MECHANICAL EXTRACT VENTILATION AND HEAT RECOVERY

VORTICE 70 1954 | 2024

VORTICE S.p.A. is now part of a multinational group, **the 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, English branch of VORTICE S.p.A established in 1977 and based in Burton on 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,
a historic Spanish brand , based in Sant Joan de les Abadesses, Girona, acquired in 2019.

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VORT NOTUS RANGE

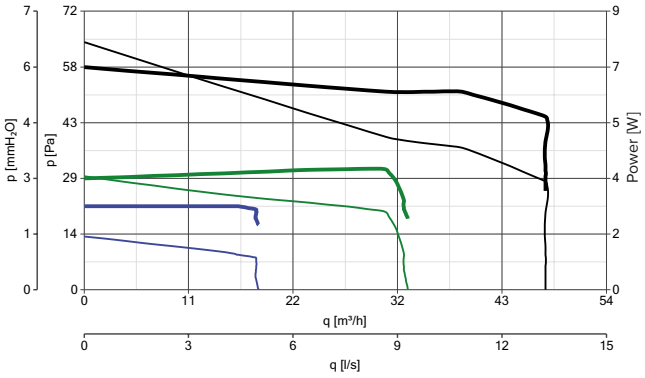
AXIAL EXTRACTOR FANS FOR CONTINUOUS VENTILATION

CENTRALIZED VENTILATION | **WALL MOUNTED** | **UP TO 60/90 M²**

Wall and ceiling axial extractor fans compatible with in-line installation. Thanks to the very low consumption of the EC (brushless) motor used, VORT NOTUS fans are ideal for ideal for the continuous ventilation of small and medium-sized residential and commercial premises whose layout allows direct or short-ducted discharge.

- Self-extinguishing polypropylene casing.
- DC-EC motor with very low electrical consumption (max 6.4 W), constant flow operation.
- Built-in adjustable timer (3'-20'), built-in humidity control sensor (adjustable from 60% to 90%).
- Degree of protection IPX4.
- Power supply 220-230 V - 50 Hz.

PERFORMANCE AND ABSORPTION



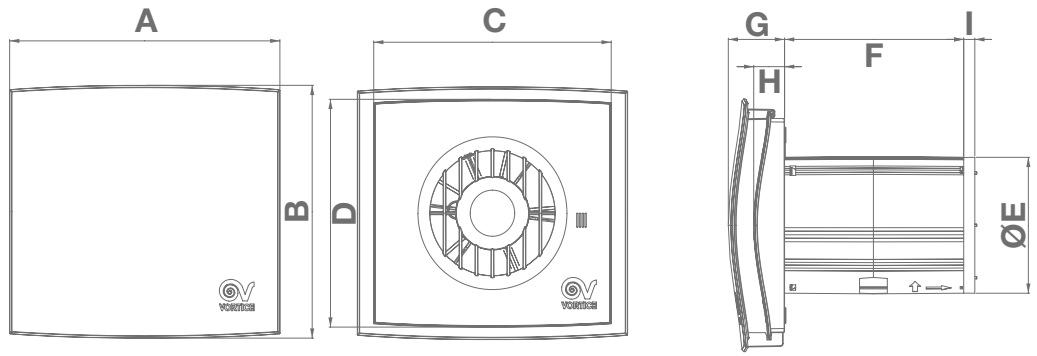
TECHNICAL DATA

PRODUCTS	CODE	Nom. Ø (mm)	(m³/h)	(W)	(PA)	Lp [db(A)] 3m
VORT NOTUS	11177	100	42	6.4	86.3	17.3
VORT NOTUS T-HCS	11903	100	42	2.8	86.3	17.3

CONSUMPTION CURVES
max
avg
min

PERFORMANCE CURVES
max
avg
min

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

ENERGY DATA

	UNIT OF MEASUREMENT	VORT NOTUS VORT NOTUS T-HCS
MANUFACTURER'S NAME OR TRADE NAME	-	VORTICE
CLASS OF SPECIFIC ENERGY CONSUMPTION FOR TEMPERATE CLIMATE	-	NA*
SPECIFIC ENERGY CONSUMPTION SEC (TEMPERATE CLIMATE)	kWh/m² year	-6.2
SPECIFIC ENERGY CONSUMPTION SEC (COLD CLIMATE)		-19.5
SPECIFIC ENERGY CONSUMPTION SEC (WARM CLIMATE)		1.5
DECLARED TYPE OF THE VENTILATION UNIT	-	UVR-U**
DRIVE TYPE	-	NA*
HRS HEAT EXCHANGER TYPE	-	absent
THERMAL EFFICIENCY OF HEAT RECOVERY AT THE HRS REFERENCE FLOW RATE	%	NA*
MAXIMUM FLOW RATE	m³/h	43
TOTAL ELECTRIC POWER ABSORBED BY THE FAN AT MAXIMUM FLOW RATE	w	3.5
NOISE LEVEL	LWA [dB(A)]	32.4
REFERENCE FLOW RATE	m³/s	0.0084
REFERENCE PRESSURE DIFFERENCE	Pa	62
SPI****	W/(m³/h)	0.22591
CTRL CONTROL FACTOR	-	1
CONTROL TYPE	-	manual
MAXIMUM PERCENTAGE OF INTERNAL LEAKAGE	%	NA*
MAXIMUM PERCENTAGE OF EXTERNAL LEAKAGE	%	NA*
MIXING RATE	-	NA*
VISUAL FILTER SIGNAL POSITION AND DESCRIPTION	-	na*
AIR FLOW SENSITIVITY TO PRESSURE VARIATIONS AT ± 20 PA	-	NA*
INDOOR/OUTDOOR AIR TIGHTNESS	m³/h	NA*
AEC ANNUAL ELECTRICITY CONSUMPTION	kWh of electricity/year	311
TEMPERATE AHS ANNUAL HEATING SAVING	kWh of primary energy/year	1397
COLD AHS ANNUAL HEATING SAVING		8901
WARM AHS ANNUAL HEATING SAVING		632

** NA: Not applicable. ** UVR-U: Residential Ventilation Unit - Unidirectional. *** VM: Multiple speeds. VSD: Variable Speed Drive.*

***** SPI: Specific power input.*

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 (ⓜ and BRE).
- **Degree of protection from dust and water**: IPX4 (suitable for Zone 1 installation).
- **Electrical insulation class**: II (earthing not required).

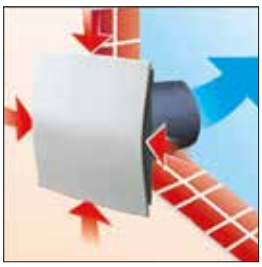
TECHNICAL DATA

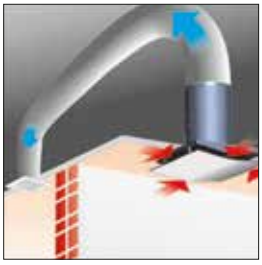
PRODUCTS	CODE	V~50 HZ	W min/max	A min/max	MAX FLOW RATE		MAX PRESSURE		Lp dB(A)* 3m min/max	°C* MAX	KG
					m^3/h min/max	l/s min/max	mmH_2O min/max	Pa min/max			
VORT NOTUS	11903	220-230	1.5 2.8	0018 0025	11.7 42.0	3.3 11.7	2.4 8.8	23.5 86.3	10.1 17.3	50	0.80
VORT NOTUS T-HCS	11177	220-230	2.1 6.4	0028 0037	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.*

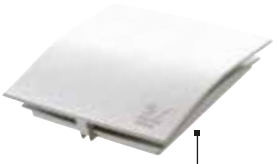
DETAILS





Reliability over time:the life of the motors is guaranteed for at least 30,000 h of continuous operation at the maximum certified temperature.

LONG LIFE 30.000 h



Reduced thickness (approx. 40 mm), which minimizes the aesthetic impact.

Strong protection from water, suitable for use in Zone 1 of bathrooms and in the presence of high humidity levels.

VORT PLATT RANGE

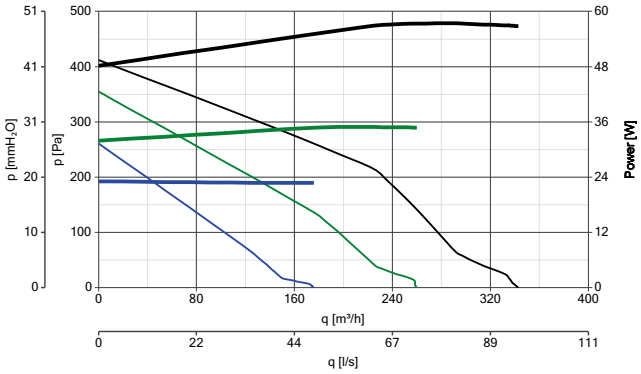
CENTRALISED MECHANICAL VENTILATION UNIT

C **FALSE CEILING CENTRALISED** **VENTILATION**

Unit for simple-flow centralised mechanical ventilation with reduced thickness. Installed in a false ceiling or in the attic, it extracts stale air from service rooms and facilitates the return of fresh external air through openings appropriately positioned in the residential rooms. A pair of relative humidity sensors enable the automatic adjustment of the performance provided to the actual needs of the moment.

- Casing of zinc-coated metal sheet and flanges of ABS, centrifugal-axial motor-fan unit mounted on ball bearings.
- Low consumption DC-EC single-phase motor, absorption 12/50 W.
- Return spigot Ø125mm, intake spigots 3 x Ø80mm + 1 x Ø125mm.
- Class II insulation.
- Integrated adjustable timer (max 30').
- Degree of protection IPX4.

PERFORMANCE AND ABSORPTION



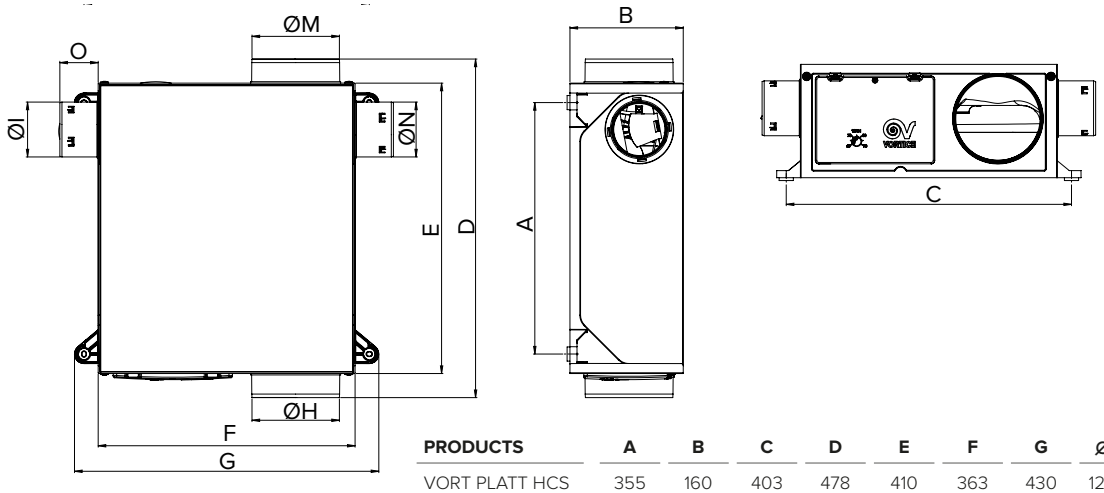
TECHNICAL DATA

PRODUCT	CODE	Nom. Ø (mm)	(m³/h)	(W)	(PA)	Lp [db(A)] 3m
VORT PLATT HCS	12108	80-125	343	56	411.7	34.9

CONSUMPTION CURVES
max
avg
min

PERFORMANCE CURVES
max
avg
min

DIMENSIONS



Dimensions in mm

PRODUCTS	A	B	C	D	E	F	G	ØH	ØI	ØM	ØN	O
VORT PLATT HCS	355	160	403	478	410	363	430	124.5	77.5	124.5	77.5	45

ENERGY DATA

	UNIT OF MEASUREMENT	VORT PLATT HCS
MANUFACTURER'S NAME OR TRADE NAME	-	VORTICE
CLASS OF SPECIFIC ENERGY CONSUMPTION FOR TEMPERATE CLIMATE	-	C
SPECIFIC ENERGY CONSUMPTION SEC (TEMPERATE CLIMATE)	kWh/m² year	-25.4
SPECIFIC ENERGY CONSUMPTION SEC (COLD CLIMATE)		-52.4
SPECIFIC ENERGY CONSUMPTION SEC (WARM CLIMATE)		-9.9
DECLARED TYPE OF THE VENTILATION UNIT	-	UVR-U**
DRIVE TYPE	-	VM***
HRS HEAT EXCHANGER TYPE	-	absent
THERMAL EFFICIENCY OF HEAT RECOVERY AT THE HRS REFERENCE FLOW RATE	%	NA*
MAXIMUM FLOW RATE	m³/h	280
TOTAL ELECTRIC POWER ABSORBED BY THE FAN AT MAXIMUM FLOW RATE	w	57.6
NOISE LEVEL	LWA [dB(A)]	57
REFERENCE FLOW RATE	m³/s	0.05
REFERENCE PRESSURE DIFFERENCE	Pa	100
SPI****	W/(m³/h)	0.18
CTRL CONTROL FACTOR	-	0.65
CONTROL TYPE	-	local premise
MAXIMUM PERCENTAGE OF INTERNAL LEAKAGE	%	NA*
MAXIMUM PERCENTAGE OF EXTERNAL LEAKAGE	%	7.4
MIXING RATE	-	NA*
VISUAL FILTER SIGNAL POSITION AND DESCRIPTION	-	NA*
AIR FLOW SENSITIVITY TO PRESSURE VARIATIONS AT ± 20 PA	-	NA*
INDOOR/OUTDOOR AIR TIGHTNESS	m³/h	NA*
AEC ANNUAL ELECTRICITY CONSUMPTION	kWh of electricity/year	117
TEMPERATE AHS ANNUAL HEATING SAVING	kWh of primary energy/year	2830
COLD AHS ANNUAL HEATING SAVING		5536
WARM AHS ANNUAL HEATING SAVING		1280

** NA: Not applicable. ** UVR-U: Residential Ventilation Unit - Unidirectional. *** VM: Multiple speeds. VSD: Variable Speed Drive.*

***** SPI: Specific power input.*

TECHNICAL FEATURES

- **1 model**.
- Cover of **zinc-coated metal sheet**.
- Rear flange of black plastic resin (ABS) **resistant to impact and aging** due to sun exposure ("UV resistant") including anchoring brackets for target surface and the position, protected by a black ABS sealed cover, of the terminals for connection to the electricity grid.
- **4 intake spigots**, three of 80 mm nominal diameter of and one of 125 mm and 1 discharge nozzle of 125 mm nominal diameter, on the lateral surface of the product.
- **3-speed AC motor**, thermally protected, with shaft mounted on ball bearings, guarantees prolonged service (at least 30,000 h) at the maximum rated temperature; speed selector and ON/OFF control available as an option.
- Impeller, of the centrifugal type with backward curved blades, **made of plastic resin loaded with glass fibers**, to combine dimensional stability, strength, and resistance to aggressive agents.
- Relative humidity sensors, electronically managed, with **adjustable threshold upon installation.**
- **2 connection sleeves to the intake pipes made of plastic resin** (PP), designed for interlocking in the 80-mm spigots. Equipped with special mylar valves to maintain the extracted flow rate at 30 m^3/h, regardless of pressure drops and the number of connected rooms.
- 1 cap with 80 mm diameter, for closing the spigot that may not be used, supplied as standard.
- **Safety certified by a third party** (Ⓨ).
- **Electrical insulation class**: II (earthing not required).

TECHNICAL DATA

PRODUCTS	CODE	V~50 HZ	W min/max	A min/max	RPM min/max	MAX FLOW RATE		MAX PRESSURE		Lp dB(A)* 3m max	°C* MAX	KG
						m^3/h min/max	l/s min/max	mmH_2O min/max	Pa min/max			
VORT PLATT HCS	12108	230	23 56	0.21 0.25	1300 2610	176 343	48.8 95.2	26.6 41.9	261 411.7	34.9	60	5.4

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

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

ACCESSORIES

MODELS	DESCRIPTION		CODE	VORT PLATT HCS code 12108
	FLOW REGULATOR	15 m^3/h	**22324**	✓
		30 m^3/h	**22325**	

DETAILS

The internal duct design guarantees high performance, low consumption, and lower noise levels.

Light and at the same time robust construction.

Reliability over time: the life of the motor is guaranteed for at least 30,000 h of continuous operation at the maximum certified temperature.

LONG LIFE 30.000 h

VORT PENTA RANGE

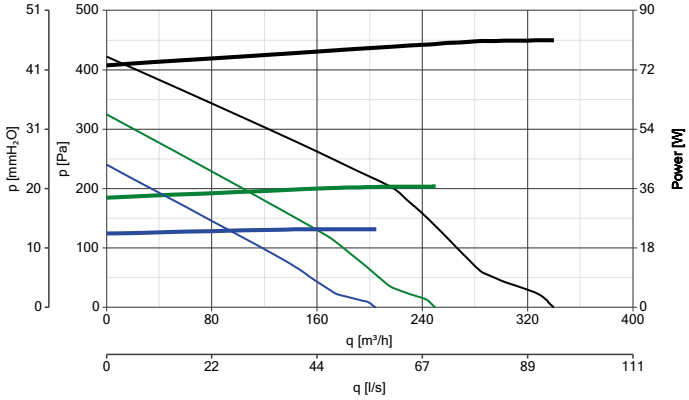
CENTRALISED MECHANICAL VENTILATION UNIT

C | CENTRALISED VENTILATION | FALSE CEILING

Unit for simple-flow centralised mechanical ventilation. Installed in a false ceiling or in the attic, it extracts stale air from service rooms and facilitates the return of fresh external air through openings appropriately positioned in the residential rooms. A pair of relative humidity sensors enables the automatic adjustment of the performance to the actual needs of the moment.

- Centralised unit for single-flow residential MCV for up to 6 rooms.
- ABS casing, centrifugal-axial motor-fan unit mounted on ball bearings.
- Low consumption single-phase DC-EC motor.
- Return spigot Ø125mm, intake spigots 5 x Ø80mm + 1 x Ø125mm.
- Class II insulation.
- Integrated adjustable timer (max 30').
- Degree of protection IPX4.
- Integrated relative humidity sensor.

PERFORMANCE AND ABSORPTION



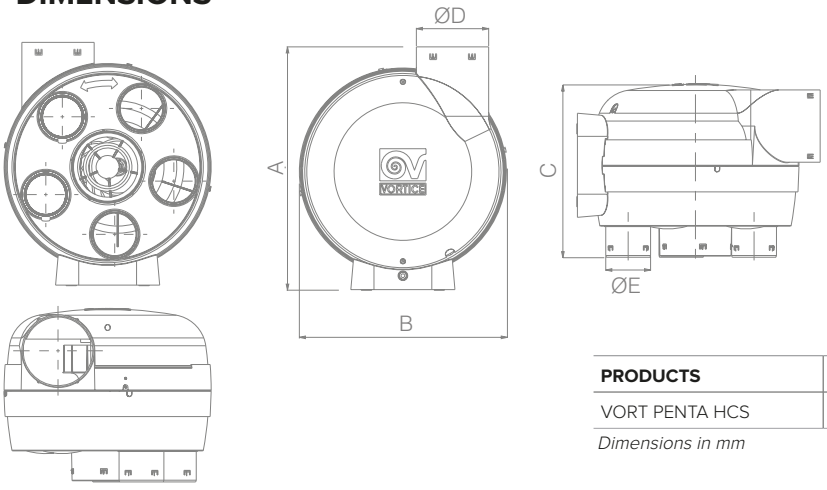
CONSUMPTION CURVES
max
avg
min

PERFORMANCE CURVES
max
avg
min

TECHNICAL DATA

PRODUCT	CODE	Nom. Ø (mm)	(m³/h)	(W)	(PA)	Lp [dB (A)] 3m
VORT PENTA HCS	12103	125	340	73	421.9	31.9

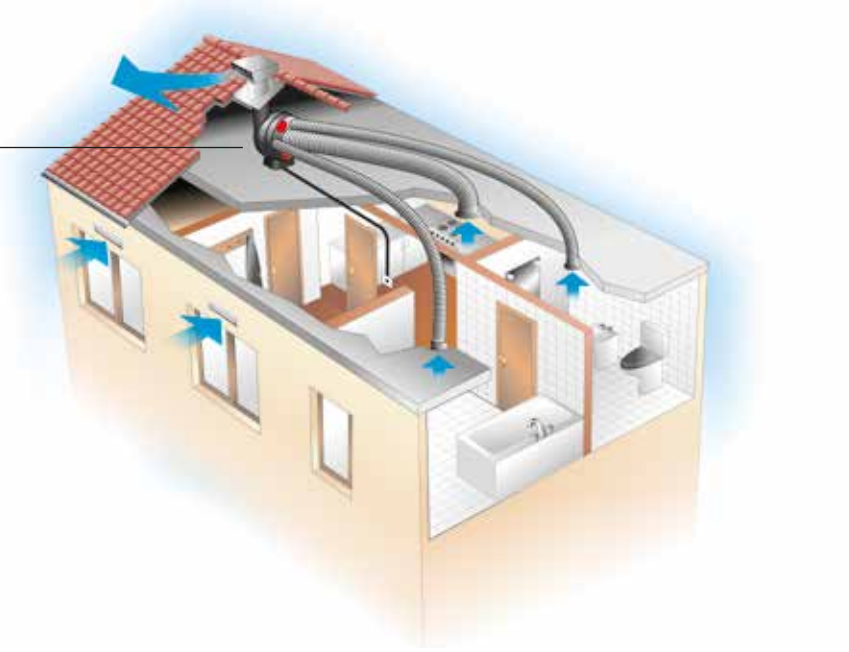
DIMENSIONS



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

Dimensions in mm

Light and at the same time robust construction.



ENERGY DATA

	UNIT OF MEASUREMENT	VORT PENTA HCS
MANUFACTURER'S NAME OR TRADE NAME	-	VORTICE
CLASS OF SPECIFIC ENERGY CONSUMPTION FOR TEMPERATE CLIMATE	-	C
SPECIFIC ENERGY CONSUMPTION SEC (TEMPERATE CLIMATE)	kWh/m² year	-25,124
SPECIFIC ENERGY CONSUMPTION SEC (COLD CLIMATE)		-52,187
SPECIFIC ENERGY CONSUMPTION SEC (WARM CLIMATE)		- 9,621
DECLARED TYPE OF THE VENTILATION UNIT	-	UVR-U**
DRIVE TYPE	-	VM***
HRS HEAT EXCHANGER TYPE	-	absent
THERMAL EFFICIENCY OF HEAT RECOVERY AT THE HRS REFERENCE FLOW RATE	%	NA*
MAXIMUM FLOW RATE	m³/h	268
TOTAL ELECTRIC POWER ABSORBED BY THE FAN AT MAXIMUM FLOW RATE	w	80
NOISE LEVEL	LWA [dB(A)]	50
REFERENCE FLOW RATE	m³/s	0,052
REFERENCE PRESSURE DIFFERENCE	Pa	90
SPI****	W/(m³/h)	0,193
CTRL CONTROL FACTOR	-	0.65
CONTROL TYPE	-	local premise
MAXIMUM PERCENTAGE OF INTERNAL LEAKAGE	%	NA*
MAXIMUM PERCENTAGE OF EXTERNAL LEAKAGE	%	9.6
MIXING RATE	-	NA*
VISUAL FILTER SIGNAL POSITION AND DESCRIPTION	-	NA*
AIR FLOW SENSITIVITY TO PRESSURE VARIATIONS AT ± 20 PA	-	NA*
INDOOR/OUTDOOR AIR TIGHTNESS	m³/h	NA*
AEC ANNUAL ELECTRICITY CONSUMPTION	kWh of electricity/year	127
TEMPERATE AHS ANNUAL HEATING SAVING	kWh of primary energy/year	2830
COLD AHS ANNUAL HEATING SAVING		5536
WARM AHS ANNUAL HEATING SAVING		1280

** NA: Not applicable. ** UVR-U: Residential Ventilation Unit - Unidirectional. *** VM: Multiple speeds. VSD: Variable Speed Drive.*

***** SPI: Specific power input.*

TECHNICAL FEATURES

- **1 model.**
- **Black plastic resin (ABS) casing resistant to impacts** and aging due to sun exposure ("UV resistant"); the lower surface integrates 6 intake spigots, 5 with 80 mm nominal diameter and one with 125 mm nominal diameter. The discharge nozzle, with 125 mm nominal diameter, is on the lateral surface. On the upper surface, protected by a sealed black ABS cover.
- **Black plastic resin (ABS) bracket**, 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, with shaft mounted on ball bearings, guarantees prolonged service (at least 30,000 h) at the maximum rated temperature.
- Impeller, of the centrifugal type with backward curved blades, made of plastic resin loaded with glass fibers, to combine **dimensional stability, strength, and resistance to aggressive agents**.
- **Relative humidity sensors**, electronically managed, with threshold adjustable upon installation.
- 2 sleeves connecting to the intake pipes of plastic resin (PP), designed for interlocking in the 80-mm spigots, integrating special mylar valves to maintain the extracted flow rate at 30 m^3/h, regardless of pressure drops and the number of connected rooms.
- **4 caps** with 80 mm diameter, for closing any spigot that may not be used, supplied as standard.
- **Safety certified by a third party** (Ⓨ)
- **Degree of protection from dust and water**: IPX4.
- **Electrical insulation class**: II (earthing not required).

TECHNICAL DATA

PRODUCTS	CODE	V~50 HZ	W min/max	A min/max	RPM min/max	MAX FLOW RATE		MAX PRESSURE		Lp dB(A)* 3m min/max	°C* MAX	KG
						m^3/h min/max	l/s min/max	mmH_2O min/max	Pa min/max			
VORT PENTA 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.*

ACCESSORIES

MODELS	DESCRIPTION		CODE	VORT PENTA HCS code 12103
	FLOW REGULATOR	$15^3/h$	**22324**	✓
		$30^3/h$	**22325**	

DETAILS

Suitable for installation in false ceilings or attics, they are designed for suspended mounting using a cable supplied as standard.

The internal duct design guarantees high performance, low consumption, and reduced noise levels.

Reliability over time: the life of the motor is guaranteed for at least 30,000 h of continuous operation at the maximum certified temperature.

Alternatively, an integrated rotating bracket is available, which facilitates the installation of the fan in any position, ensuring the correct arrangement for the needs of the system.

LONG LIFE 30.000 h

VORT MONO RANGE

DECENTRALISED HEAT RECOVERY UNITS

A **CENTRALISED WALL** **VENTILATION**

Ventilation units with heat recovery specifically designed for air exchange in newly built or renovated residential and commercial premises, featuring high levels of thermal insulation. Can be installed in perimeter walls between 260 mm and 700 mm thick. Available in the manual control version, in the variants with controls on the machine and the version with remote control and relative humidity, temperature, and ambient light sensors.

- High-efficiency 90% heat exchanger, made of ceramic material of the hexagonal cell type to maximise the heat exchange surface.
- Casing in expanded polypropylene (EPP), designed for housing in a hole, with (100/160 mm) nominal diameter, drilled in the target perimeter wall.
- EC motor fans, to ensure very low consumption.
- HCS models are supplied with remote control.
- Class II insulation.
- Washable and easily accessible G3 filters.

Ø 160

VORT HRW 40 MONO EVO
Code 12435
On-board controls

VORT HRW 40 MONO EVO HCS
Code 12437
With remote control and relative humidity, temperature and light sensor

VORT HRW 60 MONO EVO HCS
Code 12431
With remote control and relative humidity, temperature and light sensor

Ø 100

VORT HRW 30 MONO EVO
Code 12434
On-board controls

VORT HRW 30 MONO EVO HCS
Code 12436
With remote control and relative humidity, temperature and light sensor

RANGE EXPANSION

Decentralised heat recovery units **WITH Wi-Fi MODULE ABLE TO ESTABLISH MUTUAL COMMUNICATION BETWEEN PRODUCTS THROUGH A LOCAL MESH NETWORK**

The Wi-Fi module is able to establish a mutual communication between VORT HRW MONO Wi-Fi, without having to install a router and stipulate a contract with an Internet service provider, but through a local MESH network, without the need for a wired connection between the products.

Ø 160

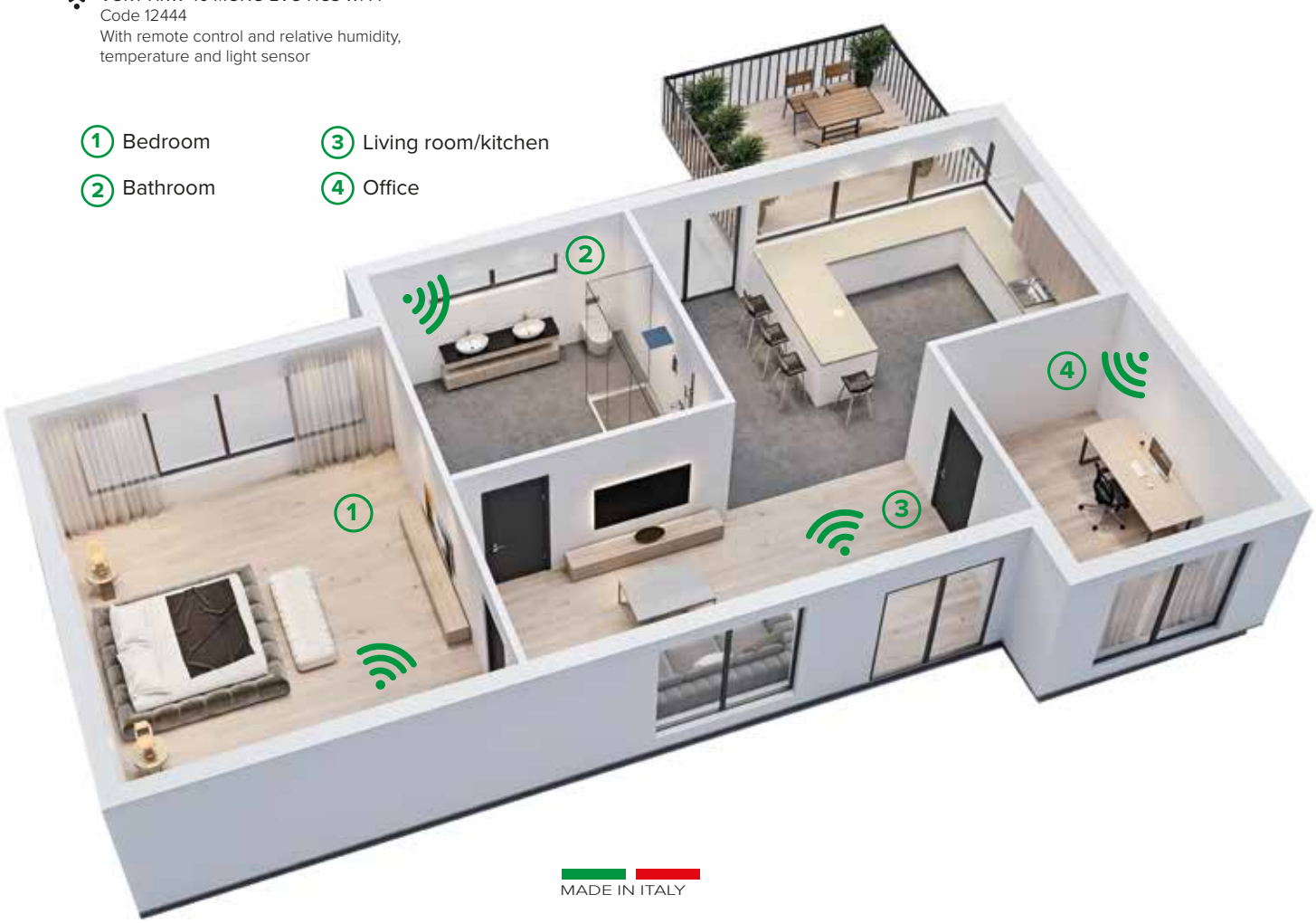
VORT HRW 60 MONO EVO HCS Wi-Fi
Code 12432
With remote control and relative humidity, temperature and light sensor

VORT HRW 40 MONO EVO HCS Wi-Fi
Code 12444
With remote control and relative humidity, temperature and light sensor

Ø 100

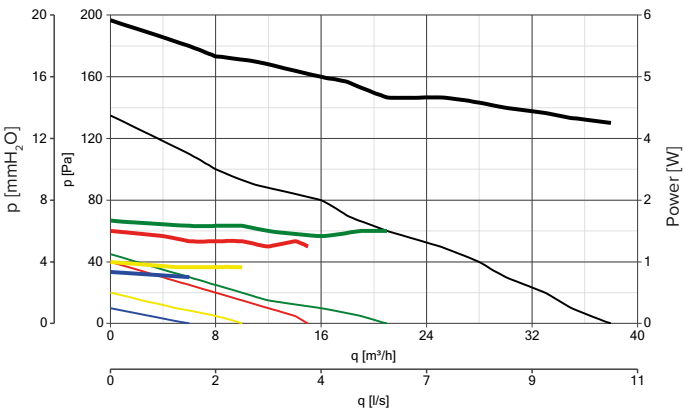
VORT HRW 30 MONO EVO HCS Wi-Fi
Code 12443
With remote control and relative humidity, temperature and light sensor

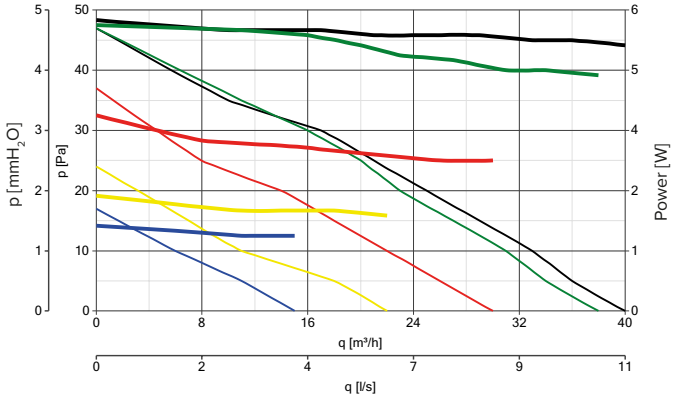
1 Bedroom
2 Bathroom
3 Living room/kitchen
4 Office



MADE IN ITALY

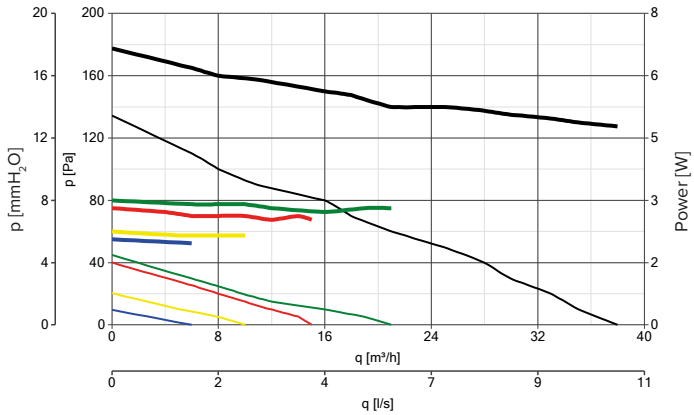
PERFORMANCE AND ABSORPTION

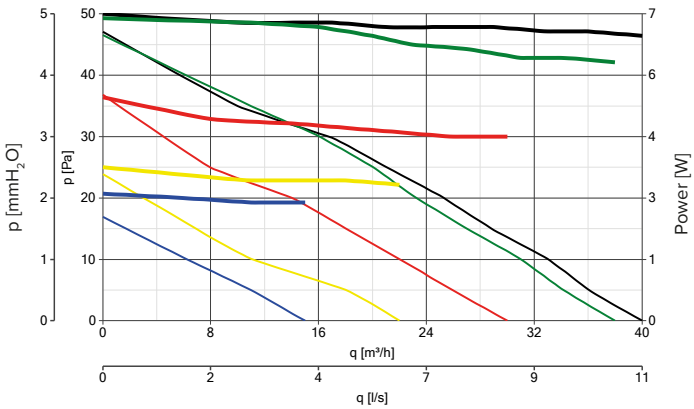




PRODUCT	CODE	Nom. Ø (mm)	(m³/h)	(W)	(PA)	Lp [dB (A)] 3m
VORT HRW 30 MONO EVO	12434	100	38	4	130	49.2
VORT HRW 30 MONO EVO HCS	12436	100	38	4	130	49.2

PRODUCT	CODE	Nom. Ø (mm)	(m³/h)	(W)	(PA)	Lp [dB (A)] 3m
VORT HRW 40 MONO EVO	12435	160	40	5	47	31.8
VORT HRW 40 MONO EVO HCS	12437	160	40	5	47	31.8





PRODUCT	CODE	Nom. Ø (mm)	(m³/h)	(W)	(PA)	Lp [dB (A)] 3m
VORT HRW 30 MONO EVO HCS Wi-Fi	12443	100	38	4	130	49.2

PRODUCT	CODE	Nom. Ø (mm)	(m³/h)	(W)	(PA)	Lp [dB (A)] 3m
VORT HRW 40 MONO EVO HCS Wi-Fi	12444	100	38	4	130	49.2

KEY:

NIGHT MODE
Pressure
Power

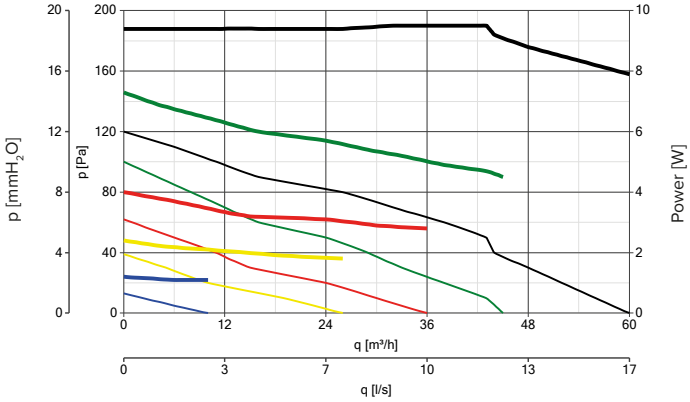
HIGH PERFORMANCE MODE
Pressure
Power

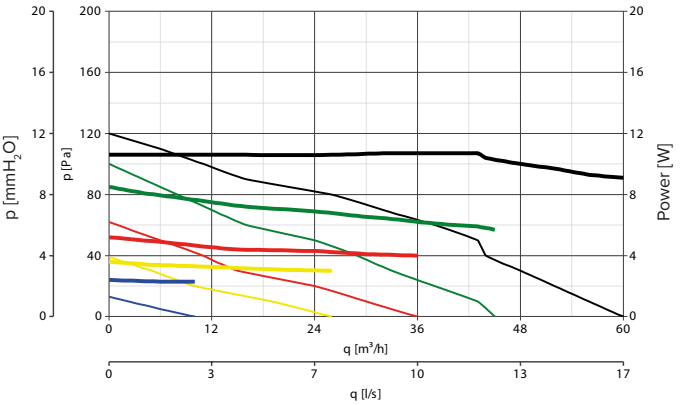
PERFORMANCE MODE
Pressure
Power

QUIET MODE
Pressure
Power

BOOST MODE
Pressure
Power

PERFORMANCE AND ABSORPTION

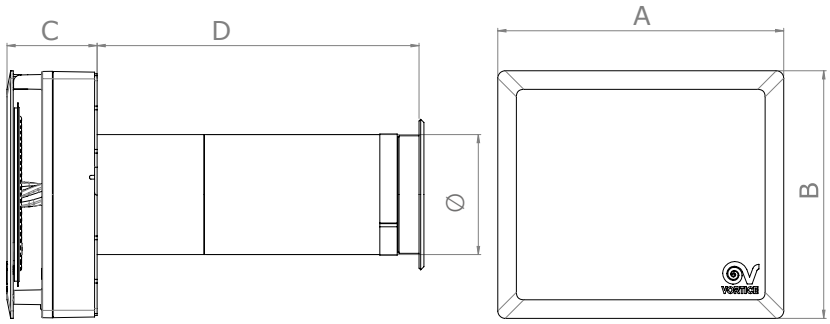




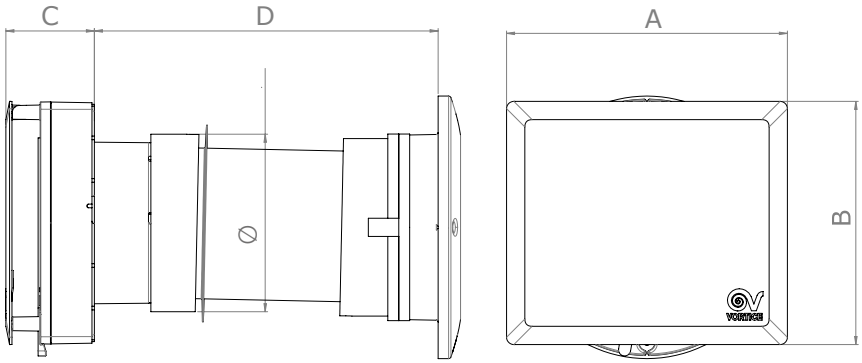
PRODUCT	CODE	Nom. Ø (mm)	(m³/h)	(W)	(PA)	Lp [dB (A)] 3m
VORT HRW 60 MONO EVO HCS	12431	160	60	7	120	44.6

PRODUCT	CODE	Nom. Ø (mm)	(m³/h)	(W)	(PA)	Lp [dB (A)] 3m
VORT HRW 60 MONO EVO HCS WIFI	12432	160	60	8	120	44.6

DIMENSIONS



12434 VORT HRW 30 MONO EVO - 12436 VORT HRW 30 MONO EVO HCS
- 12443 VORT HRW 30 MONO EVO HCS Wi-Fi



12435 VORT HRW 40 MONO EVO - 12437 VORT HRW 40 MONO EVO HCS
12444 VORT HRW 40 MONO EVO HCS Wi-Fi - 12431 VORT HRW 60 MONO EVO HCS
12432 VORT HRW 60 MONO EVO HCS WiFi

PRODUCTS	A	B	C	D	Ø
VORT HRW 30 MONO EVO	231	200	73	260	97
VORT HRW 30 MONO EVO HCS	231	200	73	260	97
VORT HRW 40 MONO EVO	231	200	73	283	146
VORT HRW 40 MONO EVO HCS	231	200	73	283	146
VORT HRW 30 MONO EVO HCS Wi-Fi	231	200	73	260	97
VORT HRW 40 MONO EVO HCS Wi-Fi	231	200	73	283	146
VORT HRW 60 MONO EVO HCS	231	200	73	283	146
VORT HRW 60 MONO EVO HCS WiFi	231	200	73	283	146

Dimensions in mm

ENERGY DATA - VORT HRW 30 MONO EVO/HCS

	UNIT OF MEASURE-MENT	VORT HRW 30 MONO EVO CODE 12434	VORT HRW 30 MONO EVO HCS CODE 12436
MANUFACTURER'S NAME OR TRADE NAME	-	VORTICE	VORTICE
CLASS OF SPECIFIC ENERGY CONSUMPTION FOR TEMPERATE CLIMATE	-	A	A+
SPECIFIC ENERGY CONSUMPTION SEC (TEMPERATE CLIMATE)	kWh/m² year	- 41.2	-44.4
SPECIFIC ENERGY CONSUMPTION SEC (COLD CLIMATE)		- 85.4	- 89.5
SPECIFIC ENERGY CONSUMPTION SEC (WARM CLIMATE)		- 17.0	-19.3
DECLARED TYPE OF THE VENTILATION UNIT	-	UVR-U**	UVR-U**
DRIVE TYPE	-	VM***	VM***
HRS HEAT EXCHANGER TYPE	-	recovery	recovery
THERMAL EFFICIENCY OF HEAT RECOVERY AT THE HRS REFERENCE FLOW RATE	%	89.0	89.0
MAXIMUM FLOW RATE	m³/h	35	35
TOTAL ELECTRIC POWER ABSORBED BY THE FAN AT MAXIMUM FLOW RATE	W	4	4
NOISE LEVEL	LWA [dB(A)]	53.1	53.1
REFERENCE FLOW RATE	m³/s	0.0097	0.0097
REFERENCE PRESSURE DIFFERENCE	Pa	10	10
SPI****	W/(m³/h)	0.11429	0.11429
CTRL CONTROL FACTOR	-	1	0.65
CONTROL TYPE	-	manual	local premise
MAXIMUM PERCENTAGE OF INTERNAL LEAKAGE	%	NA*	NA*
MAXIMUM PERCENTAGE OF EXTERNAL LEAKAGE	%	NA*	NA*
MIXING RATE	-	NA*	NA*
VISUAL FILTER SIGNAL POSITION AND DESCRIPTION	-	see instruction booklet	see instruction booklet
AIR FLOW SENSITIVITY TO PRESSURE VARIATIONS AT ± 20 PA	-	0.48	0.48
INDOOR/OUTDOOR AIR TIGHTNESS	m³/h	0.0	0.0
AEC ANNUAL ELECTRICITY CONSUMPTION	kWh of electrici-ty/year	157	83
TEMPERATE AHS ANNUAL HEATING SAVING	kWh of primary energy/year	4515	4650
COLD AHS ANNUAL HEATING SAVING		8901	9141
WARM AHS ANNUAL HEATING SAVING		2057	2113

** NA: Not applicable. ** UVR-U: Residential Ventilation Unit - Unidirectional. *** VM: Multiple speeds. VSD: Variable Speed Drive.*

***** SPI: Specific power input.*

ENERGY DATA - VORT HRW 40 MONO EVO/HCS

	UNIT OF MEASURE-MENT	VORT HRW 40 MONO EVO CODE 12435	VORT HRW 40 MONO EVO HCS CODE 12437
MANUFACTURER'S NAME OR TRADE NAME	-	VORTICE	VORTICE
CLASS OF SPECIFIC ENERGY CONSUMPTION FOR TEMPERATE CLIMATE	-	A	A+
SPECIFIC ENERGY CONSUMPTION SEC (TEMPERATE CLIMATE)	kWh/m² year	- 39.7	-43.7
SPECIFIC ENERGY CONSUMPTION SEC (COLD CLIMATE)		- 84.1	-88.8
SPECIFIC ENERGY CONSUMPTION SEC (WARM CLIMATE)		- 15.7	-18.6
DECLARED TYPE OF THE VENTILATION UNIT	-	UVR-U***	UVR-U***
DRIVE TYPE	-	VM	VM
HRS HEAT EXCHANGER TYPE	-	recovery	recovery
THERMAL EFFICIENCY OF HEAT RECOVERY AT THE HRS REFERENCE FLOW RATE	%	89	89
MAXIMUM FLOW RATE	m³/h	32.6	32.6
TOTAL ELECTRIC POWER ABSORBED BY THE FAN AT MAXIMUM FLOW RATE	W	5.4	5.4
NOISE LEVEL	LWA [dB(A)]	48.1	48.1
REFERENCE FLOW RATE	m³/s	0.0085	0.0085
REFERENCE PRESSURE DIFFERENCE	Pa	10	10
SPI****	W/(m³/h)	0.15686	0.15686
CTRL CONTROL FACTOR	-	1	0.65
CONTROL TYPE	-	manual	local premise
MAXIMUM PERCENTAGE OF INTERNAL LEAKAGE	%	NA*	NA*
MAXIMUM PERCENTAGE OF EXTERNAL LEAKAGE	%	NA*	NA*
MIXING RATE	-	NA*	NA*
VISUAL FILTER SIGNAL POSITION AND DESCRIPTION	-	see instruction booklet	see instruction booklet
AIR FLOW SENSITIVITY TO PRESSURE VARIATIONS AT ± 20 PA	-	0.48	0.48
INDOOR/OUTDOOR AIR TIGHTNESS	m³/h	0.0	0.0
AEC ANNUAL ELECTRICITY CONSUMPTION	kWh of electrici-ty/year	216	113
TEMPERATE AHS ANNUAL HEATING SAVING	kWh of primary energy/year	4515	4650
COLD AHS ANNUAL HEATING SAVING		8901	9141
WARM AHS ANNUAL HEATING SAVING		2057	2113

** NA: Not applicable. ** UVR-U: Residential Ventilation Unit - Unidirectional. *** VM: Multiple speeds. VSD: Variable Speed Drive.*

***** SPI: Specific power input.*

ENERGY DATA - VORT HRW 30 MONO EVO/HCS

	UNIT OF MEASURE-MENT	VORT HRW 30 MONO EVO HCS WI-FI CODE 12443
MANUFACTURER'S NAME OR TRADE NAME	-	VORTICE
CLASS OF SPECIFIC ENERGY CONSUMPTION FOR TEMPERATE CLIMATE	-	A+
SPECIFIC ENERGY CONSUMPTION SEC (TEMPERATE CLIMATE)	kWh/m² year	- 43.8
SPECIFIC ENERGY CONSUMPTION SEC (COLD CLIMATE)		- 89.0
SPECIFIC ENERGY CONSUMPTION SEC (WARM CLIMATE)		-18.7
DECLARED TYPE OF THE VENTILATION UNIT	-	UVR-U**
DRIVE TYPE	-	VM***
HRS HEAT EXCHANGER TYPE	-	recovery
THERMAL EFFICIENCY OF HEAT RECOVERY AT THE HRS REFERENCE FLOW RATE	%	89.0
MAXIMUM FLOW RATE	m³/h	35
TOTAL ELECTRIC POWER ABSORBED BY THE FAN AT MAXIMUM FLOW RATE	W	5.2
NOISE LEVEL	LWA [dB(A)]	53.1
REFERENCE FLOW RATE	m³/s	0.0097
REFERENCE PRESSURE DIFFERENCE	Pa	10
SPI****	W/(m³/h)	0.14857
CTRL CONTROL FACTOR	-	0.65
CONTROL TYPE	-	local premise
MAXIMUM PERCENTAGE OF INTERNAL LEAKAGE	%	NA*
MAXIMUM PERCENTAGE OF EXTERNAL LEAKAGE	%	NA*
MIXING RATE	-	NA*
VISUAL FILTER SIGNAL POSITION AND DESCRIPTION	-	see instruction booklet
AIR FLOW SENSITIVITY TO PRESSURE VARIATIONS AT ± 20 PA	-	0.48
INDOOR/OUTDOOR AIR TIGHTNESS	m³/h	0.0
AEC ANNUAL ELECTRICITY CONSUMPTION	kWh of electrici-ty/year	107
TEMPERATE AHS ANNUAL HEATING SAVING	kWh of primary energy/year	4650
COLD AHS ANNUAL HEATING SAVING		9141
WARM AHS ANNUAL HEATING SAVING		2113

** NA: Not applicable. ** UVR-U: Residential Ventilation Unit - Unidirectional. *** VM: Multiple speeds. VSD: Variable Speed Drive.*

***** SPI: Specific power input.*

ENERGY DATA - VORT HRW 40 MONO EVO/HCS

	UNIT OF MEASURE-MENT	VORT HRW 40 MONO EVO HCS Wi-Fi CODE 12444
MANUFACTURER'S NAME OR TRADE NAME	-	VORTICE
CLASS OF SPECIFIC ENERGY CONSUMPTION FOR TEMPERATE CLIMATE	-	A+
SPECIFIC ENERGY CONSUMPTION SEC (TEMPERATE CLIMATE)	kWh/m² year	-43.0
SPECIFIC ENERGY CONSUMPTION SEC (COLD CLIMATE)		-88.2
SPECIFIC ENERGY CONSUMPTION SEC (WARM CLIMATE)		-17.9
DECLARED TYPE OF THE VENTILATION UNIT	-	UVR-U**
DRIVE TYPE	-	VM
HRS HEAT EXCHANGER TYPE	-	recovery
THERMAL EFFICIENCY OF HEAT RECOVERY AT THE HRS REFERENCE FLOW RATE	%	89
MAXIMUM FLOW RATE	m³/h	32.6
TOTAL ELECTRIC POWER ABSORBED BY THE FAN AT MAXIMUM FLOW RATE	W	6.6
NOISE LEVEL	LWA [dB(A)]	48.1
REFERENCE FLOW RATE	m³/s	0.0085
REFERENCE PRESSURE DIFFERENCE	Pa	10
SPI****	W/(m³/h)	0.19608
CTRL CONTROL FACTOR	-	0.65
CONTROL TYPE	-	local premise
MAXIMUM PERCENTAGE OF INTERNAL LEAKAGE	%	NA*
MAXIMUM PERCENTAGE OF EXTERNAL LEAKAGE	%	NA*
MIXING RATE	-	NA*
VISUAL FILTER SIGNAL POSITION AND DESCRIPTION	-	see instruction booklet
AIR FLOW SENSITIVITY TO PRESSURE VARIATIONS AT ± 20 PA	-	0.48
INDOOR/OUTDOOR AIR TIGHTNESS	m³/h	0.0
AEC ANNUAL ELECTRICITY CONSUMPTION	kWh of electrici-ty/year	142
TEMPERATE AHS ANNUAL HEATING SAVING	kWh of primary energy/year	4650
COLD AHS ANNUAL HEATING SAVING		9141
WARM AHS ANNUAL HEATING SAVING		2113

** NA: Not applicable. ** UVR-U: Residential Ventilation Unit - Unidirectional. *** VM: Multiple speeds. VSD: Variable Speed Drive.*
***** SPI: Specific power input.*

ENERGY DATA - VORT HRW 60 MONO EVO/HCS

	UNIT OF MEASURE	VORT HRW 60 MONO EVO HCS CODE 12431	VORT HRW 60 MONO EVO HCS Wi - Fi CODE 12432
MANUFACTURER'S NAME OR TRADE NAME	-	VORTICE	VORTICE
CLASS OF SPECIFIC ENERGY CONSUMPTION FOR TEMPERATE CLIMATE	-	A+	A+
SPECIFIC ENERGY CONSUMPTION SEC (TEMPERATE CLIMATE)	kWh/m² year	- 44.5	- 44
SPECIFIC ENERGY CONSUMPTION SEC (COLD CLIMATE)		- 89.6	- 89.1
SPECIFIC ENERGY CONSUMPTION SEC (WARM CLIMATE)		- 19.3	- 18.9
DECLARED TYPE OF THE VENTILATION UNIT	-	UVR-U**	UVR-U**
DRIVE TYPE	-	VM	VM
HRS TYPE HEAT EXCHANGER	-	recovery	recovery
THERMAL EFFICIENCY OF HEAT RECOVERY AT THE HRS REFERENCE FLOW RATE	%	89.0	89.0
MAXIMUM FLOW RATE	m³/h	56.0	56.0
TOTAL ELECTRIC POWER CONSUMED BY THE FAN AT MAXIMUM FLOW RATE	W	8.2	9.4
NOISE LEVEL	LWA [dB(A)]	56.5	56.5
REFERENCE FLOW RATE	m³/s	0.011861	0.011861
REFERENCE PRESSURE DIFFERENCE	Pa	10	10
SPI****	W/(m³/h)	0.11007	0.13817
CTRL CONTROL FACTOR	-	0.65	0.65
CONTROL TYPE	-	local premise	local premise
MAXIMUM PERCENTAGE OF INTERNAL LEAKAGE	%	NA*	NA*
MAXIMUM PERCENTAGE OF EXTERNAL LEAKAGE	%	NA*	NA*
MIXING RATE	-	NA*	NA*
POSITION AND DESCRIPTION OF THE VISUAL FILTER SIGNAL	-	see instruction booklet	see instruction booklet
AIR FLOW SENSITIVITY TO PRESSURE VARIATIONS AT ± 20PA	-	0.48	0.48
INDOOR/OUTDOOR AIR TIGHTNESS	m³/h	0.0	0.0
AEC ANNUAL ELECTRICITY CONSUMPTION	kWh of electricity/year	79	100
TEMPERATE AHS ANNUAL HEATING SAVINGS	kWh of energy /year	4650	4650
COLD AHS ANNUAL HEATING SAVINGS		9141	9141
WARM AHS ANNUAL HEATING SAVING		2113	2113

** NA: Not applicable. ** UVR-U: Residential Ventilation Unit - Uni-directional. *** VM: Multiple speeds. VSD: Variable Speed Drive.*

***** SPI: Specific power input.*

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 side.

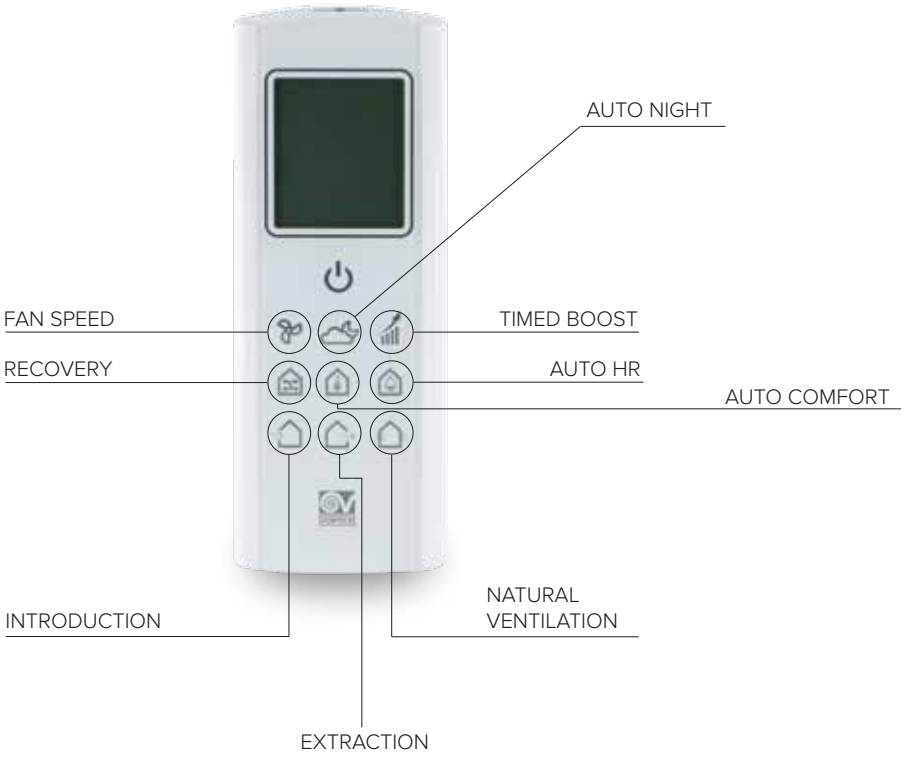
3 operating modes:

- **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).

TECHNICAL DATA

PRODUCTS	CODE	V~50-60 HZ	W max	A max	MAX FLOW RATE		MAX PRESSURE		LP dB (A) 3m min/max	°C MAX	KG
					m^3/h min/max	l/s min/max	mmH_2O min / max	Pa min/max			
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 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 30 MONO EVO HCS Wi-Fi	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 HCS Wi-Fi	12444	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 60 MONO EVO HCS	12431	220-240	7	0.07	10 60	2.8 16.7	1.5 12.2	15 120	14.3 39	30	3.3
VORT HRW 60 MONO EVO HCS WiFi	12432	220-240	8	0.08	10 60	2.8 16.7	1.5 12.2	15 120	14.3 39	30	3.3

IR remote control (only for HCS models)



HCS models are supplied with remote control with LCD display.

By default the recovery function and the 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.

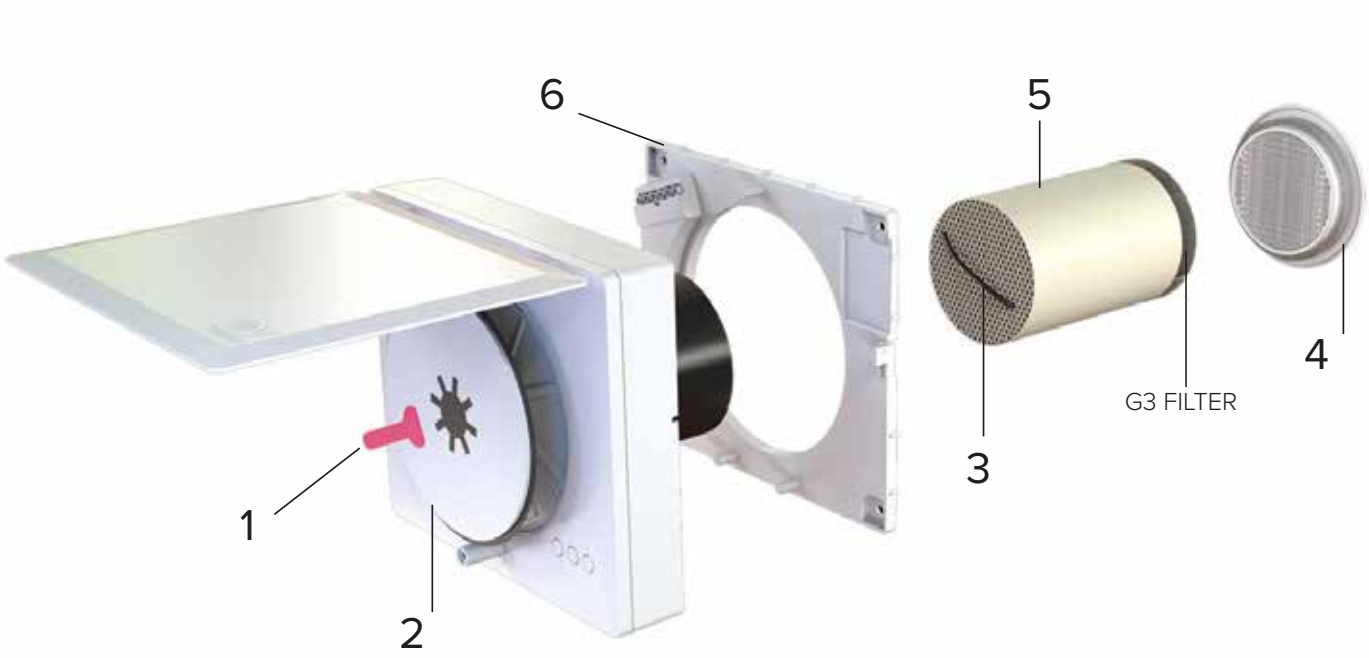
AUTO NIGHT
The ambient light sensor detects the presence or absence of light in the room.
Therefore, if it is night and no daylight is detected, the product will run at minimum speed and will not be allowed to go above minimum speed.
When the presence of daylight is detected again, the product returns to operate at the previously set speed, and the switch to higher boost speeds is allowed via remote input or HR% sensor.

AUTO HR%
In case of humidity above the alarm threshold (60%, 75%, or 90% - the default value is 75%), the extraction mode at maximum speed is automatically selected.

AUTO COMFORT
In heat recovery mode, the period that determines the inversion of rotation of the fans is set based on the temperature of the air introduced into the room: if it is too cold, the cycle time is reduced.

MAIN COMPONENTS

VORT HRW 30 MONO EVO - VORT HRW 30 MONO EVO HCS



1. MECHANICAL CLOSING DISK LEVER, TO AVOID THE PASSAGE OF AIR WHEN THE MACHINE IS NOT WORKING.

2. CO-MOLDED FRONT DISK, TO HELP ATTENUATE THE SOUND WAVE CREATED BY THE VENTILATING SYSTEM AND BY THE AIR FLOW DURING THE DELIVERY INTO THE ENVIRONMENT. ITS SURFACE WITH SPHERICAL CAPS TENDS TO REFLECT THE NOISE IN DIFFERENT DIRECTIONS, ATTENUATING ITS EFFECT.

3. EXCHANGE PACK EXTRACTION CABLE

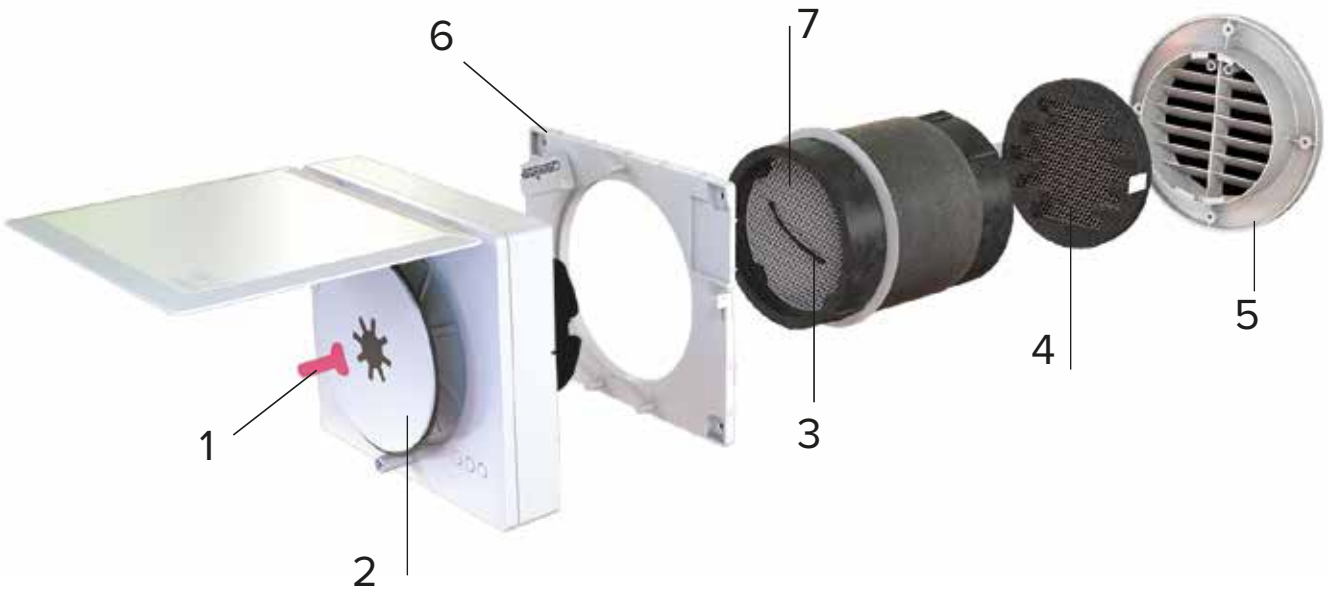
4. EXTERNAL GRILLE, MADE OF PLASTIC MATERIAL, EQUIPPED WITH ANTI-INSECT NET

5. EXCHANGE PACK OF THE ACCUMULATION TYPE, MADE OF CERAMIC MATERIAL WITH EXTERNAL FILTER ASSEMBLED.

6. FLANGE FOR WALL INSTALLATION WITH PRE-INSTALLED TERMINAL BLOCK.THE PROTECTION CLASS OF THE TERMINAL BLOCK ALLOWS AN INEXPERIENCED USER TO REMOVE THE FAN BODY AND TO PROCEED WITH THE REMOVAL AND CLEANING OF THE EXCHANGE PACK, OF THE G3 FILTER, AND TO RESET THE SYSTEM.

MAIN COMPONENTS

VORT HRW 40 MONO EVO - VORT HRW 40 MONO EVO HCS
VORT HRW 60 MONO EVO HCS - VORT HRW 60 MONO EVO HCS WIFI



1. MECHANICAL CLOSING DISK LEVER, TO AVOID THE PASSAGE OF AIR WHEN THE MACHINE IS NOT WORKING.

2. CO-MOLDED FRONT DISK, TO HELP ATTENUATE THE SOUND WAVE CREATED BY THE VENTILATING SYSTEM AND BY THE AIR FLOW DURING THE DELIVERY INTO THE ENVIRONMENT. ITS SURFACE WITH SPHERICAL CAPS TENDS TO REFLECT THE NOISE IN DIFFERENT DIRECTIONS, ATTENUATING ITS EFFECT.

3. EXCHANGE PACK EXTRACTION CABLE

4. ANTI-INSECT GRILLE, REMOVABLE AND WASHABLE BY THE USER OPERATING FROM THE INSIDE OF THE HOUSE

5. EXTERNAL GRILLE MADE OF TPV RUBBER.

6. FLANGE FOR WALL INSTALLATION WITH PRE-INSTALLED TERMINAL BLOCK.THE PROTECTION CLASS OF THE TERMINAL BLOCK ALLOWS AN INEXPERIENCED USER TO REMOVE THE FAN BODY AND TO PROCEED WITH THE REMOVAL AND CLEANING OF THE EXCHANGE PACK, OF THE G3 FILTER, AND TO RESET THE SYSTEM.

7. THE POLYPROPYLENE RINGS FEATURE SOME PROTUBERANCES FOR THE ALIGNMENT OF THE FRONT SURFACE OF THE EXCHANGER WITH THE OUTLET/INLET OF THE FAN AND THE CORRECT INCLINATION OF THE EXCHANGER WITH RESPECT TO THE CONTAINMENT PIPE INSERTED IN THE WALL

REGULATORS

MODELS	DESCRIPTION	DIMENSIONS	CODE	VORT HRW 40 MONO EVO code12435	VORT HRW 40 MONO EVO HCS code12437	VORT HRW 40 MONO EVO Wi-Fi code12442	VORT HRW 40 MONO EVO HCS Wi-Fi code12444	VORT HRW 60 MONO EVO HCS code12431	VORT HRW 60 MONO EVO HCS Wi-Fi code12432
	**C TEMP** Control sensor for air temperature in the environment	**144x54x55.8**	**12992**	✓	✓	✓	✓		
	**C HCS** Control sensor for relative humidity (RH) in the air	**144x54x55.8**	**12994**	✓	✓	✓	✓		

ACCESSORIES

MODELS	DESCRIPTION	CODE	VORT HRW 30 MONO EVO code 12434	VORT HRW 30 MONO EVO HCS code 12436	VORT HRW 40 MONO EVO code 12435	VORT HRW 40 MONO EVO HCS code 12437
	**MWS Ø 100** Windproof metal panel for outdoor in stainless steel sheet	**21883**	✓	✓		
	**WA Ø 100** 90° round/square adapter for extraction and discharge through a window frame. Circular connection diameter 100 mm	**21884**	✓	✓		
	KIT FTR Filter kit	**21891**	✓	✓		
	**PVC PIPE Ø 100**	**21879**	✓	✓		
	**PVC PIPE Ø 160**	**22599**			✓	✓
	KIT FTR Filter kit	**22466**			✓	✓
	**MWS** Windproof metal panel for outdoor in stainless steel sheet Circular connection diameter for 160 mm	**21148**			✓	✓
	**RGR** External rubber grille	**21190**			✓	✓
	**WSG-INOX** Rectangular stainless steel grille for the WA kit	**21192**			✓	✓
	**WSG-W** Powder coated stainless steel rectangular grid for the WA kit	**21193**			✓	✓
	FTR M5 Filters	**21926**			✓	✓
	**WA** 90° round/square adapter for extraction and discharge through a window frame. Circular connection Ø for 160 mm	**21191**			✓	✓

ACCESSORIES

MODELS	DESCRIPTION	CODE	VORT HRW 60 MONO EVO HCS code 12431	VORT HRW 30 MONO EVO HCS Wi-Fi code 12443	VORT HRW 60 MONO EVO HCS Wi-Fi code 12432	VORT HRW 40 MONO EVO HCS Wi-Fi code 12444
	**MWS Ø 100** Windproof metal panel for outdoor in stainless steel sheet	**21883**		✓		
	**WA Ø 100** 90° round/square adapter for extraction and discharge through a window frame. Circular connection diameter 100 mm	**21884**		✓		
	KIT FTR Filter kit	**21891**		✓		
	**PVC PIPE Ø 100**	**21879**		✓		
	**PVC PIPE Ø 160**	**22599**	✓		✓	✓
	KIT FTR Filter kit	**22466**	✓		✓	✓
	**MWS** Windproof metal panel for outdoor in stainless steel sheet Circular connection diameter for 160 mm	**21148**	✓		✓	✓
	**RGR** External rubber grille	**21190**	✓		✓	✓
	**WSG-INOX** Rectangular stainless steel grille for the WA kit	**21192**	✓		✓	✓
	**WSG-W** Powder coated stainless steel rectangular grid for the WA kit	**21193**	✓		✓	✓
	FTR M5 Filters	**21926**			✓	✓
	**WA** 90° round/square adapter for extraction and discharge through a window frame. Circular connection diameter for 160 mm	**21191**	✓		✓	✓

VORT HR NETI RANGE

WALL HEAT RECOVERY UNIT

A	WALL AND FLOOR CENTRALISED	VENTILATION	UP TO 180 M²

Centralised dual-flow ventilation unit with heat recovery for floor and wall installation, ideal for ventilation of homes as well as residential and commercial premises with a surface area of up to 180 m^2.

- Internal structure in high-density (40 kg/m^3) expanded polypropylene.
- Aesthetic front panel made of plastic resin, glossy white finish.
- Connection spigots to pipes with 125 mm nominal diameter, backward curved centrifugal fans directly coupled to EC motors.
- High-efficiency counterflow heat exchanger made of plastic material (PS).
- Automatic mechanical by-pass for free-cooling.
- ePM10 50% (M5) and Coarse 65% (G4) filters, located in correspondence with the inlet and outlet ducts respectively.
- Integrated control panel (Remote control panel with optional wired connection)
- Support bracket for wall installation integrated in the product
- Can be integrated into residential home automation systems (ModBus protocol) on RS485 SLAVE mode.

Heat recovery unit with the Passive House certification
VORT HR 300 NETI code 10930

Wall heat recovery unit with enthalpy exchanger.
VORT HR 300 NETI H code 10912

ENTHALPY EXCHANGER

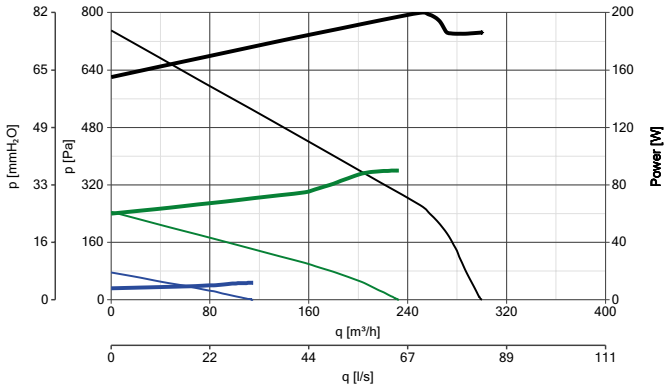
Enthalpy exchanger is able to recover both the sensible and the latent energy from one flow to the other (transfer of temperature and humidity). The humidity is recovered through the change of state of water vapour.
This guarantees:

- greater comfort in cold and dry climates (the humidity present in the extracted stale air is transferred to the incoming fresh air, avoiding the onset of breathing difficulties and tearing of the eyes, caused by too low relative humidity) or hot and humid climates (in these cases the excess humidity present in the fresh air is not transferred into the environment);
- much easier installation (in some cases the reduced formation of condensation inside the product allows to avoid water drainage).

ENTHALPY EXCHANGER

ENTHALPY EXCHANGER SECTIONED

PERFORMANCE AND ABSORPTION



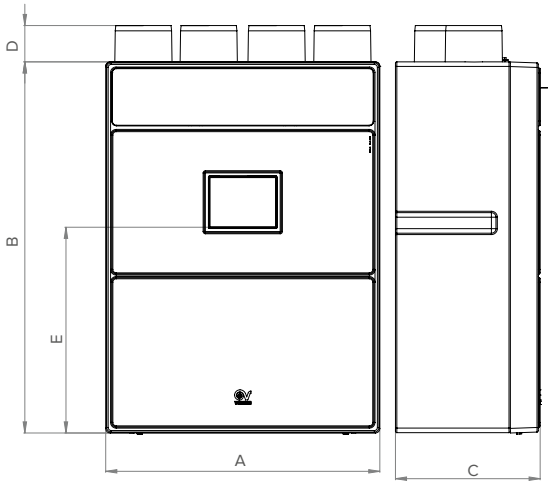
TECHNICAL DATA

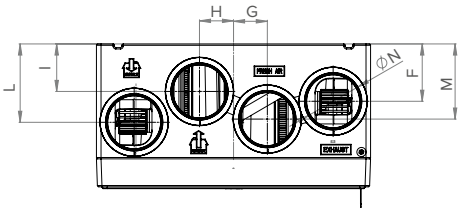
CONSUMPTION CURVES
- max
- avg
- min

PERFORMANCE CURVES
- max
- avg
- min

PRODUCT	CODE	Nom. Ø (mm)	(m³/h)	(W)	(PA)	Lp [dB (A)] 3m
VORT HR 300 NETI	10930	125	300	190	735	26.3
VORT HR 300 NETI H	10912	125	342	190	750	26.3

DIMENSIONS





A	B	C	D	E	F	G	H	I	L	M	ØN
600	812	317	80	450	125	74	74	104	172	165	125

Dimensions in mm

ENERGY DATA

	UNIT OF MEASUREMENT	VORT HR 300 NETI COD. 10930
MANUFACTURER'S NAME OR TRADE NAME	-	VORTICE
CLASS OF SPECIFIC ENERGY CONSUMPTION FOR TEMPERATE CLIMATE	-	A
SPECIFIC ENERGY CONSUMPTION SEC (TEMPERATE CLIMATE)	kWh/m² year	- 35
SPECIFIC ENERGY CONSUMPTION SEC (COLD CLIMATE)		- 73
SPECIFIC ENERGY CONSUMPTION SEC (WARM CLIMATE)		- 11
DECLARED TYPE OF THE VENTILATION UNIT	-	UVR-B**
DRIVE TYPE	-	VSD***
HRS HEAT EXCHANGER TYPE	-	recovery
THERMAL EFFICIENCY OF HEAT RECOVERY AT THE HRS REFERENCE FLOW RATE	%	87
MAXIMUM FLOW RATE	m³/h	270
TOTAL ELECTRIC POWER ABSORBED BY THE FAN AT MAXIMUM FLOW RATE	w	190
NOISE LEVEL	LWA [dB(A)]	53
REFERENCE FLOW RATE	m³/s	0.0525
REFERENCE PRESSURE DIFFERENCE	Pa	56
SPI**	W/(m3/h)	0.44
CTRL CONTROL FACTOR	-	0.85
CONTROL TYPE	-	centralised env.
MAXIMUM PERCENTAGE OF INTERNAL LEAKAGE	%	1.3
MAXIMUM PERCENTAGE OF EXTERNAL LEAKAGE	%	1.5
MIXING RATE	-	NA*
VISUAL FILTER SIGNAL POSITION AND DESCRIPTION	-	See instruction booklet
AIR FLOW SENSITIVITY TO PRESSURE VARIATIONS AT ± 20 PA	-	NA*
INDOOR/OUTDOOR AIR TIGHTNESS	m³/h	NA*
AEC ANNUAL ELECTRICITY CONSUMPTION	kWh of electricity/year	442
TEMPERATE AHS ANNUAL HEATING SAVING	kWh of primary energy/year	4548
COLD AHS ANNUAL HEATING SAVING		8998
WARM AHS ANNUAL HEATING SAVING		2057

** NA: Not applicable. ** UVR-U: Residential Ventilation Unit - Unidirectional. *** VM: Multiple speeds. VSD: Variable Speed Drive.*
***** SPI: Specific power input.*

ENERGY DATA

	UNIT OF MEASUREMENT	VORT HR 300 NETI H Code. 10912
MANUFACTURER'S NAME OR TRADE NAME	-	VORTICE
CLASS OF SPECIFIC ENERGY CONSUMPTION FOR TEMPERATE CLIMATE	-	A
SPECIFIC ENERGY CONSUMPTION SEC (TEMPERATE CLIMATE)	kWh/m² year	- 35
SPECIFIC ENERGY CONSUMPTION SEC (COLD CLIMATE)		- 71
SPECIFIC ENERGY CONSUMPTION SEC (WARM CLIMATE)		- 12
DECLARED TYPE OF THE VENTILATION UNIT	-	UVR-B**
DRIVE TYPE	-	VSD***
HRS HEAT EXCHANGER TYPE	-	recovery
THERMAL EFFICIENCY OF HEAT RECOVERY AT THE HRS REFERENCE FLOW RATE	%	77.1
MAXIMUM FLOW RATE	m³/h	305
TOTAL ELECTRIC POWER ABSORBED BY THE FAN AT MAXIMUM FLOW RATE	w	175
NOISE LEVEL	LWA [dB(A)]	57.2
REFERENCE FLOW RATE	m³/s	0.0596
REFERENCE PRESSURE DIFFERENCE	Pa	50
SPI****	W/(m³/h)	0.32
CTRL CONTROL FACTOR	-	0.85
CONTROL TYPE	-	centralised env.
MAXIMUM PERCENTAGE OF INTERNAL LEAKAGE	%	1.6
MAXIMUM PERCENTAGE OF EXTERNAL LEAKAGE	%	1.3
MIXING RATE	-	NA*
VISUAL FILTER SIGNAL POSITION AND DESCRIPTION	-	See instruction booklet
AIR FLOW SENSITIVITY TO PRESSURE VARIATIONS AT ± 20 PA	-	NA*
INDOOR/OUTDOOR AIR TIGHTNESS	m³/h	NA*
AEC ANNUAL ELECTRICITY CONSUMPTION	kWh of electricity/year	333
TEMPERATE AHS ANNUAL HEATING SAVING	kWh of primary energy/year	4280
COLD AHS ANNUAL HEATING SAVING		8374
WARM AHS ANNUAL HEATING SAVING		1936

** NA: Not applicable. ** UVR-U: Residential Ventilation Unit - Unidirectional. *** VM: Multiple speeds. VSD: Variable Speed Drive.*

***** SPI: Specific power input.*

TECHNICAL FEATURES

- **2 models**.
- Fire-resistant expanded polypropylene casing (DIN EN 13501). Brackets for wall installation included in the standard equipment.
- Aesthetic front panels made of white polycarbonate (alternative colours available on request), integrating the panels for direct access to the filters.
- Intake and delivery spigots compatible with the combination with pipes with 125 mm nominal diameter.
- Pair of motor fans driven by EC (brushless) motors of the external rotor type, with shafts mounted on ball bearings to ensure a virtually “maintenance free” operation, directly coupled to backward curved centrifugal impellers to guarantee high aeraulic efficiency. 3 operating speeds, independently settable upon installation.
- High-efficiency counterflow heat exchanger made of plastic material (PS).
- Anti-frost protection with automatic activation, 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.
- Control unit with LCD display, for:
  - turning the product on and off;
  - initial configuration of the product;
  - manual setting of the operating mode;
  - automatic management of the product and monitoring of its correct operation;
  - system diagnostics;
  - constant monitoring of the filters condition and signalling the need for their maintenance/replacement;
  - updating the firmware release.
- Pair of M5 filters (F7 filter available as an option for the delivery duct), easily accessible for periodic maintenance interventions.
- Condensate collection tray with drain devices.
- Possibility of integration in home automation environments through the ModBus communication protocol.
- 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 (earthing required).

PRODUCTS	CODE	V~50/60 HZ	W max	A max	MAX FLOW RATE		MAX PRESSURE		KG
					m^3/h	l/s	mmH_2O	Pa	
VORT HR 300 NETI	10930	220 - 240	190	1.35	300	83	75	735	14.7
VORT HR 300 NETI H	10912	220 - 240	190	1.35	342	95	-	735	14.7

** Maximum temperature with continuous operation of the product.*

TECHNICAL DATA

FILTERS

MODELS	DESCRIPTION	DIMENSIONS	CODE	VORT HR 300 NETI code 10930	VORT HR 300 NETI H code 10912
	FILTER M5	275X125X48	21410	✓	✓
	FILTER G4	275X125X48	21411	✓	✓
	* FILTER F7	275X125X48	21201	✓	✓
	FILTER F8	275X125X48	21202	✓	✓

* Accessories compulsory for Passive House requirements

REGULATORS

MODELS	DESCRIPTION	DIMENSIONS	CODE	VORT HR 300 NETI code 10930	VORT HR 300 NETI H code 10912
	**CB LCD R** Remote control unit with wired LCD panel, For recessed installation.	**116x83x65**	**21194**	✓	✓
	**WALL HRW RC BOX**	-	**22732**	✓	✓
	**BUILT-IN BOX TYPE 503**	-	**22461**	✓	✓
	**CB LCD** Remote control	-	**21381**	✓	✓
	**C SMOKE** Polluted air detector	**144x54x55.8**	**12993**	✓	✓
	**C HCS** Humidity detector	**144x54x55.8**	**12994**	✓	✓
	**SCP DIN** Flush mounting box		**12898**	✓	✓

ACCESSORIES

MODELS	DESCRIPTION	CODE	VORT HR 300 NETI code 10930	VORT HR 300 NETI H code 10912
	✱ **HEATER 750** Pre-heater to prevent the formation of frost in correspondence of the heat exchanger, also in particularly harsh climates. 750 W Heater	**22735**	✓	✓
	ELECTRIC HEATER 1200	**22622**	✓	✓
	ELECTRIC HEATER 500	**21630**	✓	✓
	**NA 125 PHI**	**20370**	✓	✓
	**VORT PLENUM 6+1**	**22343**	✓	✓
	**VORT PLENUM 5+1 AR**	**22347**	✓	✓

✱ Accessories compulsory for Passive House requirements

VORT HR NETI IoT RANGE

INTERNET OF THINGS COMPATIBLE WALL-MOUNTED HEAT RECOVERY UNIT

A | **WALL AND FLOOR CENTRALISED** | **VENTILATION** | **UP TO 180 M²**

Dual-flow centralised ventilation unit with heat recovery for wall installation, equipped with a Wi-Fi module able to connect the product to the Cloud and allow it to be managed remotely via App. Ideal for the ventilation of residential and commercial premises up to 180m^2.

Compatible with BRA.VO S, an air quality meter that can detect the presence of pollutants in the environment.

- Internal structure in high-density (40 kg/m^3) expanded polypropylene.
- Aesthetic front panel made of plastic resin, glossy white finish.
- Connection spigots to pipes with 125 mm nominal diameter, backward curved centrifugal fans directly coupled to EC motors.
- High-efficiency counterflow heat exchanger made of plastic material (PS).
- Automatic mechanical by-pass for free-cooling.
- ePM10 50% (M5) and Coarse 65% (G4) filters, located in correspondence with the inlet and outlet ducts respectively.
- Integrated control panel (Remote control panel with optional wired connection)
- Support bracket for wall installation integrated in the product
- Can be integrated into residential home automation systems (ModBus protocol) on RS485 SLAVE mode.
- Heat recovery unit with the Passive House certification.

The **Wi-Fi module** connects the product to the cloud and allows it to be managed in automatic mode, according to predefined scenarios, easily modified by the user as needs change, or manually, even remotely, thanks to a special App, using mobile devices such as smartphones or tablets.

VORT HE 300 NETI IoT automatically modulates its operation according to the concentrations of relative humidity, carbon dioxide and indoor pollutants detected by cloud-connected sensors, as well as the concentrations of outdoor pollutants detected by Copernicus, the European Union programme that monitors the environment by spying satellite observations.

The default settings are:

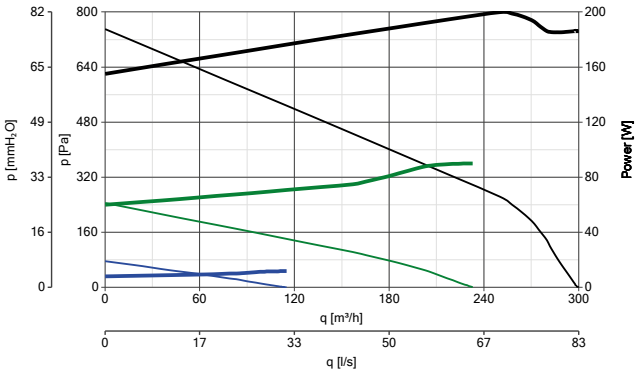
OFF: the product switches to stand-by mode: the fans stop, but the unit remains powered.

Auto: this is the default mode; the product runs at the average speed, the second highest of the 3 available. In the presence of remote sensors, the appliance automatically switches to maximum speed when at least one of them detects that its pre-set threshold limit has been exceeded.

Goodnight: the product runs at Minimum speed; this mode can be set manually or automatically by defining a specific time slot, for example at night, so as not to disturb the occupants' rest.

Away-from-home: the product runs for a short period at Medium speed, to ensure adequate air exchange in the home, and then switches to a reduced speed (30% lower than the pre-set Minimum value) to prevent the formation of unpleasant odours or the stagnation of humidity when the home is not occupied for several consecutive days.

PERFORMANCE AND ABSORPTION



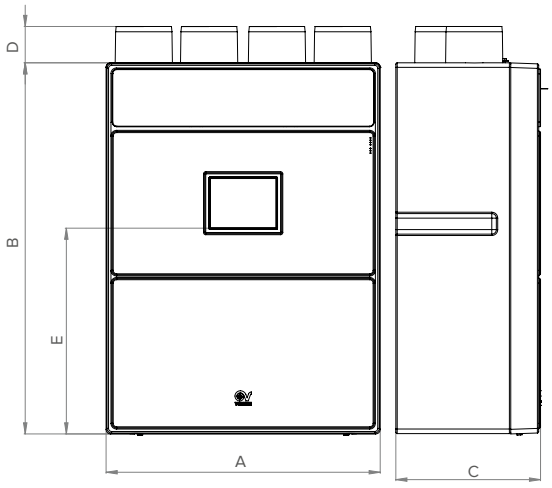
TECHNICAL DATA

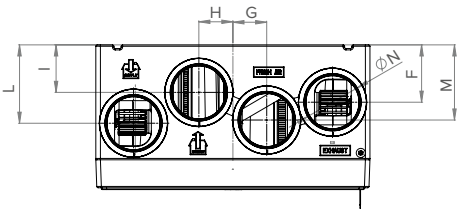
PRODUCT	CODE	Ø nom. (mm)	m³/h	W	Pa	Lp [dB (A)] 3m intake
VORT HR 300 NETI IoT	10924	125	300	190	735	26.3

CONSUMPTION CURVES
max
avg
min

PERFORMANCE CURVES
max
avg
min

DIMENSIONS





PRODUCT	CODE	A	B	C	D	E	F	G	H	I	L	M	ØN
VORT HR 300 NETI IoT	10924	600	812	317	80	450	125	74	74	104	172	165	125

Dimensions in mm

ENERGY DATA

	UNIT OF MEASUREMENT	VORT HR 300 NETI IoT COD. 10924
MANUFACTURER'S NAME OR TRADE NAME	-	VORTICE
CLASS OF SPECIFIC ENERGY CONSUMPTION FOR TEMPERATE CLIMATE	-	A
SPECIFIC ENERGY CONSUMPTION SEC (TEMPERATE CLIMATE)	kWh/m² year	- 35
SPECIFIC ENERGY CONSUMPTION SEC (COLD CLIMATE)		- 74
SPECIFIC ENERGY CONSUMPTION SEC (WARM CLIMATE)		- 11
DECLARED TYPE OF THE VENTILATION UNIT	-	UVR-B**
DRIVE TYPE	-	VSD***
HRS HEAT EXCHANGER TYPE	-	recovery
THERMAL EFFICIENCY OF HEAT RECOVERY AT THE HRS REFERENCE FLOW RATE	%	87.9
MAXIMUM FLOW RATE	m³/h	270
TOTAL ELECTRIC POWER ABSORBED BY THE FAN AT MAXIMUM FLOW RATE	w	190
NOISE LEVEL	LWA [dB(A)]	53
REFERENCE FLOW RATE	m³/s	0.0525
REFERENCE PRESSURE DIFFERENCE	Pa	56
SPI**	W/(m³/h)	0.4392
CTRL CONTROL FACTOR	-	0.85
CONTROL TYPE	-	centralised env.
MAXIMUM PERCENTAGE OF INTERNAL LEAKAGE	%	2.8
MAXIMUM PERCENTAGE OF EXTERNAL LEAKAGE	%	2.3
MIXING RATE	-	NA*
VISUAL FILTER SIGNAL POSITION AND DESCRIPTION	-	See instruction booklet
AIR FLOW SENSITIVITY TO PRESSURE VARIATIONS AT ± 20 PA	-	NA*
INDOOR/OUTDOOR AIR TIGHTNESS	m³/h	NA*
AEC ANNUAL ELECTRICITY CONSUMPTION	kWh of electricity/year	442
TEMPERATE AHS ANNUAL HEATING SAVING	kWh of primary energy/year	4573
COLD AHS ANNUAL HEATING SAVING		8946
WARM AHS ANNUAL HEATING SAVING		2068

** NA: Not applicable. ** UVR-U: Residential Ventilation Unit - Unidirectional. *** VM: Multiple speeds. VSD: Variable Speed Drive.*
***** SPI: Specific power input.*

TECHNICAL FEATURES

- Fire-resistant expanded polypropylene casing (DIN EN 13501). Brackets for wall installation included in the standard equipment.
- Aesthetic front panels made of white polycarbonate (alternative colours available on request), integrating the panels for direct access to the filters.
- Intake and delivery spigots compatible with the combination with pipes with 125 mm nominal diameter.
- Pair of motor fans driven by EC (brushless) motors of the external rotor type, with shafts mounted on ball bearings to ensure a virtually “maintenance free” operation, directly coupled to backward curved centrifugal impellers to guarantee high aeraulic efficiency. 3 operating speeds, independently settable upon installation.
- High-efficiency counterflow heat exchanger made of plastic material (PS).
- Anti-frost protection with automatic activation, 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.
- Control unit with LCD display, for:
  - turning the product on and off;
  - initial configuration of the product;
  - manual setting of the operating mode;
  - automatic management of the product and monitoring of its correct operation;
  - system diagnostics;
  - constant monitoring of the filters condition and signalling the need for their maintenance/replacement;
  - updating the firmware release.
- Pair of M5 filters (F7 filter available as an option for the delivery duct), easily accessible for periodic maintenance interventions.
- Condensate collection tray with drain devices.
- Possibility of integration in home automation environments through the ModBus communication protocol.
- 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 (earthing required).

TECHNICAL DATA

PRODUCTS	CODE	V~50/60HZ	W max	A max	MAX FLOW RATE		MAX PRESSURE		°C* MAX	KG
					m^3/h	l/s	mmH_2O	Pa		
VORT HR 300 NETI IoT	10924	220 - 240	190	1.35	300	83	75	735	40	15

** Maximum continuous operating temperature of the product.*

ACCESSORIES

FILTERS

MODELS	DESCRIPTION	DIMENSIONS	CODE	VORT HR 300 NETI IoT code 10924
	**FTR M5** (filter)	**275X125X48**	**21410**	✓
	**FTR G4** (filter)	**275X125X48**	**21411**	✓
	**FTR F8** (filter)	**275X125X48**	**21202**	✓

ELECTRIC HEATER

MODELS	DESCRIPTION	CODE	VORT HR 300 NETI IoT code 10924
	**ELECTRIC HEATER 1200** Heater to be installed in the ventilation system, always downstream of the fan, and/or the noise attenuator/air filter. To optimise the performance of the heater, it is possible, by means of regulators, to modulate the heat output according to the desired temperature in the room. Installation must always be carried out in covered spaces, with an ambient temperature between -30°C +50°C, in free air, free of dust, lint and chemical impurities.	**20317**	✓
	ELECTRIC HEATER 2250 Heater to be installed in the ventilation system, always downstream of the fan, and/or the noise attenuator/air filter. To optimise the performance of the heater, it is possible, by means of regulators, to modulate the heat output according to the desired temperature in the room. Installation must always be carried out in covered spaces, with an ambient temperature between -30°C +50°C, in free air, free of dust, lint and chemical impurities.	**20357**	✓

REGULATORS

MODELS	DESCRIPTION	DIMENSIONS	CODE	VORT HR 300 NETI IOT code 10924
	**CB LCD R** Remote control unit with wired LCD panel, for recessed installation	**116x83x65**	**21194**	✓
	**WALL HRW RC BOX**	**-**	**22732**	✓
	**BUILT-IN BOX TYPE 503**	**-**	**22461**	✓
	**CB LCD** Comando remoto	**-**	**21381**	✓
	**C SMOKE** Polluted air detector	**144x54x55.8**	**12993**	✓
	**C HCS** Humidity detector	**144x54x55.8**	**12994**	✓

VORT HR AVEL RANGE

WALL HEAT RECOVERY UNIT

A | CENTRALISED WALL | VENTILATION | UP TO 240 M²

Centralised dual-flow units with heat recovery for floor and wall installation, ideal for ventilation of houses as well as residential and commercial premises with a surface area of up to 240 m^2, featuring high levels of thermal insulation.

- Internal and external structure in high-density (40 kg/m^3) expanded polypropylene.
- Connection spigots to pipes with 150 mm nominal diameter, centrifugal fans with backward curved blades directly coupled to EC motors.
- High-efficiency counterflow heat exchanger made of plastic material (PS).
- Automatic mechanical by-pass for free-cooling.
- ePM10 50% (M5) and Coarse 30% (G3) filters, located in correspondence with the inlet and outlet ducts respectively.
- Automatic anti-frost function.
- Standard wired remote LCD control panel, can be housed in a 503 box.
- Bracket for wall installation supplied as an option.
- Floor or wall installation. Can be integrated into residential home automation systems (ModBus protocol) on RS485 SLAVE mode.

RANGE EXTENSION

Wall heat recovery unit with enthalpy exchanger.
VORT HR 350 AVEL H code 10911

ENTHALPY EXCHANGER

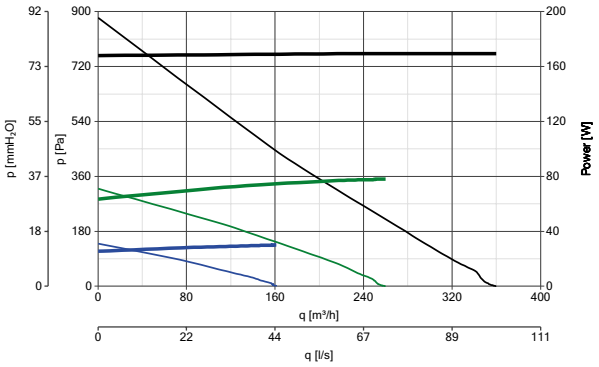
Enthalpy exchanger is able to recover both the sensible and the latent energy from one flow to the other (transfer of temperature and humidity). The humidity is recovered through the change of state of water vapour.
This guarantees:

- greater comfort in cold and dry climates (the humidity present in the expelled stale air is transferred to the incoming fresh air, avoiding the onset of breathing difficulties and tearing of the eyes, caused by too low relative humidity) or hot and humid climates (in these cases the excess humidity present in the fresh air is not transferred into the environment);
- much easier installation (in some cases the reduced formation of condensation inside the product allows to avoid external canalisation).

ENTHALPY EXCHANGER

ENTHALPY EXCHANGER SECTIONED

PERFORMANCE AND ABSORPTION



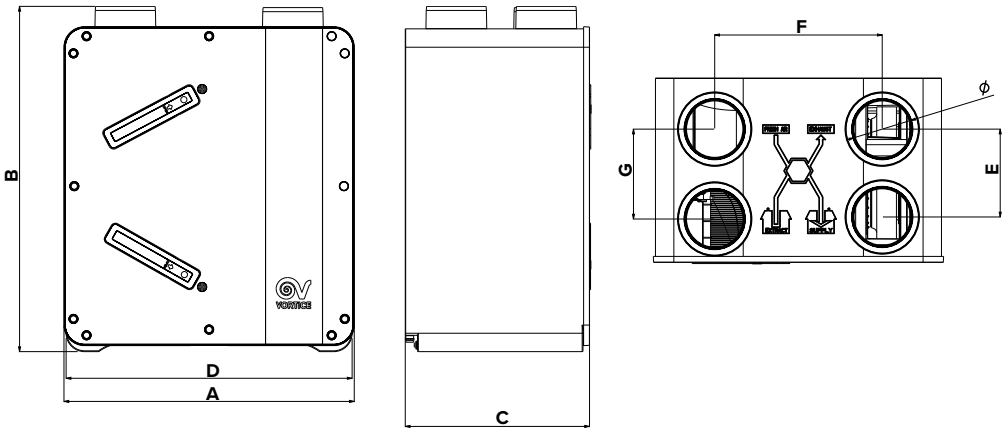
TECHNICAL DATA

CODE	Nom. Ø (mm)	(m³/h)	(W)	(PA)	Lp [db(A)] 3m
12106	150	350	165	880	23.1
10911	150	350	165	880	23.1

CONSUMPTION CURVES
max
avg
min

PERFORMANCE CURVES
max
avg
min

DIMENSIONS



PRODOTTI	CODICE	A	B	C	D	E	F	G	ø
VORT HR 350 AVEL	12106	712	845	455	700	215	410	220	150
VORT HR 350 AVEL H	10911	712	845	455	700	215	410	220	150

Dimensions in mm

ENERGY DATA

	UNIT OF MEASUREMENT	VORT HR 350 AVEL code. 12106	VORT HR 350 AVEL H code. 10911
MANUFACTURER'S NAME OR TRADE NAME	-	VORTICE	
CLASS OF SPECIFIC ENERGY CONSUMPTION FOR TEMPERATE CLIMATE	-	A	
SPECIFIC ENERGY CONSUMPTION SEC (TEMPERATE CLIMATE)	kWh/m² year	-38.4	
SPECIFIC ENERGY CONSUMPTION SEC (COLD CLIMATE)		-77.0	
SPECIFIC ENERGY CONSUMPTION SEC (WARM CLIMATE)		-13.6	
DECLARED TYPE OF THE VENTILATION UNIT	-	UVR-B**	
DRIVE TYPE	-	VSD***	
HRS HEAT EXCHANGER TYPE	-	recovery	
THERMAL EFFICIENCY OF HEAT RECOVERY AT THE HRS REFERENCE FLOW RATE	%	88.9	
MAXIMUM FLOW RATE	m³/h	315	
TOTAL ELECTRIC POWER ABSORBED BY THE FAN AT MAXIMUM FLOW RATE	w	170.0	
NOISE LEVEL	LWA [dB(A)]	57	
REFERENCE FLOW RATE	m3/s	0.0613	
REFERENCE PRESSURE DIFFERENCE	Pa	70	
SPI**	W/(m³/h)	0.31746	
CTRL CONTROL FACTOR	-	0.85	
CONTROL TYPE	-	centralised env.	
MAXIMUM PERCENTAGE OF INTERNAL LEAKAGE	%	3.4	
MAXIMUM PERCENTAGE OF EXTERNAL LEAKAGE	%	3.3	
MIXING RATE	-	NA*	
VISUAL FILTER SIGNAL POSITION AND DESCRIPTION	-	see instruction booklet	
AIR FLOW SENSITIVITY TO PRESSURE VARIATIONS AT ± 20 PA	-	NA*	
INDOOR/OUTDOOR AIR TIGHTNESS	m³/h	NA*	
AEC ANNUAL ELECTRICITY CONSUMPTION	kWh of electricity/ year	332	
TEMPERATE AHS ANNUAL HEATING SAVING	kWh of primary energy/ year	4600	
COLD AHS ANNUAL HEATING SAVING		8999	
WARM AHS ANNUAL HEATING SAVING		2080	

** NA: Not applicable. ** UVR-U: Residential Ventilation Unit - Unidirectional. *** VM: Multiple speeds. VSD: Variable Speed Drive.*
***** SPI: Specific power input.*

TECHNICAL FEATURES

- Fire-resistant expanded polypropylene casings (DIN EN 13501). Front panel made of loaded plastic resin with panels for direct access to the filters.
- Spigots for **extraction and delivery** compatible with pipes with 150 mm nominal diameter.
- **Pair of motor fans driven by EC (brushless) motors** 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 with counterflow, 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 Class ePM1 70% filters**
- **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 (earthing required).

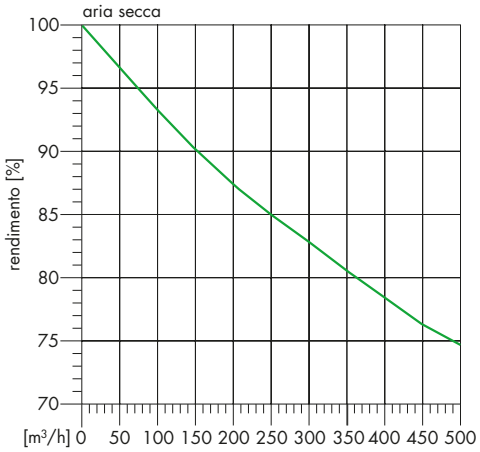
TECHNICAL DATA

PRODUCTS	CODE	V~50 HZ	W max	A max	MAX FLOW RATE		MAX PRESSURE		°C* MAX	KG
					m^3/h	l/s	mmH_2O	Pa		
VORT HR 350 AVEL	12106	230	165	1.4	350	100	90	880	40	23
VORT HR 350 AVEL H	10911	230	165	1.4	350	100	90	880	40	23

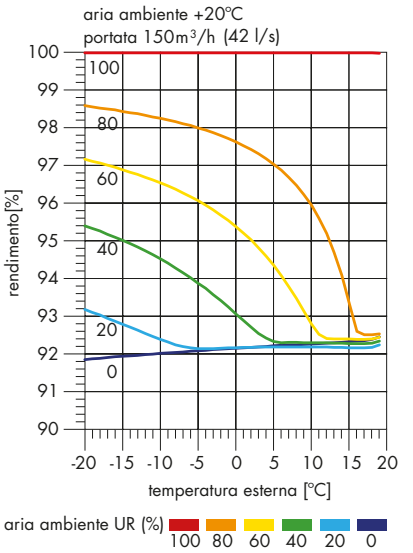
** Maximum temperature with continuous operation of the product.*

EFFICIENCY CURVES

EFFICIENCY IN ACCORDANCE WITH FLOW RATE



EFFICIENCY IN ACCORDANCE WITH CONDENSATION HEAT



FILTERS

MODELS	DESCRIPTION	DIMENSIONS	CODE	VORT HR AVEL 350 code 12106	VORT HR 350 AVEL H code. 10911
	FILTER G3	198x398x15	22661	✓	✓
	FILTER M5	198X398X15	22662	✓	✓
	✱ FILTER F7	198X398X15	22664	✓	✓

✱ Accessories compulsory for Passive House requirements

REGULATORS

MODELS	DESCRIPTION	DIMENSIONS	CODE	VORT HR AVEL 350 code 12106	VORT HR 350 AVEL H code. 10911
	**C TEMP** Temperature detector	144x54x55.8	12992	✓	✓
	**C SMOKE** Polluted air detector	144x54x55.8	12993	✓	✓
	**C HCS** Humidity detector	144x54x55.8	12994	✓	✓
	**C PIR** Presence detector	144x54x55.8	12998	✓	✓
	**CB TOUCH LCD W** Remote control panel	123x85x26	21933	✓	✓

ACCESSORIES

MODELS	DESCRIPTION	CODE	VORT HR AVEL 350 code 12106	VORT HR 350 AVEL H code. 10911
	**AVEL WALL FIXING KIT**	22663	✓	✓
	✱ **750-W HEATER** Pre-heater to prevent the formation of frost in corre-spondenceof the heat exchanger, also in particularly rigid climates	20357	✓	✓

✱ Accessories compulsory for Passive House requirements

VORT HR AVEL RANGE

WALL HEAT RECOVERY UNIT

A | **CENTRALISED WALL** | **VENTILATION** | **UP TO 260 M²**

Centralised dual-flow units with heat recovery for wall installation, ideal for ventilation of homes as well as residential and commercial premises with a surface of up to 260 m².

- High heat exchange efficiency
- Easy installation and maintenance: the front panel gives direct access to the main internal components. The position of the electrical contacts and electronics, placed on the upper side of the product, facilitates the connection to the electricity grid and the maintenance interventions.
- Low consumption, perfectly compatible with the continuous work round-the-clock.
- Mechanical by-pass, 100% filtered, for natural ventilation (free-cooling) during summer nights.
- Possibility of integration in home automation environments through the ModBus communication protocol.
- High comfort of use even at low temperatures, thanks to the efficient heat exchanger and the effective defrosting system (pre-heater available as an option).
- Full compliance with the PassiveHause requirements.

RANGE EXTENSION

Wall heat recovery unit with enthalpy exchanger.
VORT HR 450 AVEL D H code 10910

ENTHALPY EXCHANGER

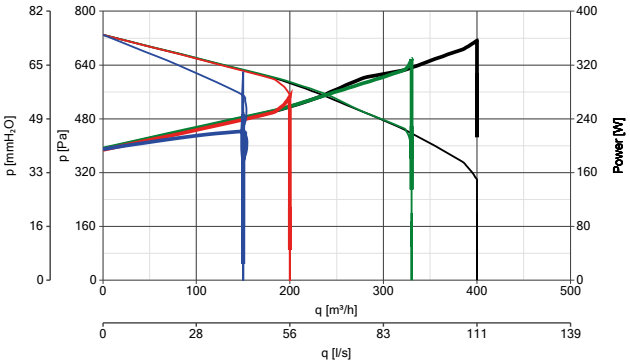
Enthalpy exchanger is able to recover both the sensible and the latent energy from one flow to the other (transfer of temperature and humidity). The humidity is recovered through the change of state of water vapour.
This guarantees:

- greater comfort in cold and dry climates (the humidity present in the expelled stale air is transferred to the incoming fresh air, avoiding the onset of breathing difficulties and tearing of the eyes, caused by too low relative humidity) or hot and humid climates (in these cases the excess humidity present in the fresh air is not transferred into the environment);
- much easier installation (in some cases the reduced formation of condensation inside the product allows to avoid external canalisation).

ENTHALPY EXCHANGER

ENTHALPY EXCHANGER SECTIONED

PERFORMANCE AND ABSORPTION



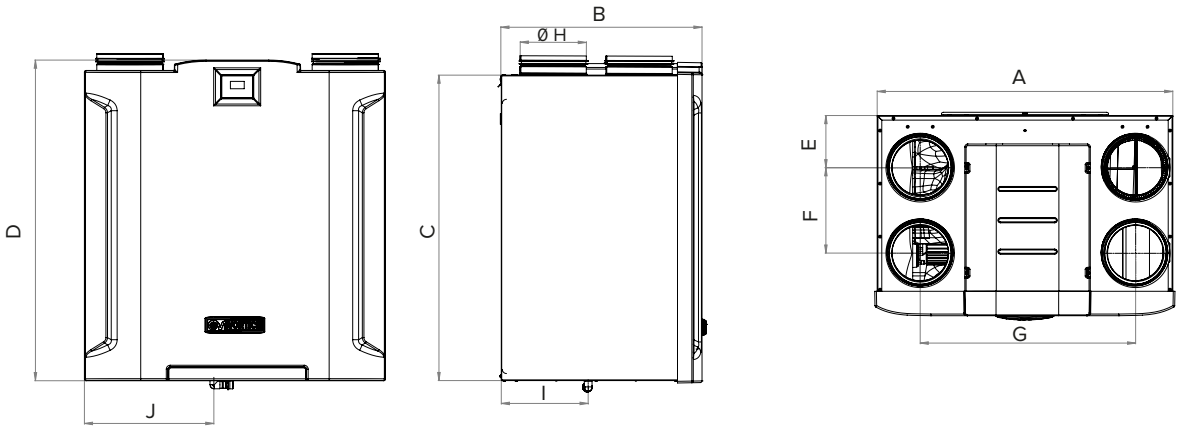
TECHNICAL DATA

CODE	Nom. Ø (mm)	(m^3/h)	(W)	(PA)	Lp [db(A)] 3m
12101	160	400	350	680	25.2
10910	160	400	350	680	25.2

CONSUMPTION CURVES
- Min.
- Avg.
- Max.
- Boost

PERFORMANCE CURVES
- Min.
- Avg.
- Max.
- Boost

DIMENSIONS



PRODOTTI	CODICE	A	B	C	D	E	F	G	ØH	I	J
VORT HR 450 AVEL D	12101	708	480	730	766	125	205	516	158	207	306
VORT HR 450 AVEL D H	10910	708	480	730	766	125	205	516	158	207	306

Dimensions in mm

ENERGY DATA

	UNIT OF MEASUREMENT	VORT HR 450 AVEL D Code 12101 VORT HR 450 AVEL D H Code 10910
MANUFACTURER'S NAME OR TRADE NAME	-	VORTICE
CLASS OF SPECIFIC ENERGY CONSUMPTION FOR TEMPERATE CLIMATE	-	A
SPECIFIC ENERGY CONSUMPTION SEC (COLD CLIMATE)	kWh/m² year	-75
SPECIFIC ENERGY CONSUMPTION SEC (TEMPERATE CLIMATE)		-37
SPECIFIC ENERGY CONSUMPTION SEC (WARM CLIMATE)		-12
DECLARED TYPE OF THE VENTILATION UNIT	-	UVR-B**
DRIVE TYPE	-	VSD***
HRS HEAT EXCHANGER TYPE	-	recovery
THERMAL EFFICIENCY OF HEAT RECOVERY AT THE HRS REFERENCE FLOW RATE	%	88
MAXIMUM FLOW RATE	m³/h	400
TOTAL ELECTRIC POWER ABSORBED BY THE FAN AT MAXIMUM FLOW RATE	w	258.5
NOISE LEVEL	LWA [dB(A)]	47.2
REFERENCE FLOW RATE	m³/s	0.0778
REFERENCE PRESSURE DIFFERENCE	Pa	50
SPI**	W/(m³/h)	0,384
CTRL CONTROL FACTOR	-	0.85
CONTROL TYPE	-	centralised env.
MAXIMUM PERCENTAGE OF INTERNAL LEAKAGE	%	0.3
MAXIMUM PERCENTAGE OF EXTERNAL LEAKAGE	%	0.6
MIXING RATE	-	NA*
VISUAL FILTER SIGNAL POSITION AND DESCRIPTION	-	see instruction booklet
AIR FLOW SENSITIVITY TO PRESSURE VARIATIONS AT ± 20 PA	-	NA*
INDOOR/OUTDOOR AIR TIGHTNESS	m³/h	NA*
AEC ANNUAL ELECTRICITY CONSUMPTION	kWh of electricity/ year	393
TEMPERATE AHS ANNUAL HEATING SAVING	kWh of primary energy/ year	4576
COLD AHS ANNUAL HEATING SAVING		8951
WARM AHS ANNUAL HEATING SAVING		2069

** NA: Not applicable. ** UVR-U: Residential Ventilation Unit - Unidirectional. *** VM: Multiple speeds. VSD: Variable Speed Drive.*

***** SPI: Specific power input.* UVR-B**: Bldirectional

TECHNICAL FEATURES

- Zinc-coated and painted steel sheet casings. Brackets for wall installation included in the standard equipment.
- Aesthetic front panel made of plastic resin (ABS). Internal parts made of resin (PPE)
- **Intake and delivery spigots** compatible with pipes with 160 mm nominal diameter.
- **Pair of motor fans** driven by EC (brushless) motors of the external rotor type controlled at constant flow; shafts mounted on ball bearings to ensure a virtually "maintenance free" operation, directly coupled to forward curved centrifugal impellers. 4 operating speeds, independently settable upon installation.
- **High-efficiency heat exchanger**, of the cross-flow type with counterflow, made of plastic resin.
- **Automatic-activation anti-frost protection**, to prevent the formation of frost at the heat exchanger.
- **100% by-pass,** of the mechanical type, automatically operated and filtered.
- **Control panel with LCD display, for:**

  switching on and off.

  initial configuration of the product.

  choosing the operating speed.

  weekly setting of the operating mode.

  the correct operation of the product (any malfunctions are highlighted through error messages shown on the display).

  displaying the operating status (set speed, by-pass status, defrosting procedure active, any pre-heater and/or post-heater on, etc.).

  signalling the saturated filters condition on the display.
- **Three ISO Coarse 90% (G4) class filters,** placed on the extraction duct, on the air delivery duct and on the by-pass respectively (ePM10 50% M5 and ePM1 55% F7 filters available as an option for the delivery duct and for the by-pass), easily accessible for periodic maintenance interventions.
- **Condensate collection tray** with drain device.
- **Possibility of interlocking with external environmental sensors** (optional), to switch to the automatic control of the operating mode.

REGULATORS

MODELS	DESCRIPTION	DIMENSIONS	CODE	VORT HR 450 AVEL D code 12101	VORT HR 450 AVEL D H code 10910
	**C SMOKE** Polluted air detector	**144x54x55.8**	**12993**	✓	✓
	**C HCS** Humidity detector	**144x54x55.8**	**12994**	✓	✓
	**CB LCD D** Wired remote control unit with LCD display for VORTICE heat recovery units. Recessed installation in a standard DIN box.	**-**	**21381**	✓	✓
	**CB TOUCH LCD W**	**123x85x26**	**21933**	✓	✓

TECHNICAL DATA

PRODUCTS	CODE	V~50 HZ	W max	A max	MAX FLOW RATE		MAX PRESSURE		°C* MAX	KG
					m^3/h	l/s	mmH_2O	Pa		
VORT HR 450 AVEL D	12101	220-240	350	2.75	400	110	69	680	40	40
VORT HR 450 AVEL D H	10910	220-240	350	2.75	400	110	69	680	40	40

** Maximum temperature with continuous operation of the product.*

ACCESSORIES

MODELS	DESCRIPTION	CODE	VORT HR 450 AVEL D Code. 12101 VORT HR 450 AVEL D H Code.10910
	*** ELECTRIC HEATER 1200** Electric pre-heater. Wiring box and tubular duct, 160 mm diameter, made of zinc-coated metal sheet, stainless steel armoured electric resistors. Safety thermostat pre-set at 60 °C and connected in series with a manual reset thermostat set at 120 °C, single-phase power supply 1200 W. Designed to be electronically controlled by the combined product electronics.	**21622**	✓
	**ELECTRIC HEATER 2400** Electric pre-heater. Wiring box and tubular duct, 160 mm diameter, made of zinc-coated metal sheet, stainless steel armoured electric resistors. Safety thermostat pre-set at 60 °C and connected in series with a manual reset thermostat set at 120 °C, single-phase power supply 2400 W. Designed to be electronically controlled by the combined product electronics.	**21623**	✓
	**NA 160 PHI** Sound attenuator for circular ducts. Length 900 mm, connection diameter 160 mm. Suitable for installation in ventilation systems in presence of non-dusty air free of impurities, greases, chemical vapours. Casings made of zinc-coated steel sheet, mineral wool insulation, thickness 100 mm. Internal coating with micro-stretched sheet metal and glass fiber gauze film. Max. air speed 15 m/s.	**21643**	✓

* Accessories compulsory for Passive House requirements

FILTERS

MODELS	DESCRIPTION	DIMENSIONS	CODE	VORT HR 450 AVEL D Code. 12101 VORT HR 450 AVEL D H Code.10910
	FTR ISO Coarse 90% (G4)	400x200x5	21628	✓
	FTR ISO Coarse 90% (G4)	420X59X5	21629	✓
	FTR ePM1 55% (F7) *	398X184X21	21624	✓
	FTR ePM10 50% (M5)	398X184X21	21625	✓
	FTR ePM1 55% (F7) *	420X54X21	21626	✓
	FTR ePM10 50% (M5)	420X54X21	21627	✓

* Accessories compulsory for Passive House requirements

VORT INVISIBLE MINI RANGE

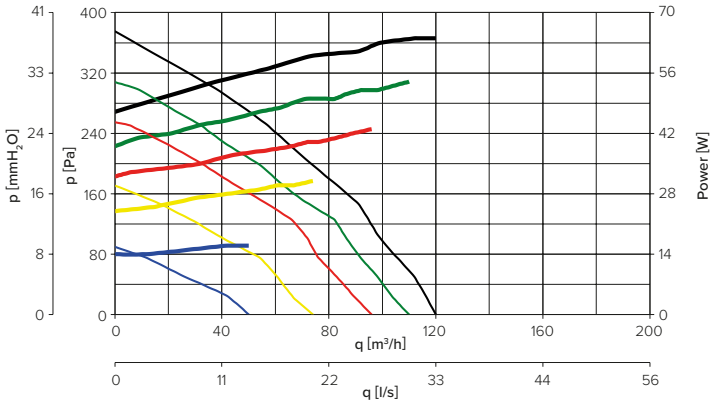
FALSE CEILING HEAT RECOVERY UNIT

A | **CEILING VENTILATION** | **UP TO 80 M²**

Centralised dual-flow ventilation unit with heat recovery for false ceiling installation, specifically designed for the ventilation of small apartments, offices, and hotel rooms, with a surface of up to 80 m².

- Suitable for false ceiling installation.
- Casing made of white painted steel sheet.
- Easy wiring, all main components are easily accessible from the bottom of the product.
- Universal duct connection Ø100 to 125 mm.
- Recovers almost 90% of the thermal energy of the extracted air, which is transferred to the fresh air at zero cost.
- Wired remote LCD control panel.
- Mechanical by-pass, 100% filtered, automatically operated.
- Full compatibility with 24/7 continuous operation, thanks to low consumption.

PERFORMANCE AND ABSORPTION

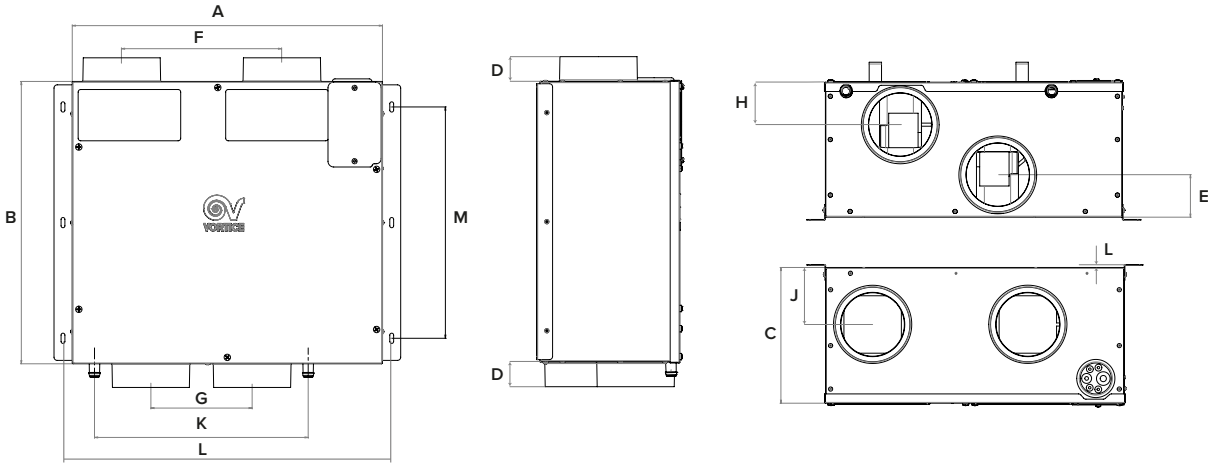


TECHNICAL DATA

PRODUCT	CODE	Nom. Ø (mm)	(m³/h)	(W)	(PA)	Lp [dB (A)] 3m
VORT INVISIBLE MINI TOP	12219	100-125	120	64	375	36

Max speed
100% adjustment
90% adjustment
80% adjustment
60% adjustment
40% adjustment

DIMENSIONS



Dimensions in mm

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

Connection ports to the intake and delivery pipes compatible with 100 mm and 125 mm nominal diameters

ENERGY DATA

	UNIT OF MEASUREMENT	VORT INVISIBLE MINI TOP
MANUFACTURER'S NAME OR TRADE NAME	-	VORTICE
CLASS OF SPECIFIC ENERGY CONSUMPTION FOR TEMPERATE CLIMATE	-	A
SPECIFIC ENERGY CONSUMPTION SEC (TEMPERATE CLIMATE)	kWh/m² year	-35
SPECIFIC ENERGY CONSUMPTION SEC (COLD CLIMATE)		- 73
SPECIFIC ENERGY CONSUMPTION SEC (WARM CLIMATE)		- 10
DECLARED TYPE OF THE VENTILATION UNIT	-	UVR-B**
DRIVE TYPE	-	VSD
HRS HEAT EXCHANGER TYPE	-	recovery
THERMAL EFFICIENCY OF HEAT RECOVERY AT THE HRS REFERENCE FLOW RATE	%	87
MAXIMUM FLOW RATE	m³/h	100
TOTAL ELECTRIC POWER ABSORBED BY THE FAN AT MAXIMUM FLOW RATE	w	63
NOISE LEVEL	LWA [dB(A)]	46
REFERENCE FLOW RATE	m³/s	0.0194
REFERENCE PRESSURE DIFFERENCE	Pa	60
SPI****	W/(m³/h)	0,457
CTRL CONTROL FACTOR	-	0.85
CONTROL TYPE	-	centralised env.
MAXIMUM PERCENTAGE OF INTERNAL LEAKAGE	%	3.0
MAXIMUM PERCENTAGE OF EXTERNAL LEAKAGE	%	3.0
MIXING RATE	-	NA*
VISUAL FILTER SIGNAL POSITION AND DESCRIPTION	-	see instruction booklet
AIR FLOW SENSITIVITY TO PRESSURE VARIATIONS AT ± 20 PA	-	NA*
INDOOR/OUTDOOR AIR TIGHTNESS	m³/h	NA*
AEC ANNUAL ELECTRICITY CONSUMPTION	kWh of electricity/year	459
TEMPERATE AHS ANNUAL HEATING SAVING	kWh of primary energy/year	4548
COLD AHS ANNUAL HEATING SAVING		8898
WARM AHS ANNUAL HEATING SAVING		2057

*NA: Not Applicable
**UVR-U: Residential Ventilation Unit - Unidirectional
*** UVR-B: Residential Ventilation Unit - Bidirectional

****VM: Multiple speeds. VSD: Variable Speed Drive
*****SPI: Specific power intake

TECHNICAL FEATURES

- **Casing made of zinc-coated white painted steel sheet**. Brackets, made of zinc-coated painted steel sheet, necessary for the suspended installation of the appliance, supplied as standard.
- Connection ports for extraction and delivery pipes with 100 mm and 125 mm nominal diameter.
- Condensate collection tank, complete with “overflow” sensor to avoid the risk of overflows.
- **Pair of 3-speed centrifugal fans** driven by EC (brushless) motors (low consumption), independently adjustable.
- **High-efficiency heat exchanger**, made of plastic resin, of the cross-flow with counterflow type.
- **Mechanical by-pass**, filtered, automatically operated.
- Multiple grommet, in compliance with UNI EN 60335-2-80 international safety standards.
- Pair of ISO COARSE 45% (G3) filters, in correspondence of the extraction/delivery ducts .
- Condensate collection tank made of plastic resin, complete with “overflow” sensor to avoid the risk of condensate overflows.
- Cross-flow counterflow heat exchanger.

TECHNICAL DATA

PRODUCTS	CODE	V~50 HZ	W min/max	A min/max	RPM min/max	MAX FLOW RATE		MAX PRESSURE		IP	KG
						m^3/h min/max	l/s min/max	mmH_2O	Pa		
VORT INVISIBLE MINI TOP	12219	220-240	16 64	0.30 0.65	1830 3900	50 120	50 120	38.2	375	X2	14

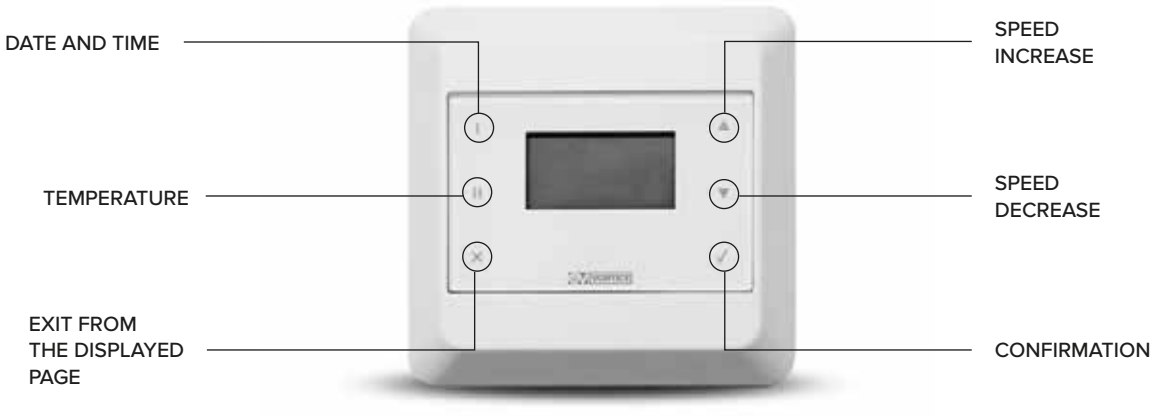
** Maximum temperature with continuous operation of the product.*

ACCESSORIES

MODELS	DESCRIPTION	DIMENSIONS	CODE	VORT INVISIBLE MINI TOP code 12219
	**C SMOKE** Smoke detector	**144x54x55.8**	**12993**	✓
	**C HCS** Humidity detector	**116X83X75**	**12994**	✓
	**C PIR** Humidity detector	**144x54x55.8**	**12998**	✓
	**SCP DIN** Flush mounting box		**12898**	✓

CONTROL UNIT SUPPLIED

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



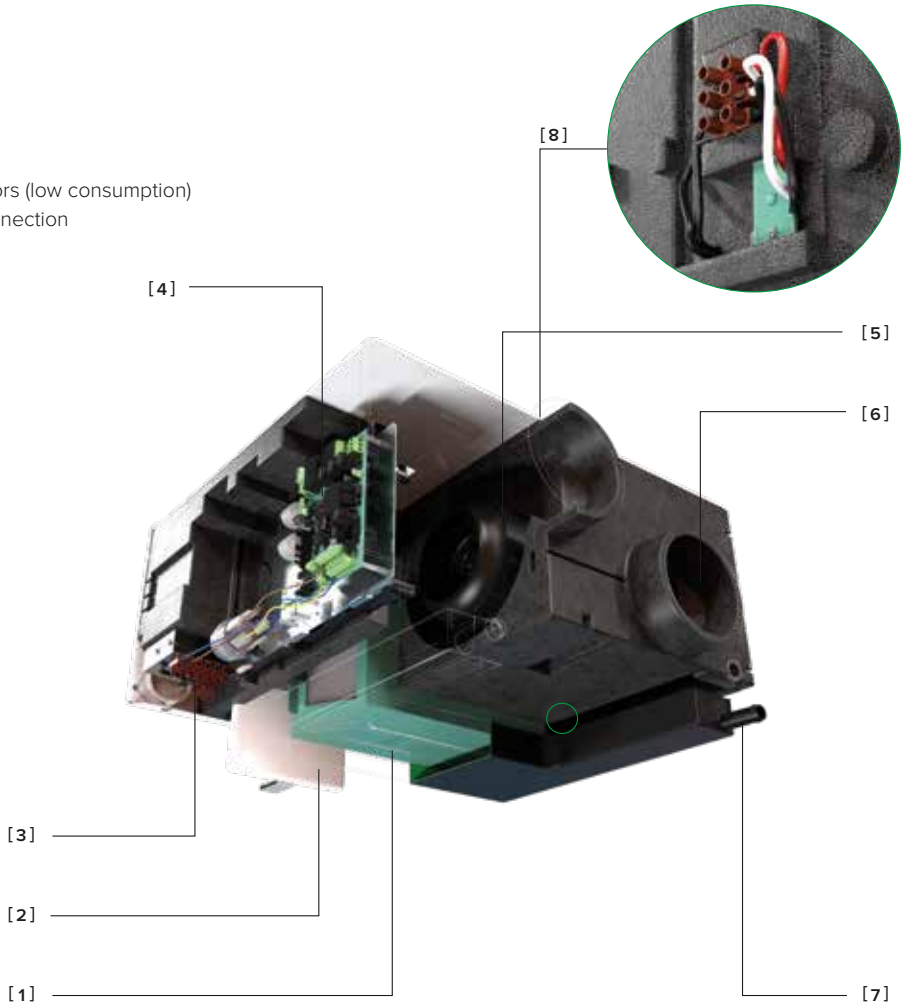
LCD display

Provides the following displays:

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

DETAILS

[1] Heat exchanger
[2] Filter
[3] Terminal block
[4] Electronic board
[5] EC Brushless motors (low consumption)
[6] Universal duct connection
[7] Condensate drain
[8] HCS sensor



FILTERS

MODELS	DESCRIPTION	DIMENSIONS	CODE	VORT INVISIBLE MINI TOP code 12219
	ISO Coarse 45% (G3)	**206x132x5**	**21805**	✓
	ISO Coarse 65% (G4)	**206x132x5**	**21806**	✓
	ePM10 50% (M5)	**208x127x25**	**21802**	✓
	ePM1 55% (F7)	**208x127x25**	**21803**	✓
	ePM1 80% (F9)	**208x127x25**	**21804**	✓

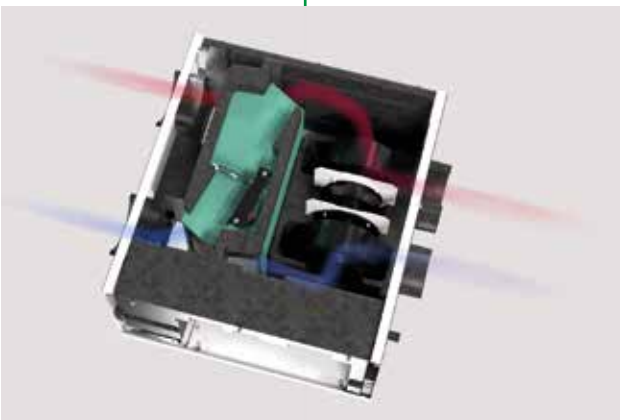
SYSTEM COMPONENTS

MODEL	DESCRIPTION	CODE
	Pre-heater "Pre-heater to prevent the formation of frost in collaboration with the heat exchanger, also required in harsh climates. 500 W Yield"	21630

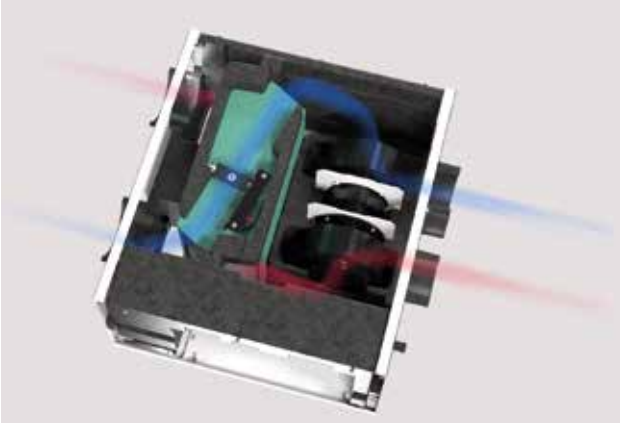
Air flows

Winter/Summer mode

The fresh air, passing through the heat exchanger, heats due to the effect of the interaction with the extracted stale air, thus ensuring adequate ventilation without unnecessary energy waste.



Free cooling mode



The fresh air, passing through the heat exchanger, cools down due to the effect of the interaction with the extracted stale air, thus ensuring adequate ventilation without unnecessary energy waste.

BY-PASS FUNCTION

When climatic conditions require (for example on cool summer evenings) the introduction of outside air. At the original temperature, the opening of the by-pass damper allows the incoming flow to get around the heat exchanger, ensuring the exchange of air with maximum comfort.

VORT HRI FLAT RANGE

FALSE CEILING HEAT RECOVERY UNITS

A | **FALSE CEILING CENTRALISED** | **VENTILATION** | **UP TO 240 M²**

Centralized dual flow ventilation units with heat recovery for false ceiling. The ideal balance between performance, functions, and purchase and operating costs makes the VORT HRI FLAT range the most cost-effective solution for the ventilation of homes as well as residential and commercial premises with an area of up to 90 m² (VORT HRI 200 FLAT) or 240 m² (VORT HRI 350 FLAT), featuring high levels of thermal insulation.

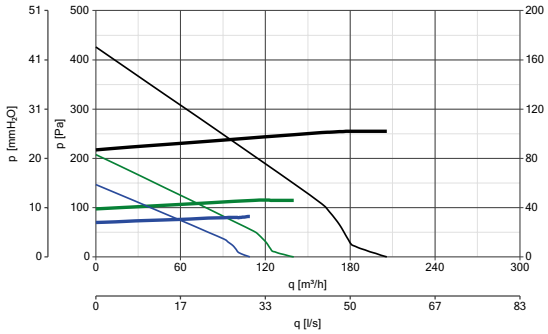
- Suitable for false ceiling installation.
- Self-supporting casing made of (10/10) zinc-coated metal sheet, with internal sound-absorbing coating.
- Connection spigots to pipes with 125 mm (FLAT200) and 150 mm (FLAT350) nominal diameter, centrifugal fans with backward blades directly coupled to EC motors.
- High-efficiency heat exchanger of the counterflow type made of plastic material (PS).
- Automatic thermodynamic bypass, based on the temperature probes available in the machine.
- Pair of Class ePM10 (M5) 50% (F5) filters.
- Three-speed control panel supplied as standard, suitable for a 503 box.

PERFORMANCE AND ABSORPTION

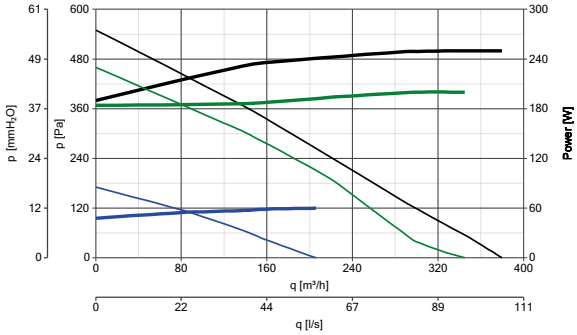
TECHNICAL DATA

PRODUCTS	CODE	Nom. Ø (mm)	(m³/h)	(W)	(PA)	Lp [dB (A)] 3m
VORT HRI 200 FLAT	11281	125	206	102	426	22.8
VORT HRI 350 FLAT	11282	150	380	250	550	16.7

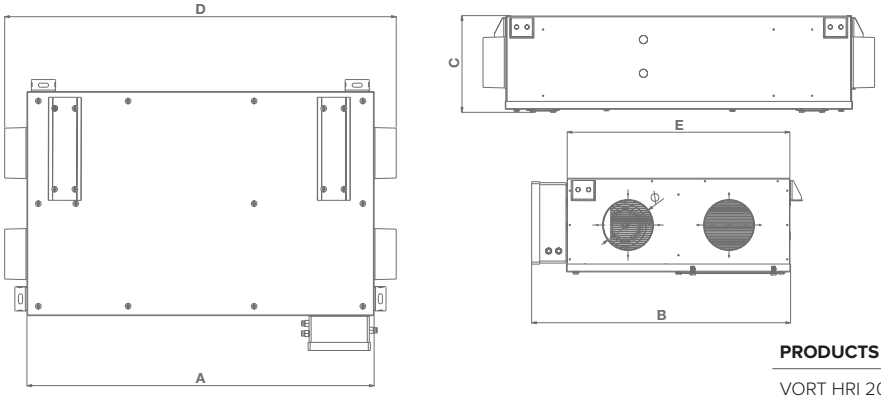
VORT HRI 200 FLAT



VORT HRI 350 FLAT



DIMENSIONS



PRODUCTS	CODE	A	B	C	D	E	Ø
VORT HRI 200 FLAT	11281	860	643	240	969	551	125
VORT HRI 350 FLAT	11282	1183	740	288	1287	650	150

Dimensions in mm

NOISE LEVELS

VORT HRI 200 FLAT		Lw db(A) 125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	Lw db(A)	Lw dB (A) 3m*
MIN. SPEED	Delivery	22.7	31.4	17.4	14.9	10.1	na**	na**	43.3	22.8
	Intake	24.2	36.8	23.0	15.4	14.0	7.3	na**	36.5	16.0
	Casing	35.7	36.9	29.2	22.2	17.0	9.8	na**	43.1	22.6

VORT HRI 350 FLAT		Lw db(A) 125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	Lw db(A)	Lw dB (A) 3m*
MIN. SPEED	Delivery	16.7	27.4	24.3	17.1	16.9	7.1	na**	37.2	16.7
	Intake	16.3	32.1	22.2	11.3	15.5	6.2	na**	37.8	17.3
	Casing	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.*

ENERGY DATA

	UNIT OF MEASUREMENT	VORT HRI 200 FLAT	VORT HRI 350 FLAT
MANUFACTURER'S NAME OR TRADE NAME	-	VORTICE	VORTICE
CLASS OF SPECIFIC ENERGY CONSUMPTION FOR TEMPERATE CLIMATE	-	A	A
SPECIFIC ENERGY CONSUMPTION SEC (TEMPERATE CLIMATE)	kWh/m² year	-36.3	-38.0
SPECIFIC ENERGY CONSUMPTION SEC (COLD CLIMATE)		-74.7	-77.0
SPECIFIC ENERGY CONSUMPTION SEC (WARM CLIMATE)		-11.7	-13.0
DECLARED TYPE OF THE VENTILATION UNIT	-	UVR-B**	UVR-B**
DRIVE TYPE	-	VSD***	VSD***
HRS HEAT EXCHANGER TYPE	-	recovery	recovery
THERMAL EFFICIENCY OF HEAT RECOVERY AT THE HRS REFERENCE FLOW RATE	%	87.8	90.4
MAXIMUM FLOW RATE	m³/h	163	280
TOTAL ELECTRIC POWER ABSORBED BY THE FAN AT MAXIMUM FLOW RATE	w	100.0	165.0
NOISE LEVEL	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
CTRL CONTROL FACTOR	-	0.85	0.85
CONTROL TYPE	-	centralised env.	centralised env.
MAXIMUM PERCENTAGE OF INTERNAL LEAKAGE	%	8.5	8.7
MAXIMUM PERCENTAGE OF EXTERNAL LEAKAGE	%	8.5	5.2
MIXING RATE	-	NA*	NA*
VISUAL FILTER SIGNAL POSITION AND DESCRIPTION	-	see instruction booklet	see instruction booklet
AIR FLOW SENSITIVITY TO PRESSURE VARIATIONS AT ± 20 PA	-	NA*	NA*
INDOOR/OUTDOOR AIR TIGHTNESS	m³/h	NA*	NA*
AEC ANNUAL ELECTRICITY CONSUMPTION	kWh of electricity/ year	402	364
TEMPERATE AHS ANNUAL HEATING SAVING	kWh of primary energy/ year	4570	4641
COLD AHS ANNUAL HEATING SAVING		8940	9078
WARM AHS ANNUAL HEATING SAVING		2067	2098

** NA: Not applicable. ** UVR-U: Residential Ventilation Unit - Unidirectional. *** VM: Multiple speeds. VSD: Variable Speed Drive.*

***** SPI: Specific power input.*

TECHNICAL FEATURES

- **2 models**, different in size and performance provided.
- **Casings made of zinc-coated steel sheet** integrating support brackets for false ceiling mounting; internal shell covered in sound-absorbing and heat-insulating fire-resistant material (DIN EN 13501). Tie-rods for suspended installation included in the standard equipment.
- **Intake and delivery spigots** compatible with pipes with 125 mm (VORT HRI 200 FLAT) and 150 mm (VORT HRI 350 FLAT) nominal diameter.
- **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 aeraulic efficiency. 3 operating speeds, independently settable upon 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.
- **Mechanical by-pass**, 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**, wire connected, for:
  - switching the product on and off;
  - selecting the product's minimum, average, or maximum speed;
  - signalling, by means of an indicator light, the saturated filters condition.
- **Pair of M5 filters** (F7 filter available as an option for the delivery duct), easily accessible for periodic maintenance interventions.
- **Condensate collection tray** with drain devices.
- **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**: II (earthing not required).

TECHNICAL DATA

PRODUCTS	CODE	V~50 HZ	W max	A max	MAX FLOW RATE		MAX PRESSURE		°C* MAX	KG
					m^3/h	l/s	mmH_2O	Pa		
VORT HRI 200 FLAT	11281	230	102	1.0	210	58.3	48.4	475	40	24
VORT HRI 350 FLAT	11282	230	250	2.0	380	105	56.0	550	50	33

** Maximum temperature with continuous operation of the product.*

DETAILS

Condensate drain nozzles.

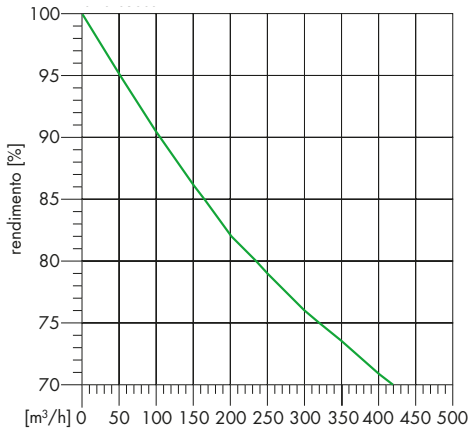
Easily removable filters.

Remote control unit supplied as standard.

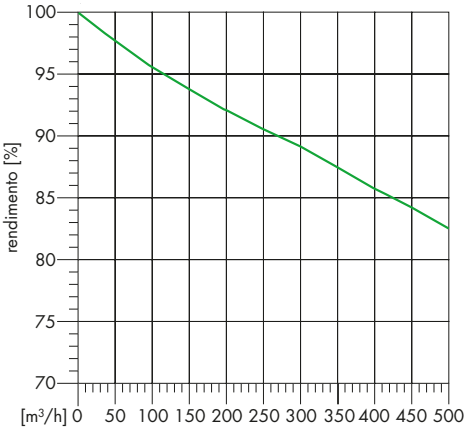
VORT HRI 200 FLAT code 11281
VORT HRI 350 FLAT code 11282

EFFICIENCY CURVES

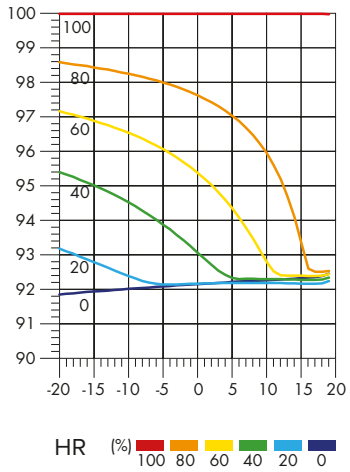
Efficiency in accordance with flow rate
VORT HRI 200 FLAT



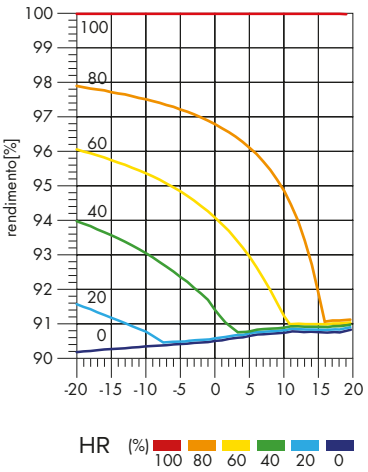
Efficiency in accordance with flow rate
VORT HRI 350 FLAT



Efficiency in accordance with condensation heat



Efficiency in accordance with condensation heat



FILTERS

MODELS	DESCRIPTION	DIMENSIONS	CODE	VORT HRI 200 FLAT code 11281	VORT HRI 350 FLAT code 11282
	FILTER F7	228X224X24	22625	✓	
	FILTER F7	230X250X48	22628		✓
	FILTER M5	212X227X24	22647	✓	
	FILTER M5	230X250X48	22646		✓

ACCESSORIES

MODELS	DESCRIPTION	CODE	VORT HRI 200 FLAT code 11281	VORT HRI 350 FLAT code 11282
	**ELECTRIC HEATER 500** Pre-heater to prevent the formation of frost in correspondence of the heat exchanger, also in particularly rigid climates	21630	✓	
	ELECTRIC HEATER 750 Pre-heater to prevent the formation of frost in correspondenceof the heat exchanger, also in particularly rigid climates	22735		✓

VORT HRI FLAT IoT RANGE

INTERNET OF THINGS COMPATIBLE WALL-MOUNTED HEAT RECOVERY UNIT

A | **FALSE CEILING CENTRALISED** | **VENTILATION** | **UP TO 240 M²**

Dual-flow centralised ventilation units with heat recovery from false ceilings, equipped with a Wi-Fi module capable of connecting the products to the Cloud and allowing them to be managed remotely via App. Ideal for the ventilation of residential and commercial premises of up to 120 m2 or 240 m2 depending on the model. The model with enthalpy exchanger (H version) is also available.

Compatible with BRA.VO S, an air quality meter that can detect the presence of pollutants in the environment.

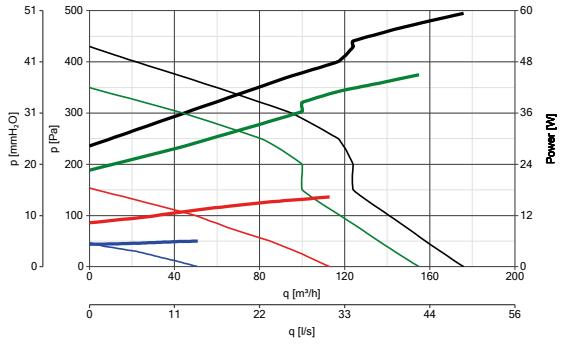
- Hot-dip galvanised and painted sheet steel enclosures; the internal cladding, made of fire-resistant soundproof material (compliant with DIN EN 13501), ensures the containment of noise emissions, minimises heat dissipation and improves the overall efficiency of the machine by improving the airflow pattern inside it.
- Pair of fans (compliant with ErP Regulation No. 327/2011/EU), centrifugal with backward-curved blades to maximise efficiency, driven by EC (brushless) motors with four speeds, independently adjustable to compensate for any imbalances in the circuits, guaranteeing reduced consumption.
- Heat exchanger, in plastic resin (PS) and of the cross-flow countercurrent type, which guarantees high heat exchange efficiency values (up to 92%) according to the ISO EN 308 standard.

PERFORMANCE AND ABSORPTION

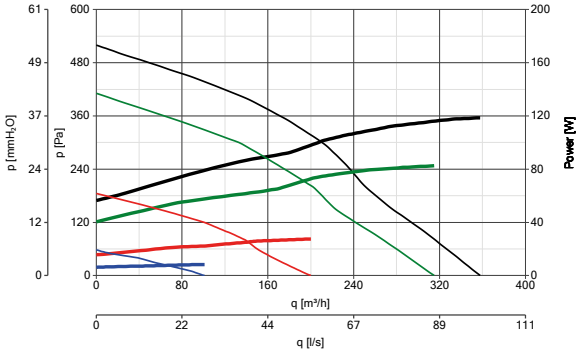
TECHNICAL DATA

PRODUCTS	CODE	Ø nom. (mm)	m³/h	W	Pa	Lp [dB (A)] 3m
VORT HRI 200 FLAT IoT	10916	125	176	125	430	32.8
VORT HRI 200 FLAT IoT H	10920	150	360	250	520	38.1
VORT HRI 350 FLAT IoT	10917	125	176	125	430	32.8

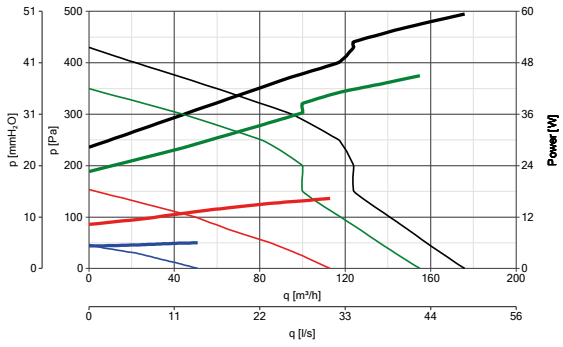
VORT HRI 200 FLAT IoT Code 10916



VORT HRI 200 FLAT IoT Code 10917



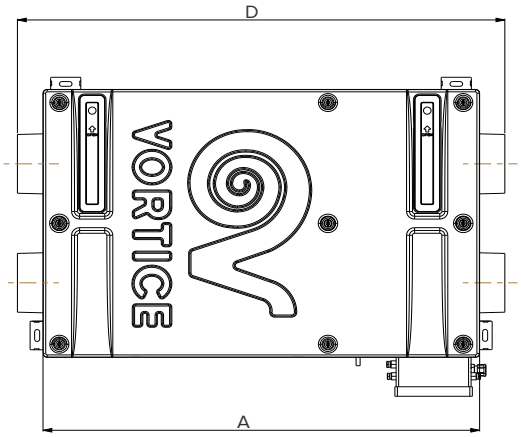
VORT HRI 200 FLAT IoT H Code 10920

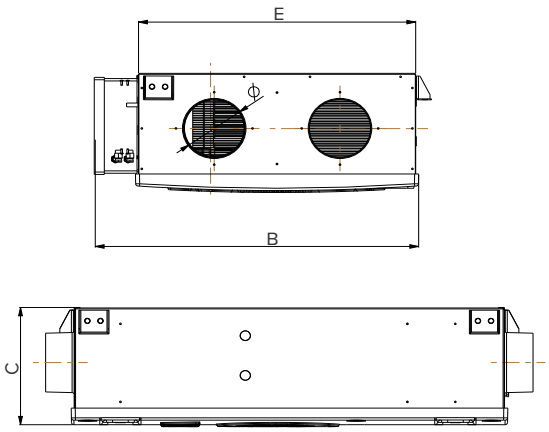


CONSUMPTION CURVES
- max
- avg
- min

PERFORMANCE CURVES
- max
- avg
- min

DIMENSIONS





PRODUCTS	CODE	A	B	C	D	E	⌀
VORT HRI 200 FLAT IoT	10916	860	641	234	969	551	125
VORT HRI 200 FLAT IoT H	10920	860	641	234	969	551	125
VORT HRI 350 FLAT IoT	10917	1183	740	283	1287	650	150

Dimensions in mm

The VORT HRI 350 FLAT IoT model code 10917 with enthalpy exchanger

ENTHALPY EXCHANGER

Enthalpy exchanger is able to recover both the sensible and the latent energy from one flow to the other (transfer of temperature and humidity). The humidity is recovered through the change of state of water vapour.
This guarantees:

- greater comfort in cold and dry climates (the humidity present in the extracted stale air is transferred to the incoming fresh air, avoiding the onset of breathing difficulties and tearing of the eyes, caused by too low relative humidity) or hot and humid climates (in these cases the excess humidity present in the fresh air is not transferred into the environment);
- much easier installation (in some cases the reduced formation of condensation inside the product allows to avoid water drianage).

ENTHALPY EXCHANGER

ENTHALPY EXCHANGER SECTIONED

ENERGY DATA

	UNIT OF MEASUREMENT	VORT HRI 200 FLAT IoT COD. 10916	VORT HRI 350 FLAT IoT COD. 10917
MANUFACTURER'S NAME OR TRADE NAME	-	VORTICE	VORTICE
CLASS OF SPECIFIC ENERGY CONSUMPTION FOR TEMPERATE CLIMATE	-	A	A
SPECIFIC ENERGY CONSUMPTION SEC (TEMPERATE CLIMATE)	kWh/m² year	-36	-37
SPECIFIC ENERGY CONSUMPTION SEC (COLD CLIMATE)		-73	-76
SPECIFIC ENERGY CONSUMPTION SEC (WARM CLIMATE)		-11	-13
DECLARED TYPE OF THE VENTILATION UNIT	-	UVR-B**	UVR-B**
DRIVE TYPE	-	VSD***	VSD***
HRS HEAT EXCHANGER TYPE	-	recovery	recovery
THERMAL EFFICIENCY OF HEAT RECOVERY AT THE HRS REFERENCE FLOW RATE	%	85.3	88.4
MAXIMUM FLOW RATE	m³/h	196	366
TOTAL ELECTRIC POWER ABSORBED BY THE FAN AT MAXIMUM FLOW RATE	w	118	235
NOISE LEVEL	LWA [dB(A)]	46.2	51.5
REFERENCE FLOW RATE	m³/s	0.0392	0.0753
REFERENCE PRESSURE DIFFERENCE	Pa	50	50
SPI**	W/(m³/h)	0.3972	0.3616
CTRL CONTROL FACTOR	-	0.85	0.85
CONTROL TYPE	-	centralised env.	centralised env.
MAXIMUM PERCENTAGE OF INTERNAL LEAKAGE	%	4.9	5.2
MAXIMUM PERCENTAGE OF EXTERNAL LEAKAGE	%	2.8	5.7
MIXING RATE	-	NA*	NA*
VISUAL FILTER SIGNAL POSITION AND DESCRIPTION	-	see instruction booklet	see instruction booklet
AIR FLOW SENSITIVITY TO PRESSURE VARIATIONS AT ± 20 PA	-	NA*	NA*
INDOOR/OUTDOOR AIR TIGHTNESS	m³/h	NA*	NA*
AEC ANNUAL ELECTRICITY CONSUMPTION	kWh of electricity/ year	404	372
TEMPERATE AHS ANNUAL HEATING SAVING	kWh of primary energy/ year	4502	4586
COLD AHS ANNUAL HEATING SAVING		8808	8972
WARM AHS ANNUAL HEATING SAVING		2036	2074

** NA: Not applicable. ** UVR-U: Residential Ventilation Unit - Unidirectional. *** VM: Multiple speeds. VSD: Variable Speed Drive.*

***** SPI: Specific power input.*

ENERGY DATA

	UNIT OF MEASUREMENT	VORT HRI 200 FLAT IoT H COD. 10920
MANUFACTURER'S NAME OR TRADE NAME	-	VORTICE
CLASS OF SPECIFIC ENERGY CONSUMPTION FOR TEMPERATE CLIMATE	-	A
SPECIFIC ENERGY CONSUMPTION SEC (TEMPERATE CLIMATE)	kWh/m² year	-36
SPECIFIC ENERGY CONSUMPTION SEC (COLD CLIMATE)		-73
SPECIFIC ENERGY CONSUMPTION SEC (WARM CLIMATE)		-11
DECLARED TYPE OF THE VENTILATION UNIT	-	UVR-B**
DRIVE TYPE	-	VSD***
HRS HEAT EXCHANGER TYPE	-	recovery
THERMAL EFFICIENCY OF HEAT RECOVERY AT THE HRS REFERENCE FLOW RATE	%	81
MAXIMUM FLOW RATE	m³/h	196
TOTAL ELECTRIC POWER ABSORBED BY THE FAN AT MAXIMUM FLOW RATE	w	118
NOISE LEVEL	LWA [dB(A)]	46.2
REFERENCE FLOW RATE	m³/s	0.0392
REFERENCE PRESSURE DIFFERENCE	Pa	50
SPI****	W/(m³/h)	0.3972
CTRL CONTROL FACTOR	-	0.85
CONTROL TYPE	-	centralised env.
MAXIMUM PERCENTAGE OF INTERNAL LEAKAGE	%	4.9
MAXIMUM PERCENTAGE OF EXTERNAL LEAKAGE	%	2.8
MIXING RATE	-	NA*
VISUAL FILTER SIGNAL POSITION AND DESCRIPTION	-	see instruction booklet
AIR FLOW SENSITIVITY TO PRESSURE VARIATIONS AT ± 20 PA	-	NA*
INDOOR/OUTDOOR AIR TIGHTNESS	m³/h	NA*
AEC ANNUAL ELECTRICITY CONSUMPTION	kWh of electricity/ year	404
TEMPERATE AHS ANNUAL HEATING SAVING	kWh of primary energy/ year	4502
COLD AHS ANNUAL HEATING SAVING		8808
WARM AHS ANNUAL HEATING SAVING		2036

** NA: Not applicable. ** UVR-U: Residential Ventilation Unit - Unidirectional. *** VM: Multiple speeds. VSD: Variable Speed Drive.*

***** SPI: Specific power input.*

ACCESSORIES

MODELS	DESCRIPTION	CODE	VORT HRI 200 FLAT IoT COD. 10916	VORT HRI 350 FLAT IoT COD. 10917	VORT HRI 350 FLAT IoT H COD. 10920
	**FT3 F7** Filter ePM2.5 60% 230x250x48	**22628**	✓		✓
	**FTR F7** Filter ePM2.5 60% 228 x 224 x 24	**22625**	✓		✓
	**ELECTRIC HEATER 750**	**22735**		✓	
	**ELECTRIC HEATER 500**	**21630**	✓		✓
	**DCW 250 Ø 150** chilled water post-cooling coil	**24146**	✓		✓
	**SILENCER PIPE Ø 125 L=500**	**22366**	✓		✓

REGULATORS

MODELS	DESCRIPTION	CODE	VORT HRI 200 FLAT IoT COD. 10916	VORT HRI 350 FLAT IoT COD. 10917	VORT HRI 350 FLAT IoT H COD. 10920
	**C SMOKE** Polluted air detector	**12993**	✓	✓	✓
	**C HCS** Humidity detector	**12994**	✓	✓	✓
	**C TEMP** Temperature detector	**12992**	✓	✓	✓
	**C PIR** Presence detector	**12998**	✓	✓	✓
	**SCI 503**	**22461**	✓	✓	✓
	**SCP 503**	**22732**	✓	✓	✓
	PSC-W White plate	**22462**	✓	✓	✓
	PSC-B White plate	**22463**	✓	✓	✓

VORT PHANTOM RANGE

FALSE CEILING HEAT RECOVERY UNITS

A | **FALSE CEILING CENTRALISED VENTILATION** | **UP TO 240 M²**

Dual-flow centralised ventilation units with false ceiling heat recovery, ideal for the ventilation of homes as well as residential and commercial premises.

- Suitable for false ceiling installation
- Self-supporting casing made of (10/10) zinc-coated metal sheet, with internal fire-resistant sound-absorbing coating, lower cover in ABS.
- Connection spigots to pipes with 125 mm (PHANTOM 200) and 150 mm (PHANTOM 350) nominal diameter, backward curved centrifugal fans directly coupled to EC motors.
- High-efficiency counterflow heat exchanger made of plastic material (PS).
- Automatic thermodynamic by-pass, based on the temperature probes available in the machine.
- Automatic mechanical by-pass, based on the temperature probes available in the machine (BP MODELS)
- Pair of Class ePM10 (M5) 50% (F5) filters
- Wired remote LCD control panel supplied as standard.

RANGE EXTENSION

False ceiling heat recovery unit with enthalpy exchanger.
VORT HRI 200 PHANTOM BP H code 10914

ENTHALPY EXCHANGER

Enthalpy exchanger is able to recover both the sensible and the latent energy from one flow to the other (transfer of temperature and humidity). The humidity is recovered through the change of state of water vapour.
This guarantees:

- greater comfort in cold and dry climates (the humidity present in the expelled stale air is transferred to the incoming fresh air, avoiding the onset of breathing difficulties and tearing of the eyes, caused by too low relative humidity) or hot and humid climates (in these cases the excess humidity present in the fresh air is not transferred into the environment);
- much easier installation (in some cases the reduced formation of condensation inside the product allows to avoid external canalisation).

ENTHALPY EXCHANGER

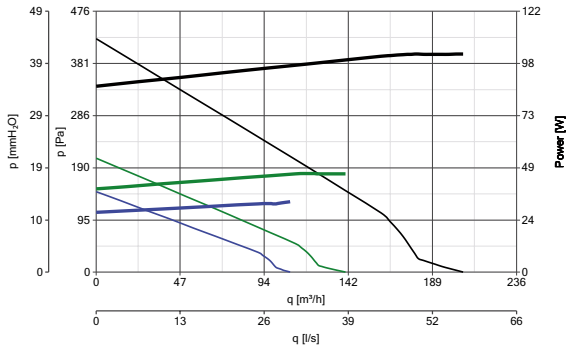
ENTHALPY EXCHANGER SECTIONED

PERFORMANCE AND ABSORPTION

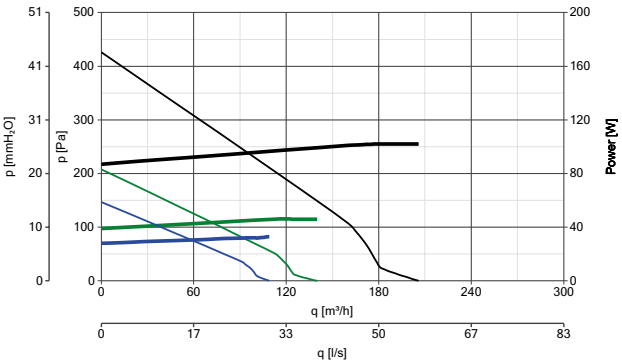
TECHNICAL DATA

PRODUCTS	CODE	Nom. Ø (mm)	(m^3/h)	(W)	(PA)	Lp [db(A)] 3m
VORT HRI 200 PHANTOM BP	11291	125	206	102	426	22.8
VORT HRI 200 PHANTOM BP H	10914	125	206	102	426	22.8
VORT HRI 350 PHANTOM BP	11293	150	350	165	568	16.7

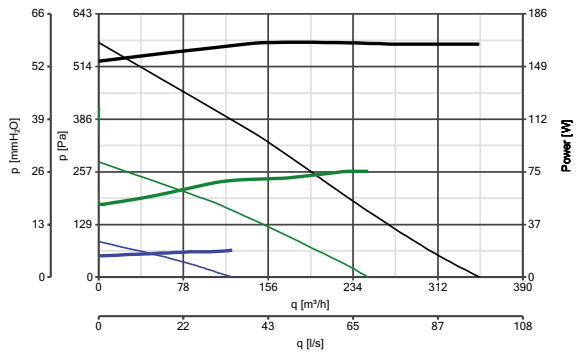
VORT HRI 200 PHANTOM BP



VORT HRI 200 PHANTOM BP H



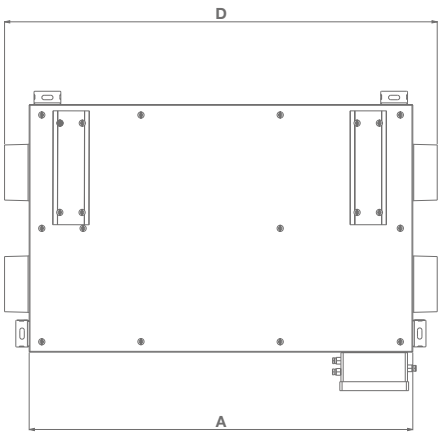
VORT HRI 350 PHANTOM BP

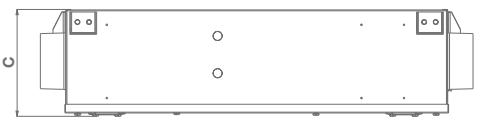


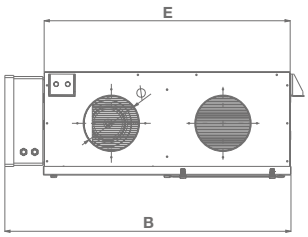
CONSUMPTION CURVES
- max
- avg
- min

PERFORMANCE CURVES
- max
- avg
- min

DIMENSIONS







PRODUCTS	CODE	A	B	C	D	E	Ø
VORT HRI 200 PHANTOM BP	11291	868	643	248	963.5	551	125
VORT HRI 200 PHANTOM BP H	10914	868	643	248	963.5	551	125
VORT HRI 350 PHANTOM BP	11293	1183	740	288	1287	650	150

Dimensions in mm

NOISE LEVELS

VORT HRI 200 PHANTOM BP VORT HRI 200 PHANTOM BP H		Lw db(A) 125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	Lw db(A) 3m*	Lw dB (A) 3m*
MIN. SPEED	Delivery	22.7	31.4	17.4	14.9	10.1	na**	na**	43.3	22.8
	Intake	24.2	36.8	23.0	15.4	14.0	7.3	na**	36.5	16.0
	Casing	35.7	36.9	29.2	22.2	17.0	9.8	na**	43.1	22.6

VORT HRI 350 PHANTOM BP		Lw db(A) 125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	Lw db(A) 3m*	Lw dB (A) 3m*
MIN. SPEED	Delivery	16.7	27.4	24.3	17.1	16.9	7.1	na**	37.2	16.7
	Intake	16.3	32.1	22.2	11.3	15.5	6.2	na**	37.8	17.3
	Casing	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.*

ENERGY DATA

	UNIT OF MEASUREMENT	VORT HRI 200 PHANTOM BP Code. 11291	VORT HRI 350 PHANTOM BP Code. 11293
MANUFACTURER'S NAME OR TRADE NAME	-	VORTICE	VORTICE
CLASS OF SPECIFIC ENERGY CONSUMPTION FOR TEMPERATE CLIMATE	-	A	A
SPECIFIC ENERGY CONSUMPTION SEC (TEMPERATE CLIMATE)	kWh/m² year	-36.3	-38.0
SPECIFIC ENERGY CONSUMPTION SEC (COLD CLIMATE)		-74.7	-77.0
SPECIFIC ENERGY CONSUMPTION SEC (WARM CLIMATE)		-11.7	-13.0
DECLARED TYPE OF THE VENTILATION UNIT	-	UVR-B**	UVR-B**
DRIVE TYPE	-	VSD***	VSD***
HRS HEAT EXCHANGER TYPE	-	recovery	recovery
THERMAL EFFICIENCY OF HEAT RECOVERY AT THE HRS REFERENCE FLOW RATE	%	87.8	90.4
MAXIMUM FLOW RATE	m³/h	163	280
TOTAL ELECTRIC POWER ABSORBED BY THE FAN AT MAXIMUM FLOW RATE	w	100.0	165.0
NOISE LEVEL	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
CTRL CONTROL FACTOR	-	0.85	0.85
CONTROL TYPE	-	centralised env.	centralised env.
MAXIMUM PERCENTAGE OF INTERNAL LEAKAGE	%	8.5	8.7
MAXIMUM PERCENTAGE OF EXTERNAL LEAKAGE	%	8.5	5.2
MIXING RATE	-	NA*	NA*
VISUAL FILTER SIGNAL POSITION AND DESCRIPTION	-	see instruction booklet	see instruction booklet
AIR FLOW SENSITIVITY TO PRESSURE VARIATIONS AT ± 20 PA	-	NA*	NA*
INDOOR/OUTDOOR AIR TIGHTNESS	m³/h	NA*	NA*
AEC ANNUAL ELECTRICITY CONSUMPTION	kWh of electricity/ year	402	364
TEMPERATE AHS ANNUAL HEATING SAVING	kWh of primary energy/ year	4570	4641
COLD AHS ANNUAL HEATING SAVING		8940	9078
WARM AHS ANNUAL HEATING SAVING		2067	2098

** NA: Not applicable. ** UVR-U: Residential Ventilation Unit - Unidirectional. *** VM: Multiple speeds. VSD: Variable Speed Drive.*
***** SPI: Specific power input.*

ENERGY DATA

	UNIT OF MEASUREMENT	VORT HRI 200 PHANTOM BP H Code. 10914
MANUFACTURER'S NAME OR TRADE NAME	-	VORTICE
CLASS OF SPECIFIC ENERGY CONSUMPTION FOR TEMPERATE CLIMATE	-	A
SPECIFIC ENERGY CONSUMPTION SEC (TEMPERATE CLIMATE)	kWh/m² year	-36.3
SPECIFIC ENERGY CONSUMPTION SEC (COLD CLIMATE)		-74.7
SPECIFIC ENERGY CONSUMPTION SEC (WARM CLIMATE)		-11.7
DECLARED TYPE OF THE VENTILATION UNIT	-	UVR-B**
DRIVE TYPE	-	VSD***
HRS HEAT EXCHANGER TYPE	-	recovery
THERMAL EFFICIENCY OF HEAT RECOVERY AT THE HRS REFERENCE FLOW RATE	%	87.8
MAXIMUM FLOW RATE	m³/h	163
TOTAL ELECTRIC POWER ABSORBED BY THE FAN AT MAXIMUM FLOW RATE	w	100.0
NOISE LEVEL	LWA [dB(A)]	43
REFERENCE FLOW RATE	m³/s	0.0317
REFERENCE PRESSURE DIFFERENCE	Pa	50
SPI****	W/(m3/h)	0.39474
CTRL CONTROL FACTOR	-	0.85
CONTROL TYPE	-	centralised env.
MAXIMUM PERCENTAGE OF INTERNAL LEAKAGE	%	2.64
MAXIMUM PERCENTAGE OF EXTERNAL LEAKAGE	%	4.21
MIXING RATE	-	NA*
VISUAL FILTER SIGNAL POSITION AND DESCRIPTION	-	see instruction booklet
AIR FLOW SENSITIVITY TO PRESSURE VARIATIONS AT ± 20 PA	-	NA*
INDOOR/OUTDOOR AIR TIGHTNESS	m³/h	NA*
AEC ANNUAL ELECTRICITY CONSUMPTION	kWh of electricity/ year	402
TEMPERATE AHS ANNUAL HEATING SAVING	kWh of primary energy/ year	4570
COLD AHS ANNUAL HEATING SAVING		8940
WARM AHS ANNUAL HEATING SAVING		2067

** NA: Not applicable. ** UVR-U: Residential Ventilation Unit - Unidirectional. *** VM: Multiple speeds. VSD: Variable Speed Drive.*

***** SPI: Specific power input.*

TECHNICAL FEATURES

- **3 models**, different in size and performance, equipped with thermodynamic or mechanical by-pass.
- **Casings made of zinc-coated steel sheet** 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.
- **Thermoformed plastic resin (PP) bottom covers**, integrating the panels for direct access to the air filters.
- **Intake and delivery spigots**compatible with pipes with 125 mm (VORT HRI 200 PHANTOM) and 150 mm (VORT HRI 350 PHANTOM) nominal diameter.
- **Pair of motor fans driven by EC (brushless) motors** of the external rotor type, with shafts mounted on ball bearings, directly coupled to backward curved centrifugal impellers to guarantee high aeraulic efficiency. 3 operating speeds, independently settable upon 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.
- **Thermodynamic or mechanical (BP models), 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.
- **Remote control unit with LCD display**, 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 interventions.
- **Condensate collection tray** with drain devices.
- **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**: II (earthing not required).

TECHNICAL DATA

PRODUCTS	CODE	V~50 HZ	W max	A max	MAX FLOW RATE		MAX PRESSURE		°C* MAX	KG
					m^3/h	l/s	mmH_2O	Pa		
VORT HRI 200 PHANTOM B.P.	11291	230	102	1.0	206	57.2	43.5	426	40	24
VORT HRI 200 PHANTOM B.P. H	10914	230	102	1.0	206	57.2	43.5	426	40	24
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.*

KEY:

Air extraction

Air delivery

DETAILS

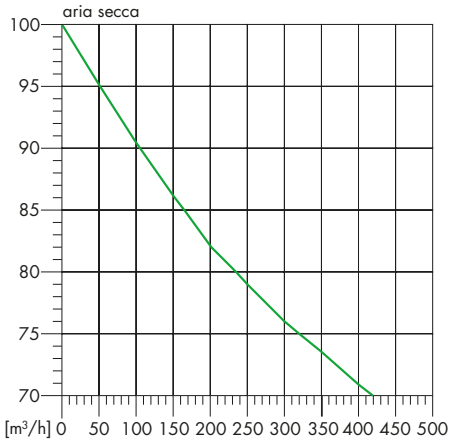
Condensate drain nozzles.

LCD display full version supplied as standard

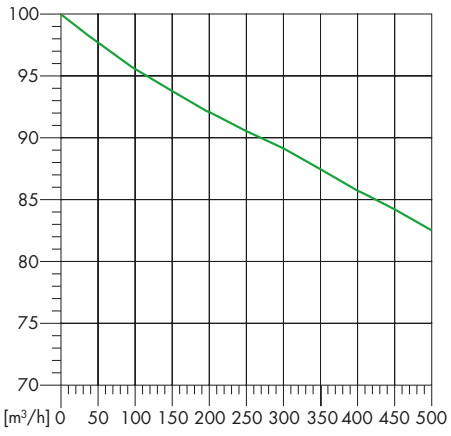
Side profile, versions with by-pass.

EFFICIENCY CURVES

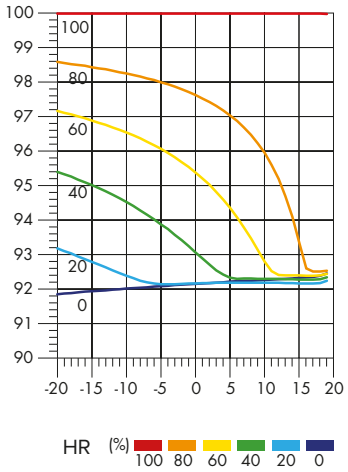
Efficiency in accordance with flow rate
VORT HRI 200 PHANTOM



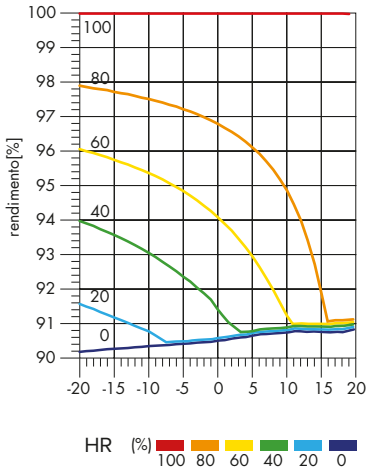
Efficiency in accordance with flow rate
VORT HRI 350 PHANTOM



Efficiency in accordance with condensation heat



Efficiency in accordance with condensation heat



FILTERS

MODELS	DESCRIPTION	DIMENSIONS	CODE	VORT HRI 200 PHANTOM BP code 11291	VORT HRI 350 PHANTOM BP code 11293	VORT HRI 200 PHANTOM BP H code 10914
	FILTER F7	228X224X24	22625	✓		✓
	FILTER F7	230X250X48	22628		✓	
	FILTER M5	227x212x24	21431			✓
	FILTER F7	227x212x24	21432			✓

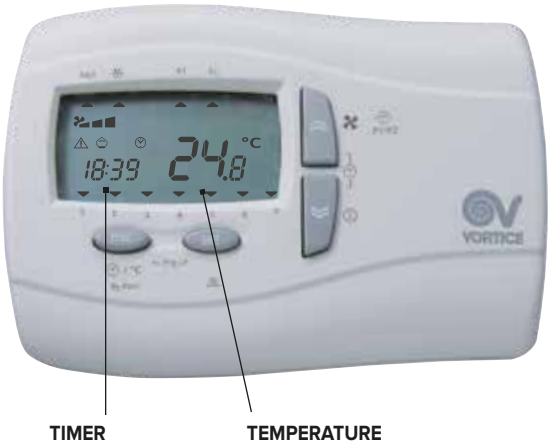
REGULATORS

MODELS	DESCRIPTION	DIMENSIONS	CODE	VORT HRI 200 PHANTOM BP code 11291	VORT HRI 350 PHANTOM BP code 11293	VORT HRI 200 PHANTOM BP H code 10914
	**C TEMP** Temperature detector	144x54x55.8	12992	✓	✓	✓
	**C SMOKE** Polluted air detector	144x54x55.8	12993	✓	✓	✓
	**C HCS** Humidity detector	144x54x55.8	12994	✓	✓	✓
	**C PIR** Presence detector	144x54x55.8	12998	✓	✓	✓
	**SKP10 INSTALLER PANEL** Installer panel	-	22629	✓	✓	✓

ACCESSORIES

MODELS	DESCRIPTION	CODE	VORT HRI 200 PHANTOM BP code 11291	VORT HRI 350 PHANTOM BP code 11293	VORT HRI 200 PHANTOM BP H code 10914
	**ELECTRIC HEATER 500** Pre-heater to prevent the formation of frost in correspondence of the heat exchanger, also in the presence of particularly harsh climates	21630	✓		✓
	ELECTRIC HEATER 750 Pre-heater to prevent the formation of frost in correspondence of the heat exchanger, also in particularly rigid climates	22735		✓	
	**DCW 250 D.150** Chilled water post-cooling coil	24146	✓	✓	

LCD DISPLAY - SUPPLIED AS STANDARD



SOME ICONS SHOWN ON THE PANEL

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

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

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).

VORT HRI PHANTOM IoT RANGE

IoT FALSE CEILING HEAT RECOVERY UNITS

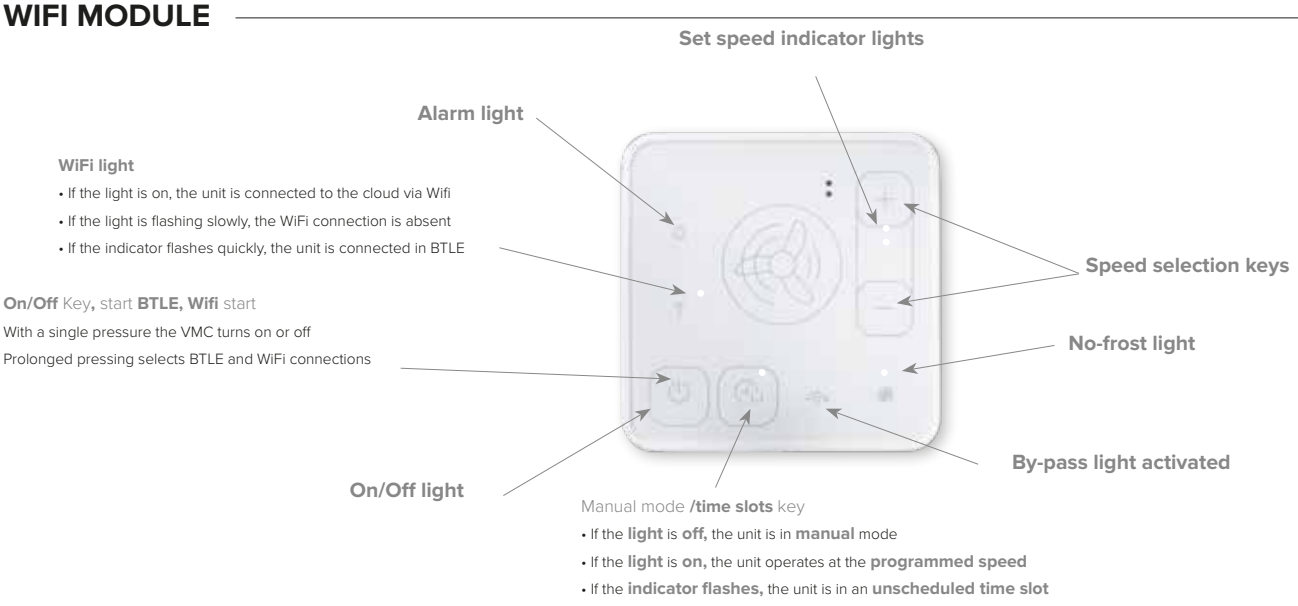
A | **CENTRALISED VENTILATION** | **FOR FALSE CEILING** | **UP TO 240 M²**

Centralised dual-flow ventilation units with heat recovery for false ceilings, ideal for ventilation of homes and residential and commercial premises with a surface area of up to 90 m² (VORT HRI 200 PHANTOM BP IoT/H) or 240 m² (VORT HRI 350 PHANTOM BP Iot), characterised by high levels of thermal insulation.

- Suitable for false ceiling installation
- Self-supporting casing made of (10/10) zinc-coated metal sheet, with internal fire-resistant sound-absorbing coating, lower cover in ABS.
- Connection spigots to pipes with 125 mm (PHANTOM 200) and 150 mm (PHANTOM 350) nominal diameter, backward curved centrifugal fans directly coupled to EC motors.
- High-efficiency counterflow heat exchanger made of plastic material (PS).
- Automatic thermodynamic by-pass, based on the temperature probes available in the machine.
- Automatic mechanical by-pass, based on the temperature probes available in the machine.
- Pair of Class ePM10 (M5) 50% (F5) filters
- Wired remote LCD control panel supplied as standard.
- WiFi module for control, monitoring and updating from remote, via mobile devices; 3 levels of access available, protected by separate PWDs (User, Service and Factory); a remote control panel, which can be installed on the wall, offers the function of back-up in case of absence of WiFi signal or unavailability of mobile devices.

Compatible with BRA.VO S, an air quality meter that can detect the presence of pollutants in the environment.

WIFI MODULE



PERFORMANCE AND ABSORPTION

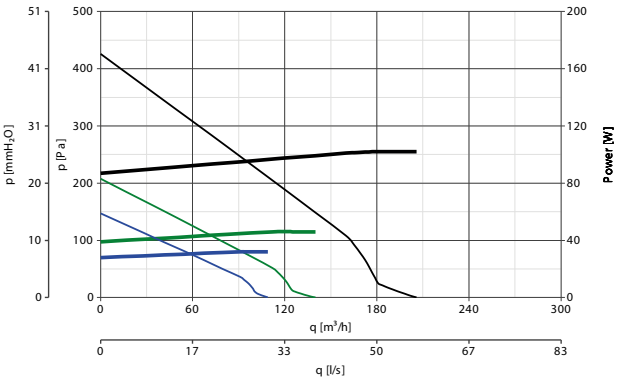
TECHNICAL DATA

PRODUCTS	CODE	Nom. Ø (mm)	m³/h	W	Pa	Lp [db(A)] 3m
VORT HRI 200 PHANTOM BP IoT	10925	125	206	105	426	22.8
VORT HRI 200 PHANTOM BP IoT H*	10927	125	206	105	426	22.8
VORT HRI 350 PHANTOM BP IoT	10926	150	350	165	568	16.7

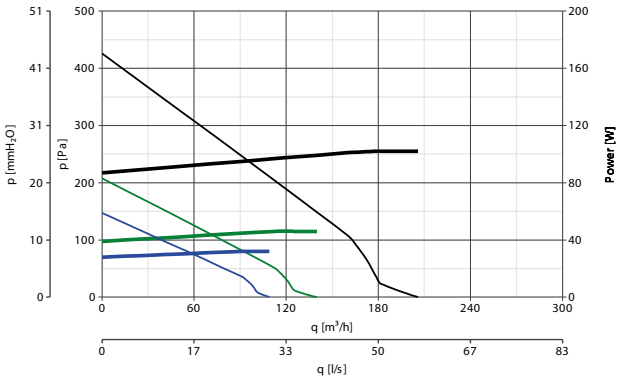
* Entalpic heat exchanger

PERFORMANCE AND ABSORPTION

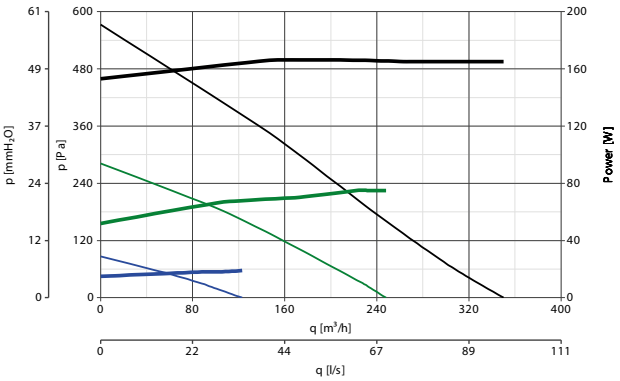
VORT HRI 200 PHANTOM BP IOT
Code 10925



VORT HRI 200 PHANTOM BP IOT H
Code 10927



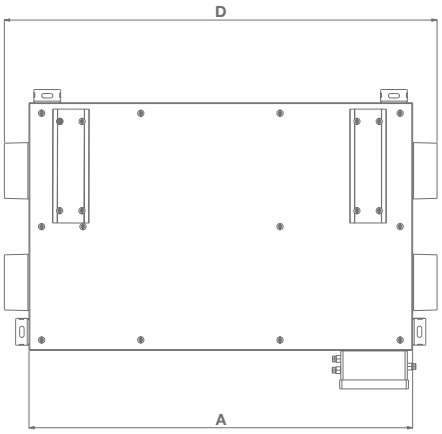
VORT HRI 350 PHANTOM BP IOT
Code 10926

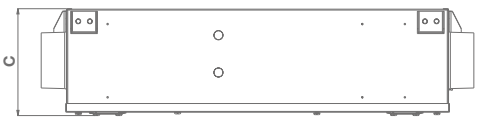


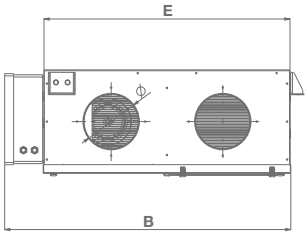
CONSUMPTION CURVES
max
avg
min

PERFORMANCE CURVES
max
avg
min

DIMENSIONS







PRODUCTS	CODE	A	B	C	D	E	Ø
VORT HRI 200 PHANTOM BP IoT	10925	868	643	248	963.5	551	125
VORT HRI 200 PHANTOM BP IoT H	10927	868	643	248	963.5	551	125
VORT HRI 350 PHANTOM BP IoT	10926	1183	740	288	1287	650	150

Dimensions in mm

ENERGY DATA

	UNIT OF MEASUREMENT	VORT HRI 200 PHANTOM BP IOT CODE 10925	VORT HRI 200 PHANTOM BP IOT H CODE 10927	VORT HRI 350 PHANTOM BP IOT CODE 10926
MANUFACTURER'S NAME OR TRADE NAME	-	VORTICE	VORTICE	VORTICE
CLASS OF SPECIFIC ENERGY CONSUMPTION FOR TEMPERATE CLIMATE	-	A	A	A
SPECIFIC ENERGY CONSUMPTION SEC (TEMPERATE CLIMATE)	kWh/m² year	-35	-35.0	-38.0
SPECIFIC ENERGY CONSUMPTION SEC (COLD CLIMATE)		-74.	-74	-77
SPECIFIC ENERGY CONSUMPTION SEC (WARM CLIMATE)		-11	-11	-13
DECLARED TYPE OF THE VENTILATION UNIT	-	UVR-B**	UVR-B**	UVR-B**
DRIVE TYPE	-	VSD***	VSD***	VSD***
HRS HEAT EXCHANGER TYPE	-	recovery	recovery	recovery
THERMAL EFFICIENCY OF HEAT RECOVERY AT THE HRS REFERENCE FLOW RATE	%	-	-	-
MAXIMUM FLOW RATE	m³/h	160	160	280
TOTAL ELECTRIC POWER ABSORBED BY THE FAN AT MAXIMUM FLOW RATE	w	105	105	165
NOISE LEVEL	LWA [dB(A)]	-	-	-
REFERENCE FLOW RATE	m³/s	0.0383	0.0383	0.0544
REFERENCE PRESSURE DIFFERENCE	Pa	50	50	70
SPI**	W/(m³/h)	0.44202	0.44202	0.35204
CTRL CONTROL FACTOR	-	0.85	0.85	0.85
CONTROL TYPE	-	centralised env.	centralised env.	centralised env.
MAXIMUM PERCENTAGE OF INTERNAL LEAKAGE	%	8.5	8.5	8.7
MAXIMUM PERCENTAGE OF EXTERNAL LEAKAGE	%	8.5	8.5	5.2
MIXING RATE	-	NA*	NA*	NA*
VISUAL FILTER SIGNAL POSITION AND DESCRIPTION	-	see instruction booklet	see instruction booklet	see instruction booklet
AIR FLOW SENSITIVITY TO PRESSURE VARIATIONS AT ± 20 PA	-	NA*	NA*	NA*
INDOOR/OUTDOOR AIR TIGHTNESS	m³/h	NA*	NA*	NA*
AEC ANNUAL ELECTRICITY CONSUMPTION	kWh of electricity/year	445	445	364
TEMPERATE AHS ANNUAL HEATING SAVING	kWh of energy/year	4570	4570	4641
COLD AHS ANNUAL HEATING SAVING		8940	8940	9078
WARM AHS ANNUAL HEATING SAVING		2067	2067	2098

** NA: Not applicable. ** UVR-U: Residential Ventilation Unit - Unidirectional. *** VM: Multiple speeds. VSD: Variable Speed Drive.*

***** SPI: Specific power input.*

TECHNICAL DATA

PRODUCTS	CODE	V~50HZ	W max	A max	MAX FLOW RATE		MAX PRESSURE		KG
					m³/h	l/s	mmH_2O	Pa	
VORT HRI 200 PHANTOM BP IoT	10925	230	105	1.0	206	57.2	43.5	426	27
VORT HRI 200 PHANTOM BP IoT H*	10927	230	105	1.0	206	57.2	43.5	426	27
VORT HRI 350 PHANTOM BP IoT	10926	230	165	1.4	350	97.0	58.0	568	33

* Entalpic heat exchanger

** Maximum temperature with continuous operation of the product.*

TECHNICAL FEATURES

- **3 models**, different in size and performance, equipped with thermodynamic or mechanical by-pass.
- **Casings made of zinc-coated steel sheet** 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.
- **Thermoformed plastic resin (PP) bottom covers**, integrating the panels for direct access to the air filters.
- **Intake and delivery spigots** compatible with pipes with 125 mm (VORT HRI 200 PHANTOM BP IoT/H) and 150 mm (VORT HRI 350 PHANTOM BP IoT) nominal diameter.
- **Pair of motor fans driven by EC (brushless) motors** of the external rotor type, with shafts mounted on ball bearings, directly coupled to backward curved centrifugal impellers to guarantee high aeraulic efficiency. 3 operating speeds, independently settable upon installation.
- **High-efficiency heat exchanger**, of the cross-flow type with counterflow, made of plastic resin (PS).
- **Enthalpy exchanger.**
- **Automatic-activation frost protection**, to prevent the formation of frost at the heat exchanger.
- **Thermodynamic or mechanical (BP models), 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.
- **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.
- **WiFi module** for remote control, monitoring and updating, using mobile devices; 3 levels of access are available, protected by different PWDs (User, Service and Factory); a remote control panel, which can be installed on the wall, offers the back-up function in case of absence of WiFi signal or unavailability of mobile devices;
- **Pair of M5 filters** (F7 filter available as an option for the delivery duct), easily accessible for periodic maintenance interventions.
- **Condensate collection tray** with drain devices.
- **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**: II (earthing not required).

FILTERS

MODELS	DESCRIPTION	DIMENSIONS	CODE	VORT HRI 200 PHANTOM BP IOT code 10925	VORT HRI 200 PHANTOM BP IOT H code 10927	VORT HRI 350 PHANTOM B.P H IOT code 10926
	FILTRO F7	227X212X24	21432	●	●	–
	FILTRO M5	227X212X24	21431	●	●	–
	FILTRO F7	230X250X48	22628	–	–	●
	FILTRO M5	230X250X48	22646	–	–	●

REGULATORS

MODELS	DESCRIPTION	CODE	VORT HRI 200 PHANTOM BP IOT code 10925	VORT HRI 200 PHANTOM BP IOT H code 10927	VORT HRI 350 PHANTOM B.P H IOT code 10926
	**C SMOKE** Smoke detector	12993	●	●	●
	**C HCS** Humidity detector	12994	●	●	●
	**C TEMP** Polluted air detector.	12992	●	●	●
	**C PIR** Presence detector.	12998	●	●	●
	**INSTALLER PANEL SKP10** Installer panel	22629	●	●	●

LCD DISPLAY - SUPPLIED AS STANDARD

SOME ICONS SHOWN ON THE PANEL

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

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

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).

VORT HRI DH RANGE

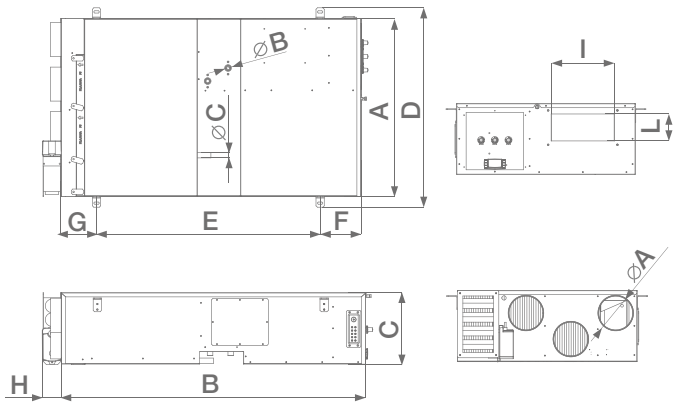
HEAT RECOVERY UNITS WITH DEHUMIDIFICATION FUNCTION

FALSE CEILING CENTRALISED | **VENTILATION** | **UP TO 240 M²**

Centralised dual-flow ventilation units with heat recovery for false ceiling installation, including direct expansion cooling circuit, designed for ventilation and dehumidification of residential and commercial premises with a surface of up to 120 m² (VORT HRI DH 260) and 240 m² (VORT HRI DH 500) featuring a radiant water cooling system.

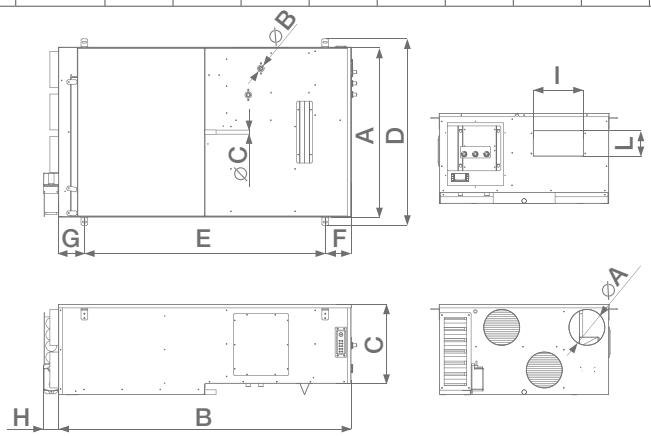
- Dual-flow with very high efficiency heat recovery (up to 90%) and integrated dehumidifier, zinc-coated steel sheet casing, exchange pack of the counterflow type made of polyethylene (PE), condensate collection tray, DC EC motors with very low electricity consumption, adjustable speeds, G4 filters on intake and delivery; automatic anti-frost function.
- Total cooling capacity 1400 W/2800 W; useful dehumidification capacity 30 l/24h / 62 l/24h.
- Reciprocating compressor operating with R 134 A gas, double water and air condenser, flow switch, 3-way modulating valve, control electronics with microprocessor including LCD display on the machine controlling the refrigerant circuit, integrated management of the aeraulic and hydronic sections, summer/winter switching, frost protection, diagnostics of any malfunctions, supervision via RS485 serial port and/or via the Internet (opt.), filter monitoring (opt.).
- False ceiling installation.
- Remote control panel with display (opt.) .
- Can be combined with a dedicated electronic temperature and humidity probe.
- External air intake/stale air expulsion/ return air spigots Ø 125 mm / Ø 160 mm rectangular delivery spigot.
- Automatic motorised recirculation damper.

DIMENSIONS



PRODUCTS	CODE	A	B	C	D	E	F	G	H	I	L	ØA	ØB	ØC
VORT HRI 260 DH	45091	655	1103	262	702	821	152	132	65	232	99	125	1/2"	20
VORT HRI 260 DH RC	45092	655	1103	262	702	821	152	132	65	232	99	125	1/2"	20

Dimensions in mm

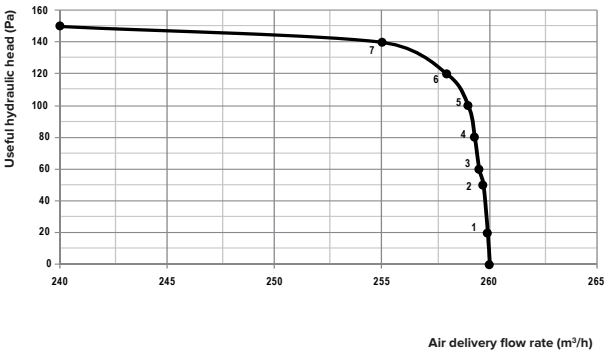


PRODUCTS	CODE	A	B	C	D	E	F	G	H	I	L	ØA	ØB	ØC
VORT HRI 500 DH	45093	756	1304	405	802	1074	116	152	65	224	114	160	1/2"	20
VORT HRI 500 DH RC	45094	756	1304	405	802	1074	116	152	65	224	114	160	1/2"	20

Dimensions in mm

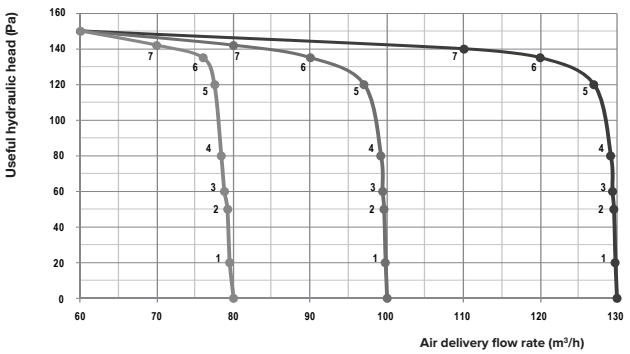
PERFORMANCE AND ABSORPTION

VORT HRI 260 DH
DELIVERY FAN



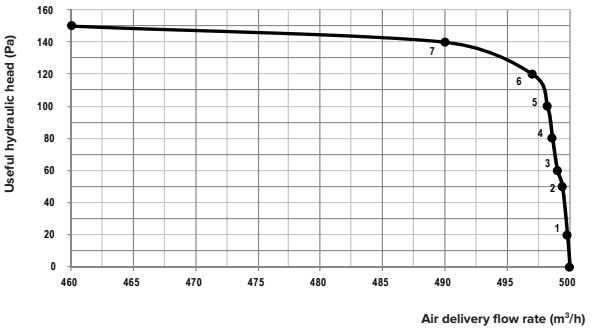
Absorbed power	1	2	3	4	5	6	7
260 M³/H	18 W	30 W	36 W	40 W	46 W	51 W	60 W

VORT HRI 260 DH
EXPULSION FAN



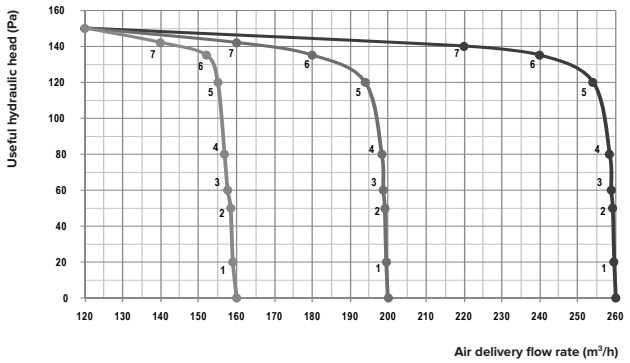
Absorbed power	1	2	3	4	5	6	7
80 M³/H	10 W	11 W	11 W	12 W	12 W	12 W	12 W
100 M³/H	11 W	13 W	15 W	15 W	17 W	18 W	18 W
130 M³/H	11 W	13 W	15 W	19 W	22 W	30 W	34 W

VORT HRI 500 DH
DELIVERY FAN



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

VORT HRI 500 DH
EXPULSION FAN

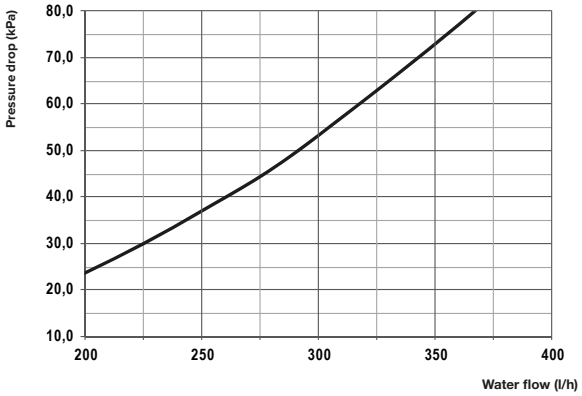


Absorbed power	1	2	3	4	5	6	7
160 m³/h	20 W	22 W	22 W	24 W	24 W	24 W	24 W
200 m³/h	22 W	26 W	30 W	30 W	34 W	36 W	36 W
260 m³/h	22 W	26 W	30 W	38 W	44 W	60 W	68 W

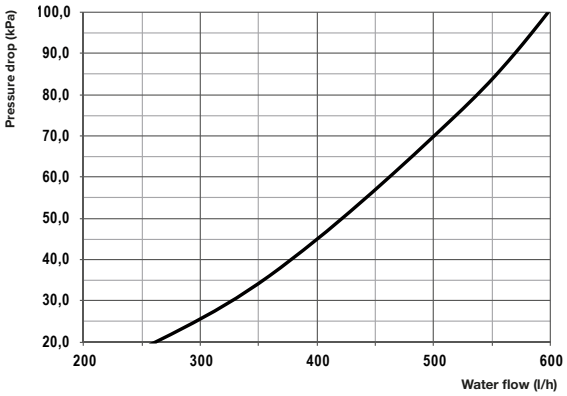
PERFORMANCE AND ABSORPTION

HYDRAULIC CIRCUIT PRESSURE DROPS

VORT HRI 260 DH - VORT HRI 260 DH RC



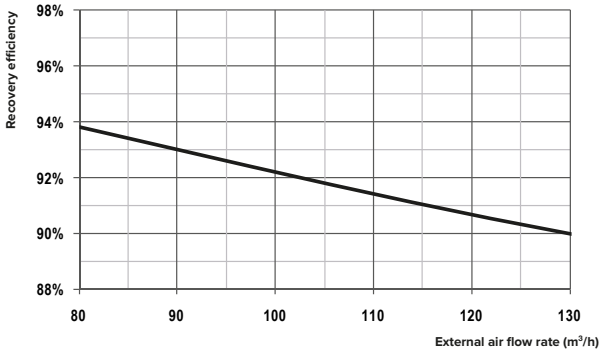
VORT HRI 500 DH - VORT HRI 500 DH RC



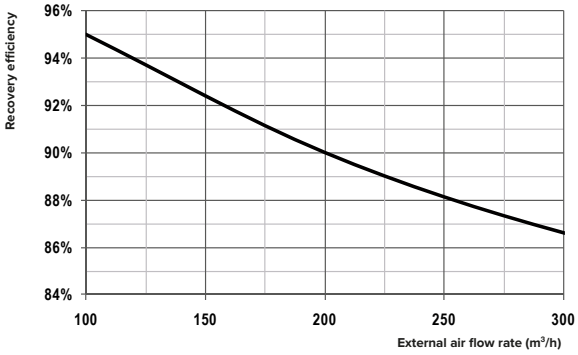
RECOVERY EFFICIENCY

Winter: internal conditions 20 °C, 50% RH external air conditions: -5 °C, 80% RH

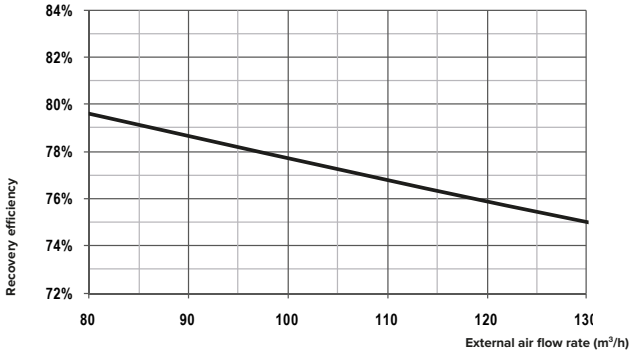
VORT HRI 260 DH - VORT HRI 260 DH RC



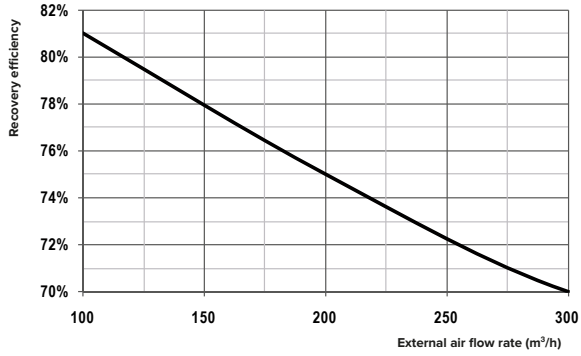
VORT HRI 500 DH - VORT HRI 500 DH RC



VORT HRI 260 DH - VORT HRI 260 DH RC



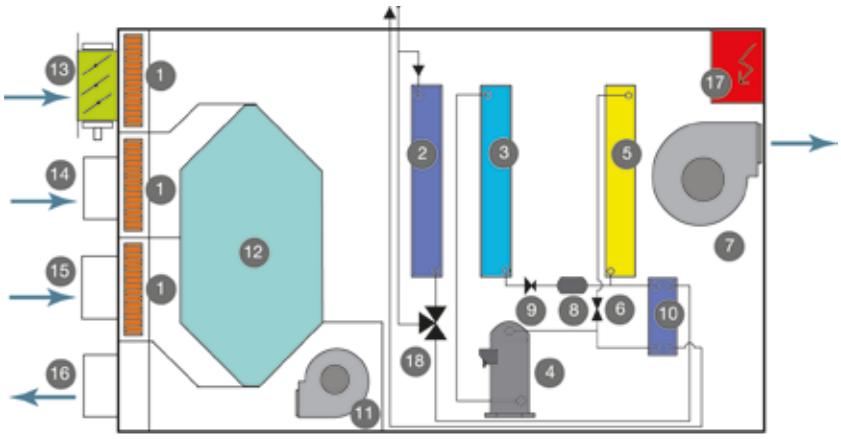
VORT HRI 500 DH - VORT HRI 500 DH RC



TECHNICAL DATA

PRODUCTS	CODE	Nom. Ø (mm)	(m³/h)	(W)	(PA)	Lp [db(A)] 3m
VORT HRI 260 DH	45091	125	130-260	86	150	39
VORT HRI 260 DH RC	45092	125	130-260	86	150	39
VORT HRI 500 DH	45093	160	250-500	150	150	44
VORT HRI 500 DH RC	45094	160	250-500	150	150	44

MAIN COMPONENTS



1 - Air filter.
2 - Pre-cooling (summer function) post-heating (winter function) hydronic battery.
3 - Evaporator.
4 - Compressor.
5 - Air condenser.
6 - Solenoid valve.
7 - Delivery fan with EC motor.
8 - Dehydrator filter.
9 - Rolling organ.
10 - Water condenser.
11 - Exhaust fan with EC.
12 - Very-high-efficiency cross-flow recovery system.
13 - Motorised return (recirculation) damper.
14 - Damp rooms return air.
15 - External air.
16 - Expelled air.
17 - Electrical panel.
18 - Three-way modulating valve.

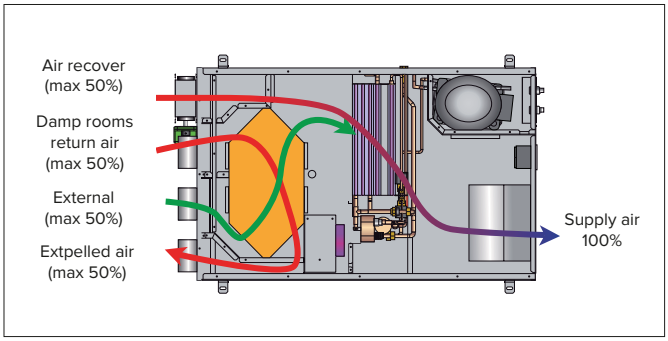
OPERATING MODE

SUMMER OPERATION (COMPRESSOR ACTIVE) WITH EXTERNAL AIR

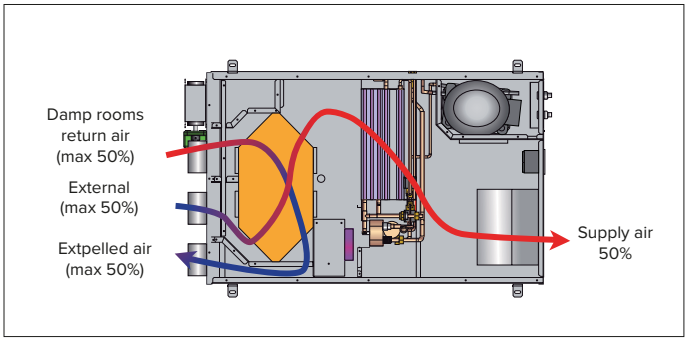
- By setting this function, the unit renews the ambient air with external one through the extremely high-efficiency heat recovery unit.
- The possible functions in this configuration are:
  - Renewal + Dehumidification with neutral air: the unit condenses partially in air and partially in water through the plate condenser, obtaining dehumidified and thermally neutral air.
  - Renewal + Dehumidification with cooling: the unit operates with 100% condensation in water, obtaining dehumidified and cooled air.

OPERATION IN WINTER AND BETWEEN SEASONS (COMPRESSOR OFF) WITH EXTERNAL AIR

- By setting this function, the unit renews the ambient air with external one through the extremely high-efficiency heat recovery unit.
- Renewal with air heating: The compressor is off, the battery can be supplied with hot water from the radiant system, (even if by virtue of the very high efficiency of the heat recovery unit it is possible to obtain a delivery air temperature of 17 °C, without using hot water, with an outside air temperature of -5 °C), and behaves like a normal thermoventilator with recuperator).



Please note: In summer mode the appliance cannot operate without the aid of cold and/or hot water. In the event of low or no water flow, the unit is turned off and the safety devices are activated.



Please note: In winter mode the appliance has the compressor off and operates as a thermo fan with very-high-efficiency heat recovery.

TECHNICAL FEATURES

- **4 models**, different in size, performance, equipment, and offered features.
- **Casing made of zinc-coated steel sheet** with removable panels for direct access to internal filters. VORT HRI 260 DH models have the lower cover made of thermoformed plastic resin. Tie-rods for suspended installation supplied as standard.
- **Intake and delivery spigots** compatible with pipes with 125 mm (VORT HRI 260 DH) and 160 mm (VORT HRI 500 DH) nominal diameter.
- **Pair of centrifugal fans driven by EC (brushless) motors** of the external rotor type, with shafts mounted on ball bearings, directly coupled to centrifugal impellers. 2 operating speeds, independently settable upon 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.
- **Motorised circulation damper**.
- **Ready for the connection** to mechanical (RC versions) or electronic (DH versions) hygrostats (optional).
- **Compressor running on gas type HFC R134a.**
- 3-way **modulating valve.**
- **Double condenser** (water + air).
- Flow switch.
- Control electronics with microprocessor, including **LCD display**.
- **Pair of G4 filters**, easily accessible for periodic maintenance interventions.
- **Condensate collection tray** with drain devices.
- **Three operating modes**:
  - SUMMER: ventilation with heat recovery (neutral air) and dehumidification;
  - SUMMER + COOLING: ventilation with heat recovery (cooled air) and dehumidification;
  - WINTER: ventilation with heat recovery.
- **Degree of protection from dust and water**: IPX2.
- **Electrical insulation class**: I (earthing required).

TECHNICAL DATA

PRODUCTS	VORT HR 260 DH CODE 45091	VORT HR 260 DH RC CODE 45092	VORT HR 500 DH CODE 45093	VORT HR 500 DH RC CODE 45094
POWER SUPPLY	230 V / 50 Hz	230 V / 50 HZ	230 V / 50 HZ	230 V / 50 HZ
DELIVERY FAN ABSORBED POWER (MIN/NOM/MAX) (W)	10-30-86	10-30-86	30-60-130	30-60-130
RECOVERY FAN ABSORBED POWER (MIN/NOM/MAX) (W)	11-22-43	11-22-43	22-44-68	22-44-68
TOTAL FRIDGE POWER IN THE ENVIRONMENT (W)	1380	1380	2820	2820
COMPRESSOR ABSORBED NOMINAL POWER (W)	340	340	480	480
WINTER THERMAL POWER RECOVERED (W)	950	950	1850	1850
TYPE OF REFRIGERANT	R134A	R134A	R134A	R134A
USEFUL DEHUMIDIFICATION CAPACITY (L/24H)	30.1	30.1	61.8	61.8
NOMINAL EFFICIENCY RECOVERED IN SUMMER (%)	70	70	70	70
NOMINAL EFFICIENCY RECOVERED IN WINTER (%)	90	90	90	90
HYDRAULIC CIRCUIT PRESSURE DROPS (NOM) (KPA)	38	38	35	35
BATTERY WATER FLOW RATE (MIN/NOM/MAX) (L/H)	150-250-400	150-250-400	200-350-600	200-350-600
DELIVERY AIR FLOW RATE IN SUMMER (M3/H)	260	260	500	500
DELIVERY AIR FLOW RATE IN WINTER (M3/H)	0-130	0-130	0-250	0-250
NOISE LEVEL LW DB (A)	47	47	52	52
ACOUSTIC PRESSURE LP DB(A) 3 M	39	39	44	44
USEFUL DELIVERY FAN HYDRAULIC HEAD (NOM/MAX) (PA)	50-140	50-140	50-140	50-140
USEFUL RECOVERY FAN HYDRAULIC HEAD (NOM/MAX) (PA)	50-140	50-140	50-140	50-140
KG	60	60	80	80

DETAILS

Predisposition for combination with mechanical (RC versions) or electronic (DH versions) hygrostats (optional).

Adapter available for circular duct passage:
R2T 260 - R2T 500

Back of the product.

Control electronics with microprocessor, including LCD display.

CONTROL PANEL supplied as standard. (see operation details below).

CONTROL DISPLAY - SUPPLIED AS STANDARD

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

REGULATORS

MODELS	DESCRIPTION	CODE	VORT HR 260 DH CODE 45091	VORT HR 260 DH RC CODE 45092	VORT HR 500 DH CODE 45093	VORT HR 500 DH RC COD. 45094
	**RCP (HRI DH)** Remote control panel	**22607**	✓	✓	✓	✓
	**ETRH (HRI DH)** Electronic probe for humidity and temperature detection.	**22608**	✓		✓	
	**MTRH (HRI DH)** Remote mechanical thermohygrostat.	**22609**		✓		✓

System components (description and data from page. ...
Regulators (description and data from page. ...).

ACCESSORIES

MODELS	DESCRIPTION	CODE	VORT HR 260 DH CODE 45091	VORT HR 260 DH RC COD. 45092	VORT HR 500 DH CODE 45093	VORT HR 500 DH RC COD. 45094
	R2T 260 (HRI DH) Conveyor	**22656**	✓	✓		
	R2T 500 (HRI DH) Conveyor	**22657**			✓	✓

VORT SANIKIT RANGE

AIR SANITISATION KIT WITH PHOTOCATALYSIS FOR HEAT RECOVERY UNITS

VORT SANIKIT is a device specifically designed to sanitise the air passing through the centralised heat recovery units of the VORTICE's CMV and Heat Recovery range. Due to its photocatalysis module, VORT SANIKIT is effective against pathogens such as viruses and bacteria, as well as against bad smells, allergens, moulds, spores, mites, etc., thus helping to preserve the health of the occupants. The combined use of heat recovery units and sanitisation kit does not affect in any way the air exchange guaranteed by the ventilation system, which is essential to maintain the humidity and carbon dioxide concentrations.

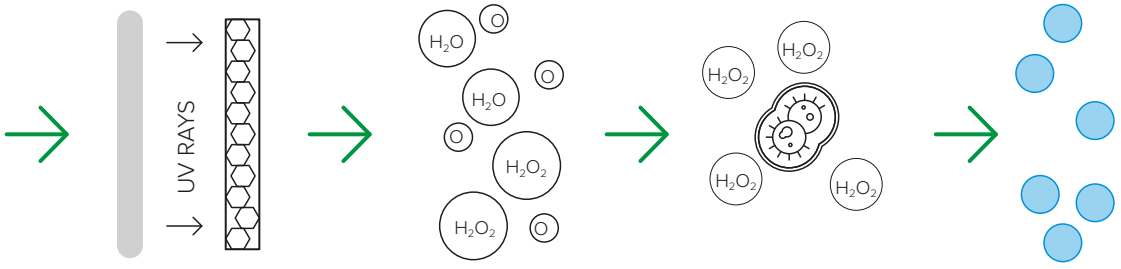
VORT SANIKIT 250 - Code 25095

VORT SANIKIT 400 - Code 25096

- The VORT SANIKIT range is composed of 2 models, which differ from each other in terms of performances and space needed, deriving from the coupling of a duct fan with a plenum integrating a photocatalysis module.

	CODE	CAN BE COMBINED WITH LINEO QUIET ES
VORT SANIKIT 250	25095	17170
VORT SANIKIT 400	25096	17171

HOW A PHOTOCATALYTIC SYSTEM WORKS



UV LAMP

Photocatalysis module

Oxygen atoms + water molecules = hydrogen peroxide

Elimination of bacteria and pollutants

AIR SANITISATION

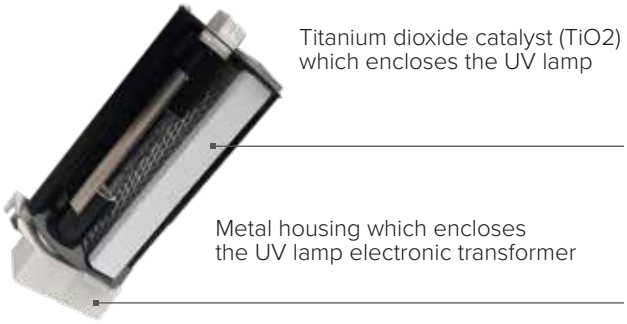
*diagram of a generic photocatalysis process (by way of example).

PHOTOCATALYSIS MODULE

The photocatalysis unit used is based on the photocatalytic oxidation process (used in hospitals and in the aerospace, medical and food industries), which is a natural phenomenon that occurs in the presence of ultraviolet rays from the sun, air humidity and some noble metals.

The combination of these three factors triggers the release of oxidising ions capable of neutralising the majority of pathogens in the air, which are potentially dangerous to our health.
The ultraviolet (UV) lamp illuminates a catalyst made from a special alloy based on titanium dioxide (TiO_2), which causes a photochemical reaction where oxygen (O) atoms bind with molecules of water (H_2O) dissolved in the air in the form of vapour.

The hydrogen peroxide molecules (H_2O_2) generated from this reaction are sufficient to eliminate most of bacteria, viruses and allergens present both in the air and on surfaces, SANITISING THEM.
The estimated service life of the UV lamp is two years.



TECHNICAL FEATURES

- **Plenum made of plastic material.**

- **Soundproof helico-centrifugal fan:**
characterised by reduced radial dimensions for an easier integration even in small spaces, driven by an electronic commutated motor (EC brushless) to guarantee low consumption, perfectly suited to continuous 24/7 operation. Speed adjustment, which is carried out using an integrated or remote potentiometer (the latter available as an option), allows to adjust the ambient air flow rate to be sanitised according to the needs.

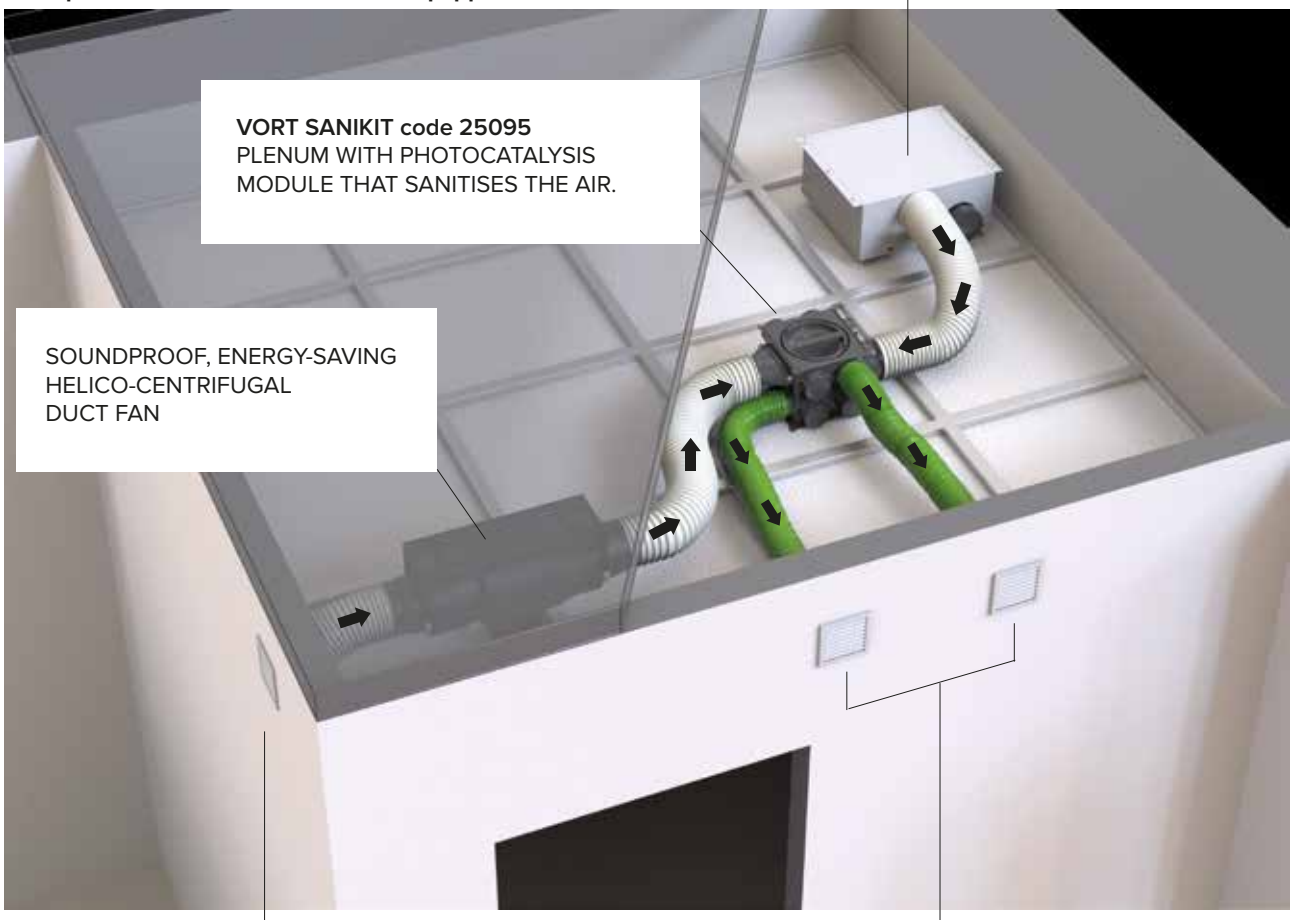
- **Photocatalysis module:**
inserted in the plenum and integrated with one of the closing caps to make the UV lamp extraction and replacement—approximately every two years—easier. This lamp activates the process and is able to quickly eliminate bacteria and viruses from the treated air. The Dust Free technology's effectiveness against COVID 19 has been proven by the tests performed at the Biomedical and Clinical Sciences Department "Luigi Sacco" of the University of the Studies of Milan.

OPERATING PRINCIPLE

Installed on a wall, in a false ceiling or in the attic of the destination building, **VORT SANIKIT** sucks in the air from the rooms served and injects it, adequately filtered from dust, fluff and debris that may be present in it, into a plenum located downstream of the delivery spigot of the associated heat exchange unit. Here, the two flows mix with each other and are sanitised by the action of the photocatalysis module, which deprives them of their allergenic and pathogenic charge, so they can be redistributed in the rooms designated to receive the fresh air.
The management of the current drawn for the sole purpose of sanitisation, which is completely independent from the flow of fresh air, can be set according to the needs of the moment using a simple potentiometer, ensuring the maximum flexibility of the system and guaranteeing the users an ideal mix between external fresh air and return air, which is adequately sanitised.
Due to the fresh air flow, the use of the plenum alone, which integrates the photocatalysis module, ensures the sanitisation of delivery ducts. The same result can be obtained by modifying the ventilation systems already installed, in order to
use on the delivery side a plenum of the WDG-PH PLUS-C 6x63 or WDG-P PLUS 16x63 type, due to the replacement of one of the original plenum caps with the SANICOVER device (code 13082).

VORT SANIKIT 250

Example of installation with duct fan equipped with brushless motor Ø 100



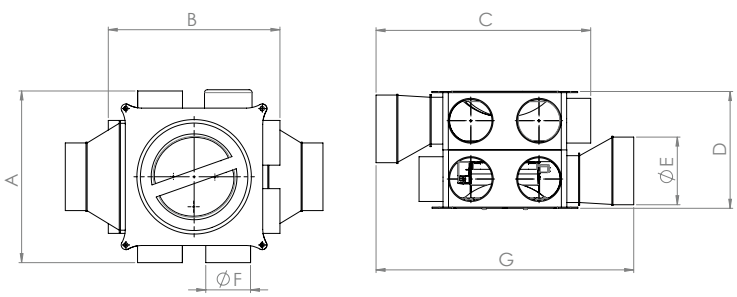
VORT SANIKIT 250

Example of installation without duct fan

DIMENSIONS

PRODUCT	CODE	A	B	C	D	ØE	ØF	G
VORT SANIKIT 250	25095	318	299	399	215	125	160	85

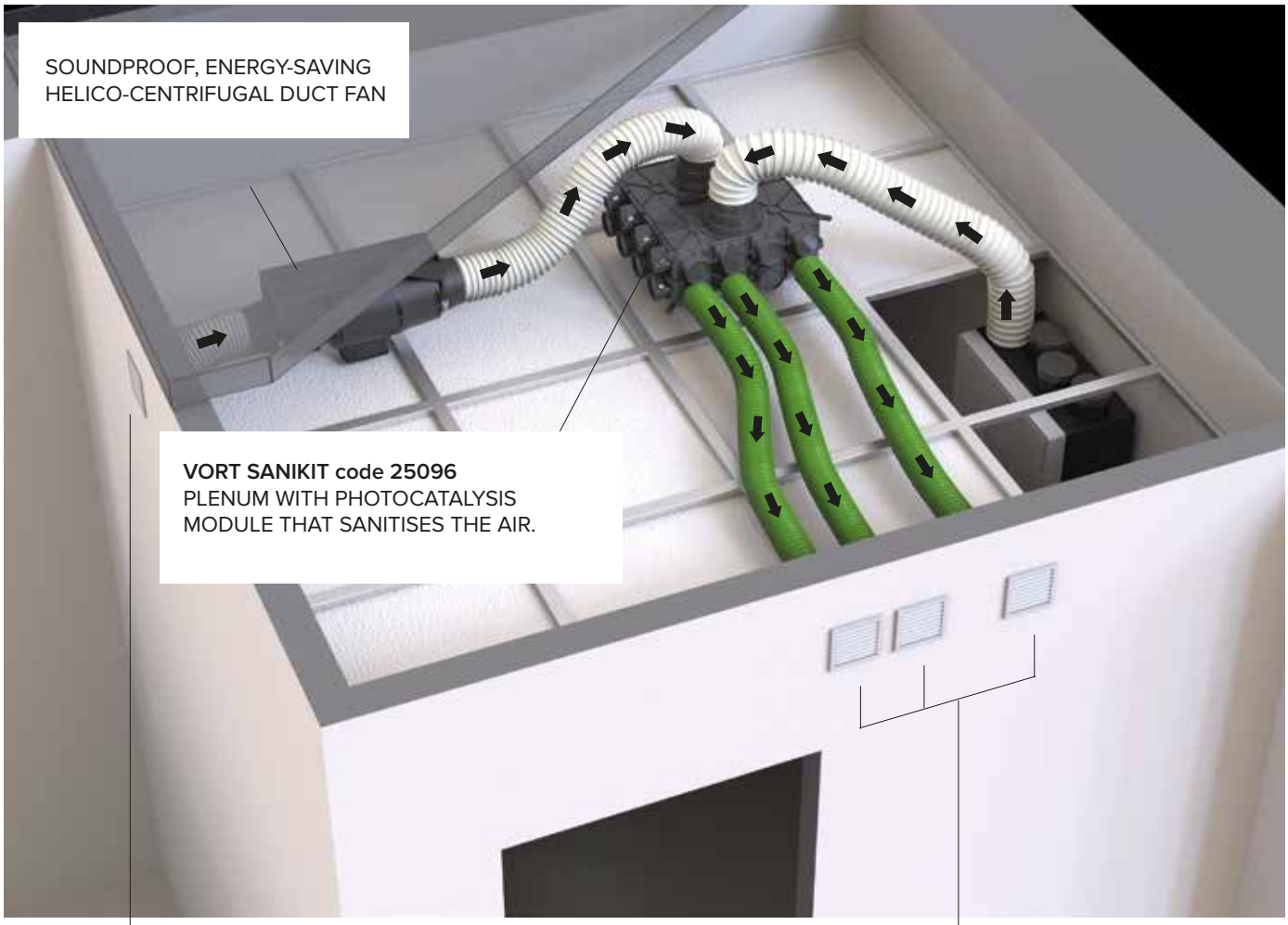
Dimensions in mm



OPERATING PRINCIPLE

VORT SANIKIT 400

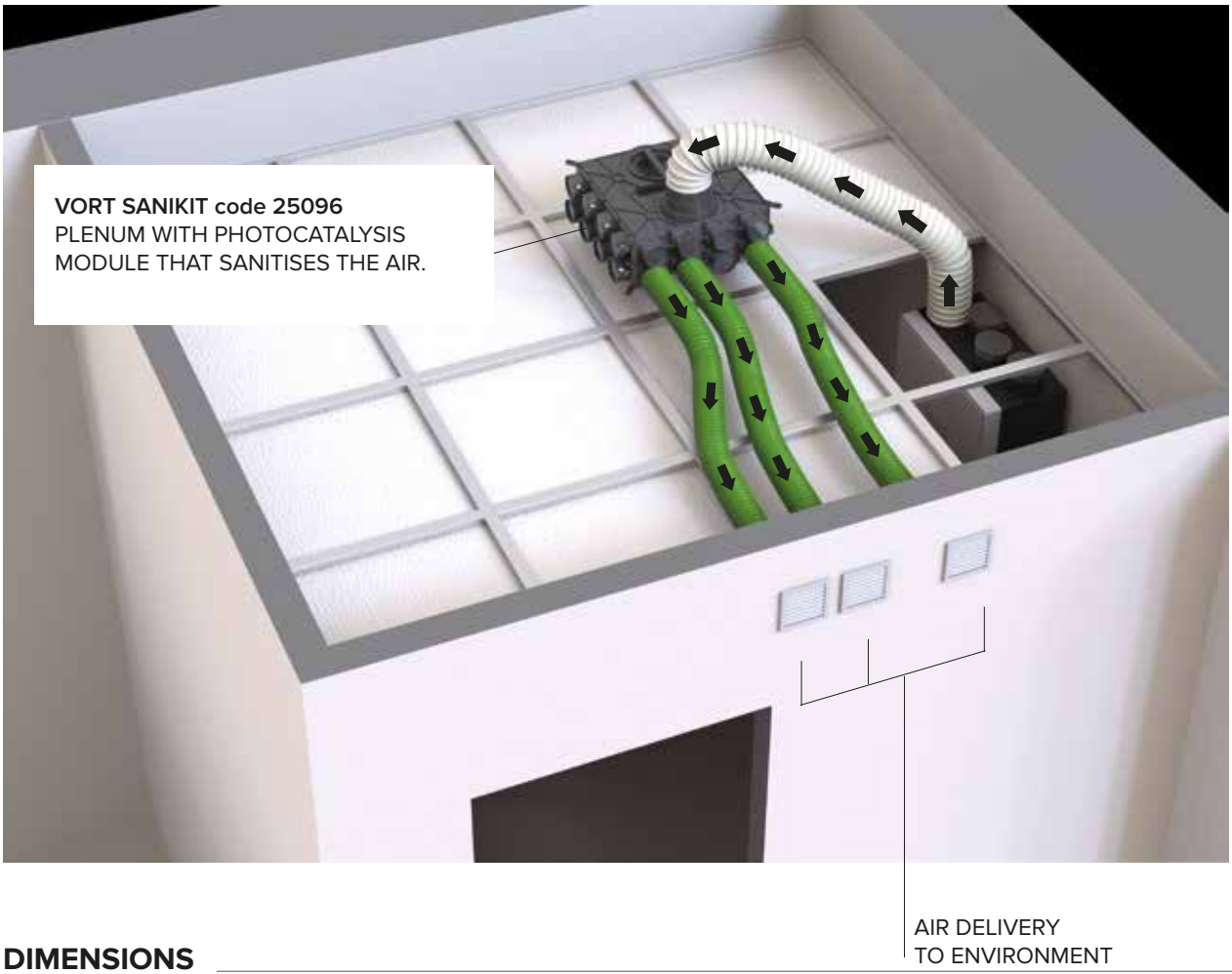
Example of installation with duct fan equipped with brushless motor Ø 125



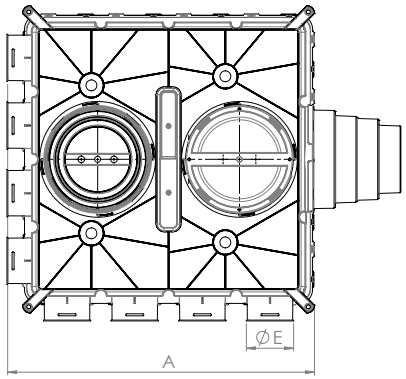
OPERATING PRINCIPLE

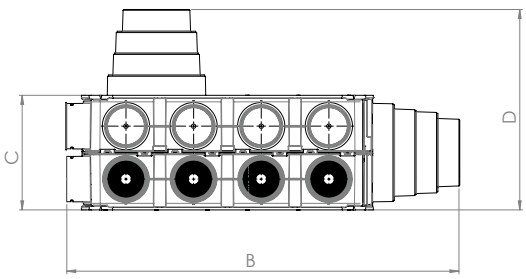
VORT SANIKIT 400

Example of installation without duct fan



DIMENSIONS





PRODUCT	CODE	A	B	C	D	ØE
VORT SANIKIT 400	25096	578	722	366	148	125

Dimensions in mm

ACCESSORIES

MODEL	DESCRIPTION	CODE	VORT SANIKIT 250 Code 25095	VORT SANIKIT 400 Code 25096
	**POT-IT** Potentiometer compatible with wall installation and flush mounting in UNI503 standard box	12826	✓	✓
	**POT** Potentiometer compatible with wall installations and flush-mounted installations in DIN standard box	12828	✓	✓
	**SANICOVER** Plenum cover with photocatalysis module	13082	✓	✓
	**UV-BLB** UV lamp for photocatalysis module	26918	✓	✓
	**PL-RING** Connection ring for plenum (21323)	13085	✓	✓
	**OVCAP** Oval cap for plenum (21323)	13088	✓	✓
	**WDG-CO** Adapter cone	21356	✓	✓
	**IN LINE S 100** Non-return damper nominal Ø 100 mm	22551	✓	
	**IN LINE S 125** Non-return damper nominal Ø 125 mm	22556		✓

HEAT EXCHANGERS
SENSIBLE AND ENTHALPY TYPES

The heat exchangers installed in the ventilation systems (CMV) are devices designed to transfer energy between the two air flows - the stale extracted one and the incoming fresh one - in order to minimise energy waste, maximise the efficiency of the plant and lower management costs. In cold seasons, the heat exchanger allows to transfer most of the heat of the extracted stale air to the external fresh air, heating it and thus lowering the heating system consumption.

On the contrary, in the warmer months, the extracted air cools the incoming external air, reducing the air conditioning system workload.
In residential applications, two types of heat exchangers are normally used, usually identified with the names "sensible" and "enthalpy".

THEIR MAIN CHARACTERISTICS ARE:

SENSIBLE EXCHANGER

It exchanges the only energy component (sensible heat) that causes a temperature change of the flows. The main benefits that make it preferrable in temperate climates are:

- high efficiency in terms of heat drop (the difference between the temperature of the air taken from the outside and that of the air introduced into the environment).

ENTHALPY EXCHANGER

Enthalpy exchanger is able to recover both the sensible and the latent energy from one flow to the other (transfer of temperature and humidity). The humidity is recovered through the change of state of water vapour.
This guarantees:

- greater comfort in cold and dry climates (the humidity present in the extracted stale air is transferred to the incoming fresh air, avoiding the onset of breathing difficulties and tearing of the eyes, caused by too low relative humidity) or hot and humid climates (in these cases the excess humidity present in the fresh air is not transferred into the environment);

- much easier installation (in some cases the reduced formation of condensation inside the product allows to avoid water drianage).

SENSIBLE EXCHANGER

SENSIBLE EXCHANGER SECTIONED

ENTHALPY EXCHANGER

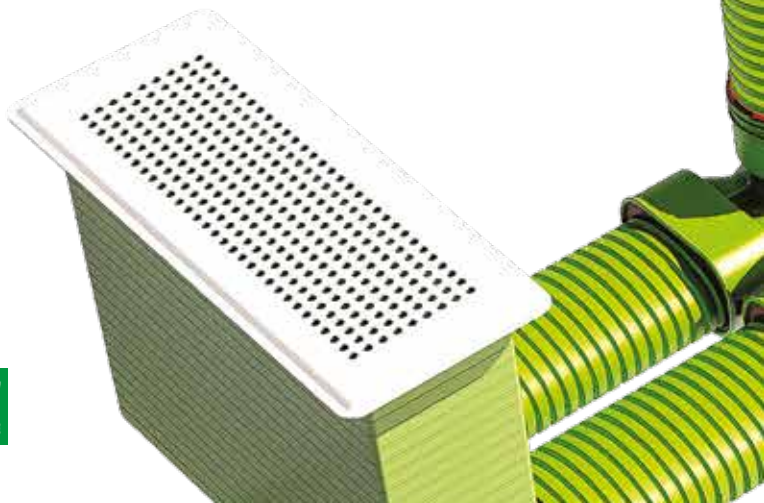
ENTHALPY EXCHANGER SECTIONED

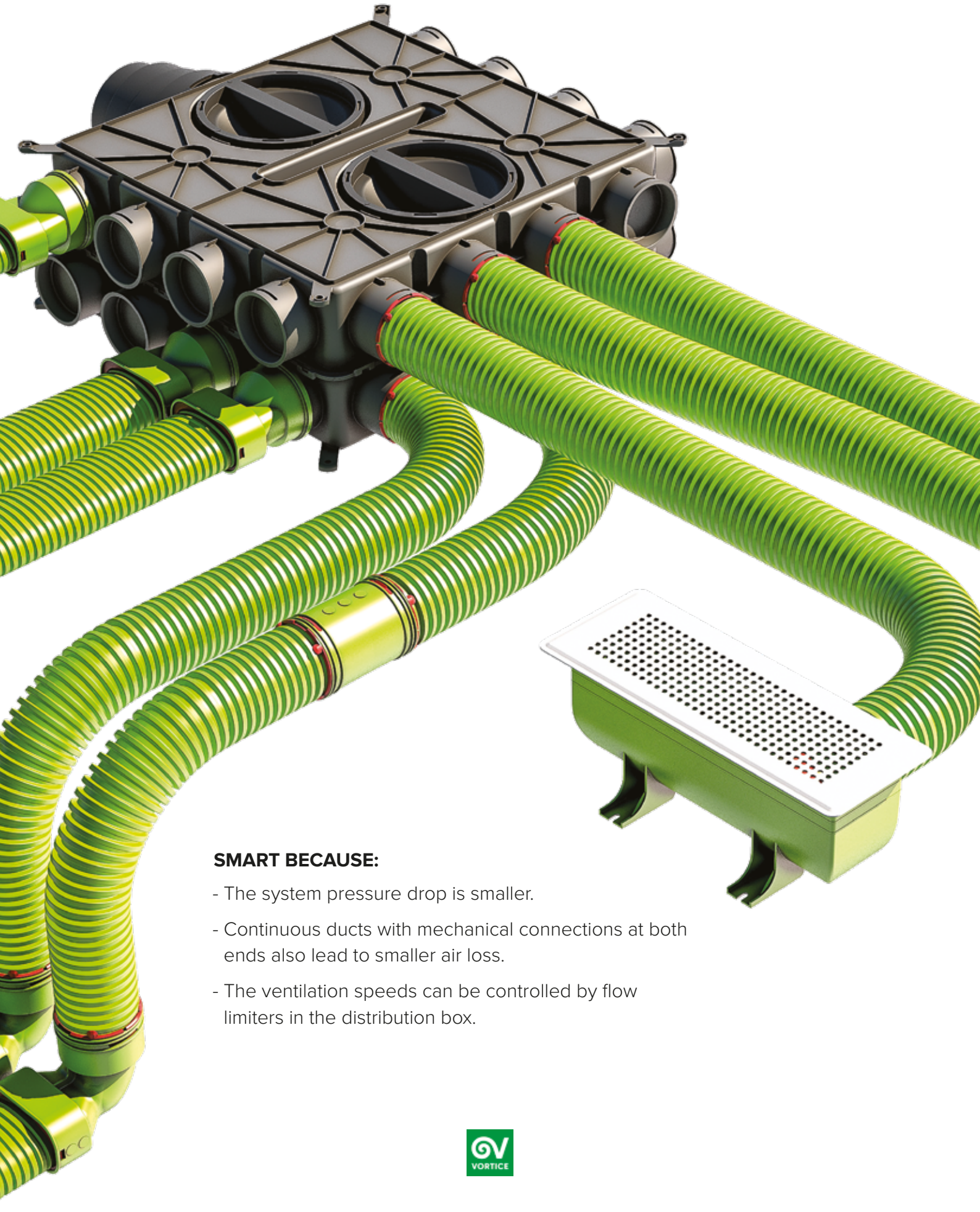
COMPONENTS

A SMART SYSTEM IS AN EFFECTIVE SYSTEM

The distribution plenums are a very important part of the distribution system, regulating the air flow of the individual lines. The air volumes of the individual ducts are managed through the flow regulators connected directly to the distribution plenum.

SYSTEMS		
WDG75	⌀ 75	plastic
WDG63	⌀ 63	plastic
WDG35	⌀ 35	plastic





SMART BECAUSE:

- The system pressure drop is smaller.
- Continuous ducts with mechanical connections at both ends also lead to smaller air loss.
- The ventilation speeds can be controlled by flow limiters in the distribution box.

SYSTEM **WDG63 - WDG75 - WDG35**

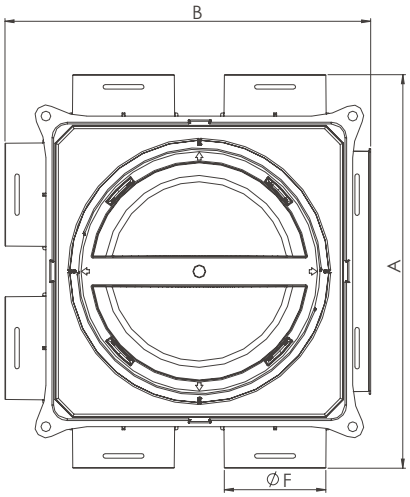
DISTRIBUTION PLENUM

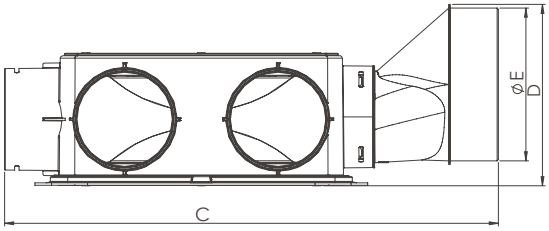
CENTRALISED VENTILATION

The PE distribution plenum of the **WDG-PH PLUS-C** system is compact and light; it comes with **6** standard connections. Ideal for residential applications of limited volume or in case of small installation spaces.

- Air flow adjustable using 12-level static flow regulators (code 25074), easy to clean and easy reassembly of the flow regulators (maintenance).
- Made of exclusively virgin PP granulate.
- With 125-mm adapter for flow duct (code 25074).
- Including adjustment diaphragms and 3 caps.

DIMENSIONS





	CODE	A	B	C	D	ØE	ØF
WDG-PH PLUS-C 6X63	21323	318	299	399	148	125	85

Dimensions in mm

TECHNICAL DATA

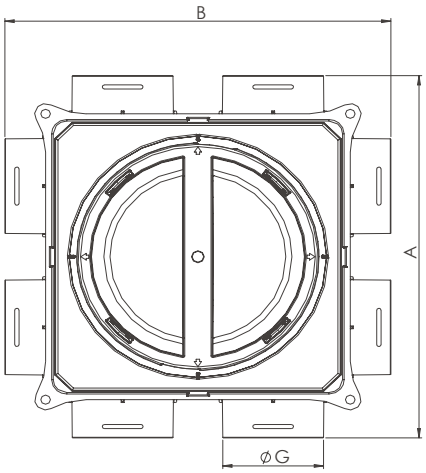
Box configuration	with 125-mm adapter for flow duct
Qv (Volume) [m3/h]	Pressure drop (Pa)
50	2.0
75	3.0
100	4.0
125	5.0
150	8.0
175	10.0
200	12.0
225	14.0
250	-
300	-
350	-

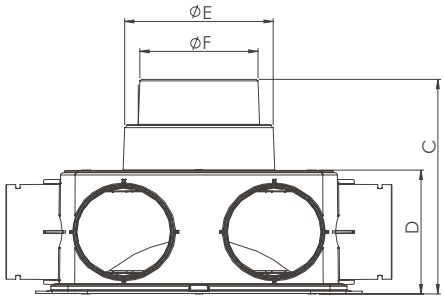
CENTRALISED VENTILATION

The distribution plenum in PE of the **WDG-PH PLUS-C** system range is compact and light; it comes with **8 connections**. The distribution plenum is ideal for residential applications of limited volume or in case of small installation spaces.

- Air flow adjustable using 12-level static flow regulators (code 25074).
- Easy to clean and easy reassembly of the flow regulators (maintenance).
- Made of exclusively virgin PP granulate.
- Including adjustment diaphragms and 4 caps.

DIMENSIONS





	CODE	A	B	C	D	ØE	ØF	ØG
WDG-PH PLUS-C 8X63	21324	318	318	188	109	125	100	85

Dimensions in mm

TECHNICAL DATA

Box configuration	1	2
Qv (Volume) [m3/h]	Pressure drop (Pa)	
50	1.0	1.0
75	1.5	1.5
100	2.0	2.0
125	3.0	3.0
150	5.0	5.0
175	6.5	6.5
200	8.0	8.0
225	9.0	9.0
250	10.0	-
300	-	-
350	-	-

1 with adapter for multi-diameter flow duct 125-180 mm
2 with adapter for multi-diameter flow duct 100-125 mm

SYSTEM **WDG63 - WDG75 - WDG35**

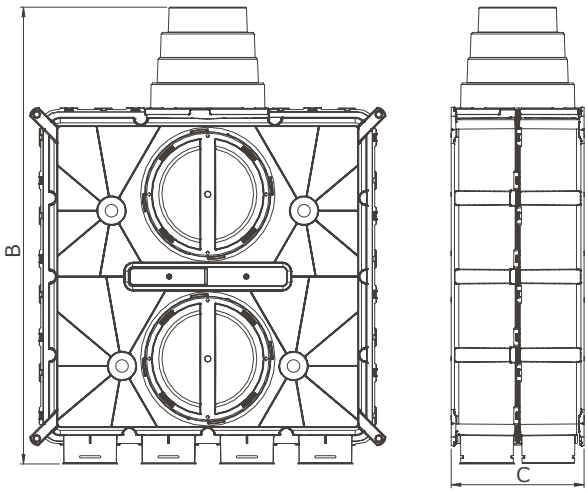
DISTRIBUTION PLENUM

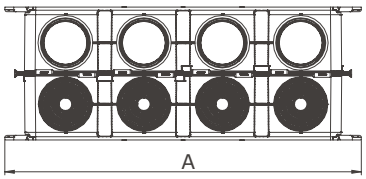
CENTRALISED VENTILATION

WDG-P PLUS is a duct system specifically designed for controlled mechanical ventilation of rooms with or without heat recovery, for homes or small commercial areas. The ventilation unit is connected to the distribution plenums by means of insulated ducts and silencers, the air is distributed through the semi-rigid ducts to supply fresh air to the habitable rooms and extract the exhausted one from the damp rooms.

- Distribution plenum with **8 connections** for WDG system
- Including adjustment diaphragms and 4 caps.
- Made of exclusively virgin PP granulate.

DIMENSIONS





	CODE	A	B	C
WDG-P PLUS 8X63	21095	565	722	210

Dimensions in mm

TECHNICAL DATA

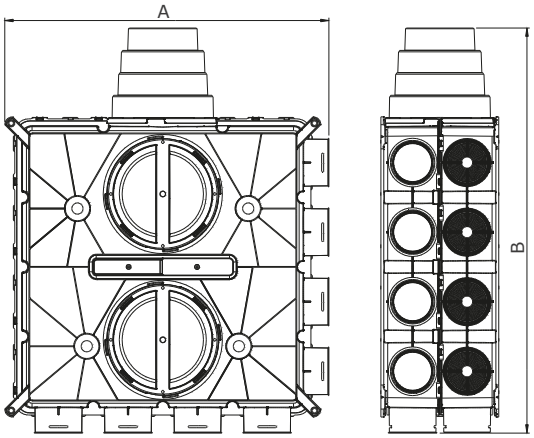
Pressure drop

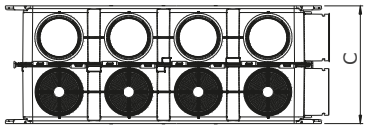
Qv (Volume) [m3/h]	Pressure drop (Pa)
100	1.0
150	1.7
200	2.7
250	4.0
300	5.7
350	7.6
400	9.9
450	12.4

WDG-P PLUS is a duct system specifically designed for controlled mechanical ventilation of rooms with or without heat recovery, for homes or small commercial areas. The ventilation unit is connected to the distribution plenums by means of insulated ducts and silencers, the air is distributed through the semi-rigid ducts to supply fresh air to the habitable rooms and extract the exhausted one from the damp rooms.

- Distribution plenum connection Ø 125-150-160-180 mm.
- **16 connections** for WDG system.
- Including adjustment diaphragms and 8 caps.

DIMENSIONS





	CODE	A	B	C
WDG-P PLUS 16X63	21096	578	722	210

Dimensions in mm

TECHNICAL DATA

Pressure drop

Qv (Volume) [m3/h]	Pressure drop (Pa)
100	1.0
150	1.7
200	2.7
250	4.0
300	5.7
350	7.6
400	9.9
450	12.4

WDG63 - WDG75 SYSTEM

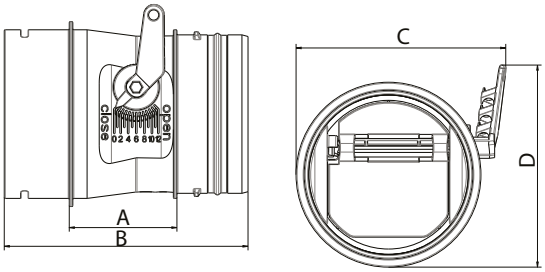
CIRCULAR

ACCESSORIES

The **flow regulator** makes it possible to set the air flow determined for each duct.
It is directly connected to the distribution plenum, and using adapters it can be connected to any type of duct.
The setting can be defined by aeraulic calculations. The air flow can be easily adjusted thanks to the lever without the need to intervene on the system.

- It enables the precise setting of the air flow between the distribution plenums and the various rooms.
- Easy flow rate adjustment in case of system changes.
- Quick and easy installation.
- Installable on distribution plenums, compatible with the whole range of ducts through the use of adapters.
- Made of exclusively virgin PP granulate.

DIMENSIONS



	CODE	A	B	C	D
WDG-RRM	25074	53	120	103	99

Dimensions in mm

TECHNICAL DATA

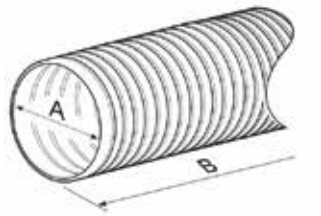
Qv (Volume) [m3/h]	V (Speed) [m3/h]	Pressure drop (Pa)												
		Pos. 0	Pos. 1	Pos. 2	Pos. 3	Pos. 4	Pos. 5	Pos. 6	Pos. 7	Pos. 8	Pos. 9	Pos. 10	Pos. 11	Pos. 12
5.6	0.5	38.8	28.6	11.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
11.2	1.0	89.1	70.9	35.6	12.0	0.4	0.0	0.0	0.0	0.2	0.1	0.3	0.4	0.3
16.8	1.5	150.8	127.0	73.8	33.1	10.9	0.4	0.0	0.0	1.6	0.9	0.8	0.9	0.7
22.4	2.0	218.4	193.3	124.0	64.9	30.3	13.9	5.8	6.2	5.2	3.1	1.8	0.9	0.5
28.1	2.5	307.0	279.5	190.5	105.8	53.8	26.0	11.5	9.5	8.1	4.8	3.0	2.0	1.5
33.7	3.0	405.8	378.4	270.4	156.8	84.3	42.6	20.1	14.4	11.9	7.1	4.4	3.2	2.5
39.3	3.5	514.9	490.0	363.6	217.9	121.8	63.7	31.7	20.9	16.7	9.9	6.2	4.6	3.7
44.9	4.0	634.3	614.3	470.2	289.2	166.3	89.5	46.1	29.0	22.5	13.3	8.2	6.2	5.0
50.5	4.5	764.0	751.2	590.2	370.5	217.8	119.7	63.5	38.6	29.2	17.3	10.6	7.9	6.4
56.1	5.0	904.0	900.8	723.5	462.1	276.3	154.6	83.7	49.9	36.8	21.9	13.2	9.8	8.0
61.7	5.5	-	-	870.2	563.7	341.8	193.9	106.9	62.7	45.4	27.0	16.2	11.9	9.7
67.3	6.0	-	-	1030.3	675.5	414.2	237.9	132.9	77.1	54.9	32.7	19.5	14.1	11.5
72.9	6.5	-	-	-	797.3	493.6	286.4	161.9	93.1	65.5	38.9	23.1	16.5	13.4
78.6	7.0	-	-	-	929.4	580.0	339.4	193.7	110.7	76.8	45.7	26.9	19.0	15.5
84.2	7.5	-	-	-	-	673.4	397.1	228.5	129.9	89.1	53.1	31.1	21.8	17.7
89.8	8.0	-	-	-	-	773.8	459.2	266.1	150.6	102.4	61.1	35.6	24.6	20.0
95.5	8.5	-	-	-	-	881.2	526.0	306.7	172.0	116.7	69.6	40.4	27.7	22.4
101.0	9.0	-	-	-	-	-	597.3	350.1	196.9	131.8	78.6	45.5	30.9	25.0
106.6	9.5	-	-	-	-	-	673.1	396.5	222.4	148.0	88.3	50.9	34.3	27.7
112.2	10.0	-	-	-	-	-	753.5	445.7	249.5	165.1	98.5	56.6	37.8	30.6

DUCTS

Double-walled semi-flexible internally smooth corrugated duct made of HDPE (high density polyethylene).
Self-extinguishing external and antistatic internal treatment.
It can be used for a floor distribution system (walkable).

- Quick and easy to install.
- Corrugated external surface to protect against any installation damage.
- Smooth internal surface to minimise pressure drops and ensure long-term cleaning.
- Antistatic and antibacterial properties.
- Suitable for new and renovated buildings.
- Made of exclusively virgin PE granulate.

DIMENSIONS



	CODE	ØA	B
WD 63	23209	63	50000
WD 75	21325	75	50000

Dimensions in mm

TECHNICAL DATA

WD63 **WD63**

Radius [mm]	0		150	
Duct route	1		1	
Qv (Volume) [m³/h]	v [m/s]	(Pa)	v [m/s]	(Pa)
0	0.0	0.0	0.0	0.0
5	0.4	0.0	0.4	0.1
10	0.9	0.2	0.9	0.4
15	1.3	0.6	1.3	0.9
20	1.8	1.2	1.8	1.7
25	2.2	2.0	2.2	2.6
30	2.7	2.9	2.7	3.8
35	3.1	4.1	3.1	5.2
40	3.6	5.4	3.6	6.7
45	4.0	7.0	4.0	8.5
50	4.5	8.7	4.5	10.5
55	4.9	10.6	4.9	12.8
60	5.3	12.7	5.3	15.2

WD75 **WD75**

Radius [mm]	0		150	
Duct route	1		1	
Qv [m³/h]	v [m/s]	(Pa)	v [m/s]	(Pa)
0	0.0	0.0	0.0	0.0
5	0.3	0.0	0.3	0.1
10	0.6	0.1	0.6	0.1
15	0.9	0.2	0.9	0.3
20	1.3	0.4	1.3	0.5
25	1.6	0.6	1.6	0.9
30	1.9	0.9	1.9	1.2
35	2.2	1.3	2.2	1.7
40	2.5	1.7	2.5	2.2
45	2.8	2.2	2.8	2.8
50	3.1	2.7	3.1	3.4
55	3.5	3.3	3.5	4.2
60	3.8	3.9	3.8	4.9
65	4.1	4.6	4.1	5.8
70	4.4	5.4	4.4	6.7
75	4.7	6.2	4.7	7.7
80	5.0	7.1	6.0	8.8

WDG63 - WDG75 SYSTEM
CIRCULAR

DUCTS

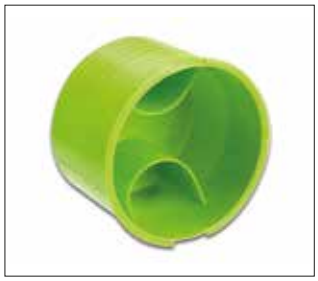
Circular reduction from WDG63 to WDG75 system.

	CODE
WDG - R 63-75	21355

Straight connector for WDG63 and WDG75 systems.

	CODE
WDG-J 63	21085
WDG-J 75	21354

Cap for WDG63 system

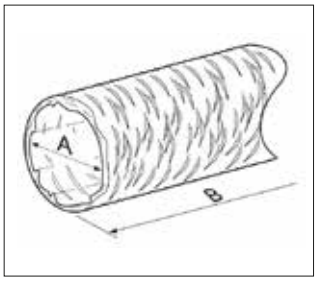


	CODE
WDG-X 63	21087

Anti-slip ring for WDG63 and WD75 system (10 pieces).

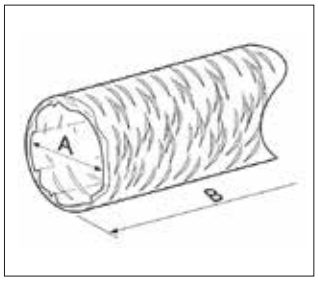
	CODE
WDG-RR 63	21088
WDG-RR 75	21329

Flexible aluminum pipe with circular section glass wool insulation.



	CODE	ØA	B
INSULATED AL. PIPE Ø 127	46272	127	10M
INSULATED AL. PIPE Ø 154	46428	154	10M

Silencer pipe.



	CODE	ØA	B
SILENCER PIPE Ø 125	22366	127	5M
SILENCER PIPE Ø 150	22316	154	5M

DUCTS

Sealing ring **(10 pieces)** for WDG63 and WDG75 systems.

	CODE
WDG-OR 63	21086
WDG-OR 75	21328

Positioning of the sealing ring (black) and anti-slip ring (red)

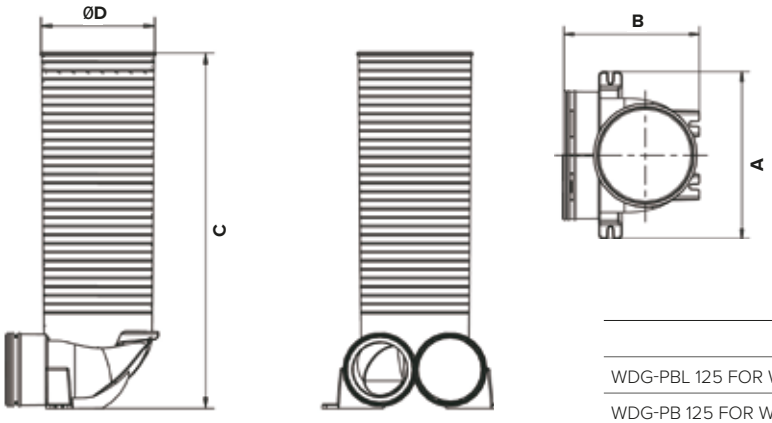
WDG63 - WDG75 SYSTEM
CIRCULAR

DIFFUSION TERMINALS

The valve adapter has been developed for ceiling or wall installations. It has been designed to cross most of structures such as walls, screeds, or false ceilings. The adapter can be cut to size with common equipment and then assembled with the termination of the ventilation system: the air delivery or extraction valve.

- For air delivery and extraction.
- For ceiling or wall installations.
- Easy to cut to the desired size.
- Antistatic and antibacterial properties.
- Made of exclusively virgin PP granulate.

DIMENSIONS



	CODE	A	B	C	ØD
WDG-PBL 125 FOR WDG 75	21326	215	125	173	190
WDG-PB 125 FOR WDG 63	21090	215	175	412	125

Dimensions in mm

TECHNICAL DATA

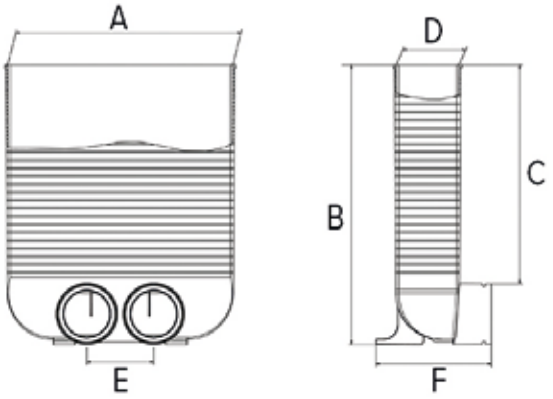
	Air delivery				Air extraction			
Duct route	1		2		1		2	
Qv (Volume) [m³/h]	v [m/s]	(Pa)	v [m/s]	(Pa)	v [m/s]	(Pa)	v [m/s]	(Pa)
0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.7	0.3	0.3	0.0	0.7	0.2	0.3	0.1
10	1.3	1.0	0.7	0.2	1.3	0.9	0.7	0.2
15	2.0	2.3	1.0	0.4	2.0	2.1	1.0	0.5
20	2.6	4.1	1.3	0.7	2.6	3.7	1.3	1.0
25	3.3	6.4	1.6	1.2	3.3	5.7	1.6	1.5
30	3.9	9.2	2.0	1.7	3.9	8.3	2.0	2.2
35	4.6	12.5	2.3	2.3	4.6	11.3	2.3	2.9

DIFFUSION TERMINALS

The grille adapter has been originally developed only for the introduction of air and for floor or wall installations. It can be cut in length with common equipment. It comes with a dust cap on the outlet and a removable cap on one of the two connections for circular duct.

- For air delivery.
- For wall or floor installations.
- Easy to cut to the desired size.
- Antistatic and antibacterial properties.
- Made of exclusively virgin PP granulate.

DIMENSIONS



	CODE	A	B	C	D	E	F
WDG-PB 310X85	21093	309	384	300	86	92	159

Dimensions in mm

TECHNICAL DATA

Air delivery with grille

Duct route	1		2	
Qv (Volume) [m³/h]	v [m/s]	(Pa)	v [m/s]	(Pa)
0	0.0	0.0	0.0	0.0
5	0.4	0.1	0.2	0.1
10	0.9	0.5	0.4	0.3
15	1.3	1.2	0.7	0.7
20	1.8	2.1	0.9	1.2
25	2.2	3.3	1.1	1.8
30	2.7	4.8	1.3	2.6
35	3.0	6.0	1.6	3.5
40	3.1	6.5	1.8	4.6
45	3.6	8.5	2.0	5.9
50	4.0	10.7	2.2	7.2
55	4.5	13.2	2.5	8.8

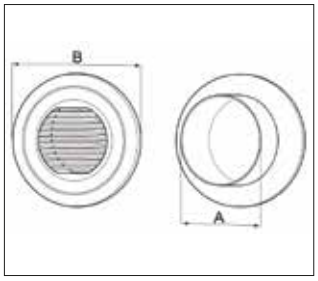
Air delivery with grille

Duct route	1		2	
Qv (Volume) [m3/h]	v [m/s]	(Pa)	v [m/s]	(Pa)
60	4.9	16.0	2.7	10.4
65	5.3	19.1	2.9	12.2
67	-	-	3.0	13.1
70	-	-	3.1	14.2
75	-	-	3.3	16.3
80	-	-	3.6	18.5
85	-	-	3.8	20.9
90	-	-	4.0	23.5
95	-	-	4.2	26.1
100	-	-	4.5	28.9
105	-	-	4.7	31.9
110	-	-	4.9	35.0
115	-	-	5.1	38.3

WDG63 - WDG75 SYSTEM
CIRCULAR

DIFFUSION TERMINALS

Delivery/recovery spigot with adjustable flow. White polystyrene casing, manual opening/closing/ adjustment system.

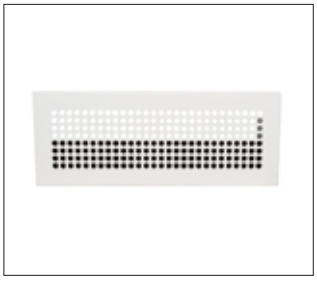


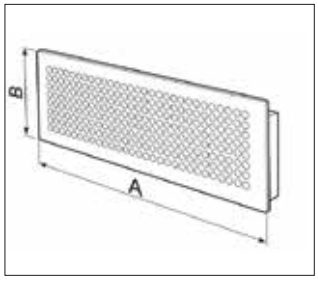
	CODE	ØA	B
BOREA 125	23199	125	165

Dimensions in mm

Example of Borea 125 terminal installation with WDG Plenum.

High induction spigot 300x100, with perforated front made of white powder-coated zinc-coated steel. Suitable for delivery and extraction.



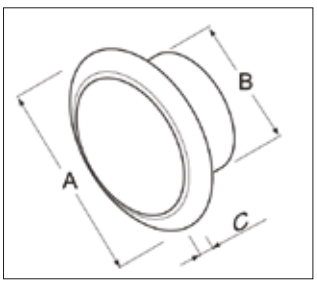


	CODE	A	B
WDG-BF 310X85	21094	310	85

Dimensions in mm

Example of perforated terminal installation with WDG rectangular Plenum.

Extraction/delivery spigot made of white thermoplastic polystyrene. Enables air flow regulation with a simple adjustment of the rotating core. To be applied to ceilings, ventilation ducts, false ceilings, etc.

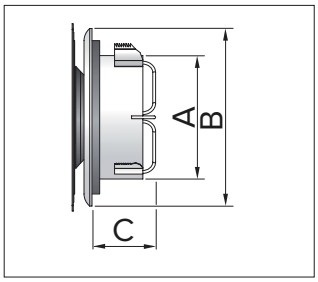


	CODE	ØA	ØB	C
AV 125	22190	166	125	15

Dimensions in mm

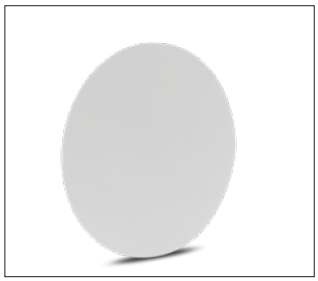
DIFFUSION TERMINALS

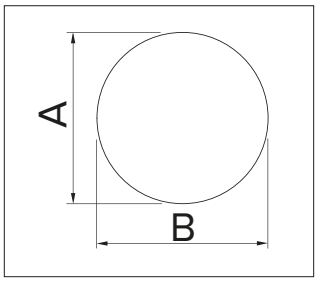
Steel extraction/delivery spigots. They enable the regulation of the air flow with a simple adjustment of the rotating core. To be applied to ceilings, ventilation ducts, false ceilings, etc. To be combined with an aesthetic mask (circular, square and rectangular). Revolutionary sound data that guarantee excellent noise levels.



	CODE	ØA	ØB	C
AV PLUS BD 125	26794	114	156	57

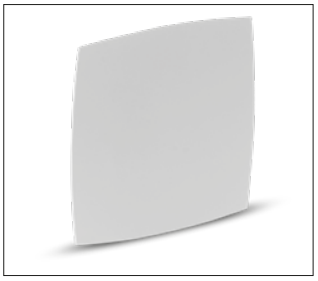
Dimensions in mm

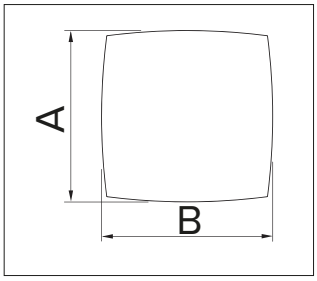




	CODE	ØA	ØB
AV PLUS RND (CIRCULAR)	26797	165	165

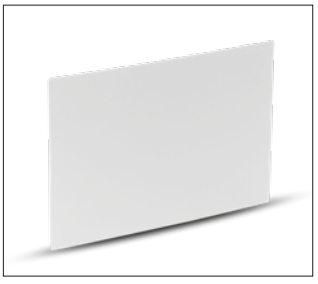
Dimensions in mm

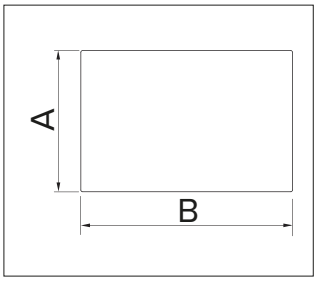




	CODE	A	B
AV PLUS BOW (SQUARE)	26795	165	165

Dimensions in mm



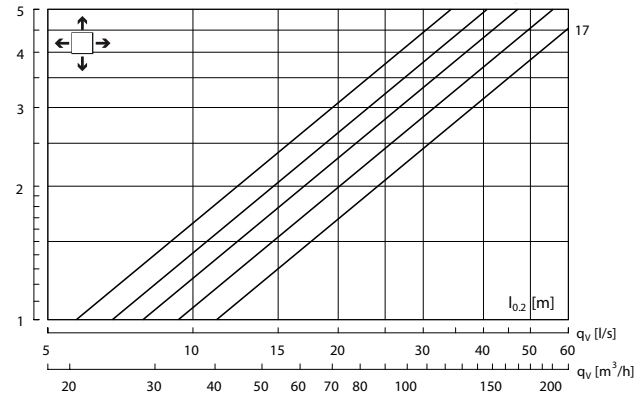


	CODE	A	B
AV PLUS RCT (RECTANGULAR)	26796	165	248

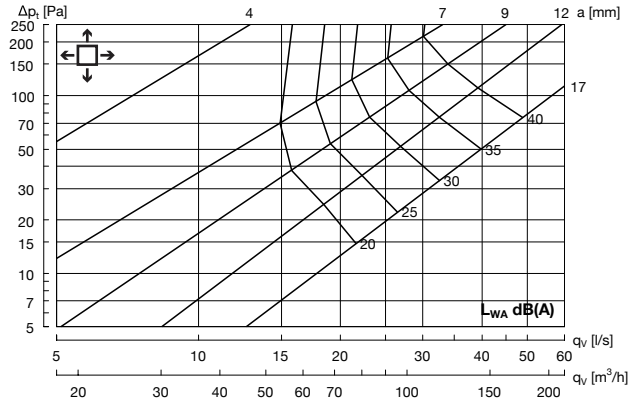
Dimensions in mm

Center frequency (Hz)

ØA nom	63	125	250	500	1K	2K	4K	8K
125	20	16	11	9	9	7	6	5

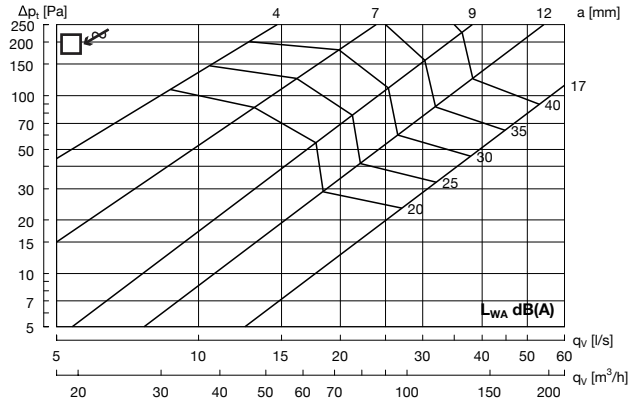


Delivery curve



Hz	63	125	250	500	1K	2K	4K	8K
K_{ok}	4	-6	-1	0	-6	-11	-15	-15

Recovery curve



Hz	63	125	250	500	1K	2K	4K	8K
K_{ok}	8	-9	-3	-3	-5	-6	-17	-21

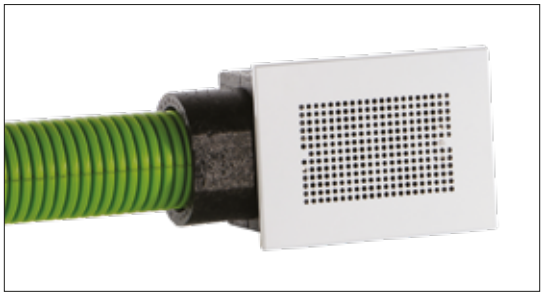
WDG63 - WDG75 SYSTEM
CIRCULAR

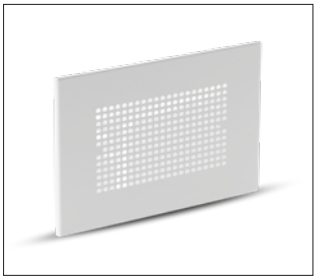
DIFFUSION TERMINALS

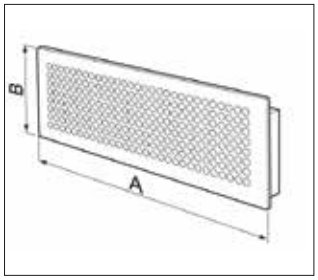
Rectangular spigot plenum, multiple connection made of PE, size 170x120. Includes connection for WD63 (75 mm) or WD75 (90 mm). Brackets for wall or plasterboard fixing included. Filter included. Possibility to connect several spigot plenums in series and to choose the position of the joint.

	CODE
WDPE-PB 170X120	26798

High-induction spigot, with perforated front made of white powder-coated zinc-coated steel. Suitable for delivery and extraction.

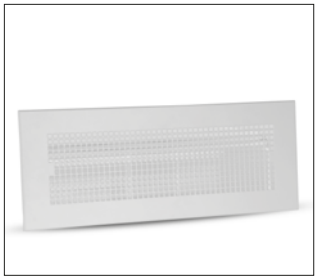


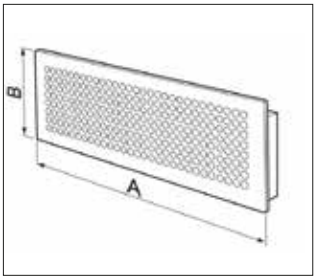


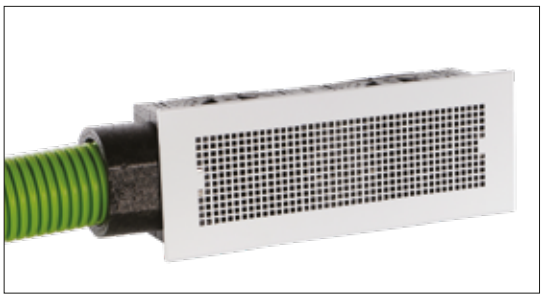


	CODE	A	B
WDPE-BF 193X140	26799	193	140

Dimensions in mm





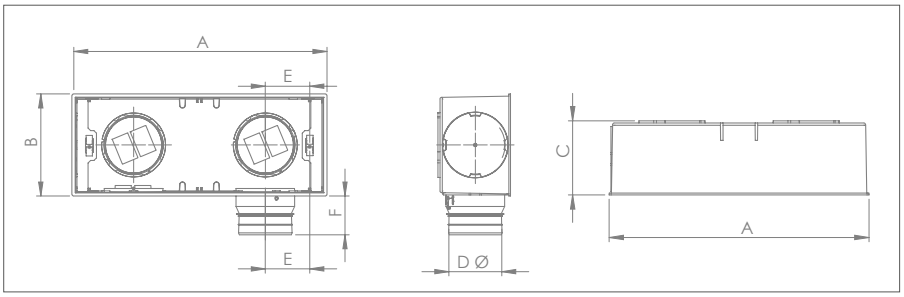


	CODE	A	B
WDPE-BF 366X140	25073	366	140

Dimensions in mm

WALL PLENUM

Rectangular spigot plenum, multiple connection made of ABS. Includes double connection for WD63 (75 mm).

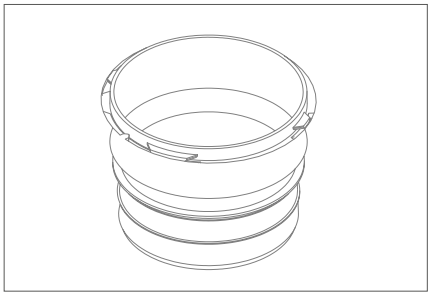


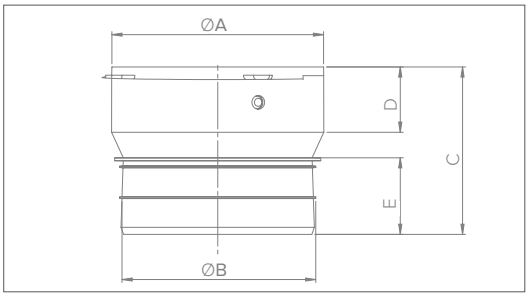
	CODE
WDPE-PB SLIM 300X120	25076

A	B	C	ØD	E	F
300	120	86	63	72.5	45.6

Dimensions in mm

Sleeve (additional for the WDPE slim system)



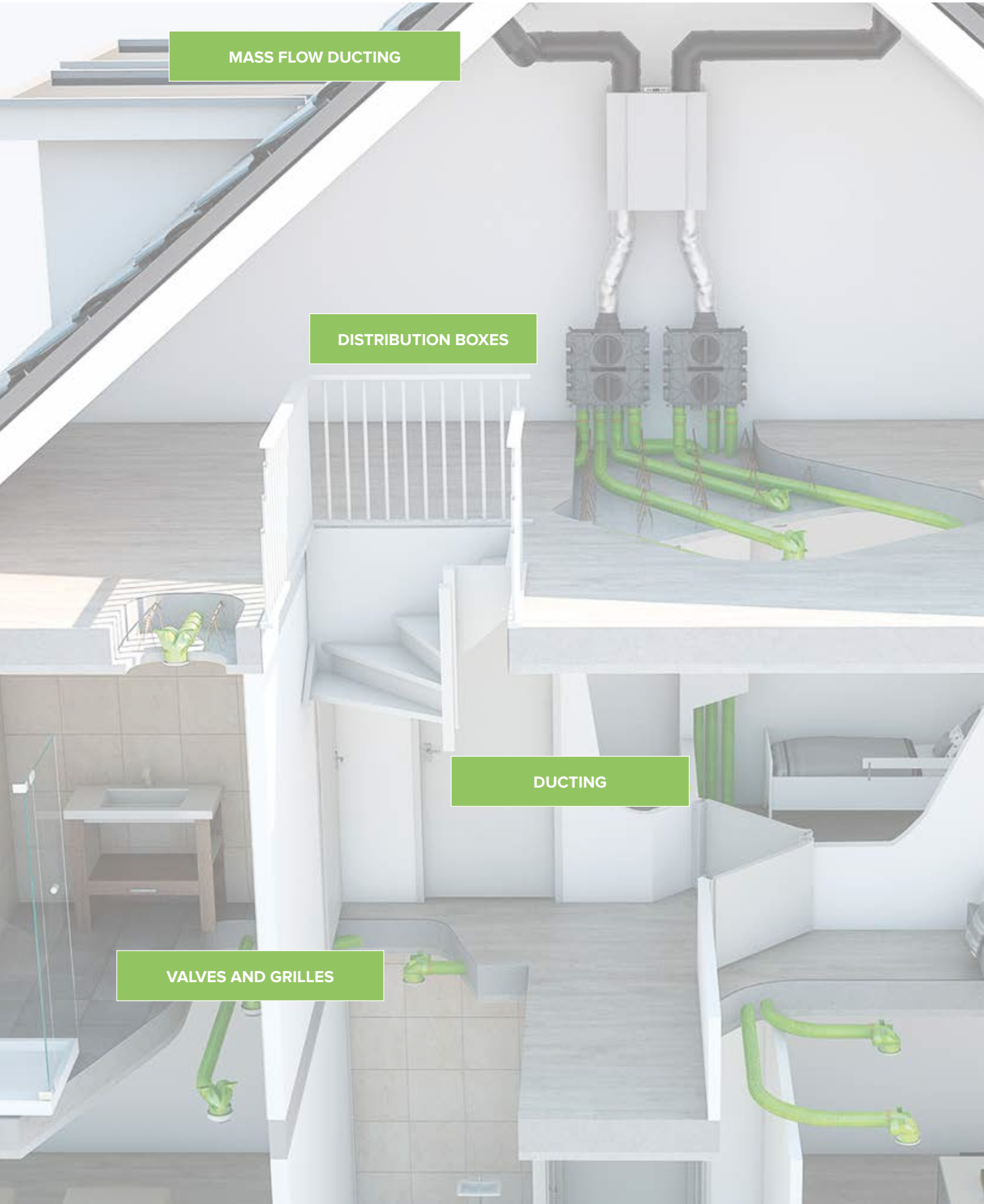


	CODE
WDPE-J SLIM	25077

ØA	ØB	C	D	E
300	120	86	63	72.5

Dimensions in mm

WDG35 SYSTEM
OVAL



FOR ALL NEW CONSTRUCTION AND RENOVATION APPLICATIONS.

Rolled ducting is easy to roll out, cut to size, and fold around obstacles. The ducting can be laid under screeds, suspended under ceilings, and hung on walls.

A complete set of accessories is available for any possible installation, including mixing of circular (**WDG63** and **WDG75**) and oval (**WDG35**) ducts. We know that every market and every situation is different. And that is why we have developed a system that will always work.

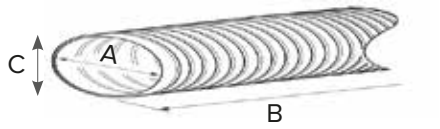
WDG35 SYSTEM
OVAL

DUCTS

The circular WDG35 ducting enables the efficient distribution of air from the distribution plenums to the various environments. Thanks to its oval section, the ducting is easy to install and ensures minimal pressure drops.

- Quick and easy to install.
- Corrugated external surface to protect against any installation damage.
- Smooth internal surface to minimise pressure drops and ensure long-term cleaning.
- Antistatic and antibacterial properties.
- Suitable for new and renovated buildings.
- Made of exclusively virgin PE granulate.

DIMENSIONS



	CODE	A	B	C
WD 35	21478	102	50M	50

Dimensions in mm

TECHNICAL DATA

	WD 35		WD 35 vertical		WD 35 horizontal	
Radius [mm]	0		150		200	
Duct route	1		1		1	
Qv (Volume) [m³/h]	v [m/s]	(Pa)	v [m/s]	(Pa)	v [m/s]	(Pa)
0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.5	0.3	0.5	0.1	0.5	0.1
10	0.9	0.7	0.9	0.2	0.9	0.3
15	1.4	1.1	1.4	0.6	1.4	0.6
20	1.8	1.7	1.8	1.0	1.8	1.1
25	2.3	2.3	2.3	1.5	2.3	1.8
30	2.7	3.0	2.7	2.2	2.7	2.6
35	3.2	3.8	3.2	3.0	3.2	3.5
40	3.6	4.7	3.6	3.9	3.6	4.6
45	4.1	5.7	4.1	5.0	4.1	5.8
50	4.6	6.8	4.6	6.1	4.6	7.1
55	5.0	8.0	5.0	7.4	5.0	8.6

TIP

Use adapter code 21492 WDG-R 63-35 to connect the oval channel to the plenums of the WDG range.

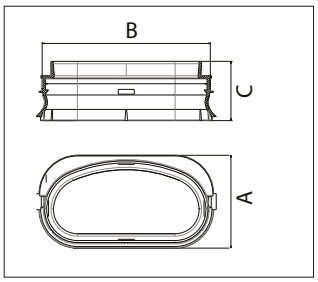
TECHNICAL DATA

	WD 35		WD 35 vertical		WD 35 horizontal	
Radius [mm]	0		150		200	
Duct route	1		1		1	
Qv (Volume) [m³/h]	v [m/s]	(Pa)	v [m/s]	(Pa)	v [m/s]	(Pa)
0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.2	0.1	0.2	0.0	0.2	0.0
10	0.5	0.3	0.5	0.1	0.5	0.1
15	0.7	0.5	0.7	0.1	0.7	0.2
20	0.9	0.7	0.9	0.2	0.9	0.3
25	1.1	0.9	1.1	0.4	1.1	0.4
30	1.4	1.1	1.4	0.6	1.4	0.6
35	1.6	1.4	1.6	0.8	1.6	0.9
40	1.8	1.7	1.8	1.01	1.8	1.1
45	2.1	2.0	2.1	1.2	2.1	1.4
50	2.3	2.3	2.3	1.5	2.3	1.8
55	2.5	2.6	2.5	1.9	2.5	2.2
60	2.7	3.0	2.7	2.2	2.7	2.6
65	3.0	3.4	3.0	2.6	3.0	3.0
70	3.2	3.8	3.2	3.0	3.2	3.5
75	3.4	4.3	3.4	3.5	3.4	4.0
80	3.6	4.7	3.6	3.9	3.6	4.6
85	3.9	5.2	3.9	4.4	3.9	5.1
90	4.1	5.7	4.1	5.0	4.1	5.8
95	4.3	6.3	4.3	5.5	4.3	6.4
100	4.6	6.8	4.6	6.1	4.6	7.1
105	4.8	7.4	4.8	6.8	4.8	7.8
110	5.0	8.0	5.0	7.4	5.0	8.6

WDG35 SYSTEM
OVAL

DUCTS

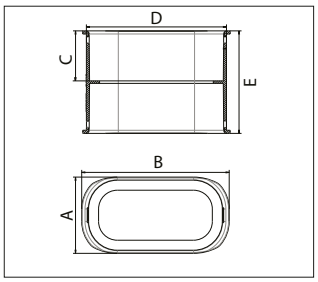
The **sealing ring** for the oval duct is an essential component of the WDG35 system for the hermetic sealing of the connections between the ducts, accessories and distribution plenums. The composite material (PP and TPE) makes the sealing ring flexible for easy assembly and the creation of hermetic connections **(1 piece)**.



	CODE	ØA	B	C
WDG-OR 35	21485	58	105	37

Dimensions in mm

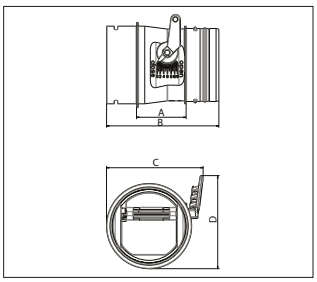
For the straight connection of the oval duct, for ceiling or wall installations.
Easy to assemble with gasket and sealing ring.
Antistatic and antibacterial properties, made from exclusively virgin PP granulate.



	CODE	A	B	C	D	E
WDG-J 35	21482	61	118	40	118	82

Dimensions in mm

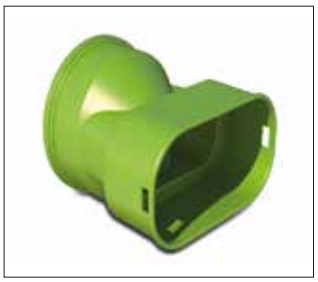
The **regulator** makes it possible to set the air flow for each duct. It is connected directly to the distribution plenum and with the use of adapters it can be connected to any type of duct. The setting can be defined by aeraulic calculations. The air flow can be easily adjusted thanks to the lever without the need to intervene on the system.



	CODE	A	B	C	D
WDG-RRM	25074	53	120	103	99

Dimensions in mm

Circular/oval connection from WDG63 to WDG35.

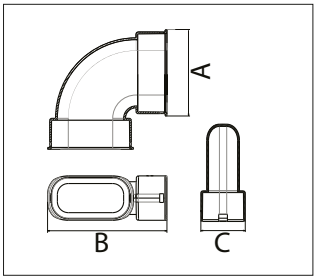


	CODE
WDG-R 63-35	21492

DUCTS

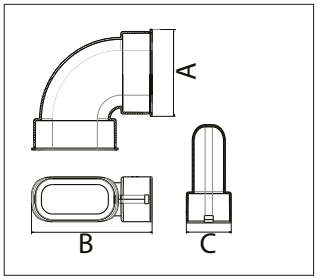
The 90° accessory has been developed to create precise curves with minimal pressure drop around obstacles and to change the direction from horizontal to vertical.

Possibility of making narrow, vertical, or horizontal curved lines for wall, floor, and ceiling installation. Antistatic and antibacterial properties. Made of exclusively virgin PP granulate.



	CODE	A	B	C
WDG-CV 35	21483	107	118	61

Dimensions in mm



	CODE	ØA	B	C
WDG-CH 35	21484	118	164	61

Dimensions in mm

TECHNICAL DATA

	Horizontal curve		Vertical curve	
Duct route	**1**		**1**	
Qv (Volume) [m³/h]	**v [m/s]**	**(Pa)**	**v [m/s]**	**(Pa)**
0	0.0	0.0	0.0	0.0
5	0.5	0.0	0.5	0.1
10	0.9	0.1	0.9	0.3
15	1.4	0.3	1.4	0.6
20	1.8	0.5	1.8	1.1
25	2.3	0.7	2.3	1.7
30	2.7	1.0	2.7	2.4
35	3.2	1.4	3.2	3.3
40	3.6	1.8	3.6	4.3
45	4.1	2.3	4.1	5.5
50	4.6	2.8	4.6	6.8
55	5.0	3.4	5.0	8.2

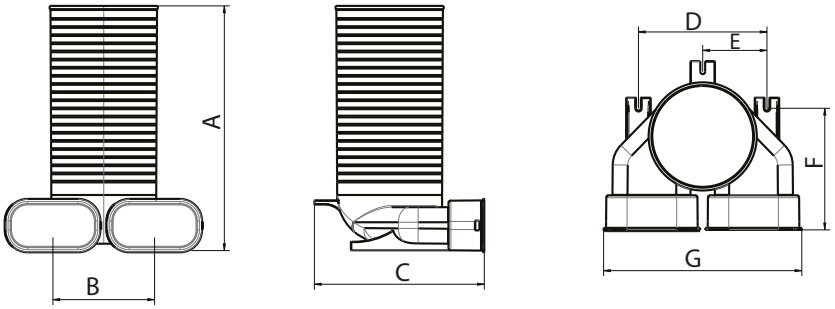
WDG35 SYSTEM
OVAL

DIFFUSION TERMINALS

The 90° valve adapter has been developed for ceiling or wall installations. It has been designed to cross most of the structures such as walls, screeds, or false ceilings. The adapter can be cut to size with common equipment and then assembled with the termination of the ventilation system: the air delivery or extraction valve. The adapter has two connections for the oval duct and is supplied with a dust cap on the valve connection (125 mm) and a removable cap on one of the two connections for the oval duct.

- For air delivery and extraction.
- For ceiling or wall installations.
- Easy to cut to the desired size.
- Antistatic and antibacterial properties.
- Made of exclusively virgin PP granulate.

DIMENSIONS



	CODE	A	B	C	D	E	F	G
WDG-PB 125-35	21479	301	125	209	158	79	149	244

Dimensions in mm

TECHNICAL DATA

	Air delivery				Air extraction			
Duct route	1		2		1		2	
Qv (Volume) [m³/h]	v [m/s]	(Pa)	v [m/s]	(Pa)	v [m/s]	(Pa)	v [m/s]	(Pa)
0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.5	0.1	0.2	0.0	0.5	0.2	0.2	0.0
10	0.9	0.5	0.5	0.1	0.9	0.6	0.5	0.2
15	1.4	1.2	0.7	0.2	1.4	1.4	0.7	0.4
20	1.8	2.1	0.9	0.4	1.8	2.5	0.9	0.7
25	2.3	3.3	1.1	0.6	2.3	4.0	1.1	1.2
30	2.7	4.8	1.4	0.9	2.7	5.7	1.4	1.7
35	3.2	6.5	1.6	1.3	3.2	7.8	1.6	2.3
40	3.6	8.5	1.8	1.6	3.6	10.1	1.8	3.0
45	4.1	10.7	2.1	2.1	4.1	12.8	2.1	3.8
50	4.6	13.3	2.3	2.6	4.6	15.8	2.3	4.7
55	5.0	16.0	2.5	3.1	5.0	19.2	2.5	5.6
60	-	-	2.7	3.7	-	-	2.7	6.7
65	-	-	3.0	4.4	-	-	3.0	7.9
70	-	-	3.2	5.1	-	-	3.2	9.1
75	-	-	3.4	5.8	-	-	3.4	10.5
80	-	-	3.6	6.6	-	-	3.6	11.9
85	-	-	3.9	7.4	-	-	3.9	13.5
90	-	-	4.1	8.4	-	-	4.1	15.1
95	-	-	4.3	9.3	-	-	4.3	16.8
100	-	-	4.6	10.3	-	-	4.6	18.7
105	-	-	4.8	11.4	-	-	4.8	20.6
110	-	-	5.0	12.5	-	-	5.0	22.6

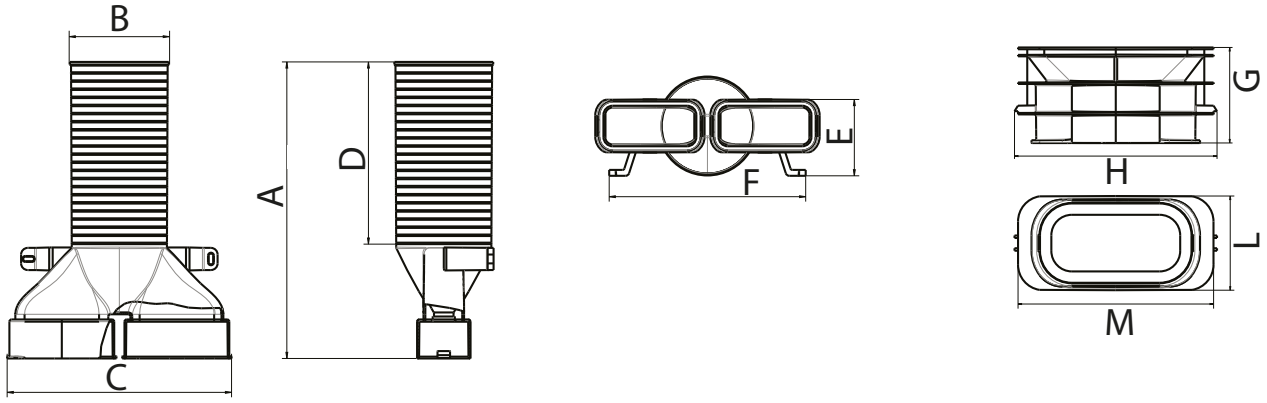
WDG35 SYSTEM
OVAL

DIFFUSION TERMINALS

The 180° valve adapter has been developed for ceiling or wall installations. It has been designed to cross most of the structures such as walls, screeds, or false ceilings. The adapter can be cut to size with common equipment and then assembled with the termination of the ventilation system: the air delivery or extraction valve. The adapter has two connections for the oval duct and comes with a dust cap on the valve connection (125 mm) and a removable cap on one of the two connections for the oval duct.

- For air delivery and extraction.
- For ceiling or wall installations.
- Easy to cut to the desired size.
- Antistatic and antibacterial properties.
- Made of exclusively virgin PP granulate.

DIMENSIONS



	CODE	A	B	C	D	E	F	G	H	L	M
WDG-PBH 125-35	21480	402	125	304	247	103.5	266	67	143	66	138

Dimensions in mm

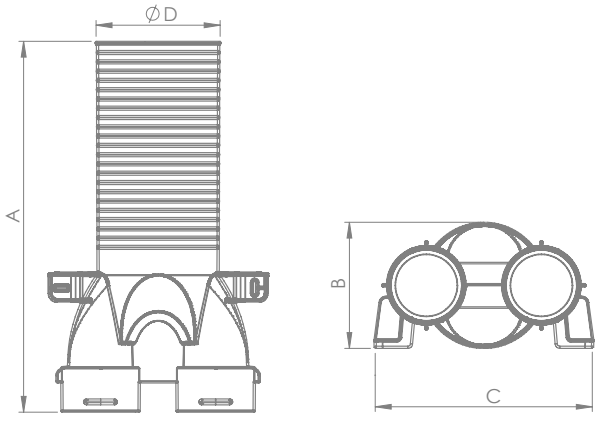
TECHNICAL DATA

	Air delivery				Air extraction			
Duct route	1		2		1		2	
Qv (Volume) [m³/h]	v [m/s]	(Pa)	v [m/s]	(Pa)	v [m/s]	(Pa)	v [m/s]	(Pa)
0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.5	0.1	0.2	0.0	0.5	0.2	0.2	0.1
10	0.9	0.4	0.5	0.1	0.9	0.6	0.5	0.2
15	1.4	0.9	0.7	0.2	1.4	1.4	0.7	0.5
20	1.8	1.7	0.9	0.3	1.8	2.5	0.9	0.8
25	2.3	2.6	1.1	0.5	2.3	3.9	1.1	1.3
30	2.7	3.8	1.4	0.7	2.7	5.7	1.4	1.8
35	3.2	5.1	1.6	0.9	3.2	7.7	1.6	2.5
40	3.6	6.7	1.8	1.6	3.6	10.1	1.8	3.2
45	4.1	8.5	2.1	1.5	4.1	12.7	2.1	4.1
50	4.6	10.4	2.3	1.8	4.6	15.7	2.3	5.0
55	5.0	12.6	2.5	2.2	5.0	19.0	2.5	6.1
60	-	-	2.7	2.6	-	-	2.7	7.2
65	-	-	3.0	3.1	-	-	3.0	8.5
70	-	-	3.2	3.5	-	-	3.2	9.9
75	-	-	3.4	4.1	-	-	3.4	11.3
80	-	-	3.6	4.6	-	-	3.6	12.9
85	-	-	3.9	5.2	-	-	3.9	14.5
90	-	-	4.1	5.9	-	-	4.1	16.3
95	-	-	4.3	6.5	-	-	4.3	18.2
100	-	-	4.6	7.2	-	-	4.6	20.1
105	-	-	4.8	8.0	-	-	4.8	22.2
110	-	-	5.0	8.8	-	-	5.0	24.4

DIFFUSION TERMINALS

The 180° valve adapter is suitable for ceiling or wall installations. It has been specifically designed to cross most of the structures such as walls, screeds, or false ceilings.
The adapter can be cut to size with common equipment and then coupled with the termination of the ventilation system: at the air delivery or extraction valve. The adapter has two connections for circular ducts and is supplied with a dust cover on the 125-mm connection and a removable cap on one of the two connections for the circular duct.

	CODE
WDG-PBH 125-63	26032



A	B	C	ØD
397	133	234	125

Dimensions in mm

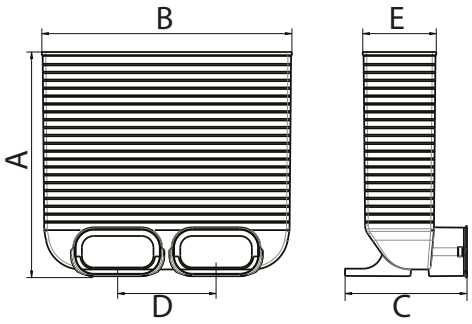
WDG35 SYSTEM
OVAL

DIFFUSION TERMINALS

The 90° grille adapter was originally developed only for air delivery and for floor or wall installations. It can be cut in length with common equipment. It comes with a dust cap on the outlet and a removable cap on one of the two connections for the oval duct. The adapter has two connections for the oval duct and comes with a dust cap on the connection to the rectangular grille and a removable cap on one of the two connections for the oval duct.

- For air delivery.
- For wall or floor installations.
- Easy to cut to the desired size.
- Antistatic and antibacterial properties.
- Made of exclusively virgin PP granulate.

DIMENSIONS



	CODE	A	B	C	D	E
WDG-PB 310X85	21481	287	318	155	125	96

Dimensions in mm

TECHNICAL DATA

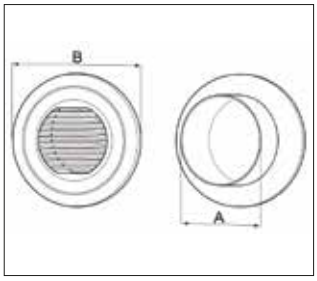
Air delivery without grille

Air delivery with grille

Duct route	1		2		1		2	
Qv (Volume) [m³/h]	v [m/s]	(Pa)	v [m/s]	(Pa)	v [m/s]	(Pa)	v [m/s]	(Pa)
0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.5	0.1	0.2	0.0	0.5	0.2	0.2	0.1
10	0.9	0.4	0.5	0.1	0.9	0.6	0.5	0.3
15	1.4	0.9	0.7	0.2	1.4	1.4	0.7	0.7
20	1.8	1.6	0.9	0.3	1.8	2.5	0.9	1.2
25	2.3	2.6	1.1	0.5	2.3	3.8	1.1	1.8
30	2.7	3.7	1.4	0.7	2.7	5.5	1.4	2.6
35	3.0	4.5	1.6	1.0	3.0	6.6	1.6	3.6
40	3.2	5.1	1.8	1.3	3.2	7.5	1.8	4.7
45	3.6	6.6	2.1	1.6	3.6	9.8	2.1	5.9
50	4.1	8.4	2.3	2.0	4.1	12.4	2.3	7.3
55	4.6	10.3	2.5	2.4	4.6	15.3	2.5	8.9
60	5.0-	12.5	2.7	2.8	5.0-	18.6	2.7	10.6
65	-	-	3.0	3.3	-	-	3.0	12.4
66	-	-	3.0	3.4	-	-	3.0	12.7
70	-	-	3.2	3.8	-	-	3.2	14.4
75	-	-	3.4	4.4	-	-	3.4	16.5
80	-	-	3.6	5.0	-	-	3.6	18.8
85	-	-	3.9	5.7	-	-	3.9	21.2
90	-	-	4.1	6.4	-	-	4.1	23.8
95	-	-	4.3	7.1	-	-	4.3	26.5
100	-	-	4.6	7.9	-	-	4.6	29.3
105	-	-	4.8	8.7	-	-	4.8	32.3
110	-	-	5.0	9.5	-	-	5.0	35.5

DIFFUSION TERMINALS

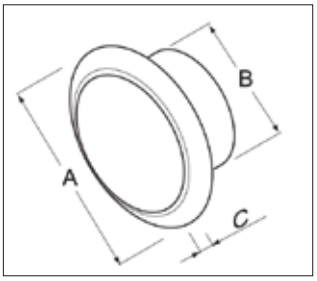
Delivery/recovery launch spigot, manual opening/ closing/adjustment system.



	CODE	ØA	B
BOREA 125	23199	125	165

Dimensions in mm

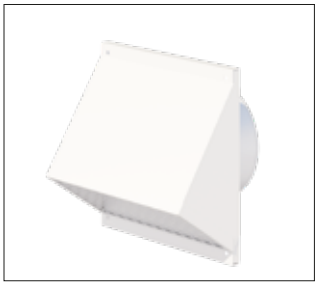
Extraction/delivery spigot made of white thermoplastic polystyrene. Enables air flow regulation with a simple adjustment of the rotating core. To be applied to ceilings, ventilation ducts, false ceilings, etc.

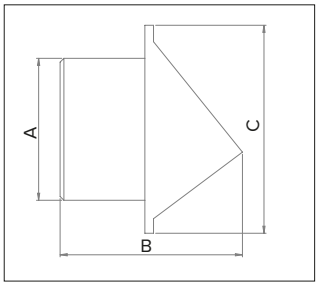


	CODE	ØA	ØB	C
AV 125	22190	166	125	15

Dimensions in mm

Windproof grille made of zinc-coated and powder-coated sheet metal for WDG system, connection diameter from 125 to 180. Equipped with anti-bird protection.



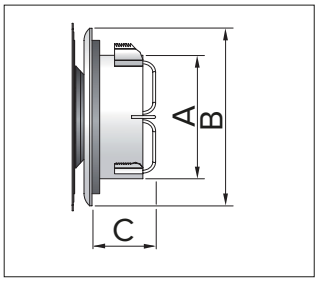


	CODE	A	B	C
GGR-WDG Ø125	26041	125	194	233

Dimensions in mm

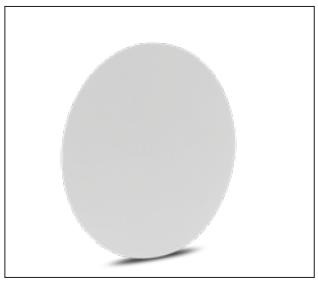
DIFFUSION TERMINALS

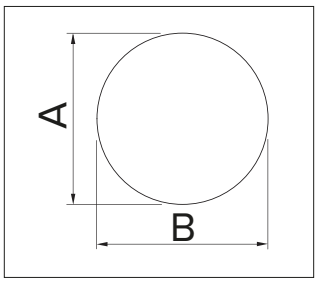
Steel extraction/delivery spigots. They enable the regulation of the air flow with a simple adjustment of the rotating core. To be applied to ceilings, ventilation ducts, false ceilings, etc. To be combined with an aesthetic mask (circular, square and rectangular). Revolutionary sound data that guarantee excellent noise levels.



	CODE	ØA	ØB	C
AV PLUS BD 125	26794	114	156	57

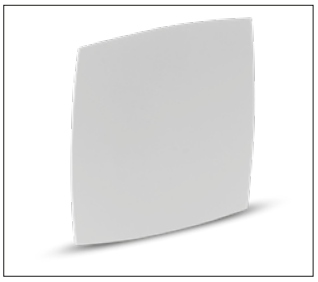
Dimensions in mm

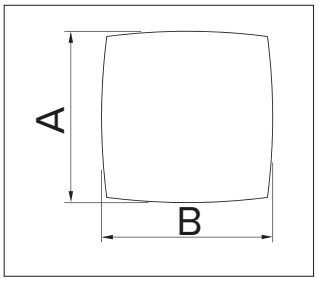




	CODE	ØA	ØB
AV PLUS RND (CIRCULAR)	26797	165	165

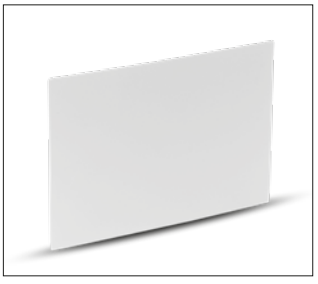
Dimensions in mm

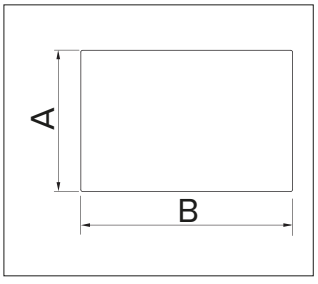




	CODE	A	B
AV PLUS BOW (SQUARE)	26795	165	165

Dimensions in mm



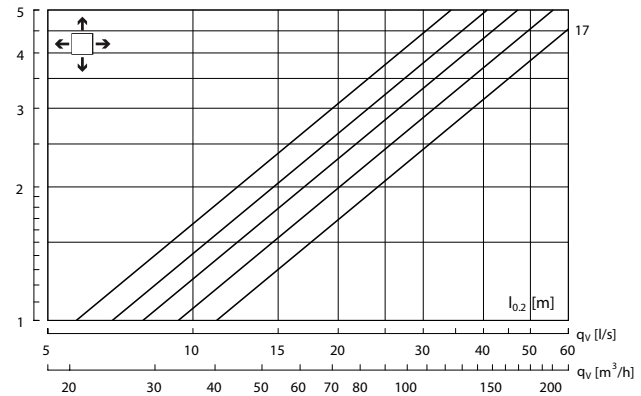


	CODE	A	B
AV PLUS RCT (RECTANGULAR)	26796	165	248

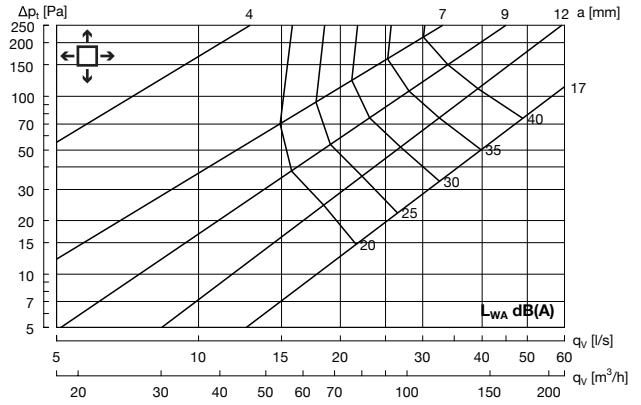
Dimensions in mm

Center frequency (Hz)

ØA nom	63	125	250	500	1K	2K	4K	8K
125	20	16	11	9	9	7	6	5

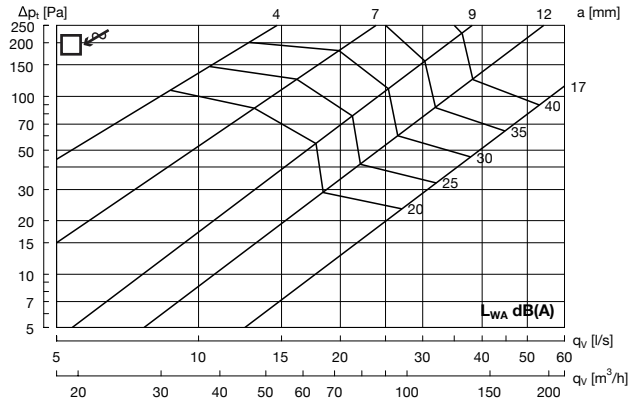


Delivery curve



Hz	63	125	250	500	1K	2K	4K	8K
K_{ok}	4	-6	-1	0	-6	-11	-15	-15

Recovery curve



Hz	63	125	250	500	1K	2K	4K	8K
K_{ok}	8	-9	-3	-3	-5	-6	-17	-21

VMC SYSTEM
EXTERNAL CONNECTION

DUCTS

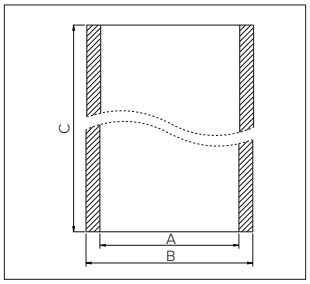
Rigid insulated ducting systems ideal for connecting the machine to the outside air inlets.

In ventilation (heating/cooling), insulating ducts are used to minimise heat loss or prevent condensation from forming inside or outside the duct.

Duct that reduces the pressure drop due to its very smooth internal surface. Light, easy to cut, and foldable, resistant to impacts (for example dent free), does not rust. Duct length 2 metres, diameters 125 and 150 mm. Easy to disassemble, which makes maintenance very simple.

DUCTS

EPE rigid duct, circular section.

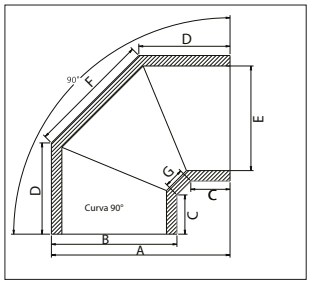


	CODE	ØA	B	C
MD-EPE Ø 125 2M	21468	125	157	2000
MD-EPE Ø 150 2M	21473	150	182	2000
MD-EPE Ø 160 2M	26036	160	-	200

Dimensions in mm

VOLUME [M³/H]	PRESSURE DROP [PA]	
	Ø 125	Ø 150
100	1.0	1.0
200	2.7	1.1
300	6.1	2.5
400	10.8	4.5
500	16.9	7.0
600	24.3	10.1

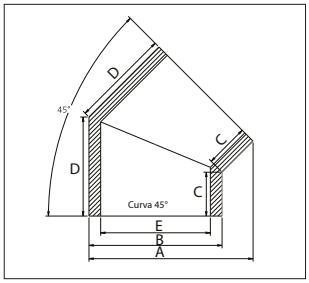
90° curve made of EPE with circular section, diameter 125-150 mm.



	CODE	ØA	ØB	C	D	ØE	F	G
CR 90° EPE Ø 125	21469	238	157	60	125	125	159	30
CR 90° EPE Ø 150	21474	263	182	60	135	150	181	30
CR 90° EPE Ø 160	26037	274	192	60	140	160	189	30

Dimensions in mm

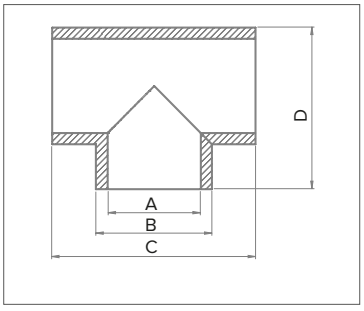
45° curve made of EPE with circular section, diameter 125-150 mm.



	CODE	ØA	ØB	C	D	ØE
45° CURVE EPE Ø 125	21470	199	157	60	125	125
45° CURVE EPE Ø 150	21475	224	182	60	135	150
45° CURVE EPE Ø 160	26038	274	192	60	140	160

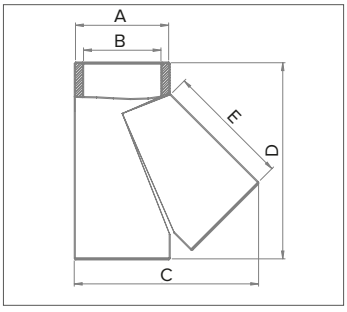
Dimensions in mm

T and Y-shaped joint circular section EPE



	CODE	A	B	C	D
GN-EPE Ø 125 (T-shaped joint)	26033	125	157	276	216
GN-EPE Ø 160 (T-shaped joint)	26035	160	192	316	254

Dimensions in mm

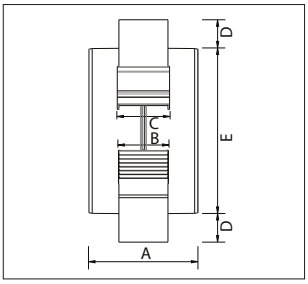


	CODE	A	B	C	D	E
GN-EPE Ø 150 (Y-shaped joint)	26034	150	182	352	377	240

Dimensions in mm

VMC SYSTEM
EXTERNAL CONNECTION

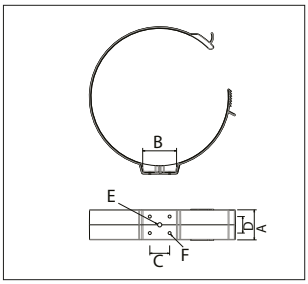
Connector made of EPE with 125 and 150 mm diameter.



	CODE	A	B	C	D	E
CNN EPE Ø 125	21471	100	45	48	15	125
CNN EPE Ø 150	21476	100	45	48	15	150
CNN EPE Ø 160	26039	100	45	48	15	160

Dimensions in mm

Fixing clip for circular ducts made of EPE.



	CODE	A	B	C	D	E	ØF
CLIP EPE Ø 125	21472	45	50	30	25	M8	4.5
CLIP EPE Ø 150	21477	45	50	30	25	M8	4.5
CLIP EPE Ø 160	26040	45	50	30	25	M8	4.5

Dimensions in mm

EXTERNAL GRILLES

Vertical ejection terminal, connection diameter 125-150 mm.

	CODE
TE-V Ø 125	21486
TE-V Ø 150	21487

Dimensions in mm

Black tile diam. 125/150/160 mm 5-25°/ 25-45°/ 35-55° for roof ejection terminal.

	CODE
TEG Ø 125/150 5-25°	21489
TEG Ø 125/150 25-45°	21490
TEG Ø 125/150 35-55°	21491

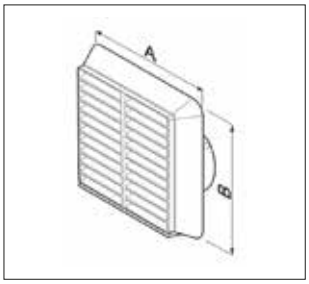
Dimensions in mm

Flat tile diam. 125/150 mm for roof ejection terminal.

	CODE
TEG Ø 125/150 FLAT	21488

Dimensions in mm

Polypropylene grille with anti-bird protection.



	CODE	A	B
OUTDOOR ANTI-BIRD GRILLE Ø 100	46056	105	105
OUTDOOR ANTI-BIRD GRILLE Ø 125	46058	155	155
OUTDOOR ANTI-BIRD GRILLE Ø 150	46059	185	185

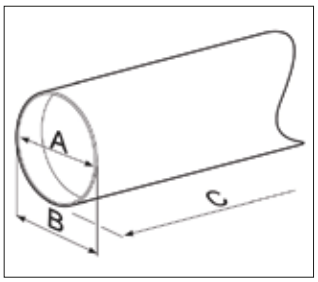
Dimensions in mm

NOTES

204x60 SYSTEM
CIRCULAR DUCTING

DUCTS

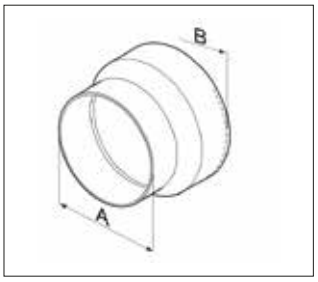
Rigid PVC pipe circular section, 1 and 2 metres in length.



	CODE	ØA	ØB	C
1-M ROUND PIPE Ø 100	46184	100	103	1000
2-M ROUND PIPE Ø 100	46186	100	103	2000
1-M RIGID PIPE Ø 125	46197	125	128	1000
2-M RIGID PIPE Ø 125	46199	125	128	2000
1-M RIGID PIPE Ø 150	46209	149	153	1000
2-M RIGID PIPE Ø 150	46211	149	153	2000

Dimensions in mm

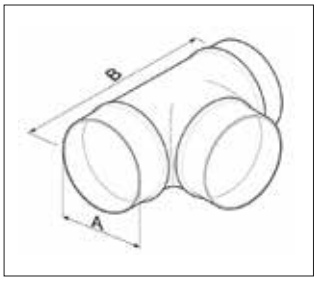
Circular reduction made of polystyrene.



	CODE	ØA	ØB
REDUCER Ø 100-80	46415	80	100
REDUCER Ø 125-100	46312	100	125
REDUCER Ø 150-100	46314	100	150
REDUCER Ø 150-125	46313	125	150
REDUCER Ø 200-150	46315	150	160

Dimensions in mm

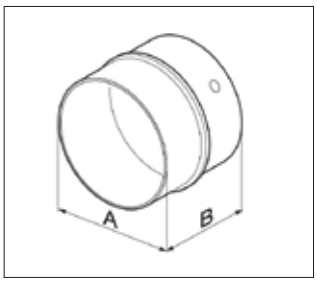
T-shaped junction circular section made of polystyrene.



	CODE	ØA	B
T-SHAPED JOINT Ø 100	46193	99	168
T-SHAPED JOINT Ø 125	46203	124	197
T-SHAPED JOINT Ø 150	46214	149	223

Dimensions in mm

Connector for circular duct made of polystyrene.

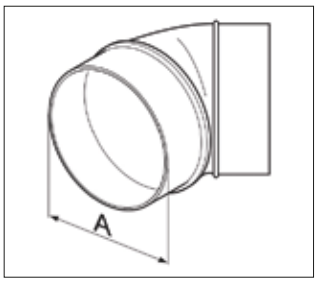


	CODE	ØA	B
PIPE-PIPE CONNECTOR Ø 100	46188	98	60
PIPE-PIPE CONNECTOR Ø 125	46205	124	62
PIPE-PIPE CONNECTOR Ø 150	46216	149	62

Dimensions in mm

DUCTS

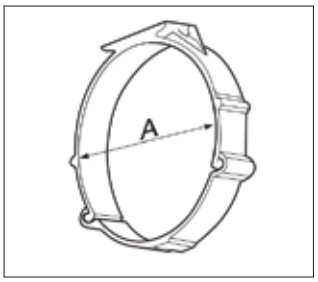
45° and 90° curves circular section made of polystyrene.



	CODE	ØA
45° ELBOW CURVE Ø 100	46192	99
45° ELBOW CURVE Ø 125	46202	124
90° ELBOW CURVE Ø 100	46191	99
90° ELBOW CURVE Ø 125	46201	124
90° ELBOW CURVE Ø 150	46213	149

Dimensions in mm

Fixing clip for circular duct made of polystyrene.



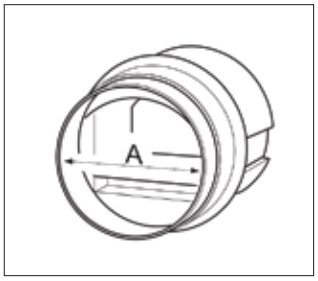
	CODE	ØA
CLIP Ø 100	46195	99
CLIP Ø 125	46204	124
CLIP Ø 150	46217	180

Dimensions in mm

Manual duct calibration damper.

	CODE
RRM Ø 80	24825
RRM Ø 100	24827
RRM Ø 125	24828
RRM Ø 150	24829

Duct flow regulator made of thermoplastic material. Maximum temperature 60°C. Complete with rubber gasket. Activated by pressures between 50 and 200 Pa.



	CODE	ØA
RD 15 M/H Ø 80	23050	80
RD 30 M/H Ø 80	23052	80
RD 45 M/H Ø 80	23053	80
RD 15 M/H Ø 100	23056	100
RD 30 M/H Ø 100	23058	100
RD 45 M/H Ø 100	23059	100
RD 60 M/H Ø 100	23061	100
RD 75 M/H Ø 100	23062	100
RD 90 M/H Ø 100	23063	100
RD 15 M/H Ø 125	23066	126
RD 30 M/H Ø 125	23068	126
RD 45 M/H Ø 125	23069	126
RD 60 M/H Ø 125	23071	126
RD 75 M/H Ø 125	23072	126
RD 90 M/H Ø 125	23073	126
RD 120 M/H Ø 125	23075	126
RD 150 M/H Ø 125	23076	126
RD 180 M/H Ø 125	23077	126
RD 120 M/H Ø 150	23079	150
RD 150 M/H Ø 150	23080	150
RD 180 M/H Ø 150	23081	150
RD 210 M/H Ø 150	23082	150
RD 240 M/H Ø 150	23083	150
RD 270 M/H Ø 150	23084	150
RD 300 M/H Ø 150	23085	150
RD 210 M/H Ø 200	23095	200
RD 240 M/H Ø 200	23096	200
RD 270 M/H Ø 200	23097	200
RD 350 M/H Ø 200	23098	200
RD 300 M/H Ø 201	23099	200

Dimensions in mm

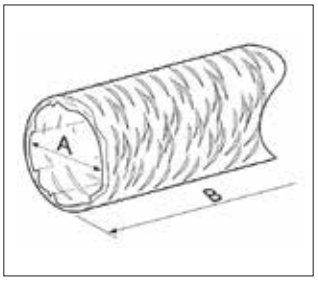
ACCESSORIES

Flow regulator 15 m^3/h and 30 m^3/h for 5+1 R and 6+1 plenum.

	CODE
REGULATOR 15	22324
REGULATOR 30	22325

DUCTS

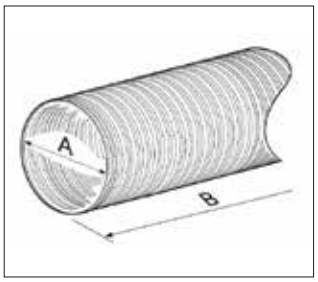
Flexible pipe with thermal and acoustic insulation. Internal duct made of perforated aluminium, insulation made of glass wool, external covering made of aluminium film reinforced with fiberglass.



	CODE	ØA	B
AFD-ACU 80-10	23201	82	10M
AFD-ACU 125-10	23203	127	10M

Dimensions in mm

Aluminium flexible duct with circular section.



	CODE	ØA	B
10-M ALUMINIUM PIPE Ø 80	46257	82	10M
10-M ALUMINIUM PIPE Ø 127	46259	127	10M

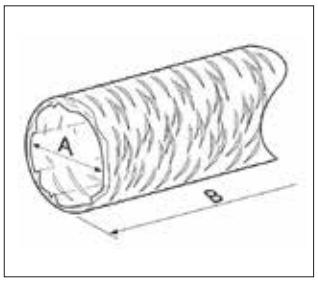
Dimensions in mm

GENERIC COMPONENTS

GENERIC COMPONENTS

DUCTS

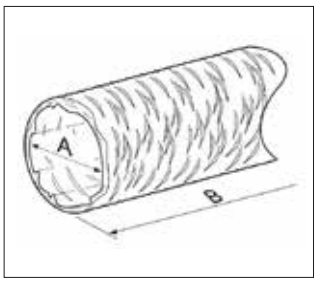
Flexible aluminum pipe with circular section glass wool insulation.



	CODE	ØA	B
10-M INSULATED AL. PIPE Ø 102	46271	102	10M
10-M INSULATED AL. PIPE Ø 127	46272	127	10M
10-M INSULATED AL. PIPE Ø 154	46428	154	10M
10-M INSULATED AL. PIPE Ø 202	46274	202	10M
10-M INSULATED AL. PIPE Ø 254	46276	254	10M

Dimensions in mm

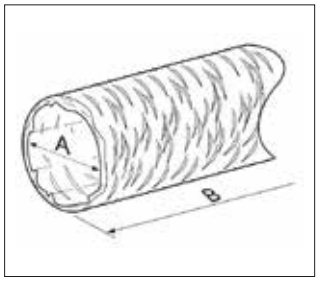
Flexible pipe with thermal and acoustic insulation. Internal duct made of perforated aluminium, insulation made of glass wool, external covering made of aluminium film reinforced with fiberglass.



	CODE	ØA	B
AFD-ACU 80-10	23201	82	10M
AFD-ACU 100-10	23202	102	10M
AFD-ACU 125-10	23203	127	10M
AFD-ACU 150-10	23204	152	10M
AFD-ACU 160-10	23205	162	10M

Dimensions in mm

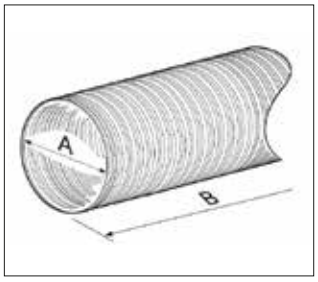
Silencer pipe.



	CODE	ØA	B
SILENCER PIPE Ø 125	22366	125	500
SILENCER PIPE Ø 150	22316	150	500

Dimensions in mm

Aluminium flexible duct with circular section.



	CODE	ØA	B
10-M ALUMINUM PIPE Ø 102	46258	102	10M
10-M ALUMINIUM PIPE Ø 127	46259	127	10M
10-M ALUMINIUM PIPE Ø 152	46260	152	10M
10-M ALUMINIUM PIPE Ø 160	46261	160	10M
10-M ALUMINIUM PIPE Ø 203	46263	203	10M
10-M ALUMINIUM PIPE Ø 315	46266	315	10M
10-M ALUMINIUM PIPE Ø 80	46257	82	10M

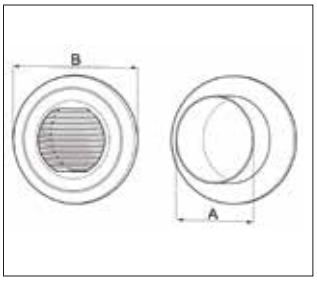
Dimensions in mm

Fixing clip for circular ducts made of aluminium.

	CODE
CLIP Ø 100	46309
CLIP Ø 125	46310

DIFFUSION TERMINALS

Delivery/recovery spigot with adjustable flow. White polystyrene casing, manual opening/closing/ adjustment system.

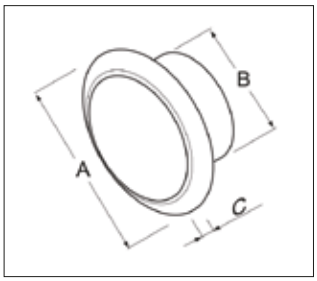


	CODE	ØA	ØB
BOREA 80	23198	80	110
BOREA 125	23199	125	165

Dimensions in mm

Self-adjusting extraction spigot. White polystyrene casing. Internal self-regulating module activated by pressures between 50 and 160 Pa. Code 23197 Vortpack Alize Self Insulation - accessory component that can be combined with Vortpack Alize spigots.

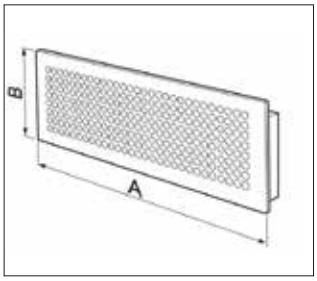
Extraction/delivery spigot made of white thermoplastic polystyrene. Enables air flow regulation with a simple adjustment of the rotating core. To be applied to ceilings, ventilation ducts, false ceilings, etc.



	CODE	ØA	ØB	C
AV 100	22189	140	100	13
AV 125	22190	166	125	15
AV 150	22191	204	150	17
AV 160	22192	204	160	17
AV 200	22193	242	200	17

Dimensions in mm

High induction spigot 300x100, with perforated front made of white powder-coated zinc-coated steel. Suitable for delivery and extraction.

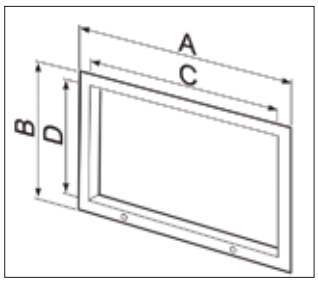


	CODE	A	B
WD-BF 200X100 (for WD system)	23656	200	100
WD-BF 300X100 (for WD system)	23215	300	100
WDG-BF 310X85 (for WDG system)	21094	310	85
WDPE-BF 193X140 (for WDPE system)	26799	193	140
WDPE-BF 366X140 (for WDPE system)	25073	366	140
WDPE-BF 540X140 (for WDPE system)	25075	540	140
WDPE-BF 330X150 (for WDPE system) SLIM	25078	330	150

Dimensions in mm

DIFFUSION TERMINALS

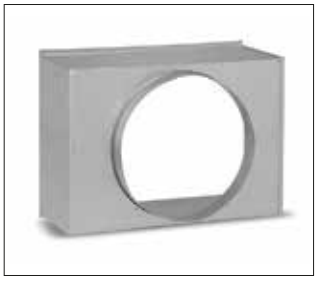
Duct counterframe.

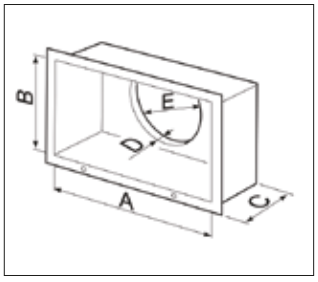


	CODE	A	B	C	D
CO 200X100	22227	235	135	200	100
CO 300X100	22228	335	135	300	100
CO 300X150	22229	388	185	300	150
CO 500X200	22230	535	235	500	200

Dimensions in mm

Zinc-coated steel plenum for grilles.

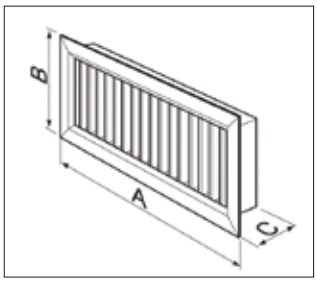




	CODE	A	B	C	D	ØE
PGB 200X100	22231	200	100	200	50	97
PGB 300X100	22232	300	100	200	50	97
PGB 300X150	22233	300	150	200	50	125
PGB 500X200	22234	500	200	200	50	160
PGB 500X350	22244	500	350	200	50	315

Dimensions in mm

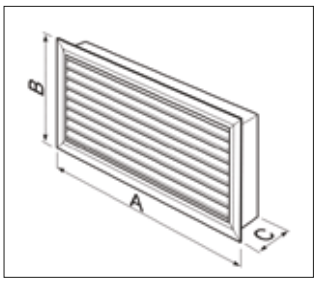
Rectangular delivery/return spigot with fixed horizontal fins and movable vertical fins, with manual adjustment. To be applied to square or rectangular ventilation ducts using a counter frame, or to circular ducts using the related plenums.



	CODE	A	B	C
BM 200X100	22215	200	100	85
BM 300X100	22216	300	100	85
BM 300X150	22217	300	150	85
BM 500X200	22218	500	200	85

Dimensions in mm

Return grille with fixed inclined fins, pitch 25 mm, made of natural anodised extruded aluminium, fixing with clips.

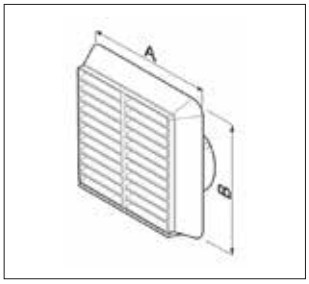


	CODE	A	B	C
GA 200X100	22219	200	100	25
GA 300X100	22220	300	100	25
GA 300X150	22221	300	150	25
GA 500X200	22222	500	200	25
GA 500X350	22243	500	350	25

Dimensions in mm

EXTERNAL GRILLES

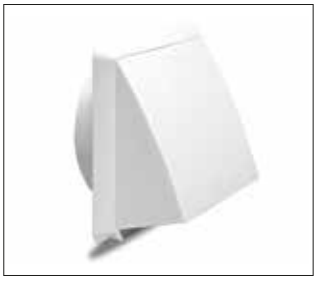
Polypropylene grille with anti-bird protection.

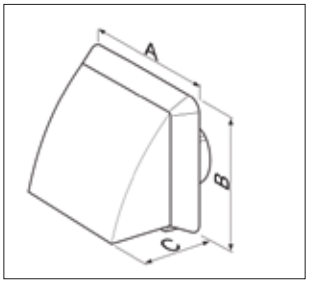


	CODE	A	B
OUTDOOR ANTI-BIRD GRILLE Ø 100	46056	155	155
OUTDOOR ANTI-BIRD GRILLE Ø 125	46058	155	155
OUTDOOR ANTI-BIRD GRILLE Ø 150	46059	185	185

Dimensions in mm

White polypropylene expulsion grille with gravity shutter and rain cover.

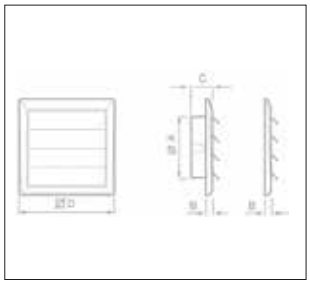




	CODE	A	B	C
WHITE ANTI-WIND GRILLE Ø 100	46072	155	155	60
WHITE ANTI-WIND GRILLE Ø 125	46074	155	155	70

Dimensions in mm

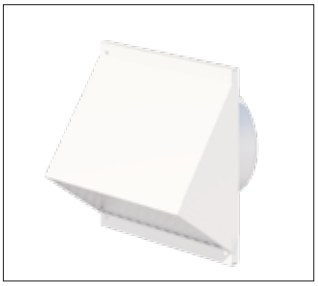
Gravity grille to be installed in the wall.
It prevents the return of air and objects from outside. Entirely made of UV-resistant shockproof thermoplastic resin.

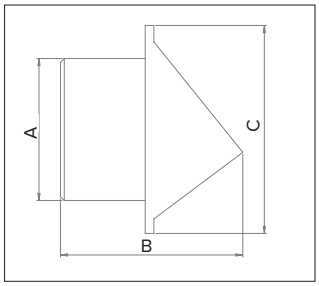


	CODE	ØA	B	C	D
GGR 100	22332	99	8	28	140
GGR 120/125	22333	119	8	28	160
GGR 150/160	22334	155	8	28	198
GGR 200	22335	199	14	28	254
GGR 250	22336	249	14	28	299
GGR 315	22337	324	14	28	391

Dimensions in mm

Windproof grille made of zinc-coated and powder-coated sheet metal for WDG system, connection diameter from 125 to 180. Equipped with anti-bird protection.





	CODE	A	B	C
GGR-WDG Ø125	26041	125	194	233
GGR-WDG Ø150	26042	150	194	233
GGR-WDG Ø160	26043	160	194	233
GGR-WDG Ø180	26044	180	200	268

Dimensions in mm

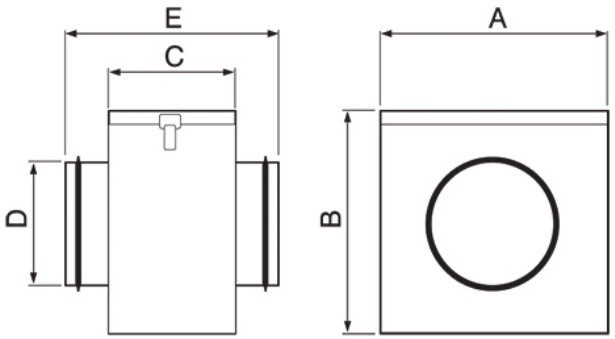
FILTER BOX AND HEATERS

FILTERS

The AF range air filters have been designed to enable remote filtration in forced ventilation systems and especially to be coupled to ventilation units. The filter media is composed of fibers coated with a highly adhesive substance to improve the collection of dust. A metal wire structure keeps the mattress flat to facilitate the uniform passage of air. The container is made of zinc-coated steel with an inspection hatch that can be easily opened for the ordinary maintenance of the filter elements. The connection with the ducts is provided with circular joints with unified diameters of 100-125-150-160-200-250-315 mm (DIN 24145).

- Intended for indoor environments with max temperature of 60 °C.
- They have the function of separating ordinary impurities such as: dust, fluff, dirt, etc.
- It is connected to the system by forced insertion on two cylindrical zinc-coated steel connections with built-in circular T-shaped rubber gaskets.

DIMENSIONS

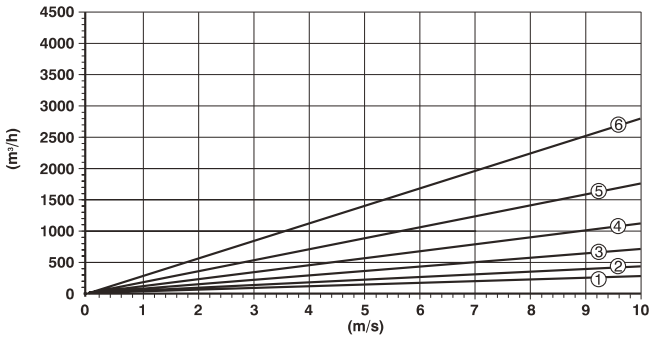


	CODE	A	B	C	ØD	E	KG
AF 100	22793	210	170	125	100	227	2.1
AF 125	22794	220	205	145	125	252	2.1
AF 150	22799	270	235	160	150	267	2.3
AF 160	22795	270	235	160	160	267	2.3
AF 200	22787	320	275	185	200	302	3.5
AF 250	22788	355	320	235	250	352	3.5
AF 315	22789	430	390	335	315	452	6.1

Dimensions in mm

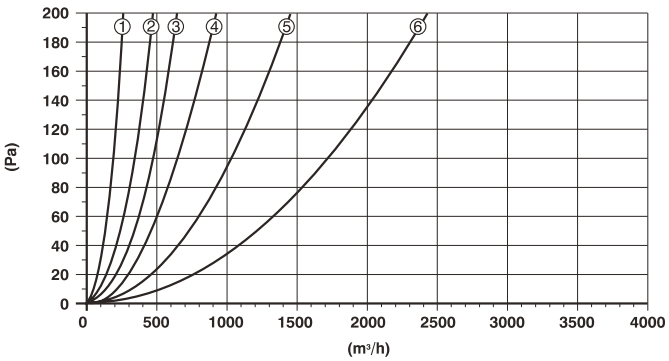
CURVES

Graph to calculate the air flow rate based on the average speed.



① AF - 100
② AF - 125
③ AF - 150 AF - 160
④ AF - 200
⑤ AF - 250
⑥ AF - 315

Initial pressure drop curves, filtration class G4.

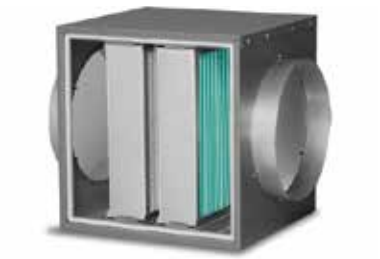


① AF - 100
② AF - 125
③ AF - 150 AF - 160
④ AF - 200
⑤ AF - 250
⑥ AF - 315

FILTER BOX AND HEATERS

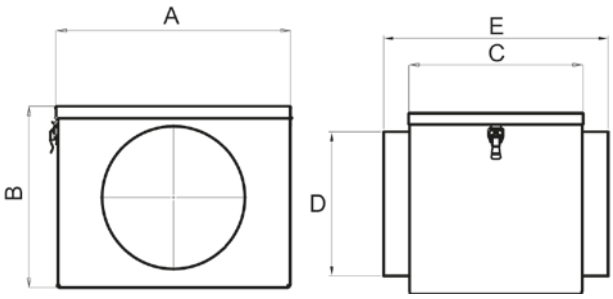
FILTERS

The FB range air filters have been designed to enable remote filtration in forced ventilation systems. These appliances have the function of separating ordinary impurities such as: dust, fluff, dirt, etc. In the case of use in combination with products already originally equipped with filters, in order not to compromise performance, we recommend removing them upon installation.
The filter media is composed of composite polypropylene (filter F7). The container is made of zinc-coated steel with an inspection hatch that can be easily opened for the ordinary maintenance of the filter elements. The connection with the ducts is provided with circular joints with unified diameters of 200-250-315-355-450 mm (DIN 24145). The FB range air filters are intended for use in indoor environments with a maximum temperature of 70 °C (with F7 filter).



- Intended for use in indoor environments with a maximum temperature of 70 °C (with F7 filter)
- Filtration class: F7;
- Filter media: non-flammable synthetic microfibers
- Maximum operating temperature: 70 °C
- It is connected to the system by forced insertion on two cylindrical zinc-coated steel connections with built-in circular T-shaped rubber gaskets.

DIMENSIONS

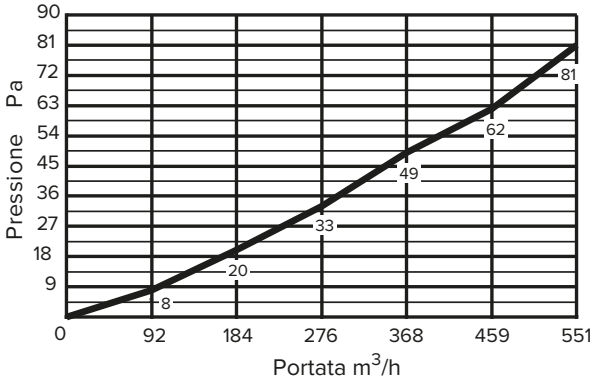


	CODE	A	B	C	D	E	KG
FB 500 Ø 200	24139	240	285	300	200	390	6.5
FB 800 Ø 250	24140	410	315	300	250	440	9
FB 1200 Ø 315	24141	470	370	600	315	735	16
FB 2000 Ø 315	24142	560	485	600	315	735	20
FB 2500/3000 Ø 350	24143	630	500	700	355	830	27
FB 4000/5000 Ø 450	24145	710	608.5	900	450	1080	34
FB 6000 Ø 450	24147	710	805	900	450	1080	40

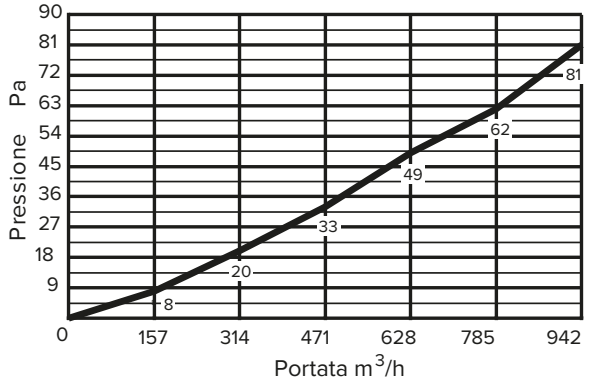
Dimensions in mm

CURVES

FB 500- F7



FB 800- F7

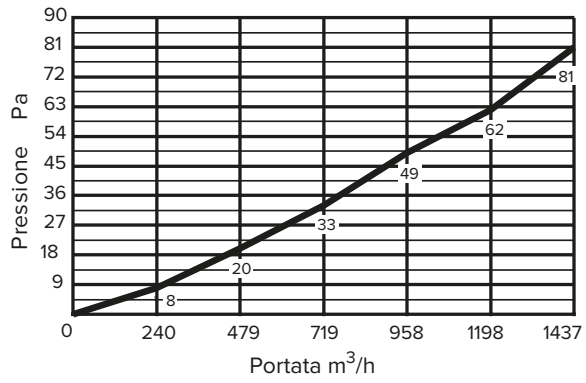


FILTER BOX AND HEATERS

FILTERS

CURVES

FB 1200 - F7



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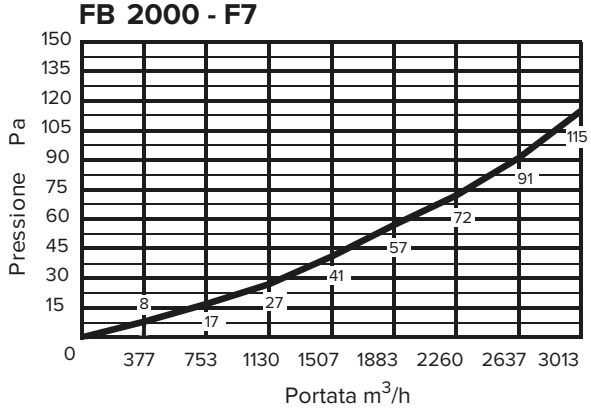
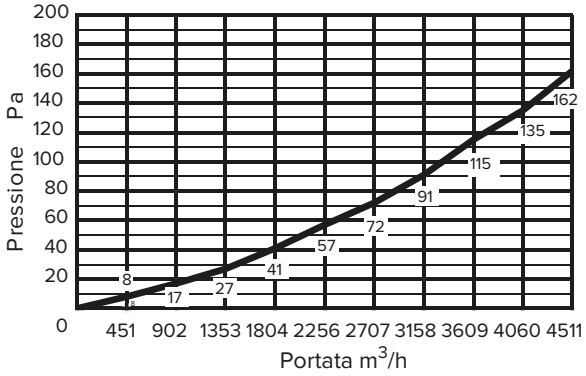
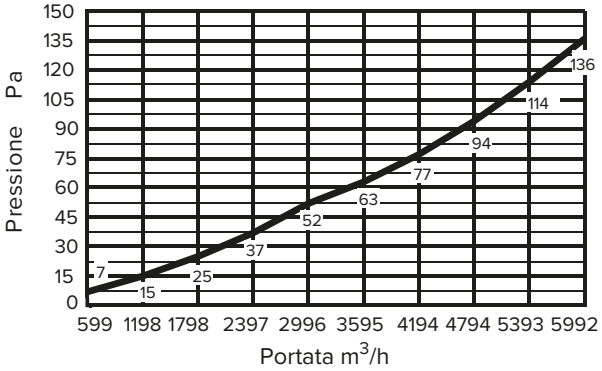


FB 2500/3000 -F7



FB 4000/5000 - F7



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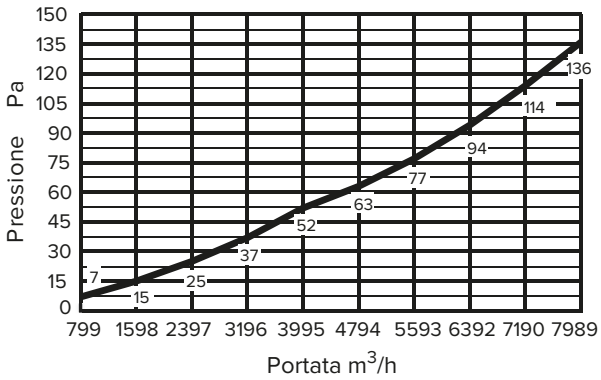


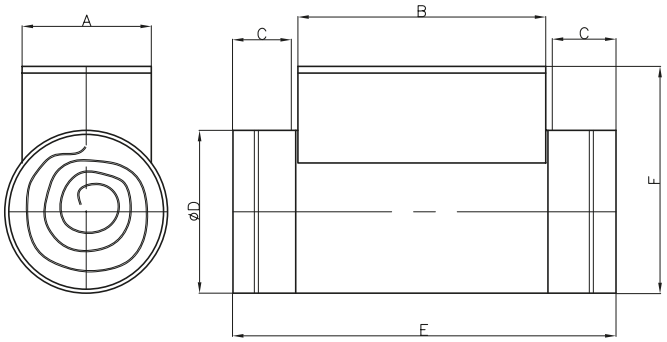
FILTER BOX AND HEATERS

HEATERS

Heater to be installed in the ventilation system, always downstream of the fan, and/or the noise attenuator/ air filter. To optimise the efficiency of the heater it is possible, by means of regulators, to adjust the thermal power according to the desired temperature in the room. The installation must always be carried out in indoor spaces, with an ambient temperature between -30 °C and +50 °C, with free air, without dust, fluff, and chemical impurities.
The casing is made of zinc-coated sheet metal with T-shaped rubber gaskets on both sides, diameters for standard circular ducts 100 125-150-160-200-250-315 mm (DIN 24145).

- Equipped with circular section electric batteries consisting of armoured elements made of stainless steel.
- To be used in indoor places with ambient temperature from +30 °C to +50 °C with free air without dust or chemical impurities.
- Degree of protection of the electrical connection box IP43.
- Does not require special maintenance except for periodic operating checks.

DIMENSIONS



	CODE	A	B	C	ØD	E	F	KG
ELECTRIC HEATER 500	21630	160	300	50	121	400	223	3.6
ELECTRIC HEATER 750	22735	151	300	50	146	400	247	4.0
ELECTRIC HEATER 1200	21622	161	300	50	156	400	245	4.4
ELECTRIC HEATER 2400	21623	161	300	50	156	400	245	4.9

Dimensions in mm

TECHNICAL DATA

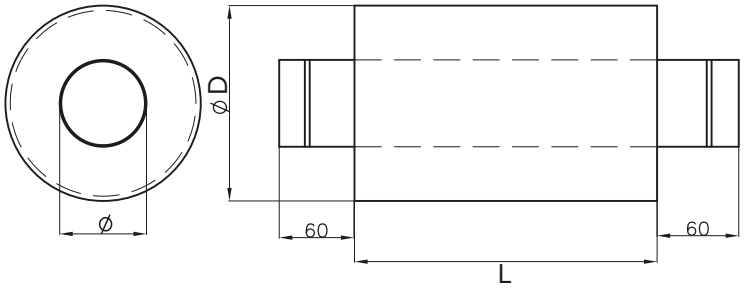
	CODE	(KW)	NO. OF PHASES	NO. OF SECTIONS	(A)	(V)	(HZ)	(IP)
ELECTRIC HEATER 500	21630	0.5	1	1/1	2.2	220-240	50/60	40
ELECTRIC HEATER 750	22735	0.75	1	1/1	3.3	220-240	50/60	40
ELECTRIC HEATER 1200	21622	1.2	1	2/2	13	220-240	50/60	40
ELECTRIC HEATER 2400	21623	2.4	1	1/1	4.3	220-240	50/60	40

NOISE ATTENUATOR

Attenuator to be installed in the ventilation system always after the fan and/or the filter box and/or the heater in the duct. Useful when a particularly low noise level is required.

- Operating temperature from -30 °C to +60 °C.
- Maximum operating pressure: 2000 Pa.
- Maximum air speed: 25 m/s.
- Internal pipe made with spiral of perforated aluminium sheet, 0.1 mm thick.
- PE film containment heads.
- Wool insulation, 40-mm thick basalt. Heat resistance R = 1.00 m2k/W.
- External spiral pipe in aluminum sheet, 0.1 mm thick.

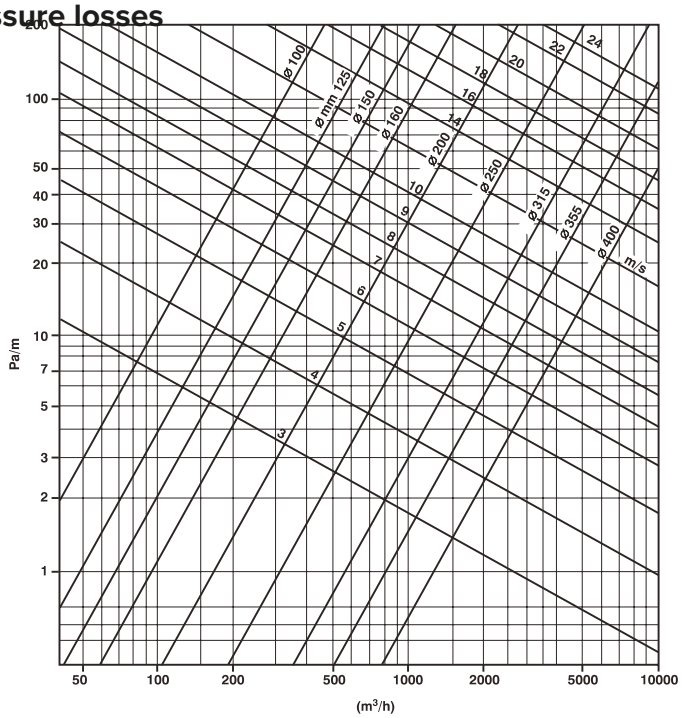
DIMENSIONS



	CODE	Ø	ØD	L	KG
NA 160	21425	260	160	1000	9.1
NA 315	21428	415	315	1000	15.2

Dimensions in mm

Graph to calculate pressure losses

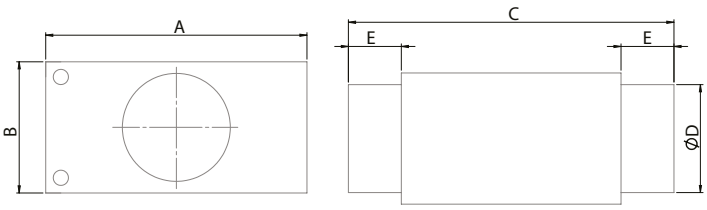


BATTERIES
HOT AND COLD

HOT BATTERY

Hot water battery for duct.

DIMENSIONS



	CODE	A	B	C	ØD	KG
DHW 500 Ø 200	24148	465	320	700	200	4
DHW 800 Ø 250	24149	490	350	700	250	4.5
DHW 1500 Ø 315	24150	650	400	700	315	7.2
DHW 3000 Ø 350	24151	900	530	700	350	10
DHW 5000 Ø 450	24152	1180	740	700	450	17

Dimensions in mm

HOT WATER BATTERY THERMAL YIELDS

TABLE KEY:

RH = Relative Humidity
Q = Air flow rate
A iT = Air inlet temp
A PΔ = Air pressure drop
A oT = Air outlet temp
Pow. = Power
W q = Water flow rate
W PΔ = Water pressure drops

DHW 500 - CODE 24148

AIR (70% RH)			WATER IN/OUT 80/70 °C				WATER IN/OUT 80/60 °C				WATER IN/OUT 60/40 °C				WATER IN/OUT 55/45 °C			
Q	A iT	A PΔ	A oT	Pow.	kW	W PΔ	A oT	Pow.	W q	W PΔ	A oT	Pow.	W q	W PΔ	A oT	Pow.	W q	W PΔ
m³/h	°C	Pa	°C	kW	m³/h	kPa	°C	kW	m³/h	kPa	°C	kW	m³/h	kPa	°C	kW	m³/h	kPa
430	-15	8	5.16	3.31	0.29	3.00	2.78	2.92	0.13	1.00	- 2.84	2.92	0.09	0.01	- 1.90	2.15	0.19	1.00
430	-10	8	9.10	3.08	0.27	3.00	6.79	2.71	0.12	1.00	1.35	1.83	0.08	0.01	2.17	1.96	0.17	1.00
430	-5	8	13.04	2.86	0.25	2.00	10.75	2.50	0.11	1.00	5.54	1.67	0.07	0.01	6.23	1.78	0.15	1.00
430	0	7	16.97	2.51	0.22	2.00	14.97	2.21	0.10	0.01	9.73	1.44	0.06	0.01	11.00	1.62	0.14	1.00
430	5	8	20.91	2.36	0.20	2.00	18.80	2.04	0.09	0.01	13.53	1.26	0.05	0.01	14.36	1.39	0.12	1.00
430	10	8	24.81	2.24	0.19	2.00	22.45	1.88	0.08	0.01	16.86	1.04	0.05	0.01	18.42	1.27	0.11	1.00

DHW 800 - CODE 24149

AIR (70% RH)			WATER IN/OUT 80/70 °C				WATER IN/OUT 80/60 °C				WATER IN/OUT 60/40 °C				WATER IN/OUT 55/45 °C			
Q	A iT	A PΔ	A oT	Pow.	kW	W PΔ	A oT	Pow.	W q	W PΔ	A oT	Pow.	W q	W PΔ	A oT	Pow.	W q	W PΔ
m³/h	°C	Pa	°C	kW	m³/h	kPa	°C	kW	m³/h	kPa	°C	kW	m³/h	kPa	°C	kW	m³/h	kPa
800	-15	20	9.01	7.34	0,631	16.0	6.51	6.57	0,283	4.00	0.57	4.76	0,205	2.00	1.60	5.07	0,436	8.00
800	-10	20	12.84	6.85	0,589	14.0	10.33	6.10	0,262	3.00	4.33	4.30	0,185	2.00	5.42	4.62	0,398	7.00
800	-5	20	16.63	6.37	0,548	12.0	13.04	5.32	0,229	3.00	8.06	3.85	0,166	1.00	9.23	4.19	0,361	6.00
800	0	18	20.97	5.76	0,496	10.0	18.37	5.05	0,217	2.00	12.13	3.33	0,143	1.00	13.04	3.58	0,308	4.00
800	5	19	24.10	5.45	0,469	9.0	20.91	4.54	0,195	2.00	15.29	2.94	0,126	1.00	16.63	3.32	0,286	4.00
800	10	19	27.78	5.00	0,430	8.0	24.85	4.17	0,179	2.00	19.11	2.56	0,110	1.00	20.28	2.89	0,248	3.00

BATTERIES

HOT AND COLD

HOT WATER BATTERY THERMAL YIELDS

TABLE KEY:

RH = Relative Humidity
Q = Air flow rate
A iT = Air inlet temp
A PΔ = Air pressure drop
A oT = Air outlet temp
Pow. = Power
W q = Water flow rate
W PΔ = Water pressure drops

DHW 1500 - CODE 24150

AIR (70% RH)			WATER IN/OUT 80/70 °C				WATER IN/OUT 80/60 °C				WATER IN/OUT 60/40 °C				WATER IN/OUT 55/45 °C			
Q	A iT	A PΔ	A oT	Pow.	kW	W PΔ	A oT	Pow.	W q	W PΔ	A oT	Pow.	W q	W PΔ	A oT	Pow.	W q	W PΔ
m³/h	°C	Pa	°C	kW	m³/h	kPa	°C	kW	m³/h	kPa	°C	kW	m³/h	kPa	°C	kW	m³/h	kPa
1200	-15	14	12.16	12.45	1.07	18.00	9.37	11.17	0.48	4.00	2.63	8.08	0.35	2.00	3.35	8.41	0.72	9.00
1200	-10	13	15.85	11.63	1.00	16.00	13.01	10.36	0.45	4.00	6.23	7.30	0.31	2.00	7.04	7.67	0.59	7.00
1200	-5	13	19.41	10.79	0.93	14.00	16.63	9.56	0.41	3.00	9.80	6.45	0.28	2.00	10.73	6.95	0.60	6.00
1200	0	13	22.97	9.88	0.85	12.00	20.31	8.73	0.38	3.00	12.73	5.47	0.24	1.00	14.42	6.20	0.53	5.00
1200	5	13	26.54	9.22	0.79	10.00	22.79	7.61	0.33	2.00	16.67	5.00	0.22	1.00	18.11	5.61	0.48	4.00
1200	10	13	30.10	8.47	0.73	9.00	26.60	7.00	0.30	2.00	20.30	4.34	0.19	1.00	21.63	4.90	0.42	3.00
1800	-15	26	6.88	15.04	1.29	25.00	4.50	13.41	0.58	6.00	- 0.96	9.65	0.42	3.00	- 0.15	10.21	0.88	12.00
1800	-10	26	10.78	14.03	1.21	22.00	8.42	12.43	0.54	5.00	2.96	8.75	0.38	3.00	3.79	9.31	0.80	11.00
1800	-5	26	14.68	13.05	1.12	19.00	12.34	11.49	0.49	4.00	6.80	7.83	0.34	2.00	7.73	8.44	0.73	9.00
1800	0	25	18.67	12.04	1.04	17.00	16.27	10.50	0.45	4.00	10.70	6.90	0.30	2.00	11.67	7.53	0.65	7.00
1800	5	25	22.40	11.17	0.96	15.00	20.01	9.64	0.41	3.00	13.92	5.73	0.25	1.00	15.55	6.78	0.58	6.00
1800	10	17	26.21	10.24	0.88	12.00	23.10	8.28	0.36	2.00	18.11	5.12	0.22	1.00	19.32	5.89	0.51	5.00

DHW 3000 - CODE 24151

AIR (70% RH)			WATER IN/OUT 80/70 °C				WATER IN/OUT 80/60 °C				WATER IN/OUT 60/40 °C				WATER IN/OUT 55/45 °C			
Q	A iT	A PΔ	A oT	Pow.	kW	W PΔ	A oT	Pow.	W q	W PΔ	A oT	Pow.	W q	W PΔ	A oT	Pow.	W q	W PΔ
m³/h	°C	Pa	°C	kW	m³/h	kPa	°C	kW	m³/h	kPa	°C	kW	m³/h	kPa	°C	kW	m³/h	kPa
2500	-15	16	9.91	23.78	2.05	28.00	7.53	21.52	0.93	7.00	2.21	16.43	0.71	4.00	3.30	17.47	1.50	16.00
2500	-10	16	14.78	23.33	2.00	27.00	11.35	20.01	0.86	6.00	5.86	14.87	0.64	4.00	6.69	15.90	1.37	14.00
2500	-5	16	18.50	21.64	1.86	24.00	15.16	18.57	0.80	5.00	8.79	12.70	0.55	3.00	10.60	14.37	1.24	12.00
2500	0	15	22.27	19.95	1.72	21.00	18.97	17.00	0.73	5.00	12.73	11.40	0.49	2.00	14.28	12.79	1.10	9.00
2500	5	15	25.74	18.50	1.59	18.00	22.79	15.86	0.68	4.00	16.67	10.41	0.45	2.00	17.76	11.38	0.98	8.00
2500	10	15	29.32	16.97	1.46	16.00	26.60	14.59	0.63	3.00	20.20	8.97	0.39	1.00	21.29	9.92	0.85	6.00
3000	-15	22	7.53	25.82	2.22	33.00	5.16	23.10	0.99	8.00	0.54	17.81	0.77	5.00	1.56	18.98	1.63	19.00
3000	-10	21	11.35	24.01	2.07	29.00	9.10	21.48	0.92	7.00	4.36	16.15	0.69	4.00	5.37	17.30	1.49	16.00
3000	-5	21	16.31	23.56	2.03	28.00	13.04	19.93	0.86	6.00	8.10	14.48	0.62	3.00	9.12	15.60	1.34	13.00
3000	0	20	20.22	21.73	1.87	24.00	16.97	18.25	0.79	5.00	11.23	12.07	0.52	2.00	12.94	13.91	1.20	11.00
3000	5	20	23.82	20.14	1.73	20.00	20.91	17.03	0.73	5.00	15.29	11.02	0.47	2.00	16.55	12.36	1.06	9.00
3000	10	18	27.57	18.85	1.59	18.00	24.85	15.64	0.67	4.00	19.23	9.72	0.42	2.00	20.25	10.79	0.93	7.00

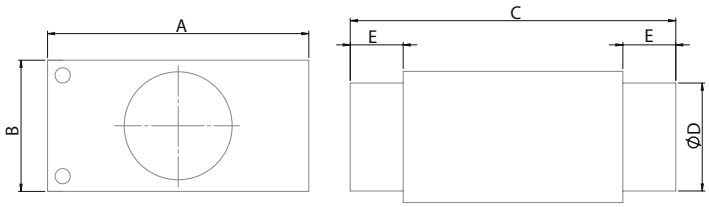
DHW 5000 - CODE 24152

AIR (70% RH)			WATER IN/OUT 80/70 °C				WATER IN/OUT 80/60 °C				WATER IN/OUT 60/40 °C				WATER IN/OUT 55/45 °C			
Q	A iT	A PΔ	A oT	Pow.	kW	W PΔ	A oT	Pow.	W q	W PΔ	A oT	Pow.	W q	W PΔ	A oT	Pow.	W q	W PΔ
m³/h	°C	Pa	°C	kW	m³/h	kPa	°C	kW	m³/h	kPa	°C	kW	m³/h	kPa	°C	kW	m³/h	kPa
4000	-15	12	13.89	44.13	3.80	23.00	11.15	39.96	1.72	6.00	4.13	29.22	1.26	3.00	5.10	30.71	2.64	12.00
4000	-10	11	17.48	41.21	3.54	21.00	13.60	35.39	1.52	5.00	7.64	24.46	1.14	3.00	8.67	28.00	2.41	10.00
4000	-5	11	21.04	38.38	3.30	18.00	17.29	32.84	1.41	4.00	10.42	22.72	0.98	2.00	12.23	25.39	2.18	9.00
4000	0	11	24.67	35.37	3.04	16.00	20.97	30.06	1.29	3.00	14.23	20.40	0.88	2.00	15.79	22.64	1.95	7.00
4000	5	11	27.99	32.80	2.82	14.00	24.66	28.06	1.21	3.00	17.97	18.51	0.80	1.00	19.14	20.19	1.74	6.00
4000	10	11	31.41	30.11	2.59	12.00	28.35	25.81	1.11	3.00	21.33	15.93	0.69	1.00	22.52	17.61	1.52	5.00
5000	-15	17	9.91	47.57	4.09	27.00	7.05	43.03	1.85	6.00	1.98	32.44	1.40	4.00	3.08	34.53	2.97	15.00
5000	-10	16	13.60	44.24	3.81	23.00	11.35	40.02	1.71	6.00	4.85	27.85	1.20	3.00	6.67	31.42	2.70	13.00
5000	-5	16	17.29	41.05	3.53	20.00	15.16	37.13	1.60	5.00	8.79	25.40	1.09	3.00	10.41	28.39	2.44	11.00
5000	0	16	22.02	39.46	3.39	19.00	18.97	33.99	1.46	4.00	12.73	22.81	0.98	2.00	14.11	25.28	2.17	9.00
5000	5	16	24.66	35.07	3.02	15.00	22.79	31.73	1.36	4.00	16.50	20.51	0.88	2.00	17.60	22.48	1.93	7.00
5000	10	15	28.55	32.22	2.77	13.00	26.56	29.07	1.25	3.00	20.07	17.67	0.76	1.00	20.67	18.47	1.61	5.00
5800	-15	21	8.78	52.68	4.53	32.00	6.46	47.55	2.05	8.00	0.63	34.63	1.49	4.00	1.60	36.78	3.16	17.00
5800	-10	21	12.64	49.24	4.24	28.00	10.28	44.10	1.89	7.00	4.42	31.35	1.35	4.00	5.42	33.53	2.88	14.00
5800	-5	20	16.44	45.80	3.94	25.00	13.04	38.54	1.66	6.00	8.18	28.17	1.21	3.00	9.22	30.39	2.61	12.00
5800	0	20	20.35	42.29	3.64	22.00	16.97	35.28	1.52	5.00	11.23	23.34	1.00	2.00	13.01	27.04	2.33	10.00
5800	5	20	23.96	39.23	3.37	19.00	20.91	32.92	1.42	4.00	15.29	21.30	0.92	2.00	16.63	24.07	2.07	8.00
5800	10	20	27.68	36.00	3.10	16.00	24.85	30.25	1.30	3.00	19.27	18.87	0.81	1.00	20.30	20.98	1.81	6.00

COLD BATTERY

Attenuator to be installed in the ventilation system always after the fan and/or the filter box and/or the heater in the duct. Useful when a particularly low noise level is required.

DIMENSIONS



	CODE	A	B	C	ØD	E	KG
DCW 250 Ø 150	24146	-	-	-	150	-	-
DCW 500 Ø 200	24153	465	320	700	200	150	8.5
DCW 800 Ø 250	24154	520	350	700	250	150	10.8
DCW 1500 Ø 315	24155	655	405	700	315	150	18
DCW 3000 Ø 350	24156	900	540	700	350	150	23.4
DCW 5000 Ø 450	24157	1250	740	700	450	150	43

Dimensions in mm

COLD WATER BATTERY THERMAL YIELDS

TABLE KEY:

RH = Relative Humidity
Q = Air flow rate
A iT = Air inlet temp
A PΔ = Air pressure drop
A oT = Air outlet temp
Pow. = Power
W q = Water flow rate
W PΔ = Water pressure drops

DCW 250 - CODE 24146

AIR (80% RH)		
Q m³/h	A iT °C	A PΔ Pa
300	25	38
300	30	43
250	25	28
250	30	32
200	25	20
200	30	23
150	25	13
150	30	15
100	25	6
100	30	8

WATER IN/OUT 7/12 °C				
A oT °C	Pow. kW	kW m³/h	W PΔ kPa	condensate l/h
17.1	1.84	0.32	18.6	1.5
19.9	2.65	0.45	35.7	2.4
16.6	1.65	0.28	14.5	1.4
19.2	2.38	0.41	29.8	2.1
16.0	1.40	0.24	10.8	1.2
18.5	2.05	0.35	22.1	1.8
15.2	1.16	0.20	7.7	0.9
17.4	1.69	0.29	15.5	1.5
14.0	0.86	0.15	4.5	0.7
16.0	1.26	0.22	9.2	1.2

WATER IN/OUT 55/45 °C				
A oT °C	Pow. kW	Q w m³/h	W PΔ kPa	condensate l/h
20.9	0.90	0.16	4.9	0.7
23.6	1.74	0.30	16.2	1.6
20.6	0.79	0.16	3.8	0.6
23.3	1.54	0.30	13.2	1.4
20.4	0.67	0.14	2.9	0.5
22.6	1.34	0.27	9.8	1.2
19.9	0.54	0.12	1.7	0.4
21.9	1.10	0.23	6.8	1.0
19.3	0.39	0.07	1.1	0.3
20.9	0.82	0.14	3.8	0.7

DCW 500 - CODE 24153

AIR (50% RH)			WATER IN/OUT 7/12 °C			
Q m³/h	A iT °C	A PΔ Pa	A oT °C	Pow. kW	kW m³/h	W PΔ kPa
430	25	30	16.54	1.48	0.26	3.00
430	30	34	19.04	2.51	0.43	7.00
430	35	34	21.46	3.83	0.66	14.00

AIR (70% RH)			AIR (70% RH)				WATER IN/OUT 55/45 °C			
W °m³/h	A iT °C	A PΔ Pa	A oT °C	Pow. kW	W q m³/h	W PΔ kPa	A oT °C	Pow. kW	W q m³/h	W PΔ kPa
430	-10	24	25.85	5.78	0.25	2.00	26.54	5.89	0.51	7.00
430	0	21	30.62	4.52	0.19	1.00	31.71	4.68	0.40	5.00
430	10	22	34.36	3.68	0.18	1.00	34.96	3.77	0.32	3.00

BATTERIES
HOT AND COLD

COLD WATER BATTERY THERMAL YIELDS

TABLE KEY:

RH = Relative Humidity
Q = Air flow rate
A iT = Air inlet temp
A PΔ = Air pressure drop
A oT = Air outlet temp
Pow. = Power
W q = Water flow rate
W PΔ = Water pressure drops

DCW 800 - CODE 24154

AIR (50% RH)			WATER IN/OUT 7/12 °C				AIR (70% RH)			AIR (70% RH)				WATER IN/OUT 55/45 °C			
Q	A iT	A PΔ	A oT	Pow.	kW	W PΔ	W	A iT	A PΔ	A oT	Pow.	W q	W PΔ	A oT	Pow.	W q	W PΔ
m³/h	°C	Pa	°C	kW	m³/h	kPa	°m³/h	°C	Pa	°C	kW	m³/h	kPa	°C	kW	m³/h	kPa
800	25	47	16.96	2.64	0.45	9.00	800	-10	36	24.10	10.23	0.44	7.00	24.92	10.47	0.90	0.90
800	30	52	19.63	4.44	0.76	22.00	800	0	32	29.12	8.00	0.34	4.00	29.43	8.43	0.73	0.73
800	35	53	22.31	6.68	1.15	45.00	800	10	33	32.86	6.31	0.27	3.00	33.67	6.54	0.56	0.56

DCW 1500 - CODE 24155

AIR (50% RH)			WATER IN/OUT 7/12 °C				AIR (70% RH)			AIR (70% RH)				WATER IN/OUT 55/45 °C			
Q	A iT	A PΔ	A oT	Pow.	kW	W PΔ	W	A iT	A PΔ	A oT	Pow.	W q	W PΔ	A oT	Pow.	W q	W PΔ
m³/h	°C	Pa	°C	kW	m³/h	kPa	°m³/h	°C	Pa	°C	kW	m³/h	kPa	°C	kW	m³/h	kPa
1200	25	46	16.02	4.36	0,751	10.00	1200	-10	38	27.60	16.92	0,728	7.00	28.17	17.17	1,477	26.00
1200	30	49	18.29	7.27	1,251	24.00	1200	0	33	32.23	13.28	0,571	5.00	32.29	13.31	1,145	17.00
1200	35	48	20.56	10.79	1,856	49.00	1200	10	35	35.23	10.63	0,457	3.00	35.95	10.93	0,940	12.00
1800	25	94	17.18	5.48	0,943	15.00	1800	-10	76	22.35	21.84	0,939	12.00	23.29	22.47	1,932	42.00
1800	30	102	19.94	9.05	1,556	36.00	1800	0	67	27.73	17.14	0,737	8.00	28.17	17.42	1,498	27.00
1800	35	100	22.66	13.48	2,318	73.00	1800	10	71	31.75	13.75	0,591	5.00	32.59	14.27	1,228	19.00

DCW 3000 - CODE 24156

AIR (50% RH)			WATER IN/OUT 7/12 °C				AIR (70% RH)			AIR (70% RH)				WATER IN/OUT 55/45 °C			
Q	A iT	A PΔ	A oT	Pow.	kW	W PΔ	W	A iT	A PΔ	A oT	Pow.	W q	W PΔ	A oT	Pow.	W q	W PΔ
m³/h	°C	Pa	°C	kW	m³/h	kPa	°m³/h	°C	Pa	°C	kW	m³/h	kPa	°C	kW	m³/h	kPa
2500	25	59	16.74	8.29	1.43	4.00	2500	-10	45	26.67	29.16	1.25	2.00	28.51	30.86	2.65	9.00
2500	30	66	19.35	13.98	2.41	10.00	2500	0	41	29.23	25.10	1.08	2.00	30.92	26.55	2.28	7.00
2500	35	67	21.92	21.26	3.66	21.00	2500	10	42	33.11	19.94	0.86	1.00	34.17	20.86	1.79	5.00
3000	25	81	17.25	9.17	1.58	5.00	3000	-10	62	25.04	33.20	1.43	3.00	25.73	33.96	2.92	11.00
3000	30	92	20.07	15.36	2.64	12.00	3000	0	56	27.73	28.57	1.23	2.00	29.20	30.09	2.59	9.00
3000	35	94	22.84	23.41	4.03	24.00	3000	10	57	31.86	22.64	0.97	2.00	33.05	23.87	2.05	6.00

DCW 5000 - CODE 24157

AIR (50% RH)			WATER IN/OUT 7/12 °C				AIR (70% RH)			AIR (70% RH)				WATER IN/OUT 55/45 °C			
Q	A iT	A PΔ	A oT	Pow.	kW	W PΔ	W	A iT	A PΔ	A oT	Pow.	W q	W PΔ	A oT	Pow.	W q	W PΔ
m³/h	°C	Pa	°C	kW	m³/h	kPa	°m³/h	°C	Pa	°C	kW	m³/h	kPa	°C	kW	m³/h	kPa
4000	25	34	15.48	16.25	2.80	7.00	4000	-10	27	30.49	60.73	2.61	5.00	30.95	61.43	5.28	18.00
4000	30	37	17.64	27.27	4.69	18.00	4000	0	23	33.73	46.34	1.99	3.00	34.91	47.96	4.12	12.00
4000	35	37	19.80	40.81	7.02	38.00	4000	10	25	38.86	37.72	1.62	2.00	37.55	38.69	3.33	8.00
5000	25	51	16.16	18.45	3.17	9.00	5000	-10	39	27.60	70.50	3.03	7.00	28.17	71.56	6.15	24.00
5000	30	55	18.57	30.97	5.33	23.00	5000	0	34	32.07	55.08	2.37	4.00	32.29	55.46	4.77	15.00
5000	35	56	21.00	46.41	7.98	47.00	5000	10	36	35.11	44.08	1.90	3.00	35.30	44.41	3.82	10.00
6000	25	66	16.60	20.06	3.45	11.00	6000	-10	51	25.80	77.86	3.35	8.00	26.45	79.27	6.82	29.00
6000	30	73	19.18	33.61	5.78	27.00	6000	0	44	30.50	60.76	2.61	5.00	30.92	61.60	5.30	18.00
6000	35	73	21.80	50.28	8.65	54.00	6000	10	46	33.98	48.02	2.07	3.00	34.17	48.40	4.16	12.00

REMOTE CONTROL PANEL

CB TOUCH LCD W Code 21933

Remote control panel with colour LCD graphic display which can be combined with VORTICE centralised residential heat recovery units.

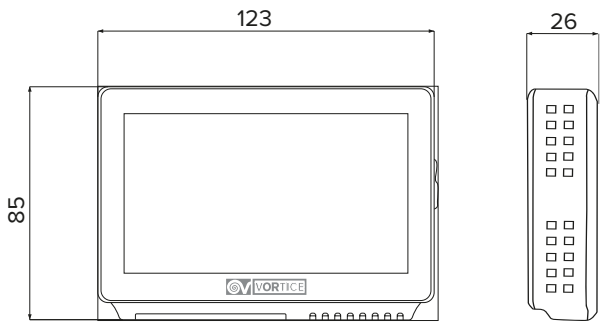
VORTICE COMPATIBLE RECOVERY UNITS:

- VORT HR 350 AVEL Code 12106
  VORT HR 300 NETI Code 10935
  VORT HR 450 AVEL D Code 12101
- VORT INVISIBLE MINI TOP Code 12214
  VORT HRI 200 PHANTOM BP Code 11291
  VORT HRI 350 PHANTOM BP Code 11293

TECHNICAL FEATURES:

- Colour touch display with 4.5” screen.
- Wall fixing plate without need for standard electrical boxes.
- Connection with the heat recovery unit via port at extra low safety 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 certified.

DIMENSIONS



Dimensions in mm

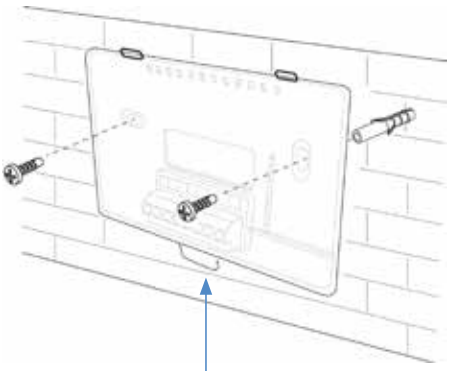
FEATURES AND SETTINGS

- 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.

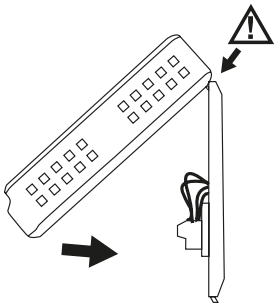
Note: The features and display data mentioned above may vary depending on the controlled mechanical ventilation unit with which the CB LCD TOUCH W control panel is combined.

INSTALLATION

Use the supplied screws and dowels to fix the rear plate to the wall



Recommended installation height = 1.50 m

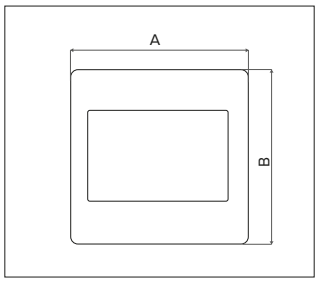


To mount the display correctly, align the two protrusions on the top part of the plate with the holes on the back of the display.

REGULATORS AND CONTROLLERS

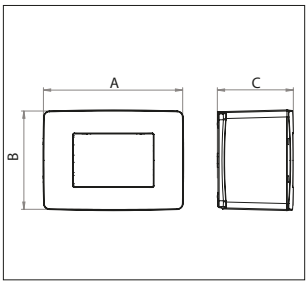
REGULATORS

Control box



	CODE	A	B
CB LCD D	21381	85	85

Remote control unit with wired LCD panel, for recessed installation.

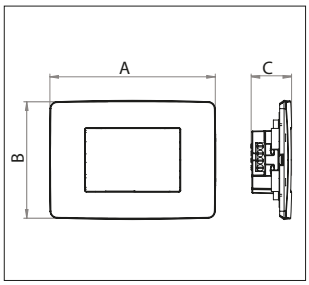


	CODE	A	B	C
CB LCD R	21194	116	83	29

Wall box for housing the control unit.

	CODE
WALL HRW RC BOX	22732

Remote control unit with wired LCD panel, for wall installation.



	CODE	A	B	C
CB LCD W	21195	116	83	65

Recessed box type 503 for housing the control unit.

	CODE
RECESSED BOX TYPE 503	22461

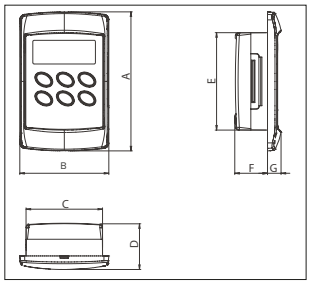
REGULATORS

Installer panel.

	CODE
SKP10 INSTALLER PANEL	22629

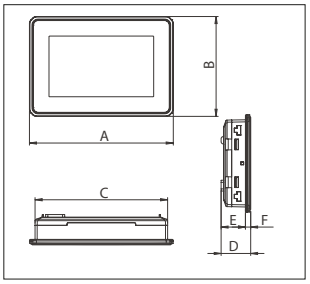
Radio frequency remote control with large display is the only command/control instrument of VORT PROMETEO PLUS HR 400; each function is activated, regulated and monitored through it.

Wired remote control unit (maximum distance from the unit 50 m) with LCD display for VORT HR 550 AVEL heat recovery unit. Vertical recessed installation in a standard 503 box. The interface, functions, keys etc. do not differ from the control unit installed in the machine.



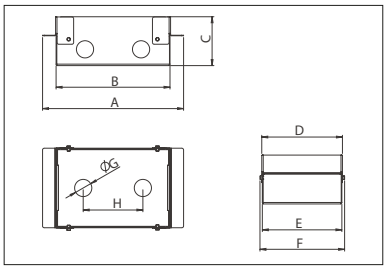
	CODE	A	B	C	D	E	F	G
TAL	21602	100	64	55	32.8	70	23.5	9.7

Wired remote control unit (maximum distance from the unit 150 m) with color LCD touch display for VORT HR 550 AVEL heat recovery unit. Wall or recessed installation in SI TNF box.



	CODE	A	B	C	D	E	F
TNF	21603	134	93	123.5	28.1	23.1	5

Recessed box, complete with brackets for fixing on plasterboard walls, for housing the TNF remote control panel.

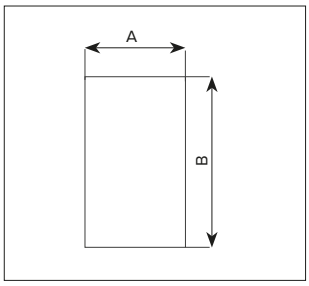


	CODE	A	B	C	D	E	F	ØG	H
SI TNF	21604	156	126	54	89.2	88	93.6	19	66

REGULATORS AND CONTROLLERS

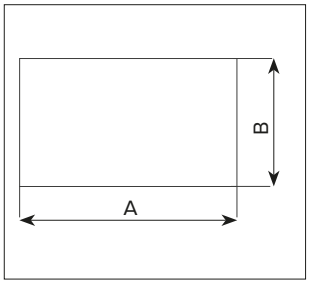
REGULATORS

Control panel with LCD display for remote control (wired connection) of the VORT HRI DH series heat recovery units.



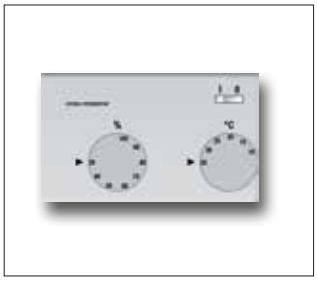
	CODE	A	B
RCP (HRI DH)	22607	62	102

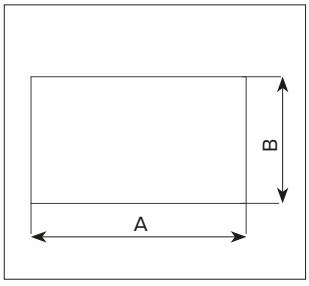
Electronic thermo-hygrostat for VORT HRI 260 DH and VORT HRI 500 DH heat recovery units. To be installed in the relevant room at a height between 1.2 and 1.5 m from the floor and at a maximum distance of 20 m from the combined heat recovery unit.



	CODE	A	B
ETRH (HRI DH)	22608	120	80

Mechanical hygrostat for VORT HRI 260 DH RC and VORT HRI 500 DH RC heat recovery units. To be installed in the relevant room at a height between 1.2 and 1.5 m from the floor.



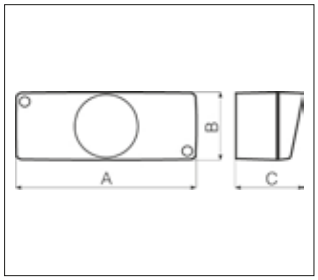


	CODE	A	B
MTRH (HRI DH)	22609	127	75

SENSORS

TEMPERATURE DETECTOR

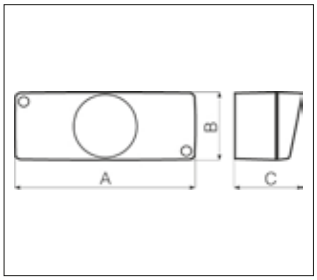
Controls the ambient air temperature: the fan is automatically activated when it detects an adjustable temperature with an external trimmer from 10° to 40° higher than the set threshold value.



	CODE	A	B	C
C TEMP	12992	144	54	55.8

PRESENCE DETECTOR

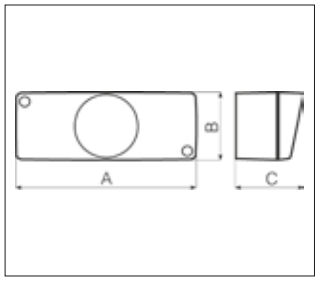
Checks for the presence of people in the environment: the fan is automatically activated when it detects the presence of a person within its range.



	CODE	A	B	C
C PIR	12998	144	54	55.8

POLLUTED AIR DETECTOR

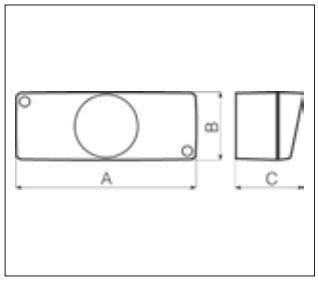
Controls the air quality in the presence of cigarette smoke, odours, and other pollutants: the extractor fan is automatically activated when it detects an odour concentration higher than the set value adjustable with an external trimmer.



	CODE	A	B	C
C SMOKE	12993	144	54	55.8

HUMIDITY DETECTOR

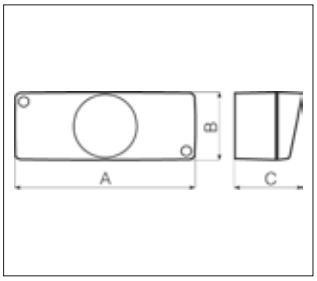
Checks the relative humidity of the air: the extractor fan is automatically activated when the percentage of relative humidity exceeds 65%.



	CODE	A	B	C
C HCS	12994	144	54	55.8

TIMER

Controls the operating time of the product to which it is connected: the extractor fan is automatically activated a few seconds after the light is turned on and continues to operate for a preset time, adjustable with an internal trimmer from 3 to 20 minutes, after the light is turned off.



	CODE	A	B	C
C TIMER	12999	144	54	55.8

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