



SERIES F301

One-Piece Ball Valve Flange End



INTRODUCTION

The Series F301 is a direct-mount, wafer-pattern ball valve offering exceptional performance in industrial and chemical environments, including hazardous conditions. It features a compact one-piece design with LUG flanges and a patented stem seal for extended reliability. Equipped with ATEX-approved anti-static components, the valve is designed for versatile use in applications involving liquids, gases, and vapors.

TECHNICAL SUMMARY

SIZE RANGE	NPS 1/2 to 6 (DN 15 to 150)
PRESSURE RATING	CLASS 150 / PN16, PN40
VALVE TYPE	Full Bore
BODY & END CAP MATERIAL (ASTM)	CF8M, CF3M, CF8, CF3, WCB
BODY & END CAP MATERIAL (EN)	1.4408, 1.4409, 1.4308, 1.4309, 1.0619
SEAT MATERIAL	PTFE, RTFE, CTFE, TFM1600, MG1241, STFE, PEEK, Delrin, UHMWPE, PCTFE
HANDLE TYPE	Flat, T-Bar
V-PORT OPTION	Yes

STANDARD OF COMPLIANCE

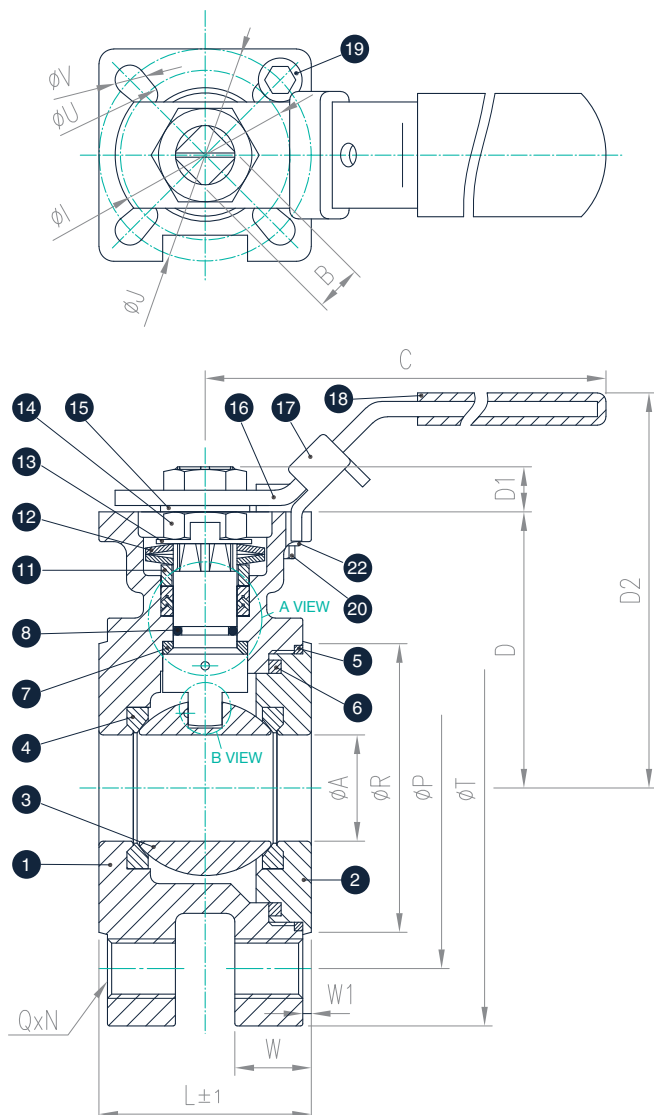
MATERIAL CERTIFICATION	EN 10204-3.1
DESIGN	ASME B16.34
	EN 12516-1
FLANGED END CONNECTIONS	ASME B16.5
	EN 1092-1
PRESSURE TESTING	API 598
	EN 12266-1
MOUNTING PAD	ISO 5211
FIRE SAFE	API 607
	ISO 10497
MARKING	ISO 5209
CE APPROVAL	2014 / 68 / EU Module H
QUALITY ASSURANCE	ISO 9001

CONSTRUCTION-BILL OF MATERIAL

SERIES F301-10

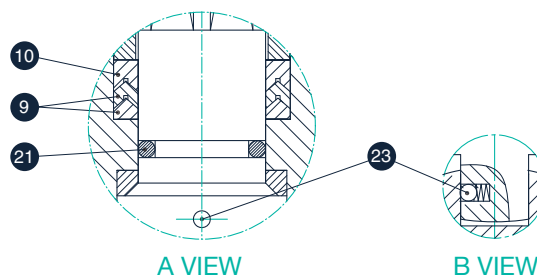
PN 16

1/2" ~ 3"



NO.	Parts	Material	Qty
1	Body	1.4408 / 1.0619	1
2	End Cap	4.4408 / 1.0619	1
3	Ball	SS316 / 1.4408	1
4	Seat	PTFE	2
5	Joint Gasket	PTFE	1
6	Joint Gasket	PTFE	1
7	Thrust Washer	RTFE	1
8	Stem	SS316	1
9	Gland Packing	PTFE	*
10	Gland Bush	25% GLASS FIBER FILED+PTFE	1
11	Gland Bush	SS304	1
12	Belleville Washer	SS301	2
13	Stop Washer	SS304	1
14	Stem Nut	SS304	2
15	Stem Washer	SS304	1
16	Handle	SS304	1
17	Locking Device	SS304	1
18	Handle Cover	PLASTIC	1
19	Stop Pin	SS304	1
20	Pin Nut	SS304	1
21	O-Ring	VITON	1
22	Washer	SS304	1
23	Anti-static Device	SS316	2

1/2" ~ 2" (2pcs) , 2-1/2" ~ 3" (3pcs)

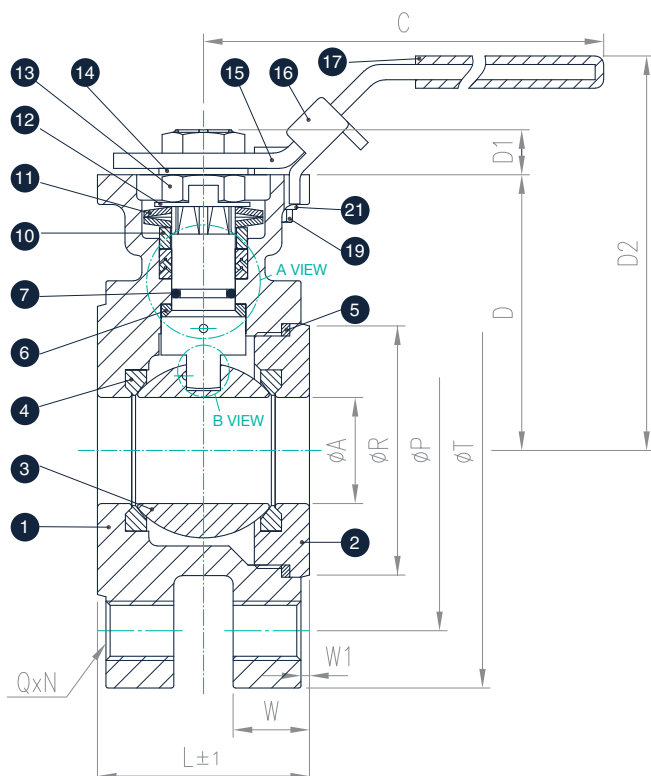
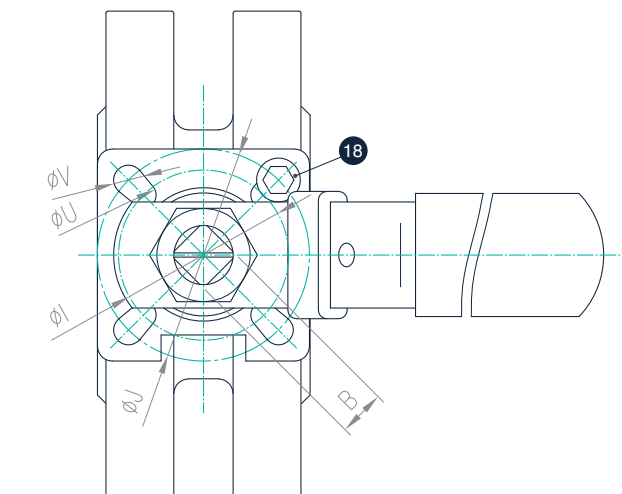


DIMENSIONS(mm)

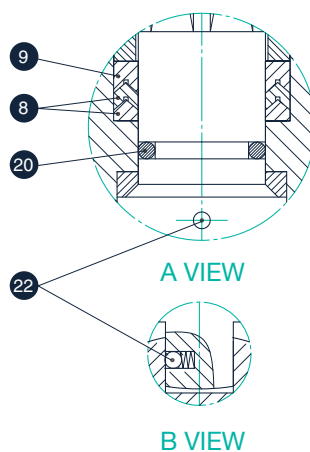
SIZE	φA	B	C	D	D1	D2	φI	φJ	L	N	φP	Q	φR	φT	W	W1	φU	φV	ISO5211
1/2"	15	9	139	48.7	7	85	36	42	40.8	4	65	M12	45	82	16	2	6	6	FOR F03 / F04
3/4"	20	9	139	53.7	8	90	36	42	44	4	75	M12	58	98.6	18	2	6	6	FOR F03 / F04
1"	25	11	165	65	12	104	42	50	50	4	85	M12	68	115	18	2	6	7	FOR F04 / F05
1-1/4"	32	11	165	77	11.3	116	42	50	60	4	100	M16	78	140	18	2	6	7	FOR F04 / F05
1-1/2"	38	14	215	85.5	15.5	135	50	70	65	4	110	M16	88	150	18	3	7.5	9	FOR F05 / F07
2"	50	14	215	93	16	142	50	70	80	4	125	M16	102	165	20	3	7.5	9	FOR F05 / F07
2-1/2"	65	17	263	109.7	15.8	168	70	102	110	4	145	M16	122	185	22	3	10	12	FOR F07 / F10
3"	80	17	313	119.5	16	178	70	102	120	8	160	M16	138	200	24	3	10	12	FOR F07 / F10

CONSTRUCTION-BILL OF MATERIAL

SERIES F301-10 PN 16 4"



NO.	Parts	Material	Qty
1	Body	1.4408 / 1.0619	1
2	End Cap	4.4408 / 1.0619	1
3	Ball	SS316 / 1.4408	1
4	Seat	PTFE	2
5	Joint Gasket	PTFE	1
6	Thrust Washer	RTFE	1
7	Stem	SS316	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	Stop Washer	SS304	1
13	Stem Nut	SS304	2
14	Stem Washer	SS304	1
15	Handle	SS304	1
16	Locking Device	SS304	1
17	Handle Cover	PLASTIC	1
18	Stop Pin	SS304	1
19	Pin Nut	SS304	1
20	O-Ring	VITON	1
21	Washer	SS304	1
22	Anti-static Device	SS316	2

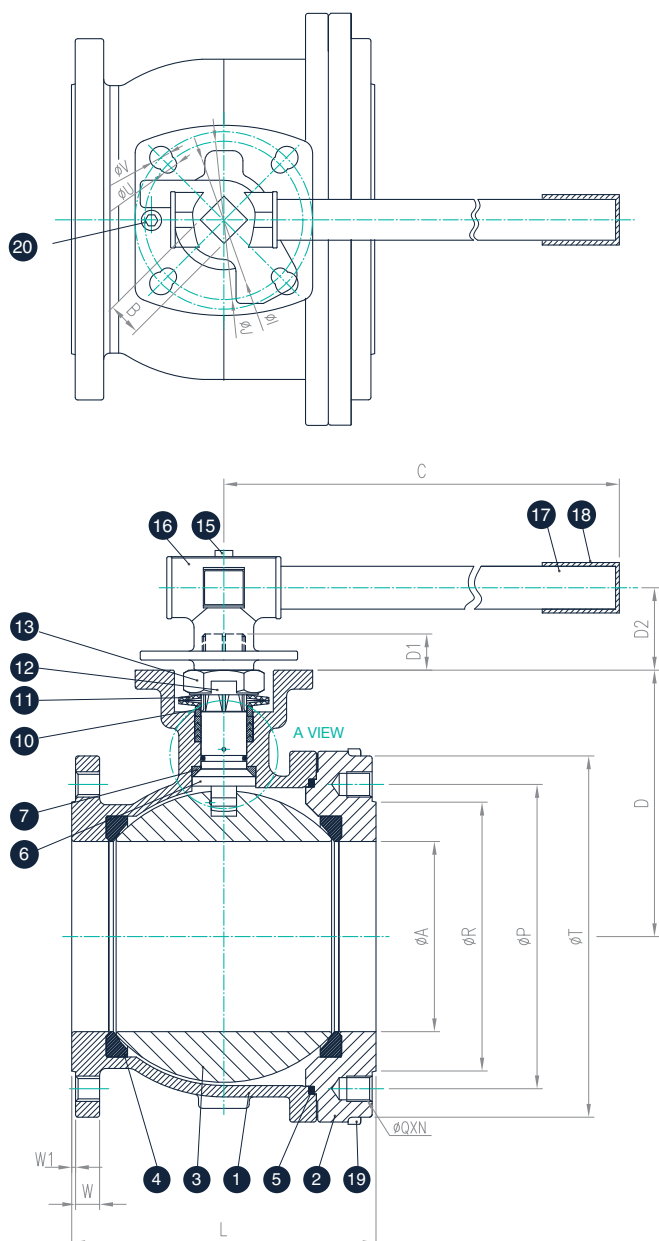


DIMENSIONS(mm)

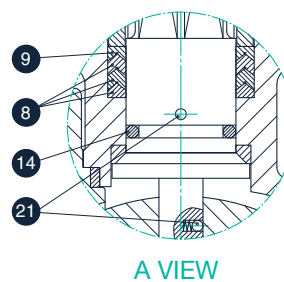
SIZE	ϕA	B	C	D	D1	D2	ϕI	ϕJ	L	N	ϕP	Q	ϕR	ϕT	W	W1	ϕU	ϕV	ISO5211
4"	100	17	344	131.7	17.8	190	70	102	150	8	180	M16	158	220	20	3	10	12	FOR F07 / F10

CONSTRUCTION-BILL OF MATERIAL

SERIES F301-10 PN 16 5" , 6"



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	PTFE	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	Stop Washer	SS304	1
13	Stem Nut	SS304	1
14	O-Ring	VITON	1
15	Handle Screw	SS304	2
16	Handle-A	SS304	1
17	Handle-B	CARBON	1
18	Handle Cover	VINYL	1
19	Bolt	SS304	8
20	Stop Pin	SS304	1
21	Anti-static Device	SS316	2

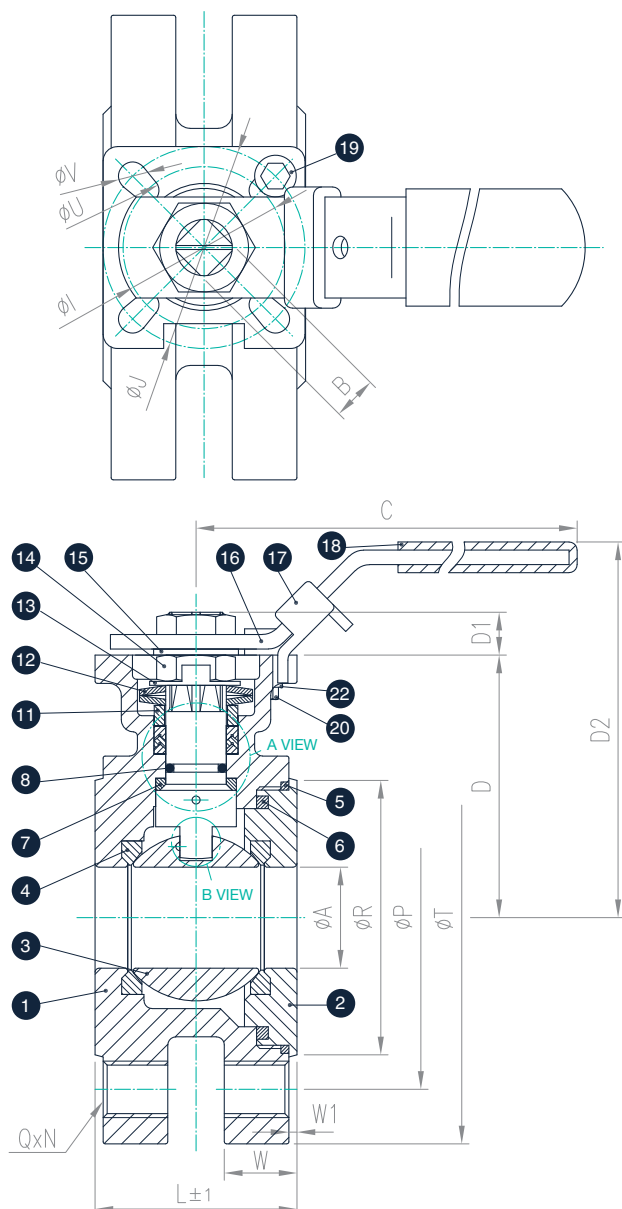


DIMENSIONS(mm)

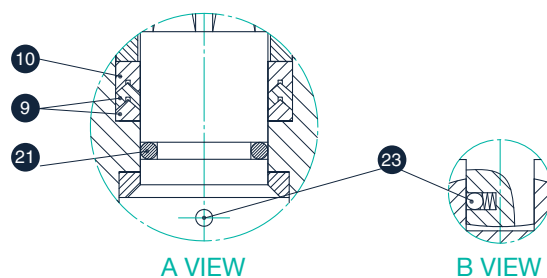
SIZE	øA	B	C	D	D1	D2	øI	øJ	L	N	øP	Q	øR	øT	W	W1	øU	øV	ISO5211
5"	125	27	705	192.7	28.5	66.5	125	140	200	8	210	M16	188	250	20.9	3	14	18	FOR F12 / F14
6"	150	27	705	210.2	28.5	66.5	125	140	240	8	240	M20	212	285	22.4	3	14	18	FOR F12 / F14

CONSTRUCTION-BILL OF MATERIAL

SERIES F301-20 PN 40 1/2" ~ 3"



NO.	Parts	Material	Qty
1	Body	1.4408 / 1.0619	1
2	End Cap	4.4408 / 1.0619	1
3	Ball	SS316 / 1.4408	1
4	Seat	PTFE	2
5	Joint Gasket	PTFE	1
6	Joint Gasket	PTFE	1
7	Thrust Washer	RTFE	1
8	Stem	SS316	1
9	Gland Packing	PTFE	*
10	Gland Bush	25% GLASS FIBER FILED+PTFE	1
11	Gland Bush	SS304	1
12	Belleville Washer	SS301	2
13	Stop Washer	SS304	1
14	Stem Nut	SS304	2
15	Stem Washer	SS304	1
16	Handle	SS304	1
17	Locking Device	SS304	1
18	Handle Cover	PLASTIC	1
19	Stop Pin	SS304	1
20	Pin Nut	SS304	1
21	O-Ring	VITON	1
22	Washer	SS304	1
23	Anti-static Device	SS316	2

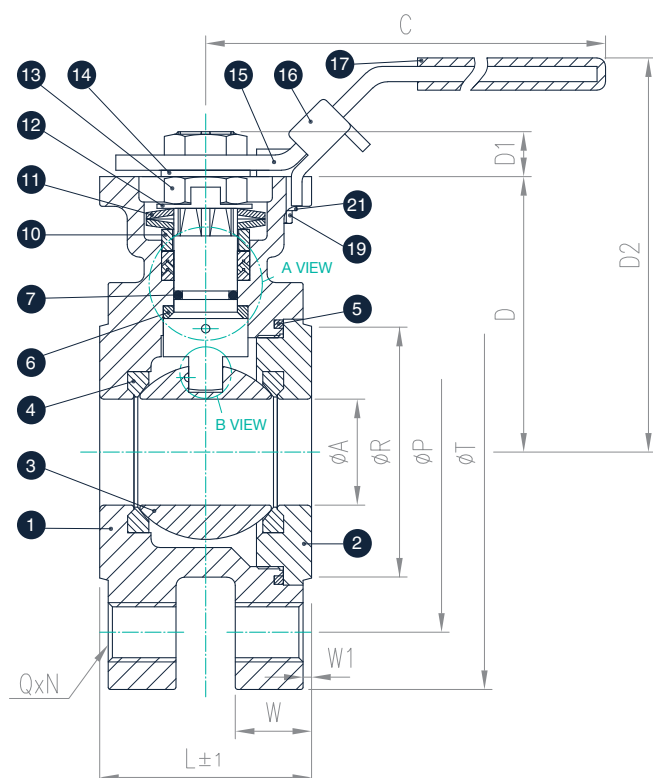
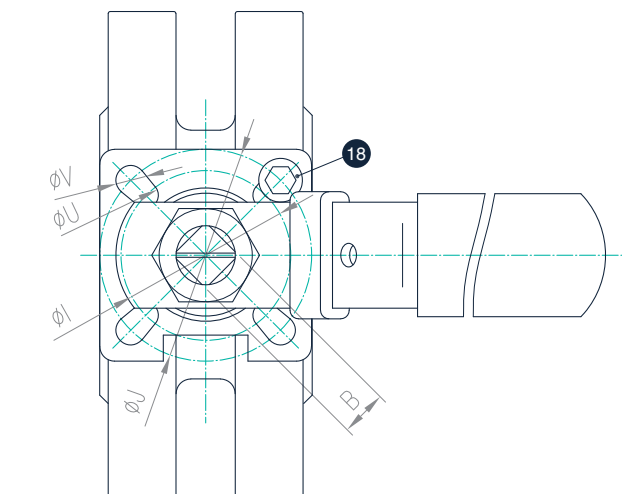


DIMENSIONS(mm)

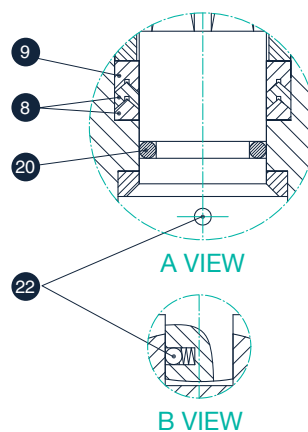
SIZE	ØA	B	C	D	D1	D2	ØI	ØJ	L	N	ØP	Q	ØR	ØT	W	W1	ØU	ØV	ISO5211
1/2"	15	9	139	48.7	7	85	36	42	40.8	4	65	M12	45	82	16	2	6	6	FOR F03 / F04
3/4"	20	9	139	53.7	8	90	36	42	44	4	75	M12	58	98.6	18	2	6	6	FOR F03 / F04
1"	25	11	165	65	12	104	42	50	50	4	85	M12	68	115	18	2	6	7	FOR F04 / F05
1-1/4"	32	11	165	77	11.3	116	42	50	60	4	100	M16	78	140	18	2	6	7	FOR F04 / F05
1-1/2"	38	14	215	85.5	15.5	135	50	70	65	4	110	M16	88	150	18	3	7.5	9	FOR F05 / F07
2"	50	14	215	93	16	142	50	70	80	4	125	M16	102	165	20	3	7.5	9	FOR F05 / F07
2-1/2"	65	17	263	109.7	15.8	168	70	102	110	4	145	M16	122	185	22	3	10	12	FOR F07 / F10
3"	80	17	313	119.5	16	178	70	102	120	8	160	M16	138	200	24	3	10	12	FOR F07 / F10

CONSTRUCTION-BILL OF MATERIAL

SERIES F301-20 PN 40 4"



NO.	Parts	Material	Qty
1	Body	1.4408 / 1.0619	1
2	End Cap	4.4408 / 1.0619	1
3	Ball	SS316 / 1.4408	1
4	Seat	PTFE	2
5	Joint Gasket	PTFE	1
6	Thrust Washer	RTFE	1
7	Stem	SS316	1
8	Gland Packing	PTFE	3
9	Gland Bush	25% GLASS FIBER FILED+PTFE	1
10	Gland Bush	SS304	1
11	Belleville Washer	SS301	2
12	Stop Washer	SS304	1
13	Stem Nut	SS304	2
14	Stem Washer	SS304	1
15	Handle	SS304	1
16	Locking Device	SS304	1
17	Handle Cover	PLASTIC	1
18	Stop Pin	SS304	1
19	Pin Nut	SS304	1
20	O-Ring	VITON	1
21	Washer	SS304	1
22	Anti-static Device	SS316	2

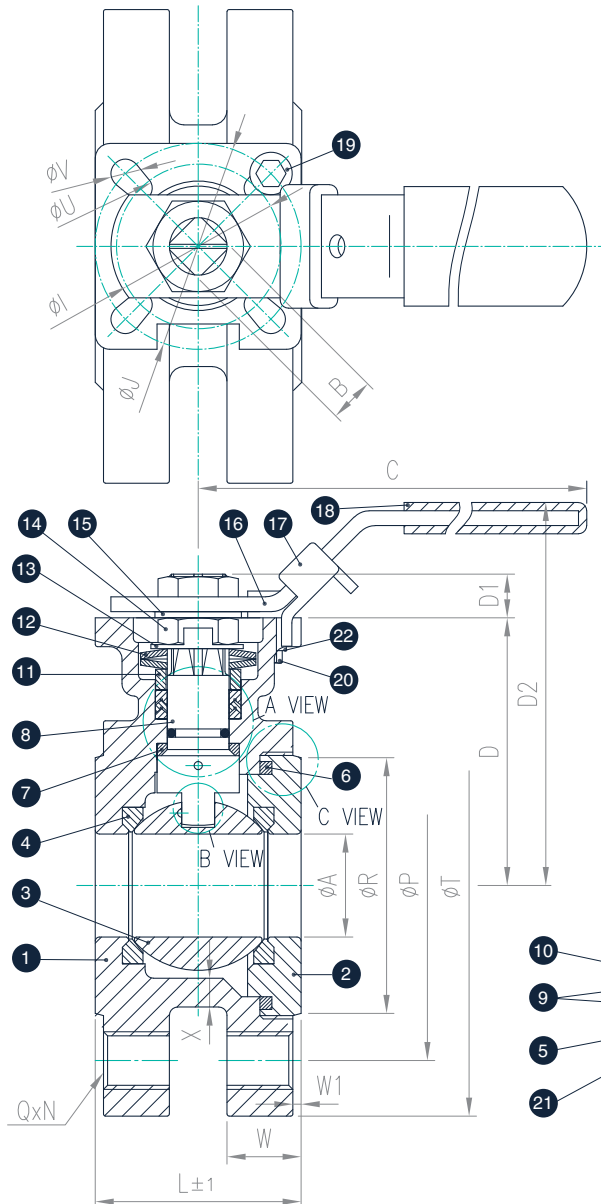


DIMENSIONS(mm)

SIZE	øA	B	C	D	D1	D2	øI	øJ	L	N	øP	Q	øR	øT	W	W1	øU	øV	ISO5211
4"	100	17	344	132.7	17.8	191	70	102	150	8	190	M20	162	235	24	3	10	12	FOR F07 / F10

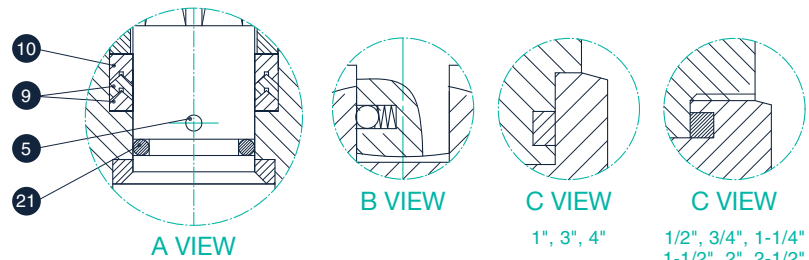
CONSTRUCTION-BILL OF MATERIAL

SERIES F301-30 ANSI CLASS 150 1/2" ~ 4"



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

1/2" ~ 2" (2pcs) , 2-1/2" ~ 4" (3pcs)



DIMENSIONS(mm)

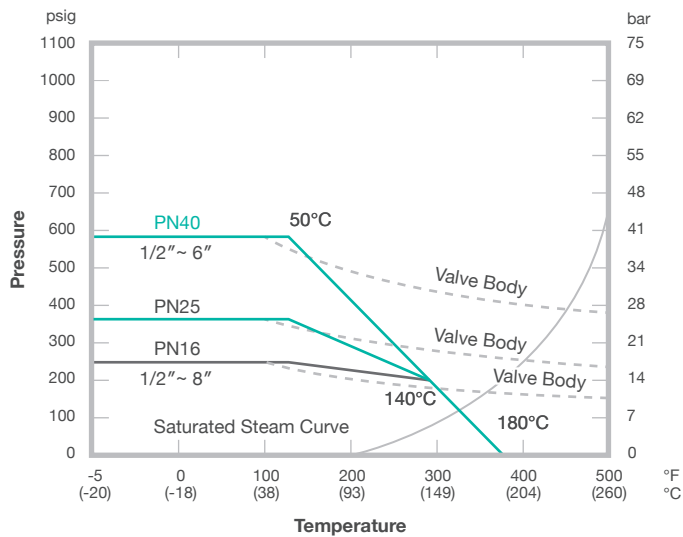
SIZE	ϕA	B	C	D	D1	D2	ϕI	ϕJ	L	N	ϕP	Q	ϕR	ϕT	W	W1	ϕU	ϕV	X	ISO5211
1/2"	15	9	139	48.7	7	85	36	42	40.8	4	60.5	1/2-13NUC	35.1	88.9	11.2	1.6	6	6	7.5	FOR F03 / F04
3/4"	20	9	139	53.7	8	90	36	42	44	4	69.9	1/2-13NUC	42.9	98.6	11.2	1.6	6	6	9	FOR F03 / F04
1"	25	11	165	65	12	104	40	50	50	4	79.2	1/2-13NUC	64	108	11.2	1.6	6	7	7	FOR F04 / F05
1-1/4"	32	11	165	77	11.3	116	40	50	60	4	88.9	1/2-13NUC	63.7	117.3	12.7	1.6	6	7	7	FOR F04 / F05
1-1/2"	38	14	215	85.5	15.5	135	50	70	65	4	98.6	1/2-13NUC	73.2	127	14.3	1.6	7.5	9	5.5	FOR F05 / F07
2"	50	14	215	93	16	142	50	70	80	4	120.7	5/8-11NUC	92.3	152.4	15.9	1.6	7.5	9	6	FOR F05 / F07
2-1/2"	65	17	263	109.7	15.8	168	70	102	110	4	139.7	5/8-11NUC	104.6	177.8	17.6	1.6	10	12	8	FOR F07 / F10
3"	80	17	313	119.5	16	178	70	102	120	4	152.4	5/8-11NUC	127	190.5	18	1.6	10	12	9	FOR F07 / F10
4"	100	17	344	132.7	17.8	191	70	102	150	8	190.5	5/8-11NUC	157.2	228.6	23.9	1.6	10	12	9.2	FOR F07 / F10

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

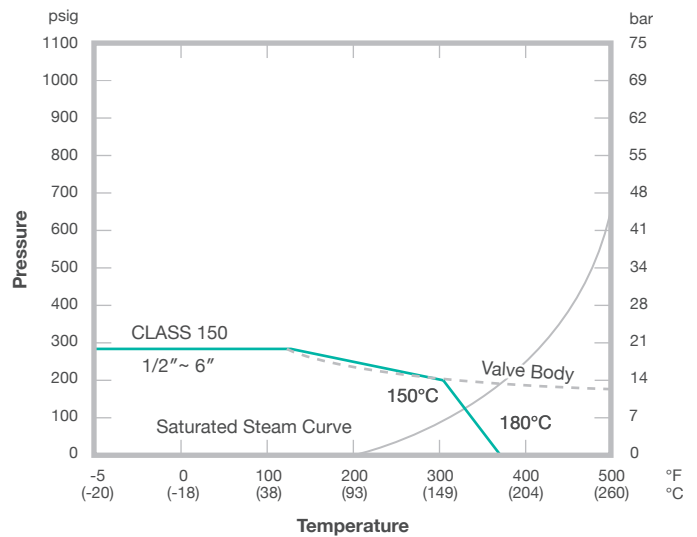
Size	Torque		Cv values	Kv values (M ³ /h)	Weight (Kg)		
	N.m	lbs.in			F301-10	F301-20	F301-30
1/2"	5	44	15	13	2	1.3	1.16
3/4"	7	62	40	34	2.5	2.5	1.48
1"	16	142	70	60	2.76	2.76	1.98
1-1/4"	18	159	110	94	4.12	4.12	2.91
1-1/2"	29	257	250	213	5.22	5.22	3.83
2"	36	319	430	366	7	6.88	6.09
2-1/2"	60	532	700	595	11.85	11.6	11.2
3"	74	656	1100	935	14.9	15	13.4
4"	90	797	2000	1700	19.81	23.57	23.38
5"	221	1958	3700	3145	50.8	-	51.6
6"	234	2073	5400	4590	68.2	-	69.1

TECHNICAL DATA | Pressure - Temperature diagram | 1/2" ~ 6"

F301-10 / F301-20
Seat material : PTFE / RTFE



F301-30
Seat material : PTFE / RTFE



OPTIONAL ACCESSORIES

| Handle options



Oval handle

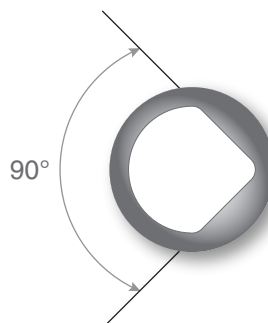
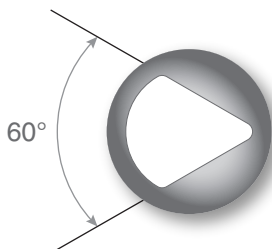
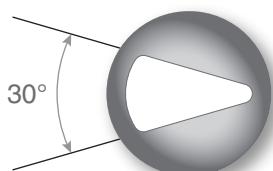


Economical stem extension



Spring return sliding lock

| V Port ball



| TSM





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

INNOVATION

INTEGRITY

STRICT SELECTION