

### Description

The type BLD-02 Medium Pressure Blast Damper is of a high performance design suitable for the arduous conditions encountered in marine and offshore environments. The Blast Damper has been independently performance tested by Aberystwyth University and certified to 04ATEX9322 for ATEX Group II Category 2 G/D use by SIRA.

Please Note, these dampers are manufactured from 304L or 316L Stainless Steel only.

### Specification

#### Casing

The damper casing is formed from 3.0 mm thick sheet steel into a rigid channel section to ensure proper alignment of blades and shafts. Damper Units in excess of 1500 mm width or height shall be manufactured as a multiple assembly. Where circular dampers or dampers with width or height dimensions less than 300 mm are required, additional spigot adaptors are used which increase the damper insertion length from 500 to 600 mm.

#### Blades

The blades are a formed single-skin of 3 mm sheet metal with lips formed at the leading and trailing edges. This lip strengthens the blades and additionally provides a measure of protection from direct weather/storm impingement. In the closed position the blades 'lipped edges' clip together and engage with the top and bottom duct stops to form a seal.

#### Shafts

Blade shafts are of the stub type design. Each shaft has a machined flat at their inner end for direct attachment to the blade, and is secured with two locked bolts. Shafts at the drive side are linked to transmit motion to the other blades.

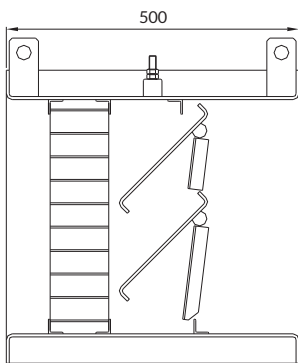
#### Bearings & Housings

Bearing housings are continuously welded to the drive side (control enclosure end) and non-drive side (idle end) frame members. Each bearing housing carries a Zeron duplex stainless steel bearing bush with a thrust face. The Zeron bushes are highly resistant to sea water corrosion and form a non-galling pair with the stainless steel shaft.

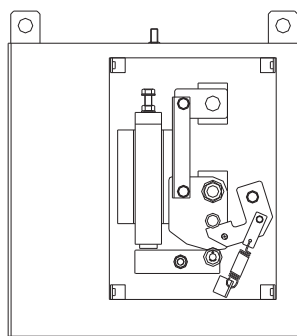
#### Operation

The blast damper blade is designed to close by the blast pressure present in the duct and aided by gravity. The blades are normally secured in the 'open' position by the tension of the Flamgard blast catch which can be adjusted to release the damper blades from the open position for various explosion pressures, thus shutting down the duct and protecting the system.

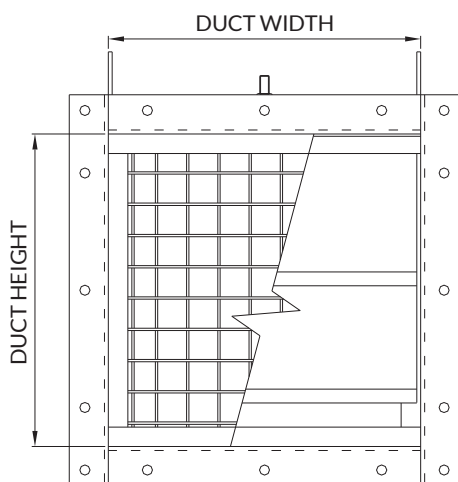
When in the 'open' position the blade is held at 45° by a cam and roller mechanism, which breaks under explosive pressure. The blade remain closed until the torque is applied to the external reset shaft of the damper which will then manually reset the blades.



Section



End Elevation



Elevation

# Medium Pressure Blast Damper

## BLD-02

### Flamgard-Calidair Type BLD-02 Medium Pressure Blast Damper

The Flamgard Calidair type BLD-02 medium pressure blast damper is of a parallel rotation, multi-blade design of exceptionally rigid construction which will withstand an explosion blast force of 0.45 barg. The damper has been designed to meet the highest specification of ventilation control equipment required for today's HVAC industry.

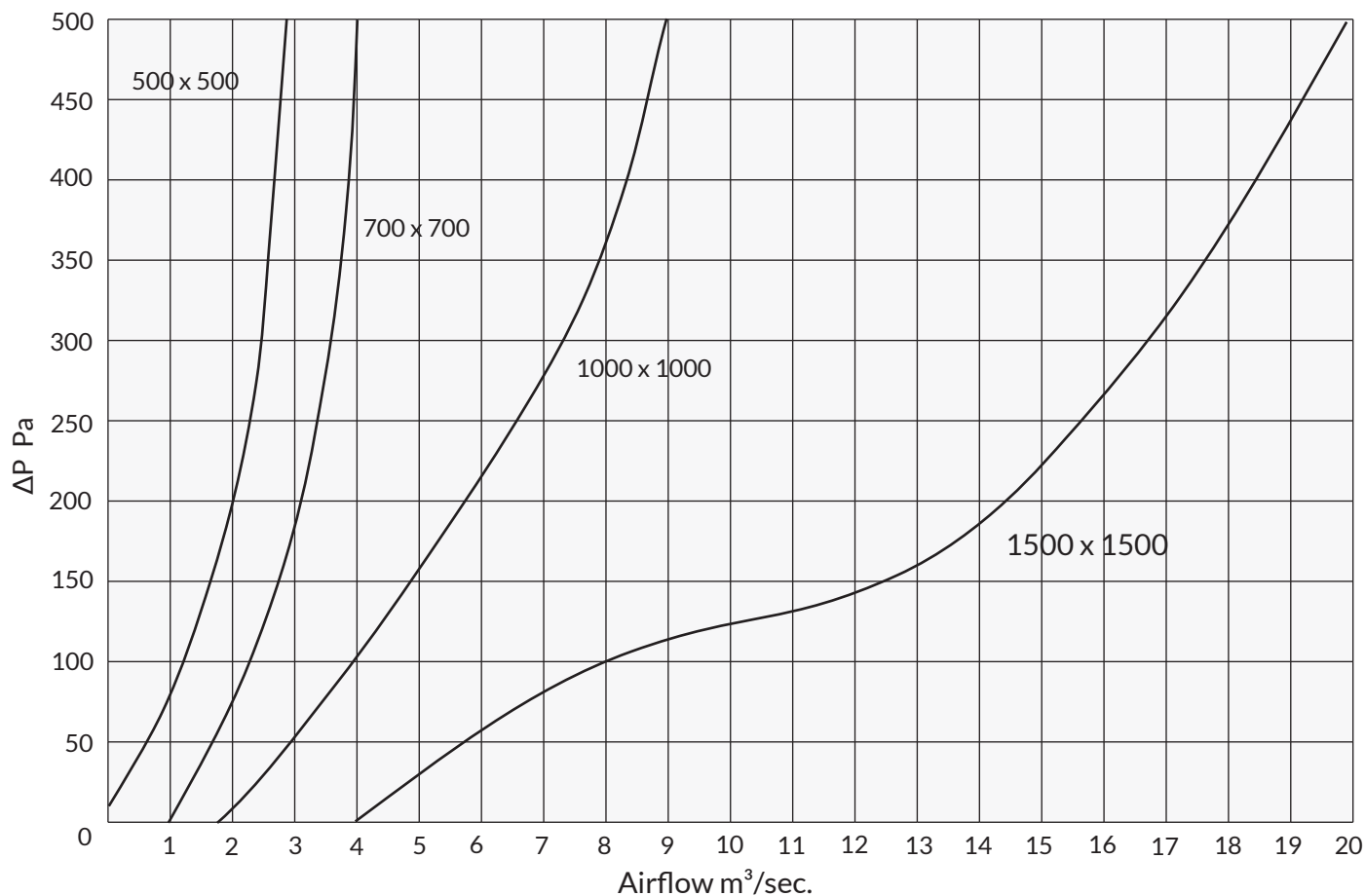
A single BLD-01 unit utilises both single and multi-blade designs in providing a duct height range of 300mm to 1500mm, together with a maximum width of 3000mm. Duct sizes larger than those given are manufactured as multiple assemblies.

The following pressure drop figures are for initial guidance only. Please consult the Flamgard Calidair Technical Department for individual project requirements.

The following figures were measured at ambient temperature (20°C) and calculated using the industry standard Air density of 1.2 kg/m<sup>3</sup> at this temperature.

#### Open Pressure Drop Characteristic Curves

Tolerance +/- 15%



Flamgard-Calidair Engineering Limited,  
Unit 2-4 Gemini Works, Estate Road,  
Pontnewynydd, Pontypool, NP4 6YW,  
Wales, United Kingdom

Tel: (+44) 01495 757 347  
Fax: (+44) 01495 755 443

[sales@flamgard.co.uk](mailto:sales@flamgard.co.uk)  
[www.flamgard.co.uk](http://www.flamgard.co.uk)