



# Heat Recovery Air Handling Units **DOMEKT**



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### KOMFOVENT DOMEKT Air Handling Units

- KOMFOVENT Air Handling units are made to create healthy indoor climate and ensure efficient energy saving. Products are designed and produced in conformance with high quality and performance requirements.
- All components and parts of the units are accurately selected and assembled to achieve the best results in operation. Reliability of the products is based on the deep attention to the details.

### Your family health protection

Units efficiently clean the air from the particulates, allergens, dust and maintain healthy indoor climate.

### **Energy Efficient**

- Silent operation.
- Reduces expenses for heating, saves electric energy.
- Due to the efficient heat exchangers which recover up to 92% of exhaust air to warm up the supplied air, the heating expences are reduced up to 40%.
- Highly efficiencient EC (electronically commutated) motors use 50% less energy than AC (alternating current) motors with voltage control.
- The special control system designed by our qualified engineers contributes to saving energy.

### **Reliable and durable**

- Double quality control system.
- Air handling units efficiency is measured in a new modern laboratory.
- Units are tested in the independent laboratories in Switzerland and Germany.
- Double anticorrosive units' casing protection.

### Wide range of air handling units

We are offering an extremely wide range of air handling units in order to fulfil our customers' needs.

### User friendly control system

Modern and attractive control panels enable a customer to select the desirable functions, set and change parameters as well as observe the ventilation processes on LCD screen.

- KOMFOVENT DOMEKT Air Handling Units are intended for residential premise ventilation within 40m<sup>2</sup> to 250m<sup>2</sup>.
- Two functions in one unit:
  - 1. Ventilates premise: ensures balanced ventilation with heat recovery supplying fresh air and extracting the used one.
  - 2. Possibility to connect a kitchen hood or any other extraction device.
- Special design of the units no need to specify the inspection side – it is both right and left hand in one.
- Ventilation units with integrated automatic control are fully prepared for installation: just PLUG & PLAY.
- A wide range and extremely compact size of the units allow the customer to mount them not only in the new premise but also in the renovated ones.



## Quick KOMFOVENT DOMEKT Unit Selection



### • KOMFOVENT DOMEKT REGO ventilation units with rotary heat exchanger

		200VE	200VE 400VE		400PE	600HE
DOMEKT REGO		200VW*	400VW*	250PW*	400PW*	600HW*
units		Vert (top con	tical nection)	Suspe (ceiling or wa	Horizontal (sides connection)	
Residential area, m <sup>2</sup>		~120	~160	~120	~200	~250
Motor type		EC	EC	EC	EC	EC
Supply and	m³/h	300	300	230	500	600
under pressure	Ра	100	125	50	50	100
Thermal efficiency of rotary heat exchanger up to, %		80	83	75	79	79

### • KOMFOVENT DOMEKT RECU ventilation units with plate heat exchanger

DOMEKT RECU		300VE 400VE		450VE	500PE
		300VW*	300VW* 400VW* 450V		500PW*
units		١	Suspended		
Residential area, m <sup>2</sup>	dential area, m <sup>2</sup> ~120 ~180 ~180				
Motor type	Motor type		EC	EC	EC
Supply and	m³/h	300	400	425	500
under pressure	Ра	150	150	100	150
Thermal efficiency of plate heat exchanger up to, %		79	80	74	86

Notes: E-electrical heater, W-hot water heater

\* Duct mounted water air heater must be ordered additionally to be installed in the duct.



## Heat Exchangers in KOMFOVENT Ventilation Units

### The operating principle of the REGO ventilation unit with nonfreezing rotary heat exchanger

Rotary heat exchangers work on the principle of heat recovery: rotating aluminium drum absorbs heat of the exhaust air and warms up the air supplied to the ventilated room.

Advantages of the Rotary Heat Exchanger:

- High efficiency factor up to 90%.
- Rotary heat exchanger allows to reduce energy consumption for warming up the supply air by approximately 4 times.
- Compact.
- Non-freezing in comparison with the cross flow plate heat exchangers.
- A share of the exhaust air moisture is transferred to the air supplied to the ventilated room.
- Cools down the supply air in summer in a conditioned space.
- No need in drainage.



### The operating principle of the RECU ventilation unit with cross flow plate heat exchanger

The heat of the exhaust air is transferred to the supply air through aluminium plates of the heat exchanger. Air flows through the heat exchanger crosswise. Unit design prevents penetration of the exhaust air to the fresh air flow. Efficiency factor for the plate-type heat exchangers approximates to 92%.

Advantages of the Plate Heat Exchanger:

- In the process of ventilation the heat of the exhaust air is recovered to the supplied air - the unit allows up to 92% of heat recovery.
- Totally separated air flows.
- Special solution of using double plate heat exchangers reduces the risk of frosting.



## Advantages of the units with EC motors:

- Silent operation noise level is 5÷7 dB(A) lower than in the units with AC motors.
- Lower energy consumption highly efficient EC motors.
- EC motors have a wide and consistent range of speed control (from 0 to 100%). Therefore, the ventilation device can operate on the exactly set point consumers can save up to 50% of the energy and maintenance costs.
- There are no parts inside the motor that would require periodic maintenance.
- EC motors have an additional electronic protection against overheating inside, exceeding the permissible current, short – circuit, etc.
- Longer operation life.

komfovent®

### Vertical unit DOMEKT REGO 200

- Unit is specially designed to be integrated into the kitchen furniture over the cooker.
- Its extremely compact size gives us a perfect possibility of simple mounting in a new flat, renovated premise, etc.

Unit is applicable to ventilate the premise up to 120m<sup>2</sup>. Ventilation unit is fully prepared for exploitation. Integrated automatic control with the wall mounted panel C4 which is handy and simple in use ensures the most economic unit functioning and necessary control.

Unit REGO 200 performs two functions:

- ventilates premise: ensures balanced ventilation with heat recovery supplying fresh air and extracting the used one,
- extracts the used air through kitchen hood: during cooking a user switches on the hood and the air is extracted through the hood by the unit.

Kitchen hood has a specially designed damper inside. The air flow through the hood is adjusted with it.

NOTE: There is no danger of rotary wheel greasing because air flows are not mixing in the unit when you are cooking! WHY? Because when you are cooking you switch on a cooker hood and it opens an internal by-pass damper by this action. Used air from cooking and fumes is extracted by exhaust fan and directed to the by-pass, without getting into rotor. Extract air fan can be easily taken out for cleaning when it is needed.

### Operation principle:

• when kitchen hood is switched ON





### Operation principle:

• when kitchen hood is switched OFF



- Extracted air from premise
- Supplied air
- Outdoor air
- Exhausted air outside



## Vertical Units DOMEKT REGO 200

# • Highly efficient rotary heat exchanger recovers up to 89% of heat.

REGO 200 special design has a big advantage: user does not need to specify unit's inspection side. This unit is both rightand left- hand in one. Front and back covering panels are easily removable – this way, when installing it, the unit must be only turned around to get the required inspection side and ducts' connection.

Integrated automatic control with the wall mounted panel C4 or touch sensitive C4 PLUS which is handy and simple in operation ensures the most economic unit functioning and necessary control.







#### REGO 200 (Shown as right)

F		3
D	A	

#### Explication 1 Rotary heat exchanger 2 Supply air filter 3 Exhaust air filter 4 Supply fan 5 Exhaust fan 6 Electric air heater 7 Automation control system А Outdoor intake В Supply air С Extract indoor D Exhaust air Kitchen hood connection Е (by-pass - extraction without heat recovery) Additional extraction connection F (by-pass - extraction without heat recovery)



Technical information	REGO-200VE-B-C4	REGO-200VW-B-C4*		
Supply voltage	V/Hz	~230 / 50 / 1 phase		
Maximal operating current	А	5.10	0.76	
Input fans power	W	2 x 70	2 x 70	
Heater capacity	kW	1.0	1.2	
Unit size (height x width x depth)	mm	660 x 60	00 x 320	
Ductwork connection	mm	5 x	125	
Filter for supply/exhaust air	mm	285 x 130 x 46-F7		
Unit weight	kg	42	42	
Unit color		RAL	9010	







$$\label{eq:product} \begin{split} \mathsf{P}[\mathsf{kW}] = \mathsf{SFP}[\mathsf{kW}/(\mathsf{m}^3/\mathsf{s})] \cdot \mathsf{V} \; [\mathsf{m}^3/\mathsf{s}]; \; \mathsf{SFP} \; \mathsf{is} \; \mathsf{shown} \; \mathsf{for} \; \mathsf{one} \; \mathsf{fan}. \; \mathsf{Performance} \; \mathsf{data:} \; \mathsf{filter} \; \mathsf{F7}. \\ \mathsf{Note:} \; \mathsf{characteristics} \; \mathsf{explanation} \; \mathsf{is} \; \mathsf{available} \; \mathsf{on} \; \mathsf{the} \; \mathsf{page} \; \mathsf{17}. \end{split}$$

REGO 200 Acoustic data		63Hz	125Hz	250Hz	500Hz	1000Hz	2000Hz	4000Hz	8000Hz	dB(A)
Supply air flow (to the ducts)	Inlet	-12	-13	-15	-14	-15	-19	-23	-27	-10.8
	Outlet	-7	-2	-1	-1	-5	-10	-14	-17	0.0
Extract air flow (to the ducts)	Inlet	-12	-13	-15	-14	-15	-19	-23	-26	-10.7
	Outlet	-7	-2	-1	-1	-5	-10	-14	-17	0.0
Kitchen hood inlet		-9	-7	-8	-7	-8	-13	-16	-19	-3.9
Additional inlet		-9	-7	-8	-7	-8	-13	-16	-19	-3.9
Surrounding (3 pl., 3 m)		-20	-16	-17	-23	-27	-33	-39	-43	-20.4



## Vertical units DOMEKT REGO 400

- Extremely compact unit in size and high energy efficient
- Highly efficient rotary heat exchanger recovers up to 90% of heat.

Unit compact size and high efficiency offer the best choice to ensure healthy microclimate in your apartments or small houses. Unit is applicable to ventilate the premise up to  $180m^2$ . Unit is designed to ensure ventilation in the premise and may be connected with a kitchen hood via an additional duct. Any exhaust air diffuser may be connected instead of a kitchen hood to by-pass duct connection (to extract air from bathroom, laundry, etc.). Integrated automatic control with the wall mounted panel C4 or C4 PLUS, which is handy and simple in operation ensures the most economic unit functioning and necessary control.







#### REGO 400 (Shown as right)

A	E	B
D		C

#### Explication

•	
1	Rotary heat exchanger
2	Supply air filter
3	Exhaust air filter
4	Supply fan
5	Exhaust fan
6	Electric air heater
7	Automation control system
А	Outdoor intake
В	Supply air
С	Extract indoor
D	Exhaust air
Е	Extraction from the kitchen or other premise (by pass – extraction without heat recovery)



Technical information	REGO-400VE-B-C4	REGO-400VW-B-C4*		
	EC	EC		
Supply voltage	V/Hz	~230 / 50 / 1 phase		
Maximal operating current	А	5.15	0.76	
Input fans power	W	2 x 70	2 x 70	
Heater capacity	kW	1.0	1.2	
Unit size (height x width x depth)	mm	563 x 60	00 x 495	
Ductwork connection	mm	4 x 160,	1 x 125	
Filter for supply/exhaust air	mm	450 x 210 x 46-F7		
Unit weight	kg	42	42	
Unit color		RAL	9010	







 $\label{eq:pkw} P[kW] = SFP[kW/(m^3/s)] \cdot V \ [m^3/s]; SFP is shown for one fan. Performance data: filter F7. Note: characteristics explanation is available on the page 17.$ 

REGO 400 Acoustic data		63Hz	125Hz	250Hz	500Hz	1000Hz	2000Hz	4000Hz	8000Hz	dB(A)
Supply air flow (to the ducts)	Inlet	-10	-9	-9	-8	-12	-16	-20	-25	-7.0
	Outlet	-7	-2	-1	-1	-5	-10	-14	-17	0.0
Extract air flow (to the ducts)	Inlet	-10	-9	-9	-8	-12	-16	-20	-24	-6.9
	Outlet	-7	-2	-1	-1	-5	-10	-14	-17	0.0
Kitchen hood inlet		-8	-5	-4	-4	-6	-12	-15	-18	-2.0
Surrounding (3 pl., 3 m)		-20	-16	-17	-23	-27	-33	-39	-43	-20.4



## False-ceiling Units DOMEKT REGO 250

- Unit's height is only 310mm so it can be easily mounted in any convenient place.
- Rotary heat exchanger ensures high heat recovery and thermal efficiency up to 87%.

Special unit's design with extremely low height allows us to mount it horizontally, hiding by false-ceiling or vertically – near the wall.

Unit REGO 250 may ventilate premise up to 100m<sup>2</sup>. It is intended for ventilation of flats, apartments, small houses, as well as classrooms, small offices and conference rooms. Integrated automatic control with the wall mounted panel C4 or

C4 PLUS, which is handy and simple in operation ensures the most economic unit functioning and necessary control.









Technical information	REGO-250PE-B-C4	REGO-250PW-B-C4*		
	EC	EC		
Supply voltage	V/Hz	~230 / 50 / 1 phase		
Maximal operating current	А	5.70	1.36	
Input fans power	W	2 x 105	2 x 105	
Heater capacity	kW	1.0	1.0	
Unit size (height x width x depth)	mm	310 x 89	90 x 550	
Ductwork connection	mm	4 x 160,	1 x 125	
Filter for supply/exhaust air	mm	278 x 258 x 46-F7		
Unit weight	kg	41	41	
Unit color		RAL	9010	







 $\label{eq:pkw} P[kW] = SFP[kW/(m^3/s)] \cdot V \ [m^3/s]; SFP is shown for one fan. Performance data: filter F7. Note: characteristics explanation is available on the page 17.$ 

REGO 250 Acoustic data		63Hz	125Hz	250Hz	500Hz	1000Hz	2000Hz	4000Hz	8000Hz	dB(A)
Supply air flow (to the ducts)	Inlet	-9	-7	-6	-6	-10	-15	-19	-23	-4.8
	Outlet	-7	-2	-1	-1	-5	-11	-14	-18	-0.1
Extract air flow (to the ducts)	Inlet	-9	-7	-6	-6	-10	-15	-19	-23	-4.8
	Outlet	-7	-2	-1	-1	-5	-10	-14	-17	0.0
Kitchen hood inlet		-8	-5	-4	-4	-6	-12	-15	-18	-2.0
Surrounding (3 pl., 3 m)		-20	-16	-17	-23	-27	-33	-39	-43	-20.4



### False-ceiling Units DOMEKT REGO 400P

- Unit's height is only 310 mm.
- High thermal efficiency is reaching up to 88% because of two rotors used in the unit.

Unit REGO 400P is applicable for the ventilation of premise up to  $180m^2$  area. It is intended for ventilation of apartments, small houses, conference rooms. In spite of low unit's height, thermal efficiency in REGO 400P reaches up to 88% because of two motors used in the unit.

By-pass or any other exhaust air diffuser may be connected instead of a kitchen hood to by-pass duct connection (to extract air from bathroom, laundry, etc.).





Technical information	REGO-400PE-B-C4	REGO-400PW-B-C4*		
	EC	EC		
Supply voltage	V/Hz	~230 / 50 / 1 phase		
Maximal operating current	А	6.90	2.56	
Input fans power	W	2 x 165	2 x 165	
Heater capacity	kW	1.0	1.5	
Unit size (height x width x depth)	mm	310 x 12	20 x 650	
Ductwork connection	mm	4 x 200,	1 x 125	
Filter for supply/exhaust air	mm	278 x 258 x 46-F7		
Unit weight	kg	62	62	
Unit color		RAL	9010	







$$\label{eq:product} \begin{split} \mathsf{P}[\mathsf{kW}] = \mathsf{SFP}[\mathsf{kW}/(\mathsf{m}^3/\mathsf{s})] \cdot \mathsf{V} \; [\mathsf{m}^3/\mathsf{s}]; \; \mathsf{SFP} \; \mathsf{is} \; \mathsf{shown} \; \mathsf{for} \; \mathsf{one} \; \mathsf{fan}. \; \mathsf{Performance} \; \mathsf{data}: \; \mathsf{filter} \; \mathsf{F7}. \\ \mathsf{Note:} \; \mathsf{characteristics} \; \mathsf{explanation} \; \mathsf{is} \; \mathsf{available} \; \mathsf{on} \; \mathsf{the} \; \mathsf{page} \; \mathsf{17}. \end{split}$$

REGO 400P Acoustic data		63Hz	125Hz	250Hz	500Hz	1000Hz	2000Hz	4000Hz	8000Hz	dB(A)
Supply air flow	Inlet	-10	-9	-9	-8	-12	-16	-20	-24	-6.9
(to the ducts)	Outlet	-7	-2	-1	-1	-5	-11	-14	-18	-0.1
Extract air flow	Inlet	-10	-9	-9	-8	-12	-16	-20	-24	-6.9
(to the ducts)	Outlet	-7	-2	-1	-1	-5	-10	-14	-17	0.0
Kitchen hood inlet		-8	-5	-4	-4	-6	-12	-15	-18	-2.0
Surrounding (3 pl., 3 m)		-20	-16	-17	-23	-27	-33	-39	-43	-20.4



## Horizontal Units DOMEKT REGO 600

• Extremely compact design with high efficiency up to 89%.

Unit REGO 600 is applicable for the ventilation of premise up to 250  $m^2$  and is intended for ventilation of big apartments, medium houses, conference rooms, etc.

High efficiency unit with compact design can be easily installed in new premise as well as in renovated ones. The width of REGO 600 without side panels is only 470 mm. It is easy to carry such a unit into the attic through the narrow stairwell or other hard approachable places.

The unit has an additional connection for air extraction from kitchen hood or other extraction device (to extract air from bathroom, laundry, etc.).

Integrated automatic control with the wall mounted panel C4 or touch sensitive C4 PLUS which is handy and simple in operation ensures the most economic unit functioning and necessary control.







D

Е

5

6

Supply fan

Exhaust fan

Additional exhausted air

Exhaust air



Technical information	REGO-600HE-B-C4	REGO-600HW-B-C4*		
		EC	EC	
Supply voltage	V/Hz	~230 / 50	/ 1 phase	
Maximal operating current	А	6.90	2.56	
Input fans power	W	2 x 155	2 x 165	
Heater capacity	kW	1.0	3.0	
Unit size (height x width x depth)	mm	600 x 1150 x 570		
Ductwork connection	mm	4 x 200,	1 x 125	
Filter for supply/exhaust air	mm	470 x 23	5 x 46-F7	
Unit weight	kg	9	0	
Unit color		RAL	9010	







$P[kW] = SFP[kW/(m^3/s)] \cdot V[m^3/s]$ ; SFP is shown for one fan. Performance data: filter F7.	
Note: characteristics explanation is available on the page 17.	

REGO 600 Acoustic data		63Hz	125Hz	250Hz	500Hz	1000Hz	2000Hz	4000Hz	8000Hz	dB(A)
Supply air flow	Inlet	-9	-7	-6	-6	-10	-15	-19	-24	-4.9
(to the ducts)	Outlet	-7	-2	-1	-1	-5	-10	-14	-17	0.0
Extract air flow	Inlet	-9	-7	-6	-6	-10	-15	-19	-23	-4.8
(to the ducts)	Outlet	-7	-2	-1	-1	-5	-10	-14	-17	0.0
Kitchen hood inlet		-8	-5	-4	-4	-6	-12	-15	-18	-2.0
Surrounding (3 pl., 3 m)		-24	-21	-21	-28	-31	-36	-41	-45	-24.8



## Vertical Units DOMEKT RECU 300

• Double plate heat exchanger with crosswise air flows ensures the heat recovery up to 88%.

Unit RECU 300 is developed and designed to create mechanical ventilation and heat recovery in flats, apartments or other residential premises up to  $180m^2$ .

The supply and exhaust air flows are separated in the unit with plate heat exchanger, that is why heat from the foul air can be recovered as well.

We can also recover the heat from the premise with a strong smell, e.g. from kitchen, bathroom, etc.

The unit has an additional extraction connection for kitchen hood. Integrated automatic control with the wall mounted panel C4 or touch sensitive C4 PLUS which is handy and simple in operation ensures the most economic unit functioning and necessary control.







Special design of RECU 300 allows the user to choose the needed inspection side (it is both left and right hand). The side panel of the units can be easily removed. After the needed inspection side is chosen, the unit is turned around and the ducts are connected.

Expli	cation
1	Drainage
2	Plate heat exchanger
3	Supply air filter
4	Supply fan
5	Exhaust fan
6	Automation control system
7	Exhaust air filter
8	Electric air heater
9	By-pass damper
А	Outdoor intake
В	Supply air
С	Extract indoor
D	Exhaust air
Е	By-pass damper, extraction without heat recovery



Technical information	RECU-300VE-B-C4	RECU-300VW-B-C4*			
	EC	EC			
Supply voltage	V/Hz	~230 / 50	/ 1 phase		
Maximal operating current	А	5.10	0.76		
Input fans power W		2 x 70			
Heater capacity	kW	1.	0		
Unit size (height x width x depth)	mm	710 x 740 x 340			
Ductwork connection	mm	5 x	125		
Filter for supply/exhaust air	mm	300 x 200	) x 46-F7		
Unit weight	kg	4	2		
Unit color		RAL	9010		







 $\label{eq:pkw} P[kW] = SFP[kW/(m^3/s)] \cdot V \ [m^3/s]; SFP is shown for one fan. Performance data: filter F7. Note: characteristics explanation is available on the page 17.$ 

RECU 300 Acoustic data		63Hz	125Hz	250Hz	500Hz	1000Hz	2000Hz	4000Hz	8000Hz	dB(A)
Supply air flow (to the ducts)	Inlet	-14	-14	-17	-16	-16	-23	-27	-29	-12.7
	Outlet	-7	-2	-1	-1	-5	-10	-14	-17	0.0
Extract air flow (to the ducts)	Inlet	-13	-11	-14	-13	-14	-21	-25	-27	-10.8
	Outlet	-7	-2	-1	-1	-5	-10	-14	-17	0.0
Kitchen hood connection		-8	-5	-4	-4	-6	-12	-15	-18	-2.0
Surrounding (3 pl., 3 m)		-20	-16	-17	-23	-27	-33	-39	-43	-20.4



## Vertical Units DOMEKT RECU 400

- Energy efficiency 89%.
- Energy efficient motors EC.

Unit is developed and designed to create mechanical ventilation and heat recovery in flats, apartments or other residential premise up to  $150 \text{ m}^2$ .

High-efficient plate heat exchangers and EC motors guarantee the most effective and economical unit operation: up to 89% of energy required for supplied air heating is recovered and used from the exhausted air.

Unit is produced with a fully integrated automatic control C4 with the wall mounted panel which is handy and simple in use and ensures the most economical unit functioning and necessary control.











For some units right and left sides are mirrored, but in some units are rotated. Choose the right side of unit installation.



7

8

9

RECU 400 (Shown as left)



#### Explication

P.	
1	Drainage
2	Plate heat exchanger
3	Supply air filter
4	Supply fan
5	Exhaust air filter
6	Exhaust fan
7	Electric air heater
8	Automation control system
9	By-pass damper

- A Outdoor intake
- B Supply air
- C Extract indoor
- D Exhaust air



#### RECU 400VECF-C4 PLUS RECU 400VWCF-C4 PLUS\*

Technical information		RECU 400VECF-C4 PLUS	RECU 400VWCF-C4 PLUS*	
		EC	EC	
Supply voltage	V/Hz	~230 / 50	) / 1 phase	
Maximal operating current	А	5.8	1.5	
Input fans power	W	2 x	105	
Heater capacity	kW	1.0	1.2	
Unit dimensions (height x width x depth)	mm	660 x 598 x 600		
Ductwork connection	mm	Ø	160	
Filter for supply/exhaust air	mm	235 x 35	0 x 46-F7	
Unit weight	kg	5	5	
Unit color		RAL	9010	

\* For more detailed information look at the hot water duct air heater DH specification.





Application: -23°C RH 82% outdoor 21°C RH 45% indoor

To calculate the power consumption for EC motor use formula: P = SFP\*V; where SFP - kW/(m<sup>3</sup>/s) and V - m<sup>3</sup>/s.

		к <sub>ост</sub>							k <sub>sum</sub>	
RECU 400 Acoustic data		63Hz	125Hz	250Hz	500Hz	1000Hz	2000Hz	4000Hz	8000Hz	dB(A)
Supply air flow	Inlet	-8	-4	-3	-3	-7	-13	-16	-19	-2.3
(to the ducts)	Outlet	-11	-8	-9	-8	-10	-18	-21	-24	-6.6
Extract air flow	Inlet	-8	-4	-3	-3	-7	-13	-16	-19	-2.3
(to the ducts)	Outlet	-11	-8	-9	-8	-10	-17	-21	-23	-6.5
Surrounding (3 pl., 3 m)		-24	-21	-21	-28	-31	-36	-41	-45	-24.8

To calculate the sound power L<sub>w</sub>, dB in 8 octave centres\* and A-weighted\*\* total sound power L<sub>wa</sub>, dB(A) of all air duct openings of the unit (without influence of casing) also to calculate the sound pressure Lp, dB in 8 octave centers and A-weighted total sound pressure LpA, dB(A) of the casing of the unit (without influence of openings) at the distance of 3 meters for environment of sound reflecting: floor (ceiling) and two near standing walls at the angle of 90 degrees to each other at the standard conditions\*\*\*, correction coefficients  $k_{ort'}$  dB and  $k_{sum'}$  dB(A) must be algebraically added to the value of the closest acoustic curve of A-weighted\* total sound power  $L_{wa'}$  dB(A) from the performance chart (usually of the exhaust outlet of the air handling unit) in the desired working point of the unit.

\* 8 octave centers - frequencies of: 63, 125, 250, 500, 1000, 2000, 4000 and 8000Hz,
\*\* A-weighting: allowance for human's hearing sensitivity in various frequencies,
\*\*\* Standard conditions: atmospheric pressure of 101.3kpa, temperature of 20°C and relative humidity of 50%.



## Vertical Units DOMEKT RECU 450

• Double plate heat exchanger with crosswise air flows ensures the heat recovery up to 88%.

Unit RECU 450 is developed and designed to create mechanical ventilation and heat recovery in flats, apartments or other residential premises up to  $180m^2$ .

The supply and exhaust air flows are separated in the unit with plate heat exchanger, that is why heat from the foul air can be recovered as well.

We can also recover the heat from the premise with a strong smell, e.g. from kitchen, bathroom, etc.

The unit has an additional extraction connection for kitchen hood. Integrated automatic control with the wall mounted panel C4 or touch sensitive C4 PLUS which is handy and simple in operation ensures the most economic unit functioning and necessary control.







Special design of RECU 450 allows the user to choose the needed inspection side (it is both left and right hand). The side panel of the units can be easily removed. After the needed inspection side is chosen, the unit is turned around and the ducts are connected.

Expli	cation
1	Drainage
2	Plate heat exchanger
3	Supply air filter
4	Supply fan
5	Exhaust fan
6	Automation control system
7	Exhaust air filter
8	Electric air heater
9	By-pass damper
А	Outdoor intake
В	Supply air
С	Extract indoor
D	Exhaust air
Е	By-pass damper, extraction without heat recovery



Technical information	RECU 450VE-B-C4	RECU 450VW-B-C4*			
	EC	EC			
Supply voltage	V/Hz	~230 / 50	/ 1 phase		
Maximal operating current	А	6.00	1.65		
nput fans power W		2 x 172			
Heater capacity	kW	1.	5		
Unit size (height x width x depth)	mm	710 x 740 x 340			
Ductwork connection	mm	5 x	125		
Filter for supply/exhaust air	mm	300 x 200	) x 46-F7		
Unit weight	kg	4	2		
Unit color		RAL	9010		







 $\label{eq:pkw} P[kW] = SFP[kW/(m^3/s)] \cdot V \ [m^3/s]; SFP is shown for one fan. Performance data: filter F7. Note: characteristics explanation is available on the page 17.$ 

RECU 450 Acoustic data		63Hz	125Hz	250Hz	500Hz	1000Hz	2000Hz	4000Hz	8000Hz	dB(A)
Supply air flow (to the ducts)	Inlet	-14	-14	-17	-16	-16	-23	-27	-29	-12.7
	Outlet	-7	-2	-1	-1	-5	-10	-14	-17	0.0
Extract air flow (to the ducts)	Inlet	-13	-11	-14	-13	-14	-21	-25	-27	-10.8
	Outlet	-7	-2	-1	-1	-5	-10	-14	-17	0.0
Kitchen hood connection		-8	-5	-4	-4	-6	-12	-15	-18	-2.0
Surrounding (3 pl., 3 m)		-20	-16	-17	-23	-27	-33	-39	-43	-20.4



### False-ceiling units DOMEKT RECU 500

- Energy efficiency 92%.
- Energy efficient motors EC.

Unit is developed and designed to create mechanical ventilation and heat recovery in flats, apartments or other residential premise up to  $200 \text{ m}^2$ .

High-efficient plate heat exchangers and EC motors guarantee the most effective and economical unit operation: up to 92% of energy required for supplied air heating is recovered and used from the exhausted air.

Unit is produced with a fully integrated automatic control C4 with the wall mounted panel which is handy and simple in use and ensures the most economical unit functioning and necessary control.





(B) 👤

B D

9 By-pass damper



Technical information	RECU 500PECF-C4 PLUS	RECU 500PWCF-C4 PLUS*				
		EC	EC			
Supply voltage	V/Hz	~230 / 50 / 1 phase				
Maximal operating current	А	6.9	2.56			
Input fans power	W	2 x 165				
Heater capacity	kW	1	1.5			
Unit dimensions (height x width x depth)	mm	1050 x 1180 x 290				
Ductwork connection	mm	Ø 200				
Filter for supply/exhaust air	mm	410 x 200 x 46-F7				
Unit weight	kg	70				
Unit color		RAL	9010			



Note: characteristics explanation is available on the page 17.





RECU 500 Acoustic data		63Hz	125Hz	250Hz	500Hz	1000Hz	2000Hz	4000Hz	8000Hz	dB(A)
Supply air flow (to the ducts)	Inlet	-13	-11	-14	-13	-14	-21	-25	-28	-10.9
	Outlet	-7	-2	-1	-1	-5	-10	-14	-17	0.0
Extract air flow (to the ducts)	Inlet	-13	-11	-14	-13	-14	-21	-25	-27	-10.8
	Outlet	-7	-2	-1	-1	-5	-10	-14	-17	0.0
Kitchen hood connection		-9	-7	-8	-7	-8	-13	-16	-19	-3.9
Surrounding (3 pl., 3 m)		-20	-16	-17	-23	-27	-33	-39	-43	-20.4



### Installation of Vertical Units KOMFOVENT DOMEKT



- Outdoor air ►



## Installation of False-ceiling Units KOMFOVENT DOMEKT

 Special units' design with extremely low heights allows us to mount them horizontally, hiding by the false-ceiling or vertically – on the wall.



- Extracted air from premise
- Extracted air from premise
- Supplied air
- Outdoor airExhausted air outside
- Exhausted air outside



## Automatic Control KOMFOVENT DOMEKT



Applications of the OVR functions:

- Maintenance of CO<sub>2</sub> quantity in a room by adding an additional CO<sub>2</sub> sensor (with relay), the main user-set ventilation rate at higher CO, will be switched to the maximum intensity until the room is ventilated, and then again will return to the user-defined intensity.
- Maintaining relative humidity in the room after contacting the external relative humidity sensor (with relay), automatically switching to maximum or different set ventilation intensity the humidity level desired by the user will be maintained.
- Ventilation on demand when the motion sensor is connected to the control contacts, ventilation will be adjusted according to

out according to the set OVR intensity and if there's nobody in the room - the unit will operate according to the main user

- additional extracting device, for example, a kitchen hood or other extraction device without a separate fan, is intended, thus the air extraction is carried out by the unit itself. After the activation of the function the supply and exhaust air fans start operating at the maximum intensity.
- Negative pressure compensation intended for the systems where air extraction can be carried out in a separate air extraction fan. Thus, for the compensation of negative pressure in a room, the OVR function can be activated by the separate control contacts. After the activation of the function the exhaust air fans start operating at the maximum intensity and the exhaust air fan goes off.



### Accessories KOMFOVENT DOMEKT

### Automatic Accessories





## KOMFOVENT DOMEKT Unit in the Ventilation System



![](_page_31_Picture_0.jpeg)

KOMFOVENT producer:

UAB AMALVA, Ozo str. 10, LT-08200 Vilnius, Lithuania www.komfovent.com, info@komfovent.com

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