

komfovent[®]

VENTILATION EQUIPMENT

CATALOGUE | 2022



komfovent[®]

**VENTILATION
EQUIPMENT**



Editorial 4

DOMEKT 22

Residential ventilation units

VERSO 54

Commercial ventilation units

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Why Komfovent?



12 companies
900+ employees

TEAM

KOMFOVENT brand unites a group of 12 companies, operating in Lithuania and other European countries employing over 900 people who: research and develop, manufacture and distribute air ventilation system products.



50+ R&D engineers
KomfoLAB

PRODUCT DEVELOPMENT

Air handling units and the major part of their components are developed by a team of over 50 highly qualified engineers. All designed prototypes are tested by KomfoLAB – an in-house laboratory using the latest testing equipment – to comply with actual or upcoming standards and norms. International requirements, as well as customer needs, are well known by KOMFOVENT R&D team.



Own control systems
since 2002

IN-HOUSE MADE CONTROL SYSTEMS

KOMFOVENT develops electronics and software, which provide unique ventilation control capabilities for professional and domestic users. Fine-tuned algorithms ensure a wide range of functions and connectivity options.

References



"Borromeo Hotel & SPA"

- 5 pcs. Verso R Pro, 1 pc. KLASIK RA
- Total air flow – 81 500 m³/h



"Vilbra" office

- 10 pcs. Verso R Pro, 1 pc. Verso S Pro
- Total air flow – 92 000 m³/h



"Queen Morta" school

- Verso CF Pro and RHP Pro
- Total air flow – 58 000 m³/h



22 000 units/year
100% green energy

MANUFACTURING

A large assortment of efficient air handling units, rotary heat exchangers, coils, air dampers, filters, control electronics, heat pump assemblies, air distribution, and fire protection systems are produced in KOMFOVENT factories invoking the latest technology in production lines.



7 international
approvals

PRODUCT QUALITY

KOMFOVENT product quality verified by various certification agencies around the world: Eurovent, TÜV, RLT, Passive House, ErP, DIBt, CE and others.



8 subsidiaries
90 distributors
40 countries





DISTRIBUTION

8 official KOMFOVENT branches operate in Europe and export products to more than 40 countries worldwide.

Wide range

DOMEKT



Residential ventilation units with heat recovery. Depending on the individual requirement, a rotary or counterflow plate heat exchanger, vertical, horizontal or flat units can be selected from a wide range of modifications.

Capacity	50 – 800 m ³ /h
Control system	  
Selection software	 DOMEKT

VERSO

VERSO Standard

Standardized choice of air handling units for commercial applications. Rotary or counterflow plate heat exchanger, vertical, horizontal, universal or flat units with integrated control system.

Capacity	250 – 40 000 m ³ /h
Control system	
Selection software	 VERSO

VERSO Pro

Modular units for commercial and industrial premises. This series offers a large number of configurations to meet the most demanding requirements. Rotary or counterflow plate heat exchanger units with integrated control system.



VERSO Pro2

A new generation of energy saving modular units with integrated control system. This series offers 1,6 million possible combinations for commercial and industrial projects with high requirements.

RHP

RHP Standard

All-in-one units with integrated heat pump provides fresh air, heating, conditioning and humidity recovery for residential and small commercial premises.



Capacity	250 – 25 000 m ³ /h
Control system	
Selection software	 VERSO

RHP Pro





Modular all-in-one units with integrated heat pump provides fresh air, heating, conditioning and humidity recovery for commercial and industrial premises.

KLASIK

A series of the unique ventilation units for the most complex projects. The largest selection of heat exchangers, fans, heaters, coolers and humidifiers. Non-standard dimensions, hygienic version, anti-corrosion coatings and many other options.

Capacity	250 – 100 000 m ³ /h
Control system	
Selection software	 KLASIK

Equipment by application

Residential areas	Commercial premises		Industrial buildings
			
DOMEKT 50 – 800 m³/h	VERSO Standard 250 – 7 000 m³/h	VERSO Pro, Pro2 1 000 – 40 000 m³/h	KLASIK 250 – 100 000 m³/h
	RHP Standard 250 – 1 500 m³/h	RHP Pro 1 000 – 25 000 m³/h	

Modifications to standard products

Rotary heat exchanger

L/A – aluminium, condensing rotor – a standard for Domekt R and Verso R Standard units. The optimal efficiency and pressure loss ensures the shortest time to pay off the investment.

SL/A – aluminium, condensing rotor with increased surface and efficiency.

L/AZ – sorption rotary heat exchanger coated with special hygroscopic zeolite coating. The most effective control of humidity and the most comfortable indoor climate.

Counterflow plate heat exchanger

Condensing – plate heat exchanger made of special polystyrene or aluminium; there are no moving parts, which results in long-term operation.

Enthalpy – plate heat exchanger made of special membrane ensures the best heat and humidity recovery, also known to be hygienic and durable.

Inspection side

Left or right inspection side is available for all units (see 134 p.).

Duct connection

H – horizontal

V – vertical

U – universal, 16 installation options

F – flat (please refer to the installation options in the specific unit page)

Heater

HE – electric heater.

DH, SVK – a water duct heater is installed in the duct and must be ordered separately. Heaters are mounted outside of the unit in any user-convenient place. 0 .. 10 V heater control included in automatic control system.

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

Cooler

HCW – designed for air cooling using cold water (water-glycol mixture), provides a higher comfort level in rooms. HCDX – direct expansion changeover heater and cooler in one piece. Used with outdoor heat pump unit.

Energy-saving technologies



Recently, when energy performance requirements for buildings are constantly tightening, higher demands for ventilation systems are placed, knowing they are directly related to many energy parameters of the building: heating, cooling, humidity regulation and electrical consumption. Keeping that in mind, when choosing technologies and solutions for the ventilation systems, it is more important to consider operating costs and payback time than the initial investment – no one will argue, that the most advanced technologies pay for themselves in the shortest possible time.

Efficient heat exchangers

Rotary – condensing and sorption-enthalpy

Rotary heat exchangers are ideal for cold climate zones – they work efficiently both in winter and summer, do not ice even at extremely low temperatures, which saves you the most energy and is likely to pay off quickly. The sorption rotor provides better performance than a condensing rotor – better humidity control, higher comfort and greater energy savings for air conditioning.

Plate – condensing and diffusion-enthalpy

The plate heat exchangers are more appropriate for the warmer climates, because, when the outside air temperature is negative, the icing begins and that results in a loss of energy. Enthalpy heat exchangers are more efficient than condensing ones. Enthalpy, like rotary heat exchangers, humidify the air in the winter and dry it in summer – efficiently saving the energy.

RHP double heat recovery – rotary heat exchanger and heat pump

The most efficient are RHP air handling units having double heat recovery and additional features: integrated heat pump efficiently heats the air in winter, while in summertime it cools the air like air conditioner.

Innovative control system

Preprogrammed operating modes and schedules allow the user to significantly reduce the energy consumption of the ventilation.

By controlling the ventilation intensity according to the CO₂ sensor signal, an optimal comfort level with minimal energy consumption is always maintained.

VAV – variable air volume function with additional sensors makes it possible to fully realize the function of "ventilation according to the need" – the ventilation intensity in each room is regulated according to a specific need, maximally saving energy.

Permanent magnet (PM) technology fans

The highest energy efficiency Ultra and Super Premium class fan motors provide minimum power consumption. Due to the optimized design of internal winding and the use of powerful permanent magnets, energy losses of the motor are minimized, resulting in low heat emittance and stable efficiency under different load or rotation speeds. Fans and their special design impellers are statically and dynamically balanced, thus the quiet and harmonious operation of the AHU is guaranteed.

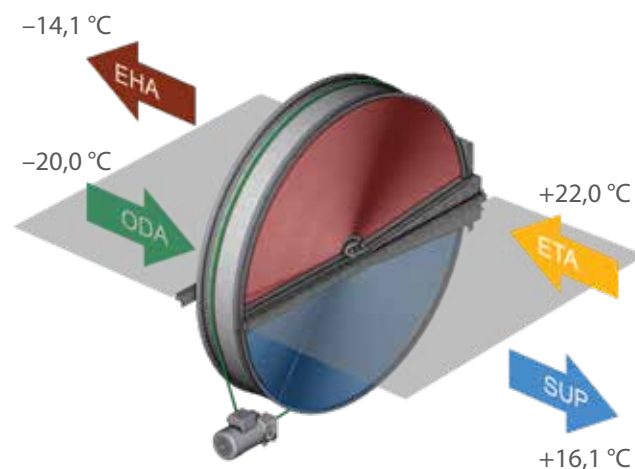
Rotary heat exchangers

Operating principle

The rotary heat exchanger transfer effect is based on the accumulation principle – the rotating aluminium wheel with small channels is warmed up by extract indoor air and then the heat is transferred to the outdoor intake. At low temperatures, humidity from extract air condensates on the rotor surface and humidifies the outdoor intake air, where absolute humidity in winter is always too low to provide comfortable conditions. Therefore, such rotary heat exchangers are called condensing.

Advantages

- Efficiently recovers the heat even the outside temperature drops to -30°C .
- Efficiently recovers cold during the summer and reduces conditioning costs.
- Recovers the humidity in the room while maintaining the optimal comfort level.
- Advanced design ensures minimal mixing of air flows.
- No drainage is necessary – easy unit installation.
- No primary heater is necessary as the heat exchanger does not ice.



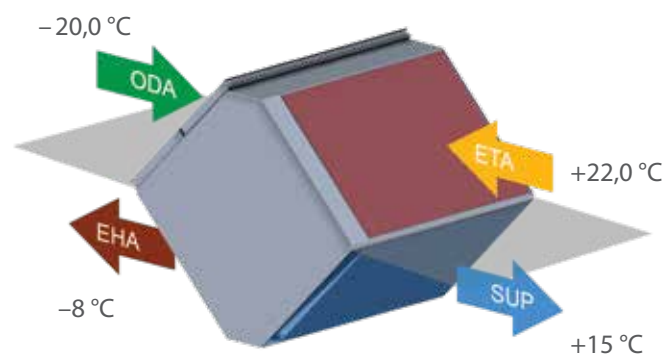
Counterflow plate heat exchangers

Operating principle

The plate heat exchangers are made of aluminium or plastic plates, which have gaps for air to flow. Fresh outdoor air and extract outdoor air flows in opposite directions through every second gap of the entire surface of the plates. Extract air transmits thermal energy to fresh outdoor air. Air flows do not mix. During winter, when the air is extracted from the room, the air cools in the heat exchanger and the humidity in it turns into ice. For this reason plate heat exchangers are more suitable for a medium and warm climate zone where there is no significant frost and no danger of icing. In cold weather, the automatic control system solves the problem of icing, but a lot of heat is lost, resulting in decreased seasonal efficiency and increased payback time.

Advantages

- High thermal efficiency.
- Very low air mixing between flows.
- Perfect solution for premises with high humidity, as it effectively eliminates humidity in the cold seasons.



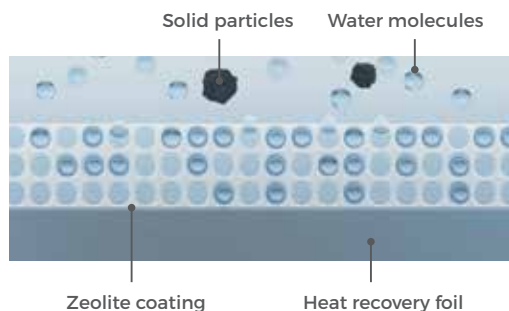
Humidity transferring heat exchangers

Humidity transferring heat exchangers are one of the most efficient ways to control indoor humidity. Since water vapor in the air carries lots of hidden (latent) energy, controlling humidity not only helps to maintain comfortable indoor conditions but also reduces the needed power of humidifiers and air conditioning costs.

Sorption-enthalpy rotary heat exchanger

Operating principle

The internal surface of the sorption-enthalpy rotor has a special zeolite coating, which catches water molecules from the air and transfers it in to another flow when wheel rotates. In such a way humidity exchange up to 90 % is achieved and rotor effectively humidifies the supply air in the winter and dries it in the summer.



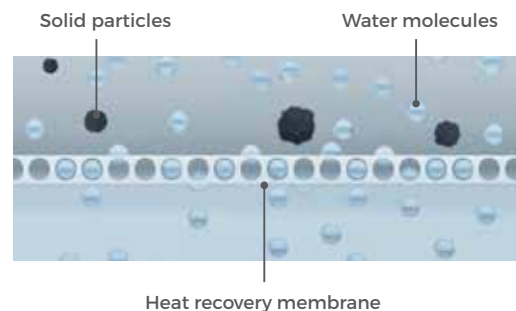
Advantages

- Reduced demand for air conditioning power.
- Reduced demand for air humidification and dehumidification power.
- More efficient use of passive cooling.
- Can operate without freezing up to -35 °C.

Diffusion-enthalpy counterflow heat exchanger

Operating principle

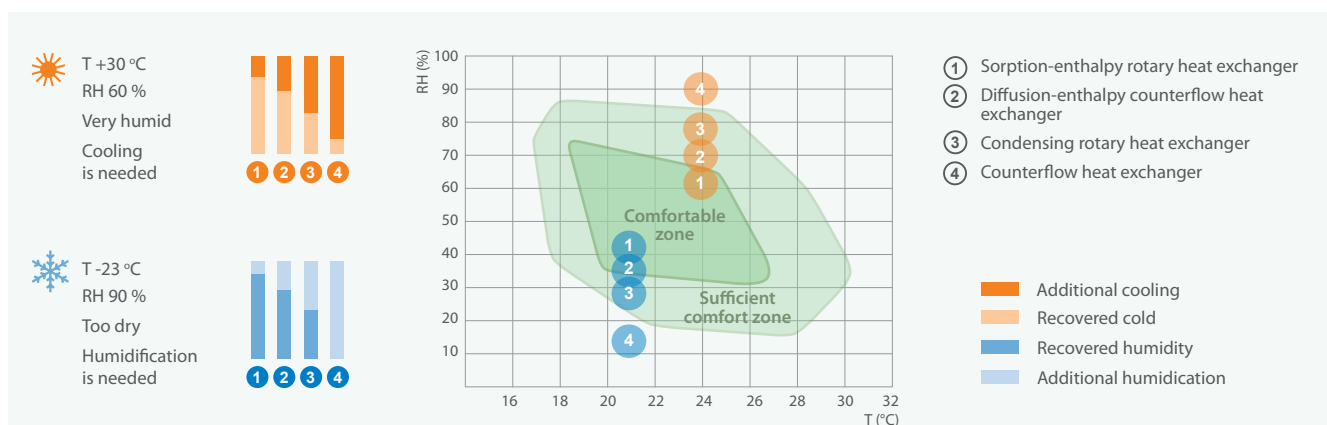
Outlet air humidity is recovered to the inlet air through a special patented membrane. Only water molecules can get through the membrane and solid particles or bacteria can not get back into the premises.



Advantages

- Reduced demand for air humidification and dehumidification power.
- Reduced demand for air cooling power in summer.
- More durable and hygienic if compared to enthalpy plate heat exchanger made of cellulose.
- Can operate without freezing up to -15 °C.

Heat exchanger type impact on indoor climate comfort and exploitation costs



RHP double heat recovery – triple the benefits

RHP ventilation unit is a complex solution that integrates all indoor climate support systems into one unit: ventilation, air heating and conditioning, humidity recovery and dehumidification, air quality, and air filtering. The heat pump is completely integrated into the casing of the air handling unit making it simple to install and easy to operate.



Advanced Technologies

The latest and most advanced engineering and technological solutions developed and refined in the fields of heating, ventilation, and air conditioning are included in RHP air handling units.

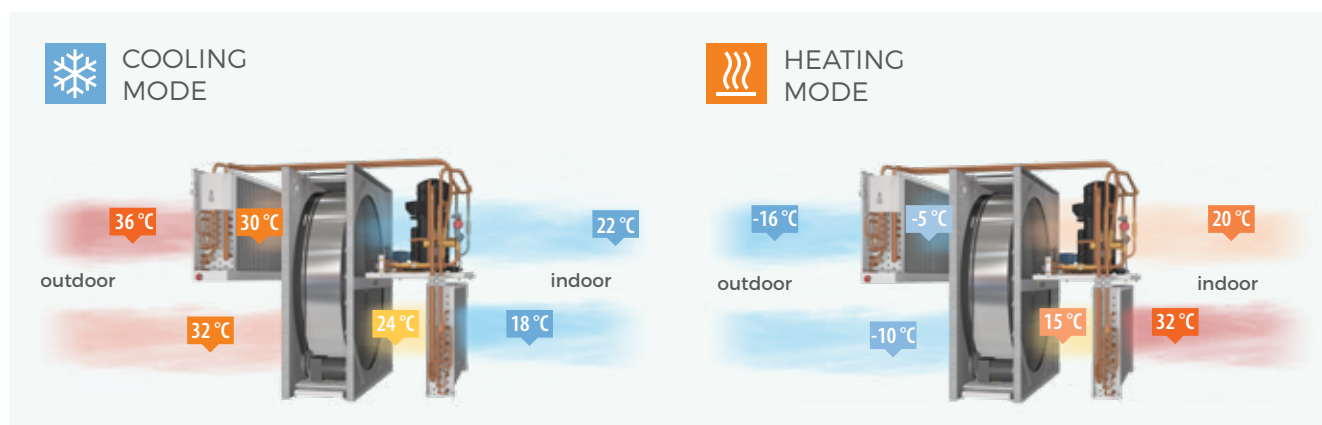
Operating principle

The heat pump and rotary heat exchanger work together as a perfect recuperation tandem. The main energy-saving component – the rotary heat exchanger works efficiently for almost the whole year, except for the times when the outside and indoor temperatures are almost equal. When higher heating or cooling demand is needed, a second recovery step (heat pump) starts supplying warm or cold air to maintain the desired temperature. The "heart" of the heat pump, high-efficiency inverter compressor complements and extends the capabilities of the air handling unit – it effectively provides heat even when the outside air temperature is as low as -15 °C or op-

rates as the central air conditioner during hot summer. Intelligent automation algorithms control all processes, maintaining optimal indoor climate with minimal energy use. Besides that, all ventilation and heating/cooling parameters are at the touch of a button on the control panel display.

Advantages of the RHP solution

- Double recovery – rotary heat exchanger + heat pump, return 100 % heat to the premises during winter.
- The heat pump works in the summer as an air conditioner.
- An integrated control system manages all indoor climate processes from the single user interface.
- Faster and easier installation and maintenance compared to individual heating, ventilation, and air conditioning systems.
- No external unit is needed to be mounted outside of the building.



Control systems

For end users



Smart control systems C6, C6M, C8

Core philosophy behind the design of these control systems was that the ventilation unit would operate properly without constant adjustments from the user.

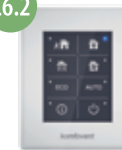
Control panels

C6.1



- Setting of all parameters from the panel
- Indication of parameters
- Colored touch-sensitive LED display

C6.2



- Simple control
- Operation modes
- Touch-sensitive screen

For professionals



Control system C5

The user is given detailed information about the operation of the device. A variety of modes and functions allows you to choose the most optimal operating mode that maximizes energy saving.

Control panel

C5.1



- Integrated thermometer and hygrometer
- Colour touch-sensitive LED display
- Smart control of parameters

VENTILATION BY DEMAND

The possibility to connect various sensors and combine them with a wide range of built-in functions allows having ventilation only when and where it is needed, therefore energy is saved.

WEB SERVER

All units are with an integrated web server, thus the operation of ventilation system can be monitored and managed from any device using an internet browser.

READY TO USE

All units are completely prewired and have integrated electronics, which are already pre-programmed with default ventilation modes and temperature set points.

APPS

User-oriented mobile apps, fully replicate the control panel functions.

USER-FRIENDLY INTERFACE

Convenient and intuitive navigation on the touch screen control panel, computer or smartphone, ensures easy ways to monitor ventilation parameters and change its settings.

BMS

Implemented BACnet and Modbus protocols enable simple connection into Building Management System as a result whole buildings engineering systems can be controlled at a single access point.



LOG PLOTTER SOFTWARE

Analysis tool for professionals. Free to use "Log plotter" software for service and maintenance staff. It helps to analyse the operation history of the air handling unit from various perspectives.

Available on – www.komfovent.com



Your home indoor climate
in your hand with
Komfovent Control app



Smart control systems C6, C6M, C8 for DOMEKT units

For both: beginners and advanced users

A user-friendly interface enables intuitive navigation and control of the unit. Core philosophy behind the design of C6, C6M, C8 – the ventilation unit would operate properly without constant adjustments from the user. Different ventilation modes are optimized for the user's daily needs. Automatic air quality control selects the most appropriate mode and ensures the comfort conditions in the room.

Advanced users can control unit's operation according to his needs, as many settings and control possibilities are provided as well:

- Airflow control: CAV / VAV / DCV*.
- Intensity control by air quality, CO₂, humidity level.

Operating modes

- 8 preset modes.
- Intelligent energy saving algorithms.
- Automatic air quality control with optional AQ sensor.
- Extensive weekly schedule.

Energy counters*

- Real-time energy consumption indicator.
- Possibility of observing the running costs of ventilation unit.
- Heat recovery counter.



* Except C8 control system.

Control options



App "Komfovent Control"



Control panel



Webserver



Connectivity & Protocols



"Komfovent Control" app

New cloud-based application is designed to control residential ventilation units with C6, C6M, C8 control system. User-friendly interface ensures intuitive control.

As the application fully replicates a control panel functions, you will have an access to all monitoring and control possibilities available in the control panel.

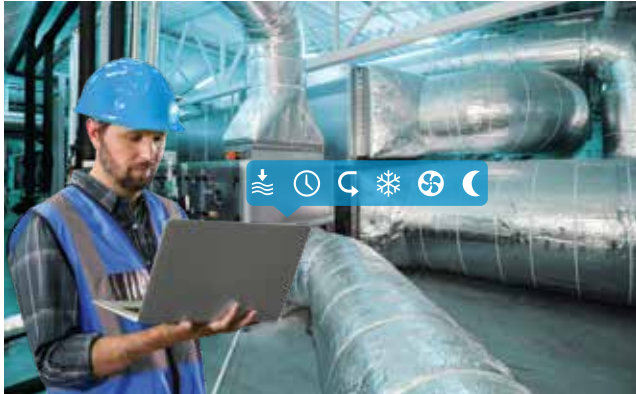
The application is available on Google Play and App Store.



SMART CONTROL FUNCTIONS	C6	C6M	C8
Air temperature control The unit can control air temperature according user-defined supply or extract temperature setting. If the user desire, room ambient temperature can also be maintained according to the temperature sensor located in the control panel	✓	✓	✓
Temperature balance control The temperature support value of the supply air is automatically set on the basis of the current extract air temperature, i.e., the extract air temperature and the supply air temperature will be the same	✓	✓	✓
Fan intensity control Fan speed can be adjusted smoothly between 20-100 %, thus ventilation intensity can be set easily by the user	✓	✓	✓
Constant air volume control (CAV) The unit supplies and extracts a constant air volume as set by the user, regardless of changes in the ventilation system	✓	✓	
Variable air volume control (VAV) The unit supplies and extracts air volume correspondingly to the ventilation requirements in different premises	✓	✓	
Directly controlled volume (DCV) The air volumes are controlled by direct external control signals	✓	✓	
External water coil control There is estimated an additional water duct heater or cooler control that can be activated by the user on the control panel	✓	✓	
External DX unit control There is estimated an additional external direct expansion (DX) unit control that can be activated by the user on the control panel	✓	✓	
External heater or cooler control There is estimated one additional duct heater or cooler control that can be activated by the user on the control panel. Water or direct expansion (DX) heating/cooling device can be connected and controlled as a second step for reaching desired air temperature			✓
Combi-coil control Heating or cooling with water by using just one circulation pump and one 3-way valve. Heating and cooling modes can be switched automatically according water temperature, or by external switch		✓	
Weekly operation schedule It is possible to choose one of the four pre-set weekly operation schedules. If necessary, the schedule can be modified. As well holiday schedule can be set, when unit will not operate for most of the time, but ventilate premises occasionally	✓	✓	✓
Air quality control (2 sensors) Upon connecting the additionally ordered an external air quality or humidity sensors, the ventilation intensity is chosen automatically. Two air quality sensors can be used at the same time, thus comfort can be controlled according to two different parameters or in two separate rooms if needed	✓	✓	
Air quality control (1 sensor) Upon connecting one air quality or humidity sensor, the ventilation intensity is chosen automatically according to its readings. In this way, optimum room comfort is ensured with the minimum energy cost			✓
Cool recovery During the summer season, in the conditioned premises cool from extract air is returned back into the premises	✓	✓	✓
Temperature saving function The automatic function attempts to maintain comfortable temperature conditions in the premises by reducing the ventilation intensity, i.e., it prevents excessive cooling down or overheating of the premises	✓	✓	✓
Free cooling When the room temperature air exceeds the set value, and the outdoor temperature is lower than the room temperature, the heat recovery and the other heating/cooling processes is blocked automatically and free cooling are performed only by fans	✓	✓	✓
Variable speed rotary heat exchanger By modulating rotation speed of heat exchanger, it is possible to maintain supply air temperature more precisely, to reduce rotation noise and to prolong exchanger motor life time		✓	
Ventilation control by 3 external contacts Air flow can be controlled by three external contacts, each of which can be assigned to different ventilation intensity	✓	✓	
Ventilation control by 1 external contact Airflow can be controlled by an external contact, which can be assigned to change ventilation intensity when needed, for example together with kitchen hood operation			✓

SMART CONTROL FUNCTIONS	C6	C6M	C8
Control via internet browser or smartphone app When the device is connected to the computer network or the Internet, the user-friendly web interface allows the operator to control the equipment with a computer or with another mobile device	✓	✓	✓
Air dehumidification If the relative humidity of the room exceeds the set limit, the air handling unit's operating intensity is increased until the humidity is reduced to the desired level. To make the function more efficient, the unit is recommended to be equipped with a refrigeration unit and an additional duct humidity sensor	✓	✓	✓
Energy counters Real-time energy consumption indicator. Possibility of observing the running costs of ventilation unit. Heat recovery counter. Day, month or overall time counters are available for ventilation unit operation analysis	✓	✓	
Operation time counters Fan, heat exchanger and heater working times are monitored. Day, month or overall time counters are available for ventilation unit operation analysis.			✓
Timed ventilation modes Three ventilation modes can be started for duration of several minutes, without changing programmed schedules. User can simply set timer from 1 to 300 minutes, for the desired mode to run ignoring main weekly schedule.	✓	✓	✓
Operation on demand The ventilation unit will operate when the air quality in the premises exceeds the set levels. An additional air quality sensor is required or humidity sensor integrated in the control panel can be used for the same purpose.	✓	✓	✓
SAFETY FUNCTIONS	C6	C6M	C8
Filter clogging indication Clogging of the air filters is measured depending on the duration and intensity of the unit's operation. The user is informed by a message, when it is time to change air filters	✓	✓	✓
Heat exchanger frost prevention Units with a counter-flow plate heat exchanger have a primary electric heater that is controlled as needed, and is operated only at the capacity to ensure frost protection. In this way, the ventilation unit can operate in low outside temperatures	✓	✓	
Heat exchanger frost prevention Special frost protection algorithm combining by-pass damper and fan speed regulation prevents freezing of counter-flow heat exchanger even at negative outdoor temperatures (up to -10 °C). For additional protection, duct mounted pre-heater control is also available			✓
Heat exchanger failure indication In units with plate or rotary heat exchanger, a control system monitors the thermal efficiency, and if it does not reach the stated level, a fault is indicated	✓	✓	✓
Water heater frost protection For the duct mounted water heater, it is ensured the maximum protection from water freezing during the unit's operation. Even when the unit is switched off, warm water circulation is supported as additional help during cold season	✓	✓	✓
Electric heater overheat protection Electrical heater shuts down automatically in case of overheating to prevent damage to the heater components and electronics. Additionally, when unit is stopped during the heater operation, fans will continue to operate for set time period to cool down the heater	✓	✓	✓
Low air flow indication If the ventilation unit does not reach the set air volume during the specified time, the unit's operation is stopped	✓	✓	
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	✓	✓	✓
Fire damper control Possibility to monitor and perform periodical fire damper system tests directly from the control panel. External fire damper controller constantly checks fire dampers functionality and gives the feedback to the ventilation system	✓	✓	✓
Emergency shut down when temperature reaches critical limits When the supply air temperature drops below or exceeds the permitted value, the unit is stopped	✓	✓	✓
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	✓	✓	✓

Control system C5 for VERSO, RHP and KLASIK units



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 savings indicator (%).
- Air heater energy consumption (kWh).
- Heat exchanger recovered energy counter (kWh).
- Fan's energy consumption (kWh).
- SFP factor of PM 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 maintain.
- Flow control modes: Constant Air Volume (CAV), Variable Air Volume (VAV), Directly Controlled Volume (DCV).
- Universal operating schedule with up to 20 events, for each of them the user can assign weekday(s) and one of five operating modes.
- Holliday scheduling allows the user to change operating mode or switch off the air handling unit on 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).

Control options



App "Komfovent C5"

C5.1



Control panel



Webserver

BACnet



Connectivity & Protocols





"Komfovent C5" app

Application is designed to control air handling units with integrated C5 control system. User-friendly interface is intuitive for both experienced and less experienced users. As the application fully replicates a control panel functions, you will have an access to all monitoring and control possibilities available in the control panel. The application is available on Google Play and App Store.

CONTROL FUNCTIONS

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: utilizing 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

Operation on demand

The air handling unit start-up function is designed to start the unit when it is off and one of the selected parameters (CO₂, air quality, humidity, or temperature) has exceeded the critical limit

Humidity control

An air handling unit can control external humidifiers or dehumidifiers. 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

By default hot and cold water pumps are controlled according to the current need for heating or cooling. If needed, water pump control according to outdoor temperature is also possible

Air flow density compensation

Air density depends on the temperature. The controller has a function which adjusts the air flows automatically to avoid any misbalance in rooms while being ventilated

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. You can control up to two additional zones or a preheater (electric or water). Also applicable to STANDARD series

Recirculation control

The 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: CO₂, air pollution by organic components and chemical substances, humidity or temperature; 2) recirculation according to the outdoor 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

SAFETY FUNCTIONS

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

Multi-level frost prevention

Units with counterflow heat exchangers can be selected with a multi-level frost prevention option. In such a case, the heat exchanger is fitted with a four-segment damper, segments of which close and open in turns, thus preventing the heat exchanger from freezing under low outdoor temperatures.

Service time

A warning message appears when the continuous operation of the AHU has reached 12 months

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

Water coil frost protection

Return water temperature is maintained under low outdoor temperatures, avoiding the possibility of frost at any time, even if the unit is on standby. At the same time alarm signal from the water pump, or water flow sensor input is available for extra protection.

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 selection software



- ✓ Simple and intuitive navigation
- ✓ Accurate and detailed unit information
- ✓ Wide range of modifications

DOMEKT AND RHP SELECTION SOFTWARE

- For DOMEKT units with capacity from 50 to 800 m³/h.
- For RHP Standard units with capacity from 250 to 1500 m³/h.
- Parameters are calculated for specific climate and operating conditions.
- Selection of unit's accessories.
- Comparison of the units.
- DOMEKT 3D REVIT models are available in the selection software.



VERSO AND RHP SELECTION SOFTWARE

- For VERSO units with capacity from 250 to 40 000 m³/h.
- For RHP units with capacity from 800 to 25 000 m³/h.
- Eurovent, TÜV and RLT certificates guarantee the accuracy of the parameters.
- Detailed technical data report.
- Generating VERSO Pro 3D models for the REVIT program.
- VERSO Standard 3D models are available in the selection software.

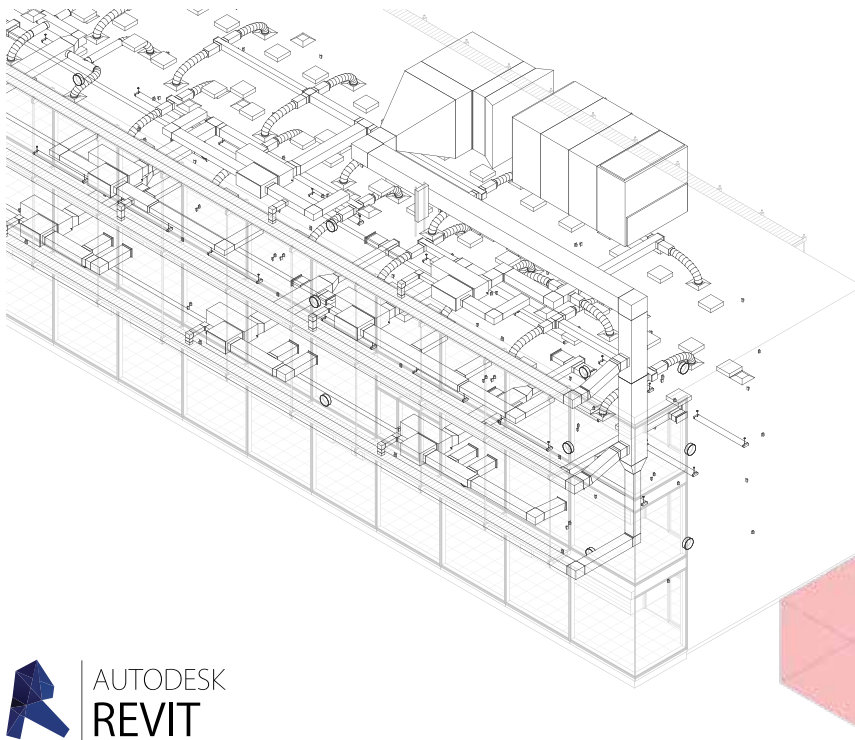


KLASIK SELECTION SOFTWARE

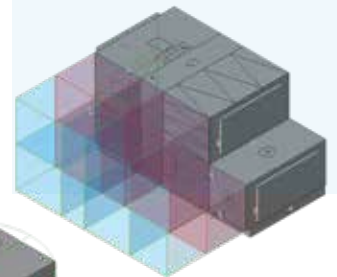
- For units from 250 to 100 000 m³/h.
- Solutions to the most complex projects.
- Wide range of modifications.
- Eurovent, TÜV, RLT certified.



KOMFOVENT + BIM



Precise and fast
integration into
digital building
projects



Komfovent DOMEKT + REVIT

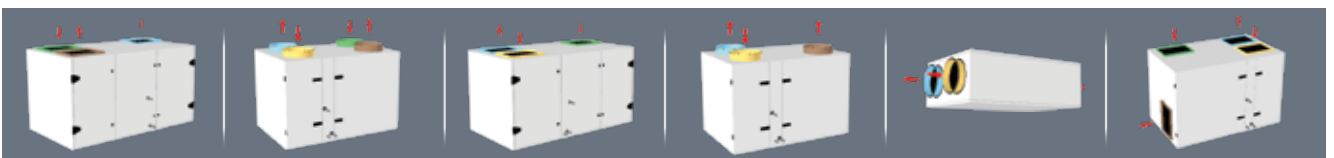
Easy units' integration into building information modeling – 3D REVIT models of DOMEKT units are available in the REVIT add-on KOMFOVENT HUB library.

Komfovent VERSO + REVIT

Komfovent HUB – VERSO Standard digital drawings library for REVIT users. REVIT models of Komfovent VERSO Pro equipment are generated individually for each project.



Verso R Standard
3D BIM models
available in
MagiCAD Cloud
database





Residential ventilation units with simple and intuitive control are designed to maintain the best indoor climate at home and save energy

komfovent[®]

DOMEKT

Smart
Home Comfort



DOMEKT features

ENERGY SAVING

- Modern energy efficient EC fans.
- High efficiency rotary and counterflow plate heat exchangers.
- Low resistance and high filtration class air filters.
- Over 20 functions optimise unit's operation and reduce running costs.

SMART CONTROL

- "Komfovent Control" app.
- Ability to control via a web browser.
- Integration into a smart home management system.
- Demand control ventilation according to the air quality parameters by connecting additional sensors.

HUMIDITY CONTROL

- Optional heat exchangers – sorption rotary or enthalpic counterflow plate – efficiently recover humidity.
- Air quality function ventilates premises according to the user desired humidity settings.

RELIABLE AND DURABLE CASING

- Powder coated (RAL 9003) galvanized steel panels insulated with mineral wool.
- Hydrophobic and lightweight EPP (expanded polypropylene) casing without thermal bridges and condensation is designed for several units.

LOW NOISE LEVEL

- Perfectly balanced fans.
- All of the unit's components are aerodynamically matched.
- Sound absorbing insulation and special composite materials.

LONG-LIFE SOLUTIONS

- Variable rotary heat exchanger speed control.
- Fan motors are protected from humidity and dust, and equipped with long-life bearings.
- Up to 10 safety functions, which ensure reliable operation of unit components.

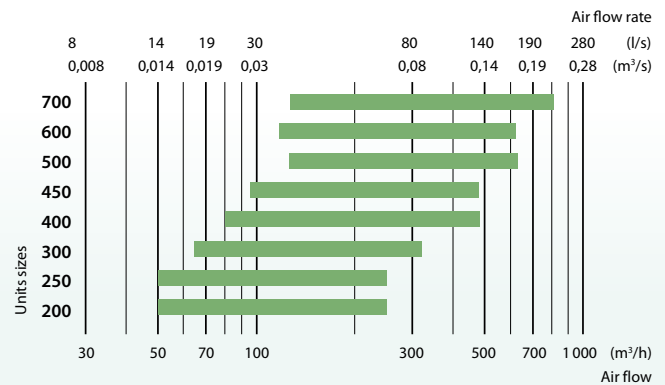


Range review

Domekt R with rotary heat exchanger



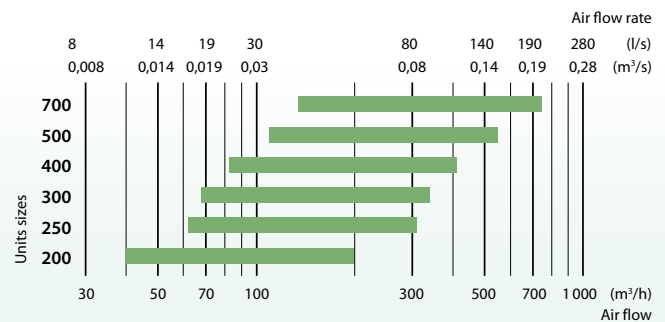
Sizes and capacities of Domekt R units



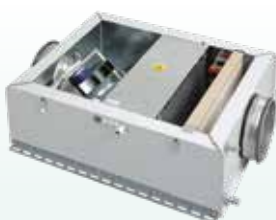
Domekt CF with counter flow heat exchanger



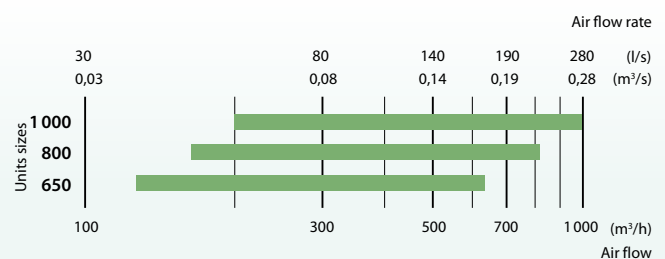
Sizes and capacities of Domekt CF units



Domekt S supply air handling unit



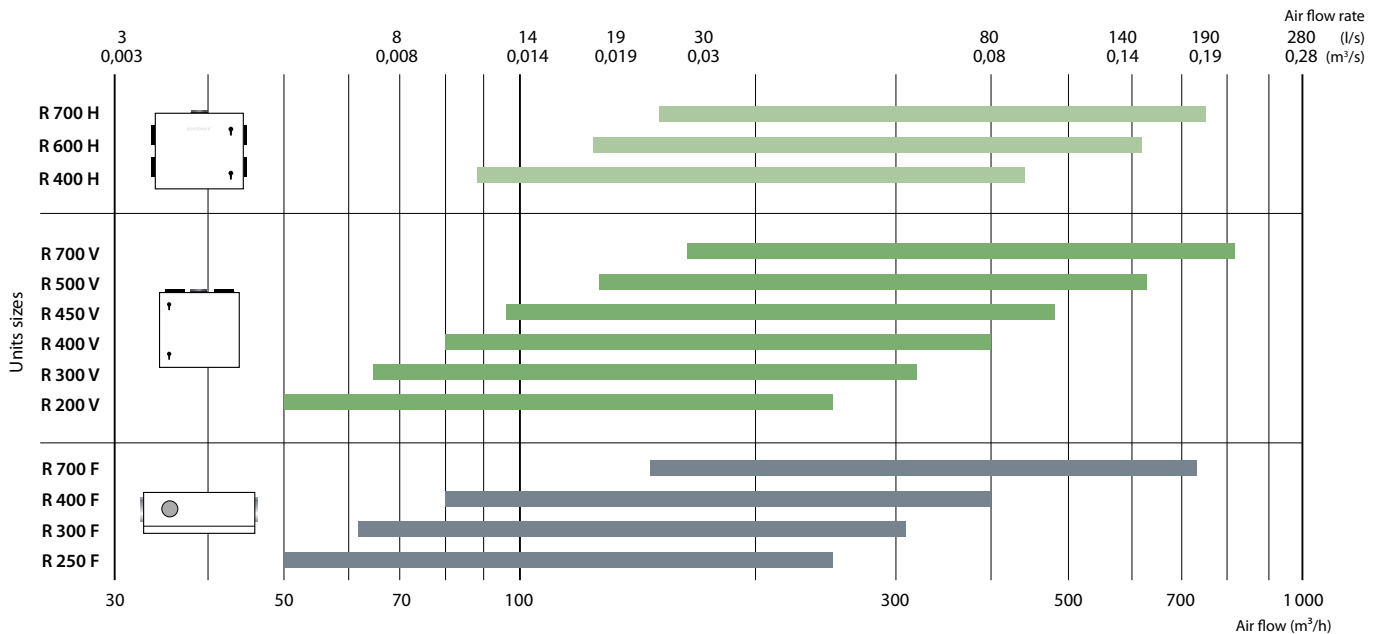
Sizes and capacities of Domekt S units



Domekt R

Air handling units with rotary heat exchanger

Sizes and air volumes of Domekt R units



Modifications of Domekt R units

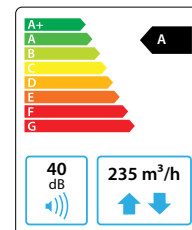
Unit	Heat exchanger		Supply air filter class		Heater			Cooler		Inspection side				Control system			
	Condensing L/A	Enthalpy L/AZ	ePM1 55%	ePM10 50%	HE	DH	HCW	HCW	HCDX	R1	R2	L1	L2	C4	C6	C6M	C8
Domekt R 200 V	●		○	●	●	△	△			○	○			●			
Domekt R 250 F	●	○	○	●	●	△	△	△	△	○	○	○	○		●		
Domekt R 300 V	●	○	○	●	●	△	△	△	△	○		○					●
Domekt R 300 F	●	○	○	●	●	△	△	△	△		○	○					●
Domekt R 400 V	●	○	○	●	●	△	△	△	△	○		○				●	
Domekt R 400 H	●	○	○	●	●	△	△	△	△	○		○				●	
Domekt R 400 F	●	○	○	●	●	△	△	△	△	○	○	○	○			●	
Domekt R 450 V	●	○	○	●	●	△	△	△	△	○		○				●	
Domekt R 500 V	●	○	○	●	●	△	△	△	△	○		○			●		
Domekt R 600 H	●	○	○	●	●	△	△	△	△	○		○				●	
Domekt R 700 V	●	○	○	●	●	△	△	△	△	○		○			●		
Domekt R 700 H	●	○	○	●	●	△	△	△	△	○		○				●	
Domekt R 700 F	●	○	○	●	●	△	△	△	△	○	○	○	○			●	

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

The markings are explained on p. 7.

Domekt R 200 V C4

Maximal air flow, m ³ /h	235
Maximal air flow, l/s	65
Reference flow rate, m ³ /s	0,046
Reference pressure difference, Pa	50
SPI, W/(m ³ /h)	0,31
Thermal efficiency of heat recovery, %	81
Electric air heater capacity, kW / Δt, °C	0,8/14,2
Supply voltage, V	1~230
Maximal operating current HE, A	5,2
Electric power input of the fan drive at maximum flow rate, W	63
Electric power input of the fan drive at reference flow rate, W	24
Filters dimensions BxHxL, mm	285x130x46
Unit dimensions BxHxL, mm	325x625x600
Maintenance space, mm	300
Unit weight, kg	42



Acoustic data

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

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

A-weighted sound pressure level L_{PA} , dB(A)

10 m² normally isolated room, distance from casing – 3 m.

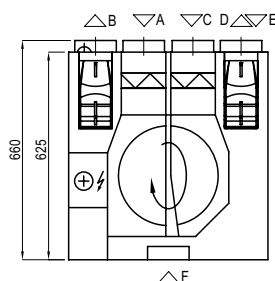
Surroundings	30
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Temperature efficiency

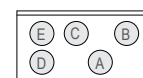
	Winter					Summer		
Outdoor temperature, °C	-23	-15	-10	-5	0	25	30	35
After heat exchanger, °C	13,4	14,9	15,9	16,8	17,8	22,6	23,5	24,5

indoor +22°C, 20 % RH

Shown as left (L1)



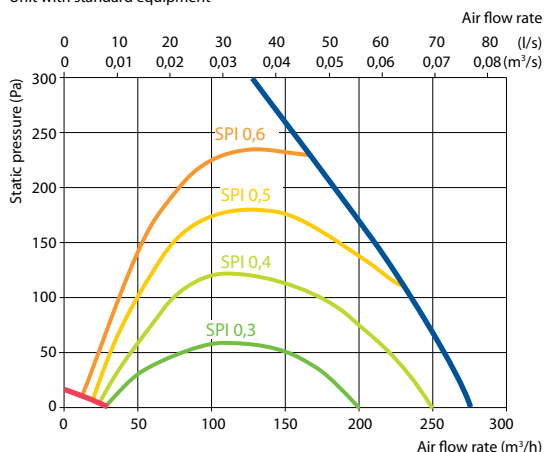
Shown as right (R1)



- 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)

Performance

Unit with standard equipment



Accessories

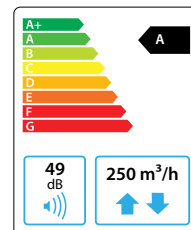
Closing damper	AGUJ-M-125+LF230/CM230
Silencer	A/D AGS-125-50-600-M
	B/C AGS-125-50-900-M
Water heater	DH-125
PPU	PPU-HW-3R-15-0,4-W2
2-way valve (heater)	VVP47.10-0,4

Water cooler	DCW-0,2-1
2-way valve (cooler)	VVP47.10-1,6
Kitchen hood	KH
Decorative panel	DP
Air distribution box	OSD-200 VE-125
Outdoor grill	LD-125
Water heater-cooler	DHCW-125



Domekt R 250 F C6

Maximal air flow, m ³ /h	250
Maximal air flow, l/s	69
Reference flow rate, m ³ /s	0,049
Reference pressure difference, Pa	50
SPI, W/(m ³ /h)	0,45
Thermal efficiency of heat recovery, %	80
Electric air heater capacity, kW / Δt, °C	1/16,7
Supply voltage, V	1~230
Maximal operating current HE, A	6,1
Electric power input of the fan drive at maximum flow rate, W	90
Electric power input of the fan drive at reference flow rate, W	40
Filters dimensions BxHxL, mm	278x258x46
Unit dimensions BxHxL, mm	602x310x842
Maintenance space, mm	300
Unit weight, kg	40



Acoustic data

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

Supply inlet	61
Supply outlet	70
Exhaust inlet	61
Exhaust outlet	70
Casing	49

A-weighted sound pressure level L_{PA} , dB(A)

10 m² normally isolated room, distance from casing – 3 m.

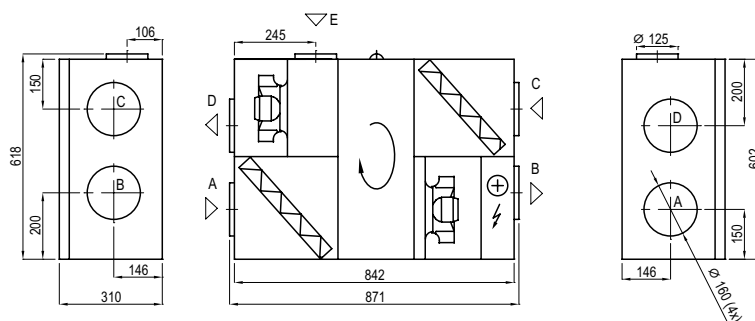
Surroundings	38
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Temperature efficiency

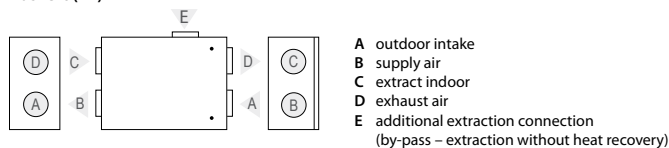
	Winter					Summer		
Outdoor temperature, °C	-23	-15	-10	-5	0	25	30	35
After heat exchanger, °C	10,7	12,7	14	15,2	16,5	22,8	24	25,3

indoor +22°C, 20 % RH

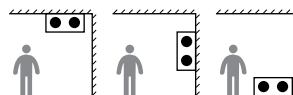
Shown as right (R2)



Shown as left (L2)

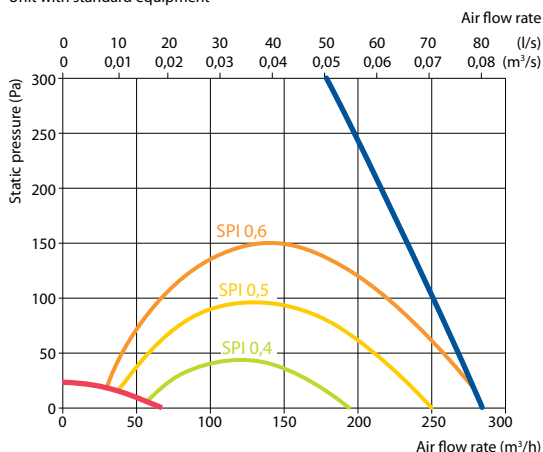


Mounting positions



Performance

Unit with standard equipment



Accessories

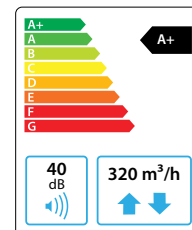
Closing damper	AGUJ-M-160+LF230/CM230
Silencer	A/D AGS-160-50-600-M B/C AGS-160-50-900-M
Water heater	DH-160
PPU	PPU-HW-3R-15-0,4-W2

2-way valve (heater)	VVP47.10-0,4
Water cooler	DCW-0,2-1
2-way valve (cooler)	VVP47.10-1,6
Outdoor grill	LD-160
Water heater-cooler	DHCW-160



Domekt R 300 V C8

Maximal air flow, m ³ /h	320
Maximal air flow, l/s	89
Reference flow rate, m ³ /s	0,062
Reference pressure difference, Pa	50
SPI, W/(m ³ /h)	0,29
Thermal efficiency of heat recovery, %	85
Electric air heater capacity, kW / Δt, °C	0,5/6,5
Supply voltage, V	1~230
Maximal operating current HE, A	3,9
Electric power input of the fan drive at maximum flow rate, W	78
Electric power input of the fan drive at reference flow rate, W	31
Filters dimensions BxHxL, mm	290x205x46
Unit dimensions BxHxL, mm	515x615x605
Maintenance space, mm	450
Unit weight, kg	29



Acoustic data

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

Supply inlet	53
Supply outlet	61
Exhaust inlet	53
Exhaust outlet	61
Casing	40

A-weighted sound pressure level L_{PA} , dB(A)

10 m² normally isolated room, distance from casing – 3 m.

Surroundings	30
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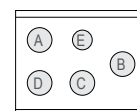
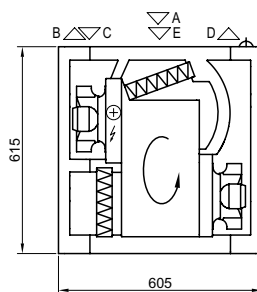
Temperature efficiency

	Winter					Summer		
Outdoor temperature, °C	-23	-15	-10	-5	0	25	30	35
After heat exchanger, °C	15,3	16,5	17,2	18,0	18,7	22,5	23,2	24,0

indoor +22°C, 20 % RH

Shown as left (L1)

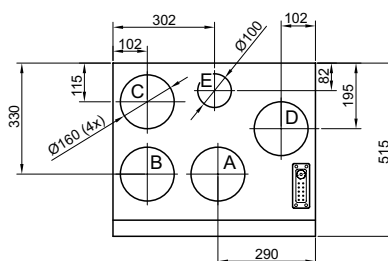
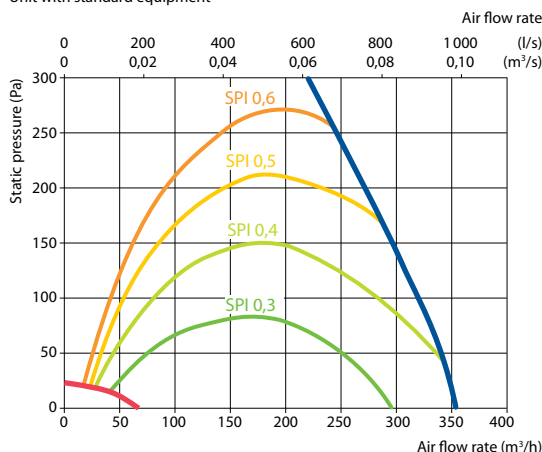
Shown as right (R1)



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

Performance

Unit with standard equipment



Accessories

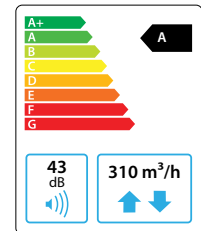
Closing damper	AGUJ-M-160+LF230/CM230
Silencer	A/D AGS-160-50-600-M
	B/C AGS-160-50-900-M
Water heater	DH-160
PPU	PPU-HW-3R-15-0,4-W2
2-way valve (heater)	VVP47.10-0,4

Water cooler	DCW-0,4-3
2-way valve (cooler)	VVP47.10-1,6
Outdoor grill	LD-160
Water heater-cooler	DHCW-160
DX heater - cooler	DCF-0,4-3
Heat pump unit	MOU-12HFN8-KA8140



Domekt R 300 F C8

Maximal air flow, m ³ /h	310
Maximal air flow, l/s	86
Reference flow rate, m ³ /s	0,06
Reference pressure difference, Pa	50
SPI, W/(m ³ /h)	0,3
Thermal efficiency of heat recovery, %	83
Electric air heater capacity, kW / Δt, °C	1/13,5
Supply voltage, V	1~230
Maximal operating current HE, A	6,2
Electric power input of the fan drive at maximum flow rate, W	81
Electric power input of the fan drive at reference flow rate, W	32
Filters dimensions BxHxL, mm	200x250x46
Unit dimensions BxHxL, mm	630x280x1090
Maintenance space, mm	300
Unit weight, kg	56



Acoustic data

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

Supply inlet	56
Supply outlet	60
Exhaust inlet	56
Exhaust outlet	60
Casing	43

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

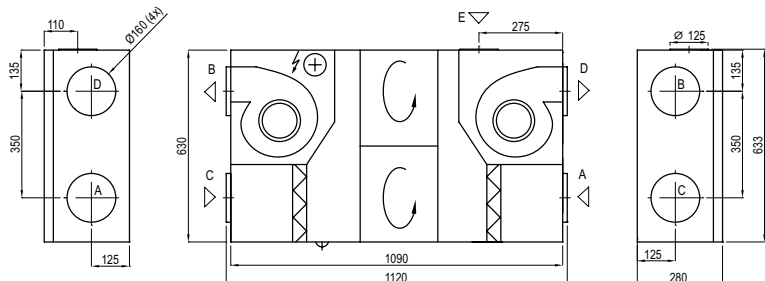
Surroundings	33
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Temperature efficiency

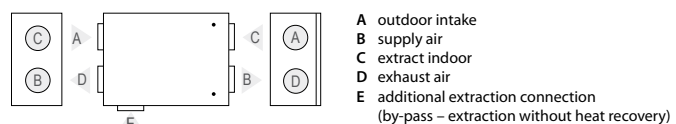
	Winter					Summer		
Outdoor temperature, °C	-23	-15	-10	-5	0	25	30	35
After heat exchanger, °C	14,1	15,5	16,4	17,3	18,2	22,5	23,4	24,3

indoor +22°C, 20 % RH

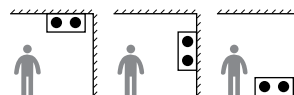
Shown as left (L1)



Shown as right (R2)

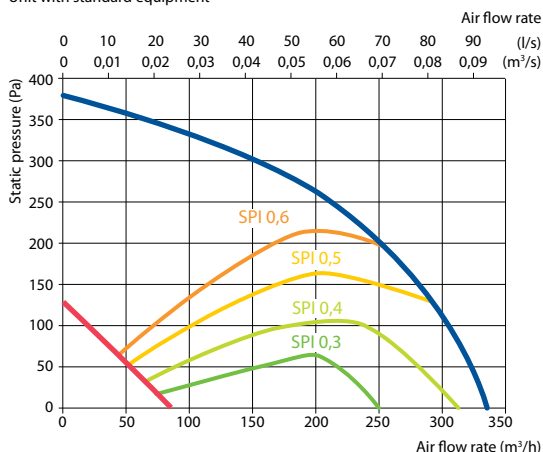


Mounting positions



Performance

Unit with standard equipment

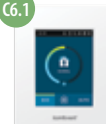


Accessories

Closing damper	AGUJ-M-160+LF230/CM230
Silencer	A/D AGS-160-50-600-M B/C AGS-160-50-900-M
Water heater	DH-160
PPU	PPU-HW-3R-15-0,4-W2
2-way valve (heater)	VVP47.10-0,4

Water cooler	DCW-0,4-3
2-way valve (cooler)	VVP47.10-1,6
Outdoor grill	LD-160
Water heater-cooler	DHCW-160
DX heater-cooler	DCF-0,4-3
Heat pump unit	MOU-12HFN8+KA8140

C6.1

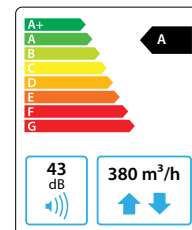


C6.2



Domekt R 400 V C6M

Maximal air flow, m ³ /h	380
Maximal air flow, l/s	106
Reference flow rate, m ³ /s	0,074
Reference pressure difference, Pa	50
SPI, W/(m ³ /h)	0,3
Thermal efficiency of heat recovery, %	85
Electric air heater capacity, kW / Δt, °C	1/11
Supply voltage, V	1~230
Maximal operating current HE, A	6,5
Electric power input of the fan drive at maximum flow rate, W	114
Electric power input of the fan drive at reference flow rate, W	41
Filters dimensions BxHxL, mm	428x231x46
Unit dimensions BxHxL, mm	495x561x598
Maintenance space, mm	600
Unit weight, kg	49



Acoustic data

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

Supply inlet	55
Supply outlet	68
Exhaust inlet	55
Exhaust outlet	69
Casing	43

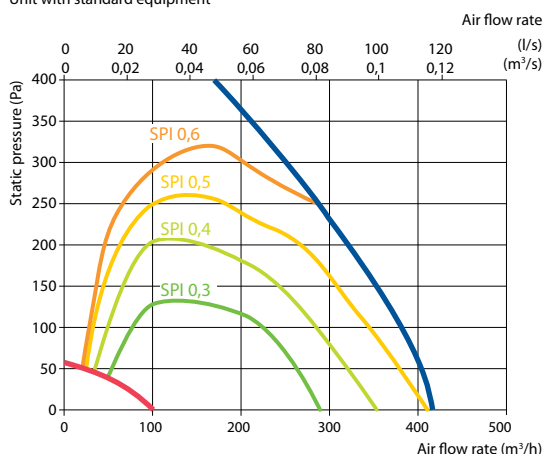
A-weighted sound pressure level L_{pA} , dB(A)

10 m² normally isolated room, distance from casing – 3 m.

Surroundings	33
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Performance

Unit with standard equipment

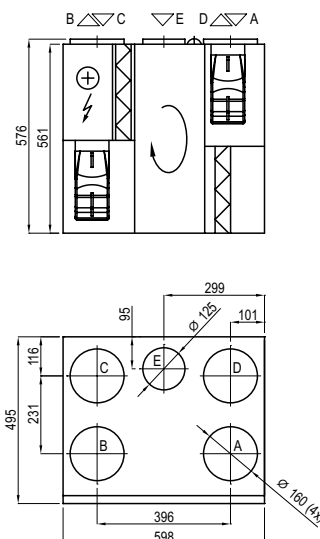


Temperature efficiency

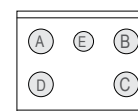
	Winter					Summer		
Outdoor temperature, °C	-23	-15	-10	-5	0	25	30	35
After heat exchanger, °C	15,3	16,5	17,2	18	18,7	22,5	23,2	24

indoor +22°C, 20 % RH

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)

Accessories

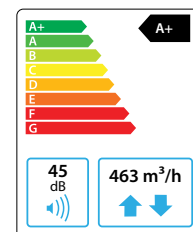
Closing damper	AGUJ-M-160+LF230/CM230
Silencer	A/D AGS-160-50-600-M
	B/C AGS-160-50-900-M
Water heater	DH-160
PPU	PPU-HW-3R-15-0,4-W2
2-way valve (heater)	VVP47.10-0,4

Water cooler	DCW-0,4-3
2-way valve (cooler)	VVP47.10-1,6
Outdoor grill	LD-160
Water heater-cooler	DHCW-160
DX heater-cooler	DCF-0,4-3
Heat pump unit	MOU-12HFN8+KA8140



Domekt R 400 H C6M

Maximal air flow, m ³ /h	463
Maximal air flow, l/s	129
Reference flow rate, m ³ /s	0,09
Reference pressure difference, Pa	50
SPI, W/(m ³ /h)	0,27
Thermal efficiency of heat recovery, %	84
Electric air heater capacity, kW / Δt, °C	1/9
Supply voltage, V	1~230
Maximal operating current HE, A	7,3
Electric power input of the fan drive at maximum flow rate, W	113
Electric power input of the fan drive at reference flow rate, W	44
Filters dimensions BxHxL, mm	417x210x46
Unit dimensions BxHxL, mm	515x567x660
Maintenance space, mm	650
Unit weight, kg	49



Acoustic data

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

Supply inlet	55
Supply outlet	65
Exhaust inlet	55
Exhaust outlet	65
Casing	45

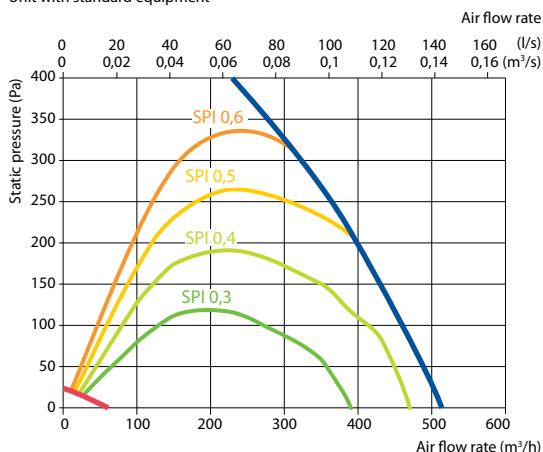
A-weighted sound pressure level L_{PA} , dB(A)

10 m² normally isolated room, distance from casing – 3 m.

Surroundings	33
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Performance

Unit with standard equipment

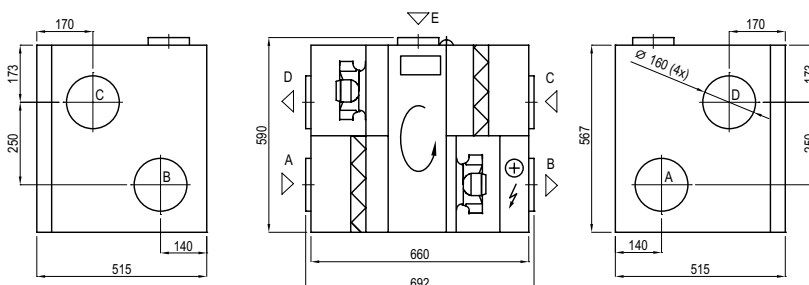


Temperature efficiency

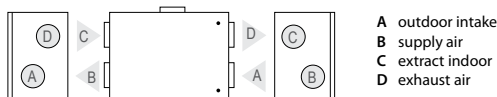
	Winter					Summer		
Outdoor temperature, °C	-23	-15	-10	-5	0	25	30	35
After heat exchanger, °C	14,8	16,1	16,9	17,7	18,5	22,5	23,3	24,1

indoor +22°C, 20 % RH

Shown as right (R1)



Shown as left (L1)



Accessories

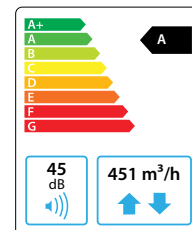
Closing damper	AGUJ-M-160+LF230/CM230
Silencer	A/D AGS-160-50-600-M
	B/C AGS-160-50-900-M
Water heater	DH-160
PPU	PPU-HW-3R-15-0,4-W2
2-way valve (heater)	VVP47.10-0,4

Water cooler	DCW-0,4-3
2-way valve (cooler)	VVP47.10-1,6
Outdoor grill	LD-160
Water heater-cooler	DHCW-160
DX heater-cooler	DCF-0,4-3
Heat pump unit	MOU-12HFN8+KA8243



Domekt R 400 F C6M

Maximal air flow, m ³ /h	451
Maximal air flow, l/s	125
Reference flow rate, m ³ /s	0,088
Reference pressure difference, Pa	50
SPI, W/(m ³ /h)	0,25
Thermal efficiency of heat recovery, %	82
Electric air heater capacity, kW / Δt, °C	1/9,3
Supply voltage, V	1~230
Maximal operating current HE, A	7,3
Electric power input of the fan drive at maximum flow rate, W	99
Electric power input of the fan drive at reference flow rate, W	40
Filters dimensions BxHxL, mm	346x258x46
Unit dimensions BxHxL, mm	700x310x1170
Maintenance space, mm	300
Unit weight, kg	65



Acoustic data

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

Supply inlet	55
Supply outlet	64
Exhaust inlet	55
Exhaust outlet	64
Casing	45

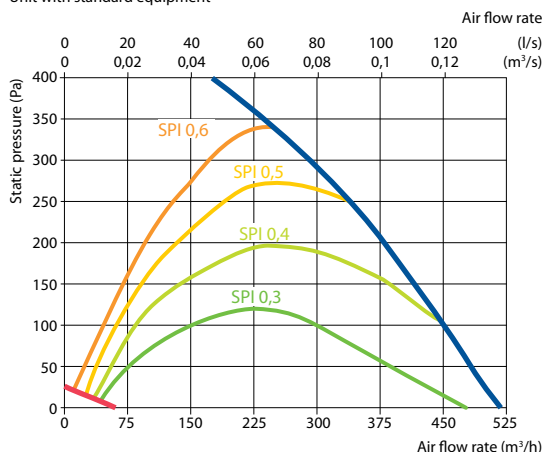
A-weighted sound pressure level L_{PA} , dB(A)

10 m² normally isolated room, distance from casing – 3 m.

Surroundings	33
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Performance

Unit with standard equipment

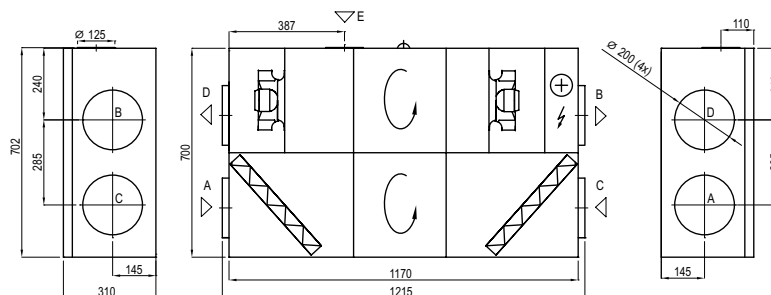


Temperature efficiency

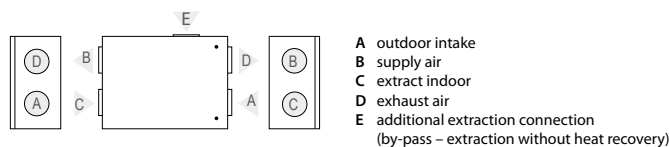
	Winter					Summer		
Outdoor temperature, °C	-23	-15	-10	-5	0	25	30	35
After heat exchanger, °C	13,9	15,3	16,2	17,1	18	22,5	23,4	24,3

indoor +22°C, 20 % RH

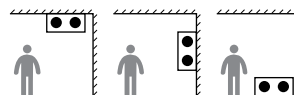
Shown as right (R1)



Shown as left (L1)



Mounting positions



Accessories

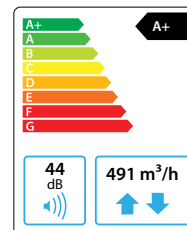
Closing damper	AGUJ-M-200+LF230/CM230
Silencer	A/D AGS-200-50-600-M B/C AGS-200-50-900-M
Water heater	DH-200
PPU	PPU-HW-3R-15-0,63-W2
2-way valve (heater)	VVP47.10-0,63

Water cooler	DCW-0,4-3
2-way valve (cooler)	VVP47.15-2,5
Outdoor grill	LD-200
Water heater-cooler	DHCW-200
DX heater-cooler	DCF-0,4-3
Heat pump unit	MOU-12HFN8+KA8140



Domekt R 450 V C6M

Maximal air flow, m ³ /h	491
Maximal air flow, l/s	136
Reference flow rate, m ³ /s	0,095
Reference pressure difference, Pa	50
SPI, W/(m ³ /h)	0,3
Thermal efficiency of heat recovery, %	86
Electric air heater capacity, kW / Δt, °C	1/8,6
Supply voltage, V	1~230
Maximal operating current HE, A	7,5
Electric power input of the fan drive at maximum flow rate, W	146
Electric power input of the fan drive at reference flow rate, W	54
Filters dimensions BxHxL, mm	517x278x46
Unit dimensions BxHxL, mm	585x655x680
Maintenance space, mm	700
Unit weight, kg	60



Acoustic data

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

Supply inlet	57
Supply outlet	66
Exhaust inlet	57
Exhaust outlet	66
Casing	44

A-weighted sound pressure level L_{pA} , dB(A)

10 m² normally isolated room, distance from casing – 3 m.

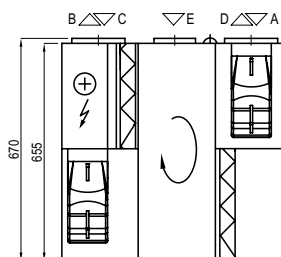
Surroundings	34
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Temperature efficiency

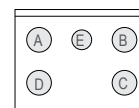
	Winter					Summer		
Outdoor temperature, °C	-23	-15	-10	-5	0	25	30	35
After heat exchanger, °C	15,7	16,8	17,5	18,2	18,9	22,4	23,1	23,8

indoor +22°C, 20 % RH

Shown as left (L1)



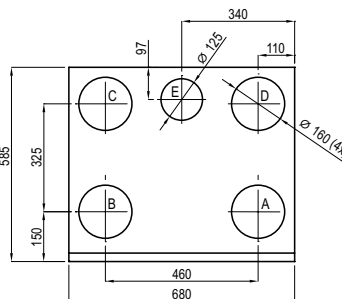
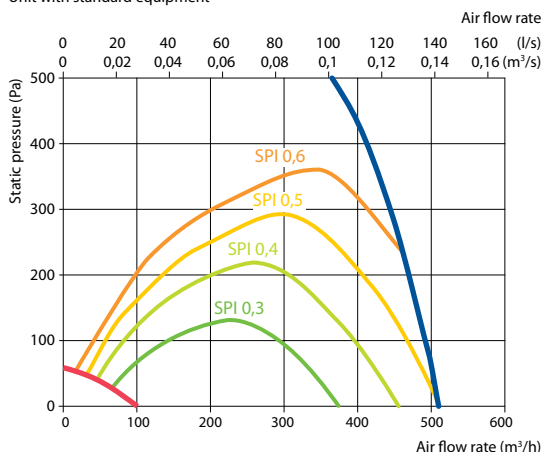
Shown as right (R1)



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

Performance

Unit with standard equipment



Accessories

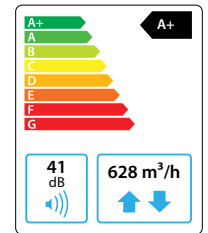
Closing damper	AGUJ-M-160+LF230/CM230
Silencer	A/D AGS-160-50-600-M
	B/C AGS-160-50-900-M
Water heater	DH-160
PPU	PPU-HW-3R-15-0,4-W2
2-way valve (heater)	VVP47.10-0,4

Water cooler	DCW-0,5-3
2-way valve (cooler)	VVP47.10-1,6
Outdoor grill	LD-160
Water heater-cooler	DHCW-160
DX heater-cooler	DCF-0,5-3
Heat pump unit	MOU-12HFN8+KA8243



Domekt R 500 V C6

Maximal air flow, m³/h	628
Maximal air flow, l/s	174
Reference flow rate, m³/s	0,122
Reference pressure difference, Pa	50
SPI, W/(m³/h)	0,21
Thermal efficiency of heat recovery, %	85
Electric air heater capacity, kW / Δt, °C	1/6,7
Supply voltage, V	1~230
Maximal operating current HE, A	7,3
Electric power input of the fan drive at maximum flow rate, W	107
Electric power input of the fan drive at reference flow rate, W	47
Filters dimensions BxHxL, mm	540x260x46
Unit dimensions BxHxL, mm	645x950x1070
Maintenance space, mm	1050
Unit weight, kg	113



Acoustic data

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

Supply inlet	52
Supply outlet	60
Exhaust inlet	52
Exhaust outlet	60
Casing	41

A-weighted sound pressure level L_{PA} , dB(A)

10 m² normally isolated room, distance from casing – 3 m.

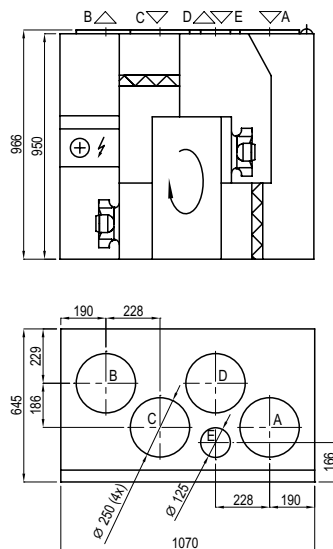
Surroundings	31
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Temperature efficiency

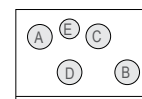
	Winter					Summer		
Outdoor temperature, °C	-23	-15	-10	-5	0	25	30	35
After heat exchanger, °C	15,3	16,5	17,2	18	18,7	22,5	23,2	24

indoor +22°C, 20 % RH

Shown as left (L1)



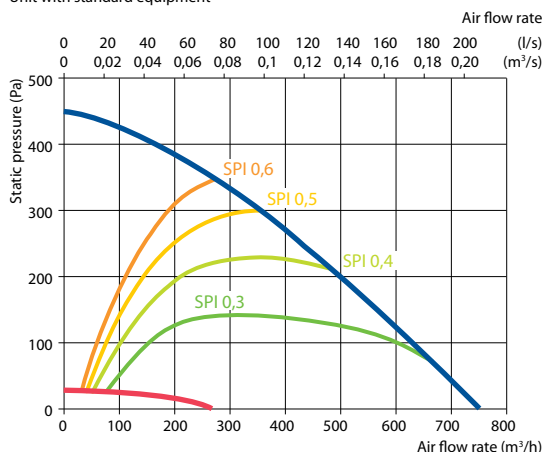
Shown as right (R1)



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

Performance

Unit with standard equipment



Accessories

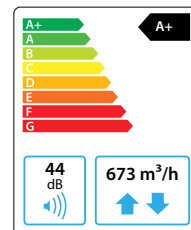
Closing damper	AGUJ-M-250+LF230/CM230
Silencer	A/D AGS-250-50-600-M
	B/C AGS-250-50-900-M
Water heater	DH-250
PPU	PPU-HW-3R-15-0,63-W2
2-way valve (heater)	VVP47.15-2,5

Water cooler	DCW-0,5-3
2-way valve (cooler)	VVP47.15-2,5
Outdoor grill	LD-250
Water heater-cooler	DHCW-250
DX heater-cooler	DCF-0,5-3
Heat pump unit	MOU-12HFN8+KA8140



Domekt R 600 H C6M

Maximal air flow, m ³ /h	673
Maximal air flow, l/s	187
Reference flow rate, m ³ /s	0,131
Reference pressure difference, Pa	50
SPI, W/(m ³ /h)	0,25
Thermal efficiency of heat recovery, %	82
Electric air heater capacity, kW / Δt, °C	1/6,2
Supply voltage, V	1~230
Maximal operating current HE, A	7,3
Electric power input of the fan drive at maximum flow rate, W	155
Electric power input of the fan drive at reference flow rate, W	62
Filters dimensions BxHxL, mm	475x235x46
Unit dimensions BxHxL, mm	570x600x1060
Maintenance space, mm	1100
Unit weight, kg	80



Acoustic data

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

Supply inlet	56
Supply outlet	66
Exhaust inlet	56
Exhaust outlet	66
Casing	44

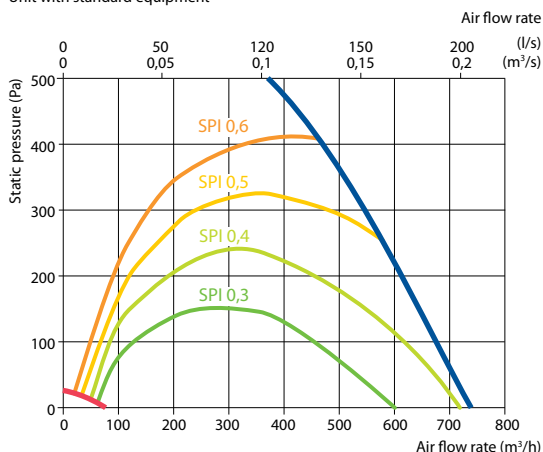
A-weighted sound pressure level L_{PA} , dB(A)

10 m² normally isolated room, distance from casing – 3 m.

Surroundings	33
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Performance

Unit with standard equipment

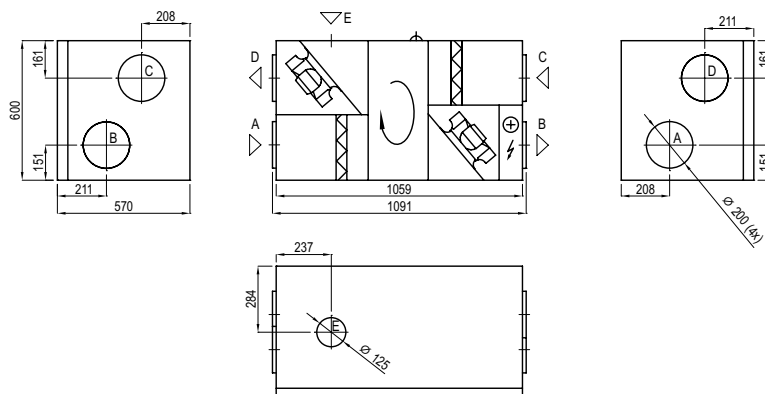


Temperature efficiency

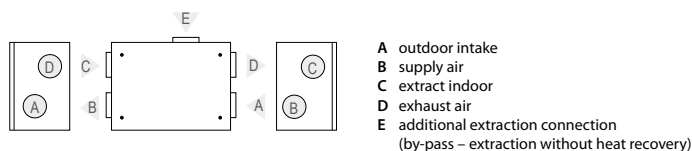
	Winter					Summer		
Outdoor temperature, °C	-23	-15	-10	-5	0	25	30	35
After heat exchanger, °C	13,9	15,3	16,2	17,1	18	22,5	23,4	24,3

indoor +22°C, 20 % RH

Shown as right (R1)



Shown as left (L1)



Accessories

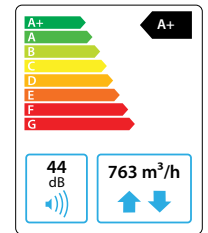
Closing damper	AGUJ-M-200+LF230/CM230
Silencer	A/D AGS-200-50-600-M B/C AGS-200-50-900-M
Water heater	DH-200
PPU	PPU-HW-3R-15-0,63-W2
2-way valve (heater)	VVP47.10-0,63

Water cooler	DCW-0,7-5
2-way valve (cooler)	VVP47.15-2,5
Outdoor grill	LD-200
Water heater-cooler	DHCW-200
DX heater-cooler	DCF-0,7-5
Heat pump unit	MOU-18HFN8+KA8140



Domekt R 700 V C6

Maximal air flow, m ³ /h	763
Maximal air flow, l/s	212
Reference flow rate, m ³ /s	0,148
Reference pressure difference, Pa	50
SPI, W/(m ³ /h)	0,26
Thermal efficiency of heat recovery, %	84
Electric air heater capacity, kW / Δt, °C	2/10,9
Supply voltage, V	1~230
Maximal operating current HE, A	11,7
Electric power input of the fan drive at maximum flow rate, W	180
Electric power input of the fan drive at reference flow rate, W	73
Filters dimensions BxHxL, mm	540x260x46
Unit dimensions BxHxL, mm	645x950x1070
Maintenance space, mm	1050
Unit weight, kg	114



Acoustic data

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

Supply inlet	55
Supply outlet	63
Exhaust inlet	55
Exhaust outlet	63
Casing	44

A-weighted sound pressure level L_{PA} , dB(A)

10 m² normally isolated room, distance from casing – 3 m.

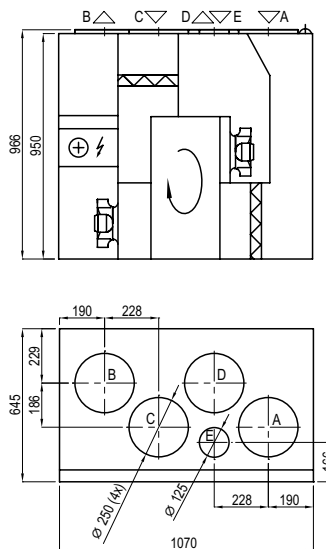
Surroundings	34
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Temperature efficiency

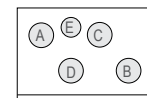
	Winter					Summer		
Outdoor temperature, °C	-23	-15	-10	-5	0	25	30	35
After heat exchanger, °C	13,1	14,7	15,7	16,7	17,7	22,6	23,6	24,6

indoor +22°C, 20 % RH

Shown as left (L1)



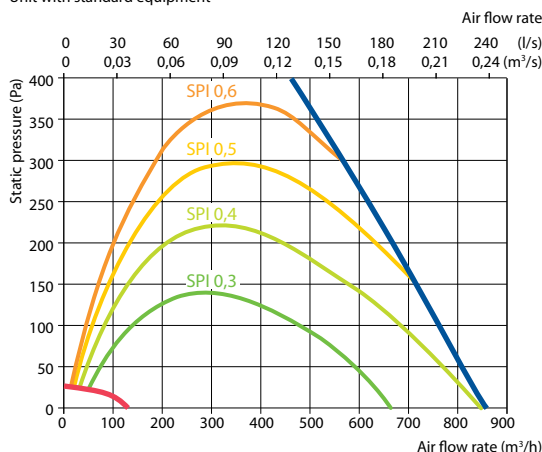
Shown as right (R1)



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

Performance

Unit with standard equipment



Accessories

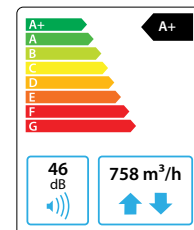
Closing damper	AGUJ-M-250+LF230/CM230
Silencer	A/D AGS-250-50-600-M
	B/C AGS-250-50-900-M
Water heater	DH-250
PPU	PPU-HW-3R-15-0,63-W2
2-way valve (heater)	VVP47.10-0,63

Water cooler	DCW-0,7-5
2-way valve (cooler)	VVP47.15-2,5
Outdoor grill	LD-250
Water heater-cooler	DHCW-250
DX heater-cooler	DCF-0,7-5
Heat pump unit	MOU-18HFN8+KA8140



Domekt R 700 H C6M

Maximal air flow, m ³ /h	758
Maximal air flow, l/s	211
Reference flow rate, m ³ /s	0,147
Reference pressure difference, Pa	50
SPI, W/(m ³ /h)	0,25
Thermal efficiency of heat recovery, %	84
Electric air heater capacity, kW / Δt, °C	2/11
Supply voltage, V	1~230
Maximal operating current HE, A	11,7
Electric power input of the fan drive at maximum flow rate, W	180
Electric power input of the fan drive at reference flow rate, W	70
Filters dimensions BxHxL, mm	540x260x46
Unit dimensions BxHxL, mm	634x700x930
Maintenance space, mm	950
Unit weight, kg	83



Acoustic data

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

Supply inlet	57
Supply outlet	66
Exhaust inlet	57
Exhaust outlet	66
Casing	46

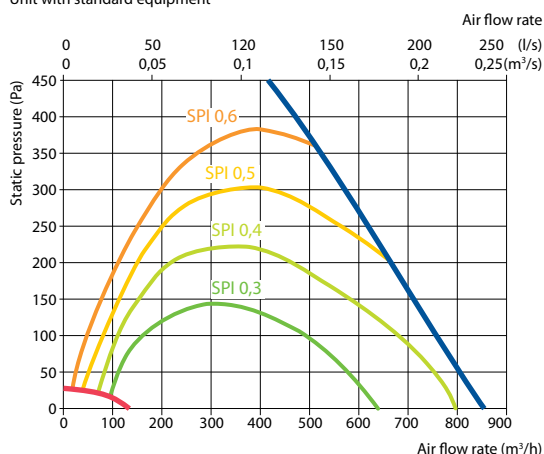
A-weighted sound pressure level L_{PA} , dB(A)

10 m² normally isolated room, distance from casing – 3 m.

Surroundings	35
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Performance

Unit with standard equipment

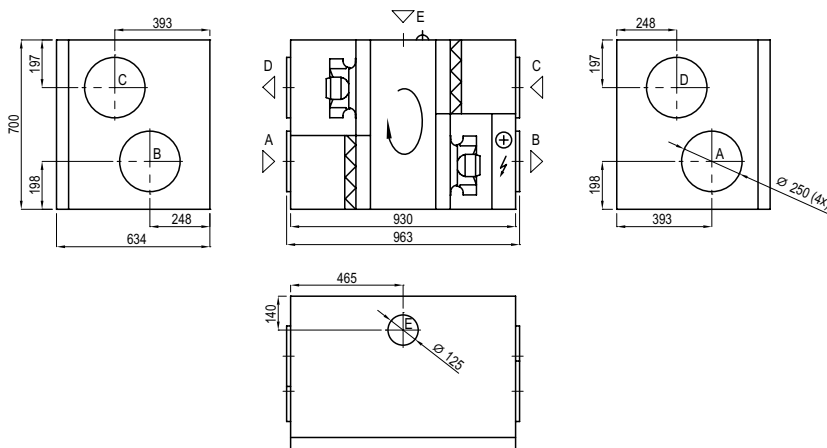


Temperature efficiency

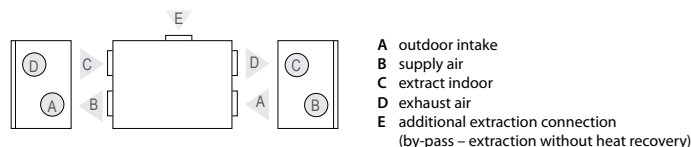
	Winter					Summer		
Outdoor temperature, °C	-23	-15	-10	-5	0	25	30	35
After heat exchanger, °C	14,8	16,1	16,9	17,7	18,5	22,5	23,3	24,1

indoor +22°C, 20 % RH

Shown as right (R1)



Shown as left (L1)



Accessories

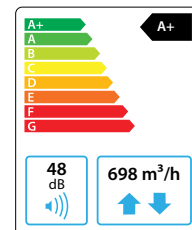
Closing damper	AGUJ-M-250+LF230/CM230
Silencer	A/D AGS-250-50-600-M
	B/C AGS-250-50-900-M
Water heater	DH-250
PPU	PPU-HW-3R-15-0,63-W2
2-way valve (water heater)	VVP47.10-0,63

Water cooler	DCW-0,7-5
2-way valve (water cooler)	VVP47.15-2,5
Outdoor grill	LD-250
Water heater-cooler	DHCW-250
DX heater-cooler	DCF-0,7-5
Heat pump unit	MOU-18HFN8+KA8140



Domekt R 700 F C6M

Maximal air flow, m ³ /h	698
Maximal air flow, l/s	194
Reference flow rate, m ³ /s	0,136
Reference pressure difference, Pa	50
SPI, W/(m ³ /h)	0,25
Thermal efficiency of heat recovery, %	83
Electric air heater capacity, kW / Δt, °C	2/12
Supply voltage, V	1~230
Maximal operating current HE, A	11,7
Electric power input of the fan drive at maximum flow rate, W	175
Electric power input of the fan drive at reference flow rate, W	65
Filters dimensions BxHxL, mm	368x375x46
Unit dimensions BxHxL, mm	850x420x1240
Maintenance space, mm	500
Unit weight, kg	93



Acoustic data

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

Supply inlet	55
Supply outlet	68
Exhaust inlet	55
Exhaust outlet	68
Casing	48

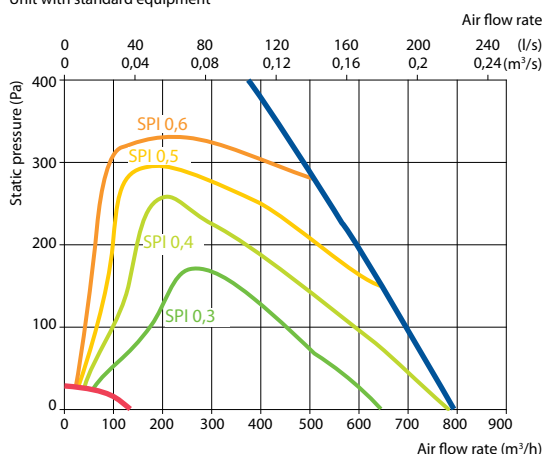
A-weighted sound pressure level L_{PA} , dB(A)

10 m² normally isolated room, distance from casing – 3 m.

Surroundings	36
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Performance

Unit with standard equipment

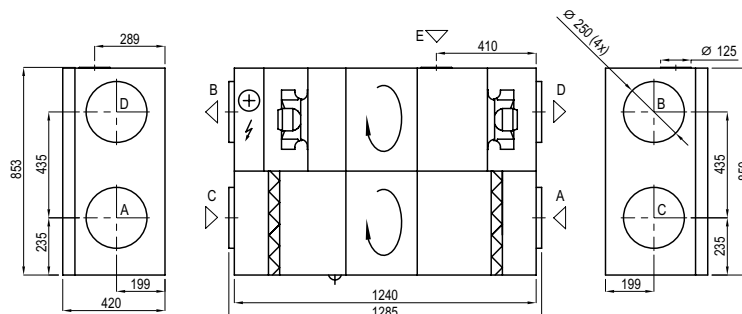


Temperature efficiency

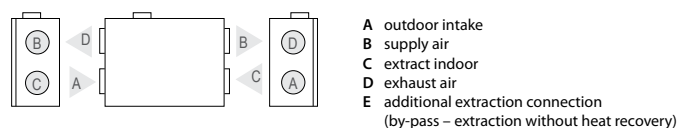
	Winter					Summer		
Outdoor temperature, °C	-23	-15	-10	-5	0	25	30	35
After heat exchanger, °C	14,2	15,6	16,5	17,3	18,2	22,5	23,4	24,2

indoor +22°C, 20 % RH

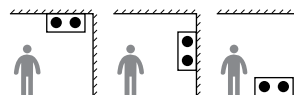
Shown as left (L1)



Shown as right (R1)



Mounting positions



Accessories

Closing damper	AGUJ-M-250+LF230/CM230
Silencer	A/D AGS-250-50-600-M B/C AGS-250-50-900-M
Water heater	DH-250
PPU	PPU-HW-3R-15-0,63-W2
2-way valve (heater)	VVP47.10-0,63

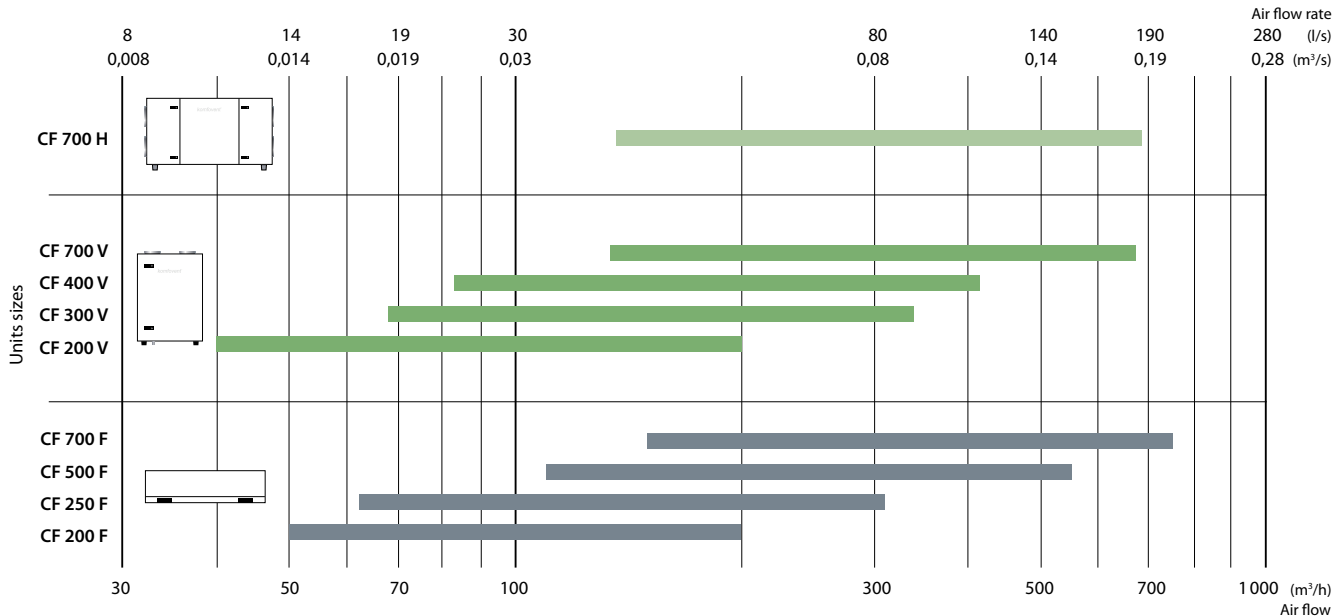
Water cooler	DCW-0,7-5
2-way valve (cooler)	VVP47.15-2,5
Outdoor grill	LD-250
Water heater-cooler	DHCW-250
DX heater-cooler	DCF-0,7-5
Heat pump unit	MOU-18HFN8a+KA8140



Domekt CF

Air handling units with counterflow plate heat exchangers

Sizes and air volumes of Domekt CF units



Modifications of Domekt CF units

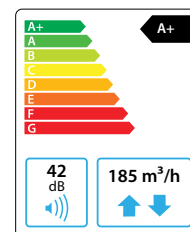
Unit	Heat exchanger		Supply air filter class		Preheater	Heater			Cooler		Inspection side				Bypass	Control system		
	Condensing	Enthalpy	ePM1 55%	ePM10 50%	HE	HE	DH	HCW	HCW	HCDX	R1	R2	L1	L2	Inner	C6	C6M	C8
Domekt CF 200 F	●	○	○	●	△	●	△	△	△			○	○		●			●
Domekt CF 200 V	●	○	○	●	●	●	△	△	△		○		○		●		●	
Domekt CF 250 F	●	○	○	●	●	●	△	△	△		○	○	○	○	●	●		
Domekt CF 300 V	●	○	○	●	●	●	△	△	△	△	○		○		●		●	
Domekt CF 400 V	●	○	○	●	●	●	△	△	△	△	○		○		●	●		
Domekt CF 500 F	●	○	○	●	●	●	△	△	△	△	○	○	○	○	●	●		
Domekt CF 700 V	●	○	○	●	●	●	△	△	△	△	○		○		●	●		
Domekt CF 700 H	●	○	○	●	●	●	△	△	△	△	○		○		●		●	
Domekt CF 700 F	●	○	○	●	●	●	△	△	△	△	○	○	○	○	●	●		

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

The markings are explained on p. 7.

Domekt CF 200 F C8

Maximal air flow, m ³ /h	185
Maximal air flow, l/s	51
Reference flow rate, m ³ /s	0,036
Reference pressure difference, Pa	50
SPI, W/(m ³ /h)	0,21
Thermal efficiency of heat recovery, %	88
Electric air heater capacity, kW / Δt, °C	0,5/11,3
Supply voltage, V	1~230
Maximal operating current HE, A	3
Electric power input of the fan drive at maximum flow rate, W	41
Electric power input of the fan drive at reference flow rate, W	13
Filters dimensions BxHxL, mm	250x232x46
Unit dimensions BxHxL, mm	560x294x1100
Maintenance space, mm	300
Unit weight, kg	28



Acoustic data

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

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

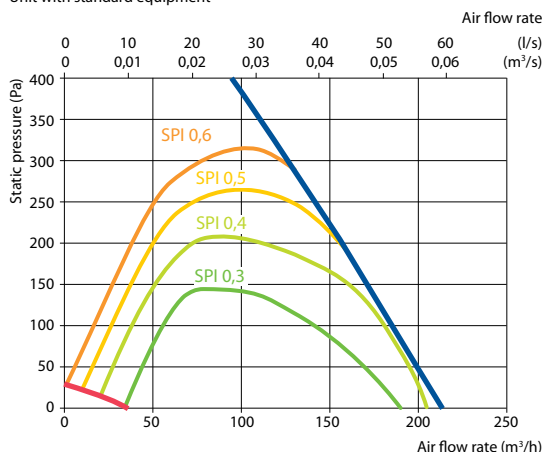
A-weighted sound pressure level L_{PA} , dB(A)

10 m² normally isolated room, distance from casing – 3 m.

Surroundings	31
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Performance

Unit with standard equipment

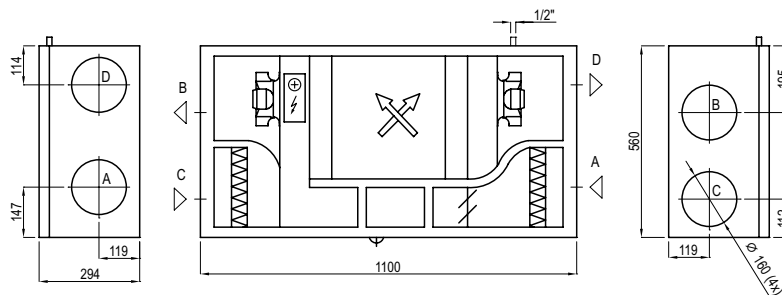


Temperature efficiency

	Winter					Summer		
Outdoor temperature, °C	-23	-15	-10	-5	0	25	30	35
After heat exchanger, °C	17,4	18	18,4	18,8	19,4	22,4	22,9	23,5

indoor +22°C, 20 % RH

Shown as left (L1)



Shown as right (R2)



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

Mounting positions



Accessories

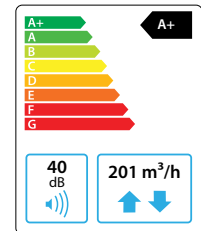
Closing damper	AGUJ-M-160+LF230/CM230
Silencer	A/D AGS-160-50-600-M B/C AGS-160-50-900-M
Water heater	DH-160
PPU	PPU-HW-3R-15-0,4-W2

2-way valve (heater)	VVP47.10-0,25
Water cooler	DCW-0,2-1
2-way valve (cooler)	VVP47.10-1,6
Outdoor grill	LD-160
Water heater-cooler	DHCW-160



Domekt CF 200 V C6M

Maximal air flow, m ³ /h	201
Maximal air flow, l/s	56
Reference flow rate, m ³ /s	0,039
Reference pressure difference, Pa	50
SPI, W/(m ³ /h)	0,21
Thermal efficiency of heat recovery, %	92
Electric air heater capacity, kW / Δt, °C	0,5/10,4
Electric preheater capacity, kW / Δt, °C	1/19,6
Supply voltage, V	1~230
Maximal operating current HE, A	8,3
Electric power input of the fan drive at maximum flow rate, W	37
Electric power input of the fan drive at reference flow rate, W	15
Filters dimensions BxHxL, mm	365x132x46
Unit dimensions BxHxL, mm	630x790x595
Maintenance space, mm	600
Unit weight, kg	42



Acoustic data

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

Supply inlet	45
Supply outlet	59
Exhaust inlet	45
Exhaust outlet	59
Casing	40

A-weighted sound pressure level L_{PA} , dB(A)

10 m² normally isolated room, distance from casing – 3 m.

Surroundings	30
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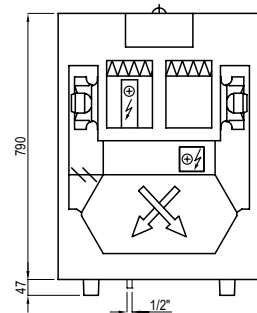
Temperature efficiency

	Winter					Summer		
Outdoor temperature, °C	-23	-15	-10	-5	0	25	30	35
After heat exchanger*, °C	18,9*	19,0*	19,0*	19,0	19,6	22,3	22,9	23,4

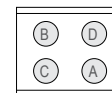
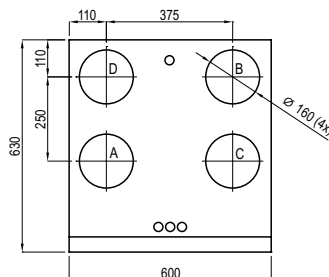
indoor +22°C, 20 % RH.

* calculations made after evaluation of the preheater.

Shown as right (R1)



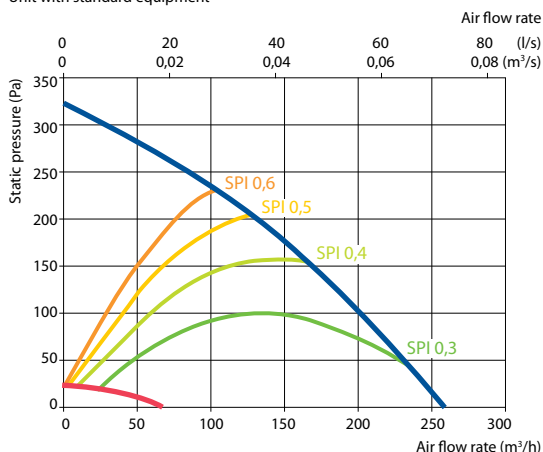
Shown as left (L1)



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

Performance

Unit with standard equipment



Accessories

Closing damper	AGUJ-M-160+LF230/CM230
Silencer	A/D AGS-160-50-600-M
	B/C AGS-160-50-900-M
Water heater	DH-160
PPU	PPU-HW-3R-15-0,4-W2

2-way valve (heater)	VVP47.10-0,25
Water cooler	DCW-0,2-1
2-way valve (cooler)	VVP47.10-1,6
Outdoor grill	LD-160
Water heater-cooler	DHCW-160

C6.1



C6.2



Domekt CF 250 F C6

Maximal air flow, m ³ /h	297
Maximal air flow, l/s	83
Reference flow rate, m ³ /s	0,058
Reference pressure difference, Pa	50
SPI, W/(m ³ /h)	0,29
Thermal efficiency of heat recovery, %	86
Electric air heater capacity, kW / Δt, °C	0,5/7
Electric preheater capacity, kW / Δt, °C	1/14
Supply voltage, V	1~230
Maximal operating current HE, A	8,3
Electric power input of the fan drive at maximum flow rate, W	91
Electric power input of the fan drive at reference flow rate, W	32
Filters dimensions BxHxL, mm	265x250x46
Unit dimensions BxHxL, mm	604x294x1250
Maintenance space, mm	300
Unit weight, kg	52

Acoustic data

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

Supply inlet	53
Supply outlet	65
Exhaust inlet	54
Exhaust outlet	65
Casing	46

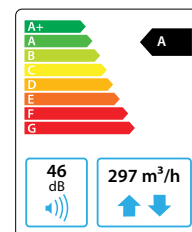
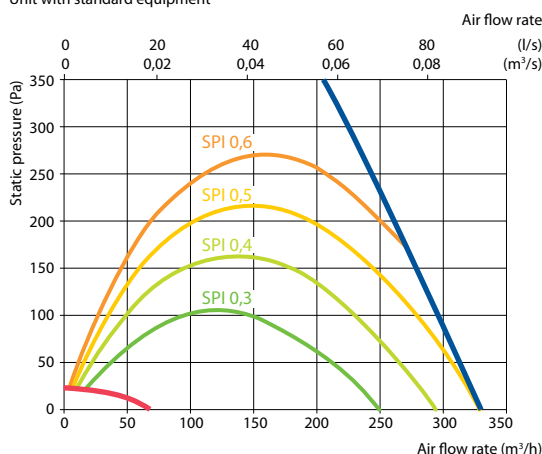
A-weighted sound pressure level L_{PA} dB(A)

10 m² normally isolated room, distance from casing – 3 m.

Surroundings	35
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Performance

Unit with standard equipment



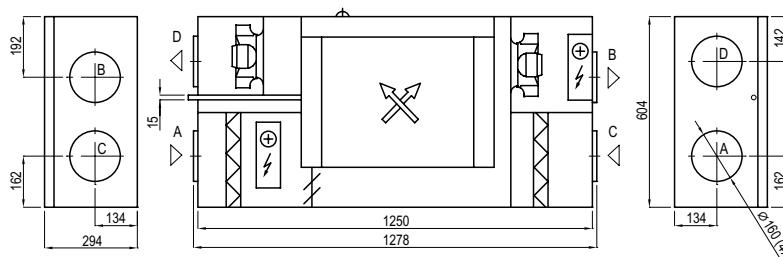
Temperature efficiency

	Winter					Summer		
Outdoor temperature, °C	-23	-15	-10	-5	0	25	30	35
After heat exchanger*, °C	16,1*	17*	17*	17	17,9	22,6	23,5	24,4

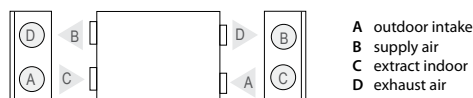
indoor +22°C, 20 % RH.

* calculations made after evaluation of the preheater.

Shown as right (R1)



Shown as left (L1)



Mounting positions



Accessories

Closing damper	AGUJ-M-160+LF230/CM230
Silencer	A/D AGS-160-50-600-M
	B/C AGS-160-50-900-M
Water heater	DH-160
PPU	PPU-HW-3R-15-0,4-W2

2-way valve (heater)	VVP47.10-0,4
Water cooler	DCW-0,2-1
2-way valve (cooler)	VVP47.10-1,6
Outdoor grill	LD-160
Water heater-cooler	DHCW-160



Domekt CF 300 V C6M

Maximal air flow, m³/h	318
Maximal air flow, l/s	88
Reference flow rate, m³/s	0,062
Reference pressure difference, Pa	50
SPI, W/(m³/h)	0,29
Thermal efficiency of heat recovery, %	88
Electric air heater capacity, kW / Δt, °C	0,5/6,6
Electric preheater capacity, kW / Δt, °C	1/13,1
Supply voltage, V	1~230
Maximal operating current HE, A	8,3
Electric power input of the fan drive at maximum flow rate, W	91
Electric power input of the fan drive at reference flow rate, W	34
Filters dimensions BxHxL, mm	365x132x46
Unit dimensions BxHxL, mm	630x790x595
Maintenance space, mm	600
Unit weight, kg	42

Acoustic data

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

Supply inlet	49
Supply outlet	65
Exhaust inlet	49
Exhaust outlet	65
Casing	45

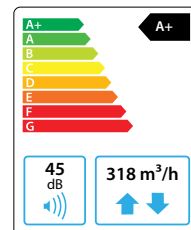
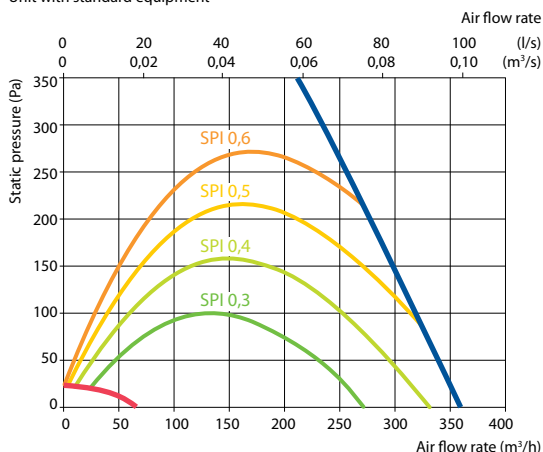
A-weighted sound pressure level L_{PA} , dB(A)

10 m² normally isolated room, distance from casing – 3 m.

Surroundings	34
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Performance

Unit with standard equipment



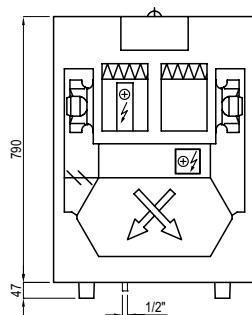
Temperature efficiency

	Winter					Summer		
Outdoor temperature, °C	-23	-15	-10	-5	0	25	30	35
After heat exchanger*, °C	16,9*	17,6*	17,7*	17,7	18,4	22,5	23,3	24,1

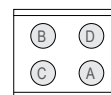
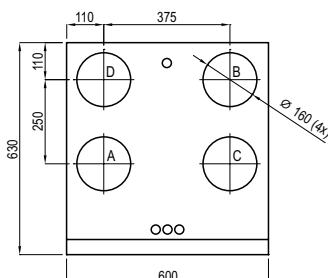
indoor +22°C, 20 % RH.

* calculations made after evaluation of the preheater.

Shown as right (R1)



Shown as left (L1)



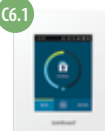
- A outdoor intake
- B supply air
- C extract indoor
- D exhaust air

Accessories

Closing damper	AGUJ-M-160+LF230/CM230
Silencer	A/D AGS-160-50-600-M
	B/C AGS-160-50-900-M
Water heater	DH-160
PPU	PPU-HW-3R-15-0,4-W2
2-way valve (heater)	VVP47.10-0,4

Water cooler	DCW-0,2-1
2-way valve (cooler)	VVP47.10-1,6
Outdoor grill	LD-160
Water heater-cooler	DHCW-160
Heat pump unit	MOU-12HFN8+KA8140

C6.1



C6.2



Domekt CF 400 V C6

Maximal air flow, m ³ /h	389
Maximal air flow, l/s	108
Reference flow rate, m ³ /s	0,076
Reference pressure difference, Pa	50
SPI, W/(m ³ /h)	0,22
Thermal efficiency of heat recovery, %	88
Electric air heater capacity, kW / Δt, °C	0,5/5,4
Electric preheater capacity, kW / Δt, °C	1,5/16,1
Supply voltage, V	1~230
Maximal operating current HE, A	10,5
Electric power input of the fan drive at maximum flow rate, W	91
Electric power input of the fan drive at reference flow rate, W	33
Filters dimensions BxHxL, mm	350x235x46
Unit dimensions BxHxL, mm	600x800x598
Maintenance space, mm	600
Unit weight, kg	54

Acoustic data

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

Supply inlet	58
Supply outlet	53
Exhaust inlet	58
Exhaust outlet	53
Casing	41

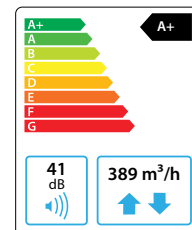
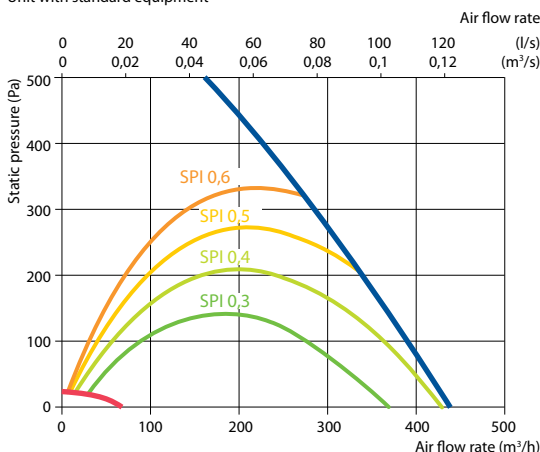
A-weighted sound pressure level L_{PA} , dB(A)

10 m² normally isolated room, distance from casing – 3 m.

Surroundings	31
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Performance

Unit with standard equipment



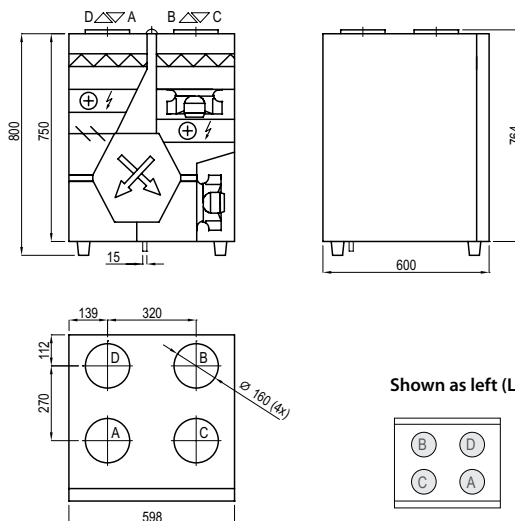
Temperature efficiency

	Winter					Summer		
Outdoor temperature, °C	-23	-15	-10	-5	0	25	30	35
After heat exchanger*, °C	18,6*	19,3*	19,3*	19,3	19,3	22,4	23	23,6

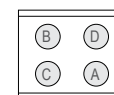
indoor +22°C, 20 % RH.

* calculations made after evaluation of the preheater.

Shown as right (R1)



Shown as left (L1)



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

Accessories

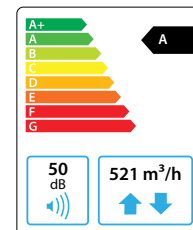
Closing damper	AGUJ-M-160+LF230/CM230
Silencer	A/D AGS-160-50-600-M B/C AGS-160-50-900-M
Water heater	DH-160
PPU	PPU-HW-3R-15-0,4-W2
2-way valve (heater)	VVP47.10-0,4

Water cooler	DCW-0,4-3
2-way valve (cooler)	VVP47.10-1,6
Outdoor grill	LD-160
Water heater-cooler	DHCW-160
DX heater-cooler	DCF-0,4-3
Heat pump unit	MOU-12HFN8+KA8140



Domekt CF 500 F C6

Maximal air flow, m ³ /h	521
Maximal air flow, l/s	145
Reference flow rate, m ³ /s	0,101
Reference pressure difference, Pa	50
SPI, W/(m ³ /h)	0,34
Thermal efficiency of heat recovery, %	87
Electric air heater capacity, kW / Δt, °C	0,5/3,8
Electric preheater capacity, kW / Δt, °C	1,5/11,4
Supply voltage, V	1~230
Maximal operating current HE, A	11,7
Electric power input of the fan drive at maximum flow rate, W	171
Electric power input of the fan drive at reference flow rate, W	67
Filters dimensions BxHxL, mm	484x250x46
Unit dimensions BxHxL, mm	1045x295x1400
Maintenance space, mm	520
Unit weight, kg	93



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	50

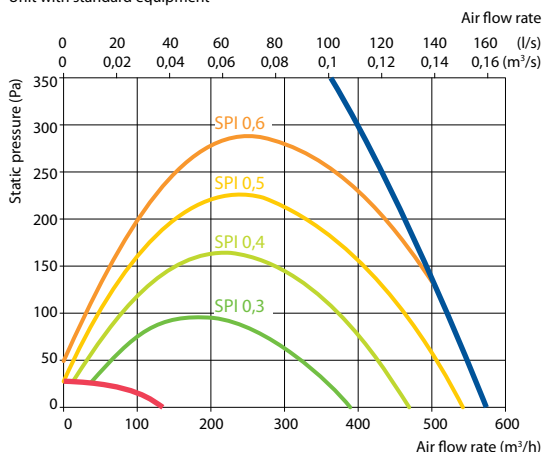
A-weighted sound pressure level L_{PA} , dB(A)

10 m² normally isolated room, distance from casing – 3 m.

Surroundings	38
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Performance

Unit with standard equipment



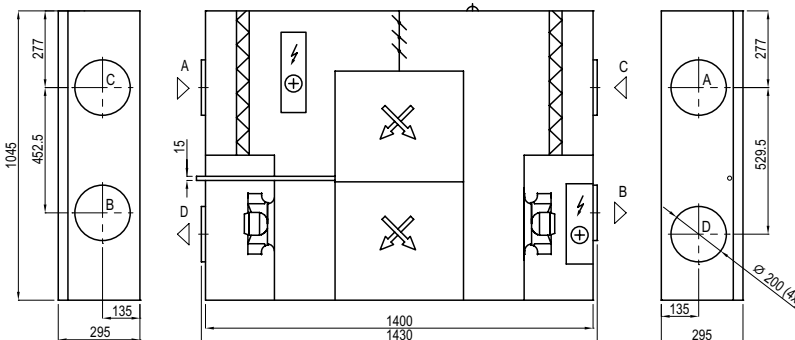
Temperature efficiency

	Winter					Summer		
Outdoor temperature, °C	-23	-15	-10	-5	0	25	30	35
After heat exchanger*, °C	17,4*	18,0*	18,2*	18,2	18,8	22,4	23,2	24

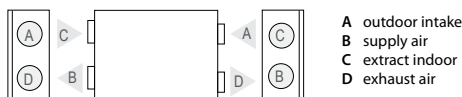
indoor +22°C, 20 % RH.

* calculations made after evaluation of the preheater.

Shown as right (R2)



Shown as left (L2)



Mounting positions

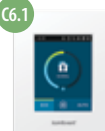


Accessories

Closing damper	AGUJ-M-200+LF230/CM230
Silencer	A/D AGS-200-50-600-M B/C AGS-200-50-900-M
Water heater	DH-200
PPU	PPU-HW-3R-15-0,4-W2
2-way valve (heater)	VVP47.10-0,4

Water cooler	DCW-0,5-3
2-way valve (cooler)	VVP47.10-1,6
Outdoor grill	LD-200
Water heater-cooler	DHCW-200
DX heater-cooler	DCF-0,5-3
Heat pump unit	MOU-12HFN8+KA8140

C6.1



C6.2



Domekt CF 700 V C6

Maximal air flow, m³/h	637
Maximal air flow, l/s	177
Reference flow rate, m³/s	0,124
Reference pressure difference, Pa	50
SPI, W/(m³/h)	0,30
Thermal efficiency of heat recovery, %	88
Electric air heater capacity, kW / Δt, °C	0,5/3,3
Electric preheater capacity, kW / Δt, °C	1,5/9,8
Supply voltage, V	1~230
Maximal operating current HE, A	11,7
Electric power input of the fan drive at maximum flow rate, W	179
Electric power input of the fan drive at reference flow rate, W	73
Filters dimensions BxHxL, mm	390x300x46
Unit dimensions BxHxL, mm	495x1220x1020
Maintenance space, mm	1000
Unit weight, kg	100

Acoustic data

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

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

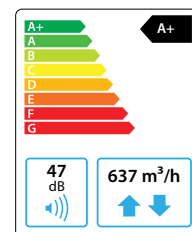
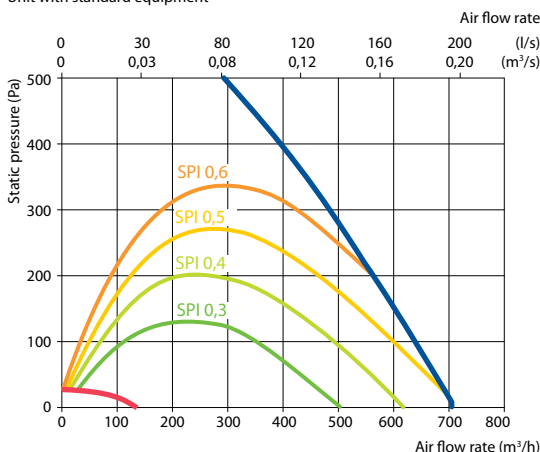
A-weighted sound pressure level L_{pA} dB(A)

10 m² normally isolated room, distance from casing – 3 m.

Surroundings	36
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Performance

Unit with standard equipment



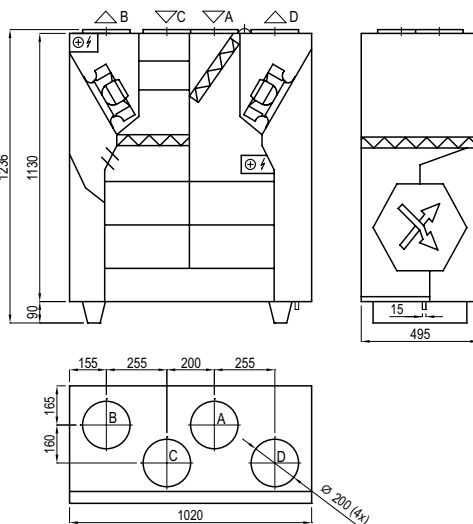
Temperature efficiency

	Winter					Summer		
Outdoor temperature, °C	-23	-15	-10	-5	0	25	30	35
After heat exchanger*, °C	17,3*	17,9*	18,1*	18,1	18,8	22,4	23,2	23,9

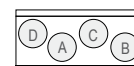
indoor +22°C, 20 % RH.

* calculations made after evaluation of the preheater.

Shown as left (L1)



Shown as right (R1)



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

Accessories

Closing damper	AGUJ-M-200+LF230/CM230
Silencer	A/D AGS-200-50-600-M
	B/C AGS-200-50-900-M
Water heater	DH-200
PPU	PPU-HW-3R-15-0,4-W2
2-way valve (heater)	VVP47.10-0,4

Water cooler	DCW-0,7-5
2-way valve (cooler)	VVP47.15-2,5
Outdoor grill	LD-200
Water heater-cooler	DHCW-200
DX heater-cooler	DCF-0,7-5
Heat pump unit	MOU-18HFN8+KA8140



Domekt CF 700 H C6M

Maximal air flow, m ³ /h	641
Maximal air flow, l/s	178
Reference flow rate, m ³ /s	0,125
Reference pressure difference, Pa	50
SPI, W/(m ³ /h)	0,27
Thermal efficiency of heat recovery, %	87
Electric air heater capacity, kW / Δt, °C	0,5/3,2
Electric preheater capacity, kW / Δt, °C	1,5/9,7
Supply voltage, V	1~230
Maximal operating current HE, A	11,6
Electric power input of the fan drive at maximum flow rate, W	178
Electric power input of the fan drive at reference flow rate, W	66
Filters dimensions BxHxL, mm	390x300x46
Unit dimensions BxHxL, mm	487x700x1500
Maintenance space, mm	500
Unit weight, kg	95

Acoustic data

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

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

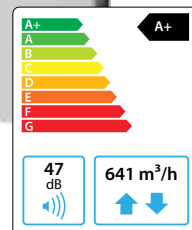
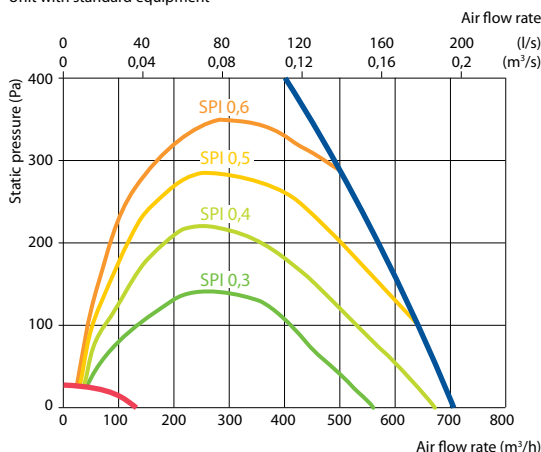
A-weighted sound pressure level L_{PA} , dB(A)

10 m² normally isolated room, distance from casing – 3 m.

Surroundings	36
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Performance

Unit with standard equipment



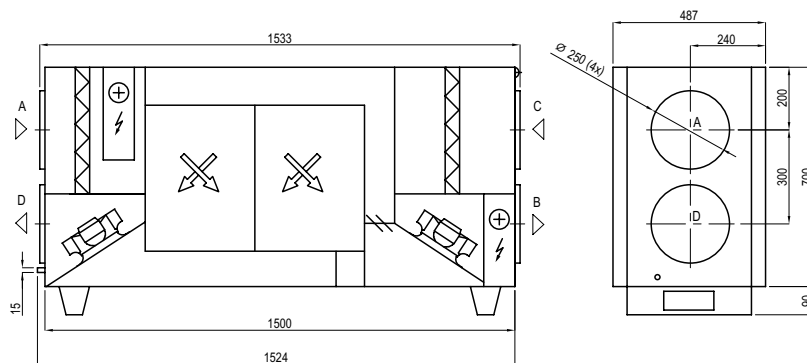
Temperature efficiency

	Winter					Summer		
Outdoor temperature, °C	-23	-15	-10	-5	0	25	30	35
After heat exchanger*, °C	17,6*	18,3*	19*	19	19	22,4	23,1	23,8

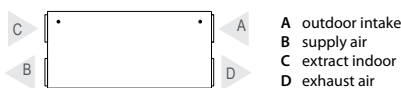
indoor +22°C, 20 % RH.

* calculations made after evaluation of the preheater.

Shown as right (R1)



Shown as left (L1)

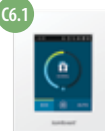


Accessories

Closing damper	AGUJ-M-250+LF230/CM230
Silencer	A/D AGS-250-50-600-M
	B/C AGS-250-50-900-M
Water heater	DH-250
PPU	PPU-HW-3R-15-0,63-W2
2-way valve (heater)	VVP47.10-0,63

Water cooler	DCW-0,7-5
2-way valve (cooler)	VVP47.15-2,5
Outdoor grill	LD-250
Water heater-cooler	DHCW-250
DX heater-cooler	DCF-0,7-5
Heat pump unit	MOU-18HFN8+KA8140

C6.1



C6.2



Domekt CF 700 F C6

Maximal air flow, m ³ /h	720
Maximal air flow, l/s	200
Reference flow rate, m ³ /s	0,14
Reference pressure difference, Pa	50
SPI, W/(m ³ /h)	0,25
Thermal efficiency of heat recovery, %	82
Electric air heater capacity, kW / Δt, °C	0,5/2,9
Electric preheater capacity, kW / Δt, °C	1,5/8,7
Supply voltage, V	1~230
Maximal operating current HE, A	11,7
Electric power input of the fan drive at maximum flow rate, W	177
Electric power input of the fan drive at reference flow rate, W	70
Filters dimensions BxHxL, mm	400x300x46
Unit dimensions BxHxL, mm	875x344x1365
Maintenance space, mm	450
Unit weight, kg	81

Acoustic data

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

Supply inlet	53
Supply outlet	66
Exhaust inlet	53
Exhaust outlet	66
Casing	46

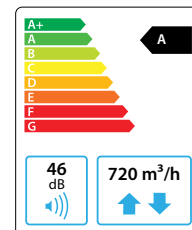
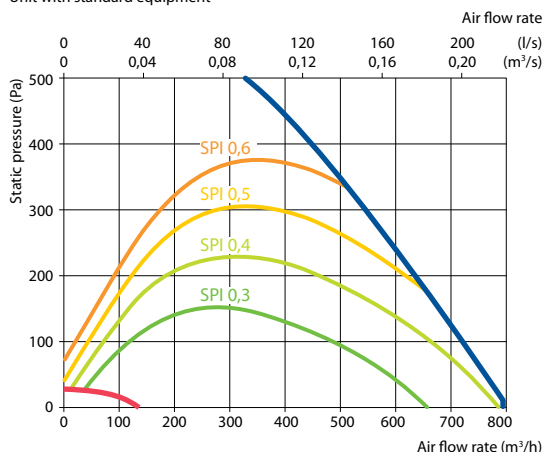
A-weighted sound pressure level L_{PA} dB(A)

10 m² normally isolated room, distance from casing – 3 m.

Surroundings	35
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Performance

Unit with standard equipment



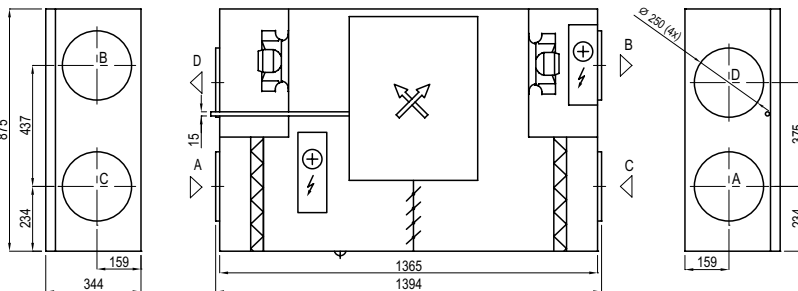
Temperature efficiency

	Winter					Summer		
Outdoor temperature, °C	-23	-15	-10	-5	0	25	30	35
After heat exchanger*, °C	15,5*	16,1*	16,8*	16,8	17,7	22,5	23,4	24,4

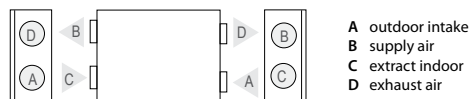
indoor +22°C, 20 % RH.

* calculations made after evaluation of the preheater.

Shown as right (R1)



Shown as left (L1)



Mounting positions



Accessories

Closing damper	AGUJ-M-250+LF230/CM230
Silencer	A/D AGS-250-50-600-M B/C AGS-250-50-900-M
Water heater	DH-250
PPU	PPU-HW-3R-15-0,63-W2
2-way valve (heater)	VVP47.10-0,63

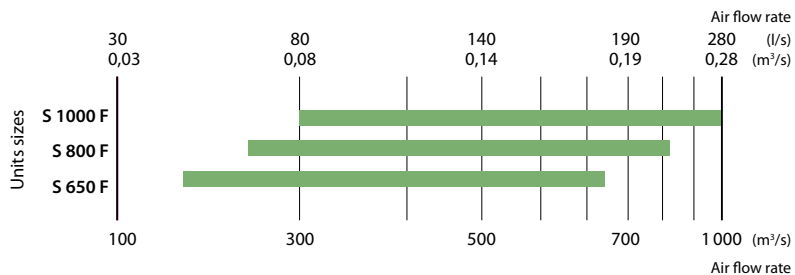
Water cooler	DCW-0,7-5
2-way valve (cooler)	VVP47.15-2,5
Outdoor grill	LD-250
Water heater-cooler	DHCW-250
DX heater-cooler	DCF-0,7-5
Heat pump unit	MOU-18HFN8+KA8140



Domekt S

False ceiling supply air handling units

Sizes and air volumes of Domekt S units



Modifications of Domekt S units

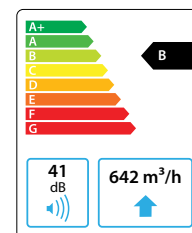
Unit	Supply air filter class		Heater		Cooler		Control system
	ePM1 55%	ePM10 50%	HE	HW	HCW	HCDX	
Domekt S 650 F	○	●	●		△	△	●
Domekt S 800 F	○	●	●	○	△	△	●
Domekt S 1000 F	○	●	●	○	△	△	●

- standard equipment
- possible choice
- △ ordered separately duct heater/cooler

The markings are explained on p. 7.

Domekt S 650 F C5

Maximal air flow, m ³ /h	642
Maximal air flow, l/s	178
Reference flow rate, m ³ /s	0,125
Reference pressure difference, Pa	50
SPI, W/(m ³ /h)	0,15
Electric power input of the fan drive at maximum flow rate, W	172
Electric power input of the fan drive at reference flow rate, W	63
Filters dimensions BxHxL, mm	371x235x46
Unit dimensions BxHxL, mm	475x297x873
Maintenance space, mm	300
Unit weight, kg	35



Acoustic data

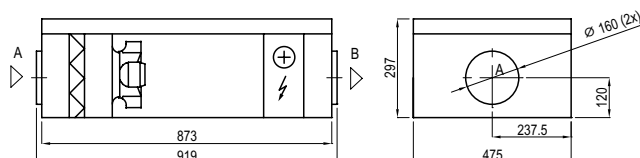
A-weighted sound power level L_{WA} dB(A)
at reference flow rate

Supply inlet	63
Supply outlet	69
Casing	41

A-weighted sound pressure level L_{pA} dB(A)

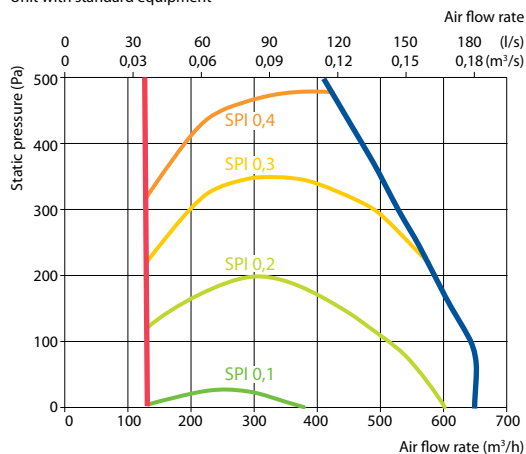
10 m² normally isolated room, distance from casing – 3 m.

Surroundings	30
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Performance

Unit with standard equipment

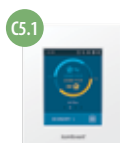


Technical data

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	14,7	19,5
Domekt S 650 F-HE/6	3~400	6,0	10,4	39,1

Accessories

Closing damper	AGUJ-M-160+LF24/CM24
Silencer	A AGS-160-50-600-M B AGS-160-50-900-M
PPU	–
Water cooler	DCW-0,7-5
2-way valve	VVP47.15-2,5+SSP61
Outdoor grill	LD-160
DX cooler	DCF-0,7-5
Cooling unit	MOU-18HFN8+KA8140

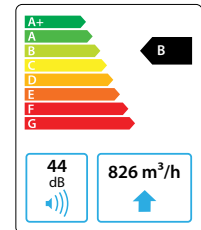


Mounting positions



Domekt S 800 F C5

Maximal air flow, m³/h	826
Maximal air flow, l/s	229
Reference flow rate, m³/s	0,161
Reference pressure difference, Pa	50
SPI, W/(m³/h)	0,14
Electric power input of the fan drive at maximum flow rate, W	181
Electric power input of the fan drive at reference flow rate, W	75
Filters dimensions BxHxL, mm	371x287x46
Unit dimensions BxHxL, mm	475x350x973
Maintenance space, mm	400
Unit weight, kg	37



Acoustic data

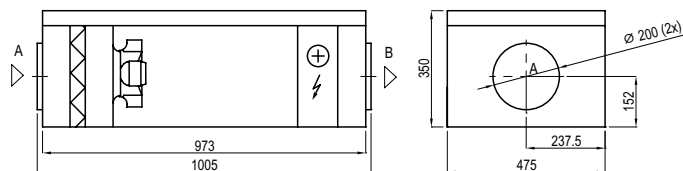
A-weighted sound power level L_{WA} , dB(A)
at reference flow rate

Supply inlet	60
Supply outlet	65
Casing	44

A-weighted sound pressure level L_{PA} , dB(A)

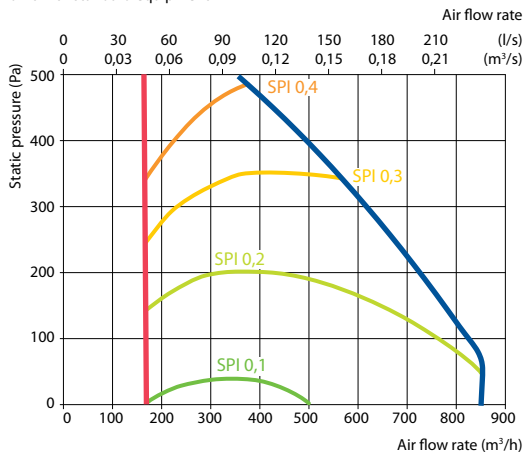
10 m² normally isolated room, distance from casing – 3 m.

Surroundings	33
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Performance

Unit with standard equipment



Technical data

Supply air handling unit	Supply voltage, V	Air heater capacity, kW	Maximal operating current, A	ΔT, °C
Domekt S 800 F-HE/6	3~400	6,0	10,3	30,3
Domekt S 800 F-HE/9	3~400	9,0	14,6	45,5
Domekt S 800 F-HW	1~230	–	1,9	–

Hot water air heater

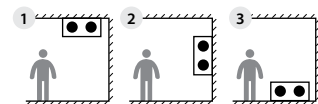
Water temperature in/out, °C	80/60	70/50	60/40
Capacity, kW	6,3	5,2	4,1
Flow rate, dm³/h	277	230	181
Pressure drop, kPa	4,8	3,8	3
Temperature in/out, °C	-5/20,0	-5/15,9	-5/11,6
Maximal capacity, kW	6,3	5,2	4,1
Connection, "	½		

Accessories

Closing damper	AGUJ-M-200+LF24/CM24
Silencer	A AGS-200-50-600-M
	B AGS-200-50-900-M
PPU	PPU-HW-3R-15-1,6-W2
Water cooler	DCW-0,9-6
2-way valve	VVP47.15-2,5+SSP61
Outdoor grill	LD-200
DX cooler	DCF-0,9-6
Cooling unit	MOU-18HFN8+KA8140



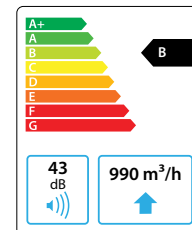
Mounting positions



2 3 with water heater only

Domekt S 1000 F C5

Maximal air flow, m³/h	990
Maximal air flow, l/s	275
Reference flow rate, m³/s	0,193
Reference pressure difference, Pa	50
SPI, W/(m³/h)	0,12
Electric power input of the fan drive at maximum flow rate, W	182
Electric power input of the fan drive at reference flow rate, W	82
Filters dimensions BxHxL, mm	558x287x46
Unit dimensions BxHxL, mm	700x350x893
Maintenance space, mm	400
Unit weight, kg	46



Acoustic data

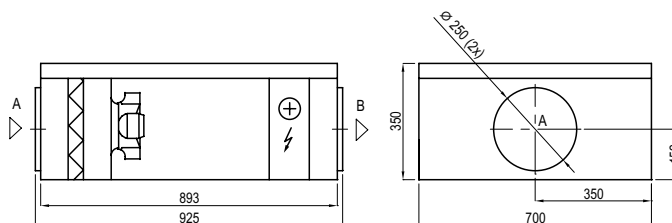
A-weighted sound power level L_{WA} dB(A)
at reference flow rate

Supply inlet	60
Supply outlet	66
Casing	43

A-weighted sound pressure level L_{pA} dB(A)

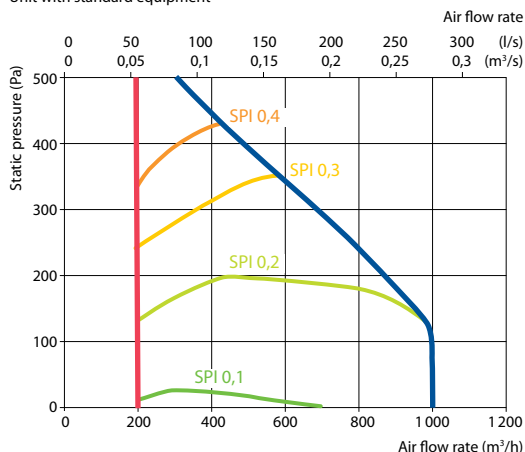
10 m² normally isolated room, distance from casing – 3 m.

Surroundings	32
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Performance

Unit with standard equipment



Technical data

Supply air handling unit	Supply voltage, V	Air heater capacity, kW	Maximal operating current, A	ΔT , °C
Domekt S 1000 F-HE/9	3~400	9,0	14,6	38
Domekt S 1000 F-HE/15	3~400	15,0	23,3	63,3
Domekt S 1000 F-HW	1~230	–	1,9	–

Hot water air heater

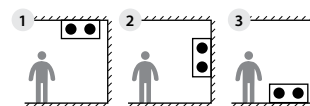
Water temperature in/out, °C	80/60	70/50	60/40
Capacity, kW	8,1	8,0	6,5
Flow rate, dm³/h	358	351	286
Pressure drop, kPa	8,1	7,9	6,0
Temperature in/out, °C	-5/20	-5/19,7	-5/15,2
Maximal capacity, kW	9,4	8,0	6,5
Connection, "	1/2		

Accessories

Closing damper	AGUJ-M-250+LF24/CM24
Silencer	A AGS-250-50-900-M
	B AGS-250-50-1200-M
PPU	PPU-HW-3R-15-1,6-W2
Water cooler	DCW-0,9-6
2-way valve	VVP47.15-2,5+SSP61
Outdoor grill	LD-250
DX cooler	DCF-0,9-6
Cooling unit	MOU-18HFN8+KA8140



Mounting positions



2 3 with water heater only



The widest product range, designed for ventilation of various commercial premises and offering standardized or individual project solutions

VERSO

Efficient and Advanced
Commercial Ventilation



VERSO Standard features



COMPACT UNITS FOR CONVENIENT TRANSPORTATION

- All units can be moved through a standard, 900 mm wide door opening.
- Larger units can be split into separate sections
- We offer mounting frames for all units (except flat ones), which ensures easier transportation.



WIDE RANGE OF FLAT UNITS

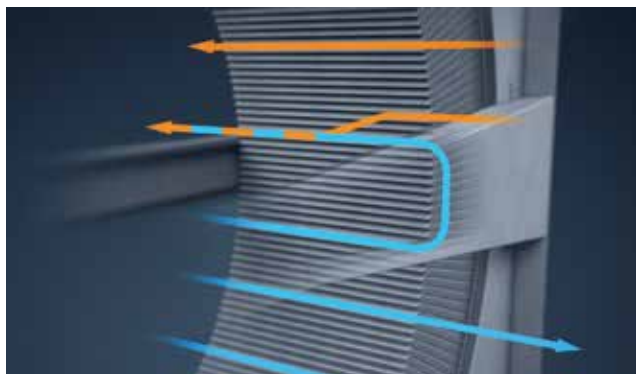
10 different models of low-profile F units for saving space when mounted on the ceiling. Some of the units have optional sliding doors, for easier access when installed above false ceiling constructions. Flat units with rotary heat exchangers as well as supply units can also be mounted on the wall or on the floor if needed*.

* AHU's with water heater only.



SORPTION ROTARY HEAT EXCHANGER

- Sorption rotary heat exchanger controls the humidity in the premises more efficiently than a condensing rotor. Now sorption is an available option for all Verso R Standard units (except Verso R 2000 / 3000 F C5 models).
- The humidity from exhaust air is used to humidify the supply air in winter.
- Wet supplied air in summertime is dried.
- High comfort is ensured all year long.



PURGE SECTOR TO PREVENT AIR MIXING

The purge sector is a solution for units with rotary heat exchangers, allowing to minimize air mixing between the air flows almost to zero. A small part of the supply airflow is directed through the purge sector, thus preventing extracted air to return into the premises.



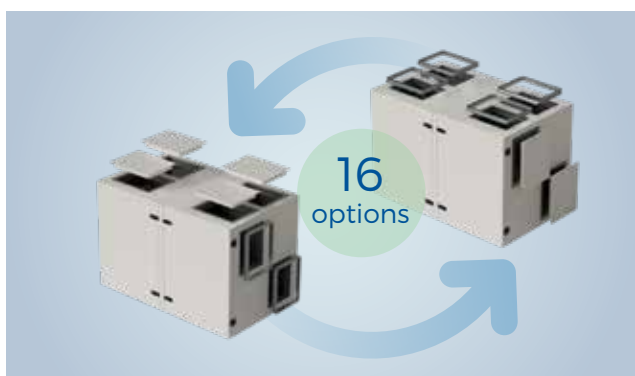
INTEGRATED DX COIL

- All VERSO Standard units of the universal type can be ordered with integrated DX coil.
- Extremely economical air heating even at very low outdoor temperatures.
- Cooling/heating power control.
- Wide range of inverter outdoor units.



MULTI LEVEL FROST PREVENTION OPTION

- Reduces the energy consumption used for heat exchanger defrost.
- Less power of the post-heater is needed to reach desired temperatures in winter conditions.
- For water heaters, smaller size PPU can be used.
- Better seasonal heat recovery efficiency is achieved.



VERSO U UNITS

Duct connections can be relocated from the sides of the unit to the top and vice versa. Each universal unit has 16 different duct layout options that are easy to change during installation, depending on the intended installation location.

EUROVENT CERTIFIED

VERSO units are tested on a regular basis at the Eurovent climatic laboratory in Germany. Parameters such as performance, efficiency, noise level, tolerances and other are tested.

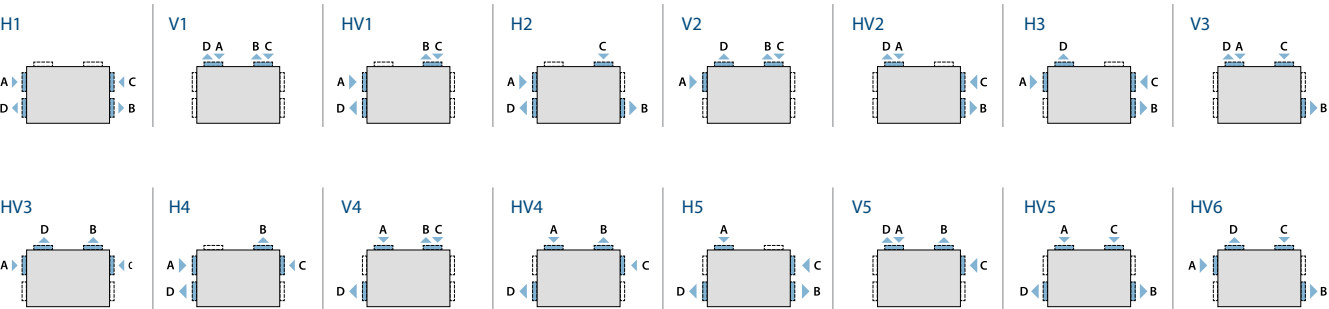


Ducts connection options of universal units

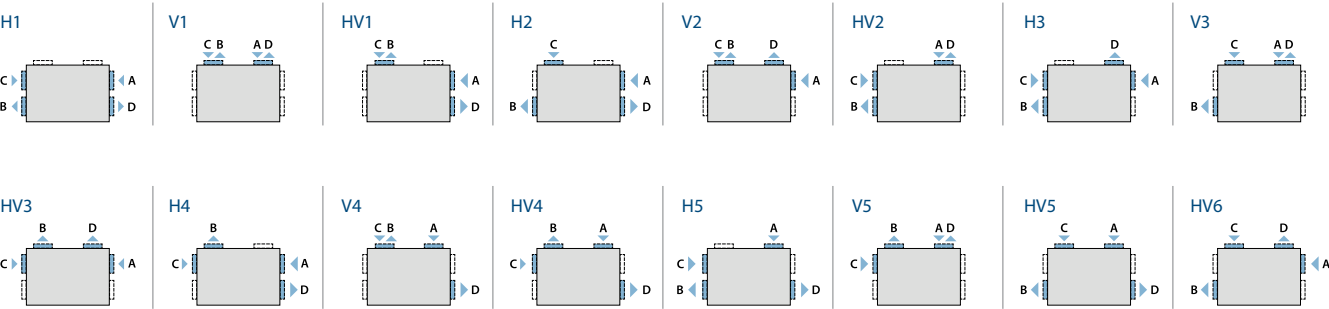
Apply to these models:
Verso R 1000-4000 U C5,
Verso CF 1000-3500 U C5.



RIGHT INSPECTION SIDE



LEFT INSPECTION SIDE



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

VERSO Standard review

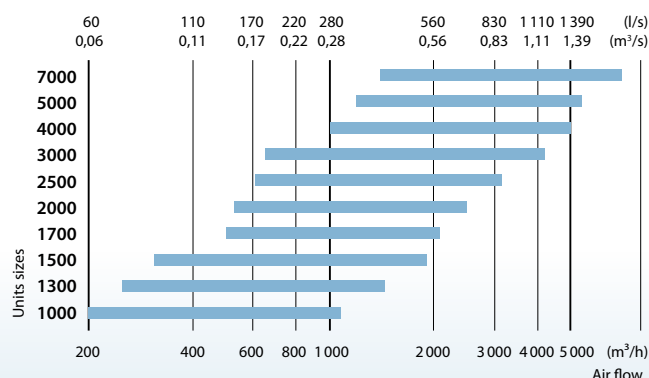
Verso R Standard with rotary heat exchanger

A wide selection of compact units with non-freezing rotary heat exchanger, horizontal, vertical, universal and false ceiling ducts connection.

Verso R Standard units efficiently save energy all year round by significantly reducing both heating and air conditioning costs. Ideal for cold weather countries.

Sorption rotary heat exchangers maintain comfortable climate in the premises.

Sizes and capacities of Verso R Standard

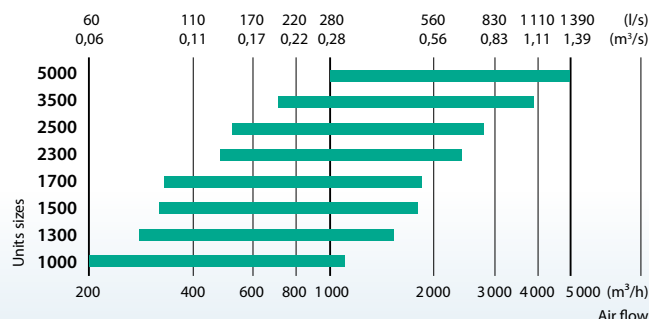


Verso CF Standard with counter flow heat exchanger

A wide selection of compact units with counterflow plate heat exchanger, horizontal, vertical, universal and false ceiling ducts connection.

Verso CF Standard units efficiently save energy all year round by significantly reducing both heating and air conditioning costs. Ideal for mild and warm climate countries.

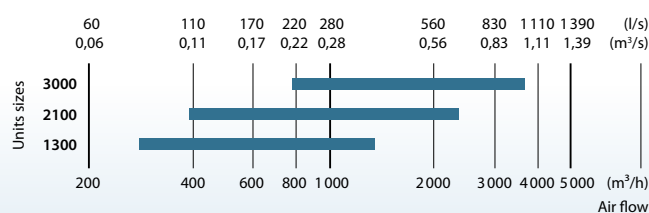
Sizes and capacities of Verso CF Standard



Verso S Standard supply air handling unit

Low-height false ceiling supply air handling units are easily installed even in the smallest premises. All Verso S Standard units have integrated control system, which simplifies units' installation.

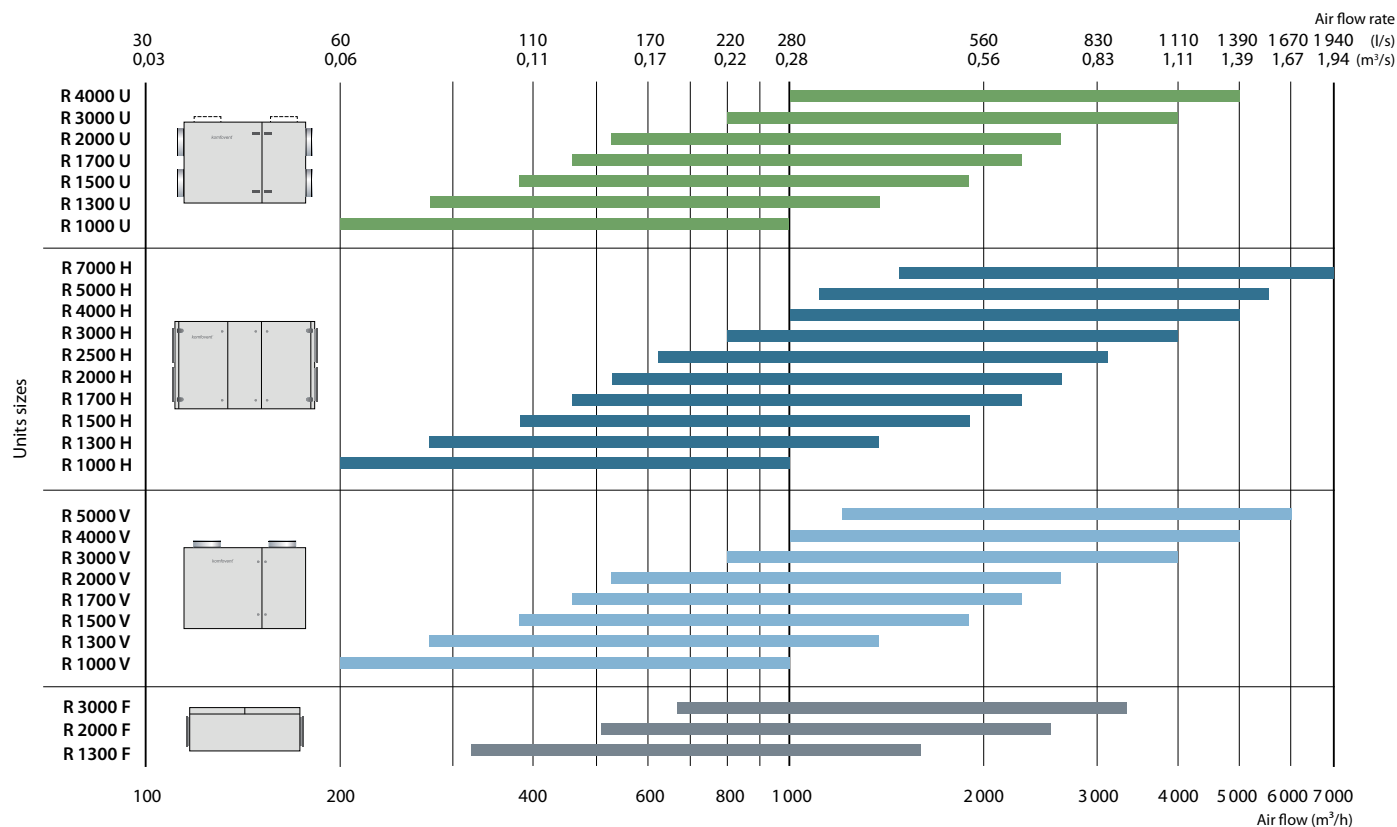
Sizes and capacities of Verso S Standard



Verso R Standard

Air handling units with rotary heat exchanger

Sizes and capacities of Verso R Standard units



Modifications of Verso R Standard units

Unit	Heat exchanger			Supply/exhaust air filter class		Heater			Cooler		Inspection side				Control system
	Condensing L/A	Enthalpy SL/A	Enthalpy L/AZ	ePM1 55%	ePM10 50%	HE	HW	HCW	HCW	HCDX	R1	L1	R2	L2	
Verso R 1000 U	●	○	○	●	●	○		○	△	○	○	○			●
Verso R 1000 H/V	●	○	○	●	●	○	○		△	△	○	○			●
Verso R 1300 U	●	○	○	●	●	○		○	△	○	○	○			●
Verso R 1300 H/V	●	○	○	●	●	○	○		△	△	○	○			●
Verso R 1300 F	●	○	○	●	●	●	△	△	△	△	○	○			●
Verso R 1500 U	●	○	○	●	●	○		○	△	○	○	○			●
Verso R 1500 H/V	●	○	○	●	●	○	○		△	△	○	○			●
Verso R 1700 U	●	○	○	●	●	○		○	△	○	○	○			●
Verso R 1700 H/V	●	○	○	●	●	○	○		△	△	○	○			●
Verso R 2000 U	●	○	○	●	●	○		○	△	○	○	○			●
Verso R 2000 H/V	●	○	○	●	●	○	○		△	△	○	○			●
Verso R 2000 F	○	●		●	●	●	△	△	△	△	○	○			●
Verso R 2500 H	●	○	○	●	●	○	○		△	△	○	○	○	○	●
Verso R 3000 U	●	○	○	●	●	○		○	△	○	○	○			●
Verso R 3000 H/V	●	○	○	●	●	○	○		△	△	○	○			●
Verso R 3000 F	○	●		●	●	●	△		△	△	○	○			●
Verso R 4000 U	●	○	○	●	●	○		○	△	○	○	○			●
Verso R 4000 H/V	●	○	○	●	●	○	○		△	△	○	○			●
Verso R 5000 V	○	●	○	●	●	○	○	○		○	○	○			●
Verso R 5000 H	●	○	○	●	●		●		△	△	○	○	○	○	●
Verso R 7000 H	●	○	○	●	●		●		△	△	○	○			●

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

The markings are explained on p. 7.

Verso R 1000 U C5

Nominal air flow according to ErP 2018, m³/h	983
Nominal air flow according to ErP 2018, l/s	273
Electric air heater capacity, kW / Δt, °C	3/8,9
Supply voltage HE, V	3~400
Supply voltage HW, V	1~230
Maximal operating current HE, A	7,3
Maximal operating current HW, A	3,3
Electric power input of the fan drive at maximum flow rate, W	180
Filters dimensions BxHxL, mm	800x400x46
Unit dimensions BxHxL, mm	906x905x1355
Panel thickness, mm	50
Maintenance space, mm	800
Unit weight, kg	196

Acoustic data

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

Supply inlet	59
Supply outlet	73
Exhaust inlet	59
Exhaust outlet	70
Casing	52

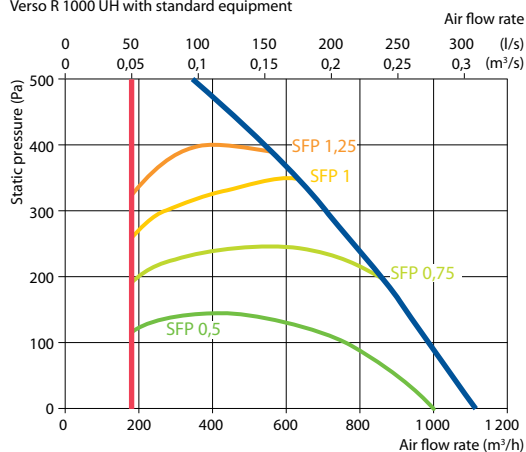
A-weighted sound pressure level L_{PA} , dB(A)

10 m² normally isolated room, distance from casing – 3 m.

Surroundings	42
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Performance

Verso R 1000 UH with standard equipment



Accessories

Closing damper	AGUJ-M-315+LF24/LM24
Silencer	A/D AGS-315-100-900-M B/C AGS-315-100-1200-M
PPU	PPU-HW-3R-15-0,63-W2
Water cooler	DCW-0,9-6
2-way valve	VVP47.15-2,5+SSP61
DX cooler	DCF-0,9-6
Cooling unit	MOU 18HFN8+KA8140



Temperature efficiency

	Winter					Summer		
Outside temperature, °C	-23	-15	-10	-5	0	25	30	35
After heat exchanger, °C	13,7	15,2	16,1	17,0	17,9	22,6	23,5	24,4

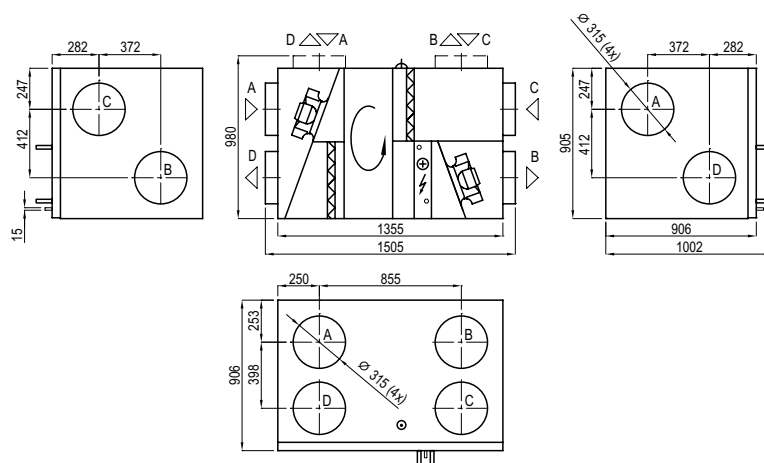
indoor +22°C, 20% RH

Changeover water/ DX heating – cooling exchanger (HCW/HCDX)

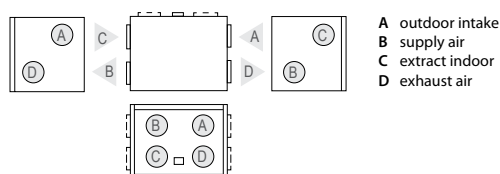
	Winter	Summer	Winter	Summer
Water temperature in/out, °C	60/40	7/12	–	–
Condensation/evaporation T, °C	–	–	45	45/5
Capacity, kW	2,6	5,1	2,6	6,7
Maximal capacity, kW	5,7	6,4	6,1	9,3
Pressure drop, kPa	1,6	4,9	–	–
Air temperature in/out, °C	13,8/22	30/18	13,8/22	30/18
Connection, " / mm	¾		½ / 22	

Summer: 30°C / 50%; HCW – 899 m³/h.

Shown as right (R1)



Shown as left (L1)



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

Verso R 1300 U C5

Nominal air flow according to ErP 2018, m ³ /h	1 468
Nominal air flow according to ErP 2018, l/s	408
Electric air heater capacity, kW / Δt, °C	4,5/9
Supply voltage HE, V	3~400
Supply voltage HW, V	1~230
Maximal operating current HE, A	11,7
Maximal operating current HW, A	5,5
Electric power input of the fan drive at maximum flow rate, W	270
Filters dimensions BxHxL, mm	800x400x46
Unit dimensions BxHxL, mm	906x905x1355
Panel thickness, mm	50
Maintenance space, mm	800
Unit weight, kg	203



Acoustic data

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

Supply inlet	66
Supply outlet	82
Exhaust inlet	67
Exhaust outlet	79
Casing	58

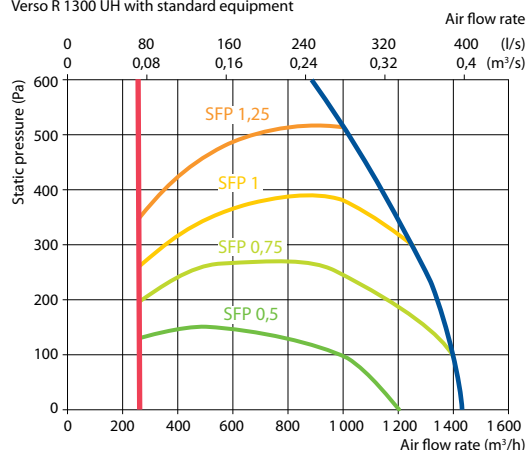
A-weighted sound pressure level L_{PA} , dB(A)

10 m² normally isolated room, distance from casing – 3 m.

Surroundings	48
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Performance

Verso R 1300 UH with standard equipment



Accessories

Closing damper	AGUJ-M-315+LF24/LM24
Silencer	A/D AGS-315-100-900-M B/C AGS-315-100-1200-M
PPU	PPU-HW-3R-15-1-W2
Water cooler	DCW-1,2-8
2-way valve	VVP45.20-4.0+SSB61
DX cooler	DCF-1,2-8
Cooling unit	MOU 36HFN8+KA8243

Temperature efficiency

	Winter					Summer		
Outside temperature, °C	-23	-15	-10	-5	0	25	30	35
After heat exchanger, °C	12,7	14,3	15,4	16,4	17,4	22,6	23,7	24,7

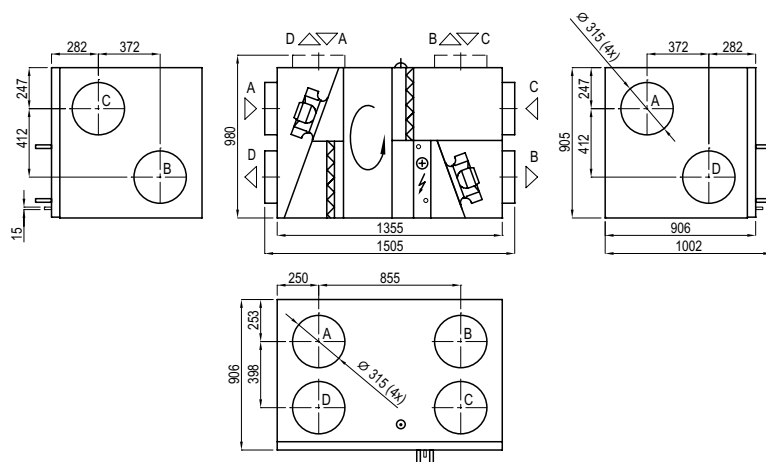
indoor +22°C, 20% RH

Changeover water/ DX heating – cooling exchanger (HCW/HCDX)

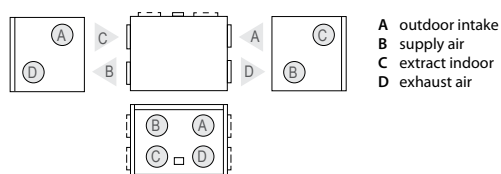
	Winter	Summer	Winter	Summer
Water temperature in/out, °C	60/40	7/12	–	–
Condensation/evaporation T, °C	–	–	45	45/5
Capacity, kW	4,2	7,9	9,6	4,3
Maximal capacity, kW	9,8	8,9	12,0	7,5
Pressure drop, kPa	1,7	9,5	–	–
Air temperature in/out, °C	12,7 / 22	30 / 18	12,7 / 22	30 / 18
Connection, " / mm	¾		½ / 22	

Summer: +30°C/ 50%; HCW – 1350 m³/h

Shown as right (R1)



Shown as left (L1)



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

Verso R 1300 F C5

Nominal air flow according to ErP 2018, m ³ /h	1 134
Nominal air flow according to ErP 2018, l/s	315
Electric air heater capacity, kW / Δt, °C	3/5,7
Supply voltage HE, V	3~400
Supply voltage HW, V	1~230
Maximal operating current HE, A	10,7
Maximal operating current HW, A	6,7
Electric power input of the fan drive at maximum flow rate, W	370
Filters dimensions BxHxL, mm	410x420x46
Unit dimensions BxHxL, mm	940x480x1360
Panel thickness, mm	50
Maintenance space, mm	400
Unit weight, kg	144

Acoustic data

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

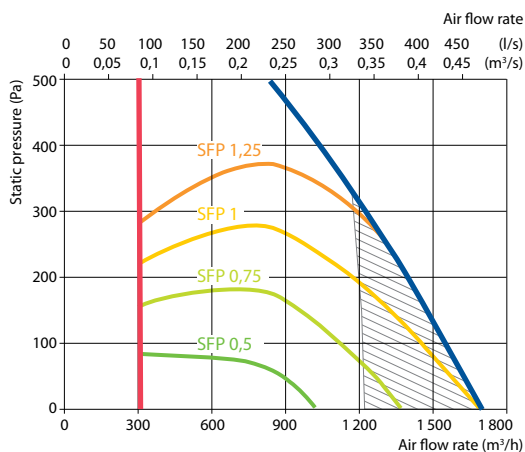
Supply inlet	64
Supply outlet	73
Exhaust inlet	63
Exhaust outlet	72
Casing	54

A-weighted sound pressure level L_{PA} , dB(A)

10 m² normally isolated room, distance from casing – 3 m.

Surroundings	44
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Performance



Accessories

Closing damper	AGUJ-M-315+LF24/LM24
Silencer	A/D AGS-315-100-900-M
	B/C AGS-315-100-1200-M
Water heater	DH-315
PPU	PPU-HW-3R-15-1,0-W2
Air heater-cooler	DCW-1,2-8 / DHCW-315
2-way valve	VVP47.15-2,5+SSP61
DX cooler	DCF-1,2-8
Cooling unit	MOU 24HFN8+KA8243



Temperature efficiency

	Winter						Summer		
Outside temperature, °C	-23	-15	-10	-5	0		25	30	35
After heat exchanger, °C	10,0	12,1	13,5	14,8	16,1		22,8	24,1	25,5

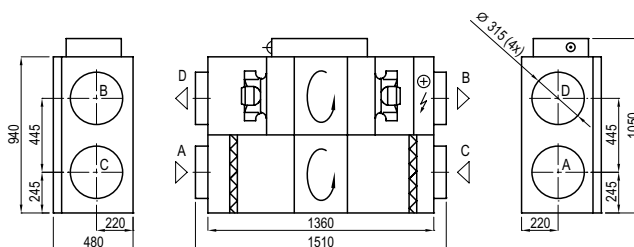
indoor +22°C, 20% RH

Hot water duct air heater (DH)*

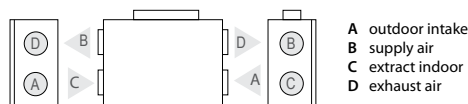
	Winter		
Water temperature in/out, °C	80/60	70/50	60/40
Capacity, kW	4,8	4,8	4,8
Flow rate, dm ³ /h	214	213	212
Pressure drop, kPa	10,9	11,0	11
Temperature in/out, °C	10,0 / 22,0		
Maximal capacity, kW	12,4	10,2	8,0
Connection, "	½		

* option

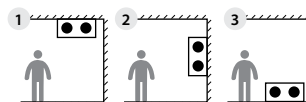
Shown as right (R1)



Shown as left (L1)



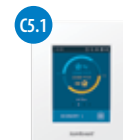
Mounting positions



2 3 with water heater only

Verso R 1500 U C5

Nominal air flow according to ErP 2018, m ³ /h	1 634
Nominal air flow according to ErP 2018, l/s	454
Electric air heater capacity, kW / Δt, °C	4,5/7
Supply voltage HE, V	3~400
Supply voltage HW, V	1~230
Maximal operating current HE, A	12,9
Maximal operating current HW, A	6,7
Electric power input of the fan drive at maximum flow rate, W	450
Filters dimensions BxHxL, mm	800x400x46
Unit dimensions BxHxL, mm	906x905x1355
Panel thickness, mm	50
Maintenance space, mm	800
Unit weight, kg	206



Acoustic data

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

Supply inlet	60
Supply outlet	75
Exhaust inlet	60
Exhaust outlet	71
Casing	54

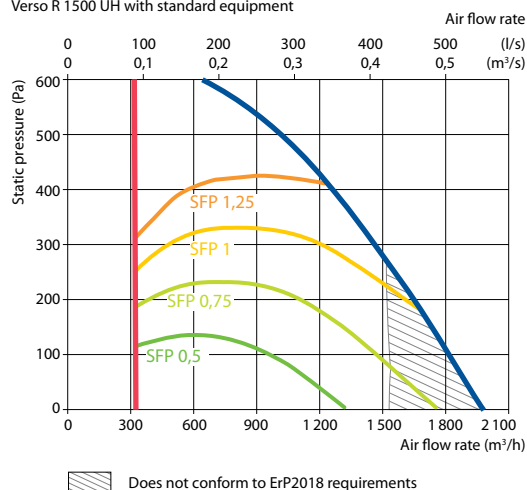
A-weighted sound pressure level L_{PA} , dB(A)

10 m² normally isolated room, distance from casing – 3 m.

Surroundings	44
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Performance

Verso R 1500 UH with standard equipment



Temperature efficiency

	Winter					Summer		
Outside temperature, °C	-23	-15	-10	-5	0	25	30	35
After heat exchanger, °C	12,3	14,0	15,1	16,2	17,2	22,6	23,7	24,8

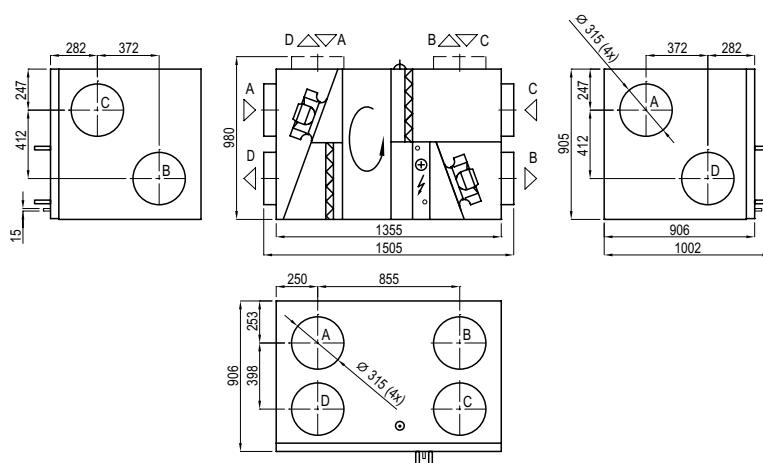
indoor +22°C, 20% RH

Changeover water/ DX heating – cooling exchanger (HCW/HCDX)

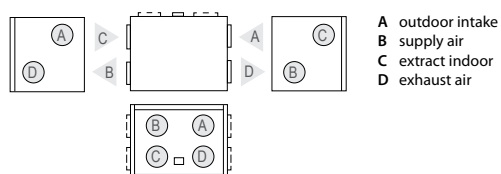
	Winter	Summer	Winter	Summer
Water temperature in/out, °C	60/40	7/12	–	–
Condensation/evaporation T, °C	–	–	45	45/5
Capacity, kW	5,0	9,1	5,3	10,4
Maximal capacity, kW	10,9	9,7	8,2	12,6
Pressure drop, kPa	1,7	11,8	–	–
Air temperature in/out, °C	12,3 / 22	30 / 18,1	12,3 / 22	30 / 18
Connection, " / mm	¾		½	22

Summer: +30°C/ 50%; DX – 1500 m³/h

Shown as right (R1)



Shown as left (L1)



Accessories

Closing damper	AGUJ-M-315+LF24/LM24
Silencer	A/D AGS-315-100-900-M B/C AGS-315-100-1200-M
PPU	PPU-HW-3R-15-1,6-W2
Water cooler	DCW-1,4-9
2-way valve	VVP47.20-4,0+SSP61
DX cooler	DCF-1,4-10
Cooling unit	MOU 36HFN8+KA8243

Verso R 1700 U C5

Nominal air flow according to ErP 2018, m³/h	1 799
Nominal air flow according to ErP 2018, l/s	500
Electric air heater capacity, kW / Δt, °C	4,5/6,6
Supply voltage HE, V	3~400
Supply voltage HW, V	1~230
Maximal operating current HE, A	12,9
Maximal operating current HW, A	6,7
Electric power input of the fan drive at maximum flow rate, W	470
Filters dimensions BxHxL, mm	800x450x46
Unit dimensions BxHxL, mm	910x1000x1485
Panel thickness, mm	50
Maintenance space, mm	800
Unit weight, kg	220

Acoustic data

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

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

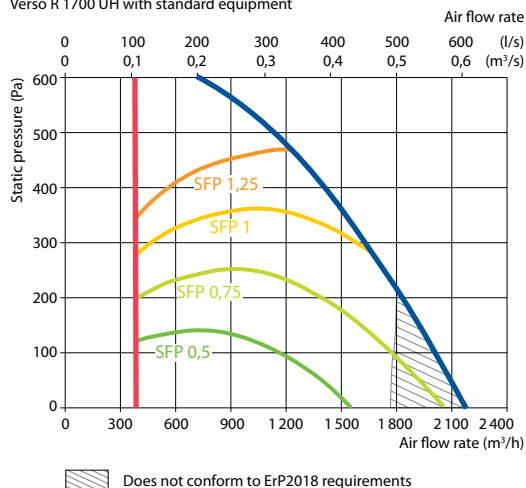
A-weighted sound pressure level L_{PA} , dB(A)

10 m² normally isolated room, distance from casing – 3 m.

Surroundings	45
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Performance

Verso R 1700 UH with standard equipment



Accessories

Closing damper	H	SRU-M-300x400+LF24/LM24
	V	SRU-M-400x300+LF24/LM24
Silencer	A/D	STS-IVR3BA-600-300-700-S
	B/C	STS-IVR3BA-600-300-1250-S
PPU		PPU-HW-3R-15-1,6-W2
Air heater-cooler		DCW-1,6-11
2-way valve		VVP47.20-4,0+SSP61
DX cooler		DCF-1,6-11
Cooling unit		MOU 36HFN8+KA8243



Temperature efficiency

	Winter					Summer		
Outside temperature, °C	-23	-15	-10	-5	0	25	30	35
After heat exchanger, °C	11,5	13,4	14,6	15,7	16,9	22,7	23,9	25,0

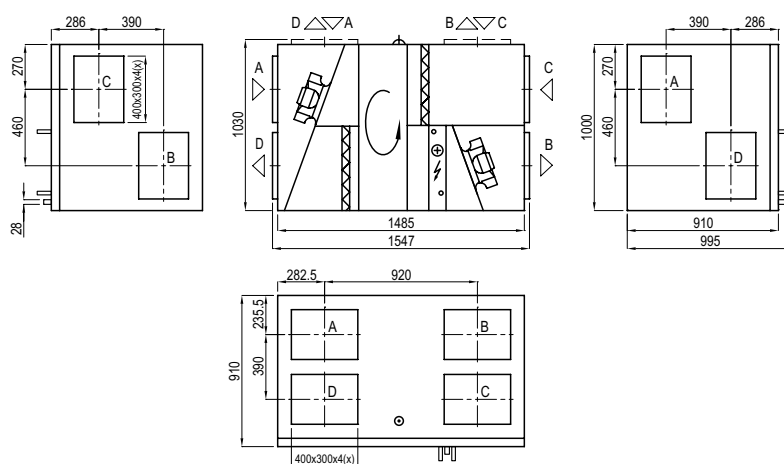
indoor +22°C, 20% RH

Changeover water/ DX heating – cooling exchanger (HCW/HCDX)

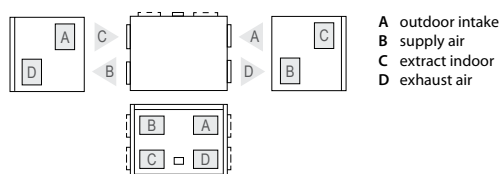
	Winter	Summer	Winter	Summer
Water temperature in/out, °C	60/40	7/12	–	–
Condensation/evaporation T, °C	–	–	45	45/5
Capacity, kW	6,3	10,4	6,3	12,3
Maximal capacity, kW	13,1	11,4	8,9	14,7
Pressure drop, kPa	1,6	6,9	–	–
Air temperature in/out, °C	11,5 / 22	30 / 18	11,5 / 22	30 / 18
Connection, " / mm	1		5/8 / 22	

Summer: +30°C/ 50%

Shown as right (R1)

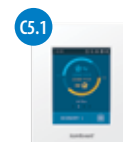


Shown as left (L1)



Verso R 2000 U C5

Nominal air flow according to ErP 2018, m ³ /h	2 159
Nominal air flow according to ErP 2018, l/s	600
Electric air heater capacity, kW / Δt, °C	7,5/8,4
Supply voltage HE, V	3~400
Supply voltage HW, V	1~230
Maximal operating current HE, A	16,9
Maximal operating current HW, A	6,3
Electric power input of the fan drive at maximum flow rate, W	650
Filters dimensions BxHxL, mm	800x450x46
Unit dimensions BxHxL, mm	910x1000x1485
Panel thickness, mm	50
Maintenance space, mm	800
Unit weight, kg	210



Acoustic data

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

Supply inlet	64
Supply outlet	79
Exhaust inlet	64
Exhaust outlet	76
Casing	56

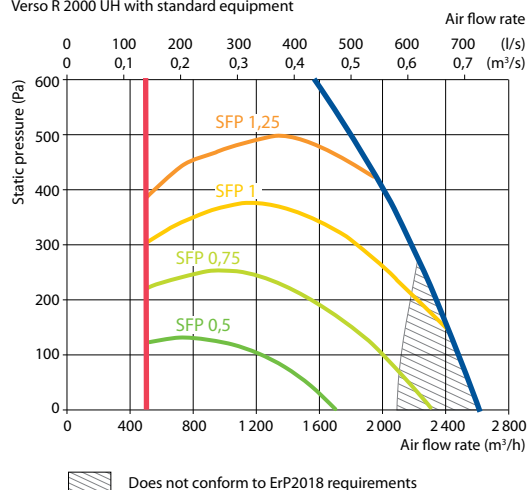
A-weighted sound pressure level L_{PA} , dB(A)

10 m² normally isolated room, distance from casing – 3 m.

Surroundings	46
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Performance

Verso R 2000 UH with standard equipment



Temperature efficiency

	Winter					Summer		
Outside temperature, °C	-23	-15	-10	-5	0	25	30	35
After heat exchanger, °C	10,3	12,4	13,7	15,0	16,3	22,8	24,1	25,4

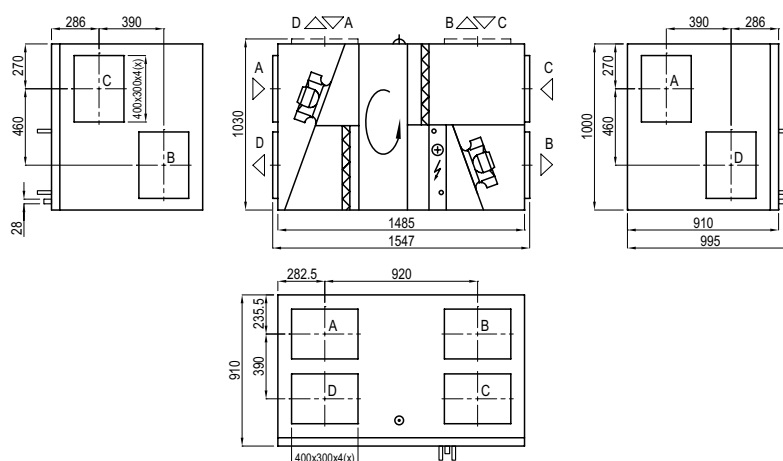
indoor +22°C, 20% RH

Changeover water/ DX heating – cooling exchanger (HCW/HCDX)

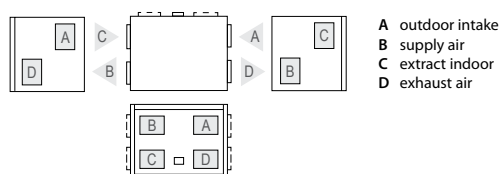
	Winter	Summer	Winter	Summer
Water temperature in/out, °C	60/40	7/12		
Condensation/evaporation T, °C	–	–	45	45/5
Capacity, kW	8,5	12,9	7,7	12,5
Maximal capacity, kW	15,9	12,9	9,6	14,8
Pressure drop, kPa	1,8	9,5	–	–
Air temperature in/out, °C	10,3 / 22	30 / 18,5	9,2 / 22	30 / 18
Connection, " / mm	1		5/8	22

Summer: +30°C/ 50%; DX – 1800 m³/h

Shown as right (R1)



Shown as left (L1)



Accessories

Closing damper	H	SRU-M-300x400+LF24/LM24
	V	SRU-M-400x300+LF24/LM24
Silencer	A/D	STS-IVR3BA-600-400-700-S
	B/C	STS-IVR3BA-600-400-1250-S
PPU		PPU-HW-3R-15-2,5-W2
Air heater-cooler		DCW-2,5-17
2-way valve		VVP45.25-6,3+SSB61
DX cooler		DCF-2,5-17
Cooling unit		MOU-55HFN8+KA8243

Verso R 2000 F C5

Nominal air flow according to ErP 2018, m³/h	2070
Nominal air flow according to ErP 2018, l/s	575
Electric air heater capacity, kW / Δt, °C	7,5/9,3
Supply voltage HE, V	3~400
Supply voltage HW, V	1~230
Maximal operating current HE, A	16,8
Maximal operating current HW, A	6,3
Electric power input of the fan drive at maximum flow rate, W	670
Filters dimensions BxHxL, mm	560x420x96
Unit dimensions BxHxL, mm	1210x527x2060
Panel thickness, mm	50
Maintenance space, mm	400
Unit weight, kg	280

Acoustic data

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

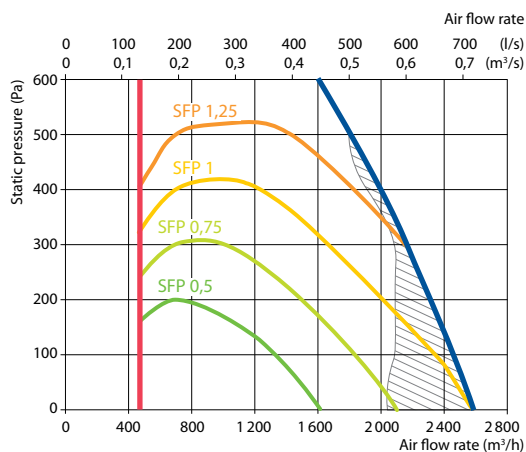
Supply inlet	69
Supply outlet	79
Exhaust inlet	69
Exhaust outlet	79
Casing	59

A-weighted sound pressure level L_{PA} , dB(A)

10 m² normally isolated room, distance from casing – 3 m.

Surroundings	48
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Performance



Accessories

Closing damper	AGUJ-M-355+LF24/LM24
Silencer	A/D AGS-355-100-900-M B/C AGS-355-100-1200-M
Water heater	DH-355
PPU	PPU-HW-3R-15-1,6-W2
Air heater-cooler	DCW-2,0-13/ DHCW-355
2-way valve	VVP47.20-4,0+SSP61
DX cooler	DCF-2,0-14
Cooling unit	MOU-48HFN8+KA8243



Temperature efficiency

	Winter					Summer		
Outside temperature, °C	-23	-15	-10	-5	0	25	30	35
After heat exchanger, °C	14,9	16,2	17,0	17,8	18,5	22,5	23,3	24,0

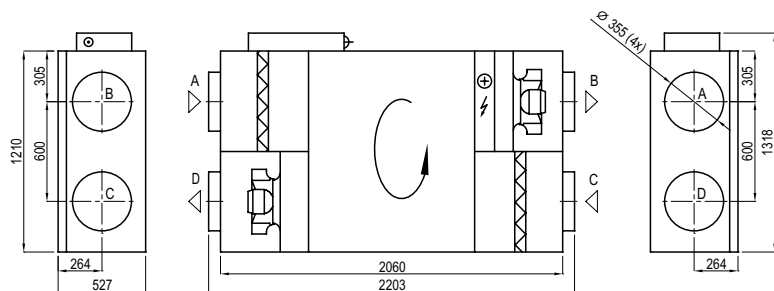
indoor +22°C, 20% RH

Hot water duct air heater (DH)*

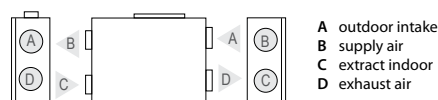
	Winter		
Water temperature in/out, °C	80/60	70/50	60/40
Capacity, kW	5,0	5,0	5,0
Flow rate, dm³/h	221	220,0	219,0
Pressure drop, kPa	12,2	12,3	12,4
Temperature in/out, °C	14,9/22		
Maximal capacity, kW	17,20	13,9	10,5
Connection, "	½		

* option

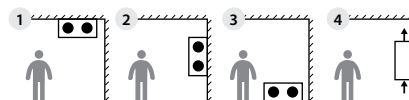
Shown as right (R1)



Shown as left (L1)



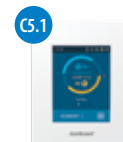
Mounting positions



with water heater only

Verso R 2500 H C5

Nominal air flow according to ErP 2018, m ³ /h	2807
Nominal air flow according to ErP 2018, l/s	780
Electric air heater capacity, kW / Δt, °C	7,5/7,8
Supply voltage HE, V	3~400
Supply voltage HW, V	1~230
Maximal operating current HE, A	18,8
Maximal operating current HW, A	8,3
Electric power input of the fan drive at maximum flow rate, W	520
Filters dimensions BxHxL, mm	792x392-10x500
Unit dimensions BxHxL, mm	1000x1000x1606
Panel thickness, mm	50
Maintenance space, mm	900
Unit weight, kg	289



Acoustic data

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

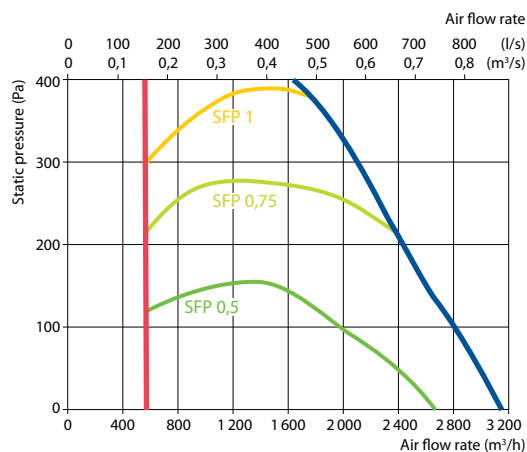
Supply inlet	58
Supply outlet	76
Exhaust inlet	61
Exhaust outlet	72
Casing	59

A-weighted sound pressure level L_{PA} , dB(A)

10 m² normally isolated room, distance from casing – 3 m.

Surroundings	45
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Performance



Accessories

Closing damper	SRU-M-700x300+LF24/LM24
Silencer	A/D STS-IVR3BA-800-300-700-S B/C STS-IVR3BA-800-300-1250-S
PPU	PPU-HW-3R-15-2,5-W2
Air heater-cooler	DCW-2,5-17
2-way valve	VVP45.25-6.3
DX cooler	DCF-2,5-17
Cooling unit	MOU-55HFN8+KA8243

Temperature efficiency

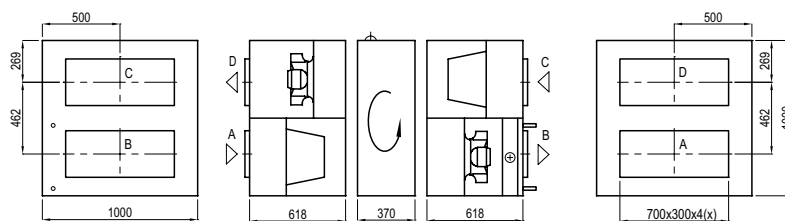
	Winter					Summer		
Outside temperature, °C	-23	-15	-10	-5	0	25	30	35
After heat exchanger, °C	10,4	12,5	13,7	15,0	16,3	22,8	24,1	25,4

indoor +22°C, 20% RH

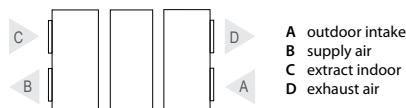
Hot water air heater

	Winter		
Water temperature in/out, °C	80/60	70/50	60/40
Capacity, kW	10,9	10,9	10,9
Flow rate, dm ³ /h	481	479	477
Pressure drop, kPa	3,3	3,3	3,3
Temperature in/out, °C	10,4/22		
Maximal capacity, kW	22,1	17,7	13,2
Connection, "	1/2		

Shown as right (R1)



Shown as left (L1)



Shown as right (R2)



Shown as left (L2)



Verso R 3000 U C5

Nominal air flow according to ErP 2018, m³/h	3 662
Nominal air flow according to ErP 2018, l/s	1017
Electric air heater capacity, kW / Δt, °C	9/6,5
Supply voltage HE, V	3~400
Supply voltage HW, V	3~400
Maximal operating current HE, A	19,8
Maximal operating current HW, A	7,1
Electric power input of the fan drive at maximum flow rate, W	850
Filters dimensions BxHxL, mm	525x510x46
Unit dimensions BxHxL, mm	1150x1150x2100
Panel thickness, mm	50
Maintenance space, mm	1 000
Unit weight, kg	456

Acoustic data

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

Supply inlet	59
Supply outlet	76
Exhaust inlet	59
Exhaust outlet	73
Casing	51

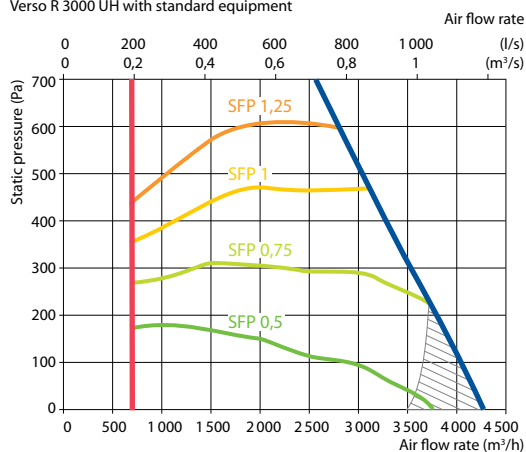
A-weighted sound pressure level L_{PA} , dB(A)

10 m² normally isolated room, distance from casing – 3 m.

Surroundings	40
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Performance

Verso R 3000 UH with standard equipment



Does not conform to ErP2018 requirements

Accessories

Closing damper	H	SRU-M-400x500+LF24/LM24
	V	SRU-M-500x400+LF24/LM24
Silencer	A/D	STS-IVR3BA-600-500-700-S
	B/C	STS-IVR3BA-600-500-1250-S
PPU		PPU-HW-3R-15-2,5-W2
Air heater-cooler		DCW-3,0-20
2-way valve		VVP45.25-6,3+SSB61
DX cooler		DCF-3,0-20-2
Cooling unit		2xMOU36HFN8+KA8243



C5.1



Temperature efficiency

	Winter					Summer		
Outside temperature, °C	-23	-15	-10	-5	0	25	30	35
After heat exchanger, °C	11,0	13,0	14,2	15,4	16,6	22,7	24,0	25,2

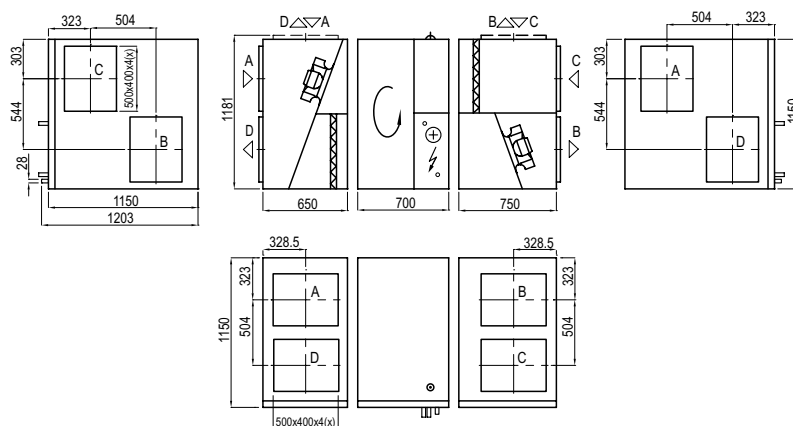
indoor +22°C, 20% RH

Changeover water/ DX heating – cooling exchanger (HCW/HCDX)

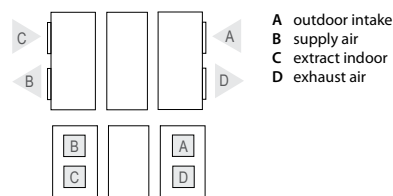
	Winter	Summer	Winter	Summer
Water temperature in/out, °C	60/40	7/12	–	–
Condensation/evaporation T_c , °C	–	–	45	45/5
Capacity, kW	12,8	21,5	11,5	19,6
Maximal capacity, kW	26,0	21,7	20,4	22,9
Pressure drop, kPa	2,0	20,5	–	–
Air temperature in/out, °C	11,0 / 22	30 / 18,0	11,0 / 22	30 / 18
Connection, " / mm	1		½ / 22	

Summer: +30°C/ 50%; DX – 2900 m³/h

Shown as right (R1)



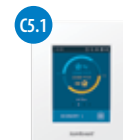
Shown as left (L1)



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

Verso R 3000 F C5

Nominal air flow according to ErP 2018, m ³ /h	2 781
Nominal air flow according to ErP 2018, l/s	773
Electric air heater capacity, kW / Δt, °C	9/7,9
Supply voltage HE, V	3~400
Supply voltage HW, V	3~400
Maximal operating current HE, A	19,8
Maximal operating current HW, A	7,1
Electric power input of the fan drive at maximum flow rate, W	720
Filters dimensions BxHxL, mm	560x540x96
Unit dimensions BxHxL, mm	1210x648x2160
Panel thickness, mm	50
Maintenance space, mm	600
Unit weight, kg	289



Acoustic data

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

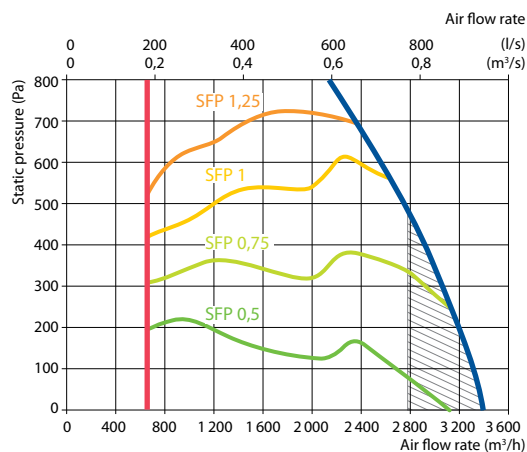
Supply inlet	72
Supply outlet	84
Exhaust inlet	71
Exhaust outlet	85
Casing	60

A-weighted sound pressure level L_{PA} , dB(A)

10 m² normally isolated room, distance from casing – 3 m.

Surroundings	49
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Performance



Does not conform to ErP2018 requirements

Accessories

Closing damper	SRU-M-500x400+LF24/LM24
Silencer	A/D STS-IVR3BA-600-400-700-S
	B/C STS-IVR3BA-600-400-1250-S
Water heater	SVK-700x400-2R
PPU	PPU-HW-3R-15-2.5-W2
Air heater-cooler	DCW-3,0-20
2-way valve	VVP45.25-6.3+SSB61
DX cooler	DCF-3,0-20-2
Cooling unit	2xMOU-36HFN8+KA8243

Temperature efficiency

	Winter					Summer		
Outside temperature, °C	-23	-15	-10	-5	0	25	30	35
After heat exchanger, °C	12,8	14,5	15,5	16,5	17,5	22,6	23,6	24,6

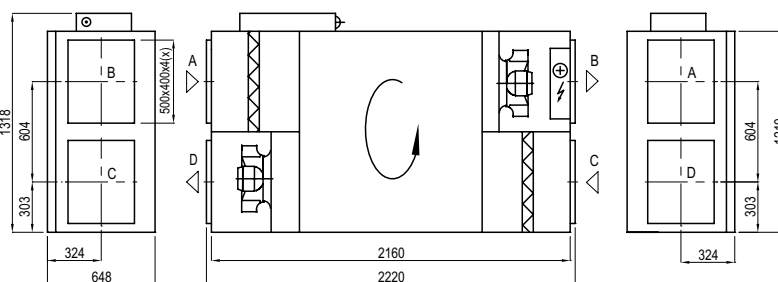
indoor +22°C, 20% RH

Hot water air heater (SVK)*

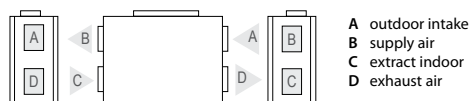
	Winter		
Water temperature in/out, °C	80/60	70/50	60/40
Capacity, kW	10,2	10,2	10,2
Flow rate, dm ³ /h	450	448	446
Pressure drop, kPa	8,1	8,2	8,3
Temperature in/out, °C	12,8 / 22,0		
Maximal capacity, kW	26,0	21,1	16,1
Connection, "	½		

* option

Shown as right (R1)

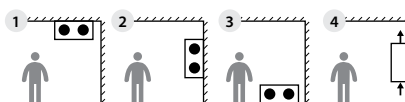


Shown as left (L1)



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

Mounting positions



2 3 4
with water heater only

Verso R 4000 U C5

Nominal air flow according to ErP 2018, m³/h	3754
Nominal air flow according to ErP 2018, l/s	1043
Electric air heater capacity, kW / Δt, °C	15/8,3
Supply voltage HE, V	3~400
Supply voltage HW, V	3~400
Maximal operating current HE, A	31,1
Maximal operating current HW, A	9,7
Electric power input of the fan drive at maximum flow rate, W	1830
Filters dimensions BxHxL, mm	525x510x46
Unit dimensions BxHxL, mm	1150x1150x2100
Panel thickness, mm	50
Maintenance space, mm	1000
Unit weight, kg	518

Acoustic data

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

Supply inlet	59
Supply outlet	76
Exhaust inlet	59
Exhaust outlet	73
Casing	47

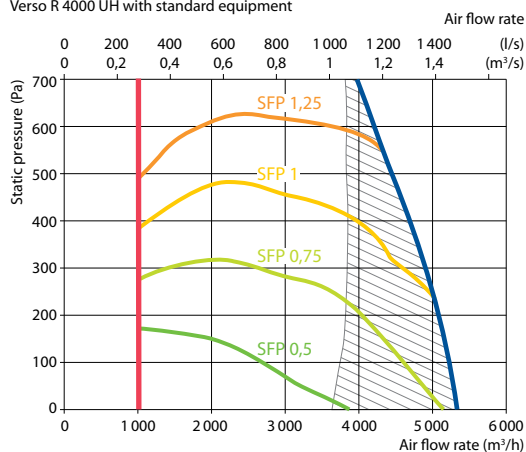
A-weighted sound pressure level L_{PA} , dB(A)

10 m² normally isolated room, distance from casing – 3 m.

Surroundings	36
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Performance

Verso R 4000 UH with standard equipment



Accessories

Closing damper	H	SRU-M-400x500+LF24/LM24
	V	SRU-M-500x400+LF24/LM24
Silencer	A/D	STS-IVR3BA-800-500-700-S
	B/C	STS-IVR3BA-800-500-1250-S
PPU		PPU-HW-3R-25-6.3-W2
Air heater-cooler		DCW-4,5-30
2-way valve		VVP45.25-10+SSC61
DX cooler		DCF-4,5-31-2
Cooling unit		2xMOU-55HFN8+KA8243



Temperature efficiency

	Winter					Summer		
Outside temperature, °C	-23	-15	-10	-5	0	25	30	35
After heat exchanger, °C	10,9	12,9	14,1	15,4	16,6	22,7	24,0	25,2

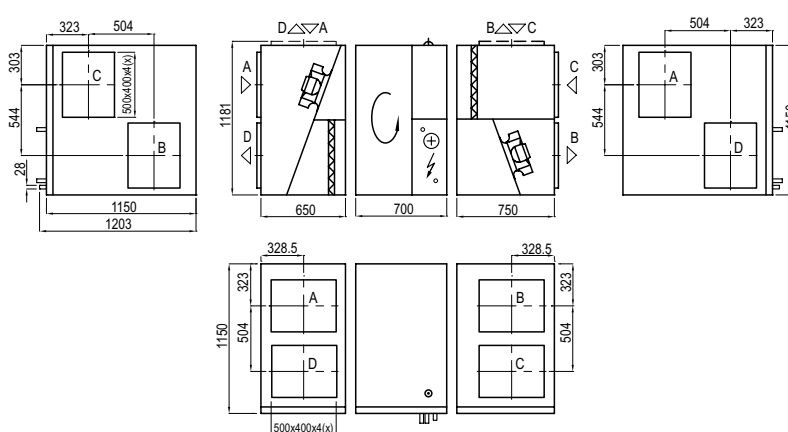
indoor +22°C, 20% RH

Changeover water/ DX heating – cooling exchanger (HCW/HCDX)

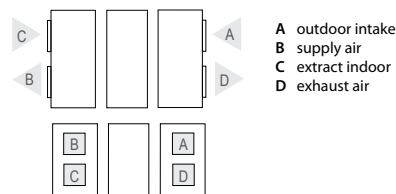
	Winter	Summer	Winter	Summer
Water temperature in/out, °C	60/40	7/12	–	–
Condensation/evaporation T, °C	–	–	45	45/5
Capacity, kW	13,1	21,7	13,1	24,1
Maximal capacity, kW	26,3	21,8	17,6	26,8
Pressure drop, kPa	2	20,9	–	–
Air temperature in/out, °C	10,9 / 22	30 / 18,0	10,9 / 22	30 / 18,0
Connection, " / mm	1		2x5/ 2x22	

Summer: +30°C/ 50%

Shown as right (R1)



Shown as left (L1)



Verso R 5000 V C5

Nominal air flow according to ErP 2018, m ³ /h	5 160
Nominal air flow according to ErP 2018, l/s	1 433
Electric air heater capacity, kW / Δt, °C	15/8,2
Supply voltage HE, V	3~400
Supply voltage HW, V	3~400
Maximal operating current HE, A	29,5
Maximal operating current HW, A	8,1
Electric power input of the fan drive at maximum flow rate, W	1 215
Filters dimensions BxHxL, mm	650x630x92
Unit dimensions BxHxL, mm	1405x1400x1900
Panel thickness, mm	50
Maintenance space, mm	1 300
Unit weight, kg	600

Acoustic data

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

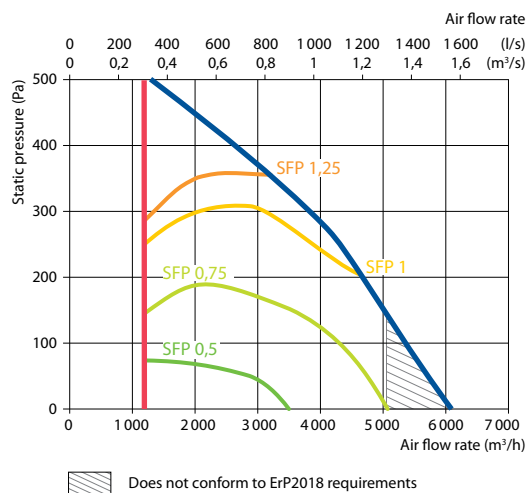
Supply inlet	70
Supply outlet	80
Exhaust inlet	68
Exhaust outlet	83
Casing	61

A-weighted sound pressure level L_{PA} , dB(A)

10 m² normally isolated room, distance from casing – 3 m.

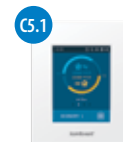
Surroundings	58
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Performance



Accessories

Closing damper	SRU-M-1100x300+LF24/LM24
Silencer	A/D STS-IXY5BU-1250-300-700-S
	B/C STS-11XAMR-1250-300-1250-S
PPU	PPU-HW-3R-20-4-W2
Water cooler	DCW-4,5-30
2-way valve	VVP45.25-10.0+SSC61
DX cooler	DCF-4,5-31-2
Cooling unit	2xMOU-55HFN8+KA8243



Temperature efficiency

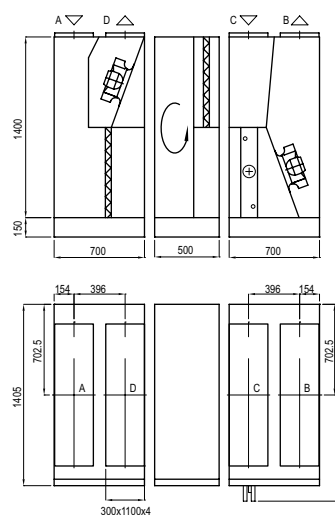
	Winter					Summer		
Outside temperature, °C	-23	-15	-10	-5	0	25	30	35
After heat exchanger, °C	14,9	16,2	17	17,8	18,5	22,5	23,3	24,0

indoor +22°C, 20% RH

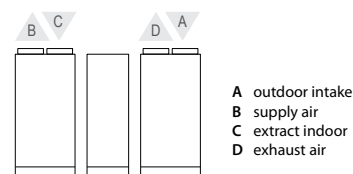
Changeover water/ DX heating – cooling exchanger (HCW/HCDX)

	Winter	Summer	Winter	Summer
Water temperature in/out, °C	60/40	7/12		
Condensation/evaporation T, °C	–	–	45	45/5
Capacity, kW	11,7	31,1	11,7	34,6
Maximal capacity, kW	40	38,8	25	42,8
Pressure drop, kPa	1,8	25,1	–	–
Air temperature in/out, °C	15/22	30/18	15/22	30/18
Connection, " / mm	½		2x½ / 2x22	

Shown as right (R1)



Shown as left (L1)



Verso R 5000 H C5

Nominal air flow according to ErP 2018, m ³ /h	5 355
Nominal air flow according to ErP 2018, l/s	1 488
Supply voltage HW, V	3~400
Maximal operating current HW, A	13,1
Electric power input of the fan drive at maximum flow rate, W	1 000
Filters dimensions BxHxL, mm	592x592-8x500
Unit dimensions BxHxL, mm	1300x1300x1872
Panel thickness, mm	50
Maintenance space, mm	1 200
Unit weight, kg	442



Acoustic data

A-weighted sound power level L_{WAr} dB(A)
at nominal flow rate

Supply inlet	61
Supply outlet	78
Exhaust inlet	64
Exhaust outlet	75
Casing	63

A-weighted sound pressure level L_{pAr} dB(A)

10 m² normally isolated room, distance from casing – 3 m.

Surroundings	50
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Temperature efficiency

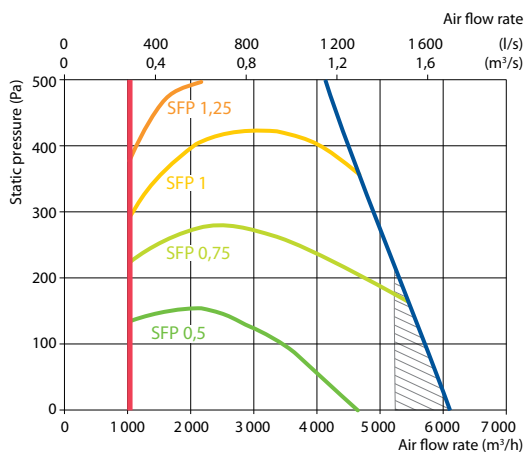
	Winter					Summer		
Outside temperature, °C	-23	-15	-10	-5	0	25	30	35
After heat exchanger, °C	10,5	12,6	13,8	15,1	16,4	22,8	24,0	25,3

indoor +22°C, 20% RH

Hot water air heater

	Winter		
Water temperature in/out, °C	80/60	70/50	60/40
Capacity, kW	20,2	20,2	20,2
Flow rate, dm ³ /h	894	890	881
Pressure drop, kPa	5,3	5,3	5,3
Temperature in/out, °C	10,5 / 22,0	10,5 / 22,0	10,5 / 21,9
Maximal capacity, kW	37,1	29,0	20,1
Connection, "	½		

Performance

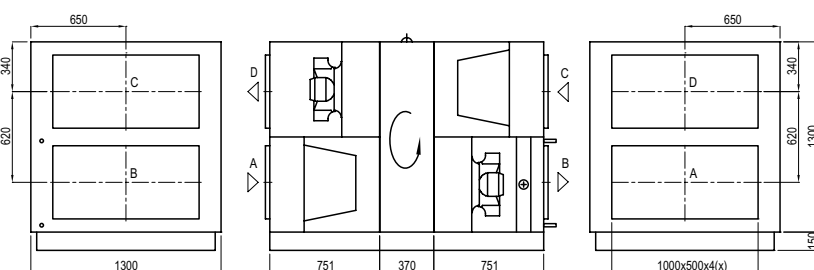


Does not conform to ErP2018 requirements

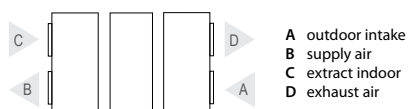
Accessories

Closing damper	SRU-M-1000x500+LF24/LM24
Silencer	A/D STS-IVR3BA-1000-500-700-S
	B/C STS-IVR3BA-1000-500-1250-S
PPU	PPU-HW-3R-20-4,0-W2
Air heater-cooler	DCW-4,5-30
2-way valve	VVP45.25-10.0+SSC61
DX cooler	DCF-4,5-31-2
Cooling unit	2xMOU-55HFN8+KA8243

Shown as right (R1)



Shown as left (L1)



Shown as right (R2)



Shown as left (L2)



Verso R 7000 H C5

Nominal air flow according to ErP 2018, m ³ /h	6657
Nominal air flow according to ErP 2018, l/s	1489
Supply voltage HW, V	3~400
Maximal operating current HW, A	12,9
Electric power input of the fan drive at maximum flow rate, W	1340
Filters dimensions BxHxL, mm	592x592-8x500
Unit dimensions BxHxL, mm	1525x1675x1980
Panel thickness, mm	50
Maintenance space, mm	1500
Unit weight, kg	765



Acoustic data

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

Supply inlet	60
Supply outlet	82
Exhaust inlet	64
Exhaust outlet	82
Casing	59

A-weighted sound pressure level L_{PA} , dB(A)

10 m² normally isolated room, distance from casing – 3 m.

Surroundings	48
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Temperature efficiency

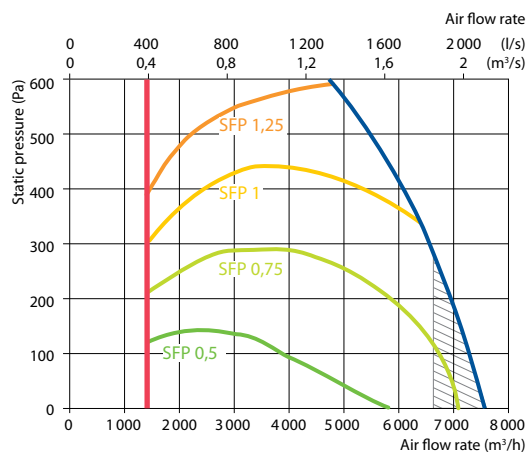
	Winter					Summer		
Outside temperature, °C	-23	-15	-10	-5	0	25	30	35
After heat exchanger, °C	11,1	13,0	14,2	15,4	16,7	22,7	24,0	25,2

indoor +22°C, 20% RH

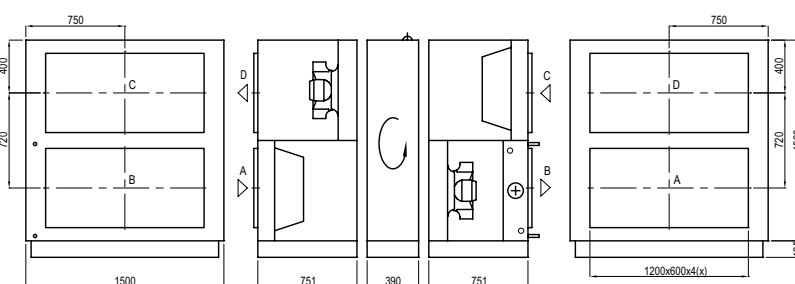
Hot water air heater

	Winter		
Water temperature in/out, °C	80/60	70/50	60/40
Capacity, kW	24,5	24,5	24,5
Flow rate, dm ³ /h	1083	1077	1072
Pressure drop, kPa	8,6	8,8	8,9
Temperature in/out, °C	11,1/22,0		
Maximal capacity, kW	55,2	45,1	34,9
Connection, "	1	1	1

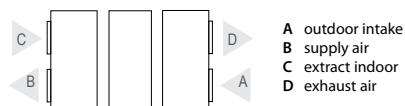
Performance



Shown as right (R1)



Shown as left (L1)



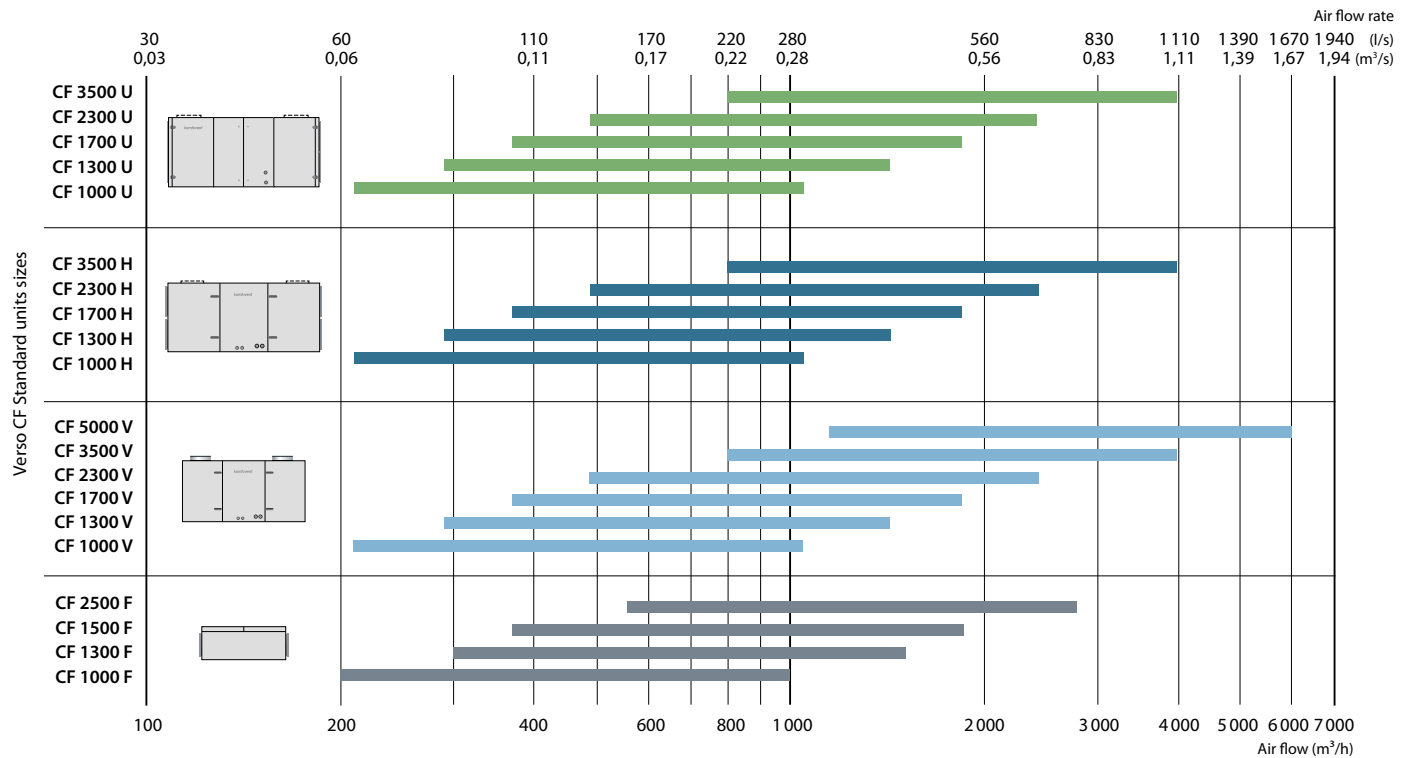
Accessories

Closing damper	SRU-M-1200x600+LF24/LM24
Silencer	A/D STS-IVR3BA-1200-600-700-S
	B/C STS-IVR3BA-1200-600-1250-S
PPU	PPU-HW-3R-20-4,0-W2
Air heater-cooler	DCW-7,0-47
2-way valve	HRB3 32 16+AMB162
DX cooler	DCF-7,0-48-3
Cooling unit	3xMOU-55HFN8+KA8243

Verso CF Standard

Air handling units with counterflow plate heat exchangers

Sizes and capacities of Verso CF Standard units



Modifications of Verso CF Standard units

Unit	Heat exchanger	Multilevel frost prevention	Supply / exhaust air filter class		Heater			Cooler		Inspection side		Control system
			ePM1 55%	ePM10 50%	HE	HW	HCW	HCW	HCDX	R1	L1	
Verso CF 1000 U	●		●	●	○		○	△	○	○	○	●
Verso CF 1000 H / V	●		●	●	○	○		△	△	○	○	●
Verso CF 1000 F	●		●	●	●	△	△	△	△	○	○	●
Verso CF 1300 U	●		●	●	○		○	△	○	○	○	●
Verso CF 1300 H / V	●		●	●	○	○		△	△	○	○	●
Verso CF 1300 F	●		●	●	●	△	△	△	△	○	○	●
Verso CF 1500 F	●		●	●	●	△	△	△	△	○	○	●
Verso CF 1700 U	●		●	●	○		○	△	○	○	○	●
Verso CF 1700 H / V	●		●	●	○	○		△	△	○	○	●
Verso CF 2300 U	●	○	●	●	○		○	△	○	○	○	●
Verso CF 2300 H / V	●	○	●	●	○	○		△	△	○	○	●
Verso CF 2500 F	●		●	●	●	△		△	△	○	○	●
Verso CF 3500 U	●	○	●	●	○		○	△	○	○	○	●
Verso CF 3500 H / V	●	○	●	●	○	○		△	△	○	○	●
Verso CF 5000 V	●	○	●	●	○	○	○		○	○	○	●

- standard equipment
- possible choice
- △ ordered separately duct heater/cooler

The markings are explained on p. 7.

Verso CF 1000 U C5

Nominal air flow according to ErP 2018, m ³ /h	1 055
Nominal air flow according to ErP 2018, l/s	293
Electric air heater capacity, kW / Δt, °C	4,5/12,5
Supply voltage HE, V	3~400
Supply voltage HW, V	1~230
Maximal operating current HE, A	9,5
Maximal operating current HW, A	3,3
Electric power input of the fan drive at maximum flow rate, W	178
Filters dimensions BxHxL, mm	800x400x46
Unit dimensions BxHxL, mm	910x905x1810
Panel thickness, mm	50
Maintenance space, mm	800
Unit weight, kg	269



Acoustic data

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

Supply inlet	56
Supply outlet	74
Exhaust inlet	57
Exhaust outlet	74
Casing	54

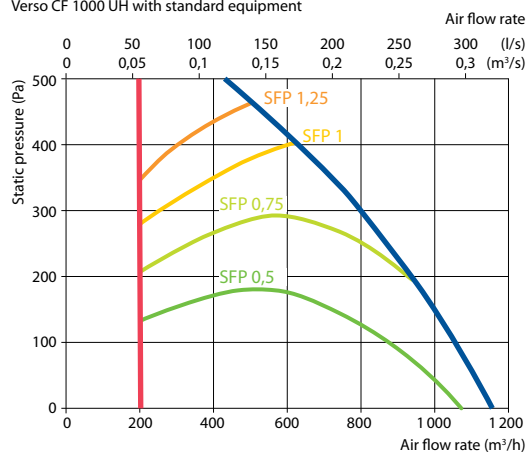
A-weighted sound pressure level L_{PA} , dB(A)

10 m² normally isolated room, distance from casing – 3 m.

Surroundings	43
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Performance

Verso CF 1000 UH with standard equipment



Temperature efficiency

	Winter					Summer		
Outside temperature, °C	-23	-15	-10	-5	0	25	30	35
After heat exchanger, °C	15,2	16,0	16,8	17,1	18,0	22,6	23,5	24,7

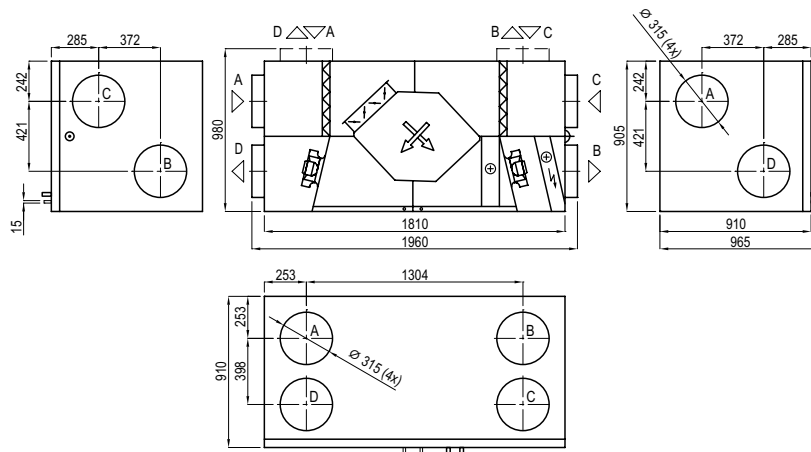
indoor +22°C, 20% RH

Changeover water/ DX heating – cooling exchanger (HCW/HCDX)

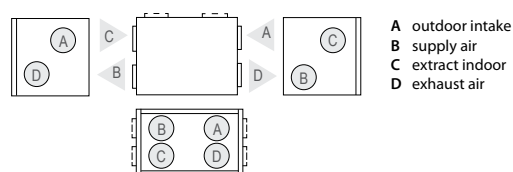
	Winter	Summer	Winter	Summer
Water temperature in/out, °C	60/40	7/12	–	–
Condensation/evaporation T, °C	–	–	45	45/5
Capacity, kW	2,4	6,8	2,4	7,3
Maximal capacity, kW	8,7	8,9	5,2	9,9
Pressure drop, kPa	1,8	34,5	–	–
Air temperature in/out, °C	15,2 / 22	30 / 18	15,2 / 22	30 / 18
Connection, " / mm	½		½ / 22	

Summer: +30°C/ 50%

Shown as right (R1)



Shown as left (L1)



Accessories

Closing damper	AGUJ-M-315+LF24/LM24
Silencer	A/D AGS-315-100-900-M B/C AGS-315-100-1200-M
PPU	PPU-HW-3R-15-0,63-W2
Water cooler	DCW-0,9-6
2-way valve	VVP47.15-2,5+SSP61
DX cooler	DCF-0,9-6
Cooling unit	MOU-18HFN8+KA8140

Verso CF 1000 F C5

Nominal air flow according to ErP 2018, m ³ /h	868
Nominal air flow according to ErP 2018, l/s	241
Electric air heater capacity, kW / Δt, °C	3/10,1
Supply voltage HE, V	3~400
Supply voltage HW, V	1~230
Maximal operating current HE, A	7,3
Maximal operating current HW, A	3,3
Electric power input of the fan drive at maximum flow rate, W	168
Filters dimensions BxHxL, mm	550x420x46
Unit dimensions BxHxL, mm	1100x527x1650
Panel thickness, mm	50
Maintenance space, mm	400
Unit weight, kg	173

Acoustic data

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

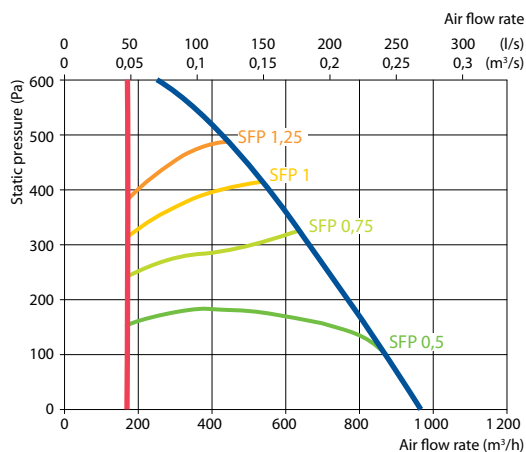
Supply inlet	59
Supply outlet	73
Exhaust inlet	59
Exhaust outlet	73
Casing	54

A-weighted sound pressure level L_{pA} , dB(A)

10 m² normally isolated room, distance from casing – 3 m.

Surroundings	42
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Performance



Accessories

Closing damper	AGUJ-M-315+LF24/LM24
Silencer	A/D AGS-315-100-900-M B/C AGS-315-100-1200-M
Water heater	DH-315
PPU	PPU-HW-3R-15-1,0-W2
Air heater-cooler	DCW-0,9-6 / DHCW-315
2-way valve	VVP47.15-2,5+SSP61
DX cooler	DCF-0,9-6
Cooling unit	MOU-18HFN6+KA8140



Temperature efficiency

	Winter					Summer		
Outside temperature, °C	-23	-15	-10	-5	0	25	30	35
After heat exchanger, °C	17,2	17,4	17,8	18,1	18,7	22,6	23,6	24,7

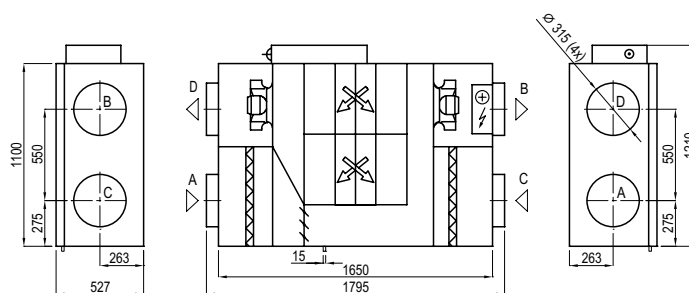
indoor +22°C, 20% RH

Hot water duct air heater (DH)*

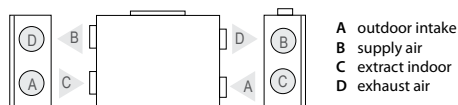
	Winter		
Water temperature in/out, °C	80/60	70/50	60/40
Capacity, kW	1,4	1,4	1,4
Flow rate, dm ³ /h	60	60	60
Pressure drop, kPa	2,3	2,3	2,4
Temperature in/out, °C	17,2/22		
Maximal capacity, kW	8,8	7,0	5,2
Connection, "	½		

* option

Shown as right (R1)



Shown as left (L1)



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

Mounting positions



Verso CF 1300 U C5

Nominal air flow according to ErP 2018, m ³ /h	1341
Nominal air flow according to ErP 2018, l/s	373
Electric air heater capacity, kW / Δt, °C	4,5/9,3
Supply voltage HE, V	3~400
Supply voltage HW, V	1~230
Maximal operating current HE, A	11,7
Maximal operating current HW, A	5,5
Electric power input of the fan drive at maximum flow rate, W	370
Filters dimensions BxHxL, mm	800x400x46
Unit dimensions BxHxL, mm	910x905x1810
Panel thickness, mm	50
Maintenance space, mm	800
Unit weight, kg	225



Acoustic data

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

Supply inlet	62
Supply outlet	81
Exhaust inlet	63
Exhaust outlet	81
Casing	59

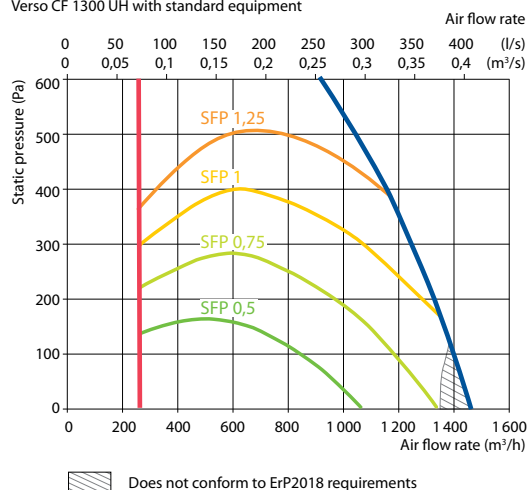
A-weighted sound pressure level L_{PA} , dB(A)

10 m² normally isolated room, distance from casing – 3 m.

Surroundings	48
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Performance

Verso CF 1300 UH with standard equipment



Accessories

Closing damper	AGUJ-M-315+LF24/LM24
Silencer	A/D AGS-315-100-900-M
	B/C AGS-315-100-1200-M
PPU	PPU-HW-3R-15-1-W2
Water cooler	DCW-1,4-9
2-way valve	VVP47.20-4,0+SSP61
DX cooler	DCF-1,4-10
Cooling unit	MOU-36HFN8+KA8243

Temperature efficiency

	Winter					Summer		
Outside temperature, °C	-23	-15	-10	-5	0	25	30	35
After heat exchanger, °C	14,6	15,5	16,4	16,8	17,8	22,6	23,6	24,6

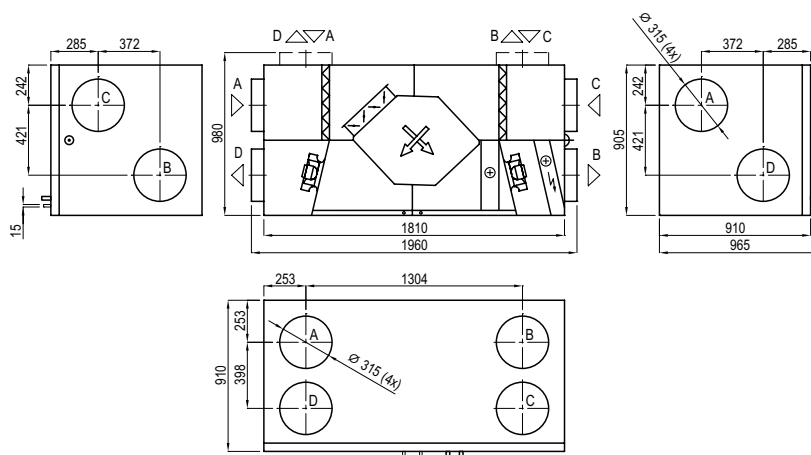
indoor +22°C, 20% RH

Changeover water/ DX heating – cooling exchanger (HCW/HCDX)

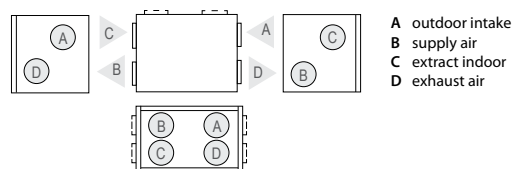
	Winter	Summer	Winter	Summer
Water temperature in/out, °C	60/40	7/12	–	–
Condensation/evaporation T, °C	–	–	45	45/5
Capacity, kW	3,3	8,6	3,3	9,3
Maximal capacity, kW	10,7	10,5	6,2	11,5
Pressure drop, kPa	2,1	53,7	–	–
Air temperature in/out, °C	14,6 / 22	30 / 18	14,6 / 22	30 / 18
Connection, " / mm	½		½ / 22	

Summer: +30°C / 50%

Shown as right (R1)



Shown as left (L1)



Verso CF 1300 F C5

Nominal air flow according to ErP 2018, m³/h	1 317
Nominal air flow according to ErP 2018, l/s	366
Electric air heater capacity, kW / Δt, °C	4,5/9,5
Supply voltage HE, V	3~400
Supply voltage HW, V	1~230
Maximal operating current HE, A	11,7
Maximal operating current HW, A	5,5
Electric power input of the fan drive at maximum flow rate, W	360
Filters dimensions BxHxL, mm	550x420x46
Unit dimensions BxHxL, mm	1100x527x1650
Panel thickness, mm	50
Maintenance space, mm	400
Unit weight, kg	175

Acoustic data

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

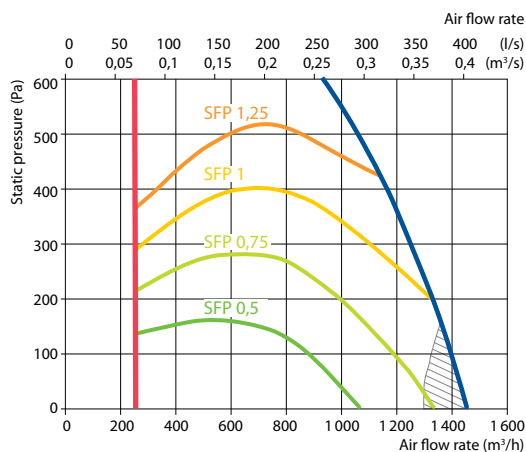
Supply inlet	65
Supply outlet	80
Exhaust inlet	65
Exhaust outlet	80
Casing	59

A-weighted sound pressure level L_{PA} , dB(A)

10 m² normally isolated room, distance from casing – 3 m.

Surroundings	48
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Performance



Accessories

Closing damper	AGUJ-M-315+LF24/LM24
Silencer	A/D AGS-315-100-900-M
	B/C AGS-315-100-1200-M
Water heater	DH-315
PPU	PPU-HW-3R-15-1-W2
Air heater-cooler	DCW-1,4-9 / DHCW-315
2-way valve	VVP47.20-4,0+SSP61
DX cooler	DCF-1,4-10
Cooling unit	MOU-36HFN8+KA8243



Temperature efficiency

	Winter					Summer		
Outside temperature, °C	-23	-15	-10	-5	0	25	30	35
After heat exchanger, °C	16,2	16,5	16,8	17,4	18,1	22,6	23,7	24,9

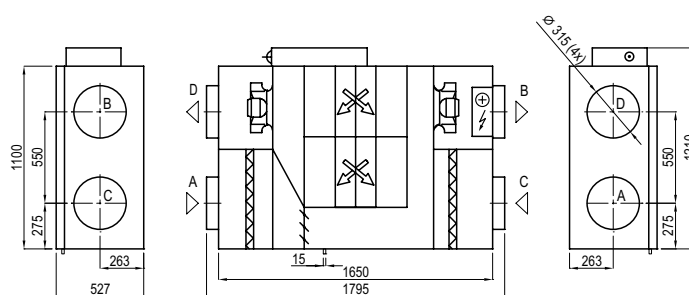
indoor +22°C, 20% RH

Hot water duct air heater (DH)*

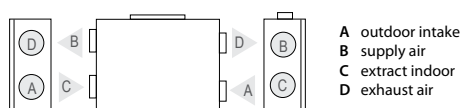
	Winter		
Water temperature in/out, °C	80/60	70/50	60/40
Capacity, kW	2,6	2,6	2,6
Flow rate, dm³/h	115	115	114
Pressure drop, kPa	4,4	4,4	4,4
Temperature in/out, °C	16,2 / 22,0		
Maximal capacity, kW	11,9	9,5	7,1
Connection, "	½		

* option

Shown as right (R1)



Shown as left (L1)



Mounting positions



Verso CF 1500 F C5

Nominal air flow according to ErP 2018, m ³ /h	1 459
Nominal air flow according to ErP 2018, l/s	405
Electric air heater capacity, kW / Δt, °C	4,5/7,9
Supply voltage HE, V	3~400
Supply voltage HW, V	1~230
Maximal operating current HE, A	12,9
Maximal operating current HW, A	6,7
Electric power input of the fan drive at maximum flow rate, W	460
Filters dimensions BxHxL, mm	550x420x46
Unit dimensions BxHxL, mm	1100x527x1650
Panel thickness, mm	50
Maintenance space, mm	400
Unit weight, kg	190



Acoustic data

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

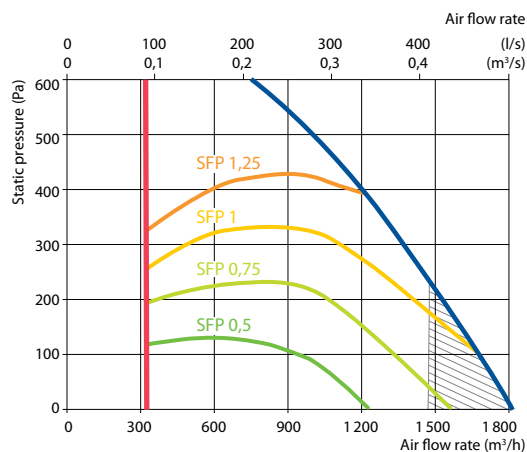
Supply inlet	60
Supply outlet	75
Exhaust inlet	60
Exhaust outlet	74
Casing	57

A-weighted sound pressure level L_{PA} , dB(A)

10 m² normally isolated room, distance from casing – 3 m.

Surroundings	46
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Performance



Temperature efficiency

	Winter					Summer		
Outside temperature, °C	-23	-15	-10	-5	0	25	30	35
After heat exchanger, °C	16,0	16,3	16,6	17,3	18,0	22,6	23,8	25,0

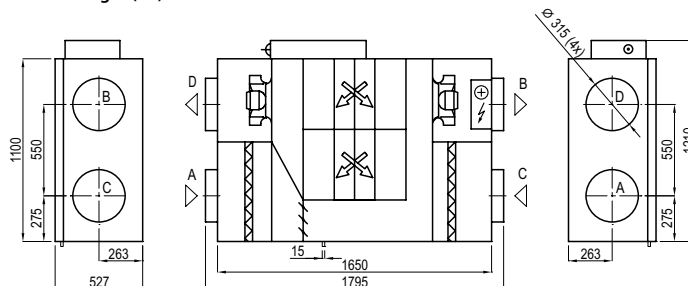
indoor +22°C, 20% RH

Hot water duct air heater (DH)*

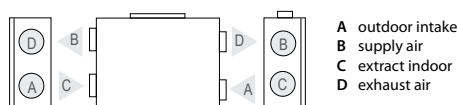
	Winter		
Water temperature in/out, °C	80/60	70/50	60/40
Capacity, kW	3,0	3,0	3,0
Flow rate, dm ³ /h	131	131	131
Pressure drop, kPa	5,2	5,2	5,3
Temperature in/out, °C	16,0 / 22,0		
Maximal capacity, kW	12,6	10,1	7,6
Connection, "	½		

* option

Shown as right (R1)



Shown as left (L1)



Mounting positions



Accessories

Closing damper	AGUJ-M-315+LF24/LM24
Silencer	A/D AGS-315-100-900-M
	B/C AGS-315-100-1200-M
Water heater	DH-315
PPU	PPU-HW-3R-15-1-W2
Air heater-cooler	DCW-1,6-11/DHCW-315
2-way valve	VVP47.20-4,0+SSP61
DX cooler	DCF-1,6-11
Cooling unit	MOU-36HFN8+KA8243

Verso CF 1700 U C5

Nominal air flow according to ErP 2018, m ³ /h	1 416
Nominal air flow according to ErP 2018, l/s	393
Electric air heater capacity, kW / Δt, °C	4,5/8,0
Supply voltage HE, V	3~400
Supply voltage HW, V	1~230
Maximal operating current HE, A	12,9
Maximal operating current HW, A	6,7
Electric power input of the fan drive at maximum flow rate, W	465
Filters dimensions BxHxL, mm	800x400x46
Unit dimensions BxHxL, mm	910x905x1810
Panel thickness, mm	50
Maintenance space, mm	800
Unit weight, kg	243

Acoustic data

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

Supply inlet	58
Supply outlet	75
Exhaust inlet	58
Exhaust outlet	75
Casing	57

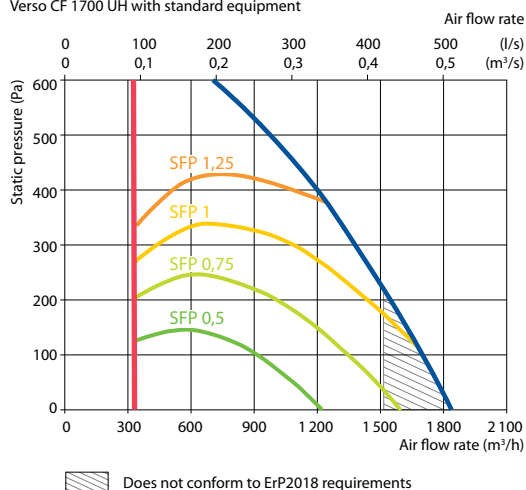
A-weighted sound pressure level L_{PA} , dB(A)

10 m² normally isolated room, distance from casing – 3 m.

Surroundings	46
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Performance

Verso CF 1700 UH with standard equipment



Accessories

Closing damper	AGUJ-M-315+LF24/LM24
Silencer	A/D AGS-315-100-900-M B/C AGS-315-100-1200-M
PPU	PPU-HW-3R-15-1,6-W2
Water cooler	DCW-1,6-11
2-way valve	VVP47.20-4,0+SSP61
DX cooler	DCF-1,6-11
Cooling unit	MOU-36HFN8+KA8243



Temperature efficiency

	Winter					Summer		
Outside temperature, °C	-23	-15	-10	-5	0	25	30	35
After heat exchanger, °C	14,4	15,3	16,2	16,6	17,6	22,6	23,6	24,7

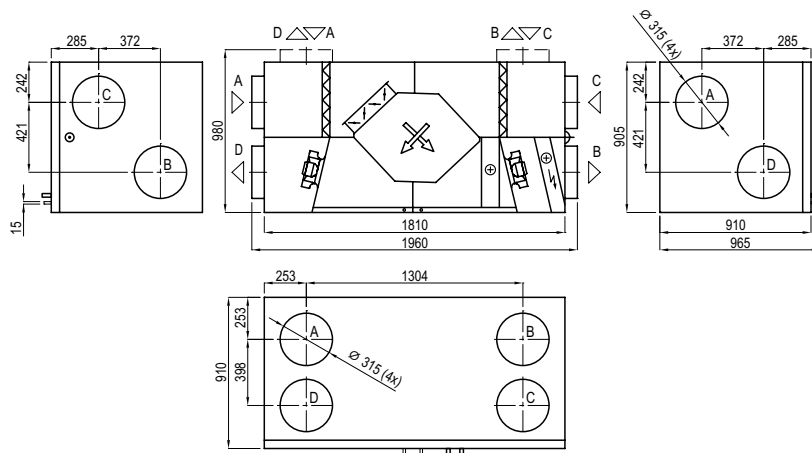
indoor +22°C, 20% RH

Changeover water/ DX heating – cooling exchanger (HCW/HCDX)

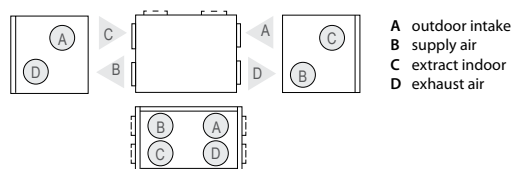
	Winter	Summer	Winter	Summer
Water temperature in/out, °C	60/40	7/12	–	–
Condensation/evaporation T, °C	–	–	45	45/5
Capacity, kW	3,9	9,8	3,7	10,0
Maximal capacity, kW	11,7	11,3	6,5	12,1
Pressure drop, kPa	2,3	67,3	–	–
Air temperature in/out, °C	14,4 / 22	30 / 18	14,4 / 22	30 / 18
Connection, " / mm		½		¾ / 22

Summer: +30°C / 50%; DX – 1450 m³/h

Shown as right (R1)



Shown as left (L1)



Verso CF 2300 U C5

Nominal air flow according to ErP 2018, m ³ /h	1980
Nominal air flow according to ErP 2018, l/s	550
Electric air heater capacity, kW / Δt, °C	7,5/9,3
Supply voltage HE, V	3~400
Supply voltage HW, V	1~230
Maximal operating current HE, A	16,8
Maximal operating current HW, A	6,3
Electric power input of the fan drive at maximum flow rate, W	660
Filters dimensions BxHxL, mm	800x400x46
Unit dimensions BxHxL, mm	910x905x2000
Panel thickness, mm	50
Maintenance space, mm	800
Unit weight, kg	250



Acoustic data

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

Supply inlet	60
Supply outlet	78
Exhaust inlet	60
Exhaust outlet	78
Casing	57

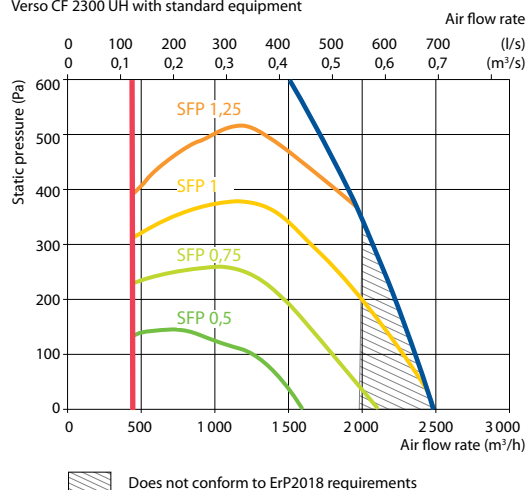
A-weighted sound pressure level L_{PA} , dB(A)

10 m² normally isolated room, distance from casing – 3 m.

Surroundings	47
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Performance

Verso CF 2300 UH with standard equipment



Temperature efficiency

	Winter					Summer		
Outside temperature, °C	-23	-15	-10	-5	0	25	30	35
After heat exchanger, °C	15,7	16,2	16,5	17,2	18,0	22,5	23,4	24,4

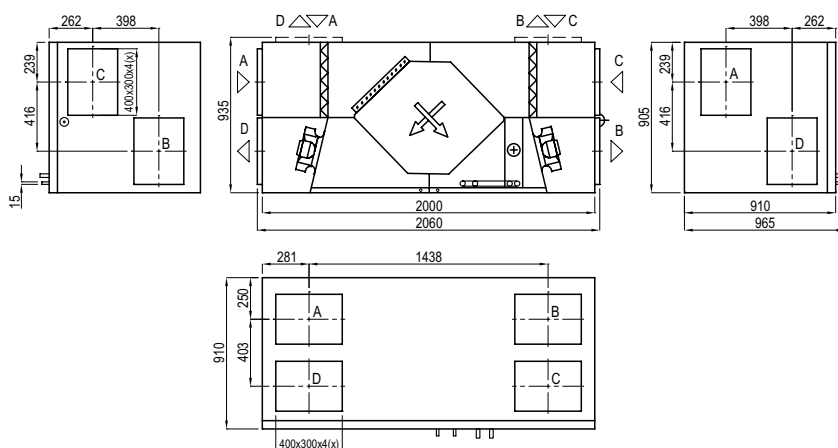
indoor +22°C, 20% RH

Changeover water/ DX heating – cooling exchanger (HCW/HCDX)

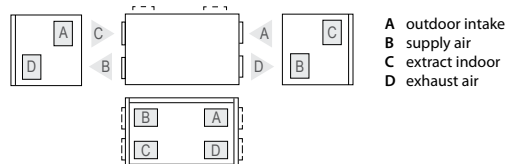
	Winter	Summer	Winter	Summer
Water temperature in/out, °C	60/40	7/12	–	–
Condensation/evaporation T, °C	–	–	45	45/5
Capacity, kW	4,2	12,5	3,6	11,7
Maximal capacity, kW	13,0	12,6	6,7	13,2
Pressure drop, kPa	2	54,7	–	–
Air temperature in/out, °C	15,7 / 22	30 / 18,4	15,7 / 22	30 / 18
Connection, " / mm	¾		½ / 22	

Summer: +30°C/ 50%; HCW – 2200 m³/h; DX – 1450 m³/h

Shown as right (R1)



Shown as left (L1)



Accessories

Closing damper	H	SRU-M-300x400+LF24/LM24
	V	SRU-M-400x300+LF24/LM24
Silencer	A/D	STS-IVR3BA-600-400-700-S
	B/C	STS-IVR3BA-600-400-1250-S
PPU		PPU-HW-3R-15-1,6-W2
Air heater-cooler		DCW-2,5-17
2-way valve		VVP45.25-6,3+SSB61
DX cooler		DCF-2,5-17
Cooling unit		MOU-55HFN8+KA8243

Verso CF 2500 F C5

Nominal air flow according to ErP 2018, m³/h	2 542
Nominal air flow according to ErP 2018, l/s	706
Electric air heater capacity, kW / Δt, °C	7,5/8,3
Supply voltage HE, V	3~400
Supply voltage HW, V	1~230
Maximal operating current HE, A	16,9
Maximal operating current HW, A	6,3
Electric power input of the fan drive at maximum flow rate, W	640
Filters dimensions BxHxL, mm	888x420x96
Unit dimensions BxHxL, mm	2000x528x1850
Panel thickness, mm	50
Maintenance space, mm	620
Unit weight, kg	340

Acoustic data

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

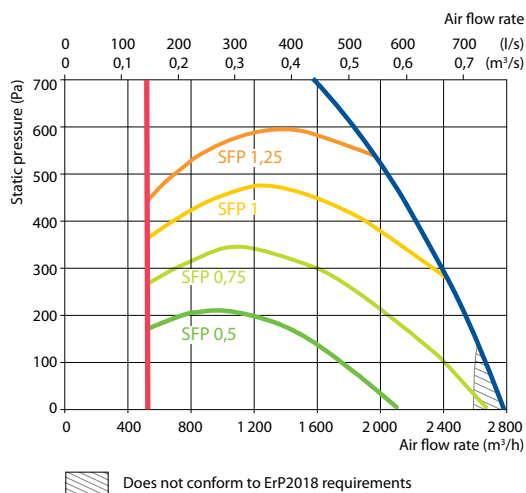
Supply inlet	64
Supply outlet	83
Exhaust inlet	64
Exhaust outlet	83
Casing	62

A-weighted sound pressure level L_{pA} , dB(A)

10 m² normally isolated room, distance from casing – 3 m.

Surroundings	51
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Performance



Accessories

Closing damper	SRU-M-700x300+LF24/LM24
Silencer	A/D STS-IVR3BA-800-300-700-S B/C STS-IVR3BA-800-300-1250-S
Water heater	SVK-700x400-2R
PPU	PPU-HW-3R-15-1-W2
Air heater-cooler	DCW-2,5-17
2-way valve	VVP45.25-6,3+SSB61
DX cooler	DCF-2,5-17
Cooling unit	MOU-55HFN8+KA8243



Temperature efficiency

	Winter					Summer		
Outside temperature, °C	-23	-15	-10	-5	0	25	30	35
After heat exchanger, °C	13,9	14,9	15,9	16,6	17,6	22,6	23,6	24,7

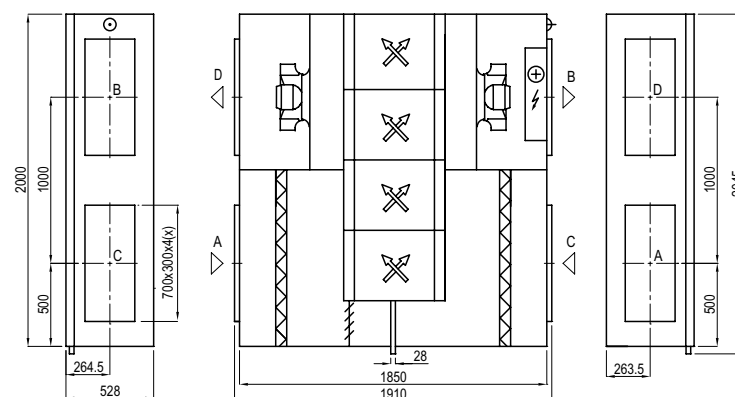
indoor +22°C, 20% RH

Hot water air heater (SVK)*

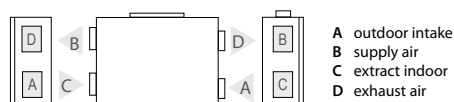
	Winter		
Water temperature in/out, °C	80/60	70/50	60/40
Capacity, kW	7,0	7,0	7,0
Flow rate, dm³/h	311	309	308
Pressure drop, kPa	4,8	4,8	4,9
Temperature in/out, °C	13,9 / 22		
Maximal capacity, kW	22,3	18,0	13,6
Connection, "	½		

* option

Shown as right (R1)



Shown as left (L1)



Mounting positions



Verso CF 3500 U C5

Nominal air flow according to ErP 2018, m ³ /h	3074
Nominal air flow according to ErP 2018, l/s	854
Electric air heater capacity, kW / Δt, °C	12/9,3
Supply voltage HE, V	3~400
Supply voltage HW, V	3~400
Maximal operating current HE, A	23,4
Maximal operating current HW, A	6,3
Electric power input of the fan drive at maximum flow rate, W	960
Filters dimensions BxHxL, mm	525x510x46
Unit dimensions BxHxL, mm	1150x1150x2500
Panel thickness, mm	50
Maintenance space, mm	1000
Unit weight, kg	500



Acoustic data

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

Supply inlet	55
Supply outlet	78
Exhaust inlet	56
Exhaust outlet	77
Casing	54

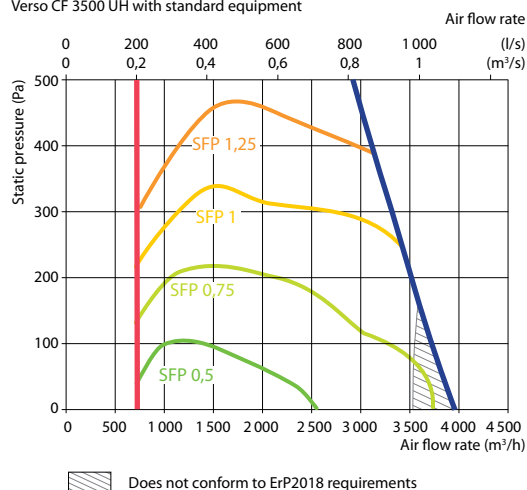
A-weighted sound pressure level L_{PA} , dB(A)

10 m² normally isolated room, distance from casing – 3 m.

Surroundings	43
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Performance

Verso CF 3500 UH with standard equipment



Temperature efficiency

	Winter					Summer		
Outside temperature, °C	-23	-15	-10	-5	0	25	30	35
After heat exchanger, °C	14,0	15,0	15,9	16,3	17,4	22,6	23,7	24,8

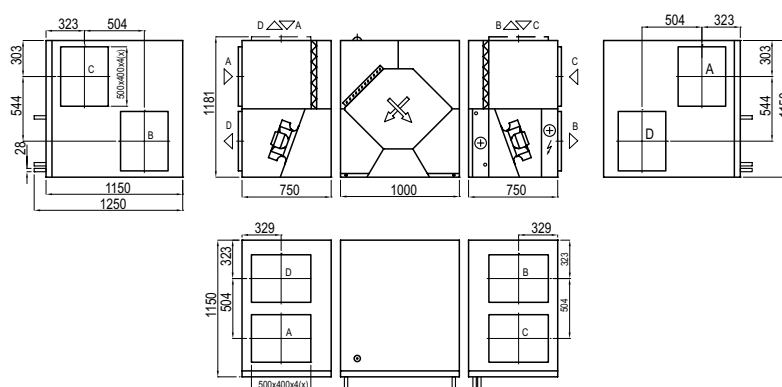
indoor +22°C, 20% RH

Changeover water/ DX heating – cooling exchanger (HCW/HCDX)

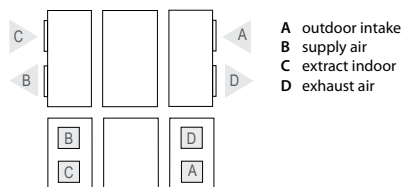
	Winter	Summer	Winter	Summer
Water temperature in/out, °C	60/40	7/12	–	–
Condensation/evaporation T, °C	–	–	45	45/5
Capacity, kW	9,5	8,4	8,2	21,8
Maximal capacity, kW	18,7	10,0	18,3	30,9
Pressure drop, kPa	3,6	25,1	–	–
Air temperature in/out, °C	14,0 / 22	30 / 24	14,0 / 22	30 / 18
Connection, " / mm	¾		2x½/2x22	

Summer: 30°C / 50%; DX/HCW – 3150 m³/h

Shown as right (R1)



Shown as left (L1)



Accessories

Closing damper	H	SRU-M-400x500+LF24/LM24
	V	SRU-M-500x400+LF24/LM24
Silencer	A/D	STS-IVR3BA-800-500-700-S
	B/C	STS-IVR3BA-800-500-1250-S
PPU		PPU-HW-3R-15-2,5-W2
Air heater-cooler		DCW-4,0-27
2-way valve		VVP45.25-6,3+SSB61
DX cooler		DCF-4,0-27-2
Cooling unit		2xMOU-48HFN8+KA8243

Verso CF 5000 V C5

Nominal air flow according to ErP 2018, m ³ /h	5 025
Nominal air flow according to ErP 2018, l/s	1 396
Electric air heater capacity, kW / Δt, °C	15/9,8
Supply voltage HE, V	3~400
Supply voltage HW, V	3~400
Maximal operating current HE, A	29,7
Maximal operating current HW, A	8,3
Electric power input of the fan drive at maximum flow rate, W	1 850
Filters dimensions BxHxL, mm	650x450x92
Unit dimensions BxHxL, mm	1400x1541x2315
Panel thickness, mm	45
Maintenance space, mm	1 500
Unit weight, kg	680

Acoustic data

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

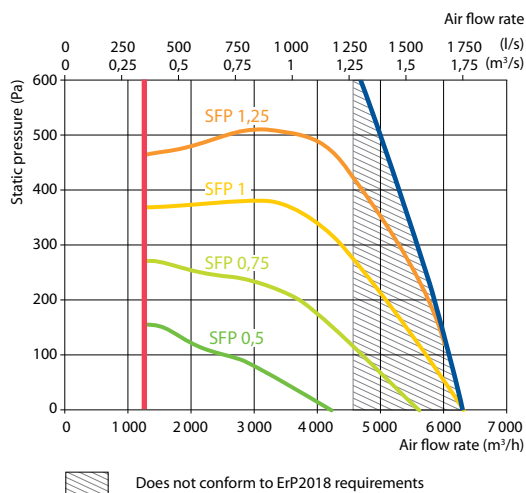
Supply inlet	59
Supply outlet	76
Exhaust inlet	59
Exhaust outlet	76
Casing	52

A-weighted sound pressure level L_{PA} , dB(A)

10 m² normally isolated room, distance from casing – 3 m.

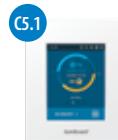
Surroundings	41
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Performance



Accessories

Closing damper	SRU-M-1100x300
Silencer	A/D STS-IXY5BU-1250-300-700-S
	B/C STS-11XAMR-1250-300-1250-S
PPU	PPU-HW-3R-20-4-W2
Water cooler	DCW-4,5-30
2-way valve	VVP45.25-10.0+SSC61
DX cooler	DCF-4,5-31-2
Cooling unit	2xMOU-55HFN8+KA8243



Temperature efficiency

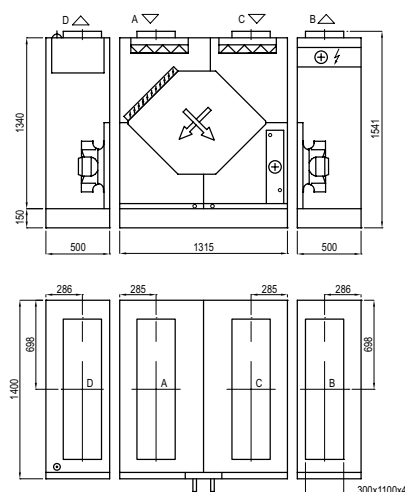
	Winter					Summer		
Outside temperature, °C	-23	-15	-10	-5	0	25	30	35
After heat exchanger, °C	14,8	15,7	16,2	17	17,9	22,6	23,5	24,4

indoor +22°C, 20% RH

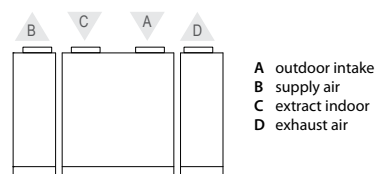
Changeover water/ DX heating – cooling exchanger (HCW/HCDX)

	Winter	Summer	Winter	Summer
Water temperature in/out, °C	60/40	7/12	–	–
Condensation/evaporation T, °C	–	–	45	45/5
Capacity, kW	11,4	29,7	11,6	33,4
Maximal capacity, kW	38,2	36,2	23,3	39,9
Pressure drop, kPa	1	26	–	–
Air temperature in/out, °C	14,8 / 22	30 / 18	14,8 / 22	30 / 18
Connection, " / mm	1 ¼		2x5/8/2x22	

Shown as right (R1)



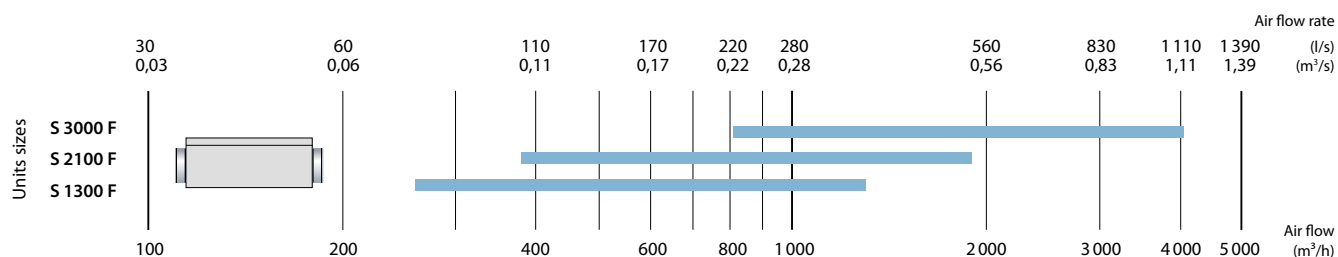
Shown as left (L1)



Verso S Standard

False ceiling supply air handling units

Sizes and capacities of Verso S Standard units



Modifications of Verso S Standard units

Unit	Supply air filter class	Heater		Cooler		Control system
		HE	HCW	HCW	HCDX	
Verso S 1300 F	●	○	○	△	△	●
Verso S 2100 F	●	○	○	△	△	●
Verso S 3000 F	●		●	△	△	●

- standard equipment
- possible choice
- △ ordered separately duct heater/cooler

The markings are explained on p. 7.

Verso S 1300 F C5

Nominal air flow, m ³ /h	1347
Nominal air flow, l/s	374
Electric power input of the fan drive at reference flow rate, W	350
Filters dimensions BxHxL, mm	558x287x46
Unit dimensions BxHxL, mm	700x350x893
Panel thickness, mm	50
Maintenance space, mm	400
Unit weight, kg	46



Acoustic data

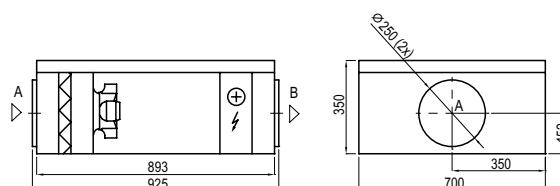
A-weighted sound power level L_{WA} , dB(A)
at nominal flow rate

Supply inlet	74
Supply outlet	80
Casing	56

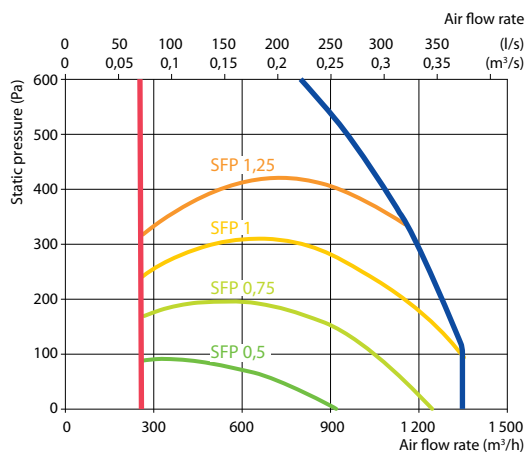
A-weighted sound pressure level L_{pA} , dB(A)

10 m² normally isolated room, distance from casing – 3 m.

Surroundings	46
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Performance



* Compliance to ErP2018 requirements check with the selection program.

Technical data

Supply air handling unit	Supply voltage, V	Air heater capacity, kW	Maximal operating current, A	ΔT, °C
Verso S 1300 F-HE/9	3~400	9,0	15,7	19,5
Verso S 1300 F-HE/15	3~400	15,0	24,4	32,6
Verso S 1300 F-HW	1~230	–	3	–

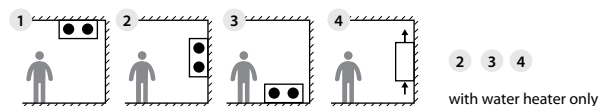
Hot water air heater

Water temperature in/out, °C	80/60	70/50	60/40
Capacity, kW	10,1	8,4	6,5
Flow rate, dm ³ /h	448	369	286
Pressure drop, kPa	3,3	2,8	2,3
Temperature in/out, °C	-5 / 18,2	-5 / 14,2	-5,0 / 10,0
Maximal capacity, kW	10,1	8,4	6,5
Connection, "	½		

Accessories

Closing damper	AGUJ-M-250+LF24/LM24
Silencer	A AGS-250-50-900-M
	B AGS-250-50-1200-M
PPU	PPU-HW-3R-15-2.5-W2
Air heater-cooler	DCW-1,4-9
2-way valve	VVP47.20-4,0+SSP61
DX cooler	DCF-1,4-10
Cooling unit	MOU-36HFN8+KA8243

Mounting positions



Verso S 2100 F C5

Nominal air flow, m ³ /h	1935
Nominal air flow, l/s	538
Electric power input of the fan drive at reference flow rate, W	340
Filters dimensions B×H×L, mm	858×287×46
Unit dimensions B×H×L, mm	1000×350×893
Panel thickness, mm	50
Maintenance space, mm	400
Unit weight, kg	73



Acoustic data

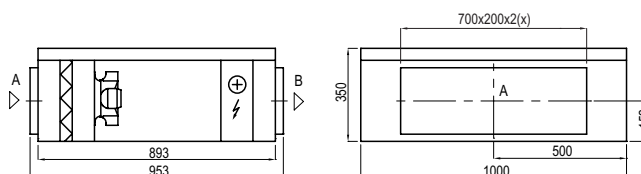
A-weighted sound power level L_{WA} , dB(A)
at nominal flow rate

Supply inlet	70
Supply outlet	75
Casing	52

A-weighted sound pressure level L_{PA} , dB(A)

10 m² normally isolated room, distance from casing – 3 m.

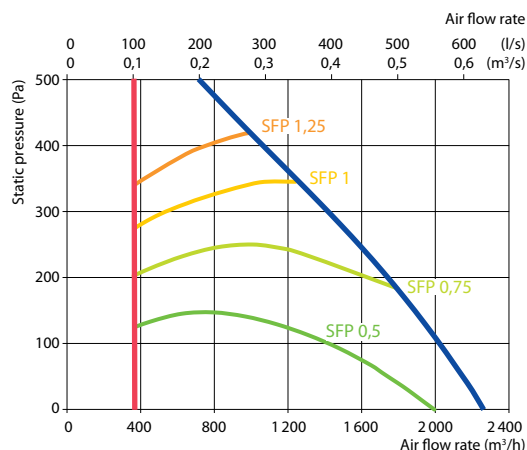
Surroundings	41
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Technical data

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	24,7	22,7
Verso S 2100 F-HE/22,5	3~400	22,5	35,6	34,0
Verso S 2100 F-HW	1~230	–	3,3	–

Performance



* Compliance to ErP2018 requirements check with the selection program.

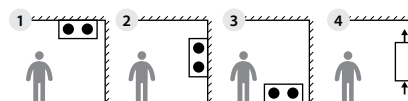
Hot water air heater

Water temperature in/out, °C	80/60	70/50	60/40
Capacity, kW	17,0	14,4	11,7
Flow rate, dm ³ /h	752	632	511
Pressure drop, kPa	7,5	5,9	4,5
Temperature in/out, °C	-5,0/21,7	-5,0/17,5	-5,0/13,3
Maximal capacity, kW	17,0	14,4	11,7
Connection, "	½		

Accessories

Closing damper	SRU-M-700x200+LF24/LM24
Silencer	A STS-IVR3BA-800-250-700-S
	B STS-IVR3BA-800-250-1250-S
PPU	PPU-HW-3R-15-2.5-W2
Air heater-cooler	DCW-2,0-13
2-way valve	VVP47.20-4,0+SSP61
DX cooler	DCF-2,0-14
Cooling unit	MOU-48HFN8+KA8243

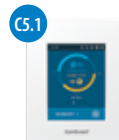
Mounting positions



with water heater only

Verso S 3000 F C5

Nominal air flow, m ³ /h	3915
Nominal air flow, l/s	1088
Electric power input of the fan drive at reference flow rate, W	629
Filters dimensions BxHxL, mm	450x480x96
Unit dimensions BxHxL, mm	1015x555x1160
Panel thickness, mm	50
Maintenance space, mm	600
Unit weight, kg	130



Acoustic data

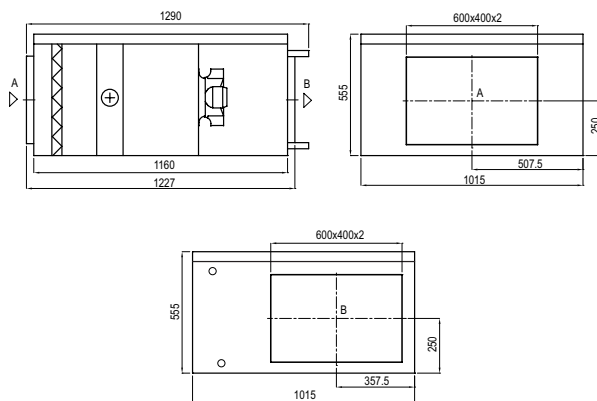
A-weighted sound power level L_{WA} , dB(A)
at nominal flow rate

Supply inlet	66
Supply outlet	77
Casing	52

A-weighted sound pressure level L_{pA} , dB(A)

10 m² normally isolated room, distance from casing – 3 m.

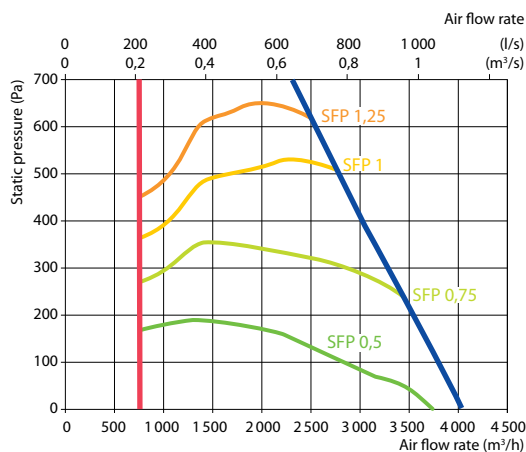
Surroundings	42
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Technical data

Supply air handling unit	Supply voltage, V	Air heater capacity, kW	Maximal operating current, A	ΔT , °C
Verso S 3000 F-HW	3~400	–	3,8	–

Performance



* Compliance to ErP2018 requirements check with the selection program.

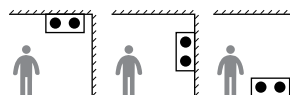
Hot water air heater

Water temperature in/out, °C	80/60	70/50	60/40
Capacity, kW	34,5	34,5	34,5
Flow rate, dm ³ /h	1523	1516	1509
Pressure drop, kPa	4,8	4,8	4,9
Temperature in/out, °C	-5 / 22,0	-5 / 22,0	-5 / 22,0
Maximal capacity, kW	52,0	44,1	35,9
Connection, "	1		

Accessories

Closing damper	SRU-M-600x400+LF24/LM24
Silencer	A STS-IVR3BA-600-400-700-S
	B STS-IVR3BA-600-400-1250-S
PPU	PPU-HW-3R-25-6.3-W2
Air heater-cooler	DCW-3,0-20
2-way valve	VVP45.25-6,3+SSB61
DX cooler	DCF-3,0-20-2
Cooling unit	2xMOU-36HFN8+KA8243

Mounting positions



VERSO Pro, VERSO Pro2

VERSO PRO

Modular air handling units for commercial ventilation
The airflow capacity: 1000 – 40 000 m³/h.

VERSO Pro air handling units range has two types of durable casing: frameless (1000 – 22 000 m³/h) and reinforced frame design (7000 – 40 000 m³/h). Both of them are modular, thus custom and flexible configurations are possible.

High-efficiency components of the VERSO Pro air handling units, ensure the best performance and energy saving. Consequently, the application areas are quite wide: from small offices to huge shopping malls or industrial buildings.



VERSO PRO2

Advanced and highly efficient modular air handling units
The airflow capacity: 1000 – 40 000 m³/h.

VERSO Pro2 range uses the latest technologies to ensure the best energy-saving and operation parameters. The superior performance classes T2/TB1/L1/D1 have been achieved thanks to the patented casing design.

The VERSO Pro2 series offers 1,6 million possible combinations for the simplest and the most complex projects, such as business centers, shopping malls, sports arenas, cinemas and theatres, hotels, airports, logistic centers, industry.



Patented VERSO Pro2 casing – superior performance

Advanced PVC profile technology ensures best casing characteristics: minimal energy losses, lowest sound levels, highest air tightness and mechanical durability.

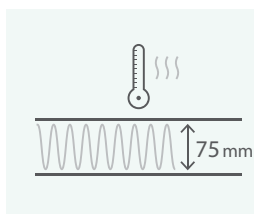
TB1 Thermal bridging



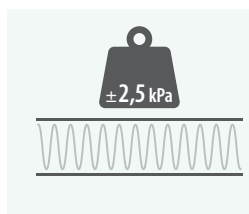
L1 Leakage



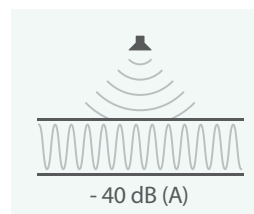
T2 Thermal transmittance



D1 Mechanical strength



Casing sound insulation



VERSΟ Pro, VERSΟ Pro2 design



HEAT EXCHANGERS

Rotary heat exchanger

Used in Verso R series units. Temperature efficiency factor – up to 86 %. Possible wave height: L, ML, SL.

Types of rotary heat exchangers:

- Condensing (aluminium);
- Condensing with epoxy coating;
- Sorption (aluminium with zeolite 4Å coating).

Rotary heat exchangers are made of seawater-resistant aluminum foil, the casing is also made of galvanized steel. 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 95 % in wet conditions and up to 88 % in dry conditions. The plate heat exchanger is equipped with an automatic by-pass. The heat exchanger is made of seawater-resistant aluminum plates. The distance between the plates is 2,1 or 3 mm.

VERSΟ Pro2 series units can be ordered with an enthalpy counterflow plate heat exchanger.

HEAT EXCHANGER FROST PREVENTION

Under conditions when the outdoor air temperature is low and humidity is high, the risk of heat exchanger frosting may occur. Various types of frost prevention are used in VERSΟ Pro and Pro2 units:

- Counter flow plate exchangers have integrated pressure drop sensors, which detects accumulating ice and initiate defrosting algorithms when needed. As standard cold air by-pass damper is opened in case of frost, while warm extracted air heats up the exchanger. Optionally “Multi level frost prevention (FP)” can be added when selecting an air handling unit with counter flow heat exchanger. The function is controlling segmented air damper, which performs partial defrosts, at the same time allowing 2/3 of heat exchanger still to be used for heat recovery, thus more thermal energy is saved, without as significant increase in heater power.
- Rotary heat exchangers usually do not freeze, however with high indoor humidity and extremely low outdoor temperatures snow crystals may start blocking the

airflow. Thus exchanger efficiency fluctuations are preventively monitored and rotary wheel speed is slowed down to increase its surface temperature if efficiency is constantly decreasing in winter.

- Besides all mentioned measures, external preheater control is also available, for units that are intended to be used under harsh outdoor conditions.





FANS

In VERSO series units plug type fans are used, so, 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, so, there is no a belt gear that simplifies maintenance.
- There is a possibility of installing an air flow measuring device.

Two types of fan motors are available – three-phase permanent magnet synchronous motors (PM) (400 V, 50 Hz), controlled by frequency converters, or electronically commutated (EC) with an integrated electronic controller with 20-100 % speed regulation. Safety category – IP54 according to IEC 34-5. Windings insulation category – F. Maximum operating temperature is 40°C.

Fan impellers

- The highest efficiency of the impeller with backward curved blades.
- Static efficiency up to 80 %.
- Statically and dynamically balanced in accordance with the standard ISO1940.
- Material – composite, aluminium or painted steel.

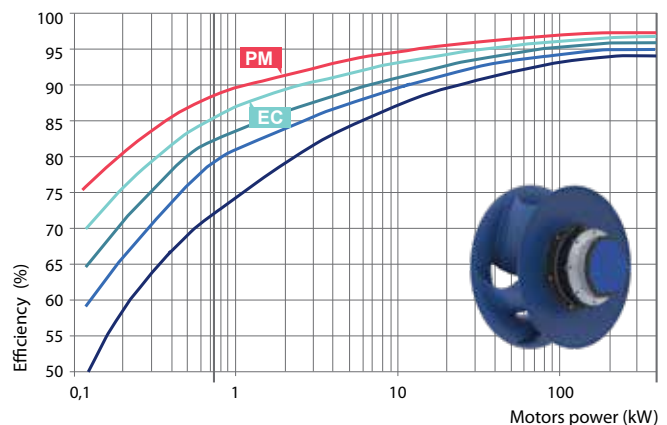
Frequency converters

- High energy efficiency – 97 %.
- Low heat dissipation.
- Specially designed algorithms for optimal PM motor control.

PM motors

- Highest energy efficiency – more than 93 %.
- Ultra Premium IE5 efficiency class according to IEC.
- Compact dimensions and low weight.
- Wide range of regulation while maintaining high efficiency.
- Low heat dissipation.
- Reliability and durability.
- The shortest payback time.

Motor efficiency classes according to IEC*



- IES Ultra Premium efficiency
- IE4 Super Premium efficiency
- IE3 Premium efficiency
- IE2 High efficiency
- IE1 Standard efficiency

* International Electrotechnical Commission



AIR HEATERS

Water air heaters

Heaters are made of copper tubes and aluminum fins (spacing 2,2; 2,6; 3,0; 3,4 mm) in galvanized steel casing insulated with a mineral wool. As an option can be order with a threat joint to connect a freezing sensor. Capillary antifreeze sensor can also be ordered.

- Maximum operating pressure – 21 bars
- Maximum water temperature +130°C
- Heated air temperature – up to +40°C

Electric air heaters

Stainless steel heating elements are used in air handling units. A three level protection ensures protection from overheating.

- Protection class IP54 in accordance with IEC 34-5.
- Heated air temperature – up to +40°C.

Note: The exact dimensions of the electric air heater and other data can be found in the Verso air handling unit selection software. The electric heater has a separate power supply.



AIR COOLERS

Water air coolers

Air coolers are made of copper tubes and aluminum fins (spacing 2,2; 2,6; 3,0; 3,4 mm) in galvanized steel casing insulated with a mineral wool. Cooler section is assembled with stainless steel (AISI 304) sloping drain tray and a water trap.

Maximum operating pressure – 21 bars.

Direct evaporation air coolers

DX coolers are made of copper tubes and aluminum fins (spacing 2,2; 2,6; 3,0; 3,4 mm) in galvanized steel casing insulated with a mineral wool. Cooler section is assembled with stainless steel (AISI 304) sloping drain tray and a water trap.

Maximum operating pressure – 42 bars.

The power of the DX cooler can be divided into 2; 3 or 4 steps. DX coil also can operate in heating mode.



AIR DAMPERS

Closing air dampers installed in the air handling units are produced from aluminium with rubber sealing.

Duct connecting flanges – L20.

For unit sizes 60, 70, 80 – L30; for sizes 90; 100 – L40.

Dampers are located outside the unit; they can be made with an insulated damper casing.

Standard tightness Class 2 damper actuator torque – 4 Nm/m². Higher tightness Class 3 dampers actuator torque – 15 Nm/m².



SILENCER SECTIONS

Integrated silencer sections can be ordered for VERSO air handling units, which will reduce the noise of the fans to the duct system.

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.

Sound attenuating splitters with resonating panels is mounted inside the section. Splitters 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.



AIR FILTERS

From G4 to F9 class synthetic or fiberglass bag filters are used. Also G4 or M5 panel type prefilter can be selected on supply air flow.

The filter clamping mechanism ensures tightness and simplifies the filter replacement procedure.

Internal pressure sensors monitor filter pressure drop in real-time and display filter impurity percentage on the user interface. KOMFOVENT air filters correspondence to ISO 1890 standard:

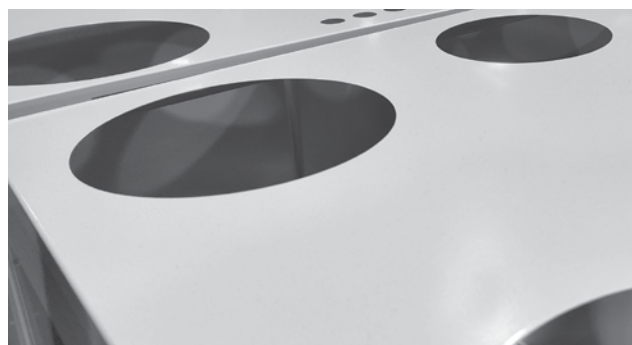
Bag filters ISO 16890	Filter class EN 779:2012	Filter depth, mm
Coarse 65%	G3 / G4	360
ePM10 60%	M5	500; 635
ePM10 65%	M6	500; 635
ePM1 60%	F7	500; 635
ePM1 85%	F9	500; 635



INSPECTION WINDOW AND LIGHTING

Inspection windows and internal lightning enable you to observe the unit's operation and help to perform the maintenance in a poorly lit environment.

The diameter of the plastic window is 200 mm.



CASING CORROSION PROTECTION

Standard casing anti-corrosion protection class – C3. Higher anti-corrosion protection class C4 is also available.



OUTDOOR HOODS

Outdoor hoods can be additionally mounted on the supply and exhaust air dampers, to protect damper actuators, and to cover inlet/outlet openings when units are installed outside.



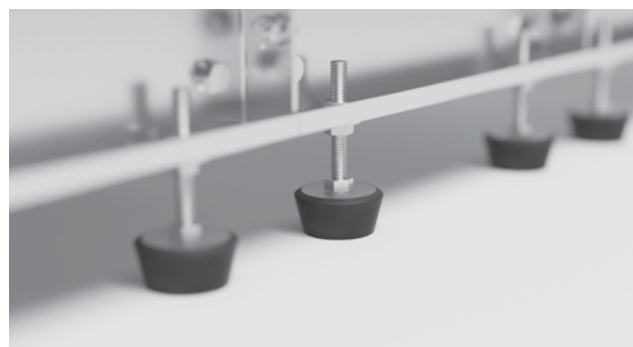
ROOF

When the outdoor air handling unit is selected it will be equipped with a specially designed roof to protect it from weather conditions.



DOOR LOCKS AND HANDLES

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

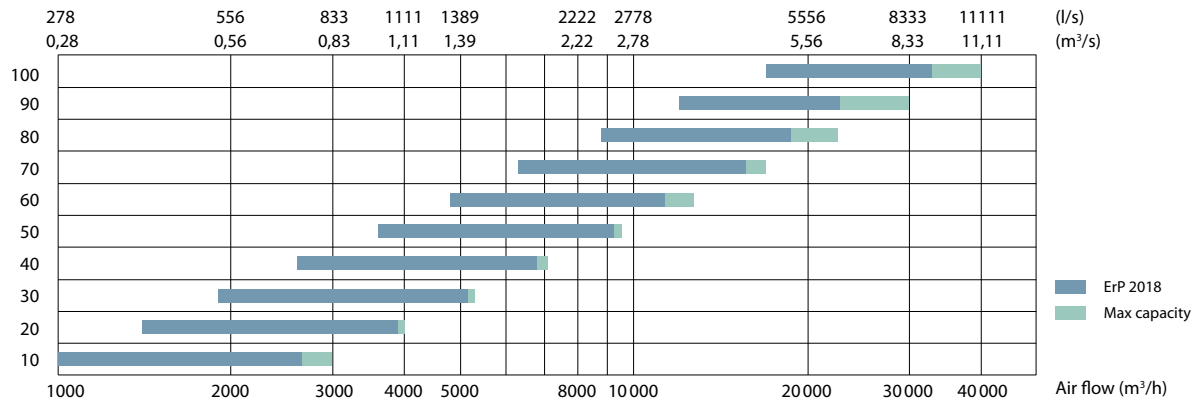


HEIGHT-ADJUSTABLE FEET

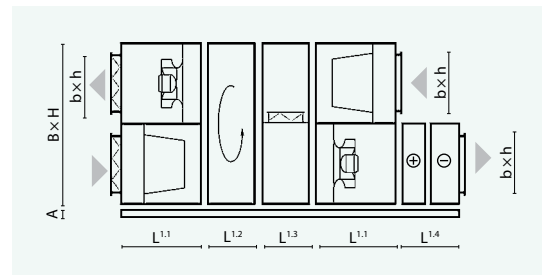
The construction frame of the air handling unit with height adjustable feet makes it much easier to level the unit on the site.

Sizes and capacities of VERSO Pro, Pro2 units

VERSO R PRO

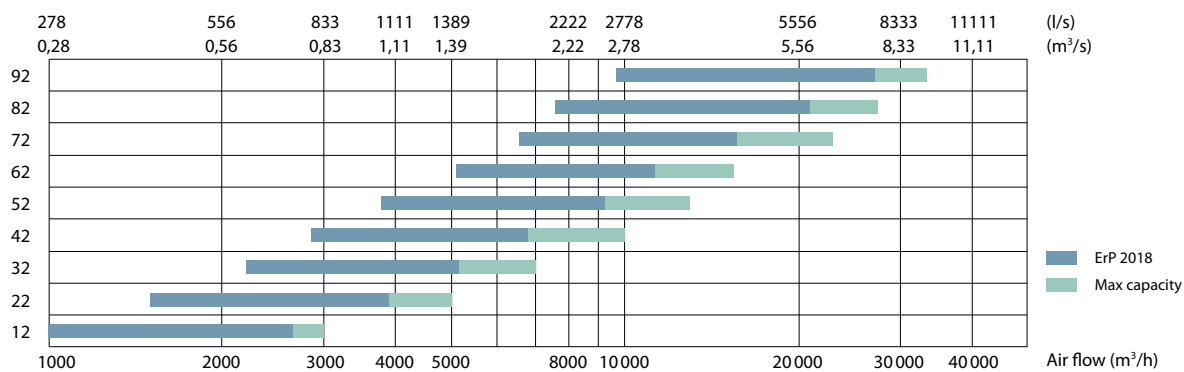


Size	B	H	L ^{1.1}	L ^{1.2}	L ^{1.3}	L ^{1.4}	b	h	A
10	1000	1000	618	370	435	800	700	300	125
20	1150	1150	751	370	435	800	900	400	125
30	1300	1300	751	370	435	800	1000	500	125
40	1500	1520	751	390	435	800	1200	600	125
50	1700	1715	885	390	435	800	1400	700	125
60	1900	1920	885	390	570	800	1600	800	125
70	2100	2100	885	390	705	800	1800	900	125
80	2300	2420	1250	510	841	830	2000	1000	125
90	2610	2650	1400	550	1040	830	2200	1100	125
100	3770	2420	1250	1400	841	830	3400	1000	125

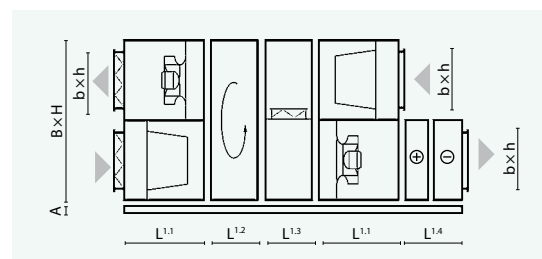


Note: the electric air heaters, water heaters and coolers section length and configuration are noted in the selection programme of VERSO air handling units.

VERSO R PRO2

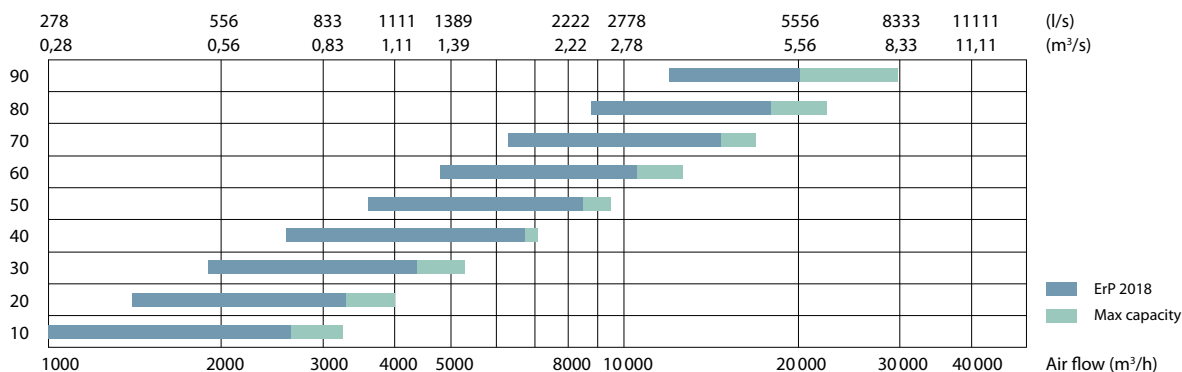


Size	B	H	L ^{1.1}	L ^{1.2}	L ^{1.3}	L ^{1.4}	b	h	A
12	1054	1054	618	380	435	865	700	200	125
22	1204	1204	751	380	435	865	900	400	125
32	1354	1354	751	380	435	865	1000	500	125
42	1554	1574	751	380	435	865	1200	600	125
52	1754	1769	885	380	435	865	1400	600	125
62	1954	1974	885	380	570	865	1600	700	125
72	2154	2154	885	380	705	865	1800	800	125
82	2360	2440	1250	500	825	1060	2000	1000	125
92	2660	2660	1400	500	1020	1060	2300	1100	125

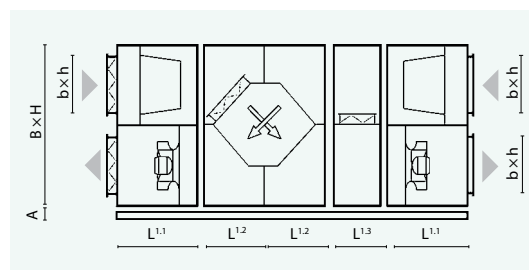


Note: the electric air heaters, water heaters and coolers section length and configuration are noted in the selection programme of VERSO air handling units.

VERSO CF PRO

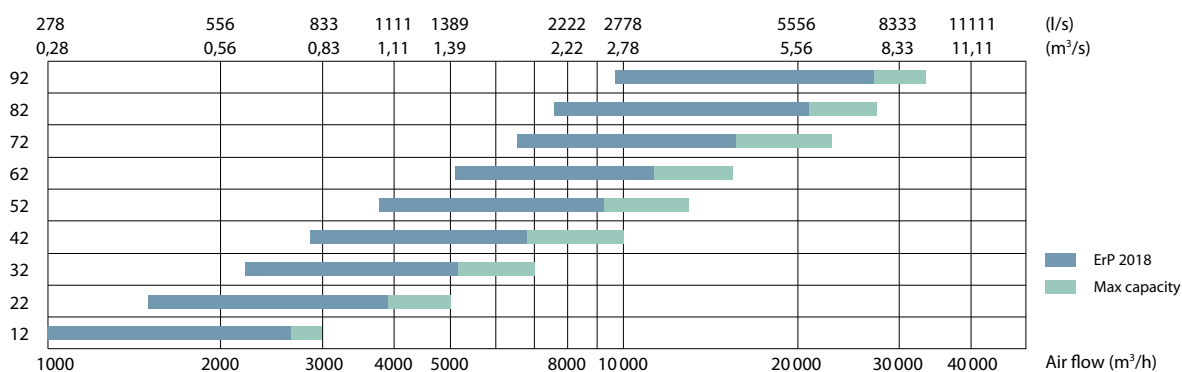


Size	B	H	L ^{1.1}	L ^{1.2}	L ^{1.3}	b	h	A
10	1000	1000	618	570	435	700	300	125
20	1150	1150	751	645	435	900	400	125
30	1300	1300	751	720	435	1000	500	125
40	1500	1520	751	720	435	1200	600	125
50	1700	1715	885	720	435	1400	700	125
60	1900	1920	885	920	570	1600	800	125
70	2100	2100	885	1020	705	1800	900	125
80	2300	2420	1250	1250	841	2000	1000	125
90	2610	2650	1400	1250	1040	2200	1100	125

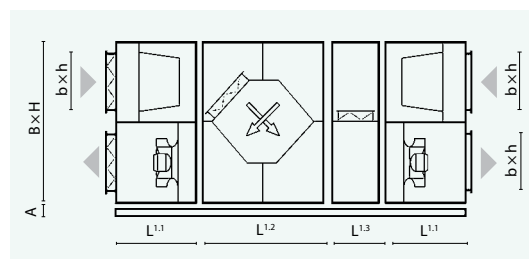


Notes: size 20÷70 plate heat exchanger section is made of two parts. Size 10, 80 and 90 – of one part. The electric air heater section length is noted in the selection programme of VERSO air handling units.

VERSO CF PRO2

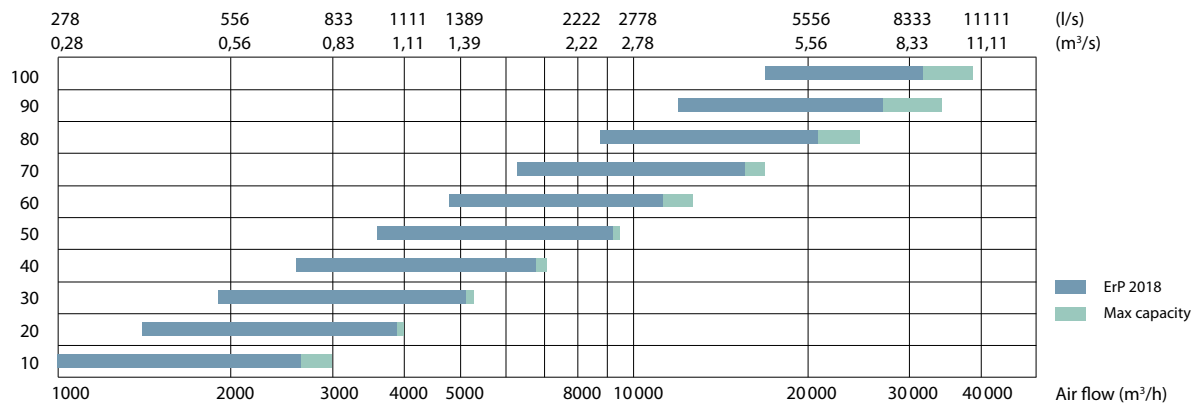


Size	B	H	L ^{1.1}	L ^{1.2}	L ^{1.3}	b	h	A
12	1054	1204	618	1428	435	700	200	125
22	1204	1354	751	1548	435	900	400	125
32	1354	1574	751	1648	435	1000	500	125
42	1554	1769	751	1934	435	1200	600	125
52	1754	1974	885	2102	435	1400	600	125
62	1954	2154	885	2102	570	1600	700	125
72	2154	2154	885	2102	705	1800	800	125
82	2360	2440	1250	2770	825	2000	1000	125
92	2660	2660	1400	2770	1020	2300	1100	125

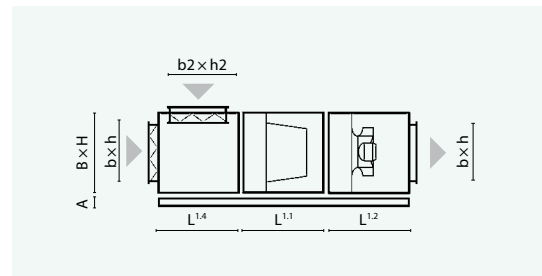


Note: if data do not correspond to data in the selection software, please refer to data shown in software.

VERSO S PRO

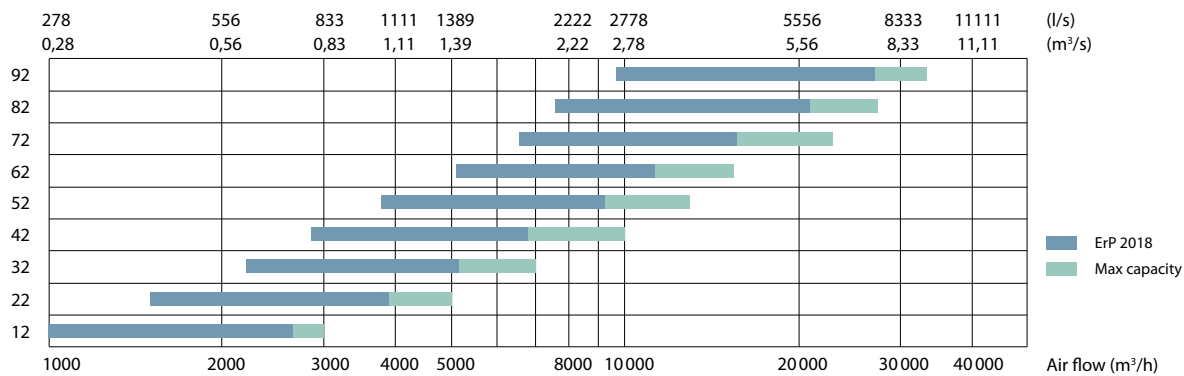


Size	B	H	L ^{1.1}	L ^{1.2}	L ^{1.4}	b	h	b1	h1	b2	h2	A
10	1000	490	750	705	430	900	400	700	300	700	300	125
20	1150	585	750	705	430	1100	500	900	400	1000	300	125
30	1300	660	750	705	470	1200	600	1000	500	1100	400	125
40	1500	740	750	842	470	1400	700	1200	600	1200	400	125
50	1700	890	750	842	470	1600	800	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

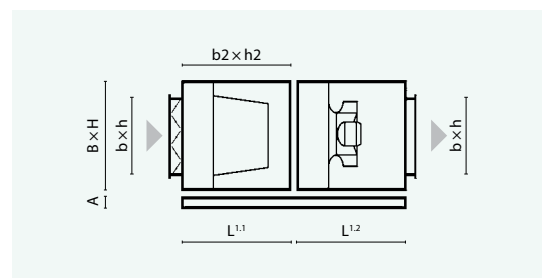


Note: the electric air heaters, water heaters and coolers section length and configuration are noted in the selection programme of VERSO air handling units.

VERSO S PRO2

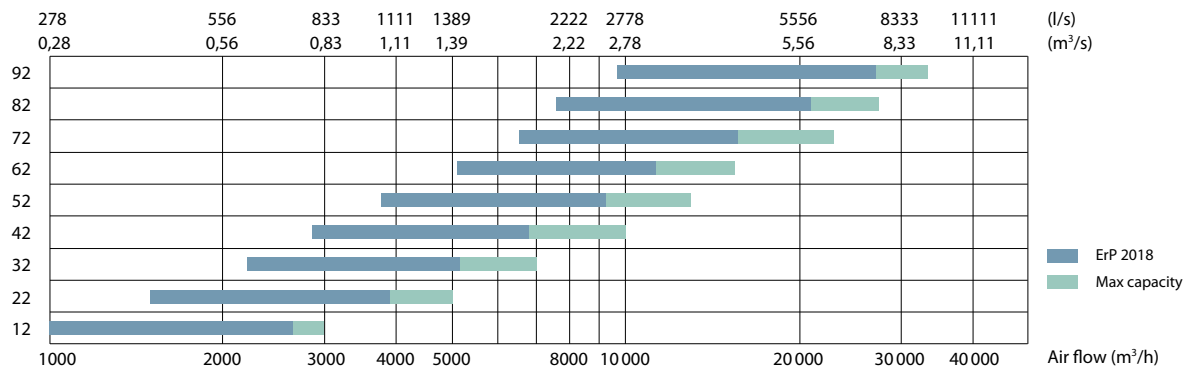


Size	B	H	L ^{1.1}	L ^{1.2}	b	h	A
12	1054	540	650	700	700	200	125
22	1204	635	650	750	900	400	125
32	1354	710	650	810	1000	500	125
42	1554	790	650	845	1200	600	125
52	1754	940	650	945	1400	600	125
62	1954	1040	650	1040	1600	700	125
72	2154	1125	650	1170	1800	800	125
82	2360	1200	705	1250	2000	1000	125
92	2660	1400	705	1400	2300	1100	125

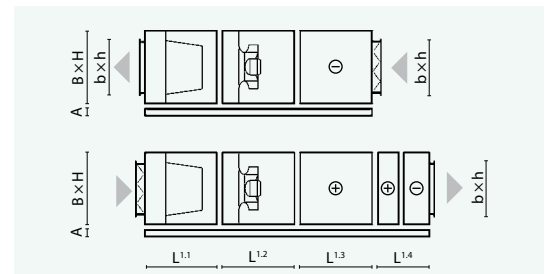


Note: the electric air heaters, water heaters and coolers section length and configuration are noted in the selection programme of VERSO air handling units.

VERS0 RA PRO2



Size	B	H	L ^{1,1}	L ^{1,2}	L ^{1,3}	L ^{1,4}	b	h	A
12	1054	540	650	1000	840	950	700	300	125
22	1204	635	650	1000	840	950	900	400	125
32	1354	710	650	1000	840	950	1000	500	125
42	1554	790	650	1000	840	950	1200	600	125
52	1754	940	650	1000	840	950	1400	600	125
62	1954	1040	650	1000	840	950	1600	700	125
72	2154	1125	650	1000	840	950	1800	800	125
82	2360	1200	705	1250	830	1060	2000	1000	125
92	2660	1400	705	1400	830	1060	2300	1100	125



Note: the electric air heaters, water heaters and coolers section length and configuration are noted in the selection programme of VERS0 air handling units.



The range of innovative air handling units
with integrated heat pumps, covering all
indoor climate support systems

RHP

Complete Indoor
Climate Control



All HVAC systems in one unit



VENTILATION

RHP units provide the premises with fresh air consuming minimal power



HEATING

RHP units can efficiently heat the premises especially during a transitional period



COOLING

RHP units provide the most efficient cooling during the summer



AIR FILTRATION

Fresh air supplying into room is cleaned from dust



HUMIDITY CONTROL

RHP units in summer perform dehumidification and in winter – regeneration of humidity

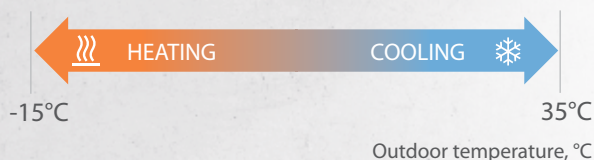
Two-stage heat / cool recovery

To reach the maximum efficiency Komfovent RHP units are designed to recover the energy in two steps:

1st step | **recovery up to 80 %**
by enthalpy rotary heat exchanger

2nd step | **recovery up to 60 %**
by reversible heat pump

Operation range:



Wide possibilities with RHP:

- Unit monitoring and management through the Internet and BMS.
- Extremely high energy efficiency.
- Simple designing, installing, operation and maintenance.
- Shortest payback time.
- Unified smart control, simplified management.
- No outdoor unit, no refrigeration specialists required.

Integrated control system C5

Automatic system designed for professionals, controls thermodynamic processes and saves energy. The user is given detailed information about the operation of the unit. Variety of modes and functions allows the user to choose the optimal operating mode that maximizes energy saving.

RHP Standard



Why choose RHP Standard units?

Total comfort all year long

Reversible heating and cooling operation of heat pump ensures comfort indoor climate.

Added value to indoor climate

Heating and humidity recovery in winter, cooling and de-humidifying in summer.

"All-inclusive" solution

No need for condensing unit, chiller, piping or additional work providing.

Convenience and safety

Factory-charged with refrigerant; no refrigeration knowledge is needed.

Energy-efficient and resource saving

Two-step efficiency is provided by rotary heat exchanger recovery and post heating / cooling operated by a heat pump.

Eco-friendly and protected

Non ozone depleting refrigerant R134A is used in RHP units and one circuit charge limits are applied.

Factory tested

Reliable and convenient "Plug and Play" installation, commissioning and exploitation.

Intelligent control

Clever automatic control algorithms and reliable components ensure safe and efficient equipment operation.

Compact design

It saves building spaces, easier transportation.

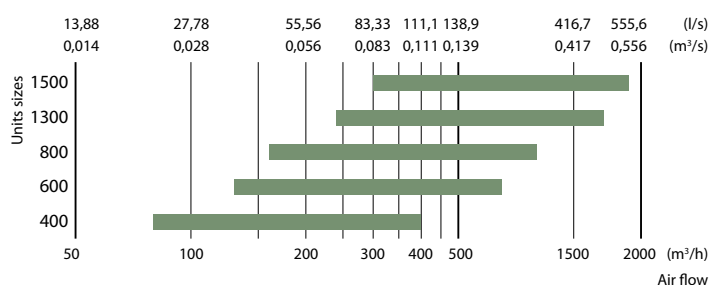
Exclusive connectivity – 16 ways *

Allows optimal and rational connection of the ducts. Universal design – 16 duct connections options are explained on p. 58.

* Except model RHP 400 V.



Sizes and capacities of RHP Standard units



RHP 400 V C5

Nominal air flow, m ³ /h	392
Nominal air flow, l/s	109
Electric air heater capacity, kW / Δt, °C	1 / 7,5
Supply voltage, V	1~230
Maximal operating current, A	7,7
Electric power input of the fan drive at maximum flow rate, W	103
Filters dimensions BxHxL, mm	462x200x46
Unit dimensions BxHxL, mm	618x1015x712
Panel thickness, mm	30/50
Maintenance space, mm	720
Refrigerant R134 A, kg	1,1
Unit weight, kg	106



Acoustic data

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

Supply inlet	58
Supply outlet	73
Exhaust inlet	59
Exhaust outlet	74
Casing	54

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

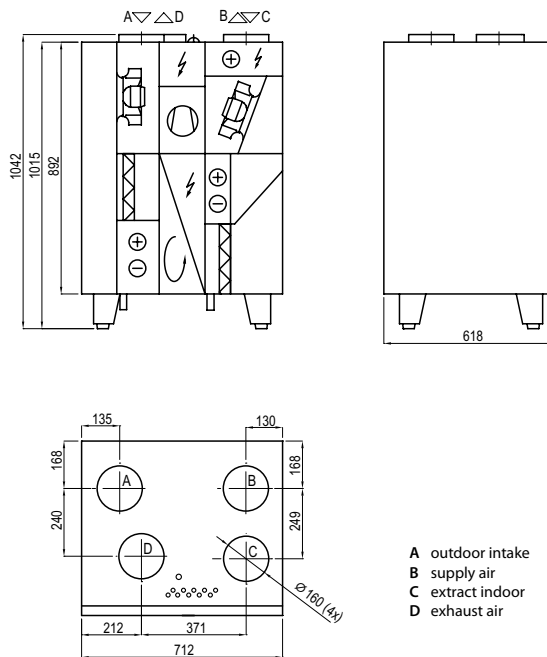
Surroundings	43
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Temperature efficiency

	Winter					Summer		
Outside temperature, °C	-23	-15	-10	-5	0	25	30	35
After heat exchanger, °C	8,9	11,2	12,7	14,1	15,6	22,9	24,3	25,8

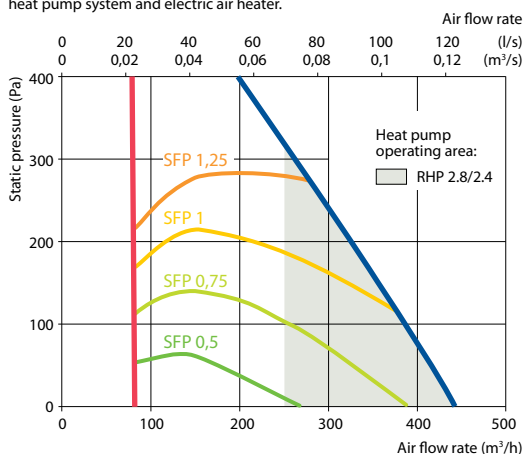
indoor +22°C, 20 % RH.

Shown as right (R1)



Performance

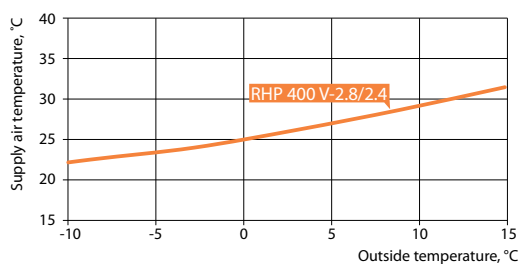
Filters ePM1 55 % / ePM10 50 %, rotary heat exchanger L, heat pump system and electric air heater.



Accessories

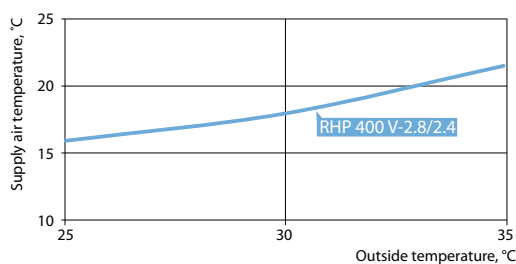
Closing damper	AGUJ-M-160+LF24/LM24
Silencer	A/D AGS-160-50-600-M
	B/C AGS-160-50-900-M

Heating mode



Application: 20°C, RH 45% indoor.

Cooling mode



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

Heat pump parameters

	RHP 400 V-2.8/2.4					
	Heating			Cooling		
Outdoor temperature, °C	7	2	-7	35	27	
Outdoor air related humidity, %	86	84	74	40	45	
Indoor air temperature, °C	20	20	20	27	21	
Indoor air related humidity, %	50	50	45	40	50	
Supply air temperature, °C	28,6	26	21,8	20,6	14,5	
Heat pump heating/cooling power, kW	1,58	1,46	1,27	1,63	1,5	
Heat pump heating/cooling power consumption, kW	0,45	0,42	0,35	0,51	0,42	
System SCOP ^{1,2,3} , Average climate / System SEER ^{1,2,3}		7,2		3,45		
COP/EER	3,48	3,44	3,68	3,22	3,54	

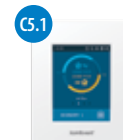
¹ Rotary heat exchanger wave size "L"

² Rotary heat exchanger + heat pump

³ According to EN 14825 standard

RHP 600 U C5

Nominal air flow, m ³ /h	668
Nominal air flow, l/s	186
Electric air heater capacity, kW / Δt , °C	1 / 4,4
Supply voltage, V	1~230
Maximal operating current, A	9,6 (RHP 3.7/3)
Maximal operating current, A	10,5 (RHP 4.4/3.8)
Electric power input of the fan drive at maximum flow rate, W	150
Filters dimensions BxHxL, mm	500x280x46
Unit dimensions BxHxL, mm	650x894x1254
Panel thickness, mm	50
Maintenance space, mm	600
Refrigerant R134 A, kg	2,08
Unit weight, kg	194



Acoustic data

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

Supply inlet	59
Supply outlet	72
Exhaust inlet	59
Exhaust outlet	69
Casing	53

A-weighted sound pressure level L_{pA} , dB(A)

10 m² normally isolated room, distance from casing – 3 m.

Surroundings	42
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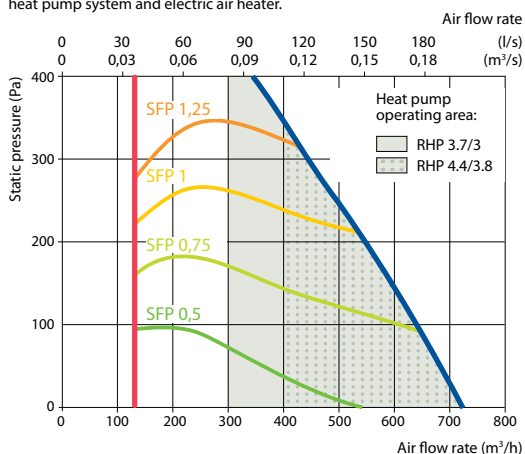
Temperature efficiency

	Winter					Summer		
Outside temperature, °C	-23	-15	-10	-5	0	25	30	35
After heat exchanger, °C	12,5	14,2	15,2	16,3	17,3	22,6	23,7	24,8

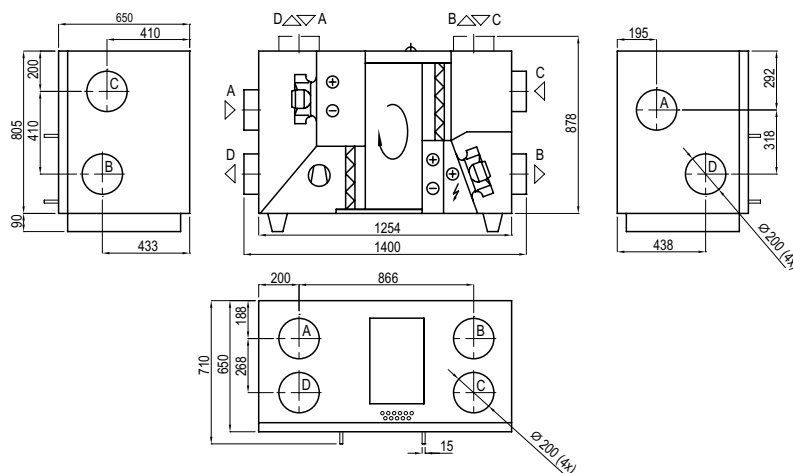
indoor +22°C, 20 % RH.

Performance

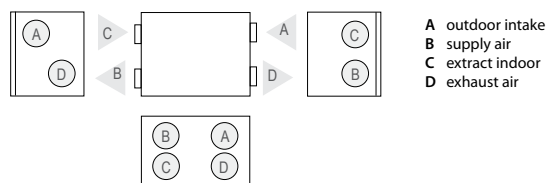
Filters ePM1 55 % / ePM10 50 %, rotary heat exchanger L, heat pump system and electric air heater.



Shown as right (R1)



Shown as left (L1)

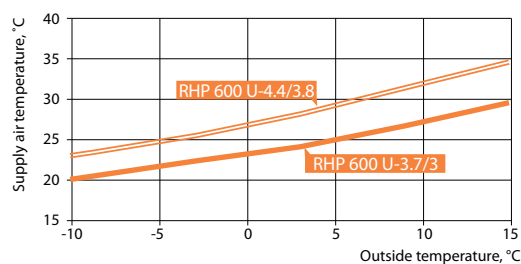


A outdoor intake
B supply air
C extract indoor
D exhaust air

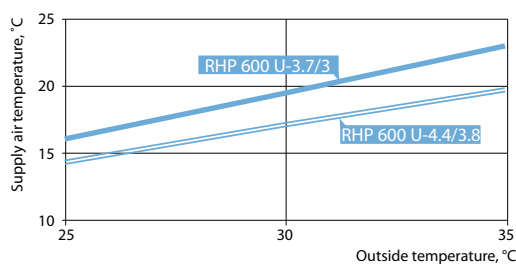
Accessories

Closing damper	AGUJ-M-200+LF24/LM24
Silencer	A/D AGS-200-50-600-M
	B/C AGS-200-50-900-M

Heating mode



Cooling mode



Heat pump parameters

	RHP 600 U-3.7/3					RHP 600 U-4.4/3.8				
	Heating			Cooling		Heating			Cooling	
Outdoor temperature, °C	7	2	-7	35	27	7	2	-7	35	27
Outdoor air related humidity, %	86	84	74	40	45	86	84	74	40	45
Indoor air temperature, °C	20	20	20	27	21	20	20	20	27	21
Indoor air related humidity, %	50	50	45	40	50	50	50	45	40	50
Supply air temperature, °C	25	23,2	20	20,6	14,8	27,9	25,9	22,2	18,8	13,2
Heat pump heating/cooling power, kW	1,67	1,51	1,24	1,8	1,68	2,34	2,21	1,74	2,37	2,92
Heat pump heating/cooling power consumption, kW	0,4	0,38	0,34	0,43	0,38	0,62	0,53	0,52	0,68	0,63
System SCOP ^{1,2,3} , Average climate / System SEER ^{1,2,3}	13,3			4,52		9,7			4,7	
COP/EER	4,21	4	3,62	4,19	4,46	3,77	4,18	3,33	3,49	4,62

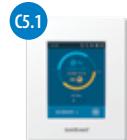
¹ Rotary heat exchanger wave size "L"

² Rotary heat exchanger + heat pump

³ According to EN 14825 standard

RHP 800 U C5

Nominal air flow, m ³ /h	860
Nominal air flow, l/s	239
Electric air heater capacity, kW / Δt, °C	2 / 6,8
Supply voltage, V	3~400
Maximal operating current, A	14,8 (RHP 3.7/3)
Maximal operating current, A	16,1 (RHP 4.4/3.8)
Electric power input of the fan drive at maximum flow rate, W	155
Filters dimensions BxHxL, mm	750x400x46
Unit dimensions BxHxL, mm	910x986x1505
Panel thickness, mm	50
Maintenance space, mm	800
Refrigerant R134 A, kg	3,1
Unit weight, kg	255



Acoustic data

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

Supply inlet	60
Supply outlet	73
Exhaust inlet	60
Exhaust outlet	71
Casing	53

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

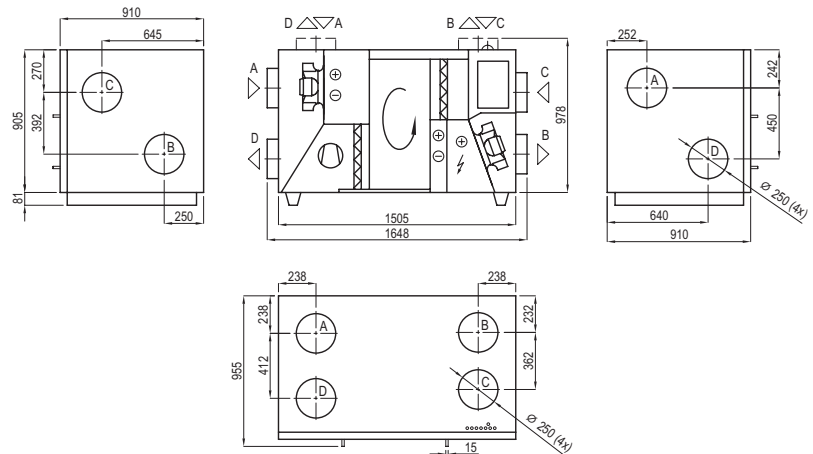
Surroundings	42
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Temperature efficiency

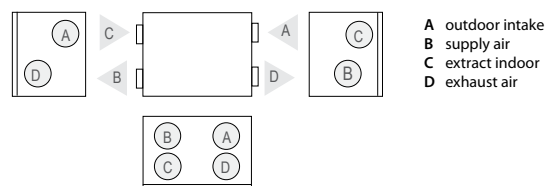
	Winter					Summer		
Outside temperature, °C	-23	-15	-10	-5	0	25	30	35
After heat exchanger, °C	14,2	15,6	16,5	17,3	18,2	22,5	23,4	24,2

indoor +22°C, 20 % RH.

Shown as right (R1)

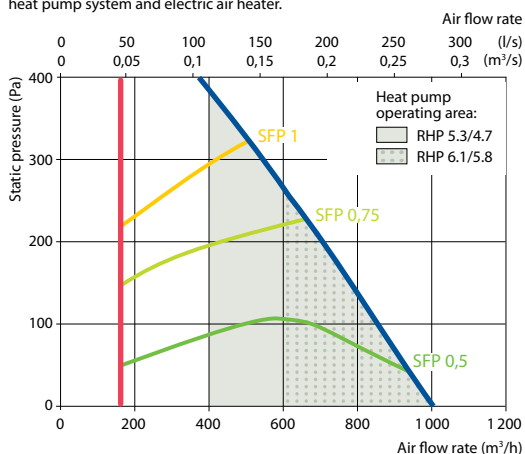


Shown as left (L1)



Performance

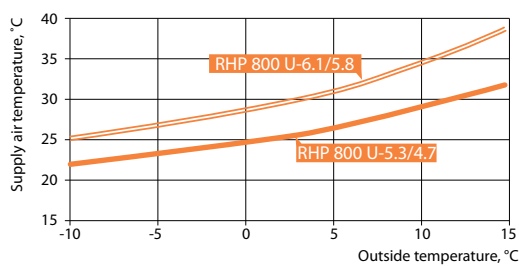
Filters ePM1 55 % / ePM10 50 %, rotary heat exchanger L, heat pump system and electric air heater.



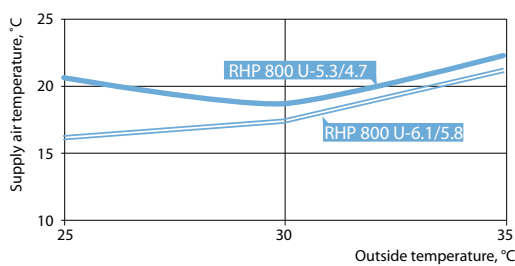
Accessories

Closing damper	AGUJ-M-250+LF24/LM24
Silencer	A/D AGS-250-50-600-M
	B/C AGS-250-50-900-M

Heating mode



Cooling mode



Total (heating and cooling) – rotary heat recovery + heat pump.

Heat pump parameters

	RHP 800 U-5.3/4.7					RHP 800 U-6.1/5.8				
	Heating			Cooling		Heating			Cooling	
Outdoor temperature, °C	7	2	-7	35	27	7	2	-7	35	27
Outdoor air related humidity, %	86	84	74	40	45	86	84	74	40	45
Indoor air temperature, °C	20	20	20	27	21	20	20	20	27	21
Indoor air related humidity, %	50	50	45	40	50	50	50	45	40	50
Supply air temperature, °C	26,7	25	21,6	19,1	13,3	29,6	27,5	24	17,1	11,8
Heat pump heating/cooling power, kW	2,51	2,35	1,77	2,73	2,55	3,48	3,11	2,47	3,33	3,27
Heat pump heating/cooling power consumption, kW	0,54	0,46	0,47	0,65	0,55	0,75	0,7	0,7	0,98	0,84
System SCOP ^{1,2,3} , Average climate / System SEER ^{1,2,3}	12,82			4,76		9,54			4,71	
COP/EER	4,69	5,1	3,77	4,22	4,68	4,65	4,41	3,51	3,41	3,89

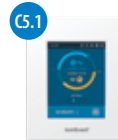
¹ Rotary heat exchanger wave size "L"

² Rotary heat exchanger + heat pump

³ According to EN 14825 standard

RHP 1300 U C5

Nominal air flow, m ³ /h	1376
Nominal air flow, l/s	382
Electric air heater capacity, kW / Δt, °C	2 / 4,3
Supply voltage, V	3~400
Maximal operating current, A	18,2 (RHP 3.7/3)
Maximal operating current, A	20,5 (RHP 4.4/3.8)
Electric power input of the fan drive at maximum flow rate, W	253
Filters dimensions BxHxL, mm	750x400x46
Unit dimensions BxHxL, mm	910x986x1505
Panel thickness, mm	50
Maintenance space, mm	800
Refrigerant R134 A, kg	3,1
Unit weight, kg	260



Acoustic data

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

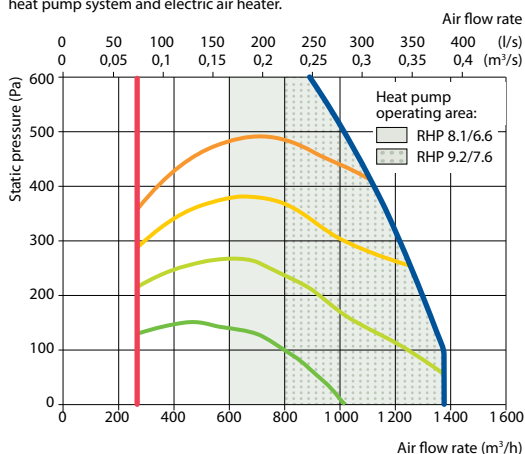
Supply inlet	67
Supply outlet	82
Exhaust inlet	67
Exhaust outlet	79
Casing	58

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

Surroundings	48
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Performance

Filters ePM1 55 % / ePM10 50 %, rotary heat exchanger L, heat pump system and electric air heater.

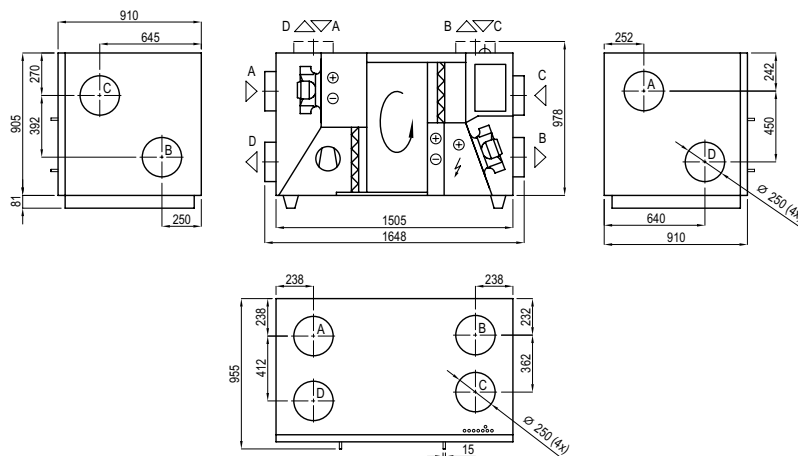


Temperature efficiency

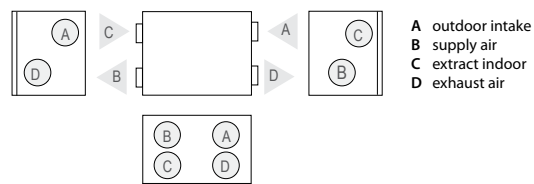
	Winter					Summer		
Outside temperature, °C	-23	-15	-10	-5	0	25	30	35
After heat exchanger, °C	12,8	14,4	15,5	16,5	17,5	22,6	23,6	24,7

indoor +22°C, 20 % RH.

Shown as right (R1)



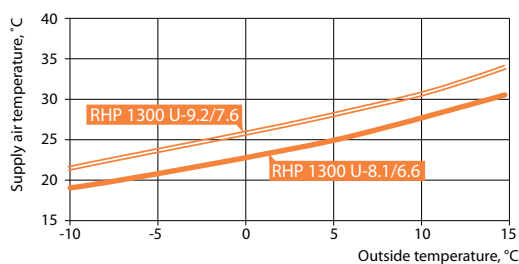
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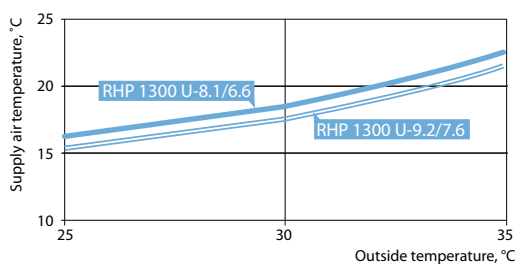
Accessories

Closing damper	AGUJ-M-250+LF24/LM24
Silencer	A/D AGS-250-50-600-M
	B/C AGS-250-50-900-M

Heating mode



Cooling mode



Heat pump parameters

	RHP 1300 U-8.1/6.6					RHP 1300 U-9.2/7.6				
	Heating			Cooling		Heating			Cooling	
Outdoor temperature, °C	7	2	-7	35	27	7	2	-7	35	27
Outdoor air related humidity, %	86	84	74	40	45	86	84	74	40	45
Indoor air temperature, °C	20	20	20	27	21	20	20	20	27	21
Indoor air related humidity, %	50	50	45	40	50	50	50	45	40	50
Supply air temperature, °C	25,4	23,7	20,5	20,30	14,5	27,3	25,3	21,9	18,30	13,20
Heat pump heating/cooling power, kW	3,6	3,28	2,72	3,94	3,65	4,52	4,18	3,38	4,77	4,56
Heat pump heating/cooling power consumption, kW	0,78	0,75	0,68	0,91	0,78	1,13	0,98	0,98	1,32	1,16
System SCOP ^{1,2,3} , Average climate / System SEER ^{1,2,3}	13,11			4,82		9,83			4,8	
COP/EER	4,59	4,38	3,97	4,33	4,66	4,01	4,28	3,45	3,61	3,93

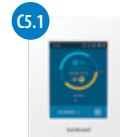
¹ Rotary heat exchanger wave size "L"

² Rotary heat exchanger + heat pump

³ According to EN 14825 standard

RHP 1500 U C5

Nominal air flow, m ³ /h	1581
Nominal air flow, l/s	439
Electric air heater capacity, kW / Δt, °C	2 / 3,7
Supply voltage, V	3~400
Maximal operating current, A	21,9
Electric power input of the fan drive at maximum flow rate, W	352
Filters dimensions B×H×L, mm	750×400×46
Unit dimensions B×H×L, mm	910×986×1505
Panel thickness, mm	50
Maintenance space, mm	800
Refrigerant R134 A, kg	3,1
Unit weight, kg	260



Acoustic data

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

Supply inlet	61
Supply outlet	74
Exhaust inlet	61
Exhaust outlet	72
Casing	56

A-weighted sound pressure level L_{pA} , dB(A)

10 m² normally isolated room, distance from casing – 3 m.

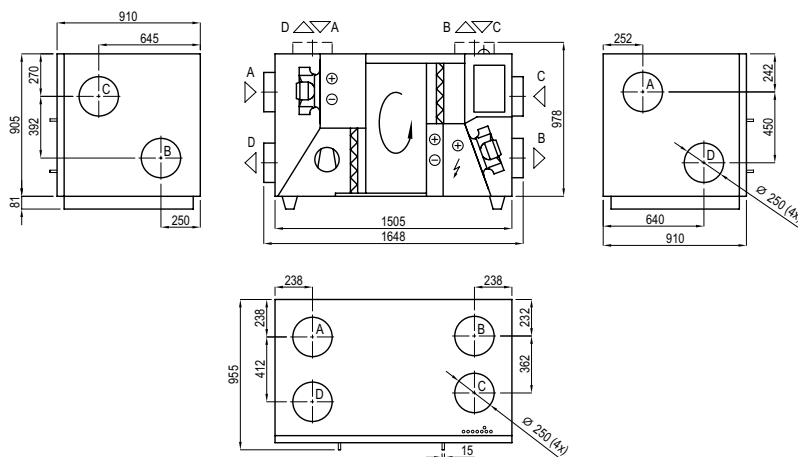
Surroundings	46
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Temperature efficiency

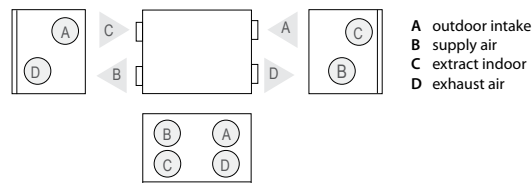
	Winter					Summer		
Outside temperature, °C	-23	-15	-10	-5	0	25	30	35
After heat exchanger, °C	12,2	13,9	15	16,1	17,2	22,7	23,7	24,8

indoor +22°C, 20 % RH.

Shown as right (R1)

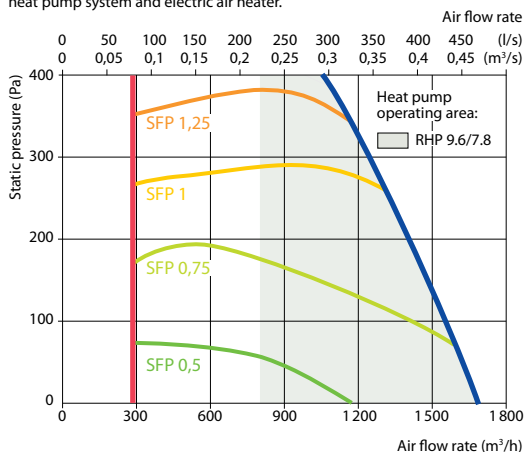


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Performance

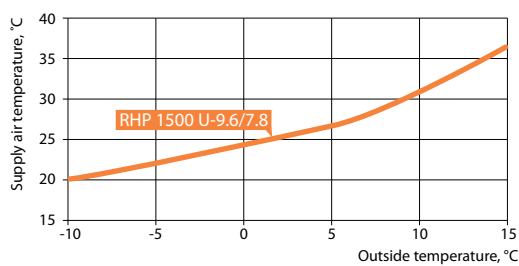
Filters ePM1 55 % / ePM10 50 %, rotary heat exchanger L, heat pump system and electric air heater.



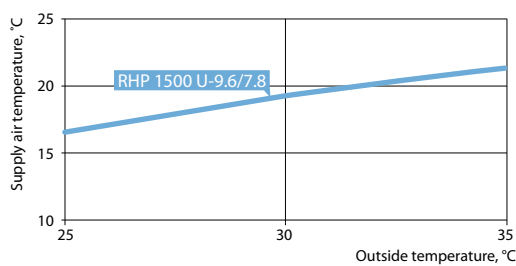
Accessories

Closing damper	AGUJ-M-250+LF24/LM24
Silencer	A/D AGS-250-100-600-M
	B/C AGS-250-100-900-M

Heating mode



Cooling mode



Heat pump parameters

	RHP 1500 U 9.6/7.8					
	Heating			Cooling		
Outdoor temperature, °C	7	2	-7	35	27	
Outdoor air related humidity, %	86	84	74	40	45	
Indoor air temperature, °C	20	20	20	27	21	
Indoor air related humidity, %	50	50	45	40	50	
Supply air temperature, °C	26	24	20,7	19,4	14	
Heat pump heating/cooling power, kW	4,63	4,17	3,47	5	5,8	
Heat pump heating/cooling power consumption, kW	1,11	1,05	0,97	1,3	1,19	
System SCOP ^{1,2,3} , Average climate / System SEER ^{1,2,3}		10,84		4,25		
COP/EER	4,17	3,96	3,57	3,84	4,88	

¹ Rotary heat exchanger wave size "L"

² Rotary heat exchanger + heat pump

³ According to EN 14825 standard

RHP Pro



Advantages of RHP Pro units

"Plug and Play" solution

Factory-charged with refrigerant and fully tested on cooling/heating modes before shipping. No need for a refrigeration specialist for installation and commissioning works.

Inverter compressors

Energy-efficient and silent inverter compressors enable accurate regulation and maintenance of supply air temperature.

Electronic expansion valve

For power adjustment of the integrated heat pump use an electronic EXV (electronic expansion valve), which ensures a stable supply air temperature and allows a wide range of regulation of device performance and heating/cooling capacity.

Sorption rotary heat exchanger

In RHP units sorption rotary regenerators with special 4Å zeolite coating are used, which because of their hygroscopic selective features ensure good heat and humidity exchange, so the RHP units maintain an optimum indoor climate with minimal energy consumption.

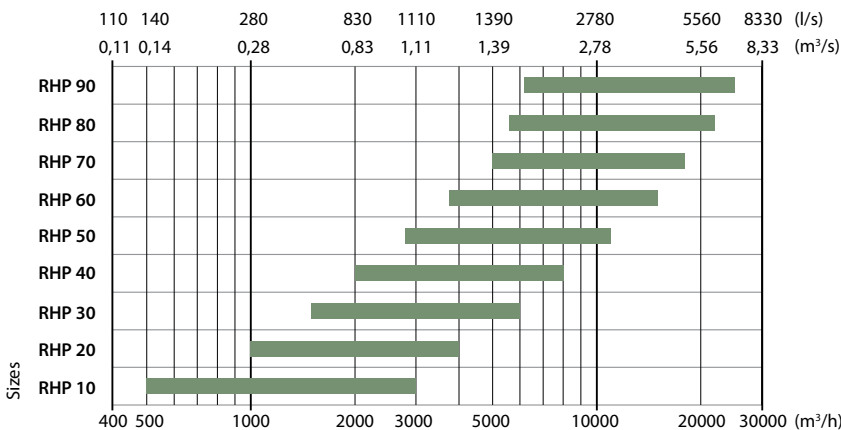
Air filters

All units are equipped with a large surface area air filters with low pressure loss, it saves energy, replacement can be less often.

PM/EC fan motors

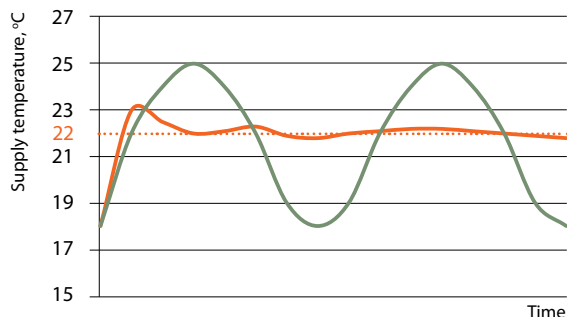
In RHP PRO units PM (permanent magnet) and EC (electronically commutated) fan motors are used, the most efficient on the market, conforming Ultra Premium IE5 or Super Premium IE4 efficiency class.

Sizes and capacities of RHP Pro units



Sizes and capacities of RHP Pro units

Compressor operation graph



Variable speed compressors are designed in RHP Pro units. The major benefit of this type of compressor are their flexibility. The rotation speed of the compressor varies, as a result less energy is used and the minor temperature changes occur on the premises.

..... Setpoint
— Constant speed compressor
— Variable speed compressor

Outdoor	Indoor	Size	RHP 10	RHP 20	RHP 30	RHP 40	RHP 50	RHP 60	RHP 70	RHP 80	RHP 90	
		Max air flow, m³/h	2800	4000	6000	8000	11000	15000	18000	22000	25000	
		Min air flow, m³/h	1200	2400	3600	4800	7000	9000	12000	14000	16000	
Heating mode												
T ¹ , °C	-7	20	Total heating capacity, kW	34	48	68	96	123	161	197	234	277
RH ¹ , %	90	40	Supply temperature, °C	24,0								
			Nominal compressor power consumption, kW	2,8	3,9	4,6	8,2	7,4	7,7	10,5	13,3	16,2
			System COP ^{2,3} , kW/kW	9,7	10,4	12,8	10,8	15,1	19,2	17,4	16,7	16,3
Cooling mode												
T ¹ , °C	35	27	Total cooling capacity, kW	18	26	50	54	73	93	115	127	154
RH ¹ , %	40	50	Supply temperature, °C	20								
			Nominal compressor power consumption, kW	2,7	3,9	7,2	8,8	11,4	12,1	16,2	18,2	23,3
			System EER ^{2,3} , kW/kW	5,3	5,5	6,3	5,6	6,0	7,2	6,8	6,7	6,4

¹ – Conditions according to EN14511

² – Rotary heat exchanger wave size "L"

³ – Rotary heat exchanger + heat pump

⁴ – According to EN 14825 standard

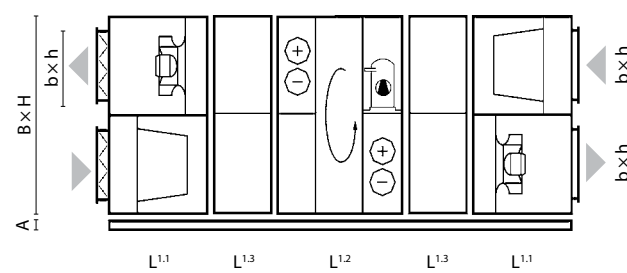
T – Temperature, °C

RH – Relative humidity, %

Dimensions

Size	B	H	L ^{1,1}	L ^{1,2}	L ^{1,3}	b	h	A
RHP 10	1000	1000	618	900	250	700	300	125
RHP 20	1150	1150	751	900	250	900	400	125
RHP 30	1300	1300	751	900	250	1000	500	125
RHP 40	1500	1520	751	900	250	1200	600	125
RHP 50	1700	1715	885	900	250	1400	700	125
RHP 60	1900	1920	885	900	250	1600	800	125
RHP 70	2100	2100	885	900	250	1800	900	125
RHP 80	2300	2420	1250	1500	–	2000	1000	125
RHP 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.





The series of unique ventilation units:
non-standard dimensions, hygienic applications,
a wide selection of internal components and
many other complex solutions

komfovent[®]

KLASIK

Unique Custom-made
Solutions



Range review

The widest range of options

KLASIK selection software offers the widest range of options – the dimensions of the equipment, the design solutions, the technical parameters of the heat exchangers, fans and other elements are presented there.

Energy saving components

It is possible to choose the most efficient components – non-freezing condensing or sorption rotary heat exchanger, counterflow plate heat exchanger, Super Premium IE4 class EC fans or Ultra Premium IE5 class PM fan.

Conformity with international standards

All KLASIK units are designed and made according EN (EN 13053, EN 13779, EN 1886), VDI (VDI 6022, VDI 3803/1), RLT (RLT 01) standards.

Modular or mono-block construction

KLASIK units consist of modules, as a result the transportation and installation of the unit is facilitated. Non-standard dimensions units and monoblocks are produced on request.

Quality certificates

KLASIK selection software and units are tested in the largest independent laboratories: Eurovent, TÜV, RLT.



C5 Control system

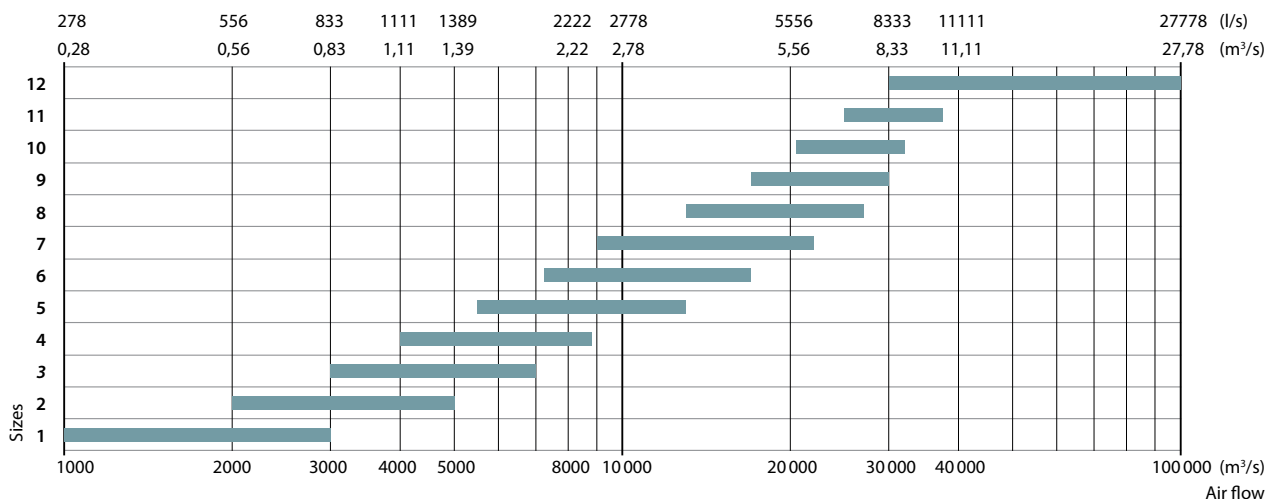
KLASIK air handling units can be ordered with an integrated and factory preset and tested C5 control system or order only automation box, which will be installed in the object. Automatic system C5 is designed for all thermodynamic processes (heating, cooling, ventilation, humidification, drainage) and has many safety and energy saving features (CAV, VAV, DCV, timers, control according to temperature, humidity, CO₂ or air quality sensors).



Selection software

The KLASIK air handling unit software is designed to select the most sophisticated units with specific requirements. The widest selection of components: heat exchangers – rotary, plate cross and counter-flow, run around; heaters – electric, water, DX and gas, coolers – water, DX and adiabatic. The dimensions of the unit and other technical characteristics can be precisely adjusted according to the project requirements.

Sizes and capacities of KLASIK units



Unit types

Wide range

The KLASIK series offers a variety of modifications: a wide range of performance; rotary, plate or counterflow heat exchangers; water or freon heater / cooler; gas or electric heaters; adiabatic humidifier.

Control panel



KLASIK R

Air handling units with a rotary heat exchanger. Temperature efficiency and energy saving up to 86 %. On request, a low profile unit with two parallel rotors can be manufactured.



KLASIK CF

Air handling units with a counterflow plate heat exchanger. Temperature efficiency and energy saving up to 92 % in wet conditions and up to 88 % in dry conditions. Upon request, it is possible to manufacture a low profile with fan / filters sections located side by side.



KLASIK P

Air handling units with a cross-flow plate heat exchanger. Temperature efficiency and economy of energy up to 75 % wet.

The units can be used for the heat utilization of technological equipment. There is a wide selection of different efficiency and pressure drop heat exchangers.



KLASIK S

Supply or exhaust air handling unit without heat recovery. On request, explosion-, corrosion- or high-temperature-resistant units can be ordered.



KLASIK RA

Air handling units with run around coil heat exchanger.

Purpose

Ventilation units with separate air flow heat exchangers are used in cases where there must be 100% of supplied and extract air flow separation:

- the extracted air is technologically contaminated with an aggressive, pungent odour or poisonous substances;
- the risk of biological contamination (medical institutions);
- high temperature of extract air.

Advantages

- The supply and extract air sections can be separated from each other.
- Compact size.
- The heat exchanger can be integrated into existing supply – extract ventilation system.

Specialized pipework package units LCHX for run around coil heat exchangers

- Depending on the operating conditions, the unit is filled with the corresponding concentration of ethylene glycol solution.
- Unit control signal 0 ... 10 V.

Maximum performance of the LCHX units

DN (mm)	20	25	32	40	50	65
Liquid flow (m ³ /h)	1,8	3,6	6,8	11	18	25



KLASIK design



CASING

"Standart2"

Air handling units of the KLASIK series have a reliable and stable design. Casing frameworks are made of aluminium profiles and solid cast aluminium corner pieces. Covering panels are made of double-skin galvanized or stainless sheet steel.

On request, casing can be painted. Fireproof 50 mm mineral wool is used as a standard.

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 at the customers' request.

Casing classification in conformance with standard EN 1886 and approved by Eurovent: thermal transmittance

class T3; thermal bridging factor TB4; casing strength class D2; casing air leakage class L1; filter bypass leakage class F9.

"Standart2 TB"

Casing frameworks are made of aluminium profiles with thermal break system and plastic corners. Covering panels are made from double-skin galvanized or stainless sheet. The panels are 60 mm thickness: 50 mm mineral wool are used for thermal and sound insulation and 10 mm of polyurethane foam.

Casing classification in conformance with standard EN 1886 and approved by Eurovent : thermal transmittance class T2; thermal bridging factor TB2; casing strength class D1; casing air leakage class L1; filter bypass leakage class F9.



FILTERS

KLASIK units pocket synthetic or fibreglass filters with a class of filtration from G4 up to F9 are used.

Filters have big filtration surface which results in longer terms of exploitation.

Filters are fastened by a clamping mechanism which secures tightness and simplifies the 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 complying to standard tightness – Class 2. Higher Class 3 or Class 4 dampers are offered as an option.



HEAT EXCHANGERS

Rotary heat exchanger

Temperature efficiency – up to 86 %. Depending on required temperature efficiency η (%), the height of a wave of a rotor can be L, ML or SL.

Rotors may be offered of four types:

- aluminium;
- aluminium with a sorption (zeolite) coating;
- aluminium with an epoxy paint covering on embossed rotor edges;
- aluminium with deep epoxy coating.

The drive of a rotor is supplied with the frequency converter, allowing support for 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. A reduced height units with two rotors are also available.

Counter flow plate heat exchanger

Made of seawater-resistant aluminum plates. Temperature efficiency is 92% for condensation and up to 88% for dry air. An automatic bypass is integrated in the heat exchanger. The heat recovery section has stainless steel (AISI 304) sloping trays and a condensate drain trap.

Plate heat exchanger

Temperature efficiency – up to 75 % wet.

Heat exchanger is tight, both air flows are separated, 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 type heat exchanger

Temperature efficiency – up to 70%.

In such a system coupled coils are placed in the supply and exhaust air. Coils are connected with pipes through a specialized PPU LCHX unit and are filled with a water-glycol mixture, which circulates around and transfers heat from one airflow to another. 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 the unit must be installed on different floors. Heat exchangers are made of copper pipes with aluminium fins.



FANS

Fans are statically and dynamically balanced according to standard ISO 1940, corresponding 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 for ventilating equipment.

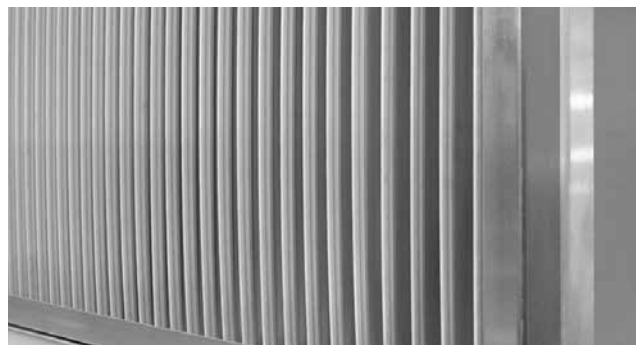
Depending on air volume and required static pressure, several types of fans are used in equipment.

Plug fans with EC/PM motor

Highly efficient in all operating areas, EC/PM motors are available in all types of KLASIK units and correspond to the IE4/IE5 Super/Ultra 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/PM fans in KLASIK units the following advantages are achieved:

- extremely high efficiency up to 94 %;
- valuable energy saving up to 20 % comparing with AC IE3 class motors;
- integrated motor controller, no need for a frequency converter;
- very smooth and silent operation;
- long-life;
- compact construction.

PM type motors correspond to the *Ultra Premium* Efficiency Class IE5 and ensure high efficiency in a wide operation range with reliable performance, durability, relatively low cost and electrical stability. Their operation is extremely smooth and silent, ensuring the highest efficiency, energy saving and accuracy in operation.



COOLERS AND HUMIDIFIERS

Water Air Coolers

Air coolers are made of copper tubes and aluminum fins (spacing 2,2; 2,6; 3,0; 3,4 mm) in galvanized steel casing insulated with a mineral wool. Air cooler section assembled with stainless steel sloping drain tray and water trap manifold pipes are covered with a condensation-proof material.

Maximum operating pressure – 21 bar.

Direct Evaporation Air Coolers

DX air coolers are made of copper tubes and aluminum fins (spacing 2,2; 2,6; 3,0; 3,4 mm) in galvanized steel casing insulated with a mineral wool. Air cooler section assembled with stainless steel sloping drain tray and water trap manifold pipes are covered with a condensation-proof material.

Maximum operating pressure – 42 bar.

Power of direct evaporation air cooler can be divided into stages. It is necessary to indicate this when ordering.

Adiabatic humidifiers

Application areas: museums, light industry, paper industry, textile industry, wood industry, poultry farms, data centres.

Advantages: Hygienic Certificate VDI 6022, optimal performance and minimal operating costs, wide range of sizes and performance, easy maintenance, durability.

Technical characteristics:

- Airflow from 425 to 55 000 m³/h,
- Efficiency – up to 97 % RH.





AIR HEATERS

Hot water air heaters

Heaters are made of copper tubes and aluminum fins (spacing 2,2; 2,6; 3,0; 3,4 mm) in galvanized steel casing insulated with a mineral wool. As an option can be order with a threat joint to connect a freezing sensor. Capillary antifreeze sensor can also be ordered.

Maximum operating pressure – 21 bar.

Maximum water temperature +130°C.

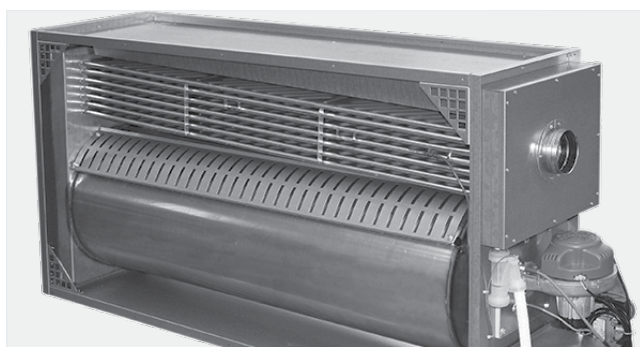
Heated air temperature up to +40°C.

Electric air heaters

Three-phase (400V/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.



CONDENSING GAS HEATERS

Advantages of gas condensing heaters:

- there is no risk of freezing;
- no circulation pumps required;
- high temperature efficiency – up to 106 %;
- simpler installation;
- wide range from 22 to 125 kW.



SOUND ATTENUATOR SECTION

Integrated or separated silencers may be offered with air handling units. Integrated silencers have completely insulated casing. Sound attenuator splitters with resonating panels is mounted inside the section. Its elements can easily be removed 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 mineral wool for ventilation systems.

The mineral wool 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 occurrence of dust inside the air channel.



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.

KLASIK units for hygienic application

Purpose

Hygienic ventilation units are designed for premises where sterile conditions are mandatory – such as hospitals, clinics, medical or pharmaceutical industry, clean rooms and etc.

RLT01 general requirements for hygienic application units

General requirements	Mechanical performance	Performance data	Hygiene requirements
EN 13053 EN 16798-3 VDI 3803-1 RLT 01	EN 13053 DIN 1751 EN 13501-1 RLT 01	EN 13053 EN 16798-3 VDI 3803-5 RLT 01	EN 13053 VDI 6022 DIN 1946/4 RLT 01

Casing

- Double-sealed panels filled with insulating material.
- Insulation class A1 or A2-s1 d0.
- All materials used are durable, with no accumulated humidity that might provide a supportive medium for microorganisms reproduction.
- Interior surfaces are smooth, without adsorption properties. No porous materials are used.
- Mechanical resistance not less than D2 class.
- Tightness is not worse than class L3 (leakage allowed not more than 2 % of the nominal air flow).
- The passage through the F7 air filters shall not exceed 2 % of the nominal air flow.
- Thermal conductivity is not higher than T4.
- Cold bridges are no worse than TB3.

Heat exchangers

- The system for supplying and discharging air should be recuperated, except where there is not enough room for it or the payback time is too long.
- Depending on the quality of the exhaust air quality, such types of heat exchangers are recommended: ETA2 – rotary or plate with overpressure; ETA3 – rotary or plate with overpressure; ETA4 – Separate Flow (Run Around coil) or Heat Pipe.
- A stainless steel or aluminium condensate tray is designed. Rotary heat exchanger condensate tray is necessary in exceptional cases.
- A rotor is recommended to be fitted with a purge section.
- To reduce the need for frost it is recommended to use adiabatic cooling by humidifying exhaust air.

Air filters

- Only filters that are tested in accordance with EN 779 or EN 1822 can be used.
- Each filter must be marked accordingly. Recommended is class ISO ePM2,5 ≥ 50 % in the extract air before the

heat recovery unit. In case of single-stage supply air filtering min. ISO ePM1 ≥ 50 %.

- The surface of the bag-type air filter must have at least 10 m² for 1 m² openings the area.
- Max. permitted maximum final pressure loss:
Filter class ISO ePM1 ≥ 70 % 300 Pa.
Filter class ISO ePM1 ≥ 50 % 200 Pa.
Filter class ISO ePM2,5 ≥ 50 % 200 Pa.
Filter class ISO ePM10 ≥ 50 % 200 Pa.

Dampers

- Air leakage class 2 for dampers that are closed while the system is in operation, e.g. mixing dampers or bypass dampers.
- Air velocity for dampers max. 8 m/s (except recirculation air and bypass dampers).
- The position of the damper must be visible from the outside of the damper.

Fans

- Fans with backward curved blades are preferred. Energy saving motors are recommended.
- Fan impeller generally protected against corrosion.
- It is recommended to use fans without belt drive (especially open impeller). Base frame of fan and motor in hot-dip galvanized steel sheeting.

Cooling coils

- Installation rails for cooling coils in stainless steel or aluminium.
- Condensate tray in stainless steel (AISI 304) or aluminium.
- Minimum fin spacing: 2 mm for cooling coil without dehumidification; 2,5 mm for cooling coil with dehumidification.

Humidifier section

- Humidifiers must not be placed directly upstream of filters or attenuator (exception: steam humidifiers).
- All components are demountable. All parts in contact with water accessible for inspection and cleaning and consisting of corrosion-resistant and disinfectant resistant material.
- Sealing compounds not be of material that can be metabolised.

Sound attenuator section

- Pressure drop max. 80 Pa.
- Surface quality material permanently abrasion-resistant and made of material that is durable when exposed to cleaning processes (e.g. glass fibre).
- Splitters demountable for cleaning without having to remove other parts.

Accessories for DOMEKT, VERSO Standard, RHP units



Filters classification and standards

The introduction of the new standard ISO 16890 has established new classification based on efficiency classification system of air filters for general ventilation based upon particulate matter (PM). With the introduction of new standard, classification based on standard EN 779 becomes obsolete and familiar filter classes (M5...F9) will no longer apply.

New standard classifies filters into four groups, based on particulate matter: Coarse, ePM10, ePM2,5 and ePM1.

In order for a filter to fall into each category its capturing efficiency should be at least 50% of the particulate in that size range. Filter efficiency is rounded off in steps of 5%, thus tested efficiency of 58% would resolve in 55%. Filters which are not able to capture 50% of PM10 dust are classified as Coarse filters.

Types of filters

Compact filters is characterized by longevity and a large filtering area. Filters have low-pressure losses – this in turn reduces power consumption. Filters are made of glass fabric with a cardboard frame, from environmentally friendly materials, which do not cause problems of utilization.

Changes to the KOMFOVENT products

For the purposes of smoother transition to the new classification all KOMFOVENT filters will carry marking of the filter class based on both standards.

Filter notation used in the name of air handling units will remain unchanged filters have been tested according to ISO 16890 and their efficiency is provided in the tables.



Bag filters

ISO 16890	EN 779:2012
Coarse 65%	G3/G4
ePM10 60%	M5
ePM10 65%	M6
ePM1 60%	F7
ePM1 80%	F9
ePM1 85%	F9



Compact filters

ISO 16890	EN 779:2012
ePM10 50%	M5
ePM1 55%	F7



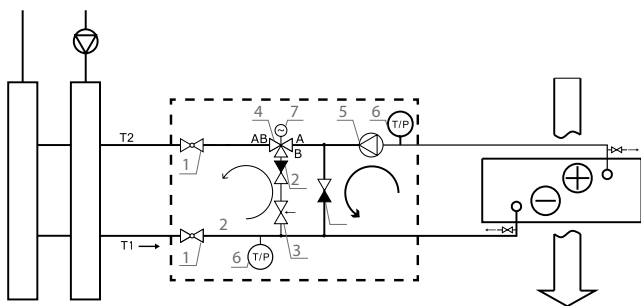
Panel pre-filter

ISO 16890	EN 779:2012
Coarse 65%	G3/G4

Pipework package

Pipework Package Units (PPU) are used for water heater power regulation, i.e., for temperature control of supplied air by mixing hot water from a boiler with recycled water in a heat exchanger.

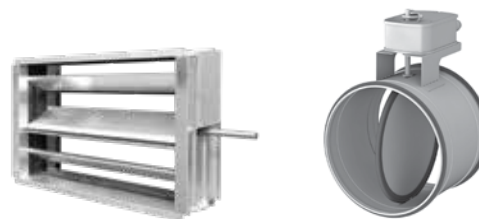
The fully assembled pipework package is available for each size of the air handling unit where a hot water heater is used.



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

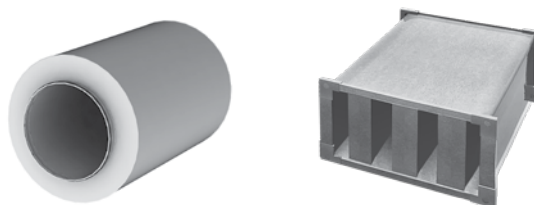
Motorized closing dampers

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



Silencers

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

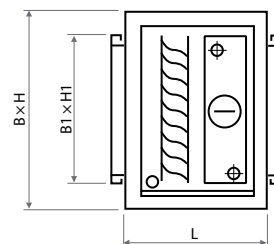


Water and direct evaporation air coolers

The 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 – R32, water 7/12 °C.

Air temperature in/out – 30/18 °C.



Supply air volume, m ³ /h	Cooler's type	Capacity, kW	Air pressure drop, Pa	Fluid pressure loss, kPa	BxHxL, mm	B1xH1, mm	Tubes connection ØD, "/mm	Weight, kg
200	DCW-0,2-1	1,3	10	13	450x400x390	300x200	1/2"	27
400	DCF-0,4-3	2,8	8	1	600x550x390	300x400	1/2" / 22	40
	DCW-0,4-3	2,6	21	25	505x550x390	300x400	1/2"	33
500	DCF-0,5-3	3,5	12	1	600x550x390	400x300	1/2" / 22	40
	DCW-0,5-3	3,3	18	46	600x550x390	400x300	1/2"	33
700	DCF-0,7-5	4,8	14	1	705x610x390	500x400	1/2" / 22	49
	DCW-0,7-5	4,5	17	15	705x610x390	500x400	1/2"	42
900	DCF-0,9-6	6,2	22	1	705x610x390	500x400	1/2" / 22	49
	DCW-0,9-6	5,5	23	5	705x610x390	500x400	3/4"	45
1200	DCF-1,2-8	8,3	37	1	705x610x390	500x400	1/2" / 22	49
	DCW-1,2-8	7,4	38	10	705x610x390	500x400	3/4"	45
1400	DCF-1,4-10	9,8	62	6,3	705x610x390	500x400	1/2" / 22	51
	DCW-1,4-9	8,7	50	13	705x610x390	500x400	3/4"	45
1600	DCF-1,6-11	11,2	66	8,8	755x610x420	500x400	1/2" / 22	56
	DCW-1,6-11	10	54	18	755x610x420	500x400	3/4"	46
2000	DCF-2,0-14	14	59	17	920x610x420	700x400	5/8" / 22	65
	DCW-2,0-13	12,8	50	32	920x610x420	700x400	3/4"	57
2500	DCF-2,5-17	17,1	56	8	1080x670x420	800x400	5/8" / 22	79
	DCW-2,5-17	15,5	63	13	1080x670x420	800x400	1"	65
3000	DCF-3,0-20-2	2x10,5	78	12	1080x670x420	800x400	2x5/8" / 2x22	79
	DCW-3,0-20	18,7	88	18	1080x670x420	800x400	1"	65
4000	DCF-4,0-27-2	2x14	68	13	1220x730x420	900x500	2x5/8" / 2x22	92
	DCW-4,0-27	25,2	92	32	1220x730x420	900x500	1"	82
4500	DCF-4,5-31-2	2x15,7	70	20	1220x730x420	900x00	2x5/8" / 2x22	98
	DCW-4,5-30	28,8	94	55	1220x790x420	900x600	1"	87
7000	DCF-7,0-48-3	3x16	90	7,2	1500x790x480	1200x600	3x5/8" / 3x22	131
	DCW-7,0-47	44,4	89	29	1500x790x420	1200x600	1 1/2"	105

Ducted heater DH and cooler DHCW

For use with DOMEKT and VERSO Standard units on supply air duct. Also must be used mixing unit PPU or 2-way valve with modulating actuator. DOMEKT units are prepared for 0...10 V actuator control.

Construction:

- Galvanised steel casing;
- Cu/Al heat exchanger;
- Anti-condensation casing covering and condensate drain (only for DHCW).



Maximal pressure – 10 bar.
Maximal fluid temperature – 130°C.
Maximal air speed – 3 m/s.
Connection – 1/2".

Supply air volume, m³/h	Heater/cooler type	Air temp. in/out, °C	Internal fluid, water	Capacity, kW	Safety on capacity, %	Air pressure drop, Pa	Fluid pressure loss, kPa	BxHxL, mm	ØD, mm	Weight, kg
250	DH-125	10/22	60/40	1	32	13	1	335x295x152	125	6,2
400	DH-160	10/22	60/40	1,6	24	31	1	335x295x152	160	6,2
700	DH-200	10/22	60/40	2,8	20	56	1,6	360x320x152	200	7
900	DH-250	10/22	60/40	3,7	31	43	3,4	420x380x152	250	9,3
1200	DH-315	10/22	60/40	4,9	43	30	8,2	470x510x152	315	11,8
1600	DH-315 M	10/22	60/40	6,5	54	57	1,2	480x520x132	315	14,4
2000	DH-355	10/22	60/40	8,1	33	54	23	600x510x152	355	13,3
2000	SVK-700x400-2R	10/22	60/40	8,1	41	30	3,7	817x500x100	700x400	12
3000	SVK-700x400-2R	10/22	60/40	12,2	26	63	8	817x500x100	700x400	12
250	DHCW-125	26/18	7/12	0,8	79	21	2,6	335x335x164	125	11,3
400	DHCW-160	26/18	7/12	1,3	47	49	6,8	335x335x164	160	11,1
700	DHCW-200	26/18	7/12	2,3	32	89	25	365x365x164	200	12,4
900	DHCW-250	26/18	7/12	3,1	47	67	61	425x425x164	250	15,4
1200	DHCW-315	26/18	7/12	3,8	49	48	5,7	560x515x164	315	21,6
1200	DHCW-315M	32/18	7/12	9,7	31	55	28	565x525x230	315	39,7
1600	DHCW-355	26/18	7/12	5,2	29	33	11	605x605x164	355	25,4

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. 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 overheating. To carry out a manual reset, a thermostat push button is installed on a heater's cover. Minimum air speed for heaters must be not less than 1,5 m/s. Standard operating range is from -30°C up to 0°C.

Type with integrated controller and flow monitoring	Heating capacity, kW	Voltage, V
EHC-125-1,0-1f SI/FC	1,0	1 ~ 230
EHC-160-1,0-1f SI/FC	1,0	1 ~ 230
EHC-160-1,5-1f SI/FC	1,5	1 ~ 230
EHC-160-2,0-1f SI/FC	2,0	1 ~ 230
EHC-200-1,0-1f SI/FC	1,0	1 ~ 230
EHC-200-1,5-1f SI/FC	1,5	1 ~ 230
EHC-200-2,0-1f SI/FC	2,0	1 ~ 230
EHC-250-2,0-1f SI/FC	2,0	1 ~ 230
EHC-250-3,0-1f SI/FC	3,0	1 ~ 230
EHC-315-2,0-1f SI/FC	2,0	1 ~ 230
EHC-315-3,0-1f SI/FC	3,0	1 ~ 230
EHC-315-6,0-3f SI/FC	6,0	3 ~ 400
EHC-315-9,0-3f SI/FC	9,0	3 ~ 400
EHC-400-9,0-3f SI/FC	6,0	3 ~ 400

DX heat pumps/outdoor units



Fresh air + heating, cooling, dehumidification

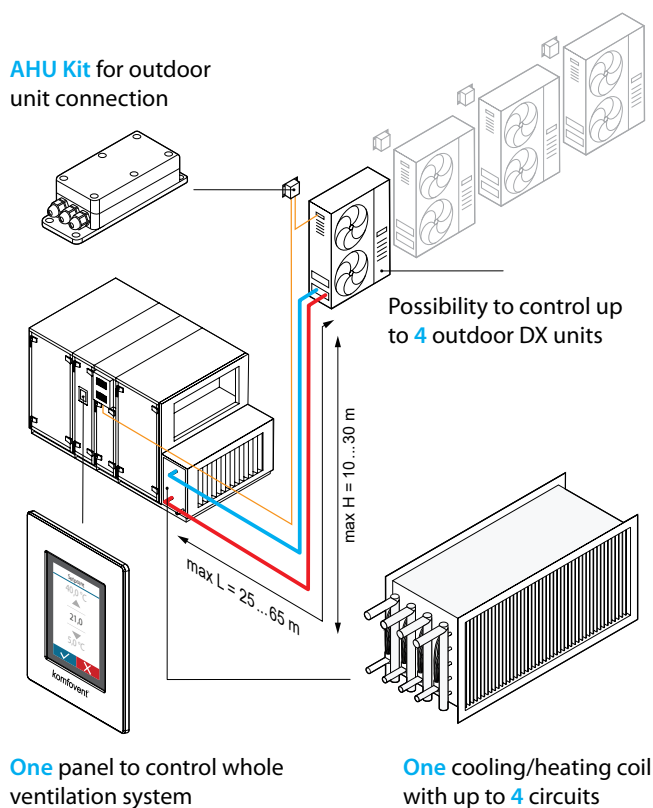
Advantages:

- R-32 eco-friendly refrigerant;
- Simple connectivity and control;
- DC Inverter – high performance rotary compressors;
- Smart defrost technology;
- High performance sigma type heat exchanger;
- Compact design – effective use of space.

Protective functions:

- Overvoltage protection;
- Compressor overload protection;
- Compressor thermal protection;
- Pressure protection;
- Fan motor thermal protection.

AHU Kit for outdoor unit connection



DX heat pump technical data

MODEL	MOU-12HFN8a	MOU-18HFN8a	MOU-24HFN8	MOU-36HFN8	MOU-48HFN8	MOU-55HFN8	MOU-280-HFN6	MOU-335-HFN6
Cooling capacity, kW	3,5 (1,1~4,2)	5,3 (3,4~5,83)	7,03 (3,22~8,21)	10,55 (4,04~12,02)	14,07 (4,75~14,58)	15,53 (5,28~16,71)	28 (14,14~36,08)	33,5 (16,92~43,17)
EER	2,89	3,42	3,21	2,67	2,74	2,61	2,33	2,19
SEER	6,1	7,0	6,1	6,1	6,1	6,1	6,35	6,42
Energy Efficiency Class	A++	A++	A++	A++	A++	A++	A+	A++
Heating capacity, kW	3,8 (1,1~4,2)	5,6 (3,1~5,85)	7,62 (2,43~8,65)	11,14 (2,95~14,14)	16,12 (3,93~16,77)	18,17 (4,4~19,34)	31,5 (15,80~40,89)	37,5 (18,81~48,68)
COP	3,45	3,57	3,72	3,71	3,19	3,01	3,71	3,3
SCOP	4,0	4,0	4,0	4,0	4,0	4,0	4,56	4,13
Energy Efficiency Class	A+	A+	A+	A+	A+	A+	A+	A+
Max input power, kW	2,15	2,5	2,95	5,6	6,2	7,5	12,0	15,3
Max pipe length, m	25	30	50	65	65	65	120	120
Max difference in level, m	10	20	25	30	30	30	40	40
Sound pressure, dB(A)	56	57	62	64	66	66	60	61
Dimension (W x D x H), mm	720x270x495	874x330x554	845x363x702	946x410x810	952x415x1333	952x415x1333	1120x1558x528	1120x1558x528
Net / Gross weight, kg	23,2/25,0	33,5/36,1	49,4/52,8	81,5/87,0	106,7/119,9	111,3/124,3	144 / 160	157/ 173
Refrigerant/charged volume, kg	R32/0,55	R32/1,1	R32/1,5	R32/2,4	R32/2,8	R32/2,95	R410A/6,5	R410A/8,0
Power supply, V	1 x 230	1 x 230	1 x 230	3 x 400	3 x 400	3 x 400	3 x 400	3 x 400
Pipe diameter, "	1/4" / 3/8"	1/4" / 1/2"	3/8" / 5/8"	3/8" / 5/8"	3/8" / 5/8"	3/8" / 5/8"	3/8" / 7/8"	1/2" / 1"
Operating temperature heating/cooling, °C	-20...+24/ -15...+50	-20...+24/ -15...+50	-20...+24/ -15...+50	-20...+24/ -15...+50	-20...+24/ -15...+50	-20...+24/ -15...+50	-20...+24/ /-5...+48	-20...+24/ -5...+48
AHU kit model	KA8140	KA8140	KA8243	KA8243	KA8243	KA8243	AHUKZ-02D	AHUKZ-02D

Accessories for unit outdoor installation

Air handling units can be installed outdoor due to thick casing insulation and easy mounting. Protective optional accessories should be used if the unit is for outdoor installation: roof, grills, supply and exhaust hoods.

SUPPLY AND EXHAUST HOODS



Unit size	Type of hood for supply air	Type of hood for exhaust air
R 1000 H C5 / CF 1000 H C5		
R 1300 H C5 / CF 1300 H C5		
R 1500 H C5		
RHP 800 UH C5	GAUBTAS_000_02_000	GAUBTAS_000_01_000
RHP 1300 UH C5		
RHP 1500 UH C5		
R 1700 H C5 / CF 1700 H C5		
R 2000 H C5	G_755_448_00	G_755_448_10
R 2500 H C5	VERSO-10-34-00.000.2	VERSO-10-34-00.000
R 3000 H C5		
R 4000 H C5	G_540_1115_00	G_540_1115_10
CF 3500 H C5		
R 5000 H C5	VERSO-30-34-00.000.2	VERSO-30-34-00.000
R 7000 H C5	V-40-34-00.000.2	V-40-34-00.000
CF 2300 H C5	G_355_870_00	G_355_870_10

Other accessories

STANDARD BASE FRAME



Base frame – painted RAL7035, with legs. There is a possibility to screw the adjustable legs with a rubber sole. They are assembled and ordered separately.

Unit size	Frame type	Dimensions BxHxL, mm
R 400 H C6M	BF_00_000_465x650	465x138x650
R 500 V C6	BF_00_000_590x1070	590x138x1070
R 600 H C6M	BF01_00_000_520x1060	520x138x1060
R 700 H C6M	BF_00_000_590x930	590x138x930
R 700 V C6	BF_00_000_590x1070	590x138x1070
R 1000 H/V C5		
R 1300 H/V C5	BF_00_000_852x1355	852x138x1355
R 1500 H/V C5		
R 1700 H/V C5	BF_00_000_852x1485	852x138x1485
R 2000 H/V C5		
R 3000 H/V C5	BF_00_000_1100x2100	1100x138x2100
R 4000 H/V C5		
CF 1000 H/V C5		
CF 1300 H/V C5	BF_00_000_852x1810	852x138x1810
CF 1700 H/V C5		
CF 2300 H/V C5	BF_00_000_852x2000	852x138x2000
CF 3500 H/V C5	BF_00_000_1100x2500	1100x138x2500

OUTDOOR GRILL

For supply and exhaust air flows' separation. (black RAL9005 or white RAL9010)



- Type:
- LD-125
 - LD-160
 - LD-200
 - LD-250
 - LD-315

AIR DISTRIBUTION BOX

(only for unit Domekt R 200 V C4 for horizontal connection of ducts)



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

DECORATIVE PANEL

(only for unit Domekt R 200)



- White colour painted
- Stainless steel

KITCHEN HOODS




- White colour painted
- Stainless steel



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

Override function (OVR) – remote airflow corrections

An external device (timer, motion sensor, differential pressure switch, thermostat, etc.) can start override function and temporarily take over control of the unit. The signal received from the external device switches the unit to the user set airflow and temperature, ignoring the current operating mode and weekly schedule. This function has the highest priority and may operate in every mode, even when the unit is switched off.

Type	Parameters
 Differential pressure switch DTV500	Pressure range 50 – 500 Pa One change-over contact (NO+NC) 250V AC, 1A Protection class IP54



Wireless router

Wireless router provides a simple way to connect the ventilation unit to the Internet or a local network via Wi-Fi. Suitable for situations when there is no possibility for cable connection between AHU and internet access point. The router comes with a power supply (adapter and micro USB) and a computer network (Ethernet) cable. Transmission speeds up to 300 Mbps.



Variable air volume control (C5/C6/C6M)

VAV – control mode allows maintaining constant air pressure in ducts while the fan speed is adjusting according to pressure changes in the ventilation system correspondingly to the requirements in different premises. Air pressure in ducts is measured by optional VAV pressure sensors installed in supply and exhaust air ducts.









Network module PING2 for C4 controller

Network module PING2 is intended for connection of air handling units with C4 controller to the computer network (Ethernet) or BMS (RS-485).

Air quality control (AQC)

Upon connecting additional external air quality or humidity sensors, the ventilation intensity is chosen automatically. The air handling unit will slow down or can even be stopped when the air quality is at the user-set level and speeds up automatically if air quality is getting worse. In this way, optimum room comfort is ensured with the minimum energy cost. This function is available on all air handling units by default, just by connecting one or more of the sensors listed below.

Type	Parameters
 Wall mounted temperature – humidity sensor „SHR“	Supply voltage: 24 Vac/dc, < 1 VA Relative humidity: 0...100 %, +/- 2 % Temperature: 0...50 °C, +/- 0,5 °C Output signal: 2 x 0...10 V Protection class: IP20 Dimensions: 87 x 86 x 30 mm
 Duct mounted humidity sensor „SHD“	Supply voltage: 24 Vac/dc, < 1 VA Relative humidity: 0...100 %, +/- 2 % Output signal: 2 x 0...10 V Protection class: IP54
 Wall mounted CO₂, % RH and temperature sensor-controller „SCRs“	Supply voltage: 24 Vac/dc, < 2 VA CO ₂ : 0...2000 ppm +/- 6% % RH: +/- 3% Temperature: 0...50°C, +/- 1°C Output signal: 2x0...10 V selectable Protection class: IP30 Dimensions: 80x80x26 mm
 Duct mounted CO₂ and temperature sensor „SCD“	Supply voltage: 24 Vac/dc, 2 VA CO ₂ : 0...2000 ppm, +/- 40 ppm Temperature: 0...50 °C, +/- 0,5 °C Output signal: 2 x 0...10 V Protection class: IP54 Dimensions: 105 x 104 x 155 mm
 Wall mounted air quality, % RH and temperature sensor-controller „SQRs“	Supply voltage: 24 Vac/dc, < 2 VA VOC: 0-100% Temperature: 0...50 °C, +/- 0,5 °C Output signal: 2 x 0...10 V selectable Protection class: IP20 Dimensions: 87 x 86 x 30 mm
 Duct mounted air quality and temperature sensor „SQD“	Supply voltage: 24 Vac/dc, < 2 VA VOC: 450...2000 ppm (CO ₂ equivalent) Temperature: 0...50 °C, +/- 0,5 °C Output signal: 2 x 0...10 V Protection class: IP54 Dimensions: 105 x 104 x 155 mm

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 air handling units power supply cable types are specified in the following table. Electrical wiring diagrams for VERSO Pro and KLASIK units are available in the technical printouts.

Unit size	Power supply cable
R 200 R 250 R 300 R 400 R 450 R 500 R 600 R 700	3×1,5 mm ²
R 1000 E	5×1,5 mm ²
R 1300 E R 1500 E R 1700 E R 2000 E R 2500 E R 3000 E R 5000 W R 7000 W	5×2,5 mm ²
R 4000 E R 5000 E	5×6 mm ²
R 1000 W R 1300 W R 1500 W R 1700 W R 2000 W R 2500 W	3×1,5 mm ²
R 3000 W R 4000 W	5×1,5 mm ²
RHP 400 RHP 600	3×1,5 mm ²
RHP 800	5×2,5 mm ²
RHP 1300 RHP 1500	5×4 mm ²
CF 200 CF 250 CF 300 CF 400 CF 500 CF 700	3×1,5 mm ²

Unit size	Power supply cable
CF 1000 E CF 1300 E CF 1500 E CF 1700 E CF 2300 E	5×2,5 mm ²
CF 2500 E CF 3500 E	5×4 mm ²
CF 5000 E	5×6 mm ²
CF 1300 W CF 1500 W CF 1700 W CF 2300 W	3×1,5 mm ²
CF 3500 W	5×1,5 mm ²
CF 5000 W	2,5×6 mm ²
S 650 E/3	3×2,5 mm ²
S 650 E/6	5×1,5 mm ²
S 800 E/6 S 800 E/9 S 1000 E/9 S 1300 E/9	5×2,5 mm ²
S 1000 E/15 S 1300 E/15 S 2100 E/15	5×6 mm ²
S 2100 E/22,5	5×10 mm ²
S 800 W S 1000 W S 1300 W S 2100 W	3×1,5 mm ²
S 3000 W	5×1,5 mm ²
Control panel	Connection cable for control panel (10 m)
C6.1, C6.2, C5.1, C4.1	4×0,22 mm ²

Unit marking and ordering samples

DOMEKT-R-450-V-L1-F7/M5-C6-L/A

1 2 3 4 5 6 7 8

- 1 Series: **DOMEKT**
- 2 Type of heat exchanger: **R** – rotary; CF – counterflow; S – supply unit
- 3 Unit size: 200, 250, 300, 400, **450**, 500, 600, 650, 700, 800, 1000
- 4 Duct connection: **V** – vertical; H – horizontal; F – ceiling
- 5 Inspection side: R1; R2; **L1**; L2
- 6 Air filter class: **F7/M5**; M5/M5
- 7 Controller: **C6**, C6M, C8, C4
- 8 Heat exchangers characteristic: **L/A**; L/AZ; ER (enthalpy counterflow plate heat exchanger)

VERSO-R-1300-UH-E-L1-F7/M5-C5.1-SL/A

1 2 3 4 5 6 7 8 9

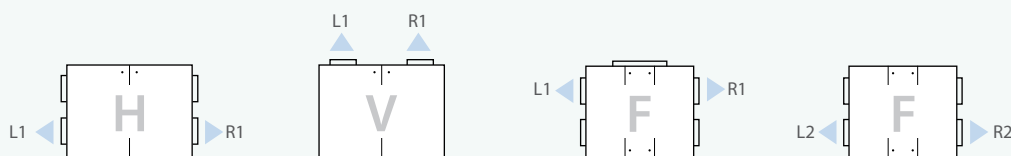
- 1 Series: **VERSO**
- 2 Type of heat exchanger: **R** – rotary; CF – counterflow; S – supply unit
- 3 Unit size: 1000, **1300**, 1500, 1700, 2000, 2100, 2300, 2500, 3000, 3500, 4000, 5000, 7000
- 4 Duct connection: **UH** – universal/horizontal; UV – universal/vertical; H – horizontal; V – vertical; F – ceiling
- 5 Heater type: **E** – electric; W – water; HCW – heater-cooler; HCDX – heater-cooler direct expansion
- 6 Inspection side: R1; R2; **L1**; L2
- 7 Air filter class: **F7/M5**
- 8 Control system with panel: **C5.1**
- 9 Rotary characteristic: L/A; **SL/A**; L/AZ

VERSO-RHP-600-3.7/3-UH-L1-F7/M5-C5.1-L/AZ

1 2 3 4 5 6 7 8 9

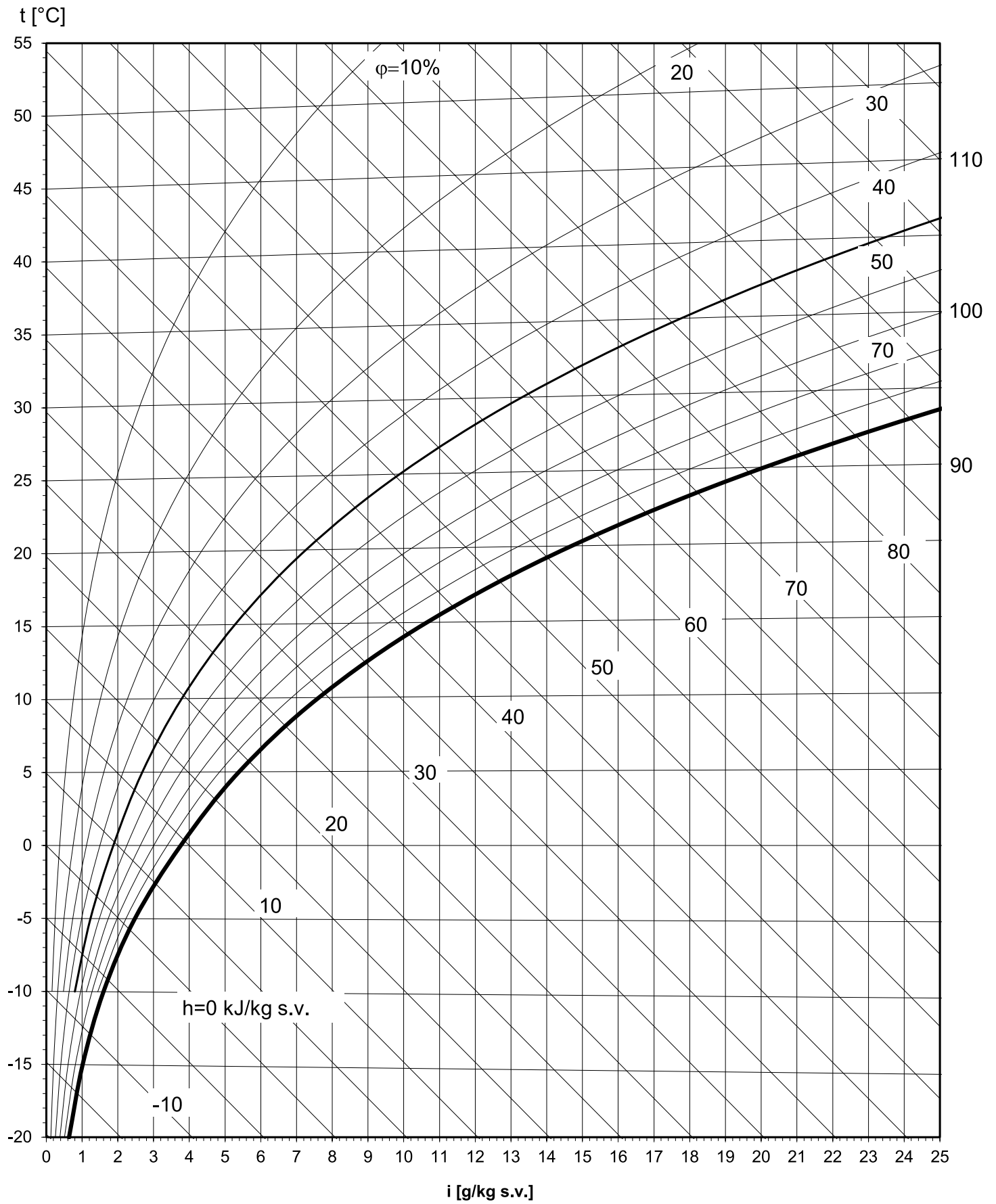
- 1 Series: **VERSO**
- 2 Type: **RHP**
- 3 Unit size: 400, **600**, 800, 1300, 1500
- 4 Heating / cooling capacity: **3.7/3**
- 5 Duct connection: **UH** – universal/horizontal; UV – universal/vertical; V – vertical
- 6 Inspection side: **L1**; L2; R1
- 7 Air filter class: **F7/M5**; F7/F7; M5/M5
- 8 Control system with panel: **C5.1**
- 9 Rotary characteristic: **L/AZ**

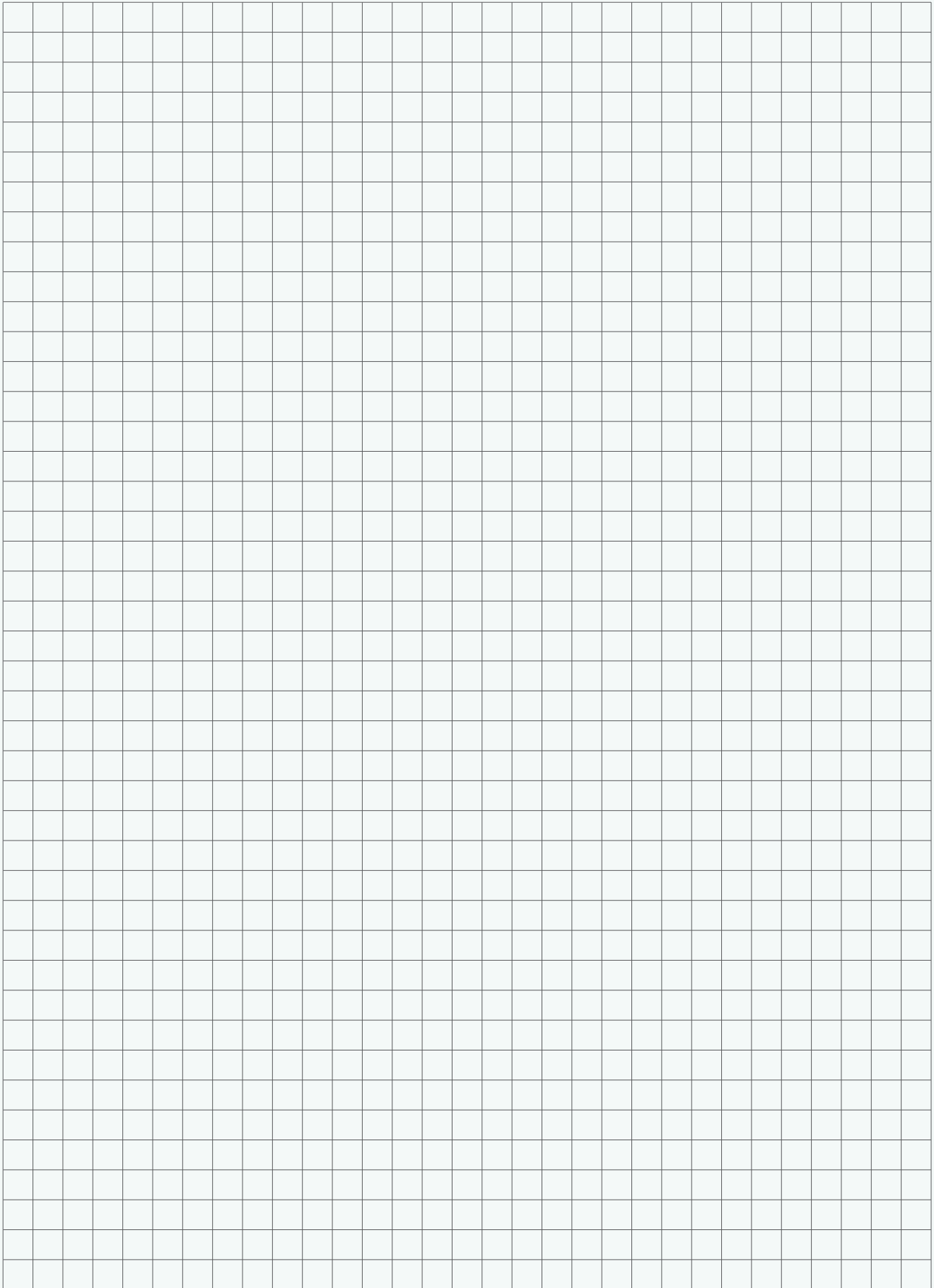
Inspection side



◀ supply air

Inspection side is determined by the supply air direction, looking at the unit from the user's side.







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