Heat recovery ventilator unit with counterflow core
HRU-SlimAIR-NA

81% SRE

Dimensions

27 in (685 mm)

46 1/4 in (1172 mm)

42 1/4 in (1070 mm)

19 3/4 in (505 mm)

9 1/2 in (242 mm)

SUPPLY   EXTRACT

5 1/2 in (143 mm)   4 3/4 in (120 mm)

Ø6 1/4 in (160 mm)

Description

Heat recovery ventilation unit HRU-SlimAIR-NA-250 is a modern device with 153 CFM (72 L/s) air flow at 0.4" w.g. (100 P.a) external static pressure. Unit is. made from cutting edge materials - PET counterflow core with high temperature recovery efficiency and EPP self supporting casing which has good acoustic and thennal isolation properties.
HRU-SlimAIR-NA air handling units optionally can be equipped with two different defrost strategies. Recirculation unit, which task is to recover heat from extracting areas. Second option is electical pre-heater which also prevents the heat exch. anger from frozening.The device operation is controlled by an advanced PCB with wired control panel. In addition, the HRU-SlimAIR-NA can be connected to the Internet and controlled via a mobile application or website.
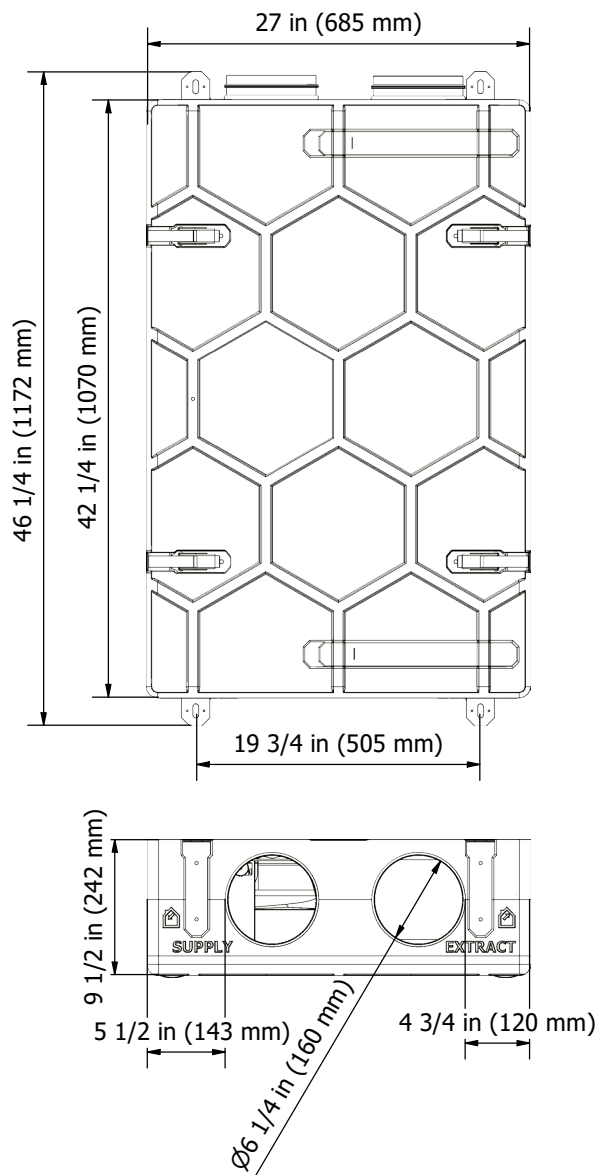
Features:

- HRV Heat Recovery Ventilator with PET counterflow core
- 153 CFM supply air @ 0.4" w.g.
- SRE 81 %
- Top ports 160mm (6 $\frac{1}{4}$") with rubber seals
- Easy accessible MERV 7 filters
- EPP insulated casing
- Weight: 56.2 lbs (25.5 kg) including core
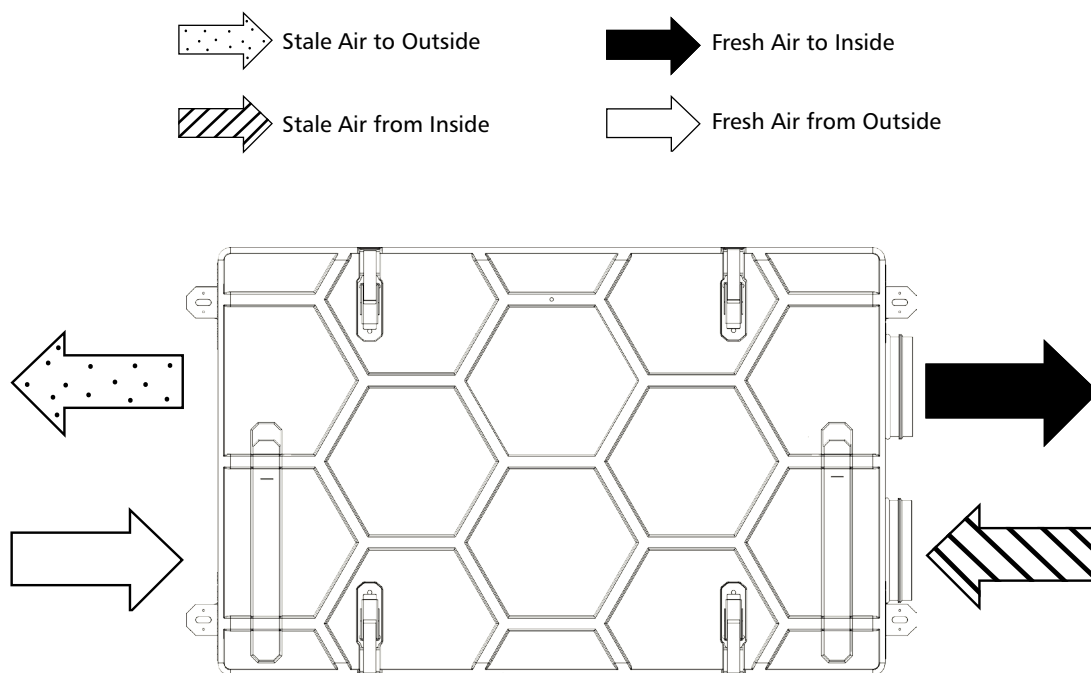- Centrifugal fans with backward curved blades with low energy consumption EC motors

Electrical requirement

120 VAC, 60Hz, 1 Phase
Cord Set: Type B 70 $\frac{3}{4}$ in (1800 mm) with ground

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Heat recovery ventilator unit with counterflow core
HRU-SlimAIR-NA

Air flow

⬜ Stale Air to Outside	⬛ Fresh Air to Inside
⬜ Stale Air from Inside	⬜ Fresh Air from Outside

Controller

Ventilation units can be controlled in several ways:

- The HRQ-BUT-PG15 panel is should be a not an wired option with limited manual control options of the ventilation unit with Physical buttons allows you to choose between 4 speeds (PAUSE, LOW, MEDIUM, HOME). It also allows you to pick actual mode (MANUAL, SCHEDULE), turn (ON/OFF) AUTO mode or turn (ON/OFF) UNIT. It has a built-in temperature and RH sensor. The panel also has wireless control of unit (build in Bluetooth and WI-FI module) via APP for Android, IOS and browser.

- The HRQ-BUT-LCD-P5 display allows you to select working modes, program the calendar and read additional working parameters such as temperature, current fan speeds or bypass status. It also allows you to configure speeds (according to user preference). It has a built-in temperature and RH sensor. The panel has a Wi-Fi and Bluetooth module.

19

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Heat recovery ventilator unit with counterflow core
HRU-SlimAIR-NA

- Cloud service for Android, iOS and via a browser (requires panel **HRQ-BUT-PG15 or HRQ-BUT-LCD-P5**).

- APP The panels are connected to the local network via WI-FI. Communication with the device is wireless. On-line control is possible after installing the application on Andriod and iOS or via a browser on a computer. The application graphically illustrates the operation of the device, allows you to choose between 4 speeds (PAUSE, LOW, MEDIUM, HOME), time programs (EXIT, PARTY, AIRING), program the calendar and read additional operating parameters such as temperatures, current fan speeds or RH level. It also allows you to configure ventilation speeds (according to user preferences).

Additional controllers

It is possible to equip the system with additional external controllers:

- HRQ-BUT-20-40-60 switch controler is used to activate the high speed in the unit in the respective time mode. Upon expiration of the time, the unit returns to the operation status mode just before the activation of the given time mode.

- HRQ-BUT-SWITCH is used to activate or deactivate the operation of the device on an hourly operating cycle. The hour-long work cycle is divided temporally into two parts:

    1. The first part is the operation of the device on the operating speed : low/medium/high.
    2. The second part of the operation is the operation of the unit in air recirculation mode (HRQ-REC product required) or complete shutdown of the fans.

After the second part of the unit's operation is completed, the cycle begins to repeat and the unit starts operation from the beginning.

Additional external sensor

- HRQ-SENS-CO2RH-P The most energy efficient and adapted to current needs of HRVs is the AUTO mode. Working in AUTO mode is possible when the CO2 or RH sensor is working in the system. In AUTO mode, the sensor generates ventilation request based on measurements of ambient air. This request is sent wired to the control panel, which sets the appropriate efficiency % of the fans, making it possible to save energy because the air exchange will only be carried out when it is needed.

Performance

- SRE up to 90.5 %
- Hi-tech modern casing made of Expanded Polypropylene – EPP
- High mechanical resistance
- High thermal and acoustic insulation
- Performance tested according to CSA C439-18 standard
- Wall mounting racks and feet included
- Replaceable duct connections
- Wireless control through mobile application or web service
- Wired function controler
- Light weight construction – only 32 kg!
- POLISH product

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HRU-SlimAIR-NA

- **Aplication**
  The panel is connected to the local network via WI-FI. Communication with the device is wireless. On-line control is possible after installing the application on Andriod and iOS or via a browser on a computer. The application graphically illustrates the operation of the device, allows you to choose between 4 speeds (PAUSE, LOW, MEDIUM, HOME), time programs (EXIT, PARTY, AIRING), program the calendar and read additional operating parameters such as temperatures, current fan speeds or RH level. It also allows you to configure ventilation speeds (according to user preferences).

Note!
Controller is not included in the kit. During purchase, choose the controller that is right for you.

Performance

- SRE up to 81.3 %
- Hi-tech modern casing made of Expanded Polypropylene – EPP
- High mechanical resistance
- High thermal and acoustic insulation
- Performance tested according to CSA C439-18 standard
- Wall mounting racks and feet included
- Replaceable duct connections
- Wireless control through mobile application or web service
- Wired function controler
- Light weight construction – only 25.5 kg!
- POLISH product

Design
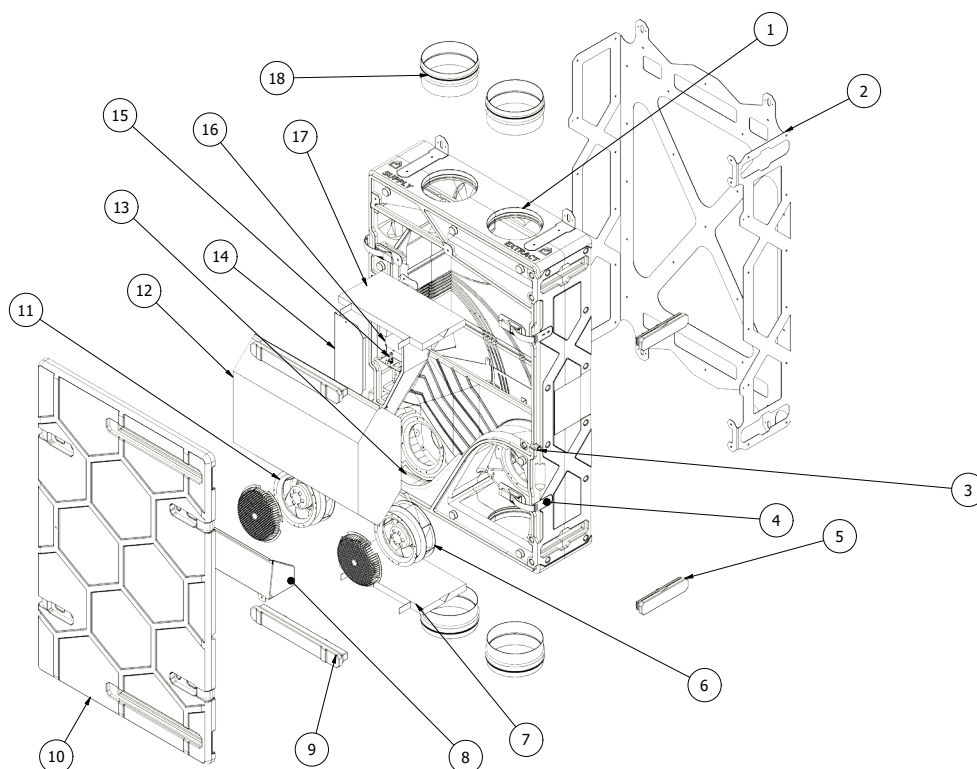
1. HRU housing	10. Front cover
2. Handling chassis	11. Extract fan
3. Side condensation drain	12. Core
4. Clamp	13. Lower condensation drain
5. Side filter cover	14. Control circuit metal cover
6. Supply fan	15. Main fuse
7. Supply filter	16. Control drcuit board
8. Condensation drip tray	17. Extract filter
9. Filter cover	18. NSL connector

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Heat recovery ventilator unit with counterflow core
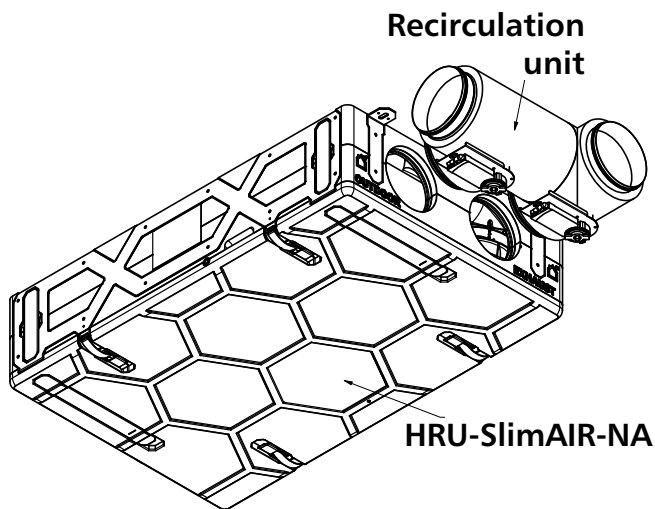# HRU-SlimAIR-NA

Defrosting system

There're 3 available defrosting options:
1. Recirculation
2. Preheater with unballance
*3. Unbalance*

(1)   Recirculation

Heat recovery unit has the possibility to connect the Alnor Recirculation System. The function allows you to control the valve that redirects air from the exhaust to the unit's intake (depending on outdoor temperature conditions).

Recirculation operates between - 25°C to -3°C.

Recirculation unit

HRU-SlimAIR-NA

Available combinatons

HRQ-SlimAIR-NA-250-REC   **HRU-SlimAIR-NA-250**

OFF

ON

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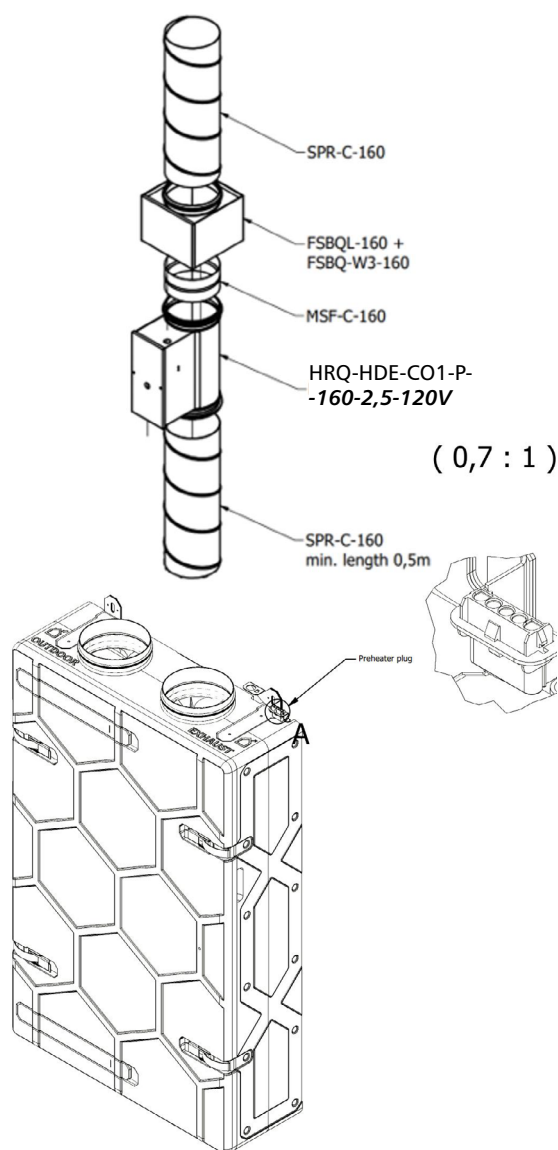
HRU-SlimAIR-NA
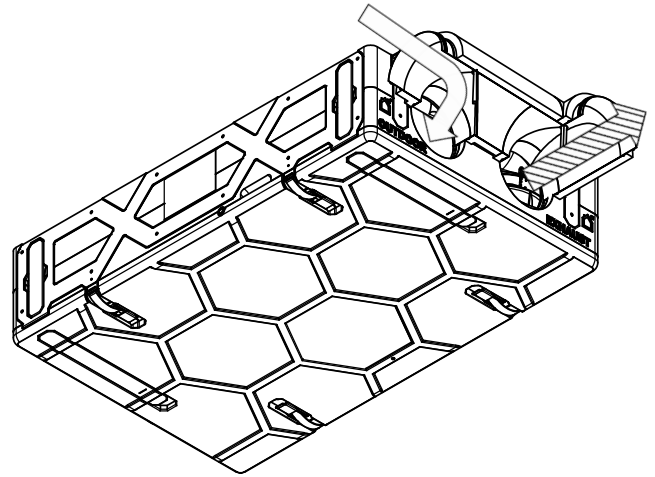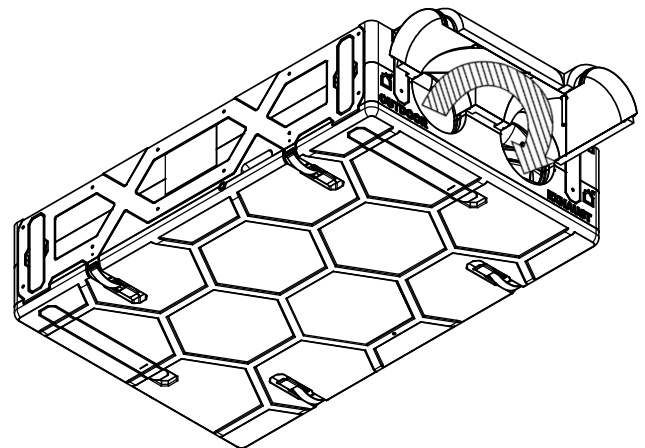
② Preheater

HRQ-HDE-CO1-P-160-2,5-120V round duct electric heater is designed for ventilation systems with residential air handling unit to use as pre-heaters - serve as additional (optional) frost protection for the core and therefore allow the unit to work in a balanced way even during heavy winter conditions.

The casing is made from galvanised steel sheet, the heating elements are made from stainless steel. Heaters are equipped in a two-stage overheat protection. The first thermostat is an automatic-reset temperature limiter set to trip at +60˚C. The other thermostat is a manual temperature limiter set to trip at +90˚C (once tripped, this device needs to be reset by hand). Ducted electric heaters feature EPDM gaskets at the male connection ends and a 3m long power cord for external power and a dedicated steering plug for HRVs.

Detailed installation instructions are described in the manual.

Preheater operates below -3°C.

Connection diagram

SPR-C-160

FSBQL-160 + FSBQ-W3-160

MSF-C-160

HRQ-HDE-CO1-P-
-160-2,5-120V

(0,7 : 1)

SPR-C-160
min. length 0,5m

Preheater plug

Available combinatons

+

HRQ-HDE-CO1-P-160-2,5-120V   HRU-SlimAIR-NA-250

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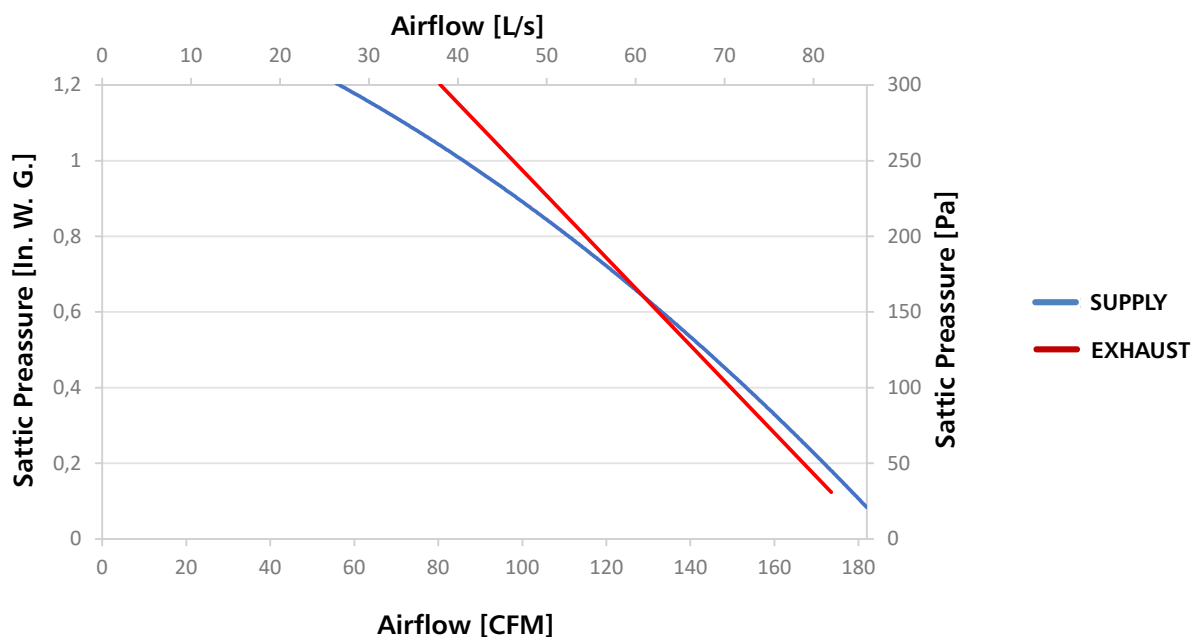# HRU-SlimAIR-NA

③ Fan unbalance

Frost protection is achieved by reducing the supply fan's speed to the minimum level of the fan. The whole process goes gradually, depending on the outdoor temperature drop. When the outdoor temperature continues to decrease and the fan has reached the set minimum revolutions.

Unbalance works within -3°C to +1°C.
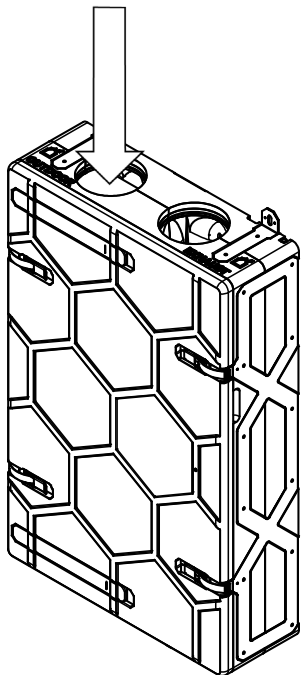
External Static Pressure	Net Supply Air Flow		Gross Air Flow				Power
			Supply		Exhaust		
Pa	In. W. G.	L/s	CFM	L/s	SCFM	L/s	SCFM	Watts
25	0,1	85	180	86	182	82	174	112
50	0,2	81	172	81	172	79	167	108
75	0,3	76	161	76	161	75	159	110
100	**0,4**	**72**	**153**	**72**	**153**	**71**	**150**	**105**
125	0,5	67	142	67	142	67	142	104
150	0,6	63	133	63	133	63	133	102
175	0,7	58	123	58	123	59	125	100
200	0,8	53	112	53	112	54	114	98
225	0,9	47	100	47	100	50	106	96
250	1,0	41	87	41	87	46	97	93
300	1,2	26	55	26	55	38	81	85

Ventilation performance

Airflow [L/s]

Sattic Preassure [In. W. G.] / Sattic Preassure [Pa]

Airflow [CFM]

— SUPPLY
— EXHAUST

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Energy performance

Supply Temperature		Net Outdoor Air Flow		Power Consumed (Watts)	Sensible Recovery Efficiency	Adjusted Sensible Recovery Efficiency	Apparent Sensiable Effectiveness	Latent Recovery/ Moisture Trans
°C	°F	L/s	CFM					
Heating								
0	32	23	49	19	76	79	89	0,00
0	32	31	66	25	81	84	89	0,00
0	32	50	106	49	80	83	86	0,00
-25	.13	42	89	92	67	69	120	0,08

Filters

• **Filter HRQ-SlimAIR-FILT-C70 (standard)**

G4 pleated panel filters creates a larger media surface area for air filtration and ensures lower pressure drops. Filters are classified as in the ISO Coarse 70% according to ISO 16890 standards, which is an equivalent to MERV 7.

Code	Filter class	Dimensions [mm]
HRQ-SlimAIR-FILT-C70	ISO Coarse 70% (MERV 7)	170x334x23

• **Filter HRQ-SlimAIR-FILT-ePM155 (optional)**

F7 is classified as a fine filter according to EN 779:2012 norm and as ePM1 55% in accordance with new standard ISO 16890, which is an equivalent to MERV 13.

Code	Filter class	Dimensions [mm]
HRQ-SlimAIR-FILT--ePM155	ISO ePM1 55% (MERV 13)	170x334x23

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