



Alloy Valves and Control

BALL VALVES 1900 SERIES



Size:

1/2" - 4" Full Port
2000 WOG

End Conections:

NPT
Butt Weld
Socket Weld

Valve Materials

316 Stainless Steel
Carbon Steel

Ball and Stem Materials:

316 Stainless Steel

Service Applications:

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

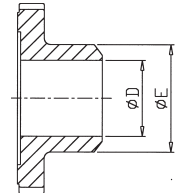
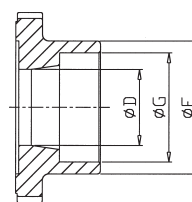
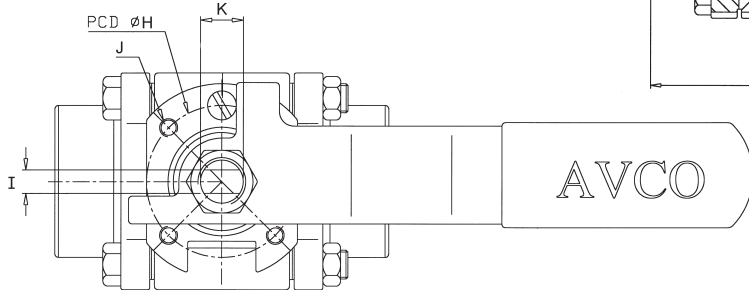
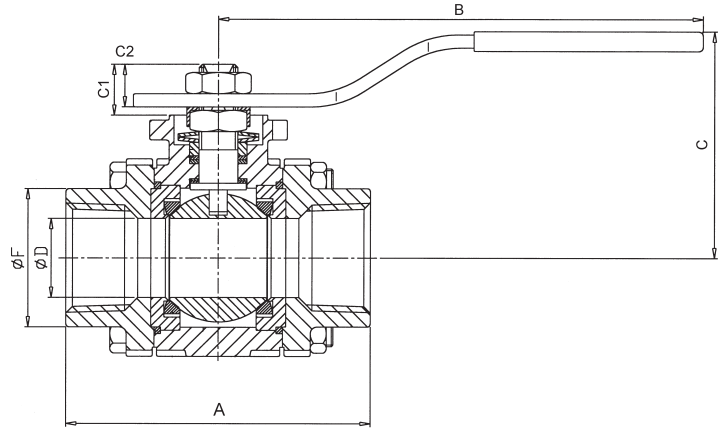
Seat Materials:

Teflon
Reinforced Teflon
TFE-25% Carbon/Graphite
PEEK
UHMWPE
Metal

Alloy Valves and Control

APPLICABLE STANDARD

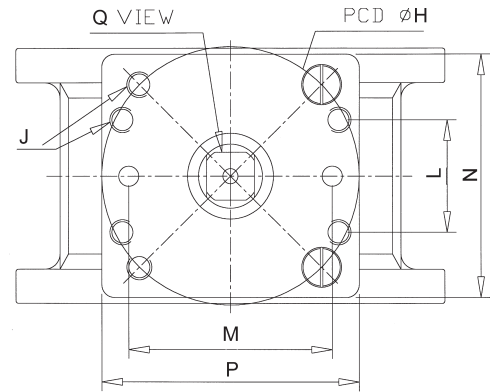
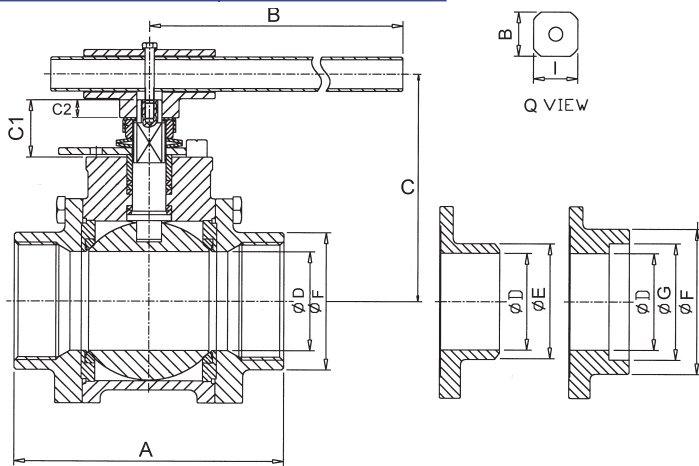
Wall Thickness	AISI B16.34
Inspection and Testing	API 598



NPS	A	B	C	C1	C2	D	E	F	G	H	I	J	K	ISO 5211	lbs.	Cv
1/4-3/8-1/2"	2.95	4.50	2.19	0.48	.335	0.50	0.87	1.10	0.87	1.42	0.22	M5	3/8"-24UNF	F03	2	5
3/4"	3.15	4.50	2.28	0.55	.385	0.75	1.10	1.38	1.08	1.42	0.22	M5	3/8"-24UNF	F03	2.5	21
1"	3.66	5.75	2.63	0.60	.555	1.00	1.34	1.77	1.36	1.65	0.30	M5	7/16"-24UNF	F04	4	44
1 1/4"	4.33	5.75	2.80	0.61	.555	1.25	1.61	2.13	1.69	1.65	0.30	M5	7/16"-24UNF	F04	6	64
1 1/2"	4.72	7.00	3.23	1.07	.725	1.50	1.93	2.44	1.93	1.97	0.34	M6	9/16"-24UNF	F05	8	87
2"	5.51	7.00	3.58	1.10	.777	2.00	2.40	2.99	2.41	1.97	0.34	M6	9/16"-24UNF	F05	14	210

APPLICABLE STANDARD

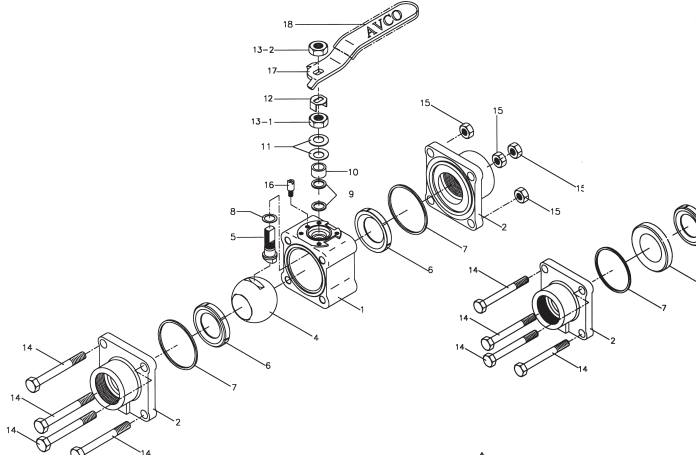
Wall Thickness	AISI B16.34
Inspection and Testing	API 598



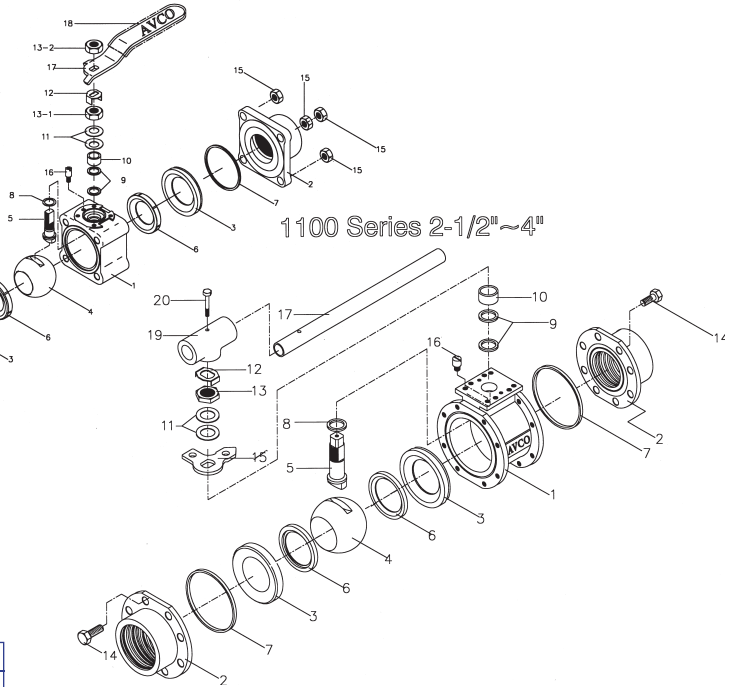
NPS	A	B	C	C1	C2	D	E	F	G	H	I	J	K	L	M	N	P	ISO/DIN	lbs.	Cv
2-1/2"	7.25	8.84	5.24	1.65	.575	2.50	2.91	3.62	2.91	2.78	0.55	M10	M20*2.5	1.26	2.52	2.76	3.35	F10	22	277
3"	8.03	13.74	6.6	1.81	.575	3.00	3.54	4.09	3.54	4.02	0.75	M10	1"-14UNF	1.75	3.17	3.78	4.02	F10	35	482
4"	9.45	13.74	7.14	1.83	.575	4.00	4.53	5.67	4.55	4.02	0.75	M10	1"-14UNF	1.75	3.17	3.78	4.02	F10	55	1001

Alloy Valves and Control

1100 Series 1/4" ~ 3/4"



Series 1100 1"~2"

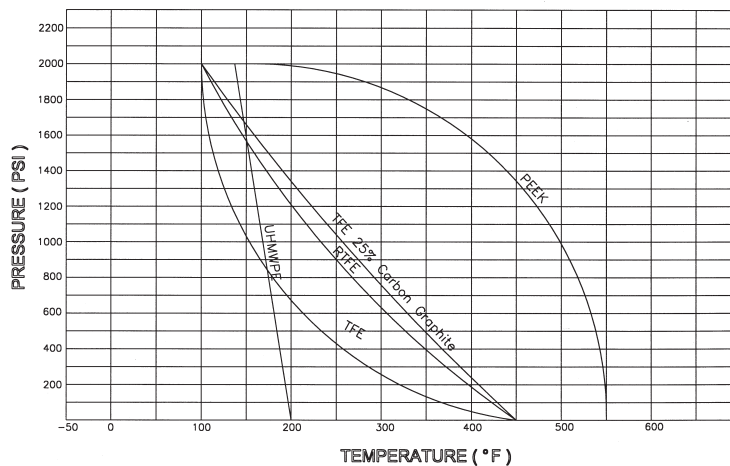


1100 Series 2-1/2"~4"

	Parts/Material	Stainless Steel	Carbon Steel
1	Body	ASTM A351-CF8M	
2	End Cap	ASTM A351-CF3M	ASTM A216-WCB
3	Retainer	ASTM A351-CF8M	
4	Ball	ASTM A351-CF8M	ASTM A351-CF8M
5	Stem	ASTM A276-316	ASTM A276-316
6	Ball Seat	TFE RTFE TFE 25% Carbon/ Graphite UHMWPE PEEK	TFE RTFE TFE 25% Carbon/ Graphite UHMWPE PEEK
7	Body Seal	TFE	TFE
8	Thrust Washer	TFE 25% Carbon	TFE 25% Carbon
9	Packing		

	Parts/Material	Stainless Steel	Carbon Steel
10	Gland Ring	AISI 304	AISI 304
11	Disc Spring	AISI 304	AISI 304
12	Lock Tab	ASTM A167-304	ASTM A167-304
13	Stem Nut	ASTM A194-GR.8	ASTM A194-GR.8
14	Bolt		
15	Nut	ASTM A193-B8	ASTM A193-B7
16	Stop Pin	AISI 304	AISI 304
17	Handle	ASTM A197-304	ASTM A197-304
18	Handle Sleeve	PVC	PVC
19	Wrench Block	AISI 304	AISI 304
20	Hex Head Bolt	ASTM A193-B8	ASTM A193-B7

2000 WOG
PRESSURE TEMPERATURE
RATING



Features

- 1/4" - 4"
- 2000 WOG
- Encapsulated Seats
- Encapsulated Body Seal
- Spring Loaded Stem Packing
- Bottom Entry Stem
- ANSI Class 600
- End Caps 316LSS
- ISO Mounting Pad

Alloy Valves and Control

AVCO Ball Valves 3 PC 15 ° V-Port 2000 WOG NPT
Ends, Butt Weld Ends, Socket Weld Ends or
Flange Ends

Percent Open	Cv (15 degree V-Port)								
	NPS 1/2 DN15	NPS 3/4 DN20	NPS 1 DN25	NPS 1-1/4 DN32	NPS 1-1/2 DN40	NPS 2 DN50	NPS 2-1/2 DN65	NPS 3 DN80	NPS 4 DN100
100	1.9	2.17	4.32	6.19	10.45	15.74	23.39	23.61	43.06
90	1.71	1.95	3.89	5.57	9.4	14.16	21.05	21.25	38.76
80	1.52	1.74	3.46	4.95	8.36	12.59	18.71	18.89	34.46
70	1.33	1.52	3.02	4.33	7.31	11.02	16.37	16.53	30.15
60	1.14	1.3	2.6	3.71	6.27	9.44	14.03	14.16	25.84
50	0.95	1.09	2.16	3.09	5.22	7.69	11.69	11.8	21.53
40	0.76	0.87	1.73	2.47	4.18	6.3	9.35	9.44	17.23
30	0.6	0.65	1.3	1.85	3.13	4.72	7.02	6.75	12.92
20	0.38	0.43	0.75	1.24	2.09	3.15	4.68	4.72	8.61
10	0.19	0.22	0.43	0.62	1.04	1.57	2.34	2.36	4.31
Approx Flow Char.	EP	EP	EP	EP	EP	EP	EP	EP	EP
Shut-off Angle	23.9°	12.6°	17.3°	16.3°	14.4°	10.3°	8.5°	12.6°	8.5°

$K_v = 0.865 C_v$

$A_v = 24.0 \times 10^{-4} C_v$

EP = Equal Percentage

AVCO Ball Valves 3 PC 30 ° V-Port 2000 WOG NPT
Ends, Butt Weld Ends, Socket Weld Ends or
Flange Ends

Percent Open	Cv (30 degree V-Port)								
	NPS 1/2 DN15	NPS 3/4 DN20	NPS 1 DN25	NPS 1-1/4 DN32	NPS 1-1/2 DN40	NPS 2 DN50	NPS 2-1/2 DN65	NPS 3 DN80	NPS 4 DN100
100	2.53	3.1	7.24	11.05	15.55	26.61	39.95	52.19	85.96
90	2.28	2.79	6.52	9.95	14	23.95	35.96	46.97	77.36
80	2.03	2.48	5.79	9.07	12.44	21.29	31.96	41.75	68.77
70	1.77	2.17	5.07	7.74	10.89	18.62	27.97	36.53	60.17
60	1.52	1.86	4.35	6.63	9.33	15.96	23.97	31.31	51.58
50	1.27	1.55	3.62	5.52	7.78	13.3	19.98	26.09	42.98
40	1.01	1.24	2.9	4.42	6.22	10.64	15.98	20.88	34.38
30	0.76	0.93	2.17	3.32	4.67	7.98	11.98	14.93	25.79
20	0.51	0.62	1.26	2.21	3.11	5.32	7.99	10.44	17.19
10	0.25	0.31	0.72	1.11	1.56	2.66	3.99	5.22	8.6
Approx Flow Char.	EP	EP	EP	EP	EP	EP	EP	EP	EP
Shut-off Angle	23.9°	12.6°	17.3°	16.3°	14.4°	10.3°	8.5°	12.6°	8.5°

$K_v = 0.865 C_v$

$A_v = 24.0 \times 10^{-4} C_v$

EP = Equal Percentage

Alloy Valves and Control

AVCO Ball Valves 3 PC 45 ° V-Port 2000 WOG NPT
Ends, Butt Weld Ends, Socket Weld Ends or
Flange Ends

Percent Open	Cv (45 degree V-Port)								
	NPS 1/2 DN15	NPS 3/4 DN20	NPS 1 DN25	NPS 1-1/4 DN32	NPS 1-1/2 DN40	NPS 2 DN50	NPS 2-1/2 DN65	NPS 3 DN80	NPS 4 DN100
100	4.42	4.51	11.13	17.67	25.96	44.18	63.76	75.67	131.75
90	3.98	4.06	10.01	15.91	23.36	39.76	57.39	68.1	118.57
80	3.53	3.61	8.9	14.14	20.76	35.34	51.02	60.54	105.4
70	3.09	3.16	7.79	12.37	18.17	30.93	44.64	52.97	92.22
60	2.65	2.71	6.7	10.6	15.57	26.51	38.26	45.4	79.05
50	2.21	2.26	5.56	8.83	12.98	22.09	31.88	37.83	65.87
40	1.77	1.8	4.45	7.07	10.38	17.67	25.51	30.27	52.7
30	1.33	1.35	3.34	5.3	7.79	13.25	19.13	21.65	39.52
20	0.88	0.9	1.93	3.53	5.19	8.84	9.72	15.13	26.35
10	0.44	0.45	1.11	1.77	2.6	4.42	6.38	7.57	13.17
Approx Flow Char.	EP	EP	EP	EP	EP	EP	EP	EP	EP
Shut-off Angle	23.9°	12.6°	17.3°	16.3°	14.4°	10.3°	8.5°	12.6°	8.5°

Kv = 0.865 Cv

Av = 24.0 X 10⁴ Cv

EP = Equal Percentage

AVCO Ball Valves 3 PC 60 ° V-Port 2000 WOG NPT
Ends, Butt Weld Ends, Socket Weld Ends or
Flange Ends

Percent Open	Cv (60 degree V-Port)								
	NPS 1/2 DN15	NPS 3/4 DN20	NPS 1 DN25	NPS 1-1/4 DN32	NPS 1-1/2 DN40	NPS 2 DN50	NPS 2-1/2 DN65	NPS 3 DN80	NPS 4 DN100
100	6.07	6.8	15.11	24.53	37.4	61.51	92.16	117.22	191.72
90	5.47	6.12	13.59	22.08	33.66	55.36	82.94	105.5	172.55
80	4.86	5.44	12.08	19.62	29.92	49.21	73.73	93.78	153.38
70	4.25	4.76	10.57	17.17	26.18	43.05	64.51	82.06	134.21
60	3.65	4.08	9.06	14.71	22.44	36.9	55.29	70.33	115.03
50	3.04	3.4	7.55	12.26	18.7	30.75	46.08	58.61	95.86
40	2.43	2.72	6.04	9.81	14.96	24.6	36.86	46.89	76.69
30	1.82	2.04	4.53	7.36	11.22	18.45	27.65	33.54	57.52
20	1.22	1.36	2.62	4.91	7.48	12.3	18.43	23.44	38.34
10	0.61	0.68	1.51	2.45	3.74	6.15	9.22	11.72	19.17
Approx Flow Char.	EP	EP	EP	EP	EP	EP	EP	EP	EP
Shut-off Angle	23.9°	12.6°	17.3°	16.3°	14.4°	10.3°	8.5°	12.6°	8.5°

Kv = 0.865 Cv

Av = 24.0 X 10⁴ Cv

EP = Equal Percentage



Alloy Valves and Control

1900 SERIES



Electric Actuator

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



Pneumatic Actuators

- Double Acting
- Spring Return
- Solenoid Valves
- Limit Switches
- Positioners 3-15 PSI
- Positioners 4-20 mA
- Intelligent Positioner
- Declutchable Manual Override



Manual Valves

- Oval Handle
- Spring Return
- Stem Extensions
- Fusible Link
- Locking Device
- Gear Operators
- Wing Handle

HOW TO ORDER						
Size	Series	Body & End Material	Ball & Stem	Seat	Seal	End
1/4"	1900 Series	1-Carbon Steel	1-	T-TFE	T-TFE	SE-NPT
3/8"	Vee-Port	2-	2-	R-RTFE	C-TFE-25%	SW-Socket Weld
1/2"	Ball Valve	3-316SS	3-316SS	C-TFE-25%	Carbon Graphite	BW-Butt Weld
3/4"		4-	4-	Carbon Graphite	G-Graphoil	150#-150# Flange
1"		5-	5-	P-PEEK		300-300# Flange
1 1/4"		6-	6-	U-UHWMPE		600-600# Flange
1 1/2"			7-	B-Metal-Bronze		
2"			8-	S-Metal-Stellite		
3"			9-	I-Metal Inconel		
4"				K-Kel-F		

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