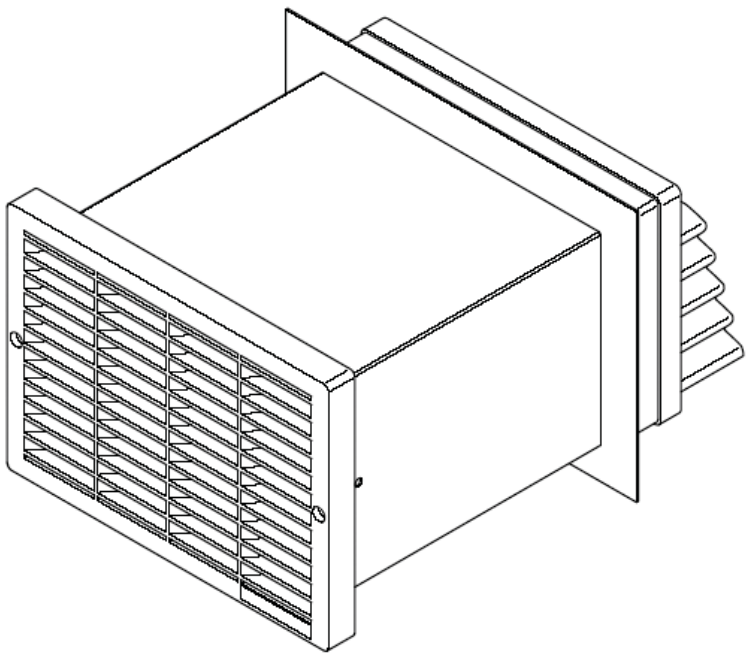
Installation and Operation Manual

HR 30W, HR 100 W
Single-Room Heat Recovery Ventilation Units



Regulus

EN
V 1.1

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1.0 Introduction

1.1 Description

1. HR30W and HR100W Heat Recovery Units work under pressure balance, i.e. they supply almost as much air into a room as they extract.

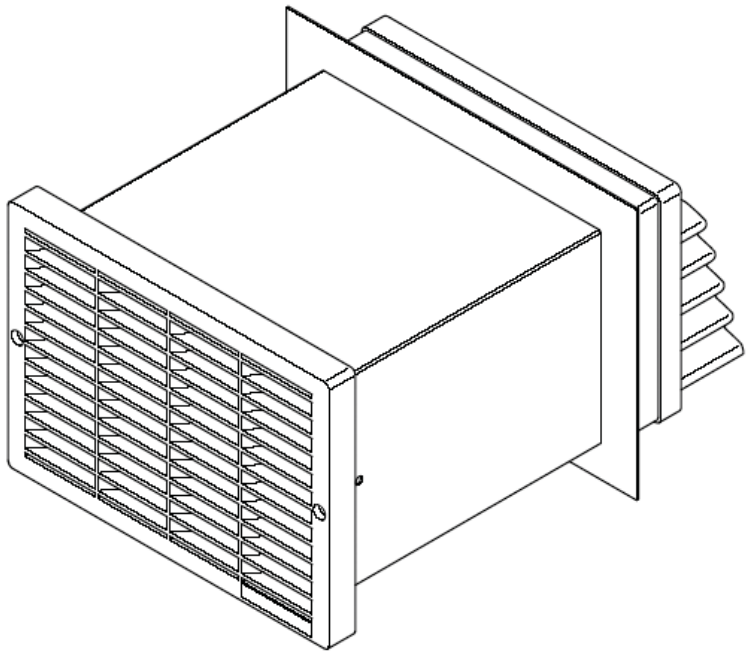


Fig. 1

2. The twin impeller and heat exchanger arrangement simultaneously supplies and extracts air while transferring heat from the stale exhaust airflow to the fresh intake airflow. This provides up to 70% heat recovery from the stale extracted air. For situations when the air exchange needs to be increased immediately, boost mode is available.

3. Installation and maintenance are identical for both the unit models (HR30W and HR100W)..

HR30W	outside air intake	indoor air extraction	power input	noise level
low speed boost speed	30 m^3/h 40 m^3/h	35 m^3/h 50 m^3/h	10 W 23 W	- 28 dB(A)@3m

HR100W	outside air intake	indoor air extraction	power input	noise level
low speed boost speed	38 m^3/h 69 m^3/h	43 m^3/h 77 m^3/h	12 W 31 W	20 dB(A)@3m 30 dB(A)@3m

2.0 Installation Conditions

1. The unit is designed for installation in external walls with a thickness up to 280 mm. For wall thicknesses up to 500 mm an extension kit is available (EXT100).

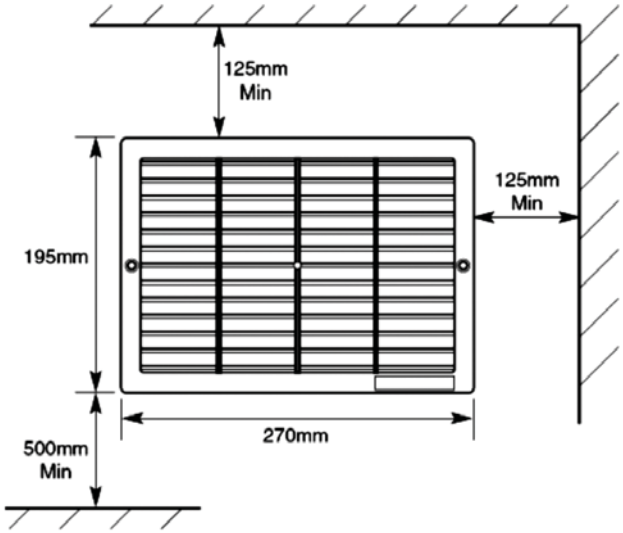


Fig. 2

2. The unit must be located so that the ambient temperature will not exceed 40° C.

3. Do not install the appliance in the vicinity of excessive levels of airborne oil or grease.

4. If the unit is installed in a room containing a fuel burning appliance, sufficient air replacement shall be ensured for both appliances.

5. The grille frame shall not be located less than 125 mm away from any wall or projecting surface (Fig. 2).

6. The external grille of the unit must be placed at least 500 mm away from any flue of gas or solid fuel appliances. This is to avoid back flow of gases entering the room.

7. All safety regulations and requirements must be strictly followed to prevent hazards to life and property both during and after installation and during subsequent maintenance or servicing.

8. Ensure the mains electrical supply is switched off before commencing installation or maintenance.

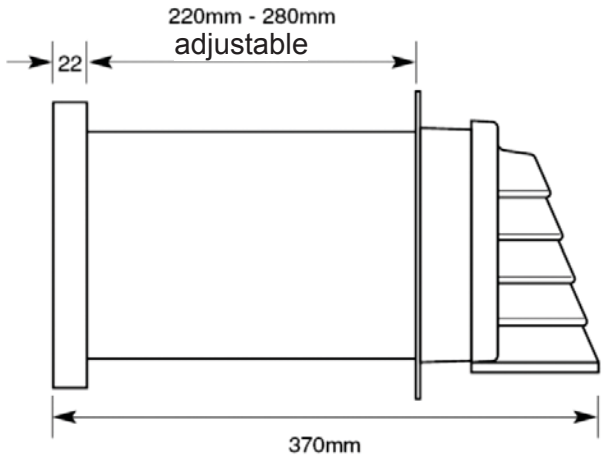


Fig. 3

3.0 Installation

3.1 Initial preparation

1. After considering the site requirements (Section 2.0), select a suitable site for the unit and controllers.

Before deciding on the final position for the unit, check there are no buried cables, pipes or obstructions in the wall.

Cable requirements:
A 3-core cable for single-speed operation, a 4-core cable for two-speed operation. See wiring.

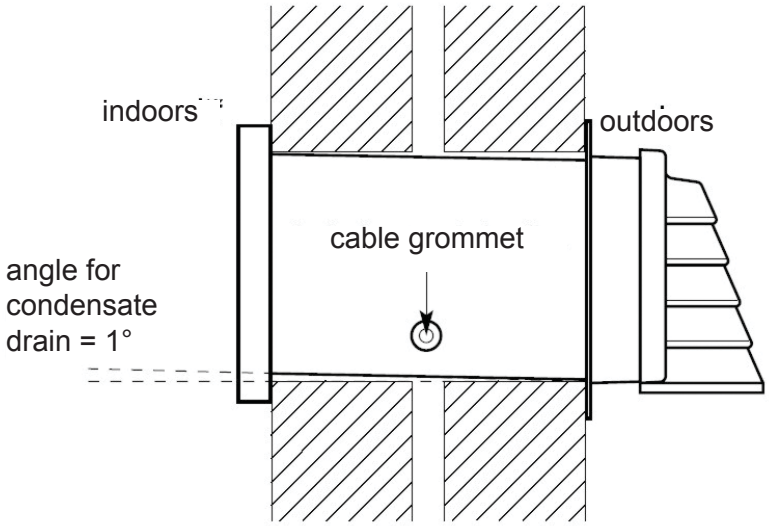


Fig. 4

2. Cut out the template from the rear page of this Manual. Mark the position of the mounting hole, 240 mm wide and 160 mm high, using this template.

3. Carefully cut the holes in the inner and outer walls to form a suitable aperture to receive the unit. Ensure that the unit is positioned with a slight outward inclination (Fig. 4).

4. Remove the grille, take out heat exchanger, outer frame and the outer louvre (Fig. 5).

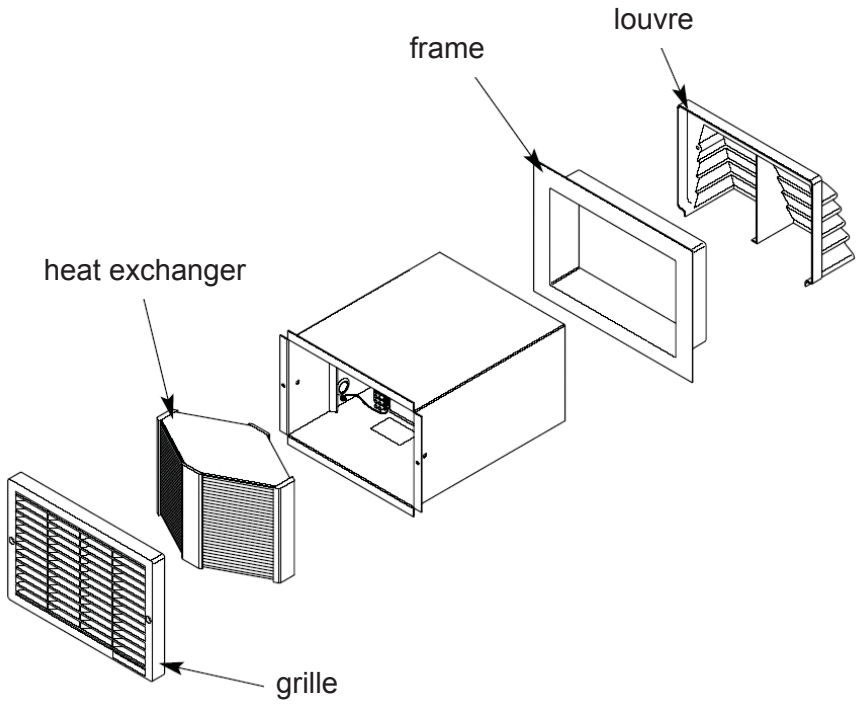


Fig. 5

3.2 Installing the Appliance

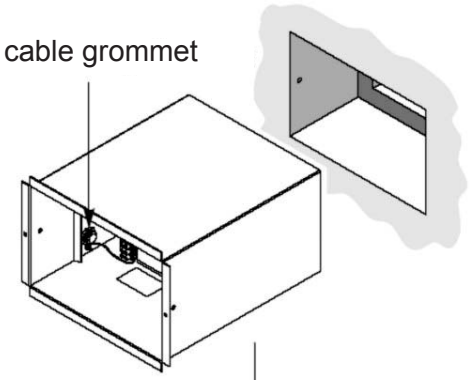


Fig. 6

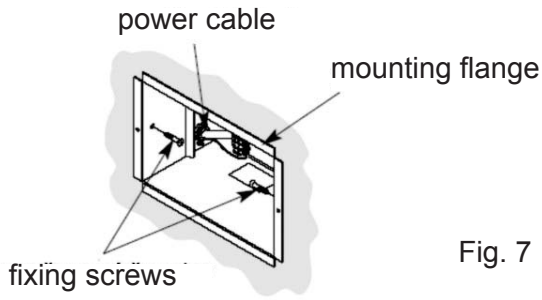


Fig. 7

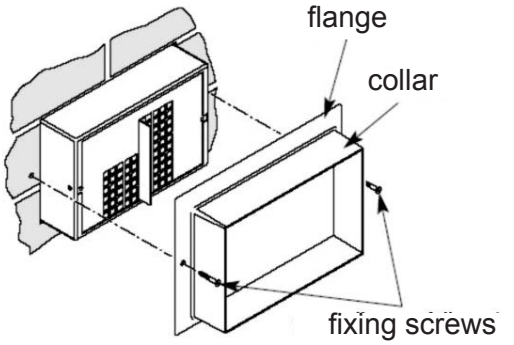


Fig. 8

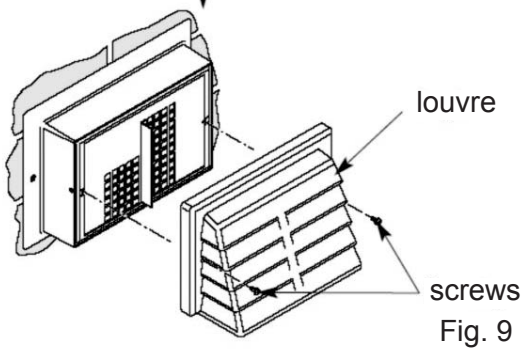


Fig. 9

From inside

1. Slide the unit into the mounting hole and ensure that the rear part of the mounting flange is flush with the inner wall (Fig. 6 and 7).

NOTE: The HR100W and HR30W units require an external overhang of 60 mm. If this overhang is bigger, the unit shall be shifted inside until the right overhang is reached.

2. Run the power cable through the grommet (Fig. 6).

3. Ensure that the unit is square and true with the outside wall face. If firmer fixings are required, secure the unit in place with the two fixing screws provided (Fig. 7).

4. Make good around the case.

From outside

1. With the outer louvre removed, slide the panel frame (flange first) on to the unit and press the flange firm against the outer wall (Fig. 8 and 9).

2.If necessary, mark and cut off an excessive section of the plastic collar.

3. Seal the space between the flange face and wall using suitable weather-resistant putty.

4. If necessary the frame flange can be secured to the wall using dowels and screws (Fig. 8).

5. Put the outer louvre to its place and secure it with the two enclosed screws (Fig. 9).

4. Electric Wiring

Voltage:	**230 V/50 Hz**
Power input (normal speed)	**12 W**
Power input (boost speed)	**31 W**

4.1 Wiring to the mains

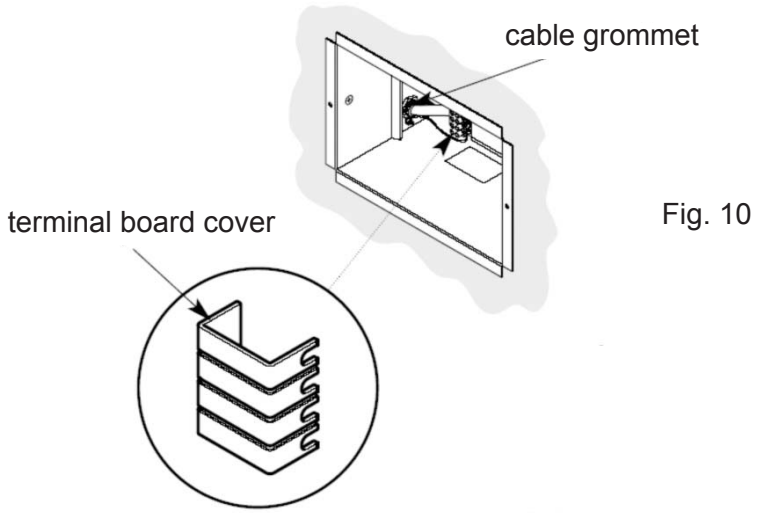


Fig. 10

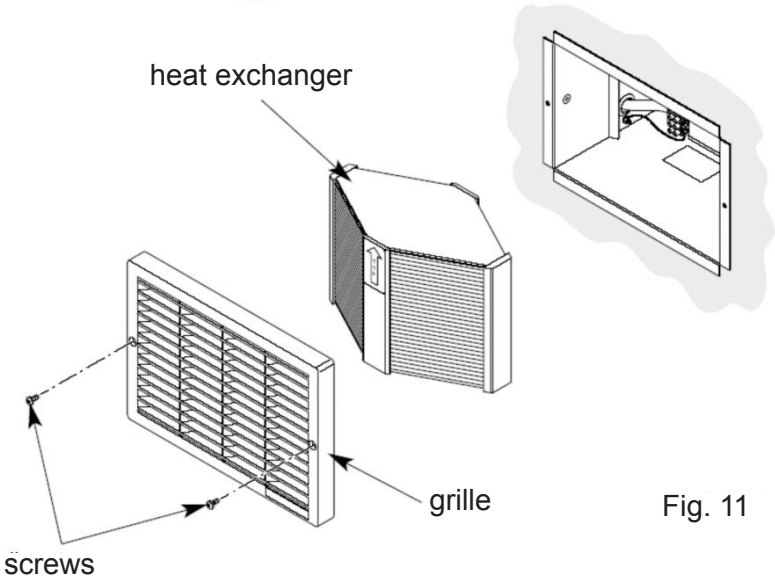


Fig. 11

1. HR100W and HR30W units are equipped with a two-speed motor.

2. Wiring must be via a 3A circuit breaker min.

3. Ensure that the mains power supply is isolated prior to installation.

4. Remove the terminal board cover (Fig. 10) and connect incoming wires to the appropriate terminals, see the wiring diagram.

5. Replace the terminal board cover and fit the grommet (Fig. 10).

6. Push the heat exchanger into the unit so that the **TOP** mark points forward and upwards (Fig. 11).

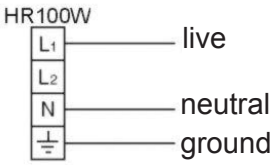
7.Put the grille onto the front of the unit and fasten it with the two screws provided (Fig. 11).

8. Switch on the electrical mains and check the operation of the unit.

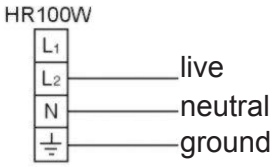
4.2 Electrical wiring and output switching

1. basic wiring

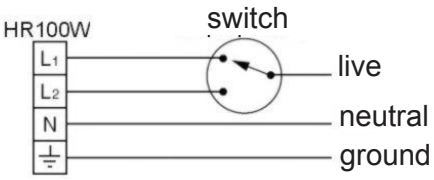
HR100W continuous normal speed

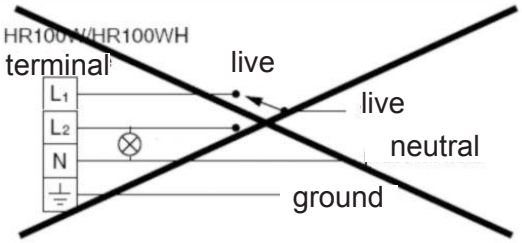


HR100W continuous boost speed



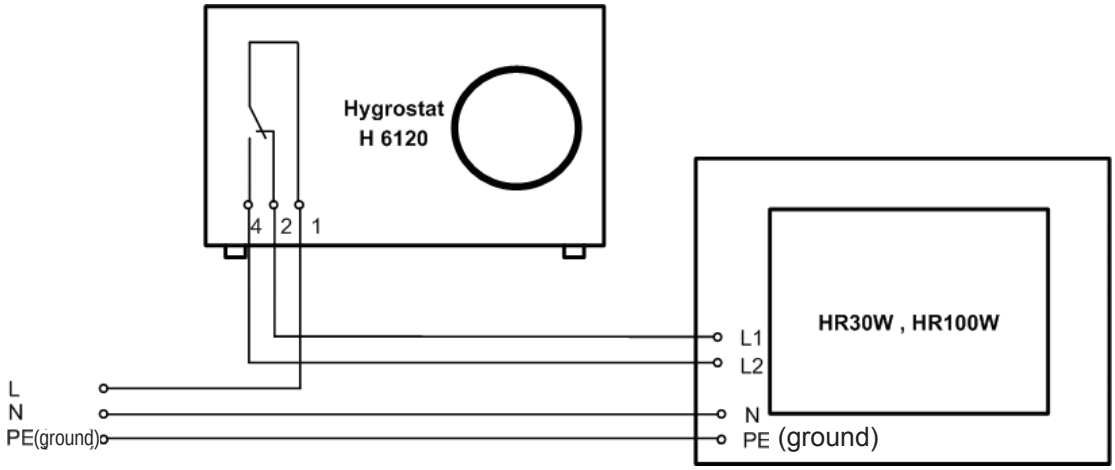
switch wiring (normal / boost speed)



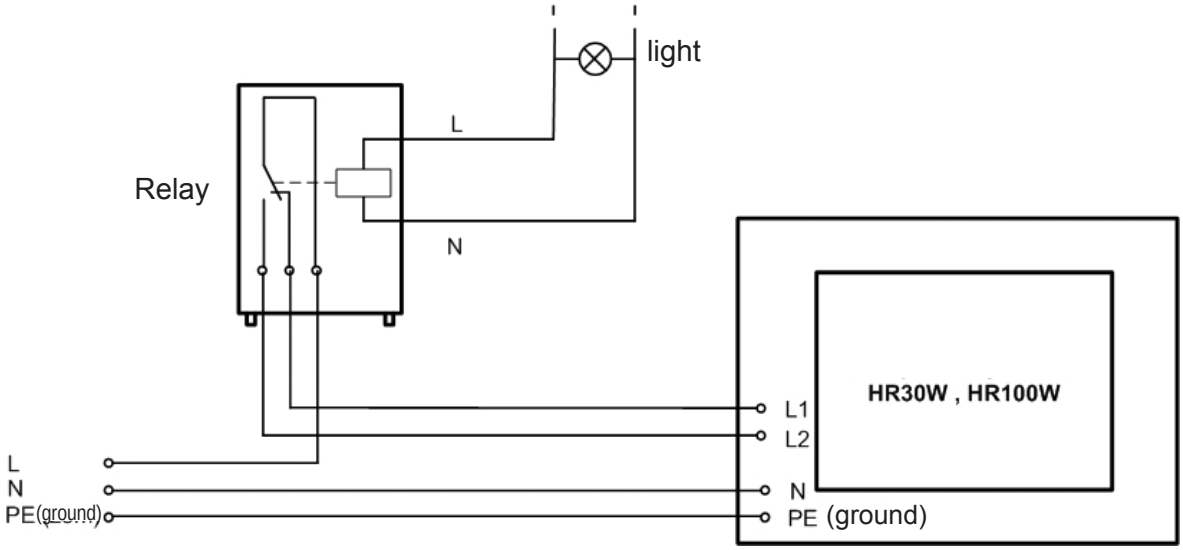


These units shall not be wired to lighting circuit!

2. wiring with a hygrostat



3. wiring with a light switch (a relay shall be used)



5. Maintenance

5.1 Cleaning

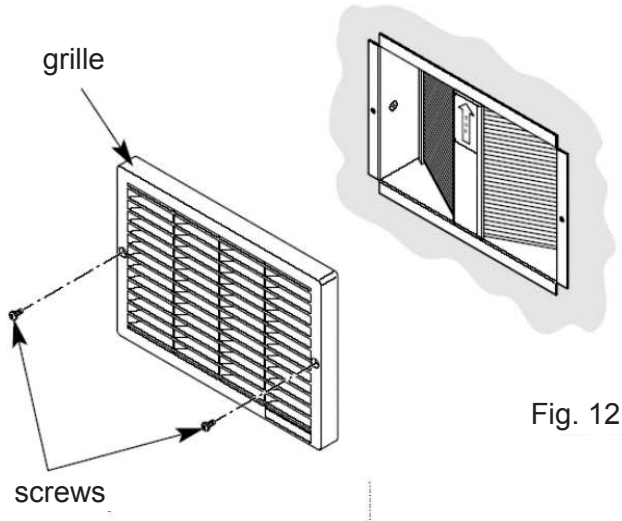


Fig. 12

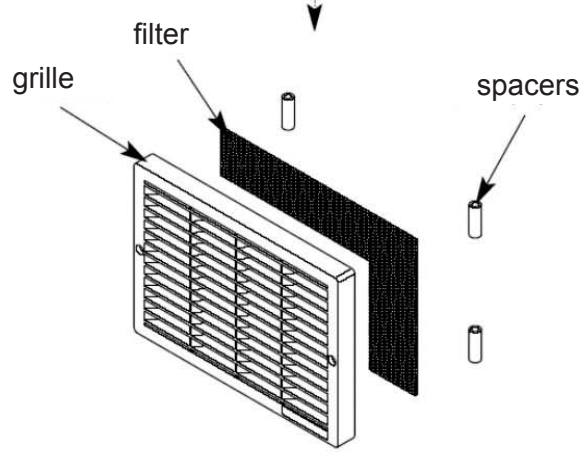


Fig. 13

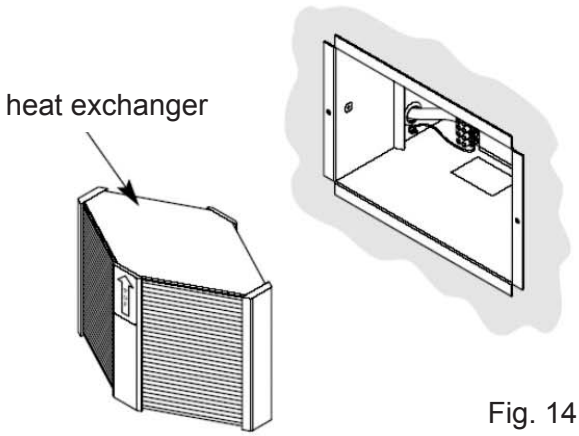


Fig. 14

1. In addition to removing odours, providing fresh air and recovering heat, this unit extracts airborne impurities such as dust, dirt and grease. These gradually build up and detract from the efficiency and appearance of the unit.

2. To ensure optimum performance, the unit should be cleaned every 3 to 6 months or at periods determined by the level of contamination experienced.

3. Isolate the mains power supply.

4. Undo the two grille securing screws and remove the grille (Fig. 12).

5. Pull out the four cylindrical inserts from behind the grille and remove the filter (Fig. 13).

6. Slide out the heat exchanger (Fig. 14).

7. Wash the grille, filter and heat exchanger in warm water using a mild detergent and dry thoroughly.

CAUTION: Keep water away from all electrical components and wiring within the unit.

If the filter cannot be cleaned, a replacement is necessary.

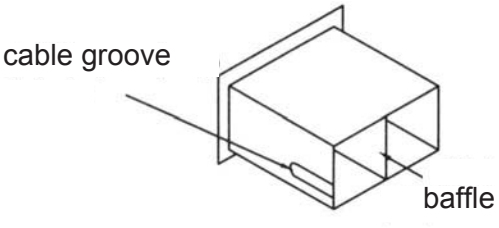
8. Reassemble in reverse order ensuring the filter and heat exchanger are seated correctly. The heat exchanger shall be positioned with the TOP mark pinpointing to the front and upwards.

9. Switch power supply on and check the operation of the unit.

HR30W
HR30W is fitted with an extra fine pollen filter (Art. No. FR30RF4). Its maintenance is the same as that of the standard filter, see Cleaning (section 5.1).

6. EXT 100 Extension

Extension for HR100W or HR30W is needed for 280-500 mm thick walls. It comes with the ABS outer louvre already mounted that forms a collar overlapping by 15 mm, making good around the installation opening, helping to seal off the opening with a water-resistant putty.

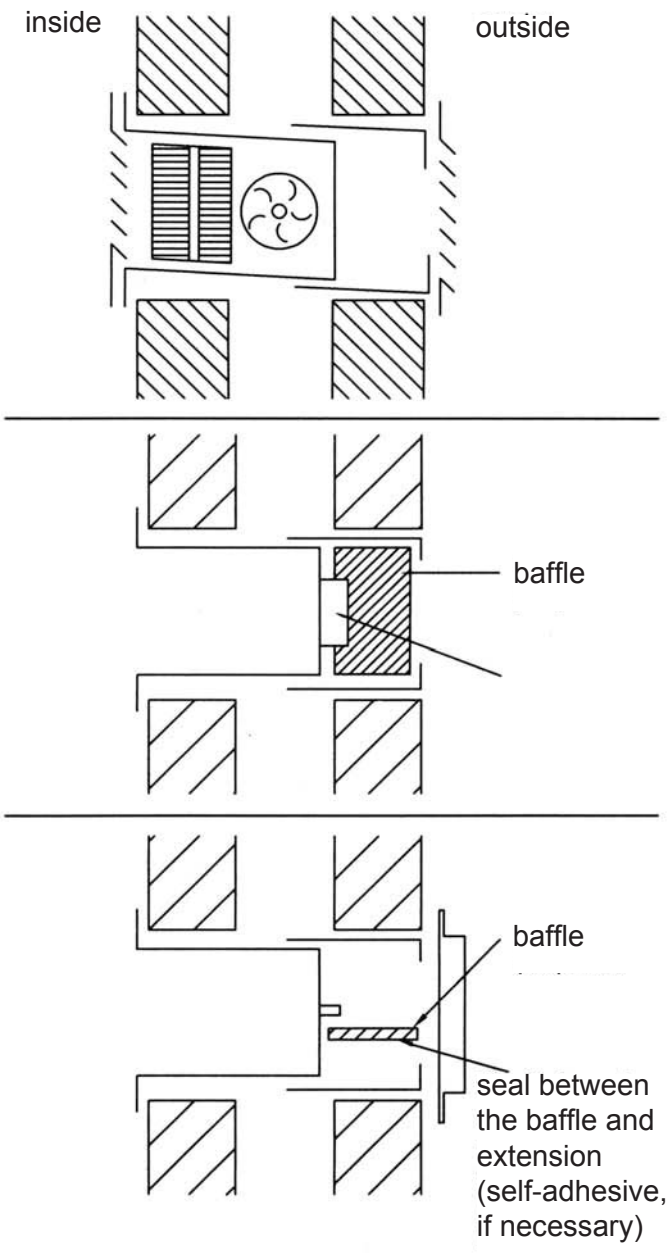


The plastic baffle comes together with the EXT100 extension piece and shall be cut as necessary to divide the fresh incoming air from the outgoing stale air along its entire length.

INSTALLATION

1. Cut an opening in the wall, 245 mm wide and 165 mm high, to accommodate the HR100W or HR30W unit and the extension (the opening is bigger by 5 mm than that intended for the HR100W unit alone).

2. Remove the louvre from the extension, notice how it is mounted.



3.Slide the HR100W (HR30W) into the mounting hole from inside and the extension from outside. Shift the two items into one another in such a manner that the mounting flange is flush with the inner wall and the edge of the extension with the outer wall. Align the assembly in order to reach a uniform outward inclination of about 1°.

4. Measure the distance from the rear of HR unit to the end of the extension.

5. Cut the baffle to this length. The baffle shall fit tightly between the rear section of HR unit and the extension's outer collar.

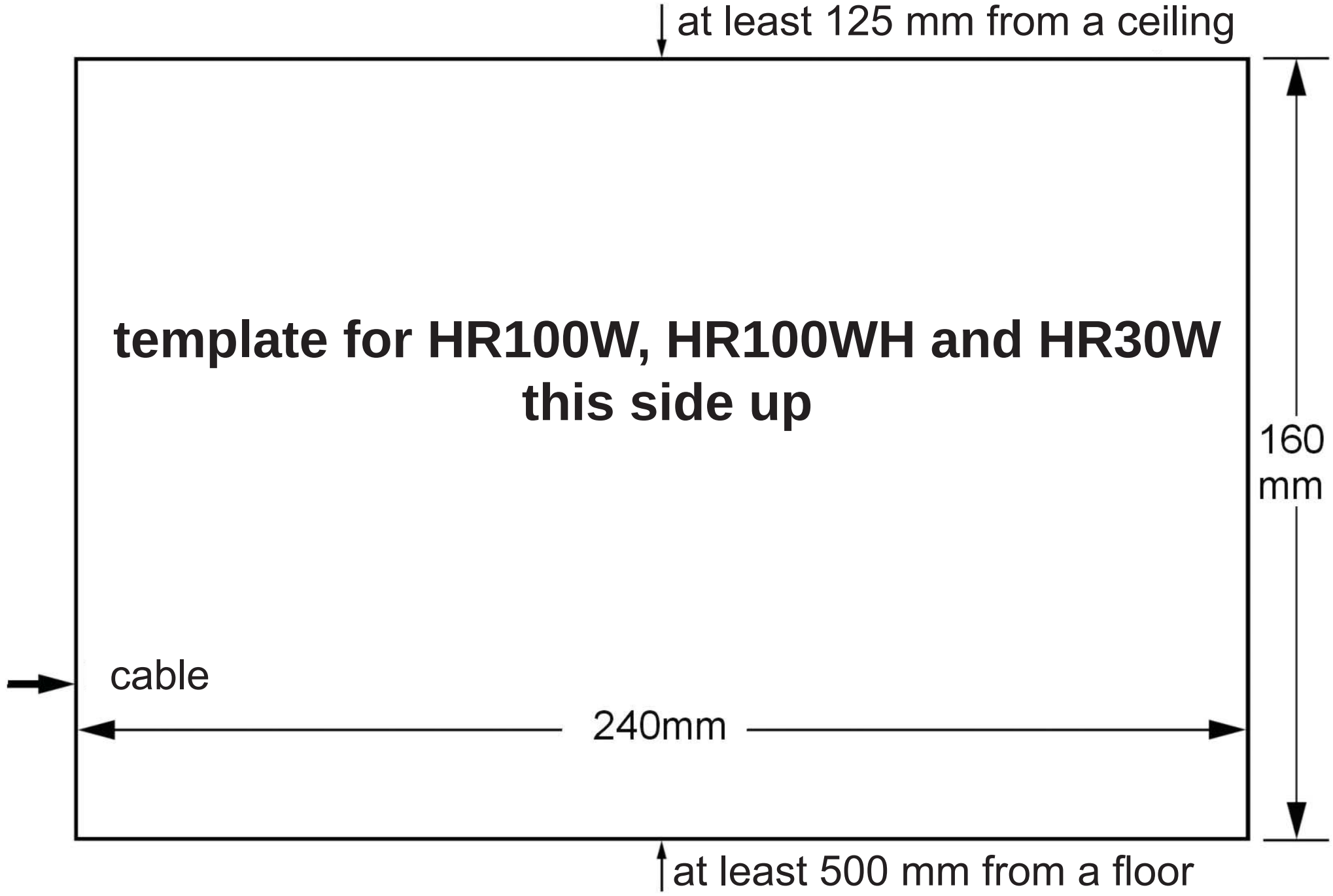
6. Wire the unit as described in the Electric Wiring chapter.

7. Verify there is a slight outward inclination of the assembly, and if necessary, the extension can be secured in this position using dowels and screws.

8. Slide the baffle in its place and fasten it to the HR rear using the self-adhesive stripe provided. Make sure the baffle is placed in the middle and straight, and that there are no gaps between the two airways. Possible leaks shall be sealed off with a duct tape.

9. Screw the outer louvre to its place using the enclosed screws. At the same time make a watertight seal between the outer louvre collar and the outer wall surface using silicone or another suitable putty.

10. Finish the installation following instructions in the Installation Manual for HR100W/HR30W.


at least 125 mm from a ceiling
template for HR100W, HR100WH and HR30W
this side up
160
mm
cable
240mm
at least 500 mm from a floor

EC DECLARATION OF CONFORMITY

Manufacturer:

Vent-Axia Limited
Fleming Way, Crawley
GB-RH109YX West Sussex
UK

Product:

Single-Room Heat Recovery Ventilation Units,
models:

HR 25; HR 25 L; HR 25 XXL
HR 30 ; HR 30 W
HR 100 R; HR 100 RS; HR 100 W; HR 100 WH; HR 100 S

Relevant harmonized standards:

EN 60335-1:1995; EN 60335-2-80:1997;
EN 55014-1:1997; EN 55014-2:1997;
EN 61000-3-2:1995; EN 61000-3-3:1995;
EN ISO 9001:2000

Relevant Directives:

Directive 2006/95/C- Low Voltage Directive (LVD)
Directive 2004/108/C - Electromagnetic Compatibility Directive (EMC)

Last two digits of the year in which the CE marking was affixed

07

Date and place of issue, name and position of the responsible person:

West Sussex 03.07.2007

……..
Lee Austin, Managing Director

WARRANTY CERTIFICATE

HR 30W, HR 100 W Single-Room Heat Recovery Ventilation Unit

Model: .....

Serial number: .....

Seller: ..... Date of purchase: .....

WARRANTY CONDITIONS

1. The Seller grants the Buyer a guarantee period of 24 months from the date of purchase.
2. When claiming warranty, this Warranty Certificate must be submitted together with the purchase receipt.
3. The warranty is valid only when the technical conditions set by the Manufacturer, installation manual and instructions in the documentation and on the product itself are maintained.
4. The warranty does not cover defects caused by external conditions or improper working conditions, defects caused by normal wear and tear, further when the product is not used in compliance with its purpose and when the defect was caused by mechanical damage to the product, improper handling, tampering by a third person, improper installation, improper stocking, natural disaster etc.

09/2014

REGULUS, spol. s r.o.
Do Koutů 1897/3
143 00 Praha 4
CZECH REPUBLIC

http://www.regulus.eu
E-mail: sales@regulus.cz