Manual No. '10 • PAC - DB - 136

MHI

DATA BOOK

HYPER INVERTER PACKAGED AIR-CONDITIONERS

(Split system, Air to air heat pump type)

CEILING CASSETTE- 4 WAY COMPACT TYPE

Twin type	Triple type
FDTC71VNXPVD	FDTC140VNXTVD
FDTC100VNXPVD	FDTC140VSXTVD
FDTC100VSXPVD	
FDTC125VNXPVD	
FDTC125VSXPVD	

DUCT CONNECTED-LOW/MIDDLE STATIC PRESSURE TYPE

Single type	Twin type	Triple type
FDUM71VNXVD	FDUM100VNXPVD	FDUM140VNXTVD
FDUM100VNXVD	FDUM100VSXPVD	FDUM140VSXTVD
FDUM100VSXVD	FDUM125VNXPVD	
FDUM125VNXVD	FDUM125VSXPVD	
FDUM125VSXVD	FDUM140VNXPVD	
FDUM140VNXVD	FDUM140VSXPVD	
FDUM140VSXVD		

CEILING CASSETTE- 4 WAY TYPE

Single type	Twin type	Triple type
FDT71VNXVD	FDT71VNXPVD	FDT140VNXTVD
FDT100VNXVD	FDT100VNXPVD	FDT140VSXTVD
FDT100VSXVD	FDT100VSXPVD	
FDT125VNXVD	FDT125VNXPVD	
FDT125VSXVD	FDT125VSXPVD	
FDT140VNXVD	FDT140VNXPVD	
FDT140VSXVD	FDT140VSXPVD	

DUCT CONNECTED-HIGH STATIC PRESSURE TYPE

Single type
FDU71VNXVD
FDU100VNXVD
FDU100VSXVD
FDU125VNXVD
FDU125VSXVD
FDU140VNXVD
FDU140VSXVD

CEILING SUSPENDED TYPE

Single type	Twin type	Triple type
FDEN71VNXVD	FDEN71VNXPVD	FDEN140VNXTVD
FDEN100VNXVD	FDEN100VNXPVD	FDEN140VSXTVD
FDEN100VSXVD	FDEN100VSXPVD	
FDEN125VNXVD	FDEN125VNXPVD	
FDEN125VSXVD	FDEN125VSXPVD	
FDEN140VNXVD	FDEN140VNXPVD	
FDEN140VSXVD	FDEN140VSXPVD	

WALL MOUNTED TYPE

Twin type	Triple type
SRK100VNXPZIX	SRK140VNXTZIX
SRK100VNXPZJX	SRK140VNXTZJX
SRK100VSXPZIX	SRK140VSXTZIX
SRK100VSXPZJX	SRK140VSXTZJX
SRK125VNXPZIX	
SRK125VNXPZJX	
SRK125VSXPZIX	
SRK125VSXPZJX	

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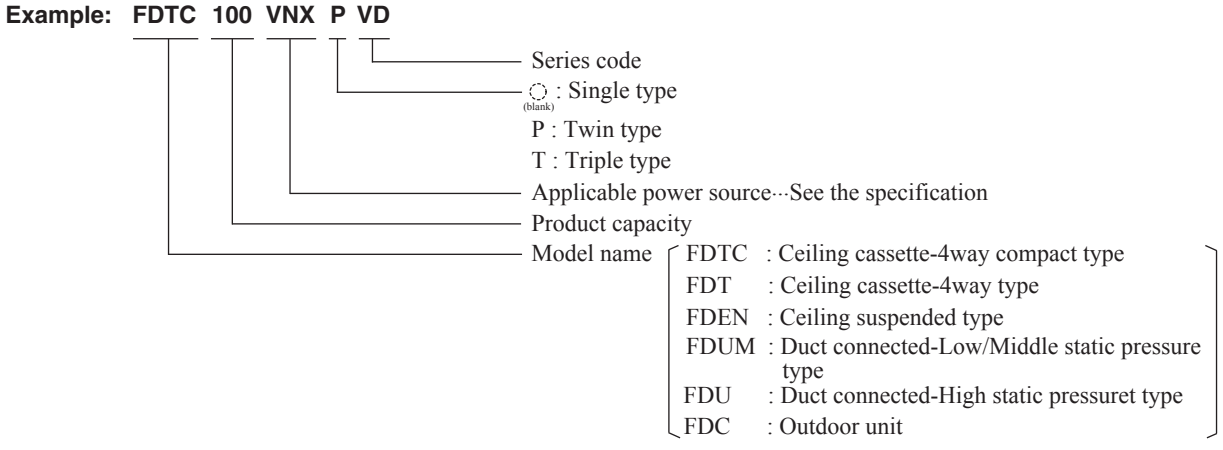

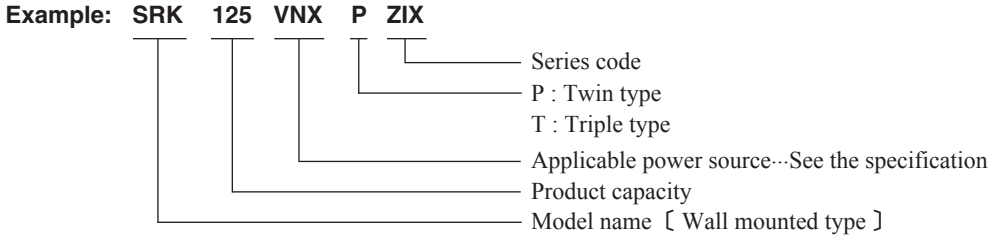

1. SPECIFICATIONS

1.1 Ceiling cassette-4way compact type (FDTC)

(1) Twin type

Adapted to **RoHS** directive

Item \ Model		FDTC71VNXPVD	
		Indoor unit **FDTC40VD (2 units)**	Outdoor unit **FDC71VNX**
		Panel **TC-PSA-25W-E**	
Power source			220-240V～50Hz / 220V～60Hz
Operation data		Cooling	Heating
Nominal capacity	kW	7.1 [3.2 (Min.)～8.0 (Max.)]	8.0 [3.6 (Min.)～9.0 (Max.)]
Power consumption	kW	1.99	2.18
Running current	A	8.9 / 9.3	9.7 / 10.2
Power factor	%	98	98
Inrush current	A	5 < Max.running current 17 >	
Sound Pressure Level	dB(A)	Cooling P-Hi : 47 Hi : 42 Me : 36 Lo : 30 Heating P-Hi : 47 Hi : 42 Me : 36 Lo : 32	Cooling : 51 Heating : 48
Exterior dimensions Height x Width x Depth	mm	Unit 248 × 570 × 570 Panel 35 × 700 × 700	750×880 (+88) × 340
Exterior appearance (Munsell color)		Plaster White (6.8Y8.9/0.2) near equivalent	Stucco White (4.2Y7.5/1.1) near equivalent
Net weight	kg	UNIT 15 PANEL 3.5	60
Refrigerant equipment Compressor type & Q'ty		—	RMT5118MDE2 × 1
Starting method		—	Direct line start
Refrigerant oil	ℓ	—	0.675 (M-MA68)
Heat exchanger		Louver fin & inner grooved tubing	M shape fin & inner grooved tubing
Refrigerant control		—	Electronic expansion valve
Air handling equipment Fan type & Q'ty		Turbo fan × 1	Propeller fan × 1
Motor <Starting method>	W	33 < Direct line start >	86 < Direct line start >
Air flow (Standard)	CMM	Cooling P-Hi : 13.5 Hi : 11.5 Me : 9 Lo : 7 Heating P-Hi : 13.5 Hi : 11.5 Me : 9 Lo : 8	Cooling : 60 Heating : 50
External static pressure	Pa	0	—
Outdoor air intake		Not possible	—
Air filter, Q'ty		Pocket plastic net × 1 (Washable)	—
Shock & vibration absorber		Rubber sleeve (for fan motor)	Rubber sleeve (for Compressor)
Insulation (noise & heat)		Polyurethane form	—
Electric heater	W	—	20 (Crank case heater)
Remote controller		wired : RC-E4 (option) wireless : RCN-TC-24W-ER (option)	
Room temperature control		Thermostat by electronics	—
Safety equipment		Overload protection for fan motor Frost protection thermostat	Internal thermostat for fan motor Abnormal discharge temperature protection.
Installation data Refrigerant piping size	mm	Liquid line : I/U φ6.35 (1/4") ②φ9.52 (3/8") × 0.8 ①φ9.52 (3/8") × 0.8 O/U φ9.52 (3/8")	
		Gas line : I/U φ12.7 (1/2") ②φ12.7 (1/2") × 0.8 ①φ15.88 (5/8") × 1.0 O/U φ15.88 (5/8")	
Connecting method		Flare piping	Flare piping
Refrigerant line (one way) length		Max.50m	※1.See page 120
Vertical height difference between outdoor unit and indoor unit		Max.30m (Outdoor unit is higher) Max.15m (Outdoor unit is lower)	
Refrigerant Quantity		R410A 2.95kg in outdoor unit (incl. the amount for the piping of : 30m)	
Drain pump		Built-in Drain pump	—
Drain		Hose Connectable with VP20	Holes size φ20 × 3pcs
Insulation for piping		Necessary (both Liquid & Gas lines)	
Standard Accessories		Mounting kit, Drain hose	—

Notes (1) The data are measured at the following conditions.

Item	Indoor air temperature		Outdoor air temperature	
Operation	DB	WB	DB	WB
Cooling	27˚C	19˚C	35˚C	24˚C
Heating	20˚C		7˚C	6˚C

(2) This packaged air-conditioner is manufactured and tested in conformity with the ISO.
(3) Sound pressure level indicates the value in an anechoic chamber. During operation these value are somewhat higher due to ambient temperature.
(4) The operation data indicates when the air-conditioner is operated at 230V50Hz or 220V60Hz.
(5) Indoor unit specifications for one unit. Capacity and operation data is two indoor units are combined and run together.
(6) Branching pipe set "DIS-WA1"×1(option). ① : Pipe of O/U～Branch, ② : Pipe of Branch～I/U
(7) If wireless remote controller is used, only 3-speed fan setting (Hi-Me-Lo) is available.

PJA003Z379

Adapted to **RoHS** directive

Item \ Model		FDTC100VNXPVD	
		Indoor unit **FDTC50VD (2 units)**	Outdoor unit **FDC100VNX**
		Panel **TC-PSA-25W-E**	
Power source			220-240V—50Hz / 220V—60Hz
Operation data		Cooling	Heating
Nominal capacity	kW	10.0 [4.0 (Min.)～11.2 (Max.)]	11.2 [4.0 (Min.)～12.5 (Max.)]
Power consumption	kW	2.78	3.02
Running current	A	12.3 / 12.9	13.4 / 14.0
Power factor	%	98	98
Inrush current	A	5 < Max.running current 24 >	
Sound Pressure Level	dB(A)	Cooling P-Hi : 47 Hi : 42 Me : 36 Lo : 30 Heating P-Hi : 47 Hi : 42 Me : 36 Lo : 32	Cooling : 48 Heating : 50
Exterior dimensions Height x Width x Depth	mm	Unit 248 × 570 × 570 Panel 35 × 700 × 700	1,300 × 970 × 370
Exterior appearance (Munsell color)		Plaster White (6.8Y8.9/0.2) near equivalent	Stucco White (4.2Y7.5/1.1) near equivalent
Net weight	kg	UNIT 15 PANEL 3.5	105
Refrigerant equipment Compressor type & Q'ty		—	RMT5134MDE2 × 1
Starting method		—	Direct line start
Refrigerant oil	ℓ	—	0.9 (M-MA68)
Heat exchanger		Louver fin & inner grooved tubing	M shape fin & inner grooved tubing
Refrigerant control		—	Electronic expansion valve
Air handling equipment Fan type & Q'ty		Turbo fan × 1	Propeller fan × 2
Motor <Starting method>	W	33 < Direct line start >	86 x 2 < Direct line start >
Air flow (Standard)	CMM	Cooling P-Hi : 13.5 Hi : 11.5 Me : 9 Lo : 7 Heating P-Hi : 13.5 Hi : 11.5 Me : 9 Lo : 8	100
External static pressure	Pa	0	—
Outdoor air intake		Not possible	—
Air filter, Q'ty		Pocket plastic net × 1 (Washable)	—
Shock & vibration absorber		Rubber sleeve (for fan motor)	Rubber sleeve (for Compressor)
Insulation (noise & heat)		Polyurethane form	—
Electric heater	W	—	20 (Crank case heater)
Remote controller		wired : RC-E4 (option) wireless : RCN-TC-24W-ER (option)	
Room temperature control		Thermostat by electronics	—
Safety equipment		Overload protection for fan motor Frost protection thermostat	Internal thermostat for fan motor Abnormal discharge temperature protection.
Installation data Refrigerant piping size	mm	Liquid line : I/U ϕ6.35 (1/4") ②ϕ9.52 (3/8") × 0.8 ①ϕ9.52 (3/8") × 0.8 O/U ϕ9.52 (3/8")	
		Gas line : I/U ϕ12.7 (1/2") ②ϕ12.7 (1/2") × 0.8 ①ϕ15.88 (5/8") × 1.0 O/U ϕ15.88 (5/8")	
Connecting method		Flare piping	Flare piping
Refrigerant line (one way) length		Max.100m	※1.See page 120
Vertical height difference between outdoor unit and indoor unit		Max.30m (Outdoor unit is higher) Max.15m (Outdoor unit is lower)	
Refrigerant Quantity		R410A 4.5kg (Pre-charged up to the piping length of 30m) Outdoor unit	
Drain pump		Built-in Drain pump	—
Drain		Hose Connectable with VP20	Holes size ϕ20 × 3pcs
Insulation for piping		Necessary (both Liquid & Gas lines)	
Standard Accessories		Mounting kit, Drain hose	Edging

Notes (1) The data are measured at the following conditions.

Item	Indoor air temperature		Outdoor air temperature	
Operation	DB	WB	DB	WB
Cooling	27℃	19℃	35℃	24℃
Heating	20℃		7℃	6℃

(2) This packaged air-conditioner is manufactured and tested in conformity with the ISO.
(3) Sound pressure level indicates the value in an anechoic chamber. During operation these value are somewhat higher due to ambient temperature.
(4) The operation data indicates when the air-conditioner is operated at 230V50Hz or 220V60Hz.
(5) Indoor unit specifications for one unit. Capacity and operation data is two indoor units are combined and run together.
(6) Branching pipe set "DIS-WA1"×1(option). ① : Pipe of O/U～Branch, ② : Pipe of Branch～I/U
(7) If wireless remote controller is used, only 3-speed fan setting (Hi-Me-Lo) is available.

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Adapted to **RoHS** directive

Item \ Model		FDTC100VSXPVD	
		Indoor unit **FDTC50VD (2 units)**	Outdoor unit **FDC100VSX**
		Panel **TC-PSA-25W-E**	
Power source			380-415V 3N～50Hz / 380V 3N～60Hz
Operation data		Cooling	Heating
Nominal capacity	kW	10.0 [4.0 (Min.)～11.2 (Max.)]	11.2 [4.0 (Min.)～16.0 (Max.)]
Power consumption	kW	2.78	3.02
Running current	A	4.1 / 4.3	4.4 / 4.7
Power factor	%	98	99 / 98
Inrush current	A	5 < Max.running current 15 >	
Sound Pressure Level	dB(A)	Cooling P-Hi : 47 Hi : 42 Me : 36 Lo : 30 Heating P-Hi : 47 Hi : 42 Me : 36 Lo : 32	Cooling : 48 Heating : 50
Exterior dimensions Height x Width x Depth	mm	Unit 248 × 570 × 570 Panel 35 × 700 × 700	1,300 × 970 × 370
Exterior appearance (Munsell color)		Plaster White (6.8Y8.9/0.2) near equivalent	Stucco White (4.2Y7.5/1.1) near equivalent
Net weight	kg	UNIT 15 PANEL 3.5	105
Refrigerant equipment Compressor type & Q'ty		—	RMT5134MDE3 × 1
Starting method		—	Direct line start
Refrigerant oil	ℓ	—	0.9 (M-MA68)
Heat exchanger		Louver fin & inner grooved tubing	M shape fin & inner grooved tubing
Refrigerant control		—	Electronic expansion valve
Air handling equipment Fan type & Q'ty		Turbo fan × 1	Propeller fan × 2
Motor <Starting method>	W	33 < Direct line start >	86 x 2 < Direct line start >
Air flow (Standard)	CMM	Cooling P-Hi : 13.5 Hi : 11.5 Me : 9 Lo : 7 Heating P-Hi : 13.5 Hi : 11.5 Me : 9 Lo : 8	100
External static pressure	Pa	0	—
Outdoor air intake		Not possible	—
Air filter, Q'ty		Pocket plastic net × 1 (Washable)	—
Shock & vibration absorber		Rubber sleeve (for fan motor)	Rubber sleeve (for Compressor)
Insulation (noise & heat)		Polyurethane form	—
Electric heater	W	—	20 (Crank case heater)
Remote controller		wired : RC-E4 (option) wireless : RCN-TC-24W-ER (option)	
Room temperature control		Thermostat by electronics	—
Safety equipment		Overload protection for fan motor Frost protection thermostat	Internal thermostat for fan motor Abnormal discharge temperature protection.
Installation data Refrigerant piping size	mm	Liquid line : I/U ϕ6.35 (1/4") ②ϕ9.52 (3/8") × 0.8 ①ϕ9.52 (3/8") × 0.8 O/U ϕ9.52 (3/8")	
		Gas line : I/U ϕ12.7 (1/2") ②ϕ12.7 (1/2") × 0.8 ①ϕ15.88 (5/8") × 1.0 O/U ϕ15.88 (5/8")	
Connecting method		Flare piping	Flare piping
Refrigerant line (one way) length		Max.100m	※1.See page 120
Vertical height difference between outdoor unit and indoor unit		Max.30m (Outdoor unit is higher) Max.15m (Outdoor unit is lower)	
Refrigerant Quantity		R410A 4.5kg (Pre-charged up to the piping length of 30m) Outdoor unit	
Drain pump		Built-in Drain pump	—
Drain		Hose Connectable with VP20	Holes size ϕ20 × 3pcs
Insulation for piping		Necessary (both Liquid & Gas lines)	
Standard Accessories		Mounting kit, Drain hose	Edging

Notes (1) The data are measured at the following conditions.

Item	Indoor air temperature		Outdoor air temperature	
Operation	DB	WB	DB	WB
Cooling	27℃	19℃	35℃	24℃
Heating	20℃		7℃	6℃

(2) This packaged air-conditioner is manufactured and tested in conformity with the ISO.
(3) Sound pressure level indicates the value in an anechoic chamber. During operation these value are somewhat higher due to ambient temperature.
(4) The operation data indicates when the air-conditioner is operated at 400V50Hz or 380V60Hz.
(5) Indoor unit specifications for one unit. Capacity and operation data is two indoor units are combined and run together.
(6) Branching pipe set "DIS-WA1"×1(option). ① : Pipe of O/U～Branch, ② : Pipe of Branch～I/U
(7) If wireless remote controller is used, only 3-speed fan setting (Hi-Me-Lo) is available.

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Adapted to **RoHS** directive

Item \ Model		FDTC125VNXPVD	
		Indoor unit **FDTC60VD (2 units)**	Outdoor unit **FDC125VNX**
		Panel **TC-PSA-25W-E**	
Power source			220-240V～50Hz / 220V～60Hz
Operation data		Cooling	Heating
Nominal capacity	kW	12.5 [5.0 (Min.)～14.0 (Max.)]	14.0 [4.0 (Min.)～17.0 (Max.)]
Power consumption	kW	4.10	4.10
Running current	A	18.2 / 19.0	18.2 / 19.0
Power factor	%	98	98
Inrush current	A	5 < Max.running current 26 >	
Sound Pressure Level	dB(A)	Cooling P-Hi : 47 Hi : 46 Me : 39 Lo : 30 Heating P-Hi : 47 Hi : 46 Me : 39 Lo : 32	Cooling : 48 Heating : 50
Exterior dimensions Height x Width x Depth	mm	Unit 248 × 570 × 570 Panel 35 × 700 × 700	1,300 × 970 × 370
Exterior appearance (Munsell color)		Plaster White (6.8Y8.9/0.2) near equivalent	Stucco White (4.2Y7.5/1.1) near equivalent
Net weight	kg	UNIT 15 PANEL 3.5	105
Refrigerant equipment Compressor type & Q'ty		—	RMT5134MDE2 × 1
Starting method		—	Direct line start
Refrigerant oil	ℓ	—	0.9 (M-MA68)
Heat exchanger		Louver fin & inner grooved tubing	M shape fin & inner grooved tubing
Refrigerant control		—	Electronic expansion valve
Air handling equipment Fan type & Q'ty		Turbo fan × 1	Propeller fan × 2
Motor <Starting method>	W	33 < Direct line start >	86 × 2 < Direct line start >
Air flow (Standard)	CMM	Cooling P-Hi : 13.5 Hi : 13.5 Me : 10 Lo : 7.5 Heating P-Hi : 13.5 Hi : 13.5 Me : 10 Lo : 8	100
External static pressure	Pa	0	—
Outdoor air intake		Not possible	—
Air filter, Q'ty		Pocket plastic net × 1 (Washable)	—
Shock & vibration absorber		Rubber sleeve (for fan motor)	Rubber sleeve (for Compressor)
Insulation (noise & heat)		Polyurethane form	—
Electric heater	W	—	20 (Crank case heater)
Remote controller		wired : RC-E4 (option) wireless : RCN-TC-24W-ER (option)	
Room temperature control		Thermostat by electronics	—
Safety equipment		Overload protection for fan motor Frost protection thermostat	Internal thermostat for fan motor Abnormal discharge temperature protection.
Installation data Refrigerant piping size	mm	Liquid line : I/U ϕ6.35 (1/4") ②ϕ9.52 (3/8") × 0.8 ①ϕ9.52 (3/8") × 0.8 O/U ϕ9.52 (3/8")	
		Gas line : I/U ϕ12.7 (1/2") ②ϕ12.7 (1/2") × 0.8 ①ϕ15.88 (5/8") × 1.0 O/U ϕ15.88 (5/8")	
Connecting method		Flare piping	Flare piping
Refrigerant line (one way) length		Max.100m	※1.See page 120
Vertical height difference between outdoor unit and indoor unit		Max.30m (Outdoor unit is higher) Max.15m (Outdoor unit is lower)	
Refrigerant Quantity		R410A 4.5kg (Pre-charged up to the piping length of 30m) Outdoor unit	
Drain pump		Built-in Drain pump	—
Drain		Hose Connectable with VP20	Holes size ϕ20 × 3pcs
Insulation for piping		Necessary (both Liquid & Gas lines)	
Standard Accessories		Mounting kit, Drain hose	Edging

Notes (1) The data are measured at the following conditions.

Item	Indoor air temperature		Outdoor air temperature	
Operation	DB	WB	DB	WB
Cooling	27℃	19℃	35℃	24℃
Heating	20℃		7℃	6℃

(2) This packaged air-conditioner is manufactured and tested in conformity with the ISO.
(3) Sound pressure level indicates the value in an anechoic chamber. During operation these value are somewhat higher due to ambient temperature.
(4) The operation data indicates when the air-conditioner is operated at 230V50Hz or 220V60Hz.
(5) Indoor unit specifications for one unit. Capacity and operation data is two indoor units are combined and run together.
(6) Branching pipe set "DIS-WA1"×1(option). ① : Pipe of O/U～Branch, ② : Pipe of Branch～I/U
(7) If wireless remote controller is used, only 3-speed fan setting (Hi-Me-Lo) is available.

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Adapted to **RoHS** directive

Item \ Model		FDTC125VSXPVD	
		Indoor unit **FDTC60VD (2 units)**	Outdoor unit **FDC125VSX**
		Panel **TC-PSA-25W-E**	
Power source			380-415V 3N～50Hz / 380V 3N～60Hz
Operation data		Cooling	Heating
Nominal capacity	kW	12.5 [5.0 (Min.)～14.0 (Max.)]	14.0 [4.0 (Min.)～18.0 (Max.)]
Power consumption	kW	4.10	4.10
Running current	A	6.0 / 6.4	6.0 / 6.4
Power factor	%	99 / 97	99 / 97
Inrush current	A	5 < Max.running current 15 >	
Sound Pressure Level	dB(A)	Cooling P-Hi : 47 Hi : 46 Me : 39 Lo : 30 Heating P-Hi : 47 Hi : 46 Me : 39 Lo : 32	Cooling : 48 Heating : 50
Exterior dimensions Height x Width x Depth	mm	Unit 248 × 570 × 570 Panel 35 × 700 × 700	1,300 × 970 × 370
Exterior appearance (Munsell color)		Plaster White (6.8Y8.9/0.2) near equivalent	Stucco White (4.2Y7.5/1.1) near equivalent
Net weight	kg	UNIT 15 PANEL 3.5	105
Refrigerant equipment Compressor type & Q'ty		—	RMT5134MDE3 × 1
Starting method		—	Direct line start
Refrigerant oil	ℓ	—	0.9 (M-MA68)
Heat exchanger		Louver fin & inner grooved tubing	M shape fin & inner grooved tubing
Refrigerant control		—	Electronic expansion valve
Air handling equipment Fan type & Q'ty		Turbo fan × 1	Propeller fan × 2
Motor <Starting method>	W	33 < Direct line start >	86 × 2 < Direct line start >
Air flow (Standard)	CMM	Cooling P-Hi : 13.5 Hi : 13.5 Me : 10 Lo : 7 Heating P-Hi : 13.5 Hi : 13.5 Me : 10 Lo : 8	100
External static pressure	Pa	0	—
Outdoor air intake		Not possible	—
Air filter, Q'ty		Pocket plastic net × 1 (Washable)	—
Shock & vibration absorber		Rubber sleeve (for fan motor)	Rubber sleeve (for Compressor)
Insulation (noise & heat)		Polyurethane form	—
Electric heater	W	—	20 (Crank case heater)
Remote controller		wired : RC-E4 (option) wireless : RCN-TC-24W-ER (option)	
Room temperature control		Thermostat by electronics	—
Safety equipment		Overload protection for fan motor Frost protection thermostat	Internal thermostat for fan motor Abnormal discharge temperature protection.
Installation data Refrigerant piping size	mm	Liquid line : I/U φ6.35 (1/4") ②φ9.52 (3/8") × 0.8 ①φ9.52 (3/8") × 0.8 O/U φ9.52 (3/8")	
		Gas line : I/U φ12.7 (1/2") ②φ12.7 (1/2") × 0.8 ①φ15.88 (5/8") × 1.0 O/U φ15.88 (5/8")	
Connecting method		Flare piping	Flare piping
Refrigerant line (one way) length		Max.100m	※1.See page 120
Vertical height difference between outdoor unit and indoor unit		Max.30m (Outdoor unit is higher) Max.15m (Outdoor unit is lower)	
Refrigerant Quantity		R410A 4.5kg (Pre-charged up to the piping length of 30m) Outdoor unit	
Drain pump		Built-in Drain pump	—
Drain		Hose Connectable with VP20	Holes size φ20 × 3pcs
Insulation for piping		Necessary (both Liquid & Gas lines)	
Standard Accessories		Mounting kit, Drain hose	Edging

Notes (1) The data are measured at the following conditions.

Item	Indoor air temperature		Outdoor air temperature	
Operation	DB	WB	DB	WB
Cooling	27˚C	19˚C	35˚C	24˚C
Heating	20˚C		7˚C	6˚C

(2) This packaged air-conditioner is manufactured and tested in conformity with the ISO.
(3) Sound pressure level indicates the value in an anechoic chamber. During operation these value are somewhat higher due to ambient temperature.
(4) The operation data indicates when the air-conditioner is operated at 400V50Hz or 380V60Hz.
(5) Indoor unit specifications for one unit. Capacity and operation data is two indoor units are combined and run together.
(6) Branching pipe set "DIS-WA1"×1(option). ① : Pipe of O/U～Branch, ② : Pipe of Branch～I/U
(7) If wireless remote controller is used, only 3-speed fan setting (Hi-Me-Lo) is available.

PJA003Z379

(2) Triple type

Adapted to **RoHS** directive

Item \ Model		FDTC140VNXTVD	
		Indoor unit **FDTC50VD (3 units)**	Outdoor unit **FDC140VNX**
		Panel **TC-PSA-25W-E**	
Power source			220-240V～50Hz / 220V～60Hz
Operation data		Cooling	Heating
Nominal capacity	kW	14.0 [5.0 (Min.)～16.0 (Max.)]	16.0 [4.0 (Min.)～18.0 (Max.)]
Power consumption	kW	4.34	4.34
Running current	A	19.3 / 20.1	19.3 / 20.1
Power factor	%	98	98
Inrush current	A	5 < Max.running current 26 >	
Sound Pressure Level	dB(A)	Cooling P-Hi : 47 Hi : 42 Me : 36 Lo : 30 Heating P-Hi : 47 Hi : 42 Me : 36 Lo : 32	Cooling : 49 Heating : 52
Exterior dimensions Height x Width x Depth	mm	Unit 248 × 570 × 570 Panel 35 × 700 × 700	1,300 × 970 × 370
Exterior appearance (Munsell color)		Plaster White (6.8Y8.9/0.2) near equivalent	Stucco White (4.2Y7.5/1.1) near equivalent
Net weight	kg	UNIT 15 PANEL 3.5	105
Refrigerant equipment Compressor type & Q'ty		—	RMT5134MDE2 × 1
Starting method		—	Direct line start
Refrigerant oil	ℓ	—	0.9 (M-MA68)
Heat exchanger		Louver fin & inner grooved tubing	M shape fin & inner grooved tubing
Refrigerant control		—	Electronic expansion valve
Air handling equipment Fan type & Q'ty		Turbo fan × 1	Propeller fan × 2
Motor <Starting method>	W	33 < Direct line start >	86 × 2 < Direct line start >
Air flow (Standard)	CMM	Cooling P-Hi : 13.5 Hi : 11.5 Me : 9 Lo : 7 Heating P-Hi : 13.5 Hi : 11.5 Me : 9 Lo : 8	100
External static pressure	Pa	0	—
Outdoor air intake		Not possible	—
Air filter, Q'ty		Pocket plastic net × 1 (Washable)	—
Shock & vibration absorber		Rubber sleeve (for fan motor)	Rubber sleeve (for Compressor)
Insulation (noise & heat)		Polyurethane form	—
Electric heater	W	—	20 (Crank case heater)
Remote controller		wired : RC-E4 (option) wireless : RCN-TC-24W-ER (option)	
Room temperature control		Thermostat by electronics	—
Safety equipment		Overload protection for fan motor Frost protection thermostat	Internal thermostat for fan motor Abnormal discharge temperature protection.
Installation data Refrigerant piping size	mm	Liquid line : I/U ϕ6.35 (1/4") ②ϕ9.52 (3/8") × 0.8 ①ϕ9.52 (3/8") × 0.8 O/Uϕ9.52 (3/8")	
		Gas line : I/U ϕ12.7 (1/2") ②ϕ12.7 (1/2") × 0.8 ①ϕ15.88 (5/8") × 1.0 O/Uϕ15.88 (5/8")	
Connecting method		Flare piping	Flare piping
Refrigerant line (one way) length		Max.100m	※1.See page 121
Vertical height difference between outdoor unit and indoor unit		Max.30m (Outdoor unit is higher) Max.15m (Outdoor unit is lower)	
Refrigerant Quantity		R410A 4.5kg (Pre-charged up to the piping length of 30m) Outdoor unit	
Drain pump		Built-in Drain pump	—
Drain		Hose Connectable with VP20	Holes size ϕ20 × 3pcs
Insulation for piping		Necessary (both Liquid & Gas lines)	
Standard Accessories		Mounting kit, Drain hose	Edging

Notes (1) The data are measured at the following conditions.

Item	Indoor air temperature		Outdoor air temperature	
Operation	DB	WB	DB	WB
Cooling	27˚C	19˚C	35˚C	24˚C
Heating	20˚C		7˚C	6˚C

(2) This packaged air-conditioner is manufactured and tested in conformity with the ISO.
(3) Sound pressure level indicates the value in an anechoic chamber. During operation these value are somewhat higher due to ambient temperature.
(4) The operation data indicates when the air-conditioner is operated at 230V50Hz or 220V60Hz.
(5) Indoor unit specifications for one unit. Capacity and operation data is three indoor units are combined and run together.
(6) Branching pipe set "DIS-TA1"×1(option). ① : Pipe of O/U～Branch, ② : Pipe of Branch～I/U
(7) If wireless remote controller is used, only 3-speed fan setting (Hi-Me-Lo) is available.

PJA003Z379

Adapted to **RoHS** directive

Item \ Model		FDTC140VSXTVD	
		Indoor unit **FDTC50VD (3 units)**	Outdoor unit **FDC140VSX**
		Panel **TC-PSA-25W-E**	
Power source			380-415V 3N～50Hz / 380V 3N～60Hz
Operation data		Cooling	Heating
Nominal capacity	kW	14.0 [5.0 (Min.)～16.0 (Max.)]	16.0 [4.0 (Min.)～20.0 (Max.)]
Power consumption	kW	4.34	4.34
Running current	A	6.4 / 6.7	6.4 / 6.7
Power factor	%	98	98
Inrush current	A	5 < Max.running current 15 >	
Sound Pressure Level	dB(A)	Cooling P-Hi : 47 Hi : 42 Me : 36 Lo : 30 Heating P-Hi : 47 Hi : 42 Me : 36 Lo : 32	Cooling : 49 Heating : 52
Exterior dimensions Height x Width x Depth	mm	Unit 248 × 570 × 570 Panel 35 × 700 × 700	1,300 × 970 × 370
Exterior appearance (Munsell color)		Plaster White (6.8Y8.9/0.2) near equivalent	Stucco White (4.2Y7.5/1.1) near equivalent
Net weight	kg	UNIT 15 PANEL 3.5	105
Refrigerant equipment Compressor type & Q'ty		—	RMT5134MDE3 × 1
Starting method		—	Direct line start
Refrigerant oil	ℓ	—	0.9 (M-MA68)
Heat exchanger		Louver fin & inner grooved tubing	M shape fin & inner grooved tubing
Refrigerant control		—	Electronic expansion valve
Air handling equipment Fan type & Q'ty		Turbo fan × 1	Propeller fan × 2
Motor <Starting method>	W	33 < Direct line start >	86 × 2 < Direct line start >
Air flow (Standard)	CMM	Cooling P-Hi : 13.5 Hi : 11.5 Me : 9 Lo : 7 Heating P-Hi : 13.5 Hi : 11.5 Me : 9 Lo : 8	100
External static pressure	Pa	0	—
Outdoor air intake		Not possible	—
Air filter, Q'ty		Pocket plastic net × 1 (Washable)	—
Shock & vibration absorber		Rubber sleeve (for fan motor)	Rubber sleeve (for Compressor)
Insulation (noise & heat)		Polyurethane form	—
Electric heater	W	—	20 (Crank case heater)
Remote controller		wired : RC-E4 (option) wireless : RCN-TC-24W-ER (option)	
Room temperature control		Thermostat by electronics	—
Safety equipment		Overload protection for fan motor Frost protection thermostat	Internal thermostat for fan motor Abnormal discharge temperature protection.
Installation data Refrigerant piping size	mm	Liquid line : I/U φ6.35 (1/4") ②φ9.52 (3/8") × 0.8 ①φ9.52 (3/8") × 0.8 O/U φ9.52 (3/8")	
		Gas line : I/U φ12.7 (1/2") ②φ12.7 (1/2") × 0.8 ①φ15.88 (5/8") ×1.0 O/U φ15.88 (5/8")	
Connecting method		Flare piping	Flare piping
Refrigerant line (one way) length		Max.100m	※1.See page 121
Vertical height difference between outdoor unit and indoor unit		Max.30m (Outdoor unit is higher) Max.15m (Outdoor unit is lower)	
Refrigerant Quantity		R410A 4.5kg (Pre-charged up to the piping length of 30m) Outdoor unit	
Drain pump		Built-in Drain pump	—
Drain		Hose Connectable with VP20	Holes size φ20 × 3pcs
Insulation for piping		Necessary (both Liquid & Gas lines)	
Standard Accessories		Mounting kit, Drain hose	Edging

Notes (1) The data are measured at the following conditions.

Item	Indoor air temperature		Outdoor air temperature	
Operation	DB	WB	DB	WB
Cooling	27℃	19℃	35℃	24℃
Heating	20℃		7℃	6℃

(2) This packaged air-conditioner is manufactured and tested in conformity with the ISO.
(3) Sound pressure level indicates the value in an anechoic chamber. During operation these value are somewhat higher due to ambient temperature.
(4) The operation data indicates when the air-conditioner is operated at 400V50Hz or 380V60Hz.
(5) Indoor unit specifications for one unit. Capacity and operation data is three indoor units are combined and run together.
(6) Branching pipe set "DIS-TA1"×1(option). ① : Pipe of O/U～Branch, ② : Pipe of Branch～I/U
(7) If wireless remote controller is used, only 3-speed fan setting (Hi-Me-Lo) is available.

PJA003Z379

1.2 Ceiling cassette-4way type (FDT)

(1) Single type

Adapted to **RoHS** directive

Item \ Model		FDT71VNXVD	
		Indoor unit **FDT71VD**	Outdoor unit **FDC71VNX**
		Panel **T-PSA-3AW-E**	
Power source			220-240V～50Hz / 220V～60Hz
Operation data		Cooling	Heating
Nominal capacity	kW	7.1 [3.2 (Min.)～8.0 (Max.)]	8.0 [3.6 (Min.)～9.0 (Max.)]
Power consumption	kW	2.04	1.94
Running current	A	9.1 / 9.5	8.7 / 9.0
Power factor	%	98	98
Inrush current	A	5 < Max.running current 17 >	
Sound Pressure Level	dB(A)	P-Hi : 46 Hi : 35 Me : 33 Lo : 31	Cooling : 51 Heating : 48
Exterior dimensions Height x Width x Depth	mm	Unit 246 × 840 × 840 Panel 35 × 950 × 950	750 × 880 (+88) × 340
Exterior appearance (Munsell color)		Plaster White (6.8Y8.9/0.2) near equivalent	Stucco White (4.2Y7.5/1.1) near equivalent
Net weight	kg	UNIT 24 PANEL 5.5	60
Refrigerant equipment Compressor type & Q'ty		—	RMT5118MDE2 × 1
Starting method		—	Direct line start
Refrigerant oil	ℓ	—	0.675 (M-MA68)
Heat exchanger		Louver fin & inner grooved tubing	M shape fin & inner grooved tubing
Refrigerant control		—	Electronic expansion valve
Air handling equipment Fan type & Q'ty		Turbo fan × 1	Propeller fan x 1
Motor <Starting method>	W	50 < Direct line start >	86 <Direct line start>
Air flow (Standard)	CMM	P-Hi : 28 Hi : 21 Me : 19 Lo : 17	Cooling : 60 Heating : 50
External static pressure	Pa	0	—
Outdoor air intake		Possible	—
Air filter, Q'ty		Pocket plastic net × 1 (Washable)	—
Shock & vibration absorber		Rubber sleeve (for fan motor)	Rubber sleeve (for Compressor)
Insulation (noise & heat)		Polyurethane form	—
Electric heater	W	—	20 (Crank case heater)
Remote controller		wired : RC-E4 (option) wireless : RCN-T-36W-E (option)	
Room temperature control		Thermostat by electronics	—
Safety equipment		Overload protection for fan motor Frost protection thermostat	Internal thermostat for fan motor Abnormal discharge temperature protection.
Installation data Refrigerant piping size	mm	Liquid line : I/U ϕ9.52 (3/8") Pipe ϕ9.52 (3/8") × 0.8 O/U ϕ9.52 (3/8")	
		Gas line : I/U ϕ15.88 (5/8") Pipe ϕ15.88 (5/8") × 1.0 O/U ϕ15.88 (5/8")	
Connecting method		Flare piping	Flare piping
Refrigerant line (one way) length		Max.50m	※1.See page 120
Vertical height difference between outdoor unit and indoor unit		Max.30m (Outdoor unit is higher) Max.15m (Outdoor unit is lower)	
Refrigerant Quantity		R410A 2.95kg in outdoor unit (incl. the amount for the piping of : 30m)	
Drain pump		Built-in Drain pump	—
Drain		Hose Connectable with VP20	Holes size ϕ20 × 3pcs
Insulation for piping		Necessary (both Liquid & Gas lines)	
Standard Accessories		Mounting kit, Drain hose	—

Notes (1) The data are measured at the following conditions.

Item	Indoor air temperature		Outdoor air temperature	
Operation	DB	WB	DB	WB
Cooling	27℃	19℃	35℃	24℃
Heating	20℃		7℃	6℃

(2) This packaged air-conditioner is manufactured and tested in conformity with the ISO.
(3) Sound pressure level indicates the value in an anechoic chamber. During operation these value are somewhat higher due to ambient temperature.
(4) The operation data indicates when the air-conditioner is operated at 230V50Hz or 220V60Hz.
(5) If wireless remote controller is used, only 3-speed fan setting (Hi-Me-Lo) is available.

PJF000Z194

Adapted to **RoHS** directive

Item \ Model		FDT100VNXVD	
		Indoor unit **FDT100VD**	Outdoor unit **FDC100VNX**
		Panel **T-PSA-3AW-E**	
Power source			220-240V～50Hz / 220V～60Hz
Operation data		Cooling	Heating
Nominal capacity	kW	10.0 [4.0 (Min.)～11.2 (Max.)]	11.2 [4.0 (Min.)～12.5 (Max.)]
Power consumption	kW	2.50	2.58
Running current	A	11.1 / 11.6	11.4 / 12.0
Power factor	%	98	98
Inrush current	A	5 < Max.running current 24 >	
Sound Pressure Level	dB(A)	P-Hi : 51 Hi : 40 Me : 37 Lo : 35	Cooling : 48 Heating : 50
Exterior dimensions Height x Width x Depth	mm	Unit 298 × 840 × 840 Panel 35 × 950 × 950	1,300 × 970 × 370
Exterior appearance (Munsell color)		Plaster White (6.8Y8.9/0.2) near equivalent	Stucco White (4.2Y7.5/1.1) near equivalent
Net weight	kg	UNIT 27 PANEL 5.5	105
Refrigerant equipment Compressor type & Q'ty		—	RMT5134MDE2 × 1
Starting method		—	Direct line start
Refrigerant oil	ℓ	—	0.9 (M-MA68)
Heat exchanger		Louver fin & inner grooved tubing	M shape fin & inner grooved tubing
Refrigerant control		—	Electronic expansion valve
Air handling equipment Fan type & Q'ty		Turbo fan × 1	Propeller fan × 2
Motor <Starting method>	W	140 < Direct line start >	86 x 2 < Direct line start >
Air flow (Standard)	CMM	P-Hi : 37 Hi : 27 Me : 24 Lo : 20	100
External static pressure	Pa	0	—
Outdoor air intake		Possible	—
Air filter, Q'ty		Pocket plastic net × 1 (Washable)	—
Shock & vibration absorber		Rubber sleeve (for fan motor)	Rubber sleeve (for Compressor)
Insulation (noise & heat)		Polyurethane form	—
Electric heater	W	—	20 (Crank case heater)
Remote controller		wired : RC-E4 (option) wireless : RCN-T-36W-E (option)	
Room temperature control		Thermostat by electronics	—
Safety equipment		Overload protection for fan motor Frost protection thermostat	Internal thermostat for fan motor Abnormal discharge temperature protection.
Installation data Refrigerant piping size	mm	Liquid line : I/U ϕ9.52 (3/8") Pipe ϕ9.52 (3/8") × 0.8 O/U ϕ9.52 (3/8")	
		Gas line : I/U ϕ15.88 (5/8") Pipe ϕ15.88 (5/8") × 1.0 O/U ϕ15.88 (5/8")	
Connecting method		Flare piping	Flare piping
Refrigerant line (one way) length		Max.100m	※1.See page 120
Vertical height difference between outdoor unit and indoor unit		Max.30m (Outdoor unit is higher) Max.15m (Outdoor unit is lower)	
Refrigerant Quantity		R410A 4.5kg in outdoor unit (incl. the amount for the piping of : 30m)	
Drain pump		Built-in Drain pump	—
Drain		Hose Connectable with VP20	Holes size ϕ20 × 3pcs
Insulation for piping		Necessary (both Liquid & Gas lines)	
Standard Accessories		Mounting kit, Drain hose	Edging

Notes (1) The data are measured at the following conditions.

Item	Indoor air temperature		Outdoor air temperature	
Operation	DB	WB	DB	WB
Cooling	27℃	19℃	35℃	24℃
Heating	20℃		7℃	6℃

(2) This packaged air-conditioner is manufactured and tested in conformity with the ISO.
(3) Sound pressure level indicates the value in an anechoic chamber. During operation these value are somewhat higher due to ambient temperature.
(4) The operation data indicates when the air-conditioner is operated at 230V50Hz or 220V60Hz.
(5) If wireless remote controller is used, only 3-speed fan setting (Hi-Me-Lo) is available.

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Adapted to **RoHS** directive

Item \ Model		FDT100VSXVD	
		Indoor unit **FDT100VD**	Outdoor unit **FDC100VSX**
		Panel **T-PSA-3AW-E**	
Power source			380-415V 3N～50Hz / 380V 3N～60Hz
Operation data		Cooling	Heating
Nominal capacity	kW	10.0 [4.0 (Min.)～11.2 (Max.)]	11.2 [4.0 (Min.)～12.5 (Max.)]
Power consumption	kW	2.50	2.58
Running current	A	3.7 / 3.9	3.8 / 4.0
Power factor	%	98 / 97	98
Inrush current	A	5 < Max.running current 15 >	
Sound Pressure Level	dB(A)	P-Hi : 51 Hi : 40 Me : 37 Lo : 35	Cooling : 48 Heating : 50
Exterior dimensions Height x Width x Depth	mm	Unit 298 × 840 × 840 Panel 35 × 950 × 950	1,300 × 970 × 370
Exterior appearance (Munsell color)		Plaster White (6.8Y8.9/0.2) near equivalent	Stucco White (4.2Y7.5/1.1) near equivalent
Net weight	kg	UNIT 27 PANEL 5.5	105
Refrigerant equipment Compressor type & Q'ty		—	RMT5134MDE3 × 1
Starting method		—	Direct line start
Refrigerant oil	ℓ	—	0.9 (M-MA68)
Heat exchanger		Louver fin & inner grooved tubing	M shape fin & inner grooved tubing
Refrigerant control		—	Electronic expansion valve
Air handling equipment Fan type & Q'ty		Turbo fan × 1	Propeller fan × 2
Motor <Starting method>	W	140 < Direct line start >	86 x 2 < Direct line start >
Air flow (Standard)	CMM	P-Hi : 37 Hi : 27 Me : 24 Lo : 20	100
External static pressure	Pa	0	—
Outdoor air intake		Possible	—
Air filter, Q'ty		Pocket plastic net × 1 (Washable)	—
Shock & vibration absorber		Rubber sleeve (for fan motor)	Rubber sleeve (for Compressor)
Insulation (noise & heat)		Polyurethane form	—
Electric heater	W	—	20 (Crank case heater)
Remote controller		wired : RC-E4 (option) wireless : RCN-T-36W-E (option)	
Room temperature control		Thermostat by electronics	—
Safety equipment		Overload protection for fan motor Frost protection thermostat	Internal thermostat for fan motor Abnormal discharge temperature protection.
Installation data Refrigerant piping size	mm	Liquid line : I/U ϕ9.52 (3/8") Pipe ϕ9.52 (3/8") × 0.8 O/U ϕ9.52 (3/8")	
		Gas line : I/U ϕ15.88 (5/8") Pipe ϕ15.88 (5/8") × 1.0 O/U ϕ15.88 (5/8")	
Connecting method		Flare piping	Flare piping
Refrigerant line (one way) length		Max.100m	※1.See page 120
Vertical height difference between outdoor unit and indoor unit		Max.30m (Outdoor unit is higher) Max.15m (Outdoor unit is lower)	
Refrigerant Quantity		R410A 4.5kg in outdoor unit (incl. the amount for the piping of : 30m)	
Drain pump		Built-in Drain pump	—
Drain		Hose Connectable with VP20	Holes size ϕ20 × 3pcs
Insulation for piping		Necessary (both Liquid & Gas lines)	
Standard Accessories		Mounting kit, Drain hose	Edging

Notes (1) The data are measured at the following conditions.

Item	Indoor air temperature		Outdoor air temperature	
Operation	DB	WB	DB	WB
Cooling	27℃	19℃	35℃	24℃
Heating	20℃		7℃	6℃

(2) This packaged air-conditioner is manufactured and tested in conformity with the ISO.
(3) Sound pressure level indicates the value in an anechoic chamber. During operation these value are somewhat higher due to ambient temperature.
(4) The operation data indicates when the air-conditioner is operated at 400V50Hz or 380V60Hz.
(5) If wireless remote controller is used, only 3-speed fan setting (Hi-Me-Lo) is available.

PJF000Z194

Adapted to **RoHS** directive

Item \ Model		FDT125VNXVD	
		Indoor unit **FDT125VD**	Outdoor unit **FDC125VNX**
		Panel **T-PSA-3AW-E**	
Power source			220-240V～50Hz / 220V～60Hz
Operation data		Cooling	Heating
Nominal capacity	kW	12.5 [5.0 (Min.)～14.0 (Max.)]	14.0 [4.0 (Min.)～17.0 (Max.)]
Power consumption	kW	3.28	3.43
Running current	A	14.6 / 15.2	15.2 / 15.9
Power factor	%	98	98
Inrush current	A	5 < Max.running current 26 >	
Sound Pressure Level	dB(A)	P-Hi : 51 Hi : 42 Me : 40 Lo : 37	Cooling : 48 Heating : 50
Exterior dimensions Height x Width x Depth	mm	Unit 298 × 840 × 840 Panel 35 × 950 × 950	1,300 × 970 × 370
Exterior appearance (Munsell color)		Plaster White (6.8Y8.9/0.2) near equivalent	Stucco White (4.2Y7.5/1.1) near equivalent
Net weight	kg	UNIT 27 PANEL 5.5	105
Refrigerant equipment Compressor type & Q'ty		—	RMT5134MDE2 × 1
Starting method		—	Direct line start
Refrigerant oil	ℓ	—	0.9 (M-MA68)
Heat exchanger		Louver fin & inner grooved tubing	M shape fin & inner grooved tubing
Refrigerant control		—	Electronic expansion valve
Air handling equipment Fan type & Q'ty		Turbo fan × 1	Propeller fan × 2
Motor <Starting method>	W	140 < Direct line start >	86 × 2 < Direct line start >
Air flow (Standard)	CMM	P-Hi : 37 Hi : 30 Me : 27 Lo : 23	100
External static pressure	Pa	0	—
Outdoor air intake		Possible	—
Air filter, Q'ty		Pocket plastic net × 1 (Washable)	—
Shock & vibration absorber		Rubber sleeve (for fan motor)	Rubber sleeve (for Compressor)
Insulation (noise & heat)		Polyurethane form	—
Electric heater	W	—	20 (Crank case heater)
Remote controller		wired : RC-E4 (option) wireless : RCN-T-36W-E (option)	
Room temperature control		Thermostat by electronics	—
Safety equipment		Overload protection for fan motor Frost protection thermostat	Internal thermostat for fan motor Abnormal discharge temperature protection.
Installation data Refrigerant piping size	mm	Liquid line : I/U ϕ9.52 (3/8") Pipe ϕ9.52 (3/8") × 0.8 O/U ϕ9.52 (3/8")	
		Gas line : I/U ϕ15.88 (5/8") Pipe ϕ15.88 (5/8") × 1.0 O/U ϕ15.88 (5/8")	
Connecting method		Flare piping	Flare piping
Refrigerant line (one way) length		Max.100m	※1.See page 120
Vertical height difference between outdoor unit and indoor unit		Max.30m (Outdoor unit is higher) Max.15m (Outdoor unit is lower)	
Refrigerant Quantity		R410A 4.5kg in outdoor unit (incl. the amount for the piping of : 30m)	
Drain pump		Built-in Drain pump	—
Drain		Hose Connectable with VP20	Holes size ϕ20 × 3pcs
Insulation for piping		Necessary (both Liquid & Gas lines)	
Standard Accessories		Mounting kit, Drain hose	Edging

Notes (1) The data are measured at the following conditions.

Item	Indoor air temperature		Outdoor air temperature	
Operation	DB	WB	DB	WB
Cooling	27℃	19℃	35℃	24℃
Heating	20℃		7℃	6℃

(2) This packaged air-conditioner is manufactured and tested in conformity with the ISO.
(3) Sound pressure level indicates the value in an anechoic chamber. During operation these value are somewhat higher due to ambient temperature.
(4) The operation data indicates when the air-conditioner is operated at 230V50Hz or 220V60Hz.
(5) If wireless remote controller is used, only 3-speed fan setting (Hi-Me-Lo) is available.

PJF000Z194

Adapted to **RoHS** directive

Item \ Model		FDT125VSXVD	
		Indoor unit **FDT125VD**	Outdoor unit **FDC125VSX**
		Panel **T-PSA-3AW-E**	
Power source			380-415V 3N～50Hz / 380V 3N～60Hz
Operation data		Cooling	Heating
Nominal capacity	kW	12.5 [5.0 (Min.)～14.0 (Max.)]	14.0 [4.0 (Min.)～18.0 (Max.)]
Power consumption	kW	3.28	3.43
Running current	A	4.8 / 5.1	5.1 / 5.3
Power factor	%	99 / 98	97 / 98
Inrush current	A	5 < Max.running current 15 >	
Sound Pressure Level	dB(A)	P-Hi : 51 Hi : 42 Me : 40 Lo : 37	Cooling : 48 Heating : 50
Exterior dimensions Height x Width x Depth	mm	Unit 298 × 840 × 840 Panel 35 × 950 × 950	1,300 × 970 × 370
Exterior appearance (Munsell color)		Plaster White (6.8Y8.9/0.2) near equivalent	Stucco White (4.2Y7.5/1.1) near equivalent
Net weight	kg	UNIT 27 PANEL 5.5	105
Refrigerant equipment Compressor type & Q'ty		—	RMT5134MDE3 × 1
Starting method		—	Direct line start
Refrigerant oil	ℓ	—	0.9 (M-MA68)
Heat exchanger		Louver fin & inner grooved tubing	M shape fin & inner grooved tubing
Refrigerant control		—	Electronic expansion valve
Air handling equipment Fan type & Q'ty		Turbo fan × 1	Propeller fan × 2
Motor <Starting method>	W	140 < Direct line start >	86 × 2 < Direct line start >
Air flow (Standard)	CMM	P-Hi : 37 Hi : 30 Me : 27 Lo : 23	100
External static pressure	Pa	0	—
Outdoor air intake		Possible	—
Air filter, Q'ty		Pocket plastic net × 1 (Washable)	—
Shock & vibration absorber		Rubber sleeve (for fan motor)	Rubber sleeve (for Compressor)
Insulation (noise & heat)		Polyurethane form	—
Electric heater	W	—	20 (Crank case heater)
Remote controller		wired : RC-E4 (option) wireless : RCN-T-36W-E (option)	
Room temperature control		Thermostat by electronics	—
Safety equipment		Overload protection for fan motor Frost protection thermostat	Internal thermostat for fan motor Abnormal discharge temperature protection.
Installation data Refrigerant piping size	mm	Liquid line : I/U ϕ9.52 (3/8") Pipe ϕ9.52 (3/8") × 0.8 O/U ϕ9.52 (3/8")	
		Gas line : I/U ϕ15.88 (5/8") Pipe ϕ15.88 (5/8") × 1.0 O/U ϕ15.88 (5/8")	
Connecting method		Flare piping	Flare piping
Refrigerant line (one way) length		Max.100m	※1.See page 120
Vertical height difference between outdoor unit and indoor unit		Max.30m (Outdoor unit is higher) Max.15m (Outdoor unit is lower)	
Refrigerant Quantity		R410A 4.5kg in outdoor unit (incl. the amount for the piping of : 30m)	
Drain pump		Built-in Drain pump	—
Drain		Hose Connectable with VP20	Holes size ϕ20 × 3pcs
Insulation for piping		Necessary (both Liquid & Gas lines)	
Standard Accessories		Mounting kit, Drain hose	Edging

Notes (1) The data are measured at the following conditions.

Item	Indoor air temperature		Outdoor air temperature	
Operation	DB	WB	DB	WB
Cooling	27℃	19℃	35℃	24℃
Heating	20℃		7℃	6℃

(2) This packaged air-conditioner is manufactured and tested in conformity with the ISO.
(3) Sound pressure level indicates the value in an anechoic chamber. During operation these value are somewhat higher due to ambient temperature.
(4) The operation data indicates when the air-conditioner is operated at 400V50Hz or 380V60Hz.
(5) If wireless remote controller is used, only 3-speed fan setting (Hi-Me-Lo) is available.

PJF000Z194

Adapted to **RoHS** directive

Item \ Model		FDT140VNXVD	
		Indoor unit **FDT140VD**	Outdoor unit **FDC140VNX**
		Panel **T-PSA-3AW-E**	
Power source			220-240V～50Hz / 220V～60Hz
Operation data		Cooling	Heating
Nominal capacity	kW	14.0 [5.0 (Min.)～16.0 (Max.)]	16.0 [4.0 (Min.)～18.0 (Max.)]
Power consumption	kW	4.19	4.20
Running current	A	18.6 / 19.4	18.6 / 19.5
Power factor	%	98	98
Inrush current	A	5 < Max.running current 26 >	
Sound Pressure Level	dB(A)	P-Hi : 51 Hi : 43 Me : 41 Lo : 38	Cooling : 49 Heating : 52
Exterior dimensions Height x Width x Depth	mm	Unit 298 × 840 × 840 Panel 35 × 950 × 950	1,300 × 970 × 370
Exterior appearance (Munsell color)		Plaster White (6.8Y8.9/0.2) near equivalent	Stucco White (4.2Y7.5/1.1) near equivalent
Net weight	kg	UNIT 27 PANEL 5.5	105
Refrigerant equipment Compressor type & Q'ty		—	RMT5134MDE2 × 1
Starting method		—	Direct line start
Refrigerant oil	ℓ	—	0.9 (M-MA68)
Heat exchanger		Louver fin & inner grooved tubing	M shape fin & inner grooved tubing
Refrigerant control		—	Electronic expansion valve
Air handling equipment Fan type & Q'ty		Turbo fan × 1	Propeller fan × 2
Motor <Starting method>	W	140 < Direct line start >	86 × 2 < Direct line start >
Air flow (Standard)	CMM	P-Hi : 37 Hi : 30 Me : 27 Lo : 23	100
External static pressure	Pa	0	—
Outdoor air intake		Possible	—
Air filter, Q'ty		Pocket plastic net × 1 (Washable)	—
Shock & vibration absorber		Rubber sleeve (for fan motor)	Rubber sleeve (for Compressor)
Insulation (noise & heat)		Polyurethane form	—
Electric heater	W	—	20 (Crank case heater)
Remote controller		wired : RC-E4 (option) wireless : RCN-T-36W-E (option)	
Room temperature control		Thermostat by electronics	—
Safety equipment		Overload protection for fan motor Frost protection thermostat	Internal thermostat for fan motor Abnormal discharge temperature protection.
Installation data Refrigerant piping size	mm	Liquid line : I/U ϕ9.52 (3/8") Pipe ϕ9.52 (3/8") × 0.8 O/U ϕ9.52 (3/8")	
		Gas line : I/U ϕ15.88 (5/8") Pipe ϕ15.88 (5/8") × 1.0 O/U ϕ15.88 (5/8")	
Connecting method		Flare piping	Flare piping
Refrigerant line (one way) length		Max.100m	※1.See page 120
Vertical height difference between outdoor unit and indoor unit		Max.30m (Outdoor unit is higher) Max.15m (Outdoor unit is lower)	
Refrigerant Quantity		R410A 4.5kg in outdoor unit (incl. the amount for the piping of : 30m)	
Drain pump		Built-in Drain pump	—
Drain		Hose Connectable with VP20	Holes size ϕ20 × 3pcs
Insulation for piping		Necessary (both Liquid & Gas lines)	
Standard Accessories		Mounting kit, Drain hose	Edging

Notes (1) The data are measured at the following conditions.

Item	Indoor air temperature		Outdoor air temperature	
Operation	DB	WB	DB	WB
Cooling	27℃	19℃	35℃	24℃
Heating	20℃		7℃	6℃

(2) This packaged air-conditioner is manufactured and tested in conformity with the ISO.
(3) Sound pressure level indicates the value in an anechoic chamber. During operation these value are somewhat higher due to ambient temperature.
(4) The operation data indicates when the air-conditioner is operated at 230V50Hz or 220V60Hz.
(5) If wireless remote controller is used, only 3-speed fan setting (Hi-Me-Lo) is available.

PJF000Z194

Adapted to **RoHS** directive

Item \ Model		FDT140VSXVD	
		Indoor unit **FDT140VD**	Outdoor unit **FDC140VSX**
		Panel **T-PSA-3AW-E**	
Power source			380-415V 3N～50Hz / 380V 3N～60Hz
Operation data		Cooling	Heating
Nominal capacity	kW	14.0 [5.0 (Min.)～16.0 (Max.)]	16.0 [4.0 (Min.)～20.0 (Max.)]
Power consumption	kW	4.19	4.20
Running current	A	6.2 / 6.5	6.2 / 6.5
Power factor	%	98	98
Inrush current	A	5 < Max.running current 15 >	
Sound Pressure Level	dB(A)	P-Hi : 51 Hi : 43 Me : 41 Lo : 38	Cooling : 49 Heating : 52
Exterior dimensions Height x Width x Depth	mm	Unit 298 × 840 × 840 Panel 35 × 950 × 950	1,300 × 970 × 370
Exterior appearance (Munsell color)		Plaster White (6.8Y8.9/0.2) near equivalent	Stucco White (4.2Y7.5/1.1) near equivalent
Net weight	kg	UNIT 27 PANEL 5.5	105
Refrigerant equipment Compressor type & Q'ty		—	RMT5134MDE3 × 1
Starting method		—	Direct line start
Refrigerant oil	ℓ	—	0.9 (M-MA68)
Heat exchanger		Louver fin & inner grooved tubing	M shape fin & inner grooved tubing
Refrigerant control		—	Electronic expansion valve
Air handling equipment Fan type & Q'ty		Turbo fan × 1	Propeller fan × 2
Motor <Starting method>	W	140 < Direct line start >	86 × 2 < Direct line start >
Air flow (Standard)	CMM	P-Hi : 37 Hi : 30 Me : 27 Lo : 23	100
External static pressure	Pa	0	—
Outdoor air intake		Possible	—
Air filter, Q'ty		Pocket plastic net × 1 (Washable)	—
Shock & vibration absorber		Rubber sleeve (for fan motor)	Rubber sleeve (for Compressor)
Insulation (noise & heat)		Polyurethane form	—
Electric heater	W	—	20 (Crank case heater)
Remote controller		wired : RC-E4 (option) wireless : RCN-T-36W-E (option)	
Room temperature control		Thermostat by electronics	—
Safety equipment		Overload protection for fan motor Frost protection thermostat	Internal thermostat for fan motor Abnormal discharge temperature protection.
Installation data Refrigerant piping size	mm	Liquid line : I/U ϕ9.52 (3/8") Pipe ϕ9.52 (3/8") × 0.8 O/U ϕ9.52 (3/8")	
		Gas line : I/U ϕ15.88 (5/8") Pipe ϕ15.88 (5/8") × 1.0 O/U ϕ15.88 (5/8")	
Connecting method		Flare piping	Flare piping
Refrigerant line (one way) length		Max.100m	※1.See page 120
Vertical height difference between outdoor unit and indoor unit		Max.30m (Outdoor unit is higher) Max.15m (Outdoor unit is lower)	
Refrigerant Quantity		R410A 4.5kg in outdoor unit (incl. the amount for the piping of : 30m)	
Drain pump		Built-in Drain pump	—
Drain		Hose Connectable with VP20	Holes size ϕ20 × 3pcs
Insulation for piping		Necessary (both Liquid & Gas lines)	
Standard Accessories		Mounting kit, Drain hose	Edging

Notes (1) The data are measured at the following conditions.

Item	Indoor air temperature		Outdoor air temperature	
Operation	DB	WB	DB	WB
Cooling	27℃	19℃	35℃	24℃
Heating	20℃		7℃	6℃

(2) This packaged air-conditioner is manufactured and tested in conformity with the ISO.
(3) Sound pressure level indicates the value in an anechoic chamber. During operation these value are somewhat higher due to ambient temperature.
(4) The operation data indicates when the air-conditioner is operated at 400V50Hz or 380V60Hz.
(5) If wireless remote controller is used, only 3-speed fan setting (Hi-Me-Lo) is available.

PJF000Z194

(2) Twin type

Adapted to **RoHS** directive

Item \ Model		FDT71VNXPVD	
		Indoor unit **FDT40VD (2 units)**	Outdoor unit **FDC71VNX**
		Panel **T-PSA-3AW-E**	
Power source			220-240V～50Hz / 220V～60Hz
Operation data		Cooling	Heating
Nominal capacity	kW	7.1 [3.2 (Min.)～8.0 (Max.)]	8.0 [3.6 (Min.)～9.0 (Max.)]
Power consumption	kW	1.85	1.99
Running current	A	8.3 / 8.6	8.9 / 9.3
Power factor	%	98	98
Inrush current	A	5 < Max.running current 17 >	
Sound Pressure Level	dB(A)	P-Hi : 39 Hi : 33 Me : 31 Lo : 30	Cooling : 51 Heating : 48
Exterior dimensions Height x Width x Depth	mm	Unit 246 × 840 × 840 Panel 35 × 950 × 950	750 × 880 (+88) × 340
Exterior appearance (Munsell color)		Plaster White (6.8Y8.9/0.2) near equivalent	Stucco White (4.2Y7.5/1.1) near equivalent
Net weight	kg	UNIT 22 PANEL 5.5	60
Refrigerant equipment Compressor type & Q'ty		—	RMT5118MDE2 × 1
Starting method		—	Direct line start
Refrigerant oil	ℓ	—	0.675 (M-MA68)
Heat exchanger		Louver fin & inner grooved tubing	M shape fin & inner grooved tubing
Refrigerant control		—	Electronic expansion valve
Air handling equipment Fan type & Q'ty		Turbo fan × 1	Propeller fan x 1
Motor <Starting method>	W	50 < Direct line start >	86 <Direct line start>
Air flow (Standard)	CMM	P-Hi : 20 Hi : 18 Me : 16 Lo : 14	Cooling : 60 Heating : 50
External static pressure	Pa	0	—
Outdoor air intake		Possible	—
Air filter, Q'ty		Pocket plastic net × 1 (Washable)	—
Shock & vibration absorber		Rubber sleeve (for fan motor)	Rubber sleeve (for Compressor)
Insulation (noise & heat)		Polyurethane form	—
Electric heater	W	—	20 (Crank case heater)
Remote controller		wired : RC-E4 (option) wireless : RCN-T-36W-E (option)	
Room temperature control		Thermostat by electronics	—
Safety equipment		Overload protection for fan motor Frost protection thermostat	Internal thermostat for fan motor Abnormal discharge temperature protection.
Installation data Refrigerant piping size	mm	Liquid line : I/U ϕ6.35 (1/4") ② ϕ9.52 (3/8") × 0.8 ① ϕ9.52 (3/8") × 0.8 O/U ϕ9.52 (3/8")	
		Gas line : I/U ϕ12.7 (1/2") ② ϕ12.7 (1/2") × 0.8 ① ϕ15.88 (5/8") × 1.0 O/U ϕ15.88 (5/8")	
Connecting method		Flare piping	Flare piping
Refrigerant line (one way) length		Max.50m	※1.See page 120
Vertical height difference between outdoor unit and indoor unit		Max.30m (Outdoor unit is higher) Max.15m (Outdoor unit is lower)	
Refrigerant Quantity		R410A 2.95kg in outdoor unit (incl. the amount for the piping of : 30m)	
Drain pump		Built-in Drain pump	—
Drain		Hose Connectable with VP20	Holes size ϕ20 × 3pcs
Insulation for piping		Necessary (both Liquid & Gas lines)	
Standard Accessories		Mounting kit, Drain hose	—

Notes (1) The data are measured at the following conditions.

Item	Indoor air temperature		Outdoor air temperature	
Operation	DB	WB	DB	WB
Cooling	27˚C	19˚C	35˚C	24˚C
Heating	20˚C		7˚C	6˚C

(2) This packaged air-conditioner is manufactured and tested in conformity with the ISO.
(3) Sound pressure level indicates the value in an anechoic chamber. During operation these value are somewhat higher due to ambient temperature.
(4) The operation data indicates when the air-conditioner is operated at 230V50Hz or 220V60Hz.
(5) Indoor unit specifications for one unit. Capacity and operation data is two indoor units are combined and run together.
(6) Branching pipe set "DIS-WA1"×1(option). ① : Pipe of O/U～Branch, ② : Pipe of Branch～I/U
(7) If wireless remote controller is used, only 3-speed fan setting (Hi-Me-Lo) is available.

PJF000Z194

Adapted to **RoHS** directive

Item \ Model		FDT100VNXPVD	
		Indoor unit **FDT50VD (2 units)**	Outdoor unit **FDC100VNX**
		Panel **T-PSA-3AW-E**	
Power source			220-240V～50Hz / 220V～60Hz
Operation data		Cooling	Heating
Nominal capacity	kW	10.0 [4.0 (Min.)～11.2 (Max.)]	11.2 [4.0 (Min.)～12.5 (Max.)]
Power consumption	kW	2.56	2.66
Running current	A	11.4 / 11.9	11.8 / 12.3
Power factor	%	98	98
Inrush current	A	5 < Max.running current 24 >	
Sound Pressure Level	dB(A)	P-Hi : 39 Hi : 33 Me : 31 Lo : 30	Cooling : 48 Heating : 50
Exterior dimensions Height x Width x Depth	mm	Unit 246 × 840 × 840 Panel 35 × 950 × 950	1,300 × 970 × 370
Exterior appearance (Munsell color)		Plaster White (6.8Y8.9/0.2) near equivalent	Stucco White (4.2Y7.5/1.1) near equivalent
Net weight	kg	UNIT 22 PANEL 5.5	105
Refrigerant equipment Compressor type & Q'ty		—	RMT5134MDE2 × 1
Starting method		—	Direct line start
Refrigerant oil	ℓ	—	0.9 (M-MA68)
Heat exchanger		Louver fin & inner grooved tubing	M shape fin & inner grooved tubing
Refrigerant control		—	Electronic expansion valve
Air handling equipment Fan type & Q'ty		Turbo fan × 1	Propeller fan × 2
Motor <Starting method>	W	50 < Direct line start >	86 x 2 < Direct line start >
Air flow (Standard)	CMM	P-Hi : 20 Hi : 18 Me : 16 Lo : 14	100
External static pressure	Pa	0	—
Outdoor air intake		Possible	—
Air filter, Q'ty		Pocket plastic net × 1 (Washable)	—
Shock & vibration absorber		Rubber sleeve (for fan motor)	Rubber sleeve (for Compressor)
Insulation (noise & heat)		Polyurethane form	—
Electric heater	W	—	20 (Crank case heater)
Remote controller		wired : RC-E4 (option) wireless : RCN-T-36W-E (option)	
Room temperature control		Thermostat by electronics	—
Safety equipment		Overload protection for fan motor Frost protection thermostat	Internal thermostat for fan motor Abnormal discharge temperature protection.
Installation data Refrigerant piping size	mm	Liquid line : I/U φ6.35 (1/4") ②φ9.52 (3/8") × 0.8 ①φ9.52 (3/8") × 0.8 O/U φ9.52 (3/8")	
		Gas line : I/U φ12.7 (1/2") ②φ12.7 (1/2") × 0.8 ①φ15.88 (5/8") × 1.0 O/U φ15.88 (5/8")	
Connecting method		Flare piping	Flare piping
Refrigerant line (one way) length		Max.100m	※1.See page 120
Vertical height difference between outdoor unit and indoor unit		Max.30m (Outdoor unit is higher) Max.15m (Outdoor unit is lower)	
Refrigerant Quantity		R410A 4.5kg (Pre-charged up to the piping length of 30m) Outdoor unit	
Drain pump		Built-in Drain pump	—
Drain		Hose Connectable with VP20	Holes size φ20 × 3pcs
Insulation for piping		Necessary (both Liquid & Gas lines)	
Standard Accessories		Mounting kit, Drain hose	Edging
Exterior dimensions		PJF000Z045	PCA001Z569
Electrical wiring		PJF000Z190	PCA001Z570

Notes (1) The data are measured at the following conditions.

Item	Indoor air temperature		Outdoor air temperature	
Operation	DB	WB	DB	WB
Cooling	27˚C	19˚C	35˚C	24˚C
Heating	20˚C		7˚C	6˚C

(2) This packaged air-conditioner is manufactured and tested in conformity with the ISO.
(3) Sound pressure level indicates the value in an anechoic chamber. During operation these value are somewhat higher due to ambient temperature.
(4) The operation data indicates when the air-conditioner is operated at 230V50Hz or 220V60Hz.
(5) Indoor unit specifications for one unit. Capacity and operation data is two indoor units are combined and run together.
(6) Branching pipe set "DIS-WA1"×1(option). ① : Pipe of O/U～Branch, ② : Pipe of Branch～I/U
(7) If wireless remote controller is used, only 3-speed fan setting (Hi-Me-Lo) is available.

PJF000Z194

Adapted to **RoHS** directive

Item \ Model		FDT100VSXPVD	
		Indoor unit **FDT50VD (2 units)**	Outdoor unit **FDC100VSX**
		Panel **T-PSA-3AW-E**	
Power source			380-415V 3N～50Hz / 380V 3N～60Hz
Operation data		Cooling	Heating
Nominal capacity	kW	10.0 [4.0(Min.)～11.2 (Max.)]	11.2 [4.0(Min.)～12.5 (Max.)]
Power consumption	kW	2.56	2.66
Running current	A	3.8 / 4.0	3.9 / 4.1
Power factor	%	97	98 / 99
Inrush current	A	5 < Max.running current 15 >	
Sound Pressure Level	dB(A)	P-Hi : 39 Hi : 33 Me : 31 Lo : 30	Cooling : 48 Heating : 50
Exterior dimensions Height x Width x Depth	mm	Unit 246 × 840 × 840 Panel 35 × 950 × 950	1,300 × 970 × 370
Exterior appearance (Munsell color)		Plaster White (6.8Y8.9/0.2) near equivalent	Stucco White (4.2Y7.5/1.1) near equivalent
Net weight	kg	UNIT 22 PANEL 5.5	105
Refrigerant equipment Compressor type & Q'ty		—	RMT5134MDE3 × 1
Starting method		—	Direct line start
Refrigerant oil	ℓ	—	0.9 (M-MA68)
Heat exchanger		Louver fin & inner grooved tubing	M shape fin & inner grooved tubing
Refrigerant control		—	Electronic expansion valve
Air handling equipment Fan type & Q'ty		Turbo fan × 1	Propeller fan × 2
Motor <Starting method>	W	50 < Direct line start >	86 x 2 < Direct line start >
Air flow (Standard)	CMM	P-Hi : 20 Hi : 18 Me : 16 Lo : 14	100
External static pressure	Pa	0	—
Outdoor air intake		Possible	—
Air filter, Q'ty		Pocket plastic net × 1 (Washable)	—
Shock & vibration absorber		Rubber sleeve (for fan motor)	Rubber sleeve (for Compressor)
Insulation (noise & heat)		Polyurethane form	—
Electric heater	W	—	20 (Crank case heater)
Remote controller		wired : RC-E4 (option) wireless : RCN-T-36W-E (option)	
Room temperature control		Thermostat by electronics	—
Safety equipment		Overload protection for fan motor Frost protection thermostat	Internal thermostat for fan motor Abnormal discharge temperature protection.
Installation data Refrigerant piping size	mm	Liquid line : I/U φ6.35 (1/4") ②φ9.52 (3/8") × 0.8 ①φ9.52 (3/8") × 0.8 O/U φ9.52 (3/8")	
		Gas line : I/U φ12.7 (1/2") ②φ12.7 (1/2") × 0.8 ①φ15.88 (5/8") × 1.0 O/U φ15.88 (5/8")	
Connecting method		Flare piping	Flare piping
Refrigerant line (one way) length		Max.100m	※1.See page 120
Vertical height difference between outdoor unit and indoor unit		Max.30m (Outdoor unit is higher) Max.15m (Outdoor unit is lower)	
Refrigerant Quantity		R410A 4.5kg (Pre-charged up to the piping length of 30m) Outdoor unit	
Drain pump		Built-in Drain pump	—
Drain		Hose Connectable with VP20	Holes size φ20 × 3pcs
Insulation for piping		Necessary (both Liquid & Gas lines)	
Standard Accessories		Mounting kit, Drain hose	Edging
Exterior dimensions		PJF000Z045	PCA001Z569
Electrical wiring		PJF000Z190	PCA001Z571

Notes (1) The data are measured at the following conditions.

Item	Indoor air temperature		Outdoor air temperature	
Operation	DB	WB	DB	WB
Cooling	27℃	19℃	35℃	24℃
Heating	20℃		7℃	6℃

(2) This packaged air-conditioner is manufactured and tested in conformity with the ISO.
(3) Sound pressure level indicates the value in an anechoic chamber. During operation these value are somewhat higher due to ambient temperature.
(4) The operation data indicates when the air-conditioner is operated at 400V50Hz or 380V60Hz.
(5) Indoor unit specifications for one unit. Capacity and operation data is two indoor units are combined and run together.
(6) Branching pipe set "DIS-WA1"×1(option). ① : Pipe of O/U～Branch, ② : Pipe of Branch～I/U
(7) If wireless remote controller is used, only 3-speed fan setting (Hi-Me-Lo) is available.

PJF000Z194

Adapted to **RoHS** directive

Item \ Model		FDT125VNXPVD	
		Indoor unit **FDT60VD (2 units)**	Outdoor unit **FDC125VNX**
		Panel **T-PSA-3AW-E**	
Power source			220-240V～50Hz / 220V～60Hz
Operation data		Cooling	Heating
Nominal capacity	kW	12.5 [5.0 (Min.)～14.0 (Max.)]	14.0 [4.0 (Min.)～17.0 (Max.)]
Power consumption	kW	3.06	3.22
Running current	A	13.6 / 14.2	14.3 / 14.9
Power factor	%	98	98
Inrush current	A	5 < Max.running current 26 >	
Sound Pressure Level	dB(A)	P-Hi : 46 Hi : 33 Me : 31 Lo : 30	Cooling : 48 Heating : 50
Exterior dimensions Height x Width x Depth	mm	Unit 246 × 840 × 840 Panel 35 × 950 × 950	1,300 × 970 × 370
Exterior appearance (Munsell color)		Plaster White (6.8Y8.9/0.2) near equivalent	Stucco White (4.2Y7.5/1.1) near equivalent
Net weight	kg	UNIT 24 PANEL 5.5	105
Refrigerant equipment Compressor type & Q'ty		—	RMT5134MDE2 × 1
Starting method		—	Direct line start
Refrigerant oil	ℓ	—	0.9 (M-MA68)
Heat exchanger		Louver fin & inner grooved tubing	M shape fin & inner grooved tubing
Refrigerant control		—	Electronic expansion valve
Air handling equipment Fan type & Q'ty		Turbo fan × 1	Propeller fan × 2
Motor <Starting method>	W	50 < Direct line start >	86 × 2 < Direct line start >
Air flow (Standard)	CMM	P-Hi : 28 Hi : 18 Me : 16 Lo : 14	100
External static pressure	Pa	0	—
Outdoor air intake		Possible	—
Air filter, Q'ty		Pocket plastic net × 1 (Washable)	—
Shock & vibration absorber		Rubber sleeve (for fan motor)	Rubber sleeve (for Compressor)
Insulation (noise & heat)		Polyurethane form	—
Electric heater	W	—	20 (Crank case heater)
Remote controller		wired : RC-E4 (option) wireless : RCN-T-36W-E (option)	
Room temperature control		Thermostat by electronics	—
Safety equipment		Overload protection for fan motor Frost protection thermostat	Internal thermostat for fan motor Abnormal discharge temperature protection.
Installation data Refrigerant piping size	mm	Liquid line : I/U φ6.35 (1/4") ②φ9.52 (3/8") × 0.8 ①φ9.52 (3/8") × 0.8 O/U φ9.52 (3/8")	
		Gas line : I/U φ12.7 (1/2") ②φ12.7 (1/2") × 0.8 ①φ15.88 (5/8") × 1.0 O/U φ15.88 (5/8")	
Connecting method		Flare piping	Flare piping
Refrigerant line (one way) length		Max.100m	※1.See page 120
Vertical height difference between outdoor unit and indoor unit		Max.30m (Outdoor unit is higher) Max.15m (Outdoor unit is lower)	
Refrigerant Quantity		R410A 4.5kg (Pre-charged up to the piping length of 30m) Outdoor unit	
Drain pump		Built-in Drain pump	—
Drain		Hose Connectable with VP20	Holes size φ20 × 3pcs
Insulation for piping		Necessary (both Liquid & Gas lines)	
Standard Accessories		Mounting kit, Drain hose	Edging

Notes (1) The data are measured at the following conditions.

Item	Indoor air temperature		Outdoor air temperature	
Operation	DB	WB	DB	WB
Cooling	27˚C	19˚C	35˚C	24˚C
Heating	20˚C		7˚C	6˚C

(2) This packaged air-conditioner is manufactured and tested in conformity with the ISO.
(3) Sound pressure level indicates the value in an anechoic chamber. During operation these value are somewhat higher due to ambient temperature.
(4) The operation data indicates when the air-conditioner is operated at 230V50Hz or 220V60Hz.
(5) Indoor unit specifications for one unit. Capacity and operation data is two indoor units are combined and run together.
(6) Branching pipe set "DIS-WA1"×1(option). ① : Pipe of O/U～Branch, ② : Pipe of Branch～I/U
(7) If wireless remote controller is used, only 3-speed fan setting (Hi-Me-Lo) is available.

PJF000Z194

Adapted to **RoHS** directive

Item \ Model		FDT125VSXPVD	
		Indoor unit **FDT60VD (2 units)**	Outdoor unit **FDC125VSX**
		Panel **T-PSA-3AW-E**	
Power source			380-415V 3N～50Hz / 380V 3N～60Hz
Operation data		Cooling	Heating
Nominal capacity	kW	12.5 [5.0 (Min.)～14.0 (Max.)]	14.0 [4.0 (Min.)～18.0 (Max.)]
Power consumption	kW	3.06	3.22
Running current	A	4.5 / 4.7	4.7 / 5.0
Power factor	%	98 / 99	99 / 98
Inrush current	A	5 < Max.running current 15 >	
Sound Pressure Level	dB(A)	P-Hi : 46 Hi : 33 Me : 31 Lo : 30	Cooling : 48 Heating : 50
Exterior dimensions Height x Width x Depth	mm	Unit 246 × 840 × 840 Panel 35 × 950 × 950	1,300 × 970 × 370
Exterior appearance (Munsell color)		Plaster White (6.8Y8.9/0.2) near equivalent	Stucco White (4.2Y7.5/1.1) near equivalent
Net weight	kg	UNIT 24 PANEL 5.5	105
Refrigerant equipment Compressor type & Q'ty		—	RMT5134MDE3 × 1
Starting method		—	Direct line start
Refrigerant oil	ℓ	—	0.9 (M-MA68)
Heat exchanger		Louver fin & inner grooved tubing	M shape fin & inner grooved tubing
Refrigerant control		—	Electronic expansion valve
Air handling equipment Fan type & Q'ty		Turbo fan × 1	Propeller fan × 2
Motor <Starting method>	W	50 < Direct line start >	86 × 2 < Direct line start >
Air flow (Standard)	CMM	P-Hi : 28 Hi : 18 Me : 16 Lo : 14	100
External static pressure	Pa	0	—
Outdoor air intake		Possible	—
Air filter, Q'ty		Pocket plastic net × 1 (Washable)	—
Shock & vibration absorber		Rubber sleeve (for fan motor)	Rubber sleeve (for Compressor)
Insulation (noise & heat)		Polyurethane form	—
Electric heater	W	—	20 (Crank case heater)
Remote controller		wired : RC-E4 (option) wireless : RCN-T-36W-E (option)	
Room temperature control		Thermostat by electronics	—
Safety equipment		Overload protection for fan motor Frost protection thermostat	Internal thermostat for fan motor Abnormal discharge temperature protection.
Installation data Refrigerant piping size	mm	Liquid line : I/U φ6.35 (1/4") ② φ9.52 (3/8") × 0.8 ① φ9.52 (3/8") × 0.8 O/U φ9.52 (3/8")	
		Gas line : I/U φ12.7 (1/2") ② φ12.7 (1/2") × 0.8 ① φ15.88 (5/8") × 1.0 O/U φ15.88 (5/8")	
Connecting method		Flare piping	Flare piping
Refrigerant line (one way) length		Max.100m	※1.See page 120
Vertical height difference between outdoor unit and indoor unit		Max.30m (Outdoor unit is higher) Max.15m (Outdoor unit is lower)	
Refrigerant Quantity		R410A 4.5kg (Pre-charged up to the piping length of 30m) Outdoor unit	
Drain pump		Built-in Drain pump	—
Drain		Hose Connectable with VP20	Holes size φ20 × 3pcs
Insulation for piping		Necessary (both Liquid & Gas lines)	
Standard Accessories		Mounting kit, Drain hose	Edging

Notes (1) The data are measured at the following conditions.

Item	Indoor air temperature		Outdoor air temperature	
Operation	DB	WB	DB	WB
Cooling	27℃	19℃	35℃	24℃
Heating	20℃		7℃	6℃

(2) This packaged air-conditioner is manufactured and tested in conformity with the ISO.
(3) Sound pressure level indicates the value in an anechoic chamber. During operation these value are somewhat higher due to ambient temperature.
(4) The operation data indicates when the air-conditioner is operated at 400V50Hz or 380V60Hz.
(5) Indoor unit specifications for one unit. Capacity and operation data is two indoor units are combined and run together.
(6) Branching pipe set "DIS-WA1"×1(option). ① : Pipe of O/U～Branch, ② : Pipe of Branch～I/U
(7) If wireless remote controller is used, only 3-speed fan setting (Hi-Me-Lo) is available.

PJF000Z194

Adapted to **RoHS** directive

Item \ Model		FDT140VNXPVD	
		Indoor unit **FDT71VD (2 units)**	Outdoor unit **FDC140VNX**
		Panel **T-PSA-3AW-E**	
Power source			220-240V～50Hz / 220V～60Hz
Operation data		Cooling	Heating
Nominal capacity	kW	14.0 [5.0 (Min.)～16.0 (Max.)]	16.0 [4.0 (Min.)～18.0 (Max.)]
Power consumption	kW	3.88	3.70
Running current	A	17.2 / 18.0	16.4 / 17.2
Power factor	%	98	98
Inrush current	A	5 < Max.running current 26 >	
Sound Pressure Level	dB(A)	P-Hi : 46 Hi : 35 Me : 33 Lo : 31	Cooling : 49 Heating : 52
Exterior dimensions Height x Width x Depth	mm	Unit 246 × 840 × 840 Panel 35 × 950 × 950	1,300 × 970 × 370
Exterior appearance (Munsell color)		Plaster White (6.8Y8.9/0.2) near equivalent	Stucco White (4.2Y7.5/1.1) near equivalent
Net weight	kg	UNIT 24 PANEL 5.5	105
Refrigerant equipment Compressor type & Q'ty		—	RMT5134MDE2 × 1
Starting method		—	Direct line start
Refrigerant oil	ℓ	—	0.9 (M-MA68)
Heat exchanger		Louver fin & inner grooved tubing	M shape fin & inner grooved tubing
Refrigerant control		—	Electronic expansion valve
Air handling equipment Fan type & Q'ty		Turbo fan × 1	Propeller fan × 2
Motor <Starting method>	W	50 < Direct line start >	86 × 2 < Direct line start >
Air flow (Standard)	CMM	P-Hi : 28 Hi : 21 Me : 19 Lo : 17	100
External static pressure	Pa	0	—
Outdoor air intake		Possible	—
Air filter, Q'ty		Pocket plastic net × 1 (Washable)	—
Shock & vibration absorber		Rubber sleeve (for fan motor)	Rubber sleeve (for Compressor)
Insulation (noise & heat)		Polyurethane form	—
Electric heater	W	—	20 (Crank case heater)
Remote controller		wired : RC-E4 (option) wireless : RCN-T-36W-E (option)	
Room temperature control		Thermostat by electronics	—
Safety equipment		Overload protection for fan motor Frost protection thermostat	Internal thermostat for fan motor Abnormal discharge temperature protection.
Installation data Refrigerant piping size	mm	Liquid line : I/U φ9.52 (3/8") ② φ9.52 (3/8") × 0.8 ① φ9.52 (3/8") × 0.8 O/U φ9.52 (3/8")	
		Gas line : I/U φ15.88 (5/8") ② φ15.88 (5/8") × 1.0 ① φ15.88 (5/8") × 1.0 O/U φ15.88 (5/8")	
Connecting method		Flare piping	Flare piping
Refrigerant line (one way) length		Max.100m	※1.See page 120
Vertical height difference between outdoor unit and indoor unit		Max.30m (Outdoor unit is higher) Max.15m (Outdoor unit is lower)	
Refrigerant Quantity		R410A 4.5kg (Pre-charged up to the piping length of 30m) Outdoor unit	
Drain pump		Built-in Drain pump	—
Drain		Hose Connectable with VP20	Holes size φ20 × 3pcs
Insulation for piping		Necessary (both Liquid & Gas lines)	
Standard Accessories		Mounting kit, Drain hose	Edging

Notes (1) The data are measured at the following conditions.

Item	Indoor air temperature		Outdoor air temperature	
Operation	DB	WB	DB	WB
Cooling	27˚C	19˚C	35˚C	24˚C
Heating	20˚C		7˚C	6˚C

(2) This packaged air-conditioner is manufactured and tested in conformity with the ISO.
(3) Sound pressure level indicates the value in an anechoic chamber. During operation these value are somewhat higher due to ambient temperature.
(4) The operation data indicates when the air-conditioner is operated at 230V50Hz or 220V60Hz.
(5) Indoor unit specifications for one unit. Capacity and operation data is two indoor units are combined and run together.
(6) Branching pipe set "DIS-WA1"×1(option). ① : Pipe of O/U～Branch, ② : Pipe of Branch～I/U
(7) If wireless remote controller is used, only 3-speed fan setting (Hi-Me-Lo) is available.

PJF000Z194

Adapted to **RoHS** directive

Item \ Model		FDT140VSXPVD	
		Indoor unit **FDT71VD (2 units)**	Outdoor unit **FDC140VSX**
		Panel **T-PSA-3AW-E**	
Power source			380-415V 3N～50Hz / 380V 3N～60Hz
Operation data		Cooling	Heating
Nominal capacity	kW	14.0 [5.0 (Min.)～16.0 (Max.)]	16.0 [4.0 (Min.)～20.0 (Max.)]
Power consumption	kW	3.88	3.70
Running current	A	5.7 / 6.0	5.4 / 5.7
Power factor	%	98	99
Inrush current	A	5 < Max.running current 15 >	
Sound Pressure Level	dB(A)	P-Hi : 46 Hi : 35 Me : 33 Lo : 31	Cooling : 49 Heating : 52
Exterior dimensions Height x Width x Depth	mm	Unit 246 × 840 × 840 Panel 35 × 950 × 950	1,300 × 970 × 370
Exterior appearance (Munsell color)		Plaster White (6.8Y8.9/0.2) near equivalent	Stucco White (4.2Y7.5/1.1) near equivalent
Net weight	kg	UNIT 24 PANEL 5.5	105
Refrigerant equipment Compressor type & Q'ty		—	RMT5134MDE3 × 1
Starting method		—	Direct line start
Refrigerant oil	ℓ	—	0.9 (M-MA68)
Heat exchanger		Louver fin & inner grooved tubing	M shape fin & inner grooved tubing
Refrigerant control		—	Electronic expansion valve
Air handling equipment Fan type & Q'ty		Turbo fan × 1	Propeller fan × 2
Motor <Starting method>	W	50 < Direct line start >	86 × 2 < Direct line start >
Air flow (Standard)	CMM	P-Hi : 28 Hi : 21 Me : 19 Lo : 17	100
External static pressure	Pa	0	—
Outdoor air intake		Possible	—
Air filter, Q'ty		Pocket plastic net × 1 (Washable)	—
Shock & vibration absorber		Rubber sleeve (for fan motor)	Rubber sleeve (for Compressor)
Insulation (noise & heat)		Polyurethane form	—
Electric heater	W	—	20 (Crank case heater)
Remote controller		wired : RC-E4 (option) wireless : RCN-T-36W-E (option)	
Room temperature control		Thermostat by electronics	—
Safety equipment		Overload protection for fan motor Frost protection thermostat	Internal thermostat for fan motor Abnormal discharge temperature protection.
Installation data Refrigerant piping size	mm	Liquid line : I/U φ9.52 (3/8") ②φ9.52 (3/8") × 0.8 ①φ9.52 (3/8") × 0.8 O/U φ9.52 (3/8")	
		Gas line : I/U φ15.88 (5/8") ②φ15.88 (5/8") × 1.0 ①φ15.88 (5/8") × 1.0 O/U φ15.88 (5/8")	
Connecting method		Flare piping	Flare piping
Refrigerant line (one way) length		Max.100m	※1.See page 120
Vertical height difference between outdoor unit and indoor unit		Max.30m (Outdoor unit is higher) Max.15m (Outdoor unit is lower)	
Refrigerant Quantity		R410A 4.5kg (Pre-charged up to the piping length of 30m) Outdoor unit	
Drain pump		Built-in Drain pump	—
Drain		Hose Connectable with VP20	Holes size φ20 × 3pcs
Insulation for piping		Necessary (both Liquid & Gas lines)	
Standard Accessories		Mounting kit, Drain hose	Edging

Notes (1) The data are measured at the following conditions.

Item	Indoor air temperature		Outdoor air temperature	
Operation	DB	WB	DB	WB
Cooling	27℃	19℃	35℃	24℃
Heating	20℃		7℃	6℃

(2) This packaged air-conditioner is manufactured and tested in conformity with the ISO.
(3) Sound pressure level indicates the value in an anechoic chamber. During operation these value are somewhat higher due to ambient temperature.
(4) The operation data indicates when the air-conditioner is operated at 400V50Hz or 380V60Hz.
(5) Indoor unit specifications for one unit. Capacity and operation data is two indoor units are combined and run together.
(6) Branching pipe set "DIS-WA1"×1(option). ① : Pipe of O/U～Branch, ② : Pipe of Branch～I/U
(7) If wireless remote controller is used, only 3-speed fan setting (Hi-Me-Lo) is available.

PJF000Z194

(3) Triple type

Adapted to **RoHS** directive

Item \ Model		FDT140VNXTVD	
		Indoor unit **FDT50VD (3 units)**	Outdoor unit **FDC140VNX**
		Panel **T-PSA-3AW-E**	
Power source			220-240V～50Hz / 220V～60Hz
Operation data		Cooling	Heating
Nominal capacity	kW	14.0 [5.0 (Min.)～16.0 (Max.)]	16.0 [4.0 (Min.)～18.0 (Max.)]
Power consumption	kW	3.88	3.76
Running current	A	17.2 / 18.0	16.7 / 17.4
Power factor	%	98	98
Inrush current	A	5 < Max.running current 26 >	
Sound Pressure Level	dB(A)	P-Hi : 39 Hi : 33 Me : 31 Lo : 30	Cooling : 49 Heating : 52
Exterior dimensions Height x Width x Depth	mm	Unit 246 × 840 × 840 Panel 35 × 950 × 950	1,300 × 970 × 370
Exterior appearance (Munsell color)		Plaster White (6.8Y8.9/0.2) near equivalent	Stucco White (4.2Y7.5/1.1) near equivalent
Net weight	kg	UNIT 22 PANEL 5.5	105
Refrigerant equipment Compressor type & Q'ty		—	RMT5134MDE2 × 1
Starting method		—	Direct line start
Refrigerant oil	ℓ	—	0.9 (M-MA68)
Heat exchanger		Louver fin & inner grooved tubing	M shape fin & inner grooved tubing
Refrigerant control		—	Electronic expansion valve
Air handling equipment Fan type & Q'ty		Turbo fan × 1	Propeller fan × 2
Motor <Starting method>	W	50 < Direct line start >	86 × 2 < Direct line start >
Air flow (Standard)	CMM	P-Hi : 20 Hi : 18 Me : 16 Lo : 14	100
External static pressure	Pa	0	—
Outdoor air intake		Possible	—
Air filter, Q'ty		Pocket plastic net × 1 (Washable)	—
Shock & vibration absorber		Rubber sleeve (for fan motor)	Rubber sleeve (for Compressor)
Insulation (noise & heat)		Polyurethane form	—
Electric heater	W	—	20 (Crank case heater)
Remote controller		wired : RC-E4 (option) wireless : RCN-T-36W-E (option)	
Room temperature control		Thermostat by electronics	—
Safety equipment		Overload protection for fan motor Frost protection thermostat	Internal thermostat for fan motor Abnormal discharge temperature protection.
Installation data Refrigerant piping size	mm	Liquid line : I/U ϕ6.35 (1/4") ②ϕ9.52 (3/8") × 0.8 ①ϕ9.52 (3/8") × 0.8 O/U ϕ9.52 (3/8")	
		Gas line : I/U ϕ12.7 (1/2") ②ϕ12.7 (1/2") × 0.8 ①ϕ15.88 (5/8") × 1.0 O/U ϕ15.88 (5/8")	
Connecting method		Flare piping	Flare piping
Refrigerant line (one way) length		Max.100m	※1.See page 121
Vertical height difference between outdoor unit and indoor unit		Max.30m (Outdoor unit is higher) Max.15m (Outdoor unit is lower)	
Refrigerant Quantity		R410A 4.5kg (Pre-charged up to the piping length of 30m) Outdoor unit	
Drain pump		Built-in Drain pump	—
Drain		Hose Connectable with VP20	Holes size ϕ20 × 3pcs
Insulation for piping		Necessary (both Liquid & Gas lines)	
Standard Accessories		Mounting kit, Drain hose	Edging

Notes (1) The data are measured at the following conditions.

Item	Indoor air temperature		Outdoor air temperature	
Operation	DB	WB	DB	WB
Cooling	27℃	19℃	35℃	24℃
Heating	20℃		7℃	6℃

(2) This packaged air-conditioner is manufactured and tested in conformity with the ISO.
(3) Sound pressure level indicates the value in an anechoic chamber. During operation these value are somewhat higher due to ambient temperature.
(4) The operation data indicates when the air-conditioner is operated at 230V50Hz or 220V60Hz.
(5) Indoor unit specifications for one unit. Capacity and operation data is three indoor units are combined and run together.
(6) Branching pipe set "DIS-TA1"×1(option). ① : Pipe of O/U～Branch, ② : Pipe of Branch～I/U
(7) If wireless remote controller is used, only 3-speed fan setting (Hi-Me-Lo) is available.

PJF000Z194

Adapted to **RoHS** directive

Item \ Model		FDT140VSXTVD	
		Indoor unit **FDT50VD (3 units)**	Outdoor unit **FDC140VSX**
		Panel **T-PSA-3AW-E**	
Power source			380-415V 3N～50Hz / 380V 3N～60Hz
Operation data		Cooling	Heating
Nominal capacity	kW	14.0 [5.0 (Min.)～16.0 (Max.)]	16.0 [4.0 (Min.)～20.0 (Max.)]
Power consumption	kW	3.88	3.76
Running current	A	5.7 / 6.0	5.5 / 5.8
Power factor	%	98	99 / 98
Inrush current	A	5 < Max.running current 15 >	
Sound Pressure Level	dB(A)	P-Hi : 39 Hi : 33 Me : 31 Lo : 30	Cooling : 49 Heating : 52
Exterior dimensions Height x Width x Depth	mm	Unit 246 × 840 × 840 Panel 35 × 950 × 950	1,300 × 970 × 370
Exterior appearance (Munsell color)		Plaster White (6.8Y8.9/0.2) near equivalent	Stucco White (4.2Y7.5/1.1) near equivalent
Net weight	kg	UNIT 22 PANEL 5.5	105
Refrigerant equipment Compressor type & Q'ty		—	RMT5134MDE3 × 1
Starting method		—	Direct line start
Refrigerant oil	ℓ	—	0.9 (M-MA68)
Heat exchanger		Louver fin & inner grooved tubing	M shape fin & inner grooved tubing
Refrigerant control		—	Electronic expansion valve
Air handling equipment Fan type & Q'ty		Turbo fan × 1	Propeller fan × 2
Motor <Starting method>	W	50 < Direct line start >	86 × 2 < Direct line start >
Air flow (Standard)	CMM	P-Hi : 20 Hi : 18 Me : 16 Lo : 14	100
External static pressure	Pa	0	—
Outdoor air intake		Possible	—
Air filter, Q'ty		Pocket plastic net × 1 (Washable)	—
Shock & vibration absorber		Rubber sleeve (for fan motor)	Rubber sleeve (for Compressor)
Insulation (noise & heat)		Polyurethane form	—
Electric heater	W	—	20 (Crank case heater)
Remote controller		wired : RC-E4 (option) wireless : RCN-T-36W-E (option)	
Room temperature control		Thermostat by electronics	—
Safety equipment		Overload protection for fan motor Frost protection thermostat	Internal thermostat for fan motor Abnormal discharge temperature protection.
Installation data Refrigerant piping size	mm	Liquid line : I/U ϕ6.35 (1/4") ②ϕ9.52 (3/8") × 0.8 ①ϕ9.52 (3/8") × 0.8 O/U ϕ9.52 (3/8")	
		Gas line : I/U ϕ12.7 (1/2") ②ϕ12.7 (1/2") × 0.8 ①ϕ15.88 (5/8") × 1.0 O/U ϕ15.88 (5/8")	
Connecting method		Flare piping	Flare piping
Refrigerant line (one way) length		Max.100m	※1.See page 121
Vertical height difference between outdoor unit and indoor unit		Max.30m (Outdoor unit is higher) Max.15m (Outdoor unit is lower)	
Refrigerant Quantity		R410A 4.5kg (Pre-charged up to the piping length of 30m) Outdoor unit	
Drain pump		Built-in Drain pump	—
Drain		Hose Connectable with VP20	Holes size ϕ20 × 3pcs
Insulation for piping		Necessary (both Liquid & Gas lines)	
Standard Accessories		Mounting kit, Drain hose	Edging

Notes (1) The data are measured at the following conditions.

Item	Indoor air temperature		Outdoor air temperature	
Operation	DB	WB	DB	WB
Cooling	27℃	19℃	35℃	24℃
Heating	20℃		7℃	6℃

(2) This packaged air-conditioner is manufactured and tested in conformity with the ISO.
(3) Sound pressure level indicates the value in an anechoic chamber. During operation these value are somewhat higher due to ambient temperature.
(4) The operation data indicates when the air-conditioner is operated at 400V50Hz or 380V60Hz.
(5) Indoor unit specifications for one unit. Capacity and operation data is three indoor units are combined and run together.
(6) Branching pipe set "DIS-TA1"×1(option). ① : Pipe of O/U～Branch, ② : Pipe of Branch～I/U
(7) If wireless remote controller is used, only 3-speed fan setting (Hi-Me-Lo) is available.

PJF000Z194

1.3 Ceiling suspended type (FDEN)

(1) Single type

Adapted to **RoHS** directive

Item \ Model		FDEN71VNXVD	
		Indoor unit **FDEN71VD**	Outdoor unit **FDC71VNX**
		—	
Power source			220-240V～50Hz / 220V～60Hz
Operation data		Cooling	Heating
Nominal capacity	kW	7.1 [3.2 (Min.)～8.0 (Max.)]	8.0 [3.6 (Min.)～9.0 (Max.)]
Power consumption	kW	2.11	2.11
Running current	A	9.4 / 9.8	9.4 / 9.8
Power factor	%	98	98
Inrush current	A	5 < Max.running current 17 >	
Sound Pressure Level	dB(A)	P-Hi : 50 Hi : 41 Me : 39 Lo : 38	Cooling : 51 Heating : 48
Exterior dimensions Height x Width x Depth	mm	210 × 1,320 × 690	750 × 880 (+88) × 340
Exterior appearance (Munsell color)		Plaster White (6.8Y8.9/0.2) near equivalent	Stucco White (4.2Y7.5/1.1) near equivalent
Net weight	kg	37	60
Refrigerant equipment Compressor type & Q'ty		—	RMT5118MDE2 × 1
Starting method		—	Direct line start
Refrigerant oil	ℓ	—	0.675 (M-MA68)
Heat exchanger		Louver fin & inner grooved tubing	M shape fin & inner grooved tubing
Refrigerant control		—	Electronic expansion valve
Air handling equipment Fan type & Q'ty		Centrifugal fan × 4	Propeller fan x 1
Motor <Starting method>	W	20 × 2 < Direct line start >	86 <Direct line start>
Air flow (Standard)	CMM	P-Hi : 22 Hi : 18 Me : 14 Lo : 12	Cooling : 60 Heating : 50
External static pressure	Pa	0	—
Outdoor air intake		Not possible	—
Air filter, Q'ty		Pocket plastic net × 2 (Washable)	—
Shock & vibration absorber		Rubber sleeve (for fan motor)	Rubber sleeve (for Compressor)
Insulation (noise & heat)		Polyurethane form	—
Electric heater	W	—	20 (Crank case heater)
Remote controller		wired : RC-E4 (option) wireless : RCN-E1R (option)	
Room temperature control		Thermostat by electronics	—
Safety equipment		Internal thermostat for fan motor Frost protection thermostat	Internal thermostat for fan motor Abnormal discharge temperature protection.
Installation data Refrigerant piping size	mm	Liquid line : I/U ϕ9.52 (3/8") Pipe ϕ9.52 (3/8") × 0.8 O/U ϕ9.52 (3/8")	
		Gas line : I/U ϕ15.88 (5/8") Pipe ϕ15.88 (5/8") × 1.0 O/U ϕ15.88 (5/8")	
Connecting method		Flare piping	Flare piping
Refrigerant line (one way) length		Max.50m	※1.See page 120
Vertical height difference between outdoor unit and indoor unit		Max.30m (Outdoor unit is higher) Max.15m (Outdoor unit is lower)	
Refrigerant Quantity		R410A 2.95kg in outdoor unit (incl. the amount for the piping of : 30m)	
Drain pump		—	—
Drain		Hose Connectable with VP20	Holes size ϕ20 × 3pcs
Insulation for piping		Necessary (both Liquid & Gas lines)	
Standard Accessories		Mounting kit, Drain hose	—

Notes (1) The data are measured at the following conditions.

Item	Indoor air temperature		Outdoor air temperature	
Operation	DB	WB	DB	WB
Cooling	27℃	19℃	35℃	24℃
Heating	20℃		7℃	6℃

(2) This packaged air-conditioner is manufactured and tested in conformity with the ISO.
(3) Sound pressure level indicates the value in an anechoic chamber. During operation these value are somewhat higher due to ambient temperature.
(4) The operation data indicates when the air-conditioner is operated at 230V50Hz or 220V60Hz.
(5) If wireless remote controller is used, only 3-speed fan setting (Hi-Me-Lo) is available.

PFA003Z911

Adapted to **RoHS** directive

Item \ Model		FDEN100VNXVD	
		Indoor unit **FDEN100VD**	Outdoor unit **FDC100VNX**
		—	
Power source			220-240V～50Hz / 220V～60Hz
Operation data		Cooling	Heating
Nominal capacity	kW	10.0 [4.0 (Min.)～11.2 (Max.)]	11.2 [4.0 (Min.)～12.5 (Max.)]
Power consumption	kW	2.80	2.88
Running current	A	12.4 / 13.0	12.8 / 13.4
Power factor	%	98	98
Inrush current	A	5 < Max.running current 24 >	
Sound Pressure Level	dB(A)	P-Hi : 46 Hi : 44 Me : 41 Lo : 39	Cooling : 48 Heating : 50
Exterior dimensions Height x Width x Depth	mm	250 × 1,620 × 690	1,300 × 970 × 370
Exterior appearance (Munsell color)		Plaster White (6.8Y8.9/0.2) near equivalent	Stucco White (4.2Y7.5/1.1) near equivalent
Net weight	kg	49	105
Refrigerant equipment Compressor type & Q'ty		—	RMT5134MDE2 × 1
Starting method		—	Direct line start
Refrigerant oil	ℓ	—	0.9 (M-MA68)
Heat exchanger		Louver fin & inner grooved tubing	M shape fin & inner grooved tubing
Refrigerant control		—	Electronic expansion valve
Air handling equipment Fan type & Q'ty		Centrifugal fan × 4	Propeller fan × 2
Motor <Starting method>	W	30 ×2 < Direct line start >	86 x 2 < Direct line start >
Air flow (Standard)	CMM	P-Hi : 28 Hi : 26 Me : 23 Lo : 21	100
External static pressure	Pa	0	—
Outdoor air intake		Not possible	—
Air filter, Q'ty		Pocket plastic net × 2 (Washable)	—
Shock & vibration absorber		Rubber sleeve (for fan motor)	Rubber sleeve (for Compressor)
Insulation (noise & heat)		Polyurethane form	—
Electric heater	W	—	20 (Crank case heater)
Remote controller		wired : RC-E4 (option) wireless : RCN-E1R (option)	
Room temperature control		Thermostat by electronics	—
Safety equipment		Internal thermostat for fan motor Frost protection thermostat	Internal thermostat for fan motor Abnormal discharge temperature protection.
Installation data Refrigerant piping size	mm	Liquid line : I/U ϕ9.52 (3/8") Pipe ϕ9.52 (3/8") × 0.8 O/U ϕ9.52 (3/8")	
		Gas line : I/U ϕ15.88 (5/8") Pipe ϕ15.88 (5/8") × 1.0 O/U ϕ15.88 (5/8")	
Connecting method		Flare piping	Flare piping
Refrigerant line (one way) length		Max.100m	※1.See page 120
Vertical height difference between outdoor unit and indoor unit		Max.30m (Outdoor unit is higher) Max.15m (Outdoor unit is lower)	
Refrigerant Quantity		R410A 4.5kg in outdoor unit (incl. the amount for the piping of : 30m)	
Drain pump		—	—
Drain		Hose Connectable with VP20	Holes size ϕ20 × 3pcs
Insulation for piping		Necessary (both Liquid & Gas lines)	
Standard Accessories		Mounting kit, Drain hose	Edging

Notes (1) The data are measured at the following conditions.

Item	Indoor air temperature		Outdoor air temperature	
Operation	DB	WB	DB	WB
Cooling	27℃	19℃	35℃	24℃
Heating	20℃		7℃	6℃

(2) This packaged air-conditioner is manufactured and tested in conformity with the ISO.
(3) Sound pressure level indicates the value in an anechoic chamber. During operation these value are somewhat higher due to ambient temperature.
(4) The operation data indicates when the air-conditioner is operated at 230V50Hz or 220V60Hz.
(5) If wireless remote controller is used, only 3-speed fan setting (Hi-Me-Lo) is available.

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Adapted to **RoHS** directive

Item \ Model		FDEN100VSXVD	
		Indoor unit **FDEN100VD**	Outdoor unit **FDC100VSX**
Item		—	
Power source			380-415V 3N～50Hz / 380V 3N～60Hz
Operation data		Cooling	Heating
Nominal capacity	kW	10.0 [4.0 (Min.)～11.2 (Max.)]	11.2 [4.0 (Min.)～16.0 (Max.)]
Power consumption	kW	2.80	2.88
Running current	A	4.1 / 4.3	4.2 / 4.5
Power factor	%	99	99 / 97
Inrush current	A	5 < Max.running current 15 >	
Sound Pressure Level	dB(A)	P-Hi : 46 Hi : 44 Me : 41 Lo : 39	Cooling : 48 Heating : 50
Exterior dimensions Height x Width x Depth	mm	250 × 1,620 × 690	1,300 × 970 × 370
Exterior appearance (Munsell color)		Plaster White (6.8Y8.9/0.2) near equivalent	Stucco White (4.2Y7.5/1.1) near equivalent
Net weight	kg	49	105
Refrigerant equipment Compressor type & Q'ty		—	RMT5134MDE3 × 1
Starting method		—	Direct line start
Refrigerant oil	ℓ	—	0.9 (M-MA68)
Heat exchanger		Louver fin & inner grooved tubing	M shape fin & inner grooved tubing
Refrigerant control		—	Electronic expansion valve
Air handling equipment Fan type & Q'ty		Centrifugal fan × 4	Propeller fan × 2
Motor <Starting method>	W	30 ×2 < Direct line start >	86 x 2 < Direct line start >
Air flow (Standard)	CMM	P-Hi : 28 Hi : 26 Me : 23 Lo : 21	100
External static pressure	Pa	0	—
Outdoor air intake		Not possible	—
Air filter, Q'ty		Pocket plastic net × 2 (Washable)	—
Shock & vibration absorber		Rubber sleeve (for fan motor)	Rubber sleeve (for Compressor)
Insulation (noise & heat)		Polyurethane form	—
Electric heater	W	—	20(Crank case heater)
Remote controller		wired : RC-E4 (option) wireless : RCN-E1R (option)	
Room temperature control		Thermostat by electronics	—
Safety equipment		Internal thermostat for fan motor Frost protection thermostat	Internal thermostat for fan motor Abnormal discharge temperature protection.
Installation data Refrigerant piping size	mm	Liquid line : I/U ϕ9.52 (3/8") Pipe ϕ9.52 (3/8") × 0.8 O/U ϕ9.52 (3/8")	
		Gas line : I/U ϕ15.88 (5/8") Pipe ϕ15.88 (5/8") × 1.0 O/U ϕ15.88 (5/8")	
Connecting method		Flare piping	Flare piping
Refrigerant line (one way) length		Max.100m	※1.See page 120
Vertical height difference between outdoor unit and indoor unit		Max.30m (Outdoor unit is higher) Max.15m (Outdoor unit is lower)	
Refrigerant Quantity		R410A 4.5kg in outdoor unit (incl. the amount for the piping of : 30m)	
Drain pump		—	—
Drain		Hose Connectable with VP20	Holes size ϕ20 × 3pcs
Insulation for piping		Necessary (both Liquid & Gas lines)	
Standard Accessories		Mounting kit, Drain hose	Edging

Notes (1) The data are measured at the following conditions.

Item	Indoor air temperature		Outdoor air temperature	
Operation	DB	WB	DB	WB
Cooling	27℃	19℃	35℃	24℃
Heating	20℃		7℃	6℃

(2) This packaged air-conditioner is manufactured and tested in conformity with the ISO.
(3) Sound pressure level indicates the value in an anechoic chamber. During operation these value are somewhat higher due to ambient temperature.
(4) The operation data indicates when the air-conditioner is operated at 400V50Hz or 380V60Hz.
(5) If wireless remote controller is used, only 3-speed fan setting (Hi-Me-Lo) is available.

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Adapted to **RoHS** directive

Item \ Model		FDEN125VNXVD	
		Indoor unit **FDEN125VD**	Outdoor unit **FDC125VNX**
		—	
Power source			220-240V～50Hz / 220V～60Hz
Operation data		Cooling	Heating
Nominal capacity	kW	12.5 [5.0 (Min.)～14.0 (Max.)]	14.0 [4.0 (Min.)～17.0 (Max.)]
Power consumption	kW	3.86	3.77
Running current	A	17.1 / 17.9	16.7 / 17.5
Power factor	%	98	98
Inrush current	A	5 < Max.running current 26 >	
Sound Pressure Level	dB(A)	P-Hi : 50 Hi : 46 Me : 44 Lo : 43	Cooling : 48 Heating : 50
Exterior dimensions Height x Width x Depth	mm	250 × 1,620 × 690	1,300 × 970 × 370
Exterior appearance (Munsell color)		Plaster White (6.8Y8.9/0.2) near equivalent	Stucco White (4.2Y7.5/1.1) near equivalent
Net weight	kg	49	105
Refrigerant equipment Compressor type & Q'ty		—	RMT5134MDE2 × 1
Starting method		—	Direct line start
Refrigerant oil	ℓ	—	0.9 (M-MA68)
Heat exchanger		Louver fin & inner grooved tubing	M shape fin & inner grooved tubing
Refrigerant control		—	Electronic expansion valve
Air handling equipment Fan type & Q'ty		Centrifugal fan × 4	Propeller fan × 2
Motor <Starting method>	W	40 × 2 < Direct line start >	86 × 2 < Direct line start >
Air flow (Standard)	CMM	P-Hi : 32 Hi : 29 Me : 26 Lo : 23	100
External static pressure	Pa	0	—
Outdoor air intake		Not possible	—
Air filter, Q'ty		Pocket plastic net × 2 (Washable)	—
Shock & vibration absorber		Rubber sleeve (for fan motor)	Rubber sleeve (for Compressor)
Insulation (noise & heat)		Polyurethane form	—
Electric heater	W	—	20 (Crank case heater)
Remote controller		wired : RC-E4 (option) wireless : RCN-E1R (option)	
Room temperature control		Thermostat by electronics	—
Safety equipment		Internal thermostat for fan motor Frost protection thermostat	Internal thermostat for fan motor Abnormal discharge temperature protection.
Installation data Refrigerant piping size	mm	Liquid line : I/U ϕ9.52 (3/8") Pipe ϕ9.52 (3/8") × 0.8 O/U ϕ9.52 (3/8")	
		Gas line : I/U ϕ15.88 (5/8") Pipe ϕ15.88 (5/8") × 1.0 O/U ϕ15.88 (5/8")	
Connecting method		Flare piping	Flare piping
Refrigerant line (one way) length		Max.100m	※1.See page 120
Vertical height difference between outdoor unit and indoor unit		Max.30m (Outdoor unit is higher) Max.15m (Outdoor unit is lower)	
Refrigerant Quantity		R410A 4.5kg in outdoor unit (incl. the amount for the piping of : 30m)	
Drain pump		—	—
Drain		Hose Connectable with VP20	Holes size ϕ20 × 3pcs
Insulation for piping		Necessary (both Liquid & Gas lines)	
Standard Accessories		Mounting kit, Drain hose	Edging

Notes (1) The data are measured at the following conditions.

Item	Indoor air temperature		Outdoor air temperature	
Operation	DB	WB	DB	WB
Cooling	27℃	19℃	35℃	24℃
Heating	20℃		7℃	6℃

(2) This packaged air-conditioner is manufactured and tested in conformity with the ISO.
(3) Sound pressure level indicates the value in an anechoic chamber. During operation these value are somewhat higher due to ambient temperature.
(4) The operation data indicates when the air-conditioner is operated at 230V50Hz or 220V60Hz.
(5) If wireless remote controller is used, only 3-speed fan setting (Hi-Me-Lo) is available.

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Adapted to **RoHS** directive

Item \ Model		FDEN125VSXVD	
		Indoor unit **FDEN125VD**	Outdoor unit **FDC125VSX**
		—	
Power source			380-415V 3N～50Hz / 380V 3N～60Hz
Operation data		Cooling	Heating
Nominal capacity	kW	12.5 [5.0 (Min.)～14.0 (Max.)]	14.0 [4.0 (Min.)～18.0 (Max.)]
Power consumption	kW	3.86	3.77
Running current	A	5.7 / 6.0	5.6 / 5.8
Power factor	%	98	97 / 99
Inrush current	A	5 < Max.running current 15 >	
Sound Pressure Level	dB(A)	P-Hi : 50 Hi : 46 Me : 44 Lo : 43	Cooling : 48 Heating : 50
Exterior dimensions Height x Width x Depth	mm	250 × 1,620 × 690	1,300 × 970 × 370
Exterior appearance (Munsell color)		Plaster White (6.8Y8.9/0.2) near equivalent	Stucco White (4.2Y7.5/1.1) near equivalent
Net weight	kg	46	105
Refrigerant equipment Compressor type & Q'ty		—	RMT5134MDE3 × 1
Starting method		—	Direct line start
Refrigerant oil	ℓ	—	0.9 (M-MA68)
Heat exchanger		Louver fin & inner grooved tubing	M shape fin & inner grooved tubing
Refrigerant control		—	Electronic expansion valve
Air handling equipment Fan type & Q'ty		Centrifugal fan × 4	Propeller fan × 2
Motor <Starting method>	W	40 × 2 < Direct line start >	86 × 2 < Direct line start >
Air flow (Standard)	CMM	P-Hi : 32 Hi : 29 Me : 26 Lo : 23	100
External static pressure	Pa	0	—
Outdoor air intake		Not possible	—
Air filter, Q'ty		Pocket plastic net × 2 (Washable)	—
Shock & vibration absorber		Rubber sleeve (for fan motor)	Rubber sleeve (for Compressor)
Insulation (noise & heat)		Polyurethane form	—
Electric heater	W	—	20 (Crank case heater)
Remote controller		wired : RC-E4 (option) wireless : RCN-E1R (option)	
Room temperature control		Thermostat by electronics	—
Safety equipment		Internal thermostat for fan motor Frost protection thermostat	Internal thermostat for fan motor Abnormal discharge temperature protection.
Installation data Refrigerant piping size	mm	Liquid line : I/U ϕ9.52 (3/8") Pipe ϕ9.52 (3/8") × 0.8 O/U ϕ9.52 (3/8")	
		Gas line : I/U ϕ15.88 (5/8") Pipe ϕ15.88 (5/8") × 1.0 O/U ϕ15.88 (5/8")	
Connecting method		Flare piping	Flare piping
Refrigerant line (one way) length		Max.100m	※1.See page 120
Vertical height difference between outdoor unit and indoor unit		Max.30m (Outdoor unit is higher) Max.15m (Outdoor unit is lower)	
Refrigerant Quantity		R410A 4.5kg in outdoor unit (incl. the amount for the piping of : 30m)	
Drain pump		—	—
Drain		Hose Connectable with VP20	Holes size ϕ 20 × 3pcs
Insulation for piping		Necessary (both Liquid & Gas lines)	
Standard Accessories		Mounting kit, Drain hose	Edging

Notes (1) The data are measured at the following conditions.

Item	Indoor air temperature		Outdoor air temperature	
Operation	DB	WB	DB	WB
Cooling	27℃	19℃	35℃	24℃
Heating	20℃		7℃	6℃

(2) This packaged air-conditioner is manufactured and tested in conformity with the ISO.
(3) Sound pressure level indicates the value in an anechoic chamber. During operation these value are somewhat higher due to ambient temperature.
(4) The operation data indicates when the air-conditioner is operated at 400V50Hz or 380V60Hz.
(5) If wireless remote controller is used, only 3-speed fan setting (Hi-Me-Lo) is available.

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Adapted to **RoHS** directive

Item \ Model		FDEN140VNXVD	
		Indoor unit **FDEN140VD**	Outdoor unit **FDC140VNX**
		—	
Power source			220-240V～50Hz / 220V～60Hz
Operation data		Cooling	Heating
Nominal capacity	kW	14.0 [5.0 (Min.)～16.0 (Max.)]	16.0 [4.0 (Min.)～18.0 (Max.)]
Power consumption	kW	4.98	4.69
Running current	A	22.1 / 23.1	20.8 / 21.8
Power factor	%	98	98
Inrush current	A	5 < Max.running current 26 >	
Sound Pressure Level	dB(A)	P-Hi : 50 Hi : 46 Me : 44 Lo : 43	Cooling : 49 Heating : 52
Exterior dimensions Height x Width x Depth	mm	250 × 1,620 × 690	1,300 × 970 × 370
Exterior appearance (Munsell color)		Plaster White (6.8Y8.9/0.2) near equivalent	Stucco White (4.2Y7.5/1.1) near equivalent
Net weight	kg	49	105
Refrigerant equipment Compressor type & Q'ty		—	RMT5134MDE2 × 1
Starting method		—	Direct line start
Refrigerant oil	ℓ	—	0.9 (M-MA68)
Heat exchanger		Louver fin & inner grooved tubing	M shape fin & inner grooved tubing
Refrigerant control		—	Electronic expansion valve
Air handling equipment Fan type & Q'ty		Centrifugal fan × 4	Propeller fan × 2
Motor <Starting method>	W	40 × 2 < Direct line start >	86 × 2 < Direct line start >
Air flow (Standard)	CMM	P-Hi : 32 Hi : 29 Me : 26 Lo : 23	100
External static pressure	Pa	0	—
Outdoor air intake		Not possible	—
Air filter, Q'ty		Pocket plastic net × 2 (Washable)	—
Shock & vibration absorber		Rubber sleeve (for fan motor)	Rubber sleeve (for Compressor)
Insulation (noise & heat)		Polyurethane form	—
Electric heater	W	—	20 (Crank case heater)
Remote controller		wired : RC-E4 (option) wireless : RCN-E1R (option)	
Room temperature control		Thermostat by electronics	—
Safety equipment		Internal thermostat for fan motor Frost protection thermostat	Internal thermostat for fan motor Abnormal discharge temperature protection.
Installation data Refrigerant piping size	mm	Liquid line : I/U ϕ9.52 (3/8") Pipe ϕ9.52 (3/8") × 0.8 O/U ϕ9.52 (3/8")	
		Gas line : I/U ϕ15.88 (5/8") Pipe ϕ15.88 (5/8") × 1.0 O/U ϕ15.88 (5/8")	
Connecting method		Flare piping	Flare piping
Refrigerant line (one way) length		Max.100m	※1.See page 120
Vertical height difference between outdoor unit and indoor unit		Max.30m (Outdoor unit is higher) Max.15m (Outdoor unit is lower)	
Refrigerant Quantity		R410A 4.5kg in outdoor unit (incl. the amount for the piping of : 30m)	
Drain pump		—	—
Drain		Hose Connectable with VP20	Holes size ϕ20 × 3pcs
Insulation for piping		Necessary (both Liquid & Gas lines)	
Standard Accessories		Mounting kit, Drain hose	Edging

Notes (1) The data are measured at the following conditions.

Item	Indoor air temperature		Outdoor air temperature	
Operation	DB	WB	DB	WB
Cooling	27˚C	19˚C	35˚C	24˚C
Heating	20˚C		7˚C	6˚C

(2) This packaged air-conditioner is manufactured and tested in conformity with the ISO.
(3) Sound pressure level indicates the value in an anechoic chamber. During operation these value are somewhat higher due to ambient temperature.
(4) The operation data indicates when the air-conditioner is operated at 230V50Hz or 220V60Hz.
(5) If wireless remote controller is used, only 3-speed fan setting (Hi-Me-Lo) is available.

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Adapted to **RoHS** directive

Item \ Model		FDEN140VSXVD	
		Indoor unit **FDEN140VD**	Outdoor unit **FDC140VSX**
		—	
Power source			380-415V 3N～50Hz / 380V 3N～60Hz
Operation data		Cooling	Heating
Nominal capacity	kW	14.0 [5.0 (Min.)～16.0 (Max.)]	16.0 [4.0 (Min.)～20.0 (Max.)]
Power consumption	kW	4.98	4.69
Running current	A	7.3 / 7.7	6.9 / 7.3
Power factor	%	98	98
Inrush current	A	5 < Max.running current 15 >	
Sound Pressure Level	dB(A)	P-Hi : 50 Hi : 46 Me : 44 Lo : 43	Cooling : 49 Heating : 52
Exterior dimensions Height x Width x Depth	mm	250 × 1,620 × 690	1,300 × 970 × 370
Exterior appearance (Munsell color)		Plaster White (6.8Y8.9/0.2) near equivalent	Stucco White (4.2Y7.5/1.1) near equivalent
Net weight	kg	49	105
Refrigerant equipment Compressor type & Q'ty		—	RMT5134MDE3 × 1
Starting method		—	Direct line start
Refrigerant oil	ℓ	—	0.9 (M-MA68)
Heat exchanger		Louver fin & inner grooved tubing	M shape fin & inner grooved tubing
Refrigerant control		—	Electronic expansion valve
Air handling equipment Fan type & Q'ty		Centrifugal fan × 4	Propeller fan × 2
Motor <Starting method>	W	40 × 2 < Direct line start >	86 × 2 < Direct line start >
Air flow (Standard)	CMM	P-Hi : 32 Hi : 29 Me : 26 Lo : 23	100
External static pressure	Pa	0	—
Outside air intake		Not possible	—
Air filter, Q'ty		Pocket plastic net × 2 (Washable)	—
Shock & vibration absorber		Rubber sleeve (for fan motor)	Rubber sleeve (for Compressor)
Insulation (noise & heat)		Polyurethane form	—
Electric heater	W	—	20 (Crank case heater)
Remote controller		wired : RC-E4 (option) wireless : RCN-E1R (option)	
Room temperature control		Thermostat by electronics	—
Safety equipment		Internal thermostat for fan motor Frost protection thermostat	Internal thermostat for fan motor Abnormal discharge temperature protection.
Installation data Refrigerant piping size	mm	Liquid line : I/U ϕ9.52 (3/8") Pipe ϕ9.52 (3/8") × 0.8 O/U ϕ9.52 (3/8")	
		Gas line : I/U ϕ15.88 (5/8") Pipe ϕ15.88 (5/8") × 1.0 O/U ϕ15.88 (5/8")	
Connecting method		Flare piping	Flare piping
Refrigerant line (one way) length		Max.100m	※1.See page 120
Vertical height difference between outdoor unit and indoor unit		Max.30m (Outdoor unit is higher) Max.15m (Outdoor unit is lower)	
Refrigerant Quantity		R410A 4.5kg in outdoor unit (incl. the amount for the piping of : 30m)	
Drain pump		—	—
Drain		Hose Connectable with VP20	Holes size ϕ20 × 3pcs
Insulation for piping		Necessary (both Liquid & Gas lines)	
Standard Accessories		Mounting kit, Drain hose	Edging

Notes (1) The data are measured at the following conditions.

Item	Indoor air temperature		Outdoor air temperature	
Operation	DB	WB	DB	WB
Cooling	27℃	19℃	35℃	24℃
Heating	20℃		7℃	6℃

(2) This packaged air-conditioner is manufactured and tested in conformity with the ISO.
(3) Sound pressure level indicates the value in an anechoic chamber. During operation these value are somewhat higher due to ambient temperature.
(4) The operation data indicates when the air-conditioner is operated at 400V50Hz or 380V60Hz.
(5) If wireless remote controller is used, only 3-speed fan setting (Hi-Me-Lo) is available.

PFA003Z911

(2) Twin type

Adapted to **RoHS** directive

Item \ Model		FDEN71VNXPVD	
		Indoor unit **FDEN40VD (2 units)**	Outdoor unit **FDC71VNX**
		—	
Power source			220-240V～50Hz / 220V～60Hz
Operation data		Cooling	Heating
Nominal capacity	kW	7.1 [3.2 (Min.)～8.0 (Max.)]	8.0 [3.6 (Min.)～9.0 (Max.)]
Power consumption	kW	1.98	2.40
Running current	A	8.8 / 9.2	10.7 / 11.2
Power factor	%	98	98
Inrush current	A	5 < Max.running current 17 >	
Sound Pressure Level	dB(A)	P-Hi : 46 Hi : 39 Me : 38 Lo : 37	Cooling : 51 Heating : 48
Exterior dimensions Height x Width x Depth	mm	210 × 1,070 × 690	750 × 880 (+88) × 340
Exterior appearance (Munsell color)		Plaster White (6.8Y8.9/0.2) near equivalent	Stucco White (4.2Y7.5/1.1) near equivalent
Net weight	kg	28	60
Refrigerant equipment Compressor type & Q'ty		—	RMT5118MDE2 × 1
Starting method		—	Direct line start
Refrigerant oil	ℓ	—	0.675 (M-MA68)
Heat exchanger		Louver fin & inner grooved tubing	M shape fin & inner grooved tubing
Refrigerant control		—	Electronic expansion valve
Air handling equipment Fan type & Q'ty		Centrifugal fan × 2	Propeller fan x 1
Motor <Starting method>	W	25 < Direct line start >	86 < Direct line start >
Air flow (Standard)	CMM	P-Hi : 13 Hi : 11 Me : 9 Lo : 7	Cooling : 60 Heating : 50
External static pressure	Pa	0	—
Outdoor air intake		Not possible	—
Air filter, Q'ty		Pocket plastic net × 2 (Washable)	—
Shock & vibration absorber		Rubber sleeve (for fan motor)	Rubber sleeve (for Compressor)
Insulation (noise & heat)		Polyurethane form	—
Electric heater	W	—	20 (Crank case heater)
Remote controller		wired : RC-E4 (option) wireless : RCN-E1R (option)	
Room temperature control		Thermostat by electronics	—
Safety equipment		Internal thermostat for fan motor Frost protection thermostat	Internal thermostat for fan motor Abnormal discharge temperature protection.
Installation data Refrigerant piping size	mm	Liquid line : I/U φ6.35 (1/4") ② φ9.52 (3/8") × 0.8 ① φ9.52 (3/8") × 0.8 O/U φ9.52 (3/8")	
		Gas line : I/U φ12.7 (1/2") ② φ12.7 (1/2") × 0.8 ① φ15.88 (5/8") × 1.0 O/U φ15.88 (5/8")	
Connecting method		Flare piping	Flare piping
Refrigerant line (one way) length		Max.50m	※1.See page 120
Vertical height difference between outdoor unit and indoor unit		Max.30m (Outdoor unit is higher) Max.15m (Outdoor unit is lower)	
Refrigerant Quantity		R410A 2.95kg in outdoor unit (incl. the amount for the piping of : 30m)	
Drain pump		—	—
Drain		Hose Connectable with VP20	Holes size φ20 × 3pcs
Insulation for piping		Necessary (both Liquid & Gas lines)	
Standard Accessories		Mounting kit, Drain hose	—

Notes (1) The data are measured at the following conditions.

Item	Indoor air temperature		Outdoor air temperature	
Operation	DB	WB	DB	WB
Cooling	27℃	19℃	35℃	24℃
Heating	20℃		7℃	6℃

(2) This packaged air-conditioner is manufactured and tested in conformity with the ISO.
(3) Sound pressure level indicates the value in an anechoic chamber. During operation these value are somewhat higher due to ambient temperature.
(4) The operation data indicates when the air-conditioner is operated at 230V50Hz or 220V60Hz.
(5) Indoor unit specifications for one unit. Capacity and operation data is two indoor units are combined and run together.
(6) Branching pipe set "DIS-WA1"×1(option). ① : Pipe of O/U～Branch, ② : Pipe of Branch～I/U
(7) If wireless remote controller is used, only 3-speed fan setting (Hi-Me-Lo) is available.

PFA003Z911

Adapted to **RoHS** directive

Item \ Model		FDEN100VNXPVD	
		Indoor unit **FDEN50VD (2 units)**	Outdoor unit **FDC100VNX**
		—	
Power source			220-240V～50Hz / 220V～60Hz
Operation data		Cooling	Heating
Nominal capacity	kW	10.0 [4.0 (Min.)～11.2 (Max.)]	11.2 [4.0 (Min.)～12.5 (Max.)]
Power consumption	kW	3.02	3.18
Running current	A	13.4 / 14.0	14.1 / 14.7
Power factor	%	98	98
Inrush current	A	5 < Max.running current 24 >	
Sound Pressure Level	dB(A)	P-Hi : 46 Hi : 39 Me : 38 Lo : 37	Cooling : 48 Heating : 50
Exterior dimensions Height x Width x Depth	mm	210 × 1,070 × 690	1,300 × 970 × 370
Exterior appearance (Munsell color)		Plaster White (6.8Y8.9/0.2) near equivalent	Stucco White (4.2Y7.5/1.1) near equivalent
Net weight	kg	28	105
Refrigerant equipment Compressor type & Q'ty		—	RMT5134MDE2 × 1
Starting method		—	Direct line start
Refrigerant oil	ℓ	—	0.9 (M-MA68)
Heat exchanger		Louver fin & inner grooved tubing	M shape fin & inner grooved tubing
Refrigerant control		—	Electronic expansion valve
Air handling equipment Fan type & Q'ty		Centrifugal fan × 2	Propeller fan × 2
Motor <Starting method>	W	25 < Direct line start >	86 x 2 < Direct line start >
Air flow (Standard)	CMM	P-Hi : 13 Hi : 11 Me : 9 Lo : 7	100
External static pressure	Pa	0	—
Outdoor air intake		Not possible	—
Air filter, Q'ty		Pocket plastic net × 2 (Washable)	—
Shock & vibration absorber		Rubber sleeve (for fan motor)	Rubber sleeve (for Compressor)
Insulation (noise & heat)		Polyurethane form	—
Electric heater	W	—	20 (Crank case heater)
Remote controller		wired : RC-E4 (option) wireless : RCN-E1R (option)	
Room temperature control		Thermostat by electronics	—
Safety equipment		Internal thermostat for fan motor Frost protection thermostat	Internal thermostat for fan motor Abnormal discharge temperature protection.
Installation data Refrigerant piping size	mm	Liquid line : I/U φ6.35 (1/4") ②φ9.52 (3/8") × 0.8 ①φ9.52 (3/8") × 0.8 O/U φ9.52 (3/8")	
		Gas line : I/U φ12.7 (1/2") ②φ12.7 (1/2") × 0.8 ①φ15.88 (5/8") × 1.0 O/U φ15.88 (5/8")	
Connecting method		Flare piping	Flare piping
Refrigerant line (one way) length		Max.100m	※1.See page 120
Vertical height difference between outdoor unit and indoor unit		Max.30m (Outdoor unit is higher) Max.15m (Outdoor unit is lower)	
Refrigerant Quantity		R410A 4,5kg (Pre-charged up to the piping length of 30m) Outdoor unit	
Drain pump		—	—
Drain		Hose Connectable with VP20	Holes size φ20 × 3pcs
Insulation for piping		Necessary (both Liquid & Gas lines)	
Standard Accessories		Mounting kit, Drain hose	Edging

Notes (1) The data are measured at the following conditions.

Item	Indoor air temperature		Outdoor air temperature	
Operation	DB	WB	DB	WB
Cooling	27℃	19℃	35℃	24℃
Heating	20℃		7℃	6℃

(2) This packaged air-conditioner is manufactured and tested in conformity with the ISO.
(3) Sound pressure level indicates the value in an anechoic chamber. During operation these value are somewhat higher due to ambient temperature.
(4) The operation data indicates when the air-conditioner is operated at 230V50Hz or 220V60Hz.
(5) Indoor unit specifications for one unit. Capacity and operation data is two indoor units are combined and run together.
(6) Branching pipe set "DIS-WA1"×1(option). ① : Pipe of O/U～Branch, ② : Pipe of Branch～I/U
(7) If wireless remote controller is used, only 3-speed fan setting (Hi-Me-Lo) is available.

PFA003Z911

Adapted to **RoHS** directive

Item \ Model		FDEN100VSXPVD	
		Indoor unit **FDEN50VD (2 units)**	Outdoor unit **FDC100VSX**
		—	
Power source			380-415V 3N～50Hz / 380V 3N～60Hz
Operation data		Cooling	Heating
Nominal capacity	kW	10.0 [4.0 (Min.)～11.2 (Max.)]	11.2 [4.0 (Min.)～16.0 (Max.)]
Power consumption	kW	3.02	3.18
Running current	A	4.4 / 4.7	4.7 / 4.9
Power factor	%	99 / 98	98 / 99
Inrush current	A	5 < Max.running current 15 >	
Sound Pressure Level	dB(A)	P-Hi : 46 Hi : 39 Me : 38 Lo : 37	Cooling : 48 Heating : 50
Exterior dimensions Height x Width x Depth	mm	210 × 1,070 × 690	1,300 × 970 × 370
Exterior appearance (Munsell color)		Plaster White (6.8Y8.9/0.2) near equivalent	Stucco White (4.2Y7.5/1.1) near equivalent
Net weight	kg	28	105
Refrigerant equipment Compressor type & Q'ty		—	RMT5134MDE3 × 1
Starting method		—	Direct line start
Refrigerant oil	ℓ	—	0.9 (M-MA68)
Heat exchanger		Louver fin & inner grooved tubing	M shape fin & inner grooved tubing
Refrigerant control		—	Electronic expansion valve
Air handling equipment Fan type & Q'ty		Centrifugal fan × 2	Propeller fan × 2
Motor <Starting method>	W	25 < Direct line start >	86 x 2 < Direct line start >
Air flow (Standard)	CMM	P-Hi : 13 Hi : 11 Me : 9 Lo : 7	100
External static pressure	Pa	0	—
Outdoor air intake		Not possible	—
Air filter, Q'ty		Pocket plastic net × 2 (Washable)	—
Shock & vibration absorber		Rubber sleeve (for fan motor)	Rubber sleeve (for Compressor)
Insulation (noise & heat)		Polyurethane form	—
Electric heater	W	—	20 (Crank case heater)
Remote controller		wired : RC-E4 (option) wireless : RCN-E1R (option)	
Room temperature control		Thermostat by electronics	—
Safety equipment		Internal thermostat for fan motor Frost protection thermostat	Internal thermostat for fan motor Abnormal discharge temperature protection.
Installation data Refrigerant piping size	mm	Liquid line : I/U φ6.35 (1/4") ②φ9.52 (3/8") × 0.8 ①φ9.52 (3/8") × 0.8 O/U φ9.52 (3/8")	
		Gas line : I/U φ12.7 (1/2") ②φ12.7 (1/2") × 0.8 ①φ15.88 (5/8") × 1.0 O/U φ15.88 (5/8")	
Connecting method		Flare piping	Flare piping
Refrigerant line (one way) length		Max.10m	※1.See page 120
Vertical height difference between outdoor unit and indoor unit		Max.30m (Outdoor unit is higher) Max.15m (Outdoor unit is lower)	
Refrigerant Quantity		R410A 4,5kg (Pre-charged up to the piping length of 30m) Outdoor unit	
Drain pump		—	—
Drain		Hose Connectable with VP20	Holes size φ20 × 3pcs
Insulation for piping		Necessary (both Liquid & Gas lines)	
Standard Accessories		Mounting kit, Drain hose	Edging

Notes (1) The data are measured at the following conditions.

Item	Indoor air temperature		Outdoor air temperature	
Operation	DB	WB	DB	WB
Cooling	27℃	19℃	35℃	24℃
Heating	20℃		7℃	6℃

(2) This packaged air-conditioner is manufactured and tested in conformity with the ISO.
(3) Sound pressure level indicates the value in an anechoic chamber. During operation these value are somewhat higher due to ambient temperature.
(4) The operation data indicates when the air-conditioner is operated at 400V50Hz or 380V60Hz.
(5) Indoor unit specifications for one unit. Capacity and operation data is two indoor units are combined and run together.
(6) Branching pipe set "DIS-WA1"×1(option). ① : Pipe of O/U～Branch, ② : Pipe of Branch～I/U
(7) If wireless remote controller is used, only 3-speed fan setting (Hi-Me-Lo) is available.

PFA003Z911

Adapted to **RoHS** directive

Item \ Model		FDEN125VNXPVD	
		Indoor unit **FDEN60VD (2 units)**	Outdoor unit **FDC125VNX**
		—	
Power source			220-240V～50Hz / 220V～60Hz
Operation data		Cooling	Heating
Nominal capacity	kW	12.5 [5.0 (Min.)～14.0 (Max.)]	14.0 [4.0 (Min.)～17.0 (Max.)]
Power consumption	kW	3.86	3.70
Running current	A	17.1 / 17.9	16.4 / 17.2
Power factor	%	98	98
Inrush current	A	5 < Max.running current 26 >	
Sound Pressure Level	dB(A)	P-Hi : 50 Hi : 41 Me : 39 Lo : 38	Cooling : 48 Heating : 50
Exterior dimensions Height x Width x Depth	mm	210 × 1,320 × 690	1,300 × 970 × 370
Exterior appearance (Munsell color)		Plaster White (6.8Y8.9/0.2) near equivalent	Stucco White (4.2Y7.5/1.1) near equivalent
Net weight	kg	37	105
Refrigerant equipment Compressor type & Q'ty		—	RMT5134MDE2 × 1
Starting method		—	Direct line start
Refrigerant oil	ℓ	—	0.9 (M-MA68)
Heat exchanger		Louver fin & inner grooved tubing	M shape fin & inner grooved tubing
Refrigerant control		—	Electronic expansion valve
Air handling equipment Fan type & Q'ty		Centrifugal fan × 4	Propeller fan × 2
Motor <Starting method>	W	20 × 2 < Direct line start >	86 × 2 < Direct line start >
Air flow (Standard)	CMM	P-Hi : 22 Hi : 18 Me : 14 Lo : 12	100
External static pressure	Pa	0	—
Outdoor air intake		Not possible	—
Air filter, Q'ty		Pocket plastic net × 2 (Washable)	—
Shock & vibration absorber		Rubber sleeve (for fan motor)	Rubber sleeve (for Compressor)
Insulation (noise & heat)		Polyurethane form	—
Electric heater	W	—	20 (Crank case heater)
Remote controller		wired : RC-E4 (option) wireless : RCN-E1R (option)	
Room temperature control		Thermostat by electronics	—
Safety equipment		Internal thermostat for fan motor Frost protection thermostat	Internal thermostat for fan motor Abnormal discharge temperature protection.
Installation data Refrigerant piping size	mm	Liquid line : I/U φ6.35 (1/4") ② φ9.52 (3/8") × 0.8 ① φ9.52 (3/8") × 0.8 O/U φ9.52 (3/8")	
		Gas line : I/U φ12.7 (1/2") ② φ12.7 (1/2") × 0.8 ① φ15.88 (5/8") × 1.0 O/U φ15.88 (5/8")	
Connecting method		Flare piping	Flare piping
Refrigerant line (one way) length		Max.100m	※1. See page 120
Vertical height difference between outdoor unit and indoor unit		Max.30m (Outdoor unit is higher) Max.15m (Outdoor unit is lower)	
Refrigerant Quantity		R410A 4.5kg (Pre-charged up to the piping length of 30m) Outdoor unit	
Drain pump		—	—
Drain		Hose Connectable with VP20	Holes size φ20 × 3pcs
Insulation for piping		Necessary (both Liquid & Gas lines)	
Standard Accessories		Mounting kit, Drain hose	Edging

Notes (1) The data are measured at the following conditions.

Item	Indoor air temperature		Outdoor air temperature	
Operation	DB	WB	DB	WB
Cooling	27℃	19℃	35℃	24℃
Heating	20℃		7℃	6℃

(2) This packaged air-conditioner is manufactured and tested in conformity with the ISO.
(3) Sound pressure level indicates the value in an anechoic chamber. During operation these value are somewhat higher due to ambient temperature.
(4) The operation data indicates when the air-conditioner is operated at 230V50Hz or 220V60Hz.
(5) Indoor unit specifications for one unit. Capacity and operation data is two indoor units are combined and run together.
(6) Branching pipe set "DIS-WA1"×1(option). ① : Pipe of O/U～Branch, ② : Pipe of Branch～I/U
(7) If wireless remote controller is used, only 3-speed fan setting (Hi-Me-Lo) is available.

PFA003Z911

Adapted to **RoHS** directive

Item \ Model		FDEN125VSXPVD	
		Indoor unit **FDEN60VD (2 units)**	Outdoor unit **FDC125VSX**
		—	
Power source			380-415V 3N～50Hz / 380V 3N～60Hz
Operation data		Cooling	Heating
Nominal capacity	kW	12.5 [5.0 (Min.)～14.0 (Max.)]	14.0 [4.0 (Min.)～18.0 (Max.)]
Power consumption	kW	3.86	3.70
Running current	A	5.7 / 6.0	5.4 / 5.7
Power factor	%	98	99
Inrush current	A	5 < Max.running current 15 >	
Sound Pressure Level	dB(A)	P-Hi : 50 Hi : 41 Me : 39 Lo : 38	Cooling : 48 Heating : 50
Exterior dimensions Height x Width x Depth	mm	210 × 1,320 × 690	1,300 × 970 × 370
Exterior appearance (Munsell color)		Plaster White (6.8Y8.9/0.2) near equivalent	Stucco White (4.2Y7.5/1.1) near equivalent
Net weight	kg	37	105
Refrigerant equipment Compressor type & Q'ty		—	RMT5134MDE3 × 1
Starting method		—	Direct line start
Refrigerant oil	ℓ	—	0.9 (M-MA68)
Heat exchanger		Louver fin & inner grooved tubing	M shape fin & inner grooved tubing
Refrigerant control		—	Electronic expansion valve
Air handling equipment Fan type & Q'ty		Centrifugal fan × 4	Propeller fan × 2
Motor <Starting method>	W	20 × 2 < Direct line start >	86 × 2 < Direct line start >
Air flow (Standard)	CMM	P-Hi : 22 Hi : 18 Me : 14 Lo : 12	100
External static pressure	Pa	0	—
Outdoor air intake		Not possible	—
Air filter, Q'ty		Pocket plastic net × 2 (Washable)	—
Shock & vibration absorber		Rubber sleeve (for fan motor)	Rubber sleeve (for Compressor)
Insulation (noise & heat)		Polyurethane form	—
Electric heater	W	—	20 (Crank case heater)
Remote controller		wired : RC-E4 (option) wireless : RCN-E1R (option)	
Room temperature control		Thermostat by electronics	—
Safety equipment		Internal thermostat for fan motor Frost protection thermostat	Internal thermostat for fan motor Abnormal discharge temperature protection.
Installation data Refrigerant piping size	mm	Liquid line : I/U φ6.35 (1/4") ②φ9.52 (3/8") × 0.8 ①φ9.52 (3/8") × 0.8 O/U φ9.52 (3/8")	
		Gas line : I/U φ12.7 (1/2") ②φ12.7 (1/2") × 0.8 ①φ15.88 (5/8") × 1.0 O/U φ15.88 (5/8")	
Connecting method		Flare piping	Flare piping
Refrigerant line (one way) length		Max.100m	※1. See page 120
Vertical height difference between outdoor unit and indoor unit		Max.30m (Outdoor unit is higher) Max.15m (Outdoor unit is lower)	
Refrigerant Quantity		R410A 4.5kg (Pre-charged up to the piping length of 30m) Outdoor unit	
Drain pump		—	—
Drain		Hose Connectable with VP20	Holes size φ20 × 3pcs
Insulation for piping		Necessary (both Liquid & Gas lines)	
Standard Accessories		Mounting kit, Drain hose	Edging

Notes (1) The data are measured at the following conditions.

Item	Indoor air temperature		Outdoor air temperature	
Operation	DB	WB	DB	WB
Cooling	27˚C	19˚C	35˚C	24˚C
Heating	20˚C		7˚C	6˚C

(2) This packaged air-conditioner is manufactured and tested in conformity with the ISO.
(3) Sound pressure level indicates the value in an anechoic chamber. During operation these value are somewhat higher due to ambient temperature.
(4) The operation data indicates when the air-conditioner is operated at 400V50Hz or 380V60Hz.
(5) Indoor unit specifications for one unit. Capacity and operation data is two indoor units are combined and run together.
(6) Branching pipe set "DIS-WA1"×1(option). ① : Pipe of O/U～Branch, ② : Pipe of Branch～I/U
(7) If wireless remote controller is used, only 3-speed fan setting (Hi-Me-Lo) is available.

PFA003Z911

Adapted to **RoHS** directive

Item \ Model		FDEN140VNXPVD	
		Indoor unit **FDEN71VD (2 units)**	Outdoor unit **FDC140VNX**
		—	
Power source			220-240V～50Hz / 220V～60Hz
Operation data		Cooling	Heating
Nominal capacity	kW	14.0 [5.0 (Min.)～16.0 (Max.)]	16.0 [4.0 (Min.)～18.0 (Max.)]
Power consumption	kW	4.78	4.43
Running current	A	21.2 / 22.2	19.7 / 20.5
Power factor	%	98	98
Inrush current	A	5 < Max.running current 26 >	
Sound Pressure Level	dB(A)	P-Hi : 50 Hi : 41 Me : 39 Lo : 38	Cooling : 49 Heating : 52
Exterior dimensions Height x Width x Depth	mm	210 × 1,320 × 690	1,300 × 970 × 370
Exterior appearance (Munsell color)		Plaster White (6.8Y8.9/0.2) near equivalent	Stucco White (4.2Y7.5/1.1) near equivalent
Net weight	kg	37	105
Refrigerant equipment Compressor type & Q'ty		—	RMT5134MDE2 × 1
Starting method		—	Direct line start
Refrigerant oil	ℓ	—	0.9 (M-MA68)
Heat exchanger		Louver fin & inner grooved tubing	M shape fin & inner grooved tubing
Refrigerant control		—	Electronic expansion valve
Air handling equipment Fan type & Q'ty		Centrifugal fan × 4	Propeller fan × 2
Motor <Starting method>	W	20 × 2 < Direct line start >	86 × 2 < Direct line start >
Air flow (Standard)	CMM	P-Hi : 22 Hi : 18 Me : 14 Lo : 12	100
External static pressure	Pa	0	—
Outdoor air intake		Not possible	—
Air filter, Q'ty		Pocket plastic net × 2 (Washable)	—
Shock & vibration absorber		Rubber sleeve (for fan motor)	Rubber sleeve (for Compressor)
Insulation (noise & heat)		Polyurethane form	—
Electric heater	W	—	20 (Crank case heater)
Remote controller		wired : RC-E4 (option) wireless : RCN-E1R (option)	
Room temperature control		Thermostat by electronics	—
Safety equipment		Internal thermostat for fan motor Frost protection thermostat	Internal thermostat for fan motor Abnormal discharge temperature protection.
Installation data Refrigerant piping size	mm	Liquid line : I/U φ9.52 (3/8") ②φ9.52 (3/8") × 0.8 ①φ9.52 (3/8") × 0.8 O/U φ9.52 (3/8")	
		Gas line : I/U φ15.88 (5/8") ②φ15.88 (5/8") × 1.0 ①φ15.88 (5/8") × 1.0 O/U φ15.88 (5/8")	
Connecting method		Flare piping	Flare piping
Refrigerant line (one way) length		Max.100m	※1. See page 120
Vertical height difference between outdoor unit and indoor unit		Max.30m (Outdoor unit is higher) Max.15m (Outdoor unit is lower)	
Refrigerant Quantity		R410A 4.5kg (Pre-charged up to the piping length of 30m) Outdoor unit	
Drain pump		—	—
Drain		Hose Connectable with VP20	Holes size φ20 × 3pcs
Insulation for piping		Necessary (both Liquid & Gas lines)	
Standard Accessories		Mounting kit, Drain hose	Edging

Notes (1) The data are measured at the following conditions.

Item	Indoor air temperature		Outdoor air temperature	
Operation	DB	WB	DB	WB
Cooling	27℃	19℃	35℃	24℃
Heating	20℃		7℃	6℃

(2) This packaged air-conditioner is manufactured and tested in conformity with the ISO.
(3) Sound pressure level indicates the value in an anechoic chamber. During operation these value are somewhat higher due to ambient temperature.
(4) The operation data indicates when the air-conditioner is operated at 230V50Hz or 220V60Hz.
(5) Indoor unit specifications for one unit. Capacity and operation data is two indoor units are combined and run together.
(6) Branching pipe set "DIS-WA1"×1(option). ① : Pipe of O/U～Branch, ② : Pipe of Branch～I/U
(7) If wireless remote controller is used, only 3-speed fan setting (Hi-Me-Lo) is available.

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Adapted to **RoHS** directive

Item \ Model		FDEN140VSXPVD	
		Indoor unit **FDEN71VD (2 units)**	Outdoor unit **FDC140VSX**
		—	
Power source			380-415V 3N～50Hz / 380V 3N～60Hz
Operation data		Cooling	Heating
Nominal capacity	kW	14.0 [5.0 (Min.)～16.0 (Max.)]	16.0 [4.0 (Min.)～20.0 (Max.)]
Power consumption	kW	4.78	4.43
Running current	A	7.0 / 7.4	6.5 / 6.9
Power factor	%	99 / 98	98
Inrush current	A	5 < Max.running current 15 >	
Sound Pressure Level	dB(A)	P-Hi : 50 Hi : 41 Me : 39 Lo : 38	Cooling : 49 Heating : 52
Exterior dimensions Height x Width x Depth	mm	210 × 1,320 × 690	1,300 × 970 × 370
Exterior appearance (Munsell color)		Plaster White (6.8Y8.9/0.2) near equivalent	Stucco White (4.2Y7.5/1.1) near equivalent
Net weight	kg	37	105
Refrigerant equipment Compressor type & Q'ty		—	RMT5134MDE3 × 1
Starting method		—	Direct line start
Refrigerant oil	ℓ	—	0.9 (M-MA68)
Heat exchanger		Louver fin & inner grooved tubing	M shape fin & inner grooved tubing
Refrigerant control		—	Electronic expansion valve
Air handling equipment Fan type & Q'ty		Centrifugal fan × 4	Propeller fan × 2
Motor <Starting method>	W	20 × 2 < Direct line start >	86 × 2 < Direct line start >
Air flow (Standard)	CMM	P-Hi : 22 Hi : 18 Me : 14 Lo : 12	100
External static pressure	Pa	0	—
Outdoor air intake		Not possible	—
Air filter, Q'ty		Pocket plastic net × 2 (Washable)	—
Shock & vibration absorber		Rubber sleeve (for fan motor)	Rubber sleeve (for Compressor)
Insulation (noise & heat)		Polyurethane form	—
Electric heater	W	—	20 (Crank case heater)
Remote controller		wired : RC-E4 (option) wireless : RCN-E1R (option)	
Room temperature control		Thermostat by electronics	—
Safety equipment		Internal thermostat for fan motor Frost protection thermostat	Internal thermostat for fan motor Abnormal discharge temperature protection.
Installation data Refrigerant piping size	mm	Liquid line : I/U ϕ9.52 (3/8") ②ϕ9.52 (3/8") × 0.8 ①ϕ9.52 (3/8") × 0.8 O/U ϕ9.52 (3/8")	
		Gas line : I/U ϕ15.88 (5/8") ②ϕ15.88 (5/8") × 1.0 ①ϕ15.88 (5/8") × 1.0 O/U ϕ15.88 (5/8")	
Connecting method		Flare piping	Flare piping
Refrigerant line (one way) length		Max.100m	※1. See page 120
Vertical height difference between outdoor unit and indoor unit		Max.30m (Outdoor unit is higher) Max.15m (Outdoor unit is lower)	
Refrigerant Quantity		R410A 4.5kg (Pre-charged up to the piping length of 30m) Outdoor unit	
Drain pump		—	—
Drain		Hose Connectable with VP20	Holes size ϕ20 × 3pcs
Insulation for piping		Necessary (both Liquid & Gas lines)	
Standard Accessories		Mounting kit, Drain hose	Edging

Notes (1) The data are measured at the following conditions.

Item	Indoor air temperature		Outdoor air temperature	
Operation	DB	WB	DB	WB
Cooling	27˚C	19˚C	35˚C	24˚C
Heating	20˚C		7˚C	6˚C

(2) This packaged air-conditioner is manufactured and tested in conformity with the ISO.
(3) Sound pressure level indicates the value in an anechoic chamber. During operation these value are somewhat higher due to ambient temperature.
(4) The operation data indicates when the air-conditioner is operated at 400V50Hz or 380V60Hz.
(5) Indoor unit specifications for one unit. Capacity and operation data is two indoor units are combined and run together.
(6) Branching pipe set "DIS-WA1"×1(option). ① : Pipe of O/U～Branch, ② : Pipe of Branch～I/U
(7) If wireless remote controller is used, only 3-speed fan setting (Hi-Me-Lo) is available.

PFA003Z911

(3) Triple type

Adapted to **RoHS** directive

Item \ Model		FDEN140VNXTVD	
		Indoor unit **FDEN50VD (3 units)**	Outdoor unit **FDC140VNX**
		—	
Power source			220-240V～50Hz / 220V～60Hz
Operation data		Cooling	Heating
Nominal capacity	kW	14.0 [5.0 (Min.)～16.0 (Max.)]	16.0 [4.0 (Min.)～18.0 (Max.)]
Power consumption	kW	4.72	4.38
Running current	A	20.9 / 21.9	19.4 / 20.3
Power factor	%	98	98
Inrush current	A	5 < Max.running current 26 >	
Sound Pressure Level	dB(A)	P-Hi : 46 Hi : 39 Me : 38 Lo : 37	Cooling : 49 Heating : 52
Exterior dimensions Height x Width x Depth	mm	210 × 1,070 × 690	1,300 × 970 × 370
Exterior appearance (Munsell color)		Plaster White (6.8Y8.9/0.2) near equivalent	Stucco White (4.2Y7.5/1.1) near equivalent
Net weight	kg	28	105
Refrigerant equipment Compressor type & Q'ty		—	RMT5134MDE2 × 1
Starting method		—	Direct line start
Refrigerant oil	ℓ	—	0.9 (M-MA68)
Heat exchanger		Louver fin & inner grooved tubing	M shage fin & inner grooved tubing
Refrigerant control		—	Electronic expansion valve
Air handling equipment Fan type & Q'ty		Centrifugal fan × 2	Propeller fan × 2
Motor <Starting method>	W	25 < Direct line start >	86 × 2 < Direct line start >
Air flow (Standard)	CMM	P-Hi : 13 Hi : 11 Me : 9 Lo : 7	100
External static pressure	Pa	0	—
Oudoor air intake		Not possible	—
Air filter, Q'ty		Pocket plastic net × 2 (Washable)	—
Shock & vibration absorber		Rubber sleeve (for fan motor)	Rubber sleeve (for Compressor)
Insulation (noise & heat)		Polyurethane form	—
Electric heater	W	—	20 (Crank case heater)
Remote controller		wired : RC-E4 (option) wireless : RCN-E1R (option)	
Room temperature control		Thermostat by electronics	—
Safety equipment		Internal thermostat for fan motor Frost protection thermostat	Internal thermostat for fan motor Abnormal discharge temperature protection.
Installation data Refrigerant piping size	mm	Liquid line : I/U φ6.35 (1/4") ② φ9.52 (3/8") × 0.8 ① φ9.52 (3/8") × 0.8 O/U φ9.52 (3/8")	
		Gas line : I/U φ12.7 (1/2") ② φ12.7 (1/2") × 0.8 ① φ15.88 (5/8") × 1.0 O/U φ15.88 (5/8")	
Connecting method		Flare piping	Flare piping
Refrigerant line (one way) length		Max.100m	※1. See page 121
Vertical height difference between outdoor unit and indoor unit		Max.30m (Outdoor unit is higher) Max.15m (Outdoor unit is lower)	
Refrigerant Quantity		R410A 4.5kg (Pre-charged up to the piping length of 30m) Outdoor unit	
Drain pump		—	—
Drain		Hose Connectable with VP20	Holes size φ20 × 3pcs
Insulation for piping		Necessary (both Liquid & Gas lines)	
Standard Accessories		Mounting kit, Drain hose	Edging

Notes (1) The data are measured at the following conditions.

Item	Indoor air temperature		Outdoor air temperature	
Operation	DB	WB	DB	WB
Cooling	27℃	19℃	35℃	24℃
Heating	20℃		7℃	6℃

(2) This packaged air-conditioner is manufactured and tested in conformity with the ISO.
(3) Sound pressure level indicates the value in an anechoic chamber. During operation these value are somewhat higher due to ambient temperature.
(4) The operation data indicates when the air-conditioner is operated at 230V50Hz or 220V60Hz.
(5) Indoor unit specifications for one unit. Capacity and operation data is three indoor units are combined and run together.
(6) Branching pipe set "DIS-TA1"×1(option). ① : Pipe of O/U～Branch, ② : Pipe of Branch～I/U
(7) If wireless remote controller is used, only 3-speed fan setting (Hi-Me-Lo) is available.

PFA003Z911

Adapted to **RoHS** directive

Item \ Model		FDEN140VSXTVD	
		Indoor unit **FDEN50VD (3 units)**	Outdoor unit **FDC140VSX**
		—	
Power source			380-415V 3N～50Hz / 380V 3N～60Hz
Operation data		Cooling	Heating
Nominal capacity	kW	14.0 [5.0 (Min.)～16.0 (Max.)]	16.0 [4.0 (Min.)～20.0 (Max.)]
Power consumption	kW	4.72	4.38
Running current	A	7.0 / 7.3	6.5 / 6.8
Power factor	%	97 / 98	97 / 98
Inrush current	A	5 < Max.running current 15 >	
Sound Pressure Level	dB(A)	P-Hi : 46 Hi : 39 Me : 38 Lo : 37	Cooling : 49 Heating : 52
Exterior dimensions Height x Width x Depth	mm	210 × 1,070 × 690	1,300 × 970 × 370
Exterior appearance (Munsell color)		Plaster White (6.8Y8.9/0.2) near equivalent	Stucco White (4.2Y7.5/1.1) near equivalent
Net weight	kg	28	105
Refrigerant equipment Compressor type & Q'ty		—	RMT5134MDE3 × 1
Starting method		—	Direct line start
Refrigerant oil	ℓ	—	0.9 (M-MA68)
Heat exchanger		Louver fin & inner grooved tubing	M shape fin & inner grooved tubing
Refrigerant control		—	Electronic expansion valve
Air handling equipment Fan type & Q'ty		Centrifugal fan × 2	Propeller fan × 2
Motor <Starting method>	W	25 < Direct line start >	86 × 2 < Direct line start >
Air flow (Standard)	CMM	P-Hi : 13 Hi : 11 Me : 9 Lo : 7	100
External static pressure	Pa	0	—
Outdoor air intake		Not possible	—
Air filter, Q'ty		Pocket plastic net × 2 (Washable)	—
Shock & vibration absorber		Rubber sleeve (for fan motor)	Rubber sleeve (for Compressor)
Insulation (noise & heat)		Polyurethane form	—
Electric heater	W	—	20 (Crank case heater)
Remote controller		wired : RC-E4 (option) wireless : RCN-E1R (option)	
Room temperature control		Thermostat by electronics	—
Safety equipment		Internal thermostat for fan motor Frost protection thermostat	Internal thermostat for fan motor Abnormal discharge temperature protection.
Installation data Refrigerant piping size	mm	Liquid line : I/U φ6.35 (1/4") ②φ9.52 (3/8") × 0.8 ①φ9.52 (3/8") × 0.8 O/U φ9.52 (3/8")	
		Gas line : I/U φ12.7 (1/2") ②φ12.7 (1/2") × 0.8 ①φ15.88 (5/8") × 1.0 O/U φ15.88 (5/8")	
Connecting method		Flare piping	Flare piping
Refrigerant line (one way) length		Max.100m	※1. See page 121
Vertical height difference between outdoor unit and indoor unit		Max.30m (Outdoor unit is higher) Max.15m (Outdoor unit is lower)	
Refrigerant Quantity		R410A 4.5kg (Pre-charged up to the piping length of 30m) Outdoor unit	
Drain pump		—	—
Drain		Hose Connectable with VP20	Holes size φ20 × 3pcs
Insulation for piping		Necessary (both Liquid & Gas lines)	
Standard Accessories		Mounting kit, Drain hose	Edging

Notes (1) The data are measured at the following conditions.

Item	Indoor air temperature		Outdoor air temperature	
Operation	DB	WB	DB	WB
Cooling	27˚C	19˚C	35˚C	24˚C
Heating	20˚C		7˚C	6˚C

(2) This packaged air-conditioner is manufactured and tested in conformity with the ISO.
(3) Sound pressure level indicates the value in an anechoic chamber. During operation these value are somewhat higher due to ambient temperature.
(4) The operation data indicates when the air-conditioner is operated at 400V50Hz or 380V60Hz.
(5) Indoor unit specifications for one unit. Capacity and operation data is three indoor units are combined and run together.
(6) Branching pipe set "DIS-TA1"×1(option). ① : Pipe of O/U～Branch, ② : Pipe of Branch～I/U
(7) If wireless remote controller is used, only 3-speed fan setting (Hi-Me-Lo) is available.

PFA003Z911

1.4 Duct connected-Low/Middle static pressure type (FDUM)

(1) Single type

Adapted to **RoHS** directive

Item \ Model		FDUM71VNXVD	
		Indoor unit **FDUM71VD**	Outdoor unit **FDC71VNX**
		—	
Power source			220-240V～50Hz / 220V～60Hz
Operation data		Cooling	Heating
Nominal capacity	kW	7.1 [3.2 (Min.)～8.0 (Max.)]	8.0 [3.6 (Min.)～9.0 (Max.)]
Power consumption	kW	2.14	2.16
Running current	A	9.5 / 10.0	9.6 / 10.1
Power factor	%	98	98
Inrush current	A	5 < Max.running current 17 >	
Sound Pressure Level	dB(A)	P-Hi : 38 Hi : 35 Me : 32 Lo : 29	Cooling : 51 Heating : 48
Exterior dimensions Height x Width x Depth	mm	299 × 950 × 635	750 × 880 (+88) × 340
Exterior appearance (Munsell color)		—	Stucco White (4.2Y7.5/1.1) near equivalent
Net weight	kg	40	60
Refrigerant equipment Compressor type & Q'ty		—	RMT5118MDE2 × 1
Starting method		—	Direct line start
Refrigerant oil	ℓ	—	0.675 (M-MA68)
Heat exchanger		Louver fin & inner grooved tubing	M shape fin & inner grooved tubing
Refrigerant control		—	Electronic expansion valve
Air handling equipment Fan type & Q'ty		Centrifugal fan × 2	Propeller fan x 1
Motor <Starting method>	W	100 < Direct line start >	86 < Direct line start >
Air flow (Standard)	CMM	P-Hi : 23 Hi : 20 Me : 18 Lo : 15	Cooling : 60 Heating : 50
External static pressure	Pa	85/100 (at 20CMM)	—
Outdoor air intake		Possible	—
Air filter, Q'ty		Procure locally	—
Shock & vibration absorber		Rubber sleeve (for fan motor)	Rubber sleeve (for Compressor)
Insulation (noise & heat)		Polyurethane form	—
Electric heater	W	—	20 (Crank case heater)
Remote controller		wired : RC-E4 (option) wireless : RCN-KIT3-E (option)	
Room temperature control		Thermostat by electronics	—
Safety equipment		Internal thermostat for fan motor Frost protection thermostat	Internal thermostat for fan motor Abnormal discharge temperature protection.
Installation data Refrigerant piping size	mm	Liquid line : I/U φ9.52 (3/8") Pipe φ9.52 (3/8") × 0.8 O/U φ9.52 (3/8")	
		Gas line : I/U φ15.88 (5/8") Pipe φ15.88 (5/8") × 1.0 O/U φ15.88 (5/8")	
Connecting method		Flare piping	Flare piping
Refrigerant line (one way) length		Max.50m	※1. See page 120
Vertical height difference between outdoor unit and indoor unit		Max.30m (Outdoor unit is higher) Max.15m (Outdoor unit is lower)	
Refrigerant Quantity		R410A 2.95kg in outdoor unit (incl. the amount for the piping of : 30m)	
Drain pump		Built-in Drain pump	—
Drain		Hose Connectable with VP20	Holes size φ20 x 3pcs
Insulation for piping		Necessary (both Liquid & Gas lines)	
Standard Accessories		Drain hose	—

Notes (1) The data are measured at the following conditions.

Item	Indoor air temperature		Outdoor air temperature		External static pressure of indoor unit [Pa]
Operation	DB	WB	DB	WB	
Cooling	27℃	19℃	35℃	24℃	60
Heating	20℃		7℃	6℃	

(2) This packaged air-conditioner is manufactured and tested in conformity with the ISO.
(3) Sound pressure level indicates the value in an anechoic chamber. During operation these value are somewhat higher due to ambient temperature.
(4) The operation data indicates when the air-conditioner is operated at 230V50Hz or 220V60Hz.
(5) Static pressure of optional air filter "UM-FL2E" is 5Pa initially.
(6) If wireless remote controller is used, only 3-speed fan setting (Hi-Me-Lo) is available.

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Adapted to **RoHS** directive

Item \ Model		FDUM100VNXVD	
		Indoor unit **FDUM100VD**	Outdoor unit **FDC100VNX**
		—	
Power source			220-240V～50Hz / 220V～60Hz
Operation data		Cooling	Heating
Nominal capacity	kW	10.0 [4.0 (Min.)～11.2 (Max.)]	11.2 [4.0 (Min.)～12.5 (Max.)]
Power consumption	kW	2.72	2.77
Running current	A	12.1 / 12.6	12.3 / 12.8
Power factor	%	98	98
Inrush current	A	5 < Max.running current 24 >	
Sound Pressure Level	dB(A)	P-Hi : 41 Hi : 37 Me : 35 Lo : 32	Cooling : 48 Heating : 50
Exterior dimensions Height x Width x Depth	mm	350 × 1,370 × 635	1,300 × 970 × 370
Exterior appearance (Munsell color)		—	Stucco White (4.2Y7.5/1.1) near equivalent
Net weight	kg	59	105
Refrigerant equipment Compressor type & Q'ty		—	RMT5134MDE2 × 1
Starting method		—	Direct line start
Refrigerant oil	ℓ	—	0.9 (M-MA68)
Heat exchanger		Louver fin & inner grooved tubing	M shape fin & inner grooved tubing
Refrigerant control		—	Electronic expansion valve
Air handling equipment Fan type & Q'ty		Centrifugal fan × 3	Propeller fan × 2
Motor <Starting method>	W	50 + 100 < Direct line start >	86 x 2 < Direct line start >
Air flow (Standard)	CMM	P-Hi : 34 Hi : 28 Me : 25 Lo : 22	100
External static pressure	Pa	90/100 (at 28CMM)	—
Outdoor air intake		Possible	—
Air filter, Q'ty		Procure locally	—
Shock & vibration absorber		Rubber sleeve (for fan motor)	Rubber sleeve (for Compressor)
Insulation (noise & heat)		Polyurethane form	—
Electric heater	W	—	20 (Crank case heater)
Remote controller		wired : RC-E4 (option) wireless : RCN-KIT3-E (option)	
Room temperature control		Thermostat by electronics	—
Safety equipment		Internal thermostat for fan motor Frost protection thermostat	Internal thermostat for fan motor Abnormal discharge temperature protection.
Installation data Refrigerant piping size	mm	Liquid line : I/U ϕ9.52 (3/8") Pipe ϕ9.52 (3/8") × 0.8 O/U ϕ9.52 (3/8")	
		Gas line : I/U ϕ15.88 (5/8") Pipe ϕ15.88 (5/8") × 1.0 O/U ϕ15.88 (5/8")	
Connecting method		Flare piping	Flare piping
Refrigerant line (one way) length		Max.100m	※1. See page 120
Vertical height difference between outdoor unit and indoor unit		Max.30m (Outdoor unit is higher) Max.15m (Outdoor unit is lower)	
Refrigerant Quantity		R410A 4.5kg in outdoor unit (incl. the amount for the piping of : 30m)	
Drain pump		Built-in Drain pump	—
Drain		Hose Connectable with VP20	Holes size ϕ20 x 3pcs
Insulation for piping		Necessary (both Liquid & Gas lines)	
Standard Accessories		Drain hose	Edging

Notes (1) The data are measured at the following conditions.

Item	Indoor air temperature		Outdoor air temperature		External static pressure of indoor unit [Pa]
Operation	DB	WB	DB	WB	
Cooling	27˚C	19˚C	35˚C	24˚C	60
Heating	20˚C		7˚C	6˚C	

(2) This packaged air-conditioner is manufactured and tested in conformity with the ISO.
(3) Sound pressure level indicates the value in an anechoic chamber. During operation these value are somewhat higher due to ambient temperature.
(4) The operation data indicates when the air-conditioner is operated at 230V50Hz or 220V60Hz.
(5) Static pressure of optional air filter "UM-FL3E" is 5Pa initially.
(6) If wireless remote controller is used, only 3-speed fan setting (Hi-Me-Lo) is available.

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Adapted to **RoHS** directive

Item \ Model		FDUM100VSXVD	
		Indoor unit **FDUM100VD**	Outdoor unit **FDC100VSX**
		—	
Power source			380-415V 3N～50Hz / 380V 3N～60Hz
Operation data		Cooling	Heating
Nominal capacity	kW	10.0 [4.0 (Min.)～11.2 (Max.)]	11.2 [4.0 (Min.)～16.0 (Max.)]
Power consumption	kW	2.72	2.77
Running current	A	4.0 / 4.2	4.1 / 4.3
Power factor	%	98	98
Inrush current	A	5 < Max.running current 15 >	
Sound Pressure Level	dB(A)	P-Hi : 41 Hi : 37 Me : 35 Lo : 32	Cooling : 48 Heating : 50
Exterior dimensions Height x Width x Depth	mm	350 × 1,370 × 635	1,300 × 970 × 370
Exterior appearance (Munsell color)		—	Stucco White (4.2Y7.5/1.1) near equivalent
Net weight	kg	59	105
Refrigerant equipment Compressor type & Q'ty		—	RMT5134MDE3 × 1
Starting method		—	Direct line start
Refrigerant oil	ℓ	—	0.9 (M-MA68)
Heat exchanger		Louver fin & inner grooved tubing	M shape fin & inner grooved tubing
Refrigerant control		—	Electronic expansion valve
Air handling equipment Fan type & Q'ty		Centrifugal fan x 3	Propeller fan × 2
Motor <Starting method>	W	50 + 100 < Direct line start >	86 x 2 < Direct line start >
Air flow (Standard)	CMM	P-Hi : 34 Hi : 28 Me : 25 Lo : 22	100
External static pressure	Pa	90/100 (at 28CMM)	—
Outdoor air intake		Possible	—
Air filter, Q'ty		Procure locally	—
Shock & vibration absorber		Rubber sleeve (for fan motor)	Rubber sleeve (for Compressor)
Insulation (noise & heat)		Polyurethane form	—
Electric heater	W	—	20 (Crank case heater)
Remote controller		wired : RC-E4 (option) wireless : RCN-KIT3-E (option)	
Room temperature control		Thermostat by electronics	—
Safety equipment		Internal thermostat for fan motor Frost protection thermostat	Internal thermostat for fan motor Abnormal discharge temperature protection.
Installation data Refrigerant piping size	mm	Liquid line : I/U ϕ9.52 (3/8") Pipe ϕ9.52 (3/8") × 0.8 O/U ϕ9.52 (3/8")	
		Gas line : I/U ϕ15.88 (5/8") Pipe ϕ15.88 (5/8") × 1.0 O/U ϕ15.88 (5/8")	
Connecting method		Flare piping	Flare piping
Refrigerant line (one way) length		Max.100m	※1. See page 120
Vertical height difference between outdoor unit and indoor unit		Max.30m (Outdoor unit is higher) Max.15m (Outdoor unit is lower)	
Refrigerant Quantity		R410A 4.5kg in outdoor unit (incl. the amount for the piping of : 30m)	
Drain pump		Built-in Drain pump	—
Drain		Hose Connectable with VP20	Holes size ϕ20 x 3pcs
Insulation for piping		Necessary (both Liquid & Gas lines)	
Standard Accessories		Drain hose	Edging

Notes (1) The data are measured at the following conditions.

Item	Indoor air temperature		Outdoor air temperature		External static pressure of indoor unit [Pa]
Operation	DB	WB	DB	WB	
Cooling	27℃	19℃	35℃	24℃	60
Heating	20℃		7℃	6℃	

(2) This packaged air-conditioner is manufactured and tested in conformity with the ISO.
(3) Sound pressure level indicates the value in an anechoic chamber. During operation these value are somewhat higher due to ambient temperature.
(4) The operation data indicates when the air-conditioner is operated at 400V50Hz or 380V60Hz.
(5) Static pressure of optional air filter "UM-FL3E" is 5Pa initially.
(6) If wireless remote controller is used, only 3-speed fan setting (Hi-Me-Lo) is available.

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Adapted to **RoHS** directive

Item \ Model		FDUM125VNXVD	
		Indoor unit **FDUM125VD**	Outdoor unit **FDC125VNX**
		—	
Power source			220-240V～50Hz / 220V～60Hz
Operation data		Cooling	Heating
Nominal capacity	kW	12.5 [5.0 (Min.)～14.0 (Max.)]	14.0 [4.0 (Min.)～17.0 (Max.)]
Power consumption	kW	3.62	3.77
Running current	A	16.1 / 16.8	16.7 / 17.5
Power factor	%	98	98
Inrush current	A	5 < Max.running current 26 >	
Sound Pressure Level	dB(A)	P-Hi : 41 Hi : 38 Me : 36 Lo : 33	Cooling : 48 Heating : 50
Exterior dimensions Height x Width x Depth	mm	350 × 1,370 × 635	1,300 × 970 × 370
Exterior appearance (Munsell color)		—	Stucco White (4.2Y7.5/1.1) near equivalent
Net weight	kg	59	105
Refrigerant equipment Compressor type & Q'ty		—	RMT5134MDE2 × 1
Starting method		—	Direct line start
Refrigerant oil	ℓ	—	0.9 (M-MA68)
Heat exchanger		Louver fin & inner grooved tubing	M shape fin & inner grooved tubing
Refrigerant control		—	Electronic expansion valve
Air handling equipment Fan type & Q'ty		Centrifugal fan × 3	Propeller fan × 2
Motor <Starting method>	W	50 + 100 < Direct line start >	86 × 2 < Direct line start >
Air flow (Standard)	CMM	P-Hi : 34 Hi : 28 Me : 25 Lo : 22	100
External static pressure	Pa	85/100 (at 34CMM)	—
Outdoor air intake		Possible	—
Air filter, Q'ty		Procure locally	—
Shock & vibration absorber		Rubber sleeve (for fan motor)	Rubber sleeve (for Compressor)
Insulation (noise & heat)		Polyurethane form	—
Electric heater	W	—	20 (Crank case heater)
Remote controller		wired : RC-E4 (option) wireless : RCN-KIT3-E (option)	
Room temperature control		Thermostat by electronics	—
Safety equipment		Internal thermostat for fan motor Frost protection thermostat	Internal thermostat for fan motor Abnormal discharge temperature protection.
Installation data Refrigerant piping size	mm	Liquid line : I/U φ9.52 (3/8") Pipe φ9.52 (3/8") × 0.8 O/U φ9.52 (3/8")	
		Gas line : I/U φ15.88 (5/8") Pipe φ15.88 (5/8") × 1.0 O/U φ15.88 (5/8")	
Connecting method		Flare piping	Flare piping
Refrigerant line (one way) length		Max.100m	※1. See page 120
Vertical height difference between outdoor unit and indoor unit		Max.30m (Outdoor unit is higher) Max.15m (Outdoor unit is lower)	
Refrigerant Quantity		R410A 4.5kg in outdoor unit (incl. the amount for the piping of : 30m)	
Drain pump		Built-in Drain pump	—
Drain		Hose Connectable with VP20	Holes size φ20 × 3pcs
Insulation for piping		Necessary (both Liquid & Gas lines)	
Standard Accessories		Drain hose	Edging

Notes (1) The data are measured at the following conditions.

Item	Indoor air temperature		Outdoor air temperature		External static pressure of indoor unit [Pa]
Operation	DB	WB	DB	WB	
Cooling	27˚C	19˚C	35˚C	24˚C	60
Heating	20˚C		7˚C	6˚C	

(2) This packaged air-conditioner is manufactured and tested in conformity with the ISO.
(3) Sound pressure level indicates the value in an anechoic chamber. During operation these value are somewhat higher due to ambient temperature.
(4) The operation data indicates when the air-conditioner is operated at 230V50Hz or 220V60Hz.
(5) Static pressure of optional air filter "UM-FL3E" is 5Pa initially.
(6) If wireless remote controller is used, only 3-speed fan setting (Hi-Me-Lo) is available.

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Adapted to **RoHS** directive

Item \ Model		FDUM125VSXVD	
		Indoor unit **FDUM125VD**	Outdoor unit **FDC125VSX**
		—	
Power source			380-415V 3N～50Hz / 380V 3N～60Hz
Operation data		Cooling	Heating
Nominal capacity	kW	12.5 [5.0 (Min.)～14.0 (Max.)]	14.0 [4.0 (Min.)～18.0 (Max.)]
Power consumption	kW	3.62	3.77
Running current	A	5.3 / 5.6	5.6 / 5.8
Power factor	%	99 / 98	97 / 99
Inrush current	A	5 < Max.running current 15 >	
Sound Pressure Level	dB(A)	P-Hi : 41 Hi : 38 Me : 36 Lo : 33	Cooling : 48 Heating : 50
Exterior dimensions Height x Width x Depth	mm	350 × 1,370 × 635	1,300 × 970 × 370
Exterior appearance (Munsell color)		—	Stucco White (4.2Y7.5/1.1) near equivalent
Net weight	kg	59	105
Refrigerant equipment Compressor type & Q'ty		—	RMT5134MDE3 × 1
Starting method		—	Direct line start
Refrigerant oil	ℓ	—	0.9 (M-MA68)
Heat exchanger		Louver fin & inner grooved tubing	M shape fin & inner grooved tubing
Refrigerant control		—	Electronic expansion valve
Air handling equipment Fan type & Q'ty		Centrifugal fan × 3	Propeller fan × 2
Motor <Starting method>	W	50 + 100 < Direct line start >	86 × 2 < Direct line start >
Air flow (Standard)	CMM	P-Hi : 34 Hi : 28 Me : 25 Lo : 22	100
External static pressure	Pa	85/100 (at 34CMM)	—
Outdoor air intake		Possible	—
Air filter, Q'ty		Procure locally	—
Shock & vibration absorber		Rubber sleeve (for fan motor)	Rubber sleeve (for Compressor)
Insulation (noise & heat)		Polyurethane form	—
Electric heater	W	—	20 (Crank case heater)
Remote controller		wired : RC-E4 (option) wireless : RCN-KIT3-E (option)	
Room temperature control		Thermostat by electronics	—
Safety equipment		Internal thermostat for fan motor Frost protection thermostat	Internal thermostat for fan motor Abnormal discharge temperature protection.
Installation data Refrigerant piping size	mm	Liquid line : I/U ϕ9.52 (3/8") Pipe ϕ9.52 (3/8") × 0.8 O/U ϕ9.52 (3/8")	
		Gas line : I/U ϕ15.88 (5/8") Pipe ϕ15.88 (5/8") × 1.0 O/U ϕ15.88 (5/8")	
Connecting method		Flare piping	Flare piping
Refrigerant line (one way) length		Max.100m	※1. See page 120
Vertical height difference between outdoor unit and indoor unit		Max.30m (Outdoor unit is higher) Max.15m (Outdoor unit is lower)	
Refrigerant Quantity		R410A 4.5kg in outdoor unit (incl. the amount for the piping of : 30m)	
Drain pump		Built-in Drain pump	—
Drain		Hose Connectable with VP20	Holes size ϕ20 × 3pcs
Insulation for piping		Necessary (both Liquid & Gas lines)	
Standard Accessories		Drain hose	Edging

Notes (1) The data are measured at the following conditions.

Item	Indoor air temperature		Outdoor air temperature		External static pressure of indoor unit [Pa]
Operation	DB	WB	DB	WB	
Cooling	27℃	19℃	35℃	24℃	60
Heating	20℃		7℃	6℃	

(2) This packaged air-conditioner is manufactured and tested in conformity with the ISO.
(3) Sound pressure level indicates the value in an anechoic chamber. During operation these value are somewhat higher due to ambient temperature.
(4) The operation data indicates when the air-conditioner is operated at 400V50Hz or 380V60Hz.
(5) Static pressure of optional air filter "UM-FL3E" is 5Pa initially.
(6) If wireless remote controller is used, only 3-speed fan setting (Hi-Me-Lo) is available.

PJR002Z393 A

Adapted to **RoHS** directive

Item \ Model		FDUM140VNXVD	
		Indoor unit **FDUM140VD**	Outdoor unit **FDC140VNX**
Item		—	
Power source			220-240V～50Hz / 220V～60Hz
Operation data		Cooling	Heating
Nominal capacity	kW	14.0 [5.0 (Min.)～16.0 (Max.)]	16.0 [4.0 (Min.)～18.0 (Max.)]
Power consumption	kW	4.34	4.69
Running current	A	19.3 / 20.1	20.8 / 21.8
Power factor	%	98	98
Inrush current	A	5 < Max.running current 26 >	
Sound Pressure Level	dB(A)	P-Hi : 41 Hi : 38 Me : 36 Lo : 33	Cooling : 49 Heating : 52
Exterior dimensions Height x Width x Depth	mm	350 × 1,370 × 635	1,300 × 970 × 370
Exterior appearance (Munsell color)		—	Stucco White (4.2Y7.5/1.1) near equivalent
Net weight	kg	59	105
Refrigerant equipment Compressor type & Q'ty		—	RMT5134MDE2 × 1
Starting method		—	Direct line start
Refrigerant oil	ℓ	—	0.9 (M-MA68)
Heat exchanger		Louver fin & inner grooved tubing	M shape fin & inner grooved tubing
Refrigerant control		—	Electronic expansion valve
Air handling equipment Fan type & Q'ty		Centrifugal fan × 3	Propeller fan × 2
Motor <Starting method>	W	50 + 100 < Direct line start >	86 x 2 < Direct line start >
Air flow (Standard)	CMM	P-Hi : 34 Hi : 28 Me : 25 Lo : 22	100
External static pressure	Pa	85 / 100 (at 34CMM)	—
Outdoor air intake		Possible	—
Air filter, Q'ty		Procure locally	—
Shock & vibration absorber		Rubber sleeve (for fan motor)	Rubber sleeve (for Compressor)
Insulation (noise & heat)		Polyurethane form	—
Electric heater	W	—	20 (Crank case heater)
Remote controller		wired : RC-E4 (option) wireless : RCN-KIT3-E (option)	
Room temperature control		Thermostat by electronics	—
Safety equipment		Internal thermostat for fan motor Frost protection thermostat	Internal thermostat for fan motor Abnormal discharge temperature protection.
Installation data Refrigerant piping size	mm	Liquid line : I/U ϕ9.52 (3/8") Pipe ϕ9.52 (3/8") × 0.8 O/U ϕ9.52 (3/8")	
		Gas line : I/U ϕ15.88 (5/8") Pipe ϕ15.88 (5/8") × 1.0 O/U ϕ15.88 (5/8")	
Connecting method		Flare piping	Flare piping
Refrigerant line (one way) length		Max.100m	※1. See page 120
Vertical height difference between outdoor unit and indoor unit		Max.30m (Outdoor unit is higher) Max.15m (Outdoor unit is lower)	
Refrigerant Quantity		R410A 4.5kg in outdoor unit (incl. the amount for the piping of : 30m)	
Drain pump		Built-in Drain pump	—
Drain		Hose Connectable with VP20	Holes size ϕ20 × 3pcs
Insulation for piping		Necessary (both Liquid & Gas lines)	
Standard Accessories		Drain hose	Edging

Notes (1) The data are measured at the following conditions.

Item	Indoor air temperature		Outdoor air temperature		External static pressure of indoor unit [Pa]
Operation	DB	WB	DB	WB	
Cooling	27℃	19℃	35℃	24℃	60
Heating	20℃		7℃	6℃	

(2) This packaged air-conditioner is manufactured and tested in conformity with the ISO.
(3) Sound pressure level indicates the value in an anechoic chamber. During operation these value are somewhat higher due to ambient temperature.
(4) The operation data indicates when the air-conditioner is operated at 230V50Hz or 220V60Hz.
(5) Static pressure of optional air filter "UM-FL3E" is 5Pa initially.
(6) If wireless remote controller is used, only 3-speed fan setting (Hi-Me-Lo) is available.

Adapted to **RoHS** directive

Item \ Model		FDUM140VSXVD	
		Indoor unit **FDUM140VD**	Outdoor unit **FDC140VSX**
		—	
Power source			380-415V 3N～50Hz / 380V 3N～60Hz
Operation data		Cooling	Heating
Nominal capacity	kW	14.0 [5.0 (Min.)～16.0 (Max.)]	16.0 [4.0 (Min.)～20.0 (Max.)]
Power consumption	kW	4.34	4.69
Running current	A	6.4 / 6.7	6.9 / 7.3
Power factor	%	98	98
Inrush current	A	5 < Max.running current 15 >	
Sound Pressure Level	dB(A)	P-Hi : 41 Hi : 38 Me : 36 Lo : 33	Cooling : 49 Heating : 52
Exterior dimensions Height x Width x Depth	mm	350 × 1,370 × 635	1,300 × 970 × 370
Exterior appearance (Munsell color)		—	Stucco White (4.2Y7.5/1.1) near equivalent
Net weight	kg	59	105
Refrigerant equipment Compressor type & Q'ty		—	RMT5134MDE3 × 1
Starting method		—	Direct line start
Refrigerant oil	ℓ	—	0.9 (M-MA68)
Heat exchanger		Louver fin & inner grooved tubing	M shape fin & inner grooved tubing
Refrigerant control		—	Electronic expansion valve
Air handling equipment Fan type & Q'ty		Centrifugal fan × 3	Propeller fan × 2
Motor <Starting method>	W	50 + 100 < Direct line start >	86 x 2 < Direct line start >
Air flow (Standard)	CMM	P-Hi : 34 Hi : 28 Me : 25 Lo : 22	100
External static pressure	Pa	85 / 100 (at 34CMM)	—
Outdoor air intake		Possible	—
Air filter, Q'ty		Procure locally	—
Shock & vibration absorber		Rubber sleeve (for fan motor)	Rubber sleeve (for Compressor)
Insulation (noise & heat)		Polyurethane form	—
Electric heater	W	—	20 (Crank case heater)
Remote controller		wired : RC-E4 (option) wireless : RCN-KIT3-E (option)	
Room temperature control		Thermostat by electronics	—
Safety equipment		Internal thermostat for fan motor Frost protection thermostat	Internal thermostat for fan motor Abnormal discharge temperature protection.
Installation data Refrigerant piping size	mm	Liquid line : I/U ϕ9.52 (3/8") Pipe ϕ9.52 (3/8") × 0.8 O/U ϕ9.52 (3/8")	
		Gas line : I/U ϕ15.88 (5/8") Pipe ϕ15.88 (5/8") × 1.0 O/U ϕ15.88 (5/8")	
Connecting method		Flare piping	Flare piping
Refrigerant line (one way) length		Max.100m	※1. See page 120
Vertical height difference between outdoor unit and indoor unit		Max.30m (Outdoor unit is higher) Max.15m (Outdoor unit is lower)	
Refrigerant Quantity		R410A 4.5kg in outdoor unit (incl. the amount for the piping of : 30m)	
Drain pump		Built-in Drain pump	—
Drain		Hose Connectable with VP20	Holes size ϕ20 × 3pcs
Insulation for piping		Necessary (both Liquid & Gas lines)	
Standard Accessories		Drain hose	Edging

Notes (1) The data are measured at the following conditions.

Item	Indoor air temperature		Outdoor air temperature		External static pressure of indoor unit [Pa]
Operation	DB	WB	DB	WB	
Cooling	27℃	19℃	35℃	24℃	60
Heating	20℃		7℃	6℃	

(2) This packaged air-conditioner is manufactured and tested in conformity with the ISO.
(3) Sound pressure level indicates the value in an anechoic chamber. During operation these value are somewhat higher due to ambient temperature.
(4) The operation data indicates when the air-conditioner is operated at 400V50Hz or 380V60Hz.
(5) Static pressure of optional air filter "UM-FL3E" is 5Pa initially.
(6) If wireless remote controller is used, only 3-speed fan setting (Hi-Me-Lo) is available.

PJR002Z393 A

(2) Twin type

Adapted to **RoHS** directive

Item \ Model		FDUM100VNXPVD	
		Indoor unit **FDUM50VD (2 units)**	Outdoor unit **FDC100VNX**
		—	
Power source			220-240V～50Hz / 220V～60Hz
Operation data		Cooling	Heating
Nominal capacity	kW	10.0 [4.0 (Min.)～11.2 (Max.)]	11.2 [4.0 (Min.)～12.5 (Max.)]
Power consumption	kW	2.94	2.94
Running current	A	13.0 / 13.6	13.0 / 13.6
Power factor	%	98	98
Inrush current	A	5 < Max.running current 24 >	
Sound Pressure Level	dB(A)	P-Hi : 35 Hi : 34 Me : 31 Lo : 28	Cooling : 48 Heating : 50
Exterior dimensions Height x Width x Depth	mm	299 × 750 × 635	1,300 × 970 × 370
Exterior appearance (Munsell color)		—	Stucco White (4.2Y7.5/1.1) near equivalent
Net weight	kg	34	105
Refrigerant equipment Compressor type & Q'ty		—	RMT5134MDE2 × 1
Starting method		—	Direct line start
Refrigerant oil	ℓ	—	0.9 (M-MA68)
Heat exchanger		Louver fin & inner grooved tubing	M shape fin & inner grooved tubing
Refrigerant control		—	Electronic expansion valve
Air handling equipment Fan type & Q'ty		Centrifugal fan × 2	Propeller fan × 2
Motor <Starting method>	W	60 < Direct line start >	86 x 2 < Direct line start >
Air flow (Standard)	CMM	P-Hi : 14 Hi : 13 Me : 12 Lo : 11	100
External static pressure	Pa	85/90 (at 14CMM)	—
Outdoor air intake		Possible	—
Air filter, Q'ty		Procure locally	—
Shock & vibration absorber		Rubber sleeve (for fan motor)	Rubber sleeve (for Compressor)
Insulation (noise & heat)		Polyurethane form	—
Electric heater	W	—	20 (Crank case heater)
Remote controller		wired : RC-E4 (option) wireless : RCN-KIT3-E (option)	
Room temperature control		Thermostat by electronics	—
Safety equipment		Internal thermostat for fan motor Frost protection thermostat	Internal thermostat for fan motor Abnormal discharge temperature protection.
Installation data Refrigerant piping size	mm	Liquid line : I/U φ6.35 (1/4") ②φ9.52 (3/8") × 0.8 ①φ9.52 (3/8") × 0.8 O/U φ9.52 (3/8")	
		Gas line : I/U φ12.7 (1/2") ②φ12.7 (1/2") × 0.8 ①φ15.88 (5/8") × 1.0 O/U φ15.88 (5/8")	
Connecting method		Flare piping	Flare piping
Refrigerant line (one way) length		Max.100m	※1. See page 120
Vertical height difference between outdoor unit and indoor unit		Max.30m (Outdoor unit is higher) Max.15m (Outdoor unit is lower)	
Refrigerant Quantity		R410A 4.5kg (Pre-charged up to the piping length of 30m) Outdoor unit	
Drain pump		Built-in Drain pump	—
Drain		Hose Connectable with VP20	Holes size φ20 x 3pcs
Insulation for piping		Necessary (both Liquid & Gas lines)	
Standard Accessories		Drain hose	Edging

Notes (1) The data are measured at the following conditions.

Item	Indoor air temperature		Outdoor air temperature		External static pressure of indoor unit [Pa]
Operation	DB	WB	DB	WB	
Cooling	27℃	19℃	35℃	24℃	60
Heating	20℃		7℃	6℃	

(2) This packaged air-conditioner is manufactured and tested in conformity with the ISO.
(3) Sound pressure level indicates the value in an anechoic chamber. During operation these value are somewhat higher due to ambient temperature.
(4) The operation data indicates when the air-conditioner is operated at 230V50Hz or 220V60Hz.
(5) Indoor unit specifications for one unit. Capacity and operation data is two indoor units are combined and run together.
(6) Branching pipe set "DIS-WA1"×1(option). ① : Pipe of O/U～Branch, ② : Pipe of Branch～I/U
(7) Static pressure of optional air filter "UM-FL1E" is 5Pa initially.
(8) If wireless remote controller is used, only 3-speed fan setting (Hi-Me-Lo) is available.

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Adapted to **RoHS** directive

Item \ Model		FDUM100VSXPVD	
		Indoor unit **FDUM50VD (2 units)**	Outdoor unit **FDC100VSX**
Item		**—**	
Power source			380-415V 3N～50Hz / 380V 3N～60Hz
Operation data		Cooling	Heating
Nominal capacity	kW	10.0 [4.0 (Min.)～11.2 (Max.)]	11.2 [4.0 (Min.)～16.0 (Max.)]
Power consumption	kW	2.94	2.94
Running current	A	4.3 / 4.6	4.3 / 4.6
Power factor	%	99 / 97	99 / 97
Inrush current	A	5 < Max.running current 15 >	
Sound Pressure Level	dB(A)	P-Hi : 35 Hi : 34 Me : 31 Lo : 28	Cooling : 48 Heating : 50
Exterior dimensions Height x Width x Depth	mm	299 × 750 × 635	1,300 × 970 × 370
Exterior appearance (Munsell color)		—	Stucco White (4.2Y7.5/1.1) near equivalent
Net weight	kg	34	105
Refrigerant equipment Compressor type & Q'ty		—	RMT5134MDE3 × 1
Starting method		—	Direct line start
Refrigerant oil	ℓ	—	0.9 (M-MA68)
Heat exchanger		Louver fin & inner grooved tubing	M shape fin & inner grooved tubing
Refrigerant control		—	Electronic expansion valve
Air handling equipment Fan type & Q'ty		Centrifugal fan × 2	Propeller fan × 2
Motor <Starting method>	W	60 < Direct line start >	86 x 2 < Direct line start >
Air flow (Standard)	CMM	P-Hi : 14 Hi : 13 Me : 12 Lo : 11	100
External static pressure	Pa	85/90 (at 14CMM)	—
Outdoor air intake		Possible	—
Air filter, Q'ty		Procure locally	—
Shock & vibration absorber		Rubber sleeve (for fan motor)	Rubber sleeve (for Compressor)
Insulation (noise & heat)		Polyurethane form	—
Electric heater	W	—	20 (Crank case heater)
Remote controller		wired : RC-E4 (option) wireless : RCN-KIT3-E (option)	
Room temperature control		Thermostat by electronics	—
Safety equipment		Internal thermostat for fan motor Frost protection thermostat	Internal thermostat for fan motor Abnormal discharge temperature protection.
Installation data Refrigerant piping size	mm	Liquid line : I/U φ6.35 (1/4") ②φ9.52 (3/8") × 0.8 ①φ9.52 (3/8") × 0.8 O/U φ9.52 (3/8")	
		Gas line : I/U φ12.7 (1/2") ②φ12.7 (1/2") × 0.8 ①φ15.88 (5/8") × 1.0 O/U φ15.88 (5/8")	
Connecting method		Flare piping	Flare piping
Refrigerant line (one way) length		Max.100m	※1. See page 120
Vertical height difference between outdoor unit and indoor unit		Max.30m (Outdoor unit is higher) Max.15m (Outdoor unit is lower)	
Refrigerant Quantity		R410A 4.5kg (Pre-charged up to the piping length of 30m) Outdoor unit	
Drain pump		Built-in Drain pump	—
Drain		Hose Connectable with VP20	Holes size φ20 x 3pcs
Insulation for piping		Necessary (both Liquid & Gas lines)	
Standard Accessories		Drain hose	Edging

Notes (1) The data are measured at the following conditions.

Item	Indoor air temperature		Outdoor air temperature		External static pressure of indoor unit [Pa]
Operation	DB	WB	DB	WB	
Cooling	27℃	19℃	35℃	24℃	60
Heating	20℃		7℃	6℃	

(2) This packaged air-conditioner is manufactured and tested in conformity with the ISO.
(3) Sound pressure level indicates the value in an anechoic chamber. During operation these value are somewhat higher due to ambient temperature.
(4) The operation data indicates when the air-conditioner is operated at 400V50Hz or 380V60Hz.
(5) Indoor unit specifications for one unit. Capacity and operation data is two indoor units are combined and run together.
(6) Branching pipe set "DIS-WA1"×1(option). ① : Pipe of O/U～Branch, ② : Pipe of Branch～I/U
(7) Static pressure of optional air filter "UM-FL1E" is 5Pa initially.
(8) If wireless remote controller is used, only 3-speed fan setting (Hi-Me-Lo) is available.

PJR002Z393 Ⓐ

Adapted to **RoHS** directive

Item \ Model		FDUM125VNXPVD	
		Indoor unit **FDUM60VD (2 units)**	Outdoor unit **FDC125VNX**
		—	
Power source			220-240V～50Hz / 220V～60Hz
Operation data		Cooling	Heating
Nominal capacity	kW	12.5 [5.0 (Min.)～14.0 (Max.)]	14.0 [4.0 (Min.)～17.0 (Max.)]
Power consumption	kW	3.86	4.10
Running current	A	17.1 / 17.9	18.2 / 19.0
Power factor	%	98	98
Inrush current	A	5 < Max.running current 26 >	
Sound Pressure Level	dB(A)	P-Hi : 38 Hi : 34 Me : 31 Lo : 28	Cooling : 48 Heating : 50
Exterior dimensions Height x Width x Depth	mm	299 × 950 × 635	1,300 × 970 × 370
Exterior appearance (Munsell color)		—	Stucco White (4.2Y7.5/1.1) near equivalent
Net weight	kg	40	105
Refrigerant equipment Compressor type & Q'ty		—	RMT5134MDE2 × 1
Starting method		—	Direct line start
Refrigerant oil	ℓ	—	0.9 (M-MA68)
Heat exchanger		Louver fin & inner grooved tubing	M shape fin & inner grooved tubing
Refrigerant control		—	Electronic expansion valve
Air handling equipment Fan type & Q'ty		Centrifugal fan × 2	Propeller fan × 2
Motor <Starting method>	W	100 < Direct line start >	86 x 2 < Direct line start >
Air flow (Standard)	CMM	P-Hi : 18 Hi : 16 Me : 15 Lo : 14	100
External static pressure	Pa	85 / 100 (at 18CMM)	—
Outdoor air intake		Possible	—
Air filter, Q'ty		Procure locally	—
Shock & vibration absorber		Rubber sleeve (for fan motor)	Rubber sleeve (for Compressor)
Insulation (noise & heat)		Polyurethane form	—
Electric heater	W	—	20 (Crank case heater)
Remote controller		wired : RC-E4 (option) wireless : RCN-KIT3-E (option)	
Room temperature control		Thermostat by electronics	—
Safety equipment		Internal thermostat for fan motor Frost protection thermostat	Internal thermostat for fan motor Abnormal discharge temperature protection.
Installation data Refrigerant piping size	mm	Liquid line : I/U ϕ6.35 (1/4") ②ϕ9.52 (3/8") × 0.8 ①ϕ9.52 (3/8") × 0.8 O/U ϕ9.52 (3/8")	
		Gas line : I/U ϕ12.7 (1/2") ②ϕ12.7 (1/2") × 0.8 ①ϕ15.88 (5/8") × 1.0 O/U ϕ15.88 (5/8")	
Connecting method		Flare piping	Flare piping
Refrigerant line (one way) length		Max.100m	※1. See page 120
Vertical height difference between outdoor unit and indoor unit		Max.30m (Outdoor unit is higher) Max.15m (Outdoor unit is lower)	
Refrigerant Quantity		R410A 4.5kg (Pre-charged up to the piping length of 30m) Outdoor unit	
Drain pump		Built-in Drain pump	—
Drain		Hose Connectable with VP20	Holes size ϕ20 × 3pcs
Insulation for piping		Necessary (both Liquid & Gas lines)	
Standard Accessories		Drain hose	Edging

Notes (1) The data are measured at the following conditions.

Item	Indoor air temperature		Outdoor air temperature		External static pressure of indoor unit [Pa]
Operation	DB	WB	DB	WB	
Cooling	27℃	19℃	35℃	24℃	60
Heating	20℃		7℃	6℃	

(2) This packaged air-conditioner is manufactured and tested in conformity with the ISO.
(3) Sound pressure level indicates the value in an anechoic chamber. During operation these value are somewhat higher due to ambient temperature.
(4) The operation data indicates when the air-conditioner is operated at 230V50Hz or 220V60Hz.
(5) Indoor unit specifications for one unit. Capacity and operation data is two indoor units are combined and run together.
(6) Branching pipe set "DIS-WA1"×1(option). ① : Pipe of O/U～Branch, ② : Pipe of Branch～I/U
(7) Static pressure of optional air filter "UM-FL2E" is 5Pa initially.
(8) If wireless remote controller is used, only 3-speed fan setting (Hi-Me-Lo) is available.

PJR002Z393 Ⓐ

Adapted to **RoHS** directive

Item \ Model		FDUM125VSXPVD	
		Indoor unit **FDUM60VD (2 units)**	Outdoor unit **FDC125VSX**
Item		**—**	
Power source			380-415V 3N～50Hz / 380V 3N～60Hz
Operation data		Cooling	Heating
Nominal capacity	kW	12.5 [5.0 (Min.)～14.0 (Max.)]	14.0 [4.0 (Min.)～18.0 (Max.)]
Power consumption	kW	3.86	4.10
Running current	A	5.7 / 6.0	6.0 / 6.4
Power factor	%	98	99 / 97
Inrush current	A	5 < Max.running current 15 >	
Sound Pressure Level	dB(A)	P-Hi : 38 Hi : 34 Me : 31 Lo : 28	Cooling : 48 Heating : 50
Exterior dimensions Height x Width x Depth	mm	299 × 950 × 635	1,300 × 970 × 370
Exterior appearance (Munsell color)		—	Stucco White (4.2Y7.5/1.1) near equivalent
Net weight	kg	40	105
Refrigerant equipment Compressor type & Q'ty		—	RMT5134MDE3 × 1
Starting method		—	Direct line start
Refrigerant oil	ℓ	—	0.9 (M-MA68)
Heat exchanger		Louver fin & inner grooved tubing	M shape fin & inner grooved tubing
Refrigerant control		—	Electronic expansion valve
Air handling equipment Fan type & Q'ty		Centrifugal fan × 2	Propeller fan × 2
Motor <Starting method>	W	100 < Direct line start >	86 x 2 < Direct line start >
Air flow (Standard)	CMM	P-Hi : 18 Hi : 16 Me : 15 Lo : 14	100
External static pressure	Pa	85 / 100 (at 18CMM)	—
Outdoor air intake		Possible	—
Air filter, Q'ty		Procure locally	—
Shock & vibration absorber		Rubber sleeve (for fan motor)	Rubber sleeve (for Compressor)
Insulation (noise & heat)		Polyurethane form	—
Electric heater	W	—	20 (Crank case heater)
Remote controller		wired : RC-E4 (option) wireless : RCN-KIT3-E (option)	
Room temperature control		Thermostat by electronics	—
Safety equipment		Internal thermostat for fan motor Frost protection thermostat	Internal thermostat for fan motor Abnormal discharge temperature protection.
Installation data Refrigerant piping size	mm	Liquid line : I/U φ6.35 (1/4") ②φ9.52 (3/8") × 0.8 ①φ9.52 (3/8") × 0.8 O/U φ9.52 (3/8")	
		Gas line : I/U φ12.7 (1/2") ②φ12.7 (1/2") × 0.8 ①φ15.88 (5/8") × 1.0 O/U φ15.88 (5/8")	
Connecting method		Flare piping	Flare piping
Refrigerant line (one way) length		Max.100m	※1. See page 120
Vertical height difference between outdoor unit and indoor unit		Max.30m (Outdoor unit is higher) Max.15m (Outdoor unit is lower)	
Refrigerant Quantity		R410A 4.5kg (Pre-charged up to the piping length of 30m) Outdoor unit	
Drain pump		Built-in Drain pump	—
Drain		Hose Connectable with VP20	Holes size φ20 × 3pcs
Insulation for piping		Necessary (both Liquid & Gas lines)	
Standard Accessories		Drain hose	Edging

Notes (1) The data are measured at the following conditions.

Item	Indoor air temperature		Outdoor air temperature		External static pressure of indoor unit [Pa]
Operation	DB	WB	DB	WB	
Cooling	27℃	19℃	35℃	24℃	60
Heating	20℃		7℃	6℃	

(2) This packaged air-conditioner is manufactured and tested in conformity with the ISO.
(3) Sound pressure level indicates the value in an anechoic chamber. During operation these value are somewhat higher due to ambient temperature.
(4) The operation data indicates when the air-conditioner is operated at 400V50Hz or 380V60Hz.
(5) Indoor unit specifications for one unit. Capacity and operation data is two indoor units are combined and run together.
(6) Branching pipe set "DIS-WA1"×1(option). ① : Pipe of O/U～Branch, ② : Pipe of Branch～I/U
(7) Static pressure of optional air filter "UM-FL2E" is 5Pa initially.
(8) If wireless remote controller is used, only 3-speed fan setting (Hi-Me-Lo) is available.

PJR002Z393 Ⓐ

Adapted to **RoHS** directive

Item \ Model		FDUM140VNXPVD	
		Indoor unit **FDUM71VD (2 units)**	Outdoor unit **FDC140VNX**
Item		—	
Power source			220-240V～50Hz / 220V～60Hz
Operation data		Cooling	Heating
Nominal capacity	kW	14.0 [5.0(Min.)～16.0(Max.)]	16.0 [4.0(Min.)～18.0(Max.)]
Power consumption	kW	4.60	4.69
Running current	A	20.4 / 21.3	20.8 / 21.8
Power factor	%	98	98
Inrush current	A	5 < Max.running current 26 >	
Sound Pressure Level	dB(A)	P-Hi : 38 Hi : 35 Me : 32 Lo : 29	Cooling : 49 Heating : 52
Exterior dimensions Height x Width x Depth	mm	299 × 950 × 635	1,300 × 970 × 370
Exterior appearance (Munsell color)		—	Stucco White (4.2Y7.5/1.1) near equivalent
Net weight	kg	40	105
Refrigerant equipment Compressor type & Q'ty		—	RMT5134MDE2 × 1
Starting method		—	Direct line start
Refrigerant oil	ℓ	—	0.9 (M-MA68)
Heat exchanger		Louver fin & inner grooved tubing	M shape fin & inner grooved tubing
Refrigerant control		—	Electronic expansion valve
Air handling equipment Fan type & Q'ty		Centrifugal fan × 2	Propeller fan × 2
Motor <Starting method>	W	100 < Direct line start >	86 x 2 < Direct line start >
Air flow (Standard)	CMM	P-Hi : 23 Hi : 20 Me : 18 Lo : 15	100
External static pressure	Pa	85 / 100 (at 20CMM)	—
Outdoor air intake		Possible	—
Air filter, Q'ty		Procure locally	—
Shock & vibration absorber		Rubber sleeve (for fan motor)	Rubber sleeve (for Compressor)
Insulation (noise & heat)		Polyurethane form	—
Electric heater	W	—	20 (Crank case heater)
Remote controller		wired : RC-E4 (option) wireless : RCN-KIT3-E (option)	
Room temperature control		Thermostat by electronics	—
Safety equipment		Internal thermostat for fan motor Frost protection thermostat	Internal thermostat for fan motor Abnormal discharge temperature protection.
Installation data Refrigerant piping size	mm	Liquid line : I/U φ9.52 (3/8") ②φ9.52 (3/8") × 0.8 ①φ9.52 (3/8") × 0.8 O/U φ9.52 (3/8")	
		Gas line : I/U φ15.88 (5/8") ②φ15.88 (5/8") × 1.0 ①φ15.88 (5/8") × 1.0 O/U φ15.88 (5/8")	
Connecting method		Flare piping	Flare piping
Refrigerant line (one way) length		Max.100m	※1. See page 120
Vertical height difference between outdoor unit and indoor unit		Max.30m (Outdoor unit is higher) Max.15m (Outdoor unit is lower)	
Refrigerant Quantity		R410A 4.5kg (Pre-charged up to the piping length of 30m) Outdoor unit	
Drain pump		Built-in Drain pump	—
Drain		Hose Connectable with VP20	Holes size φ20 × 3pcs
Insulation for piping		Necessary (both Liquid & Gas lines)	
Standard Accessories		Drain hose	Edging

Notes (1) The data are measured at the following conditions.

Item	Indoor air temperature		Outdoor air temperature		External static pressure of indoor unit [Pa]
Operation	DB	WB	DB	WB	
Cooling	27℃	19℃	35℃	24℃	60
Heating	20℃		7℃	6℃	

(2) This packaged air-conditioner is manufactured and tested in conformity with the ISO.
(3) Sound pressure level indicates the value in an anechoic chamber. During operation these value are somewhat higher due to ambient temperature.
(4) The operation data indicates when the air-conditioner is operated at 230V50Hz or 220V60Hz.
(5) Indoor unit specifications for one unit. Capacity and operation data is two indoor units are combined and run together.
(6) Branching pipe set "DIS-WA1"×1(option). ① : Pipe of O/U～Branch, ② : Pipe of Branch～I/U
(7) Static pressure of optional air filter "UM-FL2E" is 5Pa initially.
(8) If wireless remote controller is used, only 3-speed fan setting (Hi-Me-Lo) is available.

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Adapted to **RoHS** directive

Item \ Model		FDUM140VSXPVD	
		Indoor unit **FDUM71VD (2 units)**	Outdoor unit **FDC140VSX**
Item		**—**	
Power source			380-415V 3N～50Hz / 380V 3N～60Hz
Operation data		Cooling	Heating
Nominal capacity	kW	14.0 [5.0(Min.)～16.0(Max.)]	16.0 [4.0(Min.)～20.0(Max.)]
Power consumption	kW	4.60	4.69
Running current	A	6.8 / 7.1	6.9 / 7.3
Power factor	%	98	98
Inrush current	A	5 < Max.running current 15 >	
Sound Pressure Level	dB(A)	P-Hi : 38 Hi : 35 Me : 32 Lo : 29	Cooling : 49 Heating : 52
Exterior dimensions Height x Width x Depth	mm	299 × 950 × 635	1,300 × 970 × 370
Exterior appearance (Munsell color)		—	Stucco White (4.2Y7.5/1.1) near equivalent
Net weight	kg	40	105
Refrigerant equipment Compressor type & Q'ty		—	RMT5134MDE3 × 1
Starting method		—	Direct line start
Refrigerant oil	ℓ	—	0.9 (M-MA68)
Heat exchanger		Louver fin & inner grooved tubing	M shape fin & inner grooved tubing
Refrigerant control		—	Electronic expansion valve
Air handling equipment Fan type & Q'ty		Centrifugal fan × 2	Propeller fan × 2
Motor <Starting method>	W	100 < Direct line start >	86 x 2 < Direct line start >
Air flow (Standard)	CMM	P-Hi : 23 Hi : 20 Me : 18 Lo : 15	100
External static pressure	Pa	85 / 100 (at 20CMM)	—
Outdoor air intake		Possible	—
Air filter, Q'ty		Procure locally	—
Shock & vibration absorber		Rubber sleeve (for fan motor)	Rubber sleeve (for Compressor)
Insulation (noise & heat)		Polyurethane form	—
Electric heater	W	—	20 (Crank case heater)
Remote controller		wired : RC-E4 (option) wireless : RCN-KIT3-E (option)	
Room temperature control		Thermostat by electronics	—
Safety equipment		Internal thermostat for fan motor Frost protection thermostat	Internal thermostat for fan motor Abnormal discharge temperature protection.
Installation data Refrigerant piping size	mm	Liquid line : I/U φ9.52 (3/8") ②φ9.52 (3/8") × 0.8 ①φ9.52 (3/8") × 0.8 O/U φ9.52 (3/8")	
		Gas line : I/U φ15.88 (5/8") ②φ15.88 (5/8") × 1.0 ①φ15.88 (5/8") × 1.0 O/U φ15.88 (5/8")	
Connecting method		Flare piping	Flare piping
Refrigerant line (one way) length		Max.100m	※1. See page 120
Vertical height difference between outdoor unit and indoor unit		Max.30m (Outdoor unit is higher) Max.15m (Outdoor unit is lower)	
Refrigerant Quantity		R410A 4.5kg (Pre-charged up to the piping length of 30m) Outdoor unit	
Drain pump		Built-in Drain pump	—
Drain		Hose Connectable with VP20	Holes size φ20 × 3pcs
Insulation for piping		Necessary (both Liquid & Gas lines)	
Standard Accessories		Drain hose	Edging

Notes (1) The data are measured at the following conditions.

Item	Indoor air temperature		Outdoor air temperature		External static pressure of indoor unit [Pa]
Operation	DB	WB	DB	WB	
Cooling	27℃	19℃	35℃	24℃	60
Heating	20℃		7℃	6℃	

(2) This packaged air-conditioner is manufactured and tested in conformity with the ISO.
(3) Sound pressure level indicates the value in an anechoic chamber. During operation these value are somewhat higher due to ambient temperature.
(4) The operation data indicates when the air-conditioner is operated at 400V50Hz or 380V60Hz.
(5) Indoor unit specifications for one unit. Capacity and operation data is two indoor units are combined and run together.
(6) Branching pipe set "DIS-WA1"×1(option). ① : Pipe of O/U～Branch, ② : Pipe of Branch～I/U
(7) Static pressure of optional air filter "UM-FL2E" is 5Pa initially.
(8) If wireless remote controller is used, only 3-speed fan setting (Hi-Me-Lo) is available.

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(3) Triple type

Adapted to **RoHS** directive

Item \ Model		FDUM140VNXTVD	
		Indoor unit **FDUM50VD (3 units)**	Outdoor unit **FDC140VNX**
		—	
Power source			220-240V～50Hz / 220V～60Hz
Operation data		Cooling	Heating
Nominal capacity	kW	14.0 [5.0(Min.)～16.0(Max.)]	16.0 [4.0(Min.)～18.0(Max.)]
Power consumption	kW	4.60	4.69
Running current	A	20.4 / 21.3	20.8 / 21.8
Power factor	%	98	98
Inrush current	A	5 < Max.running current 26 >	
Sound Pressure Level	dB(A)	P-Hi : 35 Hi : 34 Me : 31 Lo : 28	Cooling : 49 Heating : 52
Exterior dimensions Height x Width x Depth	mm	299 × 750 × 635	1,300 × 970 × 370
Exterior appearance (Munsell color)		—	Stucco White (4.2Y7.5/1.1) near equivalent
Net weight	kg	34	105
Refrigerant equipment Compressor type & Q'ty		—	RMT5134MDE2 × 1
Starting method		—	Direct line start
Refrigerant oil	ℓ	—	0.9 (M-MA68)
Heat exchanger		Louver fin & inner grooved tubing	M shape fin & inner grooved tubing
Refrigerant control		—	Electronic expansion valve
Air handling equipment Fan type & Q'ty		Centrifugal fan × 2	Propeller fan × 2
Motor <Starting method>	W	60 < Direct line start >	86 x 2 < Direct line start >
Air flow (Standard)	CMM	P-Hi : 14 Hi : 13 Me : 12 Lo : 11	100
External static pressure	Pa	85 / 90 (at 14CMM)	—
Outdoor air intake		Possible	—
Air filter, Q'ty		Procure locally	—
Shock & vibration absorber		Rubber sleeve (for fan motor)	Rubber sleeve (for Compressor)
Insulation (noise & heat)		Polyurethane form	—
Electric heater	W	—	20 (Crank case heater)
Remote controller		wired : RC-E4 (option) wireless : RCN-KIT3-E (option)	
Room temperature control		Thermostat by electronics	—
Safety equipment		Internal thermostat for fan motor Frost protection thermostat	Internal thermostat for fan motor Abnormal discharge temperature protection.
Installation data Refrigerant piping size	mm	Liquid line : I/U ϕ6.35 (1/4") ②ϕ9.52 (3/8") × 0.8 ①ϕ9.52 (3/8") × 0.8 O/U ϕ9.52 (3/8")	
		Gas line : I/U ϕ12.7 (1/2") ②ϕ12.7 (1/2") × 0.8 ①ϕ15.88 (5/8") × 1.0 O/U ϕ15.88 (5/8")	
Connecting method		Flare piping	Flare piping
Refrigerant line (one way) length		Max.100m	※1. See page 121
Vertical height difference between outdoor unit and indoor unit		Max.30m (Outdoor unit is higher) Max.15m (Outdoor unit is lower)	
Refrigerant Quantity		R410A 4.5kg (Pre-charged up to the piping length of 30m) Outdoor unit	
Drain pump		Built-in Drain pump	—
Drain		Hose Connectable with VP20	Holes size ϕ20 × 3pcs
Insulation for piping		Necessary (both Liquid & Gas lines)	
Standard Accessories		Drain hose	Edging

Notes (1) The data are measured at the following conditions.

Item	Indoor air temperature		Outdoor air temperature		External static pressure of indoor unit [Pa]
Operation	DB	WB	DB	WB	
Cooling	27℃	19℃	35℃	24℃	60
Heating	20℃		7℃	6℃	

(2) This packaged air-conditioner is manufactured and tested in conformity with the ISO.
(3) Sound pressure level indicates the value in an anechoic chamber. During operation these value are somewhat higher due to ambient temperature.
(4) The operation data indicates when the air-conditioner is operated at 230V50Hz or 220V60Hz.
(5) Indoor unit specifications for one unit. Capacity and operation data is three indoor units are combined and run together.
(6) Branching pipe set "DIS-TA1"×1(option). ① : Pipe of O/U～Branch, ② : Pipe of Branch～I/U
(7) Static pressure of optional air filter "UM-FL1E" is 5Pa initially.
(8) If wireless remote controller is used, only 3-speed fan setting (Hi-Me-Lo) is available.

Adapted to **RoHS** directive

Item \ Model		FDUM140VSXTVD	
		Indoor unit **FDUM50VD (3 units)**	Outdoor unit **FDC140VSX**
Item		—	
Power source			380-415V 3N～50Hz / 380V 3N～60Hz
Operation data		Cooling	Heating
Nominal capacity	kW	14.0 [5.0(Min.)～16.0(Max.)]	16.0 [4.0(Min.)～20.0(Max.)]
Power consumption	kW	4.60	4.69
Running current	A	6.8 / 7.1	6.9 / 7.3
Power factor	%	98	98
Inrush current	A	5 < Max.running current 15 >	
Sound Pressure Level	dB(A)	P-Hi : 35 Hi : 34 Me : 31 Lo : 28	Cooling : 49 Heating : 52
Exterior dimensions Height x Width x Depth	mm	299 × 750 × 635	1,300 × 970 × 370
Exterior appearance (Munsell color)		—	Stucco White (4.2Y7.5/1.1) near equivalent
Net weight	kg	34	105
Refrigerant equipment Compressor type & Q'ty		—	RMT5134MDE3 × 1
Starting method		—	Direct line start
Refrigerant oil	ℓ	—	0.9 (M-MA68)
Heat exchanger		Louver fin & inner grooved tubing	M shape fin & inner grooved tubing
Refrigerant control		—	Electronic expansion valve
Air handling equipment Fan type & Q'ty		Centrifugal fan × 2	Propeller fan × 2
Motor <Starting method>	W	60 < Direct line start >	86 x 2 < Direct line start >
Air flow (Standard)	CMM	P-Hi : 14 Hi : 13 Me : 12 Lo : 11	100
External static pressure	Pa	85 / 90 (at 14CMM)	—
Outdoor air intake		Possible	—
Air filter, Q'ty		Procure locally	—
Shock & vibration absorber		Rubber sleeve (for fan motor)	Rubber sleeve (for Compressor)
Insulation (noise & heat)		Polyurethane form	—
Electric heater	W	—	20 (Crank case heater)
Remote controller		wired : RC-E4 (option) wireless : RCN-KIT3-E (option)	
Room temperature control		Thermostat by electronics	—
Safety equipment		Internal thermostat for fan motor Frost protection thermostat	Internal thermostat for fan motor Abnormal discharge temperature protection.
Installation data Refrigerant piping size	mm	Liquid line : I/U φ6.35 (1/4") ②φ9.52 (3/8") × 0.8 ①φ9.52 (3/8") × 0.8 O/U φ9.52 (3/8")	
		Gas line : I/U φ12.7 (1/2") ②φ12.7 (1/2") × 0.8 ①φ15.88 (5/8") × 1.0 O/U φ15.88 (5/8")	
Connecting method		Flare piping	Flare piping
Refrigerant line (one way) length		Max.100m	※1. See page 121
Vertical height difference between outdoor unit and indoor unit		Max.30m (Outdoor unit is higher) Max.15m (Outdoor unit is lower)	
Refrigerant Quantity		R410A 4.5kg (Pre-charged up to the piping length of 30m) Outdoor unit	
Drain pump		Built-in Drain pump	—
Drain		Hose Connectable with VP20	Holes size φ20 × 3pcs
Insulation for piping		Necessary (both Liquid & Gas lines)	
Standard Accessories		Drain hose	Edging

Notes (1) The data are measured at the following conditions.

Item	Indoor air temperature		Outdoor air temperature		External static pressure of indoor unit [Pa]
Operation	DB	WB	DB	WB	
Cooling	27℃	19℃	35℃	24℃	60
Heating	20℃		7℃	6℃	

(2) This packaged air-conditioner is manufactured and tested in conformity with the ISO.
(3) Sound pressure level indicates the value in an anechoic chamber. During operation these value are somewhat higher due to ambient temperature.
(4) The operation data indicates when the air-conditioner is operated at 400V50Hz or 380V60Hz.
(5) Indoor unit specifications for one unit. Capacity and operation data is three indoor units are combined and run together.
(6) Branching pipe set "DIS-TA1"×1(option). ① : Pipe of O/U～Branch, ② : Pipe of Branch～I/U
(7) Static pressure of optional air filter "UM-FL1E" is 5Pa initially.
(8) If wireless remote controller is used, only 3-speed fan setting (Hi-Me-Lo) is available.

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1.5 Duct connected-High static pressure type (FDU)

(1) Single type

Adapted to **RoHS** directive

Item \ Model		FDU71VNXVD	
		Indoor unit **FDU71VD**	Outdoor unit **FDC71VNX**
		—	
Power source			220-240V～50Hz
Operation data		Cooling	Heating
Nominal capacity	kW	7.1 [3.2 (Min.)～8.0 (Max.)]	8.0 [3.6 (Min.)～9.0 (Max.)]
Power consumption	kW	2.15	2.15
Running current	A	9.6	9.5
Power factor	%	98	99
Inrush current	A	5 < Max.running current 17 >	
Sound Pressure Level	dB(A)	Hi : 41 Lo : 37	Cooling : 51, Heating : 48
Exterior dimensions Height x Width x Depth	mm	295 × 850 × 650	750 × 880 (+88) × 340
Exterior appearance (Munsell color)		—	Stucco White (4.2Y7.5/1.1) near equivalent
Net weight	kg	40	60
Refrigerant equipment Compressor type & Q'ty		—	RMT5118MDE2 × 1
Starting method		—	Direct line start
Refrigerant oil	ℓ	—	0.675 (M-MA68)
Heat exchanger		Louver fin & inner grooved tubing	M shape fin & inner grooved tubing
Refrigerant control		—	Electronic expansion valve
Air handling equipment Fan type & Q'ty		Centrifugal fan × 2	Propeller fan x 1
Motor <Starting method>	W	230 < Direct line start >	86 < Direct line start >
Air flow (Standard)	CMM	Hi : 20 Lo : 17	Cooling : 60, Heating : 50
External static pressure	Pa	Standard : 60 Max : 130	—
Outdoor air intake		Possible (on return duct)	—
Air filter, Q'ty		Procure locally	—
Shock & vibration absorber		Rubber sleeve (for fan motor)	Rubber sleeve (for Compressor)
Insulation (noise & heat)		Polyurethane form	—
Electric heater	W	—	20 (Crank case heater)
Remote controller		wired : RC-E4 (option) wireless : RCN-KIT3-E (option)	
Room temperature control		Thermostat by electronics	—
Safety equipment		Internal thermostat for fan motor Frost protection thermostat	Internal thermostat for fan motor Abnormal discharge temperature protection.
Installation data Refrigerant piping size	mm	Liquid line : I/U φ9.52 (3/8") Pipe φ9.52 (3/8") × 0.8 O/U φ9.52 (3/8")	
		Gas line : I/U φ15.88 (5/8") Pipe φ15.88 (5/8") × 1.0 O/U φ15.88 (5/8")	
Connecting method		Flare piping	Flare piping
Refrigerant line (one way) length		Max.50m	※1. See page 120
Vertical height difference between outdoor unit and indoor unit		Max.30m (Outdoor unit is higher) Max.15m (Outdoor unit is lower)	
Refrigerant Quantity		R410A 2.95kg in outdoor unit (incl. the amount for the piping of : 30m)	
Drain pump		Built-in Drain pump	—
Drain		Hose Connectable with VP20	Holes size φ20 x 3pcs
Insulation for piping		Necessary (both Liquid & Gas lines)	
Standard Accessories		Drain hose	—

Notes (1) The data are measured at the following conditions.

Item	Indoor air temperature		Outdoor air temperature		External static pressure of indoor unit [Pa]
Operation	DB	WB	DB	WB	
Cooling	27℃	19℃	35℃	24℃	60
Heating	20℃		7℃	6℃	

(2) This packaged air-conditioner is manufactured and tested in conformity with the ISO.
(3) Sound pressure level indicates the value in an anechoic chamber. During operation these value are somewhat higher due to ambient temperature.
(4) The operation data indicates when the air-conditioner is operated at 230V50Hz
(5) External static pressure can be changed from standard external static pressure (factory setting) to maximum external static pressuer (high static pressure setting) by remote controller.
(6) Value of sound pressure level become increased 5dB(A), when external static pressure is 130Pa.

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Adapted to **RoHS** directive

Item \ Model		FDU100VNXVD	
		Indoor unit **FDU100VD**	Outdoor unit **FDC100VNX**
		—	
Power source			220-240V～50Hz
Operation data		Cooling	Heating
Nominal capacity	kW	10.0 [4.0 (Min.)～11.2 (Max.)]	11.2 [4.0 (Min.)～12.5 (Max.)]
Power consumption	kW	2.78	2.90
Running current	A	12.3	12.9
Power factor	%	98	98
Inrush current	A	5 < Max.running current 25 >	
Sound Pressure Level	dB(A)	Hi : 42 Lo : 37	Cooling : 48 Heating : 50
Exterior dimensions Height x Width x Depth	mm	350 × 1,370 × 650	1,300 × 970 × 370
Exterior appearance (Munsell color)		—	Stucco White (4.2Y7.5/1.1) near equivalent
Net weight	kg	63	105
Refrigerant equipment Compressor type & Q'ty		—	RMT5134MDE2 × 1
Starting method		—	Direct line start
Refrigerant oil	ℓ	—	0.9 (M-MA68)
Heat exchanger		Louver fin & inner grooved tubing	Straight fin & inner grooved tubing
Refrigerant control		—	Electronic expansion valve
Air handling equipment Fan type & Q'ty		Centrifugal fan × 2	Propeller fan × 2
Motor <Starting method>	W	280 < Direct line start >	86 x 2 < Direct line start >
Air flow (Standard)	CMM	Hi : 34 Lo : 27	100
External static pressure	Pa	Standard : 60 Max : 130	—
Outdoor air intake		Possible (on return duct)	—
Air filter, Q'ty		Procure locally	—
Shock & vibration absorber		Rubber sleeve (for fan motor)	Rubber sleeve (for Compressor)
Insulation (noise & heat)		Polyurethane form	—
Electric heater	W	—	20 (Crank case heater)
Remote controller		wired : RC-E4 (option) wireless : RCN-KIT3-E (option)	
Room temperature control		Thermostat by electronics	—
Safety equipment		Internal thermostat for fan motor Frost protection thermostat	Internal thermostat for fan motor Abnormal discharge temperature protection.
Installation data Refrigerant piping size	mm	Liquid line : I/U ϕ9.52 (3/8") Pipe ϕ9.52 (3/8") × 0.8 O/U ϕ9.52 (3/8")	
		Gas line : I/U ϕ15.88 (5/8") Pipe ϕ15.88 (5/8") × 1.0 O/U ϕ15.88 (5/8")	
Connecting method		Flare piping	Flare piping
Refrigerant line (one way) length		Max.100m	※1. See page 120
Vertical height difference between outdoor unit and indoor unit		Max.30m (Outdoor unit is higher) Max.15m (Outdoor unit is lower)	
Refrigerant Quantity		R410A 4.5kg in outdoor unit (incl. the amount for the piping of : 30m)	
Drain pump		Built-in Drain pump	—
Drain		Hose Connectable with VP20	Holes size ϕ20 x 3pcs
Insulation for piping		Necessary (both Liquid & Gas lines)	
Standard Accessories		Drain hose	Edging

Notes (1) The data are measured at the following conditions.

Item	Indoor air temperature		Outdoor air temperature		External static pressure of indoor unit [Pa]
Operation	DB	WB	DB	WB	
Cooling	27℃	19℃	35℃	24℃	60
Heating	20℃		7℃	6℃	

(2) This packaged air-conditioner is manufactured and tested in conformity with the ISO.
(3) Sound pressure level indicates the value in an anechoic chamber. During operation these value are somewhat higher due to ambient temperature.
(4) The operation data indicates when the air-conditioner is operated at 230V50Hz
(5) External static pressure can be changed from standard external static pressure (factory setting) to maximum external static pressuer (high static pressure setting) by remote controller.
(6) Value of sound pressure level become increased 5dB(A), when external static pressure is 130Pa.

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Adapted to **RoHS** directive

Item \ Model		FDU100VSXVD	
		Indoor unit **FDU100VD**	Outdoor unit **FDC100VSX**
Item		—	
Power source			380-415V 3N～50Hz
Operation data		Cooling	Heating
Nominal capacity	kW	10.0 [4.0 (Min.)～11.2 (Max.)]	11.2 [4.0 (Min.)～16.0 (Max.)]
Power consumption	kW	2.78	2.90
Running current	A	4.1	4.3
Power factor	%	98	97
Inrush current	A	5 < Max.running current 16 >	
Sound Pressure Level	dB(A)	Hi : 42 Lo : 37	Cooling : 48 Heating : 50
Exterior dimensions Height x Width x Depth	mm	350 × 1,370 × 650	1,300 × 970 × 370
Exterior appearance (Munsell color)		—	Stucco White (4.2Y7.5/1.1) near equivalent
Net weight	kg	63	105
Refrigerant equipment Compressor type & Q'ty		—	RMT5134MDE3 × 1
Starting method		—	Direct line start
Refrigerant oil	ℓ	—	0.9 (M-MA68)
Heat exchanger		Louver fin & inner grooved tubing	M shape fin & inner grooved tubing
Refrigerant control		—	Electronic expansion valve
Air handling equipment Fan type & Q'ty		Centrifugal fan x 2	Propeller fan x 2
Motor <Starting method>	W	280 < Direct line start >	86 x 2 < Direct line start >
Air flow (Standard)	CMM	Hi : 34 Lo : 27	100
External static pressure	Pa	Standard : 60 Max : 130	—
Outdoor air intake		Possible (on return duct)	—
Air filter, Q'ty		Procure locally	—
Shock & vibration absorber		Rubber sleeve (for fan motor)	Rubber sleeve (for Compressor)
Insulation (noise & heat)		Polyurethane form	—
Electric heater	W	—	20 (Crank case heater)
Remote controller		wired : RC-E4 (option) wireless : RCN-KIT3-E (option)	
Room temperature control		Thermostat by electronics	—
Safety equipment		Internal thermostat for fan motor Frost protection thermostat	Internal thermostat for fan motor Abnormal discharge temperature protection.
Installation data Refrigerant piping size	mm	Liquid line : I/U ϕ9.52 (3/8") Pipe ϕ9.52 (3/8") × 0.8 O/U ϕ9.52 (3/8")	
		Gas line : I/U ϕ15.88 (5/8") Pipe ϕ15.88 (5/8") × 1.0 O/U ϕ15.88 (5/8")	
Connecting method		Flare piping	Flare piping
Refrigerant line (one way) length		Max.100m	※1. See page 120
Vertical height difference between outdoor unit and indoor unit		Max.30m (Outdoor unit is higher) Max.15m (Outdoor unit is lower)	
Refrigerant Quantity		R410A 4.5kg in outdoor unit (incl. the amount for the piping of : 30m)	
Drain pump		Built-in Drain pump	—
Drain		Hose Connectable with VP20	Holes size ϕ20 x 3pcs
Insulation for piping		Necessary (both Liquid & Gas lines)	
Standard Accessories		Drain hose	Edging

Notes (1) The data are measured at the following conditions.

Item	Indoor air temperature		Outdoor air temperature		External static pressure of indoor unit [Pa]
Operation	DB	WB	DB	WB	
Cooling	27℃	19℃	35℃	24℃	60
Heating	20℃		7℃	6℃	

(2) This packaged air-conditioner is manufactured and tested in conformity with the ISO.
(3) Sound pressure level indicates the value in an anechoic chamber. During operation these value are somewhat higher due to ambient temperature.
(4) The operation data indicates when the air-conditioner is operated at 400V50Hz
(5) External static pressure can be changed from standard external static pressure (factory setting) to maximum external static pressuer (high static pressure setting) by remote controller.
(6) Value of sound pressure level become increased 5dB(A), when external static pressure is 130Pa.

PJD001Z311

Adapted to **RoHS** directive

Item \ Model		FDU125VNXVD	
		Indoor unit **FDU125VD**	Outdoor unit **FDC125VNX**
Item		—	
Power source			220-240V～50Hz
Operation data		Cooling	Heating
Nominal capacity	kW	12.5 [5.0(Min.)～14.0(Max.)]	14.0 [4.0(Min.)～17.0(Max.)]
Power consumption	kW	3.44	3.67
Running current	A	15.3	16.3
Power factor	%	98	98
Inrush current	A	5 < Max.running current 29 >	
Sound Pressure Level	dB(A)	Hi : 43 Lo : 38	Cooling : 48 Heating : 50
Exterior dimensions Height x Width x Depth	mm	350 × 1,370 × 650	1,300 × 970 × 370
Exterior appearance (Munsell color)		—	Stucco White (4.2Y7.5/1.1) near equivalent
Net weight	kg	63	105
Refrigerant equipment Compressor type & Q'ty		—	RMT5134MDE2 × 1
Starting method		—	Direct line start
Refrigerant oil	ℓ	—	0.9 (M-MA68)
Heat exchanger		Louver fin & inner grooved tubing	M shape fin & inner grooved tubing
Refrigerant control		—	Electronic expansion valve
Air handling equipment Fan type & Q'ty		Centrifugal fan × 2	Propeller fan × 2
Motor <Starting method>	W	370 < Direct line start >	86 x 2 < Direct line start >
Air flow (Standard)	CMM	Hi : 42 Lo : 33.5	100
External static pressure	Pa	Standard : 60 Max : 130	—
Outdoor air intake		Possible (on return duct)	—
Air filter, Q'ty		Procure locally	—
Shock & vibration absorber		Rubber sleeve (for fan motor)	Rubber sleeve (for Compressor)
Insulation (noise & heat)		Polyurethane form	—
Electric heater	W	—	20 (Crank case heater)
Remote controller		wired : RC-E4 (option) wireless : RCN-KIT3-E (option)	
Room temperature control		Thermostat by electronics	—
Safety equipment		Internal thermostat for fan motor Frost protection thermostat	Internal thermostat for fan motor Abnormal discharge temperature protection.
Installation data Refrigerant piping size	mm	Liquid line : I/U ϕ9.52 (3/8") Pipe ϕ9.52 (3/8") × 0.8 O/U ϕ9.52 (3/8")	
		Gas line : I/U ϕ15.88 (5/8") Pipe ϕ15.88 (5/8") × 1.0 O/U ϕ15.88 (5/8")	
Connecting method		Flare piping	Flare piping
Refrigerant line (one way) length		Max.100m	※1. See page 120
Vertical height difference between outdoor unit and indoor unit		Max.30m (Outdoor unit is higher) Max.15m (Outdoor unit is lower)	
Refrigerant Quantity		R410A 4.5kg in outdoor unit (incl. the amount for the piping of : 30m)	
Drain pump		Built-in Drain pump	—
Drain		Hose Connectable with VP20	Holes size ϕ20 × 3pcs
Insulation for piping		Necessary (both Liquid & Gas lines)	
Standard Accessories		Drain hose	Edging

Notes (1) The data are measured at the following conditions.

Item	Indoor air temperature		Outdoor air temperature		External static pressure of indoor unit [Pa]
Operation	DB	WB	DB	WB	
Cooling	27℃	19℃	35℃	24℃	60
Heating	20℃		7℃	6℃	

(2) This packaged air-conditioner is manufactured and tested in conformity with the ISO.
(3) Sound pressure level indicates the value in an anechoic chamber. During operation these value are somewhat higher due to ambient temperature.
(4) The operation data indicates when the air-conditioner is operated at 230V50Hz
(5) External static pressure can be changed from standard external static pressure (factory setting) to maximum external static pressuer (high static pressure setting) by remote controller.
(6) Value of sound pressure level become increased 5dB(A), when external static pressure is 130Pa.

PJD001Z311

Adapted to **RoHS** directive

Item \ Model		FDU125VSXVD	
		Indoor unit **FDU125VD**	Outdoor unit **FDC125VSX**
Item		—	
Power source			380-415V 3N～50Hz
Operation data		Cooling	Heating
Nominal capacity	kW	12.5 [5.0(Min.)～14.0(Max.)]	14.0 [4.0(Min.)～18.0(Max.)]
Power consumption	kW	3.44	3.67
Running current	A	5.1	5.4
Power factor	%	97	98
Inrush current	A	5 < Max.running current 18 >	
Sound Pressure Level	dB(A)	Hi : 43 Lo : 38	Cooling : 48 Heating : 50
Exterior dimensions Height x Width x Depth	mm	350 × 1,370 × 650	1,300 × 970 × 370
Exterior appearance (Munsell color)		—	Stucco White (4.2Y7.5/1.1) near equivalent
Net weight	kg	63	105
Refrigerant equipment Compressor type & Q'ty		—	RMT5134MDE3 × 1
Starting method		—	Direct line start
Refrigerant oil	ℓ	—	0.9 (M-MA68)
Heat exchanger		Louver fin & inner grooved tubing	M shape fin & inner grooved tubing
Refrigerant control		—	Electronic expansion valve
Air handling equipment Fan type & Q'ty		Centrifugal fan × 2	Propeller fan × 2
Motor <Starting method>	W	370 < Direct line start >	86 x 2 < Direct line start >
Air flow (Standard)	CMM	Hi : 42 Lo : 33.5	100
External static pressure	Pa	Standard : 60 Max : 130	—
Outdoor air intake		Possible (on return duct)	—
Air filter, Q'ty		Procure locally	—
Shock & vibration absorber		Rubber sleeve (for fan motor)	Rubber sleeve (for Compressor)
Insulation (noise & heat)		Polyurethane form	—
Electric heater	W	—	20 (Crank case heater)
Remote controller		wired : RC-E4 (option) wireless : RCN-KIT3-E (option)	
Room temperature control		Thermostat by electronics	—
Safety equipment		Internal thermostat for fan motor Frost protection thermostat	Internal thermostat for fan motor Abnormal discharge temperature protection.
Installation data Refrigerant piping size	mm	Liquid line : I/U ϕ9.52 (3/8") Pipe ϕ9.52 (3/8") × 0.8 O/U ϕ9.52 (3/8")	
		Gas line : I/U ϕ15.88 (5/8") Pipe ϕ15.88 (5/8") × 1.0 O/U ϕ15.88 (5/8")	
Connecting method		Flare piping	Flare piping
Refrigerant line (one way) length		Max.100m	※1. See page 120
Vertical height difference between outdoor unit and indoor unit		Max.30m (Outdoor unit is higher) Max.15m (Outdoor unit is lower)	
Refrigerant Quantity		R410A 4.5kg in outdoor unit (incl. the amount for the piping of : 30m)	
Drain pump		Built-in Drain pump	—
Drain		Hose Connectable with VP20	Holes size ϕ20 × 3pcs
Insulation for piping		Necessary (both Liquid & Gas lines)	
Standard Accessories		Drain hose	Edging

Notes (1) The data are measured at the following conditions.

Item	Indoor air temperature		Outdoor air temperature		External static pressure of indoor unit [Pa]
Operation	DB	WB	DB	WB	
Cooling	27℃	19℃	35℃	24℃	60
Heating	20℃		7℃	6℃	

(2) This packaged air-conditioner is manufactured and tested in conformity with the ISO.
(3) Sound pressure level indicates the value in an anechoic chamber. During operation these value are somewhat higher due to ambient temperature.
(4) The operation data indicates when the air-conditioner is operated at 400V50Hz
(5) External static pressure can be changed from standard external static pressure (factory setting) to maximum external static pressuer (high static pressure setting) by remote controller.
(6) Value of sound pressure level become increased 5dB(A), when external static pressure is 130Pa.

PJD001Z311

Adapted to **RoHS** directive

Item \ Model		FDU140VNXVD	
		Indoor unit **FDU140VD**	Outdoor unit **FDC140VNX**
Item		—	
Power source			220-240V～50Hz
Operation data		Cooling	Heating
Nominal capacity	kW	14.0 [5.0(Min.)～16.0(Max.)]	16.0 [4.0(Min.)～18.0(Max.)]
Power consumption	kW	4.20	4.30
Running current	A	18.6	19.1
Power factor	%	98	98
Inrush current	A	5 < Max.running current 30 >	
Sound Pressure Level	dB(A)	Hi : 43 Lo : 38	Cooling : 49 Heating : 52
Exterior dimensions Height x Width x Depth	mm	350 × 1,370 × 650	1,300 × 970 × 370
Exterior appearance (Munsell color)		—	Stucco White (4.2Y7.5/1.1) near equivalent
Net weight	kg	63	105
Refrigerant equipment Compressor type & Q'ty		—	RMT5134MDE2 × 1
Starting method		—	Direct line start
Refrigerant oil	ℓ	—	0.9 (M-MA68)
Heat exchanger		Louver fin & inner grooved tubing	M shape fin & inner grooved tubing
Refrigerant control		—	Electronic expansion valve
Air handling equipment Fan type & Q'ty		Centrifugal fan × 2	Propeller fan × 2
Motor <Starting method>	W	370 < Direct line start >	86 x 2 < Direct line start >
Air flow (Standard)	CMM	Hi : 42 Lo : 33.5	100
External static pressure	Pa	Standard : 60 Max : 130	—
Outdoor air intake		Possible (on return duct)	—
Air filter, Q'ty		Procure locally	—
Shock & vibration absorber		Rubber sleeve (for fan motor)	Rubber sleeve (for Compressor)
Insulation (noise & heat)		Polyurethane form	—
Electric heater	W	—	20 (Crank case heater)
Remote controller		wired : RC-E4 (option) wireless : RCN-KIT3-E (option)	
Room temperature control		Thermostat by electronics	—
Safety equipment		Internal thermostat for fan motor Frost protection thermostat	Internal thermostat for fan motor Abnormal discharge temperature protection.
Installation data Refrigerant piping size	mm	Liquid line : I/U ϕ9.52 (3/8") Pipe ϕ9.52 (3/8") × 0.8 O/U ϕ9.52 (3/8")	
		Gas line : I/U ϕ15.88 (5/8") Pipe ϕ15.88 (5/8") × 1.0 O/U ϕ15.88 (5/8")	
Connecting method		Flare piping	Flare piping
Refrigerant line (one way) length		Max.100m	※1. See page 120
Vertical height difference between outdoor unit and indoor unit		Max.30m (Outdoor unit is higher) Max.15m (Outdoor unit is lower)	
Refrigerant Quantity		R410A 4.5kg in outdoor unit (incl. the amount for the piping of : 30m)	
Drain pump		Built-in Drain pump	—
Drain		Hose Connectable with VP20	Holes size ϕ20 × 3pcs
Insulation for piping		Necessary (both Liquid & Gas lines)	
Standard Accessories		Drain hose	Edging

Notes (1) The data are measured at the following conditions.

Item	Indoor air temperature		Outdoor air temperature		External static pressure of indoor unit [Pa]
Operation	DB	WB	DB	WB	
Cooling	27℃	19℃	35℃	24℃	60
Heating	20℃		7℃	6℃	

(2) This packaged air-conditioner is manufactured and tested in conformity with the ISO.
(3) Sound pressure level indicates the value in an anechoic chamber. During operation these value are somewhat higher due to ambient temperature.
(4) The operation data indicates when the air-conditioner is operated at 230V50Hz
(5) External static pressure can be changed from standard external static pressure (factory setting) to maximum external static pressuer (high static pressure setting) by remote controller.
(6) Value of sound pressure level become increased 5dB(A), when external static pressure is 130Pa.

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Adapted to **RoHS** directive

Item \ Model		FDU140VSXVD	
		Indoor unit **FDU140VD**	Outdoor unit **FDC140VSX**
Item		—	
Power source			380-415V 3N～50Hz
Operation data		Cooling	Heating
Nominal capacity	kW	14.0 [5.0(Min.)～16.0(Max.)]	16.0 [4.0(Min.)～20.0(Max.)]
Power consumption	kW	4.20	4.30
Running current	A	6.2	6.3
Power factor	%	98	99
Inrush current	A	5 < Max.running current 19 >	
Sound Pressure Level	dB(A)	Hi : 43 Lo : 38	Cooling : 49 Heating : 52
Exterior dimensions Height x Width x Depth	mm	350 × 1,370 × 650	1,300 × 970 × 370
Exterior appearance (Munsell color)		—	Stucco White (4.2Y7.5/1.1) near equivalent
Net weight	kg	63	105
Refrigerant equipment Compressor type & Q'ty		—	RMT5134MDE3 × 1
Starting method		—	Direct line start
Refrigerant oil	ℓ	—	0.9 (M-MA68)
Heat exchanger		Louver fin & inner grooved tubing	M shape fin & inner grooved tubing
Refrigerant control		—	Electronic expansion valve
Air handling equipment Fan type & Q'ty		Centrifugal fan × 2	Propeller fan × 2
Motor <Starting method>	W	370 < Direct line start >	86 x 2 < Direct line start >
Air flow (Standard)	CMM	Hi : 42 Lo : 33.5	100
External static pressure	Pa	Standard : 60 Max : 130	—
Outdoor air intake		Possible (on return duct)	—
Air filter, Q'ty		Procure locally	—
Shock & vibration absorber		Rubber sleeve (for fan motor)	Rubber sleeve (for Compressor)
Insulation (noise & heat)		Polyurethane form	—
Electric heater	W	—	20 (Crank case heater)
Remote controller		wired : RC-E4 (option) wireless : RCN-KIT3-E (option)	
Room temperature control		Thermostat by electronics	—
Safety equipment		Internal thermostat for fan motor Frost protection thermostat	Internal thermostat for fan motor Abnormal discharge temperature protection.
Installation data Refrigerant piping size	mm	Liquid line : I/U ϕ9.52 (3/8") Pipe ϕ9.52 (3/8") × 0.8 O/U ϕ9.52 (3/8")	
		Gas line : I/U ϕ15.88 (5/8") Pipe ϕ15.88 (5/8") × 1.0 O/U ϕ15.88 (5/8")	
Connecting method		Flare piping	Flare piping
Refrigerant line (one way) length		Max.100m	※1. See page 120
Vertical height difference between outdoor unit and indoor unit		Max.30m (Outdoor unit is higher) Max.15m (Outdoor unit is lower)	
Refrigerant Quantity		R410A 4.5kg in outdoor unit (incl. the amount for the piping of : 30m)	
Drain pump		Built-in Drain pump	—
Drain		Hose Connectable with VP20	Holes size ϕ20 × 3pcs
Insulation for piping		Necessary (both Liquid & Gas lines)	
Standard Accessories		Drain hose	Edging

Notes (1) The data are measured at the following conditions.

Item	Indoor air temperature		Outdoor air temperature		External static pressure of indoor unit [Pa]
Operation	DB	WB	DB	WB	
Cooling	27℃	19℃	35℃	24℃	60
Heating	20℃		7℃	6℃	

(2) This packaged air-conditioner is manufactured and tested in conformity with the ISO.
(3) Sound pressure level indicates the value in an anechoic chamber. During operation these value are somewhat higher due to ambient temperature.
(4) The operation data indicates when the air-conditioner is operated at 400V50Hz
(5) External static pressure can be changed from standard external static pressure (factory setting) to maximum external static pressuer (high static pressure setting) by remote controller.
(6) Value of sound pressure level become increased 5dB(A), when external static pressure is 130Pa.

PJD001Z311

1.6 Wall mounted type (SRK)

(1) Twin type

Adapted to **RoHS** directive

Item \ Model		SRK100VNXPZIX SRK100VNXPZJX	
		Indoor unit **SRK50ZIX-S (2 units)** **SRK50ZJX-S (2 units)**	Outdoor unit **FDC100VNX**
Item		—	
Power source			220-240V～50Hz / 220V～60Hz
Operation data		Cooling	Heating
Nominal capacity	kW	10.0 [4.0(Min.)～11.2(Max.)]	11.2 [4.0(Min.)～12.5(Max.)]
Power consumption	kW	2.66	2.60
Running current	A	11.8 / 12.3	11.5 / 12.1
Power factor	%	98	98
Inrush current	A	5 < Max.running current 24 >	
Sound Pressure Level	dB(A)	Hi : 45 Me : 38 Lo : 26(C) / Hi : 45 Me : 38 Lo : 32(H)	Cooling : 48 Heating : 50
Exterior dimensions Height x Width x Depth	mm	309 × 890 × 220	1,300 × 970 × 370
Exterior appearance (Munsell color)		Fine snow (8.0Y9.3/0.1) near equivalent	Stucco White (4.2Y7.5/1.1) near equivalent
Net weight	kg	15	105
Refrigerant equipment Compressor type & Q'ty		—	RMT5134MDE2 × 1
Starting method		—	Direct line start
Refrigerant oil	ℓ	—	0.9 (M-MA68)
Heat exchanger		Louver fins & inner grooved tubing	M shape fin & inner grooved tubing
Refrigerant control		—	Electronic expansion valve
Air handling equipment Fan type & Q'ty		Tangential fan x 1	Propeller fan × 2
Motor <Starting method>	W	27 < Direct line start >	86 x 2 < Direct line start >
Air flow (Standard)	CMM	Hi : 13.5 Me : 11 Lo : 8(C) / Hi : 16.5 Me : 14.5 Lo : 10.5(H)	100
External static pressure	Pa	0	—
Outside air intake		Not possible	—
Air filter, Q'ty		Polypropylene net (washable) x 2	—
Shock & vibration absorber		—	Rubber sleeve (for Compressor)
Insulation (noise & heat)		Polyurethane form	—
Electric heater	W	—	20 (Crank case heater)
Remote controller		RC-E4 (option) & SC-BIKN-E (Interface kit, option)	
Room temperature control		Thermostat by electronics	—
Safety equipment		Internal thermostat for fan motor Frost protection thermostat	Internal thermostat for fan motor Abnormal discharge temperature protection.
Installation data Refrigerant piping size	mm	Liquid line : I/U ϕ6.35 (1/4") ②ϕ9.52 (3/8") × 0.8 ①ϕ9.52 (3/8") × 0.8 O/U ϕ9.52 (3/8")	
		Gas line : I/U ϕ12.7 (1/2") ②ϕ12.7 (1/2") × 0.8 ①ϕ15.88 (5/8") × 1.0 O/U ϕ15.88 (5/8")	
Connecting method		Flare piping	Flare piping
Refrigerant line (one way) length		Max.100m	※1. See page 120
Vertical height difference between outdoor unit and indoor unit		Max.30m (Outdoor unit is higher) Max.15m (Outdoor unit is lower)	
Refrigerant Quantity		R410A 4.5kg (Pre-charged up to the piping length of 30m) Outdoor unit	
Drain pump		—	—
Drain		Hose Connectable with VP16	Holes size ϕ20 × 3pcs
Insulation for piping		Necessary (both Liquid & Gas lines)	
Standard Accessories		Mounting kit, Drain hose	Edging

Notes (1) The data are measured at the following conditions.

Item	Indoor air temperature		Outdoor air temperature	
Operation	DB	WB	DB	WB
Cooling	27℃	19℃	35℃	24℃
Heating	20℃		7℃	6℃

(2) This packaged air-conditioner is manufactured and tested in conformity with the ISO.
(3) Sound pressure level indicates the value in an anechoic chamber. During operation these value are somewhat higher due to ambient temperature.
(4) The operation data indicates when the air-conditioner is operated at 230V50Hz or 220V60Hz.
(5) Indoor unit specifications for one unit. Capacity and operation data is two indoor units are combined and run together.
(6) Branching pipe set "DIS-WA1"×1(option). ① : Pipe of O/U～Branch, ② : Pipe of Branch～I/U

PCA001Z611

Adapted to **RoHS** directive

Item \ Model		SRK100VSXPZIX SRK100VSXPZJX	
		Indoor unit **SRK50ZIX-S (2 units)** **SRK50ZJX-S (2 units)**	Outdoor unit **FDC100VSX**
		—	
Power source			380-415V 3N～50Hz / 380V 3N～60Hz
Operation data		Cooling	Heating
Nominal capacity	kW	10.0 [4.0(Min.)～11.2(Max.)]	11.2 [4.0(Min.)～16.0(Max.)]
Power consumption	kW	2.66	2.60
Running current	A	3.9 / 4.1	3.8 / 4.0
Power factor	%	98 / 99	99
Inrush current	A	5 < Max.running current 15 >	
Sound Pressure Level	dB(A)	Hi : 45 Me : 38 Lo : 26(C) / Hi : 45 Me : 38 Lo : 32(H)	Cooling : 48 Heating : 50
Exterior dimensions Height x Width x Depth	mm	309 × 890 × 220	1,300 × 970 × 370
Exterior appearance (Munsell color)		Fine snow (8.0Y9.3/0.1) near equivalent	Stucco White (4.2Y7.5/1.1) near equivalent
Net weight	kg	15	105
Refrigerant equipment Compressor type & Q'ty		—	RMT5134MDE3 × 1
Starting method		—	Direct line start
Refrigerant oil	ℓ	—	0.9 (M-MA68)
Heat exchanger		Louver fins & inner grooved tubing	M shape fin & inner grooved tubing
Refrigerant control		—	Electronic expansion valve
Air handling equipment Fan type & Q'ty		Tangential fan x 1	Propeller fan × 2
Motor <Starting method>	W	27 < Direct line start >	86 x 2 < Direct line start >
Air flow (Standard)	CMM	Hi : 13.5 Me : 11 Lo : 8(C) / Hi : 16.5 Me : 14.5 Lo : 10.5(H)	100
External static pressure	Pa	0	—
Outside air intake		Not possible	—
Air filter, Q'ty		Polypropylene net (washable) x 2	—
Shock & vibration absorber		—	Rubber sleeve (for Compressor)
Insulation (noise & heat)		Polyurethane form	—
Electric heater	W	—	20 (Crank case heater)
Remote controller		RC-E4 (option) & SC-BIKN-E (Interface kit, option)	
Room temperature control		Thermostat by electronics	—
Safety equipment		Internal thermostat for fan motor Frost protection thermostat	Internal thermostat for fan motor Abnormal discharge temperature protection.
Installation data Refrigerant piping size	mm	Liquid line : I/U φ6.35 (1/4") ②φ9.52 (3/8") × 0.8 ①φ9.52 (3/8") × 0.8 O/U φ9.52 (3/8")	
		Gas line : I/U φ12.7 (1/2") ②φ12.7 (1/2") × 0.8 ①φ15.88 (5/8") × 1.0 O/U φ15.88 (5/8")	
Connecting method		Flare piping	Flare piping
Refrigerant line (one way) length		Max.100m	※1. See page 120
Vertical height difference between outdoor unit and indoor unit		Max.30m (Outdoor unit is higher) Max.15m (Outdoor unit is lower)	
Refrigerant Quantity		R410A 4.5kg (Pre-charged up to the piping length of 30m) Outdoor unit	
Drain pump		—	—
Drain		Hose Connectable with VP16	Holes size φ20 × 3pcs
Insulation for piping		Necessary (both Liquid & Gas lines)	
Standard Accessories		Mounting kit, Drain hose	Edging

Notes (1) The data are measured at the following conditions.

Item	Indoor air temperature		Outdoor air temperature	
Operation	DB	WB	DB	WB
Cooling	27℃	19℃	35℃	24℃
Heating	20℃		7℃	6℃

(2) This packaged air-conditioner is manufactured and tested in conformity with the ISO.
(3) Sound pressure level indicates the value in an anechoic chamber. During operation these value are somewhat higher due to ambient temperature.
(4) The operation data indicates when the air-conditioner is operated at 400V50Hz or 380V60Hz.
(5) Indoor unit specifications for one unit. Capacity and operation data is two indoor units are combined and run together.
(6) Branching pipe set "DIS-WA1"×1(option). ① : Pipe of O/U～Branch, ② : Pipe of Branch～I/U

PCA001Z611

Adapted to **RoHS** directive

Item \ Model		SRK125VNXPZIX SRK125VNXPZJX	
		Indoor unit **SRK60ZIX-S (2 units)** **SRK60ZJX-S (2 units)**	Outdoor unit **FDC125VNX**
Item		—	
Power source			220-240V～50Hz / 220V～60Hz
Operation data		Cooling	Heating
Nominal capacity	kW	12.5 [5.0(Min.)～14.0(Max.)]	14.0 [4.0(Min.)～17.0(Max.)]
Power consumption	kW	3.60	3.48
Running current	A	16.0 / 16.7	15.4 / 16.1
Power factor	%	98	98
Inrush current	A	5 < Max.running current 26 >	
Sound Pressure Level	dB(A)	Hi : 47 Me : 38 Lo : 26(C) / Hi : 45 Me : 39 Lo : 33(H)	Cooling : 48 Heating : 50
Exterior dimensions Height x Width x Depth	mm	309 × 890 × 220	1,300 × 970 × 370
Exterior appearance (Munsell color)		Fine snow (8.0Y9.3/0.1) near equivalent	Stucco White (4.2Y7.5/1.1) near equivalent
Net weight	kg	15	105
Refrigerant equipment Compressor type & Q'ty		—	RMT5134MDE2 × 1
Starting method		—	Direct line start
Refrigerant oil	ℓ	—	0.9 (M-MA68)
Heat exchanger		Louver fins & inner grooved tubing	M shape fin & inner grooved tubing
Refrigerant control		—	Electronic expansion valve
Air handling equipment Fan type & Q'ty		Tangential fan x 1	Propeller fan × 2
Motor <Starting method>	W	27 < Direct line start >	86 x 2 < Direct line start >
Air flow (Standard)	CMM	Hi : 14.5 Me : 12.5 Lo : 8.5(C) / Hi : 17 Me : 15 Lo : 11(H)	100
External static pressure	Pa	0	—
Outside air intake		Not possible	—
Air filter, Q'ty		Polypropylene net (washable) x 2	—
Shock & vibration absorber		—	Rubber sleeve (for Compressor)
Insulation (noise & heat)		Polyurethane form	—
Electric heater	W	—	20 (Crank case heater)
Remote controller		RC-E4 (option) & SC-BIKN-E (Interface kit, option)	
Room temperature control		Thermostat by electronics	—
Safety equipment		Internal thermostat for fan motor Frost protection thermostat	Internal thermostat for fan motor Abnormal discharge temperature protection.
Installation data Refrigerant piping size	mm	Liquid line : I/U φ6.35 (1/4") ②φ9.52 (3/8") × 0.8 ①φ9.52 (3/8") × 0.8 O/U φ9.52 (3/8")	
		Gas line : I/U φ12.7 (1/2") ②φ12.7 (1/2") × 0.8 ①φ15.88 (5/8") × 1.0 O/U φ15.88 (5/8")	
Connecting method		Flare piping	Flare piping
Refrigerant line (one way) length		Max.100m	※1. See page 120
Vertical height difference between outdoor unit and indoor unit		Max.30m (Outdoor unit is higher) Max.15m (Outdoor unit is lower)	
Refrigerant Quantity		R410A 4.5kg (Pre-charged up to the piping length of 30m) Outdoor unit	
Drain pump		—	—
Drain		Hose Connectable with VP16	Holes size φ20 × 3pcs
Insulation for piping		Necessary (both Liquid & Gas lines)	
Standard Accessories		Mounting kit, Drain hose	Edging

Notes (1) The data are measured at the following conditions.

Item	Indoor air temperature		Outdoor air temperature	
Operation	DB	WB	DB	WB
Cooling	27℃	19℃	35℃	24℃
Heating	20℃		7℃	6℃

(2) This packaged air-conditioner is manufactured and tested in conformity with the ISO.
(3) Sound pressure level indicates the value in an anechoic chamber. During operation these value are somewhat higher due to ambient temperature.
(4) The operation data indicates when the air-conditioner is operated at 230V50Hz or 220V60Hz.
(5) Indoor unit specifications for one unit. Capacity and operation data is two indoor units are combined and run together.
(6) Branching pipe set "DIS-WA1"×1(option). ① : Pipe of O/U～Branch, ② : Pipe of Branch～I/U

PCA001Z611

Adapted to **RoHS** directive

Item \ Model		SRK125VSXPZIX SRK125VSXPZJX	
		Indoor unit **SRK60ZIX-S (2 units)** **SRK60ZJX-S (2 units)**	Outdoor unit **FDC125VSX**
		—	
Power source			380-415V 3N～50Hz / 380V 3N～60Hz
Operation data		Cooling	Heating
Nominal capacity	kW	12.5 [5.0(Min.)～14.0(Max.)]	14.0 [4.0(Min.)～18.0(Max.)]
Power consumption	kW	3.60	3.48
Running current	A	5.3 / 5.6	5.1 / 5.4
Power factor	%	98	98
Inrush current	A	5 < Max.running current 15 >	
Sound Pressure Level	dB(A)	Hi : 47 Me : 38 Lo : 26(C) / Hi : 45 Me : 39 Lo : 33(H)	Cooling : 48 Heating : 50
Exterior dimensions Height x Width x Depth	mm	309 × 890 × 220	1,300 × 970 × 370
Exterior appearance (Munsell color)		Fine snow (8.0Y9.3/0.1) near equivalent	Stucco White (4.2Y7.5/1.1) near equivalent
Net weight	kg	15	105
Refrigerant equipment Compressor type & Q'ty		—	RMT5134MDE3 × 1
Starting method		—	Direct line start
Refrigerant oil	ℓ	—	0.9 (M-MA68)
Heat exchanger		Louver fins & inner grooved tubing	M shape fin & inner grooved tubing
Refrigerant control		—	Electronic expansion valve
Air handling equipment Fan type & Q'ty		Tangential fan x 1	Propeller fan × 2
Motor <Starting method>	W	27 < Direct line start >	86 x 2 < Direct line start >
Air flow (Standard)	CMM	Hi : 14.5 Me : 12.5 Lo : 8.5(C) / Hi : 17 Me : 15 Lo : 11(H)	100
External static pressure	Pa	0	—
Outside air intake		Not possible	—
Air filter, Q'ty		Polypropylene net (washable) x 2	—
Shock & vibration absorber		—	Rubber sleeve (for Compressor)
Insulation (noise & heat)		Polyurethane form	—
Electric heater	W	—	20 (Crank case heater)
Remote controller		RC-E4 (option) & SC-BIKN-E (Interface kit, option)	
Room temperature control		Thermostat by electronics	—
Safety equipment		Internal thermostat for fan motor Frost protection thermostat	Internal thermostat for fan motor Abnormal discharge temperature protection.
Installation data Refrigerant piping size	mm	Liquid line : I/U φ6.35 (1/4") ②φ9.52 (3/8") × 0.8 ①φ9.52 (3/8") × 0.8 O/U φ9.52 (3/8")	
		Gas line : I/U φ12.7 (1/2") ②φ12.7 (1/2") × 0.8 ①φ15.88 (5/8") × 1.0 O/U φ15.88 (5/8")	
Connecting method		Flare piping	Flare piping
Refrigerant line (one way) length		Max.100m	※1. See page 120
Vertical height difference between outdoor unit and indoor unit		Max.30m (Outdoor unit is higher) Max.15m (Outdoor unit is lower)	
Refrigerant Quantity		R410A 4.5kg (Pre-charged up to the piping length of 30m) Outdoor unit	
Drain pump		—	—
Drain		Hose Connectable with VP16	Holes size φ20 × 3pcs
Insulation for piping		Necessary (both Liquid & Gas lines)	
Standard Accessories		Mounting kit, Drain hose	Edging

Notes (1) The data are measured at the following conditions.

Item	Indoor air temperature		Outdoor air temperature	
Operation	DB	WB	DB	WB
Cooling	27˚C	19˚C	35˚C	24˚C
Heating	20˚C		7˚C	6˚C

(2) This packaged air-conditioner is manufactured and tested in conformity with the ISO.
(3) Sound pressure level indicates the value in an anechoic chamber. During operation these value are somewhat higher due to ambient temperature.
(4) The operation data indicates when the air-conditioner is operated at 400V50Hz or 380V60Hz.
(5) Indoor unit specifications for one unit. Capacity and operation data is two indoor units are combined and run together.
(6) Branching pipe set "DIS-WA1"×1(option). ① : Pipe of O/U～Branch, ② : Pipe of Branch～I/U

PCA001Z611

(2) Triple type

Adapted to **RoHS** directive

Item \ Model		SRK140VNXTZIX SRK140VNXTZJX	
		Indoor unit **SRK50ZIX-S (3 units)** **SRK50ZJX-S (3 units)**	Outdoor unit **FDC140VNX**
Item		—	
Power source			220-240V～50Hz / 220V～60Hz
Operation data		Cooling	Heating
Nominal capacity	kW	14.0 [5.0(Min.)～16.0(Max.)]	16.0 [4.0(Min.)～18.0(Max.)]
Power consumption	kW	3.98	3.68
Running current	A	17.7 / 18.5	16.3 / 17.1
Power factor	%	98 / 98	98
Inrush current	A	5 < Max.running current 26 >	
Sound Pressure Level	dB(A)	Hi : 45 Me : 38 Lo : 26(C) / Hi : 45 Me : 38 Lo : 32(H)	Cooling : 49 Heating : 52
Exterior dimensions Height x Width x Depth	mm	309 × 890 × 220	1,300 × 970 × 370
Exterior appearance (Munsell color)		Fine snow (8.0Y9.3/0.1) near equivalent	Stucco White (4.2Y7.5/1.1) near equivalent
Net weight	kg	15	105
Refrigerant equipment Compressor type & Q'ty		—	RMT5134MDE2 × 1
Starting method		—	Direct line start
Refrigerant oil	ℓ	—	0.9 (M-MA68)
Heat exchanger		Louver fins & inner grooved tubing	M shape fin & inner grooved tubing
Refrigerant control		—	Electronic expansion valve
Air handling equipment Fan type & Q'ty		Tangential fan x 1	Propeller fan × 2
Motor <Starting method>	W	27 < Direct line start >	86 x 2 < Direct line start >
Air flow (Standard)	CMM	Hi : 13.5 Me : 11 Lo : 8(C) / Hi : 16.5 Me : 14.5 Lo : 10.5(H)	100
External static pressure	Pa	0	—
Outside air intake		Not possible	—
Air filter, Q'ty		Polypropylene net (washable) x 2	—
Shock & vibration absorber		—	Rubber sleeve (for Compressor)
Insulation (noise & heat)		Polyurethane form	—
Electric heater	W	—	20 (Crank case heater)
Remote controller		RC-E4 (option) & SC-BIKN-E (Interface kit, option)	
Room temperature control		Thermostat by electronics	—
Safety equipment		Internal thermostat for fan motor Frost protection thermostat	Internal thermostat for fan motor Abnormal discharge temperature protection.
Installation data Refrigerant piping size	mm	Liquid line : I/U φ6.35 (1/4") ②φ9.52 (3/8") × 0.8 ①φ9.52 (3/8") × 0.8 O/U φ9.52 (3/8")	
		Gas line : I/U φ12.7 (1/2") ②φ12.7 (1/2") × 0.8 ①φ15.88 (5/8") × 1.0 O/U φ15.88 (5/8")	
Connecting method		Flare piping	Flare piping
Refrigerant line (one way) length		Max.100m	※1. See page 121
Vertical height difference between outdoor unit and indoor unit		Max.30m (Outdoor unit is higher) Max.15m (Outdoor unit is lower)	
Refrigerant Quantity		R410A 4.5kg (Pre-charged up to the piping length of 30m) Outdoor unit	
Drain pump		—	—
Drain		Hose Connectable with VP16	Holes size φ20 × 3pcs
Insulation for piping		Necessary (both Liquid & Gas lines)	
Standard Accessories		Mounting kit, Drain hose	Edging

Notes (1) The data are measured at the following conditions.

Item	Indoor air temperature		Outdoor air temperature	
Operation	DB	WB	DB	WB
Cooling	27℃	19℃	35℃	24℃
Heating	20℃		7℃	6℃

(2) This packaged air-conditioner is manufactured and tested in conformity with the ISO.
(3) Sound pressure level indicates the value in an anechoic chamber. During operation these value are somewhat higher due to ambient temperature.
(4) The operation data indicates when the air-conditioner is operated at 230V50Hz or 220V60Hz.
(5) Indoor unit specifications for one unit. Capacity and operation data is three indoor units are combined and run together.
(6) Branching pipe set "DIS-TA1"×1(option). ① : Pipe of O/U～Branch, ② : Pipe of Branch～I/U

PCA001Z611

Adapted to **RoHS** directive

Item \ Model		SRK140VSXTZIX SRK140VSXTZJX	
		Indoor unit **SRK50ZIX-S (3 units)** **SRK50ZJX-S (3 units)**	Outdoor unit **FDC140VSX**
		—	
Power source			380-415V 3N～50Hz / 380V 3N～60Hz
Operation data		Cooling	Heating
Nominal capacity	kW	14.0 [5.0(Min.)～16.0(Max.)]	16.0 [4.0(Min.)～20.0(Max.)]
Power consumption	kW	3.98	3.68
Running current	A	5.9 / 6.2	5.4 / 5.7
Power factor	%	97 / 98	98
Inrush current	A	5 < Max.running current 15 >	
Sound Pressure Level	dB(A)	Hi : 45 Me : 38 Lo : 26(C) / Hi : 45 Me : 38 Lo : 32(H)	Cooling : 49 Heating : 52
Exterior dimensions Height x Width x Depth	mm	309 × 890 × 220	1,300 × 970 × 370
Exterior appearance (Munsell color)		Fine snow (8.0Y9.3/0.1) near equivalent	Stucco White (4.2Y7.5/1.1) near equivalent
Net weight	kg	15	105
Refrigerant equipment Compressor type & Q'ty		—	RMT5134MDE3 × 1
Starting method		—	Direct line start
Refrigerant oil	ℓ	—	0.9 (M-MA68)
Heat exchanger		Louver fins & inner grooved tubing	M shape fin & inner grooved tubing
Refrigerant control		—	Electronic expansion valve
Air handling equipment Fan type & Q'ty		Tangential fan x 1	Propeller fan × 2
Motor <Starting method>	W	27 < Direct line start >	86 x 2 < Direct line start >
Air flow (Standard)	CMM	Hi : 13.5 Me : 11 Lo : 8(C) / Hi : 16.5 Me : 14.5 Lo : 10.5(H)	100
External static pressure	Pa	0	—
Outside air intake		Not possible	—
Air filter, Q'ty		Polypropylene net (washable) x 2	—
Shock & vibration absorber		—	Rubber sleeve (for Compressor)
Insulation (noise & heat)		Polyurethane form	—
Electric heater	W	—	20 (Crank case heater)
Remote controller		RC-E4 (option) & SC-BIKN-E (Interface kit, option)	
Room temperature control		Thermostat by electronics	—
Safety equipment		Internal thermostat for fan motor Frost protection thermostat	Internal thermostat for fan motor Abnormal discharge temperature protection.
Installation data Refrigerant piping size	mm	Liquid line : I/U φ6.35 (1/4") ②φ9.52 (3/8") × 0.8 ①φ9.52 (3/8") × 0.8 O/U φ9.52 (3/8")	
		Gas line : I/U φ12.7 (1/2") ②φ12.7 (1/2") × 0.8 ①φ15.88 (5/8") × 1.0 O/U φ15.88 (5/8")	
Connecting method		Flare piping	Flare piping
Refrigerant line (one way) length		Max.100m	※1. See page 121
Vertical height difference between outdoor unit and indoor unit		Max.30m (Outdoor unit is higher) Max.15m (Outdoor unit is lower)	
Refrigerant Quantity		R410A 4.5kg (Pre-charged up to the piping length of 30m) Outdoor unit	
Drain pump		—	—
Drain		Hose Connectable with VP16	Holes size φ20 × 3pcs
Insulation for piping		Necessary (both Liquid & Gas lines)	
Standard Accessories		Mounting kit, Drain hose	Edging

Notes (1) The data are measured at the following conditions.

Item	Indoor air temperature		Outdoor air temperature	
Operation	DB	WB	DB	WB
Cooling	27˚C	19˚C	35˚C	24˚C
Heating	20˚C		7˚C	6˚C

(2) This packaged air-conditioner is manufactured and tested in conformity with the ISO.
(3) Sound pressure level indicates the value in an anechoic chamber. During operation these value are somewhat higher due to ambient temperature.
(4) The operation data indicates when the air-conditioner is operated at 400V50Hz or 380V60Hz.
(5) Indoor unit specifications for one unit. Capacity and operation data is three indoor units are combined and run together.
(6) Branching pipe set "DIS-TA1"×1(option). ① : Pipe of O/U～Branch, ② : Pipe of Branch～I/U

PCA001Z611

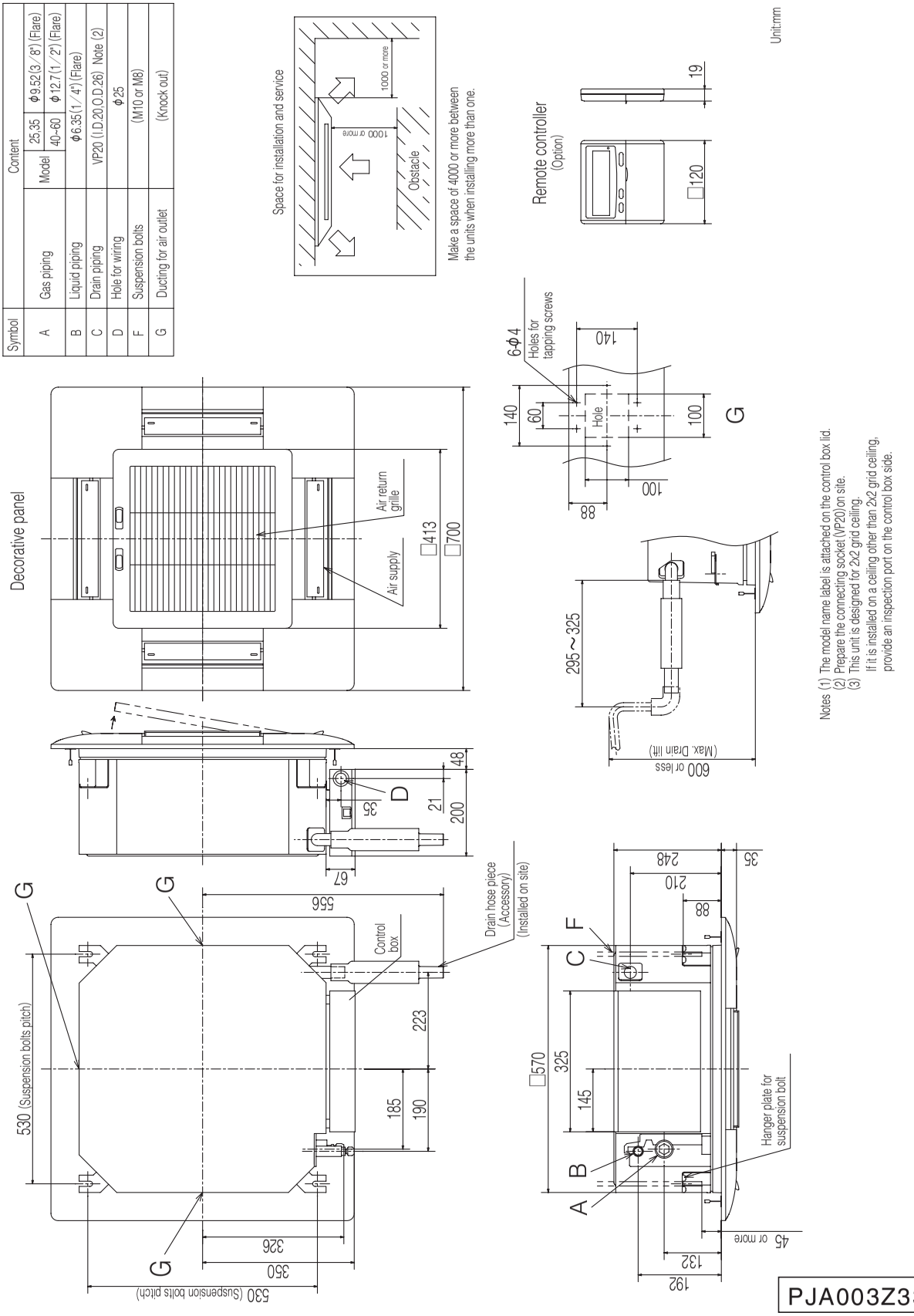
2. EXTERIOR DIMENSIONS

2.1 Indoor units

(1) Ceiling cassette-4 way compact type (FDTC)

Models FDTC40VD, 50VD, 60VD

Symbol	Content		
		Model	
		25,35	40~60
A	Gas piping	ϕ9.52(3/8") (Flare)	ϕ12.7(1/2") (Flare)
B	Liquid piping	ϕ6.35(1/4") (Flare)	
C	Drain piping	VP20 (I.D.20,O.D.26) Note (2)	
D	Hole for wiring	ϕ25	
F	Suspension bolts	(M10 or M8)	
G	Ducting for air outlet	(Knock out)	

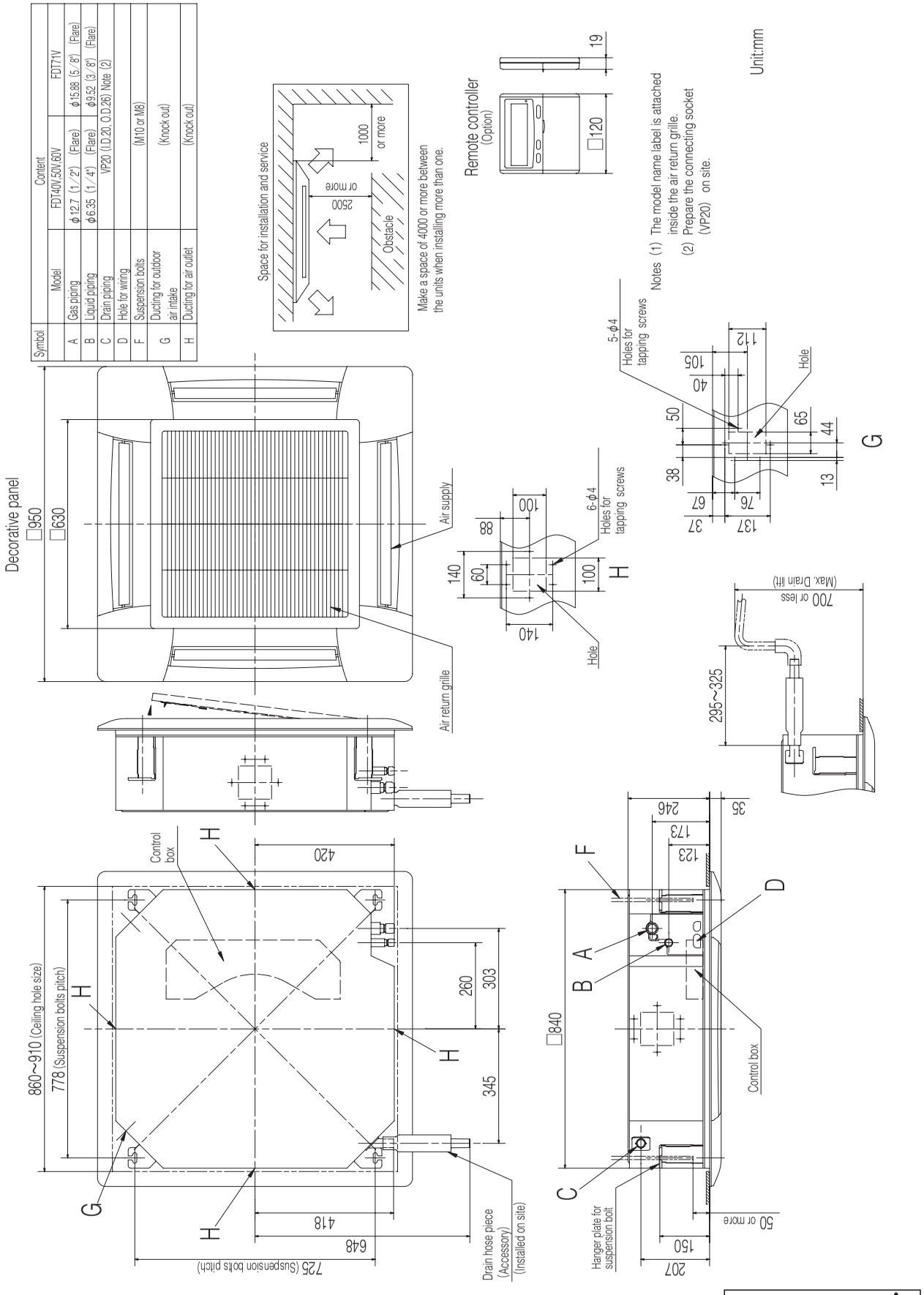


Notes (1) The model name label is attached on the control box lid.
(2) Prepare the connecting socket (VP20) on site.
(3) This unit is designed for 2x2 grid ceiling.
If it is installed on a ceiling other than 2x2 grid ceiling, provide an inspection port on the control box side.

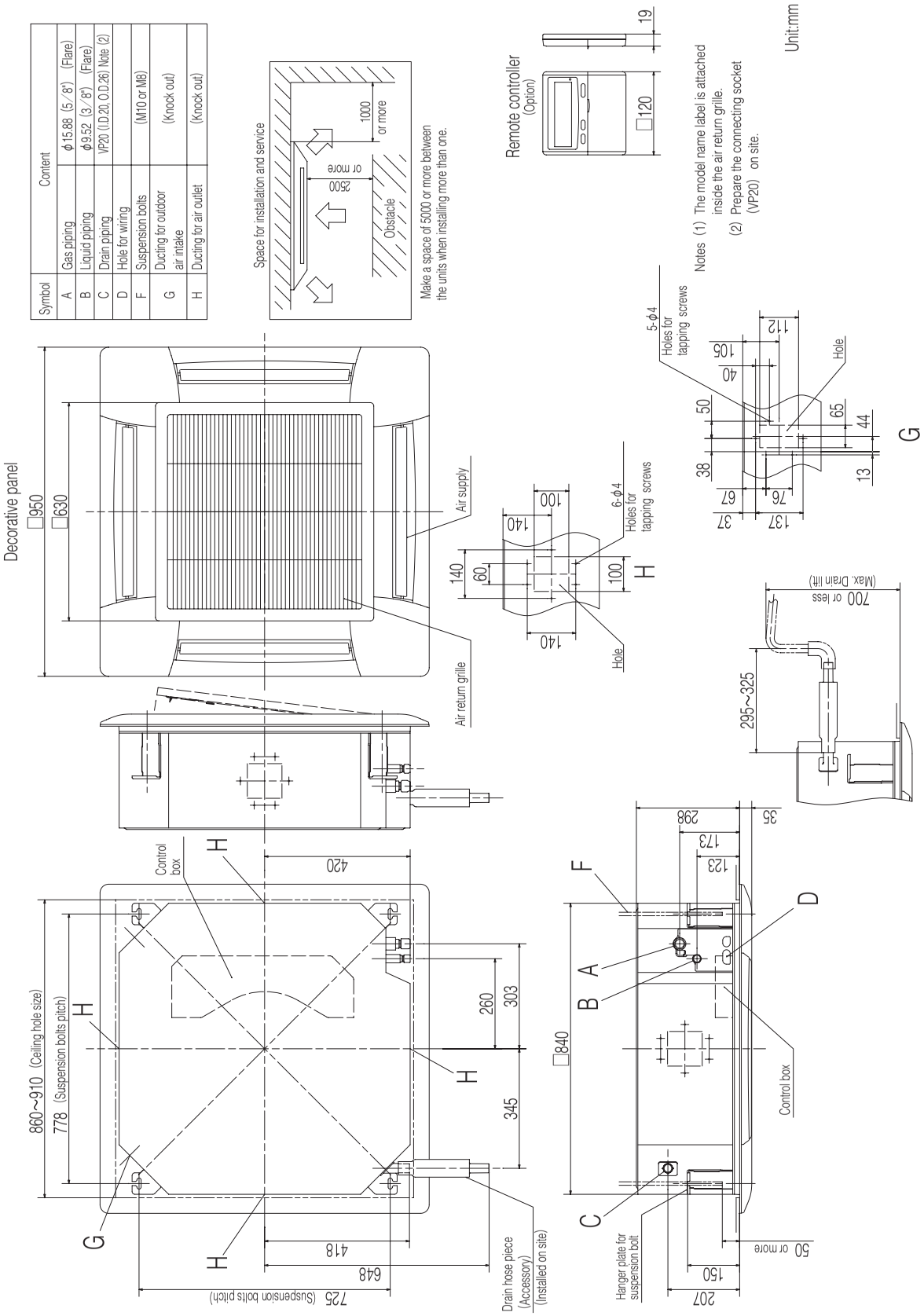
PJA003Z338 B

(2) Ceiling cassette-4 way type (FDT)

Models FDT40VD, 50VD, 60VD, 71VD



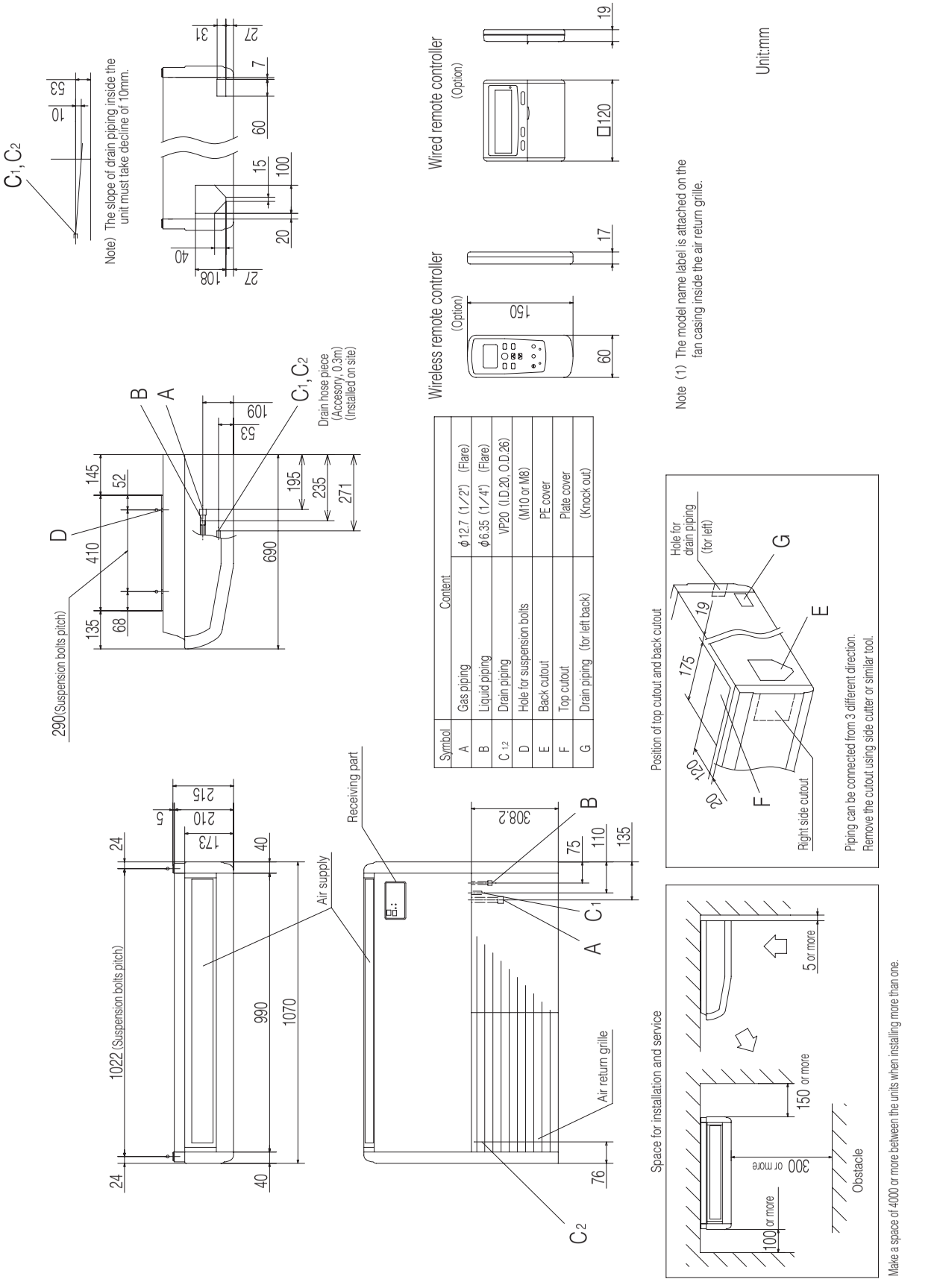
Models FDT100VD, 125VD, 140VD



PJF000Z046 b

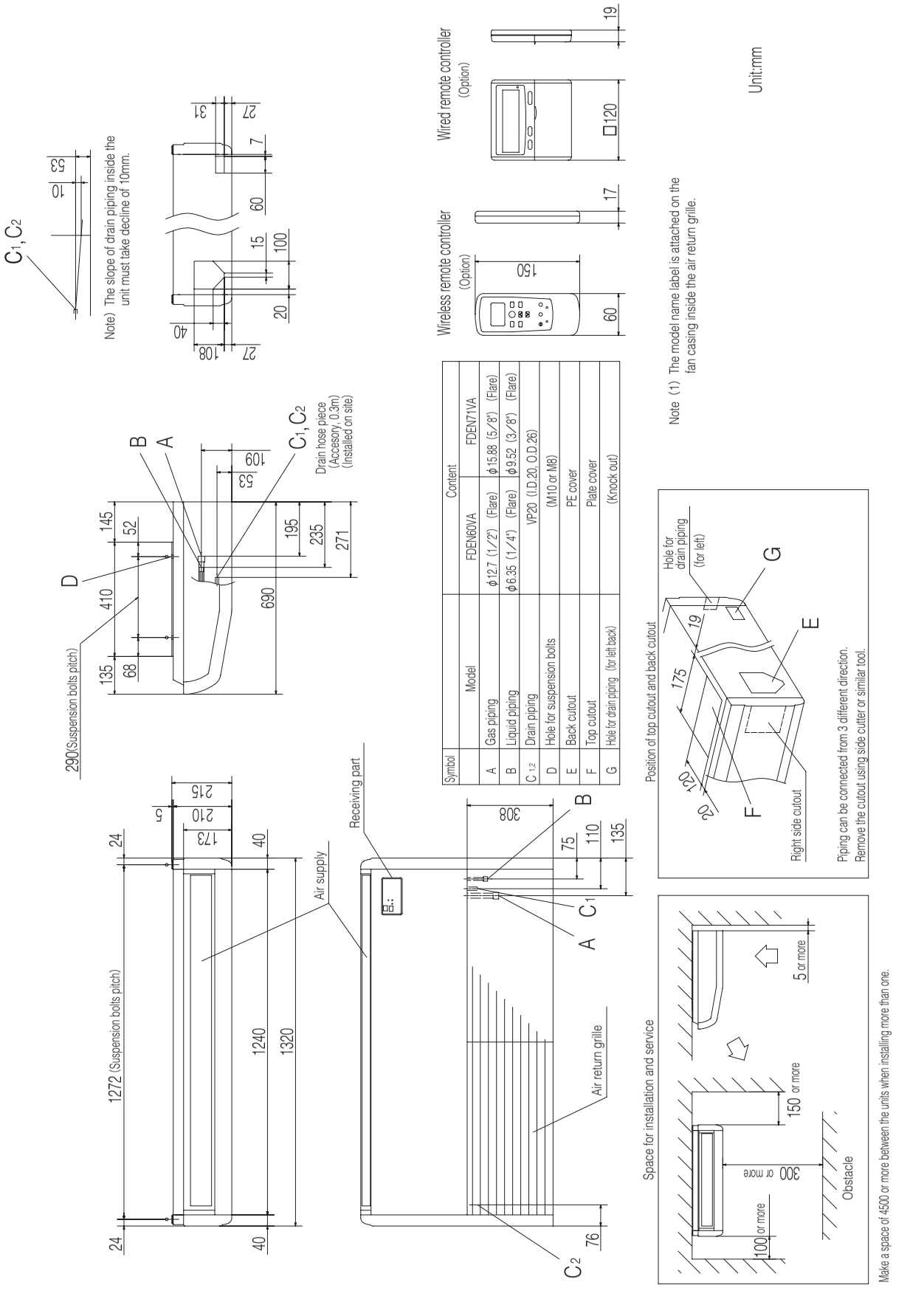
(3) Ceiling suspended type (FDEN)

Models FDEN40VD, 50VD



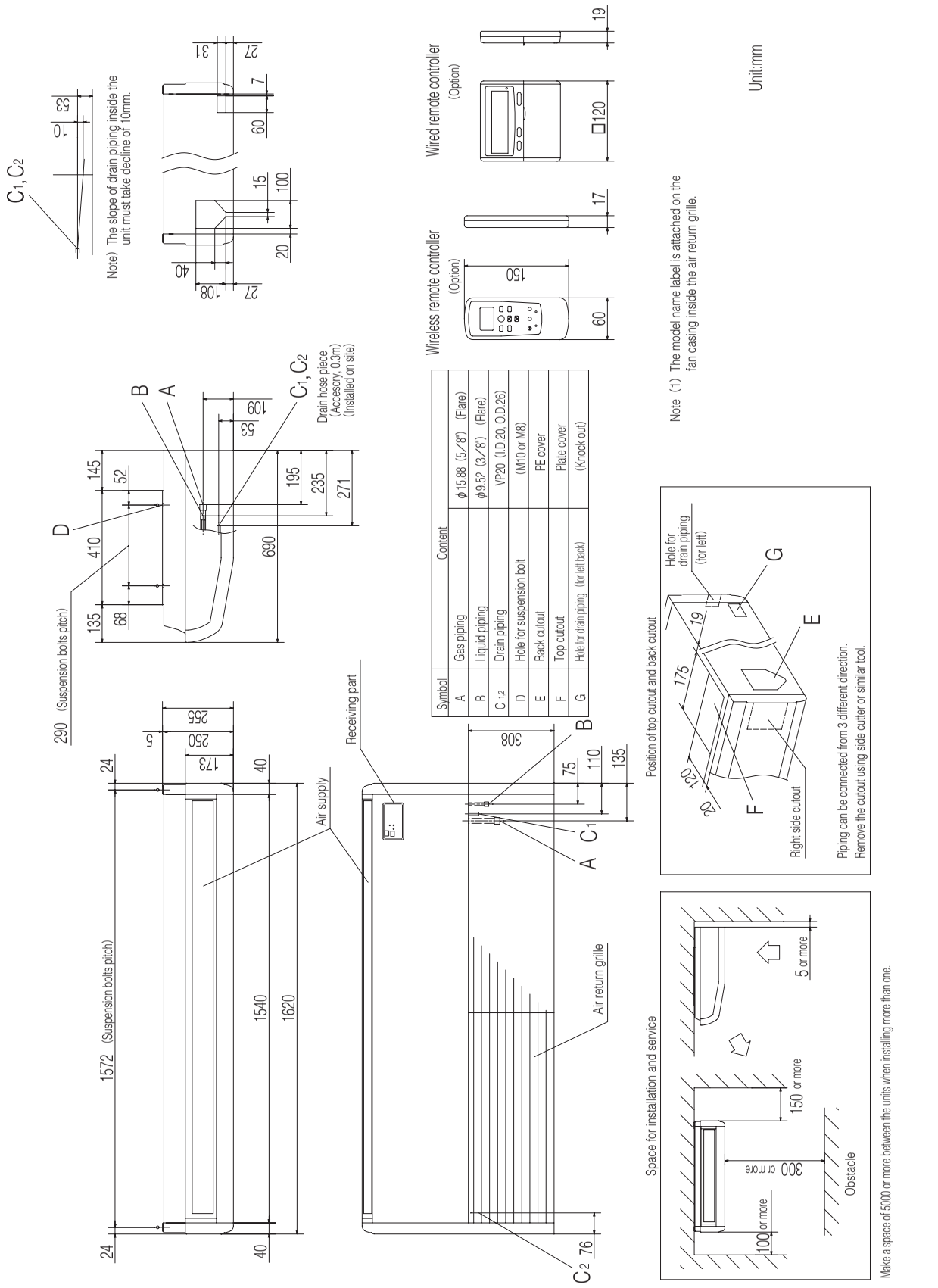
PFA003Z816 b

Models FDEN60VD, 71VD



PFA003Z817 b

Models FDEN100VD, 125VD, 140VD



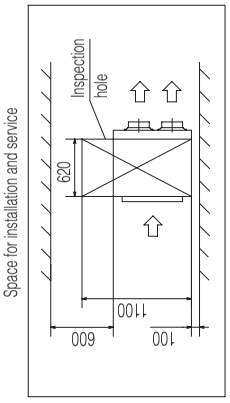
Symbol	Content	
A	Gas piping	ϕ15.88 (5/8") (Flare)
B	Liquid piping	ϕ9.52 (3/8") (Flare)
C 1,2	Drain piping	VP20 (I.D.20, O.D.26)
D	Hole for suspension bolt	(M10 or M8)
E	Back cutout	PE cover
F	Top cutout	Plate cover
G	Hole for drain piping (for left back)	(Knock out)

PFA003Z818 b

(4) Duct connected-Low/Middle static pressure type (FDUM)

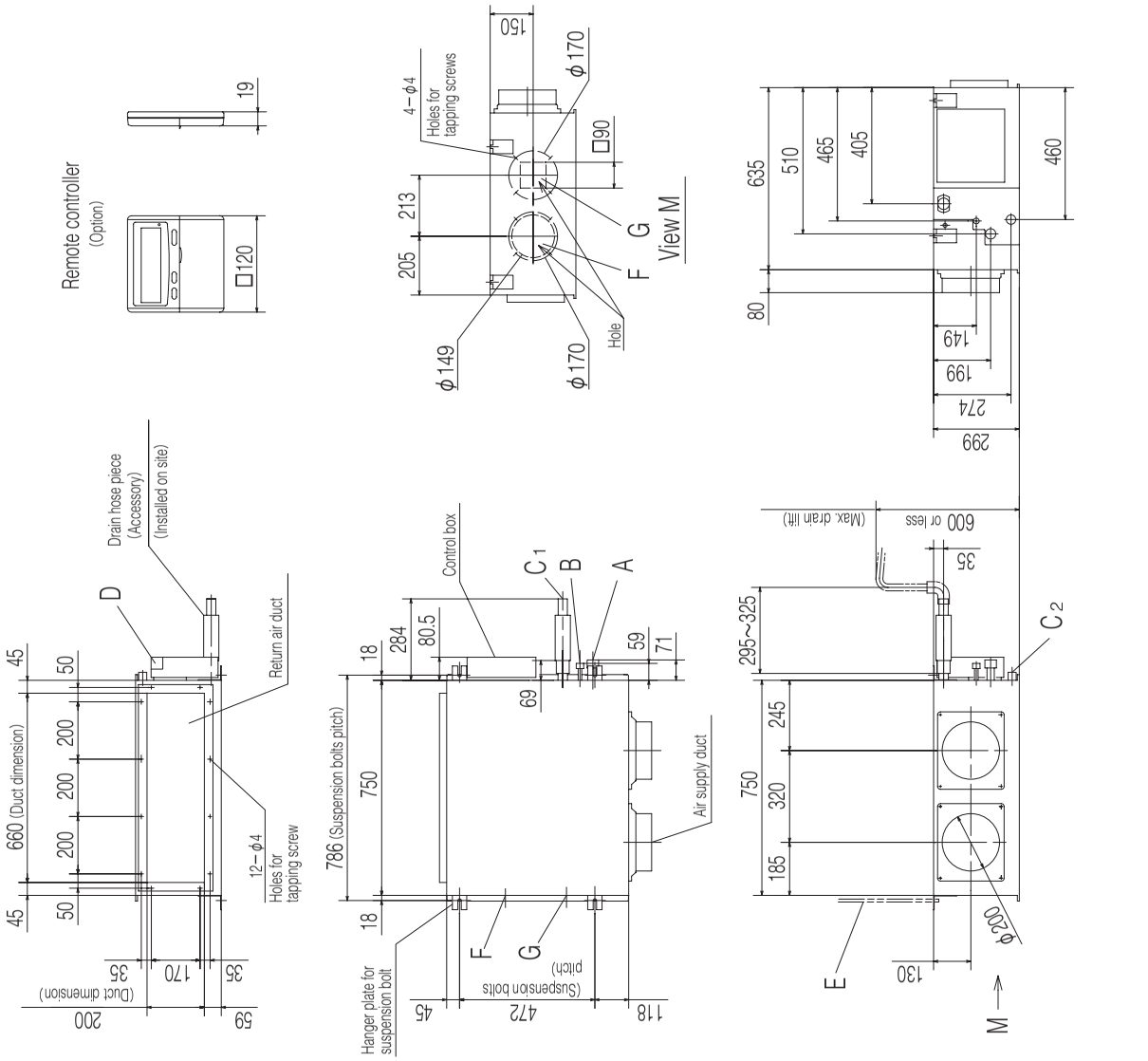
Model FDUM50VD

Symbol	Content	
A	Gas piping	φ12.7 (1/2") (Flare)
B	Liquid piping	φ6.35 (1/4") (Flare)
C1	Drain piping	VP20 (I.D.20, O.D.26) Note (2)
C2	Drain piping (Gravity drainage)	VP20 (I.D.20, O.D.26)
D	Hole for wiring	
E	Suspension bolts	(M10)
F	Ducting for outdoor air intake	(φ150) (Knock out)
G	Ducting for air outlet	(φ125) (Knock out)



Unit:mm

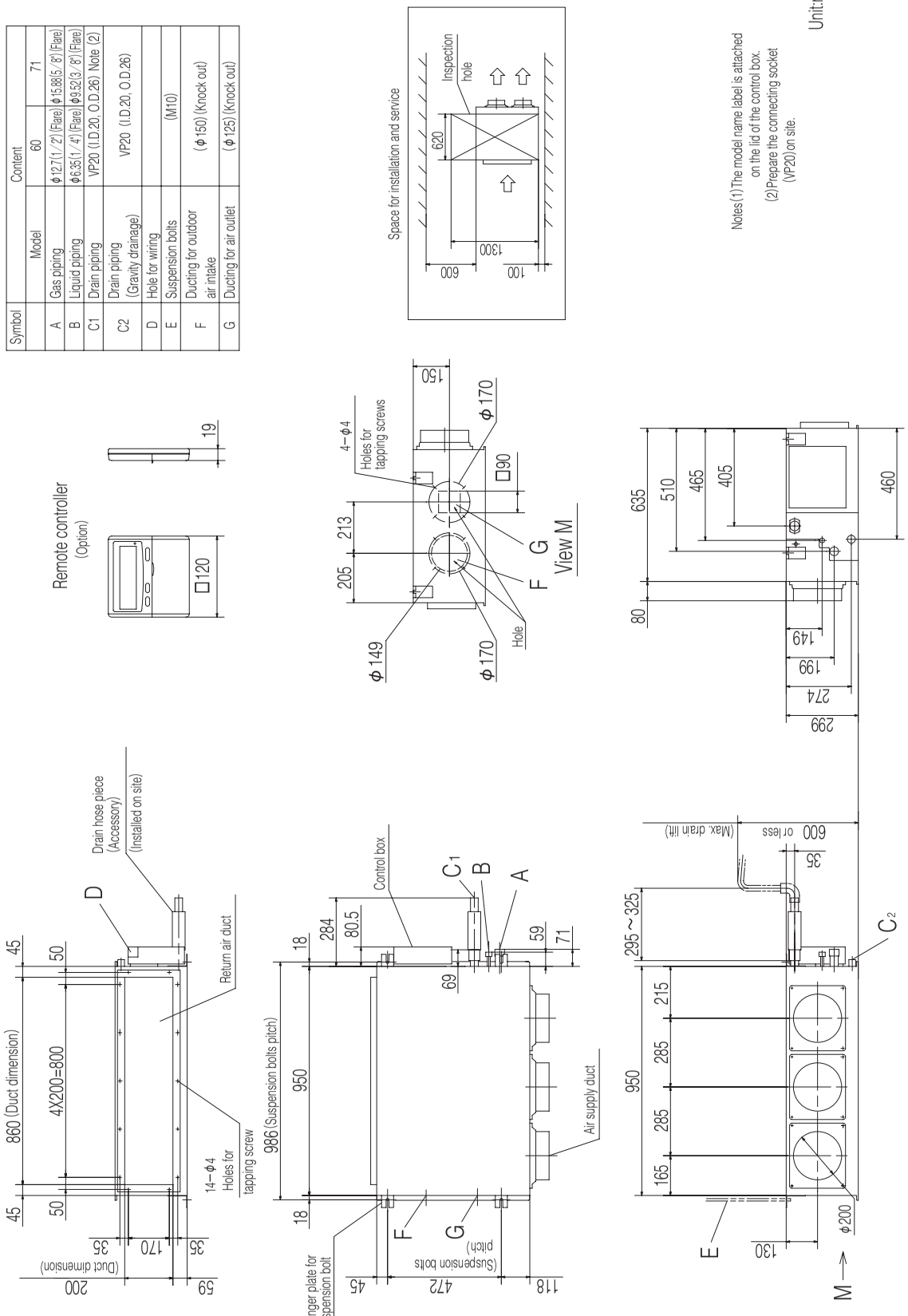
Notes (1) The model name label is attached on the lid of the control box.
(2) Prepare the connecting socket (VP20) on site.



PJR002Z241 b

Models FDUM60VD, 71VD

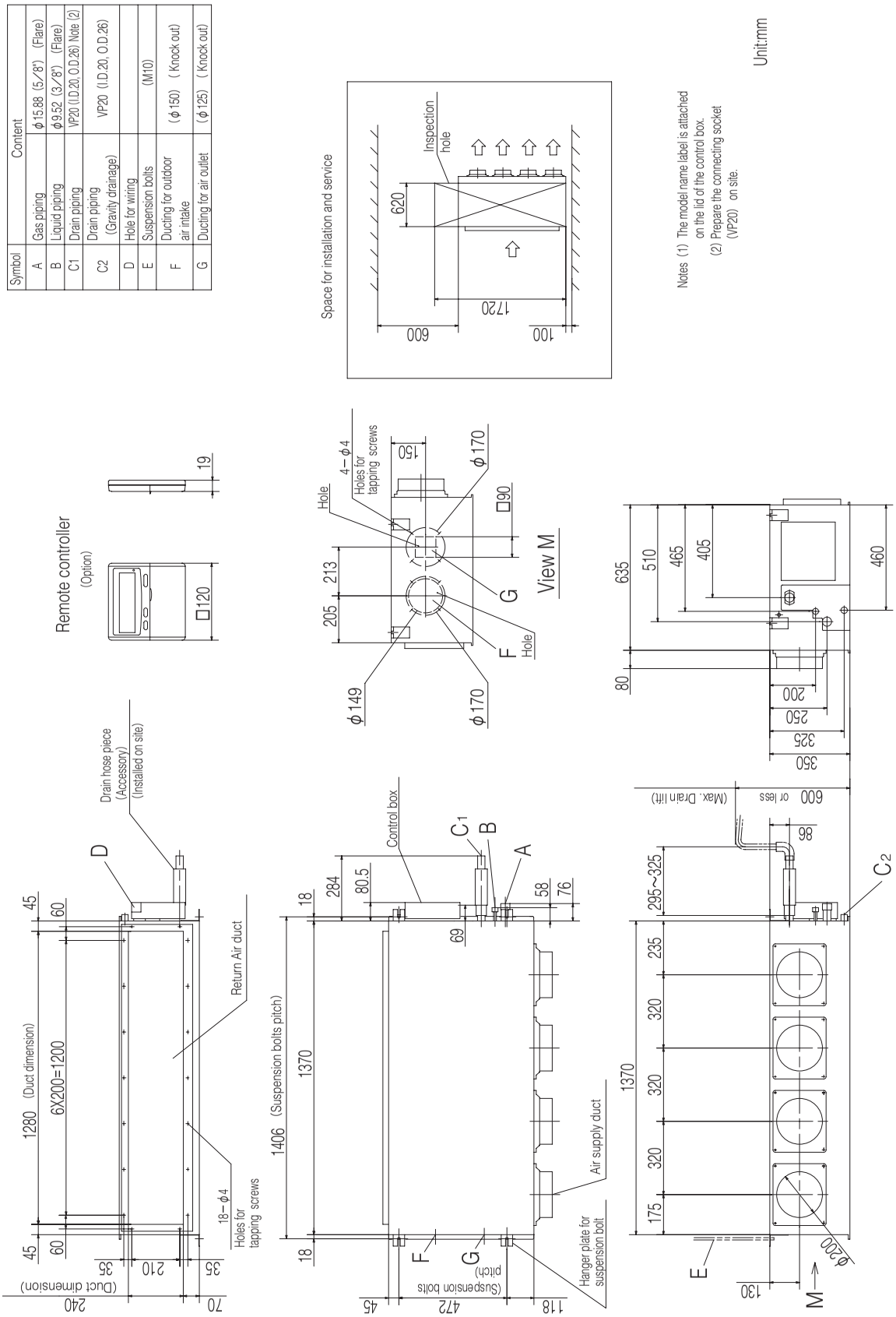
Symbol	Content		
	Model	60	71
A	Gas piping	φ12.7(1/2") (Flare)	φ15.88(5/8") (Flare)
B	Liquid piping	φ6.35(1/4") (Flare)	φ9.52(3/8") (Flare)
C1	Drain piping	VP20 (I.D.20, O.D.26) Note (2)	
C2	Drain piping (Gravity drainage)	VP20 (I.D.20, O.D.26)	
D	Hole for wiring		
E	Suspension bolts	(M10)	
F	Ducting for outdoor air intake	(φ150) (Knock out)	
G	Ducting for air outlet	(φ125) (Knock out)	



PJR002Z242 C

Models FDUM100VD, 125VD, 140VD

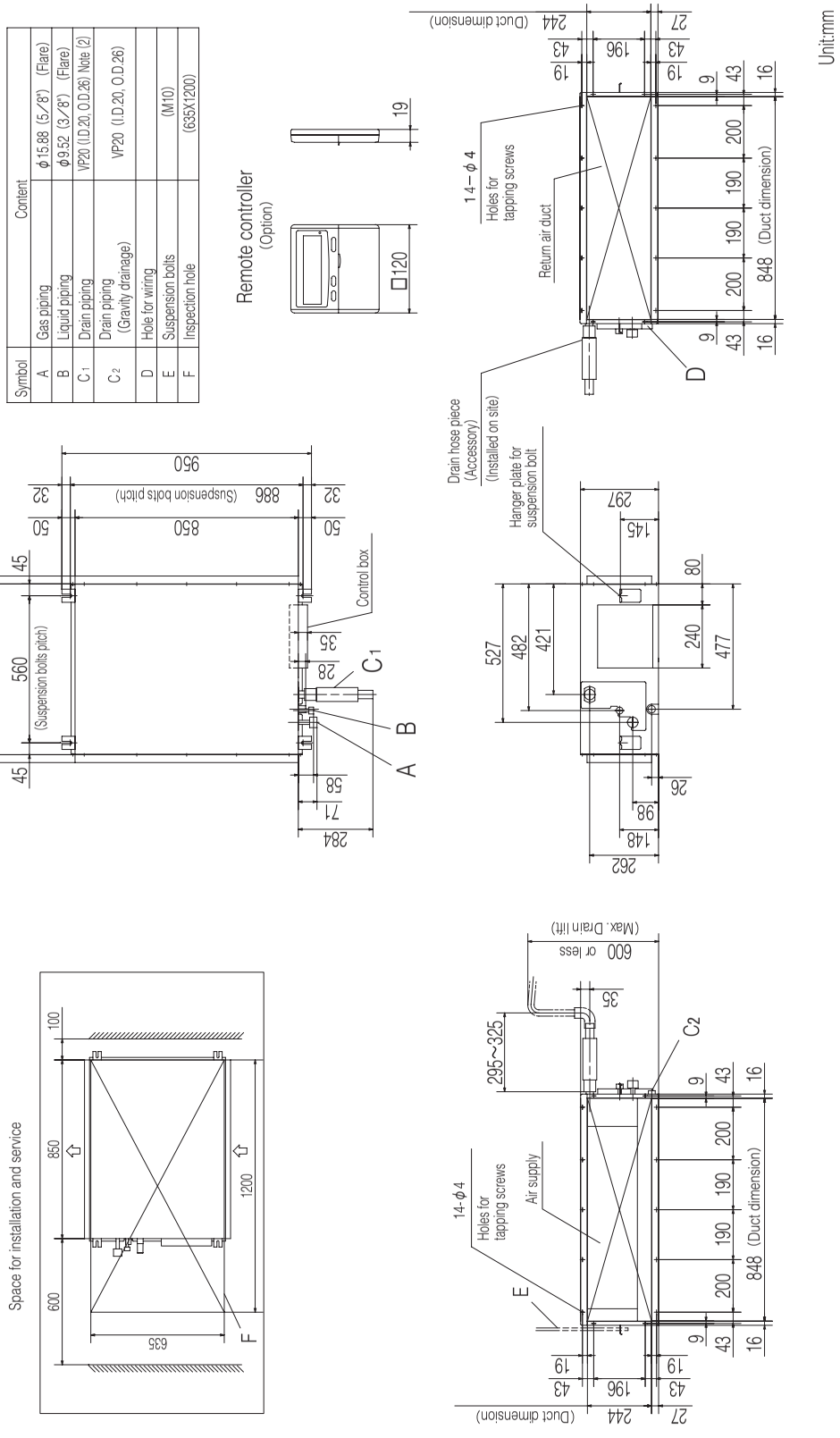
Symbol	Content	
A	Gas piping	φ15.88 (5/8") (Flare)
B	Liquid piping	φ9.52 (3/8") (Flare)
C1	Drain piping	VP20 (I.D.20, O.D.26) Note (2)
C2	Drain piping (Gravity drainage)	VP20 (I.D.20, O.D.26)
D	Hole for wiring	
E	Suspension bolts	(M10)
F	Ducting for outdoor air intake	(φ150) (Knock out)
G	Ducting for air outlet	(φ125) (Knock out)



PJR002Z243 b

(5) Duct connected-High static pressure type (FDU)

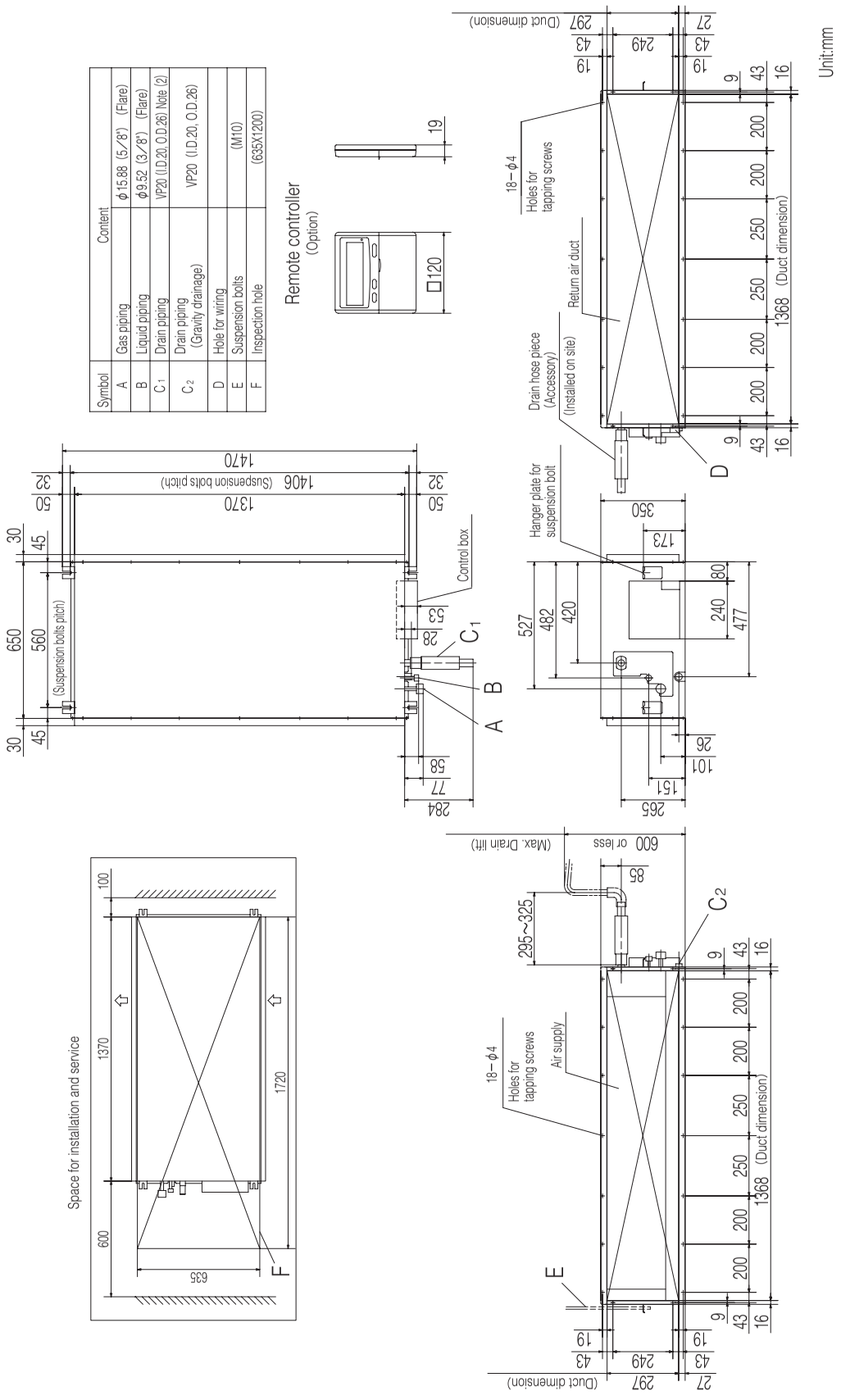
Model FDU71VD



Notes (1) The model name label is attached on the lid of the control box.
(2) Prepare the connecting socket (VP20) on site.

PJD001Z214 C

Models FDU100VD, 125VD, 140VD

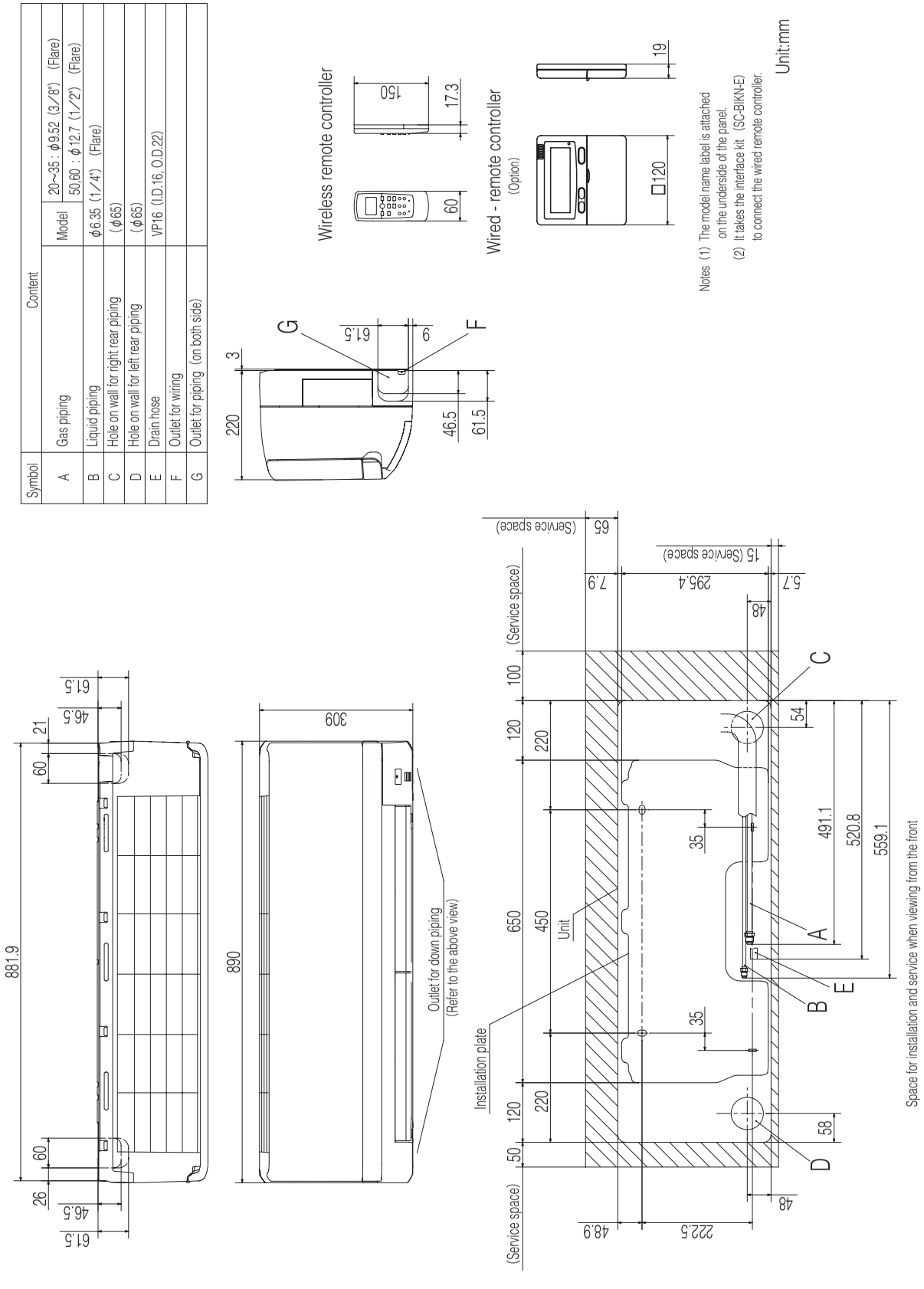


PJD001Z215 C

(6) Wall mounted type (SRK)

Models SRK50ZIX-S, 60ZIX-S
SRK50ZJX-S, 60ZJX-S

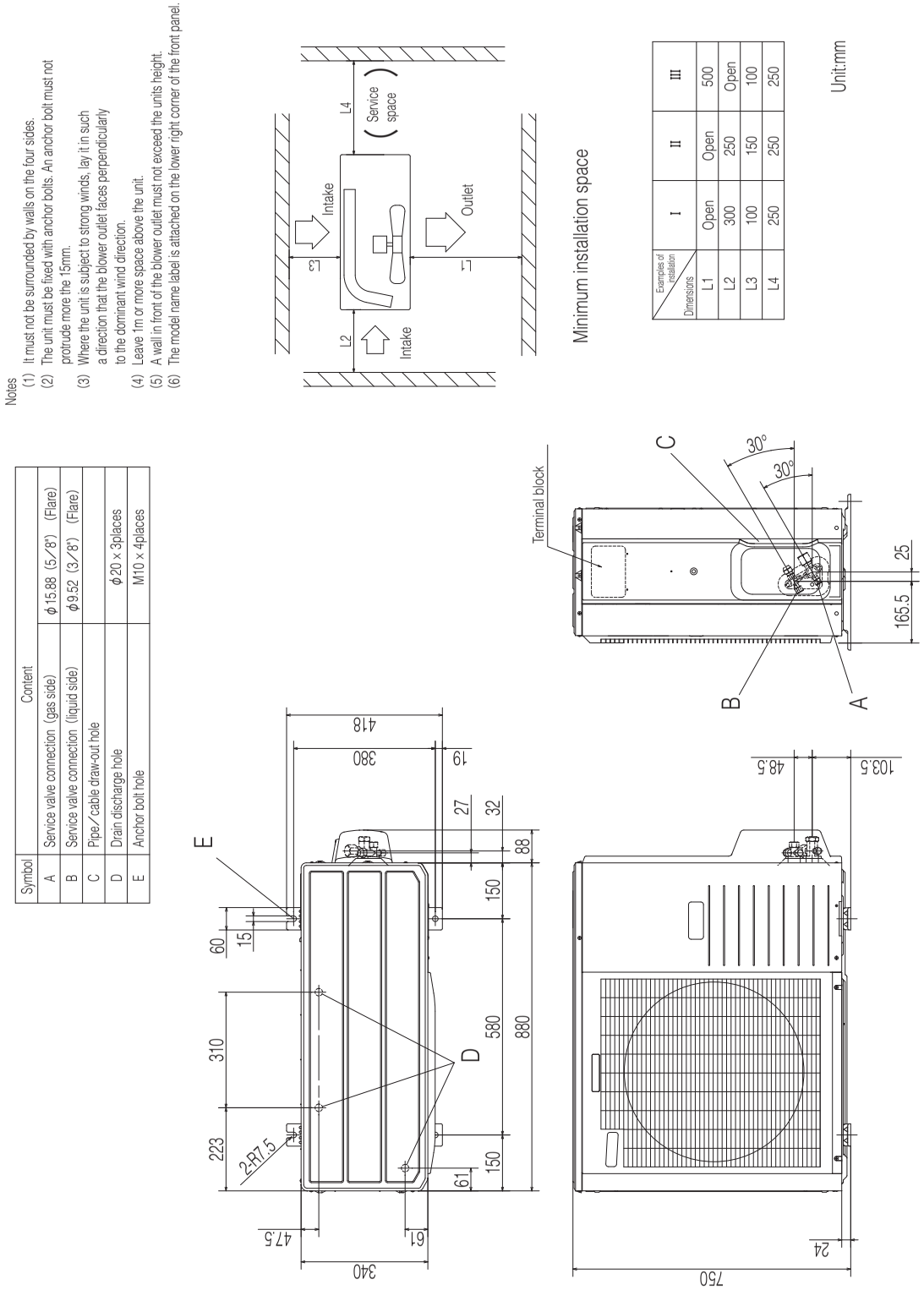
Symbol	Content		
A	Gas piping	Model	20~35 : ϕ9.52 (3/8") (Flare)
			50,60 : ϕ12.7 (1/2") (Flare)
B	Liquid piping		ϕ6.35 (1/4") (Flare)
C	Hole on wall for right rear piping		(ϕ65)
D	Hole on wall for left rear piping		(ϕ65)
E	Drain hose		VP16 (I.D.16, O.D.22)
F	Outlet for wiring		
G	Outlet for piping (on both side)		



RKY000Z052 b

2.2 Outdoor units

Model FDC71VNX



PCA001Z603

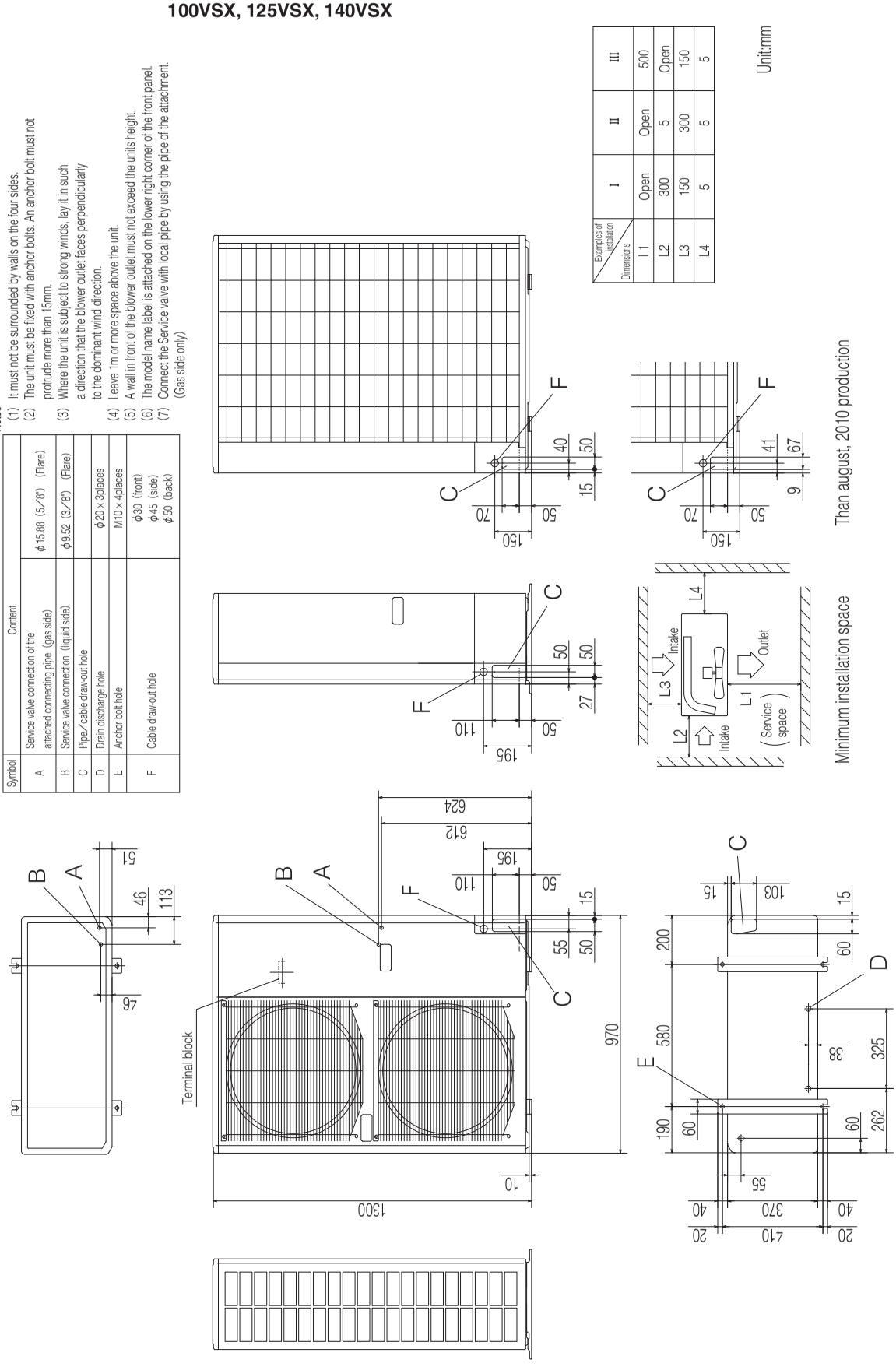
Models FDC100VNX, 125VNX, 140VNX
100VSX, 125VSX, 140VSX

Notes
(1) It must not be surrounded by walls on the four sides.
(2) The unit must be fixed with anchor bolts. An anchor bolt must not protrude more than 15mm.
(3) Where the unit is subject to strong winds, lay it in such a direction that the blower outlet faces perpendicularly to the dominant wind direction.
(4) Leave 1m or more space above the unit.
(5) A wall in front of the blower outlet must not exceed the units height.
(6) The model name label is attached on the lower right corner of the front panel.
(7) Connect the Service valve with local pipe by using the pipe of the attachment. (Gas side only)

Symbol	Content	
A	Service valve connection of the attached connecting pipe (gas side)	φ15.88 (5/8") (Flare)
B	Service valve connection (liquid side)	φ9.52 (3/8") (Flare)
C	Pipe/cable draw-out hole	
D	Drain discharge hole	φ20 × 3places
E	Anchor bolt hole	M10 × 4places
F	Cable draw-out hole	φ30 (front) φ45 (side) φ50 (back)

Examples of installation / Dimensions	I	II	III
L1	Open	Open	500
L2	300	5	Open
L3	150	300	150
L4	5	5	5

Unit:mm

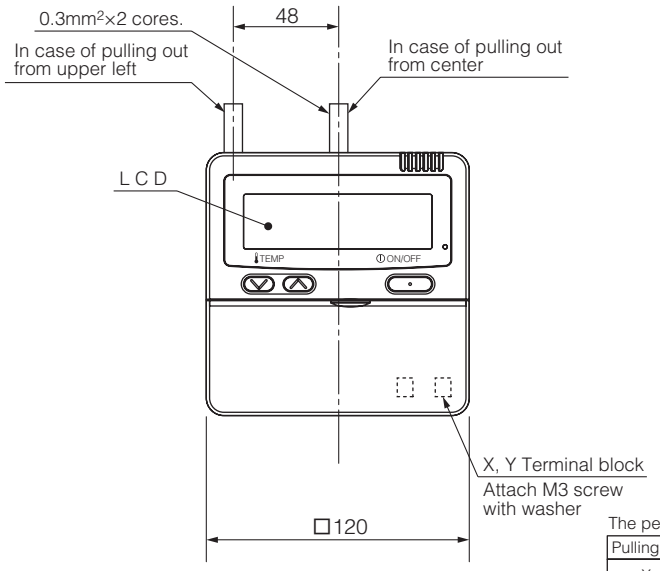


PCA001Z569A

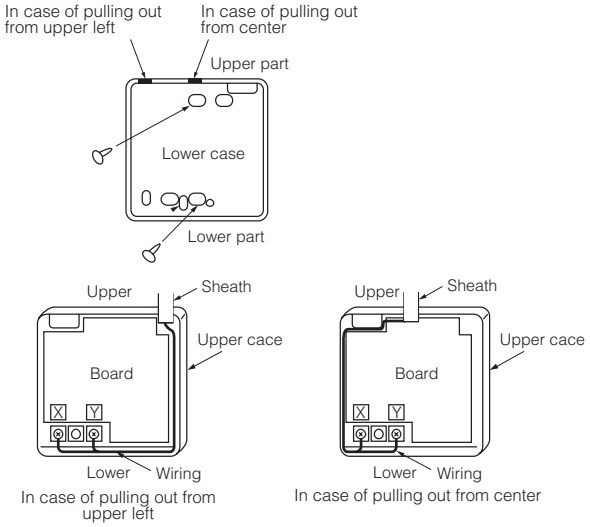
2.3 Remote controller (Option parts)

(1) wired remote controller (RC-E4)

Exposed mounting

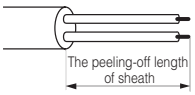


Wiring outlet
Cut off the upper thin part of remote control lower case with a nipper or knife, and grind burrs with a file etc.

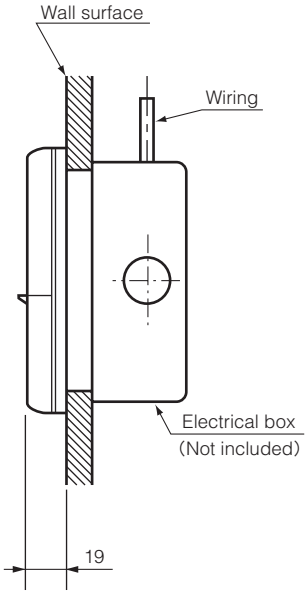


The peeling-off length of sheath

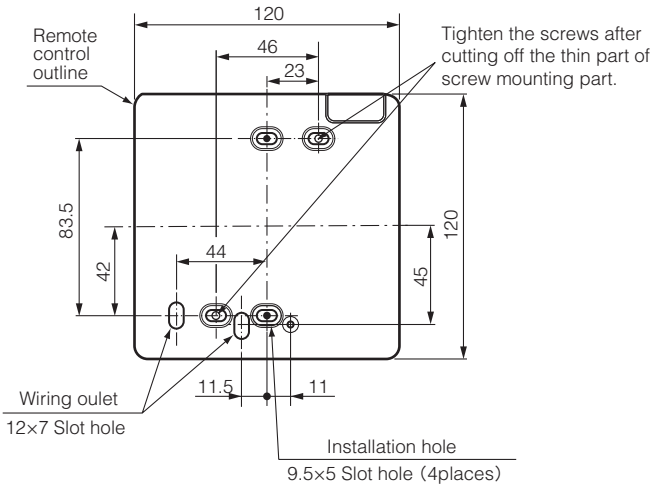
Pulling out from upper left	Pulling out from center
X wiring : 215mm Y wiring : 195mm	X wiring : 170mm Y wiring : 190mm



Embedded mounting



Remote control installation dimensions



(1) Installation screw for remote control
M4 Screw (2 pieces)

Unit:mm

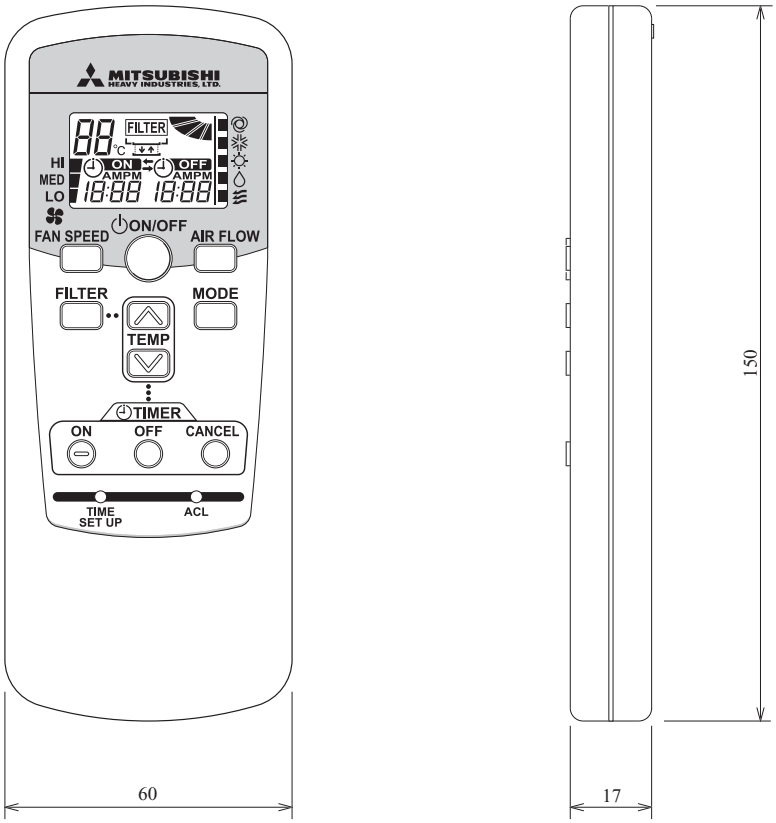
Wiring specifications

(1) If the prolongation is over 100m, change to the size below.
But, wiring in the remote controller case should be under 0.5mm². Change the wire size outside of the case according to wire connecting. Waterproof treatment is necessary at the wire connecting section. Be careful about contact failure.

Length	Wiring thickness
100 to 200m	0.5mm²×2 cores
Under 300m	0.75mm²×2 cores
Under 400m	1.25mm²×2 cores
Under 600m	2.0mm²×2 cores

PJZ000Z274

(2) Wireless remote controller (RCN-E1R)



Unit: mm

3. ELECTRICAL WIRING

3.1 Indoor units

(1) Ceiling cassette-4 way compact type (FDTC)

Models FDTC40VD, 50VD, 60VD

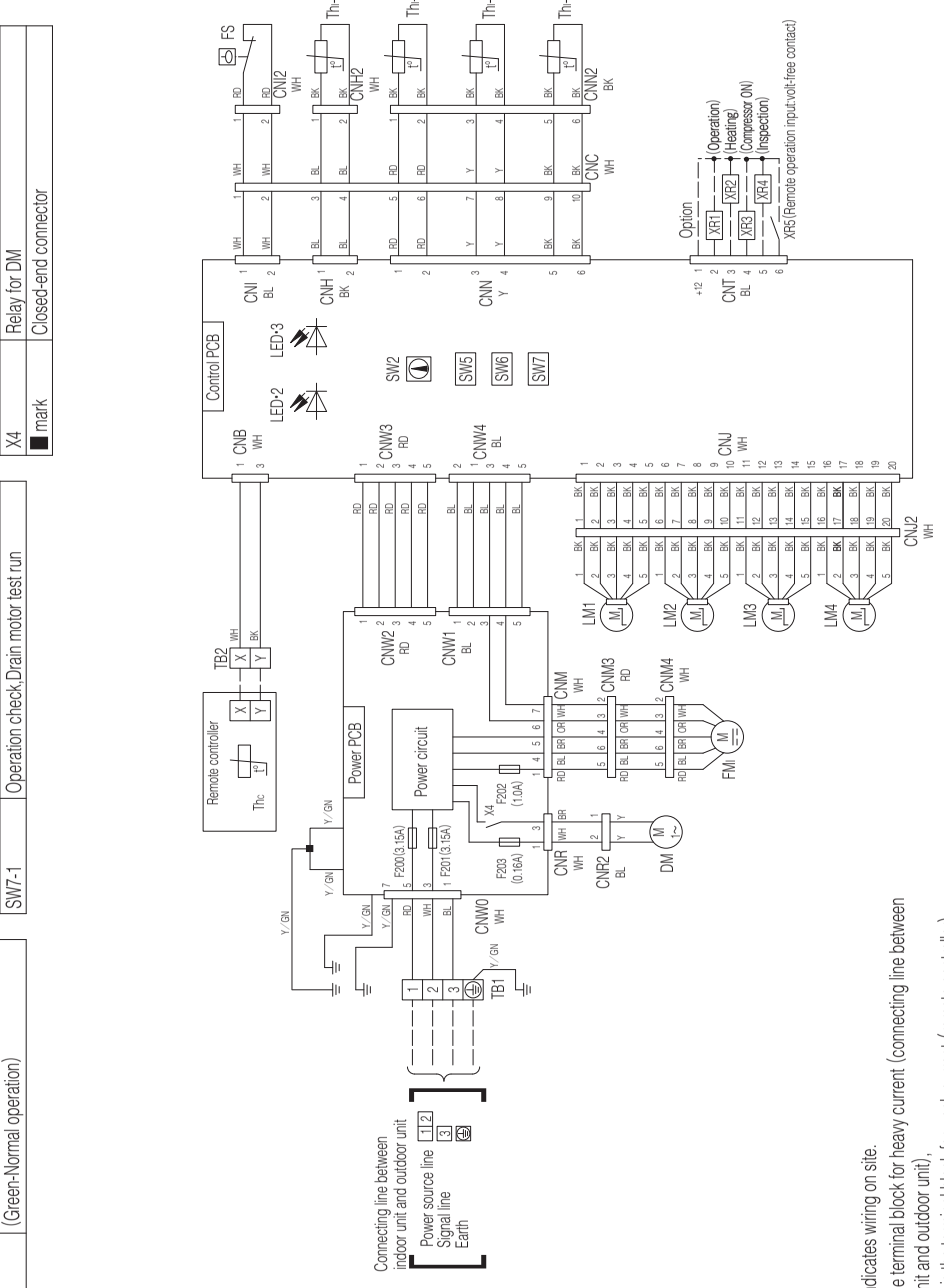
Color Marks

Mark	Color
BK	Black
BL	Blue
BR	Brown
OR	Orange
RD	Red
WH	White
Y	Yellow
Y／GN	Yellow／Green

TB1	Terminal block (Power source) (□ mark)
TB2	Terminal block (Signal line) (□mark)
Thc	Thermistor (Remote controller)
Th-A	Thermistor (Return air)
Th-R1,2,3	Thermistor (Heat exchanger)
X4	Relay for DM
■ mark	Closed-end connector

LED･3	Indication lamp (Red-Inspection)
LM1~4	Louver motor
SW2	Remote controller communication address
SW5	Plural units Master／Slave setting
SW6	Model capacity setting
SW7-1	Operation check, Drain motor test run

CNB~Z	Connector
DM	Drain motor
F200~203	Fuse
FM	Fan motor
FS	Float switch
LED･2	Indication lamp (Green-Normal operation)



Notes 1. — — indicates wiring on site.
2. TB1 is the terminal block for heavy current (connecting line between indoor unit and outdoor unit), and TB2 is the terminal block for weak current (remote controller).
3. See the wiring diagram of outside unit about the line between inside unit and outside unit.
4. Use twin core cable (0.3mm^2 X2) at remote controller line. See spec sheet of remote controller in case that the total length is more than 100m.
5. Do not put remote controller line alongside power source line.

PJA003Z340 B

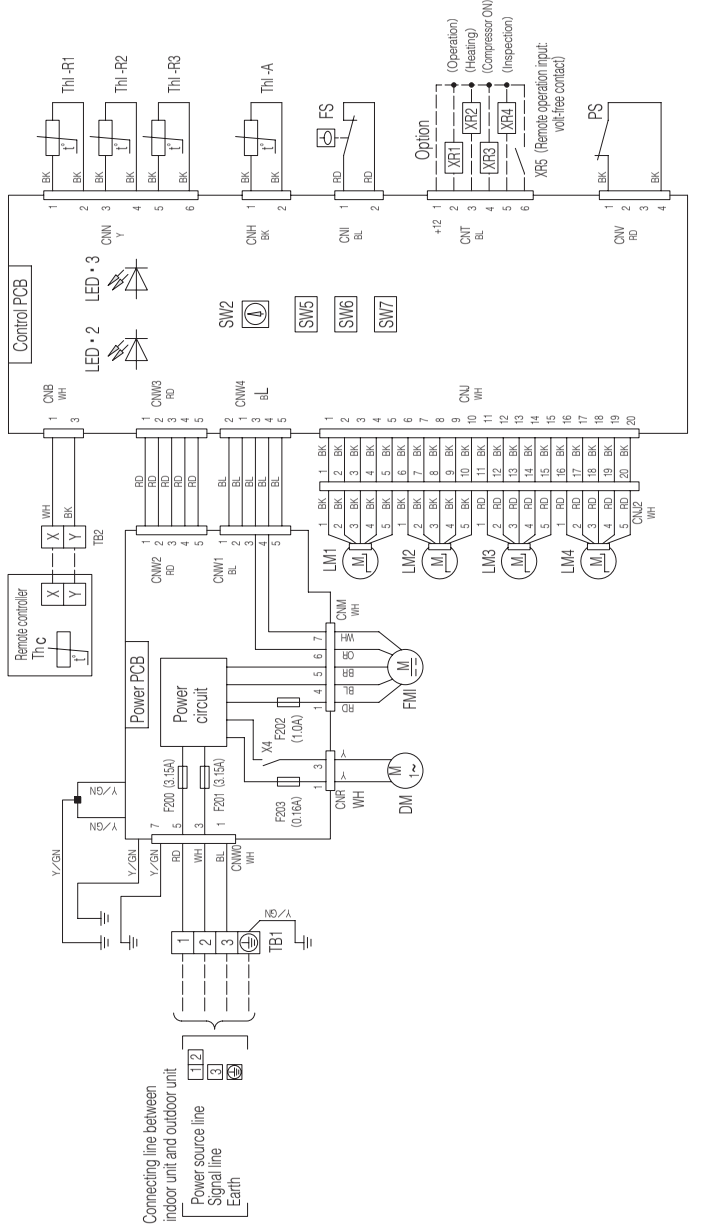
(2) Ceiling cassette-4 way type (FDT)

Models FDT40VD, 50VD, 60VD, 71VD, 100VD, 125VD, 140VD

CNB~Z	Connector
DM	Drain motor
F200~203	Fuse
FMI	Fan motor
FS	Float switch
LED・2	Indication lamp (Green-Normal operation)
LED・3	Indication lamp (Red-Inspection)
LM1~4	Louver motor
PS	Panel switch
SW2	Remote controller communication address
SW5	Plural units Master／Slave setting
SW6	Model capacity setting
SW7-1	Operation check, Drain motor test run
TB1	Terminal block (Power source) (□mark)
TB2	Terminal block (Signal line) (□mark)
Th c	Thermistor (Remote controller)
Thl -A	Thermistor (Return air)
Thl -R1,2,3	Thermistor (Heat exchanger)
X4	Relay for DM
■mark	Closed-end connector

Color Marks

Mark	Color	Mark	Color
BK	Black	RD	Red
BL	Blue	WH	White
BR	Brown	Y	Yellow
OR	Orange	Y／GN	Yellow／Green

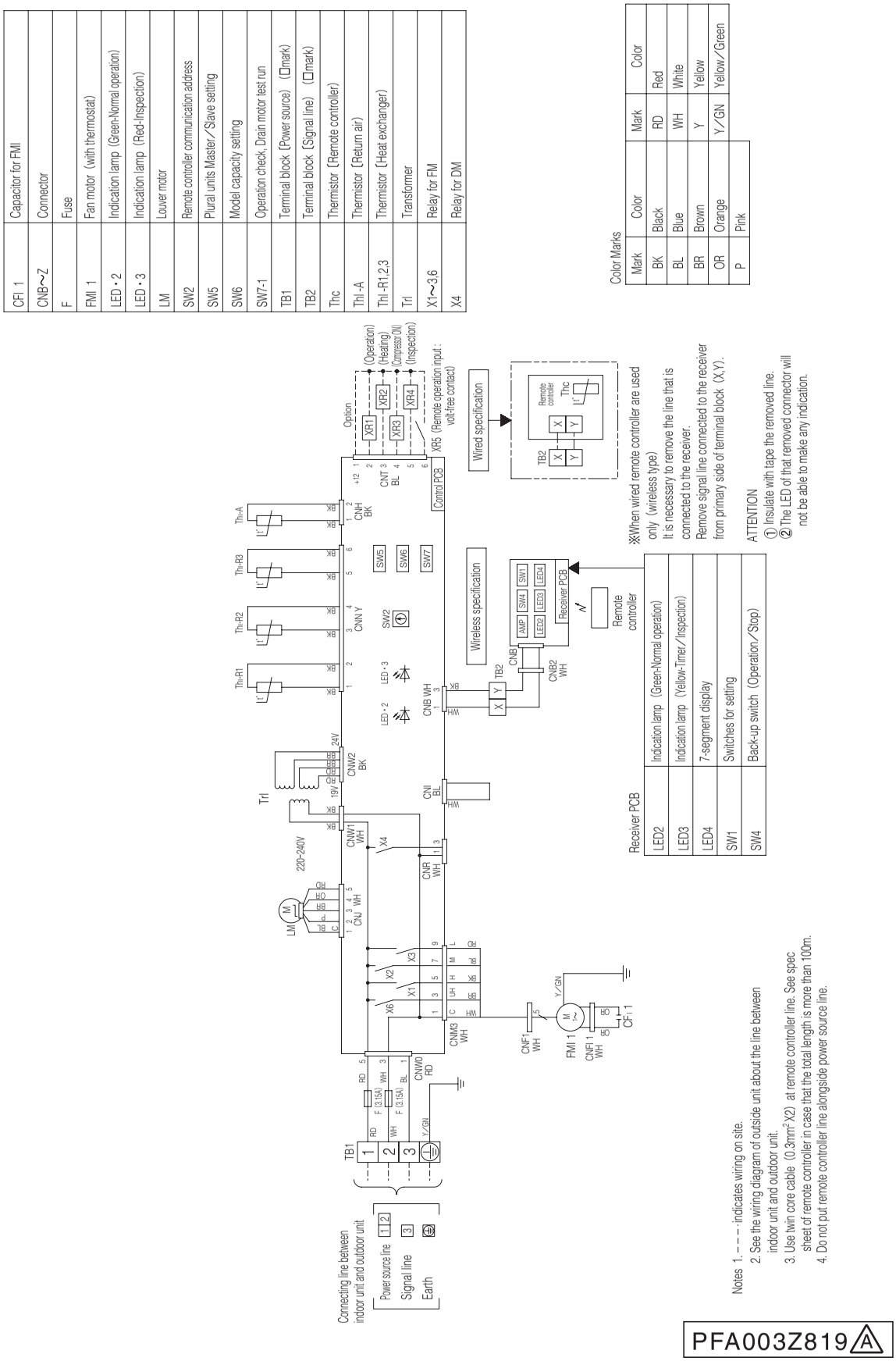


Notes 1. – – – : indicates wiring on site.
2. See the wiring diagram of outside unit about the line between inside unit and outside unit.
3. Use twin core cable (0.3mm²X2) at remote controller line. See spec sheet of remote controller in case that the total length is more than 100m.
4. Do not put remote controller line alongside power source line.

PJF000Z190

(3) Ceiling suspended type (FDEN)

Models FDEN40VD, 50VD

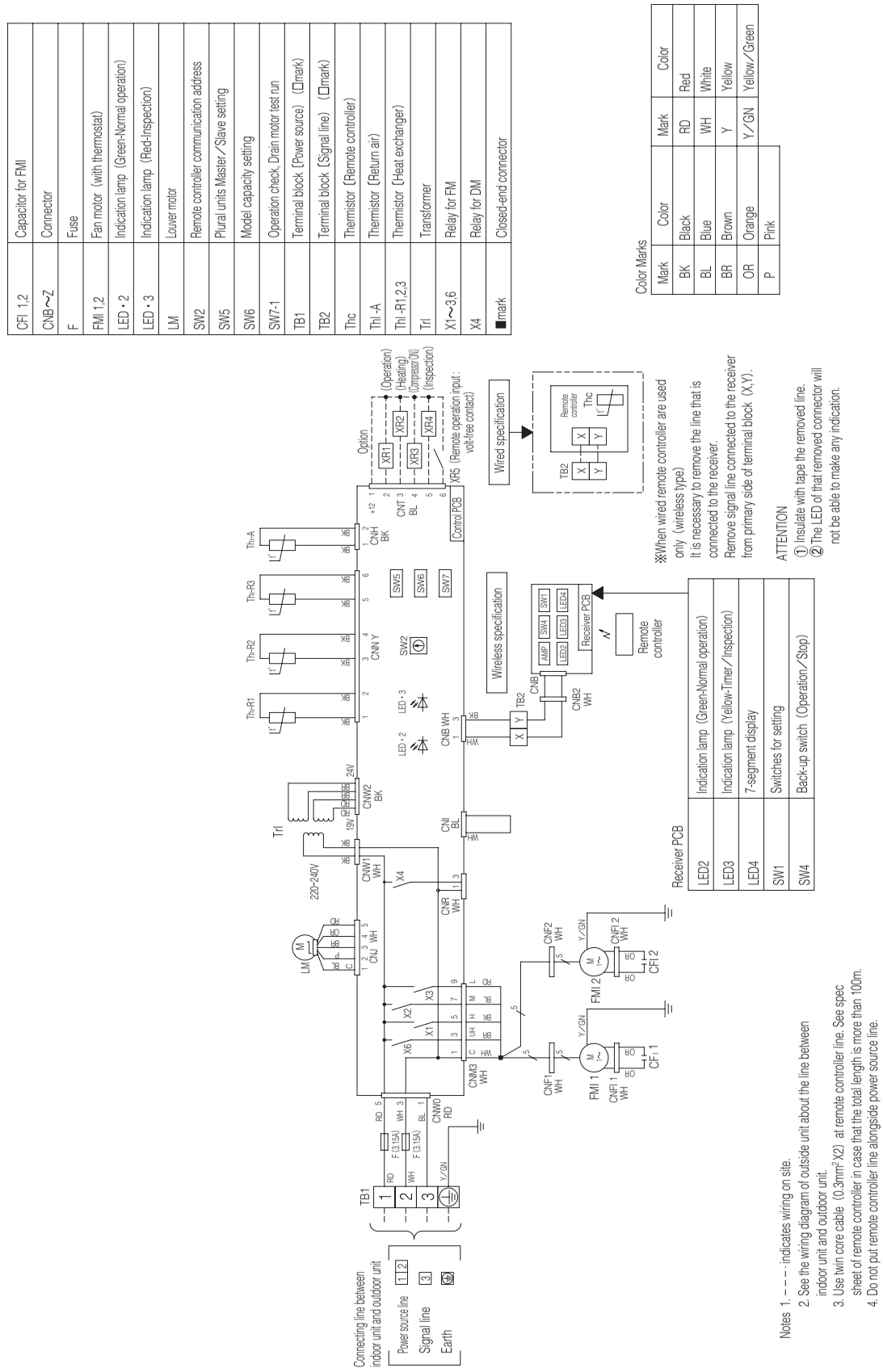


Models FDEN60VD, 71VD, 100VD, 125VD, 140VD

CFI 1,2	Capacitor for FMI
CNB~Z	Connector
F	Fuse
FMI 1,2	Fan motor (with thermostat)
LED・2	Indication lamp (Green-Normal operation)
LED・3	Indication lamp (Red-Inspection)
LM	Louver motor
SW2	Remote controller communication address
SW5	Plural units Master／Slave setting
SW6	Model capacity setting
SW7-1	Operation check, Drain motor test run
TB1	Terminal block (Power source) (□mark)
TB2	Terminal block (Signal line) (□mark)
Thc	Thermistor (Remote controller)
Thl -A	Thermistor (Return air)
Thl -R1,2,3	Thermistor (Heat exchanger)
Trl	Transformer
X1~3,6	Relay for FM
X4	Relay for DM
■mark	Closed-end connector

Color Marks

Mark	Color	Mark	Color
BK	Black	RD	Red
BL	Blue	WH	White
BR	Brown	Y	Yellow
OR	Orange	Y／GN	Yellow／Green
P	Pink		

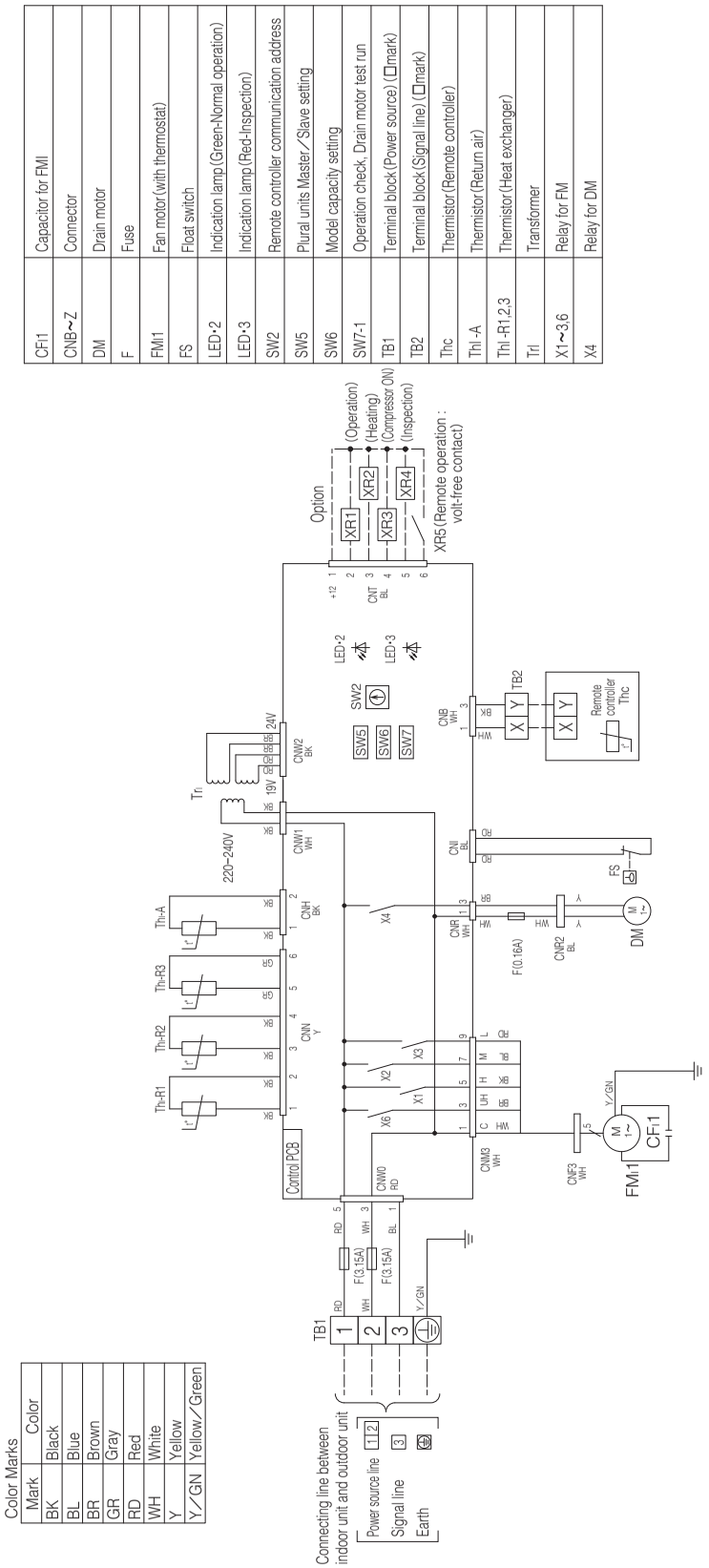


Notes 1. - - - : indicates wiring on site.
2. See the wiring diagram of outside unit about the line between indoor unit and outdoor unit.
3. Use twin core cable (0.3mm² X2) at remote controller line. See spec sheet of remote controller in case that the total length is more than 100m.
4. Do not put remote controller line alongside power source line.

PFA003Z820 B

(4) Duct connected-Low/Middle static pressure type (FDUM)

Models FDUM50VD, 60VD, 71VD

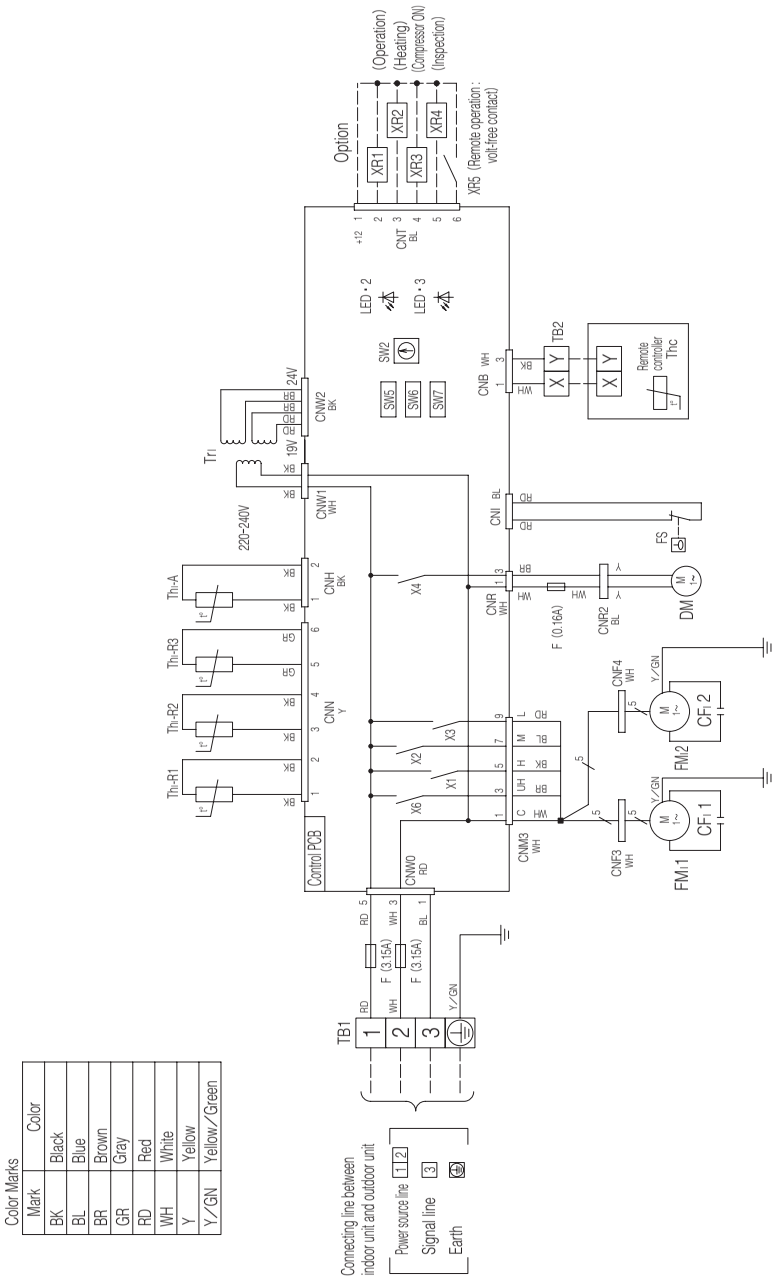


Notes 1. —— indicates wiring on site.
2. See the wiring diagram of outside unit about the line between inside unit and outside unit.
3. Use twin core cable (0.3mm² X2) at remote controller line. See spec sheet of remote controller in case that the total length is more than 100m.
4. Do not put remote controller line alongside power source line.

PJR002Z244 B

Models FDUM100VD, 125VD, 140VD

CFI1,2	Capacitor for FMI
CNB~Z	Connector
DM	Drain motor
F	Fuse
FMI 1,2	Fan motor (with thermostat)
FS	Float switch
LED・2	Indication lamp (Green-Normal operation)
LED・3	Indication lamp (Red-Inspection)
SW2	Remote controller communication address
SW5	Plural units Master/Slave setting
SW6	Model capacity setting
SW7-1	Operation check, Drain motor test run
TB1	Terminal block (Power source) (□mark)
TB2	Terminal block (Signal line) (□mark)
Thc	Thermistor (Remote controller)
Thl -A	Thermistor (Return air)
Thl -R1,2,3	Thermistor (Heat exchanger)
Trl	Transformer
X1~3,6	Relay for FM
X4	Relay for DM
■mark	Closed-end connector



Color Marks

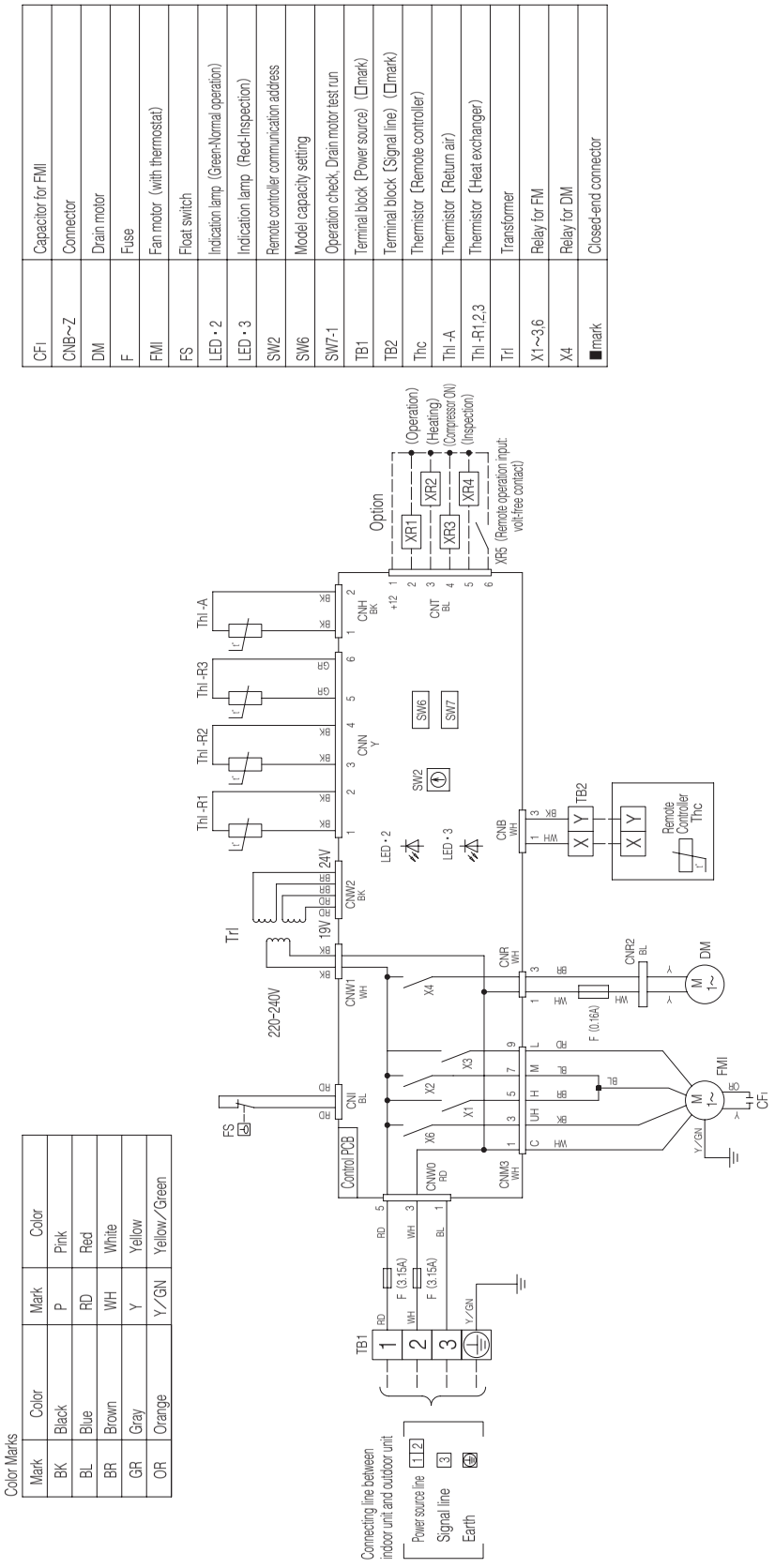
Mark	Color
BK	Black
BL	Blue
BR	Brown
GR	Gray
RD	Red
WH	White
Y	Yellow
Y/GN	Yellow/Green

Notes 1. – – – : indicates wiring on site.
2. See the wiring diagram of outside unit about the line between inside unit and outside unit.
3. Use twin core cable (0.3mm²X2) at remote controller line. See spec sheet of remote controller in case that the total length is more than 100m.
4. Do not put remote controller line alongside power source line.

PJR002Z245 B

(5) Duct connected-High static pressure type (FDU)

Model FDU71VD

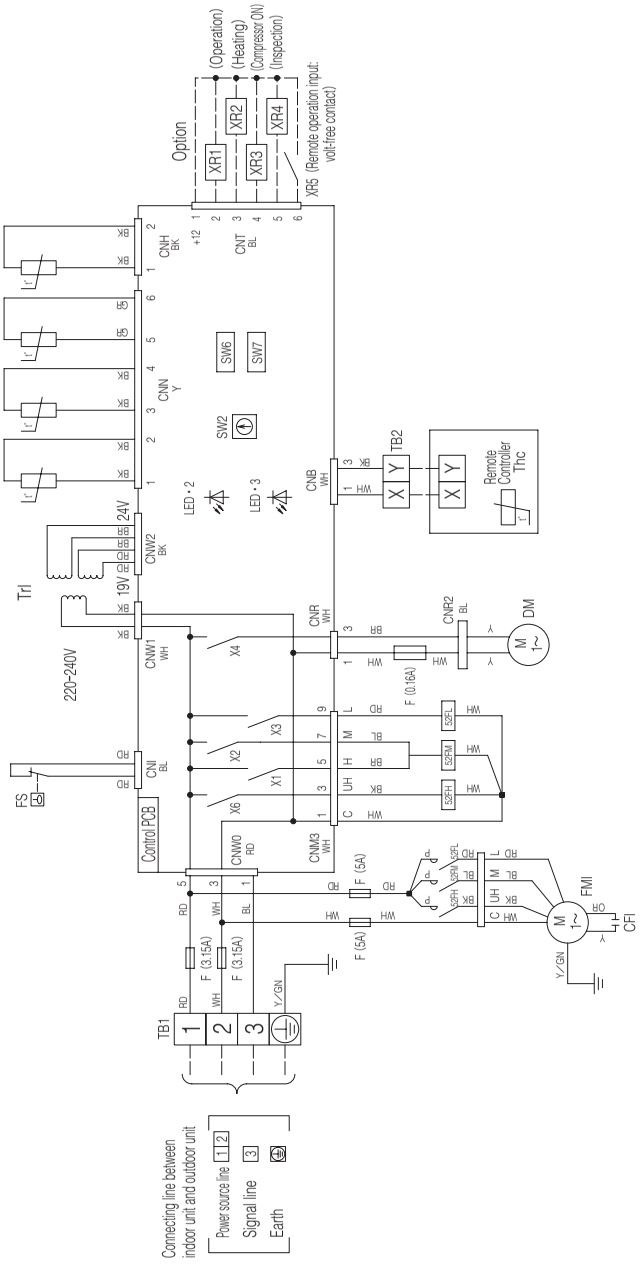


Notes 1. – – – indicates wiring on site.
2. See the wiring diagram of outside unit about the line between inside unit and outside unit.
3. Use twin core cable (0.3mm² X2) at remote controller line. See spec sheet of remote controller in case that the total length is more than 100m.
4. Do not put remote controller line alongside power source line.

PJD001Z304

Models FDU100VD, 125VD, 140VD

CFI	Capacitor for FMI
CNB~Z	Connector
DM	Drain motor
F	Fuse
FMI	Fan motor (with thermostat)
FS	Float switch
LED • 2	Indication lamp (Green-Normal operation)
LED • 3	Indication lamp (Red-Inspection)
SW2	Remote controller communication address
SW6	Model capacity setting
SW7-1	Operation check, Drain motor test run
TB1	Terminal block (Power source) (□mark)
TB2	Terminal block (Signal line) (□mark)
Thc	Thermistor (Remote controller)
Thl-A	Thermistor (Return air)
Thl-R1,2,3	Thermistor (Heat exchanger)
Trl	Transformer
X1~3,6	Relay for FM
X4	Relay for DM
■mark	Closed-end connector
S2FL,FM,FH	Electromagnetic contactor for FMI



Color Marks

Mark	Color	Mark	Color
BK	Black	P	Pink
BL	Blue	RD	Red
BR	Brown	WH	White
GR	Gray	Y	Yellow
OR	Orange	Y/GN	Yellow/Green

Notes 1. – – –: indicates wiring on site.
2. See the wiring diagram of outside unit about the line between inside unit and outside unit.
3. Use twin core cable (0.3mm² X2) at remote controller line. See spec sheet of remote controller in case that the total length is more than 100m.
4. Do not put remote controller line alongside power source line.

PJD001Z217 B

(6) Wall mounted type (SRK)

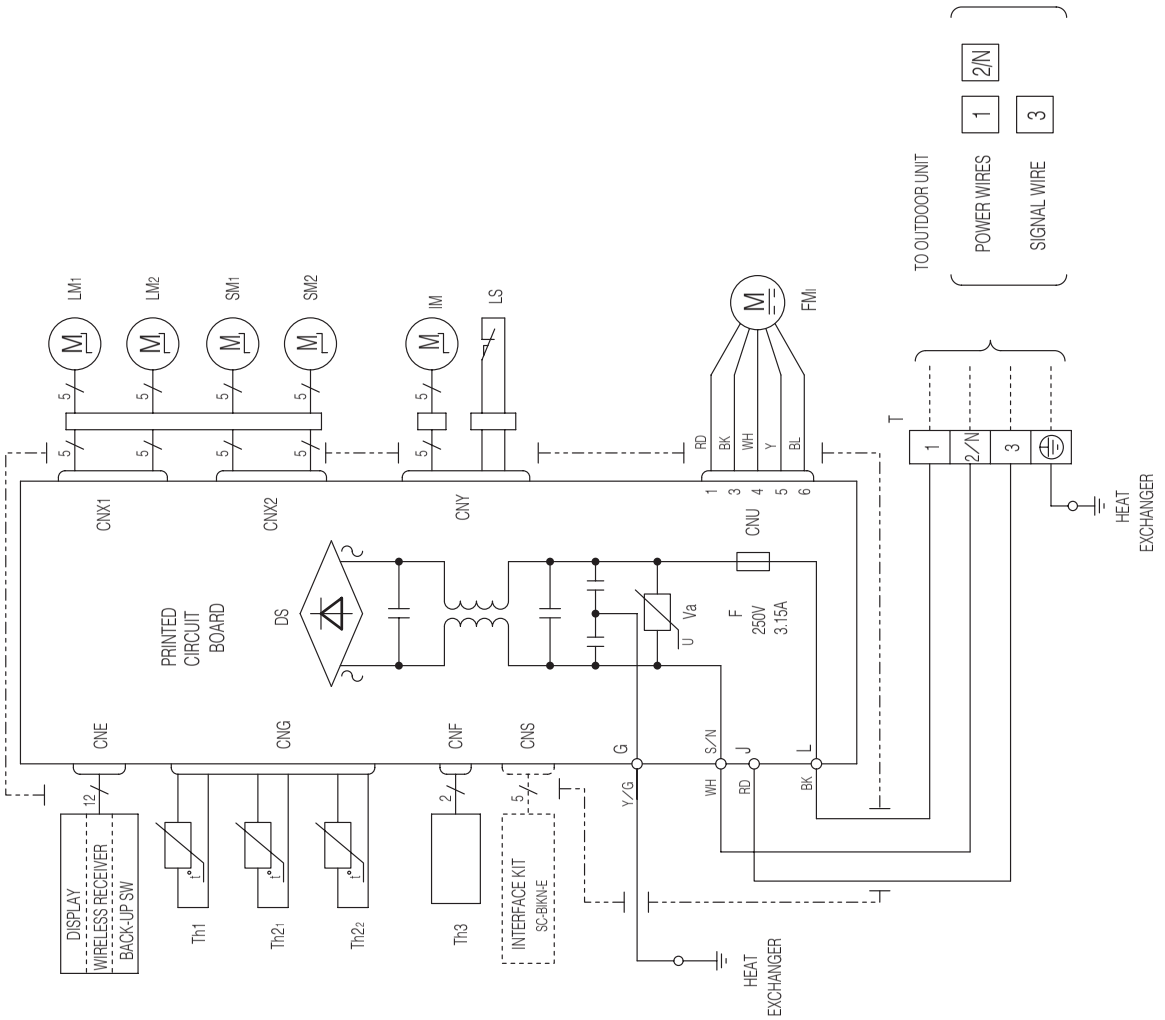
Models SRK50ZIX-S, 60ZIX-S

SRK50ZJX-S, 60ZJX-S

Item	Description
CNE-CNY	Connector
FM_I	Fan motor
$SM_{1,2}$	Flap motor
$LM_{1,2}$	Louver motor
IM	Inlet motor
Th1	Room temp. sensor
$Th2_{1,2}$	Heat exch. sensor
Th3	Humidity sensor
LS	Limit switch
DS	Diode stack
F	Fuse
T	Terminal block
Va	Varistor

Color Marks

Mark	Color
BK	Black
BL	Blue
RD	Red
WH	White
Y	Yellow
Y/G	Yellow/Green



RWA000Z215

3.2 Outdoor units

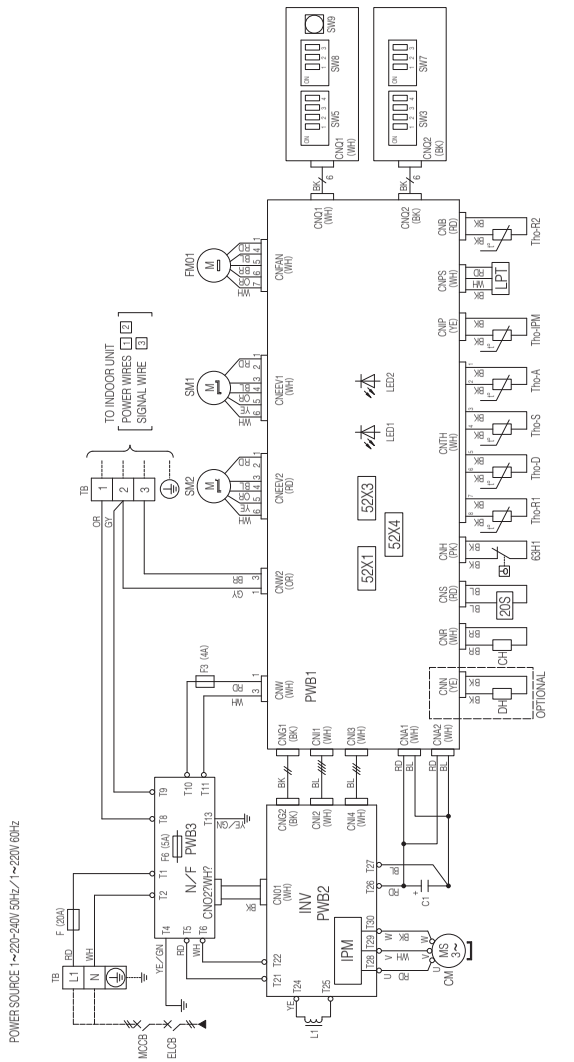
Model FDC71VNX

Item	Description
CM	Compressor motor
FM01	Fan motor
CH	Crankcase heater
DH	Drain pan heater
52X1	Auxiliary relay (for CH)
52X3	Auxiliary relay (for 20S)
52X4	Auxiliary relay (for DH)
20S	Solenoid valve for 4 way valve
SM1	Expansion valve for cooling
SM2	Expansion valve for heating
63H1	High pressure switch
Tho-A	Thermistor (Outdoor air temp.)
Tho-D	Thermistor (Discharge pipe temp.)
Tho-R1,R2	Thermistor (Heat exchanger temp.)
Tho-S	Thermistor (Suction pipe temp.)
Tho-IPM	Thermistor (IPM)
LPT	Low pressure sensor
IPM	Intelligent power module
TB	Terminal block
FF3	Fuse
CnA~Z	Connector
SW9	Pump down switch
SW3,5	Local setting switch
LED1	Indication lamp (GREEN)
LED2	Indication lamp (RED)
L1	Reactor

Mark	Color
BK	Black
BL	Blue
BR	Brown
OR	Orange
RD	Red
WH	White
YE	Yellow
YE/GN	Yellow/Green
GY	Gray
PK	Pink

Local setting switch SW3, SW5 (Set up at shipment OFF)

SW3-1	Defrost control change	The defrosting operation interval becomes shorter by turning ON this switch. This switch should be turned ON in the area where outside temperature becomes below the freezing point.
SW3-2	Snow guard fan control	When this switch is turned ON, the outdoor unit fan will run for 10 seconds in every 10 minutes, when outdoor temperature falls to 3˚C or lower and the compressor is not running when the unit is used in a very snowy country, set this switch to ON.
SW5-3,4	Trial operation	Method of trial operation 1. Trial operation can be performed by using SW5-3. 2. Cooling trial operation will be performed when SW5-4 is OFF, and heating trial operation when SW5-4 is ON. 3. Be sure to turn OFF SW5-3 after the trial operation is finished.



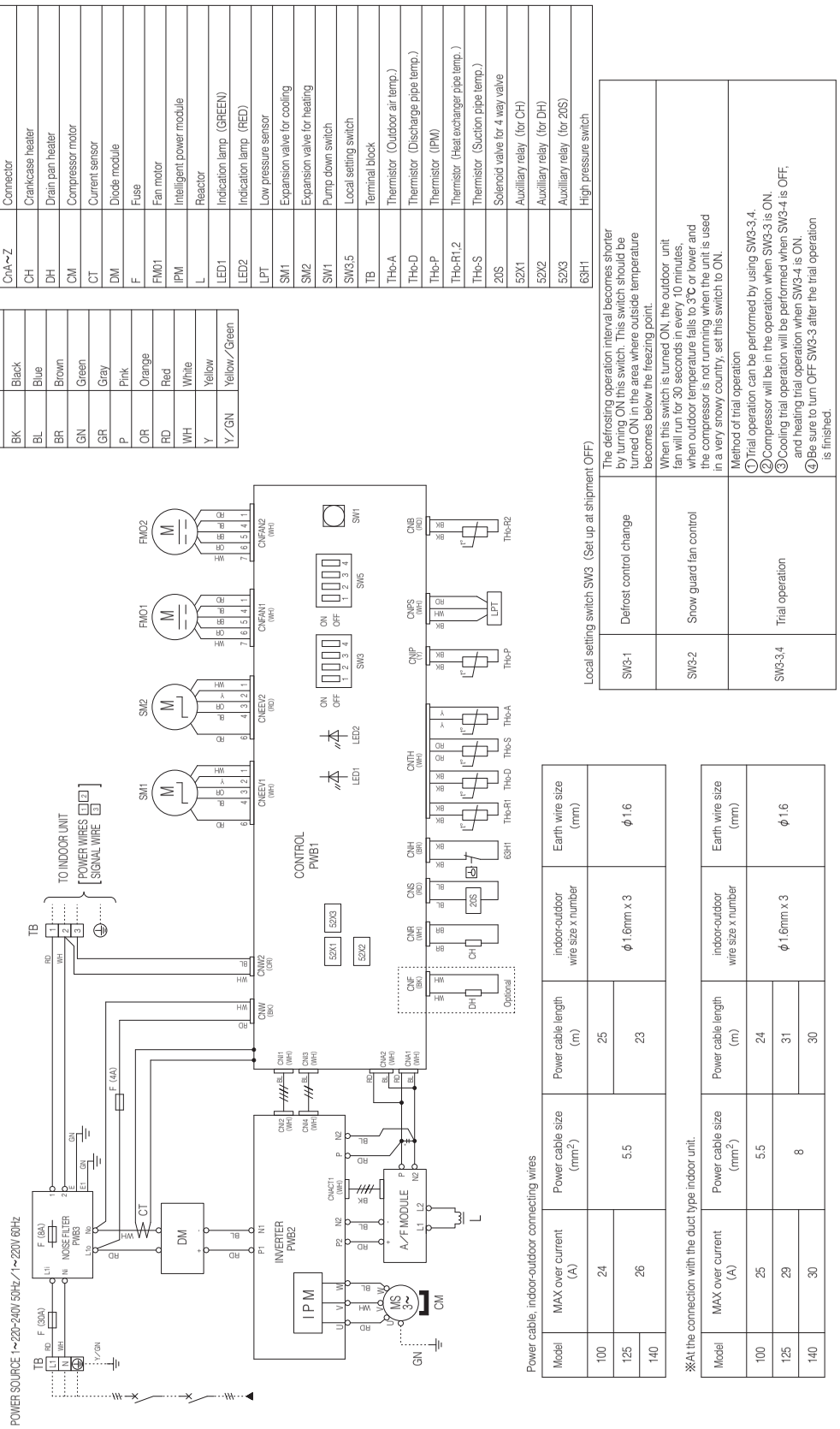
Power cable, indoor-outdoor connecting wires

Model	MAX over current (A)	Power cable size (mm^2)	Power cable length (m)	indoor-outdoor wire size x number (mm)	Earth wire size (mm)
71	17	3.5	21	ϕ1.6mm x 3	ϕ1.6mm

- The specifications shown in the above table are for units without heaters. For units with heaters, refer to the installation instructions or the construction instructions of the indoor unit.
- Switchgear of Circuit breaker capacity which is calculated from MAX. over current should be chosen along the regulations in each country.
- The cable specifications are based on the assumption that a metal or plastic conduit is used with no more than three cables contained in a conduit and a voltage drop is 2%. For an installation falling outside of these conditions, please follow the internal cabling regulations. Adapt it to the regulation in effect in each country.
- Refer to installation manual or technical manual about usage of local setting switch.
  Don't operate SW3-3,SW5-1,SW5-2,SW7,SW8

PCA001Z605

Models FDC100VNX, 125VNX, 140VNX



Mark	Color
BK	Black
BL	Blue
BR	Brown
GN	Green
GR	Gray
P	Pink
OR	Orange
RD	Red
WH	White
Y	Yellow
Y/GN	Yellow/Green

Item	Description
CnA~Z	Connector
CH	Crankcase heater
DH	Drain pan heater
CM	Compressor motor
CT	Current sensor
DM	Diode module
F	Fuse
FMO1	Fan motor
IPM	Intelligent power module
L	Reactor
LED1	Indication lamp (GREEN)
LED2	Indication lamp (RED)
LPT	Low pressure sensor
SM1	Expansion valve for cooling
SM2	Expansion valve for heating
SW1	Pump down switch
SW3,5	Local setting switch
TB	Terminal block
THo-A	Thermistor (Outdoor air temp.)
THo-D	Thermistor (Discharge pipe temp.)
THo-P	Thermistor (IPM)
THo-R1,2	Thermistor (Heat exchanger pipe temp.)
THo-S	Thermistor (Suction pipe temp.)
20S	Solenoid valve for 4 way valve
52X1	Auxiliary relay (for CH)
52X2	Auxiliary relay (for DH)
52X3	Auxiliary relay (for 20S)
63H1	High pressure switch

Local setting switch SW3 (Set up at shipment OFF)

SW3-1	Defrost control change	The defrosting operation interval becomes shorter by turning ON this switch. This switch should be turned ON in the area where outside temperature becomes below the freezing point.
SW3-2	Snow guard fan control	When this switch is turned ON, the outdoor unit fan will run for 30 seconds in every 10 minutes, when outdoor temperature falls to 3℃ or lower and the compressor is not runnning when the unit is used in a very snowy country, set this switch to ON.
SW3-3,4	Trial operation	Method of trial operation ①Trial operation can be performed by using SW3-3,4. ②Compressor will be in the operation when SW3-3 is ON. ③Cooling trial operation will be performed when SW3-4 is OFF, and heating trial operation when SW3-4 is ON. ④Be sure to turn OFF SW3-3 after the trial operation is finished.

Power cable, indoor-outdoor connecting wires

Model	MAX over current (A)	Power cable size (mm^2)	Power cable length (m)	indoor-outdoor wire size x number	Earth wire size (mm)
100	24	5.5	25	φ1.6mm x 3	φ1.6
125	26		23		
140					

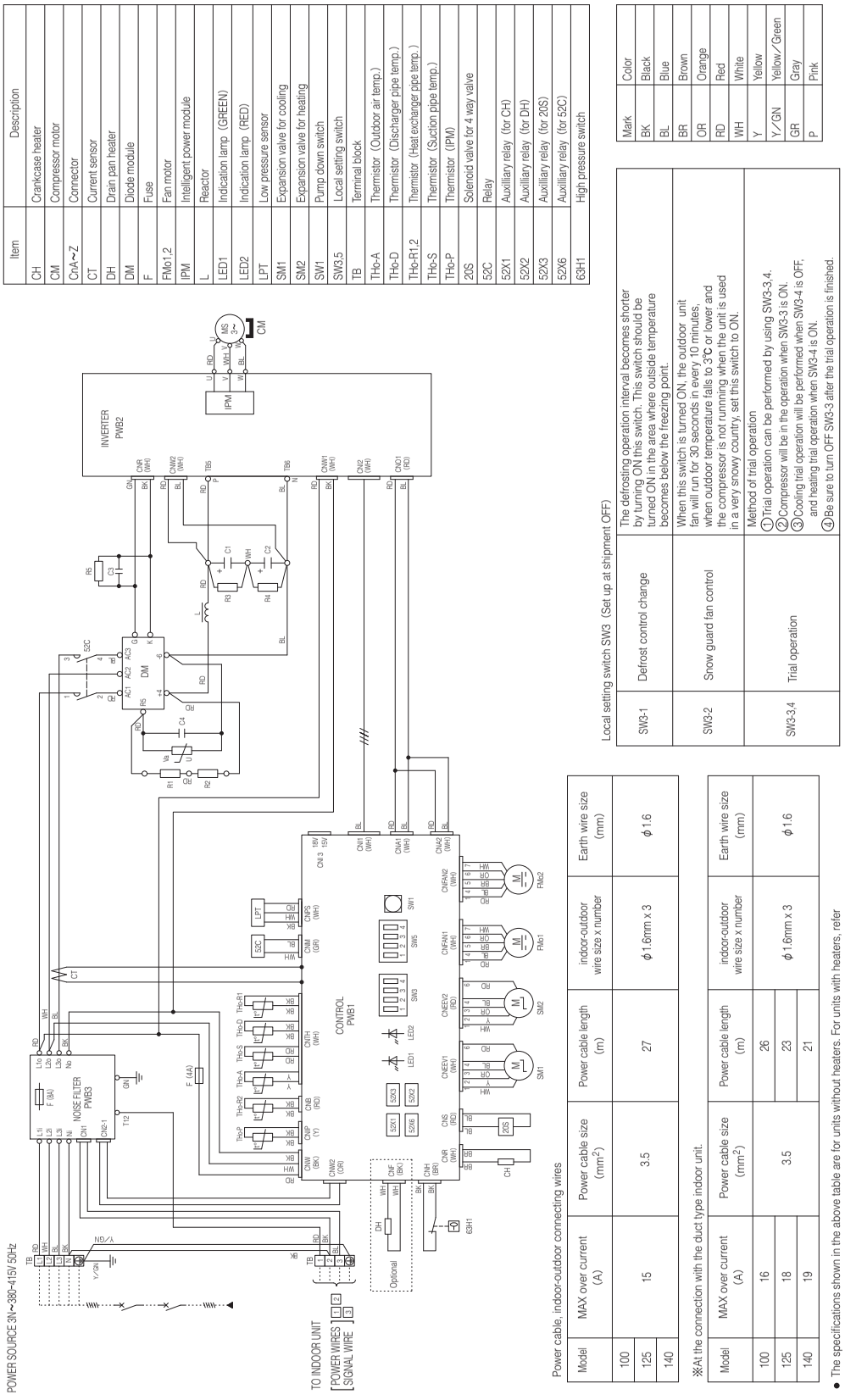
※At the connection with the duct type indoor unit.

Model	MAX over current (A)	Power cable size (mm^2)	Power cable length (m)	indoor-outdoor wire size x number	Earth wire size (mm)
100	25	5.5	24	φ1.6mm x 3	φ1.6
125	29	8	31		
140	30		30		

- The specifications shown in the above table are for units without heaters. For units with heaters, refer to the installation instructions or the construction instructions of the indoor unit.
- Switchgear of Circuit breaker capacity which is calculated from MAX. over current should be chosen along the regulations in each country.
- The cable specifications are based on the assumption that a metal or plastic conduit is used with no more than three cables contained in a conduit and a voltage drop is 2%. For an installation falling outside of these conditions, please follow the internal cabling regulations. Adapt it to the regulation in effect in each country.

PCA001Z570A

Models FDC100VSX, 125VSX, 140VSX



Item	Description
CH	Crankcase heater
CM	Compressor motor
CnA~Z	Connector
CT	Current sensor
DH	Drain pan heater
DM	Diode module
F	Fuse
FMo1,2	Fan motor
IPM	Intelligent power module
L	Reactor
LED1	Indication lamp (GREEN)
LED2	Indication lamp (RED)
LPT	Low pressure sensor
SM1	Expansion valve for cooling
SM2	Expansion valve for heating
SW1	Pump down switch
SW3,5	Local setting switch
TB	Terminal block
THo-A	Thermistor (Outdoor air temp.)
THo-D	Thermistor (Discharger pipe temp.)
THo-R1,2	Thermistor (Heat exchanger pipe temp.)
THo-S	Thermistor (Suction pipe temp.)
THo-P	Thermistor (IPM)
20S	Solenoid valve for 4 way valve
52C	Relay
52X1	Auxiliary relay (for CH)
52X2	Auxiliary relay (for DH)
52X3	Auxiliary relay (for 20S)
52X6	Auxiliary relay (for 52C)
63H1	High pressure switch

Mark	Color
BK	Black
BL	Blue
BR	Brown
OR	Orange
RD	Red
WH	White
Y	Yellow
Y/GN	Yellow/Green
GR	Gray
P	Pink

Local setting switch SW3 (Set up at shipment OFF)

SW3-1	Defrost control change	The defrosting operation interval becomes shorter by turning ON this switch. This switch should be turned ON in the area where outside temperature becomes below the freezing point.
SW3-2	Snow guard fan control	When this switch is turned ON, the outdoor unit fan will run for 30 seconds in every 10 minutes, when outdoor temperature falls to 3℃ or lower and the compressor is not runnning when the unit is used in a very snowy country, set this switch to ON.
SW3-3,4	Trial operation	Method of trial operation ①Trial operation can be performed by using SW3-3, 4. ②Compressor will be in the operation when SW3-3 is ON. ③Cooling trial operation will be performed when SW3-4 is OFF, and heating trial operation when SW3-4 is ON. ④Be sure to turn OFF SW3-3 after the trial operation is finished.

Power cable, indoor-outdoor connecting wires

Model	MAX over current (A)	Power cable size (mm^2)	Power cable length (m)	indoor-outdoor wire size x number	Earth wire size (mm)
100 125 140	15	3.5	27	ϕ1.6mm x 3	ϕ1.6

※At the connection with the duct type indoor unit.

Model	MAX over current (A)	Power cable size (mm^2)	Power cable length (m)	indoor-outdoor wire size x number	Earth wire size (mm)
100	16	3.5	26	ϕ1.6mm x 3	ϕ1.6
125	18		23		
140	19		21		

- The specifications shown in the above table are for units without heaters. For units with heaters, refer to the installation instructions or the construction instructions of the indoor unit.
- Switchgear of Circuit breaker capacity which is calculated from MAX. over current should be chosen along the regulations in each country.
- The cable specifications are based on the assumption that a metal or plastic conduit is used with no more than three cables contained in a conduit and a voltage drop is 2%. For an installation falling outside of these conditions, please follow the internal cabling regulations. Adapt it to the regulation in effect in each country.

PCA001Z571 A

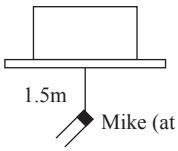
4. NOISE LEVEL

Notes (1) The data are based on the following conditions.
Ambient air temperature: Indoor unit 27℃WB. Outdoor unit 35℃DB.
(2) The data in the chart are measured in an anechoic room.
(3) The noise levels measured in the field are usually higher than the data because of reflection.

4.1 Indoor units

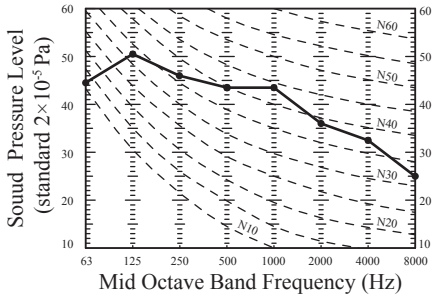
(1) Ceiling cassette-4way compact type (FDTC)

Measured based on JIS B 8616
Mike position as right

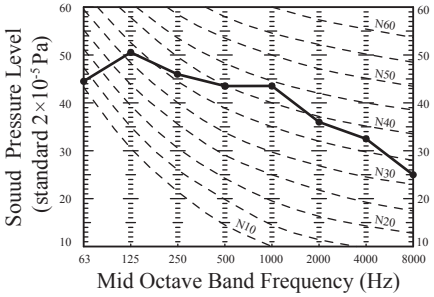


Models FDTC40VD,50VD

Cooling noise level 47 dB (A) at P-HIGH
42 dB (A) at HIGH
36 dB (A) at MEDIUM
30 dB (A) at LOW

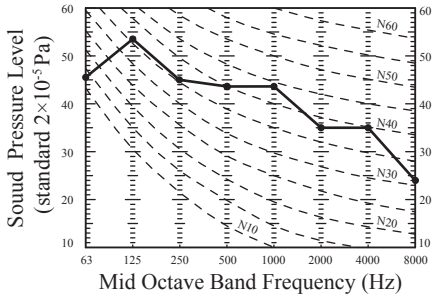


Heating noise level 47 dB (A) at P-HIGH
42 dB (A) at HIGH
36 dB (A) at MEDIUM
32 dB (A) at LOW

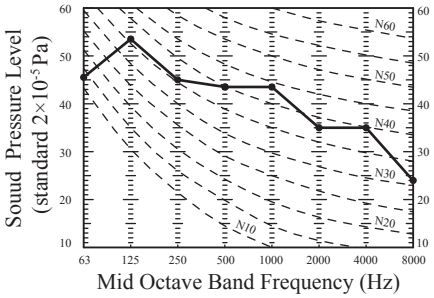


Model FDTC60VD

Cooling noise level 47 dB (A) at P-HIGH
46 dB (A) at HIGH
39 dB (A) at MEDIUM
30 dB (A) at LOW

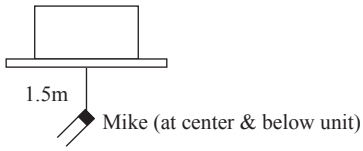


Heating noise level 47 dB (A) at P-HIGH
46 dB (A) at HIGH
39 dB (A) at MEDIUM
32 dB (A) at LOW



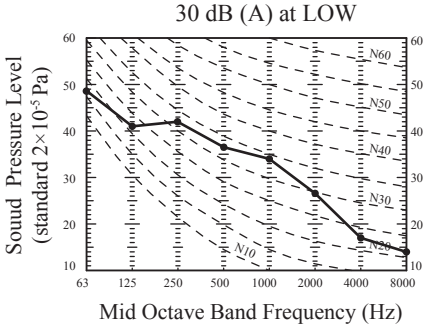
(2) Ceiling cassette-4way type (FDT)

Measured based on JIS B 8616
Mike position as right



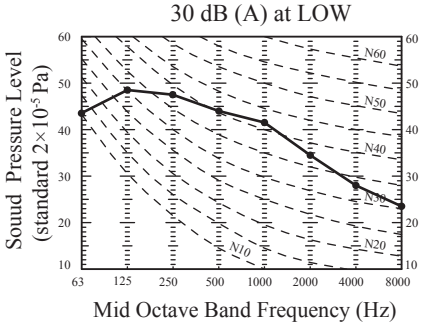
Models FDT40,50VD

Noise level 39 dB (A) at P-HIGH
33 dB (A) at HIGH
31 dB (A) at MEDIUM
30 dB (A) at LOW



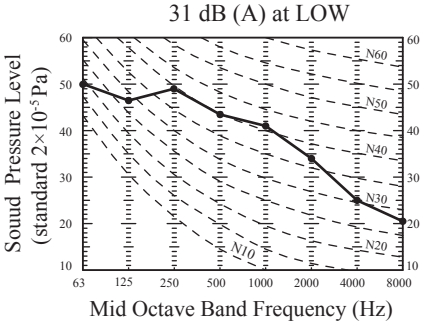
Model FDT60VD

Noise level 46 dB (A) at P-HIGH
33 dB (A) at HIGH
31 dB (A) at MEDIUM
30 dB (A) at LOW



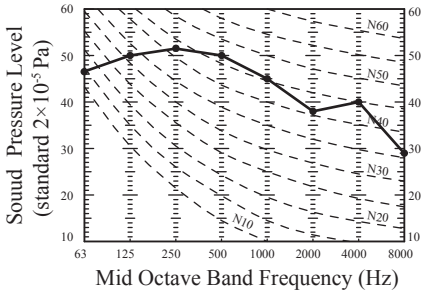
Model FDT71VD

Noise level 46 dB (A) at P-HIGH
35 dB (A) at HIGH
33 dB (A) at MEDIUM
31 dB (A) at LOW



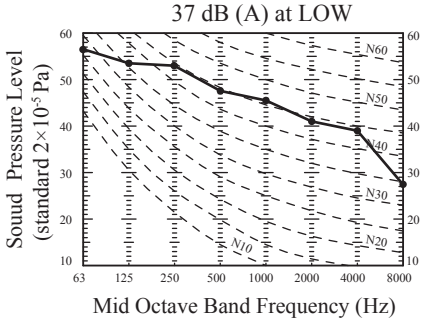
Model FDT100VD

Noise level 51 dB (A) at P-HIGH
40 dB (A) at HIGH
37 dB (A) at MEDIUM
35 dB (A) at LOW



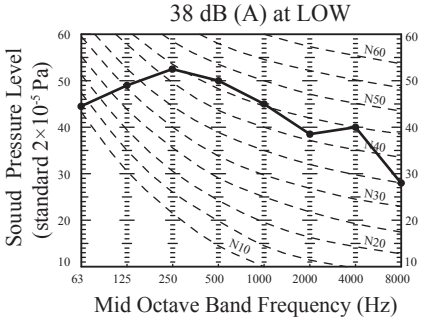
Model FDT125VD

Noise level 51 dB (A) at P-HIGH
42 dB (A) at HIGH
40 dB (A) at MEDIUM
37 dB (A) at LOW



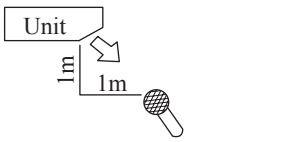
Model FDT140VD

Noise level 51 dB (A) at P-HIGH
43 dB (A) at HIGH
41 dB (A) at MEDIUM
38 dB (A) at LOW



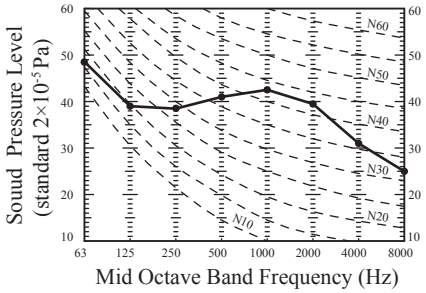
(3) Ceiling suspended type (FDEN)

Measured based on JIS B 8616
Mike position as right



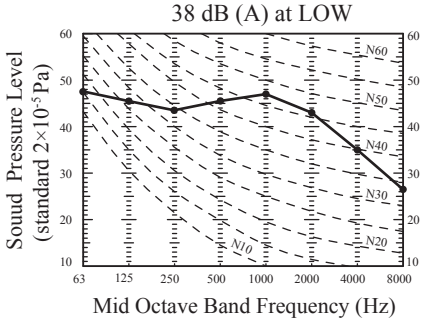
Models FDEN40,50VD

Noise level 46 dB (A) at P-HIGH
39 dB (A) at HIGH
38 dB (A) at MEDIUM
37 dB (A) at LOW



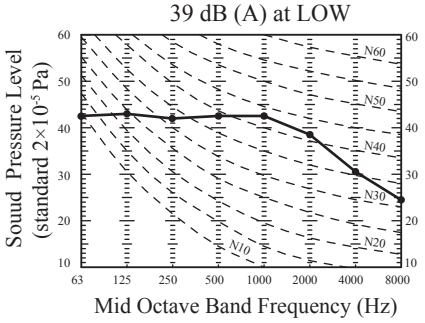
Models FDEN60,71VD

Noise level 50 dB (A) at P-HIGH
41 dB (A) at HIGH
39 dB (A) at MEDIUM
38 dB (A) at LOW



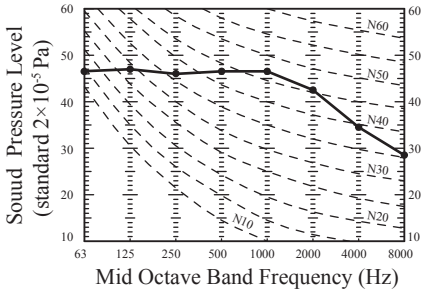
Model FDEN100VD

Noise level 46 dB (A) at P-HIGH
44 dB (A) at HIGH
41 dB (A) at MEDIUM
39 dB (A) at LOW



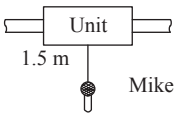
Models FDEN125,140VD

Noise level 50 dB (A) at P-HIGH
46 dB (A) at HIGH
44 dB (A) at MEDIUM
43 dB (A) at LOW



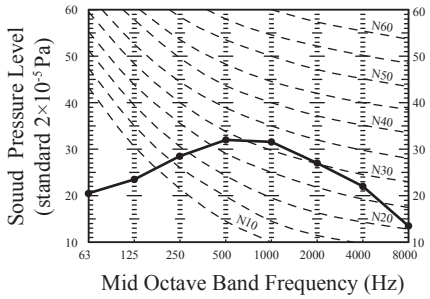
(4) Duct connected-Low/Middle static pressure type (FDUM)

Measured based on JIS B 8616
Mike position as right



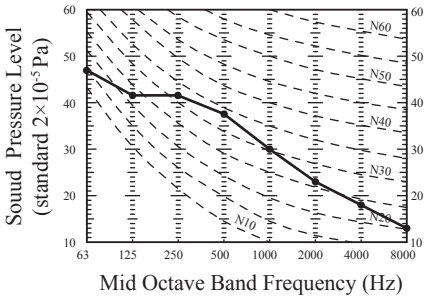
Model FDUM50VD

Noise level 35 dB (A) at P-HIGH
34 dB (A) at HIGH
31 dB (A) at MEDIUM
28 dB (A) at LOW



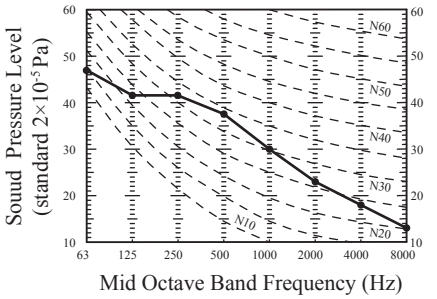
Model FDUM60VD

Noise level 38 dB (A) at P-HIGH
34 dB (A) at HIGH
31 dB (A) at MEDIUM
28 dB (A) at LOW



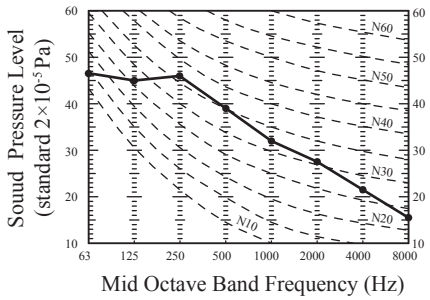
Model FDUM71VD

Noise level 38 dB (A) at P-HIGH
35 dB (A) at HIGH
32 dB (A) at MEDIUM
29 dB (A) at LOW



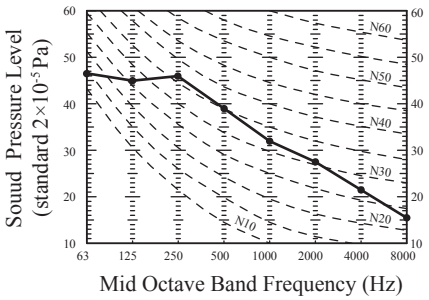
Model FDUM100VD

Noise level 41 dB (A) at P-HIGH
37 dB (A) at HIGH
35 dB (A) at MEDIUM
32 dB (A) at LOW



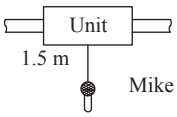
Models FDUM125,140VD

Noise level 41 dB (A) at P-HIGH
38 dB (A) at HIGH
36 dB (A) at MEDIUM
33 dB (A) at LOW



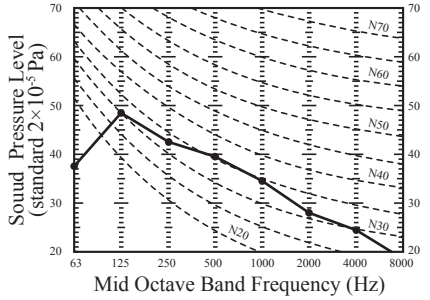
(5) Duct connected-High static pressure-type (FDU)

Measured based on JIS B 8616
Mike position as right



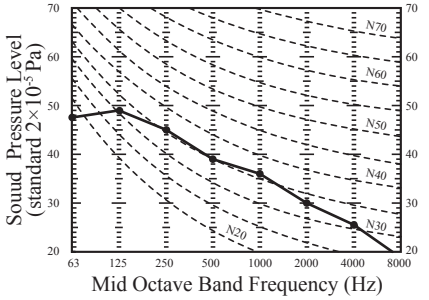
Model FDU71VD

Noise level 41 dB (A) at HIGH
37 dB (A) at LOW



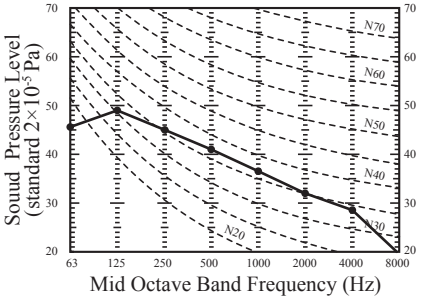
Model FDU100VD

Noise level 42 dB (A) at HIGH
37 dB (A) at LOW



Models FDU125VD, 140VD

Noise level 43 dB (A) at HIGH
38 dB (A) at LOW



(6) Wall-mounted type (SRK)

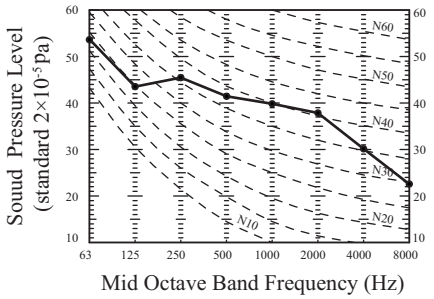
Measured based on JIS B 8616

Mike position as right

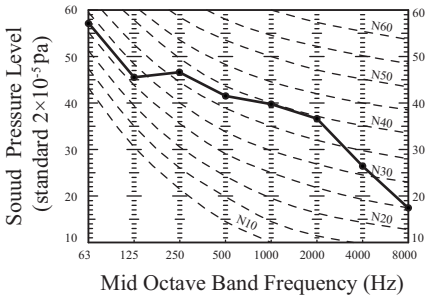
Model SRK50ZIX-S

SRK50ZJX-S

Cooling noise level 45 dB (A) at HIGH
38 dB (A) at MEDIUM
26 dB (A) at LOW



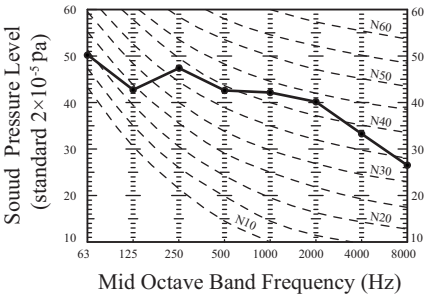
Heating noise level 45 dB (A) at HIGH
38 dB (A) at MEDIUM
32 dB (A) at LOW



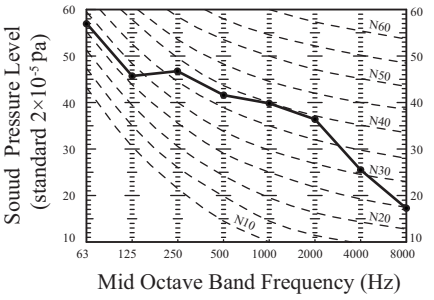
Model SRK60ZIX-S

SRK60ZJX-S

Cooling noise level 47 dB (A) at HIGH
38 dB (A) at MEDIUM
26 dB (A) at LOW



Heating noise level 45 dB (A) at HIGH
39 dB (A) at MEDIUM
33 dB (A) at LOW



4.2 Outdoor units

Measured based on JIS B 8616

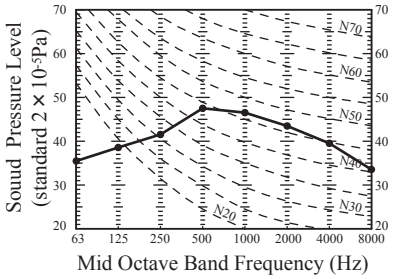
Mike position: at highest noise level in position as mentined below

Distance from front side 1m

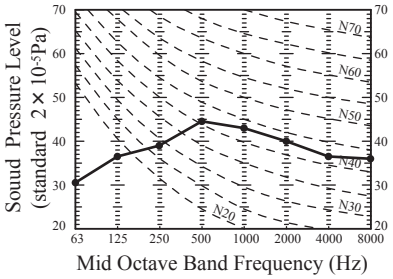
Height 1m

Model FDC71VNX

Cooling noise level 51 dB (A)

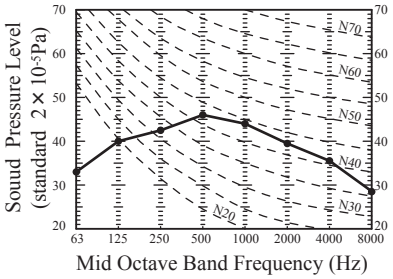


Heating noise level 48 dB (A)



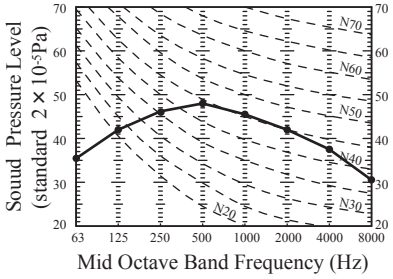
Model FDC100VNX,100VSX

Cooling noise level 48 dB (A)

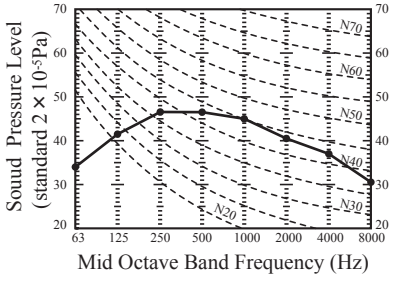


Models FDC125VNX,125VSX

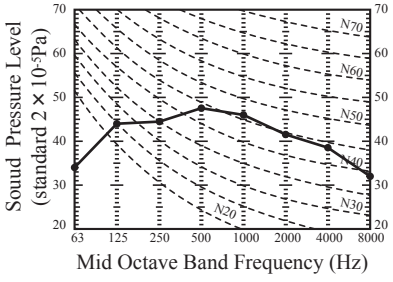
Heating noise level 50 dB (A)



Cooling noise level 49 dB (A)

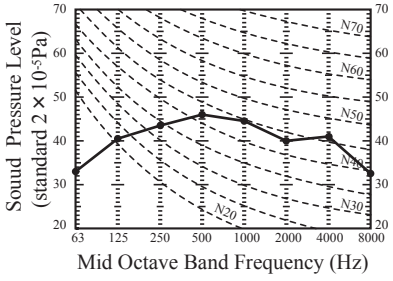


Heating noise level 50 dB (A)

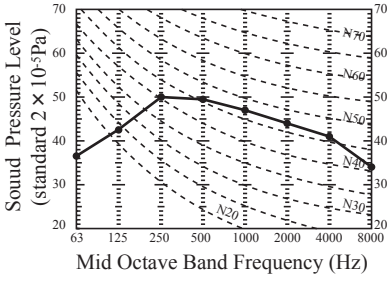


Models FDC140VNX,140VSX

Heating noise level 49 dB (A)



Heating noise level 52 dB (A)



5. CHARACTERISTICS OF FAN

5.1 Duct connected-Low/Middle static pressure type (FDUM)

• External static pressure table

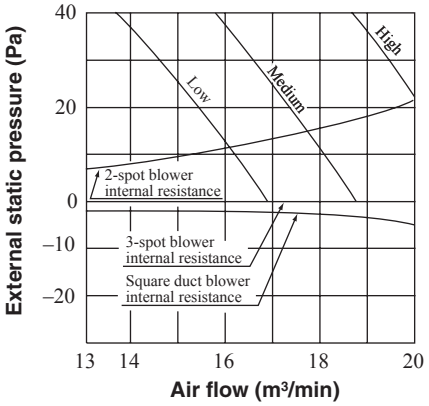
Unit : Pa (50Hz/60Hz)

Model \ Duct specs. / Air flow (m^3/min)		1 spot closing(1)	Standard (2)	Square duct (3)
FDUM50VD	14	-	85/90	90/90
FDUM60VD	18	70/85	85/100	90/100
FDUM71VD	20	65/80	85/100	90/105
FDUM100VD	28	80/90	90/100	95/105
FDUM125VD FDUM140VD	34	75/90	85/100	95/105

Notes(1) 1 spot closing: Round duct flange at center is removed and shield with a special panel (option).
(2) Standard: ø200 duct are installed at all blowout holes.
(3) Square duct: All round ducts are removed and replaced with special square duct flanges (option)

How to interpret the blower characteristics table

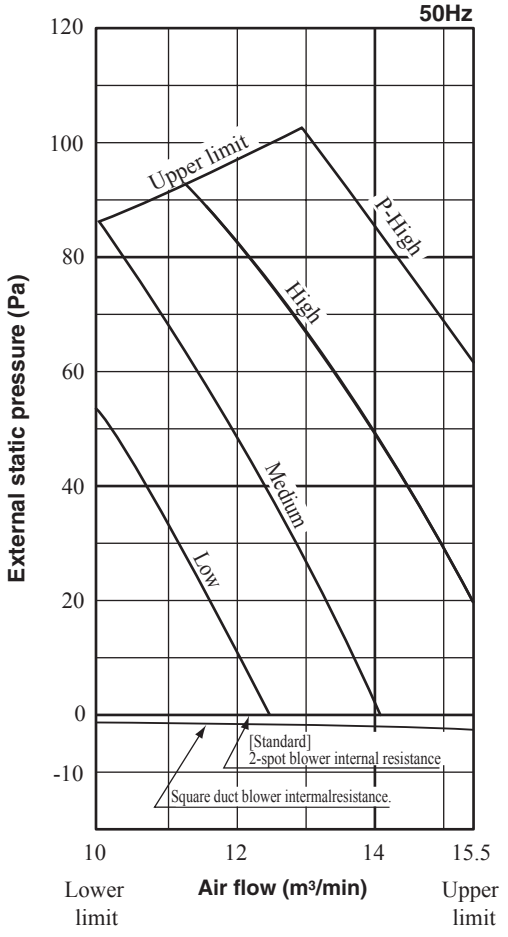
Example : Case of FDUM60VD (50Hz)

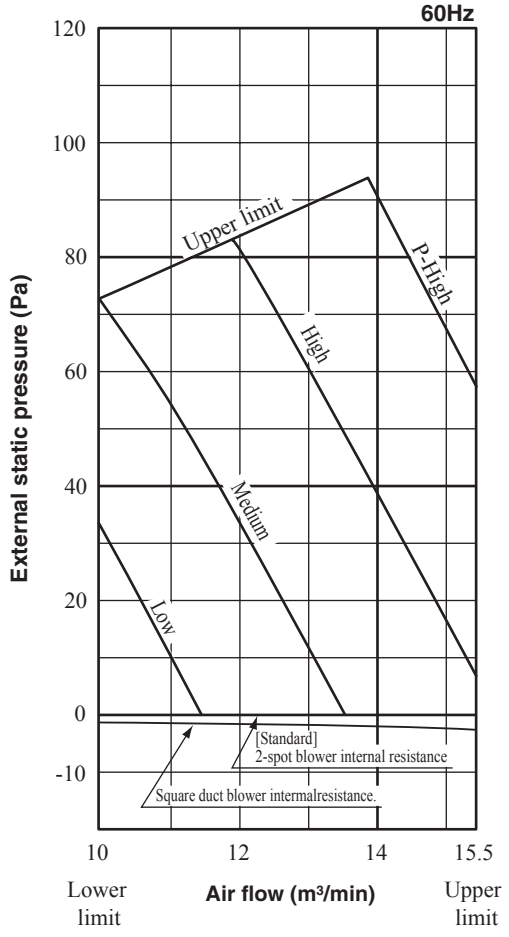


① 2-spot blowout.....
Internal resistance increases more than the standard 3-spot blowout.Approx. 14Pa at 17m^3/min

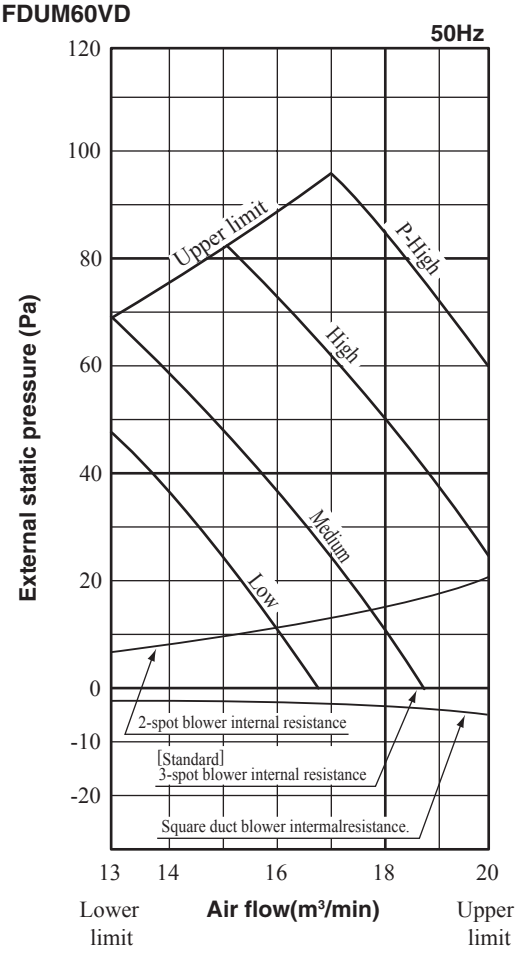
② Square duct blowout.....
Internal resistance decreases more than the standard round duct (ø200 3-spot). 3Pa at 17m^3/min. (External static pressure increases in reverse.)

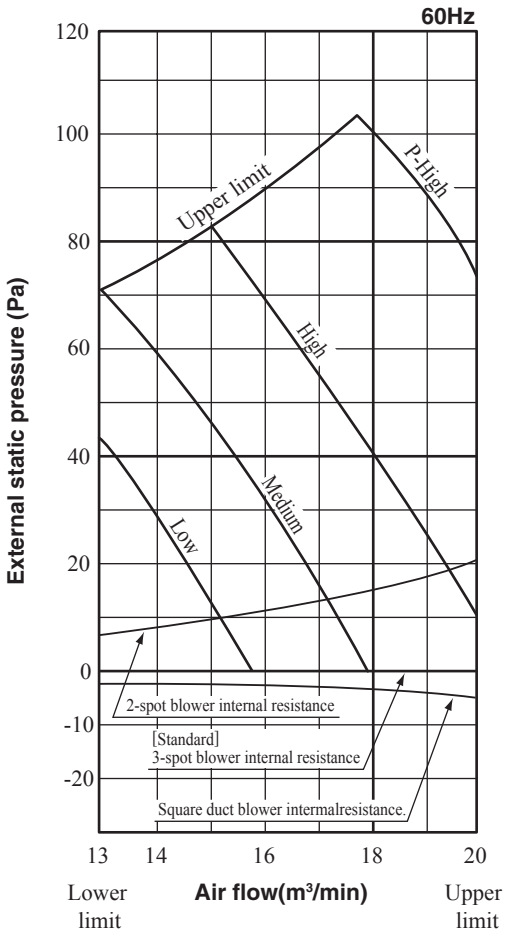
Model FDUM50VD



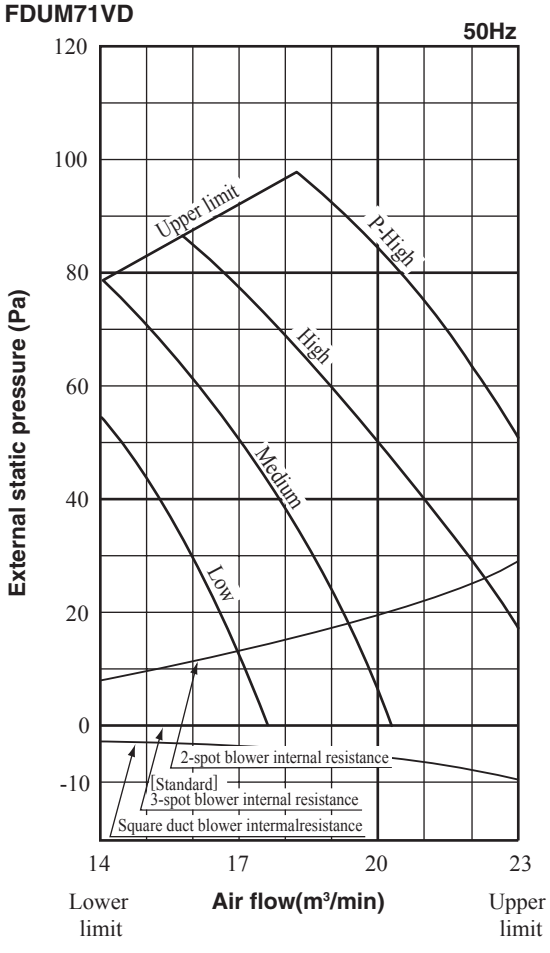


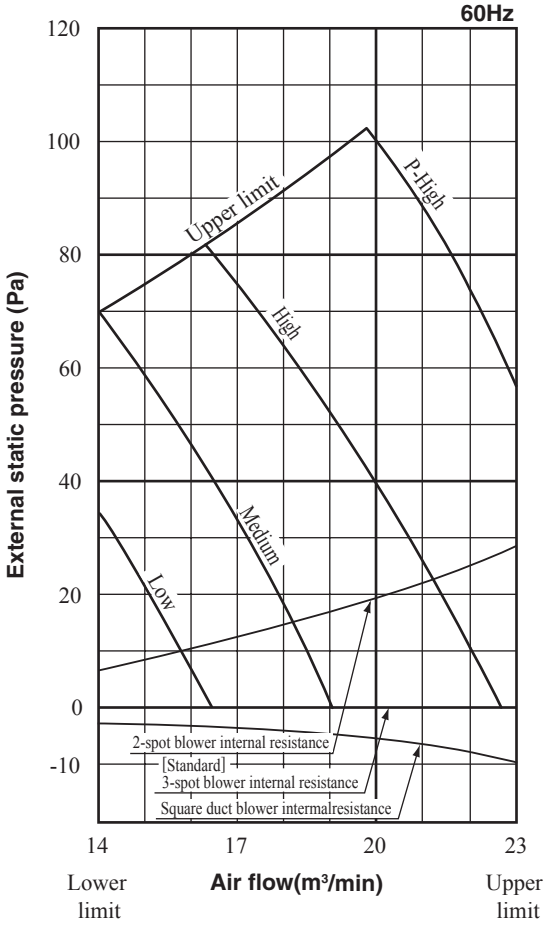
Model FDUM60VD



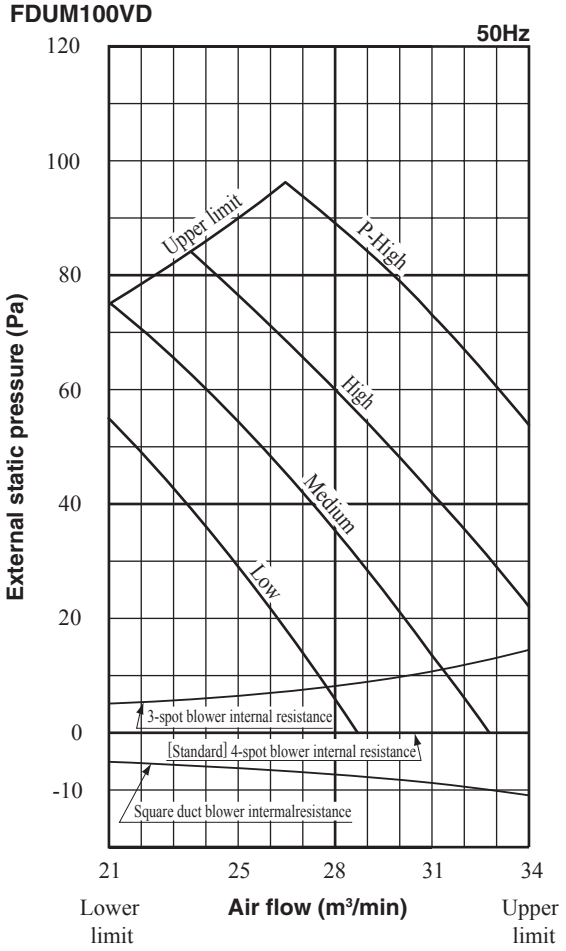


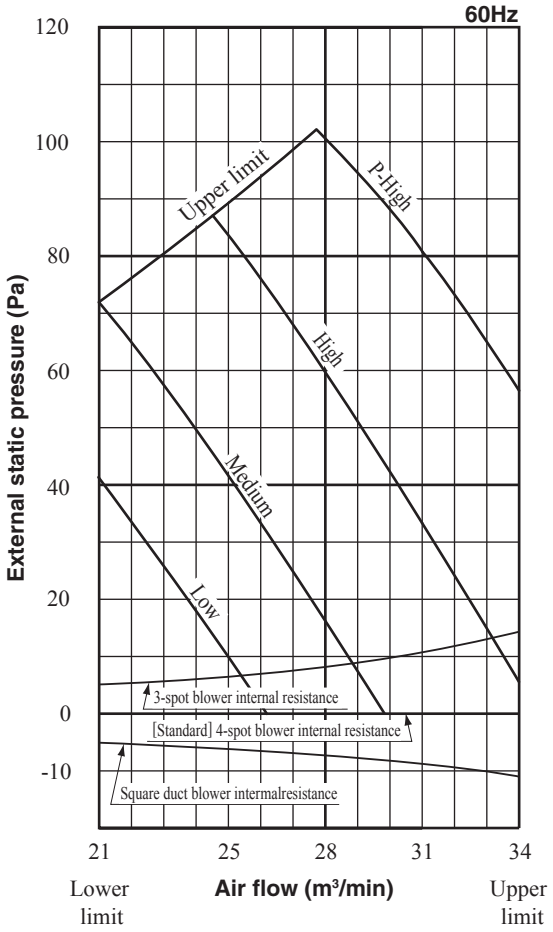
Model FDUM71VD



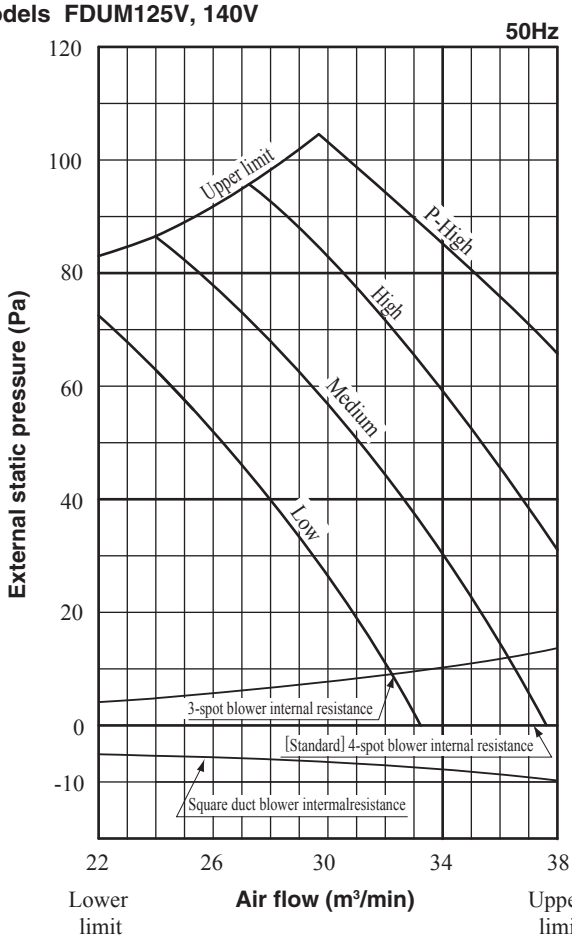


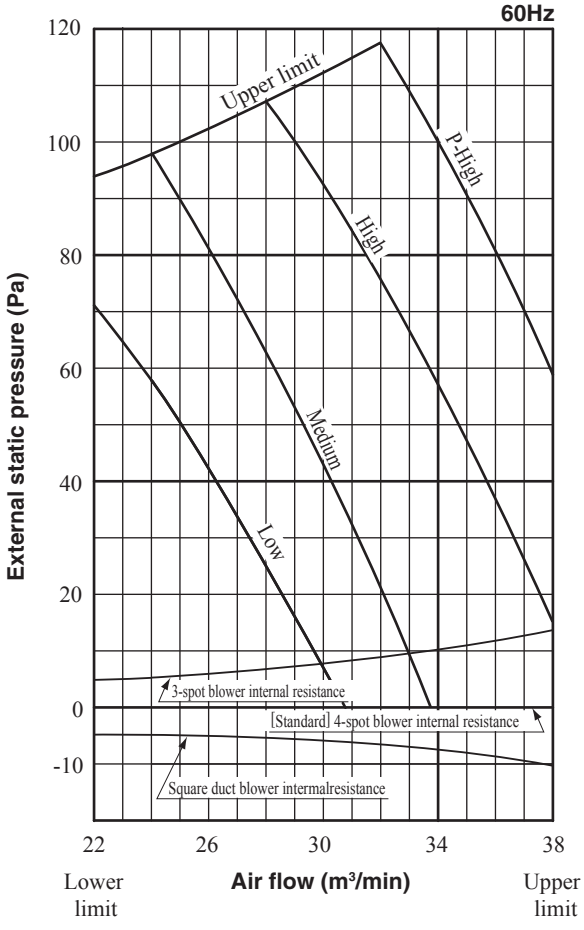
Model FDUM100VD





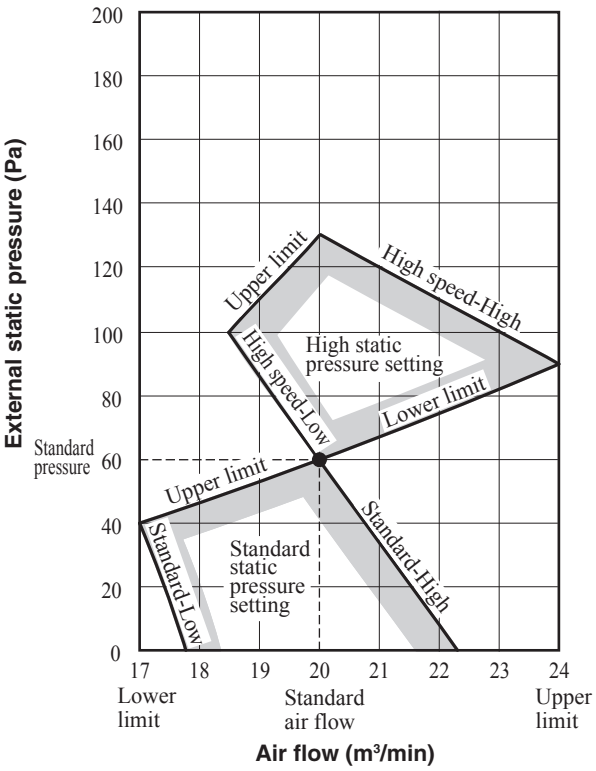
Models FDUM125V, 140V



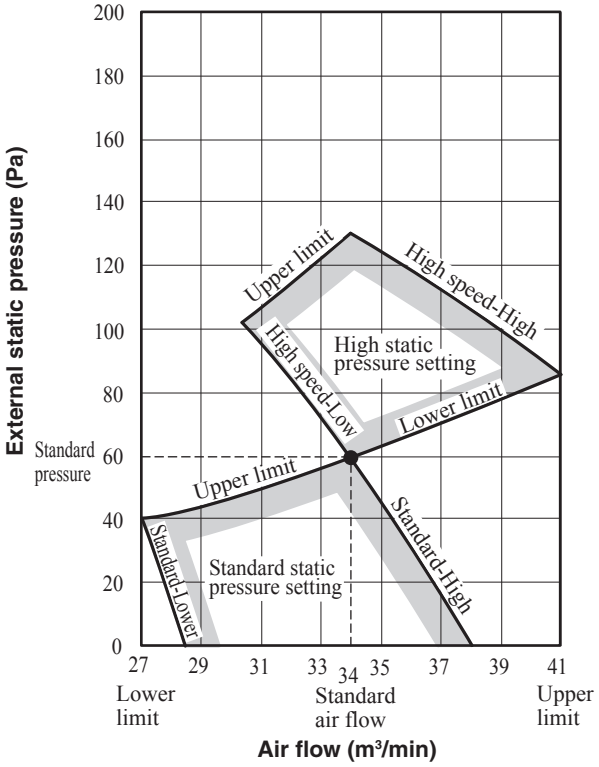


5.2 Duct connected-High static pressure type (FDU)

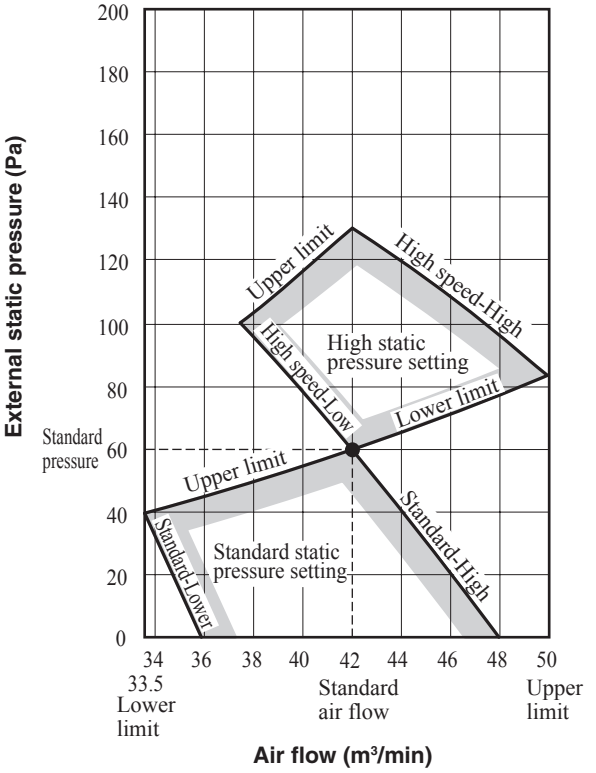
Model FDU71VD



Model FDU100VD



Models FDU125,140VD



Notes 1) Factory default setting of fan speed is [STANDARD] which has standard static pressure.
If high static pressure setting is required, change setting to [HIGH SPEED 1] with remote controller on site.
(Regarding the setting method, refer to the user's manual of remote controller for detail)
2) When setting up high static pressure, do not operate the unit under the condition of 60Pa or lower of the external static pressure.
3) The fan speed of this model can be switched between two speeds.

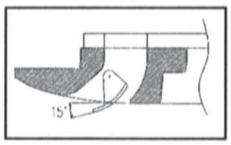
6. TEMPERATURE AND VELOCITY DISTRIBUTION

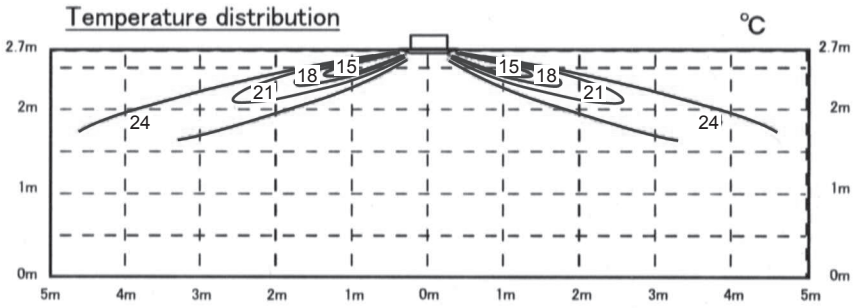
6.1 Ceiling cassett-4way compact type (FDTC)

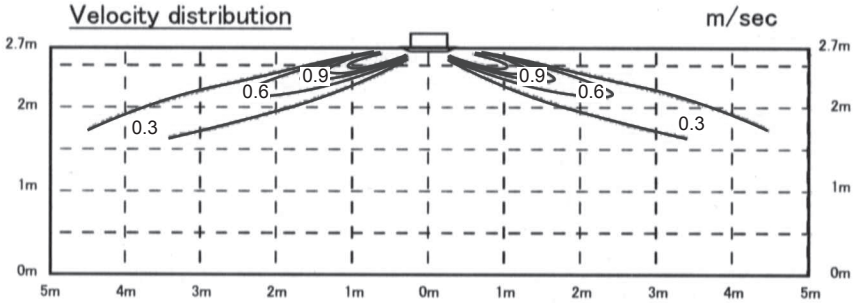
Models FDTC40, 50, 60VD

Cooling Air flow : P-Hi

Louver position

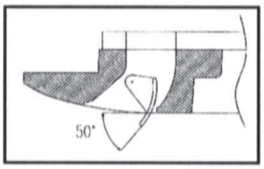


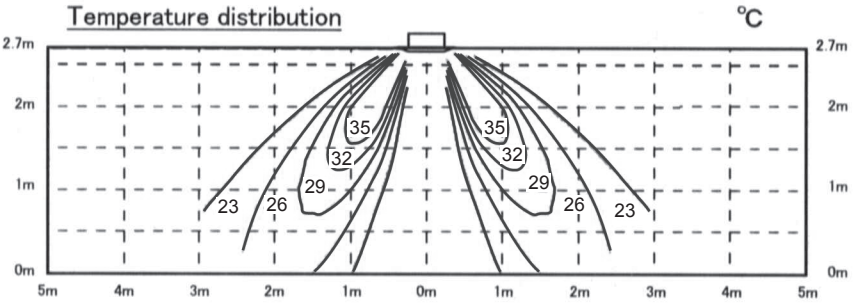


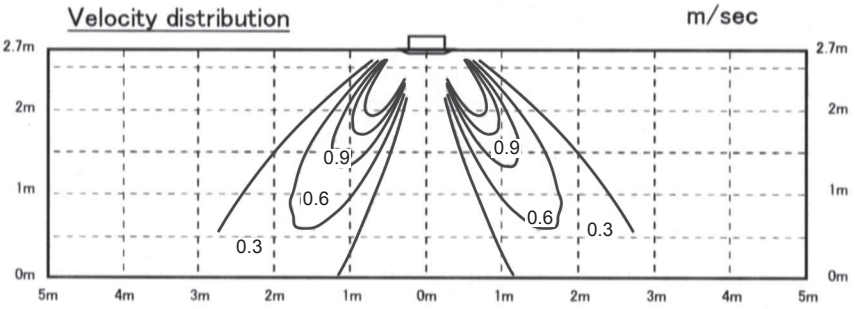


Heating Air flow : P-Hi

Louver position







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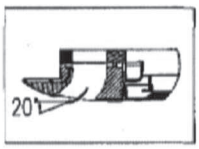
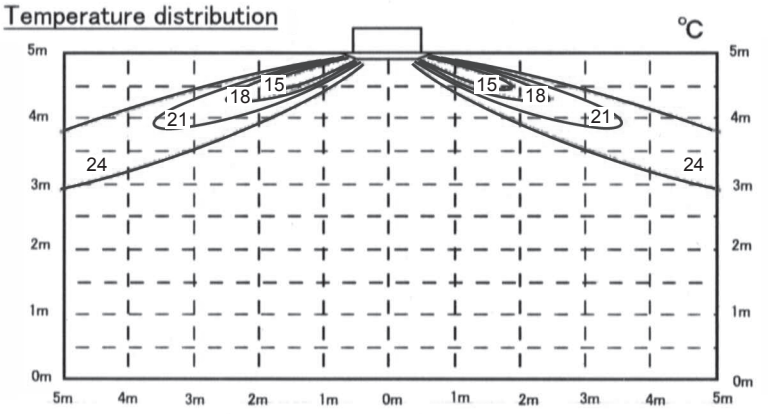
6.2 Ceiling cassett-4way type (FDT)

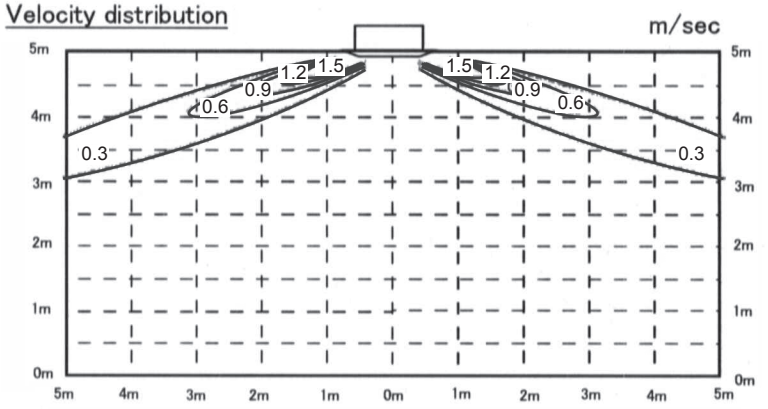
Models FDT40, 50VD

Cooling Air flow : P-Hi

Louver position

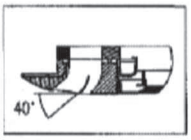


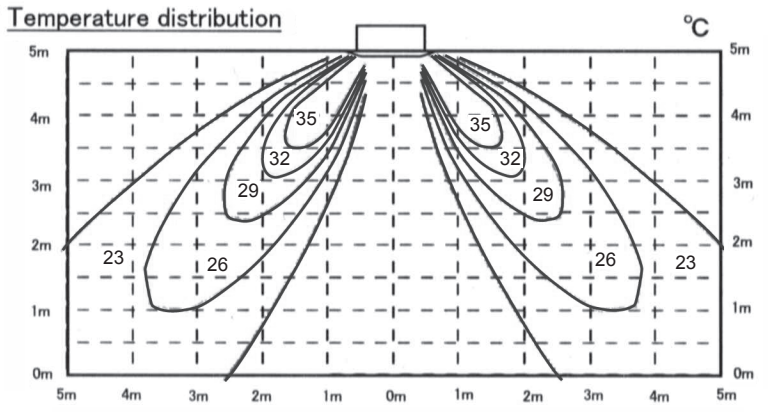


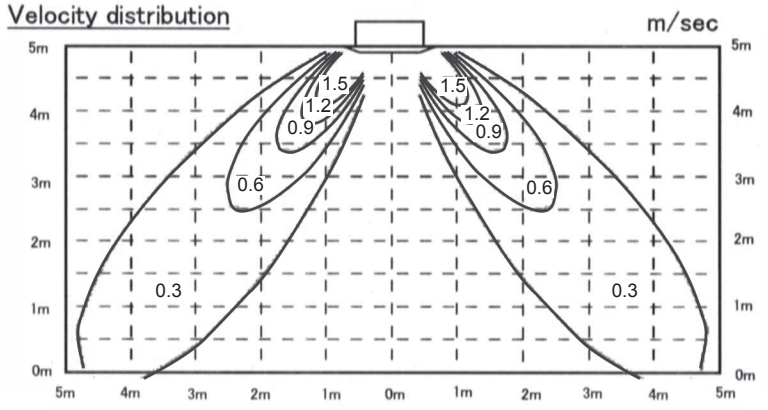


Heating Air flow : P-Hi

Louver position







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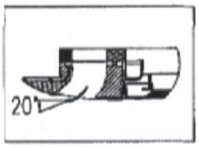
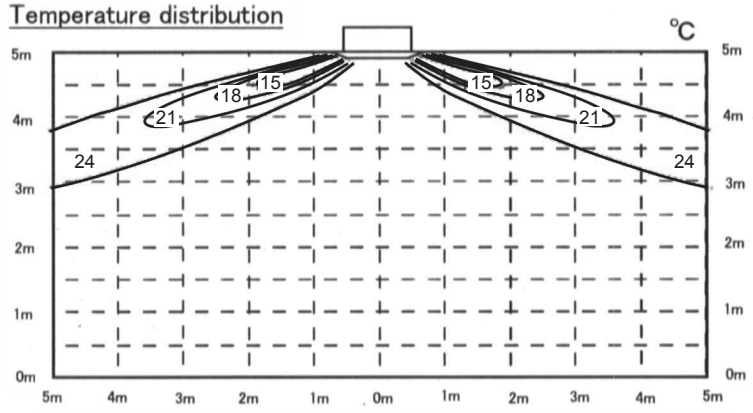
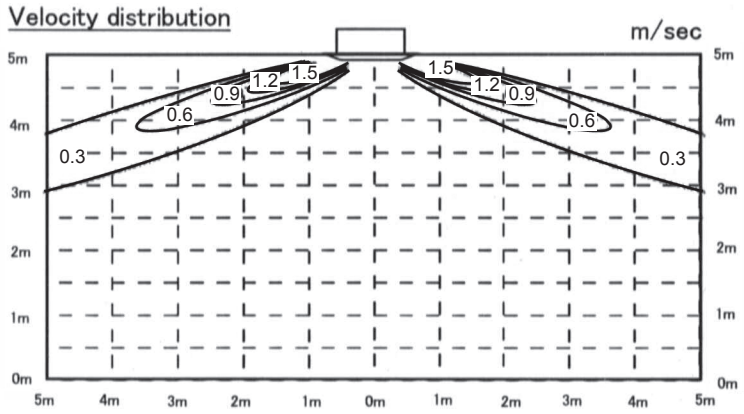
Models FDT60, 71VD

Cooling Air flow : P-Hi

Louver position

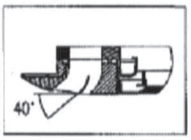


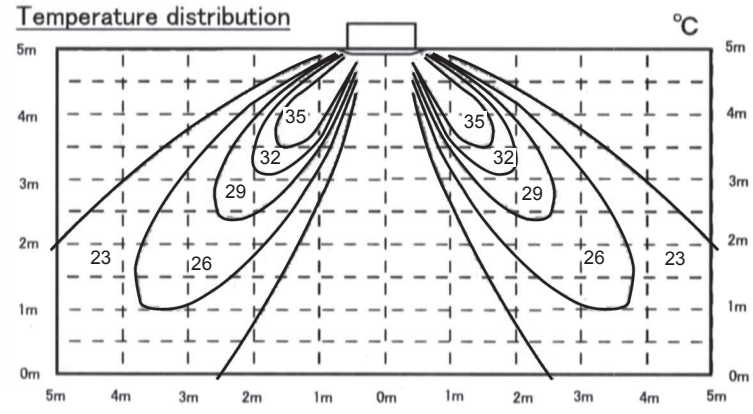


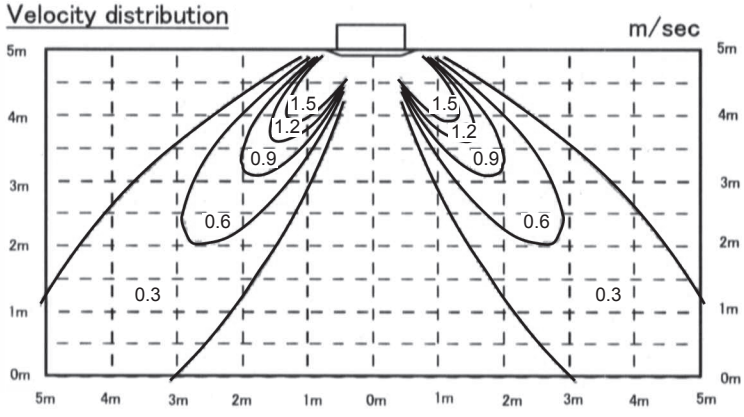


Heating Air flow : P-Hi

Louver position







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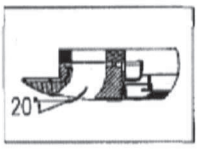
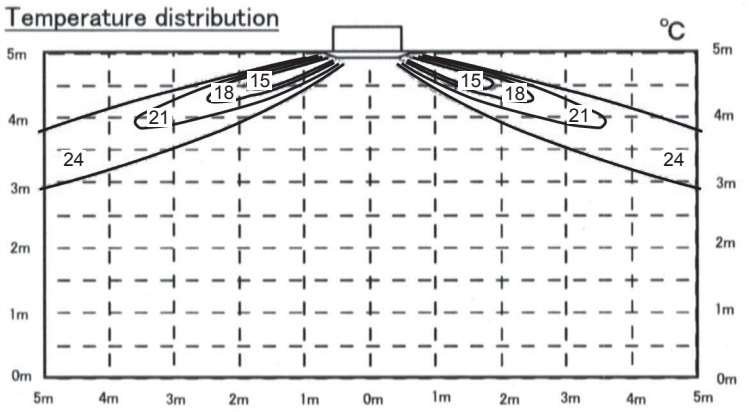
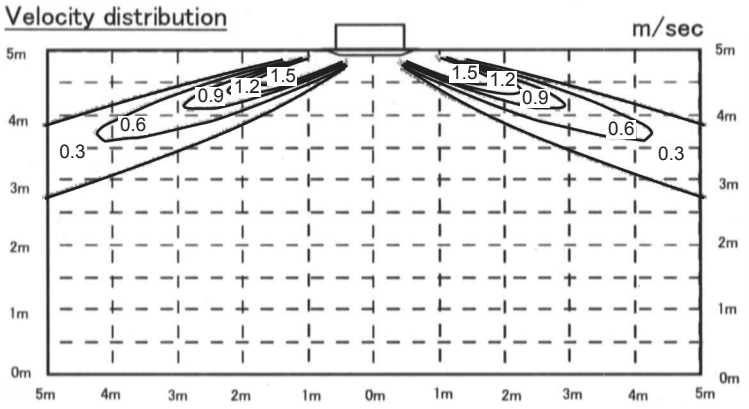
Models FDT100, 125, 140VD

Cooling Air flow : P-Hi

Louver position

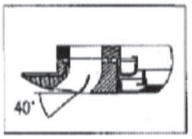


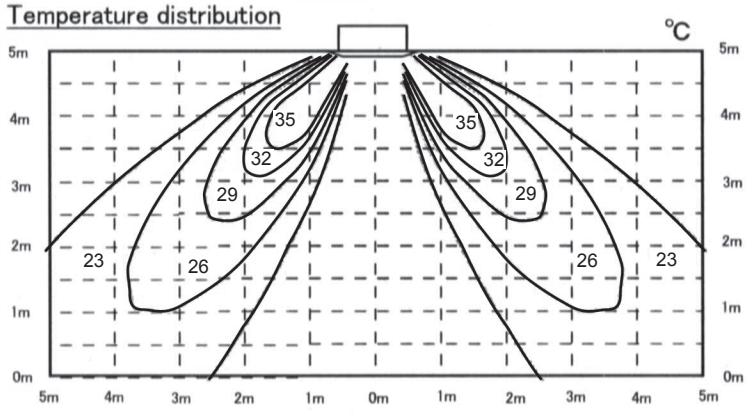


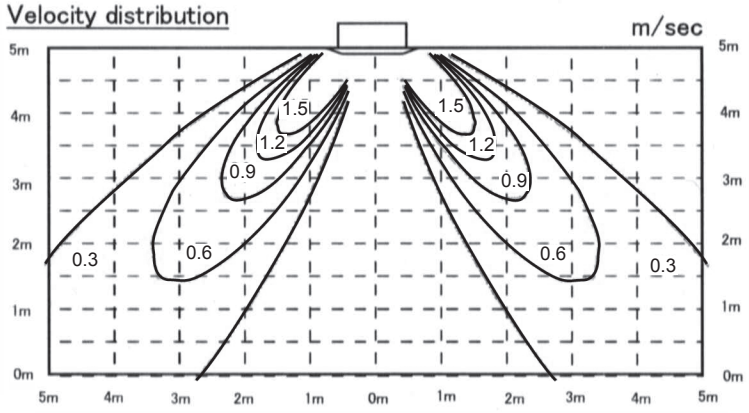


Heating Air flow : P-Hi

Louver position







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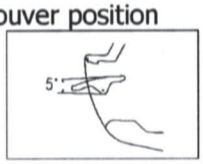
6.3 Ceiling suspended type (FDEN)

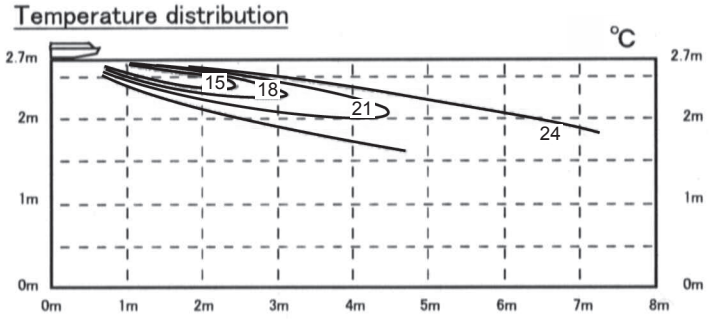
Models FDEN40, 50VD

Cooling Air flow : P-Hi

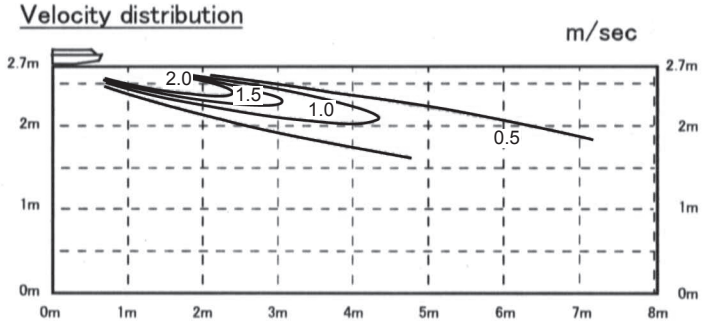
Louver position



Temperature distribution

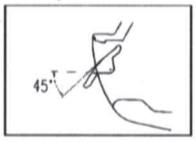


Velocity distribution

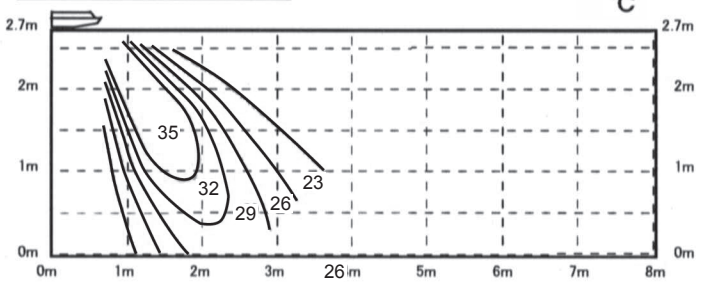


Heating Air flow : P-Hi

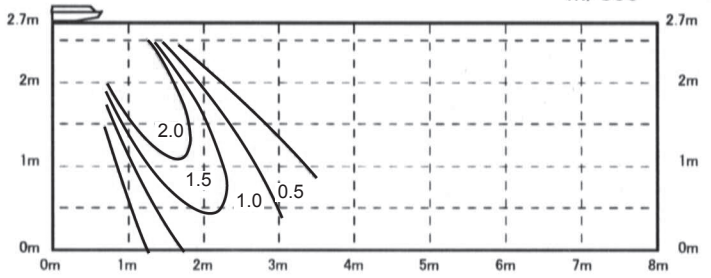
Louver position



Temperature distribution



Velocity distribution



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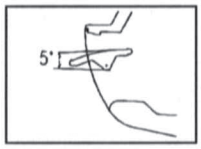
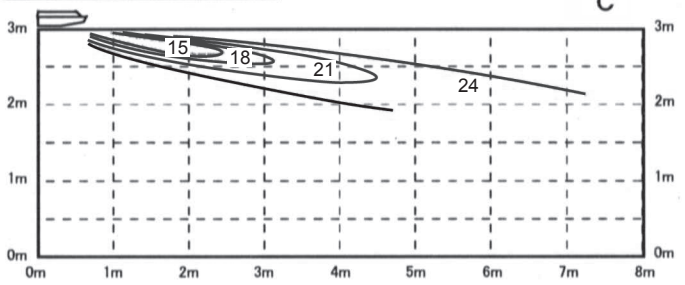
Models FDEN60, 71VD

Cooling Air flow : P-Hi

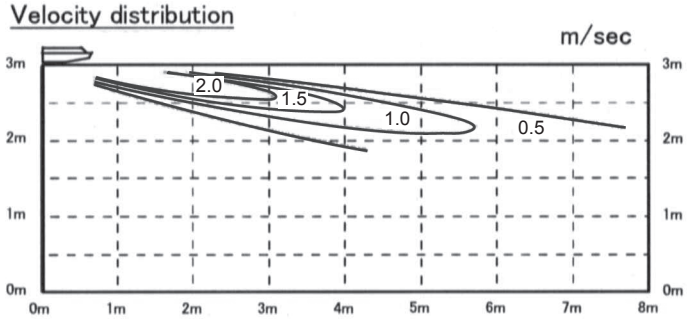
Louver position



Temperature distribution

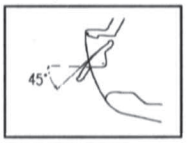


Velocity distribution

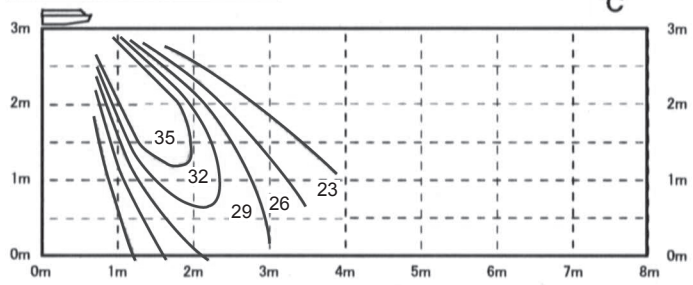


Heating Air flow : P-Hi

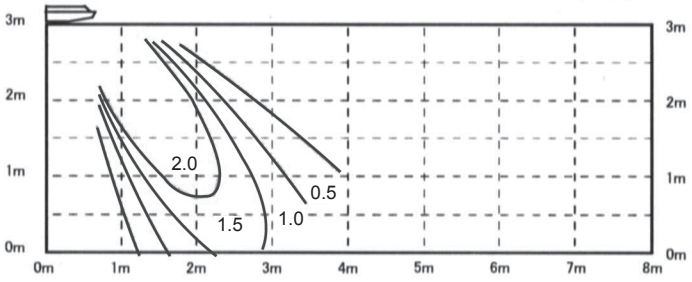
Louver position



Temperature distribution



Velocity distribution



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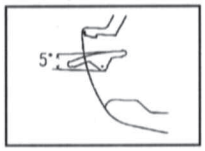
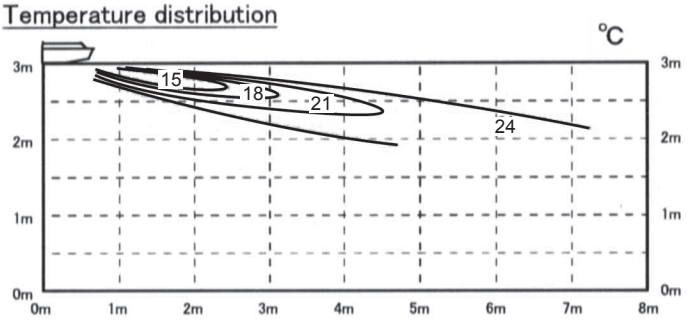
Models FDEN100VD

Cooling Air flow : P-Hi

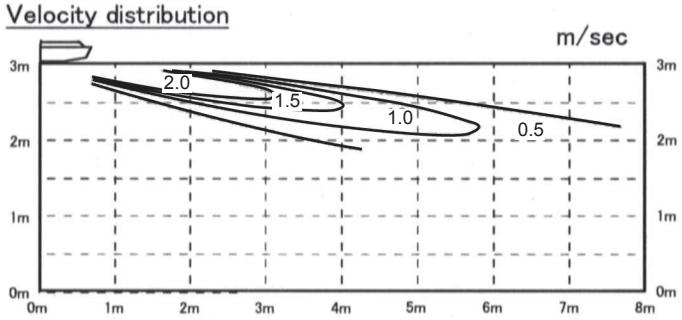
Louver position



Temperature distribution

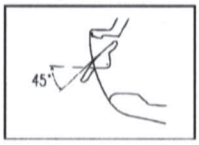


Velocity distribution

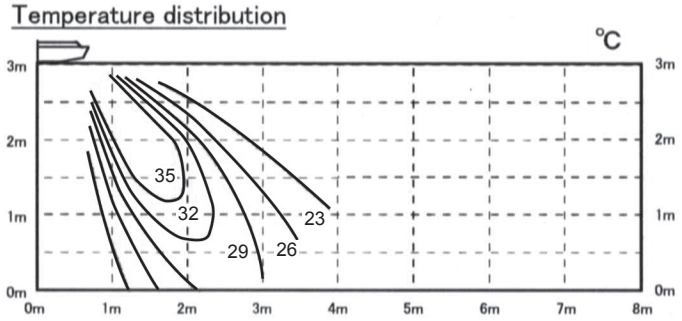


Heating Air flow : P-Hi

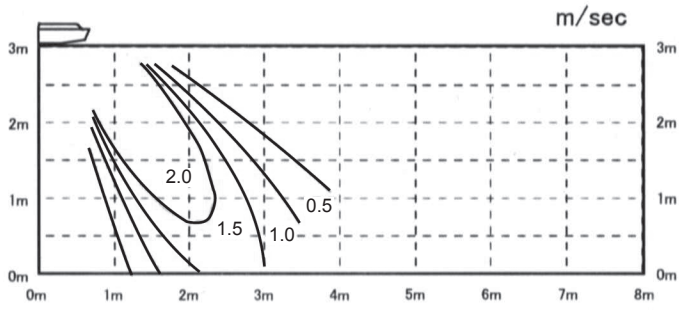
Louver position



Temperature distribution



Velocity distribution



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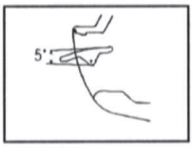
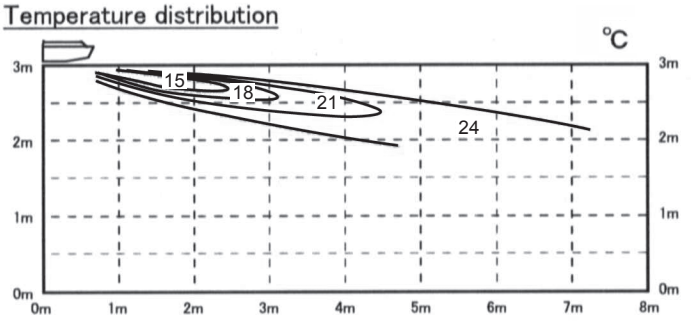
Models FDEN125, 140VD

Cooling Air flow : P-Hi

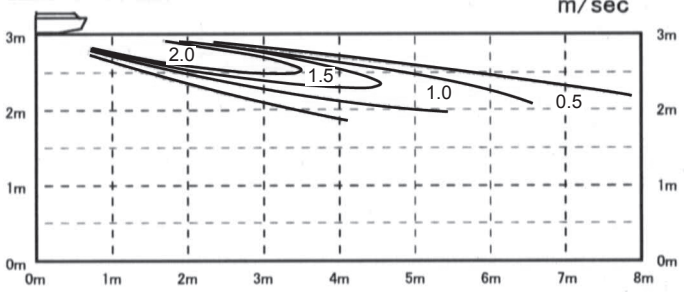
Louver position



Temperature distribution

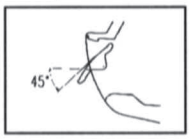


Velocity distribution

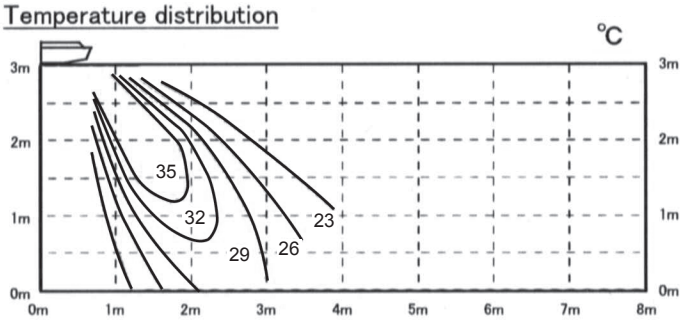


Heating Air flow : P-Hi

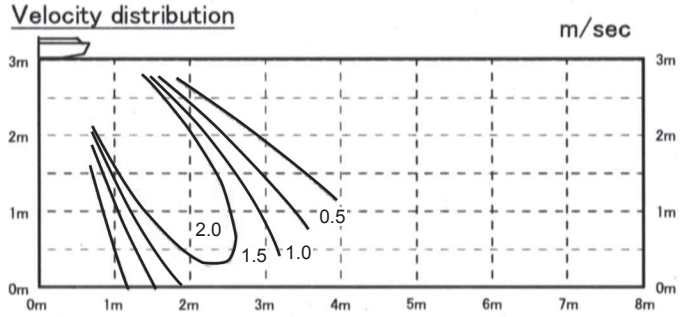
Louver position



Temperature distribution



Velocity distribution



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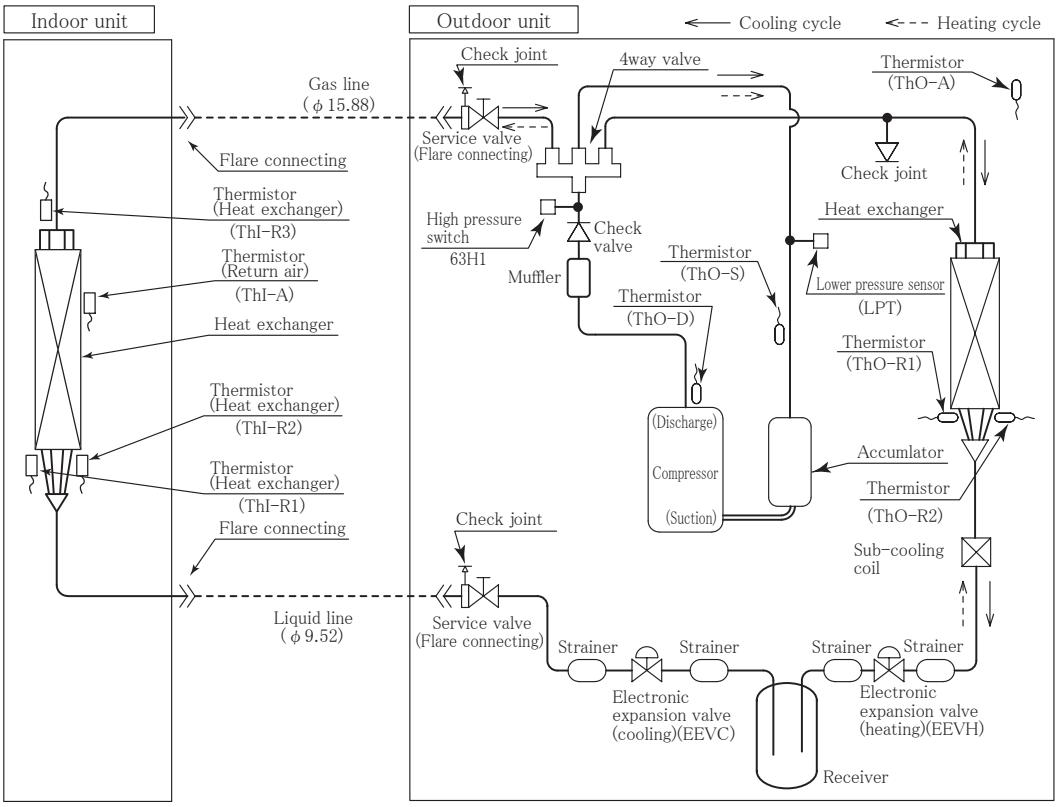
7. PIPING SYSTEM

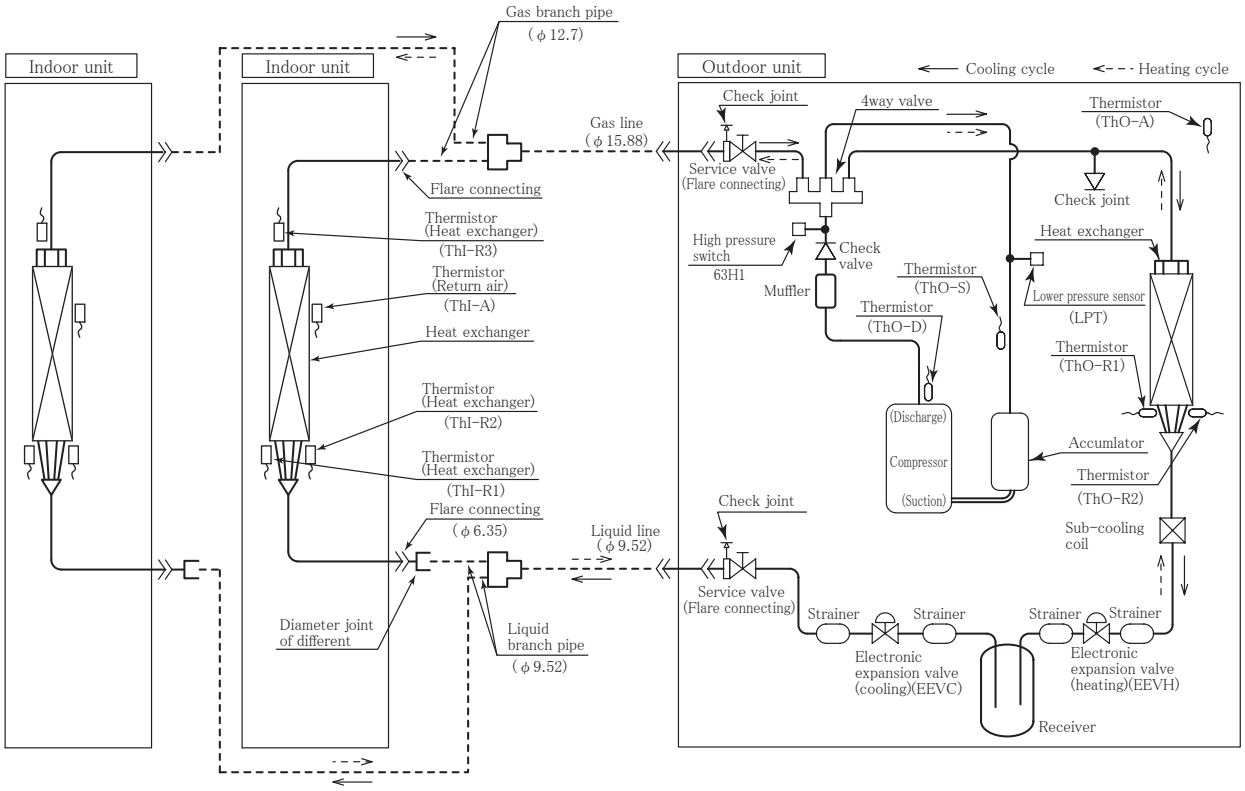
7.1 Single type

Models 71, 100, 125, 140



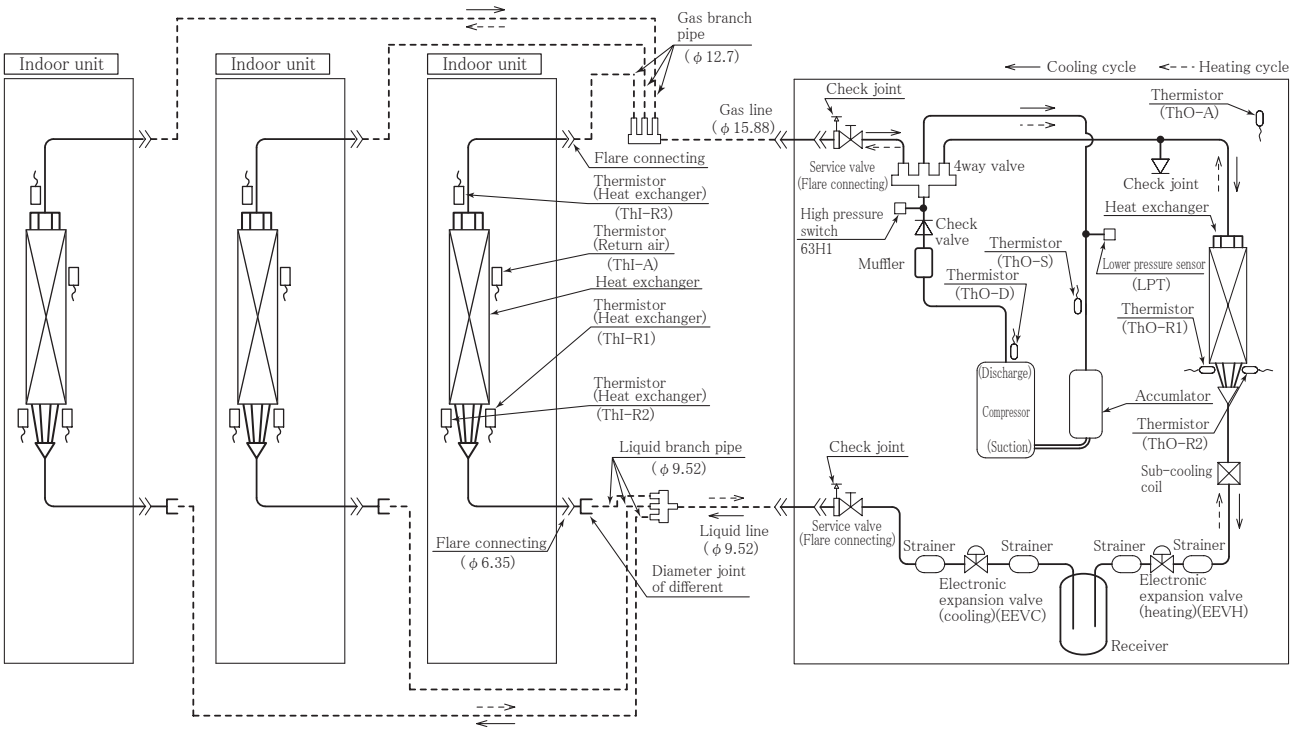
7.2 Twin type

Models 71, 100, 125, 140



7.3 Triple type

Model 140



Preset point of the protective devices

Parts name	Mark	Equipped unit	71, 100, 125, 140 model
Thermistor (for protection over-loading in heating)	**ThI-R**	Indoor unit	OFF 63 ON 56
Thermistor (for frost prevention)			OFF 1.0 ON 10
Thermistor (for protection high pressure in cooling.)	**Tho-R (TH1)**	Outdoor unit	OFF 51 ON 65
Thermistor (for detecting dis-charge pipe temp.)	**Tho-D (TH3)**	Outdoor unit	OFF 115 ON 85
High pressure switch (for protection)	**63H1**	Outdoor unit	OFF 4.15MPa ON 3.15MPa
Low pressure sensor (for protection)	**LPT**	Outdoor unit	OFF 0.227MPa ON 0.079MPa

8. RANGE OF USAGE & LIMITATIONS

Operating temperature range		See the next page.
		When used below -5˚C, install a snow hood.
Recommendable area to install		Considering to get sufficient heating capacity, the area where the averaged lowest ambient air temperature in day time during winter is above 0˚C, and it has no accumulation of snow.
Installation site		The limitations of installation space are shown in the page for outline drawing. Install the indoor unit at least 2.5m higher than the floor surface.
Temperature and humidity conditions surrounding the indoor unit in the ceiling (Note 2)		Dew point temperature : 28 (23) ˚C or less, relative hummdity : 80% or less (Note 5)
Limitations on unit and piping installation		See page 120 and 121
Compressor ON-OFF cycling	Cycle Time	7 minutes or more (from OFF to OFF) or (from ON to ON)
	Stop Time	3 minutes or more
Power source	Voltage range	Rating ±10%
	Voltage drop at start-up	Min.85% of rating
	Phase-to-phase imbalance	3% or less

Note 1. Do not install the unit in places which :
1) Flammable gas may leak.
2) Carbon fiber, metal particles, powder, etc. are floating.
3) Cosmetic or special sprays are used frequently.
4) Exposed to oil splashes or steam (e.g. kitchen and machine plant).
5) Exposed to sea breeze (e.g. coastal area) or calcium chloride (e.g. snow melting agent).
6) Exposed to ammonia substance (e.g. organic fertilizer).
7) Matters affecting devices, such as sulfuric gas, chlorine gas, acid, alkali, etc. may generate or accumulate.
8) Chimney smoke is hanging.
9) Sucking the exhaust gas from heat exchanger.
10) Adjacent to equipment generating electromagnetic waves or high frequency waves.
11) There is light beams that affect the receiving device of indoor unit in case of the wireless specification.
12) Snow falls heavily.
13) At an elevation of 1000 meters or higher.
14) On mobile machine (e.g. vehicle, ship, etc.)
15) Splashed with water to indoor unit (e.g. laundry room).
16) Indoor units of twin and triple specifications separately in a room with partition.

Note 2. If ambient temperature and humidity exceed the above conditions, add polyurethane foam insulation(10mm or thicker) on the outer plate of indoor unit.

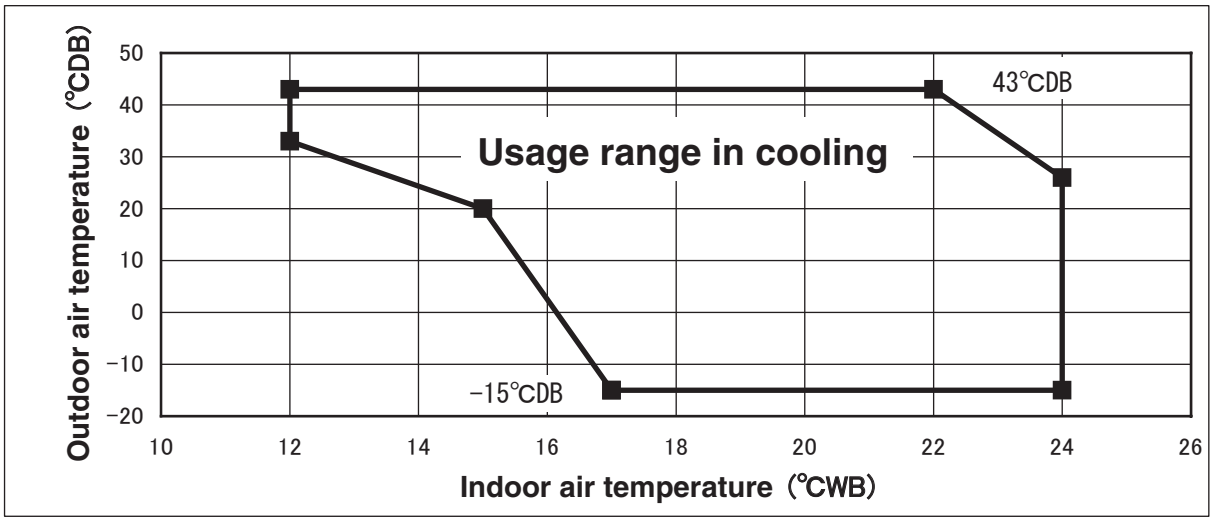
Note 3. Both gas and liquid pipes need to be coverd with 20mm or thicker heat insulation materials at the place where humidity exceeds 70%.

Note 4. When used below -5˚C, install a snow hood on site. Regarding outline of a snow hood, refer to our technical manual.

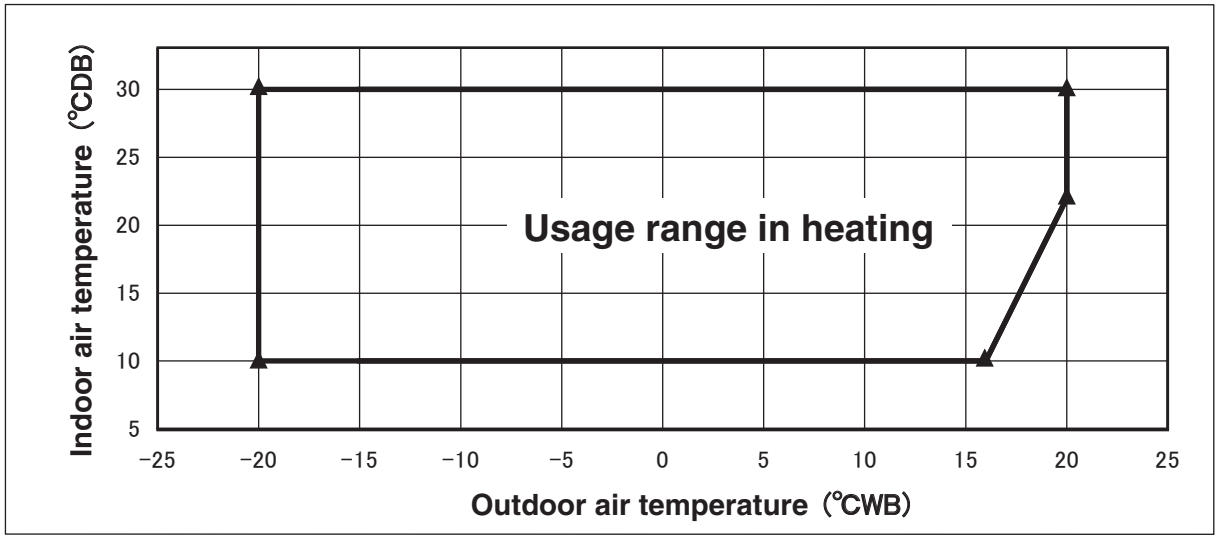
Note 5. Value in ( ) are for the model FDEN series.

Operating temperature range

■ **Cooling**



■ **Heating**



Decline in cooling and heating capacity or operation stop may occur when the outdoor unit is installed in places where natural wind can increase or decrease its design airflow rate.

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"CAUTION" Cooling operation under low outdoor air temperature conditions

PAC models can be operated in cooling mode at low outdoor air temperature condition within above temperature range. However in case of severely low temperature conditions if the following precaution is not observed, it may not be operated in spite of operable temperature range mentioned above and cooling capacity may not be established under certain conditions.

[Precaution]

In case of severely low temperature condition

1) Install the outdoor unit at the place where strong wind cannot blow directly into the outdoor unit.
2) If there is no installation place where can prevent strong wind from directly blowing into the outdoor unit, mount the flex flow adapter (prepared as optional part) or like such devices onto the outdoor unit in order to divert the strong wind.

[Reason]

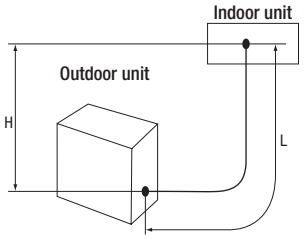
Under the low outdoor air temperature conditions of -5℃ or lower, the outdoor fan is controlled at lower or lowest speed by outdoor fan control, but if strong wind directly blow into the outdoor unit, the outdoor heat exchanger temperature will drop more.

This makes high and low pressures to drop as well. This low pressure drop makes the indoor heat exchanger temperature to drop and will activate anti-frost control at indoor heat exchanger at frequent intervals, that cooling operation may not be established for any given time.

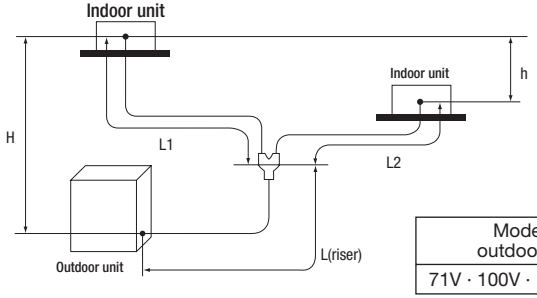
Limitation on unit and piping installation - single, twin.

Descriptions	Models for outdoor unit		Dimensional limitations	Marks appearing in the drawing	
				Single type	Twin type
One-way pipe length	71V		≦ 50m	L	L + L1 + L2
	100V · 125V · 140V		≦ 100m		
Main pipe length	71V		≦ 50m		L
	100V · 125V · 140V		≦ 100m		
One-way pipe length after first branching point	71V		≦ 20m		L1, L2
	100V · 125V · 140V		≦ 30m		
Difference of pipe length after first branching point			≦ 10m		L1 - L2 L2 - L1
Total pipe length after the second branching point			≦ 15m		
Elevation difference between indoor and outdoor unit	When outdoor unit is positioned higher	71V	≦ 30m	H	H
		100V · 125V · 140V			
	When outdoor unit is positioned lower	71V	≦ 15m	H	H
		100V · 125V · 140V			
Elevation difference among indoor units			≦ 0.5m		h

Single type



Twin type



Twin type

Model for outdoor units	Branch piping set (option)
71V · 100V · 125V · 140V	DIS-WA1

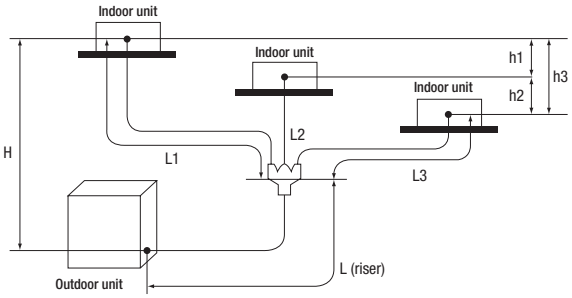
(1) A riser pipe must be part of the main.
A branching pipe set should be installed horizontally at point as close to an indoor unit as possible.
(2) Reduce refrigerant amount by according to table below from the factory charge when refrigerant piping is shorter than 3m.

Model for outdoor units	Refrigerant to be reduced
71V · 100V · 125V · 140V	1.0 kg

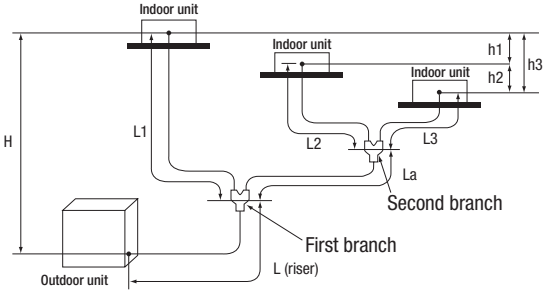
Limitation on unit and piping installation - triple.

Descriptions	Models for outdoor unit	Dimensional limitations	Marks appearing in the drawing	
			Triple type A	Triple type B
One-way pipe length	140V	≦ 100m	L + L1 + L2 + L3	L + La + L1 + L2 + L3 ※1
Main pipe length	140V	≦ 100m	L	L
One-way pipe length first branching point to indoor units between	140V	≦ 30m	L1, L2, L3	L1 ※1
One-way pipe length between first branching point from and second branching point	140V	≦ 5m		La
One-way pipe length first branching point and indoor units	140V	≦ 27m		La + L2, La + L3 ※1
Piping length difference among piping to indoor units from first branch		< 3m	L1 - L2, L1 - L3, L2 - L3	(not possible)
		3m ≦ ≦ 10m	(not possible)	L1 - (La + L2), L1 - (La + L3) ※1
One-way pipe length difference from second branching point to indoor units		≦ 10m		L2 - L3
Elevation difference between indoor and outdoor	When the outdoor unit is positioned higher	≦ 30m	H	H
	When the outdoor unit is positioned lower	≦ 15m		
Elevation difference among indoor units		≦ 0.5m	h1, h2, h3	h1, h2, h3

Triple type A



Triple type B



※1
Install the indoor units so that L + L1 becomes the longest one-way pipe.
Keep the pipe length difference between L1 and (La + L2) or (La + L3) within 10m.

Branch piping set (option)

Model for outdoor units	Triple type A	Triple type B	
	Branch piping	First branch	Second branch
140V	DIS-TA1	DIS-WA1	DIS-WA1

(1) A riser pipe must be part of the main.
A branching pipe set should be installed horizontally at point as close to an indoor unit as possible.
(2) Reduce refrigerant amount by 1.0kg from the factory charge when refrigerant piping is shorter than 3m.

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9. SELECTION CHART

Correct the cooling and heating capacity in accordance with the operating conditions. The net cooling and heating capacity can be obtained in the following way.

Net capacity = Capacity shown in the capacity tables (9.1) × Correction factors shown in he table (9.2) (9.3) (9.4).

Caution: In case that the cooling operation during low outdoor air temperature below -5℃ is expected, install the outdoor unit where it is not influenced by natural wind. Otherwise protection control by low pressure will be activated much more frequently and it will cause insufficient capacity or breakdown of the compressor in worst case.

9.1 Capacity tables

(1) Ceiling cassette-4way compact type (FDTC)

(a) Twin type

Model FDTC71VNXPVD Indoor unit FDTC40VD (2 units) Outdoor unit FDC71VNX

Cool Mode

Outdoor air temp.	Indoor air temperature											
	23℃CDB 16℃CWB		26℃CDB 18℃CWB		27℃CDB 19℃CWB		28℃CDB 20℃CWB		31℃CDB 22℃CWB		33℃CDB 24℃CWB	
℃CDB	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
20	6.96	6.16	7.39	6.59	7.61	6.53	7.84	6.47	8.31	6.86	8.78	6.72
25	6.86	6.12	7.44	6.61	7.72	6.57	7.98	6.51	8.49	6.92	8.91	6.75
30	6.67	6.05	7.17	6.51	7.41	6.46	7.67	6.42	8.14	6.82		
35	6.43	5.96	6.88	6.41	7.10	6.36	7.31	6.31	7.74	6.71		
40	6.00	5.80	6.50	6.29	6.75	6.25	6.94	6.19	7.34	6.60		
43	5.68	5.69	6.19	6.18	6.45	6.16	6.68	6.11	7.14	6.54		

Heat Mode

Outdoor air temp.		Indoor air temperature ℃CDB				
℃CDB	℃CWB	16	18	20	22	24
-14.7	-15	4.53	4.51	4.50	4.48	4.46
-9.6	-10	5.11	5.09	5.06	5.03	5.00
-3.4	-4	5.69	5.66	5.62	5.59	5.55
1.8	1	6.13	6.09	6.04	6.00	5.96
4.9	4	7.78	7.71	7.52	6.92	6.56
7.0	6	8.16	8.08	8.00	7.80	7.52
11.2	10	8.86	8.75	8.64	8.52	8.41

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Model FDTC100VNXPVD Indoor unit FDTC50VD (2 units) Outdoor unit FDC100VNX

Cool Mode

Outdoor air temp.	Indoor air temperature											
	23℃CDB 16℃CWB		26℃CDB 18℃CWB		27℃CDB 19℃CWB		28℃CDB 20℃CWB		31℃CDB 22℃CWB		33℃CDB 24℃CWB	
℃CDB	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
20	9.66	7.23	10.26	7.63	10.56	7.55	10.87	7.47	11.48	7.81	12.24	7.65
25	9.77	7.28	10.37	7.67	10.67	7.59	10.97	7.51	11.58	7.84	12.49	7.72
30	9.46	7.15	10.04	7.55	10.34	7.47	10.63	7.39	11.21	7.73		
35	9.14	7.02	9.71	7.42	10.00	7.35	10.29	7.27	10.86	7.62		
40	8.69	6.83	9.24	7.25	9.52	7.18	9.81	7.11	10.36	7.47		
43	8.40	6.72	8.94	7.14	9.21	7.07	9.49	7.00	10.03	7.37		

Heat Mode

Outdoor air temp.		Indoor air temperature ℃CDB				
℃CDB	℃CWB	16	18	20	22	24
-14.7	-15	8.12	8.09	8.05	8.01	7.97
-9.6	-10	9.01	8.97	8.93	8.87	8.83
-3.4	-4	10.29	10.22	10.17	10.11	10.05
1.8	1	11.35	11.27	11.20	11.13	11.06
4.9	4	11.96	11.87	11.80	11.73	11.66
7.0	6	11.37	11.28	11.20	11.13	11.07
11.2	10	12.45	12.35	12.25	12.16	12.07

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Model FDTC100VSXPVD Indoor unit FDTC50VD (2 units) Outdoor unit FDC100VSX

Cool Mode

Outdoor air temp.	Indoor air temperature											
	23℃CDB 16℃CWB		26℃CDB 18℃CWB		27℃CDB 19℃CWB		28℃CDB 20℃CWB		31℃CDB 22℃CWB		33℃CDB 24℃CWB	
℃CDB	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
20	9.66	7.23	10.26	7.63	10.56	7.55	10.87	7.47	11.48	7.81	12.24	7.65
25	9.77	7.28	10.37	7.67	10.67	7.59	10.97	7.51	11.58	7.84	12.49	7.72
30	9.46	7.15	10.04	7.55	10.34	7.47	10.63	7.39	11.21	7.73		
35	9.14	7.02	9.71	7.42	10.00	7.35	10.29	7.27	10.86	7.62		
40	8.69	6.83	9.24	7.25	9.52	7.18	9.81	7.11	10.36	7.47		
43	8.40	6.72	8.94	7.14	9.21	7.07	9.49	7.00	10.03	7.37		

Heat Mode

Outdoor air temp.		Indoor air temperature ℃CDB				
℃CDB	℃CWB	16	18	20	22	24
-14.7	-15	11.30	11.25	11.20	11.15	11.09
-9.6	-10	11.39	11.34	11.29	11.22	11.17
-3.4	-4	11.64	11.57	11.51	11.44	11.37
1.8	1	11.85	11.76	11.69	11.62	11.55
4.9	4	11.98	11.89	11.83	11.75	11.68
7.0	6	11.37	11.28	11.20	11.13	11.07
11.2	10	12.45	12.35	12.25	12.16	12.07

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Note(1) These data show average statuses.
Depending on the system control, there may be ranges where the operation is not conducted continuously.
(2) Capacities are based on the following conditions.
Corresponding refrigerant piping length :7.5m
Level difference of Zero.
(3) Symbols are as follows.
TC : Total cooling capacity (kW)
SHC : Sensible heat capacity (kW)
HC : Heating capacity (kW)

Model FDTC125VNXPVD Indoor unit FDTC60VD (2 units) Outdoor unit FDC125VNX

Cool Mode

Outdoor air temp.	Indoor air temperature											
	23℃CDB 16℃CWB		26℃CDB 18℃CWB		27℃CDB 19℃CWB		28℃CDB 20℃CWB		31℃CDB 22℃CWB		33℃CDB 24℃CWB	
℃CDB	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
20	12.07	8.28	12.83	8.66	13.21	8.57	13.59	8.47	14.35	8.77	15.30	8.58
25	12.21	8.34	12.96	8.72	13.34	8.62	13.71	8.52	14.47	8.81	15.62	8.68
30	11.82	8.17	12.55	8.54	12.92	8.45	13.29	8.36	14.02	8.65		
35	11.43	7.99	12.14	8.38	12.50	8.29	12.86	8.19	13.57	8.50		
40	10.86	7.74	11.55	8.14	11.90	8.06	12.26	7.97	12.96	8.29		
43	10.50	7.58	11.18	7.99	11.52	7.91	11.86	7.82	12.54	8.15		

Heat Mode

Outdoor air temp.		Indoor air temperature ℃CDB				
℃CDB	℃CWB	16	18	20	22	24
-14.7	-15	10.16	10.11	10.06	10.02	9.97
-9.6	-10	11.26	11.21	11.16	11.09	11.04
-3.4	-4	12.86	12.78	12.71	12.63	12.56
1.8	1	14.19	14.08	14.00	13.91	13.83
4.9	4	14.95	14.84	14.75	14.66	14.57
7.0	6	14.22	14.11	14.00	13.92	13.83
11.2	10	15.56	15.44	15.31	15.20	15.09

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Model FDTC125VSXPVD Indoor unit FDTC60VD (2 units) Outdoor unit FDC125VSX

Cool Mode

Outdoor air temp.	Indoor air temperature											
	23℃CDB 16℃CWB		26℃CDB 18℃CWB		27℃CDB 19℃CWB		28℃CDB 20℃CWB		31℃CDB 22℃CWB		33℃CDB 24℃CWB	
℃CDB	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
20	12.07	8.28	12.83	8.66	13.21	8.57	13.59	8.47	14.35	8.77	15.30	8.58
25	12.21	8.34	12.96	8.72	13.34	8.62	13.71	8.52	14.47	8.81	15.62	8.68
30	11.82	8.17	12.55	8.54	12.92	8.45	13.29	8.36	14.02	8.65		
35	11.43	7.99	12.14	8.38	12.50	8.29	12.86	8.19	13.57	8.50		
40	10.86	7.74	11.55	8.14	11.90	8.06	12.26	7.97	12.96	8.29		
43	10.50	7.58	11.18	7.99	11.52	7.91	11.86	7.82	12.54	8.15		

Heat Mode

Outdoor air temp.		Indoor air temperature ℃CDB				
℃CDB	℃CWB	16	18	20	22	24
-14.7	-15	14.13	14.06	14.00	13.94	13.86
-9.6	-10	14.24	14.18	14.11	14.03	13.96
-3.4	-4	14.55	14.46	14.38	14.30	14.22
1.8	1	14.81	14.70	14.61	14.52	14.43
4.9	4	14.98	14.87	14.78	14.69	14.60
7.0	6	14.22	14.11	14.00	13.92	13.83
11.2	10	15.56	15.44	15.31	15.20	15.09

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(b) Triple type

Model FDTC140VNXTVD Indoor unit FDTC50VD (3 units) Outdoor unit FDC140VNX

Cool Mode

Outdoor air temp.	Indoor air temperature											
	23℃CDB 16℃CWB		26℃CDB 18℃CWB		27℃CDB 19℃CWB		28℃CDB 20℃CWB		31℃CDB 22℃CWB		33℃CDB 24℃CWB	
℃CDB	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
20	13.52	10.45	14.37	11.06	14.79	10.95	15.22	10.83	16.07	11.36	17.14	11.13
25	13.68	10.51	14.52	11.12	14.94	11.00	15.36	10.88	16.21	11.40	17.49	11.23
30	13.24	10.33	14.06	10.94	14.47	10.84	14.88	10.72	15.70	11.25		
35	12.80	10.16	13.60	10.77	14.00	10.67	14.40	10.56	15.20	11.09		
40	12.16	9.90	12.94	10.54	13.33	10.44	13.73	10.34	14.51	10.89		
43	11.76	9.75	12.52	10.38	12.90	10.29	13.28	10.19	14.04	10.75		

Heat Mode

Outdoor air temp.		Indoor air temperature ℃CDB				
℃CDB	℃CWB	16	18	20	22	24
-14.7	-15	11.61	11.55	11.50	11.45	11.39
-9.6	-10	12.87	12.81	12.75	12.68	12.61
-3.4	-4	14.69	14.60	14.52	14.44	14.35
1.8	1	16.21	16.09	16.00	15.90	15.80
4.9	4	17.08	16.95	16.86	16.75	16.65
7.0	6	16.25	16.12	16.00	15.90	15.81
11.2	10	17.78	17.65	17.50	17.37	17.25

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Model FDTC140VSXTVD Indoor unit FDTC50VD (3 units) Outdoor unit FDC140VSX

Cool Mode

Outdoor air temp.	Indoor air temperature											
	23℃CDB 16℃CWB		26℃CDB 18℃CWB		27℃CDB 19℃CWB		28℃CDB 20℃CWB		31℃CDB 22℃CWB		33℃CDB 24℃CWB	
℃CDB	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
20	13.52	10.45	14.37	11.06	14.79	10.95	15.22	10.83	16.07	11.36	17.14	11.13
25	13.68	10.51	14.52	11.12	14.94	11.00	15.36	10.88	16.21	11.40	17.49	11.23
30	13.24	10.33	14.06	10.94	14.47	10.84	14.88	10.72	15.70	11.25		
35	12.80	10.16	13.60	10.77	14.00	10.67	14.40	10.56	15.20	11.09		
40	12.16	9.90	12.94	10.54	13.33	10.44	13.73	10.34	14.51	10.89		
43	11.76	9.75	12.52	10.38	12.90	10.29	13.28	10.19	14.04	10.75		

Heat Mode

Outdoor air temp.		Indoor air temperature ℃CDB				
℃CDB	℃CWB	16	18	20	22	24
-14.7	-15	16.15	16.07	16.00	15.93	15.85
-9.6	-10	16.28	16.20	16.13	16.03	15.95
-3.4	-4	16.63	16.53	16.44	16.34	16.25
1.8	1	16.92	16.80	16.70	16.60	16.50
4.9	4	17.12	16.99	16.89	16.79	16.69
7.0	6	16.25	16.12	16.00	15.90	15.81
11.2	10	17.78	17.65	17.50	17.37	17.25

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Note(1) These data show average statuses.
Depending on the system control, there may be ranges where the operation is not conducted continuously.
(2) Capacities are based on the following conditions.
Corresponding refrigerant piping length :7.5m
Level difference of Zero.
(3) Symbols are as follows.
TC : Total cooling capacity (kW)
SHC : Sensible heat capacity (kW)
HC : Heating capacity (kW)

(2) Ceiling cassette-4way type (FDT)

(a) Single type

Model FDT71VNXVD Indoor unit FDT71VD Outdoor unit FDC71VNX

Cool Mode

Outdoor air temp.	Indoor air temperature											
	23℃CDB 16℃CWB		26℃CDB 18℃CWB		27℃CDB 19℃CWB		28℃CDB 20℃CWB		31℃CDB 22℃CWB		33℃CDB 24℃CWB	
℃CDB	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
20	6.96	5.45	7.39	5.80	7.61	5.69	7.84	5.58	8.31	5.88	8.78	5.62
25	6.86	5.43	7.44	5.81	7.72	5.72	7.98	5.61	8.49	5.91	8.91	5.63
30	6.67	5.38	7.17	5.75	7.41	5.65	7.67	5.55	8.14	5.85		
35	6.43	5.31	6.88	5.69	7.10	5.58	7.31	5.48	7.74	5.79		
40	6.00	5.20	6.50	5.60	6.75	5.51	6.94	5.41	7.34	5.73		
43	5.68	5.12	6.19	5.53	6.45	5.45	6.68	5.36	7.14	5.70		

Heat Mode

Outdoor air temp.		Indoor air temperature ℃CDB				
℃CDB	℃CWB	16	18	20	22	24
-14.7	-15	4.53	4.51	4.50	4.48	4.46
-9.6	-10	5.11	5.09	5.06	5.03	5.00
-3.4	-4	5.69	5.66	5.62	5.59	5.55
1.8	1	6.13	6.09	6.04	6.00	5.96
4.9	4	7.78	7.71	7.52	6.92	6.56
7.0	6	8.16	8.08	8.00	7.80	7.52
11.2	10	8.86	8.75	8.64	8.52	8.41

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Model FDT100VNXVD Indoor unit FDT100VD Outdoor unit FDC100VNX

Cool Mode

Outdoor air temp.	Indoor air temperature											
	23℃CDB 16℃CWB		26℃CDB 18℃CWB		27℃CDB 19℃CWB		28℃CDB 20℃CWB		31℃CDB 22℃CWB		33℃CDB 24℃CWB	
℃CDB	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
20	9.66	8.30	10.26	8.90	10.56	8.73	10.87	8.55	11.48	9.07	12.24	8.69
25	9.77	8.33	10.37	8.92	10.67	8.75	10.97	8.57	11.58	9.08	12.49	8.71
30	9.46	8.26	10.04	8.85	10.34	8.69	10.63	8.52	11.21	9.04		
35	9.14	8.18	9.71	8.79	10.00	8.63	10.29	8.46	10.86	9.00		
40	8.69	8.08	9.24	8.70	9.52	8.55	9.81	8.39	10.36	8.94		
43	8.40	8.01	8.94	8.65	9.21	8.50	9.49	8.35	10.03	8.91		

Heat Mode

Outdoor air temp.		Indoor air temperature ℃CDB				
℃CDB	℃CWB	16	18	20	22	24
-14.7	-15	8.12	8.09	8.05	8.01	7.97
-9.6	-10	9.01	8.97	8.93	8.87	8.83
-3.4	-4	10.29	10.22	10.17	10.11	10.05
1.8	1	11.35	11.27	11.20	11.13	11.06
4.9	4	11.96	11.87	11.80	11.73	11.66
7.0	6	11.37	11.28	11.20	11.13	11.07
11.2	10	12.45	12.35	12.25	12.16	12.07

PJF000Z200

Model FDT100VSXVD Indoor unit FDT100VD Outdoor unit FDC100VSX

Cool Mode

Outdoor air temp.	Indoor air temperature											
	23℃CDB 16℃CWB		26℃CDB 18℃CWB		27℃CDB 19℃CWB		28℃CDB 20℃CWB		31℃CDB 22℃CWB		33℃CDB 24℃CWB	
℃CDB	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
20	9.66	8.30	10.26	8.90	10.56	8.73	10.87	8.55	11.48	9.07	12.24	8.69
25	9.77	8.33	10.37	8.92	10.67	8.75	10.97	8.57	11.58	9.08	12.49	8.71
30	9.46	8.26	10.04	8.85	10.34	8.69	10.63	8.52	11.21	9.04		
35	9.14	8.18	9.71	8.79	10.00	8.63	10.29	8.46	10.86	9.00		
40	8.69	8.08	9.24	8.70	9.52	8.55	9.81	8.39	10.36	8.94		
43	8.40	8.01	8.94	8.65	9.21	8.50	9.49	8.35	10.03	8.91		

Heat Mode

Outdoor air temp.		Indoor air temperature ℃CDB				
℃CDB	℃CWB	16	18	20	22	24
-14.7	-15	11.30	11.25	11.20	11.15	11.09
-9.6	-10	11.39	11.34	11.29	11.22	11.17
-3.4	-4	11.64	11.57	11.51	11.44	11.37
1.8	1	11.85	11.76	11.69	11.62	11.55
4.9	4	11.98	11.89	11.83	11.75	11.68
7.0	6	11.37	11.28	11.20	11.13	11.07
11.2	10	12.45	12.35	12.25	12.16	12.07

PJF000Z200

Model FDT125VNXVD Indoor unit FDT125VD Outdoor unit FDC125VNX

Cool Mode

Outdoor air temp.	Indoor air temperature											
	23℃CDB 16℃CWB		26℃CDB 18℃CWB		27℃CDB 19℃CWB		28℃CDB 20℃CWB		31℃CDB 22℃CWB		33℃CDB 24℃CWB	
℃CDB	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
20	12.07	9.67	12.83	10.29	13.21	10.14	13.59	9.97	14.35	10.50	15.30	10.15
25	12.21	9.71	12.96	10.33	13.34	10.17	13.71	10.00	14.47	10.53	15.62	10.21
30	11.82	9.59	12.55	10.21	12.92	10.06	13.29	9.90	14.02	10.44		
35	11.43	9.47	12.14	10.10	12.50	9.95	12.86	9.79	13.57	10.35		
40	10.86	9.29	11.55	9.94	11.90	9.80	12.26	9.65	12.96	10.22		
43	10.50	9.19	11.18	9.84	11.52	9.71	11.86	9.56	12.54	10.14		

Heat Mode

Outdoor air temp.		Indoor air temperature ℃CDB				
℃CDB	℃CWB	16	18	20	22	24
-14.7	-15	10.16	10.11	10.06	10.02	9.97
-9.6	-10	11.26	11.21	11.16	11.09	11.04
-3.4	-4	12.86	12.78	12.71	12.63	12.56
1.8	1	14.19	14.08	14.00	13.91	13.83
4.9	4	14.95	14.84	14.75	14.66	14.57
7.0	6	14.22	14.11	14.00	13.92	13.83
11.2	10	15.56	15.44	15.31	15.20	15.09

PJF000Z200

Note(1) These data show average statuses.
Depending on the system control, there may be ranges where the operation is not conducted continuously.
(2) Capacities are based on the following conditions.
Corresponding refrigerant piping length :7.5m
Level difference of Zero.
(3) Symbols are as follows.
TC : Total cooling capacity (kW)
SHC : Sensible heat capacity (kW)
HC : Heating capacity (kW)

Model FDT125VSXVD Indoor unit FDT125VD Outdoor unit FDC125VSX

Cool Mode

Outdoor air temp.	Indoor air temperature											
	23℃CDB 16℃CWB		26℃CDB 18℃CWB		27℃CDB 19℃CWB		28℃CDB 20℃CWB		31℃CDB 22℃CWB		33℃CDB 24℃CWB	
℃CDB	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
20	12.07	9.67	12.83	10.29	13.21	10.14	13.59	9.97	14.35	10.50	15.30	10.15
25	12.21	9.71	12.96	10.33	13.34	10.17	13.71	10.00	14.47	10.53	15.62	10.21
30	11.82	9.59	12.55	10.21	12.92	10.06	13.29	9.90	14.02	10.44		
35	11.43	9.47	12.14	10.10	12.50	9.95	12.86	9.79	13.57	10.35		
40	10.86	9.29	11.55	9.94	11.90	9.80	12.26	9.65	12.96	10.22		
43	10.50	9.19	11.18	9.84	11.52	9.71	11.86	9.56	12.54	10.14		

Heat Mode

Outdoor air temp.		Indoor air temperature ℃CDB				
℃CDB	℃CWB	16	18	20	22	24
-14.7	-15	14.13	14.06	14.00	13.94	13.86
-9.6	-10	14.24	14.18	14.11	14.03	13.96
-3.4	-4	14.55	14.46	14.38	14.30	14.22
1.8	1	14.81	14.70	14.61	14.52	14.43
4.9	4	14.98	14.87	14.78	14.69	14.60
7.0	6	14.22	14.11	14.00	13.92	13.83
11.2	10	15.56	15.44	15.31	15.20	15.09

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Model FDT140VNXVD Indoor unit FDT140VD Outdoor unit FDC140VNX

Cool Mode

Outdoor air temp.	Indoor air temperature											
	23℃CDB 16℃CWB		26℃CDB 18℃CWB		27℃CDB 19℃CWB		28℃CDB 20℃CWB		31℃CDB 22℃CWB		33℃CDB 24℃CWB	
℃CDB	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
20	13.52	10.26	14.37	10.86	14.79	10.73	15.22	10.59	16.07	11.09	17.14	10.81
25	13.68	10.32	14.52	10.91	14.94	10.78	15.36	10.63	16.21	11.13	17.49	10.89
30	13.24	10.16	14.06	10.75	14.47	10.62	14.88	10.48	15.70	10.99		
35	12.80	9.99	13.60	10.60	14.00	10.47	14.40	10.34	15.20	10.85		
40	12.16	9.76	12.94	10.38	13.33	10.26	13.73	10.13	14.51	10.67		
43	11.76	9.61	12.52	10.24	12.90	10.12	13.28	10.00	14.04	10.54		

Heat Mode

Outdoor air temp.		Indoor air temperature ℃CDB				
℃CDB	℃CWB	16	18	20	22	24
-14.7	-15	11.61	11.55	11.50	11.45	11.39
-9.6	-10	12.87	12.81	12.75	12.68	12.61
-3.4	-4	14.69	14.60	14.52	14.44	14.35
1.8	1	16.21	16.09	16.00	15.90	15.80
4.9	4	17.08	16.95	16.86	16.75	16.65
7.0	6	16.25	16.12	16.00	15.90	15.81
11.2	10	17.78	17.65	17.50	17.37	17.25

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Model FDT140VSXVD Indoor unit FDT140VD Outdoor unit FDC140VSX

Cool Mode

Outdoor air temp.	Indoor air temperature											
	23℃CDB 16℃CWB		26℃CDB 18℃CWB		27℃CDB 19℃CWB		28℃CDB 20℃CWB		31℃CDB 22℃CWB		33℃CDB 24℃CWB	
℃CDB	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
20	13.52	10.26	14.37	10.86	14.79	10.73	15.22	10.59	16.07	11.09	17.14	10.81
25	13.68	10.32	14.52	10.91	14.94	10.78	15.36	10.63	16.21	11.13	17.49	10.89
30	13.24	10.16	14.06	10.75	14.47	10.62	14.88	10.48	15.70	10.99		
35	12.80	9.99	13.60	10.60	14.00	10.47	14.40	10.34	15.20	10.85		
40	12.16	9.76	12.94	10.38	13.33	10.26	13.73	10.13	14.51	10.67		
43	11.76	9.61	12.52	10.24	12.90	10.12	13.28	10.00	14.04	10.54		

Heat Mode

Outdoor air temp.		Indoor air temperature ℃CDB				
℃CDB	℃CWB	16	18	20	22	24
-14.7	-15	16.15	16.07	16.00	15.93	15.85
-9.6	-10	16.28	16.20	16.13	16.03	15.95
-3.4	-4	16.63	16.53	16.44	16.34	16.25
1.8	1	16.92	16.80	16.70	16.60	16.50
4.9	4	17.12	16.99	16.89	16.79	16.69
7.0	6	16.25	16.12	16.00	15.90	15.81
11.2	10	17.78	17.65	17.50	17.37	17.25

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(b) Twin type

Model FDT71VNXPVD Indoor unit FDT40VD (2 units) Outdoor unit FDC71VNX

Cool Mode

Outdoor air temp.	Indoor air temperature											
	23℃CDB 16℃CWB		26℃CDB 18℃CWB		27℃CDB 19℃CWB		28℃CDB 20℃CWB		31℃CDB 22℃CWB		33℃CDB 24℃CWB	
℃CDB	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
20	6.96	5.66	7.39	6.07	7.61	5.87	7.84	5.67	8.31	6.01	8.78	5.55
25	6.86	5.65	7.44	6.07	7.72	5.87	7.98	5.66	8.49	6.00	8.91	5.54
30	6.67	5.64	7.17	6.07	7.41	5.88	7.67	5.67	8.14	6.02		
35	6.43	5.63	6.88	6.07	7.10	5.88	7.31	5.69	7.74	6.06		
40	6.00	5.61	6.50	6.07	6.75	5.89	6.94	5.70	7.34	6.09		
43	5.68	5.60	6.19	6.07	6.45	5.90	6.68	5.72	7.14	6.11		

Heat Mode

Outdoor air temp.		Indoor air temperature ℃CDB				
℃CDB	℃CWB	16	18	20	22	24
-14.7	-15	4.53	4.51	4.50	4.48	4.46
-9.6	-10	5.11	5.09	5.06	5.03	5.00
-3.4	-4	5.69	5.66	5.62	5.59	5.55
1.8	1	6.13	6.09	6.04	6.00	5.96
4.9	4	7.78	7.71	7.52	6.92	6.56
7.0	6	8.16	8.08	8.00	7.80	7.52
11.2	10	8.86	8.75	8.64	8.52	8.41

PJF000Z200

Note(1) These data show average statuses.
Depending on the system control, there may be ranges where the operation is not conducted continuously.
(2) Capacities are based on the following conditions.
Corresponding refrigerant piping length :7.5m
Level difference of Zero.
(3) Symbols are as follows.
TC : Total cooling capacity (kW)
SHC : Sensible heat capacity (kW)
HC : Heating capacity (kW)

Model FDT100VNXPVD Indoor unit FDT50VD (2 units) Outdoor unit FDC100VNX

Cool Mode

Outdoor air temp.	Indoor air temperature											
	23℃CDB 16℃CWB		26℃CDB 18℃CWB		27℃CDB 19℃CWB		28℃CDB 20℃CWB		31℃CDB 22℃CWB		33℃CDB 24℃CWB	
℃CDB	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
20	9.66	7.71	10.26	8.22	10.56	8.06	10.87	7.90	11.48	8.34	12.24	7.99
25	9.77	7.74	10.37	8.25	10.67	8.09	10.97	7.92	11.58	8.35	12.49	8.02
30	9.46	7.66	10.04	8.17	10.34	8.02	10.63	7.86	11.21	8.30		
35	9.14	7.58	9.71	8.10	10.00	7.95	10.29	7.80	10.86	8.24		
40	8.69	7.46	9.24	7.99	9.52	7.85	9.81	7.71	10.36	8.17		
43	8.40	7.39	8.94	7.93	9.21	7.79	9.49	7.65	10.03	8.12		

Heat Mode

Outdoor air temp.		Indoor air temperature ℃CDB				
℃CDB	℃CWB	16	18	20	22	24
-14.7	-15	8.12	8.09	8.05	8.01	7.97
-9.6	-10	9.01	8.97	8.93	8.87	8.83
-3.4	-4	10.29	10.22	10.17	10.11	10.05
1.8	1	11.35	11.27	11.20	11.13	11.06
4.9	4	11.96	11.87	11.80	11.73	11.66
7.0	6	11.37	11.28	11.20	11.13	11.07
11.2	10	12.45	12.35	12.25	12.16	12.07

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Model FDT100VSXPVD Indoor unit FDT50VD (2 units) Outdoor unit FDC100VSX

Cool Mode

Outdoor air temp.	Indoor air temperature											
	23℃CDB 16℃CWB		26℃CDB 18℃CWB		27℃CDB 19℃CWB		28℃CDB 20℃CWB		31℃CDB 22℃CWB		33℃CDB 24℃CWB	
℃CDB	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
20	9.66	7.71	10.26	8.22	10.56	8.06	10.87	7.90	11.48	8.34	12.24	7.99
25	9.77	7.74	10.37	8.25	10.67	8.09	10.97	7.92	11.58	8.35	12.49	8.02
30	9.46	7.66	10.04	8.17	10.34	8.02	10.63	7.86	11.21	8.30		
35	9.14	7.58	9.71	8.10	10.00	7.95	10.29	7.80	10.86	8.24		
40	8.69	7.46	9.24	7.99	9.52	7.85	9.81	7.71	10.36	8.17		
43	8.40	7.39	8.94	7.93	9.21	7.79	9.49	7.65	10.03	8.12		

Heat Mode

Outdoor air temp.		Indoor air temperature ℃CDB				
℃CDB	℃CWB	16	18	20	22	24
-14.7	-15	11.30	11.25	11.20	11.15	11.09
-9.6	-10	11.39	11.34	11.29	11.22	11.17
-3.4	-4	11.64	11.57	11.51	11.44	11.37
1.8	1	11.85	11.76	11.69	11.62	11.55
4.9	4	11.98	11.89	11.83	11.75	11.68
7.0	6	11.37	11.28	11.20	11.13	11.07
11.2	10	12.45	12.35	12.25	12.16	12.07

PJF000Z200

Model FDT125VNXPVD Indoor unit FDT60VD (2 units) Outdoor unit FDC125VNX

Cool Mode

Outdoor air temp.	Indoor air temperature											
	23℃CDB 16℃CWB		26℃CDB 18℃CWB		27℃CDB 19℃CWB		28℃CDB 20℃CWB		31℃CDB 22℃CWB		33℃CDB 24℃CWB	
℃CDB	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
20	12.07	9.39	12.83	10.01	13.21	9.75	13.59	9.48	14.35	10.00	15.30	9.40
25	12.21	9.41	12.96	10.03	13.34	9.77	13.71	9.49	14.47	10.01	15.62	9.41
30	11.82	9.34	12.55	9.97	12.92	9.72	13.29	9.45	14.02	9.98		
35	11.43	9.27	12.14	9.92	12.50	9.67	12.86	9.41	13.57	9.96		
40	10.86	9.17	11.55	9.84	11.90	9.60	12.26	9.36	12.96	9.93		
43	10.50	9.11	11.18	9.79	11.52	9.56	11.86	9.33	12.54	9.91		

Heat Mode

Outdoor air temp.		Indoor air temperature ℃CDB				
℃CDB	℃CWB	16	18	20	22	24
-14.7	-15	10.16	10.11	10.06	10.02	9.97
-9.6	-10	11.26	11.21	11.16	11.09	11.04
-3.4	-4	12.86	12.78	12.71	12.63	12.56
1.8	1	14.19	14.08	14.00	13.91	13.83
4.9	4	14.95	14.84	14.75	14.66	14.57
7.0	6	14.22	14.11	14.00	13.92	13.83
11.2	10	15.56	15.44	15.31	15.20	15.09

PJF000Z200

Model FDT125VSXPVD Indoor unit FDT60VD (2 units) Outdoor unit FDC125VSX

Cool Mode

Outdoor air temp.	Indoor air temperature											
	23℃CDB 16℃CWB		26℃CDB 18℃CWB		27℃CDB 19℃CWB		28℃CDB 20℃CWB		31℃CDB 22℃CWB		33℃CDB 24℃CWB	
℃CDB	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
20	12.07	9.39	12.83	10.01	13.21	9.75	13.59	9.48	14.35	10.00	15.30	9.40
25	12.21	9.41	12.96	10.03	13.34	9.77	13.71	9.49	14.47	10.01	15.62	9.41
30	11.82	9.34	12.55	9.97	12.92	9.72	13.29	9.45	14.02	9.98		
35	11.43	9.27	12.14	9.92	12.50	9.67	12.86	9.41	13.57	9.96		
40	10.86	9.17	11.55	9.84	11.90	9.60	12.26	9.36	12.96	9.93		
43	10.50	9.11	11.18	9.79	11.52	9.56	11.86	9.33	12.54	9.91		

Heat Mode

Outdoor air temp.		Indoor air temperature ℃CDB				
℃CDB	℃CWB	16	18	20	22	24
-14.7	-15	14.13	14.06	14.00	13.94	13.86
-9.6	-10	14.24	14.18	14.11	14.03	13.96
-3.4	-4	14.55	14.46	14.38	14.30	14.22
1.8	1	14.81	14.70	14.61	14.52	14.43
4.9	4	14.98	14.87	14.78	14.69	14.60
7.0	6	14.22	14.11	14.00	13.92	13.83
11.2	10	15.56	15.44	15.31	15.20	15.09

PJF000Z200

Note(1) These data show average statuses.
Depending on the system control, there may be ranges where the operation is not conducted continuously.
(2) Capacities are based on the following conditions.
Corresponding refrigerant piping length :7.5m
Level difference of Zero.
(3) Symbols are as follows.
TC : Total cooling capacity (kW)
SHC : Sensible heat capacity (kW)
HC : Heating capacity (kW)

Model FDT140VNXPVD Indoor unit FDT71VD (2 units) Outdoor unit FDC140VNX

Cool Mode

Outdoor air temp.	Indoor air temperature											
	23℃CDB 16℃CWB		26℃CDB 18℃CWB		27℃CDB 19℃CWB		28℃CDB 20℃CWB		31℃CDB 22℃CWB		33℃CDB 24℃CWB	
℃CDB	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
20	13.52	10.54	14.37	11.21	14.79	10.98	15.22	10.74	16.07	11.31	17.14	10.78
25	13.68	10.58	14.52	11.25	14.94	11.01	15.36	10.76	16.21	11.33	17.49	10.82
30	13.24	10.47	14.06	11.15	14.47	10.92	14.88	10.68	15.70	11.26		
35	12.80	10.36	13.60	11.05	14.00	10.83	14.40	10.60	15.20	11.20		
40	12.16	10.20	12.94	10.92	13.33	10.71	13.73	10.49	14.51	11.11		
43	11.76	10.11	12.52	10.84	12.90	10.63	13.28	10.42	14.04	11.05		

Heat Mode

Outdoor air temp.		Indoor air temperature ℃CDB				
℃CDB	℃CWB	16	18	20	22	24
-14.7	-15	11.61	11.55	11.50	11.45	11.39
-9.6	-10	12.87	12.81	12.75	12.68	12.61
-3.4	-4	14.69	14.60	14.52	14.44	14.35
1.8	1	16.21	16.09	16.00	15.90	15.80
4.9	4	17.08	16.95	16.86	16.75	16.65
7.0	6	16.25	16.12	16.00	15.90	15.81
11.2	10	17.78	17.65	17.50	17.37	17.25

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Model FDT140VSXPVD Indoor unit FDT71VD (2 units) Outdoor unit FDC140VSX

Cool Mode

Outdoor air temp.	Indoor air temperature											
	23℃CDB 16℃CWB		26℃CDB 18℃CWB		27℃CDB 19℃CWB		28℃CDB 20℃CWB		31℃CDB 22℃CWB		33℃CDB 24℃CWB	
℃CDB	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
20	13.52	10.54	14.37	11.21	14.79	10.98	15.22	10.74	16.07	11.31	17.14	10.78
25	13.68	10.58	14.52	11.25	14.94	11.01	15.36	10.76	16.21	11.33	17.49	10.82
30	13.24	10.47	14.06	11.15	14.47	10.92	14.88	10.68	15.70	11.26		
35	12.80	10.36	13.60	11.05	14.00	10.83	14.40	10.60	15.20	11.20		
40	12.16	10.20	12.94	10.92	13.33	10.71	13.73	10.49	14.51	11.11		
43	11.76	10.11	12.52	10.84	12.90	10.63	13.28	10.42	14.04	11.05		

Heat Mode

Outdoor air temp.		Indoor air temperature ℃CDB				
℃CDB	℃CWB	16	18	20	22	24
-14.7	-15	16.15	16.07	16.00	15.93	15.85
-9.6	-10	16.28	16.20	16.13	16.03	15.95
-3.4	-4	16.63	16.53	16.44	16.34	16.25
1.8	1	16.92	16.80	16.70	16.60	16.50
4.9	4	17.12	16.99	16.89	16.79	16.69
7.0	6	16.25	16.12	16.00	15.90	15.81
11.2	10	17.78	17.65	17.50	17.37	17.25

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(c) Triple type

Model FDT140VNXTVD Indoor unit FDT50VD (3 units) Outdoor unit FDC140VNX

Cool Mode

Outdoor air temp.	Indoor air temperature											
	23℃CDB 16℃CWB		26℃CDB 18℃CWB		27℃CDB 19℃CWB		28℃CDB 20℃CWB		31℃CDB 22℃CWB		33℃CDB 24℃CWB	
℃CDB	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
20	13.52	11.05	14.37	11.80	14.79	11.57	15.22	11.32	16.07	11.97	17.14	11.44
25	13.68	11.09	14.52	11.83	14.94	11.59	15.36	11.35	16.21	11.99	17.49	11.47
30	13.24	10.98	14.06	11.74	14.47	11.51	14.88	11.27	15.70	11.92		
35	12.80	10.88	13.60	11.65	14.00	11.42	14.40	11.19	15.20	11.86		
40	12.16	10.73	12.94	11.52	13.33	11.31	13.73	11.09	14.51	11.78		
43	11.76	10.63	12.52	11.44	12.90	11.23	13.28	11.02	14.04	11.72		

Heat Mode

Outdoor air temp.		Indoor air temperature ℃CDB				
℃CDB	℃CWB	16	18	20	22	24
-14.7	-15	11.61	11.55	11.50	11.45	11.39
-9.6	-10	12.87	12.81	12.75	12.68	12.61
-3.4	-4	14.69	14.60	14.52	14.44	14.35
1.8	1	16.21	16.09	16.00	15.90	15.80
4.9	4	17.08	16.95	16.86	16.75	16.65
7.0	6	16.25	16.12	16.00	15.90	15.81
11.2	10	17.78	17.65	17.50	17.37	17.25

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Model FDT140VSXTVD Indoor unit FDT50VD (3 units) Outdoor unit FDC140VSX

Cool Mode

Outdoor air temp.	Indoor air temperature											
	23℃CDB 16℃CWB		26℃CDB 18℃CWB		27℃CDB 19℃CWB		28℃CDB 20℃CWB		31℃CDB 22℃CWB		33℃CDB 24℃CWB	
℃CDB	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
20	13.52	11.05	14.37	11.80	14.79	11.57	15.22	11.32	16.07	11.97	17.14	11.44
25	13.68	11.09	14.52	11.83	14.94	11.59	15.36	11.35	16.21	11.99	17.49	11.47
30	13.24	10.98	14.06	11.74	14.47	11.51	14.88	11.27	15.70	11.92		
35	12.80	10.88	13.60	11.65	14.00	11.42	14.40	11.19	15.20	11.86		
40	12.16	10.73	12.94	11.52	13.33	11.31	13.73	11.09	14.51	11.78		
43	11.76	10.63	12.52	11.44	12.90	11.23	13.28	11.02	14.04	11.72		

Heat Mode

Outdoor air temp.		Indoor air temperature ℃CDB				
℃CDB	℃CWB	16	18	20	22	24
-14.7	-15	16.15	16.07	16.00	15.93	15.85
-9.6	-10	16.28	16.20	16.13	16.03	15.95
-3.4	-4	16.63	16.53	16.44	16.34	16.25
1.8	1	16.92	16.80	16.70	16.60	16.50
4.9	4	17.12	16.99	16.89	16.79	16.69
7.0	6	16.25	16.12	16.00	15.90	15.81
11.2	10	17.78	17.65	17.50	17.37	17.25

PJF000Z200

Note(1) These data show average statuses.
Depending on the system control, there may be ranges where the operation is not conducted continuously.
(2) Capacities are based on the following conditions.
Corresponding refrigerant piping length :7.5m
Level difference of Zero.
(3) Symbols are as follows.
TC : Total cooling capacity (kW)
SHC : Sensible heat capacity (kW)
HC : Heating capacity (kW)

(3) Ceiling suspended type (FDEN)

(a) Single type

Model FDEN71VNXVD Indoor unit FDEN71VD Outdoor unit FDC71VNX

Cool Mode

Outdoor air temp.	Indoor air temperature											
	23℃CDB 16℃CWB		26℃CDB 18℃CWB		27℃CDB 19℃CWB		28℃CDB 20℃CWB		31℃CDB 22℃CWB		33℃CDB 24℃CWB	
℃CDB	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
20	6.96	5.18	7.39	5.47	7.61	5.39	7.84	5.31	8.31	5.57	8.78	5.38
25	6.86	5.14	7.44	5.49	7.72	5.43	7.98	5.35	8.49	5.61	8.91	5.41
30	6.67	5.07	7.17	5.40	7.41	5.33	7.67	5.27	8.14	5.53		
35	6.43	4.99	6.88	5.31	7.10	5.24	7.31	5.16	7.74	5.43		
40	6.00	4.84	6.50	5.19	6.75	5.14	6.94	5.06	7.34	5.33		
43	5.68	4.73	6.19	5.10	6.45	5.05	6.68	4.99	7.14	5.28		

Heat Mode

Outdoor air temp.		Indoor air temperature ℃CDB				
℃CDB	℃CWB	16	18	20	22	24
-14.7	-15	4.53	4.51	4.50	4.48	4.46
-9.6	-10	5.11	5.09	5.06	5.03	5.00
-3.4	-4	5.69	5.66	5.62	5.59	5.55
1.8	1	6.13	6.09	6.04	6.00	5.96
4.9	4	7.78	7.71	7.52	6.92	6.56
7.0	6	8.16	8.08	8.00	7.80	7.52
11.2	10	8.86	8.75	8.64	8.52	8.41

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Model FDEN100VNXVD Indoor unit FDEN100VD Outdoor unit FDC100VNX

Cool Mode

Outdoor air temp.	Indoor air temperature											
	23℃CDB 16℃CWB		26℃CDB 18℃CWB		27℃CDB 19℃CWB		28℃CDB 20℃CWB		31℃CDB 22℃CWB		33℃CDB 24℃CWB	
℃CDB	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
20	9.66	6.89	10.26	7.25	10.56	7.14	10.87	7.03	11.48	7.32	12.24	7.09
25	9.77	6.93	10.37	7.28	10.67	7.17	10.97	7.06	11.58	7.35	12.49	7.15
30	9.46	6.81	10.04	7.17	10.34	7.07	10.63	6.96	11.21	7.25		
35	9.14	6.69	9.71	7.06	10.00	6.96	10.29	6.85	10.86	7.16		
40	8.69	6.53	9.24	6.91	9.52	6.81	9.81	6.72	10.36	7.03		
43	8.40	6.43	8.94	6.81	9.21	6.72	9.49	6.62	10.03	6.95		

Heat Mode

Outdoor air temp.		Indoor air temperature ℃CDB				
℃CDB	℃CWB	16	18	20	22	24
-14.7	-15	8.12	8.09	8.05	8.01	7.97
-9.6	-10	9.01	8.97	8.93	8.87	8.83
-3.4	-4	10.29	10.22	10.17	10.11	10.05
1.8	1	11.35	11.27	11.20	11.13	11.06
4.9	4	11.96	11.87	11.80	11.73	11.66
7.0	6	11.37	11.28	11.20	11.13	11.07
11.2	10	12.45	12.35	12.25	12.16	12.07

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Model FDEN100VSXVD Indoor unit FDEN100VD Outdoor unit FDC100VSX

Cool Mode

Outdoor air temp.	Indoor air temperature											
	23℃CDB 16℃CWB		26℃CDB 18℃CWB		27℃CDB 19℃CWB		28℃CDB 20℃CWB		31℃CDB 22℃CWB		33℃CDB 24℃CWB	
℃CDB	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
20	9.66	6.89	10.26	7.25	10.56	7.14	10.87	7.03	11.48	7.32	12.24	7.09
25	9.77	6.93	10.37	7.28	10.67	7.17	10.97	7.06	11.58	7.35	12.49	7.15
30	9.46	6.81	10.04	7.17	10.34	7.07	10.63	6.96	11.21	7.25		
35	9.14	6.69	9.71	7.06	10.00	6.96	10.29	6.85	10.86	7.16		
40	8.69	6.53	9.24	6.91	9.52	6.81	9.81	6.72	10.36	7.03		
43	8.40	6.43	8.94	6.81	9.21	6.72	9.49	6.62	10.03	6.95		

Heat Mode

Outdoor air temp.		Indoor air temperature ℃CDB				
℃CDB	℃CWB	16	18	20	22	24
-14.7	-15	11.30	11.25	11.20	11.15	11.09
-9.6	-10	11.39	11.34	11.29	11.22	11.17
-3.4	-4	11.64	11.57	11.51	11.44	11.37
1.8	1	11.85	11.76	11.69	11.62	11.55
4.9	4	11.98	11.89	11.83	11.75	11.68
7.0	6	11.37	11.28	11.20	11.13	11.07
11.2	10	12.45	12.35	12.25	12.16	12.07

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Model FDEN125VNXVD Indoor unit FDEN125VD Outdoor unit FDC125VNX

Cool Mode

Outdoor air temp.	Indoor air temperature											
	23℃CDB 16℃CWB		26℃CDB 18℃CWB		27℃CDB 19℃CWB		28℃CDB 20℃CWB		31℃CDB 22℃CWB		33℃CDB 24℃CWB	
℃CDB	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
20	12.07	8.26	12.83	8.67	13.21	8.53	13.59	8.39	14.35	8.71	15.30	8.41
25	12.21	8.32	12.96	8.71	13.34	8.58	13.71	8.43	14.47	8.74	15.62	8.49
30	11.82	8.17	12.55	8.57	12.92	8.44	13.29	8.30	14.02	8.61		
35	11.43	8.02	12.14	8.42	12.50	8.30	12.86	8.16	13.57	8.49		
40	10.86	7.80	11.55	8.22	11.90	8.11	12.26	7.98	12.96	8.33		
43	10.50	7.67	11.18	8.10	11.52	7.99	11.86	7.86	12.54	8.22		

Heat Mode

Outdoor air temp.		Indoor air temperature ℃CDB				
℃CDB	℃CWB	16	18	20	22	24
-14.7	-15	10.16	10.11	10.06	10.02	9.97
-9.6	-10	11.26	11.21	11.16	11.09	11.04
-3.4	-4	12.86	12.78	12.71	12.63	12.56
1.8	1	14.19	14.08	14.00	13.91	13.83
4.9	4	14.95	14.84	14.75	14.66	14.57
7.0	6	14.22	14.11	14.00	13.92	13.83
11.2	10	15.56	15.44	15.31	15.20	15.09

PFA003Z917

Note(1) These data show average statuses.
Depending on the system control, there may be ranges where the operation is not conducted continuously.
(2) Capacities are based on the following conditions.
Corresponding refrigerant piping length :7.5m
Level difference of Zero.
(3) Symbols are as follows.
TC : Total cooling capacity (kW)
SHC : Sensible heat capacity (kW)
HC : Heating capacity (kW)

Model FDEN125VSXVD Indoor unit FDEN125VD Outdoor unit FDC125VSX

Cool Mode

Outdoor air temp.	Indoor air temperature											
	23℃CDB 16℃CWB		26℃CDB 18℃CWB		27℃CDB 19℃CWB		28℃CDB 20℃CWB		31℃CDB 22℃CWB		33℃CDB 24℃CWB	
℃CDB	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
20	12.07	8.26	12.83	8.67	13.21	8.53	13.59	8.39	14.35	8.71	15.30	8.41
25	12.21	8.32	12.96	8.71	13.34	8.58	13.71	8.43	14.47	8.74	15.62	8.49
30	11.82	8.17	12.55	8.57	12.92	8.44	13.29	8.30	14.02	8.61		
35	11.43	8.02	12.14	8.42	12.50	8.30	12.86	8.16	13.57	8.49		
40	10.86	7.80	11.55	8.22	11.90	8.11	12.26	7.98	12.96	8.33		
43	10.50	7.67	11.18	8.10	11.52	7.99	11.86	7.86	12.54	8.22		

Heat Mode

Outdoor air temp.		Indoor air temperature ℃CDB				
℃CDB	℃CWB	16	18	20	22	24
-14.7	-15	14.13	14.06	14.00	13.94	13.86
-9.6	-10	14.24	14.18	14.11	14.03	13.96
-3.4	-4	14.55	14.46	14.38	14.30	14.22
1.8	1	14.81	14.70	14.61	14.52	14.43
4.9	4	14.98	14.87	14.78	14.69	14.60
7.0	6	14.22	14.11	14.00	13.92	13.83
11.2	10	15.56	15.44	15.31	15.20	15.09

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Model FDEN140VNXVD Indoor unit FDEN140VD Outdoor unit FDC140VNX

Cool Mode

Outdoor air temp.	Indoor air temperature											
	23℃CDB 16℃CWB		26℃CDB 18℃CWB		27℃CDB 19℃CWB		28℃CDB 20℃CWB		31℃CDB 22℃CWB		33℃CDB 24℃CWB	
℃CDB	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
20	13.52	8.85	14.37	9.23	14.79	9.08	15.22	8.93	16.07	9.21	17.14	8.89
25	13.68	8.92	14.52	9.29	14.94	9.14	15.36	8.98	16.21	9.25	17.49	8.98
30	13.24	8.73	14.06	9.11	14.47	8.97	14.88	8.81	15.70	9.10		
35	12.80	8.55	13.60	8.94	14.00	8.80	14.40	8.65	15.20	8.95		
40	12.16	8.30	12.94	8.70	13.33	8.57	13.73	8.44	14.51	8.75		
43	11.76	8.14	12.52	8.56	12.90	8.43	13.28	8.30	14.04	8.62		

Heat Mode

Outdoor air temp.		Indoor air temperature ℃CDB				
℃CDB	℃CWB	16	18	20	22	24
-14.7	-15	11.61	11.55	11.50	11.45	11.39
-9.6	-10	12.87	12.81	12.75	12.68	12.61
-3.4	-4	14.69	14.60	14.52	14.44	14.35
1.8	1	16.21	16.09	16.00	15.90	15.80
4.9	4	17.08	16.95	16.86	16.75	16.65
7.0	6	16.25	16.12	16.00	15.90	15.81
11.2	10	17.78	17.65	17.50	17.37	17.25

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Model FDEN140VSXVD Indoor unit FDEN140VD Outdoor unit FDC140VSX

Cool Mode

Outdoor air temp.	Indoor air temperature											
	23℃CDB 16℃CWB		26℃CDB 18℃CWB		27℃CDB 19℃CWB		28℃CDB 20℃CWB		31℃CDB 22℃CWB		33℃CDB 24℃CWB	
℃CDB	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
20	13.52	8.85	14.37	9.23	14.79	9.08	15.22	8.93	16.07	9.21	17.14	8.89
25	13.68	8.92	14.52	9.29	14.94	9.14	15.36	8.98	16.21	9.25	17.49	8.98
30	13.24	8.73	14.06	9.11	14.47	8.97	14.88	8.81	15.70	9.10		
35	12.80	8.55	13.60	8.94	14.00	8.80	14.40	8.65	15.20	8.95		
40	12.16	8.30	12.94	8.70	13.33	8.57	13.73	8.44	14.51	8.75		
43	11.76	8.14	12.52	8.56	12.90	8.43	13.28	8.30	14.04	8.62		

Heat Mode

Outdoor air temp.		Indoor air temperature ℃CDB				
℃CDB	℃CWB	16	18	20	22	24
-14.7	-15	16.15	16.07	16.00	15.93	15.85
-9.6	-10	16.28	16.20	16.13	16.03	15.95
-3.4	-4	16.63	16.53	16.44	16.34	16.25
1.8	1	16.92	16.80	16.70	16.60	16.50
4.9	4	17.12	16.99	16.89	16.79	16.69
7.0	6	16.25	16.12	16.00	15.90	15.81
11.2	10	17.78	17.65	17.50	17.37	17.25

PFA003Z917

(b) Twin type

Model FDEN71VNXPVD Indoor unit FDEN40VD (2 units) Outdoor unit FDC71VNX

Cool Mode

Outdoor air temp.	Indoor air temperature											
	23℃CDB 16℃CWB		26℃CDB 18℃CWB		27℃CDB 19℃CWB		28℃CDB 20℃CWB		31℃CDB 22℃CWB		33℃CDB 24℃CWB	
℃CDB	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
20	6.96	5.68	7.39	6.04	7.61	5.96	7.84	5.88	8.31	6.21	8.78	6.02
25	6.86	5.64	7.44	6.06	7.72	6.00	7.98	5.92	8.49	6.25	8.91	6.04
30	6.67	5.58	7.17	5.98	7.41	5.91	7.67	5.84	8.14	6.17		
35	6.43	5.50	6.88	5.89	7.10	5.82	7.31	5.74	7.74	6.08		
40	6.00	5.36	6.50	5.78	6.75	5.72	6.94	5.65	7.34	5.99		
43	5.68	5.26	6.19	5.69	6.45	5.64	6.68	5.58	7.14	5.95		

Heat Mode

Outdoor air temp.		Indoor air temperature ℃CDB				
℃CDB	℃CWB	16	18	20	22	24
-14.7	-15	4.53	4.51	4.50	4.48	4.46
-9.6	-10	5.11	5.09	5.06	5.03	5.00
-3.4	-4	5.69	5.66	5.62	5.59	5.55
1.8	1	6.13	6.09	6.04	6.00	5.96
4.9	4	7.78	7.71	7.52	6.92	6.56
7.0	6	8.16	8.08	8.00	7.80	7.52
11.2	10	8.86	8.75	8.64	8.52	8.41

PFA003Z917

Note(1) These data show average statuses.
Depending on the system control, there may be ranges where the operation is not conducted continuously.
(2) Capacities are based on the following conditions.
Corresponding refrigerant piping length :7.5m
Level difference of Zero.
(3) Symbols are as follows.
TC : Total cooling capacity (kW)
SHC : Sensible heat capacity (kW)
HC : Heating capacity (kW)

Model FDEN100VNXPVD Indoor unit FDEN50VD (2 units) Outdoor unit FDC100VNX

Cool Mode

Outdoor air temp.	Indoor air temperature											
	23℃CDB 16℃CWB		26℃CDB 18℃CWB		27℃CDB 19℃CWB		28℃CDB 20℃CWB		31℃CDB 22℃CWB		33℃CDB 24℃CWB	
℃CDB	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
20	9.66	6.66	10.26	6.98	10.56	6.88	10.87	6.76	11.48	7.02	12.24	6.79
25	9.77	6.70	10.37	7.02	10.67	6.91	10.97	6.80	11.58	7.05	12.49	6.85
30	9.46	6.58	10.04	6.91	10.34	6.80	10.63	6.69	11.21	6.95		
35	9.14	6.46	9.71	6.79	10.00	6.69	10.29	6.59	10.86	6.85		
40	8.69	6.29	9.24	6.63	9.52	6.54	9.81	6.44	10.36	6.72		
43	8.40	6.18	8.94	6.53	9.21	6.44	9.49	6.35	10.03	6.63		

Heat Mode

Outdoor air temp.		Indoor air temperature ℃CDB				
℃CDB	℃CWB	16	18	20	22	24
-14.7	-15	8.12	8.09	8.05	8.01	7.97
-9.6	-10	9.01	8.97	8.93	8.87	8.83
-3.4	-4	10.29	10.22	10.17	10.11	10.05
1.8	1	11.35	11.27	11.20	11.13	11.06
4.9	4	11.96	11.87	11.80	11.73	11.66
7.0	6	11.37	11.28	11.20	11.13	11.07
11.2	10	12.45	12.35	12.25	12.16	12.07

PFA003Z917

Model FDEN100VSXPVD Indoor unit FDEN50VD (2 units) Outdoor unit FDC100VSX

Cool Mode

Outdoor air temp.	Indoor air temperature											
	23℃CDB 16℃CWB		26℃CDB 18℃CWB		27℃CDB 19℃CWB		28℃CDB 20℃CWB		31℃CDB 22℃CWB		33℃CDB 24℃CWB	
℃CDB	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
20	9.66	6.66	10.26	6.98	10.56	6.88	10.87	6.76	11.48	7.02	12.24	6.79
25	9.77	6.70	10.37	7.02	10.67	6.91	10.97	6.80	11.58	7.05	12.49	6.85
30	9.46	6.58	10.04	6.91	10.34	6.80	10.63	6.69	11.21	6.95		
35	9.14	6.46	9.71	6.79	10.00	6.69	10.29	6.59	10.86	6.85		
40	8.69	6.29	9.24	6.63	9.52	6.54	9.81	6.44	10.36	6.72		
43	8.40	6.18	8.94	6.53	9.21	6.44	9.49	6.35	10.03	6.63		

Heat Mode

Outdoor air temp.		Indoor air temperature ℃CDB				
℃CDB	℃CWB	16	18	20	22	24
-14.7	-15	11.30	11.25	11.20	11.15	11.09
-9.6	-10	11.39	11.34	11.29	11.22	11.17
-3.4	-4	11.64	11.57	11.51	11.44	11.37
1.8	1	11.85	11.76	11.69	11.62	11.55
4.9	4	11.98	11.89	11.83	11.75	11.68
7.0	6	11.37	11.28	11.20	11.13	11.07
11.2	10	12.45	12.35	12.25	12.16	12.07

PFA003Z917

Model FDEN125VNXPVD Indoor unit FDEN60VD (2 units) Outdoor unit FDC125VNX

Cool Mode

Outdoor air temp.	Indoor air temperature											
	23℃CDB 16℃CWB		26℃CDB 18℃CWB		27℃CDB 19℃CWB		28℃CDB 20℃CWB		31℃CDB 22℃CWB		33℃CDB 24℃CWB	
℃CDB	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
20	12.07	9.71	12.83	10.33	13.21	10.19	13.59	10.04	14.35	10.58	15.30	10.27
25	12.21	9.75	12.96	10.37	13.34	10.23	13.71	10.08	14.47	10.61	15.62	10.34
30	11.82	9.62	12.55	10.24	12.92	10.11	13.29	9.96	14.02	10.50		
35	11.43	9.49	12.14	10.12	12.50	9.99	12.86	9.85	13.57	10.40		
40	10.86	9.30	11.55	9.94	11.90	9.82	12.26	9.69	12.96	10.26		
43	10.50	9.18	11.18	9.84	11.52	9.71	11.86	9.59	12.54	10.16		

Heat Mode

Outdoor air temp.		Indoor air temperature ℃CDB				
℃CDB	℃CWB	16	18	20	22	24
-14.7	-15	10.16	10.11	10.06	10.02	9.97
-9.6	-10	11.26	11.21	11.16	11.09	11.04
-3.4	-4	12.86	12.78	12.71	12.63	12.56
1.8	1	14.19	14.08	14.00	13.91	13.83
4.9	4	14.95	14.84	14.75	14.66	14.57
7.0	6	14.22	14.11	14.00	13.92	13.83
11.2	10	15.56	15.44	15.31	15.20	15.09

PFA003Z917

Model FDEN125VSXPVD Indoor unit FDEN60VD (2 units) Outdoor unit FDC125VSX

Cool Mode

Outdoor air temp.	Indoor air temperature											
	23℃CDB 16℃CWB		26℃CDB 18℃CWB		27℃CDB 19℃CWB		28℃CDB 20℃CWB		31℃CDB 22℃CWB		33℃CDB 24℃CWB	
℃CDB	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
20	12.07	9.71	12.83	10.33	13.21	10.19	13.59	10.04	14.35	10.58	15.30	10.27
25	12.21	9.75	12.96	10.37	13.34	10.23	13.71	10.08	14.47	10.61	15.62	10.34
30	11.82	9.62	12.55	10.24	12.92	10.11	13.29	9.96	14.02	10.50		
35	11.43	9.49	12.14	10.12	12.50	9.99	12.86	9.85	13.57	10.40		
40	10.86	9.30	11.55	9.94	11.90	9.82	12.26	9.69	12.96	10.26		
43	10.50	9.18	11.18	9.84	11.52	9.71	11.86	9.59	12.54	10.16		

Heat Mode

Outdoor air temp.		Indoor air temperature ℃CDB				
℃CDB	℃CWB	16	18	20	22	24
-14.7	-15	14.13	14.06	14.00	13.94	13.86
-9.6	-10	14.24	14.18	14.11	14.03	13.96
-3.4	-4	14.55	14.46	14.38	14.30	14.22
1.8	1	14.81	14.70	14.61	14.52	14.43
4.9	4	14.98	14.87	14.78	14.69	14.60
7.0	6	14.22	14.11	14.00	13.92	13.83
11.2	10	15.56	15.44	15.31	15.20	15.09

PFA003Z917

Note(1) These data show average statuses.
Depending on the system control, there may be ranges where the operation is not conducted continuously.
(2) Capacities are based on the following conditions.
Corresponding refrigerant piping length :7.5m
Level difference of Zero.
(3) Symbols are as follows.
TC : Total cooling capacity (kW)
SHC : Sensible heat capacity (kW)
HC : Heating capacity (kW)

Model FDEN140VNXPVD Indoor unit FDEN71VD (2 units) Outdoor unit FDC140VNX

Cool Mode

Outdoor air temp.	Indoor air temperature											
	23℃CDB 16℃CWB		26℃CDB 18℃CWB		27℃CDB 19℃CWB		28℃CDB 20℃CWB		31℃CDB 22℃CWB		33℃CDB 24℃CWB	
℃CDB	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
20	13.52	10.21	14.37	10.81	14.79	10.66	15.22	10.50	16.07	11.00	17.14	10.66
25	13.68	10.27	14.52	10.86	14.94	10.70	15.36	10.54	16.21	11.03	17.49	10.74
30	13.24	10.11	14.06	10.71	14.47	10.56	14.88	10.40	15.70	10.91		
35	12.80	9.96	13.60	10.57	14.00	10.42	14.40	10.27	15.20	10.78		
40	12.16	9.74	12.94	10.36	13.33	10.22	13.73	10.08	14.51	10.62		
43	11.76	9.60	12.52	10.23	12.90	10.10	13.28	9.96	14.04	10.51		

Heat Mode

Outdoor air temp.		Indoor air temperature ℃CDB				
℃CDB	℃CWB	16	18	20	22	24
-14.7	-15	11.61	11.55	11.50	11.45	11.39
-9.6	-10	12.87	12.81	12.75	12.68	12.61
-3.4	-4	14.69	14.60	14.52	14.44	14.35
1.8	1	16.21	16.09	16.00	15.90	15.80
4.9	4	17.08	16.95	16.86	16.75	16.65
7.0	6	16.25	16.12	16.00	15.90	15.81
11.2	10	17.78	17.65	17.50	17.37	17.25

PFA003Z917

Model FDEN140VSXPVD Indoor unit FDEN71VD (2 units) Outdoor unit FDC140VSX

Cool Mode

Outdoor air temp.	Indoor air temperature											
	23℃CDB 16℃CWB		26℃CDB 18℃CWB		27℃CDB 19℃CWB		28℃CDB 20℃CWB		31℃CDB 22℃CWB		33℃CDB 24℃CWB	
℃CDB	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
20	13.52	10.21	14.37	10.81	14.79	10.66	15.22	10.50	16.07	11.00	17.14	10.66
25	13.68	10.27	14.52	10.86	14.94	10.70	15.36	10.54	16.21	11.03	17.49	10.74
30	13.24	10.11	14.06	10.71	14.47	10.56	14.88	10.40	15.70	10.91		
35	12.80	9.96	13.60	10.57	14.00	10.42	14.40	10.27	15.20	10.78		
40	12.16	9.74	12.94	10.36	13.33	10.22	13.73	10.08	14.51	10.62		
43	11.76	9.60	12.52	10.23	12.90	10.10	13.28	9.96	14.04	10.51		

Heat Mode

Outdoor air temp.		Indoor air temperature ℃CDB				
℃CDB	℃CWB	16	18	20	22	24
-14.7	-15	16.15	16.07	16.00	15.93	15.85
-9.6	-10	16.28	16.20	16.13	16.03	15.95
-3.4	-4	16.63	16.53	16.44	16.34	16.25
1.8	1	16.92	16.80	16.70	16.60	16.50
4.9	4	17.12	16.99	16.89	16.79	16.69
7.0	6	16.25	16.12	16.00	15.90	15.81
11.2	10	17.78	17.65	17.50	17.37	17.25

PFA003Z917

(c) Triple type

Model FDEN140VNXTVD Indoor unit FDEN50VD (3 units) Outdoor unit FDC140VNX

Cool Mode

Outdoor air temp.	Indoor air temperature											
	23℃CDB 16℃CWB		26℃CDB 18℃CWB		27℃CDB 19℃CWB		28℃CDB 20℃CWB		31℃CDB 22℃CWB		33℃CDB 24℃CWB	
℃CDB	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
20	13.52	9.61	14.37	10.12	14.79	9.97	15.22	9.81	16.07	10.22	17.14	9.89
25	13.68	9.67	14.52	10.17	14.94	10.02	15.36	9.85	16.21	10.26	17.49	9.97
30	13.24	9.51	14.06	10.02	14.47	9.87	14.88	9.71	15.70	10.12		
35	12.80	9.35	13.60	9.86	14.00	9.72	14.40	9.57	15.20	9.99		
40	12.16	9.11	12.94	9.65	13.33	9.51	13.73	9.37	14.51	9.82		
43	11.76	8.97	12.52	9.51	12.90	9.38	13.28	9.24	14.04	9.70		

Heat Mode

Outdoor air temp.		Indoor air temperature ℃CDB				
℃CDB	℃CWB	16	18	20	22	24
-14.7	-15	11.61	11.55	11.50	11.45	11.39
-9.6	-10	12.87	12.81	12.75	12.68	12.61
-3.4	-4	14.69	14.60	14.52	14.44	14.35
1.8	1	16.21	16.09	16.00	15.90	15.80
4.9	4	17.08	16.95	16.86	16.75	16.65
7.0	6	16.25	16.12	16.00	15.90	15.81
11.2	10	17.78	17.65	17.50	17.37	17.25

PFA003Z917

Model FDEN140VSXTVD Indoor unit FDEN50VD (3 units) Outdoor unit FDC140VSX

Cool Mode

Outdoor air temp.	Indoor air temperature											
	23℃CDB 16℃CWB		26℃CDB 18℃CWB		27℃CDB 19℃CWB		28℃CDB 20℃CWB		31℃CDB 22℃CWB		33℃CDB 24℃CWB	
℃CDB	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
20	13.52	9.61	14.37	10.12	14.79	9.97	15.22	9.81	16.07	10.22	17.14	9.89
25	13.68	9.67	14.52	10.17	14.94	10.02	15.36	9.85	16.21	10.26	17.49	9.97
30	13.24	9.51	14.06	10.02	14.47	9.87	14.88	9.71	15.70	10.12		
35	12.80	9.35	13.60	9.86	14.00	9.72	14.40	9.57	15.20	9.99		
40	12.16	9.11	12.94	9.65	13.33	9.51	13.73	9.37	14.51	9.82		
43	11.76	8.97	12.52	9.51	12.90	9.38	13.28	9.24	14.04	9.70		

Heat Mode

Outdoor air temp.		Indoor air temperature ℃CDB				
℃CDB	℃CWB	16	18	20	22	24
-14.7	-15	16.15	16.07	16.00	15.93	15.85
-9.6	-10	16.28	16.20	16.13	16.03	15.95
-3.4	-4	16.63	16.53	16.44	16.34	16.25
1.8	1	16.92	16.80	16.70	16.60	16.50
4.9	4	17.12	16.99	16.89	16.79	16.69
7.0	6	16.25	16.12	16.00	15.90	15.81
11.2	10	17.78	17.65	17.50	17.37	17.25

PFA003Z917

Note(1) These data show average statuses.
Depending on the system control, there may be ranges where the operation is not conducted continuously.
(2) Capacities are based on the following conditions.
Corresponding refrigerant piping length :7.5m
Level difference of Zero.
(3) Symbols are as follows.
TC : Total cooling capacity (kW)
SHC : Sensible heat capacity (kW)
HC : Heating capacity (kW)

(4) Duct connected-Low/Middle static pressure type (FDUM)

(a) Single type

Model FDUM71VNXVD Indoor unit FDUM71VD Outdoor unit FDC71VNX

Cool Mode

Outdoor air temp.	Indoor air temperature											
	23℃CDB 16℃CWB		26℃CDB 18℃CWB		27℃CDB 19℃CWB		28℃CDB 20℃CWB		31℃CDB 22℃CWB		33℃CDB 24℃CWB	
℃CDB	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
20	6.96	5.30	7.39	5.61	7.61	5.53	7.84	5.45	8.31	5.73	8.78	5.54
25	6.86	5.26	7.44	5.63	7.72	5.57	7.98	5.49	8.49	5.77	8.91	5.56
30	6.67	5.20	7.17	5.54	7.41	5.47	7.67	5.41	8.14	5.68		
35	6.43	5.11	6.88	5.45	7.10	5.38	7.31	5.31	7.74	5.59		
40	6.00	4.97	6.50	5.34	6.75	5.28	6.94	5.21	7.34	5.49		
43	5.68	4.86	6.19	5.24	6.45	5.20	6.68	5.14	7.14	5.45		

Heat Mode

Outdoor air temp.		Indoor air temperature ℃CDB				
℃CDB	℃CWB	16	18	20	22	24
-14.7	-15	4.53	4.51	4.50	4.48	4.46
-9.6	-10	5.11	5.09	5.06	5.03	5.00
-3.4	-4	5.69	5.66	5.62	5.59	5.55
1.8	1	6.13	6.09	6.04	6.00	5.96
4.9	4	7.78	7.71	7.52	6.92	6.56
7.0	6	8.16	8.08	8.00	7.80	7.52
11.2	10	8.86	8.75	8.64	8.52	8.41

PJR002Z409

Model FDUM100VNXVD Indoor unit FDUM100VD Outdoor unit FDC100VNX

Cool Mode

Outdoor air temp.	Indoor air temperature											
	23℃CDB 16℃CWB		26℃CDB 18℃CWB		27℃CDB 19℃CWB		28℃CDB 20℃CWB		31℃CDB 22℃CWB		33℃CDB 24℃CWB	
℃CDB	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
20	9.66	7.90	10.26	8.41	10.56	8.31	10.87	8.22	11.48	8.66	12.24	8.46
25	9.77	7.94	10.37	8.44	10.67	8.35	10.97	8.25	11.58	8.69	12.49	8.52
30	9.46	7.83	10.04	8.33	10.34	8.24	10.63	8.14	11.21	8.59		
35	9.14	7.71	9.71	8.22	10.00	8.14	10.29	8.04	10.86	8.50		
40	8.69	7.55	9.24	8.07	9.52	7.99	9.81	7.90	10.36	8.36		
43	8.40	7.44	8.94	7.97	9.21	7.89	9.49	7.81	10.03	8.28		

Heat Mode

Outdoor air temp.		Indoor air temperature ℃CDB				
℃CDB	℃CWB	16	18	20	22	24
-14.7	-15	8.12	8.09	8.05	8.01	7.97
-9.6	-10	9.01	8.97	8.93	8.87	8.83
-3.4	-4	10.29	10.22	10.17	10.11	10.05
1.8	1	11.35	11.27	11.20	11.13	11.06
4.9	4	11.96	11.87	11.80	11.73	11.66
7.0	6	11.37	11.28	11.20	11.13	11.07
11.2	10	12.45	12.35	12.25	12.16	12.07

PJR002Z409

Model FDUM100VSXVD Indoor unit FDUM100VD Outdoor unit FDC100VSX

Cool Mode

Outdoor air temp.	Indoor air temperature											
	23℃CDB 16℃CWB		26℃CDB 18℃CWB		27℃CDB 19℃CWB		28℃CDB 20℃CWB		31℃CDB 22℃CWB		33℃CDB 24℃CWB	
℃CDB	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
20	9.66	7.90	10.26	8.41	10.56	8.31	10.87	8.22	11.48	8.66	12.24	8.46
25	9.77	7.94	10.37	8.44	10.67	8.35	10.97	8.25	11.58	8.69	12.49	8.52
30	9.46	7.83	10.04	8.33	10.34	8.24	10.63	8.14	11.21	8.59		
35	9.14	7.71	9.71	8.22	10.00	8.14	10.29	8.04	10.86	8.50		
40	8.69	7.55	9.24	8.07	9.52	7.99	9.81	7.90	10.36	8.36		
43	8.40	7.44	8.94	7.97	9.21	7.89	9.49	7.81	10.03	8.28		

Heat Mode

Outdoor air temp.		Indoor air temperature ℃CDB				
℃CDB	℃CWB	16	18	20	22	24
-14.7	-15	11.30	11.25	11.20	11.15	11.09
-9.6	-10	11.39	11.34	11.29	11.22	11.17
-3.4	-4	11.64	11.57	11.51	11.44	11.37
1.8	1	11.85	11.76	11.69	11.62	11.55
4.9	4	11.98	11.89	11.83	11.75	11.68
7.0	6	11.37	11.28	11.20	11.13	11.07
11.2	10	12.45	12.35	12.25	12.16	12.07

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Model FDUM125VNXVD Indoor unit FDUM125VD Outdoor unit FDC125VNX

Cool Mode

Outdoor air temp.	Indoor air temperature											
	23℃CDB 16℃CWB		26℃CDB 18℃CWB		27℃CDB 19℃CWB		28℃CDB 20℃CWB		31℃CDB 22℃CWB		33℃CDB 24℃CWB	
℃CDB	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
20	12.07	9.14	12.83	9.66	13.21	9.57	13.59	9.47	14.35	9.91	15.30	9.72
25	12.21	9.20	12.96	9.71	13.34	9.62	13.71	9.51	14.47	9.95	15.62	9.81
30	11.82	9.04	12.55	9.55	12.92	9.46	13.29	9.36	14.02	9.80		
35	11.43	8.87	12.14	9.39	12.50	9.31	12.86	9.21	13.57	9.66		
40	10.86	8.64	11.55	9.17	11.90	9.09	12.26	9.01	12.96	9.47		
43	10.50	8.50	11.18	9.04	11.52	8.96	11.86	8.87	12.54	9.34		

Heat Mode

Outdoor air temp.		Indoor air temperature ℃CDB				
℃CDB	℃CWB	16	18	20	22	24
-14.7	-15	10.16	10.11	10.06	10.02	9.97
-9.6	-10	11.26	11.21	11.16	11.09	11.04
-3.4	-4	12.86	12.78	12.71	12.63	12.56
1.8	1	14.19	14.08	14.00	13.91	13.83
4.9	4	14.95	14.84	14.75	14.66	14.57
7.0	6	14.22	14.11	14.00	13.92	13.83
11.2	10	15.56	15.44	15.31	15.20	15.09

PJR002Z409

Note(1) These data show average statuses.
Depending on the system control, there may be ranges where the operation is not conducted continuously.
(2) Capacities are based on the following conditions.
Corresponding refrigerant piping length :7.5m
Level difference of Zero.
(3) Symbols are as follows.
TC : Total cooling capacity (kW)
SHC : Sensible heat capacity (kW)
HC : Heating capacity (kW)

Model FDUM125VSXVD Indoor unit FDUM125VD Outdoor unit FDC125VSX

Cool Mode

Outdoor air temp.	Indoor air temperature											
	23℃CDB 16℃CWB		26℃CDB 18℃CWB		27℃CDB 19℃CWB		28℃CDB 20℃CWB		31℃CDB 22℃CWB		33℃CDB 24℃CWB	
℃CDB	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
20	12.07	9.14	12.83	9.66	13.21	9.57	13.59	9.47	14.35	9.91	15.30	9.72
25	12.21	9.20	12.96	9.71	13.34	9.62	13.71	9.51	14.47	9.95	15.62	9.81
30	11.82	9.04	12.55	9.55	12.92	9.46	13.29	9.36	14.02	9.80		
35	11.43	8.87	12.14	9.39	12.50	9.31	12.86	9.21	13.57	9.66		
40	10.86	8.64	11.55	9.17	11.90	9.09	12.26	9.01	12.96	9.47		
43	10.50	8.50	11.18	9.04	11.52	8.96	11.86	8.87	12.54	9.34		

Heat Mode

Outdoor air temp.		Indoor air temperature ℃CDB				
℃CDB	℃CWB	16	18	20	22	24
-14.7	-15	14.13	14.06	14.00	13.94	13.86
-9.6	-10	14.24	14.18	14.11	14.03	13.96
-3.4	-4	14.55	14.46	14.38	14.30	14.22
1.8	1	14.81	14.70	14.61	14.52	14.43
4.9	4	14.98	14.87	14.78	14.69	14.60
7.0	6	14.22	14.11	14.00	13.92	13.83
11.2	10	15.56	15.44	15.31	15.20	15.09

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Model FDUM140VNXVD Indoor unit FDUM140VD Outdoor unit FDC140VNX

Cool Mode

Outdoor air temp.	Indoor air temperature											
	23℃CDB 16℃CWB		26℃CDB 18℃CWB		27℃CDB 19℃CWB		28℃CDB 20℃CWB		31℃CDB 22℃CWB		33℃CDB 24℃CWB	
℃CDB	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
20	13.52	9.76	14.37	10.27	14.79	10.17	15.22	10.06	16.07	10.48	17.14	10.27
25	13.68	9.83	14.52	10.33	14.94	10.23	15.36	10.11	16.21	10.52	17.49	10.38
30	13.24	9.64	14.06	10.14	14.47	10.04	14.88	9.94	15.70	10.35		
35	12.80	9.45	13.60	9.96	14.00	9.86	14.40	9.76	15.20	10.19		
40	12.16	9.18	12.94	9.70	13.33	9.61	13.73	9.52	14.51	9.96		
43	11.76	9.01	12.52	9.54	12.90	9.45	13.28	9.36	14.04	9.81		

Heat Mode

Outdoor air temp.		Indoor air temperature ℃CDB				
℃CDB	℃CWB	16	18	20	22	24
-14.7	-15	11.61	11.55	11.50	11.45	11.39
-9.6	-10	12.87	12.81	12.75	12.68	12.61
-3.4	-4	14.69	14.60	14.52	14.44	14.35
1.8	1	16.21	16.09	16.00	15.90	15.80
4.9	4	17.08	16.95	16.86	16.75	16.65
7.0	6	16.25	16.12	16.00	15.90	15.81
11.2	10	17.78	17.65	17.50	17.37	17.25

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Model FDUM140VSXVD Indoor unit FDUM140VD Outdoor unit FDC140VSX

Cool Mode

Outdoor air temp.	Indoor air temperature											
	23℃CDB 16℃CWB		26℃CDB 18℃CWB		27℃CDB 19℃CWB		28℃CDB 20℃CWB		31℃CDB 22℃CWB		33℃CDB 24℃CWB	
℃CDB	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
20	13.52	9.76	14.37	10.27	14.79	10.17	15.22	10.06	16.07	10.48	17.14	10.27
25	13.68	9.83	14.52	10.33	14.94	10.23	15.36	10.11	16.21	10.52	17.49	10.38
30	13.24	9.64	14.06	10.14	14.47	10.04	14.88	9.94	15.70	10.35		
35	12.80	9.45	13.60	9.96	14.00	9.86	14.40	9.76	15.20	10.19		
40	12.16	9.18	12.94	9.70	13.33	9.61	13.73	9.52	14.51	9.96		
43	11.76	9.01	12.52	9.54	12.90	9.45	13.28	9.36	14.04	9.81		

Heat Mode

Outdoor air temp.		Indoor air temperature ℃CDB				
℃CDB	℃CWB	16	18	20	22	24
-14.7	-15	16.15	16.07	16.00	15.93	15.85
-9.6	-10	16.28	16.20	16.13	16.03	15.95
-3.4	-4	16.63	16.53	16.44	16.34	16.25
1.8	1	16.92	16.80	16.70	16.60	16.50
4.9	4	17.12	16.99	16.89	16.79	16.69
7.0	6	16.25	16.12	16.00	15.90	15.81
11.2	10	17.78	17.65	17.50	17.37	17.25

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(b) Twin type

Model FDUM100VNXPVD Indoor unit FDUM50VD (2 units) Outdoor unit FDC100VNX

Cool Mode

Outdoor air temp.	Indoor air temperature											
	23℃CDB 16℃CWB		26℃CDB 18℃CWB		27℃CDB 19℃CWB		28℃CDB 20℃CWB		31℃CDB 22℃CWB		33℃CDB 24℃CWB	
℃CDB	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
20	9.66	8.16	10.26	8.70	10.56	8.62	10.87	8.54	11.48	9.02	12.24	8.86
25	9.77	8.21	10.37	8.74	10.67	8.66	10.97	8.58	11.58	9.05	12.49	8.93
30	9.46	8.08	10.04	8.62	10.34	8.55	10.63	8.47	11.21	8.94		
35	9.14	7.96	9.71	8.50	10.00	8.43	10.29	8.35	10.86	8.84		
40	8.69	7.79	9.24	8.34	9.52	8.27	9.81	8.20	10.36	8.69		
43	8.40	7.68	8.94	8.23	9.21	8.17	9.49	8.10	10.03	8.60		

Heat Mode

Outdoor air temp.		Indoor air temperature ℃CDB				
℃CDB	℃CWB	16	18	20	22	24
-14.7	-15	8.12	8.09	8.05	8.01	7.97
-9.6	-10	9.01	8.97	8.93	8.87	8.83
-3.4	-4	10.29	10.22	10.17	10.11	10.05
1.8	1	11.35	11.27	11.20	11.13	11.06
4.9	4	11.96	11.87	11.80	11.73	11.66
7.0	6	11.37	11.28	11.20	11.13	11.07
11.2	10	12.45	12.35	12.25	12.16	12.07

PJR002Z409

Note(1) These data show average statuses.
Depending on the system control, there may be ranges where the operation is not conducted continuously.
(2) Capacities are based on the following conditions.
Corresponding refrigerant piping length :7.5m
Level difference of Zero.
(3) Symbols are as follows.
TC : Total cooling capacity (kW)
SHC : Sensible heat capacity (kW)
HC : Heating capacity (kW)

Model FDUM100VSXPVD Indoor unit FDUM50VD (2 units) Outdoor unit FDC100VSX

Cool Mode

Outdoor air temp.	Indoor air temperature											
	23℃CDB 16℃CWB		26℃CDB 18℃CWB		27℃CDB 19℃CWB		28℃CDB 20℃CWB		31℃CDB 22℃CWB		33℃CDB 24℃CWB	
℃CDB	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
20	9.66	8.16	10.26	8.70	10.56	8.62	10.87	8.54	11.48	9.02	12.24	8.86
25	9.77	8.21	10.37	8.74	10.67	8.66	10.97	8.58	11.58	9.05	12.49	8.93
30	9.46	8.08	10.04	8.62	10.34	8.55	10.63	8.47	11.21	8.94		
35	9.14	7.96	9.71	8.50	10.00	8.43	10.29	8.35	10.86	8.84		
40	8.69	7.79	9.24	8.34	9.52	8.27	9.81	8.20	10.36	8.69		
43	8.40	7.68	8.94	8.23	9.21	8.17	9.49	8.10	10.03	8.60		

Heat Mode

Outdoor air temp.		Indoor air temperature ℃CDB				
℃CDB	℃CWB	16	18	20	22	24
-14.7	-15	11.30	11.25	11.20	11.15	11.09
-9.6	-10	11.39	11.34	11.29	11.22	11.17
-3.4	-4	11.64	11.57	11.51	11.44	11.37
1.8	1	11.85	11.76	11.69	11.62	11.55
4.9	4	11.98	11.89	11.83	11.75	11.68
7.0	6	11.37	11.28	11.20	11.13	11.07
11.2	10	12.45	12.35	12.25	12.16	12.07

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Model FDUM125VNXPVD Indoor unit FDUM60VD (2 units) Outdoor unit FDC125VNX

Cool Mode

Outdoor air temp.	Indoor air temperature											
	23℃CDB 16℃CWB		26℃CDB 18℃CWB		27℃CDB 19℃CWB		28℃CDB 20℃CWB		31℃CDB 22℃CWB		33℃CDB 24℃CWB	
℃CDB	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
20	12.07	9.31	12.83	9.85	13.21	9.76	13.59	9.65	14.35	10.12	15.30	9.91
25	12.21	9.36	12.96	9.90	13.34	9.80	13.71	9.69	14.47	10.15	15.62	10.00
30	11.82	9.20	12.55	9.75	12.92	9.65	13.29	9.55	14.02	10.02		
35	11.43	9.05	12.14	9.60	12.50	9.50	12.86	9.41	13.57	9.88		
40	10.86	8.82	11.55	9.38	11.90	9.30	12.26	9.21	12.96	9.70		
43	10.50	8.68	11.18	9.25	11.52	9.17	11.86	9.08	12.54	9.57		

Heat Mode

Outdoor air temp.		Indoor air temperature ℃CDB				
℃CDB	℃CWB	16	18	20	22	24
-14.7	-15	10.16	10.11	10.06	10.02	9.97
-9.6	-10	11.26	11.21	11.16	11.09	11.04
-3.4	-4	12.86	12.78	12.71	12.63	12.56
1.8	1	14.19	14.08	14.00	13.91	13.83
4.9	4	14.95	14.84	14.75	14.66	14.57
7.0	6	14.22	14.11	14.00	13.92	13.83
11.2	10	15.56	15.44	15.31	15.20	15.09

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Model FDUM125VSXPVD Indoor unit FDUM60VD (2 units) Outdoor unit FDC125VSX

Cool Mode

Outdoor air temp.	Indoor air temperature											
	23℃CDB 16℃CWB		26℃CDB 18℃CWB		27℃CDB 19℃CWB		28℃CDB 20℃CWB		31℃CDB 22℃CWB		33℃CDB 24℃CWB	
℃CDB	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
20	12.07	9.31	12.83	9.85	13.21	9.76	13.59	9.65	14.35	10.12	15.30	9.91
25	12.21	9.36	12.96	9.90	13.34	9.80	13.71	9.69	14.47	10.15	15.62	10.00
30	11.82	9.20	12.55	9.75	12.92	9.65	13.29	9.55	14.02	10.02		
35	11.43	9.05	12.14	9.60	12.50	9.50	12.86	9.41	13.57	9.88		
40	10.86	8.82	11.55	9.38	11.90	9.30	12.26	9.21	12.96	9.70		
43	10.50	8.68	11.18	9.25	11.52	9.17	11.86	9.08	12.54	9.57		

Heat Mode

Outdoor air temp.		Indoor air temperature ℃CDB				
℃CDB	℃CWB	16	18	20	22	24
-14.7	-15	14.13	14.06	14.00	13.94	13.86
-9.6	-10	14.24	14.18	14.11	14.03	13.96
-3.4	-4	14.55	14.46	14.38	14.30	14.22
1.8	1	14.81	14.70	14.61	14.52	14.43
4.9	4	14.98	14.87	14.78	14.69	14.60
7.0	6	14.22	14.11	14.00	13.92	13.83
11.2	10	15.56	15.44	15.31	15.20	15.09

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Model FDUM140VNXPVD Indoor unit FDUM71VD (2 units) Outdoor unit FDC140VNX

Cool Mode

Outdoor air temp.	Indoor air temperature											
	23℃CDB 16℃CWB		26℃CDB 18℃CWB		27℃CDB 19℃CWB		28℃CDB 20℃CWB		31℃CDB 22℃CWB		33℃CDB 24℃CWB	
℃CDB	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
20	13.52	10.46	14.37	11.09	14.79	10.94	15.22	10.78	16.07	11.32	17.14	10.98
25	13.68	10.52	14.52	11.14	14.94	10.98	15.36	10.82	16.21	11.35	17.49	11.06
30	13.24	10.36	14.06	11.00	14.47	10.84	14.88	10.68	15.70	11.23		
35	12.80	10.21	13.60	10.85	14.00	10.71	14.40	10.55	15.20	11.11		
40	12.16	9.99	12.94	10.65	13.33	10.51	13.73	10.37	14.51	10.94		
43	11.76	9.86	12.52	10.53	12.90	10.39	13.28	10.25	14.04	10.84		

Heat Mode

Outdoor air temp.		Indoor air temperature ℃CDB				
℃CDB	℃CWB	16	18	20	22	24
-14.7	-15	11.61	11.55	11.50	11.45	11.39
-9.6	-10	12.87	12.81	12.75	12.68	12.61
-3.4	-4	14.69	14.60	14.52	14.44	14.35
1.8	1	16.21	16.09	16.00	15.90	15.80
4.9	4	17.08	16.95	16.86	16.75	16.65
7.0	6	16.25	16.12	16.00	15.90	15.81
11.2	10	17.78	17.65	17.50	17.37	17.25

PJR002Z409

Note(1) These data show average statuses.
Depending on the system control, there may be ranges where the operation is not conducted continuously.
(2) Capacities are based on the following conditions.
Corresponding refrigerant piping length :7.5m
Level difference of Zero.
(3) Symbols are as follows.
TC : Total cooling capacity (kW)
SHC : Sensible heat capacity (kW)
HC : Heating capacity (kW)

Model FDUM140VSXPVD Indoor unit FDUM71VD (2 units) Outdoor unit FDC140VSX

Cool Mode

Outdoor air temp.	Indoor air temperature											
	23℃CDB 16℃CWB		26℃CDB 18℃CWB		27℃CDB 19℃CWB		28℃CDB 20℃CWB		31℃CDB 22℃CWB		33℃CDB 24℃CWB	
℃CDB	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
20	13.52	10.46	14.37	11.09	14.79	10.94	15.22	10.78	16.07	11.32	17.14	10.98
25	13.68	10.52	14.52	11.14	14.94	10.98	15.36	10.82	16.21	11.35	17.49	11.06
30	13.24	10.36	14.06	11.00	14.47	10.84	14.88	10.68	15.70	11.23		
35	12.80	10.21	13.60	10.85	14.00	10.71	14.40	10.55	15.20	11.11		
40	12.16	9.99	12.94	10.65	13.33	10.51	13.73	10.37	14.51	10.94		
43	11.76	9.86	12.52	10.53	12.90	10.39	13.28	10.25	14.04	10.84		

Heat Mode

Outdoor air temp.		Indoor air temperature ℃CDB				
℃CDB	℃CWB	16	18	20	22	24
-14.7	-15	16.15	16.07	16.00	15.93	15.85
-9.6	-10	16.28	16.20	16.13	16.03	15.95
-3.4	-4	16.63	16.53	16.44	16.34	16.25
1.8	1	16.92	16.80	16.70	16.60	16.50
4.9	4	17.12	16.99	16.89	16.79	16.69
7.0	6	16.25	16.12	16.00	15.90	15.81
11.2	10	17.78	17.65	17.50	17.37	17.25

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(c) Triple type

Model FDUM140VNXTVD Indoor unit FDUM50VD (3 units) Outdoor unit FDC140VNX

Cool Mode

Outdoor air temp.	Indoor air temperature											
	23℃CDB 16℃CWB		26℃CDB 18℃CWB		27℃CDB 19℃CWB		28℃CDB 20℃CWB		31℃CDB 22℃CWB		33℃CDB 24℃CWB	
℃CDB	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
20	13.52	10.72	14.37	11.37	14.79	11.26	15.22	11.15	16.07	11.72	17.14	11.50
25	13.68	10.78	14.52	11.43	14.94	11.32	15.36	11.20	16.21	11.76	17.49	11.60
30	13.24	10.60	14.06	11.25	14.47	11.15	14.88	11.04	15.70	11.60		
35	12.80	10.43	13.60	11.08	14.00	10.98	14.40	10.88	15.20	11.45		
40	12.16	10.17	12.94	10.84	13.33	10.75	13.73	10.65	14.51	11.24		
43	11.76	10.02	12.52	10.69	12.90	10.60	13.28	10.51	14.04	11.10		

Heat Mode

Outdoor air temp.		Indoor air temperature ℃CDB				
℃CDB	℃CWB	16	18	20	22	24
-14.7	-15	11.61	11.55	11.50	11.45	11.39
-9.6	-10	12.87	12.81	12.75	12.68	12.61
-3.4	-4	14.69	14.60	14.52	14.44	14.35
1.8	1	16.21	16.09	16.00	15.90	15.80
4.9	4	17.08	16.95	16.86	16.75	16.65
7.0	6	16.25	16.12	16.00	15.90	15.81
11.2	10	17.78	17.65	17.50	17.37	17.25

PJR002Z409

Model FDUM140VSXTVD Indoor unit FDUM50VD (3 units) Outdoor unit FDC140VSX

Cool Mode

Outdoor air temp.	Indoor air temperature											
	23℃CDB 16℃CWB		26℃CDB 18℃CWB		27℃CDB 19℃CWB		28℃CDB 20℃CWB		31℃CDB 22℃CWB		33℃CDB 24℃CWB	
℃CDB	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
20	13.52	10.72	14.37	11.37	14.79	11.26	15.22	11.15	16.07	11.72	17.14	11.50
25	13.68	10.78	14.52	11.43	14.94	11.32	15.36	11.20	16.21	11.76	17.49	11.60
30	13.24	10.60	14.06	11.25	14.47	11.15	14.88	11.04	15.70	11.60		
35	12.80	10.43	13.60	11.08	14.00	10.98	14.40	10.88	15.20	11.45		
40	12.16	10.17	12.94	10.84	13.33	10.75	13.73	10.65	14.51	11.24		
43	11.76	10.02	12.52	10.69	12.90	10.60	13.28	10.51	14.04	11.10		

Heat Mode

Outdoor air temp.		Indoor air temperature ℃CDB				
℃CDB	℃CWB	16	18	20	22	24
-14.7	-15	16.15	16.07	16.00	15.93	15.85
-9.6	-10	16.28	16.20	16.13	16.03	15.95
-3.4	-4	16.63	16.53	16.44	16.34	16.25
1.8	1	16.92	16.80	16.70	16.60	16.50
4.9	4	17.12	16.99	16.89	16.79	16.69
7.0	6	16.25	16.12	16.00	15.90	15.81
11.2	10	17.78	17.65	17.50	17.37	17.25

PJR002Z409

(5) Duct connected-High static pressure type (FDU)

(a) Single type

Model FDU71VNXVD Indoor unit FDU71VD Outdoor unit FDC71VNX

Cool Mode

Outdoor air temp.	Indoor air temperature											
	23℃CDB 16℃CWB		26℃CDB 18℃CWB		27℃CDB 19℃CWB		28℃CDB 20℃CWB		31℃CDB 22℃CWB		33℃CDB 24℃CWB	
℃CDB	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
20	6.96	5.80	7.39	6.18	7.61	6.12	7.84	6.06	8.31	6.40	8.78	6.24
25	6.86	5.77	7.44	6.20	7.72	6.16	7.98	6.10	8.49	6.45	8.91	6.28
30	6.67	5.70	7.17	6.11	7.41	6.06	7.67	6.00	8.14	6.35		
35	6.43	5.61	6.88	6.01	7.10	5.96	7.31	5.90	7.74	6.25		
40	6.00	5.45	6.50	5.89	6.75	5.85	6.94	5.79	7.34	6.14		
43	5.68	5.34	6.19	5.79	6.45	5.76	6.68	5.71	7.14	6.09		

Heat Mode

Outdoor air temp.		Indoor air temperature ℃CDB				
℃CDB	℃CWB	16	18	20	22	24
-14.7	-15	4.53	4.51	4.50	4.48	4.46
-9.6	-10	5.11	5.09	5.06	5.03	5.00
-3.4	-4	5.69	5.66	5.62	5.59	5.55
1.8	1	6.13	6.09	6.04	6.00	5.96
4.9	4	7.78	7.71	7.52	6.92	6.56
7.0	6	8.16	8.08	8.00	7.80	7.52
11.2	10	8.86	8.75	8.64	8.52	8.41

PJD001Z317

Note(1) These data show average statuses.
Depending on the system control, there may be ranges where the operation is not conducted continuously.
(2) Capacities are based on the following conditions.
Corresponding refrigerant piping length :7.5m
Level difference of Zero.
(3) Symbols are as follows.
TC : Total cooling capacity (kW)
SHC : Sensible heat capacity (kW)
HC : Heating capacity (kW)

Model FDU100VNXVD Indoor unit FDU100VD Outdoor unit FDC100VNX

Cool Mode

Outdoor air temp.	Indoor air temperature											
	23℃CDB 16℃CWB		26℃CDB 18℃CWB		27℃CDB 19℃CWB		28℃CDB 20℃CWB		31℃CDB 22℃CWB		33℃CDB 24℃CWB	
℃CDB	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
20	9.66	8.10	10.26	8.63	10.56	8.55	10.87	8.46	11.48	8.94	12.24	8.77
25	9.77	8.14	10.37	8.67	10.67	8.59	10.97	8.50	11.58	8.96	12.49	8.83
30	9.46	8.02	10.04	8.55	10.34	8.47	10.63	8.39	11.21	8.86		
35	9.14	7.90	9.71	8.44	10.00	8.36	10.29	8.28	10.86	8.76		
40	8.69	7.73	9.24	8.27	9.52	8.20	9.81	8.13	10.36	8.61		
43	8.40	7.62	8.94	8.17	9.21	8.10	9.49	8.03	10.03	8.52		

Heat Mode

Outdoor air temp.		Indoor air temperature ℃CDB				
℃CDB	℃CWB	16	18	20	22	24
-14.7	-15	8.12	8.09	8.05	8.01	7.97
-9.6	-10	9.01	8.97	8.93	8.87	8.83
-3.4	-4	10.29	10.22	10.17	10.11	10.05
1.8	1	11.35	11.27	11.20	11.13	11.06
4.9	4	11.96	11.87	11.80	11.73	11.66
7.0	6	11.37	11.28	11.20	11.13	11.07
11.2	10	12.45	12.35	12.25	12.16	12.07

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Model FDU100VSXVD Indoor unit FDU100VD Outdoor unit FDC100VSX

Cool Mode

Outdoor air temp.	Indoor air temperature											
	23℃CDB 16℃CWB		26℃CDB 18℃CWB		27℃CDB 19℃CWB		28℃CDB 20℃CWB		31℃CDB 22℃CWB		33℃CDB 24℃CWB	
℃CDB	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
20	9.66	8.10	10.26	8.63	10.56	8.55	10.87	8.46	11.48	8.94	12.24	8.77
25	9.77	8.14	10.37	8.67	10.67	8.59	10.97	8.50	11.58	8.96	12.49	8.83
30	9.46	8.02	10.04	8.55	10.34	8.47	10.63	8.39	11.21	8.86		
35	9.14	7.90	9.71	8.44	10.00	8.36	10.29	8.28	10.86	8.76		
40	8.69	7.73	9.24	8.27	9.52	8.20	9.81	8.13	10.36	8.61		
43	8.40	7.62	8.94	8.17	9.21	8.10	9.49	8.03	10.03	8.52		

Heat Mode

Outdoor air temp.		Indoor air temperature ℃CDB				
℃CDB	℃CWB	16	18	20	22	24
-14.7	-15	11.30	11.25	11.20	11.15	11.09
-9.6	-10	11.39	11.34	11.29	11.22	11.17
-3.4	-4	11.64	11.57	11.51	11.44	11.37
1.8	1	11.85	11.76	11.69	11.62	11.55
4.9	4	11.98	11.89	11.83	11.75	11.68
7.0	6	11.37	11.28	11.20	11.13	11.07
11.2	10	12.45	12.35	12.25	12.16	12.07

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Model FDU125VNXVD Indoor unit FDU125VD Outdoor unit FDC125VNX

Cool Mode

Outdoor air temp.	Indoor air temperature											
	23℃CDB 16℃CWB		26℃CDB 18℃CWB		27℃CDB 19℃CWB		28℃CDB 20℃CWB		31℃CDB 22℃CWB		33℃CDB 24℃CWB	
℃CDB	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
20	12.07	10.06	12.83	10.71	13.21	10.62	13.59	10.51	14.35	11.09	15.30	10.88
25	12.21	10.11	12.96	10.76	13.34	10.66	13.71	10.55	14.47	11.12	15.62	10.96
30	11.82	9.96	12.55	10.62	12.92	10.52	13.29	10.41	14.02	10.99		
35	11.43	9.81	12.14	10.47	12.50	10.38	12.86	10.27	13.57	10.86		
40	10.86	9.59	11.55	10.27	11.90	10.18	12.26	10.09	12.96	10.69		
43	10.50	9.46	11.18	10.14	11.52	10.05	11.86	9.96	12.54	10.57		

Heat Mode

Outdoor air temp.		Indoor air temperature ℃CDB				
℃CDB	℃CWB	16	18	20	22	24
-14.7	-15	10.16	10.11	10.06	10.02	9.97
-9.6	-10	11.26	11.21	11.16	11.09	11.04
-3.4	-4	12.86	12.78	12.71	12.63	12.56
1.8	1	14.19	14.08	14.00	13.91	13.83
4.9	4	14.95	14.84	14.75	14.66	14.57
7.0	6	14.22	14.11	14.00	13.92	13.83
11.2	10	15.56	15.44	15.31	15.20	15.09

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Model FDU125VSXVD Indoor unit FDU125VD Outdoor unit FDC125VSX

Cool Mode

Outdoor air temp.	Indoor air temperature											
	23℃CDB 16℃CWB		26℃CDB 18℃CWB		27℃CDB 19℃CWB		28℃CDB 20℃CWB		31℃CDB 22℃CWB		33℃CDB 24℃CWB	
℃CDB	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
20	12.07	10.06	12.83	10.71	13.21	10.62	13.59	10.51	14.35	11.09	15.30	10.88
25	12.21	10.11	12.96	10.76	13.34	10.66	13.71	10.55	14.47	11.12	15.62	10.96
30	11.82	9.96	12.55	10.62	12.92	10.52	13.29	10.41	14.02	10.99		
35	11.43	9.81	12.14	10.47	12.50	10.38	12.86	10.27	13.57	10.86		
40	10.86	9.59	11.55	10.27	11.90	10.18	12.26	10.09	12.96	10.69		
43	10.50	9.46	11.18	10.14	11.52	10.05	11.86	9.96	12.54	10.57		

Heat Mode

Outdoor air temp.		Indoor air temperature ℃CDB				
℃CDB	℃CWB	16	18	20	22	24
-14.7	-15	14.13	14.06	14.00	13.94	13.86
-9.6	-10	14.24	14.18	14.11	14.03	13.96
-3.4	-4	14.55	14.46	14.38	14.30	14.22
1.8	1	14.81	14.70	14.61	14.52	14.43
4.9	4	14.98	14.87	14.78	14.69	14.60
7.0	6	14.22	14.11	14.00	13.92	13.83
11.2	10	15.56	15.44	15.31	15.20	15.09

PJD001Z317

Note(1) These data show average statuses.
Depending on the system control, there may be ranges where the operation is not conducted continuously.
(2) Capacities are based on the following conditions.
Corresponding refrigerant piping length :7.5m
Level difference of Zero.
(3) Symbols are as follows.
TC : Total cooling capacity (kW)
SHC : Sensible heat capacity (kW)
HC : Heating capacity (kW)

Model FDU140VNXVD Indoor unit FDU140VD Outdoor unit FDC140VNX

Cool Mode

Outdoor air temp.	Indoor air temperature											
	23℃CDB 16℃CWB		26℃CDB 18℃CWB		27℃CDB 19℃CWB		28℃CDB 20℃CWB		31℃CDB 22℃CWB		33℃CDB 24℃CWB	
℃CDB	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
20	13.52	10.63	14.37	11.27	14.79	11.16	15.22	11.05	16.07	11.60	17.14	11.37
25	13.68	10.69	14.52	11.33	14.94	11.21	15.36	11.09	16.21	11.64	17.49	11.47
30	13.24	10.52	14.06	11.16	14.47	11.05	14.88	10.93	15.70	11.49		
35	12.80	10.34	13.60	10.99	14.00	10.89	14.40	10.77	15.20	11.34		
40	12.16	10.09	12.94	10.75	13.33	10.66	13.73	10.55	14.51	11.13		
43	11.76	9.94	12.52	10.60	12.90	10.51	13.28	10.41	14.04	11.00		

Heat Mode

Outdoor air temp.		Indoor air temperature ℃CDB				
℃CDB	℃CWB	16	18	20	22	24
-14.7	-15	11.61	11.55	11.50	11.45	11.39
-9.6	-10	12.87	12.81	12.75	12.68	12.61
-3.4	-4	14.69	14.60	14.52	14.44	14.35
1.8	1	16.21	16.09	16.00	15.90	15.80
4.9	4	17.08	16.95	16.86	16.75	16.65
7.0	6	16.25	16.12	16.00	15.90	15.81
11.2	10	17.78	17.65	17.50	17.37	17.25

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Model FDU140VSXVD Indoor unit FDU140VD Outdoor unit FDC140VSX

Cool Mode

Outdoor air temp.	Indoor air temperature											
	23℃CDB 16℃CWB		26℃CDB 18℃CWB		27℃CDB 19℃CWB		28℃CDB 20℃CWB		31℃CDB 22℃CWB		33℃CDB 24℃CWB	
℃CDB	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
20	13.52	10.63	14.37	11.27	14.79	11.16	15.22	11.05	16.07	11.60	17.14	11.37
25	13.68	10.69	14.52	11.33	14.94	11.21	15.36	11.09	16.21	11.64	17.49	11.47
30	13.24	10.52	14.06	11.16	14.47	11.05	14.88	10.93	15.70	11.49		
35	12.80	10.34	13.60	10.99	14.00	10.89	14.40	10.77	15.20	11.34		
40	12.16	10.09	12.94	10.75	13.33	10.66	13.73	10.55	14.51	11.13		
43	11.76	9.94	12.52	10.60	12.90	10.51	13.28	10.41	14.04	11.00		

Heat Mode

Outdoor air temp.		Indoor air temperature ℃CDB				
℃CDB	℃CWB	16	18	20	22	24
-14.7	-15	16.15	16.07	16.00	15.93	15.85
-9.6	-10	16.28	16.20	16.13	16.03	15.95
-3.4	-4	16.63	16.53	16.44	16.34	16.25
1.8	1	16.92	16.80	16.70	16.60	16.50
4.9	4	17.12	16.99	16.89	16.79	16.69
7.0	6	16.25	16.12	16.00	15.90	15.81
11.2	10	17.78	17.65	17.50	17.37	17.25

PJD001Z317

(6) Wall mounted type (SRK)

(a) Twin type

Model SRK100VNXPZIX Indoor unit SRK50ZIX-S (2 units) Outdoor unit FDC100VNX
SRK100VNXPZJX SRK50ZJX-S (2 units)

Cool Mode

Outdoor air temp.	Indoor air temperature											
	23℃CDB 16℃CWB		26℃CDB 18℃CWB		27℃CDB 19℃CWB		28℃CDB 20℃CWB		31℃CDB 22℃CWB		33℃CDB 24℃CWB	
℃CDB	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
20	9.66	7.35	10.26	7.77	10.56	7.70	10.87	7.62	11.48	7.98	12.24	7.84
25	9.77	7.40	10.37	7.81	10.67	7.74	10.97	7.66	11.58	8.01	12.49	7.91
30	9.46	7.26	10.04	7.68	10.34	7.61	10.63	7.54	11.21	7.89		
35	9.14	7.13	9.71	7.55	10.00	7.49	10.29	7.42	10.86	7.78		
40	8.69	6.94	9.24	7.37	9.52	7.31	9.81	7.25	10.36	7.62		
43	8.40	6.83	8.94	7.26	9.21	7.20	9.49	7.14	10.03	7.52		

Heat Mode

Outdoor air temp.		Indoor air temperature ℃CDB				
℃CDB	℃CWB	16	18	20	22	24
-14.7	-15	8.12	8.09	8.05	8.01	7.97
-9.6	-10	9.01	8.97	8.93	8.87	8.83
-3.4	-4	10.29	10.22	10.17	10.11	10.05
1.8	1	11.35	11.27	11.20	11.13	11.06
4.9	4	11.96	11.87	11.80	11.73	11.66
7.0	6	11.37	11.28	11.20	11.13	11.07
11.2	10	12.45	12.35	12.25	12.16	12.07

PCA001Z620

Model SRK100VSXPZIX Indoor unit SRK50ZIX-S (2 units) Outdoor unit FDC100VSX
SRK100VSXPZJX SRK50ZJX-S (2 units)

Cool Mode

Outdoor air temp.	Indoor air temperature											
	23℃CDB 16℃CWB		26℃CDB 18℃CWB		27℃CDB 19℃CWB		28℃CDB 20℃CWB		31℃CDB 22℃CWB		33℃CDB 24℃CWB	
℃CDB	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
20	9.66	7.35	10.26	7.77	10.56	7.70	10.87	7.62	11.48	7.98	12.24	7.84
25	9.77	7.40	10.37	7.81	10.67	7.74	10.97	7.66	11.58	8.01	12.49	7.91
30	9.46	7.26	10.04	7.68	10.34	7.61	10.63	7.54	11.21	7.89		
35	9.14	7.13	9.71	7.55	10.00	7.49	10.29	7.42	10.86	7.78		
40	8.69	6.94	9.24	7.37	9.52	7.31	9.81	7.25	10.36	7.62		
43	8.40	6.83	8.94	7.26	9.21	7.20	9.49	7.14	10.03	7.52		

Heat Mode

Outdoor air temp.		Indoor air temperature ℃CDB				
℃CDB	℃CWB	16	18	20	22	24
-14.7	-15	11.30	11.25	11.20	11.15	11.09
-9.6	-10	11.39	11.34	11.29	11.22	11.17
-3.4	-4	11.64	11.57	11.51	11.44	11.37
1.8	1	11.85	11.76	11.69	11.62	11.55
4.9	4	11.98	11.89	11.83	11.75	11.68
7.0	6	11.37	11.28	11.20	11.13	11.07
11.2	10	12.45	12.35	12.25	12.16	12.07

PCA001Z620

Note(1) These data show average statuses.
Depending on the system control, there may be ranges where the operation is not conducted continuously.
(2) Capacities are based on the following conditions.
Corresponding refrigerant piping length :7.5m
Level difference of Zero.
(3) Symbols are as follows.
TC : Total cooling capacity (kW)
SHC : Sensible heat capacity (kW)

Model **SRK125VNXPZIX** Indoor unit SRK60ZIX-S (2 units) Outdoor unit FDC125VNX
SRK125VNXPZJX SRK60ZJX-S (2 units)

Cool Mode

Outdoor air temp.	Indoor air temperature											
	23℃CDB 16℃CWB		26℃CDB 18℃CWB		27℃CDB 19℃CWB		28℃CDB 20℃CWB		31℃CDB 22℃CWB		33℃CDB 24℃CWB	
℃CDB	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
20	12.07	8.71	12.83	9.15	13.21	9.07	13.59	8.99	14.35	9.35	15.30	9.19
25	12.21	8.77	12.96	9.21	13.34	9.13	13.71	9.03	14.47	9.40	15.62	9.30
30	11.82	8.59	12.55	9.03	12.92	8.96	13.29	8.87	14.02	9.24		
35	11.43	8.42	12.14	8.86	12.50	8.79	12.86	8.71	13.57	9.08		
40	10.86	8.17	11.55	8.62	11.90	8.55	12.26	8.48	12.96	8.87		
43	10.50	8.01	11.18	8.47	11.52	8.41	11.86	8.33	12.54	8.73		

Heat Mode

Outdoor air temp.		Indoor air temperature ℃CDB				
℃CDB	℃CWB	16	18	20	22	24
-14.7	-15	10.16	10.11	10.06	10.02	9.97
-9.6	-10	11.26	11.21	11.16	11.09	11.04
-3.4	-4	12.86	12.78	12.71	12.63	12.56
1.8	1	14.19	14.08	14.00	13.91	13.83
4.9	4	14.95	14.84	14.75	14.66	14.57
7.0	6	14.22	14.11	14.00	13.92	13.83
11.2	10	15.56	15.44	15.31	15.20	15.09

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Model **SRK125VSXPZIX** Indoor unit SRK60ZIX-S (2 units) Outdoor unit FDC125VSX
SRK125VSXPZJX SRK60ZJX-S (2 units)

Cool Mode

Outdoor air temp.	Indoor air temperature											
	23℃CDB 16℃CWB		26℃CDB 18℃CWB		27℃CDB 19℃CWB		28℃CDB 20℃CWB		31℃CDB 22℃CWB		33℃CDB 24℃CWB	
℃CDB	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
20	12.07	8.71	12.83	9.15	13.21	9.07	13.59	8.99	14.35	9.35	15.30	9.19
25	12.21	8.77	12.96	9.21	13.34	9.13	13.71	9.03	14.47	9.40	15.62	9.30
30	11.82	8.59	12.55	9.03	12.92	8.96	13.29	8.87	14.02	9.24		
35	11.43	8.42	12.14	8.86	12.50	8.79	12.86	8.71	13.57	9.08		
40	10.86	8.17	11.55	8.62	11.90	8.55	12.26	8.48	12.96	8.87		
43	10.50	8.01	11.18	8.47	11.52	8.41	11.86	8.33	12.54	8.73		

Heat Mode

Outdoor air temp.		Indoor air temperature ℃CDB				
℃CDB	℃CWB	16	18	20	22	24
-14.7	-15	14.13	14.06	14.00	13.94	13.86
-9.6	-10	14.24	14.18	14.11	14.03	13.96
-3.4	-4	14.55	14.46	14.38	14.30	14.22
1.8	1	14.81	14.70	14.61	14.52	14.43
4.9	4	14.98	14.87	14.78	14.69	14.60
7.0	6	14.22	14.11	14.00	13.92	13.83
11.2	10	15.56	15.44	15.31	15.20	15.09

PCA001Z620

(b) Triple type

Model **SRK140VNXTZIX** Indoor unit SRK50ZIX-S (3 units) Outdoor unit FDC140VNX
SRK140VNXTZJX SRK50ZJX-S (3 units)

Cool Mode

Outdoor air temp.	Indoor air temperature											
	23℃CDB 16℃CWB		26℃CDB 18℃CWB		27℃CDB 19℃CWB		28℃CDB 20℃CWB		31℃CDB 22℃CWB		33℃CDB 24℃CWB	
℃CDB	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
20	13.52	10.47	14.37	11.14	14.79	10.91	15.22	10.67	16.07	11.23	17.14	10.70
25	13.68	10.51	14.52	11.17	14.94	10.94	15.36	10.69	16.21	11.25	17.49	10.74
30	13.24	10.40	14.06	11.08	14.47	10.85	14.88	10.61	15.70	11.18		
35	12.80	10.29	13.60	10.98	14.00	10.76	14.40	10.53	15.20	11.11		
40	12.16	10.14	12.94	10.85	13.33	10.63	13.73	10.42	14.51	11.03		
43	11.76	10.04	12.52	10.76	12.90	10.56	13.28	10.34	14.04	10.97		

Heat Mode

Outdoor air temp.		Indoor air temperature ℃CDB				
℃CDB	℃CWB	16	18	20	22	24
-14.7	-15	11.61	11.55	11.50	11.45	11.39
-9.6	-10	12.87	12.81	12.75	12.68	12.61
-3.4	-4	14.69	14.60	14.52	14.44	14.35
1.8	1	16.21	16.09	16.00	15.90	15.80
4.9	4	17.08	16.95	16.86	16.75	16.65
7.0	6	16.25	16.12	16.00	15.90	15.81
11.2	10	17.78	17.65	17.50	17.37	17.25

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Model **SRK140VSXTZIX** Indoor unit SRK50ZIX-S (3 units) Outdoor unit FDC140VSX
SRK140VSXTZJX SRK50ZJX-S (3 units)

Cool Mode

Outdoor air temp.	Indoor air temperature											
	23℃CDB 16℃CWB		26℃CDB 18℃CWB		27℃CDB 19℃CWB		28℃CDB 20℃CWB		31℃CDB 22℃CWB		33℃CDB 24℃CWB	
℃CDB	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
20	13.52	10.47	14.37	11.14	14.79	10.91	15.22	10.67	16.07	11.23	17.14	10.70
25	13.68	10.51	14.52	11.17	14.94	10.94	15.36	10.69	16.21	11.25	17.49	10.74
30	13.24	10.40	14.06	11.08	14.47	10.85	14.88	10.61	15.70	11.18		
35	12.80	10.29	13.60	10.98	14.00	10.76	14.40	10.53	15.20	11.11		
40	12.16	10.14	12.94	10.85	13.33	10.63	13.73	10.42	14.51	11.03		
43	11.76	10.04	12.52	10.76	12.90	10.56	13.28	10.34	14.04	10.97		

Heat Mode

Outdoor air temp.		Indoor air temperature ℃CDB				
℃CDB	℃CWB	16	18	20	22	24
-14.7	-15	16.15	16.07	16.00	15.93	15.85
-9.6	-10	16.28	16.20	16.13	16.03	15.95
-3.4	-4	16.63	16.53	16.44	16.34	16.25
1.8	1	16.92	16.80	16.70	16.60	16.50
4.9	4	17.12	16.99	16.89	16.79	16.69
7.0	6	16.25	16.12	16.00	15.90	15.81
11.2	10	17.78	17.65	17.50	17.37	17.25

PCA001Z620

Note(1) These data show average statuses.
Depending on the system control, there may be ranges where the operation is not conducted continuously.
(2) Capacities are based on the following conditions.
Corresponding refrigerant piping length :7.5m
Level difference of Zero.
(3) Symbols are as follows.
TC : Total cooling capacity (kW)
SHC : Sensible heat capacity (kW)
HC : Heating capacity (kW)

9.2 Correction of cooling and heating capacity in relation to air flow rate control (fan speed)

Fan speed	P-Hi or Hi(1)	Me	Lo
Coefficient	1.00	0.97	0.95

Note (1) Models FDU only.

9.3 Correction of cooling and heating capacity in relation to one way length of refrigerant piping

It is necessary to correct the cooling and heating capacity in relation to the one way equivalent piping length between the indoor and outdoor units.

Equivalent piping length (1)(m)			7.5	10	15	20	25	30	35	40	45	50	55
Heating			1	1	1	1	1	0.998	0.998	0.993	0.993	0.988	0.988
Cooling	71 model	ϕ15.88	1	0.996	0.989	0.982	0.975	0.968	0.961	0.954	0.947	0.940	0.933
	100 model		1	0.991	0.978	0.964	0.951	0.937	0.924	0.910	0.897	0.883	0.870
	125 model		1	0.986	0.968	0.950	0.932	0.914	0.896	0.878	0.860	0.842	0.824
	140 model		1	0.985	0.966	0.946	0.927	0.907	0.888	0.868	0.849	0.829	0.810
	71 model	ϕ19.05	1.008	1.006	1.003	1	0.997	0.994	0.991	0.988	0.985	0.982	0.979
	100 model		1.016	1.013	1.007	1.002	0.996	0.991	0.985	0.980	0.974	0.969	0.963
	125 model		1.022	1.018	1.009	1.001	0.992	0.984	0.975	0.967	0.958	0.950	0.941
	140 model		1.026	1.021	1.011	1.002	0.992	0.983	0.973	0.964	0.954	0.945	0.935

Equivalent piping length (1)(m)			60	65	70	75	80	85	90	95	100	105
Heating			0.983	0.983	0.978	0.978	0.973	0.973	0.968	0.968	0.963	0.963
Cooling	71 model	ϕ15.88	—	—	—	—	—	—	—	—	—	—
	100 model		0.856	0.843	0.829	0.816	0.803	0.789	0.776	0.762	0.749	0.736
	125 model		0.806	0.788	0.770	0.752	0.734	0.716	0.698	0.680	0.662	0.644
	140 model		0.790	0.771	0.751	0.732	0.712	0.693	0.673	0.654	0.634	0.615
	71 model	ϕ19.05	—	—	—	—	—	—	—	—	—	—
	100 model		0.959	0.955	0.951	0.948	0.944	0.940	0.936	0.932	0.929	0.926
	125 model		0.935	0.929	0.924	0.919	0.912	0.908	0.902	0.897	0.892	0.887
	140 model		0.928	0.920	0.913	0.907	0.900	0.894	0.888	0.882	0.876	0.870

Note (1) Calculate the equivalent length using the following formula.
However, install the piping so that the piping length is within +5 m of the limit length (actual length) for the respective types.

• Equivalent Length =Actual Length + (Equivalent bend length x number of bends in the piping.)
Equivalent length per bend.

Gas Pipe Diameter (mm)	ϕ12.7	ϕ15.88	ϕ19.05
Equivalent Bend Length	0.20	0.25	0.30

9.4 Height difference between the indoor unit and outdoor unit

When the outdoor unit is located below indoor units in cooling mode, or when the outdoor unit is located above indoor units in heating mode, the correction coefficient mentioned in the below table should be subtracted from the value in the above table.

Height difference between the indoor unit and outdoor unit in the vertical height difference	5m	10m	15m	20m	25m	30m
Adjustment coefficient	0.99	0.98	0.97	0.96	0.95	0.94

Piping length limitations

Item \ Model	71	100, 125, 140
Max. one way piping length	50m	100m
Max. vertical height difference	Outdoor unit is higher 30m Outdoor unit is lower 15m	

Note (1) Values in the table indicate the one way piping length between the indoor and outdoor units.

How to obtain the cooling and heating capacity

Example : The net cooling capacity of the model FDT100VNXVD with the air flow "P-High", the piping length of 15m, the outdoor unit located 5m lower than the indoor unit, indoor wet-bulb temperature at 19.0℃ and outdoor dry-bulb temperature 35℃ is

Net cooling capacity = 10.0 × 1.00 × 0.978 × 0.99 ≒ 9.7kW

- 10.0: Net cooling total capacity of FDT100VNXVD (Outdoor temp. : 35℃DB Indoor temp. : 19℃WB) shown in table 9.1
- 1.00: Air flow : P-High shown in table 9.2
- 0.978: Piping length :15m (Gas pipe size is ϕ15.88) shown in table 9.3
- 0.99: Height diff. :5m (Outdoor unit : below) shown in table 9.4

10. APPLICATION DATA

10.1 Installation of indoor unit

PJA012D786

(1) Ceiling cassette-4way compact type (FDTC)

This manual is for the installation of an indoor unit.
For electrical wiring work (Indoor), refer to the electrical wiring work installation manual. For remote controller installation, refer to the installation manual attached to a remote controller. For wireless kit installation, refer to the installation manual attached to a wireless kit. For electrical wiring work (Outdoor) and refrigerant pipe work installation for outdoor unit, refer to the installation manual attached to an outdoor unit.
This unit must always be used with the panel.

SAFETY PRECAUTIONS

- Read the "SAFETY PRECAUTIONS" carefully first of all and then strictly follow it during the installation work in order to protect yourself.
- The precautionary items mentioned below are distinguished into two levels, ⚠WARNING and ⚠CAUTION .
  ⚠WARNING : Wrong installation would cause serious consequences such as injuries or death.
  ⚠CAUTION : Wrong installation might cause serious consequences depending on circumstances.
  Both mentions the important items to protect your health and safety so strictly follow them by any means.
- The meanings of "Marks" used here are as shown as follows:
  ⃠ Never do it under any circumstances. ❶ Ⓔ Always do it according to the instruction.
- After completing the installation, do commissioning to confirm there are no abnormalities, and explain to the customers about "SAFETY PRECAUTIONS", correct operation method and maintenance method (air filter cleaning, operation method and temperature setting method) with user's manual of this unit.
  Ask your customers to keep this installation manual together with the user's manual. Also, ask them to hand over the user's manual to the new user when the owner is changed.

⚠WARNING

- **Installation should be performed by the specialist.**
  If you install the unit by yourself, it may lead to serious trouble such as water leakage, electric shock, fire, and injury due to overturn of the unit.
- **Install the system correctly according to these installation manuals.**
  Improper installation may cause explosion, injury, water leakage, electric shock, and fire.
- **When installing in small rooms, take prevention measures not to exceed the density limit of refrigerant in the event of leakage, referred by the formula (accordance with ISO5149).**
  If the density of refrigerant exceeds the limit, please consult the dealer and install the ventilation system, otherwise lack of oxygen can occur, which can cause serious accidents.
- **Use the genuine accessories and the specified parts for installation.**
  If parts unspecified by our company are used it could cause water leakage, electric shock, fire, and injury due to overturn of the unit.
- **Ventilate the working area well in case the refrigerant leaks during installation.**
  If the refrigerant contacts the fire, toxic gas is produced.
- **Install the unit in a location that can hold heavy weight.**
  Improper installation may cause the unit to fall leading to accidents.
- **Install the unit properly in order to be able to withstand strong winds such as typhoons, and earthquakes.**
  Improper installation may cause the unit to fall leading to accidents.
- **Do not mix air in to the cooling cycle on installation or removal of the air conditioner.**
  If air is mixed in, the pressure in the cooling cycle will rise abnormally and may cause explosion and injuries.
- **Be sure to have the electrical wiring work done by qualified electrical installer, and use exclusive circuit.**
  Power source with insufficient capacity and improper work can cause electric shock and fire.
- **Use specified wire for electrical wiring, fasten the wiring to the terminal securely, and hold the cable securely in order not to apply unexpected stress on the terminal.**
  Loose connections or hold could result in abnormal heat generation or fire.
- **Arrange the electrical wires in the control box properly to prevent them from rising. Fit the lid of the services panel property.**
  Improper fitting may cause abnormal heat and fire.
- **Check for refrigerant gas leakage after installation is completed.**
  If the refrigerant gas leaks into the house and comes in contact with a fan heater, a stove, or an oven, toxic gas is produced.
- **Use the specified pipe, flare nut, and tools for R410A.**
  Using existing parts (R22) could cause the unit failure and serious accident due to explosion of the cooling cycle.
- **Tighten the flare nut according to the specified method by with torque wrench.**
  If the flare nut were tightened with excess torque, it could cause burst and refrigerant leakage after a long period.
- **Do not put the drainage pipe directly into drainage channels where poisonous gases such as sulfide gas can occur.**
  Poisonous gases will flow into the room through drainage pipe and seriously affect the user's health and safety. This can also cause the corrosion of the indoor unit and a resultant unit failure or refrigerant leak.
- **Connect the pipes for refrigeration circuit securely in installation work before compressor is operated.**
  If the compressor is operated when the service valve is open without connecting the pipe, it could cause explosion and injuries due to abnormal high pressure in the system.
- **Stop the compressor before removing the pipe after shutting the service valve on pump down work.**
  If the pipe is removed when the compressor is in operation with the service valve open, air would be mixed in the refrigeration circuit and it could cause explosion and injuries due to abnormal high pressure in the cooling cycle.
- **Only use prescribed optional parts. The installation must be carried out by the qualified installer.**
  If you install the system by yourself, it can cause serious trouble such as water leaks, electric shocks, fire.
- **Do not repair by yourself. And consult with the dealer about repair.**
  Improper repair may cause water leakage, electric shock or fire.
- **Consult the dealer or a specialist about removal of the air conditioner.**
  Improper installation may cause water leakage, electric shock or fire.
- **Turn off the power source during servicing or inspection work.**
  If the power is supplied during servicing or inspection work, it could cause electric shock and injury by the operating fan.
- **Do not run the unit when the panel or protection guard are taken off.**
  Touching the rotating equipment, hot surface, or high voltage section could cause an injury to be caught in the machine, to get burned, or electric shock.
- **Shut off the power before electrical wiring work.**
  It could cause electric shock, unit failure and improper running.

⚠ CAUTION

- **Perform earth wiring surely.**
  Do not connect the earth wiring to the gas pipe, water pipe, lightning rod and telephone earth wiring. Improper earth could cause unit failure and electric shock due to a short circuit.
- **Earth leakage breaker must be installed.**
  If the earth leakage breaker is not installed, it can cause electric shocks.
- **Use the circuit breaker of correct capacity. Circuit breaker should be the one that disconnect all poles under over current.**
  Using the incorrect one could cause the system failure and fire.
- **Do not use any materials other than a fuse of correct capacity where a fuse should be used.**
  Connecting the circuit by wire or copper wire could cause unit failure and fire.
- **Do not install the indoor unit near the location where there is possibility of flammable gas leakages.**
  If the gas leaks and gathers around the unit, it could cause fire.
- **Do not install and use the unit where corrosive gas (such as sulfurous acid gas etc.) or flammable gas (such as thinner, petroleum etc.) may be generated or accumulated, or volatile flammable substances are handled.**
  It could cause the corrosion of heat exchanger, breakage of plastic parts etc. And inflammable gas could cause fire.
- **Secure a space for installation, inspection and maintenance specified in the manual.**
  Insufficient space can result in accident such as personal injury due to falling from the installation place.
- **Do not use the indoor unit at the place where water splashes such as laundry.**
  Indoor unit is not waterproof. It could cause electric shock and fire.
- **Do not use the indoor unit for a special purpose such as food storage, cooling for precision instrument, preservation of animals, plants, and a work of art.**
  It could cause the damage of the items.
- **Do not install nor use the system near equipments which generate electromagnetic wave or high harmonics.**
  Equipments like inverter equipment, private power generator, high-frequency medical equipment, or telecommunication equipment might influence the air conditioner and cause a malfunction and breakdown. Or the air conditioner might influence medical equipments or telecommunication equipments, and obstruct their medical activity or cause jamming.
- **Do not install the remote controller at the direct sunlight.**
  It could cause breakdown or deformation of the remote controller.
- **Do not install the indoor unit at the place listed below.**
  · Places where flammable gas could leak.
  · Places where carbon fiber, metal powder or any powder is floated.
  · Place where the substances which affect the air conditioner are generated such as sulfide gas, chloride gas, acid, alkali or ammonic atmospheres.
  · Places exposed to oil mist or steam directly.
  · On vehicles and ships
  · Places where machinery which generates high harmonics is used.
  · Places where cosmetics or special sprays are frequently used.
  · Highly salted area such as beach.
  · Heavy snow area
  · Places where the system is affected by smoke from a chimney.
  · Altitude over 1000m
- **Do not install the indoor unit in the locations listed below (Be sure to install the indoor unit according to the installation manual for each model because each indoor unit has each limitation)**
  · Locations with any obstacles which can prevent inlet and outlet air of the unit
  · Locations where vibration can be amplified due to insufficient strength of structure.
  · Locations where the infrared receiver is exposed to the direct sunlight or the strong light beam. (in case of the infrared specification unit)
  · Locations where an equipment affected by high harmonics is placed. (TV set or radio receiver is placed within 5m)
  · Locations where drainage cannot run off safely.
  It can affect performance or function and etc..
- **Do not put any valuables which will break down by getting wet under the air conditioner.**
  Condensation could drop when the relative humidity is higher than 80% or drain pipe is clogged, and it damages user's belongings.
- **Do not use the base frame for the outdoor unit which is corroded or damaged after a long period of use.**
  It could cause the unit falling down and injury.
- **Pay attention not to damage the drain pan by weld sputter when brazing work is done near the unit.**
  If sputter entered into the unit during brazing work, it could cause damage (pinhole) of drain pan and leakage of water. To avoid damaging, keep the indoor unit packed or cover the indoor unit.
- **Install the drain pipe to drain the water surely according to the installation manual.**
  Improper connection of the drain pipe may cause dropping water into room and damaging user's belongings.
- **Do not share the drain pipe for indoor unit and GHP (Gas Heat Pump system) outdoor unit.**
  Toxic exhaust gas would flow into room and it might cause serious damage (some poisoning or deficiency of oxygen) to user's health and safety.
- **Be sure to perform air tightness test by pressurizing with nitrogen gas after completed refrigerant piping work.**
  If the density of refrigerant exceeds the limit in the event of refrigerant leakage in the small room, lack of oxygen can occur, which can cause serious accidents.
- **For drain pipe installation, be sure to make descending slope of greater than 1/100, not to make traps, and not to make air-bleeding.**
  Check if the drainage is correctly done during commissioning and ensure the space for inspection and maintenance.
- **Ensure the insulation on the pipes for refrigeration circuit so as not to condense water.**
  Incomplete insulation could cause condensation and it would wet ceiling, floor, and any other valuables.
- **Do not install the outdoor unit where is likely to be a nest for insects and small animals.**
  Insects and small animals could come into the electronic components and cause breakdown and fire. Instruct the user to keep the surroundings clean.
- **Pay extra attention, carrying the unit by hand.**
  Carry the unit with 2 people if it is heavier than 20kg. Do not use the plastic straps but the grabbing place, moving the unit by hand. Use protective gloves in order to avoid injury by the aluminum fin.
- **Make sure to dispose of the packaging material.**
  Leaving the materials may cause injury as metals like nail and woods are used in the package.
- **Do not operate the system without the air filter.**
  It may cause the breakdown of the system due to clogging of the heat exchanger.
- **Do not touch any button with wet hands.**
  It could cause electric shock.
- **Do not touch the refrigerant piping with bare hands when in operation.**
  The pipe during operation would become very hot or cold according to the operating condition, and it could cause a burn or frostbite.
- **Do not clean up the air conditioner with water.**
  It could cause electric shock.
- **Do not turn off the power source immediately after stopping the operation.**
  Be sure to wait for more than 5 minutes. Otherwise it could cause water leakage or breakdown.
- **Do not control the operation with the circuit breaker.**
  It could cause fire or water leakage. In addition, the fan may start operation unexpectedly and it may cause injury.

① Before installation

- Install correctly according to the installation manual.
- Confirm the following points:
  ○ Unit type/Power supply specification ○ Pipes/Wires/Small parts ○ Accessory items

Accessory itme

For unit hanging		For refrigerant pipe			For draom pipe			
Flat washer (M10)	Level gauge (Insulation)	Pipe cover(big)	Pipe cover (small)	Strap	Pipe cover(big)	Pipe cover(small)	Drain hose	Hose clamp
								
8	4	1	1	4	1	1	1	1
For unit hanging	For adjustment in hoisting in the unit's main body	For heat insulation of gas pipe	For heat insulation of liquid tube	For pipe cover fixing	For heat insulation of drain socket	For heat insulation of drain socket	For drain pipe connecting	For drain hose mounting

② Selection of installation location for the indoor unit

① Select the suitable areas to install the unit under approval of the user.
- Areas where the indoor unit can deliver hot and cold wind sufficiently. Suggest to the user to use a circulator if the ceiling height is over 3m to avoid warm air being accumulated on the ceiling.
- Areas where there is enough space to install and service.
- Areas where it can be drained properly. Areas where drain pipe descending slope can be taken.
- Areas where there is no obstruction of airflow on both air return grille and air supply port.
- Areas where fire alarm will not be accidentally activated by the air conditioner.
- Areas where the supply air does not short-circuit.
- Areas where it is not influenced by draft air.
- Areas not exposed to direct sunlight.
- Areas where dew point is lower than around 28°C and relative humidity is lower than 80%.
  This indoor unit is tested under the condition of JIS (Japan Industrial Standard) high humidity condition and confirmed there is no problem. However, there is some risk of condensation drop if the air conditioner is operated under the severer condition than mentioned above.
  If there is a possibility to use it under such a condition, attach additional insulation of 10 to 20mm thick for entire surface of indoor unit, refrigeration pipe and drain pipe.
- Areas where TV and radio stays away more than 1m. (It could cause jamming and noise.)
- Areas where any items which will be damaged by getting wet are not placed such as food, table wares, server, or medical equipment under the unit.
- Areas where there is no influence by the heat which cookware generates.
- Areas where not exposed to oil mist, powder and/or steam directly such as above fryer.
- Areas where lighting device such as fluorescent light or incandescent light doesn't affect the operation.
  (A beam from lighting device sometimes affects the infrared receiver for the wireless remote controller and the air conditioner might not work properly.)

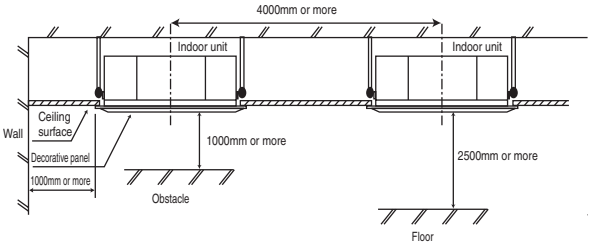
② Check if the place where the air conditioner is installed can hold the weight of the unit. If it is not able to hold, reinforce the structure with boards and beams strong enough to hold it. If the strength is not enough, it could cause injury due to unit falling.

③ If there are 2 units of wireless type, keep them away for more than 5m to avoid malfunction due to cross communication.

④ When plural indoor units are installed nearby, keep them away for more than 4m.

Space for installation and service

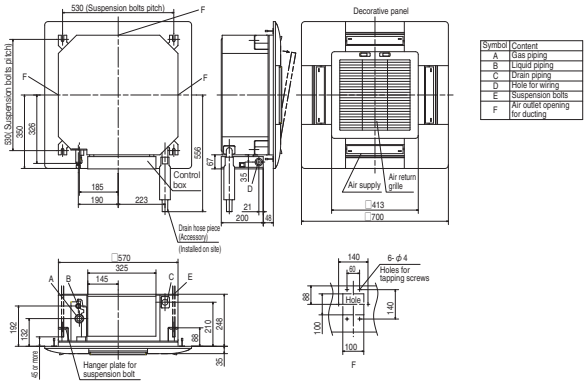
- When it is not possible to keep enough space between indoor unit and wall or between indoor units, close the air supply port where it is not possible to keep space and confirm there is no short circuit of airflow.
- Install the indoor unit at a height of more than 2.5m above the floor.



③ Preparation before installation

- If suspension bolt becomes longer, do reinforcement of earthquake resistant.
  ○ For grid ceiling
  When suspension bolt length is over 500mm, or the gap between the ceiling and roof is over 700mm, apply earthquake resistant brace to the bolt.
  ○ In case the unit is hanged directly from the slab and is installed on the ceiling plane which has enough strength.
  When suspension bolt length is over 1000mm, apply the earthquake resistant brace to the bolt.
- Prepare four (4) sets of suspension bolt, nut and spring washer (M10 or M8) on site.

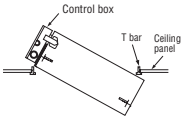
Ceiling opening, Suspension bolts pitch, Pipe position



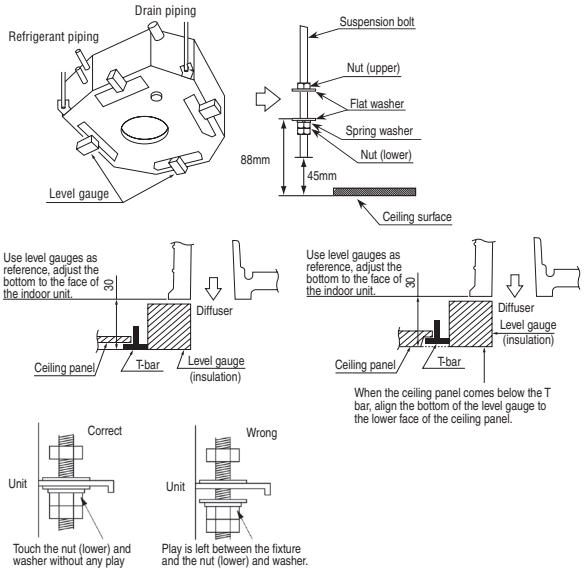
④ Installation of indoor unit

Work procedure

1. This units is designed for 2 x 2 grid ceiling.
   If necessary, please detach the T bar temporarily before you install it.
   If it is installed on a ceiling other than 2 x 2 grid ceiling, provide an inspection port on the control box side.
2. Arrange the suspension bolt at the right position (530mm×530mm).
3. Make sure to use four suspension bolts and fix them so as to be able to hold 500N load.
4. Ensure that the lower end of the suspension bolt should be 45mm above the ceiling plane. Temporarily put the four lower nuts 88mm above the ceiling plane and the upper nuts on distant place from the lower nuts in order not to obstruct hanging the indoor unit or adjust the indoor unit position, and then hang the indoor unit.

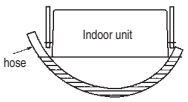


5. Adjust the indoor unit position after hanging it by inserting the level gauge attached on the package into the air supply port and checking if the gap between the ceiling plane and the indoor unit is appropriate. In order to adjust the indoor unit position, adjust the lower nuts while the upper nuts are put on distant place. Confirm there is no backlash between the hanger plate for suspension bolt and the lower nut and washer.



④ Installation of indoor unit (continued)

6. Make sure to install the indoor unit horizontally. Confirm the levelness of the indoor unit with a level gauge or transparent hose filled with water. Keep the height difference at both ends of the indoor unit within 3mm.
7. Tighten four upper nuts and fix the unit after height and levelness adjustment.



Caution

- Do not adjust the height by adjusting upper nuts. It will cause unexpected stress on the indoor unit and it will lead to deformation of the unit, failure of attaching a panel, and generating noise from the fan.
- Make sure to install the indoor unit horizontally and set the gap between the unit underside and the ceiling plane properly. Improper installation may cause air leakage, dew condensation, water leakage and noise.
- Even after decorative panel attached, still the unit height can be adjusted finely. Refer to the installation manual for decorative panel for details.
- Make sure there is no gap between decoration panel and ceiling surface, and between decoration panel and the indoor unit. The gap may cause air leakage, dew condensation and water leakage.
- In case decorative panel is not installed at the same time, or ceiling material is installed after the unit installed, put the cardboard template for installation attached on the package (packing material of cardboard box) on the bottom of the unit in order to avoid dust coming into the indoor unit.

⑤ Refrigerant pipe

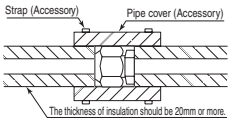
Caution

- Use the new refrigerant pipe.
  When re-using the existing pipe system for R22 or R407C, pay attention to the following items.
  - Change the flare nuts with the attached ones (JIS category 2), and reprocess the flare parts.
  - Do not use thin-walled pipes.
- Use phosphorus deoxidized copper alloy seamless pipe (C1220T specified in JIS H3300) for refrigeration pipe installation.
  In addition, make sure there is no damage both inside and outside of the pipe, and no harmful substances such as sulfur, oxide, dust or a contaminant stuck on the pipes.
- Do not use any refrigerant other than R410A.
  Using other refrigerant except R410A (R22 etc.) may degrade inside refrigeration oil. And air getting into refrigeration circuit may cause over-pressure and resultant it may result in bursting, etc.
- Store the copper pipes indoors and seal the both end of them until they are brazed in order to avoid any dust, dirt or water getting into pipe. Otherwise it will cause degradation of refrigeration oil and compressor breakdown, etc.
- Use special tools for R410 refrigerant.

Work procedure

1. Remove the flare nut and blind flanges on the pipe of the indoor unit.
   ※ Make sure to loosen the flare nut with holding the nut on pipe side with a spanner and giving torque to the nut with another spanner in order to avoid unexpected stress to the copper pipe, and then remove them.
   (Gas may come out at this time, but it is not abnormal.)
   - Pay attention whether the flare nut pops out. (as the indoor unit is sometimes pressured.)
2. Make a flare on liquid pipe and gas pipe, and connect the refrigeration pipes on the indoor unit.
   ※ Bend the pipe with as big radius as possible and do not bend the pipe repeatedly. In addition, do not twist and crush the pipes.
   ※ Do a flare connection as follows:
   - Make sure to loosen the flare nut with holding the nut on pipe side with a spanner and giving torque to the nut with another spanner in order to avoid unexpected stress to the copper pipe, and then remove them.
   - When fastening the flare nut, align the refrigeration pipe with the center of flare nut, screw the nut for 3-4 times by hand and then tighten it by spanner with the specified torque mentioned in the table below. Make sure to hold the pipe on the indoor unit securely by a spanner when tightening the nut in order to avoid unexpected stress on the copper pipe.
3. Cover the flare connection part of the indoor unit with attached insulation material after a gas leakage inspection, and tighten both ends with attached straps.
   - Make sure to insulate both gas pipes and liquid pipes completely.
     ※ Incomplete insulation may cause dew condensation or water dropping.
4. Refrigerant is charged in the outdoor unit.
   As for the additional refrigerant charge for the indoor unit and piping, refer to the installation manual attached to the outdoor unit.

Pipe diameter	Tightening torque N·m
ϕ 6.35	14 to 18
ϕ 9.52	34 to 42
ϕ 12.7	49 to 61
ϕ 15.88	68 to 82
ϕ 19.05	100 to 120



⑥ Drain pipe

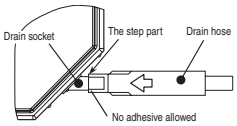
Caution

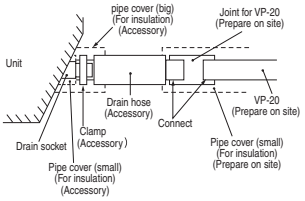
- Install the drain pipe according to the installation manual in order to drain properly.
  Imperfection in draining may cause flood indoors and wetting the household goods etc.
- Do not put the drain pipe directly into the ditch where toxic gas such as sulfur, the other harmful and inflammable gas is generated. Toxic gas would flow into the room and it would cause serious damage to user's health and safety (some poisoning or deficiency of oxygen). In addition, it may cause corrosion of heat exchanger and bad smell.
- Connect the pipe securely to avoid water leakage from the joint.
- Insulate the pipe properly to avoid condensation drop.
- Check if the water can flow out properly from both the drain outlet on the indoor unit and the end of the drain pipe after installation.
- Make sure to make descending slope of greater than 1/100 and do not make up-down bend and/or trap in the midway. In addition, do not put air vent on the drain pipe. Check if water is drained out properly from the pipe during commissioning. Also, keep sufficient space for inspection and maintenance.

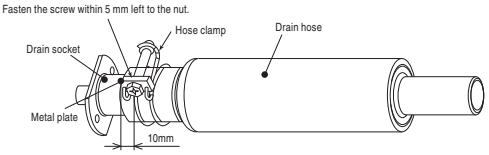
⑥ Drain pipe (continued)

Work procedure

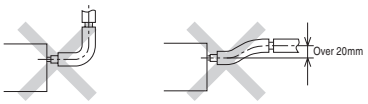
1. Make sure to insert the drain hose (the end mode of soft PVC) to the end of the step part of drain socket.
   Attach the hose clamp to the drain hose around 10mm from the end, and fasten the screw within 5mm left to the nut.
   - Do not apply adhesives on this end.



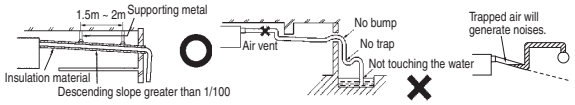




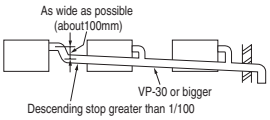
2. Prepare a joint for connecting VP-20 pipe, adhere and connect the joint to the drain hose (the end made of rigid PVC), and adhere and connect VP-20 pipe (prepare on site).
   ※ As for drain pipe, apply VP-20 made of rigid PVC which is on the market.
   - Make sure that the adhesive will not get into the supplied drain hose.
     It may cause the flexible part broken after the adhesive is dried up and gets rigid.
   - Do not bend or make an excess offset on the drain hose as shown in the picture.
     Bend or excess offset will cause drain leakage.



3. Make sure to make descending slope of greater than 1/100 and do not make up-down bend and/or trap in the midway.
   - Pay attention not to give stress on the pipe on the indoor unit side, and support and fix the pipe as close place to the unit as possible when connecting the drain pipe.
   - Do not set up air vent.



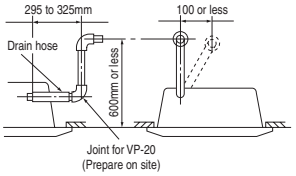
   - When sharing a drain pipe for more than one unit, lay the main pipe 100mm below the drain outlet of the unit. In addition, select VP-30 or bigger size for main drain pipe.



4. Insulate the drain pipe.
   - Be sure to insulate the drain socket and rigid PVC pipe installed indoors otherwise it may cause dew condensation and water leakage.
     ※ After drainage test implementation, cover the drain socket part with pipe cover (small size), then use the pipe cover (big size) to cover the pipe cover (small size), clamps and part of the drain hose, and fix and wrap it with tapes to wrap and make joint part gapless.

Drain up

- The position for drain pipe outlet can be raised up to 600mm above the ceiling. Use elbows for installation to avoid obstacles inside ceiling. If the horizontal drain pipe is too long before vertical pipe, the backflow of water will increase when the unit is stopped, and it may cause overflow of water from the drain pan on the indoor unit. In order to avoid overflow, keep the horizontal pipe length and offset of the pipe within the limit shown in the figure below.

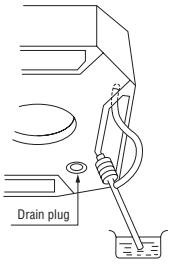


⑥ Drain pipe (continued)

Drain test

- After installation of drain pipe, make sure that drain system work in good condition and no water leakage from joint and drain pan. Check if the motor sound of drain pump is normal or not.
- Do drain test even if installation of heating season.
- For new building cases, make sure to complete the test before hanging the ceiling.

1. Pour water of about 1000cc into the drain pan in the indoor unit by pump so as not to get the electrical component wet.
2. Make sure that water is drained out properly and there is no water leakage from any joints of the drain pipe at the test.
   Confirm that the water is properly drained out while the drain motor is operating. At the drain socket (transparent), it is possible to check if the water is drained out properly.
3. Unplug the drain plug on the indoor unit to remove remaining water on the drain pan after the test, and re-plug it. And insulate the drain pipe properly finally.



Drain pump operation

○ In case electrical wiring work finished
Drain pump can be operated by remote controller (wired).
For the operation method, refer to Operation for drain pump in the installation manual for wiring work.

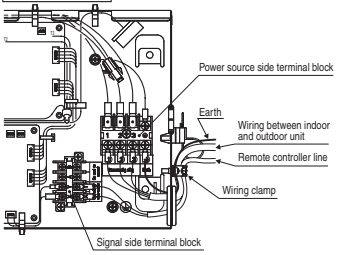
○ In case electrical wiring work not finished
Drain pump will run continuously when the dip switch"SW7-1" on the indoor unit PCB is turned ON, the Connector CNB is disconnected, and then the power supply (220-240VAC on the terminal block [① and ②] or [Ⓛ and Ⓝ]) is turned ON.
Make sure to turn OFF "SW7-1" and reconnect the Connector CNB after the test.

⑦ Wiring-out position and wiring connection

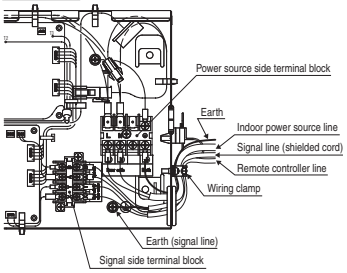
- Electrical installation work must be performed according to the installation manual by an electrical installation service provider qualified by a power provider of the country, and be executed according to the technical standards and other regulations applicable to electrical installation in the country. Be sure to use an exclusive circuit.
- Use specified cord, fasten the wiring to the terminal securely, and hold the cord securely in order not to apply unexpected stress on the terminal.
- Do not put both power source line and signal line on the same route. It may cause miscommunication and malfunction.
- Be sure to do D type earth work.
- For the details of electrical wiring work, see attached instruction manual for electrical wiring work.

1. Remove a lid of the control box (1 screws).
2. Hold each wiring inside the unit and fasten them to terminal block securely.
3. Fix the wiring with clamp.
4. Install a lid of the control box back to original place.

Single split (PAC) series



VRF (KX) series



⑧ Panel installation

- After wiring work finished, install the panel on the indoor unit.
- Refer to attached panel installation manual for details. (see next page)

Accessory items

1	Hook		1 piece	For fixing temporarily
2	Chain		2 pieces	
3	Bolt		4 pieces	For installing the panel
4	Screw		1 piece	For attaching a hook
5	Screw		2 pieces	For attaching a chain

- Attach the panel on the indoor unit after electrical wiring work.
- Refer to attached manual for panel installation for details. (See next page)

⑨ Check list after installation

- Check the following items after all installation work completed.

Check if	Expected trouble	Check
The indoor and outdoor units are fixed securely?	Falling, vibration, noise	
Inspection for leakage is done?	Insufficient capacity	
Insulation work is properly done?	Water leakage	
Water is drained properly?	Water leakage	
Supply voltage is same as mentioned in the model name plate?	PCB burnt out, not working at all	
There is mis-wiring or mis-connection of piping?	PCB burnt out, not working at all	
Earth wiring is connected properly?	Electric shock	
Cable size comply with specified size?	PCB burnt out, not working at all	
Any obstacle blocks airflow on air inlet and outlet?	Insufficient capacity	

PANEL INSTALLATION MANUAL

PJA012D783 a

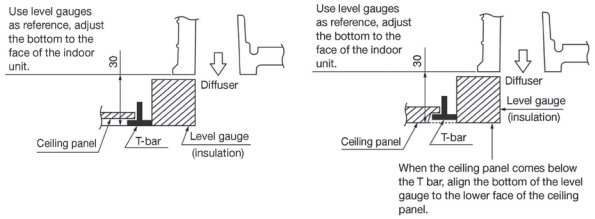
Please read this manual together with the indoor unit's installation manual.

⚠ WARNING

- **Fasten the wiring to the terminal securely and hold the cable securely so as not to apply unexpected stress on the terminal.**
  Loose connection or hold will cause abnormal heat generation or fire.
- **Make sure the power supply is turned off when electric wiring work.**
  Otherwise, electric shock, malfunction and improper running may occur.

① Checking the indoor unit installation position

- Read this manual together with the air conditioner installation manual carefully.
- Check if the gap between the ceiling plane and the indoor unit is correct by inserting the level gauge into the air outlet port of the indoor unit. (See below drawing)
- Adjust the installation elevation if necessary.
- Remove the level gauge before you attach the panel.

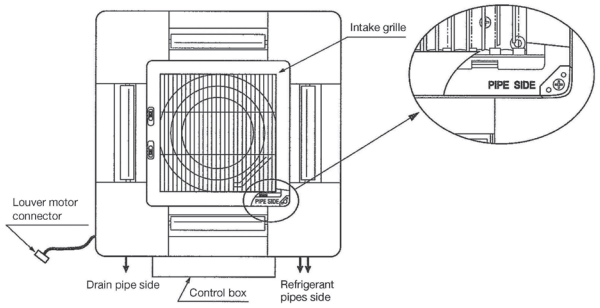


② Orientation of the panel and return air grille installation

1. Take note that there is an orientation to install the panel.
   - Attach the panel with the orientation shown on the below.
   - Align the "PIPE SIDE" mark (on the panel) with the refrigerant pipes on the indoor unit.
2. The intake grille can also be attached in a rotated position by 90 degrees.

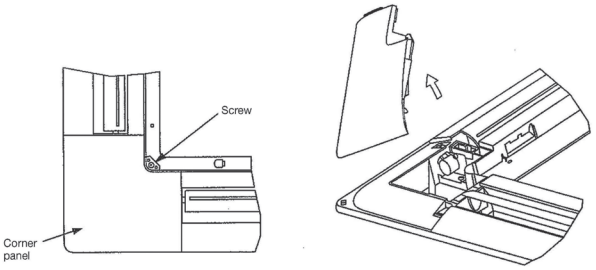
Caution

· In case the orientation of the panel is not correct, it will lead to air leakage and also it is not possible to connect the louver motor wiring.



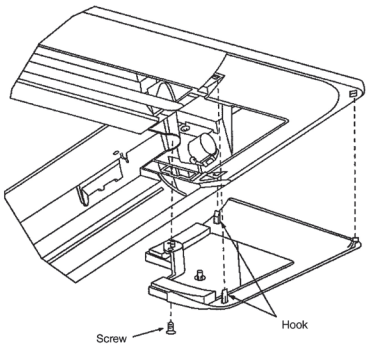
③ Removing a corner panel

- Unscrew the screw from the corner area, pull the corner panel toward the direction indicated by the arrow mark.



④ Attaching a corner panel

- First insert the part "a" of a corner panel into the part "A" of the cover panel, engage two hooks and tighten the screw.



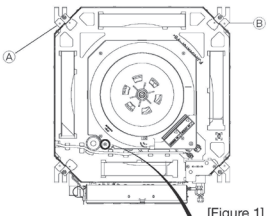
⑤ Panel installation

- Install the panel on the unit after completing the electrical wiring.

Accessories

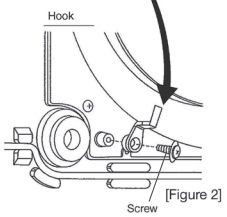
1	Hook		1 piece	For fixing temporarily
2	Chain		2 pieces	
3	Screw		4 pieces	For hoisting the panel
4	Screw		1 piece	For attaching a hook
5	Screw		2 pieces	For attaching a chain

1. Screw in two bolts out of the four supplied with the panel by about slightly less than 5mm. (● mark ⒶⒷ) [Figure 1]



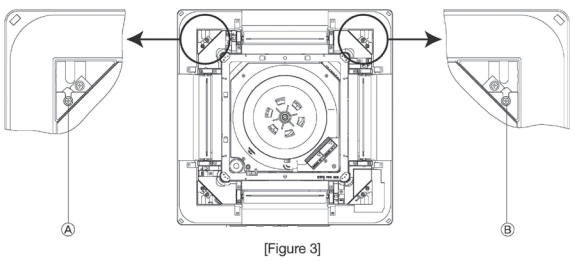
[Figure 1]

2. Attach the hook supplied with the panel to the main body with the hook fixing screw (1 screw). [Figure 2]
3. Open the intake grille.
4. Please remove the screw of a corner panel and remove a corner panel. (four places)



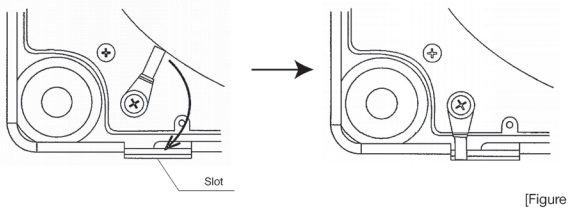
[Figure 2]

5. A panel is hooked on two bolts (● mark ⒶⒷ). [Figure 3]



[Figure 3]

6. Please rotate a hook, put in the slot on the panel, and carry out fixing the panel temporarily. [Figure 4]

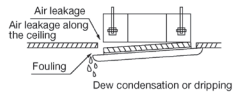


[Figure 4]

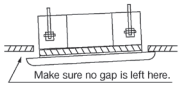
7. Tighten the two bolts used for fixing the panel temporarily and the other two.

Caution

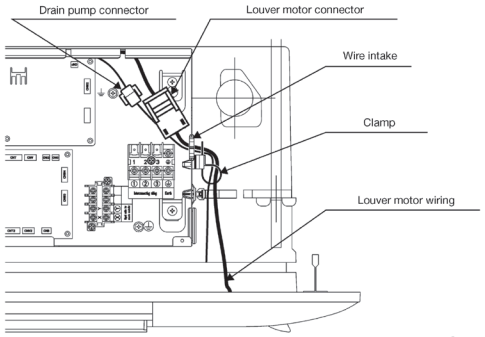
- Improperly tightened hanging bolts can cause the problems listed below, so make sure that you have tightened them securely.



- If there is a gap remaining between the ceiling and the decorative panel even after the hanging bolts are tightened, adjust the installation level of the indoor unit again.

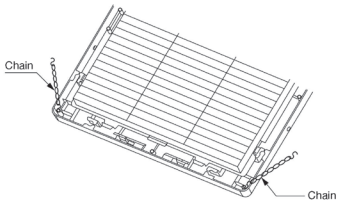


8. Please open the lid of a control box.
9. Like drain pump wiring, please band together by the clamp and put in louver motor wiring into a control box. [Figure 5]
10. Please connect a louver motor connector. [Figure 5]



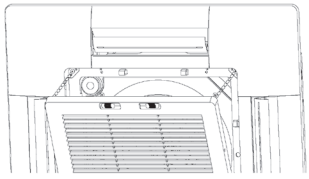
[Figure 5]

11. Attach two chains to the intake grille with two screws. [Figure 6]



[Figure 6]

12. Replace the corner panels. Please also close a chain with a screw together then. [Figure 7]
13. Close the intake grill.



[Figure 7]

Caution

Make sure there is no stress given on the panel when adjusting the height of the indoor unit to avoid unexpected distortion. It may cause the distortion of panel or failing to close the air return grille.

⑦ How to set the airflow direction

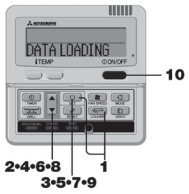
It is possible to change the movable range of the louver on the air outlet from the wired remote controller. Once the top and bottom position is set, the louver will swing within the range between the top and the bottom when swing operation is chosen. It is also possible to apply different setting to each louver.
Note: This function is not able to be set with wireless remote controller or simple remote controll (RCH-H3).

1 Stop the air conditioner and press SET button and LOUVER button simultaneously for three seconds or more.
The following is displayed if the number of the indoor units connected to the remote controller is one. Go to step **4**.

"DATA LOADING "
↓
"No.1 "

The following is displayed if the number of the indoor units connected to the remote controller are more than one

"SELECT I/U"
↓
"I/U000 "



2 Press ▲ or ▼ button. (selection of indoor unit)
Select the indoor unit of which the louver is set.
[EXAMPLE]
"I/U000 "⇔"I/U001 "⇔"I/U002 "⇔
"I/U003 "

3 Press SET button. (determination of indoor unit)
Selected indoor unit is fixed.
[EXAMPLE]

"I/U001 " (displayed for two seconds)
↓
"DATA LOADING "
↓
"No.1 "

4 Press ▲ or ▼ button. (selection of louver No.)
Select the louver No. to be set according to the right figure.
[EXAMPLE]
"No.1 "⇔"No.2 "⇔"No.3 "⇔
"No.4 "

5 Press SET button. (Determination of louver No.)
The louver No. to be set is confirmed and the display shows the upper limit of the movable range.
[EXAMPLE] If No. louver is selected
"No.1 UPPER2 " ← current upper limit position

6 Press ▲ or ▼ button. (selection of upper limit position)
Select the upper limit of louver movable range.
"position 1" is the most horizontal, and "position 6" is the most downward.
"position --" is to return to the factory setting. If you need to change the setting to the default setting, use "position --".

"No.1 UPPER1 " (the most horizontal)
⇔"No.1 UPPER2 "
⇔"No.1 UPPER3 "
⇔"No.1 UPPER4 "
⇔"No.1 UPPER5 "
⇔"No.1 UPPER6 " (the most downwards)
⇔"No.1 UPPER--- " (return to the default setting)

7 Press SET button. (i in of the upper limit position)
The upper limit position is fixed and the setting position is displayed for two seconds. Then proceed to lower limit position selection display.
[EXAMPLE]
No.1 UPPER2 (displayed for two seconds)
↓
No.1 LOWER5 (shows current setting)

8 Press ▲ or ▼ button. (Selection of lower limit position)
Select the lower limit position of louver.
"position 1" is the most horizontal, and "position 6" is the most downwards.
"position --" is to return to the factory setting. If you need to change the setting to the default setting, use "position --".

No.1 LOWER1 (the most horizontal)
No.1 LOWER2
No.1 LOWER3
No.1 LOWER4
No.1 LOWER5
No.1 LOWER6 (the most downwards)
No.1 LOWER--- (return to the default setting)

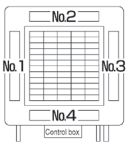
9 Press SET button. (i in of the lower limit position)
Upper limit position and lower limit position are fixed, and the set positions are displayed for two seconds, then setting is completed.
- After the setting is completed, the louver which was set moves from the original position to the lower limit position, and goes back to the original position again. (This operation is not performed if the indoor unit and or indoor unit fan is in operation.)

[EXAMPLE]
No.1 U2 L6 (displayed for two seconds)
SET COMPLETE
No.1

10 Press ON/OFF button.
Louver adjusting mode ends and returns to the original display.
For setting the swing range of other louvers, return to 1 and proceed same procedure respectively.

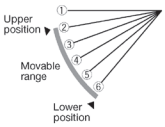
NOTICE

- In case the louver No to be set is uncertain, set any louver temporarily.
The louver will swing once when the setting is completed and it is possible to confirm the louver No and the position.
After that, choose the correct louver No and set the top and bottom position.



Louver No.

the position of the louver



Caution

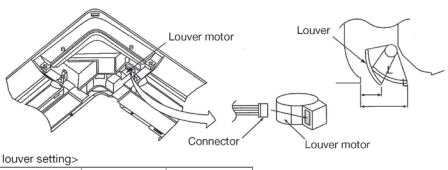
If the upper limit position number and the lower limit position number are set to the same position, the louver is fixed at that position auto swing does not function.

ATTENTION

If you press RESET button during settings, the display will return to previous display.
If you press ON/OFF button during settings, the mode will be ended and return to original display, and the settings that have not been completed will become invalid.

When plural remote controllers are connected, louver setting operation cannot be set by slave remote controller.

If it is necessary to fix the louver position manually, follow the procedure mentioned below.
1. Shut off the main power switch.
2. Unplug the connector of the louver motor which you want to fix the position.
Make sure to insulate unplugged connectors electrically with a vinyl tape.
3. Adjust the louver position slowly by hand so as to be within the applicable range mentioned below table.



<Range of louver setting>

Vertical airflow direction	Horizontal 23°	Downwards 50°
Dimension L (mm)	40	24

※It can be set between 24~40mm freely.

Caution

- Any automatic control or operation from the remote controller will be disabled on the louver whose position is fixed in the above way.
- Do not set a louver beyond the specified range. Failure to observe this instruction may result in dripping, dew condensation, the fouling of the ceiling and the malfunctioning of the unit.

PJF012D016

(2) Ceiling cassette-4way type (FDT)

This manual is for the installation of an indoor unit.
For electrical wiring work (Indoor), refer to the electrical wiring work installation manual. For remote controller installation, refer to the installation manual attached to a remote controller. For wireless kit installation, refer to the installation manual attached to a wireless kit. For electrical wiring work (Outdoor) and refrigerant pipe work installation for outdoor unit, refer to the installation manual attached to an outdoor unit.
This unit must always be used with the panel.

SAFETY PRECAUTIONS

- Read the "SAFETY PRECAUTIONS" carefully first of all and then strictly follow it during the installation work in order to protect yourself.
- The precautionary items mentioned below are distinguished into two levels, ⚠WARNING and ⚠CAUTION .
  ⚠WARNING : Wrong installation would cause serious consequences such as injuries or death.
  ⚠CAUTION : Wrong installation might cause serious consequences depending on circumstances.
  Both mentions the important items to protect your health and safety so strictly follow them by any means.
- The meanings of "Marks" used here are as shown on the right:
  ⃠ Never do it under any circumstances. ❶ Always do it according to the instruction.
- After completing the installation, do commissioning to confirm there are no abnormalities, and explain to the customers about "SAFETY PRECAUTIONS", correct operation method and maintenance method (air filter cleaning, operation method and temperature setting method) with user's manual of this unit.
  Ask your customers to keep this installation manual together with the user's manual. Also, ask them to hand over the user's manual to the new user when the owner is changed.

⚠WARNING

- **Installation should be performed by the specialist.**
  If you install the unit by yourself, it may lead to serious trouble such as water leakage, electric shock, fire, and injury due to overturn of the unit.
- **Install the system correctly according to these installation manuals.**
  Improper installation may cause explosion, injury, water leakage, electric shock, and fire.
- **Check the density refered by the foumula (accordance with ISO5149).**
  If the density exceeds the limit density, please consult the dealer and installate the ventilation system.
- **Use the genuine accessories and the specified parts for installation.**
  If parts unspecified by our company are used it could cause water leakage, electric shock, fire, and injury due to overturn of the unit.
- **Ventilate the working area well in case the refrigerant leaks during installation.**
  If the refrigerant contacts the fire, toxic gas is produced.
- **Install the unit in a location that can hold heavy weight.**
  Improper installation may cause the unit to fall leading to accidents.
- **Install the unit properly in order to be able to withstand strong winds such as typhoons, and earthquakes.**
  Improper installation may cause the unit to fall leading to accidents.
- **Do not mix air in to the cooling cycle on installation or removal of the air conditioner.**
  If air is mixed in, the pressure in the cooling cycle will rise abnormally and may cause explosion and injuries.
- **Be sure to have the electrical wiring work done by qualified electrical installer, and use exclusive circuit.**
  Power source with insufficient capacity and improper work can cause electric shock and fire.
- **Use specified wire for electrical wiring, fasten the wiring to the terminal securely, and hold the cable securely in order not to apply unexpected stress on the terminal.**
  Loose connections or hold could result in abnormal heat generation or fire.
- **Arrange the electrical wires in the control box properly to prevent them from rising. Fit the lid of the services panel property.**
  Improper fitting may cause abnormal heat and fire.
- **Check for refrigerant gas leakage after installation is completed.**
  If the refrigerant gas leaks into the house and comes in contact with a fan heater, a stove, or an oven, toxic gas is produced.
- **Use the specified pipe, flare nut, and tools for R410A.**
  Using existing parts (R22) could cause the unit failure and serious accident due to explosion of the cooling cycle.
- **Tighten the flare nut according to the specified method by with torque wrench.**
  If the flare nut were tightened with excess torque, it could cause burst and refrigerant leakage after a long period.
- **Do not put the drainage pipe directly into drainage channels where poisonous gases such as sulfide gas can occur.**
  Poisonous gases will flow into the room through drainage pipe and seriously affect the user's health and safety. This can also cause the corrosion of the indoor unit and a resultant unit failure or refrigerant leak.
- **Connect the pipes for refrigeration circuit securely in installation work before compressor is operated.**
  If the compressor is operated when the service valve is open without connecting the pipe, it could cause explosion and injuries due to abnormal high pressure in the system.
- **Stop the compressor before removing the pipe after shutting the service valve on pump down work.**
  If the pipe is removed when the compressor is in operation with the service valve open, air would be mixed in the refrigeration circuit and it could cause explosion and injuries due to abnormal high pressure in the cooling cycle.
- **Only use prescribed optional parts. The installation must be carried out by the qualified installer.**
  If you install the system by yourself, it can cause serious trouble such as water leaks, electric shocks, fire.
- **Do not repair by yourself. And consult with the dealer about repair.**
  Improper repair may cause water leakage, electric shock or fire.
- **Consult the dealer or a specialist about removal of the air conditioner.**
  Improper installation may cause water leakage, electric shock or fire.
- **Turn off the power source during servicing or inspection work.**
  If the power is supplied during servicing or inspection work, it could cause electric shock and injury by the operating fan.
- **Do not run the unit when the panel or protection guard are taken off.**
  Touching the rotating equipment, hot surface, or high voltage section could cause an injury to be caught in the machine, to get burned, or electric shock.
- **Shut off the power before electrical wiring work.**
  It could cause electric shock, unit failure and improper running.

⚠ CAUTION

- **Perform earth wiring surely.**
  Do not connect the earth wiring to the gas pipe, water pipe, lightning rod and telephone earth wiring. Improper earth could cause unit failure and electric shock due to a short circuit.
- **Earth leakage breaker must be installed.**
  If the earth leakage breaker is not installed, it can cause electric shocks.
- **Use the circuit breaker of correct capacity. Circuit breaker should be the one that disconnect all poles under over current.**
  Using the incorrect one could cause the system failure and fire.
- **Do not use any materials other than a fuse of correct capacity where a fuse should be used.**
  Connecting the circuit by wire or copper wire could cause unit failure and fire.
- **Do not install the indoor unit near the location where there is possibility of flammable gas leakages.**
  If the gas leaks and gathers around the unit, it could cause fire.
- **Do not install and use the unit where corrosive gas (such as sulfurous acid gas etc.) or flammable gas (such as thinner, petroleum etc.) may be generated or accumulated, or volatile flammable substances are handled.**
  It could cause the corrosion of heat exchanger, breakage of plastic parts etc. And inflammable gas could cause fire.
- **Secure a space for installation, inspection and maintenance specified in the manual.**
  Insufficient space can result in accident such as personal injury due to falling from the installation place.
- **Do not use the indoor unit at the place where water splashes such as laundry.**
  Indoor unit is not waterproof. It could cause electric shock and fire.
- **Do not use the indoor unit for a special purpose such as food storage, cooling for precision instrument, preservation of animals, plants, and a work of art.**
  It could cause the damage of the items.
- **Do not install nor use the system near equipments which generate electromagnetic wave or high harmonics.**
  Equipments like inverter equipment, private power generator, high-frequency medical equipment, or telecommunication equipment might influence the air conditioner and cause a malfunction and breakdown. Or the air conditioner might influence medical equipments or telecommunication equipments, and obstruct their medical activity or cause jamming.
- **Do not install the remote controller at the direct sunlight.**
  It could cause breakdown or deformation of the remote controller.
- **Do not install the indoor unit at the place listed below.**
  - Places where flammable gas could leak.
  - Places where carbon fiber, metal powder or any powder is floated.
  - Place where the substances which affect the air conditioner are generated such as sulfide gas, chloride gas, acid, alkali or ammonic atmospheres.
  - Places exposed to oil mist or steam directly.
  - On vehicles and ships
  - Places where machinery which generates high harmonics is used.
  - Places where cosmetics or special sprays are frequently used.
  - Highly salted area such as beach.
  - Heavy snow area
  - Places where the system is affected by smoke from a chimney.
  - Altitude over 1000m
- **Do not install the indoor unit in the locations listed below (Be sure to install the indoor unit according to the installation manual for each model because each indoor unit has each limitation)**
  - Locations with any obstacles which can prevent inlet and outlet air of the unit
  - Locations where vibration can be amplified due to insufficient strength of structure.
  - Locations where the infrared receiver is exposed to the direct sunlight or the strong light beam. (in case of the infrared specification unit)
  - Locations where an equipment affected by high harmonics is placed. (TV set or radio receiver is placed within 5m)
  - Locations where drainage cannot run off safely.

  It can affect performance or function and etc..
- **Do not put any valuables which will break down by getting wet under the air conditioner.**
  Condensation could drop when the relative humidity is higher than 80% or drain pipe is clogged, and it damages user's belongings.
- **Do not use the base frame for the outdoor unit which is corroded or damaged after a long period of use.**
  It could cause the unit falling down and injury.
- **Pay attention not to damage the drain pan by weld sputter when brazing work is done near the unit.**
  If sputter entered into the unit during brazing work, it could cause damage (pinhole) of drain pan and leakage of water. To avoid damaging, keep the indoor unit packed or cover the indoor unit.
- **Install the drain pipe to drain the water surely according to the installation manual.**
  Improper connection of the drain pipe may cause dropping water into room and damaging user's belongings.
- **Do not share the drain pipe for indoor unit and GHP (Gas Heat Pump system) outdoor unit.**
  Toxic exhaust gas would flow into room and it might cause serious damage (some poisoning or deficiency of oxygen) to user's health and safety.
- **Be sure to perform air tightness test by pressurizing with nitrogen gas after completed refrigerant piping work.**
  If the density of refrigerant exceeds the limit in the event of refrigerant leakage in the small room, lack of oxygen can occur, which can cause serious accidents.
- **For drain pipe installation, be sure to make descending slope of greater than 1/100, not to make traps, and not to make air-bleeding.**
  Check if the drainage is correctly done during commissioning and ensure the space for inspection and maintenance.
- **Ensure the insulation on the pipes for refrigeration circuit so as not to condense water.**
  Incomplete insulation could cause condensation and it would wet ceiling, floor, and any other valuables.
- **Do not install the outdoor unit where is likely to be a nest for insects and small animals.**
  Insects and small animals could come into the electronic components and cause breakdown and fire. Instruct the user to keep the surroundings clean.
- **Pay extra attention, carrying the unit by hand.**
  Carry the unit with 2 people if it is heavier than 20kg. Do not use the plastic straps but the grabbing place, moving the unit by hand. Use protective gloves in order to avoid injury by the aluminum fin.
- **Make sure to dispose of the packaging material.**
  Leaving the materials may cause injury as metals like nail and woods are used in the package.
- **Do not operate the system without the air filter.**
  It may cause the breakdown of the system due to clogging of the heat exchanger.
- **Do not touch any button with wet hands.**
  It could cause electric shock.
- **Do not touch the refrigerant piping with bare hands when in operation.**
  The pipe during operation would become very hot or cold according to the operating condition, and it could cause a burn or frostbite.
- **Do not clean up the air conditioner with water.**
  It could cause electric shock.
- **Do not turn off the power source immediately after stopping the operation.**
  Be sure to wait for more than 5 minutes. Otherwise it could cause water leakage or breakdown.
- **Do not control the operation with the circuit breaker.**
  It could cause fire or water leakage. In addition, the fan may start operation unexpectedly and it may cause injury.

①Before installation

●Install correctly according to the installation manual.

●Confirm the following points:

○Unit type/Power supply specification ○Pipes/Wires/Small parts ○Accessory items

Accessory item

For unit hanging		For refrigerant pipe			For drain pipe			
Flat washer (M10)	Level gauge	Pipe cover(big)	Pipe cover (small)	Strap	Pipe cover(big)	Pipe cover(small)	Drain hose	Hose clamp
								
8	1	1	1	4	1	1	1	1
For unit hanging	For unit hanging and adjustment	For heat insulation of gas pipe	For heat insulation of liquid tube	For pipe cover fixing	For heat insulation of drain socket	For heat insulation of drain socket	For drain pipe connecting	For drain hose mounting

②Selection of installation location for the indoor unit

① Select the suitable areas to install the unit under approval of the user.

- Areas where the indoor unit can deliver hot and cold wind sufficiently. Suggest to the user to use a circulator if the ceiling height is over 3m to avoid warm air being accumulated on the ceiling.
- Areas where there is enough space to install and service.
- Areas where it can be drained properly. Areas where drain pipe descending slope can be taken.
- Areas where there is no obstruction of airflow on both air return grille and air supply port.
- Areas where fire alarm will not be accidentally activated by the air conditioner.
- Areas where the supply air does not short-circuit.
- Areas where it is not influenced by draft air.
- Areas not exposed to direct sunlight.
- Areas where dew point is lower than around 28°C and relative humidity is lower than 80%.

  This indoor unit is tested under the condition of JIS (Japan Industrial Standard) high humidity condition and confirmed there is no problem. However, there is some risk of condensation drop if the air conditioner is operated under the severer condition than mentioned above.
  If there is a possibility to use it under such a condition,attach additional insulation of 10 to 20mm thick for entire surface of indoor unit, refrigeration pipe and drain pipe.
- Areas where TV and radio stays away more than 1m. (It could cause jamming and noise.)
- Areas where any items which will be damaged by getting wet are not placed such as food, table wares, server, or medical equipment under the unit.
- Areas where there is no influence by the heat which cookware generates.
- Areas where not exposed to oil mist, powder and/or steam directly such as above fryer.
- Areas where lighting device such as fluorescent light or incandescent light doesn't affect the operation.
  (A beam from lighting device sometimes affects the infrared receiver for the wireless remote controller and the air conditioner might not work properly.)

②Check if the place where the air conditioner is installed can hold the weight of the unit. If it is not able to hold, reinforce the structure with boards and beams strong enough to hold it. If the strength is not enough, it could cause injury due to unit falling.

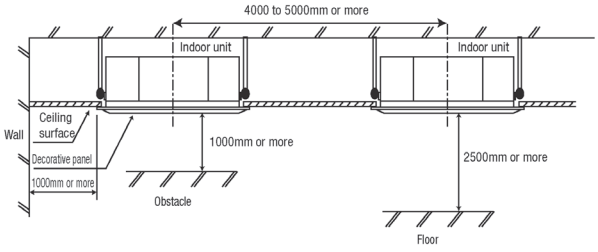
③If there are 2 units of wireless type, keep them away for more than 6m to avoid malfunction due to cross communication.

④When plural indoor units are installed nearby, keep them away for more than 4 to 5m.

Space for installation and service

●When it is not possible to keep enough space between indoor unit and wall or between indoor units, close the air supply port where it is not possible to keep space and confirm there is no short circuit of airflow.

●Install the indoor unit at a height of more than 2.5m above the floor.



Set blow-out pattern

●Select the most proper number of blow-out air supply port direction from 4 way, 3 way or 2 way according to the shape of the room and installation position. (1 way is not available.)

●If it is necessary to change the number of air supply port, prepare the covering materials. (sold as accessory)

●Instruct the user not to use low fan speed when 2way or 3way air supply is used.

●Do not use 2way air supply port under high temperature and humidity environment. (Otherwise it could cause condensation and leakage of water.)

●It is possible to set the airflow direction port by port independently. Refer to tne user's manual for details.

③Preparation before installation

●If suspension bolt becomes longer, do reinforcement of earthquake resistant.

○For grid ceiling

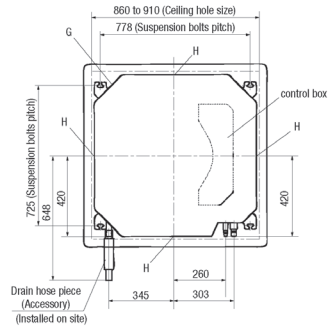
When suspension bolt length is over 500mm, or the gap between the ceiling and roof is over 700mm, apply earthquake resistant brace to the bolt.

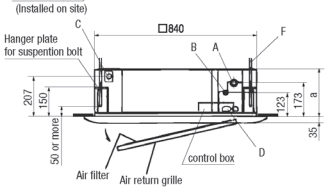
○In case the unit is hanged directly from the slab and is installed on the ceiling plane which has enough strength.

When suspension bolt length is over 1000mm, apply the earthquake resistant brace to the bolt.

●Prepare four (4) sets of suspension bolt, nut and spring washer (M10 or M8) on site.

Ceiling opening, Suspension bolts pitch, Pipe position

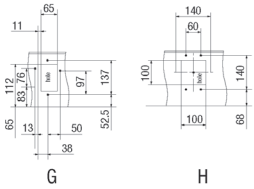




(mm)

Series	Type	a
Single Split (PAC) series	40 to 71 type	246
	100 to 140 type	298
VRF (KX) series	28 to 71 type	246
	90 to 160 type	298

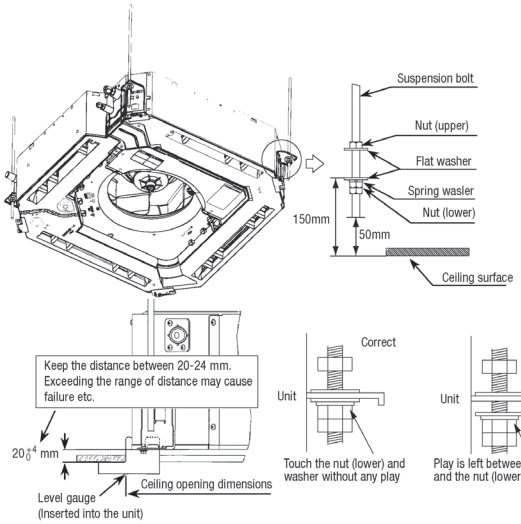
Symbol	
A	Gas piping
B	Liquid piping
C	Drain piping
D	Hole for wiring
F	Suspension bolts
G	Outside air opening for ducting
H	Air outlet opening for ducting



④Installation of indoor unit

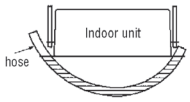
Work procedure

1. Prepare a ceiling hole with the size of from 860mm × 860mm to 910mm × 910mm referring to the template attached in the package.
2. Arrange the suspension bolt at the right position (725mm×778mm).
3. Make sure to use four suspension bolts and fix them so as to be able to hold 500N load.
4. Ensure that the lower end of the suspension bolt should be 50mm above the ceiling plane. Temporarily put the four lower nuts 150mm above the ceiling plane and the upper nuts on distant place from the lower nuts in order not to obstruct hanging the indoor unit or adjust the indoor unit position, and then hang the indoor unit.
5. Adjust the indoor unit position after hanging it by inserting the level gauge attached on the package into the air supply port and checking if the gap between the ceiling plane and the indoor unit is appropriate. In order to adjust the indoor unit position, adjust the lower nuts while the upper nuts are put on distant place. Confirm there is no backlash between the hanger plate for suspension bolt and the lower nut and washer.



④Installation of indoor unit (continued)

6. Make sure to install the indoor unit horizontally. Confirm the levelness of the indoor unit with a level gauge or transparent hose filled with water. Keep the height difference at both ends of the indoor unit within 3mm.
7. Tighten four upper nuts and fix the unit after height and levelness adjustment.



Caution

- Do not adjust the height by adjusting upper nuts. It will cause unexpected stress on the indoor unit and it will lead to deformation of the unit, failure of attaching a panel, and generating noise from the fan.
- Make sure to install the indoor unit horizontally and set the gap between the unit underside and the ceiling plane properly. Improper installation may cause air leakage, dew condensation, water leakage and noise.
- Even after decorative panel attached, still the unit height can be adjusted finely. Refer to the installation manual for decorative panel for details.
- Make sure there is no gap between decoration panel and ceiling surface, and between decoration panel and the indoor unit. The gap may cause air leakage, dew condensation and water leakage.
- In case decorative panel is not installed at the same time, or ceiling material is installed after the unit installed, put the cardboard template for installation attached on the package (packing material of cardboard box) on the bottom of the unit in order to avoid dust coming into the indoor unit.

⑤Refrigerant pipe

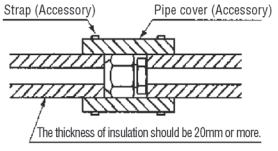
Caution

- Use the new refrigerant pipe.
  When re-using the existing pipe system for R22 or R407C, pay attention to the following items.
  ・Change the flare nuts with the attached ones (JIS category 2), and reprocess the flare parts.
  ・Do not use thin-walled pipes.
- Use phosphorus deoxidized copper alloy seamless pipe (C1220T specified in JIS H3300) for refrigeration pipe installation.
  In addition, make sure there is no damage both inside and outside of the pipe, and no harmful substances such as sulfur, oxide, dust or a contaminant stuck on the pipes.
- Do not use any refrigerant other than R410A.
  Using other refrigerant except R410A (R22 etc.) may degrade inside refrigeration oil. And air getting into refrigeration circuit may cause over-pressure and resultant it may result in bursting, etc.
- Store the copper pipes indoors and seal the both end of them until they are brazed in order to avoid any dust, dirt or water getting into pipe. Otherwise it will cause degradation of refrigeration oil and compressor breakdown, etc.
- Use special tools for R410 refrigerant.

Work procedure

1. Remove the flare nut and blind flanges on the pipe of the indoor unit.
   ※ Make sure to loosen the flare nut with holding the nut on pipe side with a spanner and giving torque to the nut with another spanner in order to avoid unexpected stress to the copper pipe, and then remove them.
   (Gas may come out at this time, but it is not abnormal.)
   - Pay attention whether the flare nut pops out. (as the indoor unit is sometimes pressured.)
2. Make a flare on liquid pipe and gas pipe, and connect the refrigeration pipes on the indoor unit.
   ※Bend the pipe with as big radius as possible and do not bend the pipe repeatedly. In addition, do not twist and crush the pipes.
   ※Do a flare connection as follows:
   - Make sure to loosen the flare nut with holding the nut on pipe side with a spanner and giving torque to the nut with another spanner in order to avoid unexpected stress to the copper pipe, and then remove them.
   - When fastening the flare nut, align the refrigeration pipe with the center of flare nut, screw the nut for 3-4 times by hand and then tighten it by spanner with the specified torque mentioned in the table below. Make sure to hold the pipe on the indoor unit securely by a spanner when tightening the nut in order to avoid unexpected stress on the copper pipe.
3. Cover the flare connection part of the indoor unit with attached insulation material after a gas leakage inspection, and tighten both ends with attached straps.
   - Make sure to insulate both gas pipes and liquid pipes completely.
     ※Incomplete insulation may cause dew condensation or water dropping.
4. Refrigerant is charged in the outdoor unit.
   As for the additional refrigerant charge for the indoor unit and piping, refer to the installation manual attached to the outdoor unit.

Pipe diameter	Tightening torque N·m
ϕ 6.35	14 to 18
ϕ 9.52	34 to 42
ϕ 12.7	49 to 61
ϕ 15.88	68 to 82
ϕ 19.05	100 to 120



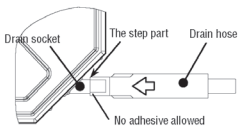
⑥Drain pipe

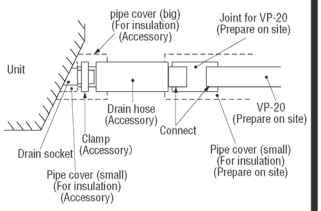
Caution

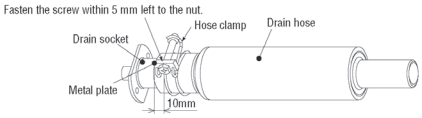
- Install the drain pipe according to the installation manual in order to drain properly.
  Imperfection in draining may cause flood indoors and wetting the household goods, etc.
- Do not put the drain pipe directly into the ditch where toxic gas such as sulfur, the other harmful and inflammable gas is generated. Toxic gas would flow into the room and it would cause serious damage to user's health and safety (some poisoning or deficiency of oxygen). In addition, it may cause corrosion of heat exchanger and bad smell.
- Connect the pipe securely to avoid water leakage from the joint.
- Insulate the pipe properly to avoid condensation drop.
- Check if the water can flow out properly from both the drain outlet on the indoor unit and the end of the drain pipe after installation.
- Make sure to make descending slope of greater than 1/100 and do not make up-down bend and/or trap in the midway. In addition, do not put air vent on the drain pipe. Check if water is drained out properly from the pipe during commissioning. Also, keep sufficient space for inspection and maintenance.

Work procedure

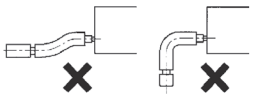
1. Make sure to insert the drain hose (the end mode of soft PVC) to the end of the step part of drain socket.
   Attach the hose clamp to the drain hose around 10mm from the end, and fasten the screw within 5mm left to the nut.
   - Do not apply adhesives on this end.



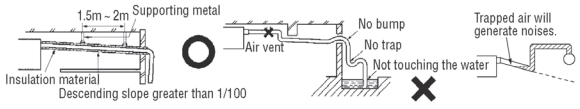




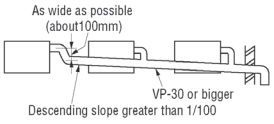
2. Prepare a joint for connecting VP-20 pipe, adhere and connect the joint to the drain hose (the end made of rigid PVC), and adhere and connect VP-20 pipe (prepare on site).
   ※As for drain pipe, apply VP-20 made of rigid PVC which is on the market.
   - Make sure that the adhesive will not get into the supplied drain hose.
     It may cause the flexible part broken after the adhesive is dried up and gets rigid.
   - The flexible drain hose is intended to absorb a small difference at installation of the unit or drain pipes. Intentional bending, expanding may cause the flexible hose broken and water leakage.



3. Make sure to make descending slope of greater than 1/100 and do not make up-down bend and/or trap in the midway.
   - Pay attention not to give stress on the pipe on the indoor unit side, and support and fix the pipe as close place to the unit as possible when connecting the drain pipe.
   - Do nt set up air vent.



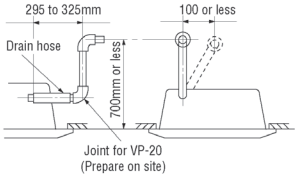
- When sharing a drain pipe for more than one unit, lay the main pipe 100mm below the drain outlet of the unit. In addition, select VP-30 or bigger size for main drain pipe.



4. Insulate the drain pipe.
   - Be sure to insulate the drain socket and rigid PVC pipe installed indoors otherwise it may cause dew condensation and water leakage.
     ※After drainage test implementation, cover the drain socket part with pipe cover (small size), then use the pipe cover (big size) to cover the pipe cover (small size), clamps and part of the drain hose, and fix and wrap it with tapes to wrap and make joint part gapless.

Drain up

- The position for drain pipe outlet can be raised up to 700mm above the ceiling. Use elbows for installation to avoid obstacles inside ceiling. If the horizontal drain pipe is too long before vertical pipe, the backflow of water will increase when the unit is stopped, and it may cause overflow of water from the drain pan on the indoor unit. In order to avoid overflow, keep the horizontal pipe length and offset of the pipe within the limit shown in the figure below.

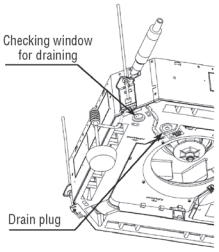


⑥Drain pipe (continued)

Drain test

- After installation of drain pipe, make sure that drain system work in good condition and no water leakage from joint and drain pan. Check if the motor sound of drain pump is normal or not.
- Do drain test even if installation of heating season.
- For new building cases, make sure to complete the test before hanging the ceiling.

1. Pour water of about 1000cc into the drain pan in the indoor unit by pump so as not to get the electrical component wet.
2. Make sure that water is drained out properly and there is no water leakage from any joints of the drain pipe at the test.
   Confirm that the water is properly drained out while the drain motor is operating. At the drain socket (transparent), it is possible to check if the water is drained out properly.
3. Unplug the drain plug on the indoor unit to remove remain ing water on the drain pan after the test, and re-plug it. And insulate the drain pipe properly finally.



Drain pump operation

○In case electrical wiring work finished

Drain pump can be operated by remote controller (wired).
For the operation method, refer to Operation for drain pump in the installation manual for wiring work.

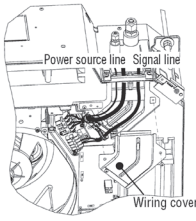
○In case electrical wiring work not finished

Drain pump will run continuously when the dip switch"SW7-1" on the indoor unit PCB is turned ON, the Connector CNB is disconnected, and then the power supply (230VAC on the terminal block ① and ②) is turned ON.
Make sure to turn OFF "SW7-1" and reconnect the Connector CNB after the test.

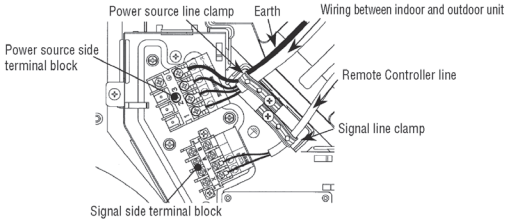
⑦Wiring-out position and wiring connection

- Electrical installation work must be performed according to the installation manual by an electrical installation service provider qualified by a power provider of the country, and be executed according to the technical standards and other regulations applicable to electrical installation in the country.
  Be sure to use an exclusive circuit.
- Use specified cord, fasten the wiring to the terminal securely, and hold the cord securely in order not to apply unexpected stress on the terminal.
- Do not put both power source line and signal line on the same route. It may cause miscommunication and malfunction.
- Be sure to do D type earth work.
- For the details of electrical wiring work, see attached instruction manual for electrical wiring work.

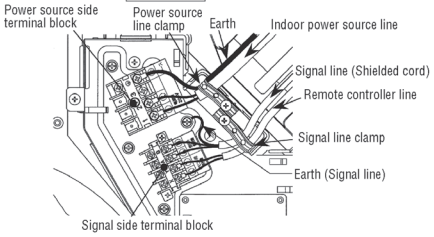
1. Remove a lid of the control box (3 screws) and the wiring cover (2 screws).
2. Hold each wiring inside the unit and fasten them to terminal block securely.
3. Fix the wiring with clamps.
4. Install the removed parts back to original place.



Single Split (PAC) series



VRF (KX) series



⑧Panel installation

- Attach the panel on the indoor unit after electrical wiring work.
- Refer to attached manual for panel installation for details. (See next page)

⑨Check list after installation

- Check the following items after all installation work completed.

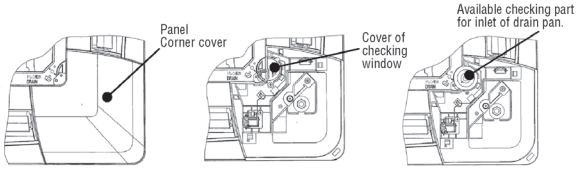
Check if;	Expected trouble	Check
The indoor and outdoor units are fixed securely?	Falling, vibration, noise	
Inspection for leakage is done?	Insufficient capacity	
Insulation work is properly done?	Water leakage	
Water is drained properly?	Water leakage	
Supply voltage is same as mentioned in the model name plate?	PCB burnt out, not working at all	
There is mis-wiring or mis-connection of piping?	PCB burnt out, not working at all	
Earth wiring is connected properly?	Electric shock	
Cable size comply with specified size?	PCB burnt out, not working at all	
Any obstacle blocks airflow on air inlet and outlet?	Insufficient capacity	

⑩How to check the dirt of drain pan (Maintenance)

The method of checking the dirt of drain pan

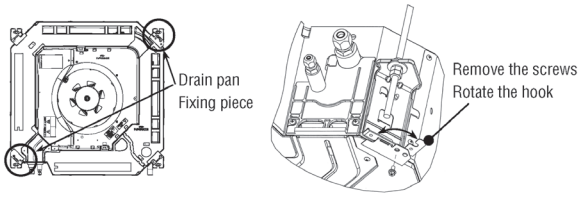
- It is possible to check the dirt for inlet of drain pan without detaching the panel.
  (Inspection is not possible when the high efficient filter and option spacer is installed.)

1. Open the air return grille and remove the panel corner cover on drain pan side.
2. Remove the cover of inspection window. (1screw)
3. Check the drain pan from the inspection window.
   If the drain pan is very dirty, remove the drain pan and clean it.
4. After checking of the dirty of drain pan, restore the cover of the inspection window securely. Improper restoration of the cover may cause dew condensation and water leakage.



Attention for removing drain pan

- The fixing components have been attached the with drain pan. Pay attention to these components during installation and removing. Take off the hanging hook after removing four screws. During the installation of drain pan, fix the drain pan firmly by using four screws after hanging it up with the fixing hook.



PANEL INSTALLATION MANUAL

PJF012D003A b

Read this manual together with the indoor unit's installation manual.

⚠ WARNING

- **Fasten the wiring to the terminal securely and hold the cable securely so as not to apply unexpected stress on the terminal. Loose connection or hold will cause abnormal heat generation or fire.**
- **Make sure the power supply is turned off when electric wiring work. Otherwise, electric shock, malfunction and improper running may occur.**

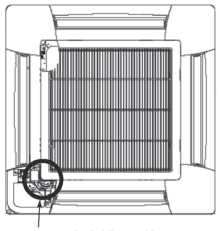
① Before installation

- Follow installation manual carefully, and install the panel properly.
- Check the following items.
  - ○ Accessories

Accessories

Bolt		4 pieces	For panel installation
Strap		4 pieces	For avoiding the corner panel from falling

Note: Accessories are laid in the position removing the corner panel.



Accessories holding position

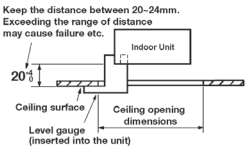
② Checking the indoor unit installation position

- Read this manual together with the air conditioner installation manual carefully.
- Check if the opening size for the indoor unit is correct with the level gauge supplied in the indoor unit.
- Check if the gap between the ceiling plane and the indoor unit is correct by inserting the level gauge into the air outlet port of the indoor unit. (See below drawing)
- Adjust the installation elevation if necessary.

Caution

If there is a height difference beyond the design limit between the installation level of the indoor unit and the ceiling plane, the panel may be subject to excessive stress during installation, it may cause distortion and damage.

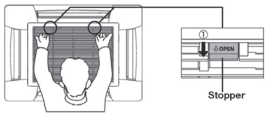
- The installation level of the indoor unit can be adjusted finely from the opening provided on the corner, even after panel is attached. (Refer to ⑥ Attaching the panel for details.)



③ Removing the air return grille

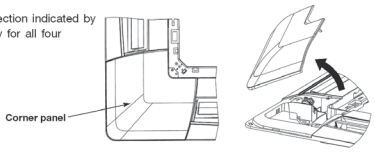
1. Hold the stoppers on the air return grille (2 places) toward OPEN direction, open the air return grille.
2. Remove the hooks of the air return grille from the decorative panel while it is in the open position.

<Removal>



④ Removing a corner panel

- Pull the corner panel toward the direction indicated by the arrow and remove it. (Same way for all four corner panels)



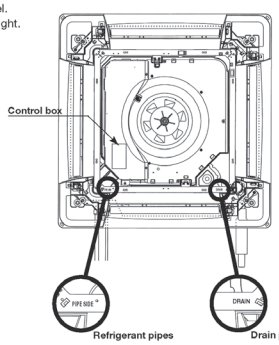
⑤ Orientation of the panel installation

Take note that there is an orientation to install the panel.

- Attach the panel with the orientation shown on the right.
- Align the "PIPE SIDE" mark (on the panel) with the refrigerant pipes on the indoor unit.
- Align the "DRAIN" mark (on the panel) with the drain pipe on the indoor unit.

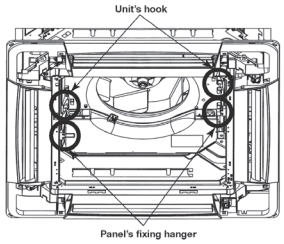
CAUTION

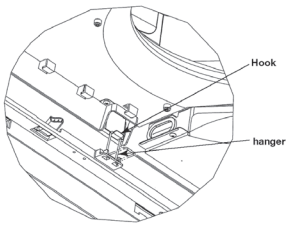
In case the orientation of the panel is not correct, it will lead to air leakage and also it is not possible to connect the louver motor wiring.



⑥ Attaching the panel

1. Temporary attaching
   - Lift up the hanger (2 places) on the panel for temporary support.
   - Hang the panel on the hook on the indoor unit.

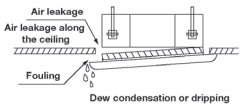




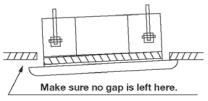
2. Fix the panel on the indoor unit
   - Fasten the panel on the indoor unit with the four bolts supplied with the panel.

Caution

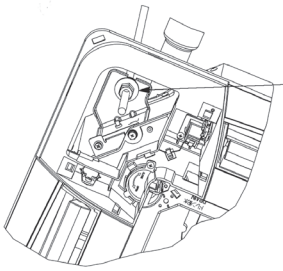
- Improperly tightened hanging bolts can cause the problems listed below, so make sure that you have tightened them securely.



- If there is a gap remaining between the ceiling and the decorative panel even after the hanging bolts are tightened, adjust the installation level of the indoor unit again.



- It is possible to adjust the installation height of the indoor unit with the panel attached as long as there is no influence on the drain pipe inclination and/or the indoor unit levelness.



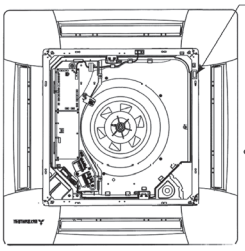
To adjust finely, please turn a nut fastening the indoor unit using a spanner or similar tool from the opening on the corner.

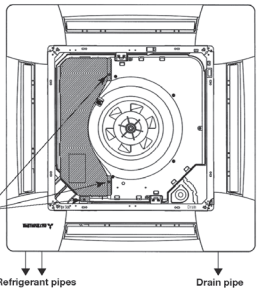
Caution

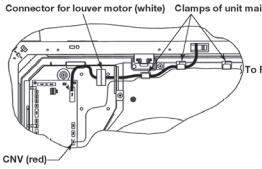
Make sure there is no stress given on the panel when adjusting the height of the indoor unit to avoid unexpected distortion. It may cause the distortion of panel or failing to close the air return grille.

⑦ Electrical wiring

1. After removing three screws of control box, detach the cover of control box (the hatched part).
2. Connect the connector for louver motor (white 20P).
   - Hold the wiring by using the clamps of the indoor unit.
   - Hold the connector inside the control box.
3. Connect the connector for panel switch.
   - Hold the wiring by using the clamps of the indoor unit.
   - Connect CNV (red) inside the control box.





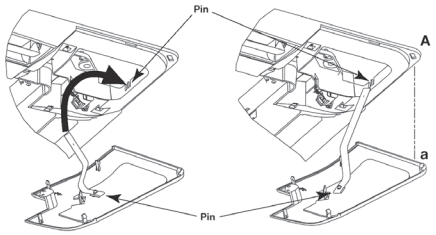


CAUTION

- If the air return grill is opened, the panel switch is turned off so that the air-conditioner cannot be operated any more.
- To start the air conditioner, close the air return grill.

⑧ Attaching a corner panel

1. To avoid unexpected falling of the corner panel, put the strap onto the corner panel's pin with turning the strap up.
2. Then hang the strap of a corner panel onto the decorative panel's pin.
3. First insert the part "a" of a corner panel into the part "A" of the decorative panel, and then engage four hooks.



⑨ How to set the airflow direction

It is possible to change the movable range of the louver on the air outlet from the wired remote controller. Once the top and bottom position is set, the louver will swing within the range between the top and the bottom when swing operation is chosen. It is also possible to apply different setting to each louver.
Note: This function is not able to be set with wireless remote controller or simple remote controller (RCH-H3).

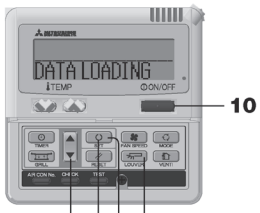
1 Stop the air conditioner and press SET button and LOUVER button simultaneously for three seconds or more.

The following is displayed if the number of the indoor units connected to the remote controller is one. Go to step **4**.

"DATA LOADING"
↓
"No.1 ▲"

The following is displayed if the number of the indoor units connected to the remote controller are more than one

"SELECT I/U"
↓
"I/U000 ▲"



2 Press ▲ or ▼ button.(selection of indoor unit)

Select the indoor unit of which the louver is set.

[EXAMPLE]
"I/U000 ▲"⇔"I/U001 ⇕"⇔"I/U002 ⇕"⇔
"I/U003 ⇕"

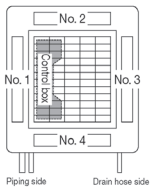
3 Press SET button. (determination of indoor unit)

Selected indoor unit is fixed.

[EXAMPLE]
"I/U001 " (displayed for two seconds)
↓
"DATA LOADING "
↓
"No.1 ▲"

NOTICE

- For FDT type, in case the louver No to be set is uncertain, set any louver temporarily. The louver will swing once when the setting is completed and it is possible to confirm the louver No and the position. After that, choose the correct louver No and set the top and bottom position.



Louver No.

4 Press ▲ or ▼ button. (selection of louver No.)

Select the louver No. to be set according to the right figure.

[EXAMPLE]
"No.1 ▲"⇔"No.2 ⇕"⇔"No.3 ⇕"⇔
"No.4 ▼"

5 Press SET button. (Determination of louver No.)

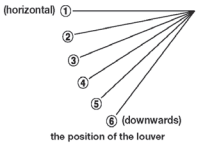
The louver No. to be set is confirmed and the display shows the upper limit of the movable range.

[EXAMPLE] **If No.1 louver is selected,**
"No.1 UPPER2 ⇕" ←current upper limit position

6 Press ▲ or ▼ button. (selection of upper limit position)

Select the upper limit of louver movable range.
"position1" is the most horizontal, and "position 6" is the most downward.
"position --" is to return to the factory setting. If you need to change the setting to the default setting, use "position --".

"No.1 UPPER1 ▼" (the most horizotal)
⇔"No.1 UPPER2 ⇕"
⇔"No.1 UPPER3 ⇕"
⇔"No.1 UPPER4 ⇕"
⇔"No.1 UPPER5 ⇕"
⇔"No.1 UPPER6 ▲" (the most downwards)
⇔"No.1 UPPER-- ▲" (return to the default setting)



the position of the louver

7 Press SET button (Fixing of the upper limit position)

The upper limit position is fixed and the setting position is displayed for two seconds. Then proceed to lower limit position selection display.

[EXAMPLE]
No.1 UPPER2 (displayed for two seconds)
↓
No.1 LOWER5 ⇕ (shows current setting)

8 Press▲ or ▼ button (Selection of lower limit position)

Select the lower limit position of louver.
"position 1" is the most horizontal, and "position 6 "is the most downwards.
"position --" is to return to the factory setting. If you need to change the setting to the default setting, use "position --".

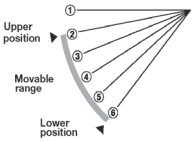
No.1 LOWER1 ▼ (the most horizontal)
No.1 LOWER2 ⇕
No.1 LOWER3 ⇕
No.1 LOWER4 ⇕
No.1 LOWER5 ⇕
No.1 LOWER6 ⇕ (the most horizontal)
No.1 LOWER-- ▲ (return to the default setting)

9 Press SET button (Fixing of the lower limit position)

Upper limit position and lower limit position are fixed, and the set positions are displayed for two seconds, then setting is completed.

- After the setting is completed, the louver which was set moves from the original position to the lower limit position, and goes back to the original position again. (This operation is not performed if the indoor unit and/or indoor unit fan is in operation.)

[Example]
No.1 U2 L6 (displayed for two seconds)
SET COMPLETE
No.1 ▲



10 Press ⏻ON/OFF button.

Louver adjusting mode ends and returns to the original display.
For setting the swing range of other louvers, return to 1 and proceed same procedure respectively.

Caution

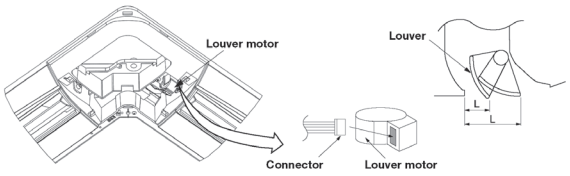
If the upper limit position number and the lower limit position number are set to the same position, the louver is fixed at that position auto swing does not funtion.

ATTENTION

If you press RESET button during settings, the display will return to previous display. If you press ⏻ON/OFF button during settings, the mode will be ended and return to original display, and the settings that have not been completed will become invalid.

When plural remote controllers are connected, louver setting operation cannot be set by slave remote controller.

If it is necessary to fix the louver position manually, follow the procedure mentioned below.
1. Shut off the main power switch.
2. Unplug the connector of the louver motor which you want to fix the position. Make sure to insulate unplugged connectors electrically with a vinyl tape.
3. Adjust the louver position slowly by hand so as to be within the applicable range mentioned below table.



<Range of louver setting>

Vertical airflow direction	Horizontal 0°	Downwards 45°
Dimension L (mm)	43	26

※It can be set between 26~43mm freely.

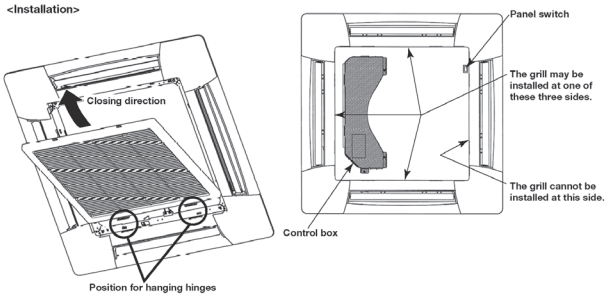
Caution

- Any automatic control or operation from the remote controller will be disabled on the louver whose position is fixed in the above way.
- Do not set a louver beyond the specified range. Failure to observe this instruction may result in dripping, dew condensation, the fouling of the ceiling and the malfunctioning of the unit.

⑩ Attaching the air return grille

To attach the air return grille, follow the procedure described in ⑪ Removing the air return grille in the reverse order.
1. Hang the hooks of the air return grille in the hole of the panel. (The hooks of the grille can be hanged in three side of the panel as following.)
2. After the grille is hanged, close the grille while the stoppers on the grille (2 places) are kept pressed to "OPEN" direction. When the grille comes to the original position, release the stoppers to hold the grille. Make sure to hear the sound of "CLICK" in both stoppers.

<Installation>



Caution

- Attaching the air return grille from the hinge side.
- Be careful in air return grille attaching, unstable attaching may cause grille falling.
- Repair or replace the distorted, broken stopper at once, or the grille falling may occur.

PFA012D621B △b

(3) Ceiling suspended type (FDEN)

This manual is for the installation of an indoor unit.
For electrical wiring work (Indoor), refer to the electrical wiring work installation manual. For remote controller installation, refer to the installation manual attached to a remote controller. For wireless kit installation, refer to the installation manual attached to a wireless kit. For electrical wiring work (Outdoor) and refrigerant pipe work installation for outdoor unit, refer to the installation manual attached to an outdoor unit.

SAFETY PRECAUTIONS

- Read the "SAFETY PRECAUTIONS" carefully first of all and then strictly follow it during the installation work in order to protect yourself.
- The precautionary items mentioned below are distinguished into two levels, ⚠WARNING and ⚠CAUTION .
  ⚠WARNING : Wrong installation would cause serious consequences such as injuries or death.
  ⚠CAUTION : Wrong installation might cause serious consequences depending on circumstances.
  Both mentions the important items to protect your health and safety so strictly follow them by any means.
- The meanings of "Marks" used here are as shown as follows:
  ⃠ Never do it under any circumstances. ❗ Always do it according to the instruction.
- After completing the installation, do commissioning to confirm there are no abnormalities, and explain to the customers about "SAFETY PRECAUTIONS", correct operation method and maintenance method (air filter cleaning, operation method and temperature setting method) with user's manual of this unit.
  Ask your customers to keep this installation manual together with the user's manual. Also, ask them to hand over the user's manual to the new user when the owner is changed.

⚠ WARNING

- **Installation should be performed by the specialist.**
  If you install the unit by yourself, it may lead to serious trouble such as water leakage, electric shock, fire, and injury due to overturn of the unit. ❗
- **Install the system correctly according to these installation manuals.**
  Improper installation may cause explosion, injury, water leakage, electric shock, and fire. ❗
- **When installing in small rooms, take prevention measures not to exceed the density limit of refrigerant in the event of leakage, referred by the formula (accordance with ISO5149).**
  If the density of refrigerant exceeds the limit, please consult the dealer and install the ventilation system, otherwise lack of oxygen can occur, which can cause serious accidents. ❗
- **Use the genuine accessories and the specified parts for installation.**
  If parts unspecified by our company are used it could cause water leakage, electric shock, fire, and injury due to overturn of the unit. ❗
- **Ventilate the working area well in case the refrigerant leaks during installation.**
  If the refrigerant contacts the fire, toxic gas is produced. ❗
- **Install the unit in a location that can hold heavy weight.**
  Improper installation may cause the unit to fall leading to accidents. ❗
- **Install the unit properly in order to be able to withstand strong winds such as typhoons, and earthquakes.**
  Improper installation may cause the unit to fall leading to accidents. ❗
- **Do not mix air in to the cooling cycle on installation or removal of the air conditioner.**
  If air is mixed in, the pressure in the cooling cycle will rise abnormally and may cause explosion and injuries. ⃠
- **Be sure to have the electrical wiring work done by qualified electrical installer, and use exclusive circuit.**
  Power source with insufficient capacity and improper work can cause electric shock and fire. ❗
- **Use specified wire for electrical wiring, fasten the wiring to the terminal securely, and hold the cable securely in order not to apply unexpected stress on the terminal.**
  Loose connections or hold could result in abnormal heat generation or fire. ❗
- **Arrange the electrical wires in the control box properly to prevent them from rising. Fit the lid of the services panel property.**
  Improper fitting may cause abnormal heat and fire. ❗
- **Check for refrigerant gas leakage after installation is completed.**
  If the refrigerant gas leaks into the house and comes in contact with a fan heater, a stove, or an oven, toxic gas is produced. ❗
- **Use the specified pipe, flare nut, and tools for R410A.**
  Using existing parts (R22) could cause the unit failure and serious accident due to explosion of the cooling cycle. ❗
- **Tighten the flare nut according to the specified method by with torque wrench.**
  If the flare nut were tightened with excess torque, it could cause burst and refrigerant leakage after a long period. ❗
- **Do not put the drainage pipe directly into drainage channels where poisonous gases such as sulfide gas can occur.**
  Poisonous gases will flow into the room through drainage pipe and seriously affect the user's health and safety. This can also cause the corrosion of the indoor unit and a resultant unit failure or refrigerant leak. ⃠
- **Connect the pipes for refrigeration circuit securely in installation work before compressor is operated.**
  If the compressor is operated when the service valve is open without connecting the pipe, it could cause explosion and injuries due to abnormal high pressure in the system. ❗
- **Stop the compressor before removing the pipe after shutting the service valve on pump down work.**
  If the pipe is removed when the compressor is in operation with the service valve open, air would be mixed in the refrigeration circuit and it could cause explosion and injuries due to abnormal high pressure in the cooling cycle. ❗
- **Only use prescribed optional parts. The installation must be carried out by the qualified installer.**
  If you install the system by yourself, it can cause serious trouble such as water leaks, electric shocks, fire. ❗
- **Do not repair by yourself. And consult with the dealer about repair.**
  Improper repair may cause water leakage, electric shock or fire. ⃠
- **Consult the dealer or a specialist about removal of the air conditioner.**
  Improper installation may cause water leakage, electric shock or fire. ❗
- **Turn off the power source during servicing or inspection work.**
  If the power is supplied during servicing or inspection work, it could cause electric shock and injury by the operating fan. ❗
- **Do not run the unit when the panel or protection guard are taken off.**
  Touching the rotating equipment, hot surface, or high voltage section could cause an injury to be caught in the machine, to get burned, or electric shock. ⃠
- **Shut off the power before electrical wiring work.**
  It could cause electric shock, unit failure and improper running. ❗

⚠ CAUTION

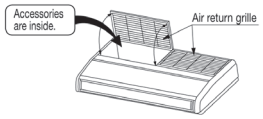
- **Perform earth wiring surely.**
  Do not connect the earth wiring to the gas pipe, water pipe, lightning rod and telephone earth wiring. Improper earth could cause unit failure, electric shock and fire due to a short circuit. ⏚
- **Earth leakage breaker must be installed.**
  If the earth leakage breaker is not installed, it can cause fire and electric shocks. ❗
- **Use the circuit breaker of correct capacity. Circuit breaker should be the one that disconnect all poles under over current.**
  Using the incorrect one could cause the system failure and fire. ❗
- **Do not use any materials other than a fuse of correct capacity where a fuse should be used.**
  Connecting the circuit by wire or copper wire could cause unit failure and fire. ⃠
- **Do not install the indoor unit near the location where there is possibility of flammable gas leakages.**
  If the gas leaks and gathers around the unit, it could cause fire. ⃠
- **Do not install and use the unit where corrosive gas (such as sulfurous acid gas etc.) or flammable gas (such as thinner, petroleum etc.) may be generated or accumulated, or volatile flammable substances are handled.**
  It could cause the corrosion of heat exchanger, breakage of plastic parts etc. And inflammable gas could cause fire. ⃠
- **Secure a space for installation, inspection and maintenance specified in the manual.**
  Insufficient space can result in accident such as personal injury due to falling from the installation place. ❗
- **Do not use the indoor unit at the place where water splashes such as laundry.**
  Indoor unit is not waterproof. It could cause electric shock and fire. ⃠
- **Do not use the indoor unit for a special purpose such as food storage, cooling for precision instrument, preservation of animals, plants, and a work of art.**
  It could cause the damage of the items. ⃠
- **Do not install nor use the system near equipments which generate electromagnetic wave or high harmonics.**
  Equipments like inverter equipment, private power generator, high-frequency medical equipment, or telecommunication equipment might influence the air conditioner and cause a malfunction and breakdown. Or the air conditioner might influence medical equipments or telecommunication equipments, and obstruct their medical activity or cause jamming. ⃠
- **Do not install the remote controller at the direct sunlight.**
  It could cause breakdown or deformation of the remote controller. ⃠
- **Do not install the indoor unit at the place listed below.**
  · Places where flammable gas could leak.
  · Places where carbon fiber, metal powder or any powder is floated.
  · Place where the substances which affect the air conditioner are generated such as sulfide gas, chloride gas, acid, alkali or ammonic atmospheres.
  · Places exposed to oil mist or steam directly.
  · On vehicles and ships
  · Places where machinery which generates high harmonics is used.
  · Places where cosmetics or special sprays are frequently used.
  · Highly salted area such as beach.
  · Heavy snow area
  · Places where the system is affected by smoke from a chimney.
  · Altitude over 1000m ⃠
- **Do not install the indoor unit in the locations listed below (Be sure to install the indoor unit according to the installation manual for each model because each indoor unit has each limitation)**
  · Locations with any obstacles which can prevent inlet and outlet air of the unit
  · Locations where vibration can be amplified due to insufficient strength of structure.
  · Locations where the infrared receiver is exposed to the direct sunlight or the strong light beam. (in case of the infrared specification unit)
  · Locations where an equipment affected by high harmonics is placed. (TV set or radio receiver is placed within 5m)
  · Locations where drainage cannot run off safely.
  It can affect performance or function and etc.. ⃠
- **Do not put any valuables which will break down by getting wet under the air conditioner.**
  Condensation could drop when the relative humidity is higher than 80% or drain pipe is clogged, and it damages user's belongings. ⃠
- **Do not use the base frame for the outdoor unit which is corroded or damaged after a long period of use.**
  It could cause the unit falling down and injury. ⃠
- **Pay attention not to damage the drain pan by weld sputter when brazing work is done near the unit.**
  If sputter entered into the unit during brazing work, it could cause damage (pinhole) of drain pan and leakage of water. To avoid damaging, keep the indoor unit packed or cover the indoor unit. ❗
- **Install the drain pipe to drain the water surely according to the installation manual.**
  Improper connection of the drain pipe may cause dropping water into room and damaging user's belongings. ❗
- **Do not share the drain pipe for indoor unit and GHP (Gas Heat Pump system) outdoor unit.**
  Toxic exhaust gas would flow into room and it might cause serious damage (some poisoning or deficiency of oxygen) to user's health and safety. ⃠
- **Be sure to perform air tightness test by pressurizing with nitrogen gas after completed refrigerant piping work.**
  If the density of refrigerant exceeds the limit in the event of refrigerant leakage in the small room, lack of oxygen can occur, which can cause serious accidents. ❗
- **For drain pipe installation, be sure to make descending slope of greater than 1/100, not to make traps, and not to make air-bleeding.**
  Check if the drainage is correctly done during commissioning and ensure the space for inspection and maintenance. ❗
- **Ensure the insulation on the pipes for refrigeration circuit so as not to condense water.**
  Incomplete insulation could cause condensation and it would wet ceiling, floor, and any other valuables. ❗
- **Do not install the outdoor unit where is likely to be a nest for insects and small animals.**
  Insects and small animals could come into the electronic components and cause breakdown and fire. Instruct the user to keep the surroundings clean. ⃠
- **Pay extra attention, carrying the unit by hand.**
  Carry the unit with 2 people if it is heavier than 20kg. Do not use the plastic straps but the grabbing place, moving the unit by hand. Use protective gloves in order to avoid injury by the aluminum fin. ❗
- **Make sure to dispose of the packaging material.**
  Leaving the materials may cause injury as metals like nail and woods are used in the package. ❗
- **Do not operate the system without the air filter.**
  It may cause the breakdown of the system due to clogging of the heat exchanger. ⃠
- **Do not touch any button with wet hands.**
  It could cause electric shock. ⃠
- **Do not touch the refrigerant piping with bare hands when in operation.**
  The pipe during operation would become very hot or cold according to the operating condition, and it could cause a burn or frostbite. ⃠
- **Do not clean up the air conditioner with water.**
  It could cause electric shock. ⃠
- **Do not turn off the power source immediately after stopping the operation.**
  Be sure to wait for more than 5 minutes. Otherwise it could cause water leakage or breakdown. ⃠
- **Do not control the operation with the circuit breaker.**
  It could cause fire or water leakage. In addition, the fan may start operation unexpectedly and it may cause injury. ⃠

①Before installation

- Install correctly according to the installation manual.
- Confirm the following points:
  - ○Unit type/Power supply specification ○Pipes/Wires/Small parts ○Accessory items

Accessory item

For unit hanging		For refrigerant pipe			For drain pipe					For air return grille
Flat washer (M10)	Paper pattern	Pipe cover (large)	Pipe cover (small)	Strap	Drain hose (with clamp)	Hose clamp	Fixing bracket	Screw	Heay insulation	Screw
										
8	1	1	1	4	1	1	1	2	1	4
For unit hanging	For unit hanging and adjustment	For heat insulation of gas pipe	For heat insulation of liquid pipe	For fixing of pipe cover	For drain pipe connection	For drain hose mounting	For fixing of drain hose	For installing of fixing bracket	For drain hose	For fixing air return grille



②Selection of installation location for the indoor unit

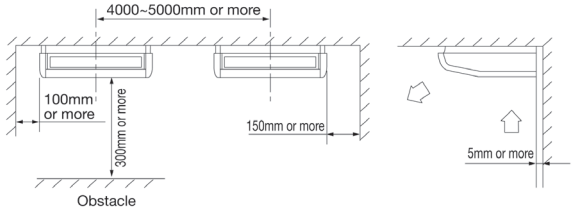
① Select the suitable areas to install the unit under approval of the user.
- Areas where the indoor unit can deliver hot and cold wind sufficiently. Suggest to the user to use a circulator if the ceiling height is over 3m to avoid warm air being accumulated on the ceiling.
- Areas where there is enough space to install and service.
- Areas where it can be drained properly. Areas where drain pipe descending slope can be taken.
- Areas where there is no obstruction of airflow on both air return grille and air supply port.
- Areas where fire alarm will not be accidentally activated by the air conditioner.
- Areas where the supply air does not short-circuit.
- Areas where it is not influenced by draft air.
- Areas not exposed to direct sunlight.
- Areas where dew point is lower than around 23°C and relative humidity is lower than 80%. This indoor unit is tested under the condition of JIS (Japan Industrial Standard) high humidity condition and confirmed there is no problem. However, there is some risk of condensation drop if the air conditioner is operated under the severer condition than mentioned above.
- Areas where TV and radio stays away more than 1m. (It could cause jamming and noise.)
- Areas where any items which will be damaged by getting wet are not placed such as food, table wares, server, or medical equipment under the unit.
- Areas where there is no influence by the heat which cookware generates.
- Areas where not exposed to oil mist, powder and/or steam directly such as above fryer.
- Areas where lighting device such as fluorescent light or incandescent light doesn't affect the operation.
  (A beam from lighting device sometimes affects the infrared receiver for the wireless remote controller and the air conditioner might not work properly.)

② Check if the place where the air conditioner is installed can hold the weight of the unit. If it is not able to hold, reinforce the structure with boards and beams strong enough to hold it. If the strength is not enough, it could cause injury due to unit falling.

③ If there are 2 units of wireless type, keep them away for more than 6m to avoid malfunction due to cross communication.

④ When plural indoor units are installed nearby, keep them away for more than 4 to 5m.

Space for installation and service



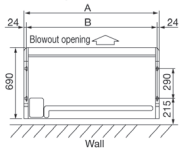
③Preparation before installation

- If suspension bolt becomes longer, do reinforcement of earthquake resistant.
  - ○ For grid ceiling
    When suspension bolt length is over 500mm, or the gap between the ceiling and roof is over 700mm, apply earthquake resistant brace to the bolt.
  - ○ In case the unit is hanged directly from the slab and is installed on the ceiling plane which has enough strength.
    When suspension bolt length is over 1000mm, apply the earthquake resistant brace to the bolt.
- Prepare four (4) sets of suspension bolt, nut and spring washer (M10) on site.

③Preparation before installation (continued)

Pitch of suspension bolts and pipe position

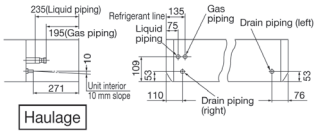
Pitch of suspension bolts



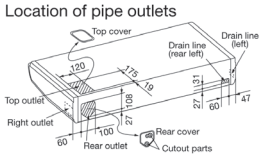
(mm)

Series	type	A	B
Single Split (PAC) series	40 to 50type	1070	1022
	60 to 71type	1320	1272
	100 to 140type	1620	1572
VRF (KX) series	36 to 56type	1070	1022
	71type	1320	1272
	112 to 140type	1620	1572

Pipe position



Location of pipe outlets



※The outlet through which the pipings are taken out is available in three directions.
※Pipes can be taken out in 3 directions (rear, right or top).
- Cut out holes using nippers, etc.
- Cut out holes to take out pipes along the cutoff line on the rear cover.
- Cut out the top face cover aligning to the piping position.
- When taking pipe out to right-hand side, cut out a hole along the groove at the inside of side panel.
- After installing pipes and wires, seal clearances around pipes and wires with putty, etc. to shut off dust.

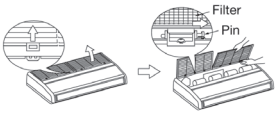
Make sure to install the covers at rear and top in order to protect the inside of unit from intrusion of dust or protect wires from damages by sharp edges. When taking them out to the right-hand side, remove burrs or sharp edges from the cutout.

Haulage

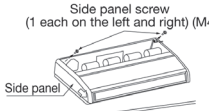
- Move the box as close to the installation area as possible packed.
- If it must be unpacked, wrap the unit with a nylon sling, and be careful not to damage the unit.
- If you need to lay the unit on a floor after unpacking, always put it with the intake grille facing upward.

Preparation before instalation

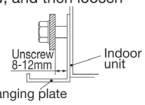
1. Remove the air return grille.
Slide stoppers (4 places) of the catches, then pull out the pins (4 or 6 places).

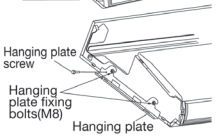


2. Remove the side panel.
Remove the screw and detach the side panel by sliding it toward the direction indicated by the arrow mark.



3. Remove the hanging plate.
Remove the screw, and then loosen the fixing bolts.





④Remote controller

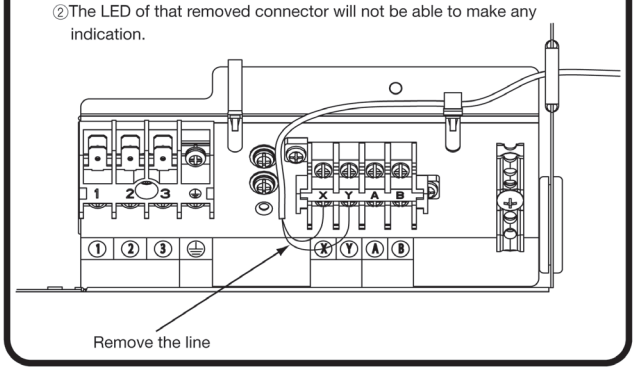
Installation of remote controller

Up to two receiver or wired remote controller can be installed in one indoor unit group.

- When both wired and wireless remote controller are used
  It is necessary to set wired or wireless remote controller as slave.
  (For the method of changing the setting, refer to the installtion manual attached to remote controller or wireless kit.)
- When wired remote controller are used only (wireless type)
  It is necessary to remove the line that is connected to the receiver.
  Remove signal line connected to the receiver from primary side of terminal block (X, Y).

ATTENTION

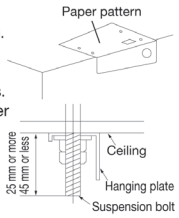
①Insulate with tape the removed line.
②The LED of that removed connector will not be able to make any indication.



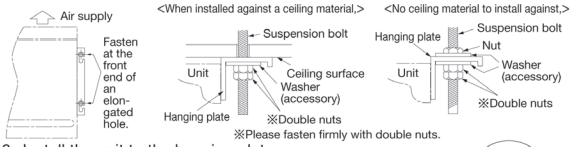
⑤Installation of indoor unit

Work procedure

1. Select the suspension bolt locations and the pipe hole location.
   (1) Use enclosed paper pattern as a reference, and drill the holes for the suspension bolts and pipe.
   ※Decide the locations based on direct measurements.
   (2) Once the locations are properly placed, the paper pattern can be removed.
2. Install the suspension bolts in place.
3. Fix with 4 suspension bolts, which can endure load of 500N.
4. Check the measurements given at the right figure for the length of the suspension bolts.

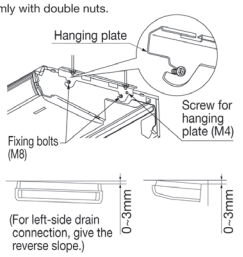


5. Fasten the hanging plate onto the suspension bolts.



※Please fasten firmly with double nuts.

6. Install the unit to the hanging plate.
   (1) Slide the unit in from front side to get it hanged on the hanging plate with the bolts.
   (2) Fasten the four fixing bolts (M8: 2 each on the left and right sides) firmly.
   (3) Fasten the two screws (M4: 1 each on the left and right sides).



⚠**WARNING** : Hang a side panel on from the panel side to the rear side and then fasten it securely onto the indoor unit with screws.

※To ensure smooth drain flow, install the unit with a descending slope toward the drain outlet.

⚠ **CAUTION** : Do not give the reversed slope, which may cause water leaks.

⑥Refrigerant pipe

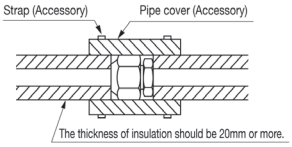
Caution

- ●Use the new refrigerant pipe.
  When re-using the existing pipe system for R22 or R407C, pay attention to the following items.
  ・Change the flare nuts with the attached ones (JIS category 2), and reprocess the flare parts.
  ・Do not use thin-walled pipes.
- ●Use phosphorus deoxidized copper alloy seamless pipe (C1220T specified in JIS H3300) for refrigeration pipe installation.
  In addition, make sure there is no damage both inside and outside of the pipe, and no harmful substances such as sulfur, oxide, dust or a contaminant stuck on the pipes.
- ●Do not use any refrigerant other than R410A.
  Using other refrigerant except R410A (R22 etc.) may degrade inside refrigeration oil. And air getting into refrigeration circuit may cause over-pressure and resultant it may result in bursting, etc.
- ●Store the copper pipes indoors and seal the both end of them until they are brazed in order to avoid any dust, dirt or water getting into pipe. Otherwise it will cause degradation of refrigeration oil and compressor breakdown, etc.
- ●Use special tools for R410 refrigerant.

Work procedure

1. Remove the flare nut and blind flanges on the pipe of the indoor unit.
   ※Make sure to loosen the flare nut with holding the nut on pipe side with a spanner and giving torque to the nut with another spanner in order to avoid unexpected stress to the copper pipe, and then remove them. (Gas may come out at this time, but it is not abnormal.)
   ●Pay attention whether the flare nut pops out. (as the indoor unit is sometimes pressured.)
2. Make a flare on liquid pipe and gas pipe, and connect the refrigeration pipes on the indoor unit.
   ・When taking out the pipe to rear or top, install it together with the electric wire⑧, passing them through the attached cover.
   ・Seal clearances with putty, etc. to shut off dust.
   ※Bend the pipe with as big radius as possible and do not bend the pipe repeatedly. In addition, do not twist and crush the pipes.
   ※Do a flare connection as follows:
   ●Make sure to loosen the flare nut with holding the nut on pipe side with a spanner and giving torque to the nut with another spanner in order to avoid unexpected stress to the copper pipe, and then remove them.
   ●When fastening the flare nut, align the refrigeration pipe with the center of flare nut, screw the nut for 3-4 times by hand and then tighten it by spanner with the specified torque mentioned in the table below. Make sure to hold the pipe on the indoor unit securely by a spanner when tightening the nut in order to avoid unexpected stress on the copper pipe.
3. Cover the flare connection part of the indoor unit with attached insulation material after a gas leakage inspection, and tighten both ends with attached straps.
   ●Make sure to insulate both gas pipes and liquid pipes completely.
   ※Incomplete insulation may cause dew condensation or water dropping.
4. Refrigerant is charged in the outdoor unit.
   As for the additional refrigerant charge for the indoor unit and piping, refer to the installation manual attached to the outdoor unit.

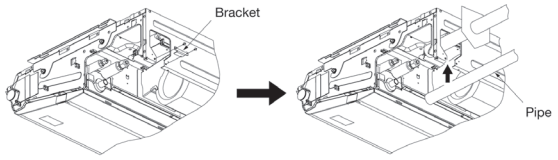
Pipe diameter	Tightening torque N·m
ø 6.35	14 to 18
ø 9.52	34 to 42
ø 12.7	49 to 61
ø 15.88	68 to 82
ø 19.05	100 to 120



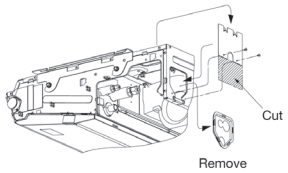
⑥Refrigerant pipe (continued)

The pipe can be connected from three different directions. (back, reight, top)

- ● When the pipe is routed through the back.
  If the bracket is removed, piping work will become easy.
  ※After piping, reinstall the removed bracket.



- ● When the pipe is routed through the back.
  Cut the removed top cover, and install to the rear panel instead of rear cover.



⑦Drain pipe

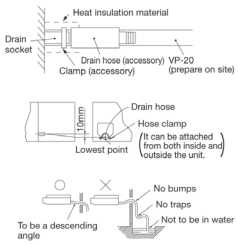
The drain pipes may face out towards the back to the left, or to the right side.

Caution

- ● Install the drain pipe according to the installation manual in order to drain properly. Imperfection in draining may cause flood indoors and wetting the household goods, etc.
- ● Do not put the drain pipe directly into the ditch where toxic gas such as sulfur, the other harmful andinflammable gas is generated. Toxic gas would flow into the room and it would cause serious damage to user's health and safety (some poisoning or deficiency of oxygen). In addition, it may cause corrosion of heat exchanger and bad smell.
- ● Connect the pipe securely to avoid water leakage from the joint.
- ● Insulate the pipe properly to avoid condensation drop.
- ● Check if the water can flow out properly from both the drain outlet on the indoor unit and the end of the drain pipe after installation.
- ● Make sure to make descending slope of greater than 1/100 and do not make up-down bend and/or trap in the midway. In addition, do not put air vent on the drain pipe. Check if water is drained out properly from the pipe during commissioning. Also, keep sufficient space for inspection and maintenance.

Work procedure

1. Insert drain hose completely to the base, and tighten the drain hose clamp securely. (adhesive must not be used.)
   ※When plumbing on the left side, move the rubber plug and the cylindrical insulating materials by the pipe connecting hole on the left side of the unit to the right side.
   ⚠Beware of a possible outflow of water that may occur upon removal of a drain plug.
2. Fix the drain hose at the lowest point with a hose clamp supplied as an accessory.
   ※Give a drain hose a gradient of 10mm as illustrated in the right drawing by laying it without leaving a slack.
   ● Take head of electrical cables so that they may not run beneath the drain hose.



⚠A drain hose must be clamped down with a hose clamp. There is a possibility that drain water overflows.

3. Connect VP-20(prepare on site) to drain hose. (adhesive must not be used.)
   ※ Use commercially available rigid PVC general pipe VP-20 for drain pipe.
4. Do not to make the up-down bending and trap in the mid-way while assuming that the drain pipes is downhill. (more than 1/100)
   ● Never set up air vent.
5. Insulate the drain pipe.
   ● Insulate the drain hose clamp with the heat insulation supplied as accessories.
   ● When the unit is installed in a humid place, consider precautions against dew condensation such as heat insulation for the drain pipe.

Drain test

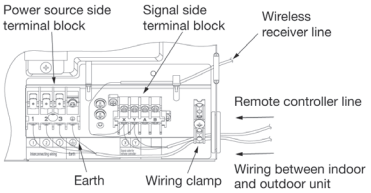
- ● After installation of drain pipe, make sure that drain system work in good condition and no water leakage from joint and drain pan.
- ● Do drain test even if installation of heating season.

⑧Wiring-out position and wiring connection

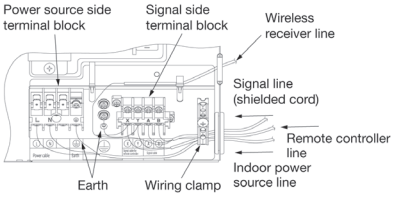
- Electrical installation work must be performed according to the installation manual by an electrical installation service provider qualified by a power provider of the country, and be executed according to the technical standards and other regulations applicable to electrical installation in the country.
  Be sure to use an exclusive circuit.
- Use specified cord, fasten the wiring to the terminal securely, and hold the cord securely in order not to apply unexpected stress on the terminal.
- Do not put both power source line and signal line on the same route. It may cause miscommunication and malfunction.
- Be sure to do D type earth work.
- For the details of electrical wiring work, see attached instruction manual for electrical wiring work.

1. Remove a lid of the electrical box (2 screws).
2. Hold each wiring inside the unit and connect to a terminal block surely.
3. Fix the wiring by clamps.
4. Install the removed parts back to original place.

Single split (PAC) series



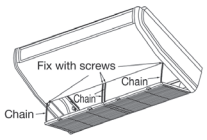
VRF(KX) series

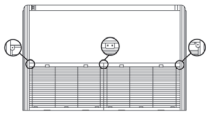


⑨Attaching the air return grille

●The air return grille must be attached when electrical cabling work is completed.

1. Fix the chains tied to the air return grille onto the indoor unit with screws supplied as accessories (4 pieces).
2. Close the air return grille.
   This completes the unit installation work.





⑩Check list after installation

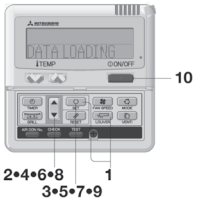
● Check the following items after all installation work completed.

Check if	Expected trouble	Check
The indoor and outdoor units are fixed securely?	Falling, vibration, noise	
Inspection for leakage is done?	Insufficient capacity	
Insulation work is properly done?	Water leakage	
Water is drained properly?	Water leakage	
Supply voltage is same as mentioned in the model name plate?	PCB burnt out, not working at all	
There is mis-wiring or mis-connection of piping?	PCB burnt out, not working at all	
Earth wiring is connected properly?	Electric shock	
Cable size comply with specified size?	PCB burnt out, not working at all	
Any obstacle blocks airflow on air inlet and outlet?	Insufficient capacity	

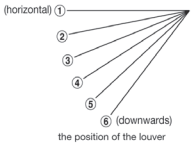
⑪How to set the airflow direction

It is possible to change the movable range of the louver on the air outlet from the wired remote controller. Once the top and bottom position is set, the louver will swing within the range between the top and the bottom when swing operation is chosen. It is also possible to apply different setting to each louver.
Note: This function is not able to be set with wireless remote controller or simple remote controll (RCH-H3).

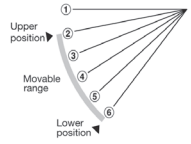
1. Stop the air conditioner and press SET button and LOUVER button simultaneously for three seconds or more.
   ●The following is displayed if the number of the indoor units connected to the remote controller is one. Go to step 4.
   "DATA LOADING "
   ↓
   "No.1 ▲"
   ●The following is displayed if the number of the indoor units connected to the remote controller are more than one.
   "SELECT I/U "
   ↓
   "I/U000 ▲"



2. Press▲or▼button.(selection of indoor unit)●Select the indoor unit of which the louver is set.
   [EXAMPLE]
   "I/U000 ▲"⇔"I/U001 ⇕"⇔" I/U002 ⇕"⇔
   "I/U003 ⇕"
3. Press SET button.(determination of indoor unit) ●Selected indoor unit is fixed.
   [EXAMPLE]
   "I/U001 " (displayed for two seconds)
   ↓
   "DATA LOADING "
   ↓
   "No.1 ▲"
4. Press▲or▼button.(selection of louver No.) ●Select the louver No. to be set according to the right figure.
   [EXAMPLE]
   "No.1 ▲"⇔ "No.2 ⇕"⇔ "No.3 ⇕"⇔
   "No.4 ▼"
5. Press SET button.(Determination of louver No.)
   ●The louver No. to be set is confirmed and the display shows the upper limit of the movable range.
   [EXAMPLE] If No.1 louver is selected,
   "No.1 UPPER2 ⇕" ←current upper limit position
6. Press▲or▼button.(selection of upper limit position)
   ● Select the upper limit of louver movable range.
   "position 1" is the most horizontal, and "position 6" is the most downward.
   "position --" is to return to the factory setting.
   If you need to change the setting to the default setting, use "position --".
   "No.1 UPPER1 ▼" (the most horizotal)
   ⇔"No.1 UPPER2 ⇕"
   ⇔"No.1 UPPER3 ⇕"
   ⇔"No.1 UPPER4 ⇕"
   ⇔"No.1 UPPER5 ⇕"
   ⇔"No.1 UPPER6 ⇕" (the most downwards)
   ⇔"No.1 UPPER-- ▲" (return to the default setting)



7. Press SET button.(Fixing of the upper limit position)
   ●The upper limit position is fixed and the setting position is displayed for two seconds. Then proceed to lower limit position selection display.
   [EXAMPLE]
   No.1 UPPER2 (displayed for two seconds)
   ↓
   No.1 LOWER5 ⇕ (shows current setting)
8. Press▲or▼button.(Selection of lower limit position)
   ●Select the lower limit position of louver.
   "position 1" is the most horizontal, and "position 6 "is the most downwards.
   "position --" is to return to the factory setting. If you need to change the setting to the default setting, use "position --".
   No.1 LOWER1 ▼ (the most horizontal)
   No.1 LOWER2 ⇕
   No.1 LOWER3 ⇕
   No.1 LOWER4 ⇕
   No.1 LOWER5 ⇕
   No.1 LOWER6 ⇕ (the most downwards)
   No.1 LOWER-- ▲ (return to the default setting)
9. Press SET button.(Fixing of the lower limit position)
   ●Upper limit position and lower limit position are fixed, and the set positions are displayed for two seconds, then setting is completed.
   • After the setting is completed, the louver which was set moves from the original position to the lower limit position, and goes back to the original position again. (This operation is not performed if the indoor unit and/or indoor unit fan is in operation.)
   [Example]
   No.1 U2 L6 (displayed for two seconds)
   SET COMPLETE
   No.1 ▲



10. Press ⏻ON/OFF button.
    ●Louver adjusting mode ends and returns to the original display.

Caution

If the upper limit position number and the lower limit position number are set to the same position, the louver is fixed at that position auto swing does not funtion.

ATTENTION

If you press RESET button during settings, the display will return to previous display.If you press ⏻ON/OFF button during settings, the mode will be ended and return to original display, and the settings that have not been completed will become invalid.

When plural remote controllers are connected, louver setting operation cannot be set by slave remote controller.

PJR012D319 A

(4) Duct connected-Low/Middle static pressure type (FDUM)

This manual is for the installation of an indoor unit.
For electrical wiring work (Indoor), refer to the electrical wiring work installation manual. For remote controller installation, refer to the installation manual attached to a remote controller. For wireless kit installation, refer to the installation manual attached to a wireless kit. For electrical wiring work (Outdoor) and refrigerant pipe work installation for outdoor unit, refer to the installation manual attached to an outdoor unit.

SAFETY PRECAUTIONS

- Read the "SAFETY PRECAUTIONS" carefully first of all and then strictly follow it during the installation work in order to protect yourself.
- The precautionary items mentioned below are distinguished into two levels, ⚠WARNING and ⚠CAUTION .
  ⚠WARNING : Wrong installation would cause serious consequences such as injuries or death.
  ⚠CAUTION : Wrong installation might cause serious consequences depending on circumstances.
  Both mentions the important items to protect your health and safety so strictly follow them by any means.
- The meanings of "Marks" used here are as shown on the right:
  ⃠ Never do it under any circumstances. ❗ Always do it according to the instruction.
- After completing the installation, do commissioning to confirm there are no abnormalities, and explain to the customers about "SAFETY PRECAUTIONS", correct operation method and maintenance method (air filter cleaning, operation method and temperature setting method) with user's manual of this unit.
  Ask your customers to keep this installation manual together with the user's manual. Also, ask them to hand over the user's manual to the new user when the owner is changed.

⚠ WARNING

- **Installation should be performed by the specialist.**
  If you install the unit by yourself, it may lead to serious trouble such as water leakage, electric shock, fire, and injury due to overturn of the unit.
- **Install the system correctly according to these installation manuals.**
  Improper installation may cause explosion, injury, water leakage, electric shock, and fire.
- **Check the density refered by the foumula (accordance with ISO5149).**
  If the density exceeds the limit density, please consult the dealer and installate the ventilation system.
- **Use the genuine accessories and the specified parts for installation.**
  If parts unspecified by our company are used it could cause water leakage, electric shock, fire, and injury due to overturn of the unit.
- **Ventilate the working area well in case the refrigerant leaks during installation.**
  If the refrigerant contacts the fire, toxic gas is produced.
- **Install the unit in a location that can hold heavy weight.**
  Improper installation may cause the unit to fall leading to accidents.
- **Install the unit properly in order to be able to withstand strong winds such as typhoons, and earthquakes.**
  Improper installation may cause the unit to fall leading to accidents.
- **Do not mix air in to the cooling cycle on installation or removal of the air conditioner.**
  If air is mixed in, the pressure in the cooling cycle will rise abnormally and may cause explosion and injuries.
- **Be sure to have the electrical wiring work done by qualified electrical installer, and use exclusive circuit.**
  Power source with insufficient capacity and improper work can cause electric shock and fire.
- **Use specified wire for electrical wiring, fasten the wiring to the terminal securely, and hold the cable securely in order not to apply unexpected stress on the terminal.**
  Loose connections or hold could result in abnormal heat generation or fire.
- **Arrange the electrical wires in the control box properly to prevent them from rising. Fit the lid of the services panel property.**
  Improper fitting may cause abnormal heat and fire.
- **Check for refrigerant gas leakage after installation is completed.**
  If the refrigerant gas leaks into the house and comes in contact with a fan heater, a stove, or an oven, toxic gas is produced.
- **Use the specified pipe, flare nut, and tools for R410A.**
  Using existing parts (R22) could cause the unit failure and serious accident due to explosion of the cooling cycle.
- **Tighten the flare nut according to the specified method by with torque wrench.**
  If the flare nut were tightened with excess torque, it could cause burst and refrigerant leakage after a long period.
- **Do not put the drainage pipe directly into drainage channels where poisonous gases such as sulfide gas can occur.**
  Poisonous gases will flow into the room through drainage pipe and seriously affect the user's health and safety. This can also cause the corrosion of the indoor unit and a resultant unit failure or refrigerant leak.
- **Connect the pipes for refrigeration circuit securely in installation work before compressor is operated.**
  If the compressor is operated when the service valve is open without connecting the pipe, it could cause explosion and injuries due to abnormal high pressure in the system.
- **Stop the compressor before removing the pipe after shutting the service valve on pump down work.**
  If the pipe is removed when the compressor is in operation with the service valve open, air would be mixed in the refrigeration circuit and it could cause explosion and injuries due to abnormal high pressure in the cooling cycle.
- **Only use prescribed optional parts. The installation must be carried out by the qualified installer.**
  If you install the system by yourself, it can cause serious trouble such as water leaks, electric shocks, fire.
- **Do not repair by yourself. And consult with the dealer about repair.**
  Improper repair may cause water leakage, electric shock or fire.
- **Consult the dealer or a specialist about removal of the air conditioner.**
  Improper installation may cause water leakage, electric shock or fire.
- **Turn off the power source during servicing or inspection work.**
  If the power is supplied during servicing or inspection work, it could cause electric shock and injury by the operating fan.
- **Do not run the unit when the panel or protection guard are taken off.**
  Touching the rotating equipment, hot surface, or high voltage section could cause an injury to be caught in the machine, to get burned, or electric shock.
- **Shut off the power before electrical wiring work.**
  It could cause electric shock, unit failure and improper running.

⚠ CAUTION

- **Perform earth wiring surely.**
  Do not connect the earth wiring to the gas pipe, water pipe, lightning rod and telephone earth wiring. Improper earth could cause unit failure and electric shock due to a short circuit.
- **Earth leakage breaker must be installed.**
  If the earth leakage breaker is not installed, it can cause electric shocks.
- **Use the circuit breaker of correct capacity. Circuit breaker should be the one that disconnect all poles under over current.**
  Using the incorrect one could cause the system failure and fire.
- **Do not use any materials other than a fuse of correct capacity where a fuse should be used.**
  Connecting the circuit by wire or copper wire could cause unit failure and fire.
- **Do not install the indoor unit near the location where there is possibility of flammable gas leakages.**
  If the gas leaks and gathers around the unit, it could cause fire.
- **Do not install and use the unit where corrosive gas (such as sulfurous acid gas etc.) or flammable gas (such as thinner, petroleum etc.) may be generated or accumulated, or volatile flammable substances are handled.**
  It could cause the corrosion of heat exchanger, breakage of plastic parts etc. And inflammable gas could cause fire.
- **Secure a space for installation, inspection and maintenance specified in the manual.**
  Insufficient space can result in accident such as personal injury due to falling from the installation place.
- **Do not use the indoor unit at the place where water splashes such as laundry.**
  Indoor unit is not waterproof. It could cause electric shock and fire.
- **Do not use the indoor unit for a special purpose such as food storage, cooling for precision instrument, preservation of animals, plants, and a work of art.**
  It could cause the damage of the items.
- **Do not install nor use the system near equipments which generate electromagnetic wave or high harmonics.**
  Equipments like inverter equipment, private power generator, high-frequency medical equipment, or telecommunication equipment might influence the air conditioner and cause a malfunction and breakdown. Or the air conditioner might influence medical equipments or telecommunication equipments, and obstruct their medical activity or cause jamming.
- **Do not install the remote controller at the direct sunlight.**
  It could cause breakdown or deformation of the remote controller.
- **Do not install the indoor unit at the place listed below.**
  - Places where flammable gas could leak.
  - Places where carbon fiber, metal powder or any powder is floated.
  - Place where the substances which affect the air conditioner are generated such as sulfide gas, chloride gas, acid, alkali or ammonic atmospheres.
  - Places exposed to oil mist or steam directly.
  - On vehicles and ships
  - Places where machinery which generates high harmonics is used.
  - Places where cosmetics or special sprays are frequently used.
  - Highly salted area such as beach.
  - Heavy snow area
  - Places where the system is affected by smoke from a chimney.
  - Altitude over 1000m
- **Do not install the indoor unit in the locations listed below (Be sure to install the indoor unit according to the installation manual for each model because each indoor unit has each limitation)**
  - Locations with any obstacles which can prevent inlet and outlet air of the unit
  - Locations where vibration can be amplified due to insufficient strength of structure.
  - Locations where the infrared receiver is exposed to the direct sunlight or the strong light beam. (in case of the infrared specification unit)
  - Locations where an equipment affected by high harmonics is placed. (TV set or radio receiver is placed within 5m)
  - Locations where drainage cannot run off safely.

  It can affect performance or function and etc..
- **Do not put any valuables which will break down by getting wet under the air conditioner.**
  Condensation could drop when the relative humidity is higher than 80% or drain pipe is clogged, and it damages user's belongings.
- **Do not use the base frame for the outdoor unit which is corroded or damaged after a long period of use.**
  It could cause the unit falling down and injury.
- **Pay attention not to damage the drain pan by weld sputter when brazing work is done near the unit.**
  If sputter entered into the unit during brazing work, it could cause damage (pinhole) of drain pan and leakage of water. To avoid damaging, keep the indoor unit packed or cover the indoor unit.
- **Install the drain pipe to drain the water surely according to the installation manual.**
  Improper connection of the drain pipe may cause dropping water into room and damaging user's belongings.
- **Do not share the drain pipe for indoor unit and GHP (Gas Heat Pump system) outdoor unit.**
  Toxic exhaust gas would flow into room and it might cause serious damage (some poisoning or deficiency of oxygen) to user's health and safety.
- **Be sure to perform air tightness test by pressurizing with nitrogen gas after completed refrigerant piping work.**
  If the density of refrigerant exceeds the limit in the event of refrigerant leakage in the small room, lack of oxygen can occur, which can cause serious accidents.
- **For drain pipe installation, be sure to make descending slope of greater than 1/100, not to make traps, and not to make air-bleeding.**
  Check if the drainage is correctly done during commissioning and ensure the space for inspection and maintenance.
- **Ensure the insulation on the pipes for refrigeration circuit so as not to condense water.**
  Incomplete insulation could cause condensation and it would wet ceiling, floor, and any other valuables.
- **Do not install the outdoor unit where is likely to be a nest for insects and small animals.**
  Insects and small animals could come into the electronic components and cause breakdown and fire. Instruct the user to keep the surroundings clean.
- **Pay extra attention, carrying the unit by hand.**
  Carry the unit with 2 people if it is heavier than 20kg. Do not use the plastic straps but the grabbing place, moving the unit by hand. Use protective gloves in order to avoid injury by the aluminum fin.
- **Make sure to dispose of the packaging material.**
  Leaving the materials may cause injury as metals like nail and woods are used in the package.
- **Do not operate the system without the air filter.**
  It may cause the breakdown of the system due to clogging of the heat exchanger.
- **Do not touch any button with wet hands.**
  It could cause electric shock.
- **Do not touch the refrigerant piping with bare hands when in operation.**
  The pipe during operation would become very hot or cold according to the operating condition, and it could cause a burn or frostbite.
- **Do not clean up the air conditioner with water.**
  It could cause electric shock.
- **Do not turn off the power source immediately after stopping the operation.**
  Be sure to wait for more than 5 minutes. Otherwise it could cause water leakage or breakdown.
- **Do not control the operation with the circuit breaker.**
  It could cause fire or water leakage. In addition, the fan may start operation unexpectedly and it may cause injury.

○This model is middle static ducted type air conditioning unit. Therefore, do not use this model for direct blow type air conditioning unit.

①Before installation

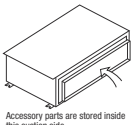
●Install correctly according to the installation manual.

●Confirm the following points:

○Unit type/Power supply specification ○Pipes/Wires/Small parts ○Accessory items

Accessory item

For refrigerant pipe			For drain pipe			
Pipe cover(big)	Pipe cover (small)	Strap	Pipe cover(big)	Pipe cover(small)	Drain hose	Hose clamp
						
1	1	4	1	1	1	1
For heat insulation of gas pipe	For heat insulation of liquid tube	For pipe cover fixing	For heat insulation of drain socket	For heat insulation of drain socket	For drain pipe connecting	For drain hose mounting



Accessory parts are stored inside this suction side.

②Selection of installation location for the indoor unit

① Select the suitable areas to install the unit under approval of the user.

- Areas where the indoor unit can deliver hot and cold wind sufficiently. Suggest to the user to use a circulator if the ceiling height is over 3m to avoid warm air being accumulated on the ceiling.
- Areas where there is enough space to install and service.
- Areas where it can be drained properly. Areas where drain pipe descending slope can be taken.
- Areas where there is no obstruction of airflow on both air return grille and air supply port.
- Areas where fire alarm will not be accidentally activated by the air conditioner.
- Areas where the supply air does not short-circuit.
- Areas where it is not influenced by draft air.
- Areas not exposed to direct sunlight.
- Areas where dew point is lower than around 28°C and relative humidity is lower than 80%.

This indoor unit is tested under the condition of JIS (Japan Industrial Standard) high humidity condition and confirmed there is no problem. However, there is some risk of condensation drop if the air conditioner is operated under the severer condition than mentioned above.
If there is a possibility to use it under such a condition, attach additional insulation of 10 to 20mm thick for entire surface of indoor unit, refrigeration pipe and drain pipe.

- Areas where TV and radio stays away more than 1m. (It could cause jamming and noise.)
- Areas where any items which will be damaged by getting wet are not placed such as food, table wares, server, or medical equipment under the unit.
- Areas where there is no influence by the heat which cookware generates.
- Areas where not exposed to oil mist, powder and/or steam directly such as above fryer.
- Areas where lighting device such as fluorescent light or incandescent light doesn't affect the operation.
  (A beam from lighting device sometimes affects the infrared receiver for the wireless remote controller and the air conditioner might not work properly.)

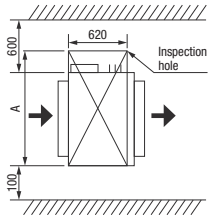
②Check if the place where the air conditioner is installed can hold the weight of the unit. If it is not able to hold, reinforce the structure with boards and beams strong enough to hold it. If the strength is not enough, it could cause injury due to unit falling.

Space for installation and service

●Make installation altitude over 2.5m.

(Indoor Unit)

Installation Space



UNIT: mm

Multi type	22~56	71, 90	112, 140
Single type	50	60, 71	100~140
A	1100	1300	1720

③Preparation before installation

●If suspension bolt becomes longer, do reinforcement of earthquake resistant.

○For grid ceiling

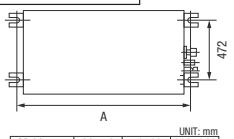
When the suspension bolt length is over 500mm, or the gap between the ceiling and roof is over 700mm, apply earthquake resistant brace to the bolt.

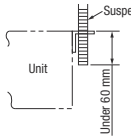
○In case the unit is hanged directly from the slab and is installed on the ceiling plane which has enough strength.

When suspension bolt length is over 1000mm, apply the earthquake resistant brace to the bolt.

●Prepare four (4) sets of suspension bolt, nut and spring washer (M10) on site.

Suspension Bolt Location





○ Adhere to the measurements given below for the length of the suspension bolts.

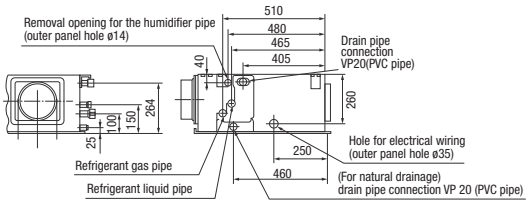
UNIT: mm

Multi type	22~56	71, 90	112, 140
Single type	50	60, 71	100~140
A	786	986	1406

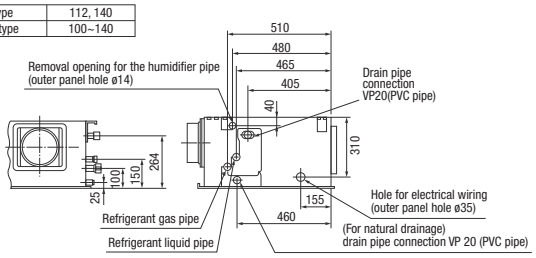
③Preparation before installation (continued)

Pipe locations UNIT: mm

Multi type	22~90
Single type	50~71



Multi type	112, 140
Single type	100~140

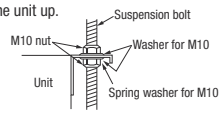


④Installation of indoor unit

Installation

[Hanging]

Hang the unit up.

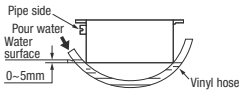


If the measurements between the unit and the ceiling hole do not match upon installation, it may be adjusted with the long holed installation tool.

Adjustment for horizontality

○Either use a level vial, or adjust the level according to the method below.

●Adjust so the bottom side of the unit will be leveled with the water surface as illustrated below.



Let the pipe side be slightly sloped.

○If the unit is not leveled, it may cause malfunctions or inoperation of the float switch.

⑤Duct Work

①A corrugated board (for preventing sputtering) is attached to the main body of the air conditioner (on the outlet port). Do not remove it until connecting the duct.

●An air filter can be provided on the main body of the air conditioner (on the inlet port). Remove it when connecting the duct on the inlet port.

②Blowout duct

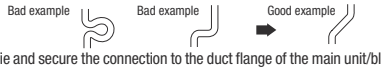
●Use according to the spot numbers shown in the table below with a 200 circular duct.

Multi type	22	36, 45, 56	71, 90	112, 140
Single type	–	50	56, 71	100~140
Spot numbers	1 spot	2 spots	3 or 2 spots	4 or 3 spots

●The difference of the duct lengths between each spot should be less than 2:1.

●The ducts should be at their minimum lengths.

●Keep the bends to a minimum. (The bending radius should be as large as possible.)



●Tie and secure the connection to the duct flange of the main unit/blowout hole with a band. Then, apply insulation materials to the secured part for dew condensation prevention.

●Use of the sound and heat insulated flexible duct is recommended for condensation prevention and soundproofing. (sold separately; 1m, 2m, 4m available)

●Conduct the duct work before ceiling attachment.

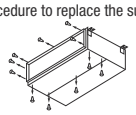
③Inlet port

●When shipped the inlet port lies on the back.

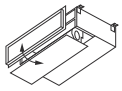
●When connecting the duct to the inlet port, remove the air filter if it is fitted to the inlet port.

⑤Duct Work (continued)

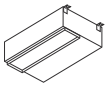
●When placing the inlet port to carry out suction from the bottom side, use the following procedure to replace the suction duct joint and the bottom plate.



●Remove the screws which fasten the bottom plate and the duct joint on the inlet port side of the unit.



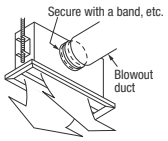
●Replace the removed bottom plate and duct joint.



●Fit the duct join with a screw; fit the bottom plate.

●Make sure to insulate the duct to prevent dewing on it.

④Install the specific blowout duct in a location where the air will circulate to the entire room.

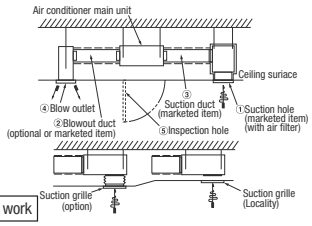


●The duct connection is specific to the 200 circular duct.

●Conduct the installation of the specific blowout hole and the connection of the duct before attaching them to the ceiling.

●Insulate the area where the duct is secured by a band for dew condensation prevention.

⑤Make sure provide an inspection hole on the ceiling. It is indispensable to service elecric equipment, motor, functional components and cleaning of heat exchanger.



Bad example of duct work

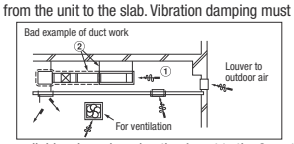
①If a duct is not provided at the suction side but it is substituted with the space over the ceiling, humidity in the space will increase by the influence of capacity of ventilation fan, strength of wind blowing against the out door air louver, weather (rainy day) and others.

a)Moisture in air is likely to condense over the external plates of the unit and to drip on the ceiling. Unit should be operated under the conditions as listed in the above table and within the limitation of wind volume. When the building is a concrete structure, especially immediately after the construction, humidity tends to rise even if the space over the ceiling is not substituted in place of a duct. In such occasion, it is necessary to insulate the entire unit with glass wool (25mm). (Use a wire net or equivalent to hold the glass wool in place.)

b)It may run out the allowable limit of unit operation (Example: When outdoor air temperature is 35°C DB, suction air temperature is 27°C WB) and it could result in such troubles as compressor overload, etc..

c)There is a possibility that the blow air volume may exceed the allowable range of operation due to the capacity of ventilation fan or strength of wind blowing against external air louver so that drainage from be heat exchanger may fall to reach the drain pan but leak outside (Example: drip on to the ceiling) with consequential water leakage in the room.

②If vibration damping is not conducted between the unit and the duct, and between the unit and the slab, vibration will be transmitted to the duct and vibration noise may occur. Also, vibration may be transmitted from the unit to the slab. Vibration damping must be performed.



Notice

A specific cover plate is available when changing the 4 spot to the 3 spot, or when changing the 3 spot to the 2 spot.

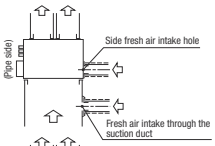
Note: Do not change from 2 spot to 1 spot.

Connecting the air intake/vent ducts

①Fresh Air Intake

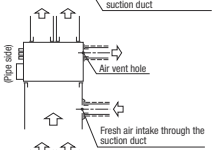
[for air intake duct only]

○Use the side fresh air intake hole, or supply through a part of the suction duct.



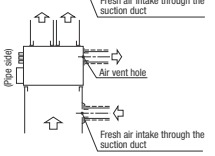
[for simultaneous air intake/vent]

○Intake air through the suction duct. (the side cannot be used)



②Air Vent

○Use the side air vent hole. (always use together with the air intake)



○Use the duct flange for the air intake/vent (sold separately; for 125 circular duct connection), and connect the 125 circular duct (tighten with band).

○Insulate the duct to protect it from dew condensation.

⑥Refrigerant pipe

Caution

●Use the new refrigerant pipe.
When re-using the existing pipe system for R22 or R407C, pay attention to the following items.
・Change the flare nuts with the attached ones (JIS category 2), and reprocess the flare parts.
・Do not use thin-walled pipes.

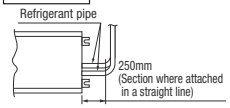
●Use phosphorus deoxidized copper alloy seamless pipe (C1220T specified in JIS H3300) for refrigeration pipe installation. In addition, make sure there is no damage both inside and outside of the pipe, and no harmful substances such as sulfur, oxide, dust or a contaminant stuck on the pipes.

●Do not use any refrigerant other than R410A.
Using other refrigerant except R410A (R22 etc.) may degrade inside refrigeration oil. And air getting into refrigeration circuit may cause over-pressure and resultant it may result in bursting, etc.

●Store the copper pipes indoors and seal the both end of them until they are brazed in order to avoid any dust, dirt or water getting into pipe. Otherwise it will cause degradation of refrigeration oil and compressor breakdown, etc.

●Use special tools for R410 refrigerant.

Piping work

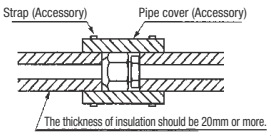


When conducting piping work, make sure to allow the pipes to be aligned in a straight line for at least 250 mm, as shown in the left illustration. (This is necessary for the drain pump to function)

Work procedure

1. Remove the flare nut and blind flanges on the pipe of the indoor unit.
※ Make sure to loosen the flare nut with holding the nut on pipe side with a spanner and giving torque to the nut with another spanner in order to avoid unexpected stress to the copper pipe, and then remove them. (Gas may come out at this time, but it is not abnormal.)
● Pay attention whether the flare nut pops out. (as the indoor unit is sometimes pressured.)
2. Make a flare on liquid pipe and gas pipe, and connect the refrigeration pipes on the indoor unit.
※Bend the pipe with as big radius as possible and do not bend the pipe repeatedly. In addition, do not twist and crush the pipes.
※Do a flare connection as follows:
● Make sure to loosen the flare nut with holding the nut on pipe side with a spanner and giving torque to the nut with another spanner in order to avoid unexpected stress to the copper pipe, and then remove them.
● When fastening the flare nut, align the refrigeration pipe with the center of flare nut, screw the nut for 3-4 times by hand and then tighten it by spanner with the specified torque mentioned in the table below. Make sure to hold the pipe on the indoor unit securely by a spanner when tightening the nut in order to avoid unexpected stress on the copper pipe.
3. Cover the flare connection part of the indoor unit with attached insulation material after a gas leakage inspection, and tighten both ends with attached straps.
●Make sure to insulate both gas pipes and liquid pipes completely.
※Incomplete insulation may cause dew condensation or water dropping.
4. Refrigerant is charged in the outdoor unit.
As for the additional refrigerant charge for the indoor unit and piping, refer to the installation manual attached to the outdoor unit.

Pipe diameter	Tightening torque N·m
ϕ 6.35	14 to 18
ϕ 9.52	34 to 42
ϕ 12.7	49 to 61
ϕ 15.88	68 to 82
ϕ 19.05	100 to 120



⑦Drain pipe

Caution

● Install the drain pipe according to the installation manual in order to drain properly. Imperfection in draining may cause flood indoors and wetting the household goods, etc.

● Do not put the drain pipe directly into the ditch where toxic gas such as sulfur, the other harmful and inflammable gas is generated. Toxic gas would flow into the room and it would cause serious damage to user's health and safety (some poisoning or deficiency of oxygen). In addition, it may cause corrosion of heat exchanger and bad smell.

● Connect the pipe securely to avoid water leakage from the joint.

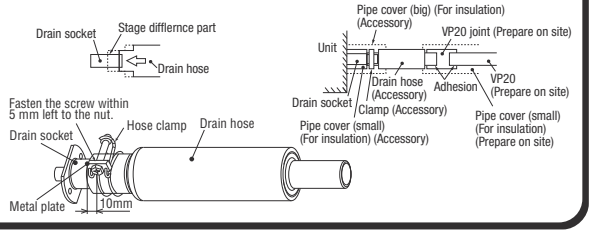
● Insulate the pipe properly to avoid condensation drop.

● Check if the water can flow out properly from both the drain outlet on the indoor unit and the end of the drain pipe after installation.

● Make sure to make descending slope of greater than 1/100 and do not make up-down bend and/or trap in the midway. In addition, do not put air vent on the drain pipe. Check if water is drained out properly from the pipe during commissioning. Also, keep sufficient space for inspection and maintenance.

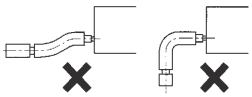
Work procedure

1. Make sure to insert the drain hose (the end mode of soft PVC) to the end of the step part of drain socket.
Attach the hose clamp to the drain hose around 10mm from the end, and fasten the screw within 5mm left to the nut.
●Do not apply adhesives on this end.
●Do not use acetone-based adhesives to connect to the drain socket.

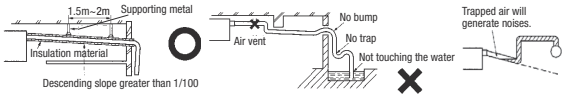


⑦Drain pipe (continued)

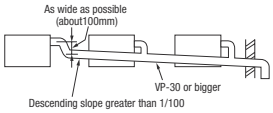
2. Prepare a joint for connecting VP-20 pipe, adhere and connect the joint to the drain hose (the end made of rigid PVC), and adhere and connect VP-20 pipe (prepare on site).
   ※As for drain pipe, apply VP-20 made of rigid PVC which is on the market.
   - Make sure that the adhesive will not get into the supplied drain hose. It may cause the flexible part broken after the adhesive is dried up and gets rigid.
   - The flexible drain hose is intended to absorb a small difference at installation of the unit or drain pipes. Intentional bending, expanding may cause the flexible hose broken and water leakage.



3. Make sure to make descending slope of greater than 1/100 and do not make up-down bend and/or trap in the midway.
   - Pay attention not to give stress on the pipe on the indoor unit side, and support and fix the pipe as close place to the unit as possible when connecting the drain pipe.
   - Do not set up air vent.



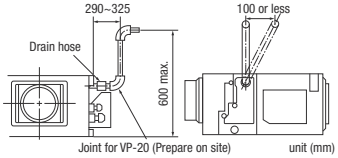
- When sharing a drain pipe for more than one unit, lay the main pipe 100mm below the drain outlet of the unit. In addition, select VP-30 or bigger size for main drain pipe.



4. Insulate the drain pipe.
   - Be sure to insulate the drain socket and rigid PVC pipe installed indoors otherwise it may cause dew condensation and water leakage.
     ※ After drainage test implementation, cover the drain socket part with pipe cover (small size), then use the pipe cover (big size) to cover the pipe cover (small size), clamps and part of the drain hose, and fix and wrap it with tapes to wrap and make joint part gapless.

Drain up

- The position for drain pipe outlet can be raised up to 600mm above the ceiling. Use elbows for installation to avoid obstacles inside ceiling. If the horizontal drain pipe is too long before vertical pipe, the backflow of water will increase when the unit is stopped, and it may cause overflow of water from the drain pan on the indoor unit. In order to avoid overflow, keep the horizontal pipe length and offset of the pipe within the limit shown in the figure below.



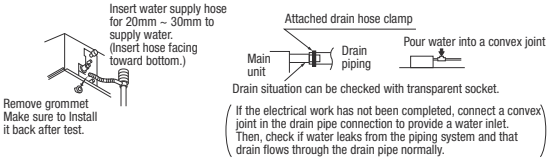
Otherwise, the construction point makes it same as drain pipe construction.

Drain test

1. Conduct a drain test after completion of the electrical work.
2. During the trail, make sure that drain flows properly through the piping and that no water leaks from connections.
3. In case of a new building, conduct the test before it is furnished with the ceiling.
4. Be sure to conduct this test even when the unit is installed in the heating season.

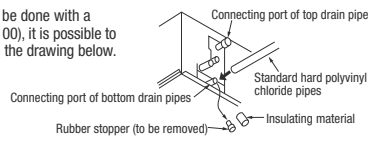
Procedures

1. Supply about 1000 cc of water to the unit through the air outlet by using a feed water pump.
2. Check the drain while cooling operation.



Outline of bottom drain piping work

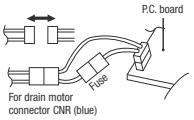
- If the bottom drain piping can be done with a descending gradient (1/50-1/100), it is possible to connect the pipes as shown in the drawing below.



Uncoupling the drain motor connector

- Uncouple the connector CNR for the drain motor as illustrated in the drawing on the right.

(Note: If the unit is run with the connector coupled, drain water will be discharged from the upper drain pipe joint, causing a water leak.)



⑦Drain pipe (continued)

Drain pump operation

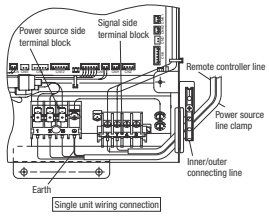
○In case electrical wiring work finished
Drain pump can be operated by remote controller (wired).
For the operation method, refer to Operation for drain pump in the installation manual for wiring work.

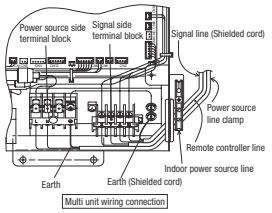
○In case electrical wiring work not finished
Drain pump will run continuously when the dip switch"SW7-1" on the indoor unit PCB is turned ON, the Connector CNB is disconnected, and then the power supply (230VAC on the terminal block ① and ②) is turned ON. Make sure to turn OFF "SW7-1" and reconnect the Connector CNB after the test.

⑧Wiring-out position and wiring connection

- Electrical installation work must be performed according to the installation manual by an electrical installation service provider qualified by a power provider of the country, and be executed according to the technical standards and other regulations applicable to electrical installation in the country.
  Be sure to use an exclusive circuit.
- Use specified cord, fasten the wiring to the terminal securely, and hold the cord securely in order not to apply unexpected stress on the terminal.
- Do not put both power source line and signal line on the same route. It may cause miscommunication and malfunction.
- Be sure to do D type earth work.
- For the details of electrical wiring work, see attached instruction manual for electrical wiring work.

1. Remove a lid of the control box (2 screws).
2. Hold each wiring inside the unit and fasten them to terminal block securely.
3. Fix the wiring with clamps.
4. Install the removed parts back to original place.





⑨Check list after installation

●Check the following items after all installation work completed.

Check if	Expected trouble	Check
The indoor and outdoor units are fixed securely?	Falling, vibration, noise	
Inspection for leakage is done?	Insufficient capacity	
Insulation work is properly done?	Water leakage	
Water is drained properly?	Water leakage	
Supply voltage is same as mentioned in the model name plate?	PCB burnt out, not working at all	
There is mis-wiring or mis-connection of piping?	PCB burnt out, not working at all	
Earth wiring is connected properly?	Electric shock	
Cable size comply with specified size?	PCB burnt out, not working at all	
Any obstacle blocks airflow on air inlet and outlet?	Insufficient capacity	

⑩Tap selection on blower unit (when the high peformance filter is used)

Following table shows the maximum external static pressure for models adapted to the fan setting speed (Hi, UH). Select at site the fan setting speed according to the external static pressure.

50/60Hz

Multi type		22~56	71, 90, 140	112
Single type		50	60, 71, 125, 140	100
Fan Speed	Hi	60/60	60/60	60/60
	UH	85/90	85/100	90/100

Unit:Pa

⚠ CAUTION

- Taps should not be used under external static pressure mentioned above. Dew condensation may occur with the unit and wet the ceiling or furniture.
- Do not use under external static pressure of 60Pa or less. Water drops may be blown from the diffuser outlet of the unit and wet the ceiling or furniture.

PJD012D052 A

(5) Duct connected-High static pressure type (FDU)

This manual is for the installation of an indoor unit.
For electrical wiring work (Indoor), refer to the electrical wiring work installation manual. For remote controller installation, refer to the installation manual attached to a remote controller. For wireless kit installation, refer to the installation manual attached to a wireless kit. For electrical wiring work (Outdoor) and refrigerant pipe work installation for outdoor unit, refer to the installation manual attached to an outdoor unit.

SAFETY PRECAUTIONS

- Read the "SAFETY PRECAUTIONS" carefully first of all and then strictly follow it during the installation work in order to protect yourself.
- The precautionary items mentioned below are distinguished into two levels, ⚠WARNING and ⚠CAUTION .
  ⚠WARNING : Wrong installation would cause serious consequences such as injuries or death.
  ⚠CAUTION : Wrong installation might cause serious consequences depending on circumstances.
  Both mentions the important items to protect your health and safety so strictly follow them by any means.
- The meanings of "Marks" used here are as shown on the right:
  ⃠ Never do it under any circumstances. ❗ Always do it according to the instruction.
- After completing the installation, do commissioning to confirm there are no abnormalities, and explain to the customers about "SAFETY PRECAUTIONS", correct operation method and maintenance method (air filter cleaning, operation method and temperature setting method) with user's manual of this unit.
  Ask your customers to keep this installation manual together with the user's manual. Also, ask them to hand over the user's manual to the new user when the owner is changed.

⚠ WARNING

- **Installation should be performed by the specialist.**
  If you install the unit by yourself, it may lead to serious trouble such as water leakage, electric shock, fire, and injury due to overturn of the unit.
- **Install the system correctly according to these installation manuals.**
  Improper installation may cause explosion, injury, water leakage, electric shock, and fire.
- **Check the density refered by the foumula (accordance with ISO5149).**
  If the density exceeds the limit density, please consult the dealer and installate the ventilation system.
- **Use the genuine accessories and the specified parts for installation.**
  If parts unspecified by our company are used it could cause water leakage, electric shock, fire, and injury due to overturn of the unit.
- **Ventilate the working area well in case the refrigerant leaks during installation.**
  If the refrigerant contacts the fire, toxic gas is produced.
- **Install the unit in a location that can hold heavy weight.**
  Improper installation may cause the unit to fall leading to accidents.
- **Install the unit properly in order to be able to withstand strong winds such as typhoons, and earthquakes.**
  Improper installation may cause the unit to fall leading to accidents.
- **Do not mix air in to the cooling cycle on installation or removal of the air conditioner.**
  If air is mixed in, the pressure in the cooling cycle will rise abnormally and may cause explosion and injuries.
- **Be sure to have the electrical wiring work done by qualified electrical installer, and use exclusive circuit.**
  Power source with insufficient capacity and improper work can cause electric shock and fire.
- **Use specified wire for electrical wiring, fasten the wiring to the terminal securely, and hold the cable securely in order not to apply unexpected stress on the terminal.**
  Loose connections or hold could result in abnormal heat generation or fire.
- **Arrange the electrical wires in the control box properly to prevent them from rising. Fit the lid of the services panel property.**
  Improper fitting may cause abnormal heat and fire.
- **Check for refrigerant gas leakage after installation is completed.**
  If the refrigerant gas leaks into the house and comes in contact with a fan heater, a stove, or an oven, toxic gas is produced.
- **Use the specified pipe, flare nut, and tools for R410A.**
  Using existing parts (R22) could cause the unit failure and serious accident due to explosion of the cooling cycle.
- **Tighten the flare nut according to the specified method by with torque wrench.**
  If the flare nut were tightened with excess torque, it could cause burst and refrigerant leakage after a long period.
- **Do not put the drainage pipe directly into drainage channels where poisonous gases such as sulfide gas can occur.**
  Poisonous gases will flow into the room through drainage pipe and seriously affect the user's health and safety. This can also cause the corrosion of the indoor unit and a resultant unit failure or refrigerant leak.
- **Connect the pipes for refrigeration circuit securely in installation work before compressor is operated.**
  If the compressor is operated when the service valve is open without connecting the pipe, it could cause explosion and injuries due to abnormal high pressure in the system.
- **Stop the compressor before removing the pipe after shutting the service valve on pump down work.**
  If the pipe is removed when the compressor is in operation with the service valve open, air would be mixed in the refrigeration circuit and it could cause explosion and injuries due to abnormal high pressure in the cooling cycle.
- **Only use prescribed optional parts. The installation must be carried out by the qualified installer.**
  If you install the system by yourself, it can cause serious trouble such as water leaks, electric shocks, fire.
- **Do not repair by yourself. And consult with the dealer about repair.**
  Improper repair may cause water leakage, electric shock or fire.
- **Consult the dealer or a specialist about removal of the air conditioner.**
  Improper installation may cause water leakage, electric shock or fire.
- **Turn off the power source during servicing or inspection work.**
  If the power is supplied during servicing or inspection work, it could cause electric shock and injury by the operating fan.
- **Do not run the unit when the panel or protection guard are taken off.**
  Touching the rotating equipment, hot surface, or high voltage section could cause an injury to be caught in the machine, to get burned, or electric shock.
- **Shut off the power before electrical wiring work.**
  It could cause electric shock, unit failure and improper running.

⚠ CAUTION

- **Perform earth wiring surely.**
  Do not connect the earth wiring to the gas pipe, water pipe, lightning rod and telephone earth wiring. Improper earth could cause unit failure and electric shock due to a short circuit.
- **Earth leakage breaker must be installed.**
  If the earth leakage breaker is not installed, it can cause electric shocks.
- **Use the circuit breaker of correct capacity. Circuit breaker should be the one that disconnect all poles under over current.**
  Using the incorrect one could cause the system failure and fire.
- **Do not use any materials other than a fuse of correct capacity where a fuse should be used.**
  Connecting the circuit by wire or copper wire could cause unit failure and fire.
- **Do not install the indoor unit near the location where there is possibility of flammable gas leakages.**
  If the gas leaks and gathers around the unit, it could cause fire.
- **Do not install and use the unit where corrosive gas (such as sulfurous acid gas etc.) or flammable gas (such as thinner, petroleum etc.) may be generated or accumulated, or volatile flammable substances are handled.**
  It could cause the corrosion of heat exchanger, breakage of plastic parts etc. And inflammable gas could cause fire.
- **Secure a space for installation, inspection and maintenance specified in the manual.**
  Insufficient space can result in accident such as personal injury due to falling from the installation place.
- **Do not use the indoor unit at the place where water splashes such as laundry.**
  Indoor unit is not waterproof. It could cause electric shock and fire.
- **Do not use the indoor unit for a special purpose such as food storage, cooling for precision instrument, preservation of animals, plants, and a work of art.**
  It could cause the damage of the items.
- **Do not install nor use the system near equipments which generate electromagnetic wave or high harmonics.**
  Equipments like inverter equipment, private power generator, high-frequency medical equipment, or telecommunication equipment might influence the air conditioner and cause a malfunction and breakdown. Or the air conditioner might influence medical equipments or telecommunication equipments, and obstruct their medical activity or cause jamming.
- **Do not install the remote controller at the direct sunlight.**
  It could cause breakdown or deformation of the remote controller.
- **Do not install the indoor unit at the place listed below.**
  - Places where flammable gas could leak.
  - Places where carbon fiber, metal powder or any powder is floated.
  - Place where the substances which affect the air conditioner are generated such as sulfide gas, chloride gas, acid, alkali or ammonic atmospheres.
  - Places exposed to oil mist or steam directly.
  - On vehicles and ships
  - Places where machinery which generates high harmonics is used.
  - Places where cosmetics or special sprays are frequently used.
  - Highly salted area such as beach.
  - Heavy snow area
  - Places where the system is affected by smoke from a chimney.
  - Altitude over 1000m
- **Do not install the indoor unit in the locations listed below (Be sure to install the indoor unit according to the installation manual for each model because each indoor unit has each limitation)**
  - Locations with any obstacles which can prevent inlet and outlet air of the unit
  - Locations where vibration can be amplified due to insufficient strength of structure.
  - Locations where the infrared receiver is exposed to the direct sunlight or the strong light beam. (in case of the infrared specification unit)
  - Locations where an equipment affected by high harmonics is placed. (TV set or radio receiver is placed within 5m)
  - Locations where drainage cannot run off safely.

  It can affect performance or function and etc..
- **Do not put any valuables which will break down by getting wet under the air conditioner.**
  Condensation could drop when the relative humidity is higher than 80% or drain pipe is clogged, and it damages user's belongings.
- **Do not use the base frame for the outdoor unit which is corroded or damaged after a long period of use.**
  It could cause the unit falling down and injury.
- **Pay attention not to damage the drain pan by weld sputter when brazing work is done near the unit.**
  If sputter entered into the unit during brazing work, it could cause damage (pinhole) of drain pan and leakage of water. To avoid damaging, keep the indoor unit packed or cover the indoor unit.
- **Install the drain pipe to drain the water surely according to the installation manual.**
  Improper connection of the drain pipe may cause dropping water into room and damaging user's belongings.
- **Do not share the drain pipe for indoor unit and GHP (Gas Heat Pump system) outdoor unit.**
  Toxic exhaust gas would flow into room and it might cause serious damage (some poisoning or deficiency of oxygen) to user's health and safety.
- **Be sure to perform air tightness test by pressurizing with nitrogen gas after completed refrigerant piping work.**
  If the density of refrigerant exceeds the limit in the event of refrigerant leakage in the small room, lack of oxygen can occur, which can cause serious accidents.
- **For drain pipe installation, be sure to make descending slope of greater than 1/100, not to make traps, and not to make air-bleeding.**
  Check if the drainage is correctly done during commissioning and ensure the space for inspection and maintenance.
- **Ensure the insulation on the pipes for refrigeration circuit so as not to condense water.**
  Incomplete insulation could cause condensation and it would wet ceiling, floor, and any other valuables.
- **Do not install the outdoor unit where is likely to be a nest for insects and small animals.**
  Insects and small animals could come into the electronic components and cause breakdown and fire. Instruct the user to keep the surroundings clean.
- **Pay extra attention, carrying the unit by hand.**
  Carry the unit with 2 people if it is heavier than 20kg. Do not use the plastic straps but the grabbing place, moving the unit by hand. Use protective gloves in order to avoid injury by the aluminum fin.
- **Make sure to dispose of the packaging material.**
  Leaving the materials may cause injury as metals like nail and woods are used in the package.
- **Do not operate the system without the air filter.**
  It may cause the breakdown of the system due to clogging of the heat exchanger.
- **Do not touch any button with wet hands.**
  It could cause electric shock.
- **Do not touch the refrigerant piping with bare hands when in operation.**
  The pipe during operation would become very hot or cold according to the operating condition, and it could cause a burn or frostbite.
- **Do not clean up the air conditioner with water.**
  It could cause electric shock.
- **Do not turn off the power source immediately after stopping the operation.**
  Be sure to wait for more than 5 minutes. Otherwise it could cause water leakage or breakdown.
- **Do not control the operation with the circuit breaker.**
  It could cause fire or water leakage. In addition, the fan may start operation unexpectedly and it may cause injury.

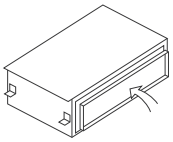
○This model is middle static ducted type air conditioning unit. Therefore, do not use this model for direct blow type air conditioning unit.

①Before installation

- ●Install correctly according to the installation manual.
- ●Confirm the following points:
  - ○Unit type/Power supply specification
  - ○Pipes/Wires/Small parts
  - ○Accessory items

Accessory item

For refrigerant pipe		
Pipe cover(big)	Pipe cover (small)	Strap
		
1	1	4
For heat insulation of gas pipe	For heat insulation of liquid tube	For pipe cover fixing



Accessory parts are stored inside this suction side.

For drain pipe			
Pipe cover(big)	Pipe cover(small)	Drain hose	Hose clamp
			
1	1	1	1
For heat insulation of drain socket	For heat insulation of drain socket	For drain pipe connecting	For drain hose mounting

②Selection of installation location for the indoor unit

① Select the suitable areas to install the unit under approval of the user.

- Areas where the indoor unit can deliver hot and cold wind sufficiently. Suggest to the user to use a circulator if the ceiling height is over 3m to avoid warm air being accumulated on the ceiling.
- Areas where there is enough space to install and service.
- Areas where it can be drained properly. Areas where drain pipe descending slope can be taken.
- Areas where there is no obstruction of airflow on both air return grille and air supply port.
- Areas where fire alarm will not be accidentally activated by the air conditioner.
- Areas where the supply air does not short-circuit.
- Areas where it is not influenced by draft air.
- Areas not exposed to direct sunlight.
- Areas where dew point is lower than around 28°C and relative humidity is lower than 80%.
  This indoor unit is tested under the condition of JIS (Japan Industrial Standard) high humidity condition and confirmed there is no problem. However, there is some risk of condensation drop if the air conditioner is operated under the severer condition than mentioned above.
  If there is a possibility to use it under such a condition, attach additional insulation of 10 to 20mm thick for entire surface of indoor unit, refrigeration pipe and drain pipe.
- Areas where TV and radio stays away more than 1m. (It could cause jamming and noise.)
- Areas where any items which will be damaged by getting wet are not placed such as food, table wares, server, or medical equipment under the unit.
- Areas where there is no influence by the heat which cookware generates.
- Areas where not exposed to oil mist, powder and/or steam directly such as above fryer.
- Areas where lighting device such as fluorescent light or incandescent light doesn't affect the operation.
  (A beam from lighting device sometimes affects the infrared receiver for the wireless remote controller and the air conditioner might not work properly.)

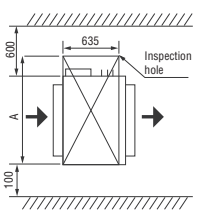
②Check if the place where the air conditioner is installed can hold the weight of the unit. If it is not able to hold, reinforce the structure with boards and beams strong enough to hold it. If the strength is not enough, it could cause injury due to unit falling.

Space for installation and service

●Make installation altitude over 2.5m.

(Indoor Unit)

Installation Space



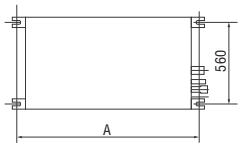
UNIT: mm

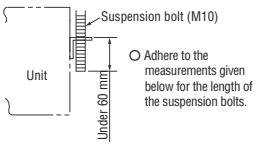
Multi type	71	90, 112, 140
Single type	71	100, 125, 140
A	1200	1720

③Preparation before installation

- ●If suspension bolt becomes longer, do reinforcement of earthquake resistant.
  - ○For grid ceiling
    When the suspension bolt length is over 500mm, or the gap between the ceiling and roof is over 700mm, apply earthquake resistant brace to the bolt.
  - ○In case the unit is hanged directly from the slab and is installed on the ceiling plane which has enough strength.
    When suspension bolt length is over 1000mm, apply the earthquake resistant brace to the bolt.
- ●Prepare four (4) sets of suspension bolt, nut and spring washer (M10) on site.

Suspension Bolt Location



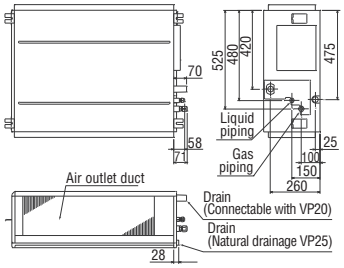


UNIT: mm

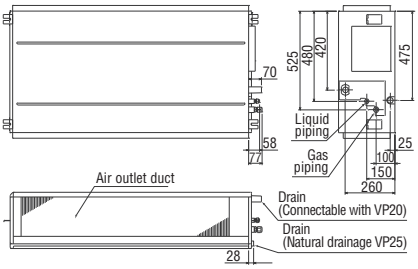
Multi type	71	90, 112, 140
Single type	71	100, 125, 140
A	986	1406

Pipe locations UNIT: mm

Multi type	71
Single type	71



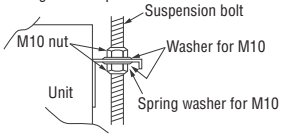
Multi type	90, 112, 140
Single type	100, 125, 140



④Installation of indoor unit

Installation

[Hanging]
Hang the unit up.

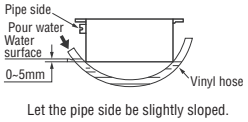


If the measurements between the unit and the ceiling hole do not match upon installation, it may be adjusted with the long holed installation tool.

Adjustment for horizontality

○Either use a level vial, or adjust the level according to the method below.

●Adjust so the bottom side of the unit will be leveled with the water surface as illustrated below.



Let the pipe side be slightly sloped.

○If the unit is not leveled, it may cause malfunctions or inoperation of the float switch.

⑤Duct Work

A corrugated board (for preventing sputtering) is attached to the main body of the air conditioner (on the outlet port). Do not remove it until connecting the duct.

①●The air conditioner main unit does not have an air filter. Incorporate it into the easy-to-clean suction grille.

②Blowout duct

●The ducts should be at their minimum lengths.

●Keep the bends to a minimum. (The bending radius should be as large as possible.)

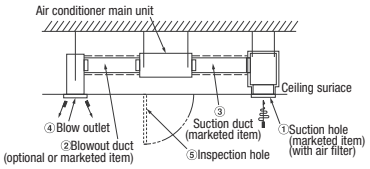
●Conduct the duct work before ceiling attachment.

③Suction duct

●Make sure to insulate the duct to prevent dewing on it.

④Location and form of blow outlet should be selected so that air from the outlet will be distributed all over the room, and equipped with a device to control air volume.

⑤Make sure provide an inspection hole on the ceiling. It is indispensable to service elecric equipment, motor, functional components and cleaning of heat exchanger.



Bad example of duct work

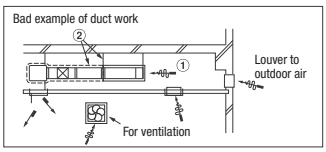
①If a duct is not provided at the suction side but it is substituted with the space over the ceiling, humidity in the space will increase by the influence of capacity of ventilation fan, strength of wind blowing against the out door air louver, weather (rainy day) and others.

a)Moisture in air is likely to condense over the external plates of the unit and to drip on the ceiling. Unit should be operated under the conditions as listed in the above table and within the limitation of wind volume. When the building is a concrete structure, especially immediately after the construction, humidity tends to rise even if the space over the ceiling is not substituted in place of a duct. In such occasion, it is necessary to insulate the entire unit with glass wool (25mm). (Use a wire net or equivalent to hold the glass wool in place.)

b)It may run out the allowable limit of unit operation (Example: When outdoor air temperature is 35°C DB, suction air temperature is 27°C WB) and it could result in such troubles as compressor overload, etc..

c)There is a possibility that the blow air volume may exceed the allowable range of operation due to the capacity of ventilation fan or strength of wind blowing against external air louver so that drainage from be heat exchanger may fall to reach the drain pan but leak outside (Example: drip on to the ceiling) with consequential water leakage in the room.

②If vibration damping is not conducted between the unit and the duct, and between the unit and the slab, vibration will be transmitted to the duct and vibration noise may occur. Also, vibration may be transmitted from the unit to the slab. Vibration damping must be performed.



⑥Refrigerant pipe

Caution

●Use the new refrigerant pipe.
When re-using the existing pipe system for R22 or R407C, pay attention to the following items.
・Change the flare nuts with the attached ones (JIS category 2), and reprocess the flare parts.
・Do not use thin-walled pipes.

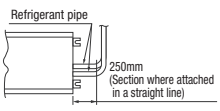
●Use phosphorus deoxidized copper alloy seamless pipe (C1220T specified in JIS H3300) for refrigeration pipe installation.
In addition, make sure there is no damage both inside and outside of the pipe, and no harmful substances such as sulfur, oxide, dust or a contaminant stuck on the pipes.

●Do not use any refrigerant other than R410A.
Using other refrigerant except R410A (R22 etc.) may degrade inside refrigeration oil. And air getting into refrigeration circuit may cause over-pressure and resultant it may result in bursting, etc.

●Store the copper pipes indoors and seal the both end of them until they are brazed in order to avoid any dust, dirt or water getting into pipe. Otherwise it will cause degradation of refrigeration oil and compressor breakdown, etc.

●Use special tools for R410 refrigerant.

Piping work



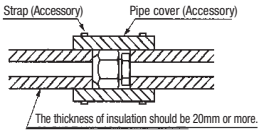
When conducting piping work, make sure to allow the pipes to be aligned in a straight line for at least 250 mm, as shown in the left illustration. (This is necessary for the drain pump to function)

⑥Refrigerant pipe (continued)

Work procedure

1. Remove the flare nut and blind flanges on the pipe of the indoor unit.
※ Make sure to loosen the flare nut with holding the nut on pipe side with a spanner and giving torque to the nut with another spanner in order to avoid unexpected stress to the copper pipe, and then remove them.
(Gas may come out at this time, but it is not abnormal.)
● Pay attention whether the flare nut pops out. (as the indoor unit is sometimes pressured.)
2. Make a flare on liquid pipe and gas pipe, and connect the refrigeration pipes on the indoor unit.
※Bend the pipe with as big radius as possible and do not bend the pipe repeatedly. In addition, do not twist and crush the pipes.
※Do a flare connection as follows:
● Make sure to loosen the flare nut with holding the nut on pipe side with a spanner and giving torque to the nut with another spanner in order to avoid unexpected stress to the copper pipe, and then remove them.
● When fastening the flare nut, align the refrigeration pipe with the center of flare nut, screw the nut for 3-4 times by hand and then tighten it by spanner with the specified torque mentioned in the table below. Make sure to hold the pipe on the indoor unit securely by a spanner when tightening the nut in order to avoid unexpected stress on the copper pipe.
3. Cover the flare connection part of the indoor unit with attached insulation material after a gas leakage inspection, and tighten both ends with attached straps.
●Make sure to insulate both gas pipes and liquid pipes completely.
※Incomplete insulation may cause dew condensation or water dropping.
4. Refrigerant is charged in the outdoor unit.
As for the additional refrigerant charge for the indoor unit and piping, refer to the installation manual attached to the outdoor unit.

Pipe diameter	Tightening torque N·m
ϕ 6.35	14 to 18
ϕ 9.52	34 to 42
ϕ 12.7	49 to 61
ϕ 15.88	68 to 82
ϕ 19.05	100 to 120



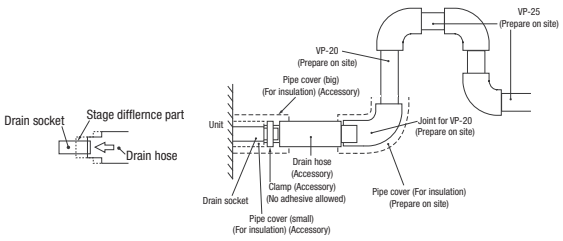
⑦Drain pipe

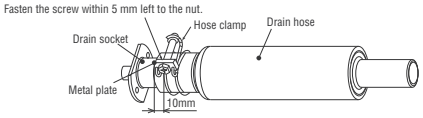
Caution

● Install the drain pipe according to the installation manual in order to drain properly.
Imperfection in draining may cause flood indoors and wetting the household goods, etc.
● Do not put the drain pipe directly into the ditch where toxic gas such as sulfur, the other harmful and inflammable gas is generated. Toxic gas would flow into the room and it would cause serious damage to user's health and safety (some poisoning or deficiency of oxygen). In addition, it may cause corrosion of heat exchanger and bad smell.
● Connect the pipe securely to avoid water leakage from the joint.
● Insulate the pipe properly to avoid condensation drop.
● Check if the water can flow out properly from both the drain outlet on the indoor unit and the end of the drain pipe after installation.
● Make sure to make descending slope of greater than 1/100 and do not make up-down bend and/or trap in the midway. In addition, do not put air vent on the drain pipe. Check if water is drained out properly from the pipe during commissioning. Also, keep sufficient space for inspection and maintenance.

Work procedure

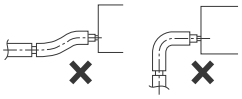
1. Make sure to insert the drain hose (the end mode of soft PVC) to the end of the step part of drain socket.
Attach the hose clamp to the drain hose around 10mm from the end, and fasten the screw within 5mm left to the nut.
●Do not apply adhesives on this end.
●Do not use acetone-based adhesives to connect to the drain socket.



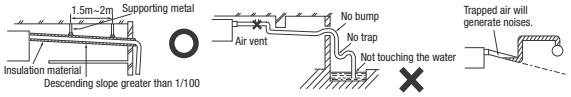


⑦Drain pipe (continued)

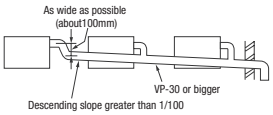
2. Prepare a joint for connecting VP-20 pipe, adhere and connect the joint to the drain hose (the end made of rigid PVC), and adhere and connect VP-20 pipe (prepare on site).
   ※As for drain pipe, apply VP-20 made of rigid PVC which is on the market.
   - When installing drain pipe, use VP-20 for the pipe goes up the closest to the unit, and VP-25 or higher number product for farther pipes.
   - Make sure that the adhesive will not get into the supplied drain hose.
     It may cause the flexible part broken after the adhesive is dried up and gets rigid.
   - The flexible drain hose is intended to absorb a small difference at installation of the unit or drain pipes. Intentional bending, expanding may cause the flexible hose broken and water leakage.



3. Make sure to make descending slope of greater than 1/100 and do not make up-down bend and/or trap in the midway.
   - Pay attention not to give stress on the pipe on the indoor unit side, and support and fix the pipe as close place to the unit as possible when connecting the drain pipe.
   - Do not set up air vent.



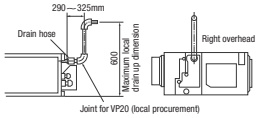
   - When sharing a drain pipe for more than one unit, lay the main pipe 100mm below the drain outlet of the unit. In addition, select VP-30 or bigger size for main drain pipe.



4. Insulate the drain pipe.
   - Be sure to insulate the drain socket and rigid PVC pipe installed indoors otherwise it may cause dew condensation and water leakage.
     ※ After drainage test implementation, cover the drain socket part with pipe cover (small size), then use the pipe cover (big size) to cover the pipe cover (small size), clamps and part of the drain hose, and fix and wrap it with tapes to wrap and make joint part gapless.

Drain up

- The position for drain pipe outlet can be raised up to 600mm above the ceiling. Use elbows for installation to avoid obstacles inside ceiling. If the horizontal drain pipe is too long before vertical pipe, the backflow of water will increase when the unit is stopped, and it may cause overflow of water from the drain pan on the indoor unit. In order to avoid overflow, keep the horizontal pipe length and offset of the pipe within the limit shown in the figure below.



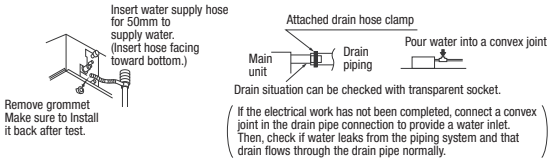
Otherwise, the construction point makes it same as drain pipe construction.

Drain test

1. Conduct a drain test after completion of the electrical work.
2. During the trail, make sure that drain flows properly through the piping and that no water leaks from connections.
3. In case of a new building, conduct the test before it is furnished with the ceiling.
4. Be sure to conduct this test even when the unit is installed in the heating season.

Procedures

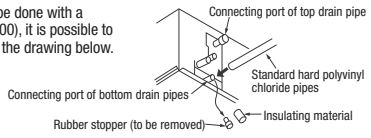
1. Supply about 1000 cc of water to the unit through the air outlet by using a feed water pump.
2. Check the drain while cooling operation.



(If the electrical work has not been completed, connect a convex joint in the drain pipe connection to provide a water inlet. Then, check if water leaks from the piping system and that drain flows through the drain pipe normally.)

Outline of bottom drain piping work

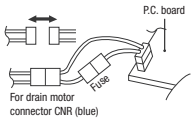
- If the bottom drain piping can be done with a descending gradient (1/50-1/100), it is possible to connect the pipes as shown in the drawing below.



Uncoupling the drain motor connector

- Uncouple the connector CNR for the drain motor as illustrated in the drawing on the right.

(Note: If the unit is run with the connector coupled, drain water will be discharged from the upper drain pipe joint, causing a water leak.)



⑦Drain pipe (continued)

Drain pump operation

○In case electrical wiring work finished

Drain pump can be operated by remote controller (wired).
For the operation method, refer to Operation for drain pump in the installation manual for wiring work.

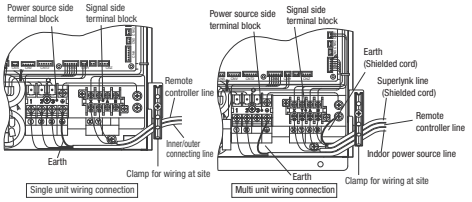
○In case electrical wiring work not finished

Drain pump will run continuously when the dip switch"SW7-1" on the indoor unit PCB is turned ON, the Connector CNB is disconnected, and then the power supply (230VAC on the terminal block ① and ②) is turned ON.
Make sure to turn OFF "SW7-1" and reconnect the Connector CNB after the test.

⑧Wiring-out position and wiring connection

- Electrical installation work must be performed according to the installation manual by an electrical installation service provider qualified by a power provider of the country, and be executed according to the technical standards and other regulations applicable to electrical installation in the country.
  Be sure to use an exclusive circuit.
- Use specified cord, fasten the wiring to the terminal securely, and hold the cord securely in order not to apply unexpected stress on the terminal.
- Do not put both power source line and signal line on the same route. It may cause miscommunication and malfunction.
- Be sure to do D type earth work.
- For the details of electrical wiring work, see attached instruction manual for electrical wiring work.

1. Remove a lid of the control box (2 screws).
2. Hold each wiring inside the unit and fasten them to terminal block securely.
3. Fix the wiring with clamps.
4. Install the removed parts back to original place.



⑨Check list after installation

- Check the following items after all installation work completed.

Check if	Expected trouble	Check
The indoor and outdoor units are fixed securely?	Falling, vibration, noise	
Inspection for leakage is done?	Insufficient capacity	
Insulation work is properly done?	Water leakage	
Water is drained properly?	Water leakage	
Supply voltage is same as mentioned in the model name plate?	PCB burnt out, not working at all	
There is mis-wiring or mis-connection of piping?	PCB burnt out, not working at all	
Earth wiring is connected properly?	Electric shock	
Cable size comply with specified size?	PCB burnt out, not working at all	
Any obstacle blocks airflow on air inlet and outlet?	Insufficient capacity	

⑩Tap selection on blower unit (when the high peformance filter is used)

The fan tap's factory setting is "Standard." If you want to change it to the high static-pressure setting, you can avail yourself of the following two methods. Use one of the two methods to set the fan tap.
Make sure to perform the functional setting with remote controller.
Select [I/U FUNCTION] in the functional setting mode, and change the function number [02] [FAN SPEED SET].
For operation method, refer to the user's manual of the remote controller.

Function number A	Functional content B	Setting content C	Default setting
02	Fan Speed Set	Standard	○
		High Speed 1	

UNIT: Pa

Static Pressure	Standard Tap	60
	High Speed 1 Tap	130

⚠ CAUTION

If the external static pressure is 60Pa or less, do not set the fan speed to High speed 1. If High speed 1 setting is done, air outlet speed from indoor unit will increase and waterdrop may be blown out and wet the ceiling or the furniture.

(6) Wall mounted type (SRK)

RKY012A007

This instruction manual illustrates the method of installing an indoor unit.
For electrical wiring work, please see instructions set out on the backside.
For outdoor unit installation and refrigerant piping, please refer to the installation manual that comes with your outdoor unit.
A wired remote control unit is supplied separately as an optional part.

SAFETY PRECAUTIONS

- Please read these "Safety Precautions" first then accurately execute the installation work.
- For installing qualified personnel, take precautions in respect to themselves by using suitable protective clothing, groves, etc., and then perform the installation works.
- Though the precautionary points indicated herein are divided under two headings, ⚠WARNING and ⚠CAUTION, those points which are related to the strong possibility of an installation done in error resulting in death, serious injury or environmental pollution are listed in the ⚠WARNING section. However, there is also a possibility of serious consequences in relationship to the points listed in the ⚠CAUTION section as well. In either case, important safety related information is indicated, so by all means, properly observe all that is mentioned.
- Please pay attention not to fall down the tools, etc. when installing the unit at the high position.
- After completing the installation, along with confirming that no abnormalities were seen from the operation tests. Please explain operating methods as well as maintenance methods to the user (customer) of this equipment, based on the user's manual. Moreover, ask the customer to keep this sheet together with the user's manual.
- If unusual noise can be heard during operation, consult the dealer.

⚠ WARNING

- To disconnect the appliance from the mains supply this appliance must be connected to the mains by means of a circuit breaker or a switch (use a recognized 16A) with a contact separation of at least 3mm.
- The appliance shall be installed in accordance with national wiring regulations.
- When a plug is connected to the power cord, a plug conforming to the IEC60884-1 standard must be used.
- This system should be applied to places as households, residences and the like. Application to inferior environment such as engineering shop could cause equipment malfunction.
- Please entrust installation to either the company which sold you the equipment or to a professional contractor. Defects from improper installations can be the cause of water leakage, electric shocks and fires.
- Execute the installation accurately, based on following the installation manual. Again, improper installations can result in water leakage, electric shocks and fires.
- For installation, confirm that the installation site can sufficiently support heavy weight. When strength is insufficient, injury can result from a falling of the unit.
- For electrical work, please see that a licensed electrician executes the work while following the safety standards related to electrical equipment, and local regulations as well as the installation instructions, and that only exclusive use circuits are used.
  Insufficient power source circuit capacity and defective installment execution can be the cause of electric shocks and fires.
- Accurately connect wiring using the proper cable, and insure that the external force of the cable is not conducted to the terminal connection part, through properly securing it. Improper connection or securing can result in heat generation or fire.
- Take care that wiring does not rise upward, and accurately install the lid/service panel. It's improper installation can also result in heat generation or fire.
- Always use accessory parts and authorized parts for installation construction. Using parts not authorized by this company can result in water leakage, electric shock, fire and refrigerant leakage.
- Ventilate the work area when refrigerant leaks during the operation.
  Coming in contact with fire, refrigerant could generate toxic gas.
- Confirm after the foundation construction work that refrigerant does not leak.
  If coming in contact with fire of a fan heater, a stove or a movable cooking stove, etc., refrigerant leaking in the room could generate toxic gas.
- Turn off the power source during working on the inside of the unit such as servicing or installing work.
  This may cause electric shock.
- Use only pipe, flare nut and tools that have been designed to operate with R410A.
  Using existing parts (R22) may cause the unit failure, even as due to serious accident such as explosion of the cooling cycle or injury etc.
- For pump down work, stop the compressor before removing the refrigerant pipe.
  If the refrigerant pipe is removed when the compressor is in operation with the service valves open (liquid side and gas side), air would be mixed in the refrigerant circuit and this may cause explosion and injuries due to abnormal high pressure in the cooling cycle.
- Connect the pipes for refrigerant circuit securely in installation work before compressor is operated
  If the compressor is operated when the service valve is open without connecting the pipe, this may cause frostbite and injuries due to refrigerant leakage rapidly. Also, the unit is absorbed the air etc., this may cause explosion and injuries due to abnormal high pressure in the cooling cycle.
- Tighten the flare nut by torque wrench with specified method.
  If the flare nut were tightened with excess torque, this may cause burst and refrigerant leakage after a long period, and then, this may cause generate the harmful substance due to touch the flammable materials.
- Make sure there is no dust or clogging on both plug and socket nor loose connection of the socket before plugging of the power plug. Then, the power plug must be inserted tightly.
  Accumulation of dust, clogging on the socket or plug, or loose installation of the socket may cause electric shock and fire. Replace the socket if it is loose.
- Do not open the service valves (liquid side and gas side) until refrigerant piping construction, air-tightness test and evacuation are completed
  This may cause frostbite and injuries due to refrigerant leakage rapidly. Also, if the refrigerant gas leakage occurs during installing work, stop the work such as brazing work and then ventilation of the room. This may cause generate the toxic gas due to touch the flammable materials.

- Do not put the drain pipe directly into the ditch where toxic gas such as sulfur is generated.
  Toxic gas would flow into the room. Also, this may cause corrosion of indoor unit, and malfunction or refrigerant leakage.
- Be sure to bring back the packing material, form polystyrene, band and vinyl back etc., of the indoor and/or outdoor units after complete the installation work, and then implement appropriate measures such as breaking them.
- When setting up or moving the location of the air conditioner, do not mix air etc. or anything other than the designated refrigerant (R410A) within the refrigeration cycle.
  Rupture and injury caused by abnormal high pressure can result from such mixing.
- Do not processing, splice the power cord, or share a socket with other power plugs.
  This may cause fire or electric shock due to defecting contact, defecting insulation and over-current etc.
- Do not bundling, winding or processing for the power cord. Or, do not deforming the power plug due to tread it
  This may cause fire or heating.
- Do not vent R410A into the atomosphere:R410A is a fluor inated greenhouse gas. covered by the Kyoto Protocol with a Groval Warming Potential (GWP) =1975

- Execute proper grounding. Do not connect the ground wire to a gas pipe, water pipe, lightning rod or a telephone ground wire. Improper placement of ground wires can result in electric shock.

⚠ CAUTION

- Please avoid installing this unit in the locations where oil splashes and moisture are abundant (e.g., kitchens, mechanical workshops) or where the outside air is likely to flow in. These locations may cause corrosion and lower performance of the heat exchanger and cause damage to plastic parts.
- Please avoid installing this unit in the locations with corrosive gases (such as sulfurous acid gas), inflammable gases (such as thinner, gasoline) and areas where there are possibilities of gas accumulation or where a volatile inflammable material is handled. These locations can cause corrosion to the heat exchanger and damage to plastic parts. Also, the inflammable gas could cause fire.
- Please avoid installing this unit in the vicinity of equipment generating electromagnetic waves such as hospital equipment or equipment generating high-frequency waves. A failure to observe this instruction may result in controller performance errors due to noise generation.
- Please avoid installing and using this unit in a place where it is subject to sea breezes (coastal area). Installation in such a place may result in the corrosion of exterior panels and the heat exchanger.
- Do not place the remote control at locations that receives direct sunlight. This may cause malfunction and deformation.
- Spatters from welding, etc., if hit the unit, can damage (pinhole) its drain pan and other components and cause a water leak. Care must be taken in performing a welding operation near this unit and take necessary precautions to prevent spatters from entering this unit.
- For installation work, be careful not to get injured with the heat exchanger, piping flare portion or screws etc.
- For the drain pipe, follow the installation manual to insure that it allows proper drainage and thermally insulate it to prevent condensation. Inadequate plumbing can result in water leakage and water damage to interior items.
- The installation of an earth leakage breaker is necessary depending on the established location of the unit. Not installing an earth leakage breaker may result in electric shock.
- When perform the air conditioner operation (cooling or drying operation) in which ventilator is installed in the room. In this case, using the air conditioner in parallel with the ventilator, there is the possibility that drain water may backflow in accordance with the room lapse into the negative pressure status. Therefore, set up the opening port such as incorporate the air into the room that may appropriate to ventilation (For example; Open the door a little). In addition, just as above, so set up the opening port if the room lapse into negative pressure status due to register of the wind for the high rise apartment etc.
- Secure the regulated space for inspection and maintenance
  When it is not possible to keep enough space, this may cause injury due to falling from the installation place.
- To prevent the falling, institute the everlasting ladder and handrail etc., to the aisle when installing the outdoor unit in the location with rooftop or altitude.
  Or, for surrounding of the outdoor unit, institute the fence and handrail etc., to the aisle to prevent the falling.
- Performing the heat insulation and condensation of the refrigerant piping
  If the heat insulation and condensation of the refrigerant piping is not correctly, this may cause the water leakage, dew dropping and household wetting etc.
- Be careful not to injury due to damage of the unit installing work when leaving of the packaging materials.

- Do not install the unit where there is a concern about leakage of combustible gas.
  The rare event of leaked gas collecting around the unit could result in an outbreak of fire.
- Do not touch the suction or aluminum fin on the outdoor unit
  This may cause injury.
- Do not install the outdoor unit where is likely to be a nest for small animals
  Small animals may come into the electronic components and may cause breakdown and fire. Also,instruct the user to keep the surroundings clean.
- Do not install the outdoor unit at the place where fan airflow falls on the garden tree etc.
  This may cause damage to the garden tree etc., due to the fan airflow.
- Do not put anything on the outdoor unit and operating the unit.
  This may cause damage the objects or injury due to falling to the object.

- Symbols which appear frequently in the text have the following meaning

⊘	**Strictly prohibited**	!	**Observe instructions with great care**	⏚	**Provide proper earthing**

CAUTIONS FOR INSTALLATION ⊘

- ○The system should be applied to places as households, residences and the like.
- ○The equipment shall be installed in accordance with national wiring regulations.
- ○The connection to the fixed wiring of the mains supply must be made via a double pole isolating switch with a contact gap of at least 3mm in each pole.
- ○When the outdoor unit has a possibility of being overturned or being displaced and fall from its original installation position, the outdoor unit should be fixed in its position by use of anchor bolts or wires.

BEFORE INSTALLATION

○Before installation check that the power supply matches the air conditioner.

Standard accessories (Installation kit) Accessories for indoor unit		Q'ty
①	Installation board (Attached to the rear of the indoor unit)	1
②	Wireless remote control	1
③	Remote control holder	1
④	Tapping screws (for installation board 4dia. by 25mm)	4
⑤	Wood screw (for remote control switch holder 3.5(mm). by 16mm)	2
⑥	Battery [R03(AAA,Micro) 1.5V]	2
⑦	Air-cleaning filters	2
⑧	Filter holders (Attached to the front panel of indoor unit)	2
⑨	Insulation (#486 50 x 100 t3)	1

Option parts		Q'ty
ⓐ	Sealing plate	1
ⓑ	Sleeve	1
ⓒ	Inclination plate	1
ⓓ	Putty	1
ⓔ	Drain hose (extention hose)	1
ⓕ	Piping cover (for insulation of connection piping)	1

Necessary tools for the installation work	
1	Plus headed driver
2	Knife
3	Saw
4	Tape measure
5	Hammer
6	Spanner wrench
7	Torque wrench (14.0 ~ 61.0N•m (1.4 ~ 6.1kgf•m))
8	Hole core drill (65mm in diameter)
9	Wrench key (Hexagon) [4m/m]
10	Flaring tool set (Designed specifically for R410A)
11	Gas leak detector (Designed specifically for R410A)
12	Gauge for projection adjustment (Used when flare is made by using conventional flare tool)
13	Pipe bender

SELECTION OF INSTALLATION LOCATION

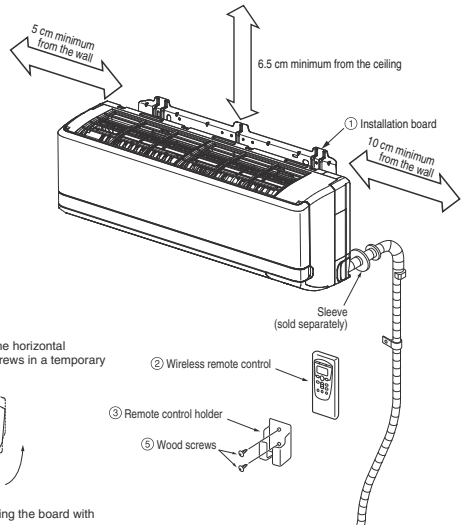
(Install at location that meets the following conditions, after getting approval from the customer)

Indoor unit

○ Where there is no obstructions to the air flow and where the cooled and heated air can be evenly distributed.
○ A solid place where the unit or the wall will not vibrate.
○ A place where there will be enough space for servicing. (Where space mentioned below can be secured)
○ Where wiring and the piping work will be easy to conduct.
○ The place where receiving part is not exposed to the direct rays of the sun or the strong rays of the street lighting.
○ A place where it can be easily drained.
○ A place separated at least 1m away from the television or the radio. (To prevent interference to images and sounds.)
○ Places where this unit is not affected by the high frequency equipment or electric equipment.
○ Avoid installing this unit in place where there is much oil mist.
○ Places where there is no electric equipment or household under the installing unit.

Wireless remote control

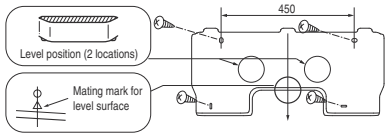
○ A place where the air conditioner can be received the signal surely during operating the wireless remote control.
○ Places where there is no affected by the TV and radio etc.
○ Do not place where exposed to direct sunlight or near heat devices such as a stove.



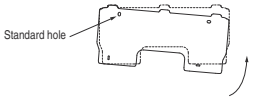
INSTALLATION OF INDOOR UNIT

Installation of Installation board

Look for the inside wall structures (Intersediats support or pillar and finally install the unit after level surface has been checked.)

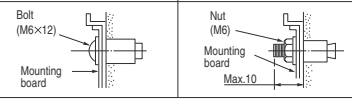


○Adjustment of the installation board in the horizontal direction is to be conducted with four screws in a temporary tightened state.



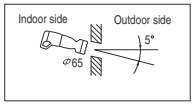
○Adjust so the board will be level by turning the board with the standard hole as the center.

Fixing on concrete wall	
Use of nut anchor	Use of bolt anchor

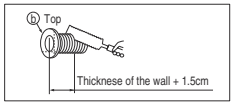


Drilling of holes and fixture of sleeve (Option parts)

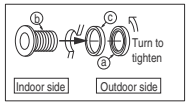
When drilling the wall that contains a metal lath, wire lath or metal plate, be sure to use pipe hole sleeve sold separately.

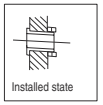


○Drill a hole with whole core drill.

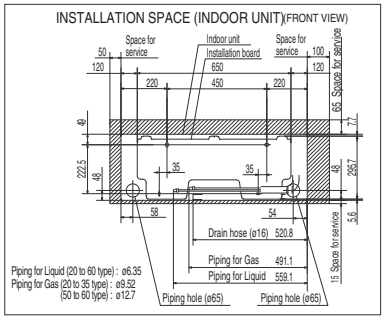


○In case of rear piping draw out, cut off the lower and the right side portions of the sleeve collar.





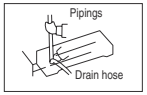
Relation between setting plate and indoor unit

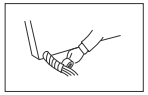


Installing the support of piping

In case of piping in the right rear direction

Shaping of pipings	Taping of the exterior





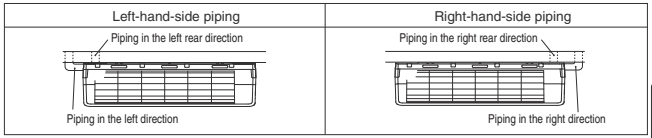
○Hold the bottom of the piping and fix direction before stretching it and shaping it.

○Tape only the portion that goes through the wall.
○Always tape the wiring with the piping.

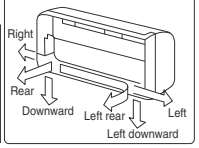
● Matters of special notice when piping from left or central/rear of tha unit.

[Top view]

Left-hand-side piping	Right-hand-side piping

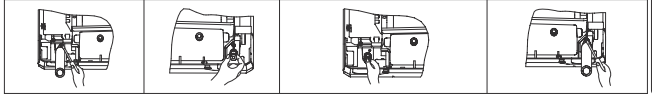


Piping is possible in the rear, left, left rear, left downward, right or downward direction.



[Drain hose changing procedures]

1. Remove the drain hose.	2. Remove the drain cap.	3. Insert the drain cap.	4. Connect the drain hose.



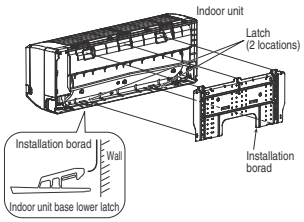
○Remove the screw and drain hose, making it rotate.

○Remove it with hand or pilers.

○Insert the drain cap which was removed at procedure "2" securely using a hexagonal wrench etc.
Note: Be careful that If it is not Inserted securely, water leakage may occur.

○Insert the drain hose securely, making rotate. And install the screw.
Note: Be careful that If it is not Inserted securely, water leakage may occur.

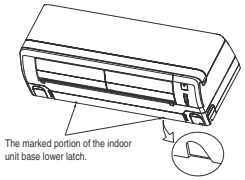
Fixing of indoor unit



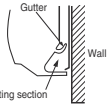
Installation Steps
①Pass the pipe through the hole in the wall, and hook the upper part of the indoor unit to the installation board.
②Gently push the lower part to secure the unit.

● How to remove the indoor unit from the installation board

① Push up at the marked portion of the indoor unit base lower latch, and slightly pull it toward you. (both right and left hand sides) (The indoor unit base lower latch can be removed from the installation board)
② Push up the indoor unit upward. So the indoor unit will be removed from the installation board.



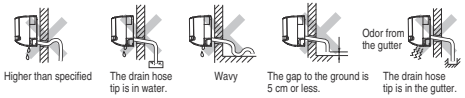
Since this air conditioner has been designed to collect dew drops on the rear surface to the drain pan, do not attach the power cord above the gutter.



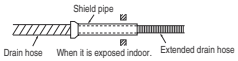
Drainage

○ Arrange the drain hose in a downward angle
○ Avoid the following drain piping.

⚠CAUTION Go through all installation steps and check if the drainage is all right. Otherwise water leak may occur.



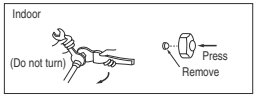
○ Pour water to the drain pan located under the heat exchanger, and ensure that the water is discharged outdoor.
○ When the extended drain hose is indoor, always use a shield pipe (to be arranged by the user) and ensure it is thermally insulated



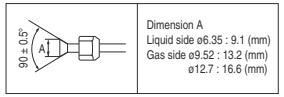
CONNECTION OF REFRIGERANT PIPINGS

Preparation

Keep the openings of the pipes covered with tapes etc. to prevent dust, sand, etc. from entering them.



○ Remove the flared nuts. (on both liquid and gas sides)

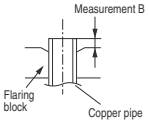


Dimension A
Liquid side ø6.35 : 9.1 (mm)
Gas side ø9.52 : 13.2 (mm)
ø12.7 : 16.6 (mm)

○ Install the removed flared nuts to the pipes to be connected, then flared the pipes.

⚠CAUTION
Do not apply refrigerating machine oil to the flared surface.

● Flaring work



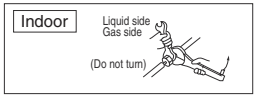
Copper pipe diameter	Measurement B (mm)		
	Clutch type flare tool for R410A	Conventional (R22) flare tool	
		Clutch type	Wing nut type
ø6.35	0.0 - 0.5	1.0 - 1.5	1.5 - 2.0
ø9.52	0.0 - 0.5	1.0 - 1.5	1.5 - 2.0
ø12.7	0.0 - 0.5	1.0 - 1.5	2.0 - 2.5

Use a flare tool designed for R410A or a conventional flare tool.
Please note that measurement B (protrusion from the flaring block) will vary depending on the type of a flare tool in use.
If a coventional flare tool is used, please use a copper pipe gauge or a similar instrument to check protrusion so that you can keep measurement B to a correct value.

⚠CAUTION
Do not apply excess torque to the flared nuts. Otherwise, the flared nuts may checkdepending.

Connection

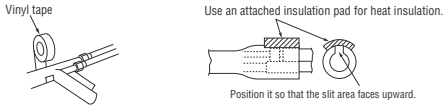
Indoor



○ Connect the pipes on both liquid and gas sides.
○ Tighten the nuts to the following torque.
Liquid side (ø6.35) : 14.0 - 18.0 N·m (1.4 - 1.8 kgf·m)
Gas side (ø9.52) : 34.0 - 42.0 N·m (3.4 - 4.2 kgf·m)
(ø12.7) : 49.0 - 61.0 N·m (4.9 - 6.1 kgf·m)

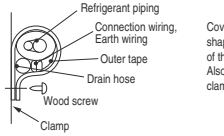
Insulation of the connection portion

Cover the coupling with insulator and then cover it with tapes.



● Cover the indoor unit's flare-connected joints, after they are checked for a gas leak, with an indoor unit heat insulating material and then wrap them with a tape with an attached insulation pad placed over the heat insulating material's slit area.

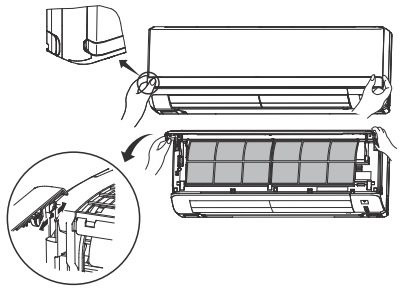
Finishing work and fixing



Cover the exterior portion with outer tape and shape the piping so it will match the contours of the route that the piping to take.
Also fix the wiring and pipings to the wall with clamps.

Open/close and detachment/attachment of the air inlet panel

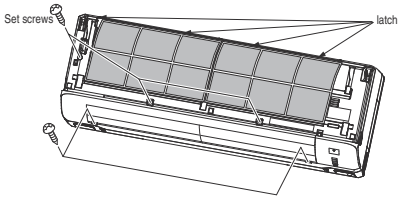
○ To open, pull the panel at both ends of lower part and release latches, then pull up the panel until you feel resistance.
(The panel stops at approx. 60° open position)
○ To close, hold the panel at both ends of lower part to lower downward and push it slightly until the latch works.
○ To remove, pull up the panel to the position shown in right illustration and pull it toward you.
○ To install, insert the panel arm into the slot on the front panel from the position shown in right illustration, hold the panel at both ends of lower part, lower it downward slowly, then push it slightly until the latch warks.



How to remove and fit the front panel

○ Removing
① Remove the air inlet panel.
② Remove the 5 set screws.
③ Remove the 4 latches in the upper section.
④ Move the lower part of the panel forward and push upwards to remove.

○ Fitting
① Do remove the air filter.
② Cover the body with the front panel.
③ Fit the 4 latches in the upper section.
④ Tighten the 5 set screws.
⑤ Fit the air filter.
⑥ Fit the air input panel.



ELECTRICAL WIRING WORK

Preparation of indoor unit

Mounting of connecting wires

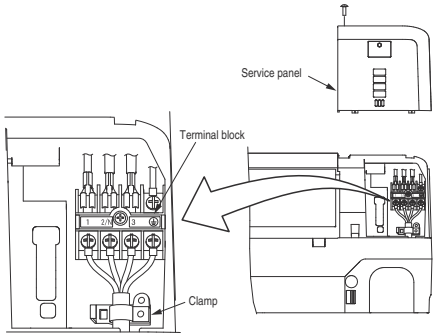
① Open the air inlet panel.
② Remove the service panel.
③ Remove the wiring clamp
④ Connect the connecting wire securely to the terminal block.
  1) Connect the connection wire securely to the terminal block. If the wire is not affixed completely, contact will be poor, and it is dangerous as the terminal block may heat up and catch fire.
  2) Take care not to confuse the terminal numbers for indoor and outdoor connections.
  3) Fix the connection wire using the wiring clamp.
⑤ Fix the connecting wire by wiring clamp.
⑥ Attach the service panel.
⑦ Close the air inlet panel.

⚠ CAUTION

In case of faulty wiring connection, the indoor unit stops, and then the run lamp turns on and the timer lamp blinks.

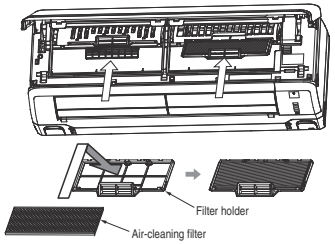
Use cables for interconnection wiring to avoid loosening of the wires.
CENELEC code for cables Required field cables.

H05	RNR4G1.5 (example) or 245IEC57
H	Harmonized cable type
05	300/500 volts
R	Natural-and/or synth, rubber wire insulation
N	Polychloroprene rubber conductors insulation
R	Stranded core
4or5	Number of conductors
G	One conductor of the cable is the earth conductor (yellow/green)
1.5	Section of copper wire (mm²)



Installing the air-cleaning filters

1. Open the air inlet panel and remove the air filters.
2. Install the filter holders, with the air-cleaning filters installed in the holders. In the air conditioner.
   • Each air-cleaning filter can be installed in the left or right filter holder.
3. Install the air filters and close the inlet panel.



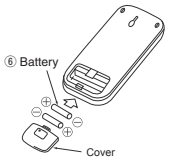
INSTALLATION OF REMOTE CONTROL SWITCH

Mounting method of battery

○Uncover the wireless remote control, and mount the batteries [R03(AAA,Micro),×2 pieces] in the body regularly.
(Fit the poles with the indication marks, ⊕ & ⊖ without fall)

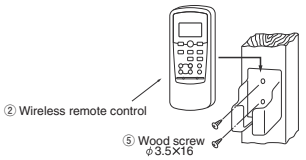
⚠ CAUTION

Do not use new and old batteries together.



Fixing to pillar or wall

○Conventionally, operate the remote control switch by holding in your hand.
○Avoid installing it on a clay wall etc.



INSTALLATION TEST CHECK POINTS

Check the following points again after completion of the installation, and before turning on the power. Conduct a test run again and ensure that the unit operates properly. At the same time, explain to the customer how to use the unit and how to take care of the unit following the user's manual.

After installation

☐ The power supply voltage is correct as the rating.
☐ No gas leaks from the joints of the operational valve.
☐ Power cables and crossover wires are securely fixed to the terminal board.
☐ Operational valve is fully open.
☐ The pipe joints for indoor and outdoor pipes have been insulated.

Test run

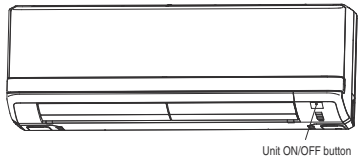
☐ Air conditioning operation is normal.
☐ No abnormal noise.
☐ Water drains smoothly.
☐ Protective functions are not working.
☐ The remote control is normal.
☐ Operation of the unit has been explained to the customer.
(Three-minutes restart preventive timer)
When the air conditioner is restarted or when changing the operation, the unit will not start operating for approximately 3 minutes.
This is to protect the unit and it is not a malfunction.

HOW TO RELOCATE OR DISPOSE OF THE UNIT

○ In order to protect the environment, be sure to pump down (recovery of refrigerant).
○ Pump down is the method of recovering refrigerant from the indoor unit to the outdoor unit when the pipes are removed from the unit.

<How to pump down>
① Connect charge hose to service port of outdoor unit.
② Liquid side : Close the liquid valve with hexagon wrench key.
Gas side : Fully open the gas valve
Carry out cooling operation . (If indoor temperature is low, operate forced cooling operation.)
③ After low pressure gauge become 0.01MPa, stop cooling operation and close the gas valve.

● Forced cooling operation
Turn on a power supply again after a while after turn off a power supply.
Then press continually the ON/OFF button 5 seconds or more.



CONCERNING TERMINAL CONNECTION FOR AN INTERFACE

① Remove the front panel and lid of control.
② There is a terminal (respectively marked with CNS) for the indoor control board.
In connecting an interface, connect to the respective terminal securely with the connection harness supplied with an optional "Interface connection kit SC-BIKN-E" and fasten the connection harness onto the indoor control box with the clamp supplied with the kit.
For more details, please refer to the user's manual of your "Interface connection kit SC-BIKN-E".

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10.2 Instullation of wired remote controller

Read together with indoor unit's installation manual.

⚠WARNING

- Fasten the wiring to the terminal securely and hold the cable securely so as not to apply unexpected stress on the terminal.
  Loose connection or hold will cause abnormal heat generation or fire.
- Make sure the power supply is turned off when electric wiring work.
  Otherwise, electric shock, malfunction and improper running may occur.

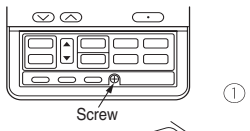
⚠CAUTION

- DO NOT install the remote controller at the following places in order to avoid malfunction.
  (1) Places exposed to direct sunlight
  (2) Places near heat devices
  (3) High humidity places
  (4) Hot surface or cold surface enough to generate condensation
  (5) Places exposed to oil mist or steam directly
  (6) Uneven surface
- DO NOT leave the remote controller without the upper case.
  In case the upper cace needs to be detached, protect the remote controller with a packaging box or bag in order to keep it away from water and dust.

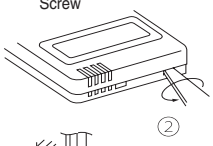
Accessories	Remote controller, wood screw (ø3.5×16) 2 pieces
Prepare on site	Remote controller cord (2 cores) the insulated thickness in 1mm or more. [In case of embedding cord] Erectrical box, M4 screw (2 pieces) [In case of exposing cord] Cord clamp (if needed)

Installation procedure

① Open the cover of remote controller , and remove the screw under the buttons without fail.

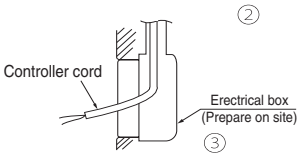


② Remove the upper case of remote controller.
Insert a flat-blade screwdriver into the dented part of the upper part of the remote controller, and wrench slightly.

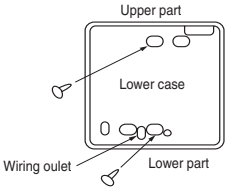


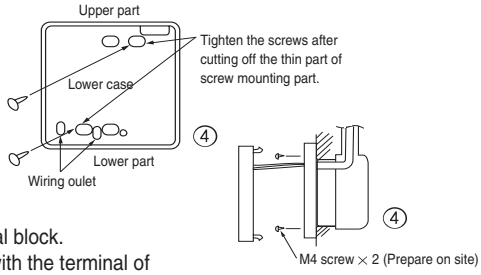
[In case of embedding cord]

③ Embed the erectrical box and remote controller cord beforehand.



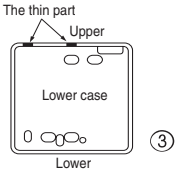
④ Prepare two M4 screws (recommended length is 12-16mm) on site, and install the lower case to erectrical box.
Choose either of the following two positions in fixing it with screws.





⑤ Connect the remote controller cord to the terminal block.
Connect the terminal of remote controller (X,Y) with the terminal of indoor unit (X,Y). (X and Y are no polarity)

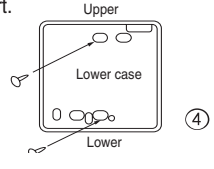
⑥ Install the upper case as before so as not to catch up the remote controller cord, and tighten with the screws.



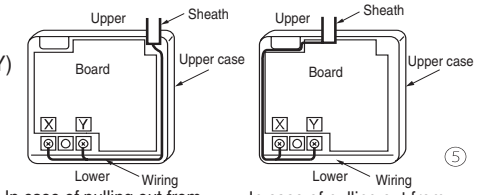
[In case of exposing cord]

③ You can pull out the remote controller cord from left upper part or center upper part.
Cut off the upper thin part of remote controller lower case with a nipper or knife, and grind burrs with a file etc.

④ Install the lower case to the flat wall with attached two wooden screws.

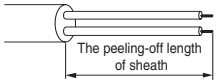


⑤ Connect the remote controller cord to the terminal block.
Connect the terminal of remote controller (X,Y) with the terminal of indoor unit (X,Y).
(X and Y are no polarity)
Wiring route is as shown in the right diagram depending on the pulling out direction.



The wiring inside the remote controller case should be within 0.3mm^2 (recommended) to 0.5mm^2.
The sheath should be peeled off inside the remote controller case.
The peeling-off length of each wire is as below.

Pulling out from upper left	Pulling out from upper center
X wiring : 215mm Y wiring : 195mm	X wiring : 170mm Y wiring : 190mm



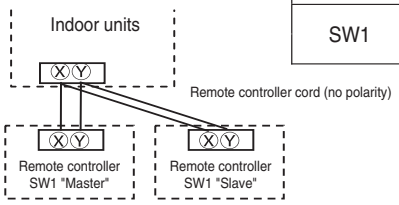
⑥ Install the upper case as before so as not to catch up the remote controller cord, and tighten with the screws.
⑦ In case of exposing cord, fix the cord on the wall with cord clamp so as not to slack.

Installation and wiring of remote controller

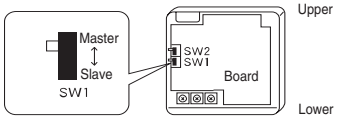
① Wiring of remote controller should use 0.3mm^2 × 2 core wires or cables. (on-site configuration)
② Maximum prolongation of remote controller wiring is 600 m.
If the prolongation is over 100m, change to the size below.
But, wiring in the remote controller case should be under 0.5mm^2 . Change the wire size outside of the case according to wire connecting. Waterproof treatment is necessary at the wire connecting section. Be careful about contact failure.
100 - 200m·····0.5mm^2 × 2 cores
Under 300m·····0.75mm^2 × 2 cores
Under 400m·····1.25mm^2 × 2 cores
Under 600m·····2.0mm^2 × 2 cores

Master/ slave setting when more than one remote controllers are used

A maximum of two remote controllers can be connected to one indoor unit (or one group of indoor units.)



Switch	Setting	Contents
SW1	M	Master remote controller
	S	Slave remote controller

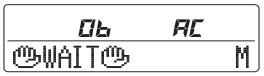


Set SW1 to "Slave" for the slave remote controller. It was factory set to "Master" for shipment.
Note: The setting "Remote controller thermistor enabled" is only selectable with the master remote controller in the position where you want to check room temperature.
The air conditioner operation follows the last operation of the remote controller regardless of the master/ slave setting of it.

The indication when power source is supplied

When power source is turned on, the following is displayed on the remote controller until the communication between the remote controller and indoor unit settled.
Master remote controller : "WAIT M"
Slave remote controller : "WAIT S"

At the same time, a mark or a number will be displayed for two seconds first.
This is the software's administration number of the remote controller, not an error cord.



※ The left mark is only an example. Other marks may appear.

When remote controller cannot communicate with the indoor unit for half an hour, the below indication will appear.
Check wiring of the indoor unit and the outdoor unit etc.

The range of temperature setting

When shipped, the range of set temperature differs depending on the operation mode as below.

Heating : 16~30˚C (55~86˚F)

Except heating (cooling, fan, dry, automatic) : 18~30˚C (62~86˚F)

●Upper limit and lower limit of set temperature can be changed with remote controller.

Upper limit setting: valid during heating operation. Possible to set in the range of 20 to 30˚C (68 to 86˚F).

Lower limit setting: valid except heating (automatic, cooling, fan, dry) Possible to set in the range of 18 to 26˚C (62 to 79˚F).

When you set upper and lower limit by this function, control as below.

1. When ⑫ TEMP RANGE SET, remote controller function of function setting mode is "INDN CHANGE" (factory setting),
   【If upper limit value is set】
   During heating, you cannot set the value exceeding the upper limit.

   【If lower limit value is set 】
   During operation mode except heating, you cannot set the value below the lower limit.

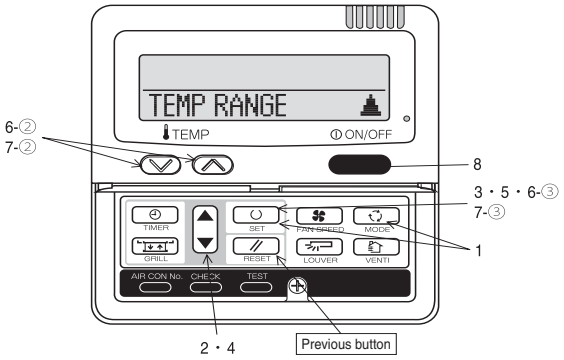
2. When ⑫ TEMP RANGE SET, remote controller function of function setting mode is "NO INDN CHANGE"
   【If upper limit value is set】
   During heating, even if the value exceeding the upper limit is set, upper limit value will be sent to the indoor unit. But, the indication is the same as the temperature set.

   【If lower limit value is set 】
   During except heating, even if the value lower than the lower limit is set, lower limit value will be sent to the indoor unit. But, the indication is the same as the temperature set.

●How to set upper and lower limit value

1. Stop the air-conditioner, and press (SET) and (MODE) button at the same time for over three seconds .
   The indication changes to "FUNCTION SET ▼".
2. Press ▼ button once, and change to the "TEMP RANGE ▲ " indication.
3. Press (SET) button, and enter the temperature range setting mode.
4. Select "UPPER LIMIT ▼" or "LOWER LIMIT ▲" by using ▲ ▼ button.
5. Press (SET) button to fix.
6. When "UPPER LIMIT ▼" is selected (valid during heating)
   ① Indication: "☝ ∨ ∧ SET UP" → "UPPER 30˚C ∨"
   ② Select the upper limit value with temperature setting button ∨ ∧. Indication example: "UPPER 26˚C ∨ ∧" (blinking)
   ③ Press (SET) button to fix. Indication example: "UPPER 26˚C" (Displayed for two seconds)
   After the fixed upper limit value displayed for two seconds, the indication will return to "UPPER LIMIT ▼".
7. When "LOWER LIMIT ▲" is selected (valid during cooling, dry, fan, automatic)
   ① Indication: "☝ ∨ ∧ SET UP" → "LOWER 18˚C ∧"
   ② Select the lower limit value with temperature setting button ∨ ∧. Indication example: "LOWER 24˚C ∨ ∧" (blinking)
   ③ Press (SET) button to fix. Indication for example: "LOWER 24˚C" (Displayed for two seconds)
   After the fixed lower limit value displayed for two seconds, the indication will return to "LOWER LIMIT ▼".
8. Press ON/OFF button to finish.

- It is possible to finish by pressing ON/OFF button on the way, but unfinished change of setting is unavailable.
- During setting, if you press (RESET) button, you return to the previous screen.



The functional setting

●The initial function setting for typical using is performed automatically by the indoor unit connected, when remote controller and indoor unit are connected.
As long as they are used in a typical manner, there will be no need to change the initial settings.
If you would like to change the initial setting marked " ○ ", set your desired setting as for the selected item.
The procedure of functional setting is shown as the following diagram.

[Flow of function setting]

Start : Stop air-conditioner and press "(SET)" and "(MODE)" buttons at the same time for over three seconds.
Finalize : Press "(SET)" button.
Reset : Press "(RESET)" button.
Select : Press ▲ ▼ button.
End : Press ON/OFF button.
It is possible to finish above setting on the way, and unfinished change of setting is unavailable.
" ○ " : Initial settings
" ※ " : Automatic criterion

Record and keep the setting

Consult the technical data etc. for each control details

Stop air-conditioner and press (SET) + (MODE) buttons at the same time for over three seconds.

FUNCTION SET ▼

FUNCTION ▼ (Remote controller function)

	Function	setting		
	01 GRILLE ↑↓ SET	↑↓ INVALID	○	
		50Hz ZONE ONLY		When you use at 50Hz area
		60Hz ZONE ONLY		When you use at 60Hz area
	02 AUTO RUN SET			
		AUTO RUN ON	※	
		AUTO RUN OFF	※	Automatical operation is impossible
	03 TEMP SW			
		VALID	○	
		INVALID		Temperature setting button is not working
	04 MODE SW			
		VALID	○	
		INVALID		Mode button is not working
	05 ON/OFF SW			
		VALID	○	
		INVALID		On/Off button is not working
	06 FAN SPEED SW			
		VALID	※	
		INVALID	※	Fan speed button is not working
	07 LOUVER SW			
		VALID	※	
		INVALID	※	Louver button is not working
	08 TIMER SW			
		VALID	○	
		INVALID		Timer button is not working
※	09 SENSOR SET			
		SENSOR OFF	○	Remote thermistor is not working.
		SENSOR ON		Remote thermistor is working.
		SENSOR +3.0℃		Remote thermistor is working, and to be set for producing +3.0˚C increase in temperature.
		SENSOR +2.0℃		Remote thermistor is working, and to be set for producing +2.0˚C increase in temperature.
		SENSOR +1.0℃		Remote thermistor is working, and to be set for producing +1.0˚C increase in temperature.
		SENSOR -1.0℃		Remote thermistor is working, and to be set for producing -1.0˚C increase in temperature.
		SENSOR -2.0℃		Remote thermistor is working, and to be set for producing -2.0˚C increase in temperature.
		SENSOR -3.0℃		Remote thermistor is working, and to be set for producing -3.0˚C increase in temperature.
	10 AUTO RESTART			
		INVALID	○	
		VALID		
※	11 VENT LINK SET			
		NO VENT	○	
		VENT LINK		In case of Single split series, by connecting ventilation device to CNT of the indoor printed circuit board (in case of VRF series, by connecting it to CND of the indoor printed circuit board), the operation of ventilation device is linked with the operation of indoor unit.
		NO VENT LINK		In case of Single split series, by connecting ventilation device to CNT of the indoor printed circuit board (in case of VRF series, by connecting it to CND of the indoor printed circuit board), you can operate /stop the ventilation device independently by (VENT) button.
	12 TEMP RANGE SET			
		INDN CHANGE	○	If you change the range of set temperature, the indication of set temperature will vary following the control.
		NO INDN CHANGE		If you change the range of set temperature, the indication of set temperature will not vary following the control, and keep the set temperature.
	13 I/U FAN			
		HI-MID-LO	※	Airflow of fan becomes of ※-※-※ or the four speed of ※-※-※-※.
		HI-LO	※	Airflow of fan becomes of ※-※.
		HI-MID		Airflow of fan becomes of ※-※.
		1 FAN SPEED	※	Airflow of fan is fixed at one speed.
	14 POSITION			If you change the remote controller function "14 POSITION", you must change the indoor function "04 POSITION" accordingly.
		4POSITION STOP	○	You can select the louver stop position in the four.
		FREE STOP		The louver can stop at any position.
	15 MODEL TYPE			
		HEAT PUMP	※	
		COOLING ONLY	※	
	16 EXTERNAL CONTROL SET			
		INDIVIDUAL	○	If you input signal into CNT of the indoor printed circuit board from external, the indoor unit will be operated independently according to the input from external.
		FOR ALL UNITS		If you input into CNT of the indoor printed circuit board from external, all units which connect to the same remote controller are operated according to the input from external.
	17 ROOM TEMP INDICATION SET			
		INDICATION OFF	○	
		INDICATION ON		In normal working indication, indoor unit temperature is indicated instead of airflow. (Only the master remote controller can be indicated.)
	18 ※ INDICATION			
		INDICATION ON	○	
		INDICATION OFF		Heating preparation indication should not be indicated.
	19 ℃/℉ SET			
		℃	○	Temperature indication is by degree C
		℉		Temperature indication is by degree F

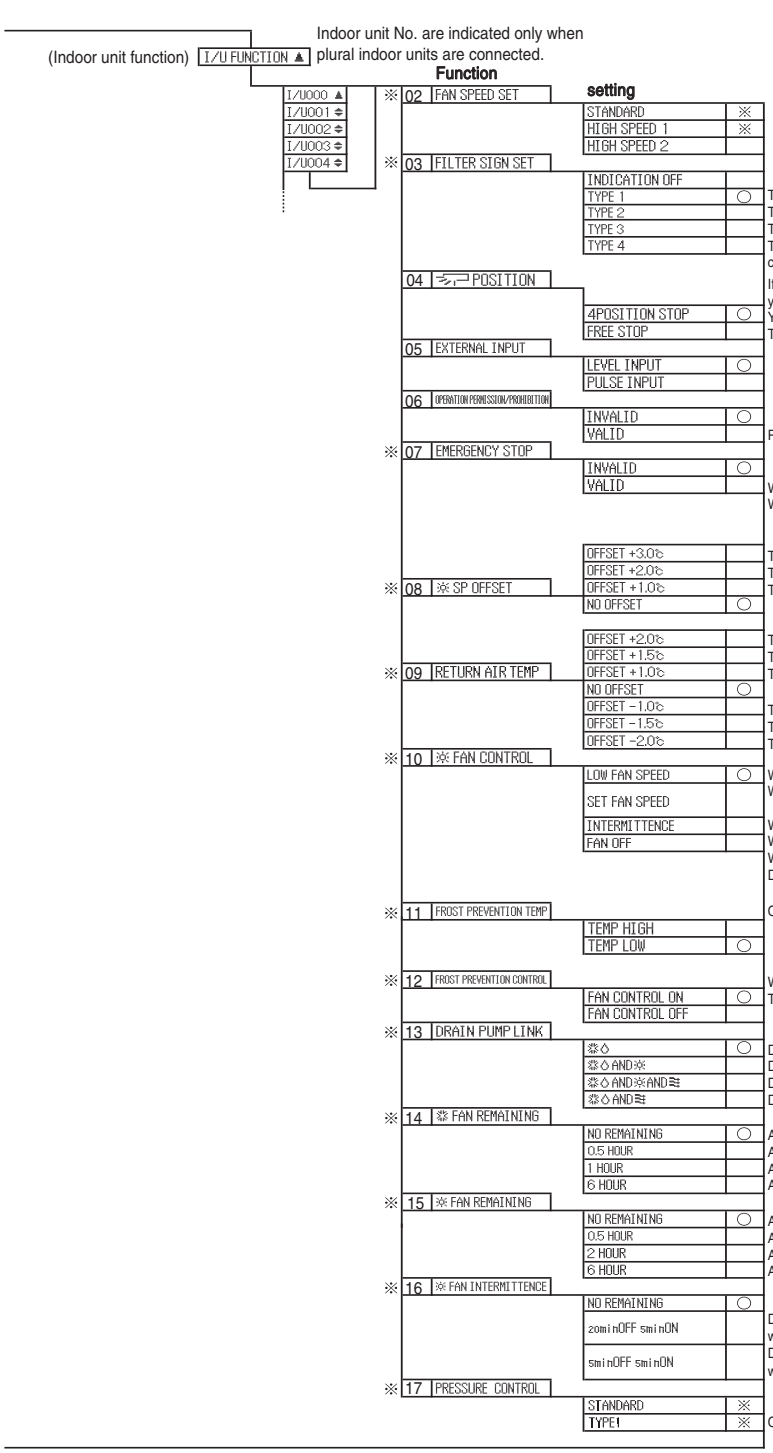
Note (1) ※ The mark cannot use SRK serles.

ON/OFF button (finished)

Note 1: The initial setting marked "※" is decided by connected indoor and outdoor unit, and is automatically defined as following table.

Function No.	Item	Default	Model
Remote controller function02	AUTO RUN SET	AUTO RUN ON	"Auto-RUN" mode selectable indoor unit.
		AUTO RUN OFF	Indoor unit without "Auto-RUN" mode
Remote controller function06	FAN SPEED SW	VALID	Indoor unit with two or three step of air flow setting
		INVALID	Indoor unit with only one of air flow setting
Remote controller function07	LOUVER SW	VALID	Indoor unit with automatically swing louver
		INVALID	Indoor unit without automatically swing louver
Remote controller function13	I/U FAN	HI-MID-LO	Indoor unit with three step of air flow setting
		HI-LO	Indoor unit with two step of air flow setting
		HI-MID	
		1 FAN SPEED	Indoor unit with only one of air flow setting
Remote controller function15	MODEL TYPE	HEAT PUMP	Heat pump unit
		COOLING ONLY	Exclusive cooling unit

Note 3: As for plural indoor unit, set indoor functions to each master and slave indoor unit.
But only master indoor unit is received the setting change of indoor unit function "05 EXTERNAL INPUT" and "06 PERMISSION / PROHIBISHION".



Note2: Fan setting of "HIGH SPEED"

Fan tap		Indoor unit air flow setting			
		※■■■ - ※■■ - ※■ - ※□	※■■ - ※■ - ※□	※■■ - ※□	※■■ - ※■□
FAN SPEED SET	STANDARD	PHi - Hi - Me - Lo	Hi - Me - Lo	Hi - Lo	Hi - Me
	HIGH SPEED1, 2	PHi - PHi - Hi - Me	PHi - Hi - Me	PHi - Me	PHi - Hi

Initial function setting of some indoor unit is "HIGH SPEED".
4 speed is not able to be set with wireless remote controller or simple remote controller (RCH-H3).

The filter sign is indicated after running for 180 hours.
The filter sign is indicated after running for 600 hours.
The filter sign is indicated after running for 1000 hours.
The filter sign is indicated after running for 1000 hours, then the indoor unit will be stopped by compulsion after 24 hours.

If you change the indoor function "04 POSITION", you must change the remote controller function "14 POSITION" accordingly.
You can select the louver stop position in the four.
The louver can stop at any position.

Permission/prohibition control of operation will be valid.

With the VRF series, it is used to stop all indoor units connected with the same outdoor unit immediately.
When stop signal is inputed from remote on-off terminal "CNT-6", all indoor units are stopped immediately.

To be reset for producing +3.0˚C increase in temperature during heating.
To be reset for producing +2.0˚C increase in temperature during heating.
To be reset for producing +1.0˚C increase in temperature during heating.

To be reset producing +2.0˚C increase in return air temperature of indoor unit.
To be reset producing +1.5˚C increase in return air temperature of indoor unit.
To be reset producing +1.0˚C increase in return air temperature of indoor unit.

To be reset producing -1.0˚C increase in return air temperature of indoor unit.
To be reset producing -1.5˚C increase in return air temperature of indoor unit.
To be reset producing -2.0˚C increase in return air temperature of indoor unit.

When heating thermostat is OFF, to be operated with low fan speed. (or with ultre low fan speed in case of some models)
When heating thermostat is OFF, to be operated with set fan speed.

When heating thermostat is OFF, fan speed is operated intermittently.
When heating thermostat is OFF, the fan is stopped.
When the remote thermistor is working, "FAN OFF" is set automatically.
Do not set "FAN OFF" when the indoor unit's thermistor is working.

Change of indoor heat exchanger temperature to start frost prevention control.

Working only with the Single split series.
To control frost prevention, the indoor fan tap is raised.

Drain pump is run during cooling and dry.
Drain pump is run during cooling, dry and heating.
Drain pump is run during cooling, dry, heating and fan.
Drain pump is run during cooling, dry and fan.

After cooling is stopped, the fan does not perform extra operation.
After cooling is stopped, the fan perform extra operation for half an hour.
After cooling is stopped, the fan perform extra operation for an hour.
After cooling is stopped, the fan perform extra operation for six hours.

After heating is stopped or heating thermostat is OFF, the fan does not perform extra operation.
After heating is stopped or heating thermostat is OFF,the fan perform extra operation for half an hour.
After heating is stopped or heating thermostat is OFF,the fan perform extra operation for two hours.
After heating is stopped or heating thermostat is OFF, the fan perform extra operation for six hours.

During heating is stopped or heating thermostat is OFF, the fan perform intermittent operation for five minutes with low fan speed after twenty minutes' OFF.
During heating is stopped or heating thermostat is OFF, the fan perform intermittent operation for five minutes with low fan speed after five minutes' OFF.

Connected "OA Processing" type indoor unit, and is automatically defined.

10.3 Installation of outdoor unit

PSB012D909G K

(1) Model FDC71VNX

Inverter driven single split PAC
71V
Designed for R410A refrigerant

◎This installation manual deals with outdoor units and general installation specifications only. For indoor units, refer to the respective installation manuals supplied with the units.
◎When install the unit, be sure to check whether the selection of installation place, power supply specifications, usage limitation (piping length, height differences between indoor and outdoor units, power supply voltage and etc.) and installation spaces

SAFETY PRECAUTIONS

- We recommend you to read this "SAFETY PRECAUTIONS" carefully before the installation work in order to gain full advantage of the functions of the unit and to avoid malfunction due to mishandling.
- The precautions described below are divided into ⚠WARNING and ⚠CAUTION. The matters with possibilities leading to serious consequences such as death or serious personal injury due to erroneous handling are listed in the ⚠WARNING and the matters with possibilities leading to personal injury or damage of the unit due to erroneous handling including probability leading to serious consequences in some cases are listed in ⚠CAUTION. **These are very important precautions for safety. Be sure to observe all of them without fail.**
- The meaning of "Marks" used here are as shown below.

⃠	Never do it under any circumstance.	❗ ⏚	Always do it according to the instruction

- Be sure to confirm no anomaly on the equipment by commissioning after completed installation and explain the operating methods as well as the maintenance methods of this equipment to the user according to the owner's manual.
- Keep the installation manual together with owner's manual at a place where any user can read at any time. Moreover if necessary, ask to hand them to a new user

Check before installation work

- Model name and power source
- Refrigerant piping length
- Piping, wiring and miscellaneous small parts
- Indoor unit installation manual

⚠ WARNING

❗
- **Installation must be carried out by the qualified installer.**
  If you install the system by yourself, it may cause serious trouble such as water leaks, electric shocks, fire and personal injury, as a result of a system malfunction.
- **Install the system in full accordance with the instruction manual.**
  Incorrect installation may cause bursts, personal injury, water leaks, electric shocks and fire.
- **Use the original accessories and the specified components for installation.**
  If parts other than those prescribed by us are used, It may cause fall of the unit, water leaks, electric shocks, fire, refrigerant leak, substandard performance, control failure and personal injury.
- **When installing in small rooms, take prevention measures not to exceed the density limit of refrigerant in the event of leakage accordance with ISO5149.**
  Consult the expert about prevention measures. If the density of refrigerant exceeds the limit in the event of leakage, lack of oxygen can occur, which can cause serious accidents.
- **Ventilate the working area well in the event of refrigerant leakage during installation.**
  If the refrigerant comes into contact with naked flames, poisonous gas is produced.
- **After completed installation, check that no refrigerant leaks from the system.**
  If refrigerant leaks into the room and comes into contact with an oven or other hot surface, poisonous gas is produced.
- **Hang up the unit at the specified points with ropes which can support the weight in lifting for portage. And to avoid jolting out of alignment, be sure to hang up the unit at 4-point support.**
  An improper manner of portage such as 3-point support can cause death or serious personal injury due to falling of the unit
- **Install the unit in a location with good support.**
  Unsuitable installation locations can cause the unit to fall and cause material damage and personal injury.
- **Ensure the unit is stable when installed, so that it can withstand earthquakes and strong winds.**
  Unsuitable installation locations can cause the unit to fall and cause material damage and personal injury.
- **The electrical installation must be carried out by the qualified electrician in accordance with "the norm for electrical work" and "national wiring regulation", and the system must be connected to the dedicated circuit.**
  Power supply with insufficient capacity and incorrect function done by improper work can cause electric shocks and fire,
- **Be sure to shut off the power before starting electrical work.**
  Failure to shut off the power can cause electric shocks, unit failure or incorrect function of equipment.
- **Be sure to use the cables conformed to safety standard and cable ampacity for power distribution work.**
  Unconformable cables can cause electric leak, anomalous heat production or fire.
- **Use the prescribed cables for electrical connection, tighten the cables securely in terminal block and relieve the cables correctly to prevent overloading the terminal blocks.**
  Loose connections or cable mountings can cause anomalous heat production or fire.
- **Arrange the wiring in the control box so that it cannot be pushed up further into the box. Install the service panel correctly.**
  Incorrect installation may result in overheating and fire.

❗
- **Do not perform brazing work in the airtight room**
  It can cause lack of oxygen.
- **Use the prescribed pipes, flare nuts and tools for R410A.**
  Using existing parts (for R22 or R407C) can cause the unit failure and serious accidents due to burst of the refrigerant circuit.
- **Tighten the flare nut by using double spanners and torque wrench according to prescribed method. Be sure not to tighten the flare nut too much.**
  Loose flare connection or damage on the flare part by tightening with excess torque can cause burst or refrigerant leaks which may result in lack of oxygen.
- **Do not open the service valves for liquid line and gas line until completed refrigerant piping work, air tightness test and evacuation.**
  If the compressor is operated in state of opening service valves before completed connection of refrigerant piping work, you may incur frost bite or injury from an abrupt refrigerant outflow and air can be sucked into refrigerant circuit, which can cause burst or personal injury due to anomalously high pressure in the refrigerant
- **Only use prescribed optional parts. The installation must be carried out by the qualified installer.**
  If you install the system by yourself, it can cause serious trouble such as water leaks, electric shocks, fire.
- **Do not perform any change of protective device itself or its setup condition**
  The forced operation by short-circuiting protective device of pressure switch and temperature controller or the use of non specified component can cause fire or burst.
- **Be sure to switch off the power supply in the event of installation, inspection or servicing.**
  If the power supply is not shut off, there is a risk of electric shocks, unit failure or personal injury due to the unexpected start of fan.
- **Consult the dealer or an expert regarding removal of the unit.**
  Incorrect installation can cause water leaks, electric shocks or fire.
- **Stop the compressor before closing valve and disconnecting refrigerant pipes in case of pump down operation.**
  If disconnecting refrigerant pipes in state of opening service valves before compressor stopping, you may incur frost bite or injury from an abrupt refrigerant outflow and air can be sucked, which can cause burst or personal injury due to anomalously high pressure in the refrigerant circuit

⃠
- **Ensure that no air enters in the refrigerant circuit when the unit is installed and removed.**
  If air enters in the refrigerant circuit, the pressure in the refrigerant circuit becomes too high, which can cause burst and personal injury.
- **Do not run the unit with removed panels or protections**
  Touching rotating equipments, hot surfaces or high voltage parts can cause personal injury due to entrapment, burn or electric shocks.
- **Be sure to fix up the service panels.**
  Incorrect fixing can cause electric shocks or fire due to intrusion of dust or water.
- **Do not perform any repairs or modifications by yourself. Consult the dealer if the unit requires repair.**
  If you repair or modify the unit, it can cause water leaks, electric shocks or fire.

⚠ CAUTION

- **Carry out the electrical work for ground lead with care**
  Do not connect the ground lead to the gas line, water line, lightning conductor or telephone line's ground lead. Incorrect grounding can cause unit faults such as electric shocks due to short-circuiting. Never connect the grounding wire to a gas pipe because if gas leaks,it could cause explosion or ignition.
- **Use the circuit breaker for all pole with correct capacity.**
  Using the incorrect circuit breaker, it can cause the unit malfunction and fire.
- **Install isolator or disconnect switch on the power supply wiring in accordance with the local codes and regulations.**
  The isolator should be locked in accordanced with EN60204-1.
- **Take care when carrying the unit by hand.**
  If the unit weights more than 20kg, it must be carried by two or more persons. Do not carry by the plastic straps, always use the carry handle when carrying the unit by hand. Use gloves to minimize the risk of cuts by the aluminum fins.
- **Dispose of any packing materials correctly.**
  Any remaining packing materials can cause personal injury as it contains nails and wood. And to avoid danger of suffocation, be sure to keep the plastic wrapper away from children and to dispose after tear it up.
- **Pay attention not to damage the drain pan by weld spatter when welding work is done near the indoor unit.**
  If weld spatter entered into the indoor unit during welding work, it can cause pin-hole in drain pan and result in water leakage. To prevent such damage, keep the indoor unit in its packing or cover it.
- **Be sure to insulate the refrigerant pipes so as not to condense the ambient air moisture on them.**
  Insufficient insulation can cause condensation, which can lead to moisture damage on the ceiling, floor, furniture and any other valuables.
- **Be sure to perform air tightness test by pressurizing with nitrogen gas after completed refrigerant piping work.**
  If the density of refrigerant exceeds the limit in the event of refrigerant leakage in the small room, lack of oxygen can occur, which can cause serious accidents.
- **Perform installation work properly according to this installation manual.**
  Improper installation can cause abnormal vibrations or increased noise generation.
- **Earth leakage breaker must be installed**
  If the earth leakage breaker is not installed, it can cause fire or electric shocks.
- **Do not use any materials other than a fuse with the correct rating in the location where fuses are to be used.**
  Connecting the circuit with copper wire or other metal thread can cause unit failure and fire.
- **Do not install the unit near the location where leakage of combustible gases can occur.**
  If leaked gases accumulate around the unit, it can cause fire.
- **Do not install the unit where corrosive gas (such as sulfurous acid gas etc.) or combustible gas (such as thinner and petroleum gases) can accumulate or collect, or where volatile combustible substances are handled.**
  Corrosive gas can cause corrosion of heat exchanger, breakage of plastic parts and etc. And combustible gas can cause fire.
- **Secure a space for installation, inspection and maintenance specified in the manual.**
  Insufficient space can result in accident such as personal injury due to falling from the installation place..
- **When the outdoor unit is installed on a roof or a high place, provide permanent ladders and handrails along the access route and fences and handrails around the outdoor unit.**
  If safety facilities are not provided, it can cause personal injury due to falling from the installation place.
- **Do not install nor use the system close to the equipment that generates electromagnetic fields or high frequency harmonics**
  Equipment such as inverters, standby generators, medical high frequency equipments and telecommunication equipments can affect the system, and cause malfunctions and breakdowns. The system can also affect medical equipment and telecommunication equipment, and obstruct its function or cause jamming.
- **Do not install the outdoor unit in a location where insects and small animals can inhabit.**
  Insects and small animals can enter the electric parts and cause damage or fire. Instruct the user to keep the surroundings clean.
- **Do not use the base flame for outdoor unit which is corroded or damaged due to long periods of operation.**
  Using an old and damage base flame can cause the unit falling down and cause personal injury.
- **Do not install the unit in the locations listed below**
  - Locations where carbon fiber, metal powder or any powder is floating.
  - Locations where any substances that can affect the unit such as sulphide gas, chloride gas, acid and alkaline can occur.
  - Vehicles and ships
  - Locations where cosmetic or special sprays are often used.
  - Locations with direct exposure of oil mist and steam such as kitchen and machine plant.
  - Locations where any machines which generate high frequency harmonics are used.
  - Locations with salty atmospheres such as coastlines
  - Locations with heavy snow (If installed, be sure to provide base flame and snow hood mentioned in the manual)
  - Locations where the unit is exposed to chimney smoke
  - Locations at high altitude (more than 1000m high)
  - Locations with ammonic atmospheres
  - Locations where heat radiation from other heat source can affect the unit
  - Locations without good air circulation.
  - Locations with any obstacles which can prevent inlet and outlet air of the unit
  - Locations where short circuit of air can occur (in case of multiple units installation)
  - Locations where strong air blows against the air outlet of outdoor unit

  It can cause remarkable decrease in performance, corrosion and damage of components, malfunction and fire.
- **Do not install the outdoor unit in the locations listed below.**
  - Locations where discharged hot air or operating sound of the outdoor unit can bother neighborhood.
  - Locations where outlet air of the outdoor unit blows directly to an animal or plants. The outlet air can affect adversely to the plant etc.
  - Locations where vibratian can be amplified and transmitted due to insufficient strength of structure.
  - Locations where vibration and operation sound generated by the outdoor unit can affect seriously. (on the wall or at the place near bed room)
  - Locations where an equipment affected by high harmonics is placed. (TV set or radio receiver is placed within 5m)
  - Locations where drainage cannot run off safely.

  It can affect surrounding environment and cause a claim
- **Do not use the unit for special purposes such as storing foods, cooling precision instruments and preservation of animals, plants or art.**
  It can cause the damage of the items.
- **Do not touch any buttons with wet hands**
  It can cause electric shocks
- **Do not touch any refrigerant pipes with your hands when the system is in operation.**
  During operation the refrigerant pipes become extremely hot or extremely cold depending the operating condition, and it can cause burn injury or frost injury.
- **Do not clean up the unit with water**
  It can cause electric shocks
- **Do not operate the outdoor unit with any article placed on it.**
  You may incur property damage or personal injure from a fall of the article.
- **Do not step onto the outdoor unit.**
  You may incur injury from a drop or fall.

Notabilia as a unit designed for R410A

- Do not use any refrigerant other than R410A. R410A will rise to pressure about 1.6 times higher than that of a conventional refrigerant. A cylinder containing R410A has a pink indication mark on the top.
- A unit designed for R410A has adopted a different size indoor unit operation valve charge port and a different size check joint provided in the unit to prevent the charging of a wrong refrigerant by mistake. The processed dimension of the flared part of a refrigerant pipe and a flare nut's parallel side measurement have also been altered to raise strength against pressure. Accordingly, you are required to arrange dedicated R410A tools listed in the table on the right before installing or servicing this unit.
- Do not use a charge cylinder. The use of a charge cylinder will cause the refrigerant composition to change, which results in performance degradation.
- In charging refrigerant, always take it out from a cylinder in the liquid phase.
- All indoor units must be models designed exclusively for R410A. Check connectable indoor unit models in a catalog, etc. (A wrong indoor unit, if connected into the system, will impair proper system operation)

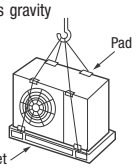
	Dedicated R410A tools
a)	Gauge manifold
b)	Charge hose
c)	Electronic scale for refrigerant charging
d)	Torque wrench
e)	Flare tool
f)	Protrusion control copper pipe gauge
g)	Vacuum pump adapter
h)	Gas leak detector

1. HAULAGE AND INSTALLATION (Take particular care in carrying in or moving the unit, and always perform such an operation with two or more persons.)

⚠CAUTION When a unit is hoisted with slings for haulage, take into consideration the offset of its gravity center position. If not properly balanced, the unit can be thrown off-balance and fall.

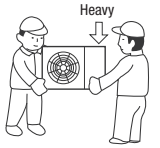
1) Delivery

- Deliver the unit as close as possible to the installation site before removing it from the packaging.
- When some compelling reason necessitates the unpacking of the unit before it is carried in, use nylon slings or protective wood pieces so as not to damage the unit by ropes lifting it.



2) Portage

- The right hand side of the unit as viewed from the front (diffuser side) is heavier. A person carrying the right hand side must take heed of this fact. A person carrying the left hand side must hold with his right hand the handle provided on the front panel of the unit and with his left hand the corner column section.



3) Selection of installation location for the outdoor unit

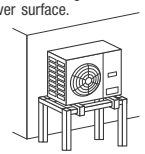
Be sure to select a suitable installation place in consideration of following conditions.

- ○ A place where it is horizontal, stable and can endure the unit weight and will not allow vibration transmittance of the unit.
- ○ A place where it can be free from possibility of bothering neighbors due to noise or exhaust air from the unit
- ○ A place where the unit is not exposed to oil splashes.
- ○ A place where it can be free from danger of flammable gas leakage.
- ○ A place where drain water can be disposed without any trouble.
- ○ A place where the unit will not be affected by heat radiation from other heat source.
- ○ A place where snow will not accumulate.
- ○ A place where the unit can be kept away 5m or more from TV set and/or radio receiver in order to avoid any radio or TV interference.
- ○ A place where good air circulation can be secured, and enough service space can be secured for maintenance and service of the unit safely.
- ○ A place where the unit will not be affected by electromagnetic waves and/or high-harmonic waves generated by other equipment.
- ○ A place where chemical substances like sulfuric gas, chloric gas, acid and alkali (including ammonia), which can harm the unit, will not be generated and not remain.
- ○ A place where strong wind will not blow against the outlet air blow of the unit.

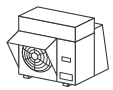
4) Caution about selection of installation location

(1) If the unit is installed in the area where the snow will accumulate, following measures are required.
The bottom plate of unit and intake, outlet may be blocked by snow.

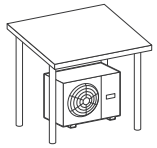
1. Install the unit on the base so that the bottom is higher than snow cover surface.



2. Provide a snow hood to the outdoor unit on site.
Regarding outline of a snow hood, refer to our technical manual.



3. Install the unit under eaves or provide the roof on site.

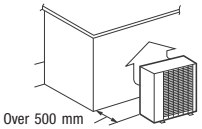


Since drain water generated by defrost control may freeze, following measures are required.

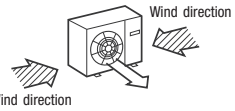
- ● Don't execute drain piping work by using a drain elbow and drain grommets (optional parts). [Refer to Drain piping work.]
- ● Recommend setting Defrost Control (SW3-1) and Snow Guard Fan Control (SW3-2). [Refer to Setting SW3-1, SW3-2.]

(2) If the unit can be affected by strong wind, following measures are required.
Strong wind can cause damage of fan (fan motor), or can cause performance degradation, or can trigger anomalous stop of the unit due to rising of high pressure.

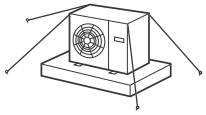
1. Install the outlet air blow side of the unit to face a wall of building, or provide a fence or a windbreak screen.



2. Install the outlet air blow side of the unit in a position perpendicular to the direction of wind.



3. The unit should be installed on the stable and level foundation. If the foundation is not level, tie down the unit with wires.

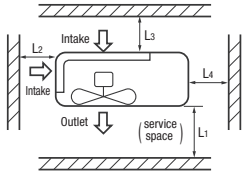


5) Installation space

- ● Walls surrounding the unit in the four sides are not acceptable.
- ● There must be a 1-meter or larger space in the above.
- ● When more than one unit are installed side by side, provide a 250mm or wider interval between them as a service space. In order to facilitate servicing of controllers, please provide a sufficient space between units so that their top plates can be removed easily.
- ● Where a danger of short-circuiting exists, install guide louvers.
- ● When more than one unit are installed, provide sufficient intake space consciously so that short-circuiting may not occur.
- ● Where piling snow can bury the outdoor unit, provide proper snow guards.

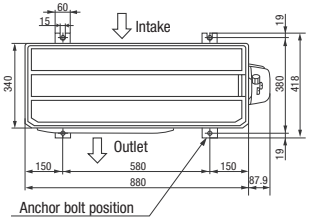
(mm)

Size \ Example installation	71V		
	Ⅰ	Ⅱ	Ⅲ
L1	Open	Open	500
L2	300	250	Open
L3	100	150	100
L4	250	250	250

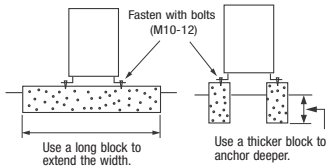


6) Installation

① Anchor bolt fixed position



② Notabilia for installation



- ● In installing the unit, fix the unit's legs with bolts specified on the above.
- ● The protrusion of an anchor bolt on the front side must be kept within 15 mm.
- ● Securely install the unit so that it does not fall over during earthquakes or strong winds, etc.
- ● Refer to the above illustrations for information regarding concrete foundations.
- ● Install the unit in a level area. (With a gradient of 5 mm or less.)
  Improper installation can result in a compressor failure, broken piping within the unit and abnormal noise generation.

7) To run the unit for a cooling operation, when the outdoor temperature is –5°C or lower.

- ● When the outdoor air temperature is -5°C or lower, provide a snow hood to the outdoor unit on site. So that strong wind will not blow against the outdoor heat exchanger directly. Regarding outline of a snow hood, refer to our technical manual.

2. REFRIGERANT PIPING WORK

1) Restrictions on unit installation and use

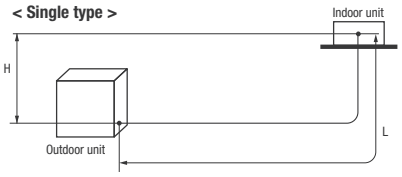
- ● Check the following points in light of the indoor unit specifications and the installation site.
- ● Observe the following restrictions on unit installation and use. Improper installation can result in a compressor failure or performance degradation.

Restrictions		Dimensional restrictions	Marks appearing in the drawing on the right	
			Single type	Twin type
One-way pipe length of refrigerant piping	Model 71V	50m or less	L	L1+L1+L2
Main pipe length			L	L
One-way pipe length after the first branching point		20m or less	—	L1, L2
Difference of pipe length after the first branching point		10m or less	—	L1—L2
Elevation difference between indoor and outdoor units	When the outdoor unit is positioned higher,	30m or less	H	H
	When the outdoor unit is positioned lower,	15m or less	H	H
Elevation difference between indoor units		0.5m or less	—	h

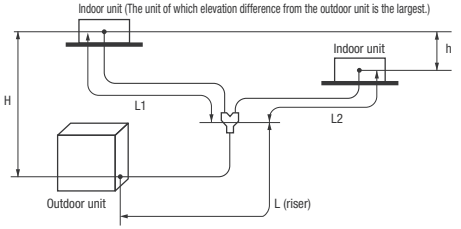
⚠CAUTION

- ● The use restrictions appearing in the table above are applicable to the standard pipe size combinations shown in the table below. Where an existing pipe system is utilized, different one-way pipe length restrictions should apply depending on its pipe size. For more information, please see " 6. UTILIZATION OF EXISTING PIPING."

< Single type >



< Twin type >



2) Determination of pipe size

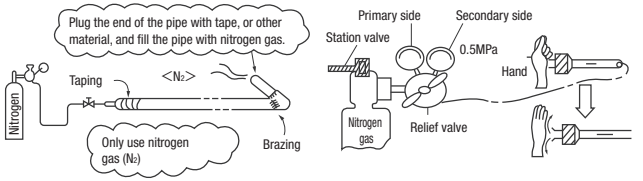
● Determine refrigerant pipe size pursuant to the following guidelines based on the indoor unit specifications.

		Model 71V	
		Gas pipe	Liquid pipe
Outdoor unit connected		φ15.88 Flare	φ9.52 Flare
Refrigerant piping (branch pipeL)		φ15.88	φ9.52
In the case of a single type	Indoor unit connected	φ15.88	φ9.52
	Capacity of indoor unit	Model 71V	
In the case of a twin type	Branching pipe set	DIS-WA1	
	Refrigerant piping (branch pipe L1,L2)	φ12.7	φ9.52
	Indoor unit connected	φ12.7	φ6.35
	Capacity of indoor unit	Model 40V×2	

About brazing

Brazing must be performed under a nitrogen gas flow.

Without nitrogen gas, a large quantity of foreign matters (oxidized film) are created, causing a critical failure from capillary tube or expansion valve clogging.



⚠CAUTION

- When the 40V model is connected as an indoor unit, always use a φ9.52 liquid pipe for the branch (branching pipe – indoor unit) and a different diameter joint supplied with the branching pipe set for connection with the indoor unit (φ6.35 on the liquid pipe side).
  If a φ6.35 pipe is used for connection with a branching pipe, a refrigerant distribution disorder may occur, causing one of the indoor units to fall short of the rated capacity.
- A riser pipe must be a part of the main. A branching pipe set should be installed horizontally at a point as close to an indoor unit as possible.
  A branching part must be dressed with a heat-insulation material supplied as an accessory.
- For the details of installation work required at and near a branching area, see the installation manual supplied with your branching pipe set.

3) Refrigerant pipe wall thickness and material

● Select refrigerant pipes of the table shown on the right wall thickness and material as specified for each pipe size.

Pipe diameter [mm]	6.35	9.52	12.7	15.88
Minimum pipe wall thickness [mm]	0.8	0.8	0.8	1.0
Pipe material*	O-type pipe	O-type pipe	O-type pipe	O-type pipe

NOTE ● Select pipes having a wall thickness larger than the specified minimum pipe thickness.

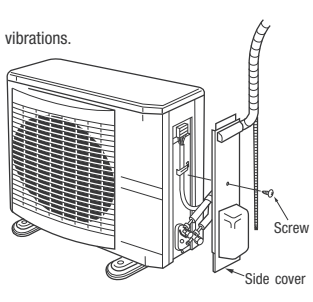
*Phosphorus deoxidized seamless copper pipe C1220T, JIS H3300

4) On-site piping work

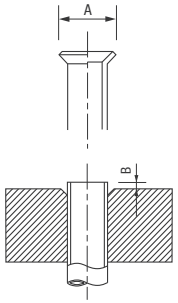
⚠IMPORTANT

- Take care so that installed pipes may not touch components within a unit.
  If touching with an internal component, it will generate abnormal sounds and/or vibrations.

How to remove the side cover Please remove the screw of a side cover and remove to the front.



- Carry out the on site piping work with the operation valve fully closed.
- Give sufficient protection to a pipe end (compressed and blazed, or with an adhesive tape) so that water or foreign matters may not enter the piping.
- Bend a pipe to a radius as large as practical.(R100～R150) Do not bend a pipe repeatedly to correct its form.
- Flare connection is used between the unit and refrigerant pipe. Flare a pipe after engaging a flare nut onto it. Flare dimensions for R410A are different from those for conventional R407C. Although we recommend the use of flaring tools designed specifically for R410A, conventional flaring tools can also be used by adjusting the measurement of protrusion B with a protrusion control gauge.
- The pipe should be anchored every 1.5m or less to isolate the vibration.
- Tighten a flare joint securely with a double spanner.



Flared pipe end: A (mm)

Copper pipe outer diameter	A 0 −0.4
φ6.35	9.1
φ9.52	13.2
φ12.7	16.6
φ15.88	19.7

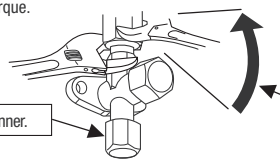
Copper pipe protrusion for flaring: B (mm)

Copper pipe outer diameter	In the case of a rigid (clutch) type	
	With an R410A tool	With a conventional tool
φ6.35	0～0.5	0.7～1.3
φ9.52		
φ12.7		
φ15.88		

⚠ CAUTION **Do not apply force beyond proper fastening torque in tightening the flare nut.**

Fix both liquid and gas service valves at the valve main bodies as illustrated on the right, and then fasten them, applying appropriate fastening torque.

Operation valve size (mm)	Tightening torque (N-m)	Tightening angle (°)	Recommended length of a tool handle (mm)
φ6.35 (1/4")	14～18	45～60	150
φ9.52 (3/8")	34～42	30～45	200
φ12.7 (1/2")	49～61	30～45	250
φ15.88(5/8")	68～82	15～20	300



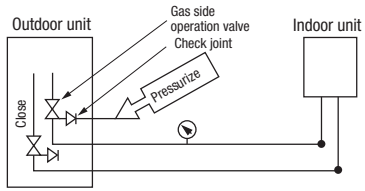
Do not hold the valve cap area with a spanner.

Use a torque wrench. If a torque wrench is not available, fasten the flare nut manually first and then tighten it further, using the left table as a guide.

5) Air tightness test

① Although outdoor and indoor units themselves have been tested for air tightness at the factory, check the connecting pipes after the installation work for air tightness from the operation valve's check joint equipped on the outdoor unit side. While conducting a test, keep the operation valve shut all the time.
a) Raise the pressure to 0.5 MPa, and then stop. Leave it for five minutes to see if the pressure drops.
b) Then raise the pressure to 1.5 MPa, and stop. Leave it for five more minutes to see if the pressure drops.
c) Then raise the pressure to the specified level (4.15 MPa), and record the ambient temperature and the pressure.
d) If no pressure drop is observed with an installation pressurized to the specified level and left for about one day, it is acceptable. When the ambient Temperature fall 1°C, the pressure also fall approximately 0.01 MPa. The pressure, if changed, should be compensated for.
e) If a pressure drop is observed in checking e) and a) – d), a leak exists somewhere. Find a leak by applying bubble test liquid to welded parts and flare joints and repair it. After repair, conduct an air-tightness test again.

② In conducting an air-tightness test, use nitrogen gas and pressurize the system with nitrogen gas from the gas side. Do not use a medium other than nitrogen gas under any circumstances.



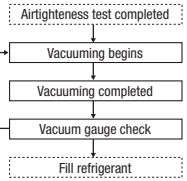
6) Evacuation

<Work flow>

When the system has remaining moisture inside or a leaky point, the vacuum gauge indicator will rise.
Check the system for a leaky point and then draw air to create a vacuum again.

Run the vacuum pump for at least one hour after the vacuum gauge shows -101kPa or lower. (-755mmHg or lower)

Confirm that the vacuum gauge indicator does not rise even if the system is left for one hour or more.



Pay attention to the following points in addition to the above for the R410A and compatible machines.

○To prevent a different oil from entering, assign dedicated tools, etc. to each refrigerant type. Under no circumstances must a gauge manifold and a charge hose in particular be shared with other refrigerant types (R22, R407C, etc.).
○Use a counterflow prevention adapter to prevent vacuum pump oil from entering the refrigerant system.

7) Additional refrigerant charge

(1) Calculate a required refrigerant charge volume from the following table.

	Standard refrigerant charge volume (kg)	Pipe length for standard refrigerant charge volume (m)	Additional charge volume (kg) per meter of refrigerant piping (liquid pipe ϕ6.35)	Refrigerant volume charged for shipment at the factory (kg)	Installation's pipe length (m) covered without additional refrigerant charge
Model 71V	2.35	20	0.06	2.95	30

● This unit contains factory charged refrigerant covering 30m of refrigerant piping and additional refrigerant charge on the installation site is not required for an installation with up to 30m refrigerant piping. When refrigerant piping exceeds 30m, additionally charge an amount calculated from the pipe length and the above table for the portion in excess of 30m.
● When refrigerant piping is shorter than 3m, reduce refrigerant by 1kg from the factory charged volume and adjust to 1.95kg.
● If an existing pipe system is used, a required refrigerant charge volume will vary depending on the liquid pipe size. For further information, please see "6. UTILIZATION OF EXISTING PIPING."

Formula to calculate the volume of additional refrigerant required

Additional charge volume (kg) = { Main pipe length (m) – Length covered without additional charge 30 (m) } x 0.06 (kg/m) + Total length of branch pipes (m) x 0.06 (kg/m)

*When an additional charge volume calculation result is negative, it is not necessary to charge refrigerant additionally.

● For an installation measuring 3m or longer, but not more than 20m, in pipe length, please charge the standard refrigerant charge volume, when you recharge refrigerant after servicing etc.
● When refrigerant piping is shorter than 3m, recharge 1.95kg of refrigerant.
Ex.) For a 10m installation, charge 2.35 kg of refrigerant.
For a 25m installation, charge "2.35 + (25-20) x 0.06 = 2.65 kg."

(2) Charging refrigerant

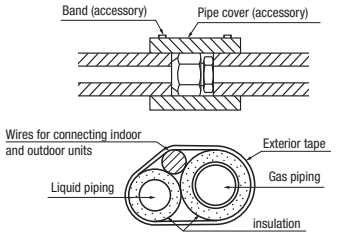
● Since R410A refrigerant must be charged in the liquid phase, you should charge it, keeping the container cylinder upside down or using a refrigerant cylinder equipped with a siphon tube.
● Charge refrigerant always from the liquid side service port with the operation valve shut. When you find it difficult to charge a required amount, fully open the outdoor unit valves on both liquid and gas sides and charge refrigerant from the gas (suction) side service port, while running the unit in the cooling mode. In doing so, care must be taken so that refrigerant may be discharged from the cylinder in the liquid phase all the time. When the cylinder valve is throttled down or a dedicated conversion tool to change liquid-phase refrigerant into mist is used to protect the compressor, however, adjust charge conditions so that refrigerant will gasify upon entering the unit.
● In charging refrigerant, always charge a calculated volume by using a scale to measure the charge volume.
● When refrigerant is charged with the unit being run, complete a charge operation within 30 minutes. Running the unit with an insufficient quantity of refrigerant for a long time can cause a compressor failure.

NOTE Put down the refrigerant volume calculated from the pipe length onto the caution label attached on the back side of the service panel.

8) Heating and condensation prevention

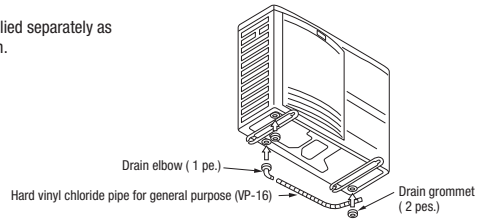
(1) Dress refrigerant pipes (both gas and liquid pipes) for heat insulation and prevention of dew condensation.
- Improper heat insulation/anti-dew dressing can result in a water leak or dripping causing damage to household effects, etc.

(2) Use a heat insulating material that can withstand 120℃ or a higher temperature. Poor heat insulating capacity can cause heat insulation problems or cable deterioration.
- All gas pipes must be securely heat insulated in order to prevent damage from dripping water that comes from the condensation formed on them during a cooling operation or personal injury from burns because their surface can reach quite a high temperature due to discharged gas flowing inside during a heating operation.
- Wrap indoor units' flare joints with heat insulating parts (pipe cover) for heat insulation (both gas and liquid pipes).
- Give heat insulation to both gas and liquid side pipes. Bundle a heat insulating material and a pipe tightly together so that no gaps may be left between them and wrap them together with a connecting cable by a dressing tape.
- Although it is verified in a test that this air conditioning unit shows satisfactory performance under JIS condensation test conditions, **both gas and liquid pipes need to be dressed with 20 mm or thicker heat insulation materials above the ceiling where relative humidity exceeds 70%.**



3. DRAIN PIPING WORK

● Execute drain piping by using a drain elbow and drain grommets supplied separately as optional parts, where water drained from the outdoor unit is a problem.



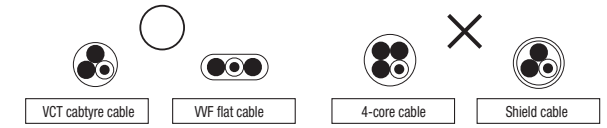
○ There are 3 drain holes provided on the bottom plate of an outdoor unit to discharge condensed water.
○ When condensed water needs to be led to a drain, etc., install the unit on a flat base (supplied separately as an optional part) or concrete blocks.
○ Connect a drain elbow as shown in the illustration and close the other two drain holes with grommets.

4. ELECTRICAL WIRING WORK For details of electrical cabling, refer to the indoor unit installation manual.

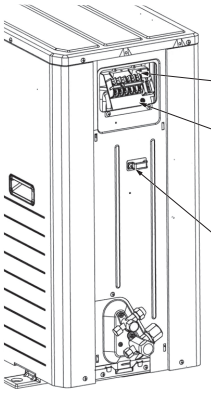
Electrical installation work must be performed by an electrical installation service provider qualified by a power provider of the country.
Electrical installation work must be executed according to the technical standards and other regulations applicable to electrical installations in the country.

- Do not use any supply cord lighter than one specified in parentheses for each type below.
  - braided cord (code designation 60245 IEC 51),
  - ordinary tough rubber sheathed cord (code designation 60245 IEC 53)
  - flat twin tinsel cord (code designation 60227 IEC 41);

  Do not use anything lighter than polychloroprene sheathed flexible cord (code designation 60245 IEC57) for supply cords of parts of appliances for outdoor use.
- Ground the unit. Do not connect the grounding wire to a gas pipe, water pipe, lightning rod or telephone grounding wire.
  If improperly grounded, an electric shock or malfunction may result.
- A grounding wire must be connected before connecting the power cable. Provide a grounding wire longer than the power cable.
- The installation of an impulse withstanding type earth leakage breaker is necessary. A failure to install an earth leakage breaker can result in an acccident such as an electric shock or a fire.
- Do not turn on the power until the electrical work is completeted .
- Do not use a condensive capacitor for power factor improvement under any circumstances. (It dose not improve power factor, while it can cause an abnormal overheat accident)
- For power supply cables, use conduits.
- Do not lay electronic control cables (remote control and signaling wires) and other cables together outside the unit. Laying them together can result in the malfunctioning or a failure of the unit due to electric noises.
- Fasten cables so that may not touch the piping, etc.
- When cables are connected, make sure that all electrical components within the electrical component box are free of loose connector coupling or terminal connection and then attach the cover securely. (Improper cover attachment can result in malfunctioning or a failure of the unit, if water penetrates into the box.)
- Always use a three-core cable for an indoor-outdoor connecting cable. Never use a shield cable.



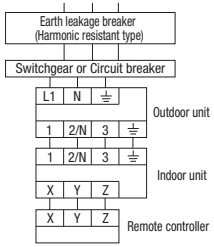
● Connect a pair bearing a common terminal number with an indoor-outdoor connecting wire.
● In cabling, fasten cables securely with cable clamps so that no external force may work on terminal connections.
● Grounding terminals are provided in the control box.



Power cable, indoor-outdoor connecting wires

● Always perform grounding system installation work with the power cord unplugged.

⚠ CAUTION Always use an earth leakage circuit breaker designed for inverter circuits to prevent a faulty operation.



Model	Power source	Power cable thickness (mm^2)	MAX. over current (A)	Cable length (m)	Grounding wire thickness	Indoor-outdoor wire thickness x number
71V	Single phase 3 wire 220-240V 50Hz	3.5	17	21	ϕ1.6mm	ϕ1.6mm x 3

● The specifications shown in the above table are for units without heaters. For units with heaters, refer to the installation instructions or the construction instructions of the indoor unit.
● Switchgear or Circuit breaker capacity which is calculated from MAX. over current should be chosen along the regulations in each country.
● The cable specifications are based on the assumption that a metal or plastic conduit is used with no more than three cables contained in a conduit and a voltage drop is 2%. For an installation falling outside of these conditions, follow the internal cabling regulations. Adapt it to the regulation in effect in each country.

5. TEST RUN

⚠ WARNING

- Before conduct a test run, do not fail to make sure that the operation valves are closed.
- Turn on power 6 hours prior to a test run to energize the crank case heater.
- In case of the first operation after turning on power, even if the unit does not move for 30 minutes, it is not a breakdown.
- Always give a 3-minute or longer interval before you start the unit again whenever it is stopped.
- Removing the service panel will expose high-voltage live parts and high-temperature parts, which are quite dangerous. Take utmost care not to incur an electric shock or burns. Do not leave the unit with the service panel open.

} A failure to observe these instructions can result in a compressor breakdown.

⚠ CAUTION

- When you operate switches for on-site setting, be careful not to touch a live part.
- You cannot check discharge pressure from the liquid operation valve charge port.
- The 4-way valve (20S) is energized during a heating operation.
- When power supply is cut off to reset the unit, give 3 or more minutes before you turn on power again after power is cut off. If this procedure is not observed in turning on power again, "E-5" (Communication error) may occur.

About insulation resistance

- An insulation resistance value may drop to several M ohms immediately after installation or when the unit is left for a long time without power, because refrigerant is gathered in the compressor. When the earth-leakage breaker is actuated due to low insulation resistance, please check the following:

(1) Check whether a normal insulation resistance value is restored about 6 hours after power is turned. Turning on power will energize the compressor and heat it to evaporate refrigerant gathered in it.
(2) Check whether the earth-leakage breaker is a harmonic resistant type.
This unit is equipped with an inverter and therefore, the use of a harmonic resistant type earth-leakage breaker is necessary to prevent a false actuation.

1) Test run method

Please remove a side cover.

(1) A test run can be initiated from an outdoor unit by using SW5-4 and SW5-4 for on-site setting.
(2) Switching SW3-3 to ON will start the compressor.
(3) The unit will start a cooling operation, when SW5-4 is OFF, or a heating operation, when SW5-4 is ON.
(4) **Do not fail to switch SW5-3 to OFF when a test run is completed.**

※ **In case of the first operation after turning on the power supply, when the unit runs in the cooling mode at outside temperature 5°C or lower, it automatically changes into the cooling mode after it runs in the heating mode for 10 minutes.**

SW-3-3	SW-3-4	
ON	OFF	Cooling during a test run
	ON	Heating during a test run
OFF	—	Normal or After the test operation

2) Checking the state of the unit in operation

Please remove a service panel.

Use check joints provided on the piping before and after the four-way valve installed inside the outdoor unit for checking discharge pressure and suction pressure.
As indicated in the table shown on the right, pressure detected at each point will vary depending on whether a cooling or heating operation has been selected.

	Check joint of the pipe	Charge port of the gas operation valve
Cooling operation	Discharge pressure (High pressure)	Suction pressure (Low pressure)
Heating operation	Suction pressure (Low pressure)	Discharge pressure (High pressure)

3) Setting SW3-1, SW3-2.

Please remove a service panel.

(1) Defrost control switching (SW3-1)
- ·When this switch is turned ON, the unit will run in the defrost mode more frequently.
- ·Set this switch to ON, when installed in a region where outdoor temperature falls below zero during the season the unit is run for a heating operation.

(2) Snow guard fan control (SW3-2)
- ·When this switch is turned on, the outdoor unit fan will run for 30 seconds in every 10 minutes, when outdoor temperature falls to 3℃ or lower and the compressor is not running.
- ·When the unit is used in a very snowy country, set this switch to ON.

4) Failure diagnosis in a test run

Error indicated on the remote control unit	Printed circuit board LED(The cycles of 5 seconds)		Failure event	Action
	Red LED	Green LED		
E34	Blinking once	Blinking continuously	Open phase	Check power cables for loose contact or disconnection
E40	Blinking once	Blinking continuously	63H1 actuation or operation with operation valves shut (occurs mainly during a heating operation)	1. Check whether the operation valves are open. 2. If an error has been canceled when 3 minutes have elapsed since a compressor stop, you can restart the unit by effecting Check Reset from the remote control unit.
E49	Blinking once	Blinking continuously	Low pressure error or operation with operation valves shut (occurs mainly during a cooling operation)	

- If an error code other than those listed above is indicated, refer to the wiring diagram of the outdoor unit and the indoor unit.

5) The state of the electronic expansion valve.

The following table illustrates the steady states of the electronic expansion valve.

	When power is turned on	When the unit comes to a normal stop		When the unit comes to an abnormal stop	
		During a cooling operation	During a heating operation	During a cooling operation	During a heating operation
Valve for a cooling operation	Complete shut position	Complete shut position	Full open position	Full open position	Full open position
Valve for a heating operation	Full open position	Full open position	Complete shut position	Full open position	Full open position

6) Heed the following on the first operation after turning on the circuit breaker.

This outdoor unit may start in the standby mode (waiting for a compressor startup), which can continue up to 30 minutes, to prevent the oil level in the compressor from lowering on the first operation after turning on the circuit breaker. If that is the case, do not suspect a unit failure.

Items to checkbefore a test run

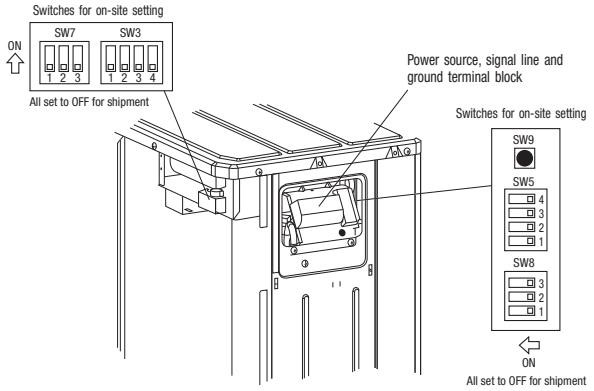
- When you leave the outdoor unit with power supplied to it, be sure to close the panel.

Item No.used in the installation manual	Item	Check item	Check
2	Refrigerant plumbing	If brazed, was it brazed under a nitrogen gas flow?	
		Were air-tightness test and vacuum extraction surely performed?	
		Are heat insulation materials installed on both liquid and gas pipes?	
		Are operation valves surely opened for both liquid and gas systems?	
		Have you recorded the additional refrigerant charge volume and refrigerant pipe length on the panel's label?	
4	Electric wiring	Is the unit free of cabling errors such as uncompleted connection, an absent or reversed phase?	
		Are properly rated electrical equipments used for circuit breakers and cables?	
		Doesn't cabling cross-connect between units, where more than one unit are installed?	
		Aren't indoor-outdoor signal wires connected to remote control wires?	
		Do indoor-outdoor connecting cables connect between the same terminal numbers?	
		Are either VCT cabtyre cables or WF flat cables used for indoor-outdoor connecting cables?	
		Does grounding satisfy the D type grounding (type III grounding) requirements?	
		Is the unit grounded with a dedicated grounding wire not connected to another unit's grounding wire?	
		Are cables free of loose screws at their connection points?	
		Are cables held down with cable clamps so that no external force works onto terminal connections?	
—	Indoor unit	Is indoor unit installation work completed?	
		Where a face cover should be attached onto an indoor unit, is the face cover attached to the indoor unit?	

Test run procedure

- Always carry out a test run and check the following in order as listed.

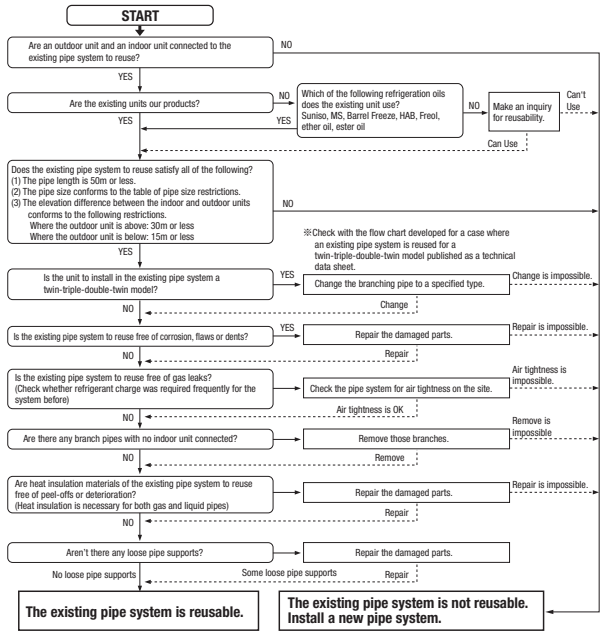
Turn	The contents of operation	Check
①	Open the gas side operation valve fully.	
②	Open the liquid side operation valve fully.	
③	Close the panel.	
④	Where a remote control unit is used for unit setup on the installation site, follow instructions for unit setup on the installation site with a remote control unit.	
⑤	SW5-3 / SW5-4 OFF: the unit will start a cooling operation.	
	SW5-3 / SW5-4 ON: the unit will start a heating operation.	
⑥	When the unit starts operation, press the wind direction button provided on the remote control unit to check its operation.	
⑦	Place your hand before the indoor unit's diffuser to check whether cold (warm) winds come out in a cooling (heating) operation.	
⑧	Make sure that a red LED is not blinking.	
⑨	When you complete the test run, please turn on SW5-3 for 1 second and be sure to end a test run.	
⑩	Where options are used, check their operation according to the respective instruction manuals.	



※1 Do not operate SW3-3, SW5-1, SW5-2, SW8.
※2 Refer to TECHNICAL MANUAL about SW9. (Pump down SW)

6. UTILIZATION OF EXISTING PIPING.

Check whether an existing pipe system is reusable or not by using the following flow chart.



⚠ WARNING <Where the existing unit can be run for a cooling operation.>

Carry out the following steps with the excising unit (in the order of (1), (2), (3) and (4))

(1) Run the unit for 30 minutes for a cooling operation.
(2) Stop the indoor fan and run the unit for 3 minutes for a cooling operation (returning liquid)
(3) Close the liquid side operation valve of the outdoor unit and pump down (refrigerant recovery)
(4) Blow with nitrogen gas. ※ If discolored refrigeration oil or any foreign matters is discharged by the blow, wash the pipe system or install a new pipe system.

- For the flare nut, do not use the old one, but use the one supplied with the outdoor unit. Process a flare to the dimensions specified for R410A.
- **Turn on-site setting switch SW8-1** to the ON position. (Where the gas pipe size is ϕ19.05)

<Table of pipe size restrictions>

◎:Standard pipe size ○:Usable △:Restricted to shorter pipe length limits Cool ↓ : Cooling capacity drop

Additional charge volume per meter of pipe		0.06kg/m		0.08kg/m
Pipe size	Liquid pipe	ϕ9.52	ϕ9.52	ϕ12.7
	Gas pipe	ϕ12.7	ϕ15.88	ϕ15.88
71V	Usability	Cool ↓	◎	△
	Maximum one-way pipe length	35	50	25
	Length covered without additional charge	30	30	15

- **The pipe length should be at least 3m. If the pipe length is shorter than 3m, the quantity of refrigerant needs to be reduced. Please consult with our distributor in the area, if you need to recover refrigerant and charge it again.**
- Any combinations of pipe sizes not listed in the table are not usable.

<Pipe system after the branching pipe>

◎:Standard pipe size ○:Usable

Additional charging amount of refrigerant per 1m			0.06kg/m	
Pipe size	Liquid pipe		ϕ9.52	
	Gas pipe		ϕ12.7	ϕ15.88
Model	Combination type	Combination of capacity		
FDC71	Twin	40+40	◎	○

- Any combinations of pipe sizes not listed in the tableare not usable.

<The model types of existing units of which branching pipes are reusable.>

The branching pipes used with models other than those listed above are not reusable.

Use our genuine branching pipes for R410A.

Formula to calculate additional charge volume

Additional charge volume (kg) = {Main pipe length (m) − Length covered without additional charge shown in the table (m)} × Additional charge volume per meter of pipe shown in the table (kg/m) + Total length of branch pipes (m) × Additional charge volume per meter of pipe shown in the table (kg/m)

※ If you obtain a negative figure as a result of calculation, no additional refrigerant needs to be charged.

Example) When an 71V (single installation) is installed in a 30m long existing pipe system (liquid ϕ12.7, gas ϕ15.88), the quantity of refrigerant to charge additionally should be (30m-15m) x 0.08kg/m = 1.2 kg.

Example) When an 71V (twin installation) is installed in a 30m long existing pipe system (main pipe length 20m, liquid ϕ12.7, gas ϕ15.88; pipe length after branching pipe 5m x 2, liquid ϕ9.52, gas ϕ12.7), the quantity of refrigerant to charge additionally should be (20m-15m) x 0.08kg/m + 5m x 2 x 0.06kg/m = 1.0 kg.

<Where the existing unit cannot be run for a cooling operation.>

Wash the pipe system or install a new pipe system.

- If you choose to wash the pipe system, contact our distributor in the area.

Inverter driven single split PAC
100VNX～140VNX,100VSX～140VSX
Designed for R410A refrigerant

(2) Models FDC100~140VNX, 100~140VSX

◎This installation manual deals with outdoor units and general installation specifications only. For indoor units, refer to the respective installation manuals supplied with the units.
◎When install the unit, be sure to check whether the selection of installation place, power supply specifications, usage limitation (piping length, height differences between indoor and outdoor units, power supply voltage and etc.) and installation spaces

SAFETY PRECAUTIONS

- We recommend you to read this "SAFETY PRECAUTIONS" carefully before the installation work in order to gain full advantage of the functions of the unit and to avoid malfunction due to mishandling.
- The precautions described below are divided into ⚠WARNING and ⚠CAUTION. The matters with possibilities leading to serious consequences such as death or serious personal injury due to erroneous handling are listed in the ⚠WARNING and the matters with possibilities leading to personal injury or damage of the unit due to erroneous handling including probability leading to serious consequences in some cases are listed in ⚠CAUTION. **These are very important precautions for safety. Be sure to observe all of them without fail.**
- The meaning of "Marks" used here are as shown below.

⃠	Never do it under any circumstance.	❗	Always do it according to the instruction

- For 3 phase power source outdoor unit,EN61000-3-2 is not applicable if consent by the utility company or nortification to the utility company is given before usage.
- 3phase power source unit, both indoor and outdoor, is suitable for installation in a commercial and light industrial environment. If installed as a house-hold appliance it could cause electromagnetic interference.
- 5 and 6 HP units of single phase power source are equipment complying with IEC 61000-3-12.
- Be sure to confirm no anomaly on the equipment by commissioning after completed installation and explain the operating methods as well as the maintenance methods of this equipment to the user according to the owner's manual.
- Keep the installation manual together with owner's manual at a place where any user can read at any time. Moreover if necessary, ask to hand them to a new user

Check before installation work

[Accessory]

Edging		1 piece	knock-out hole protection

- Model name and power source
- Refrigerant piping length
- Piping, wiring and miscellaneous small parts
- Indoor unit installation manual

⚠ WARNING

- **Installation must be carried out by the qualified installer.**
  If you install the system by yourself, it may cause serious trouble such as water leaks, electric shocks, fire and personal injury, as a result of a system malfunction.
- **Install the system in full accordance with the instruction manual.**
  Incorrect installation may cause bursts, personal injury, water leaks, electric shocks and fire.
- **Use the original accessories and the specified components for installation.**
  If parts other than those prescribed by us are used, It may cause fall of the unit, water leaks, electric shocks, fire, refrigerant leak, substandard performance, control failure and personal injury.
- **When installing in small rooms, take prevention measures not to exceed the density limit of refrigerant in the event of leakage accordance with ISO5149.**
  Consult the expert about prevention measures. If the density of refrigerant exceeds the limit in the event of leakage, lack of oxygen can occur, which can cause serious accidents.
- **Ventilate the working area well in the event of refrigerant leakage during installation.**
  If the refrigerant comes into contact with naked flames, poisonous gas is produced.
- **After completed installation, check that no refrigerant leaks from the system.**
  If refrigerant leaks into the room and comes into contact with an oven or other hot surface, poisonous gas is produced.
- **Hang up the unit at the specified points with ropes which can support the weight in lifting for portage. And to avoid jolting out of alignment, be sure to hang up the unit at 4-point support.**
  An improper manner of portage such as 3-point support can cause death or serious personal injury due to falling of the unit
- **Install the unit in a location with good support.**
  Unsuitable installation locations can cause the unit to fall and cause material damage and personal injury.
- **Ensure the unit is stable when installed, so that it can withstand earthquakes and strong winds.**
  Unsuitable installation locations can cause the unit to fall and cause material damage and personal injury.
- **The electrical installation must be carried out by the qualified electrician in accordance with "the norm for electrical work" and "national wiring regulation", and the system must be connected to the dedicated circuit.**
  Power supply with insufficient capacity and incorrect function done by improper work can cause electric shocks and fire,
- **Be sure to shut off the power before starting electrical work.**
  Failure to shut off the power can cause electric shocks, unit failure or incorrect function of equipment.
- **Be sure to use the cables conformed to safety standard and cable ampacity for power distribution work.**
  Unconformable cables can cause electric leak, anomalous heat production or fire.
- **Use the prescribed cables for electrical connection, tighten the cables securely in terminal block and relieve the cables correctly to prevent overloading the terminal blocks.**
  Loose connections or cable mountings can cause anomalous heat production or fire.
- **Arrange the wiring in the control box so that it cannot be pushed up further into the box. Install the service panel correctly.**
  Incorrect installation may result in overheating and fire.

- **Do not perform brazing work in the airtight room**
  It can cause lack of oxygen.
- **Use the prescribed pipes, flare nuts and tools for R410A.**
  Using existing parts (for R22 or R407C) can cause the unit failure and serious accidents due to burst of the refrigerant circuit.
- **Tighten the flare nut by using double spanners and torque wrench according to prescribed method. Be sure not to tighten the flare nut too much.**
  Loose flare connection or damage on the flare part by tightening with excess torque can cause burst or refrigerant leaks which may result in lack of oxygen.
- **Do not open the service valves for liquid line and gas line until completed refrigerant piping work, air tightness test and evacuation.**
  If the compressor is operated in state of opening service valves before completed connection of refrigerant piping work, you may incur frost bite or injury from an abrupt refrigerant outflow and air can be sucked into refrigerant circuit, which can cause burst or personal injury due to anomalously high pressure in the refrigerant
- **Only use prescribed optional parts. The installation must be carried out by the qualified installer.**
  If you install the system by yourself, it can cause serious trouble such as water leaks, electric shocks, fire.
- **Do not perform any change of protective device itself or its setup condition**
  The forced operation by short-circuiting protective device of pressure switch and temperature controller or the use of non specified component can cause fire or burst.
- **Be sure to switch off the power supply in the event of installation, inspection or servicing.**
  If the power supply is not shut off, there is a risk of electric shocks, unit failure or personal injury due to the unexpected start of fan.
- **Consult the dealer or an expert regarding removal of the unit.**
  Incorrect installation can cause water leaks, electric shocks or fire.
- **Stop the compressor before closing valve and disconnecting refrigerant pipes in case of pump down operation.**
  If disconnecting refrigerant pipes in state of opening service valves before compressor stopping, you may incur frost bite or injury from an abrupt refrigerant outflow and air can be sucked, which can cause burst or personal injury due to anomalously high pressure in the refrigerant circuit

- **Ensure that no air enters in the refrigerant circuit when the unit is installed and removed.**
  If air enters in the refrigerant circuit, the pressure in the refrigerant circuit becomes too high, which can cause burst and personal injury.
- **Do not run the unit with removed panels or protections**
  Touching rotating equipments, hot surfaces or high voltage parts can cause personal injury due to entrapment, burn or electric shocks.
- **Be sure to fix up the service panels.**
  Incorrect fixing can cause electric shocks or fire due to intrusion of dust or water.
- **Do not perform any repairs or modifications by yourself. Consult the dealer if the unit requires repair.**
  If you repair or modify the unit, it can cause water leaks, electric shocks or fire.

⚠ WARNING

- **Installation must be carried out by the qualified installer.**
  If you install the system by yourself, it may cause serious trouble such as water leaks, electric shocks, fire and personal injury, as a result of a system malfunction.
- **Install the system in full accordance with the instruction manual.**
  Incorrect installation may cause bursts, personal injury, water leaks, electric shocks and fire.
- **Use the original accessories and the specified components for installation.**
  If parts other than those prescribed by us are used, It may cause fall of the unit, water leaks, electric shocks, fire, refrigerant leak, substandard performance, control failure and personal injury.
- **When installing in small rooms, take prevention measures not to exceed the density limit of refrigerant in the event of leakage accordance with ISO5149.**
  Consult the expert about prevention measures. If the density of refrigerant exceeds the limit in the event of leakage, lack of oxygen can occur, which can cause serious accidents.
- **Ventilate the working area well in the event of refrigerant leakage during installation.**
  If the refrigerant comes into contact with naked flames, poisonous gas is produced.
- **After completed installation, check that no refrigerant leaks from the system.**
  If refrigerant leaks into the room and comes into contact with an oven or other hot surface, poisonous gas is produced.
- **Hang up the unit at the specified points with ropes which can support the weight in lifting for portage. And to avoid jolting out of alignment, be sure to hang up the unit at 4-point support.**
  An improper manner of portage such as 3-point support can cause death or serious personal injury due to falling of the unit
- **Install the unit in a location with good support.**
  Unsuitable installation locations can cause the unit to fall and cause material damage and personal injury.
- **Ensure the unit is stable when installed, so that it can withstand earthquakes and strong winds.**
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- **The electrical installation must be carried out by the qualified electrician in accordance with "the norm for electrical work" and "national wiring regulation", and the system must be connected to the dedicated circuit.**
  Power supply with insufficient capacity and incorrect function done by improper work can cause electric shocks and fire,
- **Be sure to shut off the power before starting electrical work.**
  Failure to shut off the power can cause electric shocks, unit failure or incorrect function of equipment.
- **Be sure to use the cables conformed to safety standard and cable ampacity for power distribution work.**
  Unconformable cables can cause electric leak, anomalous heat production or fire.
- **Use the prescribed cables for electrical connection, tighten the cables securely in terminal block and relieve the cables correctly to prevent overloading the terminal blocks.**
  Loose connections or cable mountings can cause anomalous heat production or fire.
- **Arrange the wiring in the control box so that it cannot be pushed up further into the box. Install the service panel correctly.**
  Incorrect installation may result in overheating and fire.

- **Do not perform brazing work in the airtight room**
  It can cause lack of oxygen.
- **Use the prescribed pipes, flare nuts and tools for R410A.**
  Using existing parts (for R22 or R407C) can cause the unit failure and serious accidents due to burst of the refrigerant circuit.
- **Tighten the flare nut by using double spanners and torque wrench according to prescribed method. Be sure not to tighten the flare nut too much.**
  Loose flare connection or damage on the flare part by tightening with excess torque can cause burst or refrigerant leaks which may result in lack of oxygen.
- **Do not open the service valves for liquid line and gas line until completed refrigerant piping work, air tightness test and evacuation.**
  If the compressor is operated in state of opening service valves before completed connection of refrigerant piping work, you may incur frost bite or injury from an abrupt refrigerant outflow and air can be sucked into refrigerant circuit, which can cause burst or personal injury due to anomalously high pressure in the refrigerant
- **Only use prescribed optional parts. The installation must be carried out by the qualified installer.**
  If you install the system by yourself, it can cause serious trouble such as water leaks, electric shocks, fire.
- **Do not perform any change of protective device itself or its setup condition**
  The forced operation by short-circuiting protective device of pressure switch and temperature controller or the use of non specified component can cause fire or burst.
- **Be sure to switch off the power supply in the event of installation, inspection or servicing.**
  If the power supply is not shut off, there is a risk of electric shocks, unit failure or personal injury due to the unexpected start of fan.
- **Consult the dealer or an expert regarding removal of the unit.**
  Incorrect installation can cause water leaks, electric shocks or fire.
- **Stop the compressor before closing valve and disconnecting refrigerant pipes in case of pump down operation.**
  If disconnecting refrigerant pipes in state of opening service valves before compressor stopping, you may incur frost bite or injury from an abrupt refrigerant outflow and air can be sucked, which can cause burst or personal injury due to anomalously high pressure in the refrigerant circuit

- **Ensure that no air enters in the refrigerant circuit when the unit is installed and removed.**
  If air enters in the refrigerant circuit, the pressure in the refrigerant circuit becomes too high, which can cause burst and personal injury.
- **Do not run the unit with removed panels or protections**
  Touching rotating equipments, hot surfaces or high voltage parts can cause personal injury due to entrapment, burn or electric shocks.
- **Be sure to fix up the service panels.**
  Incorrect fixing can cause electric shocks or fire due to intrusion of dust or water.
- **Do not perform any repairs or modifications by yourself. Consult the dealer if the unit requires repair.**
  If you repair or modify the unit, it can cause water leaks, electric shocks or fire.

⚠ CAUTION

- **Carry out the electrical work for ground lead with care**
  Do not connect the ground lead to the gas line, water line, lightning conductor or telephone line's ground lead. Incorrect grounding can cause unit faults such as electric shocks due to short-circuiting. Never connect the grounding wire to a gas pipe because if gas leaks,it could cause explosion or ignition.
- **Use the circuit breaker for all pole with correct capacity.**
  Using the incorrect circuit breaker, it can cause the unit malfunction and fire.
- **Install isolator or disconnect switch on the power supply wiring in accordance with the local codes and regulations.**
  The isolator should be locked in accordanced with EN60204-1.
- **Take care when carrying the unit by hand.**
  If the unit weights more than 20kg, it must be carried by two or more persons. Do not carry by the plastic straps, always use the carry handle when carrying the unit by hand. Use gloves to minimize the risk of cuts by the aluminum fins.
- **Dispose of any packing materials correctly.**
  Any remaining packing materials can cause personal injury as it contains nails and wood. And to avoid danger of suffocation, be sure to keep the plastic wrapper away from children and to dispose after tear it up.
- **Pay attention not to damage the drain pan by weld spatter when welding work is done near the indoor unit.**
  If weld spatter entered into the indoor unit during welding work, it can cause pin-hole in drain pan and result in water leakage. To prevent such damage, keep the indoor unit in its packing or cover it.
- **Be sure to insulate the refrigerant pipes so as not to condense the ambient air moisture on them.**
  Insufficient insulation can cause condensation, which can lead to moisture damage on the ceiling, floor, furniture and any other valuables.
- **Be sure to perform air tightness test by pressurizing with nitrogen gas after completed refrigerant piping work.**
  If the density of refrigerant exceeds the limit in the event of refrigerant leakage in the small room, lack of oxygen can occur, which can cause serious accidents.
- **Perform installation work properly according to this installation manual.**
  Improper installation can cause abnormal vibrations or increased noise generation.
- **Earth leakage breaker must be installed**
  If the earth leakage breaker is not installed, it can cause fire or electric shocks.
- **Do not use any materials other than a fuse with the correct rating in the location where fuses are to be used.**
  Connecting the circuit with copper wire or other metal thread can cause unit failure and fire.
- **Do not install the unit near the location where leakage of combustible gases can occur.**
  If leaked gases accumulate around the unit, it can cause fire.
- **Do not install the unit where corrosive gas (such as sulfurous acid gas etc.) or combustible gas (such as thinner and petroleum gases) can accumulate or collect, or where volatile combustible substances are handled.**
  Corrosive gas can cause corrosion of heat exchanger, breakage of plastic parts and etc. And combustible gas can cause fire.
- **Secure a space for installation, inspection and maintenance specified in the manual.**
  Insufficient space can result in accident such as personal injury due to falling from the installation place..
- **When the outdoor unit is installed on a roof or a high place, provide permanent ladders and handrails along the access route and fences and handrails around the outdoor unit.**
  If safety facilities are not provided, it can cause personal injury due to falling from the installation place.
- **Do not install nor use the system close to the equipment that generates electromagnetic fields or high frequency harmonics**
  Equipment such as inverters, standby generators, medical high frequency equipments and telecommunication equipments can affect the system, and cause malfunctions and breakdowns. The system can also affect medical equipment and telecommunication equipment, and obstruct its function or cause jamming.
- **Do not install the outdoor unit in a location where insects and small animals can inhabit.**
  Insects and small animals can enter the electric parts and cause damage or fire. Instruct the user to keep the surroundings clean.

- **Do not use the base flame for outdoor unit which is corroded or damaged due to long periods of operation.**
  Using an old and damage base flame can cause the unit falling down and cause personal injury.
- **Do not install the unit in the locations listed below**
  - Locations where carbon fiber, metal powder or any powder is floating.
  - Locations where any substances that can affect the unit such as sulphide gas, chloride gas, acid and alkaline can occur.
  - Vehicles and ships
  - Locations where cosmetic or special sprays are often used.
  - Locations with direct exposure of oil mist and steam such as kitchen and machine plant.
  - Locations where any machines which generate high frequency harmonics are used.
  - Locations with salty atmospheres such as coastlines
  - Locations with heavy snow (If installed, be sure to provide base flame and snow hood mentioned in the manual)
  - Locations where the unit is exposed to chimney smoke
  - Locations at high altitude (more than 1000m high)
  - Locations with ammonic atmospheres
  - Locations where heat radiation from other heat source can affect the unit
  - Locations without good air circulation.
  - Locations with any obstacles which can prevent inlet and outlet air of the unit
  - Locations where short circuit of air can occur (in case of multiple units installation)
  - Locations where strong air blows against the air outlet of outdoor unit

  It can cause remarkable decrease in performance, corrosion and damage of components, malfunction and fire.
- **Do not install the outdoor unit in the locations listed below.**
  - Locations where discharged hot air or operating sound of the outdoor unit can bother neighborhood.
  - Locations where outlet air of the outdoor unit blows directly to an animal or plants. The outlet air can affect adversely to the plant etc.
  - Locations where vibration can be amplified and transmitted due to insufficient strength of structure.
  - Locations where vibration and operation sound generated by the outdoor unit can affect seriously. (on the wall or at the place near bed room)
  - Locations where an equipment affected by high harmonics is placed. (TV set or radio receiver is placed within 5m)
  - Locations where drainage cannot run off safely.

  It can affect surrounding environment and cause a claim
- **Do not use the unit for special purposes such as storing foods, cooling precision instruments and preservation of animals, plants or art.**
  It can cause the damage of the items.
- **Do not touch any buttons with wet hands**
  It can cause electric shocks
- **Do not touch any refrigerant pipes with your hands when the system is in operation.**
  During operation the refrigerant pipes become extremely hot or extremely cold depending the operating condition, and it can cause burn injury or frost injury.
- **Do not clean up the unit with water**
  It can cause electric shocks
- **Do not operate the outdoor unit with any article placed on it.**
  You may incur property damage or personal injure from a fall of the article.
- **Do not step onto the outdoor unit.**
  You may incur injury from a drop or fall.

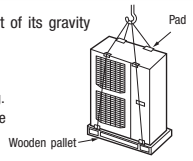
Notabilia as a unit designed for R410A

- Do not use any refrigerant other than R410A. R410A will rise to pressure about 1.6 times higher than that of a conventional refrigerant. A cylinder containing R410A has a pink indication mark on the top.
- A unit designed for R410A has adopted a different size indoor unit operation valve charge port and a different size check joint provided in the unit to prevent the charging of a wrong refrigerant by mistake. The processed dimension of the flared part of a refrigerant pipe and a flare nut's parallel side measurement have also been altered to raise strength against pressure. Accordingly, you are required to arrange dedicated R410A tools listed in the table on the right before installing or servicing this unit.
- Do not use a charge cylinder. The use of a charge cylinder will cause the refrigerant composition to change, which results in performance degradation.
- In charging refrigerant, always take it out from a cylinder in the liquid phase.
- All indoor units must be models designed exclusively for R410A. Check connectable indoor unit models in a catalog, etc. (A wrong indoor unit, if connected into the system, will impair proper system operation)

	Dedicated R410A tools
a)	Gauge manifold
b)	Charge hose
c)	Electronic scale for refrigerant charging
d)	Torque wrench
e)	Flare tool
f)	Protrusion control copper pipe gauge
g)	Vacuum pump adapter
h)	Gas leak detector

1. HAULAGE AND INSTALLATION (Take particular care in carrying in or moving the unit, and always perform such an operation with two or more persons.)

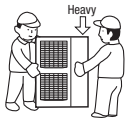
⚠CAUTION When a unit is hoisted with slings for haulage, take into consideration the offset of its gravity center position.
If not properly balanced, the unit can be thrown off-balance and fall.



1) Delivery

- Deliver the unit as close as possible to the installation site before removing it from the packaging.
- When some compelling reason necessitates the unpacking of the unit before it is carried in, use nylon slings or protective wood pieces so as not to damage the unit by ropes lifting it.

2) Portage



- The right hand side of the unit as viewed from the front (diffuser side) is heavier. A person carrying the right hand side must take heed of this fact. A person carrying the left hand side must hold with his right hand the handle provided on the front panel of the unit and with his left hand the corner column section.

3) Selection of installation location for the outdoor unit

Be sure to select a suitable installation place in consideration of following conditions.

- ○ A place where it is horizontal, stable and can endure the unit weight and will not allow vibration transmittance of the unit.
- ○ A place where it can be free from possibility of bothering neighbors due to noise or exhaust air from the unit
- ○ A place where the unit is not exposed to oil splashes.
- ○ A place where it can be free from danger of flammable gas leakage.
- ○ A place where drain water can be disposed without any trouble.
- ○ A place where the unit will not be affected by heat radiation from other heat source.
- ○ A place where snow will not accumulate.
- ○ A place where the unit can be kept away 5m or more from TV set and/or radio receiver in order to avoid any radio or TV interference.
- ○ A place where good air circulation can be secured, and enough service space can be secured for maintenance and service of the unit safely.
- ○ A place where the unit will not be affected by electromagnetic waves and/or high-harmonic waves generated by other equipment.
- ○ A place where chemical substances like sulfuric gas, chloric gas, acid and alkali (including ammonia), which can harm the unit, will not be generated and not remain.
- ○ A place where strong wind will not blow against the outlet air blow of the unit.

4) Caution about selection of installation location

(1) If the unit is installed in the area where the snow will accumulate, following measures are required.
The bottom plate of unit and intake, outlet may be blocked by snow.

1.Install the unit on the base so that the bottom is higher than snow cover surface.

2.Provide a snow hood to the outdoor unit on site. Regarding outline of a snow hood, refer to our technical manual.

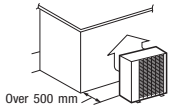
3.Install the unit under eaves or providen the roof on site.

Since drain water generated by defrost control may freeze, following measures are required.

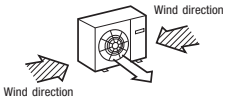
- Don't execute drain piping work by using a drain elbow and drain grommets (optional parts). [Refer to Drain piping work.]
- Recommend setting Defrost Control (SW3-1) and Snow Guard Fan Control (SW3-2). [Refer to Setting SW3-1, SW3-2.]

(2) If the unit can be affected by strong wind, following measures are required.
Strong wind can cause damage of fan (fan motor), or can cause performance degradation, or can trigger anomalous stop of the unit due to rising of high pressure.

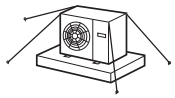
1.Install the outlet air blow side of the unit to face a wall of building, or provide a fence or a windbreak screen.



2.Install the outlet air blow side of the unit in a position perpendicular to the direction of wind.



3.The unit should be installed on the stable and level foundation. If the foundation is not level, tie down the unit with wires.

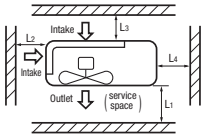


5) Installation space

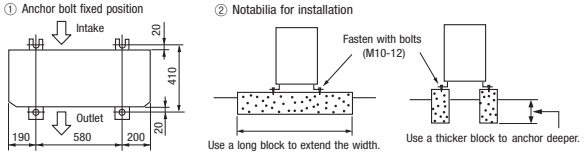
- Walls surrounding the unit in the four sides are not acceptable.
- There must be a 1-meter or larger space in the above.
- Where a danger of short-circuiting exists, install guide louvers.
- When more than one unit are installed, provide sufficient intake space consciously so that short-circuiting may not occur.
- Where piling snow can bury the outdoor unit, provide proper snow guards.
- A barrier wall placed in front of the exhaust diffuser must not be higher than the unit.

(mm)

Size \ Example installation	I	II	III
L1	Open	Open	500
L2	300	5	Open
L3	150	300	150
L4	5	5	5



6) Installation



- In installing the unit, fix the unit's legs with bolts specified on the left.
- The protrusion of an anchor bolt on the front side must be kept within 15 mm.
- Securely install the unit so that it does not fall over during earthquakes or strong winds, etc.
- Refer to the left illustrations for information regarding concrete foundations.
- Install the unit in a level area. (With a gradient of 5 mm or less.)
  Improper installation can result in a compressor failure, broken piping within the unit and abnormal noise generation.

7) To run the unit for a cooling operation, when the outdoor temperature is –5°C or lower.

- When the outdoor air temperature is -5°C or lower, provide a snow hood to the outdoor unit on site.
  So that strong wind will not blow against the outdoor heat exchanger directly. Regarding outline of a snow hood, refer to our technical manual.

2. REFRIGERANT PIPING WORK

1) Restrictions on unit installation and use

- Check the following points in light of the indoor unit specifications and the installation site.
- Observe the following restrictions on unit installation and use. Improper installation can result in a compressor failure or performance degradation.

Descriptions	One-way pipe length difference from the first branching point to the indoor unit			Marks appearing in the drawing			
						< 3m	≧ 3m
	Model for outdoor units		Dimensional limitations	Single type	Twin type	Triple type A	Triple type B
One-way pipe length of refrigerant piping	100VN,125VN,100VS,125VS		≦ 50m	L	L+L1+L2	—	—
	140VN,140VS					L+L1+L2+L3	L+La+L1+L2+L3
	100VNX,125VNX,100VSX,125VSX		≦ 100m			—	—
	140VNX,140VSX					L+L1+L2+L3	L+La+L1+L2+L3
Main pipe length	100VN,125VN,100VS,125VS		≦ 50m	—	L	—	—
	140VN,140VS					L	L
	100VNX,125VNX,100VSX,125VSX		≦ 100m			—	—
	140VNX,140VSX					L	L
One-way pipe length between the first branching point from to the second branching point	140VN,140VS, 140VNX,140VSX		≦ 5m	—	—	—	La
One-way pipe length after the first branching point	100VN,125VN,100VS,125VS, 100VNX,125VNX,100VSX,125VSX		≦ 30m	—	L1, L2	—	—
						L1, L2, L3	L1 (1)
One-way pipe length after the first branching point and second branching point	140VN,140VS,140VNX,140VSX		≦ 27m	—	—	—	La+L2, La+L3 (1)
One-way pipe length difference from the first branching point to the indoor unit	Twin type		≦ 10m	—	| L1—L2 |	—	—
	Triple type	140VN,140VS, 140VNX,140VSX	≦ 3m			| L1—L2 | , | L2—L3 | , | L3—L1 |	
			≦ 10m			—	L—(La+L2), L1—(La+L3) (1)
One-way pipe length difference from the second branching point to the indoor unit	140VN,140VS, 140VNX,140VSX		≦ 10m	—	—	—	| L2—L3 |
Elevation difference between indoor and outdoor units	When the outdoor unit is positioned higher,		≦ 30m	H	H	H	H
	When the outdoor unit is positioned lower,		≦ 15m				
Elevation difference between indoor units			≦ 0.5m	—	h	h1, h2, h3	h1, h2, h3

⚠CAUTION

- The use restrictions appearing in the table above are applicable to the standard pipe size combinations shown in the table below. Where an existing pipe system is utilized, different one-way pipe length restrictions should apply depending on its pipe size. For more information, see " 6. UTILIZATION OF EXISTING PIPING."
- With the triple pipe connection, the way of use is different when the difference of one-way pipe length after the first branching point is 3m to 10m. For details, refer to the above table and right figure.

Note (1) Install the indoor units so that L + L1 becomes the longest one-way pipe.
Keep the pipe length difference between L1 and (La + L2) or (La + L3) within 10m.

2) Determination of pipe size

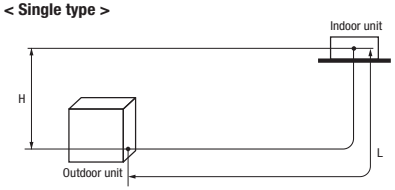
- Determine refrigerant pipe size pursuant to the following guidelines based on the indoor unit specifications.

		Model 100V		Model 125V		Model 140V	
		Gas pipe	Liquid pipe	Gas pipe	Liquid pipe	Gas pipe	Liquid pipe
Outdoor unit connected		ϕ15.88	ϕ9.52	ϕ15.88	ϕ9.52	ϕ15.88	ϕ9.52
		Flare	Flare	Flare	Flare	Flare	Flare
Refrigerant piping (branch pipeL)		ϕ15.88	ϕ9.52	ϕ15.88	ϕ9.52	ϕ15.88	ϕ9.52
In the case of a single type	Indoor unit connected	ϕ15.88	ϕ9.52	ϕ15.88	ϕ9.52	ϕ15.88	ϕ9.52
	Capacity of indoor unit	Model 100V		Model 125V		Model 140V	
In the case of a twin type	Branching pipe set	DIS-WA1		DIS-WA1		DIS-WA1	
	Refrigerant piping (branch pipe L1,L2)	ϕ12.7	ϕ9.52	ϕ12.7	ϕ9.52	ϕ15.88	ϕ9.52
	Indoor unit connected	ϕ12.7	ϕ6.35	ϕ12.7	ϕ6.35	ϕ15.88	ϕ9.52
	Capacity of indoor unit	Model 50V×2		Model 60V×2		Model 71V×2	
In the case of a triple type A	Branching pipe set	—		—		DIS-TA1	
	Refrigerant piping (branch pipe L1,L2,L3)					ϕ12.7	ϕ9.52
	Indoor unit connected					ϕ12.7	ϕ6.35
	Capacity of indoor unit					Model 50Vx3	
In the case of a triple type B	Branching pipe set	—		—		DIS-WA1	
	Refrigerant piping (branch pipe La)					ϕ15.88	ϕ9.52
	Refrigerant piping (branch pipe L1)					ϕ12.7	ϕ9.52
	Indoor unit connected					DIS-WA1	
	Refrigerant piping (branch pipe L2,L3)					ϕ12.7	ϕ9.52
	Indoor unit connected					ϕ12.7	ϕ6.35
	Capacity of indoor unit					Model 50V×3	

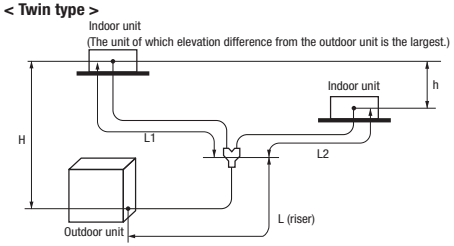
⚠CAUTION

- When the 50V or 60V model is connected as an indoor unit, always use a ϕ9.52 liquid pipe for the branch (branching pipe – indoor unit) and a different diameter joint supplied with the branching pipe set for connection with the indoor unit (ϕ6.35 on the liquid pipe side).
  If a ϕ6.35 pipe is used for connection with a branching pipe, a refrigerant distribution disorder may occur, causing one of the indoor units to fall short of the rated capacity.
- A riser pipe must be a part of the main. A branching pipe set should be installed horizontally at a point as close to an indoor unit as possible.
  A branching part must be dressed with a heat-insulation material supplied as an accessory.
- For the details of installation work required at and near a branching area, see the installation manual supplied with your branching pipe set.

< Single type >



< Twin type >



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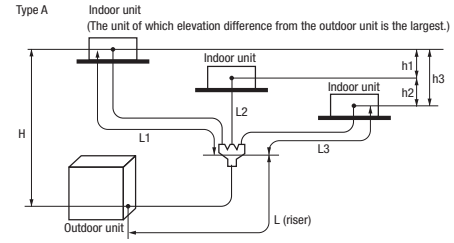

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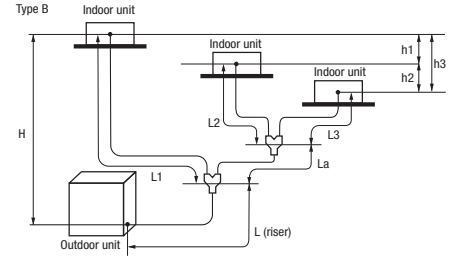
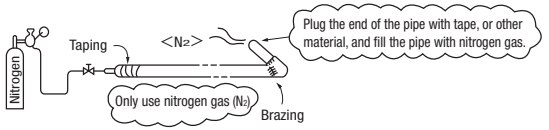
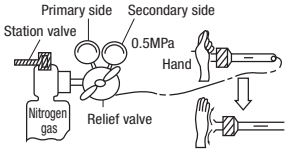


About brazing

Brazing must be performed under a nitrogen gas flow.

Without nitrogen gas, a large quantity of foreign matters (oxidized film) are created, causing a critical failure from capillary tube or expansion valve clogging.





3) Refrigerant pipe wall thickness and material

- Select refrigerant pipes of the table shown on the right wall thickness and material as specified for each pipe size.
- This unit uses R410A. Always use 1/2H pipes having a 1.0mm or thicker wall for ϕ19.05 or larger pipes, because O-type pipes do not meet the pressure resistance requirement.

Pipe diameter [mm]	6.35	9.52	12.7	15.88	22.22	25.4	28.58
Minimum pipe wall thickness [mm]	0.8	0.8	0.8	1.0	1.0	1.0	1.0
Pipe material*	O-type pipe	O-type pipe	O-type pipe	O-type pipe	1/2H-type pipe	1/2H-type pipe	1/2H-type pipe

*Phosphorus deoxidized seamless copper pipe C1220T, JIS H3300

NOTE

- Select pipes having a wall thickness larger than the specified minimum pipe thickness.

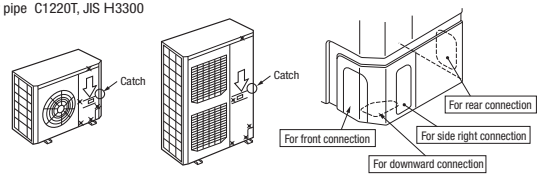
4) On-site piping work

⚠IMPORTANT

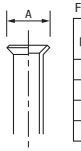
- Take care so that installed pipes may not touch components within a unit. If touching with an internal component, it will generate abnormal sounds and/or vibrations.

How to remove the service panel

First remove the five screws (× mark) of the service panel and push it down into the direction of the arrow mark and then remove it by pulling it toward you.

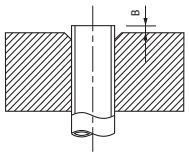


- The pipe can be laid in any of the following directions: side right, front, rear and downward.
- Remove a knock-out plate provided on the pipe penetration to open a minimum necessary area and attach an edging material supplied as an accessory by cutting it to an appropriate length before laying a pipe.
- Carry out the on site piping work with the operation valve fully closed.
- Give sufficient protection to a pipe end (compressed and blazed, or with an adhesive tape) so that water or foreign matters may not enter the piping.
- Bend a pipe to a radius as large as practical.(R100～R150) Do not bend a pipe repeatedly to correct its form.
- Flare connection is used between the unit and refrigerant pipe. Flare a pipe after engaging a flare nut onto it. Flare dimensions for R410A are different from those for conventional R407C. Although we recommend the use of flaring tools designed specifically for R410A, conventional flaring tools can also be used by adjusting the measurement of protrusion B with a protrusion control gauge.
- The pipe should be anchored every 1.5m or less to isolate the vibration.
- Tighten a flare joint securely with a double spanner.



Flared pipe end: A (mm)

Copper pipe outer diameter	A 0 −0.4
ϕ6.35	9.1
ϕ9.52	13.2
ϕ12.7	16.6
ϕ15.88	19.7



Copper pipe protrusion for flaring: B (mm)

Copper pipe outer diameter	In the case of a rigid (clutch) type	
	With an R410A tool	With a conventional tool
ϕ6.35	0～0.5	0.7～1.3
ϕ9.52		
ϕ12.7		
ϕ15.88		

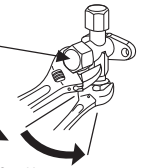
⚠ CAUTION **Do not apply force beyond proper fastening torque in tightening the flare nut.**

Fix both liquid and gas service valves at the valve main bodies as illustrated on the right, and then fasten them, applying appropriate fastening torque.

Operation valve size (mm)	Tightening torque (N-m)	Tightening angle (°)	Recommended length of a tool handle (mm)
ϕ6.35 (1/4")	14～18	45～60	150
ϕ9.52 (3/8")	34～42	30～45	200
ϕ12.7 (1/2")	49～61	30～45	250
ϕ15.88 (5/8")	68～82	15～20	300

Do not hold the valve cap area with a spanner.

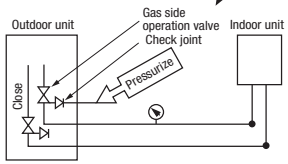
Use a torque wrench. If a torque wrench is not available, fasten the flare nut manually first and then tighten it further, using the left table as a guide.



5) Air tightness test

① Although outdoor and indoor units themselves have been tested for air tightness at the factory, check the connecting pipes after the installation work for air tightness from the operation valve's check joint equipped on the outdoor unit side. While conducting a test, keep the operation valve shut all the time.
a) Raise the pressure to 0.5 MPa, and then stop. Leave it for five minutes to see if the pressure drops.
b) Then raise the pressure to 1.5 MPa, and stop. Leave it for five more minutes to see if the pressure drops.
c) Then raise the pressure to the specified level (4.15 MPa), and record the ambient temperature and the pressure.
d) If no pressure drop is observed with an installation pressurized to the specified level and left for about one day, it is acceptable. When the ambient Temperature fall 1℃, the pressure also fall approximately 0.01 MPa. The pressure, if changed, should be compensated for.
e) If a pressure drop is observed in checking e) and a) – d), a leak exists somewhere. Find a leak by applying bubble test liquid to welded parts and flare joints and repair it. After repair, conduct an air-tightness test again.

② In conducting an air-tightness test, use nitrogen gas and pressurize the system with nitrogen gas from the gas side. Do not use a medium other than nitrogen gas under any circumstances.



6) Evacuation

<Work flow> When the system has remaining moisture inside or a leaky point, the vacuum gauge indicator will rise.
Check the system for a leaky point and then draw air to create a vacuum again.

Airtightness test completed
↓
Vacuuming begins
↓
Run the vacuum pump for at least one hour after the vacuum gauge shows -101kPa or lower. (-755mmHg or lower)
Confirm that the vacuum gauge indicator does not rise even if the system is left for one hour or more.
↓
Vacuuming completed
↓
Vacuum gauge check
↓
Fill refrigerant

Pay attention to the following points in addition to the above for the R410A and compatible machines.

- ○To prevent a different oil from entering, assign dedicated tools, etc. to each refrigerant type. Under no circumstances must a gauge manifold and a charge hose in particular be shared with other refrigerant types (R22, R407C, etc.).
- ○Use a counterflow prevention adapter to prevent vacuum pump oil from entering the refrigerant system.

7) Additional refrigerant charge

(1) Calculate a required refrigerant charge volume from the following table.

<Single type>

Item / Capacity	Standard refrigerant charge volume (kg)	Pipe length for standard refrigerant charge volume (m)	Additional charge volume (kg) per meter of refrigerant piping (liquid pipe)	Refrigerant volume charged for shipment at the factory (kg)	Installation's pipe length (m) covered without additional refrigerant charge
100VN～140VN 100VS～140VS	2.0	0	0.06	3.8	30
100VNX～140VNX 100VSX～140VSX	2.7			4.5	

<Twin, triple, W-twin type>

Item / Capacity	Standard refrigerant charge volume (kg)	Pipe length for standard refrigerant charge volume (m)	Additional charge volume (kg) per meter of refrigerant piping (liquid pipe)		Refrigerant volume charged for shipment at the factory (kg)	Installation's pipe length (m) covered without additional refrigerant charge
			Main pipe	Branch pipe		
100VN～140VN 100VS～140VS	2.0	0	0.06		3.8	30
100VNX～140VNX 100VSX～140VSX	2.7				4.5	

- A standard refrigerant charge volume means a refrigerant charge volume for an installation with 0m long refrigerant piping.
- This unit contains factory charged refrigerant covering 30m of refrigerant piping and additional refrigerant charge on the installation site is not required for an installation with up to 30m refrigerant piping. When refrigerant piping exceeds 30m, additionally charge an amount calculated from the pipe length and the above table for the portion in excess of 30m.
- When refrigerant piping is shorter than 3m, reduce refrigerant by 1kg from the factory charged volume and adjust to 2.8kg.
- If an existing pipe system is used, a required refrigerant charge volume will vary depending on the liquid pipe size. For further information, see "6. UTILIZATION OF EXISTING PIPING."

Formula to calculate the volume of additional refrigerant required

Additional charge volume (kg) = { Main pipe length (m) – Length covered without additional charge 30 (m) } x 0.06 (kg/m) + Total length of branch pipes (m) x 0.06 (kg/m)

*When an additional charge volume calculation result is negative, it is not necessary to charge refrigerant additionally.

● **To charge refrigerant again, recover refrigerant from the system first and then charge the volume calculated from the above table (Standard refrigerant charge volume + branch pipes charge volume)**

(2) Charging refrigerant

- ● Since R410A refrigerant must be charged in the liquid phase, you should charge it, keeping the container cylinder upside down or using a refrigerant cylinder equipped with a siphon tube.
- ● Charge refrigerant always from the liquid side service port with the operation valve shut. When you find it difficult to charge a required amount, fully open the outdoor unit valves on both liquid and gas sides and charge refrigerant from the gas (suction) side service port, while running the unit in the cooling mode. In doing so, care must be taken so that refrigerant may be discharged from the cylinder in the liquid phase all the time. When the cylinder valve is throttled down or a dedicated conversion tool to change liquid-phase refrigerant into mist is used to protect the compressor, however, adjust charge conditions so that refrigerant will gasify upon entering the unit.
- ● In charging refrigerant, always charge a calculated volume by using a scale to measure the charge volume.
- ● When refrigerant is charged with the unit being run, complete a charge operation within 30 minutes. Running the unit with an insufficient quantity of refrigerant for a long time can cause a compressor failure.

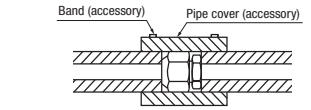
NOTE Put down the refrigerant volume calculated from the pipe length onto the caution label attached on the back side of the service panel.

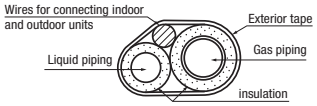
8) Heating and condensation prevention

(1) Dress refrigerant pipes (both gas and liquid pipes) for heat insulation and prevention of dew condensation.

(2) Use a heat insulating material that can withstand 120℃ or a higher temperature. Poor heat insulating capacity can cause heat insulation problems or cable deterioration.

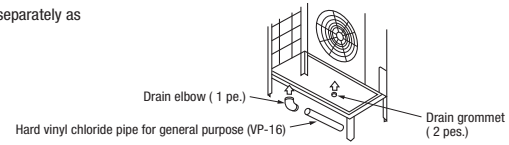
- Improper heat insulation/anti-dew dressing can result in a water leak or dripping causing damage to household effects, etc.
- All gas pipes must be securely heat insulated in order to prevent damage from dripping water that comes from the condensation formed on them during a cooling operation or personal injury from burns because their surface can reach quite a high temperature due to discharged gas flowing inside during a heating operation.
- Wrap indoor units' flare joints with heat insulating parts (pipe cover) for heat insulation (both gas and liquid pipes).
- Give heat insulation to both gas and liquid side pipes. Bundle a heat insulating material and a pipe tightly together so that no gaps may be left between them and wrap them together with a connecting cable by a dressing tape.
- Although it is verified in a test that this air conditioning unit shows satisfactory performance under JIS condensation test conditions, **both gas and liquid pipes need to be dressed with 20 mm or thicker heat insulation materials above the ceiling where relative humidity exceeds 70%.**





3. DRAIN PIPING WORK

● Execute drain piping by using a drain elbow and drain grommets supplied separately as optional parts, where water drained from the outdoor unit is a problem.



○ There are 3 drain holes provided on the bottom plate of an outdoor unit to discharge condensed water.

○ When condensed water needs to be led to a drain, etc., install the unit on a flat base (supplied separately as an optional part) or concrete blocks.

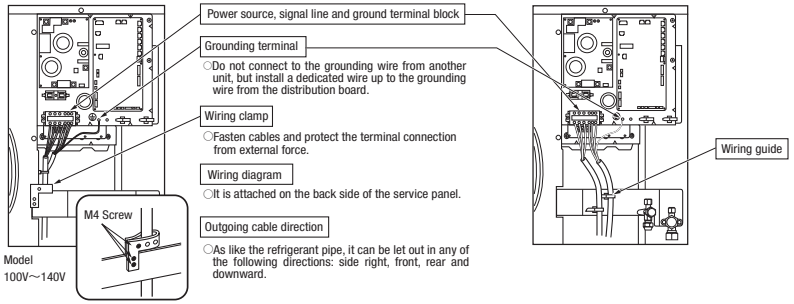
○ Connect a drain elbow as shown in the illustration and close the other two drain holes with grommets.

4. ELECTRICAL WIRING WORK For details of electrical cabling, refer to the indoor unit installation manual.

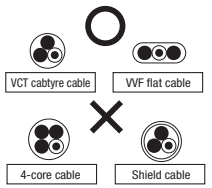
Electrical installation work must be performed by an electrical installation service provider qualified by a power provider of the country.
Electrical installation work must be executed according to the technical standards and other regulations applicable to electrical installations in the country.

- •Do not use any supply cord lighter than one specified in parentheses for each type below.
  - braided cord (code designation 60245 IEC 51),
  - ordinary tough rubber sheathed cord (code designation 60245 IEC 53)
  - flat twin tinsel cord (code designation 60227 IEC 41);

  Do not use anything lighter than polychloroprene sheathed flexible cord (code designation 60245 IEC57) for supply cords of parts of appliances for outdoor use.
- •Ground the unit. Do not connect the grounding wire to a gas pipe, water pipe, lightning rod or telephone grounding wire. If impropery grounded, an electric shock or malfunction may result.
- •A grounding wire must be connected before connecting the power cable. Provide a grounding wire longer than the power cable.
- •The installation of an impulse withstanding type earth leakage breaker is necessary. A failure to install an earth leakage breaker can result in an acccident such as an electric shock or a fire.



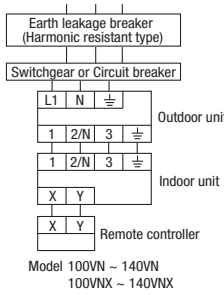
- •Do not turn on the power until the electrical work is completeted .
- •Do not use a condensive capacitor for power factor improvement under any circumstances. (It dose not improve power factor, while it can cause an abnormal overheat accident)
- •For power supply cables, use conduits.
- •Do not lay electronic control cables (remote control and signaling wires) and other cables together outside the unit. Laying them together can result in the malfunctioning or a failure of the unit due to electric noises.
- •Fasten cables so that may not touch the piping, etc.
- •When cables are connected, make sure that all electrical components within the electrical component box are free of loose connector coupling or terminal connection and then attach the cover securely. (Improper cover attachment can result in malfunctioning or a failure of the unit, if water penetrates into the box.)
- •Always use a three-core cable for an indoor-outdoor connecting cable. Never use a shield cable.
- ● Connect a pair bearing a common terminal number with an indoor-outdoor connecting wire.
- ● In cabling, fasten cables securely with cable clamps so that no external force may work on terminal connections.
- ● Grounding terminals are provided in the control box.



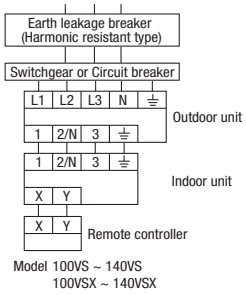
Power cable, indoor-outdoor connecting wires

● Always perform grounding system installation work with the power cord unplugged.

⚠ CAUTION Always use an earth leakage circuit breaker designed for inverter circuits to prevent a faulty operation.



Model 100VN ~ 140VN
100VNX ~ 140VNX



Model 100VS ~ 140VS
100VSX ~ 140VSX

Model	Power source	Power cable thickness(mm²)	MAX. over current (A)	Cable length (m)	Grounding wire thickness	Indoor-outdoor wire thickness × number
100VN～140VN	Single phase 3 wire 220-240V 50Hz 220V 60Hz	5.5	24	25	φ1.6mm	φ1.6mm x 3
100VNX						
125VNX,140VNX			26	23		
100VS～140VS	3 phase 4 wire 380V 50Hz	3.5	15	27		
100VSX～140VSX						

●The specifications shown in the above table are for units without heaters. For units with heaters, refer to the installation instructions or the construction instructions of the indoor unit.
●Switchgear or Circuit breaker capacity which is calculated from MAX. over current should be chosen along the regulations in each country.
●The cable specifications are based on the assumption that a metal or plastic conduit is used with no more than three cables contained in a conduit and a voltage drop is 2%. For an installation falling outside of these conditions, follow the internal cabling regulations. Adapt it to the regulation in effect in each country.

※At the connection with the duct type indoor unit.

Model	Power source	Power cable thickness(mm²)	MAX. over current (A)	Cable length (m)	Grounding wire thickness	Indoor-outdoor wire thickness × number
100VN,100VNX	Single phase 3 wire 220-240V 50Hz 220V 60Hz	5.5	25	24	φ1.6mm	φ1.6mm x 3
125VN			27	22		
140VN		8	28	32		
125VNX			29	31		
140VNX			30	30		
100VS,100VSX	3 phase 4 wire 380-415V 50Hz 380V 60Hz	3.5	16	26		
125VS,125VSX			18	23		
140VS,140VSX			19	21		

5. TEST RUN

⚠ WARNING
- Before conduct a test run, do not fail to make sure that the operation valves are closed.
- Turn on power 6 hours prior to a test run to energize the crank case heater.
- In case of the first operation after turning on power, even if the unit does not move for 30 minutes, it is not a breakdown.
- Always give a 3-minute or longer interval before you start the unit again whenever it is stopped.
- Removing the service panel will expose high-voltage live parts and high-temperature parts, which are quite dangerous. Take utmost care not to incur an electric shock or burns. Do not leave the unit with the service panel open.

} A failure to observe these instructions can result in a compressor breakdown.

⚠ CAUTION
- When you operate switches (SW3, SW5) for on-site setting, be careful not to touch a live part.
- You cannot check discharge pressure from the liquid operation valve charge port.
- The 4-way valve (20S) is energized during a heating operation.
- When power supply is cut off to reset the unit, give 3 or more minutes before you turn on power again after power is cut off. If this procedure is not observed in turning on power again, "Communication error between outdoor and indoor unit" may occur.

1) Test run method

(1) A test run can be initiated from an outdoor unit by using SW3-3 and SW3-4 for on-site setting.
(2) Switching SW3-3 to ON will start the compressor.
(3) The unit will start a cooling operation, when SW3-4 is OFF, or a heating operation, when SW3-4 is ON.
(4) **Do not fail to switch SW3-3 to OFF when a test run is completed.**

SW-3-3	SW-3-4	
ON	OFF	Cooling during a test run
	ON	Heating during a test run
OFF	—	Normal or After the test operation

2) Checking the state of the unit in operation

Use check joints provided on the piping before and after the four-way valve installed inside the outdoor unit for checking discharge pressure and suction pressure.
As indicated in the table shown on the right, pressure detected at each point will vary depending on whether a cooling or heating operation has been selected.

	Check joint of the pipe	Charge port of the gas operation valve
Cooling operation	Discharge pressure (High pressure)	Suction pressure (Low pressure)
Heating operation	Suction pressure (Low pressure)	Discharge pressure (High pressure)

3) Setting SW3-1, SW3-2, on-site

(1) Defrost control switching (SW3-1)
・When this switch is turned ON, the unit will run in the defrost mode more frequently.
・Set this switch to ON, when installed in a region where outdoor temperature falls below zero during the season the unit is run for a heating operation.
(2) Snow guard fan control (SW3-2)
・When this switch is turned on, the outdoor unit fan will run for 10 seconds in every 10 minutes, when outdoor temperature falls to 3℃ or lower and the compressor is not running.
・When the unit is used in a very snowy country, set this switch to ON.

4) Failure diagnosis in a test run

Error indicated on the remote control unit	Printed circuit board LED(The cycles of 5 seconds)		Failure event	Action
	Red LED	Green LED		
E34	Blinking once	Blinking continuously	Open phase	Check power cables for loose contact or disconnection
E40	Blinking once	Blinking continuously	63H1 actuation or operation with operation valves shut (occurs mainly during a heating operation)	1. Check whether the operation valves are open. 2. If an error has been canceled when 3 minutes have elapsed since a compressor stop, you can restart the unit by effecting Check Reset from the remote control unit.
E49	Blinking once	Blinking continuously	Low pressure error or operation with operation valves shut (occurs mainly during a cooling operation)	

● If an error code other than those listed above is indicated, refer to the wiring diagram of the outdoor unit and the indoor unit.

5) The state of the electronic expansion valve.

The following table illustrates the steady states of the electronic expansion valve.

	When power is turned on	When the unit comes to a normal stop		When the unit comes to an abnormal stop	
		During a cooling operation	During a heating operation	During a cooling operation	During a heating operation
Valve for a cooling operation	Complete shut position	Complete shut position	Full open position	Full open position	Full open position
Valve for a heating operation	Full open position	Full open position	Complete shut position	Full open position	Full open position

6) Heed the following on the first operation after turning on the circuit breaker.

This outdoor unit may start in the standby mode (waiting for a compressor startup), which can continue up to 30 minutes, to prevent the oil level in the compressor from lowering on the first operation after turning on the circuit breaker. If that is the case, do not suspect a unit failure.

Items to checkbefore a test run

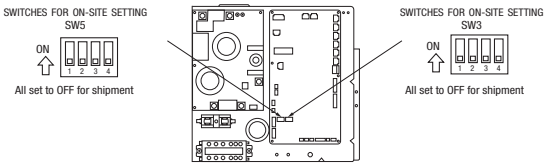
● When you leave the outdoor unit with power supplied to it, be sure to close the panel.

Item No.used in the installation manual	Item	Check item	Check
2	Refrigerant plumbing	If brazed, was it brazed under a nitrogen gas flow?	
		Were air-tightness test and vacuum extraction surely performed?	
		Are heat insulation materials installed on both liquid and gas pipes?	
		Are operation valves surely opened for both liquid and gas systems?	
		Have you recorded the additional refrigerant charge volume and refrigerant pipe length on the panel's label?	
4	Electric wiring	Is the unit free of cabling errors such as uncompleted connection, an absent or reversed phase?	
		Are properly rated electrical equipments used for circuit breakers and cables?	
		Doesn't cabling cross-connect between units, where more than one unit are installed?	
		Aren't indoor-outdoor signal wires connected to remote control wires?	
		Do indoor-outdoor connecting cables connect between the same terminal numbers?	
		Are either VCT cabtyre cables or WF flat cables used for indoor-outdoor connecting cables?	
		Does grounding satisfy the D type grounding (type III grounding) requirements?	
		Is the unit grounded with a dedicated grounding wire not connected to another unit's grounding wire?	
		Are cables free of loose screws at their connection points?	
		Are cables held down with cable clamps so that no external force works onto terminal connections?	
—	Indoor unit	Is indoor unit installation work completed?	
		Where a face cover should be attached onto an indoor unit, is the face cover attached to the indoor unit?	

Test run procedure

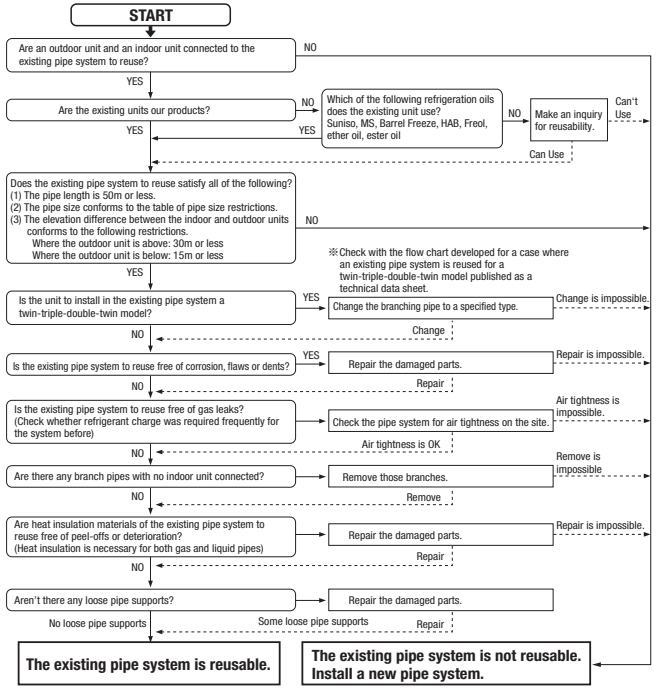
● Always carry out a test run and check the following in order as listed.

Turn	The contents of operation	Check
①	Open the gas side operation valve fully.	
②	Open the liquid side operation valve fully.	
③	Close the panel.	
④	Where a remote control unit is used for unit setup on the installation site, follow instructions for unit setup on the installation site with a remote control unit.	
⑤	SW3-3 ON / SW3-4 OFF: the unit will start a cooling operation.	
	SW3-3 ON / SW3-4 ON: the unit will start a heating operation.	
⑥	When the unit starts operation, press the wind direction button provided on the remote control unit to check its operation.	
⑦	Place your hand before the indoor unit's diffuser to check whether cold (warm) winds come out in a cooling (heating) operation.	
⑧	Make sure that a red LED is not blinking.	
⑨	When you complete the test run, do not forget to turn SW3-3 to the OFF position.	
⑩	Where options are used, check their operation according to the respective instruction manuals.	



6. UTILIZATION OF EXISTING PIPING.

Check whether an existing pipe system is reusable or not by using the following flow chart.



⚠ WARNING <Where the existing unit can be run for a cooling operation.>

Carry out the following steps with the excising unit (in the order of (1), (2), (3) and (4))

(1) Run the unit for 30 minutes for a cooling operation.
(2) Stop the indoor fan and run the unit for 3 minutes for a cooling operation (returning liquid)
(3) Close the liquid side operation valve of the outdoor unit and pump down (refrigerant recovery)
(4) Blow with nitrogen gas. ※ If discolored refrigeration oil or any foreign matters is discharged by the blow, wash the pipe system or install a new pipe system.
- For the flare nut, do not use the old one, but use the one supplied with the outdoor unit. Process a flare to the dimensions specified for R410A.
- **Turn on-site setting switch SW5-1** to the ON position. (Where the gas pipe size is ϕ19.05)

<Where the existing unit cannot be run for a cooling operation.>

Wash the pipe system or install a new pipe system.
- If you choose to wash the pipe system, contact our distributor in the area.

<Table of pipe size restrictions>

◎:Standard pipe size ○:Usable
△:Restricted to shorter pipe length limits ×:Not usable

Additional charging amount of refrigerant per 1m		0.06kg/m		0.08kg/m	
Pipe size	Liquid pipe	ϕ9.52	ϕ9.52	ϕ12.7	ϕ12.7
	Gas pipe	ϕ15.88	ϕ19.05	ϕ15.88	ϕ19.05
100VN 100VS	Usability	◎	○※1	△	△※1
	Maximum one-way pipe length	50	50	25	25
	Length covered without additional charge	30	30	15	15
125VN 125VS	Usability	◎	○※1	△	△※1
	Maximum one-way pipe length	50	50	25	25
	Length covered without additional charge	30	30	15	15
140VN 140VS	Usability	◎	○※1	△	△※1
	Maximum one-way pipe length	50	50	25	25
	Length covered without additional charge	30	30	15	15

Additional charging amount of refrigerant per 1m		0.02kg/m	0.06kg/m		0.08kg/m	
Pipe size	Liquid pipe	ϕ6.35	ϕ9.52	ϕ9.52	ϕ12.7	ϕ12.7
	Gas pipe	ϕ15.88	ϕ15.88	ϕ19.05	ϕ15.88	ϕ19.05
100VNX 100VSX	Usability	△	◎	○※1	△	△※1
	Maximum one-way pipe length	20	100	100	50	50
	Length covered without additional charge	10	30	30	15	15
125VNX 125VSX	Usability	△	◎	○※1	△	△※1
	Maximum one-way pipe length	20	100	100	50	50
	Length covered without additional charge	10	30	30	15	15
140VNX 140VSX	Usability	△	◎	○※1	△	△※1
	Maximum one-way pipe length	20	100	100	50	50
	Length covered without additional charge	10	30	30	15	15

<Pipe system after the branching pipe>

			After 1st branch ※4			After 2nd branch		
Additional charging amount of refrigerant per 1m			0.06kg/m			0.06kg/m		
Pipe size	Liquid pipe		ϕ9.52			ϕ9.52		
	Gas pipe		ϕ12.7	ϕ15.88	ϕ19.05※1	ϕ12.7	ϕ15.88	ϕ19.05※1
Model	Combination type	Combination of capacity						
100V	Twin	50+50	◎	○	×	—	—	—
125V	Twin	60+60	◎	○	×	—	—	—
140V	Twin	71+71	×	◎	○	—	—	—
	Triple A	50+50+50	◎	○	×	—	—	—
	Triple B	50+50+50	×	◎※5	○※5	◎	○	×

※1 Because of its insufficient pressure resistance, **turn the dip switch SW5-1** provided on the outdoor unit board to the ON position for ϕ19.05 × t1.0. (In the case of a twin-triple-double-twin model, this also applies to the case where ϕ19.05 × t1.0 is used in a pipe system after the first branching point.) However, you need not turn the dip switch SW5-1 to the ON position, if 1/2H pipes or pipes having 1.2 or thicker walls are used.

※2 When the main pipe length exceeds 40m, a significant capacity drop may be experienced due to pressure loss in the liquid pipe system. Use ϕ12.7 for the liquid main.

※3 Keep the total pipe length, not one-way pipe length, below the specified maximum pipe length.

※4 Piping size after branch should be equal or smaller than main pipe size.

※5 Piping size from first branch to indoor unit should be ϕ9.52 (Liquid) / ϕ12.7 (Gas).

- When refrigerant piping is shoter than 3m, reduce refrigerant by 1kg from factory charged volume.
- Any combinations of pipe sizes not listed in the table or marked with × in the table are not usable.

<The model types of existing units of which branching pipes are reusable.>

Models later than Type 8.
- FDC ＊＊＊ 8 □ □ □
- FDCP ＊＊＊ 8 □ □ □

The branching pipes used with models other than those listed above are not reusable because of their insufficient pressure resistance. Please use our genuine branching pipes for R410A.

- ＊＊＊ are numbers representing horsepower. □□□ is an alphanumeric letter.

Formula to calculate additional charge volume

Additional charge volume (kg) = {Main pipe length (m) − Length covered without additional charge shown in the table (m)} × Additional charge volume per meter of pipe shown in the table (kg/m) + Total length of branch pipes (m) × Additional charge volume per meter of pipe shown in the table (kg/m)

※ If you obtain a negative figure as a result of calculation, no additional refrigerant needs to be charged.
Example) When an 140V (single installation) is installed in a 20m long existing pipe system (liquid ϕ12.7, gas ϕ19.05), the quantity of refrigerant to charge additionally should be (20m-15m) x 0.08kg/m = 0.4 kg.

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10.4 Electric wiring work installation

Electrical wiring work must be performed by an electrician qualified by a local power provider according to the electrical installation technical standards and interior wiring regulations applicable to the installation site.

Security instructions

- **Read the "SAFETY PRECAUTIONS" carefully first of all and then strictly follow it during the installation work in order to protect yourself.**
- **The precautionary items mentioned below are distinguished into two levels, ⚠WARNING and ⚠CAUTION .**
  ⚠WARNING : Wrong installation would cause serious consequences such as injuries or death.
  ⚠CAUTION : Wrong installation might cause serious consequences depending on circumstances.
  Both mentions the important items to protect your health and safety so strictly follow them by any means.
- **The meanings of "Marks" used here are as shown on the right:**
  ⃠ Never do it under any circumstances. ❶ Always do it according to the instruction.
- **Accord with following items. Otherwise, there will be the risks of electric shock and fire caused by overheating or short circuit.**

⚠WARNING

- **Be sure to have the electrical wiring work done by qualified electrical installer, and use exclusive circuit.**
  Power source with insufficient capacity and improper work can cause electric shock and fire.
- **Use specified wire for electrical wiring, fasten the wiring to the terminal securely, and hold the cable securely in order not to apply unexpected stress on the terminal.**
  Loose connections or hold could result in abnormal heat generation or fire.
- **Arrange the electrical wires in the control box properly to prevent them from rising. Fit the lid of the services panel property.**
  Improper fitting may cause abnormal heat and fire.
- **Use the genuine optional parts. And installation should be performed by a specialist.**
  If you install the unit by yourself, it could cause water leakage, electric shock and fire.
- **Do not repair by yourself. And consult with the dealer about repair.**
  Improper repair may cause water leakage, electric shock or fire.
- **Consult the dealer or a specialist about removal of the air conditioner.**
  Improper installation may cause water leakage, electric shock or fire.
- **Turn off the power source during servicing or inspection work.**
  If the power is supplied during servicing or inspection work, it could cause electric shock and injury by the operating fan.
- **Shut off the power before electrical wiring work.**
  It could cause electric shock, unit failure and improper running.

⚠CAUTION

- **Perform earth wiring surely.**
  Do not connect the earth wiring to the gas pipe, water pipe, lightning rod and telephone earth wiring. Improper earth could cause unit failure and electric shock due to a short circuit.
- **Earth leakage breaker must be installed.**
  If the earth leakage breaker is not installed, it can cause electric shocks.
- **Make sure to install earth leakage breaker on power source line. (countermeasure thing to high harmonics.)**
  Absence of breaker could cause electric shock.
- **Use the circuit breaker of correct capacity. Circuit breaker should be the one that disconnect all poles under over current.**
  Using the incorrect one could cause the system failure and fire.
- **Do not use any materials other than a fuse of correct capacity where a fuse should be used.**
  Connecting the circuit by wire or copper wire could cause unit failure and fire.
- **Use power source line of correct capacity.**
  Using incorrect capacity one could cause electric leak, abnormal heat generation and fire.
- **Do not mingle solid cord and stranded cord on power source and signal side terminal block.**
  In addition, do not mingle difference capacity solid or stranded cord.
  Inappropriate cord setting could cause loosing screw on terminal block, bad electrical contact, smoke and fire.
- **Do not turn off the power source immediately after stopping the operation.**
  Be sure to wait for more than 5 minutes. Otherwise it could cause water leakage or breakdown.
- **Do not control the operation with the circuit breaker.**
  It could cause fire or water leakage. In addition, the fan may start operation unexpectedly and it may cause injury.

①Electrical Wiring Connection

- Use three-core cable as wiring between indoor and outdoor unit. As for detail, refer to "INSTALLATION MANUAL" of outdoor Unit.
- Set earth of D-type.
- Keep "remote controller line" and "power source line" away from each other on constructing of unit outside.
- Run the lines (power source, remote controller and "between indoor and outdoor unit") upper ceiling through iron pipe or other tube protection to avoid the damage by mouse and so on.
- Do not add cord in the middle of line route (of power source, remote controller and "between indoor and outdoor unit") on outside of unit. If connecting point is flooded, it could cause problem as for electric or communication. (In the case that it is necessary to set connecting point on the way, perform thorough waterproof measurement.)
- Do not connect the power source line [220V/240V/380V/415V] to signal side terminal block. Otherwise, it could cause failure.
- Screw the line to terminal block without any looseness, certainly.
- Do not turn on the switch of power source, before all of line work is done.
- Connection of the line ("Between indoor and outdoor unit", Earth and Remote controller)

①Remove lid of control box before connect the above lines, and connect the lines to terminal block according to number pointed on label of terminal block.
In addition, pay enough attention to confirm the number to lines, because there is electrical polarity except earth line. Furthermore, connect earth line to earth position of terminal block of power source.

②Install earth leakage breaker on power source line. In addition, select the type of breaker for inverter circuit as earth leakage breaker.

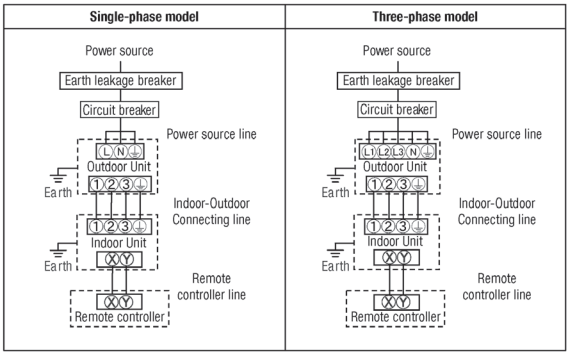
③If the function of selected earth leakage breaker is only for earth-fault protection, hand switch (switch itself and type "B" fuse) or circuit breaker is required in series with the earth leakage breaker.

④Install isolator or disconnect switch on the power supply wiring in accordance with the local codes and regulations.
The isolator should be set in the box with key to prevent touching by another person when servicing.

Cable connection for single unit installation

①As for connecting method of power source, select from following connecting patterns. In principle, do not directly connect power souce line to inside unit.
※As for exceptional connecting method of power souce, discuss with the power provider of the country with referring to technical documents, and follow its instruction.

②For cable size and circuit breaker selection, refer to the outdoor unit installation manual.



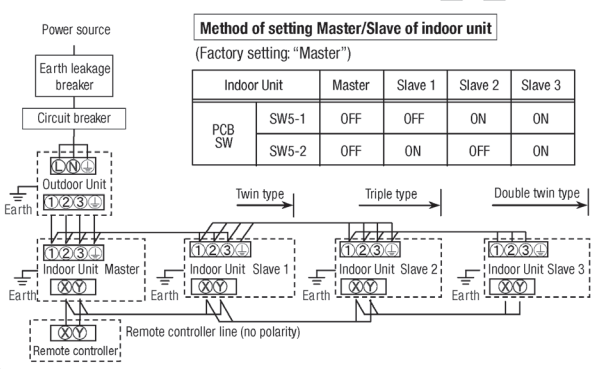
Cable connection for a V multi configuration installation

①Connect the same pairs number of terminal block "①, ②, and ③"and " Ⓧ and Ⓨ " between master and slave indoor units.

②Do the same address setting of all inside units belong to same refrigerant system by rotary switch SW2 on indoor unit's PCB (Printed circuit board).

③Set slave indoor unit as "slave 1" through "slave 3" by address switch SW5-1, 5-2 on PCB.

④When the AIR CON NO. button on the remote control unit is pressed after turning on the power, an indoor unit's address number will be displayed. Do not fail to confirm that the connected indoor unit's numbers are displayed on the remote control unit by pressing the ▲ or ▼ button.



Method of setting Master/Slave of indoor unit
(Factory setting: "Master")

Indoor Unit		Master	Slave 1	Slave 2	Slave 3
PCB SW	SW5-1	OFF	OFF	ON	ON
	SW5-2	OFF	ON	OFF	ON

②Remote Control, Wiring and functions

●DO NOT install it on the following places
①Places exposed to direct sunlight
②Places near heat devices
③High humidity places
④Hot surface or cold surface enough to generate condensation
⑤Places exposed to oil mist or steam directly.
⑥Uneven surface

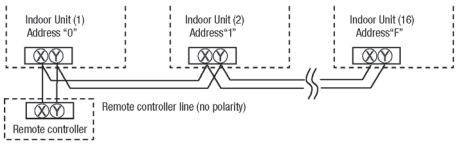
Installation and wiring of remote controller

①Install remote controller referring to the attached installation manual.
②Wiring of remote controller should use 0.3mm² ×2 core wires or cables.
The insulation thickness is 1mm or more. (on-site configuration)
③Maximum prolongation of remote control wiring is 600 m.
If the prolongation is over 100m, change to the size below.
But, wiring in the remote controller case should be under 0.5mm² . Change the wire size outside of the case according to wire connecting. Waterproof treatment is necessary at the wire connecting section. Be careful about contact failure.
100 - 200m ..... 0.5mm² × 2 cores
Under 300m ..... 0.75mm² × 2 cores
Under 400m ..... 1.25mm² × 2 cores
Under 600m ..... 2.0mm² × 2 cores
④Avoid using multi-core cables to prevent malfunction.
⑤Keep remote controller line away from earth (frame or any metal of building).
⑥Make sure to connect remote controller line to the remote controller and terminal block of indoor unit. (No polarity)

Control plural indoor units by a single remote controller.

①A remote controller can control plural indoor units (Up to 16).
In above setting, all plural indoor units will operate under same mode and temperature setting.
②Connect all indoor units with 2 core remote controller line.
③Set unique remote control communication address from "0" to "F" to each inside unit by the rotary switch SW2 on the indoor unit's PCB.

After a unit is energized, it is possible to display an indoor unit address by pressing AIR CON NO. button on the remote control unit. Press the ▲ or ▼ button to make sure that all indoor units connected are displayed in order.



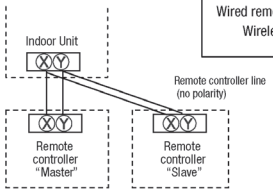
Confirming method of indoor units

When indoor unit address number is displayed on remote controller, pushing the (MODE) button to make the indoor unit with that number blow air (Display example:" I/U001 ≋ ")
Push the (MODE) button again to stop the operation.
However, this operation is invalid on the air-conditioning running.

Master/ slave setting when more than one remote control unit are used

A maximum of two remote control units can be connected to one indoor unit (or one group of indoor units.)
The air conditioner operation follows the last operation of the remote controller regardless of the master/slave setting of it.
Acceptable combination is "two (2) wired remote controllers", "one (1) wired remote controller and one (1) wireless kit" or "two (2) wireless kits".
Set SW1 (wired remote controller) or SW1-2 (wireless kit) to "Slave" for the slave remote control unit. It was factory set to "Master" for shipment.
Note:The setting "Remote control unit sensor enabled" is only selectable with the master remote control unit in the position where you want to check room temperature.

Switch	setting	contents
Wired remote controller: SW1 Wireless kit: SW1-2	M	Master remote controller
	S	Slave remote controller



③Trial operation

The method of trial cooling operation

Operate the remote control unit as follows.
1. Starting a cooling test run.
①Start the system by pressing the ON/OFF button.
②Select " ❄ (Cool)" with the (MODE) button.
③Press the TEST button for 3 seconds or longer.
The screen display will switch to: " ❄ TEST RUN ▼ "
④When the (SET) button is pressed while " ❄ TEST RUN ▼ " is indicated, a cooling test run will start.
The screen display will switch to " ❄ TEST RUN ".
2. Ending a cooling test run.
Pressing the ON/OFF button, the (TEMP) button or (MODE) button will end a cooling test run. (Cooling test run will end after 30 minutes pass.)
" ❄ TEST RUN " shown on the screen will go off.

Checking operation data

Operation data can be checked with remote control unit operation.
1. Press the CHECK button.
The display change " OPER DATA ▼ "
2. Press the (SET) button while " OPER DATA ▼ " is displayed.
3. When only one indoor unit is connected to remote controller, " DATA LOADING" is displayed (blinking indication during data loading).
Next, operation data of the indoor unit will be displayed. Skip to step 7.
4. When plural indoor units is connected, the smallest address number of indoor unit among all connected indoor unit is displayed.
[Example]:
"☝◆ SELECT I/U" (blinking 1 seconds)→
"I/U000 ▲" blinking.
5. Select the indoor unit number you would like to have data displayed with the ▲ ▼ button.
6. Determine the indoor unit number with the (SET) button.
(The indoor unit number changes from blinking indication to continuous indication)
" I/U000 " (The address of selected indoor unit is blinking for 2 seconds.)
↓
" DATA LOADING " (A blinking indication appears while data loaded.)
Next, the operation data of the indoor unit is indicated.
7. Upon operation of the ▲ ▼ button, the current operation data is displayed in order from data number 01.
The items displayed are in the above table.
※Depending on models, the items that do not have corresponding data are not displayed.
8. To display the data of a different indoor unit, press the AIR CON NO. button, which allows you to go back to the indoor unit selection screen.
9. Pressing the ON/OFF button will stop displaying data.
Pressing the (RESET) button during remote control unit operation will undo your last operation and allow you to go back to the previous screen.

Number	Data Item	
01	❄	(Operation Mode)
02	SET TEMP °C	(Set Temperature)
03	RETURN AIR °C	(Return Air Temperature)
04	SENSOR °C	(Remote Controller Thermistor Temperature)
05	THI-R1 °C	(Indoor Unit Heat Exchanger Thermistor / U Bend)
06	THI-R2 °C	(Indoor Unit Heat Exchanger Thermistor /Capillary)
07	THI-R3 °C	(Indoor Unit Heat Exchanger Thermistor /Gas Header)
08	I/U FANSPEED	(Indoor Unit Fan Speed)
09	DEMAND Hz	(Frequency Requirements)
10	ANSWER Hz	(Response Frequency)
11	I/U EEV P	(Pulse of Indoor Unit Expansion Valve)
12	TOTAL I/U RUN H	(Total Running Hours of The Indoor Unit)
21	OUTDOOR °C	(Outdoor Air Temperature)
22	THO-R1 °C	(Outdoor Unit Heat Exchanger Thermistor)
23	THO-R2 °C	(Outdoor Unit Heat Exchanger Thermistor)
24	COMP Hz	(Compressor Frequency)
25	HP MPa	(High Pressure)
26	LP MPa	(Low Pressure)
27	Td °C	(Discharge Pipe Temperature)
28	COMP BOTTOM °C	(Comp Bottom Temperature)
29	CT AMP	(Current)
30	TARGET SH °C	(Target Super Heat)
31	SH °C	(Super Heat)
32	TDSH °C	(Discharge Pipe Super Heat)
33	PROTECTION No.	(Protection State No. of The Compressor)
34	O/U FANSPEED	(Outdoor Unit Fan Speed)
35	63H1	(63H1 On/Off)
36	DEFROST	(Defrost Control On/Off)
37	TOTAL COMP RUN H	(Total Running Hours of The Compressor)
38	O/U EEV1 P	(Pulse of The Outdoor Unit Expansion Valve EEVC)
39	O/U EEV2 P	(Pulse of The Outdoor Unit Expansion Valve EEVH)

※Depending on outdoor unit model, there are data not shown.

◎If two (2) remote controllers are connected to one (1) inside unit, only the master controller is available for trial operation and confirmation of operation data. (The slave remote controller is not available.)

Trail operation of drain pump

Drain pump operation from remote control unit is possible. Operate a remote control unit by following the steps described below.
1. To start a forced drain pump operation.
①Press the TEST button for three seconds or longer.
The display will change " ❄ TEST RUN ▼ "
②Press the ▼ button once and cause " DRAIN PUMP ◆ " to be displayed.
③When the (SET) button is pressed, a drain pump operation will start.
Display: " ☝ TO STOP "
2. To cancel a drain pump operation.
①If either (SET) or ON/OFF button is pressed, a forced drain pump operation will stop. The air conditioning system will become OFF.

◎If two (2) remote controllers are connected to one (1) inside unit, only the master controller is available for trial operation and confirmation of operation data. (The slave remote controller is not available.)

④Function Setting by Remote Controller

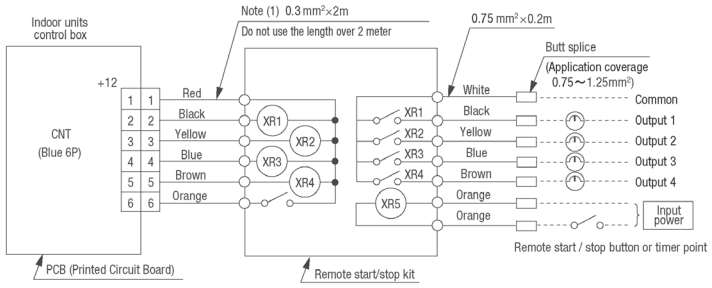
Refer to page 172.

⑤Control mode switching

●The control content of indoor units can be switched in following way. (☐ is the default setting)

Switch No.	Control Content	
SW2	Indoor unit address (0-Fh)	
SW5-1 SW5-2	Master/Slave Switching (plural /Slave unit Setting)	
SW6-1～4	Model capacity setting	
SW7－1	ON	Operation check, Drain motor test run
	☐OFF	Normal operation

⑥Function of CNT connector of indoor printed circuit board



●CNT connector (local) vendor model
Connector : Made by molex 5264 - 06
Terminals : Made by molex 5263T

●Function

Output 1	Operation output (there is output when unit is in operation.)
Output 2	Heating output (there is output when operation MODE is HEATING.)
Output 3	Compressor ON output (there is output when compressor is in operation.)
Output 4	Inspection output (there is output when unit is stopped by error.)
Input 5	Remote operation input (Volt-free contact) (Inputted to operate unit)

⑦Troubleshooting

The operation data is saved when the situation of abnormal operation happen, and the data can be confirmed by remote controller.
[Operating procedure]

1. Press the CHECK button.
   The display change " OPER DATA ▼ "
2. Once, press the ▼ button, and the display change
   " ERROR DATA ♟ ".
3. Press the ○ (SET) button and abnormal operation data mode is started.
4. When only one indoor unit is connected to remote controller, following is displayed.
   ①The case that there is history of abnormal operation.
   →Error code and " DATA LOADING " is displayed.
   [Example]: [E8] (ERROR CODE)
   " DATA LOADING " is displayed (blinking indication during data loading).
   Next, the abnormal operation data of the indoor unit will be displayed.
   Skip to step 8.
   ②The case that there is not history of abnormal operation.
   →" NO ERROR " is displayed for 3 seconds and this mode is closed.
5. When plural indoor units is connected, following is displayed.
   ①The case that there is history of abnormal operation.
   →Error code and the smallest address number of indoor unit among all connected indoor unit is displayed.
   [Example]: [E8] (ERROR CODE)
   " I/U000 ♟ " blinking
   ②The case that there is not history of abnormal operation.
   →Only address number is displayed.
6. Select the indoor unit number you would like to have data displayed with the ▲ ▼ button.
7. Determine the indoor unit number with the ○ (SET) button.
   [Example]: [E8] (ERROR CODE)
   " I/U000 ♟ " (The address of selected indoor unit is blinking for 2 seconds.)
   ↓
   [E8] "DATA LOADING " (A blinking indication appears while data loaded.)
   Next, the abnormal operation data is indicated.
   If the indoor unit doing normal operation is selected, NO ERROR " is displayed for 3 seconds and address of indoor unit is displayed.
8. By the ▲ ▼ button, the abnormal operation data is displayed.
   Displayed data item is based on ③Trial operation .
   ※Depending on models, the items that do not have corresponding data are not displayed.
9. To display the data of a different indoor unit, press the AIR CON No. button, which allows you to go back to the indoor unit slection screen.
10. Pressing the ①ON/OFF button will stop displaying data.

Pressing the ⁄ (RESET) button during remote control unit operation will undo your last operation and allow you to go back to the previous screen.

◎If two (2) remote controllers are connected to one (1) indoor unit, only the master controller is available for trial operation and confirmation of operation data. (The slave remote controller is not available.)

Error Code of indoor unit

Display on remote controller	LED on indoor circuit board		Content
	red (checking)	green (normal)	
Off	Off	Continuous blinking	Normal
	Off	Off	Fault on power, indoor power off or lack phase
E1	Off	Continuous blinking	Fault on the transmission between indoor circuit board and remote control
	Not sure	Not sure	Indoor computer abnormal
E5	Blinking twice	Continuous blinking	Fault on outdoor-indoor transmission
E6	Blinking once	Continuous blinking	Indoor heat exchange sensor interrupted or short-circuit
E7	Blinking once	Continuous blinking	Indoor air inhaling sensor broken or short-circuit
E8	Blinking once	Continuous blinking	The temperature of heat exchange abnormal
E9	Blinking once	Continuous blinking	Float SW actions (only with FS)
E10	Off	Continuous blinking	Excess number of remote controller connections
E14	Blinking for three times	Continuous blinking	The communication fault for master/slave indoor units
E16	Blinking once	Continuous blinking	Fan motor abnormal
E19	Blinking once	Continuous blinking	Configuration fault on running checking model
E28	Off	Continuous blinking	Remote controller sensor interrupted
Over E30	Off	Continuous blinking	Outdoor unit checking (outdoor circuit board LED checking)

10.5 Instructions for branching pipe set (DIS-WA1, WB1, TA1, TB1)

For R410A

PSB012D865 ⑨

⚠ WARNING / CAUTION

- This set is for R410A refrigerant.
- Select a branching pipe set correctly rated for the combined total capacity of connected indoor units and install it according to this manual.
  An improperly installed branching pipe set can cause degraded performance or an abnormal unit stop.
- Provide good heat insulation to the pipes by following instructions contained in this manual.
  Improper heat insulation can result in degraded performance or a water leak accident from condensation.
- Please make sure that only parts supplied as accessories or the manufacturer's approved parts are used in installing the unit, because a leak of refrigerant can result in a lack-of-oxygen accident, if it reaches a concentration beyond the tolerable limit.

This manual explains how to use a branching pipe set that is indispensable in connecting pipes for a twin/triple/W-twin configuration installation (system). For the details of piping work, unit installation work and electrical installation work, please refer to the installation manuals and installation guides supplied with your outdoor and indoor units.

1. Branching pipe set specifications

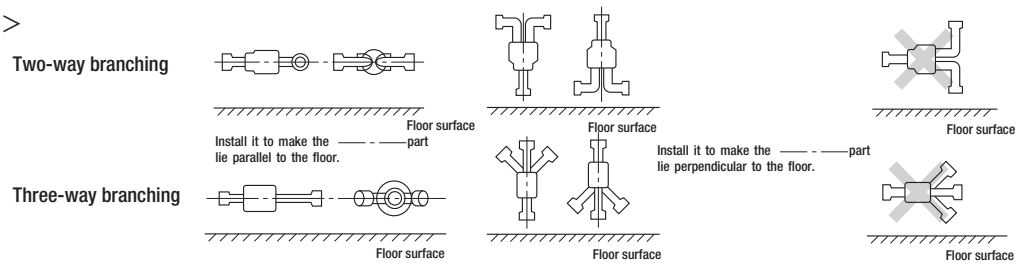
(1) Please make sure that you have chosen the right branching pipe set and the specifications of the parts contained in it by checking with the table below.
(2) Connect pipes as illustrated in the table below. The pipe from an outdoor unit must be brazed to the pipe connection port "①" and the pipes from indoor units to "②," "③" and "④."

Branching pipe set type	Supported outdoor/indoor unit combinations		Part lists			
	Outdoor unit model	Indoor unit model	Branching pipe set for a liquid pipe	Branching pipe set for a gas pipe	Different diameter pipe joint	Heat insulation material
DIS-WA1 (Two-way branching set)	3HP	1.5HP＋1.5HP	ID9.52 ① ② ③ ID9.52 ID9.52 1 piece	ID15.88 ① ② ③ ID15.88 ID15.88 1 piece	Joint A ID9.52 2 pieces Flare joint (for indoor unit side connection) Joint B OD15.88 2 pieces ID12.7	One each for liquid and gas
	4HP	2HP＋2HP				
		1.5HP＋2.5HP				
	5HP	2.5HP＋2.5HP				
		2HP＋3HP				
	6HP	3HP＋3HP				
		2HP＋4HP				
DIS-WB1 (Two-way branching set)	8HP	4HP＋4HP	ID9.52 ① ② ③ ID12.7 ID9.52 1 piece	ID15.88 ① ② ③ ID25.4 ID15.88 1 piece	Joint C OD12.7 1 piece ID9.52	One each for liquid and gas
		3HP＋5HP				
	10HP	5HP＋5HP				
DIS-TA1 (Three-way branching set)	6HP	2HP＋2HP＋2HP	ID9.52 ① ② ③ ④ ID9.52 1 piece	ID12.7 ① ② ③ ④ ID15.88 1 piece	Joint A ID9.52 3 pieces Flare joint (for indoor unit side connection)	One each for liquid and gas
DIS-TB1 (Three-way branching set)	8HP	3HP＋3HP＋3HP	ID9.52 ① ② ③ ④ ID9.52 1 piece	ID15.88 ① ② ③ ④ ID25.4 1 piece	Joint A ID9.52 2 pieces Flare joint (for indoor unit side connection) Joint B OD15.88 1 piece ID12.7 Joint D ID12.7 1 piece OD9.52	One each for liquid and gas

(3) To connect pipes for a Double Twin installation (involving 4 indoor units), please see 2-7. "Double Twin configuration."
(4) A branching pipe set must always be installed into the posture as illustrated in the drawing below.

ID stands for inner diameter and OD, outer diameter.

＜Posture to install into＞

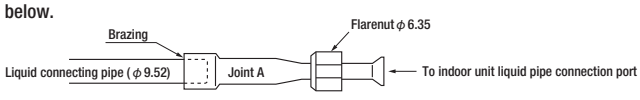


2. Pipe connecting procedure

Braze the different diameter pipe joint found in the set matching the connected outdoor and indoor unit capacities according to the instructions set out below.

⚠ CAUTION

In connecting an indoor unit of which capacity is 1.5HP, 2HP or 2.5HP, always use a φ9.52 liquid pipe to connect to the branching pipe (branching pipe – indoor unit).
In connecting to an indoor unit (liquid pipe side: φ6.35), use the different diameter pipe joint A supplied with the set and follow the procedure set out below.



2-1 DIS-WA1

Supported combinations		Liquid branching pipe	Gas branching pipe
Outdoor unit model	Indoor unit model		
3HP	1.5HP＋1.5HP	Flare joint (φ6.35) Joint A; Connecting pipe (φ9.52); ID9.52 ① ② ③; CAUTION Reference; Joint A; Flare joint (φ6.35)	ID12.7 Joint B ② ① ID15.88 ③ Joint B ID12.7
4HP	2HP＋2HP		
	1.5HP＋2.5HP		※A ID12.7 Joint B ② ① ID15.88 ③ Joint B ID12.7; ID12.7 Joint B ② ① ID15.88 ③ ID15.88
5HP	2.5HP＋2.5HP		※A ID12.7 Joint B ② ① ID15.88 ③ Joint B ID12.7; ID15.88 ② ① ID15.88 ③ ID15.88
	2HP＋3HP	Flare joint (φ6.35) Joint A; Connecting pipe (φ9.52); ID9.52 ① ② ③; CAUTION Reference	ID12.7 Joint B ② ① ID15.88 ③ ID15.88
6HP	3HP＋3HP	ID9.52 ② ① ID9.52 ③ ID9.52	ID15.88 ② ① ID15.88 ③ ID15.88
	2HP＋4HP	Flare joint (φ6.35) Joint A; Connecting pipe (φ9.52); ID9.52 ① ② ③; CAUTION Reference	ID12.7 Joint B ② ① ID15.88 ③ ID15.88

2-2 DIS-WB1

Supported combinations		Liquid branching pipe	Gas branching pipe
Outdoor unit model	Indoor unit model		
8HP	3HP＋5HP	ID9.52 ② ID9.52 ① Joint C ③ ID9.52	ID15.88 ② ① ID25.4 ③ ID15.88
	4HP＋4HP		
10HP	5HP＋5HP	ID9.52 ② ① ID12.7 ③ ID9.52	ID15.88 ② ① ID25.4 ③ ID15.88

2-3 DIS-TA1

Applicable to the difference in length of pipes after the branch being less than 3 m
* Connection is not allowed when the difference in length of pipes is larger than 3 m.

Supported combinations		Liquid branching pipe	Gas branching pipe
Outdoor unit model	Indoor unit model		
6HP	2HP＋2HP＋2HP	Connecting pipe (φ9.52) Joint A; ID9.52 ① ② ③ ④ Flare joint (φ6.35); Joint A; CAUTION Reference	ID12.7 ① ② ③ ④ ID15.88

2-4 DIS-TB1

Applicable to the difference in length of pipes after the branch being less than 3 m
* Connection is not allowed when the difference in length of pipes is larger than 3 m.

Supported combinations		Liquid branching pipe	Gas branching pipe
Outdoor unit model	Indoor unit model		
8HP	3HP＋3HP＋3HP	ID9.52 ② ① ID9.52 ③ ④	ID15.88 ① ② ③ ④ ID25.4

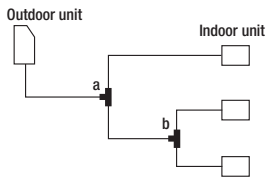
▷OLD Model list

model name
FDTA251R
FDENA251R
FDKNA251R
FDURA251R
FDUMA252R

Note When connect the indoor unit of an old model that is shown in the model list, use the joint supplied with the branch piping set like ※A

2-5. Triple type for same model/same capacity or different model/same capacity

When the difference in length of pipes after the branch is longer than 3 m and shorter than 10 m

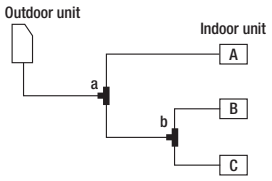


Outdoor unit model	Indoor unit model	Branching pipe	Branching pipe set type	Liquid branching pipe	Gas branching pipe
6HP	2HP＋2HP＋2HP	a	DIS-WA1	Flare joint (φ6.35) Joint A; Connecting pipe (φ9.52); ID9.52 ① ② ③; CAUTION Reference	ID12.7 Joint B ② ① ID15.88 ③ ID15.88
		b		Flare joint (φ6.35) Joint A; Connecting pipe (φ9.52); ID9.52 ① ② ③; CAUTION Reference; Joint A; Flare joint (φ6.35)	ID12.7 Joint B ② ① ID15.88 ③ Joint B ID12.7
8HP	3HP＋3HP＋3HP	a	DIS-WB1	ID9.52 ② ID9.52 ① Joint C ③ ID9.52	ID15.88 ② ① ID25.4 ③ ID15.88
		b	DIS-WA1	ID9.52 ② ① ID9.52 ③ ID9.52	ID15.88 ② ① ID15.88 ③ ID15.88

2-6. Triple type for same model/different capacity or different model/different capacity

Applicable to the difference in length of pipes after the branch being less than 3 m

* Connection is not allowed when the difference in length of pipes is larger than 3 m.



Connecting position

Outdoor unit model	Indoor unit model	A	B	C
10HP	2.5HP+2.5HP+5HP	5HP	2.5HP	2.5HP
	3HP+3HP+4HP	4HP	3HP	3HP

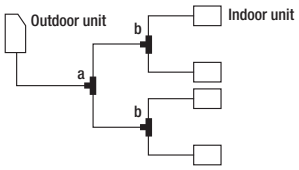
Outdoor unit model	Indoor unit model	Branching pipe	Branching pipe set type	Liquid branching pipe	Gas branching pipe
10HP	2.5HP+2.5HP+5HP	a	DIS-WB1	ID9.52 ② / ① ID12.7 / ③ ID9.52	ID15.88 ② / ① ID25.4 / ③ ID15.88
		b	DIS-WA1	Flare joint (φ6.35) Joint A / Connecting pipe (φ9.52) / ID9.52 ② ① ③ / ⚠ CAUTION Reference / Joint A Flare joint (φ6.35)	ID12.7 Joint B ② ① ID15.88 ③ Joint B ID12.7 / ※A: ID15.88 ② ① ID15.88 ③ ID15.88
10HP	3HP+3HP+4HP	a	DIS-WB1	ID9.52 ② / ① ID12.7 / ③ ID9.52	ID15.88 ② / ① ID25.4 / ③ ID15.88
		b	DIS-WA1	ID9.52 ② / ① ID9.52 / ③ ID9.52	ID15.88 ② / ① ID15.88 / ③ ID15.88

Note When connect the indoor unit of an old model that is shown in the model list, use the joint supplied with the branch piping set like※ A.

2-7. Double Twin type

Pipes should be connected as follows for a Double Twin installation (4 connected indoor units. The capacity of an outdoor unit available for this configuration is either 8HP or 10HP only):

Outdoor unit capacity	Indoor unit capacity
8HP	2HP×4 units
10HP	2.5HP×4 units



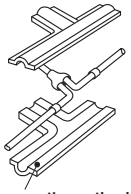
Branching pipe	Branching pipe set type	Outdoor unit model	Liquid branching pipe	Gas branching pipe
a	DIS-WB1	8HP	ID9.52 ② / ① ID9.52 / ③ ID9.52 / Joint C	ID15.88 ② / ① ID25.4 / ③ ID15.88
		10HP	ID9.52 ② / ① ID12.7 / ③ ID9.52	
b	DIS-WA1	8HP	Flare joint (φ6.35) Joint A / Connecting pipe (φ9.52) / ID9.52 ② ① ③ / ⚠ CAUTION Reference / Joint A Flare joint (φ6.35)	ID12.7 Joint B ② ① ID15.88 ③ Joint B ID12.7
		10HP		※A: ID15.88 ② ① ID15.88 ③ ID15.88 / ID12.7 Joint B ② ① ID15.88 ③ Joint B ID12.7

Note When connect the indoor unit of an old model that is shown in the model list, use the joint supplied with the branch piping set like※ A.

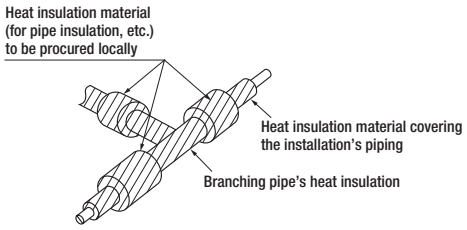
3. Heat insulation work

(1) Condensation can also occur on liquid pipes with this model. Please provide good heat insulation to both liquid and gas pipes.

(2) For the heat insulation of a branching pipe, always use the heat insulation material supplied with the set and provide heat insulation according to the instructions set out below.



1. It has an adhesive layer on the entire inner face. Remove a separator and wrap it around the branching pipe.



2. Apply a heat insulation material (to be procured locally) to the joint between the branching pipe's heat insulation and the heat insulation material covering the installation's piping as described above and wrap a tape over the gap shown as a hatched (///) area to complete dressing of the piping.

11. OPTION PARTS

11.1 Wireles kit

11.1.1 FDTC Series (RCN-TC-24W-ER)

PJA012D758 A

Notes:
Following functions of FDTC Type -D indoor unit series are not able to be set with this wireless remote controller (RCN-TC-24W-ER).
1. Individual flap control system
2. 4-fan speed setting (PHi/Hi/Me/Lo) →3-fan speed setting (Hi/Me/Lo)

⚠ WARNING

- Fasten the wiring to the terminal securely and hold the cable securely so as not to apply unexpected stress on the terminal.
  Loose connection or hold will cause abnormal heat generation or fire.
- Make sure the power supply is turned off when electric wiring work.
  Otherwise, electric shock, malfunction and improper running may occur.

⚠ CAUTION

- DO NOT install the wireless kit at the following places in order to avoid malfunction.
  (1) Places exposed to direct sunlight
  (2) Places near heat devices
  (3) High humidity places
  (4) Hot surface or cold surface enough to generate condensation
  (5) Places exposed to oil mist or steam directly
  (6) Uneven surface
  (7) Places affected by the direct airflow of the AC unit.
  (8) Places where the receiver is influenced by the fluorescent lamp (especially inverter type) or sunlight.
  (9) Places where the receiver is affected by infrared rays of any other communication devices
  (10) Places where some object may obstruct the communication with the remote controller
- DO NOT leave the wireless kit without the cover.
  In case the cover needs to be detached, protect the receiver with a packaging box or bag in order to keep it away from water and dust.

Note

- Instruct the customer how to operate it correctly referring to the instruction manual.
- For the installation method of the air conditioner itself, refer to the installation manual enclosed in the package.

① Accessories

Please make sure that you have all of the following accessories.

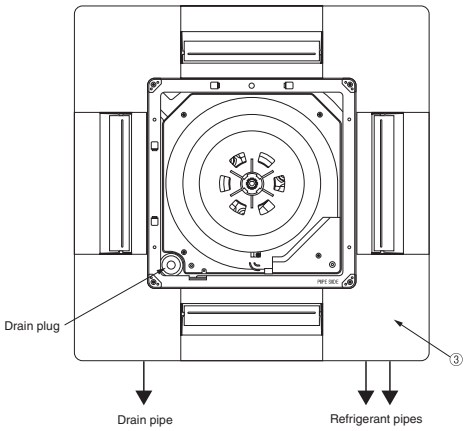
Receiver		1	Remote controller holder		1
Wireless remote controller		1	Wood screw for holder		2
Parts set		1	AAA dry cell battery (RO3)		2

② How to install the receiver

The receiver can be installed by replacing with a corner panel on the applicable decorative panel.

Preparation before installation

① Attach the decorative panel onto the air conditioner according to the installation manual for the panel.
② Remove the air return grille.
③ Remove a corner panel located on the refrigerant pipes side.
④ Remove two screws and detach the lid from the control box of the air conditioner.



Setting on site

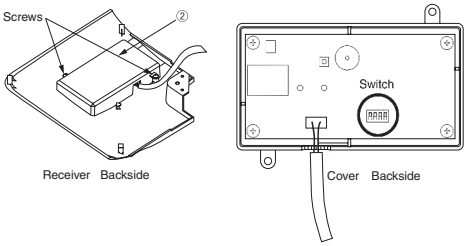
① PCB on the receiver has the following switches to set the functions. Default setting is shown with ☐ mark.

S W 1	Customized signal setting to avoid mixed communication	☐ ON : Normal OFF : Remote
S W 2	Receiver master/slave setting	☐ ON : Master OFF : Slave
S W 3	Buzzer valid/Invalid	☐ ON : Valid OFF : Invalid
S W 4	Auto restart	ON : Valid ☐ OFF : Invalid

<To change the settings>

② Remove the cover by unscrewing two screws from the back of receiver.
③ Change the setting by the switch on PCB.

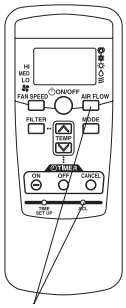
Default settings



④ When SW1 is turned to OFF position, change the corresponding remote controller setting as follows:

How to change the remote controller setting

Pressing ACL switch with AIR FLOW button kept pressing or inserting the batteries with pressing AIR FLOW button will customize the signal.



Radio interference prevention mode

Note

※ When the batteries are removed, the setting will return to the default setting.
Please make sure to reset it when the batteries are replaced.

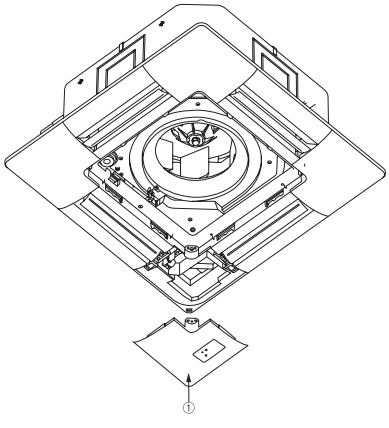
Caution

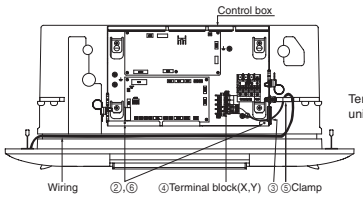
Instruct the customer to set the mentioned above when replacing the batteries.
(How to set is also mentioned in the user's manual attached on the air conditioner.)

Installation of the receiver

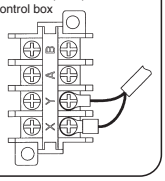
① Attach the receiver to the panel according to the panel installation manual.
② Remove two screws and detach the lid from the control box.
③ Put the wiring in the control box with other wiring as shown below.
④ Connect the wiring to the terminal block (X,Y) provided in the control box.(Non-polarized)
⑤ Fix the wiring with the clamp as shown below.
⑥ Reattach the control box lid with 2 screws removed.

※ Note: Make sure wires not to be pinched by any other parts like panel and control box.





Terminal block (X,Y) in the indoor unit control box

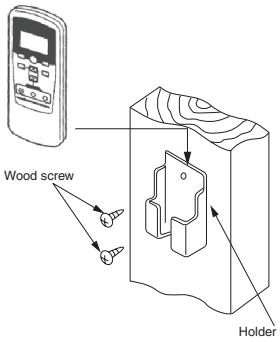


③ Remote controller

Installation of the controller holder

Caution

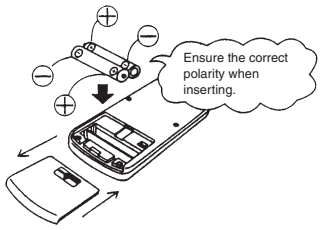
DO NOT install it on the following places
1. Places exposed to direct sunlight
2. Places near heat devices
3. High humidity places
4. Hot surface or cold surface enough to generate condensation
5. Places exposed to oil mist or steam directly.
6. Uneven surface



Installation tips for the remote controller holder
- Adjust and keep the holder upright
- Tighten the screw to the end to avoid scratching the remote controller.
- DO NOT attach the holder on plaster wall.

How to insert batteries

① Detach the back lid.
② Insert the batteries. (two AAA batteries)
③ Reattach the back lid.

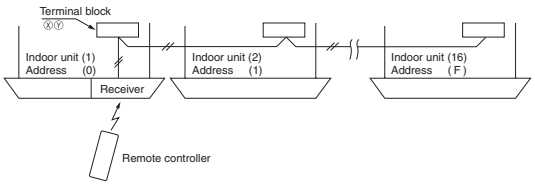


Control plural indoor units with one remote controller

Up to 16 indoor units can be connected.
① Connect the XY terminal with 2-core wire. As for the size, refer to the following note.
② For Single packaged air conditioner series, set the indoor unit address with SW2 on the indoor unit PCB from [0] to [F] so as not to duplicate.

Restrictions on the thickness and length of wire
(Maximun total extension 600m.)

Standard	Within 100m x 0.3 mm^2
	Within 200m x 0.5 mm^2
	Within 300m x 0.75mm^2
	Within 400m x 1.25mm^2
	Within 600m x 2.0 mm^2



③ For VRF series, set the indoor unit address with SW1, SW2 and SW5-2 on the indoor unit PCB from [000] to [127] so as not to duplicate.

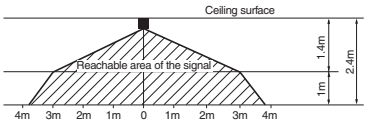
Master/Slave setting when using plural remote controllers

Up to two receivers can be installed in one indoor unit group.
When two receivers are used, it is necessary for a receiver to turn OFF SW2 on the receiver PCB to set it as slave.

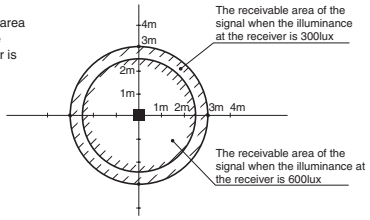
(For the method of switching, please see **Setting on site** in the section of **② How to install the receiver** in this manual.)

Wireless remote controller's operable area

① Standard reachable area of the signal
[condition] Illuminance at the receiver: 300lux
(when no lighting is installed within 1m of the receiver in an ordinary office.)



② Correlation between illuminance at the receiver and reachable area of the signal in a plain view.
The drawing in the right shows the correlation between the reachable area of the signal and illuminance at the receiver when the remote controller is operated at 1m high under the condition of ceiling height of 2.4m.



③ Installation tips when several receivers are installed close
Minimum distance between the indoor units which can avoid cross communication is 5m under the condition of 300lux of illuminance at the receiver.
(When no lighting is installed within 1m of the receiver in an ordinary office)

④ How to disable the Auto mode operation

VRF series (except heat recovery 3-pipe systems) cannot be operated in Auto mode.
Make sure to set the remote controller for the models so as not to be able to choose Auto mode.

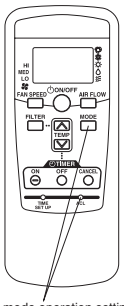
Pressing ACL switch with MODE button kept pressing or inserting the batteries with pressing MODE button will make auto mode operation.

Note

※ When the batteries are removed, the setting will return to the default setting (Auto mode is valid).

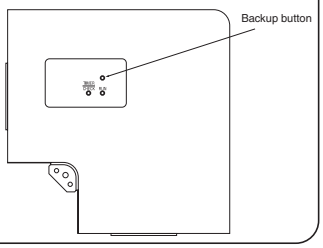
Caution

Instruct the customer to set the mentioned above when replacing the batteries. (How to set is also mentioned in the user's manual attached on the air conditioner.)



⑤ Backup button

A Backup button is provided on the receiver. Even when the operation from the wireless remote controller is not possible (due to flat batteries, controller lost, or controller failure), still it possible to operate as temporary means. Press the button directly when operating it.
(1) The air conditioner starts the operation with the condition of Auto mode, 23˚C of set point, High fan speed and horizontal louver position.
(2) The air conditioner stops the operation when the button is pressed when in operation.



⑥ Cooling test run operation

- After safety confirmation, turn on the power.
- Transmit a cooling operation command with wireless remote controller, while the backup button on the receiver is pressed.
- If the backup button on the receiver is pressed during a test run, it will end the test run.
- If you cannot operate the unit properly during a test run, please check by consulting with inspection guides on the wiring diagram of outdoor units.

⑦ How to read the two-digit display

On the receiver of a wireless kit, a two-digit (7-segment) display is provided.
(1) An indication will be displayed for one hour after power on.
(2) An indication will be displayed for 3.5 seconds after transmitting a "STOP" command from the wireless remote controller or the operation of the backup button to stop the unit.
(3) An indication appearing in (1) or (2) above will go off as soon as the unit starts operation.
(4) When there are no error records to indicate, addresses of all the connected units are displayed.
(5) When there are some error records remaining, the error records are displayed.
(6) Error records can be cleared by transmitting a "STOP" command from the wireless remote controller, while the backup button is pressed.

11.1.2 FDT Series (RCN-T-36W-E)

Notes:
Following functions of FDT Type -D indoor unit series are not able to be set with this wireless remote controller (RCN-T-36W-E).
1. Individual flap control system
2. 4-fan speed setting (PHi/Hi/Me/Lo) →3-fan speed setting (Hi/Me/Lo)

PJF012D010 A

⚠ WARNING

- Fasten the wiring to the terminal securely and hold the cable securely so as not to apply unexpected stress on the terminal.
  Loose connection or hold will cause abnormal heat generation or fire.
- Make sure the power supply is turned off when electric wiring work.
  Otherwise, electric shock, malfunction and improper running may occur.

⚠ CAUTION

- DO NOT install the wireless kit at the following places in order to avoid malfunction.
  (1) Places exposed to direct sunlight
  (2) Places near heat devices
  (3) High humidity places
  (4) Hot surface or cold surface enough to generate condensation
  (5) Places exposed to oil mist or steam directly
  (6) Uneven surface
  (7) Places affected by the direct airflow of the AC unit.
  (8) Places where the receiver is influenced by the fluorescent lamp (especially inverter type) or sunlight.
  (9) Places where the receiver is affected by infrared rays of any other communication devices
  (10) Places where some object may obstruct the communication with the remote controller
- DO NOT leave the wireless kit without the cover.
  In case the cover needs to be detached, protect the receiver with a packaging box or bag in order to keep it away from water and dust.

Attention

- Instruct the customer how to operate it correctly referring to the instruction manual.
- For the installation method of the air conditioner itself, refer to the installation manual enclosed in the package.

① Accessories

Please make sure that you have all of the following accessories.

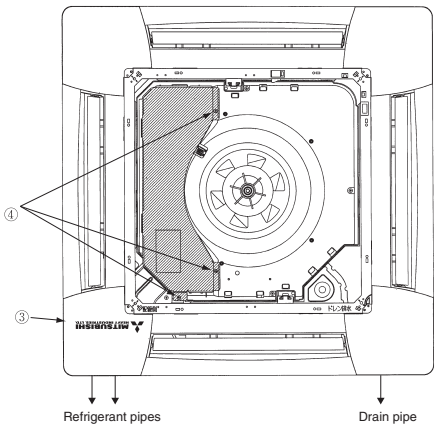
Receiver		1	Remote controller holder		1
Wireless remote controller		1	Wood screw for holder		2
Parts set		1	AAA dry cell battery (RO3)		2

② How to install the receiver

The receiver can be installed by replacing with a corner panel on the applicable decorative panel.

Preparation before installation

① Attach the decorative panel onto the air conditioner according to the installation manual for the panel.
② Remove the air return grille.
③ Remove a corner panel located on the refrigerant pipes side.
④ Remove three screws and detach the cover (indicated as shadowed area) from the control box of the air conditioner.



Setting on site

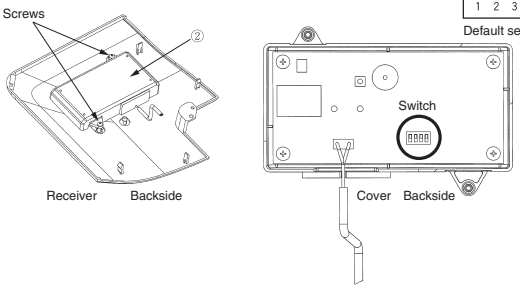
① PCB on the receiver has the following switches to set the functions. Default setting is shown with ☐ mark.

S W 1	Customized signal setting to avoid mixed communication	☐ ON : Normal OFF : Remote
S W 2	Receiver master/slave setting	☐ ON : Master OFF : Slave
S W 3	Buzzer valid/Invalid	☐ ON : Valid OFF : Invalid
S W 4	Auto restart	ON : Valid ☐ OFF : Invalid

<To change the settings>

② Remove the cover by unscrewing two screws from the back of receiver.
③ Change the setting by the switch on PCB.

Default settings



④ When SW1 is turned to OFF position, change the corresponding remote controller setting as follows:

How to change the remote controller setting

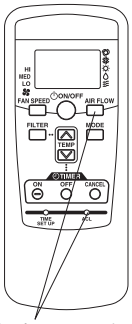
Pressing ACL and AIR FLOW button at the same time or inserting the batteries with pressing AIR FLOW button will customize the signal.

Note

※ When the batteries are removed, the setting will return to the default setting.
Please make sure to reset it when the batteries are replaced.

Caution

Instruct the customer to set the mentioned above when replacing the batteries.
(How to set is also mentioned in the user's manual attached on the air conditioner.)

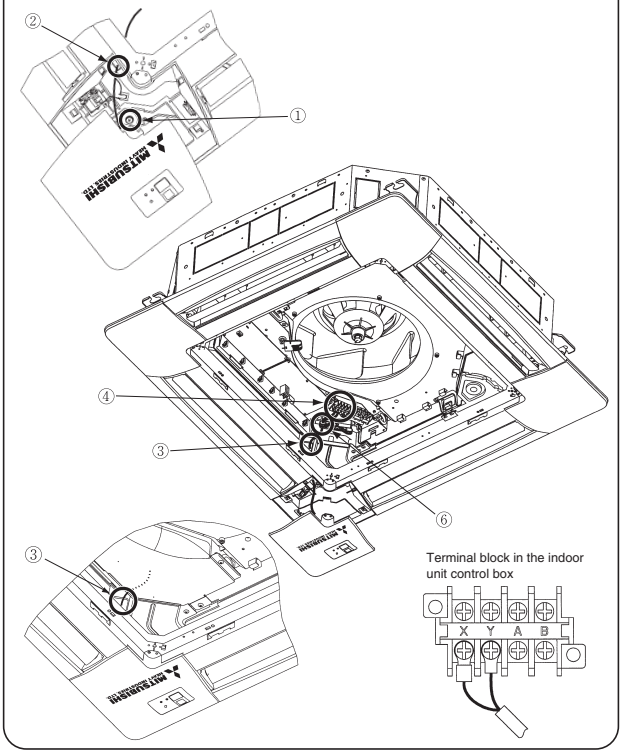


Radio interference prevention mode

Installation of the receiver

① Loosen the bolts which fix the panel and make a gap between the panel and the indoor unit
② Put the wiring of the receiver through the opening.
③ Put the wiring on the notch on the control box so as not to be pinched by the control box and lid as shown below.
④ Connect the wiring to the terminal block provided in the control box. (Non- polarized)
⑤ Attach the receiver to the panel according to the panel installation manual.
⑥ Fix the wiring with the clamp so that the wiring do not contact the edge of control box's metal sheet.
⑦ Reattach the control box lid with 3 screws removed.

※ Note: Make sure the wires not to be pinched by any other parts like panel, control box and indoor unit.



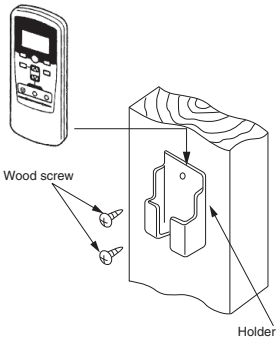
Terminal block in the indoor unit control box

③ Remote controller

Installation of the controller holder

Caution

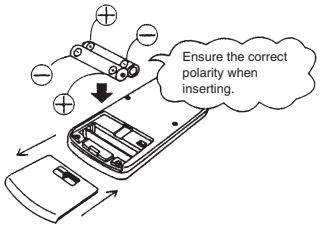
DO NOT install it on the following places
1. Places exposed to direct sunlight
2. Places near heat devices
3. High humidity places
4. Hot surface or cold surface enough to generate condensation
5. Places exposed to oil mist or steam directly.
6. Uneven surface



Installation tips for the remote controller holder
- Adjust and keep the holder upright
- Tighten the screw to the end to avoid scratching the remote controller.
- DO NOT attach the holder on plaster wall.

How to insert batteries

① Detach the back lid.
② Insert the batteries. (two AAA batteries)
③ Reattach the back lid.

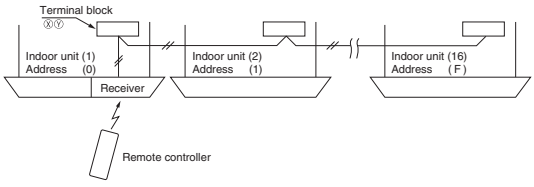


Control plural indoor units with one remote controller

Up to 16 indoor units can be connected.
① Connect the XY terminal with 2-core wire. As for the size, refer to the following note.
② For Packaged air conditioner series, set the indoor unit address with SW2 on the indoor unit PCB from [0] to [F] so as not to duplicate.

Restrictions on the thickness and length of wire
(Maximun total extension 600m.)

Standard	Within 100m x 0.3 mm²
	Within 200m x 0.5 mm²
	Within 300m x 0.75mm²
	Within 400m x 1.25mm²
	Within 600m x 2.0 mm²



③ For VRF series, set the indoor unit address with SW1, SW2 and SW5-2 on the indoor unit PCB from [000] to [127] so as not to duplicate.

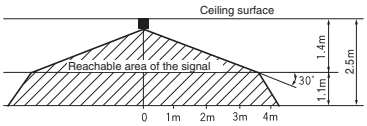
Master/Slave setting when using plural remote controllers

Up to two receivers can be installed in one indoor unit group.
When two receivers are used, it is necessary for a receiver to turn OFF SW2 on the receiver PCB to set it as slave.

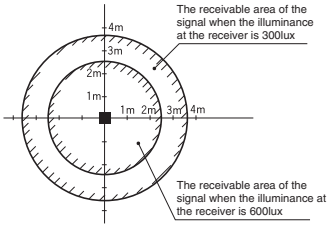
(For the method of switching, please see **Setting on site** in the section of **② How to install the receiver** in this manual.)

Wireless remote controller's operable area

① Standard reachable area of the signal
[condition] Illuminance at the receiver: 300lux
(when no lighting is installed within 1m of the receiver in an ordinary office.)



② Correlation between illuminance at the receiver and reachable area of the signal in a plain view.
The drawing in the right shows the correlation between the reachable area of the signal and illuminance at the receiver when the remote controller is operated at 1.1m high under the condition of ceiling height of 2.5m. When the illuminance becomes double, the area is narrowed down to two thirds.



③ Installation tips when several receivers are installed close
Minimum distance between the indoor units which can avoid cross communication is 5m under the condition of 300lux of illuminance at the receiver.
(When no lighting is installed within 1m of the receiver in an ordinary office)

④ How to disable the Auto mode operation

VRF system (except heat recovery 3-pipe systems) cannot be operated in Auto mode.
Make sure to set the remote controller for the models so as not to be able to choose Auto mode.

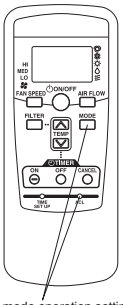
Pushing ACL and MODE button at the same time or inserting the batteries with pressing MODE button will make auto mode operation.

Attention

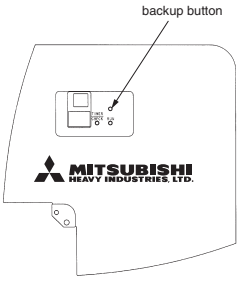
※ When the batteries are removed, the setting will return to the default setting (Auto mode is valid).

Caution

Instruct the customer to set the mentioned above when replacing the batteries. (How to set is also mentioned in the user's manual attached on the air conditioner.)



⑤ Backup button



A Backup button is provided on the receiver.
Even when the operation from the wireless remote controller is not possible (due to flat batteries, controller lost, or controller failure), still it possible to operate as temporary means. Press the button directly when operating it.
(1) The air conditioner starts the operation with the condition of Auto mode, 23˚C of set point, High fan speed and horizontal louver position.
(2) The air conditioner stops the operation when the button is pressed when in operation.

⑥ Cooling test run operation

- After safety confirmation, turn on the power.
- Transmit a cooling operation command with wireless remote controller, while the backup button on the receiver is pressed.
- If the backup button on the receiver is pressed during a test run, it will end the test run.
- If you cannot operate the unit properly during a test run, please check by consulting with inspection guides on the wiring diagram of outdoor units.

⑦ How to read the two-digit display

On the receiver of a wireless kit, a two-digit (7-segment) display is provided.
(1) An indication will be displayed for one hour after power on.
(2) An indication will be displayed for 3.5 seconds after transmitting a "STOP" command from the wireless remote controller or the operation of the backup button to stop the unit.
(3) An indication appearing in (1) or (2) above will go off as soon as the unit starts operation.
(4) When there are no error records to indicate, addresses of all the connected units are displayed.
(5) When there are some error records remaining, the error records are displayed.
(6) Error records can be cleared by transmitting a "STOP" command from the wireless remote controller, while the backup button is pressed.

11.1.3 FDEN Series (RCN-E1R)

PFA012D620 a

Notes:
Following functions of FDEN Type -D indoor unit series are not able to be set with this wireless remote controller (RCN-E1R).
1. Flap control system
2. 4-fan speed setting (PHi/Hi/Me/Lo) →3-fan speed setting (Hi/Me/Lo)

⚠ WARNING

- Fasten the wiring to the terminal securely and hold the cable securely so as not to apply unexpected stress on the terminal. Loose connection or hold will cause abnormal heat generation or fire.
- Make sure the power supply is turned off when electric wiring work. Otherwise, electric shock, malfunction and improper running may occur.

⚠ CAUTION

- Install a receiver unit where it is not exposed to direct sunrays or intense light from lighting fixtures.

① Accessories

Please make sure that you have all of the following accessories.

Remoto controller holder	AAA dry cell battery (RO3)	Wood screw for holder	Wireless remote controller
			
1	2	2	1

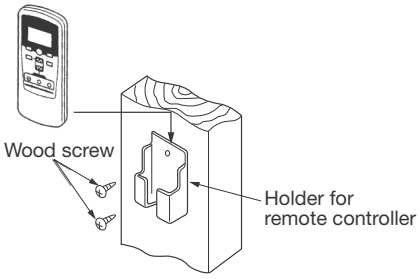
② Installation of the controller holder

⚠CAUTION DO NOT install it on the following places.

1. Places exposed to direct sunlight
2. Hot surface or cold surface enough to generate condensation
3. Places near heat devices
4. Places exposed to oil mist or steam directly.
5. High humidity places
6. Uneven surface

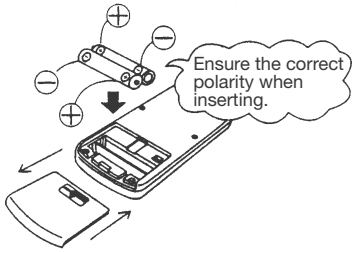
Installation tips for the remote controller holder

- Adjust and keep the holder up right.
- Tighten the screw to the end to avoid scratching the remote controller.
- DO NOT attach the holder on plaster wall.



How to insert batteries

① Detach the back lid.
② Insert the batteries. (two AAA batteries)
③ Reattach the back lid.



③ FDEN

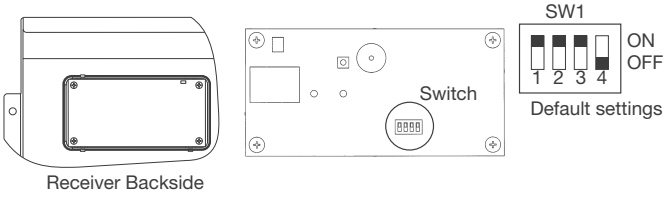
Setting on site

PCB on the receiver has the following switches to set the function.
Default setting is shown with ☐ mark.

SW1	Prevents interference during plural setting	ON : Normal (1ch) OFF : Customized (2ch)
SW2	Receiver master/slave setting	ON : Master OFF : Slave
SW3	Buzzer valid/Invalid	ON : Valid OFF : Invalid
SW4	Auto restart	ON : Valid OFF : Invalid

To change setting

1. Remove the front panel.
2. Remove four screws located on the back of the receiver and detach the board.
3. Change the setting by the switch on PCB.



4. When switch 1 is turned to off position, change the wireless remote controller setting. (For the method of changing the setting, refer to Setting to avoid mixed communication on page 4)
Refer to Wireless remote controller unit operation distance of ⑥ FDEN in case of plural setting.

Master/Slave setting when using plural remote controllers

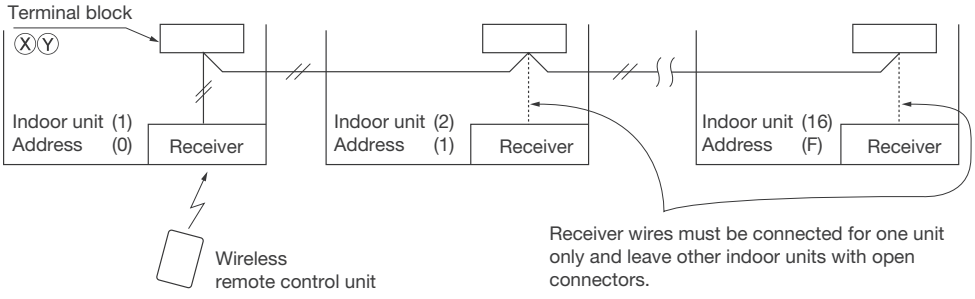
Up to two receiver or wired remote controller can be installed in one indoor unit group.
When two receivers or wired remote controller are used, it is necessary to change SW on the PCB to set it as slave.

Control plural indoor units with one remote controller

Up to 16 indoor units can be connected.
① Connect indoor units with each other with 2-core wires. As for size, refer to the following note.
② The receiver wires must be connected only with the indoor unit that will be operated by the remote controller directly.
③ Set the indoor unit address with SW2 on the indoor unit PCB from [0] to [F] so as not to duplicate.

Restrictions on the thickness and length of wire
(Maximun total extension 600m.)

Standard	Within 100m x 0.3 mm²
	Within 200m x 0.5 mm²
	Within 300m x 0.75 mm²
	Within 400m x 1.25 mm²
	Within 600m x 2.0 mm²



※ATTENTION

In a system configured as shown above, up to two receivers are usable. If two receivers are used, it is necessary to designate one of them as a slave by setting SW2. (For the method of changing the setting, refer to Setting on site .) Since other receivers are not usable, do not couple the connectors for them. (Unless the connector is coupled for a receiver, the LED will not be able to make any indication)

③ FDEN (continued)

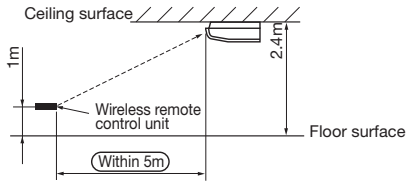
Wireless remote controller unit operation distance

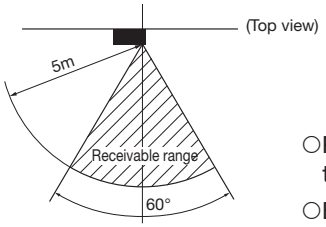
① Standard signal receiving range

[Condition]

Illuminance at the receiver area: 360 lux.

(When no lighting fixture is located within 1m of indoor unit in an ordinary office)





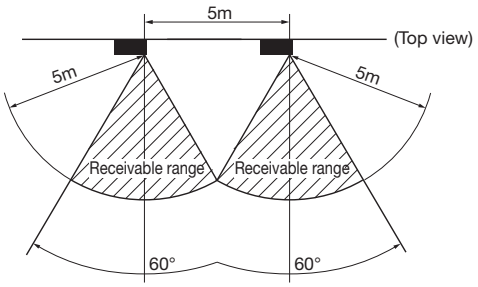
② Points for attention in connecting a plural number of indoor units

[Condition]

Illuminance at the receiver area: 360 lux.

(When no lighting fixture is located within 1m of indoor unit in an ordinary office)

When the remote control unit is used with the aforementioned interference-prevention setting, a minimum distance guaranteeing the prevention of unintended unit responses is 5m.



○Please operate remote control unit switches with the unit faced correctly toward the indoor unit's receiver section.

○Effective operation distance can vary with the luminance around the receiver and the reflection from walls of the room.

○When the receiver is exposed to intensive light such as from the direct sun or a strong light, it may become operable only from a short distance or unable to receive signals at all.

Backup button

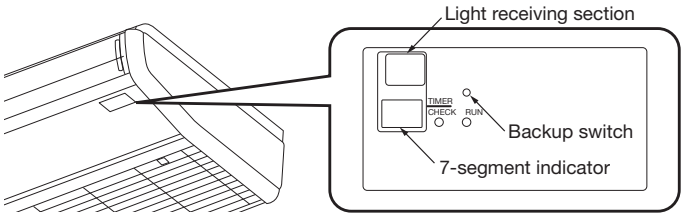
A backup switch is provided on the receiver section of the panel surface.

When operation from the wireless remote control unit is not possible (due to flat batteries, a mislaid unit, a unit failure), you can use it as an emergency means. You should operate this switch manually.

(1) If pressed while the air conditioner is in a halt, it will cause the air conditioner to start operation in the automatic mode.

Wind speed: Hi fan, Temperature setting: 23°C, Louver: horizontal

(2) If pressed while the air conditioner is in operation, it will stop the air conditioner.



Cooling test run operation

- After safety confirmation, turn on the power.
- Transmit a cooling operation command with the wireless remote control unit, while the backup switch on the receiver is depressed.
- If the backup switch on the receiver is pressed during a test run, it will end the test run.

※If you cannot operate the unit properly during a test run, please check wiring by consulting with inspection guides.

③ FDEN (continued)

How to read the two-digit display

A two-digit indicator (7-segment indicator) is provided on the receiver section.

(1) An indication will be displayed for one hour after power on.
(2) An indication appears for 3.5 seconds when a “Stop” command is sent from the wireless remote control unit while the air conditioner is not running.
(3) An indication appearing in (1) or (2) above will go off as soon as the unit starts operation.
(4) When there are no error records to indicate, addresses are displayed for all of the connected units.
(5) When there are some error records remaining, the error records are displayed.
(6) Error records can be cleared by transmitting a “Stop” command from the wireless remote control unit, while the backup switch is depressed.

④ Remote controller

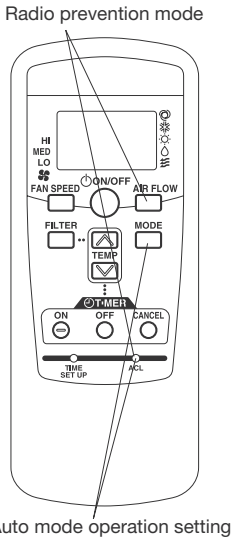
Setting to avoid mixed communication

Pressing ACL and AIR FLOW button at the same time or inserting the batteries with pressing AIR FLOW button will customize the signal.

Setting to disable the Auto mode operation

VRF system (except heat recovery 3-pipe system) cannot be operated in Auto mode.
Make sure to set the remote controller for the models so as not to be able to choose Auto mode.

Pushing ACL and MODE button at the same time or inserting the batteries with pressing MODE button will make auto mode operation.



※**ATTENTION**

When the batteries are removed, the setting will return to the default setting.
Please make sure to reset it when the batteries are replaced.

⚠**Caution**

Instruct the customer to set the mentioned above when replacing the batteries.
(How to set is also mentioned in the user’s manual attached on the air conditioner.)

11.1.4 FDUM,FDU Series (RCN-KIT3-E)

Notes:
Following functions of FDUM Type -D indoor unit series are not able to be set with this wireess remote controller (RCN-KIT3-E).
1. 4-fan speed setting (PHi/Hi/Me/Lo) →3-fan speed setting (Hi/Me/Lo)

Read this manual together with the installation manual attached to the air conditioner. PJZ012D060A

⚠ WARNING

- Fasten the wiring to the terminal securely and hold the cable securely so as not to apply unexpected stress on the terminal. Loose connection or hold will cause abnormal heat generation or fire.
- Make sure the power supply is turned off when electric wiring work. Otherwise, electric shock, malfunction and improper running may occur.

⚠ CAUTION

- DO NOT install the wireless kit at the following places in order to avoid malfunction.
  (1)Places exposed to direct sunlight
  (2)Places near heat devices
  (3)High humidity places
  (4)Hot surface or cold surface enough to generate condensation
  (5)Places exposed to oil mist or steam directly
  (6)Uneven surface
  (7)Places affected by the direct airflow of the AC unit.
  (8)Places where the receiver is influenced by the fluorescent lamp (especially in verter type) or sunlight.
  (9)Places where the receiver is affected by infrared rays of any other communication devices.
  (10)Places where some object may obstruct the communication with the remote controller
- DO NOT leave the wireless kit without the cover. In case the cover needs to be detached, protect the receiver with a packaging box or bag in order to keep it away from water and dust.

Attention

- Instruct the customer how to operate it correctly referring to the instruction manual.
- User's manual of a wireless remote controller is attached to a indoor unit or a outside unit.
- Read this together with a manual attached to this kit.

① Accessories

Please make sure that you have all of the following accessories.

① Receiver	1
② Wiring (3m)	1
③ Parts set (A)	1
④ Parts set (B)	1
⑤ Parts set (C)	1
⑥ Wireless remote controller	1
⑦ User's manual	1

① Remote controller holder	1
② Screw for holder	2
③ AAA dry cell battery (R03)	2

① Screw for receiver	2
② Fixing band	1
③ Clamp	5
④ Screw for clamp	5

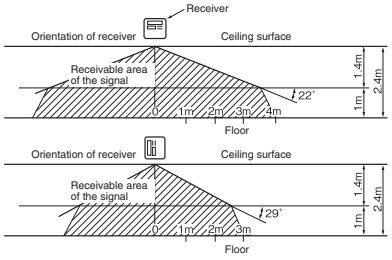
① Receiver installation bracket	1
② Screw for the bracket	2
③ Installation fitting	2

② Wireless remote controller's operable area

(1) When installed on ceiling

① Standard reachable area of the signal

condition Illuminance at the receiver : **300lux** (when no lighting is installed within 1m of the receiver in an ordinary of ce.)

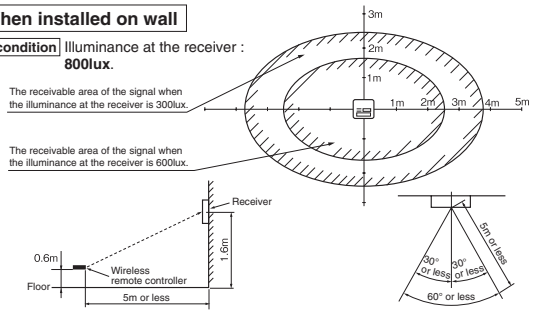


② Correlation between illuminance at the receiver and reachable area of the signal in a plain view.

condition Correlation between the reachable area of the signal and illuminance at the receiver when the remote controller is operated at 1.1m high under the condition of ceiling height of 2.5m.
When the illuminance becomes double, the area is narrowed down to two third.

(2) When installed on wall

condition Illuminance at the receiver : **800lux**.



③ How to install the receiver

The following two methods can be used to install the receiver onto a ceiling or a wall. Select a method according to the installation position.

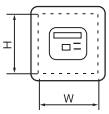
<Installation position>

(A) Direct installation onto the ceiling with wood screws.
(B) Installation with accessory's bracket

(1) Drilling of the ceiling (ceiling opening)

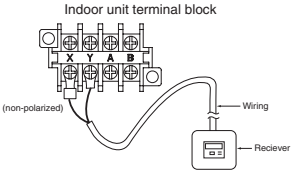
Drill the receiver installation holes with the following dimensions at the ceiling position where wires can be connected.

(A) Direct installation onto the ceiling with wood screws.	88mm(H)×101mm(W)
(B) Installation with enclosed bracket.	108mm(H)×108mm(W)



(2) Wiring connection of receiver

Caution
Do not connect the wiring to the power source of the terminal block. If it is connected, printed board will be damaged.

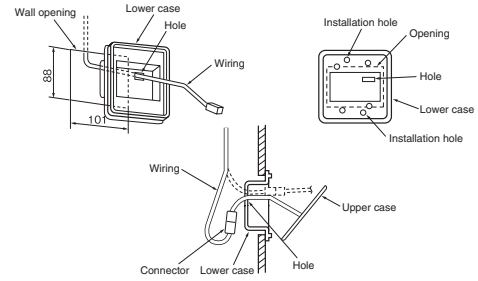


(3) Installation of the receiver

Remove the screw on the side of the receiver and sprit it into the upper case and lower case.Install the receiver with one of the two installation methods (A) or (B) shown below.

(A) Direct installation onto the ceiling with screws

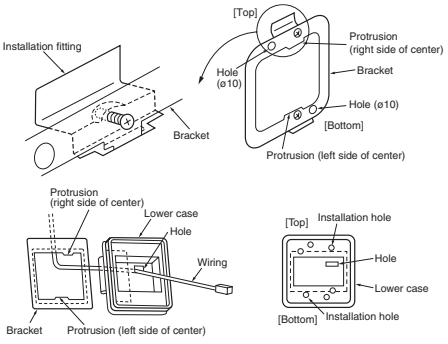
Use this installation method when the ceiling is wooden, and there is no problem for strength in installing directly with wood screws.



①Put through the wiring from the back side to the hole of the lower case.
②Fit the lower case into the ceiling opening. Make sure that the clearance between the convex part of the back of the lower case and the ceiling opening must be as equal as possible on both sides.
③Using the two installation holes shown above, fix the lower case onto the ceiling with the enclosed wood screws. (The other four holes are not used.)
④Connect the wiring with the wiring from the upper case by the connector.
⑤Take out the connector to the backside from the hole of the lower case putting through the wiring at ①.
⑥Fit the upper case and the lower case, and tighten the screws.

(B) Installation with enclosed bracket

Use this method when installaing onto a gypsum board (7 to 18mm), etc.



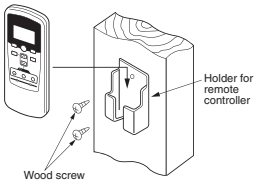
①Catch the two protrusion of the enclosed bracket onto the tting as shown above, and temporarily fix with the screws. (The bracket has an up/down and front/back orientation. Con rm the top/bottom protrusion positions and the positional relation of the ø 10 holes on the bracket and the installation hole on the lower case with the above drawing.)
②Insert the end of the installation tting into the back of the ceiling from the opening, and tighten the screws to fix the bracket onto the ceiling.
③Pass the wiring from the rear side through the hole on the lower case.
④Fit the lower case onto the bracket, and fix the lower case to the bracket using the two installation holes shown above. (The other four holes are not used.)
⑤Follow step ① to ⑥ for (A) to complete the installation.

④ Remotecontroller

Installation of the controller holder

Caution

DO NOT install it on the following places
1) Places exposed to direct sunlight
2) Places near heat devices
3) High humidity places
4) Hot surface or cold surface enough to generate condensation
5) Places exposed to oil mist or steam directly
6) Uneven surface



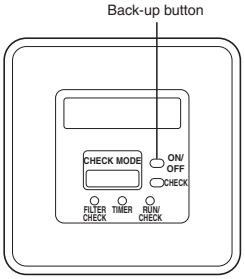
Installation tips for the remote controller holder
- Adjust and keep the holder upright.
- Tighten the screw to the end to avoid scratching the remote controller.
- DO NOT attach the holder to plaster wall.

How to insert batteries

① Detach the back lid.
② Insert the batteries. (two AAA batteries)
③ Reattach the back lid.

⑤ Cooling test run operation

- After safety con rmation, turn on the power.
- Transmit a cooling operation command with wireless remote controller, while the backup button on the receiver is pressed.
- If the backup button on the receiver is pressed during a test run, it will end the test run.
- If you cannot operate the unit properly during a test run, please check by consulting with inspection guides on the wiring diagram of outdoor units.



⑥ Setting of wireless remote controller and receiver

(A) Methods of avoiding the malfunction due to the mixed communication

Do both procedures ① and ②.

This setting is to avoid the mixed communication with other household electric appliances or the mixed communication when two receivers are located closely.

①**Setting change of the wireless remote controller**

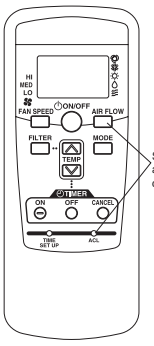
Pressing ACL and AIRFLOW button at the same time or inserting the batteries with pressing AIRFLOW button will customize the signal.

Note ***When the batteries are removed, the setting will return to the default setting. Make sure to reset it when the batteries are replaced.**

②**Setting the PCB of the receiver**

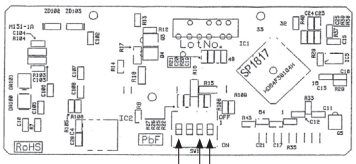
Turn SW1-1 off.

† ●**Wireless remote controller**



Setting to avoid mixed communication.

† ●**PCB of the receiver**



SW1-1	Customized signal setting to avoid mixed communication	ON : Normal OFF : Remote
SW1-2	Receiver master/slave setting	ON : Master OFF : Slave
SW1-4	Auto restart	ON : Valid OFF : Invalid

□ : Default setting

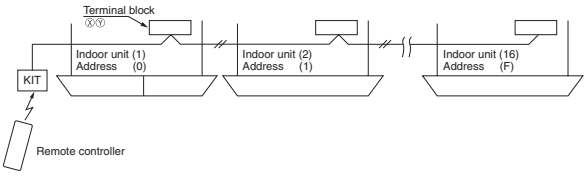
(B) Control plural indoor units with one remote controller

Up to 16 indoor units can be connected.

①Connect the XY terminal with 2-core wire. As for the size, refer to the following note.

②For Packaged air conditioner series, set the indoor unit address with SW2 on the indoor unit PCB from [0] to [F] so as not to duplicate.

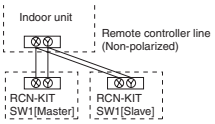
Restrictions on the thickness and length of wire (Maximun total extension 600m.)	
Standard	Within 100m x 0.3 mm²
	Within 200m x 0.5 mm²
	Within 300m x 0.75mm²
	Within 400m x 1.25mm²
	Within 600m x 2.0 mm²



③For VRF series, set the indoor unit address with SW1, SW2 and SW5-2 on the indoor unit PCB from [000] to [127] so as not to duplicate.

(C) Master/Slave setting when using plural remote controller

Up to two receivers can be installed in one indoor unit group.



Switch	Setting	Function
SW1-2	ON	Master
	OFF	Slave

(D) Change setting of auto mode operation

Auto mode operation is prohibited to be selected for KX models (except for KXR models).
Therefore be sure to change setting of remote controller to disable the auto mode operation for these models according to the following procedure.
While pressing the MODE button, press the ACL switch, or while pressing the MODE button, insert the batteries to the remote controller. Then the auto mode can be invalid.
Attention
When the batteries are removed, it is returned to initial setting (Auto mode becomes valid).
Accordingly when replacing the batteries, be sure to perform the above operation once again.

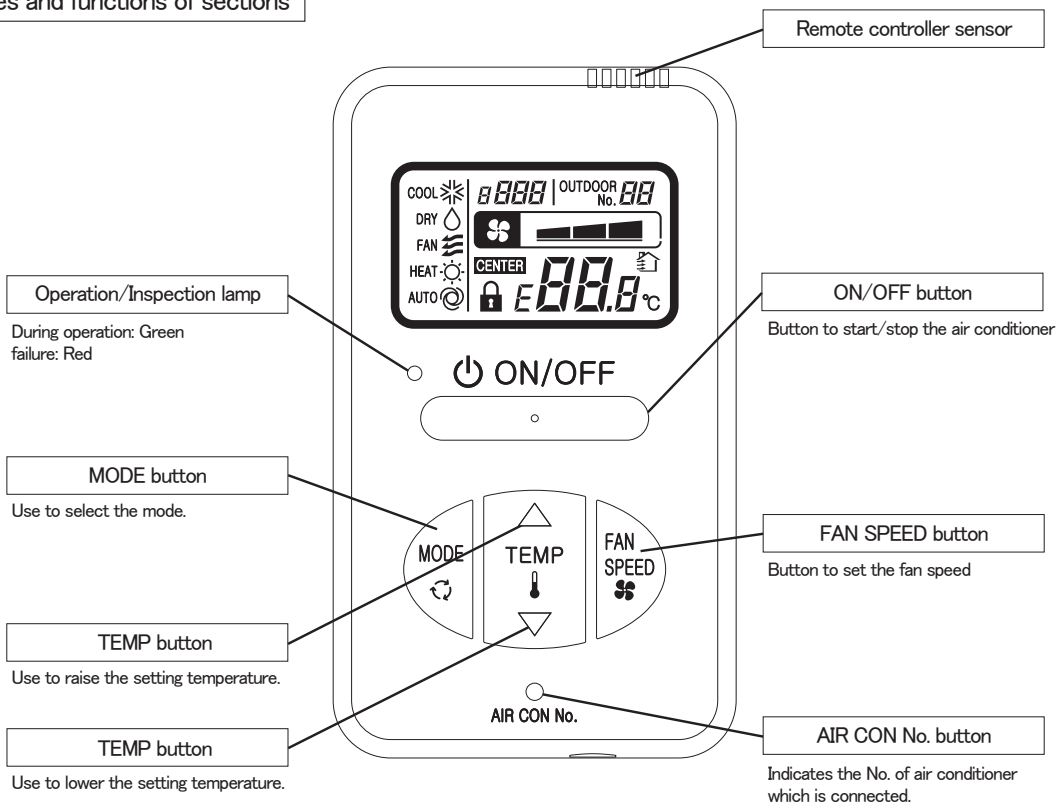
(E) Change setting of fan speed

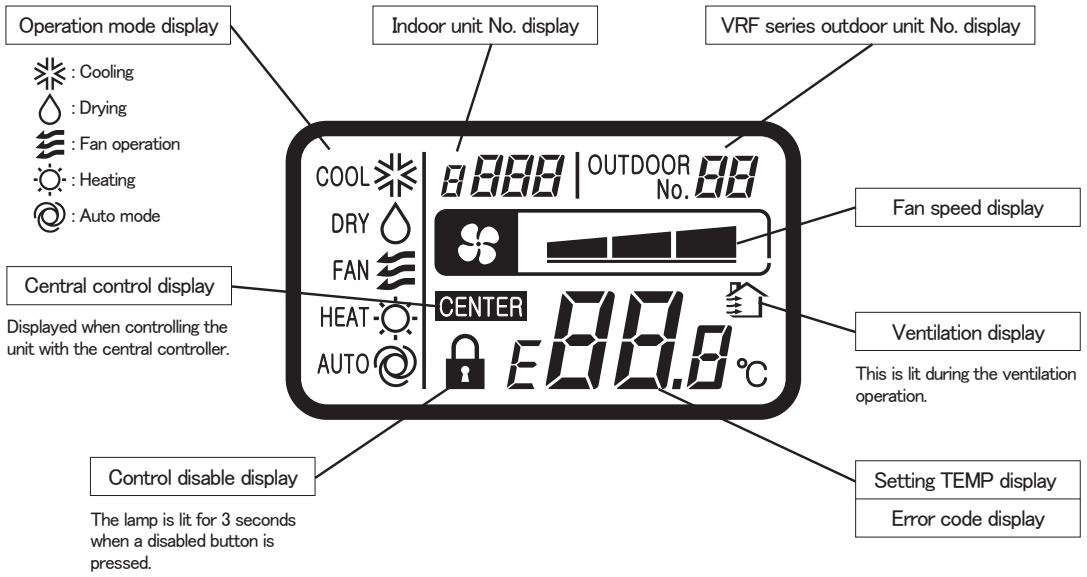
While pressing the FAN SPEED button, press the ACL switch, or while pressing the FAN SPEED button, insert the batteries to the remote controller. Then the fan speed can be changed from 2-speed setting to 3-speed setting.
When changing fan speed setting of remote controller, be sure to perform the same fan speed setting as that of the indoor unit model to be used.
Attention
When the batteries are removed, it is returned to initial setting (Fan speed setting is 2-speed).
Accordingly when replacing the batteries, be sure to perform the above operation once again.

11.2 Simple wired remote controller (RCH-E3)

Notes:
Following functions of Type -D indoor unit series are not able to be set with this simple wired remote controller (RCH-E3).
1. Individual flap control system (for FDT/FDTC)
2. Flap control system (for FDEN)
3. 4-fan speed setting (PHi/Hi/Me/Lo) →3-fan speed setting (Hi/Me/Lo) (for FDT/FDTC/FDUM/FDEN)

Names and functions of sections





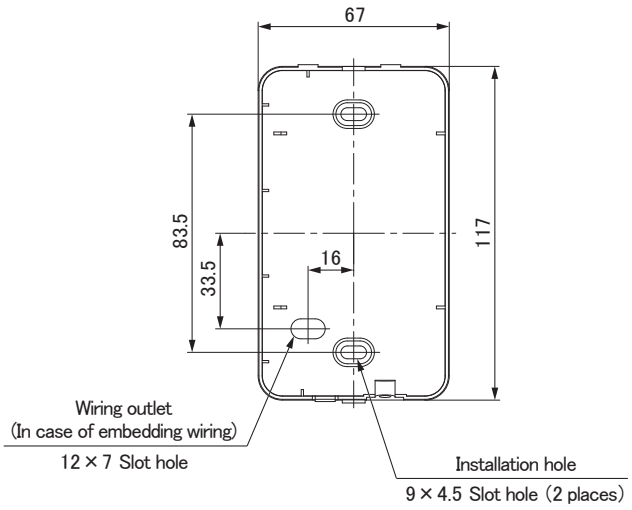
Installation of remote controller

DO NOT install the remote controller at the following places in order to avoid malfunction.

(1) Places exposed to direct sunlight
(2) Places near heat devices
(3) High humidity places
(4) Hot surface or cold surface enough to generate condensation
(5) Places exposed to oil mist or steam directly
(6) Uneven surface

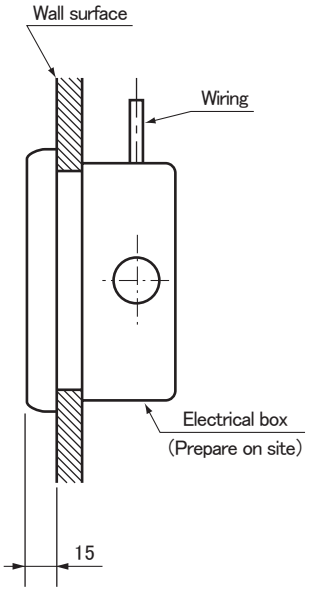
PJZ000Z272 A

Remote control installation dimensions

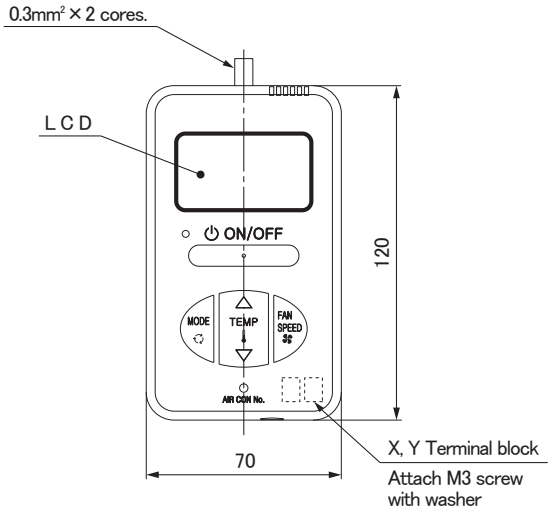


Note: Installation screw for remote controller
M4 Screw (2 pieces)

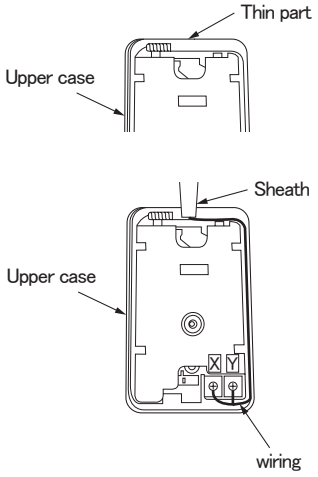
In case of embedding wiring



In case of exposing wiring

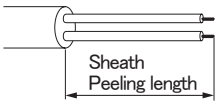


The remote controller wiring can be extracted from the upper center.
After the thin part in the upper side of the remote controller upper case is scraped with a nipper or knife, remove burr with a file.



The peeling length of each wiring is as follows:

X wiring : 160mm Y wiring : 150mm



Wiring specifications

(1) Wiring of remote controller should use 0.3mm² × 2 core wires or cables. (on-site configuration)
(2) Maximum prolongation of remote controller wiring is 600m.
If the prolongation is over 100m, change to the size below.
But, the wiring in the remote controller case should be 0.3mm² (recommended) to 0.5mm².
Change the wire size outside of the case according to wire connecting. Waterproof treatment is necessary at the wire
connecting section. Be careful about contact failure.

Unit:mm

Length	Wiring thickness
100 to 200m	0.5mm² × 2 cores
Under 300m	0.75mm² × 2 cores
Under 400m	1.25mm² × 2 cores
Under 600m	2.0mm² × 2 cores

Adapted to **RoHS** directive

Simple Remote Controller Installation Manual

PJZ012D069

Read together with indoor unit's installation manual.

⚠WARNING

- **Fasten the wiring to the terminal securely and hold the cable securely so as not to apply unexpected stress on the terminal.**
  Loose connection or hold will cause abnormal heat generation or fire.
- **Make sure the power supply is turned off when electric wiring work.**
  Otherwise, electric shock, malfunction and improper running may occur.

⚠ CAUTION

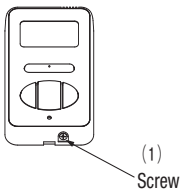
- **DO NOT install the remote controller at the following places in order to avoid malfunction.**
  (1) Places exposed to direct sunlight
  (2) Places near heat devices
  (3) High humidity places
  (4) Hot surface or cold surface enough to generate condensation
  (5) Places exposed to oil mist or steam directly
  (6) Uneven surface
- **DO NOT leave the remote controller without the upper case.**
  In case the upper cace needs to be detached, protect the remote controller with a packaging box or bag in order to keep it away from water and dust.

Accessories	Remote controller, wood screw (ϕ3.5×16) 2 pieces
Prepare on site	Remote controller cord (2 cores) (Refer to [2. Installation and wiring of remote controller]) [In case of embedding cord] Electrical box, M4 screw (2 pieces) [In case of exposing cord] Cord clamp (if needed)

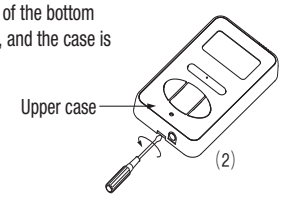
1. Installation procedure

In case of embedding cord

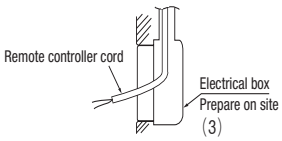
(1) Make certain to remove the screw on the bottom surface of the remote controller.



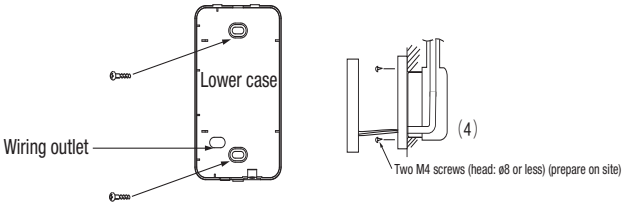
(2) Remove the upper case of the remote controller.
Insert a flat-blade screwdriver to a concave portion of the bottom surface of the remote controller and slightly twist it, and the case is removed.



(3) Pre-bury the electrical box and remote controller cord.



(4) Prepare two M4 screws (recommended length: 12 – 16mm), and install the lower case to the electrical box.
Do not use a screw whose screw head is larger than the height of the wall around the screw hole.

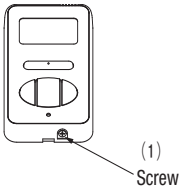


(5) Connect the remote controller cord to the terminal block.
Connect the terminals (X and Y) of the remote controller and the terminals (X and Y) of the indoor unit. (No polarity of X and Y)

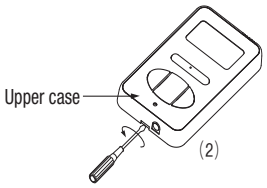
(6) Mount the upper case for restoring to its former state so as not to crimp the remote controller cord, and secure with the removed screw.

In case of exposing cord

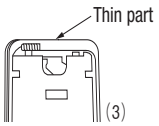
(1) Make certain to remove a screw on the bottom surface of the remote controller.



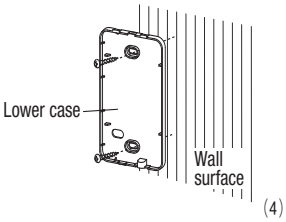
(2) Remove the upper case of the remote controller.
Insert a flat-blade screwdriver to a concave portion of the bottom surface of the remote control and slightly twist it, and the case is removed.



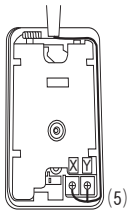
(3) The remote controller cord can be extracted from the upper center.
After the thin part in the upper side of the remote controller upper case is scraped with a nipper or knife, remove burr with a file.



(4) The lower case of the remote controller is mounted to a flat wall with two accessory wood screws.

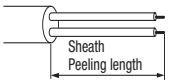


(5) Connect the remote controller cord to the terminal block.
Connect the terminals (X and Y) of the remote controller and the terminals (X and Y) of the indoor unit. (No polarity of X and Y)
The wiring route is as shown in the right.



The wiring in the remote controller case should be 0.3 mm^2 (recommended) to 0.5 mm^2 at maximum.
Further, peel off the sheath.
The peeling length of each wiring is as follows:

X wiring : 160mm Y wiring : 150mm



(6) Mount the upper case for restoring to its former state so as not to crimp the remote controller cord, and secure with the removed screw.

(7) In the case of exposing installation, secure the remote controller cord to the wall surface with a cord clamp so as not to loosen the remote controller cord.

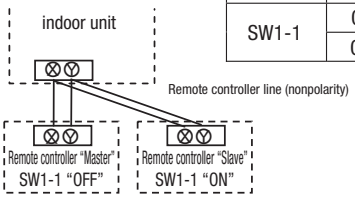
2. Installation and wiring of remote controller

(1) Wiring of remote controller should use 0.3mm^2 × 2 core wires or cables. (on-site configuration)
(2) Maximum prolongation of remote controller wiring is 600 m.
If the prolongation is over 100m, change to the size below.
But, the wiring in the remote controller case should be 0.3mm^2 (recommended) to 0.5mm^2.
Change the wire size outside of the case according to wire connecting. Waterproof treatment is necessary at the wire
connecting section. Be careful about contact failure.
100 - 200m·····0.5mm^2 × 2 cores
Under 300m·····0.75mm^2 × 2 cores
Under 400m·····1.25mm^2 × 2 cores
Under 600m·····2.0mm^2 × 2 cores

3. Master/ slave setting when more than one remote controller are used

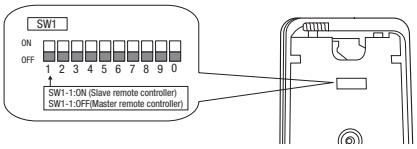
(1) Up to two remote controllers can be connected to one unit (or one group) of indoor unit.

Switch	Setting	Function detail
SW1-1	ON	Slave remote controller
	OFF	Master remote controller



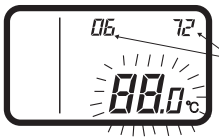
(2) Set the switch SW1-1 of the slave remote controller is "Slave" (ON). The factory default is set as "Master" (OFF).

(Note) • The remote controller thermistor enabled setting can be set only to the master remote controller.
• Install the master remote controller at the position to detect room temperature.
• The air conditioner operation follows the last operation of the remote controller in case of the master / slave setting.



4. The indication when power source is supplied

(1) At the time of turning the power source on, after the light is on for the first 2 seconds, the display becomes as shown below.
The number displayed on the upper side of LCD in the remote control is the software number, and this is not an error code.



Software number
(The number in the left is one example. Another number may be shown.)

(2) Then, "88.0 ℃" blinks on the remote controller until the communication between the remote controller and the indoor unit is established.

(3) In the case of connecting one remote controller with one unit (or one group) of indoor unit, make certain to set the master remote controller (factory default).
If the slave remote control is set, a communication cannot be established.

(4) If a state where the communication between the remote controller and the indoor unit cannot be established continues about for 30 minutes, "E" is displayed. Confirm the wiring of the indoor unit and the outdoor unit and master/slave setting of the remote controller.

5. Confirmation method for return air temperature

Return air temperature can be confirmed by the remote controller operation.

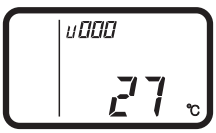
(1) **Press AIR CON NO. button for over 5 seconds.**
"88" blinks on the temperature setting indicator.
("88" blinks for approximately 2 seconds while data is read.)
↓
Then, the return air temperature is displayed.
(Example) return air temperature: "27 °C" (blinking)

(Note) For the return air temperature, in the normal case, the return air temperature of the indoor unit is displayed; however, in the case that the remote control thermistor is effective, detected temperature by the remote controller thermistor is displayed.

(2) **Press ⏻ ON/OFF button.**
End.

[In the case that the remote thermistor is ineffective and plural indoor units are connected to one remote controller]

(1) **Press AIR CON NO. button for over 5 seconds.**
indoor unit No. indicator: "U 000" (blinking)
(Among the connected indoor units, the lowest number is displayed.)



(2) **Press TEMP△ or TEMP▽ button.**
Select the indoor unit No.

(3) **Press MODE button.**
Dectder the indoor unit No.
(Example) indoor unit No. indicator: "U 000"
"88" blinks on the temperature setting indicator. (blinking for approximately 2 to 10 seconds while data is read) Then, the return air temperature is displayed. When AIR CON NO. is pressed, return to the indoor unit selection display (example, "U 000").

(4) **Press ⏻ ON/OFF button.**
End.

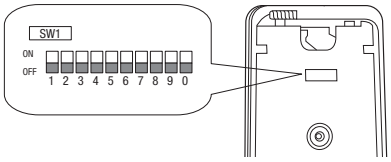
6. Function setting

Each function of the remote controller and the indoor unit is automatically set to the initial setting, which is the standard use, on the occasion of connecting the remote controller with the indoor unit. In the case of the standard use, the setting change is unnecessary. However, if you whould like to change the initial setting " ○ ", change the setting for only the item of the function number. **Record the setting contents and stored them.**

(1) Function setting item by switch on PCB

Switch No.	Setting	Setting detail	Initial setting
SW1-1	ON	Slave remote controller	
	OFF	Master remote controller	○
SW1-2	ON	Remote controller thermistor enabled	
	OFF	Remote controller thermistor disabled	○
SW1-3	ON	"MODE" button prohibited	
	OFF	"MODE" button enabled	○
SW1-4	ON	"ON/OFF" button prohibited	
	OFF	"ON/OFF" button enabled	○

Switch No.	Setting	Setting detail	Initial setting
SW1-5	ON	"TEMP" button prohibited	
	OFF	"TEMP" button enabled	○
SW1-6	ON	"FAN SPEED" button prohibited	※ Note 1
	OFF	"FAN SPEED" button enabled	※ Note 1
SW1-7	ON	Auto restart function enabled	
	OFF	Auto restart function disabled	○
SW1-8, 9, 0	ON	Not used	
	OFF		



- As for the slave remote controller, function setting is impossible other than SW1-1.
- In the indoor unit with only one fan speed, "FAN SPEED" button cannot be enabled.

(2) Function setting item by button operation

Classification	Function No.	Function	Setting No.	Setting	Initial setting	Remarks
Remote controller function	01	Indoor unit fan speed	01	Fan speed: three steps	※ Note 1	The fan speed is three steps, 🌬 ■■■ - 🌬 ■■ - 🌬 ■ .
			02	Fan speed: two steps (Hi-Lo)	※ Note 1	The fan speed is two steps, 🌬 ■■■ - 🌬 ■ .
			03	Fan speed: two steps (Hi-Me)		The fan speed is two steps, 🌬 ■■■ - 🌬 ■■ .
			04	Fan: one step	※ Note 1	The fan speed is fixed to one step.
	03	Remote controller thermistor at the time of cooling	01	Remote controller thermistor: no offset	○	
			02	Remote controller thermistor: +3.0 °C		At the time of cooling, in the case of remote controller thermistor enabled, offset temperature at +3.0°C.
			03	Remote controller thermistor: +2.0 °C		At the time of cooling, in the case of remote controller thermistor enabled, offset temperature at +2.0°C.
			04	Remote controller thermistor: +1.0 °C		At the time of cooling, in the case of remote controller thermistor enabled, offset temperature at +1.0°C.
			05	Remote controller thermistor: -1.0 °C		At the time of cooling, in the case of remote controller thermistor enabled, offset temperature at -1.0°C.
			06	Remote controller thermistor: -2.0 °C		At the time of cooling, in the case of remote controller thermistor enabled, offset temperature at -2.0°C.
			07	Remote controller thermistor: -3.0 °C		At the time of cooling, in the case of remote controller thermistor enabled, offsett temperature at -3.0°C.
	04	Remote controller thermistor at the time of heating	01	Remote controller thermistor: no offset	○	
			02	Remote controller thermistor: +3.0 °C		At the time of heating, in the case of remote controller thermistor enabled, offset temperature at +3.0°C.
			03	Remote controller thermistor: +2.0 °C		At the time of heating, in the case of remote controller thermistor enabled, offset temperature at +2.0°C.
			04	Remote controller thermistor: +1.0 °C		At the time of heating, in the case of remote controller thermistor enabled, offset temperature at +1.0°C.
			05	Remote controller thermistor: -1.0 °C		At the time of heating, in the case of remote controller thermistor enabled, offset temperature at -1.0°C.
			06	Remote controller thermistor: -2.0 °C		At the time of heating, in the case of remote controller thermistor enabled, offset temperature at -2.0°C.
			07	Remote controller thermistor: -3.0 °C		At the time of heating, in the case of remote controller thermistor enabled, offset temperature at -3.0°C.
	05	Ventilation setting	01	No ventilator connection	○	
			02	Ventilator links air-conditioner		In case of Single split series, by connecting ventilation device to CNT of the indoor printed circuit board (in case of VRF series, by connecting it to CND of the indoor printed circuit board), the operation of ventilation device is linked with the operation of indoor unit.
	06	"Auto" operation setting	01	"Auto" operation enabled	※ Note 1	
			02	"Auto" operation disabled	※ Note 1	"Auto" operation disabled
Indoor unit function	07	Operation permission/ prohibition	01	Disabled	○	
			02	Enabled		Operation permission/prohibition controller is enabled.
	08	External input	01	Level input	○	
			02	Pulse input		
	09	Fan speed setting	01	Standard	Note2	
			02	High speed 1	Note2	
			03	High speed 2	Note2	
	10	Fan remaining operation at the time of cooling	01	No remaining operation	○	After cooling stopped, no fan remaining operation
			02	0.5 hours		After cooling stopped, fan remaining operation for 0.5 hours
			03	1 hour		After cooling stopped, fan remaining operation for 1 hour
			04	6 hours		After cooling stopped, fan remaining operation for 6 hours
	11	Fan remaining operation at the time of heating	01	No remaining operation	○	After heating stopped or after heating thermostat OFF, no fan remaining operation
			02	0.5 hours		After heating stopped or after heating thermostat OFF, fan remaining operation for 0.5 hours
			03	2 hours		After heating stopped or after heating thermostat OFF, fan remaining operation for 2 hours
			04	6 hours		After heating stopped or after heating thermostat OFF, fan remaining operation for 6 hours
	12	Setting temperature offset at the time of heating	01	No offset	○	
			02	Setting temperature offset + 3.0 °C		The setting temperature at the time of heating is offset by +3.0 °C.
			03	Setting temperature offset + 2.0 °C		The setting temperature at the time of heating is offset by +2.0 °C.
			04	Setting temperature offset + 1.0 °C		The setting temperature at the time of heating is offset by +1.0 °C.
	13	Heating fan controller	01	Low fan speed	※ Note 1	At the time of heating thermostat OFF, operate with low fan speed.
			02	Setting fan speed		At the time of heating thermostat OFF, operate with the setting fan speed.
			03	Intermittent operation	※ Note 1	At the time of heatingr thermostat OFF, intermittently operate.
			04	Fan off		At the time of heating thermostat OFF, a fan will be stopped. When the remote controller thermistor is enabled, automatically set to "Fan off". Do not set at the time of the indoor unit thermistor.
	14	Return air temperature offset	01	No offset	○	
			02	Return air temperature offset +2.0 °C		Offset the return air temperature of the indoor unit by +2.0 °C.
			03	Return air temperature offset +1.5 °C		Offset the return air temperature of the indoor unit by +1.5 °C.
			04	Return air temperature offset +1.0 °C		Offset the return air temperature of the indoor unit by +1.0 °C.
			05	Return air temperature offset -1.0 °C		Offset the return air temperature of the indoor unit by -1.0 °C.
			06	Return air temperature offset -1.5 °C		Offset the return air temperature of the indoor unit by -1.5 °C.
			07	Return air temperature offset -2.0 °C		Offset the return air temperature of the indoor unit by -2.0 °C.

Note 1: The symbol " ※ " in the initial setting varies depending upon the indoor unit and the outdoor unit to be connected, and this is automatically determined as follows:

Swith No. Function No.	Function	Setting	Product model
SW1-6	"FAN SPEED" button	"FAN SPEED" button prohibited	Product model whose indoor fan speed is only one step
		"FAN SPEED" button enabled	Product model whose indoor fan speed is two steps or three steps
Remote controller function 01	Indoor unit fan speed	Fan speed: three steps	Product model whose indoor unit fan speed is three steps
		Fan speed: two steps (Hi-Lo)	Product model whose indoor unit fan speed is two steps
		Fan speed: two steps (Hi-Me)	
		Fan: one step	Product model whose indoor unit fan speed is only one step
Remote controller function 06	"Auto" operation setting	"Auto" operation enabled	Product model where "Auto" mode is selectable
		"Auto" operation disabled	Product model without "Auto" mode
Indoor unit function 13	Heating fan control	Low fan speed	Product model except FDUS
		Intermittent operation	FDUS

Note 2: Fan speed of "High speed" setting

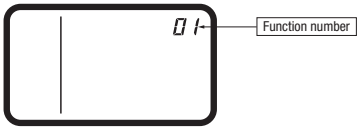
Fan speed setting	Indoor unit fan speed setting		
	🌬 ■■■ - 🌬 ■■ - 🌬 ■	🌬 ■■■ - 🌬 ■	🌬 ■■■ - 🌬 ■■
Standard	Hi — Mid — Lo	Hi — Lo	Hi — Mid
High speed 1・2	UHi — Hi — Mid	UHi — Mid	UHi — Hi

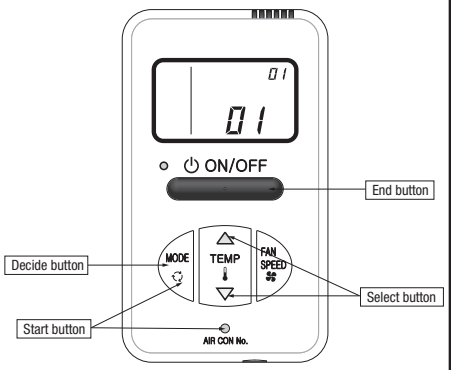
Initial setting of some indoor unit is "High speed".

Note 3: As for plural indoor unit, set indoor functions to each master and slave indoor unit.
But only master indoor unit is received the setting change of indoor unit function "07 Operation permission/ prohibition" and "08 External input".

7. How to set functions by button operation

(1) **Stop air-conditioning, and simultaneously press AIR CON NO. and MODE buttons at the same time for over three seconds.**
The function number "01" blinks in the upper right.

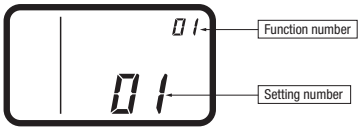




(2) **Press TEMP△ or TEMP▽ button.**
Select the function number.

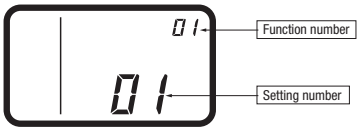
(3) **Press MODE button.**
Decide the function number.

(4) **[In the case of selecting the remote controller function (01-06)]**
① The current setting number of the selected function number blinks
(Example)
Function number: "01" (lighting)
Setting number: "01" (blinking)



② **Press TEMP△ or TEMP▽ button.**
Select the setting number.

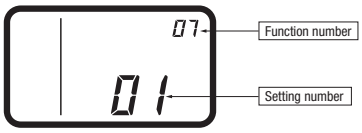
③ **Press MODE button.**
The setting is completed.
Light is on for approximately 3 to 20 seconds while data of the decided function No. and setting No. is transmitted.
(Example)
Function number: "01" (lighting for 3 to 20 seconds)
Setting number: "01" (lighting for 3 to 20 seconds)



Then, the screen goes back to the function number blinking indication (1), if the setting is sequentially conducted, continue with the same procedures. If the setting is finished, proceed to (5).

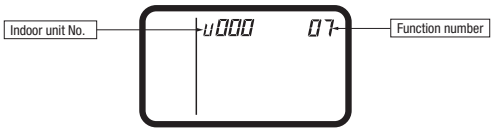
(5) **Press ON/OFF button.**
The setting is completed.

[In the case of selecting the indoor unit function (07-14)]
① **"88" blinks on the temperature setting indicators.**
(blinking for approximately 2 to 10 seconds while data is read)
↓
After that, the current setting number of the selected function number blinks.
(Example)
Function number: "07" (lighting)
Setting number: "01" (blinking)



Proceed to ②.

[Note]
a. In the case of connecting one remote control to plural indoor units, the display will be as follows:
Indoor unit No. display: "U 000" (blinking)
(Display the lowest number among the connected indoor units.)

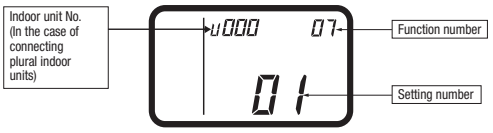


b. Press TEMP△ or TEMP▽ button.
Select the indoor unit No. to be set.
If "U ALL" is selected, the same setting can be set to all units.

c. Press MODE button.
Decide the indoor unit No.
"88" blinks on the temperature setting indicators. (blinking for 2 to 10 seconds while data is read)
When AIR CON NO. button is pressed, go back to the indoor unit selection display (for example, "U 000" blinking).

② **Press TEMP△ or TEMP▽ button.**
Select the setting number

③ **Press MODE button.**
The setting is completed.
Light is on for approximately 3 to 20 seconds while data of the decided function No. and setting No. is transmitted.
(Example)
Indoor unit No.: "U 000" (lighting for 3 to 20 seconds)
Function number: "07" (lighting for 3 to 20 seconds)
Setting number: "01" (lighting for 3 to 20 seconds)



Then, the screen goes back to the function number blinking indication (1), if the setting is sequentially conducted, continue with the same procedures. If the setting is finished, proceed to (5).

- Even if ON/OFF button is pressed during setting, the setting is ended. However, any details where the setting has not been completed will be ineffective.
- The setting contents are stored in the controller, and even if the power failure occur, this will not be lost.

[Confirmation method for current setting]
According to the operation, the "setting number" displayed first after selecting "function number" and pressing MODE button is the currently set content.
(However, in the case of selecting "U ALL" (all units), the setting number of the lowest number among the indoor units is displayed.)

11.3 Base heater kit (CW-H-E)

PCZ012D007

Model Name: CW-H-E
Parts Number: 518325

⚠ WARNING

- **Follow the instruction and installation manual for outdoor unit when installing the heater.**
- **This heater must be installed by authorized personnel.**
- **Turn off the power supply when the kit is installed.**

Failure to follow the above will result in serious accident like electrical shock or fire.

⚠ CAUTION

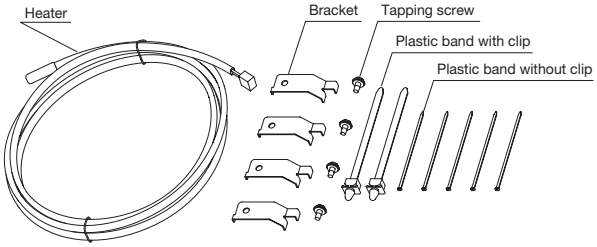
- **Follow the law or regulation of the country where it is installed.**
- **Do not alter the heater.**
- **Lay down the heater so that the edge of the sheet metal does not damage the heater.**
- **Bending radius must be bigger than 25mm.**
- **Do not use the heater near flammable substances.**
- **Be sure to check the electrical insulation before use.**
- **Be sure to check the drain is not trapped by the heater.**
- **Do not leave refrigerant oil on the base.**

AREAS TO BE APPLIED

This kit is to be used in an area where the lowest temperature drops below zero.
⚠Caution: In case the heater is not applied on the unit which is installed in an area mentioned above, it may be regarded as installation failure and warranty may not be given.

Components

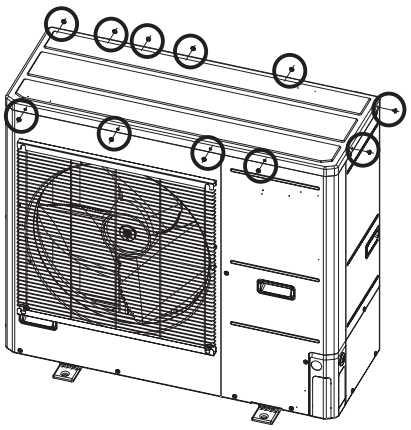
- **Heater : 1pc**
- **Bracket : 4pcs**
- **Tapping screw : 4pcs**
- **Plastic band with clip : 2pcs**
- **Plastic band : 5pcs**



Installation procedure

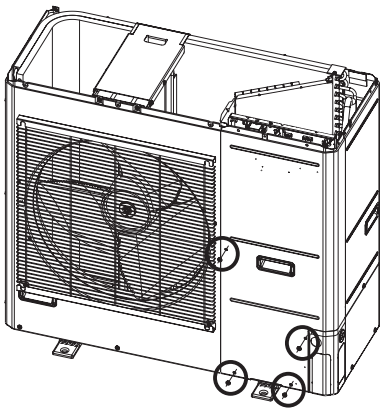
Step 1

1. Remove the top panel of the outdoor unit (11 pcs of tapping screws).



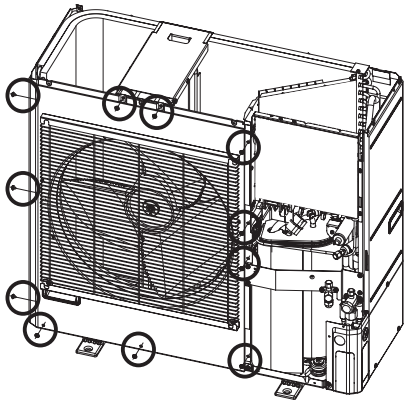
Step 2

2. Remove the service panel (4 pcs of tapping screws).



Step 3

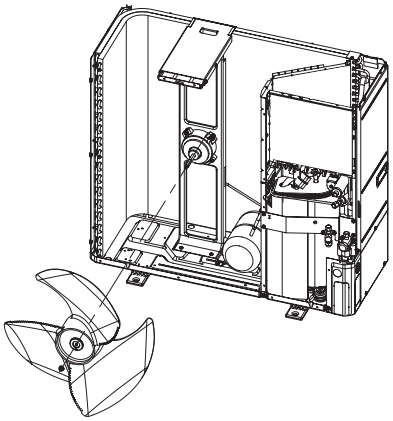
3. Remove the front panel
   (11 pcs of tapping screws).
   Pull the panel straightforward so that the panel doesn't touch the fan blade.



Step 4

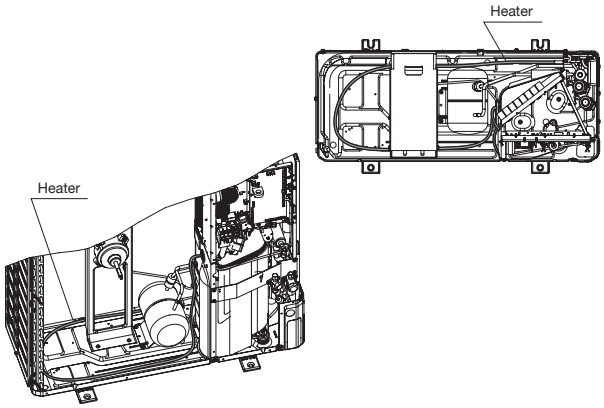
4. Remove the fan blade if necessary.

   <Note>
   Do not rotate the axis of fan motor when removing the fan blade.
   It may cause malfunction of the fan motor.



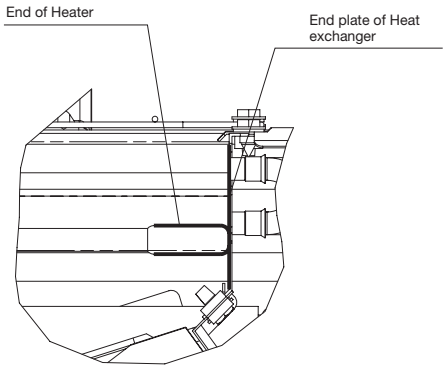
Step 5

5. Lay down the drain pan heater on the base.



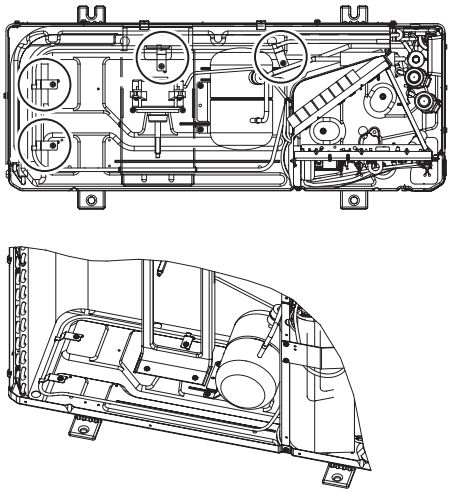
Step 6

6. Put the heater underneath the heat exchanger and align the end of heater with the end plate of heat exchanger.



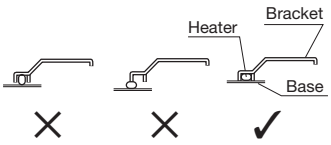
Step 7

7. Fix the heater with 4 brackets.

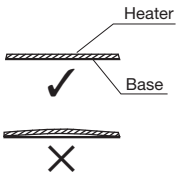


<Note>

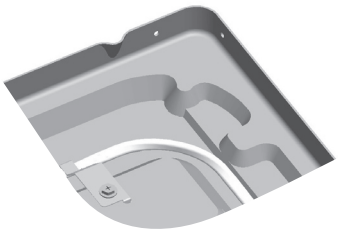
1) Fix the heater so that the bracket doesn't pinch the heater as figure shows.



2) Place the heater so as to touch the base completely.



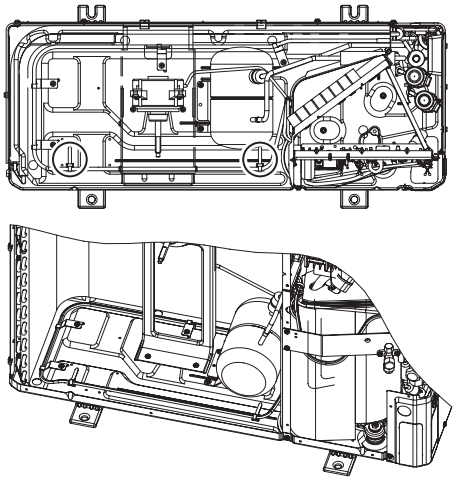
3) In bending position, twist the heater to make it easier to bend, and get back to be able to fix it with bracket.



4) Be careful not to be injured by aluminum fin when fixing the heater with screw.

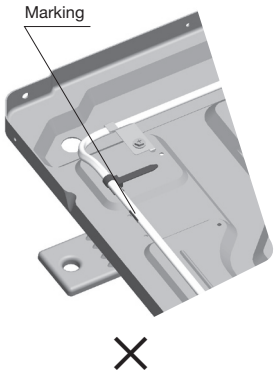
Step 8

8. Insert the plastic band with clip on the designated place (2 places), and fix the heater.

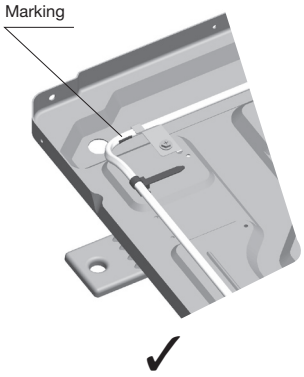


<Note>

1) Do not fasten the heating part with the plastic band.
There is a marking on the end of heating part.

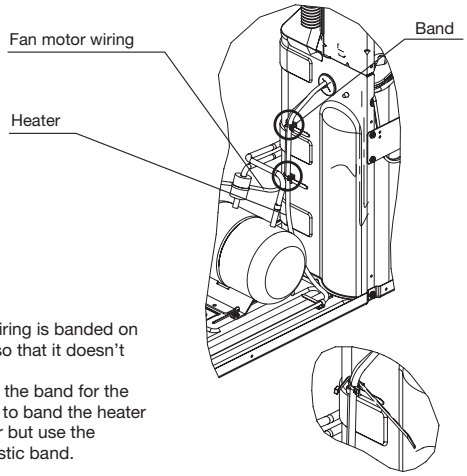


2) When the heater is laid down correctly, the end of heating part comes to the corner of the base.



Step 9

9. Lay down the wiring on the same route of fan motor wiring, and fix the wire with attached plastic band (2 places) at the same place where the fan motor wiring is banded.

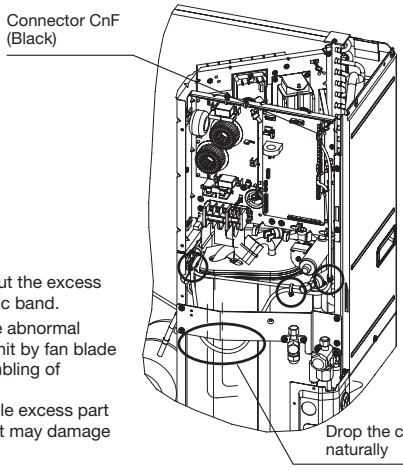


<Note>

Fan motor wiring is banded on the bracket so that it doesn't loosen.
Do not loose the band for the motor wiring to band the heater wire together but use the attached plastic band.

Step 10

10. Insert the connector to the port CnF (Black) on the top right of the PCB, and fix the wire with bands (3 places). Excess part of the wire should be dropped naturally.



<Note>

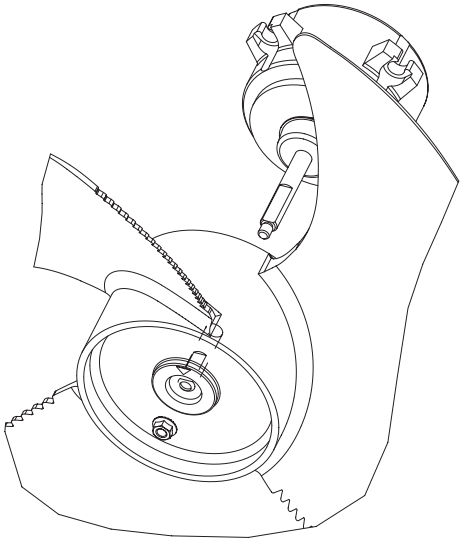
Be sure to cut the excess part of plastic band.
It may cause abnormal noise when hit by fan blade or misassembling of panels.
Do not bundle excess part of the wire. It may damage the heater.

Step 11

11. Reassemble the fan blade.
Take care to align the D-cut of motor shaft and the fan blade.
▽ mark on the center of the fan shows the position of D-cut.

<Note>

1. Tightening torque of the nut is 4.0-4.9 N·m.
2. Do not rotate the axis of fan motor when tightening the nut.
It may cause malfunction of the fan motor.

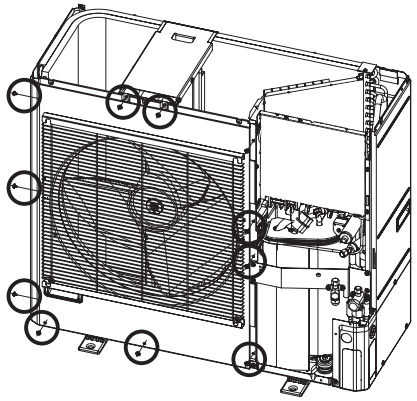


Step 12

12. Reassemble the panels.

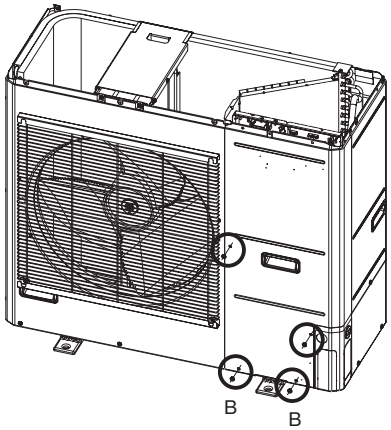
1) Front panel

Use screw B for all places.

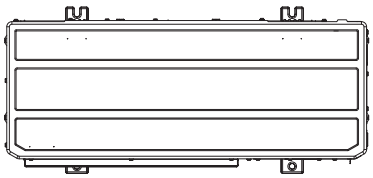


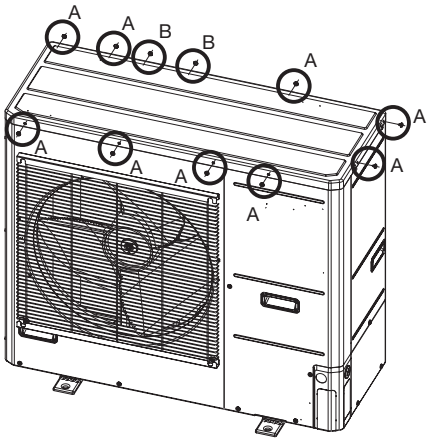
2) Service panel

Use screw B for all places.



3) Top panel





<Note>

1) When reassembling the service panel, take care not to damage the front panel with the edge.
2) There are two different length of screws.
Be sure to use correct screw.
Long screw A: used for Top panel other than fixing fan bracket.
Short screw B: other place than A.

<Note>

- This heater should have bending radius of at least 25mm including non-heating part. Do not bundle the excess part of the wire. It may cause disconnection of the heater or insufficient capacity.
- Be sure to prevent the heater from touching any refrigerant piping.
Especially, pay close attention not to make it touch with pipes which are close to the wiring route such as suction pipe, check valve and check joint.

11.4 Interface kit (SC-BIKN-E)

RKZ012A088 a

Accessories included in package

Be sure to check all the accessories included in package.

No.	Part name	Quantity
①	Indoor unit's connection cable (cable length: 1.8m)	1
②	Wood screws (for mounting the interface: ø4x 25)	2
③	Tapping screws (for the cable clump and the interface mounting bracket)	3
④	Interface mounting bracket	1
⑤	Cable clamp (for the indoor unit's connection cable)	1

Safety precautions

Before use, please read these Safety Precautions thoroughly before installation.

- All the cautionary items mentioned below are important safety related items to be taken into consideration, so be sure to observe them at all times.

⚠Warning	Incorrect installation could lead to serious consequences such as death, major injury or enviromental destruction.

- Symbols used in these precautions

❗	Always go along these instruction.

- After completed installation, carry out trial operation to confirm no anomaly, and ask the user to keep this installation manual in a good place for future reference.

⚠ Warnings

❗

- **Installation must be carried out by a qualified installer.**
  If you install it by yourself, it may cause an electric shock, fire and personal injury , as a result of a system malfunction.
- **Install it in full accordance with the instruction manual.**
  Incorrect installation may cause an electric shock, fire and personal injury.
- **Electrical work must be carried out by a qualified electrician in accordance with the technical standard for electrical equipment, the indoor wiring standard and this instruction manual.**
  Incorrect installation may cause an electric shock, fire and personal injury.
- **Use the specific cables for wiring. And connect all the cables to terminals or connectors securely and clamp them with cable clamps in order for external forces not to be transmitted to the terminals directly.**
  Incomplete connection may cause malfunction, and lead to heat generation and fire.
- **Use the original accessories and specified components for installation.**
  If the parts other than those prescribed by us are used, it may cause an electric shock, fire and sersonal injury.

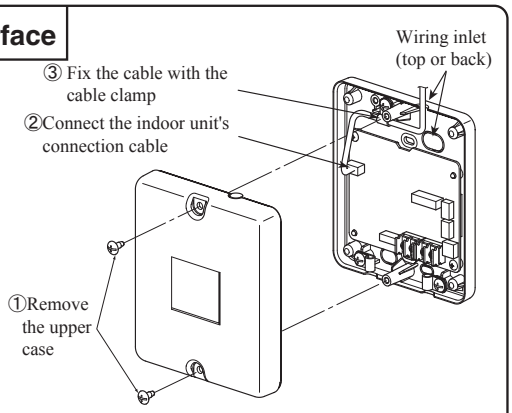
Connecting the indoor unit's connection cable to the interface

①Remove the upper case of the interface.
- Remove 2 screws from the interface casing before removal of upper casing.

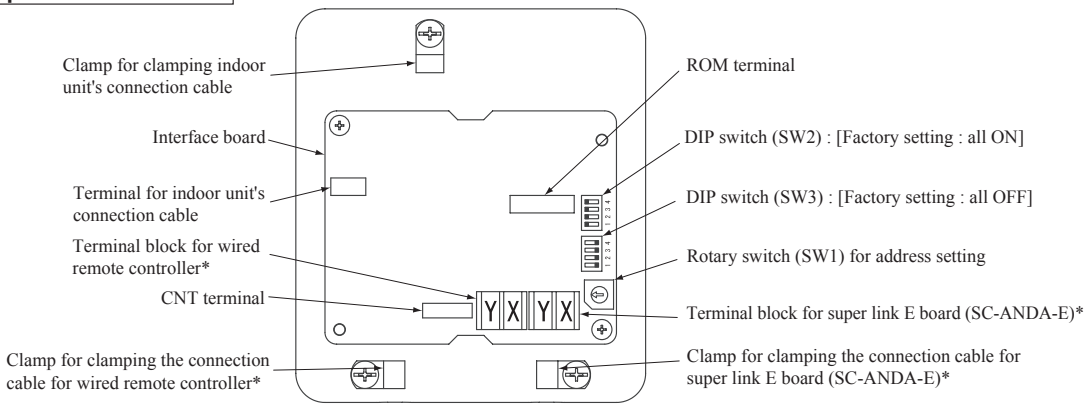
②Connect the indoor unit's connection cable to the interface.
- Connect the connector of the indoor unit connection cable to the connector on the interface's circuit board.

③Fix the indoor unit's connection cable with the cable clamp.
- Cable can be brought in from the top or from the back.
- Cut out the punch-outs for the connection cables running into the casing with cutter.

④Connect the indoor unit's connection cable to the indoor control PCB.
- Connect the indoor unit's connection cable to the indoor control PCB securely.
- Clamp the connection cable to the indoor control box securely with the cable clamp provided as an accessory.
- Regarding the cable connection to the indoor unit, refer to the instruction manual for indoor unit.



Name of each part of the interface



*Either the connection cables of super link E board (SC-ANDA-E) or of wired remote controller is connectable.

Switch	Setting	Function	Switch	Setting	Function
SW2-1	ON**	CNT level input	SW2-3	ON**	External input (CNT input)
	OFF	CNT Pulse input		OFF	Operation permission/prohibition (CNT input)
SW2-2	ON**	Wired remote controller : Valid	SW2-4	ON**	Heat pump
	OFF	Wired remote controller : Invalid		OFF	Cooling only

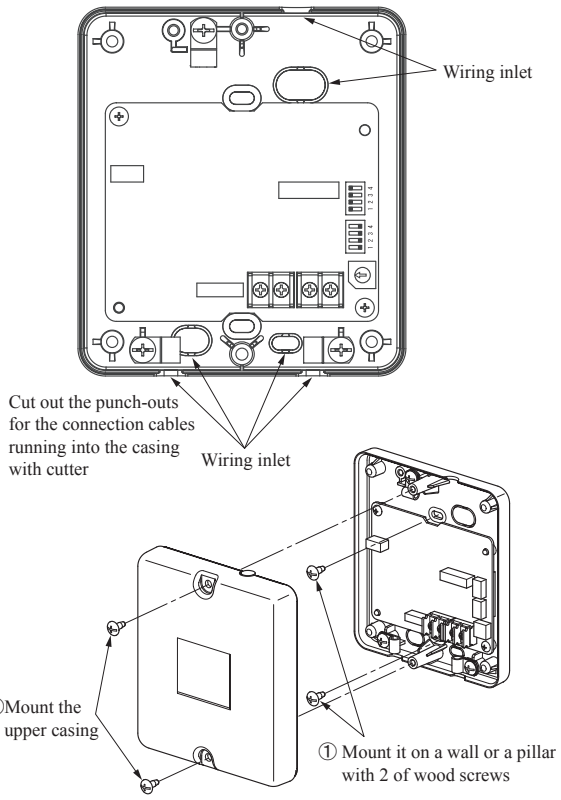
** Factory setting

Installation of the interface

- Install the interface within the range of the connection cable length (approximately 1.3m) from the indoor unit.
- Be sure not to extend the connection cable on site. If the connection cable is extended, malfunction may occur.
- Fix the interface on the wall, pillar or the like.

●DO NOT install the interface and wired remote controller at the following places.

- ○Places exposed to direct sunlight
- ○Places near heating devices
- ○High humidity places
- ○Surfaces where are enough hot or cold to generate condensation
- ○Places exposed to oil mist or steam directly
- ○Uneven surface

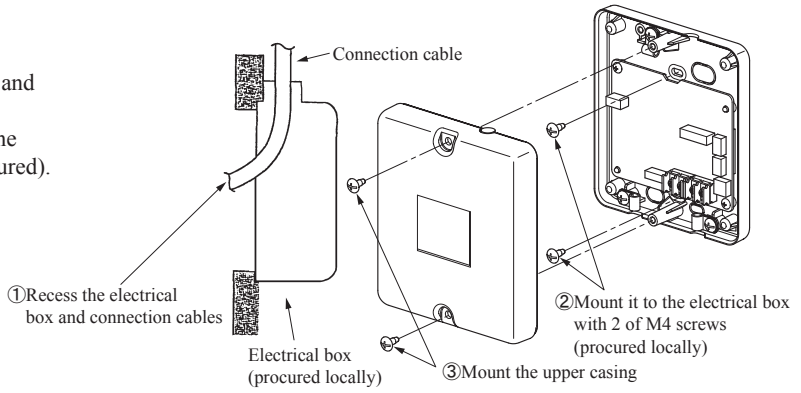


Mounting the interface directly on a wall

①Mount the lower casing of the interface on a flat surface with wood screws provided as standard accessory.
②Mount the upper casing.

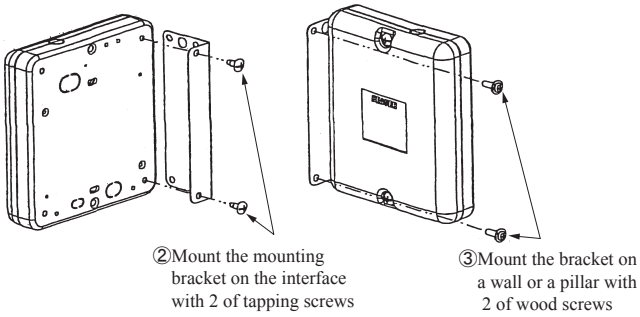
Recessing the interface in the wall

①Recess the electrical box (locally procured) and connection cables in the wall.
②Mount the lower casing of the interface to the electrical box with M4 screws (locally procured).
③Mount the upper casing.



Mounting the interface with the mounting bracket

①Mount the mounting bracket to the interface with tapping screws provided as standard accessory.
②Mount the mounting bracket on wall or the like with wood screws provided as standard accessory.
③Mount the mounting bracket to a wall surface, etc. using the wood screws provided.



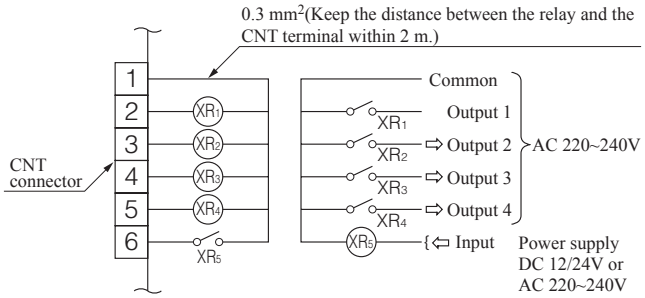
Installation check items

☐ Are the connection cables connected securely to the terminal blocks and connectors?
☐ Are the thickness and length of the connection cables conformed with the standard?

Functions of CNT connector

It is available to operate the air conditioning unit and to monitor the operation status with the external control unit (remote display) by sending the input/output signal through CNT connector on the indoor control PCB.

①Connect a external remote control unit (locally procured) to CNT terminal.
②In case of the pulse input, switch OFF the DIP switch SW2-1 on the interface PCB.
③When setting operation permission/prohibition mode, switch OFF the DIP switch SW2-3 on the interface PCB.



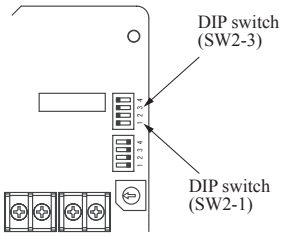
Input/ Output	Function	Output signal		Content
		Relay	ON/OFF	
Output 1	Operation output	XR_1	ON	During air-conditioner operation
Output 2	Heating output	XR_2	ON	During heating operation
Output 3	Compressor operation output	XR_3	ON	During compressor running
Output 4	Malfunction output	XR_4	ON	During anomalous stop

- $XR_{1\sim4}$ are for the DC 12V relay
- XR_5 is a DC 12/24V or AC 220~240V relay
- CNT connector (local) maker, model

Connector	Molex	5264-06
Terminals	Molex	5263T

Input/ Output	Function	SW2-1		SW2-3				Air-Conditioner	Operation by Remote Controller
		Setting		Setting	Input signal		Content		
					Level/Pulse	XR_5			
Input	External control input	ON*	Level input	ON*	Level	OFF→ON	External input	ON	Allowed
						ON→OFF		OFF	
				OFF		OFF→ON	Operation permission	OFF	
						ON→OFF	Operation prohibition	OFF	Not allowed
		OFF	Pulse input	ON*	Pulse	OFF→ON	External input	OFF→ON	Allowed
								ON→OFF	
				OFF	Level	OFF→ON	Operation permission	ON	
						ON→OFF	Operation prohibition	OFF	Not allowed

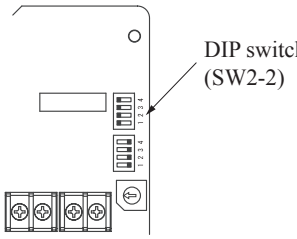
* Factory setting



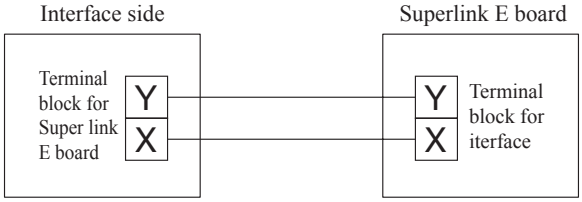
Connection of superlink E board

Regarding the connection of superlink E board, refer to the instruction manual of superlink E board.
For electrical work, power supply for all of units in the super link system must be turned OFF.

①Switch ON the DIP switch SW2-2 (Factory setting: ON) on the interface PCB.
Caution: Wireless remote controller attached to the indoor unit can be used in parallel, after connecting the wired remote controller. However, some of functions other than the basic functions such as RUN/STOP, Temperature Setting, etc. may not work properly and may have a mismatch between the display and the actual behavior.



②Wiring connection between the interface and the superlink E board.

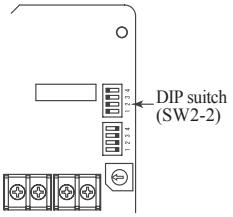


No.	Names of recommended signal wires
1	Shielded wire
2	Vinyl cabtyre round cord
3	Vinyl cabtyre round cable
4	Vinyl insulated wirevinyl sheathed cable for control

Within 200 m 0.5 mm² × 2 cores
Within 300 m 0.75 mm² × 2 cores
Within 400 m 1.25 mm² × 2 cores
Within 600 m 2.0 mm² × 2 cores

③Clamp the connection cables with cable clamps.

Connection of wired remote controller



Regarding the connection of wired remote controller, refer to the instruction manual of wired remote controller.

①Switch ON the DIP switch SW2-2 (Factory setting : ON) on the interface PCB.

Caution: Wireless remote controller attached to the indoor unit can be used in parallel, after connecting the wired remote controller. However, some of functions other than the basic functions such as RUN/STOP, Temperature Setting, etc. may not work properly and may have a mismatch between the display and the actual behavior.

②Wiring connection between the interface and the wired remote controller.

Installation and wiring of wired remote controller

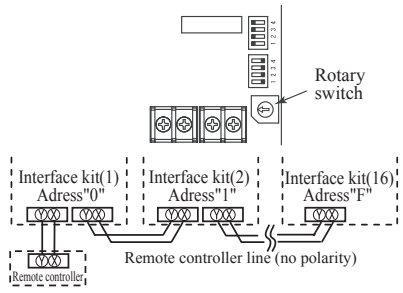
Ⓐ Install the wired remote controller with reference to the attached instruction manual of wired remote controller.
Ⓑ 0.3mm² x 2-core cable should be used for the wiring of wired remote controller.
Ⓒ Maximum length of wiring is 600m.
If the length of wiring exceeds 100m, change the size of cable as mentioned below.
100m-200m: 0.5mm² x 2-core, 300m or less: 0.75mm² x 2-core, 400m or less: 1.25mm² x 2-core, 600m or less: 2.0mm² x 2-core
However, cable size connecting to the terminal of wired remote controller should not exceed 0.5mm². Accordingly if the size of connection cable exceeds 0.5mm², be sure to downsize it to 0.5mm² at the nearest section of the wired remote controller and waterproof treatment should be done at the connecting section in order to avoid contact failure.
Ⓓ Don't use the multi-core cable to avoid malfunction.
Ⓔ Keep the wiring of wired remote controller away from grounding (Don't touch it to any metal frame of building, etc.).
Ⓕ Connect the connection cables to the terminal blocks of the wired remote controller and the interface securely (no polarity).

③Clamp the connection cables with cable clamps.

Control of multiple units by a single wired remote controller

Multiple units (up to 16) can be controlled by a single wired remote controller.
In this case, all units connected with a single wired remote controller will operate under the same mode and same setting temperature.

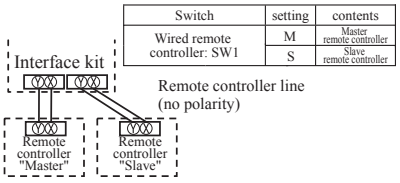
①Connect all the interface with 2-core cables of wired remote controller line.
②Set the address of indoor unit for remote controller communication from "0" to "F" with the rotary switch SW1 on the interface PCB.
③After turning the power ON, the address of indoor unit can be displayed by pressing AIR CON button on the wired remote controller.
Make sure all indoor units connected are displayed in order by pressing ▲ or ▼ button.



Master/Slave setting wired when 2 of wired remote controller are used

Maximum two wired remote controller can be connected to one indoor unit (or one group of indoor units)

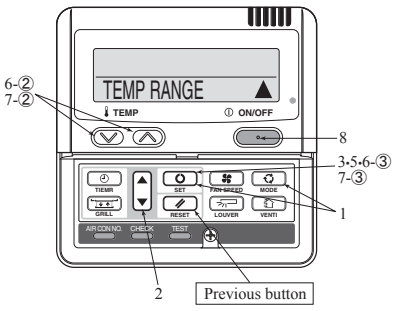
①Set the DIP switch SW1 on the wired remote controller to "Slave" for the slave remote controller. (Factory setting : Master)
○ Caution : Remote controller sensor is invalid.



●When using the wireless remote controller in parallel with the wired remote controller;
Temperature setting range should be changed with the wired remote controller (The set temperature may not be displayed correctly on the wireless remote controller, unless change of temperature setting range is done.)
Changing procedure of temperature setting range is as follows.

How to set upper and lower limit of temperature sting range

1. Stop the air-conditioner, and press (SET) and (MODE) button at the same time for 3 seconds or more.
The indication changes to"FUNCTION SET▼"
2. Press ▼ button once, and change to the "TEMP RANGE▲" indication.
3. Press (SET) button, and enter the temperature range setting mode.
4. Confirm that the "Upper limit ▼ " is shown on the display.
5. Press (SET)button to fix.
6. ①Indication: "☝∨ ∧ SET UP"→"UPPER 28℃ ∨ ∧"
②Select the upper limit value 30℃ with temperature setting button △."UPPER30℃∨ " (blinking)
③Press (SET) button to fix. "UPPER 30℃" (Displayed for two seconds)
After the fixed upper limit value displayed for two seconds, the indication will return to"UPPER LIMIT▼".
7. Press ▼ button once, "LOWER LIMIT ▲ " is selected, press (SET) button to fix.
①Indication: "☝∨ ∧ SET UP" → "LOWER 20℃∨ ∧"
②Select the lower limit value 18℃ with temperature setting button ▽."LOWER18℃∧ " (blinking)
③Press (SET) button to fix. "LOWER 18℃" (Displayed for two seconds)
After the fixed lower limit value displayed for two seconds, the indication will return to"LOWER LIMIT▼"
8. Press ON/OFF button to finish.



Temperature setting range

Mode	Temperature setting range	Upper limit	Lower limit
Heating	16-30℃	20-30℃	16-26℃
Other than heating (Cooling, Fan, Dry, Auto)	18-30℃		

- It is possible to quit in the middle by pressing ON/OFF button, but the change of setting is incompleted.
- During setting, if pressing (RESET) button, it returns to the previous screen.

11.5 Superlink E board (SC-ADNA-E)

PJZ012D029F

- Read and understand the instructions completely before starting installation.
- Refer to the instructions for both indoor and outdoor units.

Safety precautions

- Carefully read "Safety precautions" first. Follow the instructions for installation.
- Precautions are grouped into "Warning⚠" and "Caution⚠". The "Warning⚠" group includes items that may lead to serious injury or death if not observed. The items included in the "Caution⚠" group also may lead to serious results under certain conditions. Both groups are crucial for safety installation. Read and understand them carefully.
- After installation, conduct the test operation of the device to check for any abnormalities. Describe how to operate the device to the customer following the installation instruction manual. Instruct the customer to keep this installation instruction for future reference.

⚠Warning

- This device should be installed by the dealer where you purchase the device or a licensed professional shop. If the device is incorrectly installed by the customer, it may result in electric shock or fire.
- Install the device carefully following the installation instruction. If the device is incorrectly installed, it may result in electric shock or fire.
- Use the accessory parts and specified parts for installation. If any parts that do not match the specifications are used, it may result in electric shock or fire.
- A person with the electrical service certification should conduct the service based on the "Technical standards for electrical facilities", "Electrical Wiring Code", and the installation instruction. If the work is done incorrectly, it may result in electric shock or fire.
- Wiring should be securely connected using the specified types of wire. No external force on the wire should be applied to any terminals. If a secure connection is not achieved, it may result in electric shock or fire.

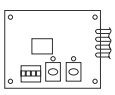
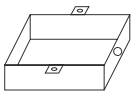
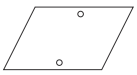
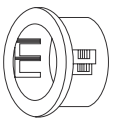
⚠Caution

- Provide ground connection.
  The ground line should never be connected to the gas supply piping, the water supply piping, the lightning conductor rod, nor the telephone ground.If the grounding is improper, it may result in electric shock.
- Do not install the device in the following locations.
  1.Where there is mist/spray of oil or steam such as kitchens.
  2.Where there is corrosive gases such as sulfurous acid gas.
  3.Where there is a device generating electromagnetic waves.
  These may interfere with the control system resulting in the device becoming uncontrollable.
  4.Where flammable volatile materials such as paint thinner and gasoline may exist or where they are handled. This may cause a fire.

1 Application

Indoor-to-outdoor three core communication specification type 3 (since October 2007)

2 Accessories

SL E board	Metal box	Metal cover	Screw for Ground
			M4×8L 2 pieces 
Pan head screws	Locking supports	Binding band	Grommet
ø4×8L 2 pieces 	To secure the print board and the metal box Made of nylon 4 pieces 		

3 Function

Allowing the center console SL1N-E, SL2NA-E, and SL3N-AE/BE to control and monitor the commercial air conditioning unit.

4 Control switching

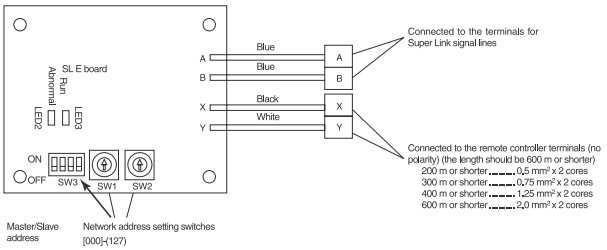
Settings can be changed by the switch SW3 on the SL E board as in the following.

Switch	Symbol	Switch	Remarks
SW3	1	ON	Master
		OFF (default)	Slave
	2	ON	Fixed previous protocol
		OFF (default)	Automatic adjustment of Super Link protocol
	3	ON	Indicates the forced operation stop when abnormality has occurred.
		OFF (default)	Indicates the status of running/stop as it is, when abnormality has occurred.
	4	ON	The hundredth address activated "1"
		OFF (default)	The hundredth address activated "0"

5 Connection Outline

Note for setting the address

- Set the address between 00 and 47 for the previous Super Link connection and between 000 and 127 for the new Super Link connection. (*1)
- Do not set the address overlapping with those of the other devices in the network. (The default is 000)



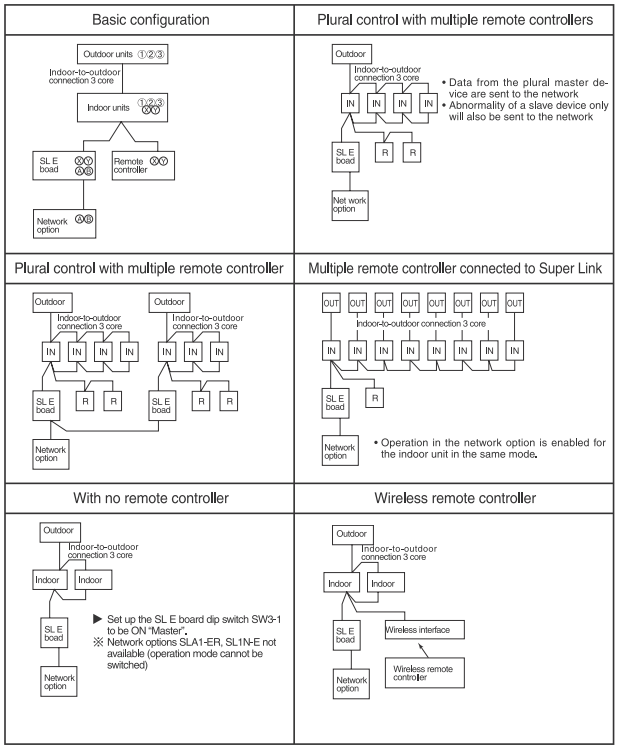
(*1) Whether the actual link is either the new Super Link or the previous Super Link depends on the models of the connected outdoor and indoor units. Consult the agent or the dealer.

Signal line specification

Communication method	Previous Super Link	New Super Link
Line type	MVVS	MVVS
Line diameter	0.75 - 1.25mm²	0.75/1.25mm²
Signal line (total length)	up to 1000m	up to 1500/1000m (*2)
Signal line (maximum length)	up to 1000m	up to 1000m

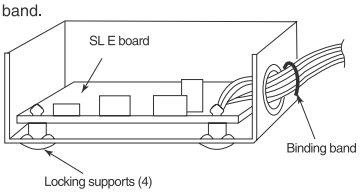
(*2) Up to 1500 m for 0.75 mm², and up to 1000 m for 1.25 mm².
Do not use 2.0 mm². It may cause an error.
(*3) Connect grounding on both ends of the shielding wire.
For the grounding method, refer to the section "6 Installation".

(1) Set the Super Link network address with SW1 (tens place), SW2 (ones place), and SW3 (hundreds place).
(2) Set the SL E board SW3-1 to be ON (Master) when using this without any remote controller (no wired remote controller nor wireless remote controller).
(3) Set up the plural master/slave device using the dip switches on the indoor unit board.
(4) Set up the remote controller master/slave device using the slide switch on the remote controller board.
(5) Set up "0" to "F" using the address rotary switch on the indoor unit board when controlling the indoor unit with the multiple remote controller.

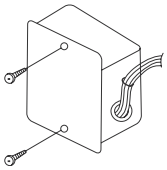


6 Installation

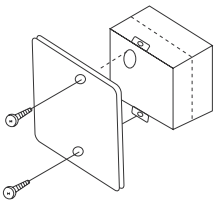
1. When using the metal box (mounted on the indoor unit / mounted on the back of the remote controller):
   (1) Mount the SL E board in the metal box using the locking supports.
   (2) Wiring should go through the provided grommet since then through the wiring to the hole on the Metal box.
   Secure the grommet after inserting the grommet into the Metal box as shown in below figure, then tie the wiring at the outlet of the unit using a binding band.



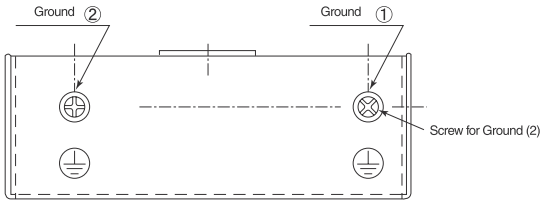
▲ When installed outside the indoor unit, put the metal cover on.



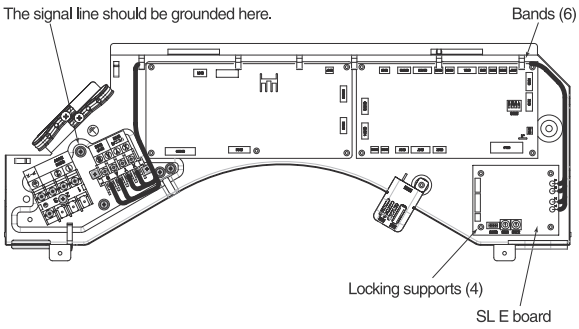
▲ When installed on the back of the remote controller, mount it directly on the remote controller bottom case.



Connect grounding. Connect grounding for the power line to Ground ①, and grounding for the signal line to Ground ② or to the Ground on the indoor unit control box.



2. When connecting to the indoor unit control box (ceiling-concealed type and FDT type only):
   (1) Mount the SL E board in the control box using the locking supports.
   (2) Remove 6 bands from the box and put the wiring through the bands to be secured.



Electrical shock hazard! Make sure to turn the power off for servicing. Be cautious so that no abnormal force should be applied to the wiring. Do not let the SL E board hung by the wiring. Do not damage the board with a screw driver.
The board is sensitive to static electricity. Release the static electricity of your body before servicing.
(you can do this by touching the control board which is grounded).

Location of installation

Install the device at the location where there are no electromagnetic waves nor where there is water and dust. The specified temperature range of the device is 0 to 40°C. Install the device at the location where the ambient temperature stays within the range. If it exceeds the specification, make sure to provide solution such as installing a cooling fan. When used outside of the range, it may cause abnormal operation.

7 Indicator display

Check the LED 3 (green) and LED 2 (red) on the SL E board for flashing.

SL E board LEDs		Inspection mode	Display on the integrated network control device
Red	Green		
Off	Flashing	Normal communication	
Off	Off	• Disconnection in the remote controller communication line (X or Y) • Short-circuit in the remote controller communication line (between X and Y) • Faulty indoor unit remote controller power • Faulty remote controller communication circuit • Faulty CPU on SL E board	No corresponding unit number
One flash	Flashing	• Disconnection in the Super Link signal line (A or B) • Short-circuit in the Super Link signal line (between A and B) • Faulty Super Link signal circuit	
Two flashes	Flashing	• Faulty address setting for the SL E board (Set up the address for previous SL E board : more than 48 new SL E board : more than 128)	
Three flashes	Flashing	• SL E board parent not set up when used without a remote controller • Faulty remote controller communication circuit	E1
Four flashes	Flashing	• Address overlapping for the SL E board and the Super Link network connected indoor unit	E2
Off	Flashing	• Number of connected devices exceeds the specification for the multiple indoor unit control	E10

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