

# AVCO

*Alloy Valves and Control*

## BALL VALVES 9100 SERIES



### Size

1/2" - 12" (Full Port)  
Fire Safe as Standard

### End Connections

150# Flanged  
300# Flanged

### Valve Materials

316 Stainless Steel  
Carbon Steel  
Alloy 20  
Hastelloy C  
Monel 400  
Duplex  
Super Duplex

### Ball and Stem Materials

316 Stainless Steel  
Alloy 20  
Hastelloy C  
Monel 400  
Duplex  
Super Duplex

### Seat Materials

TFM  
PEEK

### Service Applications

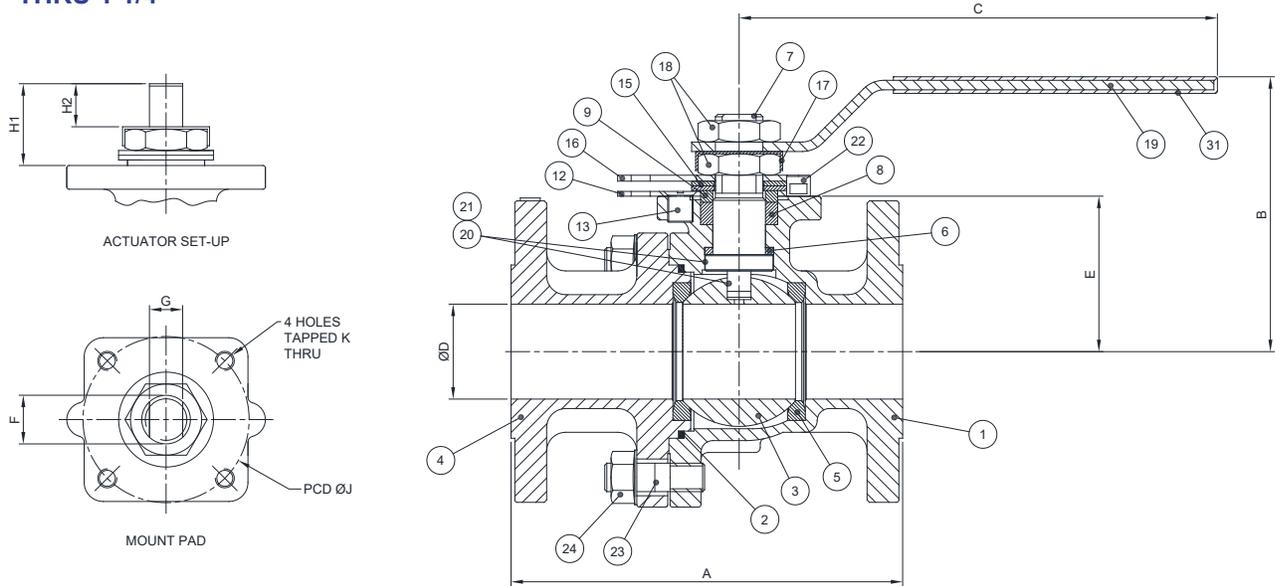
Chemical  
Food Processing  
Oxygen  
Steam  
Thermal Fluids  
Vacuum  
Water/Oil/Gas

### Applicable Standards

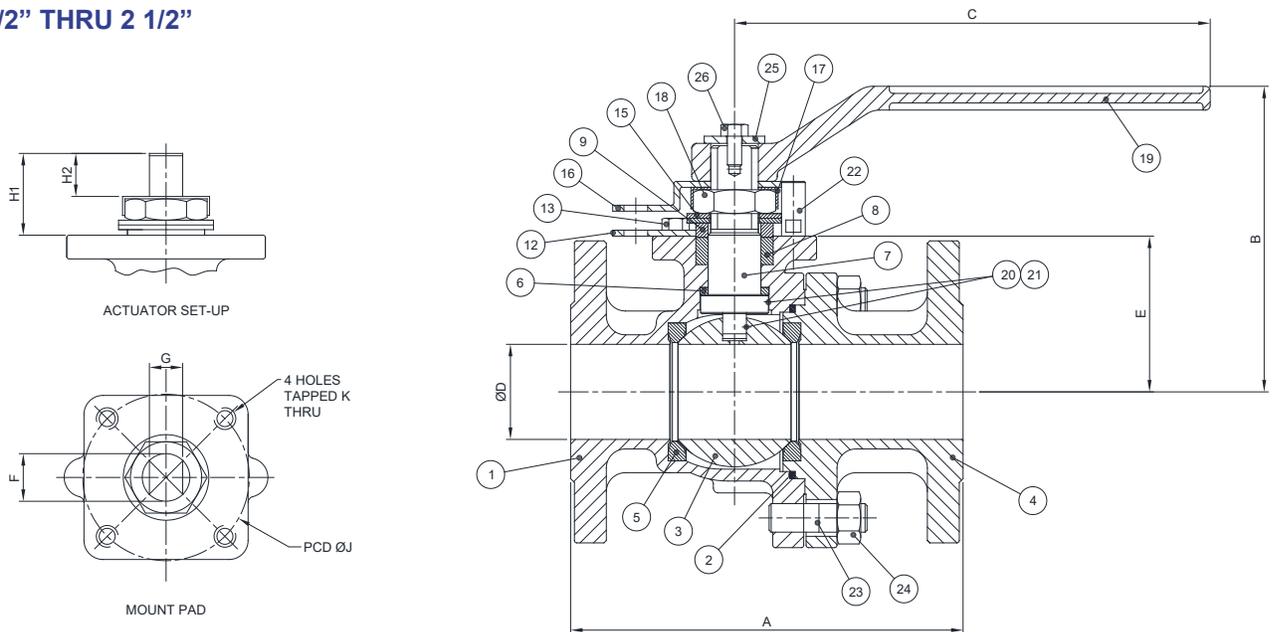
ASME B16.34  
ASME B16.10  
ASME B16.5  
API 598  
API 6D  
API 607  
API 608

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### 1/2" THRU 1 1/4"

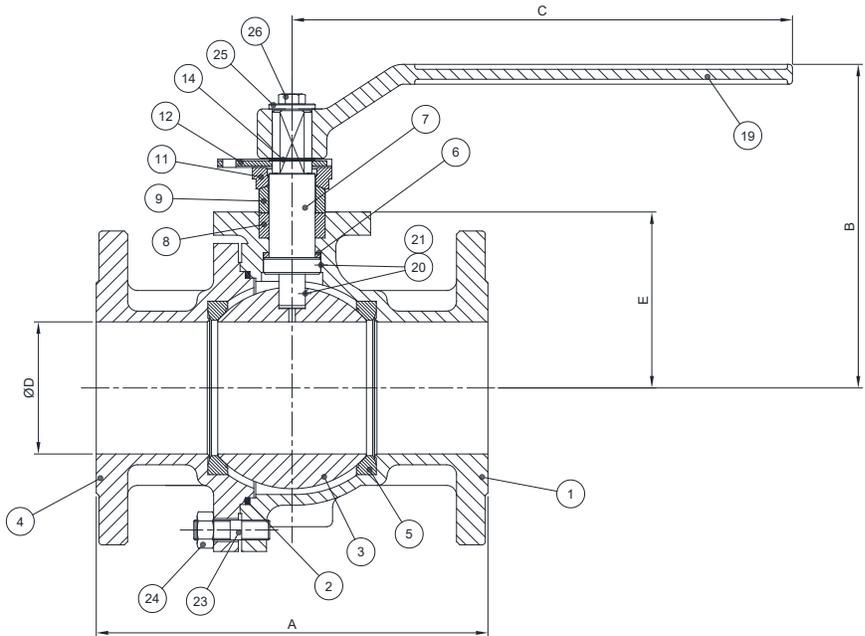
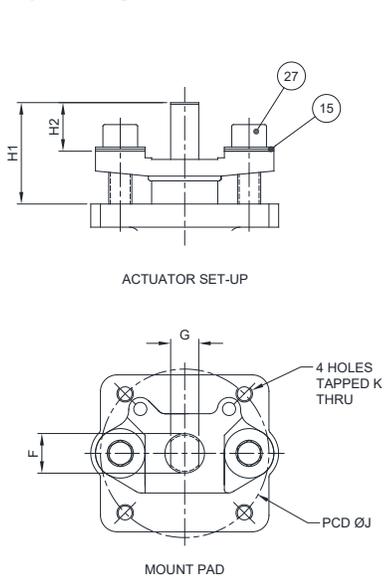


### 1 1/2" THRU 2 1/2"

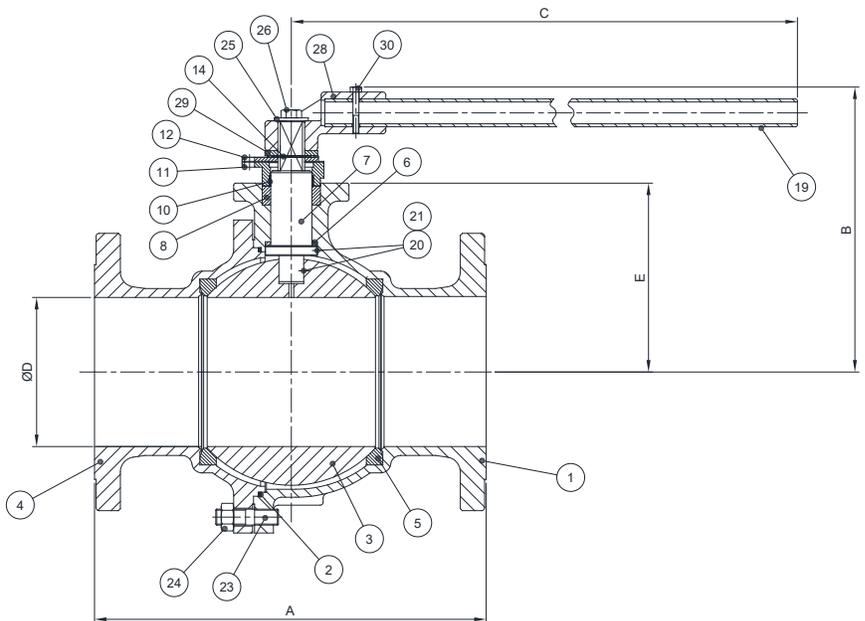
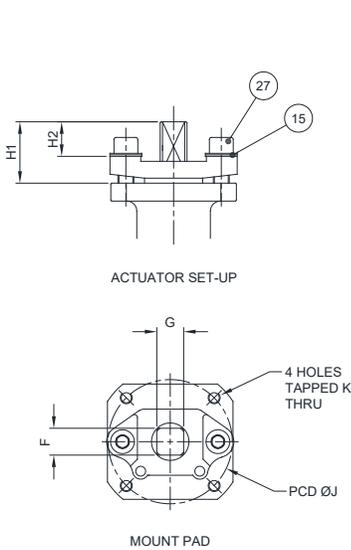


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### 3" THRU 4"



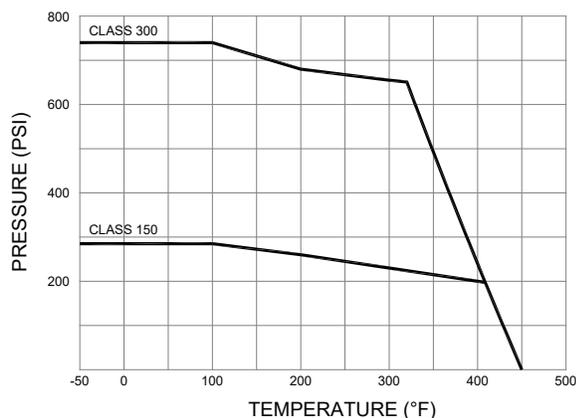
### 6" THRU 12"



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SIZE	ANS Class	A (in.)	B (in.)	C (in.)	D (in.)	E (in.)	F (in.)	G	H1 (in.)	H2 (in.)	J (in.)	K (in.)	ISO 5211	Weight (lbs)	TORQUE (in-lbs)	CV
1/2"	150#	4.25	3.57	5.65	0.59	1.67	M10	0.297	0.69	0.39	1.654	M5	F04	4.6	84	23
	300#	5.50	3.67	5.65	0.59	1.75	M10	0.297	0.69	0.37	1.654	M5	F04	7.1	84	23
3/4"	150#	4.61	3.70	5.65	0.79	1.79	M10	0.297	0.73	0.39	1.654	M5	F04	5.3	96	53
	300#	5.98	3.76	5.65	0.79	1.85	M10	0.297	0.69	0.37	1.654	M5	F04	9.5	96	53
1"	150#	5.00	4.07	5.65	0.98	2.05	M14	0.342	1.16	0.72	1.969	M6	F05	5.7	120	94
	300#	6.50	4.23	5.65	0.98	2.15	M14	0.342	1.06	0.63	1.969	M6	F05	10.6	120	94
1 1/4"	150#	5.51	4.41	5.65	1.26	2.34	M14	0.342	1.06	0.63	1.969	M6	F05	11.5	178	118
	300#	7.00	4.41	5.65	1.26	2.34	M14	0.342	1.06	0.63	1.969	M6	F05	13.9	178	118
1 1/2"	150#	6.50	5.04	7.87	1.57	2.58	M20	0.551	1.46	0.69	2.756	M8	F07	15.0	216	213
	300#	7.48	5.04	7.87	1.57	2.58	M20	0.551	1.46	0.69	2.756	M8	F07	15.9	216	213
2"	150#	7.01	5.35	7.87	1.97	2.87	M20	0.551	1.50	0.69	2.756	M8	F07	19.8	300	378
	300#	8.50	5.35	7.87	1.97	2.87	M20	0.551	1.50	0.69	2.756	M8	F07	27.6	300	378
2 1/2"	150#	7.48	6.22	11.81	2.56	3.74	M20	0.551	1.50	0.69	2.756	M8	F07	32.0	531	660
	300#	9.49	6.22	11.81	2.56	3.74	M20	0.551	1.50	0.69	2.756	M8	F07	40.4	531	660
3"	150#	7.99	7.72	13.78	3.15	4.19	0.984	0.669	2.42	1.14	4.016	M10	F10	43.0	781	951
	300#	11.14	7.95	13.78	3.15	4.45	0.984	0.669	2.42	1.14	4.016	M10	F10	70.6	781	951
4"	150#	9.02	8.35	15.75	3.94	4.80	0.984	0.669	2.42	1.14	4.016	M10	F10	72.8	1444	1691
	300#	12.01	8.58	15.75	3.94	5.06	0.984	0.669	2.42	1.14	4.016	M10	F10	101	1444	1691
6"	150#	15.51	11.30	32.87	5.91	7.48	1.063	1.063	2.43	1.34	4.921	M12	F12	137	3356	3806
	300#	15.87	11.30	32.87	5.91	7.48	1.063	1.063	2.44	1.34	4.921	M12	F12	194	3356	3806
8"	150#	17.99	14.88	41.14	7.87	9.90	1.260	1.260	3.11	1.59	4.921	M12	F12	243	8762	7812
	300#	19.76	14.88	41.14	7.87	9.90	1.260	1.260	3.11	1.59	4.921	M12	F12	359	8762	7812
10"	150#	20.98	16.26	41.34	9.84	10.87	1.417	1.417	3.37	1.83	5.512	M16	F14	366	15930	13371
	300#	22.36	16.26	41.34	9.84	10.87	1.417	1.417	3.37	1.83	5.512	M16	F14	525	15930	13371
12"	150#	24.02	20.53	59.06	11.81	13.33	1.811	1.811	4.98	2.66	6.496	M20	F16	523	21240	19255
	300#	25.51	20.53	59.06	11.81	13.33	1.811	1.811	4.98	2.66	6.496	M20	F16	783	21240	19255

### Pressure/Temperature Rating for TFM seats (contact AVCO for PEEK)



### Features

- ANSI Class 150 & 300
- Spring Loaded Stem Packing
- Bottom Entry Stem to Prevent Blow-Out
- ISO 5211 Mounting Pad
- Lockable Handle as Standard
- Fire Safe as Standard

Item	Description	Part of Valve Assembly				Material		
		1/2" thru 1 1/4"	1 1/2" thru 2 1/2"	3" thru 4"	6" thru 12"	Stainless Steel	Alloy 20	Carbon Steel
1	Body	Yes	Yes	Yes	Yes	A351-CF8M	Alloy 20	A216-WCB
2	Body Seal	Yes	Yes	Yes	Yes	SS 316/Graphite	SS 316/Graphite	SS 316/Graphite
3	Ball	Yes	Yes	Yes	Yes	A351-CF8M	Alloy 20	A351-CF8M
4	End Cap	Yes	Yes	Yes	Yes	A351-CF8M	Alloy 20	A216-WCB
5	Seat	Yes	Yes	Yes	Yes	TFM or PEEK	TFM or PEEK	TFM or PEEK
6	Thrust Seal	Yes	Yes	Yes	Yes	TFM 4215	TFM 4215	TFM 4215
7	Stem	Yes	Yes	Yes	Yes	A276-316/17-4 H1150	Alloy 20	A276-316/17-4 H1150
8	Packing	Yes	Yes	Yes	Yes	Grafoil	Grafoil	Grafoil
9	Gland Ring	Yes	Yes	Yes	No	A276-316	Alloy 20	A276-316
10	Bushing	No	No	No	Yes	PTFE	PTFE	PTFE
11	Packing Gland	No	No	Yes	Yes	A351-CF8M	Alloy 20	A216-WCB
12	Locking Plate	Yes	Yes	Yes	Yes	Stainless Steel	Stainless Steel	Stainless Steel or Steel
13	Locking Plate Screw	Yes	Yes	No	No	A193-B8	A193-B8	A193-B7
14	Locking Plate Retainer	No	No	Yes	Yes	Stainless Steel	Stainless Steel	Steel
15	Belleville Washer	Yes	Yes	Yes	Yes	A276-301	A276-301	A276-301
16	Travel Stop	Yes	Yes	No	No	Stainless Steel	Stainless Steel	Stainless Steel
17	Lock Washer	Yes	Yes	No	No	Stainless Steel	Stainless Steel	Stainless Steel
18	Stem Nut	Yes	Yes	No	No	A276-304	A276-304	A276-304
19	Handle	Yes	Yes	Yes	Yes	Steel	Steel	Steel
20	Anti-Static Ball	Yes	Yes	Yes	Yes	A276-316	A276-316	A276-316
21	Spring	Yes	Yes	Yes	Yes	A276-316	A276-316	A276-316
22	Stop Pin	Yes	Yes	No	No	Stainless Steel	Stainless Steel	Stainless Steel
23	Threaded Rod	Yes	Yes	Yes	Yes	A193-B8	A193-B8	A193-B7
24	Body Nut	Yes	Yes	Yes	Yes	A194-8	A194-8	A194-2H
25	Handle Washer	No	Yes	Yes	Yes	Stainless Steel	Stainless Steel	Stainless Steel
26	Handle Screw	No	Yes	Yes	Yes	A193-B8	A193-B8	A193-B7
27	Packing Gland Screw	No	No	Yes	Yes	A193-B8	A193-B8	A193-B7
28	Handle Block	No	No	No	Yes	A216-WCB	A216-WCB	A216-WCB
29	Stem Washer	No	No	No	Yes	Stainless Steel	Stainless Steel	Stainless Steel
30	Handle Block Screw	No	No	No	Yes	A193-B8	A193-B8	A193-B7
31	Handle Sleeve	Yes	No	No	No	Plastic	Plastic	Plastic



### Electric Actuator

120/230 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  
Stem Extensions  
Fusible Link  
Lock Device  
Gear Operators

## HOW TO ORDER

91	3	3	R	T	150	100	BAVT
Series	Body & End Material	Ball & Stem Material	Seat Material	Seal Material	End Style	Size	Options
9100 Series 2 Piece Economy Full Port Flanged Ball Valve	1 - Carbon Steel	2 - Alloy 20	E - TFM	G - Graphoil	150 - 150# Flange	050 - 1/2"	BAVT - Vented Ball
	2 - Alloy 20	3 - 316 SS	P - PEEK	T - Teflon (PTFE)	300 - 300# Flange	075 - 3/4"	O2CB - O2 Clean/Bagged
	3 - 316 SS	4 - Monel 400			600 - 600# Flange	100 - 1"	
	4 - Monel 400	6 - Hastelloy C				125 - 1 1/4"	
	6 - Hastelloy C	E - Super Duplex				150 - 1 1/2"	
	E - Super Duplex	G - Duplex				200 - 2"	
	G - Duplex					250 - 2 1/2"	
						300 - 3"	
						400 - 4"	
						600 - 6"	
					800 - 8"		
					1000 - 10"		
					1200 - 12"		

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