

AVCO

Alloy Valves and Control

BALL VALVES 1700 SERIES



Size

1/4" - 4" (Full Port)
2000 WOG

End Connections

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

Valve Materials

316 Stainless Steel
Carbon Steel
Hastelloy C
Monel

Ball and Stem Materials

316 Stainless Steel
Hastelloy B & C
Monel 400
Alloy 20

Seat Materials

Teflon (PTFE)
25% Carbon Filled Teflon
15% Glass Filled Teflon
Kel-F (PCTFE)
PEEK
UHMWPE
Metals

Service Applications

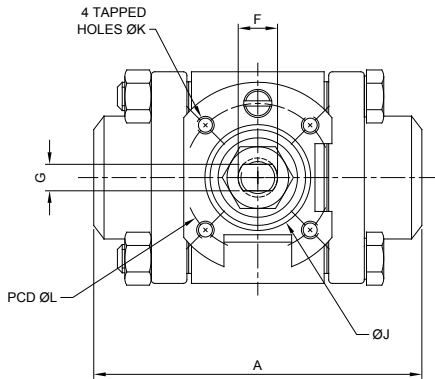
Chemical
Dry/Liquid Chlorine
Food Processing
Hydraulic
Oxygen
Steam
Thermal Fluids
Vacuum
Water/Oil/Gas

Applicable Standards

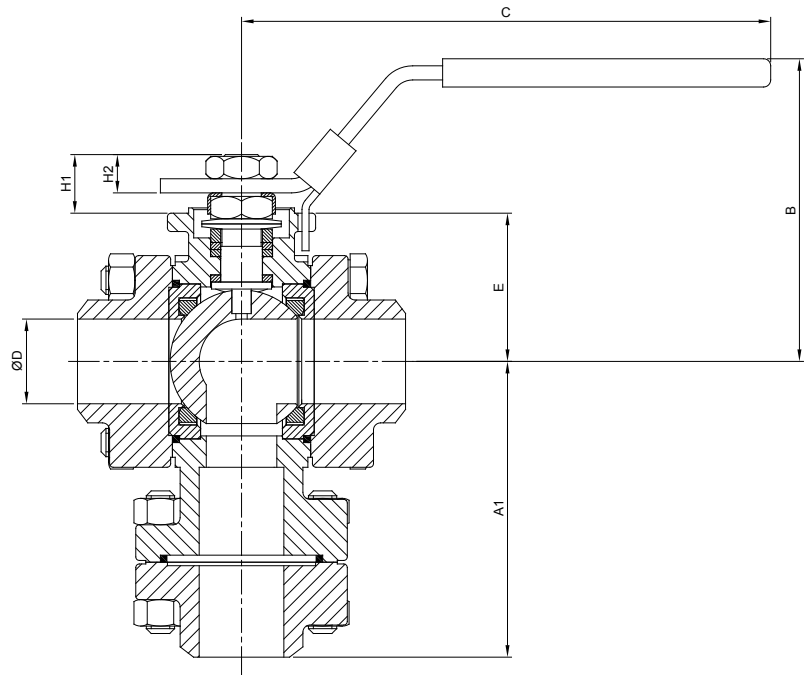
ASME B16.34
API 598

Alloy Valves and Control

1/4" THRU 2" (NPT, BW, SW)

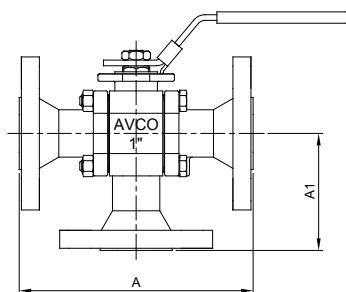


Plan View with Handle Removed



SIZE	A (in.)	A1 (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)
1/4"	2.61	2.72	2.48	4.53	0.36	1.24	0.38	0.22	0.52	0.28	0.98	M5	1.42	F03	2	65
3/8"	2.61	2.72	2.48	4.53	0.49	1.24	0.38	0.22	0.52	0.28	0.98	M5	1.42	F03	2	65
1/2"	2.97	2.90	2.48	4.53	0.59	1.24	0.38	0.22	0.52	0.28	0.98	M5	1.42	F03	2	65
3/4"	3.17	3.05	2.56	4.53	0.75	1.32	0.38	0.22	0.52	0.29	0.98	M5	1.42	F04	2.5	80
1"	3.67	3.31	3.38	5.91	0.95	1.65	0.44	0.30	0.65	0.43	1.18	M5	1.65	F04	4	120
1 1/4"	4.37	3.93	3.50	5.91	1.18	1.82	0.44	0.30	0.67	0.47	1.18	M5	1.65	F04	6	235
1 1/2"	4.72	4.23	3.92	6.85	1.50	1.90	0.57	0.34	1.14	0.60	1.38	M6	1.97	F05	8	290
2"	5.53	4.85	4.25	6.85	1.97	2.22	0.57	0.34	1.14	0.60	1.38	M6	1.97	F05	14	450

1/2" THRU 2" (Standard 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

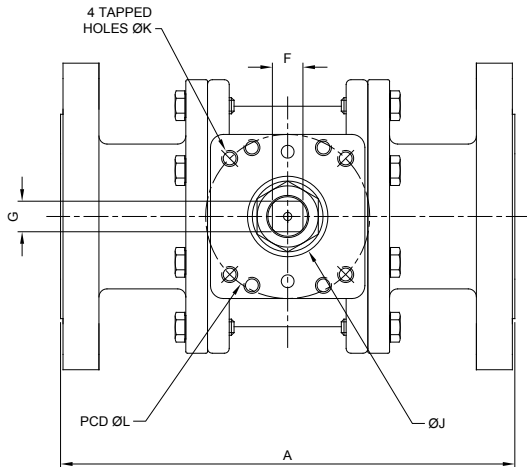
See main table on this page for all other dimensions

Note

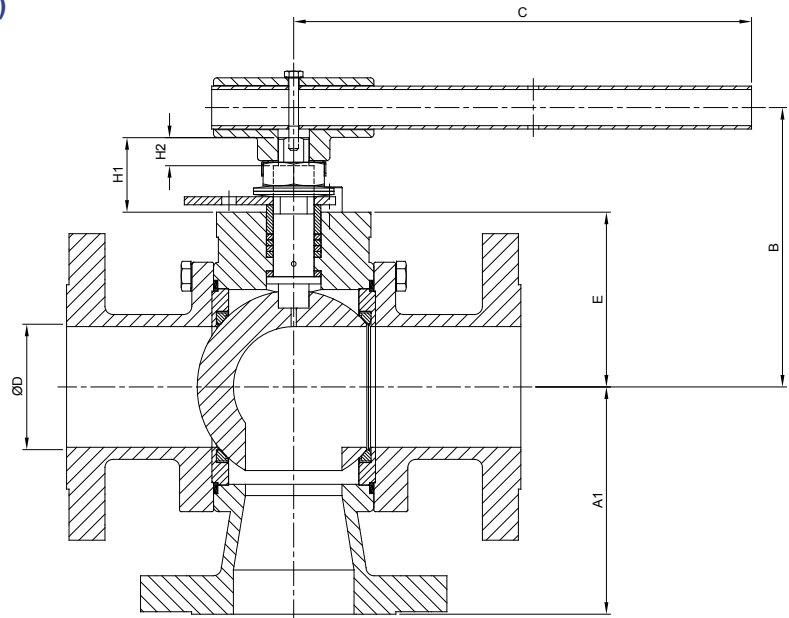
Please contact AVCO if you require flanged ends to be other than standard raised face.

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2 1/2" THRU 4" (FLANGED 150#, 300#, 600#)

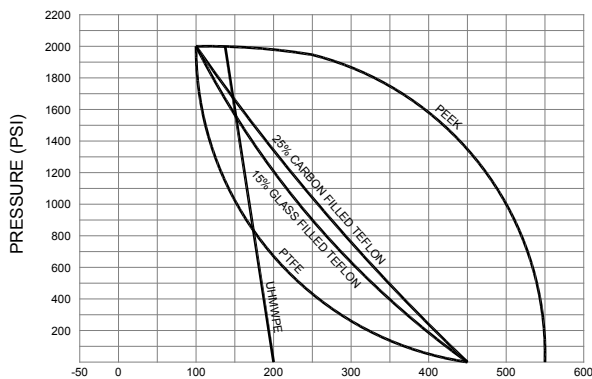


Plan View with Handle Removed



SIZE	A (in.)			A1 (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)
	150#	300#	600#	150#	300#	600#														
2 1/2"	9.50	9.50	13.00	4.75	4.75	6.50	5.28	8.84	2.52	3.25	0.79	0.55	1.65	0.72	1.58	M8	2.76	F07	22	685
3"	11.12	11.12	14.00	5.56	5.56	7.00	6.84	13.74	2.95	4.28	0.75	0.75	1.82	0.69	1.97	M10	4.02	F10	35	1200
4"	12.00	12.00	17.00	6.00	6.00	8.50	7.37	13.74	3.78	4.81	0.75	0.75	1.82	0.69	1.97	M10	4.02	F10	55	2000

Pressure/Temperature Rating



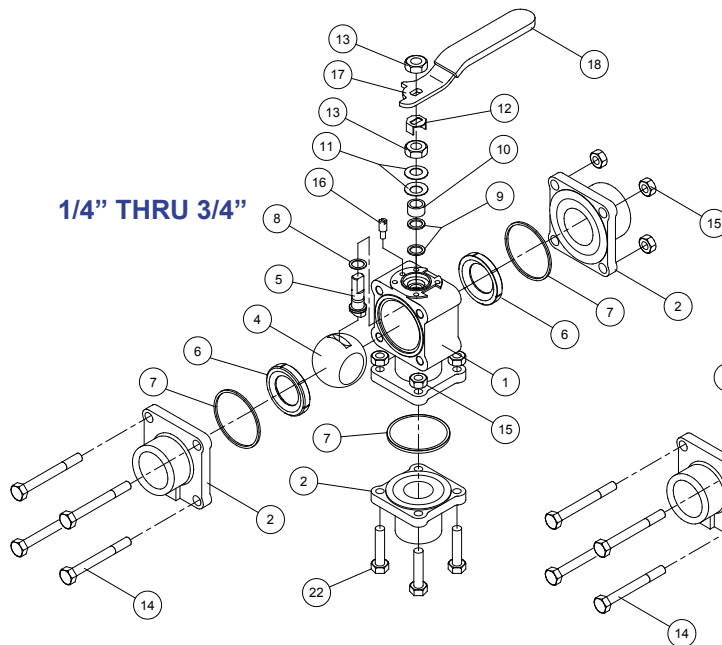
Notes

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

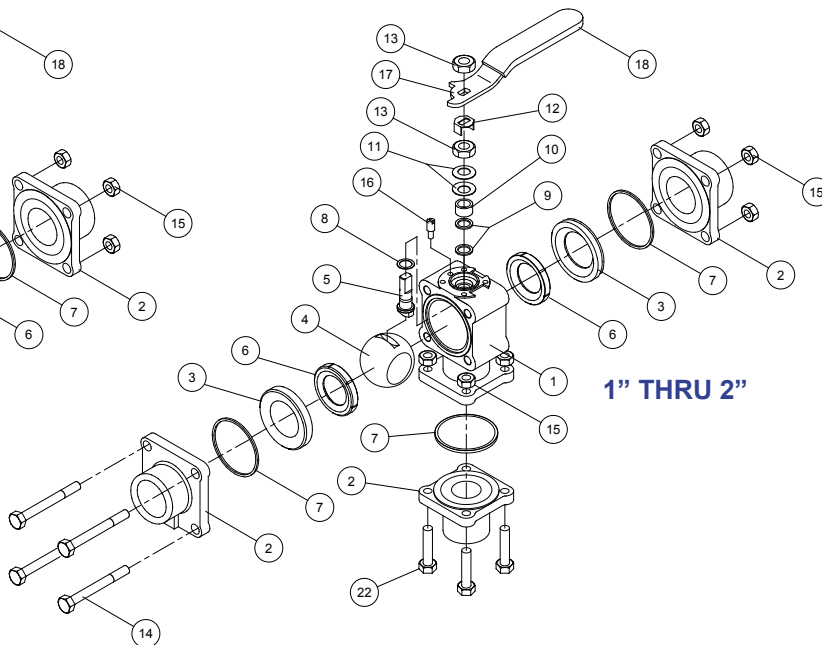
Alloy Valves and Control

1/4" THRU 2" (NPT, BW, SW)

1/4" THRU 3/4"

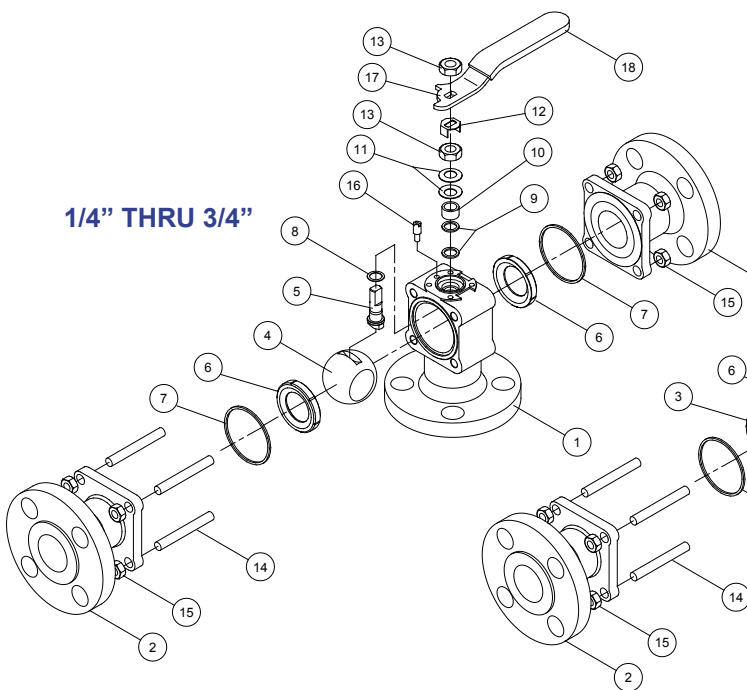


1" THRU 2"

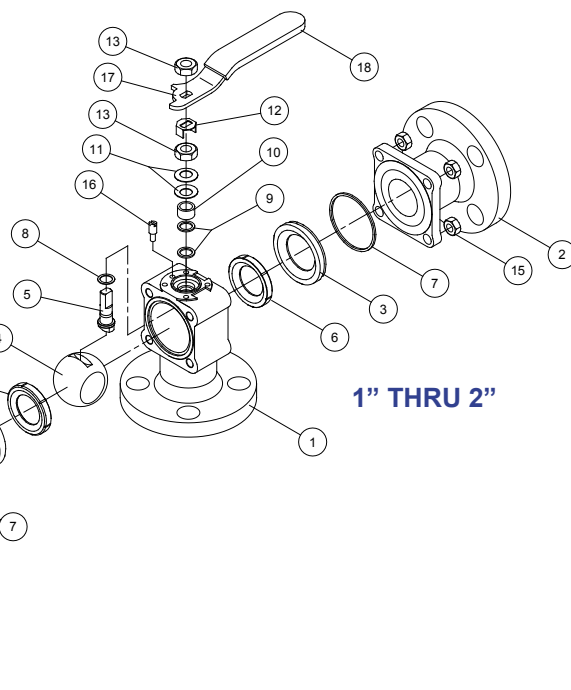


1/4" THRU 2" (FLANGED)

1/4" THRU 3/4"

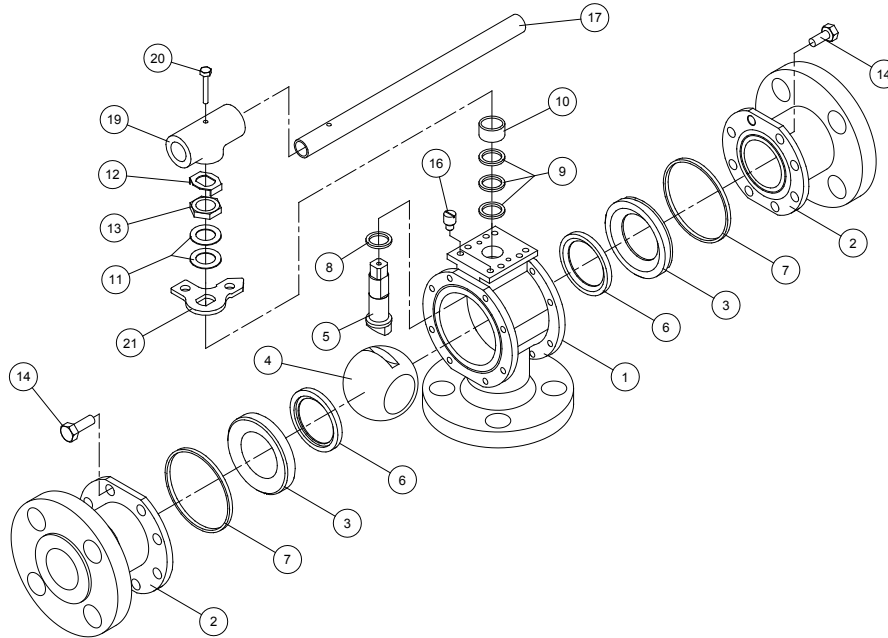


1" THRU 2"



Alloy Valves and Control

2 1/2" THRU 4" (FLANGED)



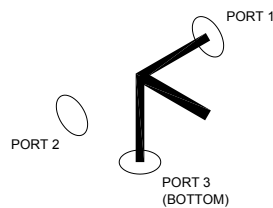
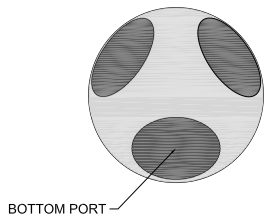
Features

ANSI Class 150#, 300# & 600#
 2000 WOG
 Encapsulated Seats, Seals & Body Bolts
 Spring Loaded Stem Packing
 Bottom Entry Stem to Prevent Blow-Out
 ISO 5211 Mounting Pad
 Locking Handle
 Inter-Changeable End Connections

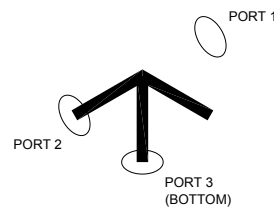
Item	Parts
1	Body
2	End Cap
3	Retainer
4	Ball
5	Stem
6	Ball Seat
7	Body Seal
8	Thrust Washer
9	Packing
10	Gland Ring
11	Disc Spring
12	Lock Tab
13	Stem Nut
14	Body Bolt
15	Body Nut
16	Stop Pin
17	Handle
18	Handle Sleeve
19	Wrench Block
20	Handle Bolt
21	Lock Pad
22	End Cap Bolt

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Ball Options



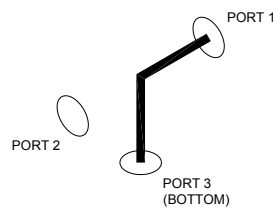
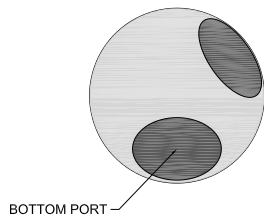
Start Position



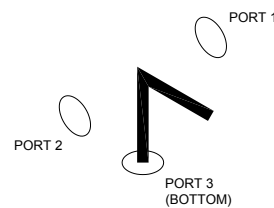
90 Degree Rotation

90 Degree Diverter Ball

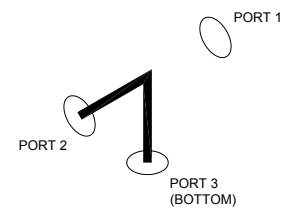
Media flows between port 1 and port 3 when the valve handle is in-line with pipeline. Upon 90 degree rotation the media is diverted to flow between port 2 and port 3. The valve handle can be locked off in either position thus preventing unwanted tampering.



Start Position



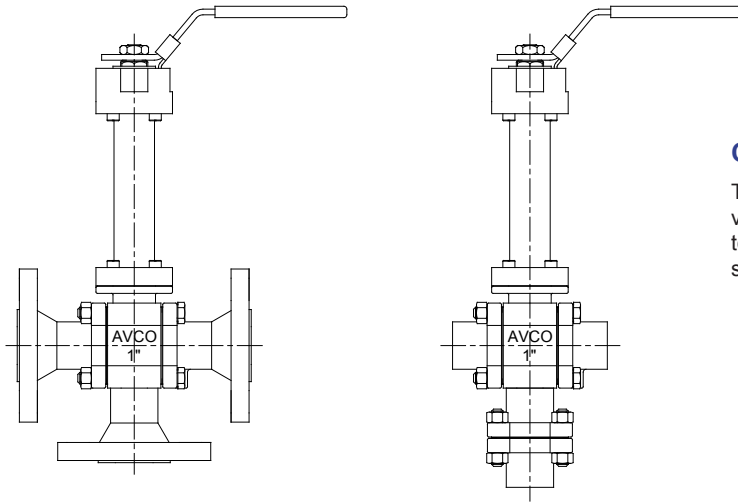
90 Degree Rotation



180 Degree Rotation

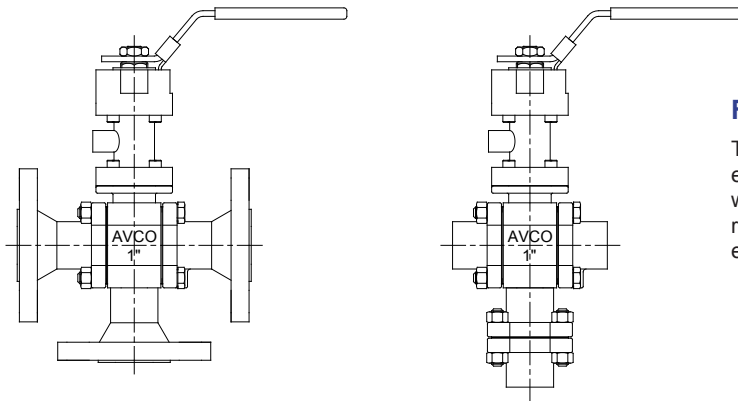
180 Degree Diverter Ball

Media flows between port 1 and port 3 and can be locked off in this position. Upon 90 degree rotation the valve will be isolated resulting in no flow and can be locked off. Upon 180 degree rotation the flow path diverts to port 2 and port 3, but cannot be locked off.



Cryogenic Option

The AVCO 1700 series ball valves are available as cryogenic valves. The extended bonnet can be shortened or lengthened to suit many applications and is also available 'off the shelf' in standard lengths (see 1500 series literature).



Fugitive Emissions Option

The AVCO 1700 series ball valves can be supplied with fugitive emissions (sniffer) bonnets. This gives an early warning system when the valve stem packing is becoming worn and ready for renewal, thus preventing dangerous chemicals/gases from entering the surrounding environment.



Vee Port and Slotted Ball Option

The AVCO 1700 series ball valves can be supplied with vee port or slotted balls for greater control and accuracy. Many configurations are available to suit the needs of the customer.



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
Decutchable Manual Override



Manual Valves

Oval Handle
Spring Return
Fusible Link
Lock Device
Gear Operators

HOW TO ORDER

1"	17	3	3	T	T	SE	BAB90
Size	Series	Body & End Material	Ball & Stem Material	Seat Material	Seal Material	End Style	Options
1/4"	1700 Series 3 Piece Bottom Entry Diverter Ball Valve	1 - Carbon Steel	2 - Alloy 20	T - Teflon (PTFE)	T - Teflon (PTFE)	SE - NPT	BAB90 - 90° Rotation Ball
3/8"		1L - Low Grade Carbon	3 - 316 SS	R - 15% Glass PTFE	C - 25% Carbon PTFE	SW - Socket Weld	BAB180 - 180° Rotation Ball
1/2"		2 - Alloy 20	4 - Monel 400	C - 25% Carbon PTFE	G - Graphoil	BW - Butt Weld	BAHL - Hardened Ball
3/4"		3 - 316 SS	5 - Hastelloy B	P - PEEK	B - BUNAN	GR - Grooved	BNIE - Emissions Bonnet
1"		4 - Monel 400	6 - Hastelloy C	U - UHMWPE	E - EPDM	FBT - Flush Bottom Tank	CF - Cavity Filled
1 1/4"		5 - Hastelloy B	7 - Inconel 625	K - Kel-F (PCTFE)	V - Viton	BSP - British Standard Pipe	O2CB - O2 Clean/Bagged
1 1/2"		6 - Hastelloy C	8 - Titanium	B - Bronze	N - Neoprene	AN - Army Navy	
2"		7 - Inconel 625	9 - Aluminum	S - Stellite		150 - 150# Flange	
2 1/2"		8 - Titanium		I - Inconel		300 - 300# Flange	
3"		9 - Aluminum				600 - 600# Flange	
4"							
						Variations of the above or special ends can be supplied upon request	Customized Ports are available upon request

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