



## Alfa Laval 5308/5309 Series Ball Valves

Simple and Effective, The Ball Valve

### Concept

Ball valves are ideal for applications requiring a full flow body design to minimize line turbulence and pressure drop. An encapsulated seat option is available for critical process applications requiring maximum reduction of potential for product entrapment.

### Standard Design

The Ball valve consists of a stainless steel body that houses a rotating ball. The rotating ball 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 valve can also be operated by an optional ¼ turn pneumatic or electric actuator. External thrust springs maintain constant pressure on the stem packing. The stem and packing design eliminate the possibility of the stem becoming dislodged or blown out.



### TECHNICAL DATA

#### Temperature

Temperature range: . . . . . -20°C to 150°C (EPDM)

#### Pressure

Max. product pressure: . . . . . 400 kPa (40 bar)

Min. product pressure: . . . . . Full vacuum

### PHYSICAL DATA

#### Materials

Valve body . . . . . CF3M9 (316L)

Ball & Stem . . . . . 1.4401 (316L)

Handle . . . . . 1.4301 (304)

External surface finish . . . . . Semi-bright (blasted)

Internal surface finish . . . . . Bright (polished), Ra ≤ 0.5 µm

Product wetted seals . . . . . PTFE

Actuator surface . . . . . Epoxy coated

**Options**

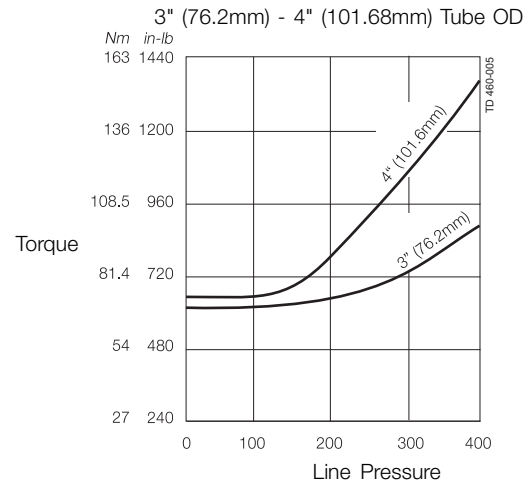
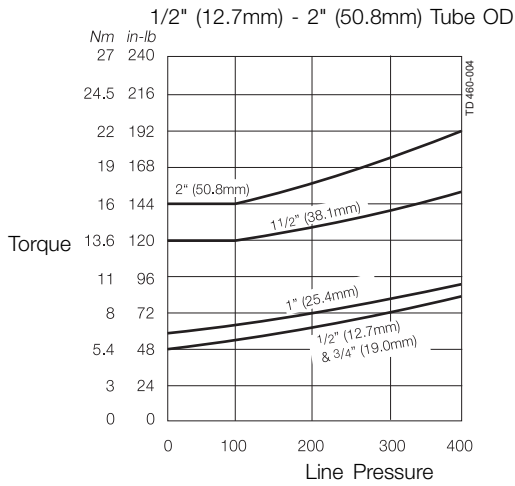
**Actuator Function**

- A. Pneumatic actuator air to air
- B. Pneumatic actuator air to spring
- C. Reinforced PTFE
- D. Stainless Steel
- E. Actuator bracket, coupling and hardware  
- 1.4301 (304) stainless steel

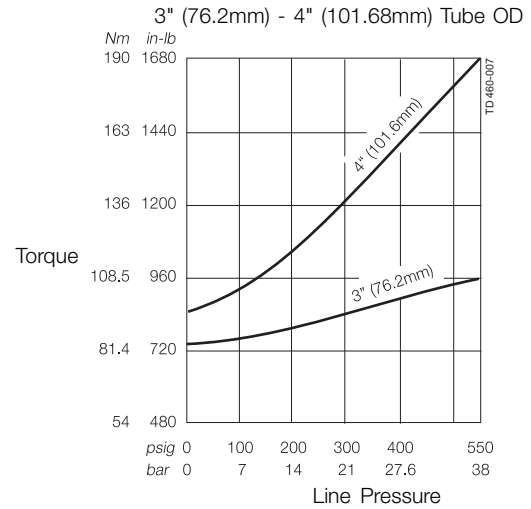
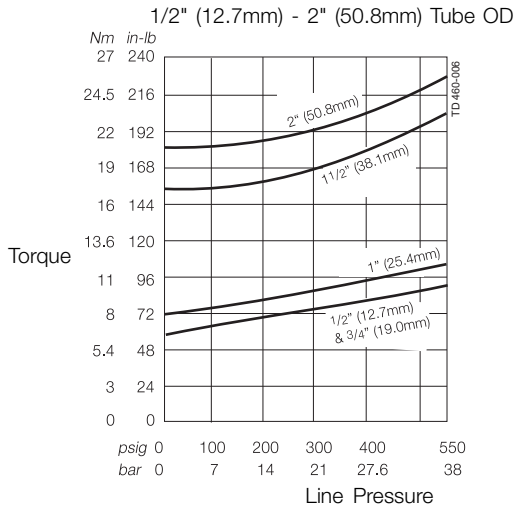
Note: Actuators cannot be utilized in Europa, as they are not CE marked.

**Torque vs. Pressure**

**Standard Seats**

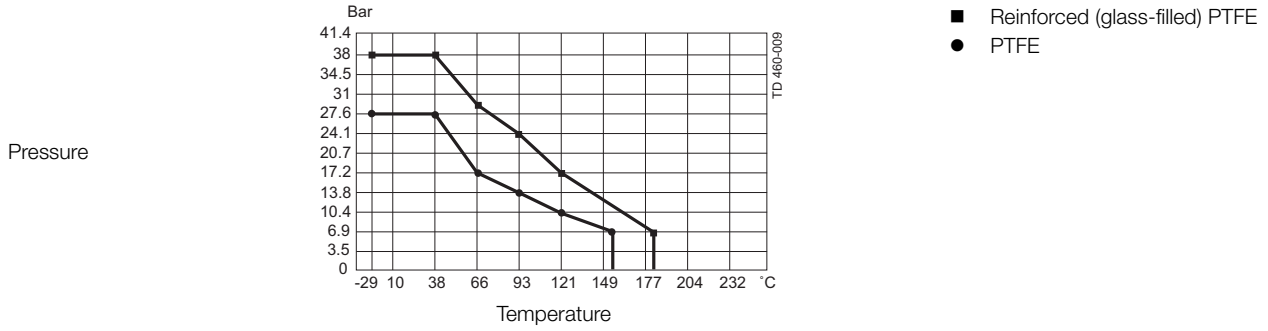


**Encapsulated Seats**

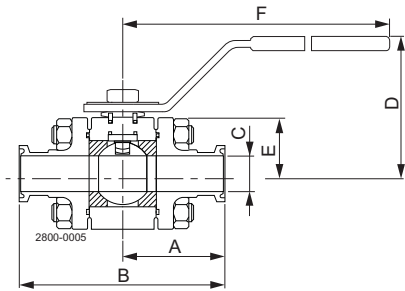


Use the charts above to determine the amount of torque required to cycle the ball valve.

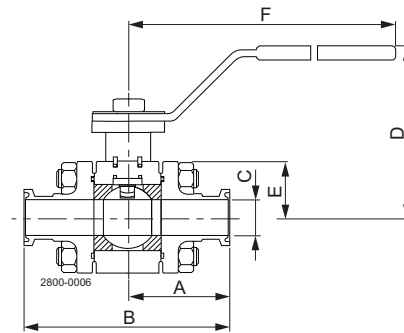
Standard and Encapsulated Seats: Ratings - Pressure vs. Temperature



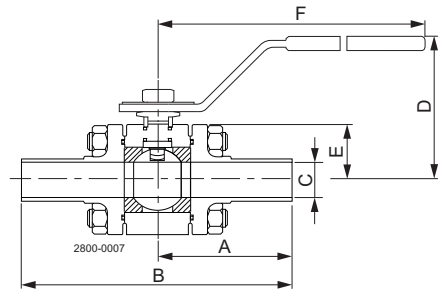
Manual Valve Dimensions



Tri-Clamp® Ends  
 Model 5308  
 Sizes 1/2" - 2"



Tri-Clamp® Ends  
 Model 5308  
 Sizes 3" and 4"



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	inch	mm	lb	kg
5308 Tri-Clamp® (both ends)	1/2	12.7	1 3/4	44.5	3 1/2	88.9	3/8	9.5	2 5/16	58.7	1 9/64	29.0	5 1/4	134	2	0.9
	3/4	19.0	1 3/4	44.5	3 1/2	88.9	5/8	15.9	2 7/16	61.9	1 9/64	29.0	5 1/4	134	2	0.9
	1 1/2	25.4	1 3/4	44.5	3 1/2	88.9	27/32	21.4	2 5/16	58.7	1 19/64	33.0	5 1/4	134	3	1.4
	1	25.4	2 1/4	57.2	4 1/2	114.3	1 23/64	34.5	2 3/4	95.3	1 37/64	40.0	6 11/16	170	6	2.7
	2	50.8	2 1/2	63.5	5	127.0	1 56/64	47.2	4 1/8	104.8	2 3/16	55.5	8 9/64	207	10	4.5
	3	76.2	3 7/8	98.4	7 3/4	196.9	2 55/64	72.6	7	177.8	4 9/16	115.5	11 3/4	298.4	30	13.6
5309 Butt-Weld (both ends)	1/2	12.7	2 11/16	68.3	5 3/8	136.5	3/8	9.5	2 5/16	58.7	1 9/64	29.0	5 1/4	134.0	2	0.9
	3/4	19.0	2 13/16	71.4	5 5/8	142.9	5/8	15.9	2 7/16	61.9	1 9/64	29.0	5 1/4	134.0	2	0.9
	1	25.4	3 7/32	81.8	6 7/16	163.5	27/32	21.4	2 5/16	58.7	1 19/64	33.0	5 1/4	134.0	3	1.4
	1 1/2	38.1	3 5/8	92.1	7 1/4	184.2	1 23/64	34.5	3 3/4	95.3	1 37/64	40.0	6 11/16	170.0	6	2.7
	2	50.8	3 13/16	81.0	7 5/8	193.7	1 55/64	47.2	4 1/8	104.8	23/16	55.5	8 9/64	207.0	10	4.5

Alfa Laval reserves the right to change specifications without prior notification.

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**How to contact Alfa Laval**

Contact details for all countries  
are continually updated on our website.  
Please visit [www.alfalaval.com](http://www.alfalaval.com) to  
access the information direct.