



SERIES S300/S303

API 607 FIRE SAFE

Three-Piece Ball Valve



INTRODUCTION

The Series S300 is a heavy-duty, three-piece ball valve engineered for exceptional reliability and performance in demanding industrial applications. It features a unique encapsulated body bolt system that facilitates efficient cleaning and minimizes residue buildup, while also allowing convenient in-line maintenance without full disassembly. Equipped with a patented stem seal system for superior leak protection, the Series 83 is ideal for managing liquids, gases, vapors, and oils. A fire-safe option is available, with the valve ATEX-approved and certified to API 607, ensuring enhanced safety and dependability.

The Series S303, designed as a reduced-bore variation of S300, offers the same robust construction and innovative design as the S300, making it a versatile option for applications requiring precise flow control. Both models deliver dependable performance and reliability for a wide range of industrial uses.

TECHNICAL SUMMARY

SIZE RANGE	Full Port	1/4" ~ 2"
	Reduced Port	1/2" ~ 2-1/2"
PRESSURE RATING	Full Port	1/4" ~ 1-1/2" : 1500 PSI / CLASS 600 / PN 100
		2" : 1000 PSI / CLASS 400 / PN 63
	Reduced Port	1/2" ~ 2" : 1500 PSI / CLASS 600 / PN 100
		2-1/2" : 1000 PSI / CLASS 400 / PN 63
END CONNECTIONS	Threaded, Butt Weld, Socket Weld, Flanged, Tube Butt Weld	
VALVE TYPE	Full / Reduced Port	
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, Oval, Cast, T-Bar, Spring Return Safety (SRS) Handle	
V-PORT OPTION	Yes	
OPERATION	Pneumatic or Electric Actuated	

STANDARD OF COMPLIANCE

MATERIAL CERTIFICATION	EN 10204-3.1
DESIGN	ASME B16.34
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 PN 16 / PN 40
	ASME B16.5 CLASS 150
PRESSURE TESTING	API 598
MOUNTING PAD	ISO 5211
FIRE SAFE	API 607 7th Edition
MARKING	ISO 5209
CE APPROVAL	2014 / 68 / EU Module H
QUALITY ASSURANCE	ISO 9001: 2015

DESIGN FEATURE

Dual Pattern ISO 5211 Direct Mount Pad

Facilitating straightforward and cost-effective automation, the need for brackets and couplings for actuator installation is eliminated.

Patented Leak-Observation Display

By identifying potential stem leaks before they escalate, this feature acts as an early alert system, helping to avert hazardous situations and minimize downtime.

Blow Out Proof Stem

The stem is inserted from inside of the body. This feature prevents the stem from being ejected due to internal pressure.

O-Ring Stem Seal

Serves to prevent emissions and helps to maintain precise alignment of the stem while strengthens its durability.

Smooth Stem Surface

By minimizing abrasion against the seal, this feature effectively lowers the torque required.

Locking Handle

Prevent unauthorized adjustments and help to avoid accidental opening or closing, to ensure a reliable fluid flow control.

Anti-Static Device

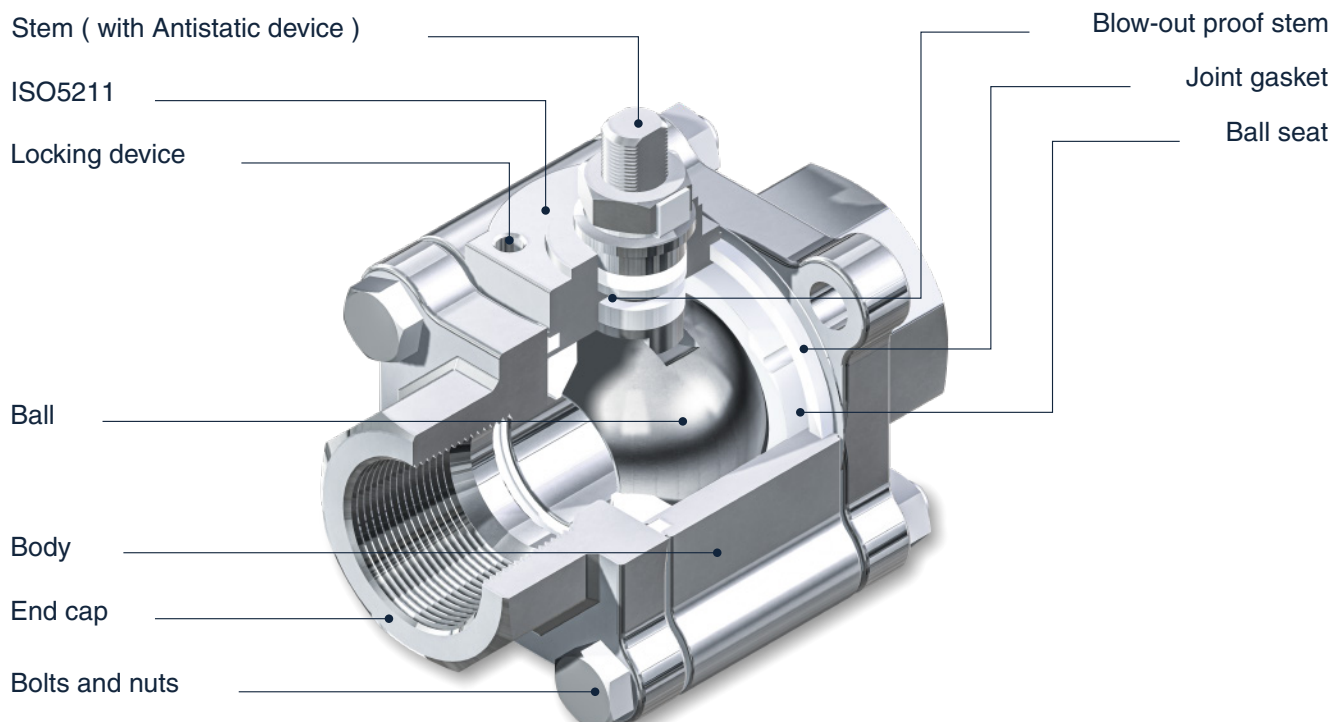
Located between the ball and stem and between the stem and valve body. It enables safe discharge of static electricity while minimizing the risk of fire.

Seats

A groove is designed to achieve pressure relief, contributing to decreased in valve torque and preventing seat damage.

Ball

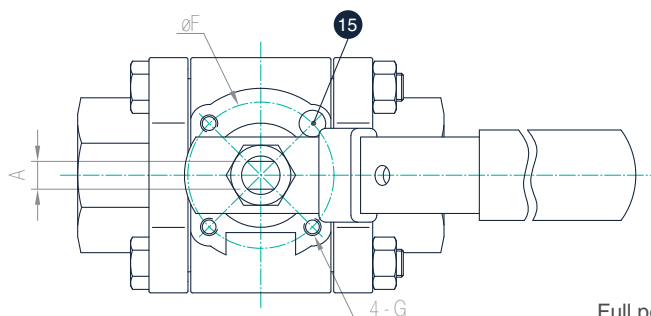
Designed with a pressure-equalizing hole, the mirror-polished ball ensures both a bubble-tight shut-off and an extended service life.



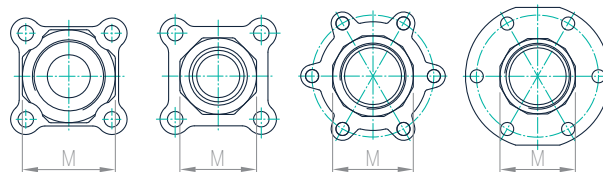
CONSTRUCTION - BILL OF MATERIAL

SERIES S300/S303

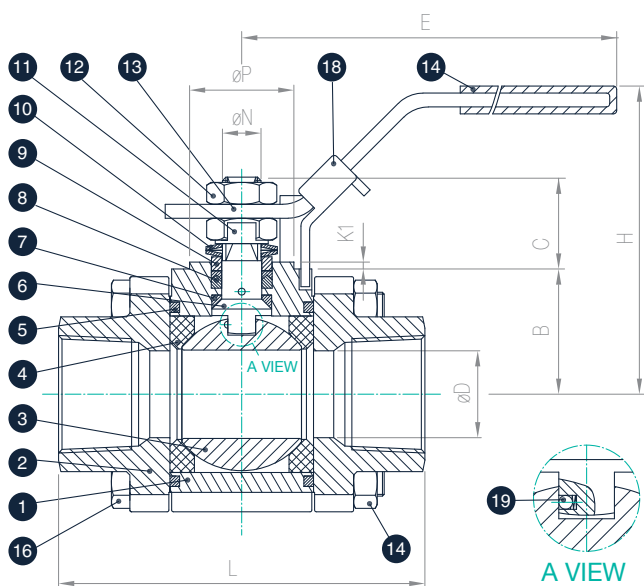
1/4" ~ 2-1/2" Full port / Reduced port



Full port
Reduced port
Bolts design



1/4", 3/8" 1/2" ~ 1-1/2" 2" 2"
1/2", 1" ~ 2" 3/4" - 2-1/2"
Encapsulated Bolts Not Encapsulated Bolts



NO.	Parts	Material	Qty
1	Body	CF8M / WCB	1
2	End cap	CF8M / WCB	2
3	Ball	SS316	1
4	Seat	RTFE	2
5	Joint Gasket	PTFE	2
6	Stem	SS316	1
7	Thrust Washer	RTFE	1
8	Gland Packing	MG1241	1 Set
9	Gland Bush	SS304	1
10	Belleville Washer	SS301	2
11	Stop Washer	SS304	1
12	Stem Nut	SS304	2
13	Handle	SS304	1
14	Handle Cover	VINYL	1
15	Stop Pin	SS304	1
16	Bolt	SS304	*
17	Bolt Nut	SS304	*
18	Locking Device	SS304	1
19	Anti-Static Device	SS316	2

Full Bore 1/4" to 1-1/2" (4pcs) Full Bore 2" (6pcs)

DIMENSIONS(mm)

SIZE	øD		A		B		C		E		øF		G		H		K1		L		M		øP		øN		ISO5211		
	F	R	F	R	F	R	F	R	F	R	F	R	F	R	F	R	F	R	F	R	F	R	F	R	F	R	F	R	
1/4"	10	-	6.5	-	29.8	-	7.4	-	134	-	36	-	M5	-	64.3	-	0.5	-	64.8	-	29.5	-	25	-	9.5	-	F03	-	
3/8"	10	-	6.5	-	29.8	-	7.4	-	134	-	36	-	M5	-	64.3	-	0.5	-	64.8	-	29.5	-	25	-	9.5	-	F03	-	
1/2"	15	10	6.5	6.5	29	29.8	16.1	7.4	134	134	36	36	M5	M5	71.5	64.3	2	0.5	72.5	64.8	30	29.5	25	25	9.5	9.5	F03	F03	
3/4"	20	15	6.5	6.5	33	29	18.1	16.1	134	134	36	36	M5	M5	76	71.5	2	2	85.4	72.5	36	36	25	25	9.5	9.5	F03	F03	
1"	25	20	8	6.5	36	33	24.6	18.1	170	134	42	36	M5	M5	82.3	76	2	2	105.3	85.4	44.5	44.5	30	25	11.1	9.5	F04	F03	
1-1/4"	32	25	8	8	40	36	24.3	24.6	170	170	42	42	M5	M5	87.3	52.3	2	2	111	105.3	54	54	30	30	11.1	11.1	F04	F04	
1-1/2"	38	32	9.7	8	47.3	40	30.2	24.3	207	170	50	42	M6	M5	103.6	87.3	2.2	2	127.3	111	60	60	35	30	14.3	11.1	F05	F04	
2"	50	38	9.7	9.7	69.5	47.3	26	30.2	207	207	50	50	M6	M6	121.6	103.6	1.5	2.2	#	127.3	73.2	73.2	35	35	14.3	14.3	F05	F05	
2-1/2"	-	50	-	9.7	-	69.5	-	26	-	207	-	50	-	M6	-	121.6	-	1.5	-	145	-	86	-	35	-	14.3	-	F05	

142.8(Flower shape) / 145(Round shape) F : Full port R : Reduced port

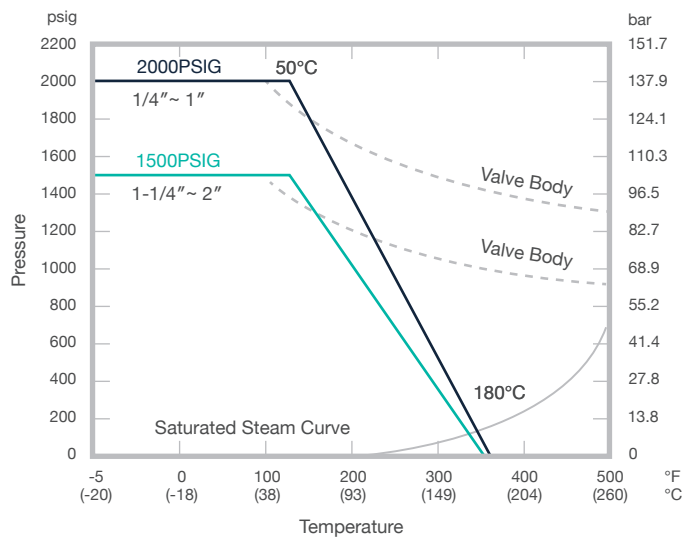
TECHNICAL DATA | Breakaway torque / Cv and Kv values / Weight

Valve size	Torque (N.m)		Torque (lbs.in)		Cv values		Kv values (M ³ /h)	Weight (Kg)	
	F	R	F	R	F	R	F	F	R
1/4"	7	-	60	-	8	-	7	0.68	-
3/8"	7	7	60	-	8	-	7	0.68	-
1/2"	8	7	70	60	15	8	13	0.83	0.68
3/4"	10	8	92	70	40	15	34	1.37	0.86
1"	14	10	127	92	70	40	60	2.05	1.43
1-1/4"	23	14	207	127	110	70	94	2.74	1.97
1-1/2"	31	23	276	207	250	110	213	3.99	2.77
2"	33	31	292	276	430	250	366	5.83	3.95
2-1/2"	-	33	-	292	-	430	-	-	-

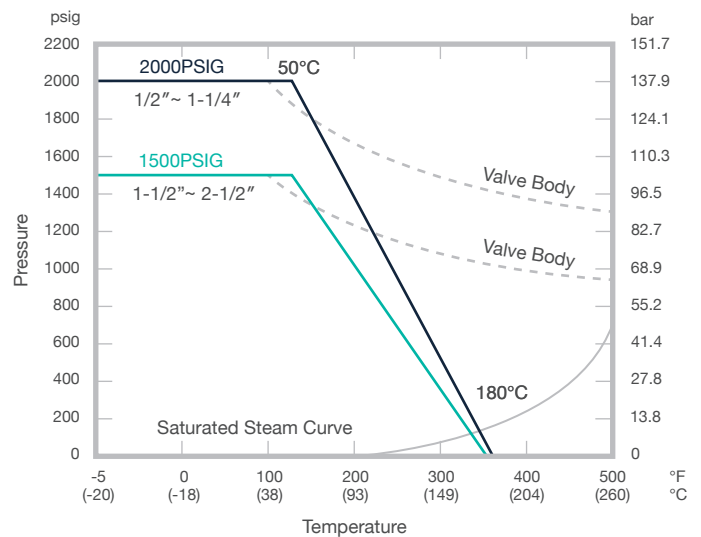
F : Full port R : Reduced port

TECHNICAL DATA | Pressure - Temperature diagram

1/2" ~ 2" Full port
Seat material : PTFE / RTFE



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



OPTIONAL ACCESSORIES

Handle options



Oval handle



Spring return sliding lock



Economical stem extension

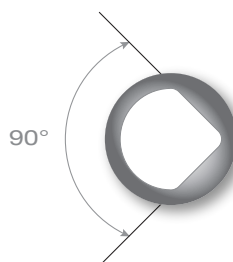
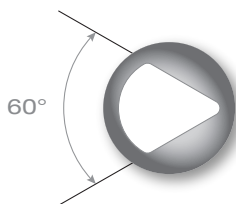
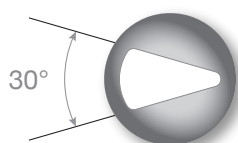


T-Handle



S.S. investment casting handle

V Port ball



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

INNOVATION

INTEGRITY

STRICT SELECTION