

EXPLOSION VENTING DEVICE ROUNDED VMP SU

It is a safety device designed to relieve and release an explosion that might occur inside the protected equipment, where there is an environment with a risk of explosion. Under normal operating conditions, the relief area on the protected equipment is covered by VMP SU. If the pstat is exceeded during an explosion inside the equipment, VMP SU will open, thus releasing the pressure from the jeopardized area. The equipment will be exposed to a pressure lower than its pressure resistance.

This data sheet describes the technical parameters of VMP SU. These VMPs have a convex three-layer construction and high vacuum resistance. They are manufactured in a rounded and rectangular design and they are in accordance with EN 14797 and European Directive 2014/34/EU.



VMP SU CLASSIFICATION

| | |
|----------------------------------|----------------|
| Equipment group | II. |
| Explosive atmosphere | D |
| Equipment category | 1D |
| Operating temperature | -40 to 240 °C |
| Storage temperature | 10 to 40 °C |
| Standard static opening pressure | 10 kPa +/-15 % |

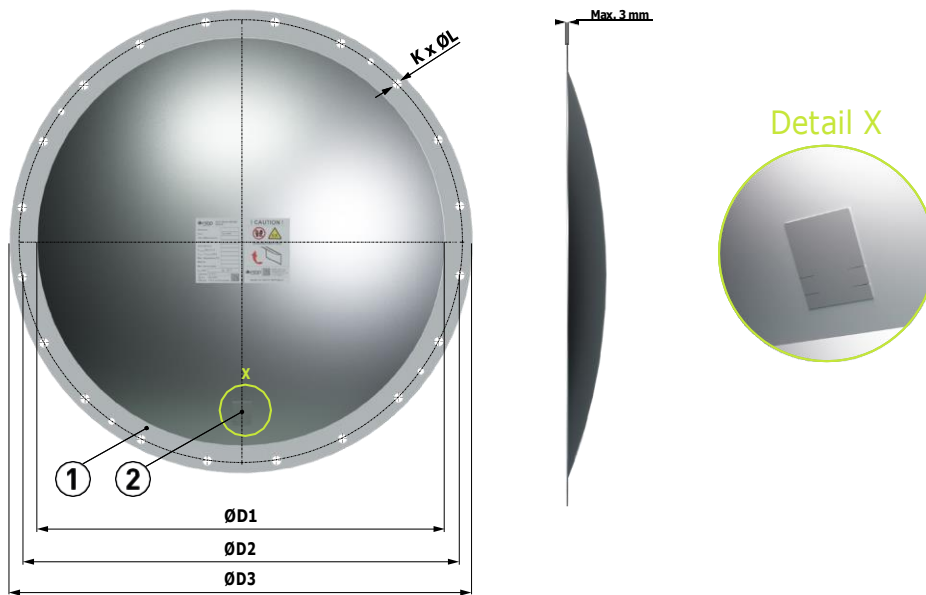
MATERIAL DESIGN

| | |
|-------------|-----------------|
| VMP | Stainless steel |
| VMP sealing | PTFE |

OPTIONAL ACCESSORIES

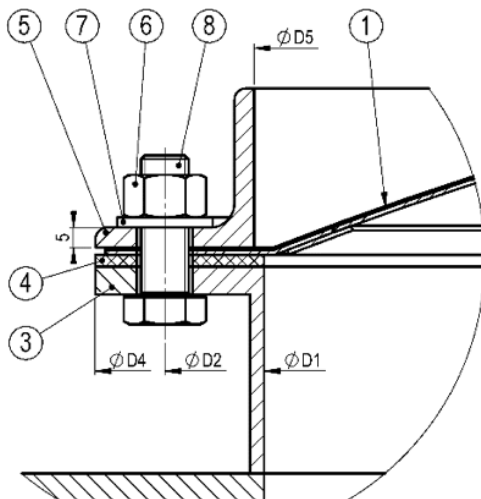
| | |
|--------------------------|---|
| Opening indicator | Cable (type G1), magnetic (type G2) or additional (type G3) |
| Intrinsically safe relay | It is used to create the interface between the safe and dangerous zone |
| Flange gasket | EPDM, silicon |
| Thermal Insulation | Synthetic rubber-based foam |
| Fasteners | Screws - (strength 8.8 or A2-70), nuts ISO 4070, washers ISO 7090(all in galvanized finish or stainless-steel design) |
| Upper frame | Made of stainless steel or constructional steel, galvanized |

DIMENSIONAL DIAGRAM

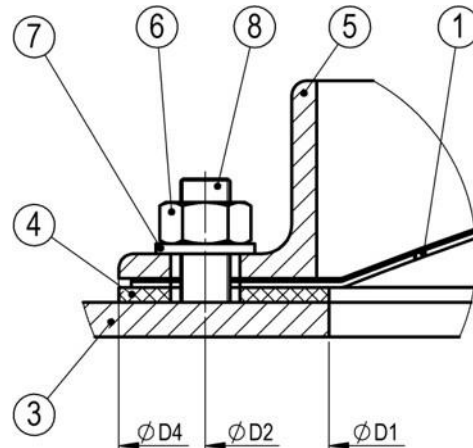


INSTALLATION VARIANTS

Installing with bolts



Installing with welded screws



| Position | Components | Quantity |
|----------|------------------------------------|-------------------|
| 1 | VMP SU | 1 |
| 2 | Universal opening indicator holder | 1 |
| 3 | Protected equipment ¹⁾ | 1 |
| 4 | Flange gasket ⁵⁾ | 1 |
| 5 | Upper frame ^{2),3)} | 1 |
| 6 | Nut ³⁾ | see ⁴⁾ |
| 7 | Washer ³⁾ | see ⁴⁾ |
| 8 | Screw ³⁾ | see ⁴⁾ |

1) For the installation of VMP SU, the flange of the protected equipment must meet the requirements of standard EN ISO 13920-BE and must be sufficiently rigid. In case of mounting on insufficiently rigid equipment, it is necessary to provide the flange with additional reinforcement.

2) The frame is made out of L-shaped steel see technical parameters table.

In case there is a risk of rainwater remaining in the upper frame, it is necessary to create drainage channels 5 mm wide and 5 mm high in suitable places in it.

3)Material - galvanized steel or stainless steel (screws strength 8.8 or A2-70).

4)Number according to technical parameters table

5) A suitable sealant can be used instead of the flange

TECHNICAL PARAMETERS

| Dimensions | Vent area [m ²] | Hole dimension in protected equipment ØD1 [mm] | Spaced circle ØD2 [mm] | VMP external dimension on ØD3 [mm] | External dimension of the frame, seal and flange of the protected equipment ØD4 [mm] | Internal dimension of the frame ØD5 [mm] | screws /holes | | |
|------------|-----------------------------|--|------------------------|------------------------------------|--|--|---------------|---------|------------|
| | | | | | | | K [ks] | ØL [mm] | Screw size |
| DN 250 | 0,05 | 265 | 320 | 345 | 350 | 270 | 12 | 11 | M8 |
| DN 3001 | 0,06 | 315 | 350 | 375 | 380 | 320 | 12 | 11 | |
| DN 350 | 0,07 | 340 | 387 | 420 | 425 | 345 | 12 | 11 | |
| DN 400 | 0,10 | 390 | 443 | 475 | 480 | 400 | 16 | 13 | M10 |
| DN 450 | 0,13 | 445 | 486 | 525 | 530 | 450 | 12 | 14 | |
| DN 510 | 0,16 | 505 | 550 | 585 | 590 | 510 | 20 | 14 | |
| DN 600 | 0,24 | 595 | 646 | 675 | 680 | 600 | 20 | 14 | |
| DN 630 | 0,27 | 625 | 680 | 705 | 710 | 630 | 20 | 14 | |
| DN 750 | 0,41 | 765 | 817 | 845 | 850 | 770 | 28 | 14 | |
| DN 800 | 0,47 | 815 | 860 | 895 | 900 | 820 | 24 | 14 | |
| DN 880 | 0,53 | 875 | 920 | 955 | 960 | 880 | 24 | 14 | |
| DN 9002 | 0,57 | 895 | 955 | 995 | 1000 | 900 | 32 | 14 | |
| DN 10002 | 0,72 | 995 | 1060 | 1095 | 1100 | 1000 | 36 | 13 | |
| DN 11002 | 0,87 | 1095 | 1160 | 1195 | 1200 | 1100 | 40 | 14 | |

Use of the standard L profile frame 40x40x5

1) Use of the L profile frame 30x30x5

2) Use of the L profile frame 50x50x5

ØD1 Hole dimension in protected equipment = ØD1 Bulge dimension

ØD1, ØD4 and ØD5 see Fig. 24 and Fig. 25

Use screws, flat washers (ISO 7090) and nuts (ISO 7040) to secure the rounded VMP SU
 Comply with a tightening torque of 15Nm (for M8) and 21Nm (for M10).