

HPE Surge Relief Valve

The purpose of the Surge Relief Valve (SRV) is to rapidly open when the pressure reaches a pre-set limit thereby eliminating excessive pressure surges or overpressures.



GENERAL DESCRIPTION

The HPE Gas Charged Surge Relief Valve features a very low inertia to facilitate the relief of high-pressure spikes of short and long duration.

The valve discharges to atmosphere (preferred) or into a discharge line as required.

FEATURES

- Reinforced sealing diaphragm for optimum gas sealing and high abrasion resistance.
- Diaphragm stroke is limited to prevent valve damage.
- High working pressures.
- The radial flow design on the diaphragm prevents diaphragm creep and allows the high working pressure.
- Flanges in all standard configurations.

OPERATING AND SETTING INSTRUCTIONS

The valve is installed on pipelines that are to be protected against excess pressure spikes. It should be mounted close to the pipeline on the free leg of a take-off tee. Once mounted the gas charge pressure must be set to the desired pressure at which the line is to be protected. This is done by introducing or releasing gas from the gas chamber of the valve by means of the charge valve and a suitable charge set that can supply nitrogen at high enough pressure. The valves should preferably be mounted with the dome to the top. It is recommended that the charge be set to at least 10% above the line working pressure but this may be reduced for controlled critical applications.

SIZING

The number of valves required depends on the working pressure, the over-pressure when relieving and whether the SRV is connected in series with a Manual Isolation Valve (MIV) or not.

Pump column pressure (MPa)	10	Typical		
Gas charge pressure (MPa)	11	10 to 15% of working pressure		
Maximum pressure when relieving (MPa)	13	Typical		
No. of SRVs in parallel	1	2	3	4
	Flow Rate (l/s)			
SRV in series with 100NB MIV	100	200	300	400
SRV directly connected to pipe (no MIV)	150	300	450	600

TECHNICAL SPECIFICATIONS

	WRS	WRH
Size (NB)	100	100
Maximum working pressure (MPa)	10	22
Maximum nitrogen charge pressure (MPa)	11.3	25
Minimum working pressure (MPa)	0.5	0,5
Mass (kg)	96	114
Standard flanges	ANSI Class 600 or 900 BS 4504 Table 100 4" NB Others on request	ANSI Class 900 or 900 BS 4504 Table 160 4" NB Others on request



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