



OPERATING & MAINTENANCE INSTRUCTIONS

COMBINED FIRE EXTINGUISHANT EXTRACT and PRESSURE RELIEF DAMPER PLENUM ASSEMBLY

DESCRIPTION

The Puma Fire Extinguishant Extract Units are manufactured to a very high standard. A double inlet, single phase, centrifugal fan is selected to meet the required performance, this is fixed directly to the internal sections of the main casing which in turn is connected to the plenum / pressure relief damper section.

The Extract units fitted with a Fire Smoke Damper (FSD) with fully sealed blades and a 240Vac motor. The FSD is fitted internally to the fan plate inside the unit. The intake side of the unit is internally flanged and is fitted with a finger guard/mesh grille. The fire rating of the FSD is 2 hours and tested to BS EN 1634 : 1 2008.

The Pressure Relief Damper (denoted PRD) is designed to relieve the build up of pressure in the room on the discharge of gas, in a high volume gaseous fire extinguishing system. The PRD has two hour fire rating, tested to BS EN 1634 : 1 : 2008. Manufactured from 18 SWG galvanised steel, oilite bearings, and stainless steel shafts.

OPERATION

In normal operation mode the combined Extract Fan is not operating and the Fire Smoke Damper is closed.

The Puma Extract unit has a motorised Fire Smoke Damper fitted, which will remain shut during normal operation.

In a "Fire Situation", when the high pressure gas system is activated, the Pressure Relief Damper will open and relieve the 'Pulse' or excess pressure. The PRD will be selected at the maximum operational pressure of the room. When the fire is extinguished and the required time period is reached and upon activation of the fireman's keyswitch, the extract fan will operate and the FSD will open, and remove the remaining gaseous extinguishant to atmosphere.

The extract unit requires a 230V ac single phase supply. The extract fan damper motor is connected in parallel to the terminal block inside the unit. The fan and damper are energised simultaneously on activation of the fireman's keyswitch. The damper motor is 'powered open' and will spring return' on power failure.

Unit 6, Viscount Court, Walworth Business Park, Andover, Hampshire SP10 5NW, England

Telephone: +44 (0) 1264 333305 Facsimile: +44 (0)1264 333310

Email: sales@pumaproducts.co.uk Website: www.pumaproducts.co.uk

INSTALLATION

The builder's wall cutout size can be ascertained from Puma certified drawing. Thickness of the External Wall will determine whether a Wall Liner or Telescopic Duct will be required.

The removal of the PRD Fire Integrity Section (FIS), from the plenum box is required to reach the fixing holes inside.

Locate the Wall Liner (WL), or Telescopic Duct, (TD) through the wall cut-out.
Fit the unit flush against the inside wall with the 'wall spigot' protruding through the wall cutout.

Secure the unit to the wall with screw fixings (by others) using the holes provided inside the plenum box (Fire cement, mastic or appropriate sealant must be used to seal the plenum and wall).

The PRD Fire Integrity Section can now be fitted back on the plenum section.

For additional security, remove the lid from the Extract Fan Unit, inside where holes are provided fit more screw fixings (by others) through to the wall.

From the outside wall fit Weather Louvre using sufficient screw fixings and appropriate weather sealant.

MAINTENANCE

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

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

Periodically the Extract Unit must be electrically tested to ensure that the supply to the Unit is continuous and that mechanical parts are in working order.

It is recommended that this test be carried out twice yearly or to fit in with existing service and maintenance contracts.

The air flow failure switch should be checked for free movement and electrical conductance.

Refer to PUMA technical sales leaflet for further information regarding dimensions, weights and unit performance and fan curves.

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