

Alfa Laval 5308/5309 Series Ball Valves

Ball valves

Introduction

Alfa Laval 5308/5309 Series Ball Valves are simple and effective full-bore ball valves that minimize turbulence and pressure drop in process lines. They are with manually operated handles, and an optional encapsulated seat to minimize or eliminate product entrapment in critical applications.

Application

The 5308/5309 Series Ball Valves are designed for use as product valves in high-pressure, high-temperature applications as well as applications that require the use of pigging systems. They are ideal for use across the dairy, food, beverage, brewery and many other industries.

Benefits

- Reliable and effective full-flow performance
- Compact, straightforward design
- Ideal for high-pressure, high-temperature applications or applications that require the use of pigging systems
- Minimizes line turbulence and pressure drop
- Easy to inspect and maintain due to welded-end flange screws that enable quick assembly and disassembly

Standard design

The Alfa Laval 5308/5309 Series Ball Valves consist of a stainless steel valve body, two flanges, two PTFE valve seats, ball, and a stem unit. The valve body houses a rotating ball, which is sealed in the body with a PTFE seat that either partially or fully encapsulates the ball. The valve is activated by a stainless steel handle that opens and closes the valve through a quarter turn. The stem and seal design eliminate the risk of dislodging or blowing out the stem.



TECHNICAL DATA

Temperature

Temperature range: -4 °F to 302 °F

Pressure

Max. product pressure: 580 PSI (40 bar)

Min. product pressure: Full vacuum

PHYSICAL DATA

Materials

Valve body: CF3M9 (316L)

Ball & Stem: 1.4401 (316L)

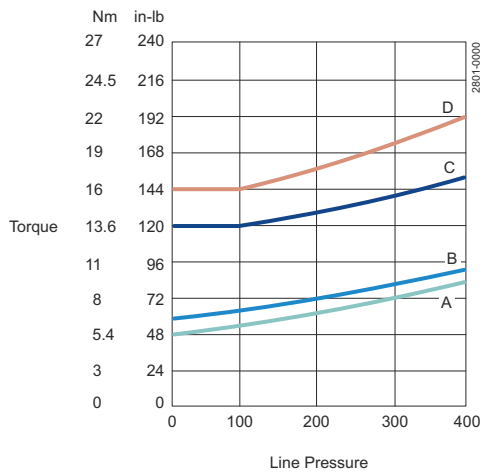
Handle: 1.4301 (304)

Surface finish: Ra 20 µin

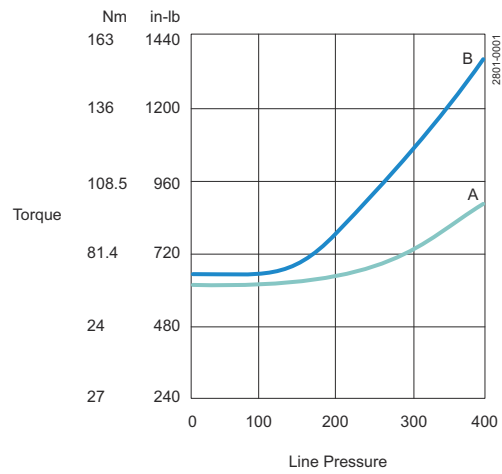
Product wetted seals: PTFE

Torque vs. Pressure

Standard Seats



A = 1/2" (12.7 mm) & 3/4" (19.0 mm)
 B = 1" (25.4 mm)
 C = 1 1/2" (38.1 mm)
 D = 2" (50.8 mm)



A = 3" (76.2 mm)
 B = 4" (101.6 mm)

Figure 2. 3" (3.00 inch) - 4" (4.00 inch) Tube OD

Figure 1. 1/2" (0.50 inch) - 2" (2.00 inch) Tube OD

Use the charts above to determine the amount of torque required to cycle the ball valve.

Encapsulated Seats

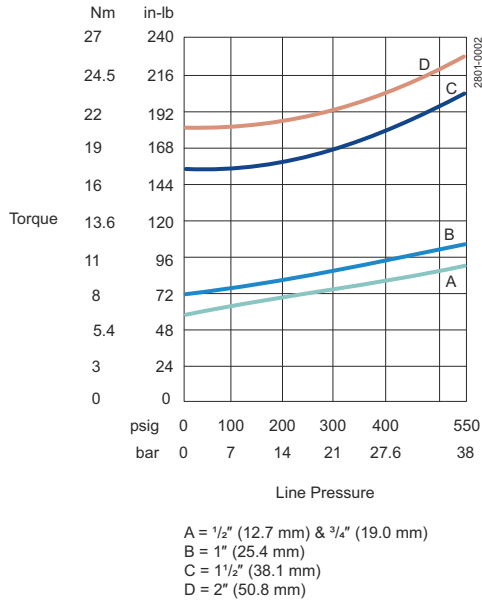


Figure 3. 1/2" (0.50 inch) - 2" (2.00 inch) Tube OD

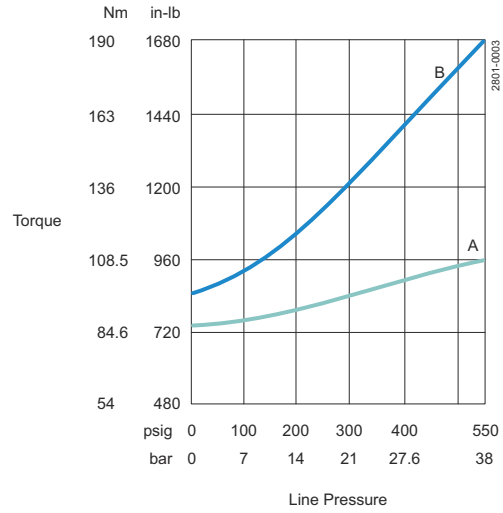
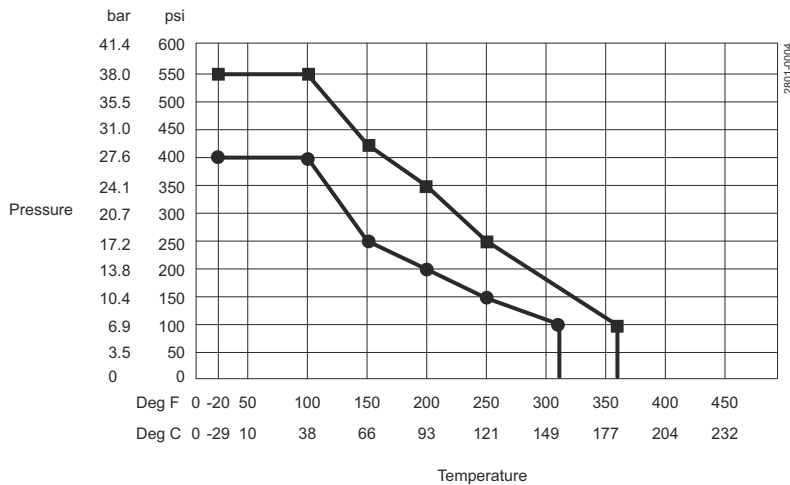


Figure 4. 3" (3.00 inch) - 4" (4.00 inch) Tube OD

Use the charts above to determine the amount of torque required to cycle the ball valve.

Standard and Encapsulated Seats: Ratings - Pressure vs. Temperature



- Reinforced (glass-filled) PTFE
- PTFE

Dimensions (inch)

Manual Valve

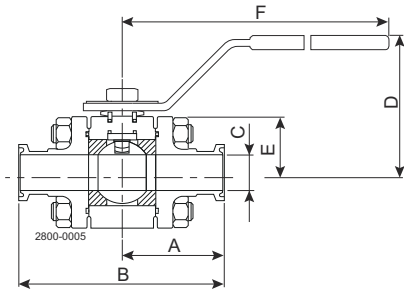


Figure 5. Tri-Clamp® Ends

Model 5308

Sizes 1/2" - 2"

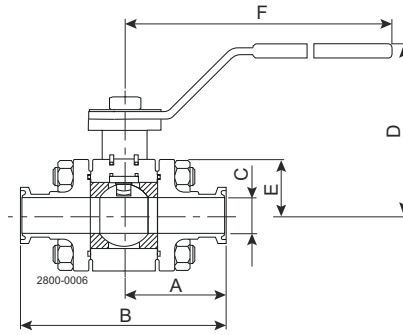


Figure 6. Tri-Clamp® Ends

Model 5308

Sizes 3" and 4"

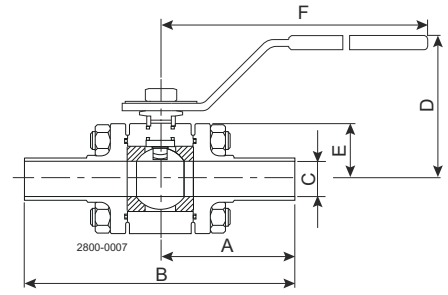


Figure 7. Butt-Weld Ends

Model 5309

Model	Size	A		B		C		D		E		F		Weight (valve + handle)			
		inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	lb	kg		
5308 Tri-Clamp® (both ends)	1/2	12.7	317.5	44.5	1130	31/2	88.9	3/8	9.5	25/16	58.7	19/64	29.0	51/4	134	2	0.9
	3/4	19.0	482.5	44.5	1130	31/2	88.9	5/8	15.9	27/16	61.9	19/64	29.0	51/4	134	2	0.9
	11/2	25.4	645	44.5	1130	31/2	88.9	27/32	21.4	25/16	58.7	119/64	33.0	51/4	134	3	1.4
	11/2	38.1	970	57.2	1452	41/2	114.3	123/64	34.5	23/4	95.3	137/64	40.0	611/16	170	6	2.7
	2	50.8	1290	63.5	1613	5	127.0	156/64	47.2	41/8	104.8	23/16	55.5	89/64	207	10	4.5
	3	76.2	1940	98.4	2500	73/4	196.9	255/64	72.6	7	177.8	49/16	115.5	113/4	298.4	30	13.6
5309 Butt-Weld (both ends)	1/2	12.7	320	68.3	1736	53/8	136.5	3/8	9.5	25/16	58.7	19/64	29.0	51/4	134.0	2	0.9
	3/4	19.0	484	71.4	1814	55/8	142.9	5/8	15.9	27/16	61.9	19/64	29.0	51/4	134.0	2	0.9
	1	25.4	645	81.8	2081	67/16	163.5	27/32	21.4	25/16	58.7	119/64	33.0	51/4	134.0	3	1.4
	11/2	38.1	970	92.1	2344	71/4	184.2	123/64	34.5	33/4	95.3	137/64	40.0	611/16	170.0	6	2.7
	2	50.8	1290	81.0	2057	75/8	193.7	155/64	47.2	41/8	104.8	23/16	55.5	89/64	207.0	10	4.5

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