



**Emergency Vent
942-MW
Instructions for Operation and Maintenance**

REV 1.7

Page 1/5

For the pressure vent type 942-MW catalogue data sheets as "Dimension sheet", "Technical data" and "Pressure drop/volume flow charts" are available including the technical data, constructions and dimensions.

1. Use

Pressure vent 942-MW complies with standard:

EN ISO 80079-36:2016	Non-electrical equipment for explosive atmospheres Basics methods and requirements
EN ISO 80079-37:2016	Non-electrical equipment for explosive atmospheres Non-electrical type of protection constructional safety "c"

The general suitability as a pressure vent for device group II, category 1/2 or EPL Ga/Gb when used with inflammable gas/air mixtures and vapour/air mixtures of inflammable liquids of explosion group IIB (standard gap width ≥ 0.5 mm) have been verified by tests executed at the Institute for Safety Technology IBExU GmbH Freiberg and the results were confirmed by the issued EU-Type Examination Certificate **IBExU20ATEX1057_X**. The following valve settings have to be considered:

- Set-pressure for pressure: 2,5 up to 150 mbar* (* factory pre-set default)
- Operating temperature: surface temperature $\leq 80\%$ of ignition temperature medium (please see data sheet)

On delivery of the device, the technical parameters of the vent and the EU-Type Examination Certificate number are documented in the test certificate which is prepared in accordance with EN 10204. In the declaration of compliance, it is confirmed that the unit meets the requirements of the harmonized standard EN ISO 80079 Parts 36 and 37. The maintenance of the basic safety requirements according to directive 2014/34/EU has been confirmed.

2. Construction

The vent consists of a carbon steel/stainless-steel base flange (9) welded to a stainless-steel seat (10). Sealing of the unit is carried out by a seal/gasket combination (14,18) which is mounted to a valve plate (12). The valve plate is mounted to the assembly via an arm (6) which in turn is mounted to the base flange. The mounting points are secured using stainless steel shafts (1,16) which are kept in place by circlips (2).


The valve plate is pre-set for the customer's specific set-up pressure using weight disks. The valve plate can be equipped with FEP, NBR or FPM sealing foils backed by a gasket.

The applied materials of the vent have to be resistant under the respective operating conditions against the mechanical and/or chemical effects of the process as well as corrosion, so that the explosion protection is always maintained.

3. Marking

The information for marking the vent are arranged on the nameplate (page 5/5).

The following data is indicated:

- Name and address of the manufacturer
- Type (including version number)
- Serial number and year of production
- Number of the certificate (EU type examination certificate-no.)
- EN number
- The specific mark for prevention of explosions in connection with the letter "h", the mark indicating the group/subgroup  II 1/2 G Ex h IIB T1...T6 Ga/Gb X of devices, the temperature class and EPL category.
- The CE mark with the number of the indicated inspection authority, which act during production
- Set-up pressure for pressure vent
- Volume flow at opening pressure

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4. Installation

The arrangement and the installation of the vent into the plant shall be done under observance of the rules applicable to the relevant range of use. Accident prevention instructions must be adhered to. A vertical installation position of the vent has to be kept under all circumstances.

The vent may be provided with flange connections that can be of bolting configuration as per EN 1092, ASME/ANSI B16.5, JIS B 2220 or another configuration under special request.

For the flanged connections, flat gaskets with a sealing parameter $k_{0kD} \leq 25b_D$ are recommended. When assembling flange connections, make sure the sealing surfaces are not damaged and free from any foreign material to avoid any leak paths.

The Vent must be included in the equipotential bonding of the vessel or plant.

Process gases and vapours are to be free of particles and are not to be exothermic in nature.

To prevent transportation damage, the valve plate and seat are separated with a transportation safeguard, which must be removed as follows:

- Lift up valve plate (12)
- Remove transportation safeguards and adhesive tags keeping them in place.
- Replace the valve plate in original position.

5. Maintenance

The maintenance includes a periodic visual inspection of the vent with regard to contamination and appearance. The intervals for the maintenance works depend on the operating conditions and how contaminating the process media is. The interval of maintenance must be defined by the operating company.

In case of major contamination, a flushing with a cleaning agent can be carried out. After cleaning all parts shall be blown dry. During the cleaning works, no mechanical modifications may be done to any element or the housing or else they must be replaced by a new one.

All works in connection with repair and replacement of components shall be executed only by trained and authorized, skilled personnel.

Valve seats and valve plates shall be checked for contamination and damage and examined in particular for intactness. Damage to the valve seat shall be eliminated by expert grinding and smoothing in consultation with the factory. Depending on the sealing system, the FEP seal or other sealing surface should indicate no damage, or else they must be replaced by a new one.

Opening and re-installing shall be performed as described under Section 4.

It is recommended to keep a spare parts kit for each seal on hand at all times. In case of replacement of structural units, only original spare parts listed in the spare parts list shall be installed to ensure the required safety standard.

Where maintenance of the protective coating system is required, the overall thickness of the coating after repair shall not exceed 2mm.

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REV 1.7

Page 3/5

6. Spare part list

Table : Spare parts for 942-MW

Item No.	Description	Qty.	Material	DN200	DN250	DN300	DN350	DN400
1	Plate Shaft	1	NSt	960000107	960000239	960000296	960000322	960000132
2	Circlip	4	NSt	302014200	322050600	302014400	302014400	302014400
3	Hex Screw	1	NSt	242007800	222075300	222075300	222075300	220009200
4	Cap Nut	1	NSt	202012700	202043200	202043200	202043200	202043400
6	Plate Arm	1	NSt St	960000109 960000108	960000272 960000271	960000298 960000297	960000324 960000323	960000134 960000133
12	Valve Plate	1	NSt	960000100	960000264	960000290	960000316	960000125
14	Disk Seal	1	PTFE NBR FPM	960000110 960000111 960000112	960000273 960000274 960000275	960000299 960000300 960000301	960000325 960000326 960000327	960000135 960000136 960000137
15	Seal Holder Plate	1	Nst	102092000	960000277	960000303	960000329	960000139
16	Base Shaft	1	Nst	960000106	960000238	960000295	960000321	960000131
18	Disk Seal Gasket	1	CF	960000113	960000276	960000302	960000328	960000138

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Page 4/5

Item No.	Description	Qty.	Material	DN450	DN500	DN600	DN750	DN900
1	Plate Shaft	1	NSt	960000348	960000158	960000184	960000213	960000239
2	Circlip	4	NSt	302014400	302014400	302014300	306885600	306885600
3	Hex Screw	1	NSt	220009200	220009200	242020800	242020800	232074050
4	Cap Nut	1	NSt	202043400	202043400	202043400	202043400	202043500
6	Plate Arm	1	NSt St	960000349 960000350	960000160 960000159	960000186 960000185	960000215 960000214	960000241 960000240
12	Valve Plate	1	NSt	960000342	960000153	960000191	960000206	960000233
14	Disk Seal	1	PTFE NBR FPM	960000351 960000352 960000353	960000161 960000162 960000163	960000187 960000188 960000189	960000216 960000217 960000218	960000242 960000243 960000244
15	Seal Holder Plate	1	Nst	960000355	960000165	960000191	960000220	960000246
16	Base Shaft	1	Nst	960000347	960000157	960000183	960000212	960000238
18	Disk Seal Gasket	1	CF	960000354	960000164	960000190	960000219	960000245

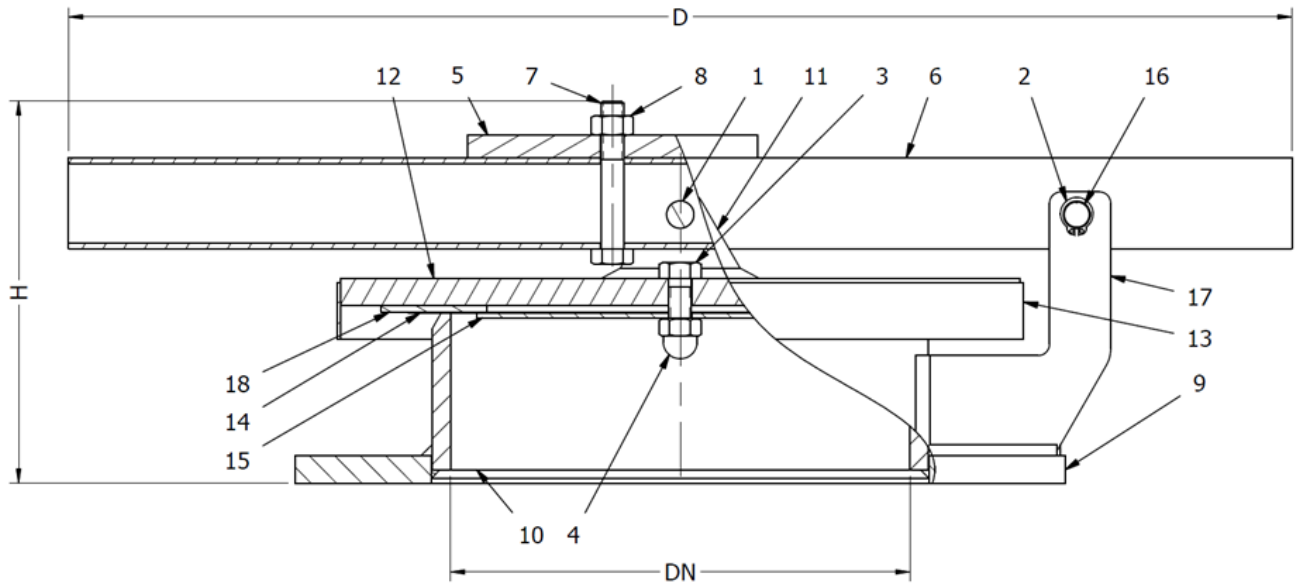
Material marks

St ... steel	LM ... light metal	FPM ... Viton	FEP .. Fluoride plastic
NSt ... stainless steel	K ... plastic	NBR ... Perbunan(N)	PTFE .. Fluoride plastic
EPDM ... ethylene propylene diene monomer rubber	CF ... Compressed Fiber		

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Assembly drawing



SIZE	D [mm]	H [mm]
DN200 / 8"	470	168
DN250 / 10"	650	216
DN300 / 12"	665	216
DN350 / 14"	685	219
DN400 / 16"	715	229
DN450 / 18"	800	244
DN500 / 20"	885	254
DN600 / 24"	960	262
DN750 / 30"	1150	292
DN900 / 36"	1350	297

Note: For indication of connection size, please refer to the product designation entered into the Type field of the name plate. For example, as below, 942-MW 200 refers to a 942-MW with a DN200 connection size.

	BS&B FlameSaf	Type	942-MW 200	set press.	XXX	mbar		
	Raheen Business Park, Limerick, Ireland.	Ser.-no	FS20XX000XX-1 01	opening press.	XXX	mbar		
	Cert.-no	IBExU20ATEX1XXX X	volume flow	XXX	Nm ³ /h	air at opening pressure		

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