

Installation, Operation, Maintenance Instructions

Sanitary and Hygiene Valves

Series 191 000

Series 191 600 Steam Barrier

1 GENERAL INFORMATION

These instructions are designed to support you when unpacking, installing and performing maintenance work on the valves. Users and maintenance personnel should carefully read these instructions before installing, operating or performing maintenance work. There is a separate set of instructions for accessories (special seat/plug fittings, diaphragm actuators, handwheels, special seats, etc.).

These instructions do not contain any information on Kämmer positioners. For this, see corresponding instructions for the installation, maintenance, troubleshooting, adjustment and operation of Kämmer positioners.

To avoid damage or injury to personnel or equipment, always heed all warnings and instructions. Unprofessional reconditioning, the use of foreign replacement parts or the performance of other maintenance steps than those described here, may cause a loss of efficiency or lead to personnel injury or damage to parts, and render the warranty void



1.1 UNPACKING

- 1.1.1 Each delivery includes a packing slip. When unpacking, check all delivered valves and accessories using this packing slip.
- 1.1.2 Report transport damage to the carrier immediately.
- 1.1.3 In case of discrepancies, contact your nearest dealer.

1.2 INSTALLATION

- 1.2.1 Clean tubing prior to installing.

- 1.2.2 If possible, install the valve in an upright position (actuator on top), to ease maintenance. An upright installation position is important with low-temperature applications, in order to keep the distance between the packing material and the medium as large as possible. The packing material then retains the ambient temperature as much as possible.

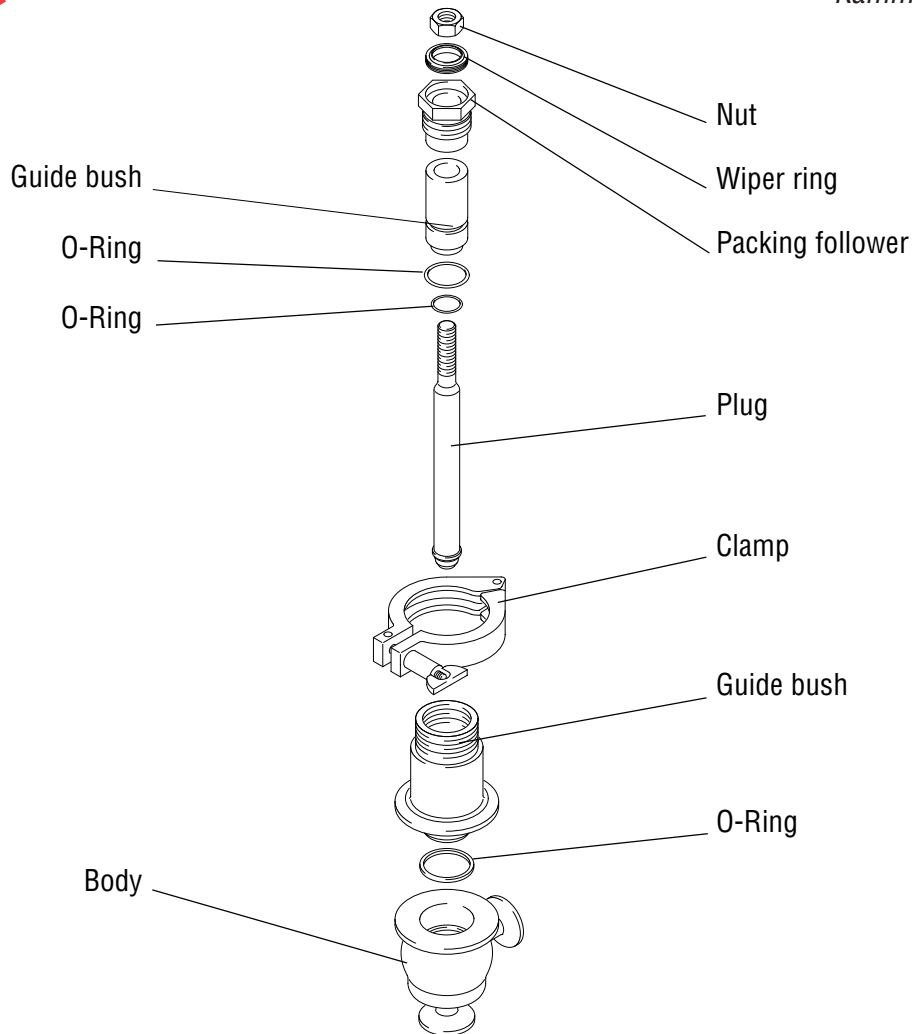


Important: Do not insulate extension bonnets that are provided for hot or cold services

- 1.2.3 Make sure that sufficient overhead clearance above the actuator is maintained, to allow for disassembly of plug from the valve body (see following table).

Actuator size	Clearance (mm)	Actuator size	Clearance (mm)
37/47	95	P2	140
38/48	140	P3	140
39/49	140	P4	140
39D/49D	140	P5	140

- 1.2.4 After installing, check direction of flow again.
- 1.2.5 If the valve is to be welded into the line, make sure that the valve is shielded from excessive heat.
- 1.2.6 Connect supply pressure and signal lines. Control valves can be supplied with a positioner. The end connections for supply pressure and signal are clearly marked. Actuator and positioner are suitable for max. 6 bar (87 psi) supply pressure. If the supply pressure exceeds the pressure specified on the nameplate, a pressure reducing station is required. If instrument air is not available, install an oil separator/air filter in the air inlet line. All connections must be free of leaks.



Typical valve configuration
Fig. 1

1.3 QUICK CHECK:

Before operating, check the valve as follows:

- 1.3.1 Open and close the valve, and observe the movement of the actuator stem. The movement must be smooth and linear.
- 1.3.2 Check for maximum stroke through change of signal (for pneumatic positioners, 0.2 - 1.0 bar or corresponding split-range values; for IP positioners, 4-20 or 0-20 mA).
- 1.3.3 Check all air connections for leaks.
- 1.3.4 The packing follower must always be tight to ensure that the packing kit (guide bush with O-Rings) functions correctly.
- 1.3.5 Check the wiper ring for damage.
- 1.3.6 Check fail-safe position. To do this, close supply pressure and observe whether the valve opens or closes as prescribed.

- 1.3.7 After use at fluctuating temperatures, re-tighten all bolt connections and check for leaks.

2 MAINTENANCE

Check valves for correct functioning at regular intervals (at least once every 6 months) as follows. This check can be made when installed and in many cases without interrupting production. If internal defects are suspected, see section on „Disassembly and Assembly of Valve“.

- 2.1 Examine gaskets for leaks and if necessary re-tighten bolts (see Fig. 1).
- 2.2 Check valve for damage caused by corrosive residues or corrosive vapours.
- 2.3 Clean valves and if necessary repaint.
- 2.4 Check that the packing follower is tight.

2.5 If possible, open and close valve and check for maximum stroke and smooth movement of the plug stem. Irregular movement of the plug stem may indicate internal defects.

Note: With graphite packing, irregular movement of the plug stem is normal.



IMPORTANT: Keep hands, hair, clothing, etc. away from all moving parts. Failure to do so can lead to serious injury.

- 2.7 Check all accessories for firm seating.
- 2.8 If possible, close supply pressure and check the fail-safe position.
- 2.9 Check stem boot for wear.
- 2.10 Check actuator for leaks. To do this, spray housing, air connections and plug stem guide with leak spray and note any bubble formation.
- 2.11 Clean plug stem.
- 2.12 Check air filter, if present, and if necessary replace insert.

3 DISASSEMBLE AND ASSEMBLE VALVE

General Information

We recommend separating the actuator from the valve before commencing repair work.

However, many maintenance and adjusting operations can be carried out with the valve installed.



Attention: Never turn plug or perform any service on the valve while the plug is in the seat ring. Doing so may cause irreparable damage to the trim set. To ensure against this, always hold the plug out of the seat while working on the valve assembly.

3.1 Disassemble valve

- 3.1.1 Disconnect actuator from valve body
- 3.1.2 Loosen and remove the clamp.
- 3.1.3 Carefully remove the bonnet complete with plug and packing kit..
- 3.1.4 Carefully remove the plug from the bonnet.
- 3.1.5 Unscrew the packing follower and extract the packing kit from the top of the bonnet. Check the wiper ring and O-Rings for damage.
- 3.1.6 Remove the body/bonnet gasket.
- 3.1.7 Clean and inspect all parts.

3.2 Assemble valve

Attention: All worn or damaged parts must be replaced. Reusable parts must be clean. All consumable items such as seals, O-Rings and gaskets must always be renewed.

- 3.2.1 Carefully enter the plug into the bonnet.
- 3.2.2 Replace body/bonnet gasket.
- 3.2.3 Carefully place the bonnet/plug assembly vertically onto the body ensuring the body/bonnet gasket is correctly seated.
- 3.2.4 Insert the guide bush with O-Rings into the bonnet using an assembly bushing (see Fig. 2) and tighten down the packing follower.
- 3.2.5 Place the clamp around the body and tighten the wing-nut.

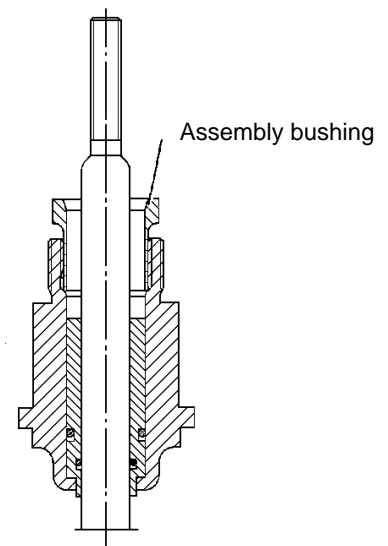


Fig. 2 Assembly bushing

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