

Operating instructions

Tapping Valve TOPsi

type 1004
for water

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Specifications subject to change without notice.



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1. Intended Use

The tapping valve TOPsi is used for installation on pipes of all nominal diameters between DN 80 and DN 300. It is suitable for drilling under pressure and can be used for

- cast iron pipes bitumen-coated,
- cast iron pipes PE-coated,
- cast iron pipes with cement coating,
- asbestos cement pipes,
- steel pipes as per EN 10220

Clapping band:

For installation on pipes, black clapping bands are available for various pipe types and diameters.

We will not assume any responsibility for faulty products as a result of improper operating conditions, war, violence, accidents, natural disasters or other circumstances.



Shut-off valves are used for OPEN/CLOSED operation, not to be used for continuous adjustment.

2. Safety Precautions

2.1 General safety instructions

The same safety regulations apply for valves as for the pipe system in which they are installed. The following instructions only include additional safety instructions to be observed for valves.

2.2 User safety instructions

The operator of the valve must ensure that the valve is only used in accordance with the intended use. This is not the responsibility of the manufacturer. The valves may only be operated by properly qualified and trained staff. The operating manual and the corresponding safety instructions must be read and understood.



It is prohibited to use any valves with a nominal pressure ("PN") and maximum admissible operating temperature insufficient for the operating conditions.
The approved range is indicated on the valve.



Warning: Temperatures below 10 °C and above 40° C during work on the pipeline parts involve the risk of injury. Protective measures must be taken accordingly.



Operating media must correspond with the specification of the valve. The manufacturer does not assume any liability for damage resulting from corrosion caused by aggressive media. Neglect of these regulations may result in imminent danger to life and health, and may cause damage to the pipeline.

- The valve must be professionally installed into the pipeline.
- Inside the pipeline, the usual flow velocity (e.g. according to EN 1074-1: 4 m/s for liquids) must not be exceeded in continuous operation.
- Operating conditions such as vibrations, water impact, erosion, cavitation and major proportions of solid matter in the medium - especially of an abrasive nature – must be clarified with the manufacturer prior to commissioning.

3. Transport and storage

All valves must be carefully transported and stored.



Valves are fully enamelled or powder coated. The coatings are shock sensitive and must be protected against impact stress.



The gaskets are sensitive to light: Unpackaged valves may only be exposed to bright daylight or ultraviolet light for a very short time. This is why the openings are sealed with protective caps. Valves must be stored in darkened rooms, in their original packaging with the protective caps.



In the event of storage over an extended period of time, the storage location should be frost-protected, cool, dry, dark and free of dust. Alternatively, the valves may also be packed in order to fulfill these conditions.

The valve should be stored on a pallet or similar support and only transported with suitable tools such as wide straps to its designated point of installation. Do not use chains!

4. Installation into the pipeline

4.1. General information

The valve is equipped with a universal base and may be mounted on ductile iron pipes as well as steel and asbestos cement pipes with the nominal diameters DN 80 up to DN 300, using the corresponding clapping band.

For the installation of Düker tapping valves TOPsi into pipe systems, the same instructions apply as for the connection of pipe system components with connection type

- internal thread Rp 1 1/2 according to **EN 10226-1**.

It is assumed that the pertaining instructions are known and will be followed. They do not form a part of this manual.



The valid safety precautions must be observed and the required personal safety equipment must be worn.

Installation of the clapping band:

The clapping bands described hereinafter are not included in the normal delivery scope of the tapping valve TOPsi, and are optionally available in the following nominal diameters: 80, 100, 125, 150, 200, 250 and 300.

- All threads must be sealed with an appropriate sealant (e.g. Teflon, hemp) before installation.
- Please compare the information on the clapping band label with the pipe.
- Remove the gasket from the foil. Check the marking of the gasket and the seal chamber in the valve base and insert the gasket to fit precisely.
- Bend the clapping band over the cleaned pipe and then install it through the closed hole in the valve base. It suffices to screw the bolt through the nut.
- Place the valve on the pipe. Put the pre-bent clapping band around the pipe and hinge the other side of the clapping band into the open hole on the valve base.
- Manually tighten both nuts so that both bolts stick out equally from the nuts. Adjust the valve at the same time and check the proper seat of the clapping band and the gasket between the pipe and valve.
- Tighten the nuts evenly with a torque of max. 60 Nm and cover with the protective caps supplied.

Spot- drill the pipe:



The tap drilling instructions described below only apply in connection with Hütz + Baumgarten drilling devices and their adapters when used in connection with the TOPsi tapping valve.

- Carry out the spot-drilling according to the directions of the drilling device manufacturer.
- The drilling can be carried out either with a drill or with a milling head up to a diameter of 38 mm max.
- Depending on the device used for spot-drilling, a matching adapter piece with flush opening is required. It should be tightly attached to the drilling device. The drill rod might have to be extended accordingly.
- In order to be able to flush out the drilling chips completely, the gate valve should be opened and equipped with a hose to discharge the flushing water. For that purpose close the flush opening of the adapter piece. If flushing through the gate valve is not possible, it may also be done through the adapter piece. However, please make sure that no drilling chips get stuck inside the adapter piece.
- Screw on the adapter piece with the drilling device while ensuring proper sealing of the thread with the O-ring.
- Shut the gate valve after completion of the spot-drilling and flushing.
- When no more water flows out of the flushing port, the tapping device can be unscrewed.

5. Pressure test on the pipeline section

- Thoroughly flush all newly installed pipeline systems in order to remove all foreign matter.
- Valve opened: The test pressure must not exceed 1.5 x PN (according to the marking).
- Valve shut: The test pressure must not exceed 1.1 x PN (according to the marking).

6. Operation

The valve is shut by turning it clockwise and is opened by turning it in the opposite direction. Manual power suffices to operate the valves. Use of extensions to increase actuating torque is not permissible, since this will cause damage to the valve.

Necessary torque until sealing Nm	Max. actuating torque according to EN 1074-2 MOT Nm	Number of turns for closing	Stem square mm
< 25	50	10	12

7. Service and maintenance

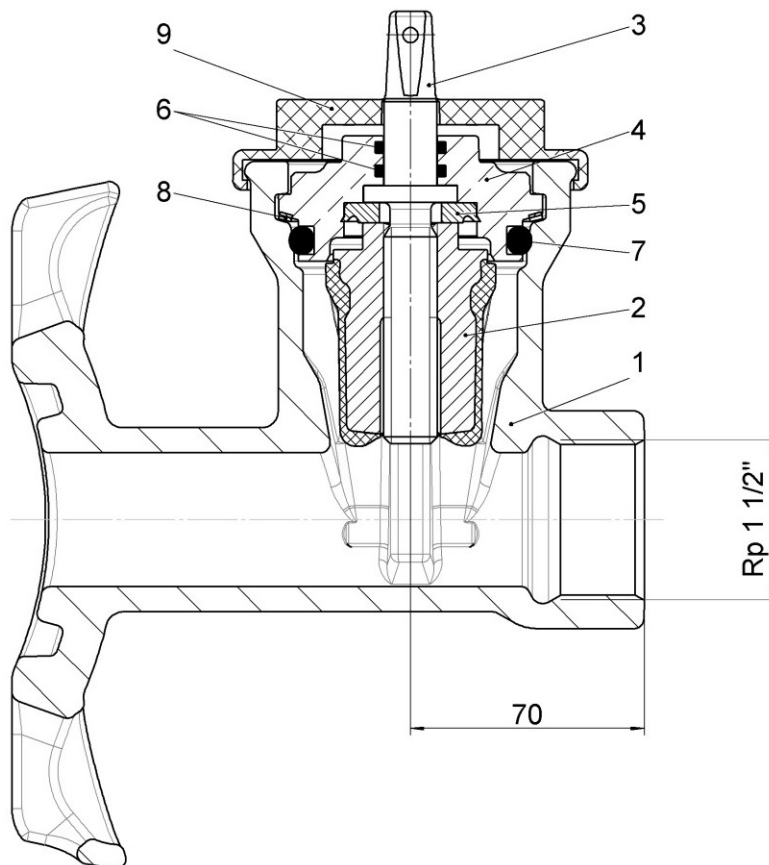
The valves do not require regular maintenance work. However, when a pipeline section is inspected, the valve may not show any leakage to the outside.

The valve should be checked for tightness and proper function at least once per year (DVGW datasheet W 392).



All pressure-conducting lines must be depressurized. After completion of the maintenance work, all connections must be checked for leaks!

8. Drawing and parts list



All spare parts are available as a complete package “bonnet complete with stem”, except Pos. 1 and 9.

Pos	Description
1	body
2	wedge
3	stem
4	bayonet
5	clamping disk
6	o-ring
7	o-ring
8	gliding ring
9	adapter cap

DN	G
80- 300	Rp 1 1/2

9. Diagnostics and trouble shooting

Leakage at the stem or seat gasket:

- Check whether the valve is completely shut.
- If so: Verify whether the valve has been shut with the full range of torque.
- If leakage on the valve continues: Open and shut the valve several times while under pressure.
- If the leakage on the valve continues: Repair necessary.
- Replace the bonnet unit with wedge and head gasket following consultation with the manufacturer.



We would like to point out that we do not assume any liability for damages or disruption of operations resulting from non-observance of the operating manual.

To ensure the function and compliance with the drinking water hygiene standards, only original Düker original spare parts may be installed.

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