



SERIES R502-10

Two-Piece Ball Valve



INTRODUCTION

The Series R502 is a direct mount, two-piece full bore ball valve crafted for general industrial and chemical applications. It features a unique stem design for improved durability and longevity, along with a blowout-proof stem and dual anti-static devices for enhanced performance. This valve is ideal for use with liquids, gases, vapors, and oils, offering reliable operation and long-lasting functionality.

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	Full 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), Oval, Cast, Spring Return Safety (SRS) Handle, Economical Stem Extension		
HANDLE MATERIAL	Flat & Oval - 304, 316, Cast - CF8, CF8M		
V-PORT OPTION	N/A		
WITH ANTI-STATIC DEVICE OPTION	Yes		
OPERATION	Pneumatic or electric actuated		

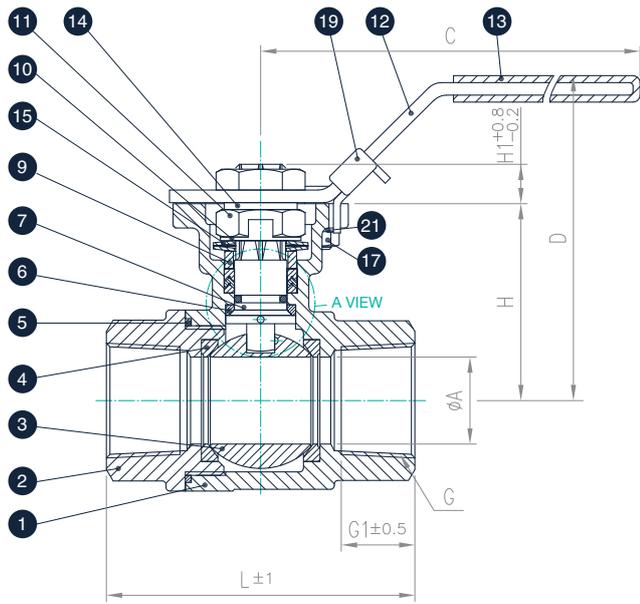
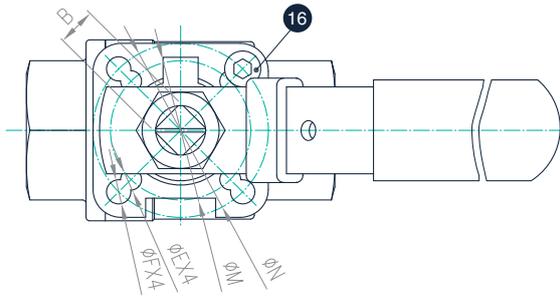
STANDARD OF COMPLIANCE

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

*Remark when required : CE, SIL 3, ATEX

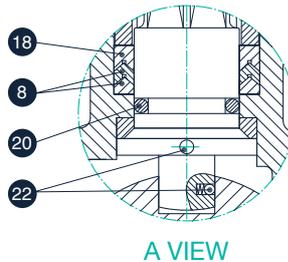
CONSTRUCTION-BILL OF MATERIAL

SERIES R502-10
1/4" ~ 3" Full port



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

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



DIMENSIONS(mm)

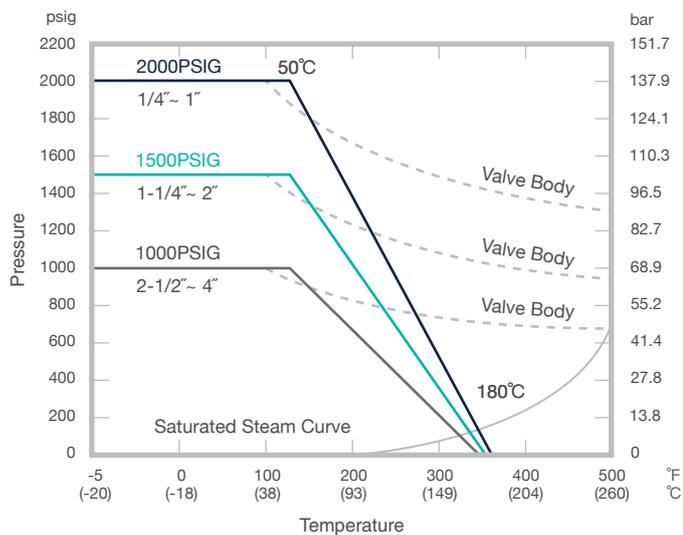
SIZE	ϕA	B	C	D	ϕE	ϕF	G	G1	H	H1	L	ϕM	ϕN	ISO5211
1/4"	11.5	9	139	74	6	6	1/4" NPT or BSP	15	38.6	6.6	65	36	42	FOR F03 / F04
3/8"	12.5	9	139	74	6	6	3/8" NPT or BSP	15	38.6	6.6	65	36	42	FOR F03 / F04
1/2"	15	9	139	74	6	6	1/2" NPT or BSP	16	38.6	6.6	65	36	42	FOR F03 / F04
3/4"	20	9	139	82	6	6	3/4" NPT or BSP	17	46.1	7.1	74.6	36	42	FOR F03 / F04
1"	25	11	165	96	6.5	7	1" NPT or BSP	21	56.6	10.9	88	42	50	FOR F04 / F05
1-1/4"	32	11	165	100	6.5	7	1-1/4" NPT or BSP	22	61	10.9	102	42	50	FOR F04 / F05
1-1/2"	38	14	215	127	7.5	9	1-1/2" NPT or BSP	22.5	77.5	13.9	110	50	70	FOR F05 / F07
2"	50	14	215	134	7.5	9	2" NPT or BSP	26	85.2	13.9	125	50	70	FOR F05 / F07
2-1/2"	65	17	263	167	10	12	2-1/2" NPT or BSP	31	108.7	16.8	160.6	70	102	FOR F07 / F10
3"	80	17	313	175	10	12	3" NPT or BSP	34	117.4	18.1	178	70	102	FOR F07 / F10

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

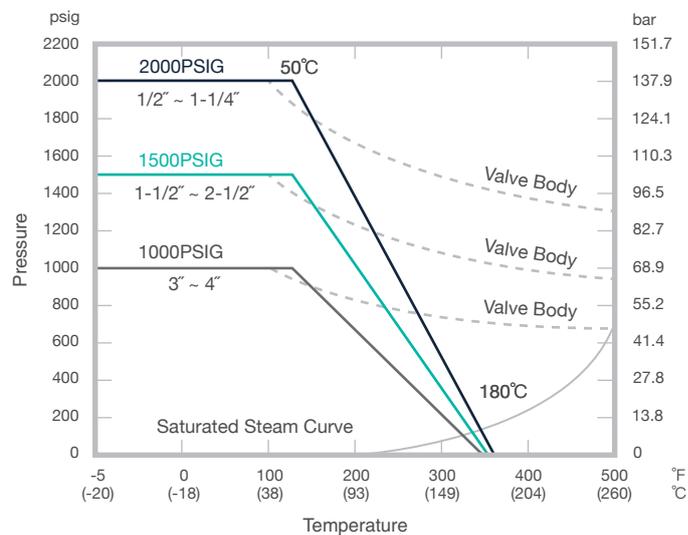
Valve size	Torque		Cv values	Kv values (M ³ /h)	Weight (Kg)
	N.m	lbs.in			
1/4"	7	58	7	6	0.53
3/8"	7	58	8	7	0.51
1/2"	7	58	15	13	0.46
3/4"	8	69	40	34	0.6
1"	14	127	70	60	1.09
1-1/4"	16	138	110	94	1.5
1-1/2"	25	219	250	213	2.55
2"	34	299	430	366	3.6
2-1/2"	52	461	700	595	7.43
3"	81	714	1100	935	10.35

TECHNICAL DATA | Pressure-Temperature diagram

1/4" ~ 4" Full port
Seat material : PTFE / RTFE



1/2" ~ 4" Reduced port
Seat material : PTFE / RTFE



OPTIONAL ACCESSORIES

Handle Options



Oval Handle



Flat (with / without Spring Return Lock)



Economical Stem Extension



Spring Return Safety (SRS) Handle
Option : Fail Open / Fail Close assembly



S.S Investment Casting Handle

Accessories



TSM



TSM with Handle



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

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