

ASME 1500 / 2500 / 4500 Class

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Applications

Overpressure relief of boiler/
superheater header

End Connections

Per customer specification

Sizes

2-1/2 to 4 inch

Optional Components

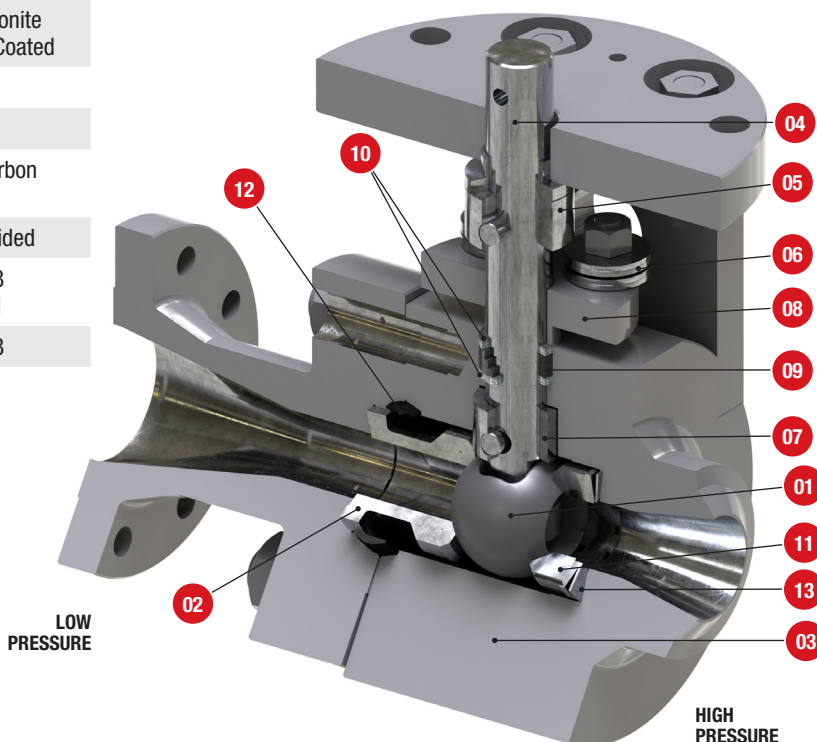
Actuator
Four-way electrically operated
solenoid valve
Control box
Limit switch
Pressure switch
Siphon tube
Air reservoir kit
Isolation Valve

Features

- ASME "V" stamp available
- Live loading ensures zero emissions from stem packing in the most severe temperature shocks
- High nickel alloy base ball and seat with a proprietary coating ensures superior wear resistance
- Quick operating pneumatic actuator decreases wear on sealing surfaces
- Field repairable

Valve Part Reference Number

Item	Description	
01	Ball	Inconel 718/Coated
02	Seat Ring	Inconel 718/Coated
03	Body	A182-F22
04	Stem	A638 GR660
05	Stem Bushing	431SS/Melonite and Xylan Coated
06	Live Loading	Inconel 718
07	Thrust Bearing	431SS/Melonite and Xylan Coated
08	Gland Flange	410SS
09	Packing Assembly	Grafoil
10	Anti-Extrusion Rings	Braided Carbon Filament
11	Pusher Seat	410SS/Nitrided
12	Body Gasket	Inconel 718 Gold Plated
13	Seat Spring	Inconel 718

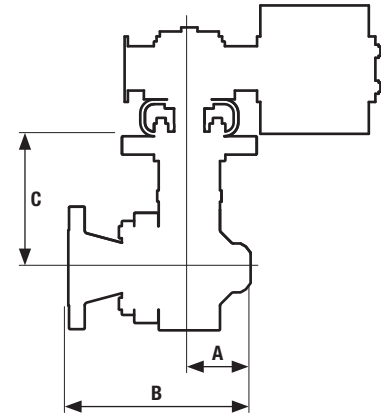


Prevents Excessive Pressure Build-up

High Performance Valve Contributes to Plant Safety

The MOGAS PORV, a pneumatic actuated pressure relieving valve, prevents excessive system pressure accumulation. The set pressure of the PORV is lower than that of the spring loaded safety valve to prevent or reduce the number of lifts of the safety valve, thus extending their life. The PORV is available either non-stamped or with the “V” stamp. The “V” stamped PORV has been flow certified by the National Board of Boiler and Pressure Vessel Inspectors.

The PORV operates as a system. The MOGAS ball valve is normally closed. The pressure switch senses steam pressure and closes an electrical switch when the pressure exceeds a predetermined point. This in turn energizes the solenoid valve, which pressurizes the “to open” cylinder port of the pneumatic actuator, opening the ball valve. When the pressure switch senses that the steam pressure has returned to normal, the electrical switch within the pressure switch opens, de-energizing the solenoid valve and closes the MOGAS ball valve.



Dimensions (in)

Model	Bore ¹	Standard Class	A	B	C	Weight w/o Actuator
PORV-UD	1.60	1500 / 2500	4.35	12.88	7.00	115 lb
	1.60	4500	6.00	17.00	10.58	115 lb
PORV-UK	1.81	1500 / 2500	7.00	15.38	10.67	250 lb
	1.81	4500	6.00	20.00	11.06	250 lb
PORV-UM	2.00	1500 / 2500	5.38	14.55	10.75	200 lb
	2.00	4500	6.50	19.97	11.83	200 lb

Dimensions (mm)

Model	Bore ¹	Standard Class	A	B	C	Weight w/o Actuator
PORV-UD	43	1500 / 2500	110	327	178	52 Kg
	43	4500	152	432	269	52 Kg
PORV-UK	46	1500 / 2500	178	391	271	113 Kg
	46	4500	152	508	281	113 Kg
PORV-UM	50	1500 / 2500	137	370	254	90 Kg
	50	4500	165	507	295	90 Kg

¹For valve bore sizes 1.30 and 2.125 inches, contact factory for dimensions.

²F22 not recommended for prolonged use above 1100°F / 593°C per ASME B16.34.

Temperature vs Pressure — Standard Class Ratings

Class	Mat'l.	Temperature (°F)																				
		-20 to 100	200	300	400	500	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200			
ASME 1500 Maximum Pressure (psig)	F22 ²	3750	3750	3640	3530	3325	3025	2940	2840	2660	2540	2435	2245	1930	1335	875	550	345	205			
	F91	3750	3750	3640	3530	3325	3025	2940	2840	2660	2540	2435	2245	1930	1820	1800	1490	975	600			
ASME 2500 Maximum Pressure (psig)	F22 ²	6250	6250	6070	5880	5540	5040	4905	4730	4430	4230	4060	3745	3220	2230	1455	915	570	345			
	F91	6250	6250	6070	5880	5540	5040	4905	4730	4430	4230	4060	3745	3220	3030	3000	2485	1630	1000			
ASME 4500 Maximum Pressure (psig)	F22 ²	11250	11250	10925	10585	9965	9070	8825	8515	7970	7610	7305	6740	5795	4010	2625	1645	1030	615			
	F91	11250	11250	10925	10585	9965	9070	8825	8515	7970	7610	7305	6740	5795	5450	5400	4475	2930	1800			
Class	Mat'l.	Temperature (°C)																				
		-29 to 38	50	100	150	200	250	300	325	350	375	400	425	450	475	500	538	550	575	600	625	650
ASME 1500 Maximum Pressure (barg)	F22 ²	258.6	258.6	257.6	250.8	243.4	231.8	214.4	206.6	201.1	194.1	183.1	175.1	169	158.2	140.9	92.2	78.2	52.6	34.4	22.3	14.2
	F91	258.6	258.6	257.6	250.8	243.4	231.8	214.4	206.6	201.1	194.1	183.1	175.1	169	158.2	140.9	125.5	124.9	119.7	93.1	63.1	41.1
ASME 2500 Maximum Pressure (barg)	F22 ²	430.9	430.9	429.4	418.2	405.4	386.2	357.1	344.3	335.3	323.2	304.9	291.6	281.8	263.9	235	153.7	130.3	87.7	57.4	37.2	23.6
	F91	430.9	430.9	429.4	418.2	405.4	386.2	357.1	344.3	335.3	323.2	304.9	291.6	281.8	263.9	235	208.9	208	199.5	155.1	105.1	68.6
ASME 4500 Maximum Pressure (barg)	F22 ²	775.7	775.7	773	752.8	729.8	694.8	642.6	619.6	603.3	581.8	548.5	524.7	507	474.8	423	276.6	234.5	157.9	103.3	66.9	42.6
	F91	775.7	775.7	773	752.8	729.8	694.8	642.6	619.6	603.3	581.8	548.5	524.7	507	474.8	423	375.8	374.2	359.1	279.3	189.3	123.4