



## Instruction for installation, operation and maintenance of ANSI flanged ball valve Series AF93/A93

### 1. General

To protect the ball and seats prior to installing the valve, flush out the pipes, making sure all sediment and welding residue have been removed.

The ball valve are not suitable to work with abrasive media because seals and seats may be destructed.

Please refer to the prospectus „ANSI Flange Ball Valve AF93/A93" for dimensions, materials, replacement parts and working conditions. The runner of the installation is responsible for the choice of the materials.

### 2. Installation

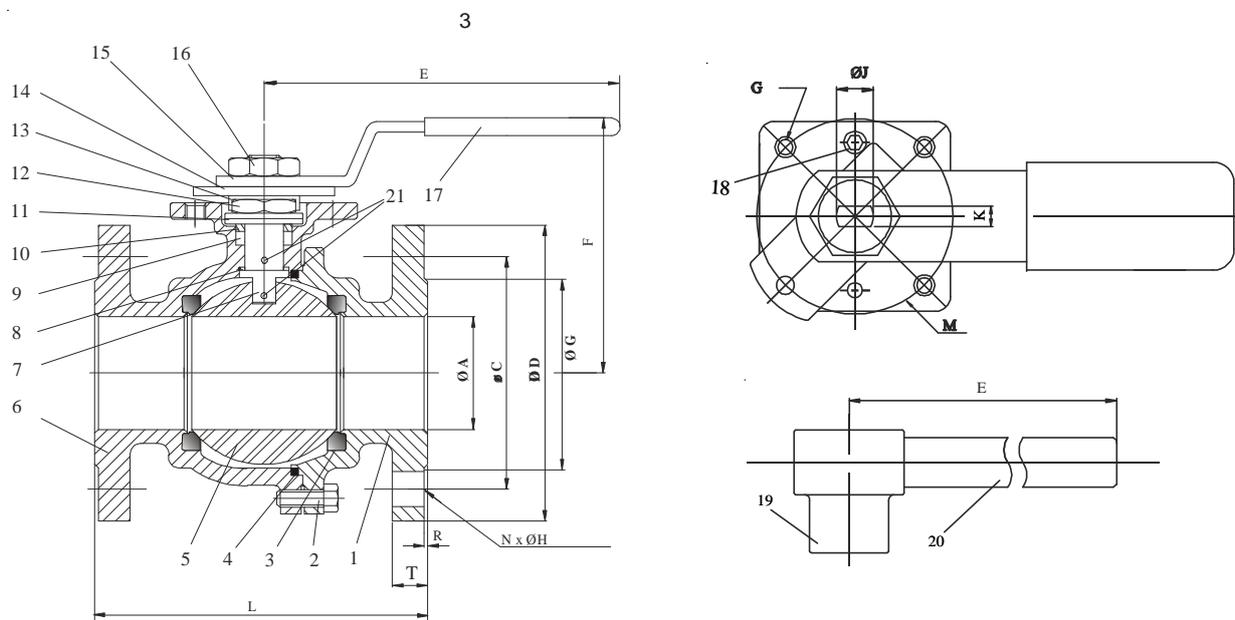
The direction of flow and the installation position of the ball valve are free.

The assembling must be performed under acceptance of the regularizing of the technology.

Remove the plastic protective covers before installing the valve.

### 3. Replacement of seats and seals

Before removing the ball valve make sure this is cold and no longer under pressure. Remove the Ball Valve from pipe and place the handle in the closed position. For internal pressure relief, open and close the Ball Valve once. Make sure to drain all media also behind the ball.



Remove body screws 2. Remove handle 15 or actuator, release saddle lock 13 followed by the stem nut 12. Remove disc washers 11 and stem seal follower 10.

Take out PTFE body gasket 4 or graphite body gasket 4 for firesafe version, remove the seats 3 and ball 5. Only original spare parts may be used.

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Strike stem 7 with a nylon hammer from the outside into the body and remove stem 7 and stem packing 9, PTFE for A93 and graphite for AF93.

Remove thrust washer 8.

Clean stem 7 and body 1 and 6 from any residue. In case of damaged stem or malfunction of the antistatic device, change the stem.

#### 4. Assembly

Only clean, undamaged and parts in good condition may be used.

Push thrust washer 8 on stem 7. Grease stem 7 with white Molykote and insert from the inside of the body 6. Make sure that the 2 antistatic devices 21 on the stem can be moved easily.

Insert stem packing 9 (PTFE for A93 and Graphite for AF93) and stem seal follower 10, tighten the packing with an assembly sleeve. Insert disk washers 11. Screw on stem nut 12 and fasten until the disk washers are flattened. Screw the nut 12 backward until the saddle lock 13 comes to the right position of a flat side of the stem nut.

Turn ball into open position, open and close valve and check correct operation. If necessary tighten up stem nut 12.

Lightly grease seats 3 with silicon.

Place body gasket 4 (PTFE for A93 and Graphite for AF93) into body 1 and 6, grease lightly body screws 2 with Molykote and assemble body 1 and tighten screws 2.

Tightening torques of body screws 2

|           |      |      |     |        |        |     |        |     |     |
|-----------|------|------|-----|--------|--------|-----|--------|-----|-----|
| Size      | 1/2" | 3/4" | 1"  | 1 1/4" | 1 1/2" | 2"  | 2 1/2" | 3"  | 4"  |
| Torque Nm | 35   | 35   | 55  | 55     | 80     | 80  | 80     | 80  | 80  |
| Size      | M8   | M8   | M10 | M10    | M12    | M12 | M12    | M12 | M12 |

Put on distancers on top of stem nut 12, use as much distancers as necessary to ensure a free turning of the adapter,

put on stop plate 14 and handle 17 or actuator and screw handle nut 16 tightly.

Flush the pipe carefully out and install the ball valve into the pipe.

#### 5. Operation

During operation the ball valve may not be dismantled nor the screws may be changed. Putting into operation, the ball valve must be checked for proper function; if there are doubts of proper function replace the ball valve.

#### 6. Maintenance and storage

The Ball Valves require no special maintenance if they are correctly laid out, the installation instructions carefully followed and only operated in the open or closed position.

In case of leakage check the tightening torques of the bolts 2. If tightness cannot be achieved, then the defective parts must be replaced according to the instruction items 3 and 4.

The Ball Valves must be stored with the ball in open position with the plastic protective covers and should not be exposed to dust, humidity or damage.

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