Fire Rated Pressure Relief Damper

For use with High Pressure Inert Gaseous Extinguishant Systems such as INERGEN, ARGONITE, CO^2 or NITROGEN based products

2 Hour Fire Rating to BS 476 Part 20 – Chiltern International Fire Limited – FO1058 A & F07080

Over Pressure Vents must be given serious consideration when installing a High Volume Gaseous Fire Extinguishing System. When a Nitrogen based product is released in a protected space, the gas expands rapidly forming a 'Pulse' Pressure significantly high enough to possibly damage the structure of the room or building. The PUMA Pressure Relief Damper has been designed and tested to maintain the Fire Integrity of the room then operates efficiently and effectively to relieve the build up of Pressure in a Gaseous Extingushant Release.

- **2 Part Telescopic Duct (TD)** Block/Brick Walls
- **Wall Sleeve (WS)** Stud/Dry Wall & SEAP Panels
- **Polyester Powdercoat Finish RAL 7035**
- **Weatherproof 'Cat' Flap (CF)** Not Shown below
- **Weather Louvre Option (WL)**
- **Anti-Intrusion Security Bar Option (AISB)**
- **Bronze 'Oilite' Bearings**
- **Balanced Profiled Flaps**
- **Full Mechanical Operation**
- **Galvanised Steel Construction**
- **Stainless Steel Shafts**
- **6 Year Guarantee**

Inner Fire Section **Telescopic Duct + AISB** **Weather Louvre**

SEVEN STANDARD VENT SIZES

PRD 300/150 - 0.0395 m^2 PRD 300 - 0.079 m^2 PRD 375 - 0.124 m^2

PRD 450 - 0.178 m^2 PRD 525 - 0.25 m^2 PRD 600 - 0.317 m^2 PRD 750 - 0.515 m^2

Special Sizes and Duplex Models Available

The Free Vent Areas are based upon the Maximum Permissible opening between each blade, this opening is achieved when the blades are open to an angle of 62 degrees. All PRD's can be set with balanced weights to provide the maximum Free Vent Area at any given working pressure. Standard Pressures are 100 Pa, 250 Pa, 500 Pa, 750 Pa and 1000 Pa - Please specify your required pressure - Test Reports and Certificates available.

Balance your Environment with

PUMA PRODUCTS LIMITED ™

Selection

PRD selection is achieved by dividing the Free Vent Area in m^2 (obtained from Gas Supply Company) by the largest divisible PRD Free Area and rounding up to the nearest whole figure.

Correct PRD selection is achieved by firstly determining the Maximum Operating Pressure of the Gaseous mix and noting the Maximum Structural Pressure of the Room. The working pressure will determine the number of weights requires to achieve the Free Vent Area.

Operation

On release and expansion of the Extinguishant Gas, the Balanced Profiled Blades of the Inner Fire Section (IFS) will commence opening at approximately 60 to 100Pa. The blade opening is progressive and dependent on the air/gas pressure differential.
The Cat Flap (CF) is fitted with a weather seal and a magnetic catch to hold against wind turbulence and stack effect to the Building. The Cat Flap will commence opening at approximately 40 to 50 Pa. and offers less resistance to pressure than the Inner Fire Section (IFS) therefore will not affect the PRD Free Vent Area., Higher opening pressures are available with magnets with greater flux capacity.
Anti-Intrusion Security Bars (AISB) may be fitted as an option to the Cat Flap Section. These high quality, high security bars are constructed to SEAP Class 3 Specification.

Installation

For wall thicknesses of up to 130mm only the Inner Fire Section (IFS) and Cat Flap (CF) is required to line the 'Stud Wall' or 'SEAP Panel'.
For Wall thicknesses between 175mm and 340mm the 2 Part Telescopic Duct (TD) will be required to line the wall.
Use appropriate fixings and fire rated mastic if necessary to secure the Inner Fire Section (IFS) to the Internal Wall opening, using suitable fixings and fire resistant mastic to secure the outer Cat Flap Section (CF) to the External Wall opening. ENSURE THAT THE OPERATION OF 'CAT FLAP' IS NOT OBSTRUCTED as stated on the outer warning label. If obstructions are an issue, we offer a Weather Louvre as an alternative. Please note the Free Vent Area of a Weather Louvre is only 50 % of the wall opening, if this figure is lower than the original selected PRD Free Vent Area, then a larger PRD or greater quantity will be required.

Maintenance

The Puma Fire Rated Pressure Relief Damper requires NO SERVICE & MAINTENANCE and is guaranteed from defective workmanship & materials for Six years from date of purchase subject to certain conditions available on request.

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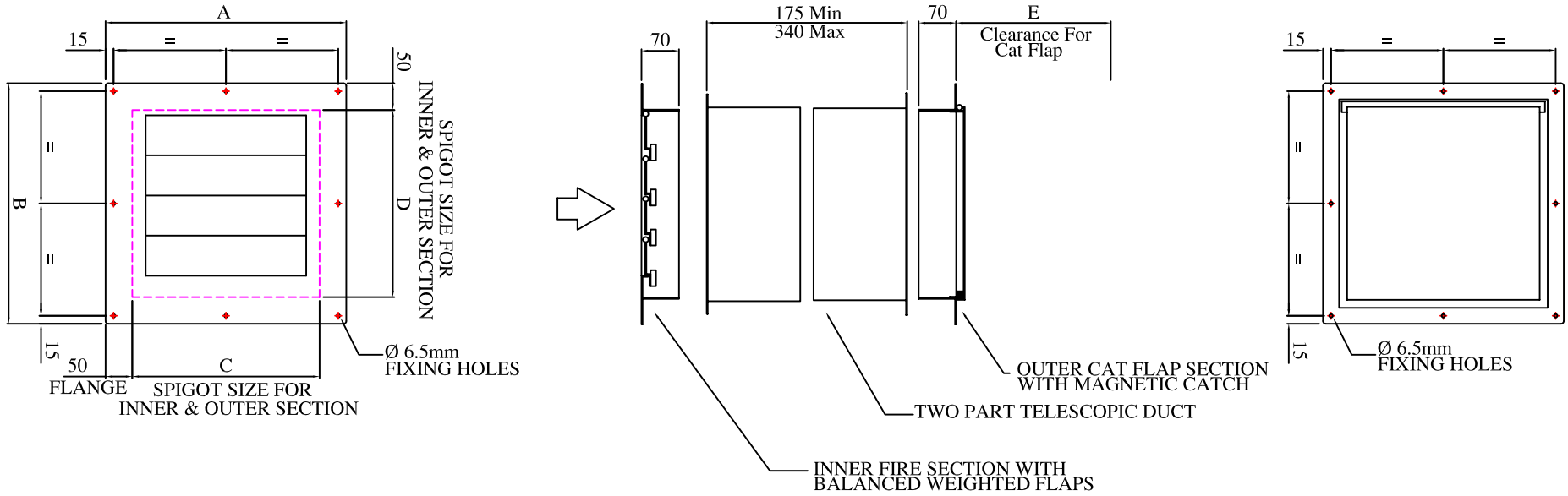

END VIEW (INTAKE)

SECTIONAL SIDE VIEW

END VIEW (DISCHARGE)

DIMENSION (mm)	PRD 300/150	PRD 300	PRD 375	PRD 450	PRD 525	PRD 600	PRD 750
A	450	525	600	600	675	750	900
B	300	525	600	600	675	750	900
C	350	425	500	500	575	650	800
D	200	425	500	500	575	650	800
E	180	250	325	400	475	550	700
APPROXIMATE WEIGHT	15Kg	20Kg	25Kg	30Kg	35Kg	40Kg	50Kg
WALL CUTOUT SIZE WITH TELESCOPIC DUCT	400W x 250H	400W x 400H	475W x 475H	550W x 550H	625W x 625H	700W x 700H	850W x 850H
WALL CUTOUT SIZE WITHOUT TELESCOPIC DUCT	360W x 210H	360W x 360H	435W x 435H	510W x 510H	585W x 585H	660W x 660H	810W x 810H

*FOR WALL THICKNESS UP TO 130mm DEEP ONLY INNER FIRE SECTION AND CATFLAP REQUIRED.

**FOR WALL THICKNESS DEEPER THAN 340mm CONSULT OUR SALES TEAM.