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MWST-Nr. 176 286



Installation and user manual for a PM Ball Valve

Table of Contents:

- 1. Safety instructions
- 2. Storage and handling
- 3. Installation and assembly regulations
- 4. Installation in explosive areas
- 5. Operation
- 6. Cleaning
- Repair / maintenance

1. Safety instructions



Designated use of PM Ball Valve

The ball valve may only be used to shut-off or control a flow rate of a medium. Gases, liquids and solids in powder or granulate form may be conducted as the medium.

The medium pressure and the temperatures must be observed as per the diagram. In the case of corrosive media, attention must be paid to the corrosion resistance of the materials used in the ball valve.

2. Storage and handling



- 2.1. Store the valve in a fully open position (as delivered) so as to avoid damage to the spherical surface and expose the seat rings to uneven loads.
- 2.2. Only remove the protective caps upon installation so that dirt cannot penetrate the valve interior.



2.3. Risk of injury

Neither an object nor a body part (e.g. hand) may be placed in the valve hole while the ball valve is activated (manually or with an actuator).

3. <u>Installation and assembly regulations</u>

- 3.1. All work on the ball valve may only be carried out by trained specialist personnel.
- 3.2. The cryogenic valves must be installed with the shaft extension upwards in a perpendicular fashion in order to ensure that there is a gas cushion in the shaft extension.
- 3.3. The insulation on cryogenic valves may only extend 50 mm over the lower packing gland so that the shaft extension remains in the open air for a sufficient length.

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Einbau- und Betriebsanleitung Kugelhahn.doc Page 1/3

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3.4. If a pressure direction has not been specified, then the valve may normally be installed in any direction and position.

If the medium has a tendency to freeze, the higher medium pressure must always be on the spring side. The spring in the ball valve is always on the side of the body weld. If there are two body welds, the spring side is marked with a groove.

- 3.5. In the case of cryogenic valves, attention must be paid to the direction of preferential pressure. Marking on a label with a red arrow.
- 3.6. If a directional arrow is indicated on the valve body, then the pressure direction of the medium must be the same as the arrow direction.
- 3.7. Flange or stub ends of the piping must be plane-parallel and be at a distance from the standard face-to face length.
- 3.8 The flange must be tightened evenly and "above the cross".



- 3.9 In the case of welding valves, the delivered pipe length should be left. Otherwise the valve body (especially the seats) must be cooled intensively.
- 3.10 The ball must be in a fully open position when welding the valve.
- 3.11 Do not move the valve after having completed the installation or welding, but flush the piping thoroughly. Only then perform the open-close movement as a function check.



3.12 Torque to operate the ball valve

The permitted torque for actuators and manual operation can be obtained from the company Peter Meyer & Co or from the company AVINTOS AG on request.

4. Installation in explosive areas

- 4.1. The ball valve does not contain any effective ignition sources.
- 4.2. In order to prevent any electrostatic loading of the ball valve, this must be connected to other parts (earth wire) electro-conductively.



5. Operation

5.1. The nominal pressure (PN) stated should not be exceeded. The temperature limits as shown in the brochure must be observed.

Non-conformity with this regulation will result in an exponential reduction in the durability of the seat ring and packing gland.

The permissible operating pressure and the permissible operating temperature for the body are based on EN 1092-1:2001 (D)

- 5.2. Abrasive medium reduces the durability of seat rings and ball.

 This also applies to metal-coated balls and seats to a much lesser extent.
- 5.3 Adhesive medium can impede the functioning of the valve.

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6. Cleaning

6.1. Once in an installed state, apply rinsing agent under pressure through the piping and valve and, at the same time, repeatedly turn the ball in both directions by 360 ℃ (remove setscrews beforehand).

7. Repair / maintenance

- 7.1. It is imperative that our repair instructions must be observed when carrying out repairs.
 - 7.2. Fully empty the piping and valve (carry out open-close movements) before dismounting the valve.
- 7.3. Only original spare parts may be used for repairs or maintenance.
- 7.4. All work on the ball valve may only be carried out by trained specialist personnel.

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