VORT HRW MONO RANGE

DECENTRALIZED HEAT RECOVERY UNITS

A | **CENTRALIZED VENTILATION** | **WALL MOUNTED** | **UP TO 20 M²**

Decentralized ventilation unit with heat recovery specifically designed for the exchange of air in residential and commercial premises, newly built or renovated, characterized by high levels of thermal insulation. They can be installed on perimeter walls between 300 mm and 700 mm thick, available in a manual control version, with on-board controls or remote control, and an automatic control version with humidistat.

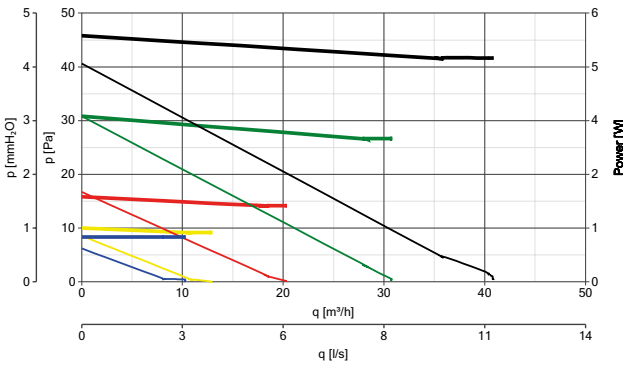
VORT HRW 20 MONO CODE 11634
VORT HRW 20 MONO HCS CODE 11631

REMOTE CONTROL UNIT
CODE 22693

VORT HRW 20 MONO RC CODE 11635

- Single room alternating flow MCV unit with a very high efficiency heat recovery unit (up to 90%), piping Ø 160mm, ceramic exchange pack.
- 5 adjustable speeds (from 18 to 40 m³/h).
- G3 Filters (F5 opt.).
- Controls on the machine.
- Relative humidity sensor on the machine (extraction at max speed if the set threshold is exceeded).

PERFORMANCE AND ABSORPTION



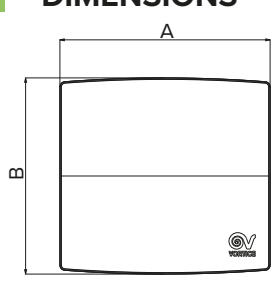
TECHNICAL DATA

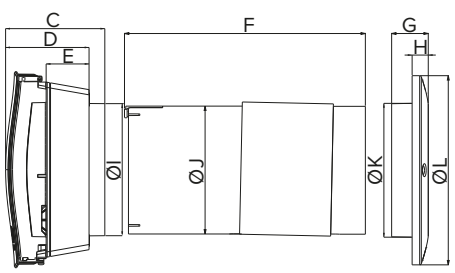
PRODUCT	CODE	Nom. Ø (mm)	(m³/h)	(W)	(PA)	Lp [dB (A)] 3m
VORT HRW 20 MONO	11634	160	41	5.5	40.6	23.6
VORT HRW 20 MONO RC	11635	160	41	5.5	40.6	23.6
VORT HRW 20 MONO HCS	11631	160	41	5.5	40.6	23.6

CONSUMPTION CURVES:
- 5th sp. (max)
- 4th sp.
- 3th sp.
- 2th sp.
- 1th sp. (min)

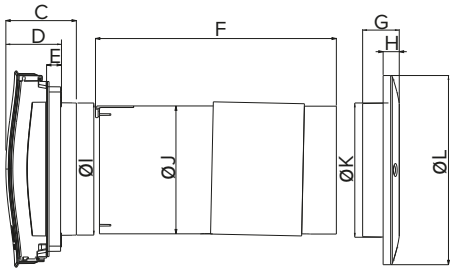
PERFORMANCE CURVES:
- 5th sp. (max)
- 4th sp.
- 3th sp.
- 2th sp.
- 1th sp. (min)

DIMENSIONS





VORT HRW 20 MONO (code 11634)
VORT HRW 20 MONO HCS (code 11631)



VORT HRW 20 MONO RC (code 11635)

Dimensions in mm

PRODUCTS	A	B	C	D	E	F	G	H	ØI	ØJ	ØK	ØL
VORT HRW 20 MONO	240	224	113	95	49	275	42	18	151	146	153	216
VORT HRW 20 MONO RC	240	224	80	64	17	275	42	18	151	146	153	216
VORT HRW 20 MONO HCS	240	224	113	95	49	275	42	18	151	146	153	216

ENERGY DATA

	UNIT OF MEASURE	VORT HRW 20 MONO
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	-39.8
SPECIFIC ENERGY CONSUMPTION SEC (COLD CLIMATE)		-83.3
SPECIFIC ENERGY CONSUMPTION SEC (WARM CLIMATE)		-14.9
DECLARED TYPE OF THE VENTILATION UNIT	-	UVR-U**
DRIVE TYPE	-	VM***
HRS TYPE HEAT EXCHANGER	-	recovery
THERMAL EFFICIENCY OF HEAT RECOVERY AT THE HRS REFERENCE FLOW RATE	%	90
MAXIMUM FLOW RATE	m³/h	31
TOTAL ELECTRIC POWER ABSORBED BY THE FAN AT MAXIMUM FLOW RATE	w	5.1
Sound LEVEL	LWA [dB(A)]	44
REFERENCE FLOW RATE	m³/s	0.006
REFERENCE PRESSURE DIFFERENCE	Pa	10
SPI****	W/(m³/h)	0.166
CTRL CONTROL FACTOR	-	1
CONTROL TYPE	-	manual
MAXIMUM PERCENTAGE OF INTERNAL LEAKAGE	%	NA*
MAXIMUM PERCENTAGE OF EXTERNAL LEAKAGE	%	NA*
MIXING RATE	-	NA*
POSITION AND DESCRIPTION OF THE VISUAL FILTER SIGNAL	-	NA*
AIR FLOW SENSITIVITY AT PRESSURE VARIATIONS OF ± 20 PA	-	0.48
INDOOR/OUTDOOR AIR SEALING	m³/h	0
AEC ANNUAL ELECTRICITY CONSUMPTION	kWh of electricity/year	229
TEMPERATE AHS ANNUAL HEATING SAVINGS	kWh of primary energy /year	4550
COLD AHS ANNUAL HEATING SAVINGS		8901
WARM AHS ANNUAL HEATING SAVING		2057

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

VORT HRW MONO RANGE

DECENTRALIZED HEAT RECOVERY UNITS

TECHNICAL CHARACTERISTICS

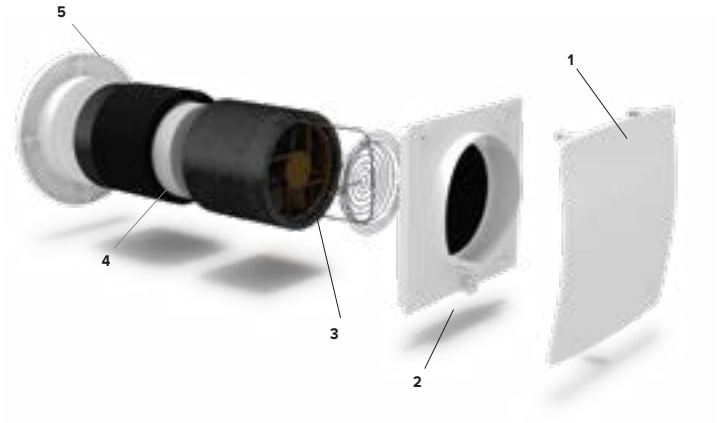
- **3 models**, also in version with relative humidity sensor, with integrated or remote controls, compatible with recessed housing in standard UNI 503 and DIN boxes.
- **Wall frames and internal panels in plastic resin** (ABS) self-extinguishing (V0) white resistant to impact and aging due to sun exposure ("UV resistant").
- The panels, **internally lined with thermal insulation material** to avoid condensation, are without frontal openings (perimeter intake and delivery) for better aesthetic integration in the target environment.
- In the VORT HRW 20 MONO and VORT HRW 20 MONO HCS models, **the frames house the controls**, the power supply of the fan motor and the relative humidity sensor and integrate the spigot of the ventilation duct.
  They are also prepared for in-wall wiring.
- **Casings in expanded polypropylene** (PPE), designed for housing in a hole, with a nominal diameter of 160 mm, drilled in the target perimeter wall.
- **External molded rubber grilles**, fit from the inside through the hole in the target wall, to simplify the installation of the product. They include an easily removable insect net to simplify cleaning operations.
- EC motor fans, to guarantee **very low consumption**, powered by low voltage and with shafts mounted on ball bearings. Characterized by 5 operating speeds, for the best compromise between air flow rate, consumption and sound emission, they are designed to work in a clockwise and anti-clockwise direction, and thus allow the product to operate in the Intake, Ventilation and Ventilation with heat recovery modes.
- **High efficiency storage heat exchangers**, made of ceramic material of the hexagonal cell type to maximize 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 extracted hot air and subsequently transfers most of this heat to the incoming cold renewal air.
- **Washable and easily accessible G3 filters** for maintenance/cleaning.
- **Pre-filters**, housed on the external side.
- The VORT HRW 20 MONO models, designed to **maximize the simplicity of installation**, are complete with controls, integrated in the wall frames, for switching the appliance on or off and selecting the operating mode and speed. They also include diagnostic and signaling LEDs concerning the filter status and the power supply of the fan motor. The VORT HRW 20 MONO HCS models differ from the previous ones for the presence of a relative humidity (RH) sensor, with an alternatively adjustable threshold value, at installation, of 60%, 70%, 80% or 90%, for switching the automatic operation to intake mode when the concentration of RH in the target environment exceeds the preset limit.
- The VORT HRW 20 MONO RC models, **designed to minimize the aesthetic impact** of the installed product, are characterized by a particularly thin wall frame (17 mm only). They are combined with the HRW RC remote control unit, (available as an accessory), with wired connection, wall-mountable in a recessed housing like a standard UNI 503 box.
- **Degree of dust and water protection**: IPX4.
- **Electrical insulation class**: II (grounding not required).

TECHNICAL DATA

PRODUCTS	CODE	V~50	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 HRW 20 MONO	11634	230	1.0 5.0	0.015 0.050	10 41	2.77 11.3	0.64 4.10	6.2 40.6	<16.0 23.6	30	2.55
VORT HRW 20 MONO RC	11635	230	1.0 5.5	0.015 0.050	10 41	2.77 11.3	0.64 4.10	6.2 40.6	<16.0 23.6	30	2.55
VORT HRW 20 MONO HCS	11631	230	1.0 5.5	0.015 0.050	10 41	2.77 11.3	0.64 4.10	6.2 40.6	<16.0 23.6	30	2.60

** Acoustic pressure measured from 3 m in free field, in compliance with ISO 3741. ** Maximum continuous operating temperature of the product.*

MAIN COMPONENTS



1 - Aesthetic plastic panel in self-extinguishing V0 polymer (ABS), internally covered with heat-insulating material.
2 - Wall frame of the Vort HRW 20 Mono and VORT HRW 20 MONO HCS models.
3 - EC brushless motor with high performance and extremely low consumption, with low sound emissions.
4 - Accumulation heat exchanger made of high efficiency ceramic material.
5 - Molded rubber external grille, mountable on the outside with dowels or internally insertable through the hole in the wall without having to use external scaffolding.
6 - 3-position slide selector for the ventilation mode: position 1 → heat recovery (cyclic inversion of the direction of rotation every 60 sec); position 2 → extraction; position 3 → delivery.
7 - Speed Knob: 0 = Off, 1-5 = fan speed.
8 - LED indicator for filter status: LED off → clean filters; LED on → filters to be cleaned or replaced.
9 - Humidity sensor only in HCS models (code 11631)

VORT HRW MONO RANGE

DECENTRALIZED HEAT RECOVERY UNITS

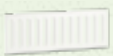
REGULATORS

MODELS	DESCRIPTION	DIMENSIONS	CODE	VORT HRW MONO code 11631	VORT HRW MONO code 11634	VORT HRW MONO code 11635	REMOTE CONTROL UNIT code 22693
	HRW RC Control box	**116x83x68.5**	**22693**			✓	
	**C TEMP** Temperature detector	**144x54x55.8**	**12992**		✓	✓	
	**C HCS** Humidity detector	**144x54x55.8**	**12994**		✓	✓	
	**WALL BOX HRW RC**	-	**22732**				✓
	**BUILT-IN BOX TYPE 503**	-	**22461**				✓

System components (description and data from page 96).

Regulators (description and data from page 152).

ACCESSORIES

MODELS	DESCRIPTION	CODE	VORT HRW MONO code 11631	VORT HRW MONO code 11634	VORT HRW MONO code 11635
	**PVC HRW PIPE** Rigid PVC duct (diameter 160 and length 700 mm) for wall mounting.	**22599**	✓	✓	✓
	**MWS** Metal grille	**21148**	✓	✓	✓
	**WA KIT** Circular or rectangular adapter for mounting the window grille.	**21191**	✓	✓	✓
	**WSG-INOX** Rectangular stainless steel grille for WA KIT	**21193**	✓	✓	✓
	**WSG-W** White rectangular grille for WA KIT	**21192**	✓	✓	✓