

ASME 3100 Limited Class

Applications

Boiler drains
Turbine drains
Above and below seat drains
Feedwater drains
Steam drum vents
Superheater vents and drains
Sootblower isolation
Isolation valve for bypass lines
Economizer header drains

End Connections

Socketweld
Buttweld
Flanged¹

Sizes

3/4 to 2-1/2 inch

¹ Available Upon Request

Features

Inconel 718 Ball and Seats

- Mate-lapped for 100% contact
- Ensures absolute shutoff
- Corrosion resistant
- Seats are protected from flow in open / closed position

Spray and Fused Chromium Carbide Coating Advantages

- Withstands thermal shock
- Handles high cycling applications
- High strain to fracture
- Maintains strength of base metal
- Erosion resistant

Rigid Mounting Bracket

- Designed to support actuator in any position

Stem & Packing Arrangement

- Live loading
- Quarter-turn non-rising stem does not deteriorate packing
- Extensive stuffing box
- Dual anti-extrusion rings keep packing in place

Mechanical Precision Stop

- Prevents turning ball 180°
- Eliminates misalignment

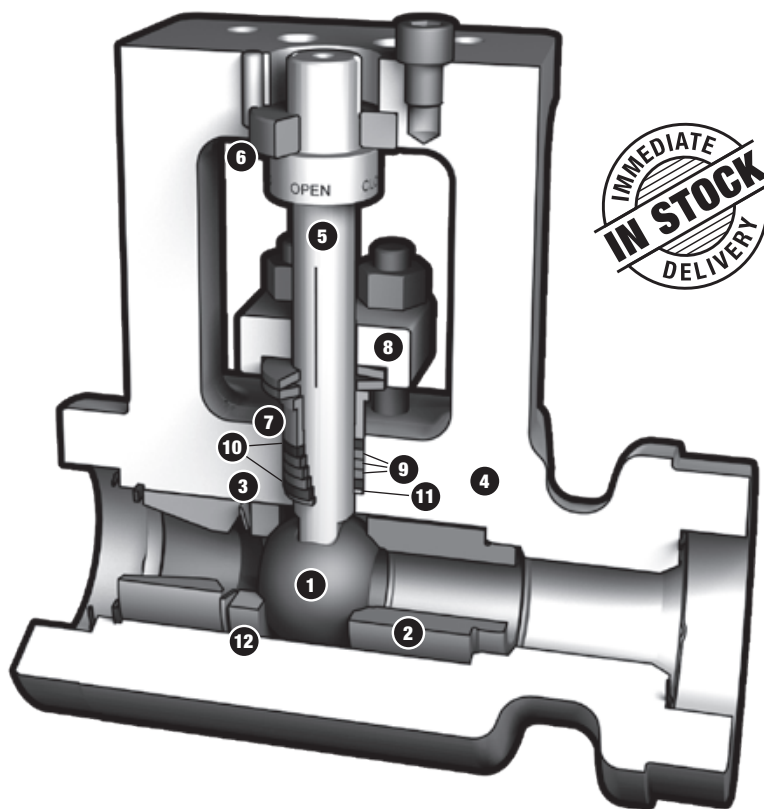
Seat Spring

- Assisted by line pressure, provides a constant mechanical force on ball against seat to maintain seal

Bill of Materials

Item No.	Description	Material
1	Ball	Inconel 718 / Spray & Fused CC Coated
2	Seat	Inconel 718 / Spray & Fused CC Coated
3	Spring	Inconel 718
4	Body	A182 F22 A105 A182 F91
5	Stem	431SS Nitrided
6	Stem Bushing	431SS / Melonite and Xylan Coated
7	Gland Thruster	431SS / Melonite and Xylan Coated
8	Gland Flange	431SS / Nitrided
9	Stem Packing	Expanded Graphite
10	Anti-Extrusion Rings	Braided Graphite w/ Inconel Wires
11	Metal Anti-Extrusion Ring	316SS
12	Pusher Seat	431SS / Nitrided

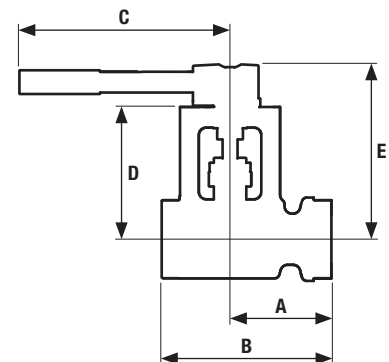
- Integral vented body design allows installation per ASME B31.1 PWHT requirements
- Standard four-year warranty; one-year warranty on high-cycle applications (1 cycle per day, 365 days per year)
- Patented design



Withstands Severe Temperature Shocks

Dimensions (in)								
Model	Bore	SW End	A	B	C	D	E	Weight
RSVP-UC	0.63	3/4	4.12	8.37	11.75	6.00	7.78	24 lb
		1, 1-1/2	2.88	7.13	11.75	6.00	7.78	24 lb
RSVP-UF	1.00	1-1/2, 2	3.42	8.50	21.56	6.63	8.80	43 lb
RSVP-UL	1.30	2, 2-1/2	3.75	9.06	22.38	7.63	10.12	66 lb

Dimensions (mm)								
Model	Bore	SW (DN)	A	B	C	D	E	Weight
RSVP-UC	16	20	105	213	298	152	198	11 Kg
		25, 40	73	181	298	152	198	11 Kg
RSVP-UF	25	40, 50	87	216	548	168	224	20 Kg
RSVP-UL	33	50, 65	95	230	568	194	257	30 Kg



Cv								
Bore (inches)	Pipe Size (inches) / Schedule							
	1 Sch 160	1 Sch XXS	1-1/2 Sch 160	1-1/2 Sch XXS	2 Sch 160	2 Sch XXS	2-1/2 Sch 160	2-1/2 Sch XXS
0.63	24	32	16	18	—	—	—	—
1.00	—	—	55	67	43	46	—	—
1.30	—	—	—	—	103	118	77	89

Temperature vs Pressure — Limited 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
ASME 3100 Maximum Pressure (psig)	F22 ²	7750	7750	7639	7520	7484	7452	7396	7308	7308	7308	7000	6200	5098	3983	2604	1635
	A105 ³	7750	7750	7750	7651	7572	7572	7572	7391	7142	6554	5314	—	—	—	—	—
	F91	7750	7750	7750	7750	7750	7750	7750	7576	7528	7440	7000	6200	5098	5013	5013	4495
Class	Mat'l.	Temperature (°C)															
		-29 to 38	50	100	150	200	250	300	325	350	375	400	425	450	475	500	538
ASME 3100 Maximum Pressure (barg)	F22 ²	534	534	533	527	519	517	514	513	508	504	504	504	488	442	386	275
	A105 ³	534	534	534	527	523	522	522	518	505	487	449	372	—	—	—	—
	F91	534	534	534	534	534	534	534	534	531	522	519	513	510	442	386	346

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

³ A105 not recommended for prolonged use above 800°F / 427°C per ASME B16.34.



Wall of MOGAS RSVP valves for main steam drain have outperformed the original globe valves. Exposed to 950°F at 1875 psi (510°C at 129 bar) while online, it is critical that these valves operate and seal dependably.