VENTS WORLD VENTILATION LEADER

MODULAR AIR HANDLING UNITS

airVENTS

ventilation systems
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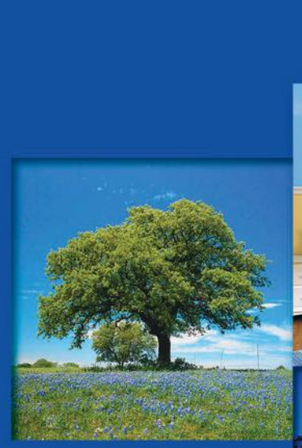
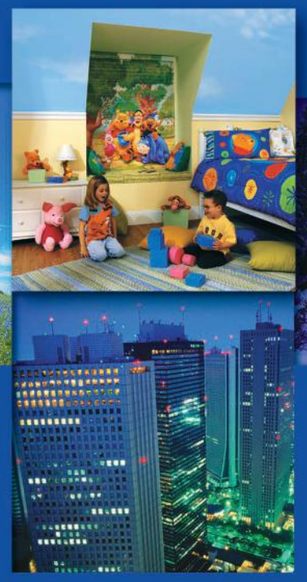
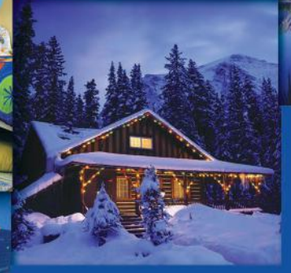
Modular Air Handling Units







VENTS reserves the rights to modify any of its products' features, designs, components and specifications at any time and without notice to maintain the development and quality of manufactured goods.

08/2015

HVI MEMBER

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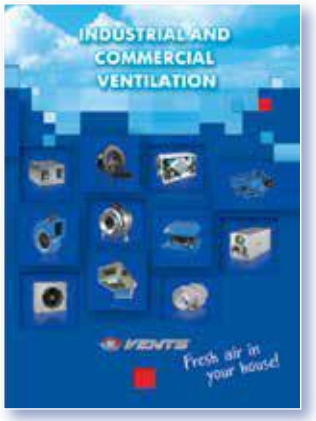
VENTS

2015

Fresh air in your house!

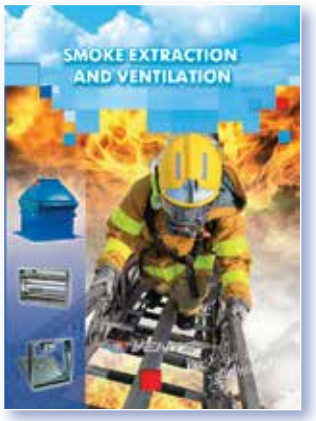


Industrial and commercial ventilation (Catalogue no. 1)

Industrial and commercial ventilation components - fans for round and rectangular ducts, sound-insulated, axial and roof fans, air handling units with heat recovery, air heating units, accessories.

Energy saving ventilation Air handling units (Catalogue no. 2)

Energy saving supply and exhaust units and air handling units with heat recovery with air capacity up to 6500 m^3/h.

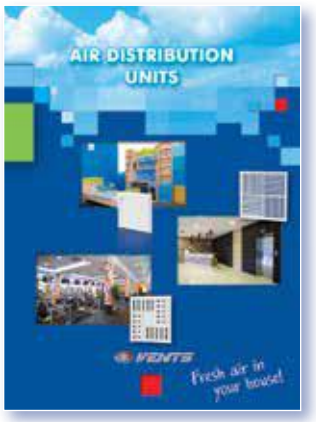


Smoke extraction and ventilation (Catalogue no. 5)

Smoke protection systems of buildings and premises.

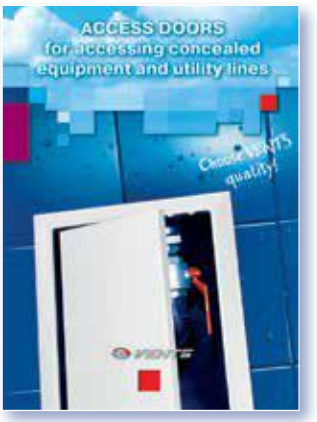
Domestic ventilation (Catalogue no. 6)

Domestic ventilation: fans, mono-pipe exhaust kitchen and bathroom fans, air distribution units, air ducts and fittings, access doors, ventilation kits.



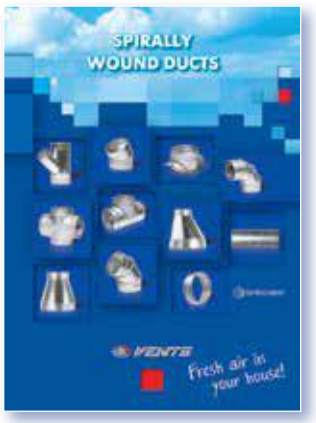
Air distribution units (Catalogue no. 9)

Plastic and metal air distribution products (grilles, disk valves, diffusers, etc.) for ventilation, air conditioning and heating.



Access doors (Catalogue no. 10)

Plastic and metal access doors for accessing concealed equipment and utility lines. Special offers for ceramic tiles.



Spirally wound ducts (Catalogue no. 13)

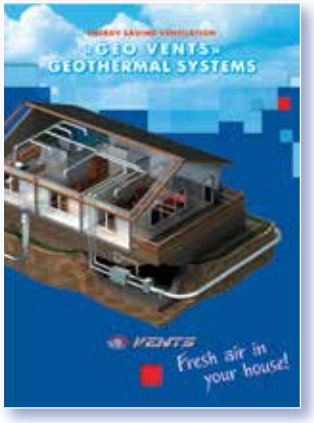
SPIROVENT spiral seam vent ducts and fittings of 100 to 1600 mm diameter.

Flexible ducts and fittings for ventilation, air conditioning and heating (Catalogue no. 14)

Flexible and semi-flexible air ducts made of polymeric materials, aluminium, galvanized or stainless steel, metal fittings for ventilation, air conditioning, heating, gas handling and abrasive particles aspiration.

Air handling units AirVENTS (Catalogue no. 3)

Energy saving air handling units with air capacity up to 40 000 m^3/h, for use in large residential, industrial and commercial objects.

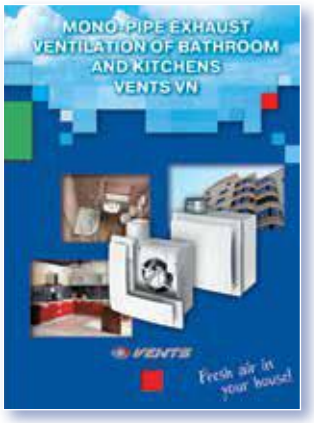


Energy saving ventilation Geothermal systems GEO VENTS (Catalogue no. 4)

Energy saving system GEO VENTS with use of the earth's surface layers heat.
High ventilation system energy efficiency and low operating costs.

Domestic fans (Catalogue no. 7)

Domestic fans with air capacity up to 365 m^3/h with extra functions: timer, humidity sensor, motion sensor, etc.
Applied for premises up to 30 m^2.

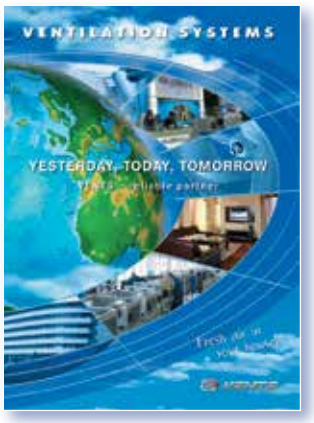


VENTS VN Mono-pipe exhaust ventilation (Catalogue no. 8)

Exhaust ventilation in houses with mono-pipe ventilation system based on VENTS VN fans.

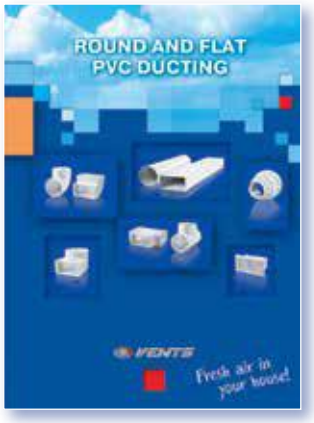
Energy saving ventilation. Single room energy recovery ventilators MICRA. (Catalogue no.11)

MICRA single room ventilators with energy regeneration for efficient ventilation and lowest investments in ready-built and brand new premises.



VENTS presentation catalogue (Catalogue no.12)

VENTS mission is to bring fresh air to your house and surround you with the world of comfortable microclimate.



Round and flat PVC ducting (Catalogue no. 15)

Flat and round PVC ducts PLASTIVENT for ventilation of residential, office and commercial premises and connection of exhaust ventilation equipment (kitchen extractors, hoods, exhaust boxes, etc).
Wide product range of fittings.

Energy saving ventilation. Single room energy recovery ventilators TwinFresh. (Catalogue no.16)

Single room reverse ventilators with energy regeneration TwinFresh for efficient ventilation and lowest investments in ready-built and brand new premises.

2015 CATALOGUES

VENTS

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WELCOME TO THE VENTS WORLD!

VENTS company was founded in the nineties of the XXth century.

Dynamic development of the enterprise and ongoing study of the consumer demand enabled rapid international leadership of the company in the ventilation industry.

VENTS is a powerful research and development enterprise with 2500 professionals working as a single team to ensure a full production cycle from idea to end product. The production base of the company is located at more than 60 000 m^2 area. It includes 16 workshops equipped under the latest international standards and each of them is comparable to a separate plant.

Modern equipment, active implementation of advanced technologies and highly automated production are the characteristic features of VENTS company.

The company undergoes rapid dynamic development; fundamental researches and effective designs in climatic equipment industry are in the focus of the company's business strategy.

The joint cooperation of the corporate design department, test laboratories and production workshops let us introduce high quality products to the market.

Special attention is paid to the manufacturing of the goods during all manufacturing stages including monitoring of the technological conditions. Technical characteristics of supplied raw materials are thoroughly checked. Quality control system which meets international standard requirements ISO 9001:2000 was implemented at the enterprise.

Environmental protection is one of the basic components of the corporate development. The technological process at the enterprise is arranged in such a way as to exclude any negative impact to the environment. To solve the global energy saving problem we develop a special climatic equipment that provides comfortable conditions for people and reduces the energy demand significantly.

Perfect quality, competitive prices, high production potential, technical capabilities and the wide product range stimulate long-term partrnership and product promotion all over the world.

The VENTS ventilation products are exported to more than 90 countries and are sold through the distribution network of 120 companies worldwide. Share of the VENTS products globally is above 10%.

VENTS is a member of high-rank international organizations, the leading HVAC experts.

Since 2008 VENTS has been a fully-featured member of HARDI Association (Heating, Air-conditioning and Refrigeration Distributors International, USA).

Since 2010 VENTS has been a participant of AMCA Association (the Air Movement and Control Association (AMCA) International, Inc.). In 2011 VENTS successfully passed tests for compliance with AMCA standards and the VENTS products were certified for the USA market.

In 2011 VENTS joined HVI (Home Ventilation Institute, USA) Association.

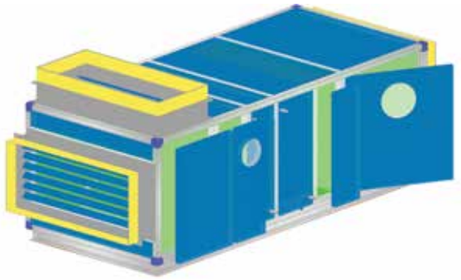
Powerful production facilities, high automation level, active implementation of innovative technologies in the production process made VENTS a worldwide ventilation leader.

We manufacture our products with respect to unique geographical, climatic, technical features of each country and do our best to fulfill the client's wishes anywhere anytime.

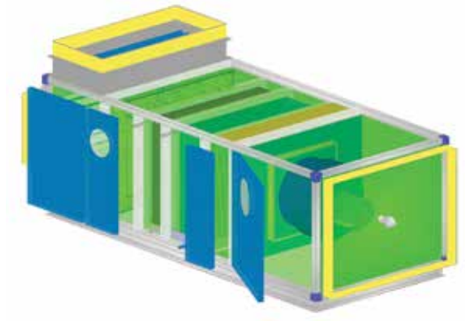
VENTS AHU SELECTION PROGRAM

Advantages of the program:

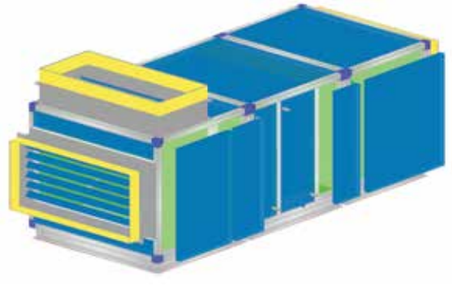
Flexible system designed to create commercial offers with a maximum accordance to the customer requirements.
High flexibility allows creation of a non-standard arrangement of sections.
Design optimization: unit can be arranged as a single block or in separate sections. Overall sizes of each section can be manually adjusted.



Example of an air extract unit arrangement with a mixing chamber

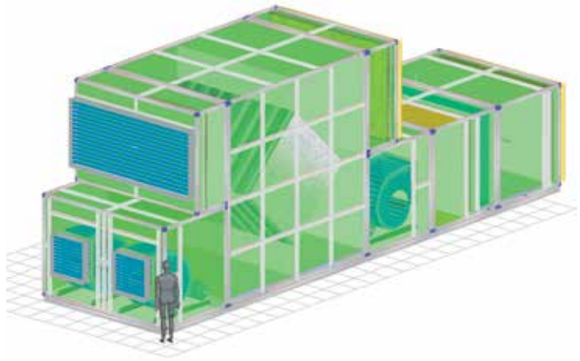


Combined units construction or

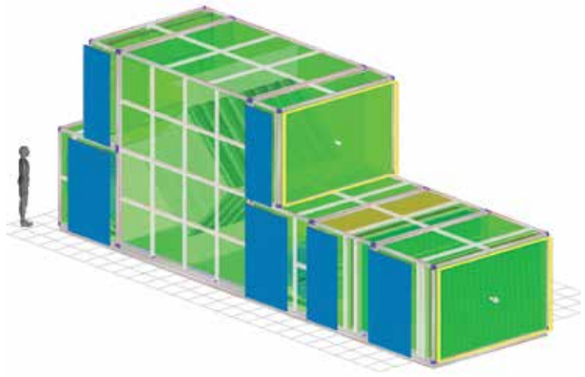


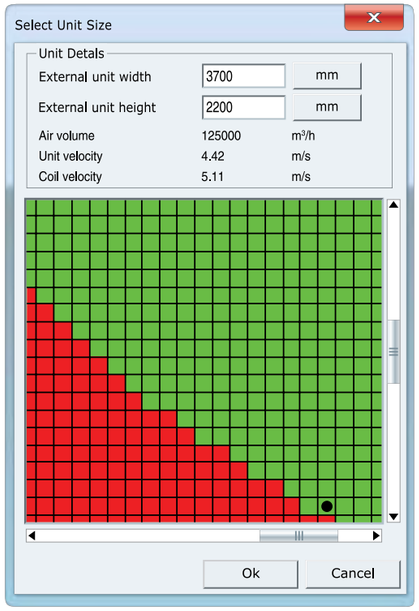
Separate units construction

Non standard sizes available upon request.
Built in coil calculation module enables flexible selection of non-standard geometry.
Detailed technical description of selected units including fan curves and processes representation on Mollier diagram.
Integration with CAD-system allows to generate a set of design documentation for automated manufacturing.
Drawing layouts of units and sections in .dwg, .dxf, .pdf format



14 standard sizes
With performance range from 1500m³/hour to 128000m³/hour





UNIT DESIGNATION

Size

AV02 AV03 AV04 AV06 AV09 AV12 AV15
AV20 AV27 AV35 AV45 AV55 AV65 AV85

Size depends on required air capacity

Service Acces Side

L — Left side
R — Right side

Supply Units

SU — Indoor mounting
SU/O — Outdoor mounting

Exhaust Units

EXH — Indoor mounting
EXH/O — Outdoor mounting

Heat Recovery Units

Rotary Heat Exchanger

SE/R — Indoor mounting
SE/R/O — Outdoor mounting

Plate Heat Exchanger

SE/P — Indoor mounting
SE/P/O — Outdoor mounting

Separate sections

H — Water heater
E — Electric heater
C — Cooling section (water coil)
DX — Cooling section (evaporator)
F — Bag-type filter
FC — Panel filter
SP — Snail-type turbine fan
EC — Fan with EC motor
S — Silencer
HU — Humidifier
MC — Mixing chamber
A — Control system
IB — Inspection block
D — Air damper
B — Manual block
AW — Weather hood galv
MB — Base frame
FLC — Flexible connection
RF — Rooftopk

Unit's designation example

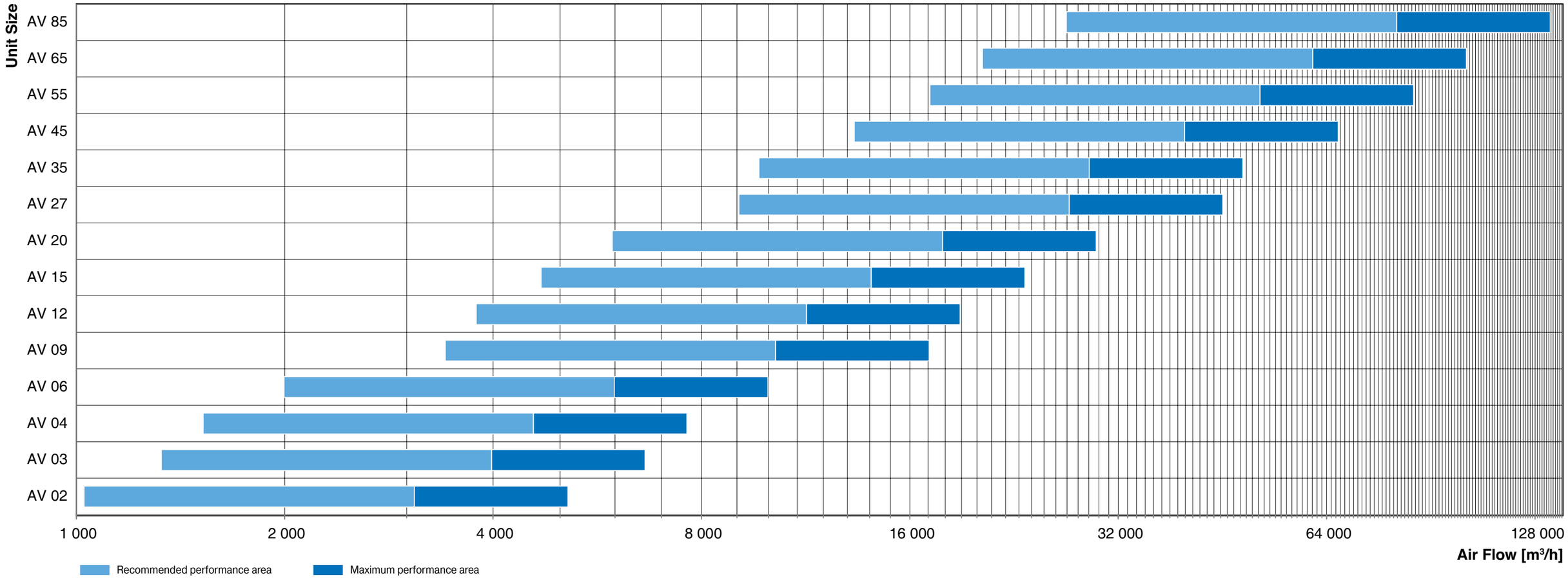
AV 09 L/SE/P/O-H-C-S

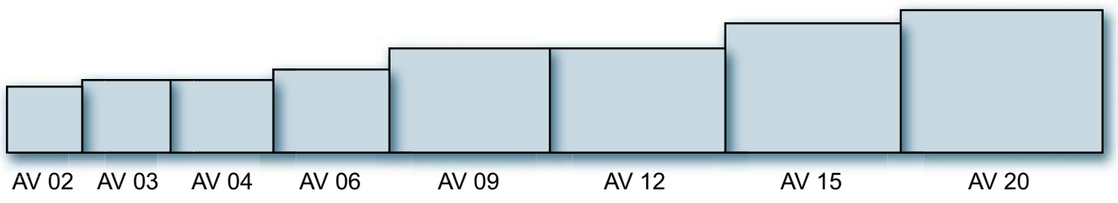
A heat recovery unit for outdoor mounting equipped with plate heat exchanger, water heater, cooling section and silancer
Total capacity: 9000 m³/h. Service access side: left.

AV 15 R/SU/O-FC-E-D-S-A

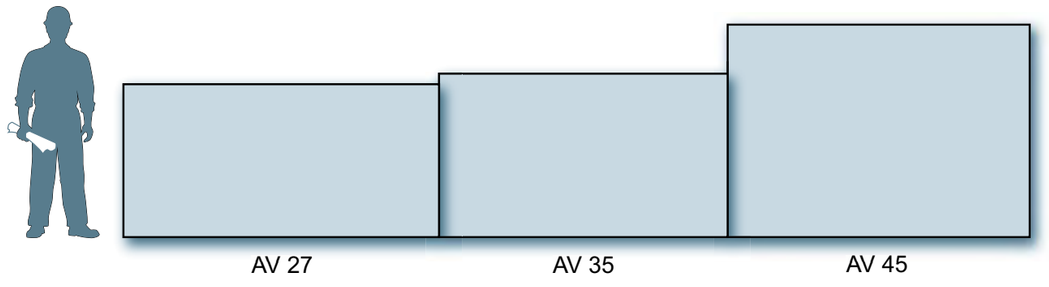
Air supply unit for outdoor mounting equipped with a panel filter, electric heater, cooling section and silencer supplied with control system.
Total capacity: 15000 m³/h. Service access side: right.

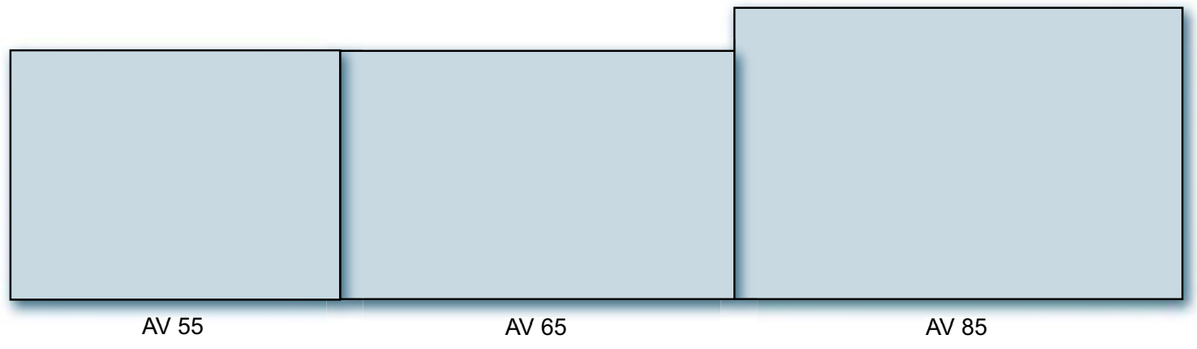
SIZE SELECTION





Unit size	AV 02	AV 03	AV 04	AV 06	AV 09	AV 12	AV 15	AV 20	AV 27	AV 35	AV 45	AV 55	AV 65	AV 85
Nominal air flow m³/h	2000	3000	4000	6000	9000	12000	15000	20000	27000	35000	45000	55000	65000	85000
Cross section hight (mm)	500	550	550	630	790	790	980	1080	1160	1240	1612	1900	1892	2200
Cross section width (mm)	570	670	770	880	1200	1330	1330	1530	2170	2170	2292	2500	2992	3400





CASING TYPES

Unit casing provides thermal and sound insulation, as well as durability and protection from external influence.

AirVENTS series are available in several types of casing, general properties of which are:

- ❑ High Mechanical strength. Class D1 according to EN 1886.
- ❑ Corrosion Resistance. Class C4 according to ISO 12944.
- ❑ Thermal insulation. Class T3 according to EN 1886.
- ❑ Protection from thermal bridges. Class TB3 according to EN 1886.

Increased fire resistance, high quality insulation materials. Mineral wool basalt fiber insulation with 90 kg/m^3 density. Unlike other types of insulating materials, this material is completely non-flammable and environmentally friendly.

■ Classic frame design – high strength

The classic casing design is based on aluminum profile frame, joined with corners made of cast aluminum or reinforsed nylon, provides high durability of the unit. Different frame thickness should be used considering the table below:

Frame Type	Recommended area of performance	Aluminum profile thickness	Thermal insulation thickness
30-25	up to 20000 m^3/h	30 mm	25 mm
50-50	20000-45000 m^3/h	50 mm	50 mm
70-50	more than 45000 m^3/h	70 mm	50 mm

Casing panels are made of steel sheets with a layer of thermal and acoustic insulation from mineral wool. The thickness of the insulation depends on the type of frame (25 or 50 mm).
Casing panel material varies depending on unit application:

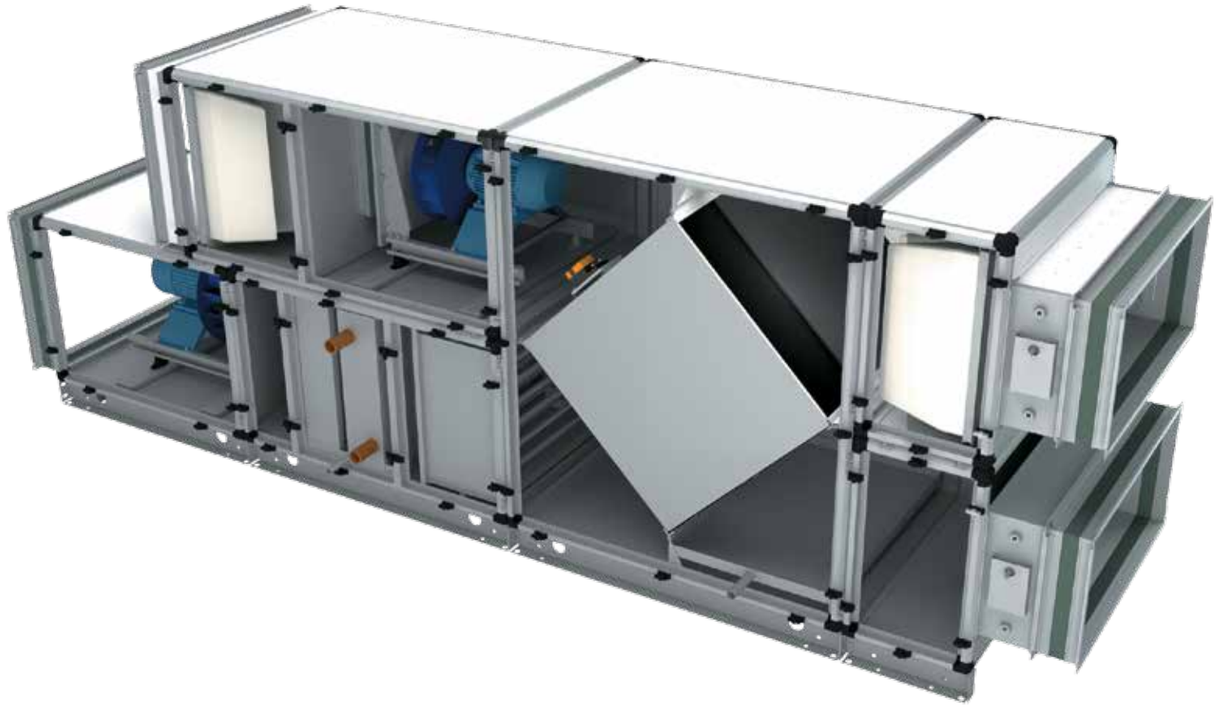
Outer panel surface material:

- ❑ Zinc-aluminium coating (standard)
- ❑ Galvanized steel with polymeric coating (high corrosion resistance)
- ❑ Galvanized steel (for internal execution units)

Inner panel surface material:

- ❑ Zinc-aluminium coating (standard)
- ❑ Stainless steel (for units in hygienic design)
- ❑ Galvanized steel

Classic unit design with 50 mm zink-aluminum panels in 50 mm frame with cast aluminum corners



Frameless units – high termal isolation

Frameless design casing system excludes thermal brigdes, usuall for aluminum or steel frame. This significantly increases thermal resistance and reduces heat loss, especially for outdoor installation. It also prevents condensation on the surface when air cooling is on.
Casing panels made of sheet steel with a layer of 40 mm thermal and acoustic insulation from mineral wool.
Casing material varies depending on unit application:

Outer panel surface material:

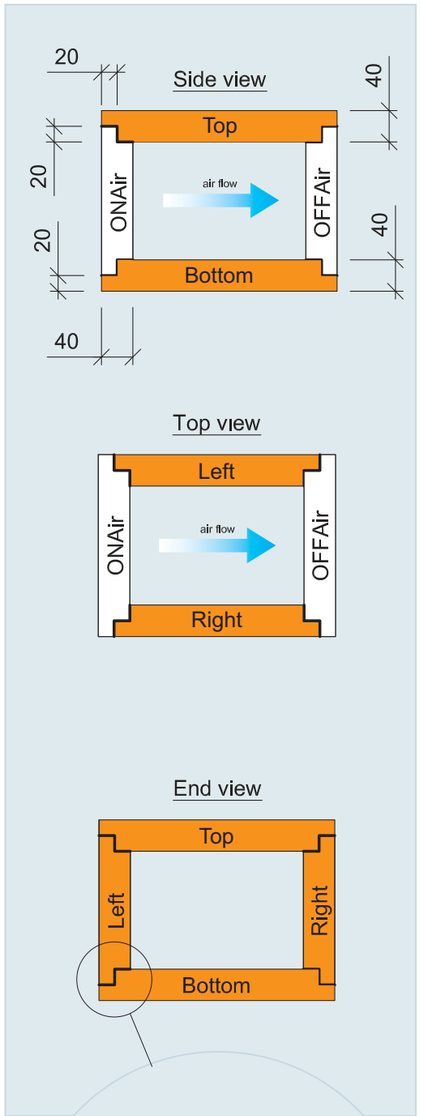
- Zinc-aluminium coating (standard)
- Galvanized steel with polymeric coating (high corrosion resistance)
- Galvanized steel (for internal execution units)

Inner panel surface material:

- Zinc aluminium (Standard)
- Stainless steel (for hygienic units)
- Galvanized steel

Benefits of frameless casing:

- better thermal resistance;
- lower weight of the unit;
- no thermal bridges;
- suitable for outdoor installation;
- lower cost;
- higher mechanical strength (compared to 30mm aluminum profile frame).



Frameless unite close up

Frameless casing connection

Base frame types

For both classic and frameless unit casing there are several types of base frame avaliable.

Type	Application (approximately):
Adjustable legs made of 2 mm thick galvanized steel	Single-deck units with air capacity up to 20000 m^3/h, or double-deck units – up to 15000 m^3/h
Solid base frame made of 2 mm thick galvanized steel	Single-deck units with air capacity up to 35000 m^3/h, or double-deck units – up to 25000 m^3/h
Solid base frame made of 3 mm thick painted galvanized steel	For unit performance up to 50000 m^3/h
Solid base frame made of 4 mmthick painted galvanized steel	For unit performance up to 128000 m^3/h

Solid base frame

Adjustable legs

SECTIONS

Fan section types:

- Plug fan with asynchronous motor (standard)
- Plug fan with electronically commutated motor (EC motor)
- Belt driven fan in spiral casing
- Fan sections are equipped with inspection window.

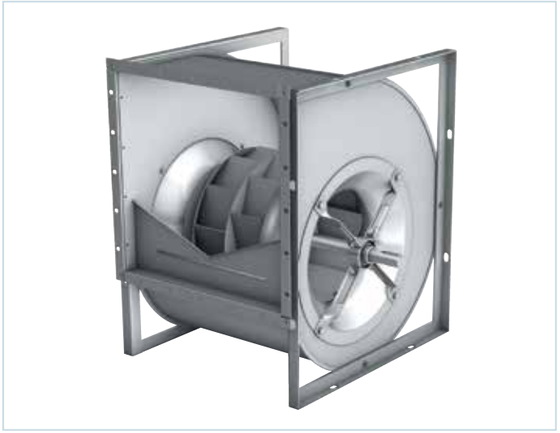
Plug fan

Plug fans are used in case of low or medium air performance and pressure. Direct driven motor and backward curved impeller ensures high performance, reliability and easy maintenance due to the absence of belt drive.
The impeller is made of high-strength composite material or sheet steel with protective polymer coating.
For correct fan operation, soft start, active thermal protection and smooth speed control, it is recommended to use variable frequency drive. It can be supplied loose or mounted inside the fan section as an option.
Motor and impeller are isolated from section housing with rubber anti-vibration mounts and flexible duct connectors.
The engine complies with energy efficiency classes IE1, IE2, and IE3, depending on the project requirements.
As an option fan can be provided in EX-proof execution.

Equipped with EC-motor

Plug fans with electronically commutated motors (EC motor)

Plug fans with the EC motors are used for projects that require high energy efficiency. The advantages of this type of fan are: extremely low power consumption at any speed, no need for external speed control and compact size due to motor with external rotor.



Belt-driven fans:

For units that require high pressure and airflow it is recommended to use belt driven fans in spiral housing. These fans are available with backward or forward curved blades.
Belt-driven fan with run and standby motors are available as an option.
The fan and gear blocks are located on the single frame, which is separated from the body of the machine with anti-vibration mounts.
The engine meets IE1, IE2, and IE3 energy efficiency classes, depending on the project requirements.

Sound attenuators:

Silencer unit consists of easily removable sound-absorbing 100 mm thick panels, with the length of 600 mm or 1200 mm. Noise absorption in accordance to ISO 7235.
Sound absorbing panels have two types of execution: pointed with reduced resistance and rectangular with a larger area of absorption.
Panels are made of high density mineral wool with protection felt cover.

The distance between the plates:

- 100 mm (standard);
- 150 mm – lower air pressure drop;
- 75 mm – increased noise reduction.

Air filters

Units include the following filter elements:

- Panel-type pre filters, G3, and G4 class, in accordance to EN779. Filter depth 50 mm. Reinforced with steel mesh. Panel frame made of galvanized steel.
- Bag Filters with pocket depth of 300 and 600 mm, G3, G4, F5 (M5), F7 or F9 class in accordance to EN779.
- High Efficiency Filters: EPA – filters (E10-E11) and HEPA – filter classes H12-H14, in accordance with EN1822.
- A filter based on active carbon is used for absorption of substances, that can not be caught by other types of filters (like odors, gases and pairs of toxic substances).

All filters have easily removable cassettes that can quickly and easily be replaced.
In the case of two stages of filtration, unit contains a compact section in which panel and bag filters are installed close to each other.

Electric heater

Section consists of electric tubular heating elements (heaters) with spiral fins with heating capacity of 5 kW each. Heating elements in the required amount are set in a removable cassette frame of galvanized steel.
Heaters are protected from overheating by thermal switches with automatic reset at 50 °C and with a manual reset to + 90 °C. Heaters are grouped in «triangle» scheme, three heaters in each group. Groups of heaters are then connected in parallel into 380 V power supply network.

Option:

Unit with built-in electric heater triac controller allows keeping the supply air temperature on a set level with accuracy of ± 1 °C.

Recommended accessories:

Fan Pressure switch DTV 500 - additional protection from overheating in case of low air flow. The sensor can be pre-mounted inside unit, or supplied loose as a separate item.
External Triac controller RNS - provides smooth control for heaters up to 75 kW (25 kW triac + two steps to 25 kW).

Water cooling coil

Heat exchanger complies with EN 13053, EN 1216
Unit consists of copper tubes with aluminum finning.
Section is equipped with a removable drain pan.
For water or glycol mixtures up to 50% glycol concentration.
Maximum working pressure of the cooling medium is up to 16 bar (1.6 MPa).
Drain and air bleeder valves are provided for each coil.

Recommended accessories:

Three-way valve with electric actuator.

DX cooling coil

Complies with EN 13053, EN 1216
Copper tubes with aluminum finning.
Section is equipped with a removable drain pan made of stainless steel.
For refrigerants R22, R407, R410A, and others.
Drain and air bleeder valves are provided for each coil.

LPHW heating coil

All heaters comply with standards EN 13053, EN 1216. Heat exchanger consists of copper tubes with aluminum finning.
Maximum temperature of heating fluid: 150 °C.
For water or glycol mixtures up to 50% glycol concentration.
Maximum working pressure of the heat transfer fluid is up to 16 bar (1.6 MPa).
Drain and air bleeder valves are provided for each coil.

Recommended accessories:

Thermostat F3000 protects the heater from freezing. The thermostat can be pre-mounted on the coil, or supplied as a separate item.
Mixing set USWK.

Rotary heat exchanger

A rotary heat exchanger is a rotary honeycomb matrix with layers of aluminum ribbon, which is slowly rotated within the supply and exhaust air streams. As the wheel rotates, heat is picked up from the exhaust air stream in one half of the rotation and given up to the fresh air stream in the other half of the rotation. Thus waste heat energy from the exhaust air stream is transferred to the matrix material and then from the matrix material to the fresh air stream, raising the temperature of the supply air stream.
The advantages of a rotary regenerator are: high efficiency, keeping comfortable humidity and low risk of frosting.
Rotary regenerators in AirVents units made of two types:

- Condensation type (standard);
- Enthalpy type. The additional hygroscopic coating is applied on tape, which provides additional moisture transfer from one stream to another. This feature is especially useful when using a rotor in the summer in conjunction with the air conditioning system.

Plate heat exchanger

Heat exchanger where heat is transferred from the flow of exhaust air to the incoming air from the street.
Heat exchanger is made of profiled aluminum plates, packed with elastic heat-resistant sealant. The sealing provides a reliable separation of the supply and exhaust air, eliminating internal flows, and not allowing moisture, dirt, odors and microorganisms transfer between streams.
To avoid frosting heat exchanger provides active protection by means of the bypass channel.
Drain pan is installed under the heat exchanger.

Air dampers

Louver made of aluminum profile.
The dampers can be mounted inside, or outside of the section. The frame around the perimeter of the damper is made of galvanized steel.
Rotating mechanism – cog wheels made of polycarbonate, mounted inside the frame, protected from external environment conditions. Square rod for automatic actuator. Two rods installed if damper height is more than 1200 mm. Air tightness class 3 according to EN 1751.
Option: «Northern» execution
For the regions with the outside air temperature below -40°C provided an electric heater between the blades. Heater protects blades and cogs from icing.

Recommended accessories: BELIMO electric actuators:

- ON/OFF, or proportional 0 to 100% by 0 ... 10V signal from the automation system.
- Actuator with spring return closes the damper when power supply is off.

Flexible anti-vibration insert

Flexible connectors are two flanges interconnected by antvibration material. The inserts are made of galvanized steel and polyethylene tape reinforced with polyamide textile cloth.
Apply:
In unit and air ducts connections to reduce vibration in the air ducts.

Outdoor version

Additional protection from precipitation is applied to unit construction in case of outdoor execution.

- Weather hoods on the air inlets and outlets
- Protective covers for air damper actuators
- Flat or twin pitched roof

Protects the unit from external influences: water, sand, leaves, others. Visor is equipped with a protective grid. Hood length is 300 mm. All joints are sealed.

Electric heater controller RNS

Triac controller provides smooth regulation of electric coils heating power. Max heating power up to 75 kW (25 kW triac + two steps 25 kW each).

Pressure switch DTV 500

Pressure differential switch indicates an error in case of clogging of air filters, breaking of belts in centrifugal fans, low air flow through electric heaters, etc.

Thermal switch F3000

Duct thermostat indicates the threat of fluid freezing in water coils.

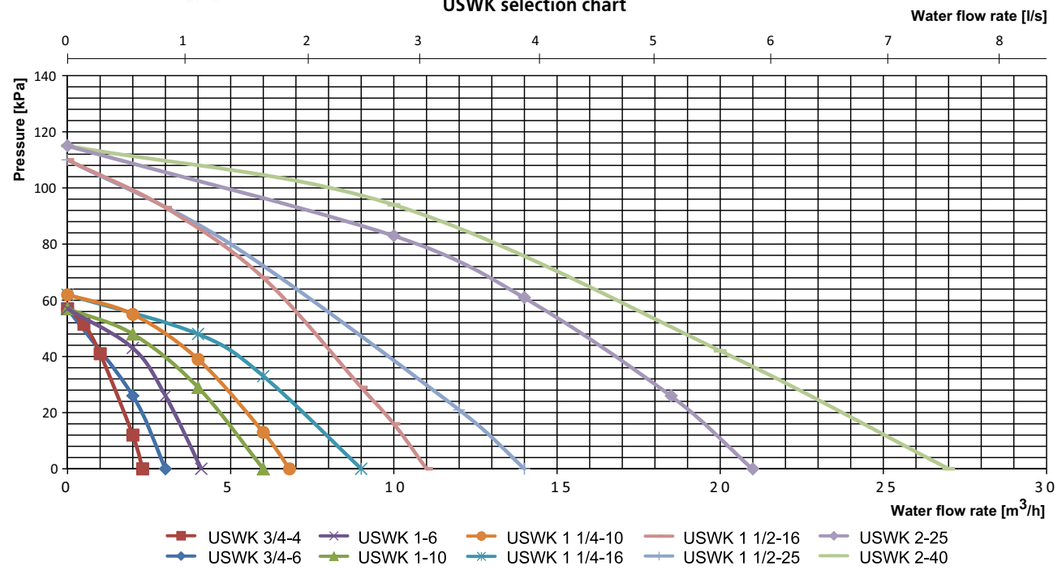
Variable frequency drive

Danfoss inverters provide smooth regulation, soft start, and active over-heating protection of asynchronous fan motors.
Inverter can be supplied loose or mounted inside the fan section.
It is recommended to use VFD for both belt driven and direct driven plug fans.

Water mixing set USWK

USWK controls power of water heating and cooling coils by regulating the temperature of water on coil inlet. USWK consists of 3-way valve with modulating 0-10V actuator and circulation pump.

USWK selection chart



Technical data:

	USWK 3/4–4	USWK 3/4–6	USWK 1–6	USWK 1–10	USWK 1 1/4–10	USWK 1 1/4–16	USWK 1 1/2–16	USWK 1 1/2–25	USWK 2–25	USWK 2–40
Circulation pump	DAB VA65/ 180		DAB A50/ 180XM		DAB A56/ 180XM		DAB BPH 120/ 250.40M		DAB BPH 120/ 280.50T	
Three-way valve with electric actuator	Belimo R317	Belimo R318	Belimo R322	Belimo R323	Belimo R329	Belimo R331	Belimo R338	Belimo R339G	Belimo R348	Belimo R349G
Three-way valve actuator	Belimo LR24A-SR						Belimo NR24A-SR	Belimo SR24A-SR	Belimo NR24A-SR	Belimo SR24A-SR
Connection	Thread						Flange			
Three-way valve nominal diameter	DN 20	DN 20	DN 25	DN 25	DN 32	DN 32	DN 40	DN 40	DN 50	DN 50
Three-way valve K_{vs}	4	6.3	6.3	10	10	16	16	25	25	40

Control system

AirVENTS control system provides maximum reliability, easy operation and installation.

Control system is available in three versions:

- Control block in plastic casing, with external fan VFD and electric heater control;
- Control block in metal casing. Fan speed and triac electric heater controllers
- (if included) are installed inside the switchboard;
- Plug-and-play unit with all control elements pre-mounted inside the unit.

Control block provides (depending on model) the following functions:

- Power supply of all the unit elements.
- Active overload protection.
- LED error signals .
- Start and stop of the system.
- Water or electric heater management. The system comes with the necessary external and supply air sensors, water (glycol) heater frosting protection sensors, pump dry run protection relays, Heater overheating protection (safety and emergency thermostats).
- Pre-cooling of electric heaters, water coils pre-heating during cold season.
- Water cooling coil mixing valve or condenser unit block control.
- Smooth bypass valve control on plate heat exchanger (active frosting protection).
- Signal outputs for air dampers.
- Smooth rotary heat exchanger VFD control;
- Air filters clogging alarm;

- Fan VFD control. Soft starting and stopping, active motor overload protection.
- Demand controlled ventilation, by CO_2, temperature, RH level etc.;
- Daily and weekly schedule;
- Fire alarm;
- Integration into building management systems.

Plug-and-play unit: full electric wiring:

Additional option – full electric wiring include:

- Installation of air damper actuators
- Installation and adjustment of pressure switches in filter sections.
- Installation and adjustment of thermostats and sensors on water heating coils;
- Installation of rotary heat exchanger VFD;
- Installation of bypass damper actuators on plate heat exchangers;
- Mounting triac controls on electric heaters;
- Installation and adjustment of fan VFD;
- Installation and adjustment of all temperature and humidity sensors inside the unit;
- Installation of control block with programmable controller inside the unit, or routing all electric contacts into a single contact block for simple connection to external control block (depending on customers needs).

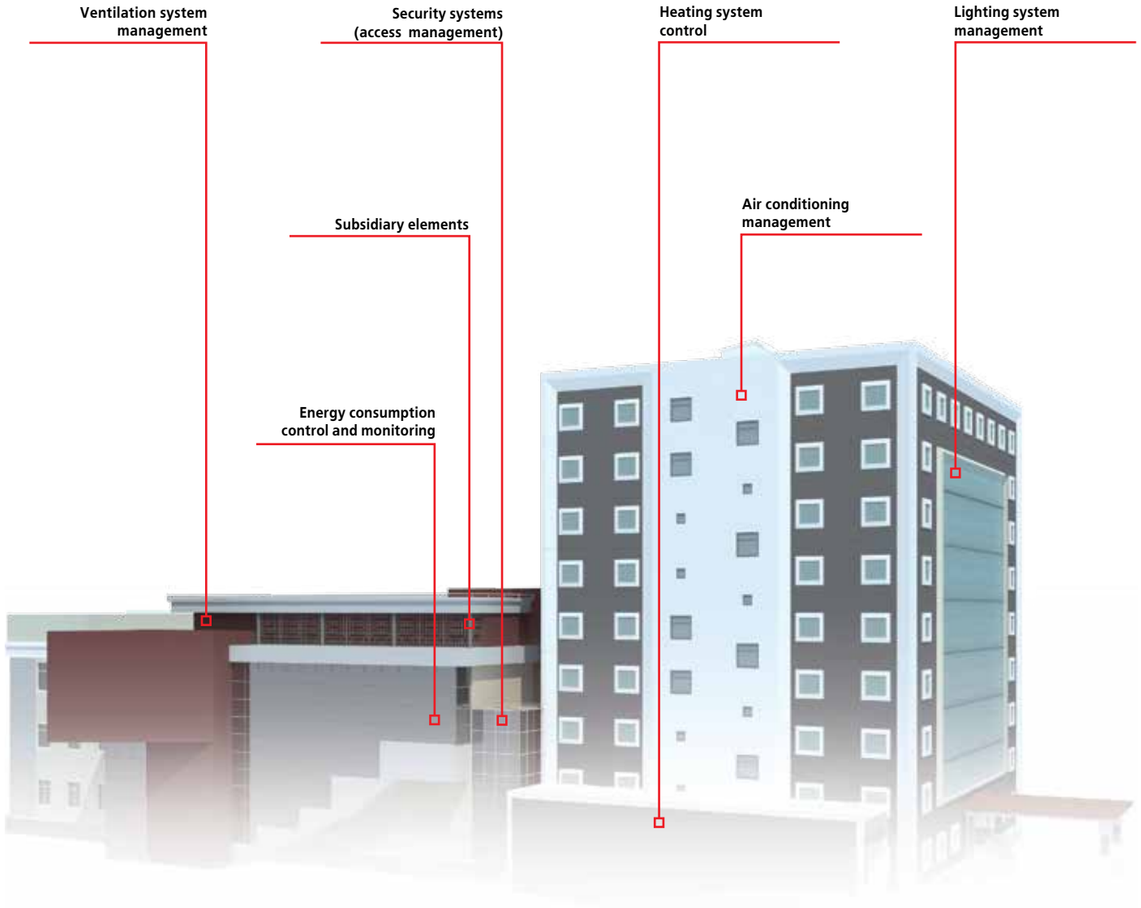
Plug-and-play option implies the possibility of shipment in separate blocks. In this case intermediate contact blocks are installed in places where blocks are joined.

Building Management Systems

AirVENTS units control system can be easily integrated into building management systems (SCADA, BMS, «smart house»).
All the information processed by a programmable logic controller, is easily accessible via standard communication protocols:

- MODBUS TCP
- LON WORKS

Any other protocol can be used according to customer's choice and project requirements.



INQUIRY FORM

Air handling units (AHU) are rather complicated pieces of equipment to specify and order, because a vast array of choices is available, and because there is no single- number identifier (e.g., a «20 000m³/h unit») that adequately describes desired product.

The selection of the unit you need can be done by one of two options:

- Use VENTS Ahu Selection program and send us the data file;
- Fill up and send us inquiry form.

In addition to size and type, in order to give you the optimal solution, our engineers must properly determine an air-handling unit's required supply air temperature and volume; outside air temperatures in summer and winter; air filtration rate; heating and cooling air capacities; humidification and dehumidification capacities; supply and exhaust air volume requirements; and required pressure capabilities of the fan(s). The more detailed information we receive- the better solution we can offer for your individual request.

AirVENTS technical specification data sheet

Company ..... /Building..... Tell

Contact person ..... E-mail:

Tell..... www.vents.ua

E-mail..... "....."....20.....

General

Unit: Exhaust ☐ Supply ☐ Supply & exhaust ☐ Supply & exhaust with heat recovery ☐

Mounting: Outdoor ☐ Indoor ☐ **Access side:** Left ☐ Right ☐

Supply & exhaust parts: Lineary ☐ Side by side ☐ One on other ☐

Capacity and pressure	Supply		Exhaust	
Capacity	.....	m^3/hour	.....	m^3/hour
Pressure (system resistance)	.....	Pa	.....	Pa

Air parameters		Winter		Summer	
Supply	Outdoor air temperature and relative humidity	..... °C	..... %	..... °C	..... %
	Conditioned air temperature and relative humidity	..... °C	..... %	..... °C	..... %
Exhaust	Extract air temperature and relative humidity	..... °C	..... %	..... °C	..... %
	Exhaust air temperature and relative humidity	..... °C	..... %	..... °C	..... %

Sections required

Fan Belt - driven ☐ Plug fan ☐

Filter Supply G4 ☐ F7 ☐ Other ....
Exhaust G4 ☐ F7 ☐ Other ....

Heater ☐ Air temp before / after heater ..... °C/ ..... °C
Electric ☐ Heater power ..... kWt
Mixing set ☐ Water temp before / after heater ..... °C/ ..... °C

Cooling section ☐ Air temp before / after heater ..... °C/ ..... °C
Freon ☐ Heater power ..... kWt
Mixing set ☐ Water temp before / after heater ..... °C/ ..... °C

Heat recovery section ☐ ☐ Inlet temperature .... °C Outlet temperature .... °C
Plates ☐ ☐ Inlet humidity .... % Outlet humidity .... %
Rotor ☐ ☐ Efficiency .....

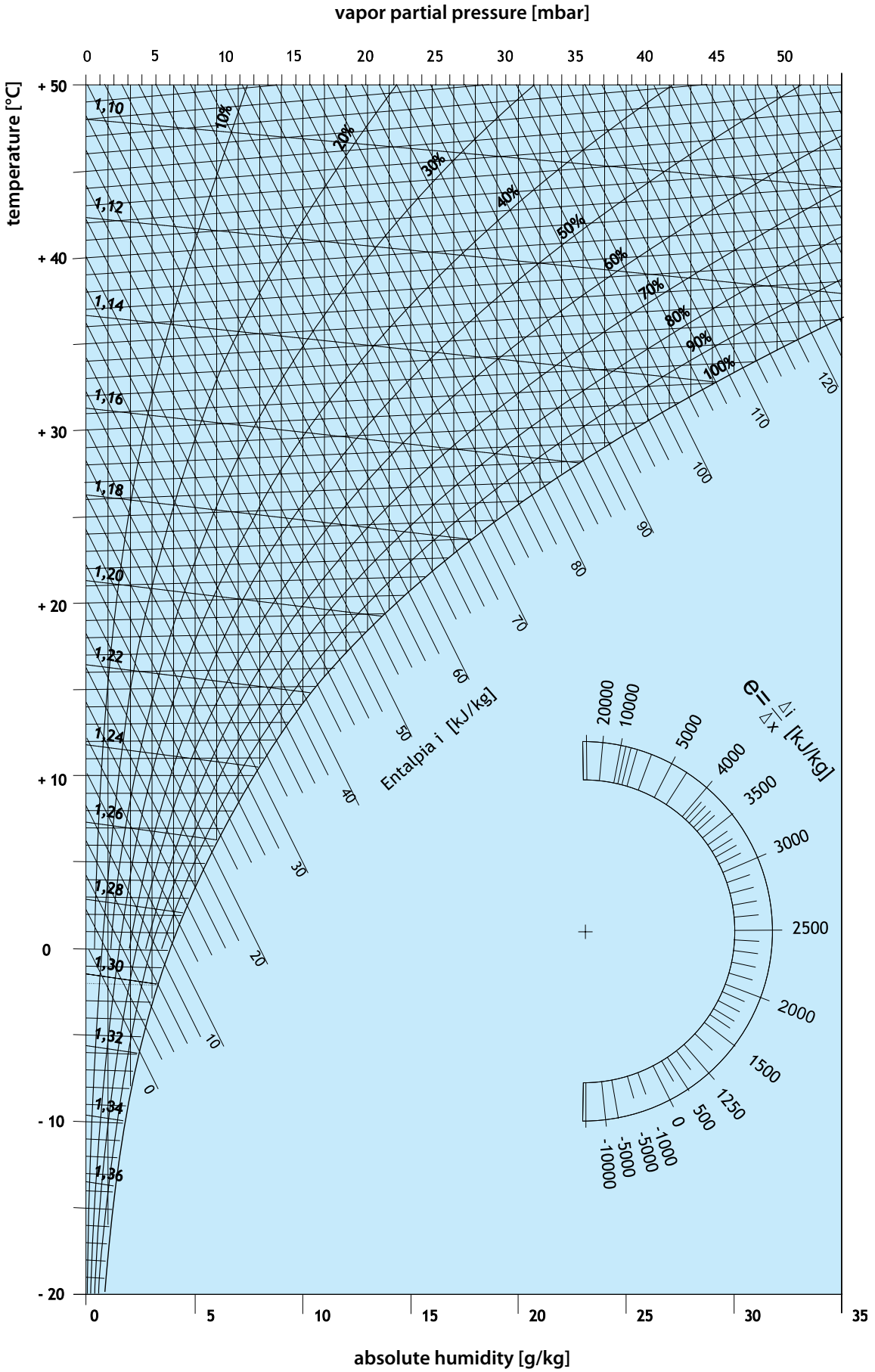
Silencer ☐ Supply ☐ 1200 mm long ☐; other .....
Exhaust ☐

Air damper ☐ Supply ☐ Exhaust ☐

Mixing section ☐ Sirculating air ..... %
Inlet air temperature .... °C
Inlet air humidity .... °C

Accessories: Flexible connection (inlet) ☐ Flexible connection (outlet) ☐ Mounting base frame ☐

Controll system ☐

Additional information:

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