

# AVCO

*Alloy Valves and Control*

## BALL VALVES 1500 SERIES



### Size

1/4" - 4" (Full Port)

### End Connections

NPT  
Butt Weld  
Socket Weld  
Flanged (150#, 300#, 600#)

### Valve Materials

316 Stainless Steel  
Hastelloy C  
Monel 400

### Ball and Stem Materials

316 Stainless Steel  
Hastelloy C  
Monel 400

### Seat Materials

Teflon (PTFE)  
Carbon Filled Teflon  
Kel-F (PCTFE)

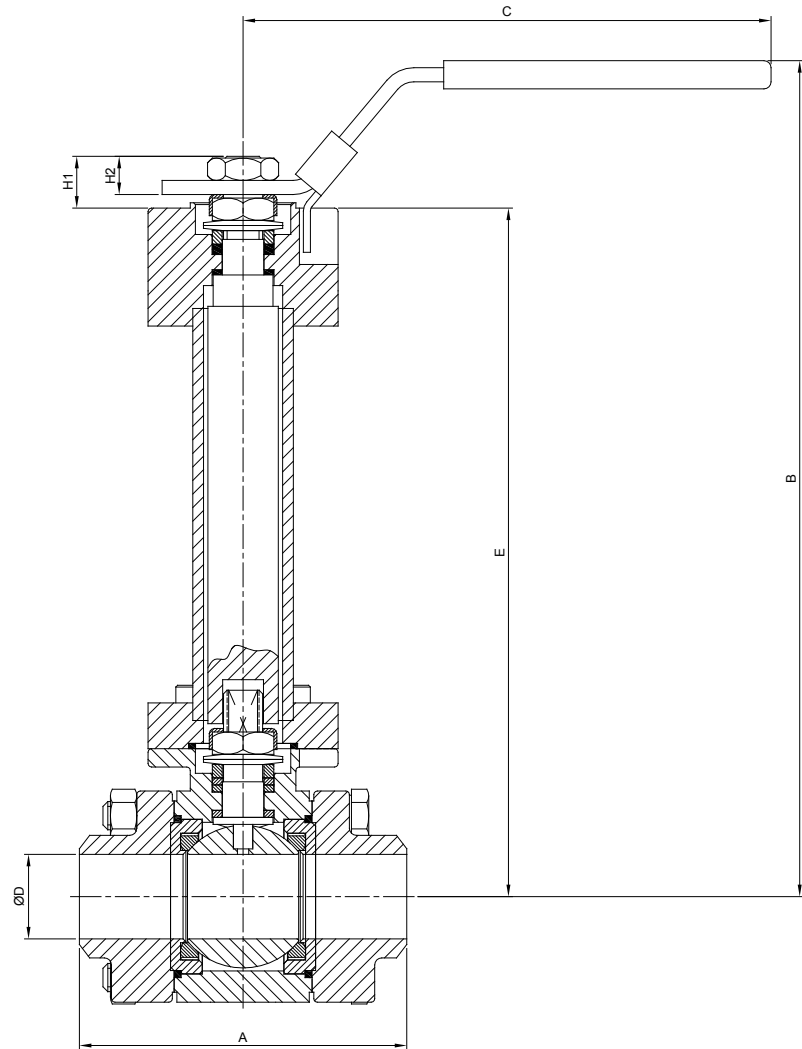
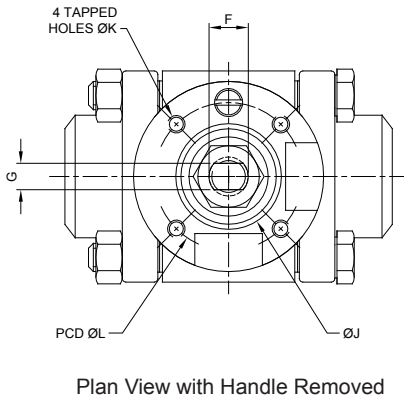
### Service Applications

Aerospace  
Cryogenic Service  
Food Processing  
Liquid H<sub>2</sub>  
Liquid N<sub>2</sub>  
Petro-Chemical

### Applicable Standards

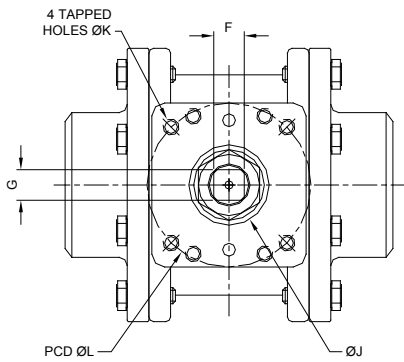
ASME B16.34  
API 598  
API 607 4th Edition

1/4" THRU 2"

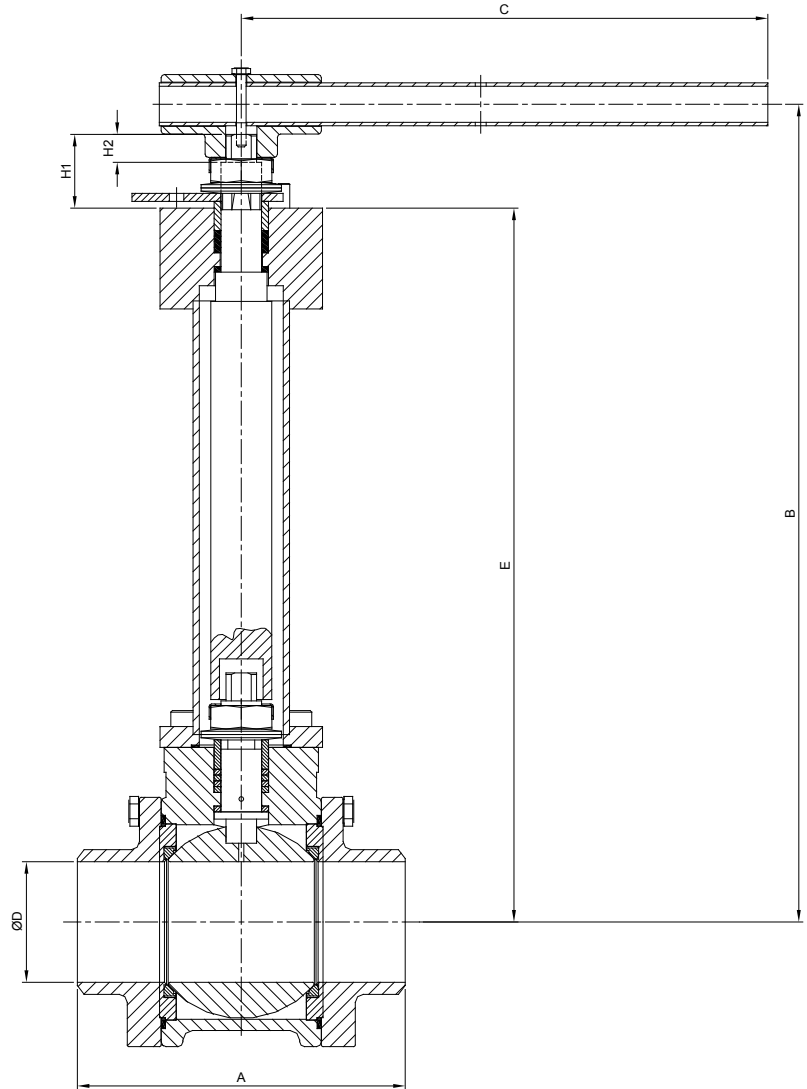


SIZE	A (in.)	B (in.)	C (in.)	D (in.)	E (in.)	F (in.)	G (in.)	H1 (in.)	H2 (in.)	J (in.)	K	L (in.)	ISO 5211	Weight (lbs)	TORQUE (in-lbs)	CV
1/4"	2.61	9.11	4.53	0.36	7.85	0.38	0.22	0.52	0.29	0.98	M5	1.42	F03	3	65	5
3/8"	2.61	9.11	4.53	0.49	7.85	0.38	0.22	0.52	0.29	0.98	M5	1.42	F03	3	65	10
1/2"	2.97	9.11	4.53	0.59	7.85	0.38	0.22	0.52	0.29	0.98	M5	1.42	F03	3	65	23
3/4"	3.17	9.19	4.53	0.75	7.93	0.38	0.22	0.52	0.29	0.98	M5	1.42	F04	3	80	33
1"	3.67	9.41	5.91	0.95	7.70	0.44	0.30	0.65	0.43	1.18	M5	1.65	F04	7	120	46
1 1/4"	4.37	9.57	5.91	1.18	7.86	0.44	0.30	0.67	0.47	1.18	M5	1.65	F04	9	235	64
1 1/2"	4.72	11.38	6.85	1.50	9.35	0.57	0.34	1.14	0.60	1.38	M6	1.97	F05	12	290	132
2"	5.53	11.73	6.85	1.97	9.70	0.57	0.34	1.14	0.60	1.38	M6	1.97	F05	17	450	262

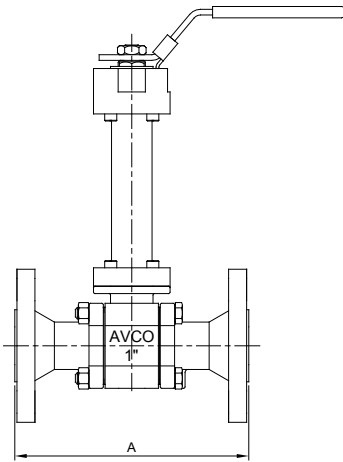
2 1/2" THRU 4"



Plan View with Handle Removed



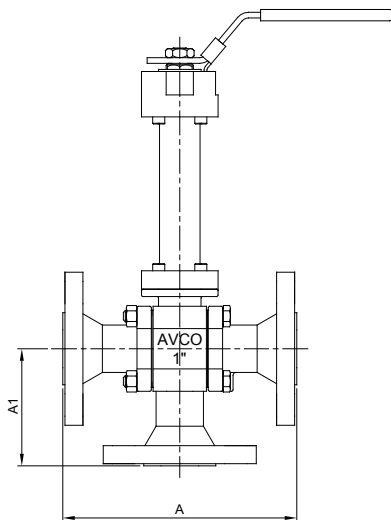
SIZE	A (in.)	B (in.)	C (in.)	D (in.)	E (in.)	F (in.)	G (in.)	H1 (in.)	H2 (in.)	J (in.)	K	L (in.)	ISO 5211	Weight (lbs)	TORQUE (in-lbs)	CV
2 1/2"	8.02	20.12	13.74	2.52	17.54	0.75	0.75	1.82	0.69	1.97	M10	4.02	F10	58	1200	427
3"	8.02	20.12	13.74	2.95	17.54	0.75	0.75	1.82	0.69	1.97	M10	4.02	F10	58	1200	579
4"	9.46	20.65	13.74	3.78	18.07	0.75	0.75	1.82	0.69	1.97	M10	4.02	F10	74	2000	896



### Standard Flanged Ends (150#, 300#, 600#)

SIZE	A (in.)		
	150#	300#	600#
1/2"	5.50	5.50	6.50
3/4"	6.00	6.00	7.50
1"	6.50	6.50	8.50
1 1/4"	7.00	7.00	9.00
1 1/2"	7.50	7.50	9.50
2"	8.50	8.50	11.50
2 1/2"	9.50	9.50	13.00
3"	11.12	11.12	14.00
4"	12.00	12.00	17.00

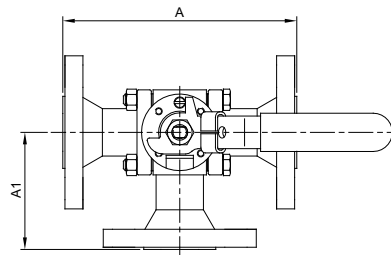
See tables on pages 2 & 3 for all other dimensions



### 3 Way Bottom Entry with Flanged Ends (150#, 300#, 600#)

SIZE	A (in.)			A1 (in.)		
	150#	300#	600#	150#	300#	600#
1/2"	5.50	5.50	6.50	2.75	2.75	3.25
3/4"	6.00	6.00	7.50	3.00	3.00	3.75
1"	6.50	6.50	8.50	3.25	3.25	4.25
1 1/4"	7.00	7.00	9.00	3.50	3.50	4.50
1 1/2"	7.50	7.50	9.50	3.75	3.75	4.75
2"	8.50	8.50	11.50	4.25	4.25	5.75
2 1/2"	9.50	9.50	13.00	4.75	4.75	6.50
3"	11.12	11.12	14.00	5.56	5.56	7.00
4"	12.00	12.00	17.00	6.00	6.00	8.50

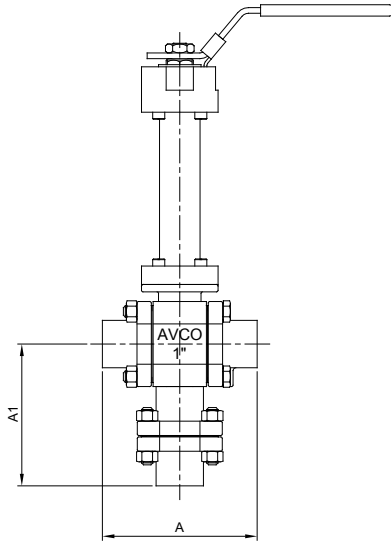
See tables on pages 2 & 3 for all other dimensions



### 3 Way Side Entry with Flanged Ends (150#, 300#, 600#)

SIZE	A (in.)			A1 (in.)		
	150#	300#	600#	150#	300#	600#
1/2"	5.50	5.50	6.50	2.75	2.75	3.25
3/4"	6.00	6.00	7.50	3.00	3.00	3.75
1"	6.50	6.50	8.50	3.25	3.25	4.25
1 1/4"	7.00	7.00	9.00	3.50	3.50	4.50
1 1/2"	7.50	7.50	9.50	3.75	3.75	4.75
2"	8.50	8.50	11.50	4.25	4.25	5.75
2 1/2"	9.50	9.50	13.00	4.75	4.75	6.50
3"	11.12	11.12	14.00	5.56	5.56	7.00
4"	12.00	12.00	17.00	6.00	6.00	8.50

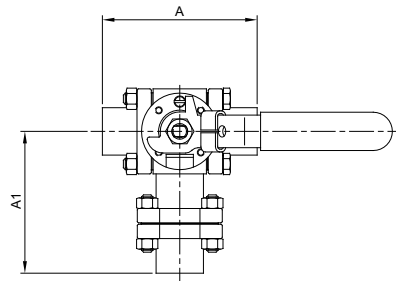
See tables on pages 2 & 3 for all other dimensions



### 3 Way Bottom Entry with BW, NPT or SW Ends

SIZE	A (in.)	A1 (in.)
1/4"	2.59	2.71
3/8"	2.59	2.71
1/2"	2.95	2.88
3/4"	3.16	3.04
1"	3.66	3.30
1 1/4"	4.35	3.91
1 1/2"	4.72	4.23
2"	5.51	4.83

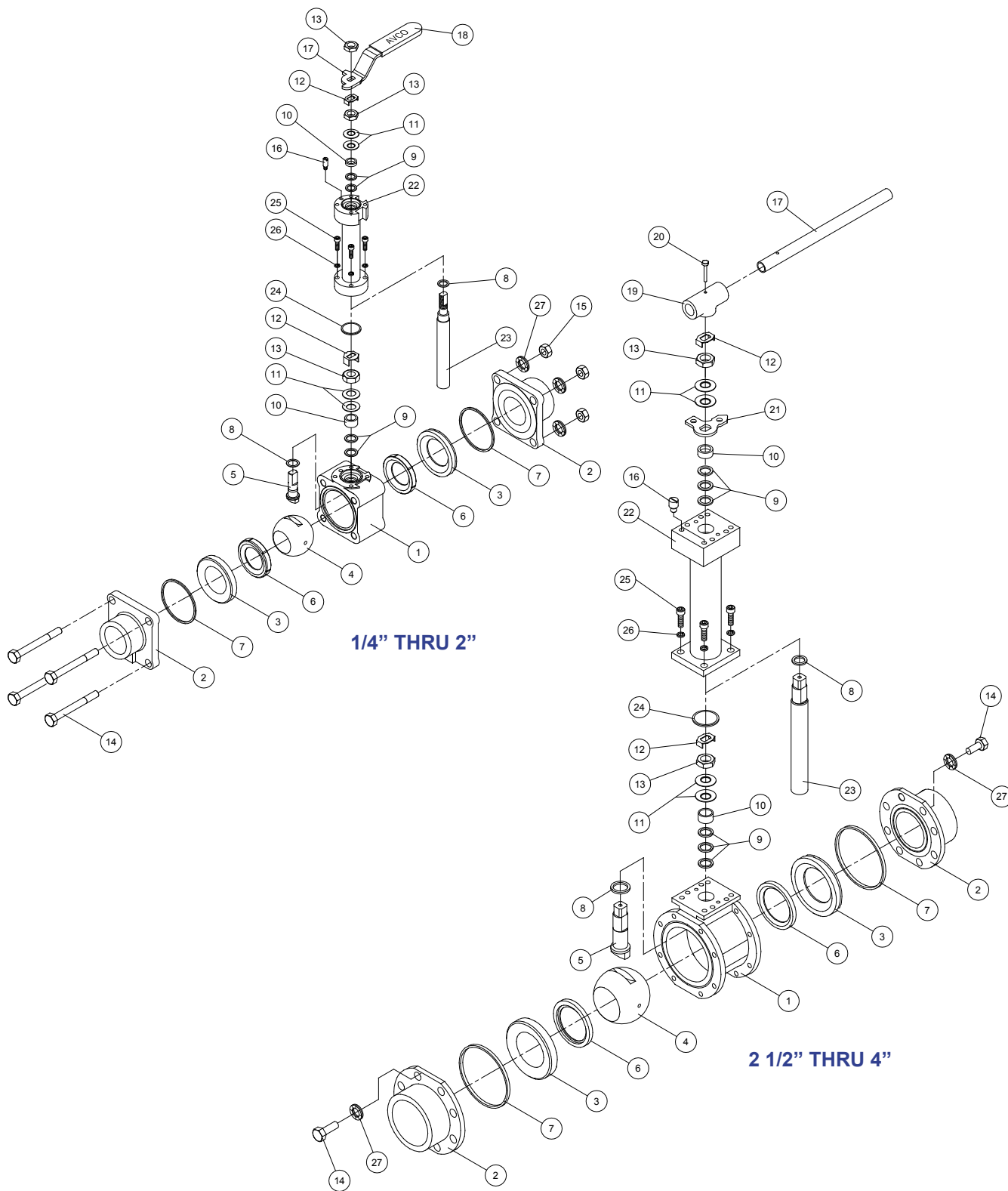
See tables on pages 2 & 3 for all other dimensions



### 3 Way Side Entry with BW, NPT or SW Ends

SIZE	A (in.)	A1 (in.)
1/4"	2.59	2.57
3/8"	2.59	2.57
1/2"	2.95	2.74
3/4"	3.16	2.93
1"	3.66	3.19
1 1/4"	4.35	3.70
1 1/2"	4.72	4.09
2"	5.51	4.71

See tables on pages 2 & 3 for all other dimensions



### Alloy Valves and Control

Item	Parts	Material
1	Body	316 Stainless Steel/Hastelloy C/Monel 400
2	End Cap	316 Stainless Steel/Hastelloy C/Monel 400
3	Retainer*	316 Stainless Steel/Hastelloy C/Monel 400
4	Ball	316 Stainless Steel/Hastelloy C/Monel 400
5	Stem	316 Stainless Steel/Hastelloy C/Monel 400
6	Ball Seat	25% Carbon PTFE/PCTFE/PTFE
7	Body Seal	25% Carbon PTFE/PTFE/Graphoil
8	Thrust Washer	25% Carbon PTFE/Graphoil
9	Packing	25% Carbon PTFE/Graphoil
10	Gland Ring	304 Stainless Steel
11	Disc Spring	304 Stainless Steel
12	Lock Tab	304 Stainless Steel
13	Stem Nut	304 Stainless Steel
14	Body Bolt	304 Stainless Steel
15	Body Nut	304 Stainless Steel
16	Stop Pin	304 Stainless Steel
17	Handle	304 Stainless Steel
18	Handle Sleeve	Vinyl
19	Wrench Block	304 Stainless Steel
20	Handle Bolt	304 Stainless Steel
21	Lock Pad	304 Stainless Steel
22	Bonnet Extension	316 Stainless Steel/Hastelloy C/Monel 400
23	Stem Extension	316 Stainless Steel/Hastelloy C/Monel 400
24	Bonnet Gasket	Flexitallic Spiral Wound Gasket (316 SS w/ Flexicarb)
25	Bonnet Bolt	304 Stainless Steel
26	Bonnet Washer	304 Stainless Steel
27	Disc-Lock Washer	316 Stainless Steel

\* This item is integral with the end cap (item 2) on sizes 1/4" thru 3/4"

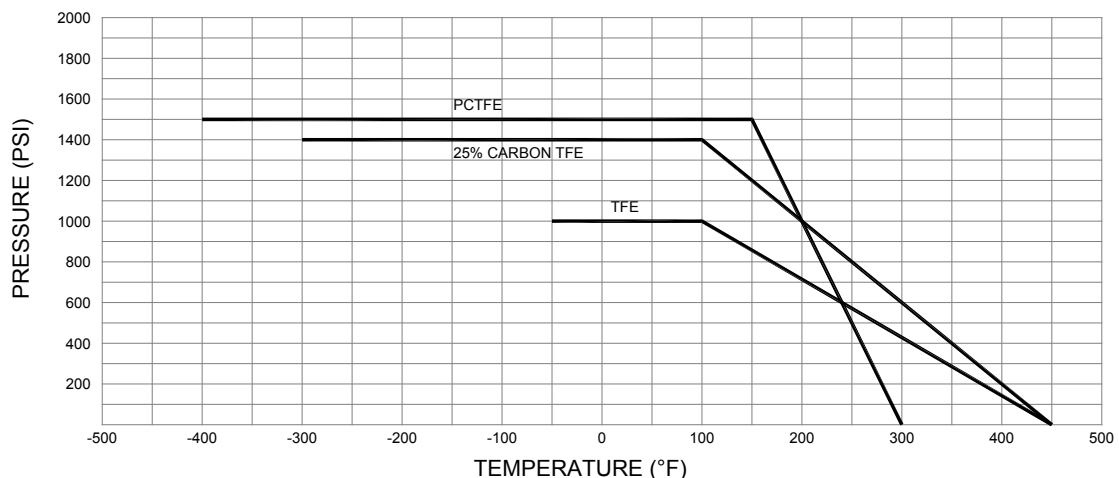
### Features

- Extended Bonnet
- Optional Extended Bonnet Lengths
- Optional Shortened Bonnet Lengths
- Encapsulated Seats, Seals & Body Bolts
- Spring Loaded Stem Packing
- Bottom Entry Stem to Prevent Blow-Out
- Vent Hole on Pressure Side of Ball
- ISO 5211 Mounting Pad
- Locking Handle
- Inter-Changeable End Connections

### Notes

Please contact AVCO if you require customized versions of our valves. CAD drawings are available for most variations, including actuators etc.

### Pressure/Temperature Rating





### Electric Actuator

120 VAC  
12/24 VDC  
NEMA 4/7  
Positioners 4-20 MA  
Reversing  
Telemetry  
Battery Back-up  
Spring Return



### Pneumatic Actuator

Double Acting  
Spring Return  
Solenoid Valves  
Limit Switches  
Positioners 3-15 PSI  
Positioners 4-20 MA  
Intelligent Positioner  
Dec clutchable Manual Override



### Manual Valves

Oval Handle  
Spring Return  
Fusible Link  
Lock Device  
Gear Operators

## HOW TO ORDER

1"	15	3	3	T	T	SE	BAB90
Size	Series	Body & End Material	Ball & Stem Material	Seat Material	Seal Material	End Style	Options
1/4"	1500 Series 3 Piece Cryogenic Full Port Ball Valve	3 - 316 SS	3 - 316 SS	T - Teflon (PTFE)	T - Teflon (PTFE)	SE - NPT	BAHL - Hardened Ball
3/8"		4 - Monel 400	4 - Monel 400	C - 25% Carbon PTFE	C - 25% Carbon PTFE	SW - Socket Weld	BAB90 - 90° Bottom Diverter
1/2"		6 - Hastelloy C	6 - Hastelloy C	K - Kel-F (PCTFE)	G - Graphoil	BW - Butt Weld	BAB180 - 180° Bottom Diverter
3/4"						150 - 150# Flange	BAS90 - 90° Side Entry Diverter
1"						300 - 300# Flange	BAV15 - 15° Vee Port
1 1/4"						600 - 600# Flange	BAV30 - 30° Vee Port
1 1/2"							BAV45 - 45° Vee Port
2"							BAV60 - 60° Vee Port
2 1/2"							EBxx - Custom Bonnet Length
3"						FS - Fire Safe	
4"	O2CB - O <sub>2</sub> Cleaned & Bagged						
Variations of the above or special ends can be supplied upon request							

Copyright © 2009 Alloy Valves and Control Inc. All rights reserved. No part of this brochure may be used or reproduced in any manner whatsoever without written permission from AVCO

This brochure is general in nature and we reserve the right to alter dimensions, materials or make design improvements.