FLEX C PRO (S)

If there is an explosive atmosphere in the form of a swirling cloud of dust and if this cloud comes in contact with a source of initiation, an explosion may occur immediately.

To protect technology, the so-called explosion relief device opens to allow the flame, dust, and fumes to escape into the environment, resulting in a drop in explosive pressure below the threshold to ensure that technology is not damaged.

Release of explosion into the environment is not suitable for applications where the released explosion may cause damage to health or property (for example inside buildings). In this case, it is necessary to use the device for flameless relief, FLEX.

The FLEX consists of an explosion relief device with an opening signal and a FLEX body welder that holds a so-called flame filter that prevents the flame transfer explosion device from opening when the flame is released into the environment.

The FLEX C is designed in accordance with European Directive 2014/34 / EU.

DATASHEET

FLEX SPECIFICATION	
Equipment group	II
Explosive atmosphere	D
Equipment category, interior / exterior	1 D 3G / 3G D
Zone - interior	20, 21, 22
- exterior	2, 22
Max K_{st} – metallic dust	150 bar m/s
Max K_{st} – organic dust	300 bar m/s
Ambient temperature	-20°C to 60°C
Operating temperature	-20°C to 150°C (can be increased up to 240°C)
Storage temperature	10°C to 40°C
$P_{red\ max}$	to 1,9 bar

| MATERIAL DESIGN	
Body	Structural steel, with the surface treatment RAL 9005 (black). Different colours can be supplied upon the customer request.
Flame filter	Stainless steel
Explosion venting device	Stainless steel. Together with position sensor is an integral part of FLEX. Glued.
Flange gasket	EPDM. Supplied with FLEX
Bolting material	Screws ISO 4017 – 8.8, nuts ISO 4070 – 8, washers ISO 7090 All supplied with FLEX. Galvanized.

OPTIONAL ACCESSORIES

The protective bag	The protective bag is intended to cover the functional area of the FLEX flame filter, of any penetration of foreign particles in the filter meshes reducing. The protective bag is recommended for the use in dusty premises. In the case of explosion, the bag breaks and the energy is absorbed without any disturbance.
The intrinsically safe relay	Forms the interface between the safe and hazardous zones.
The special flange gasket	In addition to a standard flange packing, seals can also be supplied from special materials that suit exactly the customers application.

Dimensional scheme:
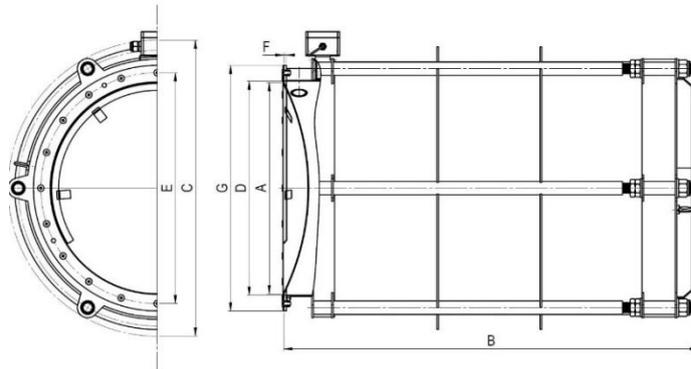
TYPE	Code	A [mm] [(in)]	B [mm] [(in)]	C [mm] [(in)]	D [mm] [(in)]	E [mm] [(in)]	F [mm]	G [mm] [(in)]	d – opening diameter [mm]	n – number of opening [ks]	Weight [kg] [(lbs)]
FLEX C1 PRO	C-FML-C1-SU	315 (12,6)	580 (22,8)	485 (19,1)	320 (12,6)	350 (13,8)	5	375 (14,8)	11	12	30 (66)
FLEX C1 PRO S	C-FML-C1-S-SU	315 (12,6)	879 (34,6)	633 (24,9)	320 (12,6)	350 (13,8)	5	375 (14,8)	11	12	80 (176)
FLEX C2 PRO S	C-FML-C2S-SU	445 (17,5)	1075 (42,3)	633 (24,9)	450 (17,7)	486 (19,1)	5	525 (20,7)	13	12	87 (192)
FLEX C3 PRO S	C-FML-C3-S-SU	505 (19,9)	1286 (50,6)	705 (27,8)	510 (20,1)	550 (21,7)	6	585 (23)	13	20	126 (278)
FLEX C4 PRO S	C-FML-C4-S-SU	625 (24,6)	1385 (54,5)	1020 (40,2)	630 (24,8)	680 (26,8)	6	705 (27,8)	13	20	243 (536)
FLEX C5 PRO	C-FML-C5-SU	815 (32,1)	2215 (87,2)	1020 (40,2)	820 (32,3)	860 (33,9)	6	895 (35,2)	13	24	291 (641)
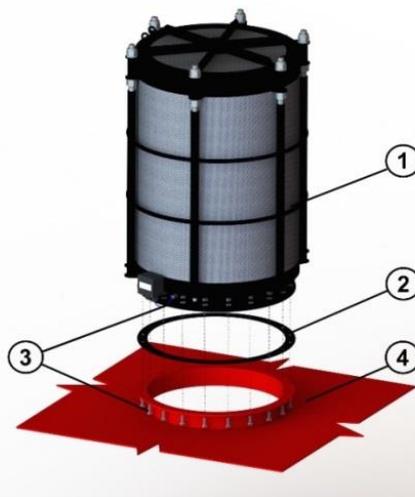
The exploded view of the round FLEX
(1 – FLEX, 2 – flange gasket, 3 – bolting materials, 4 – protected technology)

DATASHEET