

Vac-Gard / Posi-Gard (VG/PG)

(Patented)



This range of composite (compression loaded) reverse discs are ideal for the relief of vacuum and over-pressure situations. The patented design overcomes the requirement for a holder complete with blade for opening and allows for instantaneous system relief at ultra low pressures. The Posi-Gard and Vac-Gard will attain full relief within 1 second from the start of reverse. Both products offer non-fragmenting opening and, as a result of their modular content, can be offered to meet a broad range of non standard specifications / applications. The Posi-Gard and Vac-Gard can be provided with an ATEX approved burst detection device.

- Blade-less holder installation – instantaneous relief through single-stage opening
- Ultra-low pressure instantaneous relief – ideal for protection of API designed atmospheric vessels (vacuum and over-pressure)
- Standard integral detection device – immediate indication of over/ under pressure occurrence
- Non-fragmenting design – eliminates product contamination
- No moving components – not prone to mechanical failure

Specifications	
SIZE RANGE	50mm to 300mm (2" to 12")
BURST PRESSURE RANGE	5 mbarg to 500 mbarg (0.07 psig to 7.25 psig)
TEMPERATURE RANGE	-40 to 150°C (-40 to 302°F)
MAXIMUM OPERATING RATIO	60% of minimum burst pressure(45% of nominal burst pressure)
FRAGMENTATION ON BURST	non-fragmenting design
RELIEF VALVE ISOLATION	suitable
VACUUM SERVICE	PG full vacuum, VG 1 bar g back pressure
FLUID COMPATIBILITY	gas or vapour
K _R VALUES	not applicable
TORQUE-SENSITIVE	no
CYCLE LIFE	good
MATERIAL RANGE	316SS as standard, others available.
REVERSAL RATIO	not applicable with standard holder
DAMAGE RATIO	<1 (fail-safe)
LEAK TIGHTNESS	good
PERFORMANCE TOLERANCE	+/- 25% (zero manufacturing design range)
PROTECTIVE LININGS	not available

Specifications and Performance

BURST PRESSURE RANGE in mbarg (psig) at 20 °C (68°F)			
Nominal Bore		316 Stainless Steel	
(mm)	(inch)	Min	Max
50	2	50 (0.72)	500 (7.25)
80	3	25 (0.36)	400 (5.80)
100	4	18 (0.26)	250 (3.63)
150	6	10 (0.15)	200 (2.90)
200	8	5 (0.07)	150 (2.18)
250	10	5 (0.07)	150 (2.18)
300	12	5 (0.07)	100 (1.45)

PERFORMANCE TOLERANCE (ZERO MANUFACTURING DESIGN RANGE)			
Burst Pressure	Tolerance	Burst Pressure	Tolerance
Up to 14mbarg (0.2 psig)	+/-3.5mbarg (0.05psig)	Above 14mbarg (0.2 psig)	+/- 25 %

STANDARD TEMPERATURE RANGE °C (°F)		
Material	Minimum	Maximum
Fluoropolymer	-40 (-40)	150 (302)

FREE FLOW AREA / MINIMUM NET FLOW AREA (MNFA)			
<i>Nominal Bore</i>		<i>Value</i>	
<i>mm</i>	<i>inch</i>	<i>mm²</i>	<i>in²</i>
50	2	1060	1.64
80	3	2715	4.21
100	4	4240	6.57
150	6	9750	15.11
200	8	17280	24.78
250	10	27490	42.61
300	12	39585	61.36

Detection:

For burst detection the disc is supplied with a permanent, hard-wired cable, which is connected to appropriate control panels. This cable is then attached to the installed disc via an IP65 plug and socket connector. The switching device is integral with the disc and will relay an instantaneous signal when the disc operates. The disc is the only element which needs replacing.

ELECTRICAL INFORMATION

Maximum circuit resistance: 5ohms
Maximum circuit voltage: 25V
Maximum current: 125mA

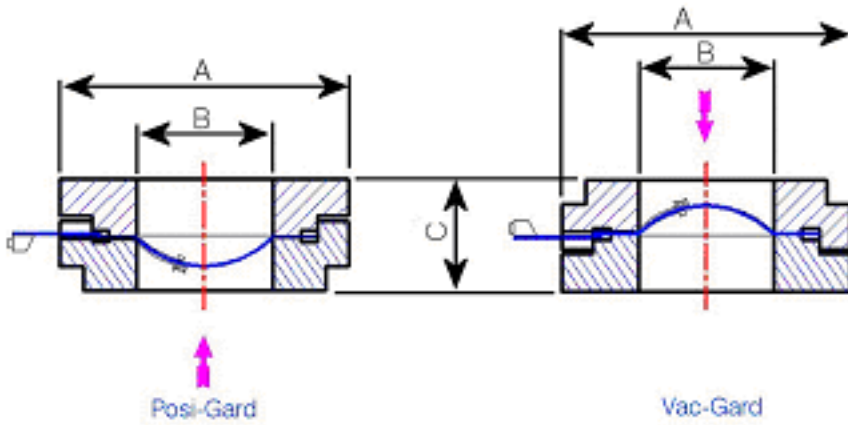
TEMPERATURE LIMITS

-40°C to +150°C
Supplied with a 2 meter cable

Due to the ultra low burst pressure of these devices, relief installations may require additional housing (s) and/or protection, particularly on the side of the relief system normally exposed to the atmosphere.

Regular checks of the integrity of your relief system are advised, particularly during the winter months.

HOLDER DIMENSIONS					
<i>Nominal Bore (B)</i>		<i>Height (C)</i>		<i>Outside Diameter (A)</i>	
<i>mm</i>	<i>inch</i>	<i>mm</i>	<i>inch</i>	<i>BS EN 1092</i>	<i>ANSI</i>
50	2	36	1.42	PN 6 to 16	150 to 300lb
80	3	42	1.65	PN 6 to 16	150 to 300lb
100	4	53	2.09	PN 6 to 16	150 to 300lb
150	6	62	2.44	PN 6 to 16	150 to 300lb
200	8	56	2.20	PN 6 to 16	150 to 300lb
250	10	56	2.20	PN 6 to 16	150 to 300lb
300	12	58	2.28	PN 6 to 16	150 to 300lb



To ensure the correct performance of a bursting disc, it must be used in its correct holder, as specified by the bursting disc manufacturer.

Sizes larger than 150mm nominal bore are not provided with dome protection as standard, this can be provided as an optional extra if required

Pressure and Solution Intelligence

The data shown on these sheets represents the standard offering from Elfab. Depending upon the requirements of your application, Elfab maybe able to provide a solution based on this product but outside the standard operating parameters. In addition, Elfab produces an extensive range of alternative products which maybe more suitable for your requirements.

As a result of extensive testing, Elfab can advise on these choices, or on other technical matters, such as discharge requirements, temperature testing, material selection and corrosion resistance, customised designs and burst detection.

To discuss your specific product or service requirements please contact your Elfab representative.



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