Simple and Effictive

Alfa Laval Ball Valve UltraPure

Concept

Ball Valve UltraPure is ideal for applications requiring a full flow body design to minimize line turbulence and pressure drop. Seat with cavity filler is standard offering for critical process applications requiring minimum risk for product entrapment.

Standard Design

The Ball Valve UltraPure consists of a stainless steel body that houses a rotating ball. The rotating ball is sealed in the body with a PTFE seat that fully encapsulates the ball. The valve is activated by a stainless steel handle that opens and closes the valve through a quarter turn. External thrust springs maintain constant pressure on the stem seal. The stem seal design eliminates the possibility of the stem becoming dislodged or blown out.

TECHNICAL DATA

Temperature

Temperature range	-20°C to 150°C (EPDM)
Temperature range	-4°F to 302°F (EPDM)

Pressure

Max. product pressure:	400 kPa (40 bar)
Max. product pressure:	400 kPa (40 bar)
Min. product pressure:	Full vacuum

PHYSICAL DATA

Materials

Valve body	CF3M (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
Surface finish	Ra 20 µin
Product wetted seals	PTFE with cavity filler
Actuator surface	Epoxy coated

Options

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

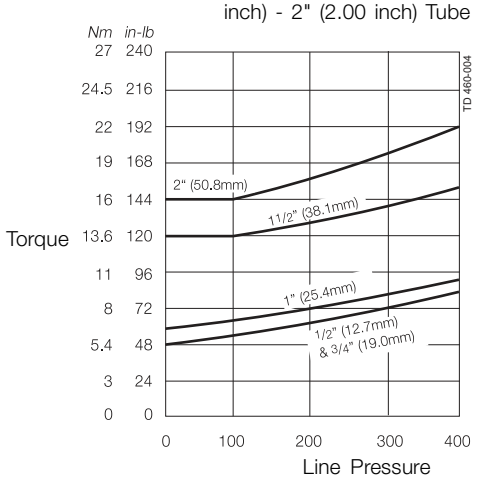
Documentation

All valves are delivered with Alfa Laval Q-doc.

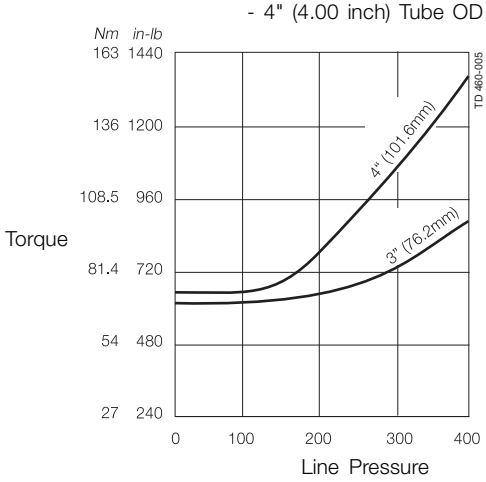
Torque vs. Pressure

Standard Seats

1/2" (12.7mm) - 2" (50.8mm) Tube OD1/2" (0.50 inch) - 2" (2.00 inch) Tube OD

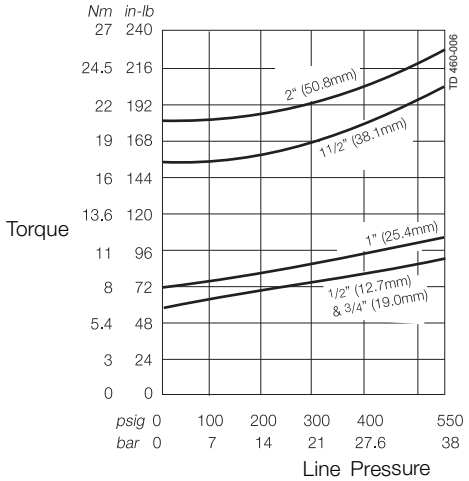


3" (76.2mm) - 4" (101.68mm) Tube OD3" (3.00 inch) - 4" (4.00 inch) Tube OD

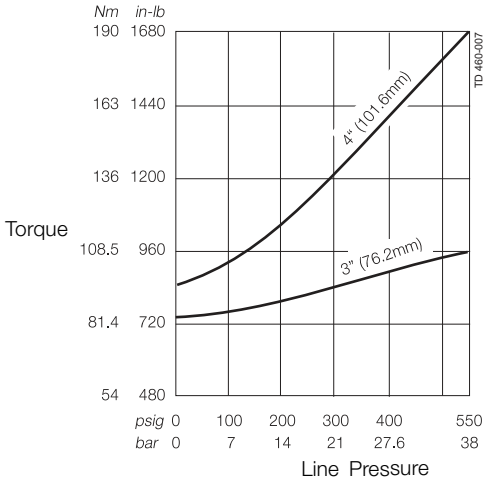


Seats with cavity filler

1/2" (12.7mm) - 2" (50.8mm) Tube OD1/2" (0.50 inch) - 2" (2.00 inch) Tube OD

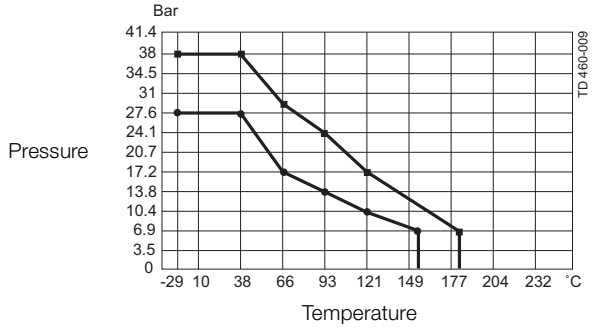


3" (76.2mm) - 4" (101.68mm) Tube OD3" (3.00 inch) - 4" (4.00 inch) Tube OD



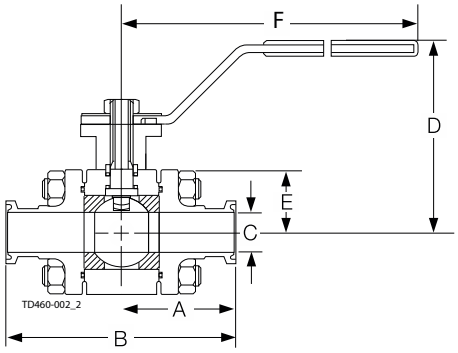
Use the charts above to determine the amount of torque required to cycle the ball valve.

Standard and Encapsulated Seats: Ratings - Pressure vs. Temperature

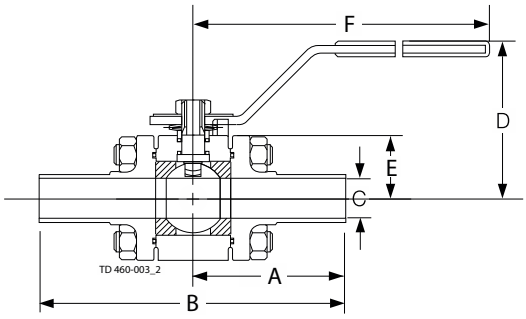


■ Reinforced (glass-filled) PTFE
● PTFE

Manual Valve Dimensions



Tri-Clamp® Ends
Model 5308



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
ASME BPE 5308 Tri-Clamp® (both ends)	1/2	12.7	1 3/4	44.5	3 1/2	88.9	3/8	9.4	2 5/16	71.5	1 9/64	29.0	5 1/4	134.0	2.0	0.9
	3/4	19.0	1 3/4	44.5	3 1/2	88.9	5/8	15.75	2 7/16	71.5	1 9/64	29.0	5 1/4	134.0	2.0	0.9
	1	25.4	1 3/4	44.5	3 1/2	88.9	27/32	22.2	2 5/16	76.0	1 19/64	33.0	5 1/4	134.0	3.0	1.4
	1 1/2	38.1	2 1/4	57.2	4 1/2	114.3	1 23/64	34.9	2 3/4	87.3	1 37/64	40.0	6 11/16	170.0	6.0	2.7
	2	50.8	2 1/2	63.5	5	127.0	1 56/64	47.5	4 1/8	109.5	2 3/16	55.5	8 9/64	207.0	10.0	4.5
	2 1/2	63.15	3 1/3	87.0	6 3/4	174.0	2 1/3	60.3	6 1/2	167.0	4 1/4	108.7	11 3/4	300.0	13.0	6.5
	3	76.2	3 7/8	98.5	7 3/4	196.9	2 55/64	73.0	7	175.0	4 9/16	117.7	11 3/4	300.0	30.0	13.6
	4	101.6	4 3/4	120.7	9 1/2	241.3	3 13/16	97.4	7 1/2	190.0	5 1/4	132.55	13 1/4	365.0	47.0	21.3
ASME BPE 5309 Weld Ends (both ends)	1/2	12.7	2 11/16	68.3	5 3/8	136.5	3/8	9.4	2 5/16	58.7	1 9/64	29.0	5 1/4	134.0	2.0	0.9
	3/4	19.0	2 13/16	71.4	5 5/8	142.9	5/8	15.75	2 7/16	61.9	1 9/64	29.0	5 1/4	134.0	2.0	0.9
	1	25.4	3 7/32	81.8	6 7/16	163.5	27/32	22.2	2 5/16	58.7	1 19/64	33.0	5 1/4	134.0	3.0	1.4
	1 1/2	38.1	3 5/8	92.1	7 1/4	184.2	1 23/64	34.9	3 3/4	95.3	1 37/64	40.0	6 11/16	170.0	6.0	2.7
	2	50.8	3 13/16	96.9	7 5/8	193.7	1 55/64	47.5	4 1/8	104.8	23/16	55.5	8 9/64	207.0	10.0	4.5
	2 1/2	63.5	4 3/16	123.8	9 3/4	247.6	2 1/3	60.3	6 1/2	167.0	4 1/4	108.7	11 3/4	300.0	13.0	6.5
	3	76.2	54 1/4	133.4	10 1/2	266.8	2 55/64	73.0	6 2/3	170.0	4 9/16	117.7	11 3/4	300.0	30.0	13.6
	4	101.6	6 1/4	158.8	12 1/2	317.6	3 13/16	97.4	7 1/3	185.0	5 1/4	132.55	14 3/4	365.0	47.0	21.3

*) C = Full bore diameter

Model	Size	A	B	C	D	E	F	Weight (valve + handle)	Full bore diameter
	mm	mm	mm	mm	mm	mm	mm	kg	
ISO 2037 Weld Ends	25	44,9	89,8	29,6	58,7	-	134,0	1,50	20
	38	57,2	114,4	35,6	61,9	-	134,0	4,27	32
	51	65,0	130,0	48,6	58,7	-	134,0	5,30	38
	63,5	72,5	145,0	60,3	95,3	-	170,0	6,51	50
	76,1	92,5	185,0	72,9	104,8	-	207,0	12,00	65
	101,6	102,5	205,0	97,6	-	-	300,0	16,20	80
DIN 11850-2 Weld Ends	25	55,0	110,0	26,0	58,7	-	134,0	1,50	25
	40	65,0	130,0	38,0	61,9	-	134,0	4,27	38
	50	71,4	142,8	50,0	58,7	-	134,0	5,30	50
	65	92,5	185,0	66,0	95,3	-	170,0	6,51	-
	80	102,5	205,0	81,0	104,8	-	207,0	12,00	-
	100	120,0	240,0	100,0	-	-	300,0	16,20	-

Model	Size	A	B	C	D	E	F	Weight (valve + handle)
	inch	inch	inch	inch	inch	inch	inch	lb
ISO 2037 Weld Ends	0.98	1.77	3.52	0.89	2.31	-	5.28	3.31
	1.50	2.25	4.50	1.40	2.44	-	5.28	9.41
	2.01	2.56	5.12	1.91	2.31	-	5.28	11.68
	2.50	2.85	5.71	2.37	3.75	-	6.69	14.35
	3.00	3.64	7.28	2.87	4.13	-	8.15	26.46
	4.00	4.04	8.07	3.84	-	-	11.81	35.71
DIN 11850-2 Weld Ends	0.98	2.17	4.33	1.02	2.31	-	5.28	3.31
	1.57	2.56	5.12	1.50	2.44	-	5.28	9.41
	1.97	2.81	5.62	1.97	2.31	-	5.28	11.68
	2.56	3.64	7.28	2.60	3.75	-	6.69	14.35
	3.15	4.04	8.07	3.19	4.13	-	8.15	26.46
	3.94	4.72	9.45	3.94	-	-	11.81	35.71