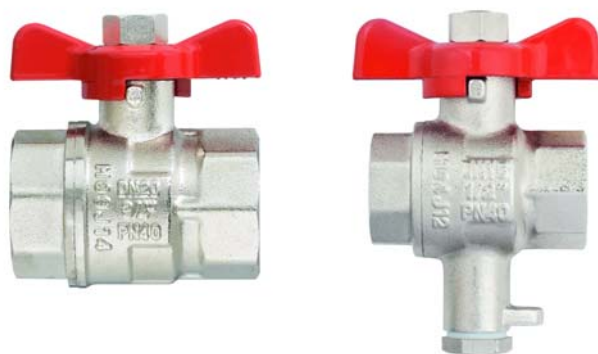


Ball valve for pipeline systems

in brass, nickel-plated



Installation Instructions



90244210T94Z003K000

V1.00/EN/00674685

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1 Safety information

General information

This manual contains information that must be observed in the interest of your own safety and to avoid material damage. This information is supported by symbols which are used in this manual as indicated.

Please read this manual before starting up the device. Store this manual in a place that is accessible to all users at all times.

If difficulties occur during startup, please do not intervene in any way that could jeopardize your warranty rights!

Warranty

The function and tightness of all ball valves are individually checked. We do not accept any warranty claims for damage caused as a result of non-observance of these installation instructions, improper handling, wear, calcification, deposits and/or corrosion.

Storage

The ball valves are stored in the open or closed positions. Attention must be paid to making sure that the ball valve is either in the completely open or completely closed position in order to avoid cold deformation on one side of the PTFE seal seats. The ball valves must be protected from dust and dirt.

Planning

Any operating pressures (pressure surges/pulse pressures) that emerge must be considered when planning and designing the ball valves. Pressure specifications in the catalog, in the data sheets and on the ball valves relate to static pressures. Corresponding pressure surges must be considered for dynamic and alternating loads. Special operating or environmental conditions (moisture, vibrations, switching frequency, electromagnetic field, potentially explosive area and anti-static, etc.) must be clearly defined when planning/ordering ball valves. Ball valves must only be used for specified mediums.

Planning, design, maintenance and operation for the installation must be conducted as per DIN 1988 and DIN EN 806.

Warning symbols



CAUTION!

Risk of burns!

The installation process must be carried out by trained personnel.

Always make sure that hot medium does not escape from the pipeline during installation or dismantling.

- ▶ Drain or seal off the pipeline system to relieve the pressure and so that no hot medium can escape from the pipeline system.
-

General

Before installation, a check must be performed to see whether the ball valve corresponds with the required design and statutory regulations and is suitable and approved for the intended use. Please make sure that the ball valves intended for installation meet the operating conditions/operating circumstances (pressure, temperature, medium, etc.). Please feel free to contact us if you need support.

The ball valve can be installed in each direction of flow and in all installation positions. The pipeline must be installed accurately and in accordance with the general recognized technical rules so that no mechanical strain can influence the ball valve. Ball valves must be processed stress-free in order to ensure they function perfectly!

The ball valves may only be installed by trained personnel and when the ball valve and the pipeline system are in a depressurized state. The pipelines must be lead to the fitting to be installed without tension. The ball valves must be checked for transport damage before they are installed. Damaged ball valves must not be installed.



NOTE!

Please use a suitable tool for proper installation!

Position the appropriate open-end wrench/pliers wrench/fitting wrench on the sleeve facing the pipe or the one facing the fitting. Fix the pipe/fitting using a suitable tool and screw it into or onto the ball valve thread. When processing, pay attention to any different thread types (DIN EN ISO 228/1 and EN 10226, old DIN 2999) and avoid excessive sealing on the sleeve with too much sealing material. We recommend Loctite liquid PTFE or PTFE sealing tape for screwing the sleeves into the pipeline.



CAUTION!

Risk of damage and cracks!

The installation process must be carried out by trained personnel. Overpacking or using too much PTFE can cause the thread to be damaged or the thread sleeves to crack.

- ▶ Avoid overpacking or using too much PTFE!
-



NOTE!

When installing in pipeline systems, make sure that the pipes are not screwed in all the way to the limit stop. The varying extension of iron, steel, stainless steel, copper or plastic pipes can lead to defects or leakages in the event of temperature fluctuations.

Expansion bends, compensators or expansion compensation sleeves must always be installed for longer pipes in order to compensate for the pipes' fluctuating expansion.

An electrical circuit must be set up as a functional test once the ball valve is installed.

2 Mounting

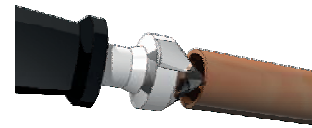
1. Before screwing in the thread, check the thread for contamination and/or damage. Contamination and/or damage can lead to damage to the seals, and leakages.



2. Before using pipes and fittings, check them for impurities, burrs and damage.

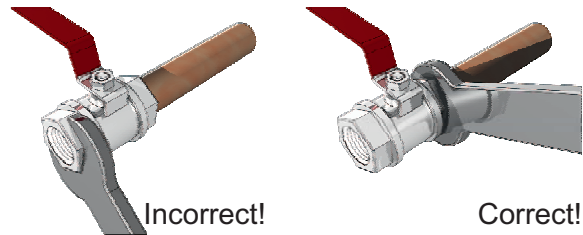


3. Remove all burrs on the threads and pipes. Burrs can lead to leaks and damage the thread on the ball valve.

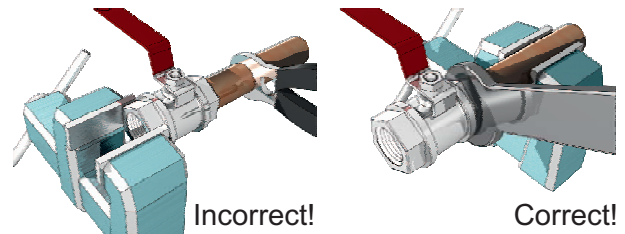


4. Position an appropriate open-end wrench/pliers wrench/fitting wrench on the sleeve facing the pipe or the one facing the fitting. Fix the pipe/fitting using a suitable tool and screw it into or onto the ball valve thread.

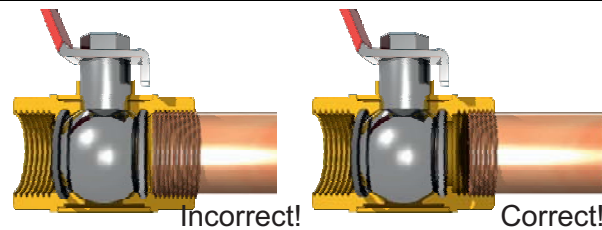
Do not use a pipe wrench on the ball valve!



5. Never clamp the ball valve in a vice as this may damage it. Fix the pipe or the fitting in a vice and screw the ball valve to the pipe.



6. Pay attention to different thread types (ISO 228-1 and EN 10226) and make sure that the thread is not screwed in all the way to the limit stop in the thread sleeves. Otherwise, the ball will be compressed and the ball valve damaged.



General

All operating instructions must be read and observed before initial startup and all operating conditions and assembly work must be checked again.

The plant must be flushed before startup (also after maintenance work for old plants) in order to prevent the ball seats and/or the balls from being damaged by dirt particles when actuating the ball valve. We recommend installing house water filters in accordance with DIN EN 13443, part 1.

Make sure that corrosion does not occur due to the condition of the mediums or the combination of the materials. To this end, observe DIN 1988-7, VDI 2035 sheet 2, ÖNORM H 5195-1 or similar.



NOTE!

A plant may only be started up by trained personnel!

The torque for the first switching operation is significantly higher than the actual torque (snap moment) when the ball valve is stored for a long time or there is a longer downtime in a switching position.



CAUTION!

Explosion hazard!

The installation process must be carried out by trained personnel.

The pipeline system must be bled before startup. Air bubbles in the pipeline system can lead to explosion if there is a sudden buildup of pressure.

► Therefore build up the operating pressure slowly and in stages!



NOTE!

If ball valves are installed in the pipeline system as end fittings, unused ball valve connections must be professionally sealed otherwise components may be torn out in an application error, posing a danger to life.

4 Operation

General

The ball valve closes clockwise and opens anti-clockwise. The angle of rotation is 90°. If the lever is pointing in the direction of the pipeline, the ball valve is open. If it is at a right angle to the pipeline, the ball valve is closed. The shift lever can only be rotated 180°. The ball valve may only be used in the **completely** open or **completely** closed positions. Intermediate positions (control function) are not permissible and damage the ball seal. This can lever out the ball seal and lead to leakages in the shut-off function.

If the ball valve has a stuffing box, this can be retightened on the spindle in the event of leaks.



NOTE!

According to DIN 1988 and EnEV § 10, ball valves must be serviced and inspected at regular intervals. The checks must be performed at more frequent intervals for extreme conditions. Ball valves should be regularly actuated in 3-month intervals in order to ensure ease of actuation and avoid any arising deposits on the ball, thus making sure the ball valves function reliably on a permanent basis!

Slowly open and close the ball valve to avoid pressure surges in the pipeline system. Do not put too much additional weight on the ball valve. Avoid shocks and impacts on the ball valve.



NOTE!

Do not perform any installation work while the plant is in operation and pressurized. Aggressive mediums and water additives, such as inhibitors, may attack the sealing materials, O-rings or Loctite connections!

The ball valves also need to be drained when draining the pipeline system, e.g. for maintenance work or if there is a danger of frost. This is performed in a 45° switch position in order to drain the housing hollow space. Once successfully drained, make sure that the ball valve is back in a **completely** open or **completely** closed position.

Ball valves must not be dismantled. Makeshift seals of any type are prohibited. Tools (e.g. pliers, hammers, open-end wrenches, extensions, etc.) may not be used to switch the ball valves. Using such tools can cause damage to the switching elements and to the housing. Ball valves must not be switched by force. Viscous, curing or grinding mediums may not be used. Please check that the ball valve is tight and correctly installed when the pressure test is being performed by the engineer.

The usability of the ball valves regarding pressure, temperature and mediums can be found in the drawings. You can request the drawings from us as required.

General

The warranty for all ball valves is 12 months from delivery. This only applies if the ball valves have been used in accordance with the installation instructions and the technical use. Notwithstanding the above, we trust that you will store the ball valves in a proper manner.

Any structural change to the ball valve, particularly the insertion of bore holes or the welding of objects (e.g. plates, brackets), is strictly prohibited and will render the warranty void.

Repairs may only be performed by the manufacturer! All warranty and damage claims will be nullified by inadmissible dismantling of the ball valve by unqualified personnel.

5 Warranty



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