

**PUMA FIRE****POSITIVE FUNCTION**

The Dual Flow Pressure Relief Damper Fire Integrity Section (FIS) is fitted with balanced, weighted blades, hinged on stainless steel rods and bronze bearings. The precision engineering and blade overlap ensure an effective seal to the wall opening, offering minimum leakage

**INTRINSIC SOUND ABSORPTION**

All Dual Flow Dampers are fitted with a Self Closing Door (SCD) held in place with a magnetic catch. This provides weather-proofing when used on external walls, an intrinsic sound barrier and a positive air, dust, and noise seal

**THERMAL BARRIER**

The integral Self Closing Door will provide a natural thermal barrier, ideal when fitted in external walls. This will help to prevent condensation forming on the Fire Integrity Section blades. Additional insulation can be fitted to increase the thermal and sound absorption characteristics

**QUALITY FINISH**

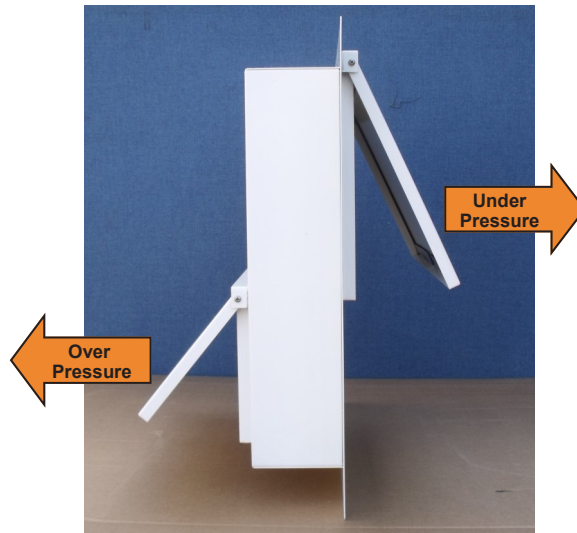
All products are manufactured from Zintec Steel and polyester powder coated to RAL 9010 White - Special colours are available on request

# Synthetic Gas 'Dual Flow' Pressure Relief Dampers

4 Hour Fire Rated to BS EN 1634-1: 2014  
Fire Classification to BS EN 13501-2 - E240 & EW120

Compliance to BS EN 15004-1:2019

Hydrofluorocarbons - HFC-125 - HFC-23 (FE-13) - HFC - 227ea (FM 200) HFC - 236fa  
Perfluoroketone - FK-5-1-12 (NOVEC 1230, NITIN 1230, Sapphire)



Side View of Damper with Open Self Closing Doors

The UNDER pressure FREE VENT AREA (FVA) is generally higher than the OVER pressure by approximately 30 %.

PUMA DUAL FLOW Pressure Relief Dampers incorporate this formula across the range, providing Free Vent Areas between 0.031 m<sup>2</sup> and 0.381 m<sup>2</sup>.

A full table of the entire range is shown on the reverse page. All PRD's are set with balanced, weighted blades to provide the maximum Free Vent Area (FVA) at the given operating pressure. Standard pressures are 100 Pa, 250 Pa, 500 Pa and 1000 Pa.

The Self Closing Door is fitted with a weatherproof seal and magnetic catch. The magnet release pressure is set at 90 Pa. Higher opening pressures are available.

Each Model is available in an 'Internal' or 'External Wall Design'. The Internal Model is suitable for walls up to 220mm deep, and is supplied with a Decorative Surround (DS) to line the wall opening. External walls up to 350mm deep will require a wall spacer (DFWS) to allow the Self Closing Door to fully open, a Telescopic Duct (TD) 175-340mm, and a Weather Louvre.

Walls deeper than 340mm require a TD - 590 & a full size Weather Louvre.

SYNTHETIC Gaseous Extinguishing systems such as NOVEC 1230 and FM 200 require UNDER pressure relief and OVER pressure relief. The PUMA range of DUAL FLOW Pressure Relief Dampers or Vents is designed specifically for this purpose. Reference standards are : BS EN 15004-1:2008 - Para 7.4.1, Part h & Article DG 513 BRE Global.

The range of NINE individual models has been designed with the maximum available Free Vent Area available from a proven and tested design. The blade design, construction, and assembly has been tested by Exova Warrington to BS EN 1634 - 1:2014 - Rated at 4 Hours. All PRD's have Fire Classification to BS EN 13501-2 - E240 & EW120.



External Model showing Under Pressure Self Closing Door & Over Pressure Fire Blades, Telescopic Duct & Full Size Weather Louvre



**PUMA FIRE** **MADE IN BRITAIN**



## Synthetic Gas 'Dual Flow' Pressure Relief Dampers

4 Hour Fire Rated to BS EN 1634-1: 2014  
Fire Classification to BS EN 13501-2 - E240 & EW120  
Certified to ewcl<sup>5</sup>

### Puma™ Products - innovation - design - quality

#### TECHNICAL SUPPORT

PUMA can offer a wealth of experience in sales, application, and technical support.

Using the latest CAD design software, we can provide detailed drawings in dxf or pdf formats

#### 3RD PARTY TESTED

BS EN 13030:2001 - Airflow Test  
BS EN 1751:2014 - Leakage Test  
BS EN 1314-1 - Free Area Calcs

#### SERVICES AVAILABLE

- Technical Support
- After Sales Support
- Maintenance
- Application Support
- Fitting Instructions
- 6 Year Warranty \*

#### BESPOKE SOLUTIONS

Puma Fire Products operates a continuous design and improvement policy, and reserves the right to change designs and specifications without notice

#### CONTACT DETAILS

For more information on any of our products or services please visit us on the Web at:

[www.pumaproducts.co.uk](http://www.pumaproducts.co.uk)

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Puma Fire Products Limited™ has supported the specific requirements of the Data Hall - Server Room - Electronic Data Processing Environment for over 35 years. Located in the South of England, we at Puma are widely recognized as experts in the field of air movement.

Using our knowledge and expertise, we have developed many products, such as Fresh Air Supply and Fire Extinguishant Gas Extract Systems incorporating Fire/Smoke Dampers. The innovative Hot Water Condensate Pumps © continue to lead the market in 'Humidifier Flush Down' disposal.

In 1999 we developed the first Fire Rated Pressure Relief Dampers to relieve the Over Pressure spike on the release of high pressure Inert Gas Systems. The advent of Synthetic Gas, sealed rooms, and integrity testing created the need for the **DUAL FLOW DAMPER**

### Nine Vent Sizes Available in Internal and External Wall Versions

Model Number	Free Vent Area in m <sup>2</sup>		Hole Cut-out in mm		Approx Weight kg
	Over Pressure	Under Pressure	Width	Height	
DF PRD 150/375	0.021	0.031	220	490	8
DF PRD 300/375	0.041	0.062	370	490	10
DF PRD 450/375	0.062	0.093	520	490	15
DF PRD 450/600	0.093	0.154	520	715	20
DF PRD 600/600	0.124	0.206	670	715	25
DF PRD 750/600	0.154	0.257	820	715	30
DF PRD 675/750	0.185	0.278	745	865	40
DF PRD 825/750	0.227	0.340	895	865	45
DF PRD 975/750	0.254	0.381	1045	865	50

\* Refer to Operating and Maintenance Instructions



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