

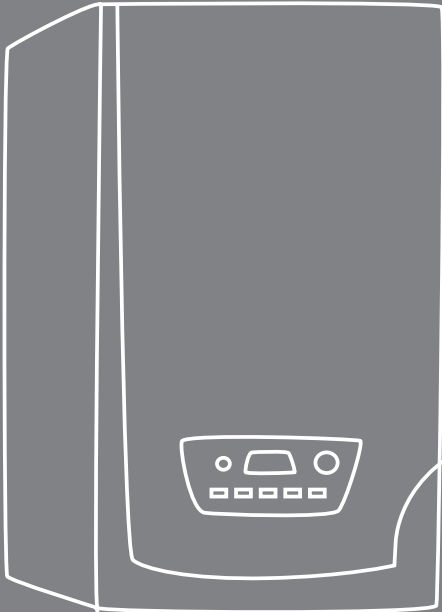


# Glow-worm

The energy you need

## Installation Instructions

Accessories/PFGHRD 60/100  
Passive Flue Gas Heat Recovery  
Device



## Explanation of Symbols



**DANGER:**  
*Risk of injuries.*

The PFGHRD is an integral part of the flue system and as such should be fitted in accordance with the manufacturer's flue instructions.

## Product description

The PFGHRD (Passive Flue Gas Heat Recovery Device) is designed as a complimentary energy saving system that can be connected to a

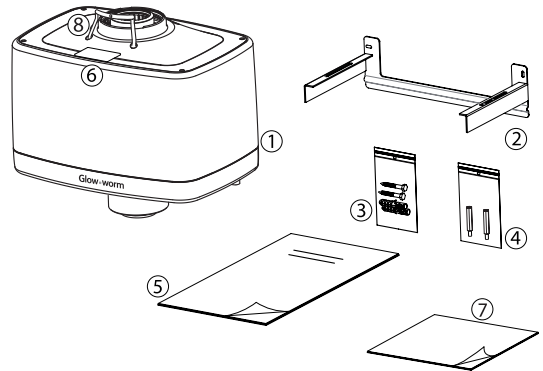
condensing combination boiler. This appliance recovers latent energy from flue gases produced by condensing combination boilers. The energy from flue gases is used to preheat incoming domestic cold water. The PFGHRD heat exchanger increases domestic hot water efficiency and therefore reduces gas consumption, CO<sub>2</sub> emissions and waste of sanitary water.

The PFGHRD is included in SAP PCDB, under Passive Flue Gas Heat Recovery Devices.

Glow-worm - PFGHRD 60/100

## Contents of package

1. PFGHRD unit
2. Support bracket
3. Wall fixing screws
4. Unit fixing screws
5. Installation manual
6. SAP label (attached to product)
7. Wall template
8. Flue anchor bracket (attached to product)



## Technical information

<b>DHW system</b> Max. water pressure Min. operating pressure	10.0* bar 0.2 bar <i>* Use a pressure-reducing device to achieve this, if necessary.</i>
<b>Water connections</b>	15 mm
<b>General dimensions</b> Height Width Depth	276 mm 376 mm 262 mm
<b>Weights</b> Empty Full	6.6 kg 9.4 kg

<b>Boiler applications</b> Condensing boilers only	Ultracom <sub>2</sub> cxi
<b>Flue Connections (60/100)</b> Top Bottom	60 - 100 mm 60 - 100 mm
<b>General</b> DHW Heat exchanger Inner casing  Outer casing Water content	Stainless steel PP According to EN 14471-1 ABS 2.8 litres
<b>Maximum flue length</b> Vertical Horizontal <i>(Flue length is reduced by 1.0m for each additional 87° elbow and by 0.5m for each additional 45° elbow).</i>	7 m 3 m + elbow, 24 & 30cxi 2m + elbow, 35cxi

## General installation conditions

Assess the overall height of the installation including PFGHRD and choose the appropriate flue system arrangement (see, 3. Installation diagram).

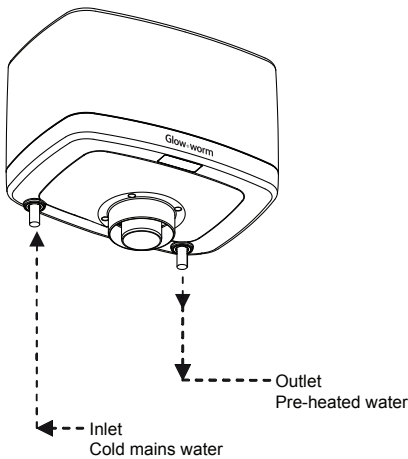
In situations where the water pressure exceeds 10 bar, it should be reduced to the permitted water pressure.

To allow pipework to be installed behind the boiler we recommend the use of the 0020082653 spacing frame.

No requirement for expansion vessel or mixing valve, see Commissioning page 7.

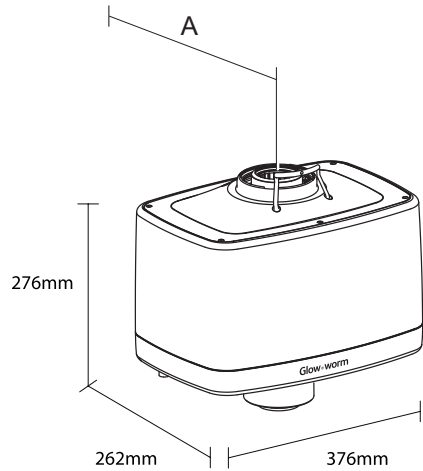
## PFGHRD Installation

1. The hot and cold water pipes are positioned at the bottom of the PFGHRD near the water connections.



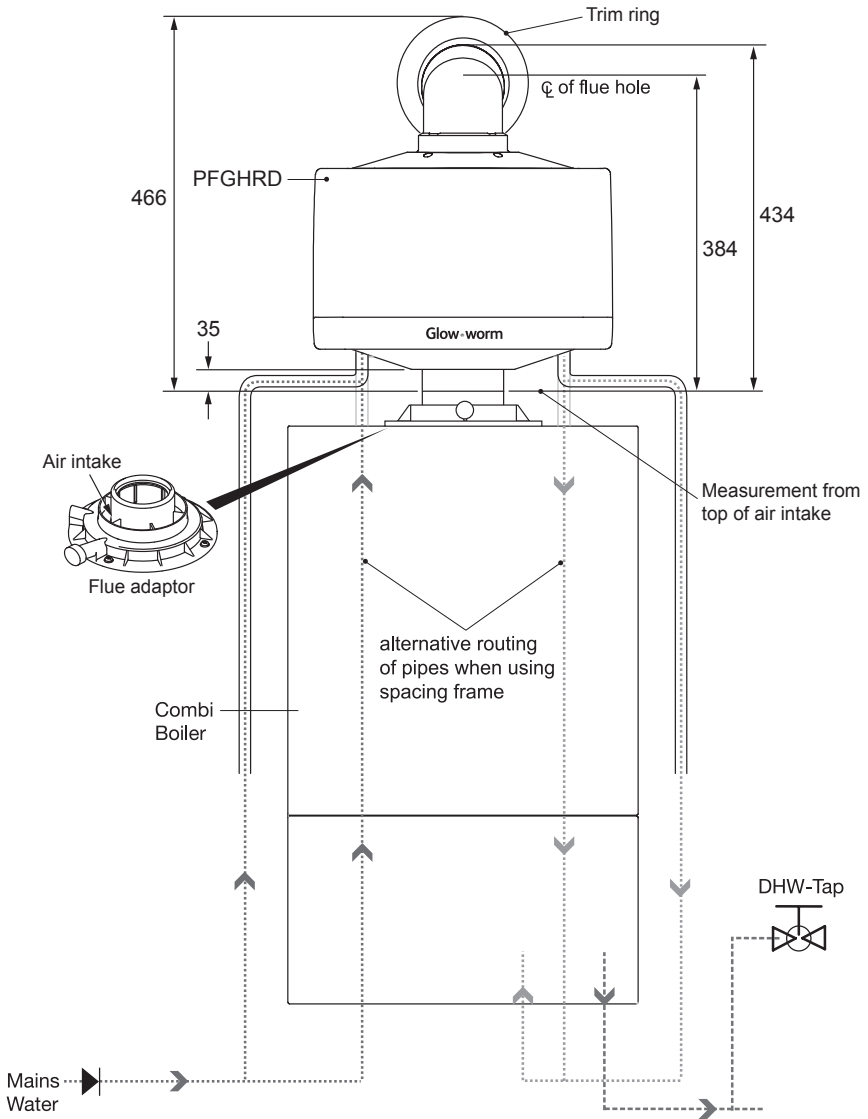
**NOTE:** No soldering of joints should be undertaken in close vicinity to the PFGHRD or boiler as this may cause damage.

2. Dimensions.



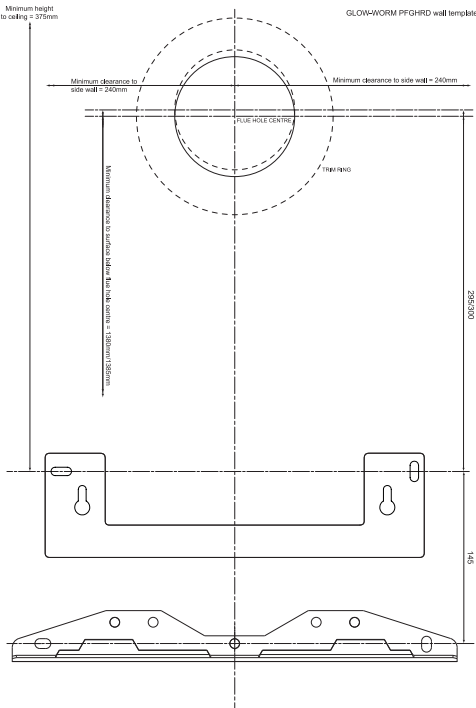
Distance from the flue outlet centre line to inside wall face, A = 126mm, if using a spacing frame, A = 176mm

3. Installation diagram.



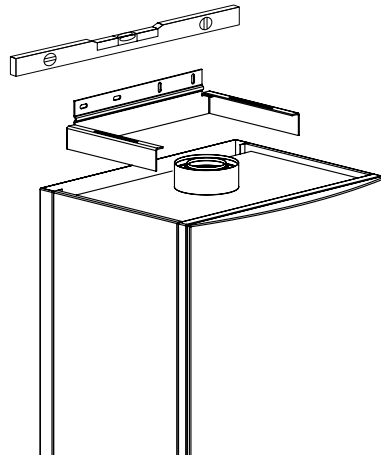
## Installation sequence

1. Fix the PFGHRD template to the wall ensuring that there is sufficient clearance to the ceiling. Ensure that the centre line of the template is vertical and at least 240mm from any side wall to allow for mounting of the boiler and pipework. Ensure there is at least 1380mm clearance from the flue centreline to any surface below to allow for installation of the boiler.



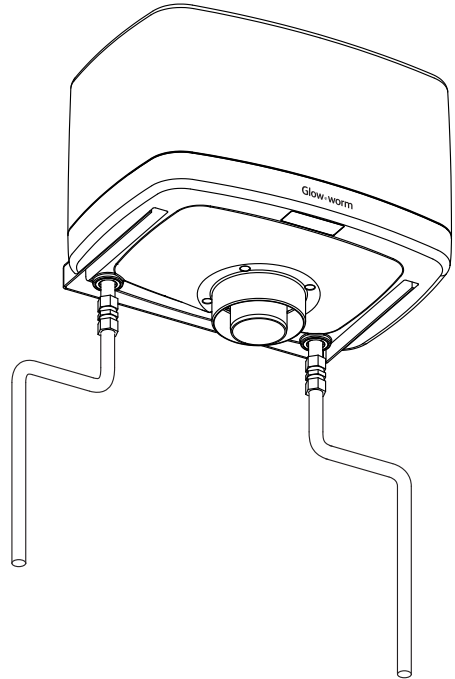
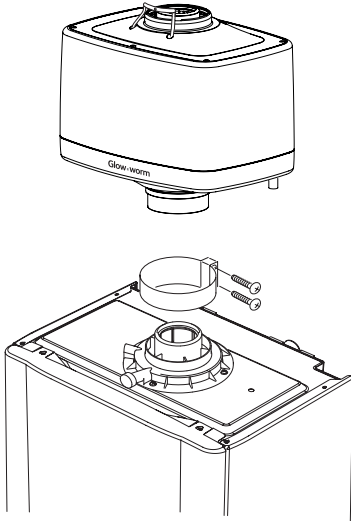
2. Mark and drill holes for the PFGHRD and boiler mounting brackets, all as per the wall template. Mark the centre of the flue. Remove the wall template and drill the flue hole. Note that if you intend to use a spacing frame, use the information provided with the spacing frame to drill additional holes as required.

3. Secure the PFGHRD bracket and the boiler mounting bracket to the wall.

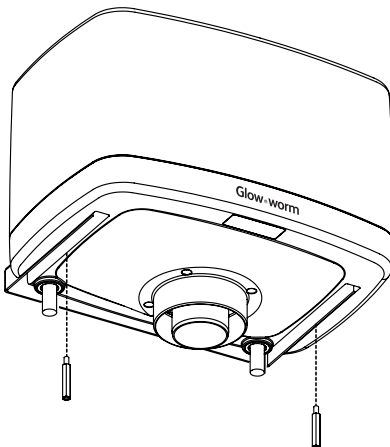


4. Follow the Boiler installation instructions and complete installation of the boiler.

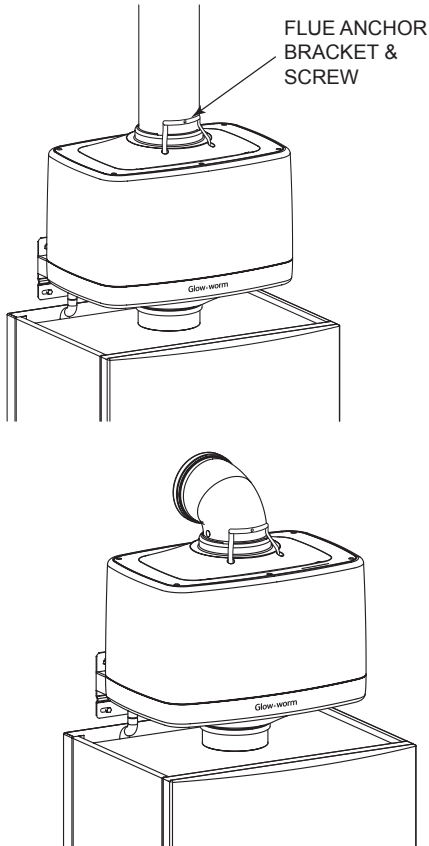
5. Attach flue adaptor to the boiler flue outlet.
6. Mount the PFGHRD onto the flue outlet of the boiler and onto the support bracket. Attach to the support bracket with the fixings provided and secure the flue clamp.



7. Connect the water pipes. Use the correct materials that can be combined with stainless steel.



8. Connect the flue system to the PFGHRD in accordance with the boiler installation instructions. Ensure the flue clamps are fitted and secured. Ensure that the flue anchor bracket attached to the PFGHRD is secured to the flue system by the screw provided.
9. Note that the overall flue length should not exceed the figures shown in the table on page 2, to allow for the additional resistance of the PFGHRD.



10. The PFGHRD is ready for commissioning.

### Commissioning

1. Complete installation and pipework of the boiler according to the installation instructions. Ensure tightness of all flue joints.
2. Open the cold water supply and cold water inlet valve of the appliance and check all connections for water leaks.
3. Turn on hot water tap and flush the PFGHRD until it is completely filled with water and no noise is audible.

4. The PFGHRD is ready for use.

5. Commission the boiler in accordance with the installation instructions.

To prevent corrosion of the boiler or PFGHRD and also on the air/flue gas duct, note the following:

Do not use sprays, solvents, chlorinated cleaning agents, paint, adhesives or similar substances in the vicinity of the boiler. Under unfavourable circumstances, these substances may cause corrosion.

All mains water heated by the Ultracom<sub>2</sub> cxi combination boiler will be classed as Category 2 fluid (potable water and small expansion volumes created during warm up must be allowed to flow back into the supply pipe. No back flow prevention is necessary with this appliance as the very small expansion volume is unlikely to heat the incoming service pipe above 25 Deg C.

Note that where back flow prevention devices are fitted (this may include water meters) these can prevent the permitted expansion into the cold supply. This along with the effects of pumping and / or water hammer can result in a pressure build-up that may cause damage to the boiler (and other household devices such as showers). Glow-worm cannot accept responsibility for damage caused to the boiler or its surroundings where an appliance has been fitted to supplies with mechanical back flow prevention. In these cases the requirement would be that a competent installer correctly installs a suitable shock arrestor / mini-expansion vessel adjacent to the boiler in the cold water supply pipe.



Subject to engineering changes

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Because of our constant endeavour for  
improvement, details may vary slightly  
from those shown in these instructions.

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