Assembly and Installation Instructions for the Dual Heat Exchanger series E2WX / E3WX / E5WX / E3WX- 400V

If you do not pay proper attention to these installation instructions the manufacturer cannot accept liability for any resulting damage to the device itself, the environment, property, or personal injury.

Your safety is our concern!

These crossflow heat exchangers consist of a casing and a horizontal coiled tube in stainless steel with an integrated heating element made out of incoloy.

1. Purpose:

In these assembly and installation instructions the Dual Heat Exchanger is referred to as Heat Exchanger. These Heat Exchangers are made to heat up bathing water in swimming pools and whirlpools while the pump is running. It is not permitted to change and/or modify the device without consulting the manufacturer.

2. Safety Warning:

2.1 These Heat Exchangers have not been designed for use by individuals (including children) with physical, mental or sensory disabilities, or people who lack the necessary experience and/or knowledge unless under the supervision of someone entrusted with their safety or instructed by that person in how the device should be used.

2.2 **Attention:** Never open the control box without disconnecting it properly from the electrical power supply and be careful of unintentional activation.

3. Please Note:

3.1 These Heat Exchangers have not been designed for use by individuals (including children) with physical, mental or sensory disabilities, or people who lack the necessary experience and/or knowledge unless under the supervision of someone entrusted with their safety or instructed by that person in how the device should be used.

3.2 Attention! Never open the control box without disconnecting it properly from the electrical power supply and be careful of unintentional activation.

4. Fire Hazard:

Improper handling or failure of the safety device can lead to overheating. In extreme cases the Heat Exchanger could reach temperatures up to 100 °C.

4.1 If the unit is mounted to the wall, especially if the construction material is easily flammable, a heat resistant plate should be inserted between the Electric Heat Exchanger and the wall. That plate should be at least 10 cm longer and wider than the Electric Heat Exchanger.

4.2 Do not install the device near flammable material.

4.3 Do not use covers or insulation.

4.4 There is a danger of getting burned! The hot water connections can reach temperatures up to 90 °C. To prevent burns and/or the destruction of the heat exchanger as a result of overheating it is essential that the heating pump and the heating element are interlocked with the filter pump. It should not be possible to switch on neither of the systems if the filter pump is not in operation.

5. Safety Devices:

5.1 The Heat Exchanger is and should be protected by at least two safety switches.

a) safety thermostat 55°C

b) flow control

Don't operate the device with the flow control, use the filter pump, see 9.8 and circuit layout.

5.2 If the limit is exceeded, the safety devices will automatically switch off the Heat Exchanger.

6. Corrosion Prevention:

6.1 Please consider 11.2,4 and 5 also as prevention against corrosion.

6.2 The Heat Exchanger must be mounted so it can always be completely full of water or completely empty. During off season it can also be completely drained.

6.3 To avoid corrosion, make sure not to exceed the following water parameters:

Chlorid Gehalt: max. 500 mg/l
Freies Chlor: max. 1 mg/l
PH: max. 6,8 – 7,8

Be careful: The disinfection device should be installed after the Heat Exchanger in a way so that neither chemicals, nor gases can enter it while it is switched off.

7. Frost:

During frost the Heat Exchanger needs to be completely empty. The flow switch has to be dismantled and stored in a frost proof place.

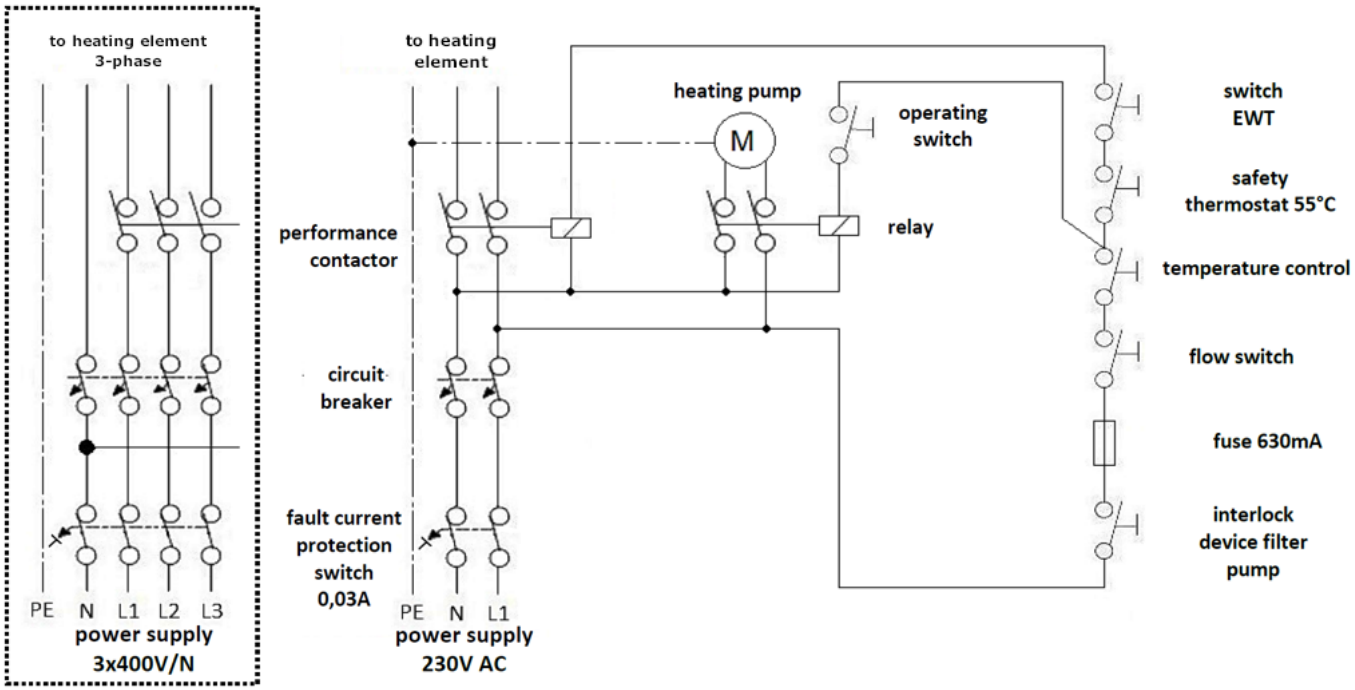
8. Please Note:

The specific water resistance at 15°C may not be below 550 kg OHM x cm. When the limits are properly taken into consideration (see above), the water resistance will remain between 1,5 Mega OHM x cm and 550 Kilo OHM x cm.

9. Safety Instructions:

9.1 Before starting the Heat Exchanger install an FI – safety switch (0,03 A) and a circuit breaker into the power supply.
9.2 The heat exchanger must be connected to the ground wire.
9.3 All metal parts are to be included in the potential equalization.
9.4 The device needs to be connected to the hardwire.
9.5 For the electrical connection, it is necessary to use a H07 RNF cable.
9.6 While cross sectioning the cable, please consider VDE 100.P
9.7 The control circuit should carry maximal 1 A alternating current. The control box needs to be set for that particular maximum capacity.
9.8 It is very important to lock the operating protection for the heating rod through the filter pump

10. Circuit Diagram:



11. Installation Instructions:

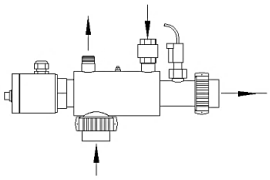
11.1 Always install the heat exchanger after the filter.
11.2 The direction of the flow in the coil must be running opposite of the secondary flow (see point 12).
11.3 To prevent corrosion, be careful that no metals containing iron get washed into the heat exchanger (contact corrosion).
11.4 Keep the heat exchanger always full of water (above and below water level) if the bathing facility gets shot down over the winter months. If there is risk of frost the heat exchanger needs to be completely empty.

11.5 If the heat exchanger is halfway filled with pool water during standstill or during winterizing, corrosion will happen. Air in combination with chlorine residue or similar chemicals, even in the smallest amounts, build an aggressive atmosphere in the heat exchanger and will destroy it.

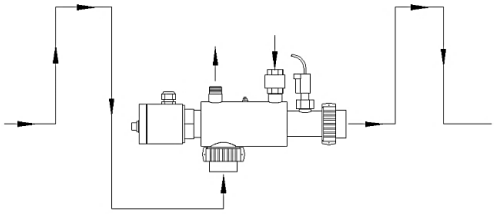
11.6 If after initial start-up the heat exchanger fails to perform properly, all air must be completely removed from the primary side (A/B). The water inlet and outlet (see diagram A-B/C-D) should be checked to ensure that they have been properly installed. The water enters through the backflow preventer, which also protects against overheating.

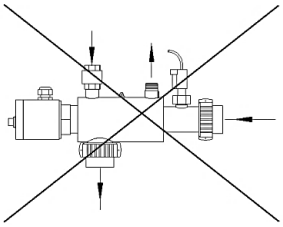
12.Installation Instruction/ Concept Drawing:

Installation layout /
below water level



Installation layout /
above water level





13.Impotrant general note:

Please keep these assembly and installation instructions on file for further reference. Thank you!

Update: **12.07.2022**

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technical changes reserved