

Push-pull heat recovery unit with remote control HRU-WALL-RC-PEG



Description

HRU-WALL-RC is a bidirectional ventilation unit, often described as decentralized or push-pull, with regenerative ceramic heat exchanger. It is intended for single room installation, usually installed in synchronised pairs. The heat exchanger material together with its unique honeycomb structure gives a maximal 82% thermal efficiency ratio (74% acc. to 1254/2014 EU Directive reference measuring point). The operating principle is analogous to HRU-WALL - unit is working in alternating flow mode, switches the air flow directions every 40-120 seconds (push-pull) and it's equipped with energy efficient EC fan (maximum power consumption is only 6 W for HRU-WALL-RC-150-60).

The unit casing is made of ABS plastic. A remote controller with LCD display is included in the set.

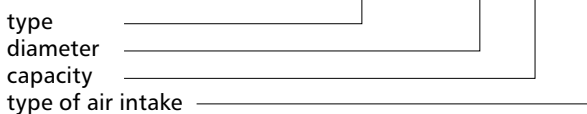
We recommend installing the devices in pairs.

The HRU-WALL-RC-PEG version has several advantages:

- Remote controller with an LCD
- 5 speeds: 10-14-17-21-25 m³/h (HRU-WALL-RC-100-25-PEG)
- 5 speeds: 20-30-40-50-60 m³/h (HRU-WALL-RC-150-60-PEG)
- Double filter (inner and outer side)
- Multicolour LED for status indication
- Automatically manages the cycle length in COMFORT mode
- Dirty filter visual indicator
- Boost function - maximum air flow for limited time
- Integrated humidity sensor – smart humidity control, increases speed if rapid rise of relative humidity is measured
- Anti-frost protection
- Free-cooling - only one direction.

Product code example

Product code: **HRU-WALL-RC - 150 - 60 - PEG**



Dimensions

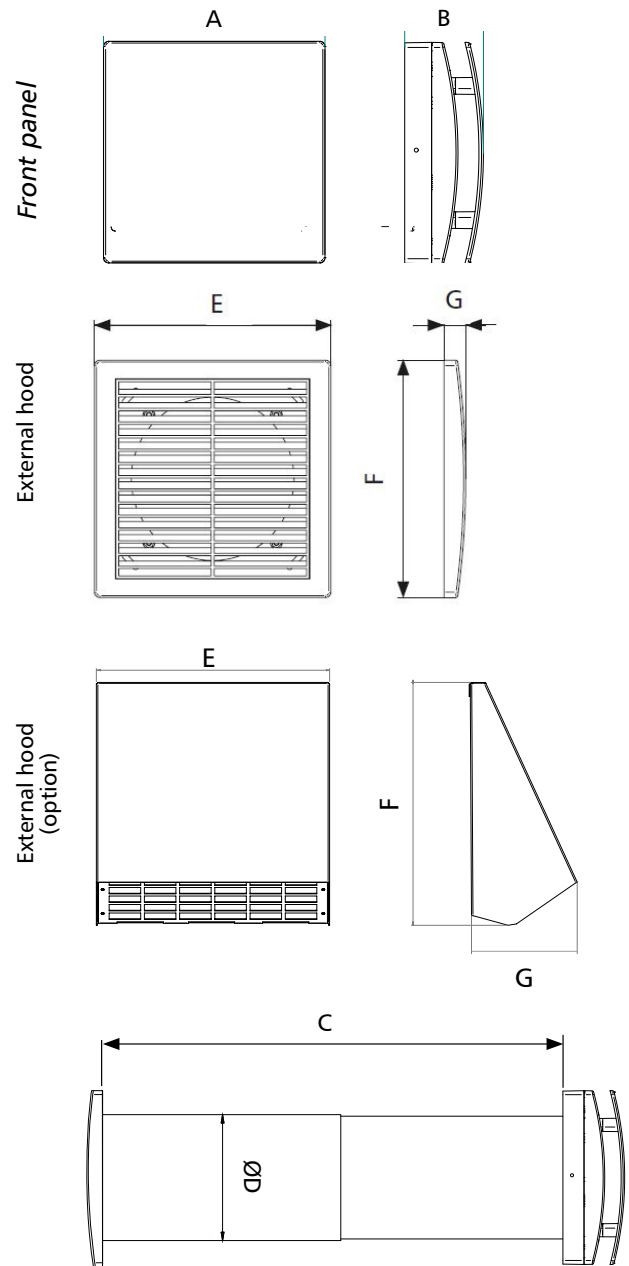


Table dimensions

	HRU-WALL-RC -100-25 / -PEG/ option [mm]	HRU-WALL-RC -150-60 / -PEG / option [mm]
Dimension A	218	218
Dimension B	78	78
Dimension C	300-570	300-570
Dimension D	110	159
Dimension E	218 / 205	218 / 255
Dimension F	218 / 205	218 / 255
Dimension G	20 / 100	20 / 130

Push-pull heat recovery unit with remote control

HRU-WALL-RC-PEG

Construction

Front cover

Made of high quality, impact and UV-resistant ABS.

Energy efficient EC fan

Due to its advance design and technology it consumes only 2.6W of power at its peak (for HRU-WALL-PEG-100-25) or only 3.5W (for HRU-WALL-RC-PEG-100-25). Unique design winglet type impeller, providing enhanced aerodynamic properties, low noise and increased efficiency. High efficient reversible EC motor with integral thermal protection, mounted on sealed for life high quality ball bearings. Designed for continuous reversible running.

Telescopic inner pipe

Regulation: 300-570 mm. High quality material, impact and UV-resistant, made from 100% recycled ABS, black colour. A cerami exchanger is placed in the pipe.

Heat exchanger

The ceramic, regenerative heat exchanger is a central and most important part of the unit. It has a honeycomb structure for high thermal efficiency and double-sided air filters (HRU-WALL-RC-PEG).

Outer grille

External aluminium cover HRU-WALL-USUA painted in RAL 9010 colour or HRU-WALL-USUA-...-RAL painted in any RAL colour

Outer grille (optional)

External steel cover HRU-WALL-USUA or HRU-WALL-USUA-...-RAL painted RAL with acoustic lining and insect screen. Standard RAL 9010.

Remote controller / controller

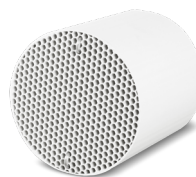
The unit is supplied with an infrared remote controller as standard (HRU-WALL-RC-PEG), as well as its support base which can be wall mounted. A magnet keeps the controller attached to the base. The controller is equipped with an LCD display to visualise the setting to be transferred to the unit. Controller with 3 two-position switches, surface / flush mounted for HRU-WALL-PEG (option).



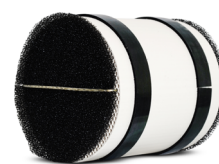
HRU-WALL-PEG



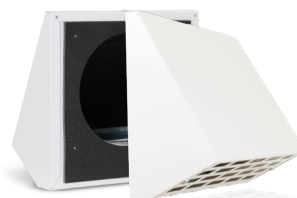
HRU-WALL-RC-PEG



HRU-WALL-PEG



HRU-WALL-RC-PEG



HRU-WALL-PEG
(option)



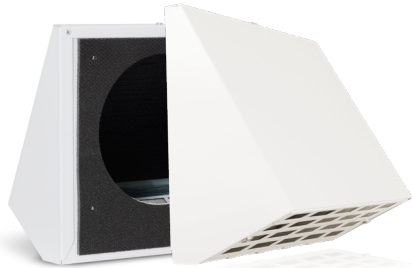
HRU-WALL-RC-PEG
(standard)

Push-pull heat recovery unit with remote control

HRU-WALL-RC-PEG

Other versions

HRU-WALL-USUA-100 / HRU-WALL-USUA-150
 additional external hood HRU-WALL-USUA
 painted in any RAL 9010 colour



HRU-WALL-USUA-100-RAL / HRU-WALL-USUA-150-RAL
 An external hood, painted in any RAL colour



HRU-WALL-RC-WREV-150-60
 a window reveal module for intake and exhaust applications



Intended use

Most effective method is to use two synchronised units which are installed in closely located rooms. In such configuration one can set the alternating operation on both devices (when one unit extracts air, the other one intakes). Such synchronisation maintains pre-chosen operation modes on all connected devices:

- **COMFORT**
inversion time varies, optimised for acoustic and thermal comfort
- **EFFICIENCY**
inversion time is fixed, optimised for maximum thermal efficiency

In order to synchronise units a wire connection must be established using 2-pole twisted pair cable. It is possible to connect up to 10 units and control them with one remote. The Intake/ Extract order among units will be set automatically.

Scenario during synchronization:

- Inversion time is synchronized, all units will change direction at the same moment,
- Devices must be turned on and off separately - turning one on will not start the other,
- Speed on each device can be set independently,
- Changing the mode to Intake / Extract / Alternate on each device is independent (for example, if we change one unit to Intake, the other will continue to operate in Alternate mode),
- Switching between COMFORT / EFFICIENCY modes is synchronized - selection in one unit, changes the mode in the other one as well,
- Inversion time is synchronized, all units will change direction at the same moment.

Example temperature values for the 3rd air supply speed.

Indoor temp. [°C]	Outdoor temp. [°C]	Air supply temp. [°C]*
20	0	17.4
20	-10	16.1
20	-20	14.8

* Supply air temperature measured at the 3rd air supply speed

How to order

Version with plastic external grille
HRU-WALL-100-25-RC-PEG / HRU-WALL-150-60-RC-PEG

Version with metal hood, painted in RAL 9010
HRU-WALL-...-...-PEG + HRU-WALL-USUA-...

Version with metal hood, painted in any RAL - provide the RAL colour with an order
HRU-WALL-RC-...-...-PEG + HRU-WALL-USUA-...- RAL

Version with window reveal hidden intake-exhaust
**HRU-WALL-RC-150-60-PEG +
 HRU-WALL-WREV-150 (flat duct) +
 HRU-WALL-WREV-FRAME (mounting frame) +
 HRU-WALL-WREV-GRILL (grille)**

Push-pull heat recovery unit with remote control

HRU-WALL-RC-PEG

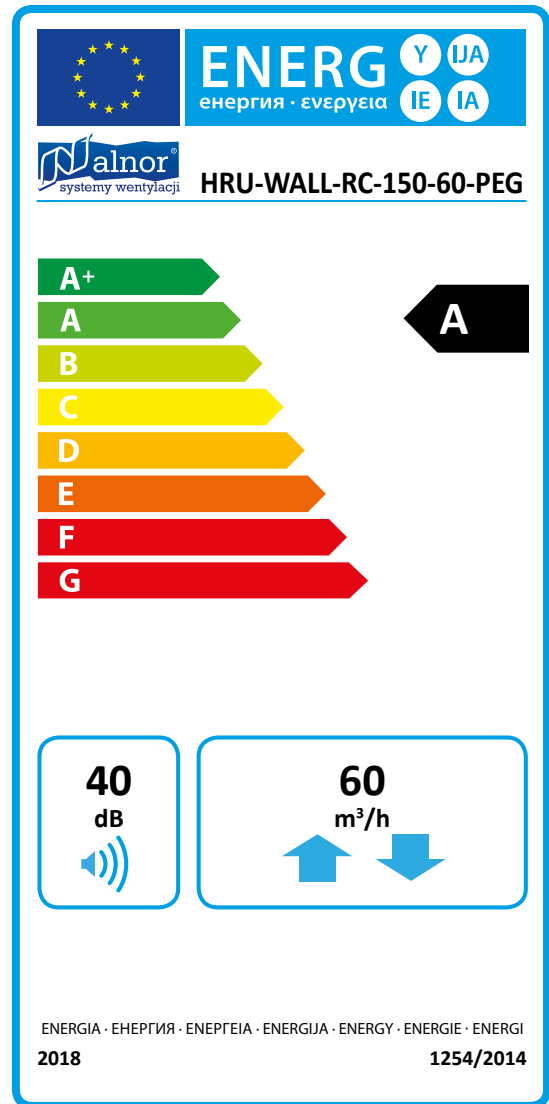
Technical specifications

	HRU-WALL-RC-100-25-PEG	HRU-WALL-RC-150-60-PEG
Air flow rate [m ³ /h]	10/ 14/ 17/ 21/ 25	20 / 30 / 40 / 50 / 60
Power [W]	2/ 2/ 2,5/ 3/ 3,5	2 / 2,5 / 3,5 / 4,5 / 6
Sound pressure [dB(A)] 3m	9/ 14/ 18/ 23/ 27	10 / 14 / 20 / 24 / 26
Ambient temp. [°C]	-20° +50°	-20° +50°
Protection class	IPX4	IPX4
Frequency [Hz]	50	50
Voltage [V]	220-240	220-240
Weight [kg]	4.40	4.40

Air efficiency measured as per ISO 5801:2008
 Heat recovery efficiency as per EN 13141-8:2011
 Sound level measured as per ISO 3746:2010

Energy class

Model	Sound level [dB]	Air flow rate [m ³ /h]	Energy class
HRU-WALL-RC-100-25-PEG	39	25	A
HRU-WALL-RC-150-60-PEG	40	60	A



Push-pull heat recovery unit with remote control

HRU-WALL-RC-PEG

Supplier's name or trade mark	ALNOR Systemy Wentylacji			ALNOR Systemy Wentylacji		
Model identifier	HRU-WALL-RC-100-25-PEG			HRU-WALL-RC-150-60-PEG		
Specific energy consumption (SEC) [kWh/(m ² .a)] (cold, average, warm)	-81,8	-40,6	-17,0	-82,8	-41,6	-18,0
Energy class	A+	A	E	A+	A	E
Declared typology	Bidirectional			Multi-speed		
Type of drive	Multi-speed			Multi-speed		
Type of heat recovery system	Regenerative			Regenerative		
Thermal efficiency ¹ [%]	74			74		
Maximum flow rate [m ³ /h] ²	25			60		
Maximum fans' electric power input [W]	3,5			6		
Sound power level L _{WA} [dB(A)]	39			40		
Reference flow rate [m ³ /h] ³	18			41		
Reference pressure difference [Pa] ⁴	10			10		
SPI [W/m ³ /h] ⁵	0,14			0,08		
Control	Local demand control			Local demand control		
Control facotr	0,65			0,65		
Declared maximum leakages ⁶	External: 1% Internal: NA			External: 1% Internal: NA		
Mixing rate	-			-		
Position and description of visual filter warning	NA			-		
Internet address for pre-/dis-assembly instructions	https://www.ventilation-alnor.co.uk/			https://www.ventilation-alnor.co.uk/		
The annual electricity consumption (AEC) [kWh/a] (cold, average, warm)	1	1	1	0,6	0,6	0,6
The annual heating saved (AHS) [kWh/a] (cold, average, warm)	84,3	43,1	19,5	84,3	43,1	19,5

1: According to EN 13141-7:2010

2: According to EN 13141-7:2010 with at pressure diference 100Pa

3: According to EN 13141-7:2010 at 70% of maximum flow at static pressure diference 50Pa

4: According to EN 13141-7:2010

5: According to EN 13141-7:2010 at reference point - 70% of maximum air flow

6: According to EN 13141-7:2010