



# VORT HRI E RANGE

HEAT RECOVERY UNITS FOR FALSE CEILING MOUNTING

**A**

**CENTRALIZED VENTILATION**

**FOR FALSE CEILING**

**UP TO 240 M<sup>2</sup>**

Dual flow centralized ventilation unit with heat recovery for false ceiling mounting, ideal for ventilation of homes and residential and commercial premises with a surface of up to 120 m<sup>2</sup> (HRI- AND ONE) or 240 m<sup>2</sup> (HRI- TWO), characterized by high levels of thermal insulation.



- Suitable for false ceiling installation
- Internal and external structure in high density expanded polypropylene 40kg/m<sup>3</sup>
- Connection spigots to pipes with a nominal diameter of 125mm (HRI E ONE) and 150mm (HRI E TWO), backward curved centrifugal fans directly coupled to EC motors.
- High efficiency heat exchanger of the counter flow type in plastic material (PS).
- Automatic mechanical bypass, based on the temperature probes present in the machine (BP MODELS)
- Pair of filters Class ePM10 (M5) 50% (F5)
- Wired remote LCD control panel supplied as standard.
- Floor or wall installation. Can be integrated into residential home automation systems (ModBus protocol) on RS485 SLAVE mode.

## PERFORMANCE AND ABSORPTION

## TECHNICAL DATA

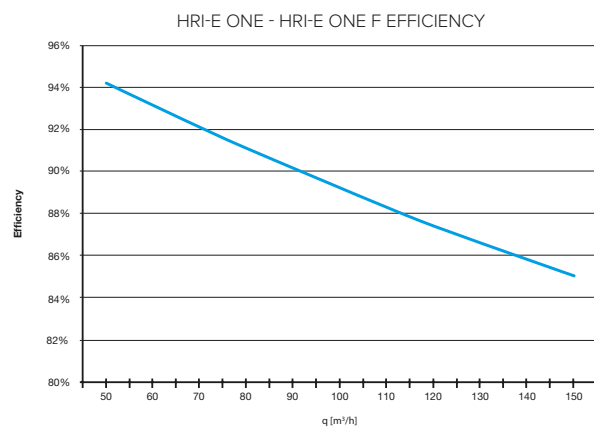
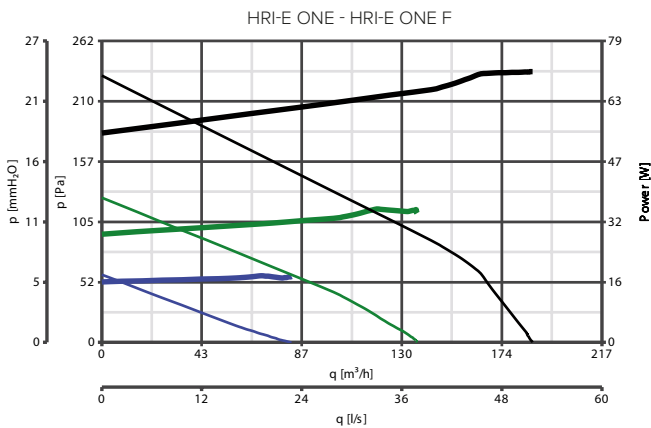
PRODUCTS	CODE	Nom. Ø (mm)	(m <sup>3</sup> /h)	(W)	(PA)	Lp [dB (A)] 3m
HRI-E ONE F	11218	125	187	71	232	23
HRI-E TWO F	11228	125	365	167	758	57

### CONSUMPTION CURVES

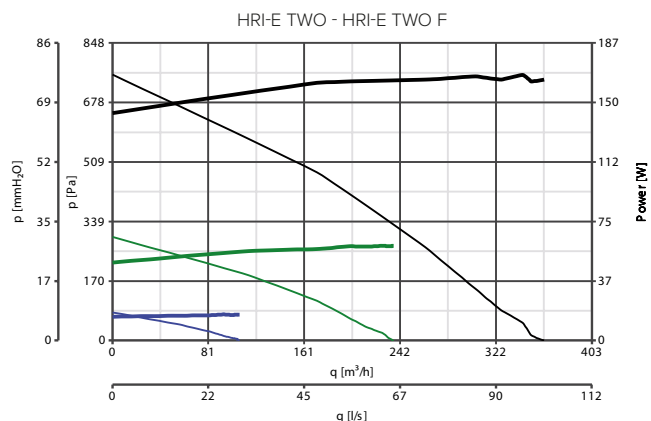
- max
- med
- min

### PERFORMANCE CURVES

- max
- med
- min

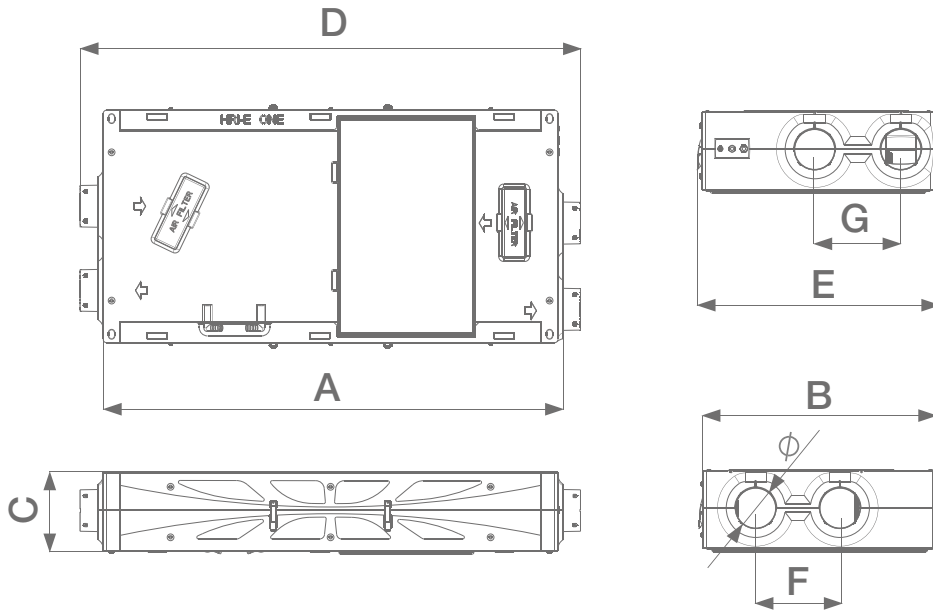


Test conditions according to EN 308: +5°C/70%; +25°C/28%.



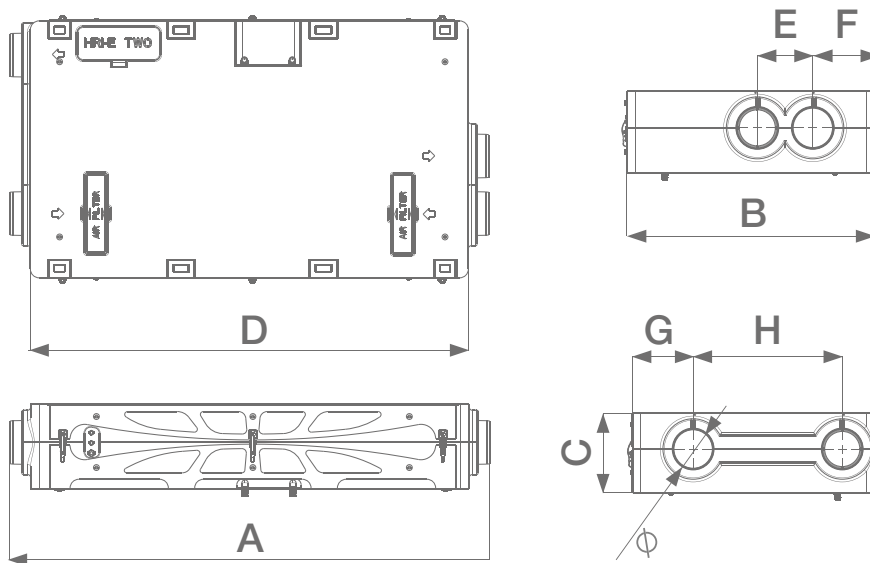
Test conditions according to EN 308: +5°C/70%; +25°C/28%.

**DIMENSIONS**



PRODUCT	CODE	A	B	C	D	E	F	G	Ø
HR-E ONE F	11218	1350	690	244	1485	720	250	256	123

*Dimensions in mm*



PRODUCT	CODE	A	B	C	D	E	F	G	H	Ø
HR-E TWO F	11228	1640	916	290	1500	197	238	238	543	149

*Dimensions in mm*



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## ENERGY DATA

	UNIT OF MEASURE	HRI-E ONE F	HRI-E TWO F
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/m <sup>2</sup> year	-38.0	-38.8
SPECIFIC ENERGY CONSUMPTION SEC (COLD CLIMATE)		-76.8	-77.1
SPECIFIC ENERGY CONSUMPTION SEC (WARM CLIMATE)		-13.1	-14.3
DECLARED TYPE OF THE VENTILATION UNIT	-	UVR-B**	UVR-B**
DRIVE TYPE	-	VSD***	VSD***
HRS TYPE HEAT EXCHANGER	-	recovery	recovery
THERMAL EFFICIENCY OF HEAT RECOVERY AT THE HRS REFERENCE FLOW RATE	%	89.8	87.5
MAXIMUM FLOW RATE	m <sup>3</sup> /h	134	335
TOTAL ELECTRIC POWER ABSORBED BY THE FAN AT MAXIMUM FLOW RATE	w	65.5	170.0
Sound LEVEL	LWA [dB(A)]	56	69
REFERENCE FLOW RATE	m <sup>3</sup> /s	0.0261	0.0651
REFERENCE PRESSURE DIFFERENCE	Pa	50	370
SPI****	W/(m <sup>3</sup> /h)	0.34648	0.28145
CTRL CONTROL FACTOR	-	0.85	0.85
CONTROL TYPE	-	centralized env.	centralized env.
MAXIMUM PERCENTAGE OF INTERNAL LEAKAGE	%	<1	6.7
MAXIMUM PERCENTAGE OF EXTERNAL LEAKAGE	%	3.9	2.5
MIXING RATE	-	NA*	NA*
POSITION AND DESCRIPTION OF THE VISUAL FILTER SIGNAL	-	see instruction booklet	see instruction booklet
AIR FLOW SENSITIVITY AT PRESSURE VARIATIONS OF ± 20 PA	-	NA*	NA*
INDOOR/OUTDOOR AIR SEALING	m <sup>3</sup> /h	NA*	NA*
AEC ANNUAL ELECTRICITY CONSUMPTION	kWh of electricity/year	359	300
TEMPERATE AHS ANNUAL HEATING SAVINGS	kWh of primary energy /year	4624	4562
COLD AHS ANNUAL HEATING SAVINGS		9046	8924
WARM AHS ANNUAL HEATING SAVING		2091	2063

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

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



**SOUND LEVELS**

HRI-E ONE F RPM		Lw dB (A)							Lw dB (A)	Lw dB (A)
		125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz		3m*
<b>MIN. SPEED</b>	<b>Casing</b>	3.1	14.7	17.4	20.5	2.7	7.2	24.2	27.3	6.8
	<b>Delivery</b>	7.3	17.6	20.4	27.6	14.6	0.4	14.1	33.4	12.9
	<b>Intake</b>	11.4	21.9	31.4	32.4	19.2	9.3	4.0	39.1	18.6
<b>MED. SPEED</b>	<b>Casing</b>	13.7	23.9	25.8	31.2	14.8	7.5	9.0	37.0	16.5
	<b>Delivery</b>	15.3	23.0	25.6	35.5	23.0	12.8	3.0	40.2	19.7
	<b>Intake</b>	19.7	28.9	36.7	42.4	30.5	25.4	15.5	48.1	27.6
<b>MAX. SPEED</b>	<b>Casing</b>	22.3	30.7	32.1	36.5	23.7	16.7	3.9	43.7	23.2
	<b>Delivery</b>	22.5	29.9	32.9	40.9	31.1	21.1	9.3	46.8	26.3
	<b>Intake</b>	23.4	35.7	50.9	46.9	38.5	33.9	25.7	55.5	35.2

\* Acoustic pressure calculated at 3 m in free field in compliance with ISO 9614.

HRI-E TWO F RPM		Lw dB (A)							Lw dB (A)	Lw dB (A)
		125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz		3m*
<b>MIN. SPEED</b>	<b>Casing</b>	23.7	32.0	37.6	34.8	28.9	20.0	15.2	47.5	26.96
	<b>Delivery</b>	17.1	24.7	23.5	16.3	15.2	13.6	14.9	31.8	11.26
	<b>Intake</b>	23.8	32.5	39.4	33.1	27.4	18.2	17.7	45.5	24.96
<b>MED. SPEED</b>	<b>Casing</b>	31.3	52.4	54.0	53.4	48.4	43.2	29.2	64.7	44.16
	<b>Delivery</b>	16.7	39.2	35.3	28.5	24.7	16.0	15.4	45.7	25.16
	<b>Intake</b>	36.1	48.7	51.1	46.8	43.6	35.3	22.0	58.2	37.66
<b>MAX. SPEED</b>	<b>Casing</b>	39.2	53.4	64.0	63.2	59.8	55.6	43.9	78.3	57.76
	<b>Delivery</b>	24.1	41.7	44.3	34.6	35.2	23.6	15.2	54.7	24.16
	<b>Intake</b>	42.5	51.3	60.2	55.5	53.9	47.2	33.2	69.3	48.76

\* Acoustic pressure calculated at 3 m in free field in compliance with ISO 9614.



# VORT HRI E RANGE

HEAT RECOVERY UNITS FOR FALSE CEILING MOUNTING

## TECHNICAL CHARACTERISTICS

- **2 models**, different in size and performance, equipped with mechanical by-pass.
- **Fire resistant expanded polypropylene casings** (DIN EN 13501). Side closing plates in galvanized steel. Tie rods for suspended installation included in the standard equipment.
- **Intake and delivery spigots** compatible with pipes with a nominal diameter of 125 mm (HRI E ONE) and 150 mm (HRI E TWO).
- **Pair of motor fans driven by EC motors** (brushless) of the external rotor type, with shafts mounted on ball bearings, directly coupled to backward curved centrifugal impellers to guarantee high aerodynamic efficiency. 3 operating speeds, independently settable at installation.
- **High efficiency heat exchanger**, of the cross-flow type with counterflow, made of plastic resin (PS).
- **Automatic activation frost protection**, to prevent the formation of frost at the heat exchanger.
- **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 with LCD display**, of the wired connection type, for:
  - turning the product on and off;
  - the initial configuration of the product;
  - selecting the minimum, average or maximum speed of operation;
  - programming the operation;
  - displaying the time and room temperature;
  - monitoring the correct operation of the product (any malfunctions are highlighted through error messages shown on the display);
  - signaling the saturated filters condition on the display.
- **Pair of M5 filters** (F7 filter available as an option for the delivery duct), easily accessible for periodic maintenance.
- **Condensate collection tray** with drain devices.
- **Possibility of interlocking with external environmental sensors** (optional), for the automatic control of the operating mode.
- **Safety certified by a third party** (CE).
- **Degree of protection from dust and water**: IPX2.
- **Electrical insulation class**: II (grounding not required).

## TECHNICAL DATA

PRODUCTS	CODE	V~50HZ	W max	A max	MAX FLOW RATE		MAX PRESSURE		°C* MAX	KG
					m³/h	l/s	mmH <sub>2</sub> O	Pa		
HRI-E ONE F	11218	230	71	0.55	187	52	23.7	232	45	17.5
HRI-E TWO F	11228	230	167	1.4	365	101	77.3	758	45	29.5

\* Maximum temperature with continuous operation of the product.



## DETAILS



Pair of Brushless motors.



M5 FILTERS



Condensate drain nozzles.



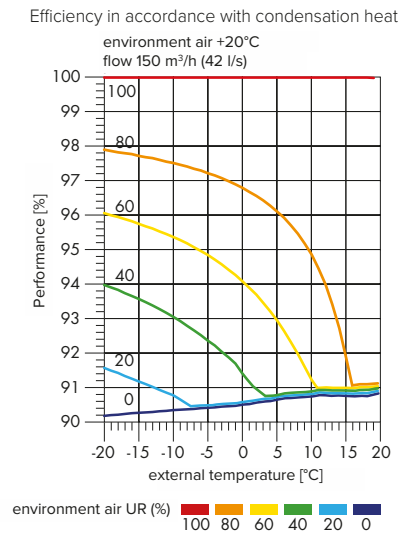
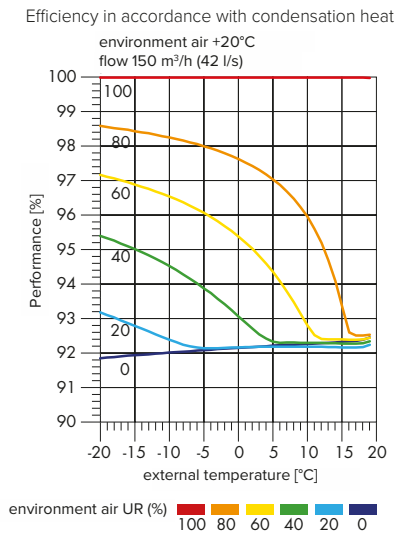
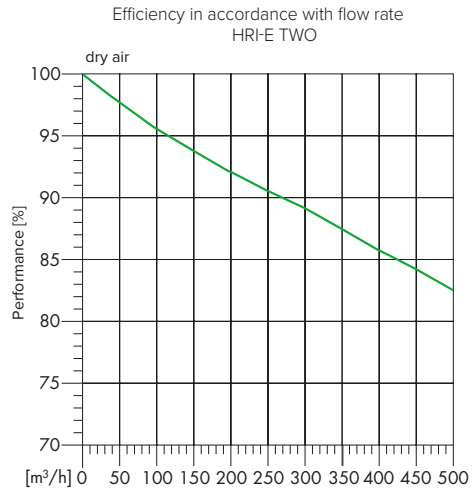
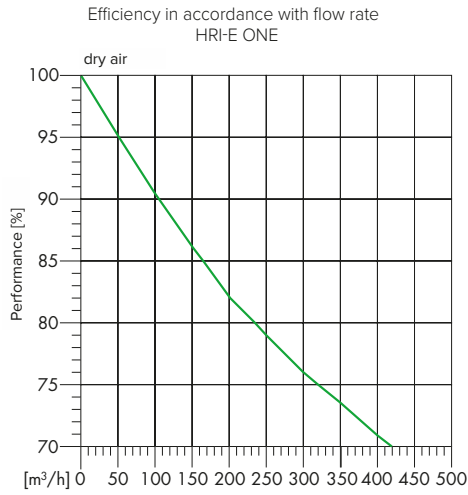
LCD display supplied as standard




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FALSE CEILING MOUNTED HEAT RECOVERY UNIT






## EFFICIENCY CURVES







## FILTERS

MODELS	DESCRIPTION	DIMENSIONS	CODE	VORT HRI-E ONE F code 11218	VORT HRI-E TWO F code 11228
	F7 FILTER	200X183X48	22549	✓	
	F7 FILTER	230X250X48	22628		✓
	M5 FILTER	200X183X43	22645	✓	
	M5 FILTER	230X250X48	22646		✓

## REGULATORS

MODELS	DESCRIPTION	DIMENSIONS	CODE	VORT HRI-E ONE F code 11218	VORT HRI-E TWO F code 11228
	<b>C TEMP</b> Temperature detector	144x54x55.8	12992	✓	✓
	<b>C SMOKE</b> Polluted air detector	144x54x55.8	12993	✓	✓
	<b>C HCS</b> Humidity detector	144x54x55.8	12994	✓	✓
	<b>C PIR</b> Presence detector	144x54x55.8	12998	✓	✓
	<b>INSTALLER PANEL SKP10</b> Installer panel	-	22629	✓	✓

## ACCESSORIES

MODELS	DESCRIPTION	CODE	VORT HRI-E ONE code 11218	VORT HRI-E TWO code 11228
	<b>BRACKET KIT</b> Bracket kit for fixing	22548	✓	
	<b>BRACKET KIT</b> Bracket kit for fixing	22648		✓
	<b>500W HEATER</b> PRE-HEATING BOX HRI-E ONE	22598	✓	
	<b>750W HEATER</b> PRE-HEATING BOX HRI-E TWO	22627		✓





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## LCD DISPLAY - SUPPLIED AS STANDARD



TIMER

TEMPERATURE

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).

### 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

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

- 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).

System components (description and data from page 96).  
Regulators (description and data from page 152).