eltherm®
innovations in heat tracing

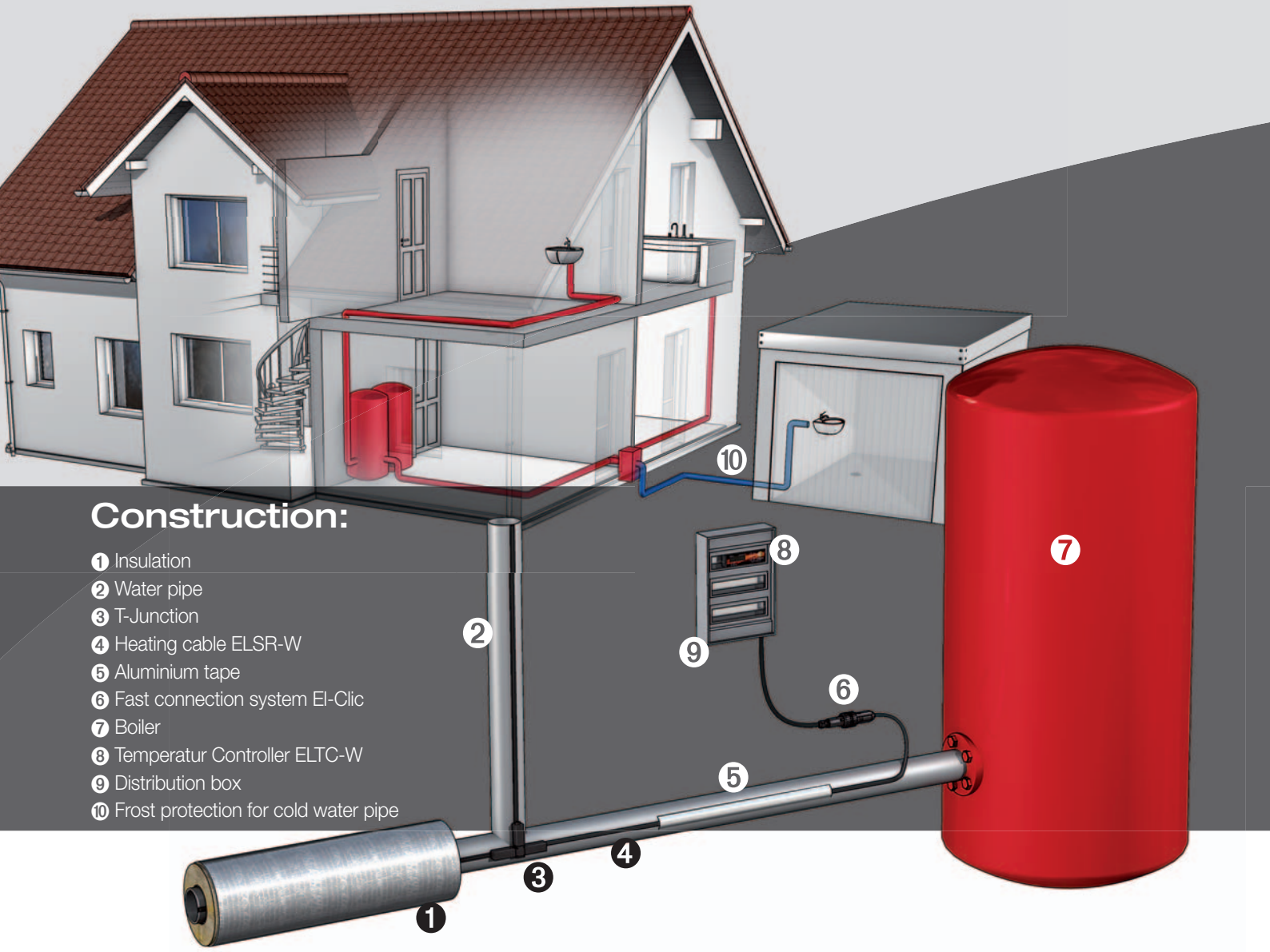
energy-saving

Water Comfort System

Innovations in
heat tracing

eltherm Water Comfort System

simply energy-saving



Construction:

1. Insulation
2. Water pipe
3. T-Junction
4. Heating cable ELSR-W
5. Aluminium tape
6. Fast connection system El-Clic
7. Boiler
8. Temperatur Controller ELTC-W
9. Distribution box
10. Frost protection for cold water pipe

Danger from the tap

In modern society the supply of fresh water, both hot and cold, is an important contribution to comfort and well-being which should be readily available. We assume that the water supply is clean and sterile, but unfortunately this is not always true. An invisible threat to health is legionella bacteria. These bacteria cause two kinds of clinical problems, which behave differently in the course of disease. One known as Legionnaires Disease normally causes symptoms similar to pneumonia and can result in death. The second one, the so called Pontiac Fever, has symptoms like influenza but with quite rapid healing.

Legionella, especially in heated water between 30 ° and 45 °C, can cause a threat to health, if small drops of water, e.g. when taking a shower, are inhaled. Legionella formation can be prevented by merely changing the water temperature. Cold water under 20 °C and warm water over 55 °C constitute poor growth conditions for legionella bacteria, therefore the water should be heated up to 60 °C once a day to purge the system. This procedure is called thermal disinfection.

If the disinfection measures are incorporated in the planning phase of a water line system, considerable cost savings can be achieved. Removing a circulation circuit and the circulation pump and using of the Water Comfort System enables an energy-saving of up to 65 %.

However, retrofitting of a thermal disinfection system is normally possible without any problems. It is especially important to install the system in buildings which present high risk of infection to the occupants, such as hospitals, nursing homes and schools, but it also makes sense to install the system in domestic housing.

The eltherm Water Comfort System provides the energy-saving solution to keep warm water steadily available and to fight legionella bacteria effectively.

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Advantages of the eltherm Water Comfort System for you:

- High **user friendliness** by intuitive interface
- Simplified entry. A lot of details are already preset for choice
- **Logical** and clear menu – no confusing icons
- Complicated calculations to adjust the system are not necessary
- An automatic operating mode ensures **legionella bacteria prevention** even if the system is not adjusted individually already.
- No overheating of the system because of heating and heat maintenance with **self-regulating heating tapes**.
- The heating tape is available in **three nominal outputs**.
- The length of the heating tape can be varied freely as you can **cut it to length from roll**.
- An **additional power output for frost protection** in combination with a self-regulating heating tape prevents freezing of an additional cold water pipe.
- Additional 24 VDC Input for operation
- **Cost saving** up to 65 %, because a circulation system and circulation pump is no longer needed.
- Considerable **energy-saving** because of optimized temperature gradation and abolition of the circulation pump.
- Placing an additional temperature sensor on the boiler enables the option of maintaining the pipework at the temperature level of the boiler
- Matching accessories enable an **individual design according** to your requirements => a **plug-and-play version** is possible if required
- The system fulfils accepted international standards for legionella avoidance (e.g. Arbeitsblatt W 551 of DVGW in Germany)
- The system is **approved by VDE** and fulfils the Flicker-standard.*

Its highly simplified installation makes the **eltherm Water Comfort Systems** to the **optimal solution** for drinking water heating and drinking water conduit facilities.

Technical Information

Temperatur Controller ELTC-W

Operating voltage range Input A: 100 .. 253 VAC, 50 Hz
Operating voltage range Input B: 24 VDC, +/– 5 %
Max. power input: ≤ 6,5 VA (@ 253 VAC
Standby power input: ≤ 3,5 VA (@ 230 VAC

Heating tape:
Nominal current: 20 A
Current in softstart: max. 50 A

Frost protection output:
Nominal current: 16A

Operating voltage range: – 10 .. 40 °C
Storage temperatur range: – 20 .. 65 °C
Admissible humidity: max 80 % (non-condensing)
Protection class: IP 20
Case (L x W x H): 153 x 93 x 59 mm
Assembly type: top-hat rail (TS35)

Temperature:
Temperature : 2 x NTC sensor
Testing range: – 20 .. 60 °C

Interface: RS485

* EN 61000-3-3/11. Please contact us for details.

Heating Tape ELSR-W

Design:
BO: Protective braid and a thermoplastic outerjacket
AO: Aluminium foil and a thermoplastic outerjacket

Technical Data:
Outerjacket. . . . . TPE-O
Bus wire . . . . . Cu nickel-plated
Maximum exposure
temperature (deenergised) . . . . . 100 °C
Maximum exposure
temperature (energised) . . . . . 80 °C
Nominal voltage . . . . . 230 V
Bending radius minimum . . . . . 20 mm
Minimum installation temperature . . – 20 °C

Type	Nominal output	Dimensions approx. (mm)	Weight approx. (g/m)	Item number
ELSR-W-45-2-AO	8 W/m bei 45 °C	13,6 x 5,5	91	0200230
ELSR-W-55-2-AO	9 W/m bei 55 °C	12,9 x 5,0	86	0200360
ELSR-W-55-2-BO	9 W/m bei 55 °C	12,9 x 5,0	105	0200350
ELSR-W-65-2-AO	13 W/m bei 65 °C	12,9 x 5,0	86	0200455
ELSR-W-65-2-BO	13 W/m bei 65 °C	12,9 x 5,0	105	0200450

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