

**glidevale**

02 GVIPSVGUIDE  
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**iPSV® INTELLIGENT PASSIVE STACK  
VENTILATION SYSTEM**

**INSTALLATION & RANGE GUIDE**

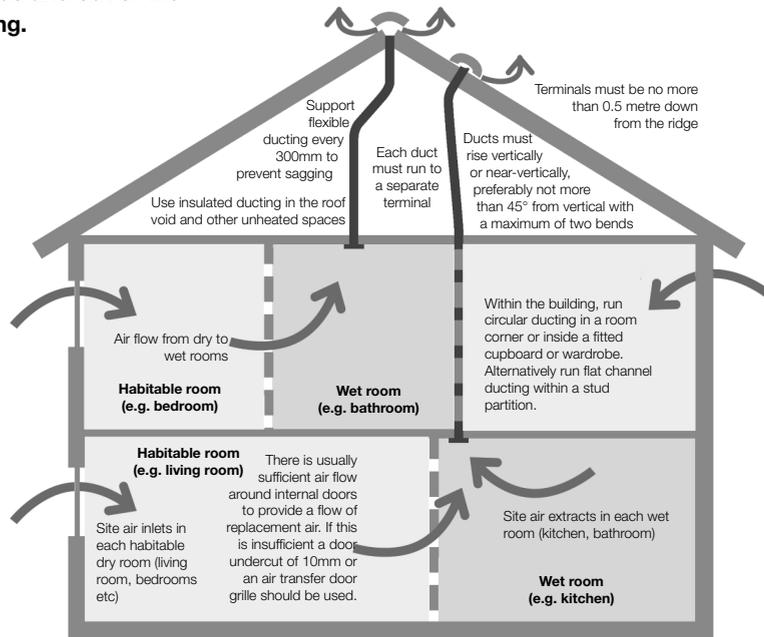


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# Design considerations

**Passive stack ventilation systems work by utilising the stack effect, a natural phenomenon whereby warm air rises and cool air falls. Passive stack systems utilise this effect and allow the warm, moisture-laden air to rise and escape from the room through pre-defined openings to the outside environment. This works in tandem with the 'Venturi effect', where air passing over the extract terminal on the roof of the building, creates a vacuum in the stack, which helps to draw moisture-laden air upwards and out of the dwelling.**

**In order to enable both these natural occurrences to work efficiently, it is essential that the following guidelines are followed.**



- Stacks should be designed and installed to run as vertically as possible. It is recommended that an angle no greater than 45° be used to harness these natural effects.
- Seal any gaps around ducts where they pass through floors, ceilings and walls. Make sure ceiling insulation fits closely round ducts. A fire damper (available to order) may be required by the fire officer where a duct passes through a fire-separating floor or wall. Flat channel ducting may be run inside a stud partition wall.
- Terminals should be installed on the roof, ideally using ridge terminals. Tile / slate terminals are available but must be installed no more than 0.5m from the ridge.
- Tile/slate terminals should be installed on the leeward side of the roof away from prevailing winds to reduce the risk of downdraughts.
- It is recommended that multiple bends are avoided as they will reduce the efficiency of the passive stack.
- It is only permissible to have one stack per extract. Multiple extracts per stack are not possible.
- Ducting, when passing through unheated spaces (e.g. loft voids), should be insulated.

### Location of components

Extracts are to be fitted into each 'wet' room where moisture is created. There should be an extract fitted in each kitchen, bath / shower room and utility room. Glidevale iPSV utilises humidity-sensitive inlets and extracts that respond to humidity levels, so open and close without user input.

Inlets are to be fitted into each habitable room such as bedrooms and living rooms. Inlets are available to be fitted either to the window frame or as a through-wall option. The inlets allow fresh air into the building, and circulation through the property is ensured by designing air routes such as gaps around internal door and natural air permeation. If there is not adequate flow of air, door undercuts of 10mm from the finished floor are recommended to provide sufficient flow of fresh air between rooms.

### General

This document describes the installation procedures and good practice which should be adhered to when installing iPSV systems.

The installation guide should be read in conjunction with specific project design drawings and method statements.

Care should be taken to ensure that the user fully understands the instruction and recommendations given within prior to commencement. Should any instruction not be clear, contact the technical hotline on 01732 850 770.

Although this installation guide is deemed correct at the time of print, Glidevale reserves the right to amend the information at any point, and will accept no responsibility for errors, omissions or misinterpretation of the information contained within.

### Compliance with Building Regulations

Compliance with Building Regulations can be met by following the guidance and BBA certification for the system as an Alternative Approach. It is the responsibility of the systems designer to ensure that the design of the system complies to Building Regulation requirements. This installation guide does not imply that Building Regulations have been met. It is the responsibility of a Building Inspector or Building Control to confirm that the work complies with Building Regulation requirements.

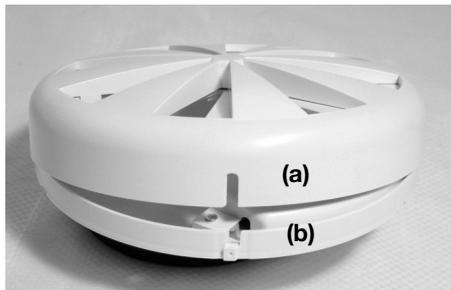


# Installation guidance

## INSTALLING THE HUMIDITY-SENSITIVE EXTRACT (A161)

Locate the humidity-sensitive extract (A161) in a convenient location to enable extraction of air. The extract should be positioned ideally on the ceiling but can be walled mounted as long as it is at high level and preferably near but not directly over the cooker. The extract is provided assembled.

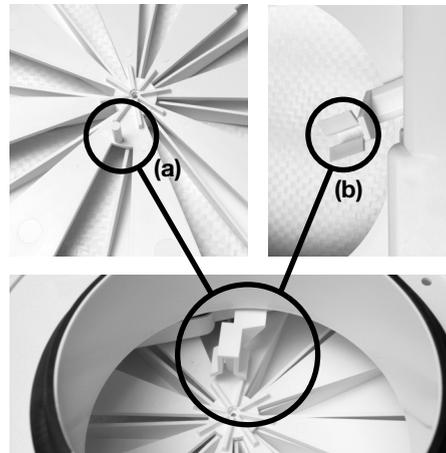
Prior to installation remove the fascia from the base unit of the extract by gently pulling the front fascia (a) from the base unit (b).



To install, screw the base unit of the extract to the wall or ceiling using three 4mm diameter self-tapping screws through the holes provided on the plate.



Align the fascia notch (a) on the back of the fascia, with the base unit control arm (b). This ensures that the humidity sensor controls the opening and closing of the grille.



Once in place, locate the fascia over the base unit ensuring that the placement lug of the back plate (a) lines up with the receptor void on the perimeter of the fascia (b).



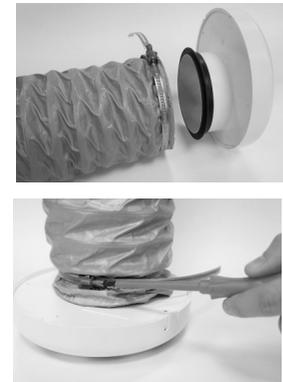
Once located, gently push-fit together until the two parts click into place.



## INSTALLING THE HUMIDITY-SENSITIVE EXTRACT TO FLEXIBLE DUCTING (F1251)

Run the ducting down so it meets the spigot on the back side of the pre-installed extract. Ensure the ducting fully covers the spigot. The ducting should be fully extended so that it does not sag or wrinkle. Place a speed clamp (X332) over the loose end of the flexible duct, ready for fitting.

Hold the ducting securely in place by using the speed clamp provided. Tighten the clamp by turning the locking screw.



## INSTALLING THE EXTRACT (A161) TO RIGID DUCTING (FCD1)

Place the flat channel circular adaptor (FCA6) on to the spigot on the back side of

the pre-installed extract. Push firmly together to ensure the rubber seal

attached to the spigot creates a seal between the spigot and the ducting.

Connect the rigid flat channel ducting (FCD1) to the adaptor.



## INSTALLING A WALL MOUNTED EXTRACT

When installing an *i*PSV system which uses a wall mounted extract, it is necessary to use a round pipe (FCA11) in conjunction with a flat channel elbow connector (FCA10).

Connect the round pipe to the spigot on the rear of the extract.



Push-fit together to ensure the rubber seal attached to the

spigot creates a seal between the two connecting parts. Push-fit the round pipe over the spigot of the flat channel elbow connector. Tape the joint between the round pipe and the flat channel elbow connector ensuring that the joint sits centrally across the width of the tape.

## CONNECTING FLEXIBLE DUCTING (F1251)

Fully extend the ducting and into the connecting end, insert one end of the sleeve coupling (MC01). Place over this overlap a speed clamp (X332) and tighten into position.

Connect the other length of ducting to the free end of the sleeve coupling and repeat the process of locating and securing a speed clamp.



## CONNECTING FLAT CHANNEL DUCTING (FCD1) TO CIRCULAR DUCTING

Push-fit the flat channel ducting (FCD1) into the flat channel circular adaptor (FCA6)



ensuring they are pushed firmly together. Tape the joint ensuring it is central across the tape width.



## CONNECTING FLAT CHANNEL DUCTING TO INSULATED FLEXIBLE DUCTING

Connect the flat channel circular adaptor (FCA6) to the insulated flexible ducting (F1252) by using a plastic sleeve coupling (PMC01). Push the plastic sleeve coupling into the adaptor end until the ridge around the coupling meets the edge of the adaptor.

Tape the joint ensuring that it sits centrally across the width of the tape.

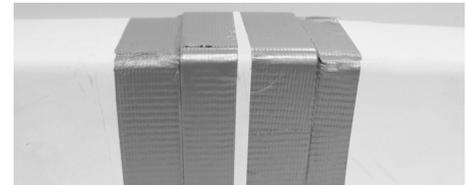
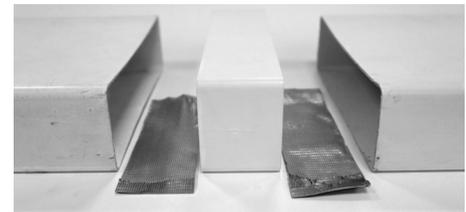


Extend the insulated ducting and slide over the open end of the coupling. Secure in place by using a speed clamp (X332) ensuring that the ducting is compressed against the coupling.



## CONNECTING FLAT CHANNEL (RIGID) DUCTING

In order to connect two lengths of rigid flat channel ducting a flat channel straight connector is used (FCA3). Position the flat channel straight connector between the two lengths and push-fit to join together. The connector should be located so that the meeting ends of the ducting are central within the connector. Tape both ends of the connector where it meets the ducting.



## CONNECTING THE TERMINAL TO INSULATED FLEXIBLE DUCTING (F1252)



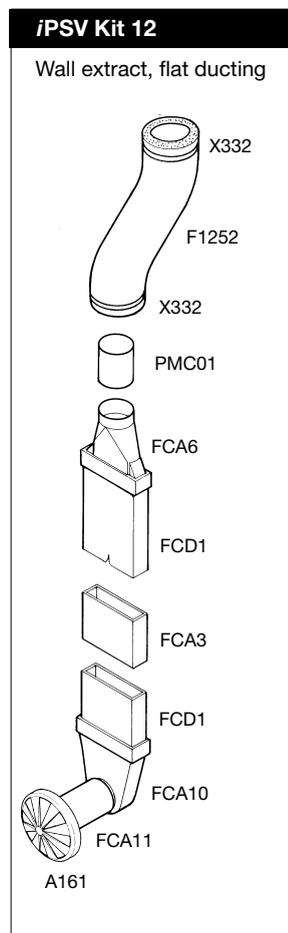
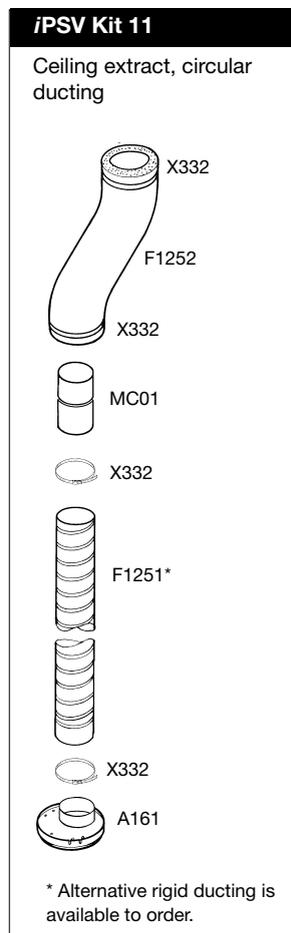
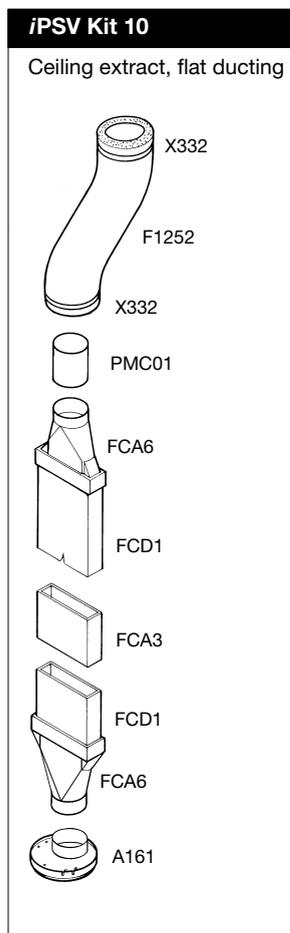
Slide a speed clamp (X332) over the ducting and push-fit the ducting around the 125mm diameter spigot of the terminal pipe adaptor. Tighten the speed clamp to secure.

The same process is used for either the ridge terminal or tile / slate terminal.

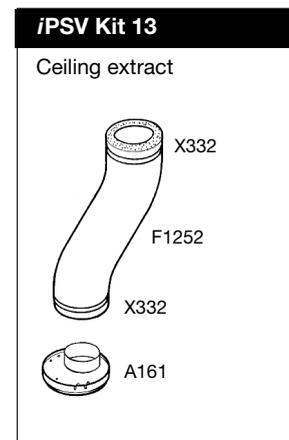


# iPSV kits for 'wet' rooms

## Ground floor (kitchen, utility and other 'wet' rooms)



## First floor (bathroom, shower room, ensuite etc)



Please note, where standard iPSV kits are not suitable for the property layout, alternative configurations can be supplied. Extension ducting is also available for properties over two storeys.

Code	Component
A161	Humidity-sensitive extract
F1251	Uninsulated flexible ducting, 3.0m
F1252	Insulated flexible ducting, 4.0m
PC1251M*	Uninsulated rigid ducting, 2.0m
FCA3	Flat channel straight connector
PMC01	Plastic sleeve coupling, male 125mm
FCA6	Flat channel circular adaptor
FCA10	Flat channel elbow connector
FCA11	Round pipe
FCD1	Flat channel ducting, 1.5m
MC01	Metal sleeve coupling, male 125mm
PRT	Ridge terminal
TT9	Tile/slate terminal
X332	Speed clamp

\* Available to order

## Terminal options

### PRT ridge terminals



*For clay ridges*

PRT25: half round ridge terminal

*For concrete ridges*

PRT15: half round ridge terminal

PRT35: segmental ridge terminal

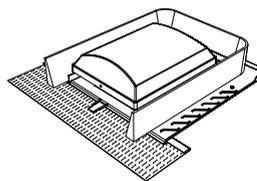
PRT45: angle ridge terminal

PRT46: angle ridge terminal

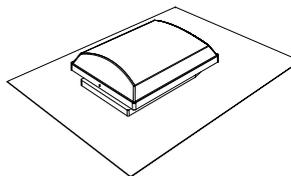
PRT301: legged angle ridge terminal

Where a suitable ridge terminal is not available, the use of a TT9 is the alternative terminal solution as close to the ridge as possible (no more than 0.5m) and on the leeward side of the roof.

### TT9 Versa-Tile terminal\*\*



### TT9 Universal Soaker style slate terminal\*\*



\*\* Profile dedicated terminals are available where the above options are not suitable.

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