



# Model 937-E

**End-of-Line Pressure/Vacuum Relief  
Vent/Valve with Integral Flame Arrester**



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The BS&B FlameSaf® breather valves offer a reliable, proven and efficient solution for protecting your people and plant without disrupting the operation. Drawing on our extensive experience in the industry, the 937-E series of weight loaded pressure and vacuum breather valves for vessels and storage tanks offer a dependable, internationally certified and precise solution to regulate pressure, preventing implosion or rupturing while providing protection against atmospheric deflagrations. The valves, which include an integral flame arrester, positioned to minimize plugging, along with a light-weight, compact design, are expertly engineered to respond to even minimal changes in pressure. Fully opening at pressure rises of just 10%, they also allow set points for pressure and vacuum, enabling users to optimize operating conditions close to limits while ensuring reliable operation that safeguards personnel and the environment. Precision engineering means less leakage and lost product. Suitable for flammable liquids, the 937-E is fully certified in accordance with the ATEX Directive 2014/34/EU. The 937-E series also features a modular design for ease of maintenance and lower stock requirements for spare parts.



Model 937-E End-of-Line Pressure/  
Vacuum Relief Vent/Valve with Integral  
Flame Arrester

## Features

- Pressure vacuum valve with integral flame arrester in one unique housing
- Facilitates ease of mounting and maintenance
- Opening pressure, at most 10%, above setting pressure, thereby maximum utilisation of scope of equipment by increasing set pressure near design pressure
- Applicable in gas/air- or vapour/air- mixtures of explosion groups up to IIB3 (Gas Group C)
- Available in wide range of diameters with several flange connections and materials
- Adjustment of all required set pressure within a range of +2.5 to +50 mbar (+1 to +20"WC) [Pressure] respectively of -2.5 to -50 mbar (-1 to -20"WC) [vacuum] by additional weight discs on pallet.

## Protection

Gas/air or vapour/air-mixtures for explosion groups up to and including IIB3 (NEC Group C), MESG ≥ 0.65mm

## Flange Connection Type

ISO 7005-1, JIS B2220  
ASME B16.5

Valve Settings	
Set Pressure	+2.5 mbar [1 inch W.C.] to to +50 mbar [20 inch W.C.]
Set Vacuum	-50 mbar [-20 inch W.C.] to -2.5 mbar [-1 inch W.C.]

Materials of Construction					
	FEP	Ductile Iron	Carbon Steel	Stainless Steel	Other Materials on request
Diaphragm	✓			✓	✓
Valve Set/ Pallet				✓	✓
Valve Seat				✓	✓
Body		✓*	✓**	✓	✓

\* Available in sizes DN 50 (2"), DN 80 (3"), DN 100 (4")

\*\* Available in sizes DN 150 (6"), DN 200 (8"), DN 250 (10"), DN 300 (12")

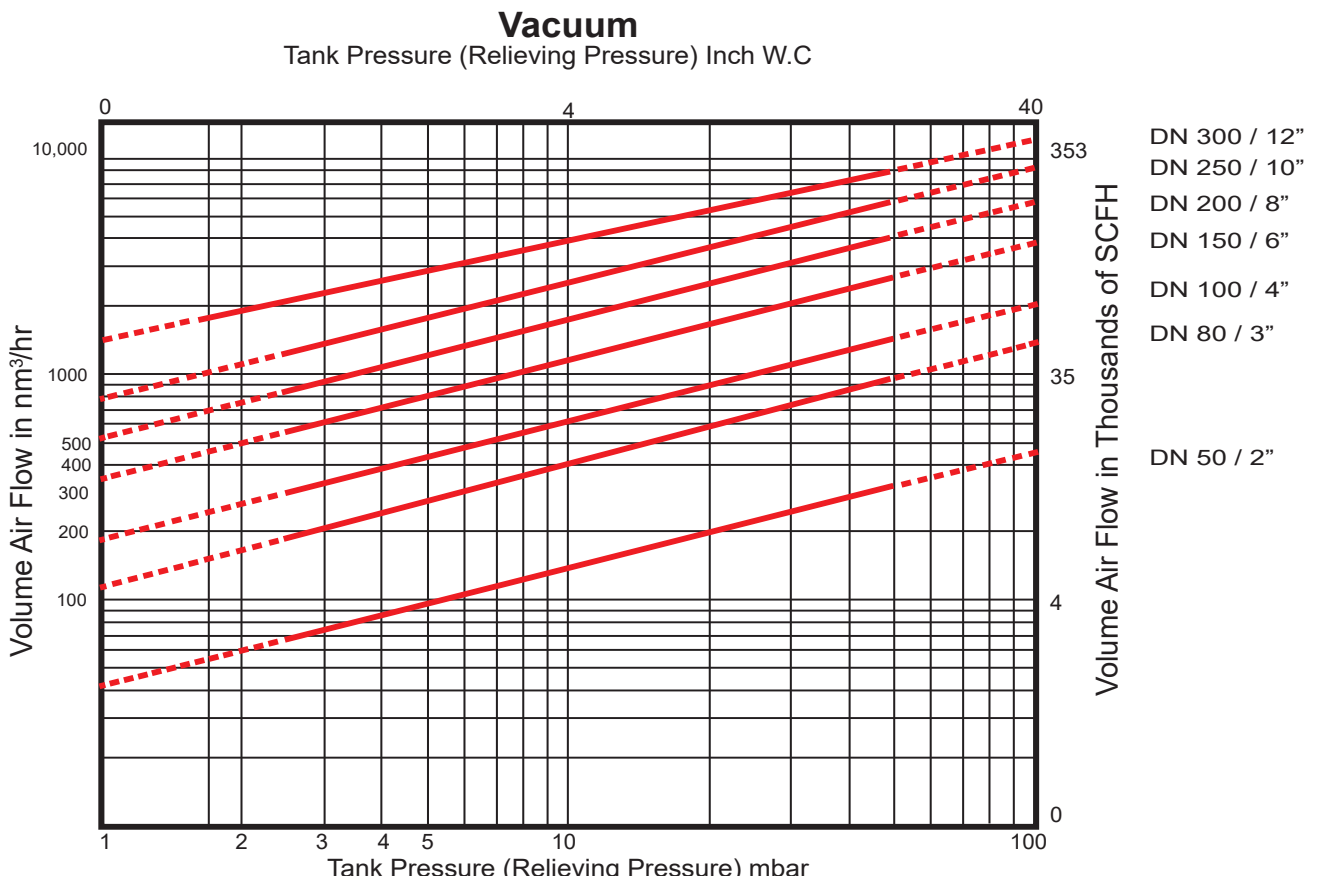
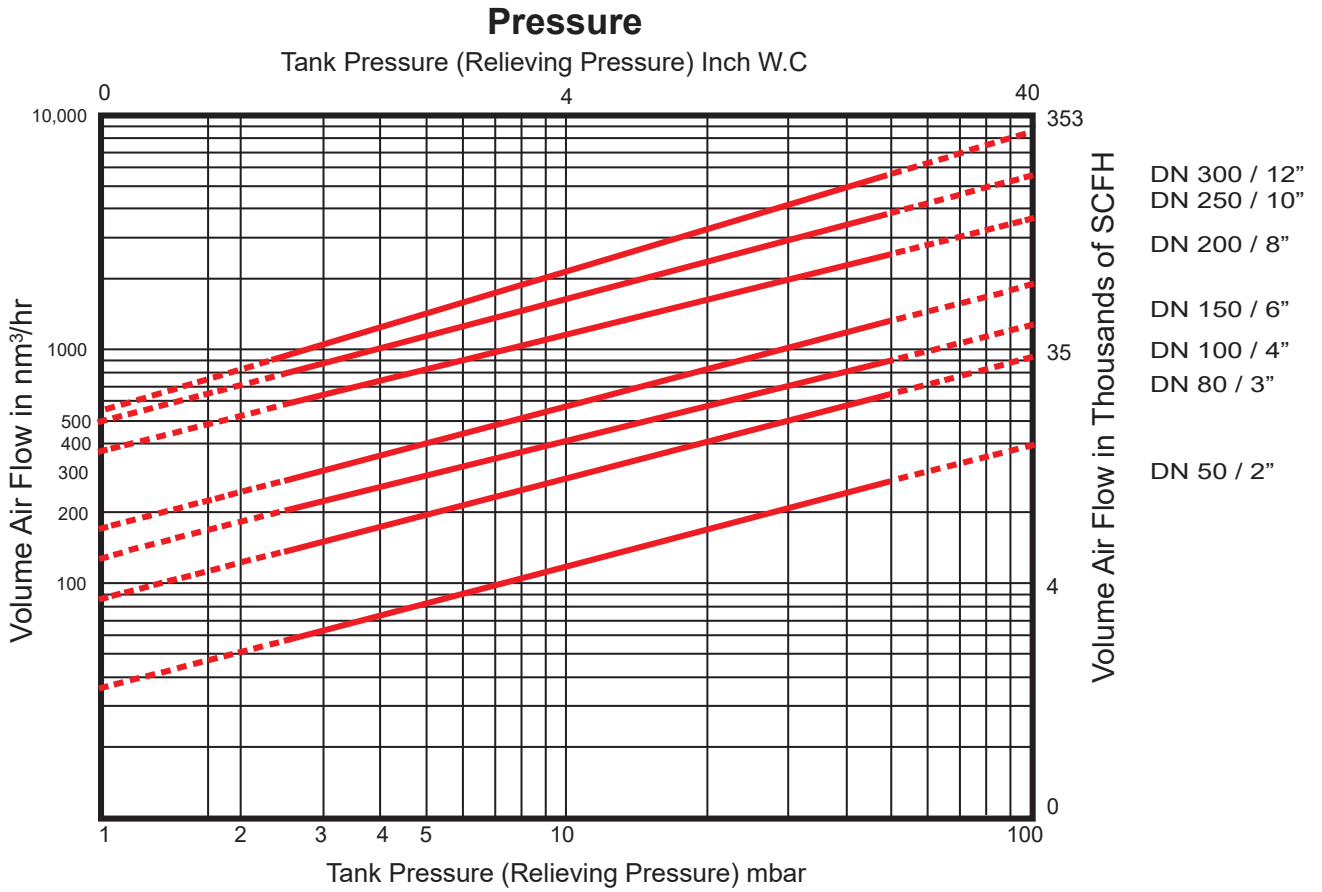
Type Examination/Compliance	
Designation	937-E 50 to 300/1x0.9
Protective System	Deflagration-proof Pressure/Vacuum Valve (End-of-Line Flame Arrester)
Certificate Number	IBExU14ATEX2010 X
Compliance with	ATEX Directive 2014/34/EU EN ISO 16852:2016 EN1127-1, EN 13463-1, EN13463-5, EN ISO 28300 <i>API Standard 2000 7th Edition (March 2014)</i>

Operating Conditions	
Temperature	≤ 60 °C / 140 °F
Maximal 80% of ignition temperature stored medium	
Pressure: Atmospheric	0.8 bar [11.6 psi] to 1.1 bar [15.95 psi] (absolute)

Valve - Maximum Pressure Rating
1 bar [g] (14.5 psig) – all sizes/settings

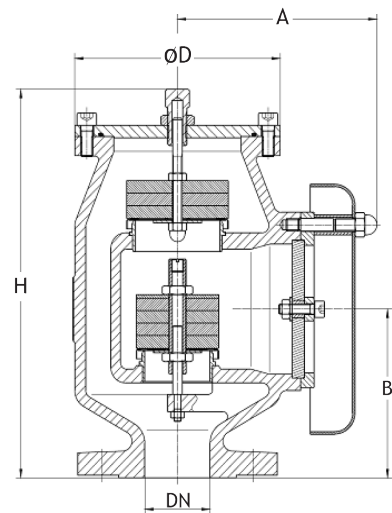
Explosion Group Selection			
MESG	Explosion Group (IEC/CEN)	Gas Group (NEC)	Special approvals on request
≥ 0.65 mm	IIB3	C	

# Pressure Drop/Volume Flow Charts



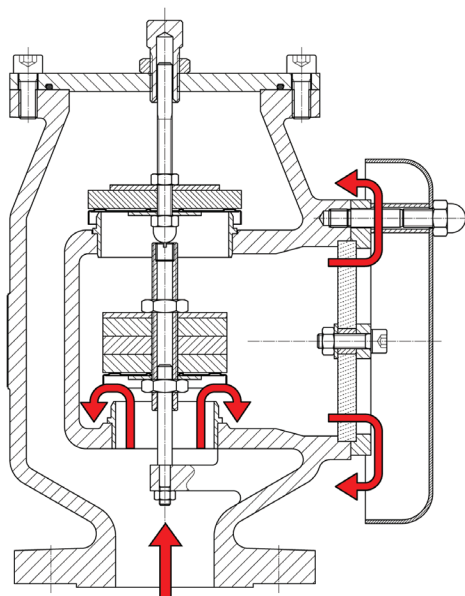
Dimensions (mm / inches)							
DN	50 / 2	80 / 3	100 / 4	150 / 6	200 / 8	250 / 10	300 / 12
A	165 / 6.50	192 / 7.56	225 / 8.86	250 / 9.84	295 / 11.61	386 / 15.20	435 / 17.13
B	135 / 5.31	162 / 6.38	190 / 7.48	210 / 6.27	277 / 10.91	310 / 12.20	434 / 17.09
Ø D	170 / 6.69	235 / 9.25	290 / 11.42	330 / 12.99	375 / 14.76	445 / 17.52	614 / 24.17
H	311 / 12.24	400 / 15.75	453 / 17.83	490 / 19.29	595 / 23.43	695 / 27.36	840 / 33.07

To select the nominal size (DN), please use the Pressure Drop/Volume Flow Charts above

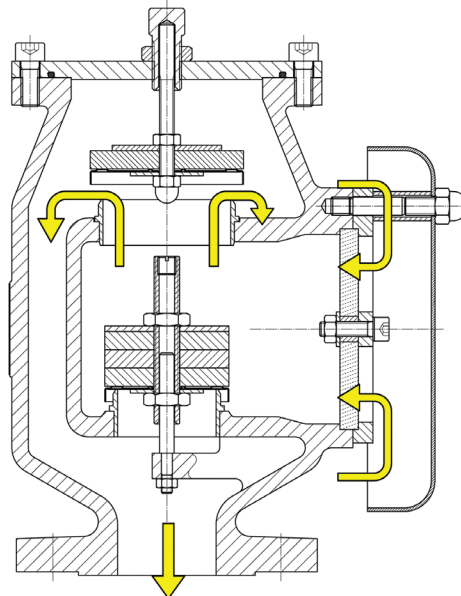


## Mode of Operation

Pressure



Vacuum



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