OPERATING & MAINTENANCE INSTRUCTIONS

INERT GAS PRESSURE RELIEF DAMPER

DESCRIPTION

The Puma range of Pressure Relief Dampers (PRD) is designed to relieve the build up of pressure of a high volume gaseous fire extinguishing system discharge, whilst maintaining the fire integrity of the room.

All walls constructed to the relevant building standards & regulations that qualify as a ½ hour to 2 hour rating, can be fitted with a Puma PRD to maintain the fire integrity of that wall. The PRD must be installed in accordance with the relevant construction standards with regard to structural strength and wall integrity.

The Puma PRD's are manufactured to a very high standard. The frame and blades are manufactured from 18 SWG or 16 SWG zintec steel. Oilite bearings house the stainless steel shafts. The PRD's are finished in polyester, powder coated to RAL 9010, (white). There are twelve standard sizes, (non-standard sizes available on request). Please refer to technical sales literature.

The standard 'complete' Pressure Relief Damper assembly consists of three basic components:

1. Fire Integrity Section (FIS) – mounted on inside of room.

2. Telescopic Duct (TD) or wall liner - two part sleeve extending from 170mm to 340mm.

3. Outer Cat Flap Weather Section (CF) - mounted on outside of room / wall.

Optional Components:

4. Anti-Intrusion Security Bars - for high security installations. – SEAP class 3

5. Weather Louvre – IMPORTANT NOTE – reduction in Free Vent Area (FVA) by 50%

6. Insect Guards – IMPORTANT NOTE – reduction in Free Vent Area (FVA) by 65%

7. Egg Crate Grille – Used for internal walls on discharge side of PRD does not affect the FVA.

OPERATION

The weighted flaps on the Fire Integrity Section will begin to open at a pressure of approximately 40 to 100 Pa. Outside CF section will open at an area pressure of between 40 and 50 Pa, and is designed to hold against wind turbulence and stack effect. It also acts as a weather seal. The CF will always open to a FVA greater than the FVA of its appropriate Fire Integrity Section.

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INSTALLATION – WALL MOUNTING

To establish the builder's wall cut out size, please refer to the certified drawing provided. If wall thickness exceeds more than 130mm and has a cavity space, then opening should be lined with either the wall sleeve or the 2 Part telescopic duct.

Install telescopic duct, starting with the **largest** section fitted on the **external** side of building wall. Then fit the smaller section to the internal wall using suitable fixings and sealing mastic.

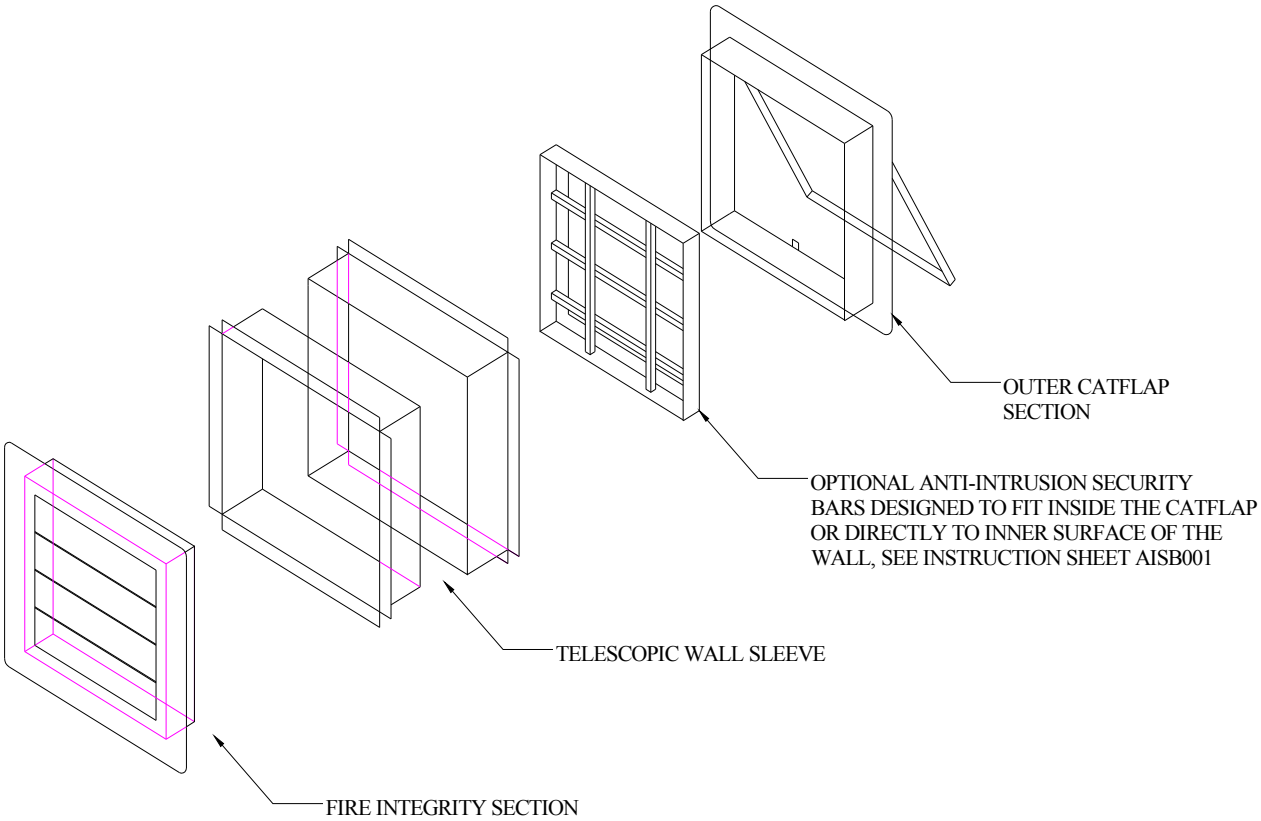
The FIS (with the weighted flaps) locates into telescopic wall liner on internal side (intake room side) of the building wall. Seal the joints using 'fire resistant' mastic and secure to wall using appropriate fixings through holes provided in outer flange.

The flanges of the FIS and CF share the same fixing centres.

The weatherproof CF section, (or optional weather louvre), is fitted to the external side of the building or wall, (discharge side), locating inside the telescopic wall liner. Seal the flanges using 'fire resistant' mastic and secure to wall using appropriate fixings through holes provided in outer flange (Note: Holes not provided in the weather louvre).

If the cat flap is deemed to cause an obstruction or hazard in the event of a gas discharge, then its opening can be restricted by the addition of a chain link. This will prevent the flap from opening fully into the occupied space, limiting the potential to cause harm.

NOTE: Ensure operation of cat flap is <u>not</u> obstructed as stated on outer warning label.
(See certified drawing for flap clearance dimension)



INSTALLATION – DOOR MOUNTING

To ascertain cut out size within the door, see Puma certified drawing provided. In this application, due to the thickness of the door, a door mounting frame will be required, as shown on the certified drawing.

Ensure that when cutting the opening within the door, there is sufficient material all around the cut out to be able to fix the door mounting frame and grille to either side of the door.

The door mounting frame is to be fitted inside the room being protected. To fit the door mounting frame, mark out the 8mm holes and, if needed, drill 3mm pilot holes within the door. Use a suitable 'fire resistant' mastic when fitting the door mounting frame to the door with the screws provided.

The FIS, (with the weighted flaps), locates into the door mounting frame on the internal side, (intake room side), of the door. Seal the damper to the frame using 'fire resistant' mastic and secure using fixings provided through holes.

On the external side of the door, fit either a weather proof cat flap or egg crate grille, depending on whether the door is either internal or external. Weather louvres can also be fitted on the external side, but are not recommended due to the restriction of FVA that they cause.

INSTALLATION – WINDOW MOUNTING

Measure the window aperture, if the opening is smaller than the required cut out for the PRD, then increase the opening to suit the damper. Remove the pane of glass, modify the opening with the appropriate equipment. Fit the Cat Flap, (CF), or weather louvre from the external side with fixings provided, and then fit the PRD on the internal side.

Where windows are larger than the overall size of the PRD, the window pane will need to be removed. The opening will then need to be boarded up and lined to the relevant building regulations and British standards. The fire rating of the construction must be equal to, or greater than the existing level of fire rating. The aperture size is shown as the wall cut out dimension on the appropriate certified drawing.

MAINTENANCE

The Puma Pressure Relief Damper has only mechanical moving parts and requires very low maintenance.

A regular check every 6 months on free movement of flaps on inner wall section is recommended to ensure full working operation of damper.

WARRANTY

6 Years from date of purchase, subject to certain conditions available on request.

ISO 9001:2008
Certificate Number: 1206 Issue: 01

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