



**CONTINUOUS  
MECHANICAL VENTILATION  
SYSTEMS**





**VORTICE S.p.A.** is part of a multinational group, **VORTICE GROUP**, which operates through its own companies or local distributors in over 90 countries worldwide and has a rich product portfolio that guarantees air quality and climate comfort. The headquarters of VORTICE S.p.A are in Tribiano (Milan).



The VORTICE GROUP also includes:

[ 1 ]  
**VORTICE LIMITED**, the UK subsidiary of VORTICE S.p.A founded in 1977 with headquarters in Burton upon Trent.

[ 2 ]  
**VORTICE INDUSTRIAL**, born from the acquisition in 2010 of Loran srl, based in Isola della Scala (VR).


[ 3 ]  
**VORTICE Ventilation System**, a company inaugurated in 2013 with headquarters in Changzhou, China.

[ 4 ]  
**VORTICE Latam**, based in Alajuela in Costa Rica, established in 2012.

[ 5 ]  
**CASALS VENTILACIÓN AIR INDUSTRIAL S.L.** historic Spanish brand, based in Sant Joan de les Abadesses, Girona, acquired in 2019.



# CONTENTS

<p>06 <b>VORT QUADRO dMEV RANGE</b> Centrifugal dMEV unit with EC (brushless) motor</p> <p>10 <b>VORT NOTUS RANGE</b> Axial dMEV unit</p> <p>14 <b>VORT LETO MEV HCS RANGE</b> Centralised mechanical extract unit</p> <p>18 <b>VORT PENTA RANGE</b> Self balancing centralised mechanical extract unit</p> <p>22 <b>VORT MONO RANGE</b> Decentralised heat recovery unit with on-board controls or with remote control and HCS sensor</p> <p>26 <b>VORT HR 200 BP RANGE</b> Compact centralised heat recovery unit</p> <p>30 <b>VORT HR NETI RANGE</b> Centralised heat recovery unit with 100% filtered bypass</p>	<p>34 <b>VORT HR AVEL RANGE</b> Centralised heat recovery unit with 100% filtered bypass</p> <p>38 <b>VORT AVEL HR 450 D RANGE</b>  Passivhaus certified centralised heat recovery unit</p> <p>42 <b>VORT INVISIBLE MINI RANGE</b> False ceiling mounted centralised mechanical extract unit with heat recovery</p> <p>46 <b>VORT PHANTOM RANGE</b> Void mounted heat recovery unit</p> <p>50 <b>NOX FILTERS</b> Indoor filters for the filtration of NO<sub>2</sub> levels</p> <p>51 <b>CB TOUCH LCD W</b> Remote control panel with colour LCD graphic display</p>
--	---

## PRODUCT FEATURES KEY



Products equipped with EC Brushless motors



Units can be installed ZONE 1



Products with air filtration system



Energy efficient



Wi-Fi controlled



Products with sanitisation system



Low noise



Can be app controlled



Control panel



Plug&Play



Great robustness & durable

We work to promote life quality  
and to contribute to the social evolution  
through eco-friendly products  
that move air **safely and efficiency.**





## WHY VENTILATE?

It is simple, the air we breathe is important! The effect of not having good indoor air quality in the home is dramatic. The average person spends 90% of time indoors and breathing in stale, contaminated air can lead to health issues. Newer houses have become more air tight which means it is harder to get a fresh air path through the building. Breathing in stale contaminated air can lead to health issues.

Factors that can lead to an unhealthy indoor air quality include:

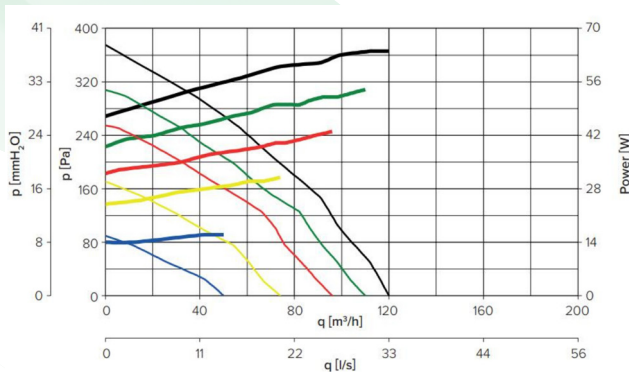


Animal Hair    Paint Fumes    Cooking

Exposure to a poor indoor air environment over time can result in health issues such as respiratory issues such as fatigue and nausea. It can cause:



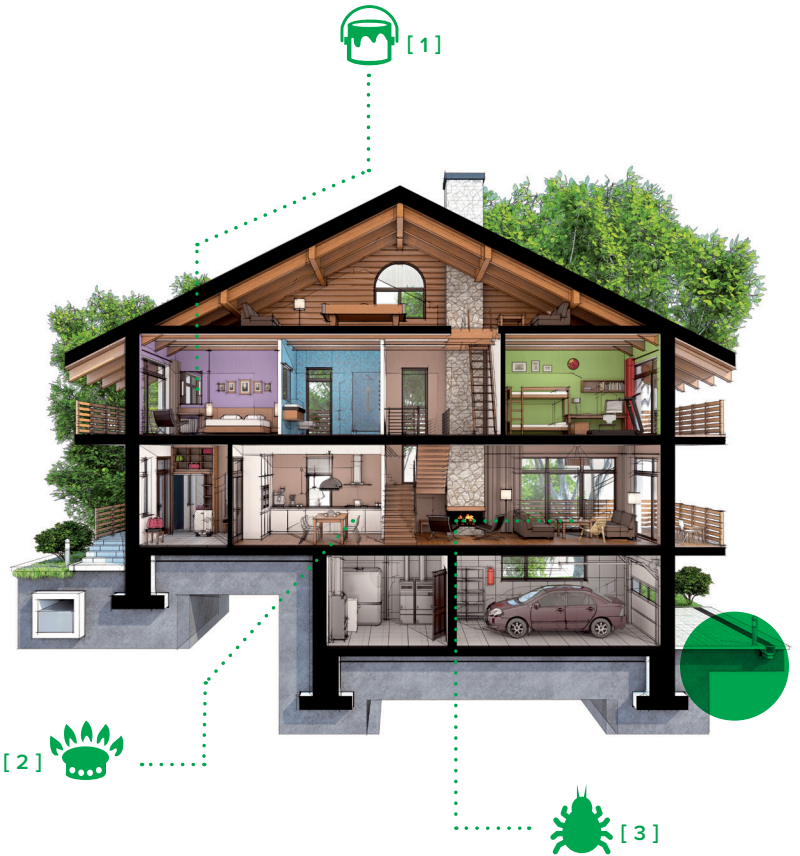
Mould Growth    Condensation    Dust Mites



## VENTILATION IS KEY!

Good ventilation is fundamental to introducing fresh filtered air into the home, thereby reducing the spread of bacteria and viruses and ensuring good indoor air quality.

One way to achieve this is to use a heat recovery unit. A heat recovery unit is a centralised mechanical ventilation system. The units recover the heat or energy contained in stale indoor air before extracting it, by passing it over a heat exchanger then adding the recovered energy back into the rooms. This in turn lowers heating bills and saves cost. VORTICE offers a wide range of units from single room units to large commercial heat recovery, to suit many applications.



- [ 1 ] THE VOLATILE ORGANIC COMPOUNDS (VOCs) RELEASED FROM PAINT FUMES CAN HAVE A SERIOUS EFFECT ON HEALTH WHEN BREATHED IN FOR LONG PERIODS OF TIME.
- [ 2 ] COOKING USING A GAS APPLIANCE EMITS NITROGEN DIOXIDE, FORMALDEHYDE AND CARBON MONOXIDE. THESE CAN LEAD TO THE INCREASE OF VARIOUS RESPIRATORY AND OTHER HEALTH ISSUES.
- [ 3 ] CARPETS COULD HARBOUR DUST MITES, ANIMAL DANDER AND HARMFUL PARTICLES.



VORTICE helps construct and redevelop high-efficiency and sustainability buildings with its products. The safety and effectiveness of VORTICE products are certified by IMQ.





# VORT QUADRO dMEV RANGE

CENTRIFUGAL DMEV UNIT WITH EC BRUSHLESS MOTORS

## DECENTRALISED VENTILATION



- Centrifugal decentralised (dMEV) unit
- Stylish sleek design
- High efficiency and low energy consumption
- Low noise emissions
- 80mm to 100mm adaptor included
- Inbuilt ceiling kit included
- IP45 rated- can be installed in zone 1 of bathrooms



Energy efficient



Low noise

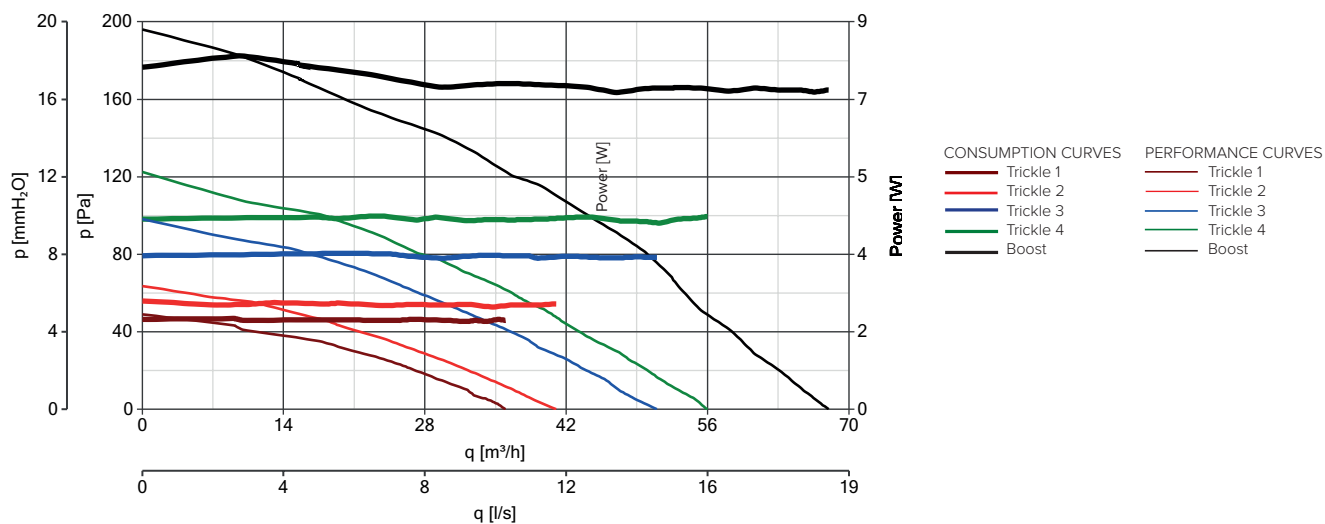


Units can be installed ZONE 1

6

## PERFORMANCE AND ABSORPTION

VORT QUADRO dMEV



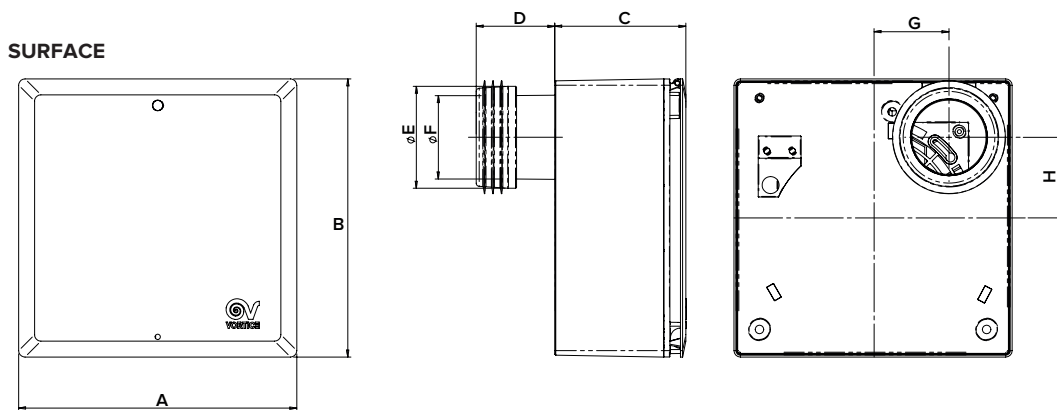
## TECHNICAL DATA

PRODUCTS	CODE	V ~ 50 Hz	W	A	RPM	MAX AIRFLOW		MAX PRESSURE		MIN. Lw dB(A)*	MAX °C	KG
						m³/h	l/s	mmH₂O	Pa			
VORT QUADRO dMEV	12192	220 - 240	8	0,085	1730	68	18,9	20	196,14	17,4	50	1,86
VORT QUADRO dMEV T-HCS	12194	220 - 240	8	0,085	1730	68	18,9	20	196,14	17,4	50	1,92
VORT QUADRO dMEV I	12196	220 - 240	8	0,085	1730	68	18,9	20	196,14	17,4	50	1,95
VORT QUADRO dMEV I T-HCS	12198	220 - 240	8	0,085	1730	68	18,9	20	196,14	17,4	50	2,00

\* Sound pressure level calculated at 3m with spherical distribution

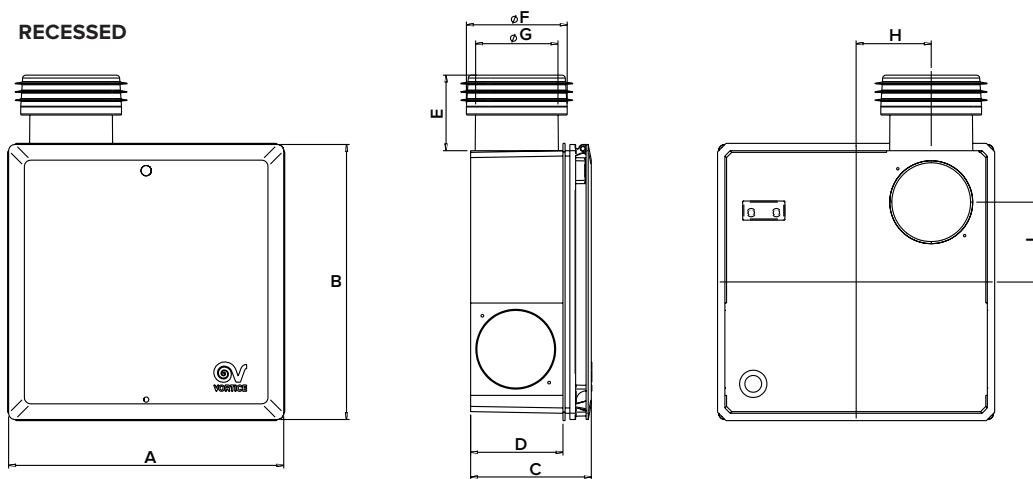


## DIMENSIONS



PRODUCTS	CODE	A	B	C	D	Ø E	Ø F	G	H
VORT QUADRO dMEV	12192	262	262	124	73,5	96	79	71,5	76
VORT QUADRO dMEV T-HCS	12194	262	262	124	73,5	96	79	71,5	76

Dimensions (mm)



PRODUCTS	CODE	A	B	C	D	E	Ø F	Ø G	H	I
VORT QUADRO dMEV I	12196	262	262	115	90	80	96	79	71,5	76
VORT QUADRO dMEV I T-HCS	12198	262	262	115	90	80	96	79	71,5	76

Dimensions (mm)



**VORT QUADRO dMEV RANGE**  
CENTRIFUGAL DECENTRALISED UNIT WITH EC BRUSHLESS MOTOR

## TECHNICAL FEATURES

- **2 models:** surface and recessed
- **2 control options:** standard and timer + relative humidity sensor (T-HCS)
- **Stylish front panel:** sleek style hinged front panel which allows for easy access for maintenance to the filters
- **EC brushless motor:** with shaft on ball bearings, allowing a minimum continuous running time of 30,000 hours at max rated temperature
- **Centrifugal impeller:** made of PBT allowing the product to have high rigidity, stability and resistance to aggressive chemical agents
- **Rear casing:** made of class E plastic resin, according to EN ISO 11925-2:201
- **Motor housing:** made of class E resin allowing easy cleaning and maintenance
- **Rubber adapter ring:** from 80 mm to 100 mm, to allow the air discharge in 100 mm ducts
- **Ceiling kit:** allowing correct installation into ceilings (product included)
- **G2 filter:** with a remove filter alarm fully compliant with ErP Regulation N° 1253/2014/UE 2nd Tier, in force since 1st January 2018
- **Performance and safety:** certified by third parties (CE)
- **IP45 rated**

## PCDB DATA

8

### RECESSED VERSIONS

UNIT CONFIGURATION	LOCATION	FAN SPEED SETTING	SPECIFIC FAN POWER (W/l/s)
in room	kitchen	4	0.31
	wet room	2	0.29
in duct	-	-	-
	-	-	-
through wall	kitchen	4	0.31
	wet room	2	0.29

### SURFACE VERSIONS

UNIT CONFIGURATION	LOCATION	FAN SPEED SETTING	SPECIFIC FAN POWER (W/l/s)
in room	kitchen	3	0.23
	wet room	1	0.23
in duct	-	-	-
	-	-	-
through wall	kitchen	3	0.23
	wet room	1	0.23







# VORT NOTUS RANGE

AXIAL DECENTRALISED UNIT

## DECENTRALISED VENTILATION



- Axial decentralised (dMEV) unit
- HCS version offers inbuilt adjustable timer from 3-20 minutes and humidity sensor from 60-90%
- Wall installations only
- IPX4 rated



Reduced thickness (approx. 40 mm) minimising intrusion in room



Energy efficient

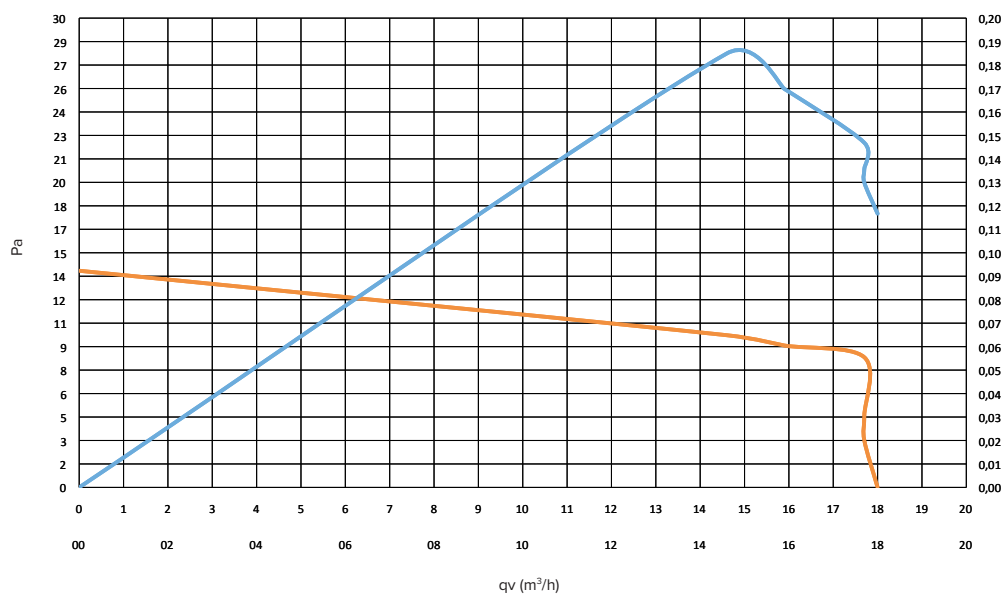


Products equipped with EC Brushless motors

10

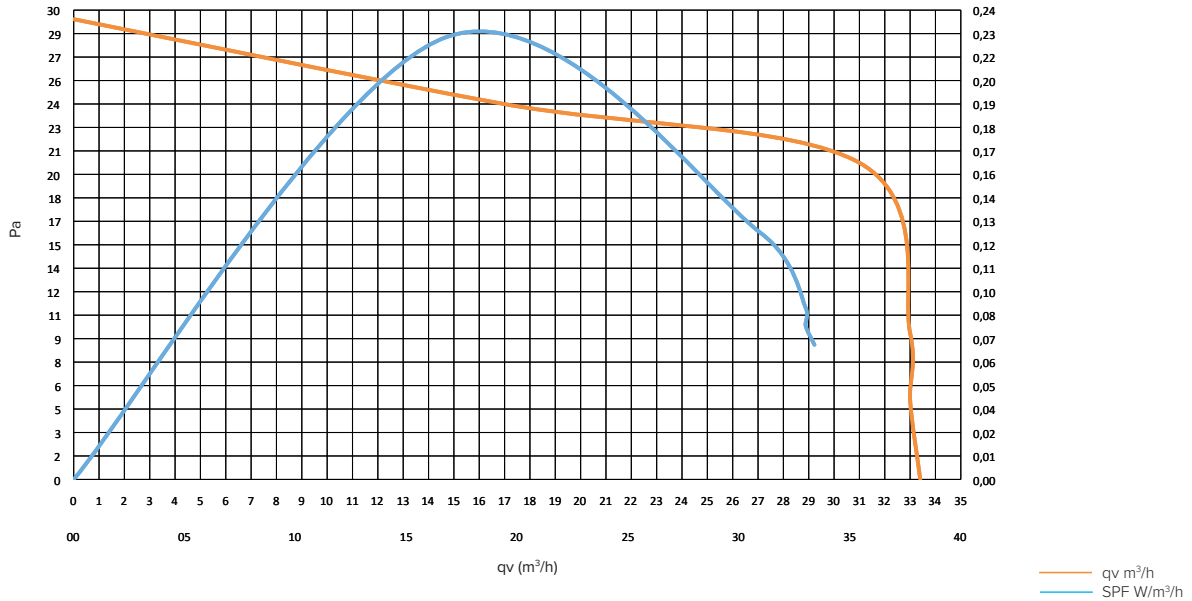
## PERFORMANCE AND ABSORPTION

### MINIMUM SPEED

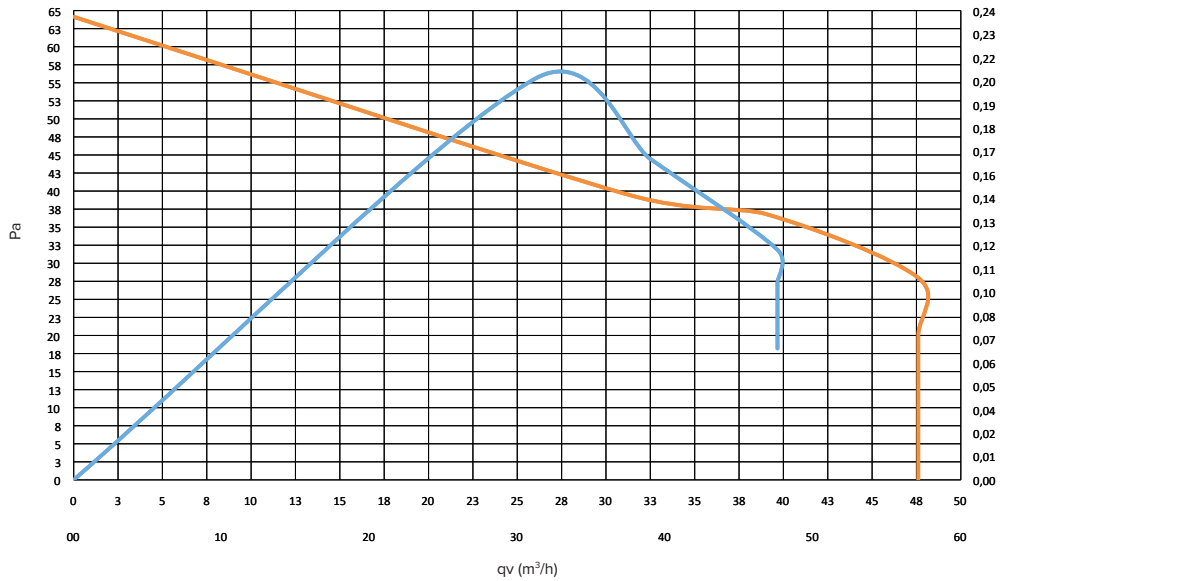


— qv m³/h  
— SPF W/m³/h

### MEDIUM SPEED



### MAXIMUM SPEED



## TECHNICAL DATA

PRODUCTS	CODE	V~50HZ	W min/max	A min/max	MAX FLOW RATE		MAX PRESSURE		Lp dB(A)* 3m min/max	°C* MAX	KG
					m³/h min/max	l/s min/max	mmH <sub>2</sub> O min/max	Pa min/max			
VORT NOTUS	11903	220-230	1.5 2.8	0.018 0.025	11.7 42.0	3.3 11.7	2.4 8.8	23.5 86.3	10.1 17.3	50	0.80
VORT NOTUS T-HCS	11177	220-230	2.1 6.4	0.028 0.037	11.7 42.0	3.3 11.7	2.4 8.8	23.5 86.3	10.1 17.3	50	0.80

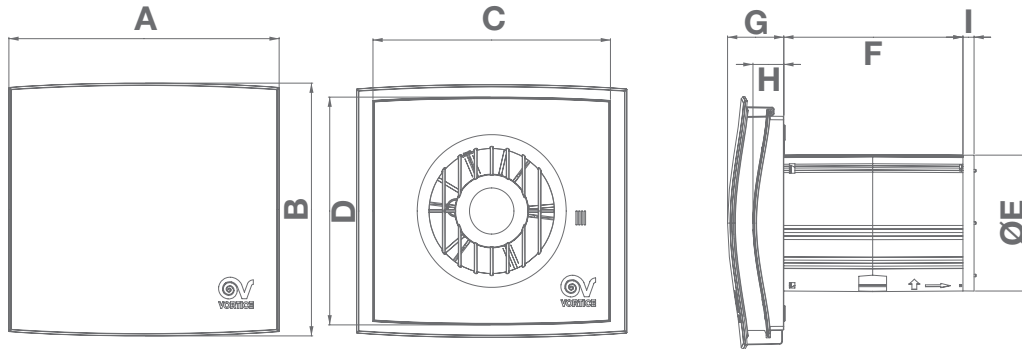
\* Acoustic pressure measured from 3 m in free field, in compliance with ISO 3741.

\*\* Maximum continuous operating temperature of the product.



**VORT NOTUS RANGE**  
AXIAL DECENTRALISED UNIT

**DIMENSIONS**



PRODUCTS	CODE	A	B	C	D	ØE	F	G	H	I
VORT NOTUS	11177	194.6	182	171	164	97.8	129	40.5	22.2	8
VORT NOTUS T-HCS	11903	194.6	182	171	164	97.8	129	40.5	22.2	8

Dimensions in mm

**TECHNICAL FEATURES**

- **2 models** with a nominal diameter of 100 mm, also in version with timer and humidistat
- **White plastic resin construction** (ABS), resistant to impact and aging due to exposure to the sun ("UV resistant")
- **EC (brushless) motors**, thermally protected, with external rotor, with shafts mounted on ball bearings to guarantee prolonged continuous service (at least 30,000 h) at the maximum plate temperature, featuring very low consumption and capable of delivering 3 different flow levels, 2 of which can be set as an alternative upon installation
- Helical impellers with wing profile blades **optimised to combine high efficiency with low noise emissions**
- T-HCS model **equipped with an electronic board with relative humidity (RH)** sensor which automatically switches from the minimum flow previously set to the maximum flow. The board integrates an electronic timer that restores operation at minimum speed, after the return of the RH below the threshold value, with a delay that can be set during installation in the 3'-20' interval (default setting 3')
- Performance and safety certified by third parties (CE and BRE)
- **Degree of protection from dust and water:** IPX4 (suitable for Zone 1 installation)
- **Electrical insulation class:** II (earthing not required)





# VORT LETO MEV HCS RANGE

## CENTRALISED VENTILATION



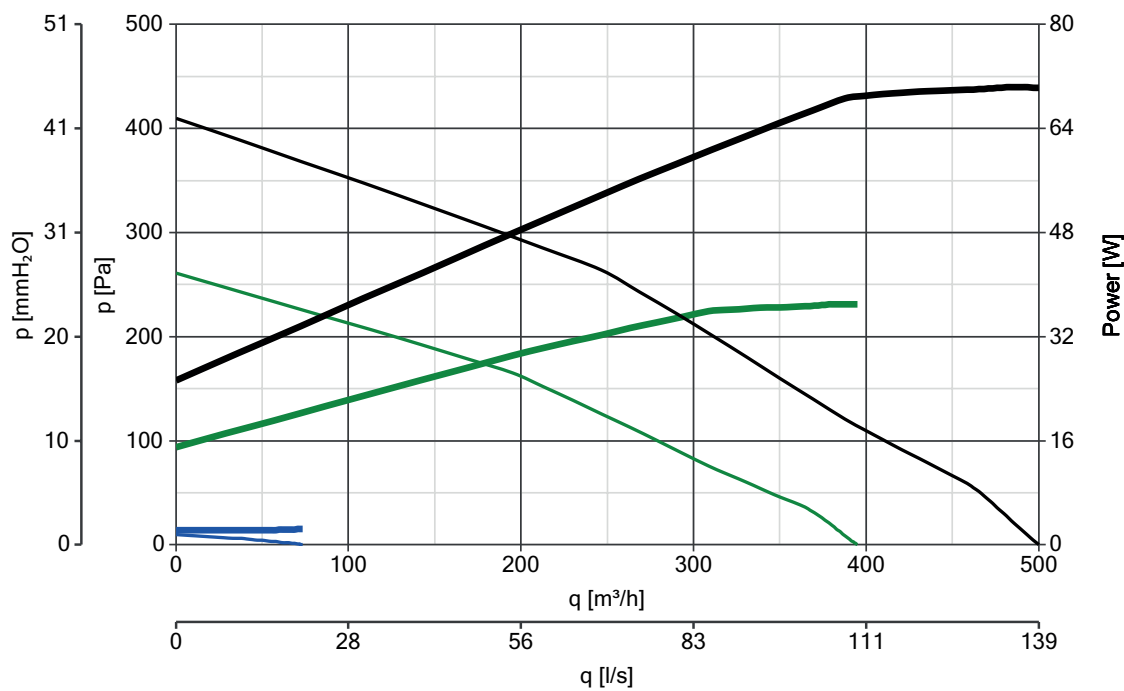
- Centralised mechanical extract unit
- Kitchen + 6 wet rooms
- Integral humidity sensors
- Product Characteristics Database Listed (PCDB)
- Flexible install options - can be mounted in any orientation
- IPX4 rated



Energy efficient

14

## PERFORMANCE AND ABSORPTION



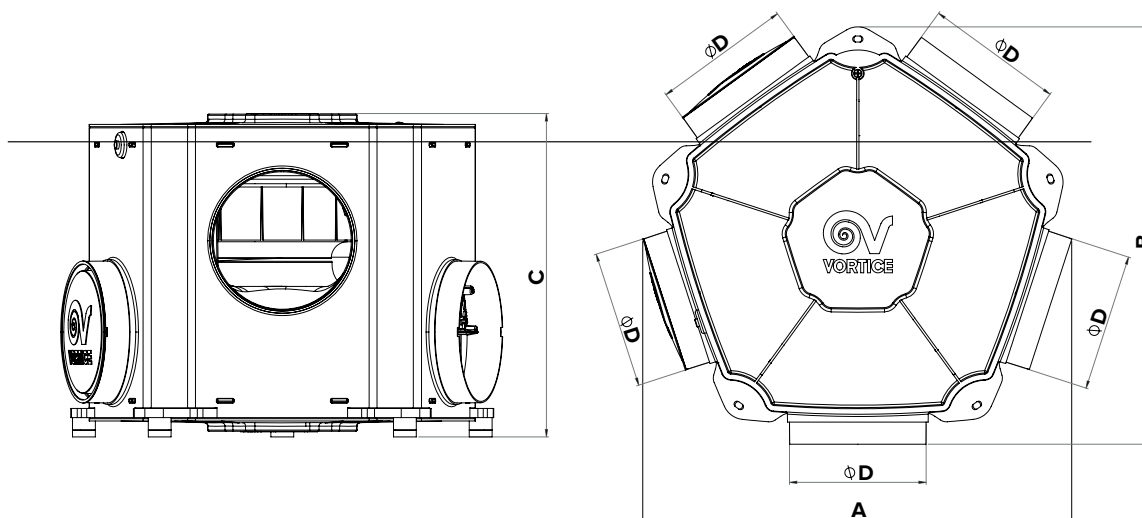
CONSUMPTION CURVES      PERFORMANCE CURVES

— speed 3                      — speed 3  
 — speed 2                      — speed 2  
 — speed 1                      — speed 1

## TECHNICAL DATA

PRODUCTS	CODE	V ~ 50 Hz	W min	W max	A min	A max	AIRFLOW min		AIRFLOW max		PRESSURE min		PRESSURE max		MAX °C	KG
							m <sup>3</sup> /h	l/s	m <sup>3</sup> /h	l/s	mmH <sub>2</sub> O	Pa	mmH <sub>2</sub> O	Pa		
VORT LETO MEV HCS	12167	230	2.5	70	0.08	0.57	72	20	500	138.9	1.035	10	41.8	410	50	3.32

## DIMENSIONS



PRODUCTS	CODE	A	B	C	D
VORT LETO MEV HCS	12167	262	262	124	73,5

Dimensions in mm

## TECHNICAL FEATURES

- **Adaptable to application** with 3 speeds (commissioning required on unit to ensure correct airflows required)
- **Precise speed setting** with potentiometers in order to achieve maximum energy saving
- The product is also equipped with **two relative humidity sensors** (pre-installed on-board the machine and to be set on **kitchen** and **bathroom** air inlets)  
The value read by the device sensors relates to the air extracted from the two room serviced by the internal sensors (bathroom and kitchen). If at least one or both sensors exceed the **threshold level set by the dip switch during the installation** (factory default 60%; 70%, 80%, 90%), the internal regulator automatically sets the **BOOST speed** for the motor **for 10 minutes** (fixed, not settable)  
**After the 10 minutes**, the speed goes automatically back to the previously set value, holding there for at least 10 minutes, regardless of the humidity values measured by the sensors
- **IPX4 Rated**

**VORT LETO MEV HCS**  
CENTRALISED MECHANICAL EXTRACT UNIT

**PCDB DATA**

EXHAUST TERMINAL CONFIGURATION	FAN SPEED SETTING	SPECIFIC FAN POWER (W/l/s)	EXHAUST TERMINAL CONFIGURATION	FAN SPEED SETTING	TOTAL FLOW RATE (l/s)	TOTAL FLOW RATE WIND CONDITION (l/s)	% REDUCTION OF TOTAL FLOW RATE
Kitchen +1 additional wet room	100% variable	0.18	Kitchen +1 additional wet room	100% variable	21	18.9	10.0
Kitchen +2 additional wet room	100% variable	0.17	Kitchen +2 additional wet room	100% variable	29	26.9	7.2
Kitchen +3 additional wet room	100% variable	0.18	Kitchen +3 additional wet room	100% variable	37	35.0	5.4
Kitchen +4 additional wet room	100% variable	0.22	Kitchen +4 additional wet room	100% variable	45	43.2	4.0
Kitchen +5 additional wet room	100% variable	0.25	Kitchen +5 additional wet room	100% variable	53	51.4	3.0
Kitchen +6 additional wet room	100% variable	0.30	Kitchen +6 additional wet room	100% variable	61	59.6	2.3







# VORT PENTA RANGE

SELF BALANCING CENTRALISED MECHANICAL VENTILATION UNIT

## CENTRALISED VENTILATION



- Centralised mechanical extract unit
- Kitchen + 5 wet rooms
- Integral humidity sensors
- Self balancing unit
- Includes 2 regulators and 4 blanks
- IPX4 rated



Unit can be mounted in any orientation ensuring an easy install!

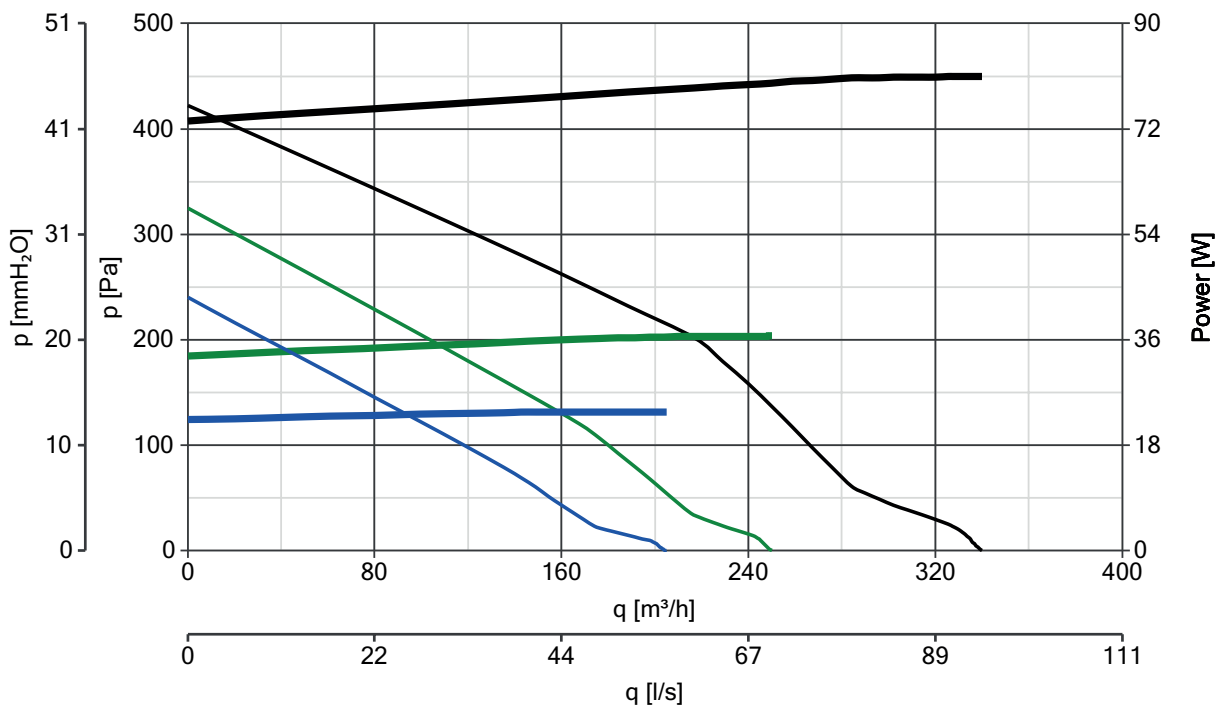


Unit can be suspended on the ceiling using the cable supplied as standard



Plug&Play

## PERFORMANCE AND ABSORPTION



CONSUMPTION CURVES      PERFORMANCE CURVES

— max                              — max  
 — med                             — med  
 — min                              — min



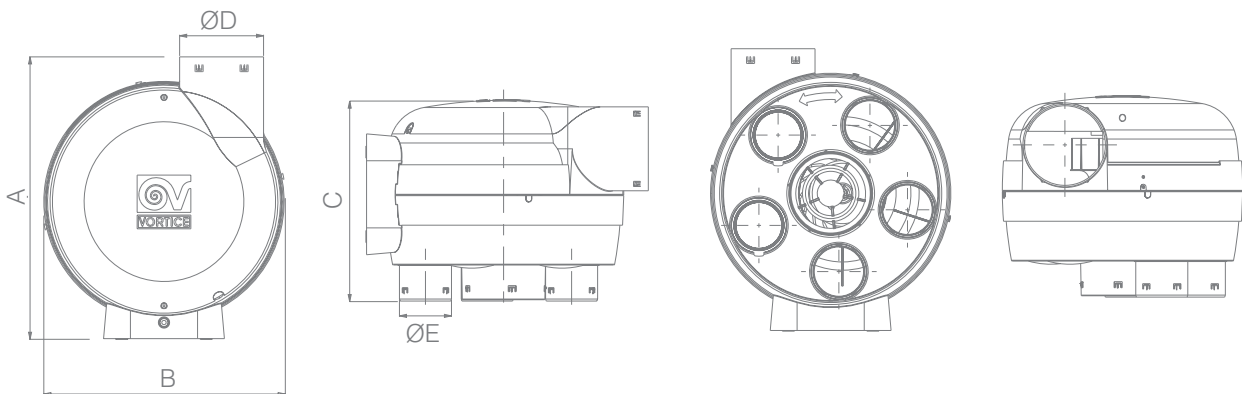
## TECHNICAL DATA

PRODUCTS	CODE	V~50HZ	W min/max	A min/max	RPM min/max	MAX FLOW RATE		MAX PRESSURE		Lp dB(A)* 3m min/max	°C* MAX	KG
						m <sup>3</sup> /h min/max	l/s min/max	mmH <sub>2</sub> O min/max	Pa min/max			
VORT PENTA MEV HCS	12103	230	21 73	0.19 0.34	1245 2160	205 340	59.9 94.4	24.4 43.0	240.1 421.9	- 31.9	40	4.4

\* Acoustic pressure measured from 3 m in free field, in compliance with ISO 3741.

\*\* Maximum continuous operating temperature of the product.

## DIMENSIONS



PRODUCTS	A	B	C	ØD	ØE
VORT PENTA MEV HCS	420	358	300	125	77.5

Dimensions in mm

## TECHNICAL FEATURES

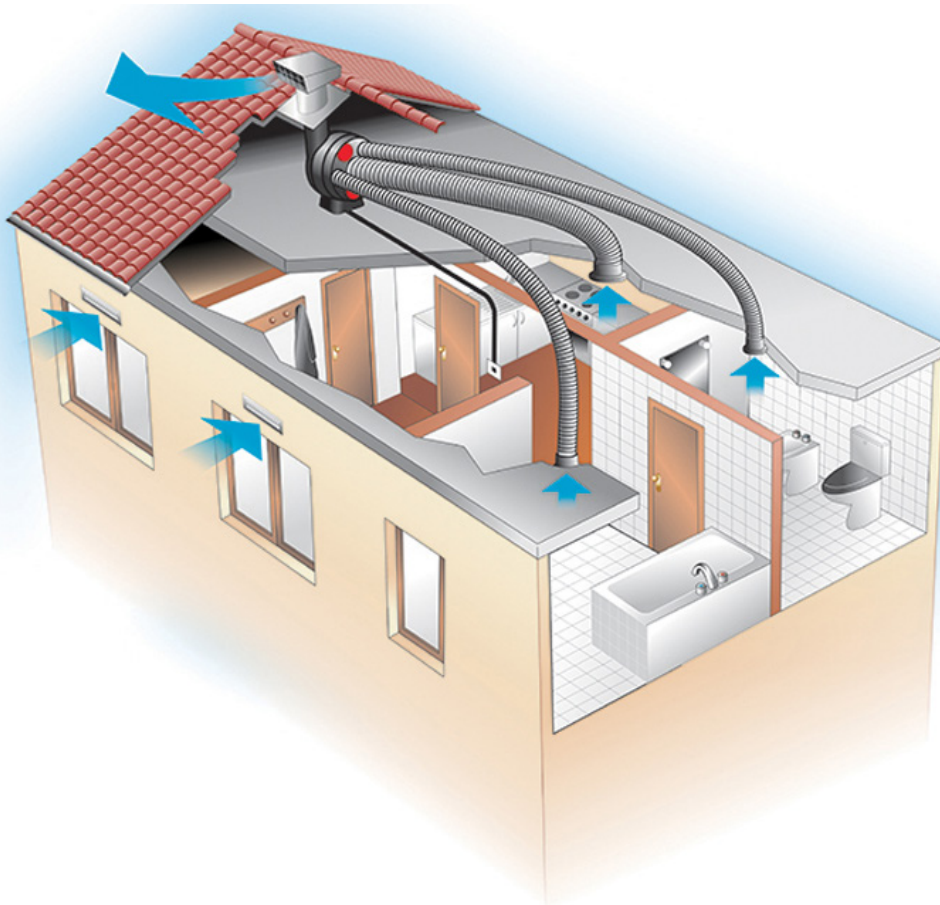
- **1 model.**
- **Black plastic resin (ABS) casing** resistant to impact and aging due to sun exposure ("UV resistant"); the lower surface integrates 6 intake spigots, 5 with a nominal diameter of 80 mm and one with a 125 mm diameter. The discharge mouth, with a nominal diameter of 125 mm, is on the lateral surface. On the upper surface, protected by a sealed black ABS cover
- **Plastic resin bracket (ABS) black**, sliding along the side of the products and integrating the holes for fixing the appliance to the target surface
- **3 speed AC motor**, thermally protected, shaft mounted on ball bearings, guarantees prolonged service (at least 30,000 h) at the
- **Relative humidity sensors**, electronically managed, with threshold adjustable at installation.
- **4 caps** with an 80 mm diameter, for closing any spigot that may not be used, supplied as standard
- **Safety certified by a third party** (CE)
- **IPX4 rated**
- **Electrical insulation class: II** (grounding not required)



**VORT PENTA RANGE**  
SELF BALANCING CENTRALISED MECHANICAL VENTILATION UNIT

**ACCESSORIES**

MODELS	DESCRIPTION	CODE	FOR MODEL
	1 Gang 1 way switch marked Boost	46426	12103
	80mm Fixed Ceiling Grille	91008	12103
	125mm Fixed Ceiling Grille	91009	12103
	Penta MEV 30 Air Valve	22325	12103
	100mm Low Resistance Fixed Grille	22418	12103
	120mm Low Resistance Fixed Grille	22419	12103







# VORT MONO RANGE

SINGLE ROOM HEAT RECOVERY UNIT

## DECENTRALISED VENTILATION WITH HEAT RECOVERY



- Decentralised single room heat recovery unit
- High efficiency, suitable for recessed installation
- Quiet, efficient and energy saving
- Wifi module available
- 5 speeds
- Easy accessible filters
- IPX4 rated

22



Wi-Fi controlled



Energy efficient



Products with air filtration system

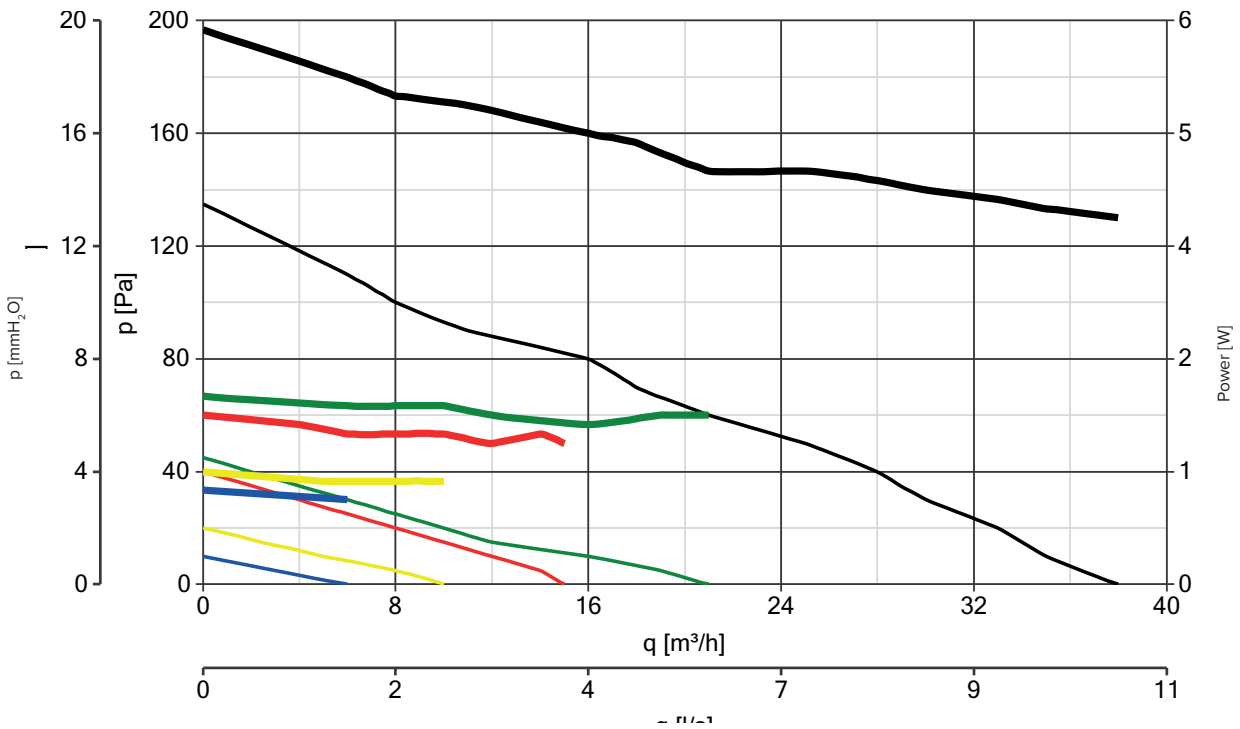


Low noise



Products equipped with EC Brushless motors

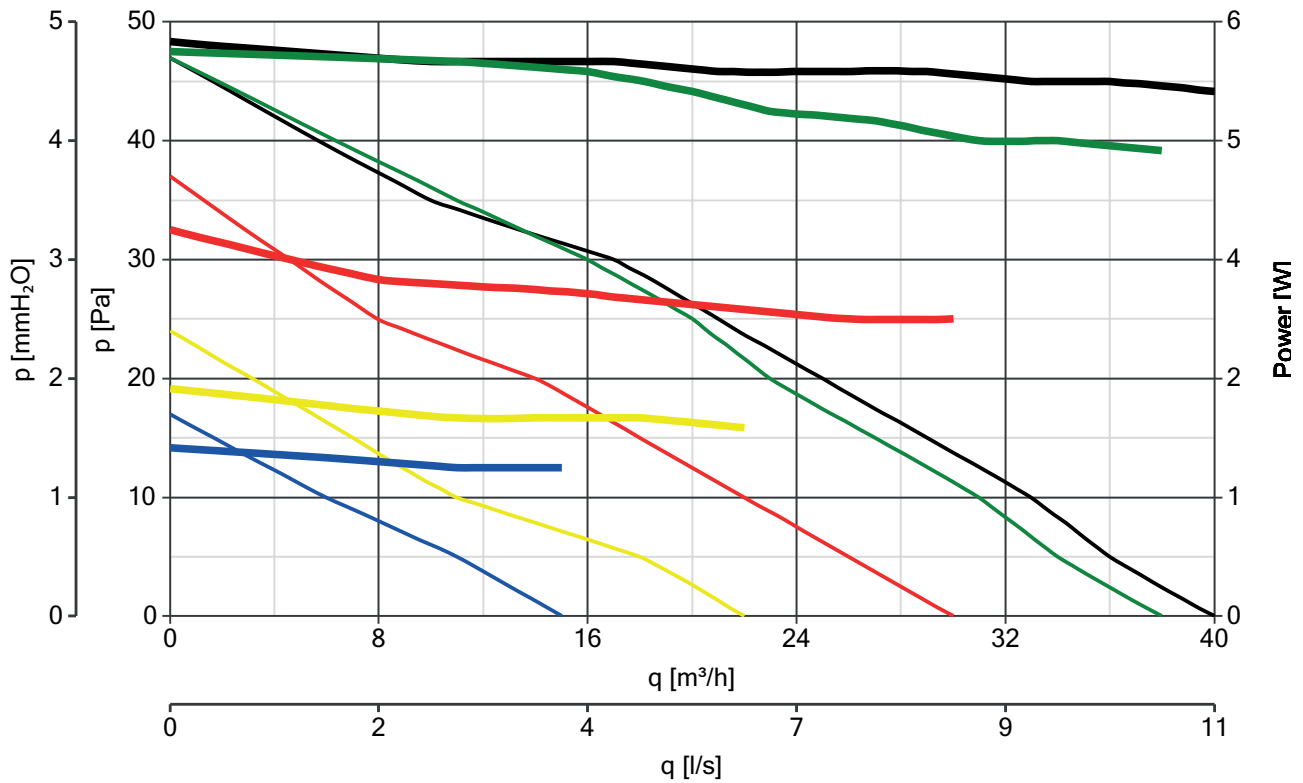
## PERFORMANCE AND ABSORPTION



**LEGEND:**

NIGHT MODE	QUIET MODE	PERFORMANCE MODE	HIGH PERFORMANCE MODE	BOOST MODE
— Pressure	— Pressure	— Pressure	— Pressure	— Pressure
— Power	— Power	— Power	— Power	— Power



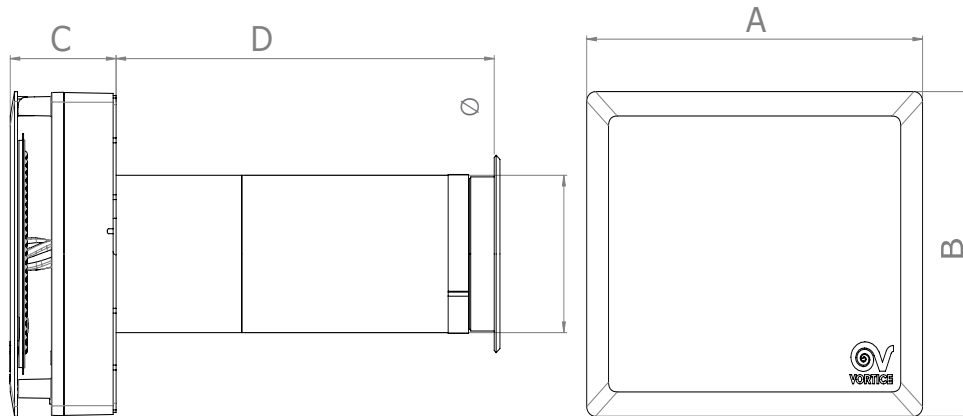


## TECHNICAL DATA

PRODUCTS	CODE	V <sub>n</sub> 50-60HZ	W max	A max	m <sup>3</sup> /h min/max	l/s min/max	mmH <sub>2</sub> O min/max	Pa min/max	LP DB (A) 3m min/max	°C MAX	KG
VORT HRW 30 MONO EVO	12434	220-240	4	0.04	6 38	1.7 10.5	1 13.7	10 130	19.1 49.2	30	3.1
VORT HRW 30 MONO EVO HCS	12436	220-240	4	0.04	6 38	1.7 10.5	1 13.7	10 130	19.1 49.2	30	3.1
VORT HRW 30 MONO EVO HCS WIFI	12443	220-240	4	0.04	6 38	1.7 10.5	1 13.7	10 130	19.1 49.2	30	3.1
VORT HRW 40 MONO EVO	12435	220-240	5	0.05	15 40	4.2 11.1	1.7 4.8	17 47	19 31.8	30	3.3
VORT HRW 40 MONO EVO HCS	12437	220-240	5	0.05	14 40	4.2 11.1	1.7 4.8	17 47	19 31.8	30	3.3
VORT HRW 40 MONO EVO HCS WIFI	12444	220-240	5	0.05	14 40	4.2 11.1	1.7 4.8	17 47	19 31.8	30	3.3
VORT HRW 60 MONO EVO HCS	12431	220-240	7	0.07	10 60	2.7 16.7		15 120	19 31.8	30	3.3
VORT HRW 60 MONO EVO HCS WIFI	12432	220-240	7	0.07	10 60	10 60		15 120	19 31.8	30	3.3

**VORT HRW 30 MONO RANGE**  
 DECENTRALISED HEAT RECOVERY WITH ON-BOARD CONTROLS  
 OR WITH REMOTE CONTROL AND HCS SENSOR

## DIMENSIONS







PRODUCTS	A	B	C	D	Ø
VORT HRW 30 MONO	231	200	73	260	97
VORT HRW 40 / 60 MONO	231	200	73	283	146

Dimensions in mm

## TECHNICAL FEATURES

- **8 models**, with on-board controls, remote control, and relative humidity, temperature and light sensor
- **Pressed wall casing** made of aesthetic plastic resin, resistant to impacts and ageing induced by light; it integrates controls for switching the appliance on and off, and regulating the operating modes and the treated flow. In the HCS models, it also integrates a relative humidity and light sensor for the automatic operation of the product
- The **fans** used in the products of the VORT MONO RANGE comply with the European ERP Directive no. 2009/125
- **EC motor fans**, to ensure very low consumption, powered by low voltage and with shafts mounted on ball bearings. Featuring 5 operating speeds, for the best compromise between air flow rate, consumption, and noise emission, they are designed to work in a clockwise and anti-clockwise direction, thus allowing the product to operate in the Intake, Ventilation and Ventilation with heat recovery modes
- **High-efficiency (90%) storage heat exchangers**, made of ceramic material of the hexagonal cell type to maximise the heat exchange surface. In winter operation (in summer the logic is reversed), thanks to the periodic inversion of the rotation direction of the motor fan, the exchange pack is cyclically heated by the hot air extracted and subsequently transfers most of this heat to the incoming cold renewal air
- **Grilles** External molded rubber grilles, which can be mounted from the inside through the hole in the target wall, to simplify the installation of the product. The grilles include an easily removable anti-insect net to simplify cleaning operations
- **Washable G3 filters**, easily accessible for maintenance and cleaning. Pre-filters, housed on the internal sides
- **3 operating modes:**
  - **Ventilation with heat recovery:** the fan periodically reverses the direction of rotation to allow the transfer of the flow at a lower temperature than the heat previously accumulated in the exchanger
  - **Ventilation in extraction mode:** the fan always operates in extraction mode
  - **Ventilation in delivery mode:** the fan always operates in delivery mode
- **Electrical insulation class:** II (earthing not required)

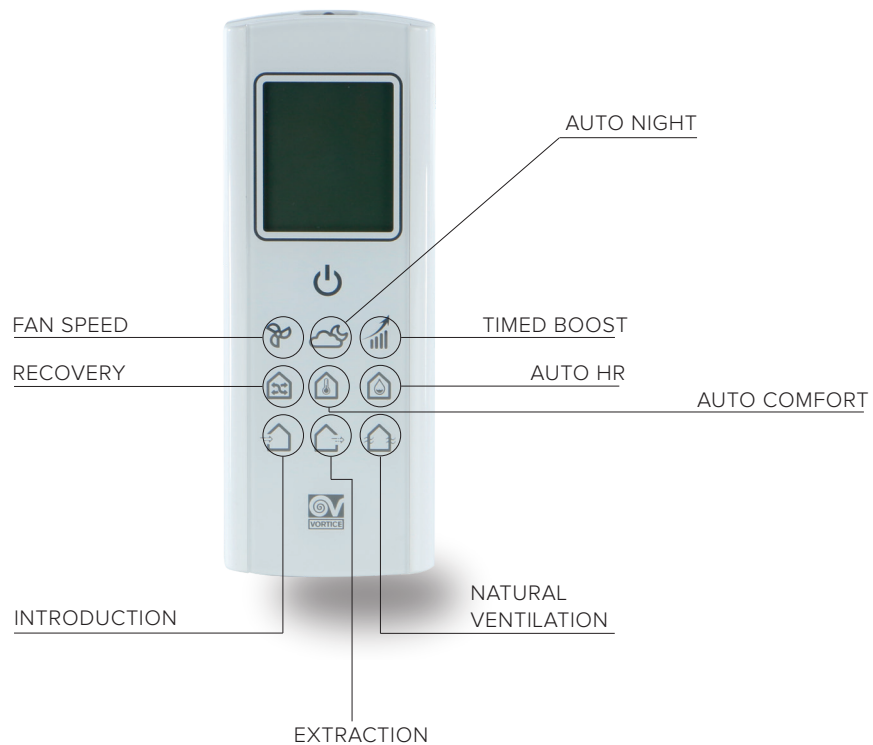
## ACCESSORIES

MODELS	DESCRIPTION	CODE	FOR MODEL
	HRW 30 G3 Filter	21891	12434 12436 12443
	HRW 40/60 G3 Filter	22466	12435 12437 12444 12431 12433
	HRW 30 100 x 700 Wall Liner	21879	12434 12436 12443
	HRW 40/60 160 x 700 Wall Liner	22599	12435 12437 12444

## CONTROLLER INFORMATION

### (FOR HCS MODEL ONLY)

By default the recovery function auto-comfort, auto HR% and auto night modes are active. The humidity threshold is set at the maximum value (90%) and the fan is set at maximum speed to obtain the maximum flow rate (5 fans displayed). The remote control transmits its default status to the product and updates the status on the appliance accordingly. If the status of the machine does not synchronise with the status of the remote control, point the remote control at the appliance and press a button on the remote control to activate the synchronisation.



#### AUTO NIGHT

During periods of darkness (night) the unit is restricted to minimum speed operation by means of an integral light sensor. The higher speed settings, including those activated by means of the HCS sensor (if present), are only available when light is detected by the unit

#### AUTO HR%

When the humidity trigger point is reached the unit automatically enters boost (max) speed. The trigger point can be set at 60%, 75% (default) or 90% relative humidity

#### AUTO COMFORT

The cycle rate of the unit in heat recovery mode is dependent on the temperature of the air. As the supply air temperature cools the cycle time is shortened



# VORT HR 200 BP RANGE

WALL-MOUNTED HEAT RECOVERY UNIT

## CENTRALISED VENTILATION WITH HEAT RECOVERY



- Compact centralised mechanical supply and extract unit with heat recovery
- Product Characteristics Database Listed (PCDB)
- Fresh air 100% fully filtered even in bypass mode
- Fully automatic bypass with optional timed manual activation
- Automatic frost protection and integral summer bypass
- Includes 2 x G3 filters
- Wired electronic controller with LCD panel which displays status
- IPX2 rated

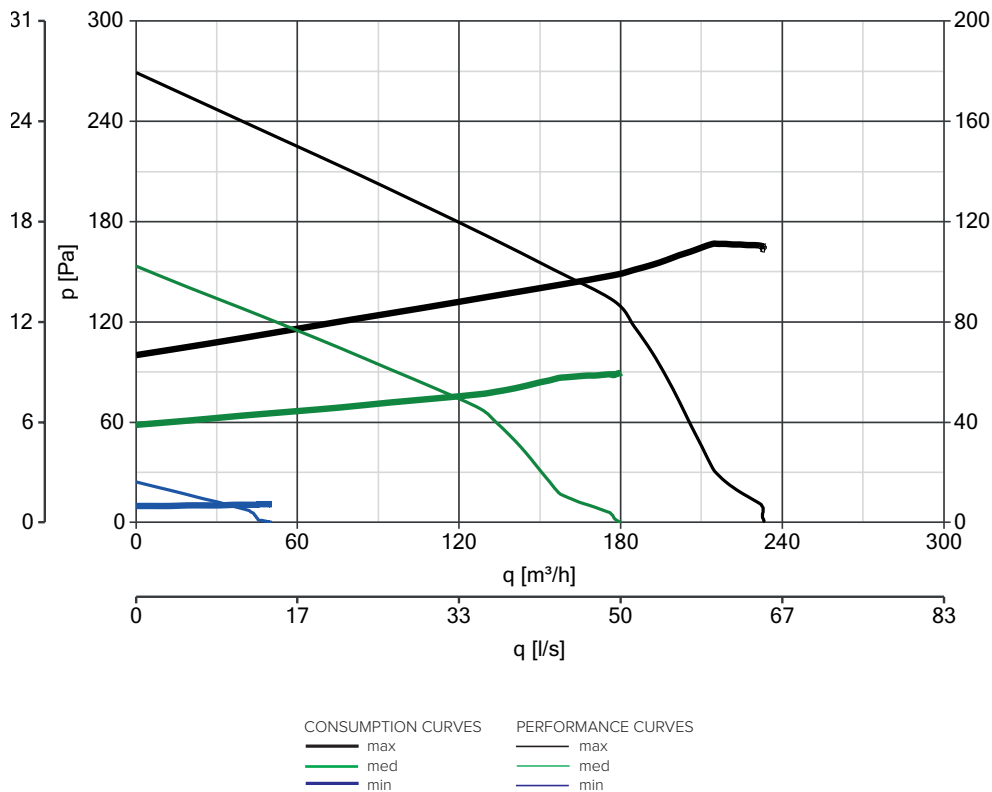


Products equipped with EC Brushless motors



Products with air filtration system

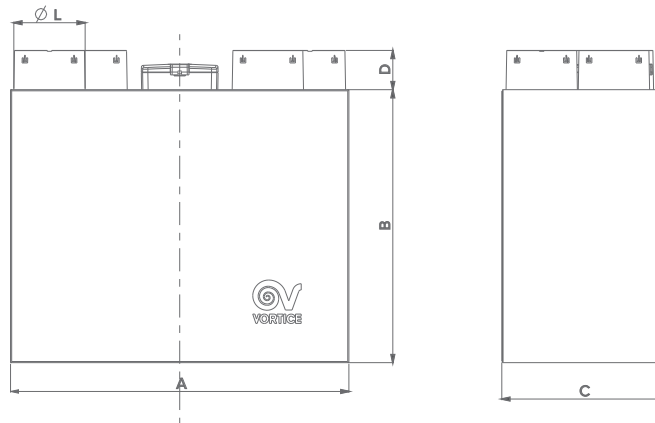
## PERFORMANCE AND ABSORPTION



## TECHNICAL DATA

PRODUCTS	CODE	V~50/60HZ	W max	A max	MAX FLOW RATE		MAX PRESSURE		KG
					m <sup>3</sup> /h	l/s	mmH <sub>2</sub> O	Pa	
VORT HR 200 BP	12102	230	110	0,82	230	64	27	265	16.6

## DIMENSIONS



PRODUCT	A	B	C	D	E	F	G	ØH	I	L
VORT HR 200 BP	595	480	285	69	74	155	127	125	81.5	74.5

Dimensions mm

## TECHNICAL FEATURES

- **1 model**
- **Structure and front panel** in FeP05 sheet metal, 10/10 thick, painted with white polyester powder in a smooth finish
- **Thermodynamic bypass** function
- **Air-air heat exchanger** with cross-flow in PS material, capable of guaranteeing thermal efficiency of over 90%
- **2 standard class G3 filters** according to EN779
- **Forward-bladed centrifugal impeller** splined to an electronically commutated (EC Brushless) external rotor motor, single-phase, ensuring low consumption and low noise emissions
- **IPX2 rated**
- **Electric insulation class: Cl. I**

**VORT HR 200 BP RANGE**  
WALL-MOUNTED HEAT RECOVERY UNIT

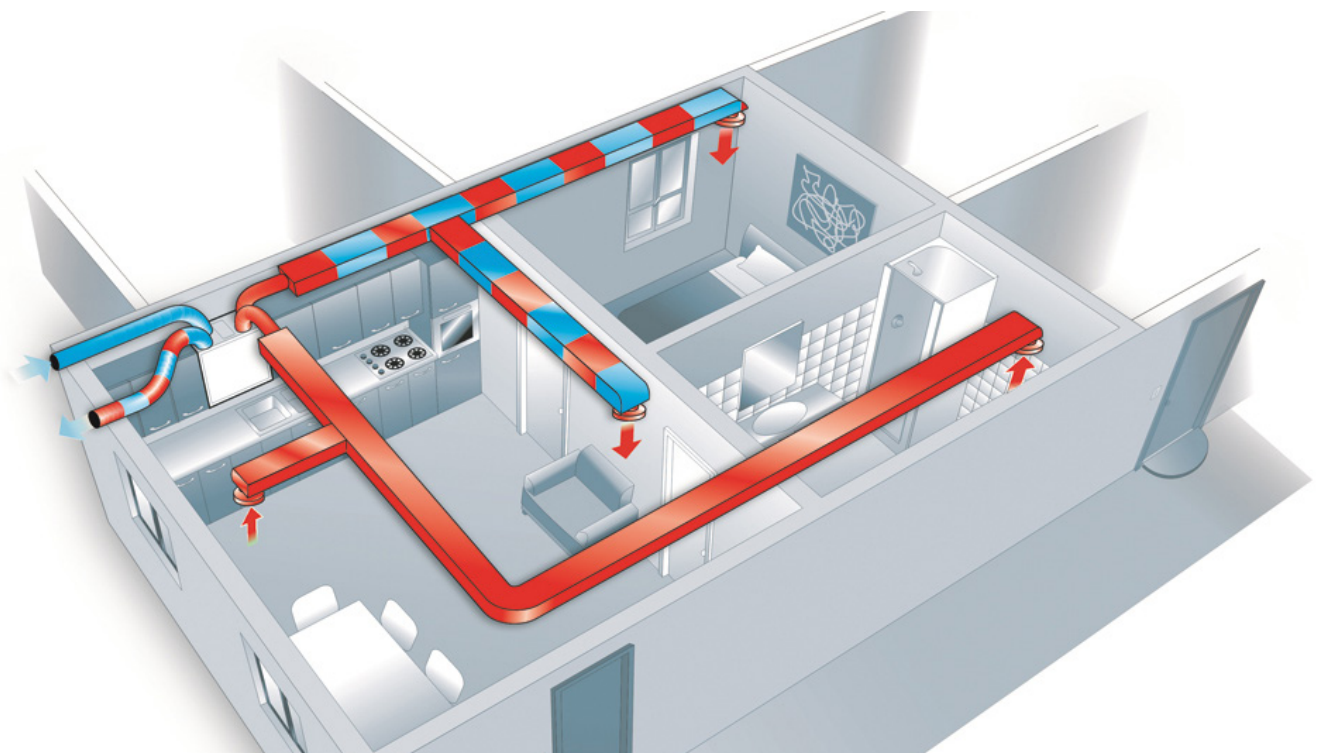
**PCDB DATA**

EXHAUST TERMINAL CONFIGURATION	FAN SPEED SETTING	AIR FLOW RATE (l/s)	SPECIFIC FAN POWER (W/l/s)	HEAT EXCHANGE EFFICIENCY (%)	EXHAUST TERMINAL CONFIGURATION	FAN SPEED SETTING	AIR FLOW RATE (l/s)	SPECIFIC FAN POWER (W/l/s)	HEAT EXCHANGE EFFICIENCY (%)
Kitchen +1 additional wet room	Supply 3.2 Extract 3.1	15.0	0.58	88	Kitchen +1 additional wet room	Supply 3.2 Extract 3.1	21.0	0.60	88
Kitchen +2 additional wet room	Supply 4.1 Extract 4.1	21.0	0.58	88	Kitchen +2 additional wet room	Supply 4.1 Extract 4.1	29.0	0.72	86
Kitchen +3 additional wet room	Supply 5.2 Extract 5.0	27.0	0.66	86	Kitchen +3 additional wet room	Supply 5.2 Extract 5.0	37.0	0.86	84
Kitchen +4 additional wet room	Supply 6.2 Extract 6.2	33.0	0.80	84	Kitchen +4 additional wet room	Supply 6.2 Extract 6.2	45.0	1.12	83
Kitchen +5 additional wet room	Supply 7.2 Extract 7.1	39.0	0.93	84					
Kitchen +6 additional wet room	Supply 8.1 Extract 8.1	45.0	1.11	83					

**SOUND LEVELS**




		Lw dB (A)							Lw dB (A)	Lw dB (A)
		125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz		3m*
<b>MIN. SPEED 880</b>	Supply	14.2	24.1	27.9	24.3	17.7	14.5	15.2	37.5	16.96
	Intake	11.9	18.9	22.7	15.9	15.1	14.5	15.5	33.2	12.66
	Breakout	21.2	27.1	28.9	19.4	19.3	15.8	16.4	34.8	14.26
<b>MED. SPEED 1800</b>	Supply	28.5	40.5	41.8	53.1	44.8	38.3	37	59.5	38.96
	Intake	27.1	27.1	31.8	41.2	30.7	22.2	19.1	47	26.46
	Breakout	45.8	40.7	41.1	46.2	32.2	26.9	20	53	32.46
<b>MAX. SPEED</b>	Supply	35.2	46.9	51	56.8	58.7	46.6	46.2	68.3	47.76
	Intake	28	30.6	38.1	41.6	37.1	24.1	23.5	49.2	28.66
	Breakout	28.5	38.9	50.1	43	39.8	32	25.6	53.2	32.66

\* Sound pressure calculated at 3 m in free field in accordance with ISO 9614.  
Tests carried out using the reference source method in a reverberation booth.





## ACCESSORIES

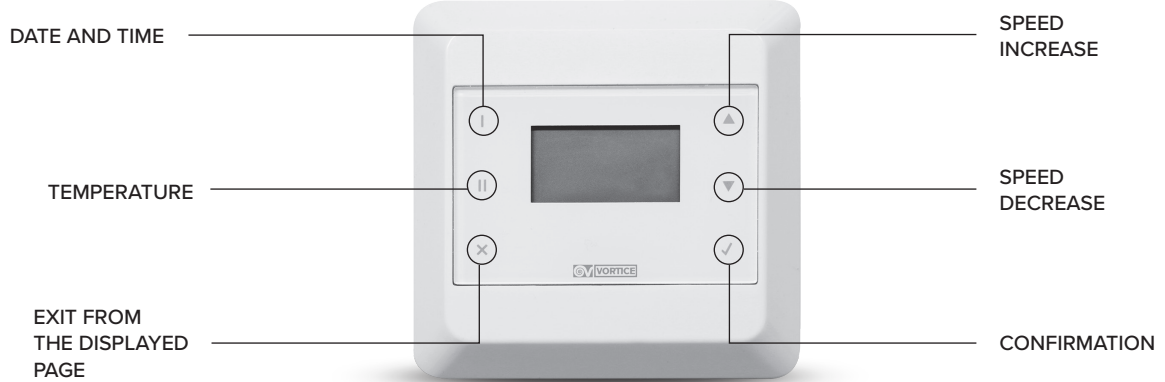
MODELS	DESCRIPTION	CODE	FOR MODEL
	G3 Filter	22367	12102
	125mm Flexible Attenuator	22366	12102
	500w Pre Heater	21630	12102

## CONTROLLER INFORMATION

- Wired connection
- Compatible with standard DIN flush-mounted box

### Provides the following displays:

- Set relative humidity threshold
- Activation of the defrosting procedure (defrost)
- Saturated filters
- Error codes



# VORT HR NETI RANGE

WALL-MOUNTED HEAT RECOVERY UNIT

## CENTRALISED VENTILATION WITH HEAT RECOVERY



- Centralised mechanical supply and extract unit with heat recovery
- Kitchen + 4 wet rooms
- Product Characteristics Database Listed (PCDB)
- Fresh air is 100% fully filtered even in bypass mode
- Fully automatic bypass with optional timed manual activation
- Automatic frost protection and summer bypass
- Includes 1x G4 and 1x M5 filter
- Removable hinged door for easy maintenance
- Wired electronic controller with LCD panel which displays status
- IPX2 rated

30



Products equipped with EC Brushless motors



Energy efficient

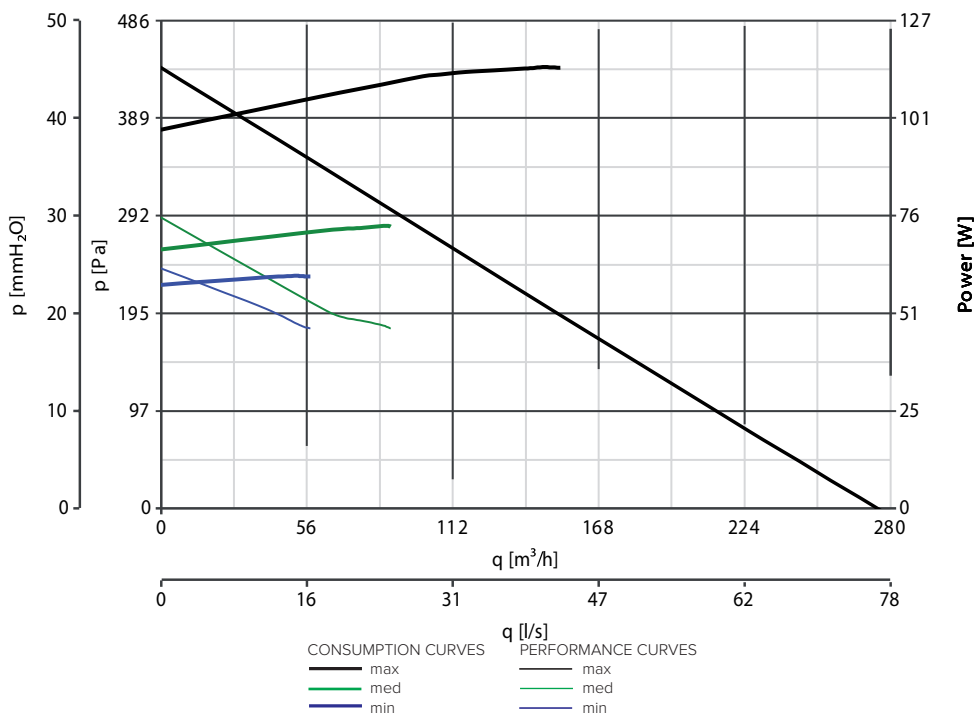


Low noise



Products with air filtration system

## PERFORMANCE AND ABSORPTION

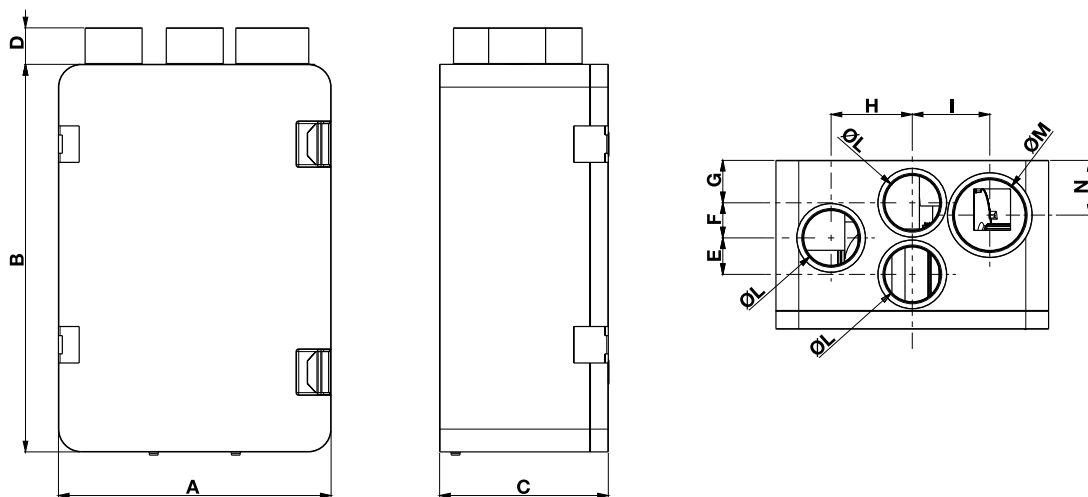


## TECHNICAL DATA

PRODUCTS	CODE	V~50/60HZ	W max	A max	MAX FLOW RATE		MAX PRESSURE		°C* MAX	KG
					m <sup>3</sup> /h	l/s	mmH <sub>2</sub> O	Pa		
VORT HR 250 NETI	11933	230	95	0,75	220	60	55	540	40	19

\* Maximum temperature with continuous operation of the product.

## DIMENSIONS



PRODUCTS	A	B	C	D	E	F	G	ØL	ØM	N
VORT HR 250 NETI	598	850	370	80	80	77	93	178	160	120

Dimensions in mm

## TECHNICAL FEATURES

- **Shock-proof**, lightweight construction (< 20 kg)
- **High performances** (250 m<sup>3</sup>/h) combined with low power consumption (108 W)
- **Very high heat transfer efficiency** (up to 93%) at conditions (+5 °C, +25 °C, 28% RH) established by applicable international standards (EN 308)
- **Simplified maintenance** thanks to rational internal layout of the main components, easily accessible though front door



**VORT HR NETI RANGE**  
WALL-MOUNTED HEAT RECOVERY UNIT

**PCDB DATA**

EXHAUST TERMINAL CONFIGURATION	FAN SPEED SETTING	AIR FLOW RATE (l/s)	SPECIFIC FAN POWER (W/l/s)	HEAT EXCHANGE EFFICIENCY (%)	EXHAUST TERMINAL CONFIGURATION	FAN SPEED SETTING	AIR FLOW RATE (l/s)	SPECIFIC FAN POWER (W/l/s)	HEAT EXCHANGE EFFICIENCY (%)
Kitchen +1 additional wet room	Supply 3.2 Extract 3.1	15.0	0.58	88	Kitchen +1 additional wet room	Supply 3.2 Extract 3.1	21.0	0.60	88
Kitchen +2 additional wet room	Supply 4.1 Extract 4.1	21.0	0.58	88	Kitchen +2 additional wet room	Supply 4.1 Extract 4.1	29.0	0.72	86
Kitchen +3 additional wet room	Supply 5.2 Extract 5.0	27.0	0.66	86	Kitchen +3 additional wet room	Supply 5.2 Extract 5.0	37.0	0.86	84
Kitchen +4 additional wet room	Supply 6.2 Extract 6.2	33.0	0.80	84	Kitchen +4 additional wet room	Supply 6.2 Extract 6.2	45.0	1.12	83
Kitchen +5 additional wet room	Supply 7.2 Extract 7.1	39.0	0.93	84					
Kitchen +6 additional wet room	Supply 8.1 Extract 8.1	45.0	1.11	83					

**SOUND LEVELS**

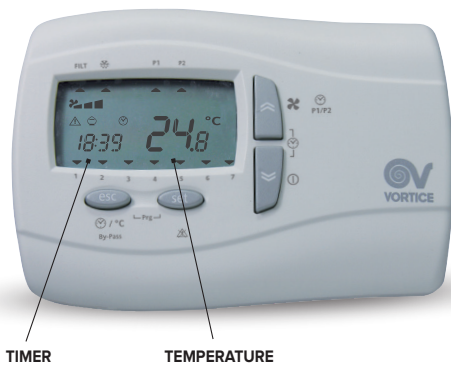
		Lw dB (A)					
		125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz
<b>MIN. SPEED</b> <b>K+1</b>	<b>Supply</b>	-	3.96	5.67	1.51	-	-
	<b>Extract</b>	-	2.94	6.68	15.9	15.1	14.5
	<b>Breakout</b>	11.7	21.09	22.71	15.98	5.31	-
<b>MED. SPEED</b> <b>K+3</b>	<b>Supply</b>	-	18.65	20.37	17.21	4.15	-
	<b>Extract</b>	-	18.78	14.06	8.95	-	-
	<b>Breakout</b>	35.47	28.81	33.65	30.97	23.31	12.36
<b>MAX. SPEED</b> <b>K+6</b>	<b>Supply</b>	-	24.64	27.91	28.56	18.32	3.4
	<b>Extract</b>	-	17.07	21.72	18.69	10.83	1.02
	<b>Breakout</b>	27.05	38.9	43.16	42.32	39.46	31.7

\* Sound pressure calculated at 3 m in free field in accordance with ISO 9614.  
Tests carried out using the reference source method in a reverberation booth.

## ACCESSORIES

MODELS	DESCRIPTION	CODE	FOR MODEL
	G4 Filter	21116	11933
	M5 Filter	21117	11933
	125mm Flexible Attenuator	22366	11933
	500 W Pre Heater	21630	11933
	CB Touch LCD W	21630	11933







## CONTROLLER INFORMATION



The LCD display controls the electronics of the product. Among the various functions, the control panel can be used for:

- turning the machine on and off,
- the initial configuration,
- the manual setting of the operating mode,
- the selection of the 3 speeds,
- the automatic management of the free-cooling function (only models with By-pass),
- setting the time slots and the room temperature,
- the display of the time or outside temperature,
- continuous monitoring of correct operation (any problems are signaled by error messages displayed on the control panel),
- constant monitoring of the filter status (need for maintenance highlighted on the control panel display)

### CONTROLLER PANEL

ICONS	FUNCTIONS
	No-Frost
P1 - P2	Time profiles
	Speed
	OFF
	Alarm
	By-pass
	Time schedule programming
FILT	Filter replacement notice
HA	Antibacterial function

Please note: For a complete and in-depth explanation of the icons and the associated functions, please refer to the instruction booklet.

# VORT HR AVEL RANGE

CENTRALISED MECHANICAL SUPPLY AND EXTRACT UNIT WITH HEAT RECOVERY

## CENTRALISED VENTILATION WITH HEAT RECOVERY



- Centralised mechanical supply and extract unit with heat recovery
- Kitchen + 4 wet rooms
- Product Characteristics Database Listed (PCDB)
- Fresh air is 100% fully filtered even in bypass mode
- Fully automatic bypass with optional timed manual activation
- Automatic frost protection and summer bypass
- Includes 1x G4 and 1x M5 filter
- Removable hinged door for easy maintenance
- Wired electronic controller with LCD panel which displays status
- IPX2 rated

34



Products equipped with EC Brushless motors



Energy efficient

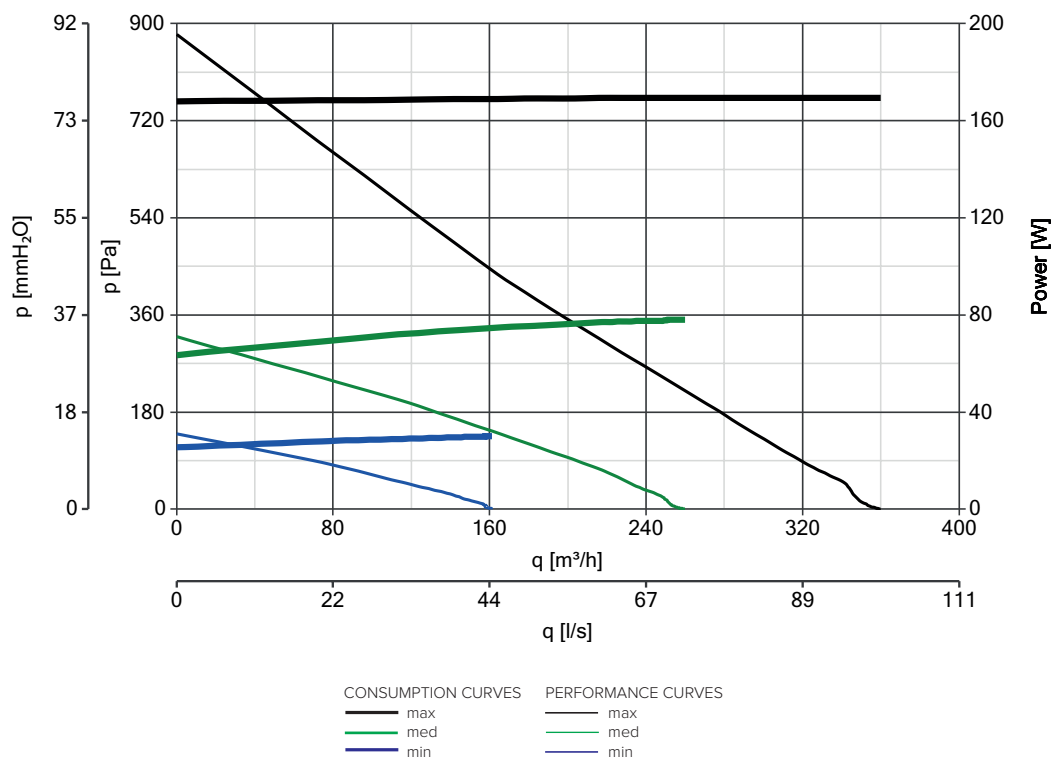


Low noise



Products with air filtration system

## PERFORMANCE AND ABSORPTION



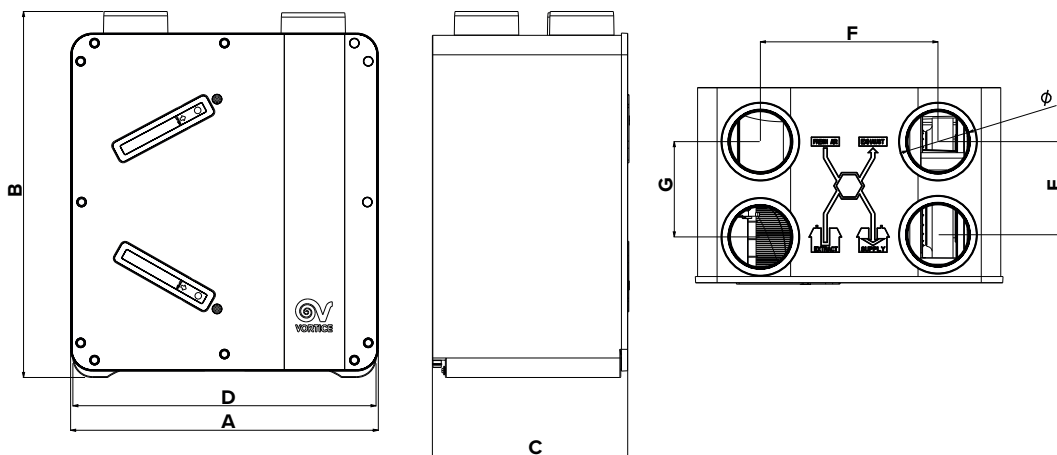


## TECHNICAL DATA

PRODUCTS	CODE	V~50HZ	W max	A max	MAX AIRFLOW		MAX PRESSURE		°C* MAX	KG
					m <sup>3</sup> /h	l/s	mmH <sub>2</sub> O	Pa		
VORT HR 350 AVEL TOP HCS	12106 / 10915	230	165	1.4	350	100	90	880	40	23

\* Maximum temperature with continuous operation of the product.

## DIMENSIONS



PRODUCTS	A	B	C	D	E	F	G	Ø
VORT HR 350 AVEL	712	845	455	700	215	410	220	150

Dimensions in mm

## TECHNICAL FEATURES

- Fire resistant expanded polypropylene casings (DIN EN 13501). Front panel in loaded plastic resin with panels for direct access to the filters
- Spigots for **intake and delivery** compatible with pipes with a nominal diameter of 150 mm
- **Pair of fans driven by EC motors** (brushless) of the external rotor type, with shafts mounted on ball bearings to ensure a virtually “maintenance free” operation, directly coupled to centrifugal impellers with backward curved blades to guarantee high aeraulic efficiency. 2 operating speeds
- **High efficiency heat exchanger**, of the cross-flow type made of plastic resin (PS)
- **Automatic activation anti frost protection**, to prevent the formation of frost at the heat exchanger
- **Mechanical, automatic and 100% filtered by-pass**, to guarantee the comfort of the occupants of the rooms in mid seasons, or whenever the outside temperature does not require the action of the heat exchanger
- **Pair of M5 filters** (F7 filter available as an option for the delivery pipe) and **pair of filters Class ePM1 70%**
- **Condensate collection tray** with drain devices
- **Brackets for wall installation** included in the standard equipment
- Possibility of **interlocking with external environmental sensors** (optional), for the automatic control of the operating mode
- **Degree of protection from dust and water: IPX2**
- **Electrical insulation class: I** (grounding required)

**VORT HR AVEL RANGE**  
CENTRALISED MECHANICAL EXTRACT UNIT WITH HEAT RECOVERY

**PCDB DATA**







EXHAUST TERMINAL CONFIGURATION	FAN SPEED SETTING	AIR FLOW RATE (l/s)	SPECIFIC FAN POWER (W/l/s)	HEAT EXCHANGE EFFICIENCY (%)	EXHAUST TERMINAL CONFIGURATION	FAN SPEED SETTING	AIR FLOW RATE (l/s)	SPECIFIC FAN POWER (W/l/s)	HEAT EXCHANGE EFFICIENCY (%)
Kitchen +1 additional wet room	Supply 3.2 Extract 3.1	15.0	0.58	88	Kitchen +1 additional wet room	Supply 3.2 Extract 3.1	21.0	0.60	88
Kitchen +2 additional wet room	Supply 4.1 Extract 4.1	21.0	0.58	88	Kitchen +2 additional wet room	Supply 4.1 Extract 4.1	29.0	0.72	86
Kitchen +4 additional wet room	Supply 6.2 Extract 6.2	33.0	0.80	84	Kitchen +3 additional wet room	Supply 5.2 Extract 5.0	37.0	0.86	84
Kitchen +5 additional wet room	Supply 7.2 Extract 7.1	39.0	0.93	84	Kitchen +4 additional wet room	Supply 6.2 Extract 6.2	45.0	1.12	83
Kitchen +6 additional wet room	Supply 8.1 Extract 8.1	45.0	1.11	83					

**SOUND LEVELS**

		Lw dB (A)							
		125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	Lw dB (A)
<b>MIN. SPEED K+1</b>	<b>Supply</b>	14.06	23.99	31.78	29.63	19.94	7.7	-1.87	13.0
	<b>Extract</b>	-2.09	11.53	15.86	11.59	-0.77	-6.47	-12.10	2.7
	<b>Breakout</b>	13.46	18.6	24.11	12.03	9.44	3.53	-4.8	10.5
<b>MED. SPEED K+3</b>	<b>Supply</b>	20.48	27.21	35.15	34.18	28.51	19.92	11.18	22.8
	<b>Extract</b>	5.72	25.16	23.98	21.62	10.59	-3.55	-12.06	11.8
	<b>Breakout</b>	21.36	37.61	32.22	22.43	19.19	3.29	1.17	20.1
<b>MAX SPEED K+7</b>	<b>Supply</b>	24.07	46.54	46.47	47.52	42.26	41.99	32.7	35.7
	<b>Extract</b>	2.39	38.06	36.52	33.82	24.25	15.83	7.53	23.4
	<b>Breakout</b>	29.42	45.40	44.87	41.06	42.18	32.89	18.6	32.4

\* Sound pressure calculated at 3 m in free field in accordance with ISO 9614.  
Tests carried out using the reference source method in a reverberation booth.

## ACCESSORIES

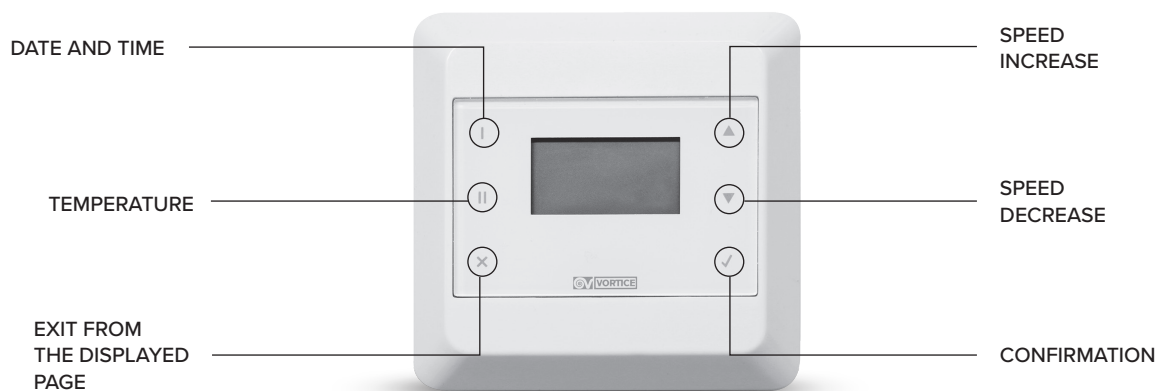
MODELS	DESCRIPTION	CODE	FOR MODEL
	G3 Filter	22661	12096 10915
	M5 Filter	22662	12096 10915
	F7 Filter	22664	12096 10915
	7500W Pre Heater HR350 Avel	22735	12096 10915
	150m Flexible Attenuator	22316	12096 10915
	CB Touch LCD W	21933	12096

## CONTROLLER INFORMATION

- Wired connection
- Compatible with standard DIN flush-mounted box

### Provides the following displays:

- Set relative humidity threshold
- Activation of the defrosting procedure (defrost)
- Saturated filters
- Error codes





# VORT AVEL HR 450 D RANGE

PASSIVHAUS CERTIFIED CENTRALISED MECHANICAL EXTRACT UNIT WITH HEAT RECOVERY

## CENTRALISED VENTILATION WITH HEAT RECOVERY



- Centralised mechanical supply and extract unit with heat recovery
- Passivhaus certified
- Vertical wall Installation
- BMS compatible
- G4 filters
- 4 operational speeds
- IPX2 rated

38



Products equipped with EC Brushless motors



Energy efficient

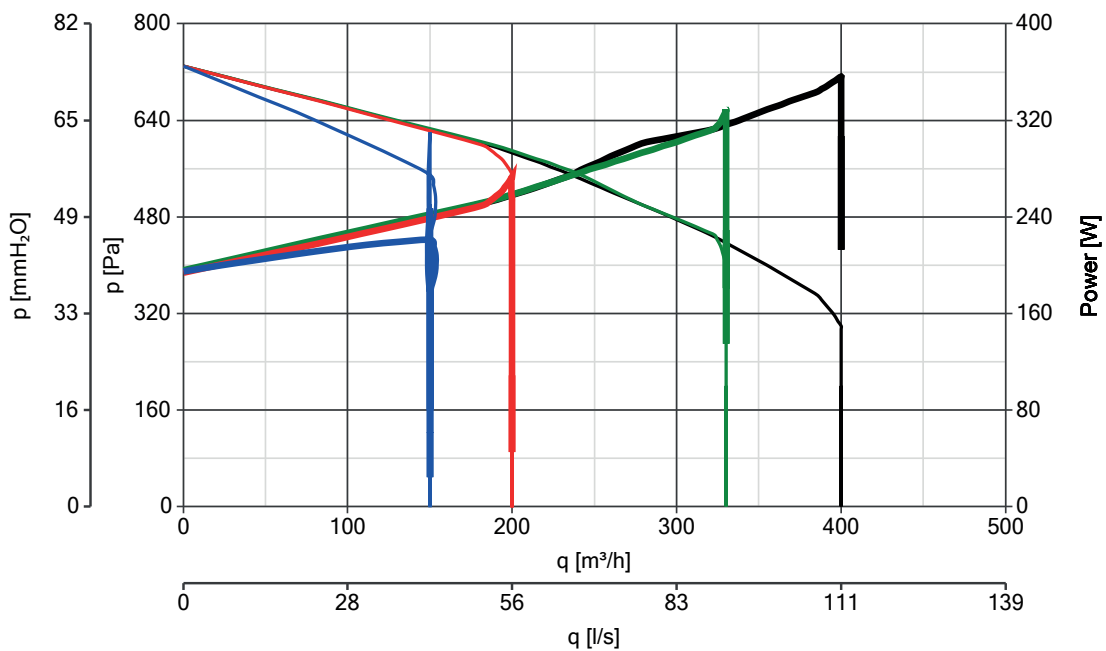


Low noise



Products with air filtration system

## PERFORMANCE AND ABSORPTION



CONSUMPTION CURVES

- Min.
- Med.
- Max.
- Boost

PERFORMANCE CURVES

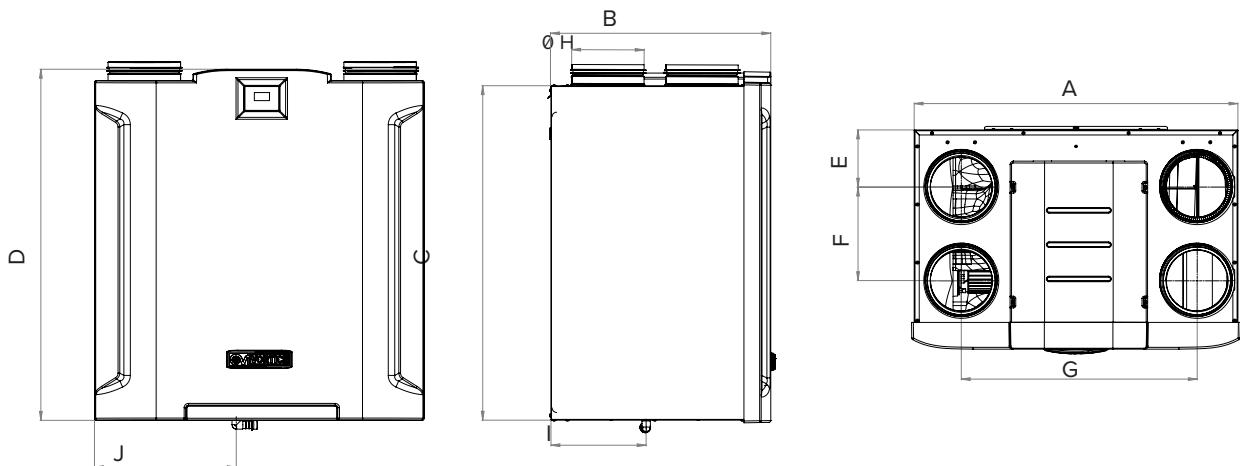
- Min.
- Med.
- Max.
- Boost

## TECHNICAL DATA

PRODUCTS	CODE	V~50HZ	W max	A max	MAX FLOW RATE		MAX PRESSURE		°C MAX	KG
					m <sup>3</sup> /h	l/s	mmH <sub>2</sub> O	Pa		
VORT HR 450 AVEL D	12101	220-240	350	2.75	400	110	69	680	40	40

\* Maximum temperature with continuous operation of the product.

## DIMENSIONS



PRODUCTS	A	B	C	D	E	F	G	ØH	I	J
VORT HR 450 AVEL D	708	480	730	766	125	205	516	158	207	306

Dimensions in mm

## TECHNICAL FEATURES

- **Galvanised and painted steel sheet casing.** Brackets for wall-installation included in standard supply
- **Aesthetic plastic resin (ABS)** front panel. Plastic resin (PPE) internal parts
- **Suction and delivery ports** compatible with pipes with a nominal diameter of 160 mm
- **Pair of electric fans driven** by external rotor constant flow regulation EC motors (brushless) with shafts mounted on ball bearings to ensure virtually "maintenance-free" operation, directly coupled to forward-blade centrifugal impellers  
4 operating speeds, can be set independently on installation
- **High efficiency** counter cross flow heat exchanger, made in plastic resin
- **Automatic frost protection** to prevent the formation of frost at the heat exchanger
- **Three ISO Coarse 90% (G4) class filters**, set respectively on the extraction duct, on the air delivery duct and on the by-pass (M5 and F7 filters available as an optional for the delivery duct and the by-pass), easily accessible for periodic maintenance.
- **Condensate collection tray** with drain devices
- **Possibility of interlocking to outdoor environmental sensors** (optionals) for automatic control of the operating mode
- **Floor or wall installation.** Can be integrated into residential home automation systems (ModBus protocol) on RS485 SLAVE mode

## VORT HR AVEL 450 D RANGE

PASSIVE HAUS CERTIFIED CENTRALISED MECHANICAL EXTRACT UNIT WITH HEAT RECOVERY

### SOUND LEVELS

	Lw dB (A)	Lw dB (A) 3m
Supply to internal	61.5	25.2
Extract to internal	45.7	41
Breakout	47.2	26.7

\* Sound pressure calculated at 3 m in free field in accordance with ISO 9614.  
Tests carried out using the reference source method in a reverberation booth.

### ACCESSORIES

40

MODELS	DESCRIPTION	CODE	FOR MODEL
	G3 Filter	21628	12101
	G4 Bypass Filter	21629	12101
	F7 Filter	21624	12101
	F7 Bypass Filter	21626	12101
	1200W Heater	21622	12101
	2400W Heater	21623	12096 10915
	Silencer	21643	12101
	AF 160 Filter Box	22795	12101
	CB Touch LCD W	21933	12101





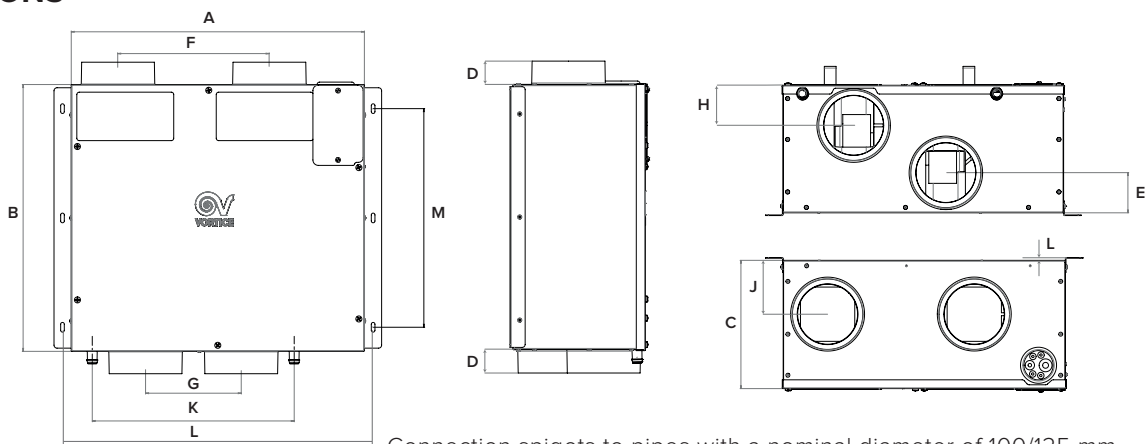


## TECHNICAL DATA

PRODUCTS	CODE	V~50HZ	W min/max	A min/max	RPM min/ max	MAX FLOW RATE		MAX PRESSURE		IP	KG
						m <sup>3</sup> /h min/max	l/s min/max	mmH <sub>2</sub> O	Pa		
VORT INVISIBLE MINI	12215										
VORT INVISIBLE EVO	12216	220-240	16 64	0.30 0.65	1830 3900	50 120	50 120	38.2	375	X2	14
VORT INVISIBLE TOP	12218										

\* Maximum continuous operating temperature of products.

## DIMENSIONS



PRODUCTS	A	B	C	D	E	F	G	H	I	J	K	L	M
VORT INVISIBLE MINI TOP	484	440.5	218	40	40	250	158	69	69	92	361	513	66

Dimensions in mm

## TECHNICAL FEATURES

- **Available in three versions:**

**VORT INVISIBLE MINI**, basic version, equipped with thermodynamic bypass;

**VORT INVISIBLE MINI EVO**, version equipped with mechanical bypass;

**VORT INVISIBLE MINI TOP**, version equipped with RH sensor, for automatic management of the operating speed, and mechanical bypass.

- **Casing in galvanized sheet steel painted in white.** Brackets, in galvanized and painted sheet steel, necessary for the suspended installation of the appliance, supplied as standard.
- **Connection ports for supply and discharge pipes** with a nominal diameter of 100mm and 125mm.
- **Condensate collection tank**, complete with "overflow" sensor.
- **Pair of centrifugal fans** driven by 3-speed EC brushless motors (low consumption), independently adjustable
- **High-efficiency heat exchanger**, made of plastic resin and of the countercurrent cross-flow type
- **Mechanical bypass**, with filters and is automatically operated.
- Multiple grommet, in compliance with UNI EN 60335-2-80 international safety standards.
- Pair of ISO Coarse class filters 45% (G3) placed at the extraction and delivery ducts.
- **Relative humidity sensor integrated** in the product (adjustable intervention threshold).



**VORT INVISIBLE MINI RANGE**  
 COMPACT HEAT RECOVERY UNIT FOR FALSE CEILING INSTALLATION

**PCDB DATA**

EXHAUST TERMINAL CONFIGURATION	FAN SPEED SETTING (%)	AIR FLOW RATE (l/s)	SPECIFIC FAN POWER (W/l/s)	HEAT EXCHANGE EFFICIENCY (%)	EXHAUST TERMINAL CONFIGURATION	FAN SPEED SETTING (%)	AIR FLOW RATE (l/s)	SPECIFIC FAN POWER (W/l/s)	HEAT EXCHANGE EFFICIENCY (%)
Kitchen +1 additional wet room	Supply 48 Extract 61	15.0	1.38	81	Kitchen +1 additional wet room	Supply 61 Extract 76	21.0	1.63	81
Kitchen +2 additional wet room	Supply 62 Extract 75	21.0	1.60	81	Kitchen +2 additional wet room	Supply 78 Extract 95	29.0	2.20	79
Kitchen +3 additional wet room	Supply 74 Extract 90	27.0	1.95	79					


**SOUND LEVELS**

		NOISE LEVEL LwA dB(A)							SOUND PRESSURE dB(A)*	
		125Hz	250Hz	500Hz	1,000Hz	2,000Hz	4,000Hz	8,000Hz	LwA	LpA 3m
100%	SUPPLY	37	44	51	42	39	25	8	53	35
	EXTRACT	47	58	65	64	61	51	46	69	52
	BREAKOUT	35	45	48	43	46	47	36	53	36
90%	SUPPLY	35	43	51	40	38	24	8	52	34
	EXTRACT	46	56	66	62	59	49	43	69	51
	BREAKOUT	32	44	49	41	44	45	34	53	35
80%	SUPPLY	35	41	53	38	35	8	8	53	36
	EXTRACT	46	56	66	62	59	49	43	69	51
	BREAKOUT	32	42	47	38	41	42	32	50	33
60%	SUPPLY	31	49	37	31	27	7	8	50	32
	EXTRACT	41	55	50	50	47	37	33	58	40
	BREAKOUT	28	44	34	32	34	34	34	46	25
40%	SUPPLY	26	31	30	21	7	7	8	34	17
	EXTRACT	35	45	43	42	37	26	8	49	31
	BREAKOUT	26	34	27	23	22	7	8	36	16

\*calculated at 3m, in free field, hemispherical distribution



## ACCESSORIES

MODELS	DESCRIPTION	CODE	FOR MODEL
	G3 Filter Supply and Extract	21805	12215 12216 12218
	F7 Filter Supply	21803	12215 12216 12218
	Pre Heater	21630	12215 12216 12218
	Post Heater	22797	12215 12216 12218
	CB Touch LCD W	21933	12215 12216 12218

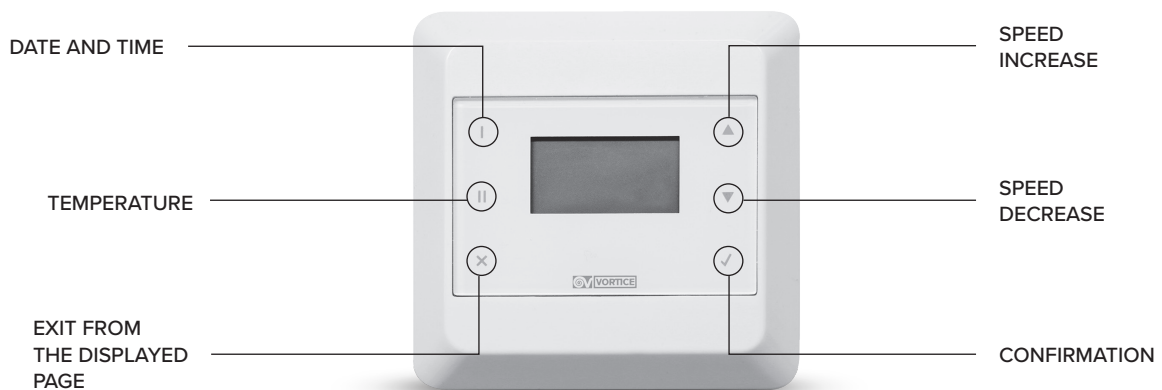
## CONTROLLER INFORMATION

- Wired connection
- Compatible with standard DIN flush-mounted box

### Provides the following displays:

- Set relative humidity threshold
- Activation of the defrosting procedure (defrost)

- Saturated filters
- Error codes



# VORT PHANTOM RANGE

HEAT RECOVERY UNITS FOR FALSE CEILING MOUNTING

## CENTRALISED VENTILATION WITH HEAT RECOVERY



- Centralised void mounted mechanical extract with heat recovery
- BMS compatible
- 100% fully filtered
- Hard wired controller with LCD display
- 2x M5 filters easily accessible by removing the front panel
- IPX2 rated



Side profile, versions with by-pass.



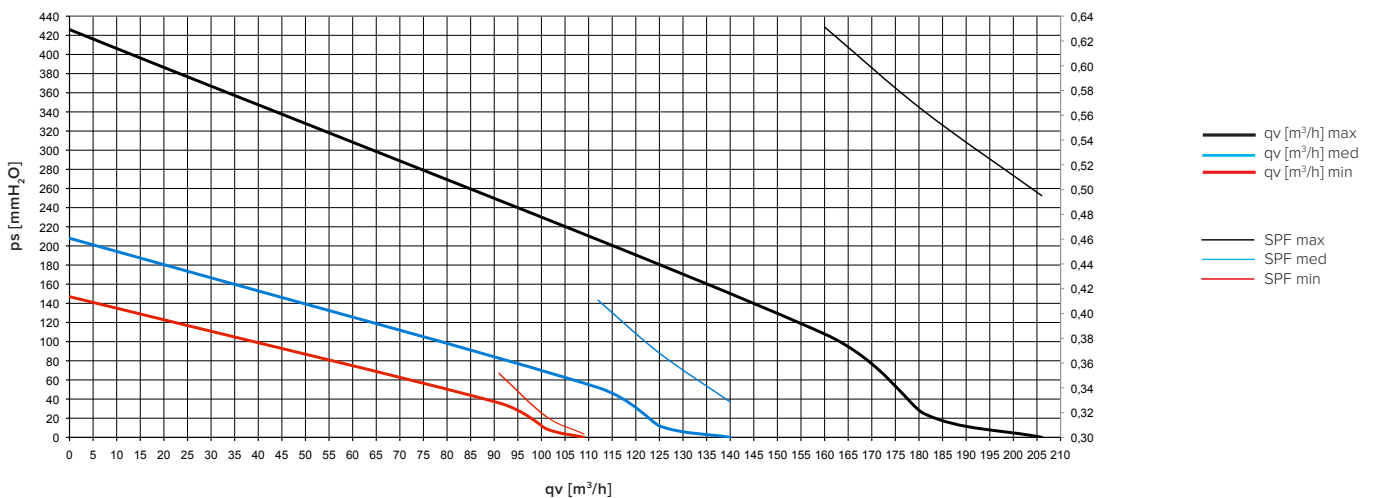
Products equipped with EC Brushless motors



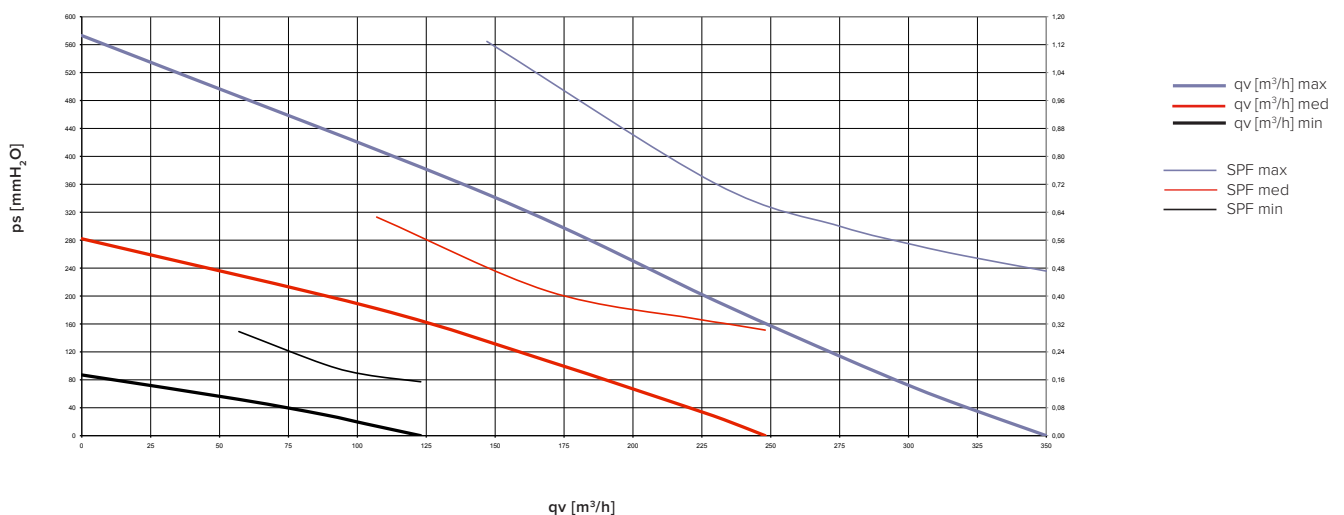
Products with air filtration system

## PERFORMANCE AND ABSORPTION

VORT HRI 350 PHANTOM



VORT HRI 350 PHANTOM BP

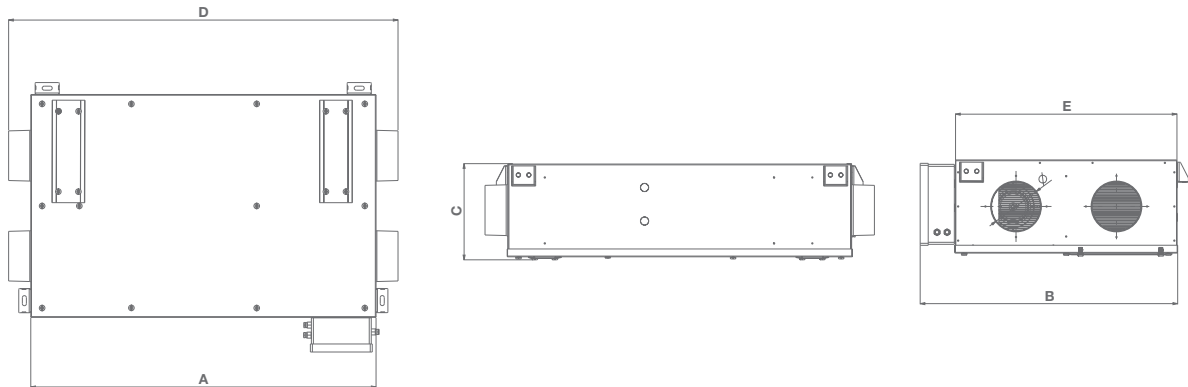


## TECHNICAL DATA

PRODUCTS	CODE	V~50HZ	W max	A max	MAX FLOW RATE		MAX PRESSURE		°C* MAX	KG
					m <sup>3</sup> /h	l/s	mmH <sub>2</sub> O	Pa		
VORT HRI 350 PHANTOM	11292	230	165	1.4	350	97.0	58.0	568	50	33
VORT HRI 350 PHANTOM B.P.	11293	230	165	1.4	350	97.0	58.0	568	50	33

\* Maximum temperature with continuous operation of the product.

## DIMENSIONS



PRODUCTS	CODE	A	B	C	D	E	Ø
VORT HRI 350 PHANTOM	11292	1183	740	288	1287	650	150
VORT HRI 350 PHANTOM BP	11293	1183	740	288	1287	650	150

Dimensions in mm



**VORT PHANTOM RANGE**  
HEAT RECOVERY UNITS FOR FALSE CEILING MOUNTING

## TECHNICAL FEATURES

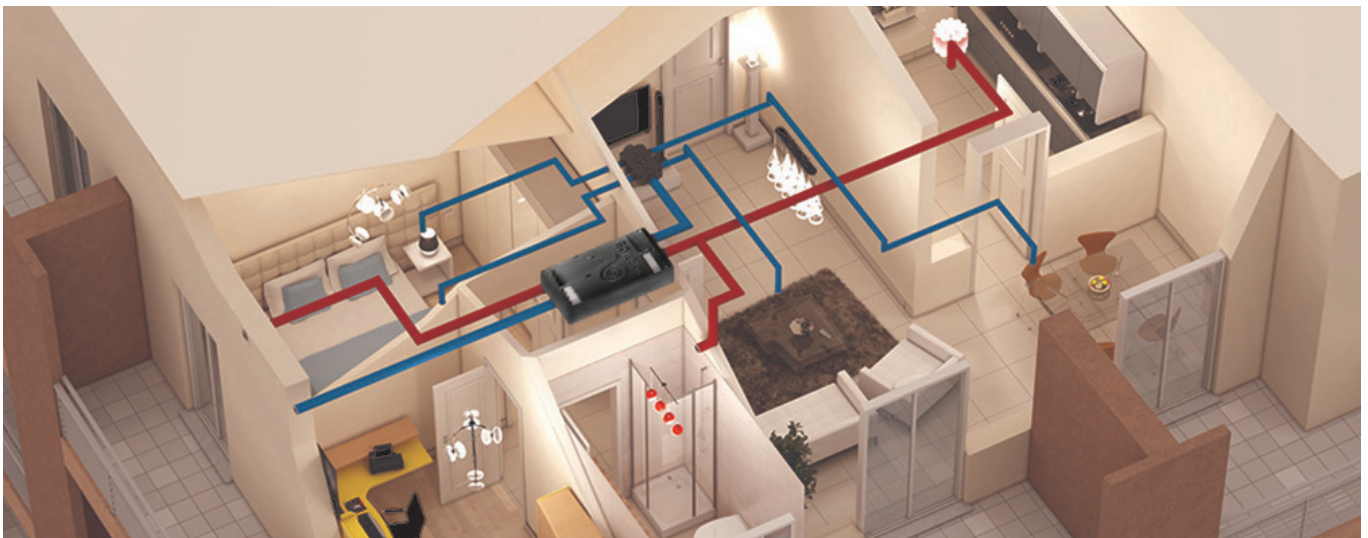
- **4 models**, different in size and performance, equipped with thermodynamic or mechanical by-pass.
- **Casings in galvanized sheet steel** integrating support brackets for false ceiling mounting; internal shell covered in sound-absorbing, heat-insulating and fire-resistant material (DIN EN 13501). Tie rods for suspended installation included in the standard equipment.
- **Plastic resin bottom covers** (PP) thermoformed, integrating the panels for direct access to the air filters.
- **Intake and delivery spigots** compatible with pipes with a nominal diameter of 150 mm.
- **Pair of motor fans driven by EC motors** (brushless) of the external rotor type, with shafts mounted on ball bearings, directly coupled to backward curved centrifugal impellers to guarantee high aerodynamic efficiency. 3 operating speeds, independently settable at installation.
- **High efficiency heat exchanger**, of the cross-flow type with counterflow, made of plastic resin (PS).
- **Automatic activation frost protection**, to prevent the formation of frost at the heat exchanger.
- **By-pass, thermodynamic or mechanical (BP models), automatic and 100% filtered**, to guarantee the comfort of the occupants of the rooms in mid seasons, or whenever the outside temperature does not require the action of the heat exchanger.
- **Remote control unit with LCD display**, of the wired connection type, for:
  - turning the product on and off;
  - the initial configuration of the product;
  - selecting the minimum, average or maximum speed of operation;
  - programming the operation;
  - Displaying the time and room temperature;
  - Monitoring the correct operation of the product (any malfunctions are highlighted through error messages shown on the display);
  - Signaling the saturated filters condition on the display.
- **Pair of M5 filters** (F7 filter available as an option for the delivery duct), easily accessible for periodic maintenance.
- **Condensate collection tray** with drain devices.
- **Possibility of interlocking** with external environmental sensors (optional), for the automatic control of the operating mode.
- **Degree of dust and water protection**: IPX2.
- **Electrical insulation class**: II (grounding not required).

48

## SOUND LEVELS


		Lw dB (A)							Lw dB (A)	Lw dB (A)
		125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	3m*	3m*
<b>MIN. SPEED</b>	<b>Delivery</b>	16.7	27.4	24.3	17.1	16.9	7.1	nd**	37.2	16.7
	<b>Intake</b>	16.3	32.1	22.2	11.3	15.5	6.2	nd**	37.8	17.3
	<b>Casing</b>	33.4	35.6	41.6	38.0	37.2	30.4	27.3	51.0	30.5

\* Acoustic pressure measured at 3 m in free field with the intensimetric method in a semi-anechoic cabin at maximum speed in accordance with ISO 9614. \*\* Data not available.

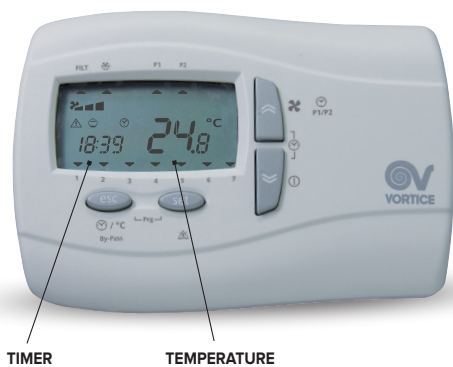











## ACCESSORIES

MODELS	DESCRIPTION	CODE	FOR MODEL
	M5 Filter	21431	11291
	F7 Filter	22625	11291
	M5 Filter	22464	11293
	F7 Filter	22628	11293
	500W Pre Heater	22734	11291
	750W Pre Heater	22735	11293
	125mm Flexible Attenuator	22366	11291
	150mm Flexible Attenuator	22316	11293
	CB Touch LCD W	21933	11291 11293

## CONTROLLER INFORMATION



### CONTROLLER PANEL

ICONS	FUNCTIONS
	No-Frost
P1 	Time profiles
	Speed
	OFF
	Alarm
	By-pass
	Time schedule programming
	Filter replacement notice
HA	Antibacterial function

The LCD display controls the electronics of the product. Among the various functions, the control panel can be used for:

- turning the machine on and off,
- the initial configuration,
- the manual setting of the operating mode,
- the selection of the 3 speeds,
- the automatic management of the free-cooling function (only models with bypass),

- setting the time slots and the room temperature,
- the display of the time or outside temperature,
- continuous monitoring of correct operation (any problems are signaled by error messages displayed on the control panel),
- constant monitoring of the filter status (need for maintenance highlighted on the control panel display).

# NOX FILTERS

INDOOR FILTERS FOR THE FILTRATION OF NO<sub>2</sub> LEVELS



- High-efficiency NOx filters provide the ideal solution to the UK Building Services market for indoor air quality projects in residential, commercial, educational, and transportation.
- Suitable for MEV and MVHR systems
- Available in 200 x 90 sizes
- Can be supplied in both horizontal and vertical air flow orientations
- Offer a low pressure drop

The European Union for Europe 2008/50/EC (CAFE) Directive set stringent NO<sub>2</sub> levels for designated Air Quality Management Areas.

In order for air quality not to exceed these levels, high grade NO<sub>2</sub> filtration is acceptable as a mitigation solution in order to comply with the directive.

## FEATURES AND SETTINGS

- Compatible with MVHR units
- Available in 220 x 90 spigot sizes
- Suitable for residential, commercial and educational applications
- Suitable for both new build and retrofit schemes.
- Widely accepted by planners in Air Quality Management Areas
- Recommended for use by leading UK air quality consultants
- Routinely specified by mechanical consulting engineers
- Offer a very low pressure drop
- Can be supplied in both horizontal and vertical air flow orientations



# CB TOUCH LCD W

REMOTE CONTROL PANEL WITH COLOUR LCD GRAPHIC DISPLAY WHICH CAN BE COMBINED WITH CENTRALISED HEAT RECOVERY UNITS OF VORTICE RESIDENTIAL RANGE.



- Colour touch display with screen 4.5" in size.
- Wall fixing plate without need of standard electrical boxes.
- Connection with the heat recovery unit via port at safety extra low voltage (maximum length of the cable: 70 metres).
- Screen brightness which can be adjusted by the user to 3 different levels of intensity.
- Time-out display which can be set to 30, 60 and 120 seconds.
- Night light located on the lower part of the control panel which can be adjusted by the user to 4 levels of luminous intensity.
- Management software available in 6 languages: Italian, English, French, German, Spanish and Chinese.
- Safety TUV SUD verified.

## VORTICE RECOVERY UNITS

VORT HR 350 AVEL Code 12096

VORT HR 300 NETI Code 11933

VORT INVISIBLE MINI TOP Code 12219

VORT HR 450 AVEL D Code 12101

## FEATURES AND SETTINGS

- Switching on/off of the controlled mechanical ventilation unit.
- Initial setting protected by password whose access is reserved for the installer.
- Manual selection of the operating speed (MANUAL MODE).
- **Activation of the AUTO MODE:** the product automatically regulates its operation based on the weekly schedule previously set.
- **Activation of the BOOST MODE:** the product goes at maximum speed.
- **Activation of the QUIET MODE:** the product never operates at the maximum speed during the night time band, which can be set by the user.
- **Activation of the HOLIDAY MODE:** the unit continuously operates at a reduced temperature so as to guarantee adequate air exchange even if there are no people in the house for a prolonged period of time.
- Setting of the weekly schedule of operation for the controlled mechanical ventilation unit.
- Manual activation of the by-pass damper.
- Activation/exclusion of the pre-heating/post-heating batteries (if installed).
- **Display of the following values:**
  - a. INDOOR and OUTDOOR air temperature (°C/°F)
  - b. Relative humidity (RH) in the environment.
- Display of the correct activation of the defrosting procedure in case of extremely cold temperatures.
- Monitoring of the correct operation of the controlled mechanical ventilation unit: any malfunctions are highlighted through error messages shown on the display.
- Signalling of the filter clogging status for a correct periodic maintenance.

## VORTICE GROUP COMPANIES

### VORTICE S.P.A

Strada Cerca, 2  
Frazione di Zoate  
20067 Tribiano  
(Milan) Italy  
Tel. (+39) 02 906991  
Fax (+39) 02 90699625  
vortice.com

### VORTICE LIMITED

Beeches House  
Eastern Avenue  
Burton on Trent  
DE13 0BB United Kingdom  
Tel. (+44) 1283-49.29.49  
Fax (+44) 1283-54.41.21  
vortice.ltd.uk

### VORTICE INDUSTRIAL S.R.L.

Via B. Brugnoli 3,  
37063 Isola della Scala  
(Verona) Italy  
Tel. (+39) 045 6631042  
Fax (+39) 045 6631039  
vorticeindustrial.com

### CASALS VENTILACIÓN AIR INDUSTRIAL S.L.

Ctra. Camprodon, s/n 17860  
Sant Joan de les Abadesses  
(Girona) Spain  
Tel. (+34) 972720150  
casals.com

### VORTICE LATAM S.A.

Bodega #6  
Zona Franca Este Alajuela,  
Alajuela 20101  
Costa Rica  
Tel. (+506) 2201 6934  
vortice-latam.com

### VORTICE VENTILATION SYSTEM

(Changzhou) Co.LTD  
No. 388 West Huanghe Road  
Building 19, Changzhou  
Post Code: 213000 China  
Tel. (+86) 0519 88990150  
Fax (+86) 0519 88990151  
vortice-china.com

### TOLL-FREE NUMBER

**800 555 777**

The descriptions and illustrations in this catalogue are intended to be indicative and not binding. Without prejudice to the essential characteristics of the products described and illustrated here, VORTICE reserves the right to make, at any time and without notice, any changes to parts, aesthetic details or supply of accessories to its products that are deemed to be appropriate for improvement or for any construction or commercial requirement.  
This printout completely cancels and replaces all previous ones.

