



3, 4, 5-Way Direct Mount

# SERIES M304

Sanitary Ball Valve



3 Way(M304W) | 4 Way(M304X) | 5 Way(M304Y)

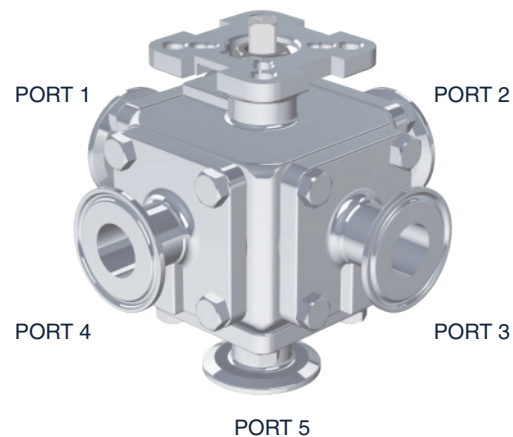
v1.0

## INTRODUCTION

The Series M304 is a direct-mount, multi-way ball valve, true bore hygienic ball valve designed for precision flow control in sanitary systems, food processing, and pharmaceutical applications. Its swing-out body design facilitates quick and hassle-free in-line maintenance. Certified with FDA standards, the valve ensures optimal hygiene with its smooth surface finish and low ferrite level, minimizing bacterial growth. Featuring a floating ball design and offering both L-port and T-port configurations, the Series M304 delivers low-torque operation and dependable performance in critical, high-purity environments.

## TECHNICAL SUMMARY

- True Bore with Various Port Arrangements
- Semi-Trunnion Ball Design
- Blow-out Proof Stem Design
- Easy-to-Maintain Construction

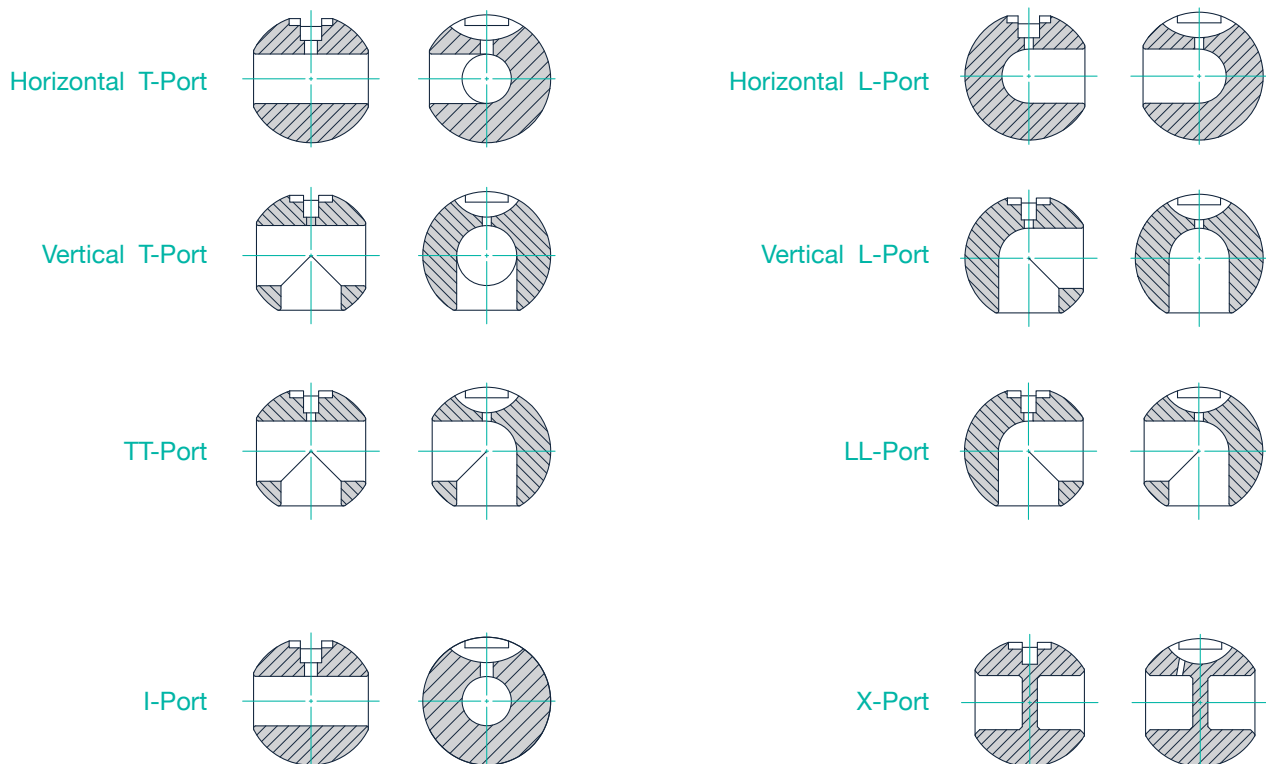


MODEL	3 Way ( M304W ) ; 4 Way ( M304X ) ; 5 Way ( M304Y )
SIZE RANGE	1/2" to 4" (DN15 to 100)
PRESSURE RATING	1000 WOG : 1/2" to 1" (DN15 to 25) 800 WOG : 1-1/2" to 2" (DN40 to 50) 600 WOG : 2-1/2" to 3" (DN65 to 80) 300 WOG : 4" (DN100)
CAVITY FILLED SEATS PRESSURE RATING	600 WOG : 1/2" to 2" (DN15 to 50) 300 WOG : 2-1/2" to 4" (DN65 to 100)
END CONNECTIONS	Clamp, Tube End
VALVE TYPE	True Bore
BODY & END CAP MATERIAL ( ASTM )	CF8M, CF3M, CF8, CF3
BODY & END CAP MATERIAL ( EN )	1.4408, 1.4409, 1.4308, 1.4309
SEAT MATERIAL	PTFE, RTFE, CTFE, TFM1600, MG1241, STFE
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
V-PORT OPTION	N/A

## STANDARD OF COMPLIANCE

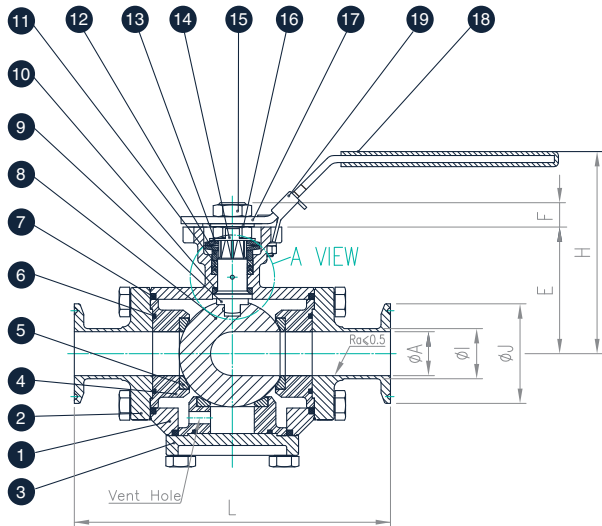
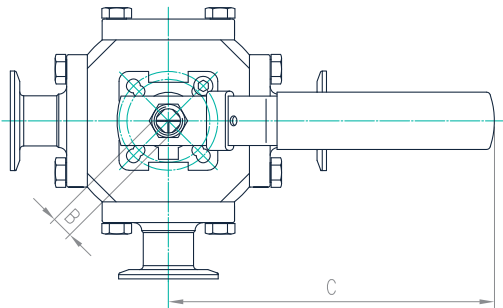
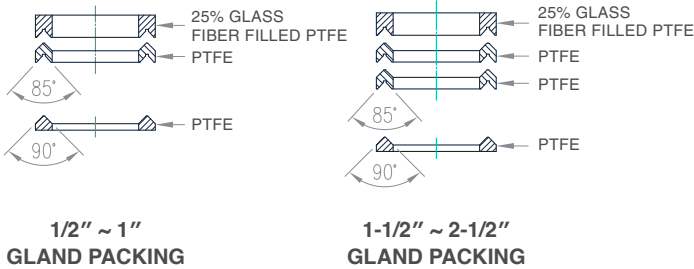
MATERIAL CERTIFICATION	EN 10204-3.1
END CONNECTIONS	ASME BPE
PRESSURE TESTING	API 598
MOUNTING PAD	ISO 5211
MARKING	ISO 5209
CE APPROVAL	2014 / 68 / EU Module H
QUALITY ASSURANCE	ISO 9001:2015
EUROPEAN DIRECTIVES APPLIED	ATEX, 2014/34/EU
SAFETY INTEGRITY LEVEL, SIL	IEC 61508

## Flow Patterns and Multi-port Ball Options



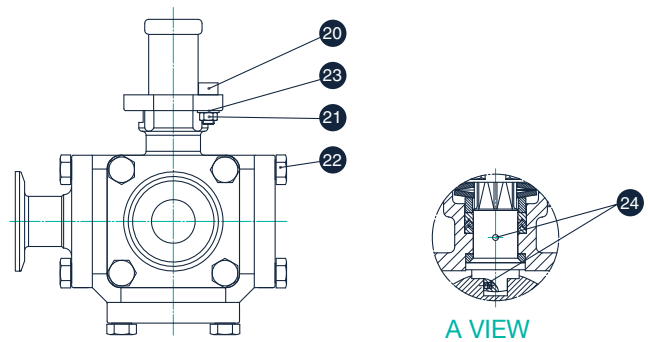
**CONSTRUCTION-BILL OF MATERIAL**

**SERIES M304**  
**1/2" ~ 2-1/2"**  
**Clamp End Cap**



NO.	Parts	Material	Qty
1	Body	CF3M	1
2	End cap - A	CF3M	3
3	End cap - B	CF3M	2
4	Seat Retainer	CF3M	5
5	Seat	PTFE	5
6	Retainer Seal	PTFE	5
7	Joint Gasket	PTFE	5
8	Ball	316L/CF3M	1
9	Stem	316L	1
10	Thrust Washer	PTFE	1
11	Gland Packing	25% GLASS FIBER FILED+PTFE and PTFE	1 set
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	Handle Cover	VINYL	1
19	Locking Device	SS304	1
20	Stop Pin	SS304	1
21	Pin Nut	SS304	1
22	Bolt nut	SS304	20
23	Washer	SS304	1
24	Anti-static Device	SS316	2

ISO 5211 Monnting Pad

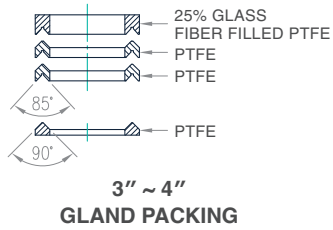
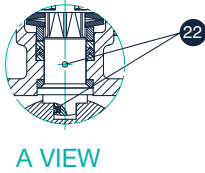


**DIMENSIONS(mm)**

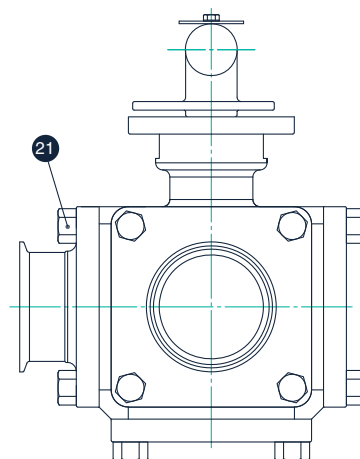
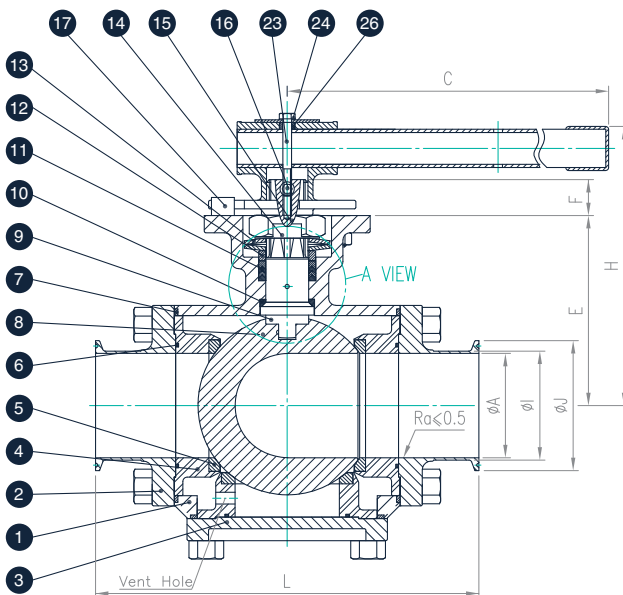
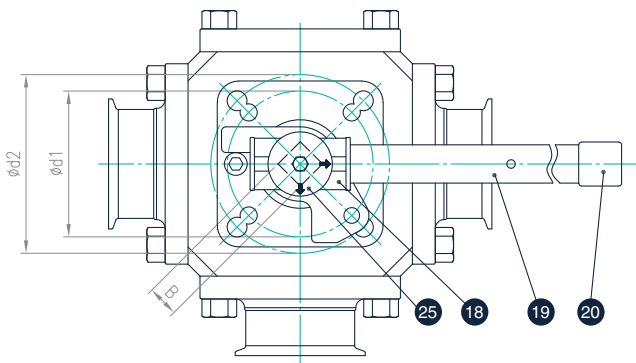
SIZE	øA	B	C	E	F	H	L	øI	øJ	ISO 5211
1/2"	9.4	9	150	43.9	9	85	110	12.7	25.2	FOR F03 / F04 / F05
3/4"	15.75	11	165	54.2	10.5	93	140	19	25.2	FOR F04 / F05
1"	22.2	11	180	64.1	10.5	108	160	25.4	50.4	FOR F04 / F05 / F07
1-1/2"	34.9	17 / 19	263	94.9	18	152	200	38.1	50.5	FOR F07 / F10
2"	47.5	17 / 19	313	101.6	18	159	220	50.8	63.9	FOR F07 / F10
2-1/2"	60.3	17 / 19	344	120	18	177	240	63.5	77.4	FOR F07 / F10

**CONSTRUCTION-BILL OF MATERIAL**

**SERIES M304**  
**3", 4"**  
**Clamp End Cap**



NO.	Parts	Material	Qty
1	Body	CF3M	1
2	End cap - A	CF3M	3
3	End cap - B	CF3M	2
4	Seat Retainer	CF3M	5
5	Seat	PTFE	5
6	Rerainer Seal	PTFE	5
7	Joint Gasket	PTFE	5
8	Ball	CF3M	1
9	Stem	316L	1
10	Thrust Washer	PTFE	1
11	Gland Packing	25% GLASS FIBER FILED+PTFE and PTFE	1 set
12	Gland Bush	SS304	1
13	Belleville Washer	SS301	2
14	Stop Washer	SS304	1
15	Stem Nut	SS304	1
16	Handle Screw	SS304	1
17	Stop Pin	SS304	1
18	Handle-A	SS304	1
19	Handle-B	SS304	1
20	Handle Cover	VINYL	1
21	Bolt nut	SS304	20
22	Anti-static Device	SS316	2
23	Handle Bolt	SS304	1
24	Washer	SS304	1
25	Position Indication	SS304	1
26	Handle Bush	SS304	1

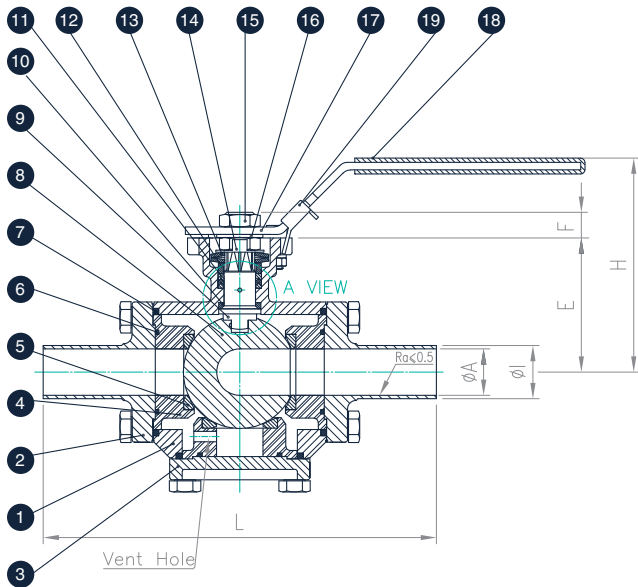
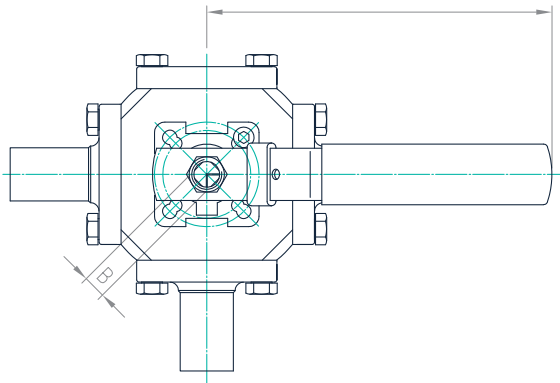
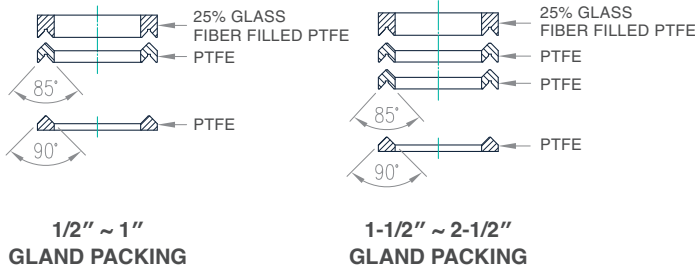


**DIMENSIONS(mm)**

SIZE	øA	B	C	E	F	H	L	øI	øJ	ød1	ød2	ISO 5211
3"	76	22	370	132.9	23	195	265	76.2	90.9	102	125	FOR F10 / F12
4"	100	22	510	164	23	226	317	101.6	118.9	102	125	FOR F10 / F12

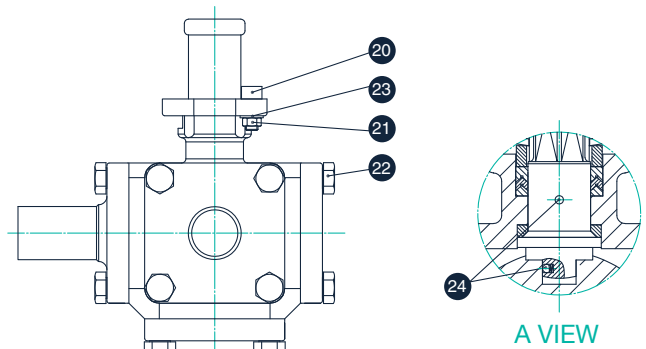
**CONSTRUCTION-BILL OF MATERIAL**

**SERIES M304**  
**1/2" ~ 2-1/2"**  
**Tube End Cap**



NO.	Parts	Material	Qty
1	Body	CF3M	1
2	End cap - A	CF3M	3
3	End cap - B	CF3M	2
4	Seat Retainer	CF3M	5
5	Seat	PTFE	5
6	Retainer Seal	PTFE	5
7	Joint Gasket	PTFE	5
8	Ball	316L/CF3M	1
9	Stem	316L	1
10	Thrust Washer	PTFE	1
11	Gland Packing	25% GLASS FIBER FILED+PTFE and PTFE	1 set
12	Gland Bush	SS304	1
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14	Stop Washer	SS304	1
15	Stem Nut	SS304	2
16	Stem Washer	SS304	1
17	Handle	SS304	1
18	Handle Cover	VINYL	1
19	Locking Device	SS304	1
20	Stop Pin	SS304	1
21	Pin Nut	SS304	1
22	Bolt nut	SS304	20
23	Washer	SS304	1
24	Anti-static Device	SS316	2

ISO 5211 Monnting Pad

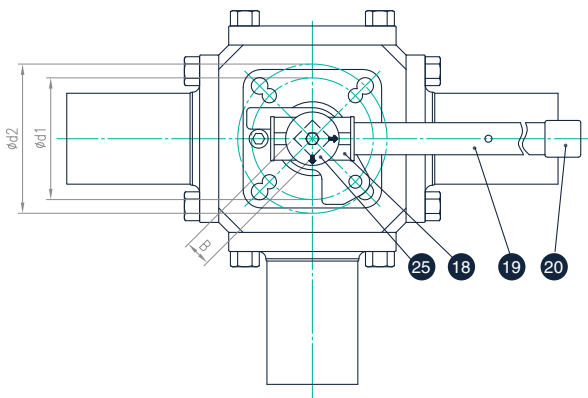
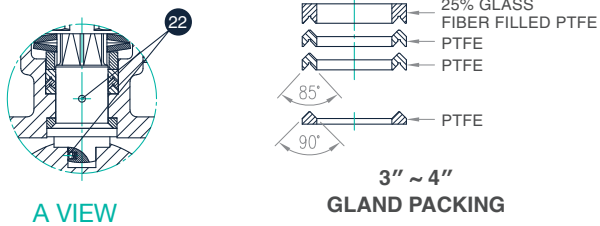


**DIMENSIONS(mm)**

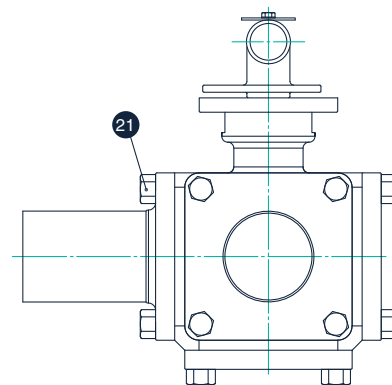
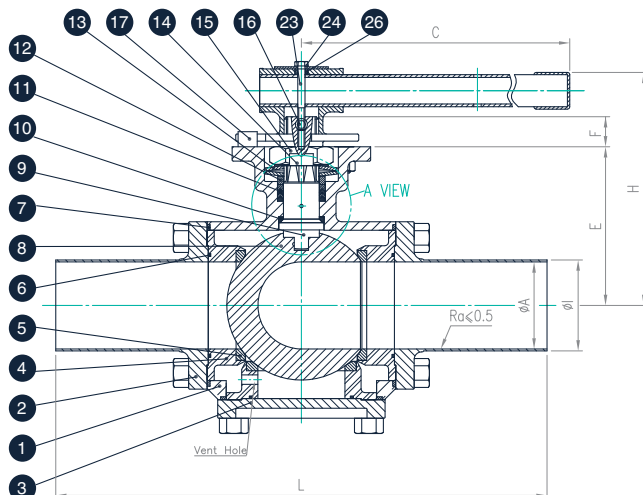
SIZE	øA	B	C	E	F	H	L	I	ISO 5211
1/2"	9.4	9	150	43.9	9	85	160	12.7	FOR F03 / F04 / F05
3/4"	15.75	11	165	54.2	10.5	93	186	19	FOR F04 / F05
1"	22.2	11	180	64.1	10.5	108	208	25.4	FOR F04 / F05 / F07
1-1/2"	34.9	17 / 19	263	94.9	18	152	250	38.1	FOR F07 / F10
2"	47.5	17 / 19	313	101.6	18	159	270	50.8	FOR F07 / F10
2-1/2"	60.3	17 / 19	344	120	18	177	306	63.5	FOR F07 / F10

## CONSTRUCTION-BILL OF MATERIAL

### SERIES M304 3", 4" Tube End Cap



NO.	Parts	Material	Qty
1	Body	CF3M	1
2	End cap - A	CF3M	2
3	End cap - B	CF3M	3
4	Seat Retainer	CF3M	5
5	Seat	PTFE	5
6	Rerainer Seal	PTFE	5
7	Joint Gasket	PTFE	5
8	Ball	CF8M	1
9	Stem	316L	1
10	Thrust Washer	PTFE	1
11	Gland Packing	25% GLASS FIBER FILED+PTFE and PTFE	1 set
12	Gland Bush	SS304	1
13	Belleville Washer	SS301	2
14	Stop Washer	SS304	1
15	Stem Nut	SS304	1
16	Handle Screw	SS304	1
17	Stop Pin	SS304	1
18	Handle-A	SS304	1
19	Handle-B	SS304	1
20	Handle Cover	VINYL	1
21	Bolt nut	SS304	20
22	Anti-static Device	SS316	2
23	Handle Bolt	SS304	1
24	Washer	SS304	1
25	Position Indication	SS304	1
26	Handle Bush	SS304	1



## DIMENSIONS(mm)

SIZE	$\phi A$	B	C	E	F	H	L	$\phi l$	$\phi d1$	$\phi d2$	ISO 5211
3"	73	22	370	132.9	23	195	365	76.2	102	125	FOR F10 / F12
4"	97.4	22	510	164	23	226	400	101.6	102	125	FOR F10 / F12

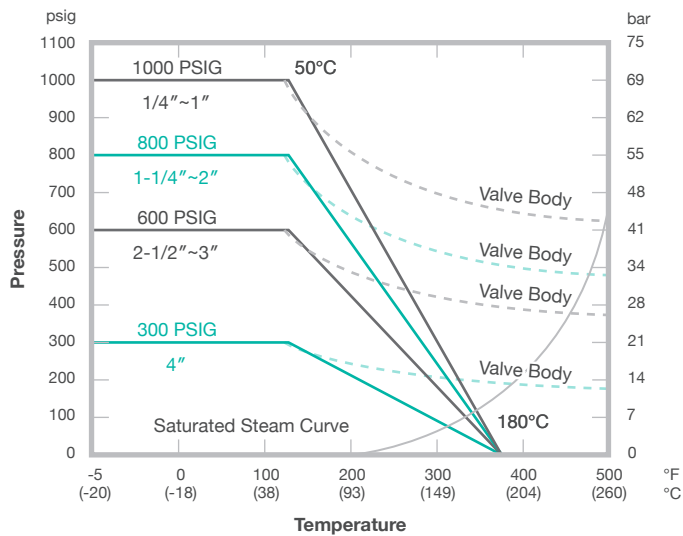
**TECHNICAL DATA | Breakaway torque / Cv and Kv values / Weight**

Size	Torque		Cv values				Kv values (M <sup>3</sup> /h)					Weight (Kg)		Weight (Kg)		
	N.m	lbs.in	L-Port Horizontal	L-Port Vertical	T-Port Horizontal	T-Port Vertical	LL-Port	V-Port Horizontal	L-Port Vertical	T-Port Horizontal	T-Port Vertical	LL-Port	L-Port Clamp	T-Port Clamp	L-Port Tube	T-Port Tube
1/2"	12	106	6	6	5	10	6	5	5	4	9	5	1.6	1.6	1.6	1.6
3/4"	20	177	16	16	13	21	15	14	14	11	18	13	2.9	2.9	2.9	2.9
1"	47	416	31	31	22	36	27	26	26	19	31	23	5.1	5.1	5.0	5.0
1-1/2"	91	806	75	75	55	90	65	64	64	47	77	55	11.0	11.0	11.2	11.2
2"	120	1063	140	140	100	175	120	119	119	85	149	102	14.0	14.0	14.7	14.7
2-1/2"	143	1267	210	210	149	235	175	179	179	127	200	149	23.0	23.0	23.5	23.5
3"	211	1870	375	375	270	450	300	319	319	230	383	255	29.6	29.6	31.3	31.3
4"	264	2339	670	670	475	800	353	570	570	404	680	300	59.9	59.9	59.5	59.5

Without Grease

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

**M304 (True Bore)**  
**Seat material : PTFE / RTFE**



## OPTIONAL ACCESSORIES

### | Handle Options



Spring Return Sliding Lock



T-Bar Handle

### | Accessories



Actuator



**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**

**INTEGRITY**

**STRICT SELECTION**