Australian Indoor Flue Installation Instructions

Vertical Termination Flue Kits

for Universal H-Series (Forced-Draft) Heaters

IMPORTANT NOTES:

1. This kit is intended to be used only with Australian Hayward Universal H-Series (Forced-Draft) gas heater models manufactured after November 1, 2013. These heaters may be identified by inspection of the heater rating plate which is located on the inside base of the heater and can be seen with the front door removed. The model number should match one of those listed in Table 1, and the manufacturing date must be after November 1 2013. The manufacturing date is part of the Serial Number and using Table 2 shows how to extract that date.
2. This instruction sheet is intended only for the heater service parts kits listed in Table 1.

TABLE 1

Part Number	Description	For Use With Heater Models	Flue Pipe Limitations	Flue Pipe Material	Flue Termination Requirement
UHXNEGVT11501AU	Indoor Flue Adapter Kit, Vertical Fluing Applications Only	H150FDAU	12 metres max vertical height, 6 metres max horizontal length (horizontal length cannot exceed 1/2 of vertical height), 3 elbows allowed maximum.	Single Wall Galvanised Non-Sealed Flue Pipe *Twin wall Flue Pipe*	Vertical Only, Termination Above Roof of House/Building
UHXNEGVT12501AU		H250FDAU			
UHXNEGVT14001AU		H400FDAU			

Twin wall flue pipe can only be used with the use of a single wall to twin wall flue pipe adaptor that shall comply with the requirements of AS 4567

TABLE 2

Serial Number Format	Year (y)	Month (mm)	
2113yymm1xxxxx001	13 = 2013	01 = Jan	07 = Jul
	14 = 2014	02 = Feb	08 = Aug
	15 = 2015	03 = Mar	09 = Sep
	16 = 2016	04 = Apr	10 = Oct
	17 = 2017	05 = May	11 = Nov
	18 = 2018	06 = Jun	12 = Dec

Note: “xxxxx” indicates the serial number.

3. This kit enables outdoor model heaters to be configured for indoor installation. All work shall be conducted by a qualified Gas Plumber/Fitter specifically trained and experienced in the installation of this type of heating equipment. The flue pipe termination is required to be vertically terminated above the house roof or building and the included approved flue cowling shall be used. The heater and Indoor Flue Kit must be installed as per the included instructions, and in accordance with AS/NZS 5601.1 (current edition), as well as all local, state and federal laws and regulations. Where these instructions are contrary to the law or regulations of an appropriate government body those laws or regulations should take precedence subject to there being no compromise to safety.
4. These flue kits are only suitable for installation on heaters up to a maximum altitude of 610 metres and can be used on natural gas or propane models.

⚠ WARNING Failure to comply with the installation instructions in this instruction sheet may result in equipment damage, fire, asphyxiation, or carbon monoxide poisoning. Exposure to products of incomplete combustion (carbon monoxide) can cause cancer, birth defects, or other reproductive harm.

CONTENTS OF THE KIT

Qty	Description
1	Flue pipe adapter for vertical termination galvanised vent pipe
1	Flue cover plate with hole for flue pipe
12	#10 Sheet metal screws
1	Blower baffle plate (UHXNEGVT12501AU & UHXNEGVT14001AU only)
1	Flue pressure switch
1	Flue pressure switch tubing
1	Flue pressure switch jumper wire pair
1	Flue pressure switch tubing tee (UHXNEGVT11501AU & UHXNEGVT12501AU only)
1	Label “Indoor Installation Only”
1	Roladuct flue cowling - AGA Certified

NOTES ON INDOOR INSTALLATIONS

Clearances

The heater must be installed such that the installation and service clearances from combustible materials shown in Table 3 are maintained. This heater may be installed on combustible floors. Do not install heater in a cupboard or in a roof cavity or roof space. If the heater is being installed inside a garage it shall be installed with the base of the heater raised at least 450 mm above the floor.

DO NOT install the heater in a location where it may ignite flammable vapours or materials or where chemicals may combine with combustible air and cause corrosion or malfunction of the heater.

DO NOT store flammable or corrosive liquids or materials in the same room as the heater.

TABLE 3

Heater Panel	Required Clearance
Top	1000 mm
Front	Unobstructed
Back	150 mm
Water Connection Side	300 mm
Side Opposite Water Connection	150 mm

Air Supply

Indoor installations and outdoor shelters (confined spaces) must be provided with adequate combustion and ventilation air to assure proper heater operation and shall be in accordance with AS/NZS 5601.1 current edition. Failure to provide adequate ventilation voids all warranties and may be a danger to persons or property.

The ventilation and combustion air shall be supplied via two permanently open vents connected directly, or via ducts that have the same cross-sectional area as the vents, to outside air.

The openings shall be located to ensure the distance between the top of the upper opening and the ceiling of the room or enclosure, and the distance between the bottom of the lower opening and the floor of the room or enclosure, do not exceed 5% of the height of the room or enclosure.

Each of the two permanent openings connected to directly outside shall be provided with a minimum free ventilation area as shown in Table 4.

Table 4 is a guide only with the vent areas calculated for a single gas heater installed only and no other appliances requiring ventilation air. For more detailed methods of providing air for combustion and ventilation, refer to the current edition of AS/NZS 5601.1 Gas Installations - Part 1: General Installations.

TABLE 4

Model	Gas appliance in a room or enclosure, other than a plant room	Gas appliance in a plant room
H150FDAU	47,400 mm²	23,700 mm²
H250FDAU	79,200 mm²	39,600 mm²
H400FDAU	126, 600 mm²	63,300 mm²

Note: The minimum vertical dimension of any free ventilation opening shall be 6mm.

Hayward Pool Products (Australia) Pty Ltd, DOES NOT recommend installing spa blowers in the same room as a gas heater. This has the potential to be dangerous or fatal to spa or pool users.

Flue Installation

All aspects of flue installation shall be in accordance with AS/NZS 5601.1 current edition and local / state regulations. All installation work must be carried out by an authorised and qualified person.

- The flue pipe diameter shall not be smaller than the size of the flue pipe adaptor on the heater (see Table 5).
- The maximum total flue length incorporating a maximum of up to 3 x 90° elbows is 18 metres.
- The maximum flue height cannot exceed 12 metres and any lateral (horizontal) run in a flue shall be as short as possible and not exceed 1/2 of the total flue height, and shall rise not less than 20 mm per 1 metre of lateral run.
- The minimum vertical length flue before an elbow can be used is 150 mm.

It is recommended that flues over 6 metres long may require to be insulated to reduce condensation related problems in cold environments, or to install an approved condensate drain at low points where condensate may collect. Flue joints shall seal adequately and if necessary a sealing agent shall be used.

TABLE 5

Indoor Flue Kit Part Number	Heater Model	Flue Pipe Diameter
UHXNEGVT11501AU	H150FDAU	150 mm (6 inch)
UHXNEGVT12501AU	H250FDAU	
UHXNEGVT14001AU	H400FDAU	200 mm (8 inch)

The flue shall be supported independently of the gas heater and shall be securely fixed and adequately supported by brackets fastened to the building structure at suitable points, to ensure the stability of the flue unless the flue is designed to be structurally independent of the building.

The minimum clearance between a single wall flue and a combustible surface and a non-combustible surface shall be as those stated in AS/NZS 5601.1 current edition. All roof and wall penetrations shall be made using approved products and in accordance with AS/NZS 5601.1 current edition and local regulations.

Flue Termination

The termination point of the flue shall be vertical and above the roof of the house or building. It shall be located in relation to any associated building and to neighbouring structures so that wind from any direction is not likely to create a downdraught in the flue and shall be:

- At least 1.5 metres from any opening into a building.
- At least 200 mm from another flue terminal.
- At least 600 mm from the end of the flue to the nearest part of the roof (Refer Figure 1).

For more detailed information regarding flue termination, refer to the current edition of AS/NZS 5601.1 Gas Installations - Part 1: General Installations.

FIGURE 1

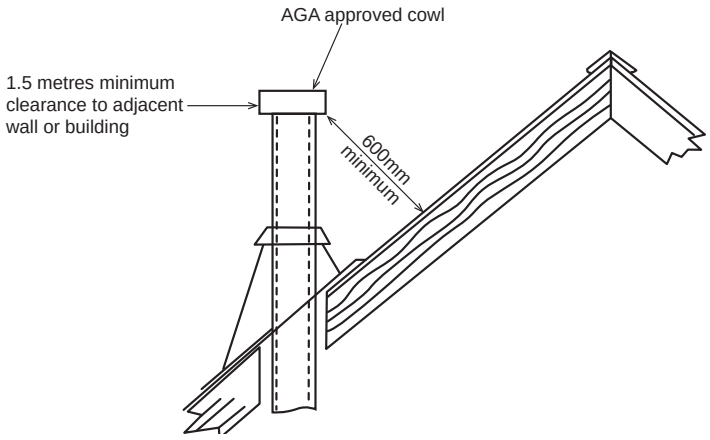
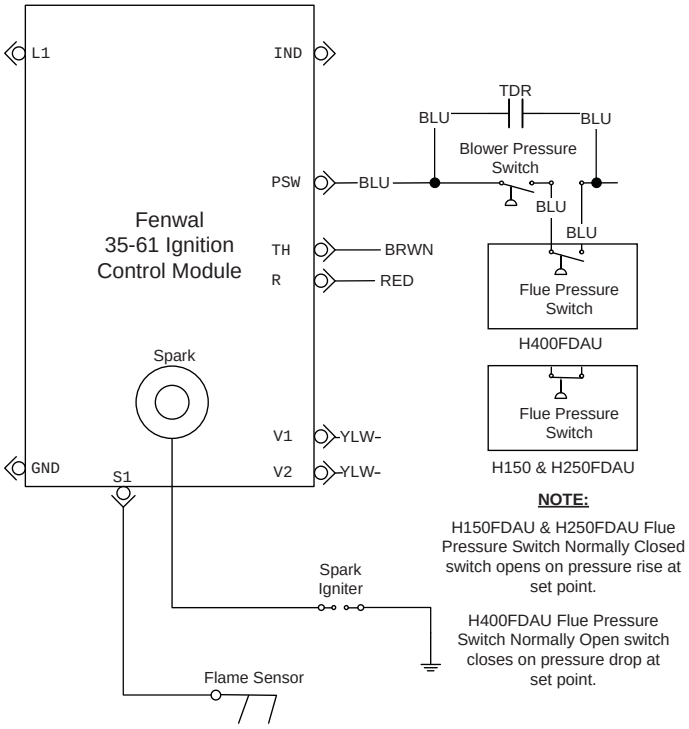


FIGURE 2



INSTALLATION PROCEDURE

1. If connected, turn pump, main gas valve, and heater power off.
2. Locate the heater as close as practical to the flue pipe exit.
3. Remove the button Phillips-head screws and remove the flue cover panel on top of the heater and discard. Save the button-head screws as they will be re-used later.
4. Remove the screws that fasten the heat barrier to the heater. Remove the heat barrier and discard. See Figure 3.
5. Remove the screws that fasten the rain guard to the heater. Remove the rain guard and discard. See Figure 3.
6. Install the flue pipe adapter plate included in this kit into the heater using the #10 screws included with this kit. Ensure the white gaskets are in place under the vent pipe adapter plate before installing. See Figure 4.
7. Install the new flue cover included with this kit over the flue pipe adapter and secure with the button-head screws from step 3 above. See Figure 5.
8. Remove heater front access door.
9. The flue pressure switch included with this kit is for this model heater up to an altitude of 610 metres only. Install the flue pressure switch inside the heater using two #10 screws as shown in Figure 6.
10. If installing the kit on models H250FDAU or H400FDAU, you must replace the existing blower baffle plate with the new one included in the kit.
    a) Remove the 5 #10 hex head screws that fasten the plate to the blower and remove the blower baffle plate and discard. Save the 5 screws as they will be needed to install the new plate.
    b) Install the new blower baffle plate included in the kit using the 5 screws. It may be helpful to drive the screws in and out of the plate outside of the heater first to “thread” the holes before installing it in the heater. See Figure 7.
11. Attach the pressure switch tubing to the flue pressure switch. On models H150FDAU & H250FDAU use the 6 mm plastic Tee provided in the kit to join into the grey air pressure tube that connects the blower air pressure switch to the pressure tap on the blower outlet. For the model H400FDAU attach the pressure switch tubing to the flue pressure switch and to the pressure tap point located on the blower baffle plate just below the array of holes. See Figure 7 for blower tap location on models H150FDAU & H250FDAU.
12. Connect the pair of jumper wires included with this kit onto the terminals on the flue pressure switch. Unplug the bottom blue wire from the blower pressure and connect the jumper wires from the flue pressure switch to the connector on the blue wire and the terminal on the blower pressure switch so that now both pressure switches are connected in series. See excerpt from heater wiring schematic in Figure 2 located on page 3.
13. Re-install heater front door.
14. Take the label “Indoor Installation Only” that is in this kit and replace or stick on top of the label on the heater that says “Outdoor Installation Only”
15. Connect flue piping system to heater flue adapter.
16. If connected, turn pump, main gas valve, and heater power back on.
17. Activate heater and check for proper function.

FIGURE 3

FIGURE 4

FIGURE 5

FIGURE 6

FIGURE 7