



SERIES F303

One-Piece Ball Valve Flange End



INTRODUCTION

The Series F303 is a direct-mount, one-piece reduced-bore flange ball valve engineered for reliable performance in industrial applications. Certified with API 607 7th edition fire-safe standards, it ensures robust safety in high-risk environments. Featuring a unique stem seal for enhanced durability and ATEX-approved anti-static components, the valve is designed for versatile use across a wide range of processes involving liquids, gases, and vapors.

TECHNICAL SUMMARY

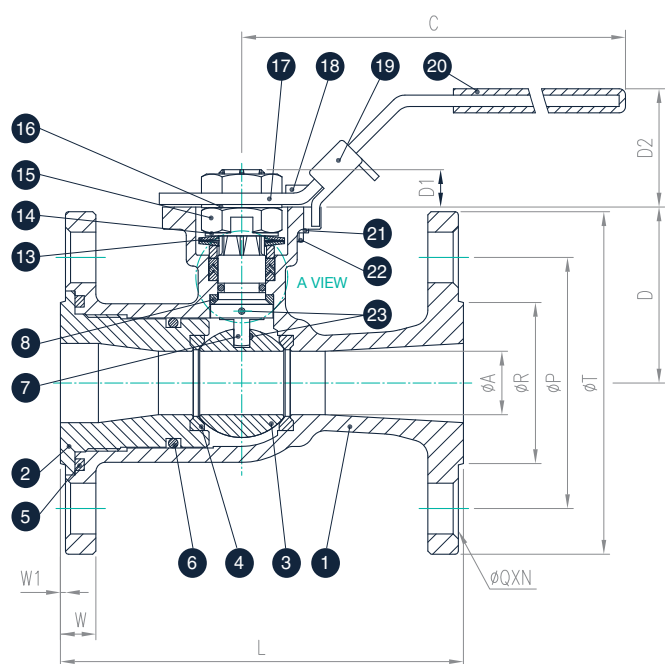
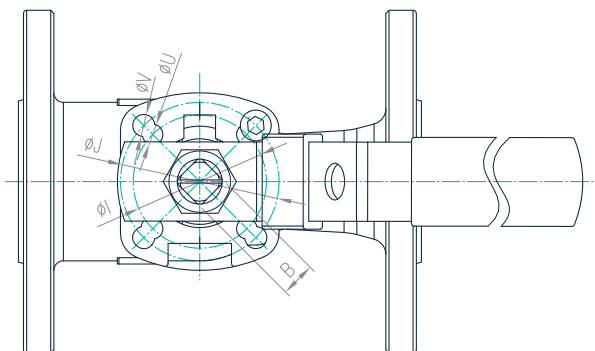
SIZE RANGE	Full port	1/4" ~ 4"	
	Reduced port	1/2" ~ 4"	
PRESSURE RATING	Full port	1/4" ~ 1"	: 2000psi / Class 800 / PN100
		1-1/4" ~ 1-1/2"	: 1500psi / Class 600 / PN100
		2" ~ 4"	: 1000psi / Class 400 / PN63
	Reduced port	1/2" ~ 2-1/2"	: 1500psi / Class 600 / PN100
		3" ~ 4"	: 1000psi / Class 400 / PN63
END CONNECTIONS	Threaded, Butt weld, Socket weld, Flanged, Tube (ISO) Butt weld		
VALVE TYPE	Reduced 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), T-Bar, Economical Stem Extension		
HANDLE MATERIAL	Flat & T-Bar - 304, 316		
V-PORT OPTION	N/A		
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
THREADED END CONNECTIONS	NPT ASME B1.20.1
	BSPP ISO 228-1
	BSPT ISO 7-1
	DIN 2999
SOCKET WELD END CONNECTIONS	ASME B16.11
BUTT WELD END CONNECTIONS	ASME B16.25
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 6 th Edition
MARKING	ISO 5209
CE APPROVAL	2014 / 68 / EU Module H
QUALITY ASSURANCE	ISO 9001:2015

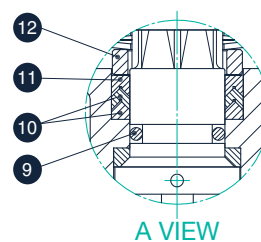
CONSTRUCTION-BILL OF MATERIAL

SERIES F303-10 1/2" ~ 2" Reduced port



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	O-Ring	VITON	1
7	Stem	SS316	1
8	Thrust Washer	RTFE	1
9	O-Ring	VITON	1
10	Gland Packing	PTFE	*
11	Gland Packing	25% GLASS FIBER FILED+PTFE	1
12	Gland Bush	SS304	1
13	Belleville Washer	SS301	2
14	Stop Washer	SS304	1
15	Stem Nut	SS304	2
16	Stem Washer	SS304	1
17	Handle	SS304	1
18	Stop Pin	SS304	1
19	Locking Device	SS304	1
20	Handle Cover	VINYL	1
21	Washer	SS304	1
22	Pin Nut	SS304	1
23	Anti-static Device	SS316	2

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

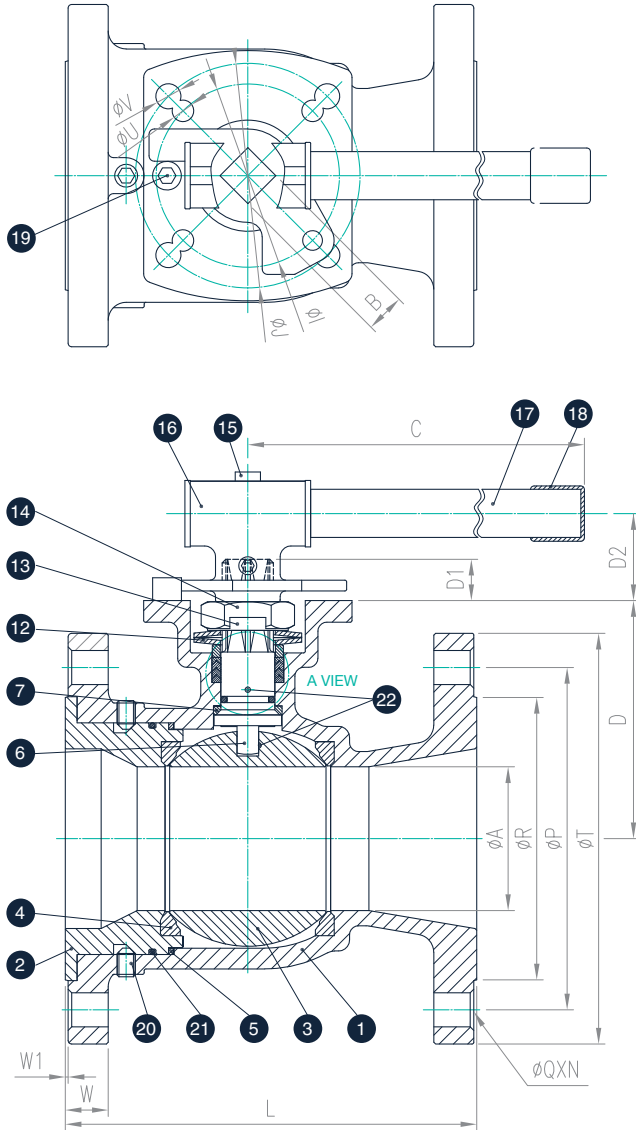


DIMENSIONS(mm)

SIZE	øA	B	C	D	D1	D2	øI	øJ	L	N	øP	øQ	øR	øT	W	W1	øU	øV	ISO5211
1/2"	12.7	11	165	46.7	9.4	36	42	50	108.3	4	60.5	16	35.1	88.9	11.2	1.6	6.5	7	FOR F04 / F05
3/4"	15	11	165	51.2	9.9	36	42	50	117.3	4	69.9	16	42.9	98.6	11.2	1.6	6.5	7	FOR F04 / F05
1"	20	11	165	55.5	9.9	36	42	50	127.1	4	79.2	16	50.8	108	11.2	1.6	6.5	7	FOR F04 / F05
1-1/2"	32	14	215	72.6	12.9	47	50	70	165.1	4	98.6	16	73.2	127	14.3	1.6	7.5	9	FOR F05 / F07
2"	38	17 / 19	262	89.1	18.1	55	70	102	178.3	4	120.7	19	91.9	152.4	15.9	1.6	10	12	FOR F07 / F10

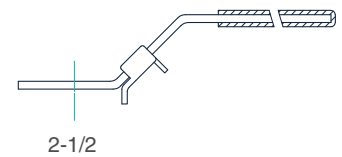
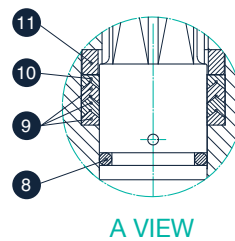
CONSTRUCTION-BILL OF MATERIAL

SERIES F303-10 2-1/2" ~ 6" Reduced port



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	O-Ring	VITON	1
9	Gland Packing	PTFE	3
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	1
15	Handle Screw	SS304	2
16	Handle -A	SS304	1
17	Handle-B	SS304 / CARBON	1
18	Handle Cover	VINYL	1
19	Stop Pin	SS304	1
20	Screw	SS304	*
21	O-Ring	VITON	1
22	Anti-static Device	SS316	2

2-1/2" ~ 4" (4pcs) , 6" (8pcs)
3" ~ 4" Handle-B material is SS304
6" Handle-B material is CARBON

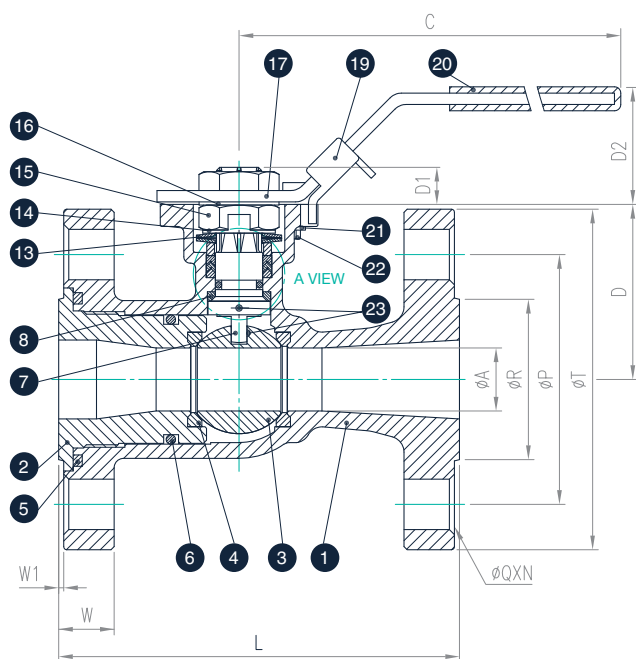
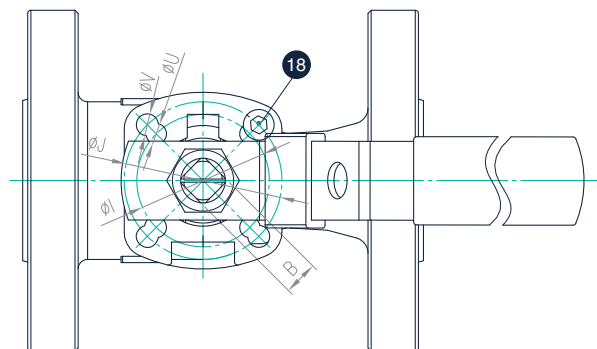


DIMENSIONS(mm)

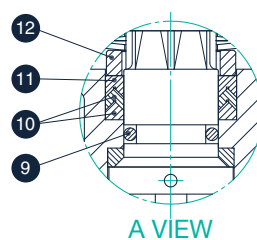
SIZE	øA	B	C	D	D1	D2	øI	øJ	L	N	øP	øQ	øR	øT	W	W1	øU	øV	ISO5211
2-1/2"	50	17 / 19	262	96.6	19	55	70	102	190	4	139.7	19	104.6	177.8	17.6	1.6	10	12	FOR F07 / F10
3"	65	17 / 19	365	116	19	44.3	70	102	203.5	4	152.4	19	127	190.5	19	1.6	10	12	FOR F07 / F10
4"	80	22	365	132.5	23	48.4	102	125	228.6	8	190.5	19	157.2	228.6	23.9	1.6	12	14	FOR F10 / F12
6"	111	27	705	179.7	28.5	65	125	140	266.7	8	241.3	22.2	215.9	279.4	25.4	1.6	14	18	FOR F12 / F14

CONSTRUCTION-BILL OF MATERIAL

SERIES F303-20 1/2" ~ 2" Reduced port



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	SPIRAL WOUND SS316 WITH GRAPHITE	1
6	O-Ring	VITON	1
7	Stem	SS316	1
8	Thrust Washer	RTFE	1
9	O-Ring	VITON	1
10	Gland Packing	PTFE	1
11	Gland Packing	25% GLASS FIBER FILED+PTFE	1
12	Gland Bush	SS304	1
13	Belleville Washer	SS301	2
14	Stop Washer	SS304	1
15	Stem Nut	SS304	2
16	Stem Washer	SS304	1
17	Handle	SS304	1
18	Stop Pin	SS304	1
19	Locking Device	SS304	1
20	Handle Cover	VINYL	1
21	Washer	SS304	1
22	Pin Nut	SS304	1
23	Anti-static Device	SS316	2

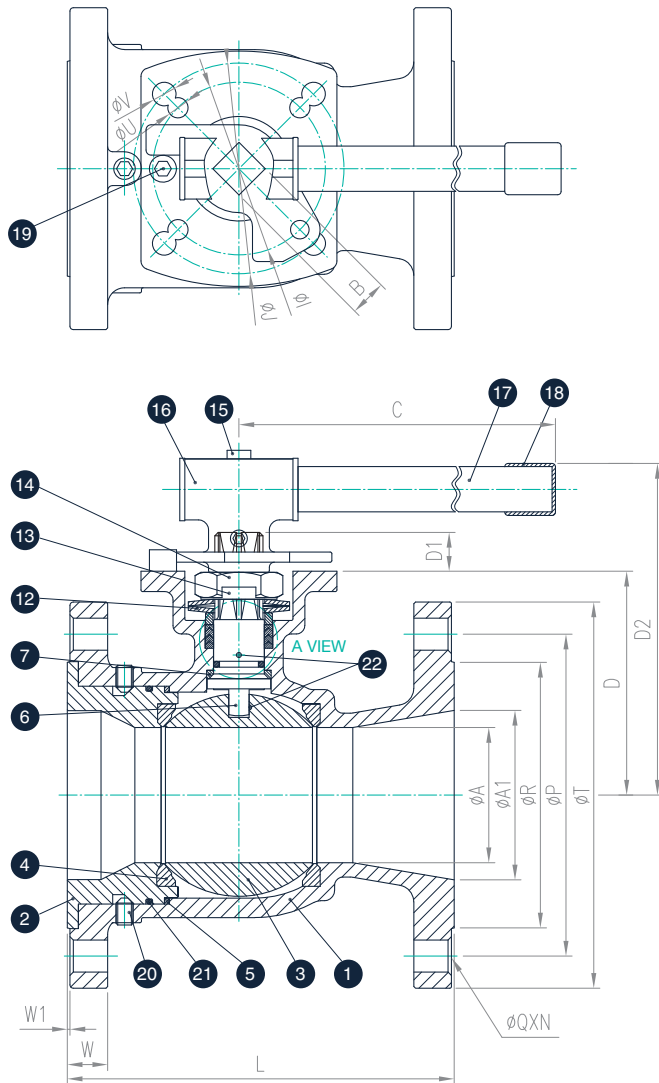


DIMENSIONS(mm)

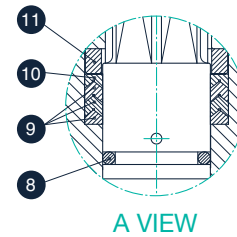
SIZE	ϕA	$\phi A1$	B	C	D	D1	D2	ϕI	ϕJ	L	N	ϕP	ϕQ	ϕR	ϕT	W	W1	ϕU	ϕV	ISO5211
1/2"	12.7	15	11	165	48.7	9.4	85	42	50	139.7	4	66.5	16	35.1	95.3	14.3	1.6	6.5	7	FOR F04 / F05
3/4"	16	20	11	165	63.5	10.3	100	42	50	152.4	4	82.6	19	42.9	117.3	15.8	1.6	6.5	7	FOR F04 / F05
1"	20	25	11	165	63.5	10.3	100	42	50	165.1	4	88.9	19	50.8	124	17.6	1.6	6.5	7	FOR F04 / F05
1-1/2"	32	38	14	215	79.7	12.9	127	50	70	190.5	4	114.3	22.2	73.2	155.4	20.6	1.6	7.5	9	FOR F05 / F07
2"	38	50	17/19	262	89.1	18.1	144	70	102	216	8	127	19	91.9	165.1	22.4	1.6	10	12	FOR F07 / F10

CONSTRUCTION-BILL OF MATERIAL

SERIES F303-20 3", 4" Reduced port



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	SPIRAL WOUND SS316 WITH GRAPHITE	1
6	Stem	SS316	1
7	Thrust Washer	RTFE	1
8	O-Ring	VITON	1
9	Gland Packing	PTFE	1
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	1
15	Handle Screw	SS304	2
16	Handle -A	SS304	1
17	Handle-B	SS304	1
18	Handle Cover	VINYL	1
19	Stop Pin	SS304	1
20	Screw	SS304	4
21	O-Ring	VITON	1
22	Anti-static Device	SS316	2



DIMENSIONS(mm)

SIZE	øA	øA1	B	C	D	D1	D2	øI	øJ	L	N	øP	øQ	øR	øT	W	W1	øU	øV	ISO5211
3"	65	80	17 / 19	365	116	19	176	70	102	282.4	8	168.2	22.2	127	209.6	28.5	1.6	10	12	FOR F07 / F10
4"	80	100	22	365	132.5	23	196	102	125	304.8	8	200.2	22.2	157.2	254	31.8	1.6	12	14	FOR F10 / F12

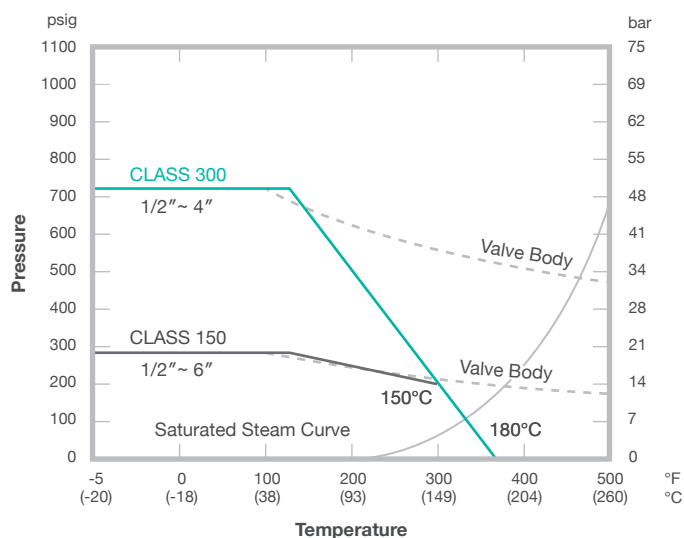
TECHNICAL DATA | Breakaway torque / Cv and Kv values / Weight

F303-10					
Size	Torque		Cv values	Kv values (M ³ /h)	Weight (Kg)
	N.m	lbs.in			
1/2"	10	89	9	8	1.6
3/4"	10	89	15	13	2.0
1"	14	124	42	36	2.6
1-1/2"	23	204	125	106	5.4
2"	34	301	165	140	8.1
2-1/2"	39	346	245	208	11.9
3"	59	523	350	298	16.0
4"	96	851	680	578	26.0
6"	212	1878	1020	867	45.1

F303-20					
Size	Torque		Cv values	Kv values (M ³ /h)	Weight (Kg)
	N.m	lbs.in			
1/2"	10	89	9	8	2.4
3/4"	10	89	15	13	3.7
1"	14	124	42	36	4.4
1-1/2"	23	204	125	106	8.2
2"	34	301	165	140	11.2
3"	59	523	350	298	24.2
4"	96	851	680	578	38.4

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

Series : F303-10 / F303-20
Seat material : PTFE / RTFE



OPTIONAL ACCESSORIES

| Handle options



Oval handle



Economical stem extension



Flat (with / without Spring Return Lock)



Transworld Steel Enterprise Co., Ltd.

Tel +886 4 2271 6107 **Fax** +886 4 2271 6127

Address No. 34, Gongye 14th Rd., Dali Dist.,
Taichung City, 412038, Taiwan (R.O.C.)



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

INNOVATION

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