



SERIES F501

Two-Piece Ball Valve Flange End

INTRODUCTION

The Series F501 is a two-piece, full-bore flange valve designed with a robust Double D stem for reliable operation in demanding industrial environments. Certified with API 607 7th edition fire-safe standards, it provides outstanding safety in high-risk applications. Featuring an ATEX-certified anti-static component for enhanced reliability and a precision-engineered stem seal system for durable, leak-proof performance, the Series F501 is a versatile and dependable choice for critical industrial operations.

TECHNICAL SUMMARY

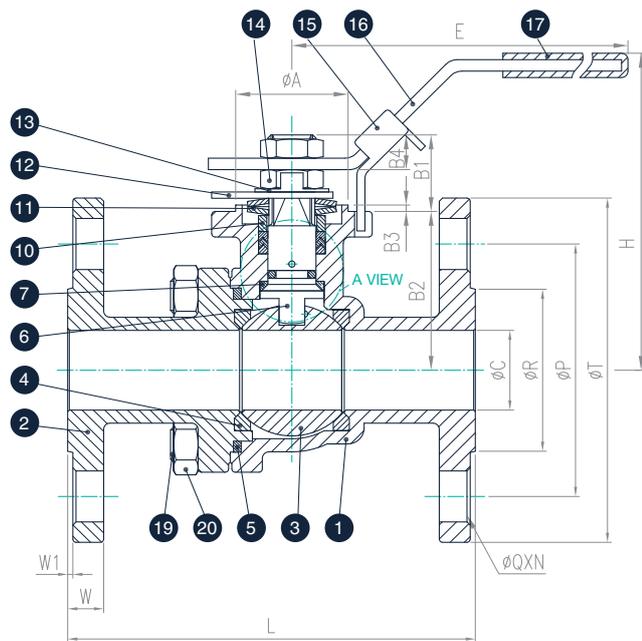
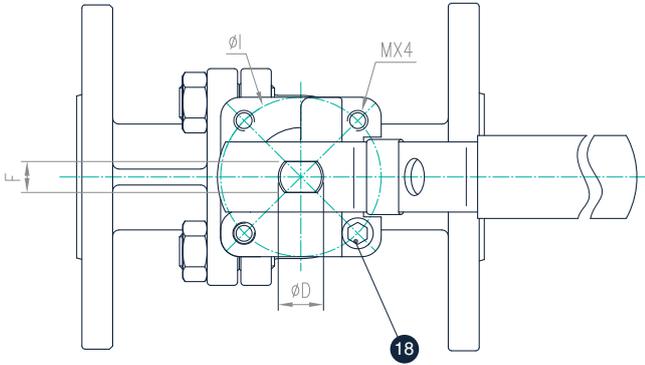
SIZE RANGE	1/2" ~ 4"
PRESSURE RATING	Class 150, PN16, PN40
VALVE TYPE	Full Bore
BODY & END CAP MATERIAL (ASTM)	CF8M, CF3M, CF8, CF3, WCB, CN7M, CD3MN, CE3MN, CW12MW, 904L, LCC, Titanium Alloy (Gr. C-2)
BODY & END CAP MATERIAL (EN)	1.4408, 1.4409, 1.4308, 1.4309, 1.0619, 1.4470
SEAT MATERIAL	PTFE, RTFE, CTFE, TFM1600, MG1241, STFE, PEEK, Delrin, UHMWPE, PCTFE
HANDLE TYPE	Flat (with / without SR Lock), Oval, T-Bar, Economical Stem Extension
HANDLE MATERIAL	Flat, Oval, T-Bar - 304, 316
V-PORT OPTION	Yes
WITH ANTI-STATIC DEVICE OPTION	Yes
OPERATION	Pneumatic or electric actuated

STANDARD OF COMPLIANCE

MATERIAL CERTIFICATION	EN 10204-3.1
DESIGN	ASME B16.34 / EN12516-1 / EN 12516-3
FLANGED END CONNECTIONS	EN 1092-1 PN16 / PN40 ASME B16.5 Class 150
PRESSURE TESTING	API 598
MOUNTING PAD	ISO 5211
FIRE SAFE	API 607 8 th Edition
MARKING	ISO 5209
CE APPROVAL	2014 / 68 / EU Module H
QUALITY ASSURANCE	ISO 9001:2015

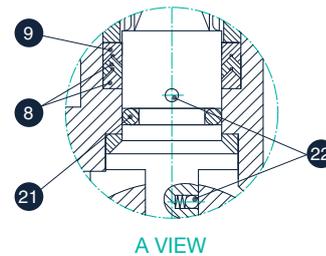
CONSTRUCTION-BILL OF MATERIAL

**SERIES F501-10
ASME CLASS 150
1/2"~ 2-1/2"**



NO.	Parts	Material	Qty
1	Body	CF8M / WCB	1
2	End cap	CF8M / WCB	1
3	Ball	SS316	1
4	Seat	RTFE	2
5	Joint Gasket	PTFE	1
6	Stem	SS316	1
7	Thrust Washer	RTFE	1
8	Gland Packing	PTFE	&
9	Gland Packing	25% GLASS FIBER FILED+PTFE	1
10	Gland Bush	SS304	1
11	Belleville Washer	SS301	2
12	Locking Plate	SS304	1
13	Stop Washer	SS304	1
14	Stem Nut	SS304	1
15	Locking Device	SS304	1
16	Handle	SS304	1
17	Handle Cover	VINYL	1
18	Stop Pin	SS304	1
19	Bolt	SS304	*
20	Bolt nut	SS304	*
21	O-Ring	VITON	1
22	Anti-static Device	SS316	2

1-1/2"~ 2" (4pcs of balts and bolt nuts) , 2-1/2" (8pcs of balts and bolt nuts)
& 1/2"~ 1-1/4" (2pcs) , 1-1/2"~2-1/2" (3pcs)
Without O-ring design available

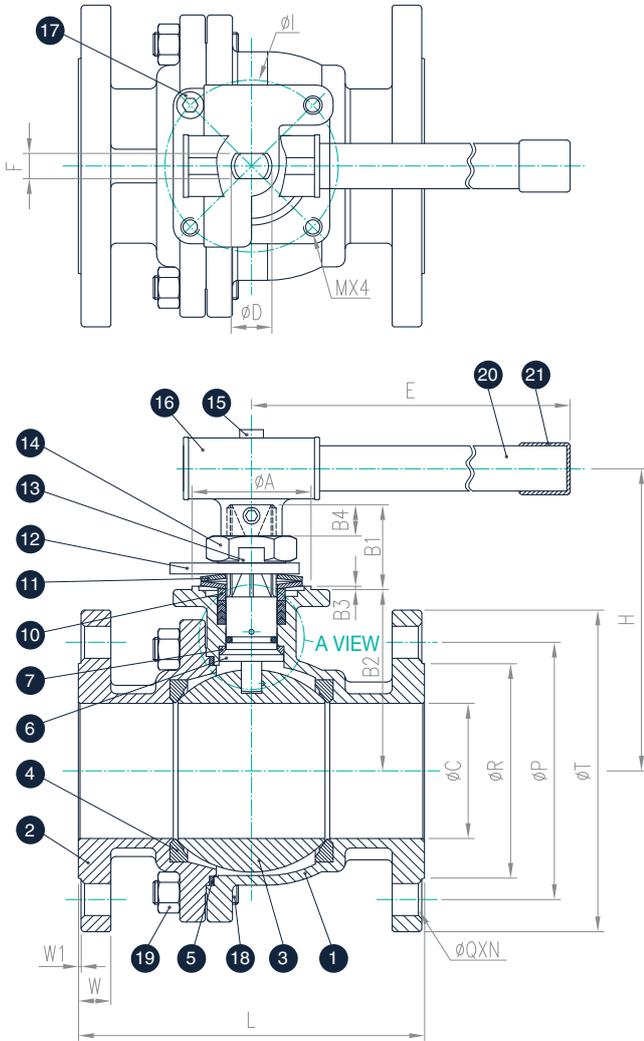


DIMENSIONS(mm)

SIZE	øA	B1	B2	B3	B4	øC	øD	E	F	H	øI	L	M	N	øP	øQ	øR	øT	W	W1	ISO5211
1/2"	30	23	34.5	1	9.2	15	11.1	170	8	80	42	108.3	108.3	4	60.5	16	35.1	88.9	11.2	1.6	FOR F04
3/4"	30	23	42	1	10.2	20	11.1	170	8	87	42	117.3	117.3	4	69.9	16	42.9	98.6	11.2	1.6	FOR F04
1"	35	23.5	49.8	2	8.1	25	14.3	207	9.7	103	50	127.1	127.1	4	79.2	16	50.8	108	11.2	1.6	FOR F05
1-1/4"	35	23.5	55	2	8.1	32	14.3	207	9.7	108	50	139.7	139.7	4	88.9	16	63.5	117.3	12.7	1.6	FOR F05
1-1/2"	55	34.8	78.3	2	14.8	38	19	261	12	153	70	165.1	165.1	4	98.6	16	73.2	127	14.3	1.6	FOR F07
2"	55	34.8	86.4	2	14.8	50	19	261	12	162	70	178.3	178.3	4	120.7	19	91.9	152.4	15.9	1.6	FOR F07
2-1/2"	55	34.8	97.4	2	14.8	65	19	261	12	173	70	190	190	4	139.7	19	104.6	177.8	17.6	1.6	FOR F07

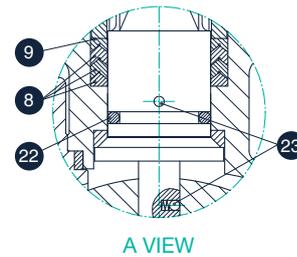
CONSTRUCTION-BILL OF MATERIAL

SERIES F501-10
ASME CLASS 150
3"~4"



NO.	Parts	Material	Qty
1	Body	CF8M / WCB	1
2	End cap	CF8M / WCB	1
3	Ball	CF8M	1
4	Seat	RTFE	2
5	Joint Gasket	PTFE	1
6	Stem	SS316	1
7	Thrust Washer	RTFE	1
8	Gland Packing	PTFE	3
9	Gland Packing	25% GLASS FIBER FILED+PTFE	1
10	Gland Bush	SS304	1
11	Belleville Washer	SS301	2
12	Locking Plate	SS304	1
13	Stop Washer	SS304	1
14	Stem Nut	SS304	1
15	Handle Screw	SS304	2
16	Handle-A	SS304	1
17	Stop Pin	SS304	1
18	Bolt	SS304	8
19	Bolt nut	SS304	8
20	Handle-B	SS304	1
21	Handle Cover	VINYL	1
22	O-Ring	VITON	1
23	Anti-static Device	SS316	2

Without O-ring design available

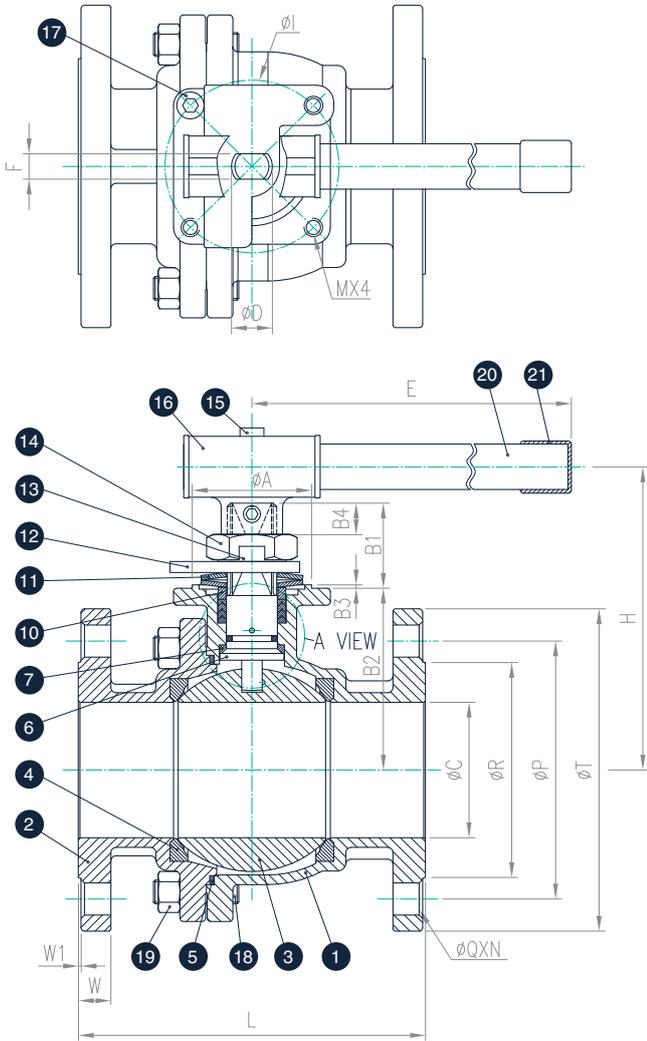


DIMENSIONS(mm)

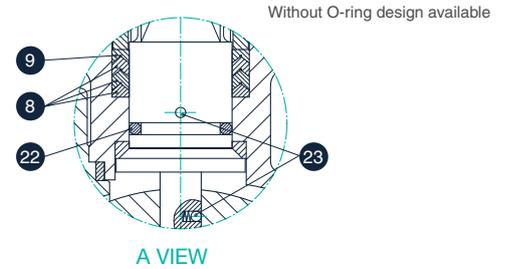
SIZE	øA	B1	B2	B3	B4	øC	øD	E	F	H	øI	L	M	N	øP	øQ	øR	øT	W	W1	ISO5211
3"	70	46	107.4	2	23.5	80	24	365	15	174.8	102	203.5	M10(3/8"-16UNC)	4	152.4	19	127	190.5	19	1.6	FOR F10
4"	70	46	122.4	2	23.5	100	24	365	15	189.9	102	228.6	M10(3/8"-16UNC)	8	190.5	19	157.2	228.6	23.9	1.6	FOR F10

CONSTRUCTION-BILL OF MATERIAL

**SERIES F501-40
PN16
3"~4"**



NO.	Parts	Material	Qty
1	Body	1.4408/1.0619	1
2	End cap	1.4408/1.0619	1
3	Ball	SS316/1.4408	1
4	Seat	RTFE	2
5	Joint Gasket	PTFE	1
6	Stem	SS316	1
7	Thrust Washer	RTFE	1
8	Gland Packing	PTFE	3
9	Gland Packing	25% GLASS FIBER FILED+PTFE	1
10	Gland Bush	SS304	1
11	Belleville Washer	SS301	2
12	Locking Plate	SS304	1
13	Stop Washer	SS304	1
14	Stem Nut	SS304	1
15	Handle Screw	SS304	2
16	Handle-A	SS304	1
17	Stop Pin	SS304	1
18	Bolt	SS304	8
19	Bolt nut	SS304	8
20	Handle-B	SS304	1
21	Handle Cover	VINYL	1
22	O-Ring	VITON	1
23	Anti-static Device	SS316	2

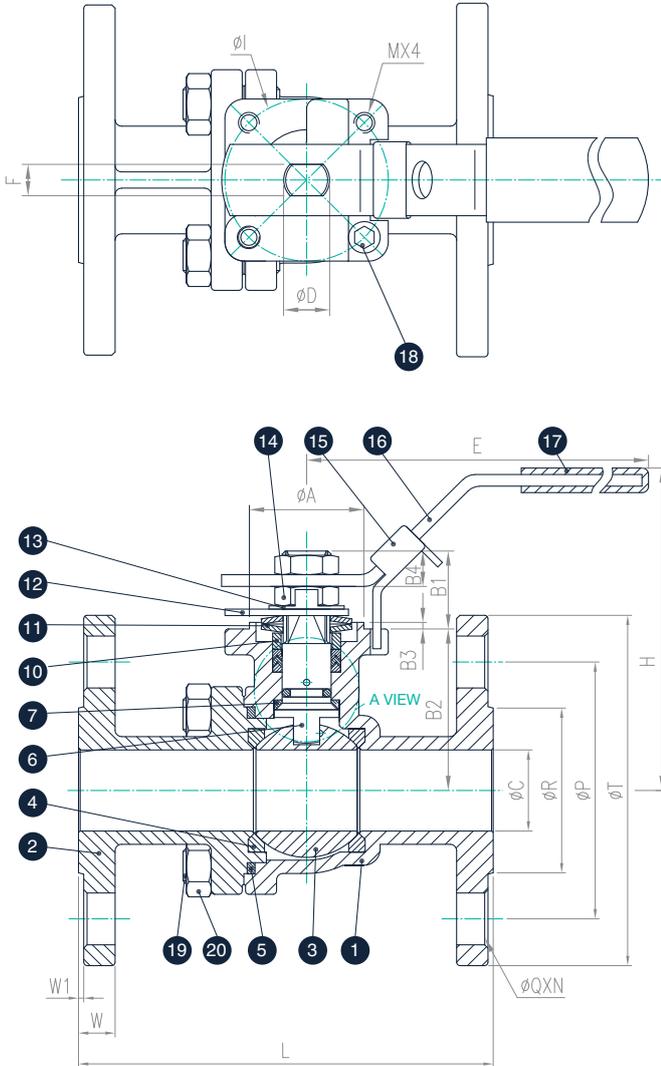


DIMENSIONS(mm)

SIZE	ϕA	B1	B2	B3	B4	ϕC	ϕD	E	F	H	ϕI	L		M	N	ϕP	ϕQ	ϕR	ϕT	W	W1	ISO5211
												F4	F1									
3"	70	46	108	2	23.5	80	24	365	15	175.4	102	180	310	M10	8	160	18	138	200	20	3	FOR F10
4"	70	46	123	2	23.5	100	24	365	15	190.5	102	190	350	M10	8	180	18	158	220	20	3	FOR F10

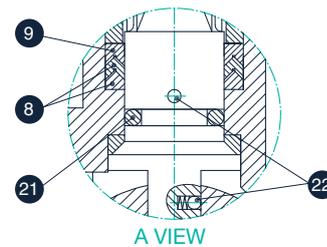
CONSTRUCTION-BILL OF MATERIAL

**SERIES F501-60
PN40
1/2"~ 2-1/2"**



NO.	Parts	Material	Qty
1	Body	1.4408/1.0619	1
2	End cap	1.4408/1.0619	1
3	Ball	SS316/1.4408	1
4	Seat	RTFE	2
5	Joint Gasket	PTFE	1
6	Stem	SS316	1
7	Thrust Washer	RTFE	1
8	Gland Packing	PTFE	&
9	Gland Packing	25% GLASS FIBER FILED+PTFE	1
10	Gland Bush	SS304	1
11	Belleville Washer	SS301	2
12	Locking Plate	SS304	1
13	Stop Washer	SS304	1
14	Stem Nut	SS304	2
15	Locking Device	SS304	1
16	Handle	SS304	1
17	Handle Cover	VINYL	1
18	Stop Pin	SS304	1
19	Bolt	SS304	*
20	Bolt nut	SS304	*
21	O-Ring	VITON	1
22	Anti-static Device	SS316	2

1/2"~ 2" (4pcs of balts and bolt nuts) , 2-1/2" (8pcs of balts and bolt nuts)
& 1/2"~ 1-1/4" (2pcs) , 1-1/2"~2-1/2" (3pcs)
Without O-ring design available

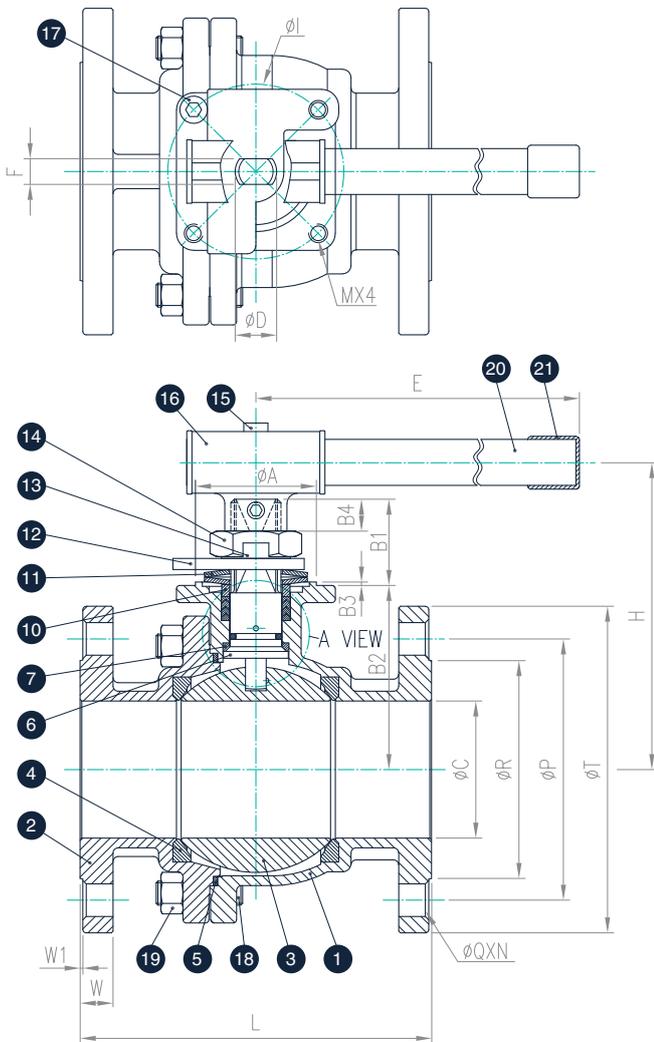


DIMENSIONS(mm)

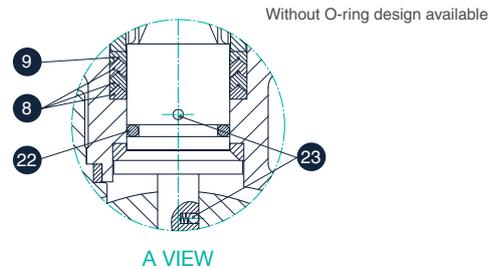
SIZE	øA	B1	B2	B3	B4	øC	øD	E	F	H	øI	L		M	N	øP	øQ	øR	øT	W	W1	ISO5211
												F4	F1									
1/2"	30	23	34.5	1	9.2	15	11.1	170	8	80	42	115	130	M5	4	65	14	45	95	16	2	FOR F04
3/4"	30	23	42.5	1	10.2	20	11.1	170	8	87	42	120	150	M5	4	75	14	58	105	18	2	FOR F04
1"	35	23.5	50	2	8.1	25	14.3	207	9.7	103	50	125	160	M6	4	85	14	68	115	18	2	FOR F05
1-1/4"	35	23.5	54.7	2	8.1	32	14.3	207	9.7	108	50	130	180	M6	4	100	18	78	140	18	2	FOR F05
1-1/2"	55	34.8	78	2	14.8	38	19	261	12	153	70	140	200	M8	4	110	18	88	150	18	3	FOR F07
2"	55	34.8	86.7	2	14.8	50	19	261	12	162	70	150	230	M8	4	125	18	102	165	20	3	FOR F07
2-1/2"	55	34.8	98	2	14.8	65	19	261	12	173	70	170	290	M8	8	145	18	122	185	22	3	FOR F07

CONSTRUCTION-BILL OF MATERIAL

**SERIES F501-60
PN40
3"~4"**



NO.	Parts	Material	Qty
1	Body	1.4408/1.0619	1
2	End cap	1.4408/1.0619	1
3	Ball	SS316/1.4408	1
4	Seat	RTFE	2
5	Joint Gasket	PTFE	1
6	Stem	SS316	1
7	Thrust Washer	RTFE	1
8	Gland Packing	PTFE	3
9	Gland Packing	25% GLASS FIBER FILED+PTFE	1
10	Gland Bush	SS304	1
11	Belleville Washer	SS301	2
12	Locking Plate	SS304	1
13	Stop Washer	SS304	1
14	Stem Nut	SS304	1
15	Handle Screw	SS304	2
16	Handle-A	SS304	1
17	Stop Pin	SS304	1
18	Bolt	SS304	8
19	Bolt nut	SS304	8
20	Handle-B	SS304	1
21	Handle Cover	VINYL	1
22	O-Ring	VITON	1
23	Anti-static Device	SS316	2



DIMENSIONS(mm)

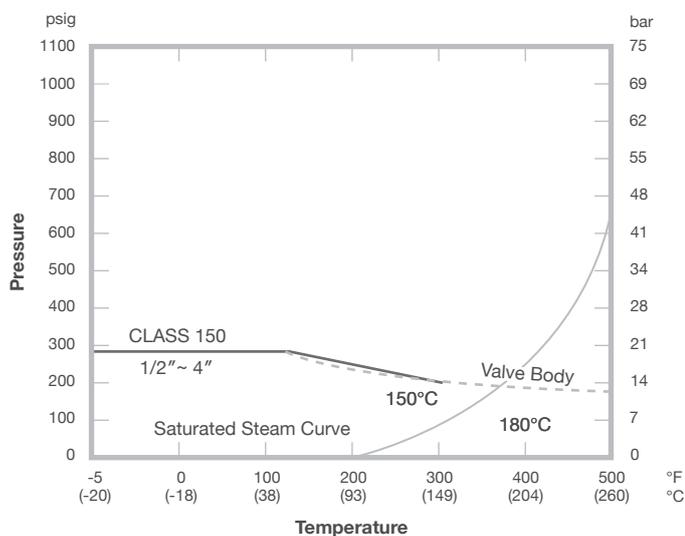
SIZE	øA	B1	B2	B3	B4	øC	øD	E	F	H	øI	L		M	N	øP	øQ	øR	øT	W	W1	ISO5211
												F4	F1									
3"	70	46	108	2	23.5	80	24	365	15	175.4	102	180	310	M10	8	160	18	138	200	24	3	FOR F10
4"	70	46	123	2	23.5	100	24	365	15	190.5	102	190	350	M10	8	190	22	162.6	235	24	3	FOR F10

TECHNICAL DATA | Breakaway torque / Cv and Kv values / Weight

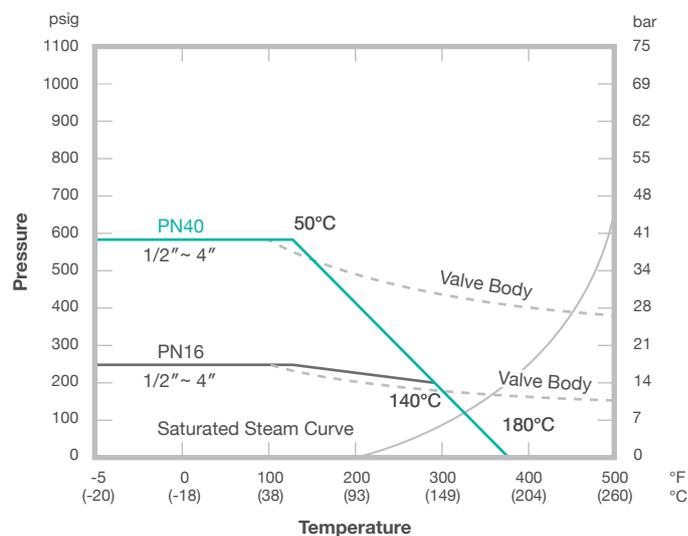
Size	Torque		Cv values	Kv values (M ³ /h)	Weight (Kg)		
	N.m	lbs.in			F501-10	F501-40	F501-60
1/2"	9	80	15	13	1.7	2.3	2.3
3/4"	13	115	40	34	2.2	3.1	3.1
1"	14	124	70	60	3.2	4.2	4.2
1-1/4"	22	195	110	94	4	5.6	5.6
1-1/2"	26	230	250	213	6.3	7.7	7.7
2"	35	310	430	366	9.3	9.5	10.2
2-1/2"	53	470	700	595	14.1	14	15
3"	78	691	1100	935	19.3	20.3	20.3
4"	94	833	2000	1700	31	30	30

TECHNICAL DATA | Pressure - Temperature diagram | 1/2" ~ 4"

Seat material : PTFE / RTFE



Seat material : PTFE / RTFE



OPTIONAL ACCESSORIES

Handle Options



Oval Handle



Flat (with / without Spring Return Lock)

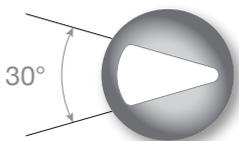


Economical Stem Extension

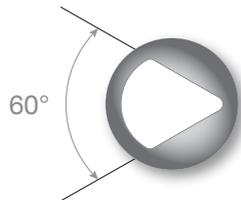


T-Bar Handle

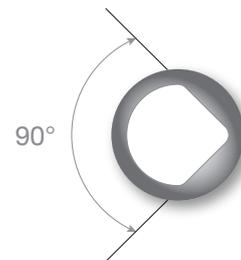
V-Port Ball



30°



60°



90°

Accessories



Actuator



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Established in 1992
TAWD has dedicated over 30 years to
manufacturing premium ball valves

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