komfovent®


# VENTILATION EQUIPMENT

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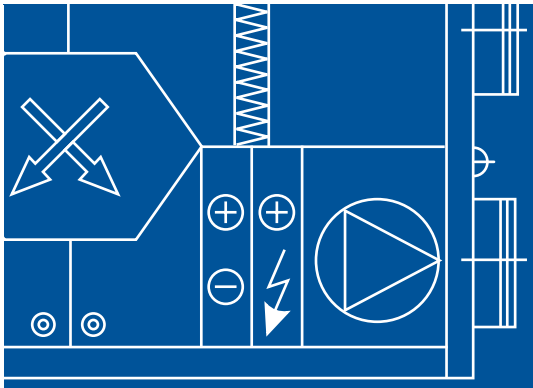

# KOMFOVENT range

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 1 000–7 000 that is a standardized range of AHUs, matching the same amount of the air flow (1000–7000 $m^3$/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 1 000–7 000 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.

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Why Komfovent? ... 4

Software ... 5

Automatic Control System ... 8

## DOMEKT
Residential ventilation units

15

Domekt R ... 17
units with a rotary heat exchanger

Domekt CF ... 52
units with a counter cross-flow plate heat exchanger

Domekt RHP ... 33
units with a rotary heat exchanger and an integrated heat pump

Domekt S ... 62
supply air units

Domekt P ... 38
units with a plate heat exchanger

## VERSO
Non residential ventilation units

73

Verso R 1000–7000 ... 76
units with a rotary heat exchanger

Verso CF 1300–1500 ... 98
units with a counter cross-flow plate heat exchanger

Verso RHP 1300–1500 ... 89
units with a rotary heat exchanger and an integrated heat pump

Verso S 1000–4000 ... 106
supply air units

Verso P 1000–7000 ... 94
units with a plate heat exchanger

Verso 10–90 ... 114
Non standard units

## KLASIK
Non residential ventilation units

123

Klasik R ... 125
units with a rotary heat exchanger

Klasik RA ... 126
supply air units with separate airflows

Klasik P ... 125
units with a plate heat exchanger

Klasik Hg ... 127
clean premises (hygienic) units

Klasik S ... 126
supply air units

# 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

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

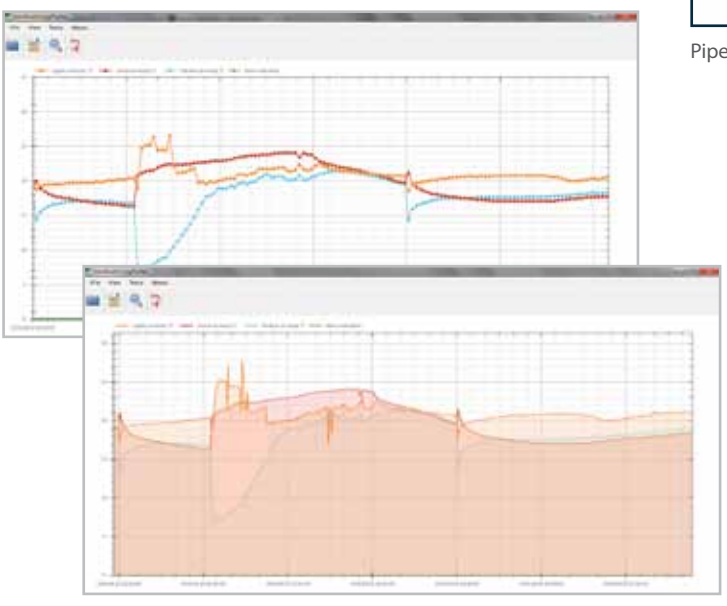
Technical data sheets present important technical parameters at a specified working point of the selected unit: efficiency, SFP, acoustics and other required data.

For air handling units:
- DOMEKT
- VERSO
- KLASIK

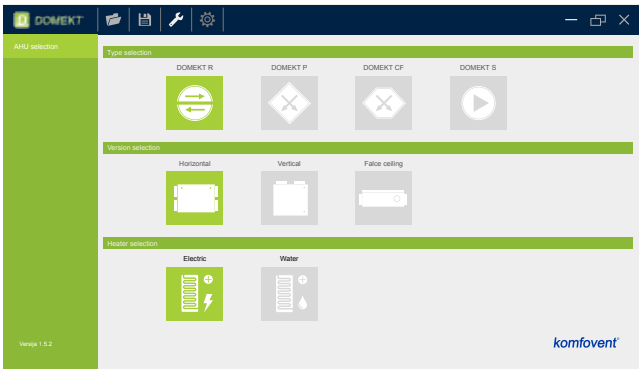
For ventilation systems components:
- Pipework Packages
- Rotary Heat Exchangers
- Water Coils
- Sound Attenuators

### 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.

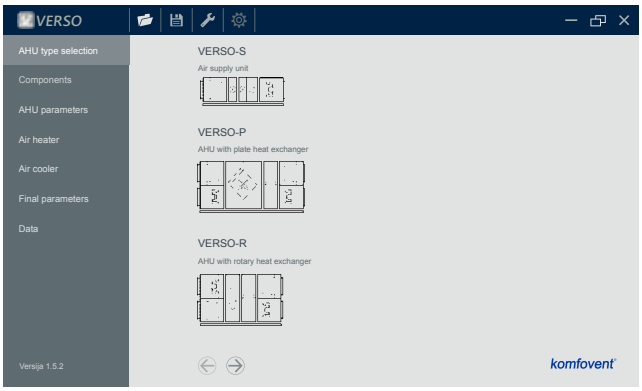
### LogPlotter
The computer program "Komfovent LogPlotter" has been designed to analyze the unit's operation history of the last 7 days. Unit's operation with C5 can be monitored not only in real-time from now on.



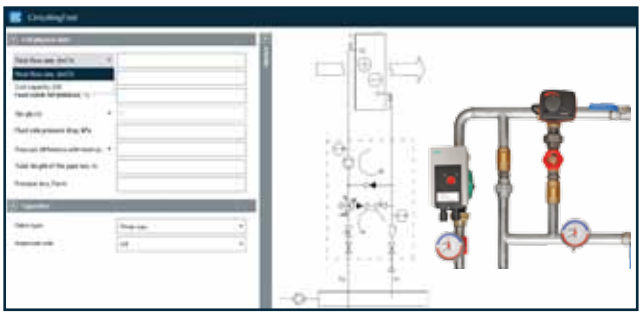
LogPlotter software




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

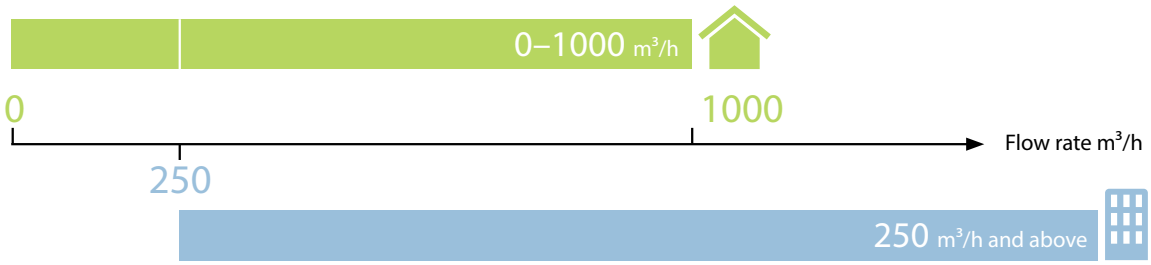
Under Directive 2009/125/EC energy-related products (ErP) representing significant volumes of sales and trade, having significant environmental impact within the Union and presenting significant potential for improvement in terms of their environmental impact, without entailing excessive costs, are to 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.



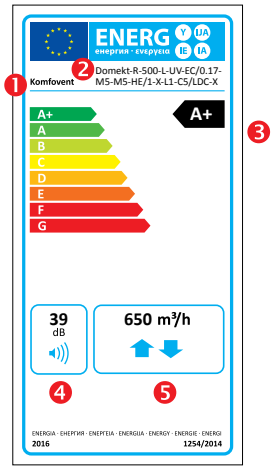

 

## Requirements for RVUs

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 |
|---|---|---|---|---|---|
| | | | The maximum internal specific fan power of ventilation components ($SFP_{int\_limit}$) $W/(m^3/s)$ | | |
| Year | The minimum thermal efficiency | Sound power level | up to 2 $m^3/s$ | over 2 $m^3/s$ | The maximum internal specific fan power of ventilation components ($SFP_{int\_limit}$) $W/(m^3/s)$ |
| 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 bi-directional 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

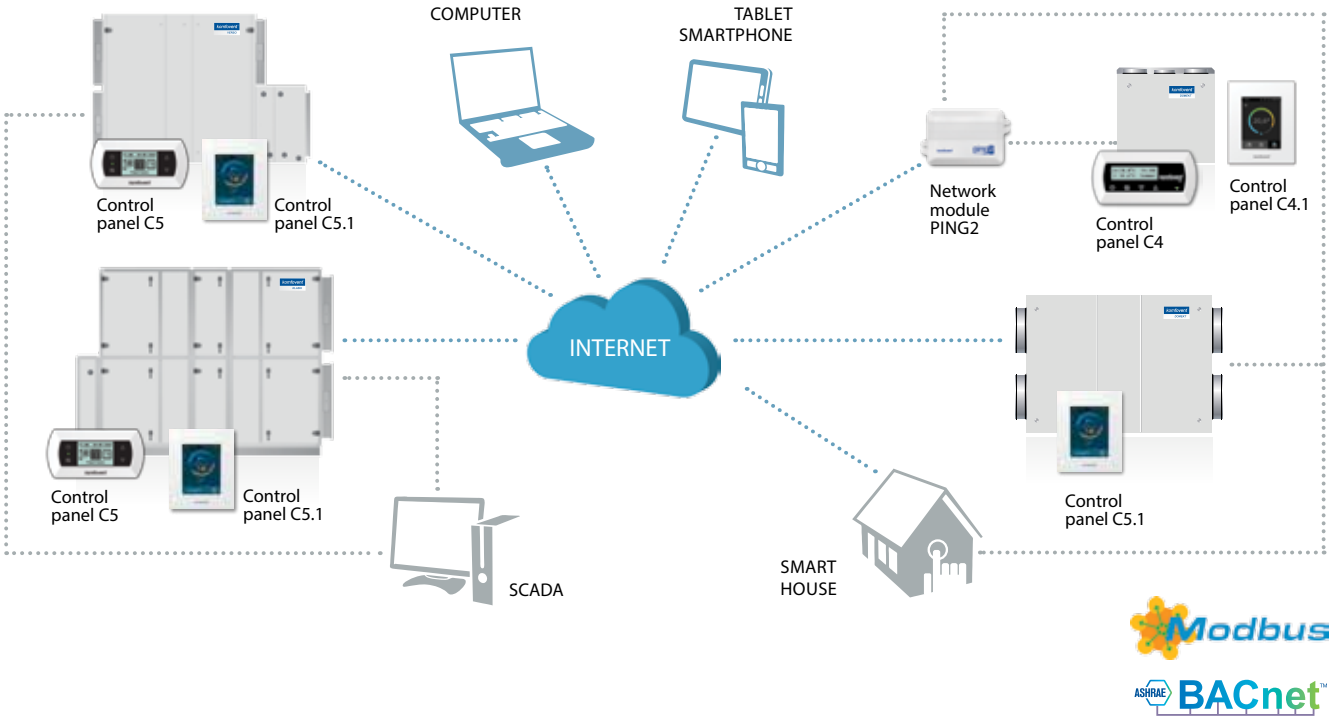
C5 C4 C3

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.

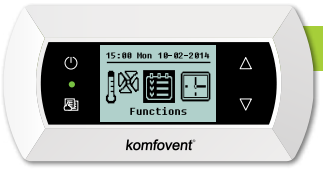
Scan the QR codes below and download mobile applications:

iOS

"Komfovent" application for units with integrated C5 control system

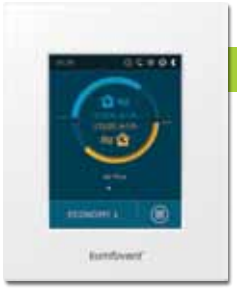

"Komfovent Home" application for units with integrated C4 control system

# 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

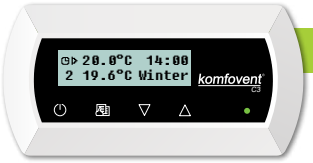
- Controlling up to 30 units connected into a network from one panel.
- Ability to connect the controller to the Internet network and manage it via a standard internet browser without any accessories.
- Possibility to control air handling unit by Smartphone via Android OS or iOS application software.
- 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

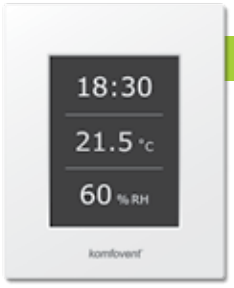
| Extended C5 control functions in addition to C3 | |
|---|---|
| Air quality control | Two different air quality values may be set for two different unit operating modes (e.g. *Comfort* and *Economy*). These values will be maintained by automatically increasing or reducing the intensity of ventilation |
| 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 |

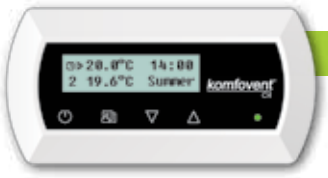
| | |
|---|---|
| Summer night cooling[3] | In summer night time, when cooling is required, ventilation intensity level is automatically switched to the third intensity level. Air is cooled only by outdoor air, without heat or coolness recovery and additional air cooling or heating |
| Exhaust air flow 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$^0$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.

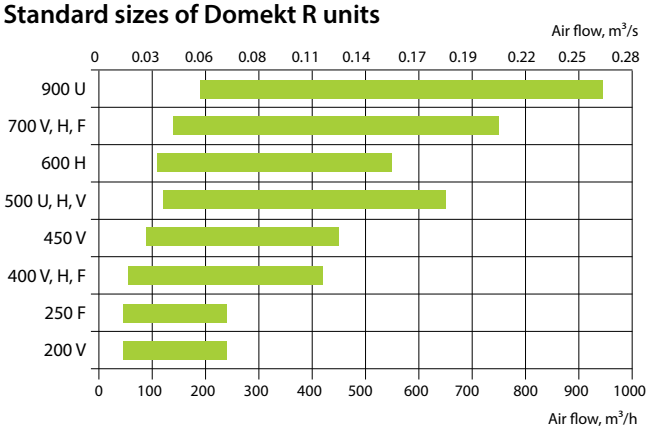
Due to the availability of clever design and functions the units offer a great opportunity to keep running costs low, they are safe, reliable and durable in operation. The air is filtered and supplied clean and fresh to the premises, which is especially advisable to allergic people.

| 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.
Capacity range 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 | | | | Connection versions | | | | | Supply/ exhaust air filter class | | Heater | | | Cooler | | Inspection side | | | | Control system | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Type | | Wave height | | | | | | | | | | | | | | | | | | C4 panel | | C5 panel |
| | AL | AZ* | L | XL | H | V | U | F | HV | 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 V | ● | ○ | ● | ○ | | ● | | | | ● | ○ | ● | △ | △ | △ | △ | ○ | | ○ | | | | ● |
| Domekt R 500 H | ● | ○ | ● | ○ | ● | | | | | ● | ○ | ● | △ | △ | △ | △ | ○ | | ○ | | | | ● |
| Domekt R 500 U | ● | ○ | ● | ○ | ○ | ○ | ● | | ○ | ● | ○ | ○ | | ○ | △ | △ | ○ | | ○ | | | | ● |
| Domekt R 600 H | ● | ○ | ● | ○ | ● | | | | | ● | ○ | ● | △ | △ | | | ○ | | ○ | | ● | ○ | |
| Domekt R 700 V | ● | ○ | ● | ○ | | ● | | | | ● | ○ | ● | △ | △ | △ | △ | ○ | | ○ | | | | ● |
| Domekt R 700 H | ● | ○ | ● | ○ | ● | | | | | ● | ○ | ● | △ | △ | △ | △ | ○ | | ○ | | | | ● |
| Domekt R 700 F | ● | ○ | ● | ○ | | | | ● | | ● | ○ | ● | △ | △ | △ | △ | ○ | ○ | ○ | ○ | | | ● |
| Domekt R 900 U | ● | ○ | ● | ○ | ○ | ○ | ● | | ○ | ● | ○ | ○ | | ○ | △ | △ | ○ | | ○ | | | | ● |

● standard equipment
○ possible choice
△ duct water heater/cooler ordered separately
* available only L wave height

### 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 standard, Domekt units are equipped with L optimal wave height of the rotors. In exceptional cases, requiring increased temperature devices utility, they can be equipped with enhanced XL surface area of the rotors.

### Duct connection

H – horizontal.
V – vertical.
U – universal, 14 installation options.
F – false ceiling.
HV – horizontal or vertical (only for universal units).

### Heater

HE – electric heater.

HW – water duct heater is installed on the duct 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.
Design:
- Galvanized sheet steel casing.
- Copper pipes for heat transfer fluid (water).
- Spacing between profiled aluminum plates is 3 mm (standard spacing). Optional threaded connection for freezing protection alarm sensor (to be specified in the order form).

Capacitive constraints:
- Maximum operating pressure – 10 bar.
- Maximum water temperature +100°C.
- Maximum airflow velocity through the heater 3 m/s.

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. 134.

### 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)

| | |
|---|---|
| Nominal air flow, m³/h | 250 |
| 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 | 285x130x45-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 | 67 |
| Electric air heater capacity, kW / Δt, °C | 0,8 / 15 |
| 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 | 51 |
| Exhaust Outlet | 65 |
| Casing | 30 |

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

| | |
|---|---|
| Surroundings | 19 |

## Temperature efficiency

| | Winter | | | | | Summer |
|---|---|---|---|---|---|---|
| Outside temperature, °C | -23 | -15 | -10 | -5 | 0 | 30 |
| After heat exchanger*, °C | 15,7 | 16,9 | 17,6 | 18,2 | 18,9 | 23,1 |

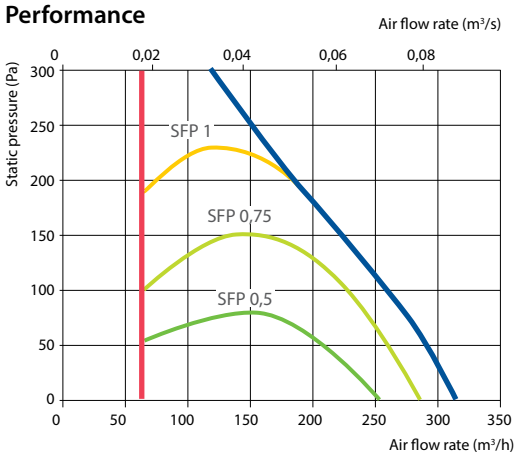
* indoor +22°C, 20 % RH

## Hot water duct air heater (DH)**

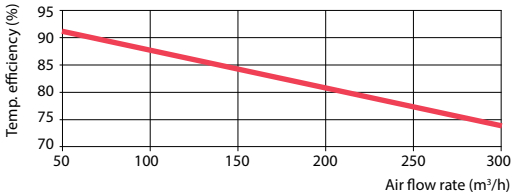
| | Winter | | | |
|---|---|---|---|---|
| Water temperature in/out, °C | 90/70 | 80/60 | 70/50 | 60/40 |
| Capacity, kW | 0,5 | 0,5 | 0,5 | 0,5 |
| Flow rate, dm³/h | 23 | 22 | 22 | 22 |
| Pressure drop, kPa | 1 | 1 | 1 | 1 |
| Temperature in/out, °C | 15,7/22 | | | |
| Maximal capacity, kW | 1,8 | 1,4 | 1,1 | 0,8 |
| Connection, ” | ½ | | | |
| Dimensions, mm | 315×315×220 | | | |
| Hot water duct heater type | DH-125 | | | |

** option

## Performance

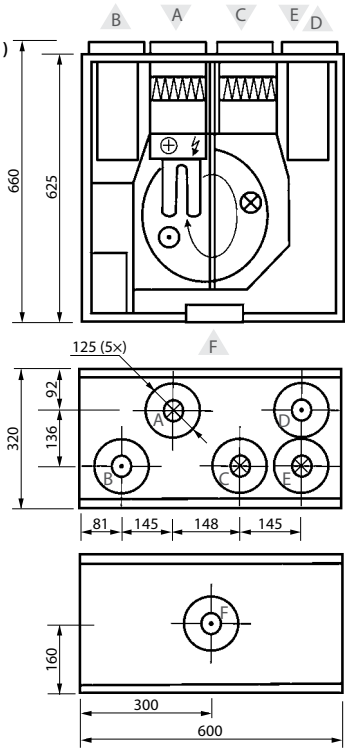



## Temperature efficiency




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

**Shown as left (L1)**




**Shown as right (R1)**


**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)

| | |
|---|---|
| Nominal air flow, m³/h | 250 |
| 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, % | 82 |
| Reference flow rate, m³/s | 0,05 |
| Reference pressure difference, Pa | 50 |
| SPI, W/(m³/h) | 0,48 |
| Filters dimensions B×H×L, mm | 278×258×46-M5 |
| Electric power input of the fan drive at reference flow rate, W | 36 |
| Electric power input of the fan drive at maximum flow rate, W | 96 |
| Electric air heater capacity, kW / Δt, °C | 1,0 / 16,5 |
| 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 | 68 |
| Exhaust Inlet | 61 |
| Exhaust Outlet | 68 |
| Casing | 42 |

**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 | -23 | -15 | -10 | -5 | 0 | 30 |
| After heat exchanger*, °C | 12 | 13,8 | 14,9 | 16 | 17,1 | 23,8 |

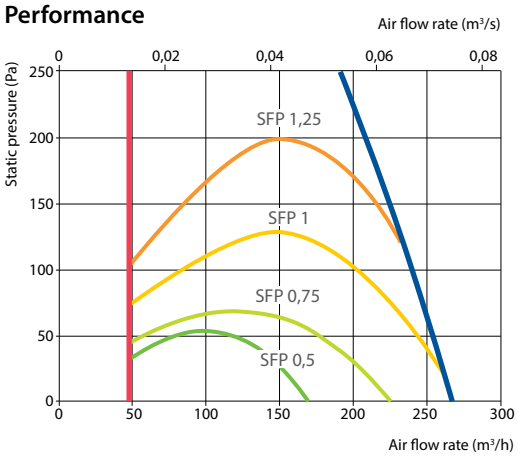
* indoor +22°C, 20 % RH

## Hot water duct air heater (DH)**

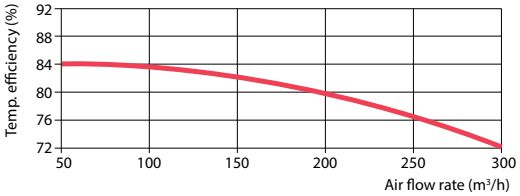
| | Winter | | | |
|---|---|---|---|---|
| Water temperature in/out, °C | 90/70 | 80/60 | 70/50 | 60/40 |
| Capacity, kW | 0,8 | 0,8 | 0,8 | 0,8 |
| Flow rate, dm³/h | 36 | 36 | 36 | 36 |
| Pressure drop, kPa | 1 | 1 | 1 | 1 |
| Temperature in/out, °C | 12/22 | | | |
| Maximal capacity, kW | 2,2 | 1,8 | 1,3 | 0,9 |
| Connection, ” | ½ | | | |
| Dimensions, mm | 315x315x220 | | | |
| Hot water duct heater type | DH-160 | | | |

** option

## Performance

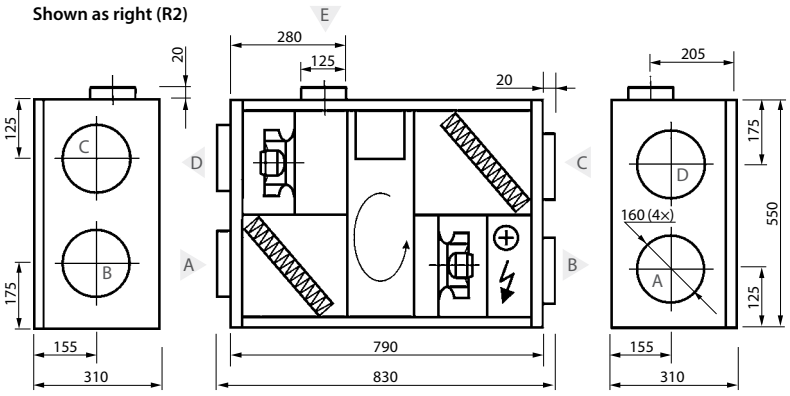



## Temperature efficiency

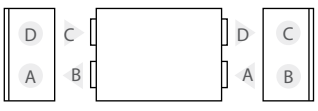



Indoor and outdoor ΔT=13°C re: *Ecodesign 1254/2014.*

**Shown as right (R2)**




**Shown as left (L2)**




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

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# Domekt R 400 V

(Domekt REGO 400V)

| | |
|---|---|
| Nominal air flow, $m^3/h$ | 290 |
| 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, $m^3/s$ | 0,06 |
| Reference pressure difference, Pa | 50 |
| SPI, $W/(m^3/h)$ | 0,26 |
| Filters dimensions B×H×L, mm | 450×210×46-M5 |
| Electric power input of the fan drive at reference flow rate, W | 21 |
| Electric power input of the fan drive at maximum flow rate, W | 67 |
| Electric air heater capacity, kW / Δt, °C | 1,0 / 14 |
| 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 | 54 |
| Supply Outlet | 67 |
| Exhaust Inlet | 52 |
| Exhaust Outlet | 67 |
| Casing | 31 |

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

| | |
|---|---|
| Surroundings | 20 |

## Temperature efficiency

| | Winter | | | | | Summer |
|---|---|---|---|---|---|---|
| Outside temperature, °C | -23 | -15 | -10 | -5 | 0 | 30 |
| After heat exchanger*, °C | 16,2 | 17,2 | 17,8 | 18,5 | 19,1 | 23 |

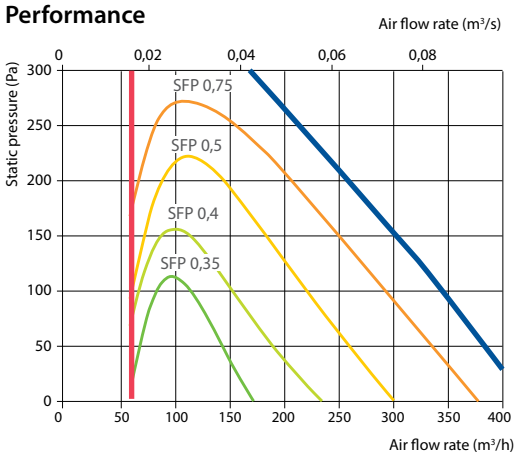
* indoor +22°C, 20 % RH

## Hot water duct air heater (DH)**

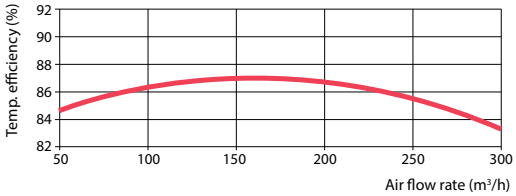
| | Winter | | | |
|---|---|---|---|---|
| Water temperature in/out, °C | 90/70 | 80/60 | 70/50 | 60/40 |
| Capacity, kW | 0,6 | 0,6 | 0,6 | 0,6 |
| Flow rate, $dm^3/h$ | 25 | 24 | 24 | 24 |
| Pressure drop, kPa | 1 | 1 | 1 | 1 |
| Temperature in/out, °C | 16,2/22 | | | |
| Maximal capacity, kW | 2 | 1,6 | 1,2 | 0,9 |
| Connection, ” | ½ | | | |
| Dimensions, mm | 315×315×220 | | | |
| Hot water duct heater type | DH-160 | | | |

** option

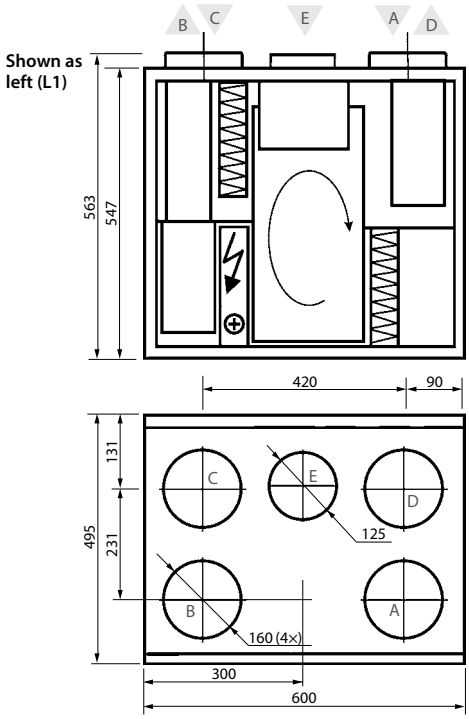
## Performance




## Temperature efficiency




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

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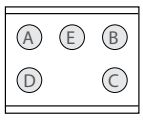
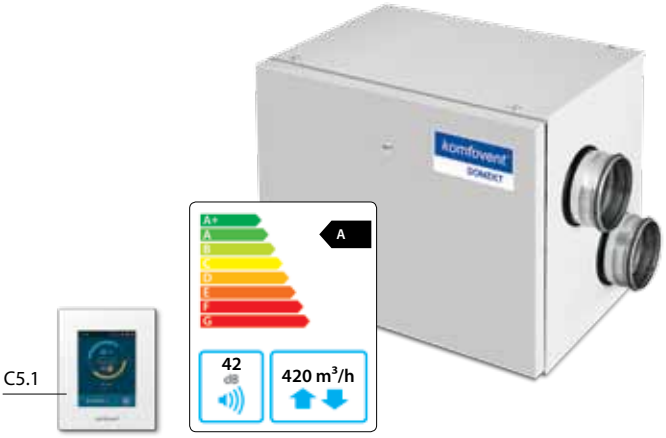



**A** outdoor intake
**B** supply air
**C** extract indoor
**D** exhaust air
**E** additional extraction connection (by-pass – extraction without heat recovery)

# Domekt R 400 H

(Kompakt REGO 400H)

| | |
|---|---|
| Nominal 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) | 0,34 |
| Filters dimensions B×H×L, mm | 410×200×46-M5 |
| Electric power input of the fan drive at reference flow rate, W | 47 |
| Electric power input of the fan drive at maximum flow rate, W | 94 |
| Electric air heater capacity, kW / Δt, °C | 1,0 / 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 | 59 |
| Supply Outlet | 68 |
| Exhaust Inlet | 60 |
| Exhaust Outlet | 68 |
| Casing | 42 |

**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 | -23 | -15 | -10 | -5 | 0 | 30 |
| After heat exchanger*, °C | 12,2 | 13,7 | 14,6 | 15,5 | 16,4 | 21,8 |

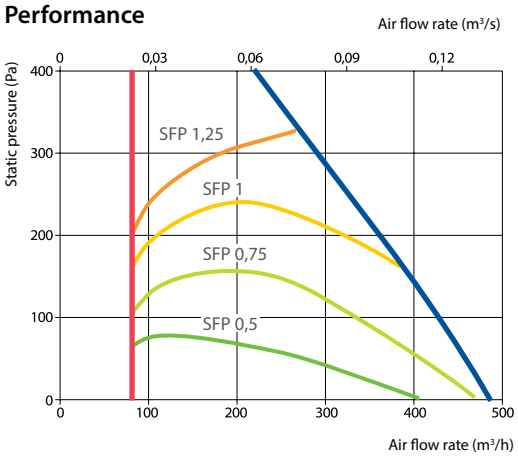
* indoor +22°C, 20 % RH

## Hot water duct air heater (DH)**

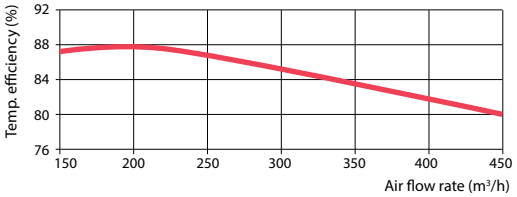
| | Winter | | | |
|---|---|---|---|---|
| Water temperature in/out, °C | 90/70 | 80/60 | 70/50 | 60/40 |
| Capacity, kW | 1,4 | 1,4 | 1,4 | 1,4 |
| Flow rate, dm³/h | 62 | 61 | 61 | 61 |
| Pressure drop, kPa | 1 | 1 | 1 | 1 |
| Temperature in/out, °C | 12,2/22 | | | |
| Maximal capacity, kW | 3,6 | 2,9 | 2,2 | 1,6 |
| Connection, ” | ½ | | | |
| Dimensions, mm | 315×315×220 | | | |
| Hot water duct heater type | DH-160 | | | |

** option

## Performance

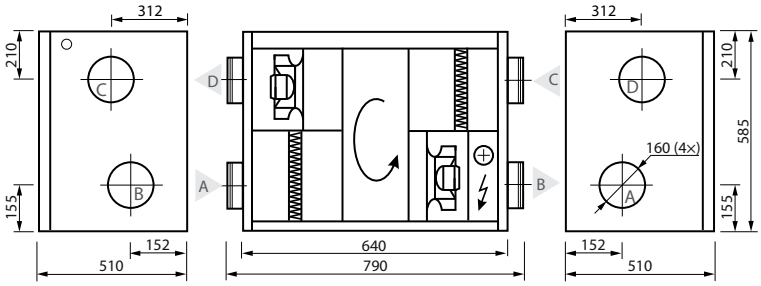



## Temperature efficiency




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

**Shown as right (R1)**




**Shown as left (L1)**


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

komfovent®

# Domekt R 400 F

(Domekt REGO 400P)

| | |
|---|---|
| Nominal air flow, m³/h | 460 |
| 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, % | 83 |
| Reference flow rate, m³/s | 0,09 |
| Reference pressure difference, Pa | 50 |
| SPI, W/(m³/h) | 0,45 |
| Filters dimensions B×H×L, mm | 278×258×46-M5 |
| Electric power input of the fan drive at reference flow rate, W | 58 |
| Electric power input of the fan drive at maximum flow rate, W | 164 |
| Electric air heater capacity, kW / Δt, °C | 1,0 / 6 |
| 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 | 62 |
| Exhaust Outlet | 71 |
| Casing | 44 |

**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 | 12,5 | 14,2 | 15,3 | 16,3 | 17,4 | 23,7 |

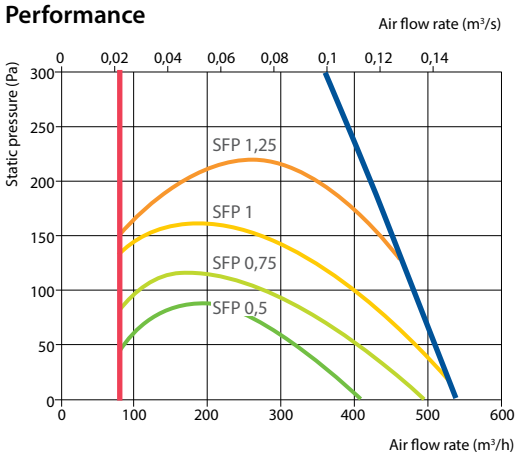
* indoor +22°C, 20 % RH

## Hot water duct air heater (DH)**

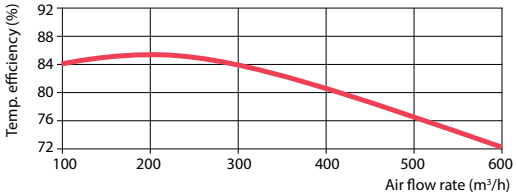
| | Winter | | | |
|---|---|---|---|---|
| Water temperature in/out, °C | 90/70 | 80/60 | 70/50 | 60/40 |
| Capacity, kW | 1,4 | 1,4 | 1,4 | 1,4 |
| Flow rate, dm³/h | 60 | 60 | 59 | 59 |
| Pressure drop, kPa | 1 | 1 | 1 | 1 |
| Temperature in/out, °C | 12,5/22 | | | |
| Maximal capacity, kW | 4,0 | 3,3 | 2,5 | 1,8 |
| Connection, ” | ½ | | | |
| Dimensions, mm | 315×315×220 | | | |
| Hot water duct heater type | DH-200 | | | |

** option

## Performance

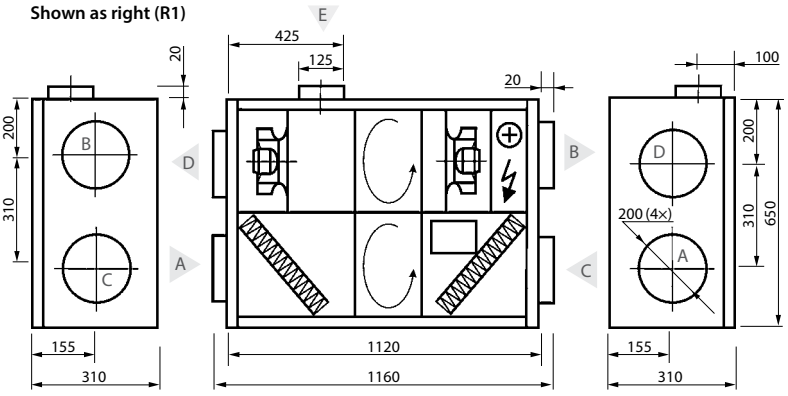



## Temperature efficiency

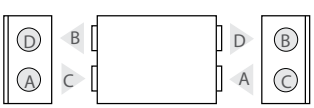



Indoor and outdoor ΔT=13°C re: *Ecodesign 1254/2014.*

**Shown as right (R1)**




**Shown as left (L1)**




**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)

| | |
|---|---|
| Nominal air flow, m³/h | 480 |
| 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, % | 83 |
| Reference flow rate, m³/s | 0,09 |
| Reference pressure difference, Pa | 50 |
| SPI, W/(m³/h) | 0,44 |
| Filters dimensions B×H×L, mm | 470×240×46-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 | 171 |
| Electric air heater capacity, kW / Δt, °C | 1,0/ 9 |
| 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 | 55 |
| Exhaust Outlet | 71 |
| Casing | 35 |

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

| | |
|---|---|
| Surroundings | 24 |

## Temperature efficiency

| | Winter | | | | | Summer |
|---|---|---|---|---|---|---|
| Outside temperature, °C | -23 | -15 | -10 | -5 | 0 | 30 |
| After heat exchanger*, °C | 14,5 | 15,8 | 16,7 | 17,5 | 18,3 | 23,3 |

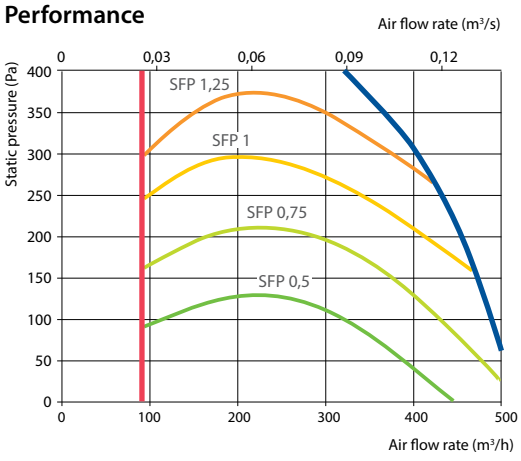
* indoor +22°C, 20 % RH

## Hot water duct air heater (DH)**

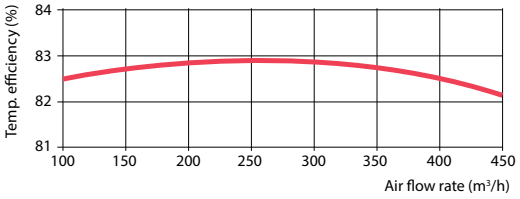
| | Winter | | | |
|---|---|---|---|---|
| Water temperature in/out, °C | 90/70 | 80/60 | 70/50 | 60/40 |
| Capacity, kW | 1,1 | 1,1 | 1,1 | 1,1 |
| Flow rate, dm³/h | 51 | 51 | 50 | 50 |
| Pressure drop, kPa | 1 | 1 | 1 | 1 |
| Temperature in/out, °C | 14,5/22 | | | |
| Maximal capacity, kW | 3,2 | 2,5 | 1,9 | 1,3 |
| Connection, ” | ½ | | | |
| Dimensions, mm | 315x315x220 | | | |
| Hot water duct heater type | DH-160 | | | |

** option

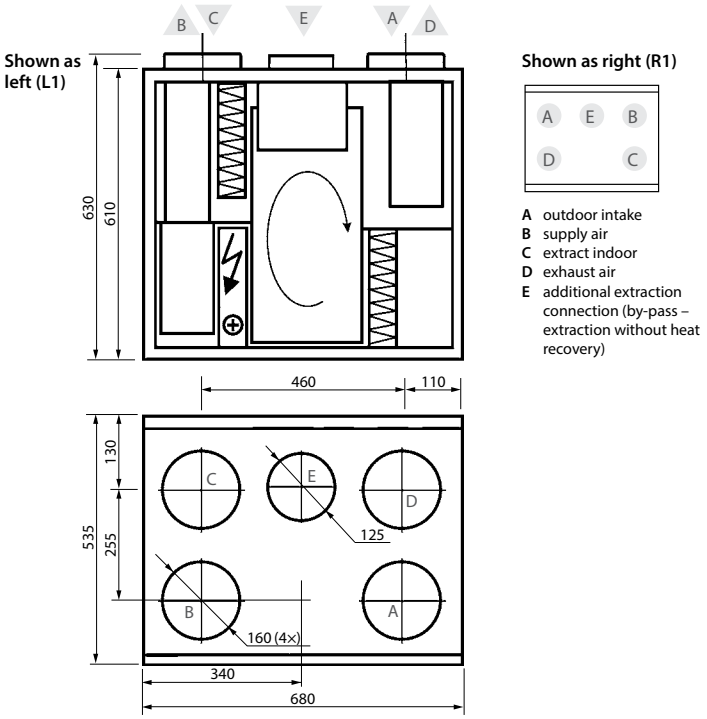
## Performance




## 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)

| | |
|---|---|
| Nominal air flow, m³/h | 650 |
| Panel thickness, mm | 50 |
| Unit weight, kg | 90 |
| Supply voltage, V | 1~ 230 |
| Maximal operating current, A | HE 7,6 / HW 3,8 |
| Thermal efficiency of heat recovery, % | 86 |
| Reference flow rate, m³/s | 0,13 |
| Reference pressure difference, Pa | 50 |
| SPI, W/(m³/h) | 0,33 |
| Filters dimensions B×H×L, mm | 540×260×46-M5 |
| Electric power input of the fan drive at reference flow rate, W | 66 |
| Electric power input of the fan drive at maximum flow rate, W | 170 |
| Electric air heater capacity, kW / Δt, °C | 1,0 / 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 | 66 |
| Exhaust Inlet | 58 |
| Exhaust Outlet | 66 |
| Casing | 41 |

**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 | -23 | -15 | -10 | -5 | 0 | 30 |
| After heat exchanger*, °C | 15,6 | 16,8 | 17,5 | 18,2 | 18,9 | 23,1 |

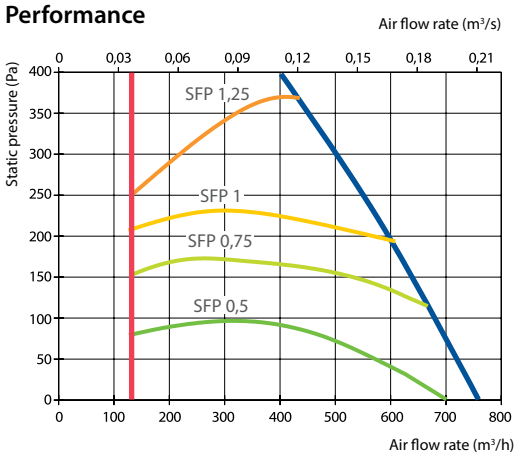
* indoor +22°C, 20 % RH

## Hot water duct air heater (DH)**

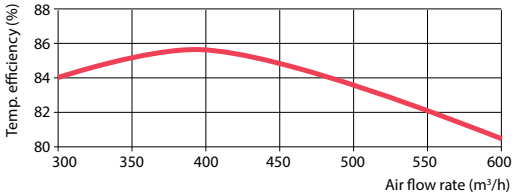
| | Winter | | | |
|---|---|---|---|---|
| Water temperature in/out, °C | 90/70 | 80/60 | 70/50 | 60/40 |
| Capacity, kW | 1,3 | 1,3 | 1,3 | 1,3 |
| Flow rate, dm³/h | 58 | 58 | 57 | 57 |
| Pressure drop, kPa | 1 | 1 | 1 | 1 |
| Temperature in/out, °C | 15,6/22 | | | |
| Maximal capacity, kW | 4,4 | 3,5 | 2,6 | 1,8 |
| Connection, ” | ½ | | | |
| Dimensions, mm | 315x315x220 | | | |
| Hot water duct heater type | DH-200 | | | |

** option

## Performance

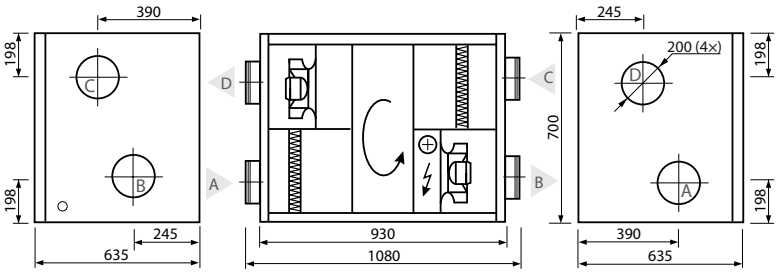



## Temperature efficiency




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

**Shown as right (R1)**




**Shown as left (L1)**


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

# Domekt R 500 V

(Kompakt REGO 500V)

| | |
|---|---|
| Nominal air flow, m³/h | 650 |
| Panel thickness, mm | 50 |
| Unit weight, kg | 140 |
| Supply voltage, V | 1~ 230 |
| Maximal operating current, A | HE 7,6 / HW 3,8 |
| Thermal efficiency of heat recovery, % | 86 |
| Reference flow rate, m³/s | 0,13 |
| Reference pressure difference, Pa | 50 |
| SPI, W/(m³/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 | 60 |
| Electric power input of the fan drive at maximum flow rate, W | 170 |
| Electric air heater capacity, kW / Δt, °C | 1,0 / 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 | 54 |
| Supply Outlet | 62 |
| Exhaust Inlet | 51 |
| Exhaust Outlet | 62 |
| Casing | 39 |

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

| | |
|---|---|
| Surroundings | 28 |

## Temperature efficiency

| | Winter | | | | | Summer |
|---|---|---|---|---|---|---|
| Outside temperature, °C | -23 | -15 | -10 | -5 | 0 | 30 |
| After heat exchanger*, °C | 15,6 | 16,8 | 17,5 | 18,2 | 18,9 | 23,1 |

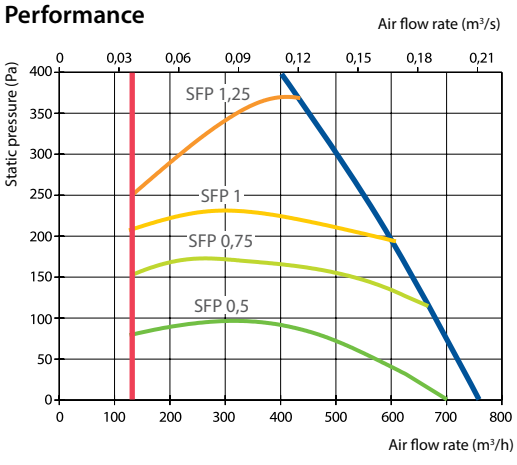
* indoor +22°C, 20 % RH

## Hot water duct air heater (DH)**

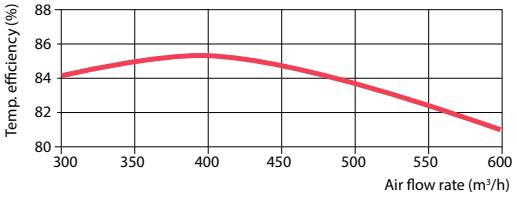
| | Winter | | | |
|---|---|---|---|---|
| Water temperature in/out, °C | 90/70 | 80/60 | 70/50 | 60/40 |
| Capacity, kW | 1,3 | 1,3 | 1,3 | 1,3 |
| Flow rate, dm³/h | 58 | 58 | 57 | 57 |
| Pressure drop, kPa | 1 | 1 | 1 | 1 |
| Temperature in/out, °C | 15,6/22 | | | |
| Maximal capacity, kW | 5,1 | 4,1 | 3,1 | 2,1 |
| Connection, ” | ½ | | | |
| Dimensions, mm | 365×365×220 | | | |
| Hot water duct heater type | DH-250 | | | |

** option

## Performance

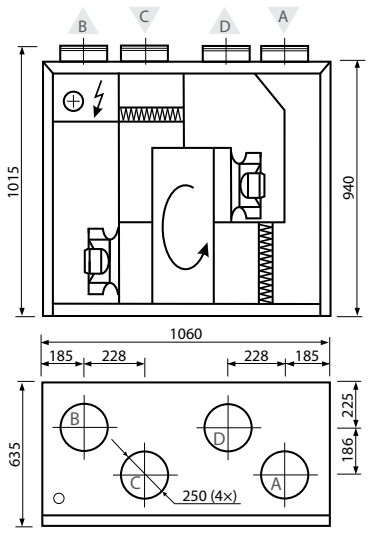



## Temperature efficiency

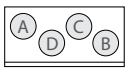



Indoor and outdoor ΔT=13°C re: *Ecodesign 1254/2014.*

**Shown as left (L1)**




**Shown as right (R1)**




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

# Domekt R 500 U

(Kompakt REGO 500U)

| | |
|---|---|
| Nominal air flow, m³/h | 650 |
| Panel thickness, mm | 50 |
| Unit weight, kg | 110 |
| Supply voltage, V | 1~ 230 |
| Maximal operating current, A | HE 7,6 / HW 3,8 |
| Thermal efficiency of heat recovery, % | 86 |
| Reference flow rate, m³/s | 0,13 |
| Reference pressure difference, Pa | 50 |
| SPI, W/(m³/h) | 0,32 |
| Filters dimensions B×H×L, mm | 545×300×46-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 | 170 |
| Electric air heater capacity, kW / Δt, °C | 1,0 / 4,5 |
| 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 | 14,1 | 15,5 | 16,4 | 17,3 | 18,2 | 23,4 |

* indoor +22°C, 20 % RH

## 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 | 39 |

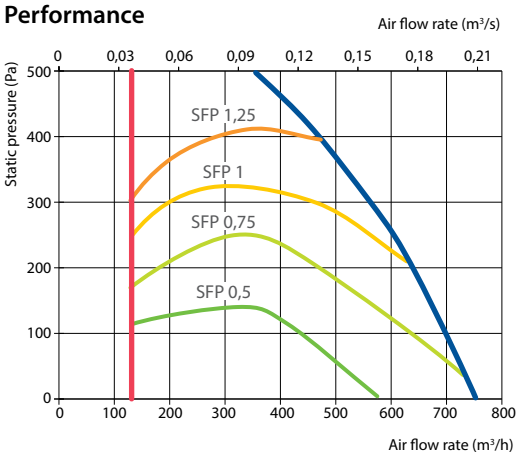
**A-weighted sound pressure level $L_{PA}$, dB(A)**
10 m² normally isolated room, distance from casing – 3 m.

| | |
|---|---|
| Surroundings | 28 |

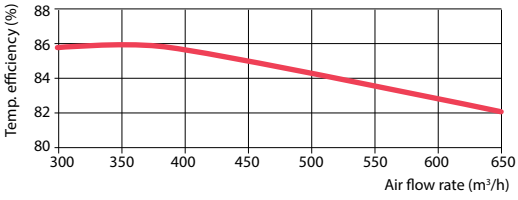
## Changeover water heating/cooling exchanger (HCW)

| | 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 | 71 | 71 | 71 | 391 |
| Pressure drop, kPa | 1,2 | 1,2 | 1,3 | 1,3 | 33 |
| Temperature in/out, °C | 14,1/22 | | | | 23,4/18 |
| Maximal capacity, kW | 6,2 | 5 | 3,8 | 2,7 | 2,3 |
| Connection, " | ½ | | | | |

## Performance

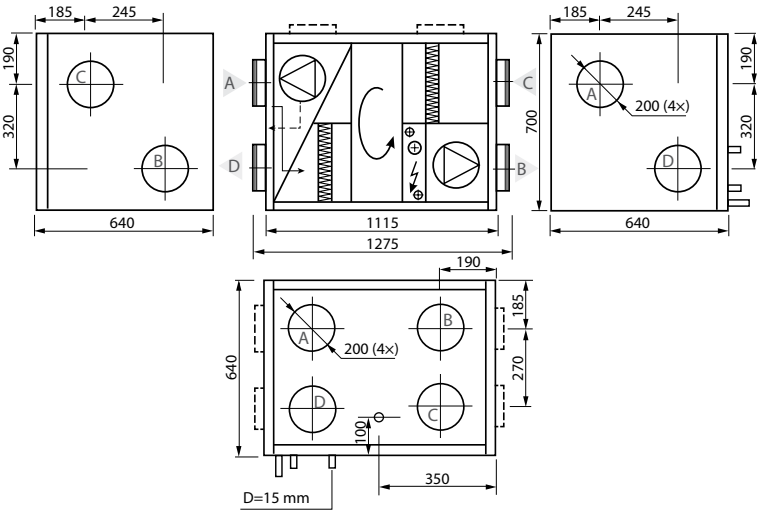



## Temperature efficiency

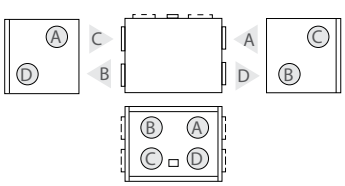



Indoor and outdoor ΔT=13°C re: *Ecodesign 1254/2014.*

**Shown as right (R1)**




**Shown as left (L1)**



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

# Domekt R 600 H

(Domekt REGO 600H)

| | |
|---|---|
| Nominal air flow, m³/h | 530 |
| 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 | 0,1 |
| Reference pressure difference, Pa | 50 |
| SPI, W/(m³/h) | 0,43 |
| Filters dimensions B×H×L, mm | 475×235×46-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 | 170 |
| Electric air heater capacity, kW / Δt, °C | 1,0 / 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 | 58 |
| Supply Outlet | 67 |
| Exhaust Inlet | 56 |
| Exhaust Outlet | 67 |
| Casing | 42 |

**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 | -23 | -15 | -10 | -5 | 0 | 30 |
| After heat exchanger*, °C | 13,8 | 15,2 | 16,1 | 17,1 | 18 | 23,5 |

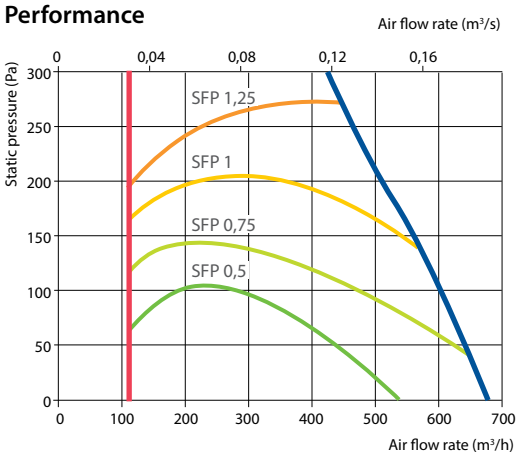
* indoor +22°C, 20 % RH

## Hot water duct air heater (DH)**

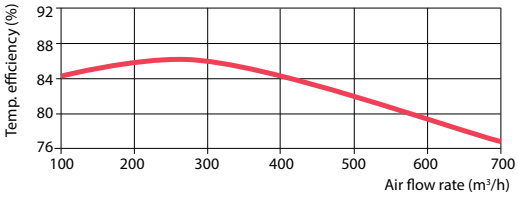
| | Winter | | | |
|---|---|---|---|---|
| Water temperature in/out, °C | 90/70 | 80/60 | 70/50 | 60/40 |
| Capacity, kW | 1,6 | 1,6 | 1,6 | 1,6 |
| Flow rate, dm³/h | 69 | 69 | 69 | 68 |
| Pressure drop, kPa | 1 | 1 | 1 | 1 |
| Temperature in/out, °C | 13,8/22 | | | |
| Maximal capacity, kW | 4,7 | 3,8 | 2,9 | 2 |
| Connection, ” | ½ | | | |
| Dimensions, mm | 315x315x220 | | | |
| Hot water duct heater type | DH-200 | | | |

** option

## Performance

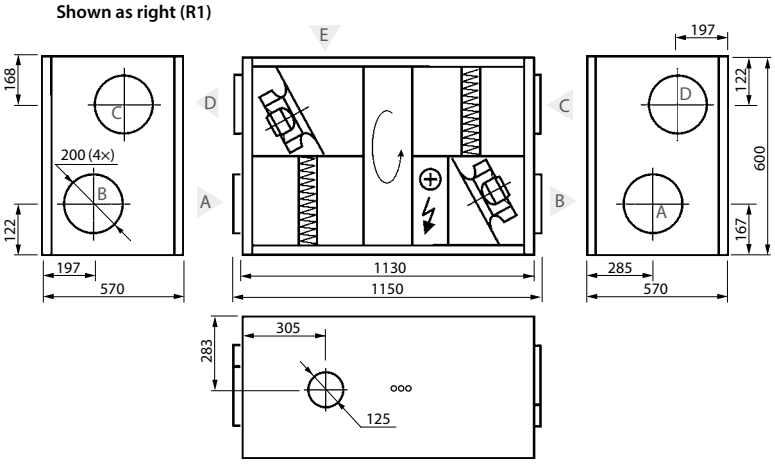



## Temperature efficiency




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

**Shown as right (R1)**




**Shown as left (L1)**


**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)

| | |
|---|---|
| Nominal air flow, m³/h | 770 |
| Panel thickness, mm | 50 |
| Unit weight, kg | 140 |
| Supply voltage, V | 1~ 230 |
| Maximal operating current, A | HE 12 / HW 3,8 |
| 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 | 2,0 / 8,6 |
| 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 | 55 |
| Supply Outlet | 63 |
| Exhaust Inlet | 52 |
| Exhaust Outlet | 63 |
| Casing | 39 |

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

| | |
|---|---|
| Surroundings | 28 |

## Temperature efficiency

| | Winter | | | | | Summer |
|---|---|---|---|---|---|---|
| Outside temperature, °C | -23 | -15 | -10 | -5 | 0 | 30 |
| After heat exchanger*, °C | 12,2 | 13,6 | 14,5 | 15,4 | 16,4 | 21,8 |

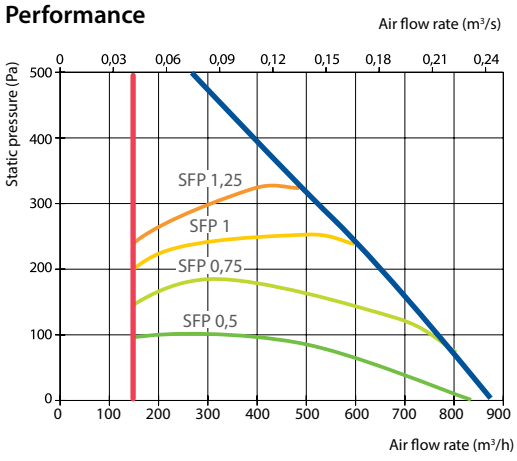
* indoor +22°C, 20 % RH

## Hot water duct air heater (DH)**

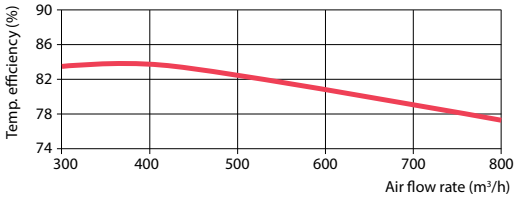
| | Winter | | | |
|---|---|---|---|---|
| Water temperature in/out, °C | 90/70 | 80/60 | 70/50 | 60/40 |
| Capacity, kW | 2,3 | 2,3 | 2,3 | 2,3 |
| Flow rate, dm³/h | 113 | 112 | 112 | 112 |
| Pressure drop, kPa | 1 | 1 | 1 | 1 |
| Temperature in/out, °C | 12,2/22 | | | |
| Maximal capacity, kW | 7,7 | 6,2 | 4,9 | 3,5 |
| Connection, ” | ½ | | | |
| Dimensions, mm | 365x365x220 | | | |
| Hot water duct heater type | DH-250 | | | |

** option

## Performance

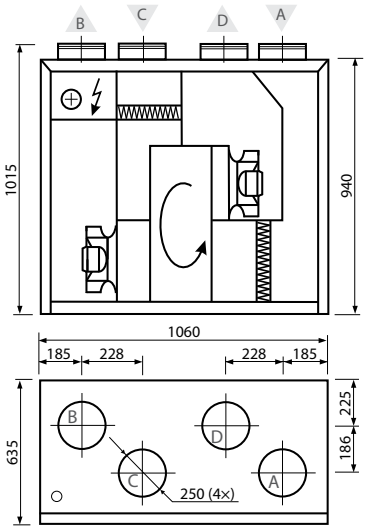



## Temperature efficiency

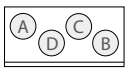



Indoor and outdoor ΔT=13°C re: *Ecodesign 1254/2014.*

**Shown as left (L1)**




**Shown as right (R1)**




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

# Domekt R 700 H

(Kompakt REGO 700H)

| | |
|---|---|
| Nominal air flow, m³/h | 720 |
| Panel thickness, mm | 50 |
| Unit weight, kg | 90 |
| 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 | 0,14 |
| 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 | 170 |
| Electric air heater capacity, kW / Δt, °C | 2,0 / 8,6 |
| 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 | 58 |
| Supply Outlet | 67 |
| Exhaust Inlet | 59 |
| Exhaust Outlet | 67 |
| Casing | 42 |

**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 | -23 | -15 | -10 | -5 | 0 | 30 |
| After heat exchanger*, °C | 12,2 | 13,6 | 14,5 | 15,4 | 16,4 | 21,8 |

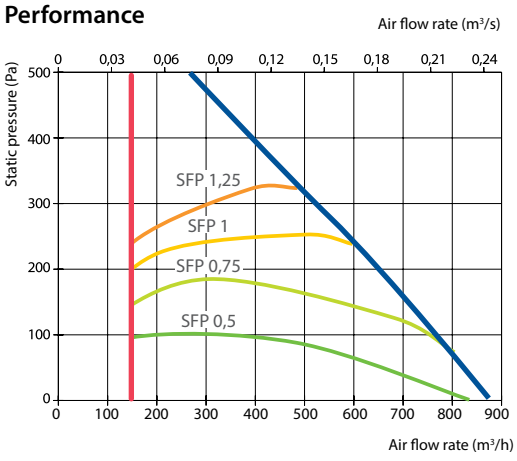
* indoor +22°C, 20 % RH

## Hot water duct air heater (DH)**

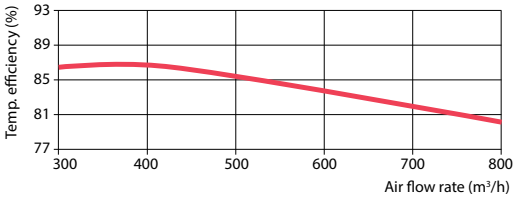
| | Winter | | | |
|---|---|---|---|---|
| Water temperature in/out, °C | 90/70 | 80/60 | 70/50 | 60/40 |
| Capacity, kW | 2,3 | 2,3 | 2,3 | 2,3 |
| Flow rate, dm³/h | 103 | 102 | 102 | 102 |
| Pressure drop, kPa | 1 | 1 | 1 | 1 |
| Temperature in/out, °C | 12,2/22 | | | |
| Maximal capacity, kW | 6,9 | 5,6 | 4,4 | 3,2 |
| Connection, ” | ½ | | | |
| Dimensions, mm | 365x365x220 | | | |
| Hot water duct heater type | DH-250 | | | |

** option

## Performance




## Temperature efficiency




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

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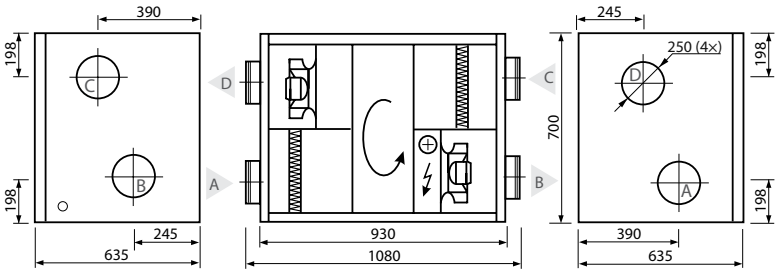



**Shown as left (L1)**

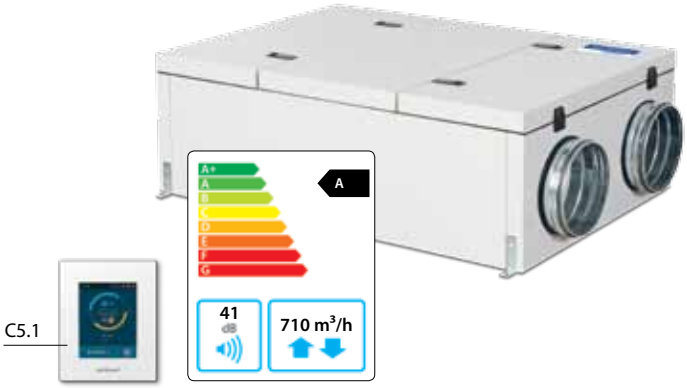

**A** outdoor intake
**B** supply air
**C** extract indoor
**D** exhaust air

komfovent®

# Domekt R 700 F

(Kompakt REGO 700P)

| | |
|---|---|
| Nominal air flow, m³/h | 710 |
| Panel thickness, mm | 50 |
| Unit weight, kg | 104 |
| Supply voltage, V | 1~ 230 |
| Maximal operating current, A | HE 12 / HW 3,8 |
| 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 | 78 |
| Electric power input of the fan drive at maximum flow rate, W | 170 |
| Electric air heater capacity, kW / Δt, °C | 2,0 / 8,6 |
| 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 | 54 |
| Supply Outlet | 67 |
| Exhaust Inlet | 52 |
| Exhaust Outlet | 67 |
| Casing | 41 |

**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 | -23 | -15 | -10 | -5 | 0 | 30 |
| After heat exchanger*, °C | 11,3 | 12,9 | 14 | 15 | 16 | 22 |

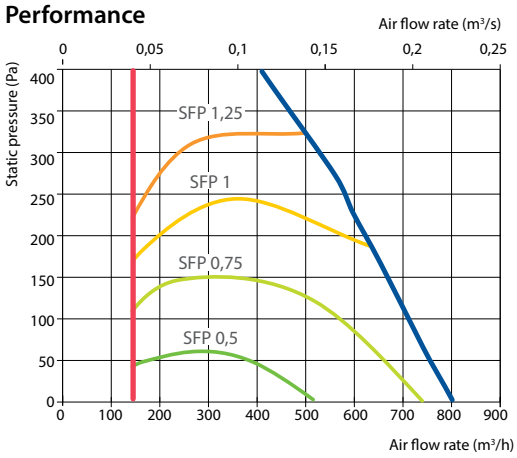
* indoor +22°C, 20 % RH

## Hot water duct air heater (DH)**

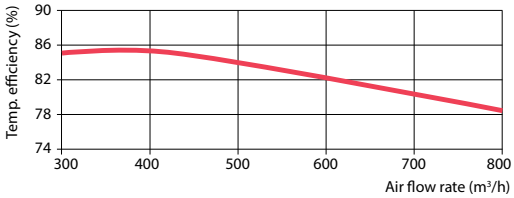
| | Winter | | | |
|---|---|---|---|---|
| Water temperature in/out, °C | 90/70 | 80/60 | 70/50 | 60/40 |
| Capacity, kW | 2.5 | 2.5 | 2.5 | 2.5 |
| Flow rate, dm³/h | 112 | 112 | 111 | 111 |
| Pressure drop, kPa | 1 | 1 | 1 | 1 |
| Temperature in/out, °C | 11,3/22 | | | |
| Maximal capacity, kW | 7,1 | 5,8 | 4,6 | 3,3 |
| Connection, ” | ½ | | | |
| Dimensions, mm | 365×365×220 | | | |
| Hot water duct heater type | DH-250 | | | |

** option

## Performance




## Temperature efficiency




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

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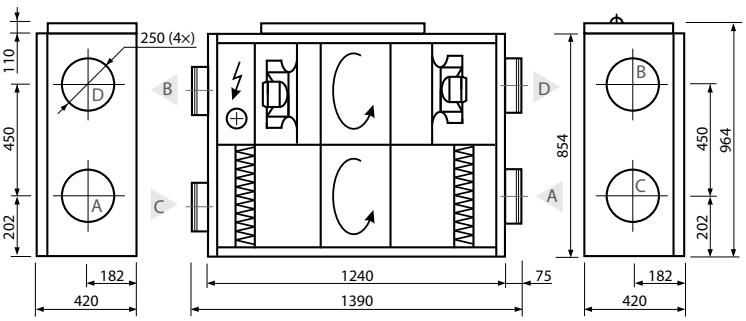


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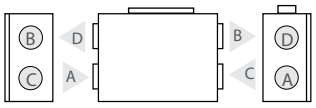
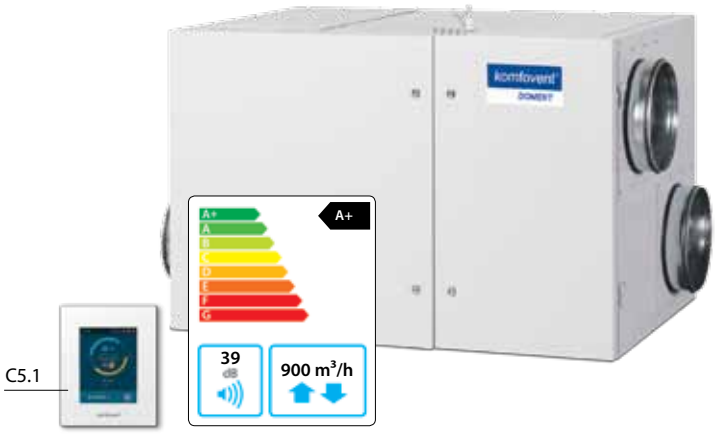



**A** outdoor intake
**B** supply air
**C** extract indoor
**D** exhaust air

# Domekt R 900 U

(Kompakt REGO 900U)

| | |
|---|---|
| Nominal air flow, m³/h | 900 |
| 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 3,8 |
| Thermal efficiency of heat recovery, % | 86 |
| Reference flow rate, m³/s | 0,18 |
| Reference pressure difference, Pa | 50 |
| SPI, W/(m³/h) | 0,28 |
| Filters dimensions B×H×L, mm | 800×400×46-M5 |
| Electric power input of the fan drive at reference flow rate, W | 84 |
| Electric power input of the fan drive at maximum flow rate, W | 181 |
| Electric air heater capacity, kW / Δt, °C | 3,0 / 10 |
| 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 | 14,7 | 16 | 16,8 | 17,6 | 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 | 52 |
| Supply Outlet | 65 |
| Exhaust Inlet | 50 |
| Exhaust Outlet | 63 |
| Casing | 39 |

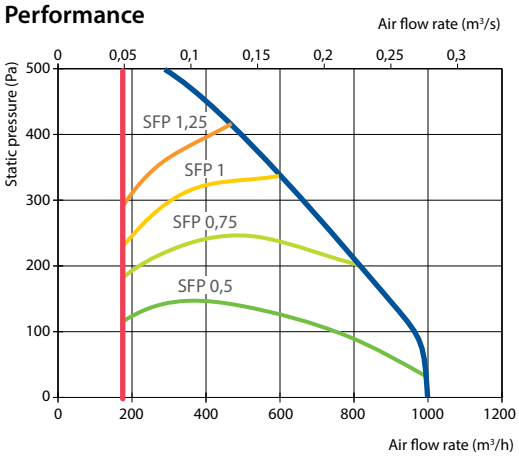
**A-weighted sound pressure level $L_{PA}$, dB(A)**
10 m² normally isolated room, distance from casing – 3 m.

| | |
|---|---|
| Surroundings | 29 |

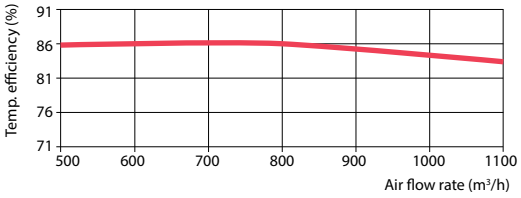
## Changeover water heating/cooling exchanger (HCW)

| | Winter | | | | Summer |
|---|---|---|---|---|---|
| Water temperature in/out, °C | 90/70 | 80/60 | 70/50 | 60/40 | 7/12 |
| Capacity, kW | 2,2 | 2,2 | 2,2 | 2,2 | 3,3 |
| Flow rate, dm³/h | 97 | 97 | 97 | 96 | 558 |
| Pressure drop, kPa | 1 | 1 | 1 | 1 | 5,5 |
| Temperature in/out, °C | 14,7/22 | | | | 23,3/18 |
| Maximal capacity, kW | 20,1 | 14,3 | 9,1 | 6,5 | 6,2 |
| Connection, ″ | ½ | | | | |

## Performance

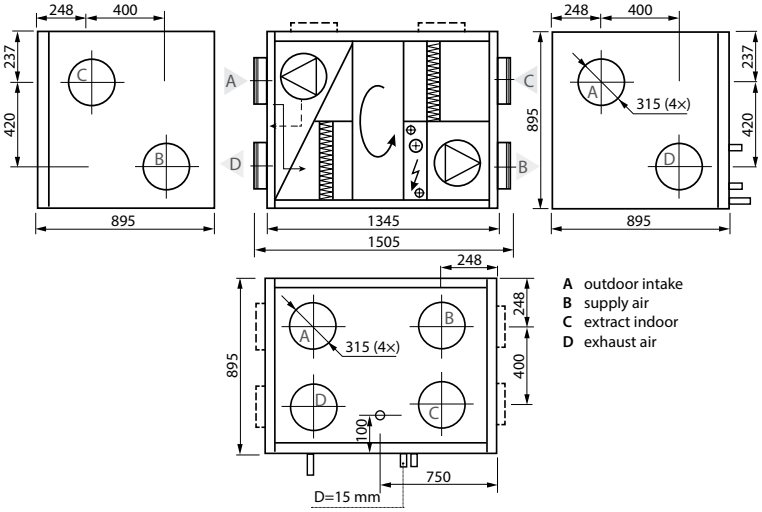



## Temperature efficiency




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

**Shown as right (R1)**

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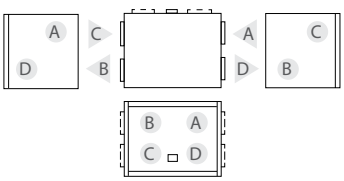
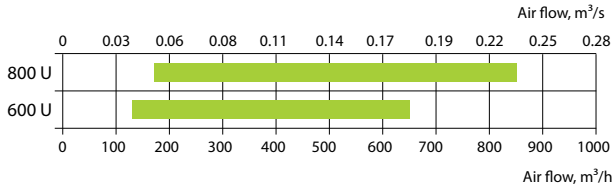


# Domekt RHP

Units with a rotary heat exchanger and an integrated heat pump.
Capacity range 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

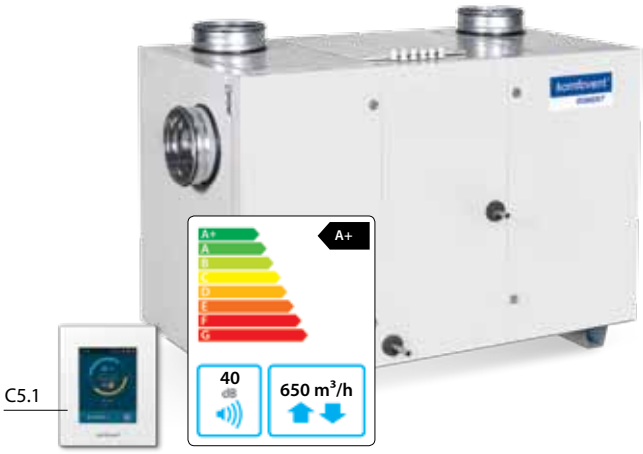
- **Total comfort all year long:** reversible heating and cooling operation of heat pump ensures comfort indoor climate.
- **Extremely energy efficient and resource saving:** two step efficiency is provided by rotary heat exchanger recovery and post heating / cooling operated by heat pump.
- **Added 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

# Domekt RHP 600 U

(Kompakt REGO 600 U RHP)

| | |
|---|---|
| Nominal 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 | 1,0 / 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

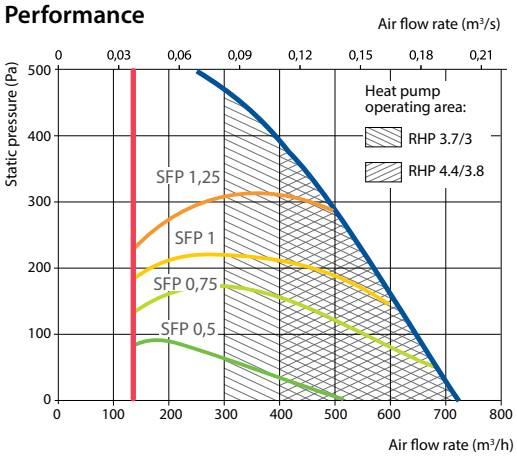
| | | Winter | | | | | | | | Summer |
|---|---|---|---|---|---|---|---|---|---|---|
| Outside temperature, °C | | -20 | -15 | -10 | -5 | 0 | 5 | 10 | 15 | 30 |
| After heat exchanger and heat pump, °C | RHP 3.7/3 | 18 | 19,5 | 21,3 | 23,1 | 25 | 26,7 | 29 | 32 | 19 |
| | RHP 4.4/3.8 | 21 | 22,9 | 25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

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

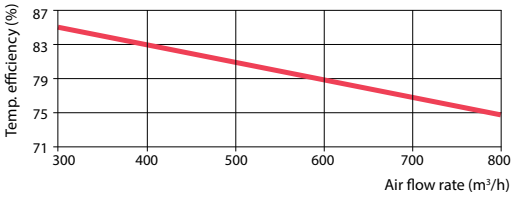
## Compressor and AHU data

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

## Performance

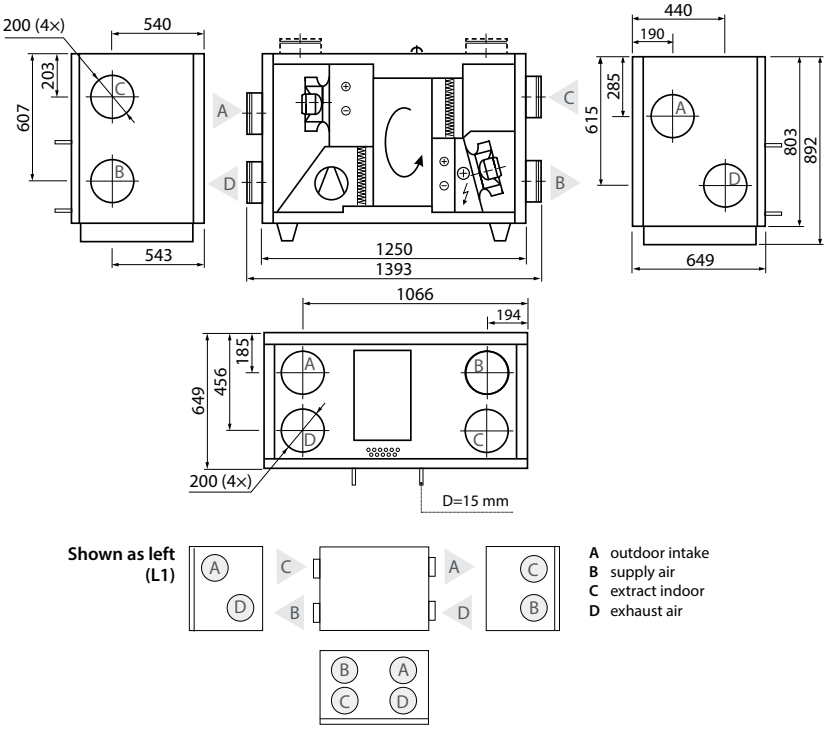



## Rotor temperature efficiency




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

**Shown as right (R1)**

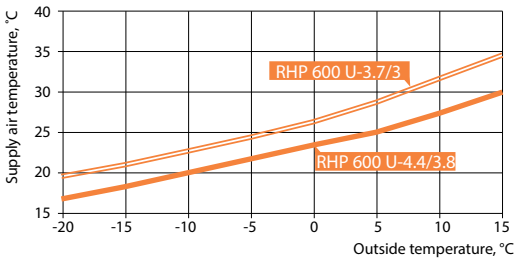



**Shown as left (L1)**



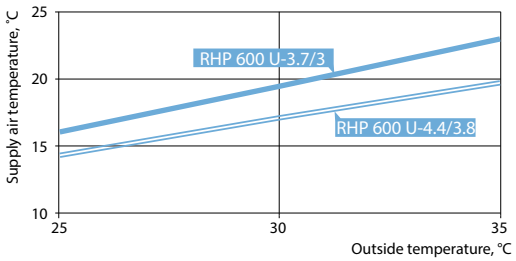

**A** outdoor intake
**B** supply air
**C** extract indoor
**D** exhaust air

## Heating mode




Application: 20°C, RH 45% indoor
Indoor and outdoor ΔT=13°C according *Ecodesign 1254/2014.*

## Cooling mode




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

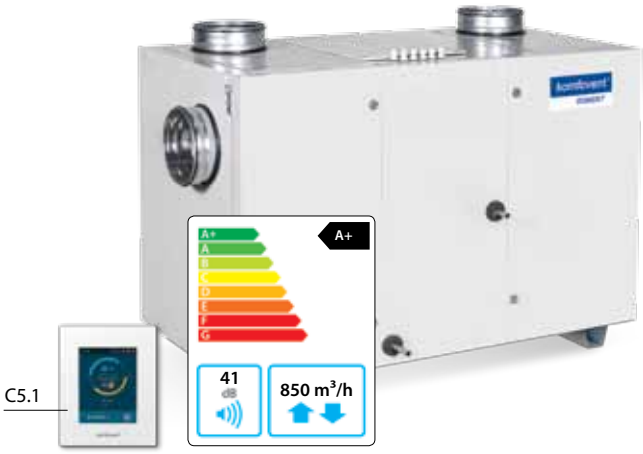
## Heat pump parameters

| | 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)

| | |
|---|---|
| Nominal 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 | 2,0 / 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

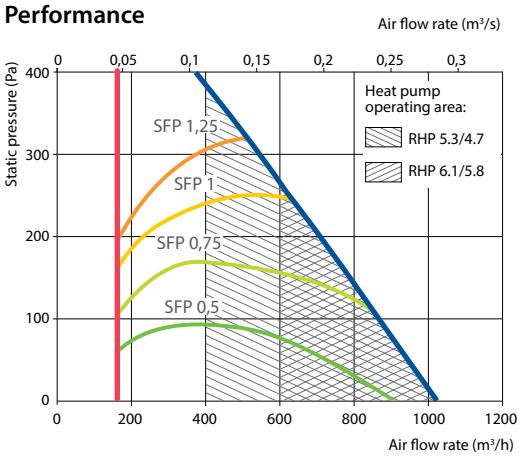
| | | Winter | | | | | | | | Summer |
|---|---|---|---|---|---|---|---|---|---|---|
| Outside temperature, °C | | -20 | -15 | -10 | -5 | 0 | 5 | 10 | 15 | 30 |
| After heat exchanger and heat pump, °C | RHP 5.3/4.7 | 19,5 | 20,6 | 22 | 23,1 | 24,6 | 26,1 | 26,9 | 31 | 18,7 |
| | RHP 6.1/5.8 | 20,1 |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

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

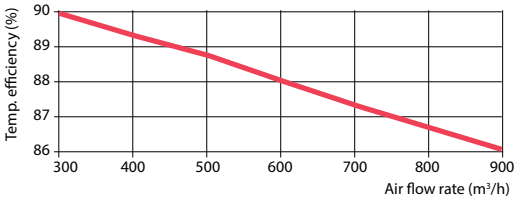
## Compressor and AHU data

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

## Performance

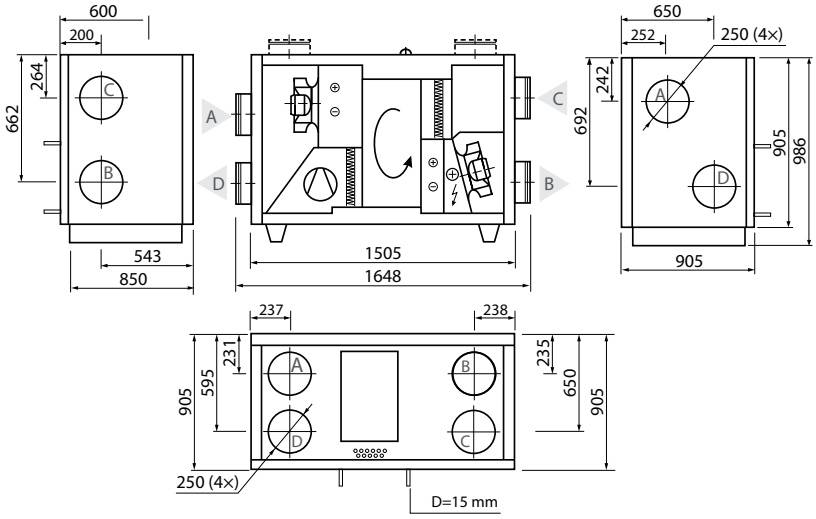



## Rotor temperature efficiency

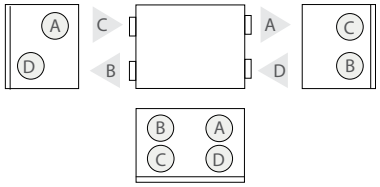



Indoor and outdoor ΔT=13°C re: *Ecodesign 1254/2014.*

**Shown as right (R1)**

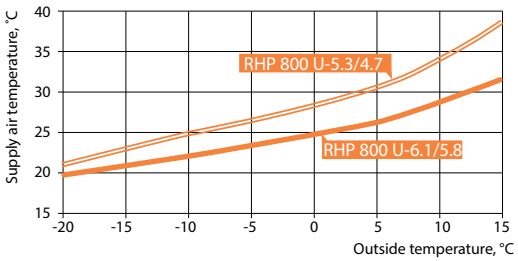



**Shown as left (L1)**



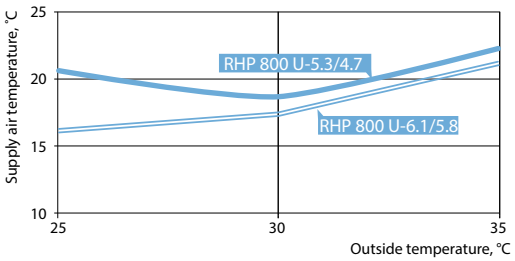

**A** outdoor intake
**B** supply air
**C** extract indoor
**D** exhaust air

## Heating mode




Application: 20°C, RH 45% indoor
Indoor and outdoor ΔT=13°C according *Ecodesign 1254/2014.*

## Cooling mode




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

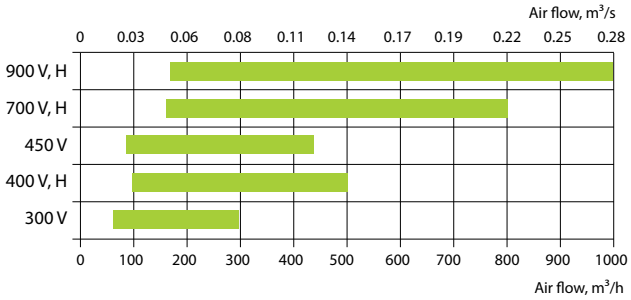
## Heat pump parameters

| | 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.
Capacity range from 60 to 1000 m³/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 the conditions of movable parts 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!

Heat exchanger is EUROVENT certified

## Domekt P range

| Unit size | Connection versions | | Supply/ exhaust air filter class | | Fan motor technology | | Heater | | | Cooler | | Inspection side | | Control system | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | C3 panel | | C4 panel | |
| | H | V | M5 | F7 | EC | AC | HE | HW | HCW | CW | CDX | R1 | L1 | 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
△ duct water heater / cooler ordered separately

### Duct connection

H – horizontal.
V – vertical.

### Heater

HE – electric heater.

HW – water duct heater is installed on the duct 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.
Design:
- Galvanized sheet steel casing.
- Copper pipes for heat transfer fluid (water).
- Spacing between profiled aluminum plates is 3 mm (standard spacing). Optional threaded connection for freezing protection alarm sensor (to be specified in the order form).

Capacitive constraints:
- Maximum operating pressure – 10 bar.
- Maximum water temperature +100°C.
- Maximum airflow velocity through the heater 3 m/s.

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. 134.

### 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$^0$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".**

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

# DOMEKT PP 300 V

(Domekt RECU 300V)

| | |
|---|---|
| Nominal air flow, m³/h | 290 |
| 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) | 0,26 |
| Filters dimensions B×H×L, mm | 300×200×46-M5 |
| Electric power input of the fan drive at reference flow rate, W | 26 |
| Electric power input of the fan drive at maximum flow rate, W | 67 |
| Electric air heater capacity, kW / Δt, °C | 1,0 / 10 |
| 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 | 30 |

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

| | |
|---|---|
| Surroundings | 19 |

## Temperature efficiency

| | Winter | | | | | Summer |
|---|---|---|---|---|---|---|
| Outside temperature, °C | -23 | -15 | -10 | -5 | 0 | 30 |
| After heat exchanger*, °C | 11 | 12,9 | 14,2 | 15,4 | 16,7 | 23,9 |

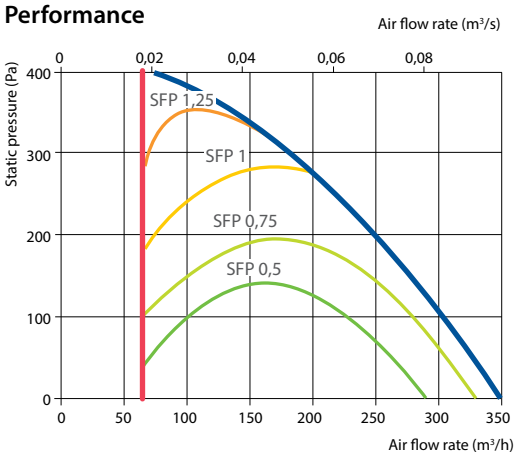
* indoor +22°C, 20 % RH

## Hot water duct air heater (DH)**

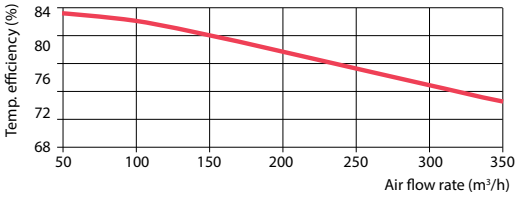
| | Winter | | | |
|---|---|---|---|---|
| Water temperature in/out, °C | 90/70 | 80/60 | 70/50 | 60/40 |
| Capacity, kW | 0,8 | 0,8 | 0,8 | 0,8 |
| Flow rate, dm³/h | 34 | 34 | 34 | 34 |
| Pressure drop, kPa | 1 | 1 | 1 | 1 |
| Temperature in/out, °C | 11/22 | | | |
| Maximal capacity, kW | 2,4 | 1,9 | 1,4 | 1 |
| Connection, ” | ½ | | | |
| Dimensions, mm | 315×315×220 | | | |
| Hot water duct heater type | DH-125 | | | |

** option

## Performance

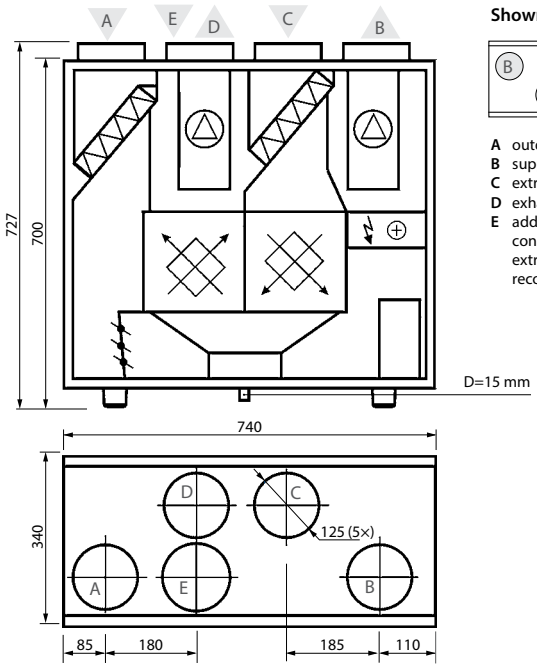



## Temperature efficiency




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

**Shown as right (R1)**

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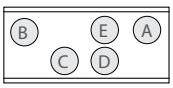



**A** outdoor intake
**B** supply air
**C** extract indoor
**D** exhaust air
**E** additional extraction connection (by-pass – extraction without heat recovery)

komfovent®

# DOMEKT P 400 V

(Kompakt RECU 400V)

| | |
|---|---|
| Nominal air flow, m³/h | 530 |
| Panel thickness, mm | 45 |
| Unit weight, kg | 62 |
| Supply voltage, V | 1~230 |
| Maximal operating current, A | 10,8 |
| 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 | 40 |
| Electric power input of the fan drive at maximum flow rate, W | 96 |
| Electric air heater capacity, kW / Δt, °C | 2 / 10,5 |
| 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 | 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 | -23 | -15 | -10 | -5 | 0 | 30 |
| After heat exchanger*, °C | 2,2 | 5,6 | 7,8 | 10 | 12,2 | 25,6 |

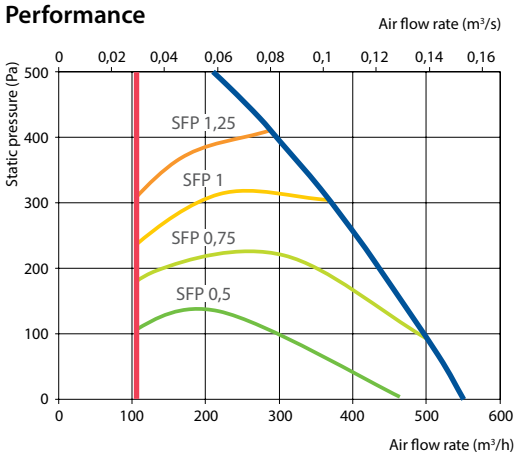
* indoor +22°C, 20 % RH

## Hot water duct air heater (DH)**

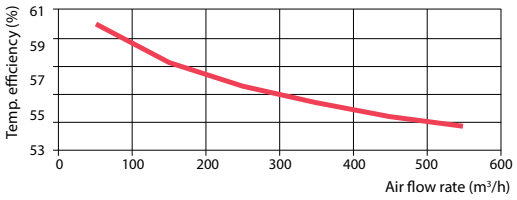
| | Winter | | | |
|---|---|---|---|---|
| Water temperature in/out, °C | 90/70 | 80/60 | 70/50 | 60/40 |
| Capacity, kW | 3,5 | 3,5 | 3,5 | 3,5 |
| Flow rate, dm³/h | 156 | 155 | 155 | 155 |
| Pressure drop, kPa | 1 | 1,1 | 1,1 | 1,2 |
| Temperature in/out, °C | 2,2/22 | | | |
| Maximal capacity, kW | 5,8 | 5 | 4 | 3,5 |
| Connection, ” | ½ | | | |
| Dimensions, mm | 315×315×220 | | | |
| Hot water duct heater type | DH-160 | | | |

** option

## Performance

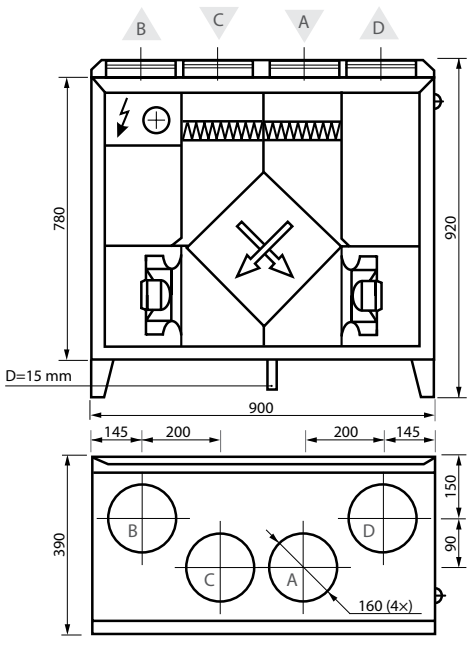



## Temperature efficiency

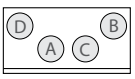



Indoor and outdoor ΔT=13°C re: *Ecodesign 1254/2014.*

**Shown as left (L1)**




**Shown as right (R1)**

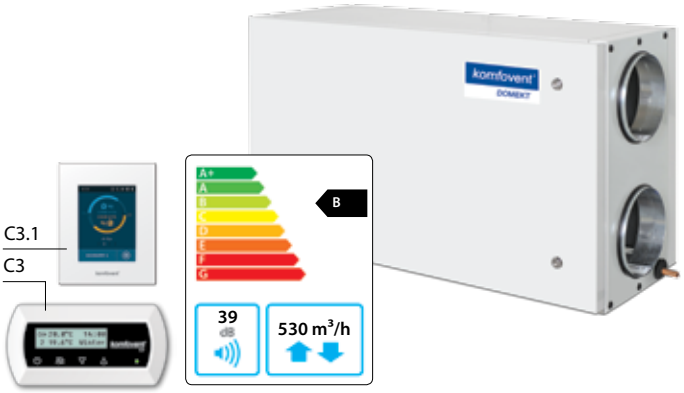



**A** outdoor intake
**B** supply air
**C** extract indoor
**D** exhaust air

# DOMEKT P 400 H

(Kompakt RECU 400H)

| | |
|---|---|
| Nominal air flow, m³/h | 530 |
| Panel thickness, mm | 45 |
| Unit weight, kg | 55 |
| Supply voltage, V | 1~230 |
| Maximal operating current, A | 10,8 |
| 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 | 40 |
| Electric power input of the fan drive at maximum flow rate, W | 96 |
| Electric air heater capacity, kW / Δt, °C | 2,0 / 10,5 |
| 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 | 63 |
| Exhaust Inlet | 51 |
| Exhaust Outlet | 63 |
| Casing | 38 |

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

| | |
|---|---|
| Surroundings | 28 |

## Temperature efficiency

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

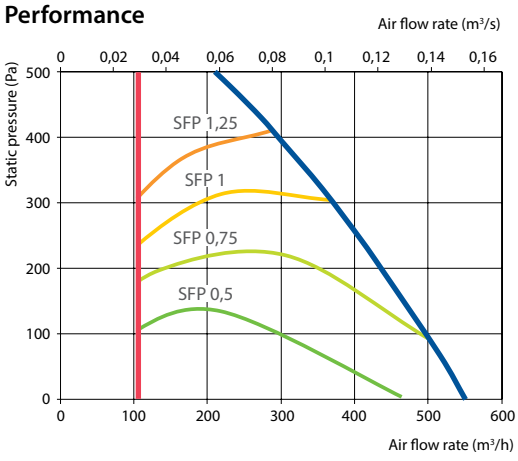
* indoor +22°C, 20 % RH

## Hot water duct air heater (DH)**

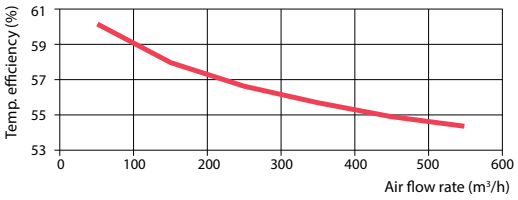
| | Winter | | | |
|---|---|---|---|---|
| Water temperature in/out, °C | 90/70 | 80/60 | 70/50 | 60/40 |
| Capacity, kW | 3,7 | 3,7 | 3,7 | 3,7 |
| Flow rate, dm³/h | 162 | 161 | 160 | 160 |
| Pressure drop, kPa | 1,3 | 1,4 | 1,4 | 1,5 |
| Temperature in/out, °C | 1,4/22 | | | |
| Maximal capacity, kW | 6,5 | 5,5 | 4,5 | 3,7 |
| Connection, ” | ½ | | | |
| Dimensions, mm | 315×315×220 | | | |
| Hot water duct heater type | DH-200 | | | |

** option

## Performance

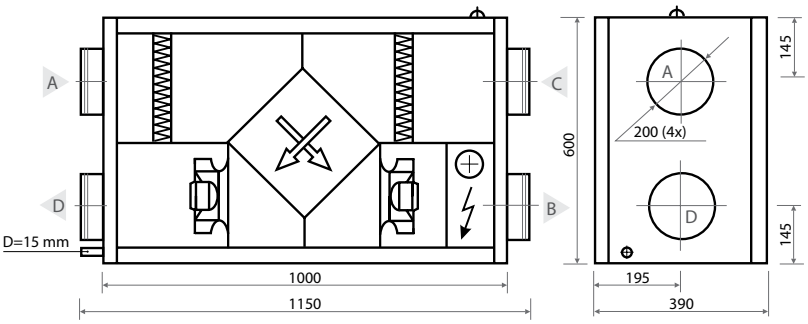



## Temperature efficiency




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

**Shown as right (R1)**




**Shown as left (L1)**


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

komfovent®

# DOMEKT PP 450 V

(Domekt RECU 450V)

| | |
|---|---|
| Nominal air flow, $m^3/h$ | 440 |
| 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, $m^3/s$ | 0,08 |
| 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 | 59 |
| Electric power input of the fan drive at maximum flow rate, W | 175 |
| Electric air heater capacity, kW / Δt, °C | 1,0 / 6,5 |
| 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 | 50 |
| Supply Outlet | 73 |
| Exhaust Inlet | 56 |
| Exhaust Outlet | 73 |
| Casing | 34 |

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

| | |
|---|---|
| Surroundings | 23 |

## Temperature efficiency

| | Winter | | | | | Summer |
|---|---|---|---|---|---|---|
| Outside temperature, °C | -23 | -15 | -10 | -5 | 0 | 30 |
| After heat exchanger*, °C | 8,7 | 11,1 | 12,6 | 14,1 | 15,6 | 24,3 |

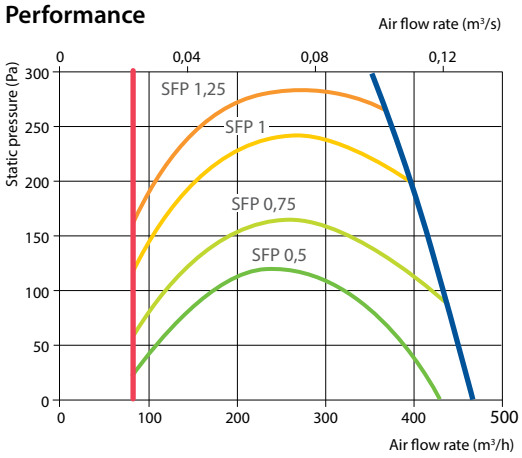
* indoor +22°C, 20 % RH

## Hot water duct air heater (DH)**

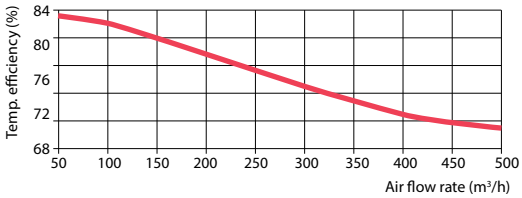
| | Winter | | | |
|---|---|---|---|---|
| Water temperature in/out, °C | 90/70 | 80/60 | 70/50 | 60/40 |
| Capacity, kW | 2 | 2 | 2 | 2 |
| Flow rate, $dm^3/h$ | 87 | 86 | 86 | 86 |
| Pressure drop, kPa | 1 | 1 | 1 | 1 |
| Temperature in/out, °C | 8,7/22 | | | |
| Maximal capacity, kW | 4,4 | 3,6 | 2,8 | 2,1 |
| Connection, ” | ½ | | | |
| Dimensions, mm | 315×315×220 | | | |
| Hot water duct heater type | DH-125 | | | |

** option

## Performance

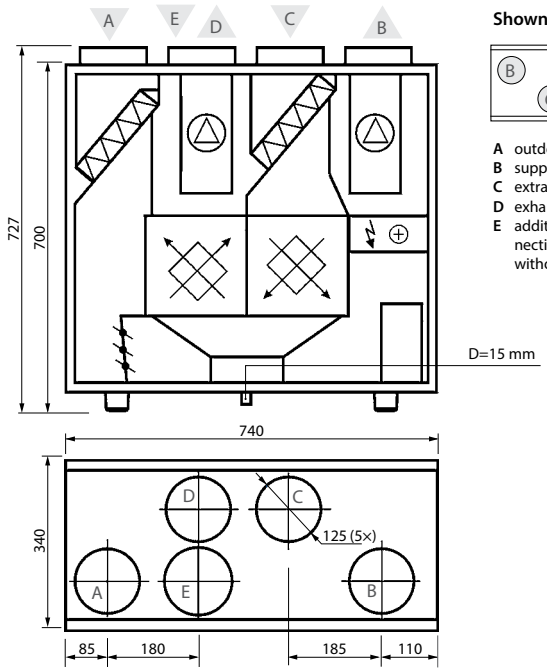



## Temperature efficiency

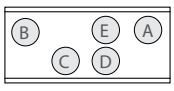



Indoor and outdoor ΔT=13°C re: *Ecodesign 1254/2014.*

**Shown as right (R1)**




**Shown as left (L1)**




**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)

| | |
|---|---|
| Nominal air flow, $m^3/h$ | 820 |
| 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, $W/(m^3/h)$ | 0,27 |
| 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 | 170 |
| Electric air heater capacity, kW / Δt, °C | 2,5 / 8,5 |
| 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 | 52 |
| Exhaust Outlet | 65 |
| Casing | 41 |

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

| | |
|---|---|
| Surroundings | 30 |

## 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 |

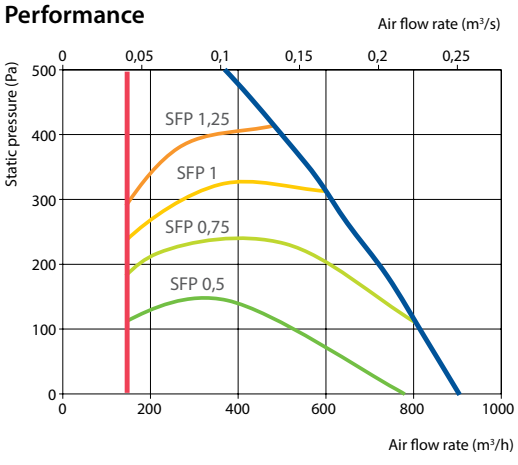
* indoor +22°C, 20 % RH

## Hot water duct air heater (DH)**

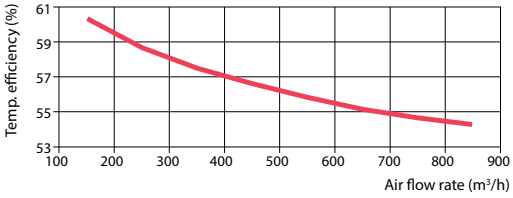
| | Winter | | | |
|---|---|---|---|---|
| Water temperature in/out, °C | 90/70 | 80/60 | 70/50 | 60/40 |
| Capacity, kW | 5,8 | 5,8 | 5,8 | 5,8 |
| Flow rate, $dm^3/h$ | 254 | 253 | 253 | 253 |
| Pressure drop, kPa | 3,1 | 3,2 | 3,2 | 3,3 |
| Temperature in/out, °C | 1,1/22 | | | |
| Maximal capacity, kW | 9,2 | 7,8 | 6,5 | 5,8 |
| Connection, ” | ½ | | | |
| Dimensions, mm | 315×315×220 | | | |
| Hot water duct heater type | DH-200 | | | |

** option

## Performance




## Temperature efficiency




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

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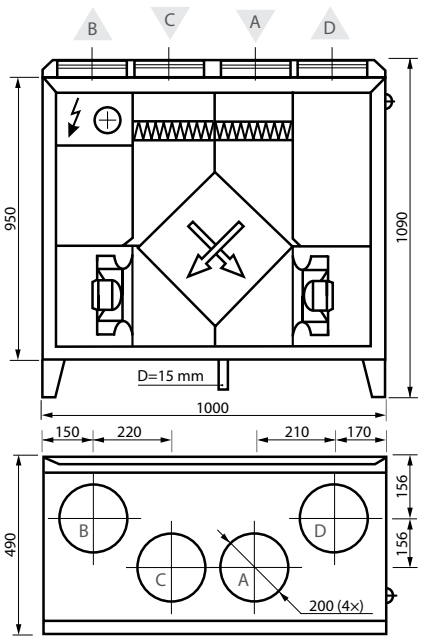


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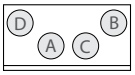



**A** outdoor intake
**B** supply air
**C** extract indoor
**D** exhaust air

# DOMEKT P 700 V

(Kompakt RECU 700V-AC)

| | |
|---|---|
| Nominal air flow, $m^3/h$ | 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, $m^3/s$ | 0,16 |
| Reference pressure difference, Pa | 50 |
| SPI, $W/(m^3/h)$ | 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 $m^2$ 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 | 1,1 | 4,8 | 7,1 | 9,4 | 11,8 | 25,7 |

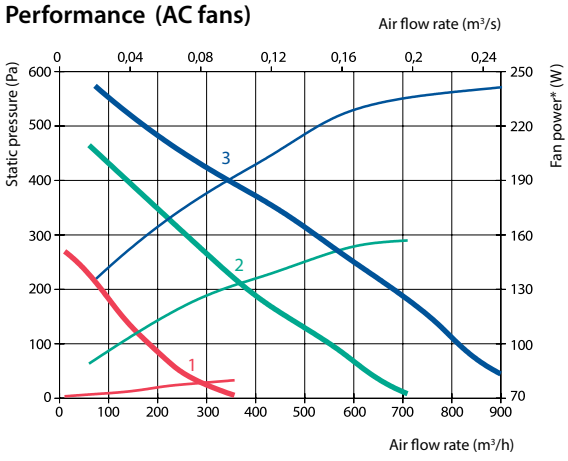
* indoor +22°C, 20 % RH

## Hot water duct air heater (DH)**

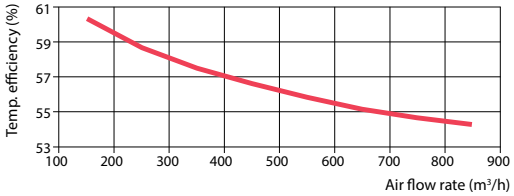
| | Winter | | | |
|---|---|---|---|---|
| Water temperature in/out, °C | 90/70 | 80/60 | 70/50 | 60/40 |
| Capacity, kW | 5,8 | 5,8 | 5,8 | 5,8 |
| Flow rate, $dm^3/h$ | 254 | 253 | 253 | 253 |
| Pressure drop, kPa | 3,1 | 3,2 | 3,2 | 3,3 |
| Temperature in/out, °C | 1,1/22 | | | |
| Maximal capacity, kW | 9,2 | 7,8 | 6,5 | 5,8 |
| Connection, ” | ½ | | | |
| Dimensions, mm | 315×315×220 | | | |
| Hot water duct heater type | DH-200 | | | |

** option

## Performance (AC fans)

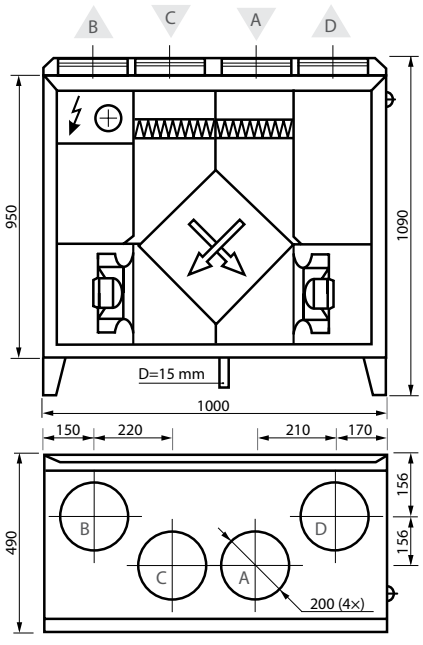



## Temperature efficiency

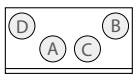



Indoor and outdoor ΔT=13°C re: *Ecodesign 1254/2014.*

**Shown as left (L1)**




**Shown as right (R1)**

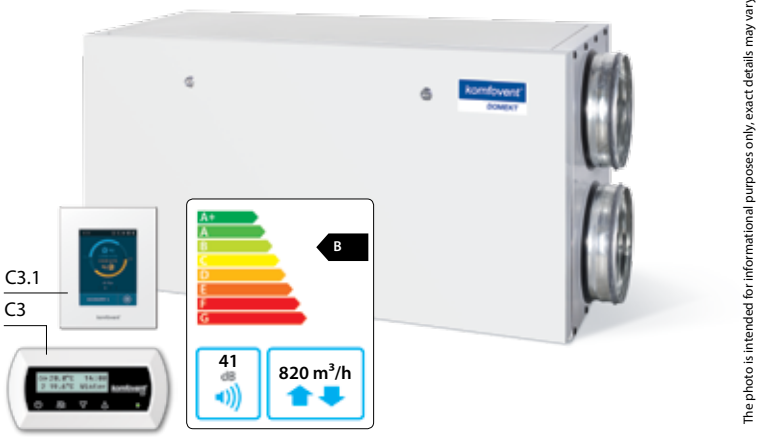



**A** outdoor intake
**B** supply air
**C** extract indoor
**D** exhaust air

# DOMEKT P 700 H

(Kompakt RECU 700H-EC)

| | |
|---|---|
| Nominal air flow, $m^3/h$ | 820 |
| 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 | 170 |
| Electric air heater capacity, kW / Δt, °C | 2,5 / 8,5 |
| 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 | 52 |
| Exhaust Outlet | 65 |
| Casing | 41 |

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

| | |
|---|---|
| Surroundings | 30 |

## 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 |

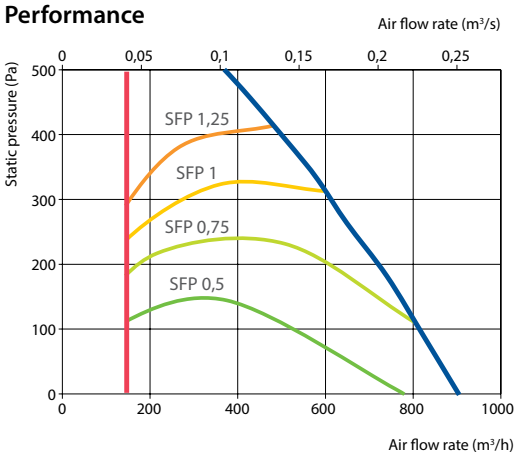
* indoor +22°C, 20 % RH

## Hot water duct air heater (DH)**

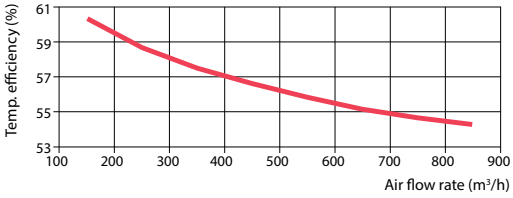
| | Winter | | | |
|---|---|---|---|---|
| Water temperature in/out, °C | 90/70 | 80/60 | 70/50 | 60/40 |
| Capacity, kW | 5,8 | 5,8 | 5,8 | 5,8 |
| Flow rate, $dm^3/h$ | 254 | 253 | 253 | 253 |
| Pressure drop, kPa | 4,3 | 4,3 | 4,4 | 4,4 |
| Temperature in/out, °C | 1,1/22 | | | |
| Maximal capacity, kW | 10,4 | 8,9 | 7,3 | 5,8 |
| Connection, ” | ½ | | | |
| Dimensions, mm | 365×365×220 | | | |
| Hot water duct heater type | DH-250 | | | |

** option

## Performance

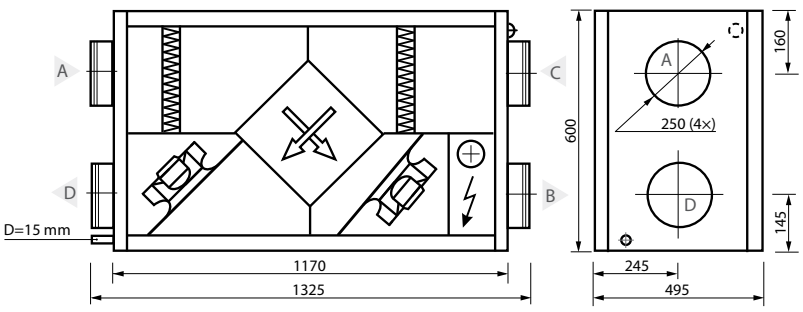



## Temperature efficiency




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

**Shown as right (R1)**




**Shown as left (L1)**

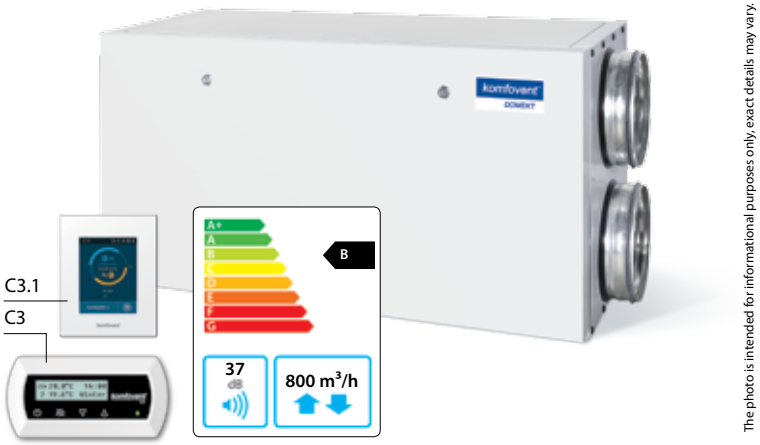

**A** outdoor intake
**B** supply air
**C** extract indoor
**D** exhaust air

komfovent®

# DOMEKT P 700 H

(Kompakt RECU 700H-AC)

| | |
|---|---|
| Nominal 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 |

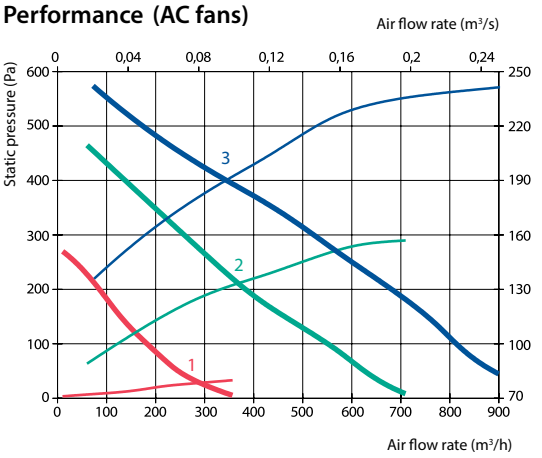
* indoor +22°C, 20 % RH

## Hot water duct air heater (DH)**

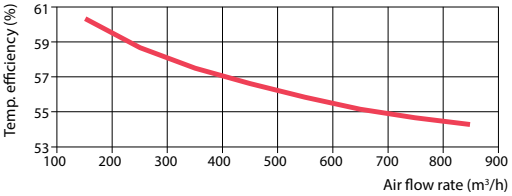
| | Winter | | | |
|---|---|---|---|---|
| Water temperature in/out, °C | 90/70 | 80/60 | 70/50 | 60/40 |
| Capacity, kW | 5,8 | 5,8 | 5,8 | 5,8 |
| Flow rate, dm³/h | 254 | 253 | 253 | 253 |
| Pressure drop, kPa | 4,3 | 4,3 | 4,4 | 4,4 |
| Temperature in/out, °C | 1,1/22 | | | |
| Maximal capacity, kW | 10,4 | 8,9 | 7,3 | 5,8 |
| Connection, ” | ½ | | | |
| Dimensions, mm | 365×365×220 | | | |
| Hot water duct heater type | DH-250 | | | |

** option

## Performance (AC fans)

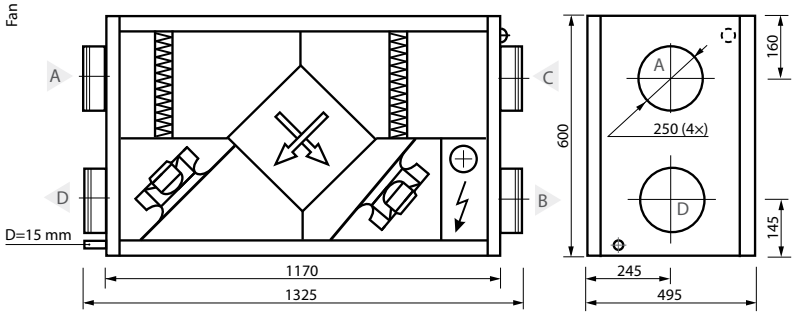



## Temperature efficiency




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

**Shown as right (R1)**




**Shown as left (L1)**


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

# DOMEKT P 900 V

(Kompakt RECU 900V-EC)

| | |
|---|---|
| Nominal air flow, $m^3/h$ | 840 |
| 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, % | 56 |
| 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 | 170 |
| Electric air heater capacity, kW / Δt, °C | 4,5 / 16 |
| 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 | 40 |

**A-weighted sound pressure level $L_{PA}$, dB(A)**
10 $m^2$ 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 | 1,2 | 4,8 | 7,1 | 9,5 | 11,8 | 25,7 |

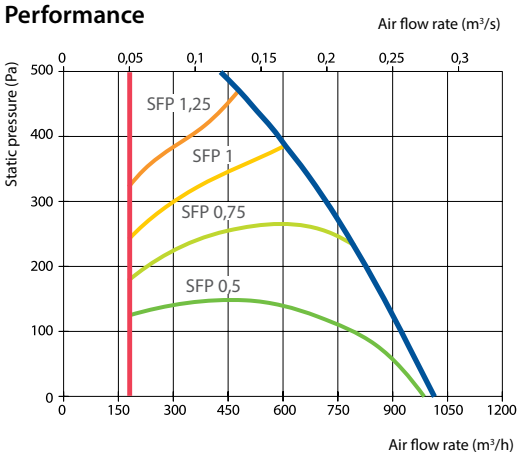
* indoor +22°C, 20 % RH

## Hot water duct air heater (DH)**

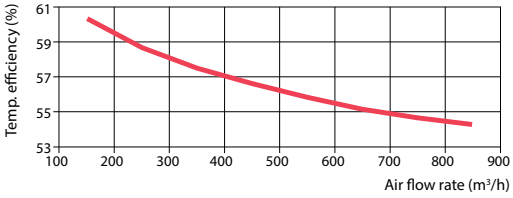
| | Winter | | | |
|---|---|---|---|---|
| Water temperature in/out, °C | 90/70 | 80/60 | 70/50 | 60/40 |
| Capacity, kW | 5,5 | 5,5 | 5,5 | 5,5 |
| Flow rate, $dm^3/h$ | 244 | 243 | 242 | 243 |
| Pressure drop, kPa | 2,9 | 2,9 | 3 | 3,1 |
| Temperature in/out, °C | 1,2/22 | | | |
| Maximal capacity, kW | 8,8 | 7,5 | 6,2 | 5,5 |
| Connection, ” | ½ | | | |
| Dimensions, mm | 315×315×220 | | | |
| Hot water duct heater type | DH-200 | | | |

** option

## Performance

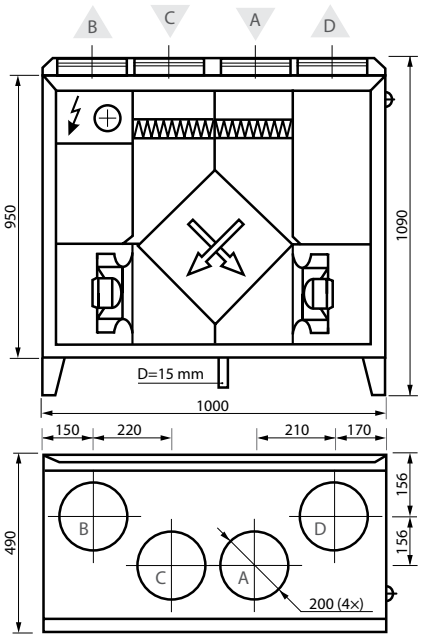



## Temperature efficiency

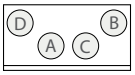



Indoor and outdoor ΔT=13°C re: *Ecodesign 1254/2014.*

**Shown as left (L1)**




**Shown as right (R1)**




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

komfovent®

# DOMEKT P 900 V

(Kompakt RECU 900V-AC)

| | |
|---|---|
| Nominal air flow, m³/h | 870 |
| 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 | 250 |
| Electric air heater capacity, kW / Δt, °C | 4,5 / 15 |
| 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 | 54 |
| Supply Outlet | 68 |
| Exhaust Inlet | 54 |
| Exhaust Outlet | 68 |
| Casing | 42 |

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

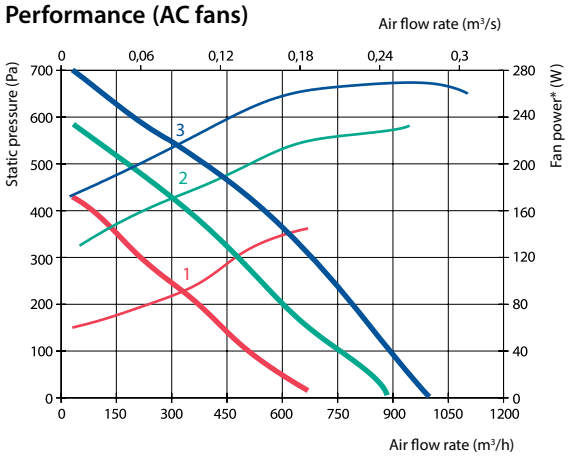
* indoor +22°C, 20 % RH

## Hot water duct air heater (DH)**

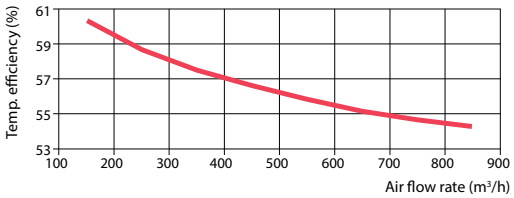
| | Winter | | | |
|---|---|---|---|---|
| Water temperature in/out, °C | 90/70 | 80/60 | 70/50 | 60/40 |
| Capacity, kW | 6,1 | 6,1 | 6,1 | 6,1 |
| Flow rate, dm³/h | 270 | 270 | 270 | 270 |
| Pressure drop, kPa | 3,5 | 3,6 | 3,6 | 3,7 |
| Temperature in/out, °C | 1/22 | | | |
| Maximal capacity, kW | 9,5 | 8,1 | 6,7 | 6,1 |
| Connection, ” | ½ | | | |
| Dimensions, mm | 315×315×220 | | | |
| Hot water duct heater type | DH-200 | | | |

** option

## Performance (AC fans)

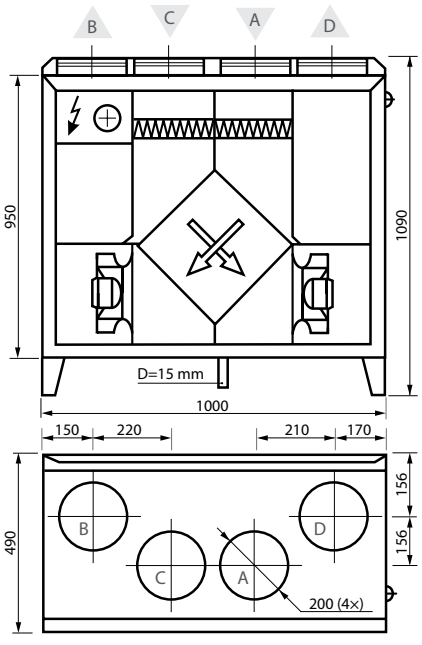



## Temperature efficiency

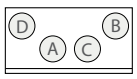



Indoor and outdoor ΔT=13°C re: *Ecodesign 1254/2014.*

**Shown as left (L1)**




**Shown as right (R1)**

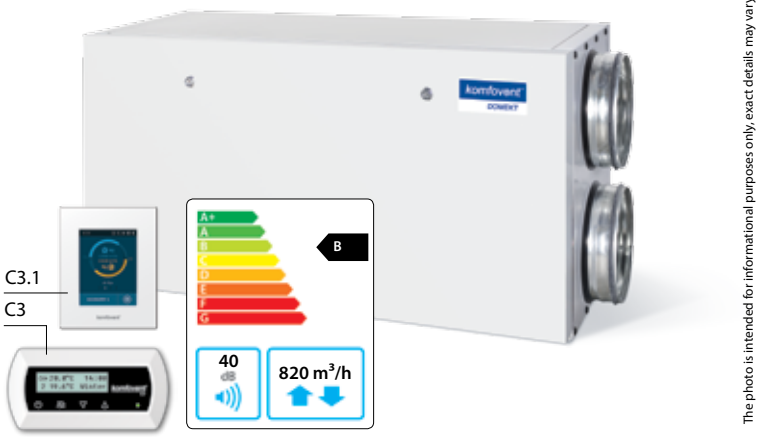



**A** outdoor intake
**B** supply air
**C** extract indoor
**D** exhaust air

# DOMEKT P 900 H

(Kompakt RECU 900H-EC)

| | |
|---|---|
| Nominal air flow, m³/h | 820 |
| 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, m³/s | 0,16 |
| Reference pressure difference, Pa | 50 |
| SPI, W/(m³/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 | 170 |
| Electric air heater capacity, kW / Δt, °C | 4,5 / 15 |
| 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 | 65 |
| Exhaust Inlet | 51 |
| Exhaust Outlet | 65 |
| 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 | -23 | -15 | -10 | -5 | 0 | 30 |
| After heat exchanger*, °C | 1,1 | 4,8 | 7,1 | 9,4 | 11,8 | 25,7 |

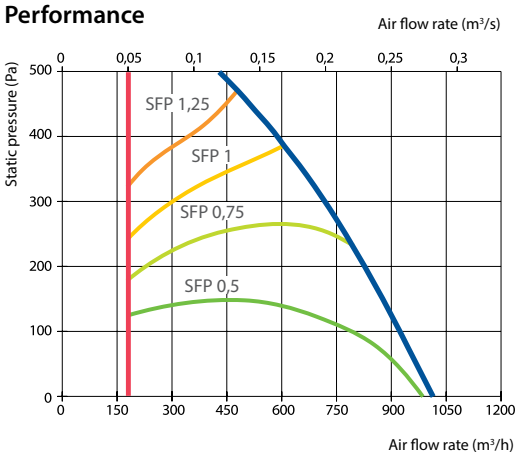
* indoor +22°C, 20 % RH

## Hot water duct air heater (DH)**

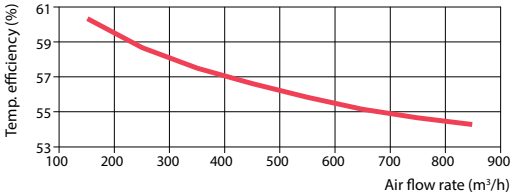
| | Winter | | | |
|---|---|---|---|---|
| Water temperature in/out, °C | 90/70 | 80/60 | 70/50 | 60/40 |
| Capacity, kW | 5,8 | 5,8 | 5,8 | 5,8 |
| Flow rate, dm³/h | 254 | 253 | 253 | 253 |
| Pressure drop, kPa | 4,3 | 4,3 | 4,4 | 4,4 |
| Temperature in/out, °C | 1,1/22 | | | |
| Maximal capacity, kW | 10,4 | 8,9 | 7,3 | 5,8 |
| Connection, ” | ½ | | | |
| Dimensions, mm | 365×365×220 | | | |
| Hot water duct heater type | DH-250 | | | |

** option

## Performance

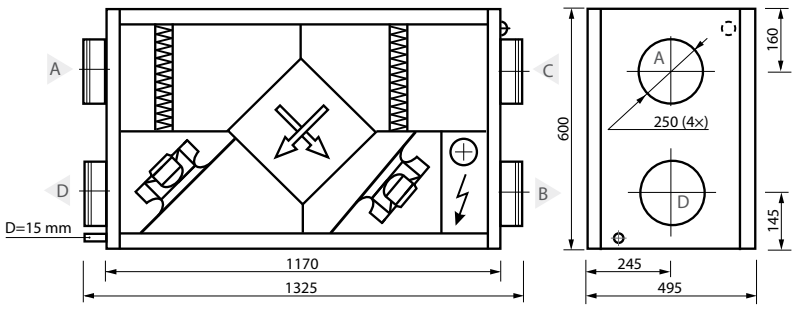



## Temperature efficiency




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

**Shown as right (R1)**




**Shown as left (L1)**

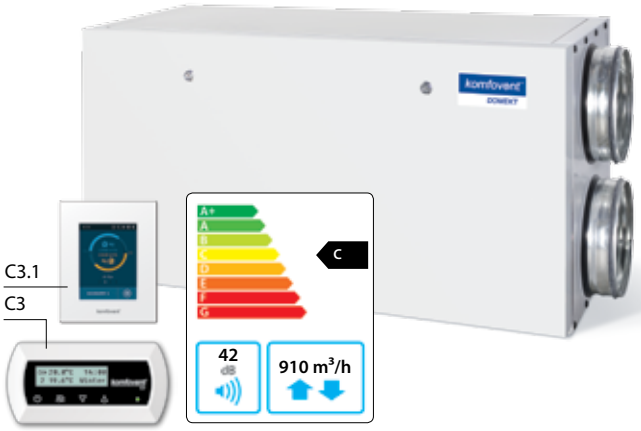

**A** outdoor intake
**B** supply air
**C** extract indoor
**D** exhaust air

komfovent®

# DOMEKT P 900 H

(Kompakt RECU 900H-AC)

| | |
|---|---|
| Nominal air flow, m³/h | 910 |
| 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 | 250 |
| Electric air heater capacity, kW / Δt, °C | 4,5 / 15 |
| 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 | 42 |

**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 | -23 | -15 | -10 | -5 | 0 | 30 |
| After heat exchanger*, °C | 0,9 | 4,6 | 6,9 | 9,3 | 11,6 | 25,8 |

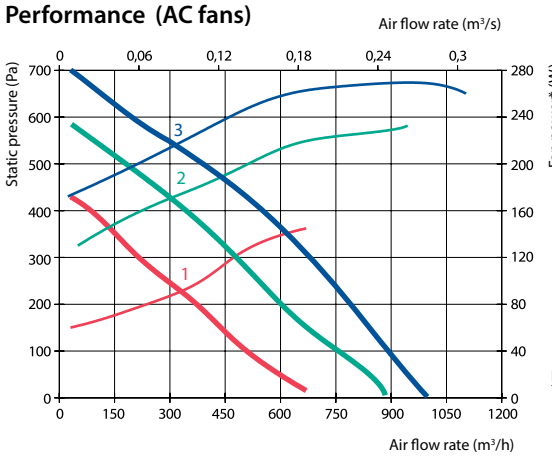
* indoor +22°C, 20 % RH

## Hot water duct air heater (DH)**

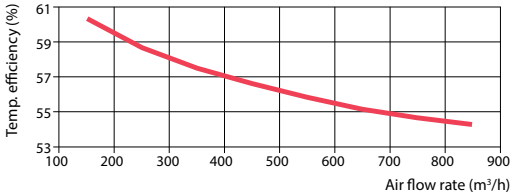
| | Winter | | | |
|---|---|---|---|---|
| Water temperature in/out, °C | 90/70 | 80/60 | 70/50 | 60/40 |
| Capacity, kW | 6,5 | 6,5 | 6,5 | 6,5 |
| Flow rate, dm³/h | 285 | 285 | 285 | 285 |
| Pressure drop, kPa | 5,3 | 5,4 | 5,5 | 5,5 |
| Temperature in/out, °C | 0,9/22 | | | |
| Maximal capacity, kW | 11,4 | 9,7 | 8 | 6,5 |
| Connection, ” | ½ | | | |
| Dimensions, mm | 365×365×220 | | | |
| Hot water duct heater type | DH-250 | | | |

** option

## Performance (AC fans)

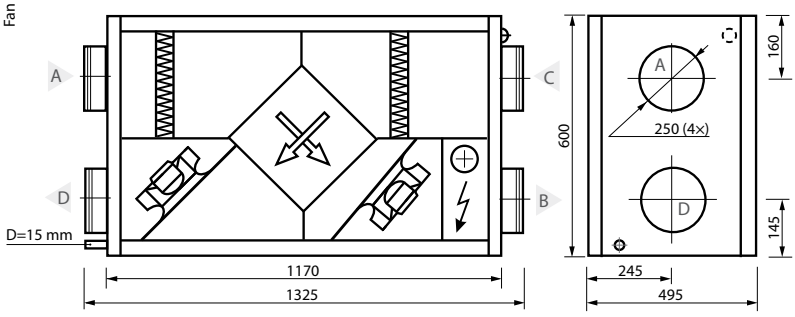



## Temperature efficiency




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

**Shown as right (R1)**

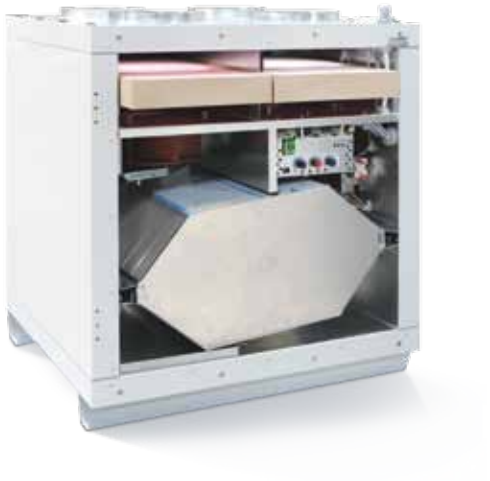



**Shown as left (L1)**

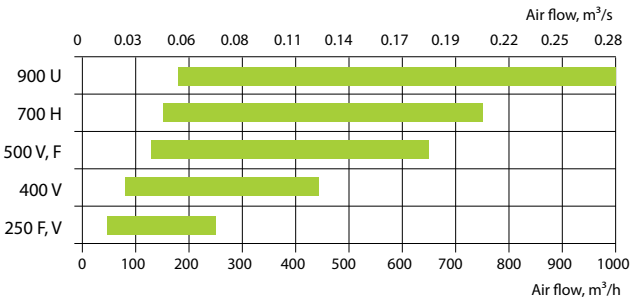

**A** outdoor intake
**B** supply air
**C** extract indoor
**D** exhaust air

# Domekt CF

Air handling units with a counterflow plate heat exchanger.
Capacity range 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 the conditions of movable parts 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 | Connection versions | | | | | Supply/ exhaust air filter class | | Heater | | | Cooler | | Inspection side | | | | Control system | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | | | | C4 panel | | C5 panel |
| | H | V | U | F | HV | M5 | F7 | HE | HW | HCW | CW | CDX | R1 | R2 | L1 | L2 | 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 F | | | | ● | | ● | ○ | ● | △ | △ | △ | △ | ○ | ○ | ○ | ○ | | | ● |

● standard equipment
○ possible choice
△ duct water heater, water and DX cooler ordered separately

## Duct connection

H – horizontal.
V – vertical.
U – universal, 14 installation options.
F – false ceiling.
HV – horizontal or vertical (only for universal units).

## Heater

HE – electric heater.

HW – water duct heater is installed on the duct 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.
Design:
- Galvanized sheet steel casing.
- Copper pipes for heat transfer fluid (water).
- Spacing between profiled aluminum plates is 3 mm (standard spacing). Optional threaded connection for freezing protection alarm sensor (to be specified in the order form).

Capacitive constraints:
- Maximum operating pressure – 10 bar.
- Maximum water temperature +100°C.
- Maximum airflow velocity through the heater 3 m/s.

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. 134.

## Control system

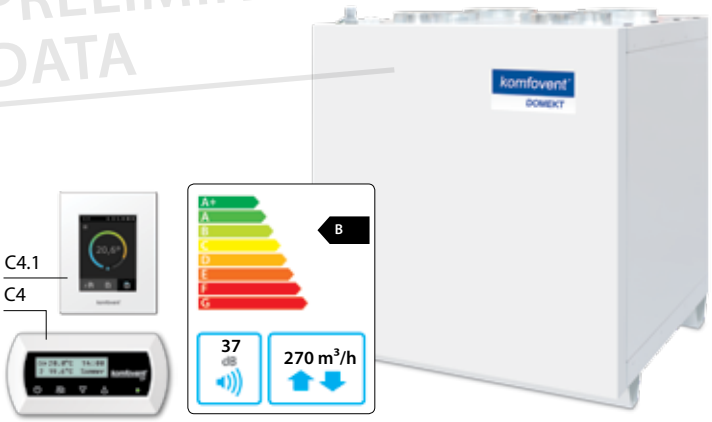
**C4** Control features:
- Unit mode selection: On / Off / Auto.
- Setting intensity level (1,2,3).
- Weekly schedule programming.
- Setting temperature from the panel 15-30°C.
- Temperature setpoint sliding +/- 9°C for time period.
- Summer / winter selection.
- Adjusting of intensity levels every 1% 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






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

| | |
|---|---|
| Nominal air flow, m³/h | 270 |
| Panel thickness, mm | 30 |
| Unit weight, kg | 46 |
| Supply voltage, V | 1~230 |
| Maximal operating current, A | 1,8 |
| Thermal efficiency of heat recovery, % | 90 |
| Reference flow rate, m³/s | 0,05 |
| Reference pressure difference, Pa | 50 |
| SPI, W/(m³/h) | 0,24 |
| Filters dimensions B×H×L, mm | 145×430×46-M5 |
| Electric power input of the fan drive at reference flow rate, W | 35 |
| Electric power input of the fan drive at maximum flow rate, W | 85 |
| Electric air heater capacity, kW / Δt, °C | – |
| Control panel | KOMFOVENT C4 / C4.1 |

## Temperature efficiency

| | Winter | | | | | Summer |
|---|---|---|---|---|---|---|
| Outside temperature, °C | -23 | -15 | -10 | -5 | 0 | 30 |
| After heat exchanger*, °C | 16,5 | 17 | 18 | 18,5 | 19 | 23,2 |

* indoor +22°C, 10% RH

## Acoustic Data

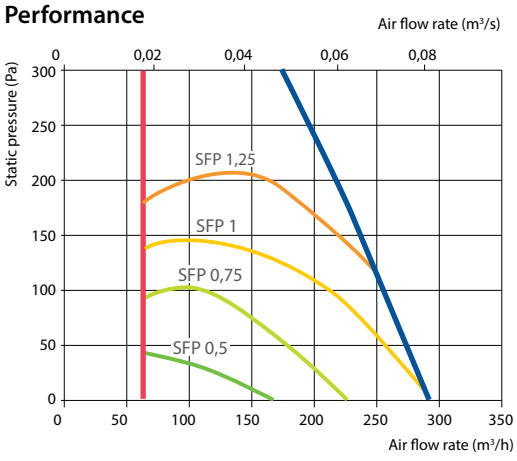
**A-weighted sound power level $L_{WA}$, dB(A) at reference flow rate**

| | |
|---|---|
| Supply Inlet | 52 |
| Supply Outlet | 58 |
| Exhaust Inlet | 52 |
| Exhaust Outlet | 59 |
| Casing | 37 |

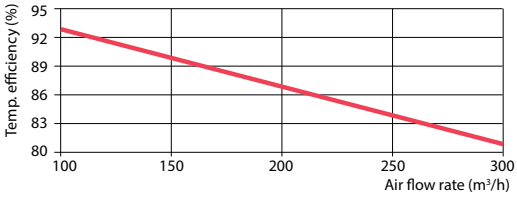
**A-weighted sound pressure level $L_{PA}$, dB(A)**
10 m² normally isolated room, distance from casing – 3 m.

| | |
|---|---|
| Surroundings | 26 |

## Performance

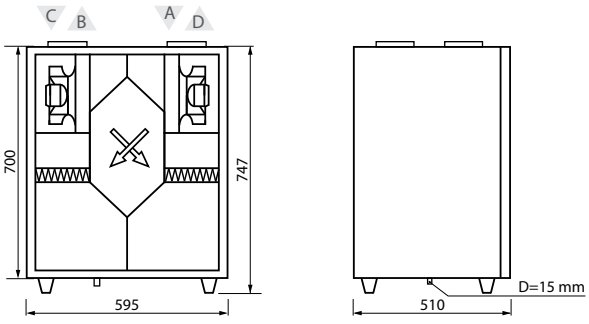


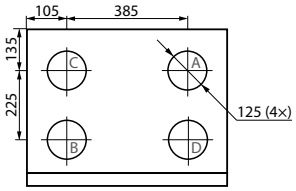

## Temperature efficiency



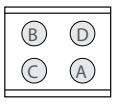

Indoor and outdoor ΔT=13°C re: *Ecodesign 1254/2014.*

**Shown as right (R1)**




**Shown as left (L1)**



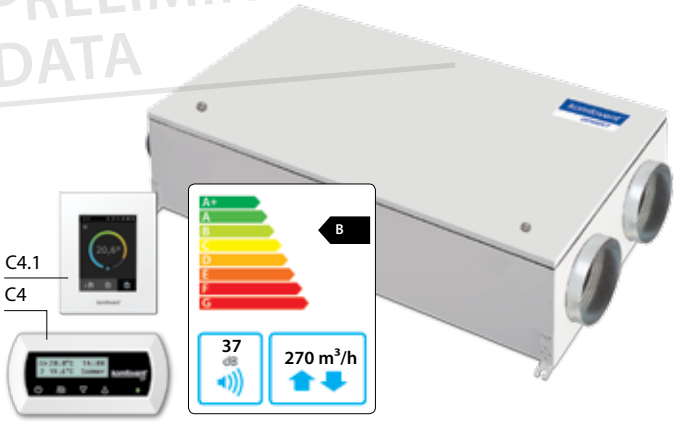

**A** outdoor intake
**B** supply air
**C** extract indoor
**D** exhaust air

komfovent®

# DOMEKT CF 250 F



| | |
|---|---|
| Nominal air flow, $m^3/h$ | 270 |
| Panel thickness, mm | 30 |
| Unit weight, kg | 46 |
| Supply voltage, V | 1~230 |
| Maximal operating current, A | 1,8 |
| Thermal efficiency of heat recovery, % | 90 |
| Reference flow rate, $m^3/s$ | 0,05 |
| Reference pressure difference, Pa | 50 |
| SPI, $W/(m^3/h)$ | 0,24 |
| Filters dimensions B×H×L, mm | 145×430×46-M5 |
| Electric power input of the fan drive at reference flow rate, W | 35 |
| Electric power input of the fan drive at maximum flow rate, W | 85 |
| Duct 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 | 16,5 | 17 | 18 | 18,5 | 19 | 23,2 |

* indoor +22°C, 10% RH

## Acoustic Data

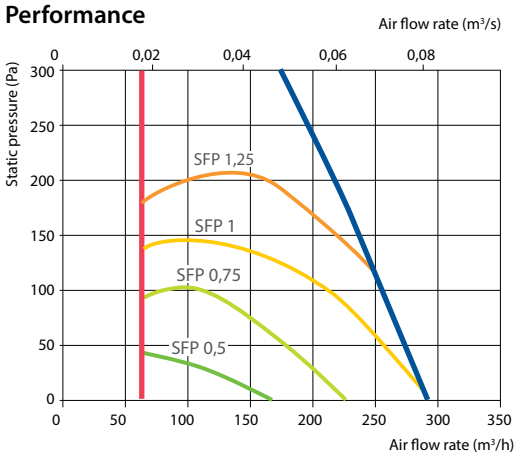
**A-weighted sound power level $L_{WA}$, dB(A) at reference flow rate**

| | |
|---|---|
| Supply Inlet | 52 |
| Supply Outlet | 58 |
| Exhaust Inlet | 52 |
| Exhaust Outlet | 59 |
| Casing | 37 |

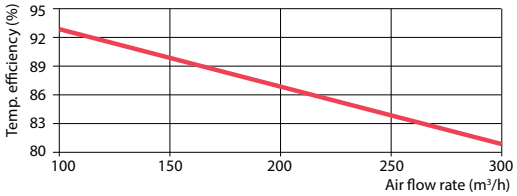
**A-weighted sound pressure level $L_{PA}$, dB(A)**
10 $m^2$ normally isolated room, distance from casing – 3 m.

| | |
|---|---|
| Surroundings | 26 |

## Performance

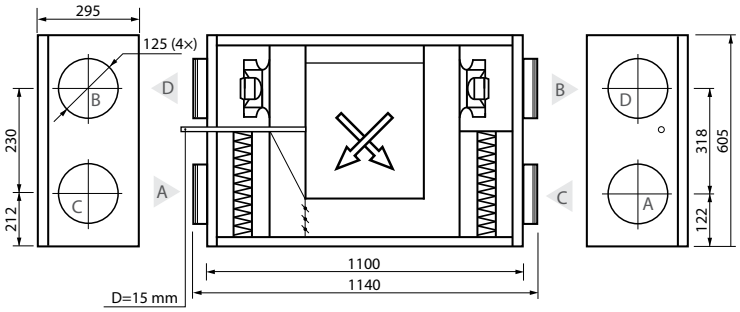



## Temperature efficiency

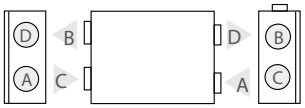



Indoor and outdoor ΔT=13°C re: *Ecodesign 1254/2014.*

**Shown as right (R1)**




**Shown as left (L1)**

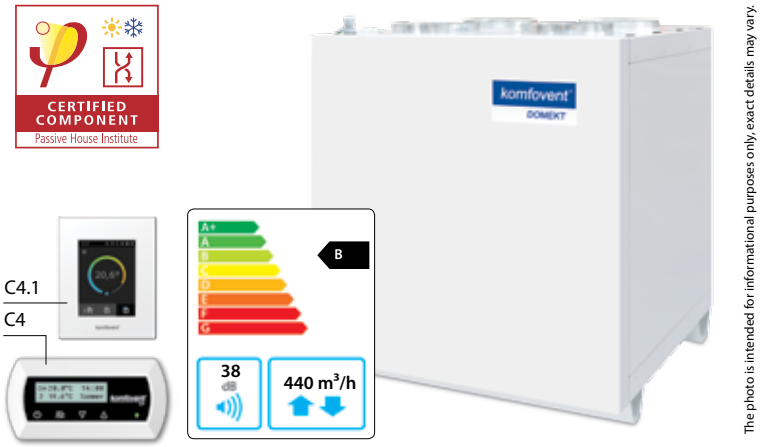



**A** outdoor intake
**B** supply air
**C** extract indoor
**D** exhaust air

# DOMEKT CF 400 V

(Domekt RECU 400VCF)

| | |
|---|---|
| Nominal air flow, m³/h | 440 |
| 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, % | 81 |
| Reference flow rate, m³/s | 0,09 |
| Reference pressure difference, Pa | 50 |
| SPI, W/(m³/h) | 0,29 |
| Filters dimensions B×H×L, mm | 235×350×46-M5 |
| Electric power input of the fan drive at reference flow rate, W | 43 |
| Electric power input of the fan drive at maximum flow rate, W | 96 |
| Electric air heater capacity, kW / Δt, °C | 1,0 / 6,5 |
| 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 | 55 |
| Exhaust Inlet | 61 |
| Exhaust Outlet | 56 |
| Casing | 38 |

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

| | |
|---|---|
| Surroundings | 28 |

## Temperature efficiency

| | Winter | | | | | Summer |
|---|---|---|---|---|---|---|
| Outside temperature, °C | -23 | -15 | -10 | -5 | 0 | 30 |
| After heat exchanger*, °C | 12,6 | 14,2 | 15,3 | 16,3 | 17,3 | 23,7 |

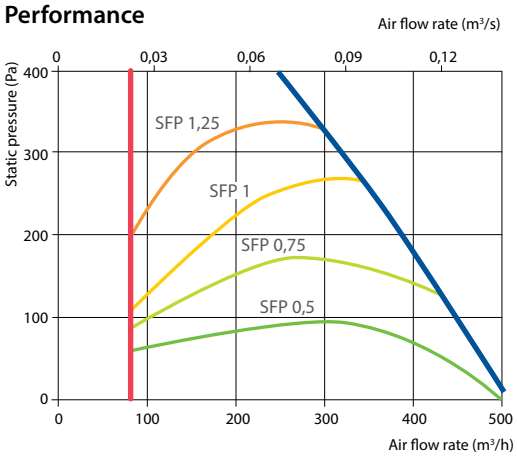
* indoor +22°C, 20 % RH

## Hot water duct air heater (DH)**

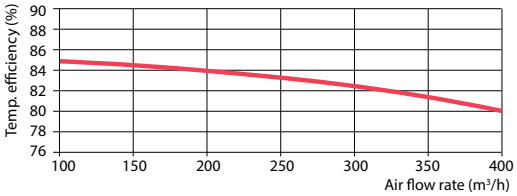
| | Winter | | | |
|---|---|---|---|---|
| Water temperature in/out, °C | 90/70 | 80/60 | 70/50 | 60/40 |
| Capacity, kW | 1,4 | 1,4 | 1,4 | 1,4 |
| Flow rate, dm³/h | 62 | 61 | 61 | 61 |
| Pressure drop, kPa | 1 | 1 | 1 | 1 |
| Temperature in/out, °C | 17,3/22 | | | |
| Maximal capacity, kW | 3,7 | 3 | 2,3 | 1,6 |
| Connection, ” | ½ | | | |
| Dimensions, mm | 315×315×220 | | | |
| Hot water duct heater type | DH-160 | | | |

** option

## Performance

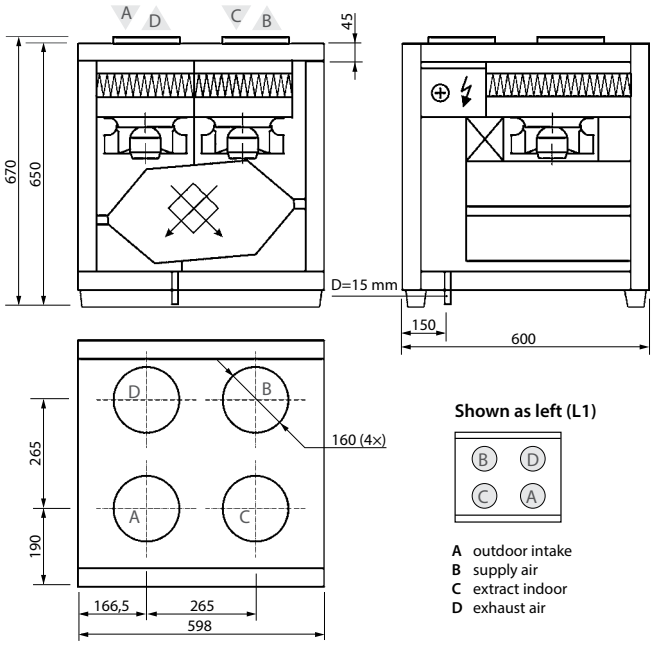



## Temperature efficiency




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

**Shown as right (R1)**




**Shown as left (L1)**



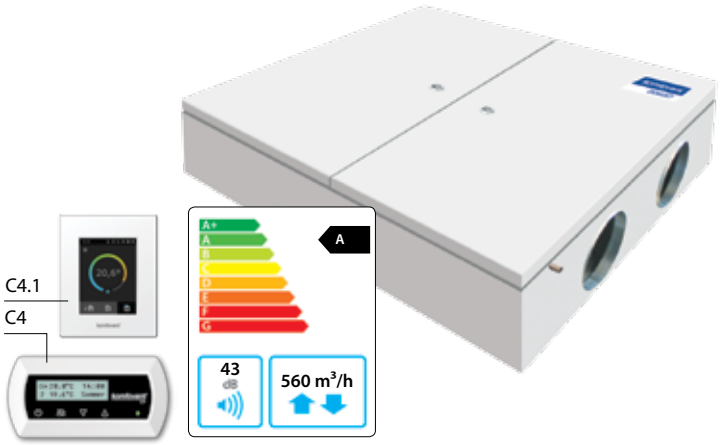

**A** outdoor intake
**B** supply air
**C** extract indoor
**D** exhaust air

komfovent®

# DOMEKT CF 500 F

(Domekt RECU 500PCF)

| | |
|---|---|
| Nominal air flow, m³/h | 560 |
| 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) | 0,4 |
| Filters dimensions B×H×L, mm | 410×200×46-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 | 170 |
| Electric air heater capacity, kW / Δt, °C | 1,0 / 5 |
| 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 | 56 |
| Supply Outlet | 70 |
| Exhaust Inlet | 56 |
| Exhaust Outlet | 70 |
| 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 | 15 | 16 | 16,8 | 17,6 | 18,4 | 23,3 |

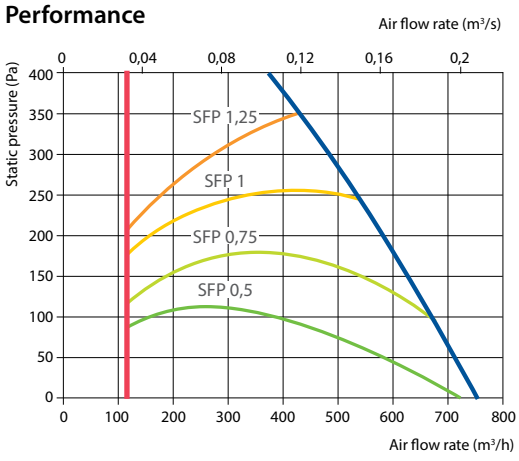
* indoor +22°C, 20 % RH

## Hot water duct air heater (DH)**

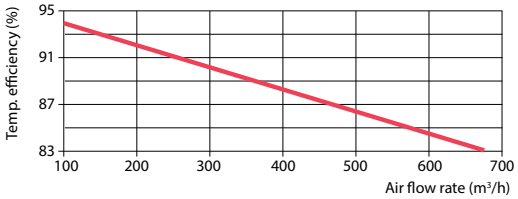
| | Winter | | | |
|---|---|---|---|---|
| Water temperature in/out, °C | 90/70 | 80/60 | 70/50 | 60/40 |
| Capacity, kW | 1,3 | 1,3 | 1,3 | 1,3 |
| Flow rate, dm³/h | 59 | 59 | 58 | 58 |
| Pressure drop, kPa | 1 | 1 | 1 | 1 |
| Temperature in/out, °C | 15/22 | | | |
| Maximal capacity, kW | 4,2 | 3,4 | 2,5 | 1,7 |
| Connection, ” | ½ | | | |
| Dimensions, mm | 315×315×220 | | | |
| Hot water duct heater type | DH-200 | | | |

** option

## Performance

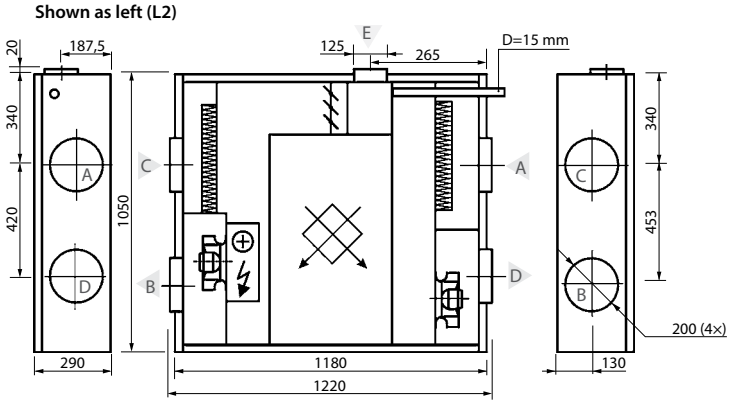



## Temperature efficiency

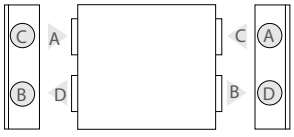



Indoor and outdoor ΔT=13°C re: *Ecodesign 1254/2014.*

**Shown as left (L2)**




**Shown as right (R2)**




**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)

| | |
|---|---|
| Nominal air flow, $m^3/h$ | 670 |
| 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, % | 88 |
| 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 | 170 |
| Electric air heater capacity, kW / Δt, °C | 2,0 / 8,4 |
| 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 | 46 |
| Supply Outlet | 67 |
| Exhaust Inlet | 52 |
| Exhaust Outlet | 67 |
| Casing | 41 |

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

| | |
|---|---|
| Surroundings | 30 |

## Temperature efficiency

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

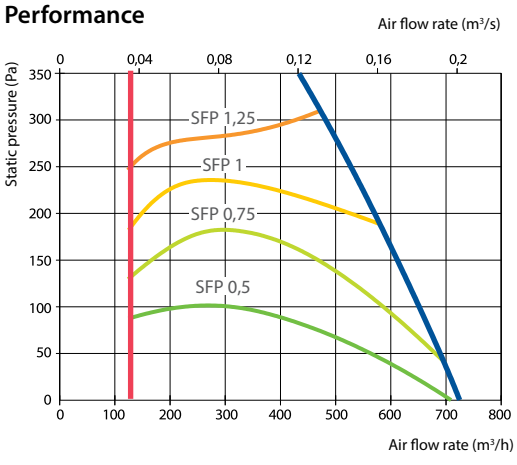
* indoor +22°C, 20 % RH

## Hot water duct air heater (DH)**

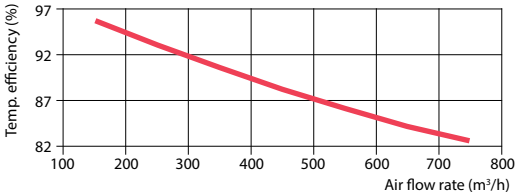
| | Winter | | | |
|---|---|---|---|---|
| Water temperature in/out, °C | 90/70 | 80/60 | 70/50 | 60/40 |
| Capacity, kW | 1,7 | 1,7 | 1,7 | 1,7 |
| Flow rate, $dm^3/h$ | 74 | 74 | 73 | 73 |
| Pressure drop, kPa | 1 | 1 | 1 | 1 |
| Temperature in/out, °C | 14,6/22 | | | |
| Maximal capacity, kW | 5,2 | 4,2 | 3,2 | 2,2 |
| Connection, ” | ½ | | | |
| Dimensions, mm | 315×315×220 | | | |
| Hot water duct heater type | DH-200 | | | |

** option

## Performance

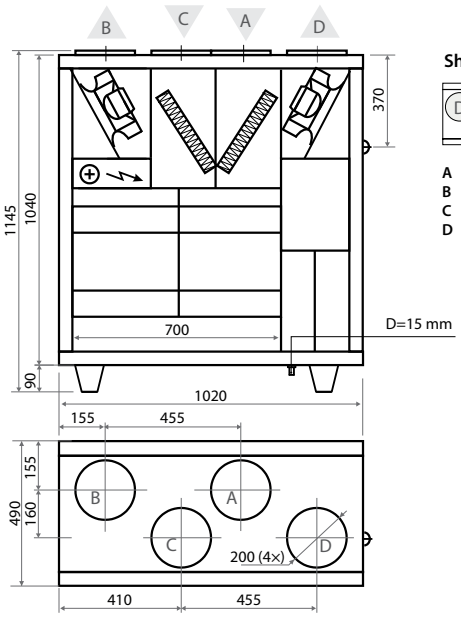



## Temperature efficiency




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

**Shown as left (L1)**

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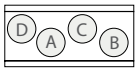



**A** outdoor intake
**B** supply air
**C** extract indoor
**D** exhaust air

komfovent®

# DOMEKT CF 700 H

(Kompakt RECU 700HCF)

| | |
|---|---|
| Nominal air flow, m³/h | 770 |
| 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, % | 86 |
| 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 | 170 |
| Electric air heater capacity, kW / Δt, °C | 2,0 / 7,2 |
| 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 | 46 |
| Supply Outlet | 66 |
| Exhaust Inlet | 51 |
| Exhaust Outlet | 66 |
| Casing | 41 |

**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 | -23 | -15 | -10 | -5 | 0 | 30 |
| After heat exchanger*, °C | 13,7 | 14,9 | 15,9 | 16,8 | 17,8 | 23,5 |

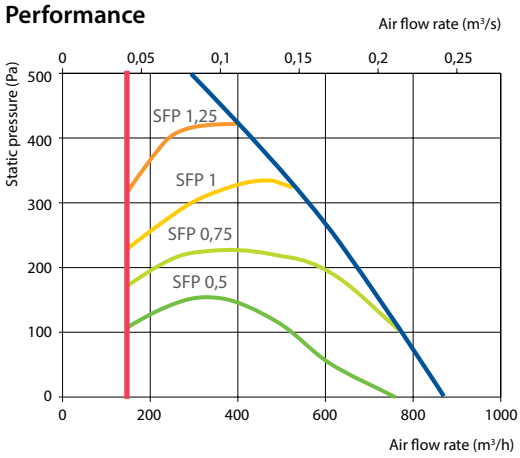
* indoor +22°C, 20 % RH

## Hot water duct air heater (DH)**

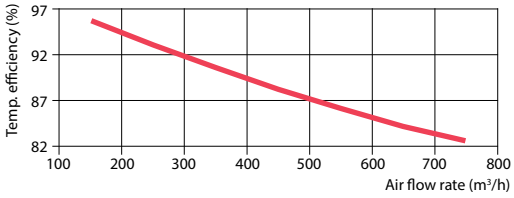
| | Winter | | | |
|---|---|---|---|---|
| Water temperature in/out, °C | 90/70 | 80/60 | 70/50 | 60/40 |
| Capacity, kW | 2,2 | 2,2 | 2,2 | 2,2 |
| Flow rate, dm³/h | 95 | 95 | 95 | 95 |
| Pressure drop, kPa | 1 | 1 | 1 | 1 |
| Temperature in/out, °C | 13,7/22 | | | |
| Maximal capacity, kW | 7,2 | 5,8 | 4,5 | 3,2 |
| Connection, ” | ½ | | | |
| Dimensions, mm | 365×365×220 | | | |
| Hot water duct heater type | DH-250 | | | |

** option

## Performance

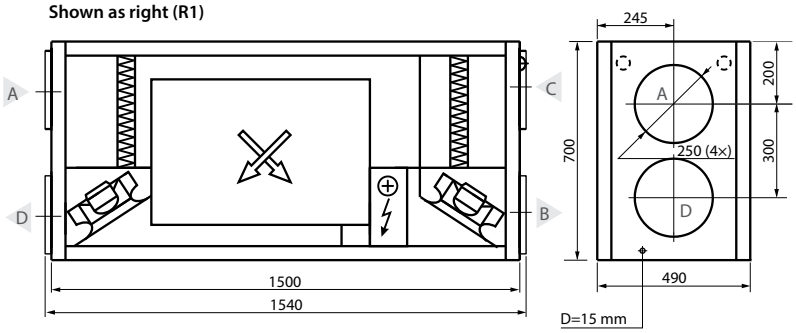



## Temperature efficiency




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

**Shown as right (R1)**




**Shown as left (L1)**


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

# DOMEKT CF 900 U

| | |
|---|---|
| Nominal air flow, $m^3/h$ | 1000 |
| Panel thickness, mm | 50 |
| Unit weight, kg | 210 |
| Supply voltage, V | HE 3~400 /HW 1~230 |
| Maximal operating current, A | HE 9,8 / HW 3,8 |
| Thermal efficiency of heat recovery, % | 83 |
| Reference flow rate, $m^3/s$ | 0,21 |
| Reference pressure difference, Pa | 50 |
| SPI, $W/(m^3/h)$ | 0,18 |
| Filters dimensions B×H×L, mm | 800×400×46-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 | 170 |
| Electric air heater capacity, kW / Δt, °C | 4,5 / 16,2 |
| Control panel | KOMFOVENT C5.1 |


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

## Acoustic Data

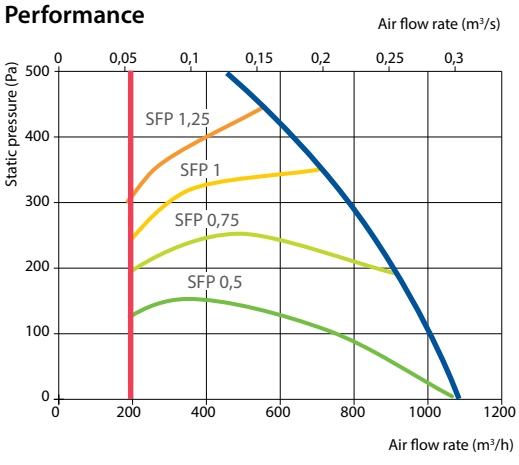
**A-weighted sound power level $L_{WA}$, dB(A) at reference flow rate**

| | |
|---|---|
| Supply Inlet | 48 |
| Supply Outlet | 63 |
| Exhaust Inlet | 49 |
| Exhaust Outlet | 63 |
| Casing | 39 |

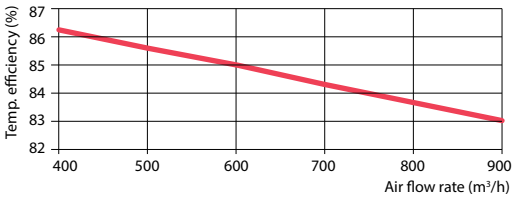
**A-weighted sound pressure level $L_{PA}$, dB(A)**
10 $m^2$ normally isolated room, distance from casing – 3 m.

| | |
|---|---|
| Surroundings | 28 |

## Performance




## 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 | 13,8 | 15,2 | 16,1 | 17 | 17,9 | 23,5 |

* 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 | 2,5 | 2,5 | 2,5 | 2,5 | 3,3 |
| Flow rate, $dm^3/h$ | 109 | 109 | 108 | 108 | 569 |
| Pressure drop, kPa | 1 | 1 | 1 | 1 | 5,5 |
| Temperature in/out, °C | 13,8/22 | | | | 23,5/18 |
| Maximal capacity, kW | 19,5 | 14,7 | 9,9 | 6,2 | 5,8 |
| 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).

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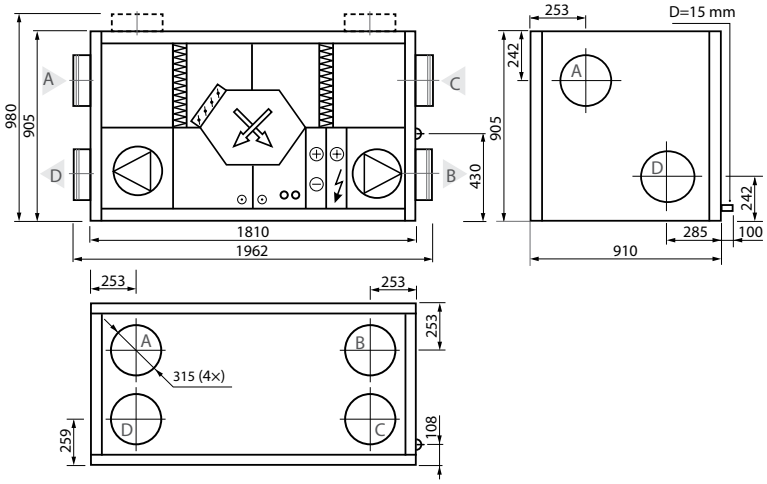


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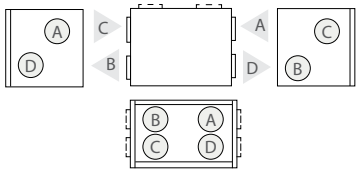
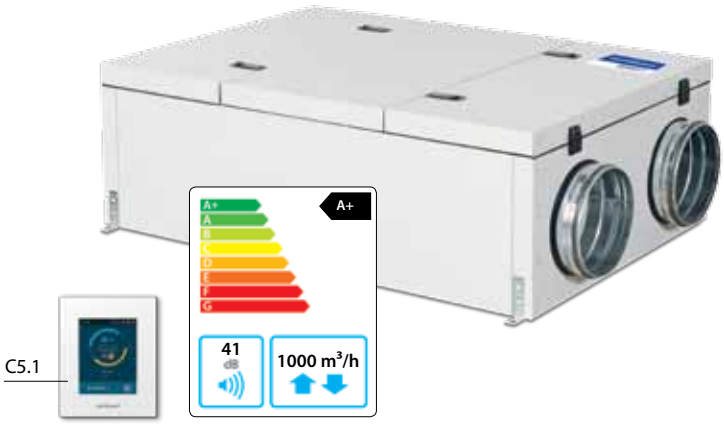


**A** outdoor intake
**B** supply air
**C** extract indoor
**D** exhaust air

komfovent®

# DOMEKT CF 900 F

| | |
|---|---|
| Nominal 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 3,8 |
| Thermal efficiency of heat recovery, % | 83 |
| 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 | 170 |
| Electric air heater capacity, kW / Δt, °C | 3,0 / 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 | 54 |
| Supply Outlet | 67 |
| Exhaust Inlet | 53 |
| Exhaust Outlet | 67 |
| Casing | 41 |

**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 | -23 | -15 | -10 | -5 | 0 | 30 |
| After heat exchanger*, °C | 13,8 | 15,2 | 16,1 | 17 | 17,9 | 23,6 |

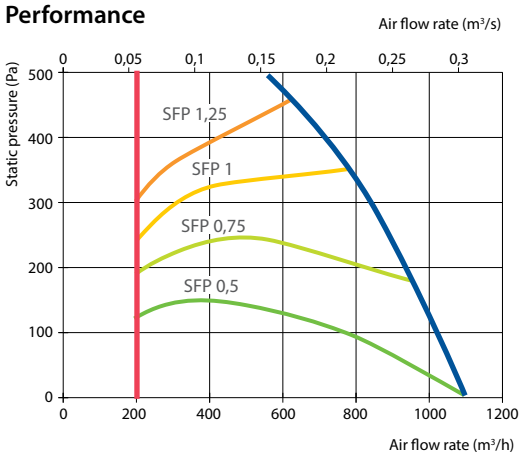
* indoor +22°C, 20 % RH

## Hot water duct air heater (DH)**

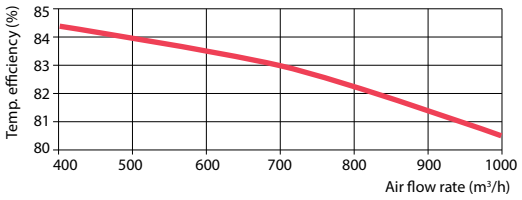
| | Winter | | | |
|---|---|---|---|---|
| Water temperature in/out, °C | 90/70 | 80/60 | 70/50 | 60/40 |
| Capacity, kW | 2,5 | 2,5 | 2,5 | 2,5 |
| Flow rate, dm³/h | 110 | 109 | 109 | 108 |
| Pressure drop, kPa | 1,4 | 1,4 | 1,4 | 1,5 |
| Temperature in/out, °C | 13,8/22 | | | |
| Maximal capacity, kW | 9,4 | 7,7 | 5,9 | 4,2 |
| Connection, ” | ½ | | | |
| Dimensions, mm | 415×415×220 | | | |
| Hot water duct heater type | DH-315 | | | |

** option

## Performance

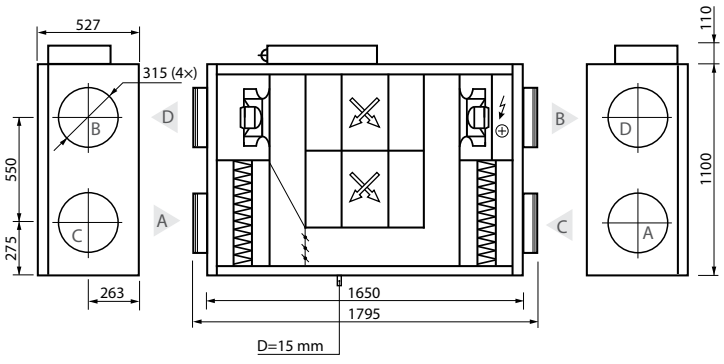



## Temperature efficiency

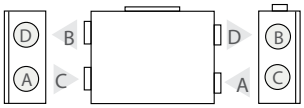



Indoor and outdoor ΔT=13°C re: *Ecodesign 1254/2014.*

**Shown as right (R1)**




**Shown as left (L1)**

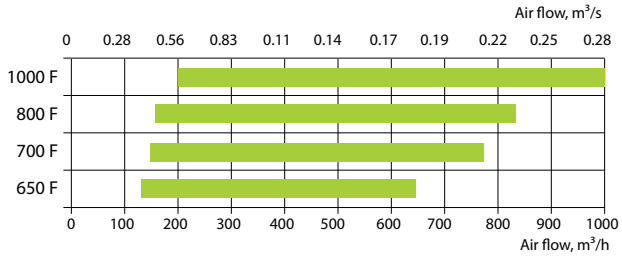



**A** outdoor intake
**B** supply air
**C** extract indoor
**D** exhaust air

# Domekt S

False ceiling supply air handling units.
Capacity range from 130 to 1 000 $m^3/h$.

### Standard sizes of Domekt S units




## Advantages of Domekt S units

- Height is only 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 | Connection versions | Supply/exhaust air filter class | | Heater | | | Cooler | | Inspection side | Control system C4 panel | | Control system C5 panel |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | F | 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
△ duct water heater, water and DX cooler 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. 134.

**Control system**

More information about **C3** on p. 12.
More information about **C5** on p. 10.

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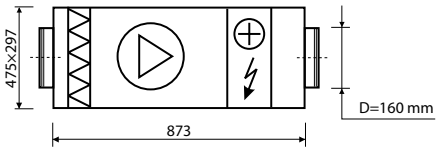
# DOMEKT S 650 F

| | |
|---|---|
| Nominal air flow, $m^3/h$ | 650 |
| Panel thickness, mm | 50 |
| Unit weight, kg | 35 |
| Reference flow rate, $m^3/s$ | 0,13 |
| Reference pressure difference, Pa | 50 |
| SPI, $W/(m^3/h)$ | 0,17 |
| Filters dimensions B×H×L, mm | 371×235×46-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 | 177 |
| 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 | 38 |

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

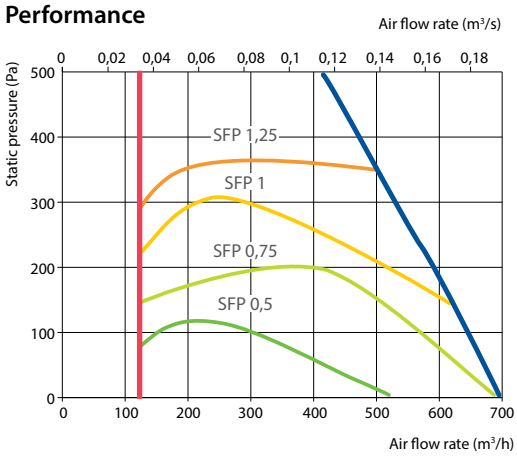
| | |
|---|---|
| Surroundings | 27 |

## 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 |

HE – electric air heater

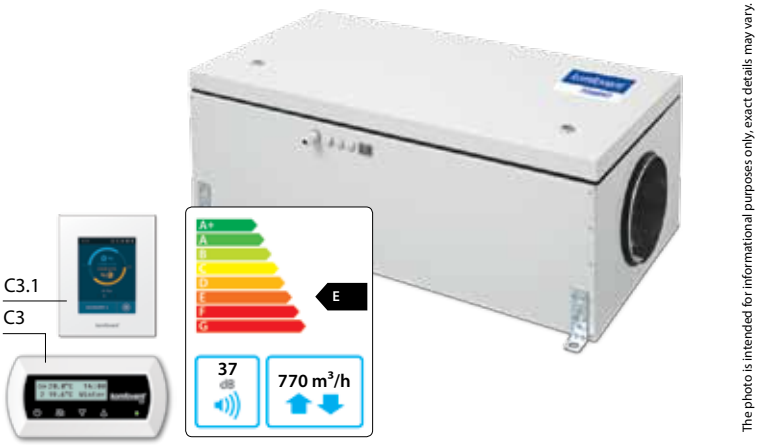
## Performance



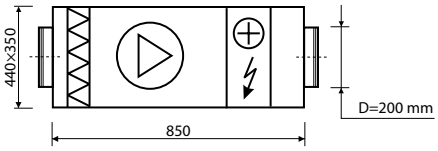
# DOMEKT S 700 F

(Kompakt OTK 700)

| | |
|---|---|
| Nominal air flow, $m^3/h$ | 770 |
| 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 | 169 |
| 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 | 63 |
| Casing | 37 |

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

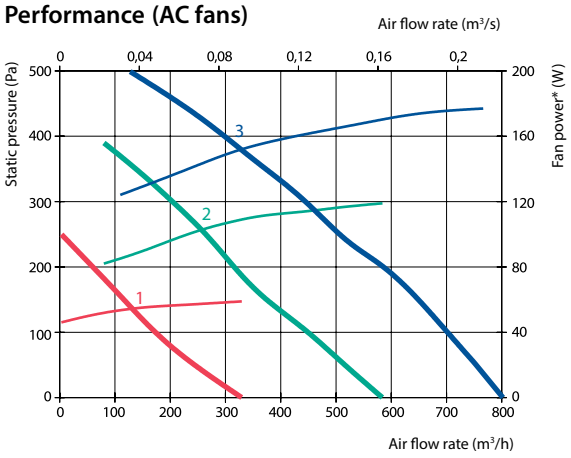
| | |
|---|---|
| Surroundings | 26 |

## 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 |

HE – electric air heater

## Performance (AC fans)



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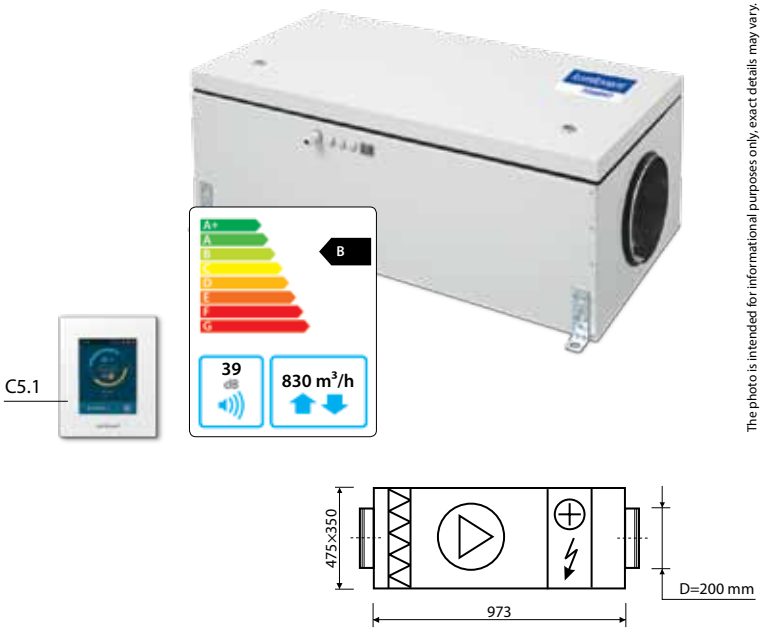
# DOMEKT S 800 F

| | |
|---|---|
| Nominal air flow, m³/h | 830 |
| Panel thickness, mm | 50 |
| Unit weight, kg | 35 |
| Reference flow rate, m³/s | 0,16 |
| Reference pressure difference, Pa | 50 |
| SPI, W/(m³/h) | 0,13 |
| Filters dimensions B×H×L, mm | 371×287×46-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 | 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 | 60 |
| Supply Outlet | 65 |
| Casing | 39 |

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

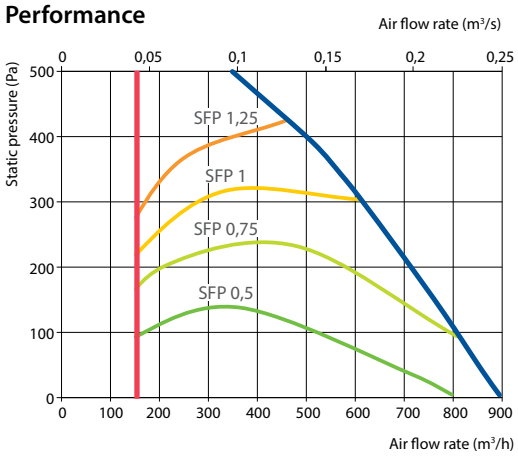
| | |
|---|---|
| Surroundings | 28 |

## 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 | 11 |
| 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 | – | 2,4 | – |

HE – electric air heater
HW – water air heater

## Performance

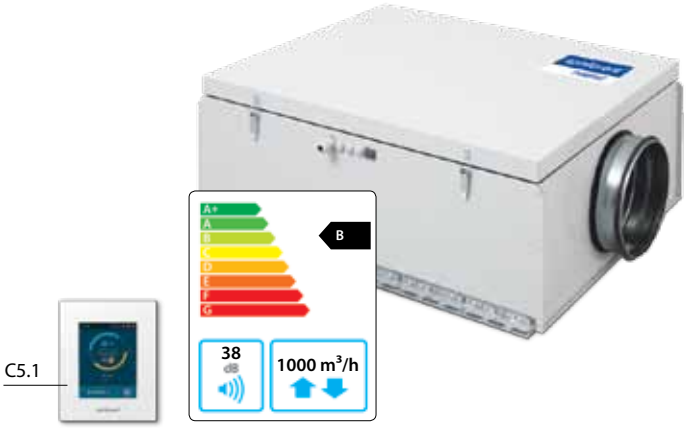



## Hot water air heater

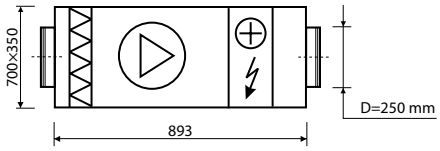
| Water temperature in/out, °C | 90/70 | 80/60 | 70/50 | 60/40 |
|---|---|---|---|---|
| Capacity, kW | 10,8 | 10,7 | 9,1 | 6 |
| Flow rate, dm³/h | 477 | 471 | 396 | 261 |
| Pressure drop, kPa | 3,9 | 3,8 | 2,9 | 1,4 |
| Temperature in/out, °C | -23/20 | -23/19,7 | -23/13,4 | -10/12,3 |
| Maximal capacity, kW | 12,1 | 10,7 | 9,1 | 6 |
| Connection, ” | ½ | | | |

# DOMEKT S 1000 F

| | |
|---|---|
| Nominal 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 | 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 | 38 |

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

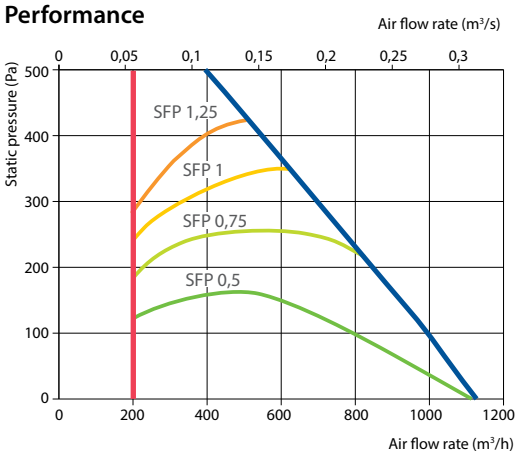
| | |
|---|---|
| Surroundings | 27 |

## 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 | – | 2,9 | – |

HE – water air heater
HW – water air heater

## Performance




## 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 400 V | AGUJ-M-160 |
| R 450 V | AGUJ-M-160 |
| R 250 F | AGUJ-M-160 |
| R 400 F | AGUJ-M-200 |
| R 600 H | AGUJ-M-200 |
| R 400 H | AGUJ-M-160 |
| R 500 H | AGUJ-M-200 |
| R 500 V | AGUJ-M-250 |
| R 500 U | AGUJ-M-200 |
| R 700 F | AGUJ-M-250 |
| R 700 H | AGUJ-M-250 |
| R 700 V | AGUJ-M-250 |
| R 900 U | AGUJ-M-315 |
| RHP 600 U | AGUJ-M-200 |
| RHP 800 U | AGUJ-M-250 |
| PP 300 V | AGUJ-M-125 |
| PP 450 V | AGUJ-M-125 |
| P 400 V | AGUJ-M-160 |
| P 400 H | AGUJ-M-200 |

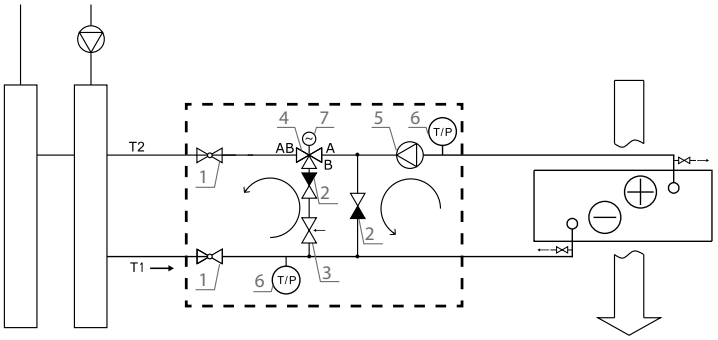
| Unit size | Damper |
|---|---|
| P 700 V EC | AGUJ-M-200 |
| P 700 H EC | AGUJ-M-250 |
| P 700 V AC | AGUJ-M-200 |
| P 700 H AC | AGUJ-M-250 |
| P 900 V EC | AGUJ-M-200 |
| P 900 H EC | AGUJ-M-250 |
| P 900 V AC | AGUJ-M-200 |
| P 900 H AC | AGUJ-M-250 |
| CF 250 V | AGUJ-M-125 |
| CF 250 F | AGUJ-M-125 |
| CF 400 V | AGUJ-M-160 |
| CF 500 F | AGUJ-M-200 |
| CF 700 V | AGUJ-M-200 |
| CF 700 H | AGUJ-M-250 |
| CF 900 U | AGUJ-M-315 |
| CF 900 F | AGUJ-M-315 |
| S 650 F | AGUJ-M-160 |
| S 700 F | AGUJ-M-200 |
| 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 Unit PPU is used for the adjustment of thermal power of water heaters, i.e. for the adjustment of thermal media debit via the heater and respectfully, the temperature of supplied air. 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

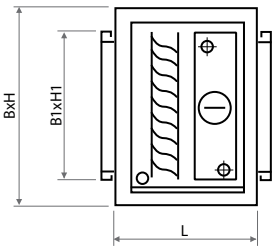
| Unit size | Pipework Package |
|---|---|
| R 200 V | PPU-HW-3R-15-0,4-W1 |
| R 400 V | PPU-HW-3R-15-0,4-W1 |
| R 450 V | PPU-HW-3R-15-0,4-W1 |
| R 250 F | PPU-HW-3R-15-0,4-W1 |
| R 400 F | PPU-HW-3R-15-0,63-W1 |
| R 600 H | PPU-HW-3R-15-0,63-W1 |
| R 400 H | PPU-HW-3R-15-0,63-W1 |
| R 500 H | PPU-HW-3R-15-0,63-W1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

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

| Unit size | Pipework Package |
|---|---|
| P 900 V AC | PPU-HW-3R-15-1,6-W2 |
| P 900 H AC | PPU-HW-3R-15-1,6-W2 |
| CF 250 V | PPU-HW-3R-15-0,4-W1 |
| CF 250 F | PPU-HW-3R-15-0,4-W1 |
| CF 400 V | PPU-HW-3R-15-0,4-W1 |
| CF 500 F | PPU-HW-3R-15-0,63-W1 |
| CF 700 V | PPU-HW-3R-15-0,63-W1 |
| CF 700 H | PPU-HW-3R-15-0,63-W1 |
| CF 900 U | PPU-HW-3R-15-0,63-W1 |
| CF 900 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 handling unit size | Cooler's type | Supply air volume, $m^3/h$ | Air temper. in/out, °C | Capacity, kW | Air pressure drop*, Pa | Fluid pressure loss, kPa | B×H×L, mm | B1×H1, mm | Tubes connections, " / mm | Weight, kg |
|---|---|---|---|---|---|---|---|---|---|---|
| R 450, P 450 | DCW-0,4-3 | 400 | 30/18 | 2,7 | 34 | 15,8 | 505×550×390 | 300×400 | ½ | 32 |
| R 400, P 400 | DCF-0,4-2 | 400 | 30/18 | 2,38 | 48 | 5,47 | 605×550×390 | 300×400 | ½ / 22 | 37 |
| | DCW-0,4-3 | 400 | 30/18 | 2,7 | 34 | 15,8 | 505×550×390 | 300×400 | ½ | 32 |
| R 500, R 600 CF 500 | DCF-0,5-3 | 500 | 30/18 | 2,97 | 43 | 4,91 | 600×550×390 | 400×300 | ½ / 22 | 38 |
| | DCW-0,5-3 | 500 | 30/18 | 3,4 | 30 | 29,5 | 600×550×390 | 400×300 | ½ | 35 |
| R 700, P 700 CF 700, S 700 | DCF-0,7-4 | 700 | 30/18 | 4,16 | 53 | 2,57 | 705×610×390 | 500×400 | ½ / 22 | 46 |
| | DCW-0,7-5 | 700 | 30/18 | 4,7 | 29 | 11,2 | 705×610×390 | 500×400 | ½ | 41 |
| R 900, P 900, CF 900 S 800, S 1000 | DCF-0,9-5 | 900 | 30/18 | 5,3 | 64 | 3,89 | 705×610×390 | 500×400 | ½ / 22 | 46 |
| | DCW-0,9-6 | 900 | 30/18 | 6,0 | 36 | 3,7 | 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**.

### Silencers for Domekt R, Domekt RHP units

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

### Silencers for Domekt P, Domekt CF units

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

### Silencers for Domekt S units

| Unit size | Silencer type | |
|---|---|---|
| S 650 F | A | AGS-160-50-600-M |
| | B | AGS-160-50-900-M |
| S 700 F<br>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

# 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 |
|---|---|---|
| EKA-NV PTC 125-0,9-1f | 0.9 | 1 ~ 230 |
| EKA-NV PTC 160-0,9-1f | 0.9 | 1 ~ 230 |
| EKA-NV PTC 160-1,2-1f | 1.2 | 1 ~ 230 |
| EKA-NV PTC 160-2,0-1f | 2 | 1 ~ 230 |
| EKA-NV PTC 200-1,2-1f | 1.2 | 1 ~ 230 |
| EKA-NV PTC 200-2,0-1f | 2 | 1 ~ 230 |
| EKA-NV PTC 250-1,2-1f | 1.2 | 1 ~ 230 |
| EKA-NV PTC 250-1,5-1f | 1.5 | 1 ~ 230 |
| EKA-NV PTC 250-2,0-1f | 2 | 1 ~ 230 |
| EKA-NV PTC 250-3,0-1f | 3 | 1 ~ 230 |
| EKA-NV PTC 315-1,5-1f | 1.5 | 1 ~ 230 |
| EKA-NV PTC 315-2,0-1f | 2 | 1 ~ 230 |

## Accessories for unit outside installation

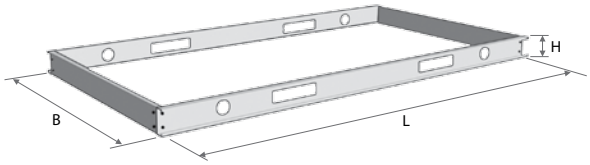
DOMEKT air handling units can be installed outside due to thick casing insulation and easy mounting. Protective optional accessories should be used if unit is for outside installation: roof, base frame, legs, grills, supply and exhaust hoods.

| Unit size | Roof code | Dimensions B×L, mm |
|---|---|---|
| R 500 H | 712200023 | 910×1210 |
| R 500 U H | 712200079 | 910×1400 |
| R 700 H | 712200023 | 910×1210 |
| R 900 H / U H | 712200264 | 1180×1555 |
| P 400 H | 712232869 | 505×1300 |
| P 700 H | 712237971 | 605×1470 |
| P 900 H | 712237971 | 605×1470 |
| CF 700 H | 712200247 | 590×1700 |
| CF 900 H / U H | 712238441 | 1193×2020 |

| Unit size | Type of hood for supply air | Type of hood for exhaust air |
|---|---|---|
| R 500 H | G-350×350 | AHIA-200 |
| R 500 U H | G-350×350 | AHIA-200 |
| R 700 H | G-350×350 | AHIA-250 |
| R 900 H / U H | G-600×430 | AHIA-315 |
| P 400 H | G-270×270 | AHIA-200 |
| P 700 H | G-350×350 | AHIA-250 |
| P 900 H | G-350×350 | AHIA-250 |
| CF 700 H | G-350×350 | AHIA-250 |
| CF 900 H / U H | 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-07.001A | 460×100×640 |
| R 500 H / 700 H | SSK-09.001A | 585×100×930 |
| R 500 V / 700 V | SSK-08.001A | 585×100×1060 |
| R 500 U | SSK-17.001A | 585×100×1115 |
| R 900 H / V / U | SSK-15.001A | 840×100×1340 |
| P 400 H | SSK-00.001A | 340×100×1000 |
| P 700 H / 900 H | SSK-01.001A | 440×100×1170 |
| CF 700 H | SSK-14.001A | 390×100×1500 |
| CF 900 H / U H | SSK-18.001A | 850×100×1810 |




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

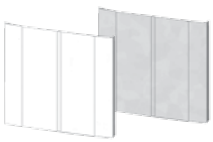
## Komfovent kitchen hood

(only for unit Domekt R 200)

Type:
- White color painted
- Stainless steel

## Decorative panel

(only for unit Domekt R 200)



Type:
- 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

Type:
- LD-125 (black or white)
- LD-160 (black or white)
- LD-200 (black or white)

For supply and exhaust air flows' separation.

## 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<br>One change-over contact (NO+NC) 250V AC, 1A<br>Protection class IP54 |
| **Motion detector PIR180** | Detection angle 180°<br>Max. distance 12 m<br>Protection class IP44 |
| **Wall mounted temperature sensor RTT** | Supply voltage: 24V AC/DC<br>Temperature measuring range 0 – 50°C<br>One change-over contact (NO+NC) 250V AC, 2A<br>Protection class IP30 |
| **Wall mounted humidity sensor RTH** | Supply voltage: 24V AC/DC<br>Relative humidity measuring range 0 – 100%<br>One change-over contact (NO+NC) 250V AC, 2A<br>Protection class IP30 |
| **Duct mounted humidity sensor DTH** | Supply voltage: 24V AC/DC<br>Relative humidity measuring range 0 – 100%<br>One change-over contact (NO+NC) 250V AC, 2A<br>Protection class IP54 |
| **Wall mounted $CO_2$ sensor RTC** | Supply voltage: 24V AC/DC<br>$CO_2$ measuring range 0 – 2000 ppm<br>One change-over contact (NO+NC) 250V AC, 2A<br>Protection class IP30 |
| **Duct mounted $CO_2$ sensor DTC** | Supply voltage: 24V AC/DC<br>$CO_2$ measuring range 0 – 2000 ppm<br>One change-over contact (NO+NC) 250V AC, 2A<br>Protection class IP54 |
| **Wall mounted air quality sensor RTQ** | Supply voltage: 24V AC/DC<br>Air quality measuring range 0 – 2000 ppm<br>One change-over contact (NO+NC) 250V AC, 2A<br>Protection class IP30 |
| **Duct mounted air quality sensor DTQ** | Supply voltage: 24V AC/DC<br>Air quality measuring range 0 – 2000 ppm<br>One change-over contact (NO+NC) 250V AC, 2A<br>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<br>Temperature measuring range 0 – 50°C<br>Output signal 0...10V DC<br>Protection class IP30 |
| **Wall mounted humidity sensor RSH** | Supply voltage: 24V AC/DC<br>Relative humidity measuring range 0 – 100%<br>Output signal 0...10V DC<br>Protection class IP30 |
| **Duct mounted humidity sensor DSH** | Supply voltage: 24V AC/DC<br>Relative humidity measuring range 0 – 100%<br>Output signal 0...10V DC<br>Protection class IP54 |
| **Wall mounted $CO_2$ sensor RSC** | Supply voltage: 24V AC/DC<br>$CO_2$ measuring range 0 – 2000 ppm<br>Output signal 0...10V DC<br>Protection class IP30 |
| **Duct mounted $CO_2$ sensor DSC** | Supply voltage: 24V AC/DC<br>$CO_2$ measuring range 0 – 2000 ppm<br>Output signal 0...10V DC<br>Protection class IP54 |
| **Wall mounted air quality sensor RSQ** | Supply voltage: 24V AC/DC<br>Air quality measuring range 0 – 2000 ppm<br>Output signal 0...10V DC<br>Protection class IP30 |
| **Duct mounted air quality sensor DSQ** | Supply voltage: 24V AC/DC<br>Air quality measuring range 0 – 2000 ppm<br>Output signal 0...10V DC<br>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 ~230V; 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:

| Type of the air handling unit | Electric power supply connecting cable, $mm^2$ |
|---|---|
| R 200 V | 3×1,5 |
| R 400 V | 3×1,5 |
| R 450 V | 3×1,5 |
| R 250 F | 3×1,5 |
| R 400 F | 3×1,5 |
| R 600 H | 3×1,5 |
| R 400 H | 3×1,5 |
| R 500 H | 3×1,5 |
| R 500 V | 3×1,5 |
| R 500 U | 3×1,5 |
| R 700 F | 3×1,5 |
| R 700 H | 3×1,5 |
| R 700 V | 3×1,5 |
| R 900 U W | 3×1,5 |
| R 900 U E | 5×1,5 |
| RHP 600 U | 3×1,5 |
| RHP 800 U | 5×1,5 |
| PP 300 V | 3×1,5 |
| PP 450 V | 3×1,5 |

| Type of the air handling unit | Electric power supply connecting cable, $mm^2$ |
|---|---|
| P 400 V | 3×1,5 |
| P 400 H | 3×1,5 |
| P 700 V E | 3×1,5 |
| P 700 H E | 3×1,5 |
| P 700 V W | 3×1,5 |
| P 700 H W | 3×1,5 |
| P 900 V E | 5×1,5 |
| P 900 H E | 5×1,5 |
| P 900 V W | 3×1,5 |
| P 900 H W | 3×1,5 |
| CF 250 V | 3×1,5 |
| CF 250 F | 3×1,5 |
| CF 400 V | 3×1,5 |
| CF 500 F | 3×1,5 |
| CF 700 V | 3×1,5 |
| CF 700 H | 3×1,5 |
| CF 900 U W | 3×1,5 |
| CF 900 U E | 5×1,5 |
| CF 900 F W | 3×1,5 |

| Type of the air handling unit | Electric power supply connecting cable, $mm^2$ |
|---|---|
| CF 900 F E | 5×1,5 |
| S 650 F E3 | 3×2,5 |
| S 650 F E6 | 5×1,5 |
| S 700 F E6 | 5×1,5 |
| S 700 F E9 | 5×2,5 |
| S 800 F W | 3×1,5 |
| S 800 F E3 | 3×2,5 |
| S 800 F E6 | 5×1,5 |
| S 800 F E9 | 5×2,5 |
| S 1000 F W | 3×1,5 |
| S 1000 F E6 | 5×1,5 |
| S 1000 F E9 | 5×2,5 |
| S 1000 F E15 | 5×4 |

| Control panel | Connection cabel for control panel ($mm^2$) |
|---|---|
| C5.1, C4.1, C4, C3.1, C3 | 4×0,22 |

Standard length of the control cabel is 10 m.

komfovent®

# VERSO

## Non residential ventilation units

# Komfovent VERSO

VERSO series units are divided into two groups: VERSO 1 000-7 000 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 1 000-7 000 and VERSO 10-70 units allows bringing it through a standard 900 mm width door opening.

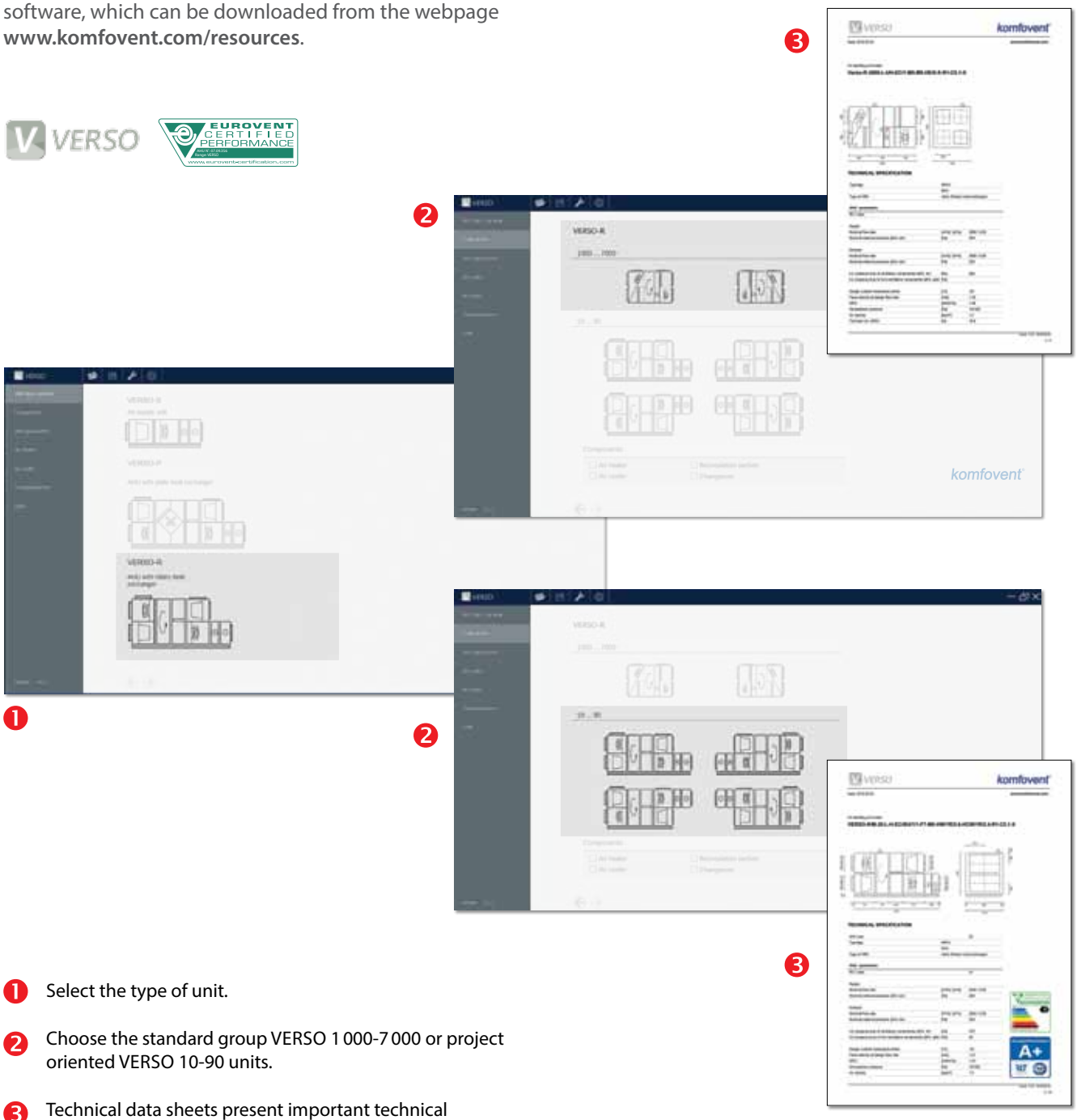
All standardized VERSO 1000-7000 units are based on the principle of Plug & Play: each unit has the integrated control system and is delivered with a complete automatic control installed and prewired inside the unit. Verso 1 000-7 000 units can be fast delivered as they are available on stock. The airflow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

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**.



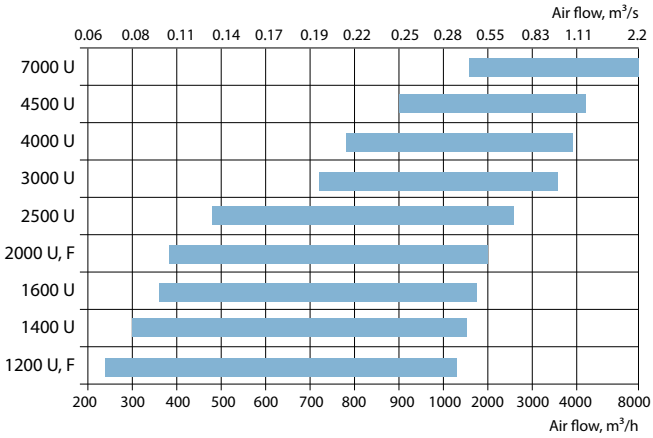

1. Select the type of unit.
2. Choose the standard group VERSO 1 000-7 000 or project oriented VERSO 10-90 units.
3. Technical data sheets present important technical parameters at a specified working point of the selected unit: effciency, SFP, acoustics and other projects' required data.

| 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 1000–7000

Air handling units with a rotary heat exchanger.
Capacity range from 240 to 8 000 $m^3$/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.
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 | | | | | Connection versions | | | | Supply/ exhaust air filter class | | Heater | | | Cooler | | Inspection side | | | | Control system C5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Type | | | Wave height | | | | | | | | | | | | | | | | | panel |
| | AL | AZ | AZM | L | XL | H | V | U | F | M5 | F7 | HE | HW | HCW | CW | CDX | R1 | R2 | L1 | L2 | C5.1 |
| Verso R 1200 U | ● | ○ | ○ | ● | ○ | ● | ● | ● | | ● | ○ | ○ | ○ | ○ | △ | △ | ○ | | ○ | | ● |
| Verso R 1200 F | ● | ○ | ○ | ● | ○ | | | | ● | ● | ○ | ○ | △ | △ | △ | △ | ○ | ○ | ○ | ○ | ● |
| Verso R 1400 U | ● | ○ | ○ | ● | ○ | ● | ● | ● | | ● | ○ | ○ | ○ | ○ | △ | △ | ○ | | ○ | | ● |
| Verso R 1600 U | ● | ○ | ○ | ● | ○ | ● | ● | ● | | ● | ○ | ○ | ○ | ○ | △ | △ | ○ | | ○ | | ● |
| Verso R 2000 U | ● | ○ | ○ | ● | ○ | ● | ● | ● | | ● | ○ | ○ | ○ | ○ | △ | △ | ○ | | ○ | | ● |
| Verso R 2000 F | ● | ○ | ○ | ● | ○ | | | | ● | ● | ○ | ○ | △ | △ | △ | △ | ○ | ○ | ○ | ○ | ● |
| Verso R 2500 U | ● | ○ | ○ | ● | ○ | ● | ● | ● | | ● | ○ | ○ | ○ | ○ | △ | △ | ○ | | ○ | | ● |
| Verso R 3000 U | ● | ○ | ○ | ● | ○ | ● | ● | ● | | ● | ○ | ○ | ○ | ○ | △ | △ | ○ | | ○ | | ● |
| Verso R 4000 U | ● | ○ | ○ | ● | ○ | ● | ● | ● | | ● | ○ | ○ | ○ | ○ | △ | △ | ○ | | ○ | | ● |
| Verso R 4500 U | ● | ○ | ○ | ● | ○ | ● | ● | ● | | ● | ○ | ○ | ○ | ○ | △ | △ | ○ | | ○ | | ● |
| Verso R 7000 H | ● | ○ | ○ | ● | ○ | ● | | | | ● | ○ | | ● | | △ | △ | ○ | | ○ | | ● |

● standard equipment
○ possible choice
△ duct water heater/cooler ordered separately

### Heat exchanger

AL – aluminum, condensing rotor. As standard, Verso units are equipped with L optimal wave height of the rotors. In exceptional cases, requiring increased temperature devices utility, they can be equipped with enhanced XL surface area of the rotors.
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.

### 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 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.
Design:
- Galvanized sheet steel casing.
- Copper pipes for heat transfer fluid (water).
- Spacing between profiled aluminum plates is 3 mm (standard spacing). Optional threaded connection for freezing protection alarm sensor (to be specified in the order form).

Capacitive constraints:
- Maximum operating pressure – 10 bar.
- Maximum water temperature +100°C.
- Maximum airflow velocity through the heater 3 m/s.

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. 134.

### 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".

# Verso R 1200 U

(Kompakt REGO 1200U)

| | |
|---|---|
| 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 / 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 | 57 |
| Supply Outlet | 69 |
| Exhaust Inlet | 55 |
| Exhaust Outlet | 66 |
| Casing | 42 |

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

| | |
|---|---|
| Surroundings | 32 |

## Temperature efficiency

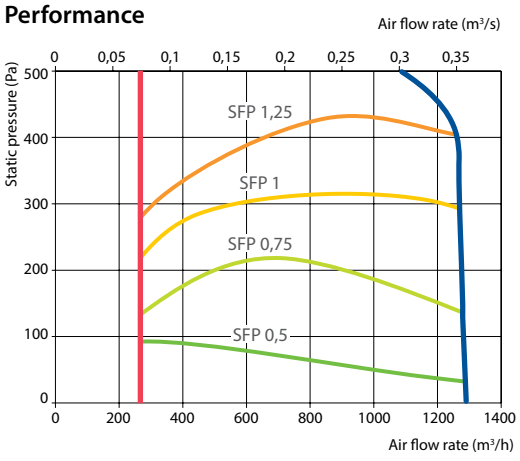
| | Winter | | | | | Summer |
|---|---|---|---|---|---|---|
| Outside temperature, °C | -23 | -15 | -10 | -5 | 0 | 30 |
| After heat exchanger*, °C | 14,5 | 15,9 | 16,7 | 17,5 | 18,4 | 23,3 |

* indoor +22°C, 10% RH

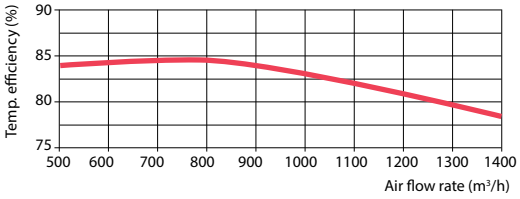
## Changeover water heating/cooling exchanger (HCW)

| | 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 | 144 | 144 | 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 | 23,2 | 16,9 | 10,7 | 8,5 |
| Connection, ” | ½ | | | | |

## Performance

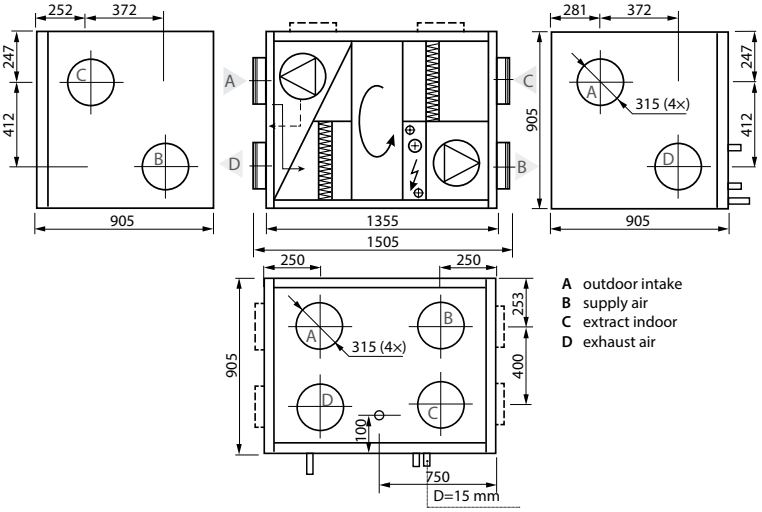



## Temperature efficiency

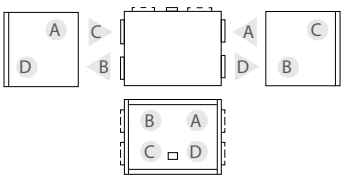



Indoor and outdoor ΔT=20°C re: *Ecodesign 1253/2014.*

**Shown as right (R1)**




**Shown as left (L1)**



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# Verso R 1200 F

(Kompakt REGO 1200P)

| | |
|---|---|
| Nominal air flow, m³/h | 1200 |
| Panel thickness, mm | 50 |
| Unit weight, kg | 135 |
| 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 |
| Control panel | KOMFOVENT C5.1 |

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


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 | 72 |
| Exhaust Inlet | 66 |
| Exhaust Outlet | 73 |
| 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 | 10,7 | 12,7 | 13,9 | 15,2 | 16,5 | 24 |

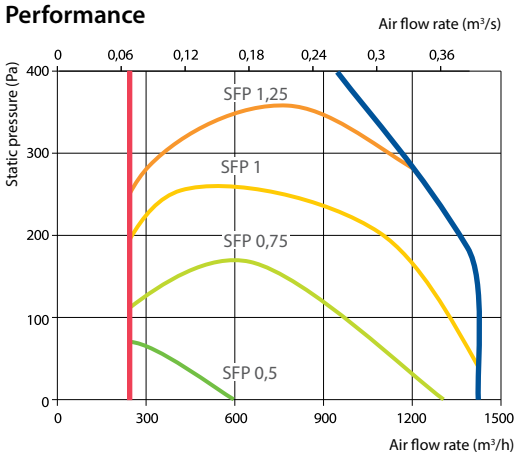
* indoor +22°C, 10% RH

## Hot water duct air heater (DH)**

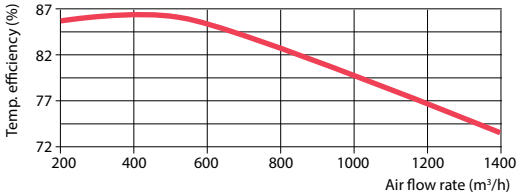
| | Winter | | | |
|---|---|---|---|---|
| Water temperature in/out, °C | 90/70 | 80/60 | 70/50 | 60/40 |
| Capacity, kW | 5,4 | 5,4 | 5,4 | 5,4 |
| Flow rate, dm³/h | 237 | 237 | 237 | 237 |
| Pressure drop, kPa | 5,6 | 5,6 | 5,6 | 5,6 |
| Temperature in/out, °C | 10,7/22 | | | |
| Maximal capacity, kW | 15 | 12,4 | 9,8 | 7,2 |
| Connection, ” | ½ | | | |
| Dimensions, mm | 415×415×220 | | | |
| Hot water duct heater type | DH-315 | | | |

** option

## Performance




## Temperature efficiency




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

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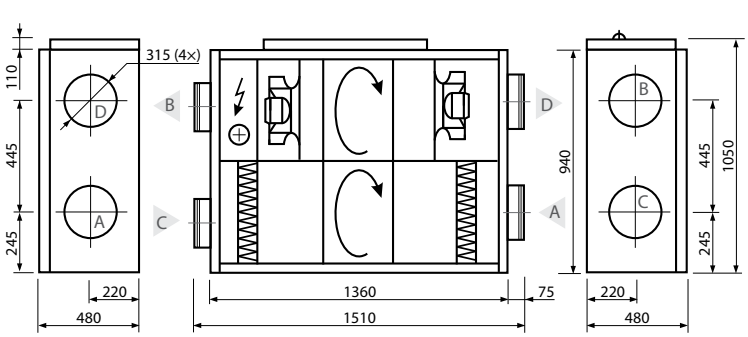


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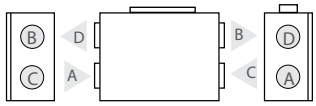



**A** outdoor intake
**B** supply air
**C** extract indoor
**D** exhaust air

# Verso R 1400 U

(Kompakt REGO 1400U)

| | |
|---|---|
| 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 | 72 |
| Exhaust Inlet | 58 |
| Exhaust Outlet | 69 |
| Casing | 44 |

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

| | |
|---|---|
| Surroundings | 41 |

## Temperature efficiency

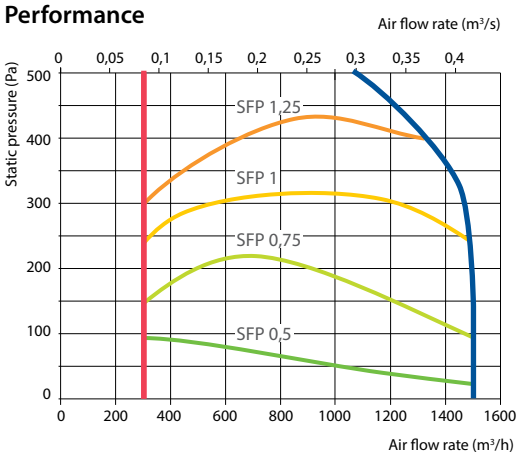
| | Winter | | | | | Summer |
|---|---|---|---|---|---|---|
| Outside temperature, °C | -23 | -15 | -10 | -5 | 0 | 30 |
| After heat exchanger*, °C | 14 | 15,4 | 16,3 | 17,2 | 18,1 | 23,4 |

* indoor +22°C, 10% RH

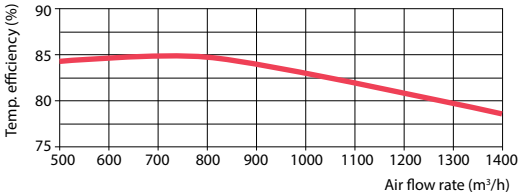
## Changeover water heating/cooling exchanger (HCW)

| | 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 | 178 | 178 | 178 | 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




## Temperature efficiency




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

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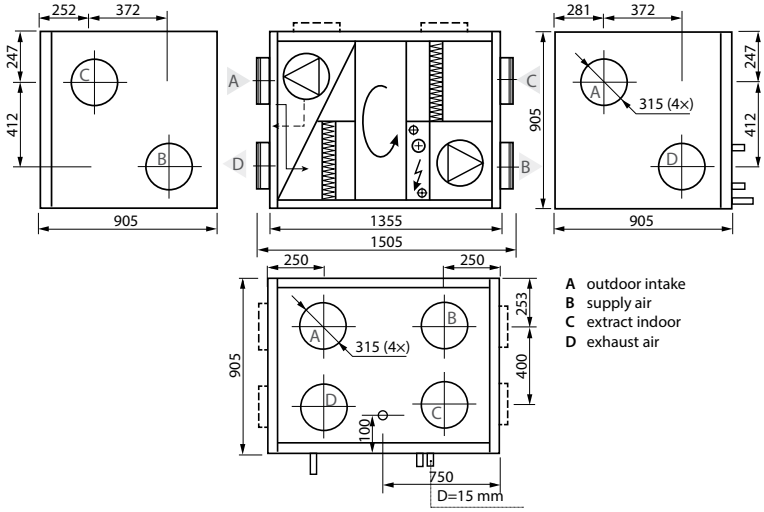


**A** outdoor intake
**B** supply air
**C** extract indoor
**D** exhaust air

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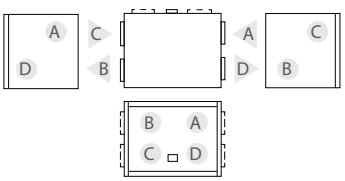


# Verso R 1600 U

(Kompakt REGO 1600U)

| | |
|---|---|
| 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 / 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 | 61 |
| Supply Outlet | 73 |
| Exhaust Inlet | 59 |
| Exhaust Outlet | 71 |
| Casing | 45 |

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

| | |
|---|---|
| Surroundings | 34 |

## Temperature efficiency

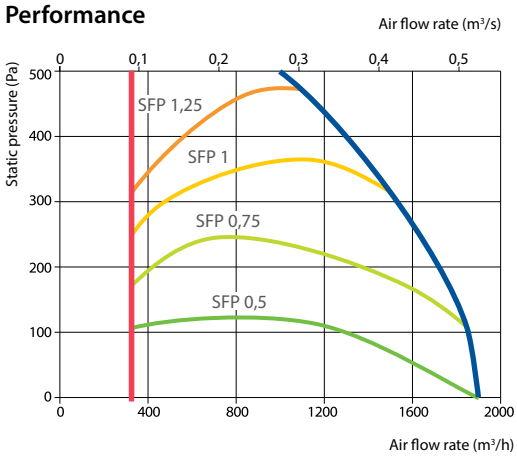
| | Winter | | | | | Summer |
|---|---|---|---|---|---|---|
| Outside temperature, °C | -23 | -15 | -10 | -5 | 0 | 30 |
| After heat exchanger*, °C | 13,1 | 14,7 | 15,7 | 16,7 | 17,6 | 23,6 |

* indoor +22°C, 10% RH

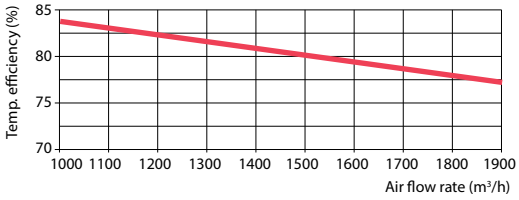
## Changeover water heating/cooling exchanger (HCW)

| | 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 | 237 | 237 | 237 | 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




## Temperature efficiency




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

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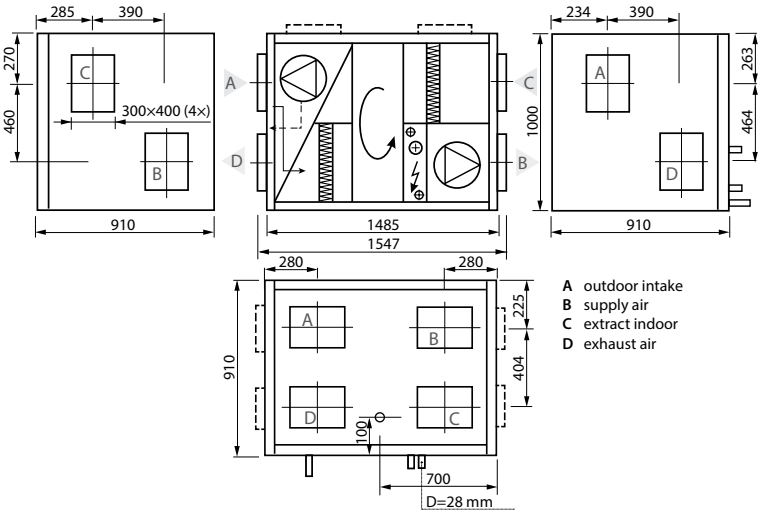


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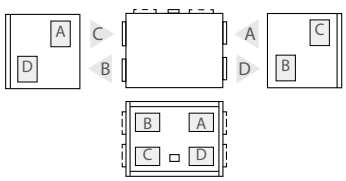


# Verso R 2000 U

(Kompakt REGO 2000U)

| | |
|---|---|
| Nominal air flow, m³/h | 1900 |
| 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 | 515 |
| Electric air heater capacity, kW / Δt, °C | 7,5 / 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 | 60 |
| Supply Outlet | 72 |
| Exhaust Inlet | 58 |
| Exhaust Outlet | 69 |
| Casing | 38 |

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

| | |
|---|---|
| Surroundings | 27 |

## Temperature efficiency

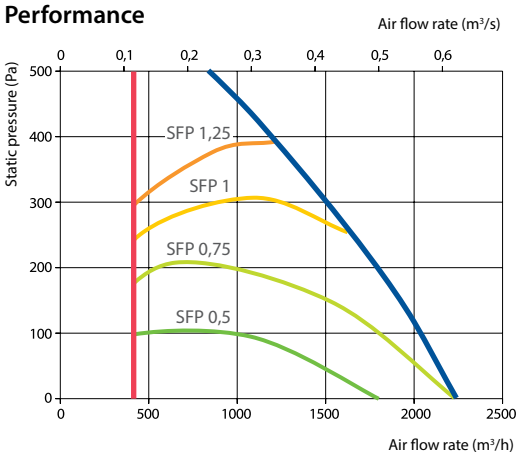
| | Winter | | | | | Summer |
|---|---|---|---|---|---|---|
| Outside temperature, °C | -23 | -15 | -10 | -5 | 0 | 30 |
| After heat exchanger*, °C | 12,8 | 14,4 | 15,5 | 16,5 | 17,5 | 23,6 |

* indoor +22°C, 10% RH

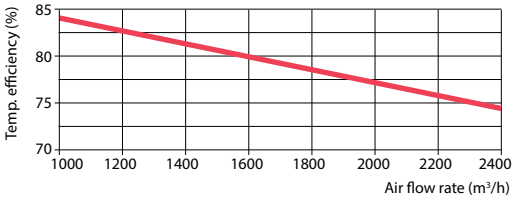
## Changeover water heating/cooling exchanger (HCW)

| | Winter | | | | Summer |
|---|---|---|---|---|---|
| Water temperature in/out, °C | 90/70 | 80/60 | 70/50 | 60/40 | 7/12 |
| Capacity, kW | 5,9 | 5,9 | 5,9 | 5,9 | 7,3 |
| Flow rate, dm³/h | 259 | 259 | 259 | 259 | 1248 |
| Pressure drop, kPa | 1 | 1 | 1 | 1 | 1,4 |
| Temperature in/out, °C | 12,8/22 | | | | 23,6/18 |
| Maximal capacity, kW | 20,8 | 15,7 | 12,3 | 8,9 | 7,3 |
| Connection, ” | 1 | | | | |

## Performance

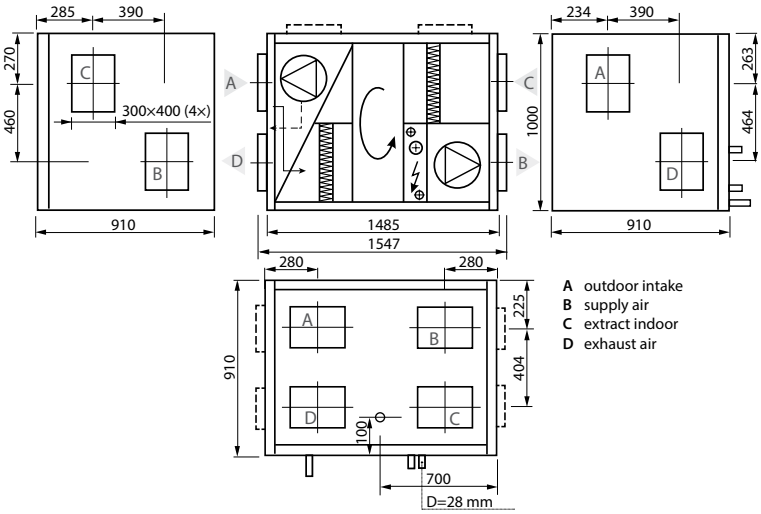



## Temperature efficiency




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

**Shown as right (R1)**

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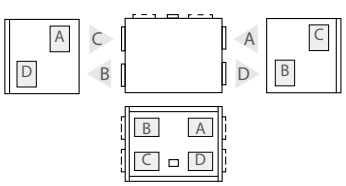

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# Verso R 2000 F

(Kompakt REGO 2000P)

| | |
|---|---|
| Nominal air flow, m³/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 |
| 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 | 76 |
| Exhaust Inlet | 71 |
| Exhaust Outlet | 78 |
| 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 | -23 | -15 | -10 | -5 | 0 | 30 |
| After heat exchanger*, °C | 14 | 15,5 | 16,3 | 17,2 | 18,1 | 23,4 |

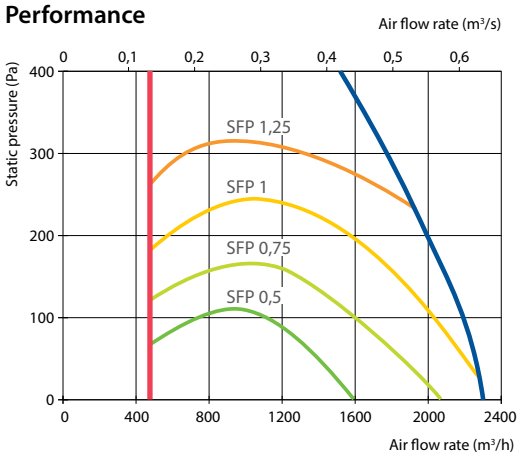
* indoor +22°C, 10% RH

## Hot water duct air heater (DH)**

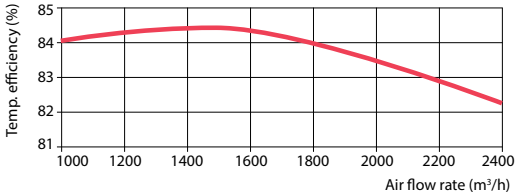
| | Winter | | | |
|---|---|---|---|---|
| Water temperature in/out, °C | 90/70 | 80/60 | 70/50 | 60/40 |
| Capacity, kW | 5,7 | 5,7 | 5,7 | 5,7 |
| Flow rate, dm³/h | 252 | 252 | 252 | 252 |
| Pressure drop, kPa | 7,1 | 7,3 | 7,5 | 7,6 |
| Temperature in/out, °C | 14/22 | | | |
| Maximal capacity, kW | 19,5 | 15,9 | 12,3 | 8,8 |
| Connection, ” | ½ | | | |
| Dimensions, mm | 590×500×150 | | | |
| Hot water duct heater type | DH-355 | | | |

** option

## Performance




## Temperature efficiency




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

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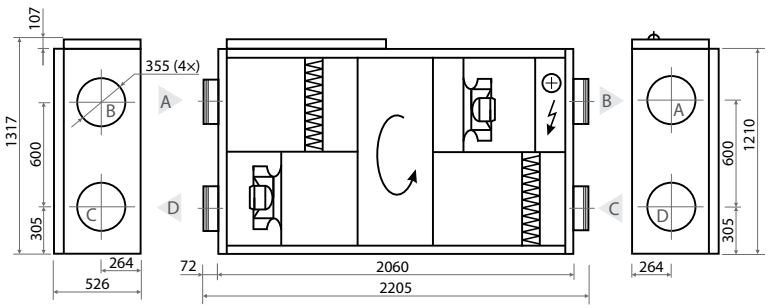


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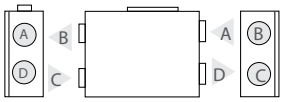


**A** outdoor intake
**B** supply air
**C** extract indoor
**D** exhaust air

# Verso R 2500 U

(Kompakt REGO 2500U)

| | |
|---|---|
| Nominal air flow, m³/h | 2400 |
| 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 / 8,7 |
| 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 | 66 |
| Supply Outlet | 79 |
| Exhaust Inlet | 64 |
| Exhaust Outlet | 76 |
| 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

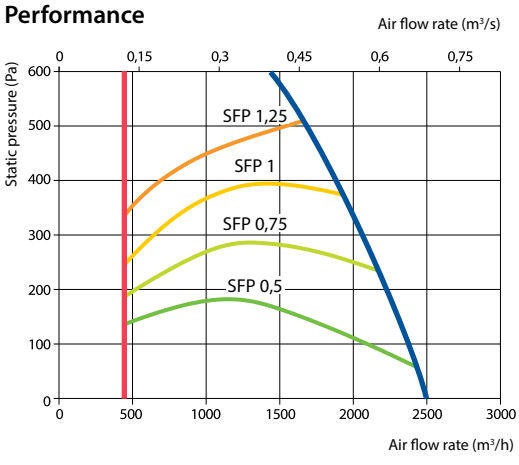
| | Winter | | | | | Summer |
|---|---|---|---|---|---|---|
| Outside temperature, °C | -23 | -15 | -10 | -5 | 0 | 30 |
| After heat exchanger*, °C | 11,4 | 13,2 | 14,4 | 15,6 | 16,8 | 23,8 |

* indoor +22°C, 10% RH

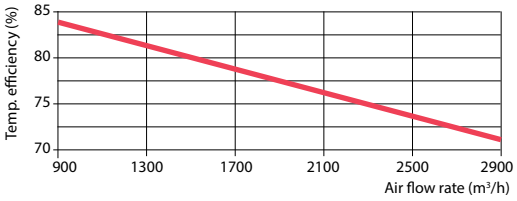
## Changeover water heating/cooling exchanger (HCW)

| | Winter | | | | Summer |
|---|---|---|---|---|---|
| Water temperature in/out, °C | 90/70 | 80/60 | 70/50 | 60/40 | 7/12 |
| Capacity, kW | 8 | 8 | 8 | 8 | 7,8 |
| Flow rate, dm³/h | 354 | 354 | 354 | 354 | 1335 |
| Pressure drop, kPa | 1 | 1 | 1 | 1 | 1,6 |
| Temperature in/out, °C | 11,4/22 | | | | 23,8/18 |
| Maximal capacity, kW | 34,2 | 25,2 | 16,4 | 10,2 | 8,3 |
| Connection, ” | 1 | | | | |

## Performance

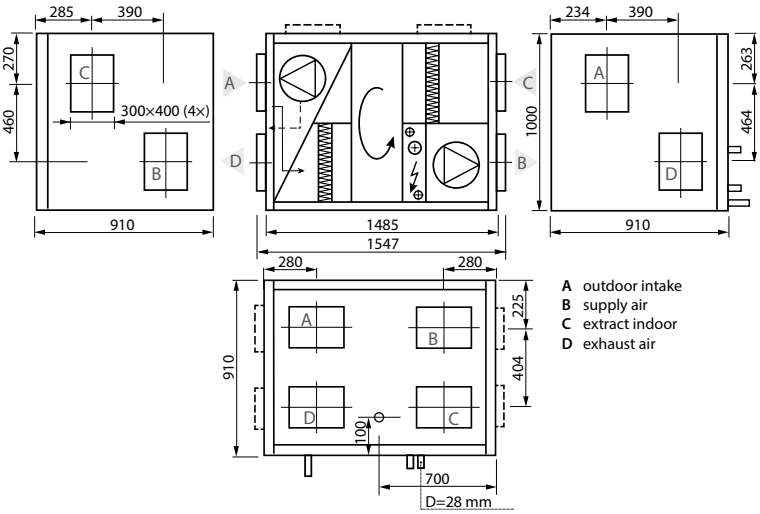



## Temperature efficiency

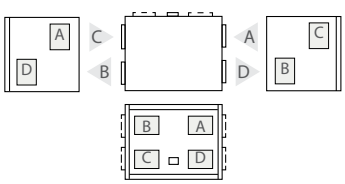



Indoor and outdoor ΔT=20°C re: *Ecodesign 1253/2014.*

**Shown as right (R1)**




**Shown as left (L1)**



# Verso R 3000 U

(Kompakt REGO 3000U)

| | |
|---|---|
| Nominal air flow, m³/h | 3600 |
| 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 | 16,7 |
| Maximal operating current HW, A | 4,2 |
| Filters dimensions B×H×L, mm | 525×510×46-M5 (x2) |
| Electric power input of the fan drive at maximum flow rate, W | 990 |
| Electric air heater capacity, kW / Δt, °C | 9 / 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 | 65 |
| Supply Outlet | 83 |
| Exhaust Inlet | 62 |
| Exhaust Outlet | 80 |
| 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

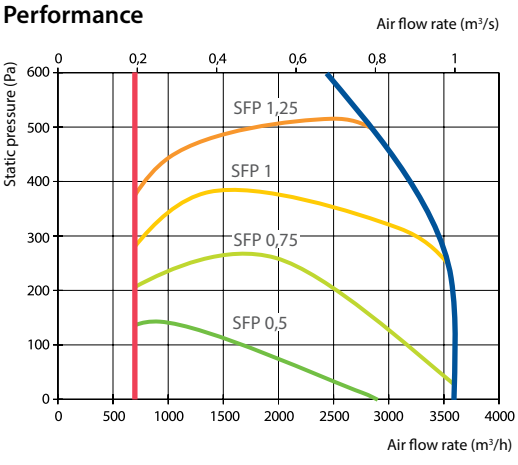
| | Winter | | | | | Summer |
|---|---|---|---|---|---|---|
| Outside temperature, °C | -23 | -15 | -10 | -5 | 0 | 30 |
| After heat exchanger*, °C | 12,4 | 14,1 | 15,2 | 16,3 | 17,3 | 23,7 |

* indoor +22°C, 10% RH

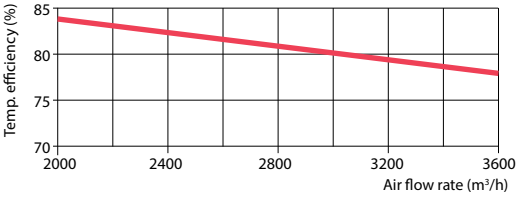
## Changeover water heating/cooling exchanger (HCW)

| | 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, dm³/h | 512 | 512 | 512 | 512 | 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

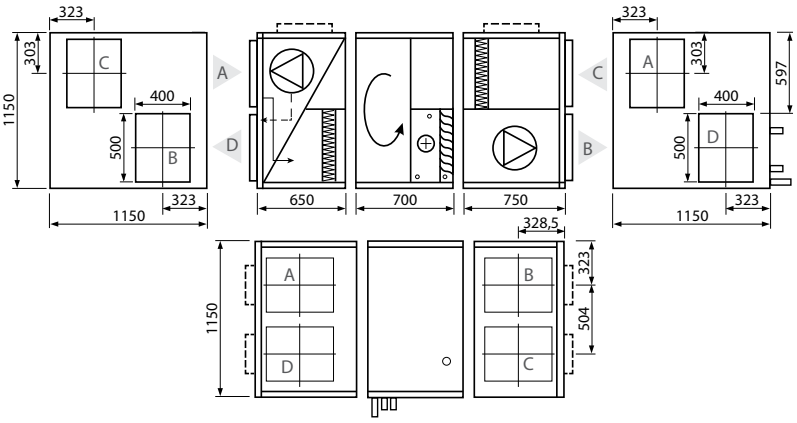



## Temperature efficiency




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

**Shown as right (R1)**

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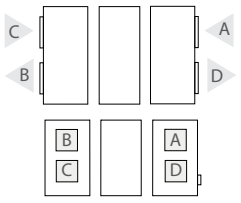



**A** outdoor intake
**B** supply air
**C** extract indoor
**D** exhaust air

# Verso R 4000 U

(Kompakt REGO 4000U)

| | |
|---|---|
| Nominal air flow, m³/h | 3900 |
| Panel thickness, mm | 50 |
| Unit weight, kg | 460(145/160/155) |
| 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 (x2) |
| 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 | 66 |
| Supply Outlet | 83 |
| Exhaust Inlet | 64 |
| Exhaust Outlet | 80 |
| Casing | 49 |

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

| | |
|---|---|
| Surroundings | 38 |

## Temperature efficiency

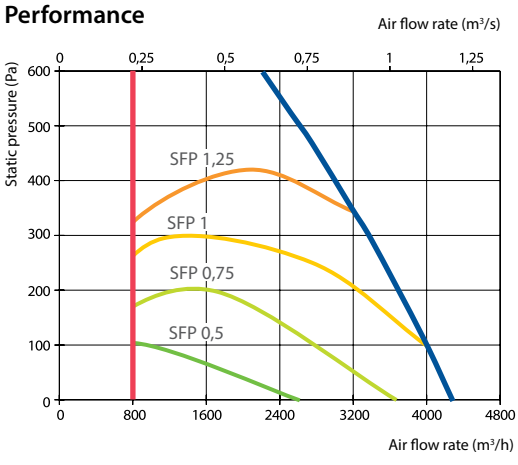
| | Winter | | | | | Summer |
|---|---|---|---|---|---|---|
| Outside temperature, °C | -23 | -15 | -10 | -5 | 0 | 30 |
| After heat exchanger*, °C | 11,9 | 13,7 | 14,8 | 16 | 17,1 | 23,8 |

* indoor +22°C, 10% RH

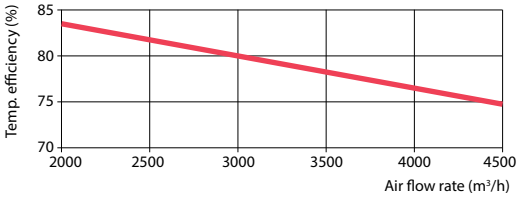
## Changeover water heating/cooling exchanger (HCW)

| | Winter | | | | Summer |
|---|---|---|---|---|---|
| Water temperature in/out, °C | 90/70 | 80/60 | 70/50 | 60/40 | 7/12 |
| Capacity, kW | 13,2 | 13,2 | 13,2 | 13,2 | 14,4 |
| Flow rate, dm³/h | 583 | 583 | 583 | 583 | 2475 |
| Pressure drop, kPa | 1 | 1 | 1 | 1 | 4,5 |
| Temperature in/out, °C | 11,9/22 | | | | 23,8/18 |
| Maximal capacity, kW | 63,4 | 50,3 | 37,8 | 25,6 | 17,4 |
| Connection, ” | 1 | | | | |

## Performance

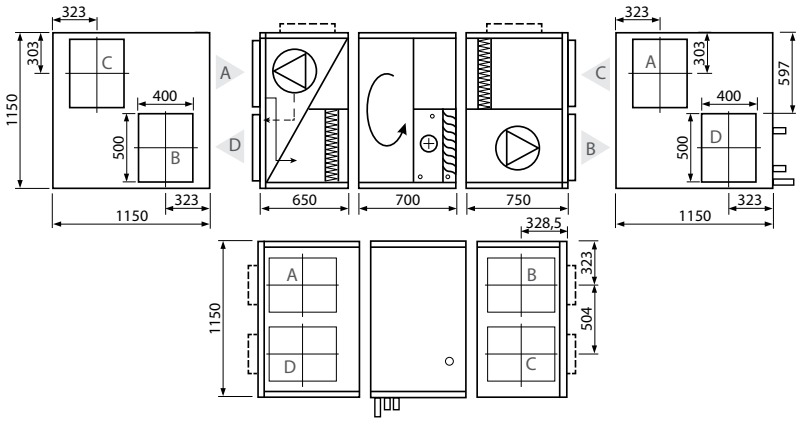



## Temperature efficiency




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

**Shown as right (R1)**

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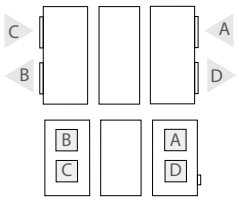


**A** outdoor intake
**B** supply air
**C** extract indoor
**D** exhaust air

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# Verso R 4500 U

(Kompakt REGO 4500U)

| | |
|---|---|
| Nominal air flow, m³/h | 4500 |
| Panel thickness, mm | 50 |
| Unit weight, kg | 470 (150/160/160) |
| 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 (x2) |
| Electric power input of the fan drive at maximum flow rate, W | 1700 |
| Electric air heater capacity, kW / Δt, °C | 15 / 9,8 |
| 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 | 68 |
| Supply Outlet | 87 |
| Exhaust Inlet | 66 |
| Exhaust Outlet | 83 |
| Casing | 50 |

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

| | |
|---|---|
| Surroundings | 39 |

## Temperature efficiency

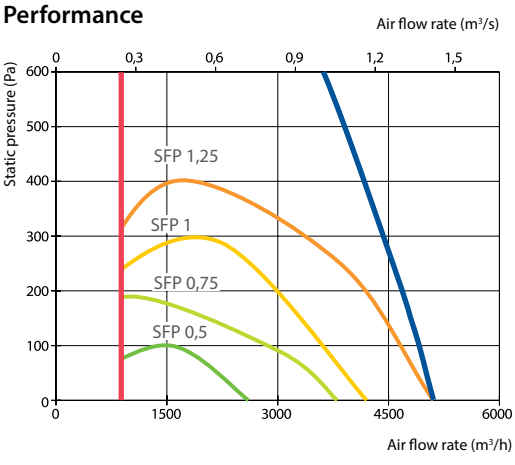
| | Winter | | | | | Summer |
|---|---|---|---|---|---|---|
| Outside temperature, °C | -23 | -15 | -10 | -5 | 0 | 30 |
| After heat exchanger*, °C | 10,2 | 12,3 | 13,6 | 14,9 | 16,2 | 24,1 |

* indoor +22°C, 10% RH

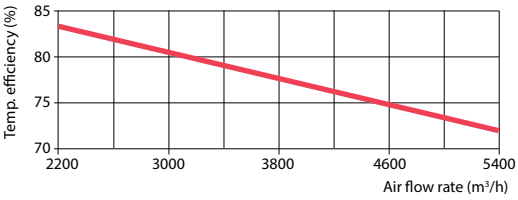
## Changeover water heating/cooling exchanger (HCW)

| | Winter | | | | Summer |
|---|---|---|---|---|---|
| Water temperature in/out, °C | 90/70 | 80/60 | 70/50 | 60/40 | 7/12 |
| Capacity, kW | 19,8 | 19,8 | 19,8 | 19,8 | 19,2 |
| Flow rate, dm³/h | 874 | 874 | 874 | 874 | 3296 |
| Pressure drop, kPa | 1 | 1 | 1 | 1 | 7,5 |
| Temperature in/out, °C | 10,2/22 | | | | 24,1/18 |
| Maximal capacity, kW | 81,5 | 65,9 | 50,8 | 36,3 | 21,8 |
| Connection, ” | 1 | | | | |

## Performance

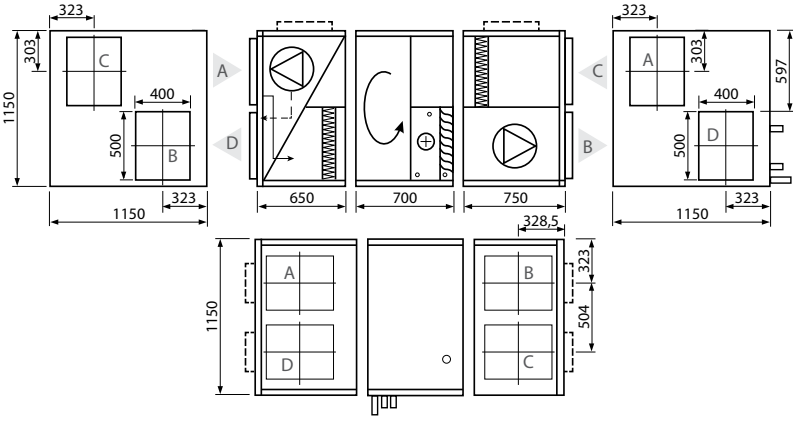



## Temperature efficiency

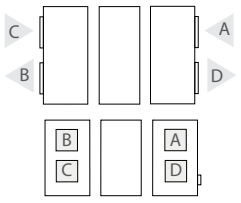



Indoor and outdoor ΔT=20°C re: *Ecodesign 1253/2014.*

**Shown as right (R1)**




**Shown as left (L1)**




**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 | 10,8 |
| Filters dimensions B×H×L, mm | 592×592-8×635-M5 (x2) |
| 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 | 88 |
| Exhaust Inlet | 77 |
| Exhaust Outlet | 88 |
| Casing | 53 |

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

| | |
|---|---|
| Surroundings | 42 |

## Temperature efficiency

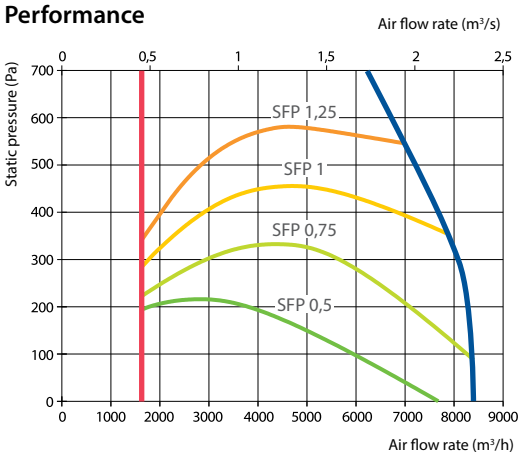
| | Winter | | | | | Summer |
|---|---|---|---|---|---|---|
| Outside temperature, °C | -23 | -15 | -10 | -5 | 0 | 30 |
| After heat exchanger*, °C | 11,6 | 13,4 | 14,6 | 15,8 | 16,9 | 23,8 |

* indoor +22°C, 10% RH

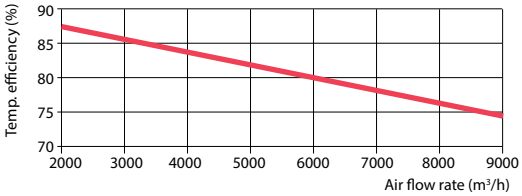
## Hot water air heater

| | 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 | 1232 | 1232 | 1232 |
| Pressure drop, kPa | 5,9 | 5,9 | 5,9 | 5,9 |
| Temperature in/out, °C | 11,6/22 | | | |
| Maximal capacity, kW | 81,8 | 67,2 | 52,7 | 38,5 |
| Connection, ” | 1 | | | |

## Performance




## Temperature efficiency




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

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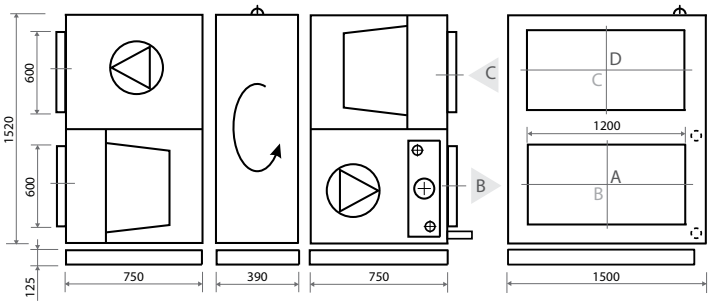


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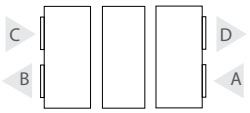
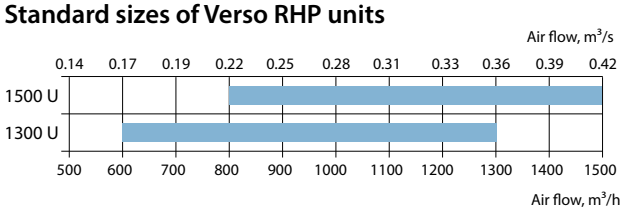



**A** outdoor intake
**B** supply air
**C** extract indoor
**D** exhaust air

# Verso RHP

Units with a rotary heat exchanger and an integrated heat pump.
Capacity range from 600 to 1 500 $m^3/h$.

**Standard sizes of Verso RHP units**




## New generation solution for residential premises

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

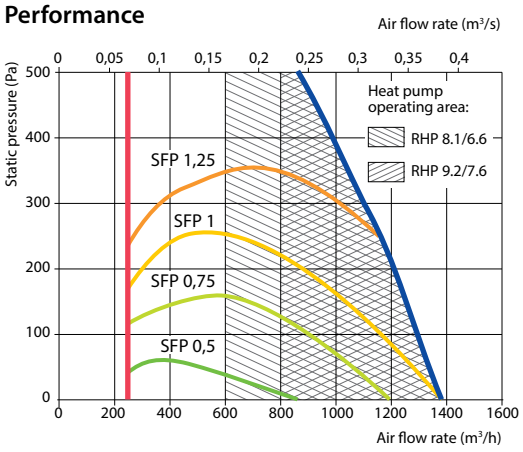
| | | Winter | | | | | | | | Summer |
|---|---|---|---|---|---|---|---|---|---|---|
| Outside temperature, °C | | -20 | -15 | -10 | -5 | 0 | 5 | 10 | 15 | 30 |
| After heat exchanger and heat pump, °C | RHP 8.1/6.6 | 17 | 18,3 | 19,5 | 21 | 22,6 | 25 | 28 | 31 | 18,6 |
| | RHP 9.2/7.6 | 18,9 | 20,5 |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

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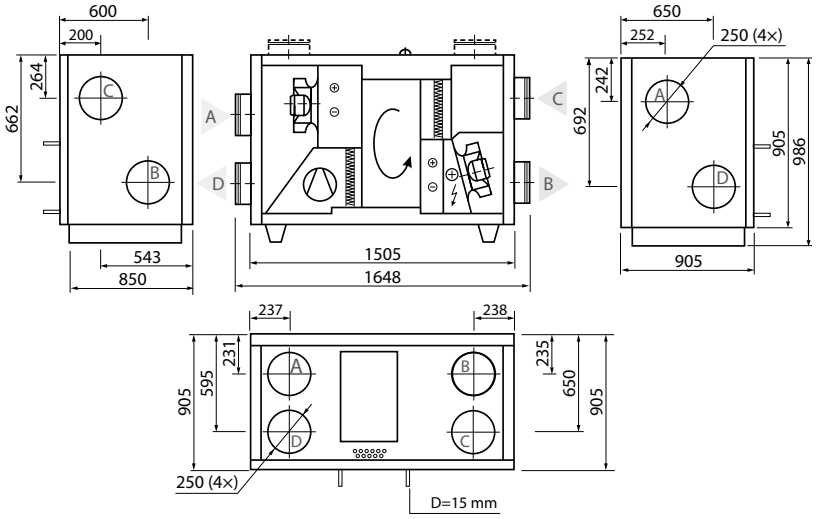


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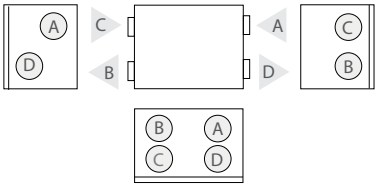
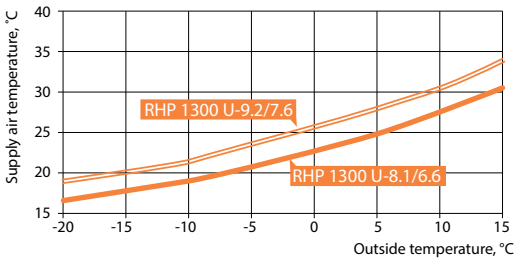


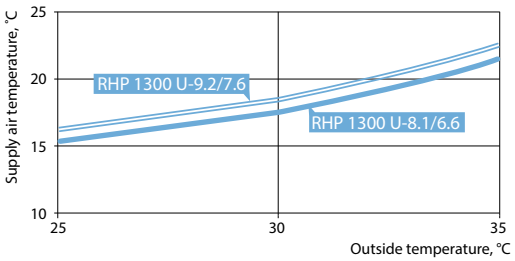

**A** outdoor intake
**B** supply air
**C** extract indoor
**D** exhaust air

## 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

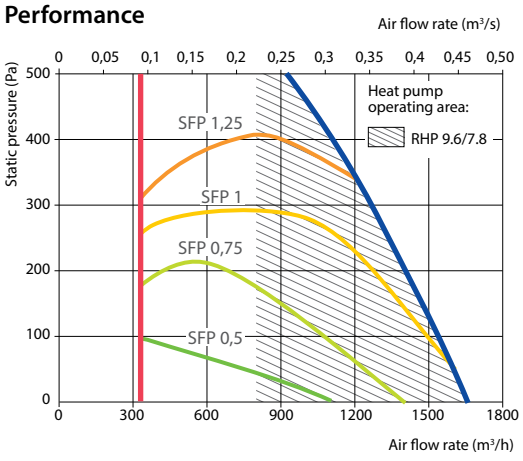
| | | | | Winter | | | | | Summer |
|---|---|---|---|---|---|---|---|---|---|
| Outside temperature, °C | -20 | -15 | -10 | -5 | 0 | 5 | 10 | 15 | 30 |
| After heat exchanger and heat pump, °C | 19 | 19,2 | 20 | 22 | 24 | 26,7 | 31 | 36 | 19 |

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

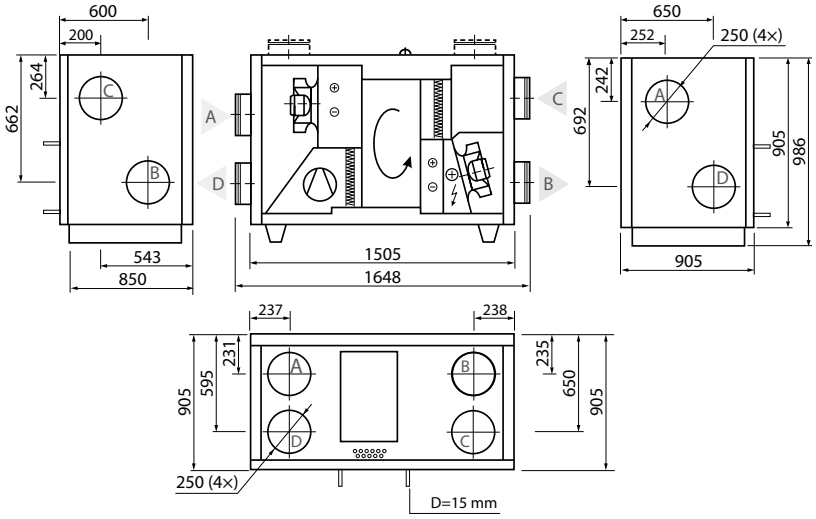
## Compressor and AHU data

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

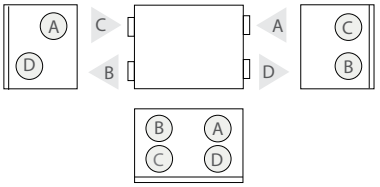
## Performance




**Shown as right (R1)**

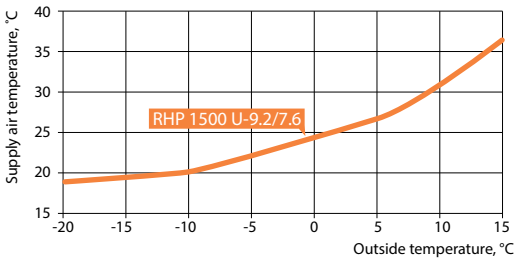



**Shown as left (L1)**



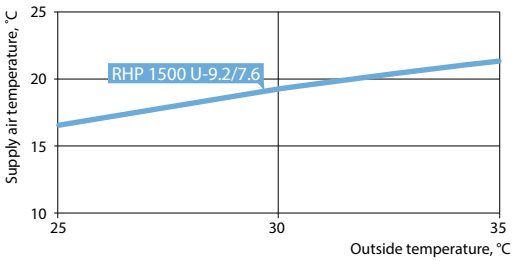

**A** outdoor intake
**B** supply air
**C** extract indoor
**D** exhaust air

## 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.

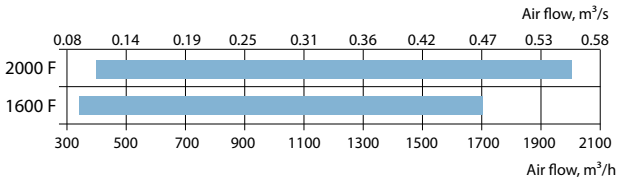
## Heat pump parameters

| | 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

Air handling units with a plate heat exchanger.
Capacity range 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 the conditions of movable parts 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 | Con-nection versions | Supply/exhaust air filter class | | Heater | | | Cooler | | Inspection side | | | | Control system C3 panel | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | F | M5 | F7 | HE | HW | HCW | CW | CDX | R1 | R2 | L1 | L2 | C3 | C3.1 |
| Verso P 1600 F | ● | ● | ○ | ○ | ○ | △ | △ | △ | ○ | ○ | ○ | ○ | ● | ○ |
| Verso P 2000 F | ● | ● | ○ | ○ | ○ | △ | △ | △ | ○ | ○ | ○ | ○ | ● | ○ |

● standard equipment
○ possible choice
△ duct water heater ordered separately / cooler

### Duct connection

F – false ceiling.

### Heater

HE – electric heater.

HW – water duct heater is installed on the duct 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.
Design:
- Galvanized sheet steel casing.
- Copper pipes for heat transfer fluid (water).
- Spacing between profiled aluminum plates is 3 mm (standard spacing). Optional threaded connection for freezing protection alarm sensor (to be specified in the order form).

Capacitive constraints:
- Maximum operating pressure – 10 bar.
- Maximum water temperature +100°C.
- Maximum airflow velocity through the heater 3 m/s.

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. 134.

### 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 (except 3 speed fan control).
- Exhaust air flow correction (except 3 speed fan control).
- Constant air flow control and indication (CAV) (except 3 speed fan control).
- Weekly schedule programming.
- Setting temperature from the panel 15-30$^0$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.

# Verso P 1600 F

(Kompakt RECU 1600 P)

| | |
|---|---|
| Nominal air flow, $m^3/h$ | 1700 |
| Panel thickness, mm | 50 |
| 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 | 600×420×92-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 | 62 |
| Supply Outlet | 75 |
| Exhaust Inlet | 61 |
| Exhaust Outlet | 75 |
| 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 | 6,5 | 9,3 | 11 | 12,8 | 14,5 | 24,7 |

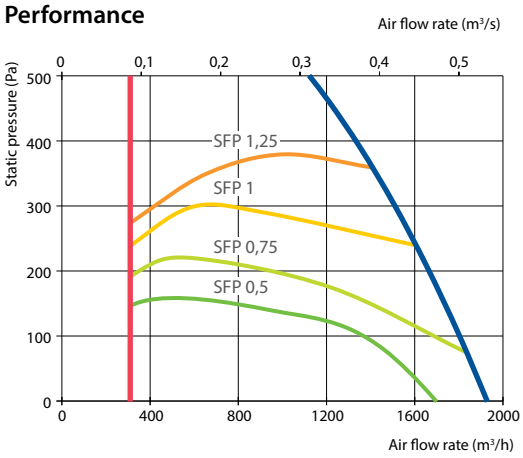
* indoor +22°C, 10% RH

## Hot water duct air heater (DH)**

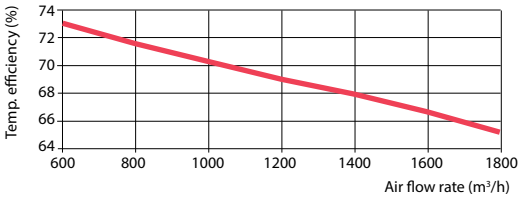
| | Winter | | | |
|---|---|---|---|---|
| Water temperature in/out, °C | 90/70 | 80/60 | 70/50 | 60/40 |
| Capacity, kW | 8,9 | 8,9 | 8,9 | 8,9 |
| Flow rate, $dm^3/h$ | 393 | 392 | 390 | 390 |
| Pressure drop, kPa | 14,3 | 14,5 | 14,7 | 15 |
| Temperature in/out, °C | 6,5/22 | | | |
| Maximal capacity, kW | 19,1 | 16 | 13 | 10 |
| Connection, ” | ½ | | | |
| Dimensions, mm | 415×415×220 | | | |
| Hot water duct heater type | DH-315 | | | |

** option

## Performance

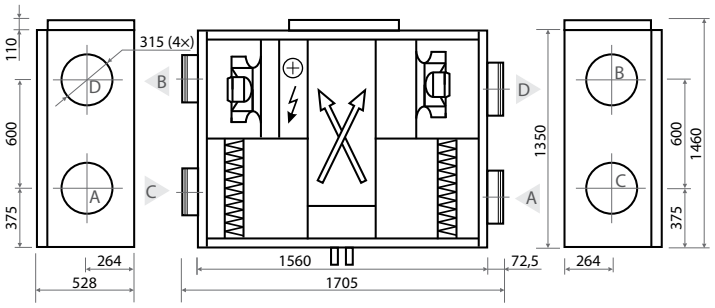



## Temperature efficiency

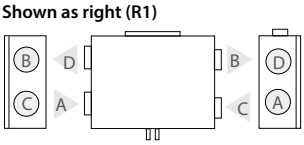



Indoor and outdoor ΔT=20°C re: *Ecodesign 1253/2014.*

**Shown as left (L1)**




**Shown as right (R1)**




**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 | 50 |
| Unit weight, kg | 190 |
| 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 | 600×420×92-M5 |
| Electric power input of the fan drive at maximum flow rate, W | 660 |
| Electric air heater capacity, kW / Δt, °C | 9 / 13,3 |
| 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 | 64 |
| Supply Outlet | 78 |
| Exhaust Inlet | 64 |
| Exhaust Outlet | 78 |
| Casing | 48 |

**A-weighted sound pressure level $L_{PA}$, dB(A)**
10 $m^2$ 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 | 5,5 | 8,5 | 10,4 | 12,2 | 14 | 24,8 |

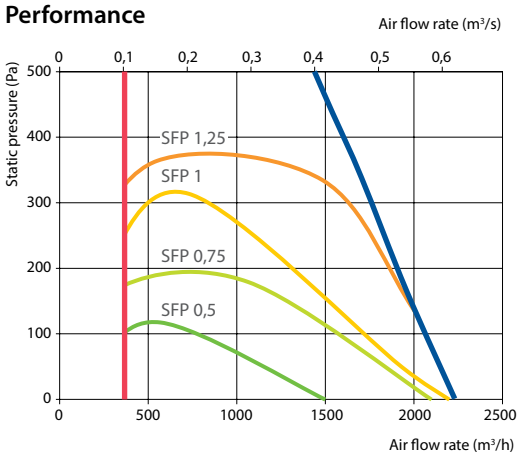
* indoor +22°C, 10% RH

## Hot water duct air heater (DH)**

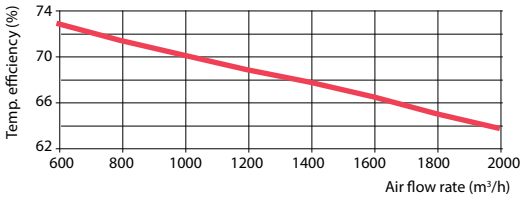
| | Winter | | | |
|---|---|---|---|---|
| Water temperature in/out, °C | 90/70 | 80/60 | 70/50 | 60/40 |
| Capacity, kW | 11,2 | 11,2 | 11,2 | 11,2 |
| Flow rate, $dm^3/h$ | 492 | 490 | 488 | 486 |
| Pressure drop, kPa | 1,7 | 1,8 | 1,8 | 1,9 |
| Temperature in/out, °C | 5,5/22 | | | |
| Maximal capacity, kW | 39 | 32,6 | 26,1 | 19,8 |
| Connection, ” | ½ | | | |
| Dimensions, mm | 510×450×220 | | | |
| Hot water duct heater type | DH-315M | | | |

** option

## Performance




## Temperature efficiency




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

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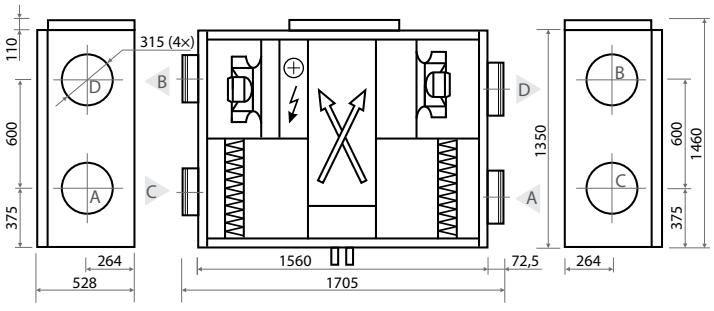
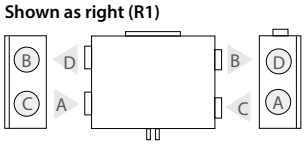



**Shown as right (R1)**

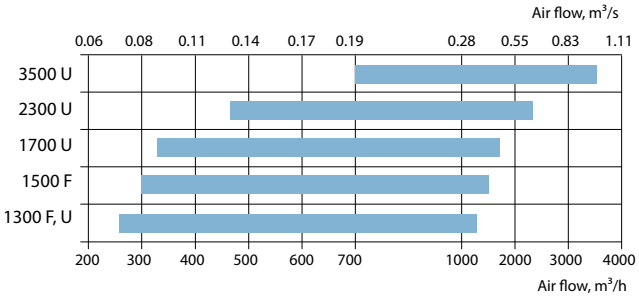



**A** outdoor intake
**B** supply air
**C** extract indoor
**D** exhaust air

# Verso CF

Air handling units with a counterflow plate heat exchanger.
Capacity range 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 the conditions of movable parts 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.

## Verso CF range

| Unit size | Connection versions | | | | Supply/ exhaust air filter class | | Heater | | | Cooler | | Inspection side | | | | Control system C5 panel |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | H | V | U | F | M5 | F7 | HE | HW | HCW | CW | CDX | R1 | R2 | L1 | L2 | C5.1 |
| Verso CF 1300 U | ● | ● | ● | | ● | O | O | O | O | △ | △ | O | | O | | ● |
| Verso CF 1300 F | | | | ● | ● | O | O | O | △ | △ | △ | O | O | O | O | ● |
| Verso CF 1500 F | | | | ● | ● | O | O | O | △ | △ | △ | O | O | O | O | ● |
| Verso CF 1700 U | ● | ● | ● | | ● | O | O | O | O | △ | △ | O | | O | | ● |
| Verso CF 2300 U | ● | ● | ● | | ● | O | O | O | O | △ | △ | O | | O | | ● |
| Verso CF 3500 U | ● | ● | ● | | ● | O | O | O | O | △ | △ | O | | O | | ● |

● standard equipment
O possible choice
△ duct water heater, water and DX cooler 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 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.
Design:
- Galvanized sheet steel casing.
- Copper pipes for heat transfer fluid (water).
- Spacing between profiled aluminum plates is 3 mm (standard spacing). Optional threaded connection for freezing protection alarm sensor (to be specified in the order form).

Capacitive constraints:
- Maximum operating pressure – 10 bar.
- Maximum water temperature +100°C.
- Maximum airflow velocity through the heater 3 m/s.

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. 134.

### 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".

# Verso CF 1300 U

| | |
|---|---|
| Nominal air flow, m³/h | 1300 |
| Panel thickness, mm | 50 |
| Unit weight, kg | 220 |
| 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 / 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 | 65 |
| Exhaust Inlet | 56 |
| Exhaust Outlet | 65 |
| Casing | 42 |

**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 | -23 | -15 | -10 | -5 | 0 | 30 |
| After heat exchanger*, °C | 13,2 | 14,7 | 15,6 | 16,6 | 17,6 | 23,7 |

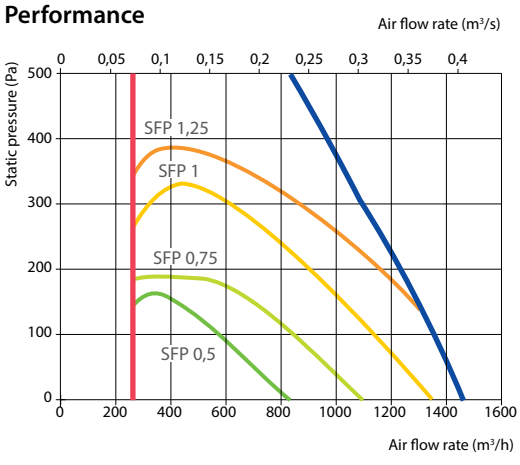
* indoor +22°C, 10% RH

## Changeover water heating/cooling exchanger (HCW)

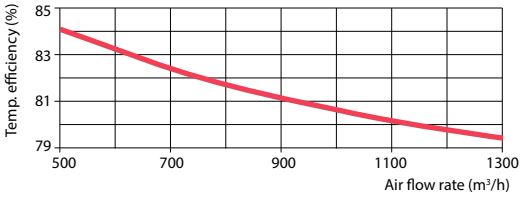
| | Winter | | | | Summer |
|---|---|---|---|---|---|
| Water temperature in/out, °C | 90/70 | 80/60 | 70/50 | 60/40 | 7/12 |
| Capacity, kW | 3,5 | 3,5 | 3,5 | 3,5 | 4,5 |
| Flow rate, dm³/h | 156 | 156 | 155 | 155 | 780 |
| Pressure drop, kPa | 1 | 1 | 1 | 1 | 9,5 |
| Temperature in/out, °C | 13,2/22 | | | | 23,7/18 |
| Maximal capacity, kW | 25,8 | 20,5 | 15,4 | 10,3 | 7,5 |
| 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

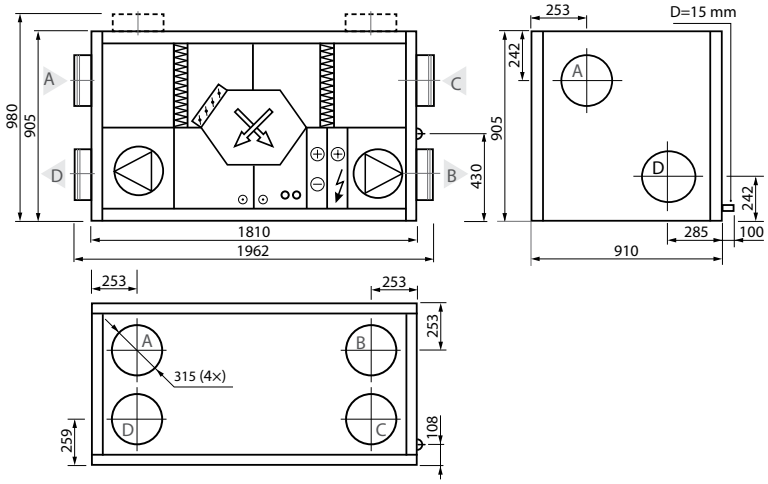



## Temperature efficiency




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

**Shown as right (R1)**

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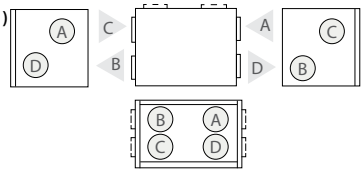


**A** outdoor intake
**B** supply air
**C** extract indoor
**D** exhaust air

# Verso CF 1300 F

| | |
|---|---|
| Nominal air flow, $m^3/h$ | 1300 |
| Panel thickness, mm | 50 |
| Unit weight, kg | 161 |
| 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 | 65 |
| Exhaust Inlet | 56 |
| Exhaust Outlet | 65 |
| 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 | 13 | 14,5 | 15,5 | 16,5 | 17,5 | 23,7 |

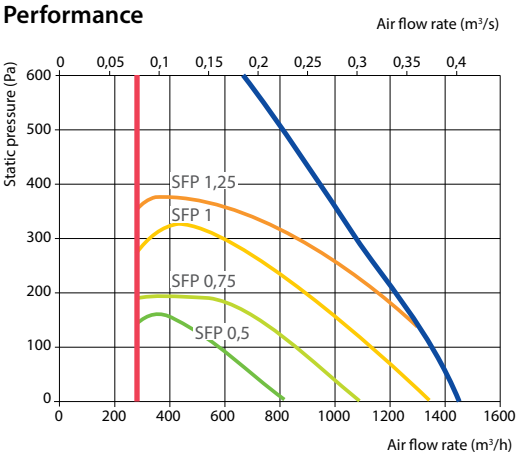
* indoor +22°C, 10% RH

## Hot water duct air heater (DH)**

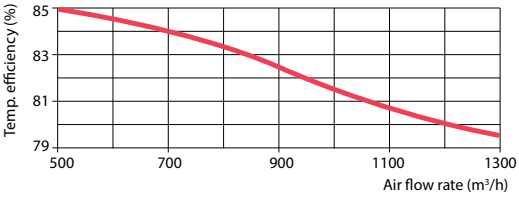
| | Winter | | | |
|---|---|---|---|---|
| Water temperature in/out, °C | 90/70 | 80/60 | 70/50 | 60/40 |
| Capacity, kW | 3,9 | 3,9 | 3,9 | 3,9 |
| Flow rate, $dm^3/h$ | 174 | 173 | 173 | 172 |
| Pressure drop, kPa | 3,2 | 3,2 | 3,3 | 3,4 |
| Temperature in/out, °C | 13/22 | | | |
| Maximal capacity, kW | 13,1 | 10,7 | 8,3 | 6 |
| Connection, ” | ½ | | | |
| Dimensions, mm | 415×415×220 | | | |
| Hot water duct heater type | DH-315 | | | |

** option

## Performance

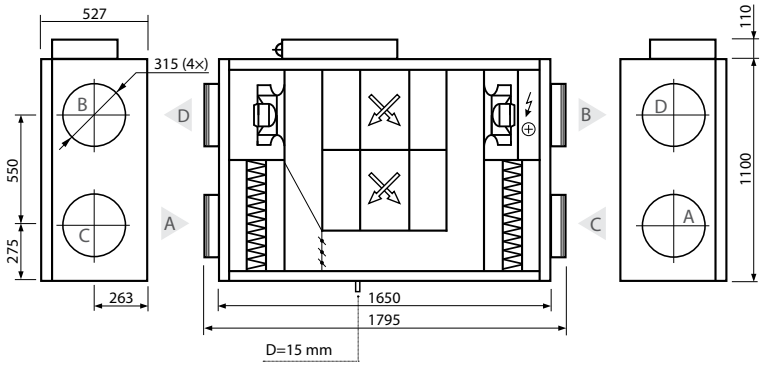



## Temperature efficiency

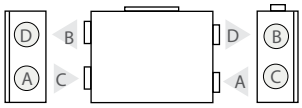



Indoor and outdoor ΔT=20°C re: *Ecodesign 1253/2014.*

**Shown as right (R1)**




**Shown as left (L1)**




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

# Verso CF 1500 F

| | |
|---|---|
| Nominal air flow, $m^3/h$ | 1500 |
| Panel thickness, mm | 50 |
| Unit weight, kg | 163 |
| 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 | 61 |
| Supply Outlet | 72 |
| Exhaust Inlet | 60 |
| Exhaust Outlet | 73 |
| 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 | -23 | -15 | -10 | -5 | 0 | 30 |
| After heat exchanger*, °C | 12,7 | 14,3 | 15,3 | 16,3 | 17,3 | 23,7 |

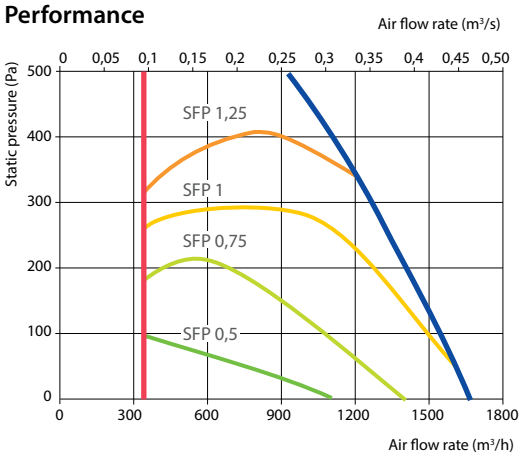
* indoor +22°C, 10% RH

## Hot water duct air heater (DH)**

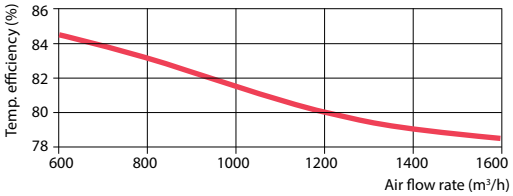
| | Winter | | | |
|---|---|---|---|---|
| Water temperature in/out, °C | 90/70 | 80/60 | 70/50 | 60/40 |
| Capacity, kW | 4,7 | 4,7 | 4,7 | 4,7 |
| Flow rate, $dm^3/h$ | 208 | 207 | 206 | 205 |
| Pressure drop, kPa | 4,4 | 4,4 | 4,5 | 4,6 |
| Temperature in/out, °C | 12,7/22 | | | |
| Maximal capacity, kW | 14,8 | 12,1 | 9,5 | 6,9 |
| Connection, ” | ½ | | | |
| Dimensions, mm | 415×415×220 | | | |
| Hot water duct heater type | DH-315 | | | |

** option

## Performance

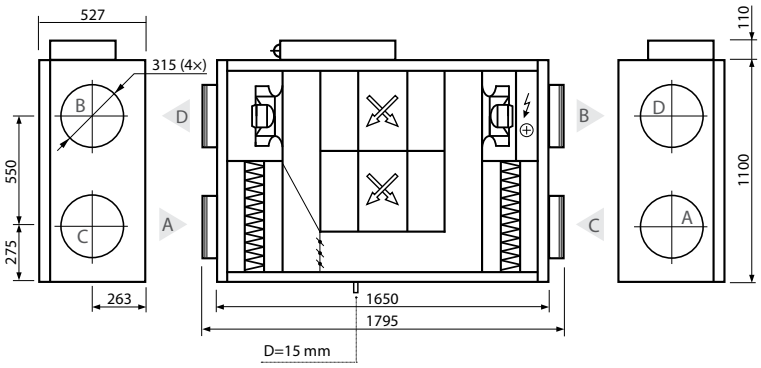



## Temperature efficiency

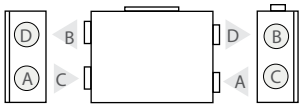



Indoor and outdoor ΔT=20°C re: *Ecodesign 1253/2014.*

**Shown as right (R1)**




**Shown as left (L1)**




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

# Verso CF 1700 U

| | |
|---|---|
| Nominal air flow, m³/h | 1700 |
| Panel thickness, mm | 50 |
| Unit weight, kg | 220 |
| 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 / 7,5 |
| 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 | 75 |
| Exhaust Inlet | 59 |
| Exhaust Outlet | 74 |
| Casing | 46 |

**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 | 12,4 | 14,1 | 15,1 | 16,2 | 17,2 | 23,8 |

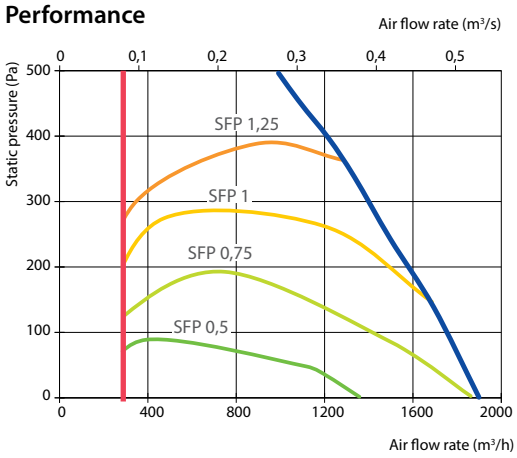
* indoor +22°C, 10% RH

## Changeover water heating/cooling exchanger (HCW)

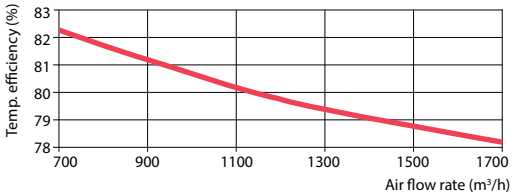
| | Winter | | | | Summer |
|---|---|---|---|---|---|
| Water temperature in/out, °C | 90/70 | 80/60 | 70/50 | 60/40 | 7/12 |
| Capacity, kW | 5,5 | 5,5 | 5,5 | 5,5 | 6,1 |
| Flow rate, dm³/h | 241 | 241 | 241 | 241 | 1054 |
| Pressure drop, kPa | 1 | 1 | 1 | 1 | 16 |
| Temperature in/out, °C | 12,4/22 | | | | 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

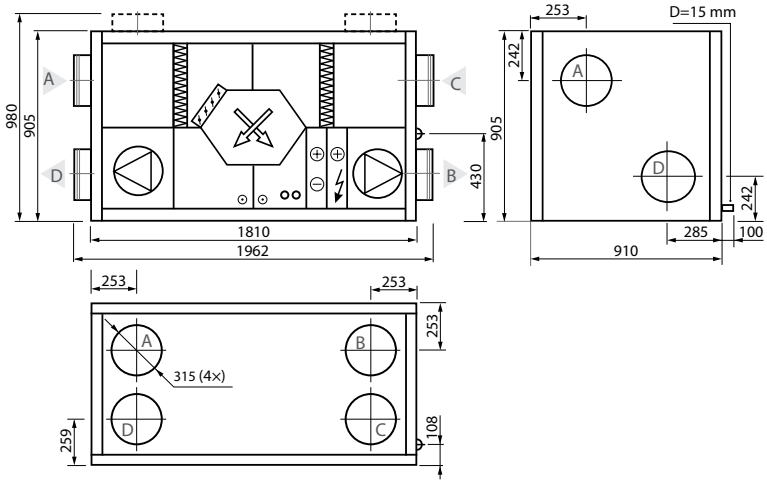



## Temperature efficiency




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

**Shown as right (R1)**

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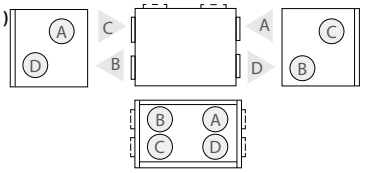


**A** outdoor intake
**B** supply air
**C** extract indoor
**D** exhaust air

# Verso CF 2300 U

| | |
|---|---|
| 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 / 10,5 |
| 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 | 62 |
| Supply Outlet | 79 |
| Exhaust Inlet | 63 |
| Exhaust Outlet | 79 |
| 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 | 14,4 | 14,7 | 15,6 | 16,6 | 17,6 | 23,7 |

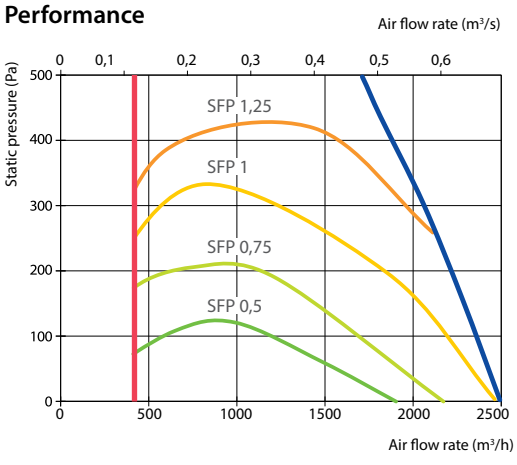
* indoor +22°C, 10% RH

## Changeover water heating/cooling exchanger (HCW)

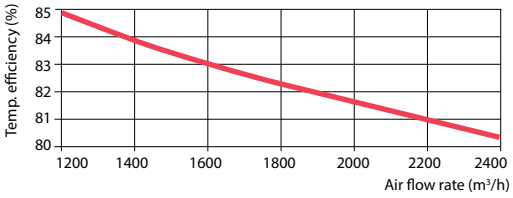
| | Winter | | | | Summer |
|---|---|---|---|---|---|
| Water temperature in/out, °C | 90/70 | 80/60 | 70/50 | 60/40 | 7/12 |
| Capacity, kW | 5,9 | 5,9 | 5,9 | 5,9 | 8,5 |
| Flow rate, dm³/h | 259 | 258 | 257 | 256 | 1458 |
| Pressure drop, kPa | 1 | 1 | 1 | 1,1 | 29 |
| Temperature in/out, °C | 14,4/22 | | | | 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

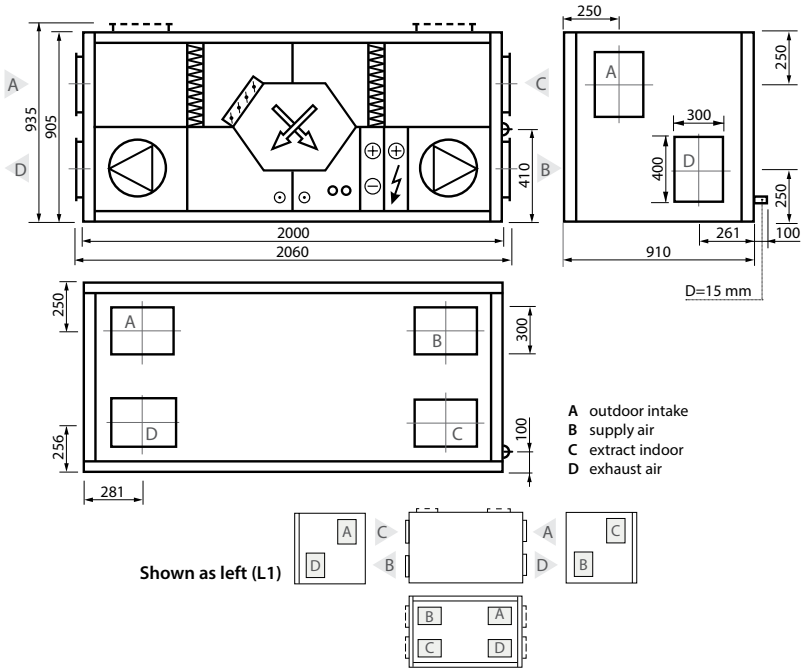



## Temperature efficiency




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

**Shown as right (R1)**




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

**Shown as left (L1)**

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# Verso CF 3500 U

| | |
|---|---|
| Nominal air flow, m³/h | 3500 |
| Panel thickness, mm | 50 |
| Unit weight, kg | 140/200/140 |
| Supply voltage, V | 3~400 |
| Maximal operating current, A | 4,5 |
| Filters dimensions B×H×L, mm | 525×510×46-M5 (x2) |
| Electric power input of the fan drive at maximum flow rate, W | 895 |
| 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 | 82 |
| Exhaust Inlet | 71 |
| Exhaust Outlet | 82 |
| Casing | 49 |

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

| | |
|---|---|
| Surroundings | 38 |

## Temperature efficiency

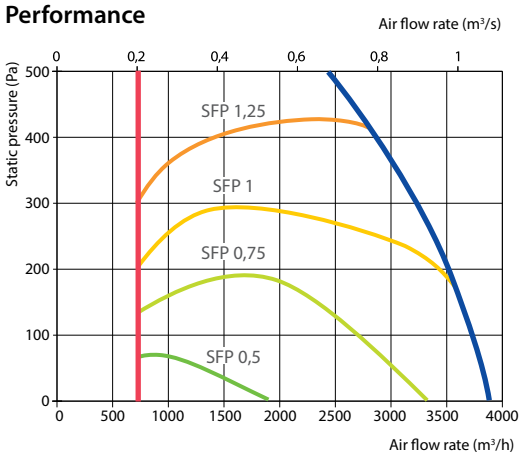
| | Winter | | | | | Summer |
|---|---|---|---|---|---|---|
| Outside temperature, °C | -23 | -15 | -10 | -5 | 0 | 30 |
| After heat exchanger*, °C | 11,9 | 13,7 | 14,8 | 15,9 | 17 | 25 |

* indoor +22°C, 10% RH

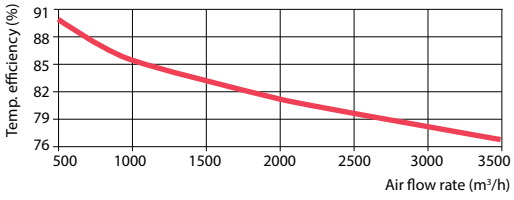
## Hot water air heater

| | Winter | | | |
|---|---|---|---|---|
| Water temperature in/out, °C | 90/70 | 80/60 | 70/50 | 60/40 |
| Capacity, kW | 11,7 | 11,7 | 11,7 | 11,7 |
| Flow rate, dm³/h | 518 | 516 | 514 | 512 |
| Pressure drop, kPa | 1 | 1 | 1 | 1 |
| Temperature in/out, °C | 11,9/22 | | | |
| Maximal capacity, kW | 57 | 45 | 33,7 | 22 |
| Connection, ” | 1 | | | |

## Performance

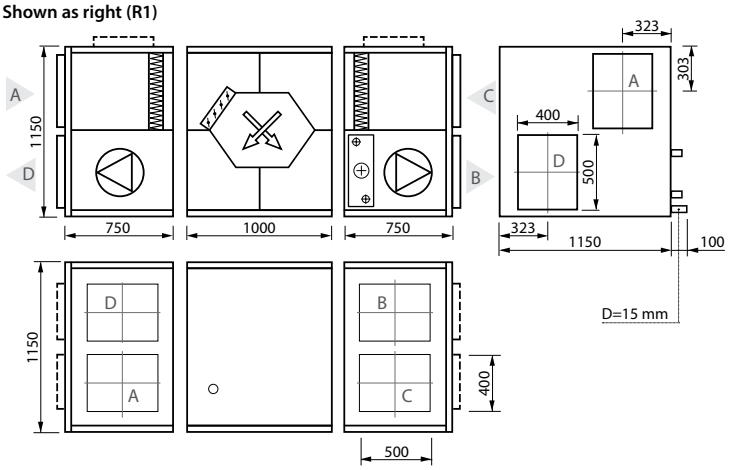



## Temperature efficiency




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

**Shown as right (R1)**

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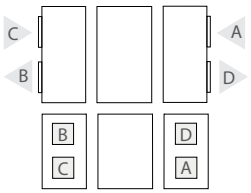
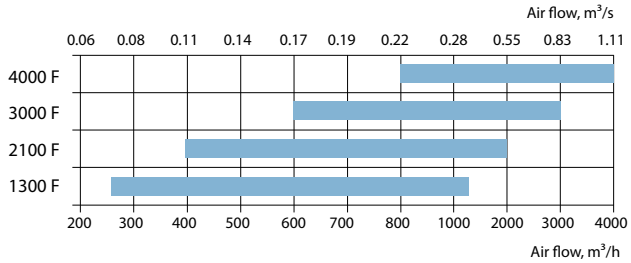



**A** outdoor intake
**B** supply air
**C** extract indoor
**D** exhaust air

# Verso S

False ceiling supply air handling units.
Capacity range 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 | Connection versions | Supply/exhaust air filter class | | Heater | | Cooler | | Inspection side | Control system C5 panel |
|---|---|---|---|---|---|---|---|---|---|
| | F | 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
△ duct water heater, water and DX cooler 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. 134.

**Control system**
More information about **C5** on p. 10.

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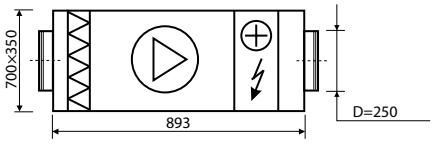
# Verso S 1300 F

| | |
|---|---|
| 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 | 275 |
| 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 referens flow rate**

| | |
|---|---|
| Supply Inlet | 54 |
| Supply Outlet | 64 |
| Casing | 40 |

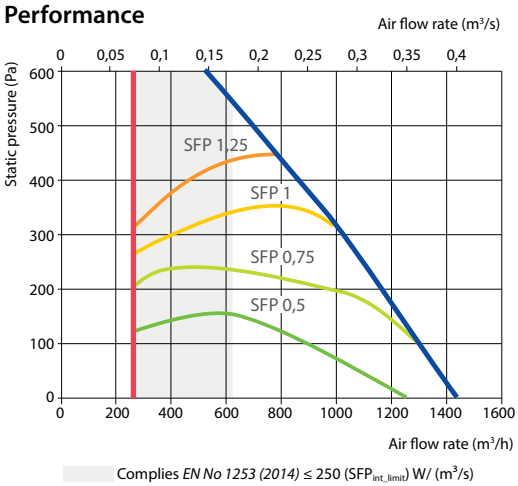
**A-weighted sound pressure level $L_{PA}$, dB(A)**
10 m² normally isolated room, distance from casing – 3 m.

| | |
|---|---|
| Surroundings | 30 |

## Technical data

| Supply air handling unit | Supply voltage, V | Air heater capacity, kW | Maximal operating current, A | ΔT, °C |
|---|---|---|---|---|
| Verso S 1300 F-HE/6 | 3~400 | 6,0 | 10,6 | 14 |
| 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




Complies *EN No 1253 (2014)* ≤ 250 ($SFP_{int\_limit}$) W/ (m³/s)

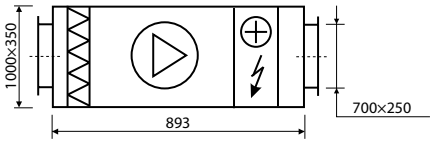
## Hot water air heater

| Water temperature in/out, °C | 90/70 | 80/60 | 70/50 | 60/40 |
|---|---|---|---|---|
| Capacity, kW | 17,3 | 16,6 | 14,1 | 10,1 |
| Flow rate, dm³/h | 764 | 731 | 617 | 440 |
| Pressure drop, kPa | 2 | 1,9 | 1,5 | 1 |
| Temperature in/out, °C | -23/20 | -23/18,4 | -23/12,1 | -15,9 |
| Maximal capacity, kW | 18,9 | 16,6 | 14,1 | 10,1 |
| Connection, ” | ½ | | | |

# Verso S 2100 F

| | |
|---|---|
| Nominal air flow, $m^3/h$ | 2000 |
| Panel thickness, mm | 50 |
| Unit weight, kg | 75 |
| Filters dimensions B×H×L, mm | 858×287×46-M5 |
| Electric power input of the fan drive at reference flow rate, W | 2x170 |
| 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 referens flow rate**

| | |
|---|---|
| Supply Inlet | 71 |
| Supply Outlet | 75 |
| Casing | 44 |

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

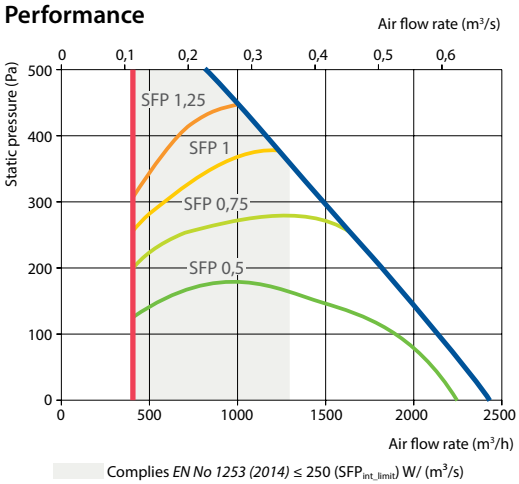
| | |
|---|---|
| Surroundings | 33 |

## Technical data

| Supply air handling unit | Supply voltage, V | Air heater capacity, kW | Maximal operating current, A | ΔT, °C |
|---|---|---|---|---|
| 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 | 43 |

HE – electric air heater
HW – water air heater

## Performance




Complies *EN No 1253 (2014)* ≤ 250 ($SFP_{int\_limit}$) W/ ($m^3/s$)

## Hot water air heater

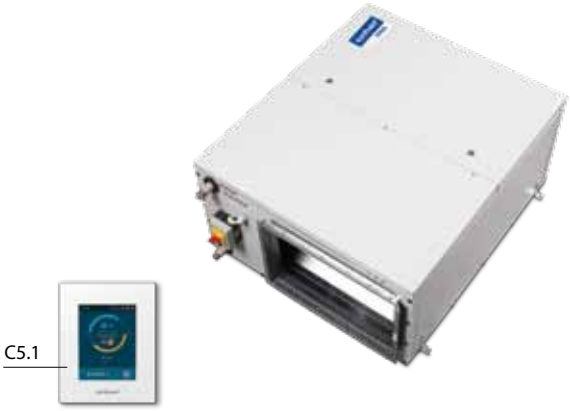
| Water temperature in/out, °C | 90/70 | 80/60 | 70/50 | 60/40 |
|---|---|---|---|---|
| Capacity, kW | 28,8 | 28,8 | 25,2 | 21,7 |
| Flow rate, $dm^3/h$ | 1272 | 1266 | 1100 | 947 |
| Pressure drop, kPa | 7,4 | 7,6 | 6,1 | 5 |
| Temperature in/out, °C | -23/20 | -23/20 | -23/14,6 | -23/9 |
| Maximal capacity, kW | 33,3 | 29,3 | 25,2 | 21,7 |
| Connection, ” | | ½ | | |

komfovent®

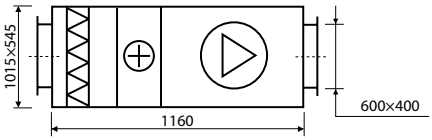
# Verso S 3000 F

(Kompakt OTK 3000P)

| | |
|---|---|
| Nominal air flow, m³/h | 3000 |
| Panel thickness, mm | 50 |
| Unit weight, kg | 120 |
| Filters dimensions B×H×L, mm | 450×480×92-M5 (x2) |
| Electric power input of the fan drive at reference flow rate, W | 990 |
| 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 referens flow rate**

| | |
|---|---|
| Supply Inlet | 70 |
| Supply Outlet | 80 |
| Casing | 45 |

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

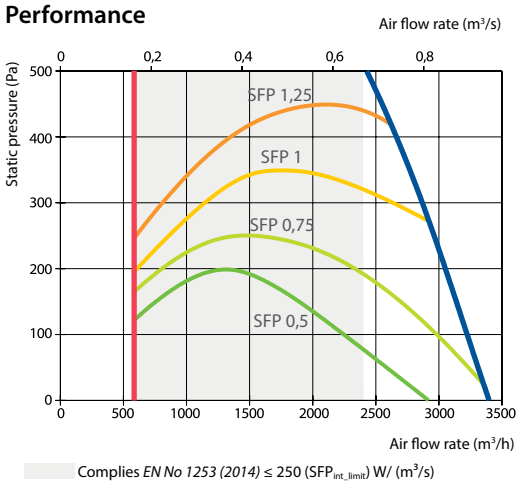
| | |
|---|---|
| Surroundings | 34 |

## 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 |

HW – water air heater

## Performance




Complies *EN No 1253 (2014)* ≤ 250 ($SFP_{int\_limit}$) W/ (m³/s)

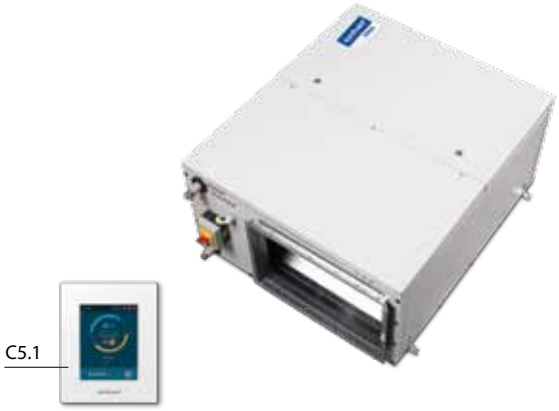
## Hot water air heater

| 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 | | | |

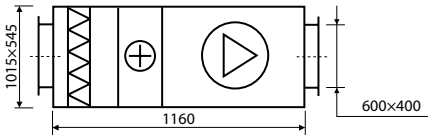
# Verso S 4000 F

(Kompakt OTK 4000P)

| | |
|---|---|
| Nominal air flow, $m^3/h$ | 4000 |
| Panel thickness, mm | 50 |
| Unit weight, kg | 125 |
| Filters dimensions B×H×L, mm | 450×480×92-M5 (x2) |
| 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 referens flow rate**

| | |
|---|---|
| Supply Inlet | 74 |
| Supply Outlet | 83 |
| Casing | 47 |

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

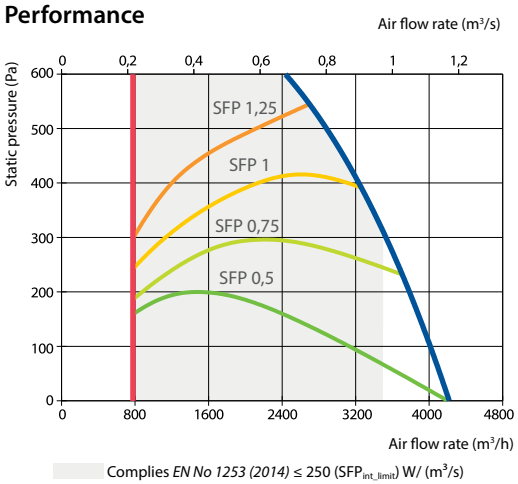
| | |
|---|---|
| Surroundings | 37 |

## 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 | 57,7 | 2,7 | 43 |

HW – water air heater

## Performance




Complies *EN No 1253 (2014)* ≤ 250 ($SFP_{int\_limit}$) W/ ($m^3/s$)

## Hot water air heater

| Water temperature in/out, °C | 90/70 | 80/60 | 70/50 | 60/40 |
|---|---|---|---|---|
| Capacity, kW | 57,7 | 57,7 | 57,7 | 57,7 |
| Flow rate, $dm^3/h$ | 2545 | 2534 | 2523 | 2513 |
| Pressure drop, kPa | 3,3 | 3,3 | 3,3 | 3,3 |
| Temperature in/out, °C | -23/20 | | | |
| Maximal capacity, kW | 103,9 | 92 | 80,1 | 68,3 |
| Connection, ” | 1 | | | |

# Accessories

## Supply and exhaust filters

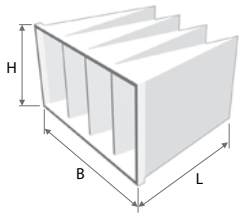
99,9 % (in amount) of particulates in the outdoor air are smaller than 1 µm. By mass the mentioned particulates account for only 30 % of all airborne dust. Thus, if the outdoor air is supplied to the public and dwelling houses, to ensure air purity required by hygienic standards, filters of M5-F7 class 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 U H/V | AGUJ-M-315 |
| R 1400 U H/V | AGUJ-M-315 |
| R 1600 U H | SRU-M-300x400 |
| R 1600 U V | SRU-M-400x300 |
| R 2000 U H | SRU-M-300x400 |
| R 2000 U V | SRU-M-400x300 |
| R 2500 U H | SRU-M-300x400 |
| R 2500 U V | SRU-M-400x300 |
| R 1200 F | AGUJ-M-315 |
| R 2000 F | AGUJ-M-355 |
| R 3000 U H | SRU-M-400x500 |
| R 3000 U V | SRU-M-500x400 |
| R 4000 U H | SRU-M-400x500 |
| R 4000 U V | SRU-M-500x400 |
| R 4500 U H | SRU-M-400x500 |
| R 4500 U V | SRU-M-500x400 |
| R 7000 H | SRU-M-1200x600 |

| Unit size | Damper |
|---|---|
| RHP 1300 U H/V | AGUJ-M-250 |
| RHP 1500 U H/V | AGUJ-M-250 |
| P 1600 F | AGUJ-M-315 |
| P 2000 F | AGUJ-M-315 |
| CF 1300 F | AGUJ-M-315 |
| CF 1500 F | AGUJ-M-315 |
| CF 1300 U H/V | AGUJ-M-315 |
| CF 1700 U H/V | AGUJ-M-315 |
| CF 2300 U H | SRU-M-300x400 |
| CF 2300 U V | SRU-M-400x300 |
| CF 3500 U H | SRU-M-400x500 |
| CF 3500 U V | SRU-M-500x400 |
| S 1300 F | AGUJ-M-250 |
| S 2100 F | SRU-M-750x250 |
| S 3000 F | SRU-M-600x400 |
| S 4000 F | SRU-M-600x400 |

| Control system | Actuator ON/OFF | |
|---|---|---|
| KOMFOVENT C3, C5 | LF24 | LM24 |

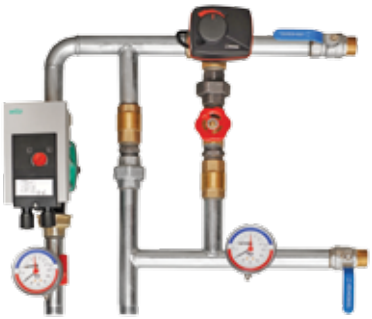
**Note:**
LF damper actuator is with spring-return.
LM damper actuator is without spring-return.

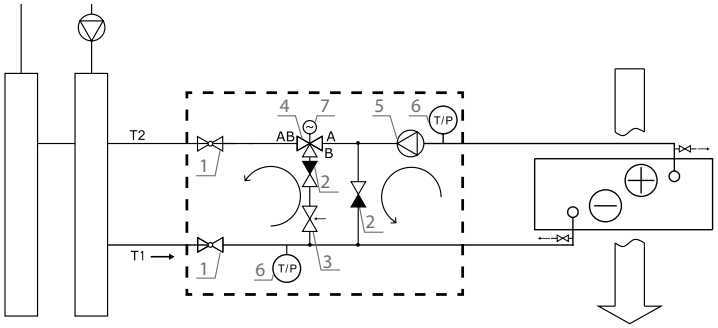
## Electric ducted air heater (preheater)

More information on page 69.

# Pipework package

Pipework Package Unit PPU is used for the adjustment of thermal power of water heaters, i.e. for the adjustment of thermal media debit via the heater and respectfully, the temperature of supplied air. 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

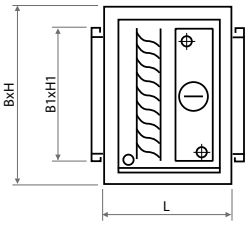
| Unit size | Pipework Package |
|---|---|
| R 1200 U | PPU-HW-3R-15-1,0-W2 |
| R 1400 U | PPU-HW-3R-15-1,0-W2 |
| R 1600 U | PPU-HW-3R-15-1,6-W2 |
| R 2000 U | PPU-HW-3R-15-1,6-W2 |
| R 2500 U | PPU-HW-3R-15-2,5-W2 |
| R 1200 F | PPU-HW-3R-15-1,6-W2 |
| R 2000 F | PPU-HW-3R-15-1,6-W2 |
| R 3000 U | PPU-HW-3R-20-4,0-W2 |

| Unit size | Pipework Package |
|---|---|
| R 4000 U | PPU-HW-3R-20-4,0-W2 |
| R 4500 U | PPU-HW-3R-25-6,3-W2 |
| R 7000 U | PPU-HW-3R-25-6,3-W2 |
| P 1600 F | PPU-HW-3R-15-2,5-W2 |
| P 2000 F | PPU-HW-3R-15-2,5-W2 |
| CF 1300 F | PPU-HW-3R-15-1,0-W2 |
| CF 1500 F | PPU-HW-3R-15-1,6-W2 |
| CF 1300 U | PPU-HW-3R-15-1,0-W2 |

| Unit size | Pipework Package |
|---|---|
| CF 1700 U | PPU-HW-3R-15-1,6-W2 |
| CF 2300 U | PPU-HW-3R-15-1,6-W2 |
| CF 3500 U | PPU-HW-3R-20-4,0-W2 |
| S 1300 F | PPU-HW-3R-25-6,3-W2 |
| S 2100 F | PPU-HW-3R-25-10-W3 |
| S 3000 F | PPU-HW-3R-25-10-W3 |
| S 4000 F | PPU-HW-3R-32-16-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 handling unit size | Cooler's type | Supply air volume, $m^3/h$ | Air temper. in/out, °C | Capacity, kW | Air pressure drop*, Pa | Fluid pressure loss, kPa | B×H×L, mm | B1×H1, mm | Tubes connections, " / mm | Weight, kg |
|---|---|---|---|---|---|---|---|---|---|---|
| R 1200 U<br>R 1200 F | DCF-1,2-7 | 1200 | 30/18 | 7,1 | 93 | 6,1 | 705×610×390 | 500×400 | ½ / 22 | 46 |
| | DCW-1,2-8 | 1200 | 30/18 | 8,1 | 60 | 6,3 | 705×610×390 | 500×400 | ¾ | 45 |
| CF 1300 F,<br>CF 1300 U, S 1300 F | DCF-1,3-8 | 1300 | 30/18 | 7,7 | 35 | 7,3 | 705×610×390 | 500×400 | ½ / 22 | 46 |
| | DCW-1,3-9 | 1300 | 30/18 | 8,7 | 67 | 7,3 | 705×610×390 | 500×400 | ¾ | 45 |
| R 1400U<br>CF 1500F | DCF-1,4-8 | 1400 | 30/18 | 8,3 | 40 | 8,3 | 705×610×390 | 500×400 | ½ / 22 | 46 |
| | DCW-1,4-9 | 1400 | 30/18 | 9,4 | 78 | 8,3 | 705×610×390 | 500×400 | ¾ | 45 |
| R 1600 U<br>CF 1700 U | DCF-1,6-10 | 1600 | 30/18 | 9,5 | 118 | 11 | 755×610×420 | 500×400 | ½ / 22 | 49 |
| | DCW-1,6-11 | 1600 | 30/18 | 10,7 | 83 | 11 | 755×610×420 | 500×400 | ¾ | 46 |
| R 2000 U<br>R 2000 F, S 2100 F | DCF-2,0-12 | 2000 | 30/18 | 11,9 | 106 | 3 | 920×610×420 | 700×400 | ½ / 22 | 56 |
| | DCW-2,0-13 | 2000 | 30/18 | 13,4 | 78 | 21 | 920×610×420 | 700×400 | ¾ | 56 |
| R 2500 U<br>CF 2300 U | DCF-2,5-15 | 2500 | 30/18 | 15 | 92 | 3,8 | 1080×670×420 | 800x400 | ½ / 22 | 68 |
| | DCW-2,5-17 | 2500 | 30/18 | 17 | 55 | 28 | 1080×670×420 | 800x400 | ¾ | 65 |
| R 3000 U<br>S 3000 F | DCF-3,0-18 | 3000 | 30/18 | 18 | 112 | 5,3 | 1080×670×420 | 800x400 | ½ / 22 | 68 |
| | DCW-3,0-20 | 3000 | 30/18 | 20 | 102 | 11 | 1080×670×420 | 800x400 | 1 | 69 |
| R 4000 U, CF 3500 U<br>S 4000 F | DCF-4,0-24 | 4000 | 30/18 | 24 | 101 | 8,3 | 1220×730×420 | 900×500 | ⅞ / 28 | 80 |
| | DCW-4,0-27 | 4000 | 30/18 | 27 | 106 | 17 | 1220×730×420 | 900×500 | 1 | 82 |
| R 4500 U | DCF-4,5-27 | 4500 | 30/18 | 27 | 115 | 8,2 | 1220×730×420 | 900×600 | ⅞ / 28 | 84 |
| | DCW-4,5-30 | 4500 | 30/18 | 30 | 108 | 32 | 1220×730×420 | 900×600 | 1 | 86 |
| R 7000 | DCF-7,0-42 | 7000 | 30/21 | 2x21 | 141 | 3,2 | 1500×790×480 | 1200×600 | 2×⅝ / 2×28 | 107 |
| | DCW-7,0-47 | 7000 | 30/18 | 47 | 138 | 23,4 | 1500×790×480 | 1200×600 | 1 ½ | 105 |

* With drop eliminator.

## Accessories for unit outside installation

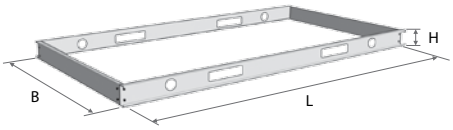
VERSO air handling units can be installed outside due to thick casing insulation and easy mounting. Protective optional accessories should be used if unit is for outside installation: roof, base frame, legs, grills, supply and exhaust hoods.

| Unit size | Type of hood for supply air | Type of hood for exhaust air |
|---|---|---|
| R 1200/1400 H / U H | G-600x430 | AHIA-315 |
| R 1600/2000/2500 H / U H | G_755_448_00 | G_755_448_10 |
| R 3000/4000/4500 H / U H | G_540_1115_00 | G_540_1115_10 |
| R 7000 H | V-40-34-00.000.2 | V-40-34-00.000 |
| P 1600/2000 F | G-600x430 | AHIA-355 |
| CF 1300/1700 H/ U H | G-600x430 | AHIA-315 |
| CF 2300 H / U H | G_355_870_00 | G_355_870_10 |

| Unit size | Dimensions of roof B×L, mm |
|---|---|
| R 1200/1400 H / U H | 1180×1555 |
| R 1600/2000/2500 H / U H | 1165×1700 |
| R 3000/4000/4500 H / U H | 1260×2300 |
| R 7000 H | 1790×2050 |
| P 1600/2000 F | 1000×2110 |
| CF 1300/1700 H/ U H | 1193×2020 |
| CF 2300 H / U H | 1193×2010 |

## Standard base frame for air handling units

| Unit size | Frame type | Dimensions B×L, mm |
|---|---|---|
| R 1200/1400 H/UH | SSK-15.001A | 840×100×1340 |
| R 1600/2000/2500 H/UH | SSK-12.001A | 850×100×1500 |
| R 3000/4000/4500 H/UH | SSK-16.001A | 1100×100×2100 |
| P 1600/2000 F | SSK-03.001A | 650×100×1900 |
| CF 1300/1700 H/ UH | SSK-18.001A | 850×100×1810 |
| CF 2300 H/UH | SSK-19.001A | 850×100×2000 |




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:

| Type of the air handling unit | Electric power supply connecting cable, mm² |
|---|---|
| R 1200 U W | 3×1,5 |
| R 1200 U E | 5×1,5 |
| R 1400 U W | 3×1,5 |
| R 1400 U E | 5×1,5 |
| R 1600 U W | 3×1,5 |
| R 1600 U E | 5×1,5 |
| R 2000 U W | 3×1,5 |
| R 2000 U E | 5×2,5 |
| R 2500 U W | 3×1,5 |
| R 2500 U E | 5×2,5 |
| R 1200 F W | 3×1,5 |
| R 1200 F E | 5×1,5 |
| R 2000 F W | 3×1,5 |
| R 2000 F E | 5×2,5 |
| R 3000 U W | 5×1,5 |
| R 3000 U E | 5×2,5 |
| R 4000 U W | 5×1,5 |
| R 4000 U E | 5×6 |

| Type of the air handling unit | Electric power supply connecting cable, mm² |
|---|---|
| R 4500 U W | 5×1,5 |
| R 4500 U E | 5×6 |
| R 7000 U W | 5×1,5 |
| RHP 1300 U | 5×1,5 |
| RHP1500 U | 5×1,5 |
| P 1600 F W | 3×1,5 |
| P 1600 F E | 5×2,5 |
| P 2000 F W | 3×1,5 |
| P 2000 F E | 5×2,5 |
| CF 1300 F W | 3×1,5 |
| CF 1300 F E | 5×1,5 |
| CF 1500 F W | 3×1,5 |
| CF 1500 F E | 5×1,5 |
| CF 1300 UW | 3×1,5 |
| CF 1300 U E | 5×1,5 |
| CF 1700 U W | 3×1,5 |
| CF 1700 U E | 5×1,5 |
| CF 2300 U W | 3×1,5 |

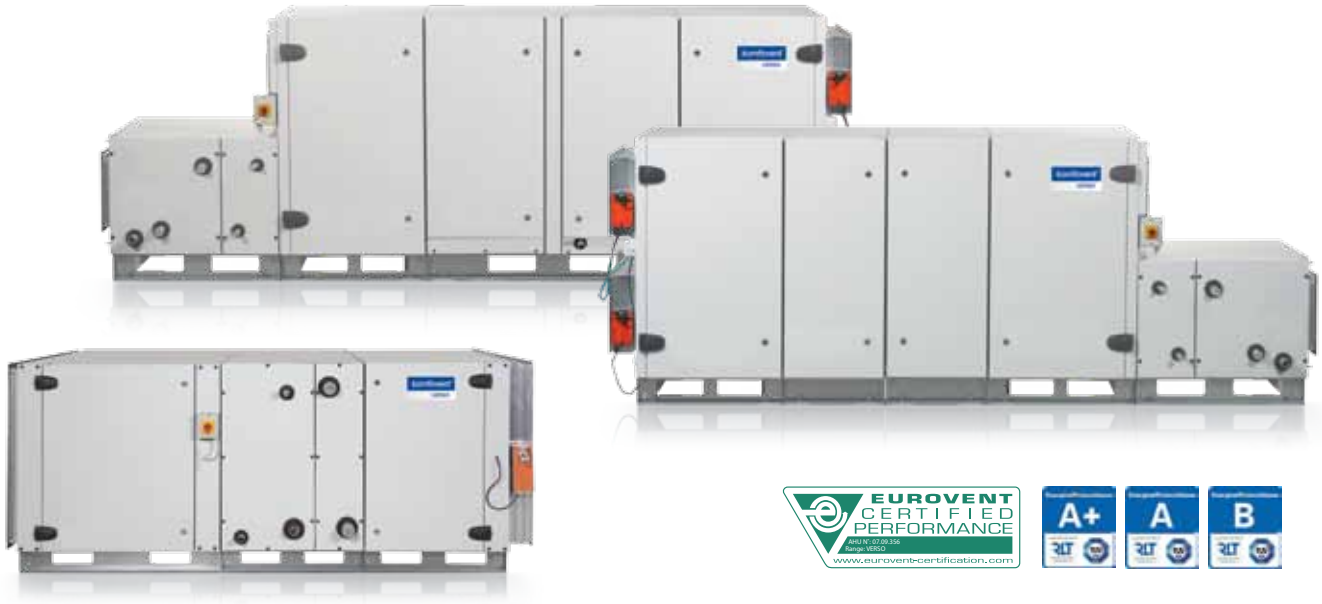
| Type of the air handling unit | Electric power supply connecting cable, mm² |
|---|---|
| CF 2300 U E | 5×2,5 |
| CF 3500 U W | 5×1,5 |
| S 1300 F W | 3×1,5 |
| S 1300 F E6 | 5×1,5 |
| S 1300 F E9 | 5×2,5 |
| S 1300 F E15 | 5×4 |
| S 2100 F W | 3×1,5 |
| S 2100 F E15 | 5×4 |
| S 2100 F E22,5 | 5×10 |
| S 3000 F W | 5×1,5 |
| S 4000 F W | 5×1,5 |

| Control panel | Connection cabel for control panel (mm²) |
|---|---|
| C5.1, C5, C3.1 | 4×0,22 |

Standard length of the control cabel is 10 m.

# 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.

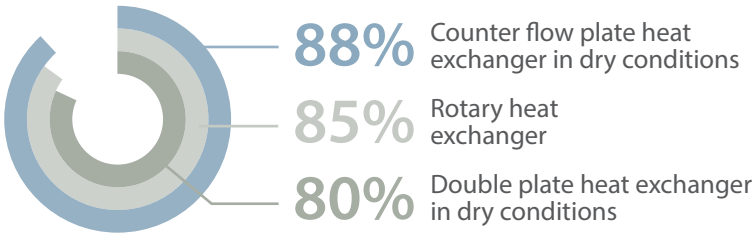
**User friendly**
Filters, fans, heat exchangers, coolers and other components are easily accessible during use; if necessary, they can be easily replaced. A new filter clamping mechanism, not only assures tightness, but also essentially simplifies filter change procedure.

| 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

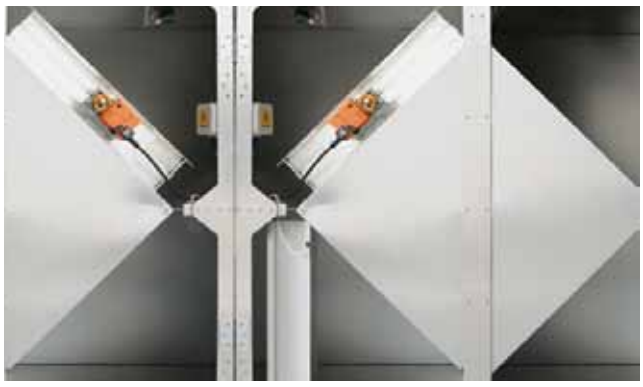
Used in Verso R series units. Temperature efficiency factor – up to 85 %. Possible wave height: 1.5 mm, 1.7 mm, 2.1 mm.
Types of rotary heat exchangers:

- 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 82 % in wet conditions and up to 80 % 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 %

90%

100%

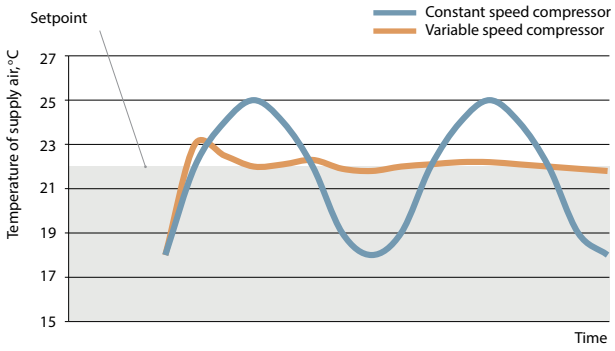
VERSO series air handling units with air source heat pumps are more efficient in heat recovery and could be used as a central air conditioner in a cooling mode.

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



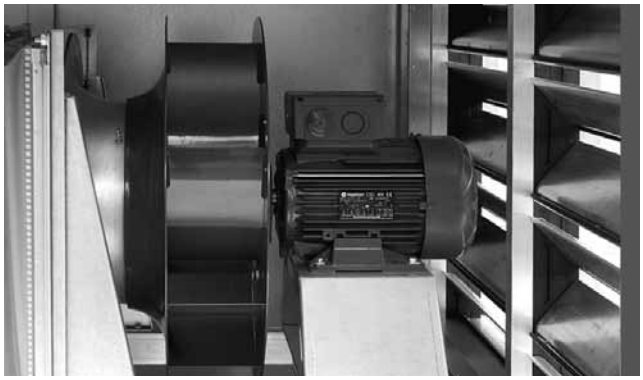

 

## Heat exchangers

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

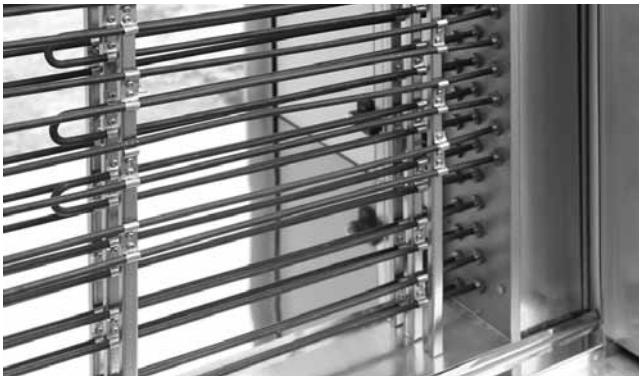
Closing air dampers installed in the air handling units are produced from aluminium with rubber sealing.
Connectors – L20.
For unit sizes 60, 70, 80 – L30, 90 – L40.
Dampers are located outside the unit; they can be made with an insulated damper casing.

## 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

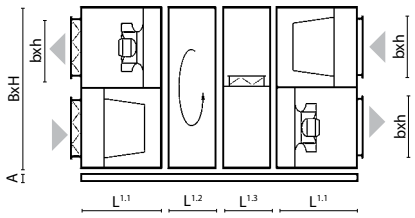
Easy to use door locks and handles ensure safe unit maintenance.

# Dimensions

Modern air handling unit proportions allow reaching better technical parameters: a lower air flow velocity inside the unit, better acoustic data. The shortest length between analogues ensures compactness; therefore air handling units are easier to design and install.

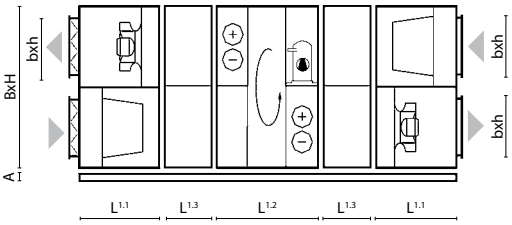
## Verso R




| 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.

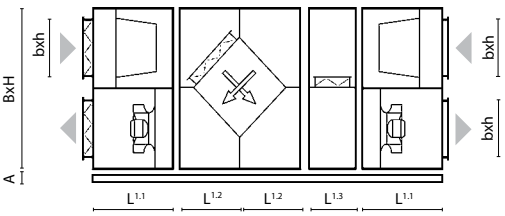
## Verso RHP




| 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.

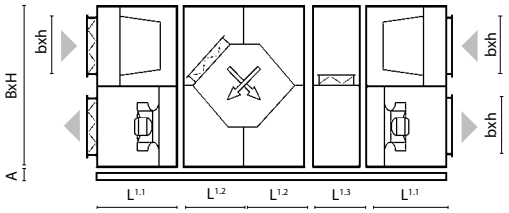
## Verso P




| 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.

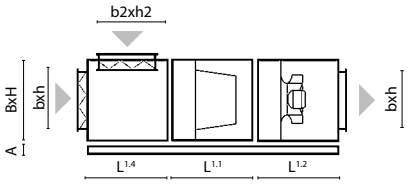
## Verso CF




| 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.

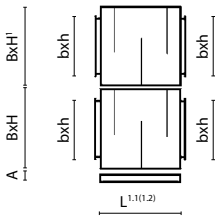
## Verso S




| 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.

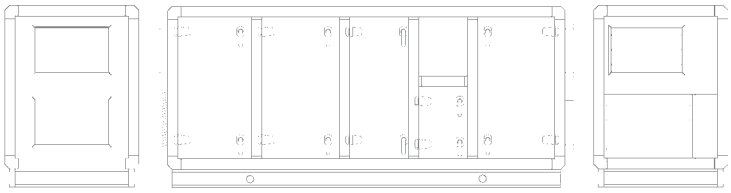
Air handling units KLASIK consist of system of modules which quantity and their functional purpose depends on requirements of the customer and features of the project. Ventilation equipment KLASIK may be offered with heat recovery or just as air supply or exhaust equipment. From the constructional point 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.

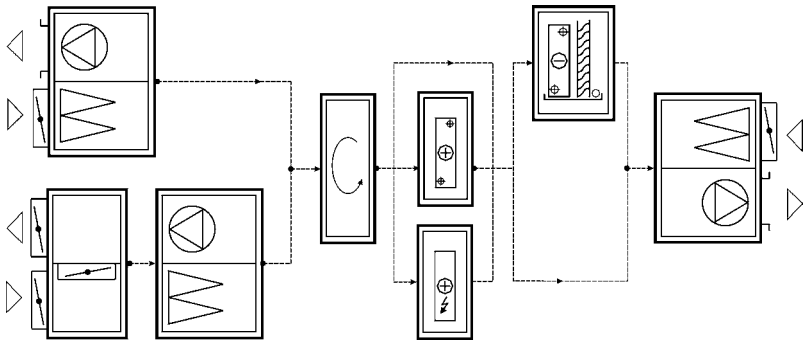
# Unit types

## Type Klasik R

Air handling units with a rotary heat exchanger.
Temperature efficiency and economy of energy up to 85 %.



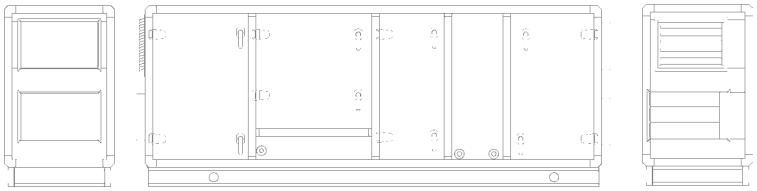
The photo is intended for informational purposes only, exact details may vary.



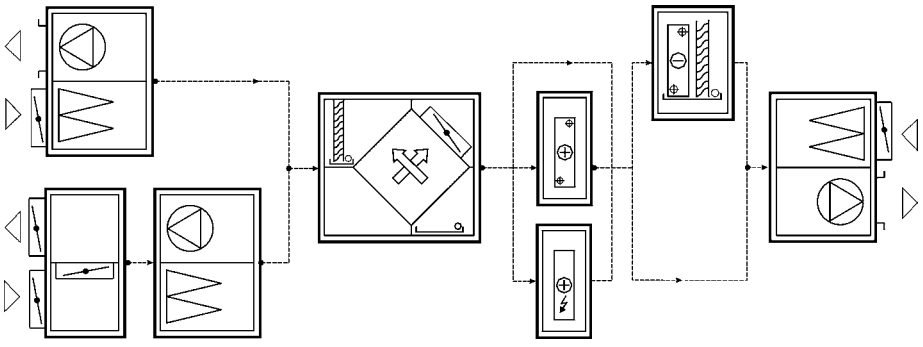
Possible sections connections

## Type Klasik P

Air handling units with a cross-flow plate heat exchanger.
Temperature efficiency and economy of energy up to 70 % wet.



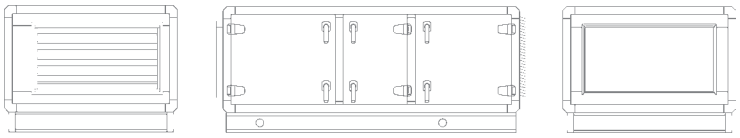
The photo is intended for informational purposes only, exact details may vary.



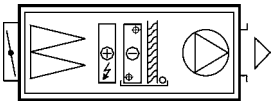
Possible sections connections

## Type Klasik S

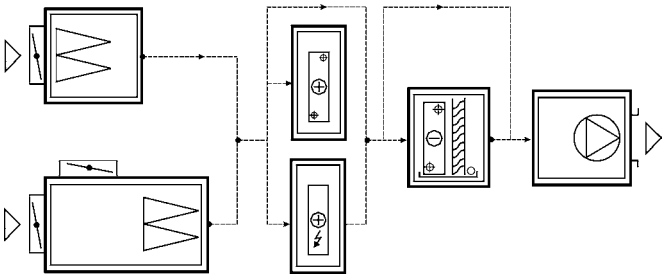
Supply or exhaust air handling unit without heat recovery.



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



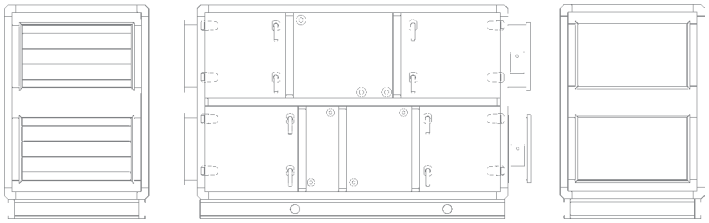
Monoblok

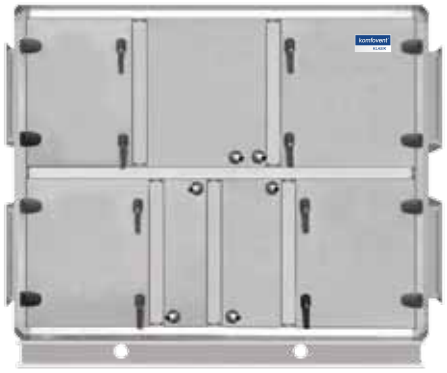


Possible sections connections

## Type Klasik RA

Air handling units with twin-coil.
Temperature efficiency and economy of energy up to 70 %.



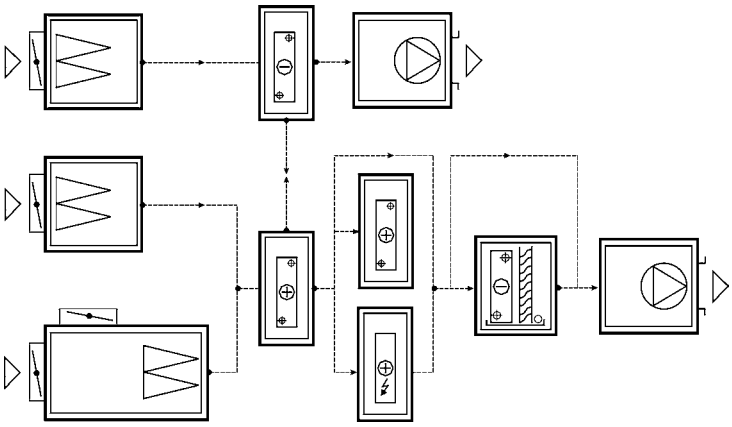


The photo is intended for informational purposes only, exact details may vary.

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

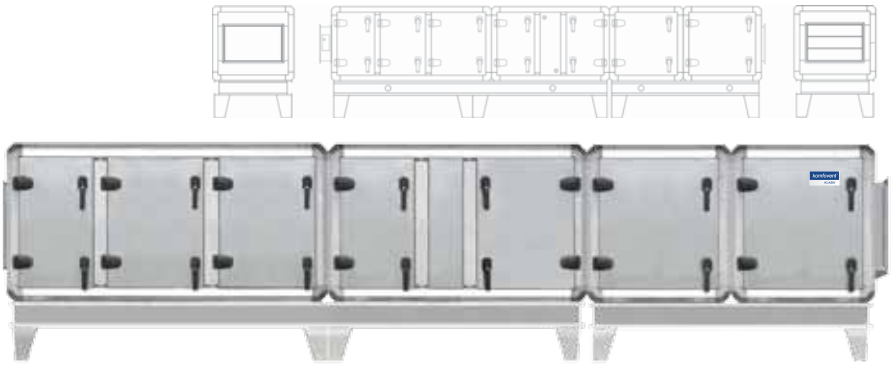
Ventilation equipment of hygienic purpose and clean premises ventilation.

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.



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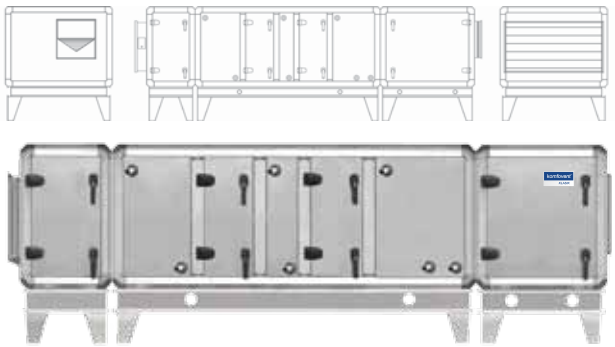
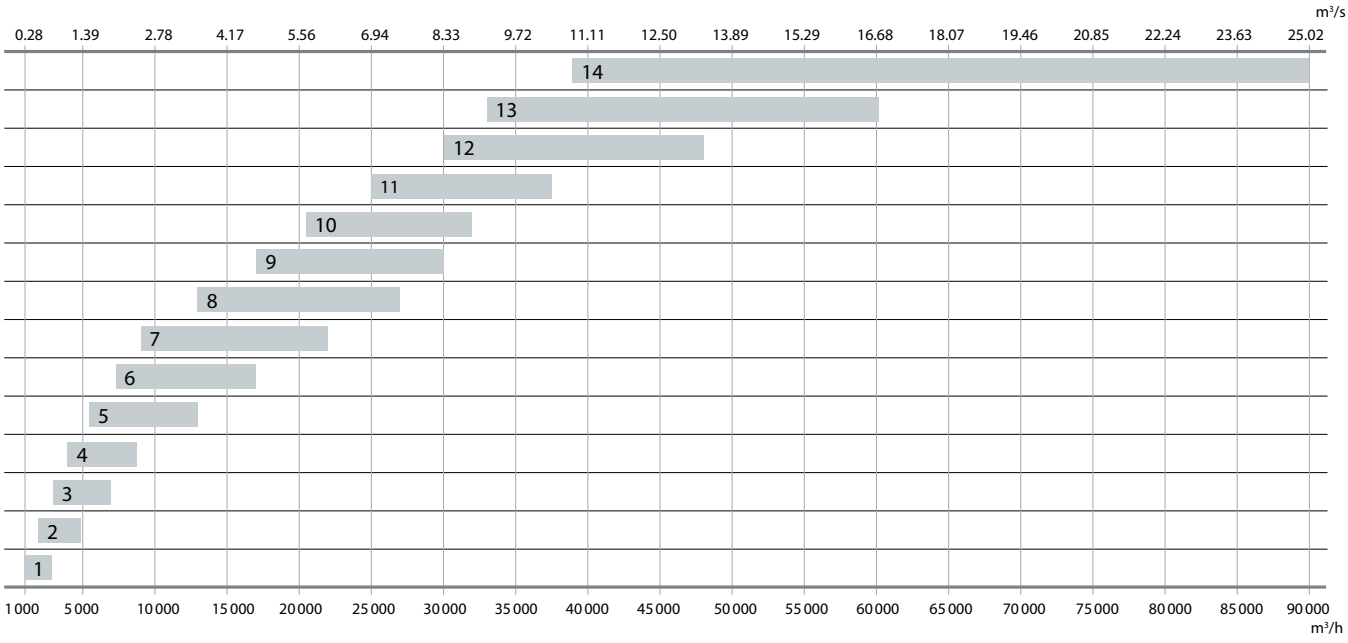


The photo is intended for informational purposes only, exact details may vary.

## Air flow



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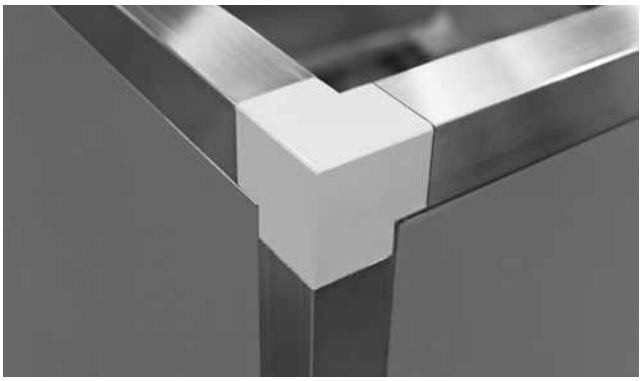
# Design



## 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:

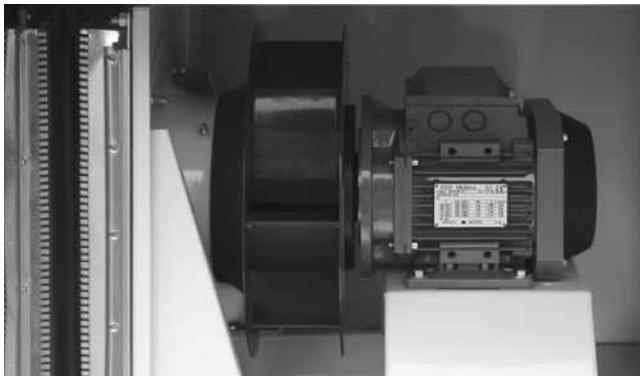
**Rotary heat exchanger**
Temperature efficiency – up to 85 %. Depending on required temperature efficiency η (%), the height of a wave of a rotor can be made from 1,35 mm up to 2,1 mm.

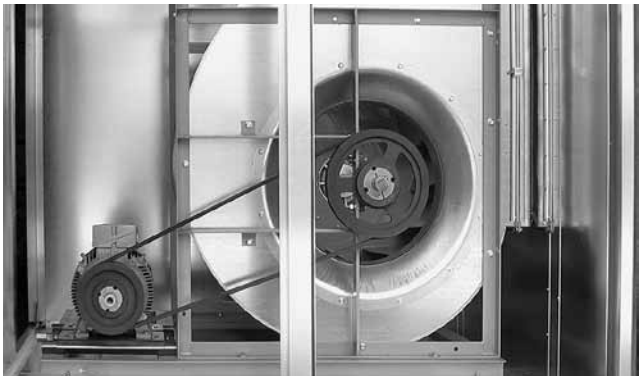
Rotors may be offered of four types:
- aluminium;
- aluminium with a hygroscopic covering;
- aluminium with an epoxy paint covering on embossed rotor edges;
- aluminium with deep epoxy coating "Blygold" technology.

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 – more than 70 %.
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 – more than 70 %.
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

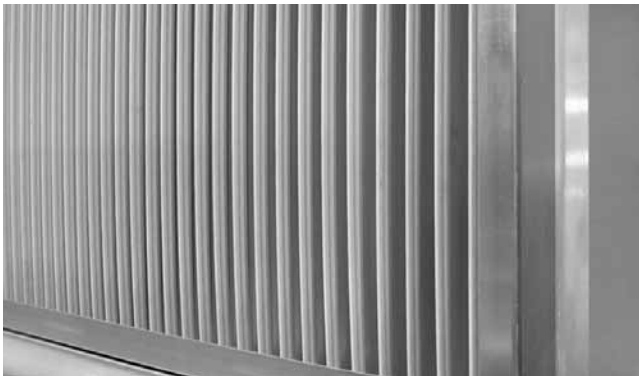
Main advantages:

- 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 lamella (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.

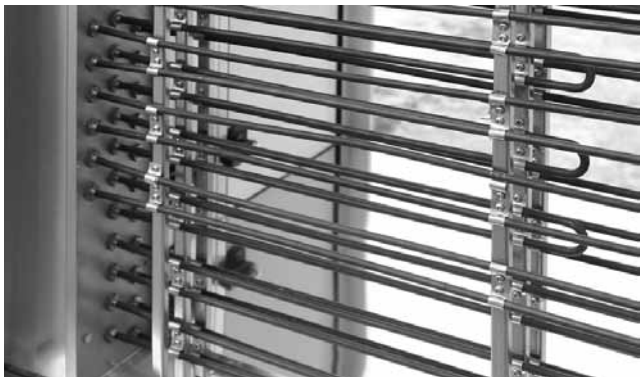
**Electric air heaters**
Three-phase (400 V/50 Hz) stainless steel heating elements are used in production.
Two level protection ensures protection from overheating.
Protection class IP54 in accordance with IEC 34-5.
Heated air temperature up to +40°C.

## 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.

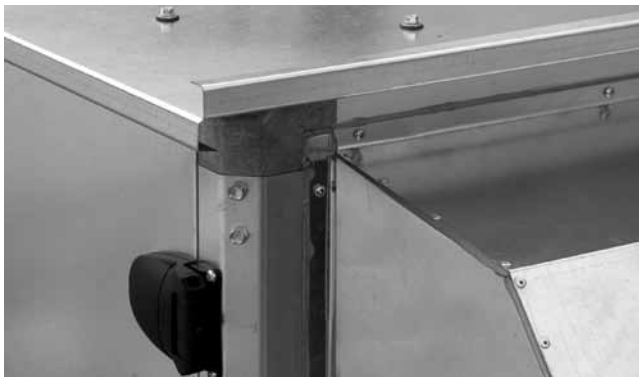
## Additional accessories

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.

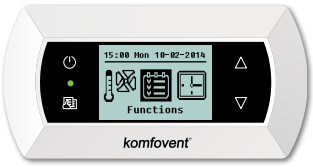
Also such additional elements are available:

- inspection window,
- sections lighting.

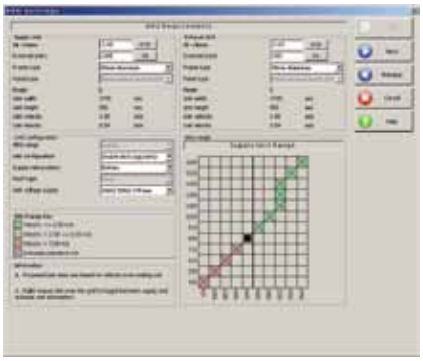


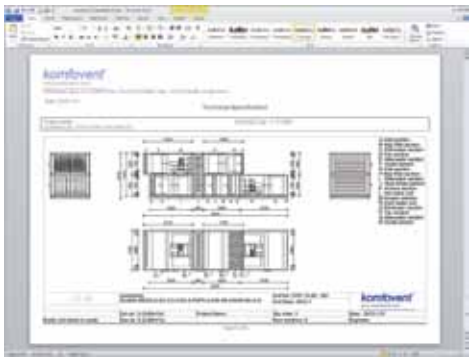
For each air handling unit the individual automation control system can be offered. Automatics of air handling units can be mounted in separate control boxes or integrated inside unit. Depending on a degree of complexity of ventilating system and required control functions producer equips control system 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**

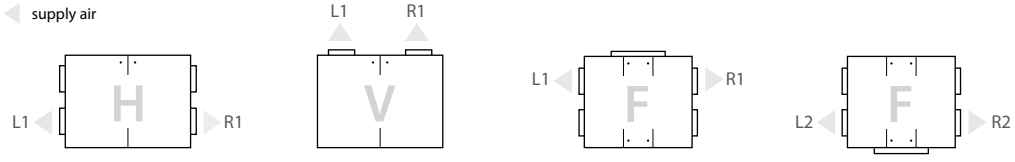
**Air filter class**
G4
M5
M6
F7
F8
F9

**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.

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