

# Metal Seated Ball Valves

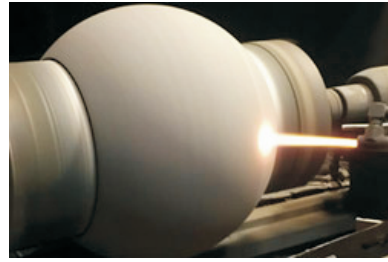
BV8 Series



- ❖ Working pressure from ASME class 600 to 4500
- ❖ Working temperature: -20°F to 1500°F (-28°C to 815°C)
- ❖ Valve nominal size from 1/2 to 4 in.
- ❖ Variety of end connections
- ❖ Lever, gear, pneumatic or electric actuation

## Features

- ❖ Working pressure from ASME class 600 to 4500
- ❖ Working temperature: -20°F to 1500°F (-28°C to 815°C)
- ❖ One-piece forged body
- ❖ Live-loaded Grafoil and Stainless Steel packing
- ❖ High velocity oxygen fueled (HVOF) coating
- ❖ Mate-lapped ball & seats
- ❖ Guide bearing for smooth, quarter-turn opening
- ❖ Variety of end connections
- ❖ Lever, gear, pneumatic or electric actuation



HVOF Coating

## Applicable Codes and Standards

- ❖ ASME TDP-1: Prevention of Water Damage to Steam Turbines
- ❖ ASME B16.34: Valves-Flanged, Threaded and Welding End
- ❖ ASME B31.1: Power Piping Code
- ❖ MSS-SP 61: Pressure Testing of Steel Valves
- ❖ API 598: Valve Inspection and Testing

## Typical applications

- ❖ Feedwater Drains
- ❖ Gauge Glass Drain and Isolation
- ❖ Boiler/Reheat/Superheat Drain, Vents and Root
- ❖ Economizer Stop
- ❖ Flash Tank
- ❖ HP Feedwater System
- ❖ IP Heater Applications
- ❖ Blowdown
- ❖ Condensate Drain
- ❖ Mud Drum Drain
- ❖ Steam Trap Isolation
- ❖ Sootblower System
- ❖ Inert Steam System
- ❖ HP Turbine Steam Supply & Extraction

## Technical Data

SIZE	ANSI	BORE	Cv	
	LIMITED CLASS		SCHEDULE- 160	SCHEDULE- XXS
0.5"	1500	0.56"	5.5	4.5
0.75"	1500	0.56"	19	13
1"	1500	0.56"	15	32
1"	1500	0.76"	55	35
1.5"	1500	0.76"	21	27
1.5"	1500	1.12"	86	194
2"	1500	1.12"	40	49
2"	1500	1.4"	132	202
2.5"	1500	1.4"	63	89
0.5"	2500	0.56"	5.5	4.5
0.75"	2500	0.56"	19	13
1"	2500	0.56"	15	32
1"	2500	0.76"	55	35
1.5"	2500	0.76"	21	27
1.5"	2500	1.12"	86	194
2"	2500	1.12"	40	49
2"	2500	1.4"	132	202
2.5"	2500	1.4"	63	89
0.5"	4500	0.65"	—	6
0.75"	4500	0.65"	—	7
1"	4500	0.65"	—	56
1.5"	4500	0.65"	—	15
2"	4500	0.65"	—	13
2"	4500	1.25"	—	103
2.5"	4500	1.25"	—	72

## Pressure Temperature Ratings

### A182-F22 (2 1/4 Cr.- 1 Mo.)

Ansi Rating	Temperature, °F																	
	-20 to 100	200	300	400	500	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200
	psig																	
900	2250	2150	2030	1945	1920	1815	1765	1705	1595	1525	1460	1350	1130	780	525	330	205	125
1500	5625	5369	5076	4860	4798	4536	4414	4258	3988	3808	3654	3370	2830	1954	1310	824	514	310
2500	7750	7551	7226	6956	6721	6249	6081	5866	5492	5244	5034	4644	3901	2692	1806	1134	708	426
4500	11250	11250	10925	10585	9965	9070	8825	8515	7970	7610	7305	6740	5665	3910	2625	1645	1030	615

### A105 (Carbon Steel)\*\*

Ansi Rating	Temperature, °F													
	-20 to 100	200	300	400	500	600	650	700	750	800	850	900	950	1000
	psig													
900	2250	2025	1970	1900	1795	1640	1610	1600	1510	1235	805	515	310	155
1500	5625	5063	4923	4753	4491	4104	4028	3996	3780	3088	2008	1288	774	388
2500	7750	6974	6783	6548	6187	5655	5549	5505	5208	4252	2764	1772	1066	532
4500	11250	10120	9845	9505	8980	8210	8055	7990	7560	6170	4010	2570	1545	770

\*\* per ASME/ANSI B16.34  
Permissible, but not  
recommended for  
prolonged usage  
above 800 °F.

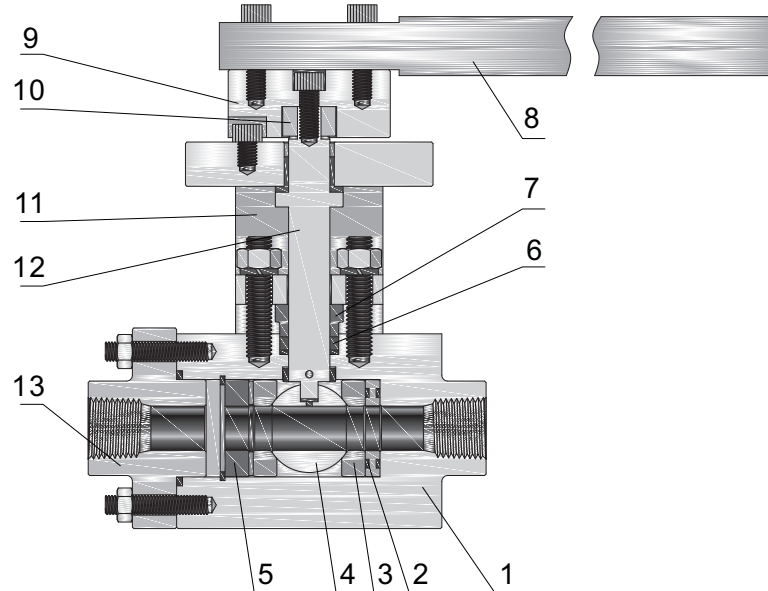
### A182-F316 (316 Stainless Steel)

Ansi Rating	Temperature, °F																	
	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500
	psig																	
900	1330	1305	1280	1265	1255	1245	1160	1050	1030	915	710	555	440	350	290	225	175	125
1500	3330	3258	3204	3168	3133	3114	2898	2624	2579	2290	1774	1390	1106	874	720	568	436	310
2500	4588	4489	4415	4365	4316	4291	3993	3614	3552	3154	2444	1914	1524	1204	992	780	602	428
4500	6660	6515	6410	6335	6265	6230	5795	5245	5155	4575	3550	2775	2210	1750	1440	1130	875	620

### A182-F91 (9Cr-1 Mo.)

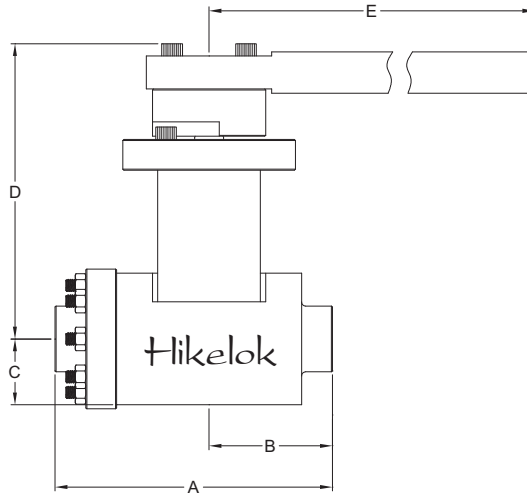
Ansi Rating	Temperature, °F																	
	-20 to 100	200	300	400	500	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200
	psig																	
900	2250	2250	2185	2115	1995	1815	1765	1705	1595	1525	1460	1350	1109	1090	1080	965	718	448
1500	5625	5625	5463	5293	4986	4536	4414	4258	3988	3808	2904	3370	2898	2728	2700	2416	1800	1105
2500	7750	7750	7527	7292	6868	6249	6081	5866	5492	5244	4334	4644	3993	3756	3720	3330	2480	1523
4500	11250	11250	10925	10585	9965	9070	8825	8515	7970	7610	7305	6740	5795	5450	5400	4835	3600	2211

## Standard Materials of Construction



Item	Description	Materials
1	Body	316 S.S.
2	Packing	Graphite
3	Seat	316S.S. HVOF-CC Coating
4	Ball	316S.S. HVOF-CC Coating
5	Adjustment set	316 S.S.
6	Stem packing	Graphite
7	Packing sets	316 S.S.
8	Handle	304 S.S.
9	Limiting block	316 S.S.
10	Anti-flight ring	316SS Spray PTFE Coating
11	Support plate	304 S.S.
12	Stem	316 S.S.
13	Connector	316 S.S.

**Dimensions**



**Class 600/900/1500/2500-Socket welding/butt welding**

Termination in. ( mm )			Orifice Size in. ( mm )	Dimension, in. (mm)				
				A	B	C	D	E
3/4 (20)	1 (25)	1-1/2 (40)	0.63 (16)	8.5 (216)	4.25 (108)	6.85 (174)	8.9 (226)	15.75 (400)
1-1/2 (40)	2 (50)		0.984 (25)	8.5 (216)	4.25 (108)	6.85 (174)	8.9 (226)	15.75 (400)
2 (50)	2-1/2 (65)		1.3 (33)	10.39 (264)	5.2 (132)	7.87 (200)	10.31 (262)	20.78 (528)
2 (50)	2-1/2 (65)		1.5 (38)	10.39 (264)	5.2 (132)	7.87 (200)	10.31 (262)	20.78 (528)

**Class 4500-Socket welding/butt welding**

Termination in. ( mm )			Orifice Size in. ( mm )	Dimension, in. (mm)				
				A	B	C	D	E
3/4 (20)	1 (25)	1-1/2 (40)	0.63 (16)	10.39 (264)	5.2 (132)	7.87 (200)	10.31 (262)	17.72 (450)
1-1/2 (40)	2 (50)		0.984 (25)	10.39 (264)	5.2 (132)	7.87 (200)	10.31 (262)	17.72 (450)

订购信息

BV8 — PSW8 — PBW8 — 15 — CL1500 — G — 316

Series	Inlet Type	Inlet Size	Outlet Type	Outlet Size	Orifice Size	ASME Class	Type of Drive	Body Material	
BV8	MSW Metric Tube Socket Weld	8 1/2 in.	Same as inlet type and inlet size	15 0.591 in. (15.0mm)	CL600	Class600	Lever	304 304 S.S.	
	FSW Fractional Tube Socket Weld	12 3/4 in.	If outlet and inlet are the same, eliminate the outlet designator	20 0.787 in. (20.0mm)	CL900	Class900	G Geared	304L 304L S.S.	
	MBW Metric Tube Butt Weld	16 1 in.		25 0.984 in. (25.0mm)	CL1500	Class1500	P Pneumatic	316 316 S.S.	
	FBW Fractional Tube Butt Weld	18 18 mm		32 1.26 in. (32.0mm)	CL2500	Class2500	E Electric	316L 316L S.S.	
	PSW Pipe Socket Weld	20 20 mm		40 1.575 in. (40.0mm)	CL4500	Class4500			
	PBW Pipe Butt Weld	24 1 1/2 in. or 24 mm			50 1.969 in. (50.0mm)				
		32 2 in. or 32 mm			65 2.559 in. (65.0mm)				
		48 3 in. or 48 mm							
		64 4 in.							