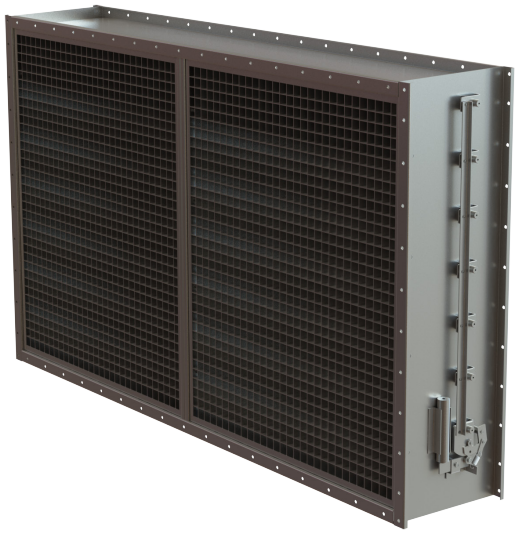
BLD-01 High pressure blast damper

For onshore and heavy industry ventilation systems



MATERIALS

PART	MATERIAL	FINISHING
Case	Stainless steel 1.4307 (304L) Stainless steel 1.4404 (316L)	-
Blades	Stainless steel 1.4307 (304L) Stainless steel 1.4404 (316L)	-
Shafts	Stainless steel 1.4307 (304L) Stainless steel 1.4404 (316L)	-
Bearings	Super Duplex Stainless Steel "ZERON"	-

PRODUCT MODELS AND ACCESSORIES

- Tool Supplied to open and arm the damper
- Lifting lugs can be added to ensure damper can be lifted safely

Further options available please contact sales team for more information.

APPLICATIONS

The Flamgard Calidair type BLD-01 high pressure blast damper is of a parallel rotation, multi-blade design of exceptionally rigid construction which will withstand an explosion blast force of 1.0 barg.
The damper has been designed to meet the highest specification of ventilation control equipment required for today's HVAC industry and have been independently performance tested by Aberystwyth University and certified to 04ATEX9322 for ATEX Group II Category 2 G/D use by SIRA.

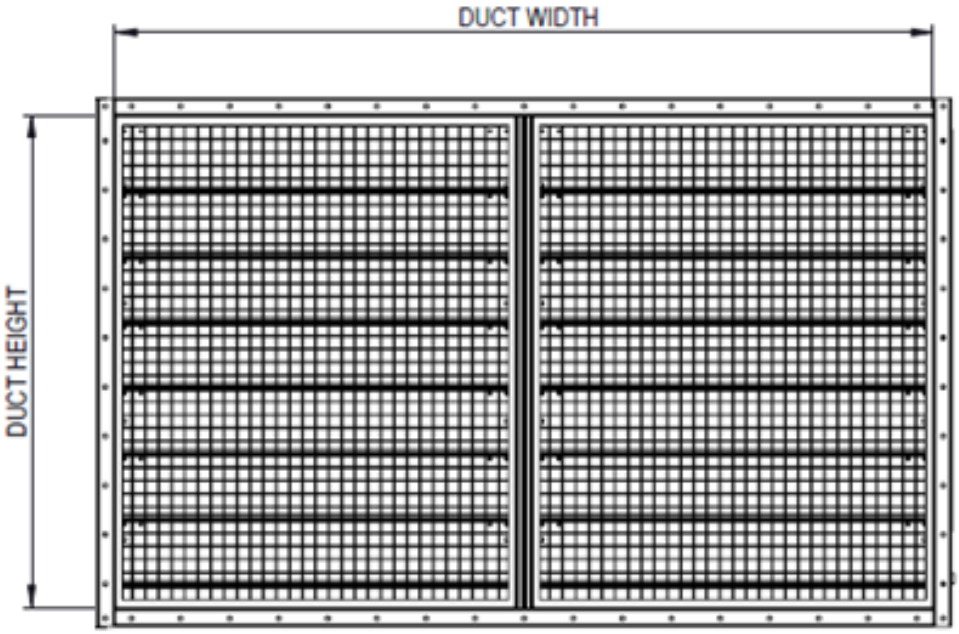
FEATURES

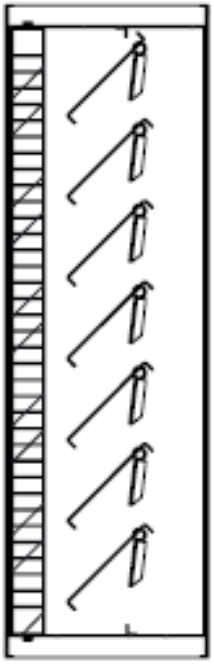
- Has been independently performance tested by Aberystwyth University
- Has been certified to 04ATEX9322 for ATEX Group II Category 2 G/D use by SIRA.
- Blade angle normal open position is at 45 degrees
- These dampers are manufactured from 304L or 316L Stainless Steel only.
- BLD-01 will withstand an explosion blast force of 1.0 barg.
- Designed to deflect blast ways, and protect personnel and equipment.
- Effective even with ultra low level blast pressures.

OPERATION PRINCIPLE

The blast damper blade is designed to close by the blast pressure present in the duct and 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.

GENERAL CID-01 DRAWINGS





Section

End Elevation

DIMENSIONS AND MATERIAL THICKNESS

The blast damper casing is formed from 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.

BLAST DAMPER TYPE	CASE THICKNESS
BLD-01	5.0 mm

BLADES

The Blast Damper blades are a formed single-skin 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.

BLAST DAMPER TYPE	BLADE THICKNESS
BLD-01	5.0 mm

SHAFTS

The Blast Damper blades are a formed single-skin 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.

BLAST DAMPER TYPE	SHAFT DIAMETER
BLD-01	25.4 mm

BEARINGS AND 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.

WEIGHTS

Please note the below table gives bare shaft damper weights only at the given square dimensions. Weights for specific sizes are issued on the quotation document.

DAMPER SIZE (MM)			
WIDTH/DIA.	HEIGHT	DEPTH	EST. WEIGHT
150	150	600	58 kg
200	200	600	58 kg
250	250	600	58 kg
300	300	500	58 kg
350	350	500	68 kg
400	400	500	78 kg
450	450	500	89 kg
500	500	500	100 kg
550	550	500	115 kg
600	600	500	128 kg
650	650	500	142 kg
700	700	500	156 kg
750	750	500	175 kg
800	800	500	191 kg
850	850	500	208 kg
900	900	500	225 kg
950	950	500	247 kg
1000	1000	500	266 kg

INSTALLATION

We advise that the blast dampers are designed to be mounted within a duct, upon a floor, upon a roof or upon a bulkhead (as detailed below). Please note that they can only be mounted horizontally when the anticipated blast wave is vertically downwards as this orientation enables gravity to assist closure of the blades.

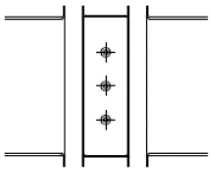


Fig.3
Duct Mounted

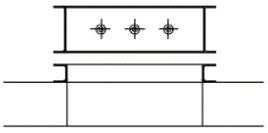


Fig.4
Floor Mounted

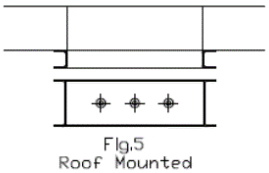


Fig.5
Roof Mounted

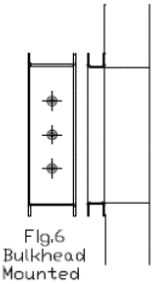


Fig.6
Bulkhead
Mounted

Halton