Operating instructions

Tapping Valve TOP

type 1004
for water

Item no. of the operation instructions: 765358_04, issue 04.2017, 10 pages

Specifications subject to change without notice.

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1. Intended use

Tapping valve TOP is used for installation on pipes of all nominal diameters between DN 80 and DN 300. 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
- steel pipes
- asbestos cement pipes

Clapping band:

For installation on pipes are black clapping bands for several nominal diameters and pipes available.

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 für OPEN/CLOSD 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 DIN 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.

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

The valves 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

The valve is equipped with a universal base and may also 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 TOP into pipe systems, the same instructions apply as for the connection of pipe system components with the following connection types:

- Internal thread Rp11/4 to Rp2 according to DIN EN **10226-1**,
- Welding with PE- HD pipe ends according to the DVGW guideline G 5600-1,

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

- All threads must be sealed with an appropriate sealant (e.g. Teflon, hemp) before installation.
- On the tapping valve, turn the wedge to the “open” position prior to the welding process on the PE pipes.
- Düker PE- HD tapping valves are equally suitable for electro socket fusion and hot plate welding.
- The welding process must be carried out in line with the guidelines and instructions of the welding apparatus and fittings manufacturers.
- The Valve must be welded in free of tension.
- In addition, all guidelines in line DVS 2207 and DVGW G 472 or other regulations valid at the place of installation are to be observed.

Installation of the clapping band:

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

- 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 hole 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 maximal 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 TOP tapping valve.

- No additional valve is required for spot-drilling the valve under pressure since it has already been included at the factory in the shape of a valve cap.
- 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 off the plug (thread R 1 1/2").
- Screw on the adapter piece with the drilling device while ensuring proper sealing of the thread with the O-ring.
- Manually insert the drill through the valve flap with a slightly rotating movement until it touches the pipe surface.
- Carry out the spot-drilling according to the directions of the drilling device manufacturer.
- Shut the gate valve after completion of the spot-drilling and flushing. The pressure build- up inside the valve helps to pull out the drill rod. It is recommended to also apply slightly rotating movements to ensure secure closing of the valve flap.
- The water going out through the flush opening of the adapter piece ensures fast closing of the valve flap. Once the water has stopped coming out of the flush opening, the drilling device may be screwed off.
- Wipe off the residual water located on the valve flap with a sponge and close the thread with the plug.

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 impermissible, since this will cause damage to the valves.

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

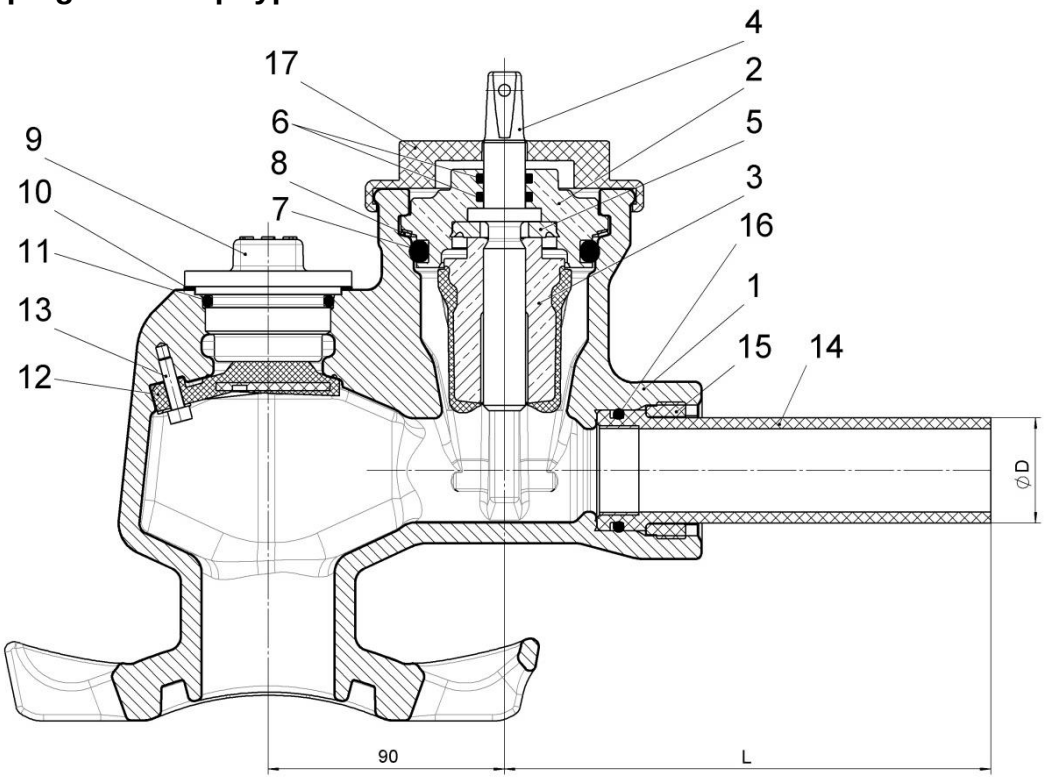
The valves do not require regular maintenance work. However, no leakage to the outside must occur during the inspection of a pipeline.

The valve should be checked for tightness, proper function and corrosion protection 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

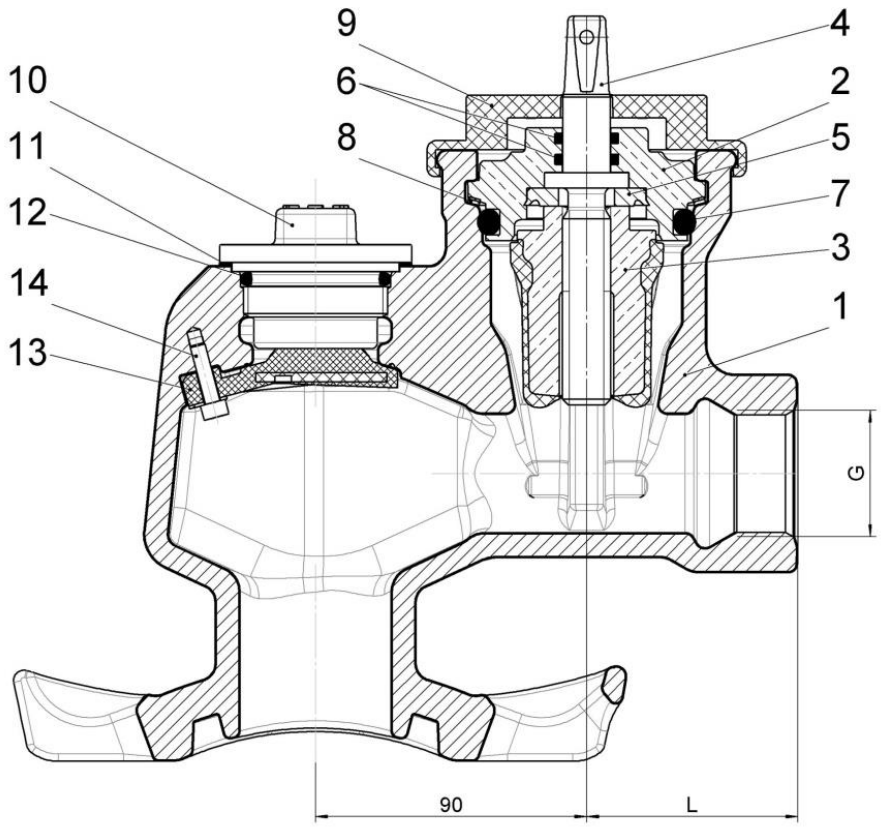
Tapping Valve Top type 1004 PEHD



Pos	Description
1	Body
2	Cap nut
3	Wedge
4	Stem
5	Clamping disk
6	O-ring
7	O-ring
8	Gliding disc
9	Plug screw
10	Protecting ring
11	O-ring
12	Valve flap
13	Cylinder screw
14	Adapter piece
15	Threaded ring
16	O-ring
17	Adapter cap

DN	∅ D	L
25	32	173
32	40	186
40	50	210
50	63	230

Tapping Valve Top type 1004 IG



Pos	Description
1	Body
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5	Clamping disk
6	O-Ring
7	O-Ring
8	Gliding ring
9	Adapter cap
10	Plug screw
11	Protecting ring
12	O-ring
13	Valve flap
14	Cylinder Screw

DN	G	L
80-300	Rp 1 ¼	70
80-300	Rp 1 ½	70
80-300	Rp 2	75

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 obturator 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.