escea.

Extended Flue Run Manual

SUITABLE FOR: D-Series and K-Series

NZ & AUS EDITION

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Contents

1 Description

The Escea polypropylene flue is a ridged pipe, co-linear push fit flue system with an Ø80mm inlet pipe and a Ø100mm exhaust pipe.

The Poly Pro flue system is ONLY for use on the D-Series range of Escea fires.

The Poly Pro flue system is available as an add–on to the maximum uninsulated flue length of DFS, DX, and DL models or the maximum insulated flue length of DF, DS, and KS models.

Read all of these instructions prior to commencing the installation of the flue.

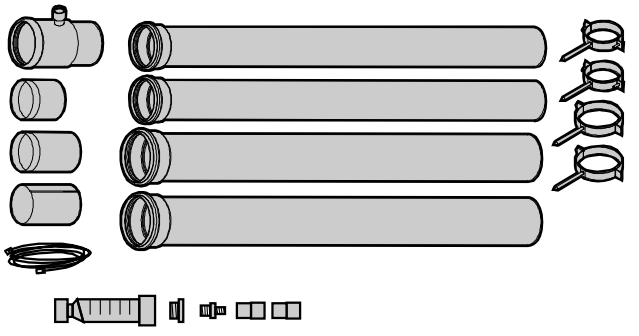
Considerations when running a Poly Pro flue extension system:

- The flue from the fire to the Poly Pro must be aluminium flexi flue (uninsulated for DFS, DX, and DL models and insulated for DF, DS, and KS models).
- The Poly Pro flue system must be Escea polypropylene co-linear flue.
- The flue will be a considerable weight and needs supporting/securing at one meter intervals.
- The appliance will generate considerable condensate which will require disposal.
- The waterless trap MUST be installed in a vertical position.
- Maximum of FOUR bends allowed in the Poly Pro flue (either 45° or 90°).
- The Poly Pro flue can get hot – ensure the correct clearance from heat sensitive materials.

WARNING – ONLY TO BE INSTALLED BY A SUITABLY QUALIFIED PERSON.

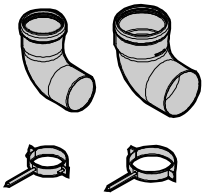
2 Available Flue Packs

906609 - Escea D Series Poly Pro Flue Starter Kit (2m Extension)



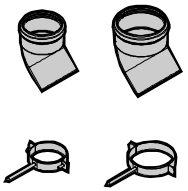
2x 1m x 100mm flue
2x 1m x 80mm flue
2x 80mm bracket
3x 100mm bracket
1x condensate trap
1x Powerflue adaptor 80mm
1x Polypro flue adaptor 80mm
1x Split Sleeve 100mm
1x 7m Extension Cord
Rivets
Washers
HepVo 40mm waterless trap
Threaded Adaptors
Plain socket
Threaded socket

906610 – Escea D Series Poly Pro 90° Elbow Kit



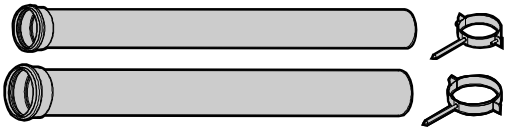
90º elbow 100mm
90º elbow 80mm
80mm bracket
100mm bracket

906610 – Escea D Series Poly Pro 45° Elbow Kit



45º elbow 100mm
45º elbow 80mm
80mm bracket
100mm bracket

906612 – Escea D Series Poly Pro Flue 1m Extension kit

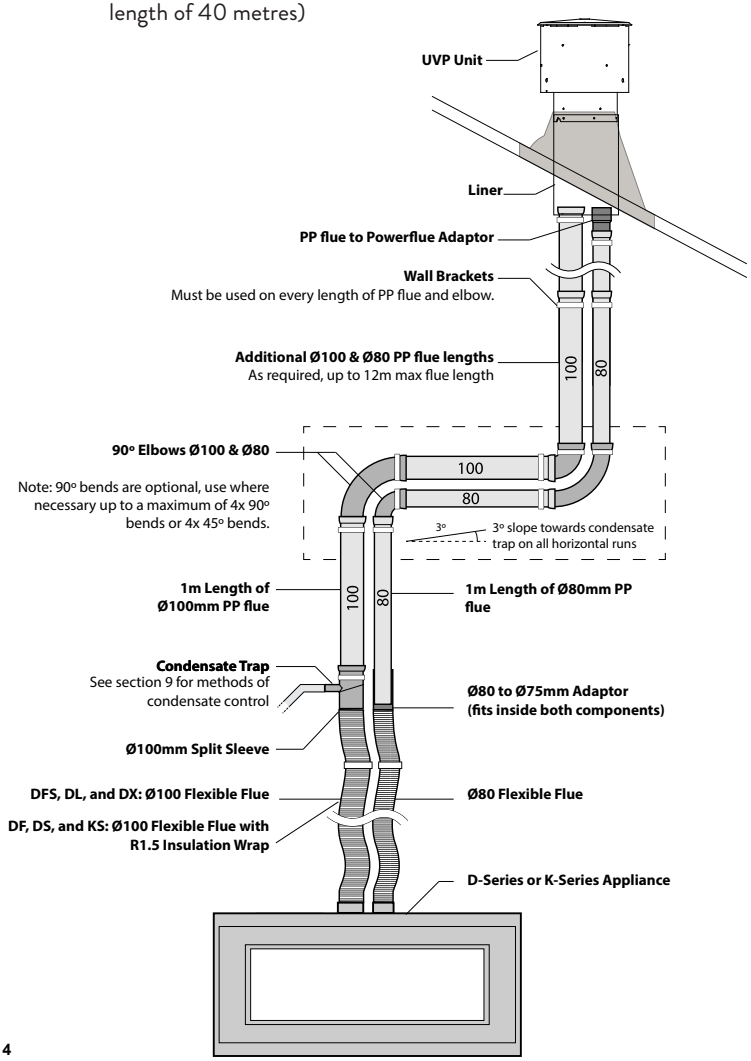


1m x 100mm flue
1m x 80mm flue
80mm bracket
100mm bracket

3 Vertical Flues

The point at which the flue needs to transition from flexi-flue to Poly Pro varies depending on the fire, as per the list below. The maximum allowable flue length also changes depending on fire model.

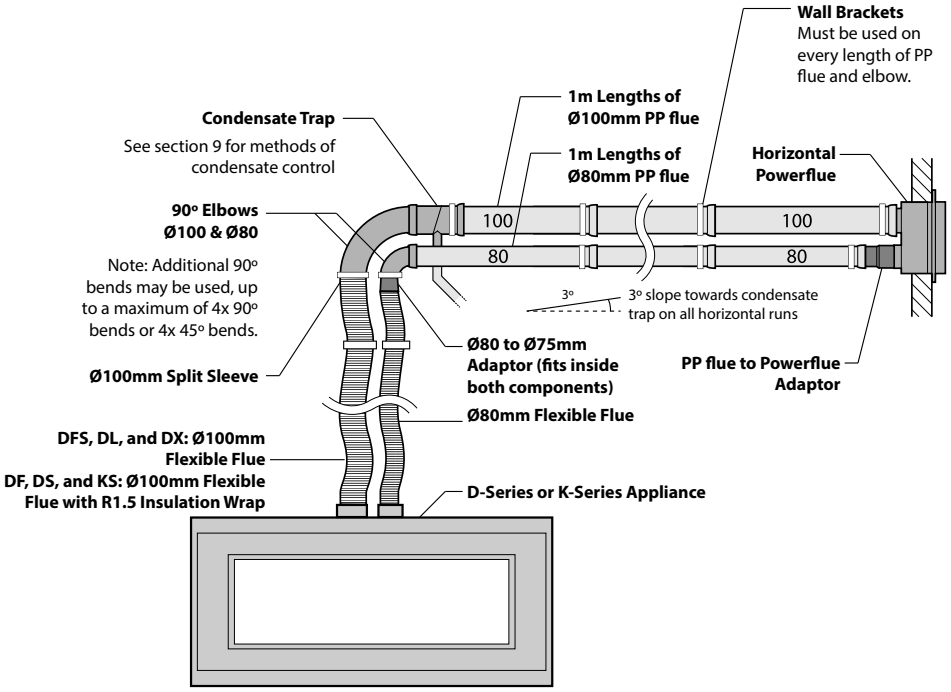
- The polypro transition point for all DFS, DL, or DX is at 4 metres (Up to a maximum flue length of 12 metres)
- The polypro transition point for all DOUBLE SIDED DS1150, DS1400, or DS1650 is at 20 metres (Up to a maximum flue length of 40 metres)
- The polypro transition point for all SINGLE SIDED DS1150, DS1400, or DS1650, the KS1150 Peninsula 400, or the KS1150 LH/RH Corner 400 is at 25 metres (Up to a maximum flue length of 40 metres)
- The polypro transition point for all SINGLE SIDED or DOUBLE SIDED DS1900, the KS1150 Single 850, or the KS1150 Double 850 is at 30 metres (Up to a maximum flue length of 40 metres)



4 Horizontal Flues

The point at which the flue needs to transition from flexi-flue to Poly Pro varies depending on the fire, as per the list below. The maximum allowable flue length also changes depending on fire model.

- The polypro transition point for all DFS, DL, and DX is at 4 metres (Up to a maximum flue length of 12 metres)
- The polypro transition point for all DOUBLE SIDED DS1150, DS1400, and DS1650 is at 20 metres (Up to a maximum flue length of 40 metres)
- The polypro transition point for all SINGLE SIDED DS1150, DS1400, or DS1650, the KS1150 Peninsula 400, or the KS1150 LH/RH Corner 400 is at 25 metres (Up to a maximum flue length of 40 metres)
- The polypro transition point for all SINGLE SIDED or DOUBLE SIDED DS1900, KS1150 Single 850, or KS1150 Double 850 is at 30 metres (up to a maximum flue length of 40 metres)

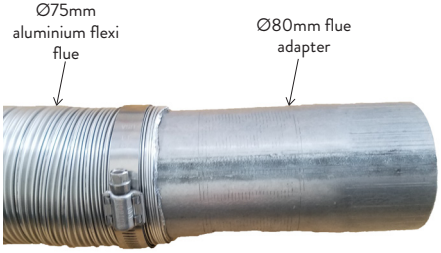


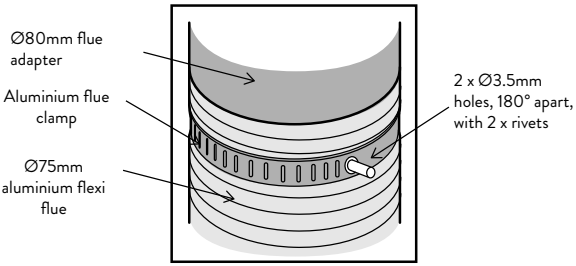
5 Attaching the Flexible Aluminium Flue to the Poly Pro

IMPORTANT NOTE: To ensure the flexi flue seals correctly, fully extend the corrugations of the last 300mm of the flexi flue at each end prior to clamping to the appliance and the flue adaptor.

The flexi flue length is connected at one end to the appliance and at the other end to the Poly Pro flue. The flue should be supported along its length at one meter intervals. The supports are needed to prevent weight and load being transferred to the next component in the flue.

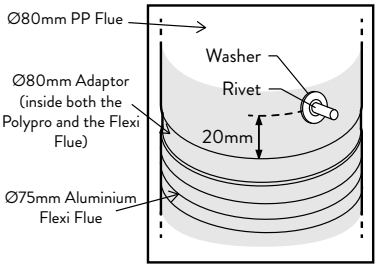
Step 1: Slide the supplied Ø75mm to Ø80mm flue adapter as far as possible into the Ø75mm flexi flue, as shown in the image to the right.

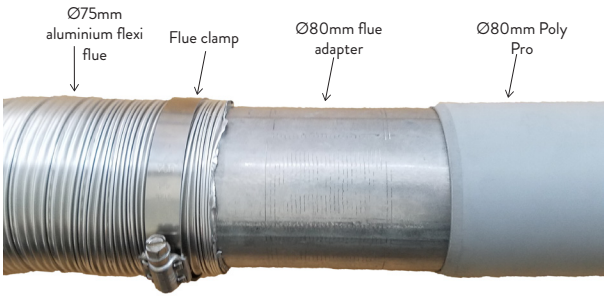




Step 2: Drill 2 x Ø3.5mm holes, 180° apart, through the flue clamp, flexi flue, and flue adaptor. Secure the adapter in place with two long rivets through the drilled holes, as shown in the diagram to the left.

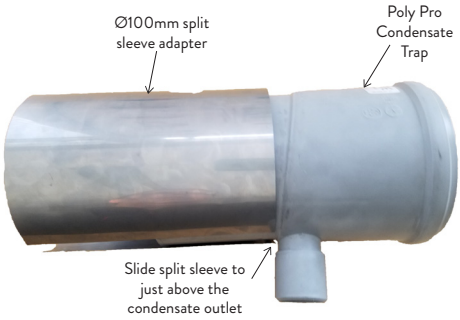
Step 3: Once secured into the flexi flue, push the Ø80mm adaptor fully into the Poly Pro flue. Secure it into position by drilling 2 x Ø3.5mm holes, 180° apart, 20mm from the end of the Poly Pro. Use the two rivets and washers provided (see diagram).



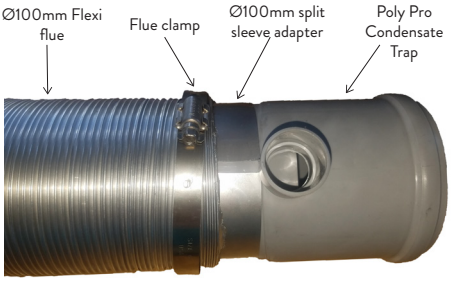


Once fully attached, the inlet connection between the flexi flue and the Poly Pro should look like the image shown.

Outlet Flue (Ø100mm Exhaust flue)



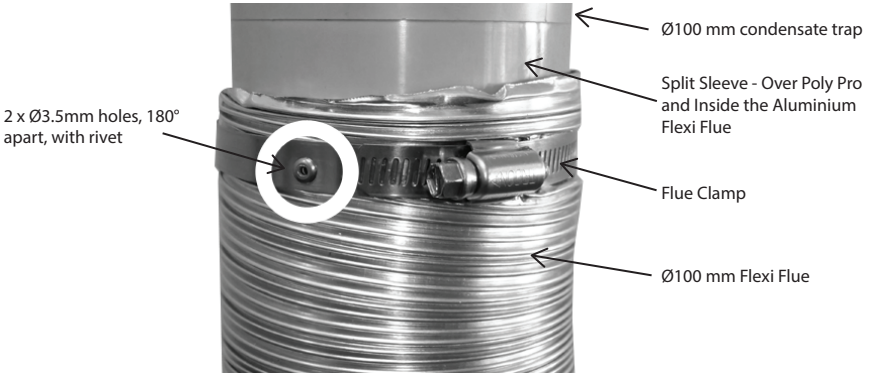
Step 1: The split steel sleeve is wrapped around the outside of the Ø100mm inlet of the condensate trap. Slide the split sleeve down so that it sits just above the condensate outlet.



Step 2: Slide the flue clamp onto the Ø100mm flexi flue. The Ø100mm flexi flue is then slid onto the outside of the split sleeve and pushed as far down as possible.

Step 3: Drill 2 x Ø3.5mm holes, 180° apart, through the flue clamp, flexi flue, and split sleeve. Secure the split sleeve and flexi flue in place with two long rivets inserted into the drilled holes, as shown in the diagram. This secures the condensate trap to the Ø100mm Poly Pro flue.

Once fully attached, the outlet connection between the flexi flue and the Poly Pro should look like the image shown.



NOTE: The condensate drain exit tube must be in a downward position. The flue support brackets are to be used on all Poly Pro flue components.

NOTE: Collection and disposal of the condensate is an important part of the appliance installation. Attention should be paid to section 9 "Condensate Control" on page 9 of this manual regarding condensate control.

The Poly Pro flue lengths and elbows push together and then must be securely supported with wall brackets –one bracket per length or elbow. These clamps serve two purposes:

1) To hold the pipe at its required angle and
2) To ensure the flue pipes remain inserted together.

NOTE: All horizontal lengths of polypropylene Ø100mm exhaust flue MUST have a fall back towards the appliance of at least 3°.

The Ø100mm Poly Pro flue pushes directly onto the powerflue with the final length of Ø100mm flue length being secured in position with a wall bracket.

The final length of Ø80mm Poly Pro flue fits into an adaptor which will then fit directly onto the powerflue, with the Poly Pro flue being secured in position with a wall bracket.

6 Wall Bracket Fixing (Wood)

The wall bracket has a shaft that should be fixed securely before continuing with the assembly of the flue.

The wall bracket shaft should be fixed into wood with the following steps.

1. Mark out the run of the flue including the 3° fall back to the condensate trap.

2. Drill a Ø6mm pilot hole into the wood in the required position.

3. Unscrew the shaft from the bracket and drive the shaft partially into the wood (approximately 25mm).

4. Reattach the bracket and use this to rotate the shaft, screwing it in to the desired height.

5. Align the bracket with the flue direction.

7 Wall Bracket Fixing (Brick/Concrete)

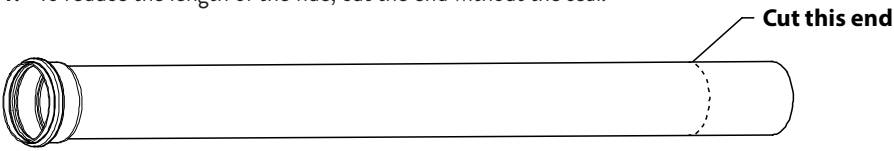
The wall bracket has a shaft that should be fixed securely before continuing with the assembly of the flue.

The wall bracket shaft should be fixed into brick or concrete with the following steps.

1. Mark out the run of the flue including the 3° fall back to the condensate trap.
2. Fix a suitably sized plastic wall plug into the brick or concrete in the required position (noting the length of the wall bracket shaft).
3. Unscrew the shaft from the bracket and drive the shaft partially into the wall plug (approximately 25mm).
4. Reattach the bracket and use this to rotate the shaft, screwing it in to the desired height.
5. Align the bracket with the flue direction.

8 Assembling the Polypropylene Flue

1. To reduce the length of the flue, cut the end without the seal.



2. Ensure that any cut edges are completely de-burred and file a slightly bevel lead-in on the outer edge – failure to do so may damage the inner seal and create a leak path.
3. To assist assembly of the flue lengths, wet the inner seal with water.
4. Once assembled, check that the flue inner seal has not been pushed out of position.

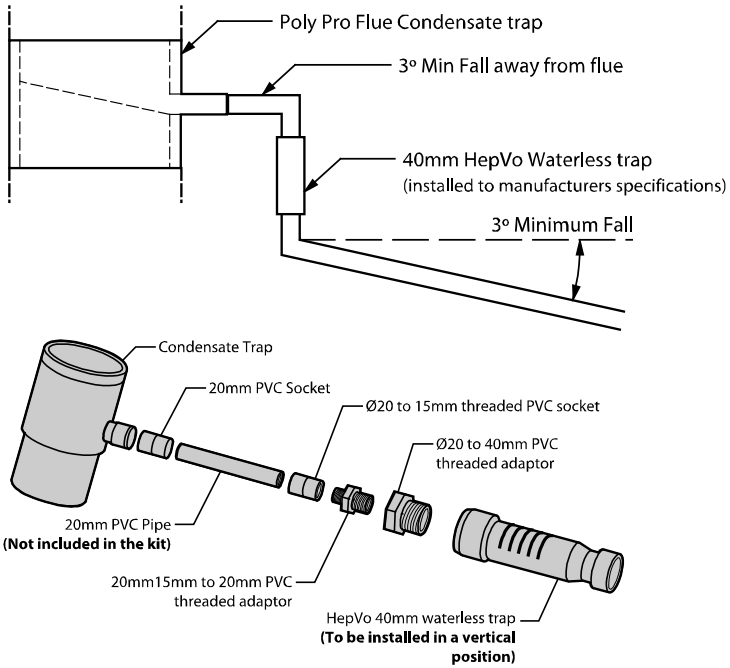
9 Condensate Control

Condensate Drain
On long flue lengths (over 4 metres) the D Series fires may continuously generate condensate at a rate of up to 0.5 litres per hour. The control of this condensate is important to both the function of the appliance and the integrity of the building, therefore the condensate must be drained to a suitable discharge point.

Condensate is a by-product of the products of combustion and is mildly acidic, therefore copper tube and/or fittings MUST NOT be used as they will corrode. Instead, solvent sealed PVC plastic pipes and fittings, together with sealed PVC threaded joints, should be used.

Condensate control installation
NOTE: Consideration should be made to the latest edition of AS/NZS 3500 and the prevention of the condensate freezing in cold conditions.

Initial condensate removal from the flue



The above components (with the exception of the Ø20mm pipe) are included in the Escea Poly Pro starter kit. You will also need PVC cement and, depending on the particular install, Ø20mm elbows. This will allow the waterless trap to be connected to the Ø100mm condensate trap in a vertical position.

NOTE: The waterless trap must be installed in a vertical position, and the PVC sockets must be sealed with PVC cement.

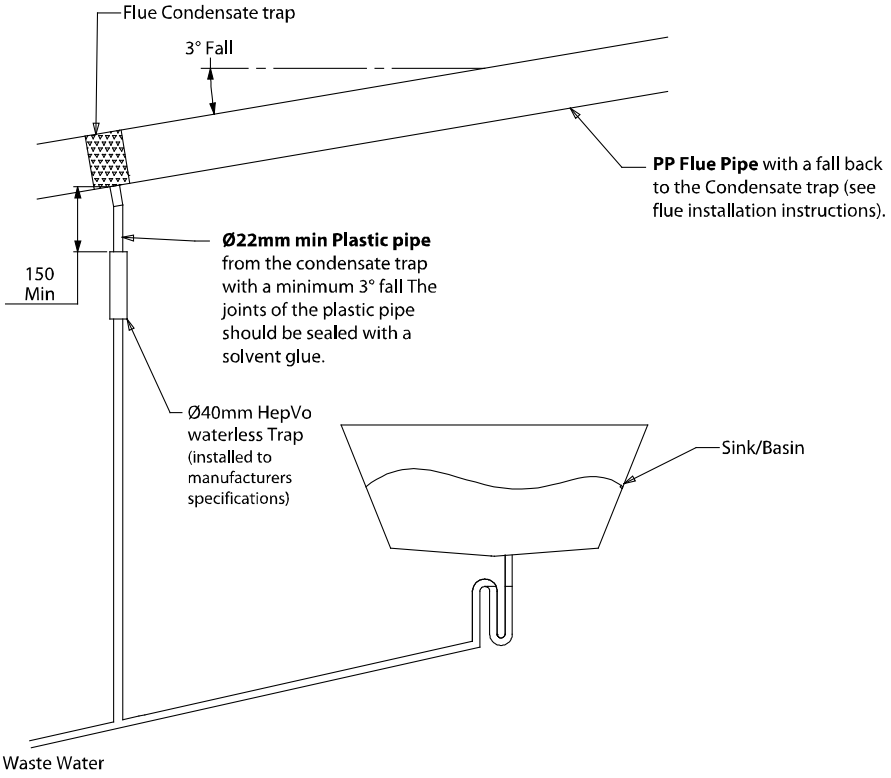
10 Internal Condensate Disposal

Wherever possible, the condensate drainage pipe should be terminated at a suitable internal foul water discharge point such as an internal soil and vent stack, an internal kitchen or bathroom waste pipe, a washing machine waste pipe, etc.

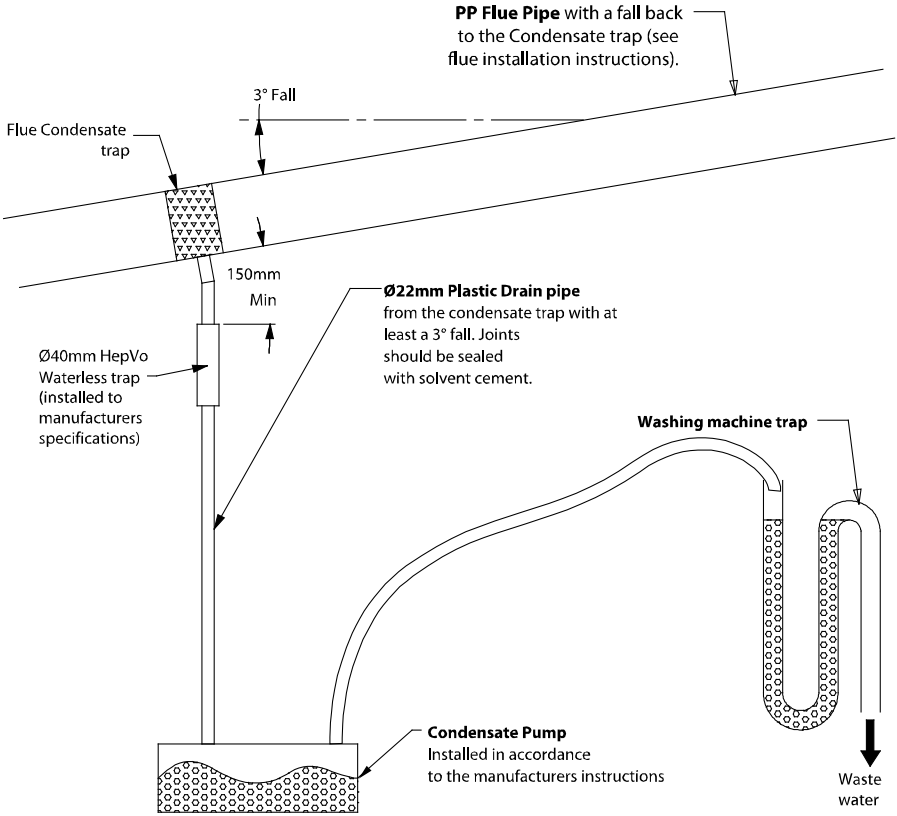
A suitable permanent connection to the foul waste pipe should be used.

The possibility of waste pipes freezing downstream of the connection point should be considered when determining a suitable connection point - e.g. a slightly longer pipe run to an internal soil stack may be preferable to a shorter run connecting into a kitchen waste pipe discharging directly through the wall to an external drain.

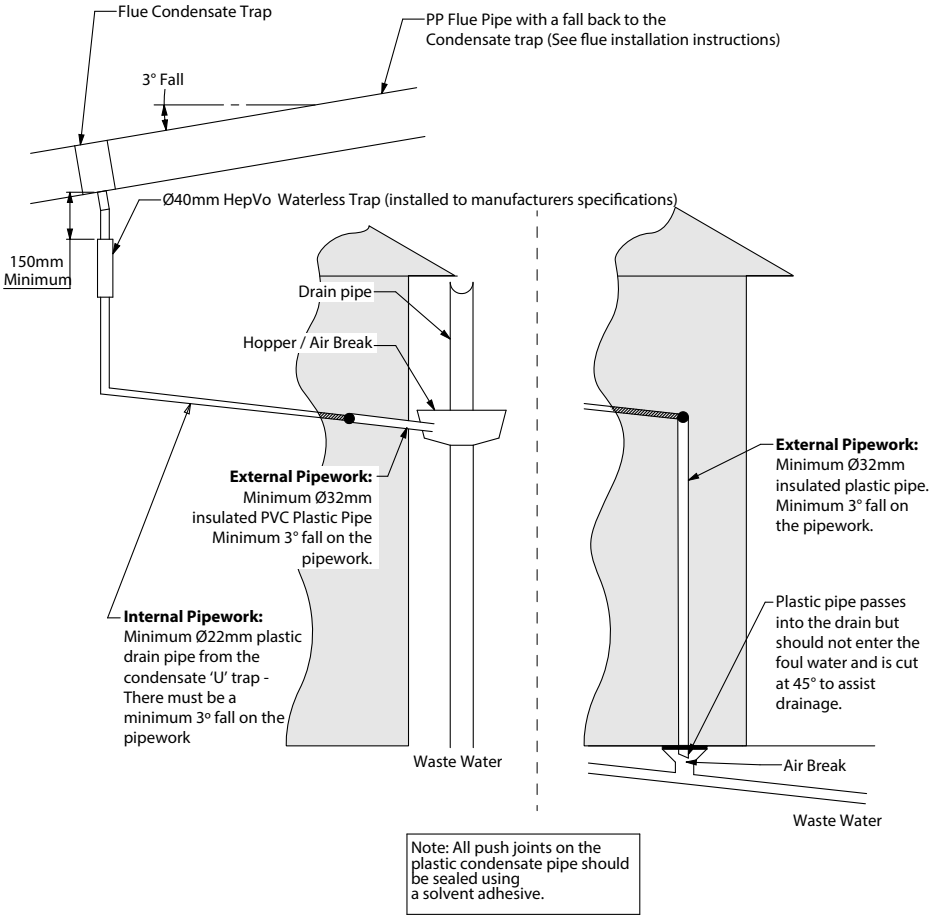
Internal Condensate Disposal Option 1



Internal Condensate Disposal Option 2



11 External Condensate Disposal



The use of an externally-run condensate drainage pipe, terminating at a suitable foul water discharge point or purpose-designed soak-away is acceptable, however, if this termination method is chosen, then the following measures should be adopted.

- The pipe should be run internally as far as possible before going externally and the pipe diameter should be increased to a minimum of 32mm outside diameter before it passes through the wall (this is to reduce the possibility of freezing in extended periods of cold weather).
- The external run should be kept as short as possible, taking the most direct and "most vertical" route possible to the discharge point, with no horizontal sections in which condensate might collect.
- The external pipe should be insulated using suitable waterproof and weatherproof insulation.

The condensate discharge must adhere to the following points:

- Suitable points of discharge are deemed to be foul water pipes (not cast iron), sewers, and pits.
- DO NOT discharge onto walkways, electrical connections, earth stakes, copper pipes, concrete paths, ponds or in any way that compromises the fabric of a building.

12 Additional Important Notes

- Internal condensate drainage pipes run in unheated areas such as roof spaces, basements, and garages should be treated as external pipework.

- If the condensate drainage pipework is connected directly to an internal soil stack or rainwater downpipe, a visible air break (such as a tundish) should be placed in the condensate line to prevent 'reverse flow' and foul water entering the appliance, followed by a 75mm U-trap.

- When a rain water downpipe is used as the termination an air break must be installed between the condensate drainage pipe and the downpipe to avoid reverse flow of rainwater into the fire should the downpipe itself become blocked or frozen.

- Consideration should be given to wind chill and all external pipes that terminate at ground level should pass into the grate.