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Installation Manual

Safety Disconnection Unit

STS 5

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Read prior to installation and operation!
Observe all safety instructions!
Keep in a safe place for future reference!



This installation manual includes important information and warnings. Read the instructions for use and installation prior to installation, electric connection and start-up. Also observe the instructions for use and installation of components/ accessories of the device.

Meaning of symbols



Attention!

Ignoring the instructions may cause material damage!



Danger!

Ignoring the instructions may cause personal injury!



Information!

Provides useful information for the various work steps!

In the following instructions, reference will be made to the symbols only!

1.0 Foreword

When receiving the device, make a detailed check of

- the condition of the device
- and verify that all items mentioned below are included in the delivery

1.1 Scope of delivery

- Safety Disconnection Unit STS 5
- Wall bracket
- Wall-fastening set
- Ball valve 1"
- Threaded unions
- Socket wrench for vent valve
- T-piece 1" - 1/2" - 1"
- Shock absorber 1/2" AG
- Reinforced hose 1" AG
- Potable water filter
- User manual
- Installation manual

1.2 General instructions



• The installation of the system has to be state-of-the-art. Observe in particular the technical regulations (e.g. DIN 1988 and EN 1717) !



- Do not fill with/or convey any flammable and/or explosive media, food or waste water!
- The following installations or operating modes are not admissible:
 - open air installation outdoors,
 - installation in wet rooms, like bathrooms etc.,
 - installation in rooms liable to frost.
- Unplug to disconnect from the power supply!
- The plug has to be readily accessible and shall not be concealed!
- Prior to plug in:
 - check that the device has been installed properly,
 - verify that all connections are sealed.
- We will not bear costs caused by improper operation or installation.
- The non-observance of the instructions for use and installation causes the loss of any claims for damages!

For further details and use instructions, cf. the user manual.

1.3 Wall mounting



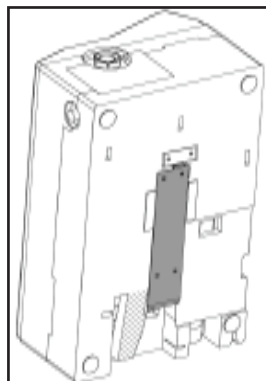
Prior to installation, consider the backflow level for a later sewer pipe connection, cf. chapter 1.6, Overflow connection.

Fasten the device:

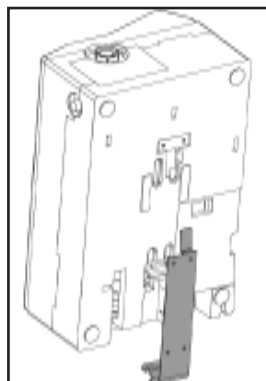
- in a dry room not liable to frost, e.g. cellar.
- in a room with a floor drain to the sewer.
- at least 40 cm below the ceiling, measured from the upper edge of the device (required for possible maintenance/service works).
- on an even wall (prevents distortions in the device).
- in horizontal position (prevents malfunctions).

Work steps:

- Hold the device against the installation spot and mark the upper left corner/intersections.
- Hold the enclosed drilling template against the marked points of intersection, position properly with a level and mark the mounting holes for the wall bracket.
- Drill the mounting holes with a 8mm drill and position the dowels.
 - Make sure that the wall bracket's position is flat and vertical to prevent any malfunctions of the device.
- Use the enclosed hexagon screws and washers to securely fix the wall bracket.
 - Verify that the wall bracket is securely fixed to prevent consequential damages.



Pict. 1



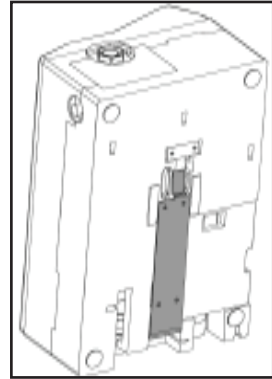
Pict. 2

- Insert the device from the top into the wall bracket and verify the correct position in the corresponding guides, cf. rear view pict. 2 and 3.
- Make sure that the device is correctly positioned in the wall bracket's guides and that it is pushed downwards until the retaining clip clicks into place.

1.4 Instructions for pressure pipe connection



Use the reinforced hose included in the delivery for a flexible connection of the pressure pipe. The installation of the shock absorber (also included in the delivery) in the pressure pipe is compulsory.



Pict. 3

1.5 Connection to potable water pipe



The float valve is designed for a maximum pressure of 4.0 bar. The delivery includes a pressure reducer-filter combination. Mount this combination in the potable water supply line to prevent damages due to excess supply pressure and/or dirt. When dimensioning the potable water inlet, make sure that there is enough potable water for the backfeed, which can amount to 3.0 m³/h depending on the consumer.

We recommend to install on-site a shut-off valve upstream of the filter.

As a result

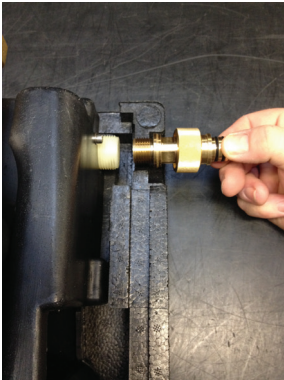


- the potable water supply can be stopped anytime,
- malfunctions can be easily eliminated
- repair works are possible anytime,
- the water inlet can be shut off for a long-term absence.

- Mount the enclosed potable water filter in the inlet of the Safety Disconnection Unit, cf. pict. 4-6.
- **Make sure that the pipe connection is correctly aligned to prevent any mechanical tensions in the device.**
- **Do not twist or bend the float valve when installing the potable water pipe, if necessary, exert counterpressure at the float valve's relevant spots, cf. pict. 5 (in black)!**
- Put the floating unit of the float valve in a vertical position in the potable water tank, cf. pict.5 (light grey)!
- Free vertical movement must be ensured for the floating unit!
- Fasten the float valve properly.



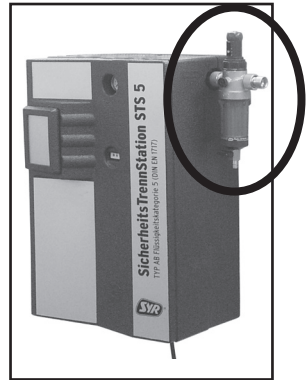
- The distance between the first pipe clamp and the device shall not exceed 10-15 cm.
- This prevents vibrations in the potable water system when the float valve closes.



Pict. 4



Pict. 5



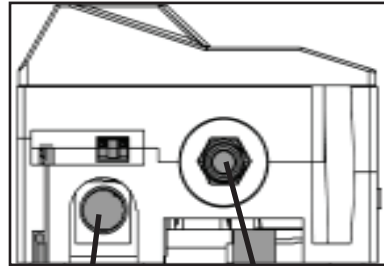
Pict.6

1.6 Overflow connection



When installing the device below the backflow level¹⁾, direct the overflow in a lifting unit, that directs the water above the backflow level¹⁾ in the sewer via a pipe loop.

- Direct the DN 50 drain pipe of the device (cf. pict. 6 bottom view) in the sewer or lifting unit via an unrestricted drop distance of at least 50 mm and a downstream DN70 tundish.
- Mount an additional siphon as odor trap downstream of the tundish (optionally)!
- Do not reduce the nominal size of the following DN 70 pipe and provide a vertical drop distance of at least 50 cm before possibly mounting a bend.
- Otherwise the water cannot be drained properly in case of overflow.



Pict. 6

Drain pipe
DN 50

Suction port

¹⁾ Backflow level:

Level up to which an overloaded sewer network may cause a backflow. Usually, this is the respective street level. Ask the local building authorities.

1.7 Pressure pipe connection

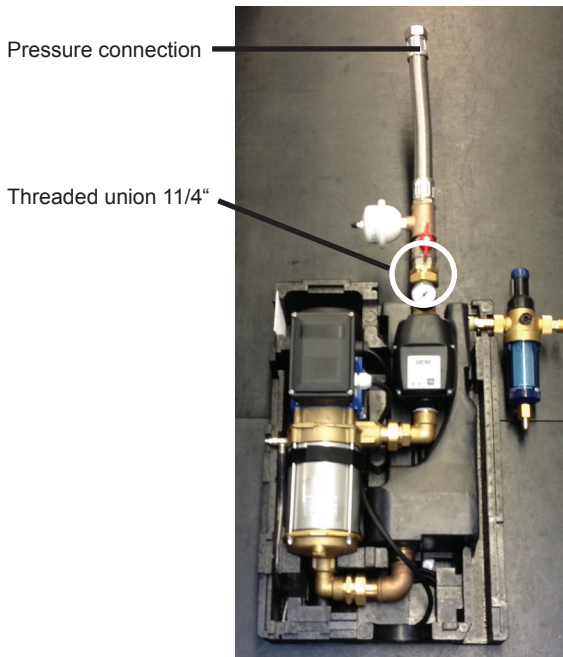


- Connect the ball valve to the reducer and make sure that the connection is leakproof and tight.
- Connect the ball valve with the male thread to an inlet of the T-piece and make sure that the connection is leakproof and tight.
- Connect the reinforced hose to the other inlet of the T-piece.
- Use suitable sealing material when sealing the acoustic pressure absorber in the 1/2"-inlet of the T-piece.
- Fit the pre-installed pipe with the reducer to the outlet threaded union of the STS 5.

Do not apply excessive tightening torque (about 2 - 4 Nm).



- Connect the on-site pressure and supply line by means of the outlet threaded union (pict. 7) of the reinforced hose.
- Equip the pressure pipe with a pipe clamp for secure fixing.
 - Position the first pipe clamp at the connection of the reinforced hose.



Pict. 7

2.1 Start-up



The device must be free from dirt!

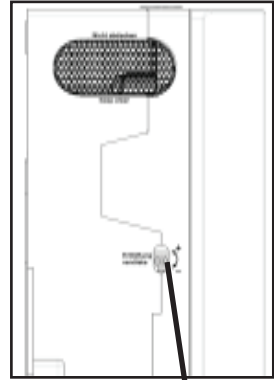
The device has to be installed according to specifications!

All water connections / threaded unions must be leaktight!

Make sure that the device is disconnected from the power supply (unplugged)!

Operation of the control element, cf. User Manual chapter 1.4.

- Open the shut-off valve of the potable water supply pipe of the device.
- Open the pump's venting valve by making about two rotations with the enclosed socket wrench and leave open during 1 minute, cf. side view pict. 8.
 - This will automatically fill the pump with water.
- Tightly close the pump's venting valve.
- Open the ball valve on the pressure side, as well as the connected points of use (e.g. toilets, draw-off points).
- Insert the plug into an appropriate grounding-type socket.
 - **The plug has to be readily accessible!**
 - The pump starts to run.



Pict. 8

Venting valve

- Should the pump not start immediately, press and hold the key **Start Pump** on the flow guard until the pump generates a pressure of at least 1 bar.
 - This key bypasses the dry run protection and the pump runs again.
 - Close the points of use as soon as the water is free from air bubbles.
 - There is a maximum pressure build-up and the pump stops after about 15 seconds.
- i**
- The device is now ready for operation
or
 - There is a malfunction.
 - Correct the malfunction, cf. chapter 2.2.

i Once the start-up is completed, store the enclosed instructions for use and installation in the pocket provided for this purpose (material cut-out on the left lower back of the device - pict. 9) for future reference.

2.2 Troubleshooting

Proceed as follows:

1. Disconnect the device from the power supply (unplug).
2. Eliminate the defect, cf. possible malfunctions under "**What to do, if**".
3. Re-insert the plug into the appropriate socket.
 - The plug must be readily accessible and not be concealed!
4. Set the desired operating state.

What to do, if

water leaks from the DN 50 drain pipe?

The floating unit of the float valve rubs against the tank wall.

Place the float valve in the center: properly press the float valve in the bracket. Other adjustments are not required. Make sure that the reinforced hose is mounted without stresses!

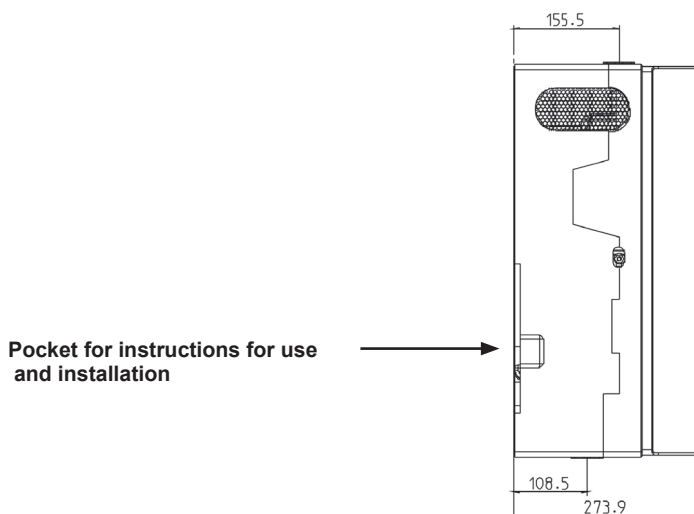
The float valve has become dirty during the pipe installation.

Open a point of use and let the pump run about one minute to flush the valve and remove dirt.



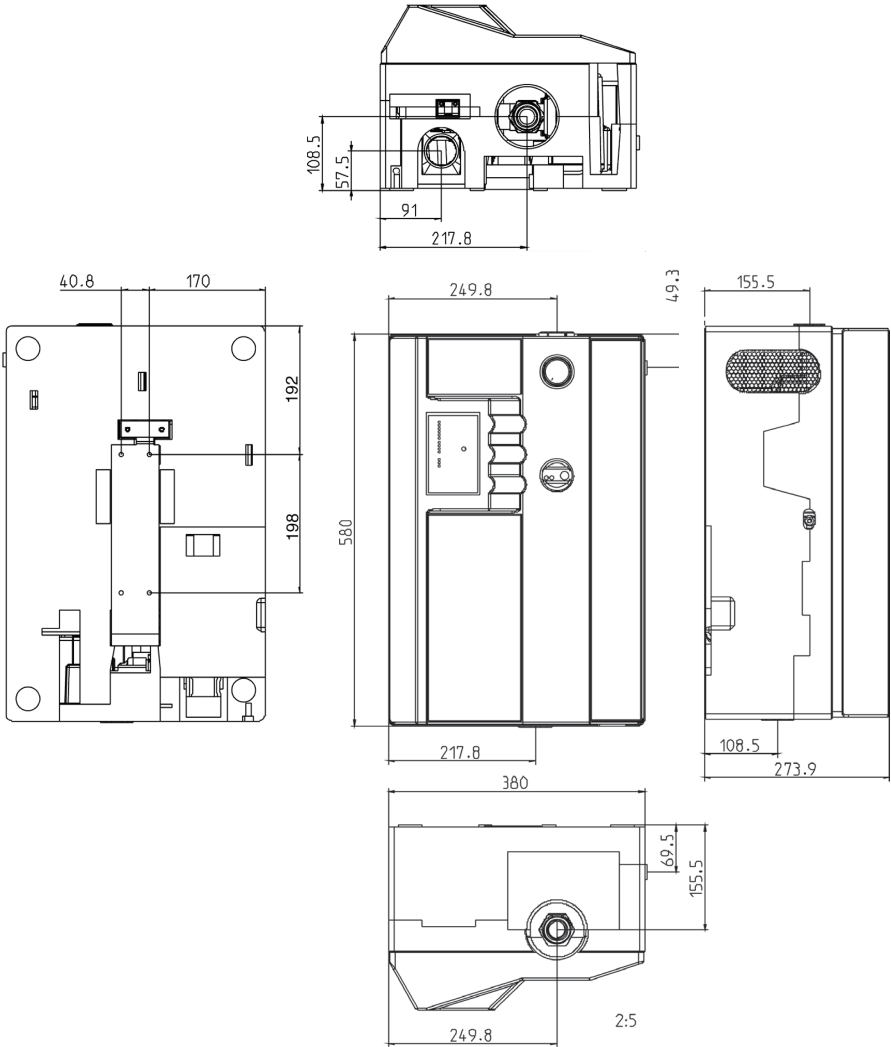
In case of other malfunctions, refer to the User Manual!

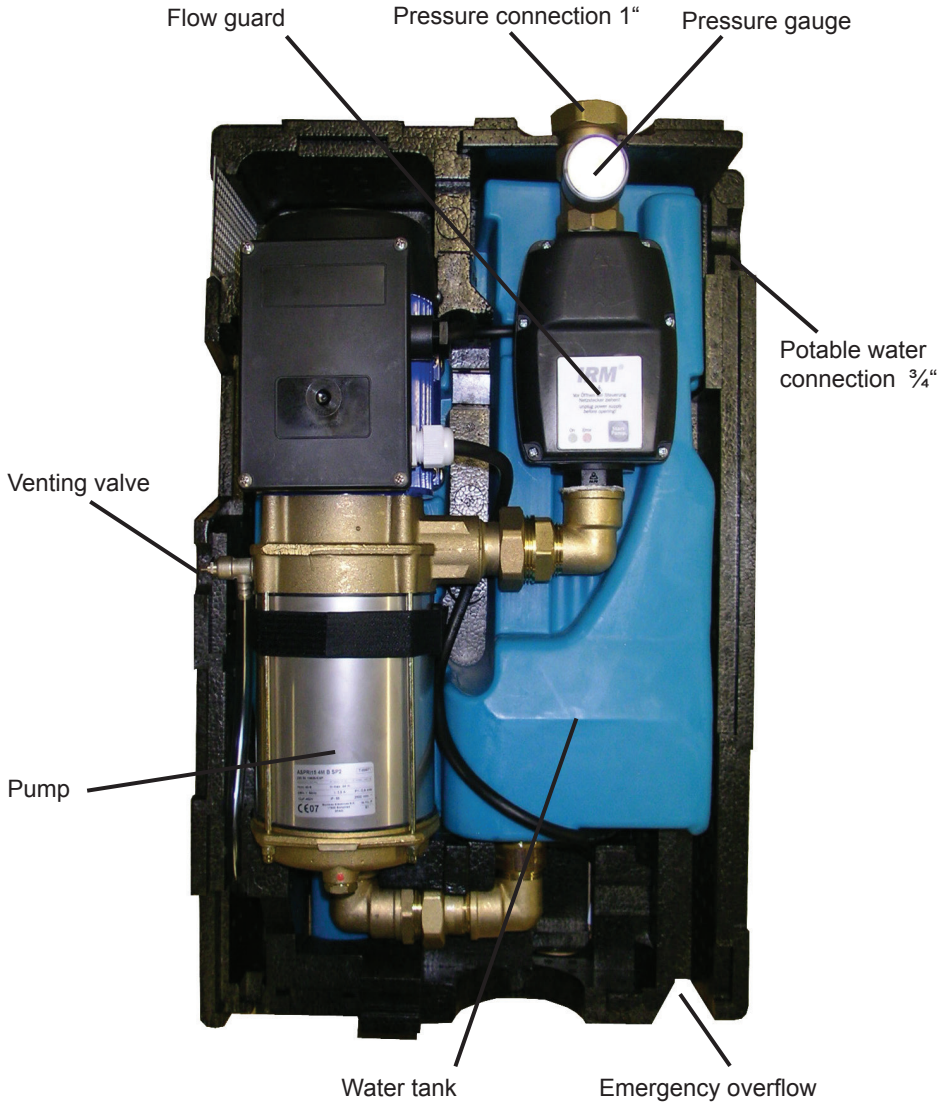
When taking down the device, observe the first work steps in chapter 1.3.



Pict. 9

2.3 Technical dimensions





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