

AVCO

Alloy Valves and Control

BALL VALVES 1100 SERIES



Size

1/4" - 4" (Full Port)
2000 WOG
3000 WOG Option

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

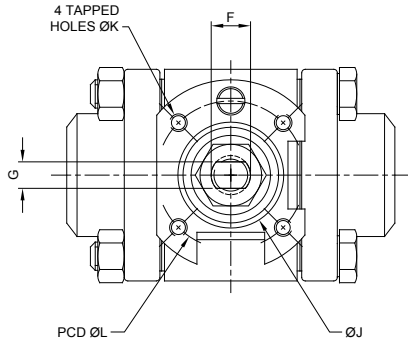
Chemical
Dry/Liquid Chlorine
Food Processing
Hydraulic
Oxygen
Steam
Thermal Fluids
Vacuum
Water/Oil/Gas

Applicable Standards

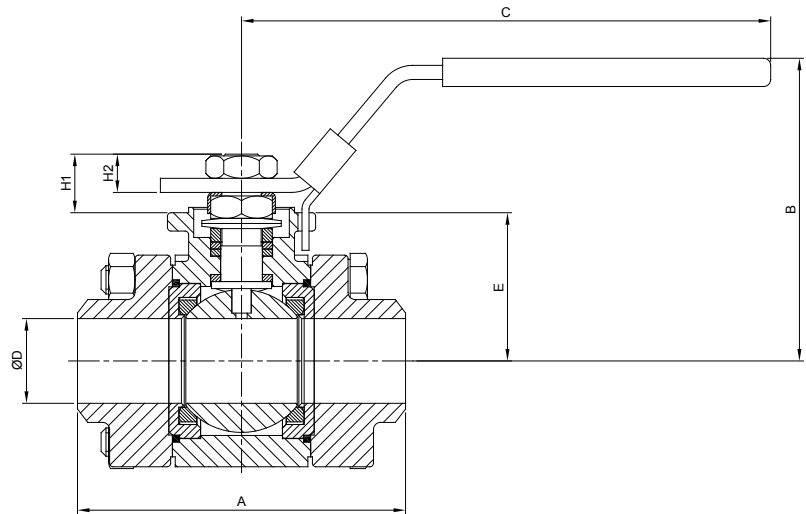
ASME B16.34
API 598
API 607 4th Edition

Alloy Valves and Control

1/4" THRU 2"

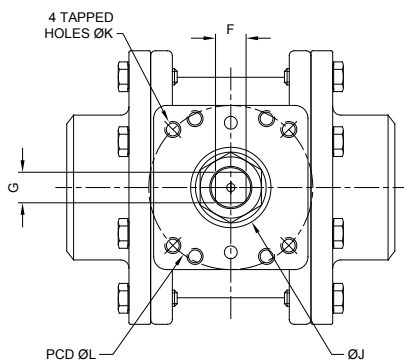


Plan View with Handle Removed

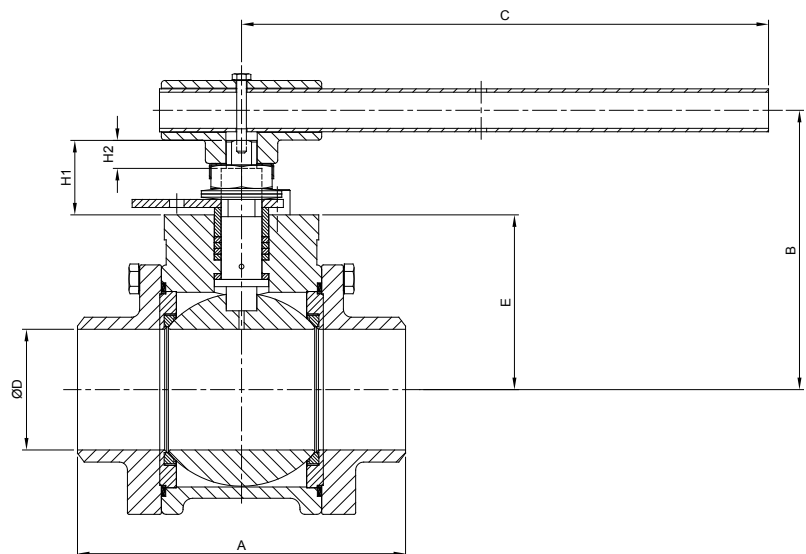


SIZE	A (in.)	B (in.)	C (in.)	D (in.)	E (in.)	F (in.)	G (in.)	H1 (in.)	H2 (in.)	J (in.)	K	L (in.)	ISO 5211	Weight (lbs)	TORQUE (in-lbs)
1/4"	2.61	2.48	4.53	0.36	1.24	0.38	0.22	0.52	0.28	0.98	M5	1.42	F03	2	65
3/8"	2.61	2.48	4.53	0.49	1.24	0.38	0.22	0.52	0.28	0.98	M5	1.42	F03	2	65
1/2"	2.97	2.48	4.53	0.59	1.24	0.38	0.22	0.52	0.28	0.98	M5	1.42	F03	2	65
3/4"	3.17	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	3.38	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	3.50	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	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	4.25	6.85	1.97	2.22	0.57	0.34	1.14	0.60	1.38	M6	1.97	F05	14	450

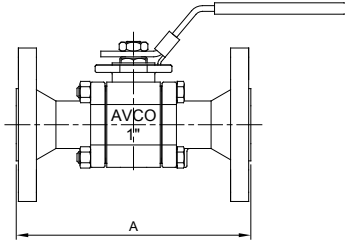
2 1/2" THRU 4"



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)
2 1/2"	7.27	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"	8.02	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"	9.46	7.37	13.74	3.78	4.81	0.75	0.75	1.82	0.69	1.97	M10	4.02	F10	55	2000



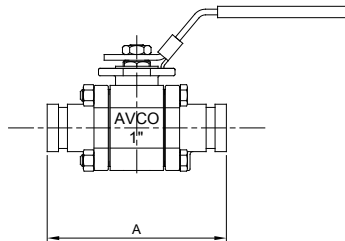
Standard Flanged Ends (150#, 300#, 600#)

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 page 2 for all other dimensions

Note

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



Standard Cut Grooved Ends

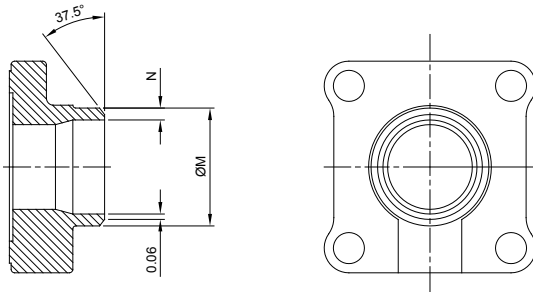
SIZE	A (in.)
3/4"	4.63
1"	5.17
1 1/4"	6.00
1 1/2"	6.50
2"	6.99
2 1/2"	7.88
3"	8.50
4"	10.00

See tables on page 2 for all other dimensions

Note

Please contact AVCO if you require any other end style than those shown in this literature.

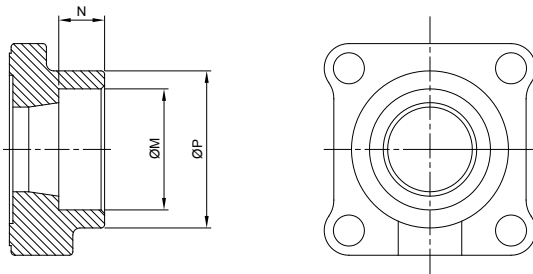
BUTT WELD END STYLE (SCH 10, SCH 40, SCH 80)



Butt weld ends are square cut where N is less than or equal to 0.12"

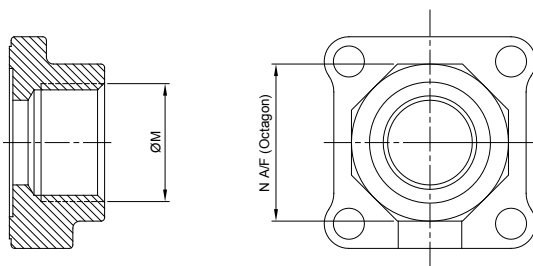
SIZE	M (in.)	N (in.)		
		Sch 10	Sch 40	Sch 80
1/4"	0.540	0.065	0.088	0.119
3/8"	0.675	0.065	0.091	0.126
1/2"	0.840	0.083	0.109	0.147
3/4"	1.050	0.083	0.113	0.154
1"	1.315	0.109	0.133	0.179
1 1/4"	1.660	0.109	0.140	0.191
1 1/2"	1.900	0.109	0.145	0.200
2"	2.375	0.109	0.154	0.218
2 1/2"	2.875	0.120	0.203	0.276
3"	3.500	0.120	0.216	0.300
4"	4.500	0.120	0.237	0.337

SOCKET WELD END STYLE



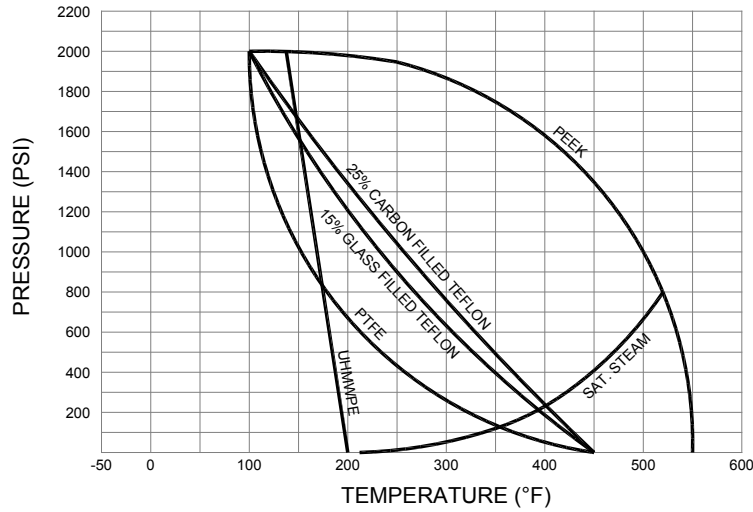
SIZE	M (in.)	N (in.)	P (in.)
1/4"	0.57	0.39	1.00
3/8"	0.71	0.39	1.00
1/2"	0.87	0.39	1.20
3/4"	1.07	0.51	1.42
1"	1.35	0.51	1.75
1 1/4"	1.70	0.51	2.13
1 1/2"	1.94	0.51	2.44
2"	2.43	0.65	2.99
2 1/2"	2.93	0.65	3.62
3"	3.56	0.65	4.33
4"	4.56	0.79	5.59

THREADED NPT END STYLE



SIZE	M (NPT)	N (in.)
1/4"	1/4	1.00
3/8"	3/8	1.00
1/2"	1/2	1.20
3/4"	3/4	1.42
1"	1	1.75
1 1/4"	1 1/4	2.13
1 1/2"	1 1/2	2.44
2"	2	2.99
2 1/2"	2 1/2	3.62
3"	3	4.33
4"	4	5.59

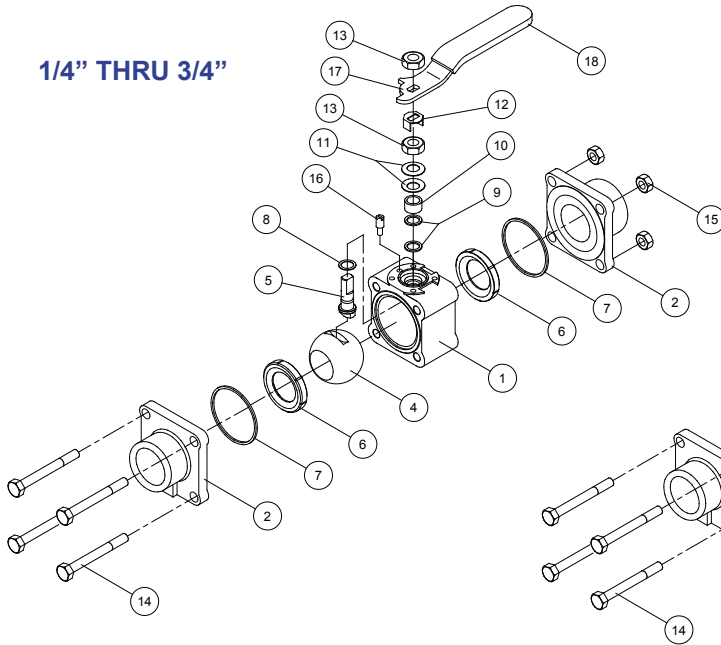
Pressure/Temperature Rating



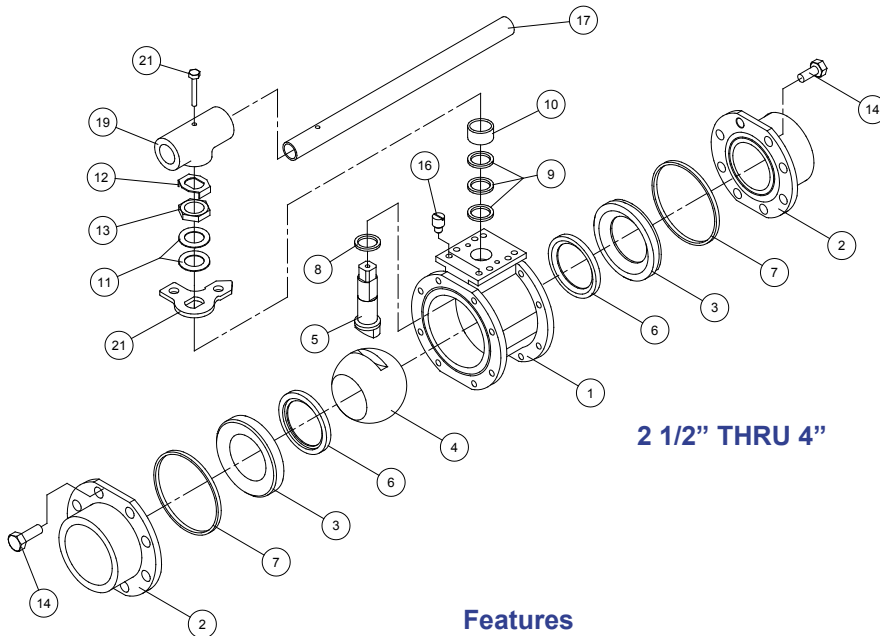
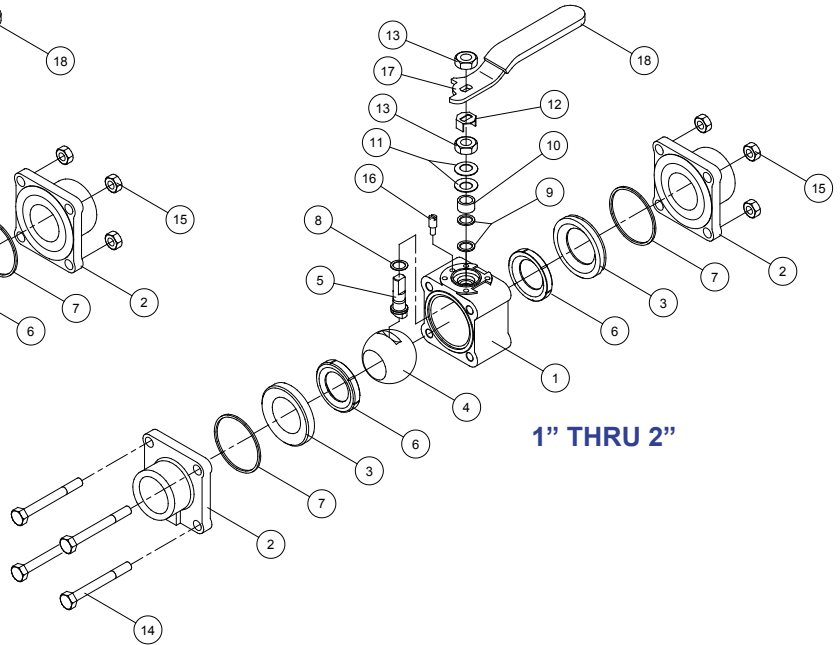
Notes

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

1/4" THRU 3/4"



1" THRU 2"

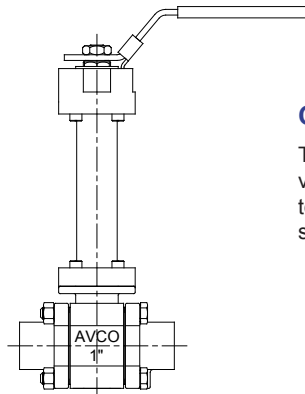
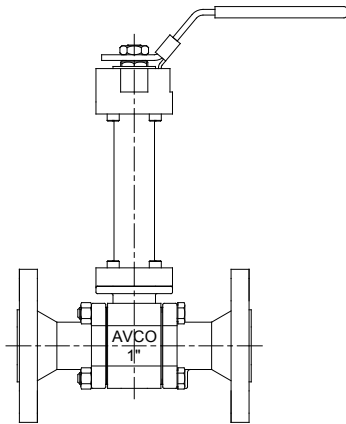


2 1/2" THRU 4"

Features

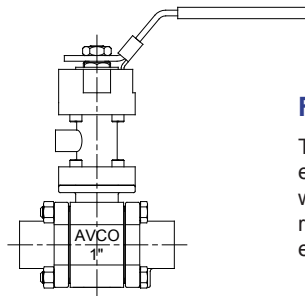
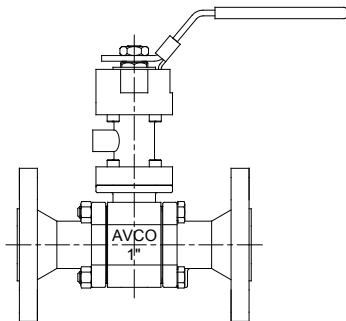
- ANSI Class 150, 300 & 600
- 2000/3000 WOG
- Encapsulated Seats, Seals & Body Bolts
- Spring Loaded Stem Packing
- Bottom Entry Stem to Prevent Blow-Out
- ISO 5211 Mounting Pad
- Locking Handle as Standard
- Inter-Changeable End Connections

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



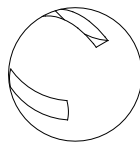
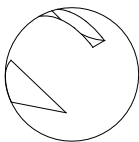
Cryogenic Option

The AVCO 1100 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 1100 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 1100 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 (see 1900 series literature).



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"	11	3	3	T	T	SE	BAVT	
Size	Series	Body & End Material	Ball & Stem Material	Seat Material	Seal Material	End Style	Options	
1/4"	1100 Series 3 Piece Ball Valve	1 - Carbon Steel	2 - Alloy 20	T - Teflon (PTFE)	T - Teflon (PTFE)	SE - NPT	BAVT - Vented Balls	
3/8"		1L - Low Grade Carbon	3 - 316 SS	R - 15% Glass PTFE	C - 25% Carbon PTFE	SW - Socket Weld	BAHL - Hardened Ball	
1/2"		2 - Alloy 20	4 - Monel 400	C - 25% Carbon PTFE	G - Graphoil	BW - Butt Weld	BNIE - Emissions Bonnet	
3/4"		3 - 316 SS	5 - Hastelloy B	P - PEEK	B - BUNA N	GR - Grooved	FS - Fire Safe	
1"		4 - Monel 400	6 - Hastelloy C	U - UHMWPE	E - EPDM	FBT - Flush Bottom Tank	O2CB - O2 Clean/Bagged	
1 1/4"		5 - Hastelloy B	7 - Inconel 625	K - Kel-F (PCTFE)	V - Viton	BSP - British Standard Pipe	CF - Cavity Filled	
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	

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