

Vacuum breaker safety valve



Model 785

The valve acts as an automatic regulator of pressure drops and prevents the creation of a vacuum inside pressurised installations or vessels. In compliance with the ATEX 2014/34/EU directive "Protective equipment and systems for use in potentially explosive atmospheres".

Specifications

- Activated by direct action helicoid spring.
- Simplicity of construction ensuring minimum maintenance.
- Internal body designed to offer favourable flow profile.
- Soft seals giving greater tightness than that required by EN 12266-1, as long as the valve, in non operating conditions, is under equal or greater pressure than atmospheric pressure.
- Great discharge capacity.
- All the valves are supplied sealed at the set depressurising requested, simulating operational conditions, and are vigorously tested.
- All components are numbered, registered and checked. If requested in advance, material, casting, test and efficiency certificates will be enclosed with the valve.



ASME

Catalog available in International System Units (SI) in PDF format.

IMPORTANT

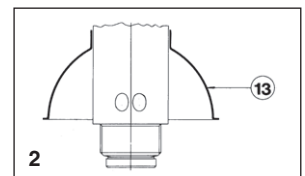
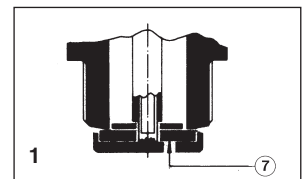
1.- Fluorelastomer (Vitón) seals or Silicone's rubber, achieving leakage levels less than:

$$0,2 \times 10^{-8} \frac{\text{Psi pulg}^3}{\text{seg.}}$$

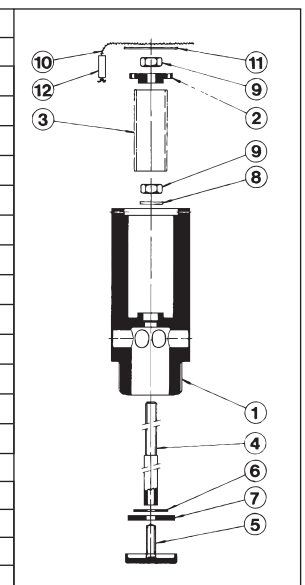
as long as the valve, in non operating conditions, is under equal or greater pressure than atmospheric pressure.

Depending on demand:

- 1.- Buna-nitrils seals, Butyl, Natural rubber, E.P.D.M., Chlorosulphonate polyethylene (Hypalon), Neoprene, ...etc.
- 2.- The intake deflector prevents the entry of foreign bodies in the valve which will affect later operation. (Specially designed for moving transport).
- 3.- Possibility of manufacture in other types of material, for use in special working conditions (high temperatures, fluids,... etc.).



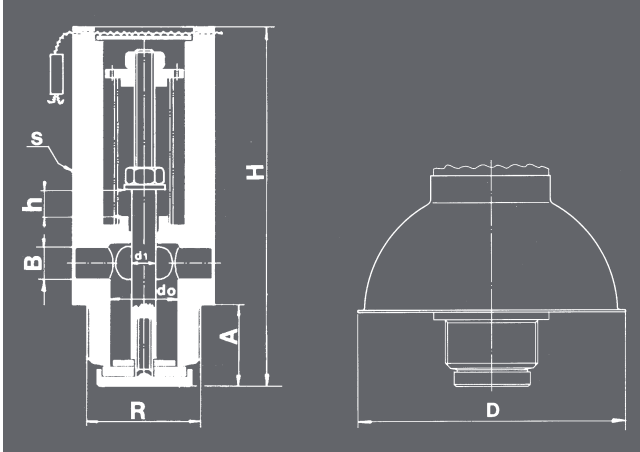
N.º PIECE	PIECE	MATERIAL			
		BRASS		STAINLESS STEEL	
1	Body	Brass (ASTM UNS C38000)		Stainless steel (AISI 316)	
2	Spring press	Brass (ASTM UNS C38000)		Stainless steel (AISI 303)	
3	Spring	Stainless steel (AISI 301)		Stainless steel (AISI 301)	
4	Shaft	Stainless steel (AISI 303)		Stainless steel (AISI 303)	
5	Plug	Brass (ASTM UNS C38000)		Stainless steel (AISI 316)	
6, 8	Washer	Stainless steel (AISI 316)		Stainless steel (AISI 316)	
7	Seal	Fluorelastomer (Vitón) ⁽²⁾		Fluorelastomer (Vitón) ⁽²⁾	
		Silicone's rubber ⁽³⁾		Silicone's rubber ⁽³⁾	
9	Nut	Stainless steel (AISI 316)		Stainless steel (AISI 316)	
10	Sealing wire	Sealing wire		Sealing wire	
11	Charactetistic plate	Aluminium		Aluminium	
12	Seal	Plastic		Plastic	
13	Deflector	Stainless steel (AISI 316)		Stainless steel (AISI 316)	
MNPT		3/8" to 1"			
CLASSE		150 lbs		150 lbs	
OPERATING CONDITIONS	PRESSURE IN psi	232,06	174,05	232,06	174,05
	MAXIMUM TEMP. IN °F ⁽¹⁾	248	302	248	302
	MINIMUM TEMP. IN °F	-58		-58	



(1) For temperatures upper 302°F special seal. For temperatures upper 572°F special seal and spring.
 (2) Recommended temperature field -22°F to +302°F. Maximum pressure of service 174,05 psi.
 (3) Recommended temperature field -58°F to +239°F. Maximum pressure of service 130,53 psi.

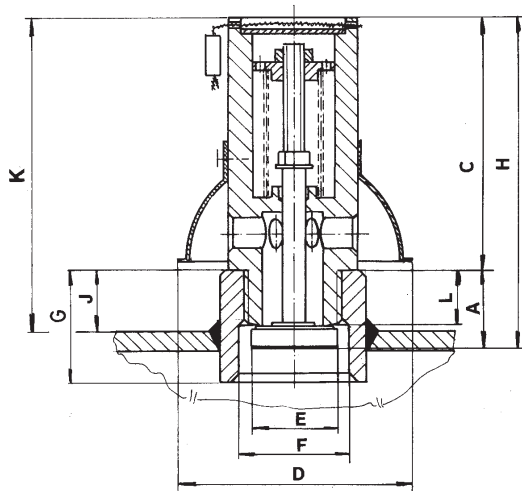
MNPT	3/8"	1/2"	3/4"	1"	
CONNECTIONS	Male thread NPT ASME B1.20.1				
do	0,37	0,49	0,65	0,79	
Ao	0,08	0,14	0,28	0,43	
H	2,77	3,50	3,75	4,41	
A	0,51	0,96	1,03	1,22	
B	0,17	0,22	0,31	0,37	
D	1,57	2,56	2,56	2,56	
S	0,94	1,26	1,38 (1,42) •	1,57 (1,61) •	
WEIGHT IN lbs.	BRASS	0,33	0,79	1,01	1,72
	STAINLESS STEEL	0,42	0,75	1,12	1,76
CODE	BRASS 2002-785	5381	5021	5341	5101
	STAINLESS STEEL 2002-785	5382	5022	5342	5102

• Stainless steel (AISI 316).



Example of installation

MNPT	H	A	C	L	E	F	D	K	G	J
3/8"	2,77	0,76	2,01	0,60	0,55	0,79	1,57	2,78	0,94	0,47
1/2"	3,50	0,96	2,54	0,78	0,70	1,00	2,56	3,15	1,26	0,61
3/4"	3,75	1,03	2,72	0,79	0,87	1,34	2,56	3,74	1,57	0,79
1"	4,41	1,22	3,19	0,98	1,08	1,65	2,56	4,17	1,97	0,98



MNPT		3/8"	1/2"	3/4"	1"
SET DEPRESSURISING IN psi	MAXIMUM	5,80	5,80	5,80	5,80
	MINIMUM	0,73	0,73	0,73	0,73
SPRING REGULATING RANGE IN bar	0,73 to 1,45	CODE 56187	56191	56195	56199
	1,31 to 2,90	CODE 56188	56192	56196	56200
	2,76 to 4,35	CODE 56189	56193	56197	56201
	4,21 to 5,80	CODE 56190	56194	56198	56202
d0		0,37	0,49	0,65	0,79
h		0,13	0,18	0,23	0,28
h/d0		0,36	0,36	0,36	0,36
INTAKE COEFFICIENTS					
INTAKE COEFFICIENTS α_{ad} FOR AIR					

INTAKE CAPACITY pd [psi] Air at 60°F and 14,50 psi in [S.C.F.M.] Calculus according "AD-Merkblatt A2"	
	OVERDEPRESSURE FACTORS