Air Handling Units

Product catalogue

systemair

Reveal the secret of fresh air!

Content

Since then the product portfolio has grown considerably and today comprises of a wide range of energy efficient fans, air handling units, air distribution products, chillers, air curtains and heating products. Our business idea is that with simplicity and reliability as core values, develop, manufacture and market ventilation products of high quality.

With the business idea as a base and our customers in focus, we will be perceived as a company to trust with a focus on delivery security, availability and quality. Our focus is to develop innovative and energy efficient products - that are easy to select, install and maintain. With over 4000 employees in 45 countries, we are always close to our customers.

Systemair across the world

Skinnskatteberg, Sweden

The Group headquarters, distribution center and largest production site. Production of compact air handling units and a wide range of fans and accessories. Production of air curtains and fan heaters for Frico, a company within the Systemair Group.

Hässleholm, Sweden

Production of heating products for air handling units, mobile and fixed fan heaters, plus dehumidifiers.

Windischbuch, Germany

Producton of an extensive range of axial and roof fans, plus tunnel and garage ventilation.

Langenfeld, Germany

Production of air curtains.

Mühlheim an der Ruhr, Germany

Production of air handling units for swimming pool halls and comfort ventilation with extra high efficiency.

Ukmergé, Lithuania

Production of residential units and large air handling units.

Maribor, Slovenia

Production of high-temperature fans for smoke extract ventilation.

Aarhus, Denmark

Production of large air handling units – "central units".

Bratislava, Slovakia

Production of air distribution products; fire dampers.

Quality:
Systemair is certified in accordance with ISO 9001; ISO 14001, ATEX and European fire safety standard EN 12101-3. Our research and development laboratories are one of the most modern in Europe; measurements are made in accordance with international standards such as AMCA and ISO.

Save Energy, lower running cost!
Our label "Green Ventilation" features products with a high energy saving potential. All products labelled with "Green Ventilation" combine energy economy with energy efficiency.

Hyderabad, India
Production of air distribution products.

Greater Noida, New Delhi, India
Production of duct, axial and box fans, air handling units and air distribution products.

Kuala Lumpur, Malaysia
Production of duct and axial fans.

Lenexa, USA
Production of duct, axial and roof fans chiefly for the North American market. Distribution centre for the USA market.

Milan, Italy
Production of a wide range of liquid- and air-cooled chillers and heat pumps for comfort cooling.

Madrid, Spain
Production of large air handling units and box fans for markets in southern Europe, the Middle East and North Africa.

Bouctouche, Canada
Production of air handling units for residential use in North America, plus dehumidifiers.

Tillsonburg, Canada
Production of air handling units for classroom ventilation in the North American market.

Eidsvoll, Norway
Production of air handling units.

Istanbul, Turkey
Production of a wide range of air handling units and fan coils.

Waalwijk, The Netherlands
Production of air handling units.

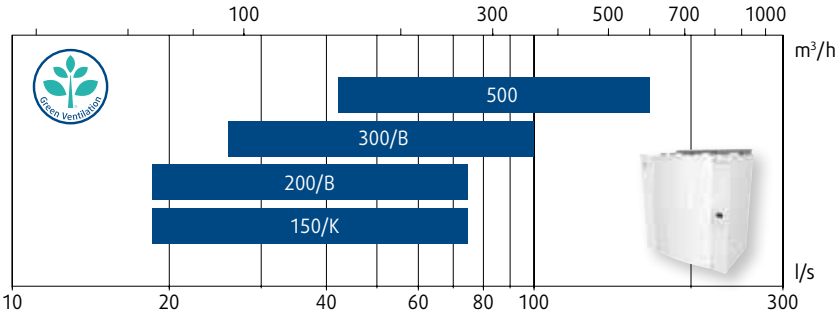
Air handling units – Overview

Systemair has a wide range of air handling units for use in various applications from small office premises to larger industrial applications. Common to all items in the range is that systems and components have been developed to satisfy stringent demands for low energy consumption. Heat exchangers, motors and fan units have all undergone extensive testing, both in the laboratory and out in the field, in order to comply with current and future demands for low energy consumption.
All products are also manufactured to comply with environmental requirements. To ensure easy installation, many of these units feature control systems enabled for Plug and Play, i.e. simple start-up.

Residential air handling units

SAVE VTR 19-167 l/s

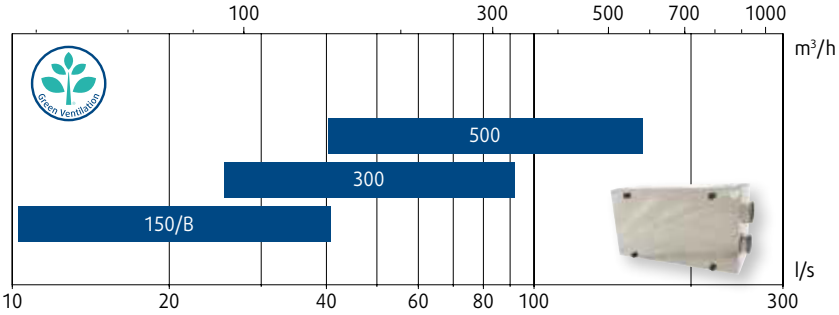
Top connected units with rotary heat exchanger and RadiCal fans with EC technology. Adapted for ventilation of houses, apartments or dwellings with an area up to 400 m².



Technical data 24

SAVE VSR 11-163 l/s

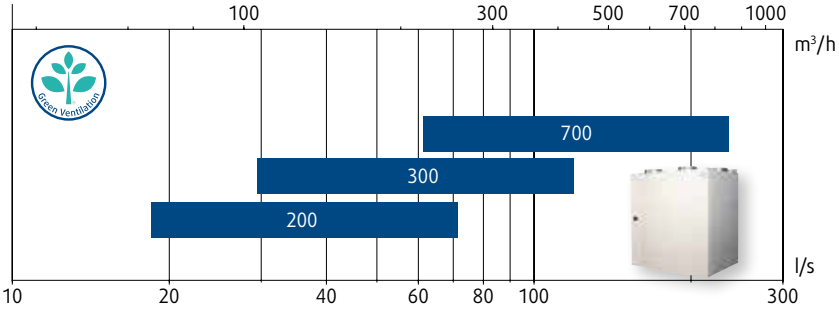
Side connected units with rotary heat exchanger and RadiCal fans with EC technology. Designed for apartments with an area up to 400 m². SAVE VSR 150/B for installation in the ceiling. SAVE VSR 300/500 for installation in the loft.



Technical data 30

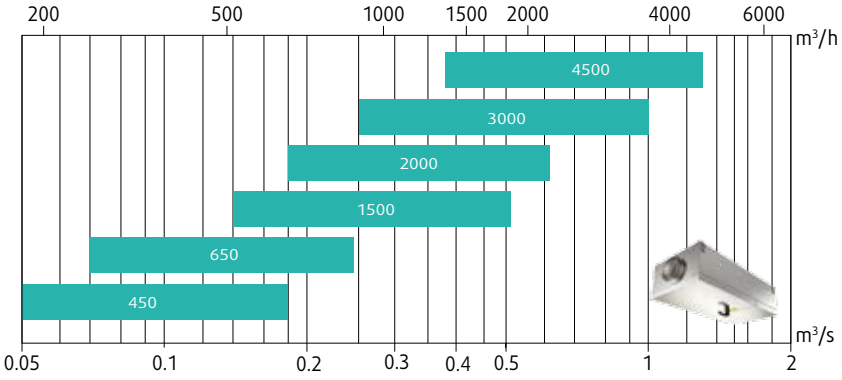
SAVE VTC 18-241 l/s

Top connected units with counter flow heat exchangers and RadiCal fans with EC technology. SAVE VTC 300, white painted model, flexible control functions and modern control panel, designed for installation on the wall in dwellings with ventilated area up to apx. 300 m². SAVE VTC 700, for floor installation with a range up to 600 m².



Technical data 34

Compact air handling units

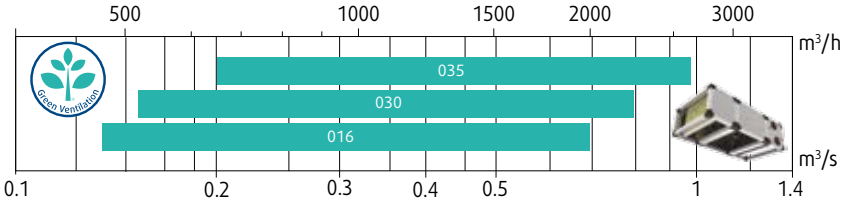


TA

0.07-1.25 m³/s

Supply air handling units intended for small to medium-sized premises. Available in 7 sizes and supplied complete with control system, fan, heating coil and filter.

Technical data 38

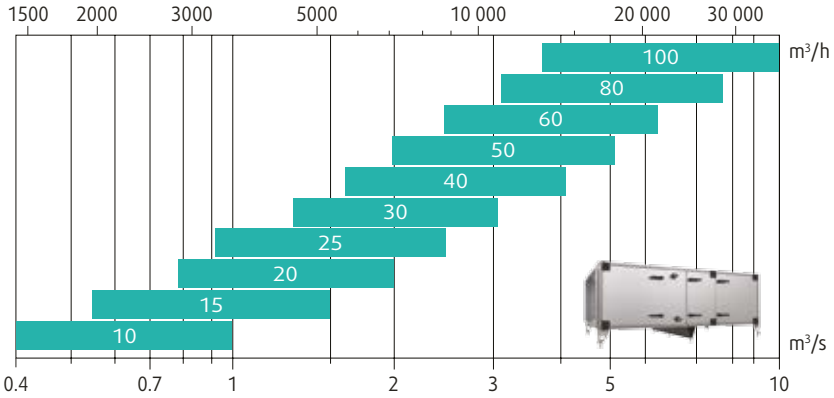


F

0.13-0.97 m³/s

False ceiling units for small and medium-sized premises. Available in 3 sizes and in 3 versions.

Technical data 44

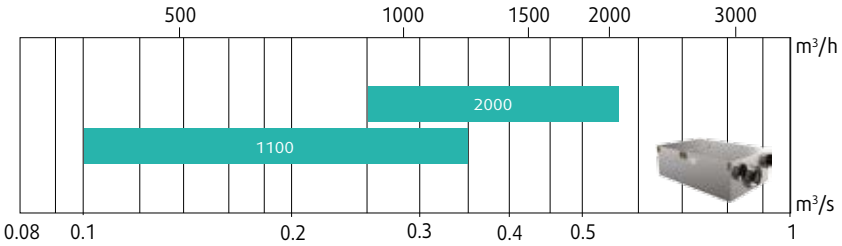


DVCompact Supply

0.4-10 m³/s

DVCompact supply is a series of air handling units designed for offices, shops, schools or similar premises. The units have compact design and low overall height that males installation easier in existing premises.

Technical data 100



Maxi

0.1-0.56 m³/s

Compact air handling units with a low overall height and heat recovery, intended for small and medium-sized premises. Available in 2 sizes and supplied complete with control system. Also available with an electric or hot water heating coil.

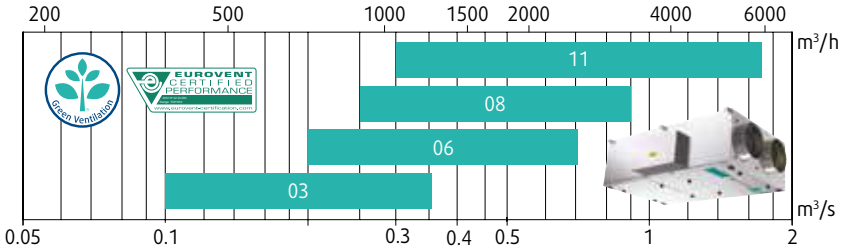
Technical data 46

Compact air handling units

Topvex FR 0.12-1.7 m³/s

Compact air handling units with a low overall height and rotary heat exchangers, EC motors and complete with control system.

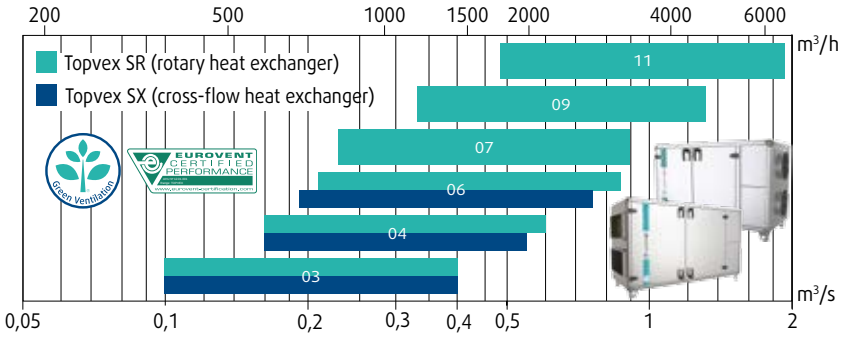
Technical data 50



Topvex SR/SX 0.09-1.9 m³/s

Compact air handling units with side connection and rotary or cross-flow heat exchangers, intended for medium-sized premises. Supplied complete with control system. Equipped with EC motors and available with an electric or hot water heating coil or without coil.

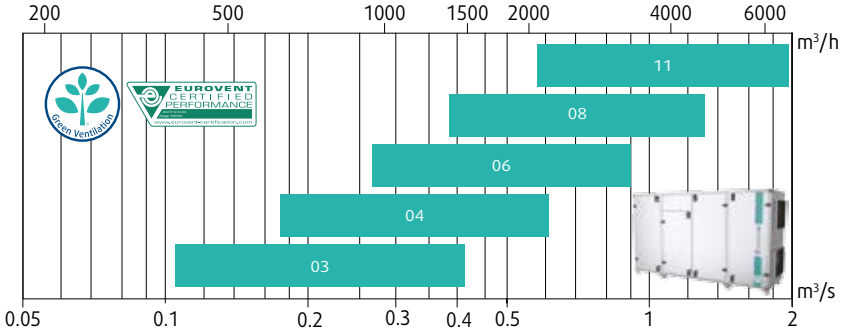
Technical data SR 56
SX 64



Topvex SC 0.11-1.97 m³/s

Compact air handling units with side connection and high efficient counterflow heat exchangers. Counterflow exchanger is used where it is required to separate supply air from exhaust air and where a high energy recovery efficiency is required. Double by-pass damper ensures low SFP in all operating situations. Supplied complete with control system.

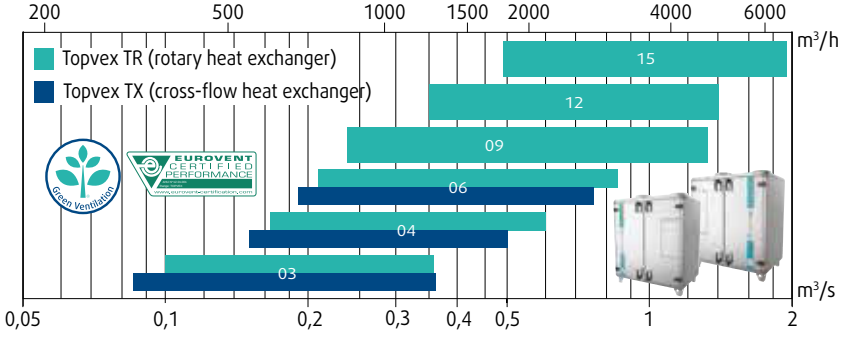
Technical data 70

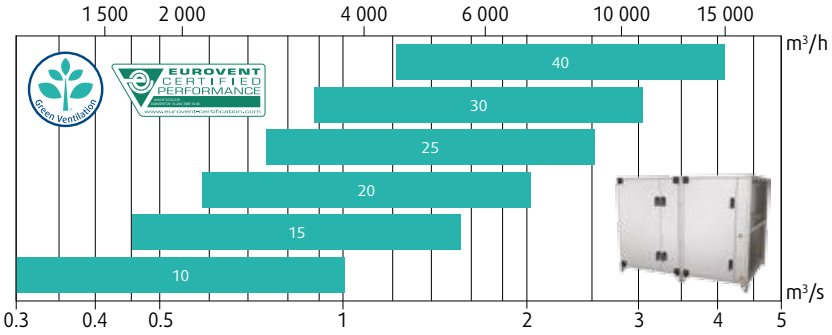


Topvex TR/TX 0.09-1.9 m³/s

Compact air handling units with top connection and rotary or cross-flow heat exchangers, intended for medium-sized premises. Supplied complete with control system. Equipped with EC motors and available with an electric or hot water heating coil or without coil.

Technical data TR 78
TX 90



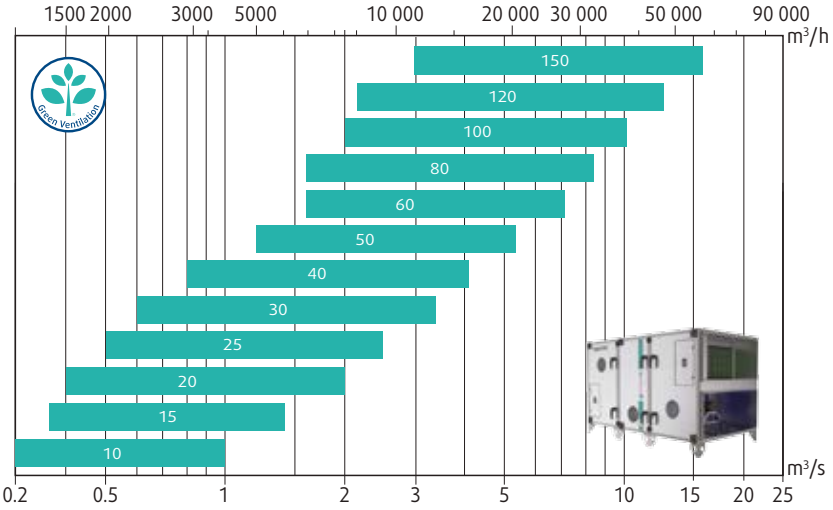


TIME ec

0.4-4 m³/s

Compact air handling units with heat recovery, intended for medium-sized premises. Available in 6 sizes and supplied complete with control system. Also available with heating coil and cooling coil.

Technical data 96



DVCompact

up to 15 m³/s

Energy optimized compact unit that meets the requirements to be labeled with the symbol Systemair Green Ventilation. Designed with a focus on energy efficiency and has a low SFP while it is designed to take as little space as possible.

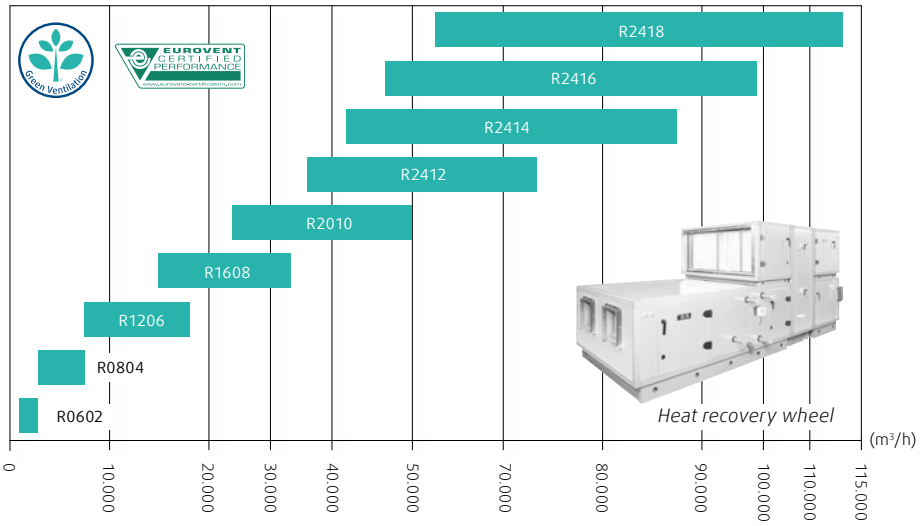
Technical data 100

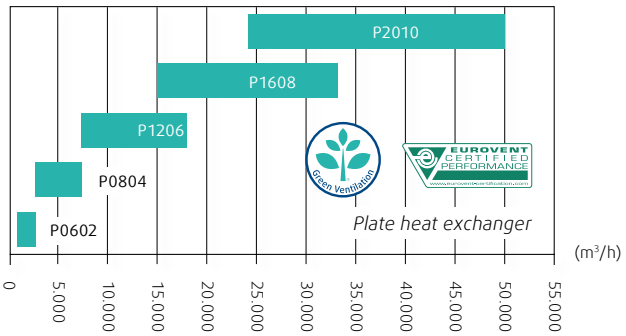
Modular air handling units

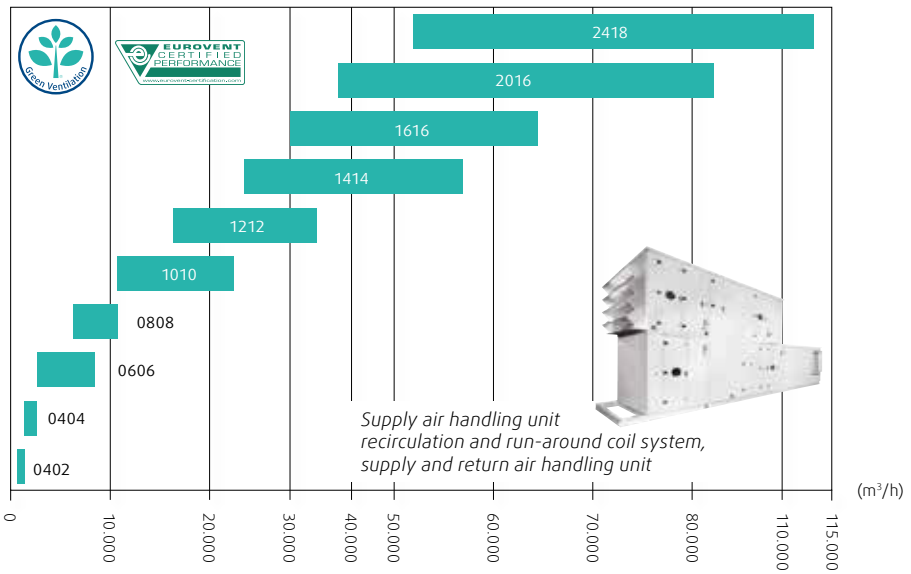
HHFlex 0.1-31.4 m³/s

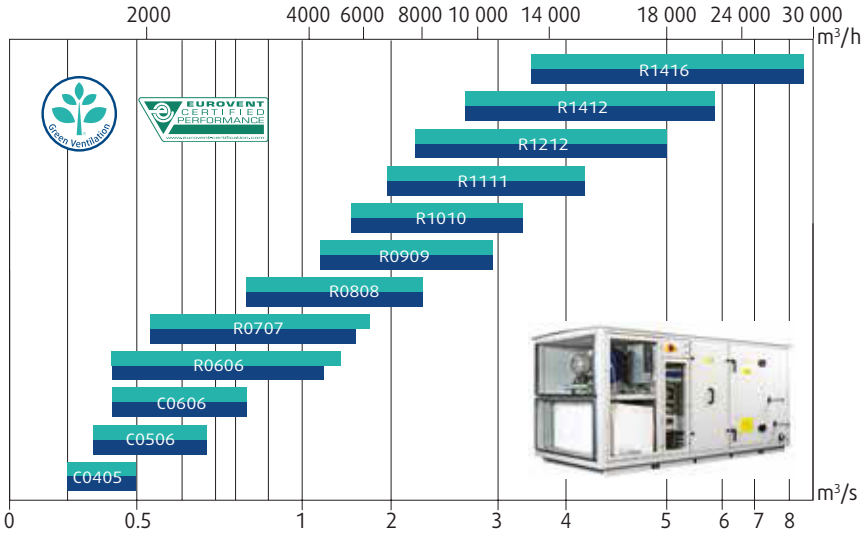
Modular air handling units with a high degree of freedom on unit layout. Certified modular components can be configured and positioned to comply to process and dimensional requirements. The available range for fan and heat exchange components covers both economical and high-end solutions.

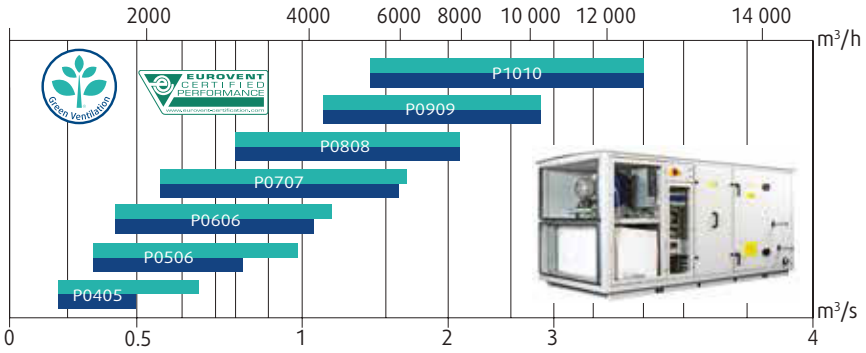
Technical data 114











With or without reheating coil
With cooling coil

HHCompact 0.19-8 m³/s

The HHCompact units are dual-flow air handling units, equipped with a high-efficiency air-to-air heat exchanger and a control system for a Plug and Play installation. The units are especially designed to ensure economical extraction of indoor air and taking in fresh air to meet current and future requirements for high energy-efficiency buildings.

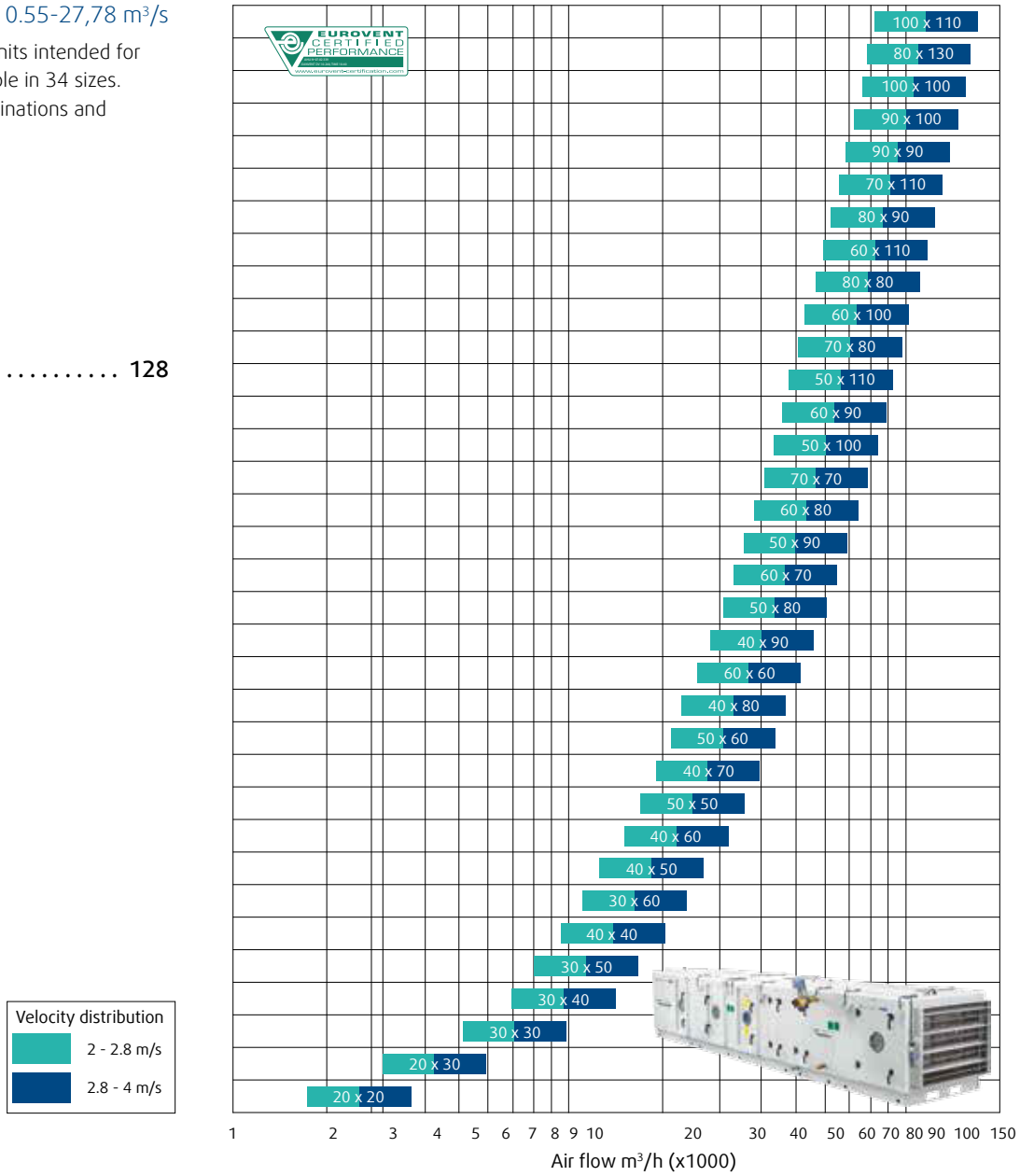
Technical data **122**

Modular air handling units

Flexline 0.55-27,78 m³/s

Modular air handling units intended for large premises. Available in 34 sizes. Large number of combinations and options.

Technical data **128**

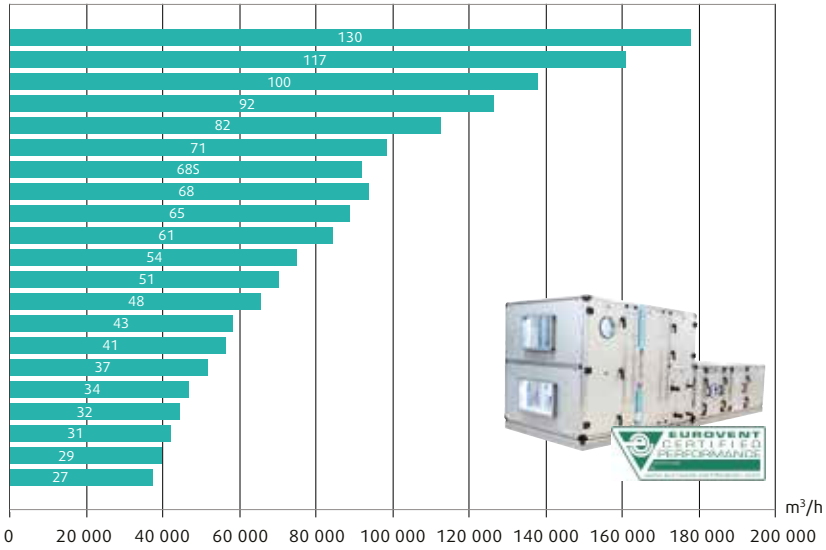


BA

0.14-41 m³/s

Modular air handling units intended for large premises. Available in 41 sizes. Large number of combinations. Suitable for technically demanding environments.

Technical data **140**

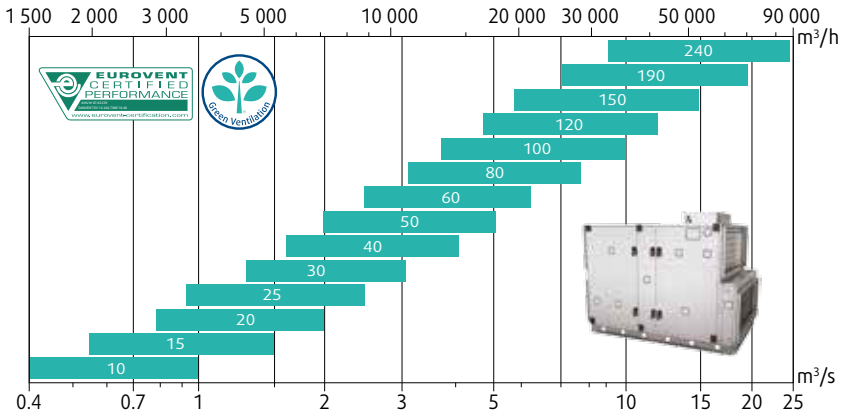


DV

0.4-24 m³/s

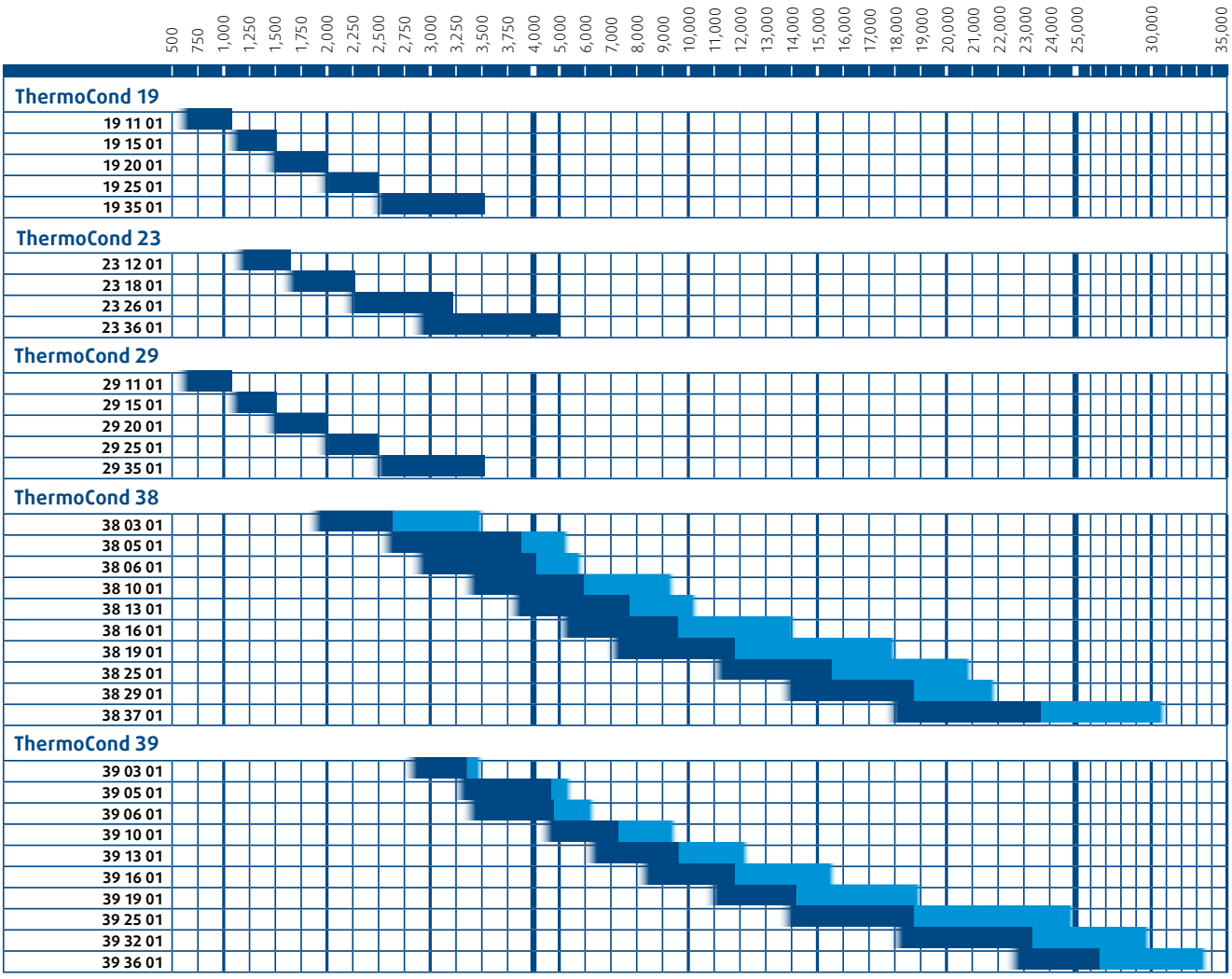
Modular air handling units intended for large premises. Available in 14 sizes. Large number of combinations and options.

Technical data **158**



Menerga

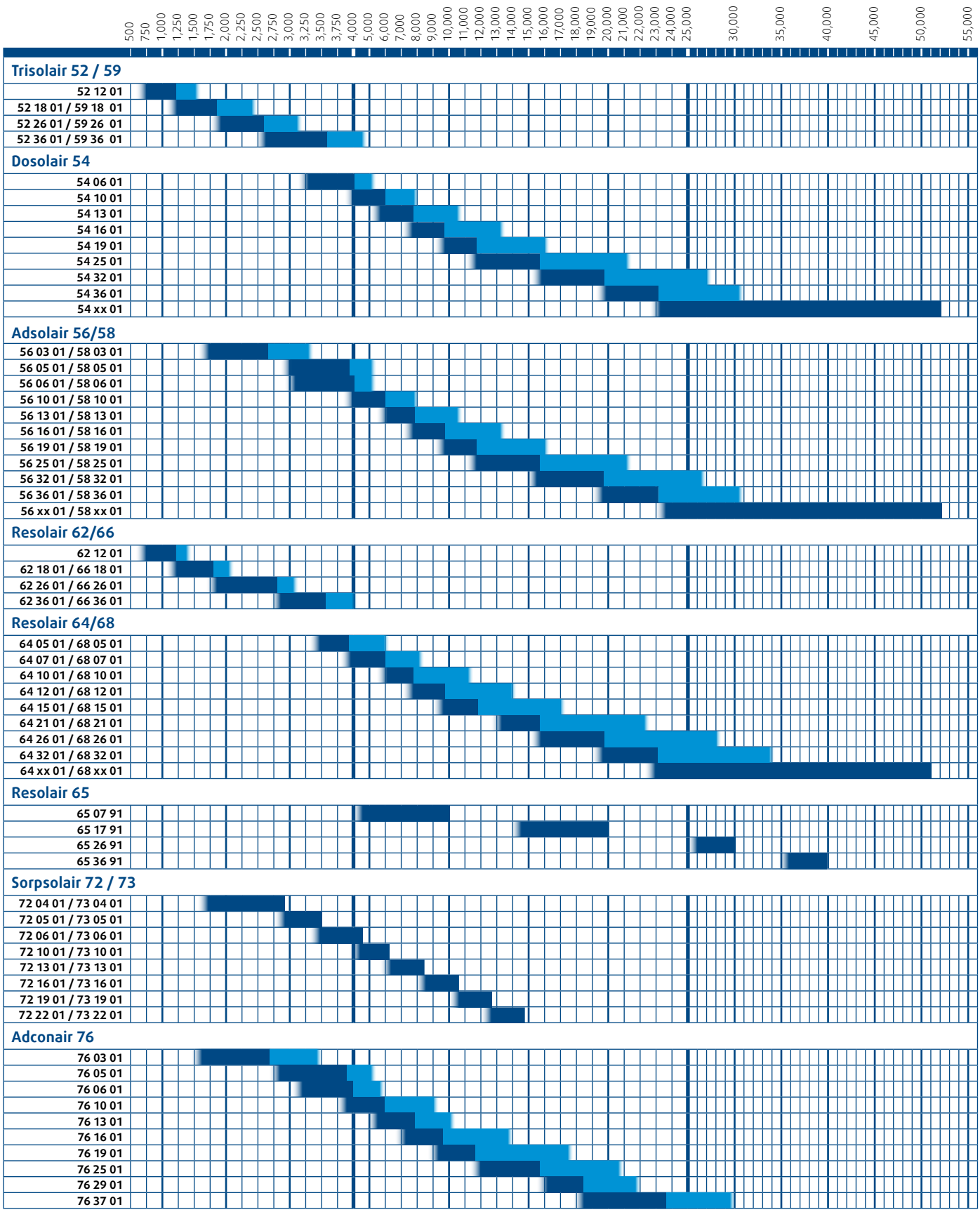
Air flow indoor swimming pool air conditioning



Optimum volume flow corresponds to air velocity class V2 according DIN EN 13053:2012 or better (exception ThermoCond 19, 23 and 29)

More information 154

Menerga
Air flow indoor comfort air conditioning



menerga
a systemair company

Product range

Systemair has an extensive range of ventilation products, the majority of which are fans and air handling units. Other products include a wide range of air terminal devices for various applications.
These products are installed in a variety of locations, including homes, offices, healthcare premises, shops, industrial buildings, tunnels, parking garages, training facilities, sports centres.
The most common usage is comfort ventilation, but safety ventilation in various forms is also an important market. Smoke gas ventilation and tunnel ventilation are two examples.

Fans

Systemair is one of the world's largest suppliers of fans for use in various types of property.

Our range includes everything from duct fans with a round connection – the company's original product – to rectangular duct fans, roof fans, axial fans, explosion-proof fans, and smoke gas fans.

These fans can be supplied in sizes suitable for everything from ducts with a diameter of just 100 mm to large road tunnel fans. All our fans have been developed to comply with stringent requirements and are characterised by user-friendliness, a high level of quality and a long service life.

Circular duct fans

Duct fans with a circular connection.

Rectangular duct fans

Duct fans with a rectangular connection.

Radial fans

Single-inlet radial fans.

Box fans

For extract air systems that transport normal or high-temperature media.

Axial fans

Axial fans for duct connection or wall mounting.

Roof fans

Roof fans with a circular or square connection.

Explosion-proof fans

Explosion-proof fans for duct, roof and axial installations.

Jet fans

The jet fan range includes products for garages and road and rail tunnels.

Thermo fans

Systemair supplies high temperature fans that can withstand conditions of up to 600°C for 120 minutes.

Fire safety ventilation
Systemair produces fans, dampers and control equipment for protection against smoke and fire certified for use during normal operation and in the event of a fire. The axial fans are certified for installation inside or outside fire risk areas.

Smoke gas fans
High-capacity fans for evacuation of smoke gases.

Fire dampers
Dampers that reduce the spread of smoke and fire.

Chillers & Heat pumps
Our wide range of Chillers and Heat Pumps cover a huge variety of applications. Our production is equipped with high-tech machinery and has one of the most modern research centers in Europe.

Air cooled and water cooled chillers
Scroll compressor with or without heat recovery

Water terminals and close control
Fan coils, casettes and chilled beams

Air terminal devices
Systemair's range also includes a wide selection of air terminal devices for all possible environments and positions. Development and manufacture take place at a modern factory in Slovakia.

Supply, extract & transfer air terminal devices
For mounting in ceilings or walls.

Nozzle air devices
Optimum air distribution for rooms.

Supply & extract air ventilators
For mounting in ceilings and walls.

Duct products
Dampers, plenum boxes, and duct accessories

General advice

A good indoor climate is vital

It goes without saying that everyone prefers fresh air. We are also aware of the fact that we must be frugal with the resources we take from Mother Earth. That is why there is sometimes a conflict between supplying ventilation systems with energy and saving the earth's resources and protecting the environment. Does it have to be this way? No. Today, there are energy-efficient solutions that create a good indoor climate. Systemair has products that have been specially adapted to protect the environment with well-thought-out material consumption and production methods. These products are also designed to be economic in terms of energy consumption. The best of Systemair's ventilation products are labelled "Green ventilation".

Heat recovery

In areas with a relatively low average annual temperature, ventilation systems employ effective heat recovery that returns energy from extract air to the supply air. A good rotary heat exchanger can recover up to 90% of the energy present.

Energy-efficient fans

Today, there is a new generation of fan motors that contribute to a dramatic reduction in energy consumption, as much as 50% in some cases. The new EC motors are better suited to speed control functions, which is where considerable energy savings can be made. A bonus of this is also quieter operation.

Pressure

The design of the duct system and the unit has an impact on required system pressure. There are often tens, sometimes hundreds, of Pascals to be saved here.

Night cooling

In warmer parts of the world, energy savings may be possible by drawing cool night-time supply air into premises, thus cooling the building structure.

Quality-certified products

How can you choose the right solution and product when there are so many alternatives? Nowadays, most major suppliers are ISO-certified and have CE-marked products, but is that enough? At Systemair we are going one step further and working hard to ensure that our products maintain a high standard and are approved by various bodies. For units, this may mean Eurovent certification or other local certification for the country in question. To achieve this, you need resources and expertise. Within the Group, you will find, among other things, one of Europe's most modern development centres, which is AMCA-certified.

One of Europes most modern development centers

A room that is so quiet that the only thing you'll hear is your heartbeat.

The development centre in Skinnskatteberg, recently accredited by AMCA, signifies an investment of EUR 700,000 and is fitted with measurement and testing equipment, making it one of the most modern facilities of its kind in Europe.

The quiet room is one of the test stations or a "reverberation chamber", producing a background sound of less than 10 dB(A). When measuring supply air terminals, a green laser is used to show how the air is expelled from wall-mounted or ceiling-mounted devices.

There is also a climate chamber that cools the air to -20°C, which means we can use it all year round to develop our recovery units. As well as the test centre in Skinnskatteberg, there are also test facilities in Germany and Denmark.

Planning tools

We have developed this unit overview to make it easier for you to get an idea of which product best suits your specific needs.
More detailed analysis or planning usually requires additional information, which is where the following tools come in.

Product catalogue and specification data
More detailed technical information, sufficient to carry out complete planning, is available in separate catalogues and specification data. These describe all incorporated functions, available accessories, and additional technical data.

Online catalogue and computer software
For those who prefer to work online, it is possible to select and dimension most products using Systemair's online catalogue.

In addition to complete product information, there is also a selection function that suggests alternative products to suit actual needs. For certain products, such as Topvex and DV there is computer software that you can download and install locally.

Personal support
Systemair aims to have local expertise close to the customer. We do our utmost to ensure that we have our own representatives on the markets where we operate. On some markets, contact is via distributors.

Examples of applications

Different types of plant – same basic requirements

All buildings are there to create a "climate shell", regardless of whether the aim is cleaner air or a cooler or warmer climate than the external surroundings. Here are a few examples of instances where Systemair's air handling units have been used and the conditions and requirements that applied.

Simple project implementation

Simple project implementation for expansion of existing premises or new builds, for example. Simplifies selection and planning and includes smart solutions for easier installation.

Flexible solutions

Flexible solutions with heat recovery and intelligent control functions that are easily adapted to suit current needs, different recovery systems and configurations.

Large volumes of air

When choosing central plants, you will usually need units capable of handling large volumes of air and sometimes the option of communicating with an integrated control system.

Compact solutions

Changed needs when upgrading or renovating a building usually mean new requirements for air handling. Extreme space-saving solutions and connections for units that can also be split for easier transport and handling at the construction site are able to satisfy all new demands.

Communication

Integrated control systems. The nature and complexity of requirements for controlling units and functions vary depending on the size of a project. Our factory-integrated solutions with various levels of equipment can handle everything from the simplest requirements to the toughest demands.

Residential

Our wide range of residential air handling units suit to your specific needs and ensure a good indoor climate. The energy-efficient EC motors reduce energy consumption and contribute to low SFP values. A perfect and tailored solution for individual homes, smaller offices and smiliar premises.

Field's Shopping Centre in the Danish capital of Copenhagen is a good example of an environment with exacting demands for comfort that requires large volumes of air. Systemair's specially customised modular air handling units provide the shopping centre with a high-quality indoor climate.

Offices

Office buildings generally require good ventilation during the day as well as heat recovery and reheating of supply air depending on external conditions. Ventilation systems with demand control should be considered for offices where staffing levels vary. As a rule, offices develop an excess of heat produced by people, lighting, solar radiation, computer equipment, etc. In many cases there is a need to cool the air and prevent uncomfortably high temperatures. In larger buildings that accumulate heat energy easily, you should consider employing night cooling. If the office is in a city environment, a higher filtration class should be used. In an office environment, there is also considerable need to reduce the noise generated by the ventilation system.

Schools/day nurseries

A school environment means a lot of people present at certain times of the day, i.e. generally there are relatively large variations. This means that it should be possible to use demand control for the ventilation system. Normally, heat recovery is warranted. There will be short periods during the year when cooling may be required. However if there is effective sunscreening, then air conditioning is rarely required. High demand for low noise levels. At day nurseries, activities, such as cooking, that create odours are common, so there is often a need for supply air and extract air to be kept separate. There must be heat recovery in the form of a plate heat exchanger, for example.

Shops

As a rule, the number of people in a shop changes constantly throughout the day, making a control-on-demand ventilation system the sensible option. Recirculating air in combination with carbon dioxide control (CO_2) and heat recovery can be one optimised solution for these types of premises. When there are few people present, CO_2 levels will be low and an increased amount of return air can be mixed into the system. As the number of people present increases, the amount of return air is reduced and replaced with fresh outdoor air. If heating is required at night-time, the premises are warmed up using 100% recirculating air.

Industry

Industrial premises will often have high airflows if the work carried out there generates high levels of air pollution. If the pollutants are also aggressive, there may be requirements that affect the choice of material used. Systemair offers products for different environmental classes that can cope with tough environments. Filtration of processed air can be adapted to suit specific demands.

Hotels

The requirements for ventilation in hotels are characterised by demands relating to fire protection, demand control and low noise levels. The choice of air handling unit will probably be affected by these demands. What is important here is good functions for speed control and quiet operation. In addition to quiet air handling units with demand control, Systemair can also supply fans and dampers for fire protection.

Healthcare premises

Healthcare premises can encompass numerous activities, everything from operating theatres to wards. The activity determines the requirements. Operating theatres will have stringent demands for cleanliness and ventilation. Wards require low noise levels. If several areas are served by the same system, the unit must have demand control and possibly even sub-systems.

Systemair's range of air handling units can satisfy all requirements relating to healthcare premises, whether these have to do with air cleanliness, noise levels or demand control.

SAVE VTR

The new air handling units SAVE VTR fulfill the high demands on the market on low energy consumption and sound levels. The EC technology ensure the fans are energy efficient and contribute to a low SFP factor. The SAVE VTR units are top connected with a rotary heat exchanger.

At a glance:

- High efficient rotary heat exchanger
- Energy-efficient RadiCal fans with modern EC technology
- Separate setting of supply and extract airflow
- Start-up wizard for easy commissioning
- Automatic change to summer operation (without heat recovery)
- Demand control regulation
- Low sound level
- Modbus communication via RS-485

High efficient heat exchanger
The rotary heat exchanger operates at a high efficiency in any condition. The units are operated and monitored by a modern control system and the status of the unit can easily be surveyed.

Control panel
Commissioning of the unit will be done from one or more CD control panels. A start-up wizard will make the commissioning easier, which can avoid that the unit is running at wrong conditions. The CD panel also has a user level for authorized installers and service personnel. The CD panel is connected to the unit by means of cable with quick connectors (modular plugs), at the top of the unit.

VTR units
SAVE VTR 150/K is adapted for ventilation of smaller houses and apartments with an area up to 100 m^2. The unit has an integrated cooker hood and should be placed above the hob. The customer has the choice of choosing between a white or stainless steel front. The unit is regulated by a separate control panel.

SAVE VTR 200/B and VTR 300/B are adapted for ventilation of smaller houses and apartments with an area up to 140 m^2 and 240 m^2. The units are white painted with an integrated control panel in the front door. The option for connecting one or more external control panels is also available. Connection to an external cooker hood is available on the top of the unit. This makes the unit well suited for apartment buildings where the extract air from the cooker hood is challenging.

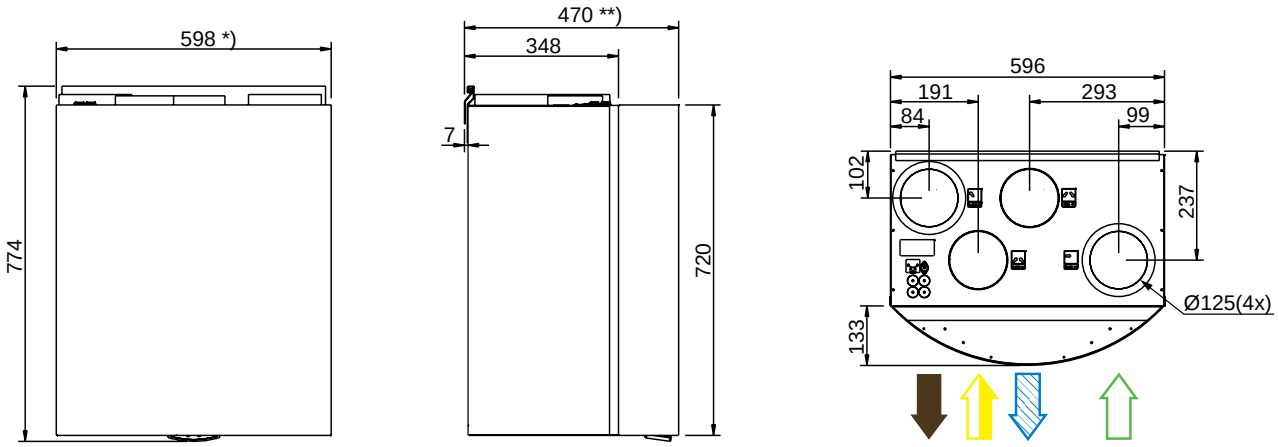
SAVE VTR 500 is adapted for ventilation of dwellings with an area of 400 m^2. The unit is a white painted model with an integrated control panel in the front door. The option for connecting one or more external control panels is also available.

Technical data		SAVE VTR 150/K (500W/1000W)	SAVE VTR 200/B (500W/1000W)	SAVE VTR 300/B	SAVE VTR 500
Voltage/Frequency	V/50Hz	230 1~	230 1~	230 1~	230 1~
Power rating per fan at the operation point	W	21 130 m^3/h at 80 Pa	37 180 m^3/h at 80 Pa	39 253 m^3/h at 80 Pa	86 420 m^3/h at 80 Pa
SFP	kW/m^3/s	1.2	1.4	1.1	1.5
Fuse	A	10	10	10	13
Power rating, motors	W	2x86	2x84	2x88	2x170
Power, electr. heating battery	kW	0,5 / 1	0,5 / 1	1,67	1,67
Weight	kg	54	46	69	81
Enclosure class	IP	24	24	24	24
Filter, supply air		G3 (standard)	F7 (standard)	F7 (standard)	F7 (standard)
Filter, extract air		G3 (standard)	G3 (standard)	G3 (standard)	G3 (standard)

Information about functions can be found on page 162. Information about control system can be found on page 170.

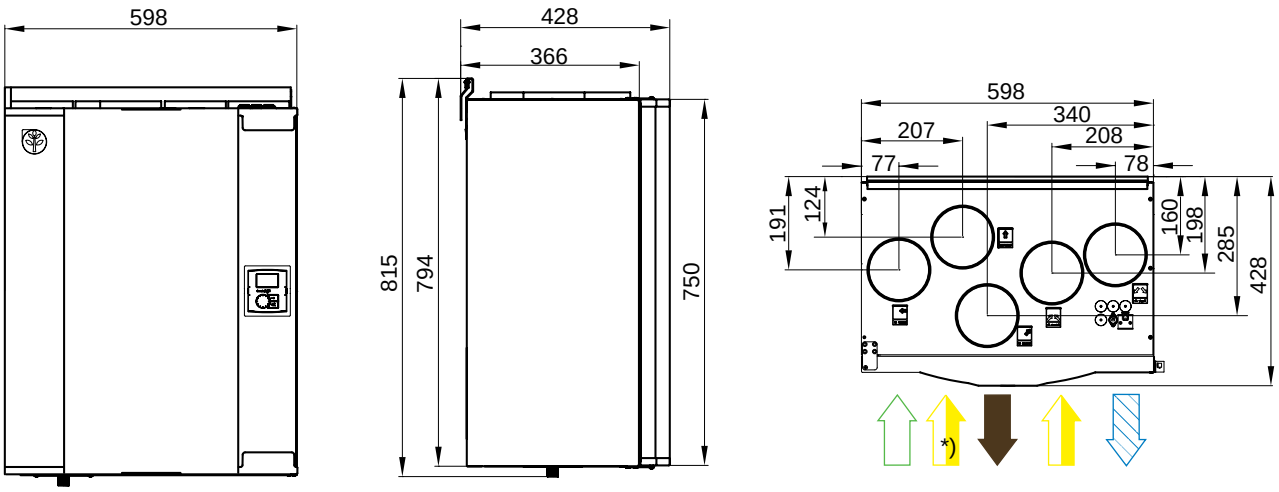
Dimensions (right hand versions)

SAVE VTR 150



*) Hatch
**) Including bracket

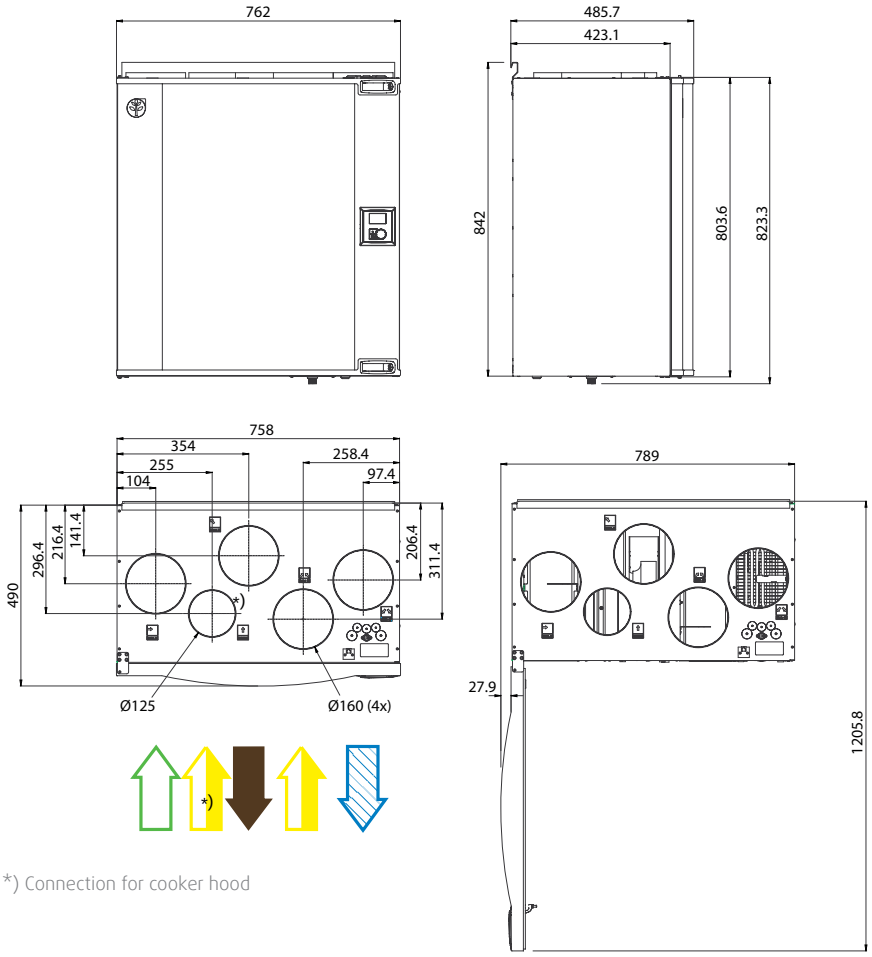
SAVE VTR 200



Duct connection: Ø125
*) Connection for cooker hood

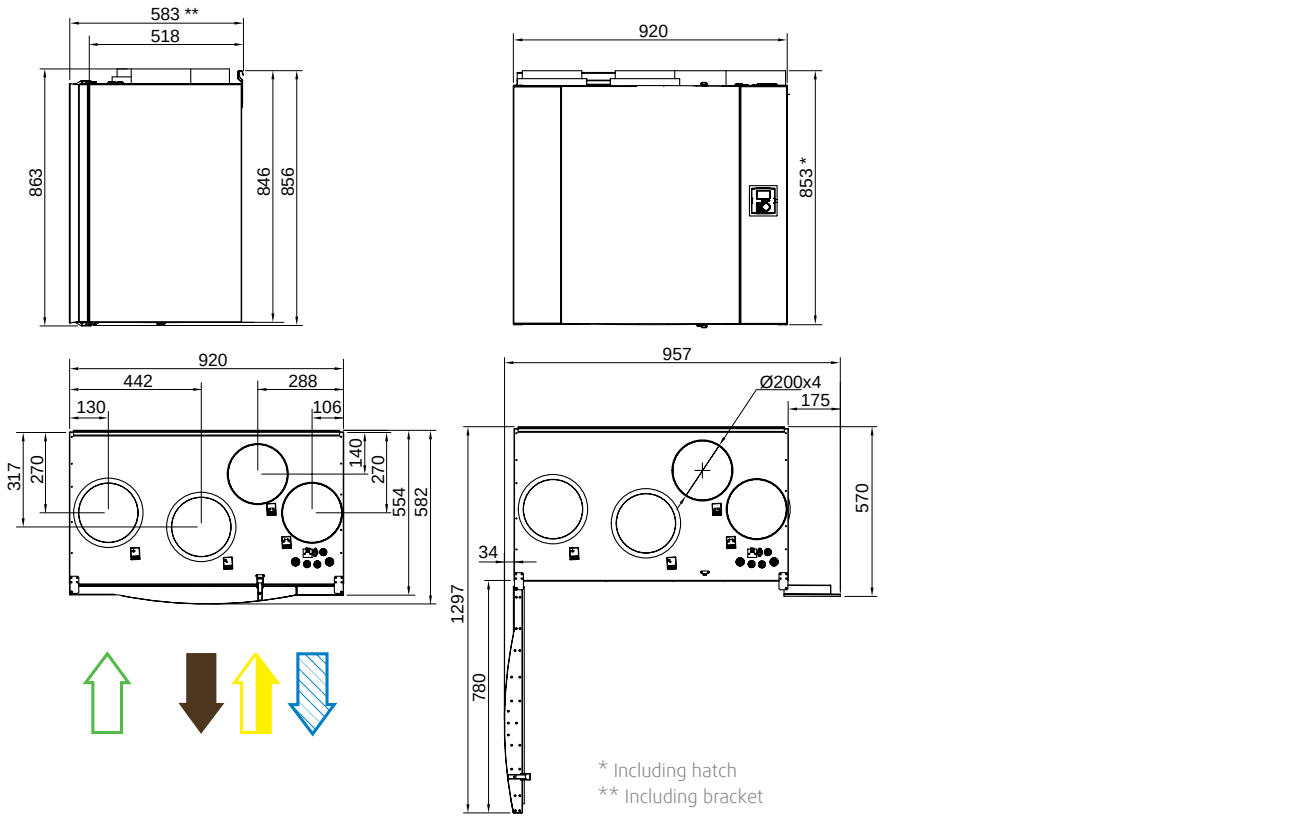
= supply air = exhaust air = extract air = outdoor air

SAVE VTR 300



*) Connection for cooker hood

SAVE VTR 500

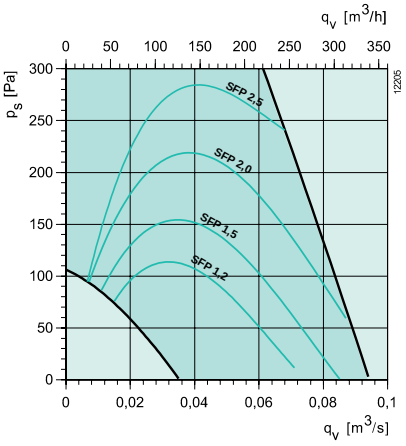


* Including hatch
** Including bracket

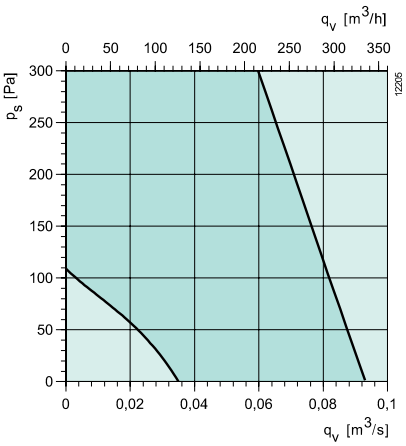
= supply air = exhaust air = extract air = outdoor air

Performance
SAVE VTR 150

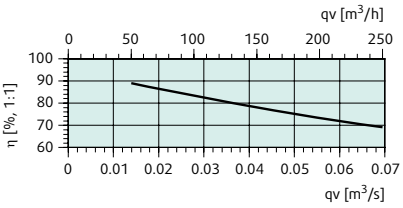
Supply air



Extract air



Temperature efficiency



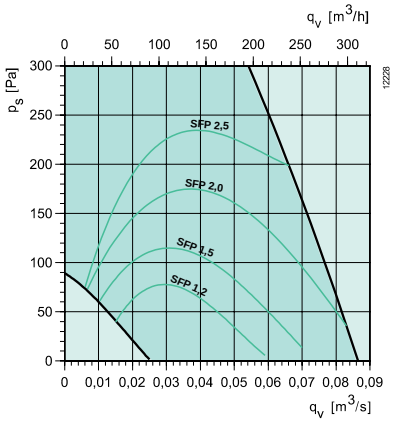
With the air ratio 1:1 and atmospheric humidity at 50% (according to EN 308).

	Octave band (mid-frequency, Hz)								
L_{wA} dB(A)	Tot	63	125	250	500	1k	2k	4k	8k
Supply air	61	44	49	53	57	53	52	40	30
Extract air	54	44	48	51	48	38	29	22	22
Surrounding	40	22	32	36	34	28	26	18	14

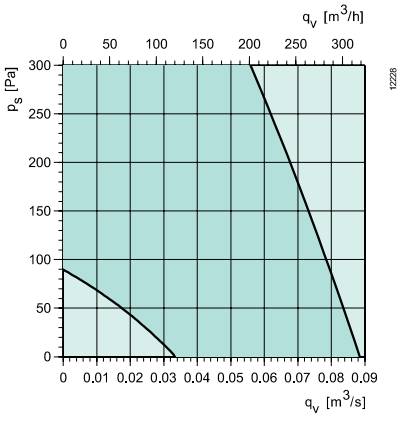
The table shows the sound power level L_{wA} based on the indicated working point at 80 Pa in the table technical data.

SAVE VTR 200

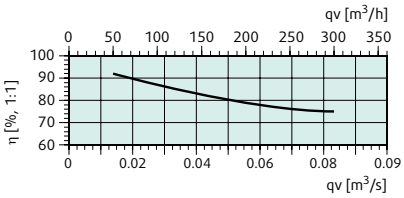
Supply air



Extract air



Temperature efficiency



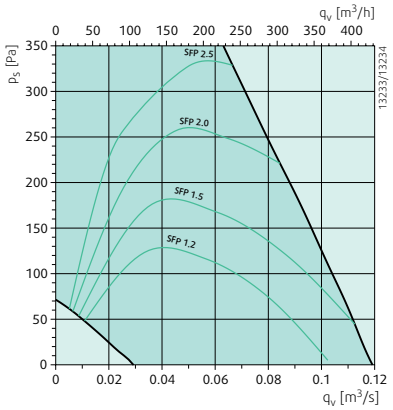
With the air ratio 1:1 and atmospheric humidity at 50% (according to EN 308).

	Octave band (mid-frequency, Hz)								
L_{wA} dB(A)	Tot	63	125	250	500	1k	2k	4k	8k
Supply air	62	48	50	55	58	54	55	45	35
Extract air	55	39	44	53	47	41	35	23	21
Surrounding	42	23	28	38	39	28	29	20	15

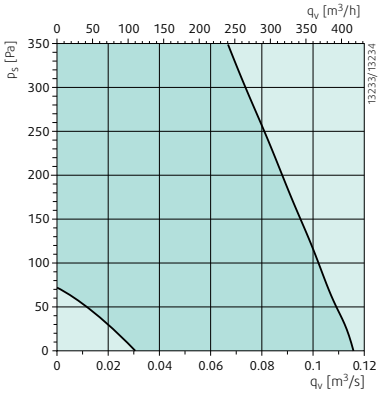
The table shows the sound power level L_{wA} based on the indicated working point at 80 Pa in the table technical data.

SAVE VTR 300

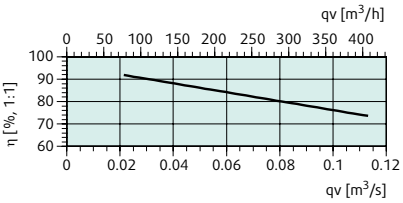
Supply air



Extract air



Temperature efficiency



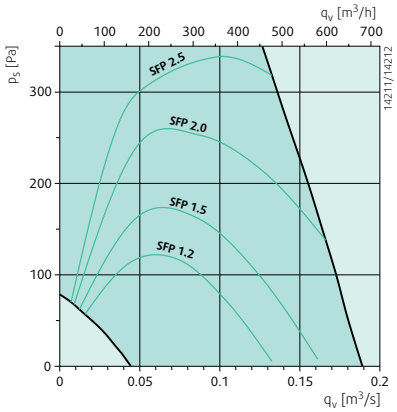
With the air ratio 1:1 and atmospheric humidity at 50% (according to EN 308).

	Octave band (mid-frequency, Hz)								
L_{wA} dB(A)	Tot	63	125	250	500	1k	2k	4k	8k
Supply air	64	41	50	59	57	55	58	50	42
Extract air	55	42	47	53	42	42	43	29	23
Surrounding	45	25	35	43	34	33	34	29	21

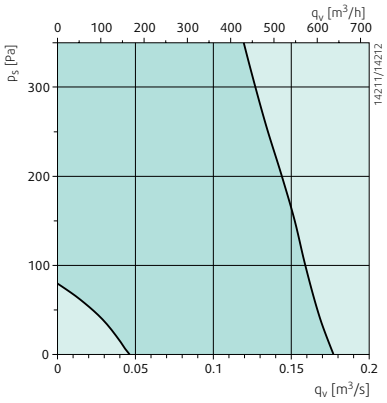
The table shows the sound power level L_{wA} based on the indicated working point at 80 Pa in the table technical data.

SAVE VTR 500

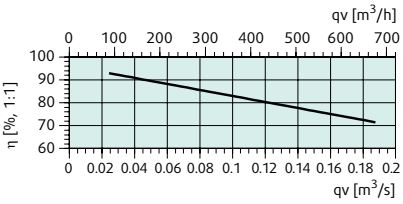
Supply air



Extract air



Temperature efficiency



With the air ratio 1:1 and atmospheric humidity at 50% (according to EN 308).

	Octave band (mid-frequency, Hz)								
L_{wA} dB(A)	Tot	63	125	250	500	1k	2k	4k	8k
Supply air	71	45	54	61	69	61	62	56	51
Extract air	63	48	55	57	59	51	50	40	32
Surrounding	50	24	39	41	49	37	37	34	29

The table shows the sound power level L_{wA} based on the indicated working point at 80 Pa in the table technical data.

Accessories

Accessories	SAVE VTR 150	SAVE VTR 200	SAVE VTR 300	SAVE VTR 500
Control panel	CD	CD	CD	CD
Control panel, wireless	SmartDial	SmartDial	SmartDial	SmartDial
Sensors, wireless	CO_2, Humidity	CO_2, Humidity	CO_2, Humidity	CO_2, Humidity
Input module, wireless	Input module wireless	Input module wireless	Input module wireless	Input module wireless
Transmitter and receiver, wireless	RS485 Gateway wireless	RS485 Gateway wireless	RS485 Gateway wireless	RS485 Gateway wireless
Cable w/plug 12 m	CEC	CEC	CEC	CEC
Cable w/plug 6 m	CEC	CEC	CEC	CEC
Diverging plug	CED	CED	CED	CED
Timer	T 120	T 120	T 120	T 120
Timer frame	F-T 120	F-T 120	F-T 120	F-T 120
Pressure guard with pitot tube	Pressure guard	Pressure guard	Pressure guard	Pressure guard
Valve actuctor 0.10V (24VDC)	RVAZ4 24A	RVAZ4 24A	RVAZ4 24A	RVAZ4 24A
Transformer (24VDC)	PSS48	PSS48	PSS48	PSS48
Water valve 2-way	ZTV 15	ZTV 15	ZTV 15	ZTV 15
Water valve 3-way	ZTR 15	ZTR 15	ZTR 15	ZTR 15
Water heating battery (external)	VBC 125	VBC 125	VBC 160	VBC 250
Water heating battery (internal)	-	-	Water coil VTR 300	Water coil VTR 500
Duct sensor 0-60°C	TG-K360	TG-K360	TG-K360	TG-K360
Filter supply air (standard)	BFVTR 150 G3	BFVTR 200 F7	BFVTR 300 F7	BFVTR 500 F7
Filter supply air (option)	BFVTR 150 F7	BFVTR 200 G3	BFVTR 300 G3	BFVTR 500 G3
Filter extract air (standard)	BFVTR 150 G3	BFVTR 200 G3	BFVTR 300 G3	BFVTR 500 G3
Combi grille	CVVX 125	CVVX 125	CVVX 160	CVVX 250
Damper, shut-off	EFD 125	EFD 125	EFD 160	EFD 160
Other	GEO heat exchanger box	GEO heat exchanger box	GEO heat exchanger box	-

SAVE VSR

The new air handling units SAVE VSR fulfill the high demands on the market on low energy consumption and sound levels. The EC technology ensure the fans are energy efficient and contribute to a low SFP factor. The SAVE VSR units are side connected with a high efficiency rotary heat exchanger.

At a glance:

- High efficient rotary heat exchanger
- Energy efficient RadiCal-fans, with modern EC-technology
- Separate settings of supply and extract air flow
- Start-up wizard for easy commissioning
- Automatic change to summer operation (without heat recovery)
- Demand control regulation
- Inspection hatch on both sides
- Modbus communication via RS-485

High efficient heat exchanger
The rotary heat exchanger operates at a high efficiency in any condition. The units are operated and monitored by a modern control system and the status of the unit can easily be surveyed.

Control panel
Commissioning of the unit will be done from one or more CD panels. A start-up wizard will make the commissioning easier, which can avoid that the unit is running at wrong conditions. The CD panel also has a user level for authorized installers and service personnel. The CD panel is connected to the unit by means of cable with quick connector (modular plug), on the side of the unit.

VSR units
SAVE VSR 150/B is white painted and can be mounted on the wall or in the ceiling. Suitable for smaller apartments up to 100 m^2. A duct from the cooker hood can be connected to a separate "bypass-duct". Hence the air from the cooker hood is led straight to the exhaust fan and not through the heat exchanger in the unit.

SAVE VSR 300 / 500 for installation in the loft. Suitable for apartments up to 240 m^2 / 400 m^2.

All units are double skinned, fully insulated and with complete control functions.

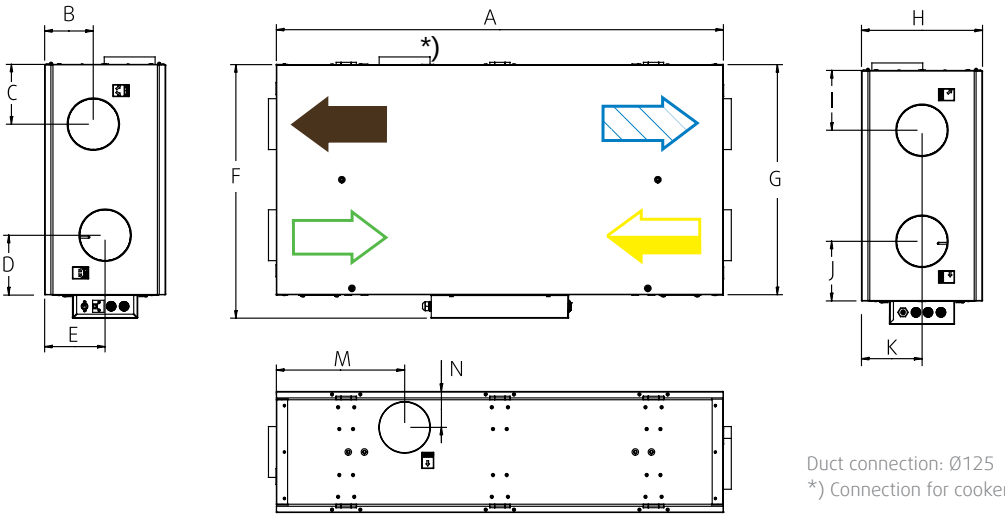
The units will automatically alternate between normal operation with heat recovery and summer operation without heat recovery. This solution will also automatically recover chilled indoor air (from cooling).

Technical data		SAVE VSR 150/B	SAVE VSR 300	SAVE VSR 500
Voltage/Frequency	V/50Hz	230 1~	230 1~	230 1~
Power rating per fan at the operation point	W	18 111 m^3/h at 80 Pa	38 235 m^3/h at 80 Pa	77 412 m^3/h at 80 Pa
SFP	$kW/m^3/s$	1.2	1.1	1.3
Fuse	A	10	10	13
Power rating, motors	W	2 x 37	2 x 83	2 x 169
Power, electr. heating battery	kW	0,5	1,67	1,67
Weight	kg	47	61	72
Enclosure class	IP	24	24	24
Filter, supply air		F7 (standard)	F7 (standard)	F7 (standard)
Filter, extract air		G3	G3	G3

Information about functions can be found on page 162. Information about control system can be found on page 170.

Dimensions

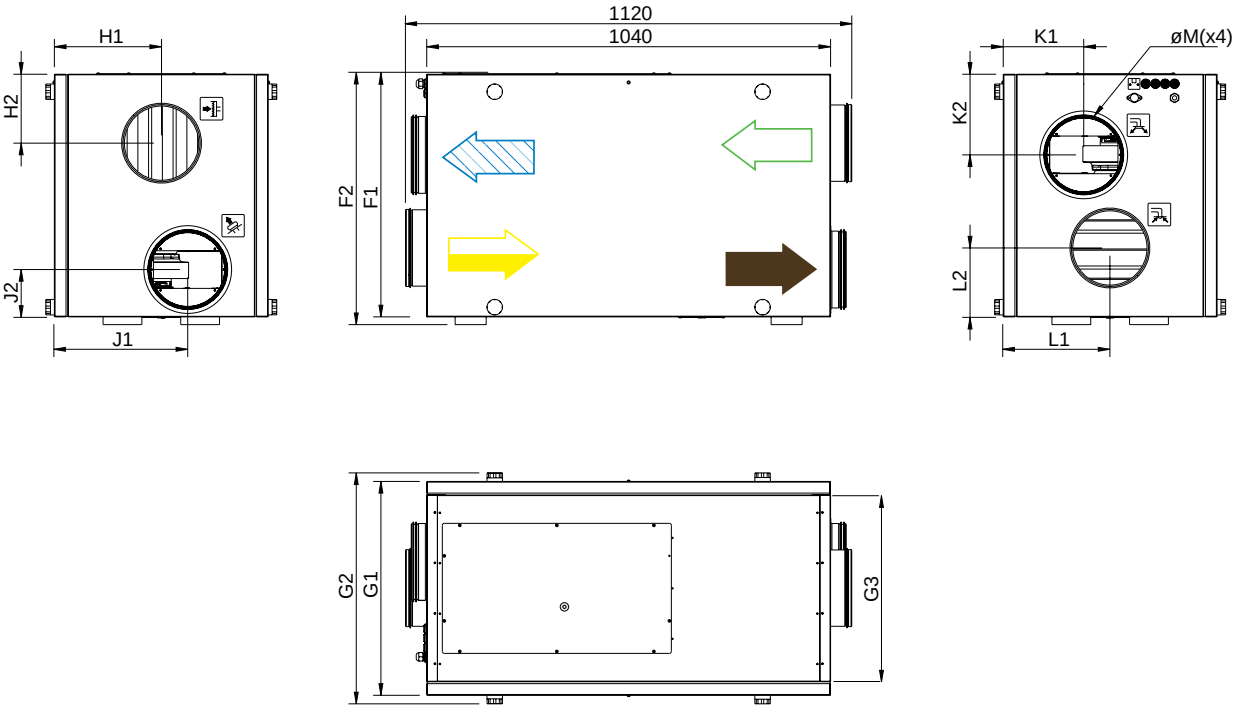
SAVE VSR 150/B



Duct connection: Ø125
*) Connection for cooker hood

SAVE	A	B	C	D	E	F	G	H	I	J	K	L	M	N
VSR 150	1107.6	120.7	148	148	150	628	570	300	148	148	150	575	318	89

SAVE VSR 300 / 500

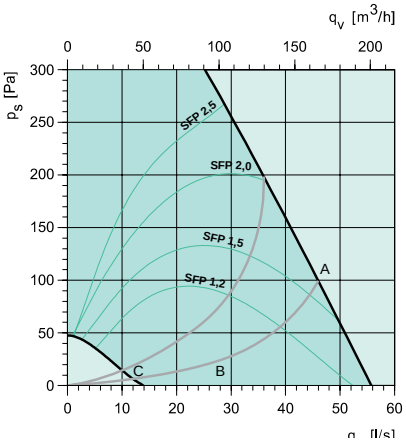


SAVE	F1	F2	G1	G2	H1	H2	J1	J2	K1	K2	L1	L2	M	G3
VSR 300	582	602	461	505	231	188	307	112	160	177	281	136	160	392
VSR 500	632	652	551	595	276	178	345	123	207	208	276	179	200	482

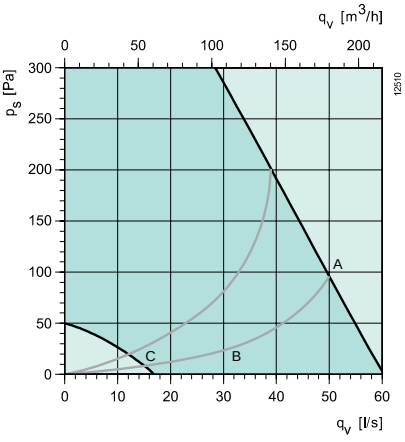
= supply air = exhaust air = extract air = outdoor air

Performance
SAVE VSR 150

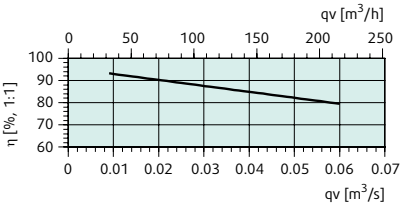
Supply air



Extract air



Temperature efficiency



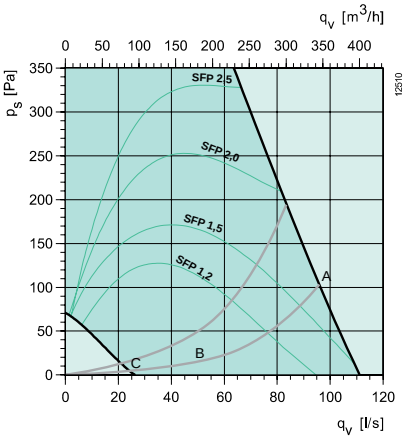
With the air ratio 1:1 and atmospheric humidity at 50%.

	Octave band (mid-frequency, Hz)								
L_{wA} dB(A)	Tot	63	125	250	500	1k	2k	4k	8k
Supply air	59	44	44	53	54	53	48	48	33
Extract air	48	39	38	46	41	32	26	19	19
Surrounding	44	23	25	39	39	35	33	27	18

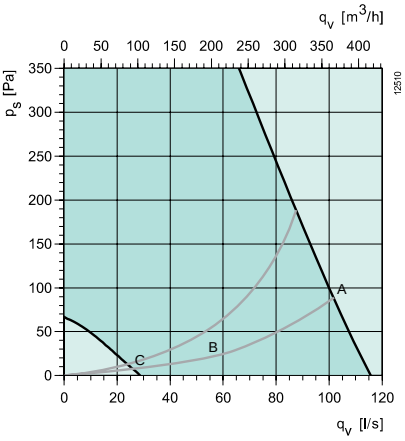
The table shows the sound power level L_{wA} based on the indicated working point at 80 Pa in the table technical data.

SAVE VSR 300

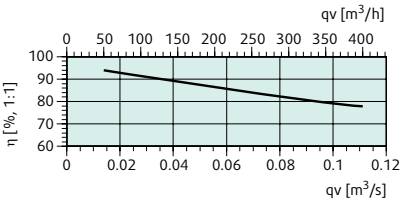
Supply air



Extract air



Temperature efficiency



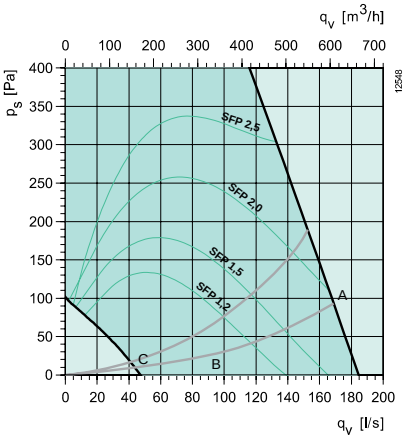
With the air ratio 1:1 and atmospheric humidity at 50%.

	Octave band (mid-frequency, Hz)								
L_{wA} dB(A)	Tot	63	125	250	500	1k	2k	4k	8k
Supply air	65	50	54	59	58	57	59	51	42
Extract air	55	40	40	53	50	38	37	27	22
Surrounding	44	25	31	38	38	34	36	29	23

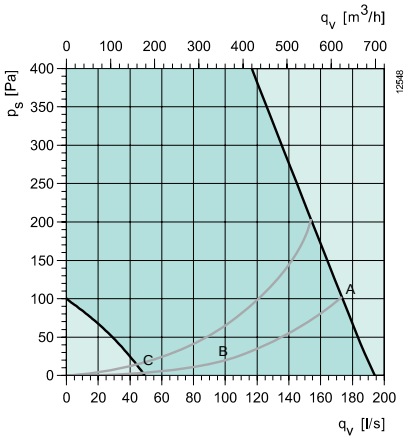
The table shows the sound power level L_{wA} based on the indicated working point at 80 Pa in the table technical data.

SAVE VSR 500

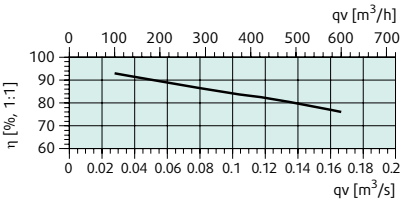
Supply air



Extract air



Temperature efficiency



With the air ratio 1:1 and atmospheric humidity at 50%.

	Octave band (mid-frequency, Hz)								
L_{wA} dB(A)	Tot	63	125	250	500	1k	2k	4k	8k
Supply air	71	49	55	60	66	64	64	60	54
Extract air	60	37	44	55	57	48	43	35	27
Surrounding	47	27	34	40	43	39	36	30	25

The table shows the sound power level L_{wA} based on the indicated working point at 80 Pa in the table technical data.

Accessories

Accessories	SAVE VSR 150	SAVE VSR 300	SAVE VSR 500
Control panel	CD	CD	CD
Control panel, wireless	SmartDial	SmartDial	SmartDial
Sensors, wireless	CO_2, Humidity	CO_2, Humidity	CO_2, Humidity
Input module, wireless	Input module wireless	Input module wireless	Input module wireless
Transmitter and receiver, wireless	RS485 Gateway wireless	RS485 Gateway wireless	RS485 Gateway wireless
Cable w/plug 12 m	CEC	CEC	CEC
Cable w/plug 6 m	CEC	CEC	CEC
Diverging plug	CED	CED	CED
Timer	T 120	T 120	T 120
Timer frame	F-T 120	F-T 120	F-T 120
Pressure guard with pitot tube	Pressure guard	Pressure guard	Pressure guard
Valve actuctor 0.10V (24VDC)	RVAZ4 24A	RVAZ4 24A	RVAZ4 24A
Transformer (24VDC)	PSS48	PSS48	PSS48
Water valve 2-way	ZTV 15	ZTV 15	ZTV 15
Water valve 3-way	ZTR 15	ZTR 15	ZTR 15
Water-heating battery	VBC 125	VBC 160	VBC 200
Duct sensor 0-60°C	TG-K360	TG-K360	TG-K360
Filter supply air (standard)	PFVSR 150 F7	BFVSR 300 F7	BFVSR 500 F7
Filter extract air (standard)	PFVSR 150 G3	BFVSR 300 G3	BFVSR 500 G3
Filter supply air (option)	PFVSR 150 G3	BFVSR 300 G3	BFVSR 500 G3
Combi grille	CVVX 125	CVVX 160	CVVX 200
Damper, shut-off	EFD 125	EFD 160	EFD 200
Other	GEO heat exchanger box	GEO heat exchanger box	-

SAVE VTC

SAVE VTC 300

The new air handling units SAVE VTC fulfill the high demands on the market on low energy consumption and sound levels. The EC technology ensure the fans are energy efficient and contribute to a low SFP factor. The SAVE VTC units are top connected with a high efficiency counter flow heat exchanger.

At a glance:

- High efficiency heat recovery unit
- Energy efficient fan motors with modern EC technology
- Operation from user friendly control panel(s), type CD with LCD-display
- Separate setting of supply and extract airflow
- Changes automatically to summer operation with no heat recovery
- Automatic defrosting
- Modbus communication via RS-485

High efficient heat exchanger

Energy efficient fans with EC motors will reduce energy consumption for transportation of ventilation air by approx. 50% compared to traditional AC motors. Modern technology gives low SFP factor (Specific Fan Power). The unit will automatically alternate between normal operation with heat recovery and summer operation without heat recovery. This solution will also automatically recover chilled indoor air (from cooling).

Control panel

Commissioning of the unit will be done from one or more CD control panels. A start-up wizard will make the commissioning easier, which can avoid that the unit is running at wrong conditions. The CD panel has a user level for authorized installers and service personnel.

The CD panel is connected to the unit by means of cable with quick connectors (modular plugs), alternatively via 4-pole terminal block. The SAVE VTC is provided with outlet for control of external hot water battery, cooling battery and inlets prepared for demand controlled ventilation from external sensors, e.g. CO2, presence or humidity sensor (potential free contact). The unit has built-in functions for communication with building management systems like Modbus.

VTC units

The SAVE VTC is designed for installation on the wall, e.g. in the laundry room or storeroom. The unit is fully insulated and with complete control functions, high efficiency counterflow heat exchanger and filters.

VTC 200 has an internal design made out of EPP (expanded polypropylene), while the VTC 300/700 is completley made out of sheet metal.

Automatic defrosting

The unit has an automatic defrost function that can be chosen in 5 different modes depending on the indoor environment as well as the outdoor conditions. If the unit is to operate for long periods when the outside temperature is below -20°, the use of a preheater such as the CB is recommended.

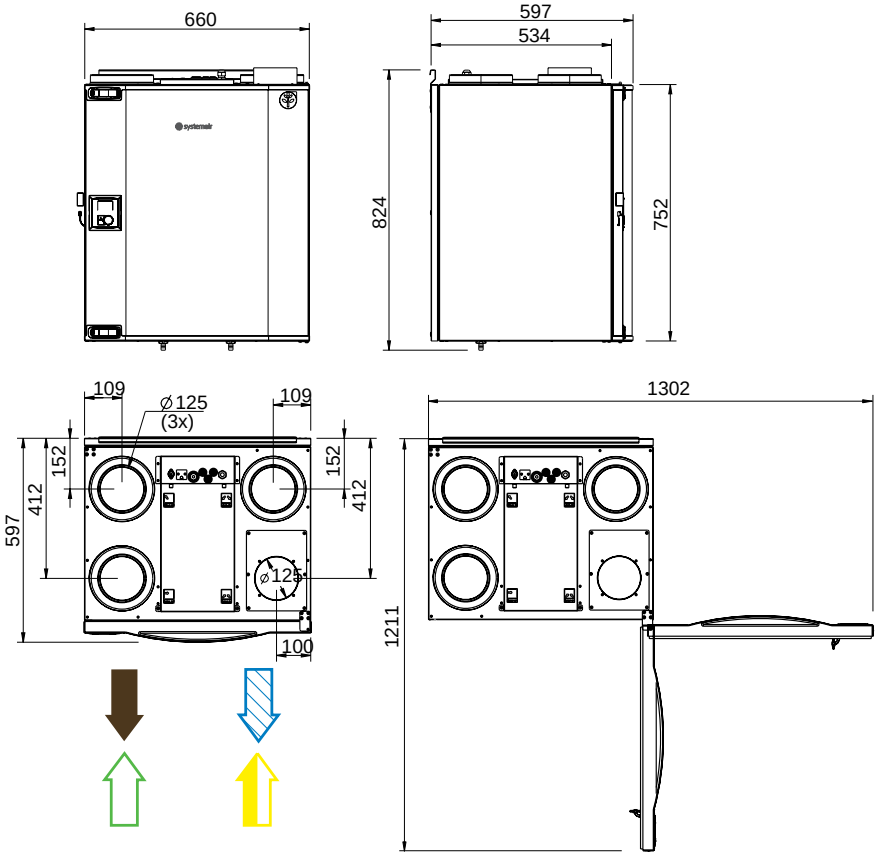
VTC 300/700 can be complemented with re-heater battery.

Technical data		SAVE VTC 200	SAVE VTC 300	SAVE VTC 700
Voltage/Frequency	V/50Hz	230 1~	230 1~	230 1~
Power rating per fan at the operation point	W	26 180 m³/h at 80 Pa	41 300 m³/h at 80 Pa	69 608 m³/h at 80 Pa
SFP	kW/m³/s	1.0	1.0	0.8
Fuse	A	10	10	10
Power rating, motors	W	2x68	2x85	2x168
Weight	kg	42	72	150
Enclosure class	IP	24	24	24
Filter, supply air	–	G4 (standard)	G4 (standard)	G4 (standard)
Filter, extract air	–	G4 (standard)	G4 (standard)	G4 (standard)

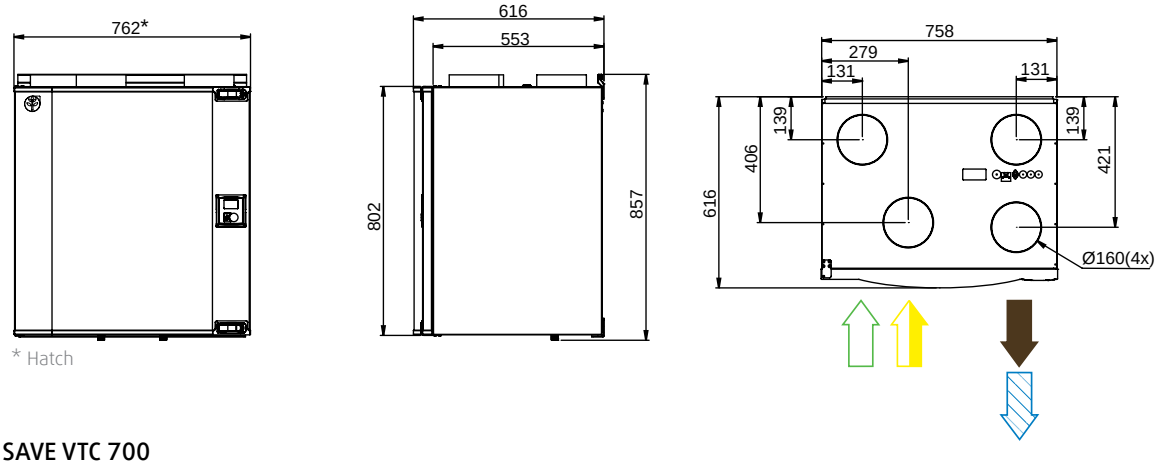
Information about functions can be found on 162. Information about control system can be found on page 170.

Dimensions (right hand versions)

SAVE VTC 200

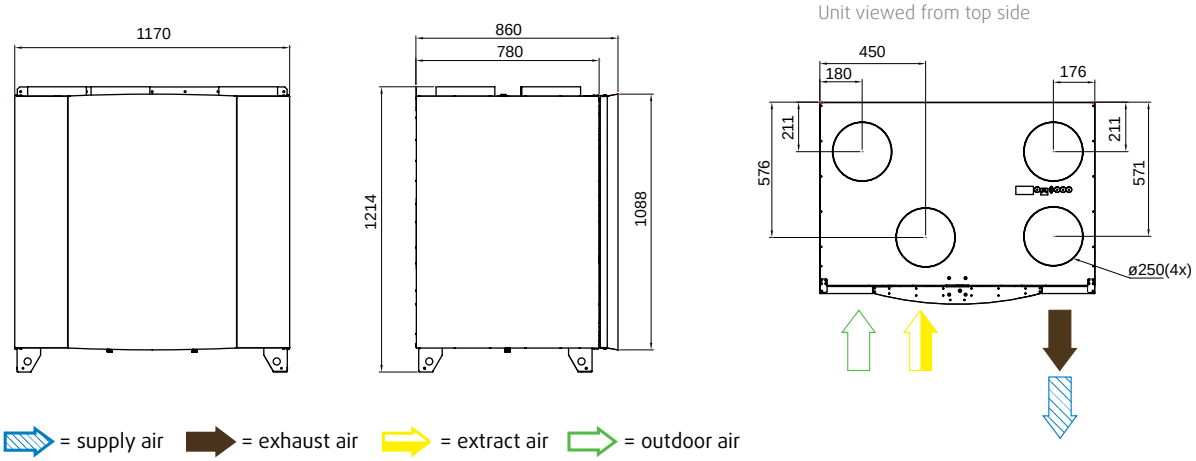


SAVE VTC 300



* Hatch

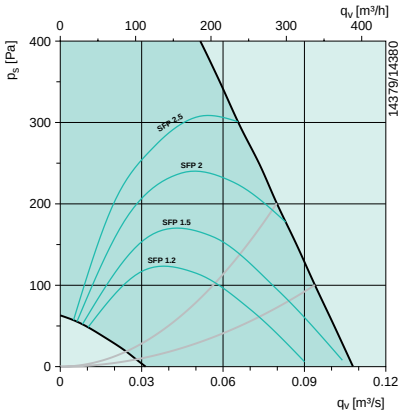
SAVE VTC 700



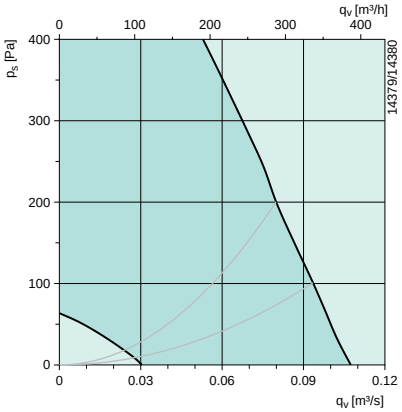
= supply air = exhaust air = extract air = outdoor air

Performance
SAVE VTC 200

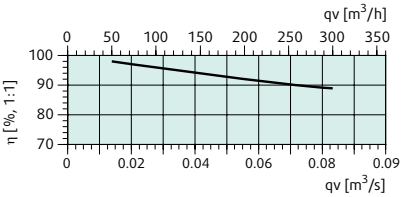
Supply air



Extract air



Temperature efficiency



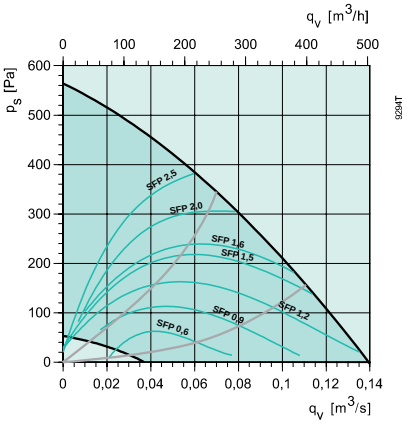
With the air ratio 1:1 and atmospheric humidity at 50%.

	Octave band (mid-frequency, Hz)								
L_{wA} dB(A)	Tot	63	125	250	500	1k	2k	4k	8k
Supply air	55	25	32	40	49	51	50	42	33
Extract air	52	40	40	49	46	43	35	24	21
Surrounding	45	22	31	33	41	41	37	27	20

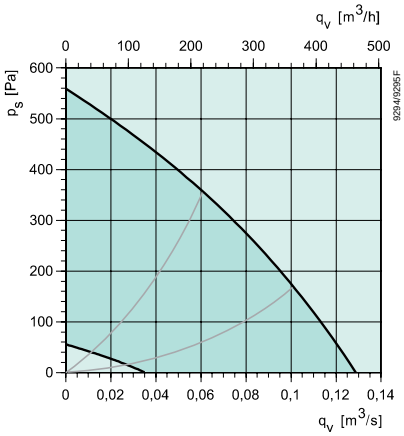
The table shows the sound power level L_{wA} based on the indicated working point at 80 Pa in the table technical data.

SAVE VTC 300

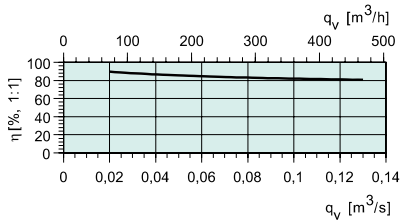
Supply air



Extract air



Temperature efficiency



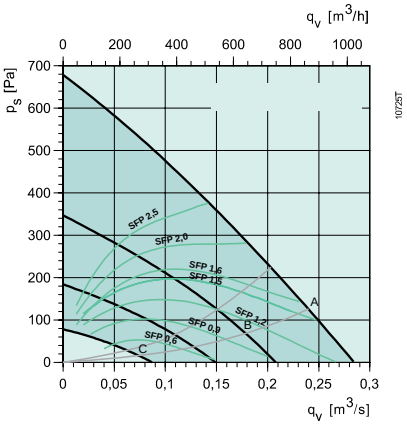
With the air ratio 1:1 and atmospheric humidity at 50%.

	Octave band (mid-frequency, Hz)								
L_{wA} dB(A)	Tot	63	125	250	500	1k	2k	4k	8k
Supply air	63	46	50	57	56	54	57	49	40
Extract air	52	43	40	50	42	42	40	27	22
Surrounding	43	27	33	39	37	34	32	25	21

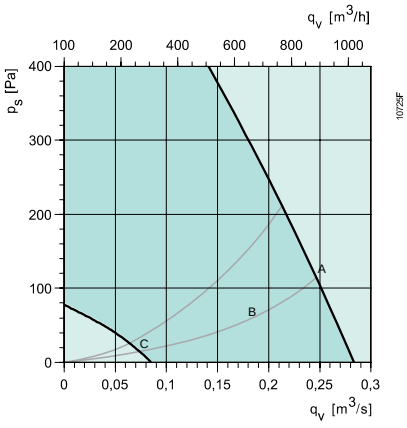
The table shows the sound power level L_{wA} based on the indicated working point at 80 Pa in the table technical data.

SAVE VTC 700

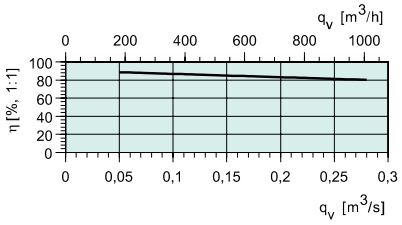
Supply air



Extract air



Temperature efficiency



With the air ratio 1:1 and atmospheric humidity at 50%.

	Octave band (mid-frequency, Hz)								
L_{wA} dB(A)	Tot	63	125	250	500	1k	2k	4k	8k
Supply air	63	43	49	53	55	57	59	48	40
Extract air	48	35	40	45	39	40	36	21	20
Surrounding	45	23	34	40	37	38	37	29	22

The table shows the sound power level L_{wA} based on the indicated working point at 80 Pa in the table technical data.

Accessories

Accessories	SAVE VTC 200	SAVE VTC 300	SAVE VTC 700
Control panel	CD	CD	CD
Control panel, wireless	SmartDial	SmartDial	SmartDial
Sensors, wireless	CO_2, Humidity	CO_2, Humidity	CO_2, Humidity
Input module, wireless	Input module wireless	Input module wireless	Input module wireless
Transmitter and receiver, wireless	RS485 Gateway wireless	RS485 Gateway wireless	RS485 Gateway wireless
Cable w/plug 12 m	CEC	CEC	CEC
Cable w/plug 6 m	CEC	CEC	CEC
Diverging plug	CED	CED	CED
Timer	T 120	T 120	T 120
Timer frame	F-T 120	F-T 120	F-T 120
Pressure guard with pitot tube	Pressure guard	Pressure guard	Pressure guard
Valve actuctor 0.10V (24VDC)	RVAZ4 24A	RVAZ4 24A	RVAZ4 24A
Transformer (24VDC)	PSS48	PSS48	PSS48
Water valve 2-way	ZTV 15	ZTV 15	ZTV 15
Water valve 3-way	ZTR 15	ZTR 15	ZTR 15
Water-heating battery	VBC 125	VBC 160	VBC 250
Duct sensor 0-60°C	TG-K360	TG-K360	TG-K360
Filter supply air (standard)	PFVTC 200 G4	PFVTC 300 G4	PFVTC 700 G4
Filter extract air (standard)	PFVTC 200 G4	PFVTC 300 G4	PFVTC 700 G4
Filter supply air (option)	PFVTC 200 F7	PFVTC 300 F7/BFVTC 300 F7	PFVTC 700 F7/BFVTC 700 F7
Filter extract air (option)	-	PFVTC 300 M5	PFVTC 700 M5
Combi grille	CVVX 125	CVVX 160	CVVX 250
Damper, shut-off	EFD 125	EFD 160	EFD 250
Accessory kit	Accessory kit pre-heater VTC	-	-

TA

TA is a range of ventilation units intended for schools, shops and offices, etc. The units are supplied complete with a control system and ready for use. TA has a low overall height.

At a glance:

- Available in 7 different sizes
- Handles airflows of 0.07-1.25 m^3/s
- Low overall height
- Complete with control system
- Adjustable speed
- Parallel connection of extract air fan
- Wide range of accessories

It could not be simpler!
The units are supplied preprogrammed, tested and ready to install. Connect TA to the duct system (connecting any external components), connect the power supply, and set the timer, temperature and fan speed via the control panel. Installation is now complete. It could not be simpler!

Low overall height
TA is suitable for petrol stations, schools, shops and other smaller premises. The units have a low overall height and are easy to install. It is possible to install TA units over a frame measuring 600x1200 mm in a ceiling. The handles can be removed using a 16 mm box wrench. This makes it possible to install TA where there is limited space. The hinges can also be removed with the help of a screwdriver.

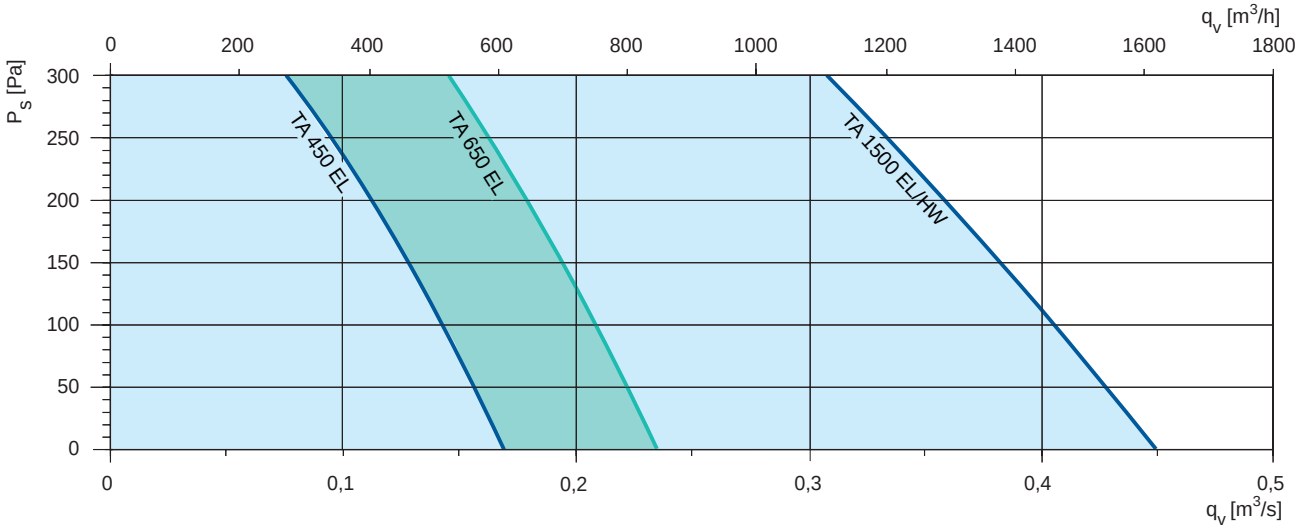
Measurement at development centre
TA has been measured and tested at Systemair's development centre. Airflows are measured in accordance with AMCA 210-07 "Laboratory methods of testing fans for rating". Sound levels are measured in accordance with AMCA 300-08 "Test Code for Sound Rating".

Technical data		450EL	650EL	1500EL	1500HW	2000EL	2000HW	3000HW	4500HW
Voltage/Frequency	V/50Hz	230/400	400	400	230	400	400	400	400
Phase	~	1/3	3	3	1	3	3	3	3
Power rating, motor	W	130	220	430	430	705	673	1084	1592
Power rating, heating coil	kW	3/3/6	5/8.3	12/20.3	*	16/33.3	*	*	*
Fuse	A	16/10	10/16	25/35	10	32/63	10	10	10
Weight	kg	48	57	82	76	110	90	130	157
Filter, supply air	–	M5	M5	M5	M5	M5	M5	M5	M5

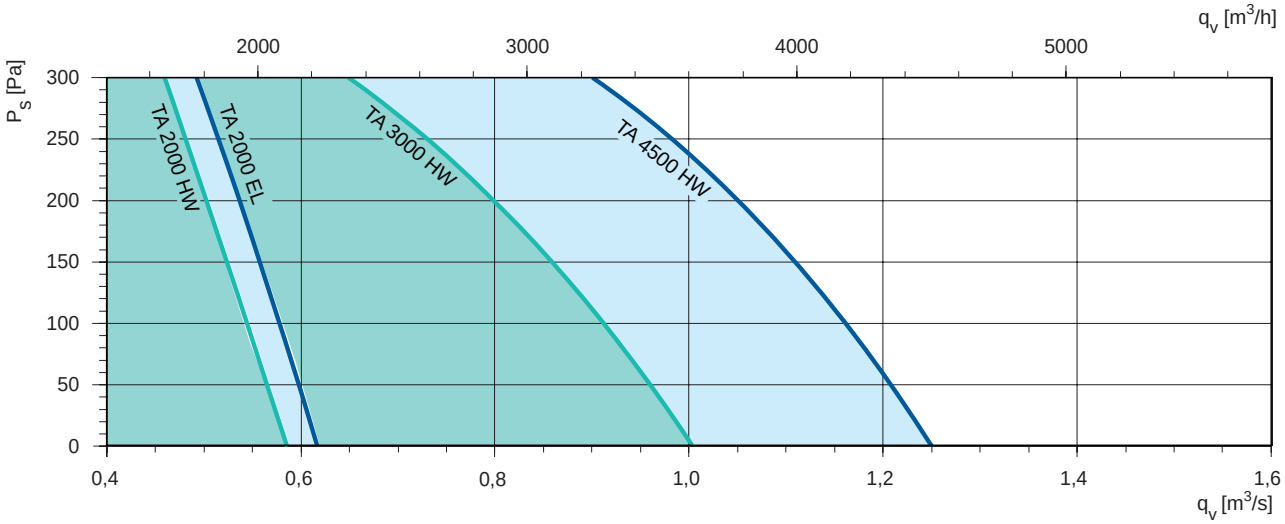
*

Information about functions can be found on page 162. Information about control system can be found on page 170.

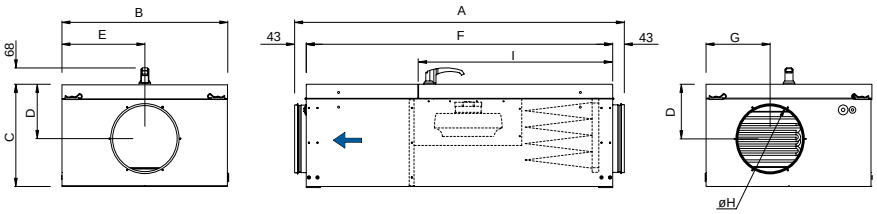
Working range
TA-450EL, 650EL, 1500EL, 1500HW



TA-2000HW, 2000EL, 3000HW, 4500HW

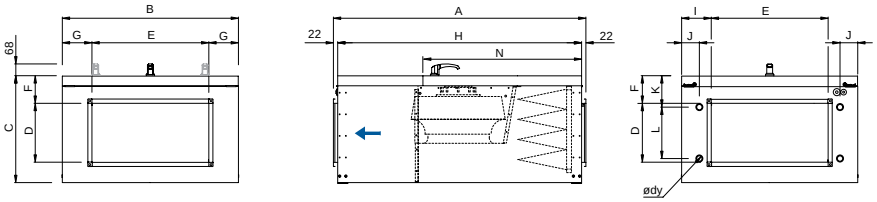


Dimensions
TA 450-650



Dimensions	A	B	C	D	E	F	G	øH	I
450	1125	500	354	203	250	1042	189	200	716
650	1203	556	307	169	278	1116	182	200	702

TA 1500-4500

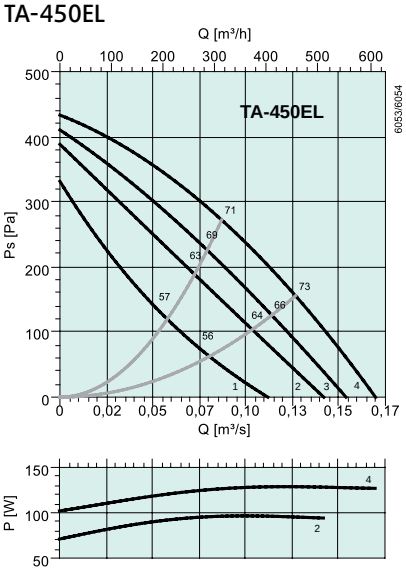


Dimensions	A	B	C	D	E	F	G	H	I	J*	K*	L*	ødy*	N
1500	1190	750	374	200	400	105	175	1146	69	102	125	162	1/2"	731
2000	1190	850	374	250	500	73	175	1146	73	101	92	212	1/2"	731
3000	1296	904	545	300	600	141	152	1252	152	92	160	262	3/4"	325
4500	1346	1006	545	400	700	91	153	1302	153	92	110	362	1"	320

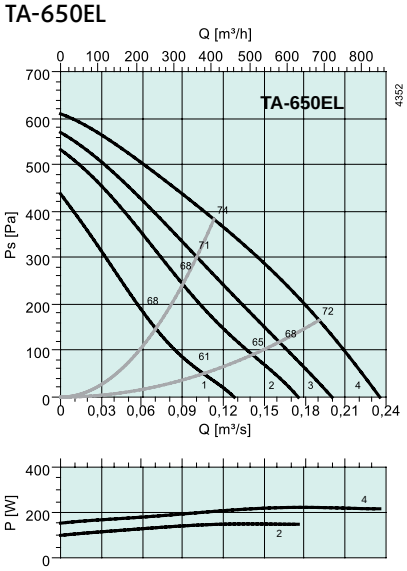
Dimensions in mm. * Only HW models

Performance

TA-450EL



TA-650EL



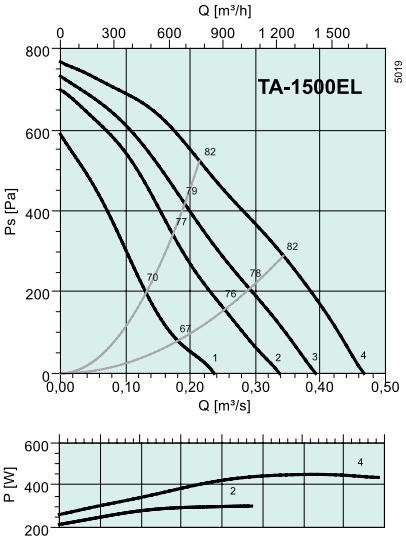
TA-450EL	Octave band (mid-frequency Hz)								
L_{wA} dB(A)	Tot	63	125	250	500	1k	2k	4k	8k
Inlet	58	44	55	51	51	40	37	31	31
Outlet	71	48	58	63	69	62	61	54	40
Surrounding	50	23	38	44	46	42	39	34	23

Measuring point: q_v = 0.087 m³/s, p_s = 272 Pa

TA-650EL	Octave band (mid-frequency Hz)								
L_{wA} dB(A)	Tot	63	125	250	500	1k	2k	4k	8k
Inlet	66	50	63	59	55	50	50	42	35
Outlet	74	57	63	69	70	64	63	56	49
Surrounding	52	30	45	47	48	36	35	23	13

Measuring point: q_v = 0.11 m³/s, p_s = 382 Pa

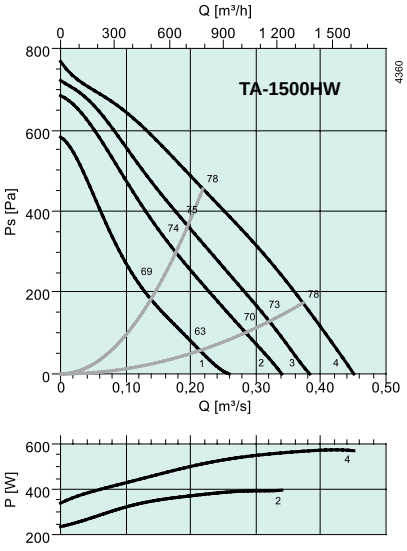
TA-1500EL



TA-1500EL	Octave band (mid-frequency Hz)								
L_{wA} dB(A)	Tot	63	125	250	500	1k	2k	4k	8k
Inlet	72	53	70	63	57	53	49	54	53
Outlet	82	57	72	74	78	72	72	71	64
Surrounding	67	39	60	60	60	56	57	57	55

Measuring point: q_v = 0.21 m³/s, p_s = 523 Pa

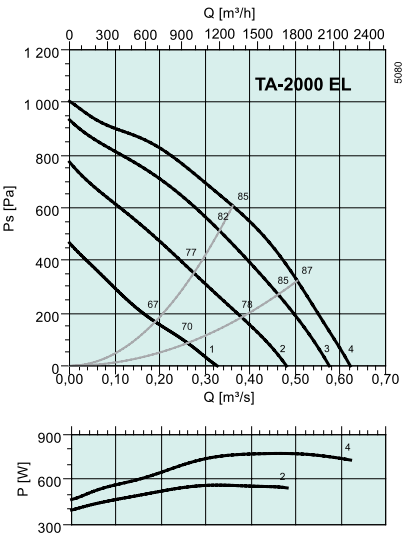
TA-1500HW



TA-1500HW	Octave band (mid-frequency Hz)								
L_{wA} dB(A)	Tot	63	125	250	500	1k	2k	4k	8k
Inlet	72	59	70	64	59	58	57	57	51
Outlet	78	61	71	71	73	70	69	62	56
Surrounding	59	41	50	53	52	50	51	46	40

Measuring point: q_v = 0.22 m³/s, p_s = 455 Pa

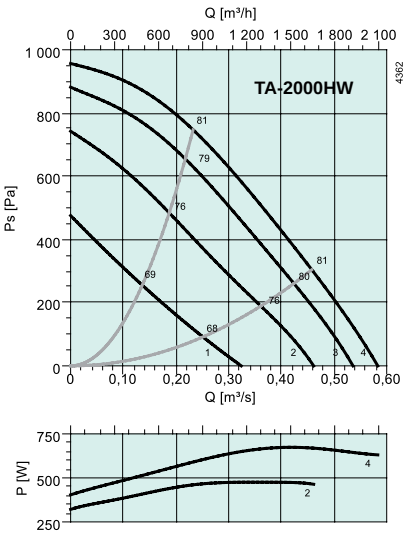
TA-2000EL



TA-2000EL	Octave band (mid-frequency Hz)								
L_{wA} dB(A)	Tot	63	125	250	500	1k	2k	4k	8k
Inlet	70	51	67	67	60	56	50	53	50
Outlet	85	57	70	81	77	75	75	74	70
Surrounding	65	37	57	63	54	49	52	54	51

Measuring point: q_v = 0.36 m³/s, p_s = 607 Pa

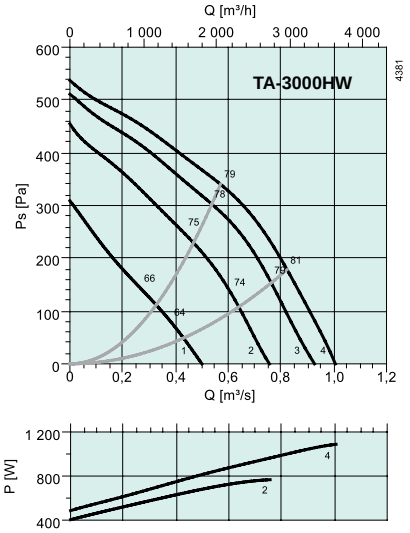
TA-2000HW



TA-2000HW	Octave band (mid-frequency Hz)								
L_{wA} dB(A)	Tot	63	125	250	500	1k	2k	4k	8k
Inlet	73	58	68	70	60	59	58	58	54
Outlet	81	60	70	77	72	73	70	65	58
Surrounding	63	39	53	62	49	42	39	36	28

Measuring point: q_v = 0.23 m³/s, p_s = 747 Pa

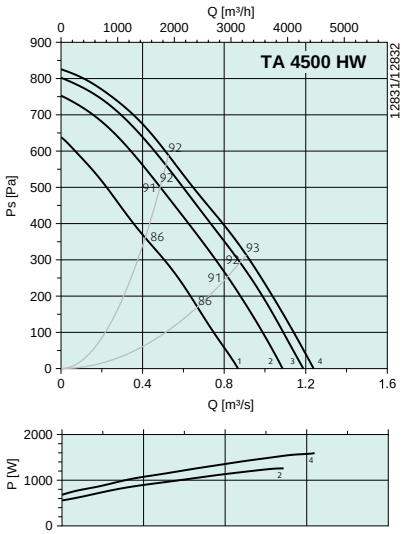
TA-3000HW



TA-3000HW	Octave band (mid-frequency Hz)								
L_{wA} dB(A)	Tot	63	125	250	500	1k	2k	4k	8k
Inlet	72	53	70	63	57	53	49	54	53
Outlet	82	57	72	74	78	72	72	71	64
Surrounding	67	39	60	60	60	56	57	57	55

Measuring point: q_v = 0.57 m³/s, p_s = 340 Pa

TA-4500HW



TA-4500HW	Octave band (mid-frequency Hz)								
L_{wA} dB(A)	Tot	63	125	250	500	1k	2k	4k	8k
Inlet	79	64	78	64	60	57	58	57	52
Outlet	85	65	80	75	78	78	75	70	62
Surrounding	68	50	66	60	55	56	55	53	47

Measuring point: q_v = 0.63 m³/s, p_s = 495 Pa

Accessories

Accessories	TA-450	TA-650	TA-1500
E-Tool cable	ETC	ETC	ETC
Shut-off damper	EFD 200	EFD 200	EFD 40-20
Valve actuator	RVAZ4 24A	RVAZ4 24A	RVAZ4 24A
Valve, 2-way	–	–	ZTV 15-1.6
Valve, 3-way	–	–	ZTR 20-2,0
Intake grille	ITA 200	ITA 200	ITA 40-20
Air cooler, water**	CWK/PGK**	CWK/PGK**	CWK/PGK**
Air cooler, DX**	DXRE**	DXRE**	DXRE**
Duct sensor****	TG-KH/PT1000	TG-KH/PT1000	TG-KH/PT1000
Room temperature sensor****	TG-R5/PT1000	TG-R5/PT1000	TG-R5/PT1000
Silencer	LDC 200	LDC 200	LDR 40-20
Timer	T 120	T 120	T 120
Presence detector	IR24-PC	IR24-PC	IR24-PC
CO_2 Room sensor (digital 1/0)	CO2RT-DR	CO2RT-DR	CO2RT-DR
Filter G3	BFTA 450/3	BFTA 650/3	BFTA 1500/3
Filter M5	BFTA 450/5	BFTA 650/5	BFTA 1500/5
Filter F7	BFTA 450/7	BFTA 650/7	BFTA 1500/7

Accessories	TA-2000	TA-3000	TA-4500
E-Tool cable	ETC	ETC	ETC
Shut-off damper	EFD 50-25	EFD 60-30	EFD 70-40
Valve actuator	RVAZ4 24A	RVAZ4 24A	RVAZ4 24A
Valve, 2-way	ZTV 20-2,0	ZTV 20-4,0	ZTV 20-6,0
Valve, 3-way	ZTR 20-4,0	ZTR 20-6,0	ZTVB 25-8.0
Intake grille	ITA 50-25	ITA 60-30	ITA 70-40
Air cooler, water**	CWK/PGK**	CWK/PGK**	CWK/PGK**
Air cooler, DX**	DXRE**	DXRE**	DXRE**
Duct sensor****	TG-KH/PT1000	TG-KH/PT1000	TG-KH/PT1000
Room temperature sensor****	TG-R5/PT1000	TG-R5/PT1000	TG-R5/PT1000
Silencer	LDR 50-25	LDR 60-30	LDR 70-40
Timer	T 120	T 120	T 120
Presence detector	IR24-PC	IR24-PC	IR24-PC
CO_2 Room sensor (digital 1/0)	CO2RT-DR	CO2RT-DR	CO2RT-DR
Filter G3	BFTA 2000/3	BFTA 3000/3	BFTA 4500/3
Filter M5	BFTA 2000/5	BFTA 3000/5	BFTA 4500/5
Filter F7	BFTA 2000/7	BFTA 3000/7	BFTA 4500/7

** See separate catalogue
**** Used as extract or outdoor temperature sensor.

F

F is a flexible unit that can be adapted to satisfy the various demands placed on ventilation systems. This is a smaller modular unit, meaning it can be equipped to suit the customer's needs and wishes. As a result, the unit can supply the property with an air quality appropriate for the activities conducted inside. F is suitable for offices, restaurants, sports halls, etc.

At a glance:

- Available in 3 different sizes
- Handles airflows of 0.13-0.97 m³/s
- Modular system
- Supply air or extract air with/ without heat recovery
- Low energy consumption - EC fan motors

Efficiency is everything

F is a range of efficient ventilation units intended for the installation in false ceilings or if space is restricted.

Customised solutions

False ceiling units F are available in three sizes and can handle airflows of between 500 and 3500 m3/h. These units are made of corrosion-resistant aluminium profiled sections with plastic corners. The design is compact and space efficient.

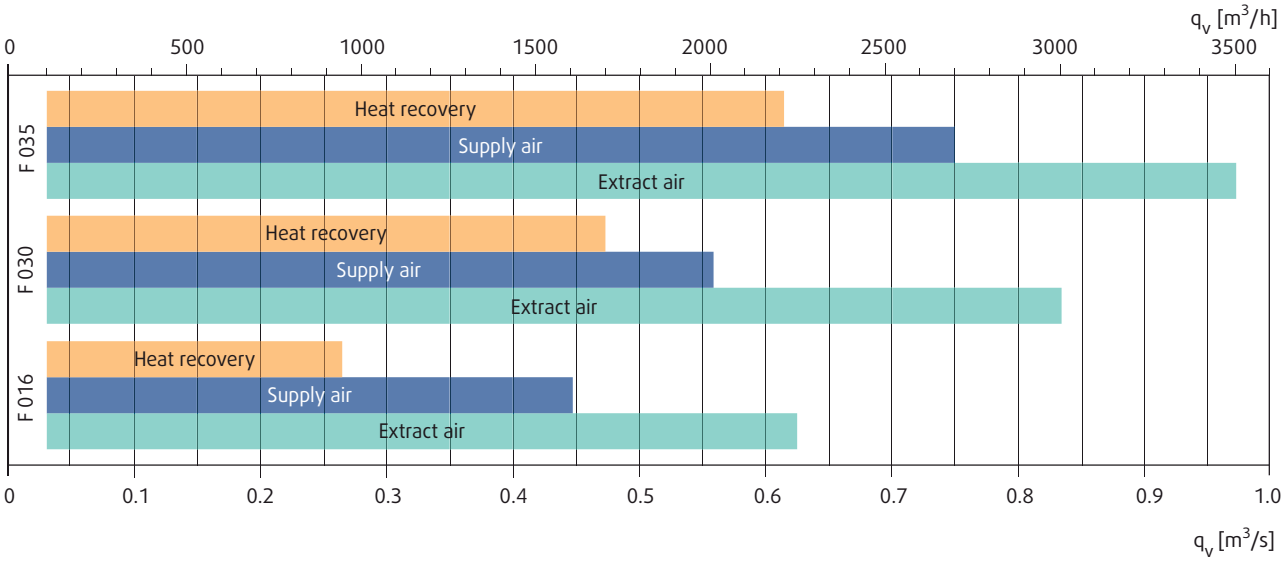
The panels comprise a 20 mm thick layer of fireproof rock wool sandwiched between two layers of sheet steel for good heat and sound insulation.

A number of different components are available, including several filter options, heating coils and air coolers, heat recovery units, and other accessories that help to guarantee flexible and specially-adapted solutions. Thanks to the modular design, almost any combination of unit is possible. F units are available as supply air and/ or extract air units with or without heat recovery.
Control equipment is optional. It is primarily mounted under the ceiling.

Systemair AirCalc

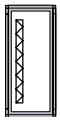
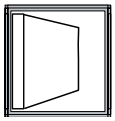
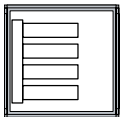
False ceiling units F can be selected with help of a software that is available after a short introduction by Systemair. It's also possible to use the enquiry form to request a quote.

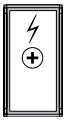
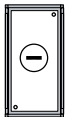
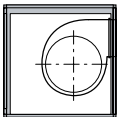
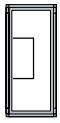
Working range
016. 030. 035

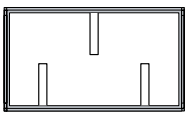
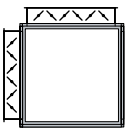
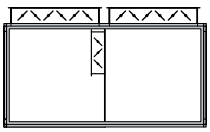
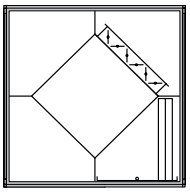


Information about functions can be found on page 162. Information about control system can be found on page 170.

Functional data

					Panel filter	Bag filter G3-M5 / M5-F9	Carbon filter	Heating coil - water PWW
								
F016	Dimensions	W = 670	H = 358		L = 358	L = 500/800	L = 670	L = 358
	Weight				14 kg	~ 17 kg/24 kg	~ 32 kg	~ 10 kg
	Max. airflow				~ 2000 m³/h	~ 2000 m³/h	~ 800 m³/h [1]	~ 1800 m³/h [2]
F030	Dimensions	W = 800	H = 358		L = 358	L = 500/800	L = 670	L = 358
	Weight				16 kg	~ 20 kg/26 kg	~ 35 kg	~ 12 kg
	Max. airflow				~ 2000 m³/h	~ 2000 m³/h	~ 800 m³/h [1]	~ 2000 m³/h
F035	Dimensions	W = 1000	H = 358		L = 358	L = 500/800	L = 670	L = 358
	Weight				20 kg	~ 23 kg/29 kg	~ 40 kg	~ 14 kg
	Max. airflow				~ 3100 m³/h	~ 3000 m³/h	~ 800 m³/h [1]	~ 3000 m³/h

					Heating coil - electric	Air cooler (LPCW/DX)	Direct-driven fan	Diffuser
								
F016	Dimensions	W = 670	H = 358		L = 500	L = 500	L = 670	L = 358
	Weight				~ 13 kg	~ 18 kg	~ 25 kg	~ 6 kg
	Max. airflow				~ 1600 m³/h	~ 1600 m³/h	~ 2200 m³/h	–
F030	Dimensions	W = 800	H = 358		L = 500	L = 500	L = 800	L = 358
	Weight				~ 15 kg	~ 20 kg	~ 30 kg	~ 8 kg
	Max. airflow				~ 2300 m³/h	~ 2300 m³/h	~ 3500 m³/h	–
F035	Dimensions	W = 1000	H = 358		L = 500	L = 500	L = 800	L = 358
	Weight				~ 18 kg	~ 24 kg	~ 35 kg	~ 11 kg
	Max. airflow				~ 3000 m³/h	~ 2800 m³/h	~ 3500 m³/h	–

					Silencer	Mixing damper	Mixing damper	Heat recovery LxWxH
								
F016	Dimensions	W = 670	H = 358		L = 1000 - 1270 - 1500	L = 670	L = 1340	1340 x 1340 x 358
	Weight				~ 40 - 45 - 51 kg	14 kg	25 kg	130 - 180 kg
	Max. airflow				~ 1800	–	–	~ 900
F030	Dimensions	W = 800	H = 358		L = 1000 - 1270 - 1500	L = 800	L = 1600	1600 x 1600 x 358
	Weight				~ 44 - 52 - 58 kg	19 kg	32 kg	160 - 250 kg
	Max. airflow				~ 2300 m³/h	–	–	~ 1700 m³/h
F035	Dimensions	W = 1000	H = 358		L = 1000 - 1270 - 1500	L = 800	L = 1600	2000 x 2000 x 358
	Weight				~ 11 kg	~ 56 - 64 - 70 kg	44 kg	200 - 320 kg
	Max. airflow				~ 3000 m³/h	–	–	~ 2200 m³/h

Dimensions in mm.

[1] Reduces odour transfer (does not prevent odours)

[2] In the event of a pressure drop approx. 250 Pa

Maxi

Maxi is a range of heat recovery units with a low overall height and cross-flow heat exchangers. This unique design with double connections for outdoor air and extract air makes these units extremely compact and easy to install.

At a glance:

- Available in 2 different sizes
- Handles airflows of 0.13-0.56 m^3/s
- Complete with integral control system
- Low overall height
- Service-friendly

It could not be simpler!
The units are supplied prepro-grammed, tested and ready to install. Connect the unit to the duct system, connecting any external components, connect the power supply, and set the timer and fan speed. Installation is now complete.
It could not be simpler!

Low overall height
Maxi is ideal for premises such as schools, day nurseries, etc. The units are supplied with a cross-flow heat exchanger, and this unique design with double connections for outdoor air and extract air makes these units extremely compact with a low overall height and easy to install. With the aid of the suspension device

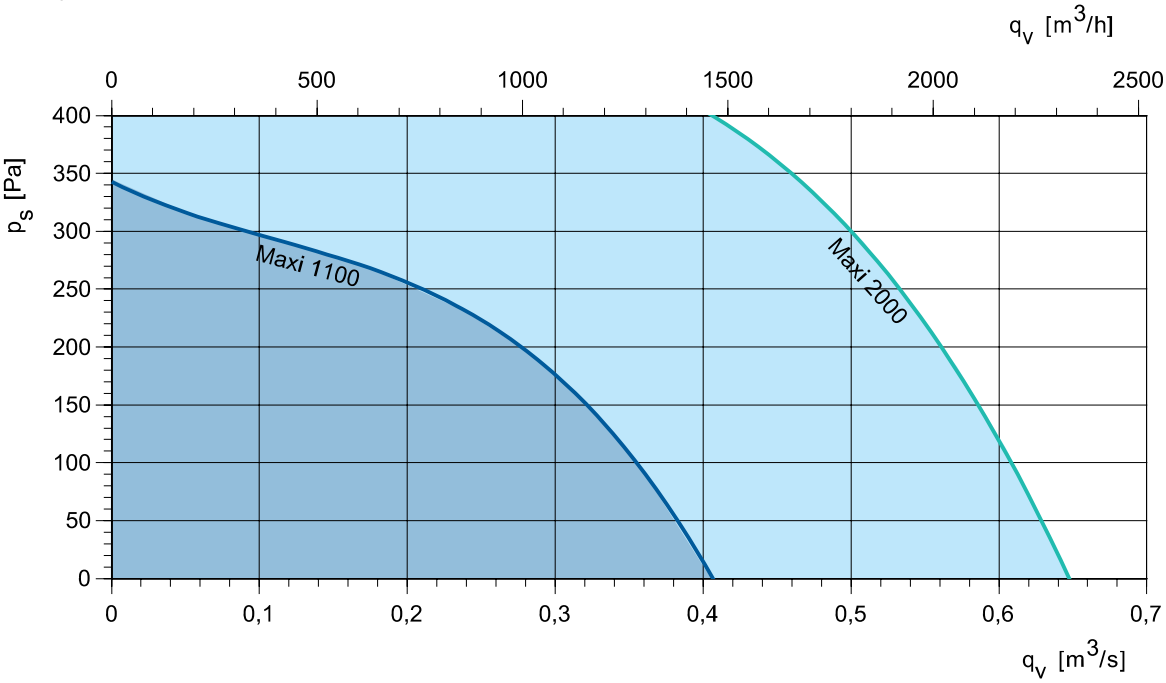
UDM, Maxi 1100 and 2000 with an electric air heater can be installed suspended from a false ceiling. To further simplify use when mounted in a false ceiling, the hinges can be split, and the panel can either be opened as a door or lifted away as a hatch. Floor-mounted units should be fitted with rubber vibration dampers (VDM) to prevent vibrations from the unit being transferred to the building. This also helps reduce sound levels.

Technical data		1100EL	1100HW	2000EL	2000HW
Voltage/Frequency	V/50Hz	400	230	400	400
Phase	~	3	1	3	3
Power rating, motors	W	2x492	2x492	2x1119	2x1119
Power rating, heating coil	kW	5	*	9	*
Fuse	A	3x16	10	3x25	3x10
Weight	kg	160	160	223	223
Filter, supply air & extract air	–	M5 / G3	M5 / G3	M5 / G3	M5 / G3

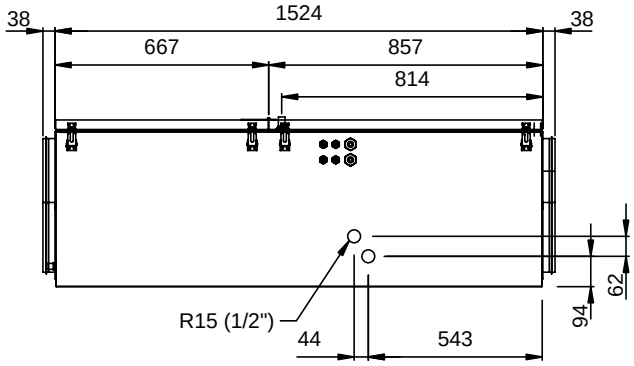
*See separate brochure "Specification data"

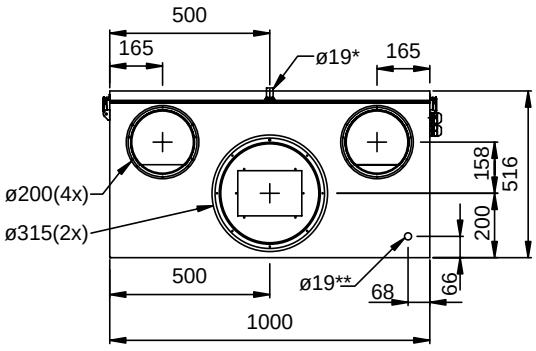
Information about functions can be found on page 162. Information about control system can be found on page 170.

Working range
1100, 2000



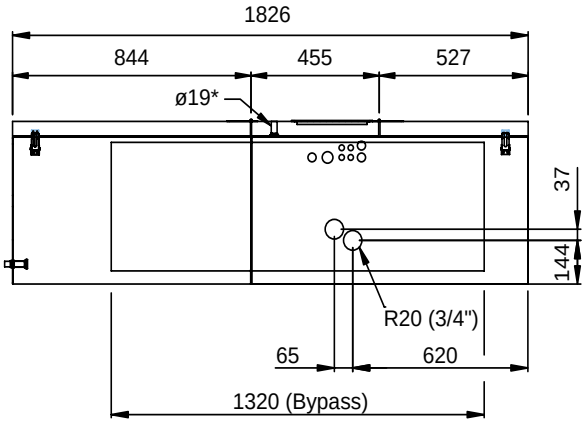
Dimensions
Maxi 1100

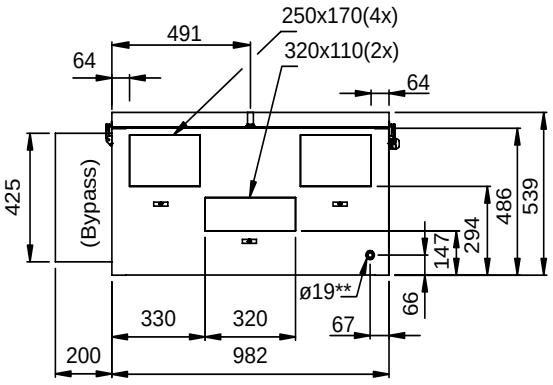




* Condensate drain only for the MAXI EL
** Condenste drain, EL and HW

Maxi 2000





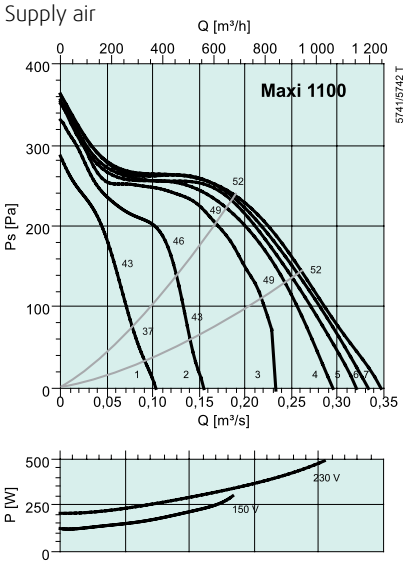
* Condensate drain only for the MAXI EL
** Condenste drain, EL and HW

Dimensions in mm.

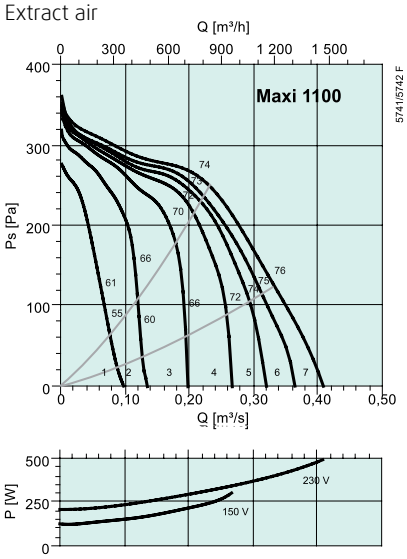
Performance

Maxi 1100

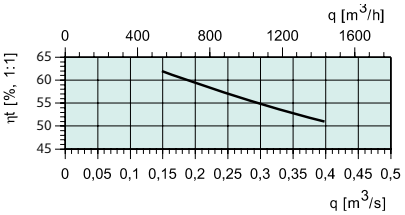
Supply air



Extract air



Temperature efficiency



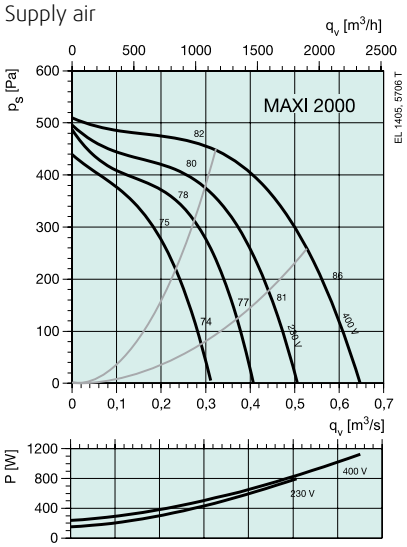
With the air ratio 1:1 and atmospheric humidity at 50%.

Maxi 1100		Octave band (mid-frequency Hz)								
Sound power level L_{wA} dB(A)		**Tot**	**63**	**125**	**250**	**500**	**1k**	**2k**	**4k**	**8k**
Supply air outlet	Max. 230 V	75	63	64	68	68	69	65	63	56
	Half 150 V	73	58	59	65	66	68	64	61	53
Extract air inlet	Max. 230 V	56	44	53	47	50	42	40	39	34
	Half 150 V	55	39	53	46	49	41	35	28	21
Surrounding outlet	Max. 230 V	54	45	51	50	39	42	35	27	21
	Half 150 V	53	40	51	49	38	41	30	16	8

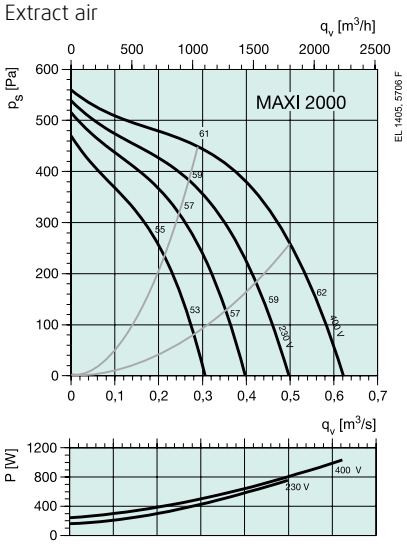
Measuring point 230 V: Supply air qv = 0.21 m³/s. Extract air qv = 0.18 m³/s
Measuring point 150 V: Supply air qv = 0.26 m³/s. Extract air qv = 0.24 m³/s

Maxi 2000

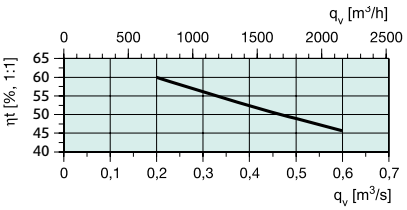
Supply air



Extract air



Temperature efficiency



With the air ratio 1:1 and atmospheric humidity at 50%.

Maxi 2000		Octave band (mid-frequency Hz)								
Sound power level L_{wA} dB(A)		**Tot**	**63**	**125**	**250**	**500**	**1k**	**2k**	**4k**	**8k**
Supply air	Inlet	62	50	54	57	58	54	47	35	23
	Outlet	82	66	71	75	74	77	70	68	61
Extract air	Inlet	61	52	55	54	55	49	42	36	41
	Outlet	83	64	73	75	75	80	71	69	62
Surrounding	Surrounding	61	40	51	56	49	56	53	51	47

Measuring point 400 V: Supply air qv = 0,28 m³/s, ps = 480 Pa. Extract air qv = 0,30 m³/s, ps = 454 Pa.

Accessories

Quick selection matrix

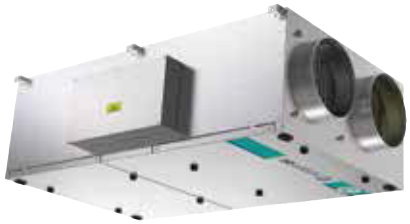
Function	Necessary accessories	Designation
By-pass control*	By-pass duct (Maxi 2000)	BP 2000
By-pass defrosting*	By-pass duct (Maxi 2000)	BP 2000
Shut-off with damper*	1x exhaust air damper and 2x outdoor air dampers	EFD
Floor-mounted unit	Vibration damper	VDM
Mounted in false ceiling	Suspension device Maxi EL	UDM
Control of water heater	Valve and valve motor	ZTV/ZTR and RVAZ4 24A
Room control	Room sensor without set point dial	TG-R5/PT1000

* Recommended

Accessories	MAXI 1100 EL/HW	MAXI 2000 EL/HW
E-Tool cable	ETC	ETC
Duct adapter (1 set), 4pcs Ø250 and 2pcs Ø315.	–	OKM 1500/2000
Shut-off damper, fits to the exhaust air duct	EFD 315	EFD 315
Shut-off damper, fits to the outside air ducts. 2pcs/unit.	EFD 200	EFD 250
Valve actuator	RVAZ4 24A	RVAZ4 24A
Valve, 2-way	ZTV 15-1,0	ZTV 20-2,0
Valve, 3-way	ZTR 15-1,6	ZTR 20-2,5
Roof cowl	THM	THM
Cooling battery, water**	CWK	CWK
Cooling battery, DX coil**	DXRE	DXRE
Step controller. DX cooling (24V). Converts 0..10V signal to output relay.	SC2/D	SC2/D
Plastic casing, step controller IP54	U-EK	U-EK
Transformer 230/24 V	PSS20	PSS20
Silencer, supply air/exhaust air	LDC 315	LDC 315
Silencer, extract/outdoor. 2pcs/extract, 2pcs/outdoor.	LDC 200	LDC 250
Timer	T 120	T 120
Room temperature sensor	TG-R5/PT1000	TG-R5/PT1000
Duct sensor	TG-KH/PT1000	TG-KH/PT1000
Presence detector	IR24-PC	IR24-PC
CO_2 Room sensor (digital 1/0)	CO2RT-DR	CO2RT-DR
By-pass duct	–	BP 1500/2000
Vibration damper	VDM 1100	VDM 1500/2000
Suspension device for EL-units	UDM 1100	UDM 1500/2000
Filter G3	BFM 1100-3	BFM 1500/2000-3
Filter M5	BFM 1100-5	BFM 1500/2000-5
Filter F7	BFM 1100-7	BFM 1500/2000-7

** See catalogue "Maxi specification data"

Topvex FR



Topvex FR is a range of heat recovery units with a low overall height and double rotary heat exchangers. The units are especially designed to meet the coming energy requirements.

At a glance:

- Available in 4 different sizes
- Handles airflows of 0.14-1.67 m^3/s
- CAV or VAV airflow control
- Plug and Play
  - Integrated control system
  - Preprogrammed
  - Menu-based control panel for easy use
- Low overall height
- Low energy use
- Easy to service
  – Slide doors as an accessory
- Made of aluzinc sheet metal

Efficiency is everything

Topvex FR03-11 is a series of efficient ventilation units designed for offices, shops, schools, daycares centre or similar premises. The units are especially designed to meet the coming energy requirements and have therefore a very low energy use and high efficiency rotary heat exchangers. No need of condense-water drainage makes the unit very flexible to install.

It could not be simpler!

The units are supplied preprogrammed, tested and ready to install. Connect the unit to the duct system, connecting any external components, connect the power supply, and set the timer and fan speed. Installation is now complete. It could not be simpler!

Easy inspection

To facilitate inspection and maintenance, both fans and the rotary heat exchangers are removable. All power cables have quick release couplings.

Low overall height

The unique design with double rotary heat exchangers makes it possible to produce the units with a low overall height. Using the enclosed suspension device, the Topvex FR can be installed in a false ceiling. To further simplify the use when mounted in a false ceiling, a sliding Door Kit can be supplied (accessory). Existing doors are then changed to sliding doors by mounting of two rails and eight wheels

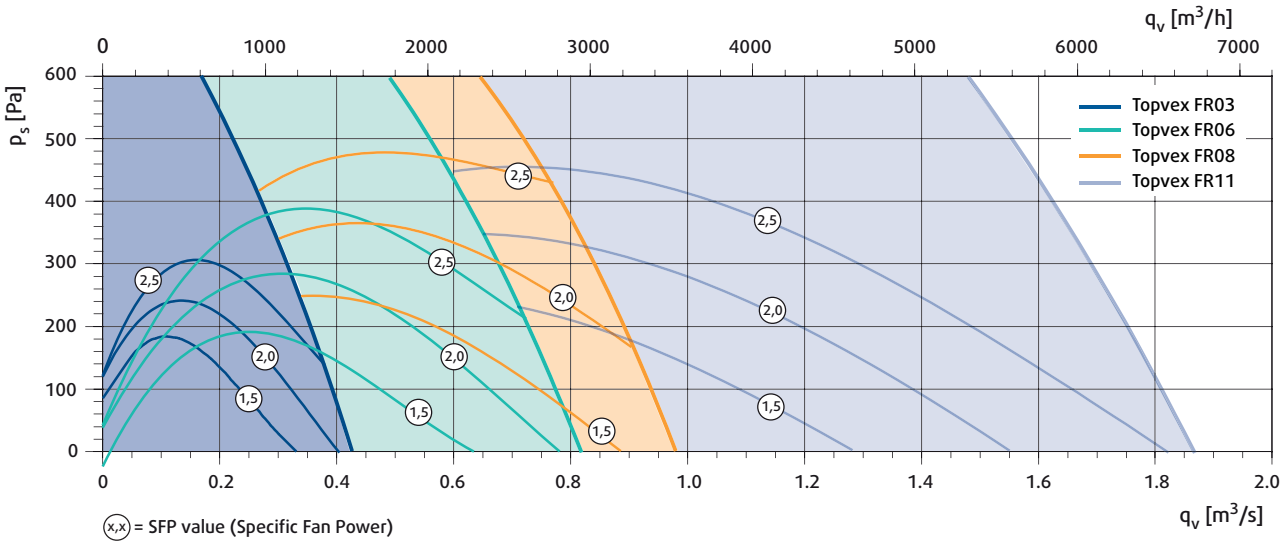
EC fan motors

Unlike motors with frequency converters, EC motors ensure excellent efficiency even at low speeds. This contributes to good energy economy. EC motors are also very quiet when running at high and low speeds.

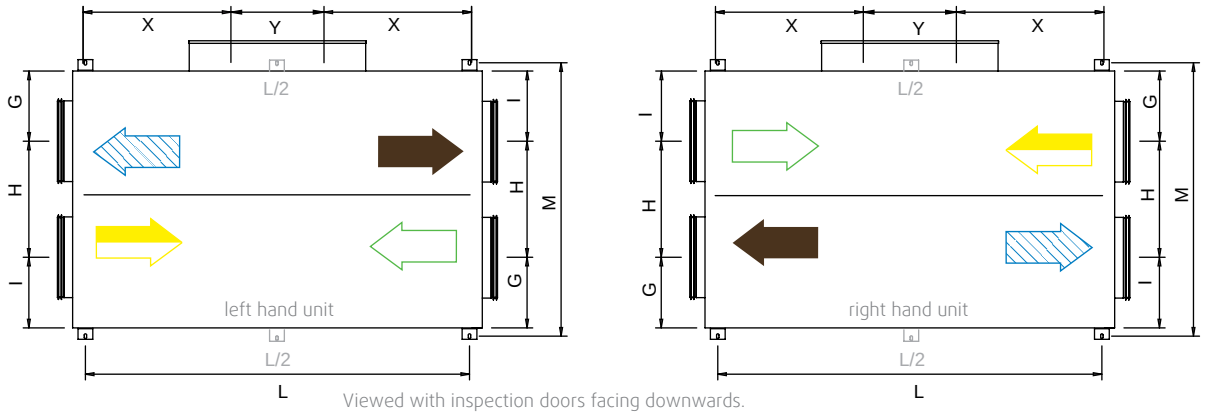
Technical data		FR03EL	FR03	FR06EL	FR06	FR08EL	FR08	FR11EL	FR11
Voltage/Frequency	V/50Hz	400	230	400	400	400	400	400	400
Phase	~	3N	1	3N	3N	3N	3N	3N	3N
Power rating, motors	W	2x477	2x477	2x941	2x941	2x972	2x972	2x2833	2x2833
Power rating, heating coil	kW	5	–	9,9	–	12	–	15	–
Fuse	A	3x20	10	3x20	3x10	3x25	3x10	3x35	3x10
Weight	kg	196	196	275	275	345	345	460	460
Filter, supply air & extract air	–	F7/M5	F7/M5	F7/M5	F7/M5	F7/M5	F7/M5	F7/M5	F7/M5

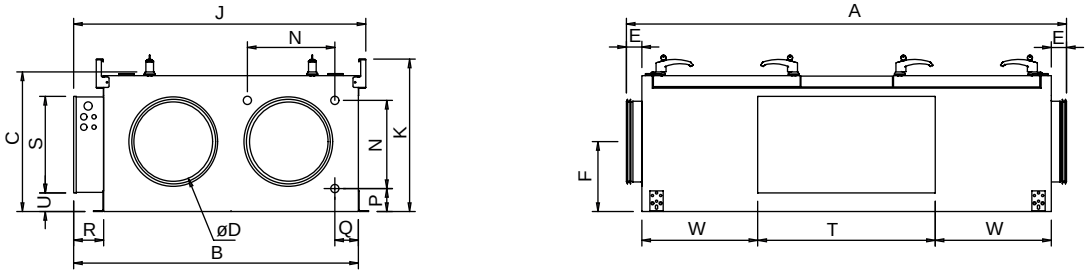
Information about functions can be found on page 162. Information about control system can be found on page 170.

Working range
FR03, FR06, FR08, FR11



Dimensions





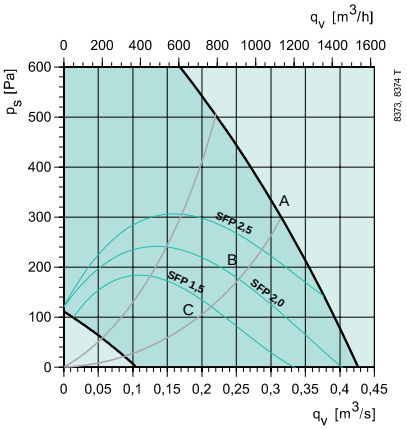
Topvex	A	B	C	øD	E	F	G	H	I	J	*K	L	M	N	P	Q	R	S	T	U	W	X	Y
FR03	1720	1115	540	315	60	270	275	450	275	1145	590	1502	1050	388	64	68	120	375	695	72	456	576	358
FR06	2160	1315	640	400	80	275	325	550	325	1345	705	1902	1260	414	103	106	102	375	695	158	653	763	384
FR08	2230	1515	740	500	60	355	350	650	400	1545	790	2004	1450	514	103	106	120	375	695	275	706	807	384
FR11	2440	1715	840	630	80	405	400	765	432	1745	904	2206	1650	614	103	106	120	375	695	329	801	844	520

* Height when using slide doors
Dimensions in mm.

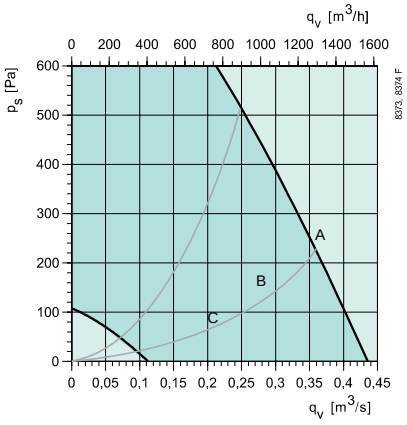
= supply air = exhaust air = extract air = outdoor air

Performance
FR03

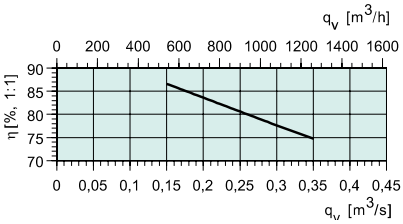
Supply air



Extract air



Temperature efficiency

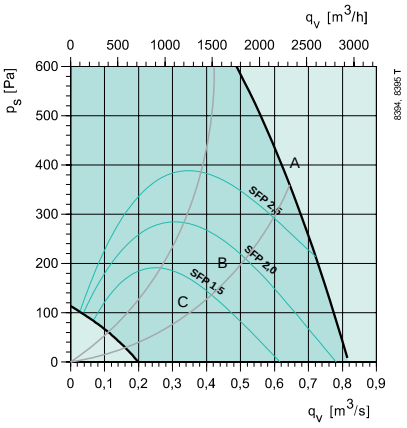


With the air ratio 1:1 and atmospheric humidity at 50%.

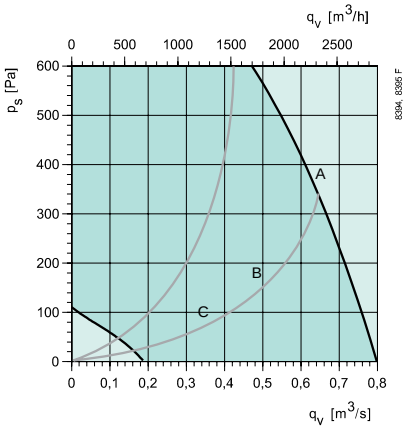
FR03	Octave band (mid-frequency Hz)																										
	Tot			63			125			250			500			1k			2k			4k			8k		
L_{wA} dB(A)	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C
Supply air	86	78	71	62	58	54	71	70	64	84	74	64	76	70	62	77	71	64	76	69	62	70	63	55	61	53	44
Extract air	73	68	63	62	57	53	66	64	62	71	65	57	56	51	41	55	48	41	47	41	34	39	32	24	30	22	20
Surrounding	65	59	52	44	40	36	56	53	50	64	56	48	52	46	38	46	39	33	42	35	28	40	33	25	31	23	18

FR06

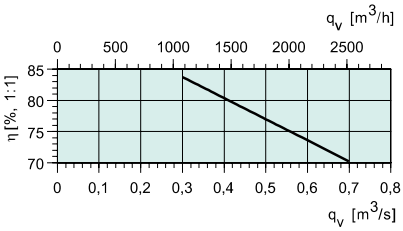
Supply air



Extract air



Temperature efficiency

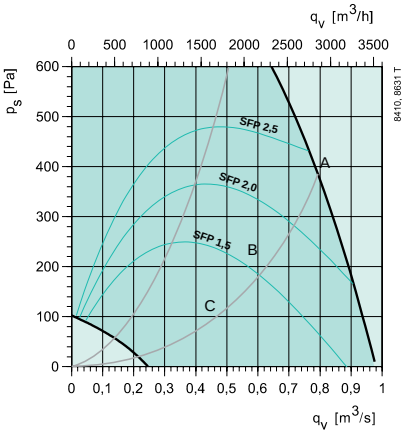


With the air ratio 1:1 and atmospheric humidity at 50%.

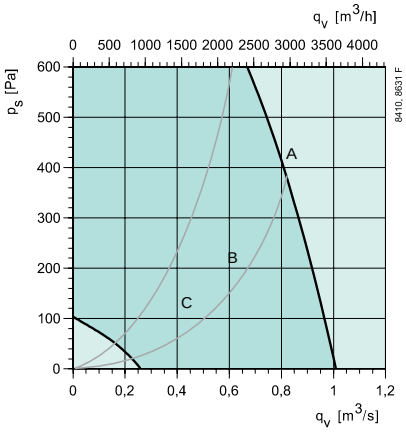
FR06	Octave band (mid-frequency Hz)																										
	Tot			63			125			250			500			1k			2k			4k			8k		
L_{wA} dB(A)	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C
Supply air	87	84	73	64	57	50	67	64	69	83	83	64	78	70	61	81	73	68	80	73	65	75	67	57	68	58	49
Extract air	71	68	60	60	54	54	64	58	58	68	68	55	61	52	43	57	50	42	53	46	39	43	36	29	35	26	22
Surrounding	64	63	54	44	37	37	50	48	52	62	63	47	57	48	40	54	47	40	52	45	38	46	38	30	39	29	23

FR08

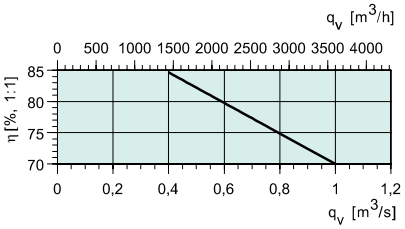
Supply air



Extract air



Temperature efficiency

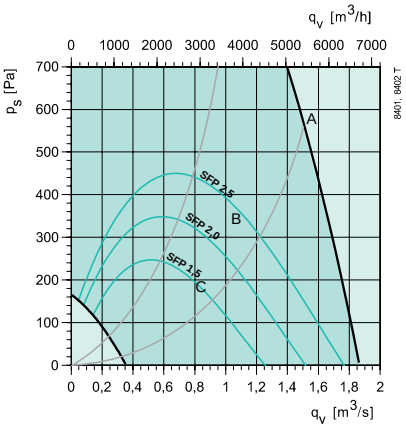


With the air ratio 1:1 and atmospheric humidity at 50%.

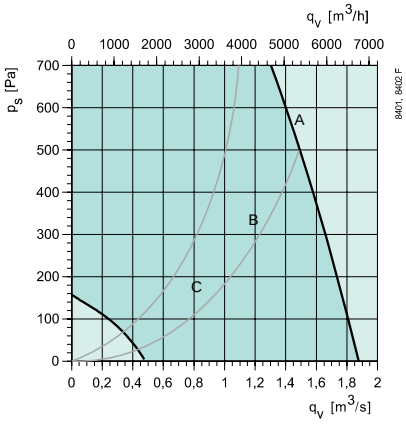
FR08	Octave band (mid-frequency Hz)																										
	Tot			63			125			250			500			1k			2k			4k			8k		
L_{wA} dB(A)	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C
Supply air	87	80	72	56	50	43	64	60	67	83	75	62	79	71	62	81	74	66	80	73	66	77	69	59	70	60	50
Extract air	72	68	64	56	49	44	60	56	63	70	67	51	61	51	43	62	54	47	62	55	48	60	53	44	42	32	25
Surrounding	70	64	59	45	38	32	54	50	58	69	63	48	57	50	41	55	48	40	58	51	44	57	50	40	43	33	24

FR11

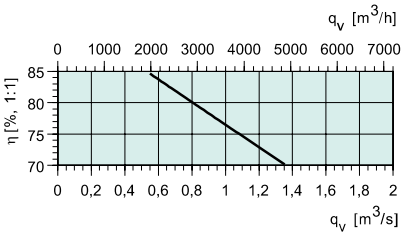
Supply air



Extract air



Temperature efficiency



With the air ratio 1:1 and atmospheric humidity at 50%.

FR11	Octave band (mid-frequency Hz)																										
	Tot			63			125			250			500			1k			2k			4k			8k		
L_{wA} dB(A)	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C
Supply air	95	89	79	69	64	57	74	70	70	88	83	71	88	82	71	91	84	74	88	81	72	82	75	67	76	69	59
Extract air	80	75	68	70	65	57	73	69	66	73	70	58	71	63	54	73	66	56	73	65	55	62	51	41	59	39	28
Surrounding	72	68	61	56	51	44	62	59	58	67	65	53	65	60	49	65	58	48	64	58	49	58	50	42	47	39	29

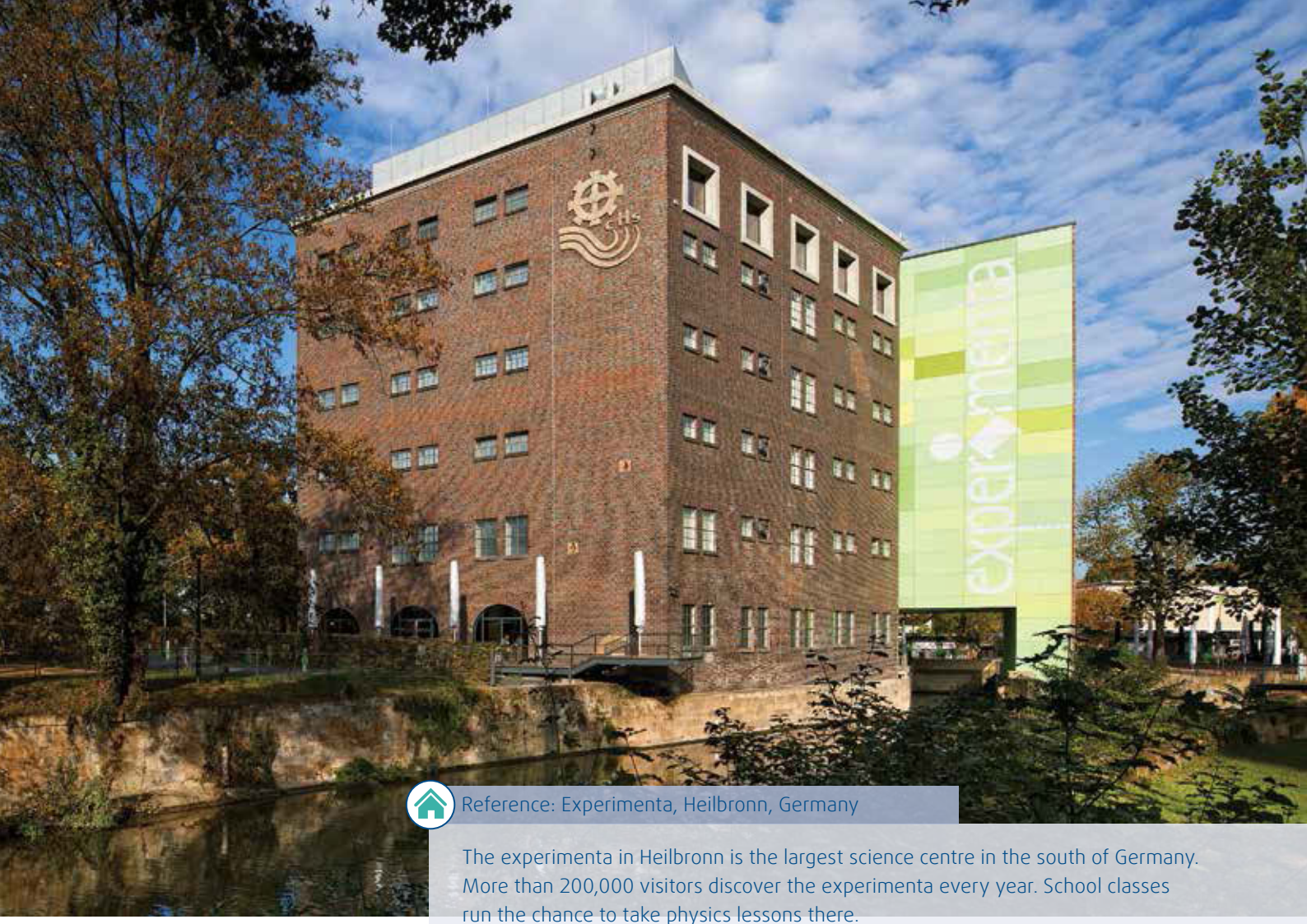
Accessories

Quick selection matrix

Function	Necessary accessories	Designation
Shut-off damper	1 for exhaust air and 1 for outdoor air	EFD
Water coil control	Valve and valve actuator	ZTV/ZTR and RVAZ4 24A
Room control	Room sensor without set point dial	TG-R5/PT1000

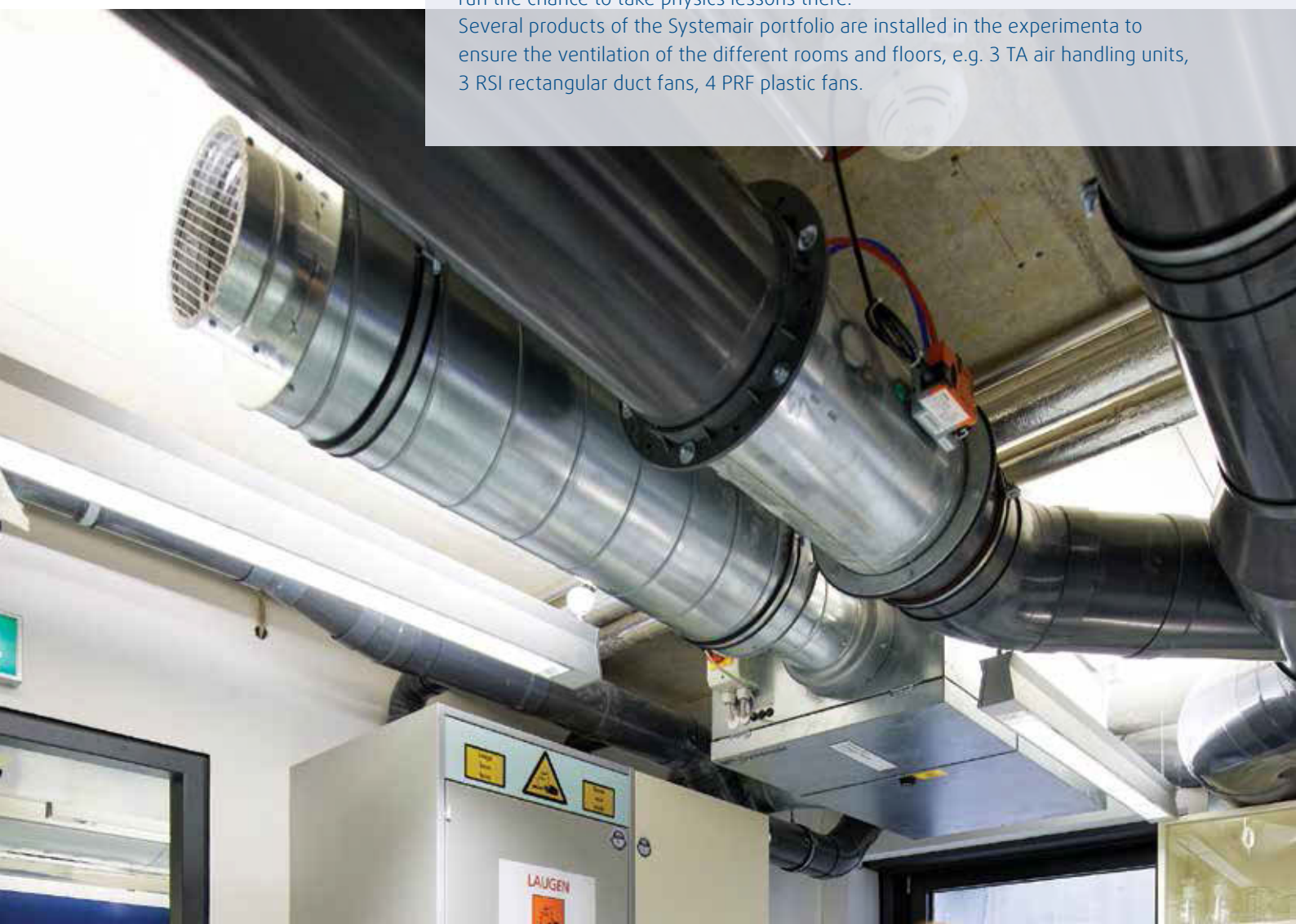
Accessories	Topvex FR03	Topvex FR06	Topvex FR08	Topvex FR11
E-Tool cable	ETC	ETC	ETC	ETC
Sliding door kit	SDF 03	SDF 06	SDF 08	SDF 11
Shut-off damper	EFD 315	EFD 400	EFD 500	EFD 630
Valve actuator	RVAZ4 24A	RVAZ4 24A	RVAZ4 24A	RVAZ4 24A
Valve, 2-way	ZTV 15-1.0	ZTV 15-1.0	ZTV 15-1.6	ZTV 20-2.0
Valve, 3-way	ZTR 15-1.0	ZTR 15-1.6	ZTR 20-2.0	ZTR 20-2.5
Cooling coil, water **	CWK	PGK	PGK	PGK
Cooling coil, DX coil **	DXRE	DXRE	DXRE	DXRE
Room temperature sensor	TG-R5/PT1000	TG-R5/PT1000	TG-R5/PT1000	TG-R5/PT1000
Combi grille	CVVX 315	CVVX 400	CVVX 500	–
Baffle silencer **	LDC-B 315	LDC-B 400	LDC-B 500	LDC-B 630
Timer	T 120	T 120	T 120	T 120
Presence detector	IR24-PC	IR24-PC	IR24-PC	IR24-PC
CO_2 Room sensor (digital 1/0)	CO2RT-DR	CO2RT-DR	CO2RT-DR	CO2RT-DR
CO_2 Room sensor (analog 0...10V DC)	CO2RT	CO2RT	CO2RT	CO2RT
Filter M5 (extract air)	BFT FR03 M5	BFT FR06 M5	BFT FR08 M5	BFT FR11 M5
Filter F7 (supply air)	BFT FR03 F7	BFT FR06 F7	BFT FR08 F7	BFT FR11 F7

** See separate catalogue



Reference: Experimenta, Heilbronn, Germany

The experimenta in Heilbronn is the largest science centre in the south of Germany. More than 200,000 visitors discover the experimenta every year. School classes run the chance to take physics lessons there.
Several products of the Systemair portfolio are installed in the experimenta to ensure the ventilation of the different rooms and floors, e.g. 3 TA air handling units, 3 RSI rectangular duct fans, 4 PRF plastic fans.



Topvex SR

Topvex SR is a range of efficient heat recovery units, intended for offices, shops, schools, day nurseries and similar premises. These units have been specially developed to comply with future energy requirements and therefore have very low energy consumption and an efficient rotary heat exchanger.

At a glance:

- Available in 5 different sizes
- Handles airflows of 0.1-1.9 m^3/s
- Rotary heat exchanger
- Low energy consumption - EC fan motors

Efficiency is everything
Topvex SR is a range of efficient ventilation units intended for offices, shops, day nurseries, schools and similar premises.

Topvex SR is supplied complete with control equipment and is ready to use as soon as it has been connected to the duct system and mains electricity.

It could not be simpler!
Topvex SR are supplied preprogrammed and tested. Connect Topvex SR to the duct system, connecting any external components, connect the power supply, set the timer and adjust the 7-day program. Installation is now complete.
It could not be simpler!

EC fan motors – quiet and energy efficient
Unlike motors with frequency converters, EC motors ensure excellent efficiency even at low speeds (see diagram). This contributes to good energy economy. EC motors are also quiet when running at low speeds.

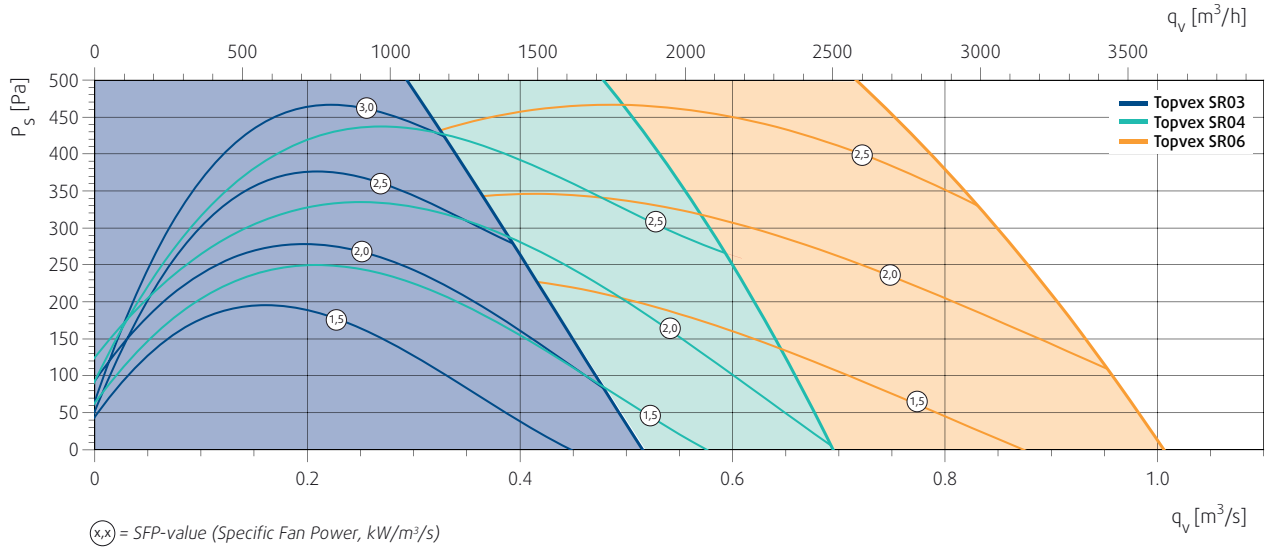
Easy to inspect
To make inspections and maintenance even easier both fans and rotary heat exchangers are easy to remove. Size 09 and 11 have a fixed rotary heat exchanger. All electrical cables are fitted with quick connectors so the fans can be released quickly and easily.

Simple electrical connection and servicing
All electrical connections are routed to the same terminal block that are clearly labeled. To facilitate servicing and troubleshooting, all electrical components and reheaters can be accessed from separate hatches.

Technical data		SR03	SR04	SR06	SR09	SR11
Voltage/Frequency, EL	V/50Hz	400	400	400	400	400
Voltage/Frequency, HW	V/50Hz	230	230	400	400	400
Phase, EL	–	3N	3N	3N	3N	3N
Phase, HW	–	1	1	3N	3N	3N
Power rating, motors	W	2x508	2x780	2x1033	2x1877	2x3065
Power rating, heating coil, EL	kW	3	4	6,3	12	15
Power rating, heating coil, HW	kW	*	*	*	*	*
Fuse, EL	A	3x13	3x16	3x16	3x32	3x40
Fuse, HW	A	10	10	3x10	3x10	3x13
Weight	kg	220	261	300	390	435
Filter, supply air	–	F7	F7	F7	F7	F7
Filter, extract air	–	M5	M5	M5	M5	M5

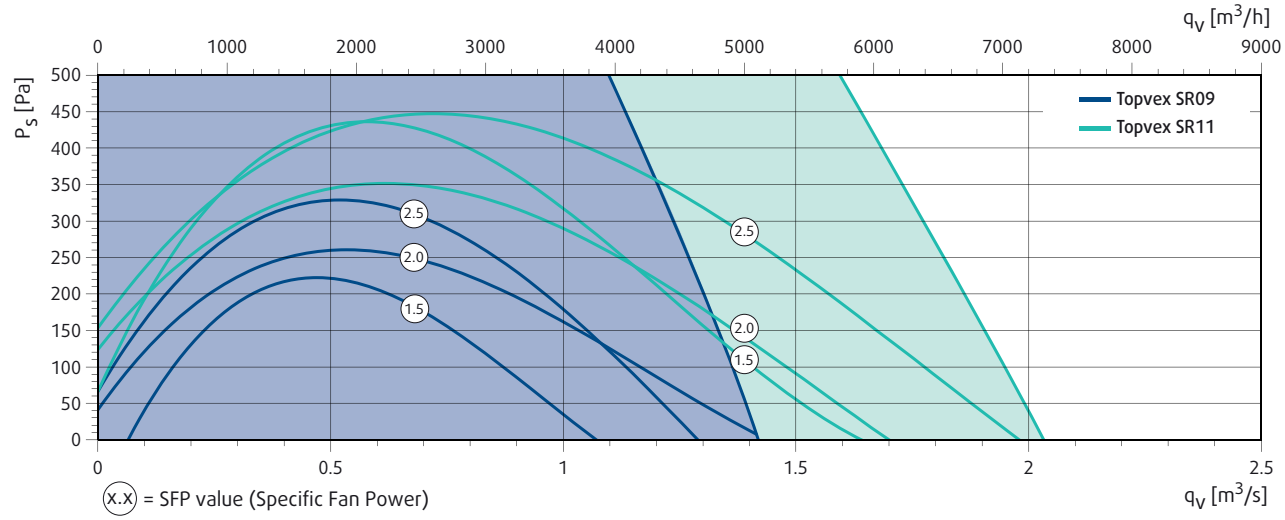
*See separate brochure "Specification data"

Working range
SR03, SR04, SR06



(x,x) = *SFP-value (Specific Fan Power, kW/m³/s)*

SR09, SR11

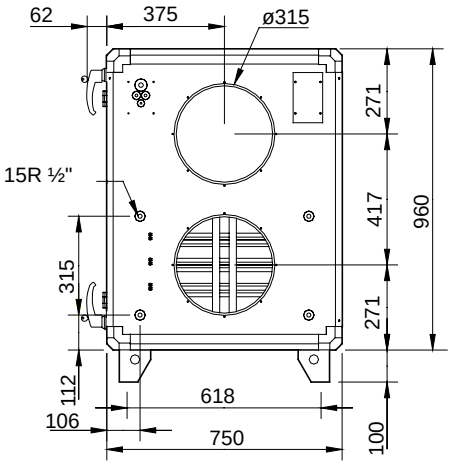


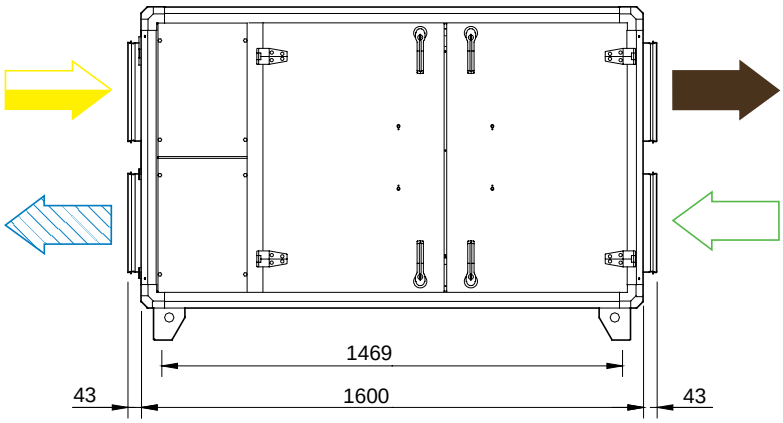
(X.X) = SFP value (Specific Fan Power)

Information about functions can be found on page 162. Information about control system can be found on page 170.

Dimensions (left hand versions)

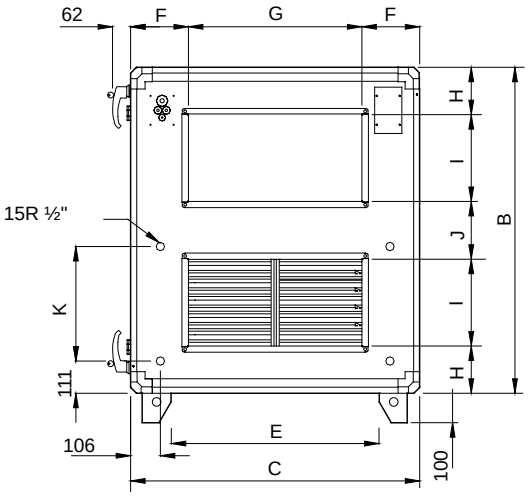
SR03

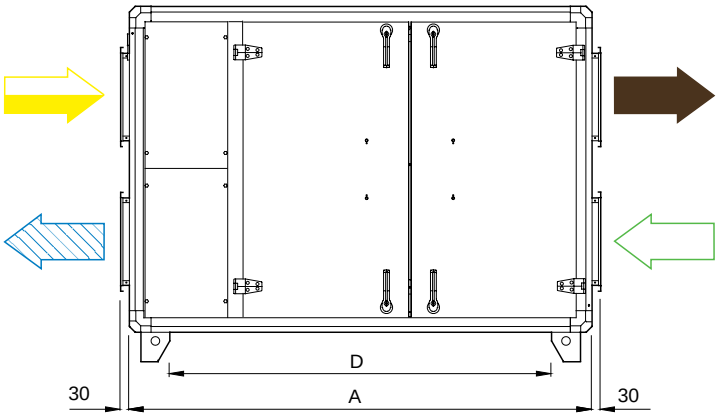




Dimensions in mm.

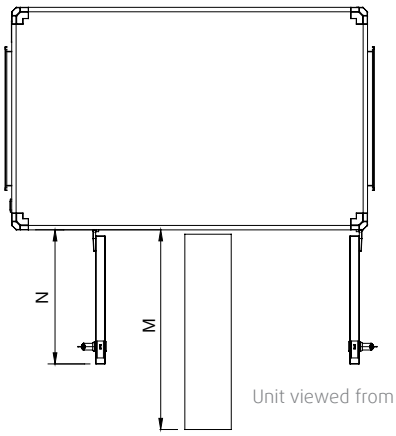
SR04, SR06





Dimensions	A	B	C	D	E	F	G	H	I	J	K
SR04	1600	1041	850	1315	565	175	500	171	250	200	355
SR06	1600	1128	1000	1468	868	200	600	164	300	200	396

Dimensions in mm.

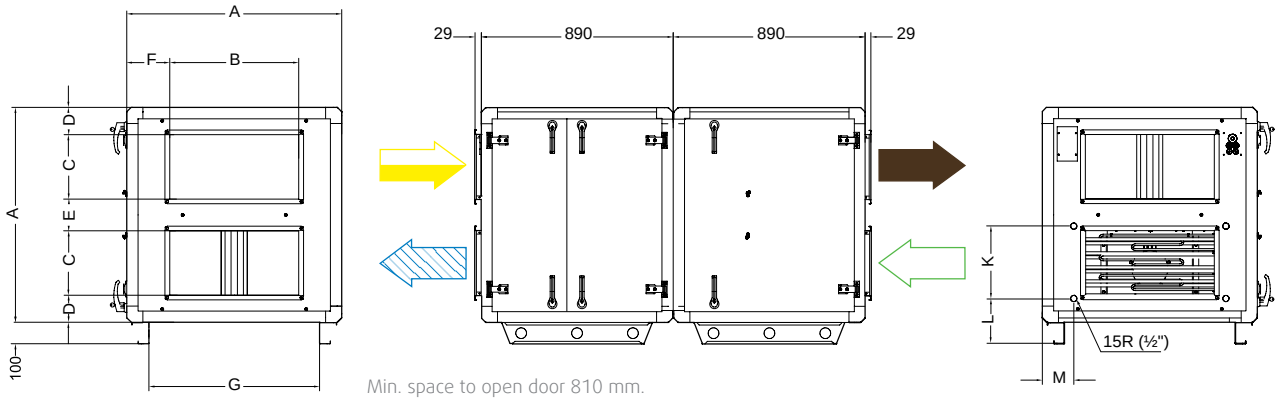


Unit viewed from top side

Dimensions	M	N
Topvex SR03	650	603
Topvex SR04	750	603
Topvex SR06	900	603

= supply air = exhaust air = extract air = outdoor air

SR09, SR11



Min. space to open door 810 mm.

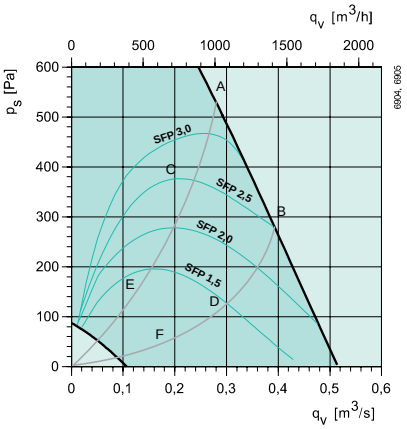
Dimensions	A	B	C	D	E	F	G	K	L	M
SR09	1120	600	400	108	104	260	915	434	195	145
SR11	1230	800	400	135	165	215	1025	487	195	145

Dimensions in mm.
Possible to devide in half. Removable duct flanges.

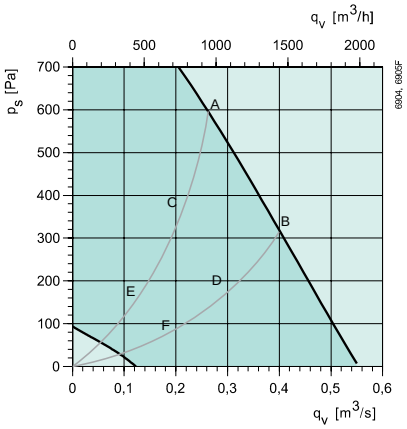
= supply air = exhaust air = extract air = outdoor air

Performance
SR03

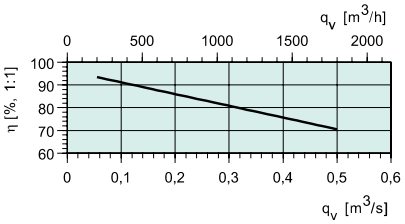
Supply air



Extract air



Temperature efficiency

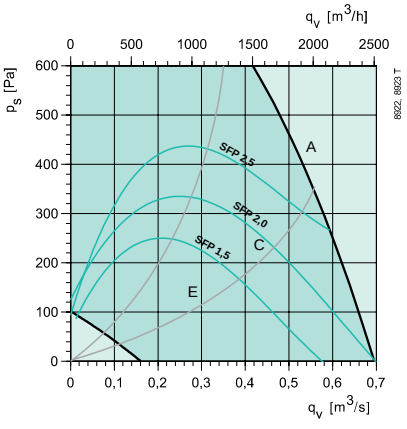


With the air ratio 1:1 and atmospheric humidity at 50%.

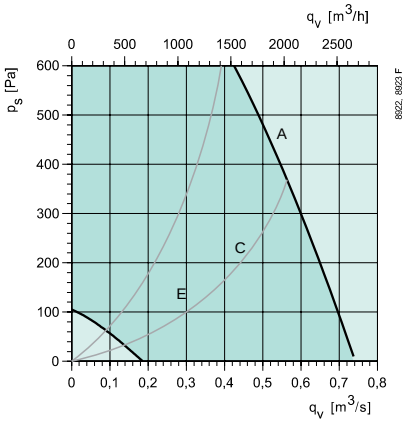
SR03	Octave band (mid-frequency Hz)																										
	Tot			63			125			250			500			1k			2k			4k			8k		
L_{wA} dB(A)	B	F	D	B	F	D	B	F	D	B	F	D	B	F	D	B	F	D	B	F	D	B	F	D	B	F	D
Supply air	80	76	67	53	49	47	64	62	61	77	73	60	72	67	59	72	69	61	71	67	59	66	61	51	55	49	37
Extract air	71	69	64	50	45	45	64	64	63	68	66	52	66	60	52	60	55	48	53	48	40	45	40	31	34	28	21
Surrounding	59	56	48	34	30	29	49	49	46	57	53	40	49	44	36	47	43	37	47	42	34	40	35	25	35	29	19

SR04

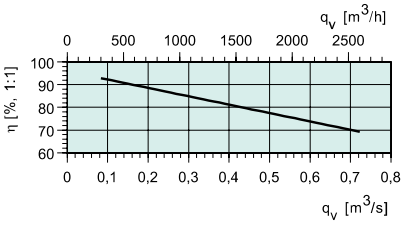
Supply air



Extract air



Temperature efficiency

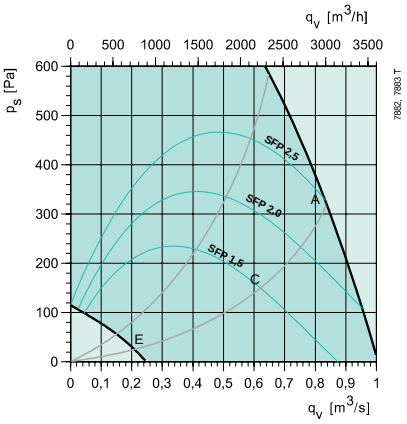


With the air ratio 1:1 and atmospheric humidity at 50%.

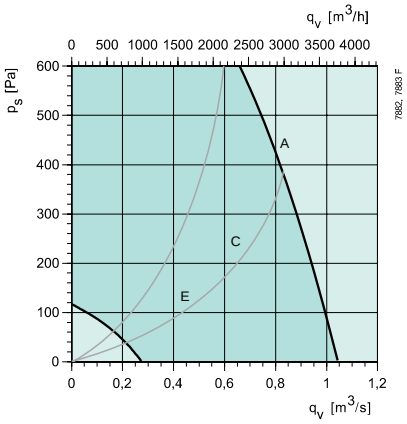
SR04	Octave band (mid-frequency Hz)																										
	Tot			63			125			250			500			1k			2k			4k			8k		
L_{wA} dB(A)	A	C	E	A	C	E	A	C	E	A	C	E	A	C	E	A	C	E	A	C	E	A	C	E	A	C	E
Supply air	84	78	70	52	47	41	60	55	58	75	70	59	73	68	60	77	72	65	79	74	67	76	74	59	70	62	50
Extract air	70	69	61	50	44	38	58	54	58	68	69	57	62	57	51	59	54	48	57	52	45	53	48	38	44	36	25
Surrounding	66	62	52	33	27	21	45	40	43	62	59	47	55	50	43	55	50	44	59	54	47	56	50	40	52	44	33

SR06

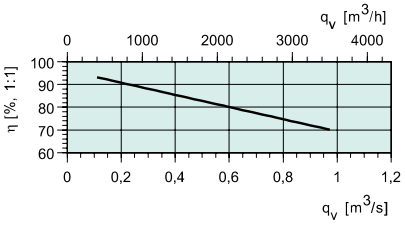
Supply air



Extract air



Temperature efficiency

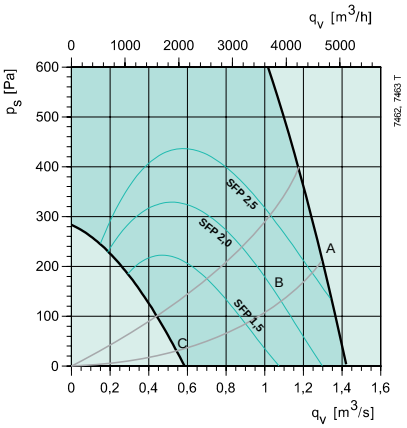


With the air ratio 1:1 and atmospheric humidity at 50%.

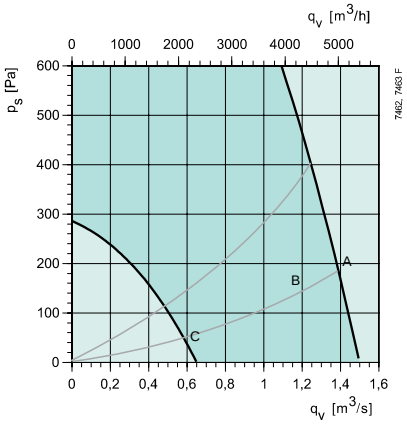
SR06	Octave band (mid-frequency Hz)																										
	Tot			63			125			250			500			1k			2k			4k			8k		
L_{wA} dB(A)	A	C	E	A	C	E	A	C	E	A	C	E	A	C	E	A	C	E	A	C	E	A	C	E	A	C	E
Supply air	83	77	56	53	47	39	60	56	42	74	71	43	76	68	48	79	72	53	77	70	50	73	66	41	67	60	35
Extract air	69	63	48	47	39	40	62	63	44	66	50	41	64	51	39	54	47	36	52	45	31	47	37	21	41	28	21
Surrounding	61	53	39	31	24	23	48	49	29	57	43	32	55	43	31	51	44	33	52	44	31	50	40	23	47	37	24

SR09

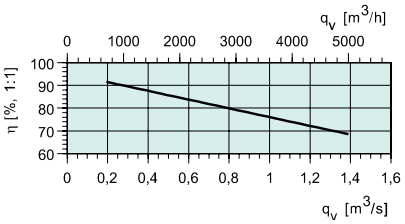
Supply air



Extract air



Temperature efficiency

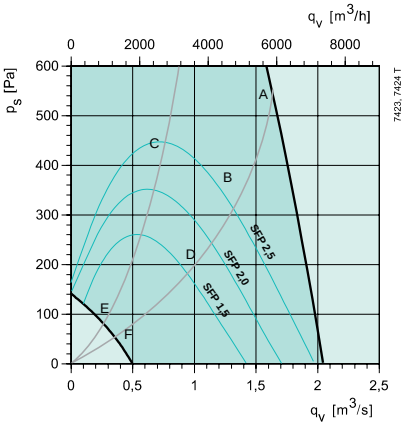


With the air ratio 1:1 and atmospheric humidity at 50%.

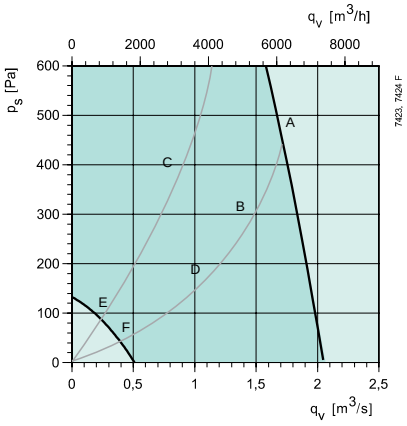
SR09	Octave band (mid-frequency Hz)																										
	Tot			63			125			250			500			1k			2k			4k			8k		
L_{wA} dB(A)	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C
Supply air	88	83	68	55	51	40	63	59	55	77	70	55	80	75	61	83	78	64	81	78	62	77	72	56	72	66	48
Extract air	75	74	60	51	49	36	63	60	59	70	72	50	70	66	51	65	61	48	61	57	45	56	52	37	48	44	25
Surrounding	71	66	54	37	33	22	57	53	51	67	61	45	63	58	44	64	59	46	63	59	45	60	55	40	61	55	37

Performance
SR11

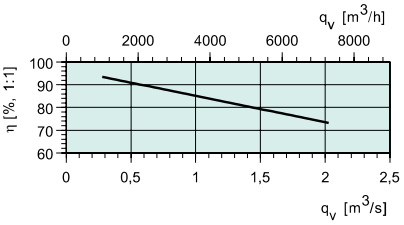
Supply air



Extract air



Temperature efficiency



With the air ratio 1:1 and atmospheric humidity at 50%.

SR11	Octave band (mid-frequency Hz)																										
	Tot			63			125			250			500			1k			2k			4k			8k		
L_{wA} dB(A)	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C
Supply air	93	86	79	51	46	41	64	60	57	87	77	64	84	78	71	87	82	75	85	80	73	81	76	69	76	71	62
Extract air	77	74	70	55	52	46	65	62	63	74	71	67	72	69	62	69	64	57	66	61	55	61	56	49	53	48	39
Surrounding	70	65	58	41	38	32	57	54	52	66	61	51	60	54	47	62	57	50	62	56	49	57	52	44	50	45	36

Accessories

Quick selection matrix

Accessories	Topvex SR03	Topvex SR04	Topvex SR06
E-Tool cable	ETC	ETC	ETC
Outdoor set, Outdoor/Exhaust air Hood + Roof	–	ODS SR04	ODS SR06
Shut-off damper	EFD 315	EFD 50-25	EFD 60-30
Valve actuator	RVAZ4 24A	RVAZ4 24A	RVAZ4 24A
Valve, 2-way. Fits to HWL/HWH coils.	ZTV 15-0.6	ZTV 15-1.0	ZTV 15-1.0
Valve, 3-way. Fits to HWL/HWH coils.	ZTR 15-1.0	ZTR 15-1.6	ZTR 15-1.6
Cooling battery, water **	PGK	PGK	PGK
Cooling battery, DX coil **	DXRE	DXRE	DXRE
Room temperature sensor	TG-R5/PT1000	TG-R5/PT1000	TG-R5/PT1000
Combi grille	CVVX 315	CVVX 400	CVVX 500
Silencer **	LDC 315	LDC 50-25	LDR 60-30
Silencer, baffle **	LDC-B 315	LDR-B 50-25	LDR-B 60-30
Timer	T 120	T 120	T 120
Presence detector	IR24-PC	IR24-PC	IR24-PC
CO_2 Room sensor (digital 1/0)	CO2RT-DR	CO2RT-DR	CO2RT-DR
CO_2 Room sensor (analog 0...10V DC)	CO2RT	CO2RT	CO2RT
U-tube manometer, filter guard	MFRO	MFRO	MFRO
Filter M5 (exhaust air)	BFRO SR03 M5	BFRO SR04 M5	BFRO SR06 M5
Filter F7 (supply air)	BFRO SR03 F7	BFRO SR04 F7	BFRO SR06 F7

Accessories	Topvex SR09	Topvex SR11
E-Tool cable	ETC	ETC
Outdoor set, Outdoor/Exhaust air Hood + Roof	ODS SR04	ODS SR06
Shut-off damper	EFD 50-25	EFD 60-30
Valve actuator	RVAZ4 24A	RVAZ4 24A
Valve, 2-way. Fits to HWL/HWH coils.	ZTV 15-1,6	ZTV 20-2,0
Valve, 3-way. Fits to HWL/HWH coils.	ZTR 20-2,0	ZTR 20-2,5
Built-in DX cooler. Delivered separatly for installation together with the Topvex SR unit **	SoftCooler SR09	SoftCooler SR11
Cooling battery, water**	PGK	PGK
Cooling battery, DX coil**	DXRE	DXRE
Duct sensor	TG-KH/PT1000	TG-KH/PT1000
Room temperature sensor	TG-R5/PT1000	TG-R5/PT1000
Silencer **	LDR 70-40	LDR 80-80
Silencer, baffle **	LDR-B 50-25	LDR-B 60-30
Timer	T 120	T 120
Presence detector	IR24-PC	IR24-PC
CO_2 Room sensor (digital 1/0)	CO2RT-DR	CO2RT-DR
CO_2 Room sensor (analog 0...10V DC)	CO2RT	CO2RT
U-tube manometer, filter guard	MFRO	MFRO
Filter M5 (exhaust air)	BFRO SR09 E M5	BFRO SR11 E M5
Filter F7 (supply air)	BFRO SR09 E F7	BFRO SR11 E F7

** See "Topvex Specification data"

Topvex SX

Topvex SX is designed for use in smaller premises such as offices and day nurseries, but these units can also be used for zone ventilation in larger buildings such as schools. Topvex SX units are equipped with EC fan motors in order to comply with new energy regulations for low SFP (Specific Fan Power).

At a glance:

- Available in 3 sizes
- Handles airflows of 0.1-0.75 m³/s
- Plug and Play
  - Integrated control system
  - Preprogrammed
  - Menu-based control panel for easy use
- Low energy consumption
- Set up for demand control
- Variable fan settings
- Easy to service
- Made of aluzinc sheet metal

Efficiency is everything
Topvex SX is a range of efficient ventilation units intended for offices, shops, day nurseries, schools and similar premises.

Topvex SX units with their cross-flow heat exchangers are usually used when there is a need to keep supply air and extract air separate. The units have an effective defrost function to ensure optimum performance.

It could not be simpler!
Topvex SX units are supplied complete with control systems, supply air and extract air filters, cross-flow heat exchangers, by-pass dampers, electric or hot water heating coil or no heating coil. The units are preprogrammed and very easy to install – simply set the timer and enter the desired air temperature, fan speed (0-100%) and operating time. Installation is now complete! It could not be simpler!

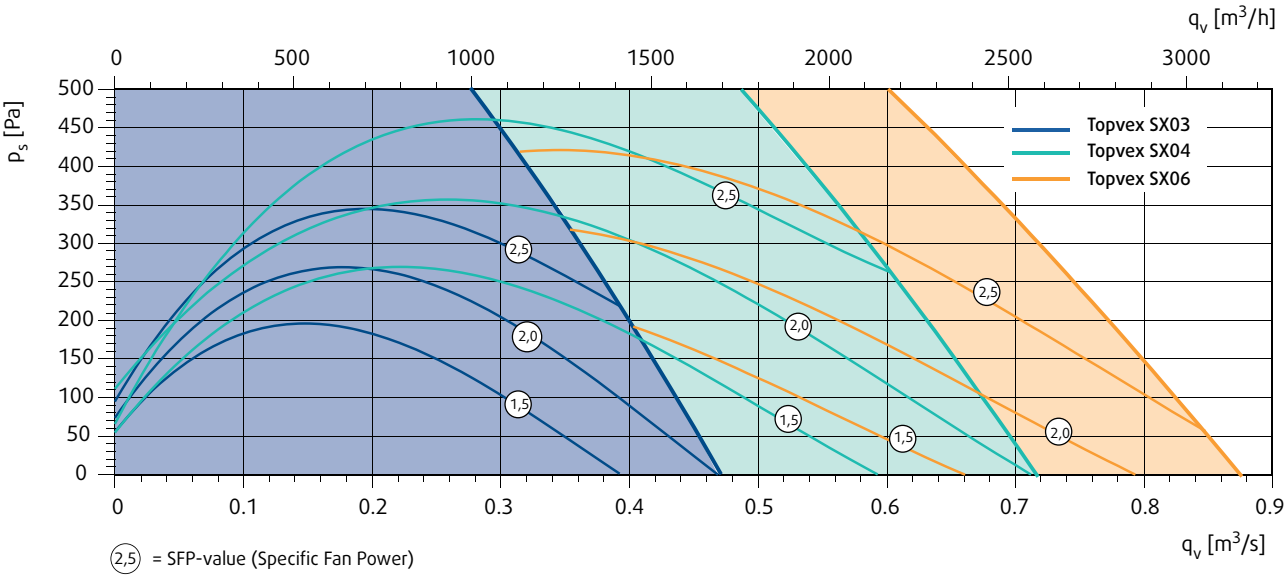
EC fan motors
Unlike motors with frequency converters, EC motors ensure excellent efficiency even at low speeds. This contributes to good energy economy. EC motors are also quiet when running at low speeds.

Technical data		SX03	SX04	SX06
Voltage/Frequency, EL	V/50Hz	400	400	400
Voltage/Frequency, HW	V/50Hz	230	230	400
Phase EL	–	3N	3N	3N
Phase HW	–	1	1	3N
Power rating, motors	W	2x496	2x760	2x1052
Power rating, heating coil, EL	kW	6	12	14
Power rating, heating coil, HW	kW	–	–	–
Fuse, EL	A	3x16	3x32	3x32
Fuse, HW	A	10	10	3x10
Weight	kg	196	260	308
Filter, supply air	–	F7	F7	F7
Filter, extract air	–	M5	M5	M5

*See separate brochure "Specification data"

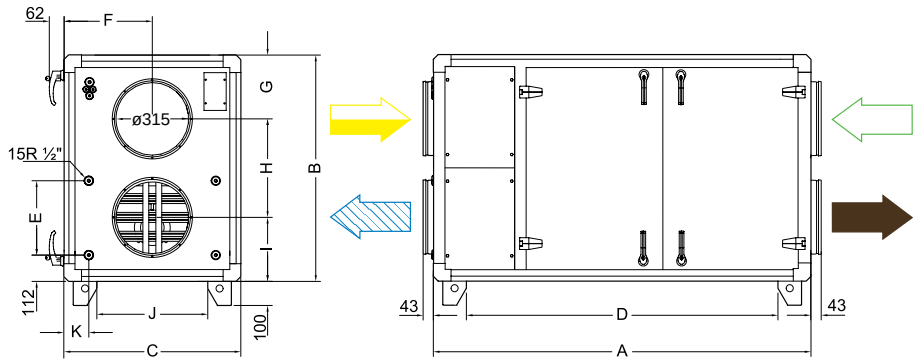
Information about functions can be found on page 162. Information about control system can be found on page 170.

Working range
SX03, SX04, SX06



Dimensions (left hand versions)

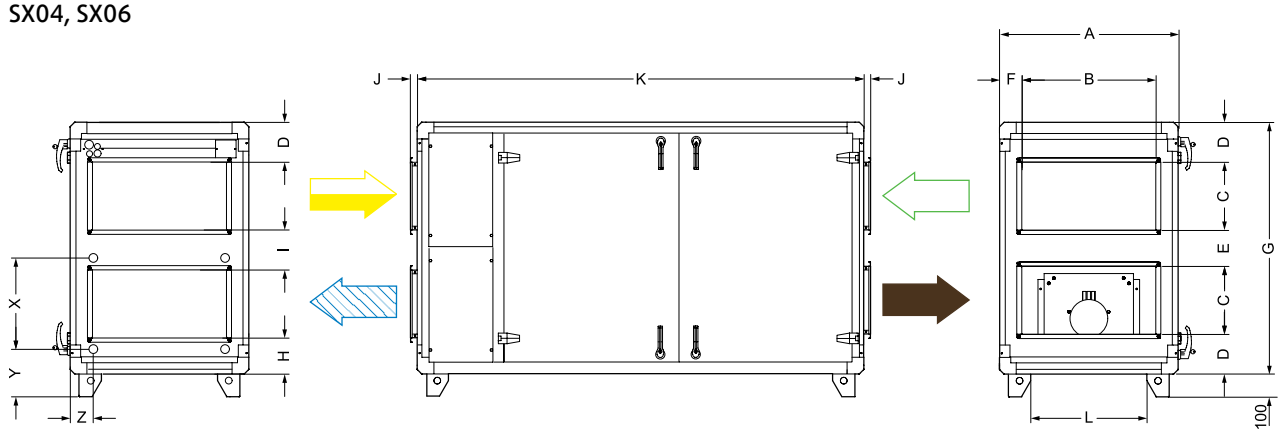
SX03



Dimensions	A	B	C	D	E	F	G	H	I	J	K
SX03	1600	960	750	1320	315	375	271	418	271	470	106

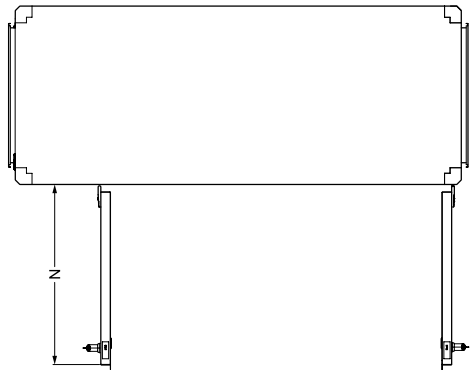
Dimensions in mm.

SX04, SX06



Dimensions	A	B	C	D	E	F	G	H	I	J	K	L	X	Y	Z
SX04	800	500	250	187	167	150	1041	171	183	30	1747	520	355	212	106
SX06	800	600	300	180	167	100	1127	164	183	30	2000	520	410	204	106

Dimensions in mm.



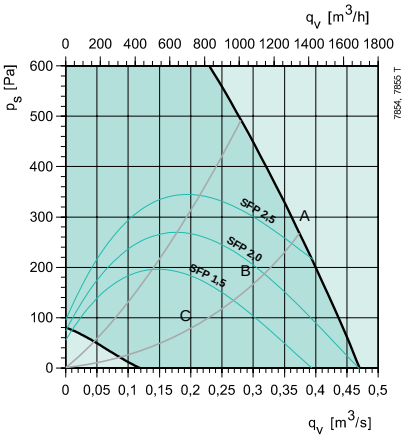
Unit viewed from top side

Dimensions	N
Topvex SX03	630
Topvex SX04	698
Topvex SX06	824

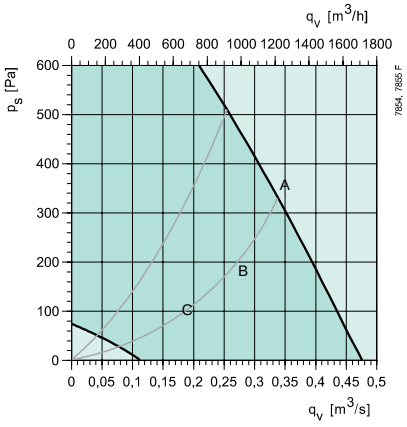
= supply air = exhaust air = extract air = outdoor air

Performance
SX03

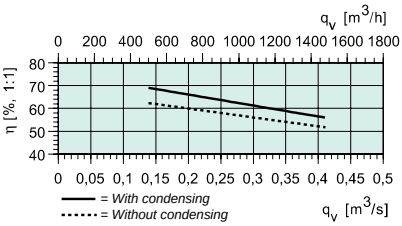
Supply air



Extract air



Temperature efficiency



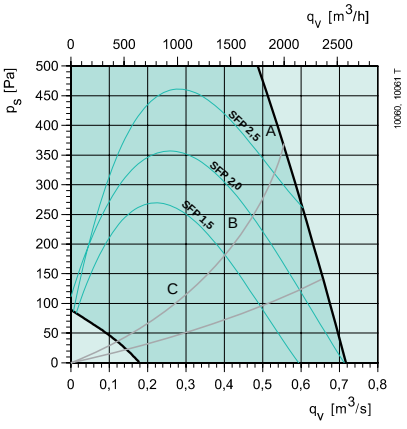
At an outdoor temperature of -15°C and an exhaust air temperature of 25°C.

With condensing: 50% air humidity.
Without condensing: 0% air humidity.

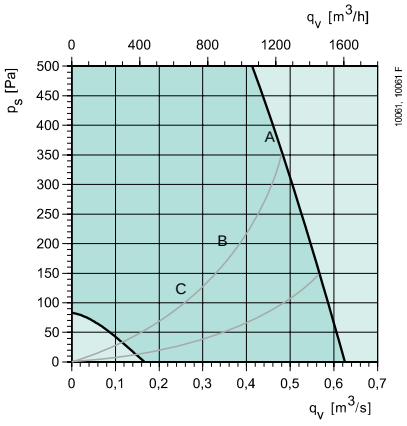
SX03	Octave band (mid-frequency Hz)																										
	Tot			63			125			250			500			1k			2k			4k			8k		
L_{wA} dB(A)	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C
Supply air	84	72	66	54	49	44	63	62	63	82	64	56	72	66	58	73	67	59	72	64	56	67	59	48	67	48	37
Extract air	64	57	52	47	44	40	53	53	51	62	52	40	51	44	36	53	46	39	50	44	30	45	31	21	31	23	22
Surrounding	66	53	50	31	27	23	50	49	49	66	48	40	48	41	33	48	42	34	50	43	32	44	33	23	38	29	23

SX04

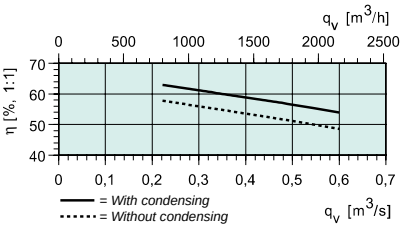
Supply air



Extract air



Termperature efficiency



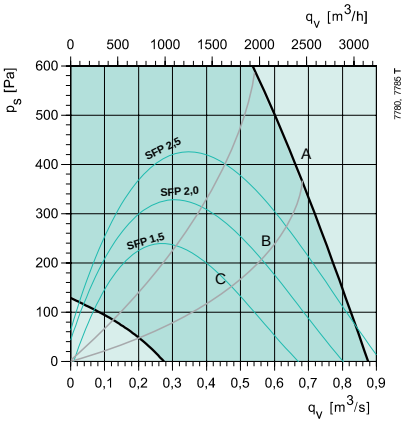
At an outdoor temperature of -15°C and an exhaust air temperature of 25°C.

With condensing: 50% air humidity.
Without condensing: 0% air humidity.

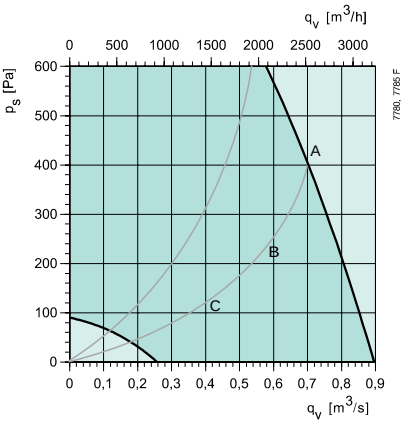
SX04	Octave band (mid-frequency Hz)																										
	Tot			63			125			250			500			1k			2k			4k			8k		
L_{wA} dB(A)	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C
Supply air	81	75	67	53	47	41	61	56	61	67	67	54	73	67	57	75	69	60	76	70	60	72	65	53	65	57	43
Extract air	59	54	51	49	42	35	50	47	49	49	50	40	57	49	40	51	43	34	43	36	27	36	29	18	32	22	19
Surrounding	60	56	51	33	27	20	49	45	50	50	52	39	52	46	37	51	45	36	55	48	39	50	43	30	49	41	28

SX06

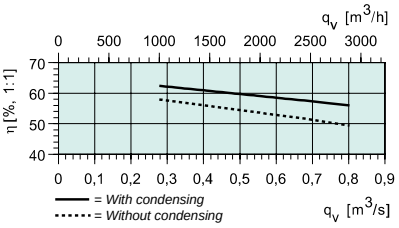
Supply air



Extract air



Temperature efficiency



At an outdoor temperature of -15°C and an exhaust air temperature of 25°C.

With condensing: 50% air humidity.
Without condensing: 0% air humidity.

SX06	Octave band (mid-frequency Hz)																										
	Tot			63			125			250			500			1k			2k			4k			8k		
L_{WA} dB(A)	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C
Supply air	84	80	71	54	51	49	60	58	57	80	72	60	74	73	63	77	74	66	77	73	64	74	70	60	68	64	52
Extract air	64	62	57	39	39	38	53	50	51	60	58	53	58	56	49	56	53	49	50	47	42	52	47	37	49	43	30
Surrounding	64	61	54	34	32	29	48	46	45	60	55	47	55	54	46	56	52	47	56	53	46	55	51	42	54	49	39

Accessories

Quick selection matrixt

Function	Necessary accessories	Designation
Shut-off damper	1 for exhaust air and 1 for outdoor air	EFD
Water coil control	Valve and valve actuator	ZTV/ZTR and RVAZ4 24A

Accessories	Topvex SX03	Topvex SX04	Topvex SX06
E-Tool cable	ETC	ETC	ETC
Shut-off damper	EFD 315	EFD 50-25	EFD 60-30
Valve actuator	RVAZ4 24A	RVAZ4 24A	RVAZ4 24A
Valve, 2-way. Fits to HWL/HWH coils.	ZTV 15-1.0 / 0.6	ZTV 15-1.6 / 1.0	ZTV 15-1.6 / 1.6
Valve, 3-way. Fits to HWL/HWH coils.	ZTR 15-1.6 / 1.0	ZTR 20/15-2.0 / 1.6	ZTR 15-20-2.5 / 2.0
Cooling battery, water **	PGK 50-25	PGK 60-30	PGK 60-35
Cooling battery, DX coil **	DXRE 50-25	DXRE 60-30	DXRE 60-35
Duct sensor	TG-KH/PT1000	TG-KH/PT1000	TG-KH/PT1000
Combi grille	CVVX 315	CVVX 400	CVVX 500
Silencer	LDC 315	LDC 50-25	LDR 60-30
Silencer, baffle	LDC-B 315	LDC-B 50-25	LDR-B 60-30
Timer	T 120	T 120	T 120
Presence detector	IR24-PC	IR24-PC	IR24-PC
CO_2 Room sensor (digital 1/0)	CO2RT-DR	CO2RT-DR	CO2RT-DR
Water lock. Where there is a risk of condensation on the outdoor air side of the heat exchanger.	Water lock	Water lock	Water lock
Filter M5 (exhaust air)	BFRO SR03 M5	BFT SX04 M5	BFT SX06 M5
Filter F7 (supply air)	BFRO SR03 F7	BFT SX04 F7	BFT SX06 F7

** See "Topvex Specification data"

Reference: Bury Grammar School, Greater Manchester, UK

Bury Grammar School is an independent grammar school in Bury, Greater Manchester, England. The earliest documentary evidence shows the existence of the school in the 16th century c.1570.

Recent refurbishment has seen a new 6th Form Arts Centre development. Providing an up to date facility for the pupils the space is ventilated by three Topvex SR11 energy recovery units. The Topvex supply variable air volumes to the classrooms via fifteen Optima-RI VAV dampers. The dampers are activated by CO2 sensors in each room. This type of control facilitates energy savings when the classrooms are not occupied or only a small number of pupils are present. Boosting automatically to full ventilation rates when the rooms are fully occupied.

The main project feature is to provided fresh air for the pupils in the new classrooms with fully automatic controls. The main challenge was to provide the required ventilation and energy recovery rates while keeping the breakout and in-duct noise to a minimum. The unit are externally mounted immediately above the art rooms.

Each Topvex unit provides heating, fresh air and energy recovery. Using low pressure hot water and a high effieciency rotary wheel. The unit is VAV operated using a pre-wired control panel that can be regulated from CO2 senors and varialble air dampers. Delivering the ventilation demands required automatically.

Topvex SC

Topvex SC is a series of efficient ventilation units designed for apartment houses, offices, shops, schools, daycares centre or similar premises. The units are especially designed to meet the coming rigid energy requirements with low energy use and high-efficiency heat exchanger.

At a glance:

- Low energy use
- High efficient counter flow heat exchanger
- Integrated/pre-programmed control system
- Constant airflow- or duct pressure- controlling
- Large inspection doors for easy maintenance
- Manufactured in Aluzinc plated sheet metal (AZ185)
- Factory tested

Efficiency is key!
Topvex SC is transportable thru a 900mm opening, the two smallest sizes (03 and 04) thru an 800mm opening.

The units casing is made up from double-skinned aluzinc sheet metal, AZ 185, with internal mineral sound/thermal insulation. To avoid sharp edges bevelled corners from cast aluminium are used.

Large inspection doors and removable main components facilitate inspection and maintenance.

Supply and extract air filter are mounted in guide rails with quick release system and are fitted with sealing stripes to provide optimal sealing against the filter.

The separate electrical cabinet with all cable connections collected at one place facilitates commissioning and service.

To simplify the installation and commissioning of the unit control system are included and pre-configured.

Topvex SC has a user friendly control system. With clear text (21 languages eligible) and a logical menu structure it is quick to learn. A startup wizard secures that necessary settings will not be forgotten.

With the integrated control system it is possible to supervise/control the airflow, duct pressure, air temperatures and weekly operating time. Topvex SC has also other energy saving functions like free cooling, cool recovering, and season related temperatures and airflow controlling.

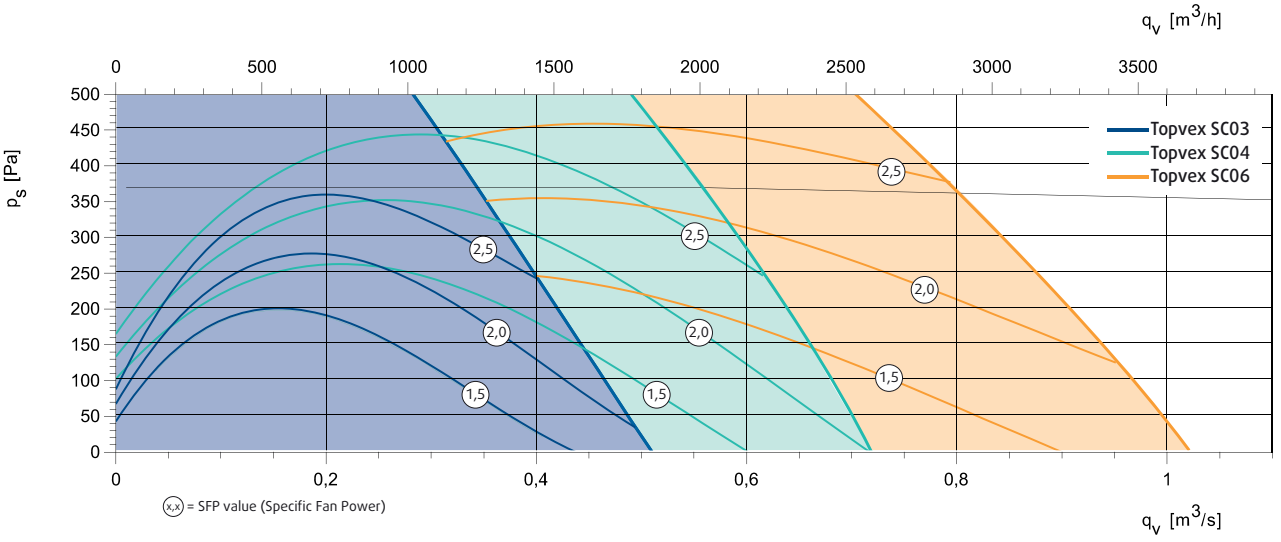
Topvex SC is as standard equipped with Exoline and Modbus communication via RS-485 and a built-in WEB server via TCP/IP and BACnet/IP.

E-tool configuration tool.
E tool© is a PC-based configuration software with graphical user interface. The program gives you an excellent overview of the Corrigo E settings. Using E tool© , all settings can be made on the computer and downloaded into the controller. An infinite number of configurations can be stored in the computer memory for later use.

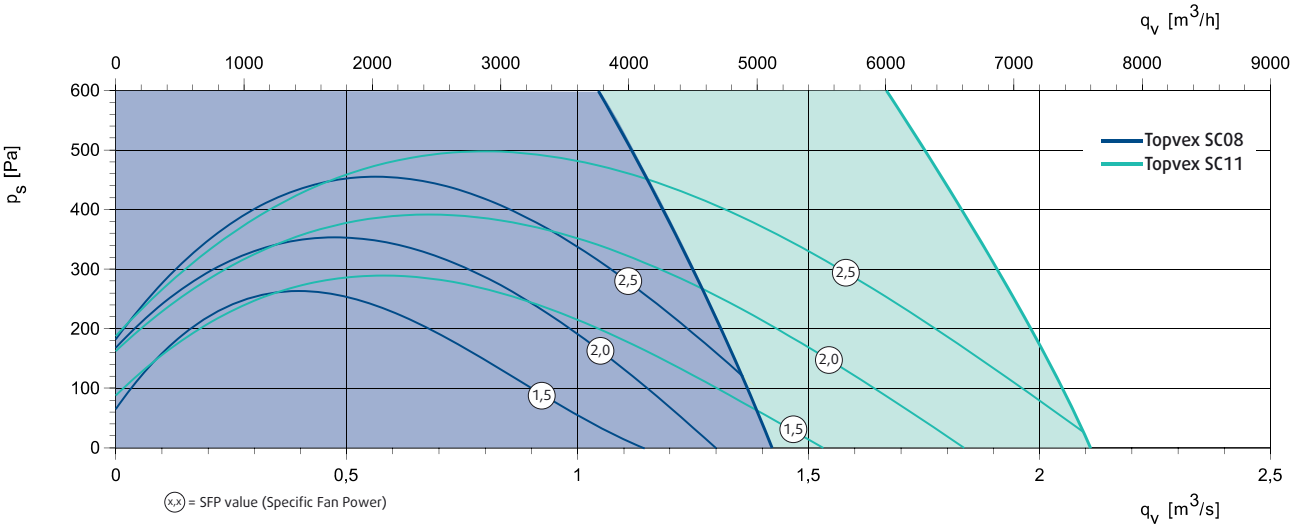
The functions and functionality in Topvex SC gives you all that are needed to create an indoor environment with the highest comfort and to the lowest operating costs. Save the global environment by using Topvex SC.

Information about functions can be found on page 162. Information about control system can be found on page 170.

Working range
SC03, SC04, SC06



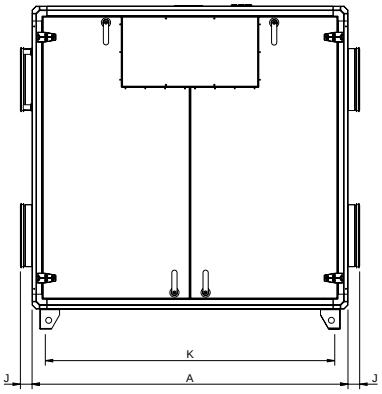
SC08, SC11

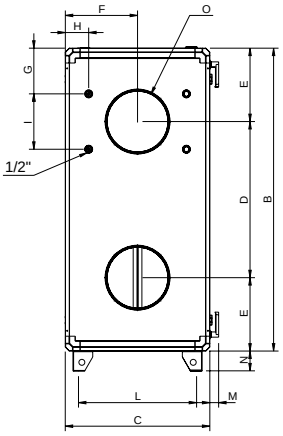


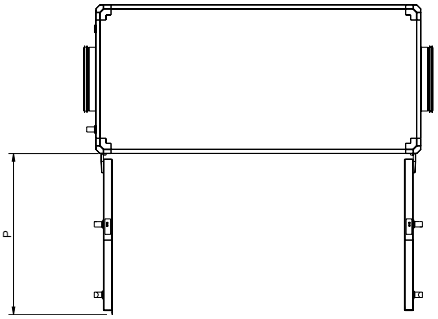
Technical data		SC03	SC04	SC06	SC08	SC11
Voltage/Frequency, EL	V/50Hz	400	400	400	400	400
Voltage/Frequency, HW	V/50Hz	230	230	400	400	400
Phase, EL	–	3N	3N	3N	3N	3N
Phase, HW	–	1	1	3N	3N	3N
Power rating, motors	W	2x506	2x763	2x1016	2x1894	2x3132
Power rating, heating coil, EL	kW	5	7.5	12	15	22.5
Fuse, EL	A	3x16	3x20	3x25	3x32	3x50
Fuse, HW	A	10	10	3x10	3x10	3x13
Weight	kg	280	330	470	565	683
Filter, supply air	–	F7	F7	F7	F7	F7
Filter, extract air	–	M5	M5	M5	M5	M5

Dimensions

SC03, SC04







Top side view of left hand unit

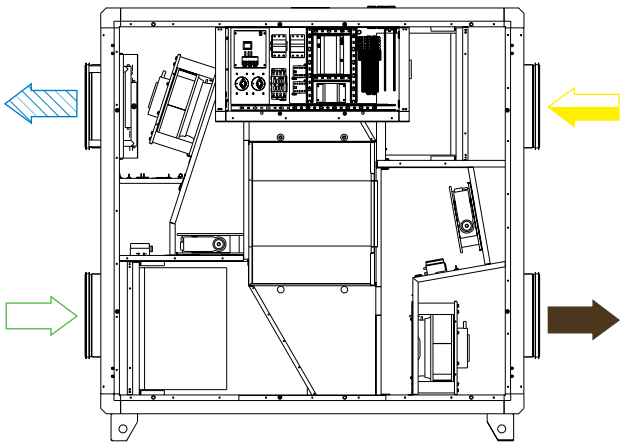
Topvex	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
SC03	1597	1531	730	790	371	365	231	118	280	59	1463	597	45	100	315	792
SC04	1941	1531	730	790	371	365	181	118	380	80	1814	597	45	100	400	965

Dimensions in mm.

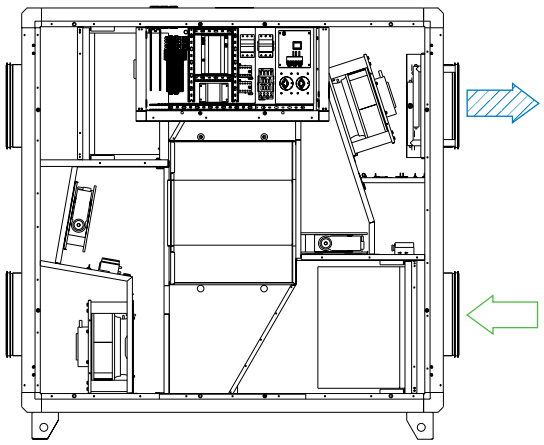
Connections

= supply air = exhaust air = extract air = outdoor air

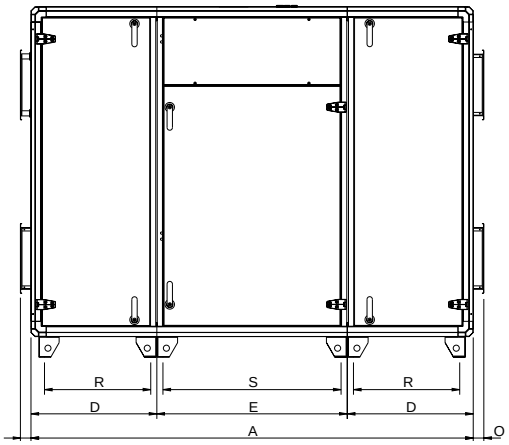
Left hand unit

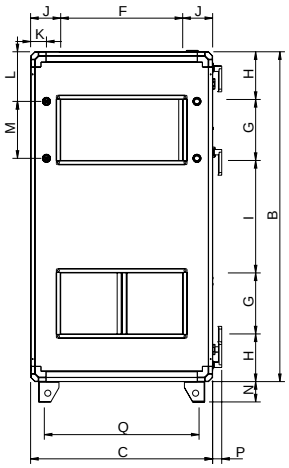


Right hand unit

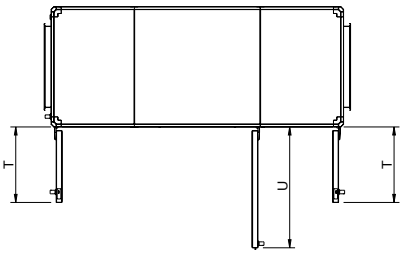


SC06, SC08, SC11



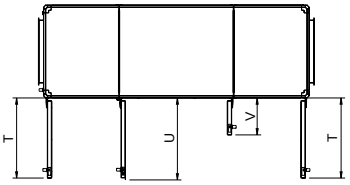


Topvex SC06



Top side view of left hand unit

Topvex SC08

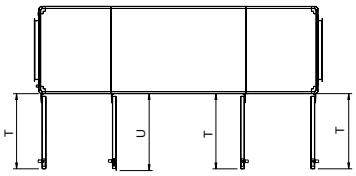


Top side view of left hand unit

Topvex	A	B	C	D	E	F	G	H	I	J	K
SC06	2175	1622	895	619	937	600	300	235	551	147	78
SC08	2650	1771	895	751	1139	600	400	195	583	147	78
SC11	3211	1771	895	829	1552	600	500	195	384	147	78
Topvex	**L**	**M**	**N**	**O**	**P**	**Q**	**R**	**S**	**T**	**U**	**V**
SC06	244	280	100	52	45	761	523	876	562	900	-
SC08	215	360	100	52	45	761	653	1076	770	790	360
SC11	234	420	100	52	45	761	733	1492	770	790	-

Dimensions in mm.
SC06, 08 and 11 are delivered in three parts.
Each part width according to: two parts =D+O and one part = E.

Topvex SC11

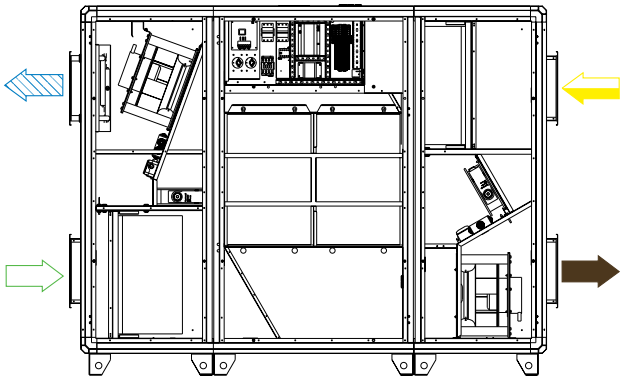


Top side view of left hand unit

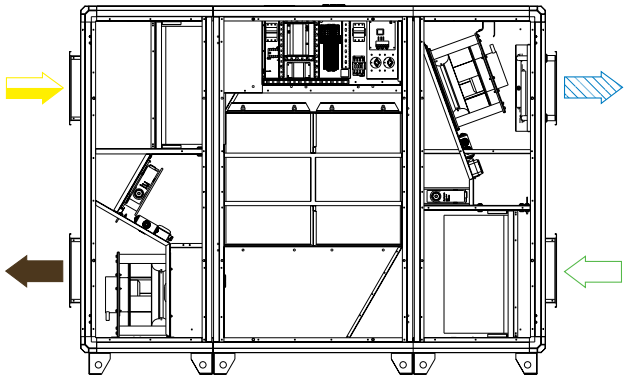
Connections

= supply air = exhaust air = extract air = outdoor air

Left hand unit

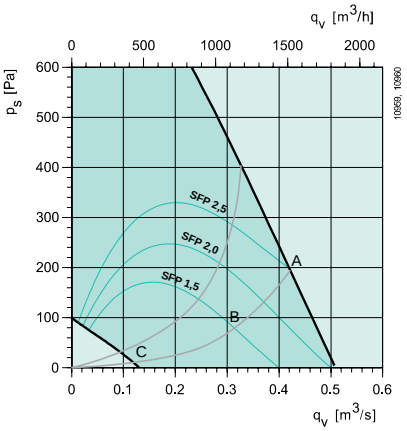


Right hand unit

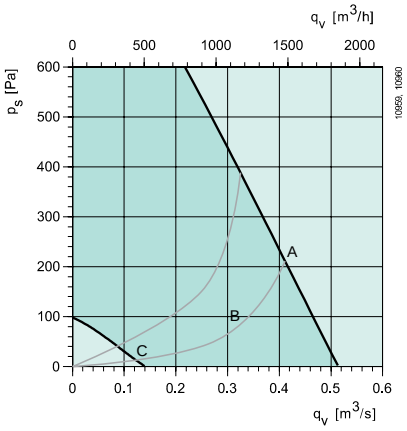


Performance
SC03

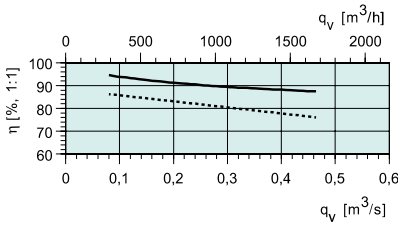
Supply air



Extract air



Temperature efficiency



— = With condensation
--- = Without condensation

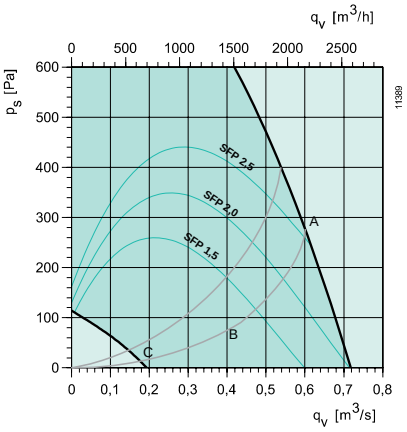
With the air ratio 1:1 and atmospheric humidity at 50%.

Extract air 22°C
Outdoor air -10°C

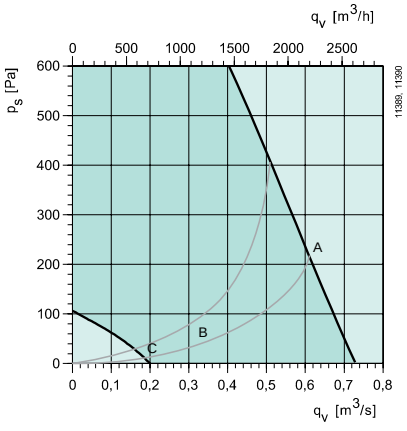
SC03	Octave band (mid-frequency Hz)																										
	Tot			63			125			250			500			1k			2k			4k			8k		
L_{wA} dB(A)	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C
Supply air	79	73	54	61	56	47	63	63	42	75	64	42	72	67	46	72	67	49	71	66	44	67	60	36	59	51	26
Extract air	62	56	42	45	39	31	40	40	25	56	41	20	48	41	28	49	43	24	48	42	16	43	32	12	32	23	15
Surrounding	61	52	34	44	38	31	44	44	24	60	48	26	52	46	28	48	43	24	46	40	17	44	35	13	37	28	16

SC04

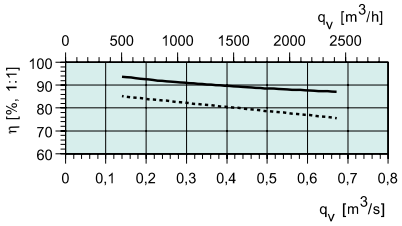
Supply air



Extract air



Temperature efficiency



— = With condensation
--- = Without condensation

With the air ratio 1:1 and atmospheric humidity at 50%.

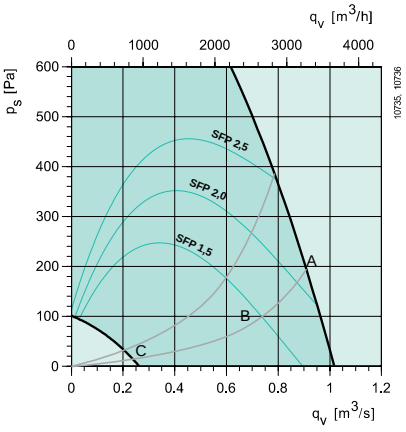
Extract air 22°C

Outdoor air -10°C

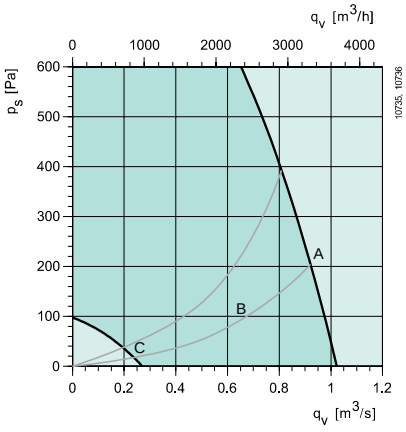
SC04	Octave band (mid-frequency Hz)																										
	Tot			63			125			250			500			1k			2k			4k			8k		
L_{wA} dB(A)	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C
Supply air	84	78	55	60	53	41	64	59	48	75	72	43	76	69	46	79	72	50	78	71	47	72	65	36	64	56	26
Extract air	71	65	48	59	53	36	54	48	45	64	60	32	63	57	35	63	57	44	64	58	34	61	54	26	49	39	23
Surrounding	64	60	39	45	38	22	46	41	32	60	58	28	59	53	30	53	48	35	56	50	27	50	43	15	42	33	16

SC06

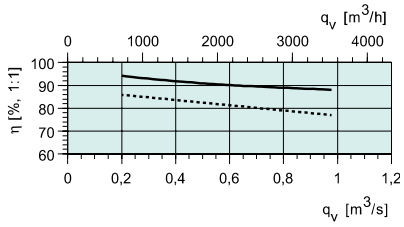
Supply air



Extract air



Temperature efficiency



— = With condensation

--- = Without condensation

With the air ratio 1:1 and atmospheric humidity at 50%.

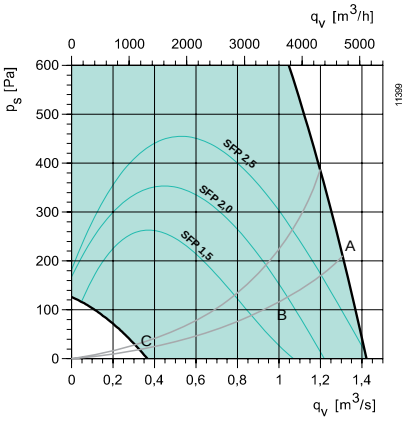
Extract air 22°C

Outdoor air -10°C

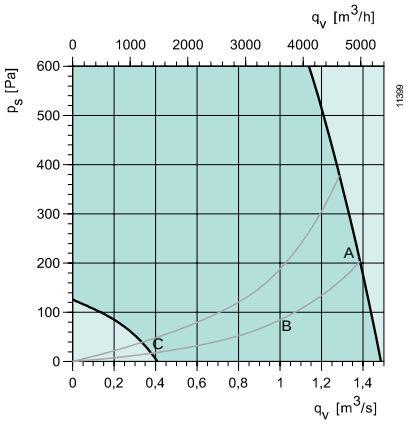
SC06	Octave band (mid-frequency Hz)																										
	Tot			63			125			250			500			1k			2k			4k			8k		
L_{wA} dB(A)	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C
Supply air	86	80	58	54	48	39	61	56	49	77	72	43	80	73	49	81	75	54	80	74	52	75	69	42	70	62	35
Extract air	66	68	43	46	40	32	45	40	30	61	67	29	62	59	33	58	53	41	57	53	29	52	46	18	44	36	19
Surrounding	67	63	44	39	33	23	49	44	35	63	60	29	62	56	31	60	55	42	57	52	30	48	42	14	41	34	13

SC08

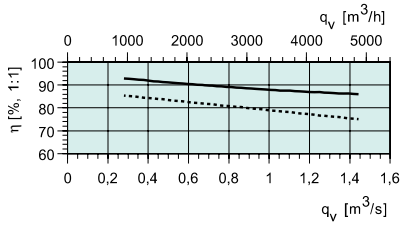
Supply air



Extract air



Temperature efficiency



— = With condensation

--- = Without condensation

With the air ratio 1:1 and atmospheric humidity at 50%.

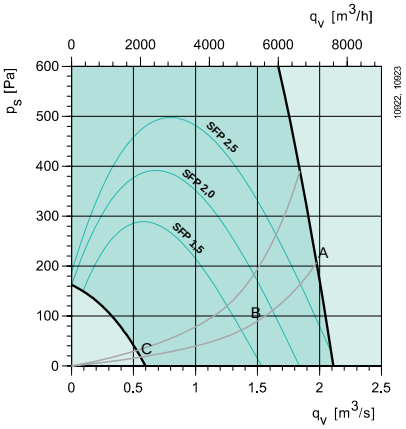
Extract air 22°C

Outdoor air -10°C

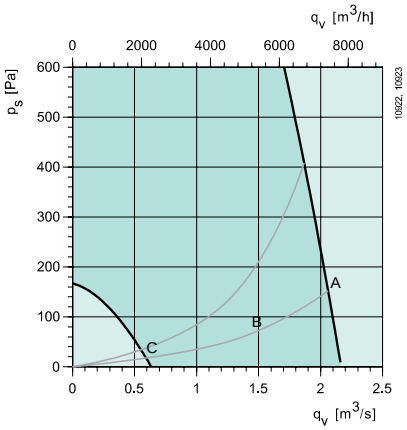
SC08	Octave band (mid-frequency Hz)																										
	Tot			63			125			250			500			1k			2k			4k			8k		
L_{wA} dB(A)	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C
Supply air	90	87	60	65	57	43	68	63	49	82	85	50	82	76	52	85	78	57	84	77	52	79	71	41	72	64	33
Extract air	81	71	53	62	55	41	66	62	51	80	67	40	71	64	42	68	62	44	65	59	36	59	51	23	49	41	22
Surrounding	79	69	47	51	45	31	60	55	43	78	67	37	68	61	38	67	61	42	65	59	35	61	53	24	61	53	24

SC11

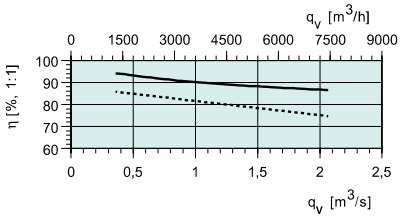
Supply air



Extract air



Temperature efficiency



— = With condensation

--- = Without condensation

With the air ratio 1:1 and atmospheric humidity at 50%.

Extract air 22°C

Outdoor air -10°C§

SC11	Octave band (mid-frequency Hz)																										
	Tot			63			125			250			500			1k			2k			4k			8k		
L_{WA} dB(A)	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C
Supply air	95	88	64	67	61	46	71	66	58	85	82	51	86	79	56	91	83	59	88	81	56	83	75	49	76	69	39
Extract air	81	75	59	65	59	46	66	60	57	79	73	45	74	67	44	71	65	46	67	61	45	61	55	30	53	47	23
Surrounding	84	77	56	59	53	40	61	55	52	78	72	43	78	71	48	79	72	49	76	68	46	70	62	35	64	57	28

Accessories

Quick selection matrix

Accessories	Topvex SC03	Topvex SC04	Topvex SC06
E-Tool cable	ETC	ETC	ETC
Shut-off damper	EFD 315	EFD 400	EFD 60-30
Valve actuator	RVAZ4 24A	RVAZ4 24A	RVAZ4 24A
Valve, 2-way. Fits to HW coils.	ZTV 15-1,0	ZTV 15-1,0	ZTV 15-1,6
Valve, 3-way. Fits to HW coils.	ZTR 15-1,0	ZTR 15-1,6	ZTR 20-2,0
Cooling battery, water	PGK 50-25	PGK 60-30	PGK 60-35
Cooling battery, DX coil	DXRE 50-25	DXRE 60-30	DXRE 60-35
Room temperature sensor	TG-R5/PT1000	TG-R5/PT1000	TG-R5/PT1000
Combi grille	CVVX 315	CVVX 400	CVVX 500
Baffle silencer	LDC-B 315	LDC-B 400	LDR-B 60-30
Timer	T 120	T 120	T 120
Presence detector	IR24-PC	IR24-PC	IR24-PC
CO_2 Room sensor (digital 1/0)	CO2RT-DR	CO2RT-DR	CO2RT-DR
CO_2 Room sensor (analog 0...10V DC)	CO2RT	CO2RT	CO2RT
Filter M5 (exhaust air)	BFT SC03/04 M5	BFT SC03/04 M5	BFT SC06 M5
Filter F7 (supply air)	BFT SC03/04 F7	BFT SC03/04 F7	BFT SC06 F7

Accessories	Topvex SC08	Topvex SC11	
E-Tool cable	ETC	ETC	
Shut-off damper	EFD 60-40	EFD 60-50	
Valve actuator	RVAZ4 24A	RVAZ4 24A	
Valve, 2-way. Fits to HW coils.	ZTV 15-1,6	ZTV 20-2,5	
Valve, 3-way. Fits to HW coils.	ZTR 20-2,5	ZTR 20-4,0	
Cooling battery, water	PGK 70-40	PGK 80-50	
Cooling battery, DX coil	DXRE 70-40	DXRE 80-50	
Room temperature sensor	TG-R5/PT1000	TG-R5/PT1000	
Combi grille	–	–	
Baffle silencer	LDR-B 60-40	LDR-B 90-50	
Timer	T 120	T 120	
Presence detector	IR24-PC	IR24-PC	
CO_2 Room sensor (digital 1/0)	CO2RT-DR	CO2RT-DR	
CO_2 Room sensor (analog 0...10V DC)	CO2RT	CO2RT	
Filter M5 (exhaust air)	BFT SC08 M5	BFT SC11 M5	
Filter F7 (supply air)	BFT SC08 F7	BFT SC11 F7	

Topvex TR

Topvex TR has been specially developed to comply with future energy regulations and therefore has very low energy consumption and an efficient rotary heat exchanger. Topvex TR has top connection.

At a glance:

- Available in 6 different sizes
- Handles airflows of 0.09 - 1.90 m^3/s
- Top connection
- Integral automatic control system
- Rotary heat exchanger
- Low energy consumption - EC fan motors

Efficiency is everything

Topvex TR is a range of efficient ventilation units intended for offices, shops, day nurseries, schools and similar premises. Topvex TR is supplied complete with control equipment and is ready to use as soon as it has been connected to the duct system and mains electricity.

It could not be simpler!

The units are supplied preprogrammed, tested and ready to install Connect the unit to the duct system, connecting any external components, connect the power supply, and set the timer and fan speed. Installation is now complete. It could not be simpler!

Space-saving top connection

With Topvex TR the ducts are connected on the top. These units take up little space and are easy to install in existing premises, as no ducts need to be connected at the sides. Compared with roof-mounted units, Topvex TR is easier to install, as you don't need ducts to pass through the roof. With one unit placed inside the building, service and maintenance are also simplified.

EC fan motors

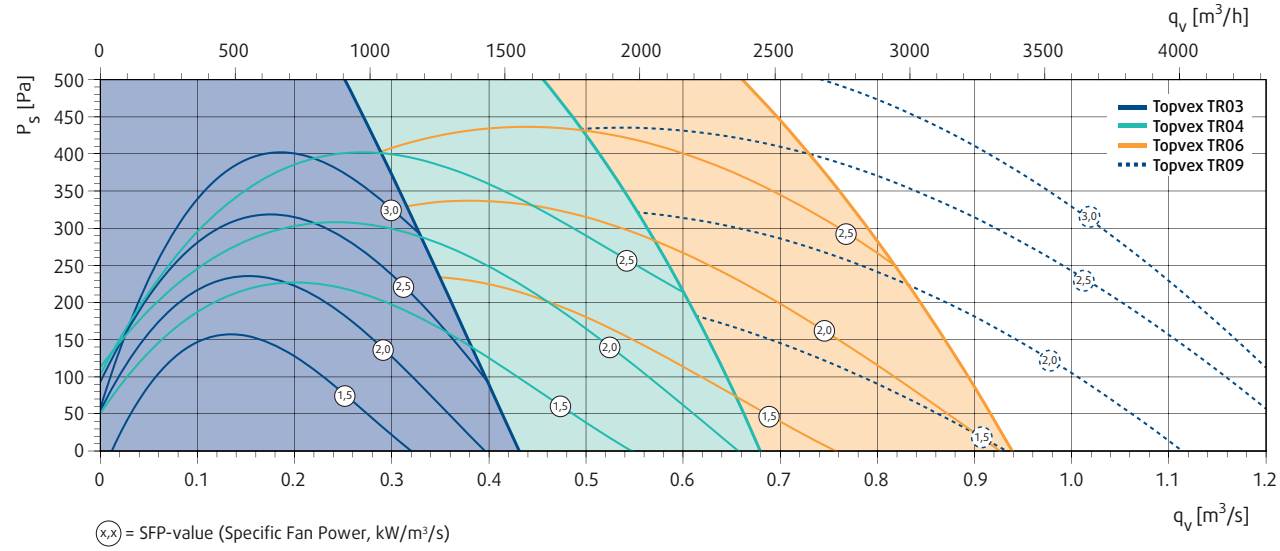
Unlike motors with frequency converters, EC motors ensure excellent efficiency even at low speeds. This contributes to good energy economy. EC motors are also quiet when running at low speeds.

Technical data		TR03	TR04	TR06	TR09	TR12	TR15
Voltage/Frequency, EL	V/50Hz	400	400	400	400	400	400
Voltage/Frequency, HW	V/50Hz	230	230	400	400	400	400
Phase EL	–	3N	3N	3N	3N	3N	3N
Phase HW	–	1	1	3N	3N	3N	3N
Power rating, motors	W	2x505	2x769	2x1005	2x1890	2x1787	2x3380
Power rating, heating coil, EL	kW	3	3,99	6,3	9	12	15
Power rating, heating coil, HW	kW	*	*	*	*	*	*
Fuse, EL	A	3x13	3x16	3x16	3x25	3x32	3x35
Fuse, HW	A	10	10	3x10	3x10	3x10	3x13
Weight	kg	220	280	350	500	580	730
Filter, Supply air	–	F7	F7	F7	F7	F7	F7
Filter, Extract air	–	M5	M5	M5	M5	M5	M5

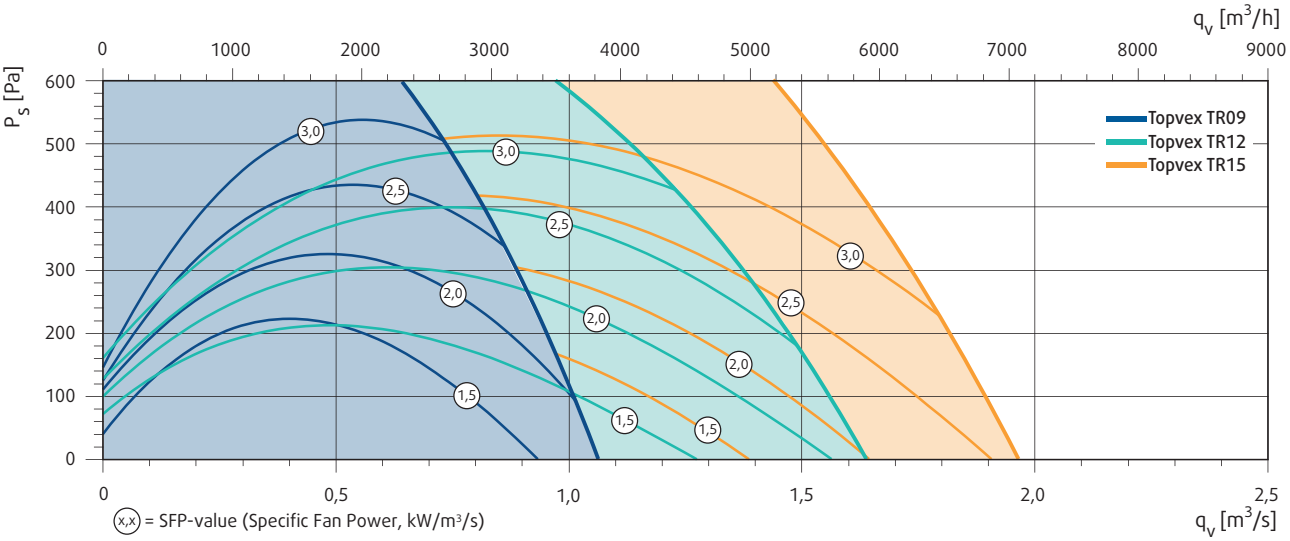
*See separate brochure "Specification data"

Information about functions can be found on page 162. Information about control system can be found on page 170.

Working range
TR03, TR04, TR06

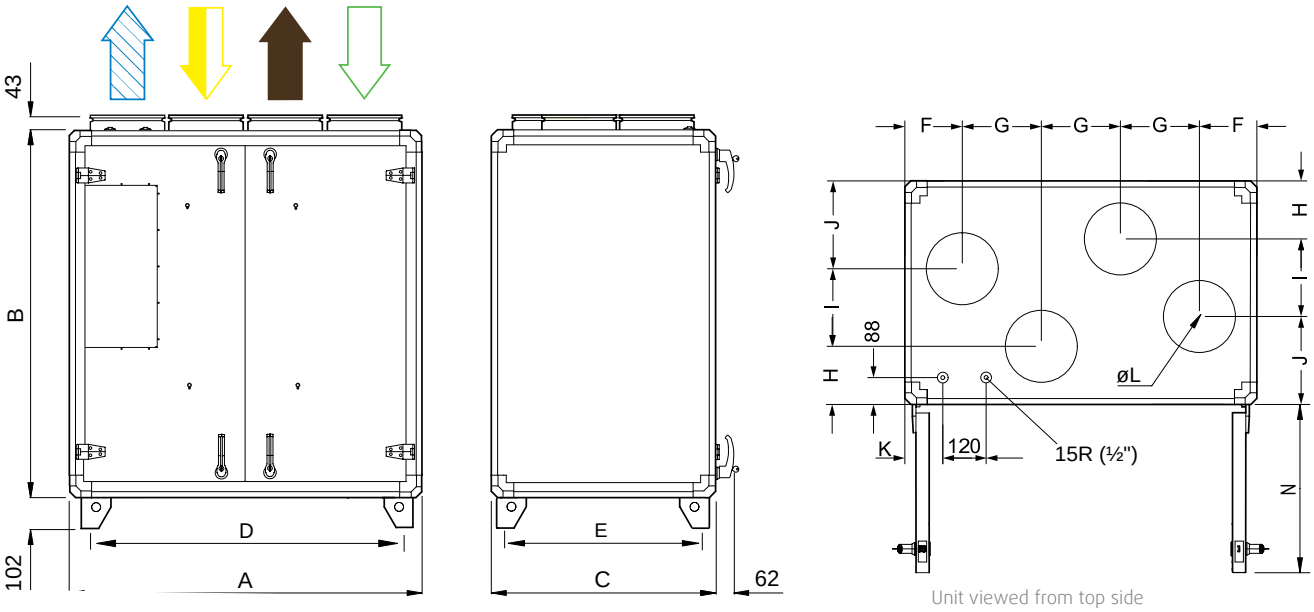


TR09, TR12, TR15



Dimensions (left hand versions)

TR03, TR04

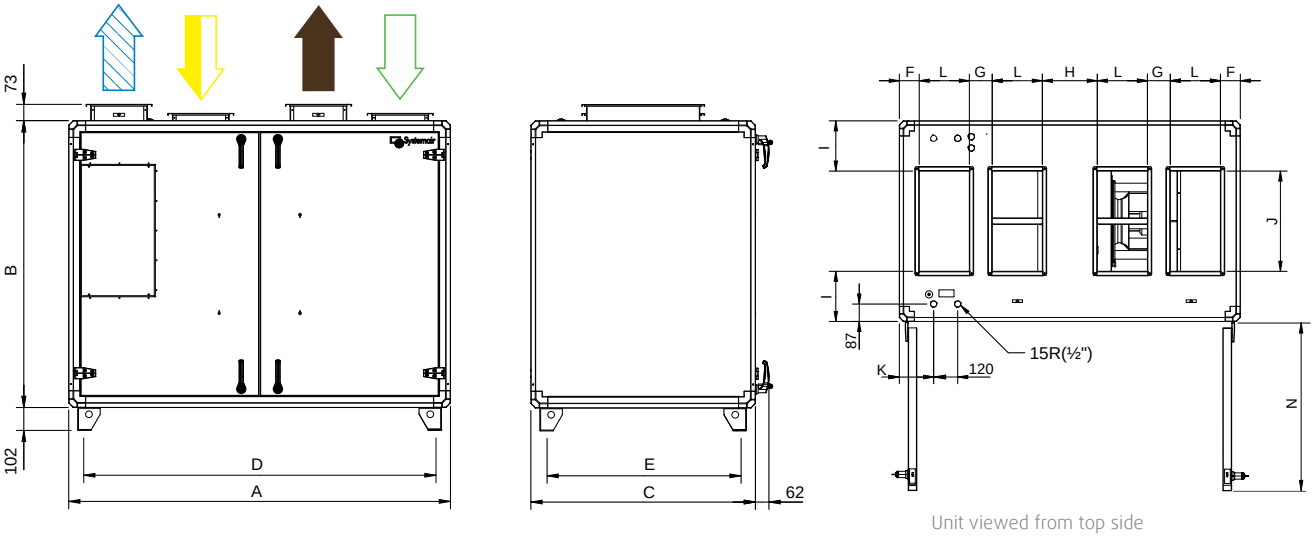


Unit viewed from top side

Dimensions	A	B	C	D	E	F	G	H	I	J	K	øL	N
TR03	1180	1230	750	1048	618	193	265	195	260	295	127	250	570
TR04	1480	1280	850	1348	718	209	354	315	220	315	163	315	715

Dimensions in mm.

TR06



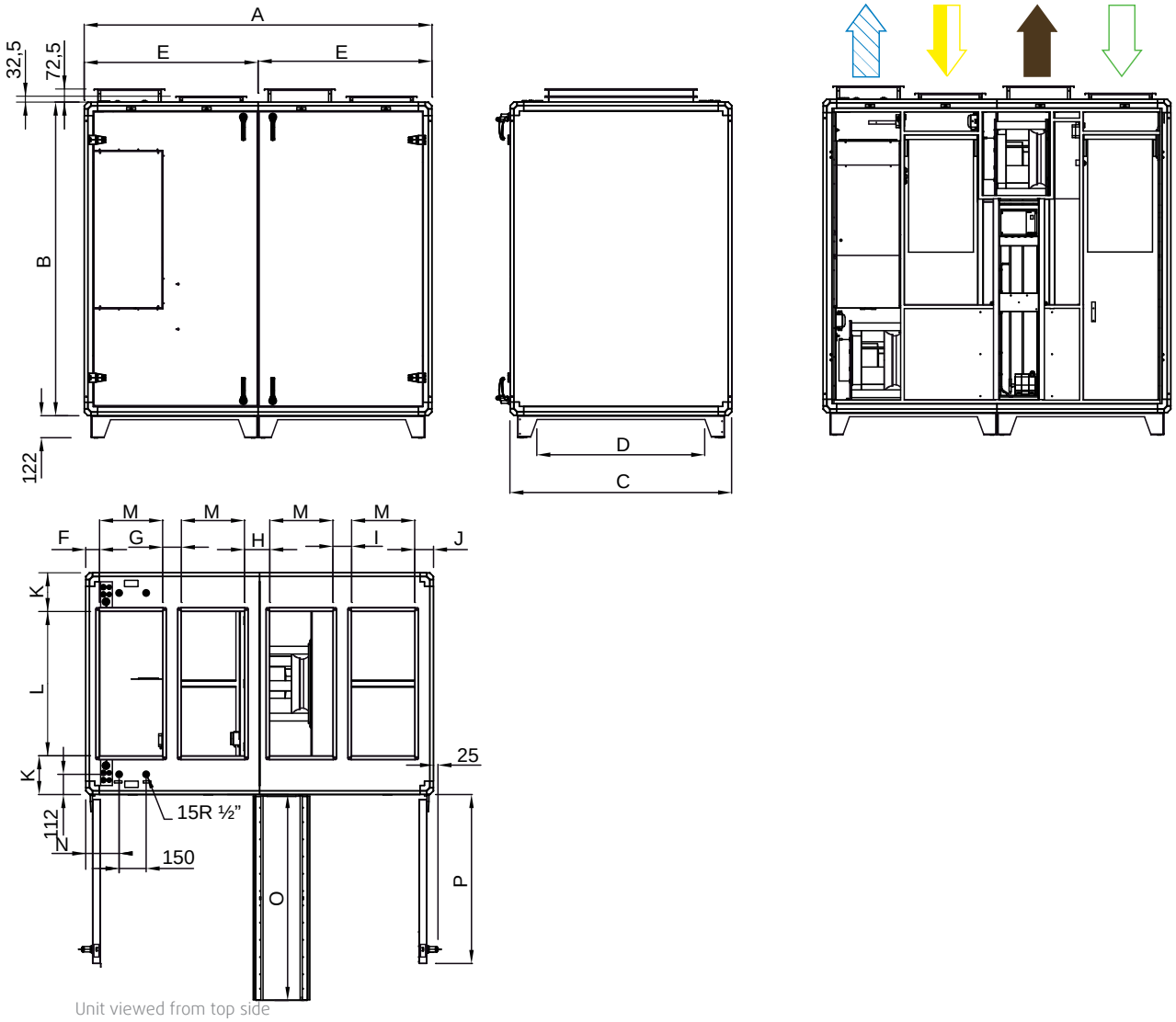
Unit viewed from top side

Dimensions	A	B	C	D	E	F	G	H	I	J	K	L	N
TR06	1700	1279	1000	1568	868	99	114	274	250	500	171	250	845

Dimensions in mm.

= supply air = exhaust air = extract air = outdoor air

TR09, TR12, TR15



Unit viewed from top side

Dimensions	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
TR09	1790	1630	1120	810	895	104	129	123	129	105	210	700	300	165	1030	870
TR12	1930	1740	1230	930	965	76	104	141	104	105	215	800	350	185	1140	940
TR15	1930	1980	1470	1180	965	76	104	141	104	105	236	1000	350	185	1380	940

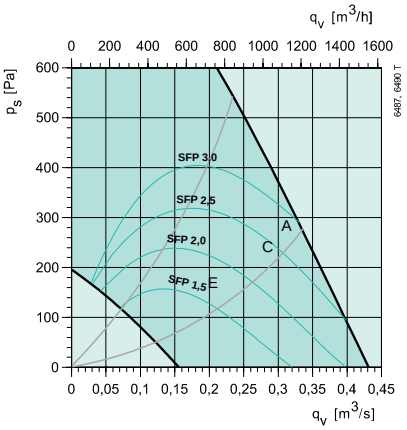
Dimensions in mm.

Topvex TR09, 12 and 15 are possible to devide in half.
Each part width according to "E".

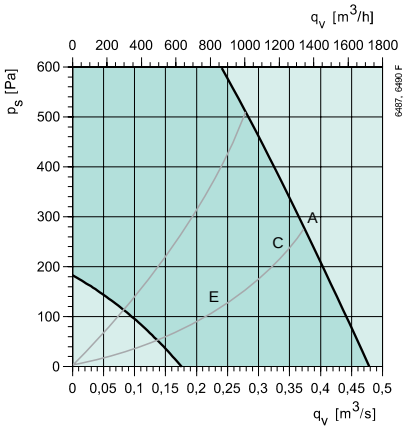
= supply air = exhaust air = extract air = outdoor air

Performance
TR03

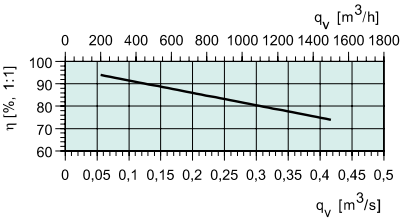
Supply air



Extract air



Temperature efficiency

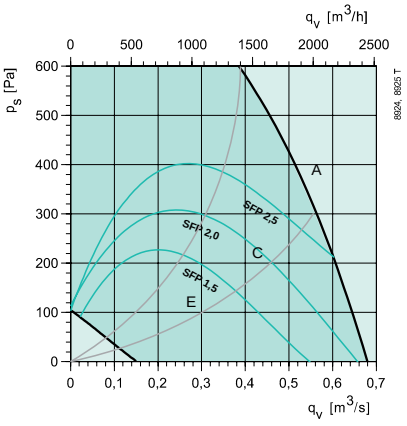


With the air ratio 1:1 and atmospheric humidity at 50%.

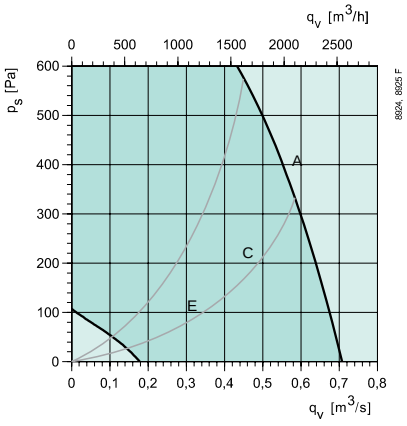
TR03	Octave band (mid-frequency Hz)																									
	Tot			63			125			250			500			1k			2k			4k			8k		
L_{WA} dB(A)	A	C	E	A	C	E	A	C	E	A	C	E	A	C	E	A	C	E	A	C	E	A	C	E	A	C	E
Supply air	81	84	73	56	61	55	68	72	67	77	82	66	71	71	63	75	75	68	72	71	63	66	65	56	54	53	43
Extract air	71	72	65	51	50	45	64	65	64	70	70	57	61	58	52	55	53	48	50	48	42	43	41	34	33	32	22
Surrounding	61	66	55	39	44	37	54	58	53	60	65	48	49	47	41	47	47	40	47	46	39	43	42	33	34	33	23

TR04

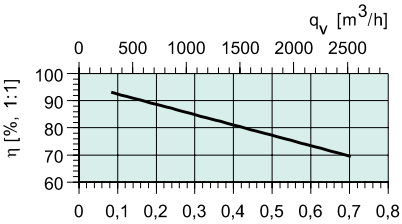
Supply air



Extract air



Temperature efficiency

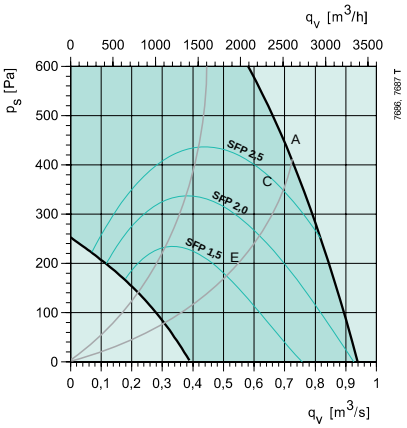


With the air ratio 1:1 and atmospheric humidity at 50%.

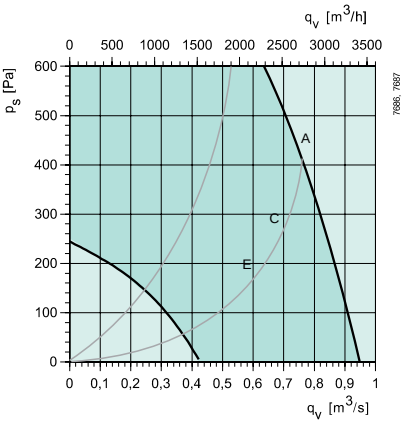
TR04	Octave band (mid-frequency Hz)																									
	Tot			63			125			250			500			1k			2k			4k			8k		
L_{WA} dB(A)	A	C	E	A	C	E	A	C	E	A	C	E	A	C	E	A	C	E	A	C	E	A	C	E	A	C	E
Supply air	88	78	70	57	50	47	62	59	61	57	74	59	75	68	61	77	72	65	77	72	64	74	67	56	66	58	47
Extract air	71	68	63	57	49	45	60	56	57	67	66	60	63	59	52	61	55	48	61	56	49	61	55	45	49	41	29
Surrounding	67	59	51	46	37	34	49	46	47	66	58	46	53	46	40	53	48	41	55	50	43	53	47	36	45	37	26

TR06

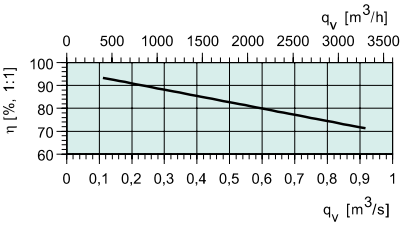
Supply air



Extract air



Temperature efficiency

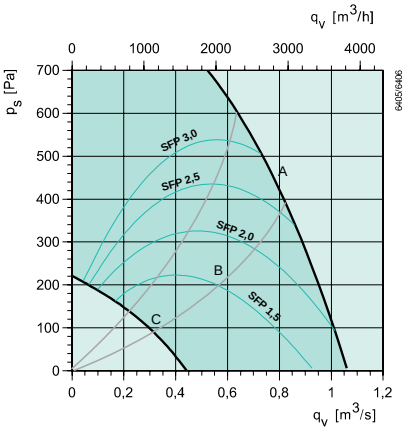


With the air ratio 1:1 and atmospheric humidity at 50%.

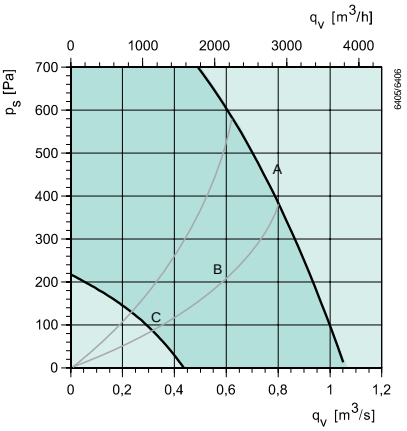
TR06	Octave band (mid-frequency Hz)																									
	Tot			63			125			250			500			1k			2k			4k			8k		
L_{WA} dB(A)	A	C	E	A	C	E	A	C	E	A	C	E	A	C	E	A	C	E	A	C	E	A	C	E	A	C	E
Supply air	90	83	78	62	59	56	66	64	62	88	79	72	81	76	73	79	76	71	79	75	70	74	71	65	68	65	59
Extract air	71	68	66	56	53	47	63	59	56	64	63	64	65	61	57	63	60	55	60	57	51	56	53	44	48	45	35
Surrounding	67	63	59	44	42	37	53	51	48	63	60	54	59	55	53	59	56	50	57	54	48	52	49	43	45	42	35

TR09

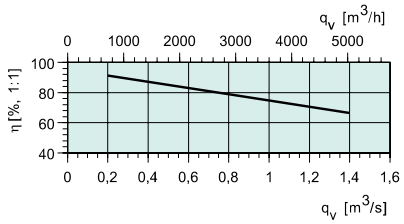
Supply air



Extract air



Temperature efficiency

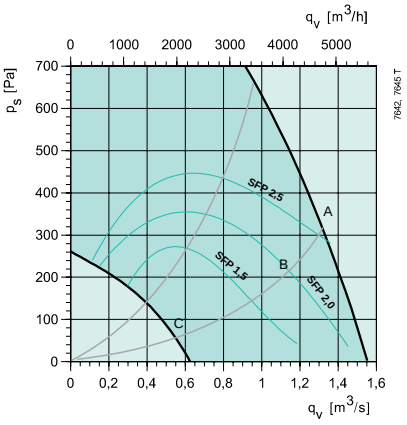


With the air ratio 1:1 and atmospheric humidity at 50%.

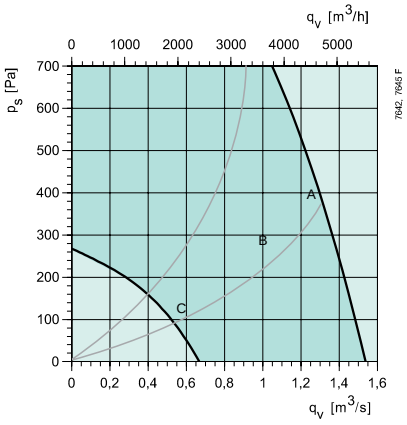
TR09	Octave band (mid-frequency Hz)																									
	Tot			63			125			250			500			1k			2k			4k			8k		
L_{WA} dB(A)	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C
Supply air	85	76	66	50	43	34	63	60	58	77	67	55	79	70	57	80	71	61	78	70	60	75	67	51	68	56	42
Extract air	71	67	60	49	39	32	63	60	60	67	65	49	64	54	43	63	53	42	61	51	39	53	42	30	50	38	28
Surrounding	69	62	55	48	36	28	59	54	54	63	58	41	64	54	42	63	53	43	61	52	40	55	46	32	51	39	28

TR12

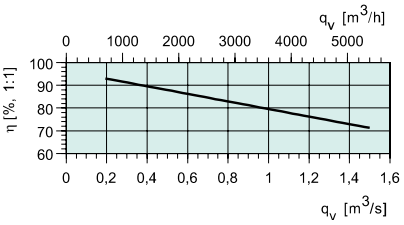
Supply air



Extract air



Temperature efficiency

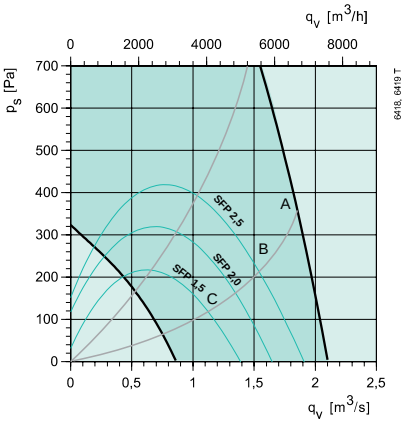


With the air ratio 1:1 and atmospheric humidity at 50%.

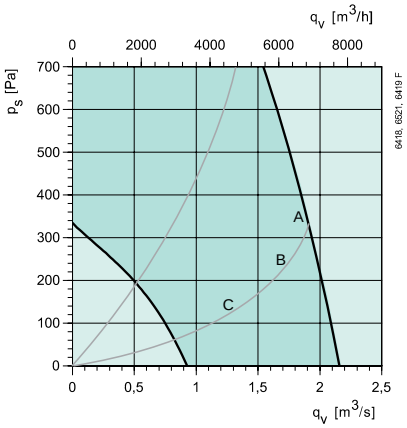
TR12	Octave band (mid-frequency Hz)																										
	Tot			63			125			250			500			1k			2k			4k			8k		
L_{WA} dB(A)	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C
Supply air	94	88	71	62	60	47	69	65	67	92	86	62	85	81	65	84	78	64	79	74	59	71	66	50	59	54	33
Extract air	72	68	66	52	47	40	66	65	65	70	63	51	60	54	48	60	53	46	58	52	41	54	46	30	54	46	23
Surrounding	78	69	58	51	48	48	60	56	57	77	66	46	66	62	47	65	60	45	61	57	41	54	49	31	50	44	20

TR15

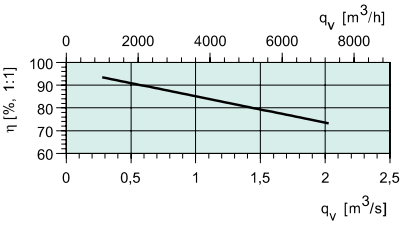
Supply air



Extract air



Temperature efficiency



With the air ratio 1:1 and atmospheric humidity at 50%.

TR15	Octave band (mid-frequency Hz)																										
	Tot			63			125			250			500			1k			2k			4k			8k		
L_{WA} dB(A)	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C
Supply air	100	94	85	63	62	56	73	71	67	98	87	78	87	84	77	92	90	81	88	87	77	85	82	73	76	73	62
Extract air	85	86	77	59	58	53	73	72	68	82	85	75	76	73	65	76	73	64	74	69	61	61	56	49	52	48	40
Surrounding	81	78	69	52	51	45	64	63	58	75	74	62	73	70	62	75	72	63	74	69	61	61	56	49	51	47	38

Accessories

Quick selection matrix

Function	Necessary accessories	Designation
Shut-off damper	1 for exhaust air and 1 for outdoor air	EFD
Water coil control	Valve and valve actuator	ZTV/ZTR and RVAZ4 24A
External air cooler	Duct sensor, Supply air	TG-KH/PT1000

Accessories	Topvex TR03	Topvex TR04	Topvex TR06
E-Tool cable	ETC	ETC	ETC
Shut-off damper	EFD 250	EFD 315	EFD 50-25
Valve actuator	RVAZ4 24A	RVAZ4 24A	RVAZ4 24A
Valve, 2-way. Fits to HWL/HWH coils.	ZTV 15-0.6	ZTV 15-1.0	ZTV 15-1.0
Valve, 3-way. Fits to HWL/HWH coils.	ZTR 15-1.0	ZTR 15-1.6	ZTR 15-1.6
Cooling battery, water **	PGK	PGK	PGK
Cooling battery, DX coil **	DXRE	DXRE	DXRE
Duct sensor	TG-KH/PT1000	TG-KH/PT1000	TG-KH/PT1000
Room temperature sensor	TG-R5/PT1000	TG-R5/PT1000	TG-R5/PT1000
Combi grille	CVVX 250	CVVX 315	CVVX 400
Silencer **	LDC 250	LDC 315	LDR 50-25
Silencer, baffle **	–	LDC-B 315	LDR-B 50-25
Timer	T 120	T 120	T 120
Presence detector	IR24-PC	IR24-PC	IR24-PC
CO_2 Room sensor (digital 1/0)	CO2RT-DR	CO2RT-DR	CO2RT-DR
CO_2 Room sensor (analog 0...10V DC)	CO2RT	CO2RT	CO2RT
U-tube manometer, filter guard	MFRO	MFRO	MFRO
Filter M5 (exhaust air)	BFT 1000/TR03 M5	BFT 1500/TR04 M5	BFT 2000/TR06 M5
Filter F7 (Supply air)	BFT 1000/TR03 F7	BFT 1500/TR04 F7	BFT TR06 F7

Accessories	Topvex TR09	Topvex TR12	Topvex TR15
E-Tool cable	ETC	ETC	ETC
Shut-off damper	EFD 70-30	EFD 80-35	EFD 100-35
Valve actuator	RVAZ4 24A	RVAZ4 24A	RVAZ4 24A
Valve, 2-way	ZTV 20-2,0	ZTV 20-2,5	ZTV 20-4,0
Valve, 3-way	ZTR 20-2,5	ZTR 20-4,0	ZTR 20-6,0
Built-in DX cooler. Delivered separatly for installation together with the Topvex TR unit **	SoftCooler TR09	SoftCooler TR12	SoftCooler TR15
Cooling battery, water **	PGK 70-40	PGK 80-50	PGK 100-50
Cooling battery, DX coil **	DXRE 70-40	DXRE 80-50	DXRE 100-50
Silencer **	LDR 70-40	LDR 80-50	LDR 100-50
Silencer, baffle **	LDR-B 70-30	LDR-B 80-35	LDR-B 100-35
Timer	T 120	T 120	T 120
Duct sensor	TG-KH/PT1000	TG-KH/PT1000	TG-KH/PT1000
Room temperature sensor	TG-R5/PT1000	TG-R5/PT1000	TG-R5/PT1000
Presence detector	IR24-PC	IR24-PC	IR24-PC
CO_2 Room sensor (digital 1/0)	CO2RT-DR	CO2RT-DR	CO2RT-DR
CO_2 Room sensor (analog 0...10V DC)	CO2RT	CO2RT	CO2RT
U-tube manometer, filter guard	MFRO	MFRO	MFRO
Filter M5, bag filter (2 per unit)	BFT TR09 M5	BFT TR12 M5	BFT TR15 M5
Filter F7, bag filter (2 per unit)	BFT TR09 F7	BFT TR12 F7	BFT TR15 F7

** See catalogue "Topvex specification data"

Topvex SoftCooler TR and SR

Topvex SoftCooler TR and SR is a new series of cooling modules for Topvex sizes TR09, 12, 15 and SR09, 11. The modules have been developed to meet the high comfort and energy requirements and provide very simple installation and commissioning.

Integration with the control equipment
Topvex SoftCooler is supplied with complete internal wiring for quick connection to the air handling unit's control system The cooler is controlled precisely after the unit's present settings and requirements. Alarm from Cooler is indicated in the unit's alarm panel.

Unique by-pass function
Most premises only have a demand for cooling for a limited part of the year. Topvex SoftCooler TR has a unique function that automatically by-passing the condenser coil when there is no cooling demand. Fan energy and operating costs are thereby reduced. By-pass damper necessary for this function (accessory).

SoftCooling - unique power control
With a unique large control range of the cooling power the Topvex SoftCooler can keep the supply air temperature on a more precise level then other comparable systems. This gives a better indoor comforts in the premises. Due to that the cooling power can be adjusted against the actual need, in a better way compared to an on/off system, the system´s COP factor is positively influenced.

Cooling recovery on demand
Thanks to the location of the components in Topvex SoftCooler TR the rotating heat exchanger can also be used for cooling recovery. The heat exchanger automatically starts for cooling recovery as soon as the temperature conditions between the extract air and the outdoor air are correct.

Adapts itself to the air volume
This type of unit gives off the condenser heat to the exhaust air. The cooling output is therefore directly dependent on the current extract air volume. Topvex SoftCooler has a unique adaptation of the cooling power to the current air volume: the condensing pressure is sensed continuously via a pressure sensor. If the condensing pressure approaches the upper permitted limit (for example because of that the extract air filter is clogged), the compressor speed is automatically reduced but only so much that the condensing pressure does not exceed the upper permitted limit. The outcome is then that the pressure switch alarm can be avoided, operation is secured and the unit cools at the maximum power that the conditions permit.

Dimensioning
The selection/calculation program SystemairCAD gives you all information that is needed.

Information about functions can be found on page 162. Information about control system can be found on page 170.

Technical data

Working range etc.
Control mode: Extract or room control
Max. flow deviation: balanced air flows within +/-20% and not beyond the min. and max. flow.

Max. outdoor air temperature:	+33°C
Max. extract air temperature:	+28°C
Max. surrounding temperature:	+28°C
Min. surrounding temperature:	+/-0°C

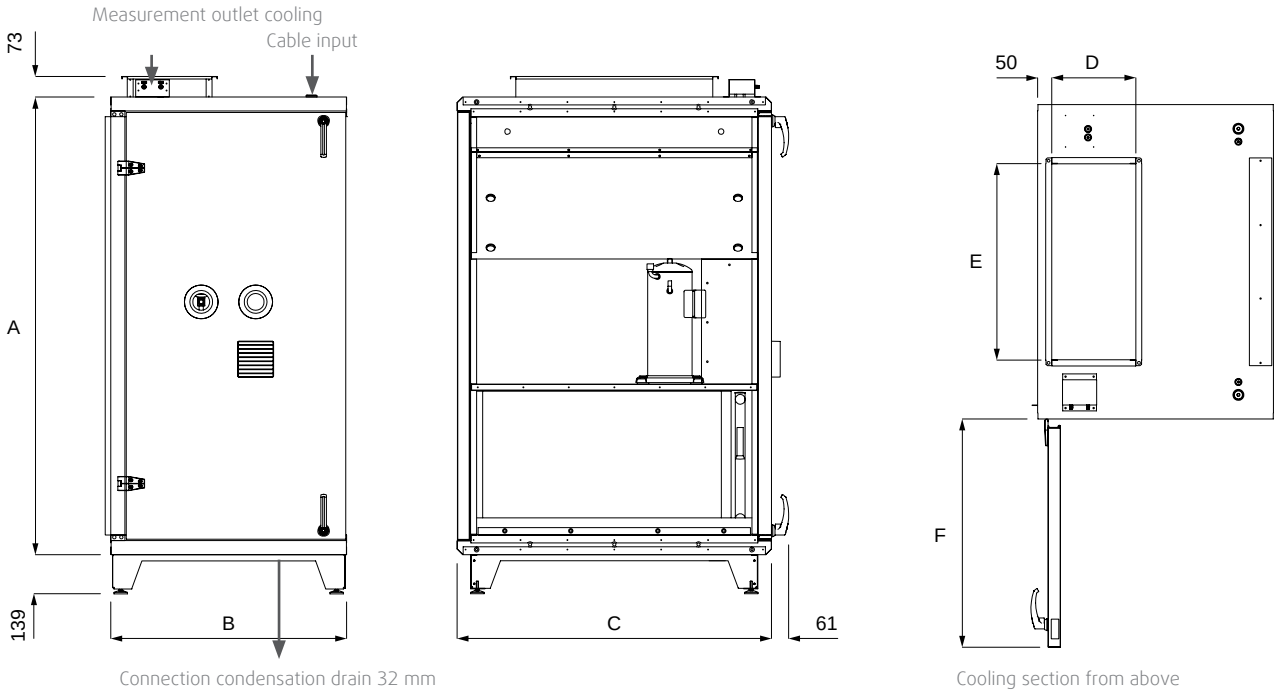
	Air volume (m^3/s)	Cooling power A (kW)	Cooling power B (kW)	Cooling power C (kW)	Pressure drop Evaporator/ Condenser (Pa)	Refrigerant R410A ca (kg)	Fuse 3x400V PEN (A)	Weight (kg)
TR09	Min. 0.35	9	6	8	13/21	4.5	16	260
	Nom 0.7	15	12	15	36/58	4.5	16	260
	Max 0.9	17	14	18	52/85	4.5	16	260
TR12	Min. 0.5	12	9	11	16/29	5.6	20	290
	Nom 1.0	18	15	20	42/83	5.6	20	290
	Max 1.3	20	19	24	59/122	5.6	20	290
TR15	Min. 0.7	16	13	16	13/30	7.1	20	345
	Nom 1.3	22	22	28	30/75	7.1	20	345
	Max 1.8	24	27	35	46/122	7.1	20	345
SR09	Min. 0.4	9	9	-	17/26	4.0	20	230
	Nom 0.9	17	17	-	53/89	4.0	20	230
	Max 1.2	20	21	-	78/137	4.0	20	230
SR11	Min. 0.7	14	13	-	27/45	5.0	20	260
	Nom 1.2	19	20	-	57/100	5.0	20	260
	Max 1.6	22	23	-	85/155	5.0	20	260

Explanations
A T-outdoor = +25°C, RH 50%. T-extract +25°C, RH 50%. No cooling recovery.
B T-outdoor = +33°C, RH 60%. T-extract +28°C, RH 60%. No cooling recovery.
C T-outdoor = +33°C, RH 60%. T-extract +28°C, RH 60%. With cooling recovery.

All data for balanced air flow.

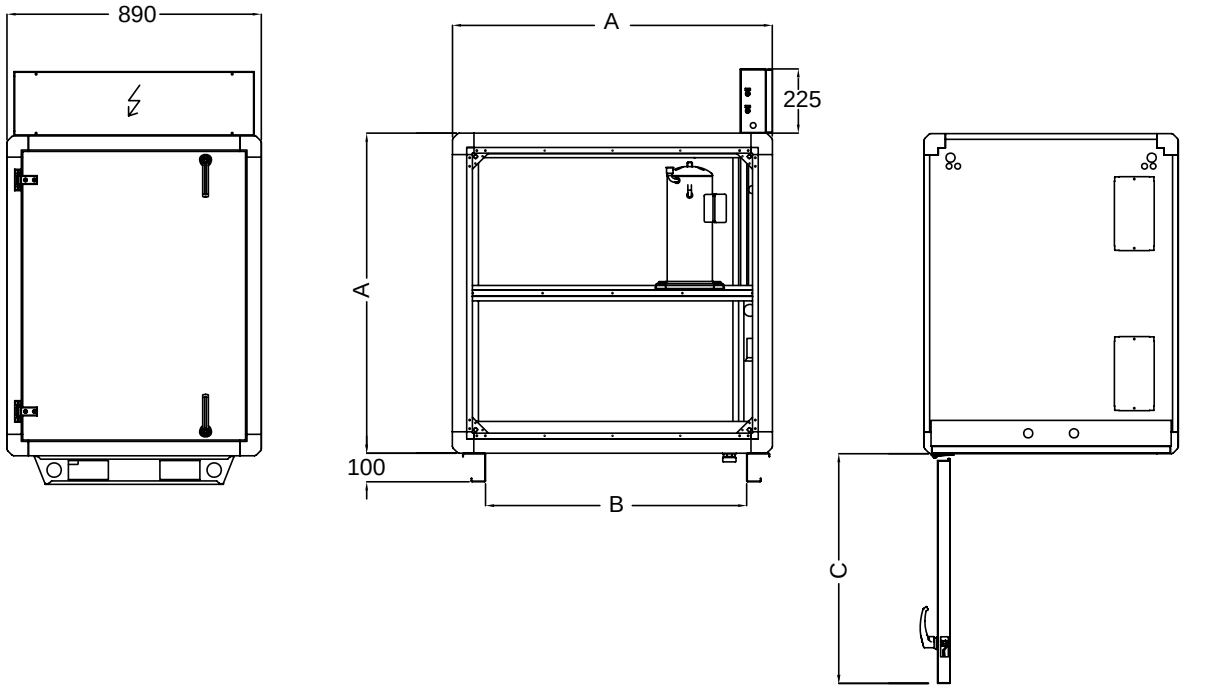
Dimensions

SoftCooler TR



Size	A	B	C	D	E	F
09	1630	840	1120	300	700	813
12	1740	840	1230	350	800	813
15	1990	890	1470	350	1000	863

SoftCooler SR



Size	A	B	C
09	1120	915	800
11	1230	1025	800

Reference: Skåne University Hospital, Malmö, Sweden

For the new emergency and infectious diseases unit at UMAS, Systemair has delivered 18 Air Handling Units in sizes DV 40 to DV 150 together with other Systemair products including duct fans, roof fans and smoke exhaust fans.

UMAS is one of the leading hospitals for infectious diseases in the world and the new clinic at the Skåne University Hospital is the largest investment ever by UMAS. The total costs are more than 125 million Euros.

The new emergency and infectious diseases unit at UMAS was designed by the Danish Architects C.F. Möller A/S, Aarhus and the Ventilation systems were designed by Incoord AB, Stockholm.

Topvex TX

Topvex TX is designed for use in smaller premises such as offices and day nurseries, but it can also be used for zone ventilation in larger buildings such as schools. These units are easy to install because of their top-connecting air ducts. Topvex TX units are equipped with EC fan motors in order to comply with new energy regulations for low SFP (Specific Fan Power).

At a glance:

- Space-saving top connection
- Handles airflows of 0.09-0.78 m^3/s
- Plug and Play
  - Integrated control system
  - Preprogrammed
  - Menu-based control panel for easy use
- Low energy consumption
- Set up for demand control
- Easy to service
- Made of aluzinc sheet metal

Efficiency is everything
Topvex TX is a range of efficient ventilation units intended for offices, shops, day nurseries, schools and similar premises.

Topvex TX units with their cross-flow heat exchangers are usually used when there is a need to keep supply air and extract air separate. The units have an effective defrost function to ensure optimum performance.

It could not be simpler!
Topvex TX units are supplied complete with control systems, supply air and extract air filters, cross-flowheat exchangers, by-pass dampers and an electric or hot water heating coil. The units are preprogrammed and very easy to install – simply set the timer and enter the desired air temperature, fan speed (0-100%) and operating time. Installation is now complete. It could not be simpler!

Space-saving top connection
With Topvex TX the ducts are connected on the top. These units take up little floor space and are easy to install in existing premises. Compared with roof-mounted units, Topvex TX is easier to install, as you don't need ducts to pass through the roof. With the unit placed inside the building, service and maintenance are also simplified.

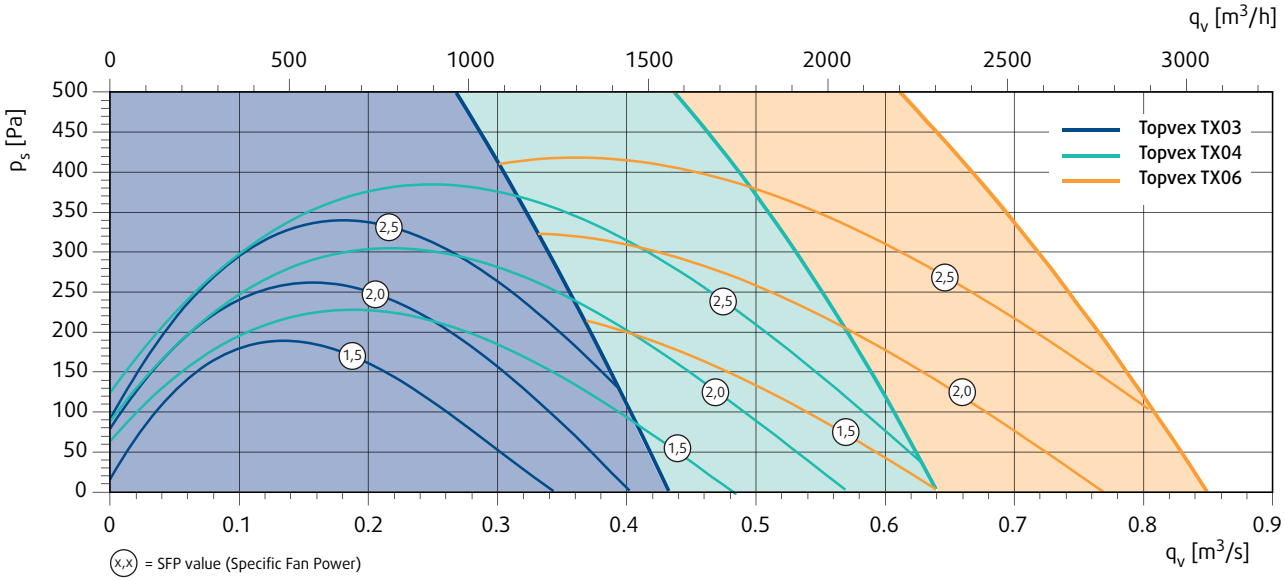
EC fan motors
Unlike motors with frequency converters, EC motors ensure excellent efficiency even at low speeds. This contributes to good energy economy. EC motors are also quiet when running at high and low speeds.

Technical data		TX03	TX04	TX06
Voltage/Frequency, EL	V/50Hz	400	400	400
Voltage/Frequency, HW	V/50Hz	230	230	400
Phase EL	–	3N	3N	3N
Phase HW	–	1	1	3N
Power rating, motors	W	2x514	2x796	2x1084
Power rating, heating coil, EL	kW	6	12	14
Power rating, heating coil, HW	kW	*	*	*
Fuse, EL	A	3x20	3x32	3x32
Fuse, HW	A	10	10	3x10
Weight	kg	203	251	335
Filter, supply air	–	F7	F7	F7
Filter, extract air	–	M5	M5	M5

*See separate brochure "Specification data"

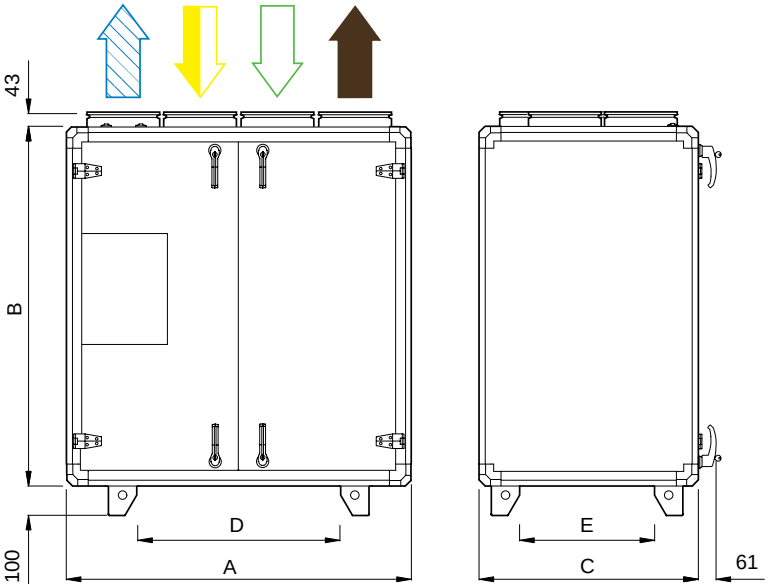
Information about functions can be found on page 162. Information about control system can be found on page 170.

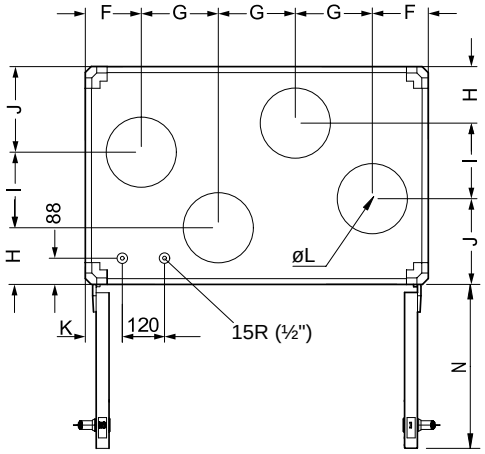
Working range
TX03, TX04, TX06



Dimensions (left hand versions)

TX03, TX04



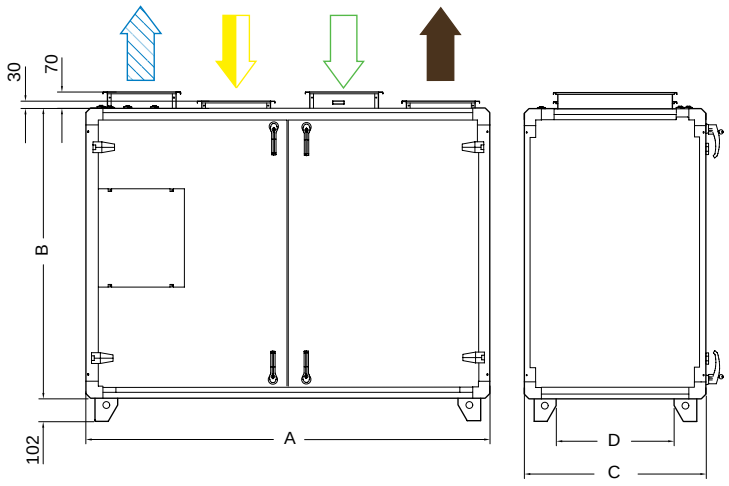


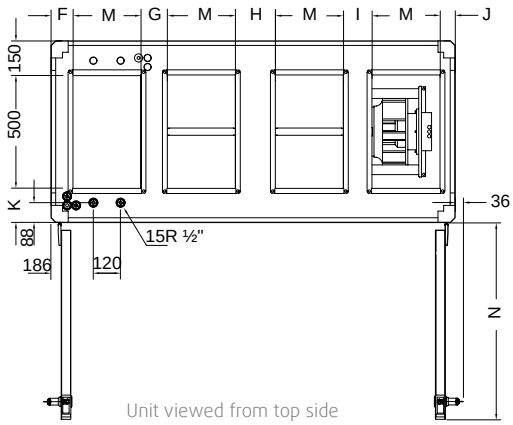
Unit viewed from top side

Dimensions	A	B	C	D	E	F	G	H	I	J	K	ØL	M
TX03	1180	1230	750	896	466	193	265	195	260	295	127	250	586
TX04	1480	1280	850	1200	570	209	354	315	220	315	163	315	740

Dimensions in mm.

TX06





Unit viewed from top side

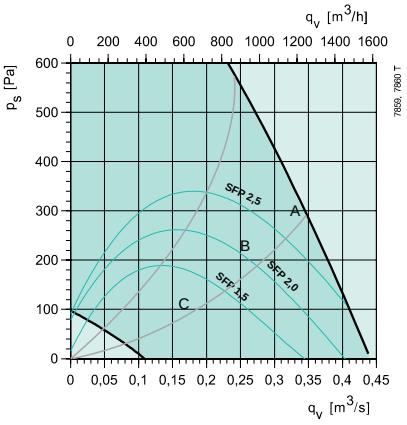
Dimensions	A	B	C	D	F	G	H	I	J	K	ØL	M	N
TX06	1780	1280	800	520	96	116	176	127	66	150	500	300	882

Dimensions in mm.

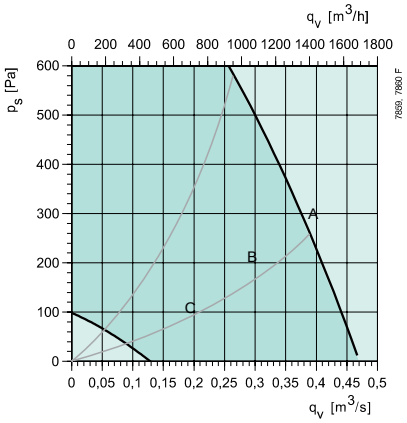
= supply air = exhaust air = extract air = outdoor air

Performance
TX03

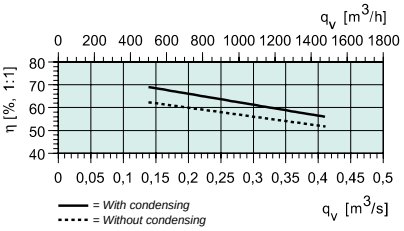
Supply air



Extract air



Temperature efficiency



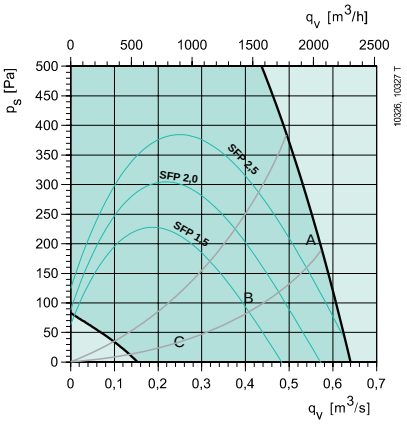
At an outdoor temperature of -15°C and an exhaust air temperature of 25°C.

With condensing: 50% air humidity.
Without condensing: 0% air humidity.

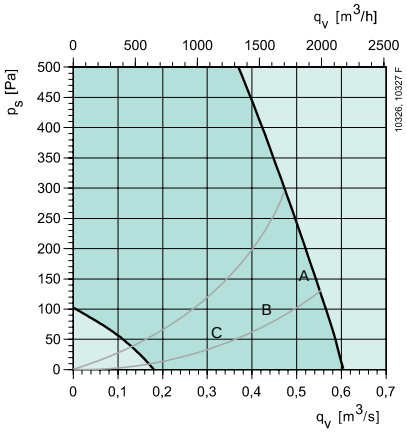
TX03	Octave band (mid-frequency Hz)																										
	Tot			63			125			250			500			1k			2k			4k			8k		
L_{WA} dB(A)	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C
Supply air	81	78	66	60	56	52	69	68	62	76	75	55	73	67	57	75	69	60	72	65	55	66	59	47	57	49	35
Extract air	69	68	65	54	49	45	61	61	65	64	66	45	63	56	47	60	53	46	59	50	41	52	44	32	45	35	25
Surrounding	63	60	56	42	37	34	53	53	55	60	58	39	53	46	37	53	46	38	57	48	39	49	41	29	42	33	22

TX04

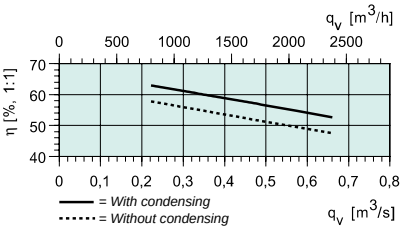
Supply air



Extract air



Temperature efficiency



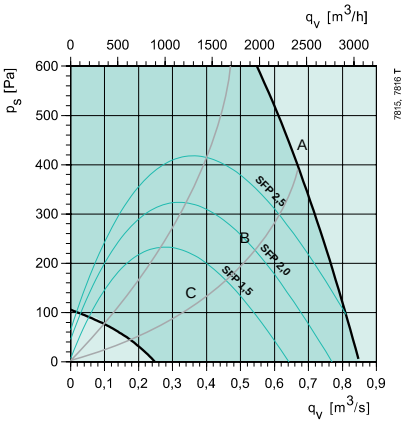
At an outdoor temperature of -15°C and an exhaust air temperature of 25°C.

With condensing: 50% air humidity.
Without condensing: 0% air humidity.

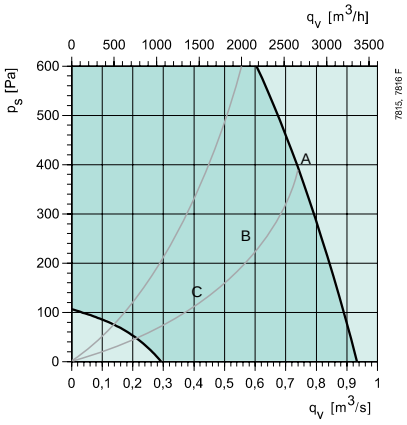
TX04	Octave band (mid-frequency Hz)																										
	Tot			63			125			250			500			1k			2k			4k			8k		
L_{WA} dB(A)	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C
Supply air	83	74	66	60	50	40	64	60	61	80	69	56	73	65	55	76	68	59	75	68	58	70	63	50	63	54	41
Extract air	69	64	60	61	52	43	60	56	55	62	59	56	61	57	50	60	54	47	59	54	46	58	52	42	49	42	30
Surrounding	66	60	54	45	35	26	52	48	49	59	53	48	55	50	53	59	54	46	59	53	44	58	52	42	50	42	30

TX06

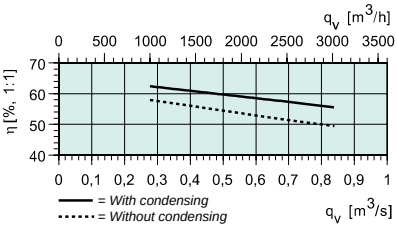
Supply air



Extract air



Temperature efficiency



At an outdoor temperature of -15°C and an exhaust air temperature of 25°C.

With condensing: 50% air humidity.
Without condensing: 0% air humidity.

TX03	Octave band (mid-frequency Hz)																										
	Tot			63			125			250			500			1k			2k			4k			8k		
L_{WA} dB(A)	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C
Supply air	85	76	68	57	51	50	65	63	64	83	69	59	75	69	59	77	70	62	76	69	60	73	66	56	68	59	48
Extract air	74	69	62	56	49	43	60	56	60	72	68	50	66	60	49	64	57	48	62	55	46	61	53	42	54	45	32
Surrounding	70	64	54	45	39	35	53	49	51	68	61	45	62	56	46	60	54	45	61	54	45	57	50	39	53	44	33

Accessories

Quick selection matrix

Function	Necessary accessories	Designation
Shut-off damper	1 for exhaust air and 1 for outdoor air	EFD
Water coil control	Valve and valve actuator	ZTV/ZTR and RVAZ4 24A
External cooling battery	Duct sensor, supply air	TG-KH/PT1000

Accessories	Topvex TX03	Topvex TX04	Topvex TX 06
E-Tool cable	ETC	ETC	ETC
Shut-off damper	EFD 250	EFD 315	EFD 50-30
Valve actuator	RVAZ4 24A	RVAZ4 24A	RVAZ4 24A
Valve, 2-way. Fits to HWL/HWH coils.	ZTV 15-1.0 / 0.6	ZTV 15-1.6 / 1.0	ZTV 20/15-2.0 / 1.6
Valve, 3-way. Fits to HWL/HWH coils.	ZTR 15-1.6 / 1.0	ZTR 20/15-2.0 / 1.6	ZTR 20-2.5 / 2.0
Cooling battery, water **	PGK 50-25	PGK 60-30	PGK 60-35
Cooling battery, DX coil **	DXRE 50-25	DXRE 60-30	DXRE 60-35
Plastic casing, step controller IP54	U-EK	U-EK	U-EK
Duct sensor	TG-KH/PT1000	TG-KH/PT1000	TG-KH/PT1000
Combi grille	CVVX 250	CVVX 315	CVVX 400
Silencer	LDC 250	LDC 315	LDR 50-30
Silencer, baffle	–	LDC-B 315	LDR-B 50-30
Timer	T 120	T 120	T 120
Presence detector	IR24-PC	IR24-PC	IR24-PC
CO_2 Room sensor (digital 1/0)	CO2RT-DR	CO2RT-DR	CO2RT-DR
Water lock. Where there is a risk of condensation on the outdoor air side of the heat exchanger.	Water lock	Water lock	Water lock
Filter M5 (exhaust air)	BFT 1000/TR03 M5	BFT TX04 M5	BFT TX06 M5
Filter F7 (supply air)	BFT TX03 F7	BFT TX04 F7	BFT TX06 F7

** See catalogue "Topvex specification data"

Reference: Volvo, Eskilstuna, Sweden

A Systemair AHU usually has plenty of treated air inside. But at Volvo in Eskilstuna, Sweden, there was a lot of air outside the units, due to the fact they were being airlifted into place by helicopter. Systemair delivered 6 DV Air Handling Units in size DV 120 to DV 190 and 2 Topvex TR15. The low energy project has been designed by Indoor Climate & Energy Engineering and installed by Innevädер AB.

TIME ec

TIME is a Plug and Play unit with a range of functions, including control system. The plug fans offers a low sound power level. The casing is designed as a sandwich construction with 50 mm of mineral wool insulation encased between an inner and outer layer of sheet metal.

At a glance:

- Available in 6 different sizes
- Handles airflows of 0.4-4.0 m^3/s
- Simple to dimension and order
- Short delivery time
- Made of aluzinc sheet metal
- Integrated control system
- 2 heat exchanger types available
- Roof version available
- Selection software

TIME ec saves time
TIME ec can be dimensioned, ordered and installed quickly and easily.

SystemairCAD – unit design
It is easy to design and dimension TIME units using our SystemairCAD software. This helps us to produce the perfect solution for each individual project. Easy-to-read documents contain the correct data and drawings can be transferred to AutoCad and Autodesk Revit.

Functions
TIME ec is available with two types of heat recovery. The rotary heat exchanger features variable rotor operation, while the plate heat exchanger has a by-pass function. Heat recovery is extremely efficient and achieves a very good operating economy. The units have maintenance-free supply air and exhaust air dampers, durable bag filters, and efficient plug fans. The fan motors are an EC type motor with integrated speed control. Both systems have high-efficiency motors for low operating costs. TIME ec is also available with an air heater.

Control system – Systemair E28
TIME ec is supplied with a user-friendly integrated control system, Systemair E28. Functions can be selected easily using the external control panel called SCP (Systemair Control Panel). SCP can be fitted anywhere and can also be used as a remote control (10 m cable).

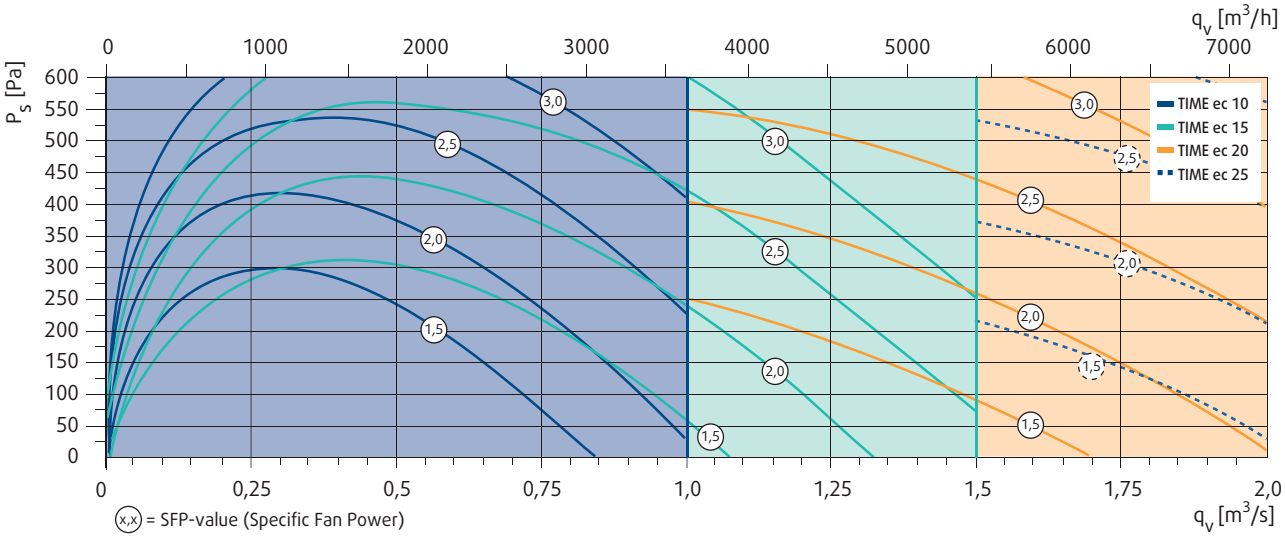
Systemair E28 can satisfy the majority of demands made of a modern unit. E28 displays the unit's operational status, and alarm, time settings and set points can be set up. The most important operating data is continuously displayed on the screen. E28 can be set up for external communication.

Roof version
TIME ec is also available in a roof version.

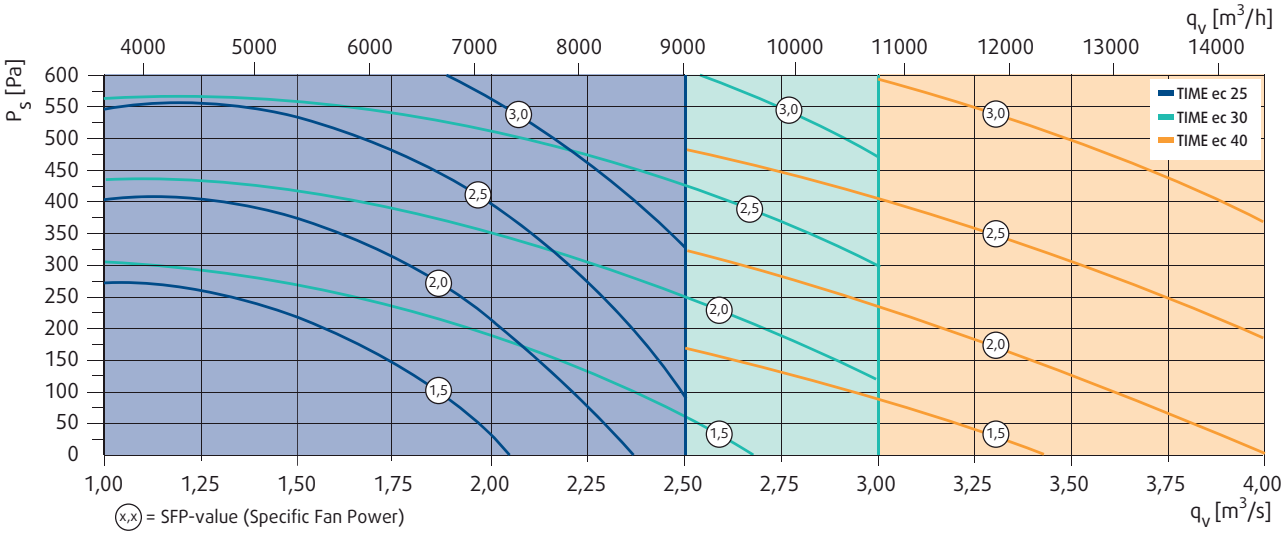
Technical data		10	15	20	25	30	40
Voltage/Frequency	V/50Hz	400	400	400	400	400	400
Phase	–	3+N+PE	3+N+PE	3+N+PE	3+N+PE	3+N+PE	3+N+PE
Power rating, motors	W	1850	2350	4000	5000	6500	8000
Power rating, heating coil	kW	17,5	20	32,9	40	50	60
Fuse	A	3x10	3x10	3x16	3x25	3x16	3x25
Weight	kg	507	588	701	795	971	1135
Filter, supply air	–	F7	F7	F7	F7	F7	F7
Filter, extract air	–	M5	M5	M5	M5	M5	M5

Information about functions can be found on page 162. Information about control system can be found on page 170.

Working range
10, 15, 20



25, 30, 40



Unit combinations

= supply air = exhaust air = extract air = outdoor air

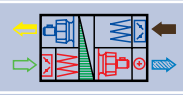
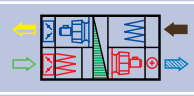
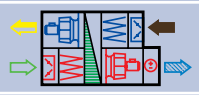
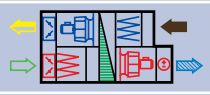
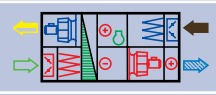
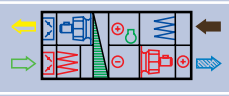
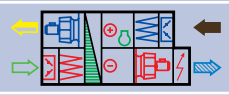
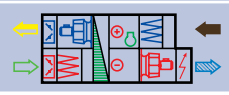
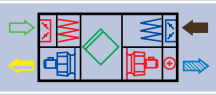
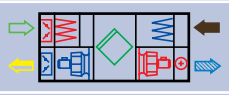
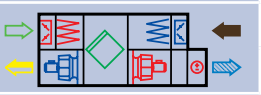
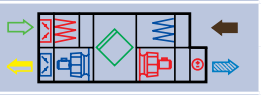
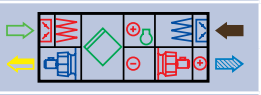
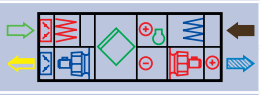
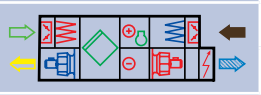
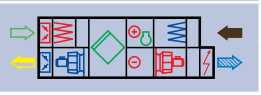
Rotary heat exchanger		Unit size					
		10	15	20	25	30	40
Dimensions	Width	970	1120	1270	1420	1570	1720
	Height[1)]	1070	1220	1370	1520	1670	1820
TIME ec C1 	Length	2090	2090	2090	2090	2090	2090
	Weight	440	510	600	670	740	970
TIME ec C2 	Length	2240	2240	2240	2240	2240	2240
	Weight	460	530	630	700	780	1020
TIME ec C3 	Length	2610	2610	2610	2610	2610	2610
	Weight	500	570	680	760	840	1080
TIME ec C4 	Length	2760	2760	2760	2760	2760	2760
	Weight	520	600	710	790	890	1130
TIME ec C5 	Length	3060	3210	3210	3360	3360	3360
	Weight	640	760	880	1060	1150	1450
TIME ec C6 	Length	3210	3360	3360	3510	3510	3510
	Weight	660	780	910	1080	1190	1510
TIME ec C7 	Length	3580	3730	3730	3880	3880	3880
	Weight	690	800	930	1140	1200	1500
TIME ec C8 	Length	3730	3880	3880	4030	4030	4030
	Weight	700	830	950	1160	1240	1550

Plate heat exchanger		Unit size					
		10	15	20	25	30	40
Dimensions	Width	970	1120	1270	1420	1570	1720
	Height[1)]	1070	1220	1370	1520	1670	1820
TIME ec Q1 	Length	3210	3360	3510	3510	3810	3810
	Weight	590	700	840	950	1180	1450
TIME ec Q2 	Length	3360	3510	3660	3660	3960	3960
	Weight	610	740	890	1010	1240	1510
TIME ec Q3 	Length	3730	3880	4030	4030	4330	4330
	Weight	650	770	930	1050	1290	1570
TIME ec Q4 	Length	3880	4030	4180	4180	4480	4480
	Weight	670	810	970	1100	1350	1630
TIME ec Q5 	Length	4180	4480	4630	4780	5080	5080
	Weight	790	950	1130	1340	1600	1940
TIME ec Q6 	Length	4330	4630	4780	4930	5230	5230
	Weight	810	990	1180	1390	1650	2000
TIME ec Q7 	Length	4700	5000	5150	5300	5600	5600
	Weight	830	990	1180	1420	1640	1980
TIME ec Q8 	Length	4850	5150	5300	5450	5750	5750
	Weight	860	1040	1220	1480	1700	2040

Dimensions in mm and weight in kg.
1) Height including feets.

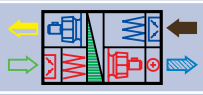
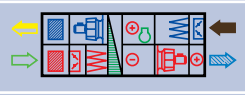
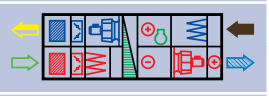
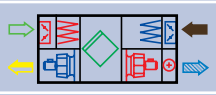
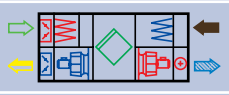
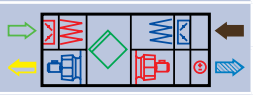
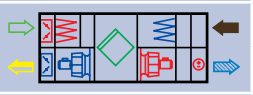
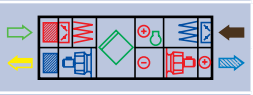
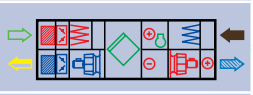
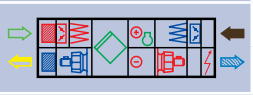
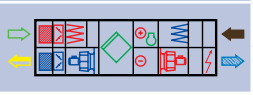
Rotary heat exchanger, roof version		Unit size					
		10	15	20	25	30	40
Dimensions	Width	970	1120	1270	1420	1570	1720
	Height[1)]	1222	1372	1522	1672	1822	1972
TIME ec C1T 	Length	2090	2090	2090	2090	2090	2090
	Weight	520	590	690	770	840	1080
TIME ec C2T 	Length	2240	2240	2240	2240	2240	2240
	Weight	550	620	720	800	890	1140
TIME ec C3T 	Length	2610	2610	2610	2610	2610	2610
	Weight	630	720	830	930	1020	1270
TIME ec C4T 	Length	2760	2760	2760	2760	2760	2760
	Weight	650	750	870	960	1070	1330
TIME ec C5T 	Length	3580	3880	4030	4180	4330	4480
	Weight	850	1010	1180	1390	1530	1800
TIME ec C6T 	Length	3730	4030	4180	4330	4480	4630
	Weight	870	1040	1210	1410	1580	1880
TIME ec C7T 	Length	4100	4400	4550	4700	4850	5000
	Weight	920	1090	1270	1460	1640	1920
TIME ec C8T 	Length	4250	4550	4700	4850	5000	5150
	Weight	950	1120	1310	1490	1690	1980

Plate heat exchanger, roof version		Unit size					
		10	15	20	25	30	40
Dimensions	Width	970	1120	1270	1420	1570	1720
	Height[1)]	1222	1372	1522	1672	1822	1972
TIME ec Q1T 	Length	3210	3360	3510	3510	3810	3810
	Weight	720	830	990	1110	1360	1640
TIME ec Q2T 	Length	3360	3510	3660	3660	3960	3960
	Weight	740	880	1040	1170	1420	1710
TIME ec Q3T 	Length	3730	3880	4030	4030	4330	4330
	Weight	810	940	1120	1250	1510	1810
TIME ec Q4T 	Length	3880	4030	4180	4180	4480	4480
	Weight	840	990	1170	1310	1580	1870
TIME ec Q5T 	Length	4700	5150	5450	5600	6050	6200
	Weight	1030	1240	1490	1730	2050	2360
TIME ec Q6T 	Length	4850	5300	5600	5150	6200	6350
	Weight	1060	1290	1540	1780	2110	2460
TIME ec Q7T 	Length	5220	5670	5970	6120	6570	6720
	Weight	1110	1330	1570	1790	2180	2510
TIME ec Q8T 	Length	5370	5820	6120	6270	6720	6870
	Weight	1150	1380	1630	1880	2250	2570

Dimensions in mm and weight in kg.
1) Height including feets.

DVCompact, DVCompact supply & extract

DVCompact belongs to the group of products that fulfills extra requirements for energy saving and has a low SFPv and therefore are marked with the Green Ventilation sign. The units are compact, so they fit into tight spaces. Most units are transportable through one meter wide openings. All units are designed for both new building and renewal projects.

At a glance:

- 12 sizes, up to 54 000 m^3/h
- Heat recovery, supply and extract units
- Roof application
- Compact design
- Low SFP
- Easy to select
- Simple transportation
- Quick assembling and start up
- Convenient maintenance

Combination options
In DVCompact included a number of well-dimensioned features. You can choose between various systems for heat recovery and filter types. There are many variations of heating and cooling coils, etc. Therefore, DVCompact built in many varieties, from the simple extract unit or supply unit with few features to the advanced ventilation unit with full control functions and monitoring via the web.

Casing
The units' casings and doors are made of rustproof sheet steel and are insulated internally with 50 mm rock wool, which has excellent sound and heat insulation properties. The unit's double-skin sheet metal casing is treated with Aluzinc 185 to protect against rust and complies with corrosion class C4 as per EN ISO 12944.2. Units are constructed using a strong closed frame profile.

Fans
The units have high efficient built-in plug fans with low sound levels and a low pressure drop at the duct connection. The plug fans achieve an efficiency of up to 75%. This type of fan is chosen to ensure optimum performance with regard to airflow, sound level and efficiency. A plug fan is a single inlet, free blowing fan with the unit casing acting as the fan casing.

Heat exchanger
DVCompact is available with two types of heat exchangers, rotary heat exchanger with high efficiency and the possibility of moisture rendering or high efficiency cross flow heat exchanger when the supply and exhaust air must be kept separated. There is a possibility to select corrosion-proof application.

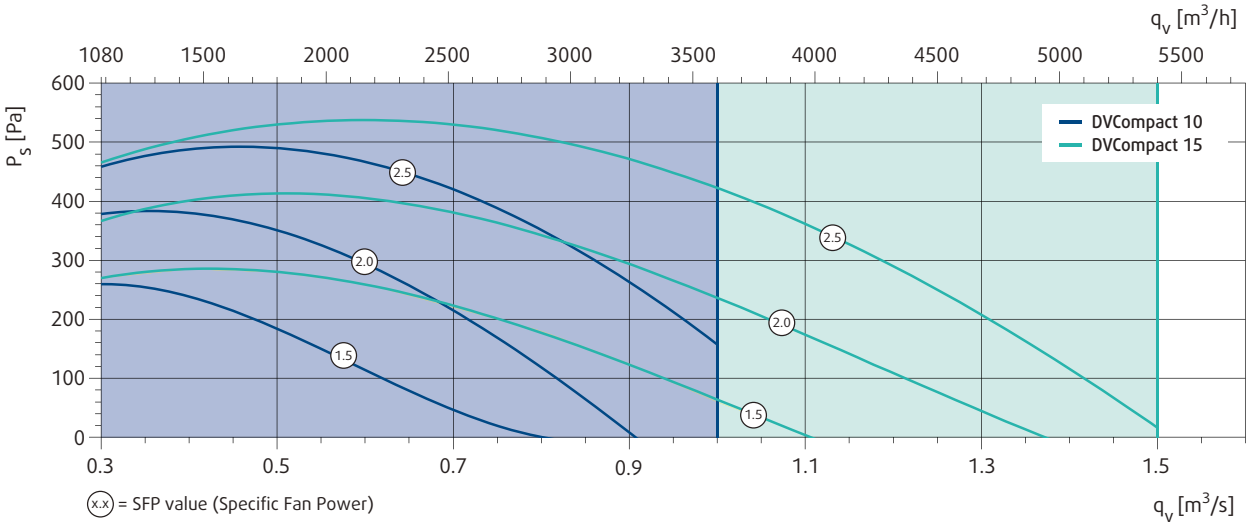
Integrated control
The DVCompact comes standard with integrated controls. Components of the control system are marked by a cross marking system. The control system comes pre-configured and tested from the factory. Each unit has 2 control cabinets with easy access and a total of 56 inputs and outputs available for use. Between each unit section there are quick connectors, and a control panel for the frequency converter which is placed on the front panel of the unit for easier control. Bus communication via BMS is prepared via open protocols.

Information about functions can be found on page 162. Information about control system can be found on page 170.

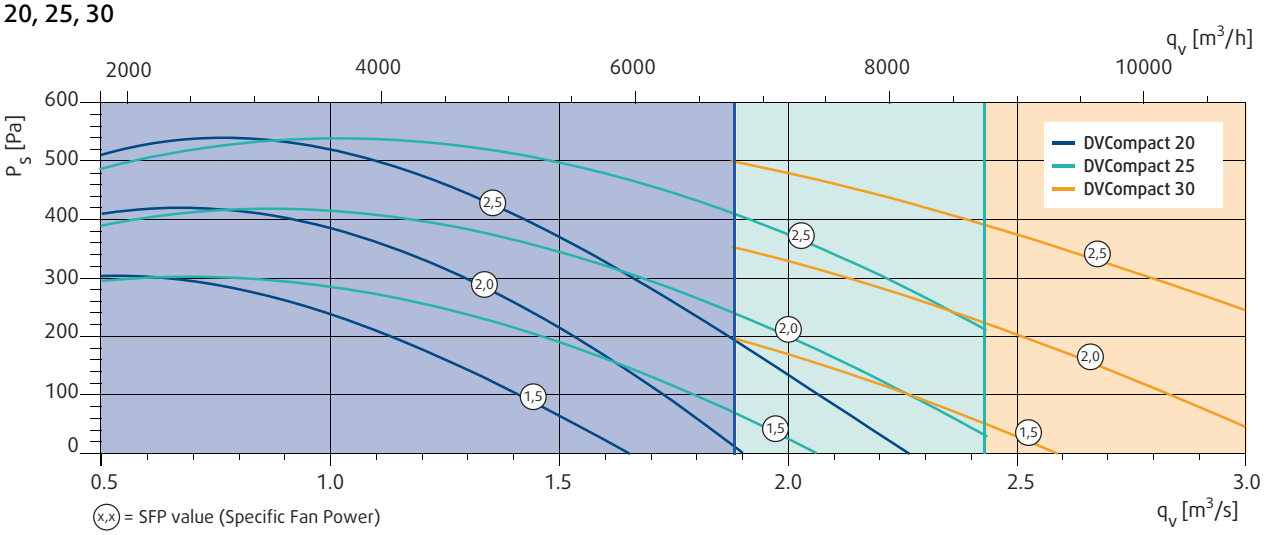
Working range DVCompact units with heat recovery

The SFP graphs are based on DVCompact, equipped with a high efficiency fan and motor, a rotary heat exchanger, two sections of heating coil, an F7 supply air filter, an F5 extract air filter, and supply air and extract air dampers.

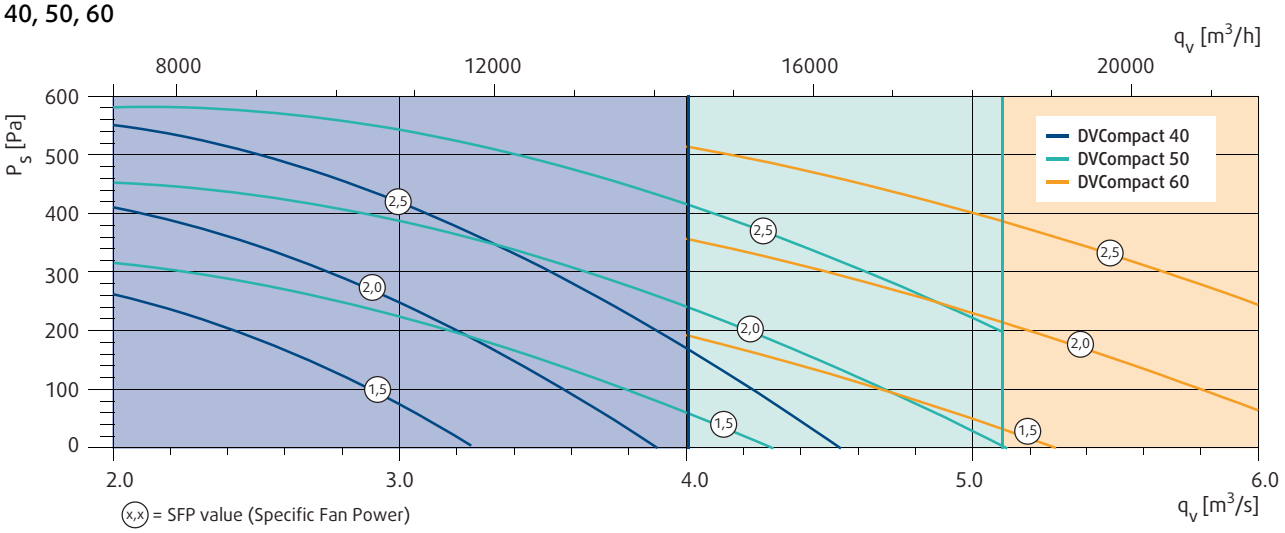
10, 15



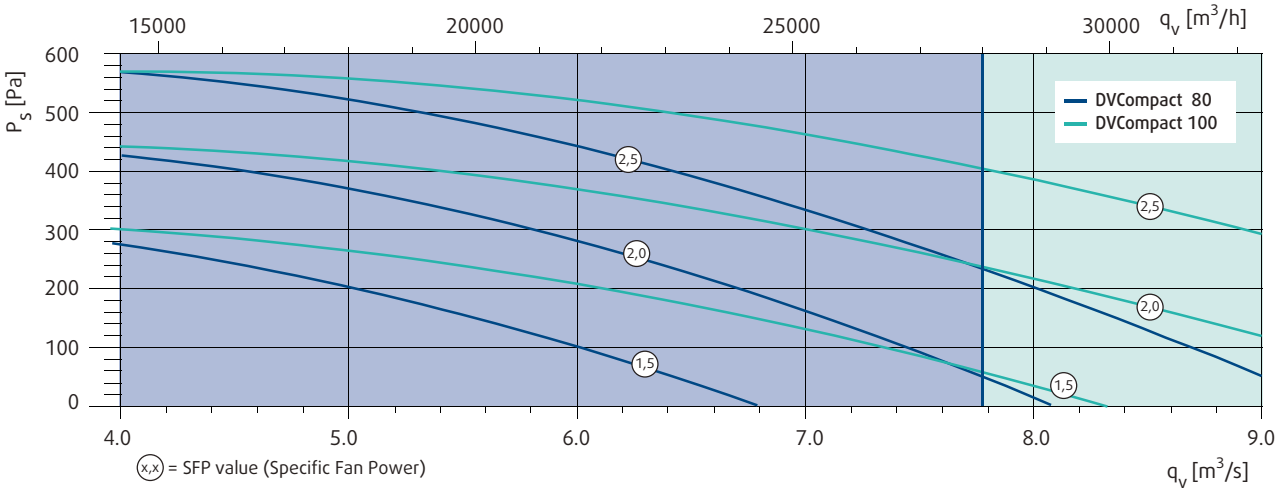
20, 25, 30



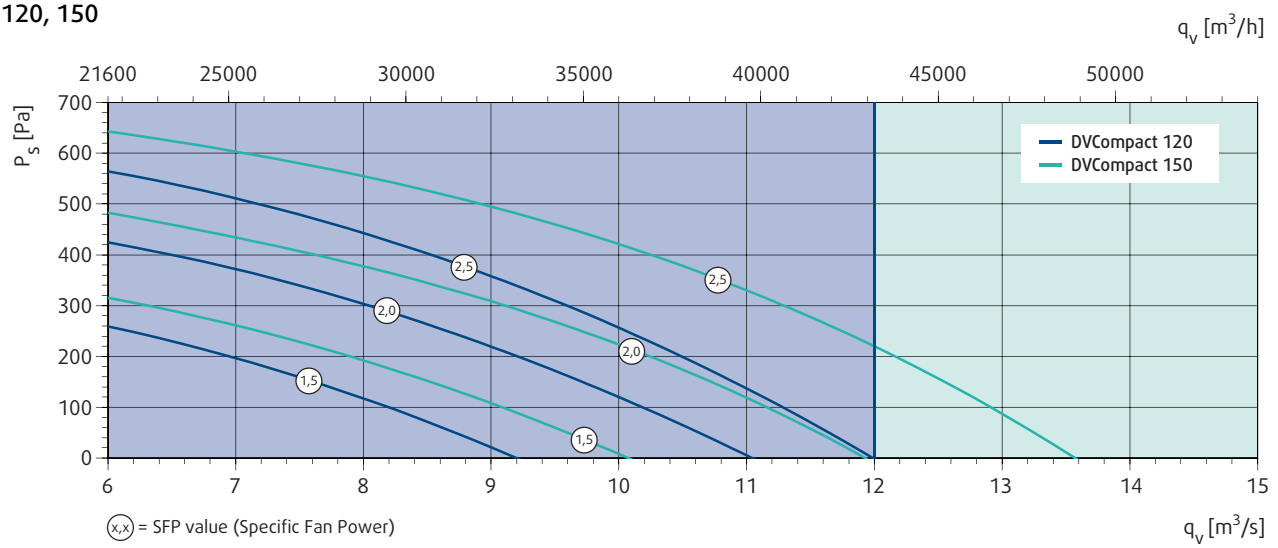
40, 50, 60



80, 100



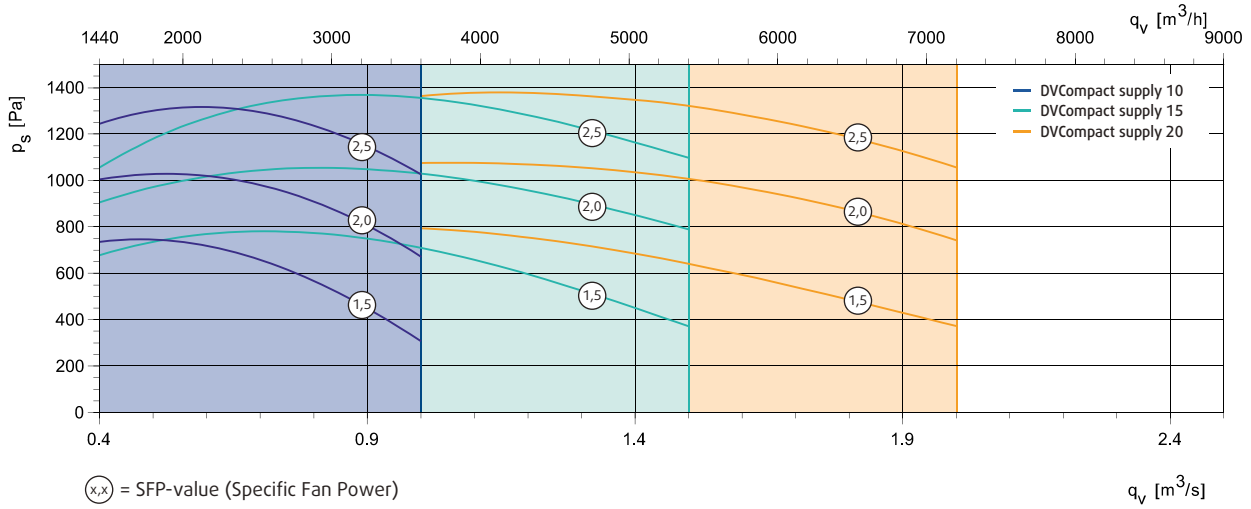
120, 150



Working range DVCompact supply units

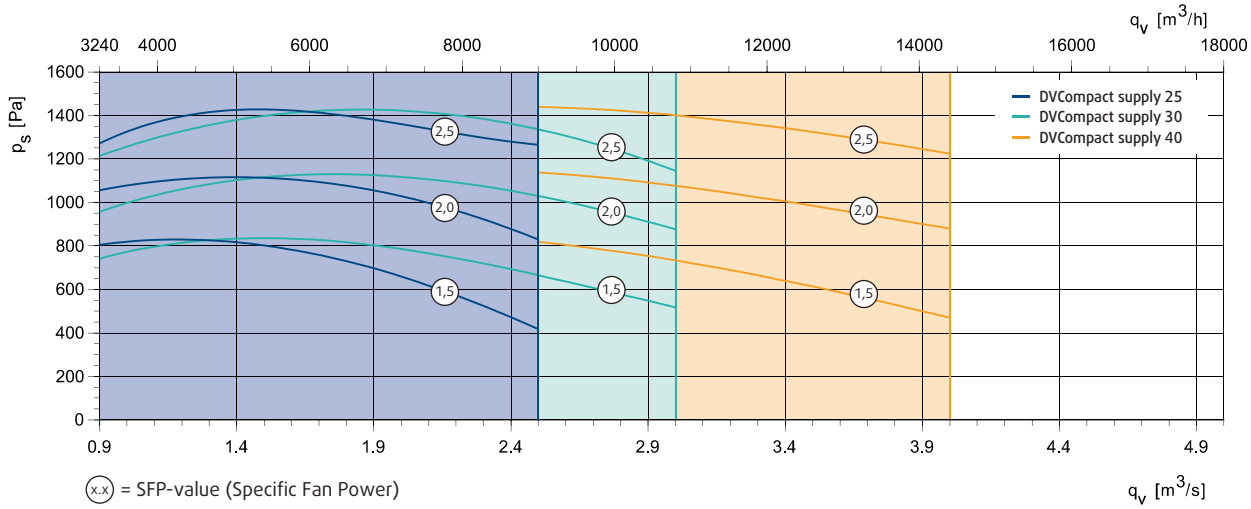
The SFP graphs are based on DVCompact, equipped with a plug fan and AC motor, a water heating coil, a M5 air filter, and air damper.

10, 15, 20



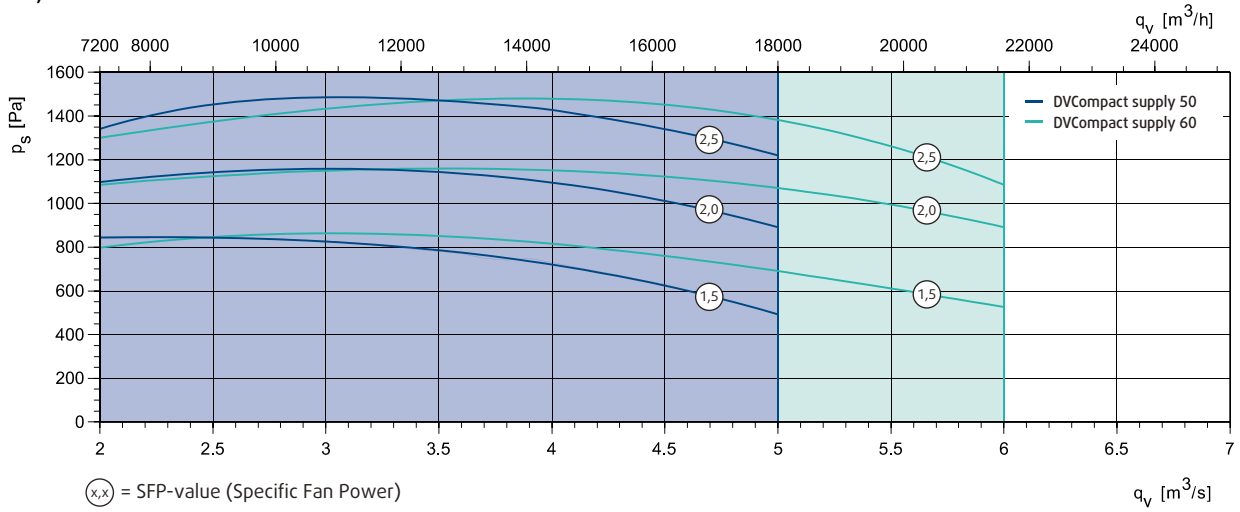
(x,x) = SFP-value (Specific Fan Power)

25, 30, 40



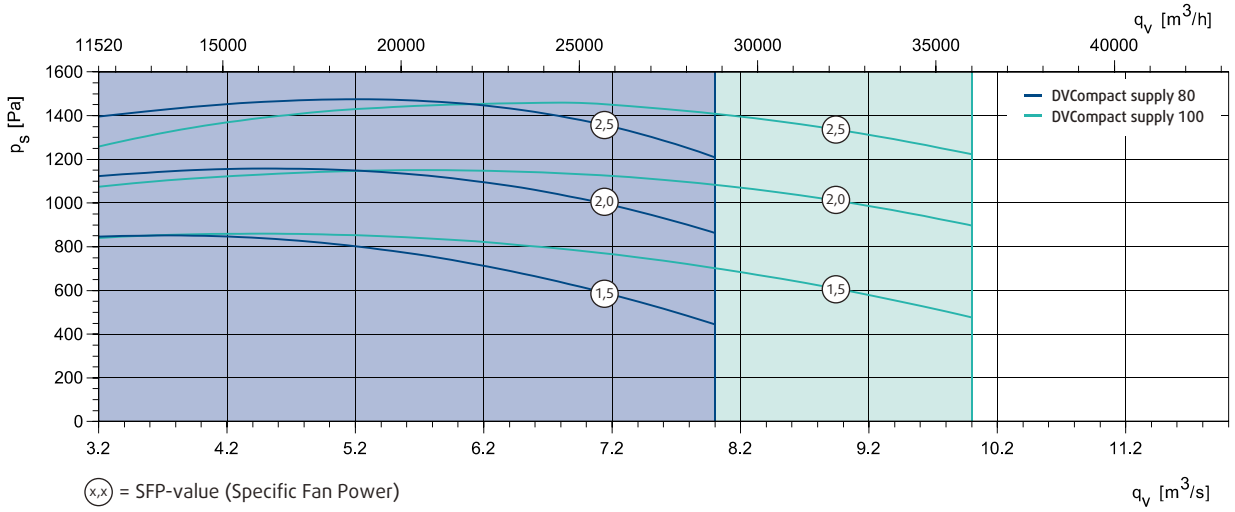
(x.x) = SFP-value (Specific Fan Power)

50, 60



(x,x) = SFP-value (Specific Fan Power)

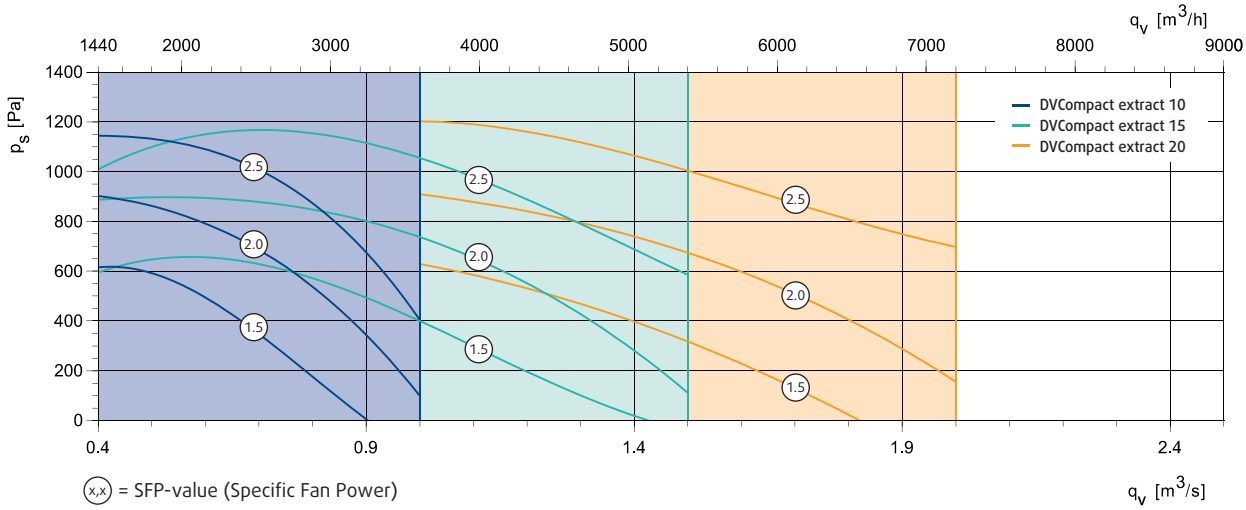
80, 100



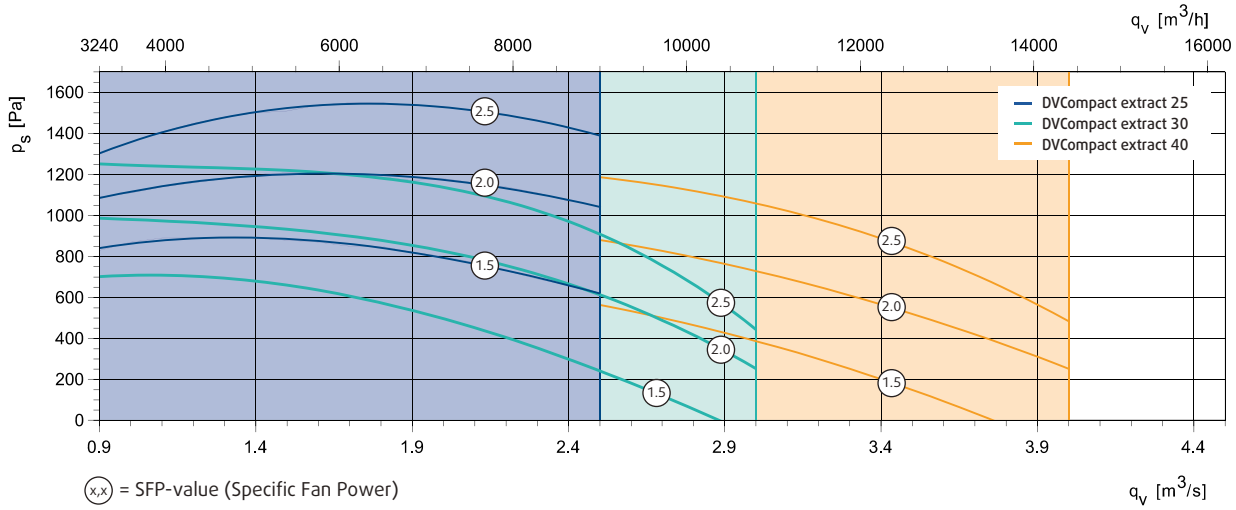
Working range DVCompact extract unit

The SFP graphs are based on DVCompact, equipped with a plug fan and AC motor, G4 panel air filter, and air damper.

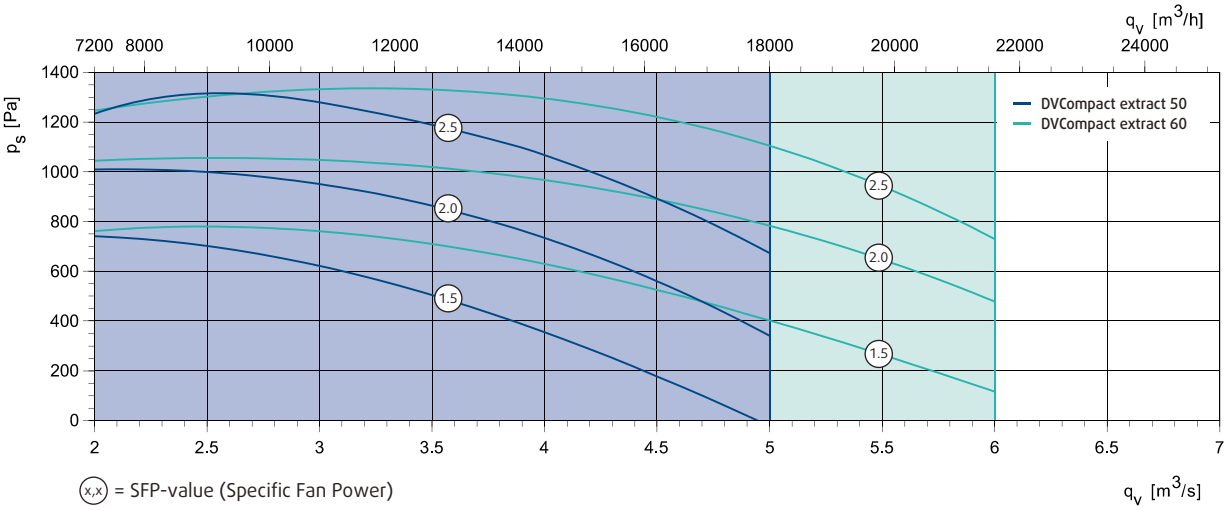
10, 15, 20



25, 30, 40

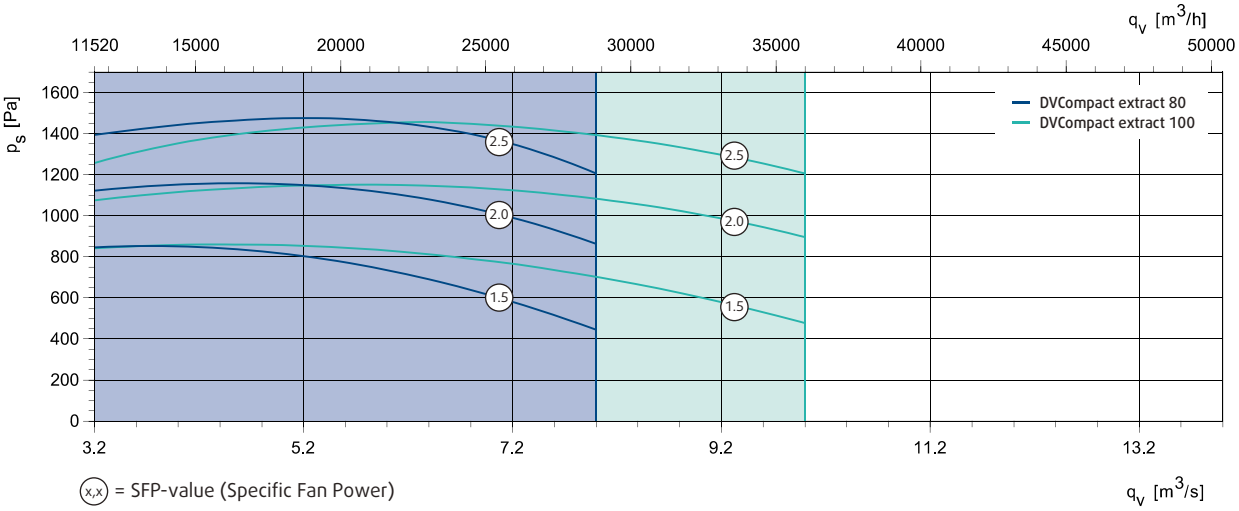


50, 60



(x,x) = SFP-value (Specific Fan Power)

80, 100



(x,x) = SFP-value (Specific Fan Power)

Accessories DVCompact

Accessories	DVCompact 10	DVCompact 15	DVCompact 20	DVCompact 25	DVCompact 30
Repeater, 230V main supply *	E0-R230K	E0-R230K	E0-R230K	E0-R230K	E0-R230K
Repeater, 24V main supply *	E0-R	E0-R	E0-R	E0-R	E0-R
E-Tool cable	ETC	ETC	ETC	ETC	ETC
Shut-off damper, inlet	DVC-10	DVC-15	DVC-20	DVC-25	DVC-30
Damper actuator, inlet	LF24A	LF24A	LF24A	LF24A	SF24A
Shut-off damper, outlet	DVC-10	DVC-15	DVC-20	DVC-25	DVC-30
Damper actuator, outlet	LM24A	LM24A	LM24A	LM24A	NM24A
Water heater HWL, low power.	DVH-10-1R-3NC	DVH-15-1R-4NC	DVH-20-1R-3NC	DVH-25-1R-4NC	DVH-30-1R-6NC
Water heater HWM, mid power.	DVH-10-2R-4NC	DVH-15-2R-6NC	DVH-20-2R-6NC	DVH-25-2R-8NC	DVH-30-2R-8NC
Water heater HWH, high power.	DVH-10-3R-5NC	DVH-15-3R-9NC	DVH-20-3R-15NC	DVH-25-3R-18NC	DVH-30-3R-39NC
Valve actuator	LR, NR, SR**	LR, NR, SR**	LR, NR, SR**	LR, NR, SR**	LR, NR, SR**
Valve, 2-way. Fits to HWL/HWH coils	R20...**	R20...**	R20...**	R20...**	R20...**
Valve, 3-way. Fits to HWL/HWH coils	R30...**	R30...**	R30...**	R30...**	R30...**
Water cooling battery, low power	DVK-10-4R-9NC	DVK-15-4R-12NC	DVK-20-4R-8NC	DVK-25-4R-12NC	DVK-30-4R-13NC
Water cooling battery, mid power	DVK-10-5R-11NC	DVK-15-5R-15NC	DVK-20-4R-13NC	DVK-25-4R-24NC	DVK-30-4R-26NC
Water cooling battery, high power	–	–	DVK-20-5R-10NC	DVK-25-5R-15NC	DVK-30-5R-16NC
Cooling battery, DX coil	DVK***	DVK***	DVK***	DVK***	DVK***
Built-in cooling machine, power version 1	-	-	DX-20N-2-400V	DX-25N-1-400V	DX-30N-1-400V
Built-in cooling machine, power version 2	-	-	-	DX-25N-2-400V	DX-30N-2-400V
Mixing section	DV-10C	DV-15C	DV-20C	DV-25C	DV-30C
Inspection section	DVI-10	DVI-15	DVI-20	DVI-25	DVI-30
Volumeter	DPG 2kPa	DPG 2kPa	DPG 2kPa	DPG 2kPa	DPG 2kPa
Camfil manometer 0-500 Pa	T50	T50	T50	T50	T50
Watertlock with a ball					
Inspection lamp AHU					
Frost protection contact Sensor	TG-A1/PT1000	TG-A1/PT1000	TG-A1/PT1000	TG-A1/PT1000	TG-A1/PT1000
Frost protection immersion sensor	TG-D3/PT1000	TG-D3/PT1000	TG-D3/PT1000	TG-D3/PT1000	TG-D3/PT1000
Room temperature sensor	TG-R5/PT1000	TG-R5/PT1000	TG-R5/PT1000	TG-R5/PT1000	TG-R5/PT1000
Silencer, 900 mm	DVD-10-900	DVD-15-900	DVD-20-900	DVD-25-900	DVD-30-900
Silencer, 1200 mm	DVD-10-1200	DVD-15-1200	DVD-20-1200	DVD-25-1200	DVD-30-1200
Timer	T 120	T 120	T 120	T 120	T 120
Presence detector	IR24-PC	IR24-PC	IR24-PC	IR24-PC	IR24-PC
CO_2 Room sensor (digital 1/0)	CO2RT-DR	CO2RT-DR	CO2RT-DR	CO2RT-DR	CO2RT-DR
CO_2 Room sensor (analog 0...10V DC)	CO2RT	CO2RT	CO2RT	CO2RT	CO2RT
U-tube manometer, filter guard	MFRO	MFRO	MFRO	MFRO	MFRO
M5 Filter	DVCF10 M5	DVCF15 M5	DVCF20 M5	DVCF25 M5	DVCF30 M5
M6 Filter	DVCF10 M6	DVCF15 M6	DVCF20 M6	DVCF25 M6	DVCF30 M6
F7 Filter	DVCF10 F7	DVCF15 F7	DVCF20 F7	DVCF25 F7	DVCF30 F7
City Flo Filter	DVCF10 City Flo	DVCF15 City Flo	DVCF20 City Flo	DVCF25 City Flo	DVCF30 City Flo
Addition LON					
Add. Webserver/EXOline TCP/IP					
E-Bacnet2-V converter					
Addition VAV					

* Used when the distance between unit and control panel is more than 10 m.
** 2 and 3ways valves are calculated in SystemairCAD for specific conditions.
*** DX coils for the units are calculated in SystemairCAD for specific conditions.

DVCompact 40	DVCompact 50	DVCompact 60	DVCompact 80	DVCompact 100	DVCompact 120	DVCompact 150
E0-R230K	E0-R230K	E0-R230K	E0-R230K	E0-R230K	E0-R230K	E0-R230K
E0-R	E0-R	E0-R	E0-R	E0-R	E0-R	E0-R
ETC	ETC	ETC	ETC	ETC	ETC	ETC
DVC	DVC50	DVC-60	DVC-80	DVC-100	DVC-120	DVC-150
SF24A	SF24A	SF24A	SF24A	SF24A	SF24A	SF24A
DVC	DVC50	DVC-60	DVC-80	DVC-100	DVC-120	DVC-150
NM24A	NM24A	NM24A	SM24A	SM24A	SM24A	SM24A
DVH-40-1R-7NC	DVH-50-1R-8NC	DVH-60-1R-9NC	DVH-80-1R-21NC	DVH-100-1R-24NC	DVH-120-1R-26NC	DVH-150-1R-26NC
DVH-40-2R-10NC	DVH-50-2R-17NC	DVH-60-2R-19NC	DVH-80-2R-21NC	DVH-100-2R-24NC	DVH-120-2R-52NC	DVH-150-2R-52NC
DVH-40-3R-45NC	DVH-50-3R-51NC	DVH-60-3R-57NC	DVH-80-3R-63NC	DVH-100-3R-72NC	DVH-120-3R-78NC	DVH-150-3R-78NC
LR, NR, SR**	LR, NR, SR**	LR, NR, SR**	LR, NR, SR**	LR, NR, SR**	LR, NR, SR**	LR, NR, SR**
R20...**	R20...**	R20...**	R20...**	R20...**	R20...**	R20...**
R30...**	R30...**	R30...**	R30...**	R30...**	R30...**	R30...**
DVK-40-4R-15NC	DVK-50-4R-22NC	DVK-60-4R-25NC	DVK-80-4R-28NC	DVK100-4R-48NC	DVK-120-4R-52NC	DVK-150-4R-52NC
DVK-40-4R-30NC	DVK-50-4R-34NC	DVK-60-4R-76NC	DVK-80-4R-84NC	DVK100-4R-96NC	DVK-120-4R-104NC	DVK-150-4R-104NC
DVK-40-5R-25NC	DVK-50-5R-28NC	DVK-60-5R-48NC	DVK-80-5R-52NC	DVK-100-5R-60NC	DVK-120-5R-65NC	DVK-150-5R-65NC
DVK***	DVK***	DVK***	DVK***	DVK***	DVK***	DVK***
DX-40N-1-400V	DX-50N-1-400V	DX-60N-1-400V	DX-80N-1-400V	-	-	-
DX-40N-2-400V	DX-50N-2-400V	DX-60N-2-400V	-	-	-	-
DV-40C	DV-50C	DV-60C	DV-80C	DV-100C	DV-120C	DV-150C
DVI-40	DVI-50	DVI-60	DVI-80	DVI-100	DVI-120	DVI-150
DPG 2kPa	DPG 2kPa	DPG 2kPa	DPG 2kPa	DPG 2kPa	DPG 2kPa	DPG 2kPa
T50	T50	T50	T50	T50	T50	T50
TG-A1/PT1000	TG-A1/PT1000	TG-A1/PT1000	TG-A1/PT1000	TG-A1/PT1000	TG-A1/PT1000	TG-A1/PT1000
TG-D3/PT1000	TG-D3/PT1000	TG-D3/PT1000	TG-D3/PT1000	TG-D3/PT1000	TG-D3/PT1000	TG-D3/PT1000
TG-R5/PT1000	TG-R5/PT1000	TG-R5/PT1000	TG-R5/PT1000	TG-R5/PT1000	TG-R5/PT1000	TG-R5/PT1000
DVD-40-900	DVD-50-900	DVD-60-900	DVD-80-900	DVD-100-900	DVD-120-900	DVD-150-900
DVD-40-1200	DVD-50-1200	DVD-60-1200	DVD-80-1200	DVD-100-1200	DVD-120-1200	DVD-150-1200
T 120	T 120	T 120	T 120	T 120	T 120	T 120
IR24-PC	IR24-PC	IR24-PC	IR24-PC	IR24-PC	IR24-PC	IR24-PC
CO2RT-DR	CO2RT-DR	CO2RT-DR	CO2RT-DR	CO2RT-DR	CO2RT-DR	CO2RT-DR
CO2RT	CO2RT	CO2RT	CO2RT	CO2RT	CO2RT	CO2RT
MFRO	MFRO	MFRO	MFRO	MFRO	MFRO	MFRO
DVCF40 M5	DVCF50 M5	DVCF60 M5	DVCF80 M5	DVCF100 M5	DVCF120 M5	DVCF150 M5
DVCF40 M6	DVCF50 M6	DVCF60 M6	DVCF80 M6	DVCF100 M6	DVCF120 M6	DVCF150 M6
DVCF40 F7	DVCF50 F7	DVCF60 F7	DVCF80 F7	DVCF100 F7	DVCF120 F7	DVCF150 F7
DVCF40 City Flo	DVCF50 City Flo	DVCF60 City Flo	DVCF80 City Flo	DVCF100 City Flo	DVCF120 City Flo	DVCF150 City Flo

Accessories DVCompact supply

Accessories	DVCompact 10	DVCompact 15	DVCompact 20	DVCompact 25
Repeater, 230V main supply *	E0-R230K	E0-R230K	E0-R230K	E0-R230K
Repeater, 24V main supply *	E0-R	E0-R	E0-R	E0-R
E-Tool cable	ETC	ETC	ETC	ETC
Shut-off damper, inlet	DVA 10	DVA 15	DVA 20	DVA 25
Damper actuator, int/ext (ON/OFF)	LM24A	LM24A	LM24A	LM24A
Damper actuator, int/ext (spring return)	LF24A	LF24A	LF24A	LF24A
Water heater, right	DVH-10-3R-10NC R	DVH-15-3R-14NC R	DVH-20-3R-19NC R	DVH-25-3R-23NC R
Water heater, left	DVH-10-3R-10NC L	DVH-15-3R-14NC L	DVH-20-3R-19NC L	DVH-25-3R-23NC L
Valve actuator	LR, NR, SR**	LR, NR, SR**	LR, NR, SR**	LR, NR, SR**
Valve, 2-way. Fits to HWL/HWH coils.	R20...**	R20...**	R20...**	R20...**
Valve, 3-way. Fits to HWL/HWH coils.	R30...**	R30...**	R30...**	R30...**
Water cooling battery, right***	DVK 10	DVK 15	DVK 20	DVK 25
Water cooling battery, left***	DVK 10	DVK 15	DVK 20	DVK 25
Cooling battery, DX coil	DVK****	DVK****	DVK****	DVK****
Droplet eliminator	DVC-10S	DVC-15S	DVC-20S	DVC-25S
Mixing section	DVM 10	DVM 15	DVM 20	DVM 25
Damper actuator, mixing section	LF24A	LF24A	LF24A	LF24A
Inspection section	DVIS-10	DVIS-15	DVIS-20	DVIS-25
Volumeter	DPG 2kPa	DPG 2kPa	DPG 2kPa	DPG 2kPa
Camfil manometer 0-500 Pa	T50	T50	T50	T50
Watertlock with a ball				
Inspection lamp AHU				
Frost protection immersion sensor	TG-D3/PT1000	TG-D3/PT1000	TG-D3/PT1000	TG-D3/PT1000
Room temperature sensor	TG-R5/PT1000	TG-R5/PT1000	TG-R5/PT1000	TG-R5/PT1000
Silencer, 900 mm	DVDC 10	DVDC 15	DVDC 20	DVDC 25
Timer	T 120	T 120	T 120	T 120
Presence detector	IR24-PC	IR24-PC	IR24-PC	IR24-PC
CO_2 Room sensor (digital 1/0)	CO2RT-DR	CO2RT-DR	CO2RT-DR	CO2RT-DR
CO_2 Room sensor (analog 0...10V DC)	CO2RT	CO2RT	CO2RT	CO2RT
M5 Filter	DVCSF10 M5	DVCSF15 M5	DVCSF20 M5	DVCSF25 M5
G4 Filter	DVCSF10 G4	DVCSF15 G4	DVCSF20 G4	DVCSF25 G4
F7 Filter	DVCSF10 F7	DVCSF15 F7	DVCSF20 F7	DVCSF25 F7
Addition LON				
Add. Webserver/EXOline TCP/IP				
E-Bacnet2-V converter				

* Used when the distance between unit and control panel is more than 10 m.
** 2 and 3ways valves are calculated in SystemairCAD for specific conditions.
*** DX coils for the units are calculated in SystemairCAD for specific conditions.

DVCompact 30	DVCompact 40	DVCompact 50	DVCompact 60	DVCompact 80	DVCompact 100
E0-R230K	E0-R230K	E0-R230K	E0-R230K	E0-R230K	E0-R230K
E0-R	E0-R	E0-R	E0-R	E0-R	E0-R
ETC	ETC	ETC	ETC	ETC	ETC
DVA 30	DVA 40	DVA 50	DVA 60	DVA 80	DVA 100
NM24A	NM24A	NM24A	NM24A	SM24A	SM24A
SF24A	SF24A	SF24A	SF24A	SF24A	SF24A
DVH-30-3R-27NC R	DVH-40-3R-36NC R	DVH-50-3R-45NC R	DVH-60-3R-54NC R	DVH-80-3R-44NC R	DVH-100-3R-63NC R
DVH-30-3R-27NC L	DVH-40-3R-36NC L	DVH-50-3R-45NC L	DVH-60-3R-54NC L	DVH-80-3R-44NC L	DVH-100-3R-63NC L
LR, NR, SR**	LR, NR, SR**	LR, NR, SR**	LR, NR, SR**	LR, NR, SR**	LR, NR, SR**
R20...**	R20...**	R20...**	R20...**	R20...**	R20...**
R30...**	R30...**	R30...**	R30...**	R30...**	R30...**
DVK 30	DVK 40	DVK 50	DVK 60	DVK 80	DVK 100
DVK 30	DVK 40	DVK 50	DVK 60	DVK 80	DVK 100
DVK****	DVK****	DVK****	DVK****	DVK****	DVK****
DVC-30S	DVC-40S	DVC-50S	DVC-60S	DVC-80S	DVC-100S
DVM 30	DVM 40	DVM 50	DVM 60	DVM 80	DVM 100
SF24A	SF24A	SF24A	SF24A	SF24A	SF24A
DVIS-30	DVIS-40	DVIS-50	DVIS-60	DVIS-80	DVIS-100
DPG 2kPa	DPG 2kPa	DPG 2kPa	DPG 2kPa	DPG 2kPa	DPG 2kPa
T50	T50	T50	T50	T50	T50
TG-D3/PT1000	TG-D3/PT1000	TG-D3/PT1000	TG-D3/PT1000	TG-D3/PT1000	TG-D3/PT1000
TG-R5/PT1000	TG-R5/PT1000	TG-R5/PT1000	TG-R5/PT1000	TG-R5/PT1000	TG-R5/PT1000
DVDC 30	DVDC 40	DVDC 50	DVDC 60	DVDC 80	DVDC 100
T 120	T 120	T 120	T 120	T 120	T 120
IR24-PC	IR24-PC	IR24-PC	IR24-PC	IR24-PC	IR24-PC
CO2RT-DR	CO2RT-DR	CO2RT-DR	CO2RT-DR	CO2RT-DR	CO2RT-DR
CO2RT	CO2RT	CO2RT	CO2RT	CO2RT	CO2RT
DVCSF30 M5	DVCSF40 M5	DVCSF50 M5	DVCSF60 M5	DVCSF80 M5	DVCSF100 M5
DVCSF30 G4	DVCSF40 G4	DVCSF50 G4	DVCSF60 G4	DVCSF80 G4	DVCSF100 G4
DVCSF30 F7	DVCSF40 F7	DVCSF50 F7	DVCSF60 F7	DVCSF80 F7	DVCSF100 F7

Accessories extract units

Accessories	DVCompact 10	DVCompact 15	DVCompact 20	DVCompact 25	DVCompact 30
Shut-off damper, internal	DVA 10	DVA 15	DVA 20	DVA 25	DVA 30
Shut-off damper, external	DVC-10	DVC-15	DVC-20	DVC-25	DVC-30
Damper actuator, internal (spring return)	LF24A	LF24A	LF24A	LF24A	SF24A
Damper actuator, internal (ON/OFF)	LM24A	LM24A	LM24A	LM24A	NM24A
Volumeter	DPG 2kPa	DPG 2kPa	DPG 2kPa	DPG 2kPa	DPG 2kPa
Camfil manometer 0-500 Pa	T50	T50	T50	T50	T50
Inspection lamp AHU					
Silencer, 900 mm	DVDC 10	DVDC 15	DVDC 20	DVDC 25	DVDC 30
Timer	T 120	T 120	T 120	T 120	T 120
G4 Panel filter					

Accessories	DVCompact 40	DVCompact 50	DVCompact 60	DVCompact 80	DVCompact 100
Shut-off damper, internal	DVA 40	DVA 50	DVA 60	DVA 80	DVA 100
Shut-off damper, external	DVC	DVC50	DVC-60	DVC-80	DVC-100
Damper actuator, internal (spring return)	SF24A	SF24A	SF24A	SF24A	SF24A
Damper actuator, internal (ON/OFF)	NM24A	NM24A	NM24A	SM24A	SM24A
Volumeter	DPG 2kPa	DPG 2kPa	DPG 2kPa	DPG 2kPa	DPG 2kPa
Camfil manometer 0-500 Pa	T50	T50	T50	T50	T50
Inspection lamp AHU					
Silencer, 900 mm	DVDC 40	DVDC 50	DVDC 60	DVDC 80	DVDC 100
Timer	T 120	T 120	T 120	T 120	T 120
G4 Panel filter					

Unit combinations

= supply air = exhaust air = extract air = outdoor air

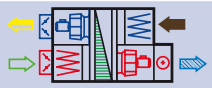
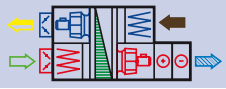
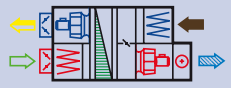
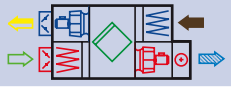
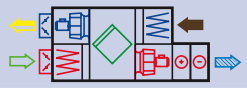
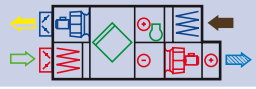
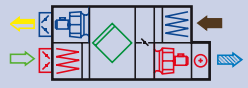
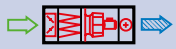
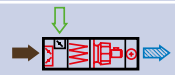
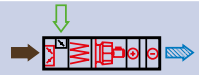
Rotary heat exchanger		Size											
		10	15	20	25	30	40	50	60	80	100	120	150
	Width	970	1120	1270	1420	1570	1720	2020	2170	2470	2270	2920	3070
	Height	970	1120	1270	1420	1570	1720	2020	2170	2470	2270	2920*	3070**
	Length	2655	2655	2655	2655	2655	2955	3105	3405	3855	4005	3705	3705
	Weight	477	539	603	710	811	983	1268	1527	2028	2877	3060	3200
	Length	3010	3010	3010	3010	3010	3310	3460	3760	4210	4360	4060	4060
	Weight	511	574	649	765	811	983	1376	1644	2157	3012	3228	3380
	Length	-	-	3625	3625	3625	3925	4075	4525	4975	-	-	-
	Weight	-	-	843	990	1161	1393	1788	2227	2778	-	-	-
	Length	3175	3175	3175	3175	3175	3475	3625	4075	4525	4825	4525	4525
	Weight	591	665	685	802	908	1090	1406	1721	2230	3159	3352	3514

Plate heat exchanger		Size									
		10	15	20	25	30	40	50	60	80	100
	Width	970	1120	1270	1420	1570	1720	2020	2170	2470	2270
	Height	970	1120	1270	1420	1570	1720	2020	2170	2470	2270
	Length	3105	3255	3255	3555	3555	4005	4005	4605	4905	5205
	Weight	573	671	664	779	891	1074	1394	1672	2199	2777
	Length	3460	3610	3610	3910	3910	4360	4360	4960	5260	5560
	Weight	607	706	710	834	891	1074	1487	1777	2328	2983
	Length	-	-	4225	4525	4525	4975	4975	5725	6025	-
	Weight	-	-	904	1059	1241	1484	1914	2372	2949	-
	Length	3625	3775	3775	4075	4075	4525	4525	5275	5575	6025
	Weight	653	762	746	871	988	1181	1521	1854	2401	3059

Supply air units		Size									
		10	15	20	25	30	40	50	60	80	100
	Height	520	595	670	745	820	895	1045	1120	1270	1420
	Width	970	1120	1270	1420	1570	1720	2020	2170	2170	2370
	Length	2170	2170	2170	2320	2320	2470	2620	2620	2770	3070
	Weight	228	276	317	366	449	521	789	860	1079	1277
	Length	2690	2690	2690	2840	2840	2990	3140	3140	3290	3590
	Weight	300	363	423	487	589	661	989	1073	1310	1511
	Length	2690	2690	2690	2840	2840	3140	3290	3290	3590	4040
	Weight	270	306	357	418	487	579	904	978	1203	1438
	Length	3210	3210	3210	3360	3360	3660	3810	3810	4110	4560
	Weight	343	393	463	539	627	740	1128	1220	1468	1711

Extract air units		Size									
		10	15	20	25	30	40	50	60	80	100
	Height	520	595	670	745	820	895	1045	1120	1270	1420
	Width	970	1120	1270	1420	1570	1720	2020	2170	2170	2370
	Length	1120	1120	1120	1270	1270	1420	1570	1570	1720	2020
	Weight	143	177	213	246	331	373	569	641	720	888

* the rotor section is 80 mm higher
** the rotor section is 230 mm higher

Dimensions in mm. Weight in kg.

DVCompact SoftCooler

DVCompact SoftCooler is a new series of cooling modules for DVCompact units, sizes 20 to 80. The modules have been developed to meet the high comfort and energy requirements and provide very simple installation and commissioning.

DVCompact with SoftCooler provides high efficiency and low energy consumption. All units are equipped with the latest technology, which gives optimal performance.

The units are compact, so they fit into tight spaces. Most units are transportable through one metre wide openings. All units are designed for both new building and renewal projects.

SoftCooler can be installed in new systems or as an add-on to existing installations with DVCompact.

Plug and Play
All units are delivered pre-programmed, tested and ready for installation. And service and maintenance is made easy, with easy-to-reach replacement components contributing to reliable operation.

PM motor based on EC technology
EC technology ensures high efficiency, over 90%, and efficiency remains high even when the speed is reduced. This results in optimizing the unit's motor efficiency at the operating point.

CPRO impeller with optimal design
Optimal design and material results in higher efficiency and lower noise levels. Better balancing reduces vibration.

Optimized rotary heat exchanger
DVCompact is optimized with maximum wheel diameter and lower coil wave height. This combination makes it possible to select units adapted to the different energy efficient demands: 80% efficiency and SFP (Specific Fan Power) <2.0. For example, by increasing the size of the unit performance of 85% efficiency and SFP <1.5 can be achieved.

Integrated control
DVCompact comes standard with integrated controls. Each unit has two control cabinets with easy access and a total of 56 input and outputs available for use. There are quick connectors between each unit section, and a control panel for the frequency converter, which is placed on the front panel for easier control.

You will always find more information at systemair.com
All the technical information and the software for product selection can be found in our online directory.

Information about functions can be found on page 162. Information about control system can be found on page 170.

DVCompact SoftCooler meets the highest comfort and energy requirements

SoftCooling gives a unique power control
DVCompact SoftCooler has a unique control of cooling capacity, which gives you a large variable range. So supply air temperature can be kept at a more precise level than with other comparable systems, resulting in higher temperature comfort in the premises. Since the cooling power can be adapted to current requirements, the system's coefficient of performance (COP) is positively affected.

DVCompact SoftCooler is easy to install
SoftCooler is installed between DVCompact's fan parts. Prepared internal control wiring is connected to DVCompact's electrical cabinet. Connect the drain and power supply. That's it.

DVCompact SoftCooler is delivered as a separate section, factory-tested and ready to run. The module contains a complete, ready-to-operate DX cooling system with a variable speed compressor.

Quick selector, SoftCooler
SoftCooler comes in twelve different sizes. This table makes it easy to choose the right unit for you. For complete project planning use SystemairCAD or contact one of our sales offices.

Unit	Size	Cooling capacity [kW]	Nom. airflow [m³/h]	L [mm]	H [mm] (no feet/base)	W [mm]	Feet high	Base high	Weight [kg]
20	2	22.3	5600	970	1270	1270	150	200	310
25	1	22.3	5600	970	1420	1420	150	200	350
25	2	32.5	7200	970	1420	1420	150	200	360
30	1	32.5	7200	970	1570	1570	150	200	370
30	2	42.0	8800	970	1570	1570	150	200	420
40	1	42.0	9800	970	1720	1720	150	200	450
40	2	56.5	11500	970	1720	1720	150	200	470
50	1	56.5	13000	970	2020	2020	-	200	580
50	2	76.5	16000	970	2020	2020	-	200	620
60	1	76.5	16000	1120	2170	2170	-	200	690
60	2	96.0	19000	1120	2170	2170	-	200	710
80	1	96.0	21000	1120	2470	2470	-	200	730

HHFlex

The HHFlex unit range provides a high degree of freedom on unit layout. Certified modular components can be configured and positioned to comply to process and dimensional requirements. The available range for fan and heat exchange components covers both economical and high-end solutions.

At a glance:

- Available in 68 cross-section sizes
- Large number of combinations
- Certified selection software
- Made of durable galvanized steel
- Proven sustainability
- Guarantees low sound levels
- Three heat recovery options
- Optimal energy efficiency
- Integration of special sections

Unit casing

Frame construction of rigid galvanized profiles and plastic ABS corners. Frame holds 60 mm, galvanized, dual skin insulated doors and panels. Assembly results in smooth surfaces. Thermal transmission and bridging factors up to T2/TB2. Corrosion & UV resistance is excellent, high quality RAL7042 polymer color coating on the external surface. Stainless steel or extra acoustic casing is selectable.

Fans

Various fan types available. Ranging from low noise direct-drive plug fans with EC-technology to classic belt-driven fans. Single, dual or run and standby configurations.

Heat recovery

As standard the three most common recuperation processes can be offered. Heat wheel: low operating cost, easy maintenance and possible moisture recovery. Plate exchanger: for optimal energy efficiency. Run around coils: known for their flexibility and hygiene. Additional recirculation/mixing possible for all configurations.

Product certificates

Eurovent certification certifies the performance and rating according to European and international standards. The guideline VDI 6022 describes the technique regarding hygiene, assessment of the air quality and requirements on the system and devices.

Outdoor installation

The entire range can be executed as safe, easy to use and corrosive resistant outdoor units. They are provided with UV-resistant roofing. Flat or sloping roof constructions at choice.

Unit versions with plug fans

In order to facilitate the work of designing an air handling unit based on the numerous options available, we have provided specifications for the most common unit combinations for units with direct-drive plug fans.

These examples should help to speed up the process of designing your preferred units with the right functions. Choose the unit version that best matches your preferences and then add or remove functions as required.

Unit versions with radial fans

In order to facilitate the work of designing an air handling unit based on the numerous options available, we have provided specifications for the most common unit combinations for units with belt-driven radial fans.

These examples should help to speed up the process of designing your preferred unit with the right functions. Choose the unit version that best matches your preferences and then add or remove functions as required.

Information about functions can be found on page 162. Information about control system can be found on page 170.

Dimension table

Height	Modul / Width	4	5	6	7	8	9	10	11	12	13	14	16	18	20	22	24
18														20,16	22,44	24,71	26,98
16											12,85	13,86	15,88	17,89	19,91	21,92	23,94
14										10,34	11,22	12,10	13,86	15,62	17,38	19,14	20,90
12							6,58	7,33	8,08	8,84	9,59	10,34	11,84	13,35	14,85	16,36	17,86
10						4,84	5,46	6,08	6,71	7,33	7,96	8,58	9,83	11,08	12,32	13,57	14,82
8				2,85	3,35	3,84	4,34	4,84	5,33	5,83	6,32	6,82	7,81	8,80	9,80	10,79	11,78
6		1,38	1,75	2,12	2,48	2,85	3,22	3,59	3,96	4,32	4,69	5,06	5,80	6,53			
4		0,90	1,14	1,38	1,62	1,86	2,10	2,34	2,58	2,82							
2,5		0,54	0,68	0,83													

Preferred ranges *Combination with heat recovery* *Other sizes*

Modul dimension: 160 mm
External width: n x modul plus 100 mm
External height: n x modul plus 100 mm
Base frame height: 160 mm of 62 mm

Example: Type HHFlex
Width: 12 x 160 plus 100 = 2.020 mm
Height: 10 x 160 plus 100 = 1.700 excl. base frame
Nominal air flow: 7.33 m^3/s

Technical data
HHFlex

HHFlex R (figure 1)		R0602	R0804	R1206	R1608	R2010	R2412	R2414	R2416	R2418	
Weight											
Unit without coils	kg	785	1.060	1.690	2.415	3.755	4.875	5.680	7.480	8.455	
Unit with reheating coils	kg	820	1.120	1.785	2.590	3.985	5.200	6.155	7.965	8.885	
Unit with reheating coil and cooling coil	kg	875	1.205	2.340	2.830	4.270	5.755	6.600	8.590	9.640	
Unit air flow											
Maximum	m³/s	0.8	2.08	5.0	9.16	13.88	20.83	24.44	27.64	31.39	
	m³/h	2900	7500	18000	33000	50000	75000	88000	99500	113000	
Minimum	m³/s	0.31	0.8	2.08	4.17	6.67	9.72	11.39	12.78	14.72	
	m³/h	1100	2900	7500	15000	24000	35000	41000	46000	53000	
HHFlex P (figure 2)		P0602	P0804	P1206	P1608	P2010					
Weight											
Unit without coils	kg	740	1.155	1.960	2.730	4.310					
Unit with reheating coils	kg	785	1.220	2.070	2.830	4.460					
Unit with reheating coil and cooling coil	kg	850	1.305	2.210	3.070	4.960					
Unit air flow											
Maximum	m³/s	0.8	2.08	5.0	9.16	13.88					
	m³/h	2900	7500	18000	33000	50000					
Minimum	m³/s	0.31	0.8	2.08	4.17	6.67					
	m³/h	1100	2900	7500	15000	24000					

HHFlex (figure 3)		0402	0404	0606	0808	1010	1212	1414	1616	2016	2418
Weight											
Unit without coils	kg	150	150	230	360	530	725	945	1.475	2010	1625
Unit with reheating coils	kg	235	255	370	570	760	1.090	1.500	1.925	2580	2355
Unit with reheating coil and cooling coil	kg	285	310	460	700	935	1.290	1.660	2.185	3035	3170
Unit air flow											
Maximum	m³/s	0.39	0.74	2.25	3.05	6.25	9.58	13.47	17.78	22.78	31.39
	m³/h	1400	2650	8100	11000	22500	34500	48500	64000	82000	113000
Minimum	m³/s	0.17	0.32	0.92	1.81	3.05	4.58	6.39	8.33	10.55	14.72
	m³/h	620	1150	3300	6500	11000	16500	23000	30000	38000	53000
HHFlex (figure 4)		0402	0404	0606	0808	1010	1212	1414	1616	2016	2418
Weight											
Unit without coils	kg	310	310	465	675	1.010	1.495	2.240	3.110	4.120	3.685
Unit with reheating coils	kg	385	400	585	850	1.210	1.820	2.820	3.480	4.600	4.425
Unit with reheating coil and cooling coil	kg	435	460	675	990	1.400	2.055	2.768	3.765	5.070	5.185
Unit air flow											
Maximum	m³/s	0.39	0.74	2.25	3.05	6.25	9.58	13.47	17.78	22.78	31.39
	m³/h	1400	2650	8100	11000	22500	34500	48500	64000	82000	113000
Minimum	m³/s	0.17	0.32	0.92	1.81	3.05	4.58	6.39	8.33	10.55	14.72
	m³/h	620	1150	3300	6500	11000	16500	23000	30000	38000	53000

HHFlex (figure 5)		0402	0404	0606	0808	1010	1212	1414	1616	2016	2418
Weight											
Unit without coils	kg	230/245	255/270	390/410	605/625	860/860	1.210/ 1.195	1.590/ 1.760	2.600/ 2.260	2.905/ 2.965	2.990/ 2.955
Unit with reheating coils	kg	255/245	290/270	440/410	675/625	955/860	1.330/ 1.195	1.745/ 1.760	2.790/ 2.260	3.170/ 2.965	3.285/ 2.955
Unit with reheating coil and cooling coil	kg	305/245	345/270	540/410	810/625	1.130/ 860	1.625/ 1.195	2.025/ 1.760	3.160/ 2.260	3.590/ 2.965	3.995/ 2.955
Unit air flow											
Maximum	m^3/s	0.39	0.74	2.25	3.05	6.25	9.58	13.47	17.78	22.78	31.39
	m^3/h	1400	2650	8100	11000	22500	34500	48500	64000	82000	113000
Minimum	m^3/s	0.17	0.32	0.92	1.81	3.05	4.58	6.39	8.33	10.55	14.72
	m^3/h	620	1150	3300	6500	11000	16500	23000	30000	38000	53000

Selection table
HHFlex R (figure 1)

Note 1
L1: lenght for unit without coils
L2: lenght for unit with re-heating coil
L3: lenght for unit with re-heating coil and cooling coil

Note 2
Figures 3 and 4: L1 without filters
Figure 4: without extract filter

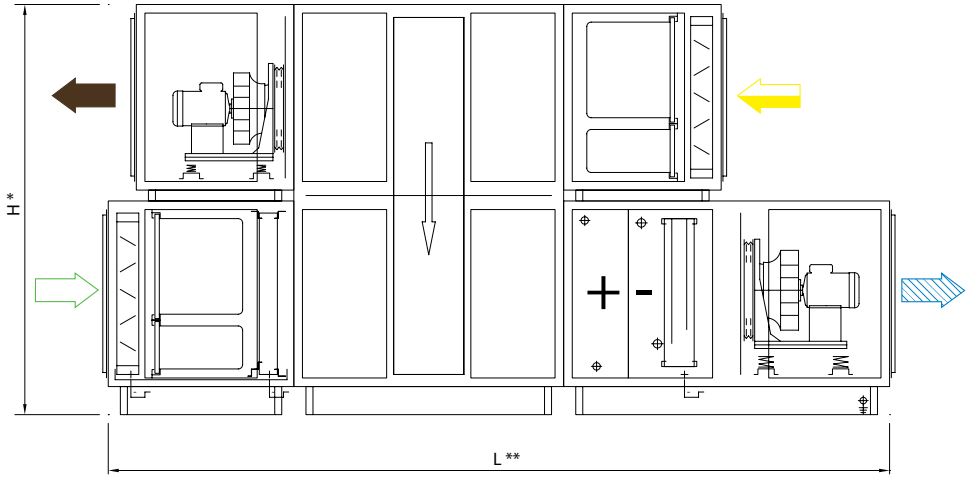
Note 3
Extra lenght for pre heating coil: 160 mm
Extra lenght for coil inspection section: 480 mm
Unit with electrical heater have different lengths, please contact Holland Heating

Steam sections also available

Filter supply air F7
Filter extract air M5

Cooling coil air in 28°c/50% - air out 16°c - medium 6-12°c
Heating coil: air in -10°c - air out 20°c - medium 90-70°c
External pressure supply 300Pa, external pressure extract 250Pa

Dimensions are with height of the supportframe 160 mm, in many cases 62 mm is enough

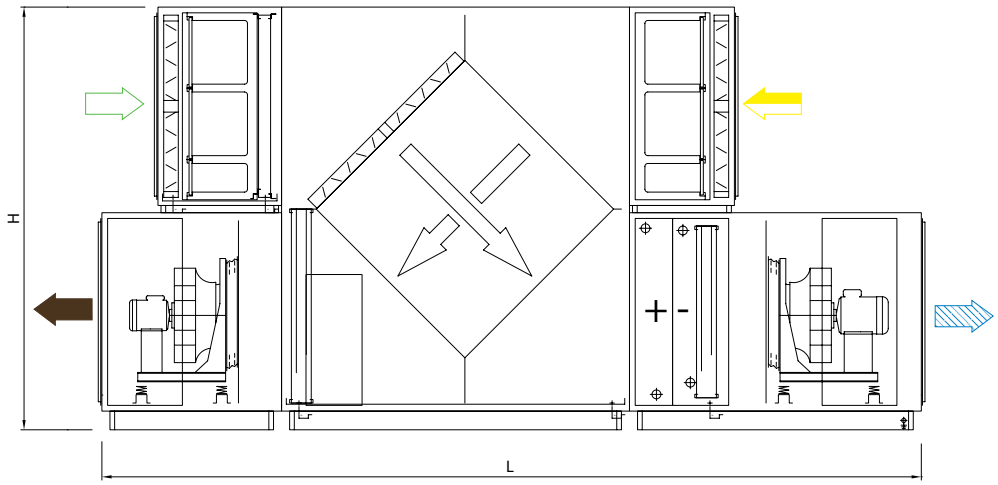


* Height (H)
** Length 3 (L)

HHFlex	Height	Width	Length 1	Length 2	Length 3
R0602	1218	1058	3494	3814	4294
R0804	1698	1378	3494	3974	4454
R1206	2338	2018	3494	3974	4454
R1608	2978	2658	3654	4294	4774
R2010	3618	3298	3974	4614	5094
R2412	4258	3938	4294	5094	5672
R2414	4898	4013	4614	5512	5992
R2416	5538	4653	4774	5734	6472
R2418	6178	4973	5094	5894	6632

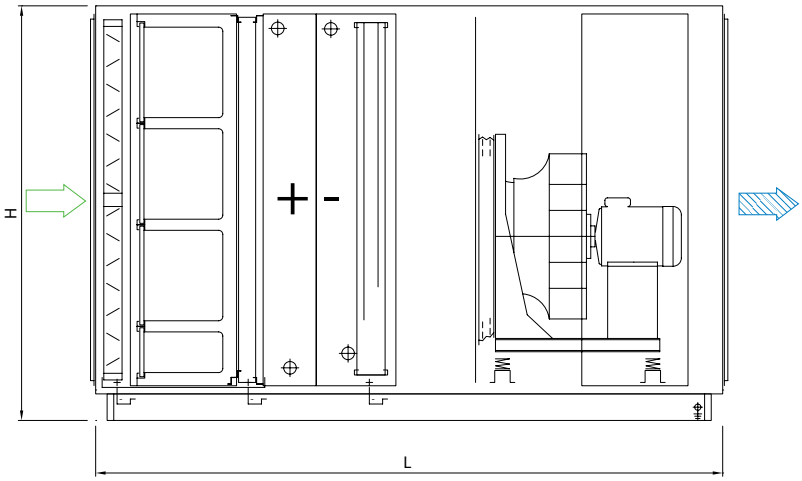
= supply air = exhaust air = extract air = outdoor air

HHFlex P (figure 2)



HHFlex	Height	Width	Length 1	Length 2	Length 3
P0602	1218	1058	3654	4134	4614
P0804	1698	1378	4454	4934	5414
P1206	2338	2018	5094	5574	6054
P1608	2978	2658	5094	5414	5894
P2010	3618	3298	6054	6374	7014

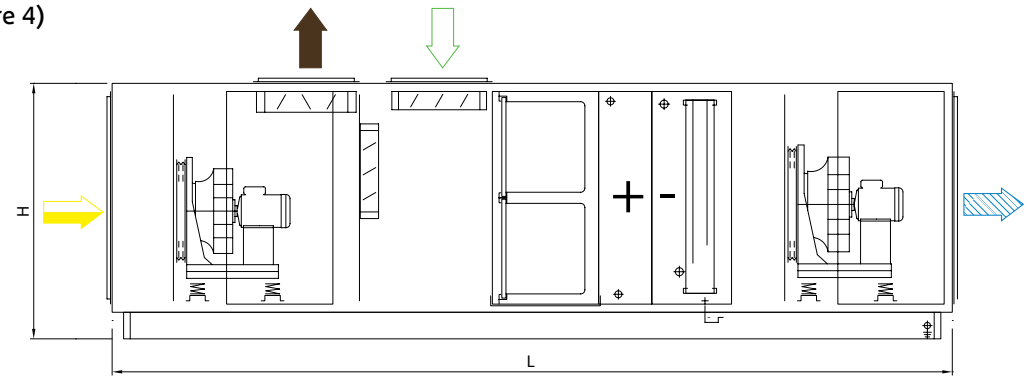
HHFlex (figure 3)



HHFlex	Height	Width	Length 1	Length 2	Length 3
0402	658	738	1058	2178	2658
0404	898	738	1058	2178	2658
0606	1218	1058	1218	2338	2818
0808	1538	1378	1538	2658	3138
1010	1858	1698	1698	2818	3298
1212	2178	2018	1858	3138	3458
1414	2498	2338	2178	3458	3778
1616	2818	2658	2658	3778	3938
2016	2818	3298	2978	4196	4676
2418	3138	3938	2178	3396	4196

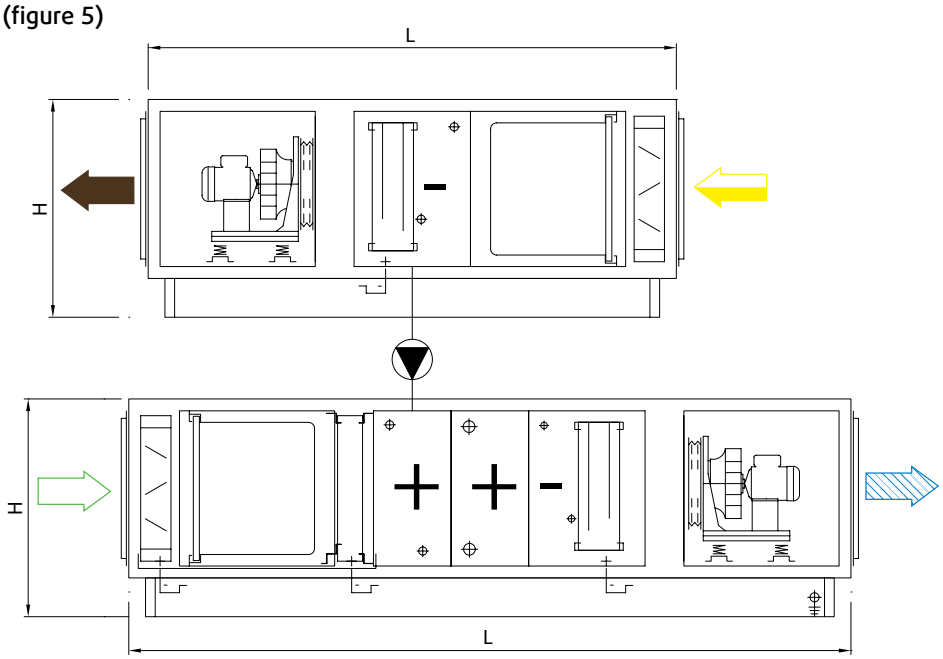
= supply air = exhaust air = extract air = outdoor air

HHFlex (figure 4)



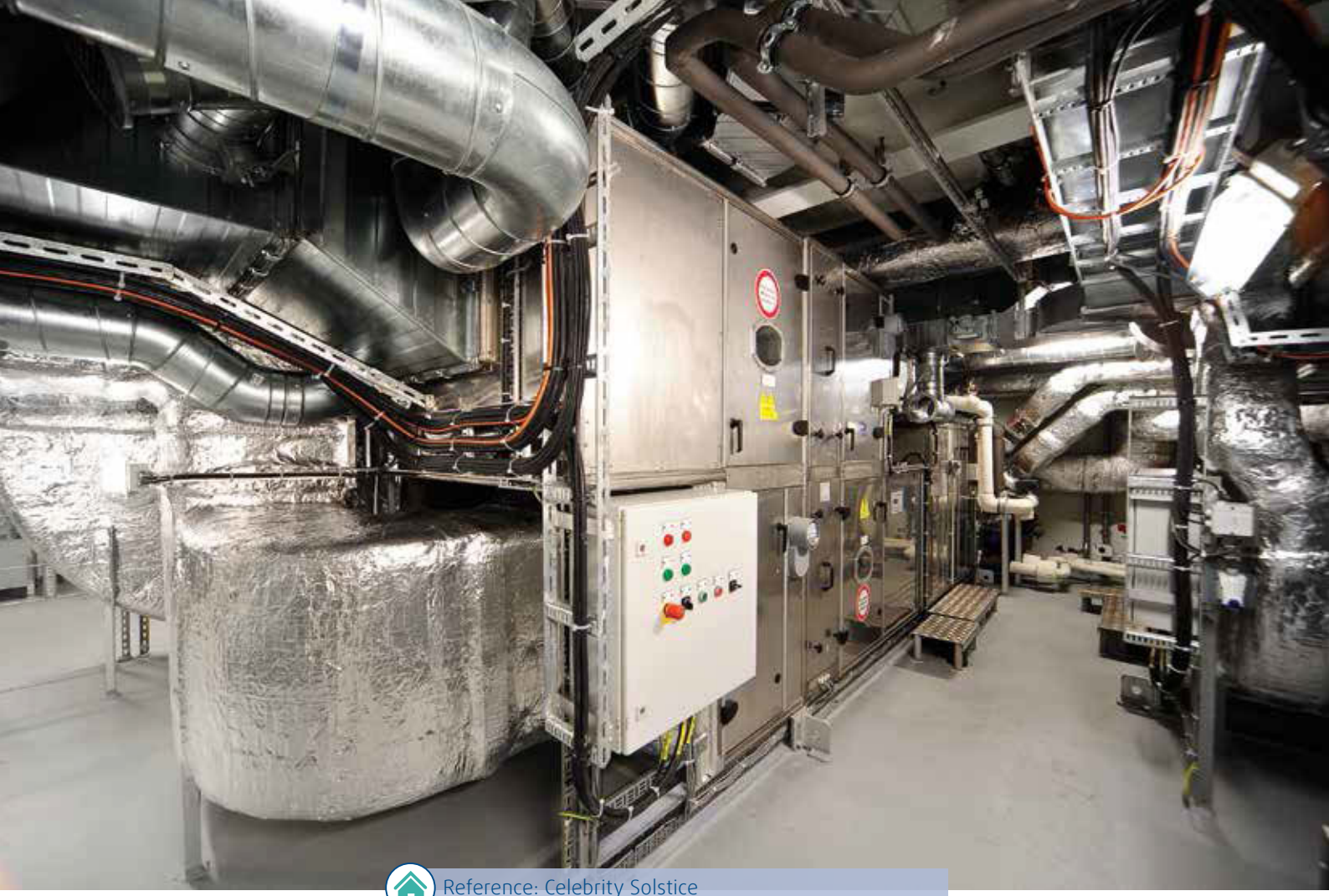
HHFlex	Height	Width	Length 1	Length 2	Length 3
0402	858	738	2818	3778	4258
0404	898	738	2818	3778	4258
0606	1218	1058	3138	4098	4578
0808	1538	1378	3618	4578	5058
1010	1858	1698	4258	5218	5698
1212	2178	2018	5058	6178	6498
1414	2498	2338	5698	6818	6978
1616	2818	2658	6658	7618	7778
2016	2818	3298	7174	8134	8614
2418	3138	3938	6214	7334	9072

HHFlex (figure 5)



HHFlex	Height	Width	Length 1	Length 2	Length 3
0402	858	738	2178/2178	2498/2178	2978/2178
0404	898	738	2178/2178	2498/2178	2978/2178
0606	1218	1058	2338/2338	2658/2338	3138/2338
0808	1538	1378	2658/2658	2978/2658	3458/2658
1010	1858	1698	2978/2818	3298/2818	3778/2818
1212	2178	2018	3138/2978	3458/2978	4098/2978
1414	2498	2338	3458/3618	3778/3618	4258/3618
1616	2818	2658	4258/3938	4578/3938	5058/3938
2016	2818	3298	4356/4356	4676/4356	5156/4356
2418	3138	3938	3716/3556	4036/3556	4676/3556

= supply air = exhaust air = extract air = outdoor air



Reference: Celebrity Solstice

This unit is installed in a ship at the Meyer Yard in Papenburg, Germany. The ship is 315 m long and 37 m wide. It has a tonnage off 122.000 ton. In total it can carry 2.850 passengers and 1.200 crew members. On November 14, 2008 she was baptized by Sharon L. Smith. Formally began commercial operation on November 23, 2008. Holland heating has delivered 91 air handling units build in stainless steel in different sizes.

HHCompact

The customer standardised HHCompact range provides easy selectable, highly optimized, certified units. Modular components although can be configured to comply to process requirements. Range varies from simple exhaust units to configurable plug and play heat exchange units.

At a glance:

- Highly optimized sizes
- Low installation and transportation cost
- Made of durable galvanized steel
- Proven sustainability
- Guarantees low sound levels
- Certified selection software
- 4 heat recovery options
- Heat recovery controls available
- Good energy efficiency

Unit casing

Frame construction of rigid galvanized profiles and plastic ABS corners. Frame holds 60 mm, galvanized, dual skin insulated doors and panels. Assembly results in smooth surfaces. Thermal transmission and bridging up to T3/TB3. Corrosion and UV resistance is excellent, high quality RAL7035 polymer color coating available on the external surface.

Fans

Various fan types available. Ranging from low noise direct-driven plug fans to classic belt-driven fans. Fan type of heat recovery units is restricted to high efficiency plug fans.

Heat recovery

As standard four common recuperation processes can be offered.

- Heat wheel: low operating cost, easy maintenance and possible moisture recovery.
- Plate exchanger: in counter- and cross-flow execution, for optimal energy efficiency.
- Run around coils: known for their flexibility and hygiene are available for inline units.
- Additional recirculation/mixing possible for heat recovery and combined exhaust/supply configurations.

Control system

Heat recovery units can be fitted with integrated ventilation and temperature control system. This configurable system optimizes the usage of the heat wheel or plate exchangers.

Product certificates

Eurovent certification certifies the performance and rating according to European an international standards.

Outdoor installation

The entire range can be executed as safe, easy to install and corrosive resistant outdoor units. They are provided with UV-resistant roof construction.

Unit versions with plug fans

In order to facilitate the work of designing an air handling unit based on the numerous options available, we have provided specifications for the most common unit combinations for units with direct-drive plug fans.

These examples should help to speed up the process of designing your preferred units with the right functions. Choose the unit version that best matches your preferences and then add/remove or modify functions as required.

Information about functions can be found on page 162. Information about control system can be found on page 170.

Technical data
HHCompact C / HHCompact R

HHCompact		C 0405	C 0506	C 0606	R 0606	R 0707	R 0808	R 0909	R 1010	R 1111	R 1212	R 1412	R 1416
Weight													
Unit without coils	kg	218	294	345	328	385	516	586	717	852	1043	1623	2605
Unit with reheating and cooling coils	kg	301	399	469	428	509	660	757	952	1121	1346	2026	3049
Unit air flow													
Maximum	m³/s	0.43	0.72	0.88	1.25	1.70	2.22	2.81	3.47	4.20	5.00	5.83	8.19
	m³/h	1565	2580	3150	4500	6125	8000	10125	12500	15125	18000	21000	29500
Minimum	m³/s	0.20	0.34	0.43	0.43	0.62	0.91	1.25	1.48	1.91	2.18	2.64	8.19
	m³/h	737	1225	1549	1549	2247	3265	4501	5328	6882	7847	9500	13000
Unit thermal efficiency*	%	94	94	94	77.5	78	78	79	79	79	79	75	76
Unit external static pressure													
At max. air flow (low static fan)	Pa	500	700	700	150	-	-	-	120	-	150	610	480
At max. air flow (high static fan)	Pa	1550	2000	1700	600	400	1200	500	950	800	1050	960	940
Specific unit fan power**	kW/m³/s	2.4	2.1	2.5	2.3	2.3	2.1	2.1	1.9	2	1.7	1.3	1.1
Unit sound data***													
Sound power level, casing radiated	dB(A)	68	68	71	70	73	68	73	69	73	69	68	70
Sound power level, extract duct	dB(A)	74	74	77	76	79	75	79	76	79	76	79	81
Sound power level, supply duct	dB(A)	84	84	88	87	89	85	89	86	89	86	89	90
Heat reclaim heat exchanger		Counter-flow plate heat exchanger			Rotary heat exchanger								
Material		Aluminium			Aluminium								
Capacity control		Bypass damper			Variable speed drive								
Exhaust and supply fans		Plug fan (backward curved)											
Fan diameter	mm	225	280	280	280	315	400	400	500	500	630	2x500	2x560
Drive		Frequency inverter											
Rated motor power (low static)	kW	0.55	1.1	1.5	1.5	2.2	2.2	2.2	4	5.5	5.5	2x4	2x5.5
Rated motor power (high static)	kW	1.5	2.2	3	3	4	5.5	5.5	7.5	11	11	2x5.5	2x7.5
Exhaust and supply air filters		Bag filter 500 mm, filter efficiency F7											
Outside air pre-heating coil		Hot-water coil or electric heater (option)											
Supply air reheating coil		Hot-water coil or electric heater (option)											
Supply air cooling coil		Chilled-water coil (option) or DX coil (option)											
Control system		Digital control with web server											
Chassis paint colour		Colour code: RAL 7035											

* Thermal efficiency of supply air at 2 m/s with the effect of supply air fan, outside air -10°C, extract air 22°C/50%.
** Specific fan power with clean filters at 2 m/s and 200 Pa.
*** Sound power at 2 m/s and 200 Pa.
Data for standard unit without optional coils and dampers.

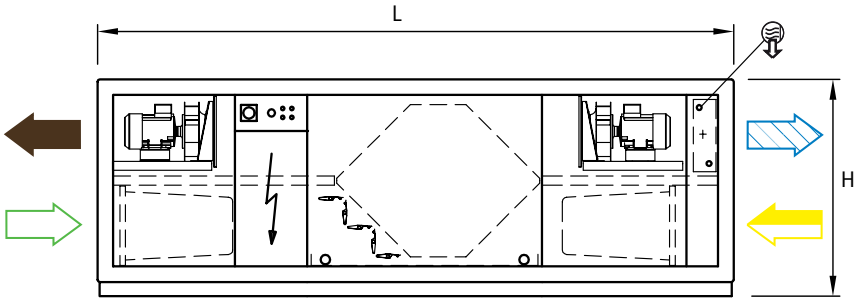
Technical data
HHCompact P

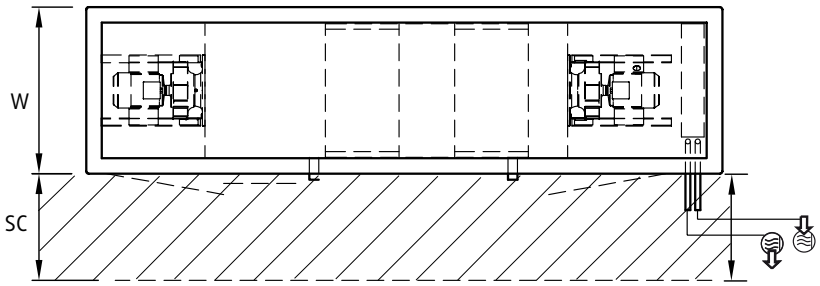
HHCompact		P 0405	P 0506	P 0606	P 0707	P 0808	P 0909	P 1010
Weight								
Unit without coils	kg	210	275	324	395	536	578	688
Unit with reheating and cooling coils	kg	277	360	423	518	712	783	923
Unit air flow								
Maximum	m^3/s	0.68	1.04	1.25	1.70	2.22	2.81	3.47
	m^3/h	2450	3750	4500	6125	8000	10125	12500
Minimum	m^3/s	0.20	0.34	0.43	0.62	0.91	1.25	1.48
	m^3/h	737	1225	1549	2247	3265	4501	5328
Unit thermal efficiency*	%	62	63	63	64	64	63	62
Unit external static pressure								
At maximum air flow (low static fan)	Pa	400	-	0	-	50	-	150
At maximum air flow (high static fan)	Pa	650	800	650	450	1300	550	1000
Specific unit fan power**	$kW/m^3/s$	2.2	1.9	2.1	2	1.8	1.9	1.7
Unit sound data***								
Sound power level, casing radiated	dB(A)	67	66	69	73	67	73	69
Sound power level, extract duct	dB(A)	77	75	79	82	77	79	78
Sound power level, supply duct	dB(A)	84	82	86	88	84	89	86
Heat recovery exchanger		Cross-flow plate heat exchanger						
Material		Aluminium						
Capacity control		Bypass damper						
Exhaust and supply fans		Plug fan (backward curved)						
Fan diameter	mm	225	280	280	315	400	400	500
Drive		Frequency inverter						
Rated motor power (low static)	kW	1.1	1.1	1.5	2.2	2.2	2.2	4
Rated motor power (high static)	kW	1.5	2.2	3	4	5.5	5.5	7.5
Exhaust and supply air filters		Pleated filter 100 mm, filter efficiency F7						
Outside air pre-heating coil		Hot-water coil or electric heater (option)						
Supply air reheating coil		Hot-water coil or electric heater (option)						
Supply air cooling coil		Chilled-water coil (option) or DX coil (option)						
Control system		Digital control with web server						
Chassis paint colour		Colour code: RAL 7035						

* Thermal efficiency of supply air at 2 m/s with the effect of supply air fan, outside air -10°C, extract air 22°C/50%.
** Specific fan power with clean filters at 2 m/s and 200 Pa.
*** Sound power at 2 m/s and 200 Pa.

Data for standard unit without optional coils and dampers.

Selection table
HHCompact C 0405-0606





Legend

Water inlet

Water outlet

Control box

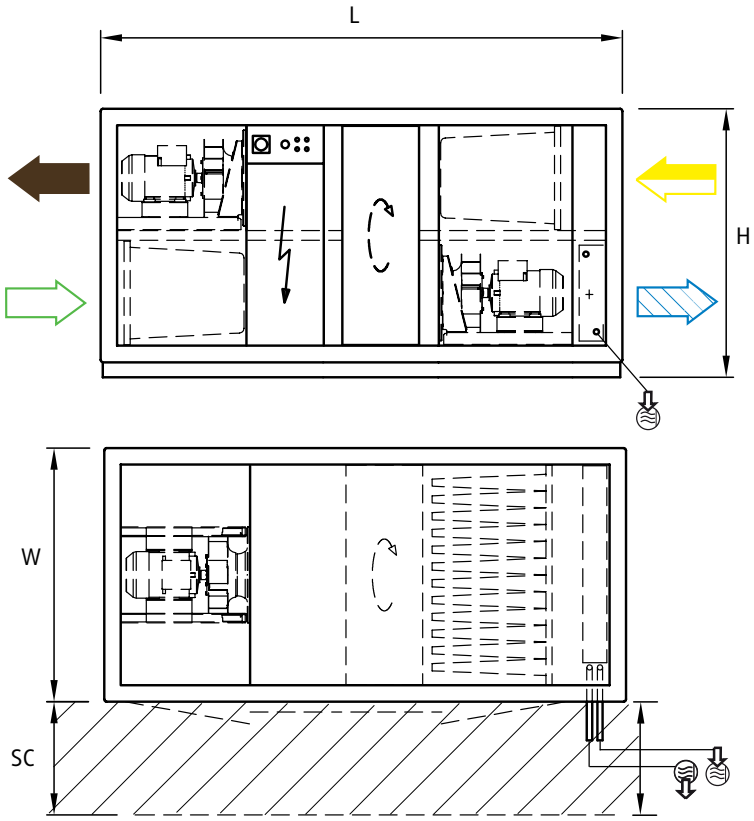
HHCompact C	Height	Width	Length 1*	Length 2**	Length 3***	Clearance
0405	960	738	2558	2718	3118	600
0506	1120	898	2798	2958	3358	750
0606	1120	1058	2798	2958	3358	900

Notes:
1 Dimensions with hot-water reheating coil and 4-row cooling coil.
2 Unit with electric heating coils - refer to the dimensional drawings.
3 Unit with hot-water pre-heating coil: + 160 mm.
4 Unit with inspection chamber: + 480 mm.
5 6-row cooling coils: + 80 mm.
6 When designing an installation refer to the certified dimensional drawings, available on request.

* Unit without coil
** Unit with hot-water coil
*** Unit with hot-water and chilled-water coils

Dimensions in mm.

HHCompact R 0606-1212



Legend

Water inlet

Water outlet

Control box

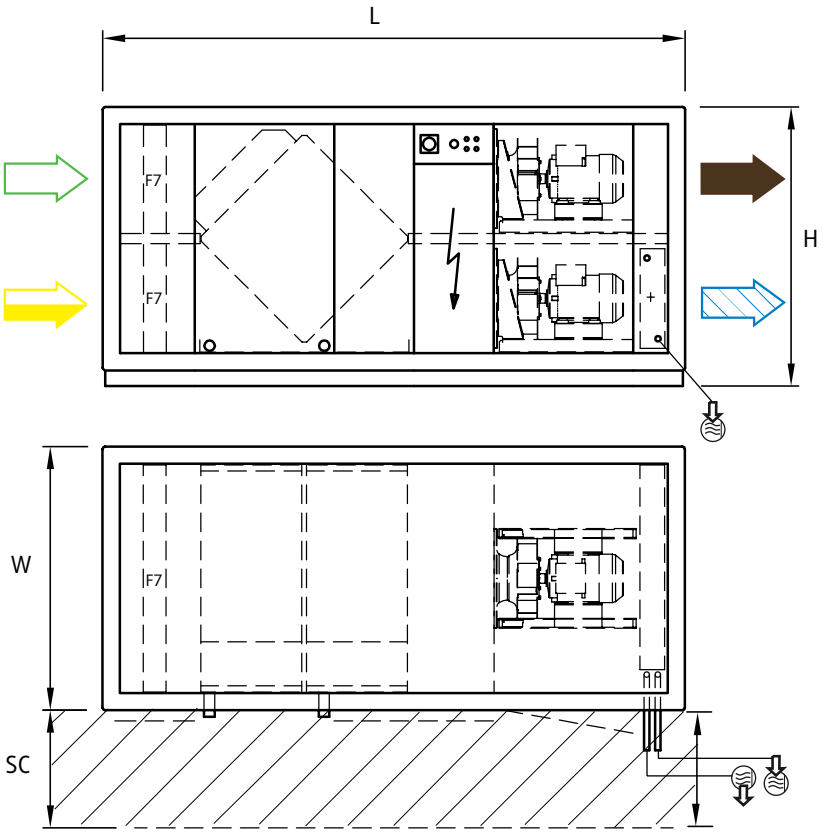
HHCompact R	Height	Width	Length 1*	Length 2**	Length 3***	Clearence
0606	1120	1058	2018	2178	2578	900
0707	1280	1218	2178	2338	2738	700
0808	1440	1378	2498	2658	3058	700
0909	1600	1538	2498	2658	3058	700
1010	1760	1698	2578	2738	3138	700
1111	1920	1858	2898	3058	3458	700
1212	2080	2018	3138	3298	3698	700
1412	2080	2338	2738	2978	3378	700
1416	2720	2338	2978	3218	3698	700

Notes:
1 Dimensions with hot-water reheating coil and 4-row cooling coil.
2 Unit with electric heating coils - refer to the dimensional drawings.
3 Unit with hot-water pre-heating coil: + 160 mm.
4 Unit with inspection chamber: + 480 mm.
5 6-row cooling coils: + 80 mm.
6 When designing an installation refer to the certified dimensional drawings, available on request.

* Unit without coil
** Unit with hot-water coil
*** Unit with hot-water and chilled-water coils

Dimensions in mm.

HHCompact P 0405-1010



Legend

- Water inlet
- Water outlet
- Control box

HHCompact P	Height	Width	Length 1*	Length 2**	Length 3***	Clearence
0405	960	738	2018	2178	2578	600
0506	1120	898	2178	2338	2738	750
0606	1120	1058	2178	2338	2738	900
0707	1280	1218	2418	2578	2978	700
0808	1440	1378	2818	2978	3378	700
0909	1600	1538	2818	2978	3378	700
1010	1760	1698	2818	2978	3378	700

Notes:
1 Dimensions with hot-water reheating coil and 4-row cooling coil.
2 Unit with electric heating coils - refer to the dimensional drawings.
3 Unit with hot-water pre-heating coil: + 160 mm.
4 Unit with inspection chamber: + 480 mm.
5 6-row cooling coils: + 80 mm.
6 When designing an installation refer to the certified dimensional drawings, available on request.

* Unit without coil
** Unit with hot-water coil
*** Unit with hot-water and chilled-water coils

Dimensions in mm.

Flexline

Systemair HSK's Eurovent certified Flexline air handling units are capable of performing all indoor air conditioning tasks with success under all operating conditions thanks to their superior thermal and mechanical performance. The modular nature of Flexline Steel Frame air handling units offer solutions that may suit varying areas of application.

At a glance:

- Available in 34 different sizes
- Handles airflows of between 0.55 and 27.78 m3/s
- Unique Frame Drill® Technology
- No thermal bridging
- Modularity
- Short delivery times

Combination options

The Flexline unit includes a number of well dimensioned functions. You can choose between various systems for heat recovery, fan sections and several types of filter. Different types of heating or/and cooling coils, etc.

The unit housing

The Flexline units offer high resistance to thermal leaks with their 50 mm panel design without thermal bridging, galvanized steel frame profiles that maximise the strength and durability of the air handling unit and their double sloped mineral wool insulated condensation pan manufactured as a standard from stainless steel.

Steel sheet thickness 0.8-1.2 mm that has been galvanized against corrosion is used in interior and exterior surfaces. PVC frame and air handling unit edge profiles insulate against thermal bridging while offering an aesthetically pleasing appearance.

Frame profiles manufactured from galvanized steel sheets with a thickness of 2 mm and with dimensions 30x30 mm and 30x60 mm form a structure that is resistant to negative pressure values. Connections of frame profiles are made with cast aluminium corner elements creating a rigid frame.

Fans

The units include a fan section for the purpose of facilitating air circulation, depending on the requirements of the environment.

While forward curved fans are preferred for units within the low pressure range, forward curved or backward curved fans can both be used for units within the medium and high pressure ranges. Airfoil fans are commonly preferred due to their efficiency and low noise level operation. Depending on design conditions plug (without scroll case, single inlet, direct coupled) fans can also be used.

Fans used in Systemair HSK air handling units are manufactured from galvanized steel sheets and can be oven painted as an option.

Heat recovery systems

The Flexline units can be supplied with 3 types of heat recovery systems: A rotary heat recovery with different kinds of rotor possibilities. A plate type heat recovery which separates the supply air and extract air flows, or a heat exchanger with run around coils for supply air and extract air in separate locations.

Humidification systems

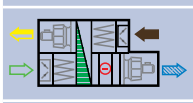
Three types of humidifiers can be used in the Flexline units according to the application type:

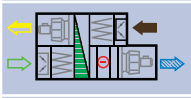
- Steam humidifier
- Atomizer humidifier
- Adiabatic humidifier

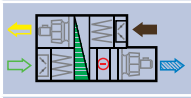
Information about functions can be found on page 162. Information about control system can be found on page 170.

Units with centrifugal fan

= supply air = exhaust air = extract air = outdoor air

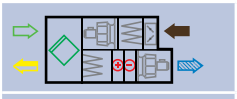
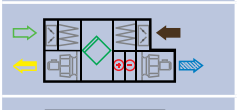
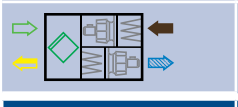
	Size	FL 20X20	FL20X30	FL30X30	FL30X40	FL30X50	FL30X60	FL40X40	FL40X50	FL40X60	FL40X70	FL50X50	FL50X60	FL50X70	FL50X80	FL50X90
	B 1)	612	612	918	918	918	918	1224	1224	1224	1224	1530	1530	1530	1530	1530
	B' 2)	772	772	1078	1078	1078	1078	1384	1384	1384	1384	1690	1690	1690	1690	1690
	H 3)	612	918	918	1224	1530	1836	1224	1530	1836	2142	1530	1836	2142	2508	2814
	H' 4)	722	1028	1028	1334	1640	1946	1334	1640	1946	2252	1640	1946	2252	2618	2924
Rotary heat exchanger																
	L 5)	4324	4324	4477	4477	4477	4477	4783	4783	4783	4783	5089	5242	5242	5242	5242
	L 5)	4018	4018	4171	4171	4171	4171	4477	4477	4477	4477	4783	4936	4936	4936	4936
	L 5)	5089	5089	5242	5395	5395	5395	5701	5701	5701	5701	6007	6160	6160	6160	6160

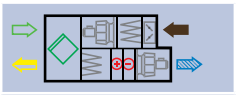
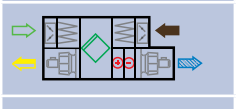
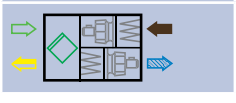
	Size	FL50X100	FL60X60	FL60X70	FL60X80	FL60X90	FL60X100	FL60X110	FL60X120	FL70X70	FL70X80	FL70X90	FL70X100	FL70X110	FL80X80	FL80X90
	B 1)	1530	1836	1836	1836	1836	1836	1836	1836	2142	2142	2142	2142	2142	2508	2508
	B' 2)	1690	1996	1996	1996	1996	1996	1996	1996	2302	2302	2302	2302	2302	2668	2668
	H 3)	3120	1836	2142	2508	2814	3120	3426	3732	2142	2508	2814	3120	3426	2508	2814
	H' 4)	3230	1946	2252	2618	2924	3230	3536	3842	2252	2618	2924	3230	3536	2618	2924
Rotary heat exchanger																
	L 5)	5242	5395	5395	5395	5395	5395	5395	5395	5701	5701	5701	5701	5701	5701	5701
	L 5)	4936	5089	5089	5089	5089	5089	5089	5089	5395	5395	5395	5395	5395	5395	5395
	L 5)	6160	6466	6466	6466	6466	6466	6466	6466	6772	6772	6772	6772	6772	6925	6925

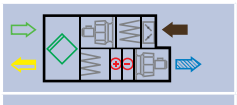
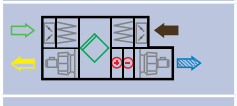
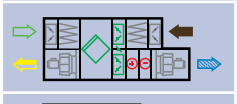
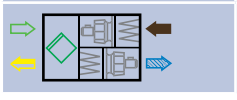
	Size	FL80X100	FL80X110	FL80X120	FL80X130	FL90X90	FL90X100	FL90X110	FL90X120	FL90X130	FL100X100	FL100X110
	B 1)	2508	2508	2508	2508	2814	2814	2814	2814	2814	3120	3120
	B' 2)	2668	2668	2668	2668	2974	2974	2974	2974	2974	3280	3280
	H 3)	3120	3426	3732	4038	2814	3120	3426	3732	4038	3120	3426
	H' 4)	3230	3536	3842	4148	2924	3230	3536	3842	4148	3230	3536
Rotary heat exchanger												
	L 5)	5701	5701	5701	5701	5701	5701	5701	5701	5701	5701	5701
	L 5)	5395	5395	5395	5395	5395	5395	5395	5395	5395	5395	5395
	L 5)	6925	6925	6925	6925	7078	7078	7078	7078	7078	7078	7078

1) inner width 2) outer width 3) inner heigth 4) outer height 5) outer length

= supply air = exhaust air = extract air = outdoor air

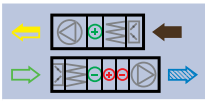
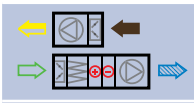
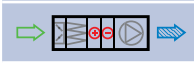
	Size	FL 20X20	FL20X30	FL30X30	FL30X40	FL30X50	FL30X60	FL40X40	FL40X50	FL40X60	FL40X70	FL50X50	FL50X60	FL50X70	FL50X80	FL50X90
	B [1]	612	612	918	918	918	918	1224	1224	1224	1224	1530	1530	1530	1530	1530
	B' [2]	772	772	1078	1078	1078	1078	1384	1384	1384	1384	1690	1690	1690	1690	1690
	H [3]	612	918	918	1224	1530	1836	1224	1530	1836	2142	1530	1836	2142	2508	2814
	H' [4]	722	1028	1028	1334	1640	1946	1334	1640	1946	2252	1640	1946	2252	2618	2924
Plate heat exchanger																
	L [5]	4630	4630	4783	4783	4783	4783	5548	5548	5548	5548	6160	6313	6313	6313	6313
	L [5]	4477	4477	4783	4783	4783	4783	5854	5854	5854	5854	6772	6925	6925	6925	6925
	L [5]	5242	5242	5548	5701	5701	5701	6772	6772	6772	6772	7690	7843	7843	7843	7843
	L [5]	3559	3559	3712	3712	3712	3712	4477	4477	4477	4477	5089	5089	5089	5089	5089

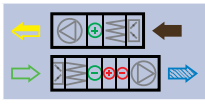
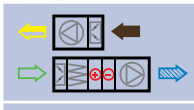
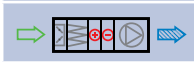
	Size	FL50X100	FL60X60	FL60X70	FL60X80	FL60X90	FL60X100	FL60X110	FL60X120	FL70X70	FL70X80	FL70X90	FL70X100	FL70X110	FL80X80	FL80X90
	B [1]	1530	1836	1836	1836	1836	1836	1836	1836	2142	2142	2142	2142	2142	2508	2508
	B' [2]	1690	1996	1996	1996	1996	1996	1996	1996	2302	2302	2302	2302	2302	2668	2668
	H [3]	3120	1836	2142	2508	2814	3120	3426	3732	2142	2508	2814	3120	3426	2508	2814
	H' [4]	3230	1946	2252	2618	2924	3230	3536	3842	2252	2618	2924	3230	3536	2618	2924
Plate heat exchanger																
	L [5]	6313	6466	6466	6466	6466	6466	6466	6466	7078	7078	7078	7078	7078	7384	7384
	L [5]	6925	7231	7231	7231	7231	7231	7231	7231	8149	8149	8149	8149	8149	8455	8455
	L [5]	7843	8302	8302	8302	8302	8302	8302	8302	9220	9220	9220	9220	9220	9679	9679
	L [5]	5089	5242	5242	5242	5242	5242	5242	5242	5854	5854	5854	5854	5854	6160	6160

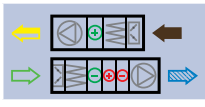
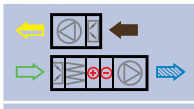
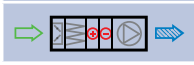
	Size	FL80X100	FL80X110	FL80X120	FL80X130	FL90X90	FL90X100	FL90X110	FL90X120	FL90X130	FL100X100	FL100X110
	B [1]	2508	2508	2508	2508	2814	2814	2814	2814	2814	3120	3120
	B' [2]	2668	2668	2668	2668	2974	2974	2974	2974	2974	3280	3280
	H [3]	3120	3426	3732	4038	2814	3120	3426	3732	4038	3120	3426
	H' [4]	3230	3536	3842	4148	2924	3230	3536	3842	4148	3230	3536
Plate heat exchanger												
	L [5]	7384	7384	7384	7384	7384	7384	7384	7384	7384	7384	7384
	L [5]	8455	8455	8455	8455	8455	8455	8455	8455	8455	8455	8455
	L [5]	9679	9679	9679	9679	9832	9832	9832	9832	9832	9832	9832
		6160	6160	6160	6160	6160	6160	6160	6160	6160	6160	6160

1) inner width
2) outer width
3) inner heigth
4) outer height
5) outer length

= supply air = exhaust air = extract air = outdoor air

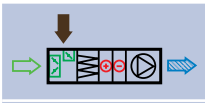
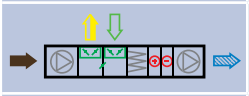
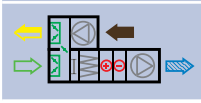
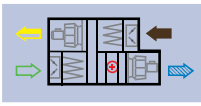
	Size	FL 20X20	FL20X30	FL30X30	FL30X40	FL30X50	FL30X60	FL40X40	FL40X50	FL40X60	FL40X70	FL50X50	FL50X60	FL50X70	FL50X80	FL50X90
	B [1]	612	612	918	918	918	918	1224	1224	1224	1224	1530	1530	1530	1530	1530
	B' [2]	772	772	1078	1078	1078	1078	1384	1384	1384	1384	1690	1690	1690	1690	1690
	H [3]	612	918	918	1224	1530	1836	1224	1530	1836	2142	1530	1836	2142	2508	2814
	H' [4]	722	1028	1028	1334	1640	1946	1334	1640	1946	2252	1640	1946	2252	2618	2924
Run around																
	L [5]	4171	4171	4324	4324	4324	4324	4630	4630	4630	4630	4936	5089	5089	5089	5089
Supply units																
	L [5]	3406	3406	3559	3559	3559	3559	3865	3865	3865	3865	4171	4324	4324	4324	4324
	L [5]	3406	3406	3559	3559	3559	3559	3865	3865	3865	3865	4171	4324	4324	4324	4324

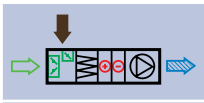
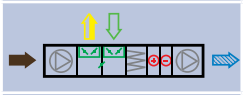
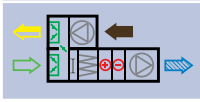
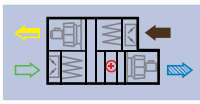
	Size	FL50X100	FL60X60	FL60X70	FL60X80	FL60X90	FL60X100	FL60X110	FL60X120	FL70X70	FL70X80	FL70X90	FL70X100	FL70X110	FL80X80	FL80X90
	B [1]	1530	1836	1836	1836	1836	1836	1836	1836	2142	2142	2142	2142	2142	2508	2508
	B' [2]	1690	1996	1996	1996	1996	1996	1996	1996	2302	2302	2302	2302	2302	2668	2668
	H [3]	3120	1836	2142	2508	2814	3120	3426	3732	2142	2508	2814	3120	3426	2508	2814
	H' [4]	3230	1946	2252	2618	2924	3230	3536	3842	2252	2618	2924	3230	3536	2618	2924
Run around																
	L [5]	5089	5242	5242	5242	5242	5242	5242	5242	5548	5548	5548	5548	5548	5548	5548
Supply units																
	L [5]	4324	4477	4477	4477	4477	4477	4477	4477	4783	4783	4783	4783	4783	4783	4783
	L [5]	4324	4477	4477	4477	4477	4477	4477	4477	4783	4783	4783	4783	4783	4783	4783

	Size	FL80X100	FL80X110	FL80X120	FL80X130	FL90X90	FL90X100	FL90X110	FL90X120	FL90X130	FL100X100	FL100X110
	B [1]	2508	2508	2508	2508	2814	2814	2814	2814	2814	3120	3120
	B' [2]	2668	2668	2668	2668	2974	2974	2974	2974	2974	3280	3280
	H [3]	3120	3426	3732	4038	2814	3120	3426	3732	4038	3120	3426
	H' [4]	3230	3536	3842	4148	2924	3230	3536	3842	4148	3230	3536
Run around												
	L [5]	5548	5548	5548	5548	5548	5548	5548	5548	5548	5548	5548
Supply units												
	L [5]	4783	4783	4783	4783	4783	4783	4783	4783	4783	4783	4783
	L [5]	4783	4783	4783	4783	4783	4783	4783	4783	4783	4783	4783

1) inner width 2) outer width 3) inner heigth 4) outer height 5) outer length

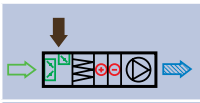
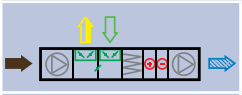
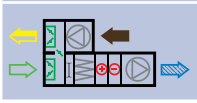
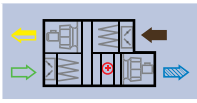
= supply air = exhaust air = extract air = outdoor air

	Size	FL 20X20	FL20X30	FL30X30	FL30X40	FL30X50	FL30X60	FL40X40	FL40X50	FL40X60	FL40X70	FL50X50	FL50X60	FL50X70	FL50X80	FL50X90
	B [1]	612	612	918	918	918	918	1224	1224	1224	1224	1530	1530	1530	1530	1530
	B' [2]	772	772	1078	1078	1078	1078	1384	1384	1384	1384	1690	1690	1690	1690	1690
	H [3]	612	918	918	1224	1530	1836	1224	1530	1836	2142	1530	1836	2142	2508	2814
	H' [4]	722	1028	1028	1334	1640	1946	1334	1640	1946	2252	1640	1946	2252	2618	2924
Units with mixing sections																
	L [5]	4058	4058	4211	4211	4211	4211	4670	4670	4670	4670	5129	5282	5282	5282	5282
	L [5]	5701	5701	6007	6007	6007	6007	6772	6772	6772	6772	7690	7843	7843	7843	7843
	L [5]	4171	4171	4324	4477	4477	4477	4783	4783	4783	4783	5089	5242	5242	5242	5242
Horse shoe																
	L [5]	4477	4477	4630	4630	4630	4630	4936	4936	4936	4936	5242	5242	5242	5242	5242

	Size	FL50X100	FL60X60	FL60X70	FL60X80	FL60X90	FL60X100	FL60X110	FL60X120	FL70X70	FL70X80	FL70X90	FL70X100	FL70X110	FL80X80	FL80X90
	B [1]	1530	1836	1836	1836	1836	1836	1836	1836	2142	2142	2142	2142	2142	2508	2508
	B' [2]	1690	1996	1996	1996	1996	1996	1996	1996	2302	2302	2302	2302	2302	2668	2668
	H [3]	3120	1836	2142	2508	2814	3120	3426	3732	2142	2508	2814	3120	3426	2508	2814
	H' [4]	3230	1946	2252	2618	2924	3230	3536	3842	2252	2618	2924	3230	3536	2618	2924
Units with mixing sections																
	L [5]	5282	5435	5435	5435	5435	5435	5435	5435	5894	5894	5894	5894	5894	5894	6047
	L [5]	7843	8149	8455	8455	8455	8455	8455	8455	9067	9067	9067	9067	9373	9067	9373
	L [5]	5242	5548	5548	5548	5548	5548	5548	5548	5854	5854	5854	5854	5854	6007	6007
Horse shoe																
	L [5]	5242	5395	5395	5395	5395	5395	5395	5395	5701	5701	5701	5701	5701	5701	5701

1) inner width 2) outer width 3) inner heigth 4) outer height 5) outer length

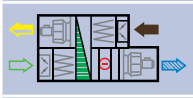
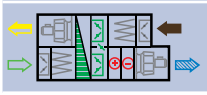
= supply air = exhaust air = extract air = outdoor air

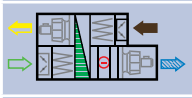
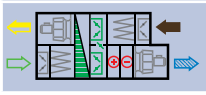
	Size	FL80X100	FL80X110	FL80X120	FL80X130	FL90X90	FL90X100	FL90X110	FL90X120	FL90X130	FL100X100	FL100X110
	B [1]	2508	2508	2508	2508	2814	2814	2814	2814	2814	3120	3120
	B' [2]	2668	2668	2668	2668	2974	2974	2974	2974	2974	3280	3280
	H [3]	3120	3426	3732	4038	2814	3120	3426	3732	4038	3120	3426
	H' [4]	3230	3536	3842	4148	2924	3230	3536	3842	4148	3230	3536
Units with mixing sections												
	L [5]	6047	6047	6047	6047	6047	6047	6047	6047	6047	6047	6047
	L [5]	9373	9373	9373	9373	9373	9373	9373	9373	9373	9373	9373
	L [5]	6007	6007	6007	6007	6160	6160	6160	6160	6160	6160	6160
Horse shoe												
	L [5]	5701	5701	5701	5701	5701	5701	5701	5701	5701	5701	5701

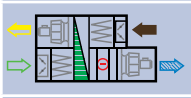
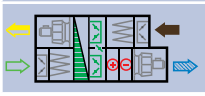
1) inner width 2) outer width 3) inner heigth 4) outer height 5) outer length

Units with plug fan

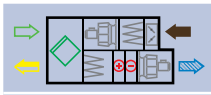
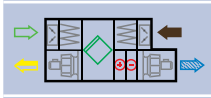
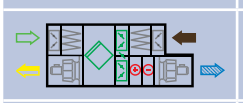
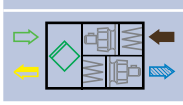
= supply air = exhaust air = extract air = outdoor air

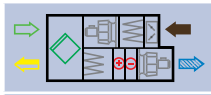
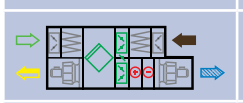
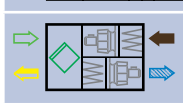
	Size	FL 20X20	FL20X30	FL30X30	FL30X40	FL30X50	FL30X60	FL40X40	FL40X50	FL40X60	FL40X70	FL50X50	FL50X60	FL50X70	FL50X80	FL50X90
	B 1)	612	612	918	918	918	918	1224	1224	1224	1224	1530	1530	1530	1530	1530
	B' 2)	772	772	1078	1078	1078	1078	1384	1384	1384	1384	1690	1690	1690	1690	1690
	H 3)	612	918	918	1224	1530	1836	1224	1530	1836	2142	1530	1836	2142	2508	2814
	H' 4)	722	1028	1028	1334	1640	1946	1334	1640	1946	2252	1640	1946	2252	2618	2924
Rotary heat exchanger																
	L 5)	4477	4477	4630	4630	4630	4630	5089	5089	5089	5089	5089	5548	5548	5548	5548
	L 5)	4171	4171	4324	4324	4324	4324	4783	4783	4783	4783	4783	5242	5242	5242	5242
	L 5)	5242	5242	5395	5548	5548	5548	6007	6007	6007	6007	6007	6466	6466	6466	6466

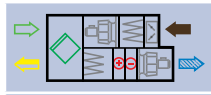
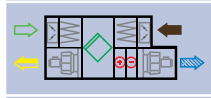
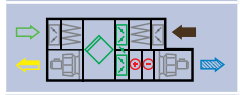
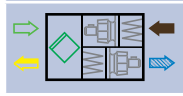
	Size	FL50X100	FL60X60	FL60X70	FL60X80	FL60X90	FL60X100	FL60X110	FL60X120	FL70X70	FL70X80	FL70X90	FL70X100	FL70X110	FL80X80	FL80X90
	B 1)	1530	1836	1836	1836	1836	1836	1836	1836	2142	2142	2142	2142	2142	2508	2508
	B' 2)	1690	1996	1996	1996	1996	1996	1996	1996	2302	2302	2302	2302	2302	2668	2668
	H 3)	3120	1836	2142	2508	2814	3120	3426	3732	2142	2508	2814	3120	3426	2508	2814
	H' 4)	3230	1946	2252	2618	2924	3230	3536	3842	2252	2618	2924	3230	3536	2618	2924
Rotary heat exchanger																
	L 5)	5548	5548	5548	5548	5548	5548	5548	5548	5548	5548	5548	5548	5548	5548	5548
	L 5)	5242	5242	5242	5242	5242	5242	5242	5242	5242	5242	5242	5242	5242	5242	5242
	L 5)	6466	6619	6619	6619	6619	6619	6619	6619	6619	6619	6619	6619	6619	6772	6772

	Size	FL80X100	FL80X110	FL80X120	FL80X130	FL90X90	FL90X100	FL90X110	FL90X120	FL90X130	FL100X100	FL100X110
	B 1)	2508	2508	2508	2508	2814	2814	2814	2814	2814	3120	3120
	B' 2)	2668	2668	2668	2668	2974	2974	2974	2974	2974	3280	3280
	H 3)	3120	3426	3732	4038	2814	3120	3426	3732	4038	3120	3426
	H' 4)	3230	3536	3842	4148	2924	3230	3536	3842	4148	3230	3536
Rotary heat exchanger												
	L 5)	5548	5548	5548	5548	5548	5548	5548	5548	5548	5548	5548
	L 5)	5242	5242	5242	5242	5242	5242	5242	5242	5242	5242	5242
	L 5)	6772	6772	6772	6772	6925	6925	6925	6925	6925	6925	6925

1) inner width 2) outer width 3) inner heigth 4) outer height 5) outer length

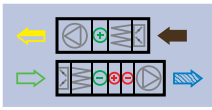
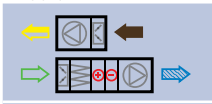
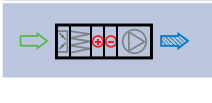
	Size	FL 20X20	FL20X30	FL30X30	FL30X40	FL30X50	FL30X60	FL40X40	FL40X50	FL40X60	FL40X70	FL50X50	FL50X60	FL50X70	FL50X80	FL50X90
	B [1]	612	612	918	918	918	918	1224	1224	1224	1224	1530	1530	1530	1530	1530
	B' [2]	772	772	1078	1078	1078	1078	1384	1384	1384	1384	1690	1690	1690	1690	1690
	H [3]	612	918	918	1224	1530	1836	1224	1530	1836	2142	1530	1836	2142	2508	2814
	H' [4]	722	1028	1028	1334	1640	1946	1334	1640	1946	2252	1640	1946	2252	2618	2924
Plate heat exchanger																
	L [5]	4783	4783	4936	4936	4936	4936	5854	5854	5854	5854	6160	6619	6619	6619	6619
	L [5]	4630	4630	4936	4936	4936	4936	6160	6160	6160	6160	6772	7231	7231	7231	7231
	L [5]	5548	5548	5854	6007	6007	6007	7384	7384	7384	7384	7690	8455	8455	8455	8455
	L [5]	3712	3712	3865	3865	3865	3865	4783	4783	4783	4783	5089	5395	5395	5395	5395

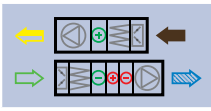
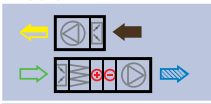
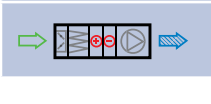
	Size	FL50X100	FL60X60	FL60X70	FL60X80	FL60X90	FL60X100	FL60X110	FL60X120	FL70X70	FL70X80	FL70X90	FL70X100	FL70X110	FL80X80	FL80X90
	B [1]	1530	1836	1836	1836	1836	1836	1836	1836	2142	2142	2142	2142	2142	2508	2508
	B' [2]	1690	1996	1996	1996	1996	1996	1996	1996	2302	2302	2302	2302	2302	2668	2668
	H [3]	3120	1836	2142	2508	2814	3120	3426	3732	2142	2508	2814	3120	3426	2508	2814
	H' [4]	3230	1946	2252	2618	2924	3230	3536	3842	2252	2618	2924	3230	3536	2618	2924
Plate heat exchanger																
	L [5]	6619	6619	6619	6619	6619	6619	6619	6619	6925	6925	6925	6925	6925	7231	7231
	L [5]	7231	7384	7384	7384	7384	7384	7384	7384	7996	7996	7996	7996	7996	8302	8302
	L [5]	8455	8608	8608	8608	8608	8608	8608	8608	8914	8914	8914	8914	8914	9373	9373
	L [5]	5395	5395	5395	5395	5395	5395	5395	5395	5701	5701	5701	5701	5701	6007	6007

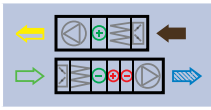
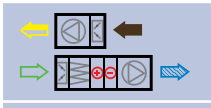
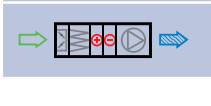
	Size	FL80X100	FL80X110	FL80X120	FL80X130	FL90X90	FL90X100	FL90X110	FL90X120	FL90X130	FL100X100	FL100X110
	B [1]	2508	2508	2508	2508	2814	2814	2814	2814	2814	3120	3120
	B' [2]	2668	2668	2668	2668	2974	2974	2974	2974	2974	3280	3280
	H [3]	3120	3426	3732	4038	2814	3120	3426	3732	4038	3120	3426
	H' [4]	3230	3536	3842	4148	2924	3230	3536	3842	4148	3230	3536
Plate heat exchanger												
	L [5]	7231	7231	7231	7231	7231	7231	7231	7231	7231	7231	7231
	L [5]	8302	8302	8302	8302	8302	8302	8302	8302	8302	8302	8302
	L [5]	9373	9373	9373	9373	9526	9526	9526	9526	9526	9526	9526
		6007	6007	6007	6007	6007	6007	6007	6007	6007	6007	6007

1) inner width 2) outer width 3) inner heigth 4) outer height 5) outer length

= supply air = exhaust air = extract air = outdoor air

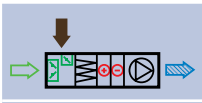
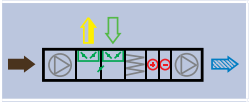
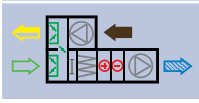
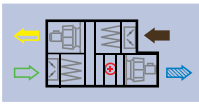
	Size	FL 20X20	FL20X30	FL30X30	FL30X40	FL30X50	FL30X60	FL40X40	FL40X50	FL40X60	FL40X70	FL50X50	FL50X60	FL50X70	FL50X80	FL50X90
	B [1]	612	612	918	918	918	918	1224	1224	1224	1224	1530	1530	1530	1530	1530
	B' [2]	772	772	1078	1078	1078	1078	1384	1384	1384	1384	1690	1690	1690	1690	1690
	H [3]	612	918	918	1224	1530	1836	1224	1530	1836	2142	1530	1836	2142	2508	2814
	H' [4]	722	1028	1028	1334	1640	1946	1334	1640	1946	2252	1640	1946	2252	2618	2924
Run around																
	L [5]	4324	4324	4477	4477	4477	4477	4936	4936	4936	4936	4936	5395	5395	5395	5395
Supply units																
	L [5]	3559	3559	3712	3712	3712	3712	4171	4171	4171	4171	4171	4630	4630	4630	4630
	L [5]	3559	3559	3712	3712	3712	3712	4171	4171	4171	4171	4171	4630	4630	4630	4630

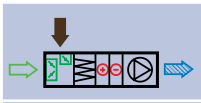
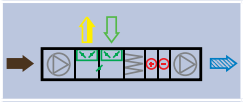
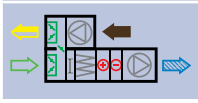
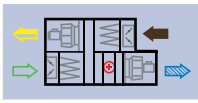
	Size	FL50X100	FL60X60	FL60X70	FL60X80	FL60X90	FL60X100	FL60X110	FL60X120	FL70X70	FL70X80	FL70X90	FL70X100	FL70X110	FL80X80	FL80X90
	B [1]	1530	1836	1836	1836	1836	1836	1836	1836	2142	2142	2142	2142	2142	2508	2508
	B' [2]	1690	1996	1996	1996	1996	1996	1996	1996	2302	2302	2302	2302	2302	2668	2668
	H [3]	3120	1836	2142	2508	2814	3120	3426	3732	2142	2508	2814	3120	3426	2508	2814
	H' [4]	3230	1946	2252	2618	2924	3230	3536	3842	2252	2618	2924	3230	3536	2618	2924
Run around																
	L [5]	5395	5395	5395	5395	5395	5395	5395	5395	5395	5395	5395	5395	5395	5395	5395
Supply units																
	L [5]	4630	4630	4630	4630	4630	4630	4630	4630	4630	4630	4630	4630	4630	4630	4630
	L [5]	4630	4630	4630	4630	4630	4630	4630	4630	4630	4630	4630	4630	4630	4630	4630

	Size	FL80X100	FL80X110	FL80X120	FL80X130	FL90X90	FL90X100	FL90X110	FL90X120	FL90X130	FL100X100	FL100X110
	B [1]	2508	2508	2508	2508	2814	2814	2814	2814	2814	3120	3120
	B' [2]	2668	2668	2668	2668	2974	2974	2974	2974	2974	3280	3280
	H [3]	3120	3426	3732	4038	2814	3120	3426	3732	4038	3120	3426
	H' [4]	3230	3536	3842	4148	2924	3230	3536	3842	4148	3230	3536
Run around												
	L [5]	5395	5395	5395	5395	5395	5395	5395	5395	5395	5395	5395
Supply units												
	L [5]	4630	4630	4630	4630	4630	4630	4630	4630	4630	4630	4630
	L [5]	4630	4630	4630	4630	4630	4630	4630	4630	4630	4630	4630

1) inner width
2) outer width
3) inner heigth
4) outer height
5) outer length

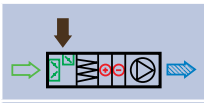
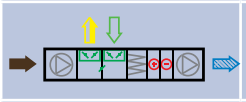
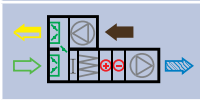
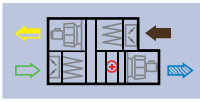
= supply air = exhaust air = extract air = outdoor air

	Size	FL 20X20	FL20X30	FL30X30	FL30X40	FL30X50	FL30X60	FL40X40	FL40X50	FL40X60	FL40X70	FL50X50	FL50X60	FL50X70	FL50X80	FL50X90
	B [1]	612	612	918	918	918	918	1224	1224	1224	1224	1530	1530	1530	1530	1530
	B' [2]	772	772	1078	1078	1078	1078	1384	1384	1384	1384	1690	1690	1690	1690	1690
	H [3]	612	918	918	1224	1530	1836	1224	1530	1836	2142	1530	1836	2142	2508	2814
	H' [4]	722	1028	1028	1334	1640	1946	1334	1640	1946	2252	1640	1946	2252	2618	2924
Units with mixing sections																
	L [5]	4058	4058	4211	4211	4211	4211	4670	4670	4670	4670	5129	5282	5282	5282	5282
	L [5]	5701	5701	6007	6007	6007	6007	6772	6772	6772	6772	7690	7843	7843	7843	7843
	L [5]	4171	4171	4324	4477	4477	4477	4783	4783	4783	4783	5089	5242	5242	5242	5242
Horse shoe																
	L [5]	4477	4477	4630	4630	4630	4630	4936	4936	4936	4936	5242	5242	5242	5242	5242

	Size	FL50X100	FL60X60	FL60X70	FL60X80	FL60X90	FL60X100	FL60X110	FL60X120	FL70X70	FL70X80	FL70X90	FL70X100	FL70X110	FL80X80	FL80X90
	B [1]	1530	1836	1836	1836	1836	1836	1836	1836	2142	2142	2142	2142	2142	2508	2508
	B' [2]	1690	1996	1996	1996	1996	1996	1996	1996	2302	2302	2302	2302	2302	2668	2668
	H [3]	3120	1836	2142	2508	2814	3120	3426	3732	2142	2508	2814	3120	3426	2508	2814
	H' [4]	3230	1946	2252	2618	2924	3230	3536	3842	2252	2618	2924	3230	3536	2618	2924
Units with mixing sections																
	L [5]	5282	5435	5435	5435	5435	5435	5435	5435	5894	5894	5894	5894	5894	5894	6047
	L [5]	7843	8149	8455	8455	8455	8455	8455	8455	9067	9067	9067	9067	9373	9067	9373
	L [5]	5242	5548	5548	5548	5548	5548	5548	5548	5854	5854	5854	5854	5854	6007	6007
Horse shoe																
	L [5]	5242	5395	5395	5395	5395	5395	5395	5395	5701	5701	5701	5701	5701	5701	5701

1) inner width 2) outer width 3) inner heigth 4) outer height 5) outer length

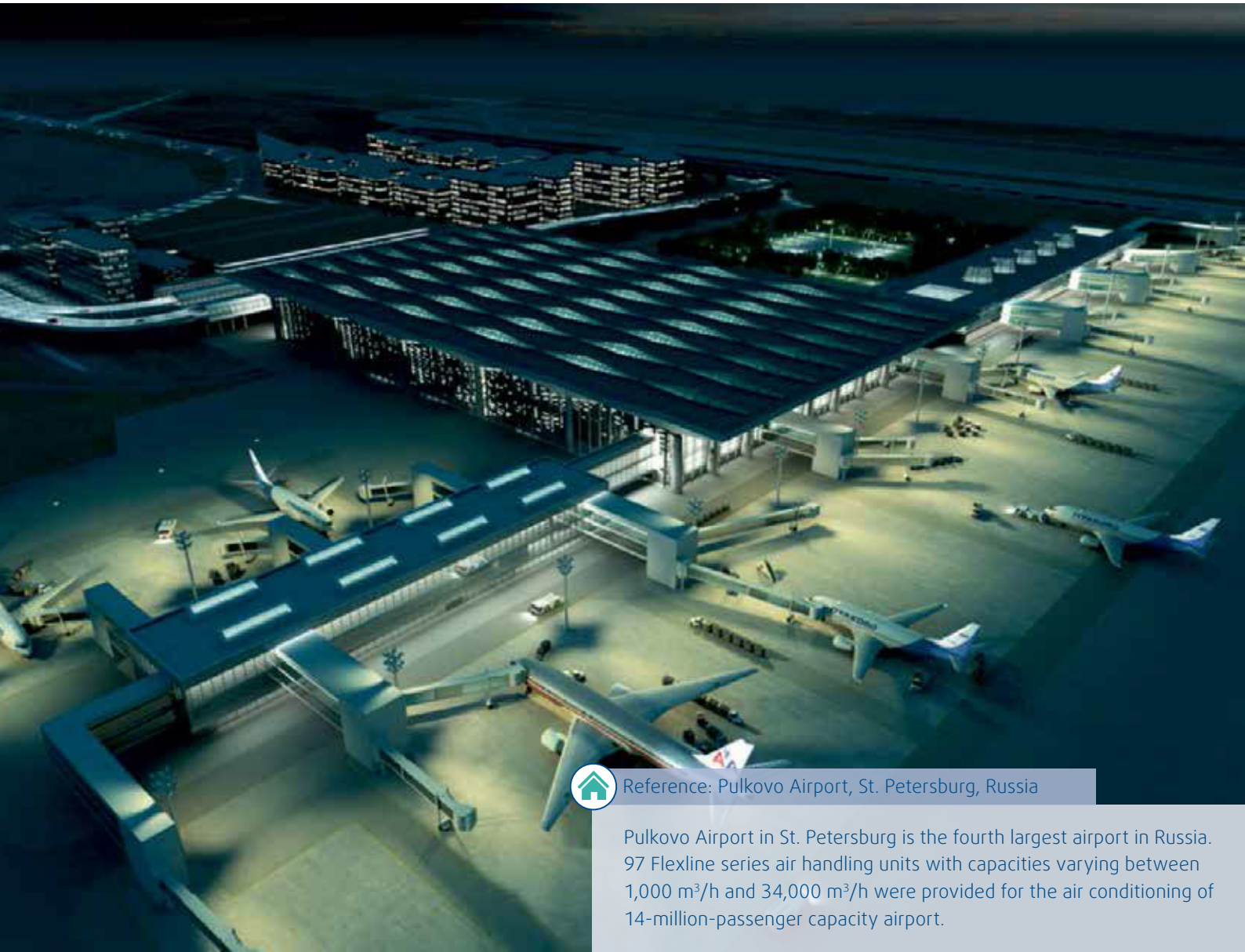
= supply air = exhaust air = extract air = outdoor air

	Size	FL80X100	FL80X110	FL80X120	FL80X130	FL90X90	FL90X100	FL90X110	FL90X120	FL90X130	FL100X100	FL100X110
	B [1]	2508	2508	2508	2508	2814	2814	2814	2814	2814	3120	3120
	B' [2]	2668	2668	2668	2668	2974	2974	2974	2974	2974	3280	3280
	H [3]	3120	3426	3732	4038	2814	3120	3426	3732	4038	3120	3426
	H' [4]	3230	3536	3842	4148	2924	3230	3536	3842	4148	3230	3536
Units with mixing sections												
	L [5]	6047	6047	6047	6047	6047	6047	6047	6047	6047	6047	6047
	L [5]	9373	9373	9373	9373	9373	9373	9373	9373	9373	9373	9373
	L [5]	6007	6007	6007	6007	6160	6160	6160	6160	6160	6160	6160
Horse shoe												
	L [5]	5701	5701	5701	5701	5701	5701	5701	5701	5701	5701	5701

1) inner width 2) outer width 3) inner heigth 4) outer height 5) outer length

Reference: Flame Tower, Baku, Azerbaijan

Being considered one of the most prestigious projects in Azerbaijan, the Flame Tower in the capital city of Baku was provided with 69 Flexline air handling units with capacities varying between 6,000 m^3/h and 75,000 m^3/h.



Reference: Pulkovo Airport, St. Petersburg, Russia

Pulkovo Airport in St. Petersburg is the fourth largest airport in Russia. 97 Flexline series air handling units with capacities varying between 1,000 m^3/h and 34,000 m^3/h were provided for the air conditioning of 14-million-passenger capacity airport.

BA

BA is a Eurovent certified series of air handling units for air conditioning, ventilation, heat recovery and filtration available in 41 models covering flow ranging from 1000 CMH to 150000 CMH. Each unit is designed and manufactured as per customer requirement. The units are available in various configurations namely horizontal floor mounted, ceiling suspended, vertical floor mounted, two tier horizontal unit with heat recovery wheel etc.

Frame work

The fram is made of extruded aluminium profile with specially designed three way corners. The frame is designed in such a way that it can bear the load of structure which is distributed equally along the entire housing.

Fan

BA air handling units incorporate AMCA certified DIDW centrifugal and plug fans. The blower motor is mounted inside the unit leading to quieter operation. The base of the motor and blower is made of extruded aluminium section as standard. The fan is completely isolated from the unit casing with anti vibration isolators and fire retardant flexible connection at fan outlet.

Coil

Coils are computer selected to obtain optimum psychrometric efficiency with low air and water pressure drops. The chilled water, direct expansion or hot water coils are constructed from high quality seamless drawn copper tubes, mechanically bonded to aluminium fins. The coil assembly complete with header can be fitted on aluminium rails and nylon rollers, for easy withdrawal from either side.

Panel

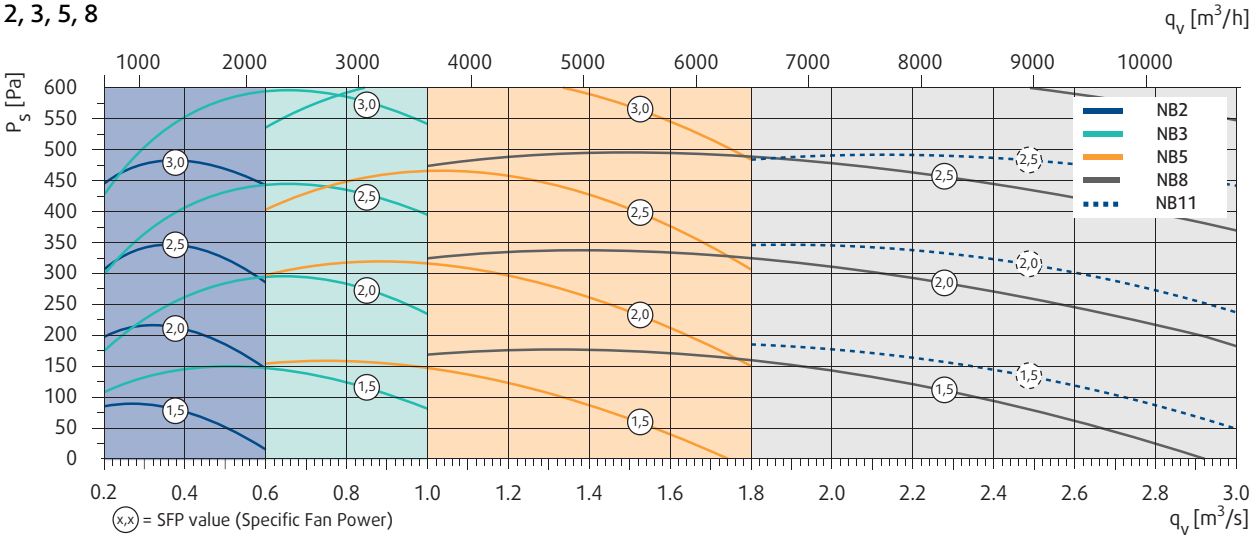
Double skin panels are avaliable in 25 mm and 50 mm thickness injected with CFC free polyurethane foam (PUF) of 40±2 Kg./cu. mt. Density. Pre coated and plain G1 sheet 0.6 mm thick are used as standard for outer and inner skins respectively. Other thicknesses and finishes are avaliable on request. Inner/outer skin of stainless steel/aluminium is available as an option. Special construction panels, having mineral wool insulation also available on request.

Filter

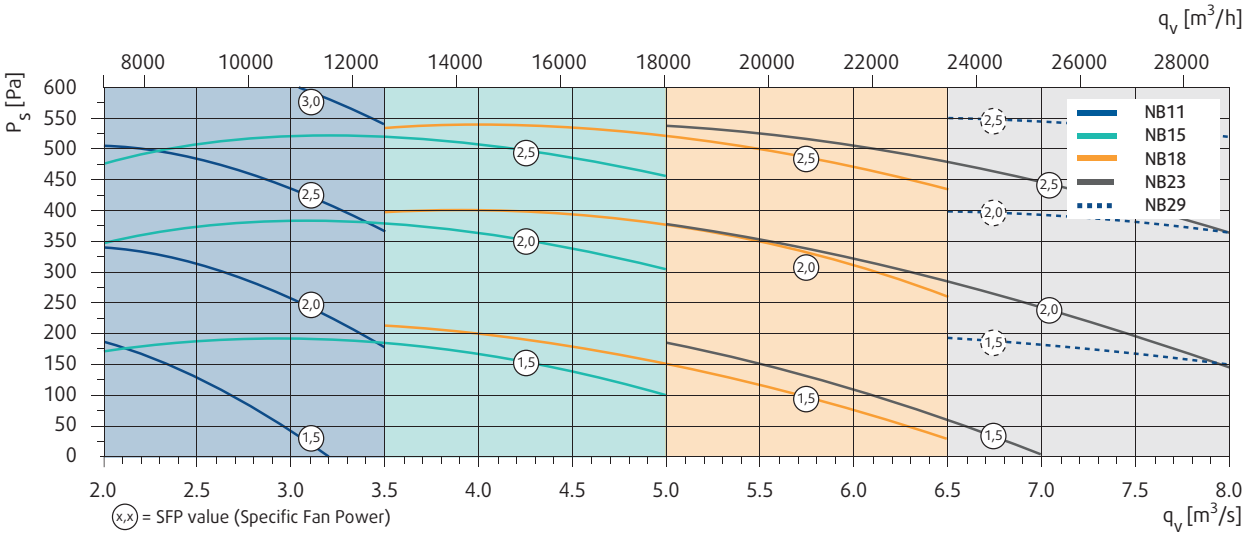
50 mm thick flat cleanable pre-filters are offered as standard. Optionally filter selection with Microvee/Bag/HEPA/Carbon/Electrostatic filters are offered as per customers requirement.

Information about functions can be found on page 162. Information about control system can be found on page 170.

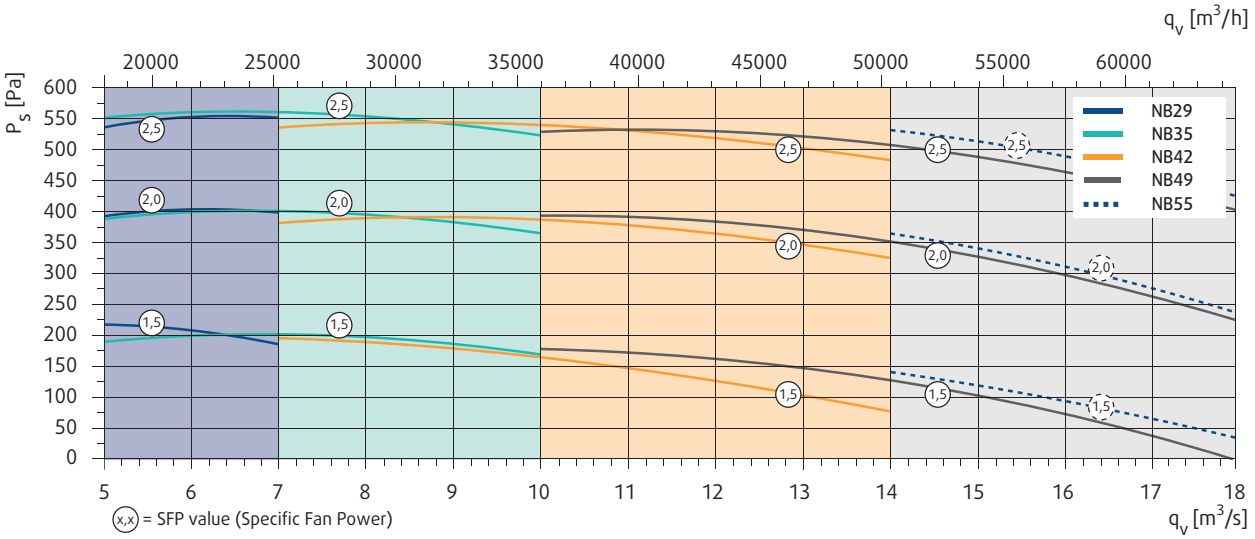
Working range
2, 3, 5, 8



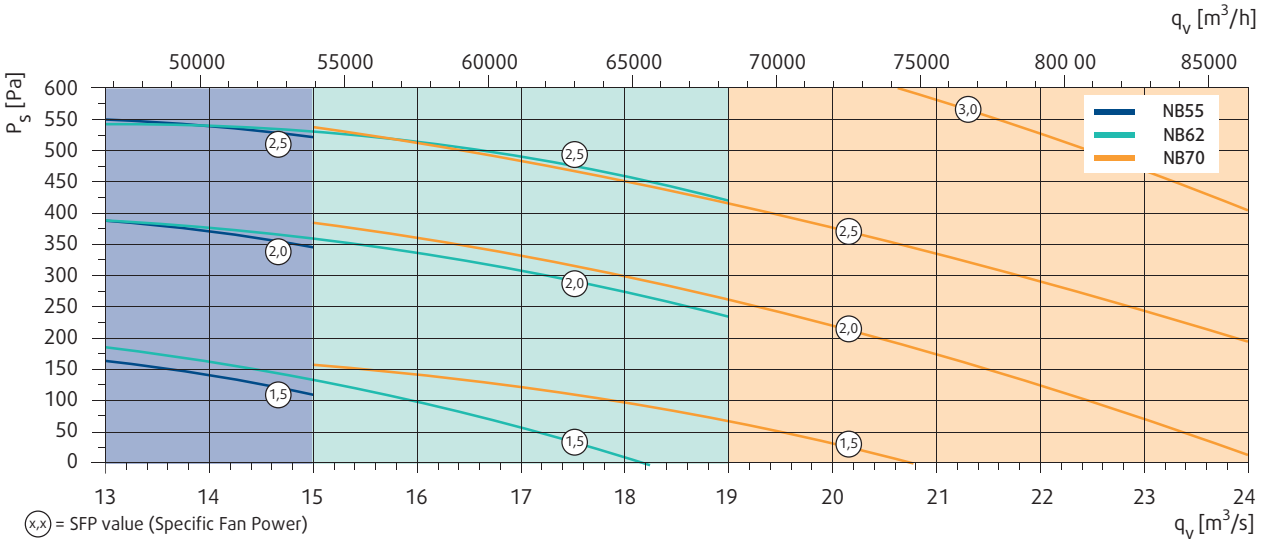
11, 15, 18, 23



29, 35, 42, 49



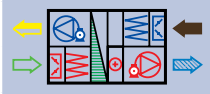
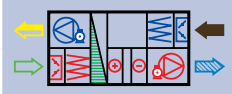
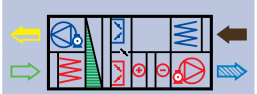
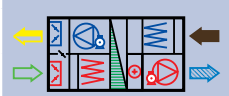
55, 62, 70



Unit Dimensions

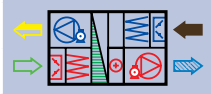
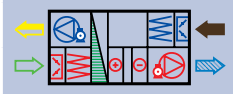
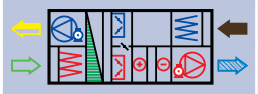
In order to facilitate the work of designing an air handling unit based on the numerous options available, we have provided specifications for the most common unit combinations for units with DVE plug fans.

These examples should help to speed up the process of designing your preferred units with the right functions. Choose the unit version that best matches your preferences and then add or remove functions as required.

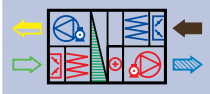
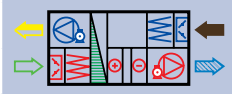
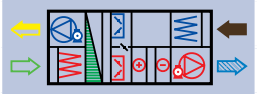
Rotary heat exchanger			Size													
			2	2A	3	3A	4	5	6	7	9	10	12	14	15	17	19
Panel 25		Width	874	915	958	1004	1128	1229	1281	1430	1430	1559	1625	1625	1765	1846	2000
		Height[1]	1246	1550	1550	1850	1850	1850	1880	1880	2358	2358	2668	2968	2984	2984	2984
Panel 50		Width	874	915	958	1004	1128	1229	1281	1430	1430	1559	1625	1625	1765	1846	2000
		Height[1]	1246	1550	1550	1850	1850	1850	1880	1880	2358	2358	2668	2968	2984	2984	2984
C1V 	Panel 25	Length	2805	2805	2805	2980	2980	2980	2980	2980	2980	3330	3330	3330	3330	3565	3740
		Weight[2]	394	435	454	565	607	641	668	727	824	1049	1178	1312	1392	1592	1748
	Panel 50	Length	2865	2865	2865	2865	2865	2865	3040	3040	3040	3215	3390	3565	3390	3565	3565
		Weight[2]	409	453	468	573	616	647	742	806	964	1069	1221	1423	1442	1643	1732
C2V 	Panel 25	Length	3330	3330	3330	3330	3330	3505	3505	3505	3505	3680	3855	3855	3855	4090	4090
		Weight[2]	426	476	489	561	605	696	728	799	907	1116	1274	1417	1567	1713	1809
	Panel 50	Length	3390	3390	3390	3390	3390	3565	3565	3565	3565	3740	3915	3915	3915	4090	4090
		Weight[2]	442	495	509	584	629	725	757	875	1032	1157	1321	1468	1621	1768	1867
C3V 	Panel 25	Length	3330	3330	3330	3680	3680	3680	3680	3680	3680	3855	4030	4030	4030	4265	4265
		Weight[2]	422	468	487	598	659	700	752	816	916	1076	1226	1329	1444	1645	1717
	Panel 50	Length	3390	3390	3390	3740	3740	3740	3740	3740	3740	3915	4090	4090	4090	4265	4265
		Weight[2]	439	487	507	623	686	741	781	848	953	1116	1272	1378	1497	1699	1774
C4V 	Panel 25	Length	3855	3855	3855	4030	4030	4205	4205	4205	4205	4205	4555	4555	4555	4790	4615
		Weight[2]	454	509	522	594	657	755	812	888	999	1143	1322	1434	1619	1766	1778
	Panel 50	Length	3915	3915	3915	4265	4265	4440	4265	4265	4265	4440	4615	4440	4615	4790	4790
		Weight[2]	472	529	548	634	699	819	796	917	1021	1204	1372	1423	1676	1824	1909
C5V 	Panel 25	Length	3330	3330	3330	3680	3680	3680	3680	3680	3680	3855	4030	4030	4030	4265	4265
		Weight[2]	436	482	502	615	677	718	770	836	938	1098	1250	1341	1518	1659	1731
	Panel 50	Length	3390	3390	3390	3740	3740	3740	3740	3740	3740	3915	4090	4090	4090	4265	4265
		Weight[2]	453	503	523	640	704	747	801	869	976	1140	1298	1392	1511	1714	1789
C6V 	Panel 25	Length	3855	3855	3855	4030	4030	4205	4205	4205	4205	4205	4555	4555	4555	4790	4615
		Weight[2]	468	523	537	611	675	773	830	908	1021	1165	1346	1446	1693	1780	1792
	Panel 50	Length	3915	3915	3915	4265	4265	4440	4265	4265	4265	4440	4615	4440	4615	4790	4790
		Weight[2]	486	545	564	651	717	825	816	938	1044	1228	1398	1437	1690	1839	1924

Dimensions in mm. Weights in kg.
[1] Does not include the height of the metal frame. [2] Does not include the weight of the metal frame.

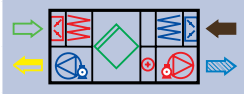
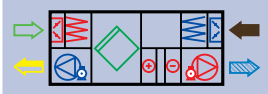
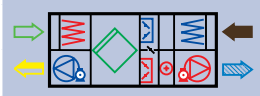
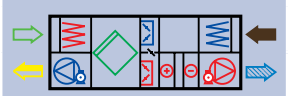
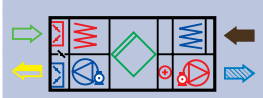
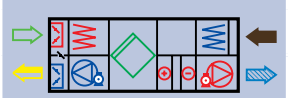
= supply air = exhaust air = extract air = outdoor air

Rotary heat exchanger			Size													
			20	22	24	26	27	29	31	32	34	37	41	43	48	51
Panel 25		Width	2154	2405	2405	2259	2335,5	2412	2412	2710	2744	2710	2770	2710	2822	2850
		Height[1)]	2984	3348	3348	3630	3653	3676	4250	3676	3676	4060	4250	4910	4910	5220
Panel 50		Width	2154	2405	2405	2259	2335,5	2412	2412	2710	2744	2710	2770	2710	2822	2850
		Height[1)]	2984	3348	3348	3630	3653	3676	4250	3676	3676	4060	4250	4910	4910	5220
C1V 	Panel 25	Length	3740	3740	3740	3740	3740	3740	4265	4265	4265	4500	4675	5025	5025	5375
		Weight[2)]	1837	2045	2080	2165	2252	2339	2985	3030	3061	3301	3507	4028	4144	4622
	Panel 50	Length	3740	3740	3740	3740	3740	3740	4265	4265	4265	4500	4675	4675	5025	5375
		Weight[2)]	1895	2113	2148	2233	2323	2413	3073	3090	3149	3317	3609	3786	4263	4755
C2V 	Panel 25	Length	4265	4265	4265	4265	4265	4265	4790	4790	4790	5200	5375	5375	5725	5900
		Weight[2)]	1977	2203	2243	2334	2429	2524	3185	3206	3271	3467	3768	3953	4442	4835
	Panel 50	Length	4265	4265	4265	4265	4265	4265	4790	4790	4790	5200	5375	5550	5725	5900
		Weight[2)]	2040	2277	2317	2408	2506	2604	3280	3301	3366	3571	3879	4305	4570	4972
C3V 	Panel 25	Length	4440	4440	4440	4440	4440	4440	4965	4965	5140	5200	5375	5375	6075	6075
		Weight[2)]	1895	2109	2144	2229	2317,5	2406	3056	3073	3173	3296	3583	3755	4574	4706
	Panel 50	Length	4440	4440	4440	4440	4440	4440	4965	4965	5140	5200	5375	5725	6075	6075
		Weight[2)]	1957	2181	2216	2302	2393	2484	3149	3165	3267	3396	3690	4156	4705	4919
C4V 	Panel 25	Length	4965	4965	4965	4965	4965	4965	5490	5490	5665	5900	6075	5725	6775	6600
		Weight[2)]	2035	2267	2307	2398	2494,5	2591	3256	3249	3383	3462	3844	3680	4872	4919
	Panel 50	Length	4965	4965	4965	4965	4965	4965	5490	5490	5665	5900	6075	6600	6775	6600
		Weight[2)]	2102	2345	2385	2477	2576	2675	3356	3376	3484	3650	3960	4675	5012	5136
C5V 	Panel 25	Length	4440	4440	4440	4440	4440	4440	4965	4965	5140	5200	5375	5375	6075	6075
		Weight[2)]	1910	2125	2160	2245	2325,5	2406	3056	3101	3173	3296	3559	3755	4574	4781
	Panel 50	Length	4440	4440	4440	4440	4440	4440	4965	4965	5140	5200	5375	5375	6075	6075
		Weight[2)]	1972	2198	2233	2319	2401,5	2484	3149	3165	3267	3396	3666	3871	4705	4919
C6V 	Panel 25	Length	4965	4965	4965	4965	4965	4965	5490	5490	5665	5900	6075	5725	6775	6600
		Weight[2)]	2050	2283	2323	2414	2502,5	2591	3256	3277	3383	3462	3820	3680	4872	4994
	Panel 50	Length	4965	4965	4965	4965	4965	4965	5490	5490	5665	5900	6075	6250	6775	6600
		Weight[2)]	2117	2362	2402	2494	2584,5	2675	3356	3376	3484	3650	3936	4390	5012	5136

Dimensions in mm. Weights in kg.
[1)] Does not include the height of the metal frame. [2)] Does not include the weight of the metal frame.

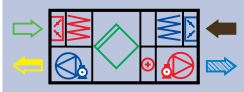
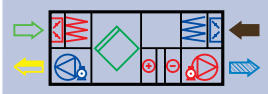
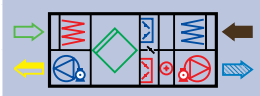
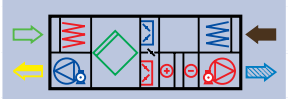
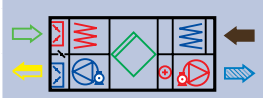
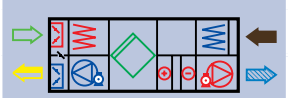
Rotary heat exchanger			Size				
			54	61	65	68	71
Panel 25		Width	2822	3078	3232	3386	3685
		Height[1]	5520	5520	5520	5520	5520
Panel 50		Width	2822	3078	3232	3386	3685
		Height[1]	5520	5520	5520	5520	5520
C1V 	Panel 25	Length	5375	5375	5550	5550	5550
		Weight[2]	4887	5278	5437	5604	6392
	Panel 50	Length	5375	5375	5550	5550	5550
		Weight[2]	5024	5335	5626	6261	6579
C2V 	Panel 25	Length	5900	5900	6075	6075	6250
		Weight[2]	5037	5283	5696	5953	6717
	Panel 50	Length	5900	5900	6075	6250	6250
		Weight[2]	5178	5433	5855	6577	6894
C3V 	Panel 25	Length	6075	6075	6250	6250	6250
		Weight[2]	4973	5200	5626	5926	6491
	Panel 50	Length	6075	6075	6250	6250	6250
		Weight[2]	5116	5352	5787	6092	6669
C4V 	Panel 25	Length	6600	6600	6775	6775	6950
		Weight[2]	5123	5205	5885	6275	6816
	Panel 50	Length	6600	6600	6775	6950	6950
		Weight[2]	5270	5450	6016	6408	6984
C5V 	Panel 25	Length	6075	6075	6250	6250	6250
		Weight[2]	4973	5200	5626	5926	6491
	Panel 50	Length	6075	6075	6250	6250	6250
		Weight[2]	5116	5352	5787	6092	6669
C6V 	Panel 25	Length	6600	6600	6775	6775	6950
		Weight[2]	5123	5205	5885	6275	6816
	Panel 50	Length	6600	6600	6775	6950	6950
		Weight[2]	5270	5450	6016	6408	6984

Dimensions in mm. Weights in kg.
[1] Does not include the height of the metal frame. [2] Does not include the weight of the metal frame.

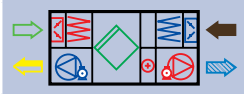
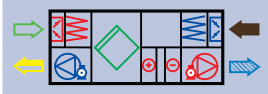
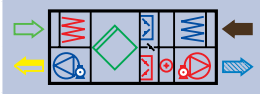
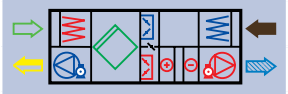
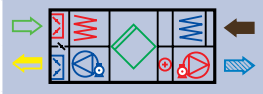
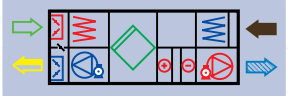
Plate heat exchanger			Size													
			2	2A	3	3A	4	5	6	7	9	10	12	14	15	17	19
Panel 25		Width	874	915	958	1004	1128	1229	1281	1430	1430	1559	1625	1625	1765	1846	2000
		Height[1]	1246	1550	1550	1850	1850	1850	1880	1880	2358	2358	2668	2968	2984	2984	2984
Panel 50		Width	874	915	958	1004	1128	1229	1281	1430	1430	1559	1625	1625	1765	1846	2000
		Height[1]	1246	1550	1550	1850	1850	1850	1880	1880	2358	2358	2668	2968	2984	2984	2984
Q1V 	Panel 25	Length	3330	3330	3330	3330	3330	3330	3330	3330	3505	3680	4380	4380	4555	4615	4790
		Weight[2]	395	457	491	562	612	666	706	765	888	979	1293	1403	1525	1571	1738
	Panel 50	Length	3390	3390	3390	3390	3390	3390	3390	3390	3565	3740	4440	4615	4965	5140	5140
		Weight[2]	413	477	513	586	639	695	736	797	925	1006	1343	1503	1719	1781	1961
Q2V 	Panel 25	Length	3855	3855	3855	3680	3680	3855	3855	3855	4030	4030	4905	4905	5080	5140	5140
		Weight[2]	427	498	526	558	610	721	766	837	971	1046	1389	1508	1700	1692	1799
	Panel 50	Length	3915	3915	3915	3915	3915	4090	3915	3915	4090	4265	4965	4965	5490	5665	5665
		Weight[2]	446	519	554	597	652	773	751	866	993	1094	1443	1548	1898	1906	2096
Q3V 	Panel 25	Length	3680	3680	4030	4030	4030	4030	4030	4205	4205	4380	5080	5255	5430	5840	5840
		Weight[2]	395	462	487	552	601	654	693	780	880	971	1282	1437	1561	1687	1842
	Panel 50	Length	3740	3740	4090	4090	4090	4090	4090	4090	4265	4440	5140	5490	5490	5840	5840
		Weight[2]	413	482	505	577	637	687	723	782	918	998	1333	1513	1621	1751	1928
Q4V 	Panel 25	Length	4205	4205	4555	4380	4380	4555	4555	4730	4730	4730	5605	5780	5955	6365	6190
		Weight[2]	427	503	522	548	599	709	753	852	963	1038	1378	1542	1736	1808	1903
	Panel 50	Length	4265	4265	4615	4615	4615	4790	4615	4615	4790	4965	5665	5840	6015	6365	6365
		Weight[2]	446	524	546	588	650	765	738	851	986	1086	1433	1558	1800	1876	2063
Q5V 	Panel 25	Length	3680	3680	4030	4030	4030	4030	4030	4030	4205	4380	5080	5255	5605	5840	5840
		Weight[2]	383	442	483	552	610	659	693	750	880	971	1282	1437	1595	1687	1861
	Panel 50	Length	3740	3740	4090	4090	4090	4090	4090	4090	4265	4440	5140	5315	5490	5490	5490
		Weight[2]	400	462	505	577	628	683	723	782	918	998	1315	1493	1625	1752	1928
Q6V 	Panel 25	Length	4205	4205	4555	4380	4380	4555	4555	4555	4730	4730	5605	5780	6130	6365	6190
		Weight[2]	415	483	518	548	608	714	753	822	963	1038	1378	1542	1770	1808	1922
	Panel 50	Length	4265	4265	4615	4615	4615	4790	4615	4615	4790	4965	5665	5665	6015	6015	6015
		Weight[2]	433	504	546	588	641	761	738	851	986	1086	1415	1538	1804	1877	2063

Dimensions in mm. Weights in kg.
[1] Does not include the height of the metal frame. [2] Does not include the weight of the metal frame.

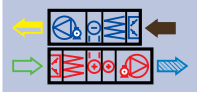
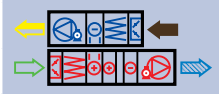
= supply air = exhaust air = extract air = outdoor air

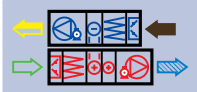
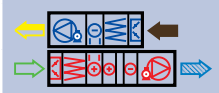
Plate heat exchanger			Size												
			20	22	24	26	27	29	31	32	34	37	41	43	48	51
Panel 25		Width	2154	2405	2405	2259	2335,5	2412	2412	2710	2744	2710	2770	2710	2822	2850
		Height[1]	2984	3348	3348	3630	3653	3676	4250	3676	3676	4060	4250	4910	4910	5220
Panel 50		Width	2154	2405	2405	2259	2335,5	2412	2412	2710	2744	2710	2770	2710	2822	2850
		Height[1]	2984	3348	3348	3630	3653	3676	4250	3676	3676	4060	4250	4910	4910	5220
Q1V 	Panel 25	Length	4790	4790	4790	4790	4965	5140	5665	5315	5840	6425	7475	7475	7475	7475
		Weight[2]	1817	2021	2038	2065	2279,5	2494	2799	2705	3068	3607	4076	4352	4489	4833
	Panel 50	Length	4790	4790	4965	4965	5052,5	5140	5665	5840	7065	6425	7475	6425	7475	7475
		Weight[2]	1964	2207	2299	2277	2430,5	2584	2899	3131	3553	3722	4200	4080	4628	5084
Q2V 	Panel 25	Length	5315	5315	5315	5315	5490	5665	6190	5840	6365	7125	8175	7825	8175	8000
		Weight[2]	1957	2179	2201	2234	2456,5	2679	2999	2881	3278	3773	4337	4277	4787	5046
	Panel 50	Length	5315	5315	5490	5490	5577,5	5665	6190	6365	7590	7125	8175	7300	8175	8000
		Weight[2]	2109	2371	2468	2452	2613,5	2775	3106	3342	3770	3976	4470	4599	4935	5301
Q3V 	Panel 25	Length	5840	5490	5490	5840	6015	6190	6365	6540	6540	6775	8175	8175	8175	8175
		Weight[2]	1976	2141	2145	2290	2394,5	2499	2742	2941	3014	3260	4066	4289	4489	4843
	Panel 50	Length	5490	5490	5490	5665	5752,5	5840	6365	6540	6540	6775	8175	8175	8875	8175
		Weight[2]	1928	2155	2215	2290	2404	2518	2899	3131	3170	3368	4200	4497	4930	4990
Q4V 	Panel 25	Length	6365	6015	6015	6365	6540	6715	6890	7065	7065	7475	8875	8525	8875	8700
		Weight[2]	2116	2299	2308	2459	2571,5	2684	2942	3117	3224	3426	4327	4214	4787	5056
	Panel 50	Length	6015	6015	6015	6190	6277,5	6365	6890	7065	7065	7475	8875	9050	9575	8700
		Weight[2]	2073	2319	2384	2465	2587	2709	3106	3342	3387	3622	4470	5016	5237	5207
Q5V 	Panel 25	Length	5840	5490	5490	5665	5752,5	5840	6365	6540	7765	7125	8175	8175	8175	8175
		Weight[2]	1976	2084	2137	2210	2321	2432	2799	3030	3437	3607	4066	4352	4489	4833
	Panel 50	Length	5840	5490	5490	5665	5752,5	5840	6365	6015	6540	6775	8175	8175	8175	8175
		Weight[2]	2047	2163	2215	2290	2404	2518	2899	2800	3170	3368	4210	4497	4638	4990
Q6V 	Panel 25	Length	6365	6015	6015	6190	6277,5	6365	6890	7065	8290	7825	8875	8525	8875	8700
		Weight[2]	2116	2242	2300	2379	2498	2617	2999	3206	3647	3773	4327	4277	4787	5046
	Panel 50	Length	6365	6015	6015	6190	6277,5	6365	6890	6540	7065	7475	8875	9050	8875	8700
		Weight[2]	2192	2327	2384	2465	2587	2709	3106	3011	3387	3622	4480	5016	4945	5207

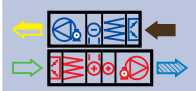
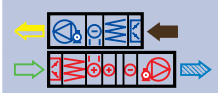
Dimensions in mm. Weights in kg.
[1] Does not include the height of the metal frame. [2] Does not include the weight of the metal frame.

Plate heat exchanger			Size				
			54	61	65	68	71
Panel 25		Width	2822	3078	3232	3386	3685
		Height[1)]	5520	5520	5520	5520	5520
Panel 50		Width	2822	3078	3232	3386	3685
		Height[1)]	5520	5520	5520	5520	5520
Q1V 	Panel 25	Length	7475	8175	8350	8525	8525
		Weight[2)]	4975	5631	6268	6246	6622
	Panel 50	Length	7475	7650	8350	8525	8525
		Weight[2)]	5242	5569	6458	6444	6833
Q2V 	Panel 25	Length	8000	8700	8875	9050	9225
		Weight[2)]	5125	5636	6527	6595	6947
	Panel 50	Length	8000	8175	8875	9225	9225
		Weight[2)]	5396	5667	6687	6760	7148
Q3V 	Panel 25	Length	8175	8875	9050	9225	9225
		Weight[2)]	4975	5631	6003	6260	6622
	Panel 50	Length	8175	8875	9050	9225	9225
		Weight[2)]	5232	5814	6458	6444	6833
Q4V 	Panel 25	Length	8700	9400	9575	9750	9925
		Weight[2)]	5125	5636	6262	6609	6947
	Panel 50	Length	8700	9400	9575	9925	9925
		Weight[2)]	5386	5912	6687	6760	7148
Q5V 	Panel 25	Length	8175	8875	9050	9225	9225
		Weight[2)]	4975	5631	6268	6246	6622
	Panel 50	Length	8175	8875	9050	9225	9225
		Weight[2)]	5137	5814	6458	6444	6833
Q6V 	Panel 25	Length	8700	9400	9575	9750	9925
		Weight[2)]	5125	5636	6527	6595	6947
	Panel 50	Length	8700	9400	9575	9925	9925
		Weight[2)]	5291	5912	6687	6760	7148

Dimensions in mm. Weights in kg.
[1)] Does not include the height of the metal frame. [2)] Does not include the weight of the metal frame.

Liquid-coupled heat exchanger			Size													
			2	2A	3	3A	4	5	6	7S	7	9	10	12	14	15	17
Panel 25		Width	874	915	958	1004	1128	1229	1281	1575	1430	1430	1559	1625	1625	1765	1846
		Height[1]	1346	1650	1650	1950	1950	1950	1980	1780	1980	2458	2458	2768	3068	3084	3084
Panel 50		Width	874	915	958	1004	1128	1229	1281	1575	1430	1430	1559	1625	1625	1765	1846
		Height[1]	1346	1650	1650	1950	1950	1950	1980	1780	1271	2458	2458	2768	3068	3084	3084
R1V 	Panel 25	Length	2685	2685	2860	2860	2860	2860	2860	2860	3035	3035	3035	3035	3385	3385	3405
		Weight[2]	324	377	419	487	543	591	639	594	730	839	929	1050	1241	1325	1437
	Panel 50	Length	2705	2705	2880	2880	2880	2880	2880	2880	3055	3055	3055	3055	3405	3405	3405
		Weight[2]	337	393	437	510	565	614	663	623	758	870	963	1087	1283	1370	1482
R2V 	Panel 25	Length	3210	3210	3385	3385	3385	3385	3385	3385	3385	3560	3560	3560	3735	3910	3930
		Weight[2]	359	416	462	533	594	647	701	653	792	916	1015	1146	1337	1474	1559
	Panel 50	Length	3230	3230	3405	3405	3405	3405	3405	3405	3405	3580	3580	3580	3755	3930	3930
		Weight[2]	374	433	482	558	622	678	727	685	822	950	1051	1187	1382	1523	1608

Liquid-coupled heat exchanger			Size													
			19	20	22	24	26	27	29	31	32	34	37	41	43	48	51
Panel 25		Width	2000	2154	2405	2405	2259	2335,5	2412	2412	2710	2744	2710	2770	2710	2822	2850
		Height[1]	3084	3084	3448	3448	3730	3753	3776	4350	3776	3776	4160	4350	5010	5010	5320
Panel 50		Width	2000	2154	2405	2405	2259	2335,5	2412	2412	2710	2744	2710	2770	2710	2822	2850
		Height[1]	3084	3084	3448	3448	3730	3753	3776	4350	3776	3776	4160	4350	5010	5010	5320
R1V 	Panel 25	Length	3405	3405	3405	3405	3580	3667,5	3755	3930	4105	4105	4125	4125	4125	4125	4125	4125
		Weight[2]	1571	1656	1836	1929	2014	2162	2310	2776	2990	3040	3193	3362	3549	3784	4108
	Panel 50	Length	3405	3405	3405	3405	3580	3667,5	3755	3930	4105	4105	4125	4125	4125	4125	4125	4125
		Weight[2]	1619	1707	1896	1990	2076	2227,5	2379	2859	3073	3124	3294	3455	3650	3888	4218
R2V 	Panel 25	Length	3930	3930	3930	3930	4280	4367,5	4455	4455	4630	4630	4825	4825	4825	4825	5000
		Weight[2]	1703	1814	2013	2094	2223	2368	2513	2927	3020	3076	3453	3626	3892	4147	4448
	Panel 50	Length	3930	3930	3930	3930	3930	4192,5	4455	4455	4455	4630	4825	4825	4825	4825	4825
		Weight[2]	1756	1870	2079	2161	2212	2400,5	2589	3016	3058	3166	3561	3790	4003	4261	4462

Liquid-coupled heat exchanger			SIZE									
			54	61	65	68S	68	71	82	92	100	117	130
Panel 25		Width	2822	3078	3232	5488	3386	3685	5540	5644	5700	6000	6000
		Height[1]	5620	5620	5620	3776	5620	5620	4340	5010	5010	5620	6060
Panel 50		Width	2822	3078	3232	5488	3386	3685	5540	5644	5700	6000	6000
		Height[1]	5620	5620	5620	3776	5620	5620	4340	5010	5010	5620	6060
R1V 	Panel 25	Length	4125	4475	4475	4125	4475	4475	4125	4125	4475	4475	4475
		Weight[2]	4374	4838	4995	4659	5317	5551	5241	5804	6531	8314	7915
	Panel 50	Length	4125	4475	4475	4125	4475	4475	4125	4125	4125	4475	4475
		Weight[2]	4489	4970	5131	4807	5458	5702	5416	6071	6507	8547	8154
R2V 	Panel 25	Length	5000	5000	5175	4650	5175	5175	4825	4825	4825	5000	5175
		Weight[2]	4730	5120	5360	4864	5631	5880	5728	6400	6736	8790	8511
	Panel 50	Length	5000	5175	5175	4650	5175	5175	4825	4825	4825	5000	5175
		Weight[2]	4857	5329	5502	5024	5778	6037	5918	6685	7000	9030	8759

Dimensions in mm. Weights in kg.
[1] Does not include the height of the metal frame. [2] Does not include the weight of the metal frame.

= supply air = exhaust air = extract air = outdoor air

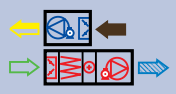
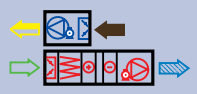
Supply air units			Size													
			2	2A	3	3A	4	5	6	7S	7	9	10	12	14	15	17
Panel 25		Width	874	915	958	1004	1128	1229	1281	1575	1430	1430	1559	1625	1625	1765	1846
		Height[1]	673	825	825	975	975	975	990	890	990	1229	1229	1384	1534	1542	1542
Panel 50		Width	874	915	958	1004	1128	1229	1281	1575	1430	1430	1559	1625	1625	1765	1846
		Height[1]	673	825	825	975	975	975	990	890	281	1229	1229	1384	1534	1542	1542
S1V 	Panel 25	Length	2685	2685	2860	2860	2860	2860	2860	2860	3035	3035	3035	3035	3385	3385	3405
		Weight[2]	146	170	190	219	244	266	290	266	332	381	421	477	568	605	650
	Panel 50	Length	2705	2705	2880	2880	2880	2880	2880	2880	3055	3055	3055	3055	3405	3405	3405
		Weight[2]	152	177	198	231	258	276	300	281	345	395	436	494	587	626	670
S2V 	Panel 25	Length	2685	2685	2860	2860	2860	2860	2860	2860	3035	3035	3035	3035	3385	3385	3405
		Weight[2]	178	207	229	268	299	325	349	328	398	458	508	573	673	720	787
	Panel 50	Length	2705	2705	2880	2880	2880	2880	2880	2880	3055	3055	3055	3055	3405	3405	3405
		Weight[2]	185	216	239	279	307	338	363	342	413	475	527	593	696	744	812

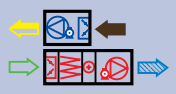
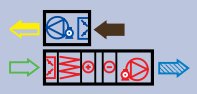
Supply air units			Size													
			19	20	22	24	26	27	29	31	32	34	37	41	43	48	51
Panel 25		Width	2000	2154	2405	2405	2259	2335,5	2412	2412	2710	2744	2710	2770	2710	2822	2850
		Height[1]	1542	1542	1724	1724	1865	1876,5	1888	2175	1888	1888	2080	2175	2505	2505	2660
Panel 50		Width	2000	2154	2405	2405	2259	2335,5	2412	2412	2710	2744	2710	2770	2710	2822	2850
		Height[1]	1542	1542	1724	1724	1865	1876,5	1888	2175	1888	1888	2080	2175	2505	2505	2660
S1V 	Panel 25	Length	3405	3405	3405	3405	3580	3667,5	3755	3930	4105	4105	4125	4125	4125	4125	4125	4125
		Weight[2]	720	758	839	894	914	1003,5	1093	1407	1424	1446	1517	1596	1692	1838	1927
	Panel 50	Length	3405	3405	3405	3405	3580	3667,5	3755	3930	4105	4105	4125	4125	4125	4125	4125	4125
		Weight[2]	742	781	866	922	942	1033,5	1125	1448	1464	1487	1572	1641	1741	1889	1980
S2V 	Panel 25	Length	3405	3405	3405	3405	3580	3667,5	3755	3930	4105	4105	4125	4125	4125	4125	4125	4125
		Weight[2]	851	898	997	1035	1100	1158,5	1217	1369	1566	1594	1676	1766	1857	1946	2181
	Panel 50	Length	3405	3405	3405	3405	3580	3667,5	3755	3930	4105	4105	4125	4125	4125	4125	4125	4125
		Weight[2]	877	926	1030	1068	1134	1194	1254	1411	1609	1637	1722	1814	1909	1999	2238

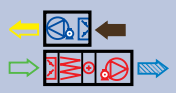
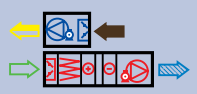
Supply air units			Size									
			54	61	65	68S	68	71	82	92	100	117	130
Panel 25		Width	2822	3078	3232	5488	3386	3685	5540	5644	5700	6000	6000
		Height[1]	2810	2810	2810	1888	2810	2810	2170	2505	2505	2810	3030
Panel 50		Width	2822	3078	3232	5488	3386	3685	5540	5644	5700	6000	6000
		Height[1]	2810	2810	2810	1888	2810	2810	2170	2505	2505	2810	3030
S1V 	Panel 25	Length	4125	4475	4475	4125	4475	4475	4125	4125	4475	4475	4475
		Weight[2]	2120	2249	2319	2199	2472	2578	2473	2738	2922	4312	3627
	Panel 50	Length	4125	4475	4475	4125	4475	4475	4125	4125	4125	4475	4475
		Weight[2]	2177	2310	2382	2271	2537	2648	2564	2912	3075	4423	3737
S2V 	Panel 25	Length	4125	4475	4475	4125	4475	4475	4125	4125	4475	4475	4475
		Weight[2]	2254	2589	2676	2460	2845	2973	2768	3066	3609	4002	4288
	Panel 50	Length	4125	4475	4475	4125	4475	4475	4125	4125	4125	4475	4475
		Weight[2]	2312	2660	2749	2536	2921	3054	2852	3159	3432	4124	4417

Dimensions in mm. Weights in kg.
[1] Does not include the height of the metal frame. [2] Does not include the weight of the metal frame.

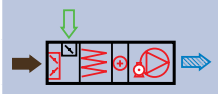
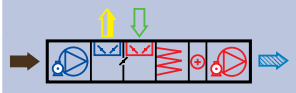
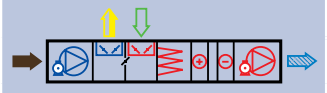
= supply air = exhaust air = extract air = outdoor air

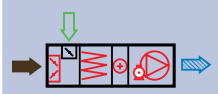
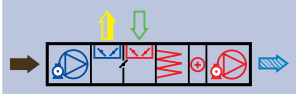
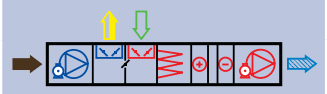
Supply air units			Size													
			2	2A	3	3A	4	5	6	7S	7	9	10	12	14	15	17
Panel 25		Width	874	915	958	1004	1128	1229	1281	1575	1430	1430	1559	1625	1625	1765	1846
		Height[1]	1346	1650	1650	1950	1950	1950	1980	1780	1980	2458	2458	2768	3068	3084	3084
Panel 50		Width	874	915	958	1004	1128	1229	1281	1575	1430	1430	1559	1625	1625	1765	1846
		Height[1]	1346	1650	1650	1950	1950	1950	1980	1780	1271	2458	2458	2768	3068	3084	3084
S3V 	Panel 25	Length	2685	2685	2860	2860	2860	2860	2860	2860	3035	3035	3035	3035	3385	3385	3405
		Weight[2]	208	237	270	313	347	379	421	372	472	544	607	710	818	893	943
	Panel 50	Length	2705	2705	2880	2880	2880	2880	2880	2880	3055	3055	3055	3055	3405	3405	3405
		Weight[2]	216	247	282	329	365	393	437	392	490	564	629	735	855	924	973
S4V 	Panel 25	Length	2685	2685	2860	2860	2860	2860	2860	2860	3035	3035	3035	3035	3385	3385	3405
		Weight[2]	240	274	309	362	402	438	480	434	538	621	694	806	923	1008	1080
	Panel 50	Length	2705	2705	2880	2880	2880	2880	2880	2880	3055	3055	3055	3055	3405	3405	3405
		Weight[2]	249	286	323	377	414	455	500	453	558	644	720	834	964	1042	1115

Supply air units			Size													
			19	20	22	24	26	27	29	31	32	34	37	41	43	48	51
Panel 25		Width	2000	2154	2405	2405	2259	2335,5	2412	2412	2710	2744	2710	2770	2710	2822	2850
		Height[1]	3084	3084	3448	3448	3730	3753	3776	4350	3776	3776	4160	4350	5010	5010	5320
Panel 50		Width	2000	2154	2405	2405	2259	2335,5	2412	2412	2710	2744	2710	2770	2710	2822	2850
		Height[1]	3084	3084	3448	3448	3730	3753	3776	4350	3776	3776	4160	4350	5010	5010	5320
S3V 	Panel 25	Length	3405	3405	3405	3405	3580	3667,5	3755	3930	4105	4105	4125	4125	4125	4125	4125
		Weight[2]	1058	1145	1300	1356	1378	1561	1744	2079	2116	2142	2330	2424	2543	2770	2908
	Panel 50	Length	3405	3405	3405	3405	3580	3667,5	3755	3930	4105	4105	4125	4125	4125	4125	4125
		Weight[2]	1091	1179	1341	1398	1420	1605,5	1791	2137	2173	2200	2404	2489	2613	2844	2986
S4V 	Panel 25	Length	3405	3405	3405	3405	3580	3667,5	3755	3930	4105	4105	4125	4125	4125	4125	4125
		Weight[2]	1189	1285	1458	1497	1564	1716	1868	2041	2258	2290	2489	2594	2708	2878	3162
	Panel 50	Length	3405	3405	3405	3405	3580	3667,5	3755	3930	4105	4105	4125	4125	4125	4125	4125
		Weight[2]	1226	1324	1505	1544	1612	1766	1920	2100	2318	2350	2554	2662	2781	2954	3244

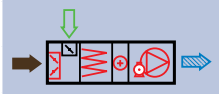
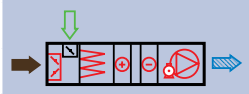
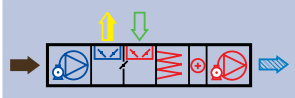
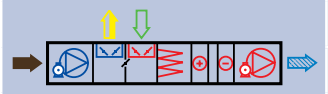
Supply air units			Size									
			54	61	65	68S	68	71	82	92	100	117	130
Panel 25		Width	2822	3078	3232	5488	3386	3685	5540	5644	5700	6000	6000
		Height[1]	5620	5620	5620	3776	5620	5620	4340	5010	5010	5620	6060
Panel 50		Width	2822	3078	3232	5488	3386	3685	5540	5644	5700	6000	6000
		Height[1]	5620	5620	5620	3776	5620	5620	4340	5010	5010	5620	6060
S3V 	Panel 25	Length	4125	4475	4475	4125	4475	4475	4125	4125	4475	4475	4475
		Weight[2]	3114	3267	3363	3162	3547	3677	3573	3890	4118	5558	4930
	Panel 50	Length	4125	4475	4475	4125	4475	4475	4125	4125	4125	4475	4475
		Weight[2]	3196	3354	3453	3265	3640	3839	3699	4101	4309	5711	5083
S4V 	Panel 25	Length	4125	4475	4475	4125	4475	4475	4125	4125	4475	4475	4475
		Weight[2]	3248	3607	3720	3423	3920	4072	3868	4218	4805	5248	5591
	Panel 50	Length	4125	4475	4475	4125	4475	4475	4125	4125	4125	4475	4475
		Weight[2]	3331	3704	3820	3530	4024	4245	3987	4348	4666	5412	5763

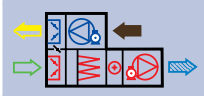
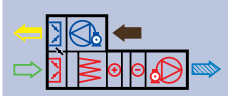
Dimensions in mm. Weights in kg.
[1] Does not include the height of the metal frame. [2] Does not include the weight of the metal frame.

Units with mixing section			Size														
			2	2A	3	3A	4	5	6	7S	7	9	10	12	14	15	17
Panel 25		Width	874	915	958	1004	1128	1229	1281	1575	1430	1430	1559	1625	1625	1765	1846
		Height[1]	673	825	825	975	975	975	990	890	990	1229	1229	1384	1534	1542	1542
Panel 50		Width	874	915	958	1004	1128	1229	1281	1575	1430	1430	1559	1625	1625	1765	1846
		Height[1]	673	825	825	975	975	975	990	890	990	1229	1229	1384	1534	1542	1542
M1V 	Panel 25	Length	2160	2160	2335	2335	2335	2335	2335	2335	2510	2510	2510	2510	2860	2860	2880
		Weight[2]	148	172	192	224	246	272	292	272	337	384	423	480	571	610	689
	Panel 50	Length	2180	2180	2355	2355	2355	2355	2355	2355	2530	2355	2530	2530	2880	2880	2880
		Weight[2]	154	180	200	233	256	282	303	284	349	380	438	496	591	631	709
M2V 	Panel 25	Length	2685	2685	2860	2685	2685	2860	2860	2860	3035	3035	2860	3035	3385	3385	3405
		Weight[2]	180	213	227	220	244	327	352	332	409	467	490	576	676	785	810
	Panel 50	Length	2705	2705	2880	2880	2880	3055	2880	2880	3055	2880	3055	3055	3230	3405	3405
		Weight[2]	187	222	241	244	269	360	318	299	418	448	526	596	636	810	834
M3V 	Panel 25	Length	3035	3035	3385	3385	3385	3385	3735	-	3735	3735	4085	4435	4785	4960	5330
		Weight[2]	218	246	283	328	366	400	455	-	459	574	657	797	884	1021	1120
	Panel 50	Length	3055	3055	3405	3405	3405	3405	3755	-	3755	4105	4105	4455	5155	4980	5330
		Weight[2]	226	256	294	341	381	418	471	-	473	617	680	830	933	1056	1157
M4V 	Panel 25	Length	3560	3560	3910	3735	3735	3910	4260	-	4260	4260	4435	4960	5310	5485	5855
		Weight[2]	250	287	318	324	364	455	515	-	531	657	724	893	989	1196	1241
	Panel 50	Length	3580	3580	3930	3930	3930	4105	4280	-	4280	4630	4630	4980	5505	5505	5855
		Weight[2]	259	298	335	352	394	496	486	-	542	685	768	930	978	1235	1282

Units with mixing section			Size													
			19	20	22	24	26	27	29	31	32	34	37	41	43	48	51
Panel 25		Width	2000	2154	2405	2405	2259	2335,5	2412	2412	2710	2744	2710	2770	2710	2822	2850
		Height[1]	1542	1542	1724	1724	1865	1876,5	1888	2175	1888	1888	2080	2175	2505	2505	2660
Panel 50		Width	2000	2154	2405	2405	2259	2335,5	2412	2412	2710	2744	2710	2770	2710	2822	2850
		Height[1]	1542	1542	1724	1724	1865	1876,5	1888	2175	1888	1888	2080	2175	2505	2505	2660
M1V 	Panel 25	Length	2880	2880	2880	3055	3055	3142,5	3230	3755	3755	3755	3775	3775	3775	3775	3775
		Weight[2]	727	763	843	915	934	974,5	1015	1412	1442	1464	1536	1602	1698	1772	1995
	Panel 50	Length	2880	2880	2880	3055	3055	3142,5	3230	3755	3755	3755	3775	3775	3775	3775	3775
		Weight[2]	748	786	870	943	962	1004	1046	1453	1470	1505	1579	1648	1748	1970	2048
M2V 	Panel 25	Length	3230	3405	3405	3580	3580	3667,5	3755	4280	4280	4280	4475	4475	4125	4475	4300
		Weight[2]	788	903	1001	1078	1103	1151,5	1200	1612	1618	1674	1702	1863	1623	2070	2208
	Panel 50	Length	3405	3405	3405	3580	3580	3667,5	3755	4280	4280	4280	4475	4475	4650	4475	4300
		Weight[2]	883	931	1034	1112	1137	1187	1237	1660	1681	1722	1833	1918	2267	2277	2265
M3V 	Panel 25	Length	5680	5680	5855	6030	6030	6292,5	6555	6555	6555	6555	7100	7100	7450	8150	8150
		Weight[2]	1246	1343	1527	1593	1618	1878	2138	2252	2289	2318	2640	2736	2938	3214	3360
	Panel 50	Length	5680	5680	5855	6030	6030	6292,5	6555	6555	6555	6555	7100	7100	7450	8150	8150
		Weight[2]	1288	1386	1579	1646	1690	1945,5	2201	2321	2357	2387	2716	2848	3027	3311	3474
M4V 	Panel 25	Length	6030	6205	6380	6555	6555	6817,5	7080	7080	7080	7080	7800	7800	7800	8850	8675
		Weight[2]	1307	1483	1685	1756	1787	2055	2323	2452	2465	2528	2806	2997	2863	3512	3573
	Panel 50	Length	6205	6205	6380	6555	6555	6817,5	7080	7080	7080	7080	7800	7800	8325	8850	8675
		Weight[2]	1423	1531	1743	1815	1865	2128,5	2392	2528	2568	2604	2970	3118	3546	3618	3691

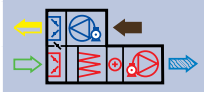
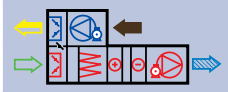
Dimensions in mm. Weights in kg.
[1] Does not include the height of the metal frame. [2] Does not include the weight of the metal frame.

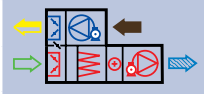
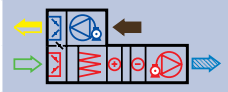
Units with mixing section			Size									
			54	61	65	68S	68	71	82	92	100	117	130
Panel 25		Width	2822	3078	3232	5488	3386	3685	5540	5644	5700	6000	6000
		Height[1]	2810	2810	2810	1888	2810	2810	2170	2505	2505	2810	3030
Panel 50		Width	2822	3078	3232	5488	3386	3685	5540	5644	5700	6000	6000
		Height[1]	2810	2810	2810	1888	2810	2810	2170	2505	2505	2810	3030
M1V 	Panel 25	Length	3775	3950	3950	3775	3950	3950	3775	3775	3775	3950	3950
		Weight[2]	2056	2257	2329	2220	2475	2587	2479	2740	2920	3410	3636
	Panel 50	Length	3950	3950	3950	3775	3950	3950	3775	3775	3775	3950	3950
		Weight[2]	2182	2318	2392	2292	2540	2657	2559	2914	3073	3514	3746
M2V 	Panel 25	Length	4300	4475	4475	4300	4475	4650	4475	4475	4475	4650	4650
		Weight[2]	2206	2262	2588	2569	2824	2912	2804	3065	3245	3735	3961
	Panel 50	Length	4475	4475	4475	4475	4650	4650	4475	4475	4475	4650	4650
		Weight[2]	2336	2416	2621	2608	2856	2972	2874	3229	3388	3829	4061
M3V 	Panel 25	Length	8150	8500	8500	-	8500	8500	-	-	-	-	-
		Weight[2]	3461	3697	3810	-	3830	4221	-	-	-	-	-
	Panel 50	Length	8150	8500	8500	-	8500	8500	-	-	-	-	-
		Weight[2]	3567	3825	4004	-	3953	4352	-	-	-	-	-
M4V 	Panel 25	Length	8675	9025	9025	-	9025	9200	-	-	-	-	-
		Weight[2]	3611	3702	4069	-	4179	4546	-	-	-	-	-
	Panel 50	Length	8675	9025	9025	-	9200	9200	-	-	-	-	-
		Weight[2]	3721	3923	4233	-	4269	4667	-	-	-	-	-

Units with mixing section			Size													
			2	2A	3	3A	4	5	6	7S	7	9	10	12	14	15	17
Panel 25		Width	874	915	958	1004	1128	1229	1281	1575	1430	1430	1559	1625	1625	1765	1846
		Height[1]	1346	1650	1650	1950	1950	1950	1980	1780	1980	2458	2458	2768	3068	3084	3084
Panel 50		Width	874	915	958	1004	1128	1229	1281	1575	1430	1430	1559	1625	1625	1765	1846
		Height[1]	1346	1650	1650	1950	1950	1950	1980	1780	1271	2458	2458	2768	3068	3084	3084
M5V 	Panel 25	Length	2685	2685	2860	2860	2860	2860	2860	2860	3035	3035	3035	3035	3385	3385	3405
		Weight[2]	208	237	270	313	347	379	421	372	472	544	607	710	818	893	943
	Panel 50	Length	2705	2705	2880	2880	2880	2880	2880	2880	3055	3055	3055	3055	3405	3405	3405
		Weight[2]	216	247	282	329	365	393	437	392	490	564	629	735	855	924	973
M6V 	Panel 25	Length	2685	2685	2860	2860	2860	2860	2860	2860	3035	3035	3035	3035	3385	3385	3405
		Weight[2]	240	274	309	362	402	438	480	434	538	621	694	806	923	1008	1080
	Panel 50	Length	2705	2705	2880	2880	2880	2880	2880	2880	3055	3055	3055	3055	3405	3405	3405
		Weight[2]	249	286	323	377	414	455	500	453	558	644	720	834	964	1042	1115

Dimensions in mm. Weights in kg.
[1] Does not include the height of the metal frame. [2] Does not include the weight of the metal frame.

= supply air = exhaust air = extract air = outdoor air

Units with mixing section			Size													
			19	20	22	24	26	27	29	31	32	34	37	41	43	48	51
Panel 25		Width	2000	2154	2405	2405	2259	2335,5	2412	2412	2710	2744	2710	2770	2710	2822	2850
		Height[1)]	3084	3084	3448	3448	3730	3753	3776	4350	3776	3776	4160	4350	5010	5010	5320
Panel 50		Width	2000	2154	2405	2405	2259	2335,5	2412	2412	2710	2744	2710	2770	2710	2822	2850
		Height[1)]	3084	3084	3448	3448	3730	3753	3776	4350	3776	3776	4160	4350	5010	5010	5320
M5V 	Panel 25	Length	3405	3405	3405	3405	3580	3667,5	3755	3930	4105	4105	4125	4125	4125	4125	4125
		Weight[2)]	1058	1145	1300	1356	1378	1561	1744	2079	2116	2142	2330	2424	2543	2770	2908
	Panel 50	Length	3405	3405	3405	3405	3580	3667,5	3755	3930	4105	4105	4125	4125	4125	4125	4125
		Weight[2)]	1091	1179	1341	1398	1420	1605,5	1791	2137	2173	2200	2404	2489	2613	2844	2986
M6V 	Panel 25	Length	3405	3405	3405	3405	3580	3667,5	3755	3930	4105	4105	4125	4125	4125	4125	4125
		Weight[2)]	1189	1285	1458	1497	1564	1716	1868	2041	2258	2290	2489	2594	2708	2878	3162
	Panel 50	Length	3405	3405	3405	3405	3580	3667,5	3755	3930	4105	4105	4125	4125	4125	4125	4125
		Weight[2)]	1226	1324	1505	1544	1612	1766	1920	2100	2318	2350	2554	2662	2781	2954	3244

Units with mixing section			Size									
			54	61	65	68S	68	71	82	92	100	117	130
Panel 25		Width	2822	3078	3232	5488	3386	3685	5540	5644	5700	6000	6000
		Height[1)]	5620	5620	5620	3776	5620	5620	4340	5010	5010	5620	6060
Panel 50		Width	2822	3078	3232	5488	3386	3685	5540	5644	5700	6000	6000
		Height[1)]	5620	5620	5620	3776	5620	5620	4340	5010	5010	5620	6060
M5V 	Panel 25	Length	4125	4475	4475	4125	4475	4475	4125	4125	4475	4475	4475
		Weight[2)]	3114	3267	3363	3162	3547	3677	3573	3890	4118	5558	4930
	Panel 50	Length	4125	4475	4475	4125	4475	4475	4125	4125	4125	4475	4475
		Weight[2)]	3196	3354	3453	3265	3640	3839	3699	4101	4309	5711	5083
M6V 	Panel 25	Length	4125	4475	4475	4125	4475	4475	4125	4125	4475	4475	4475
		Weight[2)]	3248	3607	3720	3423	3920	4072	3868	4218	4805	5248	5591
	Panel 50	Length	4125	4475	4475	4125	4475	4475	4125	4125	4125	4475	4475
		Weight[2)]	3331	3704	3820	3530	4024	4245	3987	4348	4666	5412	5763

Dimensions in mm. Weights in kg.
[1)] Does not include the height of the metal frame. [2)] Does not include the weight of the metal frame.

= supply air = exhaust air = extract air = outdoor air

Menerga: Minimal Energy Application

Menerga core competencies
Our areas of application

Please contact Menerga Germany for further information.

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Indoor swimming pool air conditioning

Private swimming pools, public swimming pool halls, adventure pools, sports pools, saline baths, hotel pools, school pools, therapeutic pools and many more.
Last not least: heat recovery from waste water.
The air conditioning of swimming pool halls is one of the most challenging areas for air conditioning. Here we started 30 years ago, this is where we grew up and where we are now market leaders and innovation pioneers. Our special competency lies in the high heat recovery efficiency lowering operating costs, while robust system design overcomes adverse conditions.

Comfort air conditioning

Low-energy buildings, offices, museums, sports facilities, schools, clinics, hotels, banks, historical buildings and many more.
With comfort air conditioning, the focus is on people. Our technology is based on the respective requirements of a project, but simultaneously always looks for the most efficient method with the lowest consumption of energy. For example, we cool with water in order to save electrical energy or make use of sorption-based air conditioning, with which you can carry out dehumidification by means of heat, e.g. from solar thermal energy or process waste heat. It is even possible to store excess solar heat for an indefinite period without any losses for the purposes of dehumidification.

Process air conditioning and Chilled water

Air conditioning of data centres, industrial drying, process cooling, air conditioning for warehouses, cold water generation and much more.
Last not least: heat recovery from waste water.
The process air conditioning system must ensure that defined air conditions prevail in a defined situation. Menerga systems guarantee reliable drying, cooling or heating. In the field of chilled water, our systems reliably provide the desired water conditions. Saving energy through the use of intelligent technology is our top priority in this sector as well.

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Special solutions

Research projects, special applications
Challenges and unusual projects are the milestones of Menergas company history. Since the foundation of our company, we have designed individual solutions for many of our customers. We enjoy taking on challenging projects, knowing that these are the projects that bring valuable experience and which also improve the quality of our “standard” systems.

The Menerga unit key

e.g. Resolair 64 12 01

Resolair	64	12	01
Name	Series	Installation size	Design

Series	Name	Function	Equipment	Design
11	Drysolair	Air drying	Heat pump, recuperator	
14	Frecolair	Ventilation/cooling	Free cooling, compressor refrigeration system	
19	ThermoCond	Indoor swimming pool air conditioning	Cross-counterflow heat exchanger	
23	ThermoCond		Cross-counterflow-cross heat exchanger	01 Indoor installation 91 Outdoor installation
29	ThermoCond		Cross-counterflow heat exchanger, heat pump	
38	ThermoCond		Counterflow plate heat exchanger, volume flow reduction as required	
39	ThermoCond		Asymmetrical high-capacity heat exchanger, output-controlled heat pump, fresh water heater, volume flow reduction as required	
44	AquaCond	Heat recovery from waste water	Heat pump, counterflow coaxial recuperator, heat pump, automatic heat exchanger cleaning	0 WWHE: Cu FWHE: Cu 1 WWHE: Cu FWHE: Cu tin-plated 2 WWHE: Cu-Ni FWHE: Cu 3 WWHE: Cu-Ni FWHE: Cu tin-plated * WWHE=Waste Water Heat Exchanger * FWHE=Fresh Water Heat Exchanger
52	Trisolair	Comfort air conditioning, recuperative heat recovery	Cross-counterflow-cross heat exchanger, air volume flow rate up to 5,000 m^3/h	01 Indoor installation 91 Outdoor installation
54	Dosolair		Double plate heat exchanger, max. flow rates up to 52,200 m^3/h	
56	Adsolair		Double plate heat exchanger, "adiabatic" evaporative cooling, Optimum flow rates up to 52,200 m^3/h	
58	Adsolair		Double plate heat exchanger, "adiabatic" evaporative cooling, compressor refrigeration system, max flow rates up to 52,800 m^3/h	
59	Trisolair		Cross-counterflow-cross heat exchanger, compressor refrigeration system, air volume flow rate up to 4,800 m^3/h	
62	Resolair	Comfort and process air conditioning, regenerative heat recovery	Heat accumulator module, max. flow rates up to 4,300 m^3/h	
64	Resolair		Heat accumulator module, max. flow rates up to 51,000 m^3/h	
65	Resolair		Heat accumulator module, air flow rates up to 40,000 m^3/h	
66	Resolair		Heat accumulator module, compressor refrigeration system, max. flow rates up to 4,300 m^3/h	
68	Resolair		Heat accumulator module, compressor refrigeration system, max. flow rates up to 51,000 m^3/h	
72	Sorpsolair	Sorption-based air conditioning	Double plate heat exchanger, "adiabatic" evaporative cooling, sorptive dehumidification, max. flow rates up to 14,900 m^3/h	
73	Sorpsolair		Double plate heat exchanger, "adiabatic" evaporative cooling, sorptive dehumidification, brine accumulator, max. flow rates up to 14,900 m^3/h	
75	Adcoolair	Recirculating air cooling	Free cooling, "adiabatic" evaporative cooling, compressor refrigeration system	
76	Adconair	Comfort air conditioning, recuperative heat recovery	Counterflow-plate heat exchanger, max. air volume flow up to 31,000 m^3/h	
97	Hybritemp	Cold water set	Indirect free cooling, "adiabatic" evaporative cooling, efficiency-optimised compressor refrigeration system	
98	Hybritemp		Free cooling, "adiabatic" evaporative cooling, efficiency-optimised compressor refrigeration system	

Adconair

Counterflow heat recovery

At a glance:

- Heat recovery rate of more than 90% with just 150 Pa pressure loss
- HRC class H1, even at high air velocities
- Thermal bridge factor kb = 0.8 - class TB1
- Two-stage supply air filtration
- Fulfils the requirements of the German Energy Saving Ordinance (EnEV) and the German Renewable Energies Heating Law (EEWärmeG)

Adconair

with counterflow plate heat exchanger

Unit Type	Length (mm)	Width [1] (mm)	Height [2] (mm)	Weight (kg)	Opt. flow rate (m³/h)	Max. volume flow rate [3] (m³/h)	Coefficient of power efficiency (%)
76 03 01	4,810	790	1,700	1,220	2,600	3,500	77
76 05 01	4,970	1,110	1,700	1,500	3,900	5,300	77
76 06 01	5,610	790	2,340	1,650	4,000	6,000	77
76 10 01	5,610	1,110	2,340	1,900	6,000	9,500	76
76 13 01	5,770	1,430	2,340	2,350	7,900	10,500	76
76 16 01	5,770	1,750	2,340	2,650	9,800	14,000	77
76 19 01	5,770	2,070	2,340	3,000	11,800	18,000	76
76 25 01	6,250	2,070	2,980	3,900	15,800	21,000	78
76 29 01	6,250	2,390	2,980	4,300	18,400	22,000	78
76 37 01	6,250	3,030	2,980	5,700	23,600	30,000	78

Specifications of technical data relate to the optimum flow rate and return air condition 22°C/40% r.h., outside air condition -12°C/90% r.h.

1 Door fitting assembly increase unit width by 65 mm each operating side
2 incl. 120 mm base frame, incl. 60 mm cable duct
3 May require alteration of the technical equipment

For service work, a clearance corresponding to dimension width is required on the operating side of the unit. If the width is smaller than one metre, please leave a clearance of one metre. For service work above the unit, please allow 50 mm working height clearance above the cable duct. Please comply with the dimensions for body size, air duct connections and electrical switch cabinet. Arrange confirmation of technical data and specifications before start of planning.

Adsolair

Cooling without power consumption

At a glance:

- Over 75% temperature efficiency
- Energy-saving EC fans
- Intelligent air bypass duct
- Two-stage supply air filtration
- Fulfils the requirements of VDI 6022

Adsolair 56

with double plate heat exchanger and „adiabatic“ evaporative cooling system

Unit Type	Length (mm)	Width [1] (mm)	Height [2] (mm)	Weight (kg)	Opt. flow rate (m³/h)	Max. volume flow rate [3] (m³/h)
56 03 01	4.350	790	1.700	1.100	2.600	3.400
56 05 01	4.510	1.110	1.700	1.350	3.900	5.100
56 06 01	5.630	790	2.340	1.550	4.000	5.100
56 10 01	5.630	1.110	2.340	1.850	6.000	7.800
56 13 01	5.790	1.430	2.340	2.200	7.900	10.400
56 16 01	5.790	1.750	2.340	2.520	9.800	12.900
56 19 01	5.790	2.070	2.340	2.800	11.800	15.600
56 25 01	6.430	2.070	2.980	3.800	15.800	20.500
56 32 01	7.230	2.070	3.620	4.650	19.900	26.400
56 36 01	7.230	2.390	3.620	5.250	23.100	29.700

Units with max. volume flow 52.800 m3/h and special units on request.

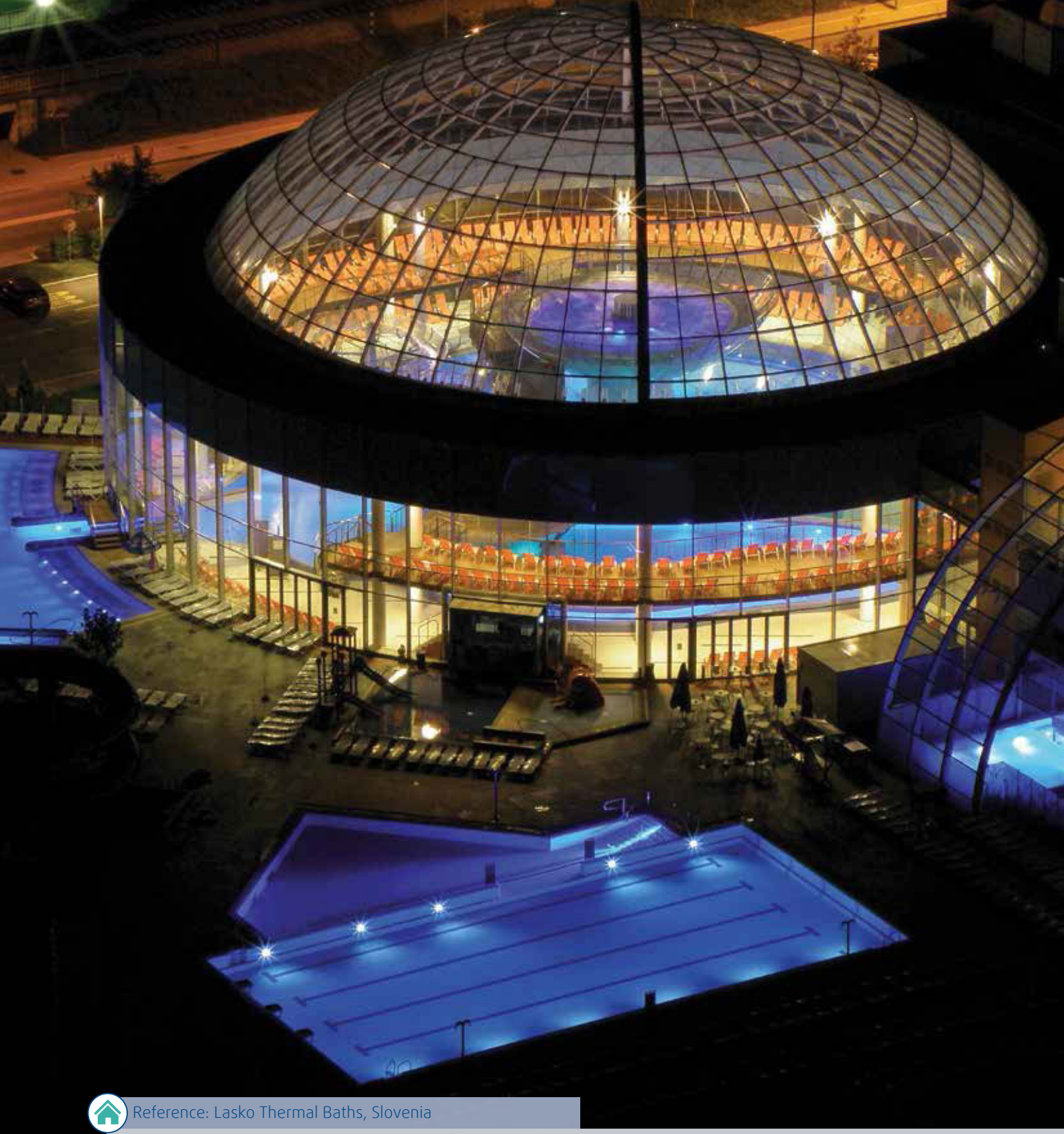
1 Door fitting assembly increase unit width by 65 mm each operating side
2 incl. 120 mm base frame, plus 60 mm cable duct
3 May require alteration of the technical equipment

Adsolair 58

with double plate heat exchanger, „adiabatic“ evaporative cooling system and compressor refrigeration system

Unit Type	Length (mm)	Width [1] (mm)	Height [2] (mm)	Weight (kg)	Opt. flow rate (m³/h)	Max. volume flow rate [3] (m³/h)
58 03 01	4.670	790	1.700	1.300	2.600	3.400
58 05 01	4.830	1.110	1.700	1.600	3.900	5.100
58 06 01	5.950	790	2.340	1.780	4.000	5.100
58 10 01	5.950	1.110	2.340	2.100	6.000	7.800
58 13 01	6.110	1.430	2.340	2.550	7.900	10.400
58 16 01	6.110	1.750	2.340	2.830	9.800	12.900
58 19 01	6.110	2.070	2.340	3.300	11.800	15.600
58 25 01	6.750	2.070	2.980	4.400	15.800	20.500
58 32 01	7.550	2.070	3.620	5.350	19.900	26.400
58 36 01	7.550	2.390	3.620	5.750	23.100	29.700

For service work, a clearance corresponding to dimension width is required on the operating side of the unit. If the width is smaller than one metre, please leave a clearance of one metre. For service work above the unit, please allow 50 mm working height clearance above the cable duct. Please comply with the dimensions for body size, air duct connections and electrical switch cabinet. Arrange confirmation of technical data and specifications before start of planning.



Reference: Lasko Thermal Baths, Slovenia

The "Lasko Wellness Park" opened in 2008 in Slovenia. With a water area of 2,200 m^2 it is a tourist and architectural gem in the town of Lasko, which has been known for its thermal springs since 1818. With a moving dome over the entire indoor area and the 1,300 people who the Wellness Park can accommodate, high demands are placed on the air-conditioning technology. Adjacent to the complex there is a hotel complex with 188 rooms in the 4-star category with its own congress and seminar area.

A total of 18 Menerga systems have been installed in the Lasko thermal baths. In addition to Resolair, Adsolair, Dosolair and several ThermoCond systems, a type 44 AquaCond system recovers energy from waste water. For its overall energy efficiency levels, amongst other things, the Lasko thermal baths have been awarded the EU Flower, which is a well-known symbol of environmental friendliness.

And not only the environmental compatibility stands out: In 2011 the thermal baths in Lasko were awarded the title of best thermal centre for the fourth time in succession in the category of medium-sized thermal baths. A good climate draws attention to itself in this way as well.

DV

DV is a range of units constructed as modules, which offers numerous design options. Units can be constructed as separate supply air and extract air units or as a complete system with a rotary heat exchanger, counter- or cross-flow plate heat exchanger or run around coils. The plug fan units guarantee low sound levels.

At a glance:

- Available in 14 different sizes
- Handles airflows of 0.4-24 m^3/s
- Large number of combinations
- 2 fan options
- 4 heat exchanger options
- Disc-Lock system for easy assembly of sections
- Made of aluzinc sheet metal
- Can be supplied with control system
- Selection software

Information about functions can be found on page 162. Information about control sysem can be found on page 170.

Combination options

The DV unit includes a number of welldimensioned functions. You can choose between various systems for heat recovery and several types of filter. Different types of heating cooling coils, etc. That is why so many different versions of DV units are available, from the simple unit with few functions to the advanced ventilation unit.

The unit housing

The DV units are built to last. In order to ensure that the unit housing is of a quality that adheres to the high standards of the functions, we have chosen to use frames and panels made from top-quality corrosion-resistant aluzinc sheets, AZ185. Sheet steel coated with aluzinc AZ185 provides corrosion resistance equivalent to class C4 as per EN ISO 12944-2.

Fans

The direct-driven plug fans with high efficiency impellers ensure low sound levels at low frequencies.

Heat exchanger

The DV units can be supplied with 4 types of heat exchanger: A rotary heat exchanger with high efficiency and a moisture recovery option. A counter- or cross-flow plate heat exchanger for separation of the supply air and extract air flows, or a heat exchanger with run around coils for supply air and extract air in separate locations.

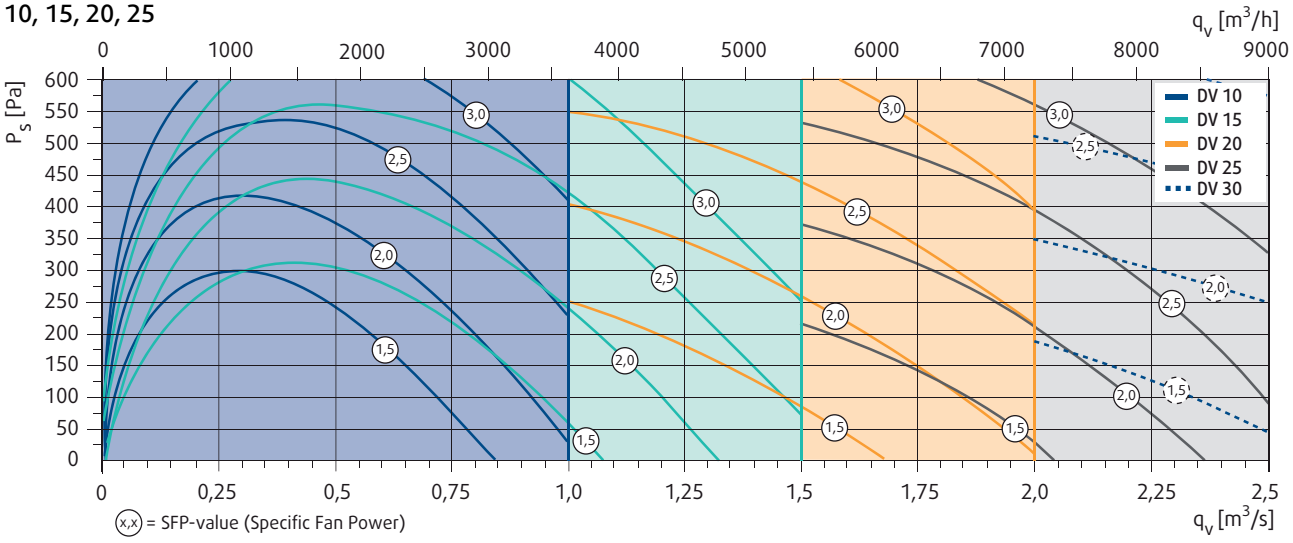
Control system – Systemair E28

DV can be ordered with the Systemair E28 control system.

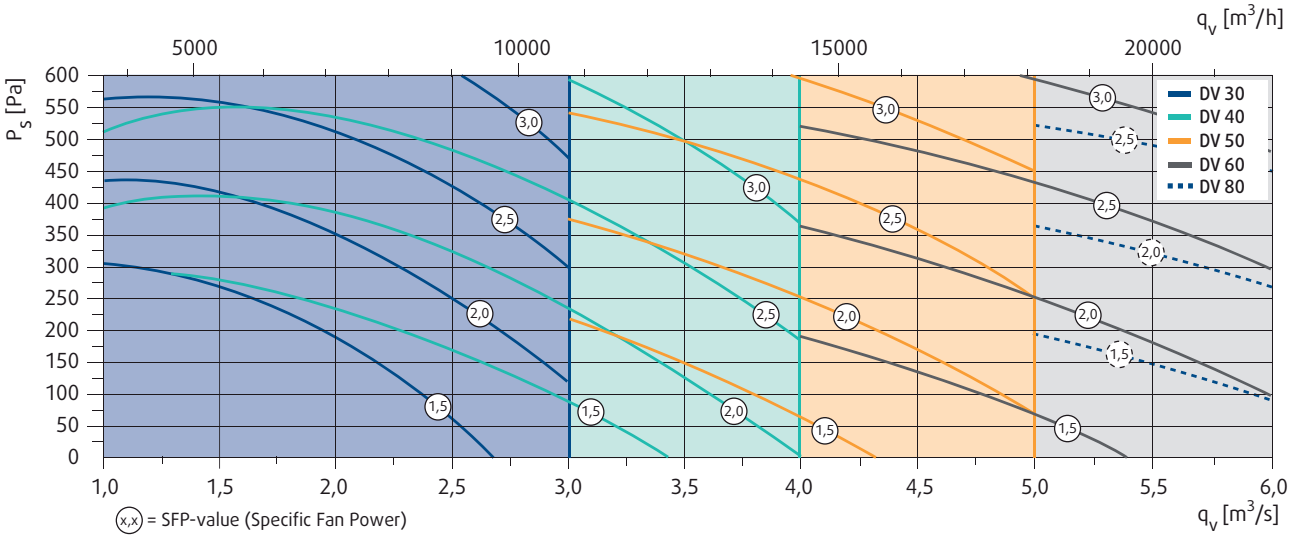
Roof version

Sizes 10-150 are also available as outdoor units with two different roof solutions, polyester-reinforced bitumen roof or corrugated sheet metal roof coated with aluzinc. The roof units are supplied assembled on base frames.

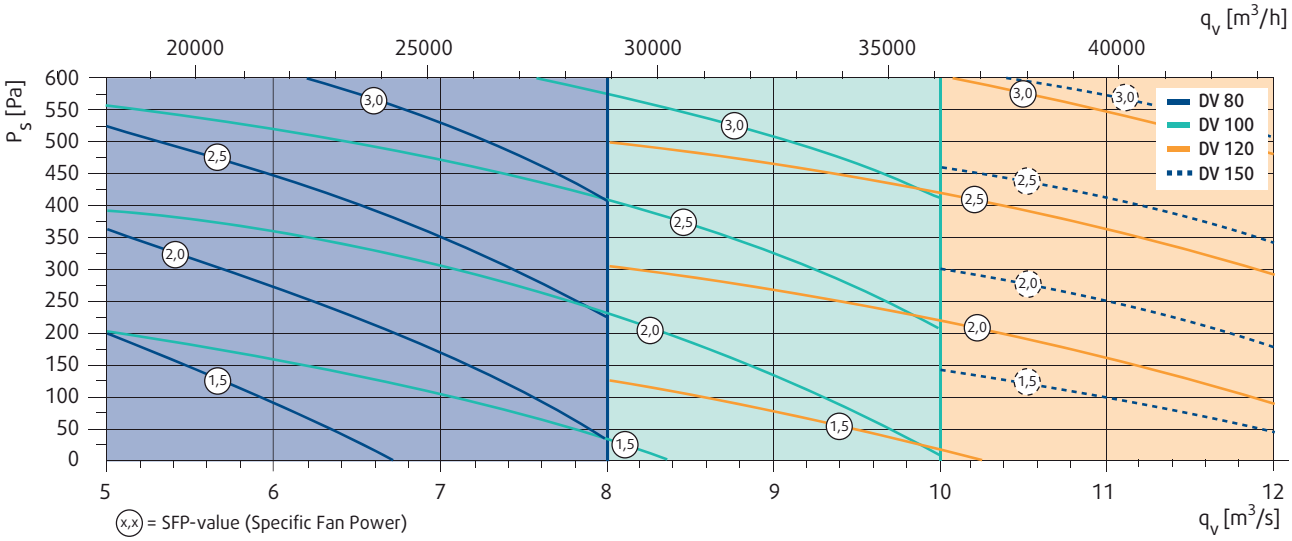
Working range
10, 15, 20, 25



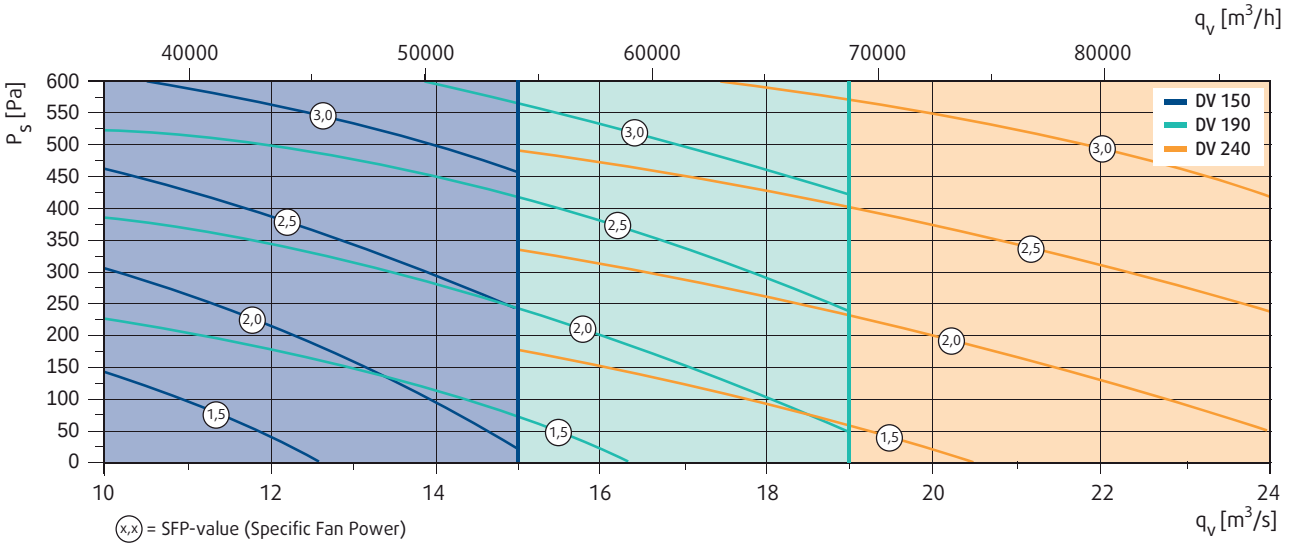
30, 40, 50, 60



80, 100, 120



150, 190, 240



Unit versions with DV plug fans

= supply air = exhaust air = extract air = outdoor air

In order to facilitate the work of designing an air handling unit based on the numerous options available, we have provided specifications for the most common unit combinations for units with DVE plug fans.

These examples should help to speed up the process of designing your preferred units with the right functions. Choose the unit version that best matches your preferences and then add or remove functions as required.

Rotary heat exchanger		Size													
		10	15	20	25	30	40	50	60	80	100	120	150	190	240
Standard	Width	970	1120	1270	1420	1570	1720	2020	2170	2170	2370	2590	2890	3190	3490
Rotary heat exchanger1)	Width	–	–	–	–	–	–	–	–	2320	2520	2890	3040	3720	4020
Double unit (2-storey)	Height2)	970	1120	1270	1420	1570	1720	2020	2240	2540	2840	3140	3440	4340	4940
C1E	Length	2160	2160	2460	2460	2760	3060	2910	3280	3210	3960	4260	4560	5010	5530
	Weight	430	520	660	760	920	1100	1470	1980	2140	2630	3250	3990	6290	7610
C2E	Length	2910	2910	3210	3210	3510	3810	3660	4030	4030	4930	5230	5530	5980	6430
	Weight	500	610	770	870	1080	1270	1690	2250	2470	3050	3890	4690	7220	8600
C3E	Length	2680	2680	3130	3130	3430	3880	4030	4400	4400	5450	5900	6200	6430	7100
	Weight	480	580	730	810	1010	1220	1700	2230	2480	3160	3870	4660	6870	8280
C4E	Length	3430	3430	3880	3880	4180	4630	4780	5220	5220	6420	7020	7170	7400	8000
	Weight	550	660	840	920	1180	1380	1930	2560	2830	3610	4560	5320	7790	9170
C5E	Length	2680	2680	3130	3130	3430	3880	3730	4100	4100	5080	5380	5680	6430	7100
	Weight	480	570	720	800	1010	1220	1630	2120	2330	2970	3620	4390	6860	8280
C6E	Length	3430	3430	3880	3880	4180	4630	4480	4850	4850	6050	6350	6650	7400	8000
	Weight	550	660	840	920	1180	1380	1850	2410	2670	3370	4280	5060	7790	9170

Plate heat exchanger		Size											
		10	15	20	25	30	40	50	60	80	100	120	150
	Width	970	1120	1270	1420	1570	1720	2020	2170	2170	2370	2590	2890
Double unit (2-storey)	Height2)	970	1120	1270	1420	1570	1720	2020	2240	2540	2840	3140	3440
Q1E	Length	3210	3580	4030	4330	4780	5080	5230	5460	5230	5910	6960	7260
	Weight	570	760	940	1130	1370	1640	2300	2550	2610	3210	4200	5130
Q2E	Length	3960	4330	4780	5080	5530	5830	5980	6210	5980	6880	7930	8230
	Weight	660	850	1060	1260	1540	1810	2520	2880	2910	3660	4870	5790
Q3E	Length	3800	4100	4700	5000	5450	5900	6050	6280	6280	7330	8380	8680
	Weight	650	820	1030	1140	1470	1760	2480	2720	2840	3620	4600	5550
Q4E	Length	4550	4850	5450	5750	6200	6650	6800	7030	6800	8000	9050	9350
	Weight	720	900	1140	1310	1630	1930	2720	3030	3130	3980	5150	6130
Q5E	Length	3800	4100	4700	5000	5450	5900	6050	6280	6130	7030	8080	8680
	Weight	640	810	1020	1170	1480	1750	2460	2700	2890	3690	4690	5840
Q6E	Length	4550	4850	5450	5750	6200	6650	6800	7100	6800	8000	9050	9350
	Weight	720	900	1140	1300	1620	1920	2700	3030	3200	4120	5320	6380

Dimensions in mm. Weights in kg.
1) The casing protrudes an equal distance on both sides.
2) For DV 10-150 = height excluding base frame DVZ, For DV 190-240 = height including base frame DVZ.

= supply air = exhaust air = extract air = outdoor air

Run around coil heat exchangers		Size													
		10	15	20	25	30	40	50	60	80	100	120	150	190	240
	Width	970	1120	1270	1420	1570	1720	2020	2170	2170	2370	2590	2890	3190	3490
Single unit (1-storey)	Height2)	520	595	670	745	820	895	1045	1120	1270	1420	1570	1720	2170	2470
Double unit (2-storey)	Height2)	1040	1190	1340	1490	1640	1790	2090	2240	2540	2840	3140	3440	4340	4940
R1E	Length	2540	2540	2690	2690	2840	2990	2990	3140	3140	3590	3890	4110	5010	5230
	Weight	580	700	840	990	1170	1420	1980	2240	2460	2990	3800	4580	6290	7420
R2E	Length	3360	3360	3510	3510	3660	3810	3810	3960	3960	4560	4860	5010	5910	6060
	Weight	680	820	980	1150	1360	1620	2220	2550	2790	3510	4340	5170	7050	8270

Supply air units		Size													
		10	15	20	25	30	40	50	60	80	100	120	150	190	240
	Width	970	1120	1270	1420	1570	1720	2020	2170	2170	2370	2590	2890	3190	3490
Single unit (1-storey)	Height2)	520	595	670	745	820	895	1045	1120	1270	1420	1570	1720	2170	2470
Double unit (2-storey)	Height2)	1040	1190	1340	1490	1640	1790	2090	2240	2540	2840	3140	3440	4340	4940
S1E	Length	1940	1940	2090	2090	2240	2390	2240	2390	2390	2690	2990	3140	4040	4260
	Weight	220	260	320	370	430	510	700	800	880	1100	1400	1700	2250	2820
S2E	Length	2690	2690	2840	2840	2990	3140	2990	3140	3140	3590	3960	4110	5010	5160
	Weight	310	370	450	520	620	730	960	1110	1230	1490	2020	2320	3170	3720
S3E	Length	1940	1940	2090	2090	2240	2390	2240	2390	2390	2690	2990	3140	4040	4260
	Weight	340	400	500	580	690	830	1140	1320	1440	1790	2350	2800	3690	4560
S4E	Length	2690	2690	2840	2340	2990	3140	2990	3140	3140	3590	3960	4110	5010	5160
	Weight	430	510	630	730	870	1040	1400	1630	1790	2180	2960	3410	4610	5460

Units with mixing section		Size													
		10	15	20	25	30	40	50	60	80	100	120	150	190	240
	Width	970	1120	1270	1420	1570	1720	2020	2170	2170	2370	2590	2890	3190	3490
Single unit (1-storey)	Height2)	520	595	670	745	820	895	1045	1120	1270	1420	1570	1720	2170	2470
Double unit (2-storey)	Height2)	970	1120	1270	1420	1570	1720	2020	2240	2540	2840	3140	3440	4340	4940
M1E	Length	2240	2240	2390	2390	2540	2840	2690	2840	2990	3660	3810	3960	4410	5080
	Weight	250	280	350	390	470	560	800	900	1000	1300	1560	1900	2320	3040
M2E	Length	3060	3060	3210	3210	3360	3660	3510	3660	3810	4410	4560	4710	5380	5980
	Weight	330	400	480	560	640	780	1050	1180	1320	1660	2140	2460	3250	3940
M3E	Length	3580	3580	3880	3880	4180	4780	4480	4780	5080	5980	6350	6650	7550	8820
	Weight	390	450	560	620	760	940	1270	1470	1630	2060	2660	3150	3930	5100
M4E	Length	4400	4400	4700	4700	5000	5600	5300	5600	5900	6950	7250	7620	8520	9720
	Weight	480	560	690	790	940	1150	1550	1760	1960	2530	3250	3800	4850	6000
M5E	Length	2610	2610	2910	2910	3210	3660	3360	2990	2990	3590	3810	3960	4710	5080
	Weight	360	430	530	580	750	910	1220	1360	1520	1950	2510	2990	4190	5150
M6E	Length	3430	3430	3730	3730	4030	4480	4180	3810	3880	4630	4780	4860	5680	5980
	Weight	460	540	670	730	930	1150	1480	1650	1880	2430	3150	3570	5110	6050

Dimensions in mm. Weights in kg.
1) The casing protrudes an equal distance on both sides.
2) For DV 10-150 = height excluding base frame DVZ, For DV 190-240 = height including base frame DVZ.

Functions

This section briefly describes the functional elements of the various units. There is a general explanation of the purpose of the function as well as a description of each unit.

Casing

The units' casings and doors are made of rustproof sheet steel and are insulated internally with 50 mm mineral wool, which has excellent sound and heat insulation properties.

TA

The unit's double-skin casing is made of 0.9 mm galvanised sheet steel surrounding a 50 mm layer of mineral wool insulation. TA has large lockable doors for easy inspection and service. Angle brackets for mounting in ceilings or on walls.

F

Sound and heat insulation between the panels comprises an A1 class flameproof material in accordance with DIN 4102. In order to avoid sharp edges, chamfered cast aluminium corners or plastic corners are used.

Maxi

The unit's double-skin sheet metal casing is treated with aluzinc 185 to protect against rust and complies with corrosion class C4 as per EN ISO 12944.2. Maxi 1100 is supplied as a unit with a built-in by-pass duct. In order to make delivery easier, the large Maxi 2000 unit is supplied in two parts with any by-pass ducts as a separate third module.

Topvex, TIME, DV, DVCompact

The unit's double-skin sheet metal casing is treated with aluzinc 185 to protect against rust and complies with corrosion class C4 as per EN ISO 12944.2. TIME and DV are constructed using a strong closed frame profile. Topvex is constructed using self-supporting panels. The units have chamfered cast aluminium corners that guarantee a stable unit casing. TIME units have casing in VDI 6022 design which makes cleaning a lot easier.

BA

The unit's frame structure is made from extruded aluminium sections, which acts as the support structure for double skin panels. The panels are removable type thereby facilitating access to the internal parts of AHU for maintenance. Options for sheet thickness for inner and outer skin are 0.6 / 0.8 / 1.0 / 1.2 mm with insulation options as PUF and rockwool. The casing strength and casing air leakage complies with EN 1886:2007 standard.

HHFlex, HHCompact

Frame of rigid closed galvanized profiles and plastic ABS corners. 60 mm, galvanized, dual-skin doors and panels. High quality polymer coating on the surface available (RAL 7035). HHFlex unit assembly results in smooth surfaces (VDI 6022). Standard walkable floors with PU-foam inserts. Stainless steel or extra acoustic casing available.

Flexline

Frame of 22 mm thick, 30x30 mm and 30x60 mm box profiles manufactured from galvanized steel, which leads to a DI class the highest mechanical strength according to EN 1886. Profile connections consist of aluminium corner members. Panel edge profiles are manufactured from PVC while corner profiles are manufactured from ABS material. Interior and exterior surface metal sheets can be selected of galvanized steel, painted or stainless steel and be manufactured in the range 0.8 – 1.2 mm.

Dampers

The various types of damper used in our units are outdoor air dampers/exhaust air dampers, mixing dampers and regulating dampers. These comply with air tightness class 3.

The circular dampers comprise a pipe union, equipped with damper blades and shaft. The connection ducts have seals of silicone rubber.

The rectangular shutter dampers comprise a number of opposing blades housed in nylon bushings in a sheet metal frame. The blades are connected via a link system, which is insulated (protected), on the outside of the frame. The dampers are made of hot-dip galvanised sheet metal and are prepared for external insulation and have a position indicator showing the percentage opening of the damper.

TA, F, Maxi and Topvex, DVCompact

See general information.

TIME, DV, Flexline, BA

The dampers used in TIME, DV and BA units have aerodynamic blades of extruded aluminium with rubber seals. The dampers are installed inside the casing and the frames of the dampers are very slim providing the maximum area and minimum resistance for the air flow.

HHFlex, HHCompact

All dampers standard suitable for optional actuator(s). Dampers air tightness up to class 3. HHFlex dampers are configurable for all opening and mixing situations and extra corrosion protection is possible. In/outlet damper material HHCompact galvanised metal sheet. Aluminium available for the HHFlex.

Shut-off damper

Mixing damper

Filter

There are different types of filter material and a variety of designs for different degrees of air purification and thus different classes of filter. With some units the filter type can be adapted to satisfy specific requirements for air purification at the premises in question. The filters must be replaced at specified intervals and are mounted in a way that makes it easy to carry out inspections and replacement work. A monitoring function for filter replacement is available for some units, using either set time intervals or differential pressure sensors. Some filters can be cleaned.

TA
TA units are supplied with M5 bag filters as standard. G3 and F7 bag filters can be ordered separately. The filter is positioned before the fan and heating coil and is monitored via time intervals.

F
F comes with three different filter options: panel filter, bag filter and carbon filter. The panel filters absorb oil and grease and discourage bacteria. Can withstand temperatures of up to 80°C. Bag filters are available in filter classes G3-F9 for bag filters 360 mm long and M5-F9 for bag filters 625 mm long. Carbon filters are intended for kitchen extractor fans. The individual carbon cartridges comprise one inner and one outer cylinder made of galvanised steel and a cover.

Maxi
Maxi units are supplied with M5 bag filter on the supply air side and G3 bag filter on the extract air side. F7 filters can be ordered separately. The filters are monitored by means of a differential pressure sensor.

Topvex
All Topvex units are supplied with bag filters as standard. Both the filters are positioned before the heat exchanger to keep it clean. Topvex is supplied with an F7 filter on the supply air side and an M5 filter on the extract air side. Filters are monitored via a time interval in Topvex TX, SX and a differential pressure sensor in Topvex TR, SR, FR and SC.

TIME
M5/F7 class bag filter.

DV, DVCompact
The bag filter DVF is made up of filter cells and is available in classes G4-F9 (M6, F7 and CityFlo for DVCompact) in accordance with EN779. The large surface area guarantees a long service life. The filter employs a simple system of lateral locking rails, which makes replacing the filters easier, and the tight seal complies with EN1886.

BA
Filter classes are available in the range G3-F9. The filters are either lift and pull type or sliding type. The filter bypass leakage complies with EN 1886 : 2007.


Compact filter


Bag filter

HHFlex
Freely positionable panel, pleated and bag filters. Type dependable classes G4-F9. Side or (self-locking) front withdrawable. HEPA (E10/H13) filters available in fully welded frames. To be positioned in accordance with factory standards. Optional differential pressure indicators and sensors available.

HHCompact
F7 Filter at supply air intake with optional pleated G4 filter. Supply and extract filter heat exchange units restricted, minimal class F7. F7 filters parallel heat exchange unit restricted to pleated type. For other configurations F7 filter restricted to bag type. For inline supply units optional F9 bag filters possible at end of section.

Flexline
The Flexline units are supplied with panel, bag, low depth, panel and rigid filters. The units use two types of filter casings depending on the area of application.

Centrifugal fan

The fan is the heart of an air handling unit. It is the fan that creates the pressure required by the unit. Each type of fan is chosen to ensure optimum performance with regard to airflow, sound level and efficiency.

F
F has two fan options: a direct-driven fan with external rotor motor or a centrifugal fan with a single or double inlet with forward curved blades. The impeller and casing are made of galvanized steel. The wheels are made of galvanized steel or polyamide (PA).

Maxi
Maxi has direct-driven centrifugal fans with external rotor motors. The impellers have forward curved blades and generate very little duct noise. A built-in transformer controls the fans in two stages.

BA
BA units are supplied with AMCA certified belt driven DIDW centrifugal fans. Options available are forward curved, backward curved, aerofoil backward curved blades with or without spark proof feature.

HHFlex, HHCompact
Wide range of double inlet fans with high quality pulleys and V-belt drive, one bolt adjustment. Vibration free setup with optimized springs and flexible connection. HHFlex range includes airfoil impellers and heavy duty (bearing) constructions. Motors 2-speed or 1-speed with optional

inverter drive. Run and stand-by motor configurations possible.

Flexline
Flexline units are supplied with centrifugal fans. Options availabe are forward curved and backward curved blades. Double fan application can be provided if needed.

The fans are manufactured from galvanised steel sheets and can be oven painted as an option

Plug fans

This type of fan is chosen to ensure optimum performance with regard to airflow, sound level and efficiency. A plug fan is a single-inlet, free-blowing fan with the unit casing acting as the fan casing.

TA

TA has a direct-drive plug fan with an external rotor motor. The impellers have backward curved blades. TA can also be supplied with an external extract air fan that can be connected to the unit and controlled parallel to the TA unit.

Topvex

Topvex uses efficient plug fans with backward-curved blades and maintenance-free external rotor motors. The units have EC motors achieving excellent efficiency.

Topvex TR, SR, FR and SC: The air volumes are individually controlled by measuring the pressure difference across the inlet cone (CAV) or by measuring the pressure in the ventilation duct (VAV).

Topvex TX, SX: The fans are individually and step-less controlled, 0...100%.

TIME, DV, DVCompact

Have highly efficient built-in plug fans with low sound levels and a low pressure drop at the duct connection. The plug fans achieve an efficiency of up to 75%. TIME and DV are supplied with efficient motors and frequency converters. With direct-drive plug fans, the unit requires very little servicing. Fans and motors are mounted on effective vibration dampers and are thus isolated from the unit casing. It is possible to add a built-in frequency converter to ensure the desired pressure and airflow. Status alarm as standard.

HHFlex

Plug fans with external rotor motors and EC-technology supported. Low cost external RPM-control or configuration possible. Range also includes permanent magnet DC motors and high efficiency classic AC motors. This ensures (high-power) solutions for situations where V-belts are not allowed (VDI 6022). Accompanying inverters for DC or AC motors are available. Flow measurement points can be integrated. Vibration free setup with optimized springs and flexible connection.

HHCompact

Plug fans with high efficiency AC motors or EC-technology. Accompanying inverters are available. Flow measurement points are integrated as standard.

Flexline

Plug fans with backward curved blades (without scroll case, single inlet, direct coupled) can be used depending on design conditions.

BA

BA units are supplied with AMCA certified high efficiency, low sound plug fans. Options of plug fans with AC/EC motors are available.

Rotary heat exchanger

The rotary heat exchanger is a functional element that recovers heat from indoor air to warm up the cold outdoor air. The exchanger is able to recover cooling from indoor air to cool the warm outdoor air if the controller is extended with this feature. The rotor motor drives the rotor by a belt. An alarm is activated if the speed of the rotor is not according to the command from the controller. The rotary heat exchanger has a short overall length.

Topvex

The efficient aluminum heat exchanger have an efficiency up to 85%. The exchanger capacity is controlled by a motor with variable speed control for control of the temperature according to the demand. The heat exchanger can be removed and has quick connectors on its electrical cables. Exception is Topvex SR09 and 11 were the exchanger is not removable.

TIME, DV and BA

TIME and DV are available with three types of standard exchangers with efficiencies up to 90%, three types of hygroscopic exchangers with efficiencies up to 90% and two types of sorption exchangers with efficiencies up to 90%. The hygroscopic types offer an increased recovery of moisture. The sorption type offer an increased recovery of moisture during the winter and during the summer on hot days the sorption type offer cooling recovery and dehumidification of the outdoor air when the temperature and water content in the extract air is below the temperature and water content in the outdoor air. Exchanger capacity is controlled by a motor with variable speed control for control of the temperature according to the demand. Purging sector to reduce extract air from mixing with supply air is available.

DVCompact

The rotary heat exchanger is extremely efficient, up to 85%. Heat exchanger controlled by a motor with variable speed control for close control of the temperature according to the demand. Purging sector to reduce extract air from mixing with supply air is available.

HHFlex, HHCompact

This range supports heat recovery wheels with condensation or sorption rotors. Sorption type rotors can be beneficial in situations where mechanical cooling or humidification is involved. This can result in a (de)humidification capacity reduction up to 30%. Accompanying inverters/controllers for the rotor motors are available.

HHFlex heat recovery section can be fitted with easy accessible inspection at choice. Hygroscopic wheels and purging sectors are available.

HHCompact adapts the rotary heat exchanger in a optional total unit control philosophy.

Flexline

The heat recovery ratio is extremely efficient, up to 85%. The heat and temperature of the exhaust air is transferred to the rotor blades. The transferred moisture and heat energy is passed on to fresh air. In addition to heat transfer conducted during the winter, it is also possible to save energy and carry out dehumidification with the same unit in the summer. Heat wheel is usually commanded by speed control.

Cross-flow heat exchanger

The cross-flow heat exchanger is a functional element that recovers heat from indoor air to warm up the cold outdoor air. These are made of corrugated aluminium sheets. Heat transfer between the sheets is improved by the turbulence created by the surface. Turbulence is created without any dirt being collected and causing changes in velocity. The design of the plates means that the entire surface of the heat exchanger can be used to maximum effect. With balanced airflows, efficiency can exceed 70% but around 50-60% is normal. In units where separate airflows are required, it can be useful to have a plate heat exchanger to perform this function, for example, if you want to avoid supply air being tainted by odours.

Maxi

Maxi 1100 has a built-in by-pass duct as standard. This by-pass duct is available as an accessory for Maxi 2000.

TIME ec, DVCompact

TIME and DVCompact with plate heat exchanger have a build in by-pass and are supplied with a high efficiency heat exchanger type.

Topvex TX/SX

Topvex TX/SX has a built-in by-pass duct as standard.

DV, BA

In units where separate airflows are required, it can be useful to have a plate heat exchanger to perform this function, for example, if you want to avoid supply air being tainted by odours. DVQ can be delivered with a standard or a high efficiency type. There are two versions of this heat exchanger, both of which are suitable for different types of environment. The aluminium version is used in commercial ventilation, for example, in schools, day nurseries, offices and hotels, where the air does not contain corrosive particles that could damage the material. Corrosion-resistant versions fitted with surface-treated aluminium elements are used in environments where the extract air could contain aggressive particles. Heat recovery is controlled via a built-in by-pass damper.

HHFlex, HHCompact

The floor of plate exchanger sections are per default provided with stainless steel drainpan on supply and exhaust air side. Face, bypass and recirculation dampers are available.

HHFlex, as an option extra exhaust eliminator is available.

HHCompact adapts the cross-flow heat exchanger in a optional total unit control philosophy.

Flexline

Heat recovery up to 65%. A bypass damper can be used in plate type heat recovery systems, to facilitate this process.

Counter-flow heat exchanger

The function of the counter-flow heat exchanger is similar to the function of the cross-flow heat exchanger but in the counter-flow heat exchanger the transmission area is extended with laminar counter-flow, and with balanced airflows, efficiency can exceed 80%.

Topvex

Topvex SC is equipped with two stepless by-pass dampers as standard. The outdoor air damper is used to by-pass the outdoor air during the warm season (no need of heat recovering) and to de-ice the heat exchanger during cold season (selectable). The extract air damper is used to by-pass the exchanger and extract air filter when the heating capacity is too high and thereby reducing the energy use. The units are built with trays under both sides of the exchanger. The tray under the exhaust air exit is for collection of condensate water in the heating mode and the tray under the supply air exit is for collection of condensate water in the cooling recovery mode. The heat exchangers are removable.

TIME, DV, BA, HHCompact

The units are built with trays under both sides of the exchanger. The tray under the exhaust air exit is for collection of condensate water in the heating mode and the tray under the supply air exit is for collection of condensate water in the cooling recovery mode.

HHCompact adapts the counter-flow heat exchanger in a optional total unit control philosophy.

Flexline

Heat recovery up to 90%. A bypass damper can be added to heat recovery section, to control air flow, enable free-cooling and prevent freezing.

Run around coil heat exchanger

DV, BA, HHFlex, HHCompact, Flexline

The run around coil heat exchanger DVR is a system where a mixture of water and glycol is circulated between two coils. DVR are used where the two airflows must be completely separated.

Heat pipe heat recovery

Flexline
Refrigerant is used to transfer heat and the unit operates on the principle of the refrigerant vaporizing upon meeting the system return air and rising within the tube and then transferring its heat to cold air and condensing back into liquid. The system can operate in the -30°C and 55°C temperature range without any problems.

The heatpipe can be used horizontally side by side or vertically stacked.

There is a stainless steel condensation pan and the drainage pipe (stainless steel) of this pan is hermetically extended outside the unit. Mounting a filter before the heat recovery coil is recommended to prevent contamination.

Humidification systems

The humidification unit is used to control the relative humidity of the ambient air by increasing the absolute humidity of air in the air handling unit.

Flexline
3 types of humidifiers can be used in Systemair HSK air handling units according to the application type: steam humidifier, atomizer humidifier, adiabatic humidifier.

Stainless steel is used as interior sheet material in humidification sections. 300 mm heightbase frames are used as a standard in air handling units including an atomizer and evaporative humidification section.

Heating coil – water

A water heating coil is used to supplement the warmth of the air after any installed heat exchanger so that the air (the supply air) enters the unit at the correct temperature. The coil is made of copper tubing with a galvanised sheet steel frame and aluminium elements. The coil can also be used for preheating of the air.

Maxi
The coil is positioned before the fan.

TIME
The coil is positioned after the fan and two capacities per size are available. Aluzinc 185-coated steel panel frame.

DVCompact
The coil is positioned after the fan and two capacities per size are available. Aluzinc 185-coated steel panel frame and vertical pipe connections.

HHFlex
The coil can be freely positioned and designed for each air handling unit. Exchanger materials in (pre painted) Cu/Al, Cu/Cu. Casing galvanized or stainless steel. Optional factory fitted with (withdrawable) frost protection thermostat(s).

HHCompact
Exchanger materials in (pre painted) Cu/Al. Casing galvanized steel. Optional factory fitted with frost protection thermostat.

Flexline
Two types exist according to the type of refrigerant used for heating: water and gas. Manufactured from copper tube aluminium. Casing galvanized or stainless steel. A freeze-free thermostat is supplied as an optional feature for freeze protection.

BA
Heating coils are available with options of plain/hydrophilic coated fins and Fe or SS casing. They comply with EN1216.

DV
The heating coil DVH, is calculated and designed for each air handling unit. Aluzinc 185-coated steel panel frame. Change over coil, where the same coil is used for both heating and cooling, are available.

Heating coil – electric

The heating coil is positioned after the fan to provide a comfortable supply air temperature even at low outdoor air temperatures. It comprises a frame of galvanised sheet steel with stainless steel elements.

Maxi
The coil is positioned before the fan.

DV, TIME and BA
The electric heating coils will be designed and calculated for each air handling unit.

DVCompact
The electric heating coil is positioned after the fan and will be designed and calculated for each air handling unit. Aluzinc 185-coated steel panel frame.

HHFlex
The coil can be (freely) positioned in accordance with factory standards. Wide range of capacities and step configurations for most sizes. Terminal box and thermal protection thermostats are included.

HHCompact
Optional electric main or pre-heaters are available. For heat recovery units 0-100% capacity control is possible with the optional total unit control.

Air cooler – water

Air coolers are used to cool supply air. Air coolers are made of copper tubing and have aluminium elements. The refrigerant is water (or gas (Flexline)). Can be fitted with a drip tray.

TA, Maxi, Topvex
Ordered as an external accessory. Controlled via the unit's built-in control system.

TIME
The cooling coil is positioned after the fan. Different capacities are available. The cooling capacity is controlled via the units control system. The coils are fitted with a drip tray. Aluzinc 185-coated steel panel frame.

DVCompact
The electric heating coil, which have several capacities, are positioned after the fan and are fitted with condensation insulated aluzinc 185-coated steel panel frame and vertical pipe connections.

HHFlex
The cooling coil can be freely positioned and designed for each air handling unit. Exchanger materials in (pre painted) Cu/Al, Cu/Cu and Cu-Sn/Cu-Sn. Casing galvanized or stainless steel. Coils standard fitted with stainless steel sloped drip tray. Plastic and galvanized eliminators are available.

HHCompact
Exchanger materials in (pre painted) Cu/Al. Casing galvanized steel. Coils standard fitted with stainless steel sloped drip tray. Plastic eliminators are available. Coils can be configured for reverse (heat-pump) cycle. Optional factory fitted with frost protection thermostat.

Flexline
Two types exist according to the type of refrigerant used for cooling: Water and gas. Casing galvanized or stainless steel.

BA
AHRI certified cooling coils are available in construction options mentioned in BA heating coils along with a dip tray. they comply with EN 1216.

DV
The cooling coil DVK, is calculated and designed for each air handling unit. Aluzinc 185-coated steel panel frame. Are fitted with a drip tray. Change over coil, where the same coil is used for both heating and cooling, are available.

Air cooler – DX

Air coolers are used to cool supply air and employ the direct expansion principle (expansion valve). Air coolers are made of copper tubing and have aluminium elements. The refrigerant does not contain freon. Can be fitted with a drip tray.

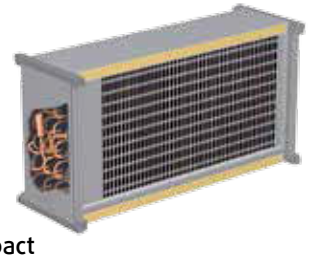
TA, Maxi, Topvex
Ordered as an external accessory. Controlled via the unit's built-in control system. TA also requires the accessory: Signal converter SC2/D.

TIME
The Cooling coil is positioned after the fan. Different capacities are available. The cooling capacity is controlled via the units control system. Are fitted with a drip tray. Aluzinc 185-coated steel panel frame.

Cooler DVU for TIME and DV
A complete cooling system in size 10-40 with compressor, all cooling components and control system integrated in a TIME/DV casing. Stepless operation from 0 to max capacity with speed controlled compressor.

DVCompact
Cooling coil, which has multiple capacity variants, placed after the fan. The battery supplied insulated in aluzinc 185, with drip pan and vertical pipe connections. The cooling effect is regulated by the unit's control system.

HHFlex
The DX-cooling coil can be freely positioned and designed for each air handling unit. Standard refrigerants R134a R407c and R410a. Exchanger materials in (pre painted) Cu/Al, Cu/Cu and Cu-Sn/Cu-Sn. Casing galvanized or stainless steel. Coils standard fitted with stainless steel sloped drip tray. Plastic and galvanized eliminators are available.



HHCompact
Exchanger materials in (pre painted) Cu/Al. Casing galvanized steel. Coils standard fitted with stainless steel sloped drip tray. Plastic eliminators are available. Standard refrigerants R407CA and R410A. Coils can be configured for reverse heat-pump cycle.

DV, BA
The cooling coil DVK, is calculated and designed for each air handling unit. Aluzinc 185-coated steel frame and a drip tray under the coil.

Silencers

Silencers are a functional element used to reduce the transfer of unit noise to the building and surroundings.

All our units can be equipped with silencers, as integrated or loose duct silencers. For TA, Maxi, and Topvex, silencers are available as an external accessory.

F
With integrated sound-damping screens in thicknesses of 100 or 200 mm.

TIME, DV
Silencers can be integrated as a part of the unit. TIME has always double silencers (inlet and exhaust).The sound attenuator is an absorptive silencer fitted with baffles. For environmental reasons, the screens have been surface-treated to prevent wear to the soundabsorbing material. There are 3 different types of surface treatment:

1. Standard coating ideal for all forms of commercial ventilation.
2. Baffles coated with a strong, durable material that is extremely resistant to mechanical wear. This is used when baffles will only be cleaned by brushing or vacuuming.
3. Synthetic-coated baffles are preferable when they are likely to be cleaned by washing. In order to facilitate inspections and cleaning, the unit housing has large inspection panels for types 2 and 3. The baffles are designed so that they can be removed for cleaning.

DVCompact, BA
The sound attenuator are fitted with aluzinc 185-coated steel panel frames and baffels. Order as external accessory.

HHFlex
The sound attenuators can be freely positioned and designed for each air handling unit. Calculated values in accordance with ISO 7235-2003. Supplied with an erosion-resistant top layer as standard.

HHCompact
For heat recovery units optional sound attenuators can be delivered as separate item, easy integratable in the duct construction. Calculated values in accordance with ISO 7235-2003. Supplied with an erosion-resistant top layer as standard.

Flexline
The attenuation function is carried out by the glass wool sound absorbing element of A2 fire classification. Coulisse widths of attenuating elements are 200 mm as standard.

Notes

Control system

S = standard settings
P = possible settings
C = choose when ordering
O = option

Controller		E283 S TA 450-4500	E283 S Topvex TX/SX	E283 L Maxi 1100, 2000	E283 L Topvex SC	E283 L Topvex TR, SR, FR	E283W-3 + E151-3 Time ec	E283W-3 + E281-3 DV and BA	2xE28 DVCompact	2xC28 HHCompact	POL 638.70 Flexline
Control panel	Separate with 10 m cable. Cable lengt up to 100 m can be used.	S	S	S	S	S	S	S	S	S	P
Repeater E0-R	For installations when controlling up to 6 AHU´s from one control panel.	O	O	O	O	O	–	–	O	O	P
Software	E-tool	O	O	O	O	O	O	O	O	–	O
Temperature control	Extract air	P	S	S	S	S	C	C	P	P	C
	Supply air	S	P	P	P	P	C	C	S	S	C
	Outdoor temperature compensated supply air	P	P	P	P	P	C	C	O	P	C
	Cascaded room control	P	P	P	P	P	C	C	C	P [8]	C
	Outdoor temp. dependent switching between supply / extract air or supply / room control	P	P	P	P	P	C	C	C	–	C
Airflow control	Week timer, two separate running periods	S	S	S	S	S	S	S	S	S	P
Fan speed control	Transformer	S	–	S	–	–	–	–	–	–	S
	Individual variable voltage regulation	–	S	–	–	–	–	–	–	–	–
	Air volume control, CAV	–	–	–	C	C	C	C	C	C	C
	Constant duct pressure, VAV	–	–	–	C	C	C	C	C	C	C
	Airflow compensated for outdoor air temperature	S	S	S	S	S	C	C	C	–	C
Heat exchanger	Cross-flow heat exchanger	–	S	S	–	–	C	C	C	C	C
	Counter-flow heat exchanger	–	–	–	S	–	C	C	–	C	C
	By-pass damper, variable	–	–	–	S [1]	–	S	S	S	S	C
	By-pass damper, on/off	–	S	O [2]	–	–	–	–	–	O	C
	Rotating	–	–	–	–	S	C	C	S	C	C
	Liquid-coupled	–	–	–	–	–	–	C	–	–	C
	Recirculation	–	–	–	–	–	–	C	C	C	C
	Without	–	–	–	–	–	–	C	–	C	C
Heater	Hot water	C [3]	C	C	C	C	C	C	C	C [7]	C
	Electrical	C [3]	C	C	C	C	C	C	C	C [6]	C
Cooler	Cold water coil. 0....10VDC output signal.	P	P	P	P	P	C	C	C	C	C
	Cold water coil. Built-in.	–	–	–	–	–	–	–	–	C	C
	Change over coil. Hot water and cold water.	–	–	–	–	–	C	C	C	C	C
	DX cooling. 24VAC (1, 2 or 3-stage binary) output.	P	P	P	P	P	C	C	C	–	C
	DX cooling. Built-in.	–	–	–	–	O [4]	C	C	C	C	C
Free cooling	Using the cold outdoor air, day and/ or night, to cool down the building.	P	P	P [5]	P	P	C	C	C	C	C
Cool recycling		P	P	P [5]	P	P	C	C	C	–	C
Demand ventilation, CO_2	2-stage, CO_2 sensor with potential free contact	P	P	P	P	P	–	C	C	–	C
	Variable, CO_2 sensor with 0...10VDC signal	–	–	–	P	P	–	C	C	C	C
Pump control	Heating, 24VAC output signal.	P	P	P	P	P	S	C	S	–	P
	Heating, 230V relay.	P	P	P	P	P	S	S	S	O	P
	Cooling, 24VAC output signal.	P	P	P	P	P	C	C	S	–	P

S = standard settings
P = possible settings
C = choose when ordering
O = option

Controller		E283 S TA 450-4500	E283 S Topvex TX/SX	E283 L Maxi 1100, 2000	E283 L Topvex SC	E283 L Topvex TR, SR, FR	E283W-3 + E151-3 Time EC	E283W-3 + E281-3 DV and BA	2xE28 DVCompact	2xC28 HHCompact	POL 638.70 Flexline
Extended operation		S	S	S	S	S	S	C	S	S	C
7-day program	Changing between Normal run, Reduced run or Off.	S	S	S	S	S	S	S	S	S	O
Damper control	Outdoor/exhaust air	S	S	S	S	S	C	C	S	C	O
Alarm	Alarm notification	S	S	S	S	S	S	S	S	S	O
	High and low priority	S	S	S	S	S	S	S	S	S	S
	Buzzer alarm (24VAC output signal)	S	S	S	S	S	S	C	O	–	C
	Timed filter alarm (monthly)	S	–	–	–	–	–	–	–	–	O
	Filter alarm triggered by pressure difference (Pa)	–	S	S	S	S	C	C	S	S	O
Communication	Exoline, Modbus via RS 485	S	S	S	S	S	S	S	S	C	S
	Exoline, WEB via TCP/IP.	S	S	S	S	S	S	S	S	S	S
	BACnet/IP.	S	S	S	S	S	S	S	–	C	–
	LON.	O	O	O	O	O	C	C	C	–	C

[1] Topvex SC has by-pass two by-pass dampers, outdoor-supply and extract-exhaust.
[2] Maxi 1100 has a built-in by-pass damper as standard.
[3] TA 450-1100 Electrical, 1500-2000 Electrical or Hot water, 3000-4500 Hot water.
[4] Option for Topvex TR09-15 and SR09 and 11.
[5] Requires by-pass damper.
[6] 0-100% modulating, also preheater available
[7] Also preheater available
[8] Room off set

Functions included in E283 L/S

Menu language	Over 20 different languages.
Operating mode:	4 operating modes Local ON/OFF Local schedule Remote digital Remote BMS
Temperature control	Supply air. Supply air with compensation for outdoor air temperature. Extract air (cascade). Room air control (cascade). Outdoor air temperature-dependent exchange between room air control and supply air control. Outdoor air temperature-dependent exchange between extract air control and supply air control.
Fan speed control	Constant air volume control, CAV. Constant duct pressure control, VAV. Airflow/duct pressure compensated for outdoor air temperature. Transformer. Individual variable voltage regulation.
Heat control	Water coil (0...10V control signal). Electric heating. Water coil and electric heating.
Control of cold water cooling	0...10V control signal
DX cooling control	0...10V control signal or up to 3-stage binary control.
Cooling energy recovery	Automatically recovers the cooled indoor air to cool the warmer outdoor air.
Free cooling	Free cooling is used to save energy by using the cold outdoor air, e.g. during night time, to cool down the building.
Demand-controlled ventilation	For applications with varying loads, the fan speed and mixing damper can be controlled by the air quality, measured using a sensor. It is also possible to use a digital input for extended/boosted operation via an external signal from an external timer, presence detector or similar sensors with a volt-free contact.
Extended operation	The units have a digital input for extended/boosted operation. This function is activated by an external signal from a button or timer. The function can also be activated via the control panel. Extended operation can be set to run for 0 to 240 minutes.
Yearly program	A yearly clock function means you can store a 7-day program with holiday periods. Each day has up to two individual operational periods for normal and reduced speed. Duct for digital timer, e.g. door locks, lighting, etc.
Damper control	24V output signal controlling one or two shut-off dampers.
Alarm	Alarm notification in clear text. Alarm prioritisation. Alarms can be assigned different priorities, A, B and C alarms or inactive. Buzzer alarm output signal (24V). Fire alarm input (potential-free contact). Different fan modes in the event of a fire.
Communication	A repeter E0-R can be used for control of up to 6 air handling units from one control panel. Standard - Exoline, Modbus via RS 485. Standard - Exoline, WEB via TCP/IP. Standard - BACnet/IP. Option - LON
E-Tool software	PC-based software.

Functions included in advanced – C28

Menu language	Different languages. Webbased easy access.
Operating mode:	4 operating modes Local ON/OFF Local schedule Remote digital Remote BMS
Temperature control	Supply air. Supply air with compensation for outdoor air temperature. Extract air (cascade). Room air control (cascade).
Fan speed control	Constant air volume control, CAV + high/low Constant duct pressure control, VAV + high/low CO_2 demand
Heat control	Water coil (0...10V control signal). Electric heating, 100% modulating. Water coil and electric heating. Both pre and booster heater. Heat demand.
Control of cold water cooling	0...10V control signal, cool demand
DX cooling control	0...10V control signal, release signal
Room surveillance	On max. and min. temperature in non occupied mode
Pump relais	2 extra pump relais possible for 1~ 230V power supply to heating or coil pump
Energy recovery	Automatically recovers the energy in both summer as winter application. Optional anti freeze sensor over heat recovery.
Free cooling	Free cooling is used to save energy by using the cold outdoor air, e.g. during night time, to cool down the building.
Demand-controlled ventilation	For applications with varying loads, the fan speed can be controlled by the air quality, measured using a sensor based on CO_2 level in the room.
Extended operation	The units have a digital input for extended/boosted operation. This function is activated by an external signal from a button or timer. The function can also be activated via the control panel.
Yearly program	A yearly clock function means you can store a 7-day program with holiday periods. Each day has up to two individual operational periods for normal and reduced speed.
Damper control	24V output signal controlling up to 4 dampers.
Recirculation damper	For rotary and cross flow plate heat exchanger for morning heat up and chilled beam applications
Alarm	Alarm notification in clear text. Alarm prioritisation. Alarms can be assigned different priorities, A, B and C alarms or inactive. Fire alarm input (potential-free contact). Different fan modes in the event of a fire.
Communication	A repeater (E0R, accessory) is required when the cable between the unit and control panel is longer than 10 metres. E0R can control up to 6 air handling units. BACnet via IP.
E-Tool software	PC-based software. Laptop power cable in cabinet.

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