



INVESTMENT CAST BALL VALVES

Technical Data	
Sizes	1/2 - 2"
Pressure Classes	ASME / ANSI Class 150 - 600
Materials of Construction	Carbon steel (A216 WCB) – standard Alloy steel (A217 WC9) – standard Stainless steel (A351 CF8M) – standard Duplex steel Exotic alloys Other materials available upon request
In Compliance	ASME B16.34 PED Nuclear ASME III Class 1, 2 and 3 Nuclear Safety Related - 10CFR50 Appendix B SIL
End Connections	Socketweld - standard Buttweld - standard Others available upon request
Shutoff	Absolute zero-leakage shutoff

BILL OF MATERIALS

Item	Description	A105 Carbon Steel Body Trim	316 Stainless Steel Body Trim	F22 (2 1/4 Cr-1 Mo.) Alloy Steel	Qty
1	Ball	A182-F316 / HVOF RiTech® 31	A182-F316 / HVOF RiTech® 31	410S.S. / HVOF RiTech® 31	1
2	Upstream Seat	A182-F316 / H.F.	A182-F316 / H.F.	A182-F316/H.F.	1
3	Belleville® Spring	Inconel 718	Inconel 718	Inconel 718	1
4	Stem	316 S.S.	316 S.S.	316 S.S.	1
5	Gland	A182-F22 / H.F.	A182-F22 / H.F.	A182-F22 / H.F.	1
6	Gland Load Spring	302 S.S.	302 S.S.	302 S.S.	24
7	Gland Nut	A194 Gr. 8M	A194 Gr. 8M	A194 Gr. 8M	4
8	Gland Stud	A193 Gr. B8M	A193 Gr. B8M	A193 Gr. B8M	4
9	End Cap / Integral Seat	A105 / HVOF RiTech® 31	A182-F316/HVOF RiTech® 31	A182-F22 / HVOF RiTech® 31	1
10	Body	A216-WCB	A351 GR CF8M	A217-WC9	1
11	Body Gasket	17-4	17-4	17-4	1
12	Gland Packing	316 S.S. / Grafoil®	316 S.S./Grafoil®	316 S.S. / Grafoil®	1
13	Key	Steel	Steel	Steel	2
15	Drive Sleeve	4130	4130	4130	1
16	Handle	Steel	Steel	Steel	1
17	Body Stud	A193 Gr. B8M	A193 Gr. B8M	A193 Gr. B8M	4**
18	Body Nut	A194 Gr. 8M	A194 Gr. 8M	A194 Gr. 8M	4**

** Quantity is 6 for 1-1/8" Ball
Consult factory for other material options. Also available with NPT ENDS - consult factory.

BUTT WELD ENDS

Size	A	B	C	D	E	G	J	Stem Diameter	Approximate Weight	Cv
1/2	6.31	4.59	1.375	3.75	7.12	0.63	0.84	.50	9 lb	42
3/4	6.31	4.59	1.375	3.75	7.12	0.63	1.05	.50	9 lb	30
1	6.31	4.59	1.375	4.20	7.12	0.63	1.315	.50	10 lb	20
1	7.75	5.66	1.875	4.06	15.00	1.06	1.315	.75	21lb	130
1 1/2	7.75	5.66	1.875	5.38	15.00	1.06	1.90	.75	24 lb	55
2	13.75	5.66	1.875	5.38	15.00	1.06	1.90	.75	27 lb	50

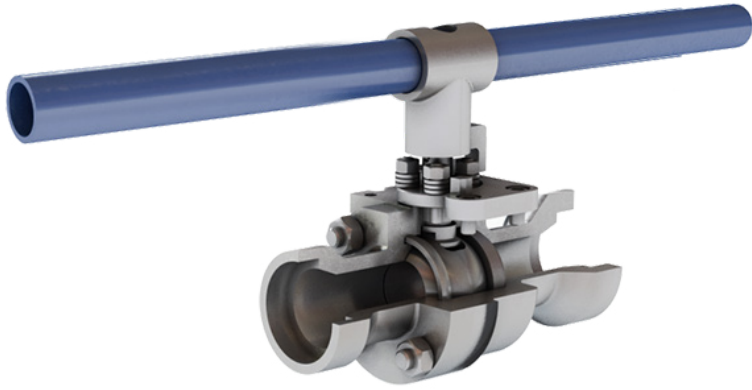
SOCKET WELD ENDS

Size	A	B	C	D	E	F	G	H	J	Stem Diameter	Approximate Weight	Cv
1/2	6.31	4.59	1.375	3.75	0.855	7.12	0.63	.38	1.33	.50	9 lb	42
3/4	6.31	4.59	1.375	4.89	1.065	7.12	0.63	.50	1.75	.50	10 lb	42
1	6.25	4.59	1.375	4.89	1.33	7.12	0.63	.50	1.75	.50	10 lb	20
1	7.75	5.66	1.875	4.06	1.33	15.00	1.06	.50	1.90	.75	21 lb	130
1 1/2	7.75	5.66	1.875	5.38	1.93	15.00	1.06	.75	2.50	.75	24 lb	60
1 1/2	9.50	6.31	2.25	4.60	1.93	18.00*	1.50	.75	2.92	.75	30 lb	270
2	8.00	5.66	1.875	5.79	2.40	15.00	1.06	.75	3.00	.75	35 lb	50
2	9.50	6.31	2.25	4.60	2.40	18.00*	1.50	.75	2.92	.75	35 lb	135
2	11.50	7.25	2.88	5.00	2.40	18.00*	2.13	.75	3.31	1	80 lb	570

* Symmetric about stem centerline
** Cv is based on actual bore, G

AVAILABLE BODY OPTIONS

- Bi-directional sealing
- Titanium
- Inconel
- Monel
- Nickel
- Duplex Stainless Steel
- 347 Stainless Steel
- 5 Chrome
- 9 Chrome
- WCB
- Hastelloy



FEATURES

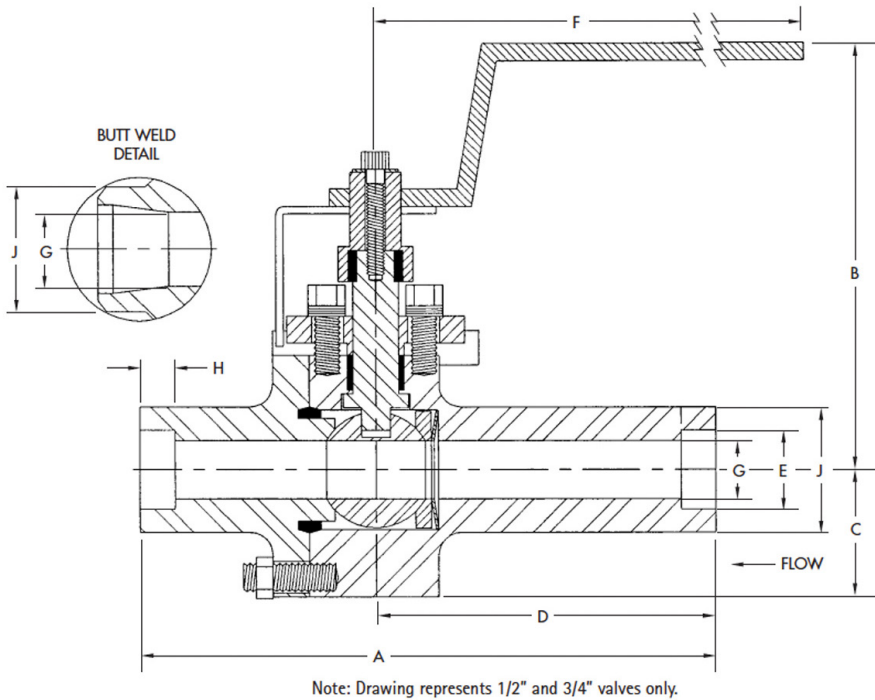
Integral metal seat. With our proprietary HVOF RiTech® coating technology, the integral seat in ValvTechnologies' valves is resistant to the attack of abrasive magnetite and ferrous oxides that may be seen in the steam flow.

Body seal ring. ValvTechnologies employs a field proven seal ring technology to ensure sealing under all operating conditions, up to 1400°F. The body seal ring is loaded at a pressure higher than 20,000 psi. In addition, valves sized 3" and above contain a secondary Grafoil® seal to further guarantee reliability.

Patented coating process. The sealing surfaces are overlaid with tungsten or chromium carbide using our exclusive HVOF RiTech® process. These surfaces have a hardness of 68 – 72 Rc to allow long periods of operation in the most severe conditions.

Live-loaded gland area. The V Series' sealing design features a four stud, live-loaded assembly designed for heavy industrial applications. The sealing material is high purity Grafoil® surrounded by stainless steel wire mesh anti-extrusion rings. The six Belleville® springs (per stud) provide constant load pressure through extreme thermal shocks and prevent wear leaks in high-cycle service.

Blow-out proof stem. The design utilizes a one piece, hard-faced, blow-out proof stem that is inserted through the inside of the body cavity eliminating the possibility of blow-out through the gland area.



PRESSURE/TEMPERATURE RATINGS

