For the pressure and vacuum vent type 944, the data sheets such as “Dimension sheet”, “Technical data” and “Pressure drop/volume flow charts” are available in the catalogue including the technical data, constructions and dimensions.

1. Use

Pressure and vacuum valve 944 complies with the following standards:

DIN EN 13463 Part 1:2009-07	Non-electrical equipment for potentially explosive atmospheres Basics methods and requirements
DIN EN 13463 Part 5:2011-10	Non-electrical equipment for potentially explosive atmospheres Protection by constructional safety "c"

The general suitability as pressure and vacuum vent for device group II, category 1/2 when used with inflammable gas/air mixtures and vapour/air mixtures of inflammable liquids of explosion group IIB (standard gap width ≥ 0.5 mm) had been verified by tests executed at the Institute for Safety Technology IBExU GmbH Freiberg and the results were confirmed by the issued EC prototype test certificate **IBExU14ATEX1244_X**
The following valve insert settings have to be considered :

- Set-pressure for pressure: 2,5 up to 50 mbar *) *) factory pre-set default
- Set-pressure for vacuum: 2,5 up to 50 mbar *)
- Operating temperature: surface temperature ≤ 80% of ignition temperature medium (please attend data sheet)

On delivery of the devices the technical parameter of the valve with stating the EC prototype test certificate number are documented in the works test certificate according to EN 10204. In the declaration of compliance it is referred to the accordance with the harmonized standard EN 13463-1/-5. The maintenance of the basic safety requirements according to directive 2014/34/EU has been confirmed.

2. Construction

The vent consists of a cast iron housing (1), equipped with pressure (6) and vacuum valve inserts (8). The housing is closed with a cover (2) by using of screw (3) and sealed by an O-ring (10). The vacuum valve insert is guided by a guiding socket screwed into the cover. The pressure valve insert is guided by a bolt screwed into the housing (9).
For protection against effects of weather the vent is equipped with a protective strainer (11) and a metal cover (12). Both are clamped/mounted by stud bolts (13), plates (16), distance sleeves (14) and cap nuts (15).
The valve inserts are pre-set for the customer’s specific set-up pressure via weight discs. They can be equipped with FEP sealing foil or with a metallic sealing surface.

3. Marking

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

- Name and address of the manufacturer
- Type (including version number)
- Serial number and year of production
- Number of the certificate (EU prototype certificate-no.)
- EN number
- The specific mark for prevention of explosions in connection with the mark indicating the group of devices II, category 1/2, the letter “G” (for areas where explosive gas, vapour, air mixtures are available), the explosion group and temperature class.
- The CE mark with the number of the indicated inspection authority, which act during production
- Set-up pressure for pressure and vacuum valve
- Volume flow at opening pressure

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. Especially the instructions for accident prevention have to be observed. A vertical installation position of the vent has to be kept under any circumstances.

The vent is equipped with a flange connection PN10 Form C or ANSI 150 RF.
For the flanged joints flat gaskets with a sealing parameter $k_O k_D \leq 25 b_D$ are recommended. While flanging be careful that the sealing strips are not damaged and there is no foreign matter or dirt between the flanges, so that no gap to the atmosphere can occur.

The valve has to 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 inserts are blocked with a transportation safeguard, which must be removed as follows:

- Uninstall cover (2) by loosening the screws (3)
- Remove transportation safeguard (corrugated card board) of the top valve insert (8)
- Lift out top valve insert
- Remove transportation safeguard (corrugated card board) of the bottom valve insert (6)
- Check the bottom valve insert (6) for easy mobility and proper location on the guide bolt (9)
- Place the top valve insert upon the top valve seat (7)
- Install the cover (2) and pull screws tight (3)
- When placing the cover, make sure that the guiding socket in the cover is guided properly across the guiding bolt of the top valve insert.

Always regard „Transportation guard page“!

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 contaminating the process media is. The interval of maintenance has to 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 on all elements or the housing or else they has to 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 damages and examined in particular for intactness as well. Damages to the valve seat shall be eliminated by expert grinding and smoothing. Depending on the sealing system, the FEP seal or metallic sealing surface should indicate no damaging, 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.

6. Spare part list

Table : Spare parts for 944 300

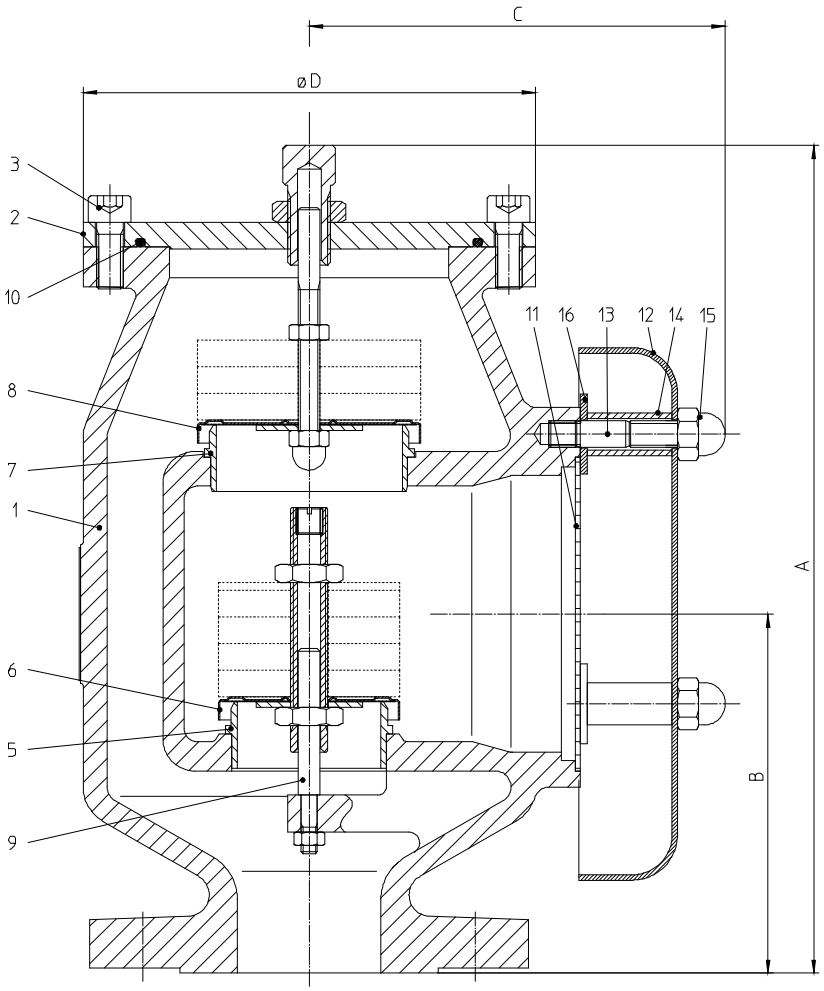
Item No.	Description	Qty.	Material	Order-No. DN300
2	cover – complete	1	St NSt	999683800 842082621
3	screw	10	NSt	232098200
6*	pressure valve insert **– FEP - valvedisk - FEP-seal surface	1	NSt/FEP	FET15418174 812072650 722089300
8*	vacuum valve insert **– FEP - valvedisk - FEP-seal surface	1	NSt/FEP	FET15418175 812072550 722089400
10*	o-ring	1	NBR	792082100
11	protective strainer	1	NSt	52099900
12	metal cover	1	NSt	999676700
13	stud bolt	4	NSt	312063800
14	distance sleeve	4	NSt	999676500
15	cap nut	4	NSt	202043200

* Parts shall be available for maintenance works
** Valve inserts without added weights

Material marks

St	... steel	LM	... light metal	FPM	... Viton	FEP . .	Fluoride plastic
NSt	... stainless steel	K	... plastic	NBR	... Perbunan(N)	PTFE ..	Fluoride plastic

Assembly drawing



DN	A [mm]	B [mm]	C [mm]	ø D [mm]
300 / 12“	887	433	459	614