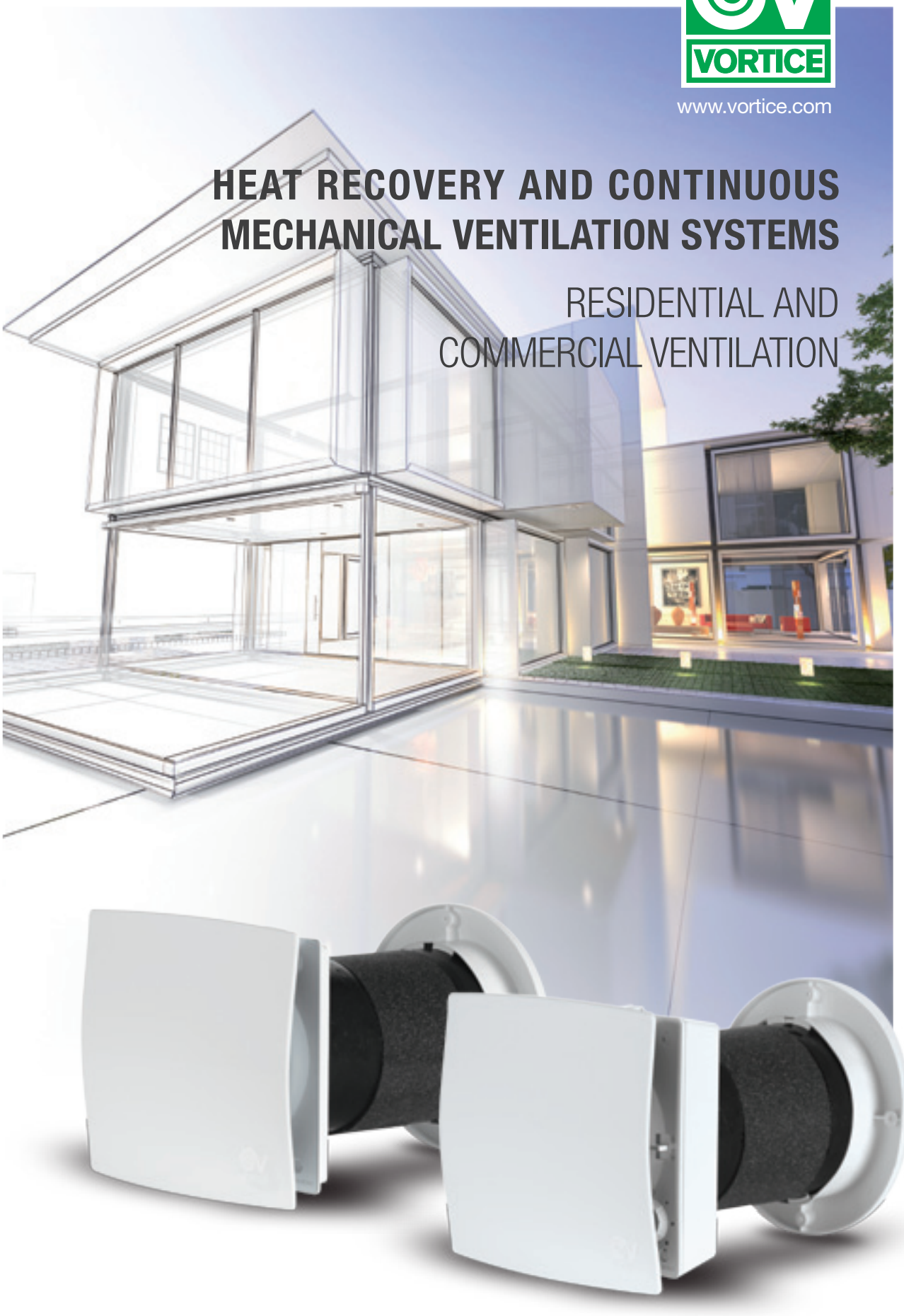
VORTICE

www.vortice.com

HEAT RECOVERY AND CONTINUOUS MECHANICAL VENTILATION SYSTEMS

RESIDENTIAL AND COMMERCIAL VENTILATION



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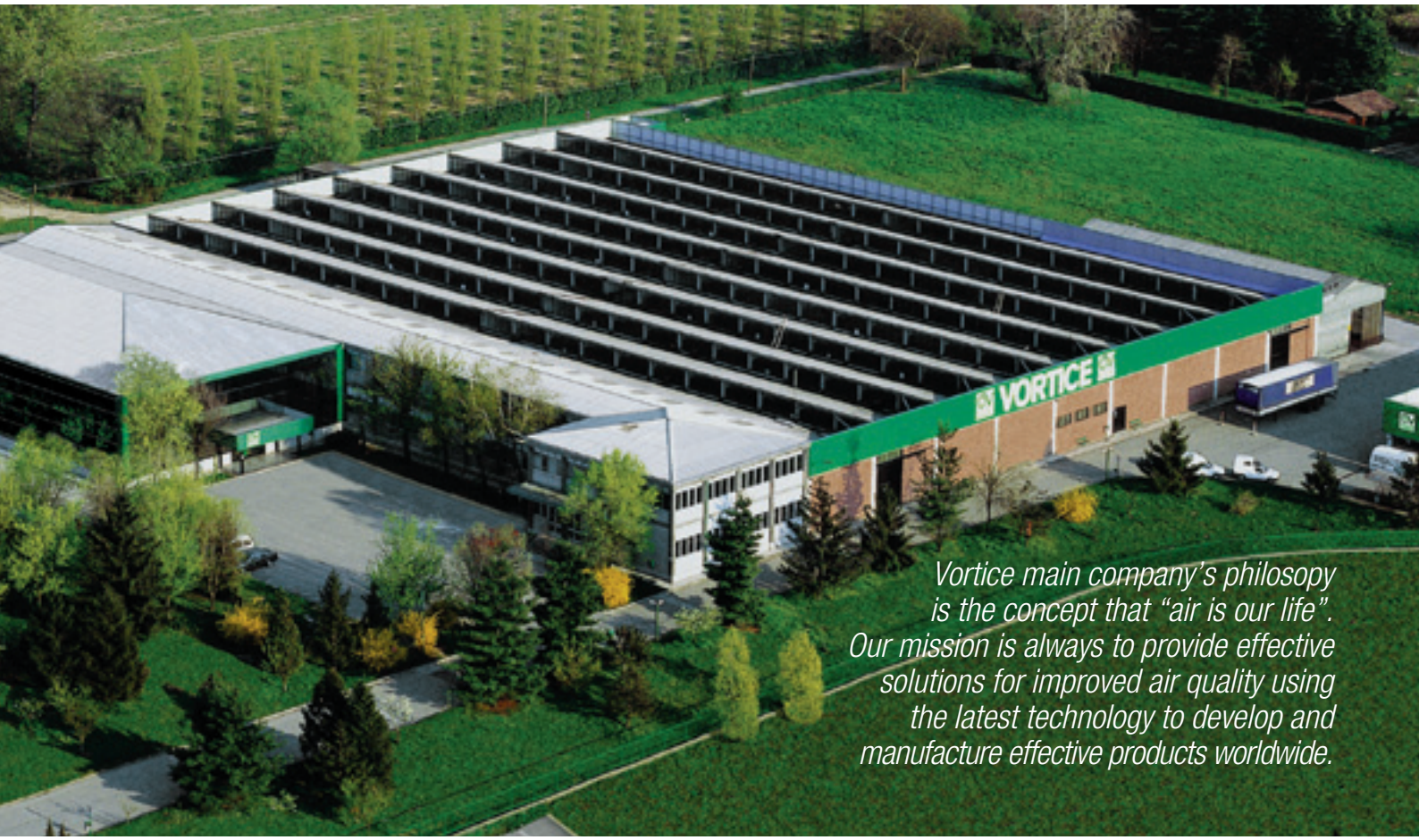

Our current Vortice Headquarters have been located in Tribiano (Milan) since 1972.

Vortice has achieved European market leadership by dedicating their efforts to the production of products for ventilation, climate control, heating, extraction, purification and the treatment of air, for domestic, commercial and industrial applications. Since 1954 Vortice has been synonymous with quality and excellence and continues to make significant improvements by investing in continuous research to improve the efficiency and quality of its products.

VORTICE IN THE WORLD

FRANCE

Founded in 1974, Vortice France is located at Crétail about 10 Km from Paris.

ENGLAND

Founded in 1977, Vortice Limited is located at Burton on Trent in the East Midlands.

CHINA

Founded in 2012, Vortice Ventilation System is located about 200 Km from Shanghai.

SOUTH AMERICA

Founded in 2012, Vortice Latam in San Josè Costarica.

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HEAT RECOVERY AND CONTINUOUS MECHANICAL VENTILATION SYSTEMS

CE MARKING

Vort Platt Range, Vort Platt EP Range, Vort Penta Renge, Vort Penta EP Renge Vort Leto Mev Range conform to the following European Directive:

- 2006/95/ Low Voltage Directive (LVD),
- 2004/108/EC Electromagnetic Compatibility (EMC),

According to the following state-of-the-art standards:
EN 60335-1; EN 60335-2-80; EN 62233;
EN 55014-1; EN 55014-2; EN 61000-3-2; EN 61000-3-3.

Vort HR 200 Range and Vort Prometeo Plus Range conform to the following European Directive:

- 2006/95/EC Low Voltage Directive (LVD),
- 2004/108/EC Electromagnetic Compatibility (EMC),
- 2006/42/EC Machine Directive (MD),

According to the following state-of-the-art standards:
EN 60335-1; EN 60335-2-80; EN 62233;
EN 55014-1; EN 55014-2; EN 61000-3-2; EN 61000-3-3;
EN ISO 12100-1; EN ISO 12100-2; EN ISO 60204-1;
EN 300 220 - 2 V2.1.2 (2007);
EN 301 489 - 3 V1.4.1 (2002);
EN 60950 - 1.

CONTINUOUS MECHANICAL VENTILATION

THE ADVANTAGES OF VENTILATION

Ventilation, whether natural or mechanical, renews the air in confined areas. Ventilation can control parameters such as air temperature, relative humidity and pollutant concentrations. A ventilation system must be dimensioned to satisfy the wellbeing requirements of the occupants. Ventilation and wellbeing are therefore closely linked to each other.

Modern technologies enable us to build ever more thermally insulated buildings, which are effectively hermitically sealed containers. But this means that without proper ventilation, buildings become unlivable due to the poor quality of the indoor air.

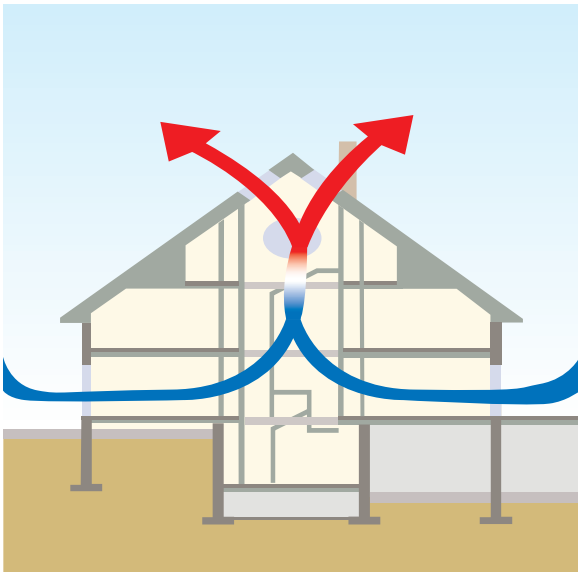
With the increasing atmospheric pollution in our cities, simply opening the window is no longer a good solution, since we have neither control over the quantity of renewed air nor over the concentration of pollutants in the room. Ventilation systems are therefore often the most suitable solution.

NATURAL VENTILATION

Natural ventilation of buildings is achieved by creating openings in the building's exterior: chimneys, windows and openings in the roof, atriums and ventilation towers, etc.. In old buildings, windows provided an interior air renewal, while in new buildings, to reduce thermal losses to the exterior, the use of more efficient windows means that air flows are much more restricted.

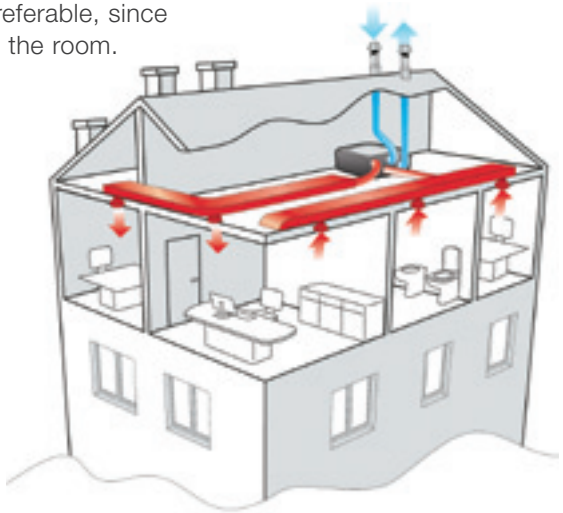
To renew the air, the most widely used approach is simply to open the windows; this has more effect if they are located on opposite sides of the room. Just a few minutes may be enough to ensure good ventilation.

Disadvantages:
- no control of the amount of renewed air
- energy losses during the cold season
- incoming air too hot in summer and too cold during winter
- no control of the quality of the incoming air (pollution)
- increased noise in the room
- possible disturbance due to draughts.



MECHANICAL VENTILATION

In order to provide good air flow control – which is lacking in natural ventilation – a mechanical air handling system can be designed to ensure the proper ventilation.
In such systems, the air flow is provided by one or more fans, ducted or not. Systems without ducts consist of one or more fans on the walls or ceiling. The simplest solution is to use one or more
extraction fans and a number of openings which enable fresh air to enter the room.
These openings can be replaced by intake fans, usually mounted on the walls opposite the extraction fans.
This solution is common in industrial environments. In some cases the fans cannot be wall-mounted: in this cases ducts are used to convey the air to the intake or extraction terminals.
In residential and commercial environments ducted systems are preferable, since the fans can be located remotely, thus eliminating running noise in the room.

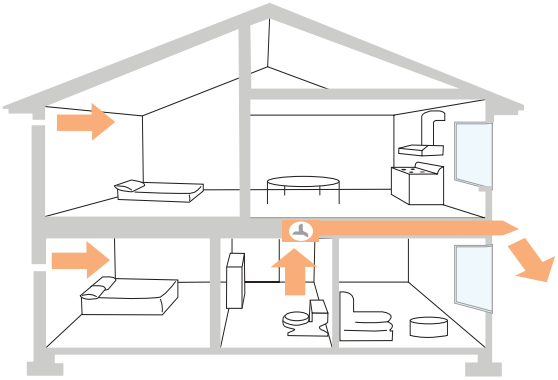


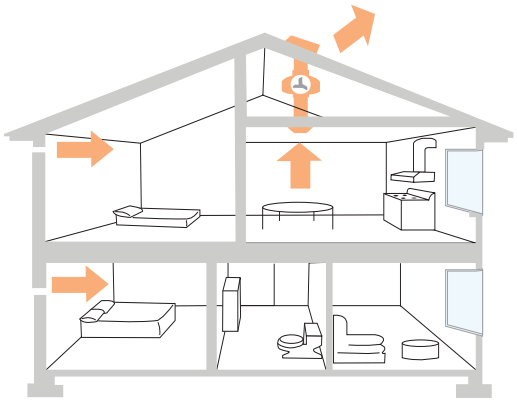
Mechanical ventilation systems have the following advantages:
- controlled air flows
- controlled air streams
- no external noise and limited running noise
- controlled air quality
- reduced thermal losses
- optional energy recovery using heat exchangers.

There are two types of controlled mechanical ventilation system: **single flow** and **double flow**.

SINGLE FLOW

The air is extracted from the room and conveyed to the exterior through ducting. The fan is usually located outside the room. Fresh air is assured by air inlets usually located on windows or walls. In residential applications, air is usually extracted from “humid” areas (kitchen, bathroom and toilets, washrooms, etc.) while fresh air is delivered to the living room and bedrooms.
In commercial applications, such as offices, fresh air is delivered to the rooms, while extraction is done from corridors via ceiling grilles connected by ducting to the exterior; ducts can be led to the roof, where the fans are usually located.





Advantages:
- controlled air flow
- possibility of integration with natural ventilation
- independence from changing weather conditions and occupant behaviour
- adaptable to seasonal conditions
- limited running noise in the rooms
- single room air flow control

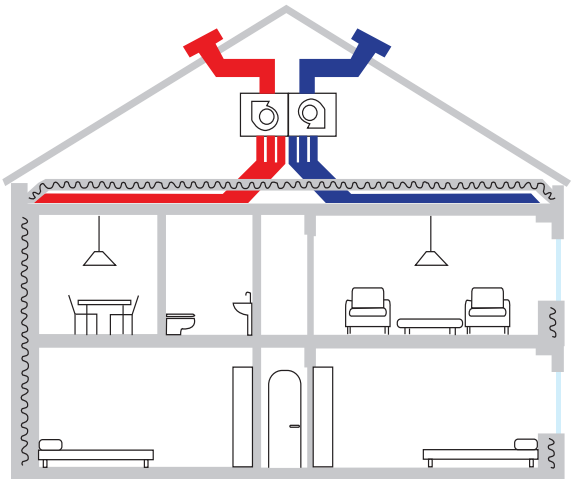
Disadvantages:
- system costs
- no control over the quality of the fresh air
- energy losses
- incoming air too hot in the summer.

DOUBLE FLOW

A double flow system both extracts air from and delivers it to the room. Extraction is the same as for a single flow system. Delivery is also done using ducts and spigots, but in a separate circuit from the extraction one. The fresh air is driven by a fan into the duct and is delivered to the rooms via diffusers. The delivery and extraction flows are coordinated by a controller.
In more complex systems, the fresh air may be treated before being delivered to the room by filtering, cooling or warming, humidifying or dehumidifying it. Double flow system also enable the use of heat exchaners to recover thermal energy from the expelled air.

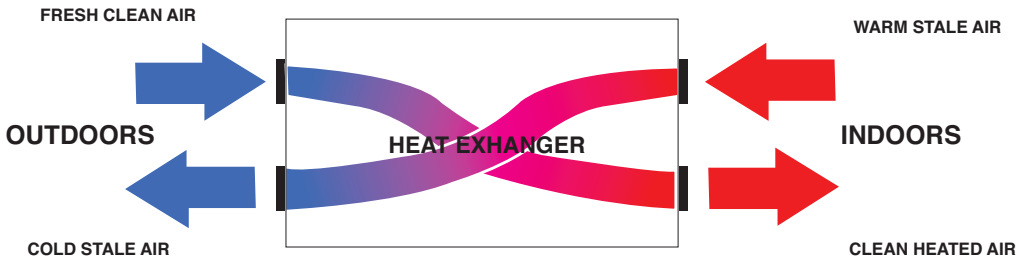
Advantages:
- controlled air flow
- optional use of heat recovery unit
- possibility of integration with natural ventilation
- independence from changing weather conditions and occupant behaviour
- adaptable to seasonal conditions
- limited running noise in the rooms
- possibility of control over the quality of the fresh air
- single room air flow control

Disadvantages:
- system costs



HEAT RECOVERY UNIT

A heat recovery unit is a double flow ventilation unit: it not only delivers fresh air to the rooms, but also extracts stale air. The two flows exchange heat within the machine itself (the heat exchanger) so that the warmer flow delivers a part of its thermal energy to the colder flow.



In a typical configuration, the heat recovery unit is not a heat generator nor a chiller, so it must be used in combination with a normal heating or A/C system. The machine has the following main components: Housing - contains the various components of the machine and insulates it acoustically.
It can be made with galvanized sheeting, sheet with a plastic film coating, with single or double panels, or plastic. It may be equipped with acoustic insulation to reduce running noise.
Fans - the fans drive the air: the unit includes an intake fan (delivers air from outdoors to the interior) and an extraction fan (from the interior to outdoors).
Heat exchanger - this is the principal component, which provides the exchange of heat energy between the two flows. There are various types of exchanger.
Filters - the machine is usually equipped with filters to protect the fan motors against dust, and above all to filter both the extracted and delivered air.

Advntages of heat recovery units:
- They are double flow units: they renew the air into the room.
- Filters keep pollution under control.
- They pre-heat or pre-chill the renewed air by recoveringenergy at zero cost from the extraction flow, energy which would be lost in a ventilation system not equipped with heat recovery.
- Thanks to energy recovery it is possible to use smallerheating and A/C units (boilers, air conditioners, roof-top units, water chillers, etc.).
- They reduce the wear of heating/cooling system equipment.
- Over time, the initial investment is paid back by savings in total running costs.

ENERGY EFFICIENCY

There are various definitions of energy efficiency or thermal exchange efficiency (η) of a heat recovery unit.
It generally refers to the ratio between the real difference ($\Delta T_{(real)}$) and the theoretical difference ($\Delta T_{(theoretical)}$) of the incoming and outgoing air temperatures (supposing both flows to be equal in mass):

$$\eta = \Delta T_{(real)} / \Delta T_{(theoretical)} = \frac{(T\ intake - T\ outdoors)}{(T\ indoors - T\ outdoors)}$$

Some practical examples to understand the importance of heat exchangers' efficiency:
Outdoors air: - 5 °C
Indoors air: +20°C
Air delivery via exchanger: to be calculated

$\Delta T_{(theoretical)}$ = 20 - (-5) = 25 °C
$\Delta T_{(real)} = \eta * (\Delta T_{(theoretical)}) = \eta * 25$, so that
T intake = * 25 + T aria esterna

A heat exchanger with efficiency η = 50% thus gives a delivery air temperature of:

T intake = 0.5 * 25 + (-5)= 7.5 °C –>
cold air is delivered to the room.

Otherwise, if the exchanger's efficiency is η= 80%, we have: T intake = 0.8 * 25 + (-5) = 15°C.

while if efficiency η= 90%, we have:
T intake = 0.9 * 25 + (-5) = 17.5 °C.

ES THANKS TO BRUSHLESS MOTORS

The high-efficiency EC-DC brushless motor equipped in ES models provides a really significant energy saving, unconceivable with regular AC motors. The Energy Saving models (ES) are marked with a special Green symbol.
This type of motor enables to classify products as "Energy Saving", for two reasons:
- they reduce specific consumption (lowe consumption for the same performance, with efficiency greater than 80%, against the 30-40% of AC motors);
- thanks to their modulability, which means that they work efficiently over a much wider range of speeds, they are able to adapt their output to the real needs of the moment.

LEGEND:

LONG LIFE 30.000 h

The Long Life 30,000 h label certifies that the appliance is guaranteed to operate for 30,000 continuous hours without mechanical failure thanks to its motor, which is equipped with ball bearings. This special configuration allows the appliance to be run continuously, and ensures efficient, silent operation throughout its service life.

The ES label shows that the appliances are fitted with EC Brushless motors and therefore offer guaranteed energy savings, thanks to the wide range of speed regulation options and signifi-cantly reduced consumption levels.

Vortice contributes with its products, systems and services to construction and renovation buildings with high efficiency and sustainability.

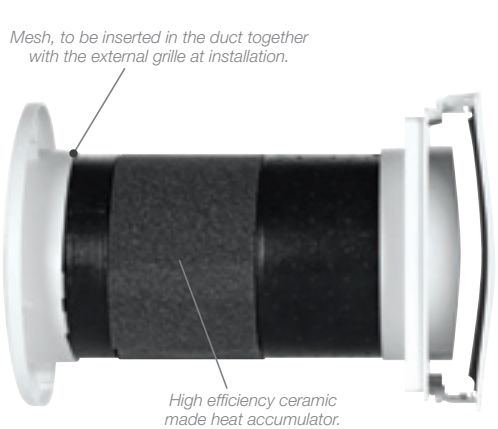
The IMQ logo denotes compliance with C.E.I product performance regulations, and this is certified by the Istituto Italiano del Marchio di Qualità.

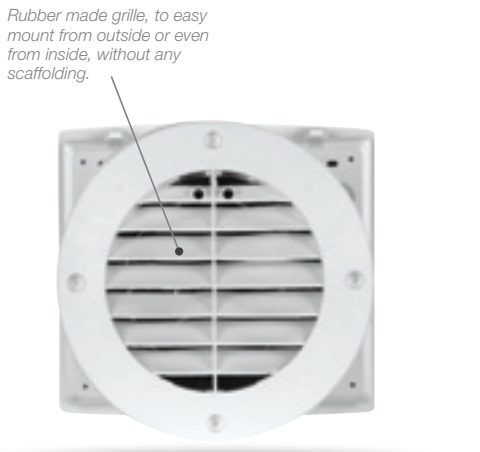
VORT HRW MONO RANGE
Decentralized heat recovery units

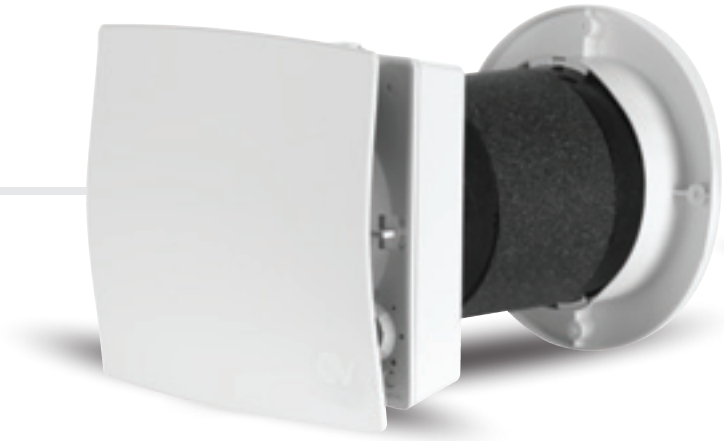
PRODUCT SPECIFICATIONS

LONG LIFE 30.000 h

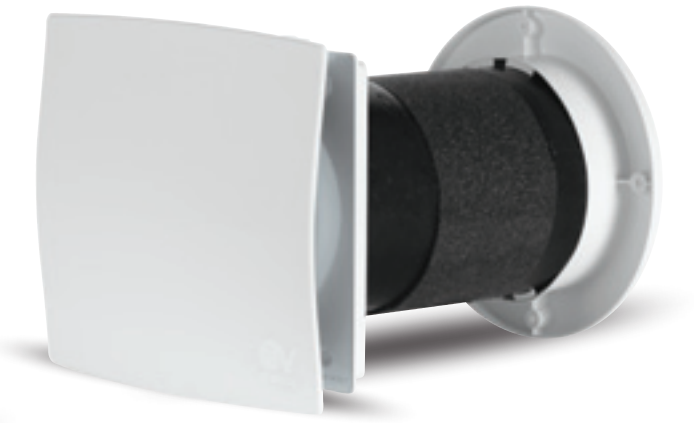
- 3 models: VORT HRW 20 MONO with operating controls built into the appliance and VORT HRW 20 MONO RC with separate Remote Control unit and VORT HRW 20 MONO HCS.
- Expanded polypropylene (PPE) enclosure.
- Inner panel made of V0 self-extinguishing aesthetic plastic polymer (ABS), clad with heat-insulating material.
- EC brushless motor affording high performance and extremely low power consumption; mounting bracket with ball bearings.
- Accumulator heat exchanger made of ceramic material, high efficiency.
- 5 selectable speeds.
- 3 operating modes for both versions: ventilation with heat recovery; with stale air extraction only; with fresh air supply only.
- Moulded rubber outer grille, which can be mounted externally with masonry plugs, or inserted internally through the hole prepared in the wall with no need for external scaffolding.
- Separate insect mesh, positionable in the duct together with the external grille at the moment of installation.
- Stale internal air extracted around the perimeter of the front panel.
- Outlet port of circular section, nominal diameter 160 mm.
- Washable G3 filter, easily accessible for maintenance purposes.
- Factory-prepared for wall wiring.
- Diagnostics and filter status Leds.
- HCS models are equipped with a relative humidity sensor (four threshold values: 60%, 70%, 80%, 90%, can be set at installation), which automatically start the extraction mode at max speed when indoor relative humidity exceeds the pre-set limit.
- Possibility of operation in automatic mode, enabled by installing optional temperature and relative
- humidity sensors.
- Protection rating: IPX2.
- Insulation class: II ⧈ .







VORT HRW 20 MONO cod.. 11634
VORT HRW 20 MONO HCS cod. 11631



VORT HRW 20 MONO RC cod. 11635

REMOTE CONTROL UNIT
(code 22693)
only for code 11635

KEY FEATURES

- Elegant aesthetics, perfectly fitting in the residential.
- Small indoor dimensions (240 x 224 x 95 mm version equipped with on-board commands, 240 x 224 x 64 mm version controlled through wired control box).
- Five airflows comprehended in the range between 10 m3/h and 38 m3/h, to allow the best compromise among performances, consumptions and noise emissions.
- Very low consumptions (≤ 2 W when running at Min speed, ≤ 5 W when at Max speed), compatible with continuous operation.
- Low noise levels (16 dB(A) at Min speed according to DIN 52210-6), compatible. with use in studies, bedrooms, living rooms, etc.
- High values of heat transfer efficiency (90% at minimum. flow rate according to EN 308), to grant the comfort of users.
- Easy to install, set and use.
- No need to install systems for removal of condensate.
- Wired control box integrating the power supply (no external device needed), allowing switching on/off and selection of operating mode. Up to 4 products can be wired simultaneously to 1 controller.
- Complying with the requirements of Regulation N° 1253/2016/UE set out by the EUP/ErP Directive, effective starting from 01.01.2018.

TECHNICAL DATA

Models	Code	V ~ 50/60 Hz	W min/max	A min/max	Max Airflow		Max Pressure		Lp dB(A) 3 m	Max °C	Kg
					m^3/h min/max	l/s min/max	mmH_20 min/max	Pa min/max			
VORT HRW 20 MONO	11634	220-240	1.0 5.5	0.015 0.053	10.0 40.0	2.7 11.1	0.64 4.10	6.2 40.6	<16.0 23.6	30	2.55
VORT HRW 20 MONO RC	11635										
VORT HRW 20 MONO HCS	11631										

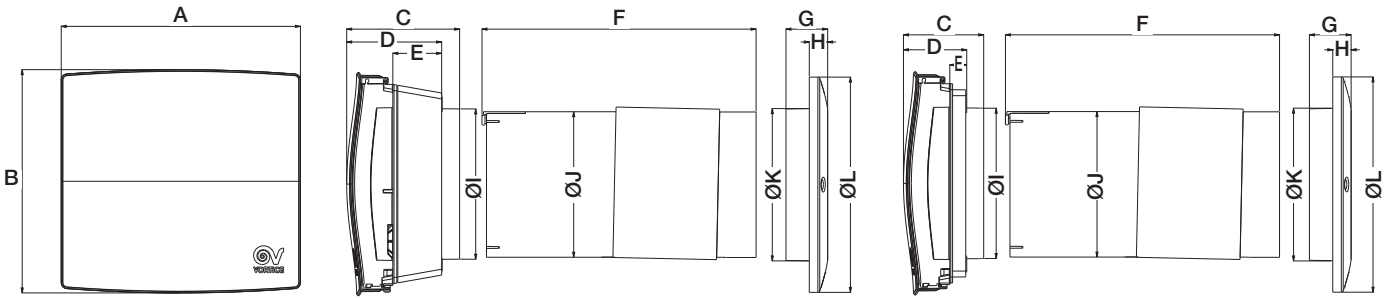
VORT HRW MONO RANGE
Decentralized heat recovery units

VORT HRW MONO RANGE | TECHNICAL DATA FOR REGULATION N° 1254/2014/UE

Models Code	Unit of measurement	VORT HRW 20 MONO - VORT HRW 20 MONO RC - VORT HRW 20 MONO HCS 11634 - 11635 - 11631
Supplier's name or trade mark	-	Vortice
Specific Energy Consumption class SEC in average climate zone	-	NA
Specific Energy Consumption class SEC average	kWh/m²a	-37,2
Specific Energy Consumption class SEC cold		-80,8
Specific Energy Consumption class SEC warm		-2,2
Declared typology	-	RVU-U*
Type of drive	-	MSD***
Type of heat recovery system HRS	-	Recuperative
Thermal efficiency of heat recovery at reference air flow	%	90
Maximum flow rate	m³/s	31
Electric power input of the fan drive, including any motor control equipment, at maximum flow rate	W	5,1
Sound power level LWA	LWA [dB(A)]	44
Reference flow rate	m³/s	0,00060
Reference pressure difference	Pa	19
SPI	W/(m³/h)	0,23963
Control factor CTRL	%	1
Control typology	-	manual
Maximum internal leakage rates	-	NA
Maximum external leakage rates	%	NA
Mixing rate	-	NA
Airflow sensitivity to pressure variations at + 20 Pa and – 20 Pa	m³/h	0,27
Indoor/outdoor air tightness	-	NA
Annual electricity consumption (AEC)	kWh electricity/a	330
AHS average Annual heating saved	kWh primary energy/a	4550
AHS cold Annual heating saved		2732
AHS warm Annual heating saved		2057
Position and description of visual filter warning	-	NA

* RVU-U: Unit Ventilation Residential - Unidirectional
** NRVU-U: Unit Ventilation Non Residential - Unidirectional
*** MSD: Multi-Speed Drive

DIMENSIONS



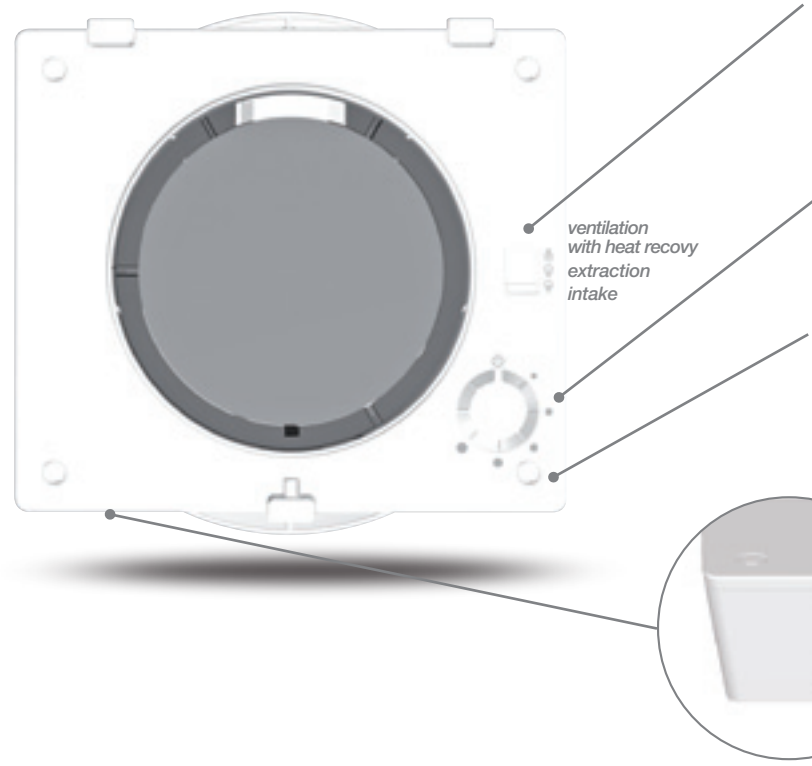
VORT HRW 20 MONO - VORT HRW 20 MONO HCS

VORT HRW 20 MONO RC

Models	Code	A	B	C	D	E	F	G	H	Ø I	Ø J	Ø K	Ø L
VORT HRW 20 MONO	11634	240	224	113	95	49	275	42	18	151	146	153	216
VORT HRW 20 MONO HCS	11631												
VORT HRW 20 MONO RC	11635			80	64	17							

Dimensions (mm)

CONTROL PANEL VORT HRW 20 MONO



3 position operation mode selector:

position 1 ventilation with heat recovery
position 2 extraction;
position 3 intake.

ventilation
with heat recovy
extraction
intake

Speed Setting Knob

(0 = Off, 1-5 = Fan speed)

Filter status indicator LED:

LED off filter clean;
LED on filters to be cleaned or replaced

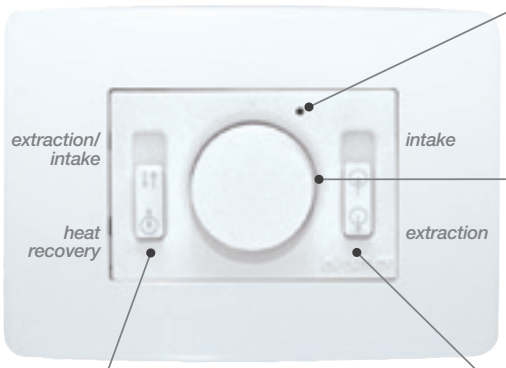
Humidity sensors only for model HCS (cod. 11631)

The Electronic Suite of HCS models comprehends a relative humidity sensor, pre-set at 60%, which automatically starts the product at max speed in extraction mode when RH exceeds the pre-set limit. RH threshold value can be choosen at installation among 60%, 70%, 80% or 90%.

VORT HRW MONO RANGE
Decentralized heat recovery units

REMOTE CONTROL UNIT VORT HRW 20 MONO RC

REMOTE CONTROL UNIT code 22693



Filter status indicator LED:
LED off → filters clean
LED on → filters to be cleaned or replaced

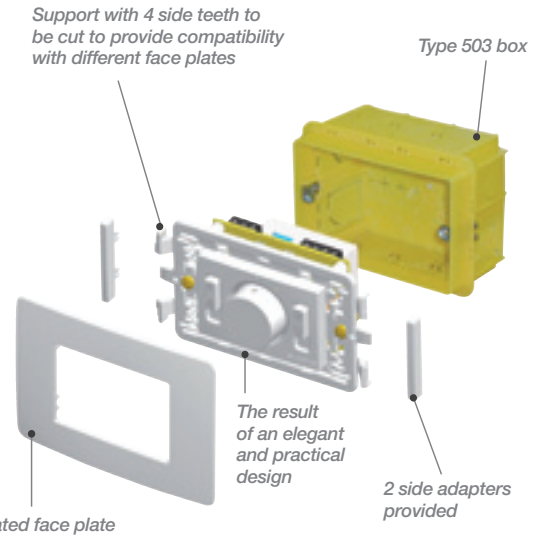
Speed Setting Knob
(0 = Off, 1-5 = Fan Speed)

Available optional ancillaries:
- white face plate code 22462
- anthracite grey face plate code 22463

2-position operation mode selector:
position 1 → extraction/intake
position 2 → ventilation with heat recovery.

2-position operation mode selector:
position 1 intake;
position 2 extraction.

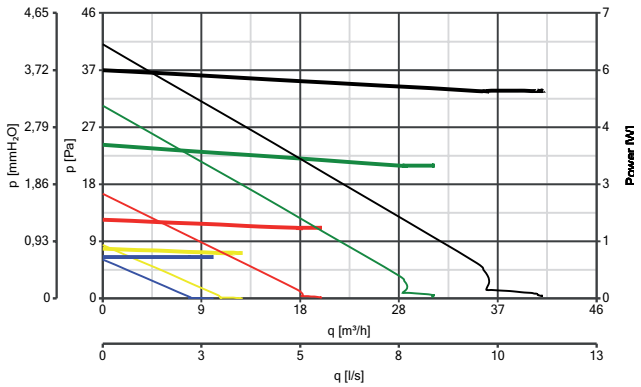
Recessed versions, thanks to an intermediate adjustable support, can be coupled with various existing standard face plates, satisfying diverse aesthetic requirements.



Power supply voltage (V): 220 - 240
Power supply frequency (Hz): 50 Max power consumption (W): 18

PERFORMANCE CURVES

VORT HRW 20 MONO cod. 11634 - 11635 - 11631



CONSUMPTION CURVES	PERFORMANCE CURVES
Speed 5 (max)	Speed 5 (max)
Speed 4	Speed 4
Speed 3	Speed 3
Speed 2	Speed 2
Speed 1 (min)	Speed 1 (min)

VORT HR 350 AVEL
Wall-mounting residential heat recovery unit

PRODUCT SPECIFICATIONS

- Plastic (PPE) enclosure.
- Very high-efficiency counter-flow heat exchanger in PS resin.
- Highly efficient backward curved centrifugal fans moved by EC (brushless) 3 speed motors.
- Ports nominal diameter of 150 mm.
- Integrated frost protection.
- Automatic, filtered 100% by-pass.
- Wired electronic control allowing with LCD display panel:
  - initial configuration;
  - manual setting of operating mode;
  - automatic operation according to ambient conditions detected by wired sensor (optional);
  - continuous monitoring of correct operation (possible problems shown on LCD display);
  - constant monitoring of filter status (maintenance needs shown on LCD display);
  - SW updating through dedicated port.
- 2 F5 filters (optional F7 filter on intake).
- Support brackets for wall mounting.
- Protection rating: IPX2.
- Insulation class: I. ⏚ .

KEY FEATURES

- High performances (350 m³/h) combined with low power consumption (16 5 W)
- Compact size (700 x 780 x 480 mm).
- Shock-proof, lightweight construction (25 kg).
- Very high heat transfer efficiency (up to 93%) at conditions (+5 °C, +25 °C, 28% RH) established by applicable international standards (EN 308).
- Reliability: motors guaranteed for 30,000 hours of continuous operation at maximun temperature declared.
- Simplified maintenance thanks to rational internal inner layout of the main components, easly accessible though front door.
- Complying with the requirements of Regulation N° 1253/2016/UE set out by the EUP/ErP Directive, effective starting from 01.01.2018.

TECHNICAL DATA

Models	Code	V ~ 50 Hz	W	A	Max Airflow		Max Pressure		Max °C	Kg
					m³/h	l/s	mmH_20	Pa		
VORT HR 350 AVEL	11396	230	165	1.4	350	100	90	880	50	22

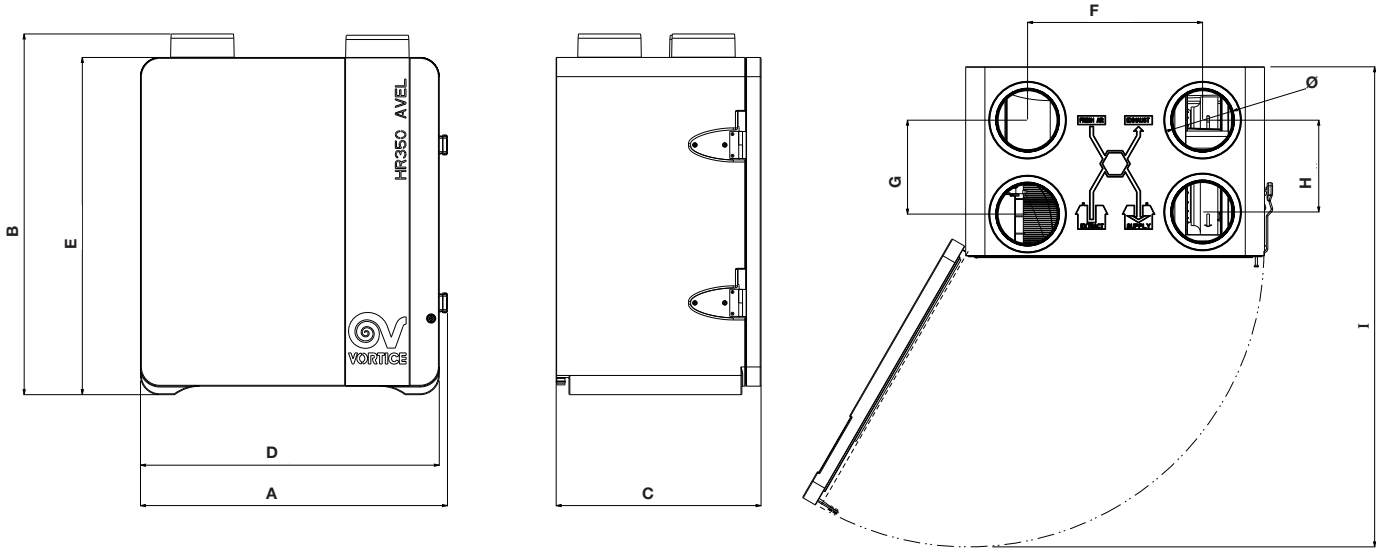
VORT HR 350 AVEL
Wall-mounting residential heat recovery unit

VORT HR 350 AVEL | TECHNICAL DATA FOR REGULATION N° 1254/2014/UE

Models Code	Unit of measurement	VORT HR 350 AVEL 11396
Supplier's name or trade mark	-	Vortice
Specific Energy Consumption class SEC in average climate zone	-	A
Specific Energy Consumption cl ass SEC average	kWh/m² year	-38,4
Specific Energy Consumption class SEC cold		-77,0
Specific Energy Consumption class SEC warm		-13,6
Declared typology	-	BRVU*
Type of drive	-	VSD**
Type of heat recovery system HRS	-	recuperative
Thermal efficiency of heat recovery at reference air flow	%	88,9
Maximum flow rate	m³/h	315
Electric power input of the fan drive, including any motor control equipment, at maximum flow rate	W	170,0
Sound power level LWA	LWA [dB(A)]	57
Reference flow rate	m³/s	0,0613
Reference pressure difference	Pa	70
SPI***	W/(m³/h)	0,31746
Control factor CTRL	-	0,85
Control typology	-	central demand control
Maximum internal leakage rates	%	3,4
Maximum external leakage rates	%	3,3
Mixing rate	-	NA*
Position and description of visual filter warning	-	see user manual
Airflow sensitivity to pressure variations at + 20 Pa and – 20 Pa	-	NA*
Indoor/outdoor air tightness	m³/h	NA*
Annual electricity consumption (AEC)	kWh electricity/year	332
AHS average Annual heating saved	kWh primary energy/year	-4600
AHS cold Annual heating saved		8999
AHS warm Annual heating saved		2080

*BRVU: Bidirectional Residential Ventilation Unit
**VSD: Variable Speed Drive
***SPI: Specific Power Input
NA: data not applicable

DIMENSIONS



Models	Code	A	B	C	Ø	D	E	F	G	H	I
VORT HR 350 AVEL	11396	719	845	480	150	700	790	410	220	215	1130

Dimensions (mm)

SOUND LEVELS

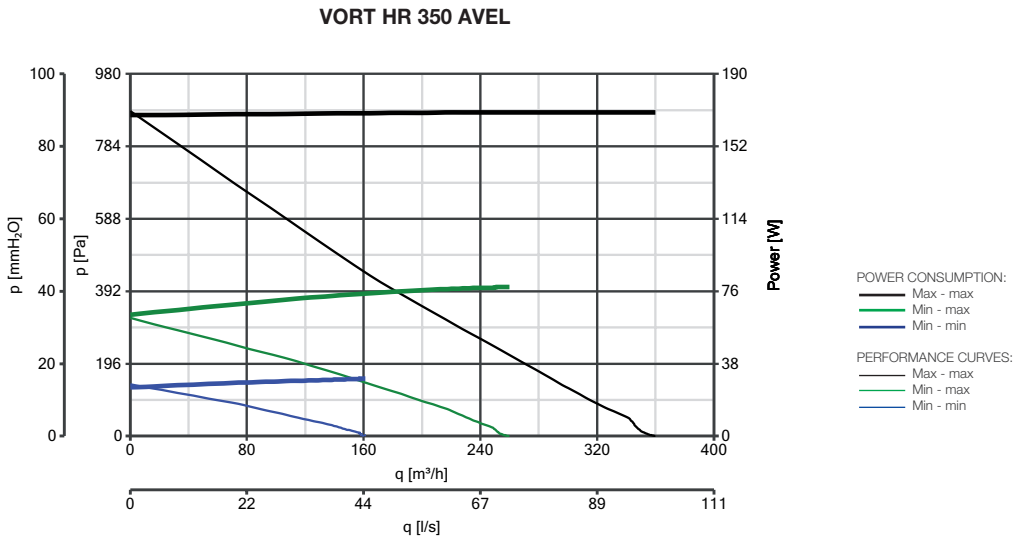
VORT HR 350 AVEL RPM		Sound Power								Sound Pressure
		Lw dB (A)							Lw dB (A)	Lp dB (A)**
		125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz		
Min. Speed	Supply to internal	23.6	26.7	30.1	26.6	25.4	13.9	5.3	39.4	18.9
	Extract to internal	17.4	26.9	28.1	32.8	35.3	26.5	21.8	43.0	22.5
	Breakout	3.0	10.6	19.9	20.4	13.9	3.5	1.2	28.1	7.6
Med. Speed	Supply to internal	30.2	42.4	39.7	36.1	36.3	28.1	19.2	49.0	28.5
	Extract to internal	15.5	40.3	43.6	41.5	45.8	37.2	37.5	53.0	32.5
	Breakout	1.7	24.4	28.2	28.8	24.1	12.2	9.6	36.6	16.1
Max. Speed	Supply to internal	35.3	42.0	43.8	43.1	43.1	36.5	30.7	57.3	36.8
	Extract to internal	17.8	37.8	43.9	48.1	53.0	45.8	48.6	60.2	39.7
	Breakout	8.7	23.7	33.4	34.5	31.6	21.3	20.6	43.6	23.1

Tests carried out according EN9614 standard. **Sound pressure calculated at 3 m distance in free-field.

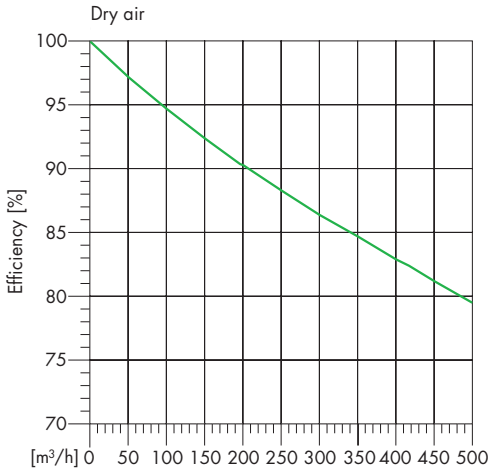
VORT HR 350 AVEL

Wall-mounting residential heat recovery unit

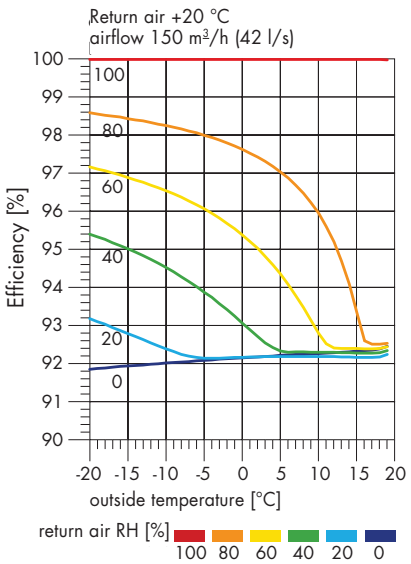
PERFORMANCE CURVES



Efficiency as a function of the airflow



Influence on efficiency due to condensation heat



NOTE

VORT HR 250 NETI

Wall-mounting residential heat recovery unit

PRODUCT SPECIFICATIONS

- Plastic (PPE) enclosure.
- Ports nominal diameter of 125 mm.
- Very high-efficiency counter-flow heat exchanger in PS resin.
- Highly efficient backward curved centrifugal fans moved by EC (brushless) 3 speed motors.
- 2 F5 filters (optional F7 filter on intake).
- Integrated frost protection.
- Automatic, filtered 100% by-pass.
- Wired electronic control allowing with LCD display panel:
  - initial configuration;
  - manual setting of operating mode;
  - automatic operation according to ambient conditions detected by wired sensor (optional);
  - continuous monitoring of correct operation (possible problems shown on LCD display);
  - constant monitoring of filter status (maintenance needs shown on LCD display);
  - SW updating through dedicated port.
- Support brackets for vertical wall mounting.
- Protection rating: IPX2.
- Insulation class: I. ⏚ .

KEY FEATURES

- Compact size (598 x 850 x 380 mm).
- Shock-proof, lightweight construction (17 kg).
- High performances (220 m3/h) combined with low power consumption (95 W).
- Very high heat transfer efficiency (up to 93%) at conditions (+5 °C, +25 °C, 28% RH) established by applicable international standards (EN 308).
- Reliability: motors guaranteed for 30,000 hours of continuous operation at maximun temperature declared.
- Simplified maintenance thanks to rational internal inner layout of the main components, easly accessible though front door.
- Complying with the requirements of Regulation N° 1253/2016/UE set out by the EUP/ErP Directive, effective starting from 01.01.2018.

TECHNICAL DATA

Models	Code	V ~ 50 Hz	W	A	Max Airflow		Max Pressure		Max °C	Kg
					m^3/h	l/s	mmH_20	Pa		
VORT HR 250 NETI	11933	230	95	0.75	220	60	55	540	40	17

VORT HR 250 NETI

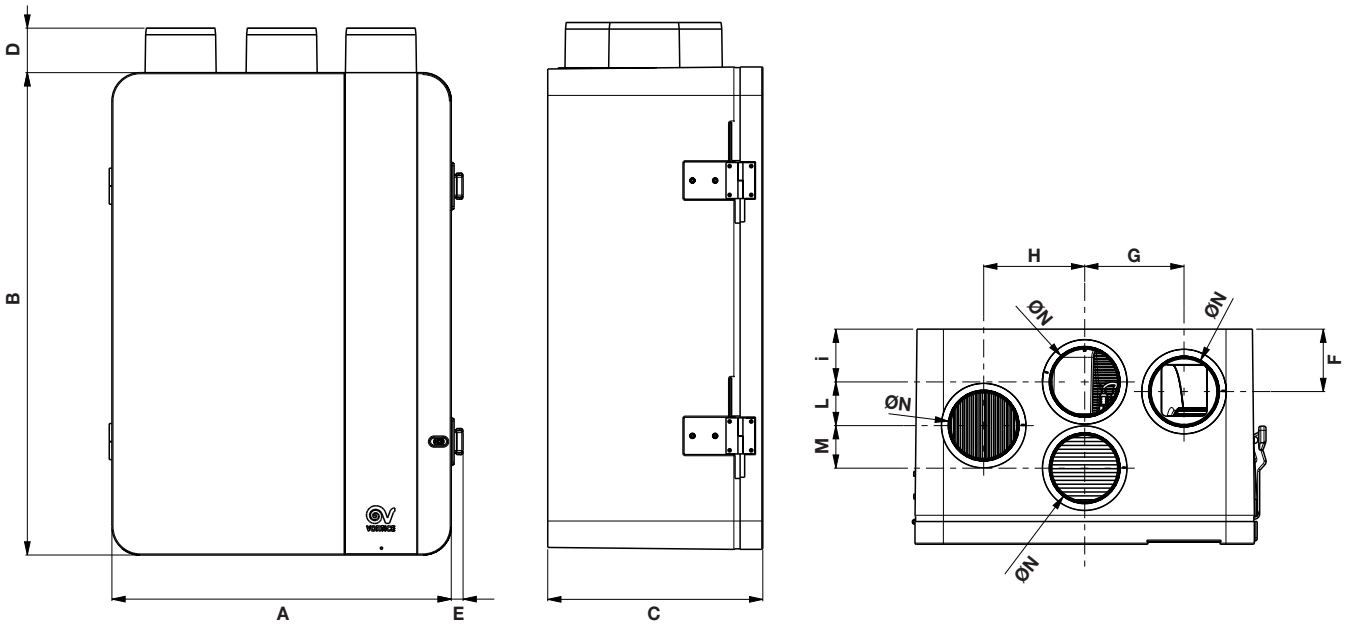
Wall-mounting residential heat recovery unit

VORT HR 250 NETI | TECHNICAL DATA FOR REGULATION N° 1254/2014/UE

Models Code	Unit of measurement	VORT HR 250 NETI 11933
Supplier's name or trade mark	-	Vortice
Specific Energy Consumption class SEC in average climate zone	-	A
Specific Energy Consumption cl ass SEC average	kWh/m² year	-35,5
Specific Energy Consumption class SEC cold		-74,6
Specific Energy Consumption class SEC warm		-10,5
Declared typology	-	BRVU*
Type of drive	-	VSD**
Type of heat recovery system HRS	-	recuperative
Thermal efficiency of heat recovery at reference air flow	%	90,6
Maximum flow rate	m³/h	192
Electric power input of the fan drive, including any motor control equipment, at maximum flow rate	W	94,5
Sound power level LWA	LWA [dB(A)]	61
Reference flow rate	m³/s	0,0373
Reference pressure difference	Pa	252
SPI***	W/(m³/h)	0,33482
Control factor CTRL	-	0,85
Control typology	-	central demand control
Maximum internal leakage rates	%	2,1
Maximum external leakage rates	%	9,8
Mixing rate	-	NA*
Position and description of visual filter warning	-	see user manual
Airflow sensitivity to pressure variations at + 20 Pa and – 20 Pa	-	NA*
Indoor/outdoor air tightness	m³/h	NA*
Annual electricity consumption (AEC)	kWh electricity/year	464
AHS average Annual heating saved	kWh primary energy/year	4646
AHS cold Annual heating saved		9089
AHS warm Annual heating saved		2101

*BRVU: Bidirectional Residential Ventilation Unit
**VSD: Variable Speed Drive
***SPI: Specific Power Input
NA: data not applicable

DIMENSIONS



Models	Code	A	B	C	D	E	F	G	H	I	L	M	Ø N
VORT HR 250 NETI	11933	598	850	380	80	21	110	175	178	93	77	75	125

Dimensions (mm)

SOUND LEVELS

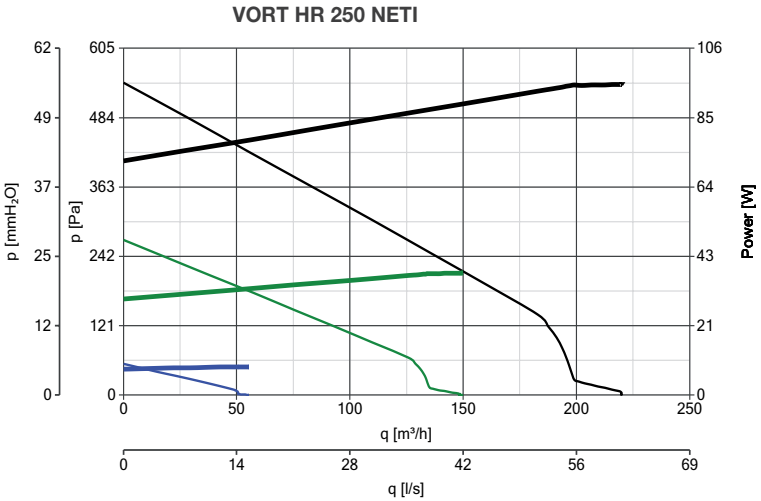
VORT HR 350 AVEL RPM		Sound Power								Sound Pressure
		Lw dB (A)							Lw dB (A)	Lp dB (A)**
		125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz		
Min. Speed	Supply to internal	11.71	21.09	22.71	15.98	5.31	n.a.	n.a	36.6	16.1
	Extract to internal	n.a	3.96	5.67	1.51	n.a.	n.a.	n.a.	15	n.a
	Breakout	n.a	2.94	6.68	n.a.	n.a.	n.a.	n.a.	14.8	n.a.
Med. Speed	Supply to internal	22.96	35.12	38.62	39.62	34.56	25.1	6.55	51.8	31.3
	Extract to internal	4.88	25.8	23.43	25.31	13.77	n.a.	n.a.	35	14.2
	Breakout	1.7	24.4	28.2	28.8	24.1	12.2	9.6	36.6	16.1
Max. Speed	Supply to internal	31.82	45.66	57.63	49.85	45.48	38.89	20.89	60.9	40.4
	Extract to internal	13.91	30.08	41.49	37.18	25.63	12.94	7.33	45.2	24.7
	Breakout	14.83	27.78	41.3	37.14	26.51	13.01	4.64	46.2	25.7

Tests carried out according EN9614 standard. **Sound pressure calculated at 3 m distance in free-field.
n.a. = data not available.

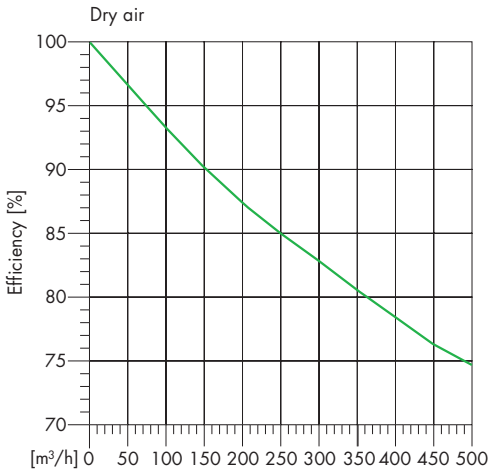
VORT HR 250 NETI

Wall-mounting residential heat recovery unit

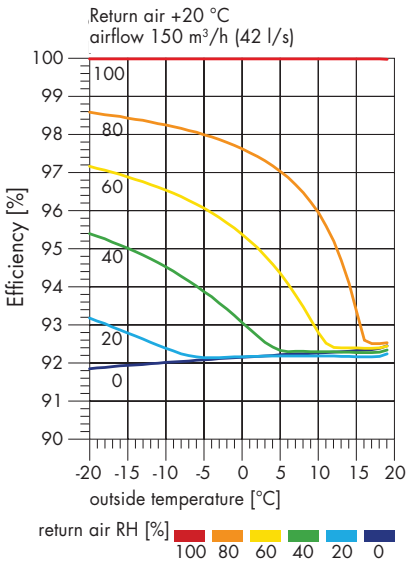
PERFORMANCE CURVES



Efficiency as a function of the airflow



Influence on efficiency due to condensation heat



NOTE

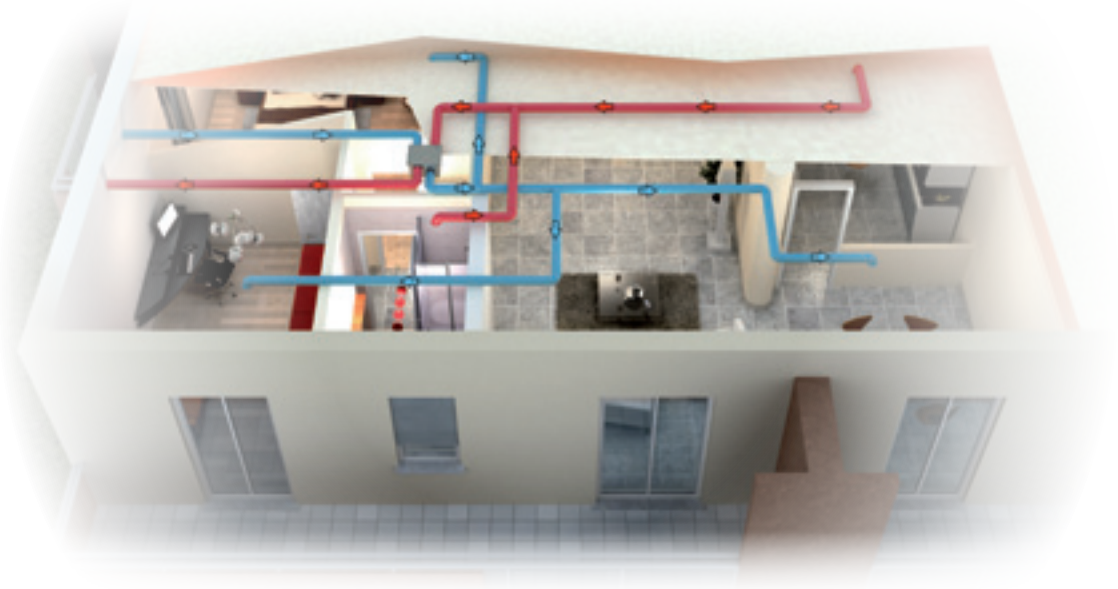
NEW

VORT HRI MINI EP

Ceiling-mounting residential heat recovery unit

PRODUCT SPECIFICATIONS

- Heat recovry system designed and optimized to offer high performances, small consumptions and low noise levels.
- Optimised for apartments with a surface area of up to 80 m2.
- Very high-efficiency crossed counter-flow type heat exchanger in PS resin.
- Ports compatible with 100 mm and 125 mm pipes.
- Enclosures made of galvanised steel sheet with fire-resistant (DIN EN 13501).
- Highly efficient backward curved centrifugal fans moved by EC (brushless) 2 speed motors. Integrated frost protection.
- Control unit for initial setting of fan speeds according to system requirements.
- Thermodinamic automatic By-pass.
- Support brackets.
- Protection rating: IPX2.
- Insulation class: I ⏚ .



KEY FEATURES

- Compact dimensions (396 x 396 x 220 mm), optimised for installation in false ceilings of small apartments or hotel rooms.
- Low noise level.
- Low power consumption (92%), at conditions (+5 °C, + 25 °C, 28% UR) established by applicable international standards (EN 308).
- Robust, lightweight construction (9 kg).
- Complying with the requirements of Regulation N° 1253/2016/UE set out by the EUP/ErP Directive, effective starting from 01.01.2018.

TECHNICAL DATA

Models	Code	V ~ 50 Hz	W	Max Airflow		Max Pressure		Max °C	Kg
				m^3/h	l/s	mmH_20	Pa		
VORT HRI MINI EP	11551	230	86	122	34	60	592	40	9

VORT HRI MINI EP

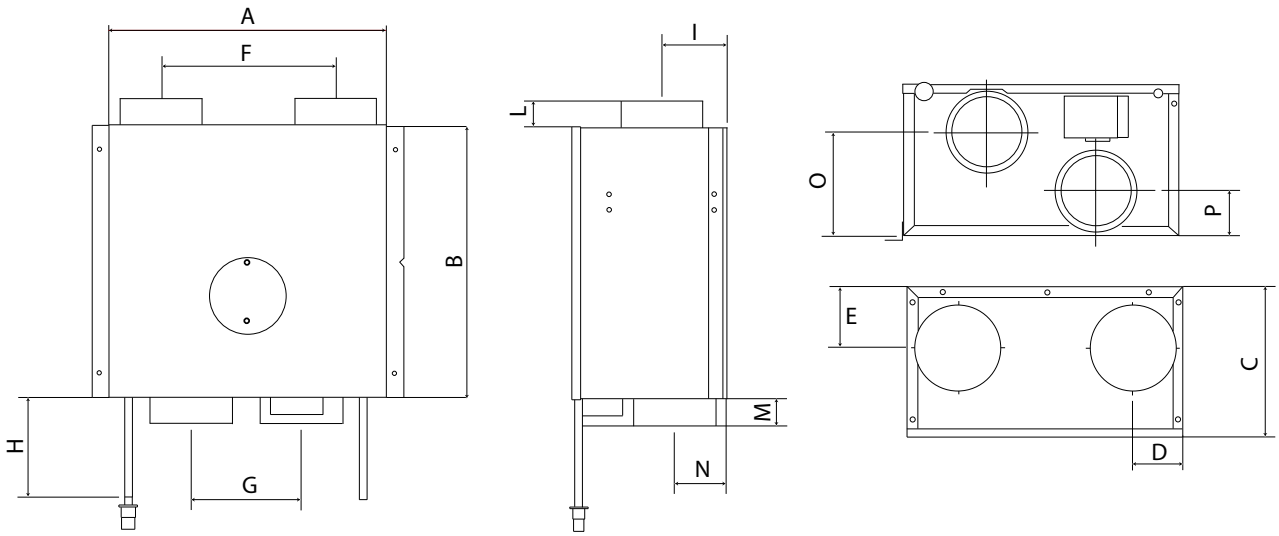
Ceiling-mounting residential heat recovery unit

VORT HRI MINI EP| TECHNICAL DATA FOR REGULATION N° 1254/2014/UE

Models Code	Unit of measurement	VORT HRI MINI EP 11551
Supplier's name or trade mark	-	Vortice
Specific Energy Consumption class SEC in average climate zone	-	A
Specific Energy Consumption cl ass SEC average	kWh/m² year	-39,4
Specific Energy Consumption class SEC cold		-78,4
Specific Energy Consumption class SEC warm		-14,4
Declared typology	-	BRVU*
Type of drive	-	VSD**
Type of heat recovery system HRS	-	recuperative
Thermal efficiency of heat recovery at reference air flow	%	87,7
Maximum flow rate	m³/h	103
Electric power input of the fan drive, including any motor control equipment, at maximum flow rate	W	79,0
Sound power level LWA	LWA [dB(A)]	42
Reference flow rate	m³/s	0,0200
Reference pressure difference	Pa	50
SPI***	W/(m³/h)	0,50000
Control factor CTRL	-	0,65
Control typology	-	local demand control
Maximum internal leakage rates	%	5
Maximum external leakage rates	%	5
Mixing rate	-	NA*
Position and description of visual filter warning	-	NA*
Airflow sensitivity to pressure variations at + 20 Pa and – 20 Pa	-	NA*
Indoor/outdoor air tightness	m³/h	NA*
Annual electricity consumption (AEC)	kWh electricity/year	310
AHS average Annual heating saved	kWh primary energy/year	4646
AHS cold Annual heating saved		9089
AHS warm Annual heating saved		2101

*BRVU: Bidirectional Residential Ventilation Unit
**VSD: Variable Speed Drive
***SPI: Specific Power Input
NA: data not applicable

DIMENSIONS



Models	Code	A	B	C	D	E	F	G	H	I	L	M	N	O	P
VORT HRI MINI	11551	396	396	220	74	89	252	160	150	94	40	40	73	150	67

Dimensions (mm)

SOUND LEVELS

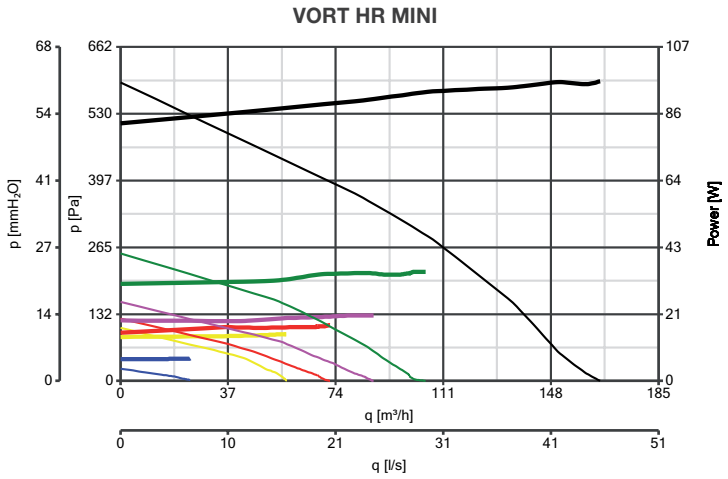
VORT HRI MINI	Lw db (A)	Lp db (A) 3 m*
Supply to internal	43.3	22.8
Extract to internal	36.5	16
Breakout	43.1	22.5

** Tests carried out according to EN 9614 standard.*Sound pressure calculated at 3 m distance in free-field.*

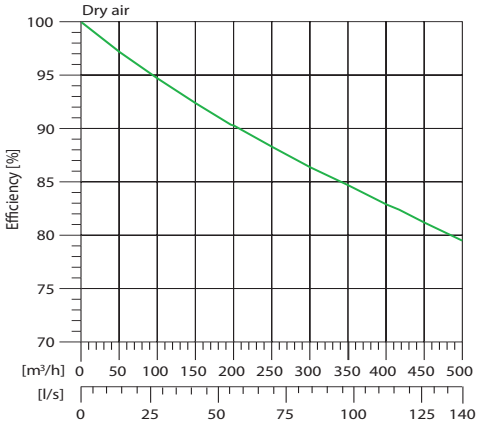
VORT HRI MINI EP

Ceiling-mounting residential heat recovery unit

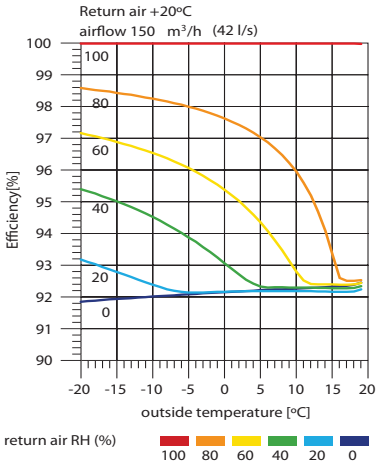
PERFORMANCE CURVES



Efficiency as a function of the airflow



Influence on efficiency due to condensation heat



NOTE

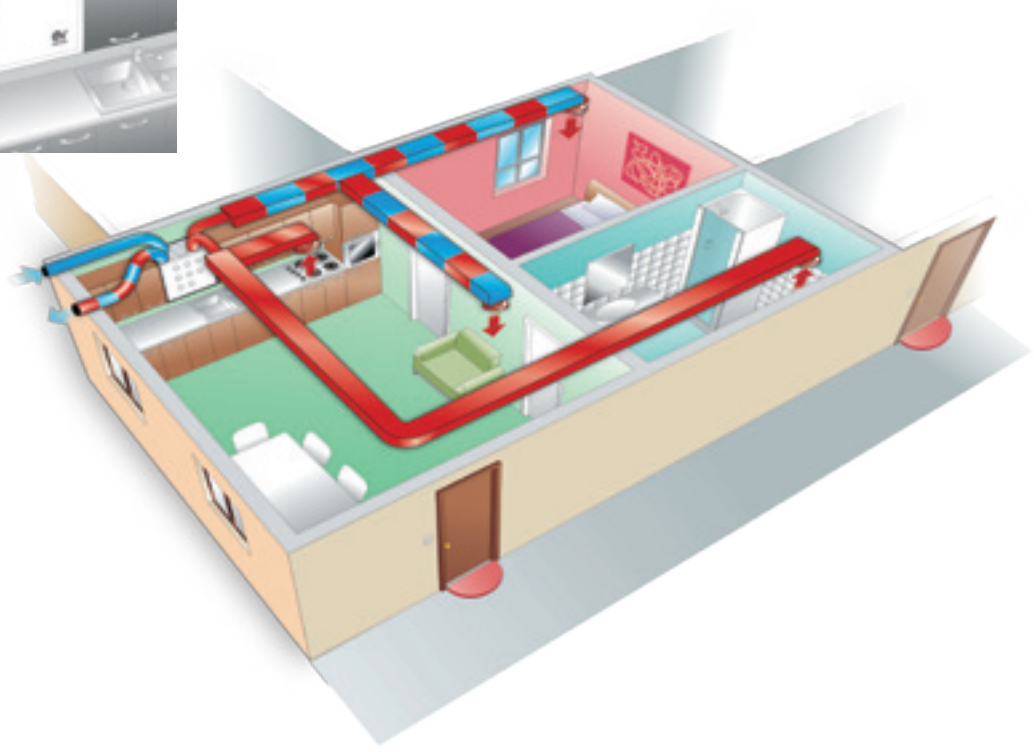
VORT EVO HR 200
Heat recovery unit

PRODUCT SPECIFICATIONS

LONG LIFE 30.000 h

C

- Pressed steel enclosure with polyester powder coated finish, colour white; rear panel zinc-coated steel, internal parts made of expanded polypropylene (PPE).
- Electronics housing and filter caps moulded from polypropylene (PP).
- Duct connection ports of nominal diameter 125 mm
- 2 x EC brushless motor of external rotor design with shafts turning in ball bearings, installed on antivibration mounts;
- 2 operating speeds, selectable independently at the moment of installation, directly at the unit or using a radio remote control (available as optional accessory).
- Low noise, forward bladed centrifugal impellers.
- Air flow settable between 50 m^3/h and 225 m^3/h
- Ultra high-efficiency counter-flow type heat exchanger fashioned from moulded plastic (PS).
- Automatically activated system designed to prevent icing of the heat exchanger.
- 2 x G3 filter (alternatively, option of F5 filters)
- The VORT EVO HR 200 can be fitted with a silencer 0.5 m in length, available as an optional accessory, applied to the outlet duct.
- Horizontal installation kit (optional)
- Protection rating: IPX2.
- Insulation class: II. ⧈ .



KEY FEATURES

- Brushless motors offer optimal performance and extremely low energy consumption.
- Offers continuous ventilation of the home, maintaining ideal comfortable conditions within the rooms served while minimising energy consumption.
- Ideal for apartments up to 120 m^2.
- Minimal size (width 595 mm): compatible with standard installation recesses.
- Easy vertical or horizontal wall installation.

TECHNICAL DATA

Models	Code	V ~ 50 Hz	W	A	RPM	Max Airflow		Max Pressure		Max °C	Kg
						m^3/h	l/s	mmH_20	Pa		
VORT EVO HR 200	11925	230	96	0.82	2800	225	63	22.7	223	50	16.6

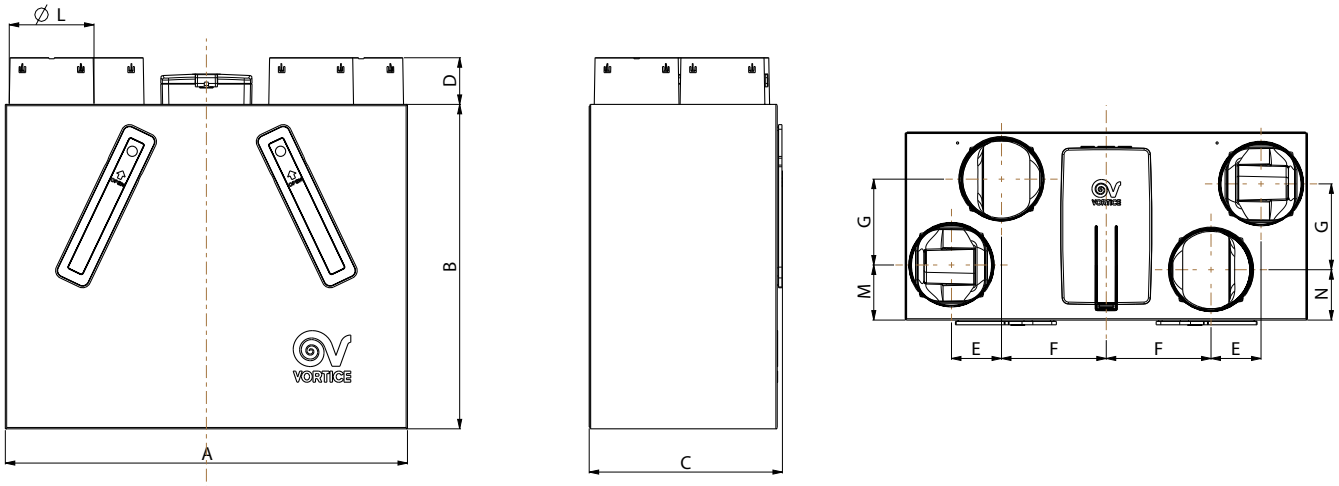
VORT EVO HR 200 RANGE
Heat recovery unit

VORT EVO HR 200 | TECHNICAL DATA FOR REGULATION N° 1254/2014/UE

Models Code	Unit of measurement	VORT HRI MINI EP 11551
Supplier's name or trade mark	-	Vortice
Specific Energy Consumption class SEC in average climate zone	-	C
Specific Energy Consumption cl ass SEC average	kWh/m² year	-25,4
Specific Energy Consumption class SEC cold		-64,2
Specific Energy Consumption class SEC warm		-0,6
Declared typology	-	BRVU*
Type of drive	-	VSD**
Type of heat recovery system HRS	-	recuperative
Thermal efficiency of heat recovery at reference air flow	%	91,2
Maximum flow rate	m³/h	163
Electric power input of the fan drive, including any motor control equipment, at maximum flow rate	W	81,0
Sound power level LWA	LWA [dB(A)]	53
Reference flow rate	m³/s	0,0317
Reference pressure difference	Pa	141
SPI***	W/(m³/h)	0,64912
Control factor CTRL	-	0,85
Control typology	-	local demand control
Maximum internal leakage rates	%	8,5
Maximum external leakage rates	%	8,5
Mixing rate	-	NA*
Position and description of visual filter warning	-	NA*
Airflow sensitivity to pressure variations at + 20 Pa and – 20 Pa	-	NA*
Indoor/outdoor air tightness	m³/h	NA*
Annual electricity consumption (AEC)	kWh electricity/year	858
AHS average Annual heating saved	kWh primary energy/year	4620
AHS cold Annual heating saved		9038
AHS warm Annual heating saved		2089

*BRVU: Bidirectional Residential Ventilation Unit
**VSD: Variable Speed Drive
***SPI: Specific Power Input
NA: data not applicable

DIMENSIONS



Modello	Codice	A	B	C	D	E	F	G	Ø L	M	N
VORT EVO HR 200	11925	595	480	285	69	74	155	127	125	81.5	74.5

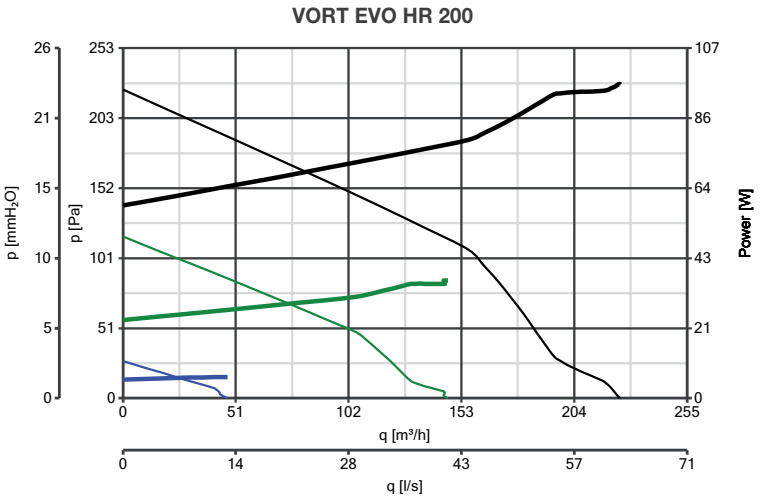
Dimensions (mm)

SOUND LEVES

RPM		Lw dB (A)							Lw dB (A)	Lp dB (A) 3m
		125 Hz	250 Hz	500 Hz	1k Hz	2k Hz	4k Hz	8k Hz		
880	Supply to internal	14.2	24.1	27.9	24.3	17.7	14.5	15.2	37.5	14.26
	Extract to internal	11.9	18.9	22.7	15.9	15.1	14.5	15.5	33.2	
	Breakout	21.2	27.1	28.9	19.4	19.3	15.8	16.4	34.8	
1800	Supply to internal	28.5	40.5	41.8	53.1	44.8	38.3	37	59.5	32.46
	Extract to internal	27.1	27.1	31.8	41.2	30.7	22.2	19.1	47	
	Breakout	45.8	40.7	41.1	46.2	32.2	26.9	20	53	
2800	Supply to internal	35.2	46.9	51	56.8	58.7	46.6	46.2	68.3	32.66
	Extract to internal	28	30.6	38.1	41.6	37.1	24.1	23.5	49.2	
	Breakout	28.5	38.9	50.1	43	39.8	32	25.6	53.2	

VORT EVO HR 200 RANGE
Heat recovery unit

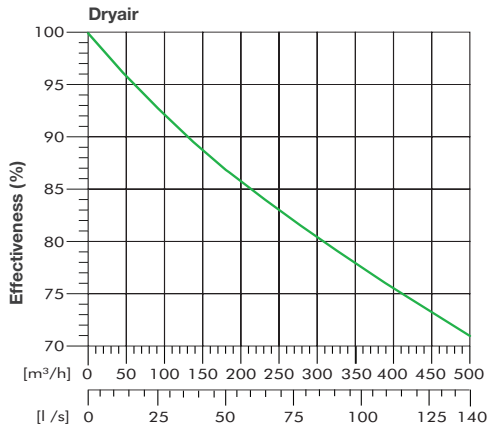
PERFORMANCE CURVES



POWER CONSUMPTION:
- Max speed
- Min speed
- Min speed

PERFORMANCE CURVES:
- Max speed
- Min speed
- Min speed

Efficiency as a function of the airflow



EFFICENCY
(test according to EN 308)

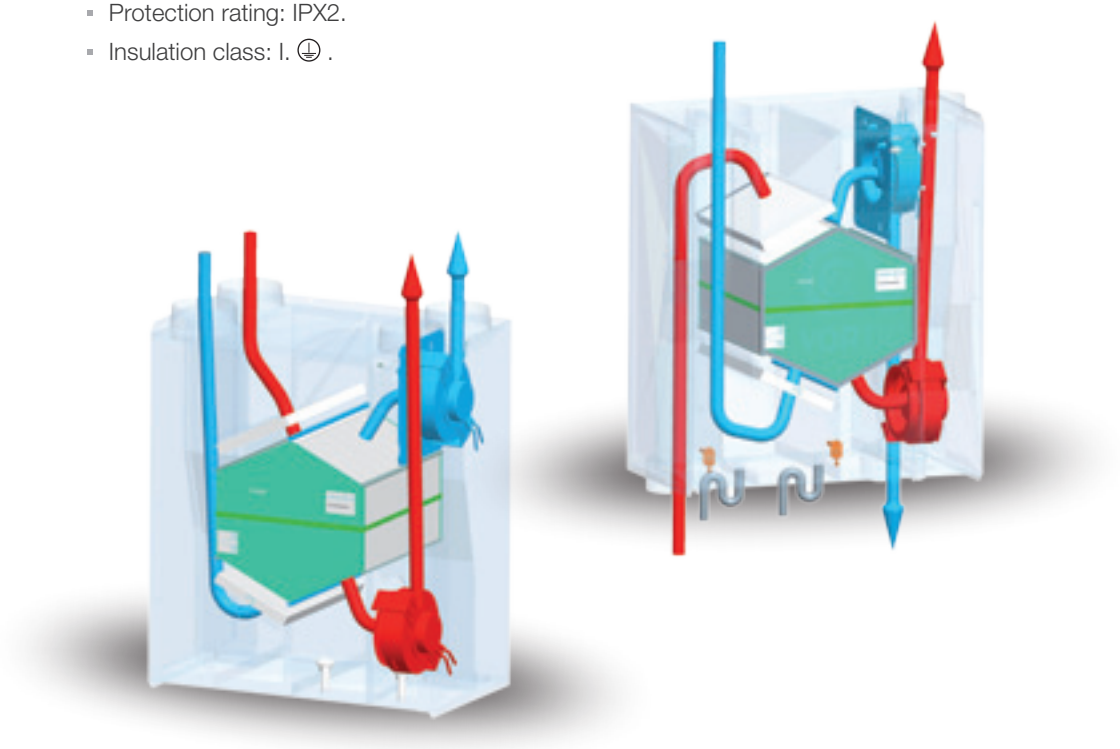
TOTAL EXHAUST FLOW RATE (m³/h)	HEAT RECOVERY EFFICIENCY (%)
54	93
76	91
97	90
119	89
140	87

NOTE

VORT HR 350 EXO
Wall-mounting residential heat recovery unit

PRODUCT SPECIFICATIONS

- Enclosure in galvanised steel sheet insulated by fire-resistant (DIN EN 13501), sound-proof lining.
- Ports nominal diameter 150 mm.
- Very high-efficiency counter-flow heat exchanger in PS resin.
- Highly efficient backward curved centrifugal fans moved by EC (brushless) 3 speed motors impellers with backward-curved blades.
- 2 easily accesible F5 filters (optional F7 filter on intake).
- Integrated frost protection.
- Wired electronic control allowing with LCD display:
  - initial configuration;
  - manual setting of operating mode;
  - automatic operation according to ambient conditions detected by wired sensor (optional);
  - continuous monitoring of correct operation (possible problems shown on LCD display);
  - constant monitoring of filter status (maintenance needs shown on LCD display);
  - SW updating through dedicated port.
- Blocked filter status monitoring system.
- Support brackets for wall-mounting.
- Protection rating: IPX2.
- Insulation class: I. ⏚ .



KEY FEATURES

- Designed for outdoor installation.
- High performances (350 m^3/h) combined with low power consumption. (150 W).
- Very high-heat transfer efficiency (Max 92%) in the conditions (+5°C, +25°C, 28% RH) established by applicable international standards (EN 308).
- Proportionately compact dimensions
- 2 versions: 4 parts on the top or split on the top and the bottom to accomplish different installations.
- Painted sheet steel cabinet (optional), to house the product in outdoor areas in the absence of dedicated closed vanes.
- Painted sheet steel heated cabinet (optional), designed to ensure the correct and effective operation of the appliance outdoor, even at low temperatures.

TECHNICAL DATA

Models	Code	V ~ 50 Hz	W	A	Max Airflow		Max Pressure		Max °C	Kg
					m^3/h	l/s	mmH_20	Pa		
VORT HR 350 EXO	11590	230	140	1.2	350	97.2	40	392	50	38

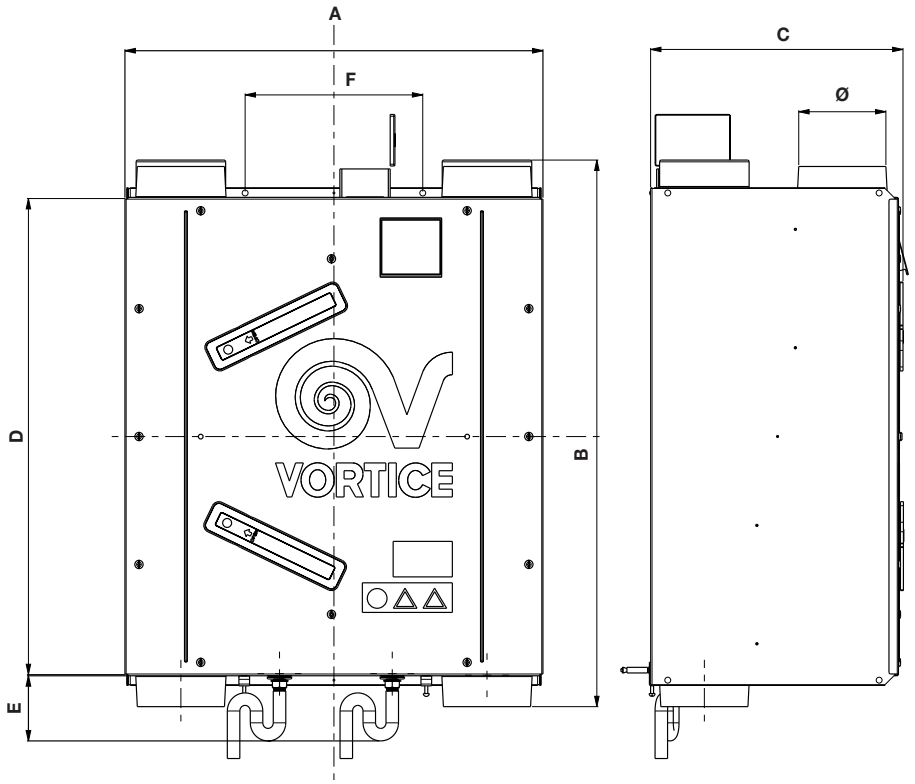
VORT HR 350 EXO
Wall-mounting residential heat recovery unit

VORT EVO HR 200 | TECHNICAL DATA FOR REGULATION N° 1254/2014/UE

Models Code	Unit of measurement	VORT HR 350 EXO 11590
Supplier's name or trade mark	-	Vortice
Specific Energy Consumption class SEC in average climate zone	-	A+
Specific Energy Consumption cl ass SEC average	kWh/m² year	-42,3
Specific Energy Consumption class SEC cold		-81,2
Specific Energy Consumption class SEC warm		-17,4
Declared typology	-	BRVU*
Type of drive	-	VSD**
Type of heat recovery system HRS	-	recuperative
Thermal efficiency of heat recovery at reference air flow	%	89,9
Maximum flow rate	m³/h	284
Electric power input of the fan drive, including any motor control equipment, at maximum flow rate	W	66,0
Sound power level LWA	LWA [dB(A)]	57
Reference flow rate	m³/s	0,0556
Reference pressure difference	Pa	50
SPI***	W/(m³/h)	0,15500
Control factor CTRL	-	0,85
Control typology	-	local demand control
Maximum internal leakage rates	%	15,5
Maximum external leakage rates	%	8,2
Mixing rate	-	NA*
Position and description of visual filter warning	-	See user manual
Airflow sensitivity to pressure variations at + 20 Pa and – 20 Pa	-	NA*
Indoor/outdoor air tightness	m³/h	NA*
Annual electricity consumption (AEC)	kWh electricity/year	185
AHS average Annual heating saved	kWh primary energy/year	4627
AHS cold Annual heating saved		9052
AHS warm Annual heating saved		2092

*BRVU: Bidirectional Residential Ventilation Unit
**VSD: Variable Speed Drive
***SPI: Specific Power Input
NA: data not applicable

DIMENSIONS



Models	Code	A	B	C	D	E	F	Ø
VORT HR 350 EXO	11590	706	923	429	804	100	300	150

Dimensions (mm)

SOUND LEVELS

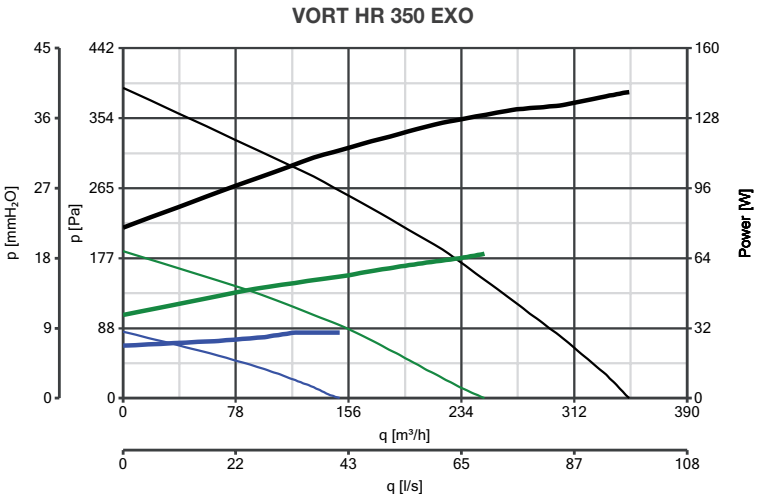
VORT HR 350 EXO RPM		Sound Power								Sound Pressure
		Lw dB (A)							Lw dB (A)	Lp dB (A)**
		125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz		
Nom. Speed	Supply to internal	26.8	36.4	42.8	32.0	26.0	13.3	8.7	53.9	33.4
	Extract to internal	9.8	21.8	18.5	15.5	n.a.	n.a.	n.a.	31.2	10.7
	Breakout	42.5	44.0	43.9	39.6	35.2	26.9	17.2	56.5	36

Tests carried out according EN9614 standard, product featuring 270 m^3/h at 110 Pa. **Sound pressure calculated at 3 m distance in free-field.
n.a. = data not available.

VORT HR 350 EXO

Wall-mounting residential heat recovery unit

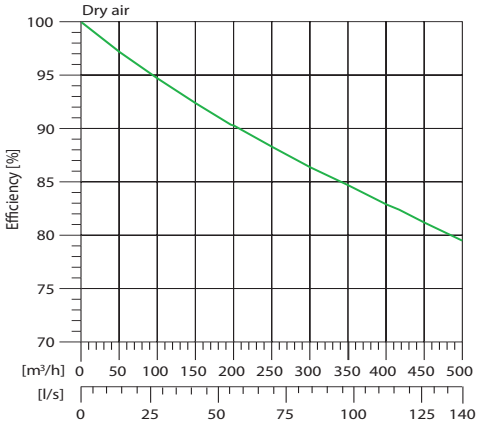
PERFORMANCE CURVES



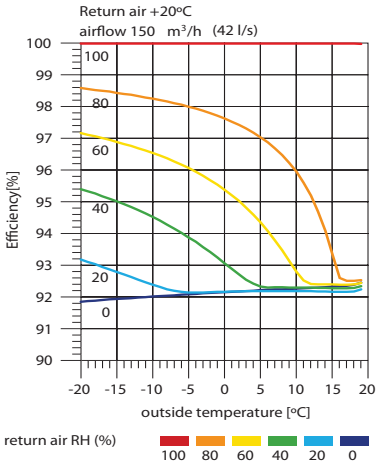
POWER CONSUMPTION:
- Max speed
- Min speed
- Min speed

PERFORMANCE CURVES:
- Max speed
- Min speed
- Min speed

Efficiency as a function of the airflow



Influence on efficiency due to condensation heat



NOTE

NEW

VORT PLATT RANGE - **VORT PLATT EP** RANGE
Centralised continuous ventilation unit

PRODUCT SPECIFICATIONS

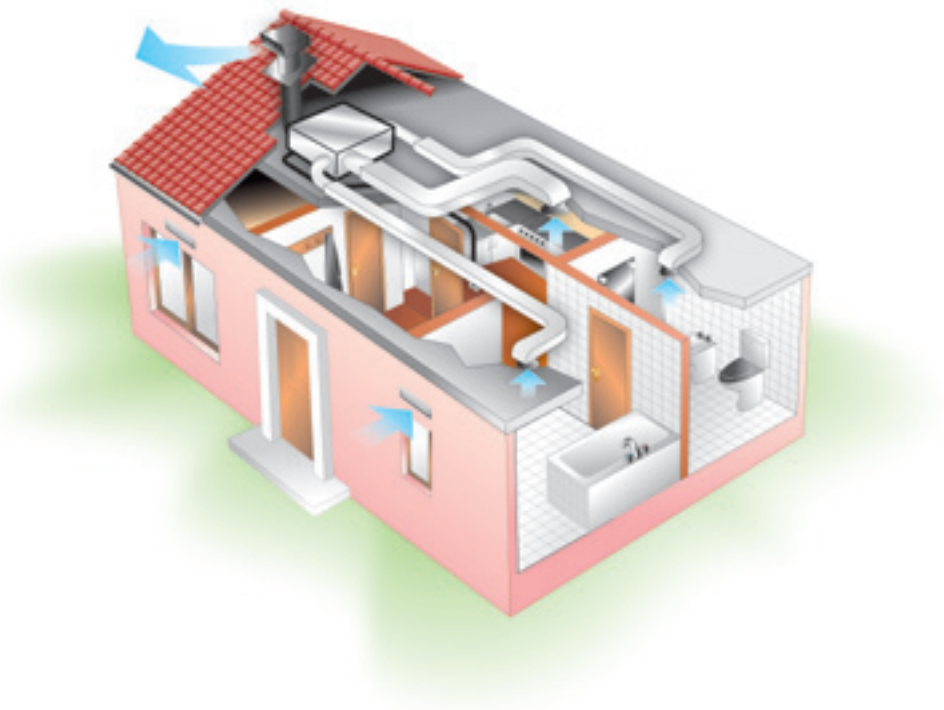
- 4 models: VORT PLATT, VORT PLATT ES, VORT PLATT EP, VORT PLATT ES EP.
- Designed to guarantee efficient ventilation of the home in continuous operating mode.
- Long lasting galvanized steel cover.
- Rear flange made of ABS.
- Ball bearing motor.
- Two speeds.
- Inlets: 3 x 80 mm + 1 x 125 mm diameter.
- Outlet: 1 x 125 mm diameter.
- Protection rating: IPX4.
- Insulation class: II ⧈ .

VORT PLATT - VORT PLATT EP:

- AC motor external rotor with thermally protected.
- VORT PLATT supplied with 2 spigots (30 m³/h) and 1 blank.

VORT PLATT ES - VORT PLATT ES EP:

- Electrically controlled EC brushless motors offer optimal performance and extremely low energy consumption.
- 3 alternative settings selectable by dip switch.
- Very high efficiency: specific fan power down to 0.2 [W/l/s].
- Timer 30'.
- VORT PLATT ES supplied with 2 spigots and 1 blank.



VORT PLATT ES code 11813

VORT PLATT ES EP code 11556

VORT PLATT code 11814

VORT PLATT EP code 11366

KEY FEATURES

- Designed to guarantee efficient ventilation of the home in continuous operating mode.
- Inner scroll design optimized to offer high performances, small consumptions and low noise levels.
- Rectangular low profile and 4 rooms extract capability makes the unit ideal for apartment ventilation.
- Suitable for horizontal and vertical installations on walls, ceilings and false ceiling.

TECHNICAL DATA

Models	Code	V ~ 50 Hz	W min/max	A min/max	RPM min/max	Max Airflow		Max Pressure		Lp dB(A) 3 m min/max	Max °C	Kg
						m^3/h min/max	l/s min/max	mmH_20 min/max	Pa min/max			
VORT PLATT	11814	230	20 55	0.18 0.24	1280 2540	200 400	56 111	20 41	206 402	27.2* -	60	4
VORT PLATT ES	11813		12 50	0.12 0.45	830 1400	215 365	60 101	5 14.5	49 142	26.5** 36	50	

Models	Code	V ~ 50 Hz	W min/max	A min/max	RPM min/max	Max Airflow		Max Pressure		Lp dB(A) 3 m min/max	Max °C	Kg
						m^3/h min/max	l/s min/max	mmH_20 min/max	Pa min/max			
VORT PLATT EP	11366	230	20 56	0.01 0.25	1300 2610	176 343	48.8 95.2	26.6 41.9	261.0 411.7	- 34.9+	60	5,4
VORT PLATT ES EP	11556		12 50	0.12 0.45	830 1400	215 365	60 101	5 14.5	49 142	26.5** 36	50	4

* Lw dB(A) measured at kitchen port at minimum speed.
** Lp dB(A) measured at 3 m in configuration 3+1.

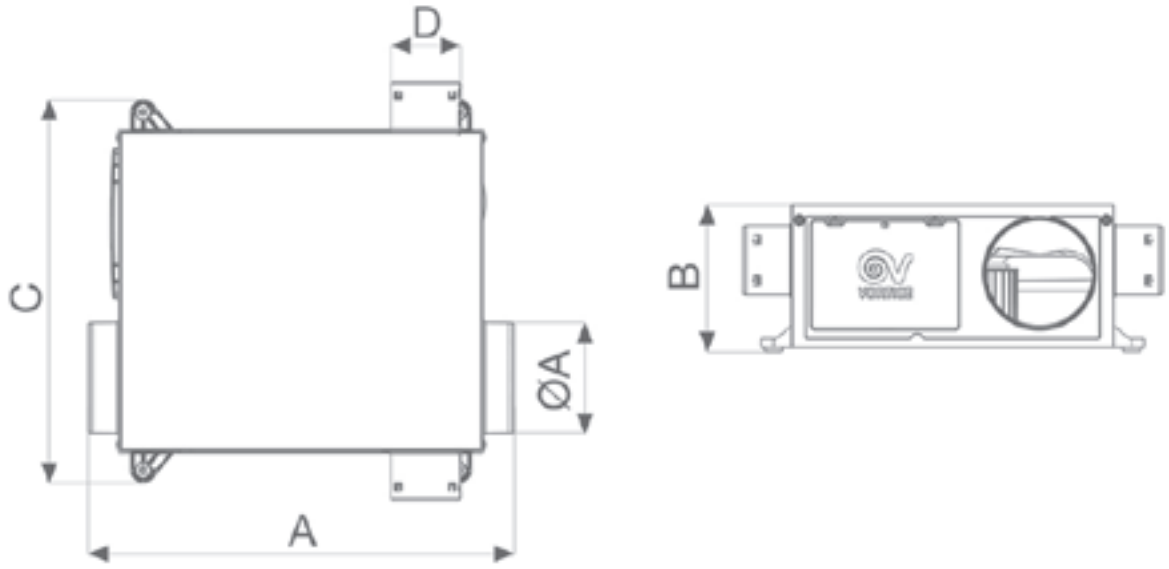
VORT PLATT RANGE - **VORT PLATT EP** RANGE
Centralised continuous ventilation unit

VORT PLATT ES - VORT PLATT EP RANGE | TECHNICAL DATA FOR REGULATION N° 1254/2014/UE

Models Code	Unit of measurement	VORT PLATT EP 11366	VORT PLATT ES - VORT PLATT ES EP 11813 - 11556
Supplier's name or trade mark	-	Vortice	Vortice
Specific Energy Consumption class SEC in average climate zone	-	E	E
Specific Energy Consumption cl ass SEC average	kWh/m² year	-11,6	-13.4
Specific Energy Consumption class SEC cold		-21,2	-23.2
Specific Energy Consumption class SEC warm		-0.2	-2.2
Declared typology	-	RVU-U*	RVU-U*
Type of drive	-	MSD***	MSD***
Type of heat recovery system HRS	-	None	None
Thermal efficiency of heat recovery at reference air flow	%	NA	NA
Maximum flow rate	m³/h	280	0,0661
Electric power input of the fan drive, including any motor control equipment, at maximum flow rate	W	57,6	32
Sound power level LWA	LWA [dB(A)]	35	43
Reference flow rate	m³/s	0,0544	0,0463
Reference pressure difference	Pa	100	95
SPI***	W/(m³/h)	0,17755	0,12005
Control factor CTRL	-	1	1
Control typology	-	manual	manual
Maximum internal leakage rates	%	NA	NA
Maximum external leakage rates	%	7,4	7,4
Mixing rate	-	NA	NA
Position and description of visual filter warning	-	NA	NA
Airflow sensitivity to pressure variations at + 20 Pa and – 20 Pa	-	NA	NA
Indoor/outdoor air tightness	m³/h	NA	NA
Annual electricity consumption (AEC)	kWh electricity/a	2223	150
AHS average Annual heating saved	kWh primary energy/year	1715	1715
AHS cold Annual heating saved		2732	2732
AHS warm Annual heating saved		632	632

* RVU-U: Unit Ventilation Residential - Unidirectional
** NRVU-U: Unit Ventilation Non Residential - Unidirectional
*** MSD: Multi-Speed Drive
NA: data not applicable

DIMENSIONS



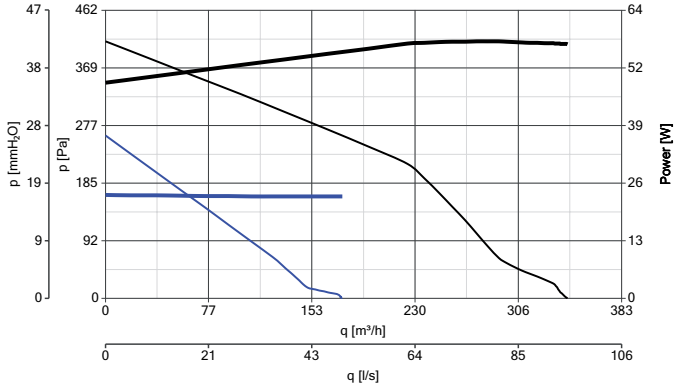
Models	Code	Ø A	A	B	C	D
VORT PLATT	11814	124,5	478	164	430	77,5
VORT PLATT EP	11366					
VORT PLATT ES	11813					
VORT PLATT ES EP	11556					

Dimensions (mm)

VORT PLATT RANGE - **VORT PLATT EP** RANGE
Centralised continuous ventilation unit

PERFORMANCE CURVES

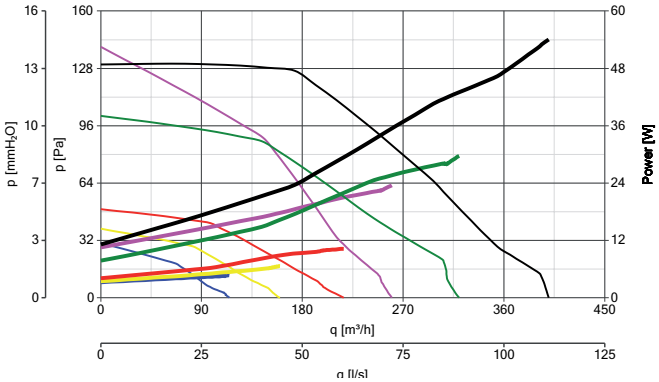
VORT PLATT



POWER CONSUMPTION:
Max
Min

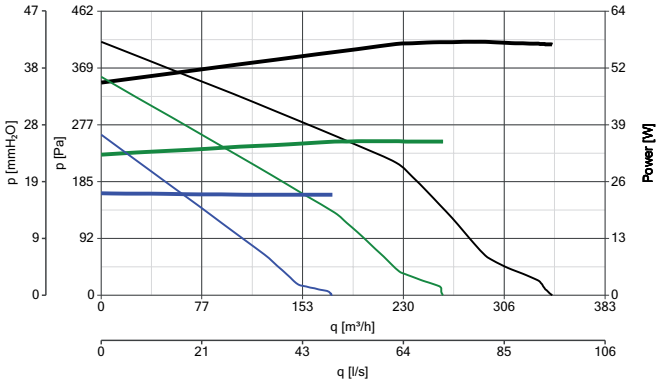
PERFORMACE CURVES:
Max
Min

VORT PLATT ES

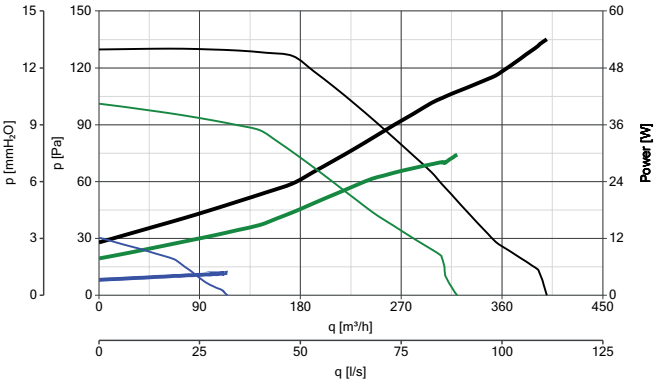


min (1+1)
min (2+1)
min (3+1)
max (1+1)
max (2+1)
max (3+1)

VORT PLATT EP



VORT PLATT ES EP



POWER CONSUMPTION:
Max speed
Min speed
Min speed

PERFORMANCE CURVES:
Max speed
Min speed
Min speed

NOTE

NEW

VORT PENTA RANGE - **VORT PENTA EP** RANGE
Centralised continuous ventilation unit

PRODUCT SPECIFICATIONS

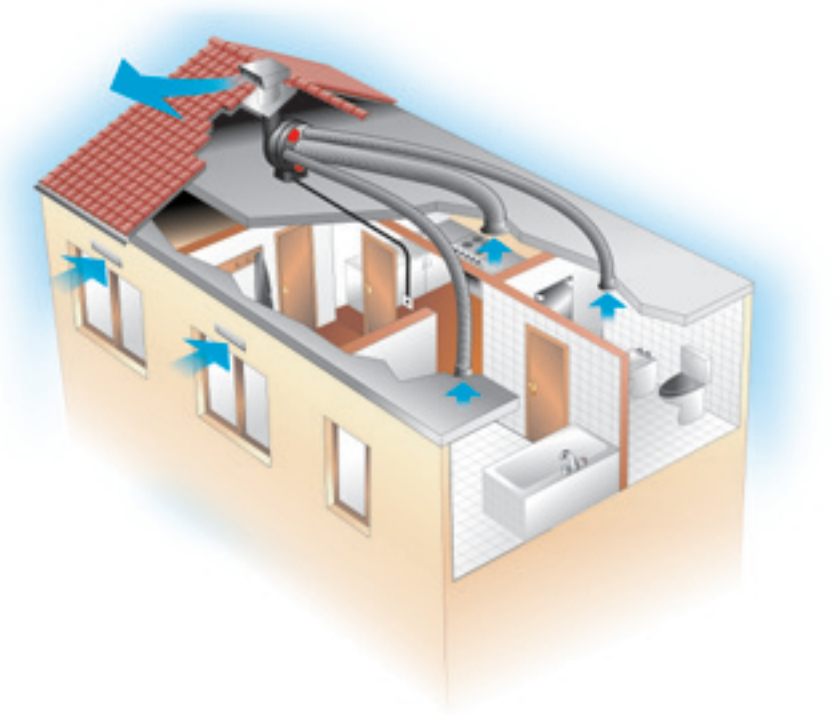
- 2 models: VORT PENTA; VORT PENTA ES
- ABS made.
- Ball bearing motor.
- 2 speeds.
- Inlets: 5x80 mm +1x125 mm diameter.
- Outlet: 1x125 mm diameter.
- New time-saving automatic kitchen flow regulation.
- Protection rating: IPX4.
- Insulation class: ⧈ II.

VORT PENTA - VORT PENTA EP:

- AC motor.
- Supplied with 2 spigots (30 m^3) and 4 blanks.

VORT PENTA ES - VORT PENTA ES EP:

- Electrically controlled EC brushless motors offer optimal performance and extremely low energy consumption.
- 5 alternative settings selectable by dip switch.
- Very high efficiency: specific fan power down to 0.2 [W/l/s].
- Timer 30'.
- Supplied with 3 spigots and 3 blanks.



VORT PENTA ES code 11767
VORT PENTA ES EP code 11557

VORT PENTA code 11707
VORT PENTA EP code 11767

KEY FEATURES

- Designed to guarantee efficient ventilation of the home in continuous operating mode.
- Extraction up to 6 rooms.
- Designed for installation in false ceilings, these are set up for suspended mounting by means of a cord supplied as standard.
- Alternatively, the integrated rotating bracket is available; this makes the fan very easy to install in any position, as it ensures the setup is suited to system requirements.
- Internal ducting designed to guarantee high performance, low consumption and reduced noise levels.

TECHNICAL DATA

Models	Code	V ~ 50 Hz	W min/max	A min/max	RPM min/max	Max Airflow		Max Pressure		Lp dB(A) 3 m min/max	°C max	Kg
						m^3/h min/max	l/s min/max	mmH_20 min/max	Pa min/max			
VORT PENTA	11707	230	21 73	0.18 0.34	1245 2160	206 340	59,9 94,4	24.4 43,0	240,1 421,9	- 31,9	40	4,4
VORT PENTA ES	11767		13 35	0.13 0.31	1350 2000	250 375	69.5 104	11.5 26	113 255	35 43	50	4

Models	Code	V ~ 50 Hz	W min/max	A min/max	RPM min/max	Max Airflow		Max Pressure		Lp dB(A) 3 m min/max	°C max	Kg
						m^3/h min/max	l/s min/max	mmH_20 min/max	Pa min/max			
VORT PENTA EP	11509	230	21 73	0.18 0.34	1245 2160	206 340	59,9 94,4	24.4 43,0	240,1 421,9	- 31,9	40	4,4
VORT PENTA EP ES	11557		13 35	0.13 0.31	1350 2000	250 375	69.5 104	11.5 26	113 255	35 43	50	4

* Lw dB(A) measured at kitchen port at minimum speed.
** Lp dB(A) measured at 3 m in configuration 5+1.

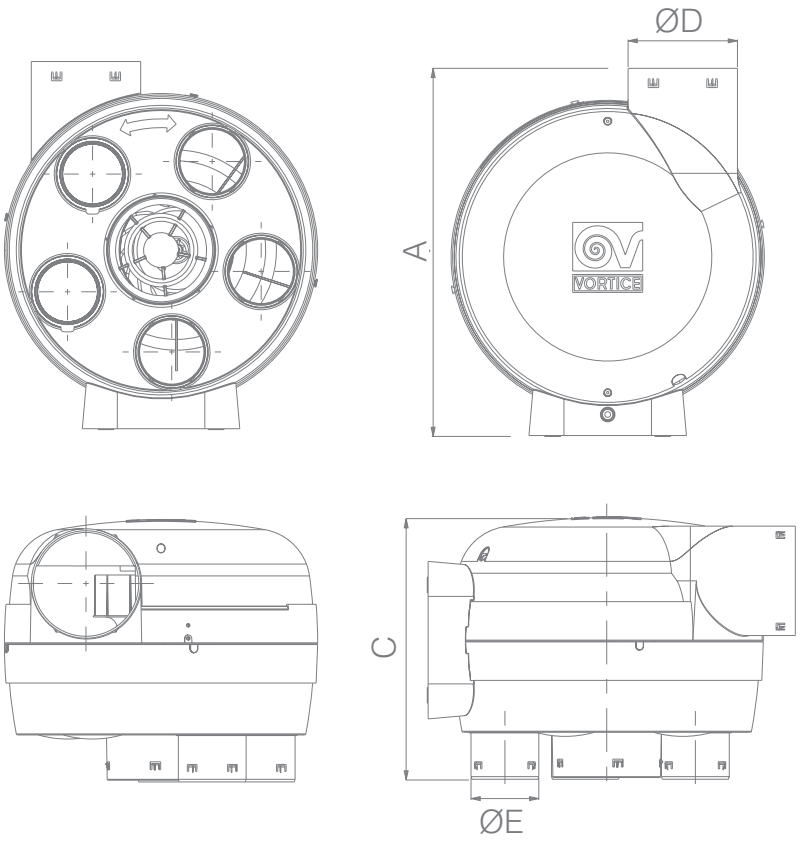
VORT PENTA RANGE - **VORT PENTA EP** RANGE
Centralised continuous ventilation unit

VORT PENTA RANGE | TECHNICAL DATA FOR REGULATION N° 1254/2014/UE

Models Code	Unit of measurement	VORT PENTA - VORT PENTA EP 11707 - 11509	VORT PENTA ES - VORT PENTA ES 11813 - 11557
Supplier's name or trade mark	-	Vortice	Vortice
Specific Energy Consumption class SEC in average climate zone	-	E	E
Specific Energy Consumption cl ass SEC average	kWh/m² year	-11,1	-14,9
Specific Energy Consumption class SEC cold		-20,7	-24,9
Specific Energy Consumption class SEC warm		0,4	-3,9
Declared typology	-	RVU-U*	RVU-U*
Type of drive	-	MSD***	MSD***
Type of heat recovery system HRS	-	None	None
Thermal efficiency of heat recovery at reference air flow	%	NA	NA
Maximum flow rate	m³/h	268	280
Electric power input of the fan drive, including any motor control equipment, at maximum flow rate	W	80	32,8
Sound power level LWA	LWA [dB(A)]	50	47
Reference flow rate	m³/s	0,0521	0,0544
Reference pressure difference	Pa	90	50
SPI***	W/(m³/h)	0,1935	0,07143
Control factor CTRL	-	1	1
Control typology	-	manual	manual
Maximum internal leakage rates	%	NA	NA
Maximum external leakage rates	%	9,6	9,6
Mixing rate	-	NA	NA
Position and description of visual filter warning	-	NA	NA
Airflow sensitivity to pressure variations at + 20 Pa and – 20 Pa	-	NA	NA
Indoor/outdoor air tightness	m³/h	NA	NA
Annual electricity consumption (AEC)	kWh electricity/a	242	89
AHS average Annual heating saved	kWh primary energy/year	1715	1715
AHS cold Annual heating saved		3732	2732
AHS warm Annual heating saved		632	632

* RVU-U: Unit Ventilation Residential - Unidirectional
** NRVU-U: Unit Ventilation Non Residential - Unidirectional
*** MSD: Multi-Speed Drive
NA: data not applicable

DIMENSIONS



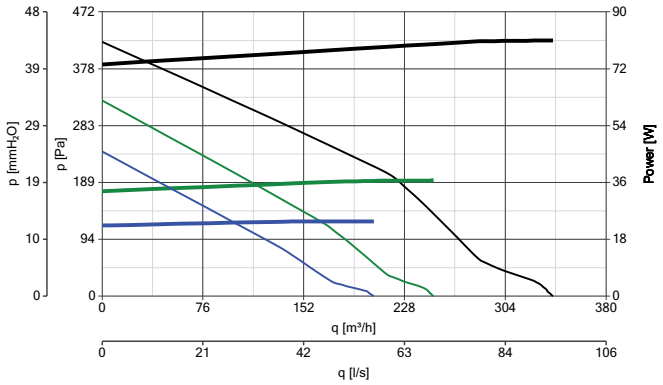
Models	Code	A	B	C	Ø D	Ø E
VORT PENTA	11707	420	358	300	125	77.5
VORT PENTA ES	11767					
VORT PENTA EP	11509					
VORT PENTA ES EP	11557					

Dimensions (mm)

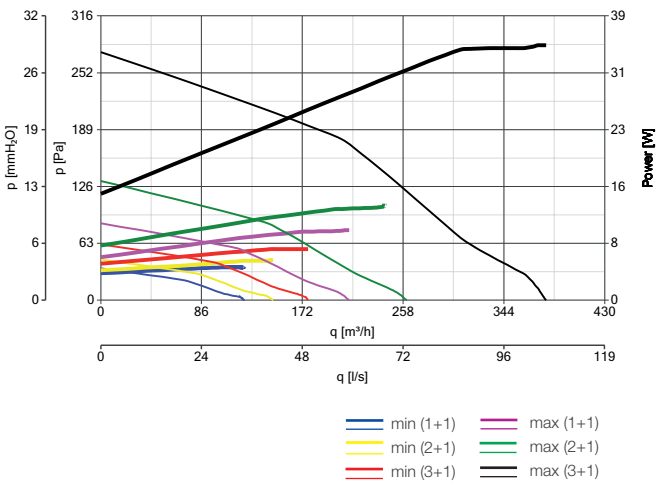
VORT PENTA RANGE - **VORT PENTA EP** RANGE
Centralised continuous ventilation unit

PERFORMANCE CURVES

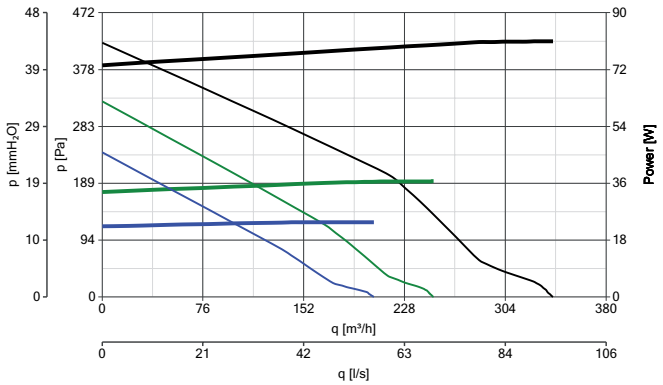
VORT PENTA



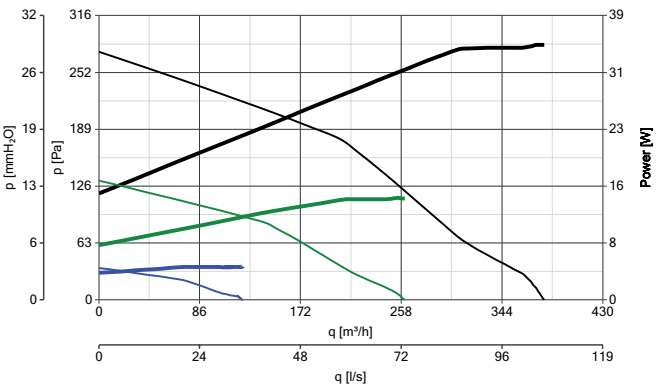
VORT PENTA ES



VORT PENTA EP



VORT PENTA ES EP



POWER CONSUMPTION:
- Max speed
- Min speed
- Min speed

PERFORMANCE CURVES:
- Max speed
- Min speed
- Min speed

NOTE

VORT LETO MEV RANGE
Centralised continuous ventilation unit

PRODUCT SPECIFICATIONS

- 2 models: VORT LETO MEV; VORT LETO MEV RF equipped with RF remote controller.
- ABS made.
- Electrically controlled EC brushless motors offer optimal performance and extremely low energy consumption.
- Ball bearing motor.
- 2 speeds.
- Very high efficiency: specific fan power down to 0.2 [W/l/s].
- Inlets: 4x125 mm diameter.
- Outlet: 1x125 mm diameter.
- Supplied with 2 blanks.
- Protection rating: IPX4.
- Insulation class: ⧈ II.

VORT LETO MEV RF:

- RF remote controller, powered by long lasting solar cells, allows speed selection and timer activation.
- Timer.

VORT LETO MEV code 11955
VORT LETO MEV RF code 11953

KEY FEATURES

- Designed for continuous operation in domestic or commercial environments.
- Extraction up to 500 m^3/h.
- Precise speed setting with potentiometers in order to achieve maximum energy saving.
- Easy vertical or horizontal wall or ceiling installation.

TECHNICAL DATA

Models	Code	V ~ 50 Hz	W min/max	A min/max	RPM min/max	Max Airflow		Max Pressure		Lp dB(A) 3m	Max °C	Kg
						m^3/h min/max	l/s min/max	mmH_20 min/max	Pa min/max			
VORT LETO MEV	11955	230	3.2 70	0.40 0.55	400 2150	72 500	20 138.9	10 41.8	98.1 410	51.5	50	3
VORT LETO MEV RF	11953											

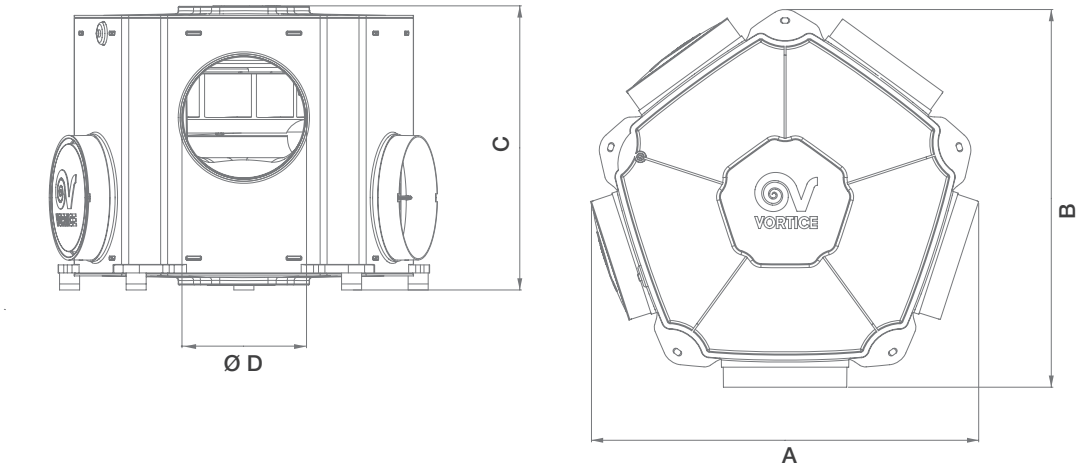
VORT LETO MEV RANGE
Centralised continuous ventilation unit

VORT LETO MEV RANGE | TECHNICAL DATA FOR REGULATION N° 1254/2014/UE

Models Code	Unit of measurement	VORT LETO MEV - VORT LETO MEV RF 11955 - 11953
Supplier's name or trade mark	-	Vortice
Specific Energy Consumption class SEC in average climate zone	-	E
Specific Energy Consumption cl ass SEC average	kWh/m² year	-13,5
Specific Energy Consumption class SEC cold		-23,3
Specific Energy Consumption class SEC warm		-2,2
Declared typology	-	RVU-U*
Type of drive	-	MSD***
Type of heat recovery system HRS	-	None
Thermal efficiency of heat recovery at reference air flow	%	NA
Maximum flow rate	m³/h	411
Electric power input of the fan drive, including any motor control equipment, at maximum flow rate	W	63,0
Sound power level LWA	LWA [dB(A)]	63
Reference flow rate	m³/s	0,0799
Reference pressure difference	Pa	98
SPI***	W/(m³/h)	0,11818
Control factor CTRL	-	1
Control typology	-	manual
Maximum internal leakage rates	%	NA
Maximum external leakage rates	%	8,8
Mixing rate	-	NA
Position and description of visual filter warning	-	NA
Airflow sensitivity to pressure variations at + 20 Pa and – 20 Pa	-	NA
Indoor/outdoor air tightness	m³/h	NA
Annual electricity consumption (AEC)	kWh electricity/a	148
AHS average Annual heating saved	kWh primary energy/year	1715
AHS cold Annual heating saved		2732
AHS warm Annual heating saved		632

* RVU-U: Unit Ventilation Residential - Unidirectional
** NRVU-U: Unit Ventilation Non Residential - Unidirectional
*** MSD: Multi-Speed Drive
NA: data not applicable

DIMENSIONS

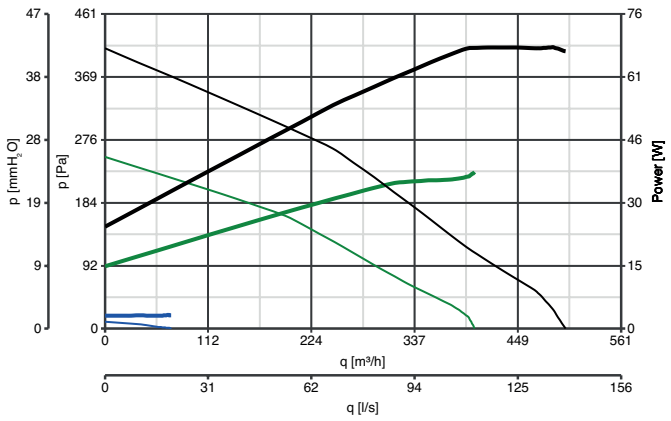


Models	Code	A	B	C	Ø D
VORT LETO MEV	11955	387	377	284	125
VORT LETO MEV RF	11953				

Dimensions (mm)

PERFORMANCE CURVES

VORT LETO MEV - VORT LETO MEV RF



POWER CONSUMPTION:
- Max - max
- Min - max
- Min - min

PERFORMANCE CURVES:
- Max - max
- Min - max
- Min - min

VORT PROMETEO PLUS RANGE
Wall and floor mounting residential heat recovery units

PRODUCT SPECIFICATIONS

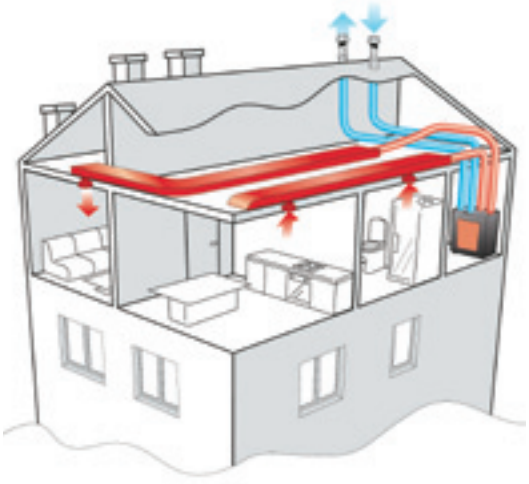
- 2 models: Vort PROMETEO PLUS HR 400, Vort PROMETEO PLUS HR 400 M and Vort PROMETEO PLUS HR 400 MP.
- Plastic (PPE) enclosure.
- Very high-efficiency counter-flow heat exchanger in PS resin.
- Highly efficient backward curved centrifugal fans moved by EC (brushless) 3 speed motors.
- Extremely high heat recovery rate (up to 92%).
- Electronically controlled EC brushless motors independently adjustable.
- Max airflow 380 m^3/h.
- 3 adjustable speeds.
- Automatic frost protection.
- By-pass 100%.
- 2 F5 filters (optional F7 filter on intake).
- 0.5 m long silencer with nominal diameter of 150 mm supplied.
- Support 2 brackets for vertical installation and feet for horizontal installation.
- Protection rate: IPX2.
- Insulation class: ⧈ II.

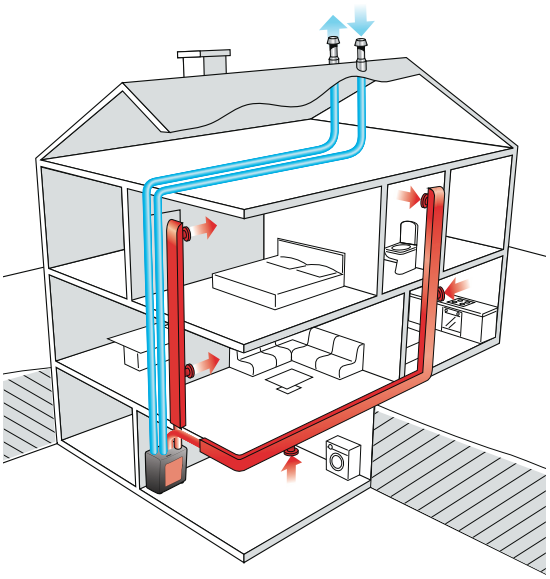
VORT PROMETEO PLUS HR 400:

- Two-ways.
- RF remote control.
- 2 operating modes: automatic and manual.
- Automatic By-pass.
- Option of setting the temperature, humidity and CO_2 sensor.
- Timer.

VORT PROMETEO PLUS HR 400 MP:

- Wired control box.
- Automatic By-pass.
- Controllable through wired Vortice ambient sensors (optional).





VORT PROMETEO PLUS HR 400
code 11582

VORT PROMETEO PLUS HR 400 MP
code 11591

KEY FEATURES

- Very low consumption.
- Possible integration in a BMS (ModBus Protocol).
- Software can be easily updated through USB connection.
- The PCB is easily accessed by removing the bottom panel.
- Low weight (just 25 kg).
- Horizontal and vertical installation allowed.

TECHNICAL DATA

Models	Code	V ~ 50 Hz	W	A	Max Airflow		Max Pressure		°C max	Kg
					m^3/h	l/s	mmH_20	Pa		
VORT PROMETEO PLUS HR 400	11582	230	160	1.3	380	106	68.8	675	50	25
VORT PROMETEO PLUS HR 400 MP	11591									

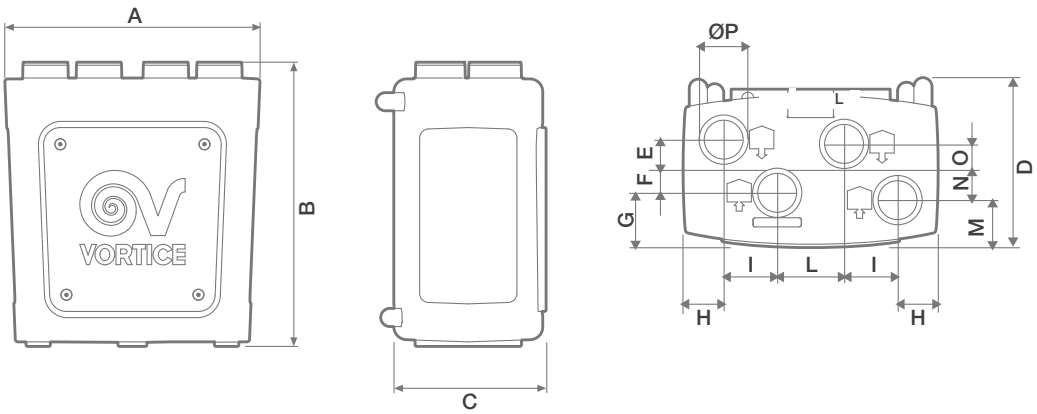
VORT PROMETEO PLUS RANGE
Wall and floor mounting residential heat recovery units

VORT PROMETEO PLUS RANGE | TECHNICAL DATA FOR REGULATION N° 1254/2014/UE

Models Code	Unit of measurement	VORT PROMETEO PLUS HR 400 11582 - 11591
Supplier's name or trade mark	-	Vortice
Specific Energy Consumption class SEC in average climate zone	-	A
Specific Energy Consumption cl ass SEC average	kWh/m² year	-38,8
Specific Energy Consumption class SEC cold		-77,3
Specific Energy Consumption class SEC warm		-14,2
Declared typology	-	BRVU*
Type of drive	-	VSD**
Type of heat recovery system HRS	-	Recuperative
Thermal efficiency of heat recovery at reference air flow	%	88,3
Maximum flow rate	m³/h	340
Electric power input of the fan drive, including any motor control equipment, at maximum flow rate	W	161,0
Sound power level LWA	LWA [dB(A)]	62
Reference flow rate	m³/s	0,0661
Reference pressure difference	Pa	240
SPI***	W/(m³/h)	0,28992
Control factor CTRL	-	0,85
Control typology	-	manual
Maximum internal leakage rates	%	1,2
Maximum external leakage rates	%	3,2
Mixing rate	-	NA
Position and description of visual filter warning	-	NA
Airflow sensitivity to pressure variations at + 20 Pa and – 20 Pa	-	NA
Indoor/outdoor air tightness	m³/h	NA
Annual electricity consumption (AEC)	kWh electricity/a	307
AHS average Annual heating saved	kWh primary energy/year	4584
AHS cold Annual heating saved		8967
AHS warm Annual heating saved		2073

*BRVU: Bidirectional Residential Ventilation Unit
**VSD: Variable Speed Drive
***SPI: Specific Power Input
NA: data not applicable

DIMENSIONS



Models	Code	A	B	C	D	E	F	G	H	I	L	M	N	O	Ø P
VORT PROMETEO PLUS HR 400	11582	840	935	502	560	85	100	156.7	133.6	176	220	180.7	76	99	150
VORT PROMETEO PLUS HR 400 MP	11591														

Dimensions (mm)

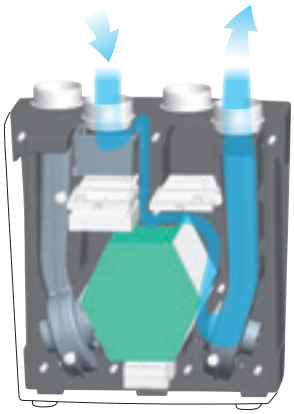
SOUND LEVES

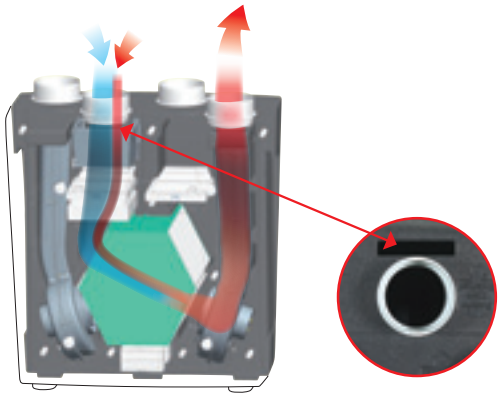
RPM		Lw dB (A)							Lw dB (A)	Lp dB (A) 3 m*
		125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz		
700	Supply to internal	8.4	9.3	14	22.6	5	9.2	10.1	28	7.5
	Extract to internal	5.7	15	18.1	16.4	13.9	12.2	7.5	27.5	7
	Breakout	14.3	39.2	18.3	20.6	2.9	7.1	n.a.	44	23.5
1600	Supply to internal	18.5	24.1	29.4	37.5	24.8	15.6	13.3	43.2	22.7
	Extract to internal	16	25.6	27.9	28.4	18.8	6.8	3.3	37.6	17.1
	Breakout	21.7	31.9	38.3	34	23.8	11.8	7.5	48.4	27.9
2100	Supply to internal	16.9	32.3	36.6	48.3	35.8	24.7	10.2	56.7	36.2
	Extract to internal	14.9	34.7	32.8	38.4	29.2	15.7	n.a.	46.4	25.9
	Breakout	24.6	41.1	41.6	47.1	34.8	20.8	5.6	58	37.5
2650	Supply to internal	20.3	40.9	46	64.7	41.8	33.7	18.5	65.5	45
	Extract to internal	19.1	42.5	38.4	60	36	25.6	13.8	60.7	40.2
	Breakout	31.3	43	48.1	59.2	41.4	29.1	13.6	61.3	40.8
3000	Supply to internal	23.5	41.3	47.5	52	44.1	37.1	22.8	59.4	38.9
	Extract to internal	19.7	42.7	40.6	43.2	38	27.1	12.2	53.6	33.1
	Breakout	28.9	45.7	47.9	47.4	43.9	33.3	16.2	59.5	39
3350	Supply to internal	25.3	44.4	49.7	54.8	48.4	42.3	28.8	62.7	42.2
	Extract to internal	23.6	43.4	43.2	45.7	41.5	31.6	13.5	55.5	35
	Breakout	31.8	46.7	51.5	55.2	47.5	37.4	22	62.4	41.9

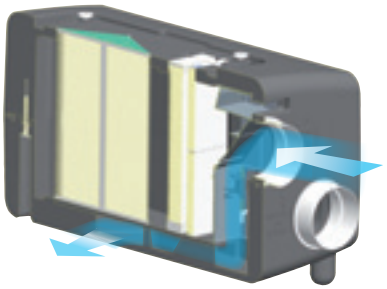
Tests carried out according EN9614 standard. **Sound pressure calculated at 3 m distance in free-field.
* In free field.
n.a. = data not available.

VORT PROMETEO PLUS RANGE
Wall and floor mounting residential heat recovery units

FUNCTIONS AND SUPPLIES







By-pass

In ISOTHERMAL conditions (similar indoor and outdoor air temperatures) or where outdoor temperature is close to desired indoor temperature, the by-pass valve be activated allowing fresh air to by-pass the heat exchanger for natural ventilation (FREE-COOLING).

Frost protection (Defrosting)

When outdoor air temperature and RH % can cause ice forming on heat exchanger, the frost protection valve automatically opens to mix up fresh outside air with indoor milder air.
Simultaneously changes motor of speed via the electronic control makes the defrosting process quicker and more efficient. In particularly harsh climates Vortice recommends the installation of 500 W, 1200 W or 1800 W in-duct pre-heaters, available as a optional accessories; each are automatically activated by on-board electronics.

Filter

VORT PROMETEO PLUS RANGE is supplied with 2 F5 filters for cleaning fresh and stale air flows. A further optional F7 filter is available for additional filtering of the incoming air. An F5 filter box optional (not aviable for M and MP versions) is also available, for installation outside the machine. Filter efficiency is monitored by onboard electronics, providing visual and acoustic warnings via the RF remote control.

RF REMOTE CONTROL FOR VORT PROMETEO PLUS HR 400

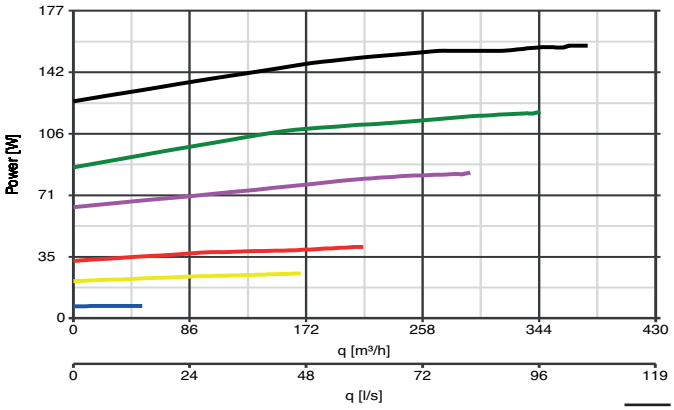
Two-ways RF remote control with LCD display can be used for the following purposes:
- Switching on/off.
- Selecting the appliance operating mode (Manual/Automatic).
- Easy initial setting of minimum and maximum speed (no need to directly operate the machine).
- Selecting one of the 3 speed settings.
- Manually selecting the By-pass function.
- Setting the Timer function (the product, working in Manual mode, will work at the maximum speed for: 10', 20', 30' or indefinitely, automatically slowing down to min speed after pre-set time).
- Configuring the automatic operating parameters:
  - desired indoor temperature (for bypass management only) can be set by the user between +15 °C and +30 °C (each step 1 °C);
  - relative humidity can be set by the user between 40% and 90% (each step 5%);
  - Max. CO2 air concentration in the room can be set by the user between 500 ppm and 3.000 ppm (at step of 50 ppm);
- CO_2 level can be disabled.
- Auto-diagnosis.

An additional radio frequency (RF) antenna, part code (22479) including a connection cable, is available as an option, and allows to control Vort Prometeo Plus even if the position chosen fo its installation is shielded from radio waves.

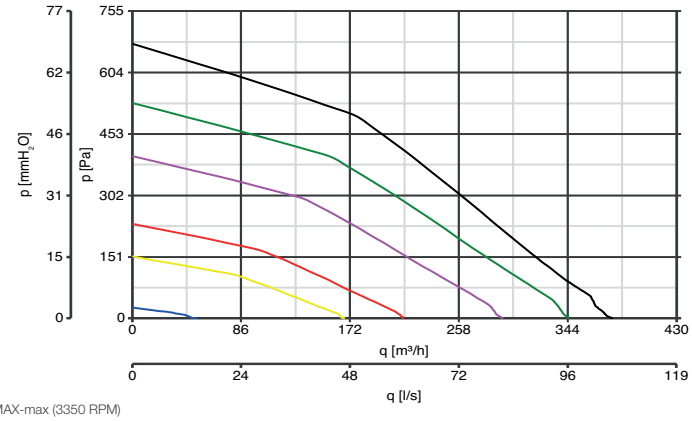
PERFORMANCE CURVES

3350 RPM
3000 RPM
2650 RPM
2100 RPM
1600 RPM
700 RPM

VORT PROMETEO PLUS HR 400
POWER CONSUMPTION

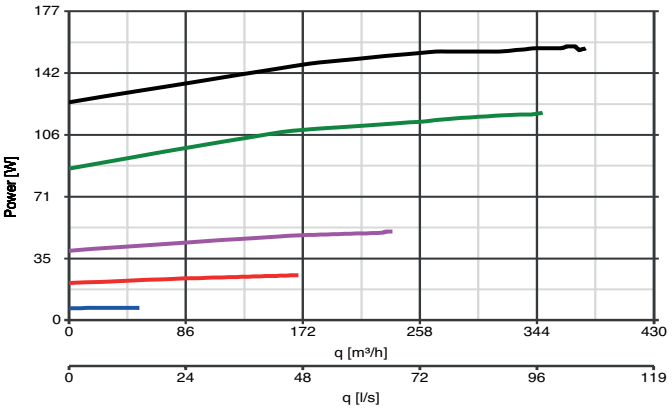


VORT PROMETEO PLUS HR 400
AIRFLOW/PRESSURE

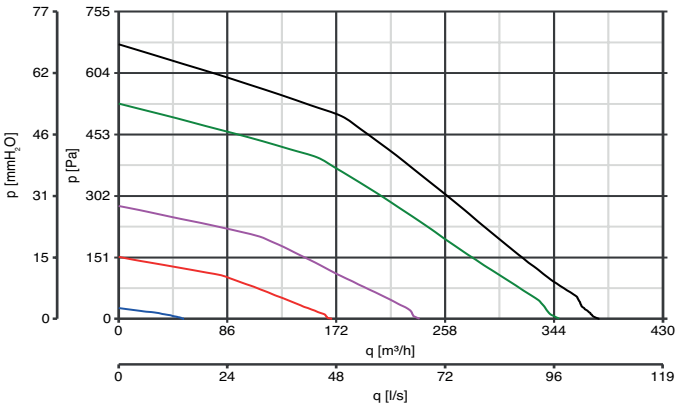


MAX-max (3350 RPM)
MAX def (3070 RPM)
MED def (2330 RPM)
MIN def (1600 RPM)
MIN-min (700 RPM)

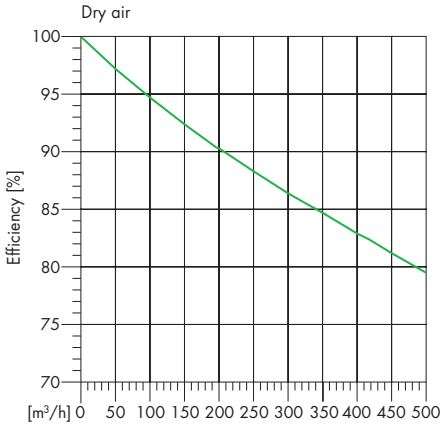
VORT PROMETEO PLUS HR 400 M
POWER CONSUMPTION



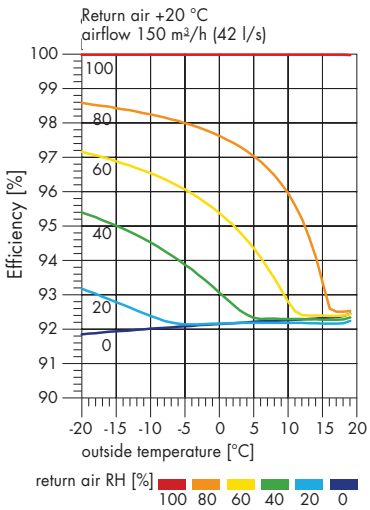
VORT PROMETEO PLUS HR 400 M
AIRFLOW/PRESSURE



Efficiency as a function of the airflow



Influence on efficiency due to condensation heat



EFFICENCY
(test according to EN 308)

TOTAL EXHAUST FLOW RATE (m³/h)	HEAT RECOVERY EFFICIENCY (%)
54	93
76	91
98	90
119	89
140	89
162	88
184	88
205	87

Test conditions: +5°C/70%; +25°C/28%.
Data refered to test performed at BRE according to BRITISH SAP-Q system 4 standard.

VORT PROMETEO PLUS RANGE
Wall and floor mounting residential heat recovery units

FILTER SPECIFICATIONS

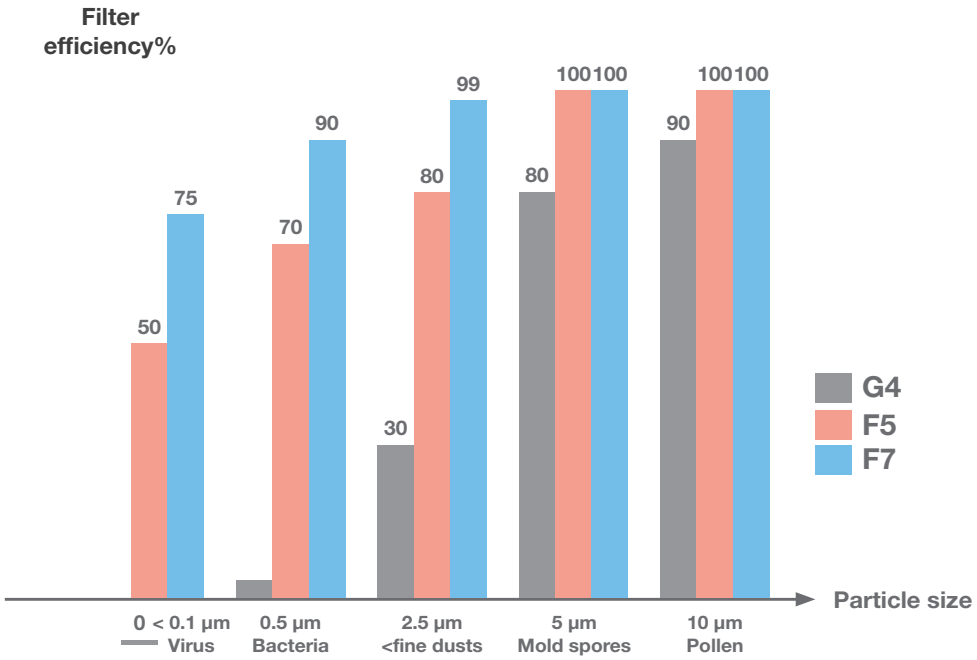
- The air we breathe contains a huge number of potentially harmful particles, over 90% of them are smaller than 1 µm, for example:
  - Fine particles emitted by motor vehicles and heating systems.
  - Viruses.
  - Bacteria.
  It is very important to use air exchange systems with high-efficiency filters, which capture most of these toxic particles.

- Mechanically controlled ventilation systems such as VORT PROMETEO PLUS HR 400 MP heat recovery units fi lter air as it enters served ambients, protecting the health and wellbeing of people occupying the rooms served by the appliance.

DON'T FORGET:

Over time, filters become clogged,leading to a greater pressure loss in the air circuit; the filters therefore require regular maintenance and should be replaced when they are no longer effective.

- Filters can be split into 2 main categories, based on their fi ltering efficiency:
  - Type G: coarse filter
  - Type F: fine filter
  These categories are defi ned by European standard **EN779**.
  Within the two categories, a progressive number indicates the efficiency level of the filter: the higher the number, the more efficient the filter is at capturing particles, as you can see from the chart below.



Ffilters are the most effi cient at capturing small particles.

NOTE

VORT HRI PHANTOM RANGE
Ceiling-mounting residential heat recovery units

PRODUCT SPECIFICATIONS

- 2 models.
- Enclosures made of galvanised steel sheet with fire-resistant (DIN EN 13501), 20 mm thick sound-proof lining.
- Ports nominal diameter 125 mm or 150 mm, depending on model.
- Very high-efficiency counter-flow heat exchanger in PS resin.
- Highly efficient backward curved centrifugal fans moved by EC (brushless) 3 speed motors.
- Integrated frost protection.
- Automatic, filtered 100% by-pass (BP models only).
- 2 easily accesible F5 filters (optional F7 filter on intake).
- Wired electronic control allowing with LCD display panel:
  - initial configuration;
  - manual setting of operating mode;
  - automatic setting of free-cooling function;
  - automatic operation according to ambient conditions detected by wired sensor (optional);
  - continuous monitoring of correct operation (according to possible problems shown on LCD display);
  - SW updating through dedicated port.
- Tie-rods for suspended installation.
- Protection rate: IPX2.
- Insulation class: ⧈ II.

KEY FEATURES

- Designed for installation in false ceilings (Mod. 200: 868 x 643 x 248 mm and Mod. 350: 1144 x 740 x 288 mm).
- Robust, lightweight construction (24 and 33 kg respectively).
- High performances combined with low power consumption.
- Very high-heat transfer efficiency (max 92%) at conditions (+5 °C, + 25 °C, 13% RH) established by applicable international standards (EN 308)
- Simplified maintenance thanks to rational inner layout of main components, easily accessible from the bottom of installed unit.

TECHNICAL DATA

Models	Code	V ~ 50 Hz	W max	A max	Max Airflow		Max Pressure		Max °C	Kg
					m^3/h	l/s	mmH_20	Pa		
VORT HRI 200 PHANTOM BP	11291	230	102	1.0	206	57,2	43,5	426	40	27
VORT HRI 350 PHANTOM BP	11293		165	1.4	350	97	58	568		37

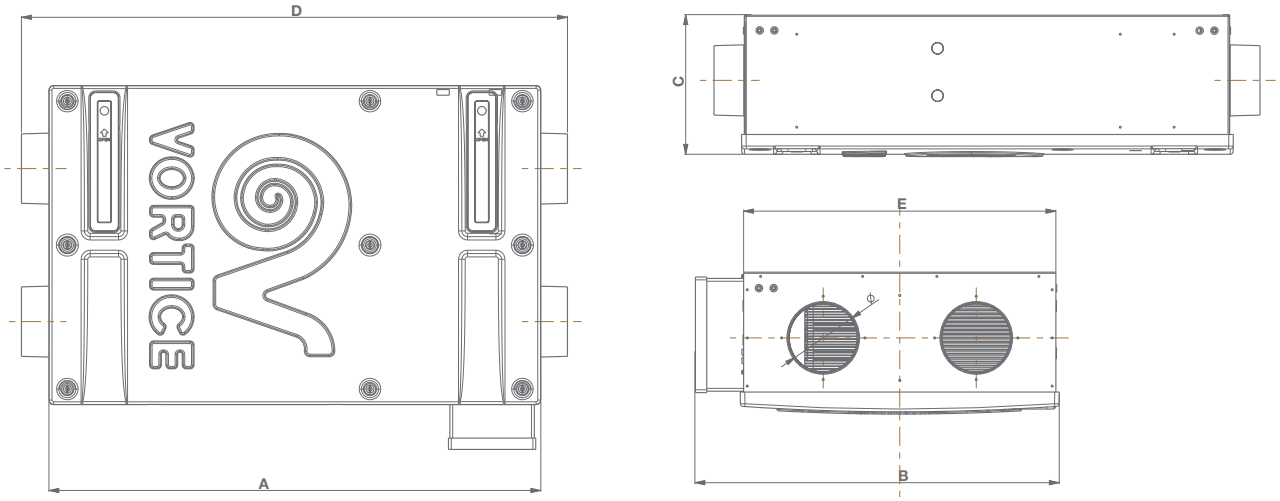
VORT HRI PHANTOM RANGE
Ceiling-mounting residential heat recovery units

VORT PROMETEO PLUS RANGE | TECHNICAL DATA FOR REGULATION N° 1254/2014/UE

Models Code	Unit of measurement	VORT HRI 200 PHANTOM BP 11291	VORT HRI 350 PHANTOM BP 11293
Supplier's name or trade mark	-	Vortice	Vortice
Specific Energy Consumption class SEC in average climate zone	-	A	A
Specific Energy Consumption cl ass SEC average	kWh/m² year	-36,3	-38,0
Specific Energy Consumption class SEC cold		-74,7	-77,0
Specific Energy Consumption class SEC warm		-11,7	-13,0
Declared typology	-	BRVU*	BRVU*
Type of drive	-	VSD**	VSD**
Type of heat recovery system HRS	-	recuperative	recuperative
Thermal efficiency of heat recovery at reference air flow	%	87,3	90,4
Maximum flow rate	m³/h	163	280
Electric power input of the fan drive, including any motor control equipment, at maximum flow rate	W	100,0	165,0
Sound power level LWA	LWA [dB(A)]	43	51
Reference flow rate	m³/s	0,0317	0,0544
Reference pressure difference	Pa	50	70
SPI***	W/(m³/h)	0,39474	0,35204
Control factor CTRL	-	0,85	0,85
Control typology	-	central demand control	central demand control
Maximum internal leakage rates	%	8,5	8,7
Maximum external leakage rates	%	8,5	5,2
Mixing rate	-	NA	NA
Position and description of visual filter warning	-	see user manual	see user manual
Airflow sensitivity to pressure variations at + 20 Pa and – 20 Pa	-	NA	NA
Indoor/outdoor air tightness	m³/h	NA	NA
Annual electricity consumption (AEC)	kWh electricity/a	402	364
AHS average Annual heating saved	kWh primary energy/year	4570	4641
AHS cold Annual heating saved		8940	9078
AHS warm Annual heating saved		2067	2098

*BRVU: Bidirectional Residential Ventilation Unit
**VSD: Variable Speed Drive
***SPI: Specific Power Input
NA: data not applicable

DIMENSIONS



Models	Code	A	B	C	D	E	Ø
VORT HRI 200 PHANTOM BP	11291	868	643	248	963.5	551	125
VORT HRI 350 PHANTOM BP	11293	1183	740	288	1287	650	150

Dimensions (mm)

SOUND LEVES

VORT HRI 200 PHANTOM BP RPM		Lw dB (A)							Lw dB (A)	Lp dB (A) 3m*
		125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz		
Nom. Speed	Supply to internal	22.7	31.4	17.4	14.9	10.1	n.a.	n.a.	43.3	22.8
	Extract to internal	24.2	36.8	23	15.4	14.0	7.3	n.a.	36.5	16.0
	Breakout	35.7	36.9	29.2	22.2	17.0	9.8	n.a.	43.1	22.6

Tests carried out according EN9614 standard, product featuring 110 m3/h at 110 Pa.

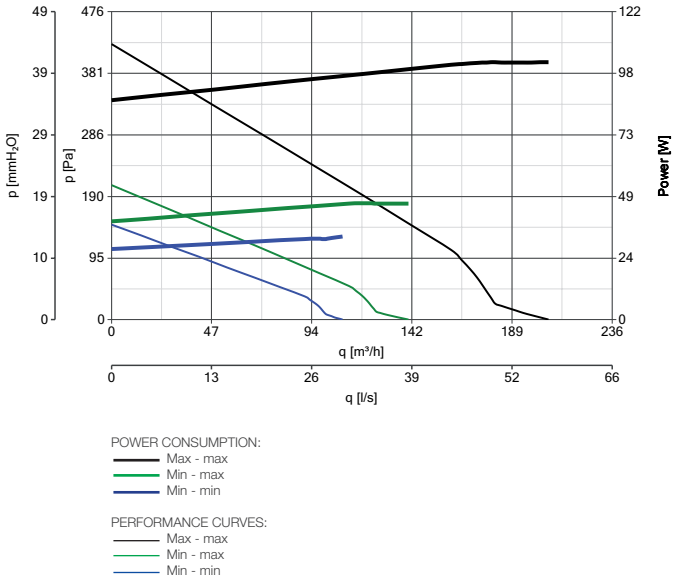
VORT HRI 350 PHANTOM BP RPM		Lw dB (A)							Lw dB (A)	Lp dB (A) 3m*
		125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz		
Nom. Speed	Supply to internal	16.7	27.4	24.3	17.1	16.9	7.1	n.a.	37.2	16.7
	Extract to internal	16.3	32.1	22.2	11.3	15.5	6.2	n.a.	37.8	17.3
	Breakout	33.4	35.6	41.6	38.0	37.2	30.4	27.3	51.0	30.5

Tests carried out according EN9614 standard, product featuring 270 m3/h at 110 Pa. *Sound pressure calculated at 3 m distance in free-field.
n.a. = data not available.

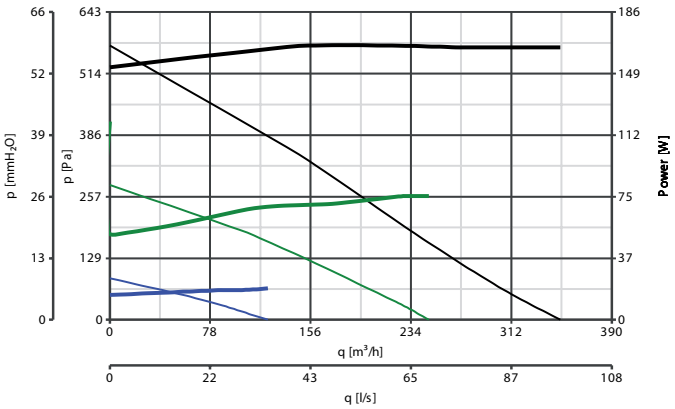
VORT HRI PHANTOM RANGE
Ceiling-mounting residential heat recovery units

PERFORMANCE CURVES

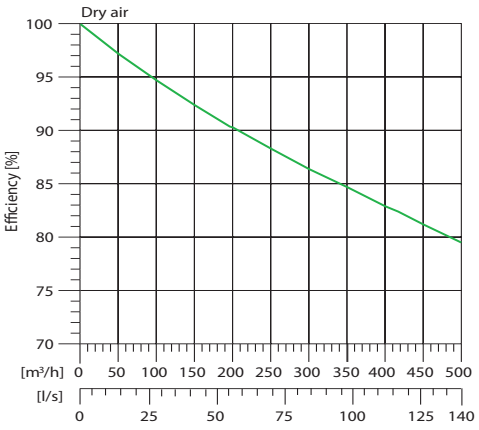
VORT HRI 200 PHANTOM



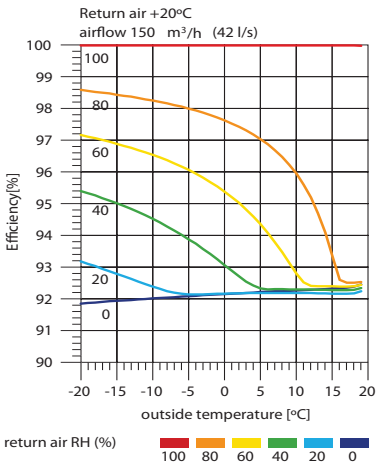
VORT HRI 350 PHANTOM



Efficiency as a function of the airflow



Influence on efficiency due to condensation heat



NOTE

VORT HA PHANTOM SYSTEM

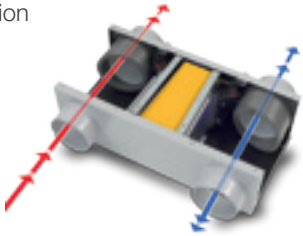
Heat recovery system for false ceiling installation with antibacterial filter

PRODUCT SPECIFICATIONS

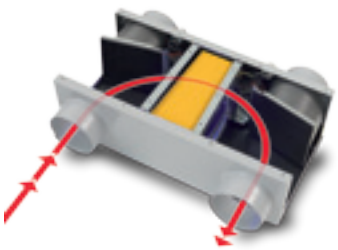
The HA PHANTOM SYSTEM is a controlled mechanical double flow ventilation system able to integrate normal ventilation using outside air with an antibacterial treatment.
The HA system (Heat recovery with Antibacteria) consists of two elements:
a VORT HRI PHANTOM which is combined with a filtering unit with antibacterial treatment.
When it is switched on, special shutters block the outward airflow and divert it directly to a special antibacterial filter treated with a solution of Chitosan and Titanium Dioxide. Low-voltage UV lamps emit radiation at 415 nm thus activating photocatalysis, an active substance that inhibits the growth of bacteria, killing it, and returning effectively purified air. A flap on the outside of the module facilitates replacement of the filter that can be safely removed because it contains no active bacteria. The air purification cycle involves alternating between air exchange with heat recovery and antibacterial filtering. This cycle can be activated automatically by a pre-set program or manually by users according to their specific needs. It is a good idea to choose the filtering function at off-peak times, such as in a private home in the daytime when the occupants are at work or at school so that they can come home to a healthy, comfortable environment.

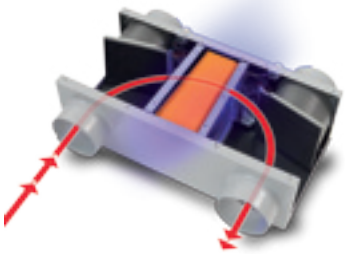
VORT HA system operation

VORT HA operation alternates between Fan and Purification modes according to the actual needs of the people in the rooms: when there are occupants (in the case of a home in the early hours of the morning, at lunch, in the evening and for most of the night), VORT HA ventilates as a traditional heat recovery unit, expelling the stale air outside and replacing it with fresh air, suitably pre-heated or pre-cooled (winter or summer), and filtered.

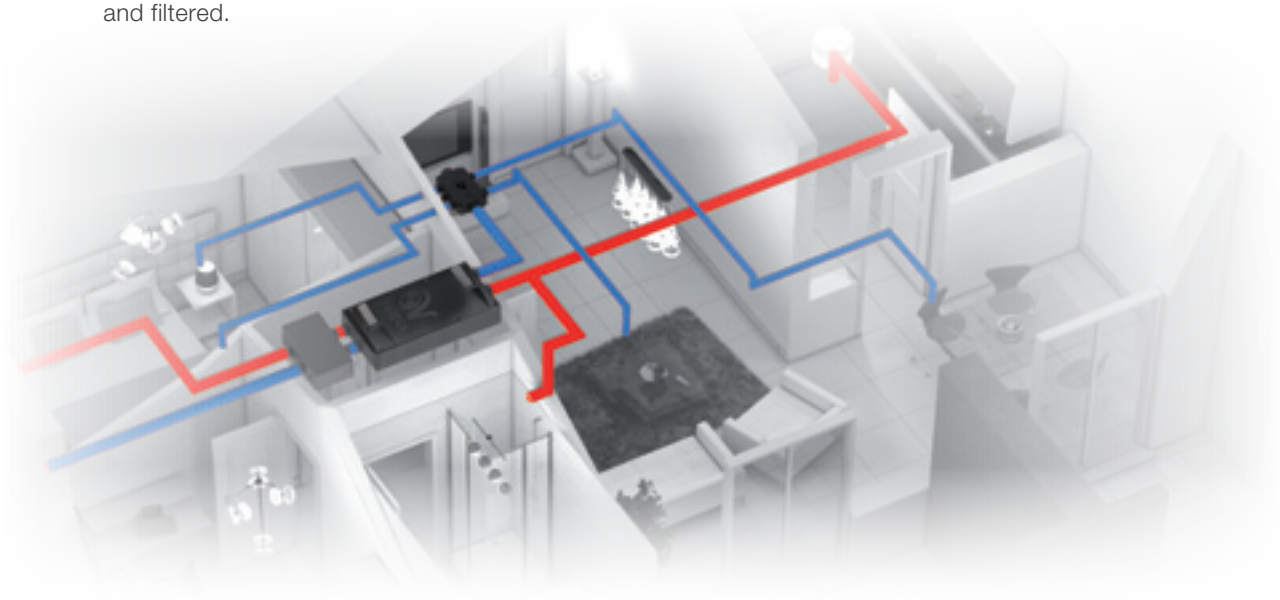


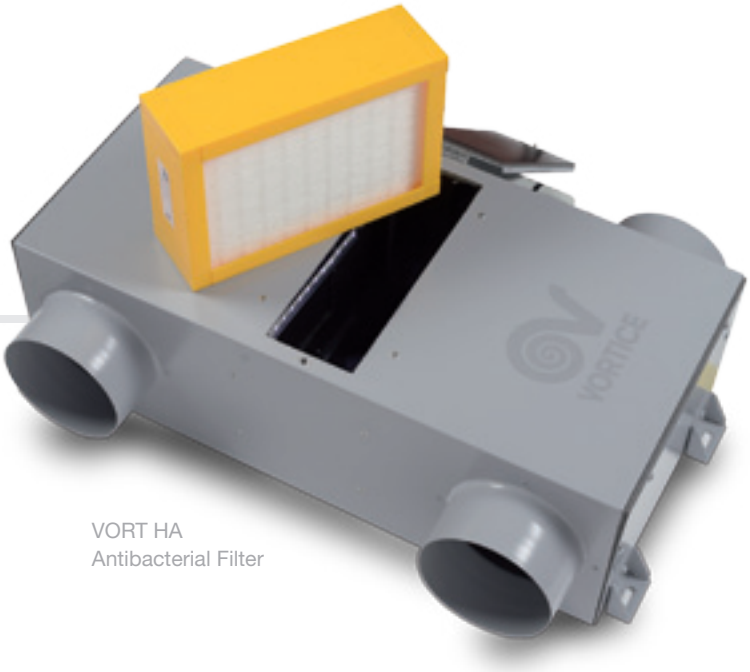
Blocking the outward airflow with the shutters and diverted to the special filter.





Photocatalysis activated thanks to the UV lamp and re-introduction of purified air.



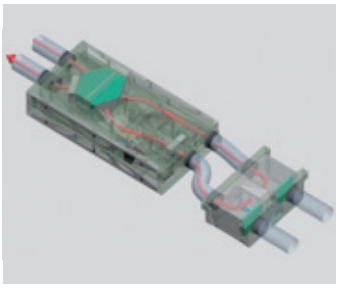


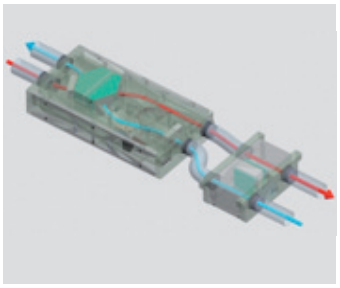
VORT HA
Antibacterial Filter

HA Phantom System 200 code 11448
HA Phantom System 350 code 11449

For technical and perfomance data
see on pag. 69 to pag. 72

At times when rooms are not occupied, fresh air intake stops and the room's air is purified. This air is forced to recycle in the air cleaner to maximize the efficiency of the relevant filter.
Specifically, the action of the heat recovery filters, which retain most of the fine dust suspended in the air, is combined with the external, patented, air cleaner, which reduces bacterial load and prevents this load from proliferating, furthering lowering the concentration of fine dust produced by previous actions or introduced by people occupying the space. This allows the high standards of air quality, optimal for heath and comfort, to be reached.





VORT HA filter combined with the VORT HRI PHANTOM heat recovery unit.

VORT HA SYSTEM,
the first heat recovery system with an antibacterial filter

KEY FEATURES

- Effective: it ensures that the levels of temperature,relative humidity and air purity required for prevention of discomfort and illness are maintained.
- Economical: the highly efficient heat exchange and low levels of consumption ensure optimum use of the heating and cooling systems, keeping operating costs down.
- Noiseless: low noise emissions ensure that the system will not disturb you at night, meaning that the system can be used continuously.
- Tested: tests conducted by the Polytechnic of Milan confirm the efficiency of the VORT HA.

VORT HR INVISIBLE-E RANGE
Ceiling-mounting residential heat recovery units

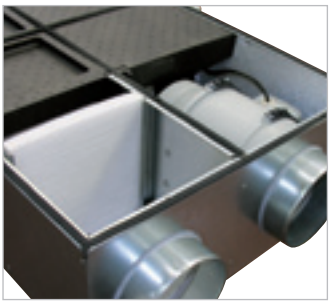
PRODUCT SPECIFICATIONS

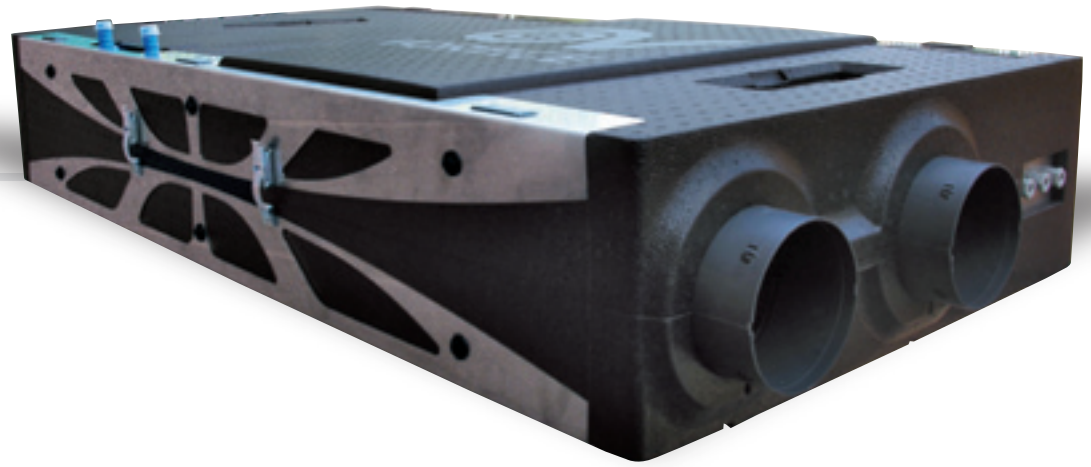
- 4 models: ONE, ONE F. TWO, TWO F.
- Plastic (PPE) enclosures.
- Highly efficient backward curved centrifugal fans moved by EC (brushless) 3 speed motors.
- Wired electronic control allowing with LCD display panel:
  - initial configuration;
  - manual setting of operating mode;
  - automatic operation according to ambient conditions detected by wired sensor (optional);
  - continuous monitoring of correct operation (possible problems shown on LCD display);
  - constant monitoring of filter status (maintenance needs shown on LCD display);
  - SW updating through dedicated port.
- Integrated frost protection.
- 2 F5 filters (optional F7 filter on intake).
- Double drain condensed water tray.
- Protection rating: IPX2.
- Insulation class: I. ⏚ .

HRI-E
- 3 speeds selectable manually.
- 100% manually operated, filtered by-pass.

HRI-E F
- Wired control panel with LCD display.
- 100% automatic and filtered by-pass.
- Compatible with BM5 (ModBus protocol on RS485 in slave mode).
- Compatible with wired Vortice environmental sensors.

ACCESSORIES
- Machine set-up kit: for all versions. (code 22629).
- By-pass control box (code 22478) - HRI E and HRI E BP models.





KEY FEATURES

- Designed for installation in false ceilings (Mod. ONE: height = 244 mm, Mod. TWO: height = 290 mm).
- Low energy consumption, thanks to EC motors and highly efficient heat exchangers.
- Ideal for apartments up to 90 m^2 (ONE version), up to 160 m^2 (TWO version).
- Low noise.
- Light weight: 17.5 kg (Mod. ONE), 33.5 kg (Mod. TWO).
- Simplified maintenance thanks to rational inner layout of main components, easily accessible from the bottom of installed unit.

TECHNICAL DATA

Models	Code	V ~ 50 Hz	W	A	Max Airflow		Max Pressure		Max °C	Kg
					m^3/h	l/s	mmH_20	Pa		
VORT HRI-E ONE	11216	230	71	0.55	187	52	23.7	232	45	17.5
	11218									
VORT HRI-E TWO	11226		167	1.4	365	101	77.3	758		29.5
	11228									

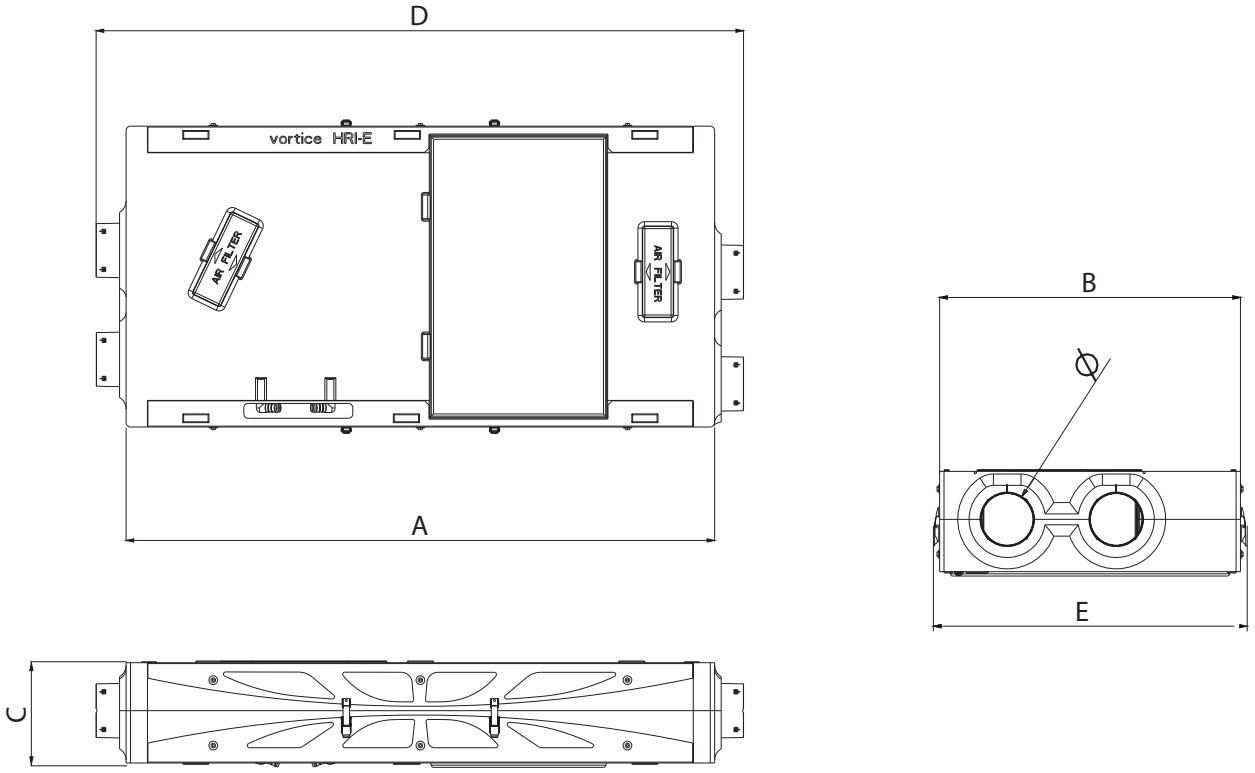
VORT HR INVISIBLE-E RANGE
Ceiling-mounting residential heat recovery units

VORT HR INVISIBLE-E RANGE | TECHNICAL DATA FOR REGULATION N° 1254/2014/UE

Models Code	Unit of measurement	VORT HRI-E ONE 11216 - 11218	VORT HRI-E ONE 11226 - 11228
Supplier's name or trade mark	-	Vortice	Vortice
Specific Energy Consumption class SEC in average climate zone	-	A	A
Specific Energy Consumption cl ass SEC average	kWh/m² year	-38,0	-38,8
Specific Energy Consumption class SEC cold		-76,8	-77,1
Specific Energy Consumption class SEC warm		-13,1	-14,3
Declared typology	-	BRVU*	BRVU*
Type of drive	-	VSD**	VSD**
Type of heat recovery system HRS	-	recuperative	recuperative
Thermal efficiency of heat recovery at reference air flow	%	89,8	87,5
Maximum flow rate [m³/s]	m³/h	134	335
Electric power input of the fan drive, including any motor control equipment, at maximum flow rate	W	65,5	170,0
Sound power level LWA	LWA [dB(A)]	56	69
Reference flow rate	m³/s	0,0261	0,0651
Reference pressure difference	Pa	50	370
SPI***	W/(m³/h)	0,34648	0,28145
Control factor CTRL	-	0,85	0,85
Control typology	-	central demand control	central demand control
Maximum internal leakage rates	%	<1	6,7
Maximum external leakage rates	%	3,9	2,5
Mixing rate	-	NA	NA
Position and description of visual filter warning	-	NA	NA
Airflow sensitivity to pressure variations at + 20 Pa and – 20 Pa	-	NA	NA
Indoor/outdoor air tightness	m³/h	NA	NA
Annual electricity consumption (AEC)	kWh electricity/a	359	300
AHS average Annual heating saved	kWh primary energy/year	4624	4562
AHS cold Annual heating saved		9046	8924
AHS warm Annual heating saved		2091	2063

*BRVU: Bidirectional Residential Ventilation Unit
**VSD: Variable Speed Drive
***SPI: Specific Power Input
NA: data not applicable

DIMENSIONS



Models	Code	A	B	C	D	E	Ø
VORT HRI-E ONE	11216	1350	690	244	1485	720	123
	11218						
VORT HRI-E TWO	11226	1500	916	290	1600	946	149
	11228						

Dimensions (mm)

VORT HR INVISIBLE-E RANGE
Ceiling-mounting residential heat recovery units

SOUND LEVES

VORT HRI-E ONE RPM		Sound Power								Sound Pressure
		Lw dB (A)							Lw dB (A)	Lp dB (A)**
		125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz		
Min. Speed	Supply to internal	3.1	14.7	17.4	20.5	2.7	7.2	24.2	27.3	6.8
	Extract to internal	7.3	17.6	20.4	27.6	14.6	0.4	14.1	33.4	12.9
	Breakout	11.4	21.9	31.4	32.4	19.2	9.3	4	39.1	18.6
Med. Speed	Supply to internal	13.7	23.9	25.8	31.2	14.8	7.5	9	37	16.5
	Extract to internal	15.3	23	25.6	35.5	23	12.8	3	40.2	19.7
	Breakout	19.7	28.9	36.7	42.4	30.5	25.4	15.5	48.1	27.6
Max. Speed	Supply to internal	22.3	30.7	32.1	36.5	23.7	16.7	3.9	43.7	23.2
	Extract to internal	22.5	29.9	32.9	40.9	31.1	21.1	9.3	46.8	26.3
	Breakout	23.4	35.7	50.9	46.9	38.5	33.9	25.7	55.5	35.2

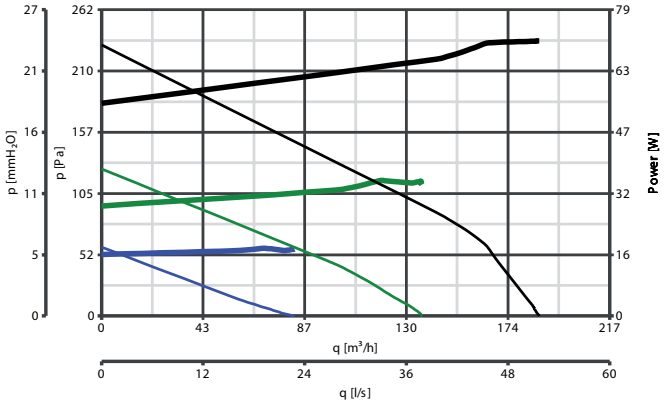
Tests carried out according to EN 9614 standard.**Sound pressure calculated at 3 m distance in free-field.

VORT HRI-E TWO RPM		Sound Power								Sound Pressure
		Lw dB (A)							Lw dB (A)	Lp dB (A)**
		125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz		
Min. Speed	Supply to internal	23.7	32	37.6	34.8	28.9	20	15.2	47.5	26.96
	Extract to internal	17.1	24.7	23.5	16.3	15.2	13.6	14.9	31.8	11.26
	Breakout	23.8	32.5	39.4	33.1	27.4	18.2	17.7	45.5	24.96
Med. Speed	Supply to internal	31.3	52.4	54	53.4	48.4	43.2	29.2	64.7	44.16
	Extract to internal	16.7	39.2	35.3	28.5	24.7	16	15.4	45.7	25.16
	Breakout	36.1	48.7	51.1	46.8	43.6	35.3	22	58.2	37.66
Max. Speed	Supply to internal	39.2	53.4	64	63.2	59.8	55.6	43.9	78.3	57.76
	Extract to internal	24.1	41.7	44.3	34.6	35.2	23.6	15.2	54.7	24.16
	Breakout	42.5	51.3	60.2	55.5	53.9	47.2	33.2	69.3	48.76

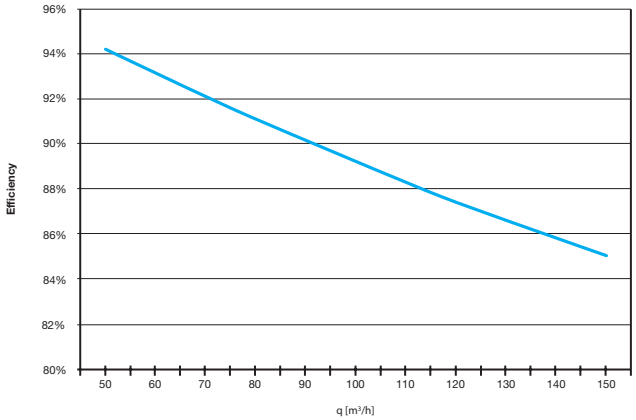
Tests carried out according to EN 9614 standard.**Sound pressure calculated at 3 m distance in free-field.

PERFORMANCE CURVES

HRI-E ONE

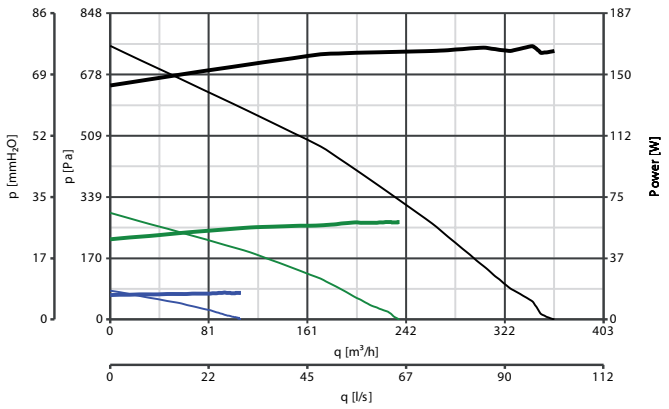


HRI-E - ONE EFFICIENCY

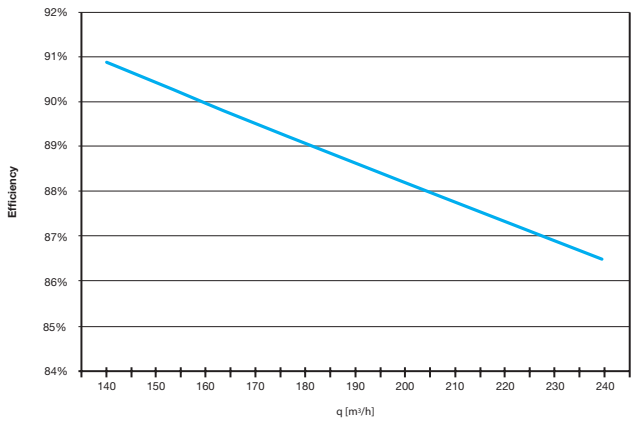


Test conditions according to EN 308: +5°C/70%; +25°C/28%.

HRI-E TWO

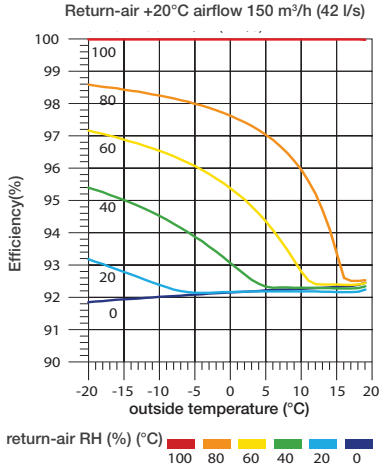


HRI-E TWO EFFICIENCY



Test conditions according to EN 308: +5°C/70%; +25°C/28%.

Influence on efficiency due to condensation heat



POWER CONSUMPTION
- max speed
- med speed
- min speed

PERFORMANCE CURVES
- max speed
- med speed
- min speed

VORT HRI DH RANGE
Ceiling-mounting heat recovery units with built-in dehumidifier

PRODUCT SPECIFICATIONS

- 2 models:
  VORT HRI 260 DH; VORT HRI 500 DH.
- 2 versions:
  DH (equipped with electronic temperature relative humidity probe);
  DH RC (compatible with mechanical wired thermo-humidistat)
- Enclosures made of galvanized steel sheet removable panels to facilitate inspection and maintenance.
- Reciprocating or rotary compressors, operating with R 134A and R 410A respectively, according to model.
- Double water/air condenser.
- Very high-efficiency counter-flow heat exchanger in PS resin.
- Higly-efficient centrifugal fans movied by EC motors (brushless);
  a speeds can be set by means of trimmers according to the system pressure drops.
- Flow meter.
- Three-way modulating valve.
- 3 G4 filters.
- Motor-operated recirculation damper.
- Electronic control unit with microprocessor, including LCD display for:
  - Monitoring the refrigeration circuit;
  - Integrated management of aeraulic and hydronic sections;
  - Summer/winter operating made switching;
  - Integrated frost protection;
  - Diagnostics for possible malfunctions
  - Supervision via RS485 serial port and/or Internet (optional)
  - Filter monitoring (optional).
- Wired mechanical thermo-humidistat for Mod. DH RC (optional).
- Built-in electronic “temperature - relative humidity sensor” (mandatory for Mod. DH)
- Remote control panel (optional).
- H10 electrostatic filter (optional).
- Tie-rods for suspended installation.
- Protection rating: IPX2.
- Insulation class: I. ⏚

KEY FEATURES

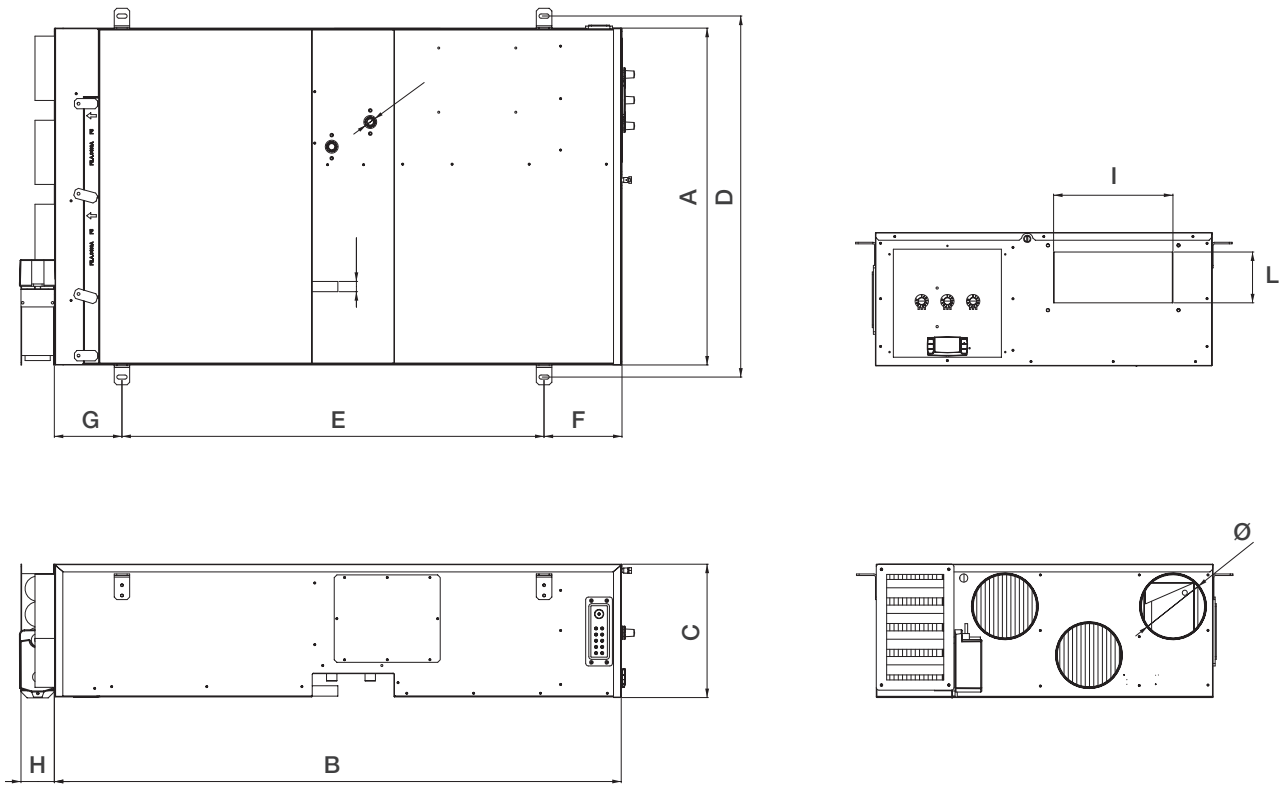
- Compact size, to facilitate installation in false ceilings.
- All-in-one architecture, for effective operation and easy installation.
- Possibility of implementing the dehumidifying function by making direct use of the water from the radiant cooling system.
- 3 operating models: Summer (compressor ON); Renewal + dehumidification with neutral air (compressor on) dehumidified air is introduced into the room at the same temperature; Winter (compressor OFF)
- In winter mode coil can be supplied with water taken from the radiant heating system.
- Built-in electronic temperature-humidity sensor (optional).

TECHNICAL DATA

Models	VORT HRI 260 DH code 45091	VORT HRI 260 DH RC code 45092	VORT HRI 500 DH code 45093	VORT HRI 500 DH RC code 45094
Supply	230 V / 50 Hz			
Airflow in ventilation mode (m^3/h)	80-125		140-250	
Airflow in dehumidification mode (m^3/h)	130-250		250-500	
Supply fan max pressure (Pa)	50-140		50-140	
Extract fan max pressure (Pa)	50-140		50-140	
Nominal water delivery (l/h)	250		350	
Water delivery range (l/h)	150-400		200-600	
Total cooling power (W) (outdoor air enthalpy net included) (2)	1400		2800	
Heat power recovered in winter mode (W) (1)	950		1850	
Dehumidifying capacity (l/24h) (outdoor air enthalpy net included) (2)	30		62	
Refrigerant gas	R 134A		R 410A	
Max thermal efficiency in winter mode (1)	90%		90%	
Max thermal efficiency in summer mode (2)	70%		70%	
Power of compressor (W)	340		480	
Nominal power of supply fan (W)	30		60	
Nominal power of extract fan (W)	22		44	
Range of power of supply fan (W)	10-86		30-130	
Range of power of extract fan (W)	11-43		22-68	
Sound power Lw dB (A)	47		52	
Sound pressure Lp dB (A) (3)	36		41	
Kg	60		80	

VORT HRI DH RANGE

DIMENSIONS

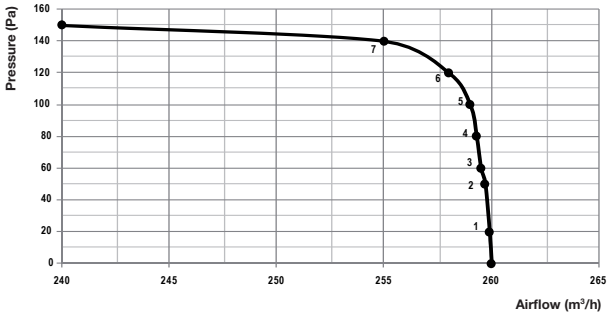


Models	Code	A	B	C	D	E	F	G	H	I	L	Ø
VORT HRI 260 DH	45091	655	1103	262	702	821	152	132	65	232	99	125
VORT HRI 260 DH RC	45092											
VORT HRI 500 DH	45093	756	1304	405	802	1024	116	152	65	224	114	160
VORT HRI 500 DH RC	45094											

Dimensions (mm)

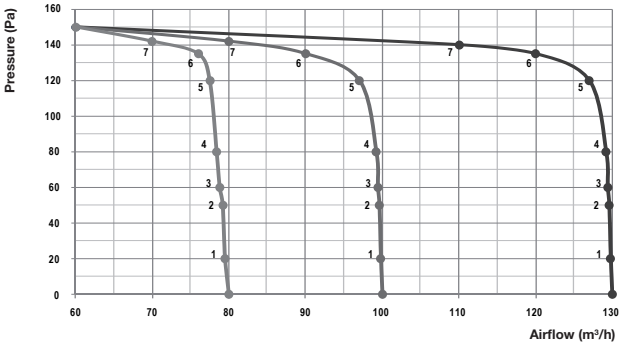
PERFORMANCE CURVES

VORT HRI 260 DH - INLET FAN



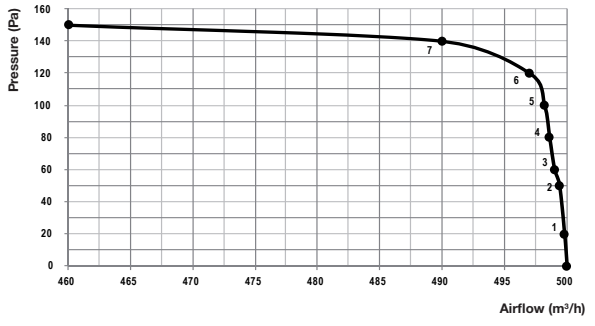
Power	1	2	3	4	5	6	7
260 m³/h	18W	30W	36W	40W	46W	51W	60W

VORT HRI 260 DH - EXTRACT FAN



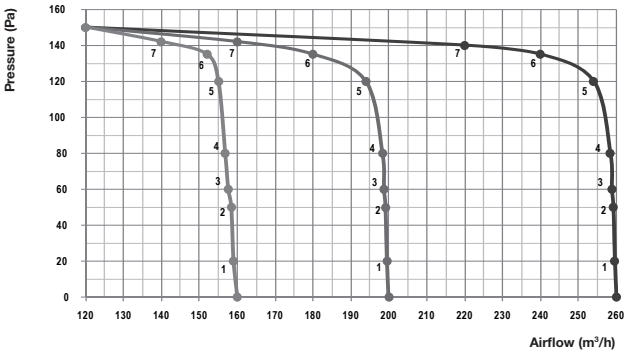
Power	1	2	3	4	5	6	7
80 m³/h	10W	11W	11W	12W	12W	12W	12W
100 m³/h	11W	13W	15W	15W	17W	18W	18W
130 m³/h	11W	13W	15W	19W	22W	30W	34W

VORT HRI 500 DH - INLET FAN



Power	1	2	3	4	5	6	7
500 m³/h	38W	60W	72W	80W	92W	103W	120W

VORT HRI 500 DH - EXTRACT FAN



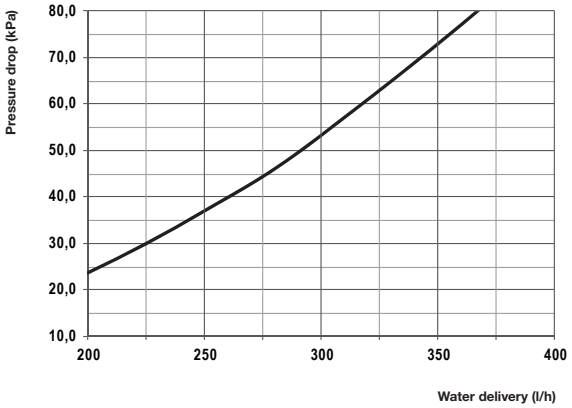
Power	1	2	3	4	5	6	7
160 m³/h	20W	22W	22W	24W	24W	24W	24W
200 m³/h	22W	26W	30W	30W	34W	36W	36W
260 m³/h	22W	26W	30W	38W	44W	60W	68W

VORT HRI DH RANGE
Ceiling-mounting heat recovery units with built-in dehumidifier

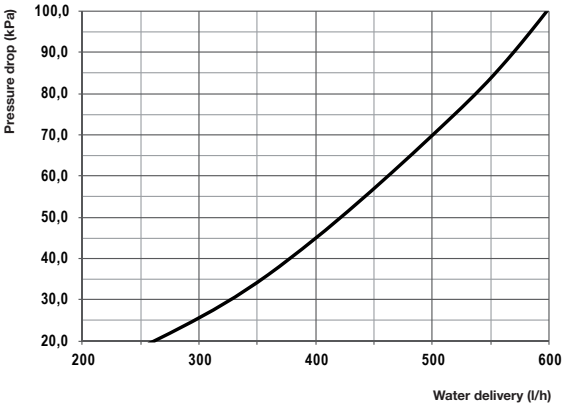
DIMENSIONS

Pressure drop in water circuit

VORT HRI 260 DH



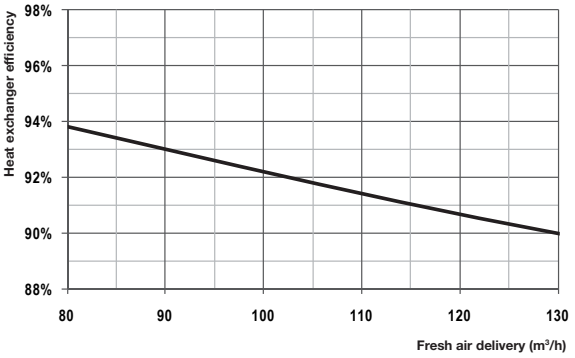
VORT HRI 500 DH



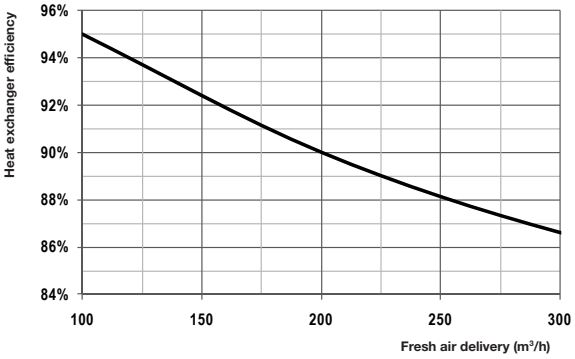
Heat recovery unit efficiency

Winter mode: indoor 20°C, 50% RH outdoor: -5°C, 80% RH

VORT HRI 260 DH

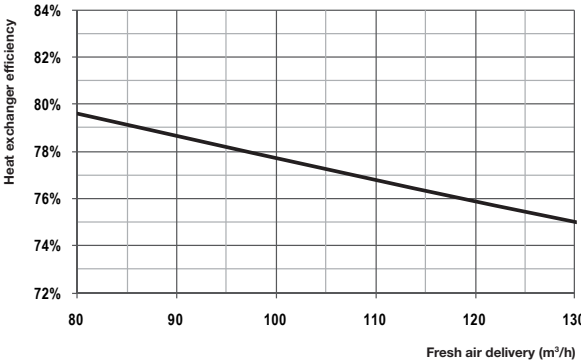


VORT HRI 500 DH

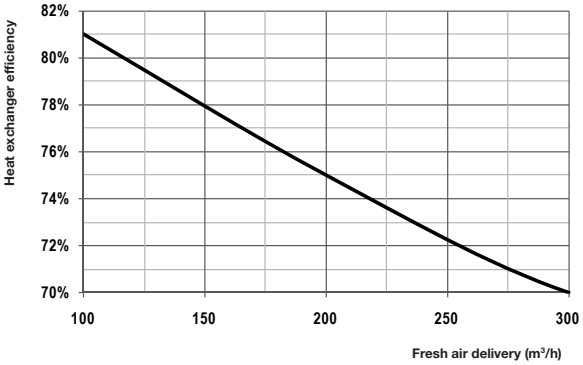


Summer mode: indoor 26°C, 60% RH outdoor: 35°C, 50% RH

VORT HRI 260 DH



VORT HRI 500 DH



NOTE

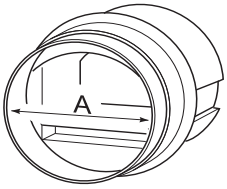
ACCESSORIES

VORT PLATT RANGE

	Description	Code	Products
	Additional spigot - Hygro 80	22847	11813
	Regulator	22324	11814
		22325	11814

DIMENSIONS (mm)

Code	Models	Ø A	Air Flow
22324	15 m³/h	80	15 m³/h
22325	30 m³/h		30 m³/h

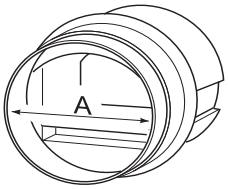


VORT PENTA RANGE

	Description	Code	Products
	Additional spigot - Hygro 80	22847	11767
	Flow Regulator	22324	11707
		22325	11707

DIMENSIONS (mm)

Code	Models	Ø A	Air Flow
22324	15 m³/h	80	15 m³/h
22325	30 m³/h		30 m³/h

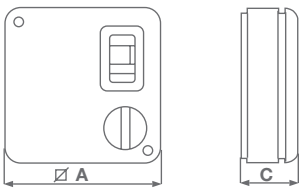


VORT LETO MEV RANGE

	Description	Code	Products
	C3VM3 - Three speed selector, single phase	12949	11955

DIMENSIONS (mm)

Code	Models	⌀ A	C
12949	C3VM3	120	43

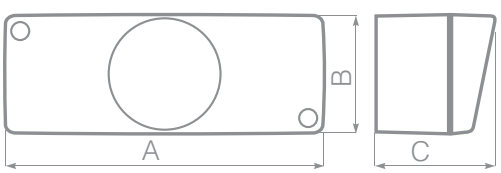


VORT HR 200 RANGE

	Description	Code
	G3 Intrnal filter (single) for HR200	22367
	F5 internal filter (single) for HR200	22368
	Heat Exchanger for HR200	22369
	Horizontal installation kit	22364
	C TEMP - Checks the temperature of the surrounding air: the extractor fan is activated automatically when a certain temperature is recorded; this can be adjusted, using an external trimmer, to a value between 10°C and 40°C above the set threshold. A timer keeps it running after the temperature has fallen below the set threshold, for a period of time which can be adjusted to a value between 3 and 20 minutes using a built-in trimmer.	12992
	C SMOKE - Checks the quality of the air when the air contains cigarette smoke, odours and other pollutants: the extractor fan is activated automatically when a concentration of odours higher than the set value is etected; this value can be adjusted using an external trimmer. A pre-set timer, which can be adjusted to a value between 3 and 20 minutes using a built-in trimmer, keeps the extractor fan running for the desired period of time.	12993
	C HCS - Checks the relative humidity of the air: the extractor fan is activated automatically when the relative humidity percentage exceeds 65%. Otherwise, the appliance starts automatically a few seconds after the light is switched on and continues to run for a set time after it has been switched off again; this time period can be adjusted to a value between 3 and 20 minutes using a built-in trimmer.	12994
	C PIR - Checks for human motion in the room: the extractor fan is activated automatically for a specified time period, which can be adjusted between 3 and 20 minutes using a trimmer, when human movement is detected in its range.	12998
	C TIMER - Checks the operating time of the appliance to which it is connected: the extractor fan is activated automatically a few seconds after the light is switched on and continues to run for a set time, which can be adjusted to a value between 3 and 20 minutes using a built-in trimmer, after it has been switched off again.	12999

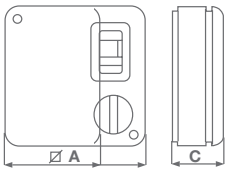
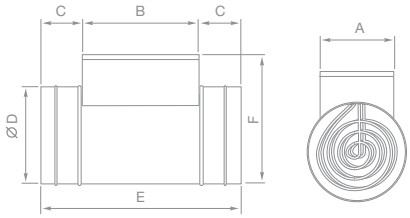
DIMENSIONS (mm)

Code	Models	A	B	C
12992	C TEMP	144	54	55.8
12993	C SMOKE			
12994	C HCS			
12998	C PIR			
12999	C TIMER			



ACCESSORIES

VORT PROMETEO PLUS RANGE

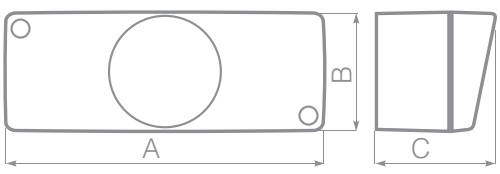
	Description	Code	Products
	Vort Prometeo Plus HR 400 RF remote control.	22464	11582
	Vort Prometeo Plus HR 400 external RF Receiver Module - An additional remote-controlled radiofrequency RF device including a connection cable is available as an optional accessory and allows control of the appliance even if the position chosen for its installation is shielded from radio waves.	22479	
	Plus HR 400 M Speed regulator: three-speed selector switch. DIMENSIONS (mm) Code | ⌀ A | C 22478 | 120 | 43 	22478	11585
	Hexagonal screwdriver for maintenance	22340	11582 - 11585
	F5 Internal filter (Single)	22321	
	F5 Internal filter (Single)	22342	
	F7 Internal filter (Single)	22323	
	Heat Exchanger	22318	
	External filter box - F5 External Filter Box Galvanised filter box (F5) designed to simplify maintaining. The filter box is fitted to the outside of the appliance and protects the intake and outlet ducts serving various rooms (replacing standard filters). Time spent on maintenance is less (thanks to a specially sized filter that guarantees perfect filtering characteristics even when the unit is used for long periods), and maintenance work is simplifi ed as direct access to the Prometeo unit is not required.	22329	
	Electric heater - When the temperature and relative humidity of air entering and leaving the Prometeo unit are such that frost may form on the heat exchanger surface, this can affect the efficiency of the unit. It can also affect the completely automatic system that manages changes in fan speeds that, in the vast majority of cases, allow defrosting to be carried out. In particularly harsh climates, this may not solve the problem. In such cases, Vortice recommend the installation of a 500 W, 1200 W or 1800 W pre-heater on the air intake duct o that incoming air can be warmed. This heater will operate automatically for the minimum time needed and will ensure the problem of frosting is solved. DIMENSIONS (mm) AND WEIGHT Code | Models | A | B | C | Ø D | E | F | KG 22467 | 500 W | 150 | 285 | 40 | 150 | 380 | 250 | 2.2 22468 | 1200 W | 274 | 376 | 230 | 2.6 22469 | 1800 W | 2.9 	22467 22468 22469	

VORT HRI PHANTOM RANGE

	Description	Code	Products
	F5 Internal filter	22647	11290 - 11291
	F5 Internal filter	22646	11292 - 11293
	F7 Internal filter	22625	11290 - 11291
	F7 Internal filter	22628	11292 - 11293
	Kit installation (for installers)	22629	For all produtcts
	C TEMP - Checks the temperature of the surrounding air: the extractor fan is activated automatically when a certain temperature is recorded; this can be adjusted, using an external trimmer, to a value between 10°C and 40°C above the set threshold. A timer keeps it running after the temperature has fallen below the set threshold, for a period of time which can be adjusted to a value between 3 and 20 minutes using a built-in trimmer.	12992	
	C SMOKE - Checks the quality of the air when the air contains cigarette smoke, odours and other pollutants: the extractor fan is activated automatically when a concentration of odours higher than the set value is etected; this value can be adjusted using an external trimmer. A pre-set timer, which can be adjusted to a value between 3 and 20 minutes using a built-in trimmer, keeps the extractor fan running for the desired period of time.	12993	
	C HCS - Checks the relative humidity of the air: the extractor fan is activated automatically when the relative humidity percentage exceeds 65%. Otherwise, the appliance starts automatically a few seconds after the light is switched on and continues to run for a set time after it has been switched off again; this time period can be adjusted to a value between 3 and 20 minutes using a built-in trimmer.	12994	
	C PIR - Checks for human motion in the room: the extractor fan is activated automatically for a specified time period, which can be adjusted between 3 and 20 minutes using a trimmer, when human movement is detected in its range.	12998	

DIMENSIONS (mm)

Code	Models	A	B	C
12992	C TEMP	144	54	55.8
12993	C SMOKE			
12994	C HCS			
12998	C PIR			



SYSTEM COMPONENTS

The range of System Components comprises ducting systems of both circular and rectangular section, available in different sizes, as well as all accessories needed to make up the air-handling system.

RECTANGULAR SECTION SYSTEMS
The 150 System (180 x 95 mm section) is ideal for ventilation with high air flow rates.
The 204 System (204 x 60 section) occupies minimal space in the vertical direction, making for a less invasive installation. Suitable for medium high air flow rates.
The 125 System (150 x 70 section) is ideal for medium air flow rates.
The 100 System (110 x 54 section) is designed for medium-low air flow rates.

CIRCULAR SECTION SYSTEMS
Characterized by excellent performance and minimal turbulence.
Available in 100, 125 and 150 mm diameters.

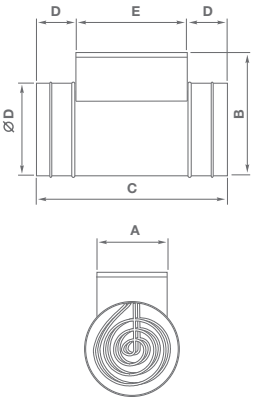
ACCESSORIES
Components also include all of the various accessories required to make up the air-handling system: couplings, connectors, 45° and 90° bends, Tees, reductions (circular/circular and circular/rectangular), wall plates, clips, ported plenum fittings, and a full range of supply and return grilles.
VMC ducts are made of PVC, guaranteed lightweight and easy to clean, and available in 1 m and 2 m lengths. Smooth ducts guarantee superior hygiene and low pressure losses.
Flexible PVC ducts, ideal for use as short connecting pieces, are available in 100, 125 and 204 System sizes and 100, 125 and 150mm diameters.
Flexible aluminium ducts are available in versions with and without insulation. Diameters from 80 up to 315 mm.

AH DUCT HEATER

To be installed in the ventilation system, always after the fan and/or the noise attenuator/air filter.

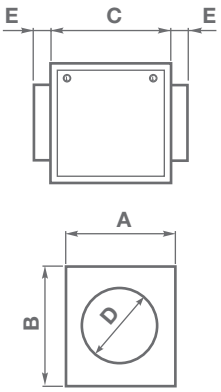
DIMENSIONS (mm)

Code	Models	A	B	C	Ø D	E	F
22796	AH 100	100	230	40	100	325	185
22797	AH 125	125			125		225
22759	AH 150	150	285		150	380	250
22798	AH 160				160		260
22790	AH 200				200		300
22791	AH 250				250		350
22792	AH 315		245		315		415



FILTER BOX

To be installed in the ventilation system, always before the fan, and/or the noise attenuator/duct heater.
Suitable to avoid impurities entering into the ventilation system

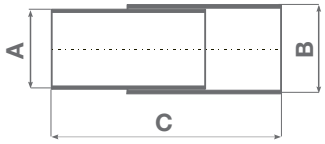


DIMENSIONS (mm)

Code	Models	A	B	C	Ø D	E
22793	AF 100	210	170	125	100	227
22794	AF 125	220	205	145	125	252
22799	AF 150	270	235	160	150	267
22795	AF 160				160	
22787	AF 200	320	275	185	200	302
22788	AF 250	355	320	235	250	352

TELESCOPIC DUCT

Rigid telescopic duct.

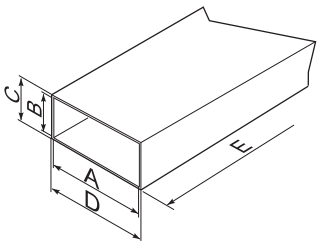


DIMENSIONS (mm)

Code	Models	A	B	C
22256	Ø 100	110	114	200 - 380
22257	Ø 120	130	135	

FLAT PVC DUCT

Rigid PVC duct of rectangular section.



DIMENSIONS (mm)

Code	Models	A	B	C	D	E
46120	SYS 100 1 m	106	50	54	110	1 m
46122	SYS 100 2 m					2 m
46141	SYS 125 1 m	146	66	70	150	1 m
46173	SYS 150 1 m	176	91	95	180	1 m
46155	SYS 204 1 m	200	54	60	204	1 m
46157	SYS 204 2m					2 m

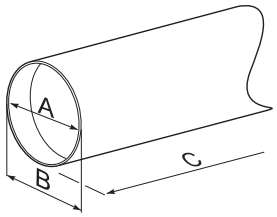
SYSTEM COMPONENTS

CIRCULAR PVC DUCT

Rigid PVC duct of circular section.

DIMENSIONS (mm)

Code	Models	Ø A	Ø B	C
46184	Ø 100 1 m	100	103	1 m
46186	Ø 100 2 m			2 m
46197	Ø 125 1 m	125	128	1 m
46199	Ø 125 2 m			2 m
46209	Ø 150 1 m	149	153	1 m
46211	Ø 150 2 m			2 m

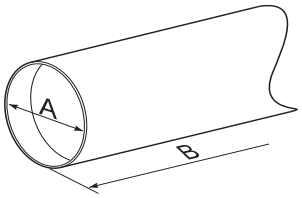


CIRCULAR PP DUCT

Black circular PP duct.

DIMENSIONS (mm)

Code	Models	Ø A	B
46433	MD 80	80	250

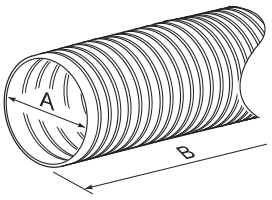


SEMI-FLEXIBLE CORRUGATED DUCT

Semi-flexible corrugated duct with smooth inner surface made of HDPE (high density polyethylene), double wall. Self-extinguishing externally and anti-static internally.

DIMENSIONS (mm)

Code	Models	Ø A	Ø B	C
23209	WD 63	63 (interno)	75 (esterno)	50 m

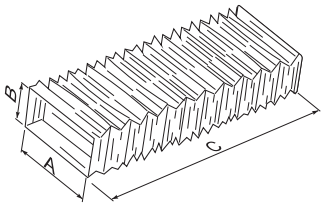


FLEXIBLE PVC DUCT (RECTANGULAR SECTION)

Flexible PVC duct of rectangular section.

DIMENSIONS (mm)

Code	Models	A	B	C
46238	SYS 100 (110x54)	112	56	3 m
46241	SYS 125 (150x70)	152	72	
46244	SYS 204 (110x54)	206	62	

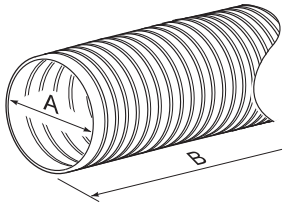


FLEXIBLE PVC DUCT (CIRCULAR SECTION)

Flexible PVC duct of circular section.

DIMENSIONS (mm)

Code	Models	Ø A	B
22250	Ø 100 3 m	102	3 m
46224	Ø 100 15 m		15 m
46251	Ø 125 3 m	127	3 m
46230	Ø 125 15 m		15 m
46235	Ø 150 15 m	152	15 m
22252	Ø 160 3 m	162	3 m

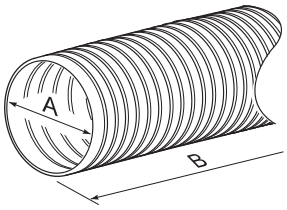


FLEXIBLE ALUMINIUM DUCT

Flexible aluminium duct of circular section.

DIMENSIONS (mm)

Code	Models	Ø A	B
46257	Ø 80 10 m	82	10 m
46258	Ø 100 10 m	102	
46259	Ø 125 10 m	127	
46260	Ø 150 10 m	152	
46261	Ø 160 10 m	162	
46263	Ø 200 10 m	203	
46264	Ø 250 10 m	254	

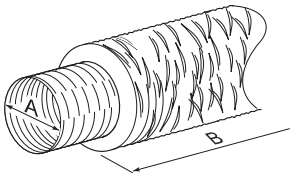


INSULATED ALUMINIUM DUCT

Flexible aluminium duct with glass wool insulation, circular section.

DIMENSIONS (mm)

Code	Models	Ø A	B
46271	Ø 102	102	10 m
46272	Ø 127	127	
46273	Ø 202	202	
46274	Ø 202	203	



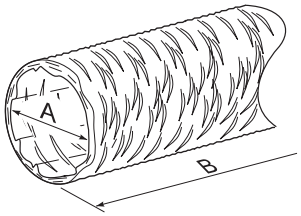
SYSTEM COMPONENTS

AFD FLEXIBLE ALUMINIUM DUCT

To be installed in the ventilation system, always after the fan, and/or the filter box/duct heater.

DIMENSIONS (mm)

Code	Models	Ø A	B
22175	AFD 100-4	102	4 m
22176	AFD 125-4	127	
22177	AFD 150-4	152	
22178	AFD 160-10	162	10 m
22179	AFD 200-10	203	
22180	AFD 250-10	254	
22181	AFD 315-10	315	

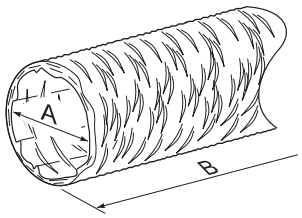


AFD-I INSULATED FLEXIBLE ALUMINIUM DUCT

Ideal for ventilation and air conditioning, low heat dissipation, condensation, noise and for high pressure.

DIMENSIONS (mm)

Code	Models	Ø A	B
22182	AFD-I 100-4	102	4 m
22183	AFD-I 125-4	127	
22184	AFD-I 150-4	152	
22185	AFD-I 160-10	162	10 m
22186	AFD-I 200-10	203	
22187	AFD-I 250-10	254	
22188	AFD-I 315-10	315	

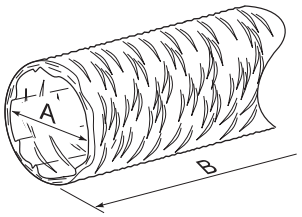


AFD-ACU SOUND INSULATED ALUMINIUM DUCT

Flexible duct with heat and sound insulation. Internal duct made of pierced aluminium with glass wool insulation, outer cladding of aluminium foil reinforced with glass fibre.

DIMENSIONS (mm)

Code	Models	Ø A	B
23202	AFD-ACU 100-10	102	10 m
23203	AFD-ACU 125-10	127	
23204	AFD-ACU 150-10	152	
23205	AFD-ACU160-10	162	

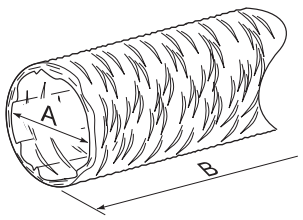


INSULATION FOR RIGID DUCTS

Flexible insulating sheath for rigid ducts.
Internal duct made of aluminium with rockwool insulation, outer sheath of reflective PVC film.

DIMENSIONS (mm)

Code	Models	Ø A	B
23220	SOCK 125	125	10 m
23221	SOCK 150	150	

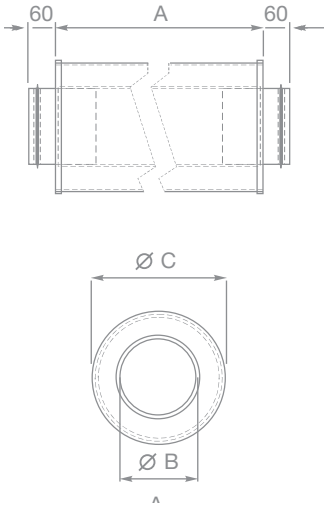


NOISE ATTENUATOR AND SILENCER TUBE

For installation in the ventilation system, always positioned downstream of the fan and/or filter housing and/or heater, inside the duct.
Indicated when there is a requirement for particularly low noise levels.
Operating temperature from -30 °C to +60 °C.
Maximum operating pressure: 2000 Pa.
Maximum air speed: 25 m/s.

DIMENSIONS (mm) and WEIGHT

Code	Models	A	Ø B	Ø C	KG
22780	NA 100	1000	100	211	2
22781	NA 125		125	241	
22756	NA 150		150	266	
22783	NA 160		160		
22784	NA 200		200	316	
22785	NA 250		250	367	
22786	NA 315		315	417	
23222	NA 125/6	600	125/6	-	-
23223	NA 160/6		160/6	-	-
22366	Tubo silenziatore Ø 125 L=500	500	125	180	0.3
22316	Tubo silenziatore Ø 150 L=500		150	200	0.3

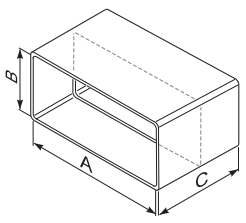


FLAT DUCT CONNECTOR

Polystyrene connector for flat duct.

DIMENSIONS (mm)

Code	Models	A	B	C
46131	SYS 100	110	54	62
46148	SYS 125	150	70	72
46175	SYS 150	180	95	80
46162	SYS 204	205	60	74



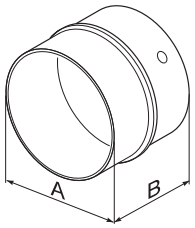
SYSTEM COMPONENTS

CIRCULAR DUCT CONNECTOR

Polystyrene connector for circular duct.

DIMENSIONS (mm)

Code	Models	Ø A	B
46188	Ø 100	98	60
46205	Ø 125	124	62
46216	Ø 150	149	

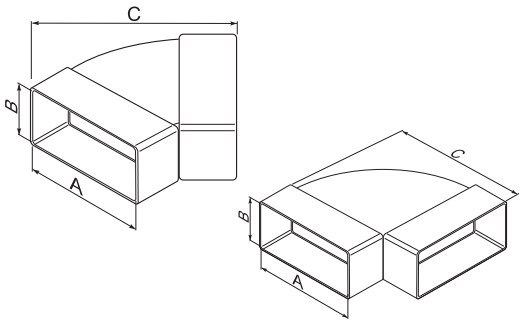


HORIZONTAL BEND

Polystyrene horizontal bend, rectangular section.

DIMENSIONS (mm)

Code	Models	A	B	C
46167	45° SYS 204	204	60	230
46134	90° SYS 100	110	54	149
46145	90° SYS 125	150	70	189
46177	90° SYS 150	180	95	225
46159	90° SYS 204	204	60	244

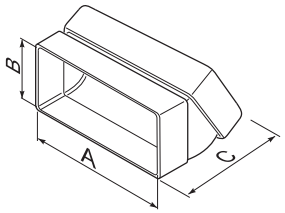


VERTICAL BEND

Polystyrene vertical bend, rectangular section.

DIMENSIONS (mm)

Code	Models	A	B	C
46135	90° SYS 100	110	54	95
46150	90° SYS 125	150	70	113
46176	90° SYS 150	180	95	136
46164	90° SYS 204	204	60	98

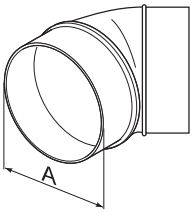


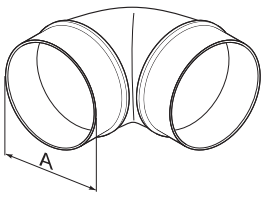
ELBOW

Polystyrene bends, circular section.

DIMENSIONS (mm)

Code	Models	Ø A
46192	45° Ø 100	99
46202	45° Ø 125	124
46191	90° Ø 100	99
46201	90° Ø 125	124
46213	90° Ø 150	149



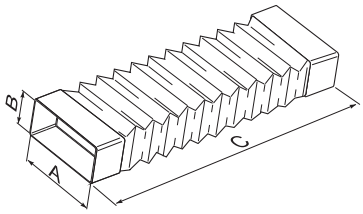


FLEXIBLE BEND

Flexible/extendable bend made of polystyrene/PVC, rectangular section.

DIMENSIONS (mm)

Code	Models	A	B	C
46129	SYS 100	110	54	630
46153	SYS 125	150	70	750
46170	SYS 204	204	60	660

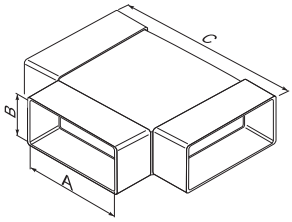


TEE (RECTANGULAR SECTION)

Polystyrene Tee, rectangular section.

DIMENSIONS (mm)

Code	Models	A	B	C
46128	SYS 100	110	54	174
46171	SYS 204	204	60	279

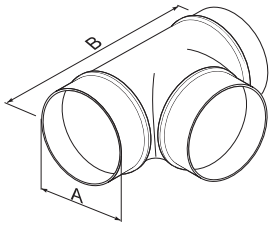


TEE (CIRCULAR SECTION)

Polystyrene Tee, circular section.

DIMENSIONS (mm)

Code	Models	Ø A	B
46193	Ø 100	99	168
46203	Ø 125	124	197
46214	Ø 150	149	223

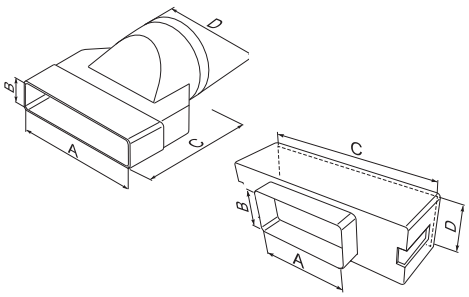


AIRBRICK ADAPTER

Airbrick grille adapters made of polypropylene, rectangular section.
With a double adapter, 2 airbrick grilles can be installed one on top of another.

DIMENSIONS (mm)

Code	Models	A	B	C	D
46119	SYS 100	106	51	209	60
46166	SYS 204	203	59	148	100
46087	SYS 204 (doppio)	205	120	110	60



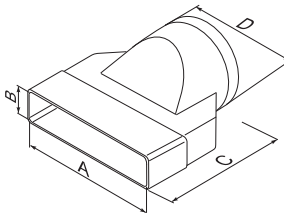
SYSTEM COMPONENTS

CIRCULAR/RECTANGULAR ADAPTER

Straight rectangular adapter made of polystyrene, circular connection.

DIMENSIONS (mm)

Code	Models	A	B	Ø C	D
46137	SYS 100	110	54	100	88
46151	SYS 125	150	70	125	132
46174	SYS 150	180	90	150	157
46165	SYS 204	204	60	125	153

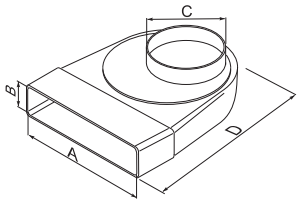


BEND WITH RECTANGULAR ADAPTER

90° polystyrene bend with rectangular adapter, size 204 x 60 mm, swivel circular section Ø 125 mm.

DIMENSIONS (mm)

Code	Models	A	B	Ø C	D
46160	SYS 204	204	60	125	153

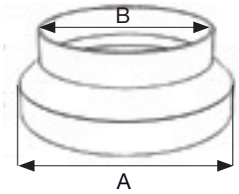


REDUCTION

Circular polystyrene reducer.

DIMENSIONS (mm)

Code	Models	Ø A	Ø B
46415	Ø 100 - 80	100	80
46312	Ø 125 - 100	125	100
46314	Ø 150 - 100	150	
46313	Ø 150 - 125		125
46315	Ø 200 - 150	200	150

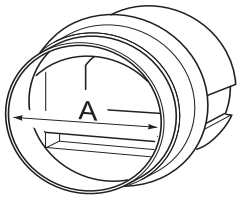


DUCT FLOW REGULATOR

Air duct flow regulator made of thermoplastic material.
Maximum temperature 60 °C.
Complete with airtight rubber seal.
Activated by pressures between 50 and 200 Pa.

DIMENSIONS (mm)

Code	Models	Ø A	m³/h
23050	RD 15 m³/h Ø 80 mm	80	15
23052	RD 30 m³/h Ø 80 mm		30
23053	RD 45 m³/h Ø 80 mm		45
23056	RD 15 m³/h Ø 100 mm	100	15
23058	RD 30 m³/h Ø 100 mm		30
23059	RD 45 m³/h Ø 100 mm		45
23061	RD 60 m³/h Ø 100 mm		60
23062	RD 75 m³/h Ø 100 mm		75
23063	RD 90 m³/h Ø 100 mm		90
23066	RD 15 m³/h Ø 125 mm	126	15
23068	RD 30 m³/h Ø 125 mm		30
23069	RD 45 m³/h Ø 125 mm		45
23071	RD 60 m³/h Ø 125 mm		60
23072	RD 75 m³/h Ø 125 mm		75
23073	RD 90 m³/h Ø 125 mm		90
23075	RD 120 m³/h Ø 125 mm		120
23076	RD 150 m³/h Ø 125 mm		150
23077	RD 180 m³/h Ø 125 mm		180
23079	RD 120 m³/h Ø 150 mm	150	120
23080	RD 150 m³/h Ø 150 mm		150
23081	RD 180 m³/h Ø 150 mm		180
23082	RD 210 m³/h Ø 150 mm		210
23083	RD 240 m³/h Ø 150 mm		240
23084	RD 270 m³/h Ø 150 mm		270
23085	RD 300 m³/h Ø 150 mm		300
23095	RD 210 m³/h Ø 200 mm	200	210
23096	RD 240 m³/h Ø 200 mm		240
23097	RD 270 m³/h Ø 200 mm		270
23098	RD 300 m³/h Ø 200 mm		300
23099	RD 350 m³/h Ø 200 mm		350



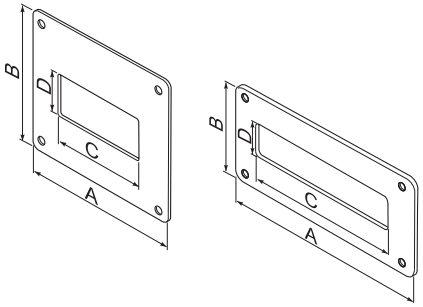
SYSTEM COMPONENTS

WALL MOUNTING PLATE FOR RECTANGULAR DUCT

Rectangular wall mounting plate for flat duct.

DIMENSIONS (mm)

Code	Models	A	B	C	D
46124	PIASTRA SYS 100	163	163	113	55
46144	PIASTRA SYS 125	173	173	152	72
46179	PIASTRA SYS 150	229	150	190	100
46158	PIASTRA SYS 204	268	123	207	63

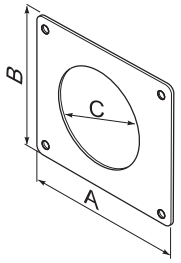


WALL MOUNTING PLATE FOR CIRCULAR DUCT

Rectangular wall mounting plate for circular duct.

DIMENSIONS (mm)

Code	Models	A	B	Ø C
46189	PIASTRA Ø 100	150	150	109
46207	PIASTRA Ø 125	173	173	129
46218	PIASTRA Ø 150	217	217	157

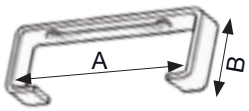


CLIP FOR RECTANGULAR DUCT

Clip for flat ducts.

DIMENSIONS (mm)

Code	Models	A	B
46130	SYS 100	110	54
46149	SYS 125	150	70
46180	SYS 150	180	95
46163	SYS 204	204	60

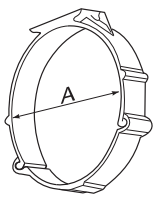


CLIP FOR CIRCULAR DUCT

Clip for circular ducts.

DIMENSIONS (mm)

Code	Models	Ø A
46195	Ø 100	110
46204	Ø 125	150
46217	Ø 150	180

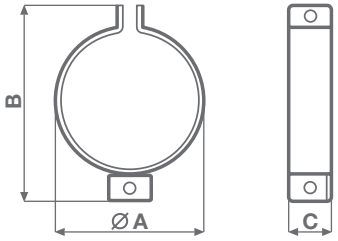


DUCT CLAMPS

Galvanized metal clamps with neoprene mousse seal.

DIMENSIONS (mm)

Code	Models	Ø A	B	C
22667	CA-FU 100	103	138	30
22668	CA-FU 125	128	163	
22669	CA-FU 150	153	188	
22666	CA-FU 160	163	198	
22671	CA-FU 200	203	238	
22672	CA-FU 250	253	288	
22673	CA-FU 315	318	353	



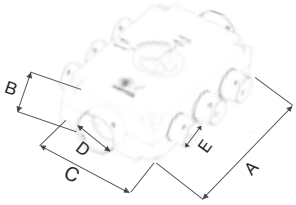
VORT PLENUM

Vort Plenum 6+1- Distribution plenum for installation in air supply and/or extractor ducts serving up to 6 rooms + kitchen (Ø ducts: inlet 125 mm, outlets 1 x 125 mm + 6 x 80 mm).

Vort Plenum 5+1 AR - Distribution plenum for installation in air extractor ducts serving up to 5 rooms + kitchen, with self-regulating ports (Ø ducts: outlet 125 mm, inlets 1 x 125 mm + 5 x 80 mm).

DIMENSIONS (mm)

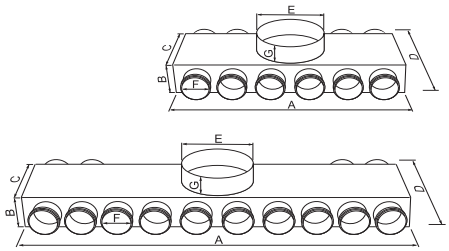
Code	Models	A	B	C	Ø D	Ø E
22343	6+1	490	150	300	125	77.5
22347	5+1 AR					



DISTRIBUTION PLENUM

Galvanized steel distribution plenum fittings for supply and return air flows.
Wall/floor/ceiling installation.

- Code 23649 - WD-P 6x63 (6 x Ø 63 mm connection with seal)
- Code 23650 - WD-P 8x63 (8 x Ø 63 mm connection with seal)
- Code 23212 - WD-P 10x63 (10 x Ø 63 mm connection with seal)
- Code 23213 - WD-P 14x63 (14 x Ø 63 mm connection with seal)



DIMENSIONS (mm)

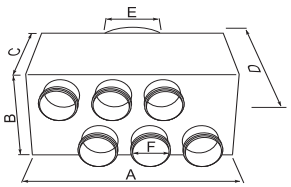
Code	Models	A	B	C	D	Ø E	Ø F	G
23649	WD-P 6x63	525	90	190	232	125	63	45
23650	WD-P 8x63	695				160		
23212	WD-P 10x63	515	82	180	265			
23213	WD-P 14x63	850						

SYSTEM COMPONENTS

INLINE DISTRIBUTION PLENUM

Galvanized steel distribution plenum fittings for supply and return air flows.
False ceiling installation.

- Code 23651 - WD-P 6x63 (6 x Ø 63 mm connection with INLINE seal)



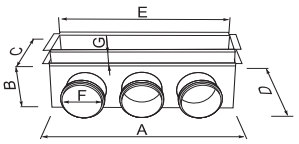
DIMENSIONS (mm)

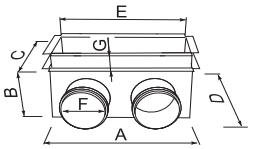
Code	Models	A	B	C	D	Ø E	Ø F
23651	WD-PH 6x63	355	200	190	277	125	63

WALL-MOUNTING PLENUM FOR RECTANGULAR PORTS

Galvanized steel plenum fittings for supply and return air flows; designed for wall-mount installations, can also be used for ceiling-mount installations.
Provided with telescopic surround to facilitate installation.
Designed to accept 200x100 mm or 300x100 mm grilles.

- Code 23653 - 2 x Ø 63 mm connection
- Code 23214 - 3 x Ø 63 mm connection





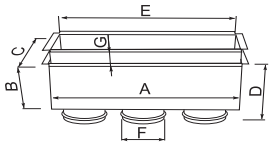
DIMENSIONS (mm)

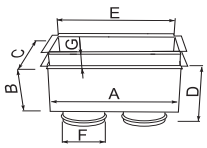
Code	Models	A	B	C	D	E	Ø F	G
23653	WD-PB 200x100	200	85	100	144	195	63	37
23214	WD-PB 300x100	300				295		

INLINE WALL-MOUNTING PLENUM FOR RECTANGULAR PORTS

Galvanized steel distribution plenum fittings for supply and return air flows; false ceiling installation.
Inline configuration
Provided with telescopic surround to facilitate installation. Connections with seals
Designed to accept 300x100 mm or 200x100 mm grilles.

- Code 23655 - 2 x Ø 63 mm connection
- Code 23654 - 3 x Ø 63 mm connection





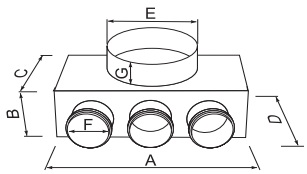
DIMENSIONS (mm)

Code	Models	A	B	C	D	E	Ø F	G
23655	WD-PBH 200x100	200	85	100	130	195	63	37
23654	WD-PBH 300x100	300				295		

WALL-MOUNTING PLENUM FOR CIRCULAR PORTS

Galvanized steel plenum fittings for circular ports.
Wall-mounting installation, connections with seals.

- Code 23218 - WD-PB 100 (Ø 100 mm port, 2 x Ø 63 mm connection)
- Code 23217 - WD-PB 125 (Ø 125 mm port, 3 x Ø 63 mm connection)



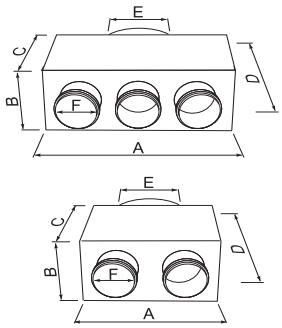
DIMENSIONS (mm)

Code	Models	A	B	C	D	E	Ø F	G
23218	WD-PB 100	170	87	122	163	100	63	45
23217	WD-PB 125	245		147	190	125		

INLINE WALL-MOUNT PLENUM FOR CIRCULAR PORTS

Galvanized steel distribution plenum fittings for supply and return air flows; false ceiling installation.
Inline configuration
Designed for connection with circular ports. Connections with seals

- Code 23658 - 2 x Ø 63 mm connection
- Code 23657 - 3 x Ø 63 mm connection

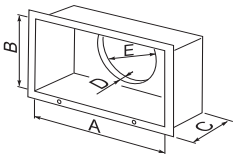


DIMENSIONS (mm)

Code	Models	A	B	C	D	Ø E	Ø F
23658	WD-PBH 100	170	122	87	175	100	63
23657	WD-PBH 125	245	147			125	

GALVANIZED STEEL PLENUM FOR GRILLES

Galvanized steel plenum fittings for 300 x 100 mm or 200 x 100 mm grilles.

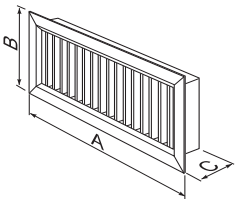


DIMENSIONS (mm)

Code	Models	A	B	C	D	Ø E
22231	PG PLENUM PER GRIGLIE 200x100	200	100	200	50	97
22232	PG PLENUM PER GRIGLIE 300x100	300				
22232	PG PLENUM PER GRIGLIE 300x150		150			

SUPPLY AIR PORT WITH LOUVRES

Aluminium supply/return air ports, with double row of louvres, adjustable singly by hand.



DIMENSIONS (mm)

Code	Models	A	B	C
22215	BM 200x100	200	100	85
22216	BM 300x100	300	100	
22217	BM 300x150	300	150	

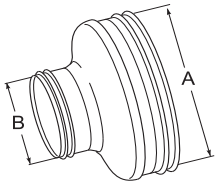
SYSTEM COMPONENTS

CIRCULAR REDUCTION

Circular reduction, size Ø 80 - Ø 63 mm; galvanized pressed steel, with rubber seals.

DIMENSIONS (mm)

Code	Models	Ø A	Ø B
23200	WD-R 63-80	80	63

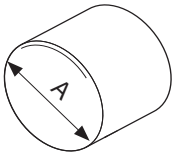


PRESSED STEEL PLUG

Steel cap Ø 63 mm.

DIMENSIONS (mm)

Code	Models	Ø A
23219	WD-X 63	63

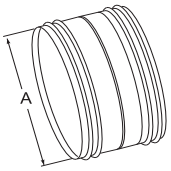


DUCT COUPLING

Coupling for ducts of internal diameter Ø 63 mm; galvanized pressed steel, with rubber seals.

DIMENSIONS (mm)

Code	Models	Ø A
23210	WD-J 63	63

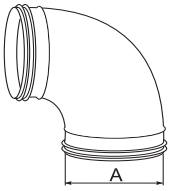


90° METAL DUCT BEND

90° bend for ducts of internal diameter Ø 63 mm; galvanized pressed steel, with rubber seals.

DIMENSIONS (mm)

Code	Models	Ø A
23211	WD-C 63	63

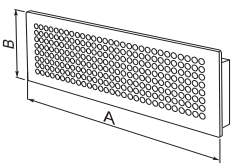


HIGH INDUCTION PIERCED PORT

High induction 300x100 port with pierced steel grille, zinc-treated and powder coated with RAL 9010 white, gloss 30.
Suitable for supply and extract air flows.

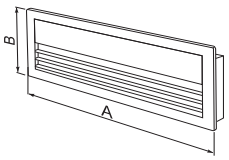
DIMENSIONS (mm)

Code	Models	A	B
23656	WD-BF 200x100	200	100
23215	WD-BF 300x100	300	



LOW NOISE PORT

High induction 300x100 port with adjustable louvres, zinc-treated and powder coated with RAL 9010 white, gloss 30.
Suitable for horizontal air throw.

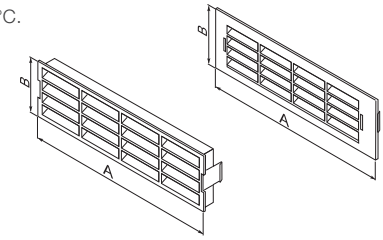


DIMENSIONS (mm)

Code	Models	A	B
23216	WD-BA 300x100	300	100

AIRBRICK GRILLE

Polypropylene supply/extract ventilation grille, permissible temperature +60 °C / -15 °C.

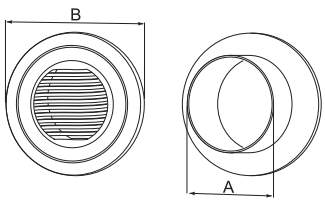


DIMENSIONS (mm)

Code	Models	A	B
46089	GRIGLIA	205	60
46090	GRIGLIA BORDATA	230	85

BOREA - SUPPLY/RETURN PORT

Supply/return port with adjustable air throw. White polystyrene casing, manual open/shut/ adjustment mechanism.

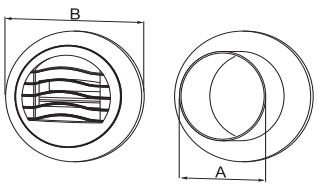


DIMENSIONS (mm)

Code	Models	Ø A	Ø B
23198	BOREA 80	80	110
23199	BOREA 125	125	165

VORTPACK ALIZÈ - SELF-ADJUSTING EXTRACTION PORT

Self-adjusting extraction port. White polystyrene casing.
Self-adjusting internal module activated by pressures between 50 and 160 Pa



DIMENSIONS (mm)

Code	Models	Ø A	Ø B	m³/h
22912	AUTO 15 m³/h	125	160	15
22911	AUTO 30 m³/h			30
23193	AUTO 45 m³/h			45
23194	AUTO 60 m³/h			60
23195	AUTO 75 m³/h			75
23196	AUTO 90 m³/h			90

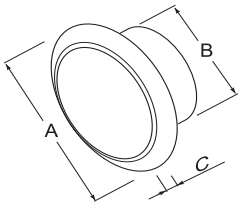
SYSTEM COMPONENTS

AV - EXTRACT/SUPPLY PORT

Air extraction/supply port made of white thermoplastic polystyrene.
Allows adjustment of air flow rate by simple repositioning of the rotary core. For application to ceilings, ventilation ducts, false ceilings, etc.

DIMENSIONI (mm)

Code	Models	Ø A	Ø B	C
22189	AV 100	138	100	15
22190	AV 125	164	125	30
22191	AV 150	192	150	45
22192	AV 160		160	60
22193	AV 200	240	200	75

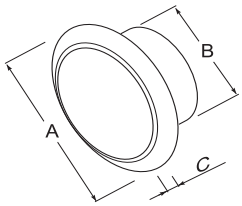


EXTRACTION PORT

Non-adjustable air extraction/supply valve.

DIMENSIONS (mm)

Code	Models	Ø A	Ø B	C
22326	80	119	80	19
22327	125	169	125	27

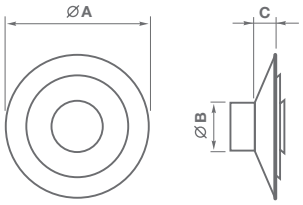


AIR DIFFUSER

For application to ceilings, ventilation ducts, false ceilings, etc.

DIMENSIONS (mm)

Code	Models	A	Ø B	Ø C
22128	CD 160	47	150	260
22127	CD 200		200	310
22168	CD 250		250	360
22169	CD 315		300	420

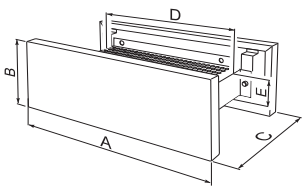


RECTANGULAR LOW NOISE TRANSIT GRILLE WITH TELESCOPIC PORT

Rectangular low noise transit grille with telescopic port for depths of 90 to 170 mm. Steel deflectors, zinc-treated and powder coated with RAL 9010 white, gloss 30. Pre-drilled stainless steel lead-through with rock wool internal insulation.

DIMENSIONS (mm)

Code	Models	A	B	C	D	E
23206	GTA 400x100	400	130	90-170	300	50

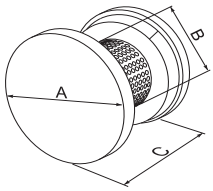


CIRCULAR LOW NOISE TRANSIT GRILLE WITH TELESCOPIC PORT

Circular low noise transit grille with telescopic port for depths of 90 to 170 mm. Steel deflectors, zinc-treated and powder coated with RAL 9010 white, gloss 30.¬ Pre-drilled stainless steel lead-through with rock wool internal insulation.

DIMENSIONS (mm)

Code	Models	Ø A	Ø B	C
23207	GTA Ø100	160	100	90-170
23208	GTA Ø125	200	125	

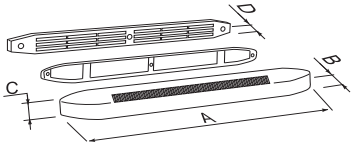


SELF-ADJUSTING AIR INLET

Self-adjusting inlet valve.

DIMENSIONS (mm)

Code	Models	A	B	C	D	m³/h
91012	EA 15 BL	405	18	20	12	15
91014	EA 30 BL					30

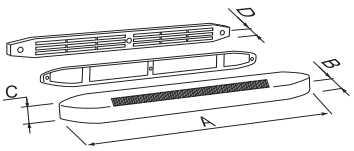


SELF-ADJUSTING SOUND INSULATED AIR INLET

Self-adjusting inlet valve with sound insulation.

DIMENSIONS (mm)

Code	Models	A	B	C	D	m³/h
91016	EEA 22 BL	400	38	36	12	22
91018	EEA 30 BL					30
91035	EEA 45 BL					45

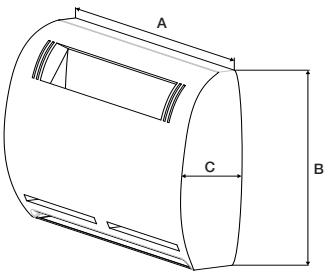


SELF-ADJUSTING SOUND INSULATED AIR INLET

Self-adjusting inlet valve with sound insulation.
Self-adjusting inlet valve with sound insulation and Ø 125 rear connection.

DIMENSIONS (mm)

Code	Models	A	B	C	m³/h
24639	EM A 30 m³/h	220	150	52	30



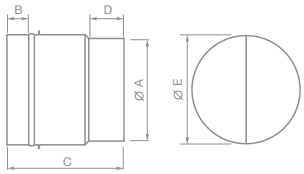
SYSTEM COMPONENTS

IN LINE - S

Non-return damper for installation directly in ventilation ducts or at fan outlet.¬ Consists in a cylinder of cold-rolled and welded galvanized steel. Closure and airtight seal guaranteed by a toroidal gasket of closed-cell neoprene.

DIMENSIONS (mm)

Code	Models	Ø A	B	C	D	Ø E
22551	IN LINE-S 100	96	23	100	36.5	103
22556	IN LINE-S 125	122		110		128
22562	IN LINE-S 150	146		120		153
22566	IN LINE-S 200	196		150		203
22571	IN LINE-S 250	247		180		253
22576	IN LINE-S 315	312		210		318

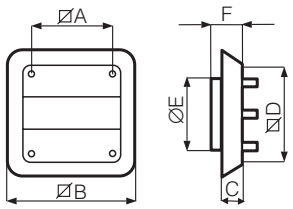


GRAVITY FLAP GRILLE

Applied to the outside of the hole prepared in the wall, aligned with the fan.
The closure flaps open automatically when the fan comes into operation.

DIMENSIONS (mm)

Code	Models	Ø A	Ø B	C	Ø D	Ø E	F
22300	GGR10	94	149	23.6	115	95.5	33.5
22330	GGR12	126	197	30	152	118	40
22360	GGR15					152	

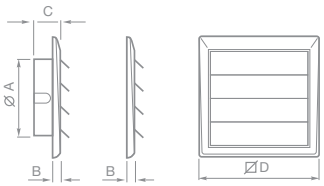


GRAVITY FLAP GRILLE

Wall-mounting installation. Prevents backdraughts and foreign matter entering from outside.
Made entirely of impact and UV resistant thermoplastic resin.

DIMENSIONS (mm)

Code	Models	Ø A	B	C	Ø D	NR. ALETTE
22332	GGR 100	99	8	28	140	5
22333	GGR 120/125	119			160	
22334	GGR 150/160	155			198	
22335	GGR 200	199	14		254	6
22336	GGR 250	249			299	7
22337	GGR 315	324			391	

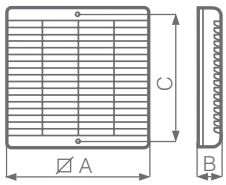


AIR INLET GRILLE

Specified by UNI CIG 7129 standards, to provide a change of air in rooms where gas cookers or gas-fuelled open water heaters are in use. The size of the grille is determined by a professional technician. The product comprises a grille with a protective mesh fitted to the outside of the hole prepared in the wall, and a grille fitted to the hole on the inside wall.

DIMENSIONS (mm)

Code	Models	⌀ A	B	C
22114	G 23/9”	291	31	241
22113	G 30/12”	370		308

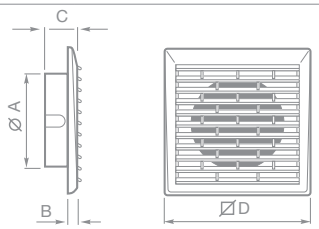


FIXED GRILLE

Fitted to the inlet end or the outlet end of the ventilation duct.
Made entirely of impact and UV resistant thermoplastic resin.

DIMENSIONS (mm)

Code	Models	Ø A	B	C	⌀ D
22165	FG 100	99	8	28	140
22166	FG 125	119			160
22167	FG 150	155			198

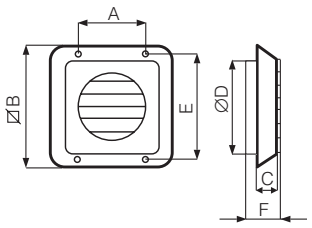


FIXED GRILLE

Applied to the outside of the hole prepared in the wall, aligned with the fan.

DIMENSIONS (mm)

Code	Models	A	⌀ B	C	Ø D	E	F
22010	GFI 10	100	150	24	97	133	50
22020	GFI 12/15	110	197	30	155	180	

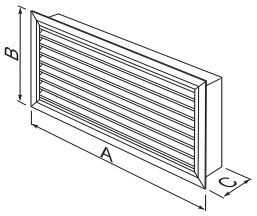


RETURN AIR GRILLE

Return air grille with fixed-angle louvres, 25 mm spacing, made of extruded aluminium with natural anodized finish, secured by clips.

DIMENSIONS (mm)

Code	Models	A	B	C
22219	GA 200x100	200	100	25
22220	GA 300x100	300		
22221	GA 300x150		150	



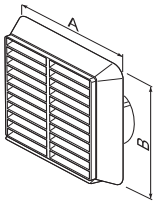
SYSTEM COMPONENTS

FIXED POLYPROPYLENE GRILLE

Fixed polypropylene supply/extract ventilation grille, permissible temperature +60 °C / -15 °C.

DIMENSIONS (mm)

Code	Models	⍁ A	⍁ B	Ø
46042	GRIGLIA Ø 125	155		125
46043	GRIGLIA Ø 150	185		150

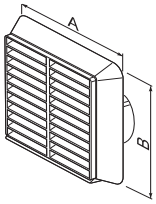


FIXED POLYPROPYLENE ANTI-INSECT GRILLE

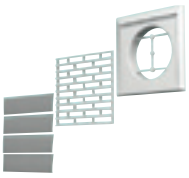
Fixed polypropylene supply/extract ventilation grille, permissible temperature +60 °C / -15 °C.
Version with anti-insect screen.

DIMENSIONS (mm)

Code	Models	⍁ A	⍁ B	Ø
46058	GRIGLIA Ø 125	155		125
46059	GRIGLIA Ø 150	185		150



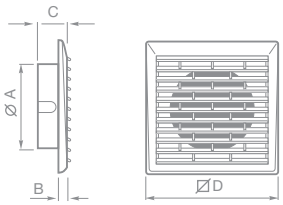
GRILLE KIT



Grille mounting frame, fixed grille, gravity flaps.

DIMENSIONIS (mm)

Code	Models	A	⍁ B	C	Ø D	E
22143	KIT GRIGLIA 90	2.5	140	20	92.5	8
22140	KIT GRIGLIA 100				99	
22141	KIT GRIGLIA 120		160		119	
22142	KIT GRIGLIA 150		190		149	



NOTE

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Cod. 5.170.084.995 09/15

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