

MANUAL

Ball valve AL 35-77L

Rotable end caps

1. Use

1.1 Maximum results and long life of the valves can be maintained under normal working conditions and according with pressure/temperature rating and corrosion data chart.

2. Manual operation

2.1 The opening and closing of the valve is done by turning the lever a ¼" turn (90 degrees).

A. Valve in Open Position the lever is in line with the valve or pipe line.

B. Valve in Closed Position the lever is at right angle with the valve or pipeline.

3. Disassembly and cleaning procedure

Caution: ball valve can trap fluids in the ball cavity when closed.

3.1 If the valve has been used to control hazardous media, it must be decontaminated before disassembly. It is recommended that the following steps are taken for safe removal and reassembly.

A. Relief the line pressure.

B. Place valve in half-open position and flush the line to remove any hazardous material from the valve.

C. All persons involved in the removal and disassembly of the valve should wear the proper protective clothing, such as face shield, gloves, etc.

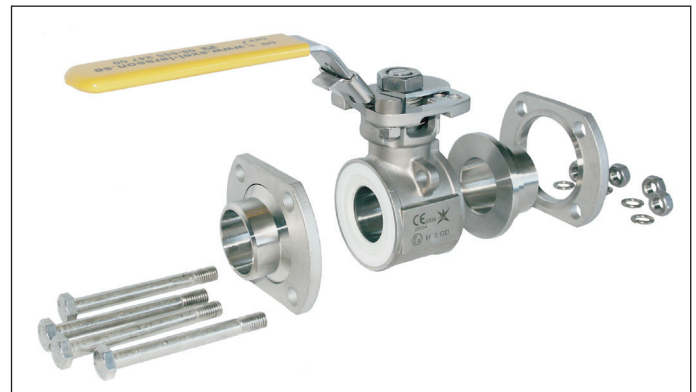
Maintenance of parts is easy, even if the valve is installed in the line: By removing all the body bolts except one and loosening the remain one, valve body can be swung out. Seats, gaskets and ball can be replaced without disturbing pipe alignment. On threaded lines, valve can be screwed on without the use of unions, as the three-piece construction makes valve ends free, by removing the bolts.

4. General information for installation

4.1 The valve can be installed in any position on the pipeline.

4.2 Before installation of the valves, the pipe must be flushed clean of dirt, burrs and welding residues, or the seat and ball surface will be damaged.

4.3 The pipe must be free from tension.



AL 35-77L is designed with loose rotatable weld ends. When mounting, use the bracket on the housing to facilitate assembly.



5. Installation of threaded valves

5.1 Use conventional sealant, such as hemp core, Teflon, etc. on the threads.

5.2 Apply wrench only on the hexagon of the valve ends. Tightening by using the valve body or lever can seriously damage the valve.

5.3 In some applications, screwed valves are back welded on site. These valves must be treated as per instructions for weld end valves before back welding.

6. Installation of weld-end valves

6.1 Tack weld the valve on the pipe in four points on both end caps.

6.2 With the valve in the open position, (lever to be parallel to the axis of the pipe), remove all the body bolts except one.

Loosen the nut on the remaining bolt.

Swing the body outside the pipe.

6.3 Finish welding both end caps on the pipe.

6.4 When cooled down, clean both end caps and body surface.

6.5 Swing the body back in position and replace the bolts. Tighten all nuts slightly. This operation is very important, to keep body and end caps perfectly parallel, thus preventing distortion of the end caps.

6.6 Tighten body bolts evenly. Make sure that maximum tightening torque is observed.

6.7 Check proper operation of the valve.

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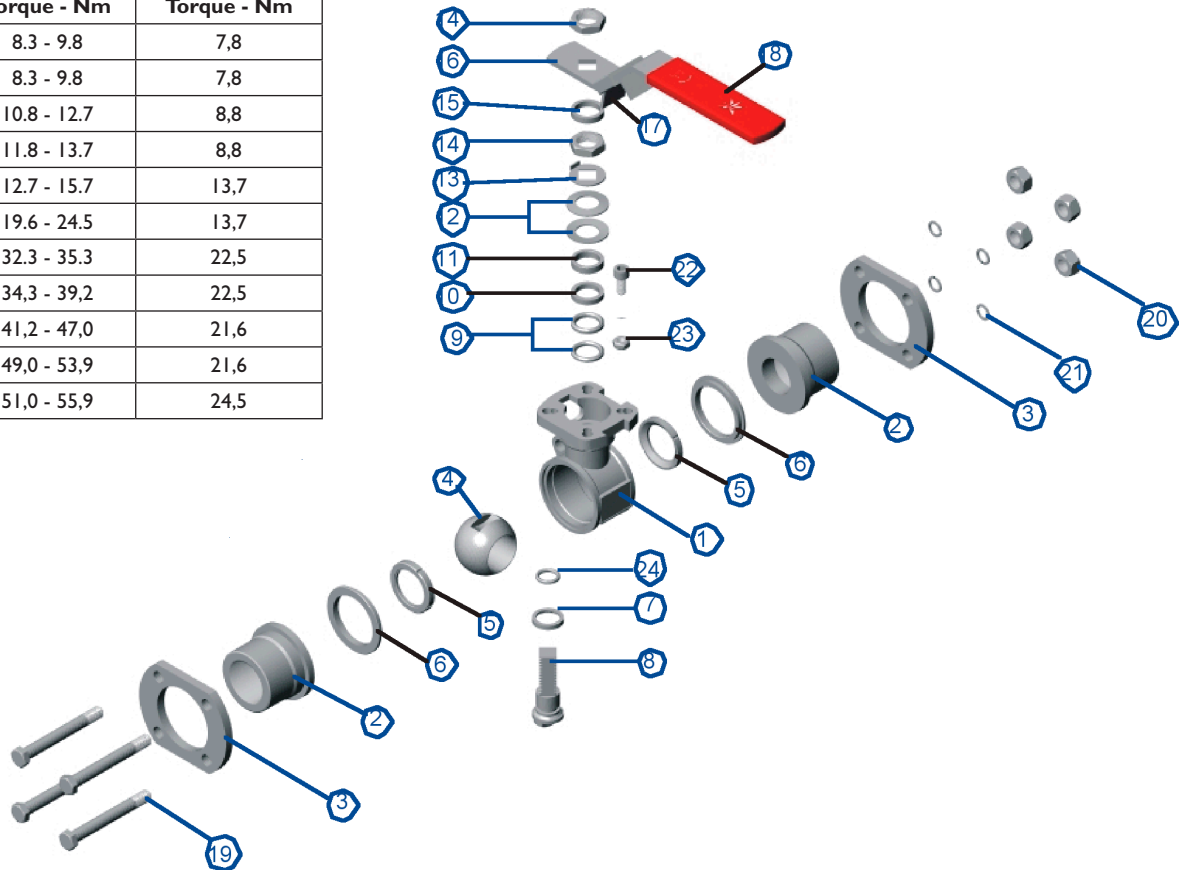
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Bolt tightening specifications

The body bolts of the valve should be tightened evenly. Tighten one-side snugly, then the one diagonal across. Repeat for the other bolts, bringing them all down tightly in sequence.

Size	Body bolts Torque - Nm	Stem nut Torque - Nm
DN 8 - 1/4"	8.3 - 9.8	7,8
DN 10 - 3/8"	8.3 - 9.8	7,8
DN 15 - 1/2"	10.8 - 12.7	8,8
DN 20 - 3/4"	11.8 - 13.7	8,8
DN 25 - 1"	12.7 - 15.7	13,7
DN 32 - 1 1/4"	19.6 - 24.5	13,7
DN 40 - 1 1/2"	32.3 - 35.3	22,5
DN 50 - 2"	34,3 - 39,2	22,5
DN 65 - 2 1/2"	41,2 - 47,0	21,6
DN 80 - 3"	49,0 - 53,9	21,6
DN 100 - 4"	51,0 - 55,9	24,5



Material specification

No	Part name	Qty	Material
1	Body	1	Stainless steel CF8M
2	End cap	2	Stainless steel CF8M
3	Body flange	2	Stainless steel CF8M
4	Ball	1	Stainless steel SS 316
5	Seat	2	RTFE
6	Joint gasket	2	RTFE
7	Stem seal	1	RTFE
8	Stem	1	Stainless steel SS 316
9	Stem packing	2	PTFE
10	Stem packing	1	25% glass fiberfilled + PTFE
11	Gland	1	Stainless steel SS 304
12	Belleville washer	2	Stainless steel SS 301

No	Part name	Qty	Material
13	Lock saddle	1	Stainless steel SS 304
14	Stem nut	2	Stainless steel SS 304
15	Stem washer	1	Stainless steel SS 304
16	Handle	1	Stainless steel SS 304
17	Locking device	1	Stainless steel SS 304
18	Handle sleeve	1	Vinyl
19	Bolt	4	Stainless steel SS 304
20	Bolt nut	4	Stainless steel SS 304
21	Bolt washer	4	Stainless steel SS 304
22	Stop pin	1	Stainless steel SS 304
23	Pin nut	1	Stainless steel SS 304
24	O-ring	1	Viton

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