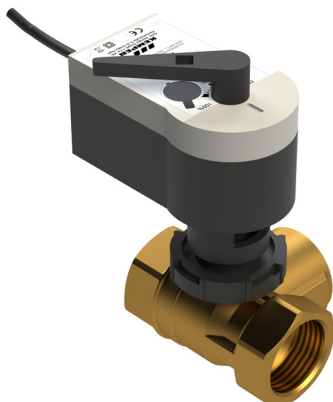


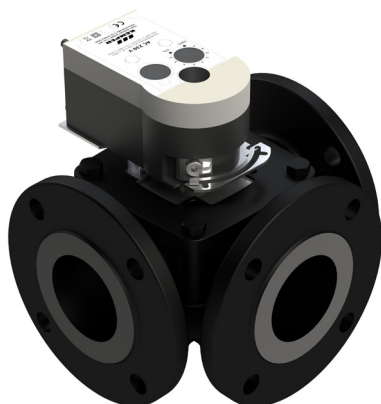
Installation and Operating Instructions

3-directional reversing valve

Figure 916 02 32 | 916 02 40 | 916 02 50 |
916 02 65 | 916 02 80



DN 32 - DN 50



DN 65 - DN 80



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Original Operating Instructions

Manufacturer's address

Gebr. Kemper GmbH + Co. KG
Harkortstrasse 5
57462 Olpe, Germany
Tel: +49 2761 891-0
Web: www.kemper-group.com



Safety Instructions for Assembly, Commissioning, Function and Maintenance



Note!

The product may be installed only in dry rooms.

Warning Information

Be sure to read and follow the warning information in the instructions. Failure to follow the warning information can result in injury or damage to property.

Labelling for important warning information:



Danger! Electricity!

Indicates hazards that may result in severe or fatal injury.



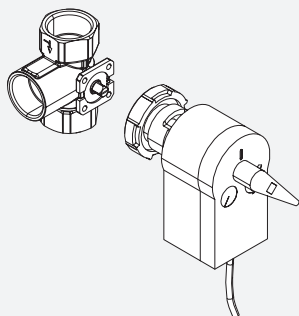
Warning!

Indicates hazards that may result in injury, material damage or contamination of drinking water.

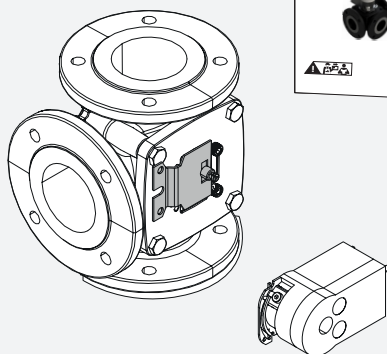




DN 32 - DN 50



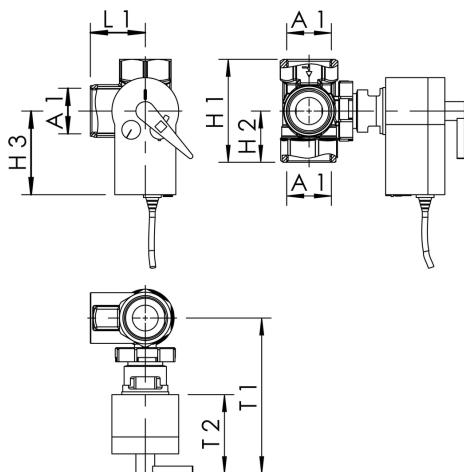
DN 65 - DN 80



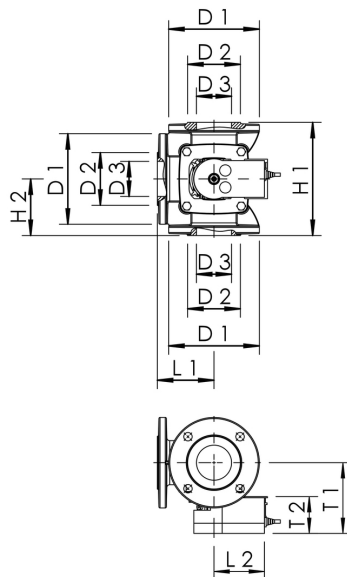
1

Technical data

DN 32 - DN 50



DN 65 - DN 80



DN 32 Part no. 9160203200	
A1	Rp 1 1/4
H1 (mm)	99
H2 (mm)	49,5
H3 (mm)	89
L1 (mm)	53
L2 (mm)	67
T1 (mm)	160,5
T2 (mm)	84
Flow coefficient value	16
kg	1,03

DN 40 Part no. 9160204000	
A1	Rp 1 1/2
H1 (mm)	110
H2 (mm)	55
H3 (mm)	89
L1 (mm)	58
L2 (mm)	67
T1 (mm)	166,5
T2 (mm)	84
Flow coefficient value	25
kg	1,44

DN 50 Part no. 9

Operating principle

The temperature controlled KTS 3-way valve is used in combination with the KEMPER Water Heater and the KTS ThermoTank.

The job of the 3-way valve is to redirect the return water coming from the water heater to the lower or middle connection of the ThermoTank, depending on the pre-set temperature on the controller.

The purpose is to promote the formation of low-temperature layers in the bottom section of the ThermoTank.

If the return temperatures are higher, e.g., in circulation mode, the return water is redirected to one of the middle connections.

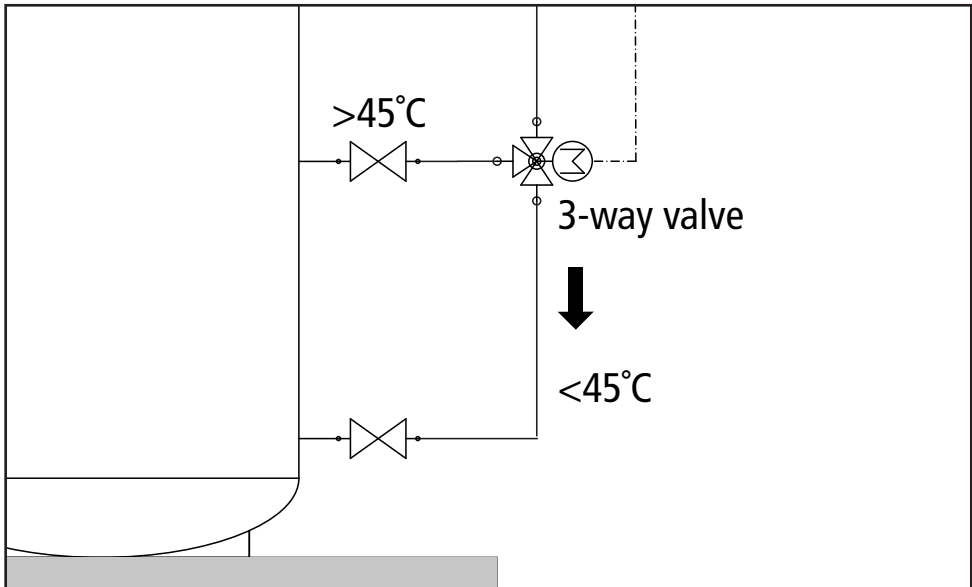


Figure 1 - Schematic diagram of the 3-way valve.

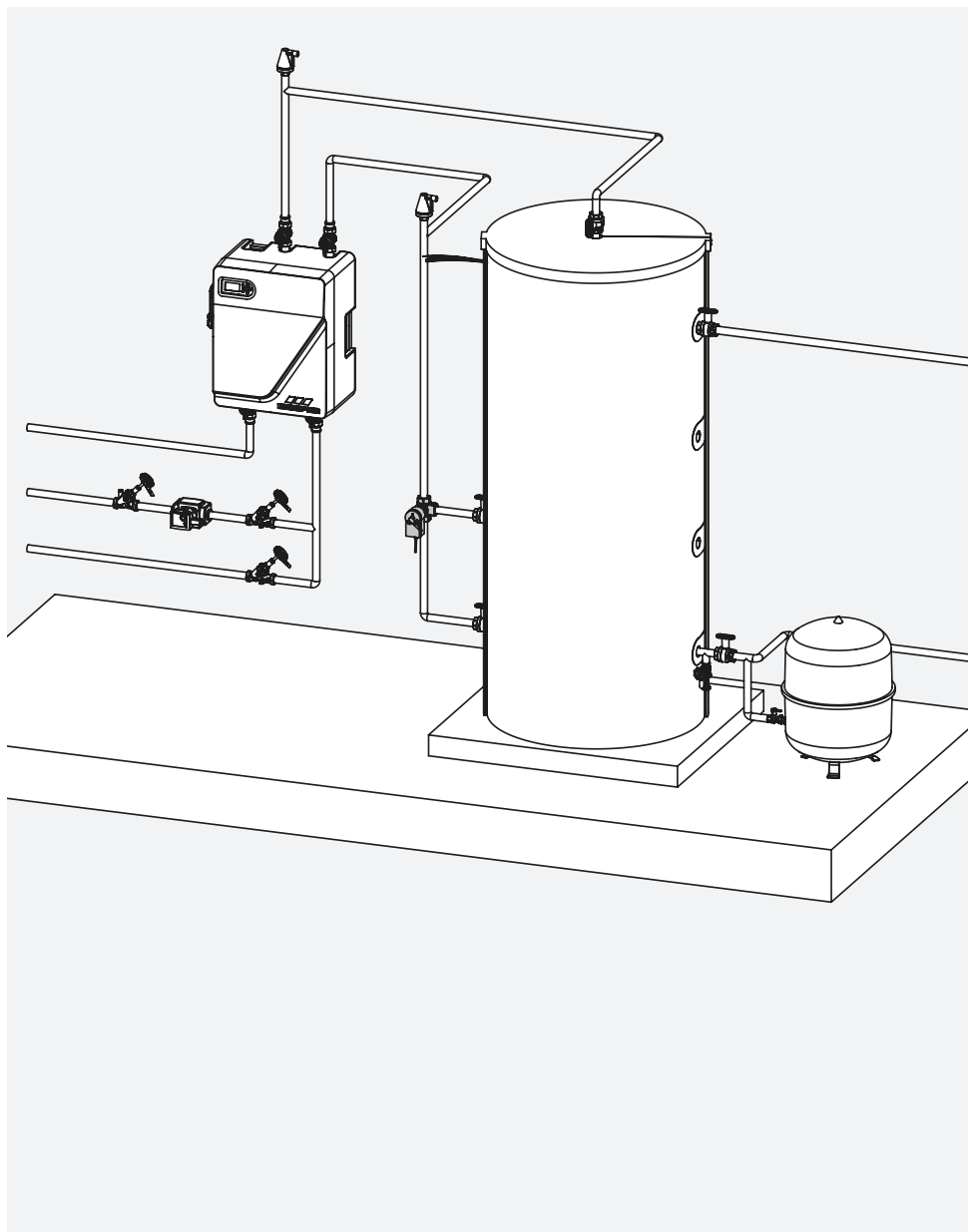


Figure 2 - Schematic diagram.

General Information

For maintenance purposes, during installation place the heating pipes in the primary ventilation/air extraction equipment at the highest point (see Figures 3 and 4) and drainage facilities at the lowest point.



Note!

For maintenance and repair purposes, provide maintenance valves equipment at the respective heating supply and return connection of the KTS Water Heaters and at the ThermoTank.



Note!

In order to save energy, the valve must be insulated in accordance with the requirements in the German Buildings Energy Act (GEG).

Place KTS the 3-way valve in the shared heating-side return pipe in the direction of flow after the KTS Water Heaters towards the KTS ThermoTank (see Figure 3).

Installation Instruction

3.1

Assembly

Hydraulic linking of the 3-way valve in association with a KTS ThermoTank.

1 3-way valve with actuator



Note!

Comply with the direction of flow of the valve when mounting/installing!

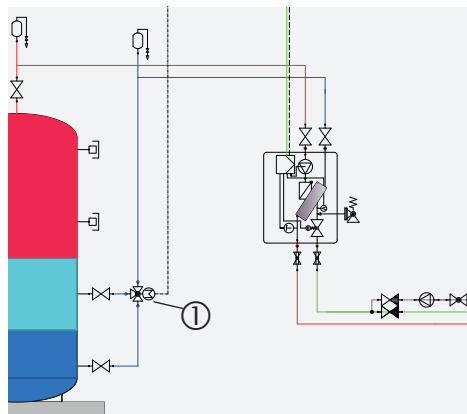


Figure 3

Hydraulic linking of the KTS 3-way valve with several KTS ThermoTanks:

1 3-way valve with actuator



3.2

Direction of Flow and Installation Layout

Preparing the 3-way valve DN 32 to DN 50

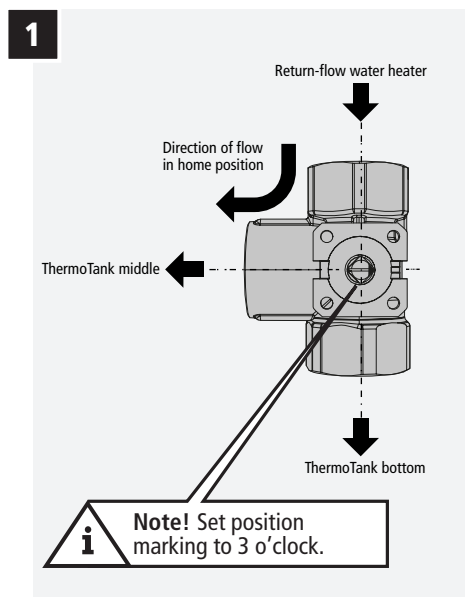


Normative information!

- Software Class A
- Pollution degree II
- Type 1AB
- Peak voltage strength 4,000V

DIN EN 60730

Installation situation with outlet left



Installation situation with outlet left

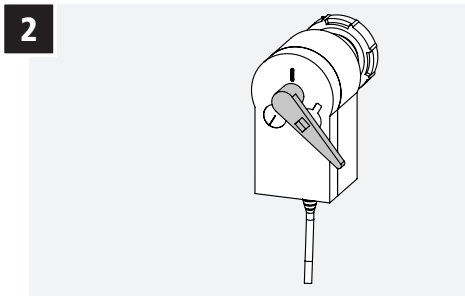


Figure 7 - Set the stop of the actuator to the right (100%).

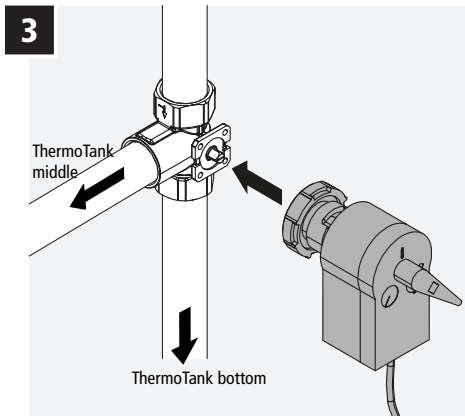


Figure 9 - Plug the actuator on the valve

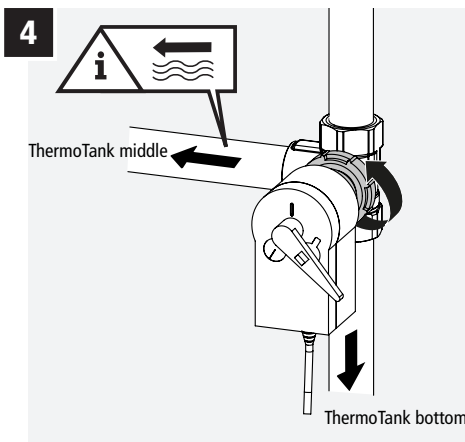


Figure 10 - Turn the lock by um 45° to fix the actuator on the valve.

3.3

Direction of Flow and Installation Layout

Preparing the 3-way valve DN 65 to DN 80

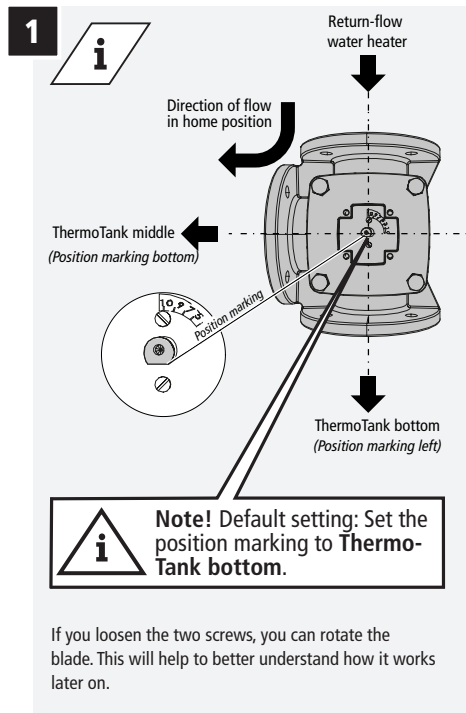


Normative information!

- Software Class A
- Pollution degree II
- Ball pressure test 129 °C
- Type 1AB
- Peak voltage strength 4,000V

DIN EN 60730

Installation situation with outlet left



Installation situation with outlet left

3

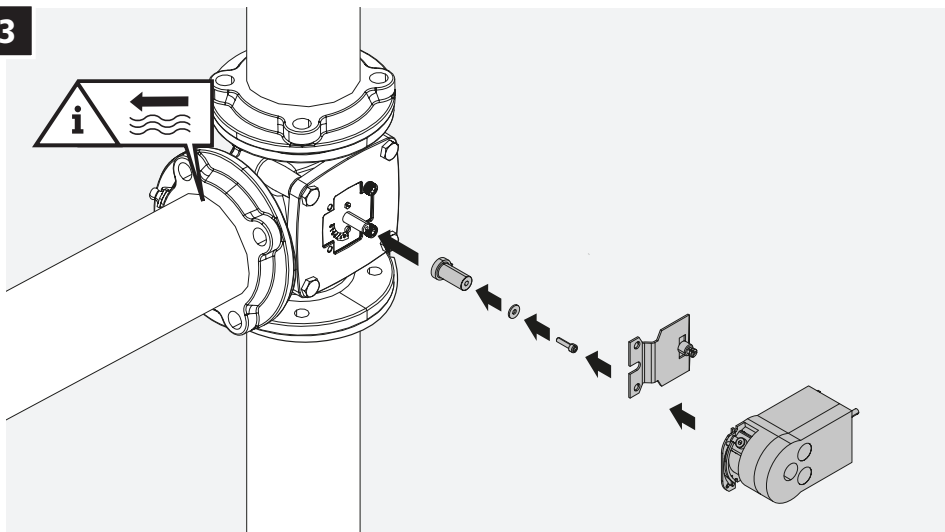
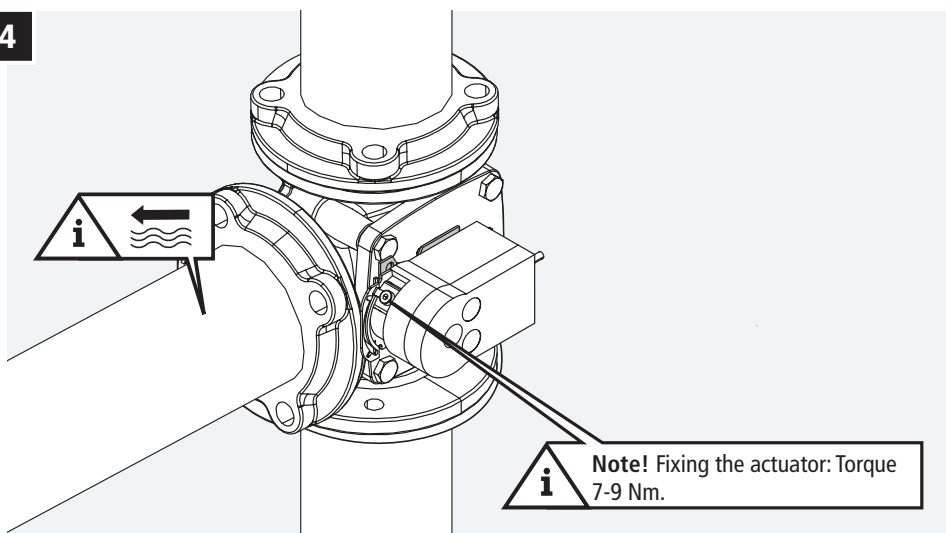


Figure 13 - Plug the actuator on the valve

4



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Installation situation with outlet right

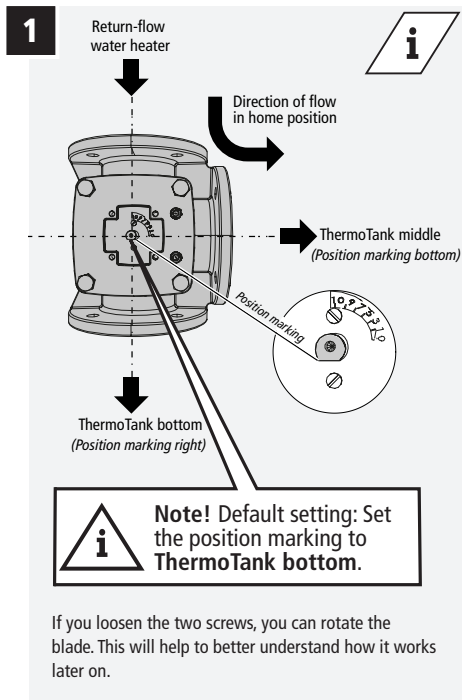


Figure 15 - Position marking.

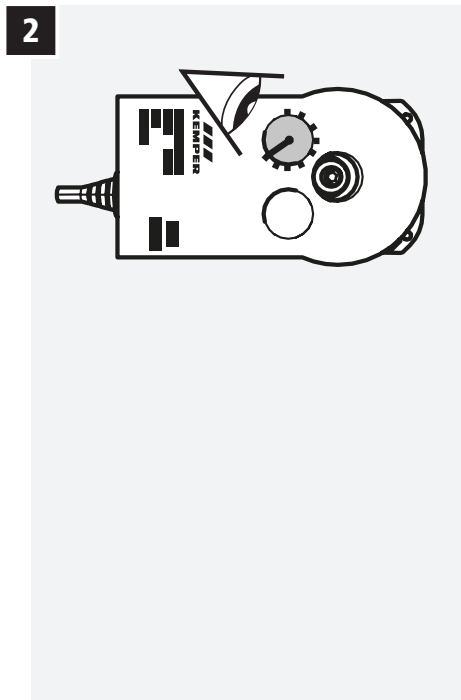


Figure 16 - Set the stop of the actuator to the right (0%).

3

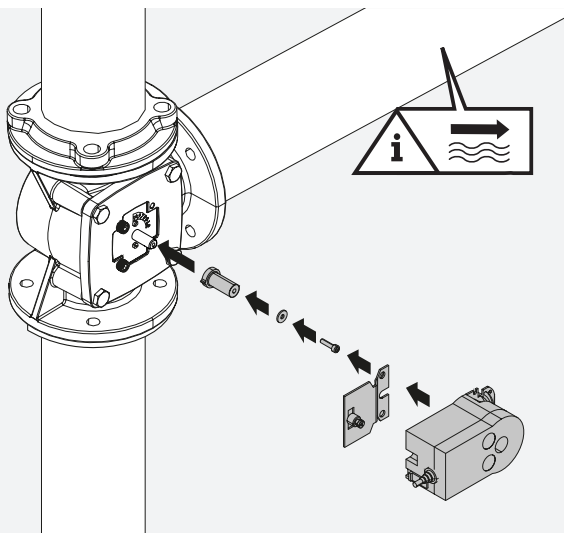


Figure 17 - Plug the actuator on the valve.

Installation situation with outlet right

4

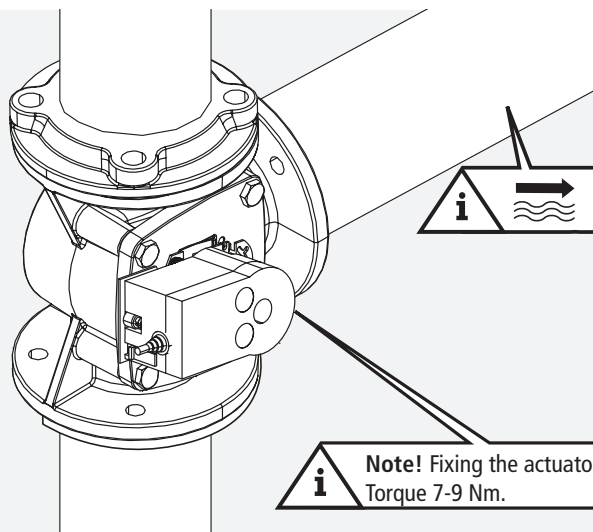


Figure 18 - Fixing the actuator: Torque 7-9 Nm.

Outlet left and right (DN 32 to DN 80)

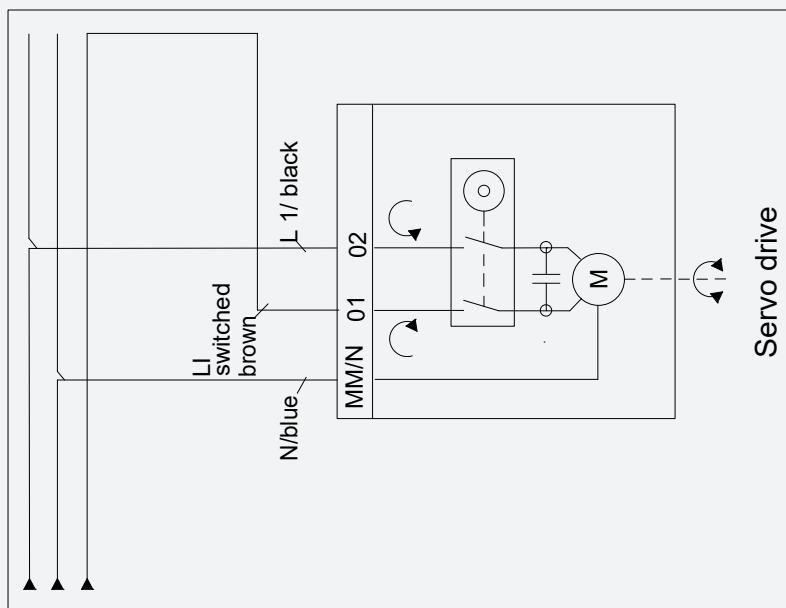


Figure 20

1. Fill the ThermoTank and primary circuit with water until operating

According to DIN EN 806-5, the drinking water heating system must be maintained annually.

Kemper recommends performing the following measures on the 3-way valve during maintenance.

Temperature-controlled 3-directional reversing valve	Implementation	Defect/Complaint	Date
Check the actuator for its functioning, installation position rights	Set the temperature in the controller to max. temp. -> Actuator moves to 100% -> Set the temperature in the controller to min. temp. -> Actuator moves to 0% -> Set 45°C		
Check the actuator for its functioning, installation position left	Set the temperature in the controller to max. temp. -> Actuator moves to 0% -> Set the temperature in the controller to min. temp. -> Actuator moves to 100% -> Set 45°C		
Check the controller for its functioning.	See previous step		
Check the valve for leaks	Visual check		
Check the valve function	When carrying out the functional test of the actuator, check the temperature in the outlet after the valve.		





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K41 0091 600012-ON / 09.2026