komfovent®

VENTILATION EQUIPMENT

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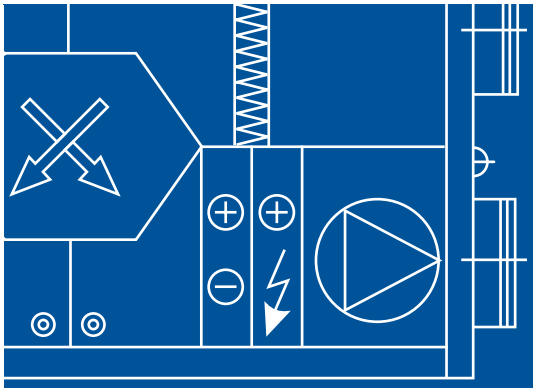


KOMFOVENT range

KOMFOVENT air handling units create healthy indoor climate ensuring an efficient energy saving.
The designed products meet a high quality standards and performance requirements.
All the components of the units are accurately selected and assembled to achieve the best operating results. Reliability of the products is based on the special attention to the details.

DOMEKT is a standardized series of the air handling units (AHU) with a heat recovery performed by a rotor, a heat pump + rotor, a plate exchanger, or just ordinary supply air units. An actual air flow ranges between 50 m^3/h and 1 000 m^3/h.
One of the advantages is a compact AHU design allowing integrating it in a limited dedicated space for installation. It is also possible to hang the units on the wall, ceiling, or place them on the floor.
Simplicity is reflected by a Plug & Play concept – units are fully prepared for installation.

VERSO series units are divided into two groups:
VERSO 1000–7000 that is a standardized range of AHUs (air flow 1000–8000 m^3/h) and VERSO 10–90 units that are designed for the special projects in the range of the air flow of 1000 m^3/h to 34000 m^3/h. Both groups of the units can be offered with a heat recovery, an integrated heat pump or just ordinary air supply units. VERSO series ensures the best performance
of the required operation parameters.
Compact size of each section in VERSO 1000–7000 and VERSO 10–70 units allows bringing it through a standard 900 mm width door opening.

KLASIK ventilation equipment is a bespoke type of AHUs, submitted in 14 sizes with a range of the air flow from 1 000 m^3/h to 90 000 m^3/h. Even bigger capacities (over 90 000 m^3/h) are available and can be offered according to individual requests.
Wide range of KLASIK AHUs is applicable for the different type of projects that require more functional possibilities or other special solutions: public, industrial buildings, etc. Clean premise ventilation needs can be fulfilled by the hygienic version of the equipment.

Why KOMFOVENT?

High energy efficiency standards
All components and parts of the units are accurately selected and assembled to achieve the best efficiency in operation.
An advanced control system optimizes unit's performance.

Silent operation and easy mounting
The units have tight, insulated and painted casing and high quality components, ensuring the extremely silent operation and easy mounting.

High efficiency EC fans
High efficiency EC (electronically commutated) motors of fans use significantly less energy than AC (alternating current) motors with voltage control. The rotary wheels are also equipped with efficient and silent EC motors.

The appropriate rotary wheel
Efficient heat recovery with an optional rotary wheel efficiency. EC motors are used to ensure an efficient rotary wheel performance and minimum operation expenses.

Connection versatility
One of the main advantages is the multipurpose application of one unit – the same unit can be connected to the ducts horizontally or vertically. An installer can always reverse the unit into the required version and choose the duct connection's position on site. One air handling unit – lots of connecting positions.

Plug & Play solution
All units are completely prewired and have an integrated automatic control.

Intelligent control
Smartly designed controllers' algorithms execute a wide range of functions. The units can be controlled not only by control panel, but also via a web browser or mobile devices. Due to the implemented protocols the units are easily integrated into any desired BMS.

RHP solution
Added value to the indoor climate – heating and humidity recovery in winter, cooling and dehumidifying in summer. No need for condensing unit, chiller, piping or additional work to be provided.

Eco-friendly and protected
R410A and R134A refrigerants are used in units with heat pumps.

Laboratory tested units
Our products are tested not only in our own laboratory but also in the independent testing centers in Germany and Switzerland.

International quality approvals
Komfovent equipment is EUROVENT certified, TÜV approved and conforms to all required EU norms and regulations. Passive House Institute Certificate is also available for some type of the units.

Software

Selection software

Equipment is selected using an informative and useful software, available to be downloaded to your PC from our website: **www.komfovent.com/resources**.

Technical data sheets present important technical parameters at a specified working point of the selected unit: efficiency, SFP, acoustics and other required data.

For air handling units:
- DOMEKT
- VERSO
- KLASIK

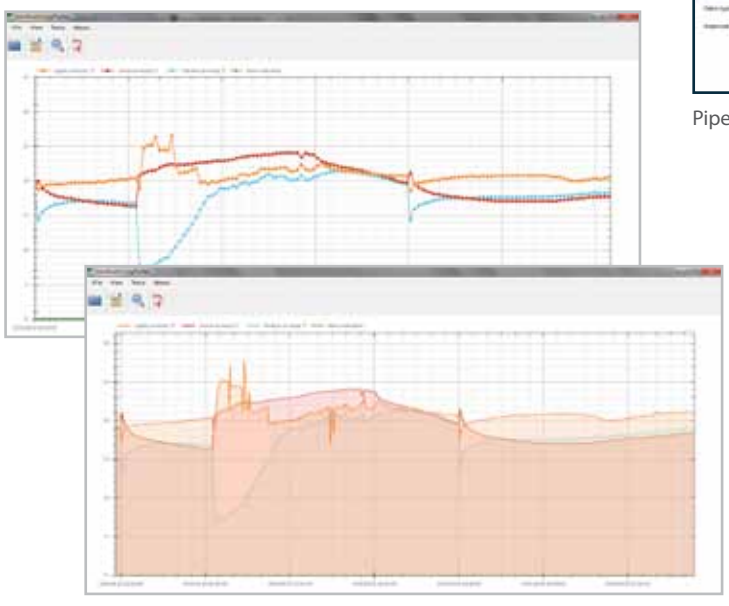
For ventilation systems components:
- Pipework Packages
- Rotary Heat Exchangers
- Water Coils
- Sound Attenuators

Mobile applications

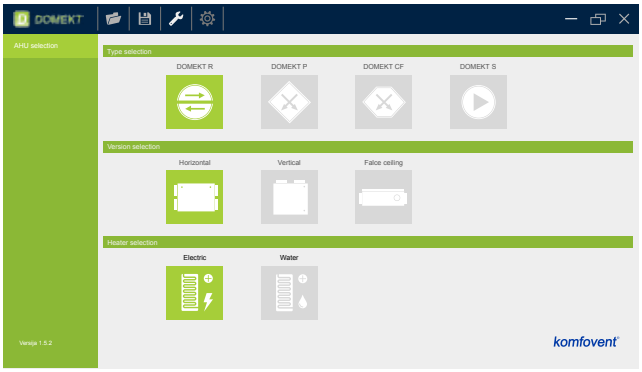
All units may be remotely controlled using smartphones. Two mobile applications are designed – "Komfovent" application is intended for units with C5 control system and "Komfovent Home" – for the units with C4 automatic control.

LogPlotter

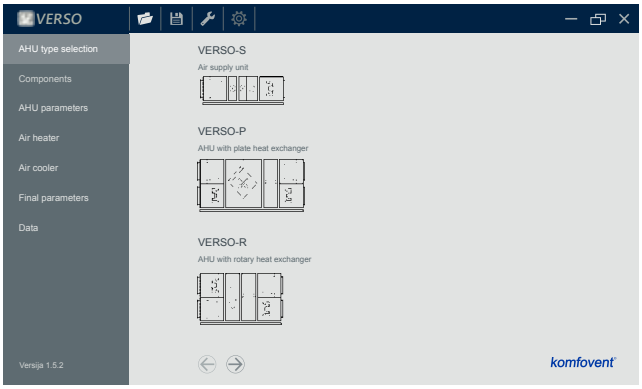
The computer program "Komfovent LogPlotter" has been designed to analyze the unit's operation history of the last 7 days. Unit's operation with C5 can be monitored not only in real-time from now on.



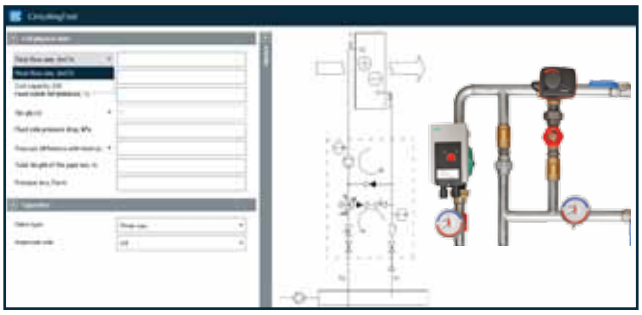
LogPlotter software



DOMEKT selection software



VERSO selection software



Pipework Packages selection software

ErP COMPLIANT

KOMFOVENT units comply with Ecodesign directive

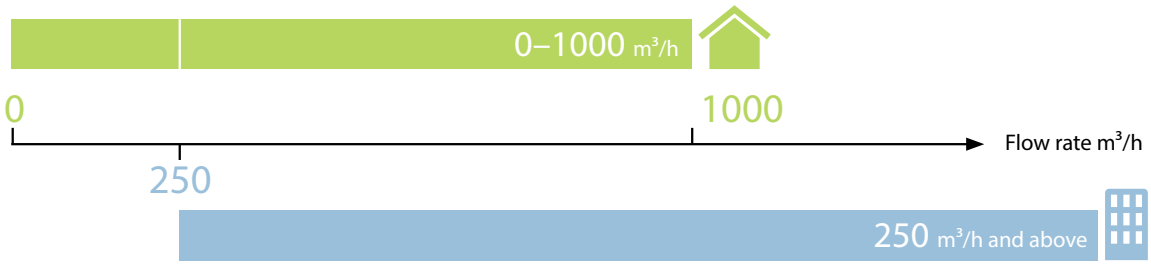
EUROPEAN Commission Regulations (EU)
No. 1253/2014 and 1254/2014

Under Directive 2009/125/EC energy-related products (ErP) representing significant volumes of sales and trade, having significant environmental impact within the Union and presenting significant potential for improvement in terms of their environmental impact, without entailing excessive costs, are to be covered by an implementing measure or a self-regulation measure regarding ecodesign requirements. The energy consumption in the use phase is the most significant environmental aspect of ventilation units, presenting significant potential for cost-effective energy savings and greenhouse gas emission reduction. Therefore the units must comply with the specific ecodesign requirements set out in Ecodesign directive.

Units classification
A distinction should be made between measures applying to residential ventilation units and those applying to non-residential ventilation units on the basis of their individual air flow rate because two different sets of measurement standards are used in practice.

Residential Ventilation Units (RVUs): Ventilation unit where the maximum flow rate does not exceed 250 m^3/h; the maximum flow rate is between 250 and 1 000 m^3/h, and the manufacturer declares its intended use as being exclusively for a residential ventilation application.

Non Residential Ventilation Units (NRVUs): Ventilation unit where the maximum flow rate of the ventilation unit exceeds 250 m^3/h, and, where the maximum flow rate is between 250 and 1 000 m^3/h, and the manufacturer has not declared its intended use as being exclusively for a residential ventilation application.
According to the requirements listed above, the manufacturer decides whether the unit is assigned to RVUs or not.

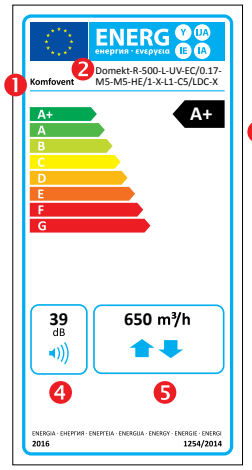


Requirements for RVUs

According to the regulation No. 1254/2014, the residential ventilation units must be marked with a special energy efficiency label. It also defines the standard information that represents the product.

The label

The label shall provide the following information: supplier's name or trade mark; supplier's model identifier; energy efficiency; sound power level (L_{WA}) in dB rounded to the nearest integer; maximum flow rate in m^3/h (at 100 Pa).

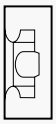


1. Manufacturer
2. Type designation
3. Energy efficiency class
4. Operating noise
5. Output

Requirements for NRVUs

The regulation No. 1253/2014 applies to ventilation units and establishes ecodesign requirements for their placing on the market or putting into service. The set minimum operating parameters will be introduced gradually during the years 2016–2018.

Non-residential ventilation units (NRVUs) should be excluded from labeling as these products are chosen by planners and architects and largely independent from consumer and market behavior.

	250 m^3/h and above				Unidirectional
					
Year	The minimum thermal efficiency	Sound power level	The maximum internal specific fan power of ventilation components (SFP_{int_limit}) $W/(m^3/s)$		The maximum internal specific fan power of ventilation components (SFP_{int_limit}) $W/(m^3/s)$
			up to 2 m^3/s	over 2 m^3/s	
2016	67 %	45 dB	up to 2200	up to 1900	250
2018	73 %	40 dB	up to 2100	up to 1800	250

The definitions of terms

According to the regulation No. 1254/2014, the standard information that represents the product must be displayed. We use required terms in DOMEKT product sheets. Please find the definitions of terms below:

- "reference flow rate" (expressed in m^3/s) is the abscissa value to a point on a curve in the flow rate/pressure diagram which is on or closest to a reference point at 70 % at least of the maximum flow rate and 50 Pa for ducted units and at a minimum pressure for non-ducted units. For bidirectional ventilation units, the reference air volume flow rate applies to the air supply outlet;
- "specific power input (SPI)" (expressed in $W/(m^3/h)$) means the ratio between the effective power input (in W) and the reference flow rate (in m^3/h);
- "specific energy consumption (SEC)" (expressed in $kWh/(m^2.a)$) means a coefficient to express the energy consumed for ventilation per m^2 heated floor area of a dwelling or building.

SEC class	SEC in $kWh/m^2.a$
A+ (most efficient)	SEC < – 42
A	– 42 ≤ SEC < – 34
B	– 34 ≤ SEC < – 26
C	– 26 ≤ SEC < – 23
D	– 23 ≤ SEC < – 20
E	– 20 ≤ SEC < – 10
F	– 10 ≤ SEC < 0
G (least efficient)	0 ≤ SEC

Automatic control system KOMFOVENT

C5 C4 C3

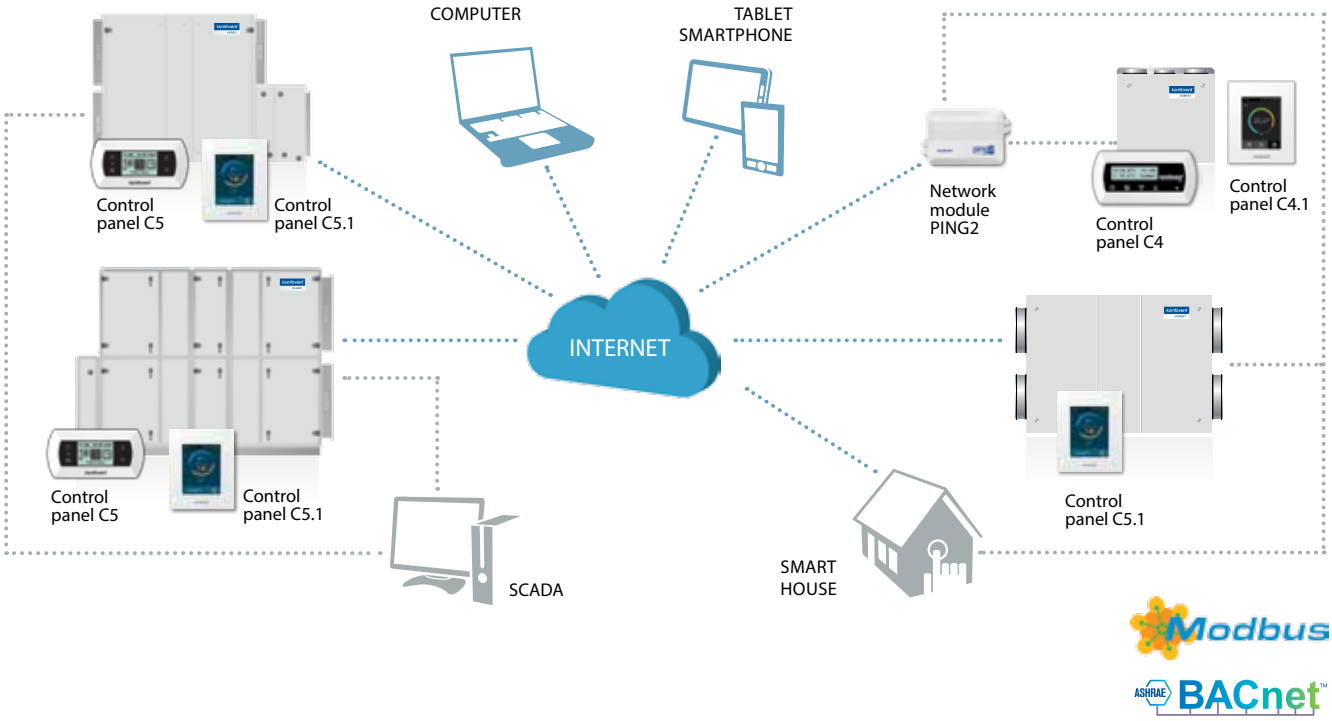
Fully integrated control system KOMFOVENT ensures safe operation of the air handling unit, controls preset ventilation system parameters and optimize unit operating costs.

KOMFOVENT air handling units are offered by the principle Plug & Play, without any external electrical boxes, ready for operation. To ensure reliable operation, reduce installation work costs and other expenses, automatic control is fully integrated in the air handling unit and the system of connected automatic elements ensures quick and easy assembling of the unit. Everything is already prewired and tested in the manufacturing site. Only the modern and attractive design control panel must be installed inside the building in any user-convenient place. Each series of the air handling units have specially adapted KOMFOVENT controller, which in the best way ensures functionality and operational needs of the air handling unit.

Smartly designed controllers' algorithms allow wide range of functional possibilities, which ensure energy saving of the system at the same time let to maintain and keep comfort conditions in the ventilated premises: air quality control, operation on demand, summer night cooling, VAV, CAV and many others.

Implemented Modbus and BACnet protocols allow easy integration of KOMFOVENT air handling units to any desired Building Management Systems.

All controllers are easy in operation, have convenient user-friendly menu, LCD display enables to monitor various parameters, touch-sensitive buttons allow pleasant and convenient setting operation modes of the unit by soft touching.



The units with C5 control system have integrated web server for controlling and monitoring the AHU's operation via internet. Remote control for units with C4 control system is available after connecting additional network module PING2.

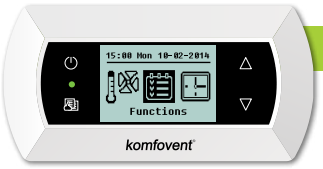
AHU can be controlled via a web browser on your computer or mobile devices. Application softwares for Smartphones are specially developed for more convenient control. User-friendly interface enables clear and easy monitoring of air handling unit operation.

Scan the QR codes below and download mobile applications:

"Komfovent" application for units with integrated C5 control system

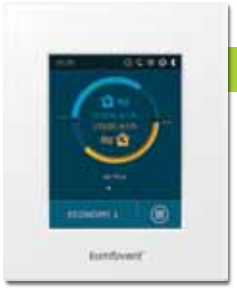
"Komfovent Home" application for units with integrated C4 control system

Komfovent C5



Panel C5

- Big graphic display and touch buttons.
- Simple and easy control.
- Indication of unit parameters and active functions.
- Unit failure and status indication.
- Selection of the language and measuring values.



Panel C5.1

- Modern design.
- Extremely thin – only 12,5 mm.
- Coloured touch-sensitive LED display.
- Smart control.
- Integrated thermometer and moisture meter.
- Customized screen saver: up to 3 parameters can be displayed, when unit is in a stand-by mode.
- 3 ways of fixing the panel.

Detailed information for the user

- Air flow indication (m^3/h, m^3/s, l/s).
- Thermal efficiency of the heat exchanger (%).
- Heat exchanger energy recovery (kW).
- Thermal energy saving indicator (%).
- Air heater energy consumption (kWh).
- Heat exchanger recovered energy counter (kWh).
- Fans energy consumption (kWh).
- SFP factor of the fans.
- Clogging level of filters (%).

Various operating modes

- 5 different operation modes: *Comfort1*, *Comfort2*, *Economy1*, *Economy2*, and *Special*. User may set supply and extract air volumes as well as air temperature for each of mode separately.
- Temperature control modes: Supply air / Extract air / Room / Balance. Possibility to select which temperature to be maintained.
- Flow control modes: Constant Air Volume (CAV), Variable Air Volume (VAV), Directly Controlled Volume (DCV).
- Universal operating schedule with up to 20 events, for which of them user can assign weekday(s) and one of five operation modes.
- Holliday scheduling allows the user to change operation mode or switch off the air handing unit at some dates of the year. Up to 10 events are possible.

Extended control possibilities

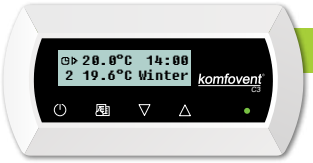
- Controlling up to 30 units connected into a network from one panel.
- Ability to connect the controller to the Internet network and manage it via a standard internet browser without any accessories.
- Possibility to control air handling unit by Smartphone via Android OS or iOS application software.
- Ability to control the unit not only by a control panel or a computer, but also by different external devices (switch, timer, etc.) and systems (e.g. the smart house system).

Connectivity & Protocols

- Modbus RTU over RS-485.
- Modbus TCP over Ethernet.
- BACnet/IP over Ethernet.

Extended C5 control functions in addition to C3	
Air quality control	Two different air quality values may be set for two different unit operating modes (e.g. *Comfort* and *Economy*). These values will be maintained by automatically increasing or reducing the intensity of ventilation.
Outdoor compensated ventilation	This function adjusts the air volume depending on the outdoor temperature. It is possible to enter four temperature points where two of them define winter conditions and the other two define summer conditions. Upon entering the compensation curve according to the outdoor temperature, the current intensity of ventilation is decreased or increased accordingly.
Summer night cooling	This function is intended for energy saving in summer: utilising the outside chill of night hours to cool down the heated rooms. The user may enable or disable function at any time as well as set the room temperature at which the function is automatically activated.
Override function	Override control of the unit can be performed by an external device (timer, switch, thermostat, etc.). The signal received from the outside activates the function which switches the unit to the pre-programmed mode ignoring the current operating mode.
Minimum temperature control	This function forces the reduction of the supply and extract air volumes set by the user when the heater capacity available in the unit is insufficient and/or heat recovery does not ensure the supply of the minimum temperature to the room.
Humidity control	An air handling unit can be ordered with an air humidity control function. If this function is available the user is able to choose the humidity control location: supply air, extract air or room. The user is also able to choose the method of control: humidification, dehumidification or both at a time.
Circulation pumps control on demand	Both heating and cooling pumps are controlled according to the current need for heating or cooling instead of a season control.
Air flow density compensation	Air density depends on the temperature. C5.1 offers a function which adjusts the air flows automatically to avoid any misbalance in rooms while being ventilated.
Operation on demand	The air handling unit start-up function is designed to start the unit operating in off mode when one of the selected parameters (CO_2, air quality, humidity, or temperature) has exceeded the critical limit.
Change-over function	Control of combined water heater- cooler and DX cooler reversing to the heating mode.
Additional zone control	Option for independently control of additional heaters and coolers in separately ventilated area. Up to two additional temperature zones can be controlled.
Recirculation control	The C5 controller has a modulated extract air recirculation function. There are four control options: 1) recirculation according to the air quality which may be defined by one of the selected parameters: CO_2, air pollution by organic components and chemical substances, humidity or temperature; 2) recirculation according to the external temperature curve; 3) recirculation according to a weekly schedule; 4) recirculation controlled by an external device.
Recirculation limitation by temperature	Recirculation may be limited according to the need for heating or cooling. In cases where recirculation is controlled automatically according to one of the air quality sensors or the recirculation level set by the user, the required value of extract air recirculation may be ignored if recirculation heats or cools down the supplied air too much. In such a case recirculation is forcibly reduced until the temperature of supply air set by the user has been reached.
New safety features	
Rotary or plate heat exchanger failure protection	This function observes the thermal efficiency of the heat exchanger. If it does not reach the required level a fault is recorded and indicated.
Rotary or plate heat exchanger anti-frost	Under the low outdoor temperature conditions, this function is constantly observing decreasing tendency of the heat exchanger thermal efficiency, determines the moment when the heat exchanger starts freezing, and activates the defrosting function automatically.
Service time	A warning message appears when the continuous operation of the AHU has reached 12 months.
Rotor cleaning function	This function ensures that the rotary heat exchanger does not pollute when turned-off. When the air handling unit operates without heat recovery, i.e. when the rotor does not rotate for some time, it is forcibly activated for a little so that moving air flows could blow possible dust.
Rotor warm-up function	This function forcibly activates the rotary heat exchanger if the air handling unit is turned off for some time and the temperature inside the unit or ventilation system is low enough for the rotor to freeze.
Circulation pumps start-up in off mode	This function starts water circulation pumps for a short period of time when they are off longer than the set period.
Warning for too low air flow	If the air handling unit does not reach the air volume set within the time set, the user is warned by an informative message.
External stop	Shut-down function from external device. May be used with or without an automatic unit restart.
Emergency shut-down in case of fire	The external fire alarm is provided when the unit is connected to the building fire alarm system. There is also an internal fire alarm to detect an increased temperature inside the air handling unit or the ventilation system.
Intelligent self-diagnostic	Self-check function of controller and elements of the air handling unit. If a fault is detected, controller terminates the operation of the unit and warns about such a fault using the respective informative messages.

Komfovent C3



Panel C3

- Easy control.
- The user may monitor the processes on the LCD display.
- Air flow control and indication.
- Unit PC control.
- Enables to select language.

Panel C3.1

- Essential functions.
- Integrated thermometer and hygrometer.
- Colored touch-sensitive LED display.
- Customized screen saver: up to 3 parameters can be displayed, when unit is in a stand-by mode.
- 3 ways of fixing the panel.
- Language selection.

Operating functions	
Unit control using panel	Panel can be used to control unit operation: to change operation modes and parameters, to switch unit on or off anytime.
Remote switching on or off	The possibility to switch unit on or off using additional device.
Supply air temperature maintenance	The unit automatically supplies air according to the temperature preset by the user.
Room temperature maintenance	Unit automatically supplies air of such temperature to maintain preset room temperature (15...30 °C).
Set point sliding	Option to shift set value of the supply or room air temperature for the specified period of time.
Temperature maintaining mode setting	The user can select from the panel temperature to be maintained: supply air or room air temperature.
Automatic temperature maintaining mode selection	Depending on the outdoor temperature, maintaining mode can be selected automatically.
Ventilation intensity control	The user may set most economical and effective ventilation intensity level.
Remote unit intensity control (OVR)[1, 3]	The ventilation unit intensity will be controlled by contacts. The fourth level of intensity can be activated with these contacts.
Constant air volume control (CAV)[1]	The unit maintains set by the user supply and exhaust air volume.
Variable air volume control (VAV)[1, 2]	The unit supplies and exhausts air volume correspondingly to the ventilation requirements in different premises. In case of frequently changing ventilation demands this air volumes maintenance mode signally reduces the unit exploitation costs.
Air quality function (AQ)[1, 2]	The provided ventilation intensity correction according to the increased CO_2, humidity level and etc.
Ventilation correction in winter time	In winter time, if there is not enough heating power, temperature is maintained by decreasing ventilation intensity.
The unit weekly schedule programming	Weekly operation schedule with three daily events may be set. For each daily event, user can select ventilation intensity.
Season setting	For the most economic unit operation summer and winter settings are provided.
Automatic season change	Depending on the outside temperature, season can be changed automatically.
Pump control	Water pump is controlled depending on the outside temperature and according to the need.
Cooling energy recovery	In summer time, cooling energy is recovered to the room.

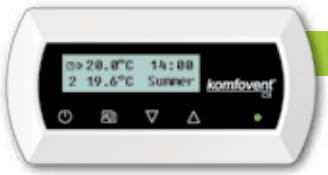
Summer night cooling[3]	In summer night time, when cooling is required, ventilation intensity level is automatically switched to the third intensity level. Air is cooled only by outdoor air, without heat or coolness recovery and additional air cooling or heating.
Exhaust air flow correction[1]	The user for the set time period can adjust exhaust air fan speed.

Protection functions	
Water heater frost protection	Maximum protection from water freezing.
Electric heater overheating protection	If there is danger of overheating, heater shuts down automatically. The unit is equipped with heater cooling. When unit is shut down during the heating operation, fans will continue to operate for set time period.
Plate heat exchanger frost protection	When there is low outdoor temperature, heat exchanger is protected from freezing.
Fan overheating protection	Fan motor is protected from failure.
Rotary heat exchanger rotation guard	If heat exchanger has a failure, the unit operation is stopped.
Emergency shut down in case of fire	If the unit is connected to the building fire alarm system, in case of fire unit operation is stopped automatically.
Emergency shut down according to the temperature value limits	If supply air temperature reaches emergency level, unit operation is stopped.
Distance unit failure indication	Possibility to indicate unit failure in a distance from the unit.
Return water temperature maintenance	When unit is switched off in winter time, return water temperature of 25 °C is maintained in hot water air heater.

Other functions	
Filter clogging indication	In case of at least one filter clogging, warning appears on the panel display.
Mode operation, temperature and time indication	Supplied air filter clogging is indicated on the control panel by the red light signal.
Failure indication	In case of failure of a separate unit assembly or elements, the air handling unit is stopped. This is indicated by text message.
Language selection	Control panel provides menu for the language selection.
Air flow indication[1]	Option to monitor unit supply and exhaust air flow (m^3/h, m^3/s, l/s).
Unit PC control[3]	Option to manage and control units by computer, when connected to the PC network, or Internet.

1 – function is provided for units with EC fans.
2 – accessories ordered additionally.
3 – additionally ordered function only for C3 control panel.

Komfovent C4



Panel C4

- Easy control.
- Performs essential functions of air handling units' control.
- The user may monitor the processes on the LCD display.
- Enables to select language.

Panel C4.1

- Easy monitoring.
- Main settings are easily accessible from main window.
- Integrated thermometer and hygrometer.
- Colored touch-sensitive LED display.
- Customized screen saver: up to 3 parameters can be displayed, when unit is in a stand-by mode.
- 3 ways of fixing the panel.
- Language selection.

Operating functions	
Unit control using panel	Panel can be used to control unit operation: to change operation modes and parameters, to switch unit on or off anytime.
Supply air temperature maintenance	The unit automatically supplies air according to the temperature preset by the user (15...30 °C).
Set point sliding	Option to shift set value of the supply or room air temperature for the specified period of time.
Ventilation intensity control	The user may set most economical and effective ventilation intensity level.
Remote unit intensity control (OVR)	The ventilation unit intensity will be controlled by contacts. The fourth level of intensity can be activated with these contacts.
The unit weekly schedule programming	Weekly operation schedule with three daily events may be set. For each daily event, user can select ventilation intensity.
Season setting	For the most economic unit operation summer and winter settings are provided.

Protection functions	
Water heater frost protection	Maximum protection from water freezing.
Electric heater overheating protection	If there is danger of overheating, heater shuts down automatically. The unit is equipped with heater cooling. When unit is shut down during the heating operation, fans will continue to operate for set time period.
Plate heat exchanger frost protection	When there is low outdoor temperature, heat exchanger is protected from freezing.
Rotary heat exchanger rotation guard	If heat exchanger has a failure, the unit operation is stopped.
Emergency shut down according to the temperature value limits	If supply air temperature reaches emergency level, unit operation is stopped.
Return water temperature maintenance	When unit is switched off in winter time, return water temperature of 25 °C is maintained in hot water air heater.

Other functions	
Notification of service time	A periodic inspection message appears on the control panel at a certain time.
Failure indication	In case of failure of a separate unit assembly or elements, the air handling unit is stopped. This is indicated by text message.
Language selection	Control panel provides menu for the language selection.
Unit PC control[1]	Option to manage and control units by computer, when connected to the PC network, or Internet.
Control via smartphone[1]	The units may be remotely controlled using "Komfovent Home" application, that can be downloaded from "Google Play".

1 – accessories ordered additionally.

komfovent®

DOMEKT

Residential ventilation units

Komfovent DOMEKT

DOMEKT air handling units are designed for the ventilation of residential premises. DOMEKT is a standardized series of the air handling units (AHU) with a heat recovery performed by a rotor, a heat pump + rotor, a plate exchanger, or just ordinary supply air units. An actual air flow ranges between 50 m^3/h and 1 000 m^3/h.

Capacity range
from 50 to 1000 m^3/h

Features and benefits of DOMEKT units:

- Energy efficient solution.
- Plug & Play concept – units are fully prepared for installation.
- DOMEKT air handling units are especially silent.
- Energy saving high performance EC fans in DOMEKT units.
- Integrated automatic control.
- Wide choice of automatic control functions already included as a standard – no options are needed.
- Integrated web server for clever control (only for C5).
- Control via Smartphone available.

A compact air handling units' design helps to integrate them in a limited dedicated space for installation.

All DOMEKT units are based on the principle of Plug & Play: each unit has the integrated control system and is delivered with a complete automatic control installed and prewired inside the unit. A modern control panel is included with each DOMEKT unit supplied.

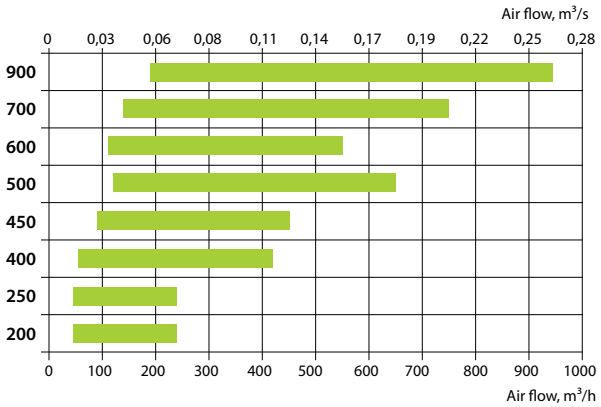
Due to the availability of clever design and functions the units offer a great opportunity to keep running costs low, they are safe, reliable and durable in operation. The air is filtered and supplied clean and fresh to the premises, which is especially advisable to allergic people.

Domekt R	Domekt RHP	Domekt P	Domekt CF	Domekt S
units with a rotary heat exchanger	units with a rotary heat exchanger and heat pump	units with a plate heat exchanger	units with a counterflow plate heat exchanger	supply air units

Domekt R

Air handling units with a rotary heat exchanger.
Operating capacity ranges from 50 to 950 m³/h.

Standard sizes of Domekt R units



Advantages of Domekt R units

Heat energy saving
In the process of ventilation the heat of the exhaust air is recovered to the supplied air.

Efficient heat
Under the normal operational conditions, the rotary heat exchanger does not freeze: exchanger at outdoor temperatures below -20 °C, no additional warming up required of the outdoor air which results in efficient heat energy saving even at hard frosts. The application of the rotary heat exchanger allows reducing the energy consumption for warming up the supply air by approximately 4 times.

Air humidity balance
Under the normal operating conditions the condensate does not form in the process of heat exchange in the rotary heat exchanger, because most of the humidity is returned to the premises. The excess moisture is removed outside. The air in the premises is less drained and the air humidity balance is maintained. As the condensate does not form, the drainage is not necessary – this simplifies the mounting of the unit.

Low noise level
Domekt R air handling units are equipped with silently operating fans and sound insulation, which ensures low noise level.

Preheater
As an additional protection for very low outdoor temperatures such as -30 °C and lower, it is recommended to use duct mounted preheater.

Rotary heat exchanger

Advantages of rotary heat exchanger
- High efficiency coefficient.
- Not freezing.
- 4 times lower energy consumption for warming up the air.
- Humidity is transferred to supply air – a lower power humidifier may be needed.
- No drainage is necessary – easy unit installation.
- Very compact in size.
- Cooled air may be recovered that results in the reduced energy consumption for air cooling.

The efficiency on the demand: two levels of rotor efficiency are available. Optimum efficiency is achieved with L type rotor, higher values may be reached with optional XL type rotor.
Air handling units are equipped with two types of rotary heat exchangers:
- **Heat exchanger is made from aluminum foil (AL).** It recovers heat (during the heating season) or cold (in summer, if the air is conditioned). It recovers moisture.
- **Heat exchanger is made from hygroscopic aluminum foil (AZ).** It recovers heat (during the heating season) or cold (in summer, if the air is conditioned). Heat exchangers of this type regenerate moisture more efficiently.

Energy efficient EC motor
All rotary heat exchangers are equipped with EC motors, which ensure the smooth rotor operation and control.

Heat exchanger is EUROVENT certified

Domekt R range

Unit size	Heat exchanger				Supply/ exhaust air filter class		Heater			Cooler		Inspection side				Control system		
	Type		Wave height													C4 panel		C5 panel
	AL	AZ*	L	XL	M5	F7	HE	HW	HCW	CW	CDX	R1	R2	L1	L2	C4	C4.1	C5.1
Domekt R 200 V	●		●	○	●	○	●	△	△			○		○		●	○	
Domekt R 250 F	●	○	●	○	●	○	●	△	△				○		○	●	○	
Domekt R 400 V	●	○	●	○	●	○	●	△	△			○		○		●	○	
Domekt R 400 H	●	○	●	○	●	○	●	△	△			○		○				●
Domekt R 400 F	●	○	●	○	●	○	●	△	△			○		○		●	○	
Domekt R 450 V	●	○	●	○	●	○	●	△	△			○		○		●	○	
Domekt R 500 U	●	○	●	○	●	○	○		○	△	△	○		○				●
Domekt R 500 H/V	●	○	●	○	●	○	●	△	△	△	△	○		○				●
Domekt R 600 H	●	○	●	○	●	○	●	△	△			○		○		●	○	
Domekt R 700 V	●	○	●	○	●	○	●	△	△	△	△	○		○				●
Domekt R 700 H	●	○	●	○	●	○	●	△	△	△	△	○		○				●
Domekt R 700 F	●	○	●	○	●	○	●	△	△	△	△	○		○				●
Domekt R 900 U	●	○	●	○	●	○	○		○	△	△	○		○				●
Domekt R 900 H/V	●	○	●	○	●	○	●	○		△	△	○		○				●

● standard equipment
○ possible choice
△ ordered separately
* available only L wave height

Duct connection

H – horizontal.
V – vertical.
U – universal, 14 installation options.
F – false ceiling.

Heat exchanger

AZ – entalpic, sorption rotary heat exchanger coated with special 4Å coating. Wave hight of this heat exchanger is L.

AL – aluminum, condensing rotor. As a standard, units are equipped with L wave height of the rotors. In exceptional cases, when increased thermal efficiency is required, the units can be equipped with XL wave.

Heater

HE – electric heater.

HW – water duct heater is installed on the duct and must be ordered separately. Heaters are mounted on the outside of the unit in any user-convenient place. There is heater control possibility in automatic control system.

HCW – heater-cooler one for both – heating and cooling. Ideal for buildings using geothermal energy.

Cooler

CW – designed for air cooling using cold water (water-glycol mixture), provides a higher comfort level in rooms.

CDX – designed for air cooling using direct expansion cooling unit, provides a higher comfort level in rooms.

Inspection side

See p. 136.

Control system

C4 Control features:

- Unit mode selection: On / Off / Auto.
- Setting intensity level (1,2,3).
- Weekly schedule programming.
- Setting temperature from the panel 15-30°C.
- Temperature setpoint sliding +/- 9°C for time period.
- Summer / winter selection.
- Adjusting of intensity levels every 1% from the panel.
- OVR functions activation via external contact.
- OVR functions activation in the panel for adjusted time period (1…90 min.).
- Choosing of panel language (1 of 15).
- Errors indication and registration log (error log with 50 events with time, date in the panel).
- Settings menu blocking with PIN.
- Application software for smartphones based on "Android".**

C5 Control features:

- 5 different operation modes: *Comfort1*, *Comfort2*, *Economy1*, *Economy2* and *Special*.
- Temperature control modes: Supply air / Extract air / Room / Balance.
- Energy parameters indication: thermal efficiency of the heat exchanger, heat exchanger's recovered energy, energy saving indicator.
- Air quality control.
- Flow control modes: CAV, VAV and DCV.
- Air flow indication (m^3/h, m^3/s, l/s).
- Rotary or plate heat exchanger failure protection.
- Rotary heat exchanger cleaning and warm-up function.
- Intelligent self-diagnostic.
- Summer night cooling.
- Holiday, weekly operating scheduling.
- Min. supply air temperature maintenance.
- Combined water heater & cooler control.
- Inverter-type DX outdoor unit control.
- Cooling recovery function.
- Outdoor compensated ventilation.
- Humidity control: air humidification and dehumidification.***
- Circulation pumps control by demand.
- Warm-up function of circulation pumps and mixing valves.
- Air filter clogging indication.
- Operation hours and energy counters.
- Remote control via web interface.
- Built-in data logger for all air handling unit parameters.
- Application software for smartphones based on "Android" and "iOS".

** required PING2 module.
*** additionally ordered function.

Domekt R 200 V

(Domekt REGO 200V)

Maximal air flow, m³/h	258
Panel thickness, mm	25
Unit weight, kg	42
Supply voltage, V	1~ 230
Maximal operating current, A	HE 4,7 / HW 1,5
Thermal efficiency of heat recovery, %	82
Reference flow rate, m³/s	0,05
Reference pressure difference, Pa	50
SPI, W/(m³/h)	0,34
Filters dimensions B×H×L, mm	285×130×45-M5
Electric power input of the fan drive at reference flow rate, W	27
Electric power input of the fan drive at maximum flow rate, W	66
Electric air heater capacity, kW / Δt, °C	0,8 / 12,3
Control panel	KOMFOVENT C4 / C4.1

The photo is intended for informational purposes only, exact details may vary.

Acoustic data

A-weighted sound power level L_{WA}, dB(A) at reference flow rate

Supply inlet	53
Supply outlet	66
Exhaust inlet	51
Exhaust outlet	66
Casing	43

A-weighted sound pressure level L_{PA}, dB(A)
10 m² normally isolated room, distance from casing – 3 m.

Surroundings	33

Temperature efficiency

	Winter					Summer
Outside temperature, °C	-23	-15	-10	-5	0	30
After heat exchanger*, °C	11,6	13,5	14,6	15,8	16,9	23,8

* indoor +22°C, 20 % RH

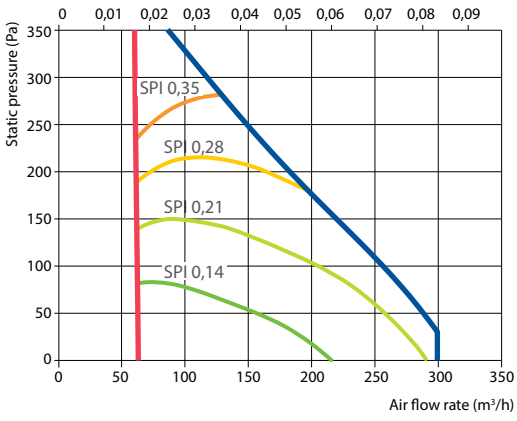
Hot water duct air heater (DH)**

	Winter			
Water temperature in/out, °C	90/70	80/60	70/50	60/40
Capacity, kW	0,9	0,9	0,9	0,9
Flow rate, dm³/h	40	40	39	39
Pressure drop, kPa	1	1	1	1
Temperature in/out, °C	11,6/22			
Maximal capacity, kW	2,4	1,9	1,5	1,0
Connection, ”	½			
Dimensions, mm	335×295×270			
Hot water duct heater type	DH-125			

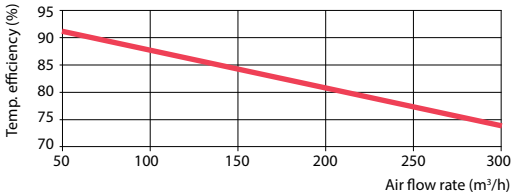
** option

Performance

Unit with standard equipment



Temperature efficiency



Indoor and outdoor ΔT=13°C re: *Ecodesign 1254/2014.*

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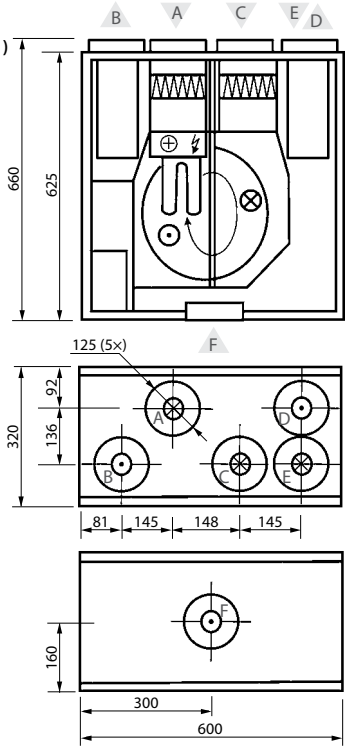

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A outdoor intake
B supply air
C extract indoor
D exhaust air
E additional extraction connection (by-pass – extraction without heat recovery)
F kitchen hood connection (by-pass – extraction without heat recovery)

Domekt R 250 F

(Domekt REGO 250P)

Maximal air flow, m³/h	290
Panel thickness, mm	25
Unit weight, kg	41
Supply voltage, V	1~ 230
Maximal operating current, A	HE 6,3 / HW 2,3
Thermal efficiency of heat recovery, %	80
Reference flow rate, m³/s	0,056
Reference pressure difference, Pa	50
SPI, W/(m³/h)	0,47
Filters dimensions B×H×L, mm	278×258×46-M5
Electric power input of the fan drive at reference flow rate, W	44
Electric power input of the fan drive at maximum flow rate, W	98
Electric air heater capacity, kW / Δt, °C	1/ 13,7
Control panel	KOMFOVENT C4 / C4.1

The photo is intended for informational purposes only, exact details may vary.

Acoustic data

A-weighted sound power level L_{WA}, dB(A) at reference flow rate

Supply inlet	61
Supply outlet	70
Exhaust inlet	62
Exhaust outlet	70
Casing	53

A-weighted sound pressure level L_{PA}, dB(A)
10 m² normally isolated room, distance from casing – 3 m.

Surroundings	42

Temperature efficiency

	Winter					Summer
Outside temperature, °C	-23	-15	-10	-5	0	30
After heat exchanger*, °C	10,7	12,7	14	15,2	16,5	24

* indoor +22°C, 20 % RH

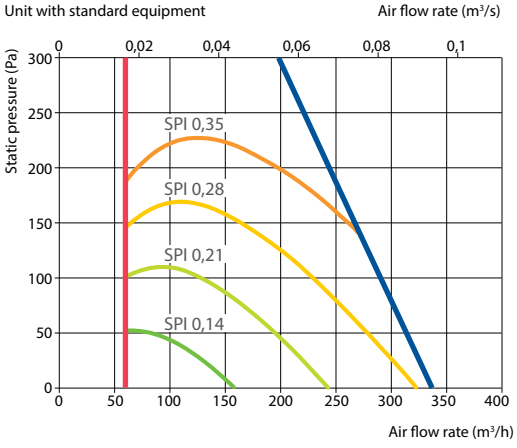
Hot water duct air heater (DH)**

	Winter			
Water temperature in/out, °C	90/70	80/60	70/50	60/40
Capacity, kW	1,1	1,1	1,1	1,1
Flow rate, dm³/h	49	48	48	48
Pressure drop, kPa	1	1	1	1
Temperature in/out, °C	10,7/22			
Maximal capacity, kW	2,8	2,3	1,7	1,2
Connection, ”	½			
Dimensions, mm	335×295×270			
Hot water duct heater type	DH-160			

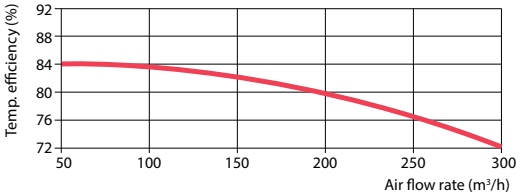
** option

Performance

Unit with standard equipment



Temperature efficiency



Indoor and outdoor ΔT=13°C re: *Ecodesign 1254/2014.*

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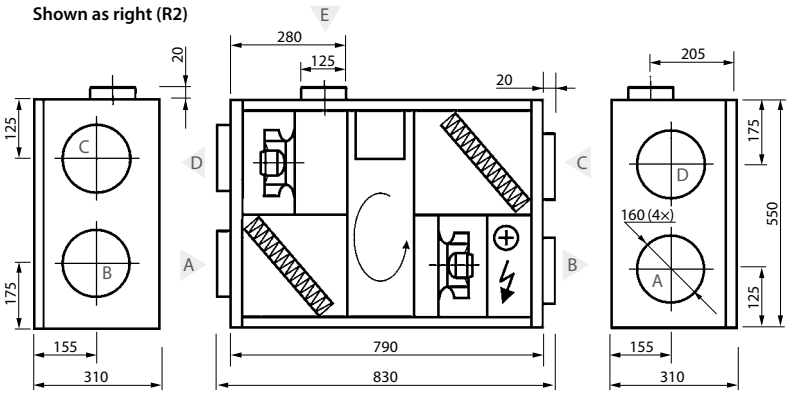

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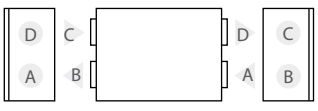


A outdoor intake
B supply air
C extract indoor
D exhaust air
E additional extraction connection (by-pass – extraction without heat recovery)

komfovent®

Domekt R 400 V

(Domekt REGO 400V)

Maximal air flow, m³/h	300
Panel thickness, mm	25
Unit weight, kg	42
Supply voltage, V	1~ 230
Maximal operating current, A	HE 5,5 / HW 1,5
Thermal efficiency of heat recovery, %	87
Reference flow rate, m³/s	0,06
Reference pressure difference, Pa	50
SPI, W/(m³/h)	0,26
Filters dimensions B×H×L, mm	450×210×46-M5
Electric power input of the fan drive at reference flow rate, W	23
Electric power input of the fan drive at maximum flow rate, W	63
Electric air heater capacity, kW / Δt, °C	1 / 13,2
Control panel	KOMFOVENT C4 / C4.1

The photo is intended for informational purposes only, exact details may vary.

Acoustic data

A-weighted sound power level L_{WA}, dB(A) at reference flow rate

Supply inlet	52
Supply outlet	65
Exhaust inlet	50
Exhaust outlet	65
Casing	37

A-weighted sound pressure level L_{PA}, dB(A)
10 m² normally isolated room, distance from casing – 3 m.

Surroundings	27

Temperature efficiency

	Winter					Summer
Outside temperature, °C	-23	-15	-10	-5	0	30
After heat exchanger*, °C	15	16,2	17	17,8	18,6	23,2

* indoor +22°C, 20 % RH

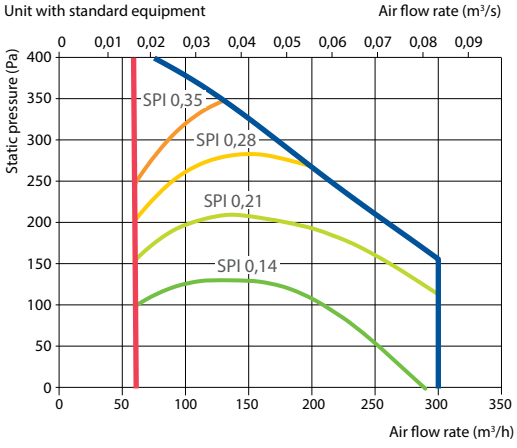
Hot water duct air heater (DH)**

	Winter			
Water temperature in/out, °C	90/70	80/60	70/50	60/40
Capacity, kW	0,7	0,7	0,7	0,7
Flow rate, dm³/h	31	31	31	31
Pressure drop, kPa	1	1	1	1
Temperature in/out, °C	15/22			
Maximal capacity, kW	2,2	1,7	1,3	0,9
Connection, ”	½			
Dimensions, mm	335×295×270			
Hot water duct heater type	DH-160			

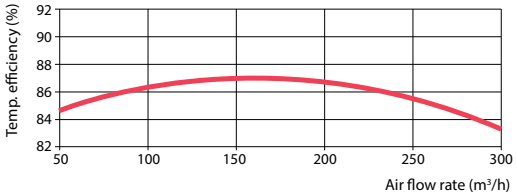
** option

Performance

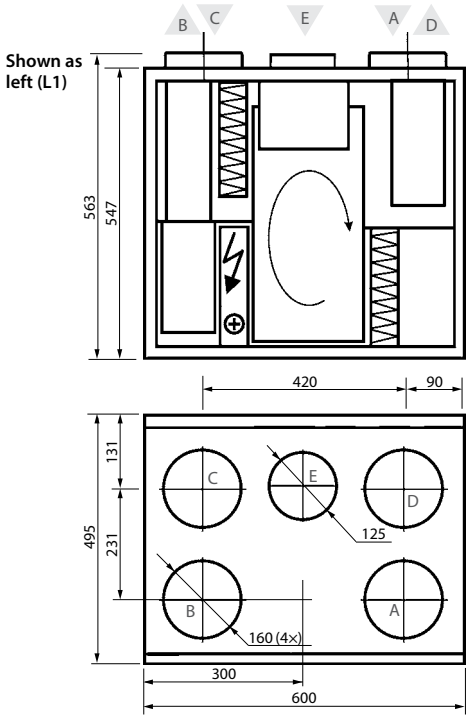
Unit with standard equipment



Temperature efficiency



Indoor and outdoor ΔT=13°C re: *Ecodesign 1254/2014.*



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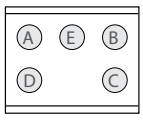
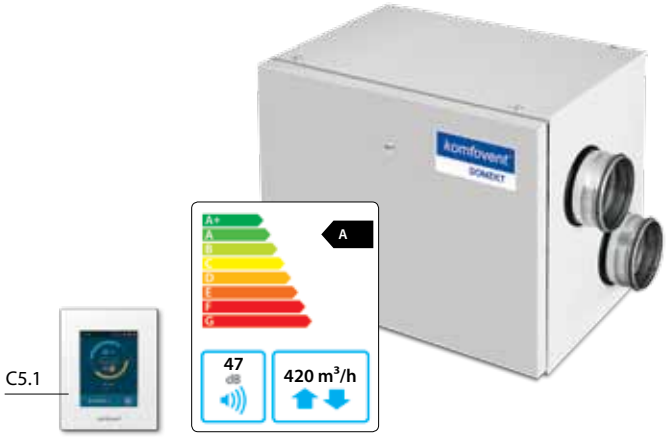


A outdoor intake
B supply air
C extract indoor
D exhaust air
E additional extraction connection (by-pass – extraction without heat recovery)

Domekt R 400 H

(Kompakt REGO 400H)

Maximal air flow, m³/h	420
Panel thickness, mm	50
Unit weight, kg	48
Supply voltage, V	1~ 230
Maximal operating current, A	HE 6,6 / HW 2
Thermal efficiency of heat recovery, %	85
Reference flow rate, m³/s	0,08
Reference pressure difference, Pa	50
SPI, W/(m³/h)	0,31
Filters dimensions B×H×L, mm	410×200×46-M5
Electric power input of the fan drive at reference flow rate, W	42
Electric power input of the fan drive at maximum flow rate, W	102
Electric air heater capacity, kW / Δt, °C	1/9,5
Control panel	KOMFOVENT C5.1



The photo is intended for informational purposes only, exact details may vary.

Acoustic data

A-weighted sound power level L_{WA}, dB(A) at reference flow rate

Supply inlet	58
Supply outlet	67
Exhaust inlet	59
Exhaust outlet	67
Casing	47

A-weighted sound pressure level L_{PA}, dB(A)
10 m² normally isolated room, distance from casing – 3 m.

Surroundings	36

Temperature efficiency

	Winter					Summer
Outside temperature, °C	-23	-15	-10	-5	0	30
After heat exchanger*, °C	13,6	15,1	16,1	17	17,9	23,5

* indoor +22°C, 20 % RH

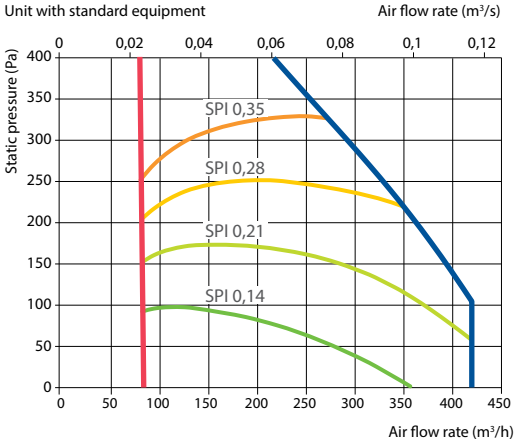
Hot water duct air heater (DH)**

	Winter			
Water temperature in/out, °C	90/70	80/60	70/50	60/40
Capacity, kW	1,2	1,2	1,2	1,2
Flow rate, dm³/h	52	52	52	52
Pressure drop, kPa	1	1	1	1
Temperature in/out, °C	13,6/22			
Maximal capacity, kW	4,4	3,5	2,5	1,6
Connection, ”	½			
Dimensions, mm	335×295×270			
Hot water duct heater type	DH-160			

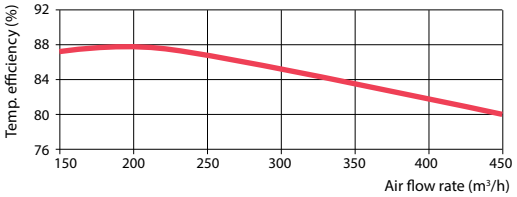
** option

Performance

Unit with standard equipment



Temperature efficiency



Indoor and outdoor ΔT=13°C re: *Ecodesign 1254/2014.*

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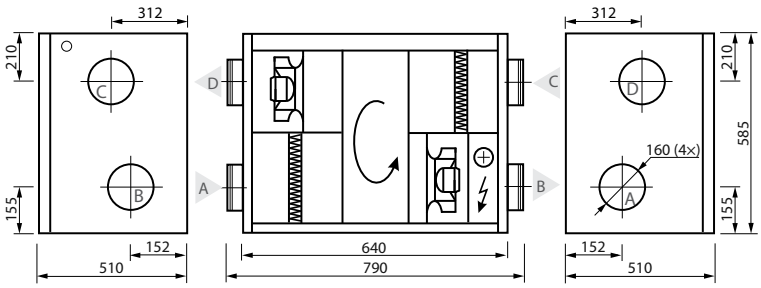


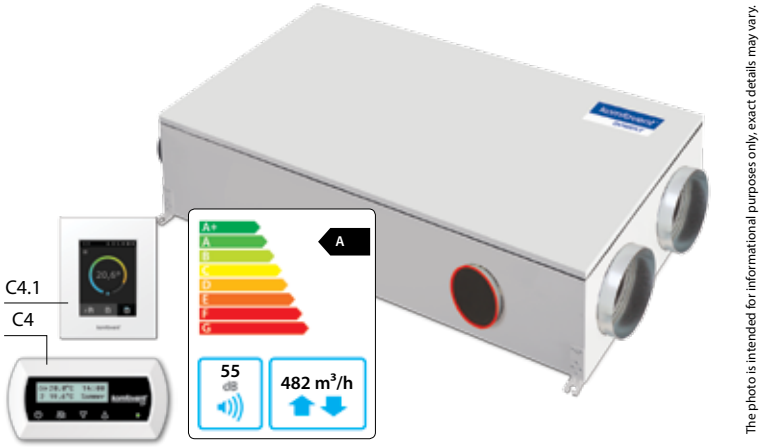
Shown as left (L1)

A outdoor intake
B supply air
C extract indoor
D exhaust air

Domekt R 400 F

(Domekt REGO 400P)

Maximal air flow, m³/h	482
Panel thickness, mm	25
Unit weight, kg	62
Supply voltage, V	1~ 230
Maximal operating current, A	HE 7,3 / HW 3,3
Thermal efficiency of heat recovery, %	82
Reference flow rate, m³/s	0,09
Reference pressure difference, Pa	50
SPI, W/(m³/h)	0,43
Filters dimensions B×H×L, mm	278×258×46-M5
Electric power input of the fan drive at reference flow rate, W	69
Electric power input of the fan drive at maximum flow rate, W	166
Electric air heater capacity, kW / Δt, °C	1 / 8,2
Control panel	KOMFOVENT C4 / C4.1



The photo is intended for informational purposes only, exact details may vary.

Acoustic data

A-weighted sound power level L_{WA}, dB(A) at reference flow rate

Supply inlet	62
Supply outlet	71
Exhaust inlet	63
Exhaust outlet	71
Casing	55

A-weighted sound pressure level L_{PA}, dB(A)
10 m² normally isolated room, distance from casing – 3 m.

Surroundings	44

Temperature efficiency

	Winter					Summer
Outside temperature, °C	-23	-15	-10	-5	0	30
After heat exchanger*, °C	11,7	13,5	14,7	15,8	17	23,8

* indoor +22°C, 20 % RH

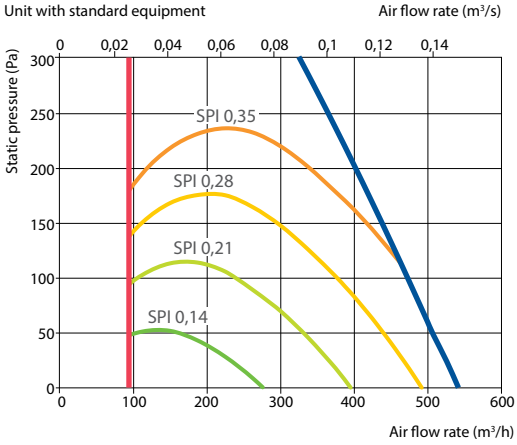
Hot water duct air heater (DH)**

	Winter			
Water temperature in/out, °C	90/70	80/60	70/50	60/40
Capacity, kW	1,7	1,7	1,7	1,7
Flow rate, dm³/h	74	73	73	73
Pressure drop, kPa	1	1	1	1
Temperature in/out, °C	11,7/22			
Maximal capacity, kW	4,5	3,7	2,9	2,0
Connection, ”	½			
Dimensions, mm	360×320×270			
Hot water duct heater type	DH-200			

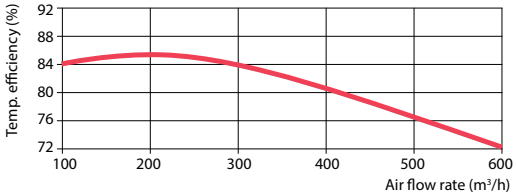
** option

Performance

Unit with standard equipment



Temperature efficiency



Indoor and outdoor ΔT=13°C re: *Ecodesign 1254/2014.*

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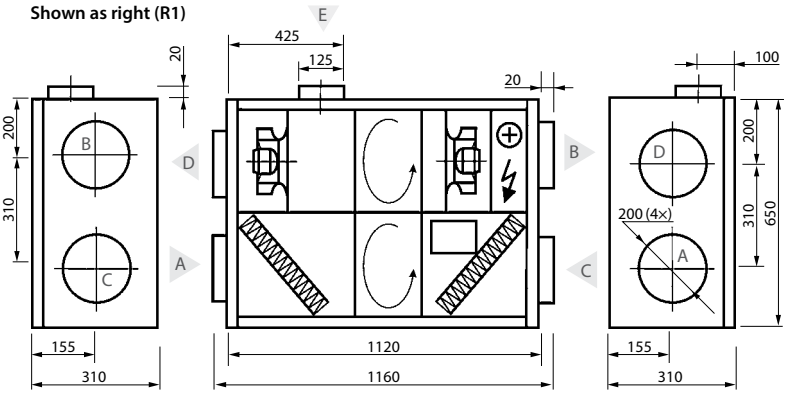

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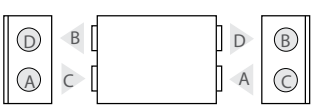


A outdoor intake
B supply air
C extract indoor
D exhaust air
E additional extraction connection (by-pass – extraction without heat recovery)

Domekt R 450 V

(Domekt REGO 450V)

Maximal air flow, m³/h	485
Panel thickness, mm	45
Unit weight, kg	46
Supply voltage, V	1~ 230
Maximal operating current, A	HE 7,2 / HW 3,2
Thermal efficiency of heat recovery, %	85
Reference flow rate, m³/s	0,09
Reference pressure difference, Pa	50
SPI, W/(m³/h)	0,43
Filters dimensions B×H×L, mm	470×240×46-M5
Electric power input of the fan drive at reference flow rate, W	69
Electric power input of the fan drive at maximum flow rate, W	170
Electric air heater capacity, kW / Δt, °C	1 / 8,2
Control panel	KOMFOVENT C4 / C4.1

The photo is intended for informational purposes only, exact details may vary.

Acoustic data

A-weighted sound power level L_{WA}, dB(A) at reference flow rate

Supply inlet	58
Supply outlet	71
Exhaust inlet	55
Exhaust outlet	71
Casing	39

A-weighted sound pressure level L_{PA}, dB(A)
10 m² normally isolated room, distance from casing – 3 m.

Surroundings	29

Temperature efficiency

	Winter					Summer
Outside temperature, °C	-23	-15	-10	-5	0	30
After heat exchanger*, °C	14,2	15,6	16,4	17,3	18,2	23,4

* indoor +22°C, 20 % RH

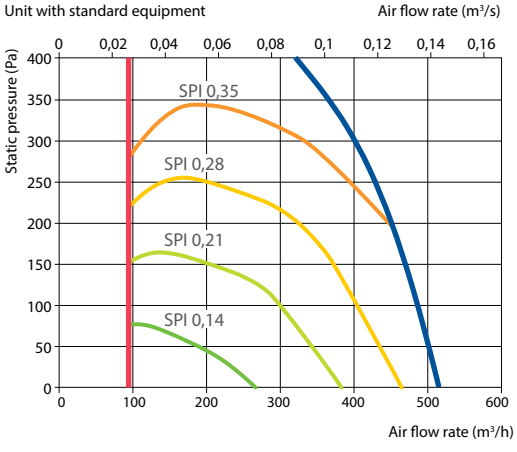
Hot water duct air heater (DH)**

	Winter			
Water temperature in/out, °C	90/70	80/60	70/50	60/40
Capacity, kW	1,3	1,3	1,3	1,3
Flow rate, dm³/h	56	56	55	55
Pressure drop, kPa	1	1	1	1
Temperature in/out, °C	14,2/22			
Maximal capacity, kW	3,6	2,9	2,2	1,5
Connection, ”	½			
Dimensions, mm	335×295×270			
Hot water duct heater type	DH-160			

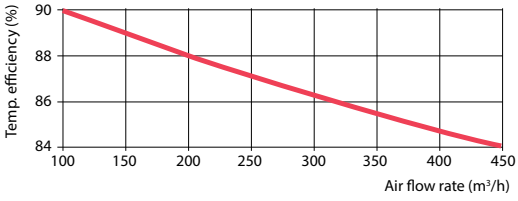
** option

Performance

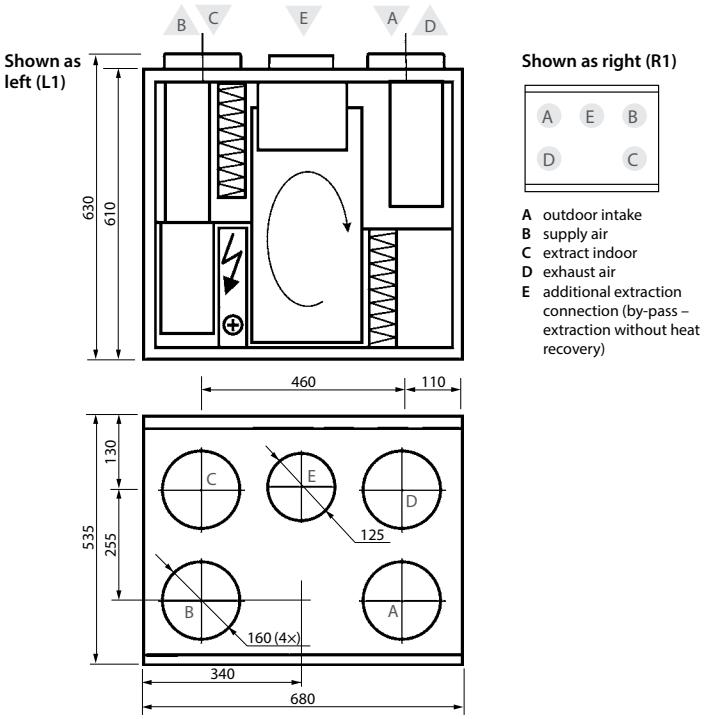
Unit with standard equipment



Temperature efficiency



Indoor and outdoor ΔT=13°C re: *Ecodesign 1254/2014.*



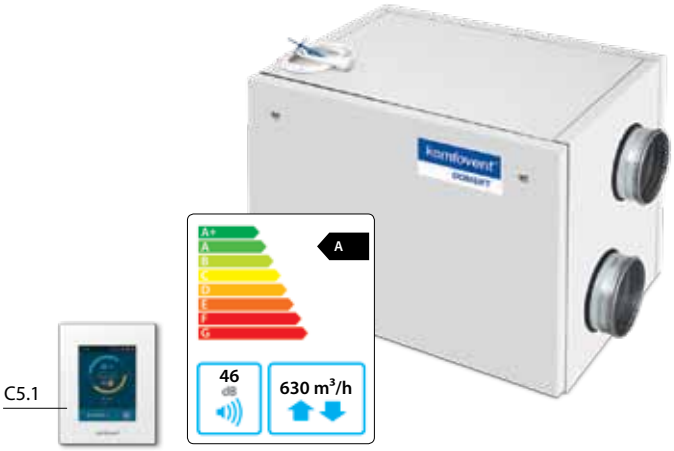
A outdoor intake
B supply air
C extract indoor
D exhaust air
E additional extraction connection (by-pass – extraction without heat recovery)

komfovent®

Domekt R 500 H

(Kompakt REGO 500H)

Maximal air flow, m³/h	630
Panel thickness, mm	50
Unit weight, kg	90
Supply voltage, V	1~ 230
Maximal operating current, A	HE 7,6 / HW 3,3
Thermal efficiency of heat recovery, %	85
Reference flow rate, m³/s	0,12
Reference pressure difference, Pa	50
SPI, W/(m³/h)	0,32
Filters dimensions B×H×L, mm	540×260×46-M5
Electric power input of the fan drive at reference flow rate, W	67
Electric power input of the fan drive at maximum flow rate, W	155
Electric air heater capacity, kW / Δt, °C	1 / 6,3
Control panel	KOMFOVENT C5.1



The photo is intended for informational purposes only, exact details may vary.

Acoustic data

A-weighted sound power level L_{WA}, dB(A) at reference flow rate

Supply inlet	58
Supply outlet	67
Exhaust inlet	58
Exhaust outlet	67
Casing	46

A-weighted sound pressure level L_{PA}, dB(A)
10 m² normally isolated room, distance from casing – 3 m.

Surroundings	35

Temperature efficiency

	Winter					Summer
Outside temperature, °C	-23	-15	-10	-5	0	30
After heat exchanger*, °C	14,3	15,6	16,5	17,4	18,2	23,4

* indoor +22°C, 20 % RH

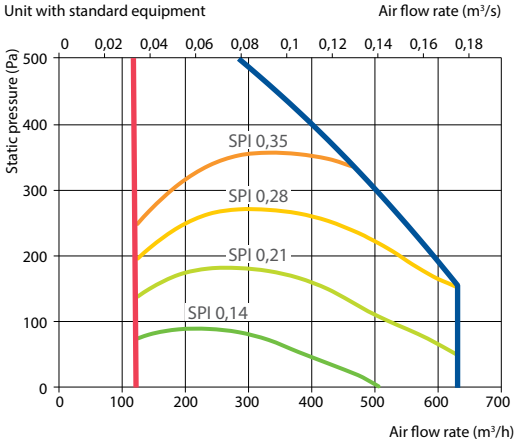
Hot water duct air heater (DH)**

	Winter			
Water temperature in/out, °C	90/70	80/60	70/50	60/40
Capacity, kW	1,6	1,6	1,6	1,6
Flow rate, dm³/h	72	72	71	71
Pressure drop, kPa	1	1	1	1
Temperature in/out, °C	14,3/22			
Maximal capacity, kW	6,3	5	3,7	2,4
Connection, ”	½			
Dimensions, mm	360×320×270			
Hot water duct heater type	DH-200			

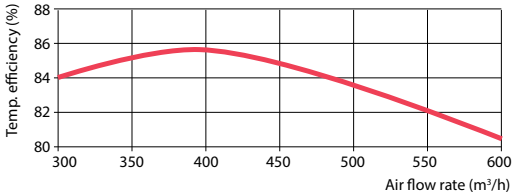
** option

Performance

Unit with standard equipment



Temperature efficiency



Indoor and outdoor ΔT=13°C re: *Ecodesign 1254/2014.*

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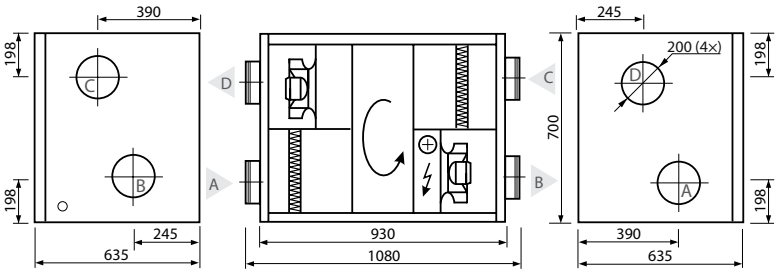

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A outdoor intake
B supply air
C extract indoor
D exhaust air

Domekt R 500 V

(Kompakt REGO 500V)

Maximal air flow, m^3/h	630
Panel thickness, mm	50
Unit weight, kg	140
Supply voltage, V	1~ 230
Maximal operating current, A	HE 7,6 / HW 3,3
Thermal efficiency of heat recovery, %	85
Reference flow rate, m^3/s	0,12
Reference pressure difference, Pa	50
SPI, $W/(m^3/h)$	0,28
Filters dimensions B×H×L, mm	540×260×46-M5
Electric power input of the fan drive at reference flow rate, W	57
Electric power input of the fan drive at maximum flow rate, W	125
Electric air heater capacity, kW / Δt, °C	1 / 6,3
Control panel	KOMFOVENT C5.1

The photo is intended for informational purposes only, exact details may vary.

Acoustic data

A-weighted sound power level L_{WA}, dB(A) at reference flow rate

Supply inlet	54
Supply outlet	62
Exhaust inlet	52
Exhaust outlet	62
Casing	42

A-weighted sound pressure level L_{PA}, dB(A)
10 m^2 normally isolated room, distance from casing – 3 m.

Surroundings	31

Temperature efficiency

	Winter					Summer
Outside temperature, °C	-23	-15	-10	-5	0	30
After heat exchanger*, °C	14,3	15,6	16,5	17,4	18,2	23,4

* indoor +22°C, 20 % RH

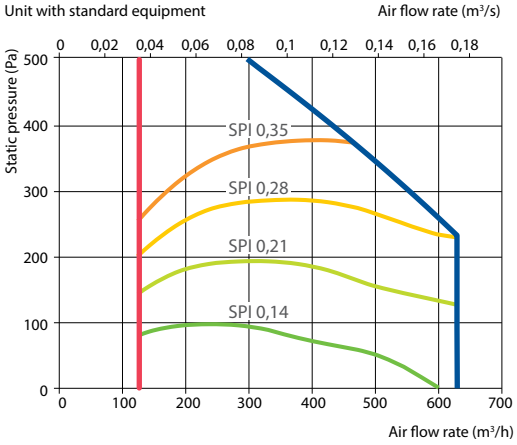
Hot water duct air heater (DH)**

	Winter			
Water temperature in/out, °C	90/70	80/60	70/50	60/40
Capacity, kW	1,6	1,6	1,6	1,6
Flow rate, dm^3/h	72	72	71	71
Pressure drop, kPa	1	1	1	1
Temperature in/out, °C	14,3/22			
Maximal capacity, kW	6,3	5	3,7	2,4
Connection, ”	½			
Dimensions, mm	420×380×270			
Hot water duct heater type	DH-250			

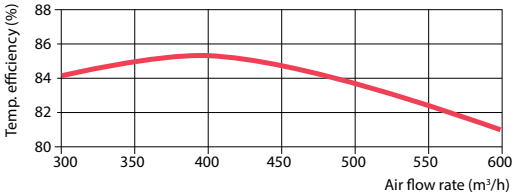
** option

Performance

Unit with standard equipment



Temperature efficiency



Indoor and outdoor ΔT=13°C re: *Ecodesign 1254/2014.*

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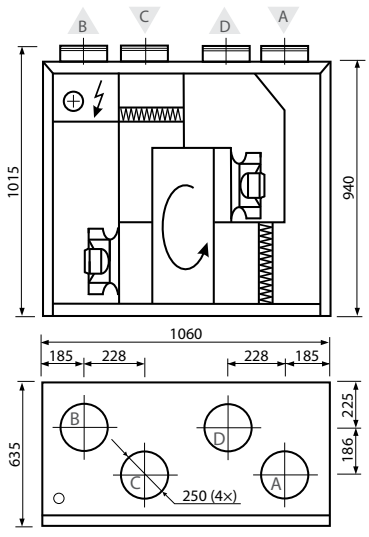

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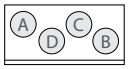


A outdoor intake
B supply air
C extract indoor
D exhaust air

Domekt R 500 U

(Kompakt REGO 500U)

Domekt R 500 UV data

Maximal air flow, m³/h	630
Panel thickness, mm	50
Unit weight, kg	110
Supply voltage, V	1~ 230
Maximal operating current, A	HE 7,6 / HW 3,3
Thermal efficiency of heat recovery, %	85
Reference flow rate, m³/s	0,12
Reference pressure difference, Pa	50
SPI, W/(m³/h)	0,28
Filters dimensions B×H×L, mm	545×300×46-M5
Electric power input of the fan drive at reference flow rate, W	57
Electric power input of the fan drive at maximum flow rate, W	145
Electric air heater capacity, kW / Δt, °C	1 / 6,3
Control panel	KOMFOVENT C5.1

The photo is intended for informational purposes only, exact details may vary.

Acoustic data

A-weighted sound power level L_{WA}, dB(A) at reference flow rate

Supply inlet	52
Supply outlet	65
Exhaust inlet	57
Exhaust outlet	60
Casing	44

A-weighted sound pressure level L_{PA}, dB(A)
10 m² normally isolated room, distance from casing – 3 m.

Surroundings	33

Temperature efficiency

	Winter					Summer
Outside temperature, °C	-23	-15	-10	-5	0	30
After heat exchanger*, °C	14,3	15,6	16,5	17,4	18,2	23,4

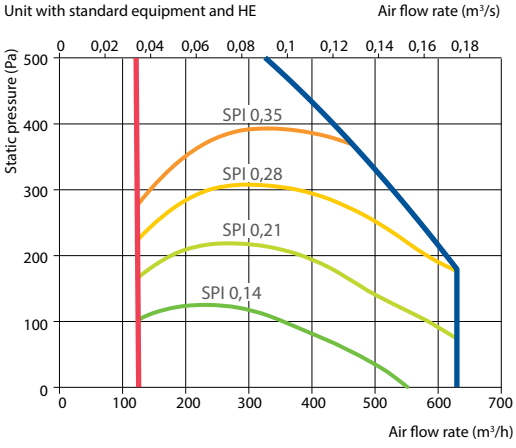
* indoor +22°C, 20 % RH

Changeover water heating/cooling exchanger (HCW)

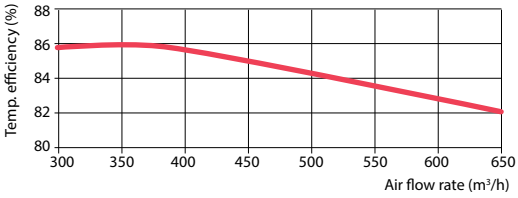
	Winter				Summer
Water temperature in/out, °C	90/70	80/60	70/50	60/40	7/12
Capacity, kW	1,6	1,6	1,6	1,6	2,3
Flow rate, dm³/h	72	72	71	71	391
Pressure drop, kPa	1,2	1,2	1,3	1,3	33
Temperature in/out, °C	14,3/22				23,4/18
Maximal capacity, kW	6,2	5	3,8	2,7	2,3
Connection, "	½				

Performance

Unit with standard equipment and HE



Temperature efficiency



Indoor and outdoor ΔT=13°C re: *Ecodesign 1254/2014.*

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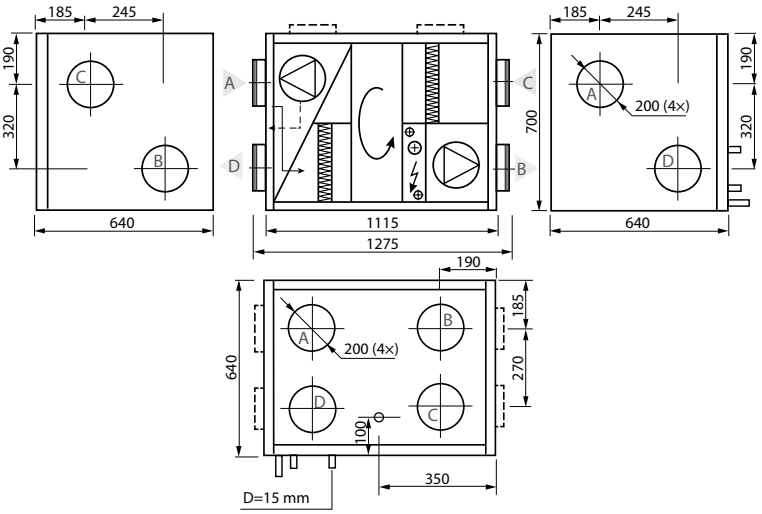

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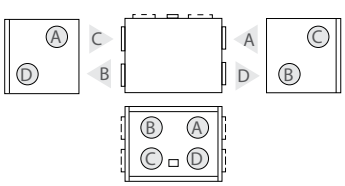


A outdoor intake
B supply air
C extract indoor
D exhaust air

Domekt R 600 H

(Domekt REGO 600H)

Maximal air flow, m³/h	551
Panel thickness, mm	45
Unit weight, kg	90
Supply voltage, V	1~ 230
Maximal operating current, A	HE 7,3 / HW 3,3
Thermal efficiency of heat recovery, %	85
Reference flow rate, m³/s	0,11
Reference pressure difference, Pa	50
SPI, W/(m³/h)	0,42
Filters dimensions B×H×L, mm	475×235×46-M5
Electric power input of the fan drive at reference flow rate, W	77
Electric power input of the fan drive at maximum flow rate, W	174
Electric air heater capacity, kW / Δt, °C	1 / 7,2
Control panel	KOMFOVENT C4 / C4.1

The photo is intended for informational purposes only, exact details may vary.

Acoustic data

A-weighted sound power level L_{WA}, dB(A) at reference flow rate

Supply inlet	59
Supply outlet	68
Exhaust inlet	57
Exhaust outlet	68
Casing	48

A-weighted sound pressure level L_{PA}, dB(A)
10 m² normally isolated room, distance from casing – 3 m.

Surroundings	37

Temperature efficiency

	Winter					Summer
Outside temperature, °C	-23	-15	-10	-5	0	30
After heat exchanger*, °C	13,6	15,1	16	17	17,9	23,5

* indoor +22°C, 20 % RH

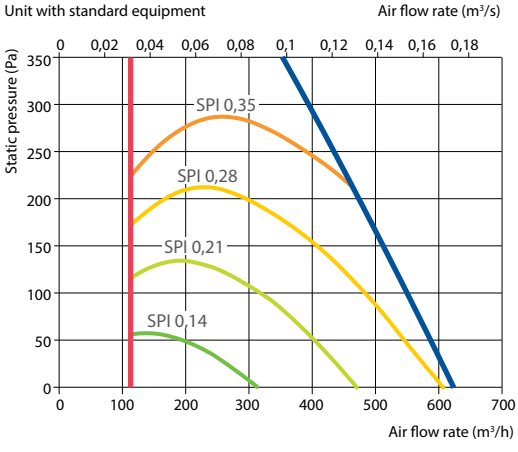
Hot water duct air heater (DH)**

	Winter			
Water temperature in/out, °C	90/70	80/60	70/50	60/40
Capacity, kW	1,6	1,6	1,6	1,6
Flow rate, dm³/h	69	68	68	68
Pressure drop, kPa	1	1	1	1
Temperature in/out, °C	13,6/22			
Maximal capacity, kW	4,6	3,2	2,8	2
Connection, ”	½			
Dimensions, mm	360×320×270			
Hot water duct heater type	DH-200			

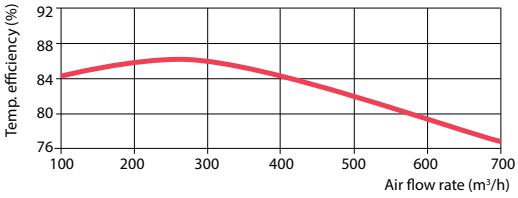
** option

Performance

Unit with standard equipment



Temperature efficiency



Indoor and outdoor ΔT=13°C re: *Ecodesign 1254/2014.*

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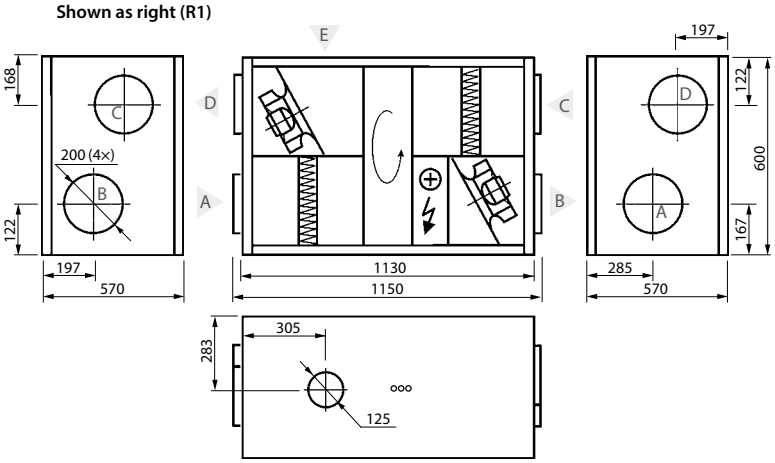

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A outdoor intake
B supply air
C extract indoor
D exhaust air
E additional extraction connection (by-pass – extraction without heat recovery)

Domekt R 700 V

(Kompakt REGO 700V)

Maximal air flow, m³/h	773
Panel thickness, mm	50
Unit weight, kg	140
Supply voltage, V	1~ 230
Maximal operating current, A	HE 12 / HW 3,3
Thermal efficiency of heat recovery, %	84
Reference flow rate, m³/s	0,15
Reference pressure difference, Pa	50
SPI, W/(m³/h)	0,32
Filters dimensions B×H×L, mm	540×260×46-M5
Electric power input of the fan drive at reference flow rate, W	83
Electric power input of the fan drive at maximum flow rate, W	180
Electric air heater capacity, kW / Δt, °C	2 / 10,3
Control panel	KOMFOVENT C5.1

The photo is intended for informational purposes only, exact details may vary.

Acoustic data

A-weighted sound power level L_{WA}, dB(A) at reference flow rate

Supply inlet	55
Supply outlet	64
Exhaust inlet	53
Exhaust outlet	64
Casing	44

A-weighted sound pressure level L_{PA}, dB(A)
10 m² normally isolated room, distance from casing – 3 m.

Surroundings	33

Temperature efficiency

	Winter					Summer
Outside temperature, °C	-23	-15	-10	-5	0	30
After heat exchanger*, °C	13,3	14,9	15,8	16,8	17,8	23,5

* indoor +22°C, 20 % RH

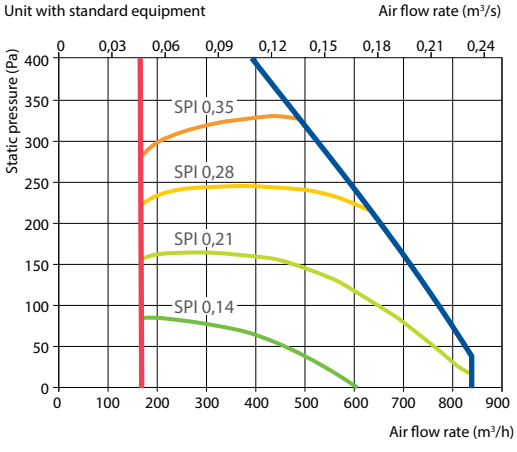
Hot water duct air heater (DH)**

	Winter			
Water temperature in/out, °C	90/70	80/60	70/50	60/40
Capacity, kW	2,3	2,3	2,3	2,3
Flow rate, dm³/h	100	99	99	98
Pressure drop, kPa	1	1	1	1
Temperature in/out, °C	13,3/22			
Maximal capacity, kW	7,2	5,9	4,5	3,2
Connection, ”	½			
Dimensions, mm	420×380×270			
Hot water duct heater type	DH-250			

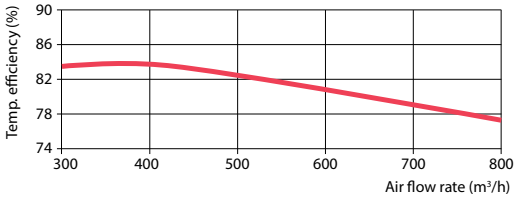
** option

Performance

Unit with standard equipment



Temperature efficiency



Indoor and outdoor ΔT=13°C re: *Ecodesign 1254/2014.*

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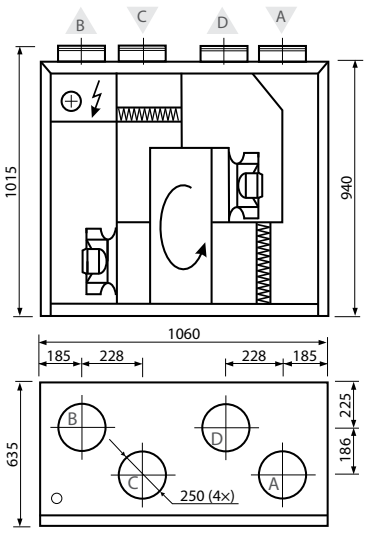

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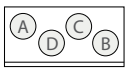


A outdoor intake
B supply air
C extract indoor
D exhaust air

Domekt R 700 H

(Kompakt REGO 700H)

Maximal air flow, m³/h	719
Panel thickness, mm	50
Unit weight, kg	90
Supply voltage, V	1~ 230
Maximal operating current, A	HE 12 / HW 3,3
Thermal efficiency of heat recovery, %	85
Reference flow rate, m³/s	0,14
Reference pressure difference, Pa	50
SPI, W/(m³/h)	0,35
Filters dimensions B×H×L, mm	540×260×46-M5
Electric power input of the fan drive at reference flow rate, W	85
Electric power input of the fan drive at maximum flow rate, W	180
Electric air heater capacity, kW / Δt, °C	2 / 11
Control panel	KOMFOVENT C5.1

The photo is intended for informational purposes only, exact details may vary.

Acoustic data

A-weighted sound power level L_{WA}, dB(A) at reference flow rate

Supply inlet	59
Supply outlet	68
Exhaust inlet	60
Exhaust outlet	68
Casing	48

A-weighted sound pressure level L_{PA}, dB(A)
10 m² normally isolated room, distance from casing – 3 m.

Surroundings	36

Temperature efficiency

	Winter					Summer
Outside temperature, °C	-23	-15	-10	-5	0	30
After heat exchanger*, °C	13,7	15,2	16,1	17	17,9	23,5

* indoor +22°C, 20 % RH

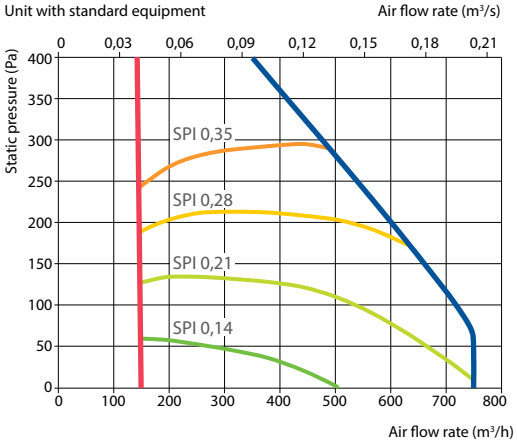
Hot water duct air heater (DH)**

	Winter			
Water temperature in/out, °C	90/70	80/60	70/50	60/40
Capacity, kW	2	2	2	2
Flow rate, dm³/h	88	88	88	87
Pressure drop, kPa	1	1	1	1
Temperature in/out, °C	13,7/22			
Maximal capacity, kW	6,7	5,4	4,2	2,9
Connection, ”	½			
Dimensions, mm	420×380×270			
Hot water duct heater type	DH-250			

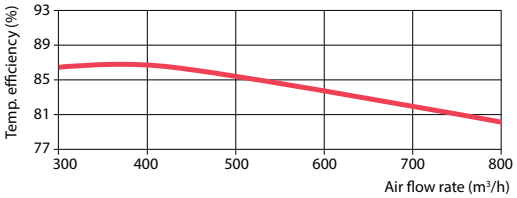
** option

Performance

Unit with standard equipment



Temperature efficiency



Indoor and outdoor ΔT=13°C re: *Ecodesign 1254/2014.*

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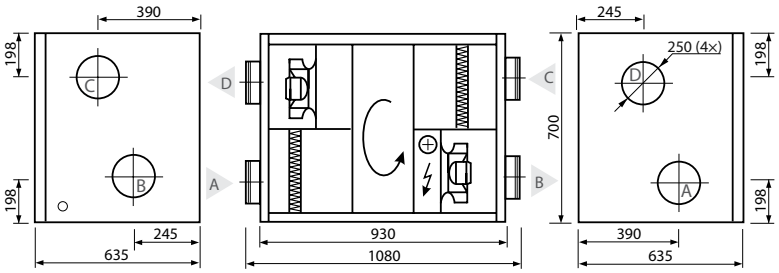

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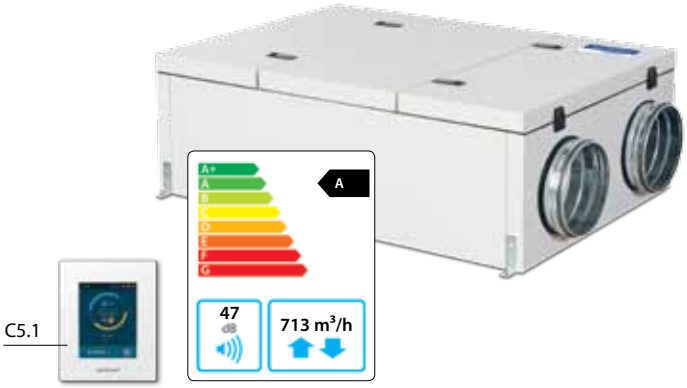
A outdoor intake
B supply air
C extract indoor
D exhaust air

komfovent®

Domekt R 700 F

(Kompakt REGO 700P)

Maximal air flow, m³/h	713
Panel thickness, mm	50
Unit weight, kg	104
Supply voltage, V	1~ 230
Maximal operating current, A	HE 12 / HW 3,3
Thermal efficiency of heat recovery, %	83
Reference flow rate, m³/s	0,14
Reference pressure difference, Pa	50
SPI, W/(m³/h)	0,33
Filters dimensions B×H×L, mm	320×360×46-M5
Electric power input of the fan drive at reference flow rate, W	79
Electric power input of the fan drive at maximum flow rate, W	176
Electric air heater capacity, kW / Δt, °C	2 / 11,1
Control panel	KOMFOVENT C5.1



The photo is intended for informational purposes only, exact details may vary.

Acoustic data

A-weighted sound power level L_{WA}, dB(A) at reference flow rate

Supply inlet	54
Supply outlet	67
Exhaust inlet	53
Exhaust outlet	67
Casing	47

A-weighted sound pressure level L_{PA}, dB(A)
10 m² normally isolated room, distance from casing – 3 m.

Surroundings	36

Temperature efficiency

	Winter					Summer
Outside temperature, °C	-23	-15	-10	-5	0	30
After heat exchanger*, °C	12,6	14,3	15,3	16,4	17,4	23,7

* indoor +22°C, 20 % RH

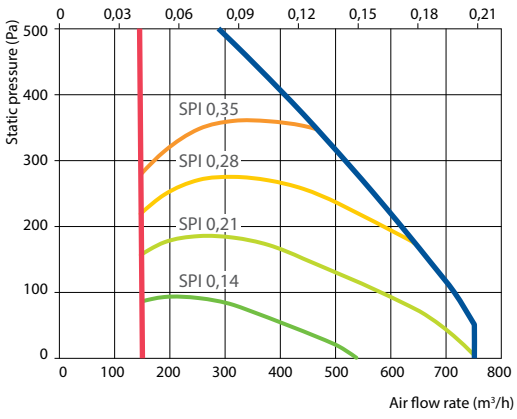
Hot water duct air heater (DH)**

	Winter			
Water temperature in/out, °C	90/70	80/60	70/50	60/40
Capacity, kW	2,3	2,3	2,3	2,3
Flow rate, dm³/h	99	99	98	98
Pressure drop, kPa	1	1	1	1
Temperature in/out, °C	12,6/22			
Maximal capacity, kW	7	5,7	4,4	3,2
Connection, ”	½			
Dimensions, mm	420×380×270			
Hot water duct heater type	DH-250			

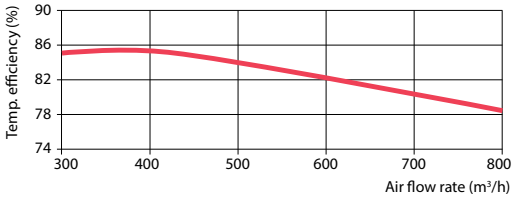
** option

Performance

Unit with standard equipment



Temperature efficiency



Indoor and outdoor ΔT=13°C re: *Ecodesign 1254/2014.*

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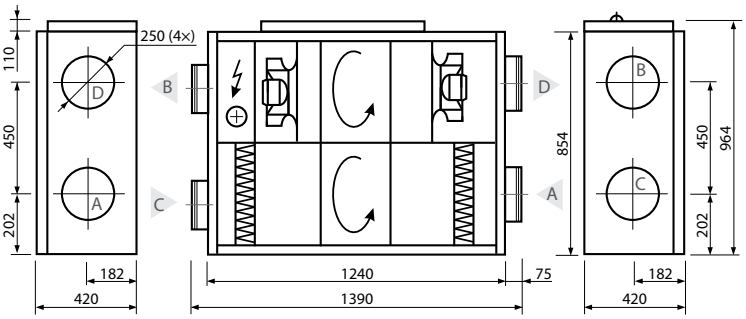

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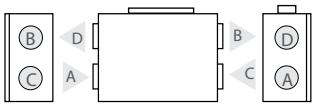


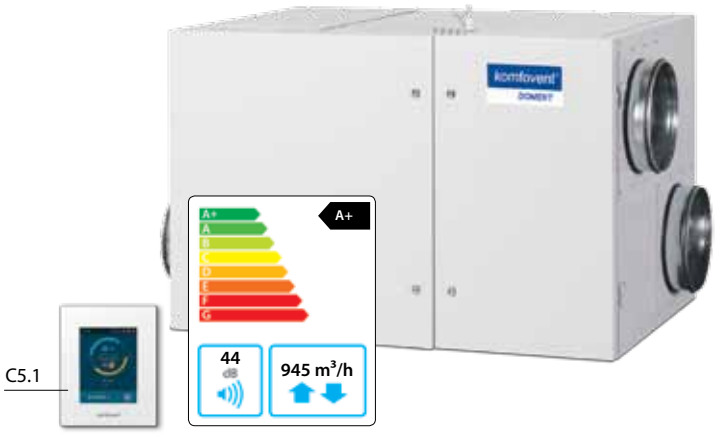
A outdoor intake
B supply air
C extract indoor
D exhaust air

Domekt R 900 U / H / V

(Kompakt REGO 900U)

Domekt R 900 UV data

Maximal air flow, m^3/h	945
Panel thickness, mm	50
Unit weight, kg	195
Supply voltage, V	HE 3~400 / HW 1~230
Maximal operating current, A	HE 7,6 / HW 3,3
Thermal efficiency of heat recovery, %	86
Reference flow rate, m^3/s	0,18
Reference pressure difference, Pa	50
SPI, $W/(m^3/h)$	0,27
Filters dimensions B×H×L, mm	800×400×46-M5
Electric power input of the fan drive at reference flow rate, W	86
Electric power input of the fan drive at maximum flow rate, W	182
Electric air heater capacity, kW / Δt, °C	3 / 12,6
Control panel	KOMFOVENT C5.1



The photo is intended for informational purposes only, exact details may vary.

Temperature efficiency

	Winter					Summer
Outside temperature, °C	-23	-15	-10	-5	0	30
After heat exchanger*, °C	14,6	15,9	16,7	17,5	18,4	23,3

* indoor +22°C, 20 % RH

Acoustic data

A-weighted sound power level L_{WA}, dB(A) at reference flow rate

Supply inlet	53
Supply outlet	66
Exhaust inlet	58
Exhaust outlet	61
Casing	44

A-weighted sound pressure level L_{PA}, dB(A)
10 m^2 normally isolated room, distance from casing – 3 m.

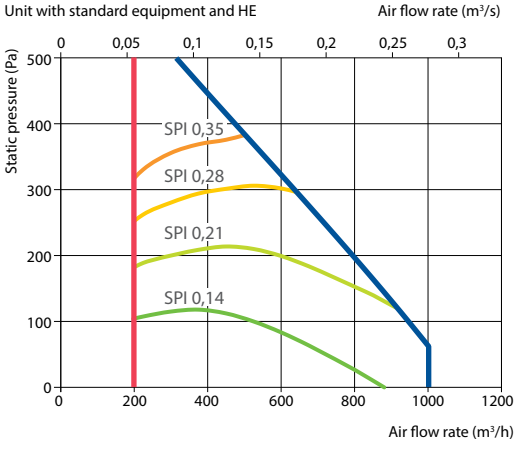
Surroundings	33

Changeover water heating/cooling exchanger (HCW)

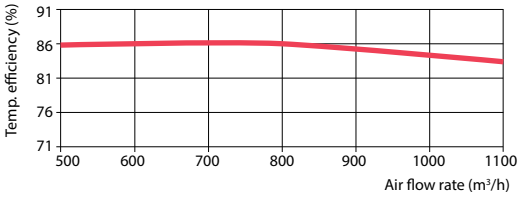
	Winter				Summer
Water temperature in/out, °C	90/70	80/60	70/50	60/40	7/12
Capacity, kW	2,4	2,4	2,4	2,4	3,4
Flow rate, dm^3/h	104	103	103	102	583
Pressure drop, kPa	1	1	1	1	6,0
Temperature in/out, °C	14,6/22				23,3/18
Maximal capacity, kW	21,5	15,8	9,9	6,7	6,5
Connection, ″	½				

Performance

Unit with standard equipment and HE



Temperature efficiency



Indoor and outdoor ΔT=13°C re: *Ecodesign 1254/2014.*

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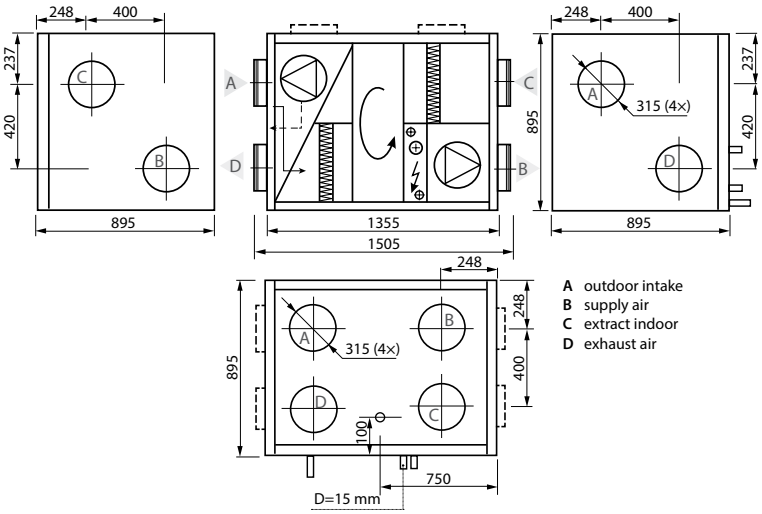

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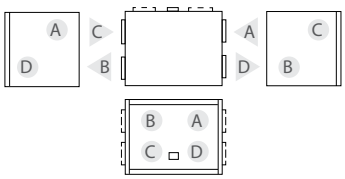
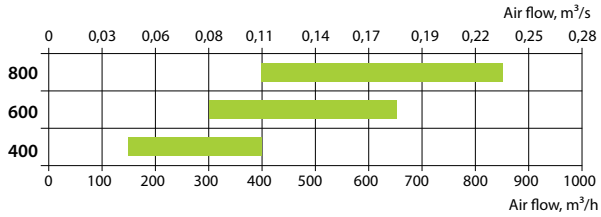


Domekt RHP

Units with a rotary heat exchanger and an integrated heat pump.
Operating capacity ranges from 130 to 850 m³/h.

Standard sizes of Domekt RHP units



New generation solution for residential premises

All Domekt RHP units have integrated heat pump, this technology extends air handling unit's capabilities – the unit not only ventilates, but also heats and cools the premises. Implementation of such complex technical solution not only extends the application of the unit, but also ensures high efficiency due to two energy recovery stages (by rotary heat exchanger and heat pump).

Advantages of Domekt RHP units

- **Total comfort all year long:** reversible heating and cooling operation of heat pump ensures comfort indoor climate.
- **Extremely energy efficient and resource saving:** two step efficiency is provided by rotary heat exchanger recovery and post heating / cooling operated by heat pump.
- **Added value to indoor climate:** heating and humidity recovery in winter, cooling and dehumidifying in summer.
- **"All inclusive" solution:** no need for condensing unit, chiller, piping or additional work providing.
- **Convenience and safety:** factory charged by refrigerant, no refrigeration knowledge is needed.
- **Eco-friendly and protected:** R410A and R134A refrigerant and one circuit charge limits <10 kg.
- **Factory tested:** reliable and convenient Plug & Play installation, commissioning and exploitation.

Heat exchanger is EUROVENT certified

NEW

Domekt RHP 400 V

The photo is intended for informational purposes only, exact details may vary.

Maximal air flow, m³/h	395
Panel thickness, mm	30/50
Unit weight, kg	120
Supply voltage, V	1~230
Maximal operating current, A	8 (RHP 2.2/1.4)
Maximal operating current, A	9 (RHP 2.8/2.4)
Thermal efficiency of heat recovery, %	80
Reference flow rate, m³/s	0,077
Reference pressure difference, Pa	50
SPI, W/(m³/h)	0,21
Filters dimensions B×H×L, mm	462×200×46-M5
Electric power input of the fan drive at reference flow rate, W	60
Electric power input of the fan drive at maximum flow rate, W	96
Electric air heater capacity, kW / Δt, °C	1 / 7,5
Control panel	KOMFOVENT C5.1

Acoustic data

A-weighted sound power level L_{WA}, dB(A) at reference flow rate

Supply inlet	53
Supply outlet	66
Exhaust inlet	51
Exhaust outlet	66
Casing	40

A-weighted sound pressure level L_{PA}, dB(A)
10 m² normally isolated room, distance from casing – 3 m.

Surroundings	30

Temperature efficiency

		Winter								Summer
Outside temperature, °C		-20	-15	-10	-5	0	5	10	15	30
After heat exchanger and heat pump, °C	RHP 2.2/1.4	14,3	15,9	17,1	18,8	20,3	22,5	24,3	26,4	20
	RHP 2.8/2.4	17,5	19	20,5	22,3	23,9	26,3	29	32	18

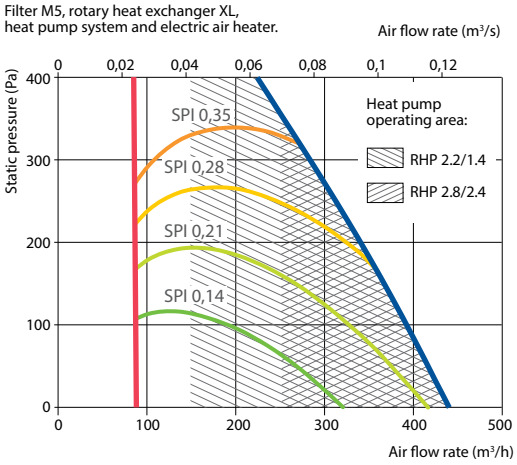
Indoor temperature winter +20 °C, summer +24 °C

Compressor and AHU data

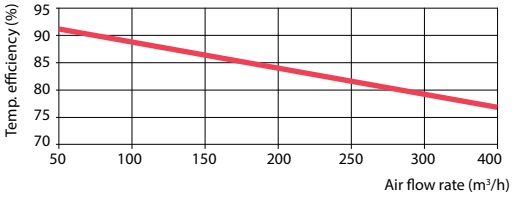
Refrigerant		R134A
Compressor heating capacity, kW	RHP 2.2/1.4	0,9
	RHP 2.8/2.4	1,8

Performance

Filter M5, rotary heat exchanger XL, heat pump system and electric air heater.



Rotor temperature efficiency



Indoor and outdoor ΔT=13°C re: *Ecodesign 1254/2014.*

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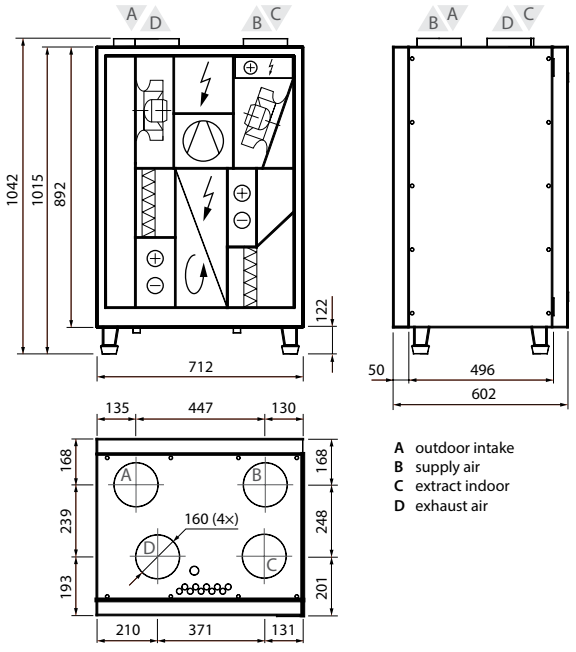
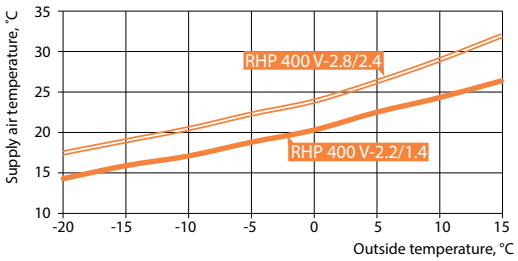


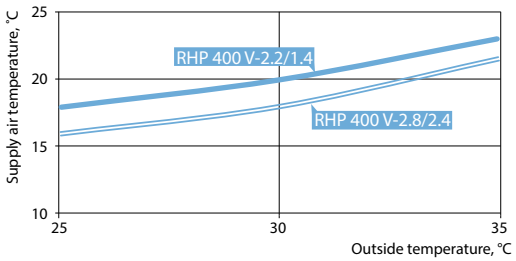
A outdoor intake
B supply air
C extract indoor
D exhaust air

Heating mode



Application: 20°C, RH 45% indoor

Cooling mode



Application: 24°C, RH 55 % indoor
Total (heating and cooling) – rotary heat recovery + heat pump.

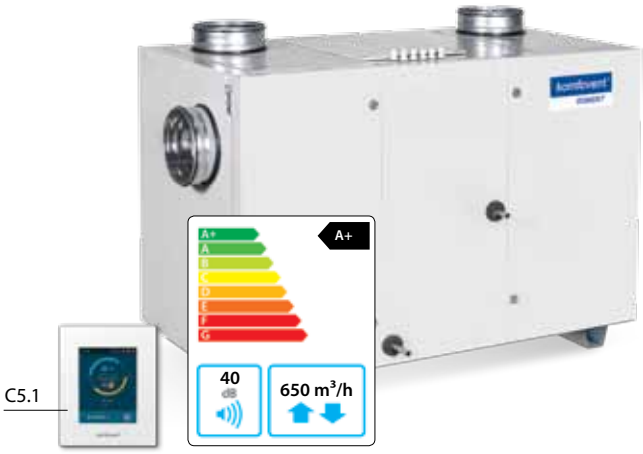
Heat pump parameters

	Domekt RHP 400 V-2.2/1.4						Domekt RHP 400 V-2.8/2.4					
	Heating				Cooling		Heating				Cooling	
Outdoor temperature, °C	7	2	-7	-15	35	27	7	2	-7	-15	35	27
Outdoor air related humidity, %	86	84	74	95	40	45	86	84	74	95	40	45
Indoor air temperature, °C	20	20	20	20	27	21	20	20	20	20	27	21
Indoor air related humidity, %	50	50	45	45	40	50	50	50	45	45	40	50
Supply air temperature, °C	23,4	22	19	16	23	20	28	26	22	19	22	19
Heat pump heating/cooling power, kW	0,81	0,73	0,56	0,45	0,81	0,77	1,5	1,3	1	0,8	1,41	1,35
Heat pump heating/cooling power consumption, kW	0,19	0,17	0,15	0,13	0,2	0,22	0,42	0,39	0,34	0,3	0,44	0,4
Power, recovered by rotary heat exchanger, kW	1,45	1,92	3,31	4,33	1,16	0,3	1,45	1,92	3,31	4,33	1,16	0,3
COP/EER	4,3	4,3	3,7	3,5	4,1	3,5	3,6	3,3	2,9	2,7	3,2	3,4

Domekt RHP 600 U

(Kompakt REGO 600 U RHP)

Maximal air flow, m³/h	650
Panel thickness, mm	50
Unit weight, kg	194
Supply voltage, V	1~230
Maximal operating current, A	9 (RHP 3.7/3)
Maximal operating current, A	10 (RHP 4.4/3.8)
Thermal efficiency of heat recovery, %	83
Reference flow rate, m³/s	0,13
Reference pressure difference, Pa	50
SPI, W/(m³/h)	0,32
Filters dimensions B×H×L, mm	500×280×46-M5
Electric power input of the fan drive at reference flow rate, W	70
Electric power input of the fan drive at maximum flow rate, W	170
Electric air heater capacity, kW / Δt, °C	1 / 6
Control panel	KOMFOVENT C5.1



The photo is intended for informational purposes only, exact details may vary.

Acoustic data

A-weighted sound power level L_{WA}, dB(A) at reference flow rate

Supply inlet	53
Supply outlet	65
Exhaust inlet	52
Exhaust outlet	62
Casing	40

A-weighted sound pressure level L_{PA}, dB(A)
10 m² normally isolated room, distance from casing – 3 m.

Surroundings	29

Temperature efficiency

		Winter								Summer
Outside temperature, °C		-20	-15	-10	-5	0	5	10	15	30
After heat exchanger and heat pump, °C	RHP 3.7/3	18	19,5	21,3	23,1	25	26,7	29	32	19
	RHP 4.4/3.8	21	22,9	25	26,4	28,5	30,3	34,5	38,1	18

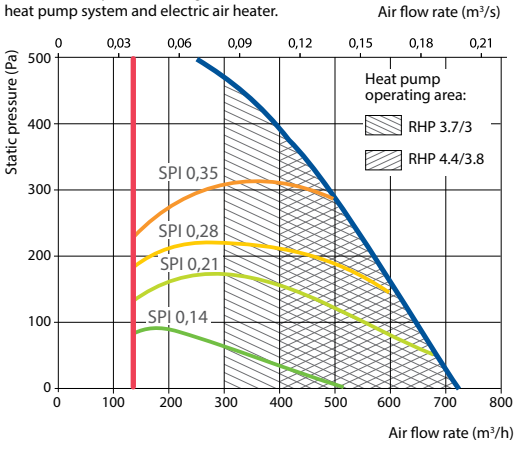
Indoor temperature winter +20 °C, summer +24 °C

Compressor and AHU data

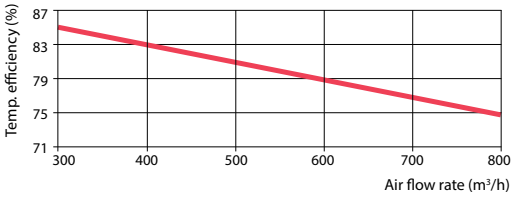
Refrigerant		R134A
Compressor heating capacity, kW	RHP 3.7/3	1,8
	RHP 4.4/3.8	2,8

Performance

Filter M5, rotary heat exchanger L, heat pump system and electric air heater.



Rotor temperature efficiency



Indoor and outdoor ΔT=13°C re: *Ecodesign 1254/2014.*

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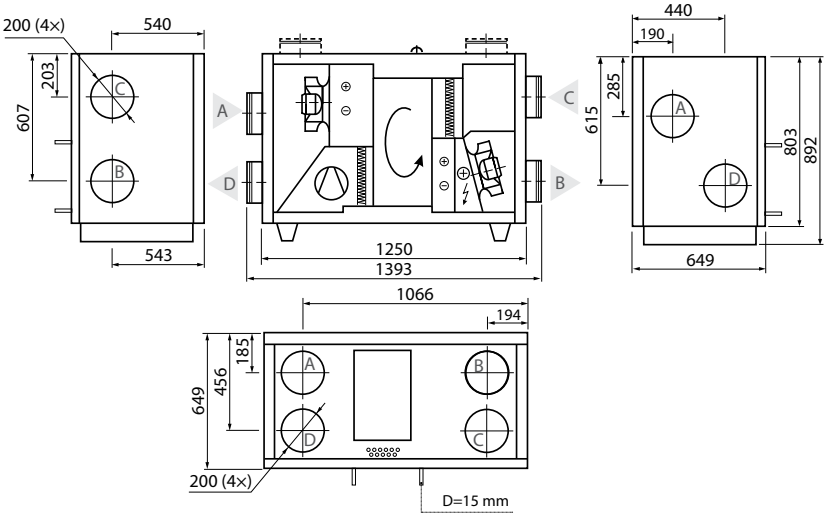

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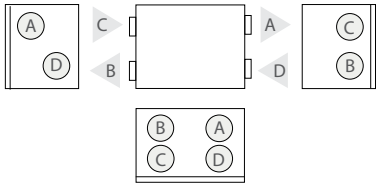
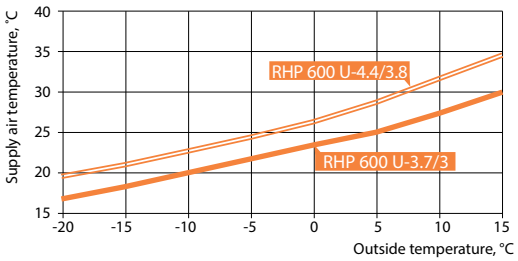


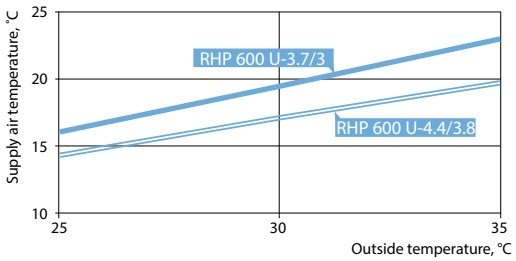
A outdoor intake
B supply air
C extract indoor
D exhaust air

Heating mode



Application: 20°C, RH 45% indoor

Cooling mode



Application: 24°C, RH 55 % indoor
Total (heating and cooling) – rotary heat recovery + heat pump.

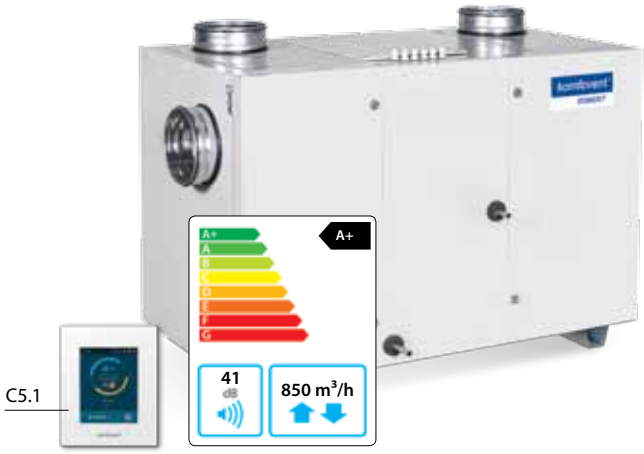
Heat pump parameters

	Domekt RHP 600 U-3.7/3						Domekt RHP 600 U-4.4/3.8					
	Heating				Cooling		Heating				Cooling	
Outdoor temperature, °C	7	2	-7	-15	35	27	7	2	-7	-15	35	27
Outdoor air related humidity, %	86	84	74	95	40	45	86	84	74	95	40	45
Indoor air temperature, °C	20	20	20	20	27	21	20	20	20	20	27	21
Indoor air related humidity, %	50	50	45	45	40	50	50	50	45	45	40	50
Supply air temperature, °C	25,7	23,9	20,7	18	21,6	15,7	28,9	26,6	22,9	20,3	20,6	14,6
Heat pump heating/cooling power, kW	1,59	1,39	1,06	0,79	1,76	1,62	2,23	1,95	1,5	1,25	2,39	2,17
Heat pump heating/cooling power consumption, kW	0,3	0,3	0,3	0,3	0,4	0,4	0,5	0,5	0,5	0,4	0,7	0,6
Power, recovered by rotary heat exchanger, kW	2,2	3,4	5,6	7,2	1,3	1	2,2	3,4	5,6	7,2	1,3	1
COP/EER	4,8	4,4	3,8	3,2	4,2	4,4	4,4	4	3,3	3	3,6	3,8

Domekt RHP 800 U

(Kompakt REGO 800 U RHP)

Maximal air flow, m³/h	850
Panel thickness, mm	50
Unit weight, kg	255
Supply voltage, V	3~400
Maximal operating current, A	8,7 (RHP 5.3/4.7)
Maximal operating current, A	8,7 (RHP 6.1/5.8)
Thermal efficiency of heat recovery, %	87
Reference flow rate, m³/s	0,17
Reference pressure difference, Pa	50
SPI, W/(m³/h)	0,24
Filters dimensions B×H×L, mm	750×400×46-M5
Electric power input of the fan drive at reference flow rate, W	70
Electric power input of the fan drive at maximum flow rate, W	170
Electric air heater capacity, kW / Δt, °C	2 / 7
Control panel	KOMFOVENT C5.1



The photo is intended for informational purposes only, exact details may vary.

Acoustic data

A-weighted sound power level L_{WA}, dB(A) at reference flow rate

Supply inlet	53
Supply outlet	64
Exhaust inlet	51
Exhaust outlet	61
Casing	41

A-weighted sound pressure level L_{PA}, dB(A)
10 m² normally isolated room, distance from casing – 3 m.

Surroundings	31

Temperature efficiency

		Winter								Summer
Outside temperature, °C		-20	-15	-10	-5	0	5	10	15	30
After heat exchanger and heat pump, °C	RHP 5.3/4.7	19,5	20,6	22	23,1	24,6	26,1	26,9	31	18,7
	RHP 6.1/5.8	20,1	21,9	23,9	25,4	27,2	29	33,1	35,6	17,4

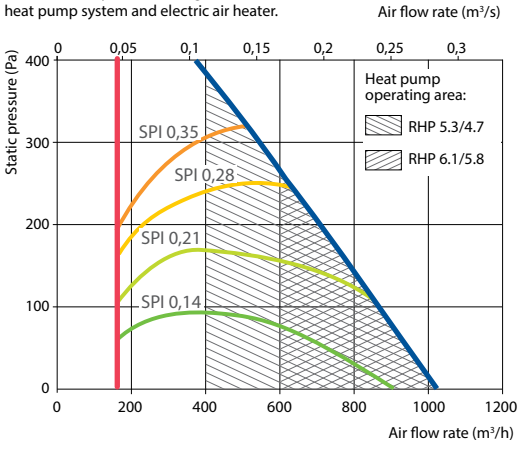
Indoor temperature winter +20 °C, summer +24 °C

Compressor and AHU data

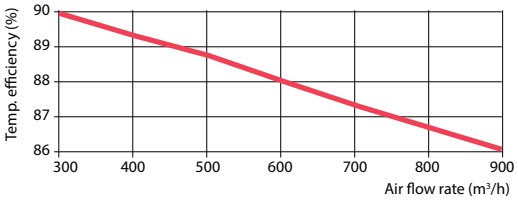
Refrigerant		R134A
Compressor heating capacity, kW	RHP 5.3/4.7	2,8
	RHP 6.1/5.8	3,9

Performance

Filter M5, rotary heat exchanger L, heat pump system and electric air heater.



Rotor temperature efficiency



Indoor and outdoor ΔT=13°C re: *Ecodesign 1254/2014.*

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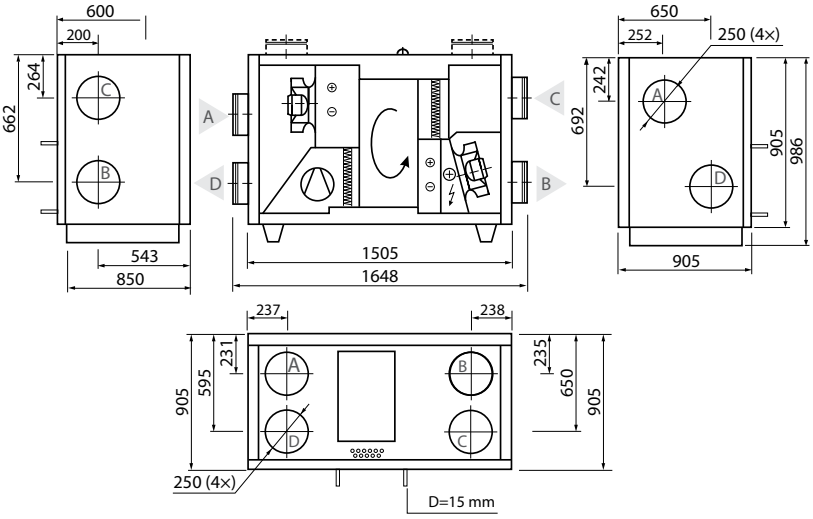

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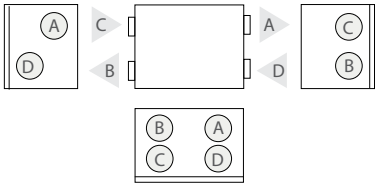
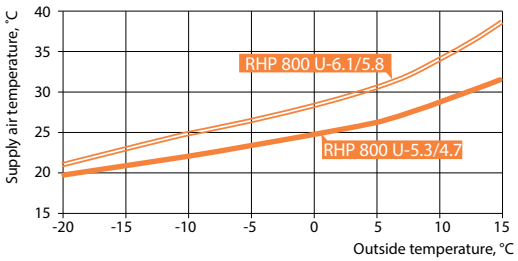


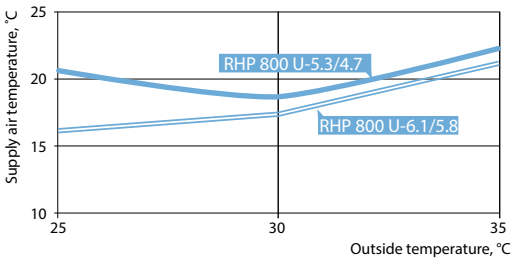
A outdoor intake
B supply air
C extract indoor
D exhaust air

Heating mode



Application: 20°C, RH 45% indoor

Cooling mode



Application: 24°C, RH 55 % indoor
Total (heating and cooling) – rotary heat recovery + heat pump.

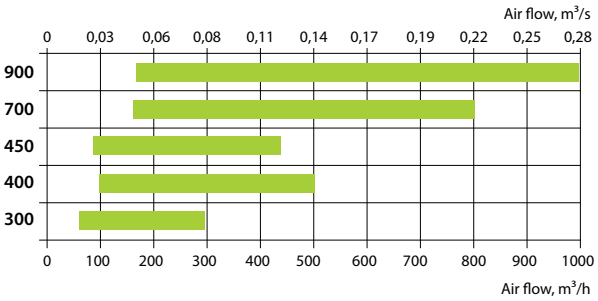
Heat pump parameters

	Domekt RHP 800 U-5.3/4.7						Domekt RHP 800 U-6.1/5.8					
	Heating				Cooling		Heating				Cooling	
Outdoor temperature, °C	7	2	-7	-15	35	27	7	2	-7	-15	35	27
Outdoor air related humidity, %	86	84	74	95	40	45	86	84	74	95	40	45
Indoor air temperature, °C	20	20	20	20	27	21	20	20	20	20	27	21
Indoor air related humidity, %	50	50	45	45	40	50	50	50	45	45	40	50
Supply air temperature, °C	26,9	25,1	22,2	20	21,18	15,26	33,9	31,3	27	24	20,5	13,8
Heat pump heating/cooling power, kW	2,31	2,02	1,55	1,26	2,57	2,33	3,13	2,72	2,06	1,66	3,19	2,9
Heat pump heating/cooling power consumption, kW	0,48	0,47	0,45	0,42	0,63	0,54	0,79	0,74	0,67	0,65	1,02	0,87
Power, recovered by rotary heat exchanger, kW	3,20	5,05	8,08	10,39	1,86	1,39	2,49	3,94	6,27	8,04	1,42	1,06
COP/EER	4,8	4,3	3,5	3	4,1	4,3	4	3,7	3,1	2,6	3,1	3,3

Domekt P

Air handling units with a plate heat exchanger.
Operating capacity ranges from 60 to 1000 m^3/h.

Standard sizes of Domekt P units



Advantages of Domekt P units

Heat energy saving
In the process of ventilation the heat of the exhaust air is recovered to the supplied air.

Totally separated airflows
The supply and exhaust airflows are separated, thus making possible utilization of the heat of the extracted foul air.

Long term efficient operation
The absence of movable parts ensures effective heat exchange and long run.

Low noise level
Domekt P air handling units are equipped with silently operating fans and sound insulation, which ensures low noise level.

Standard plate heat exchanger

Design:
- A packet of thin aluminum plates with spacing left between them.
- Exhaust warm air flows through every second channel between the plates warming up fresh air flowing through the remaining channels.
- To prevent the plates from bending under the impact of differential pressure of the air flows, strengthening gaskets are inserted between the plates.
- Rough surface of the aluminum plates generates the turbulent air stream thus intensifying heat exchange.

Anti-frosting protection
Decreasing of the outdoor air temperature below -10 °C (it is an approximate value depending on the relative humidity of the air flows and temperature) the exhaust air enhances the danger of the heat exchanger freezing. For the conditions when outdoor temperatures may be lower than -4 °C, duct mounted preheater is recommended.
Defrosting of the heat exchanger is controlled automatically in response to sensor signals.
Temperature sensors are supplied with the unit.

Note: The water trap must be installed for condensate drain!

Heat exchanger is EUROVENT certified

Domekt P range

Unit size	Supply/ exhaust air filter class		Fan motor technology		Heater			Cooler		Inspection side		Bypass		Control system			
														C3 panel		C4 panel	
	M5	F7	EC	AC	HE	HW	HCW	CW	CDX	R1	L1	Inner	External	C3	C3.1	C4	C4.1
Domekt PP 300 V	●	○	●		●	△	△			○	○	●				●	○
Domekt P 400 V	●	○	●		●	△	△	△	△	○	○		●	●	○		
Domekt P 400 H	●	○	●		●	△	△	△	△	○	○		●	●	○		
Domekt PP 450 V	●	○	●		●	△	△			○	○	●				●	○
Domekt P 700 V	●	○	●	○	●	△	△	△	△	○	○		●	●	○		
Domekt P 700 H	●	○	●	○	●	△	△	△	△	○	○		●	●	○		
Domekt P 900 V	●	○	●	○	●	△	△	△	△	○	○		●	●	○		
Domekt P 900 H	●	○	●	○	●	△	△	△	△	○	○		●	●	○		

● standard equipment
○ possible choice
△ ordered separately

Duct connection

H – horizontal.
V – vertical.

Heater

HE – electric heater.

HW – water duct heater is installed on the duct and must be ordered separately. Heaters are mounted on the outside of the unit in any user-convenient place. There is heater control possibility in automatic control system.

HCW – heater-cooler one for both – heating and cooling. Ideal for buildings using geothermal energy.

Cooler

CW – designed for air cooling using cold water (water-glycol mixture), provides a higher comfort level in rooms.

CDX – designed for air cooling using direct expansion cooling unit, provides a higher comfort level in rooms.

Inspection side

See p. 136.

Bypass

Inner bypass is controlled by smart control system.

External bypass (summer cassette) is inserted instead of plate heat exchanger in summertime.

Control system

C3 Control features:

- Unit mode selection: On / Off / Auto.
- Setting intensity level (1, 2, 3).
- Adjusting of intensity levels every 1%.*
- Exhaust air flow correction.*
- Constant air flow control and indication (CAV).*
- Weekly schedule programming.
- Setting temperature from the panel 15–30 °C.
- Temperature control selection: Supply / Room / Auto.
- Temperature setpoint sliding +/- 9 °C for time period.
- Season setting: Summer / Winter / Auto.
- Correction of ventilation intensity in winter time.
- Remote control via external contact.
- Remote unit failure indication.
- Choosing of panel language.
- Errors indication and registration log (error log with 50 events).
- Settings menu blocking with PIN.
- Air quality control.*
- Summer night cooling.
- VAV control.*
- OVR function.
- Unit PC control.**

C4 Control features:

- Unit mode selection: On / Off / Auto.
- Setting intensity level (1, 2, 3).
- Weekly schedule programming.
- Setting temperature from the panel 15–30 °C.
- Temperature setpoint sliding +/- 9 °C for time period.
- Summer / winter selection.
- Adjusting of intensity levels every 1% from the panel.
- OVR functions activation via external contact.
- OVR functions activation in the panel for adjusted time period (1…90 min.).
- Choosing of panel language (1 of 15).
- Errors indication and registration log (error log with 50 events).
- Settings menu blocking with PIN.
- Application software for smartphones based on “Android”.**

* function is provided for units with EC fans.
** required PING2 module.

DOMEKT PP 300 V

(Domekt RECU 300V)

Maximal air flow, m³/h	300
Panel thickness, mm	25
Unit weight, kg	42
Supply voltage, V	1~230
Maximal operating current, A	HE 5,5 / HW 1,5
Thermal efficiency of heat recovery, %	76
Reference flow rate, m³/s	0,06
Reference pressure difference, Pa	50
SPI, W/(m³/h)	0,23
Filters dimensions B×H×L, mm	300×200×46-M5
Electric power input of the fan drive at reference flow rate, W	23
Electric power input of the fan drive at maximum flow rate, W	67
Electric air heater capacity, kW / Δt, °C	1 / 13,2
Control panel	KOMFOVENT C4 / C4.1

The photo is intended for informational purposes only, exact details may vary.

Acoustic data

A-weighted sound power level L_{WA}, dB(A) at reference flow rate

Supply inlet	45
Supply outlet	65
Exhaust inlet	50
Exhaust outlet	65
Casing	36

A-weighted sound pressure level L_{PA}, dB(A)
10 m² normally isolated room, distance from casing – 3 m.

Surroundings	26

Temperature efficiency

	Winter					Summer
Outside temperature, °C	-23	-15	-10	-5	0	30
After heat exchanger*, °C	11,9	12	12,7	14,2	15,6	24,3

* indoor +22°C, 20 % RH

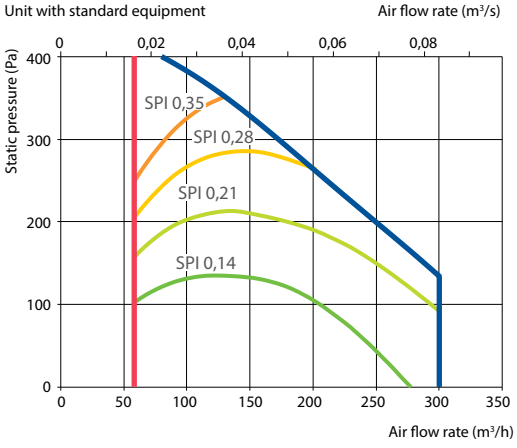
Hot water duct air heater (DH)**

	Winter			
Water temperature in/out, °C	90/70	80/60	70/50	60/40
Capacity, kW	1	1	1	1
Flow rate, dm³/h	45	45	45	44
Pressure drop, kPa	1	1	1	1
Temperature in/out, °C	11,9/22			
Maximal capacity, kW	2,7	2,2	1,7	1,2
Connection, ”	½			
Dimensions, mm	335×295×270			
Hot water duct heater type	DH-125			

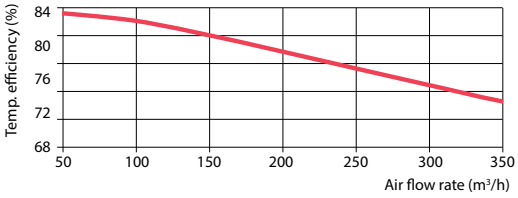
** option

Performance

Unit with standard equipment



Temperature efficiency



Indoor and outdoor ΔT=13°C re: *Ecodesign 1254/2014.*

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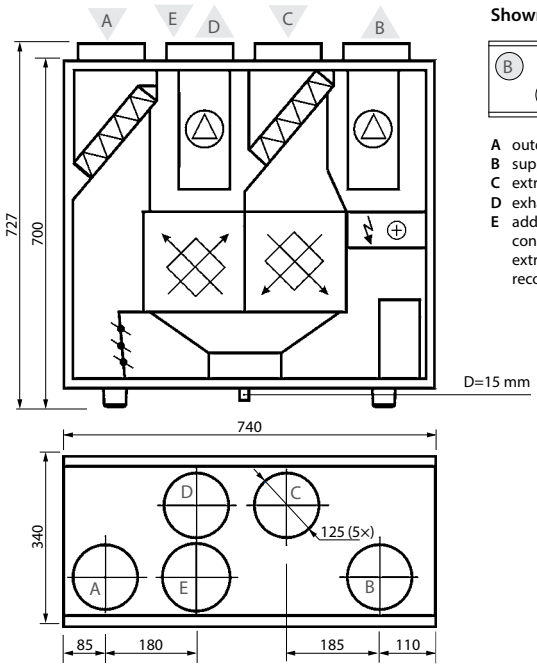

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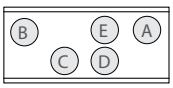


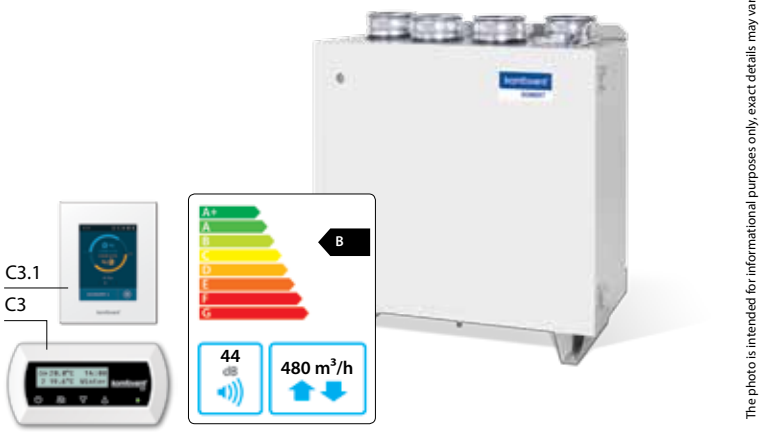
A outdoor intake
B supply air
C extract indoor
D exhaust air
E additional extraction connection (by-pass – extraction without heat recovery)

komfovent®

DOMEKT P 400 V

(Kompakt RECU 400V)

Maximal air flow, m³/h	480
Panel thickness, mm	45
Unit weight, kg	62
Supply voltage, V	1~230
Maximal operating current, A	HE 10,8/ HW 1,5
Thermal efficiency of heat recovery, %	56
Reference flow rate, m³/s	0,1
Reference pressure difference, Pa	50
SPI, W/(m³/h)	0,21
Filters dimensions B×H×L, mm	300×195×46-M5
Electric power input of the fan drive at reference flow rate, W	33
Electric power input of the fan drive at maximum flow rate, W	93
Electric air heater capacity, kW / Δt, °C	2 / 16,5
Control panel	KOMFOVENT C3 / C3.1



The photo is intended for informational purposes only, exact details may vary.

Acoustic data

A-weighted sound power level L_{WA}, dB(A) at reference flow rate

Supply inlet	50
Supply outlet	63
Exhaust inlet	50
Exhaust outlet	64
Casing	44

A-weighted sound pressure level L_{PA}, dB(A)
10 m² normally isolated room, distance from casing – 3 m.

Surroundings	34

Temperature efficiency

	Winter					Summer
Outside temperature, °C	-23	-15	-10	-5	0	30
After heat exchanger*, °C	2,4	5,4	7,5	9,7	12	25,6

* indoor +22°C, 20 % RH

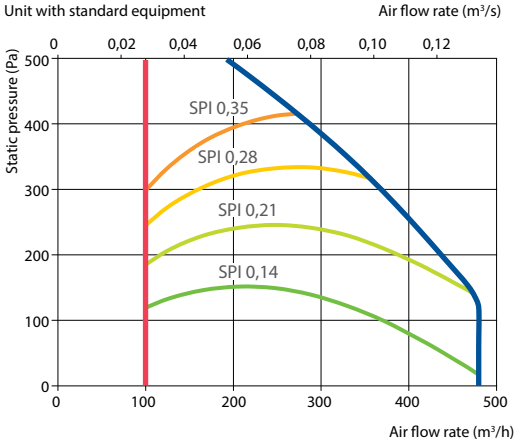
Hot water duct air heater (DH)**

	Winter			
Water temperature in/out, °C	90/70	80/60	70/50	60/40
Capacity, kW	3,2	3,2	3,2	2,8
Flow rate, dm³/h	139	139	138	123
Pressure drop, kPa	1	1	1	1
Temperature in/out, °C		2,4/22		2,4/20
Maximal capacity, kW	5,8	4,9	3,9	2,8
Connection, ”		½		
Dimensions, mm		335×295×270		
Hot water duct heater type		DH-160		

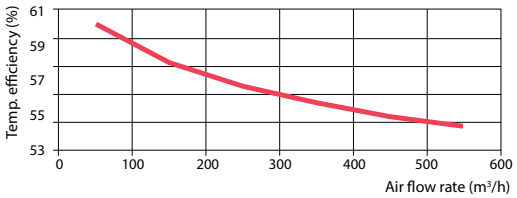
** option

Performance

Unit with standard equipment



Temperature efficiency



Indoor and outdoor ΔT=13°C re: *Ecodesign 1254/2014.*

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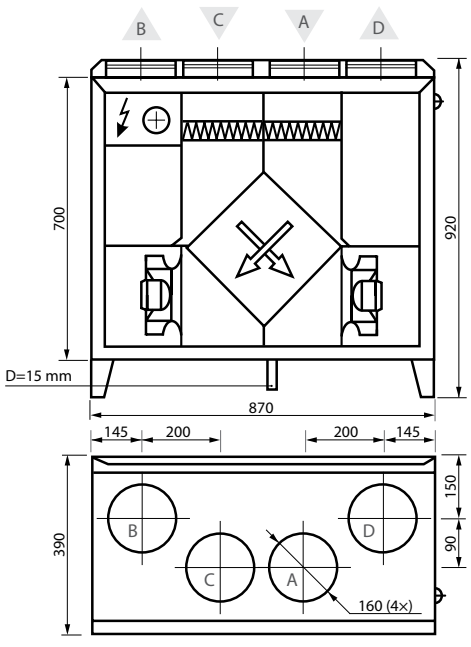

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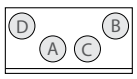
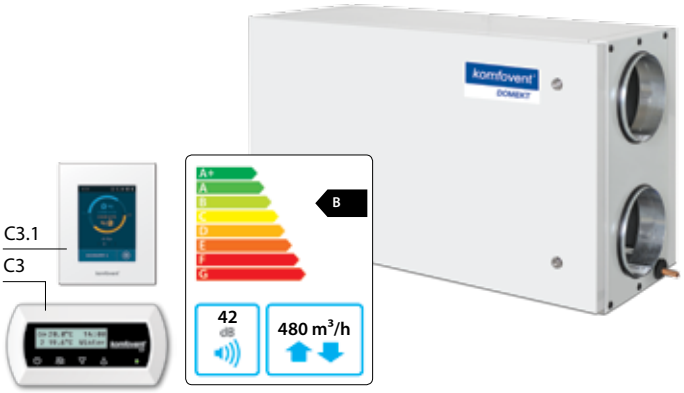


A outdoor intake
B supply air
C extract indoor
D exhaust air

DOMEKT P 400 H

(Kompakt RECU 400H)

Maximal air flow, m^3/h	480
Panel thickness, mm	45
Unit weight, kg	55
Supply voltage, V	1~230
Maximal operating current, A	HE 10,8 / HW 1,5
Thermal efficiency of heat recovery, %	56
Reference flow rate, m^3/s	0,1
Reference pressure difference, Pa	50
SPI, $W/(m^3/h)$	0,21
Filters dimensions B×H×L, mm	300×195×46-M5
Electric power input of the fan drive at reference flow rate, W	33
Electric power input of the fan drive at maximum flow rate, W	93
Electric air heater capacity, kW / Δt, °C	2 / 16,5
Control panel	KOMFOVENT C3 / C3.1



The photo is intended for informational purposes only, exact details may vary.

Acoustic data

A-weighted sound power level L_{WA}, dB(A) at reference flow rate

Supply inlet	50
Supply outlet	61
Exhaust inlet	50
Exhaust outlet	62
Casing	42

A-weighted sound pressure level L_{PA}, dB(A)
10 m^2 normally isolated room, distance from casing – 3 m.

Surroundings	32

Temperature efficiency

	Winter					Summer
Outside temperature, °C	-23	-15	-10	-5	0	30
After heat exchanger*, °C	2,4	5,4	7,5	9,7	12	25,6

* indoor +22°C, 20 % RH

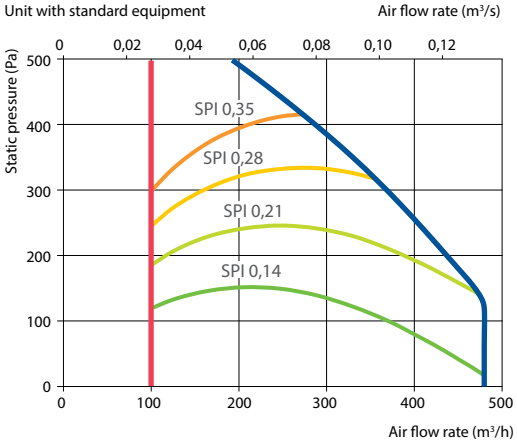
Hot water duct air heater (DH)**

	Winter			
Water temperature in/out, °C	90/70	80/60	70/50	60/40
Capacity, kW	3,2	3,2	3,2	3,2
Flow rate, dm^3/h	139	139	138	123
Pressure drop, kPa	1	1	1	1
Temperature in/out, °C		2,4/22		2,4/20
Maximal capacity, kW	5,8	4,9	3,9	2,8
Connection, ”	½			
Dimensions, mm	360×320×270			
Hot water duct heater type	DH-200			

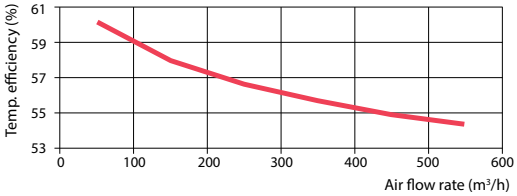
** option

Performance

Unit with standard equipment

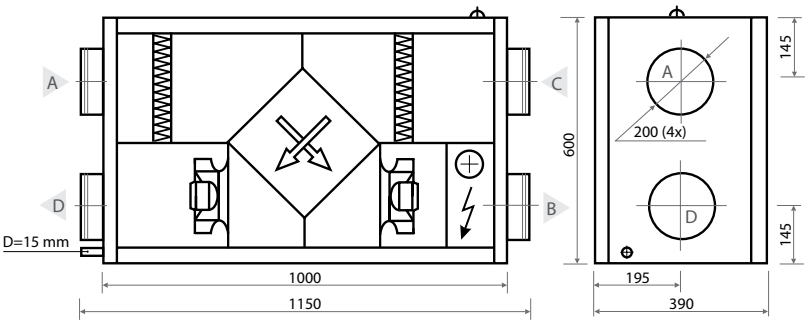


Temperature efficiency



Indoor and outdoor ΔT=13°C re: *Ecodesign 1254/2014.*

Shown as right (R1)



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A outdoor intake
B supply air
C extract indoor
D exhaust air

komfovent®

DOMEKT PP 450 V

(Domekt RECU 450V)

Maximal air flow, m^3/h	449
Panel thickness, mm	25
Unit weight, kg	42
Supply voltage, V	1~ 230
Maximal operating current, A	HE 6,7 / HW 2,7
Thermal efficiency of heat recovery, %	71
Reference flow rate, m^3/s	0,09
Reference pressure difference, Pa	50
SPI, $W/(m^3/h)$	0,39
Filters dimensions B×H×L, mm	300×200×46-M5
Electric power input of the fan drive at reference flow rate, W	61
Electric power input of the fan drive at maximum flow rate, W	167
Electric air heater capacity, kW / Δt, °C	1 / 8,8
Control panel	KOMFOVENT C4 / C4.1

The photo is intended for informational purposes only, exact details may vary.

Acoustic data

A-weighted sound power level L_{WA}, dB(A) at reference flow rate

Supply inlet	51
Supply outlet	74
Exhaust inlet	57
Exhaust outlet	74
Casing	43

A-weighted sound pressure level L_{PA}, dB(A)
10 m^2 normally isolated room, distance from casing – 3 m.

Surroundings	32

Temperature efficiency

	Winter					Summer
Outside temperature, °C	-23	-15	-10	-5	0	30
After heat exchanger*, °C	8,1	9,5	11,1	12,8	14,5	24,7

* indoor +22°C, 20 % RH

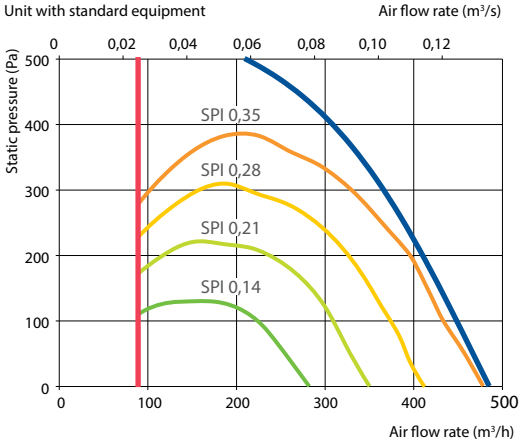
Hot water duct air heater (DH)**

	Winter			
Water temperature in/out, °C	90/70	80/60	70/50	60/40
Capacity, kW	2,1	2,1	2,1	2,1
Flow rate, dm^3/h	93	92	92	92
Pressure drop, kPa	1	1	1	1
Temperature in/out, °C	8,1/22			
Maximal capacity, kW	4,5	3,7	2,9	2,2
Connection, ”	½			
Dimensions, mm	335×295×270			
Hot water duct heater type	DH-125			

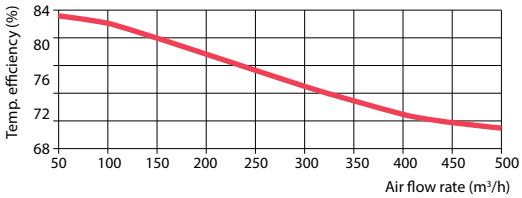
** option

Performance

Unit with standard equipment



Temperature efficiency



Indoor and outdoor ΔT=13°C re: *Ecodesign 1254/2014.*

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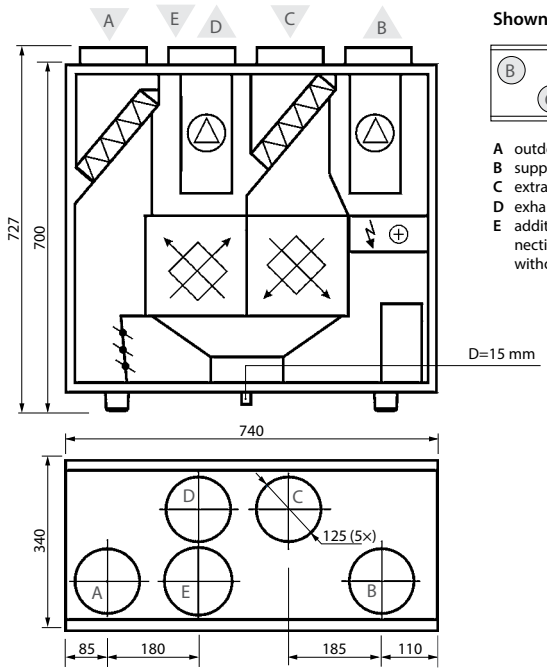

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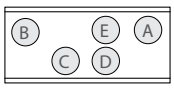


A outdoor intake
B supply air
C extract indoor
D exhaust air
E additional extraction connection (by-pass – extraction without heat recovery)

DOMEKT P 700 V

(Kompakt RECU 700V-EC)

Maximal air flow, m^3/h	797
Panel thickness, mm	45
Unit weight, kg	85
Supply voltage, V	1~230
Maximal operating current, A	HE 14,1 / HW 3,8
Thermal efficiency of heat recovery, %	55
Reference flow rate, m^3/s	0,16
Reference pressure difference, Pa	50
SPI, $W/(m^3/h)$	0,25
Filters dimensions B×H×L, mm	400×235×46-M5
Electric power input of the fan drive at reference flow rate, W	69
Electric power input of the fan drive at maximum flow rate, W	181
Electric air heater capacity, kW / Δt, °C	2,5 / 12,5
Control panel	KOMFOVENT C3 / C3.1

The photo is intended for informational purposes only, exact details may vary.

Acoustic data

A-weighted sound power level L_{WA}, dB(A) at reference flow rate

Supply inlet	52
Supply outlet	65
Exhaust inlet	51
Exhaust outlet	65
Casing	46

A-weighted sound pressure level L_{PA}, dB(A)
10 m^2 normally isolated room, distance from casing – 3 m.

Surroundings	35

Temperature efficiency

	Winter					Summer
Outside temperature, °C	-23	-15	-10	-5	0	30
After heat exchanger*, °C	1,9	5,1	7,2	9,5	11,8	25,7

* indoor +22°C, 20 % RH

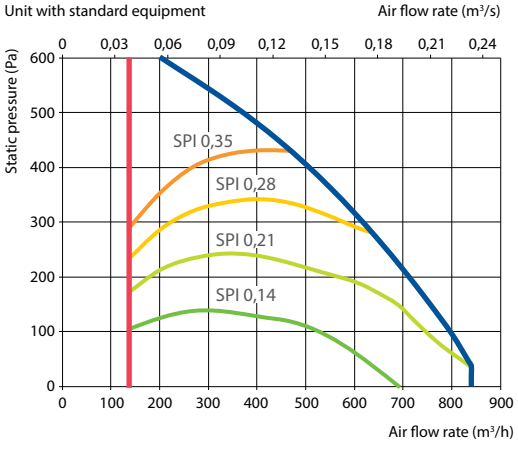
Hot water duct air heater (DH)**

	Winter			
Water temperature in/out, °C	90/70	80/60	70/50	60/40
Capacity, kW	5,2	5,2	5,2	4,6
Flow rate, dm^3/h	229	228	227	199
Pressure drop, kPa	2,6	2,6	2,6	2,1
Temperature in/out, °C		1,9/22		1,9/19,6
Maximal capacity, kW	8,6	7,3	6,0	4,6
Connection, ”	½			
Dimensions, mm	360×320×270			
Hot water duct heater type	DH-200			

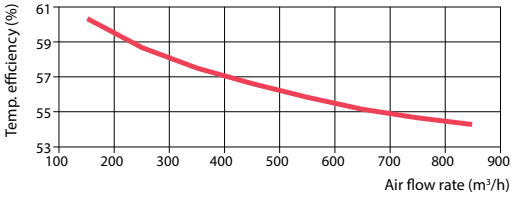
** option
Max air flow – 772 m^3/h.

Performance

Unit with standard equipment



Temperature efficiency



Indoor and outdoor ΔT=13°C re: *Ecodesign 1254/2014.*

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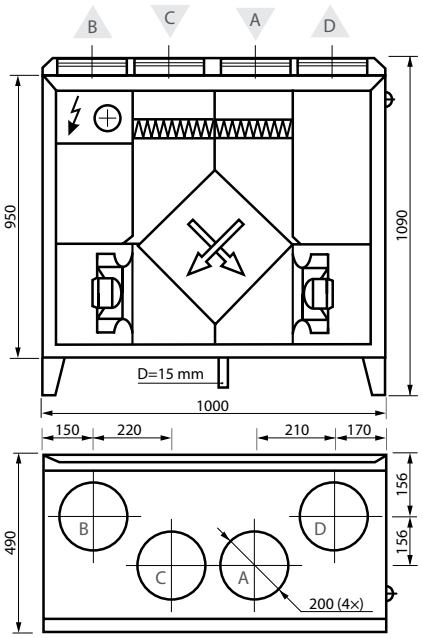

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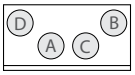


A outdoor intake
B supply air
C extract indoor
D exhaust air

komfovent®

DOMEKT P 700 V

(Kompakt RECU 700V-AC)

Maximal air flow, m³/h	800
Panel thickness, mm	45
Unit weight, kg	85
Supply voltage, V	1~230
Maximal operating current, A	13,7
Thermal efficiency of heat recovery, %	55
Reference flow rate, m³/s	0,16
Reference pressure difference, Pa	50
SPI, W/(m³/h)	0,43
Filters dimensions B×H×L, mm	400×235×46-M5
Electric power input of the fan drive at reference flow rate, W	120
Electric power input of the fan drive at maximum flow rate, W	240
Electric air heater capacity, kW / Δt, °C	2,5 / 9
Control panel	KOMFOVENT C3 / C3.1

The photo is intended for informational purposes only, exact details may vary.

Acoustic data

A-weighted sound power level L_{WA}, dB(A) at reference flow rate

Supply inlet	56
Supply outlet	67
Exhaust inlet	55
Exhaust outlet	67
Casing	43

A-weighted sound pressure level L_{PA}, dB(A)
10 m² normally isolated room, distance from casing – 3 m.

Surroundings	32

Temperature efficiency

	Winter					Summer
Outside temperature, °C	-23	-15	-10	-5	0	30
After heat exchanger*, °C	1,1	4,8	7,1	9,4	11,8	25,7

* indoor +22°C, 20 % RH

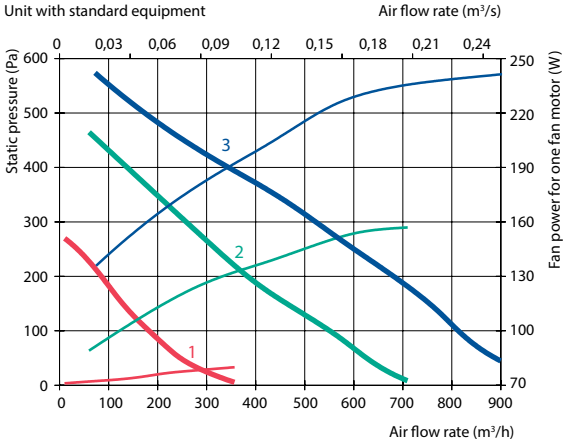
Hot water duct air heater (DH)**

	Winter			
Water temperature in/out, °C	90/70	80/60	70/50	60/40
Capacity, kW	5,8	5,8	5,8	5,8
Flow rate, dm³/h	254	253	253	253
Pressure drop, kPa	3,1	3,2	3,2	3,3
Temperature in/out, °C	1,1/22			
Maximal capacity, kW	9,2	7,8	6,5	5,8
Connection, ”	½			
Dimensions, mm	360×320×270			
Hot water duct heater type	DH-200			

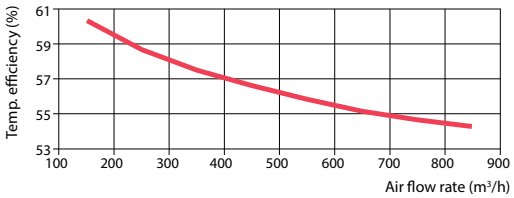
** option

Performance (AC fans)

Unit with standard equipment



Temperature efficiency



Indoor and outdoor ΔT=13°C re: *Ecodesign 1254/2014.*

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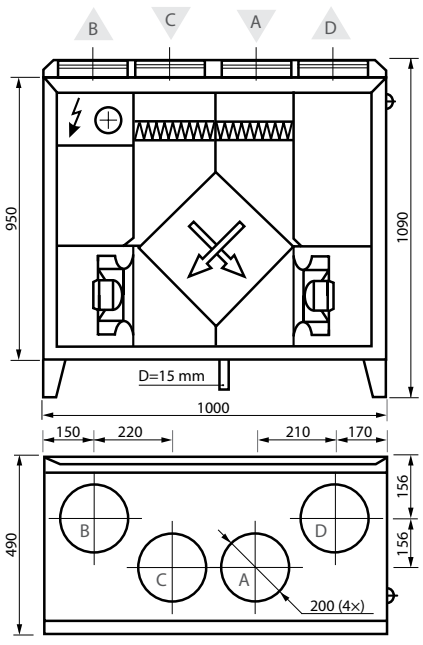

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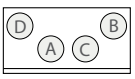


A outdoor intake
B supply air
C extract indoor
D exhaust air

DOMEKT P 700 H

(Kompakt RECU 700H-EC)

Maximal air flow, m^3/h	816
Panel thickness, mm	45
Unit weight, kg	75
Supply voltage, V	1~230
Maximal operating current, A	HE 14,1 / HW 3,8
Thermal efficiency of heat recovery, %	55
Reference flow rate, m^3/s	0,16
Reference pressure difference, Pa	50
SPI, $W/(m^3/h)$	0,27
Filters dimensions B×H×L, mm	400×235×46-M5
Electric power input of the fan drive at reference flow rate, W	75
Electric power input of the fan drive at maximum flow rate, W	181
Electric air heater capacity, kW / Δt, °C	2,5 / 12,2
Control panel	KOMFOVENT C3 / C3.1

The photo is intended for informational purposes only, exact details may vary.

Acoustic data

A-weighted sound power level L_{WA}, dB(A) at reference flow rate

Supply inlet	52
Supply outlet	66
Exhaust inlet	52
Exhaust outlet	66
Casing	46

A-weighted sound pressure level L_{PA}, dB(A)
10 m^2 normally isolated room, distance from casing – 3 m.

Surroundings	35

Temperature efficiency

	Winter					Summer
Outside temperature, °C	-23	-15	-10	-5	0	30
After heat exchanger*, °C	1,9	5,0	7,1	9,4	11,8	25,7

* indoor +22°C, 20 % RH

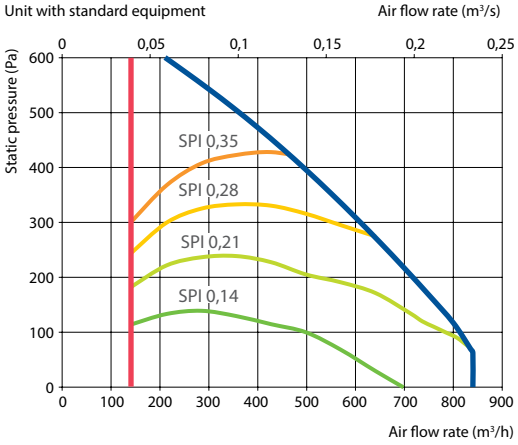
Hot water duct air heater (DH)**

	Winter			
Water temperature in/out, °C	90/70	80/60	70/50	60/40
Capacity, kW	5,5	5,5	5,5	5,5
Flow rate, dm^3/h	243	242	241	240
Pressure drop, kPa	4	4	4,1	4,2
Temperature in/out, °C	1,9/22			
Maximal capacity, kW	10,2	8,7	7,1	5,6
Connection, ”	½			
Dimensions, mm	420×380×270			
Hot water duct heater type	DH-250			

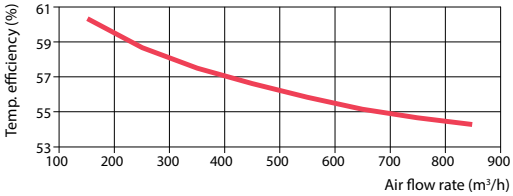
** option

Performance

Unit with standard equipment



Temperature efficiency



Indoor and outdoor ΔT=13°C re: *Ecodesign 1254/2014.*

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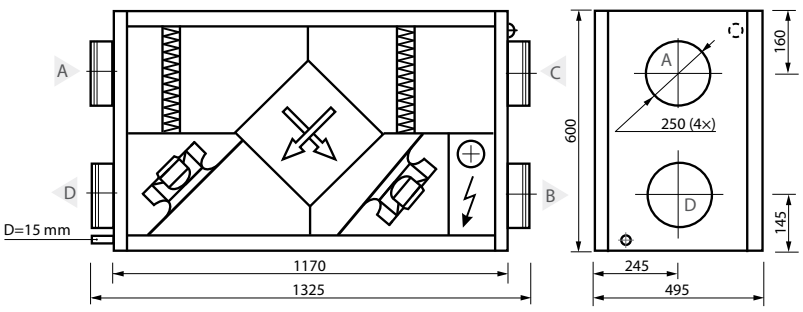

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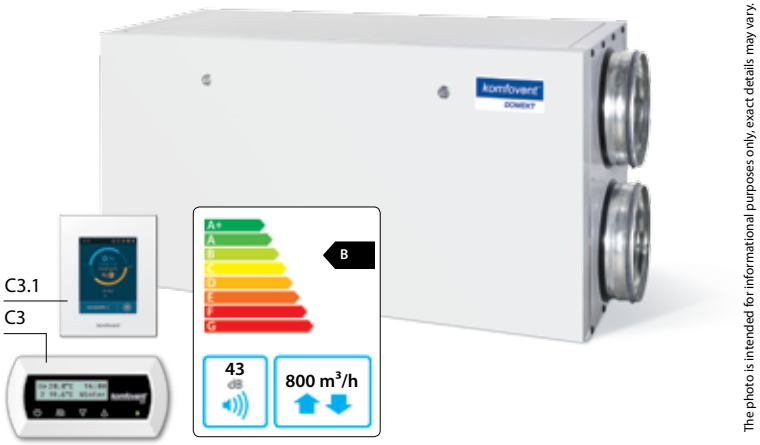
A outdoor intake
B supply air
C extract indoor
D exhaust air

komfovent®

DOMEKT P 700 H

(Kompakt RECU 700H-AC)

Maximal air flow, m³/h	800
Panel thickness, mm	45
Unit weight, kg	75
Supply voltage, V	1~230
Maximal operating current, A	14
Thermal efficiency of heat recovery, %	55
Reference flow rate, m³/s	0,16
Reference pressure difference, Pa	50
SPI, W/(m³/h)	0,43
Filters dimensions B×H×L, mm	400×235×46-M5
Electric power input of the fan drive at reference flow rate, W	120
Electric power input of the fan drive at maximum flow rate, W	240
Electric air heater capacity, kW / Δt, °C	2,5 / 9
Control panel	KOMFOVENT C3 / C3.1



The photo is intended for informational purposes only, exact details may vary.

Acoustic data

A-weighted sound power level L_{WA}, dB(A) at reference flow rate

Supply inlet	56
Supply outlet	67
Exhaust inlet	55
Exhaust outlet	67
Casing	43

A-weighted sound pressure level L_{PA}, dB(A)
10 m² normally isolated room, distance from casing – 3 m.

Surroundings	32

Temperature efficiency

	Winter					Summer
Outside temperature, °C	-23	-15	-10	-5	0	30
After heat exchanger*, °C	1,1	4,8	7,1	9,4	11,8	25,7

* indoor +22°C, 20 % RH

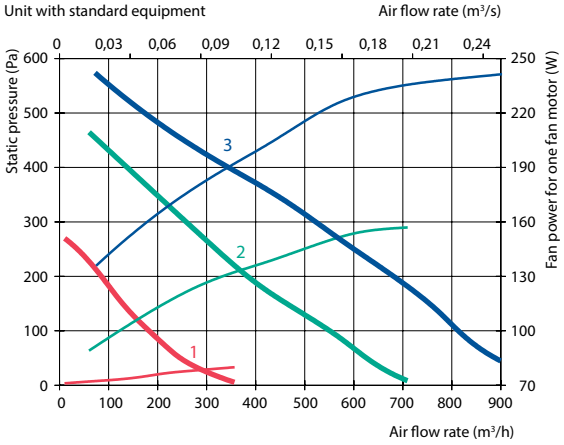
Hot water duct air heater (DH)**

	Winter			
Water temperature in/out, °C	90/70	80/60	70/50	60/40
Capacity, kW	5,8	5,8	5,8	5,8
Flow rate, dm³/h	254	253	253	253
Pressure drop, kPa	4,3	4,3	4,4	4,4
Temperature in/out, °C	1,1/22			
Maximal capacity, kW	10,4	8,9	7,3	5,8
Connection, ”	½			
Dimensions, mm	420×380×270			
Hot water duct heater type	DH-250			

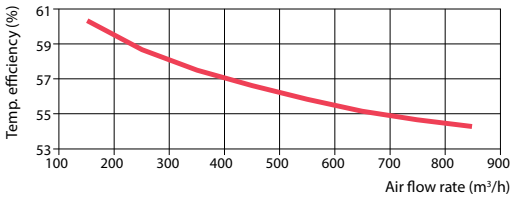
** option

Performance (AC fans)

Unit with standard equipment



Temperature efficiency



Indoor and outdoor ΔT=13°C re: *Ecodesign 1254/2014.*

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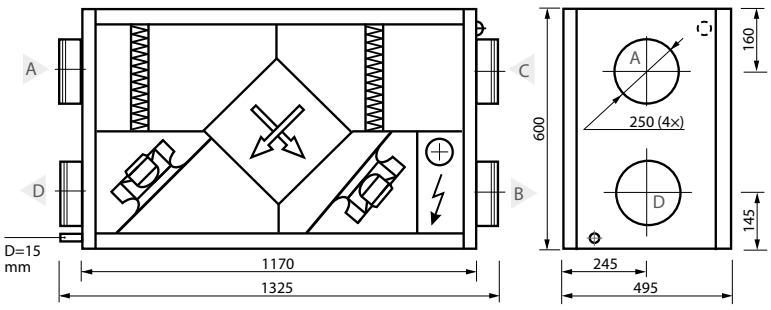

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A outdoor intake
B supply air
C extract indoor
D exhaust air

DOMEKT P 900 V

(Kompakt RECU 900V-EC)

Maximal air flow, m^3/h	788
Panel thickness, mm	45
Unit weight, kg	90
Supply voltage, V	3~400
Maximal operating current, A	HE 9,8 / HW 3,8
Thermal efficiency of heat recovery, %	55
Reference flow rate, m^3/s	0,15
Reference pressure difference, Pa	50
SPI, $W/(m^3/h)$	0,26
Filters dimensions B×H×L, mm	400×235×46-M5
Electric power input of the fan drive at reference flow rate, W	72
Electric power input of the fan drive at maximum flow rate, W	181
Electric air heater capacity, kW / Δt, °C	4,5 / 22,7
Control panel	KOMFOVENT C3 / C3.1

The photo is intended for informational purposes only, exact details may vary.

Acoustic data

A-weighted sound power level L_{WA}, dB(A) at reference flow rate

Supply inlet	51
Supply outlet	64
Exhaust inlet	51
Exhaust outlet	65
Casing	45

A-weighted sound pressure level L_{PA}, dB(A)
10 m^2 normally isolated room, distance from casing – 3 m.

Surroundings	34

Temperature efficiency

	Winter					Summer
Outside temperature, °C	-23	-15	-10	-5	0	30
After heat exchanger*, °C	1,9	5,1	7,2	9,5	11,8	25,7

* indoor +22°C, 20 % RH

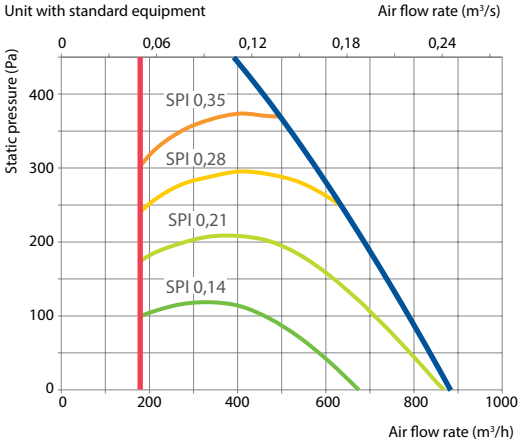
Hot water duct air heater (DH)**

	Winter			
Water temperature in/out, °C	90/70	80/60	70/50	60/40
Capacity, kW	5,1	5,1	5,1	4,5
Flow rate, dm^3/h	225	224	223	197
Pressure drop, kPa	2,5	2,5	2,6	2,1
Temperature in/out, °C		1,9/22		1,9/19,7
Maximal capacity, kW	8,5	7,2	5,9	4,5
Connection, ”		½		
Dimensions, mm		360×320×270		
Hot water duct heater type		DH-200		

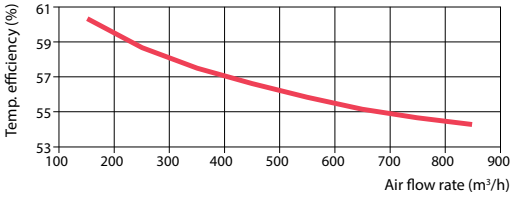
** option
Max air flow – 761 m^3/h.

Performance

Unit with standard equipment



Temperature efficiency



Indoor and outdoor ΔT=13°C re: *Ecodesign 1254/2014.*

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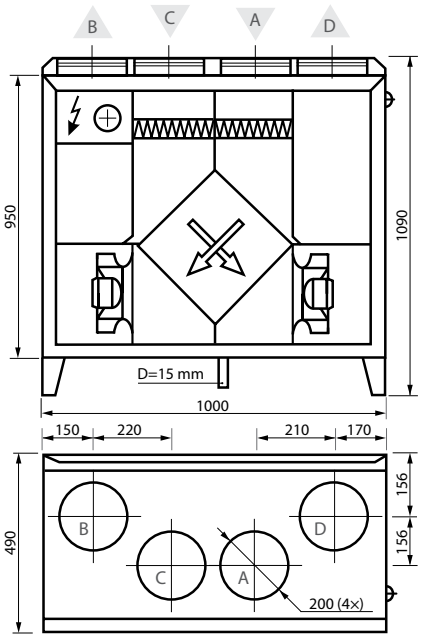

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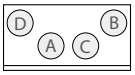


A outdoor intake
B supply air
C extract indoor
D exhaust air

komfovent®

DOMEKT P 900 V

(Kompakt RECU 900V-AC)

Maximal air flow, m³/h	865
Panel thickness, mm	45
Unit weight, kg	90
Supply voltage, V	3~400
Maximal operating current, A	HE 9,2 / HW 3,2
Thermal efficiency of heat recovery, %	55
Reference flow rate, m³/s	0,17
Reference pressure difference, Pa	50
SPI, W/(m³/h)	0,52
Filters dimensions B×H×L, mm	400×235×46-M5
Electric power input of the fan drive at reference flow rate, W	156
Electric power input of the fan drive at maximum flow rate, W	254
Electric air heater capacity, kW / Δt, °C	4,5 / 20,6
Control panel	KOMFOVENT C3 / C3.1

The photo is intended for informational purposes only, exact details may vary.

Acoustic data

A-weighted sound power level L_{WA}, dB(A) at reference flow rate

Supply inlet	55
Supply outlet	68
Exhaust inlet	54
Exhaust outlet	68
Casing	47

A-weighted sound pressure level L_{PA}, dB(A)
10 m² normally isolated room, distance from casing – 3 m.

Surroundings	37

Temperature efficiency

	Winter					Summer
Outside temperature, °C	-23	-15	-10	-5	0	30
After heat exchanger*, °C	1,7	4,9	7,1	9,4	11,7	25,7

* indoor +22°C, 20 % RH

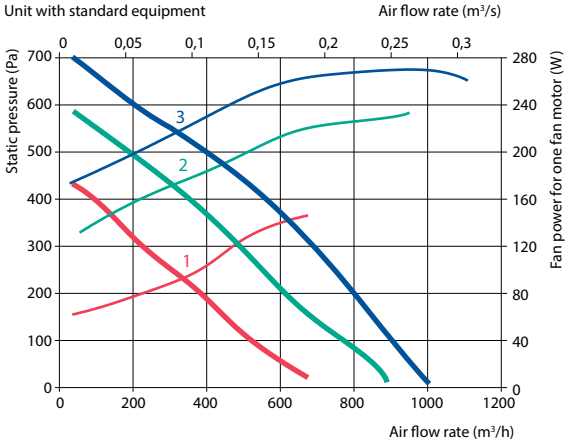
Hot water duct air heater (DH)**

	Winter			
Water temperature in/out, °C	90/70	80/60	70/50	60/40
Capacity, kW	5,6	5,6	5,6	4,8
Flow rate, dm³/h	247	246	245	211
Pressure drop, kPa	3	3	3,1	2,4
Temperature in/out, °C		1,7/22		1,7/19,3
Maximal capacity, kW	9,1	7,7	6,3	4,8
Connection, ”		½		
Dimensions, mm		360×320×270		
Hot water duct heater type		DH-200		

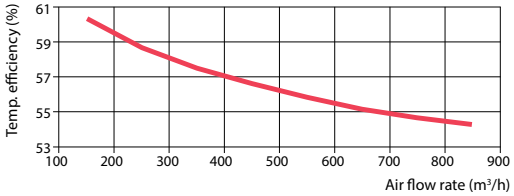
** option
Max air flow – 827 m³/h.

Performance (AC fans)

Unit with standard equipment



Temperature efficiency



Indoor and outdoor ΔT=13°C re: *Ecodesign 1254/2014.*

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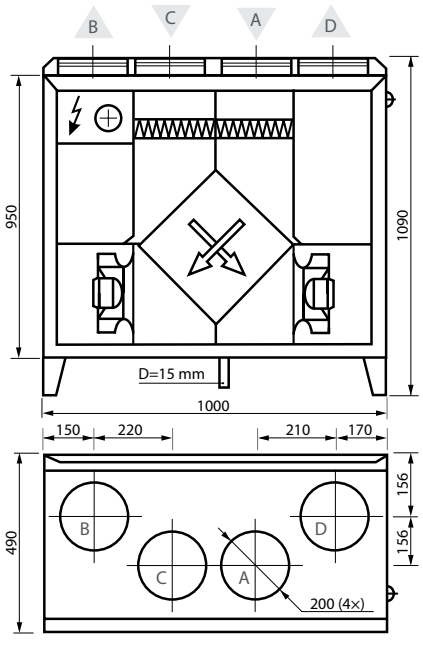

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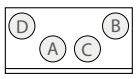
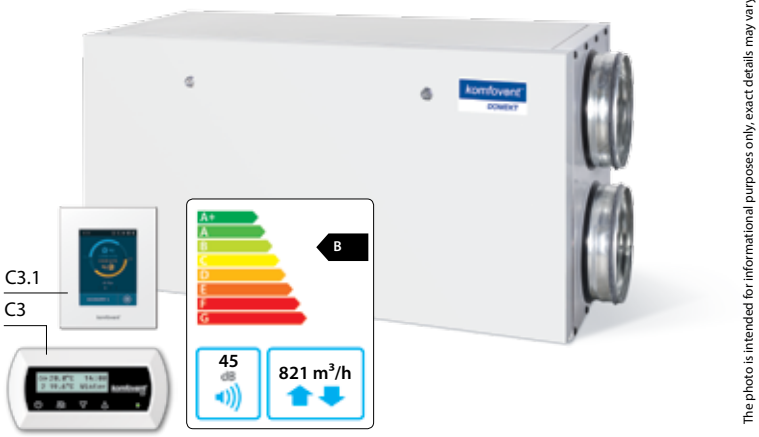


A outdoor intake
B supply air
C extract indoor
D exhaust air

DOMEKT P 900 H

(Kompakt RECU 900H-EC)

Maximal air flow, m^3/h	821
Panel thickness, mm	45
Unit weight, kg	78
Supply voltage, V	3~400
Maximal operating current, A	HE 9,8 / HW 3,8
Thermal efficiency of heat recovery, %	55
Reference flow rate, m^3/s	0,16
Reference pressure difference, Pa	50
SPI, $W/(m^3/h)$	0,28
Filters dimensions B×H×L, mm	400×235×46-M5
Electric power input of the fan drive at reference flow rate, W	79
Electric power input of the fan drive at maximum flow rate, W	181
Electric air heater capacity, kW / Δt, °C	4,5 / 21,8
Control panel	KOMFOVENT C3 / C3.1



The photo is intended for informational purposes only, exact details may vary.

Acoustic data

A-weighted sound power level L_{WA}, dB(A) at reference flow rate

Supply inlet	52
Supply outlet	65
Exhaust inlet	52
Exhaust outlet	65
Casing	45

A-weighted sound pressure level L_{PA}, dB(A)
10 m^2 normally isolated room, distance from casing – 3 m.

Surroundings	34

Temperature efficiency

	Winter					Summer
Outside temperature, °C	-23	-15	-10	-5	0	30
After heat exchanger*, °C	1,9	5,0	7,1	9,4	11,7	25,7

* indoor +22°C, 20 % RH

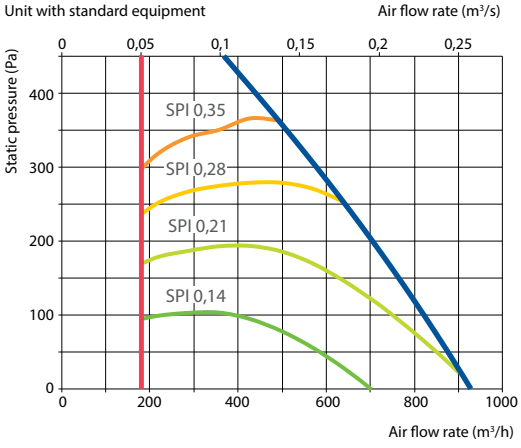
Hot water duct air heater (DH)**

	Winter			
Water temperature in/out, °C	90/70	80/60	70/50	60/40
Capacity, kW	5,6	5,6	5,6	5,6
Flow rate, dm^3/h	245	244	243	242
Pressure drop, kPa	4	4,1	4,1	4,2
Temperature in/out, °C	1,9/22			
Maximal capacity, kW	10,3	8,7	7,2	5,6
Connection, ”	½			
Dimensions, mm	420×380×270			
Hot water duct heater type	DH-250			

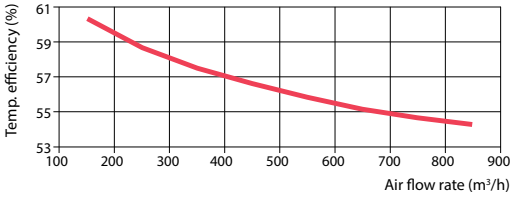
** option

Performance

Unit with standard equipment



Temperature efficiency



Indoor and outdoor ΔT=13°C re: *Ecodesign 1254/2014.*

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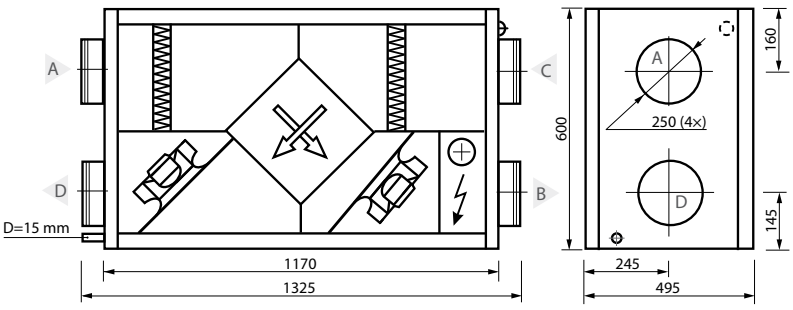


Shown as left (L1)

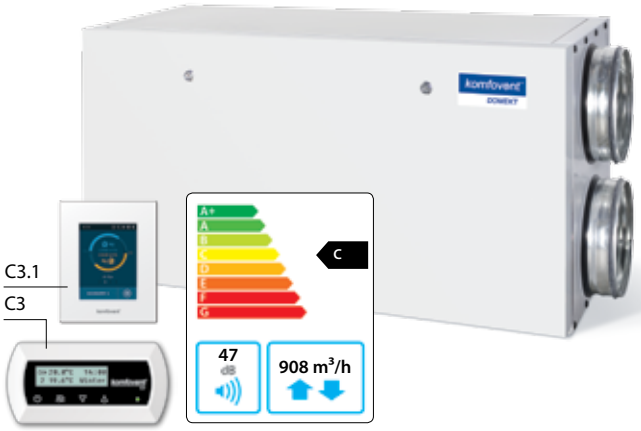
A outdoor intake
B supply air
C extract indoor
D exhaust air

komfovent®

DOMEKT P 900 H

(Kompakt RECU 900H-AC)

Maximal air flow, m³/h	908
Panel thickness, mm	45
Unit weight, kg	78
Supply voltage, V	3~400
Maximal operating current, A	HE 9,2 / HW 3,2
Thermal efficiency of heat recovery, %	55
Reference flow rate, m³/s	0,18
Reference pressure difference, Pa	50
SPI, W/(m³/h)	0,52
Filters dimensions B×H×L, mm	400×235×46-M5
Electric power input of the fan drive at reference flow rate, W	163
Electric power input of the fan drive at maximum flow rate, W	256
Electric air heater capacity, kW / Δt, °C	4,5 / 19,7
Control panel	KOMFOVENT C3 / C3.1



The photo is intended for informational purposes only, exact details may vary.

Acoustic data

A-weighted sound power level L_{WA}, dB(A) at reference flow rate

Supply inlet	55
Supply outlet	69
Exhaust inlet	54
Exhaust outlet	69
Casing	47

A-weighted sound pressure level L_{PA}, dB(A)
10 m² normally isolated room, distance from casing – 3 m.

Surroundings	37

Temperature efficiency

	Winter					Summer
Outside temperature, °C	-23	-15	-10	-5	0	30
After heat exchanger*, °C	1,6	4,0	7,0	9,3	11,6	25,8

* indoor +22°C, 20 % RH

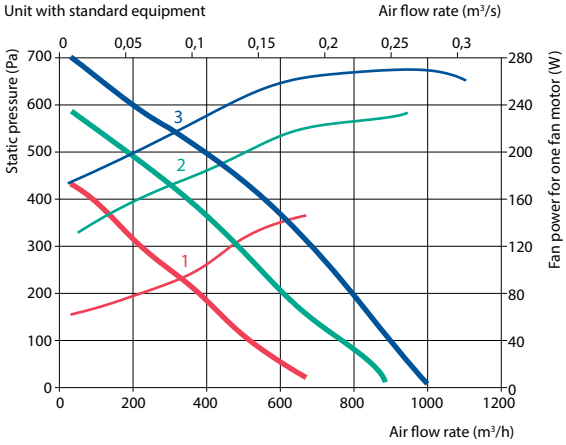
Hot water duct air heater (DH)**

	Winter			
Water temperature in/out, °C	90/70	80/60	70/50	60/40
Capacity, kW	6,2	6,2	6,2	6,1
Flow rate, dm³/h	274	272	271	266
Pressure drop, kPa	4,9	5	5,1	5
Temperature in/out, °C	1,6/22			
Maximal capacity, kW	11,2	9,5	7,8	6,1
Connection, ”	½			
Dimensions, mm	420×380×270			
Hot water duct heater type	DH-250			

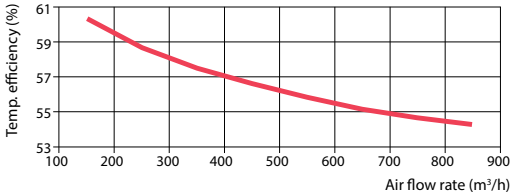
** option

Performance (AC fans)

Unit with standard equipment



Temperature efficiency



Indoor and outdoor ΔT=13°C re: *Ecodesign 1254/2014.*

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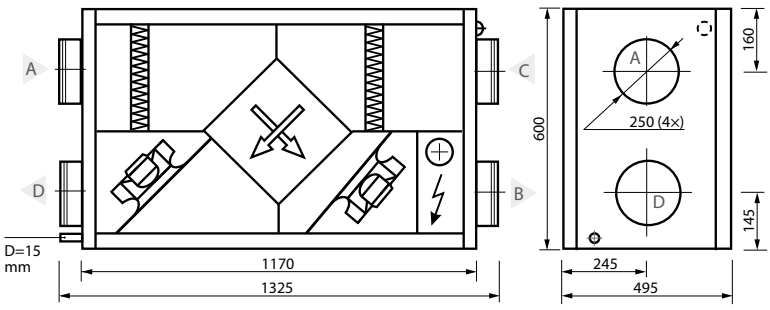

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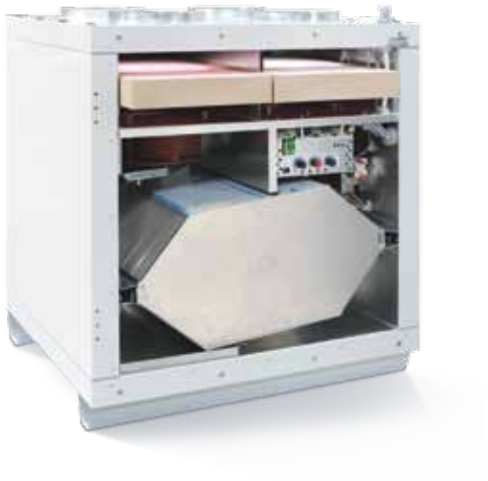
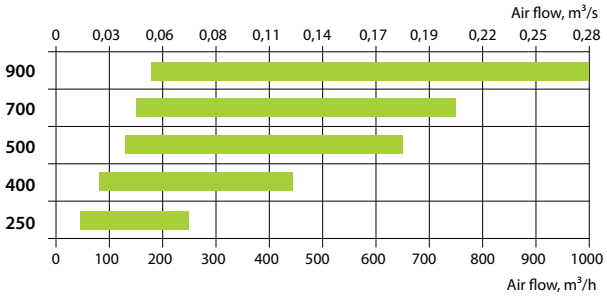
A outdoor intake
B supply air
C extract indoor
D exhaust air

Domekt CF

Air handling units with a counterflow plate heat exchanger.
Operating capacity ranges from 50 to 1000 m³/h.



Standard sizes of Domekt CF units



Advantages of Domekt CF units

Heat energy saving
In the process of ventilation the heat of the exhaust air is recovered to the supplied air.

Totally separated airflows
The supply and exhaust airflows are separated, thus making possible utilization of the heat of the extracted foul air.

Long term efficient operation
The absence of movable parts ensures effective heat exchange and long run.

Low noise level
Domekt CF air handling units are equipped with silently operating fans and sound insulation, which ensures low noise level.

Counterflow polystyrene plate heat exchanger

The exchanger is constructed completely from polystyrene. Only solvent-free elastic adhesives are used.

- The patented design makes this exchanger's outstanding performance.
- The triangular ducts in the recuperator are arranged so that each one is surrounded by parallel ducts in which the air is in counter flow.
- Each fresh-air duct is surrounded by three ducts filled with warmer exhaust air. Likewise, each duct with exhaust air is surrounded by three fresh-air ducts. This maximizes the surface area over which energy can efficiently be transferred, recaptured and reused.

Anti-frosting Protection
If the temperature of the exhaust air drops below 4°C, freezing may occur at the exhaust air corner of the heat exchanger. To avoid freezing the temperature sensor is installed in this zone to give a signal to the automatic control. If for some period of time temperature will not rise up, by-pass damper is opened to redirect outdoor air through by-pass channel and only warm exhaust air flows through exchanger to defrost risky zone. For the conditions when outdoor temperatures may be lower than -4°C, duct mounted preheater is recommended.

Aluminum heat exchanger is EUROVENT certified

Domekt CF range

Unit size	Supply/ exhaust air filter class		Heater			Cooler		Inspection side				Bypass	Control system		
													C4 panel		C5 panel
	M5	F7	HE	HW	HCW	CW	CDX	R1	R2	L1	L2	Inner	C4	C4.1	C5.1
Domekt CF 250 V	●	○		△				○		○		●	●	○	
Domekt CF 250 F	●	○		△				○		○		●	●	○	
Domekt CF 400 V	●	○	●	△	△			○		○		●	●	○	
Domekt CF 500 F	●	○	●	△	△				○		○	●	●	○	
Domekt CF 700 V	●	○	●	△	△	△	△	○		○		●			●
Domekt CF 700 H	●	○	●	△	△	△	△	○		○		●			●
Domekt CF 900 U	●	○	○		○	△	△	○		○		●			●
Domekt CF 900 H/V	●	○	○	○		△	△	○		○		●			●
Domekt CF 900 F	●	○	●	△	△	△	△	○		○		●			●

● standard equipment
○ possible choice
△ ordered separately

Duct connection

H – horizontal.
V – vertical.
U – universal, 14 installation options.
F – false ceiling.

Heater

HE – electric heater.

HW – water duct heater is installed on the duct and must be ordered separately. Heaters are mounted on the outside of the unit in any user-convenient place. There is heater control possibility in automatic control system.

HCW – heater-cooler one for both – heating and cooling. Ideal for buildings using geothermal energy.

Cooler

CW – designed for air cooling using cold water (water-glycol mixture), provides a higher comfort level in rooms.

CDX – designed for air cooling using direct expansion cooling unit, provides a higher comfort level in rooms.

Inspection side

See p. 136.

Bypass

Inner bypass is controlled by smart control system.

Control system

C4 Control features:

- Unit mode selection: On / Off / Auto.
- Setting intensity level (1, 2, 3).
- Weekly schedule programming.
- Setting temperature from the panel 15–30 °C.
- Temperature setpoint sliding +/- 9 °C for time period.
- Summer / winter selection.
- Adjusting of intensity levels every 1% from the panel.
- OVR functions activation via external contact.
- OVR functions activation in the panel for adjusted time period (1…90 min.).
- Choosing of panel language (1 of 15).
- Errors indication and registration log (error log with 50 events with time, date in the panel).
- Settings menu blocking with PIN.
- Application software for smartphones based on "Android".*

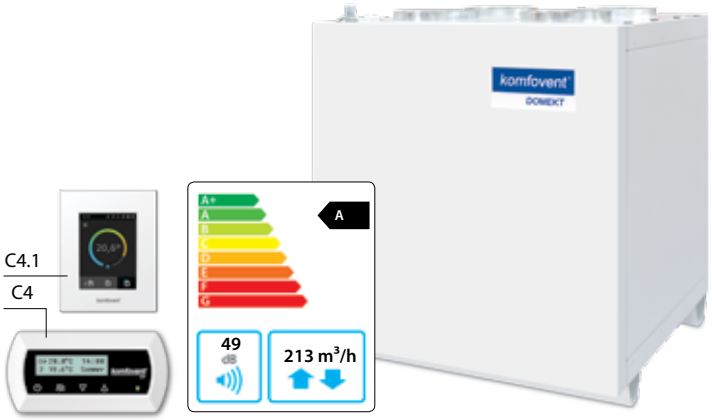
C5 Control features:

- 5 different operation modes: *Comfort1*, *Comfort2*, *Economy1*, *Economy2* and *Special*.
- Temperature control modes: Supply air / Extract air / Room / Balance.
- Energy parameters indication: thermal efficiency of the heat exchanger, heat exchanger's recovered energy, energy saving indicator.
- Air quality control.
- Flow control modes: CAV, VAV and DCV.
- Air flow indication (m^3/h, m^3/s, l/s).
- Rotary or plate heat exchanger failure protection.
- Rotary heat exchanger cleaning and warm-up function.
- Intelligent self-diagnostic.
- Summer night cooling.
- Holiday, weekly operating scheduling.
- Min. supply air temperature maintenance.
- Combined water heater & cooler control.
- Inverter-type DX outdoor unit control.
- Cooling recovery function.
- Outdoor compensated ventilation.
- Humidity control: air humidification and dehumidification.**
- Circulation pumps control by demand.
- Warm-up function of circulation pumps and mixing valves.
- Air filter clogging indication.
- Operation hours and energy counters.
- Remote control via web interface.
- Built-in data logger for all air handling unit parameters.
- Application software for smartphones based on "Android" and "iOS".

* required PING2 module.
** additionally ordered function.

DOMEKT CF 250 V

Maximal air flow, m³/h	213
Panel thickness, mm	30
Unit weight, kg	41
Supply voltage, V	1~230
Maximal operating current, A	1,7
Thermal efficiency of heat recovery, %	89
Reference flow rate, m³/s	0,04
Reference pressure difference, Pa	50
SPI, W/(m³/h)	0,46
Filters dimensions B×H×L, mm	145×430×46-M5
Electric power input of the fan drive at reference flow rate, W	33
Electric power input of the fan drive at maximum flow rate, W	90
Electric air heater capacity, kW / Δt, °C	–
Control panel	KOMFOVENT C4 / C4.1



The photo is intended for informational purposes only, exact details may vary.

Temperature efficiency

	Winter					Summer
Outside temperature, °C	-23	-15	-10	-5	0	30
After heat exchanger*, °C	16,6	17,3	17,7	18,1	18,8	23,2

* indoor +22°C, 10 % RH

Acoustic data

A-weighted sound power level L_{WA}, dB(A) at reference flow rate

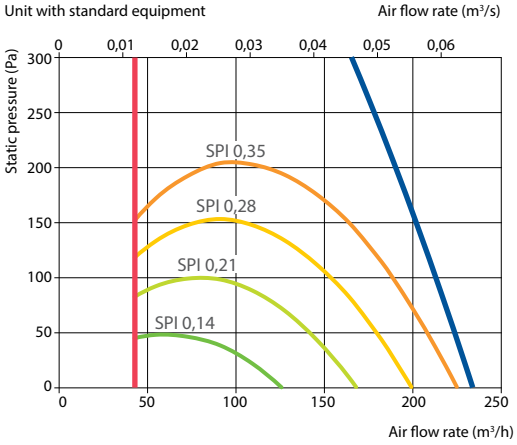
Supply inlet	48
Supply outlet	69
Exhaust inlet	54
Exhaust outlet	69
Casing	49

A-weighted sound pressure level L_{PA}, dB(A)
10 m² normally isolated room, distance from casing – 3 m.

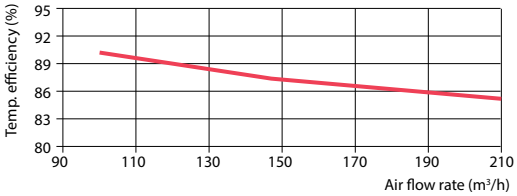
Surroundings	38

Performance

Unit with standard equipment



Temperature efficiency



Indoor and outdoor ΔT=13°C re: *Ecodesign 1254/2014.*

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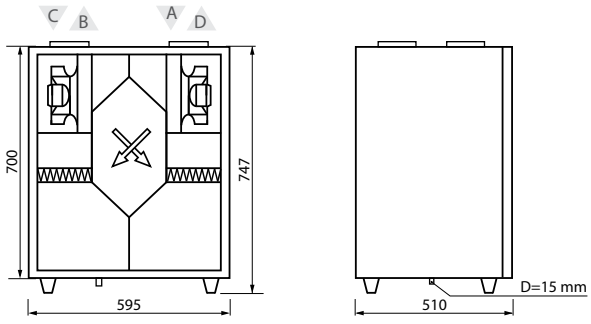

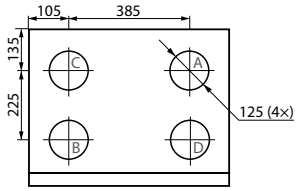

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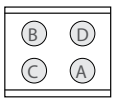
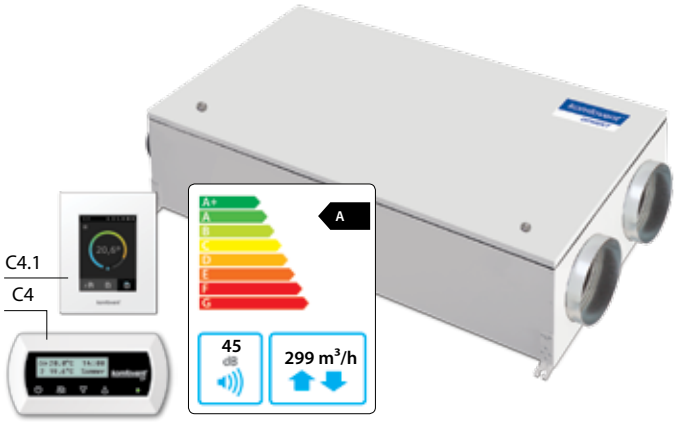


A outdoor intake
B supply air
C extract indoor
D exhaust air

komfovent®

DOMEKT CF 250 F

Maximal air flow, m³/h	299
Panel thickness, mm	30
Unit weight, kg	43
Supply voltage, V	1~230
Maximal operating current, A	1,7
Thermal efficiency of heat recovery, %	86
Reference flow rate, m³/s	0,06
Reference pressure difference, Pa	50
SPI, W/(m³/h)	0,32
Filters dimensions B×H×L, mm	265×250×46-M5
Electric power input of the fan drive at reference flow rate, W	32
Electric power input of the fan drive at maximum flow rate, W	90
Electric air heater capacity, kW / Δt, °C	–
Control panel	KOMFOVENT C4 / C4.1



The photo is intended for informational purposes only, exact details may vary.

Temperature efficiency

	Winter					Summer
Outside temperature, °C	-23	-15	-10	-5	0	30
After heat exchanger*, °C	14,8	15,7	16,2	16,8	17,8	23,5

* indoor +22°C, 10 % RH

Acoustic data

A-weighted sound power level L_{WA}, dB(A) at reference flow rate

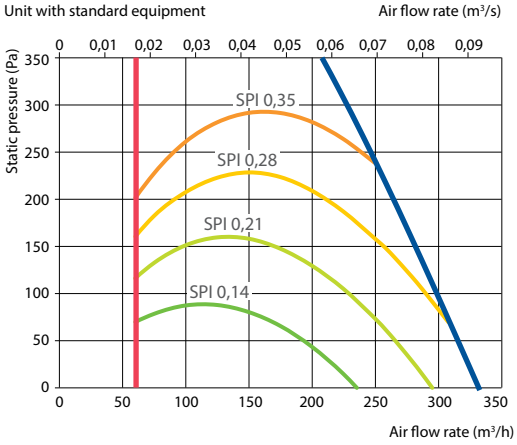
Supply inlet	53
Supply outlet	64
Exhaust inlet	56
Exhaust outlet	64
Casing	45

A-weighted sound pressure level L_{PA}, dB(A)
10 m² normally isolated room, distance from casing – 3 m.

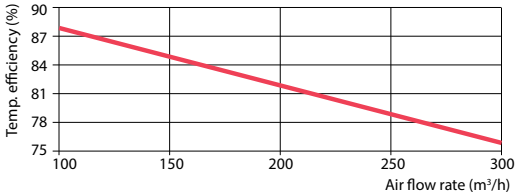
Surroundings	34

Performance

Unit with standard equipment



Temperature efficiency



Indoor and outdoor ΔT=13°C re: *Ecodesign 1254/2014.*

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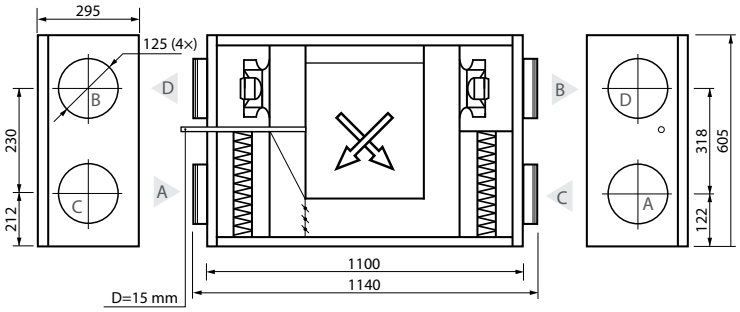

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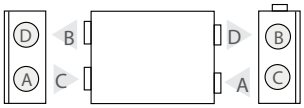
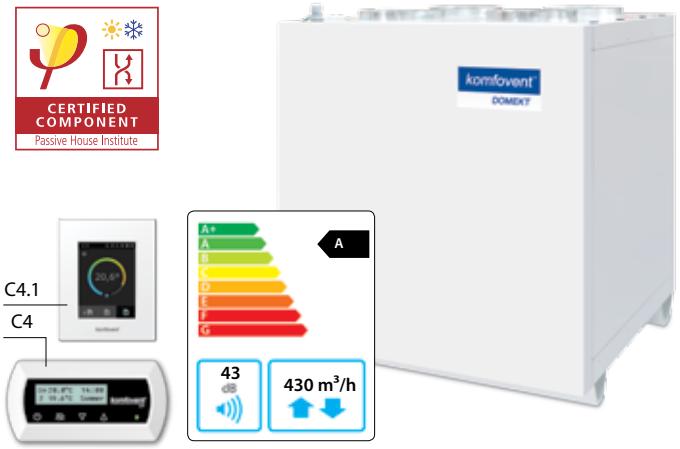


A outdoor intake
B supply air
C extract indoor
D exhaust air

DOMEKT CF 400 V

(Domekt RECU 400VCF)

Maximal air flow, m³/h	430
Panel thickness, mm	45
Unit weight, kg	55
Supply voltage, V	1~230
Maximal operating current, A	HE 6,3 / HW 2,8
Thermal efficiency of heat recovery, %	80
Reference flow rate, m³/s	0,08
Reference pressure difference, Pa	50
SPI, W/(m³/h)	0,28
Filters dimensions B×H×L, mm	235×350×46-M5
Electric power input of the fan drive at reference flow rate, W	41
Electric power input of the fan drive at maximum flow rate, W	103
Electric air heater capacity, kW / Δt, °C	1 / 9,3
Control panel	KOMFOVENT C4 / C4.1



The photo is intended for informational purposes only, exact details may vary.

Temperature efficiency

	Winter					Summer
Outside temperature, °C	-23	-15	-10	-5	0	30
After heat exchanger*, °C	13,2	14,3	16,8	16,3	17,3	23,8

* indoor +22°C, 20 % RH

Acoustic data

A-weighted sound power level L_{WA}, dB(A) at reference flow rate

Supply inlet	61
Supply outlet	56
Exhaust inlet	62
Exhaust outlet	56
Casing	43

A-weighted sound pressure level L_{PA}, dB(A)
10 m² normally isolated room, distance from casing – 3 m.

Surroundings	33

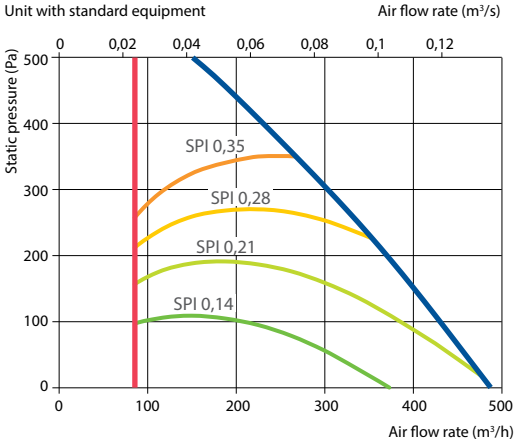
Hot water duct air heater (DH)**

	Winter			
Water temperature in/out, °C	90/70	80/60	70/50	60/40
Capacity, kW	1,3	1,3	1,3	1,3
Flow rate, dm³/h	56	56	56	55
Pressure drop, kPa	1	1	1	1
Temperature in/out, °C	13,2/22			
Maximal capacity, kW	3,5	2,8	2,1	1,5
Connection, ”	½			
Dimensions, mm	335×295×270			
Hot water duct heater type	DH-160			

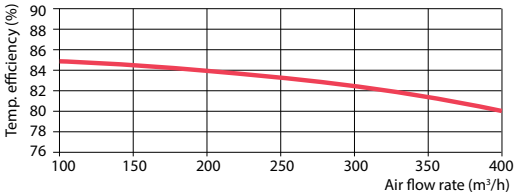
** option

Performance

Unit with standard equipment



Temperature efficiency



Indoor and outdoor ΔT=13°C re: *Ecodesign 1254/2014.*

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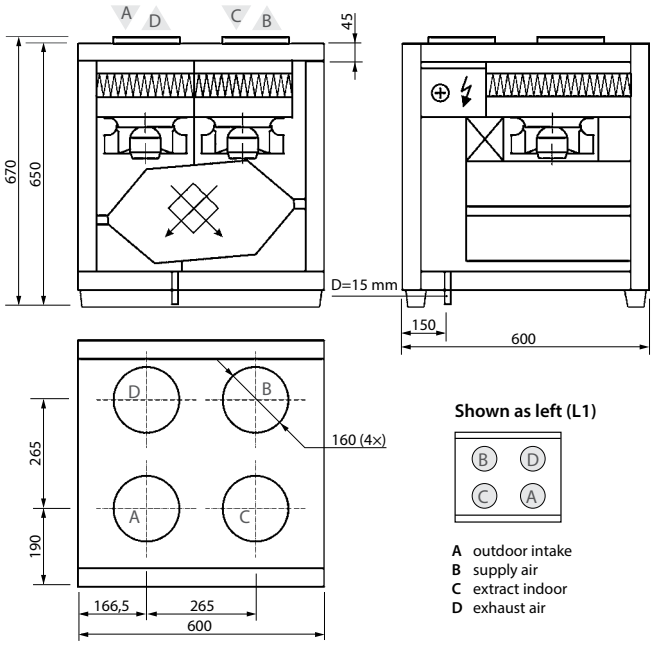

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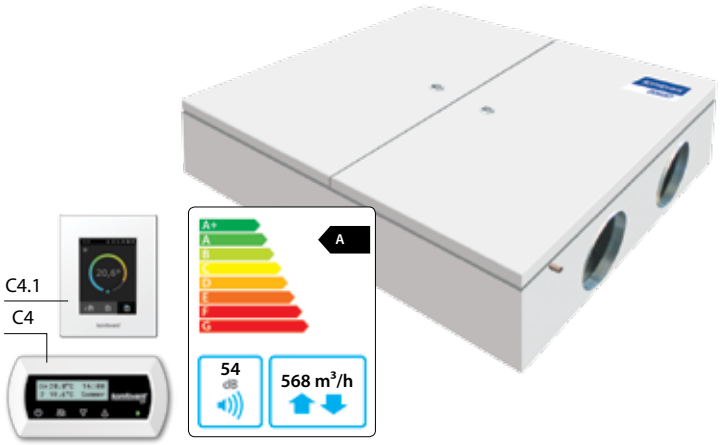
A outdoor intake
B supply air
C extract indoor
D exhaust air

komfovent®

DOMEKT CF 500 F

(Domekt RECU 500PCF)

Maximal air flow, m³/h	568
Panel thickness, mm	25
Unit weight, kg	70
Supply voltage, V	1~230
Maximal operating current, A	HE 7,3 / HW 3,3
Thermal efficiency of heat recovery, %	88
Reference flow rate, m³/s	0,11
Reference pressure difference, Pa	50
SPI, W/(m³/h)	0,41
Filters dimensions B×H×L, mm	410×200×46-M5
Electric power input of the fan drive at reference flow rate, W	81
Electric power input of the fan drive at maximum flow rate, W	177
Electric air heater capacity, kW / Δt, °C	1 / 7
Control panel	KOMFOVENT C4 / C4.1



The photo is intended for informational purposes only, exact details may vary.

Acoustic data

A-weighted sound power level L_{WA}, dB(A) at reference flow rate

Supply inlet	57
Supply outlet	71
Exhaust inlet	57
Exhaust outlet	71
Casing	54

A-weighted sound pressure level L_{PA}, dB(A)
10 m² normally isolated room, distance from casing – 3 m.

Surroundings	43

Temperature efficiency

	Winter					Summer
Outside temperature, °C	-23	-15	-10	-5	0	30
After heat exchanger*, °C	15,9	16,7	17,1	17,6	18,4	23,3

* indoor +22°C, 20 % RH

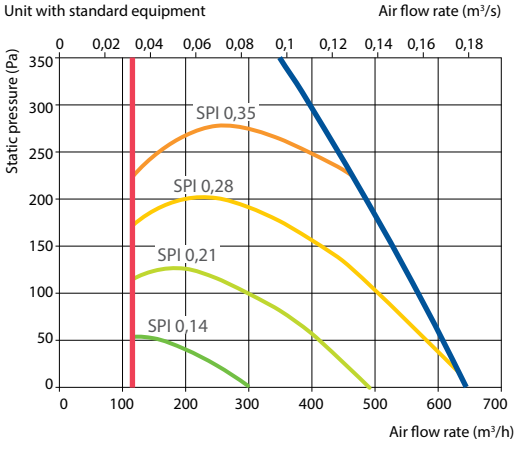
Hot water duct air heater (DH)**

	Winter			
Water temperature in/out, °C	90/70	80/60	70/50	60/40
Capacity, kW	1,2	1,2	1,2	1,2
Flow rate, dm³/h	51	51	51	51
Pressure drop, kPa	1	1	1	1
Temperature in/out, °C	15,9/22			
Maximal capacity, kW	4,1	3,2	2,4	1,6
Connection, ”	½			
Dimensions, mm	360×320×270			
Hot water duct heater type	DH-200			

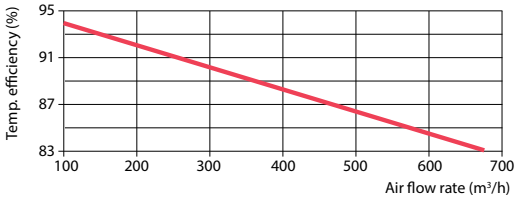
** option

Performance

Unit with standard equipment



Temperature efficiency



Indoor and outdoor ΔT=13°C re: *Ecodesign 1254/2014.*

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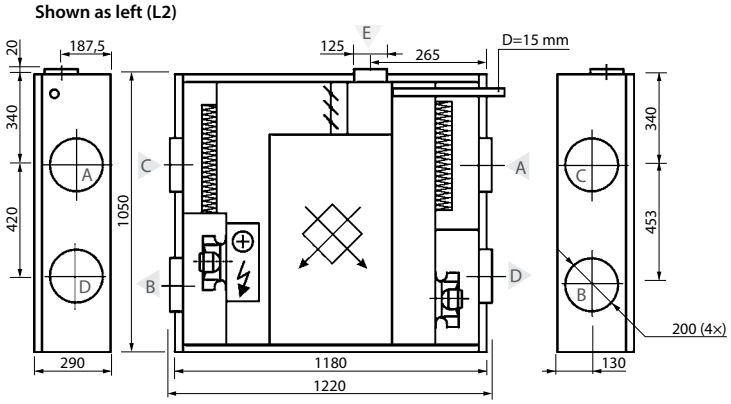

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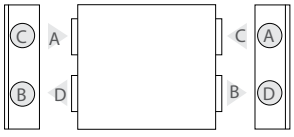


A outdoor intake
B supply air
C extract indoor
D exhaust air
E additional extraction connection (by-pass – extraction without heat recovery)

DOMEKT CF 700 V

(Kompakt RECU 700VCF)

Maximal air flow, m^3/h	665
Panel thickness, mm	45
Unit weight, kg	95
Supply voltage, V	1~230
Maximal operating current, A	HE 12 / HW 3,8
Thermal efficiency of heat recovery, %	87
Reference flow rate, m^3/s	0,13
Reference pressure difference, Pa	50
SPI, $W/(m^3/h)$	0,31
Filters dimensions B×H×L, mm	390×300×46-M5
Electric power input of the fan drive at reference flow rate, W	72
Electric power input of the fan drive at maximum flow rate, W	177
Electric air heater capacity, kW / Δt, °C	2 / 11,9
Control panel	KOMFOVENT C5.1

The photo is intended for informational purposes only, exact details may vary.

Acoustic data

A-weighted sound power level L_{WA}, dB(A) at reference flow rate

Supply inlet	47
Supply outlet	67
Exhaust inlet	52
Exhaust outlet	67
Casing	47

A-weighted sound pressure level L_{PA}, dB(A)
10 m^2 normally isolated room, distance from casing – 3 m.

Surroundings	36

Temperature efficiency

	Winter					Summer
Outside temperature, °C	-23	-15	-10	-5	0	30
After heat exchanger*, °C	15,6	16,4	16,8	17,3	18,2	23,4

* indoor +22°C, 20 % RH

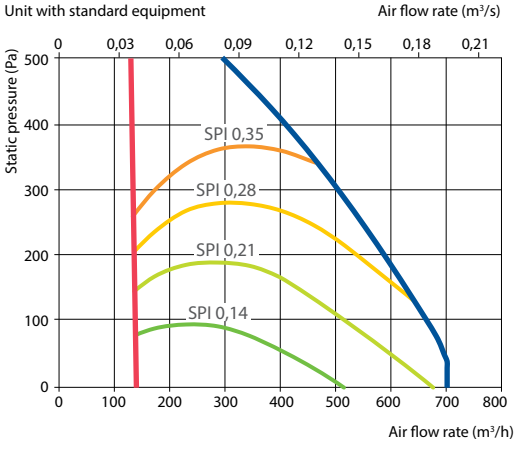
Hot water duct air heater (DH)**

	Winter			
Water temperature in/out, °C	90/70	80/60	70/50	60/40
Capacity, kW	1,4	1,4	1,4	1,4
Flow rate, dm^3/h	63	63	63	62
Pressure drop, kPa	1	1	1	1
Temperature in/out, °C	15,6/22			
Maximal capacity, kW	4,8	3,8	2,9	1,9
Connection, ”	½			
Dimensions, mm	360×320×270			
Hot water duct heater type	DH-200			

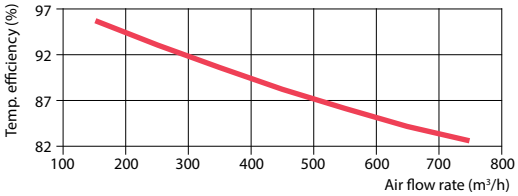
** option

Performance

Unit with standard equipment



Temperature efficiency



Indoor and outdoor ΔT=13°C re: *Ecodesign 1254/2014.*

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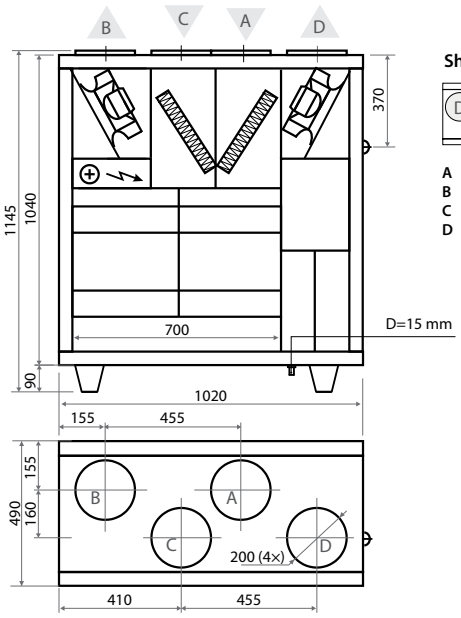

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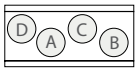
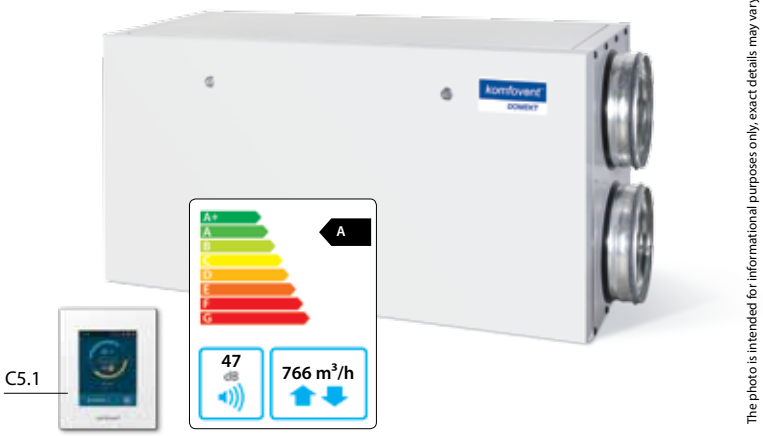


A outdoor intake
B supply air
C extract indoor
D exhaust air

DOMEKT CF 700 H

(Kompakt RECU 700HCF)

Maximal air flow, m³/h	766
Panel thickness, mm	45
Unit weight, kg	95
Supply voltage, V	1~230
Maximal operating current, A	HE 12 / HW 3,8
Thermal efficiency of heat recovery, %	85
Reference flow rate, m³/s	0,15
Reference pressure difference, Pa	50
SPI, W/(m³/h)	0,3
Filters dimensions B×H×L, mm	390×300×46-M5
Electric power input of the fan drive at reference flow rate, W	78
Electric power input of the fan drive at maximum flow rate, W	180
Electric air heater capacity, kW / Δt, °C	2 / 10,4
Control panel	KOMFOVENT C5.1



The photo is intended for informational purposes only, exact details may vary.

Acoustic data

A-weighted sound power level L_{WA}, dB(A) at reference flow rate

Supply inlet	47
Supply outlet	67
Exhaust inlet	52
Exhaust outlet	67
Casing	47

A-weighted sound pressure level L_{PA}, dB(A)
10 m² normally isolated room, distance from casing – 3 m.

Surroundings	36

Temperature efficiency

	Winter					Summer
Outside temperature, °C	-23	-15	-10	-5	0	30
After heat exchanger*, °C	14,8	15,7	16,1	16,8	17,8	23,5

* indoor +22°C, 20 % RH

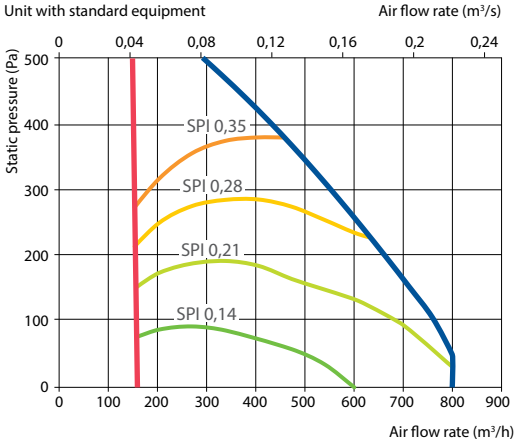
Hot water duct air heater (DH)**

	Winter			
Water temperature in/out, °C	90/70	80/60	70/50	60/40
Capacity, kW	1,9	1,9	1,9	1,9
Flow rate, dm³/h	82	81	81	81
Pressure drop, kPa	1	1	1	1
Temperature in/out, °C	14,8/22			
Maximal capacity, kW	6,7	5,4	4,1	2,8
Connection, ”	½			
Dimensions, mm	420×380×270			
Hot water duct heater type	DH-250			

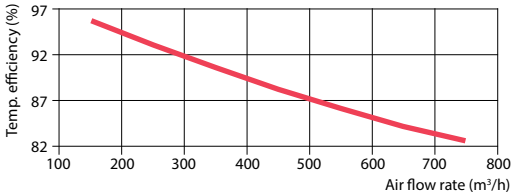
** option

Performance

Unit with standard equipment



Temperature efficiency



Indoor and outdoor ΔT=13°C re: *Ecodesign 1254/2014.*

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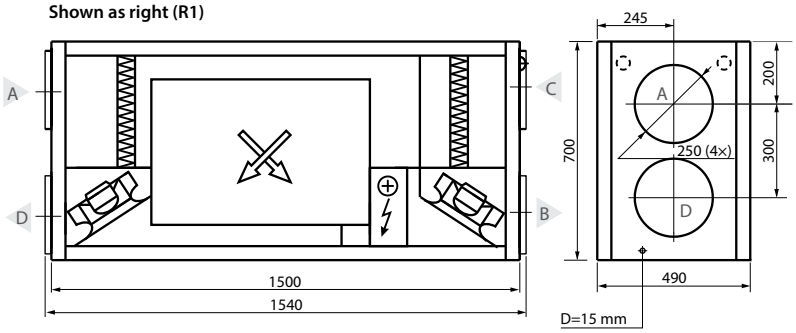

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A outdoor intake
B supply air
C extract indoor
D exhaust air

DOMEKT CF 900 U

Domekt CF 900 UV data

Maximal air flow, m³/h	1000
Panel thickness, mm	50
Unit weight, kg	267
Supply voltage, V	HE 3~400 / HW 1~230
Maximal operating current, A	HE 9,8 / HW 3,3
Thermal efficiency of heat recovery, %	82
Reference flow rate, m³/s	0,19
Reference pressure difference, Pa	50
SPI, W/(m³/h)	0,17
Filters dimensions B×H×L, mm	800×400×46-M5
Electric power input of the fan drive at reference flow rate, W	52
Electric power input of the fan drive at maximum flow rate, W	152
Electric air heater capacity, kW / Δt, °C	4,5/17,9
Control panel	KOMFOVENT C5.1

The photo is intended for informational purposes only, exact details may vary.

Acoustic data

A-weighted sound power level L_{WA}, dB(A) at reference flow rate

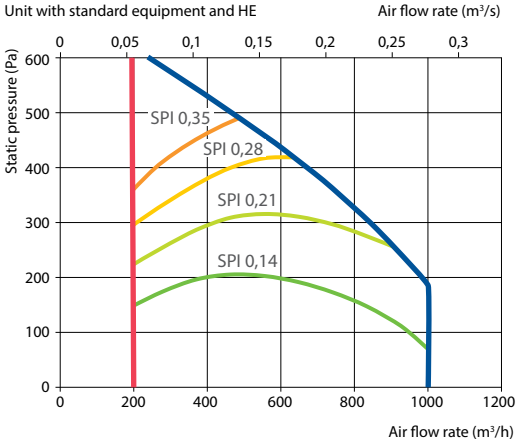
Supply inlet	48
Supply outlet	61
Exhaust inlet	49
Exhaust outlet	61
Casing	41

A-weighted sound pressure level L_{PA}, dB(A)
10 m² normally isolated room, distance from casing – 3 m.

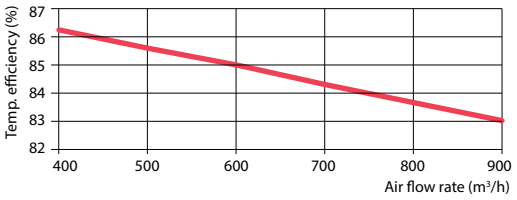
Surroundings	31

Performance

Unit with standard equipment and HE



Temperature efficiency



Indoor and outdoor ΔT=13°C re: *Ecodesign 1254/2014.*

Temperature efficiency

	Winter					Summer
Outside temperature, °C	-23	-15	-10	-5	0	30
After heat exchanger*, °C	14,1	15	15,9	16,8	17,8	23,6

* indoor +22°C, 20 % RH

Changeover water heating/cooling exchanger (HCW)

	Winter				Summer
Water temperature in/out, °C	90/70	80/60	70/50	60/40	7/12
Capacity, kW	2,7	2,7	2,7	2,7	3,8
Flow rate, dm³/h	117	117	116	116	644
Pressure drop, kPa	1	1	1	1	6,8
Temperature in/out, °C	14,1/22				23,6/18
Maximal capacity, kW	21,5	16,5	11,4	6,5	6,4
Connection, ”	½				

Available versions:
1) Electric air heater (HE);
2) Changeover water heating/cooling exchanger (HCW);
3) Changeover water heating/cooling exchanger (HCW) and electric air heater (HE).

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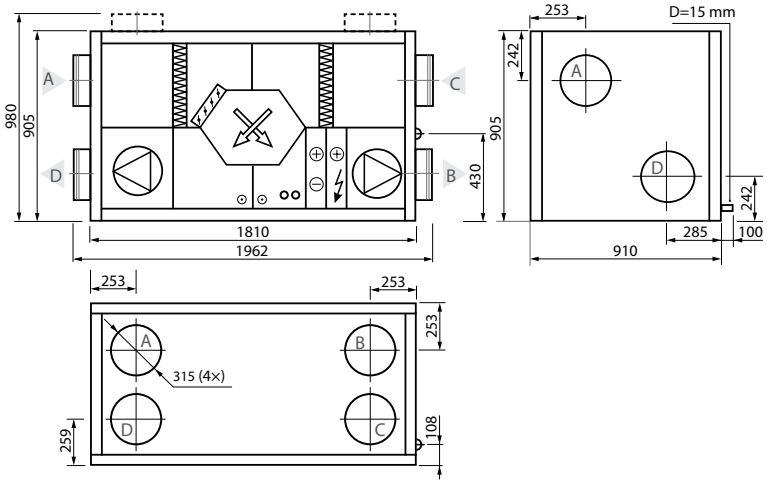

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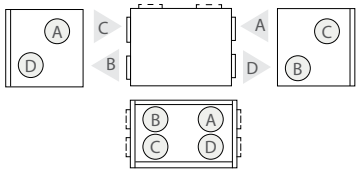
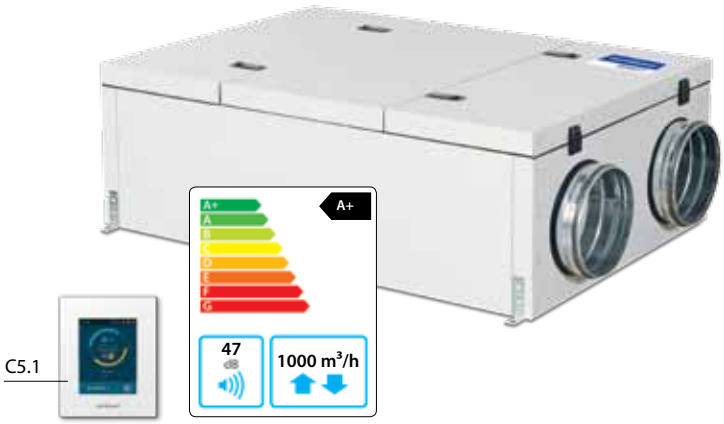


A outdoor intake
B supply air
C extract indoor
D exhaust air

komfovent®

DOMEKT CF 900 F

Maximal air flow, m³/h	1000
Panel thickness, mm	50
Unit weight, kg	161
Supply voltage, V	HE 3~400 / HW 1~230
Maximal operating current, A	HE 9,8 / HW 3,3
Thermal efficiency of heat recovery, %	82
Reference flow rate, m³/s	0,2
Reference pressure difference, Pa	50
SPI, W/(m³/h)	0,17
Filters dimensions B×H×L, mm	550×420×46-M5
Electric power input of the fan drive at reference flow rate, W	57
Electric power input of the fan drive at maximum flow rate, W	167
Electric air heater capacity, kW / Δt, °C	3 / 11,9
Control panel	KOMFOVENT C5.1



The photo is intended for informational purposes only, exact details may vary.

Acoustic data

A-weighted sound power level L_{WA}, dB(A) at reference flow rate

Supply inlet	54
Supply outlet	68
Exhaust inlet	54
Exhaust outlet	68
Casing	47

A-weighted sound pressure level L_{PA}, dB(A)
10 m² normally isolated room, distance from casing – 3 m.

Surroundings	36

Temperature efficiency

	Winter					Summer
Outside temperature, °C	-23	-15	-10	-5	0	30
After heat exchanger*, °C	14	15	15,9	16,8	17,8	23,6

* indoor +22°C, 20 % RH

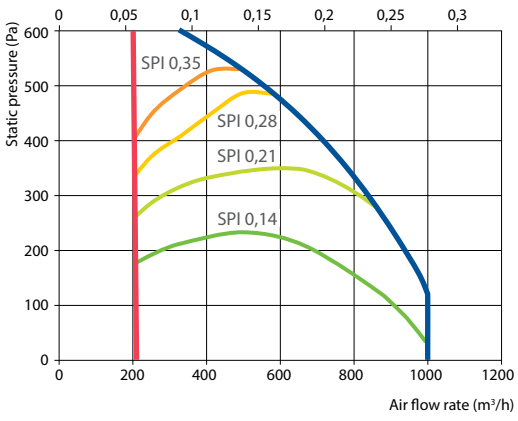
Hot water duct air heater (DH)**

	Winter			
Water temperature in/out, °C	90/70	80/60	70/50	60/40
Capacity, kW	2,7	2,7	2,7	2,7
Flow rate, dm³/h	118	117	117	116
Pressure drop, kPa	1,5	1,6	1,6	1,7
Temperature in/out, °C	14/22			
Maximal capacity, kW	10,1	8,2	6,4	4,5
Connection, ”	½			
Dimensions, mm	510×470×270			
Hot water duct heater type	DH-315			

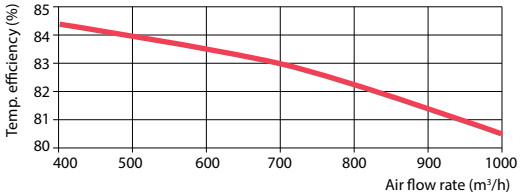
** option

Performance

Unit with standard equipment



Temperature efficiency



Indoor and outdoor ΔT=13°C re: *Ecodesign 1254/2014.*

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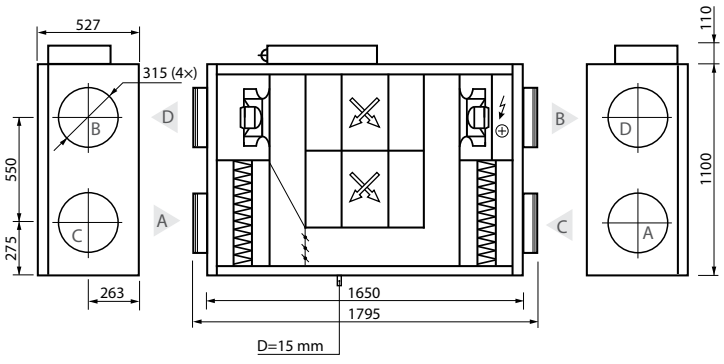

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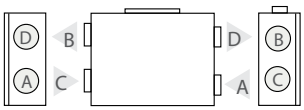
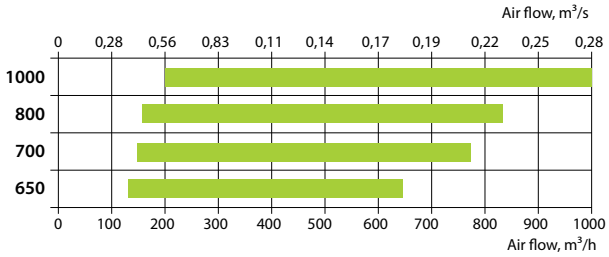


A outdoor intake
B supply air
C extract indoor
D exhaust air

Domekt S

False ceiling supply air handling units.
Operating capacity ranges from 130 to 1 000 m^3/h.

Standard sizes of Domekt S units



Advantages of Domekt S units

- Height is only 297 mm / 350 mm – easy to choose the place for installation.
- Units are complemented with fastening profiles and vibration absorbing holders.
- Safe and handy design of removable cover ensures easy fixing of cover at different opening levels for performing maintenance and service inspection.
- Air handling units have integrated control system.
- Control panel may be installed in any user-convenient place.
- Control panel display enables to set the operation parameters of the unit and monitor them.
- There is a possibility to complement and control the duct mounted cooling section.

Domekt S range

Unit size	Supply/exhaust air filter class		Heater			Cooler		Inspection side	Control system C3 panel		Control system C5 panel
	M5	F7	HE	HW	HCW	CW	CDX	R1	C3	C3.1	C5.1
Domekt S 650 F	●	○	●			△	△	●			●
Domekt S 700 F	●	○	●			△		●	●	○	
Domekt S 800 F	●	○	●	○	△	△	△	●			●
Domekt S 1000 F	●	○	●	○	△	△	△	●			●

● standard equipment
○ possible choice
△ ordered separately

Duct connection
F – false ceiling.

Heater
HE – electric heater.

HW – water air heater.

HCW – heater-cooler one for both – heating and cooling. Ideal for buildings using geothermal energy.

Cooler
CW – designed for air cooling using cold water (water-glycol mixture), provides a higher comfort level in rooms.

CDX – designed for air cooling using direct expansion cooling unit, provides a higher comfort level in rooms.

Inspection side
See p. 136.

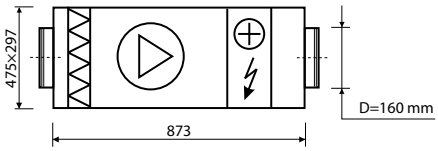
Control system
More information about C3 on p. 12.
More information about C5 on p. 10.

komfovent®

DOMEKT S 650 F

Maximal air flow, m³/h	642
Panel thickness, mm	50
Unit weight, kg	35
Reference flow rate, m³/s	0,13
Reference pressure difference, Pa	50
SPI, W/(m³/h)	0,15
Filters dimensions B×H×L, mm	235×371×46-M5
Electric power input of the fan drive at reference flow rate, W	62
Electric power input of the fan drive at maximum flow rate, W	172
Control panel	KOMFOVENT C5.1

The photo is intended for informational purposes only, exact details may vary.



Acoustic data

A-weighted sound power level L_{WA}, dB(A) at reference flow rate

Supply inlet	63
Supply outlet	69
Casing	41

A-weighted sound pressure level L_{PA}, dB(A)
10 m² normally isolated room, distance from casing – 3 m.

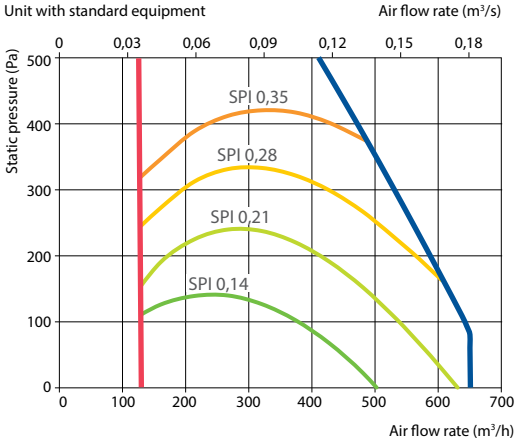
Surroundings	30

Technical data

Supply air handling unit	Supply voltage, V	Air heater capacity, kW	Maximal operating current, A	ΔT, °C
Domekt S 650 F-HE/3	1~230	3,0	14,2	13
Domekt S 650 F-HE/6	3~400	6,0	10,0	26

Performance

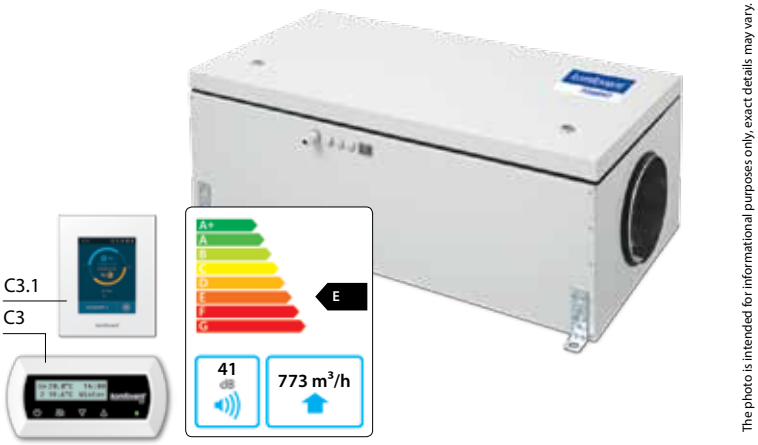
Unit with standard equipment



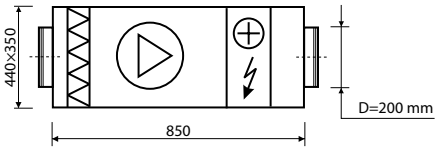
DOMEKT S 700 F

(Kompakt OTK 700)

Maximal air flow, m^3/h	773
Panel thickness, mm	45
Unit weight, kg	32,5
Reference flow rate, m^3/s	0,15
Reference pressure difference, Pa	50
SPI, $W/(m^3/h)$	0,19
Filters dimensions B×H×L, mm	345×287×46-M5
Electric power input of the fan drive at reference flow rate, W	101
Electric power input of the fan drive at maximum flow rate, W	159
Control panel	KOMFOVENT C3 / C3.1



The photo is intended for informational purposes only, exact details may vary.



Acoustic data

A-weighted sound power level L_{WA}, dB(A) at reference flow rate

Supply inlet	58
Supply outlet	64
Casing	41

A-weighted sound pressure level L_{PA}, dB(A)
10 m^2 normally isolated room, distance from casing – 3 m.

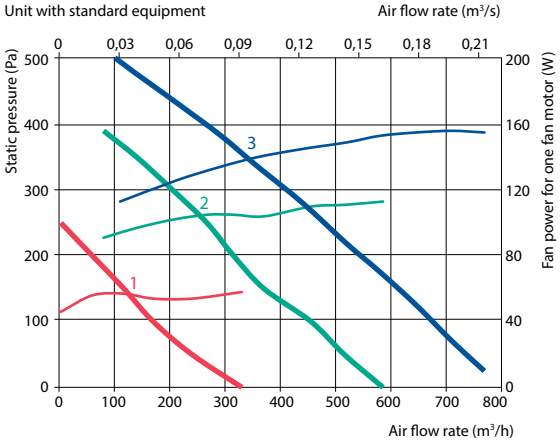
Surroundings	30

Technical data

Supply air handling unit	Supply voltage, V	Air heater capacity, kW	Maximal operating current, A	ΔT, °C
Domekt S 700 F-HE/3	1~230	3,0	14,1	11
Domekt S 700 F-HE/6	3~400	6,0	9,8	22
Domekt S 700 F-HE/9	3~400	9,0	14,1	33

Performance (AC fans)

Unit with standard equipment

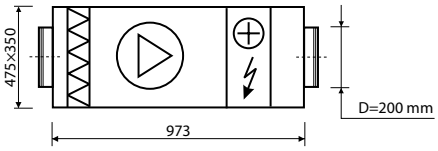


komfovent®

DOMEKT S 800 F

Maximal air flow, m³/h	826
Panel thickness, mm	50
Unit weight, kg	37
Reference flow rate, m³/s	0,16
Reference pressure difference, Pa	50
SPI, W/(m³/h)	0,13
Filters dimensions B×H×L, mm	287×371×46-M5
Electric power input of the fan drive at reference flow rate, W	75
Electric power input of the fan drive at maximum flow rate, W	181
Control panel	KOMFOVENT C5.1

The photo is intended for informational purposes only, exact details may vary.



Acoustic data

A-weighted sound power level L_{WA}, dB(A) at reference flow rate

Supply inlet	60
Supply outlet	65
Casing	44

A-weighted sound pressure level L_{PA}, dB(A)
10 m² normally isolated room, distance from casing – 3 m.

Surroundings	33

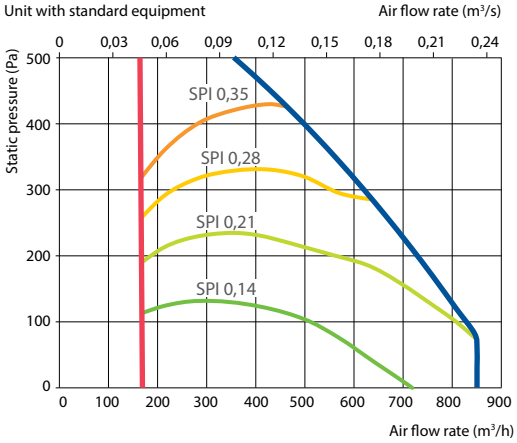
Technical data

Supply air handling unit	Supply voltage, V	Air heater capacity, kW	Maximal operating current, A	ΔT, °C
Domekt S 800 F-HE/3	1~230	3,0	14,9	10
Domekt S 800 F-HE/6	3~400	6,0	10,6	20
Domekt S 800 F-HE/9	3~400	9,0	14,9	30
Domekt S 800 F-HW	1~230	–	1,9	–

Max air flow – 784 m³/h.

Performance

Unit with standard equipment

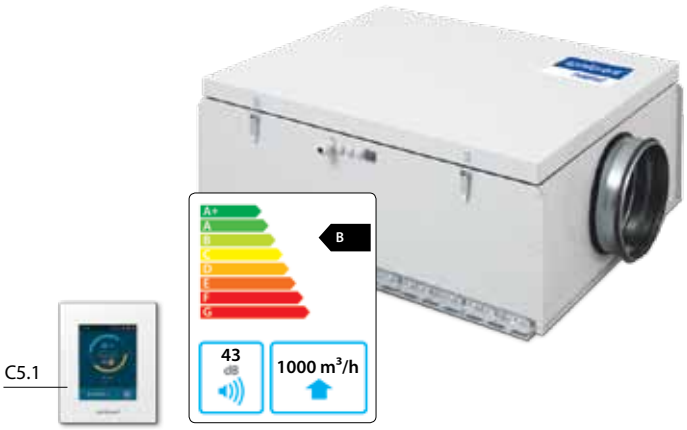


Hot water air heater

Water temperature in/out, °C	90/70	80/60	70/50	60/40
Capacity, kW	11,3	11,1	9,5	5,9
Flow rate, dm³/h	499	488	414	257
Pressure drop, kPa	4,2	4,1	3,1	1,4
Temperature in/out, °C	-23/20	-23/19,2	-23/13	-10/12,4
Maximal capacity, kW	12,6	11,1	9,5	5,9
Connection, ”	½			

DOMEKT S 1000 F

Maximal air flow, m^3/h	1000
Panel thickness, mm	50
Unit weight, kg	46
Reference flow rate, m^3/s	0,2
Reference pressure difference, Pa	50
SPI, $W/(m^3/h)$	0,12
Filters dimensions B×H×L, mm	558×287×46-M5
Electric power input of the fan drive at reference flow rate, W	82
Electric power input of the fan drive at maximum flow rate, W	182
Control panel	KOMFOVENT C5.1



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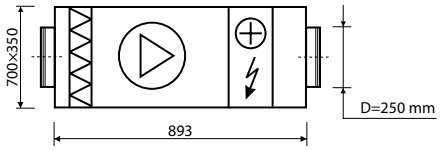


Acoustic data

A-weighted sound power level L_{WA}, dB(A) at reference flow rate

Supply inlet	60
Supply outlet	66
Casing	43

A-weighted sound pressure level L_{PA}, dB(A)
10 m^2 normally isolated room, distance from casing – 3 m.

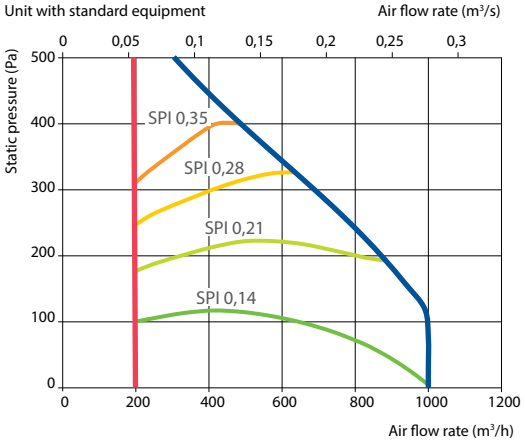
Surroundings	32

Technical data

Supply air handling unit	Supply voltage, V	Air heater capacity, kW	Maximal operating current, A	ΔT, °C
Domekt S 1000 F-HE/6	3~400	6,0	11,0	17
Domekt S 1000 F-HE/9	3~400	9,0	15,4	25
Domekt S 1000 F-HE/15	3~400	15,0	24,1	42
Domekt S 1000 F-HW	1~230	–	2,4	–

Performance

Unit with standard equipment



Hot water air heater

Water temperature in/out, °C	90/70	80/60	70/50	60/40
Capacity, kW	14,4	14,4	12,3	7,5
Flow rate, dm^3/h	636	633	537	325
Pressure drop, kPa	1,5	1,5	1,1	1
Temperature in/out, °C	-23/20	-23/20	-23/13,6	-10/12,2
Maximal capacity, kW	16,4	14,5	12,3	7,5
Connection, ”	½			

Accessories

Supply and exhaust filters

99,9% (in amount) of particulates in the outdoor air are smaller than 1 µm. By mass the mentioned particulates account for only 30% of all airborne dust. Thus, if the outdoor air is supplied to the public and dwelling houses, to ensure air purity required by hygienic standards, filters of M5-F7 class are enough. M5 class filters are used for filtering the exhaust air in air handling units. Air filtering protects air handling equipment against pollution, extends its service life. Therefore dirty filters should be replaced on a timely basis to assure comfortable conditions in the premises and protection of air handling units against breakage. A light on the control panel indicates the filter clogging. Usually air filters should be replaced not less than twice per year: after the end of the heating season and in autumn.

Filter classification and standards

Filters applied in the air handling units are classified according to EUROVENT 4/9 (EN 779 and EN 1882) system. M5 (standard filter) or F7 (optional) class filters for supply air filter. Very compact, but are distinguished by extra large filtering surface. Large filtering surface provides long-life performance and low pressure losses (low pressure losses reduce power consumption). Ecologically clean materials allow just burning clogged air filters.

Motorized closing dampers

To protect air handling units from freezing or other external factors motorized closing dampers must be used. They are mounted on supply and exhaust vents. There is dampers control possibility in automatic control system.

Unit size	Damper
R 200 V	AGUJ-M-125
R 250 F R 400 H / V R 450 V	AGUJ-M-160
R 400 F R 500 H / U R 600 H	AGUJ-M-200
R 500 V R 700 H / V / F	AGUJ-M-250
R 900 U	AGUJ-M-315
RHP 400 V	AGUJ-M-160
RHP 600 U	AGUJ-M-200
RHP 800 U	AGUJ-M-250

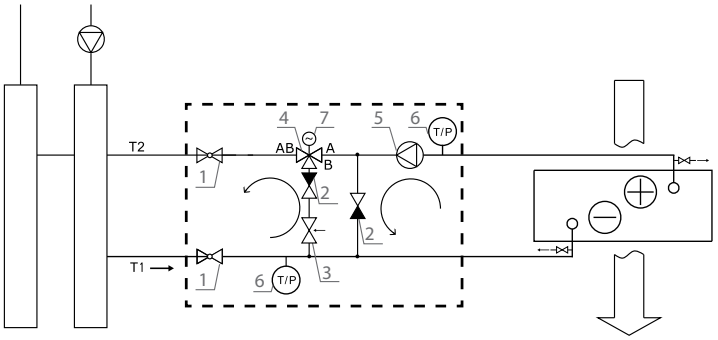
Unit size	Damper
PP 300 V PP 450 V	AGUJ-M-125
P 400 V	AGUJ-M-160
P 400 H	AGUJ-M-200
P 700 V P 900 V	AGUJ-M-200
P 700 H P 900 H	AGUJ-M-250
CF 250 V / F	AGUJ-M-125
CF 400 V	AGUJ-M-160
CF 500 F CF 700 V	AGUJ-M-200
CF 700 H	AGUJ-M-250
CF 900 U / F	AGUJ-M-315
S 650 F	AGUJ-M-160
S 700 F S 800 F	AGUJ-M-200
S 1000 F	AGUJ-M-250

Control system	Actuator ON/OFF	
Komfovent C4	LF230	LM230
Komfovent C3, C5	LF24	LM24

Note:
LF damper actuator is with spring-return
LM damper actuator is without spring-return

Pipework package

Pipework Package Units (PPU) are used for water heater power regulation, i.e. for temperature control of supplied air by mixing hot water from boiler with recycled water in heat exchanger. Fully assembled pipework package is available to each size of the air handing unit where hot water heater is used.



1. Stop valve
2. Return valve
3. Throttling valve
4. Control valve
5. Circulation pump
6. Manometer/ Thermometer
7. Actuator

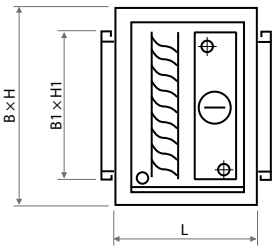
Unit size	Pipework Package
R 200 V R 250 F R 400 V R 450 V	PPU-HW-3R-15-0,4-W1
R 400 H/F R 500 H/V/U R 600 H R 700 H/V/F R 900 U	PPU-HW-3R-15-0,63-W1

Unit size	Pipework Package
PP 300 V	PPU-HW-3R-15-0,4-W1
PP 450 V	PPU-HW-3R-15-0,63-W1
P 400 H/V	PPU-HW-3R-15-1,0-W2
P 700 H/V P 900 H/V	PPU-HW-3R-15-1,6-W2

Unit size	Pipework Package
CF 250 V/F CF 400 V	PPU-HW-3R-15-0,4-W1
CF 500 F CF 700 H/V CF 900 U/F	PPU-HW-3R-15-0,63-W1
S 800 F	PPU-HW-3R-15-2,5-W2
S 1000 F	PPU-HW-3R-20-4,0-W2

Water and direct evaporation air coolers

Air cooler is mounted on the outside of the unit.
Casing of the cooler section corresponds to the unit's casing: galvanized steel sheets with internal mineral wool insulation of 45 mm thickness. Cooler section is assembled with a drop separator and a drain tray. Cooler control function is provided in the automatic control system of the unit.
Internal fluid – R410A, water 7/12.
Air temperature in/out – 30 / 18 °C.



Unit size	Supply air volume, m^3/h	Cooler's type	Capacity, kW	Air pressure drop*, Pa	Fluid pressure loss, kPa	B×H×L, mm	B1×H1, mm	Tubes connections, " / mm	Weight, kg
R 400 H P 400	400	DCF-0,4-2	2,6	48	6,3	605×550×390	300×400	½ / 22	37
		DCW-0,4-3	2,7	34	15,8	505×550×390	300×400	½	33
R 500	500	DCF-0,5-3	3,2	43	5,5	600×550×390	400×300	½ / 22	38
		DCW-0,5-3	3,4	30	29,5	600×550×390	400×300	½	35
S 650	650	DCF-0,7-4	5,3	53	3,9	705×610×390	500×400	½ / 22	46
		DCW-0,7-5	4,4	27	9,9	705×610×390	500×400	½	42
R 700 P 700 CF 700 S 700	700	DCF-0,7-4	5,3	53	3,9	705×610×390	500×400	½ / 22	46
		DCW-0,7-5	4,7	29	11,2	705×610×390	500×400	½	42
S 800	800	DCF-0,9-5	5,3	59	3,9	705×610×390	500×400	½ / 22	46
		DCW-0,9-6	5,4	44	3,1	705×610×390	500×400	¾	45
R 900 P 900 CF 900	900	DCF-0,9-5	5,3	64	3,9	705×610×390	500×400	½ / 22	46
		DCW-0,9-6	6,0	36	3,7	705×610×390	500×400	¾	45
S 1000	1000	DCF-0,9-5	7,3	69	6,4	705×610×390	500×400	½ / 22	46
		DCW-0,9-6	6,8	55	4,6	705×610×390	500×400	¾	45

* with drop eliminator.

Silencers

To ensure the normal noise level in the system and premises, silencers are used. There are circular and rectangular silencers of standard dimensions. Appropriate silencer can be selected using the online selection program, which can be found on **www.komfovent.com**.

Unit size		Silencer type
R 200 V	A/D	AGS-125-50-600-M
	B/C	AGS-125-50-900-M
R 250 F R 400 H / V R 450 V RHP 400 V	A/D	AGS-160-50-600-M
	B/C	AGS-160-50-900-M
R 400 F R 500 H / U R 600 H RHP 600 U	A/D	AGS-200-50-600-M
	B/C	AGS-200-50-900-M
R 500 V R 700 H / V / F RHP 800 U	A/D	AGS-250-50-600-M
	B/C	AGS-250-50-900-M
R 900 H / V / U	A/D	AGS-315-100-900-M
	B/C	AGS-315-100-1200-M

Unit size		Silencer type
PP 300 V PP 450 V CF 250 V / F	A/D	AGS-125-50-600-M
	B/C	AGS-125-50-900-M
P 400 V CF 400 V	A/D	AGS-160-50-600-M
	B/C	AGS-160-50-900-M
P 400 H P 700 V P 900 V CF 500 F CF 700 V	A/D	AGS-200-50-600-M
	B/C	AGS-200-50-900-M
P 700 H P 900 H CF 700 H	A/D	AGS-250-50-600-M
	B/C	AGS-250-50-900-M
CF 900 H / V / U / F	A/D	AGS-315-100-900-M
	B/C	AGS-315-100-1200-M

Unit size		Silencer type
S 650 F	A	AGS-160-50-600-M
	B	AGS-160-50-900-M
S 700 F S 800 F	A	AGS-200-50-600-M
	B	AGS-200-50-900-M
S 1000 F	A	AGS-250-50-600-M
	B	AGS-250-50-900-M

AGS-d-h-L
d – connecting diameter
h – insulation's thickness
L – silencer's length

A outdoor intake
B supply air
C extract indoor
D exhaust air

Electric ducted air heater (preheater)

The electric round duct heaters are intended to be used for heating of clean air in the ventilation systems. Also heaters can be used for heating or preheating function with air handling units. The heaters can be supplied with or without installed electronic controller, with pressure and flow monitoring system. The heater case is made of aluzinc coated metal sheet, with sealing rubber for a tight connection with ventilation ducts system. The stainless steel heating elements are used in the heaters. All heaters are equipped with 2 overheat thermostats. Automatic reset thermostat 60°C is for controlling output air temperature, manual reset thermostat 100°C is for cutoff function in case of overheat. To reset manual reset, a thermostat push button is installed on a heater's cover. Minimum air speed for heaters must be not less than 1,5 m/s. Standard operating range is from -30°C up to 0°C.

Type with integrated controller and flow monitoring	Heating capacity, kW	Voltage, V
EHC-125-1,0-1f SI/FC	1,0	1 ~ 230
EHC-160-1,0-1f SI/FC	1,0	1 ~ 230
EHC-160-1,5-1f SI/FC	1,5	1 ~ 230
EHC-160-2,0-1f SI/FC	2,0	1 ~ 230
EHC-200-1,0-1f SI/FC	1,0	1 ~ 230
EHC-200-1,5-1f SI/FC	1,5	1 ~ 230
EHC-200-2,0-1f SI/FC	2,0	1 ~ 230
EHC-250-1,0-1f SI/FC	1,0	1 ~ 230
EHC-250-1,5-1f SI/FC	1,5	1 ~ 230
EHC-250-2,0-1f SI/FC	2,0	1 ~ 230
EHC-250-3,0-1f SI/FC	3,0	1 ~ 230
EHC-315-2,0-1f SI/FC	2,0	1 ~ 230
EHC-315-3,0-1f SI/FC	3,0	1 ~ 230

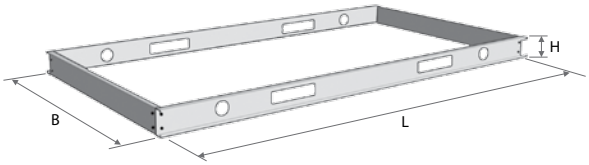
Accessories for unit outside installation

DOMEKT air handling units can be installed outside due to thick casing insulation and easy mounting. Protective optional accessories should be used if unit is for outside installation: roof, base frame, legs, grills, supply and exhaust hoods.

Unit size	Dimensions of the roof B×L, mm	Type of hood for supply air	Type of hood for exhaust air
R 500 H	910×1210	G-350×350	AHIA-200
R 500 UH	910×1400	G-350×350	AHIA-200
R 700 H	910×1210	G-350×350	AHIA-250
R 900 H / UH	1180×1555	G-600×430	AHIA-315
P 400 H	505×1300	G-270×270	AHIA-200
P 700 H	605×1470	G-350×350	AHIA-250
P 900 H	605×1470	G-350×350	AHIA-250
CF 700 H	590×1700	G-350×350	AHIA-250
CF 900 H / UH	1193×2020	G-600×430	AHIA-315

Standard base frame for air handling units

Unit size	Frame type	Dimensions B×H×L, mm
R 400 H	SSK_00_640_460_100_N	460×100×640
R 500 H R 700 H	SSK_00_930_585_100_N	585×100×930
R 500 V R 700 V	SSK_00_1060_585_100_N	585×100×1060
R 500 U	SSK_00_1115_585_100_N	585×100×1115
R 900 H / V / U	SSK_00_1355_850_100_N	850×100×1355
P 400 H	SSK_00_1000_340_100_N	340×100×1000
P 700 H R 900 H	SSK_00_1170_440_100_N	440×100×1170
CF 700 H	SSK_00_1500_390_100_N	390×100×1500
CF 900 H / U	SSK_00_1810_850_100_N	850×100×1810



Note: Standard frame is 100 mm height, without feet, painted RAL 7035.

KOMFOVENT kitchen hood

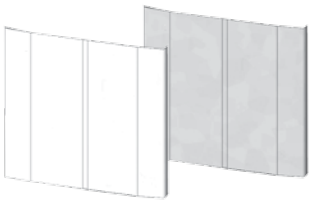
(only for unit Domekt R 200)

- White color painted
- The height is only 2,6 cm

- White color painted
- Stainless steel

Decorative panel

(only for unit Domekt R 200)



- White color painted
- Stainless steel

Air distribution box OSD

(only for unit Domekt R 200 for horizontal connection of ducts)

Type:
OSD-200 VE (100 mm)
OSD2-200 VE (125 mm)

Outdoor grill LD

For supply and exhaust air flows' separation.

Type:
- LD-125
- LD-160
- LD-200

(black or white)

Remote unit intensity control (OVR)

"OVR" (Eng. "Override" – ignore) function is intended for the remote unit's control with an external accessory device. After this function is activated the current unit's mode becomes omissible and the unit starts working according to the newly set parameters. This function has the highest priority and may operate in every mode, even when the unit is switched off. This function is possible for all units with EC fans just by connecting one of the sensors listed below. For C3 need to be activated in the factory. C5 – included as a standard function.

Type	Parameters
Differential pressure switch DTV500	Pressure range 50 – 500Pa One change-over contact (NO+NC) 250V AC, 1A Protection class IP54
Motion detector PIR180	Detection angle 180º Max. distance 12 m Protection class IP44
Wall mounted temperature sensor RTT	Supply voltage: 24V AC/DC Temperature measuring range 0 – 50ºC One change-over contact (NO+NC) 250V AC, 2A Protection class IP30
Wall mounted humidity sensor RTH	Supply voltage: 24V AC/DC Relative humidity measuring range 0 – 100% One change-over contact (NO+NC) 250V AC, 2A Protection class IP30
Duct mounted humidity sensor DTH	Supply voltage: 24V AC/DC Relative humidity measuring range 0 – 100% One change-over contact (NO+NC) 250V AC, 2A Protection class IP54
Wall mounted CO_2 sensor RTC	Supply voltage: 24V AC/DC CO_2 measuring range 0 – 2000 ppm One change-over contact (NO+NC) 250V AC, 2A Protection class IP30
Duct mounted CO_2 sensor DTC	Supply voltage: 24V AC/DC CO_2 measuring range 0 – 2000 ppm One change-over contact (NO+NC) 250V AC, 2A Protection class IP54
Wall mounted air quality sensor RTQ	Supply voltage: 24V AC/DC Air quality measuring range 0 – 2000 ppm One change-over contact (NO+NC) 250V AC, 2A Protection class IP30
Duct mounted air quality sensor DTQ	Supply voltage: 24V AC/DC Air quality measuring range 0 – 2000 ppm One change-over contact (NO+NC) 250V AC, 2A Protection class IP54

Air quality control (AQ)

AQ ventilation intensity control option according to the external sensor signal. Provides ventilation intensity correction, according to the increased CO_2, humidity level, etc. A different AQ function may be set depending on the sensor type, therefore, the intensity of the unit will be regulated accordingly. User can activate this function anytime according to the demand and can also observe the premise's air quality on the panel.
This function is possible for all units with EC fans just by connecting one of the sensors listed below.

Type	Parameters
Wall mounted temperature sensor RST	Supply voltage: 24V AC/DC Temperature measuring range 0 – 50ºC Output signal 0...10V DC Protection class IP30
Wall mounted humidity sensor RSH	Supply voltage: 24V AC/DC Relative humidity measuring range 0 – 100% Output signal 0...10V DC Protection class IP30
Duct mounted humidity sensor DSH	Supply voltage: 24V AC/DC Relative humidity measuring range 0 – 100% Output signal 0...10V DC Protection class IP54
Wall mounted CO_2 sensor RSC	Supply voltage: 24V AC/DC CO_2 measuring range 0 – 2000 ppm Output signal 0...10V DC Protection class IP30
Duct mounted CO_2 sensor DSC	Supply voltage: 24V AC/DC CO_2 measuring range 0 – 2000 ppm Output signal 0...10V DC Protection class IP54
Wall mounted air quality sensor RSQ	Supply voltage: 24V AC/DC Air quality measuring range 0 – 2000 ppm Output signal 0...10V DC Protection class IP30
Duct mounted air quality sensor DSQ	Supply voltage: 24V AC/DC Air quality measuring range 0 – 2000 ppm Output signal 0...10V DC Protection class IP54

Unit PC control (PING2) for C3/C4 controller

An option to manage and control units by computer, when connected to the PC network or Internet.
Network module PING2 is intended for connection of KOMFOVENT air handling units to the computer network (Ethernet) or another network (RS-485).

Variable air volume control (VAV) (C3/C5)

Unit supplies and exhausts the air volume correspondingly to the ventilation requirements in different premise. Because of frequently changing ventilation demands such air volume's maintenance mode signally reduces unit's exploitation costs.
VAV function is possible for all units with EC fans.

Electric wiring of air handling units

When the air handling unit is installed, the user should just connect it to the mains power supply and install one temperature sensor in the supply air duct, and in case of need extend the connecting cable of the control panel. The units with a hot water air heater are provided with extra connecting cables for a heating damper drive, a pump, and an air damper drive. If the air handling unit voltage is ~230 V; 50 Hz it is necessary to install the socket with grounding of corresponding capacity. If the voltage is ~400 V; 50 Hz, the cable of electrical power supply is con-nected to the main switch, which is located on the unit's outside wall.
The air handling units power supply cable types are specified in the table.

Unit size	Power supply cable
R 200 R 250 R 400 R 450 R 500 R 600 R 700 R 900 W	3×1,5 mm²
R 900 E	5×1,5 mm²
RHP 400 RHP 600	3×1,5 mm²
RHP 800	5×1,5 mm²
PP 300 P 400 PP 450 P 700 P 900 W	3×1,5 mm²
P 900 E	5×1,5 mm²

Unit size	Power supply cable
CF 250 CF 400 CF 500 CF 700 CF 900 W	3×1,5 mm²
CF 900 E	5×1,5 mm²
S 650 E/3 S 800 E/3	3×2,5 mm²
S 650 E/6 S 700 E/6 S 800 E/6 S 1000 E/6	5×1,5 mm²
S 700 E/9 S 800 E/9 S 1000 E/9	5×2,5 mm²
S 1000 E/15	5×4 mm²
S 800 W S 1000 W	3×1,5 mm²

Control panel	Connection cabel for control panel (10 m)
C5.1, C4.1, C4, C3.1, C3	4×0,22 mm²

komfovent®

VERSO

Non residential ventilation units

Komfovent VERSO

VERSO series units are divided into two groups: VERSO 1000–7000 that is a standardized range of AHUs and VERSO 10–90 units that are designed for the special projects. Both groups of the units can be offered with a heat recovery, an integrated heat pump or just ordinary air supply units.

Capacity range
from 1 000 to 34 000 m^3/h

Features and benefits of VERSO units:

- All units are completely prewired and have an integrated automatic control.
- Innovative units with integrated reversible heating/cooling pump.
- Wide choice of control functions is already included as a standard feature.
- Extremely silent in operation.
- Low energy consumption.
- Energy efficiency tested and approved by EUROVENT.
- Fans are balanced statically and dynamically to avoid vibration and ensure silent operation.
- All casings are powder painted.
- Steady baseframe with on-site regulation possibilities.
- Easy and quick assembling on-site.
- Integrated web server for clever control.
- Control via Smartphone available.

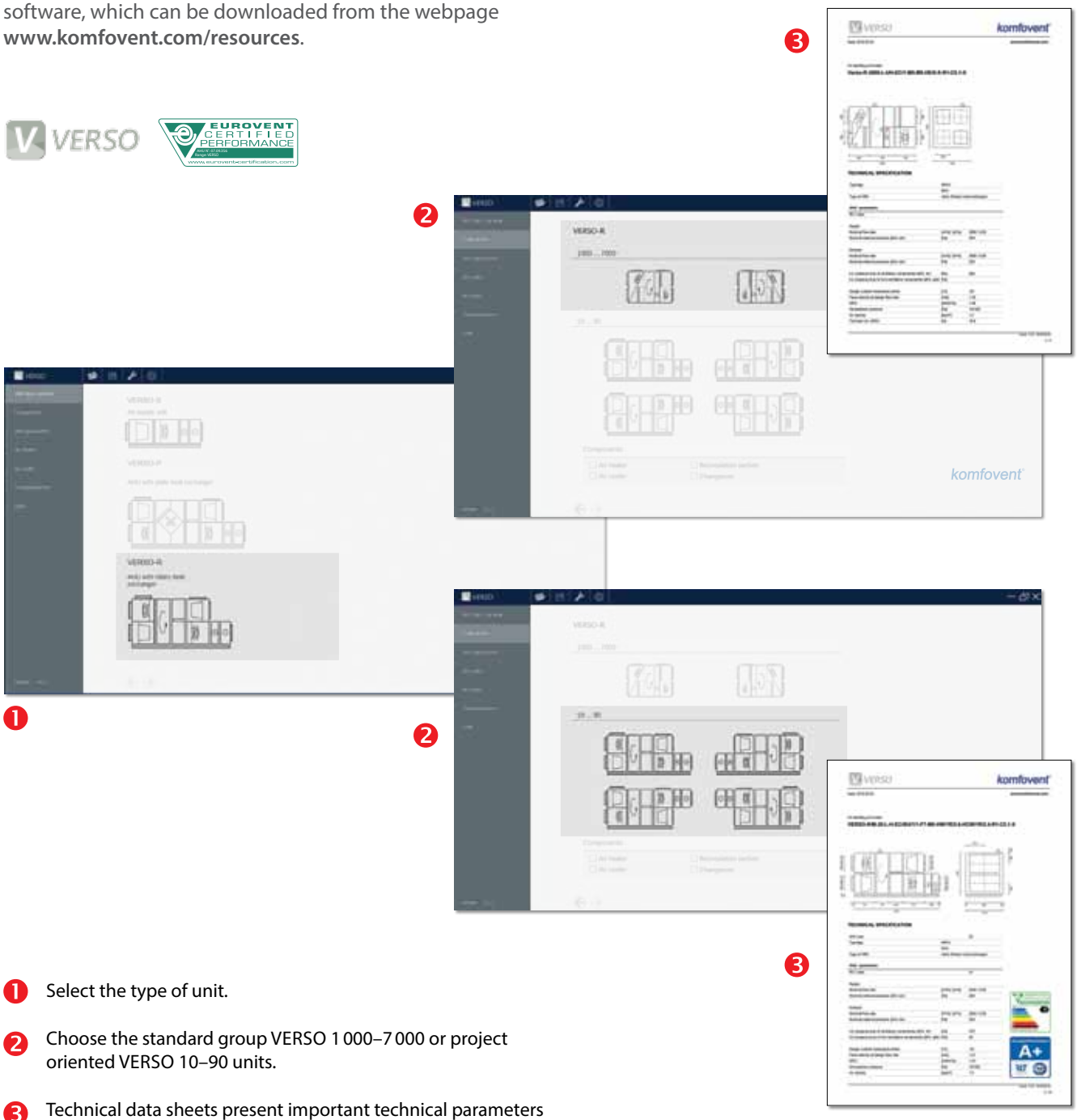
VERSO series ensures the best performance of the required operation parameters. Compact size of each section in VERSO 1000–7000 and VERSO 10–70 units allows bringing it through a standard 900 mm width door opening.

All standardized VERSO 1000–7000 units are based on the principle of Plug & Play: each unit has the integrated control system and is delivered with a complete automatic control installed and prewired inside the unit. Verso 1 000–7 000 units can be fast delivered as they are available on stock. The airflow ranges from 1 000 to 8 000 m^3/h.

VERSO 10–90 units have wide design possibilities, the customer can select the unit using the selection software. For customers' convenience air heaters, coolers and dampers are mounted outside the unit as a separate section that gives flexibility in mounting and saving the installation area. Indoor and outdoor mounting is possible. Units have a complete integrated automatic control, ensuring lower exploitation and installing costs on site. The units air flow performance ranges from 1 000 m^3/h to 34 000 m^3/h.

Convenient and accurate units' selection

All VERSO range units are selected by VERSO selection software, which can be downloaded from the webpage **www.komfovent.com/resources**.



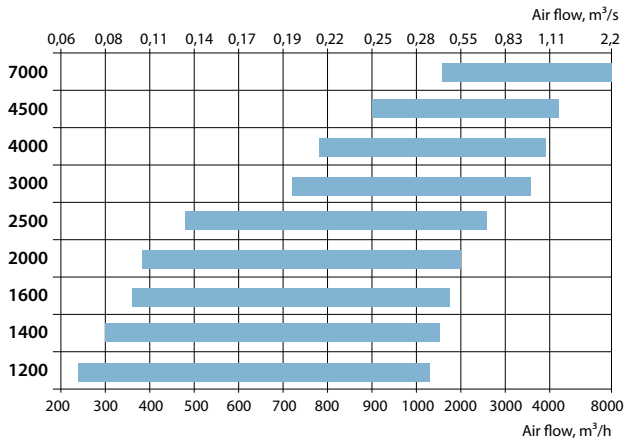
1. Select the type of unit.
2. Choose the standard group VERSO 1 000–7 000 or project oriented VERSO 10–90 units.
3. Technical data sheets present important technical parameters at a specified working point of the selected unit: effciency, SFP, acoustics and other projects' required data.

Verso R	Verso RHP	Verso P	Verso CF	Verso S
units with a rotary heat exchanger	units with a rotary heat exchanger and heat pump	units with a plate heat exchanger	units with a counterflow plate heat exchanger	supply air units

Verso R 1200–7000

Air handling units with a rotary heat exchanger.
Operating capacity ranges from 240 to 8 000 m³/h.

Standard sizes of Verso R units



Advantages of Verso R units

Heat energy saving
In the process of ventilation the heat of the exhaust air is recovered to the supplied air.

Efficient heat
Under the normal operational conditions, the rotary heat exchanger does not freeze: exchanger at outdoor temperatures below -20 °C, no additional warming up required of the outdoor air which results in efficient heat energy saving even at hard frosts. The application of the rotary heat exchanger allows reducing the energy consumption for warming up the supply air by approximately 4 times.

Air humidity balance
Under the normal operating conditions the condensate does not form in the process of heat exchange in the rotary heat exchanger, because most of the humidity is returned to the premises. The excess moisture is removed outside. The air in the premises is less drained and the air humidity balance is maintained. As the condensate does not form, the drainage is not necessary – this simplifies the mounting of the unit.

Low noise level
Verso R air handling units are equipped with silently operating fans and sound insulation, which ensures low noise level.

Rotary heat exchanger

Advantages of rotary heat exchanger
- High efficiency coefficient.
- Not freezing.
- 4 times lower energy consumption for warming up the air.
- Humidity is transferred to supply air – a lower power humidifier may be needed.
- No drainage is necessary – easy unit installation.
- Very compact in size.
- Cooled air may be recovered that results in the reduced energy consumption for air cooling.

The efficiency on the demand: two levels of rotor efficiency are available. Optimum efficiency is achieved with L type rotor, higher values may be reached with optional XL type rotor.
Air handling units are equipped with three types of rotary heat exchangers:
- **Heat exchanger is made from aluminum foil (AL).** It recovers moisture.
- **Heat exchanger is made from hygroscopic and aluminium foil (AZM).** It recovers moisture more efficiently than AL type exchanger.
- **Heat exchanger is made from hygroscopic aluminum foil (AZ).** Heat exchangers of this type regenerate moisture the most efficiently.

Energy efficient EC motor
All rotary heat exchangers are equipped with EC motors, which ensure the smooth rotor operation and control.

Preheater
As an additional protection for very low outdoor temperatures such as -30°C and lower, it is recommended to use duct mounted preheater.

Verso R range

Unit size	Heat exchanger					Supply/ exhaust air filter class		Heater			Cooler		Inspection side		Control system C5 panel
	Type			Wave height											
	AL	AZ	AZM	L	XL	M5	F7	HE	HW	HCW	CW	CDX	R1	L1	C5.1
Verso R 1200 U	●	○	○	●	○	●	○	○	○	○	△	△	○	○	●
Verso R 1200 H/V	●	○	○	●	○	●	○	○	○		△	△	○	○	●
Verso R 1200 F	●	○	○	●	○	●	○	○	△	△	△	△	○	○	●
Verso R 1400 U	●	○	○	●	○	●	○	○	○	○	△	△	○	○	●
Verso R 1400 H/V	●	○	○	●	○	●	○	○	○		△	△	○	○	●
Verso R 1600 U	●	○	○	●	○	●	○	○	○	○	△	△	○	○	●
Verso R 1600 H/V	●	○	○	●	○	●	○	○	○		△	△	○	○	●
Verso R 2000 U	●	○	○	●	○	●	○	○	○	○	△	△	○	○	●
Verso R 2000 H/V	●	○	○	●	○	●	○	○	○		△	△	○	○	●
Verso R 2000 F	●	○	○	○	●	●	○	○	△	△	△	△	○	○	●
Verso R 2500 U	●	○	○	●	○	●	○	○	○	○	△	△	○	○	●
Verso R 2500 H/V	●	○	○	●	○	●	○	○	○		△	△	○	○	●
Verso R 3000 U	●	○	○	●	○	●	○	○	○	○	△	△	○	○	●
Verso R 3000 H/V	●	○	○	●	○	●	○	○	○		△	△	○	○	●
Verso R 4000 U	●	○	○	●	○	●	○	○	○	○	△	△	○	○	●
Verso R 4000 H/V	●	○	○	●	○	●	○	○	○		△	△	○	○	●
Verso R 4500 U	●	○	○	●	○	●	○	○	○	○	△	△	○	○	●
Verso R 4500 H/V	●	○	○	●	○	●	○	○	○		△	△	○	○	●
Verso R 7000 H	●	○	○	●	○	●	○		●		△	△	○	○	●

● standard equipment
○ possible choice
△ ordered separately

Duct connection

H – horizontal.
V – vertical.
U – universal, 14 installation options.
F – false ceiling.

Heat exchanger

AL – aluminum, condensing rotor. As a standard, units are equipped with L wave height of the rotors. In exceptional cases, when increased thermal efficiency is required, the units can be equipped with XL wave.

AZ – entalpic, sorption rotary heat exchanger coated with special 4Å coating. Wave height of this heat exchanger is L.

AZM – hygroscopic rotor is "hybrid" that combines the good condensing and sorptive heat exchanger properties, e.g. high temperature efficiency and good performance of latent (the hidden) energy transfer, thus effectively operates both in winter and summer. Wave height of this heat exchanger is L.

Heater

HE – electric heater.

HW – water duct heater is installed on the duct and must be ordered separately. Heaters are mounted on the outside of the unit in any user-convenient place. There is heater control possibility in automatic control system.

HCW – heater-cooler one for both – heating and cooling. Ideal for buildings using geothermal energy.

Cooler

CW – designed for air cooling using cold water (water-glycol mixture), provides a higher comfort level in rooms.

CDX – designed for air cooling using direct expansion cooling unit, provides a higher comfort level in rooms.

Inspection side

See p. 136.

Control system

C5 Control features:

- 5 different operation modes: *Comfort1*, *Comfort2*, *Economy1*, *Economy2* and *Special*.
- Temperature control modes: Supply air / Extract air / Room.
- Energy parameters indication: thermal efficiency of the heat exchanger, heat exchanger's recovered energy, energy saving indicator.
- Air quality, minimum temperature control.
- Flow control modes: CAV, VAV and DCV.
- Weekly operating schedule.
- Air flow indication (m^3/h, m^3/s, l/s).
- Rotary or plate heat exchanger failure protection.
- Rotary heat exchanger cleaning and warm-up function.
- Intelligent self-diagnostic.
- Summer night cooling.
- Air quality function.
- Supply air temperature control.
- Min. supply air temperature maintenance.
- Combined water heater & cooler control.
- Inverter-type DX outdoor unit control.
- Cooling recovery function.
- Outdoor compensated ventilation.
- Humidity control: air humidification and dehumidification.*
- Circulation pumps control by demand.
- Warm-up function of circulation pumps and mixing valves.
- Air filter clogging indication.
- Operation hours and energy counters.
- Remote control via web interface.
- Built-in data logger for all air handling unit parameters.
- Application software for smartphones based on "Android" and "iOS".

* additionally ordered function.

Verso R 1200 U/H/V

(Kompakt REGO 1200U)

Verso R 1200 UH data

Nominal air flow, m³/h	1300
Panel thickness, mm	50
Unit weight, kg	195
Supply voltage HE, V	3~400
Supply voltage HW, V	1~230
Maximal operating current HE, A	13,2
Maximal operating current HW, A	7,2
Filters dimensions B×H×L, mm	800×400×46-M5
Electric power input of the fan drive at maximum flow rate, W	470
Electric air heater capacity, kW / Δt, °C	4,5 / 9,6
Control panel	KOMFOVENT C5.1

The photo is intended for informational purposes only, exact details may vary.

Acoustic data

A-weighted sound power level L_{WA}, dB(A) at reference flow rate

Supply inlet	57
Supply outlet	71
Exhaust inlet	55
Exhaust outlet	68
Casing	50

A-weighted sound pressure level L_{PA}, dB(A)
10 m² normally isolated room, distance from casing – 3 m.

Surroundings	40

Temperature efficiency

	Winter					Summer
Outside temperature, °C	-23	-15	-10	-5	0	30
After heat exchanger*, °C	14,5	15,9	16,7	17,5	18,4	23,3

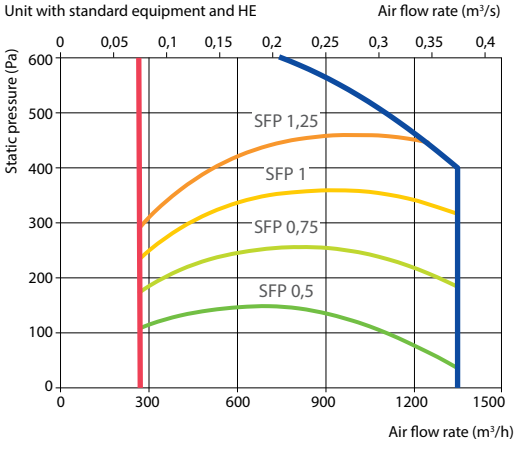
* indoor +22°C, 10% RH

Changeover water heating/cooling exchanger (HCW)

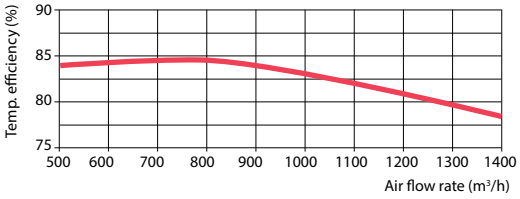
	Winter				Summer
Water temperature in/out, °C	90/70	80/60	70/50	60/40	7/12
Capacity, kW	3,3	3,3	3,3	3,3	4,7
Flow rate, dm³/h	144	144	143	142	803
Pressure drop, kPa	1	1	1	1	10,5
Temperature in/out, °C	14,5/22				23,3/18
Maximal capacity, kW	29,5	23,1	16,9	10,7	8,5
Connection, ”	½				

Performance

Unit with standard equipment and HE



Temperature efficiency



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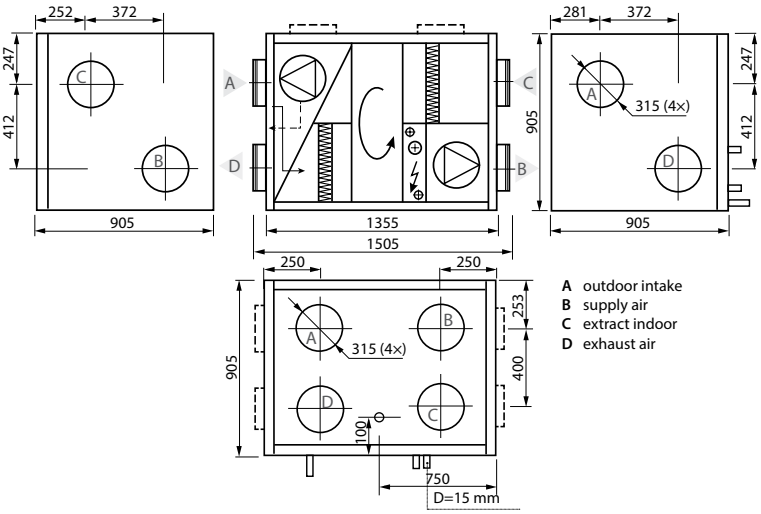

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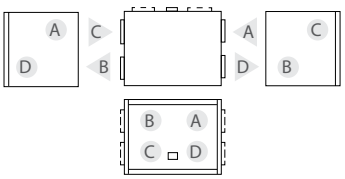


Verso R 1200 F

(Kompakt REGO 1200P)

Nominal air flow, m^3/h	1200
Panel thickness, mm	50
Unit weight, kg	120
Supply voltage HE, V	3~400
Supply voltage HW, V	1~230
Maximal operating current HE, A	11
Maximal operating current HW, A	7,2
Filters dimensions B×H×L, mm	410×420×46-M5
Electric power input of the fan drive at maximum flow rate, W	470
Electric air heater capacity, kW / Δt, °C	3 / 6,9
Control panel	KOMFOVENT C5.1

Verso R 1200 F – with removable doors.
Verso R 1200 F S – with sliding doors.

Acoustic data

A-weighted sound power level L_{WA}, dB(A) at reference flow rate

Supply inlet	64
Supply outlet	73
Exhaust inlet	65
Exhaust outlet	73
Casing	54

A-weighted sound pressure level L_{PA}, dB(A)
10 m^2 normally isolated room, distance from casing – 3 m.

Surroundings	44

The photo is intended for informational purposes only, exact details may vary.

Temperature efficiency

	Winter					Summer
Outside temperature, °C	-23	-15	-10	-5	0	30
After heat exchanger*, °C	11,7	13,6	14,7	15,8	17	23,8

* indoor +22°C, 10% RH

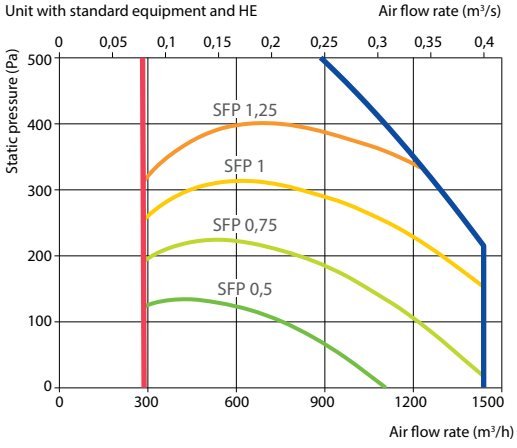
Hot water duct air heater (DH)**

	Winter			
Water temperature in/out, °C	90/70	80/60	70/50	60/40
Capacity, kW	4,2	4,2	4,2	4,2
Flow rate, dm^3/h	183	182	181	181
Pressure drop, kPa	3,5	3,5	3,6	3,7
Temperature in/out, °C	11,7/22			
Maximal capacity, kW	12,8	10,5	8,3	6,0
Connection, ”	½			
Dimensions, mm	510×470×270			
Hot water duct heater type	DH-315			

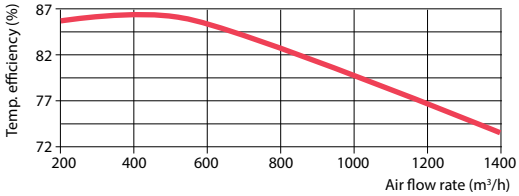
** option

Performance

Unit with standard equipment and HE



Temperature efficiency



Indoor and outdoor ΔT=20°C re: *Ecodesign 1253/2014.*

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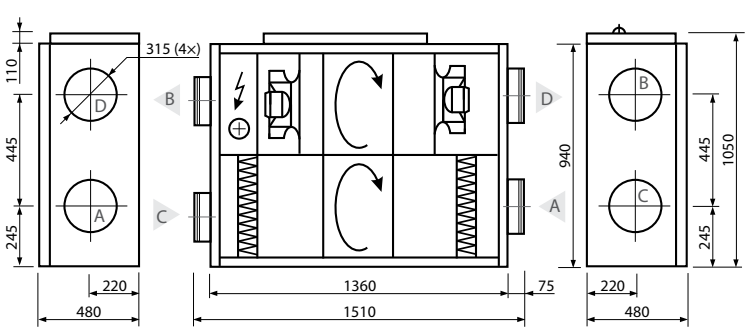

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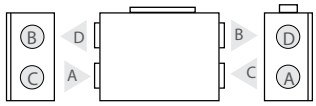


A outdoor intake
B supply air
C extract indoor
D exhaust air

Verso R 1400 U/H/V

(Kompakt REGO 1400U)

Verso R 1400 UH data

Nominal air flow, m³/h	1500
Panel thickness, mm	50
Unit weight, kg	195
Supply voltage HE, V	3~400
Supply voltage HW, V	1~230
Maximal operating current HE, A	13,2
Maximal operating current HW, A	7,2
Filters dimensions B×H×L, mm	800×400×46-M5
Electric power input of the fan drive at maximum flow rate, W	470
Electric air heater capacity, kW / Δt, °C	4,5 / 8,3
Control panel	KOMFOVENT C5.1

The photo is intended for informational purposes only, exact details may vary.

Acoustic data

A-weighted sound power level L_{WA}, dB(A) at reference flow rate

Supply inlet	59
Supply outlet	74
Exhaust inlet	58
Exhaust outlet	71
Casing	54

A-weighted sound pressure level L_{PA}, dB(A)
10 m² normally isolated room, distance from casing – 3 m.

Surroundings	44

Temperature efficiency

	Winter					Summer
Outside temperature, °C	-23	-15	-10	-5	0	30
After heat exchanger*, °C	14	15,4	16,3	17,2	18,1	23,4

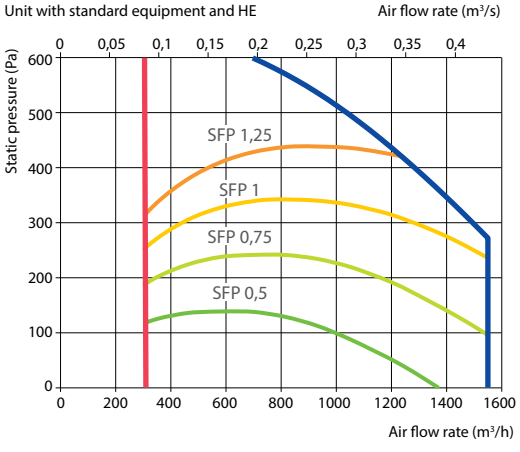
* indoor +22°C, 10% RH

Changeover water heating/cooling exchanger (HCW)

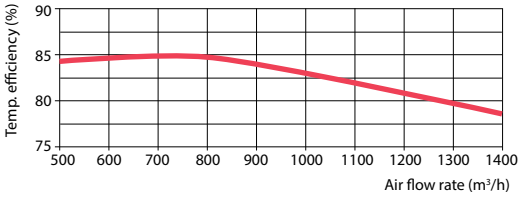
	Winter				Summer
Water temperature in/out, °C	90/70	80/60	70/50	60/40	7/12
Capacity, kW	4	4	4	4	5,5
Flow rate, dm³/h	178	177	176	175	939
Pressure drop, kPa	1	1	1	1	13,8
Temperature in/out, °C	14/22				23,4/18
Maximal capacity, kW	33,8	26,8	20	13,5	9,6
Connection, ”	½				

Performance

Unit with standard equipment and HE



Temperature efficiency



Indoor and outdoor ΔT=20°C re: *Ecodesign 1253/2014.*

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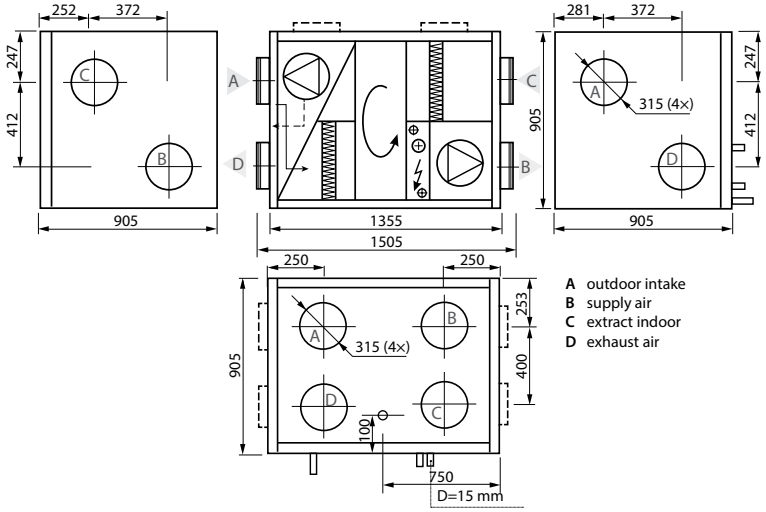

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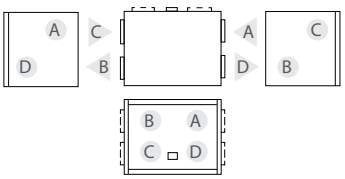


komfovent®

Verso R 1600 U/H/V

(Kompakt REGO 1600U)

Verso R 1600 UH data

Nominal air flow, m³/h	1800
Panel thickness, mm	50
Unit weight, kg	270
Supply voltage HE, V	3~400
Supply voltage HW, V	1~230
Maximal operating current HE, A	13,2
Maximal operating current HW, A	7,2
Filters dimensions B×H×L, mm	800×450×46-M
Electric power input of the fan drive at maximum flow rate, W	470
Electric air heater capacity, kW / Δt, °C	4,5 / 6,9
Control panel	KOMFOVENT C5.1

The photo is intended for informational purposes only, exact details may vary.

Acoustic data

A-weighted sound power level L_{WA}, dB(A) at reference flow rate

Supply inlet	61
Supply outlet	76
Exhaust inlet	59
Exhaust outlet	73
Casing	55

A-weighted sound pressure level L_{PA}, dB(A)
10 m² normally isolated room, distance from casing – 3 m.

Surroundings	45

Temperature efficiency

	Winter					Summer
Outside temperature, °C	-23	-15	-10	-5	0	30
After heat exchanger*, °C	13,1	14,7	15,7	16,7	17,6	23,6

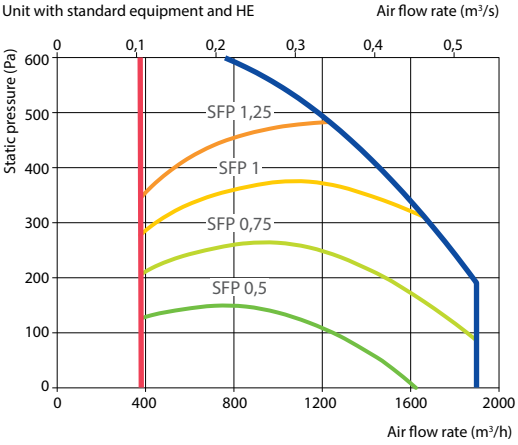
* indoor +22°C, 10% RH

Changeover water heating/cooling exchanger (HCW)

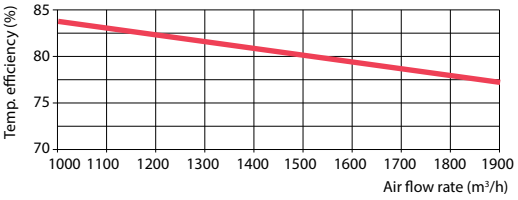
	Winter				Summer
Water temperature in/out, °C	90/70	80/60	70/50	60/40	7/12
Capacity, kW	5,4	5,4	5,4	5,4	4,2
Flow rate, dm³/h	237	236	235	234	716
Pressure drop, kPa	1	1	1	1	1
Temperature in/out, °C	13,1/22				23,6/18
Maximal capacity, kW	18,6	15,3	11,9	8,6	4,2
Connection, ”	¾				

Performance

Unit with standard equipment and HE



Temperature efficiency



Indoor and outdoor ΔT=20°C re: *Ecodesign 1253/2014.*

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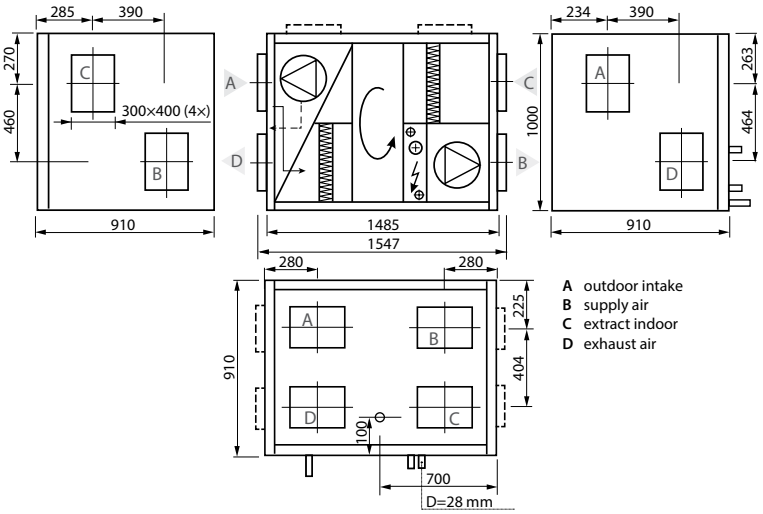

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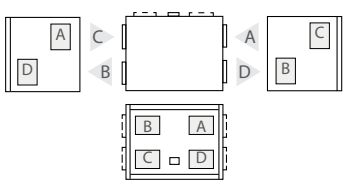


Verso R 2000 U/H/V

(Kompakt REGO 2000U)

Verso R 2000 UH data

Nominal air flow, m³/h	2000
Panel thickness, mm	50
Unit weight, kg	285
Supply voltage HE, V	3~400
Supply voltage HW, V	1~230
Maximal operating current HE, A	15,3
Maximal operating current HW, A	5
Filters dimensions B×H×L, mm	800×450×46-M5
Electric power input of the fan drive at maximum flow rate, W	500
Electric air heater capacity, kW / Δt, °C	7,5/10,4
Control panel	KOMFOVENT C5.1

The photo is intended for informational purposes only, exact details may vary.

Acoustic data

A-weighted sound power level L_{WA}, dB(A) at reference flow rate

Supply inlet	63
Supply outlet	78
Exhaust inlet	61
Exhaust outlet	75
Casing	57

A-weighted sound pressure level L_{PA}, dB(A)
10 m² normally isolated room, distance from casing – 3 m.

Surroundings	46

Temperature efficiency

	Winter					Summer
Outside temperature, °C	-23	-15	-10	-5	0	30
After heat exchanger*, °C	12,5	14,2	15,2	16,3	17,4	23,7

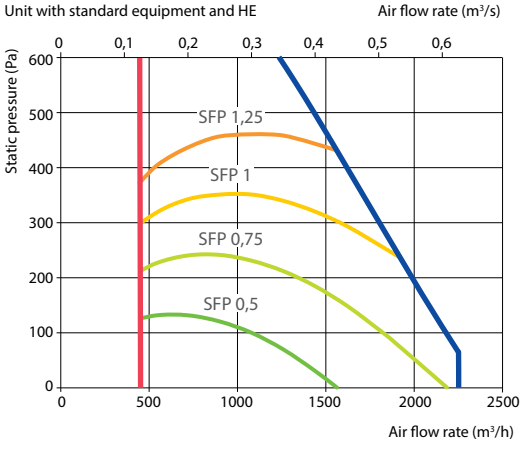
* indoor +22°C, 10% RH

Changeover water heating/cooling exchanger (HCW)

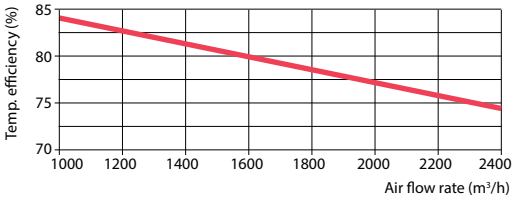
	Winter				Summer
Water temperature in/out, °C	90/70	80/60	70/50	60/40	7/12
Capacity, kW	6,4	6,4	6,4	6,4	8,2
Flow rate, dm³/h	281	280	279	278	1408
Pressure drop, kPa	1	1	1	1	1,7
Temperature in/out, °C	12,5/22				23,7/18
Maximal capacity, kW	24,8	16,2	12,7	9,2	8,2
Connection, ”	¾				

Performance

Unit with standard equipment and HE



Temperature efficiency



Indoor and outdoor ΔT=20°C re: *Ecodesign 1253/2014.*

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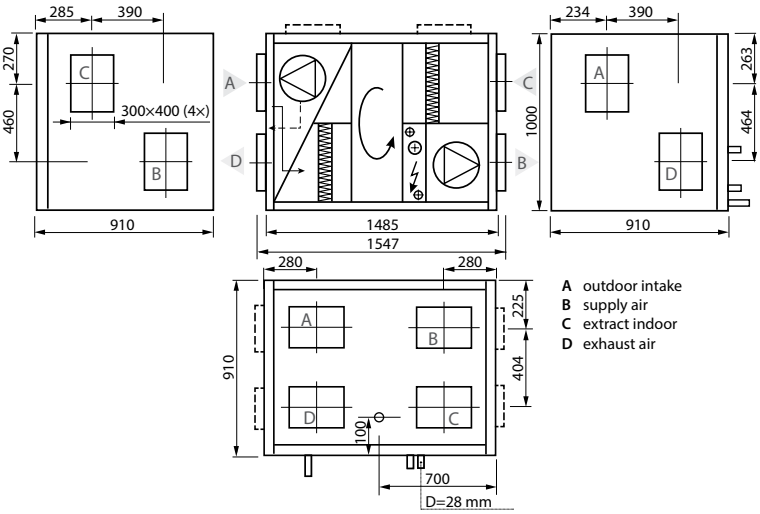

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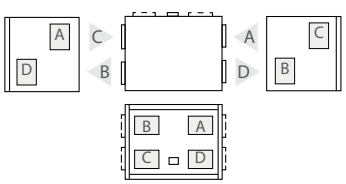


Verso R 2000 F

(Kompakt REGO 2000P)

Nominal air flow, m^3/h	2000
Panel thickness, mm	50
Unit weight, kg	280
Supply voltage HE, V	3~400
Supply voltage HW, V	1~230
Maximal operating current HE, A	17,1
Maximal operating current HW, A	6,8
Filters dimensions B×H×L, mm	560×420×92-M5
Electric power input of the fan drive at maximum flow rate, W	660
Electric air heater capacity, kW / Δt, °C	7,5/10,4
Control panel	KOMFOVENT C5.1

The photo is intended for informational purposes only, exact details may vary.

Acoustic data

A-weighted sound power level L_{WA}, dB(A) at reference flow rate

Supply inlet	69
Supply outlet	79
Exhaust inlet	70
Exhaust outlet	79
Casing	59

A-weighted sound pressure level L_{PA}, dB(A)
10 m^2 normally isolated room, distance from casing – 3 m.

Surroundings	49

Temperature efficiency

	Winter					Summer
Outside temperature, °C	-23	-15	-10	-5	0	30
After heat exchanger*, °C	14,2	15,6	16,5	17,3	18,2	23,4

* indoor +22°C, 10% RH

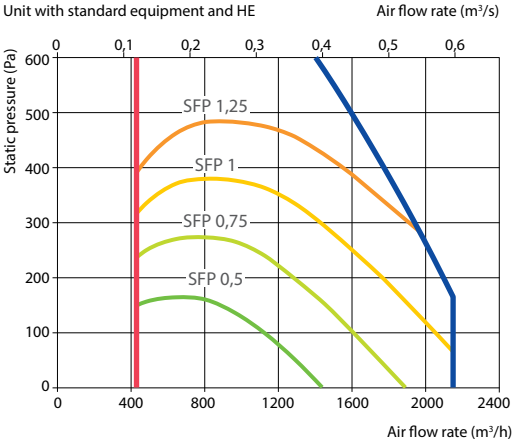
Hot water duct air heater (DH)**

	Winter			
Water temperature in/out, °C	90/70	80/60	70/50	60/40
Capacity, kW	5,2	5,2	5,2	5,2
Flow rate, dm^3/h	231	230	229	228
Pressure drop, kPa	6	6,1	6,3	6,4
Temperature in/out, °C	14,2/22			
Maximal capacity, kW	18,6	15,2	11,7	8,4
Connection, ”	½			
Dimensions, mm	600×510×310			
Hot water duct heater type	DH355			

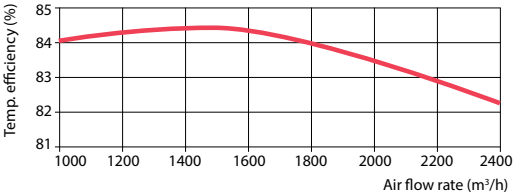
** option

Performance

Unit with standard equipment and HE



Temperature efficiency



Indoor and outdoor ΔT=20°C re: *Ecodesign 1253/2014.*

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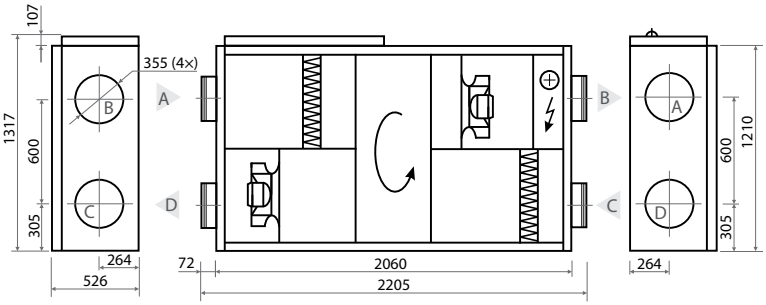

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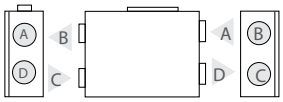


A outdoor intake
B supply air
C extract indoor
D exhaust air

Verso R 2500 U/H/V

(Kompakt REGO 2500U)

Verso R 2500 UH data

Nominal air flow, m³/h	2500
Panel thickness, mm	50
Unit weight, kg	285
Supply voltage HE, V	3~400
Supply voltage HW, V	1~230
Maximal operating current HE, A	17,1
Maximal operating current HW, A	6,8
Filters dimensions B×H×L, mm	800×450×46-M5
Electric power input of the fan drive at maximum flow rate, W	660
Electric air heater capacity, kW / Δt, °C	7,5/8,3
Control panel	KOMFOVENT C5.1

The photo is intended for informational purposes only, exact details may vary.

Acoustic data

A-weighted sound power level L_{WA}, dB(A) at reference flow rate

Supply inlet	67
Supply outlet	82
Exhaust inlet	65
Exhaust outlet	79
Casing	60

A-weighted sound pressure level L_{PA}, dB(A)
10 m² normally isolated room, distance from casing – 3 m.

Surroundings	49

Temperature efficiency

	Winter					Summer
Outside temperature, °C	-23	-15	-10	-5	0	30
After heat exchanger*, °C	11,1	13	14,2	15,4	16,7	23,9

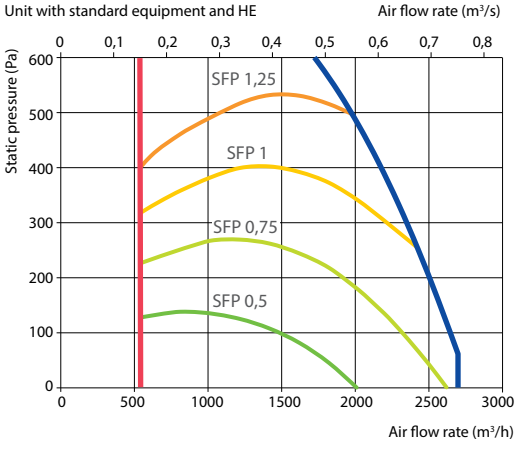
* indoor +22°C, 10% RH

Changeover water heating/cooling exchanger (HCW)

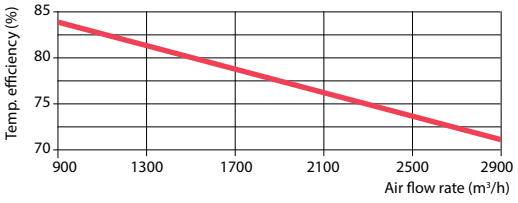
	Winter				Summer
Water temperature in/out, °C	90/70	80/60	70/50	60/40	7/12
Capacity, kW	9,1	9,1	9,1	9,1	10,2
Flow rate, dm³/h	404	402	400	398	1749
Pressure drop, kPa	1	1	1	1	2,5
Temperature in/out, °C	11,1/22				23,9/18
Maximal capacity, kW	38,4	29,7	20,8	12,1	10,2
Connection, ″	¾				

Performance

Unit with standard equipment and HE



Temperature efficiency



Indoor and outdoor ΔT=20°C re: *Ecodesign 1253/2014.*

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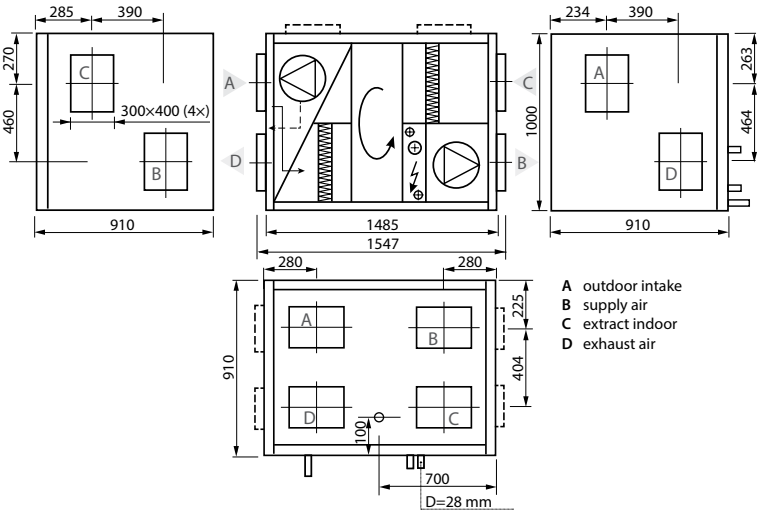

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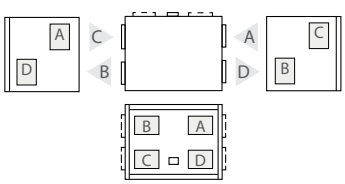


Verso R 3000 U/H/V

(Kompakt REGO 3000U)

Verso R 3000 UH data

Nominal air flow, m^3/h	3600
Panel thickness, mm	50
Unit weight, kg	440 (135/160/145)
Supply voltage HE, V	3~400
Supply voltage HW, V	3~400
Maximal operating current HE, A	16,7
Maximal operating current HW, A	4,2
Filters dimensions B×H×L, mm	525×510×46-M5 (×2)
Electric power input of the fan drive at maximum flow rate, W	1000
Electric air heater capacity, kW / Δt, °C	9/6,9
Control panel	KOMFOVENT C5.1

The photo is intended for informational purposes only, exact details may vary.

Acoustic data

A-weighted sound power level L_{WA}, dB(A) at reference flow rate

Supply inlet	66
Supply outlet	83
Exhaust inlet	63
Exhaust outlet	80
Casing	57

A-weighted sound pressure level L_{PA}, dB(A)
10 m^2 normally isolated room, distance from casing – 3 m.

Surroundings	46

Temperature efficiency

	Winter					Summer
Outside temperature, °C	-23	-15	-10	-5	0	30
After heat exchanger*, °C	12,4	14,1	15,2	16,3	17,3	23,7

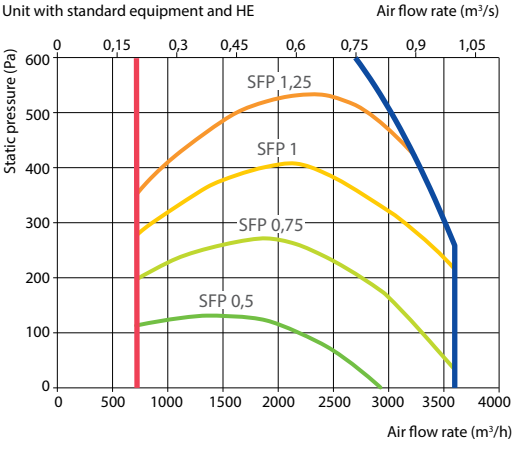
* indoor +22°C, 10% RH

Changeover water heating/cooling exchanger (HCW)

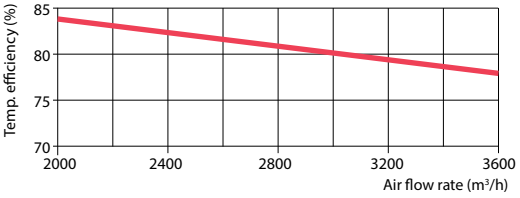
	Winter				Summer
Water temperature in/out, °C	90/70	80/60	70/50	60/40	7/12
Capacity, kW	11,6	11,6	11,6	11,6	13,1
Flow rate, dm^3/h	512	509	507	505	2252
Pressure drop, kPa	1	1	1	1	3,8
Temperature in/out, °C	12,4/22				23,7/18
Maximal capacity, kW	58,1	45,8	33,7	21,5	16,1
Connection, ”	1				

Performance

Unit with standard equipment and HE



Temperature efficiency



Indoor and outdoor ΔT=20°C re: *Ecodesign 1253/2014.*

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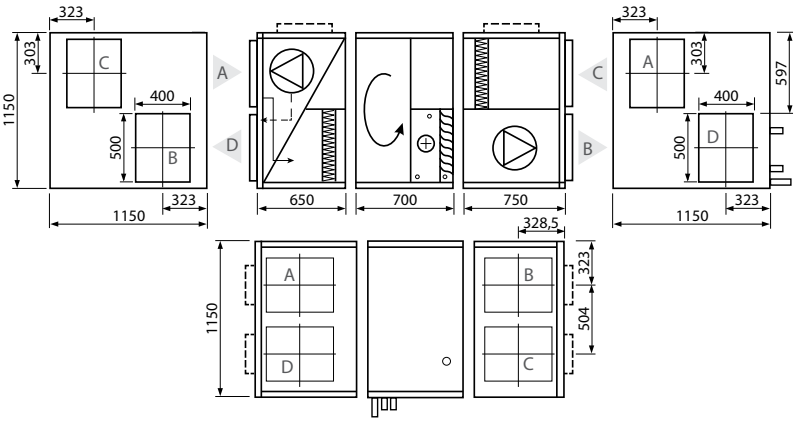

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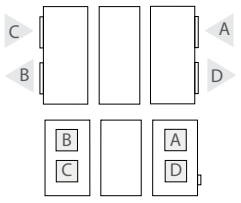


A outdoor intake
B supply air
C extract indoor
D exhaust air

Verso R 4000 U/H/V

(Kompakt REGO 4000U)

Verso R 4000 UH data

Nominal air flow, m^3/h	3900
Panel thickness, mm	50
Unit weight, kg	450 (140/160/150)
Supply voltage HE, V	3~400
Supply voltage HW, V	3~400
Maximal operating current HE, A	25,6
Maximal operating current HW, A	4,4
Filters dimensions B×H×L, mm	525×510×46-M5 (×2)
Electric power input of the fan drive at maximum flow rate, W	1000
Electric air heater capacity, kW / Δt, °C	15/10,7
Control panel	KOMFOVENT C5.1

The photo is intended for informational purposes only, exact details may vary.

Acoustic data

A-weighted sound power level L_{WA}, dB(A) at reference flow rate

Supply inlet	67
Supply outlet	83
Exhaust inlet	64
Exhaust outlet	81
Casing	59

A-weighted sound pressure level L_{PA}, dB(A)
10 m^2 normally isolated room, distance from casing – 3 m.

Surroundings	48

Temperature efficiency

	Winter					Summer
Outside temperature, °C	-23	-15	-10	-5	0	30
After heat exchanger*, °C	11,9	13,7	14,8	16	17,1	23,8

* indoor +22°C, 10% RH

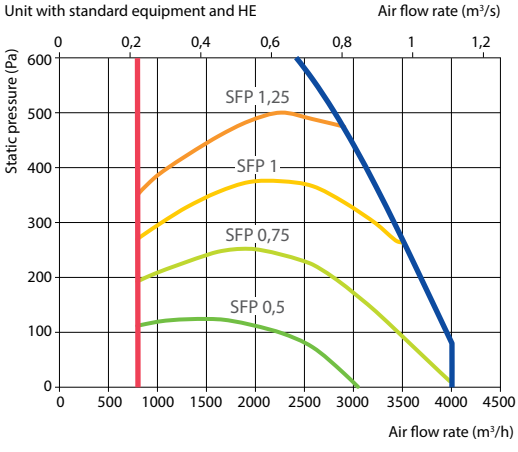
Changeover water heating/cooling exchanger (HCW)

	Winter				Summer
Water temperature in/out, °C	90/70	80/60	70/50	60/40	7/12
Capacity, kW	12,7	12,7	12,7	12,7	14,2
Flow rate, dm^3/h	560	558	555	553	2429
Pressure drop, kPa	1	1	1	1	4,4
Temperature in/out, °C	11,9/22				23,8/18
Maximal capacity, kW	61,2	48,5	36,3	24,3	17,3
Connection, ″	1				

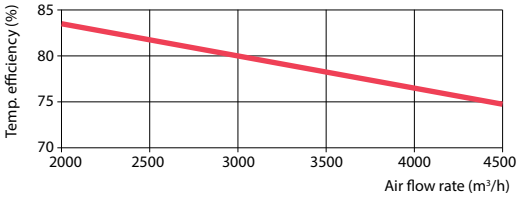
Max air flow – 3743 m^3.

Performance

Unit with standard equipment and HE



Temperature efficiency



Indoor and outdoor ΔT=20°C re: *Ecodesign 1253/2014.*

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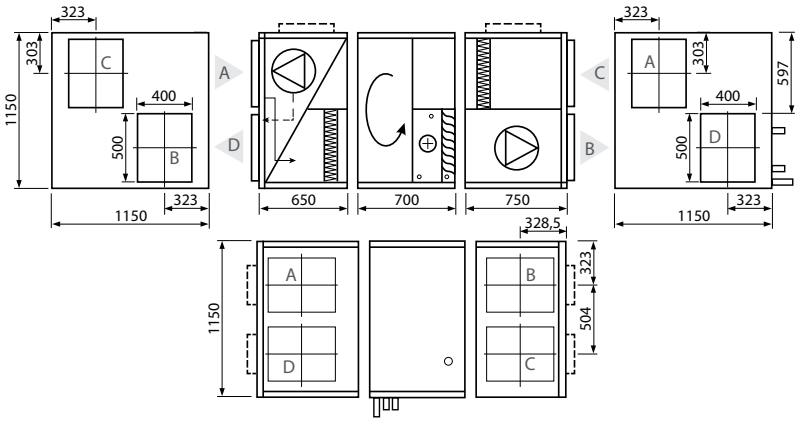

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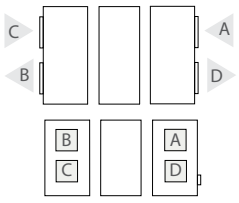


A outdoor intake
B supply air
C extract indoor
D exhaust air

komfovent®

Verso R 4500 U/H/V

(Kompakt REGO 4500U)

Verso R 4500 UH data

Nominal air flow, m³/h	4500
Panel thickness, mm	50
Unit weight, kg	450 (140/160/150)
Supply voltage HE, V	3~400
Supply voltage HW, V	3~400
Maximal operating current HE, A	27,4
Maximal operating current HW, A	6,2
Filters dimensions B×H×L, mm	525×510×46-M5 (×2)
Electric power input of the fan drive at maximum flow rate, W	1700
Electric air heater capacity, kW / Δt, °C	15 / 9,3
Control panel	KOMFOVENT C5.1

The photo is intended for informational purposes only, exact details may vary.

Acoustic data

A-weighted sound power level L_{WA}, dB(A) at reference flow rate

Supply inlet	67
Supply outlet	84
Exhaust inlet	65
Exhaust outlet	81
Casing	58

A-weighted sound pressure level L_{PA}, dB(A)
10 m² normally isolated room, distance from casing – 3 m.

Surroundings	47

Temperature efficiency

	Winter					Summer
Outside temperature, °C	-23	-15	-10	-5	0	30
After heat exchanger*, °C	11	12,9	14,2	15,4	16,6	24

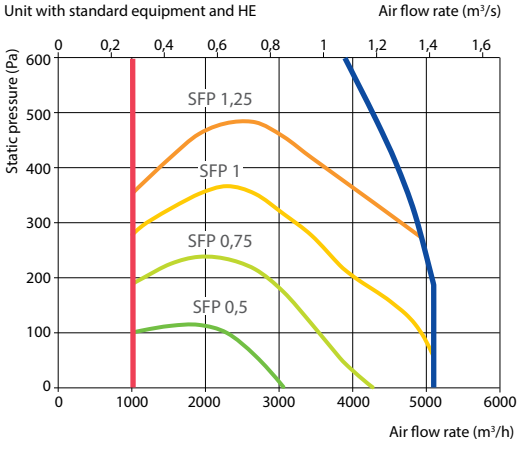
* indoor +22°C, 10% RH

Changeover water heating/cooling exchanger (HCW)

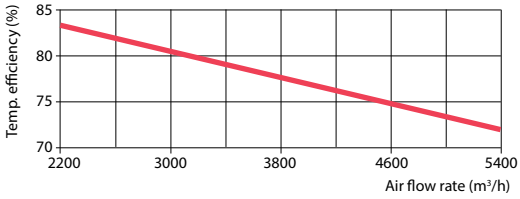
	Winter				Summer
Water temperature in/out, °C	90/70	80/60	70/50	60/40	7/12
Capacity, kW	16,6	16,6	16,6	16,6	17,2
Flow rate, dm³/h	733	730	727	724	2943
Pressure drop, kPa	1	1	1	1	6,1
Temperature in/out, °C	11/22				24/18
Maximal capacity, kW	73,3	58,9	44,9	31,6	20
Connection, ”	1				

Performance

Unit with standard equipment and HE



Temperature efficiency



Indoor and outdoor ΔT=20°C re: *Ecodesign 1253/2014.*

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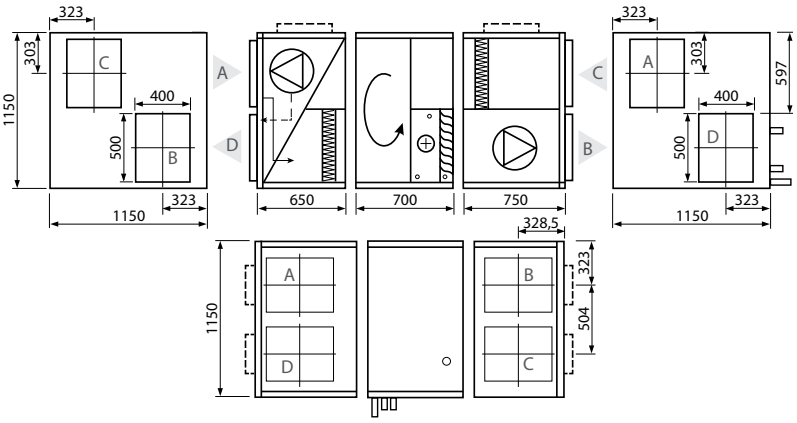

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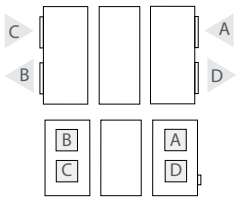


A outdoor intake
B supply air
C extract indoor
D exhaust air

Verso R 7000 H

(Kompakt REGO 7000H)

Nominal air flow, m^3/h	8000
Panel thickness, mm	50
Unit weight, kg	780 (270/230/280)
Supply voltage, V	3~400
Maximal operating current, A	12,8
Filters dimensions B×H×L, mm	592×592-8×635-M5(×2)
Electric power input of the fan drive at maximum flow rate, W	2730
Control panel	KOMFOVENT C5.1

The photo is intended for informational purposes only, exact details may vary.

Acoustic data

A-weighted sound power level L_{WA}, dB(A) at reference flow rate

Supply inlet	70
Supply outlet	89
Exhaust inlet	77
Exhaust outlet	88
Casing	64

A-weighted sound pressure level L_{PA}, dB(A)
10 m^2 normally isolated room, distance from casing – 3 m.

Surroundings	53

Temperature efficiency

	Winter					Summer
Outside temperature, °C	-23	-15	-10	-5	0	30
After heat exchanger*, °C	11,6	13,4	14,6	15,8	16,9	23,8

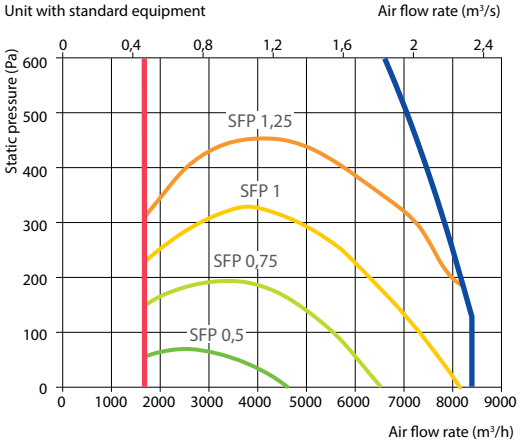
* indoor +22°C, 10% RH

Hot water air heater

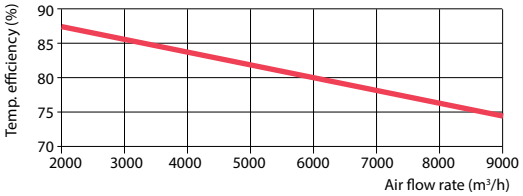
	Winter			
Water temperature in/out, °C	90/70	80/60	70/50	60/40
Capacity, kW	27,9	27,9	27,9	27,9
Flow rate, dm^3/h	1232	1226	1221	1216
Pressure drop, kPa	5,9	6,1	6,2	6,4
Temperature in/out, °C	11,6/22			
Maximal capacity, kW	83	66,4	58,1	41
Connection, ”	1			

Performance

Unit with standard equipment



Temperature efficiency



Indoor and outdoor ΔT=20°C re: *Ecodesign 1253/2014.*

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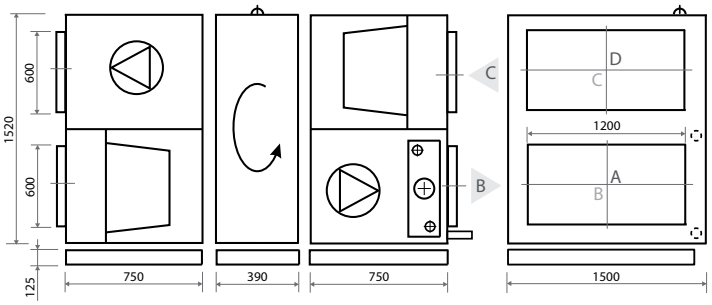

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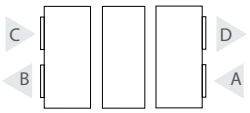
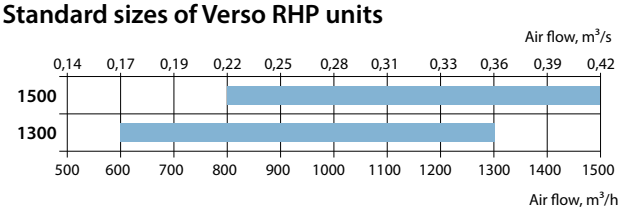


A outdoor intake
B supply air
C extract indoor
D exhaust air

Verso RHP 1300–1500

Units with a rotary heat exchanger and an integrated heat pump.
Operating capacity ranges from 600 to 1 500 m³/h.

Standard sizes of Verso RHP units



New generation solution

All Verso RHP units have integrated heat pump, this technology extends air handling unit's capabilities – the unit not only ventilates, but also heats and cools the premises. Implementation of such complex technical solution not only extends the application of the unit, but also ensures high efficiency due to two energy recovery stages (by rotary heat exchanger and heat pump).

Advantages of Verso RHP units

- **Total comfort all year long:** reversible heating and cooling operation of heat pump ensures comfort indoor climate.
- **Extremely energy efficent and resource saving:** two step efficiency is provided by rotary heat exchanger recovery and post heating / cooling operated by heat pump.
- **Added value to indoor climate:** heating and humidity recovery in winter, cooling and dehumidifying in summer.
- **"All inclusive" solution:** no need for condensing unit, chiller, piping or additional work providing.
- **Convenience and safety:** factory charged by refrigerant, no refrigeration knowledge is needed.
- **Eco-friendly and protected:** R410A and R134A refrigerant and one circuit charge limits <10 kg.
- **Factory tested:** reliable and convenient Plug & Play installation, commissioning and exploitation.

Verso RHP 1300 U

Nominal air flow, m^3/h	1300
Panel thickness, mm	50
Unit weight, kg	260
Supply voltage, V	3~400
Maximal operating current, A	8,7
Filters dimensions B×H×L, mm	750×400×46-M5
Electric power input of the fan drive at maximum flow rate, W	273
Electric air heater capacity, kW / Δt, °C	2 / 4,3
Control panel	KOMFOVENT C5.1

The photo is intended for informational purposes only, exact details may vary.

Acoustic data

A-weighted sound power level L_{WA}, dB(A) at reference flow rate

Supply inlet	62
Supply outlet	65
Exhaust inlet	57
Exhaust outlet	64
Casing	42

A-weighted sound pressure level L_{PA}, dB(A)
10 m^2 normally isolated room, distance from casing – 3 m.

Surroundings	31

Temperature efficiency

		Winter								Summer
Outside temperature, °C		-20	-15	-10	-5	0	5	10	15	30
After heat exchanger and heat pump, °C	RHP 8.1/6.6	17	18,3	19,5	21	22,6	25	28	31	18,6
	RHP 9.2/7.6	18,9	20,5	22,5	24,2	25,9	28,3	31	34	17,8

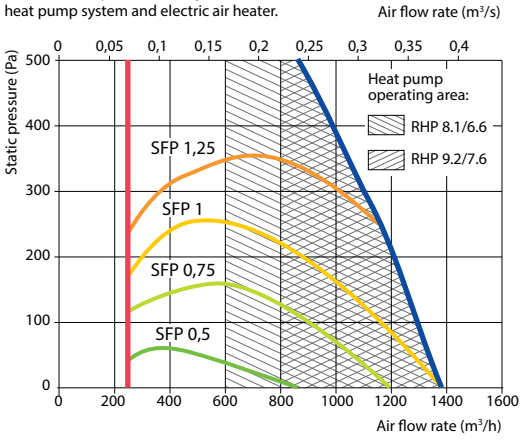
Indoor temperature winter +20 °C, summer +24 °C

Compressor and AHU data

Refrigerant		R134A
Compressor heating capacity, kW	RHP 8.1/6.6	3,9
	RHP 9.2/7.6	5,1

Performance

Filter M5, rotary heat exchanger L, heat pump system and electric air heater.



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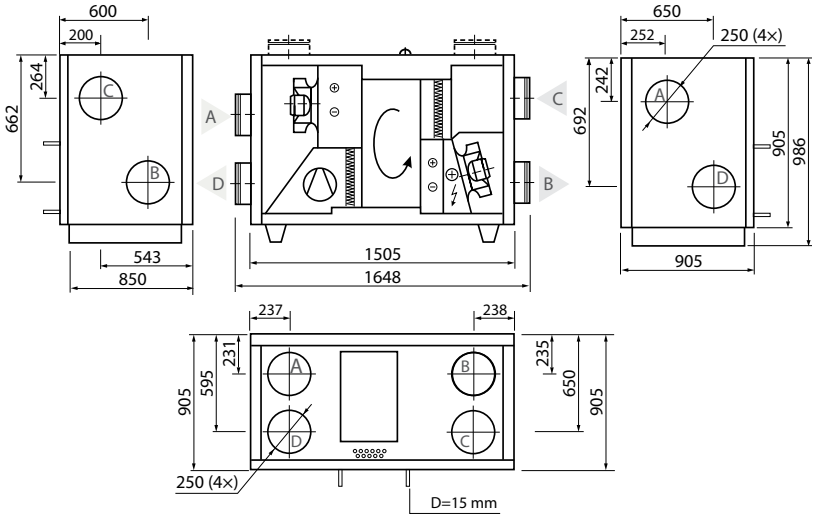

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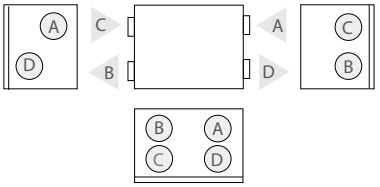
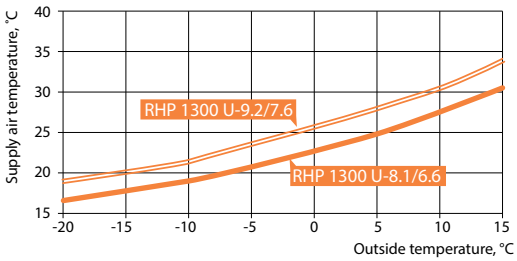


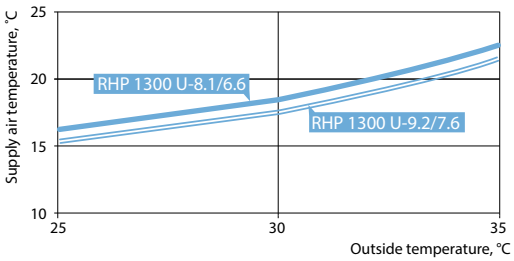
A outdoor intake
B supply air
C extract indoor
D exhaust air

Heating mode



Application: 20°C, RH 45% indoor
Indoor and outdoor ΔT=20°C according *Ecodesign 1253/2014.*

Cooling mode



Application: 24°C, RH 55% indoor
Total (heating and cooling) – rotary heat recovery + heat pump.

Heat pump parameters

	Verso RHP 1300 U-8.1/6.6						Verso RHP 1300 U-9.2/7.6					
	Heating				Cooling		Heating				Cooling	
Outdoor temperature, °C	7	2	-7	-15	35	27	7	2	-7	-15	35	27
Outdoor air related humidity, %	86	84	74	95	40	45	86	84	74	95	40	45
Indoor air temperature, °C	20	20	20	20	27	21	20	20	20	20	27	21
Indoor air related humidity, %	50	50	45	45	40	50	50	50	45	45	40	50
Supply air temperature, °C	25,4	23,9	20,9	18,3	22,5	16,5	27,8	25,9	22,7	20,5	21,77	15,5
Heat pump heating/cooling power, kW	3,29	3	2,36	1,78	3,68	3,35	4,37	3,89	3,14	2,76	4,65	4,16
Heat pump heating/cooling power consumption, kW	0,69	0,66	0,62	0,62	0,88	0,75	1,04	0,98	0,89	0,83	1,28	1,12
Power, recovered by rotary heat exchanger, kW	4,83	7,5	12,1	15,7	2,9	2,16	4,83	7,49	12,11	15,68	2,91	2,17
COP/EER	4,7	4,5	3,8	2,9	4,2	4,5	4,2	4	3,5	3,3	3,6	3,7

Verso RHP 1500 U

Nominal air flow, m^3/h	1500
Panel thickness, mm	50
Unit weight, kg	260
Supply voltage, V	3~400
Maximal operating current, A	8,7
Filters dimensions B×H×L, mm	750×400×46-M5
Electric power input of the fan drive at maximum flow rate, W	470
Electric air heater capacity, kW / Δt, °C	2 / 4
Control panel	KOMFOVENT C5.1

The photo is intended for informational purposes only, exact details may vary.

Acoustic data

A-weighted sound power level L_{WA}, dB(A) at reference flow rate

Supply inlet	65
Supply outlet	71
Exhaust inlet	64
Exhaust outlet	71
Casing	45

A-weighted sound pressure level L_{PA}, dB(A)
10 m^2 normally isolated room, distance from casing – 3 m.

Surroundings	35

Temperature efficiency

				Winter					Summer
Outside temperature, °C	-20	-15	-10	-5	0	5	10	15	30
After heat exchanger and heat pump, °C	19	19,2	20	22	24	26,7	31	36	19

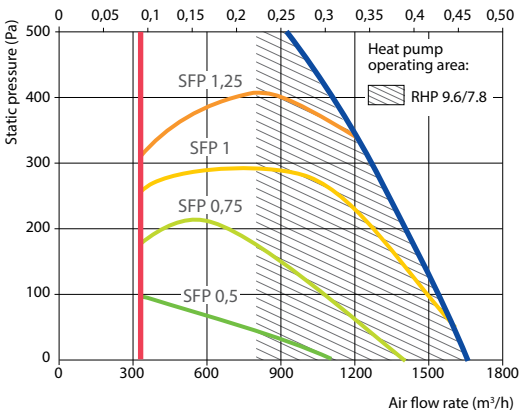
Indoor temperature winter +20 °C, summer +24 °C

Compressor and AHU data

Refrigerant		R134A
Compressor heating capacity, kW	RHP 9.6/7.8	5,1

Performance

Filter M5, rotary heat exchanger L, heat pump system and electric air heater.



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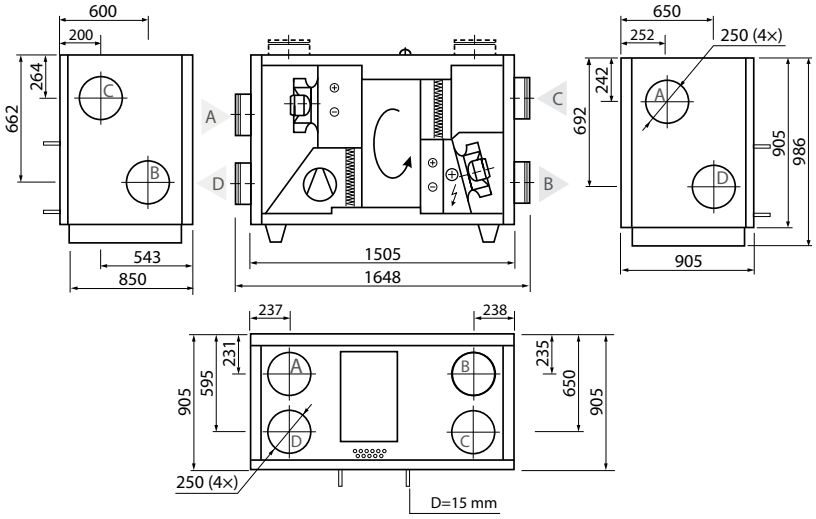

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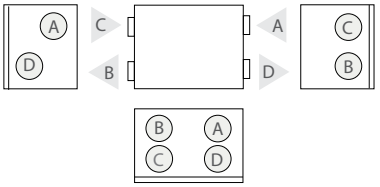
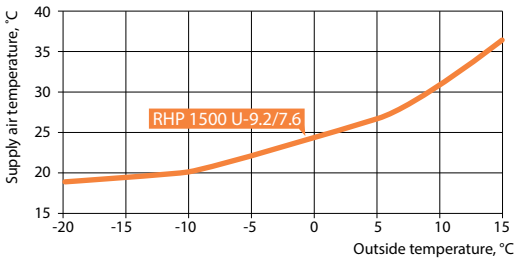


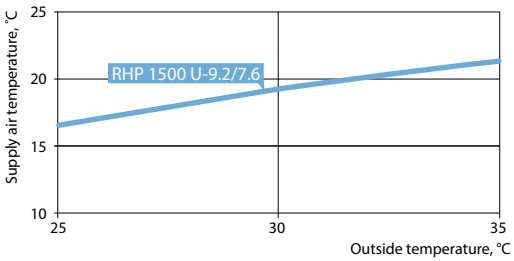
A outdoor intake
B supply air
C extract indoor
D exhaust air

Heating mode



Application: 20°C, RH 45% indoor
Indoor and outdoor ΔT=20°C according *Ecodesign 1253/2014*.

Cooling mode



Application: 24°C, RH 55% indoor
Total (heating and cooling) – rotary heat recovery + heat pump.

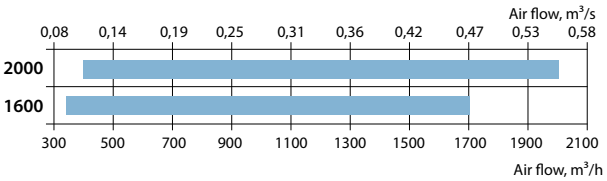
Heat pump parameters

	Verso RHP 1500 U 9.6/7.8					
	Heating				Cooling	
Outdoor temperature, °C	7	2	-7	-15	35	27
Outdoor air related humidity, %	86	84	74	95	40	45
Indoor air temperature, °C	20	20	20	20	27	21
Indoor air related humidity, %	50	50	45	45	40	50
Supply air temperature, °C	27,2	25,2	22,1	19,9	21,9	15,7
Heat pump heating/cooling power, kW	4,4	3,9	3,2	2,8	4,7	4,2
Heat pump heating/cooling power consumption, kW	1,0	1,0	0,9	0,8	1,3	1,1
Power, recovered by rotary heat exchanger, kW	5,2	7,9	12,8	16,6	3,1	2,3
COP/EER	4,3	4	3,6	3,4	3,7	3,8

Verso P 1600–2000

Air handling units with a plate heat exchanger.
Operating capacity ranges from 340 to 2 000 m^3/h.

Standard sizes of Verso P units



Advantages of Verso P units

Heat energy saving
In the process of ventilation the heat of the exhaust air is recovered to the supplied air.

Totally separated airflows
The supply and exhaust airflows are separated, thus making possible utilization of the heat of the extracted foul air.

Long term efficient operation
The absence of movable parts ensures effective heat exchange and long run.

Low noise level
Verso P air handling units are equipped with silently operating fans and sound insulation, which ensures low noise level.

Standard plate heat exchanger

Design:
- A packet of thin aluminum plates with spacing left between them.
- Exhaust warm air flows through every second channel between the plates warming up fresh air flowing through the remaining channels.
- To prevent the plates from bending under the impact of differential pressure of the air flows, strengthening gaskets are inserted between the plates.
- Rough surface of the aluminum plates generates the turbulent air stream thus intensifying heat exchange.

Anti-frosting protection
Decreasing of the outdoor air temperature below -10°C (it is an approximate value depending on the relative humidity of the air flows and temperature) the exhaust air enhances the danger of the heat exchanger freezing. For the conditions when outdoor temperatures may be lower than -4°C, duct mounted preheater is recommended.
Defrosting of the heat exchanger is controlled automatically in response to sensor signals.
Temperature sensors are supplied with the unit.

Note: The water trap must be installed for condensate drain!

Verso P range

Unit size	Supply/exhaust air filter class		Heater			Cooler		Inspection side		Control system C3 panel	
	M5	F7	HE	HW	HCW	CW	CDX	R1	L1	C3	C3.1
Verso P 1600 F	●	○	○	○	△	△	△	○	○	●	○
Verso P 2000 F	●	○	○	○	△	△	△	○	○	●	○

● standard equipment
○ possible choice
△ ordered separately

Duct connection

F – false ceiling.

Heater

HE – electric heater.

HW – water duct heater is installed on the duct and must be ordered separately. Heaters are mounted on the outside of the unit in any user-convenient place. There is heater control possibility in automatic control system.

HCW – heater-cooler one for both – heating and cooling. Ideal for buildings using geothermal energy.

Cooler

CW – designed for air cooling using cold water (water-glycol mixture), provides a higher comfort level in rooms.

CDX – designed for air cooling using direct expansion cooling unit, provides a higher comfort level in rooms.

Inspection side

See p. 136.

Control system

C3 Control features:

- Unit mode selection: On / Off / Auto.
- Setting intensity level (1,2,3).
- Adjusting of intensity levels every 1% for each fan.
- Exhaust air flow correction.
- Constant air flow control and indication (CAV).
- Weekly schedule programming.
- Setting temperature from the panel 15–30 °C.
- Temperature control selection: Supply / Room / Auto.
- Temperature setpoint sliding +/- 9 °C for time period.
- Season setting: Summer / Winter / Auto.
- Correction of ventilation intensity in winter time.
- Remote control via external contact.
- Remote unit failure indication.
- Choosing of panel language (1 of 15).
- Errors indication and registration log (error log with 50 events with time, date in the panel).
- Settings menu blocking with PIN.
- Air quality control.
- Summer night cooling.
- VAV control.
- OVR function.
- Unit PC control.*

* required PING2 module.

Verso P 1600 F

(Kompakt RECU 1600 P)

Nominal air flow, m³/h	1700
Panel thickness, mm	45
Unit weight, kg	190
Supply voltage HE, V	3~400
Supply voltage HW, V	1~230
Maximal operating current HE, A	17,5
Maximal operating current HW, A	7,2
Filters dimensions B×H×L, mm	600×420×96-M5
Electric power input of the fan drive at maximum flow rate, W	470
Electric air heater capacity, kW / Δt, °C	7,5/12,3
Control panel	KOMFOVENT C3 / 3.1

The photo is intended for informational purposes only, exact details may vary.

Acoustic data

A-weighted sound power level L_{WA}, dB(A) at reference flow rate

Supply inlet	59
Supply outlet	74
Exhaust inlet	59
Exhaust outlet	74
Casing	55

A-weighted sound pressure level L_{PA}, dB(A)
10 m² normally isolated room, distance from casing – 3 m.

Surroundings	44

Temperature efficiency

	Winter					Summer
Outside temperature, °C	-23	-15	-10	-5	0	30
After heat exchanger*, °C	6,5	9,3	11	12,8	14,5	24,7

* indoor +22°C, 10% RH

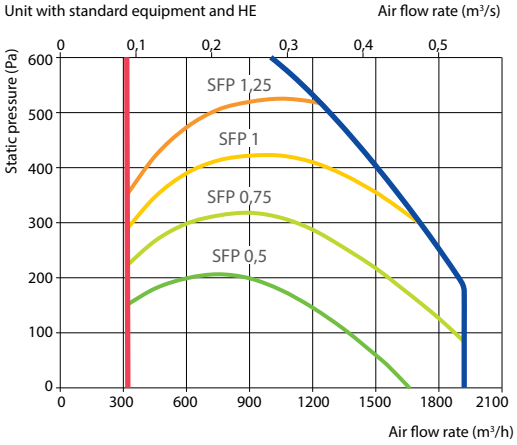
Hot water duct air heater (DH)**

	Winter			
Water temperature in/out, °C	90/70	80/60	70/50	60/40
Capacity, kW	8,9	8,9	8,9	8,9
Flow rate, dm³/h	391	389	387	386
Pressure drop, kPa	1,1	1,2	1,2	1,2
Temperature in/out, °C	6,5/22			
Maximal capacity, kW	33,9	28,1	22,3	16,7
Connection, ”	½			
Dimensions, mm	510×470×270			
Hot water duct heater type	DH-315			

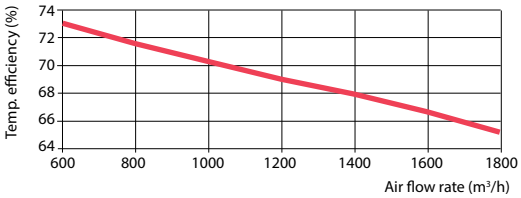
** option

Performance

Unit with standard equipment and HE



Temperature efficiency



Indoor and outdoor ΔT=20°C re: *Ecodesign 1253/2014.*

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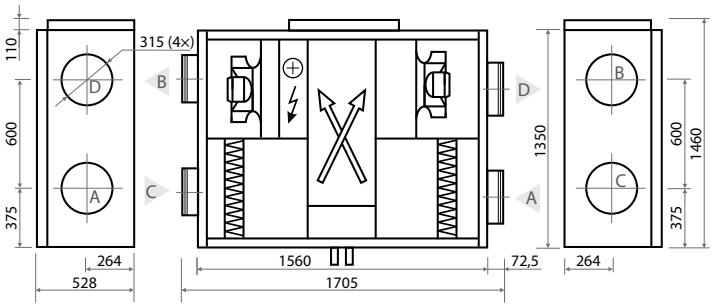

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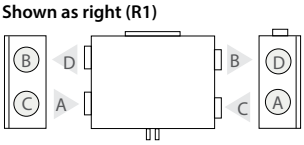


A outdoor intake
B supply air
C extract indoor
D exhaust air

Verso P 2000 F

(Kompakt RECU 2000 P)

Nominal air flow, m^3/h	2000
Panel thickness, mm	45
Unit weight, kg	200
Supply voltage HE, V	3~400
Supply voltage HW, V	1~230
Maximal operating current HE, A	19,3
Maximal operating current HW, A	6,8
Filters dimensions B×H×L, mm	600×420×96-M5
Electric power input of the fan drive at maximum flow rate, W	660
Electric air heater capacity, kW / Δt, °C	9 / 12,5
Control panel	KOMFOVENT C3 / 3.1

The photo is intended for informational purposes only, exact details may vary.

Acoustic data

A-weighted sound power level L_{WA}, dB(A) at reference flow rate

Supply inlet	62
Supply outlet	78
Exhaust inlet	62
Exhaust outlet	78
Casing	57

A-weighted sound pressure level L_{PA}, dB(A)
10 m^2 normally isolated room, distance from casing – 3 m.

Surroundings	46

Temperature efficiency

	Winter					Summer
Outside temperature, °C	-23	-15	-10	-5	0	30
After heat exchanger*, °C	5,5	8,5	10,4	12,2	14	24,8

* indoor +22°C, 10% RH

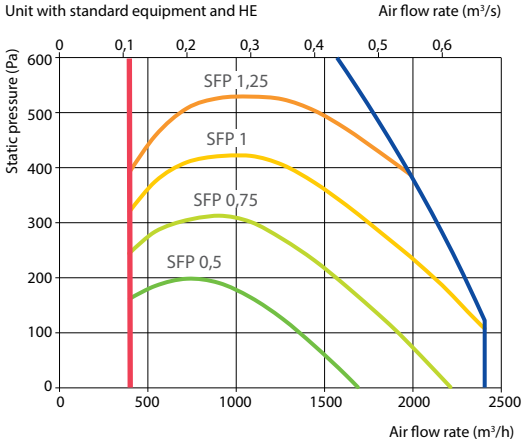
Hot water duct air heater (DH)**

	Winter			
Water temperature in/out, °C	90/70	80/60	70/50	60/40
Capacity, kW	11,1	11,1	11,1	11,1
Flow rate, dm^3/h	488	485	483	481
Pressure drop, kPa	1,7	1,8	1,8	1,9
Temperature in/out, °C	5,5/22			
Maximal capacity, kW	39	32,5	26	19,7
Connection, ”	½			
Dimensions, mm	510×470×270			
Hot water duct heater type	DH-315M			

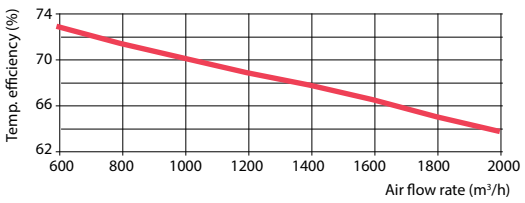
** option

Performance

Unit with standard equipment and HE



Temperature efficiency



Indoor and outdoor ΔT=20°C re: *Ecodesign 1253/2014.*

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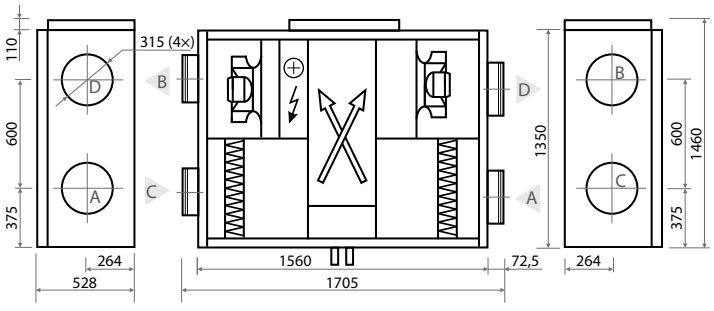

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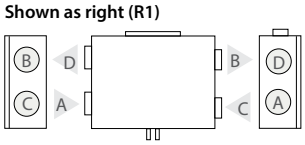
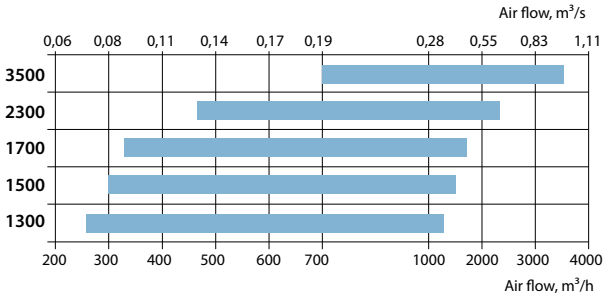


A outdoor intake
B supply air
C extract indoor
D exhaust air

Verso CF 1300–3500

Air handling units with a counterflow plate heat exchanger.
Operating capacity ranges from 260 to 3 500 m^3/h.

Standard sizes of Verso CF units



Advantages of Verso CF units

Heat energy saving
In the process of ventilation the heat of the exhaust air is recovered to the supplied air.

Totally separated airflows
The supply and exhaust airflows are separated, thus making possible utilization of the heat of the extracted foul air.

Long term efficient operation
The absence of movable parts ensures effective heat exchange and long run.

Low noise level
Verso CF air handling units are equipped with silently operating fans and sound insulation, which ensures low noise level.

Counterflow polystyrene plate heat exchanger

The exchanger is constructed completely from polystyrene – from the foils to the casing. Only solvent-free elastic adhesives are used.

- This design principle is what makes this exchanger's outstanding performance possible.
- The triangular ducts in the recuperator are arranged so that each one is surrounded by parallel ducts in which the air is in counter flow.
- Each fresh-air duct is surrounded by three ducts filled with warmer exhaust air. Likewise, each duct with exhaust air is surrounded by three fresh-air ducts. This maximizes the surface area over which energy can efficiently be transferred, recaptured and reused.

Anti-frosting protection
If the temperature of the exhaust air drops below 4 °C, freezing may occur at the exhaust air corner of the heat exchanger. To avoid freezing the temperature sensor is installed in this zone to give a signal to the automatic control. If for some period of time temperature will not rise up, by-pass damper is opened to redirect outdoor air through by-pass channel and only warm exhaust air flows through exchanger to defrost risky zone. For the conditions when outdoor temperatures may be lower than -4°C, duct mounted preheater is recommended.

komfovent®

Verso CF range

Unit size	Supply/exhaust air filter class		Heater			Cooler		Inspection side		Control system C5 panel
	M5	F7	HE	HW	HCW	CW	CDX	R1	L1	C5.1
Verso CF 1300 U	●	○	○	○	○	△	△	○	○	●
Verso CF 1300 H/V	●	○	○	○		△	△	○	○	●
Verso CF 1300 F	●	○	○	○	△	△	△	○	○	●
Verso CF 1500 F	●	○	○	○	△	△	△	○	○	●
Verso CF 1700 U	●	○	○	○	○	△	△	○	○	●
Verso CF 1700 H/V	●	○	○	○		△	△	○	○	●
Verso CF 2300 U	●	○	○	○	○	△	△	○	○	●
Verso CF 2300 H/V	●	○	○	○		△	△	○	○	●
Verso CF 3500 U	●	○		●		△	△	○	○	●

● standard equipment
○ possible choice
△ ordered separately

Duct connection

H – horizontal.
V – vertical.
U – universal, 14 installation options.
F – false ceiling.

Heater

HE – electric heater.

HW – water duct heater is installed on the duct and must be ordered separately. Heaters are mounted on the outside of the unit in any user-convenient place. There is heater control possibility in automatic control system.

HCW – heater-cooler one for both – heating and cooling. Ideal for buildings using geothermal energy.

Cooler

CW – designed for air cooling using cold water (water-glycol mixture), provides a higher comfort level in rooms.

CDX – designed for air cooling using direct expansion cooling unit, provides a higher comfort level in rooms.

Inspection side

See p. 136.

Control system

C5 Control features:

- 5 different operation modes: *Comfort1*, *Comfort2*, *Economy1*, *Economy2* and *Special*.
- Temperature control modes: Supply air / Extract air / Room.
- Energy parameters indication: thermal efficiency of the heat exchanger, heat exchanger's recovered energy, energy saving indicator.
- Air quality, minimum temperature control.
- Flow control modes: CAV, VAV and DCV.
- Weekly operating schedule.
- Air flow indication (m^3/h, m^3/s, l/s).
- Rotary or plate heat exchanger failure protection.
- Rotary heat exchanger cleaning and warm-up function.
- Intelligent self-diagnostic.
- Summer night cooling.
- Air quality function.
- Supply air temperature control.
- Min. supply air temperature maintenance.
- Combined water heater & cooler control.
- Inverter-type DX outdoor unit control.
- Cooling recovery function.
- Outdoor compensated ventilation.
- Humidity control: air humidification and dehumidification.*
- Circulation pumps control by demand.
- Warm-up function of circulation pumps and mixing valves.
- Air filter clogging indication.
- Operation hours and energy counters.
- Remote control via web interface.
- Built-in data logger for all air handling unit parameters.
- Application software for smartphones based on "Android" and "iOS".

* additionally ordered function.

Verso CF 1300 U/H/V

Verso CF 1300 UH data

Nominal air flow, m³/h	1300
Panel thickness, mm	50
Unit weight, kg	269
Supply voltage HE, V	3~400
Supply voltage HW, V	1~230
Maximal operating current HE, A	10,8
Maximal operating current HW, A	4,8
Filters dimensions B×H×L, mm	800×400×46-M5
Electric power input of the fan drive at maximum flow rate, W	273
Electric air heater capacity, kW / Δt, °C	4,5 / 9,6
Control panel	KOMFOVENT C5.1

The photo is intended for informational purposes only, exact details may vary.

Acoustic data

A-weighted sound power level L_{WA}, dB(A) at reference flow rate

Supply inlet	56
Supply outlet	72
Exhaust inlet	58
Exhaust outlet	73
Casing	53

A-weighted sound pressure level L_{PA}, dB(A)
10 m² normally isolated room, distance from casing – 3 m.

Surroundings	43

Temperature efficiency

	Winter					Summer
Outside temperature, °C	-23	-15	-10	-5	0	30
After heat exchanger*, °C	13	14,5	15,5	16,5	17,5	23,7

* indoor +22°C, 10% RH

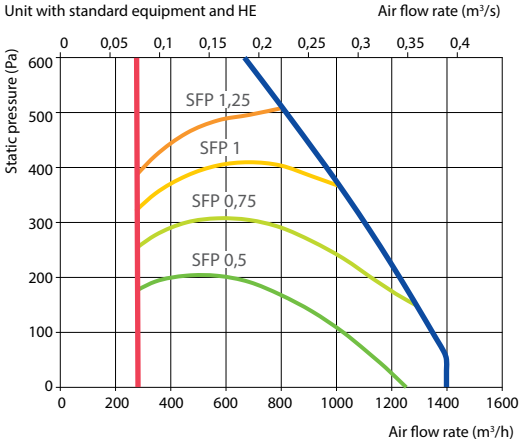
Changeover water heating/cooling exchanger (HCW)

	Winter				Summer
Water temperature in/out, °C	90/70	80/60	70/50	60/40	7/12
Capacity, kW	3,9	3,9	3,9	3,9	5
Flow rate, dm³/h	173	173	172	171	849
Pressure drop, kPa	1	1	1	1	11,1
Temperature in/out, °C	13/22				23,7/18
Maximal capacity, kW	27,7	22,1	16,7	11,4	8
Connection, ”	½				

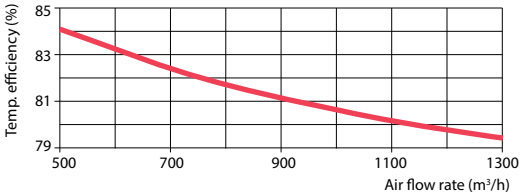
Available versions:
1) Electric air heater (HE);
2) Changeover water heating/cooling exchanger (HCW);
3) Changeover water heating/cooling exchanger (HCW) and electric air heater (HE).

Performance

Unit with standard equipment and HE



Temperature efficiency



Indoor and outdoor ΔT=20°C re: *Ecodesign 1253/2014.*

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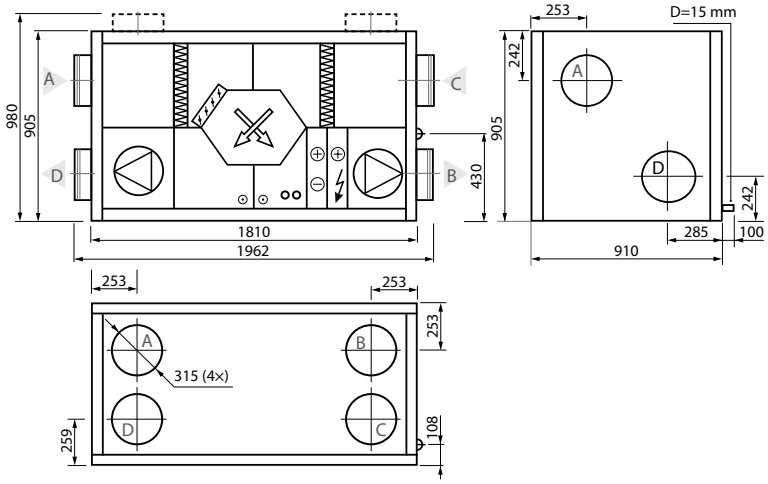

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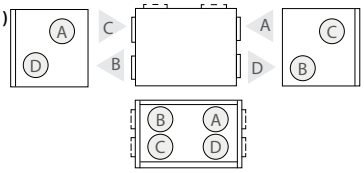


A outdoor intake
B supply air
C extract indoor
D exhaust air

Verso CF 1300 F

Nominal air flow, m³/h	1300
Panel thickness, mm	50
Unit weight, kg	162
Supply voltage HE, V	3~400
Supply voltage HW, V	1~230
Maximal operating current HE, A	10,8
Maximal operating current HW, A	4,8
Filters dimensions B×H×L, mm	550×420×46-M5
Electric power input of the fan drive at maximum flow rate, W	273
Electric air heater capacity, kW / Δt, °C	4,5 / 10
Control panel	KOMFOVENT C5.1

The photo is intended for informational purposes only, exact details may vary.

Acoustic data

A-weighted sound power level L_{WA}, dB(A) at reference flow rate

Supply inlet	56
Supply outlet	72
Exhaust inlet	58
Exhaust outlet	73
Casing	53

A-weighted sound pressure level L_{PA}, dB(A)
10 m² normally isolated room, distance from casing – 3 m.

Surroundings	43

Temperature efficiency

	Winter					Summer
Outside temperature, °C	-23	-15	-10	-5	0	30
After heat exchanger*, °C	13	14,5	15,5	16,5	17,5	23,7

* indoor +22°C, 10% RH

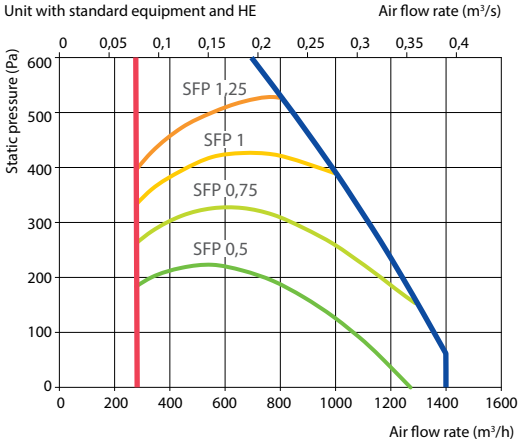
Hot water duct air heater (DH)**

	Winter			
Water temperature in/out, °C	90/70	80/60	70/50	60/40
Capacity, kW	3,9	3,9	3,9	3,9
Flow rate, dm³/h	174	173	172	172
Pressure drop, kPa	3,2	3,2	3,3	3,4
Temperature in/out, °C	13/22			
Maximal capacity, kW	13,1	10,7	8,3	6
Connection, ”	½			
Dimensions, mm	510×470×270			
Hot water duct heater type	DH-315			

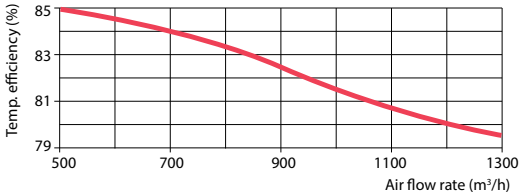
** option

Performance

Unit with standard equipment and HE



Temperature efficiency



Indoor and outdoor ΔT=20°C re: *Ecodesign 1253/2014.*

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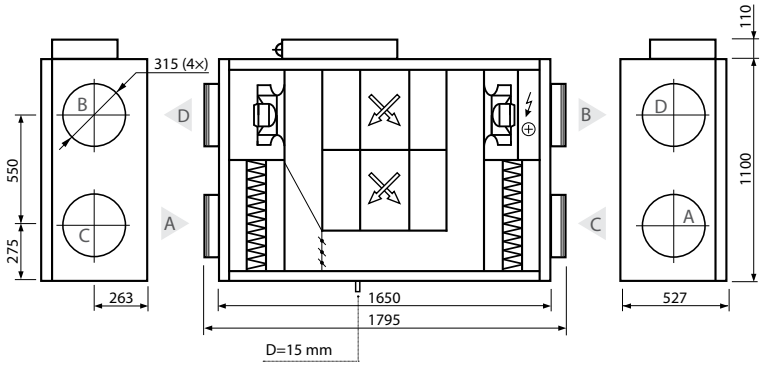

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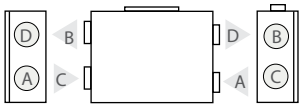


A outdoor intake
B supply air
C extract indoor
D exhaust air

Verso CF 1500 F

Nominal air flow, m³/h	1500
Panel thickness, mm	50
Unit weight, kg	162
Supply voltage HE, V	3~400
Supply voltage HW, V	1~230
Maximal operating current HE, A	13,2
Maximal operating current HW, A	7,2
Filters dimensions B×H×L, mm	550×420×46-M5
Electric power input of the fan drive at maximum flow rate, W	470
Electric air heater capacity, kW / Δt, °C	4,5 / 8,3
Control panel	KOMFOVENT C5.1

The photo is intended for informational purposes only, exact details may vary.

Acoustic data

A-weighted sound power level L_{WA}, dB(A) at reference flow rate

Supply inlet	60
Supply outlet	74
Exhaust inlet	60
Exhaust outlet	75
Casing	56

A-weighted sound pressure level L_{PA}, dB(A)
10 m² normally isolated room, distance from casing – 3 m.

Surroundings	46

Temperature efficiency

	Winter					Summer
Outside temperature, °C	-23	-15	-10	-5	0	30
After heat exchanger*, °C	12,7	14,3	15,3	16,3	17,3	23,8

* indoor +22°C, 10% RH

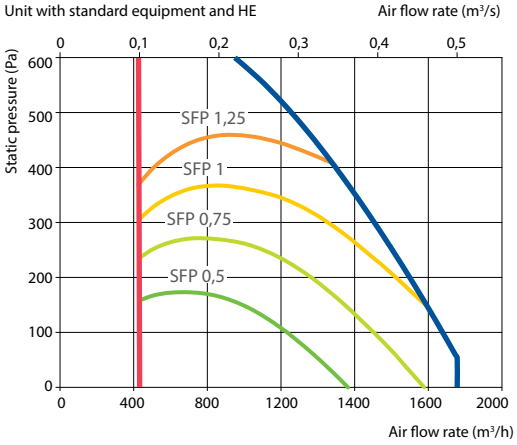
Hot water duct air heater (DH)**

	Winter			
Water temperature in/out, °C	90/70	80/60	70/50	60/40
Capacity, kW	4,7	4,7	4,7	4,7
Flow rate, dm³/h	208	207	206	205
Pressure drop, kPa	4,4	4,4	4,5	4,6
Temperature in/out, °C	12,7/22			
Maximal capacity, kW	14,8	12,1	9,5	6,9
Connection, ”	½			
Dimensions, mm	510×470×270			
Hot water duct heater type	DH-315			

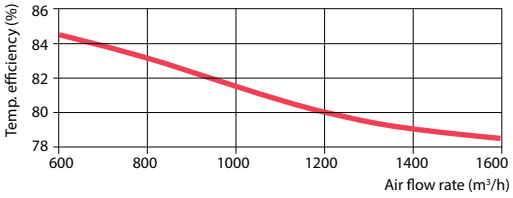
** option

Performance

Unit with standard equipment and HE



Temperature efficiency



Indoor and outdoor ΔT=20°C re: *Ecodesign 1253/2014.*

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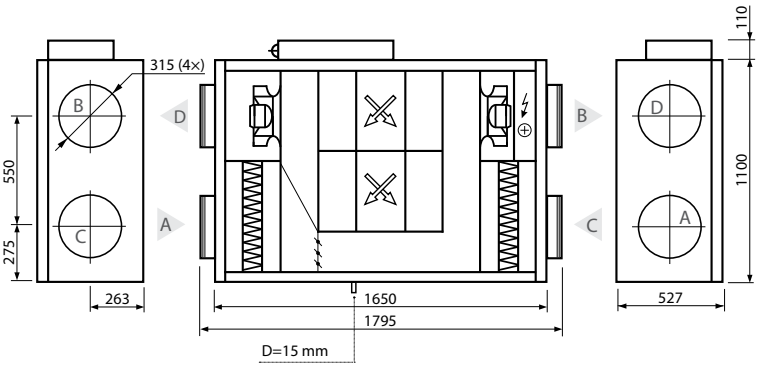

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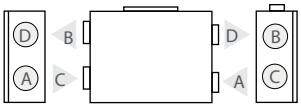


A outdoor intake
B supply air
C extract indoor
D exhaust air

komfovent®

Verso CF 1700 U/H/V

Verso CF 1700 UH data

Nominal air flow, m³/h	1700
Panel thickness, mm	50
Unit weight, kg	270
Supply voltage HE, V	3~400
Supply voltage HW, V	1~230
Maximal operating current HE, A	13,2
Maximal operating current HW, A	7,2
Filters dimensions B×H×L, mm	800×400×46-M5
Electric power input of the fan drive at maximum flow rate, W	470
Electric air heater capacity, kW / Δt, °C	4,5/7,4
Control panel	KOMFOVENT C5.1

The photo is intended for informational purposes only, exact details may vary.

Acoustic data

A-weighted sound power level L_{WA}, dB(A) at reference flow rate

Supply inlet	59
Supply outlet	74
Exhaust inlet	60
Exhaust outlet	74
Casing	56

A-weighted sound pressure level L_{PA}, dB(A)
10 m² normally isolated room, distance from casing – 3 m.

Surroundings	46

Temperature efficiency

	Winter					Summer
Outside temperature, °C	-23	-15	-10	-5	0	30
After heat exchanger*, °C	12,4	14,1	15,1	16,2	17,2	23,8

* indoor +22°C, 10% RH

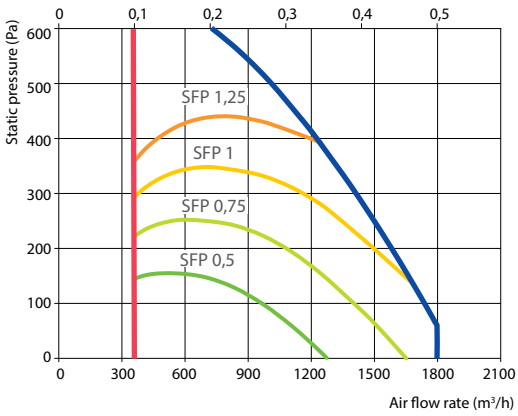
Changeover water heating/cooling exchanger (HCW)

	Winter				Summer
Water temperature in/out, °C	90/70	80/60	70/50	60/40	7/12
Capacity, kW	5,5	5,5	5,5	5,5	6,6
Flow rate, dm³/h	241	240	239	238	1126
Pressure drop, kPa	1	1	1	1	18,3
Temperature in/out, °C	12,4/22				23,7/18
Maximal capacity, kW	34,6	27,9	21,4	15	10
Connection, ”	½				

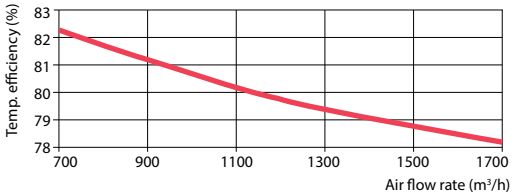
Available versions:
1) Electric air heater (HE);
2) Changeover water heating/cooling exchanger (HCW);
3) Changeover water heating/cooling exchanger (HCW) and electric air heater (HE).

Performance

Unit with standard equipment and HE



Temperature efficiency



Indoor and outdoor ΔT=20°C re: *Ecodesign 1253/2014.*

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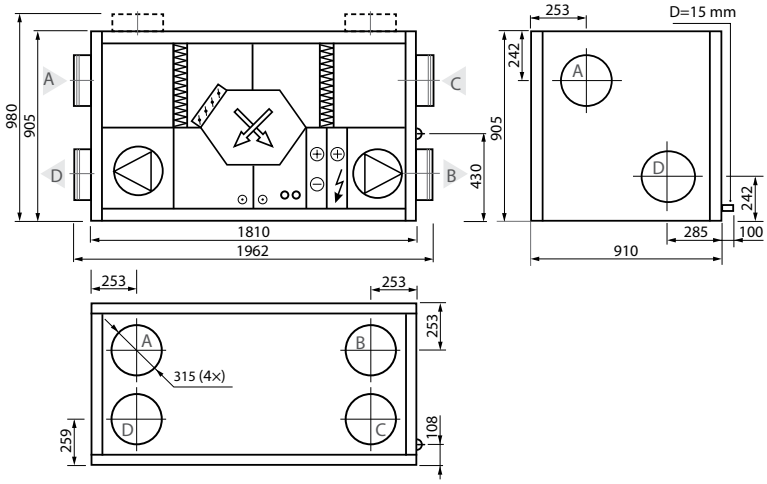

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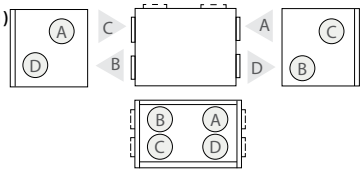


A outdoor intake
B supply air
C extract indoor
D exhaust air

Verso CF 2300 U/H/V

Verso CF 2300 UH data

Nominal air flow, m³/h	2300
Panel thickness, mm	50
Unit weight, kg	250
Supply voltage HE, V	3~400
Supply voltage HW, V	1~230
Maximal operating current HE, A	17,1
Maximal operating current HW, A	6,8
Filters dimensions B×H×L, mm	800×400×46-M5
Electric power input of the fan drive at maximum flow rate, W	660
Electric air heater capacity, kW / Δt, °C	7,5 / 11,7
Control panel	KOMFOVENT C5.1

The photo is intended for informational purposes only, exact details may vary.

Acoustic data

A-weighted sound power level L_{WA}, dB(A) at reference flow rate

Supply inlet	63
Supply outlet	81
Exhaust inlet	63
Exhaust outlet	81
Casing	61

A-weighted sound pressure level L_{PA}, dB(A)
10 m² normally isolated room, distance from casing – 3 m.

Surroundings	50

Temperature efficiency

	Winter					Summer
Outside temperature, °C	-23	-15	-10	-5	0	30
After heat exchanger*, °C	14,4	15,5	16,2	17	17,8	23,5

* indoor +22°C, 10% RH

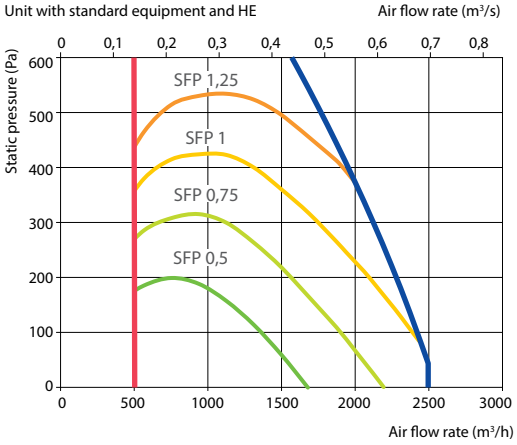
Changeover water heating/cooling exchanger (HCW)

	Winter				Summer
Water temperature in/out, °C	90/70	80/60	70/50	60/40	7/12
Capacity, kW	5,9	5,9	5,9	5,9	8,5
Flow rate, dm³/h	259	258	257	256	1459
Pressure drop, kPa	1	1	1	1,1	29
Temperature in/out, °C	14,4/22				23,5/18
Maximal capacity, kW	42,6	33,9	25,6	17,6	12,4
Connection, ”	½				

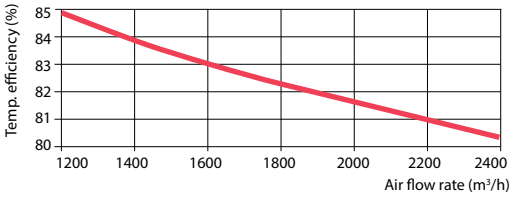
Available versions:
1) Electric air heater (HE);
2) Changeover water heating/cooling exchanger (HCW);
3) Changeover water heating/cooling exchanger (HCW) and electric air heater (HE).

Performance

Unit with standard equipment and HE



Temperature efficiency



Indoor and outdoor ΔT=20°C re: *Ecodesign 1253/2014.*

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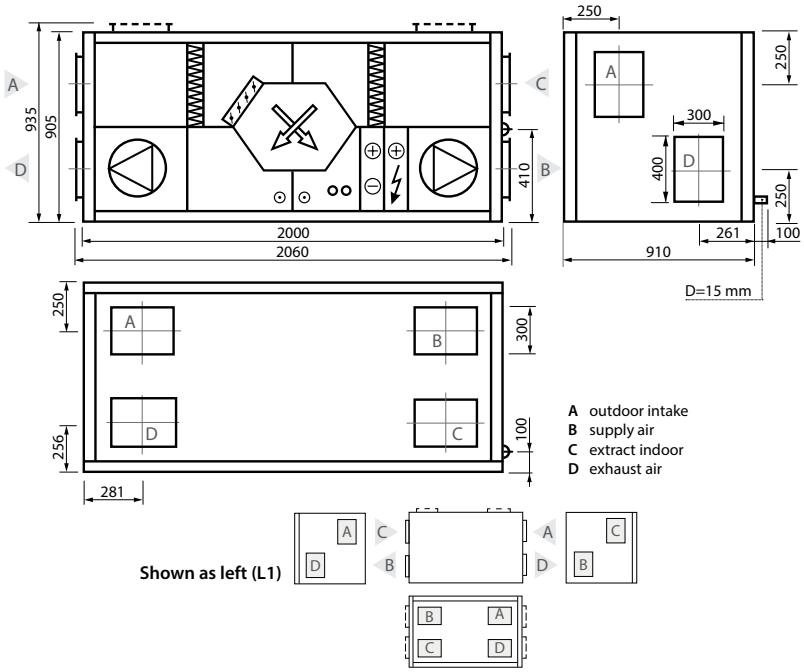

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A outdoor intake
B supply air
C extract indoor
D exhaust air

komfovent®

Verso CF 3500 U

Nominal air flow, m³/h	3500
Panel thickness, mm	50
Unit weight, kg	570 (135/200/135)
Supply voltage, V	3~400
Maximal operating current, A	4,2
Filters dimensions B×H×L, mm	525×510×46-M5 (×2)
Electric power input of the fan drive at maximum flow rate, W	1000
Control panel	KOMFOVENT C5.1

The photo is intended for informational purposes only, exact details may vary.

Acoustic data

A-weighted sound power level L_{WA}, dB(A) at reference flow rate

Supply inlet	62
Supply outlet	84
Exhaust inlet	63
Exhaust outlet	84
Casing	60

A-weighted sound pressure level L_{PA}, dB(A)
10 m² normally isolated room, distance from casing – 3 m.

Surroundings	49

Temperature efficiency

	Winter					Summer
Outside temperature, °C	-23	-15	-10	-5	0	30
After heat exchanger*, °C	14,3	15,4	16,2	16,9	17,8	23,5

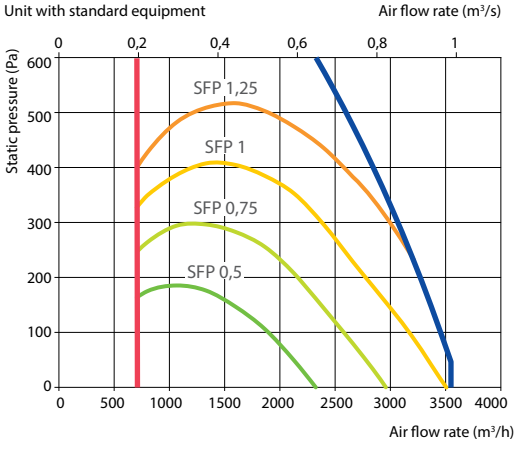
* indoor +22°C, 10% RH

Hot water air heater

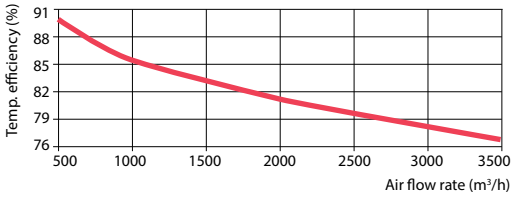
	Winter			
Water temperature in/out, °C	90/70	80/60	70/50	60/40
Capacity, kW	9	9	9	9
Flow rate, dm³/h	397	395	393	392
Pressure drop, kPa	1,1	1,2	1,2	1,3
Temperature in/out, °C	14,3/22			
Maximal capacity, kW	31,1	25,1	19,2	13,5
Connection, ”	1			

Performance

Unit with standard equipment



Temperature efficiency



Indoor and outdoor ΔT=20°C re: *Ecodesign 1253/2014.*

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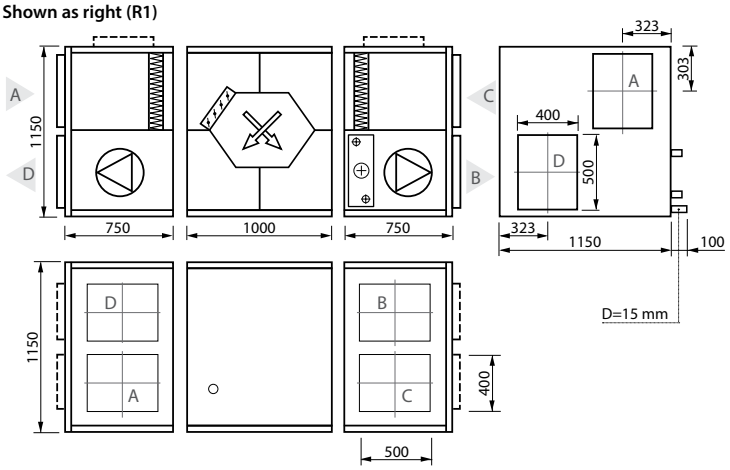

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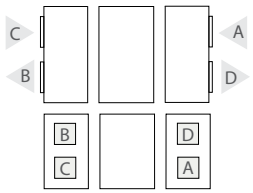
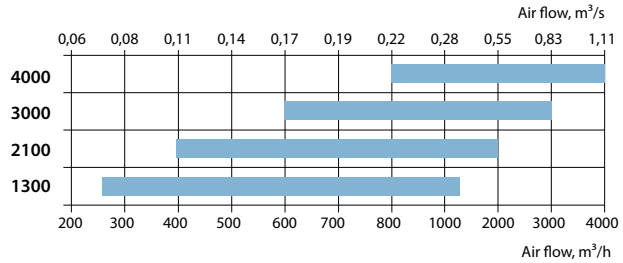


A outdoor intake
B supply air
C extract indoor
D exhaust air

Verso S 1300–4000

False ceiling supply air handling units.
Operating capacity ranges from 260 to 4 000 m^3/h.

Standard sizes of Verso S units



Advantages of Verso S units

- Height is only 350 mm / 545 mm – easy to choose the place for installation.
- Units are complemented with fastening profiles and vibration absorbing holders.
- Safe and handy design of removable cover ensures easy fixing of cover at different opening levels for performing maintenance and service inspection.
- Air handling units have integrated control system.
- Control panel may be installed in any user-convenient place.
- Control panel display enables to set the operation parameters of the unit and monitor them.
- There is a possibility to complement and control the duct mounted cooling section.

Verso S range

Unit size	Supply/exhaust air filter class		Heater		Cooler		Inspection side	Control system C5 panel
	M5	F7	HE	HW	CW	CDX	R1	C5.1
Verso S 1300 F	●	○	○	○	△	△	○	●
Verso S 2100 F	●	○	○	○	△	△	○	●
Verso S 3000 F	●	○		●	△	△	○	●
Verso S 4000 F	●	○		●	△	△	○	●

● standard equipment
○ possible choice
△ ordered separately

Duct connection
F – false ceiling.

Heater
HE – electric heater.
HW – water air heater.

Cooler
CW – designed for air cooling using cold water (water-glycol mixture), provides a higher comfort level in rooms.
CDX – designed for air cooling using direct expansion cooling unit, provides a higher comfort level in rooms.

Inspection side
See p. 136.

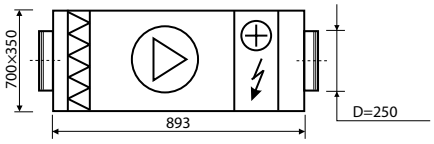
Control system
More information about C5 on p. 10.

komfovent®

Verso S 1300 F

Nominal air flow, m³/h	1200
Panel thickness, mm	50
Unit weight, kg	46
Filters dimensions B×H×L, mm	558×287×46-M5
Electric power input of the fan drive at reference flow rate, W	273
Control panel	KOMFOVENT C5.1

The photo is intended for informational purposes only, exact details may vary.



Acoustic data

A-weighted sound power level L_{WA}, dB(A) at reference flow rate

Supply inlet	71
Supply outlet	77
Casing	55

A-weighted sound pressure level L_{PA}, dB(A)
10 m² normally isolated room, distance from casing – 3 m.

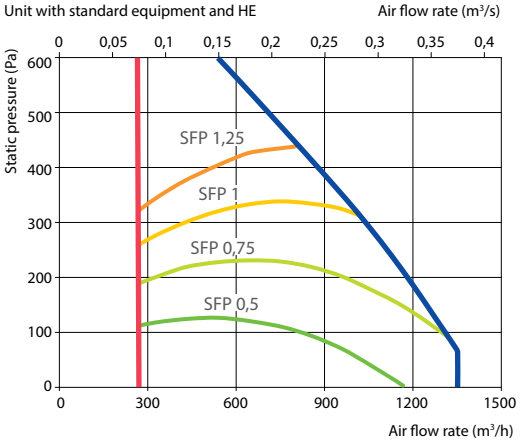
Surroundings	44

Technical data

Supply air handling unit	Supply voltage, V	Air heater capacity, kW	Maximal operating current, A	ΔT, °C
Verso S 1300 F-HE/6	3~400	6,0	10,6	15
Verso S 1300 F-HE/9	3~400	9,0	15,4	21
Verso S 1300 F-HE/15	3~400	15,0	24,1	35
Verso S 1300 F-HW	1~230	18,9	2,9	43

Performance

Unit with standard equipment and HE



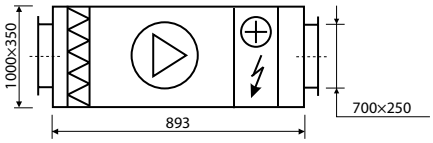
Hot water air heater

Water temperature in/out, °C	90/70	80/60	70/50	60/40
Capacity, kW	17,3	16,6	14,1	8,6
Flow rate, dm³/h	764	731	617	374
Pressure drop, kPa	2	1,9	1,5	1
Temperature in/out, °C	-23/20	-23/18,4	-23/12,1	-10/11,3
Maximal capacity, kW	18,9	16,6	14,1	8,6
Connection, ”	½			

Verso S 2100 F

Nominal air flow, m^3/h	2000
Panel thickness, mm	50
Unit weight, kg	73
Filters dimensions B×H×L, mm	858×287×46-M5
Electric power input of the fan drive at reference flow rate, W	2×170
Control panel	KOMFOVENT C5.1

The photo is intended for informational purposes only, exact details may vary.



Acoustic data

A-weighted sound power level L_{WA}, dB(A) at reference flow rate

Supply inlet	70
Supply outlet	75
Casing	52

A-weighted sound pressure level L_{PA}, dB(A)
10 m^2 normally isolated room, distance from casing – 3 m.

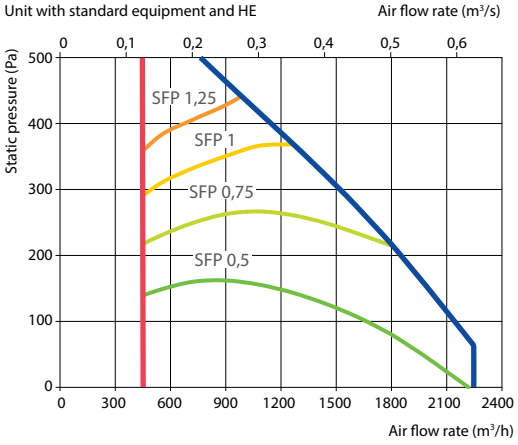
Surroundings	42

Technical data

Supply air handling unit	Supply voltage, V	Air heater capacity, kW	Maximal operating current, A	ΔT, °C
Verso S 2100 F-HE/15	3~400	15,0	25,0	21
Verso S 2100 F-HE/22,5	3~400	22,5	35,9	31
Verso S 2100 F-HW	1~230	28,8	3,8	47

Performance

Unit with standard equipment and HE



Hot water air heater

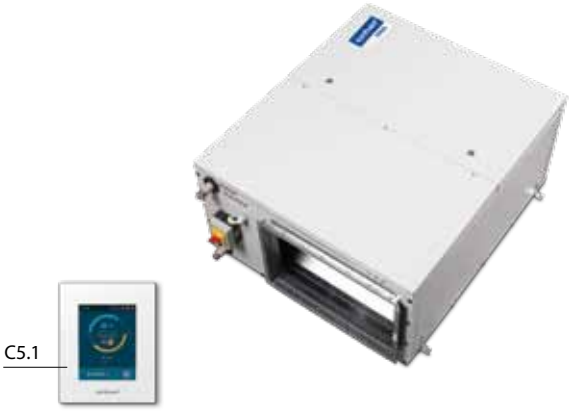
Water temperature in/out, °C	90/70	80/60	70/50	60/40
Capacity, kW	28,8	28,8	25,5	16,5
Flow rate, dm^3/h	1273	1257	1115	718
Pressure drop, kPa	7,6	7,8	6,4	3
Temperature in/out, °C	-23/20	-23/20	-23/15	-10/14,5
Maximal capacity, kW	33,3	29,5	25,5	16,5
Connection, ”		½		

komfovent®

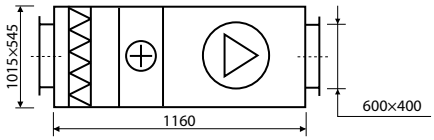
Verso S 3000 F

(Kompakt OTK 3000P)

Nominal air flow, m³/h	3000
Panel thickness, mm	45
Unit weight, kg	125
Filters dimensions B×H×L, mm	450×480×92-M5 (×2)
Electric power input of the fan drive at reference flow rate, W	1000
Control panel	KOMFOVENT C5.1



The photo is intended for informational purposes only, exact details may vary.



Acoustic data

A-weighted sound power level L_{WA}, dB(A) at reference flow rate

Supply inlet	71
Supply outlet	80
Casing	52

A-weighted sound pressure level L_{PA}, dB(A)
10 m² normally isolated room, distance from casing – 3 m.

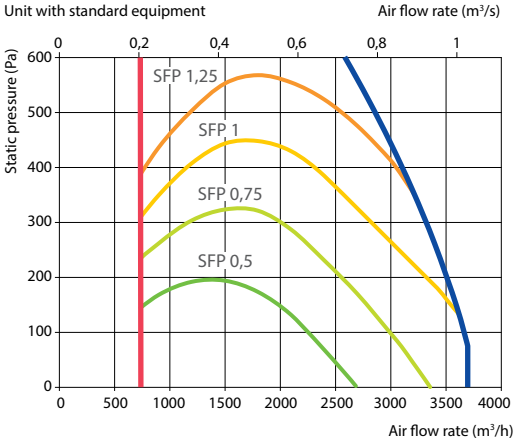
Surroundings	41

Technical data

Supply air handling unit	Supply voltage, V	Air heater capacity, kW	Maximal operating current, A	ΔT, °C
Verso S 3000 F-HW	3~400	43,3	2,7	43

Performance

Unit with standard equipment



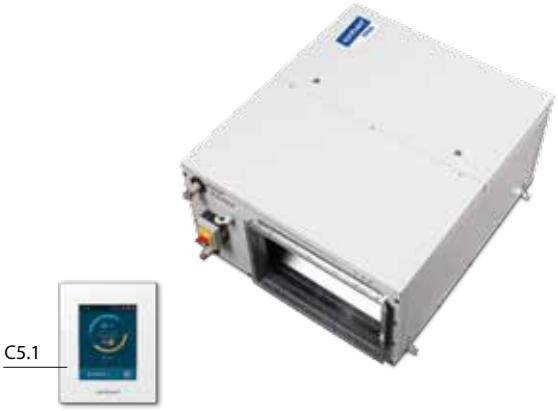
Hot water air heater

Water temperature in/out, °C	90/70	80/60	70/50	60/40
Capacity, kW	43,3	43,3	43,3	43,3
Flow rate, dm³/h	1909	1900	1892	1884
Pressure drop, kPa	2	2	2,1	2,2
Temperature in/out, °C	-23/20			
Maximal capacity, kW	82	72,6	63,2	53,8
Connection, ”	1			

Verso S 4000 F

(Kompakt OTK 4000P)

Nominal air flow, m^3/h	3700
Panel thickness, mm	45
Unit weight, kg	125
Filters dimensions B×H×L, mm	450×480×92-M5 (×2)
Electric power input of the fan drive at reference flow rate, W	1000
Control panel	KOMFOVENT C5.1



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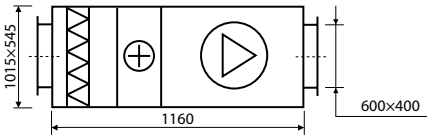


Acoustic data

A-weighted sound power level L_{WA}, dB(A) at reference flow rate

Supply inlet	74
Supply outlet	83
Casing	58

A-weighted sound pressure level L_{PA}, dB(A)
10 m^2 normally isolated room, distance from casing – 3 m.

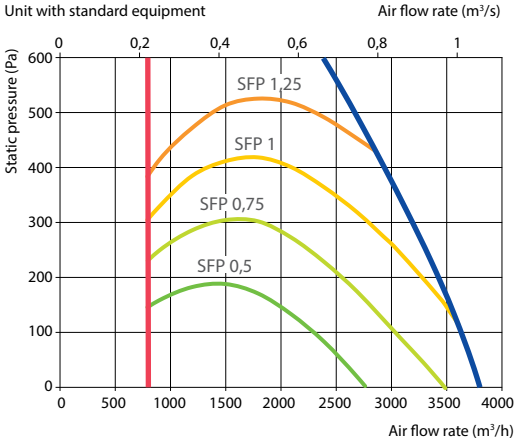
Surroundings	47

Technical data

Supply air handling unit	Supply voltage, V	Air heater capacity, kW	Maximal operating current, A	ΔT, °C
Verso S 4000 F-HW	3~400	55,8	2,7	45

Performance

Unit with standard equipment



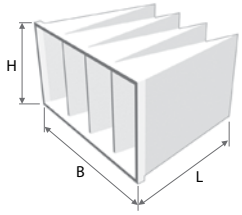
Hot water air heater

Water temperature in/out, °C	90/70	80/60	70/50	60/40
Capacity, kW	55,8	55,8	55,8	55,8
Flow rate, dm^3/h	2464	2453	2442	2432
Pressure drop, kPa	3,1	3,2	3,3	3,4
Temperature in/out, °C	-23/22			
Maximal capacity, kW	97,4	86,3	75,2	64,1
Connection, ”	1			

Accessories

Supply and exhaust filters

99,9 % (in amount) of particulates in the outdoor air are smaller than 1 µm. By mass the mentioned particulates account for only 30 % of all airborne dust. Thus, if the outdoor air is supplied to the public and dwelling houses, to ensure air purity required by hygienic standards, filters of M5-F7 class are enough. M5 class filters are used for filtering the exhaust air in air handling units. Air filtering protects air handling equipment against pollution, extends its service life. Therefore dirty filters should be replaced on a timely basis to assure comfortable conditions in the premises and protection of air handling units against breakage. A light on the control panel indicates the filter clogging. Usually air filters should be replaced not less than twice per year: after the end of the heating season and in autumn.



Filter classification and standards

Filters applied in the air handling units are classified according to EUROVENT 4/9 (EN 779 and EN 1882) system.

Types of filters

M5 (standard filter) or F7 (optional) class filters for supply air filter. Very compact, but are distinguished by extra large filtering surface. Large filtering surface provides long-life performance and low pressure losses (low pressure losses reduce power consumption). Ecologically clean materials allow just burning clogged air filters. Bag filters are used in bigger size units: M5 (or F7) classes for supply and for exhaust air.

Motorized closing dampers

To protect air handling units from freezing or other external factors motorized closing dampers must be used. They are mounted on supply and exhaust vents. There is dampers control possibility in automatic control system.

Unit size	Damper
R 1200 H/V/U/F R 1400 H/V/U	AGUJ-M-315
R 2000 F	AGUJ-M-355
R 1600 H/UH R 2000 H/UH R 2500 H/UH	SRU-M-300×400
R 1600 V/UV R 2000 V/UV R 2500 V/UV	SRU-M-400×300
R 3000 H/UH R 4000 H/UH R 4500 H/UH	SRU-M-400×500
R 3000 V/UV R 4000 V/UV R 4500 V/UV	SRU-M-500×400
RHP 1300 U RHP 1500 U	AGUJ-M-250
R 7000 H	SRU-M-1200×600

Unit size	Damper
P 1600 F	AGUJ-M-315
P 2000 F	AGUJ-M-315
CF 1300 H/V/U/F CF 1500 F CF 1700 H/V/U	AGUJ-M-315
CF 2300 H/UH	SRU-M-300×400
CF 2300 V/UV	SRU-M-400×300
CF 3500 UH	SRU-M-400×500
CF 3500 UV	SRU-M-500×400
S 1300 F	AGUJ-M-250
S 2100 F	SRU-M-750×250
S 3000 F S 4000 F	SRU-M-600×400

Control system	Actuator ON/OFF	
KOMFOVENT C3, C5	LF24	LM24

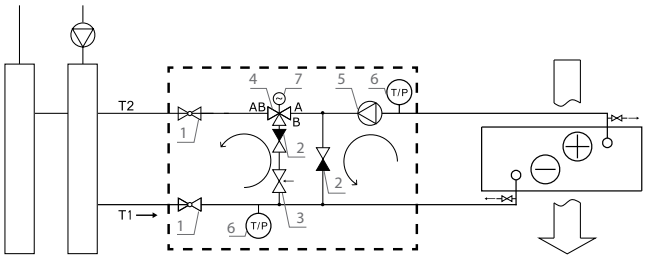
Note:
LF damper actuator is with spring-return.
LM damper actuator is without spring-return.

Electric ducted air heater (preheater)

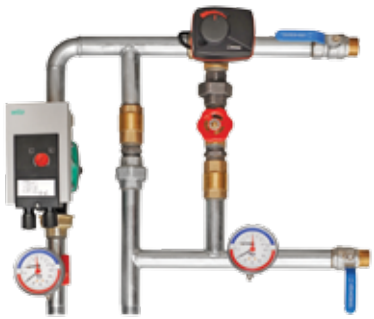
More information on page 71.

Pipework package

Pipework Package Units (PPU) are used for water heater power regulation, i.e. for temperature control of supplied air by mixing hot water from boiler with recycled water in heat exchanger. Fully assembled pipework package is available to each size of the air handing unit where hot water heater is used.



1. Stop valve
2. Return valve
3. Throttling valve
4. Control valve
5. Circulation pump
6. Manometer/ Thermometer
7. Actuator



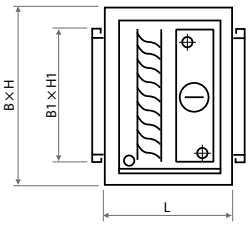
Unit size	Pipework Package
R 1200 R 1400	PPU-HW-3R-15-1.6-W2
R 1600 R 2000	PPU-HW-3R-15-2.5-W2
R 2500	PPU-HW-3R-20-4.0-W2
R 3000 R 4000	PPU-HW-3R-25-6.3-W2
R 4500 R 7000	PPU-HW-3R-25-10-W3

Unit size	Pipework Package
P 1600 P 2000	PPU-HW-3R-20-4.0-W2
CF 1300	PPU-HW-3R-15-2.5-W2
CF 1500 CF 1700 CF 2300	PPU-HW-3R-20-4.0-W2
CF 3500	PPU-HW-3R-25-6.3-W2

Unit size	Pipework Package
S 1300	PPU-HW-3R-25-6.3-W2
S 2100 S 3000	PPU-HW-3R-25-10-W3
S 4000	PPU-HW-3R-25-16-W3

Water and direct evaporation air coolers

Air cooler is mounted on the outside of the unit.
Casing of the cooler section corresponds to the unit's casing: galvanized steel sheets with internal mineral wool insulation of 45 mm thickness. Cooler section is assembled with a drop separator and a drain tray. Cooler control function is provided in the automatic control system of the unit.
Internal fluid – R410A, water 7 / 12. Air temperature in/out – 30 / 18 °C.



Unit size	Supply air volume, m³/h	Cooler's type	Capacity, kW	Air pressure drop*, Pa	Fluid pressure loss, kPa	B×H×L, mm	B1×H1, mm	Tubes connections, " / mm	Weight, kg
R 1200	1200	DCF-1,2-7	7,1	93	6,1	705×610×390	500×400	½ / 22	46
		DCW-1,2-8	8,1	60	6,3			¾	45
CF 1300 S 1300	1300	DCF-1,2-7	7,7	35	7,2	705×610×390	500×400	½ / 22	46
		DCW-1,2-8	8,8	67	7,3			¾	45
R 1400 CF 1500	1400	DCF-1,4-8	8,3	40	8,3	705×610×390	500×400	½ / 22	46
		DCW-1,4-9	9,4	78	8,3			¾	45
R 1600 P 1600 CF 1700	1600	DCF-1,6-10	9,5	118	11,2	755×610×420	500×400	½ / 22	49
		DCW-1,6-11	10,7	83	11,2			¾	46
R 2000 P 2000 S 2100	2000	DCF-2,0-12	11,9	106	3	920×610×420	700×400	½ / 22	57
		DCW-2,0-13	13,4	78	20,6			¾	57
R 2500 CF 2300	2500	DCF-2,5-15	14,9	92	3,8	1080×670×420	800×400	⅝ / 28	69
		DCW-2,5-17	16,9	55	28,3			1	65
R 3000 S 3000	3000	DCF-3,0-18	17,8	112	5,3	1080×670×420	800×400	⅝ / 28	69
		DCW-3,0-20	20,2	102	11			1	69
CF 3500	3500	DCF-4,0-24	20,75	52	6,5	1220×730×420	900×500	⅞ / 28	80
		DCW-4,0-27	23,3	73	13,2			1	82
R 4000 S 4000	4000	DCF-4,0-24	23,8	101	8,2	1220×730×420	900×500	⅞ / 28	80
		DCW-4,0-27	27	106	17,1			1	82
R 4500	4500	DCF-4,5-27	26,7	115	8,2	1220×790×420	900×600	⅞ / 28	84
		DCW-4,5-30	30,3	108	31,8			1	87
R 7000	7000	DCF-7,0-42	2×20,8	141	3,2	1500×790×480	1200×600	2×⅝ / 2×28	108
		DCW-7,0-47	46,5	138	23,4	1500×790×420		1 ½	105

* with drop eliminator.

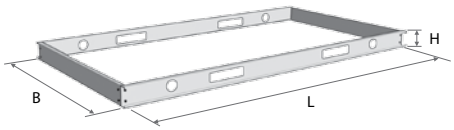
Accessories for unit outside installation

VERSO air handling units can be installed outside due to thick casing insulation and easy mounting. Protective optional accessories should be used if unit is for outside installation: roof, base frame, legs, grills, supply and exhaust hoods.

Unit size	Hood for supply air	Hood for exhaust air	Dimensions of the roof B×L, mm
R 1200 H/UH R 1400 H/UH	G-600×430	AHIA-315	1180×1555
R 1600 H/UH R 2000 H/UH R 2500 H/UH	G_755_448_00	G_755_448_10	1165×1700
R 3000 H/UH R 4000 H/UH R 4500 H/UH	G_540_1115_00	G_540_1115_10	1345×2400
R 7000 H	V-40-34-00.000.2	V-40-34-00.000	1790×2050
CF 1300 H/UH CF 1700 H/UH	G-600×430	AHIA-315	1193×2020
CF 2300 H/UH	G_355_870_00	G_355_870_10	1193×2020
CF 3500 UH	G_540_1115_00	G_540_1115_00	1345×2800

Standard base frame for air handling units

Unit size	Frame type	Dimensions B×L, mm
R 1200 H/V/U R 1400 H/V/U	SSK_00_1355_850_100_N_000	850x100x1355
R 1600 H/V/U R 2000 H/V/U R 2500 H/V/U	SSK_00_1485_850_100_N_000	850x100x1485
R 3000 H/V/U R 4000 H/V/U R 4500 H/V/U	SSK_00_2100_1100_100_N_000	1100×100×2100
R 7000 H		sold with a unit, not separately
CF 1300 H/V/U CF 1700 H/V/U	SSK_00_1810_850_100_N_000	850×100×1810
CF 2300 H/V/U	SSK_00_2000_850_100_N_000	850×100×2000
CF 3500 UH	SSK_00_2500_1100_100_N_000	1100×100×2500



Note: Standard frame is 100 mm height, without feet, painted RAL 7035.

Electric wiring of air handling units

When the air handling unit is installed, the user should just connect it to the mains power supply and install one temperature sensor in the supply air duct, and in case of need extend the connecting cable of the control panel. The units with a hot water air heater are provided with extra connecting cables for a heating damper drive, a pump, and an air damper drive. If the air handling unit voltage is ~230 V; 50 Hz it is necessary to install the socket with grounding of corresponding capacity. If the voltage is ~400 V; 50 Hz, the cable of electrical power supply is connected to the main switch, which is located on the unit's outside wall. The air handling units power supply cable types are specified in the table:

Unit size	Power supply cable
R 1200 E R 1400 E R 1600 E	5×1,5 mm²
R 2000 E R 2500 E R 3000 E	5×2,5 mm²
R 4000 E R 4500 E	5×6 mm²
R 1200 W R 1400 W R 1600 W R 2000 W R 2500 W	3×1,5 mm²
R 3000 W R 4000 W R 4500 W R 7000 W	5×1,5 mm²
RHP 1300 RHP 1500	5×1,5 mm²

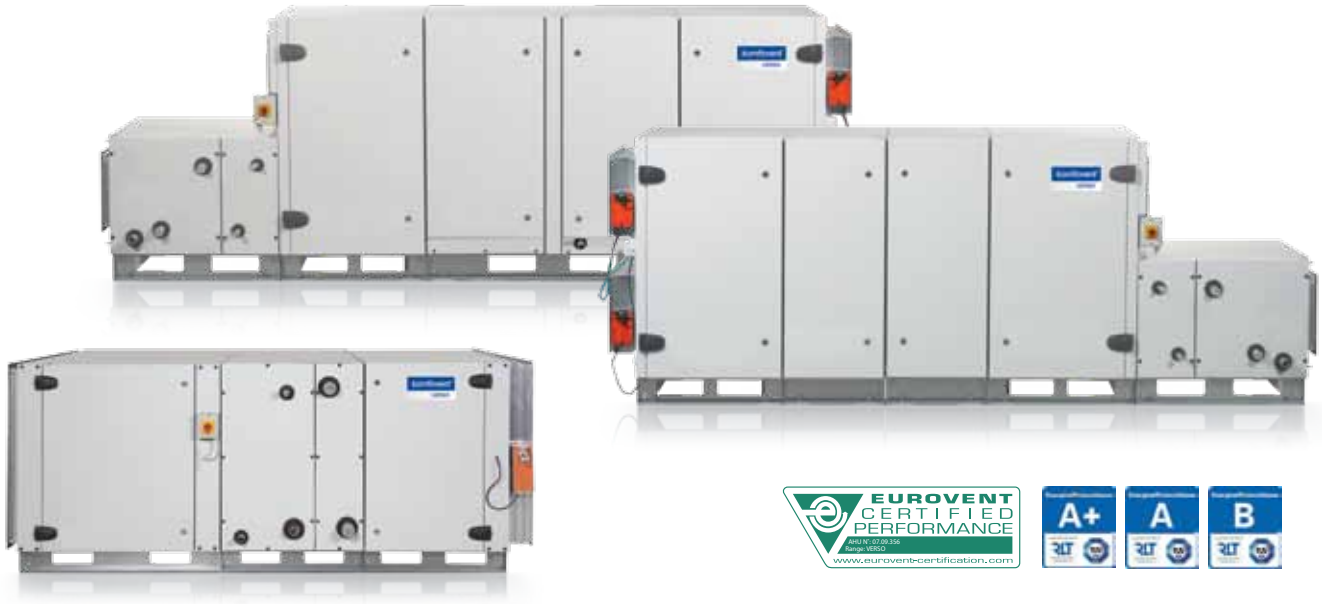
Unit size	Power supply cable
P 1600 E P 2000 E	5×2,5 mm²
P 1600 W P 2000 W	3×1,5 mm²
CF 1300 E CF 1500 E CF 1700 E	5×1,5 mm²
CF 2300 E	5×2,5 mm²
CF 1300 W CF 1500 W CF 1700 W CF 2300 W	3×1,5 mm²
CF 3500 W	5×1,5 mm²

Unit size	Power supply cable
S 1300 E/6	5×1,5 mm²
S 1300 E/9	5×2,5 mm²
S 1300 E/15 S 2100 E/15	5×4 mm²
S 2100 E/22,5	5×10 mm²
S 1300 W S 2100 W	3×1,5 mm²
S 3000 W S 4000 W	5×1,5 mm²

Control panel	Connection cabel for control panel (10 m)
C5.1, C5, C3.1	4×0,22 mm²

Verso 10–90

Heat recovery units' casing is comprised of three main sections. Two side sections are similar fan and filter sections. The middle section is for a heat exchanger. Supply air unit casing is composed of symmetrical filter and fan sections. For customer convenience air heaters, cooler sections are mounted outside the unit.



Convenient
Unit design assures effective transportation and easy installation. Separate parts are compact, without projection parts; therefore it is easy to transport them to a designated area of the building, where later they are assembled. Finished air handling units are delivered to the customer in packages that are ready to be transported.

Durable
Unit doors are mounted with firm and aesthetic-looking hinges and are locked with convenient and elegant locks. Door seals are made of firm and elastic foam type gaskets, which are automatically fastened to the door by the newest machinery and are long lasting and hermetic.

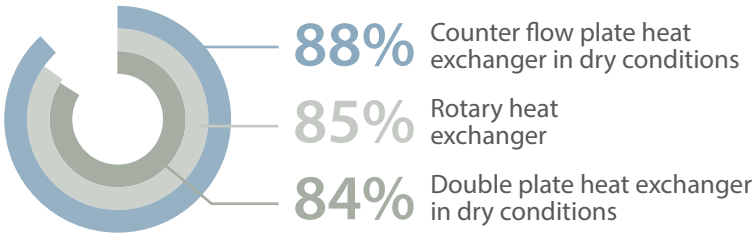
Universal
Unit walls are made of galvanized steel sheets with 50 mm thickness insulation. This assures not only effective heat and noise insulation, but also a high level of fire resistance.
Air handling unit accessories – external grilles for supply/ exhaust vents, hood and roof – allow installing units outside.

User friendly
Filters, fans, heat exchangers, coolers and other components are easily accessible during use; if necessary, they can be easily replaced. A new filter clamping mechanism, not only assures tightness, but also essentially simplifies filter change procedure.

Verso R	Verso RHP	Verso P	Verso CF	Verso S
units with a rotary heat exchanger	units with a rotary heat exchanger and heat pump	units with a plate heat exchanger	units with a counterflow plate heat exchanger	supply air units

Design

Increased efficiency for higher energy savings



Rotary heat exchanger

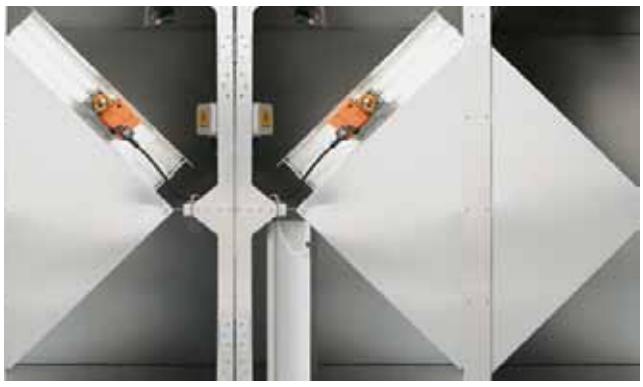
Used in Verso R series units. Temperature efficiency factor – up to 85 %. Possible wave height: 1,35 mm; 1,5 mm, 1,7 mm, 2,1 mm.
Types of rotary heat exchangers:

- Condensation (aluminium);
- Hygroscopic (aluminium and zeolith);
- Sorption (aluminium with silica gel or zeolith coating);
- Deep epoxy coating "Blygold" technology.

Aluminium foil is made of an aluminium alloy resistant to sea water. Rotary heat exchanger rotation speed is controlled by a frequency converter, according to the air temperature. The heat exchanger can be ordered with an installed purge section.

Counter flow plate heat exchanger

Used in Verso CF series units.
Temperature efficiency factor – up to 92 % in wet conditions and up to 88 % in dry conditions.
The plate heat exchanger is equipped with automatic by-pass.
Aluminium plates are made of an aluminium alloy resistant to sea water.



Double plate heat exchanger

Used in Verso P series units.
Temperature efficiency factor – up to 90 % in wet conditions and up to 84 % in dry conditions.
Aluminium plate-type heat exchangers are used in the units.
Aluminium plates are made of an aluminium alloy resistant to sea water.

Integrated heat pump with a rotary heat exchanger

HVAC SYSTEMS IN ONE UNIT

HEATING VENTILATION COOLING

Two energy recovery stages
Increased efficiency, lower compressor capacity, higher energy savings

I-st stage – energy recovery in cooling and heating modes by rotary heat exchanger up to 90 %

II-nd stage – energy recovery in heating mode by heat pump up to 100 %

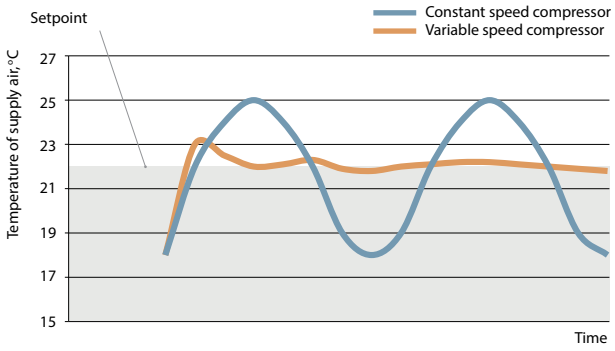
VERSO series air handling units with air source heat pumps are more efficient in heat recovery and could be used as a central air conditioner in a cooling mode.

We can offer units from 7 to 67 kW capacity in heating and from 7,5 to 61 kW capacity in cooling modes. The heat pump is controlled by a microprocessor that controls supply air parameters and ensures efficient energy use.

The refrigeration system of the heat pump includes a variable capacity scroll compressor that enables precise temperature control and efficient energy use. For best heat transfer Cu-Al evaporators and condensers are used. In all heat pumps, the R410A refrigerant, which has a zero ozone depletion potential, is used. A controlled 4-way valve automatically switches between cooling and heating modes.

The construction of the heat pump enables to do a defrost cycle by not turning the unit off. Defrost cycles are controlled by a microprocessor, that ensure defrost cycle start on demand. Components used in the units ensure safe and efficient work of the heat pumps.

Device management schedule

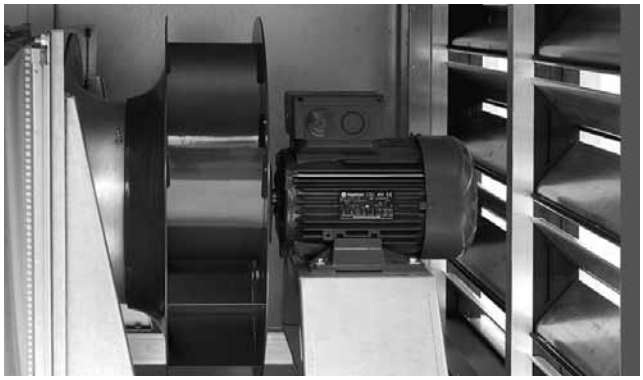


Heat exchangers

VERSO air handling units may generate different energy efficiency levels with four main types of heat exchangers. The most advanced one is a rotary heat exchanger with the thermal efficiency of 85% and the minimum risk of freezing. A counter cross-flow plate heat exchanger and a double plate heat exchanger are also highly effective and may have efficiency coefficients up to 92% or 82% correspondingly, however, they are very sensitive to low outdoor temperatures. A standard plate heat exchanger complete the range of the heat exchangers with the maximum efficiency of 70%. Aluminium is used as a material for the exchangers.

Anti-frost precautions

Under conditions when the outdoor air temperature is low and humidity is high, the risk of heat exchanger frosting may appear. To avoid frosting of the heat exchanger bypass damper is opened. For an extremely low outdoor air temperature the duct mounted electric preheater is recommended. The counter cross-flow heat exchanger is even more sensitive for low outside air temperatures, as the risk of frosting appears in the temperature range from -3°C to -5°C and below. A standard aluminium cross-flow plate heat exchanger has better features, as the risk of freezing appears only at -10°C. The lowest risk and the highest resistance to cold outside air is a competitive feature of the rotary heat exchanger, as it does not freeze even at the temperatures of -30°C if the humidity level of the air is appropriate.



Fans

In VERSO series units plug type fans are used, therefore, units are silent and use electricity effectively. The fans are balanced statically and dynamically, based on the ISO 1940 standard; therefore, unit vibration is minimal and meets all requirements.

When running, fans exhibit the following qualities:
- Very high efficiency coefficient.
- Frequency converters ensure an optimal capacity.
- Good acoustic performance.
- Longevity: a fan is directly connected to the electric motor; therefore, there is no a belt gear that simplifies maintenance.
- There is a possibility to install an air flow measuring device.

Two types of fan motors are available – three-phase asynchronous (AC) (400 V, 50 Hz), controlled by frequency converters, or electronically commutated (EC) with an integrated electronic controller with 100% speed regulation.
Safety category – IP55 according to IEC 34-5.
Windings insulation category – F.
Maximum operating temperature is 40°C.

An aluminium or high performance composite impeller has less weight and vibration force on motor bearings. A new design of the impeller can reach up to 73% of efficiency.

EC fans

Highly efficient in all operating areas, EC motors are available in all types of VERSO units and correspond to the IE4 premium efficiency level. High efficiency is determined by low energy consumption, high efficiency factor and the best values of the SFP factor. By using EC fans in VERSO units the following advantages are achieved:
- Extremely high efficiency;
- Valuable energy saving up to 30% comparing with AC;
- Integrated motor controller, no need for a frequency converter;
- Very smooth and silent operation;
- Long-life.

Air dampers

Closing air dampers installed in the air handling units are produced from aluminium with rubber sealing.
Connectors – L20.
For unit sizes 60, 70, 80 – L30, 90 – L40.
Dampers are located outside the unit; they can be made with an insulated damper casing.

Air filters

From G4 to F9 class synthetic or fiberglass pocket type filters are used.

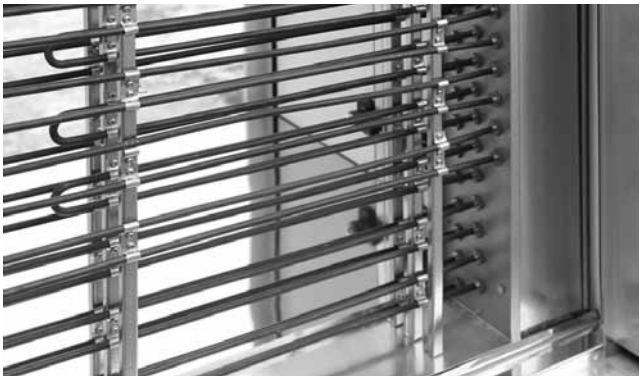
- Standard length of G4 class filters – 360 mm.
- Standard length of M5–F9 class filters – 500, 635 mm.

The filter clamping mechanism ensures tightness and simplifies a filter replacement procedure.

Air heaters

Water air heaters
Normally used with aluminium fins and copper pipes. Can be made with a thread joint to connect a freezing sensor. Insulated with a mineral wool heater section mounted on the outside of the unit – room space is saved this way; it is also more convenient to mount it.

- Maximum operating pressure – 21 bars.
- Maximum water temperature – +100°C (on special order – up to +130°C).
- Heated air temperature – up to +40°C.



Electric air heaters
Stainless steel heating elements are used in production. A three level protection ensure protection from overheating.
Protection class IP54 in accordance with IEC 34-5.
Heated air temperature – up to +40°C.

Note: exact electric air heater measurements and other information can be found in VERSO air handling units selection software. The electric heater has its own supply voltage.

Air coolers

Water air coolers
Normally used with aluminium fins (spacing 2,5 or 3 mm) and copper pipes. Insulated with a mineral wool heater section mounted on the outside of the unit – room space is saved this way and it is more convenient to mount it.
Maximum operating pressure – 21 bars.
The air cooler section is assembled with a stainless steel sloping drain tray and a water trap.

Direct evaporation air coolers
Normally used with aluminium fins (spacing 2,5 or 3 mm) and copper pipes. Insulated with a mineral wool heater section mounted on the outside of the unit – room space is saved this way; it is also more convenient to mount it.
Maximum operating pressure – 42 bars.
The cooler section is assembled with a stainless steel sloping drain tray and a water trap. The power of the direct evaporation air cooler can be divided into 2 or 3 steps. It is necessary to indicate this upon order.

Noise reduction sections

To avoid excessive pressure losses inside the air handling unit, duct mounted sound attenuation sections are offered for VERSO units.
The sound attenuation section of 900 mm length will reduce the noise to air ducts by 15 to 20 dB, a longer section of 1200 mm in length – by 20 to 25 dB. The width and height of these sections correspond to air handling unit dimensions.
The baffler-type sound absorber is installed inside this section. Bafflers are filled with special acoustic mineral stone wool and are covered by non-woven glass fibre felt certified to be inside the air duct. Mineral wool can be replaced with polyester wool in the case of a special request.
Splitters of the absorber can be easily removed from the section for dry or semi-wet washing for ventilation hygiene purposes.

The efficiency of the channel noise reduction section, in dB

No.	Length, mm	Efficiency dB when frequency Hz							
		63	125	250	500	1000	2000	4000	8000
10	900	10	19	27	31	33	32	27	17
	1200	13	26	35	42	44	43	36	22
20	900	6	13	17	21	22	21	18	11
	1200	8	17	23	27	29	28	24	15
30	900	7	13	18	22	23	22	19	12
	1200	9	18	24	29	30	30	25	15
40	900	6	13	18	21	22	21	18	11
	1200	8	17	23	27	29	28	24	15
50	900	6	12	17	20	21	21	18	11
	1200	8	16	22	27	28	27	23	14
60	900	8	15	21	25	26	25	21	13
	1200	10	20	28	33	34	34	28	18
70	900	7	14	20	23	25	24	20	13
	1200	10	19	26	31	33	32	27	17
80	900	7	14	19	23	24	23	20	12
	1200	9	18	25	30	32	31	26	16
90	900	7	14	20	23	25	24	20	13
	1200	10	19	26	31	33	32	27	17

Casing and outside grilles

Casing and outside grilles can be additionally mounted on the supply and exhaust vents of outdoor air handling units.

Roof

A roof with water drainage must be additionally installed on outdoor air handling units.

Height adjustable feet

The construction frame of the air handling unit with height adjustable feet makes it much easier to level the unit on the site.

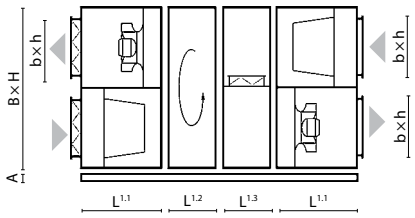
Door locks and handles

Easy to use door locks and handles ensure safe unit maintenance.

Dimensions

Modern air handling unit proportions allow reaching better technical parameters: a lower air flow velocity inside the unit, better acoustic data.

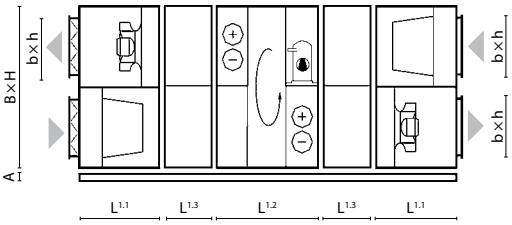
Verso R



Size	B	H	L1.1	L1.2	L1.3	b	h	A
10	1000	1000	618	370	435	700	300	125
20	1150	1150	751	370	435	900	400	125
30	1300	1300	751	370	435	1000	500	125
40	1500	1520	751	390	435	1200	600	125
50	1700	1715	885	390	435	1400	700	125
60	1900	1920	885	390	570	1600	800	125
70	2100	2100	885	390	705	1800	900	125
80	2300	2420	1250	510	841	2000	1000	125
90	2610	2650	1400	550	1040	2200	1100	125

Note: the electric air heaters, water heaters and coolers section length and configuration are noted in the selection program of VERSO air handling units.

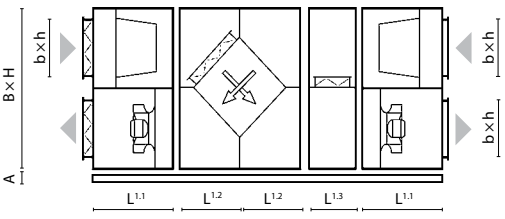
Verso RHP



Size	B	H	L1.1	L1.2	L1.3	b	h	A
10	1000	1000	618	900	250	700	300	125
20	1150	1150	751	900	250	900	400	125
30	1300	1300	751	900	250	1000	500	125
40	1500	1520	751	900	250	1200	600	125
50	1700	1715	885	900	250	1400	700	125
60	1900	1920	885	900	250	1600	800	125
70	2100	2100	885	900	250	1800	900	125
80	2300	2420	1250	1500	–	2000	1000	125
90	2610	2650	1400	1500	–	2200	1100	125

Note: the electric air heaters, water heaters and coolers section length and configuration are noted in the selection program of VERSO air handling units.

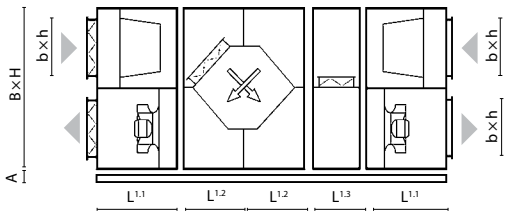
Verso P



Size	B	H	L1.1	L1.2	L1.3	b	h	A
10	1000	1000	618	422	435	700	300	125
20	1150	1150	751	570	435	900	400	125
30	1300	1300	751	570	435	1000	500	125
40	1500	1520	751	570	435	1200	600	125
50	1700	1715	885	707	435	1400	700	125
60	1900	1920	885	845	570	1600	800	125
70	2100	2100	885	845	705	1800	900	125
80	2300	2420	1250	1150	841	2000	1000	125
90	2610	2650	1400	1150	1040	2200	1100	125

Notes: size 20÷70 plate heat exchanger section is made of two parts. Size 10, 80 and 90 – of one part. The electric air heaters, water heaters and coolers section length and configuration are noted in the selection program of VERSO air handling units.

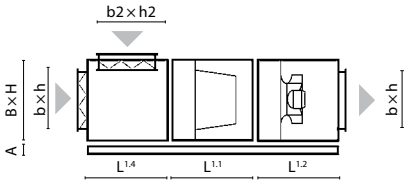
Verso CF



Size	B	H	$L^{1.1}$	$L^{1.2}$	$L^{1.3}$	L3	b	h	A
10	1000	1000	618	570	435	710	700	300	125
20	1150	1150	751	645	435	710	900	400	125
30	1300	1300	751	720	435	710	1000	500	125
40	1500	1520	751	720	435	710	1200	600	125
50	1700	1715	885	720	435	710	1400	700	125
60	1900	1920	885	920	570	710	1600	800	125
70	2100	2100	885	1060	705	710	1800	900	125
80	2300	2420	1250	1250	841	710	2000	1000	125
90	2610	2650	1400	1250	1040	710	2200	1100	125

Notes: size 20÷70 plate heat exchanger section is made of two parts. Size 10, 80 and 90 – of one part. The electric air heater section length is noted in the selection program of VERSO air handling units.

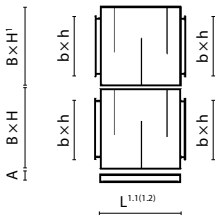
Verso S



Size	B	H	$L^{1.1}$	$L^{1.2}$	$L^{1.4}$	b	h	b1	h1	b2	h2	A
10	1000	490	750	705	430	900	400	700	300	700	300	125
20	1150	585	750	705	430	1100	500	900	400	1000	300	125
30	1300	660	750	705	470	1200	600	1000	500	1100	400	125
40	1500	740	750	842	470	1400	700	1200	600	1200	400	125
50	1700	890	750	842	470	1600	800	1400	700	1400	400	125
60	1900	960	750	979	570	1800	900	1600	800	1600	500	125
70	2100	1085	750	979	705	2000	1000	1800	900	1800	600	125
80	2300	1235	750	1250	705	2200	1100	2000	1000	2000	600	125
90	2610	1350	750	1400	705	2500	1200	2200	1100	2200	600	125

Note: the electric air heaters, water heaters and coolers section length and configuration are noted in the selection program of VERSO air handling units.

Silencer



Size	B	H	H^{1}	$L^{1.1}$	$L^{1.2}$	b	h	A
10	1000	490	510	900	1200	700	300	125
20	1150	585	565	900	1200	900	400	125
30	1300	660	640	900	1200	1000	500	125
40	1500	740	780	900	1200	1200	600	125
50	1700	890	825	900	1200	1400	700	125
60	1900	960	960	900	1200	1600	800	125
70	2100	1085	1015	900	1200	1800	900	125
80	2300	1235	1185	900	1200	2000	1000	125
90	2610	1350	1300	900	1200	2200	1100	125

komfovent®

KLASIK

Non residential ventilation units

Komfovent KLASIK

Customer oriented and unique energy efficient solutions.

The photo is intended for informational purposes only, exact details may vary.

Development of air handling units KLASIK allows to offer the customer reliable and qualitative equipment which technical parameters allow to create not only comfortable conditions of a microclimate in various premise, but also to correspond to modern ecological and energy efficient requirements. Carrying out the monitoring system of quality in conformance to standard ISO 9001, company AMALVA guarantees quality of the manufactured equipment performing and developing production according to all requirements of environment protection standard ISO 14001.

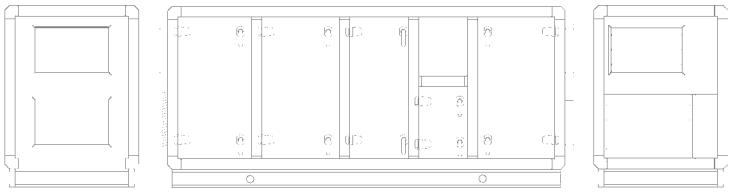
Air handling units KLASIK consist of system of modules which quantity and their functional purpose depends on requirements of the customer and features of the project. Ventilation equipment KLASIK may be offered with heat recovery or just as air supply or exhaust equipment. From the constructional point of view and depending on customer needs units may be monoblock (consisting of one common section in one level) and modular (consisting of several sections or modules). Air handling units are available in 14 sizes with airflows ranging from 1 000 m^3/h to 90 000 m^3/h (0,3 m^3/s to 25 m^3/s). Unit of bigger capacity (90 000 m^3/h and more) are also available and can be selected according to individual inquiries. All units are designed and made according LST, EN (EN 13053, EN 13779, EN 1886), VDI (VDI 6022, VDI 3803/1), RLT (RLT 01) standards.

KLASIK selection software is approved by EUROVENT.

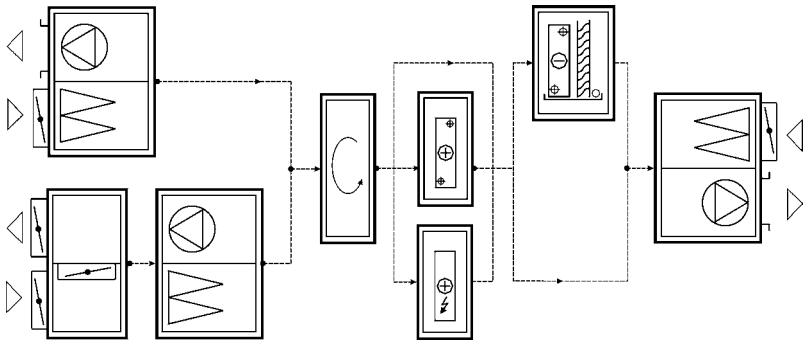
Unit types

Type Klasik R

Air handling units with a rotary heat exchanger.
Temperature efficiency and economy of energy up to 85 %.



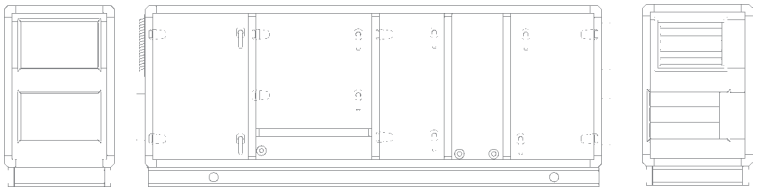
The photo is intended for informational purposes only, exact details may vary.



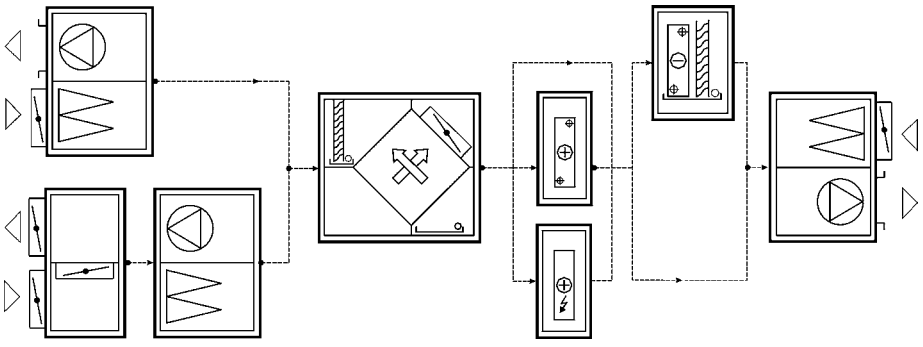
Possible sections connections

Type Klasik P

Air handling units with a cross-flow plate heat exchanger.
Temperature efficiency and economy of energy up to 70 % wet.



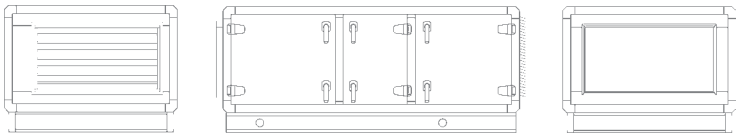
The photo is intended for informational purposes only, exact details may vary.



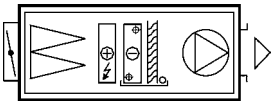
Possible sections connections

Type Klasik S

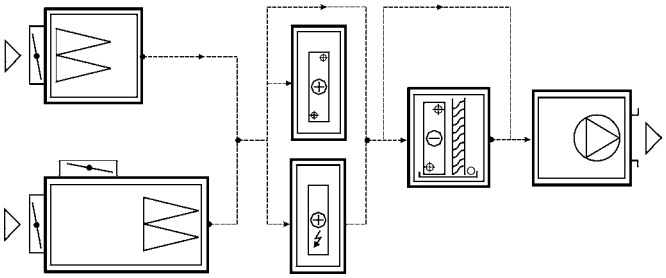
Supply or exhaust air handling unit without heat recovery.



The photo is intended for informational purposes only, exact details may vary.



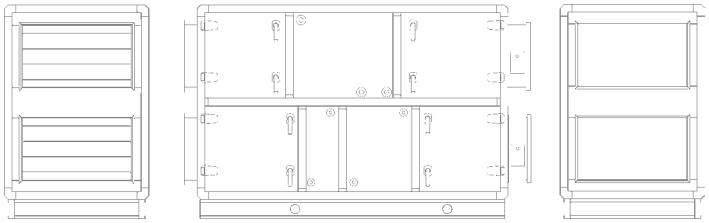
Monoblok

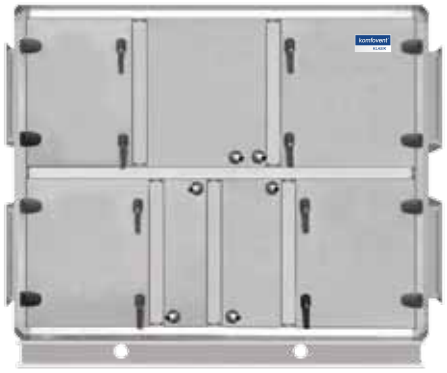


Possible sections connections

Type Klasik RA

Air handling units with twin-coil.
Temperature efficiency and economy of energy up to 55 %.



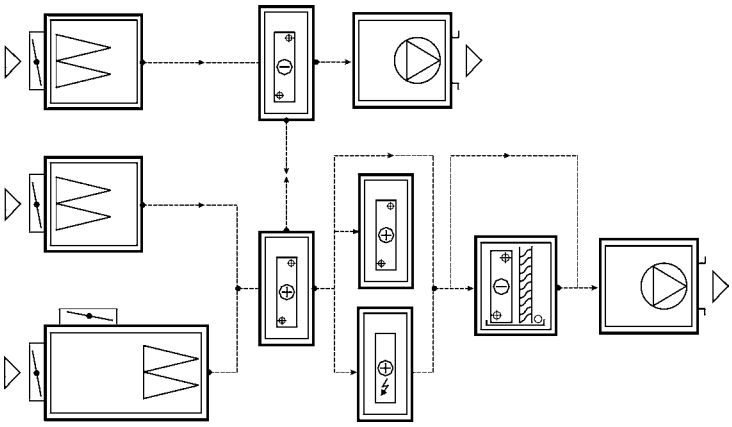


The photo is intended for informational purposes only, exact details may vary.

RA – supply/exhaust air handling units with separate air flows.

Advantages:

- Due to totally separate supply and exhaust air flows there is possibility to use the heat of polluted air.
- Supply air and exhaust air units can be mounted separately in different premises what is very important when mounting space is very limited.



Possible sections connections

Type Klasik S Hg, RA Hg

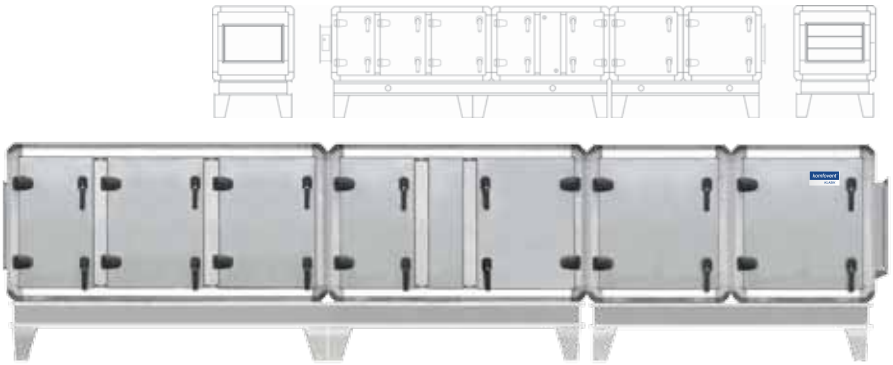
Ventilation equipment of hygienic purpose and clean premises ventilation.

Due to exploitation purposes very high hygienic requirements are applied to air handling units of S Hg, RA Hg type.

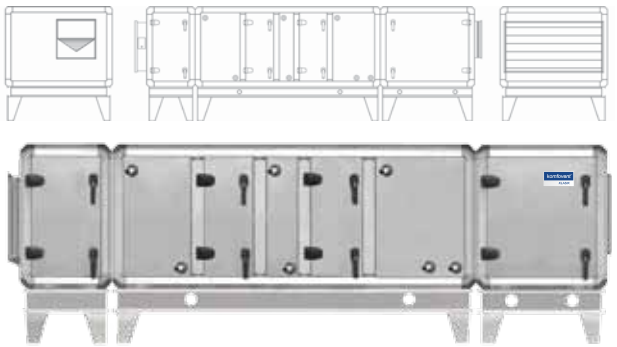
Internal surfaces of units S Hg, RA Hg are smooth, without protrusive elements and roughness to avoid and protect from accumulation of impurities and activators of illnesses.

All connections are additionally sealed by dustproof sealant. The bottom of equipment (and in case of need – all internal walls) is produced from stainless steel that allows washing and cleaning of internal surfaces with disinfectants.

Units can be made according VDI and non extended RLT requirements.

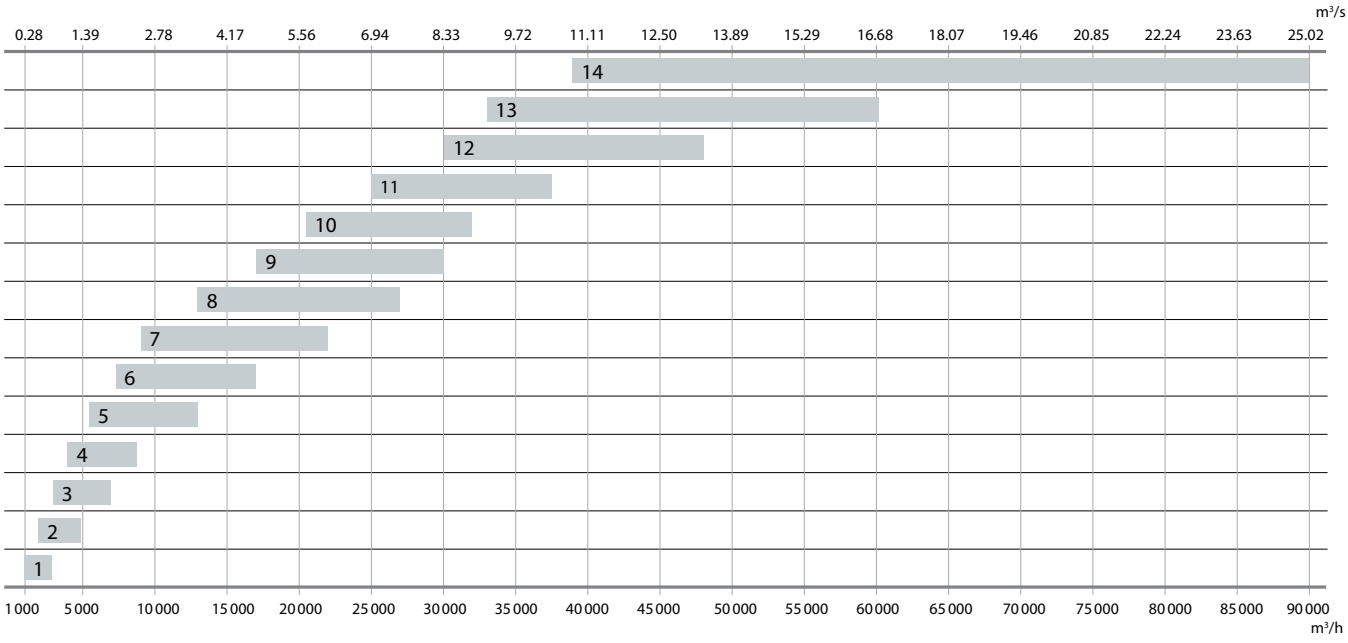


The photo is intended for informational purposes only, exact details may vary.



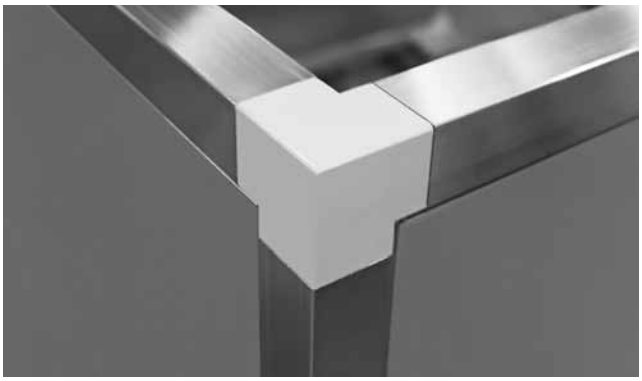
The photo is intended for informational purposes only, exact details may vary.

Air flow



All data can be calculated in KLASIK selection software. If data of performance do not correspond to data in selection software, please refer to data shown in software.

Design



Casing

Air handling units of KLASIK series characterize in reliable and stable design. Casing frameworks are made of aluminium profiles and solid cast aluminium corner pieces.
Covering panels are made from galvanized or stainless sheet steel and have two-layer construction. Panels are insulated with 50 mm thickness incombustible thermal and sound insulation pressed up to 45 mm.
On request casing can be painted. KLASIK gaskets and sealing are used to ensure perfect casing tightness and sound insulation. All doors are hinged and equipped with handles which can be locked.
Variable accessories such as adjustable feet, inspection windows, sections lighting, etc. are available on customers' request.
Unit casing corresponds to L2 for tightness requirement and T3 according to the common heat transfer coefficient in conformance to standard EN 1886.

Filters

KLASIK units pocket synthetic or fiberglass filters with a class of a filtration from G4 up to F9 are used.
Filters have big filtration surface what results in longer terms of exploitation.
Filters are fastened by clamping mechanism which secures tightness and simplifies filter replacement procedure.

Air dampers

Closing air dampers installed in the air handling units are produced from aluminium, or galvanized steel blades with rubber sealing.

Heat Exchanger

KLASIK air handling units can be supplied with:

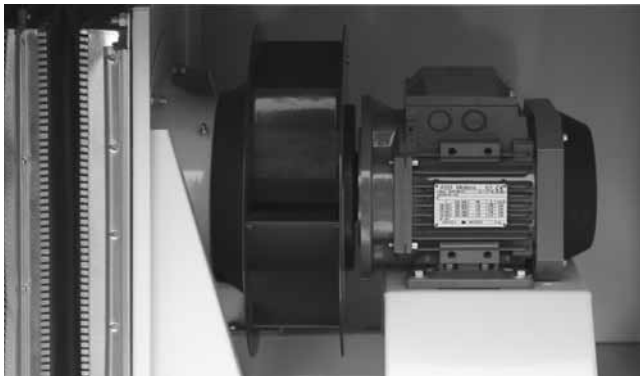
Rotary heat exchanger
Temperature efficiency – up to 85 %. Depending on required temperature efficiency η (%), the height of a wave of a rotor can be made from 1,35 mm up to 2,1 mm.

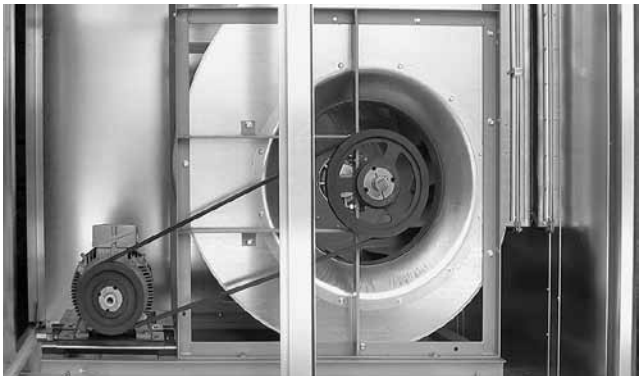
Rotors may be offered of four types:
- aluminium;
- aluminium with a hygroscopic covering;
- aluminium with an epoxy paint covering on embossed rotor edges;
- aluminium with deep epoxy coating "Blygold" technology.

The drive of a rotor is supplied with the frequency converter, allowing supporting an optimum heat exchanger operating mode, smoothly changing speed of rotation of a rotor.
Rotary heat exchanger can be equipped with purge sector on customers' request.

Plate heat exchanger
Temperature efficiency – up to 70% wet.
Heat exchanger is tight, both air flows are separate, use of heat of polluted air is possible. Plate heat exchangers with aluminium lamellas are used in KLASIK units.
There is a built – in bypass with damper for heat recovery regulation and exchanger frost protection.
Each unit with plate heat exchanger is equipped with stainless steel sloping drain tray and water trap.

Run around heat exchanger
Temperature efficiency – up to 55%.
In such system warming up the air exchanger is placed in the supply air and the cooling one – in the exhaust air. Exchangers are connected with pipes and in this contour water and glycol solution is circulating.
Air handling units with such heat recovery are used in cases when air streams must be absolutely separated or when on design features or other requirements unit must be installed on different floors. Heat exchangers are made of copper pipes with aluminium fins.





Fans

Fans statically and dynamically are balanced according to standard ISO 1940, correspond to class G2,5/6,3 (at the maximal rotations).
Thus, even at the maximum rotation of the fan, vibration is minimal and meets modern requirements to ventilating equipment.
Depending on air volume and required static pressure, several types of fans are used in equipment.

Plug fans with EC motor

Highly efficient in all operating areas, EC motors are available in all types of KLASIK units and correspond to the IE4 premium efficiency level. High efficiency is determined by low energy consumption, high efficiency factor and the best values of the SFP factor. By using EC fans in Klasik units the following advantages are achieved:

- extremely high efficiency up to 92 %;
- valuable energy saving up to 30 % comparing with AC in some applications;
- integrated motor controller, no need for a frequency converter;
- very smooth and silent operation;
- long-life;
- compact construction.

Plug fans with AC motor

Main advantages:

- high efficiency,
- smoothly adjustable productivity,
- good acoustic characteristics,
- durability.

The laminar stream after the fan wheel allows to lower losses of pressure in a network; there is an opportunity to connect the device for measurement of a stream of air. The fan is connected to the casing by frame with vibroizolators. AC three-phase fan's motor (400 V, 50 Hz) are controlled by frequency converters.
Class of safety IP55 on IEC 34-5, windings of motors has isolation of a category "F".
Working temperature up to 40°C.

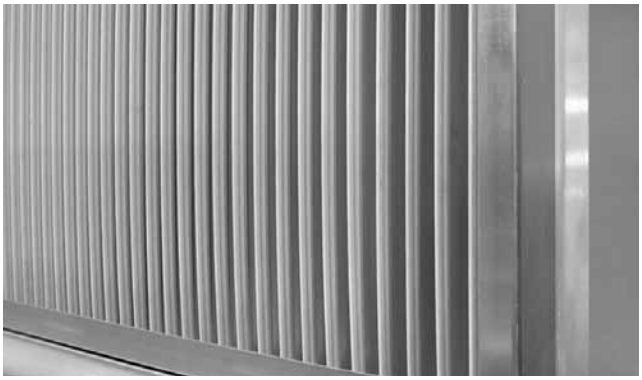
Belt driven radial double suction fans

Fans with backward – curved fans' blades insure KLASIK stability of work, provide a high pressure, and their efficiency reaches 85 %.
Fans with forward-curved blades operate on low speed, are quiet, the efficiency reaches 70 %.
Fans are delivered with the one-speed motors controlled by frequency converters.

Air Heaters

Hot water air heaters
In standard version normally used air heaters with aluminium lamellae (spacing 3 or 4 mm) and copper pipes.
Heater can be equipped with thread joint to connect freezing sensor.
Maximum operating pressure – 21 bar.
Maximum water temperature +130°C.
Heated air temperature up to +40°C.

Electric air heaters
Three-phase (400 V/50 Hz) stainless steel heating elements are used in production.
Two level protection ensures protection from overheating.
Protection class IP54 in accordance with IEC 34-5.
Heated air temperature up to +40°C.

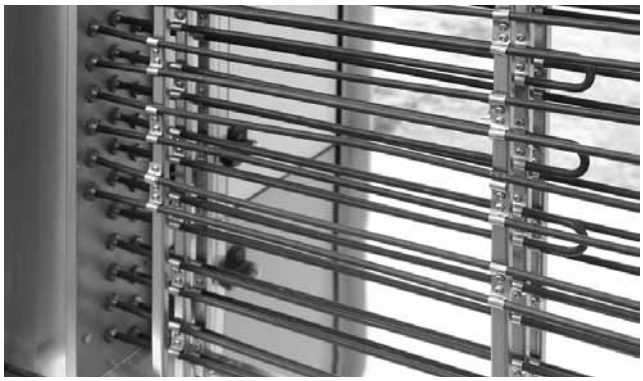


Coolers and Humidifiers

Water Air Coolers
Normally used with aluminium lamellae (spacing 2,5 or 3 mm) and copper pipes.
Maximum operating pressure – 21 bar.
Air cooler section assembled with stainless steel sloping drain tray and water trap manifold pipes are covered with a condensation-proof material.

Direct Evaporation Air Coolers
Normally used with aluminium lamellae (spacing 2,5 or 3 mm) and copper pipes.
Maximum operating pressure – 42 bar.
Air cooler section assembled with stainless steel sloping drain tray and water trap manifold pipes are covered with a condensation-proof material. Power of direct evaporation air cooler can be divided into stages. It is necessary to indicate this upon order.

Humidifiers
Low pressure steam humidifiers or atomizing humidifiers can be offer with equipment.



Atomizing humidifier

Sound attenuator section

Integrated sound attenuators or separated sound attenuators maybe offered with air handling units. High performance sound attenuators as well as ventilation unit ensures high sound attenuating level and are completely insulated casing. Inside the section, a wall sound attenuator is mounted. Its elements can be removed easily through the door without using tools. The elements should be removed one by one, not as a whole block, thus providing easy dry or semi-moist cleaning for the purpose of sanitation of the ventilation system. The elements of the sound attenuator are filled with acoustic silicate cotton used for an air channel. The silicate cotton is covered with a fibreglass mat preventing cotton particles from getting into an air channel when the airflow is running at high speed. The fibreglass mat is maximally resistant to the appearance of dust inside the air channel. Sound attenuators are available with two types of cotton: silicate cotton and polyester cotton (Dacron) with a fibre mat and polypropylene fibre covering.

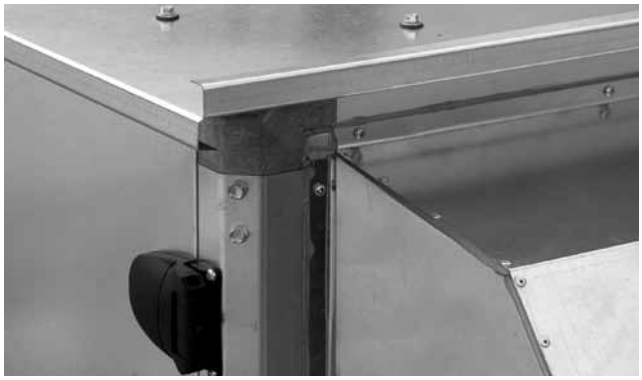
Additional accessories

KLASIK air handling units can be outdoor type.
For such outdoor performance there is complete set enclosed consisting of:

- a protective roof,
- intake and exhaust air hoods,
- external grilles.

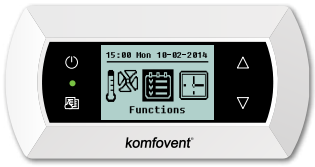
Also such additional elements are available:

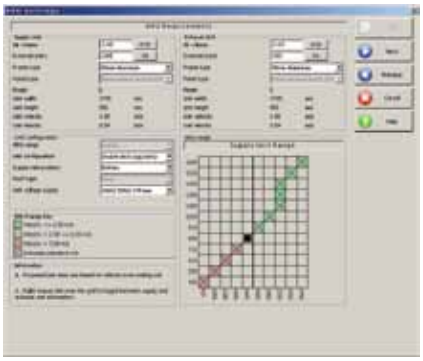
- inspection window,
- sections lighting.

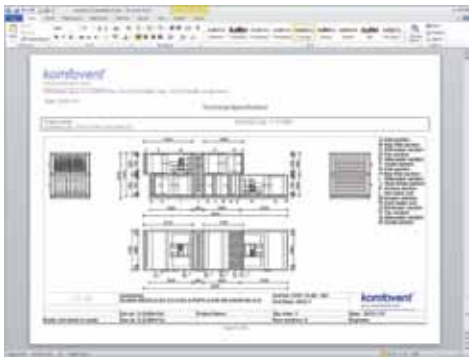


For each air handling unit the individual automation control system can be offered. Automatics of air handling units can be mounted in separate control boxes or integrated inside unit. Depending on a degree of complexity of ventilating system and required control functions producer equips control system with controllers KOMFOVENT C5.

For the most perfect control and management of equipment KOMFOVENT engineers have developed a computer control system for one as well as the whole complex of units controlling. More specific information about a specific unit can be obtained using KLASIK air handling unit operating program.







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Unit marking and ordering sample

Heater/characteristic
HW – water /xy
HE – electric / p
HDX – direct expansion / xyz
HS – steam / xy
HG – gas / p
HCW – reversible W / xy
HCDX – reversible DX / xyz
HW/DH – duct mounted water

Cooler/characteristic
CW – water / xy
CDX – direct expansion / xyz

x- number of rows
y - distance between the plates
p - power
z - number of circuits

Series
DOMEKT
VERSO
KLASIK

Unit size
200-900
1000-7000, 10-90
1–14

Duct connection
H – horizontal
V – vertical
U – universal
F – ceiling
HV – horizontal and vertical

Control
C3
C3.1
C4
C4.1
C5.1
C6

DOMEKT-R-200-L-V-EC/0.137-F7-M5-HE/1-X-L1-C4-O/By

Type of heat exchanger
R – rotary
P – plate
PP – double plate
RA – run around
CF – counter flow
RHP – rotary with heat pump
PHP – plate with heat pump
M – recirculation section
S – supply unit

Characteristic of heat exchanger

Rotary - wave height
L - 1,7 mm
XL - 1,5 mm
UL - 1,35 mm
/
AH – sorption silica gel
AZ – sorption zeolite
AE – aluminium epoxy coated
AZM – hygroscopic

Plate
C, M, L - distance between plates

Counter flow
1.6, 2, 2.5, 3 ... – distance between plates

Run around
xyz / xyz

Heat exchanger with heat pump
20/17 kW cooling/heating power

Supply Exhaust

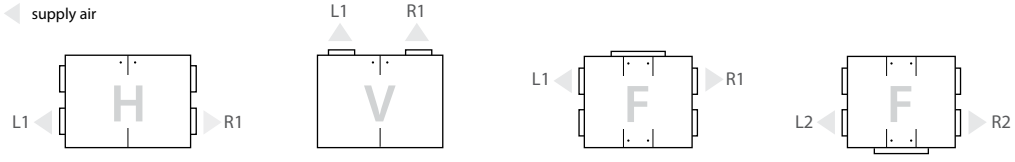
Air filter class
G4
M5
M6
F7
F8
F9

Motor
AC / IE4 (efficiency)
EC / p/p (supply/exhaust motor power)
PM / p (power)

Inspection side
R1
R2
L1
L2

Additional equipment/characteristic
Sa - silencer
Hu - humidifier
RAL 9001- color
By - external bypass
Hg - hygienic version
Out - outdoor version
Col - partial coloring

Inspection side:



Inspection side is determined by the supply air direction, looking at the unit from the user's side.

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

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