



Assembly and Installation Instructions

Heat Exchanger Plastic of the Series Compact

D-KWT 45/85 kW - VA / Ti

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!

This crossflow water heat exchanger consists of a plastic casing and a corrugated tube coil.

1. Purpose:

This compact heat exchanger is extremely versatile – to heat swimming pools, whirlpools, and similar facilities. It is easily connected to the water circuit with the handy gluing socket D50.

2. Safety warning:

This device has not been designed for being used by individuals (including children) with physical, mental or sensory disabilities nor people who lack the necessary experience and/or knowledge, unless they are under the supervision of someone entrusted with their safety or instructed by that person in how the device should be used.

3. Safety instructions:

- 3.1 Before starting the Electric Heat Exchanger install an FI – safety switch (0,03 A) and a circuit breaker into the power supply.
- 3.2 The electric heat exchanger must be connected to the ground wire.
- 3.3 The device needs to be connected to the hardwire.
- 3.4 For the electrical connection it is necessary to use a H07 RNF cable.
- 3.5 While cross sectioning the cable, please pay attention to VDE 100.

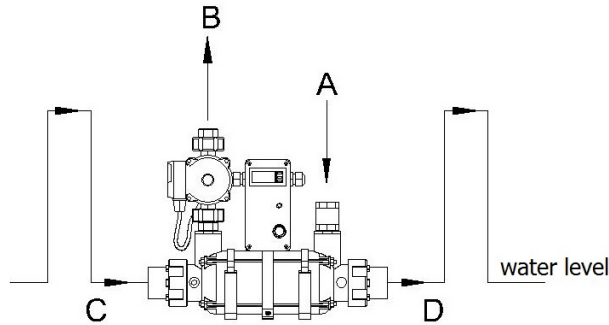
4. Hazards:

- 4.1 Don't exceed the maximum allowed pressure limit. Pool side 2 bar – heating side 6 bar and the maximum primary temperature of 90°C.
- 4.2 Attention! Danger of getting burned! The Compact Heat Exchanger might heat itself up to the flow temperature of the heating water if it doesn't get supplied with bathing water. The heating water side connections can reach up to 100°C. To prevent any hazards e.g. burn injuries and/or damage to the heat exchanger through overheating, the heating pump has to stop automatically through the filter pump. It shouldn't be possible to switch it on if the filter pump is not on! It is recommended to install a switch-off delay. The heating pump should be taken off the circuit about 10 minutes before the filter pump.
- 4.3 For the Compact Heat Exchanger and the area around it not to get damaged, check it weekly if there are noticeable exterior damages and leaks during the bathing season.

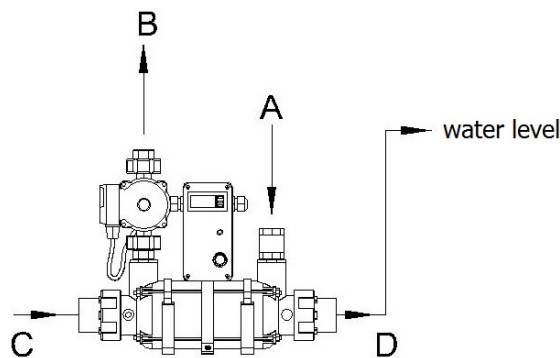
5. Installation:

- 5.1 **Always install the compact heat exchanger after the filter.**
- 5.2 Make sure the compact heat exchanger is installed in a frost proof area.
- 5.3 Follow the installation instructions during the assembly (see 5.6 and 5.7). You can avoid damages and a lack of performance. Mind the loops in the pipes to prevent idle running!
- 5.4 To prevent corrosion damage, make sure no iron containing metals are washed into the Compact Heat Exchanger (contact corrosion).
- 5.5 During wintering it is very important that the Compact Heat Exchanger is always full of water (above and below water level). If there is a possibility of frost the Compact Heat Exchanger must be fully emptied. If the performance (output) of the Compact Heat Exchanger is weak after start-up, de-aerate the primary side (A/B). The water entry and exit (see sketch A-B/C-D) need to be checked for correct assembly.

5.6 Installation layout above water level



5.7 Installation layout below water level



6. Important information about how to prevent corrosion:

Make sure not to exceed the following water parameters:

AISI:

Chloride content: max. 500 mg/l
Free chlorine: max. 1 mg/l
PH: max. 6,8 – 7,8

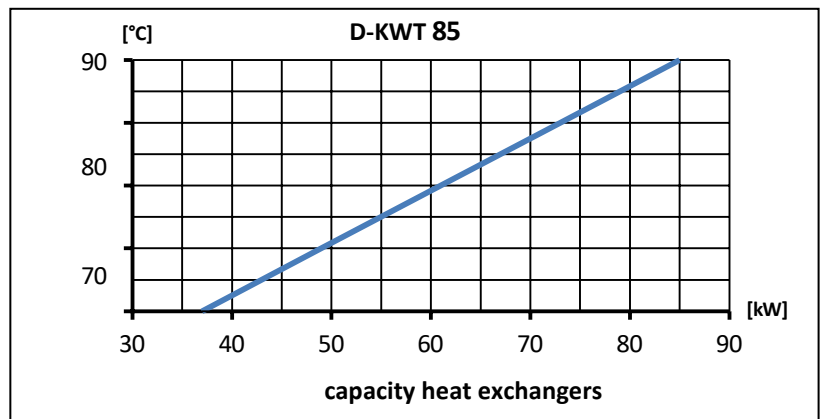
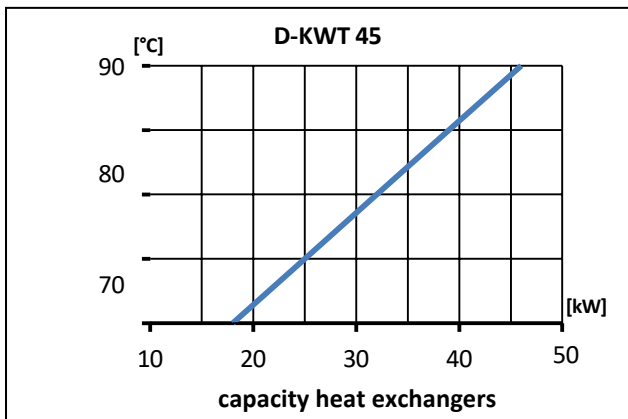
Ti:

Chloride content: max. 3000 mg/l
Free chlorine: no limit
PH: max. 6,8 – 7,8
Salt: max. 3%

If the above-mentioned limits are not taken into consideration, it is likely for the heat exchanger to be destroyed due to corrosion.

Be careful: Disinfection devices are to be installed after the heat exchanger and in a way where there won't be any chemicals or gases entering the heat exchanger, as well as during a period of downtime.

7. Diagrams:



Modell:	Heating (primary):	Bathing water (secondary):	Loss heating	Loss bathing water
D-KWT 45	2 m ³ /h	10 m ³ /h	0,15 bar	0,15 bar
D-KWT 85	2 m ³ /h	12 m ³ /h	0,28 bar	0,22 bar

Basis of calculation: Bathing water 20°C





8. Function:

- 8.1 The circulation pump DAB, pre-set to level 3, needs to be connected electronically by the installer with the electric control panel.
- 8.2 The backflow preventer protects the heat exchanger on the primary side from idling. Danger exists for the heat exchanger to overheat.
- 8.3 The digital electric temperature control indicates the actual temperature of the bathing water when the water is flowing through.
- 8.4 Setting the desired bathing water temperature is easy. Follow the instructions for the temperature regulator Ascon E 51A.
- 8.5 The differential temperature is set at 0,5°C. To change it, follow the instructions for the temperature regulator Ascon E 51A.
- 8.6 The green control lamp lights up if the circulation pump is on.
- 8.7 With the ON/OFF button you can switch the heat exchanger on or off.


9. Instruction for the digital electric Temperature Regulator Ascon E 51A:

- 9.1 Contacts 1+2 supply 230V AC 50/60 Hertz
- 9.2 Contacts 4+5 for the use of the heating pump control
- 9.3 Contacts 6+7 temperature probe
- 9.4 After switching on the regulator, it will undergo a short test, the display will blink briefly then show the temperature in the heat exchanger. After the filter pump has been switched on the bathing water temperature will appear.

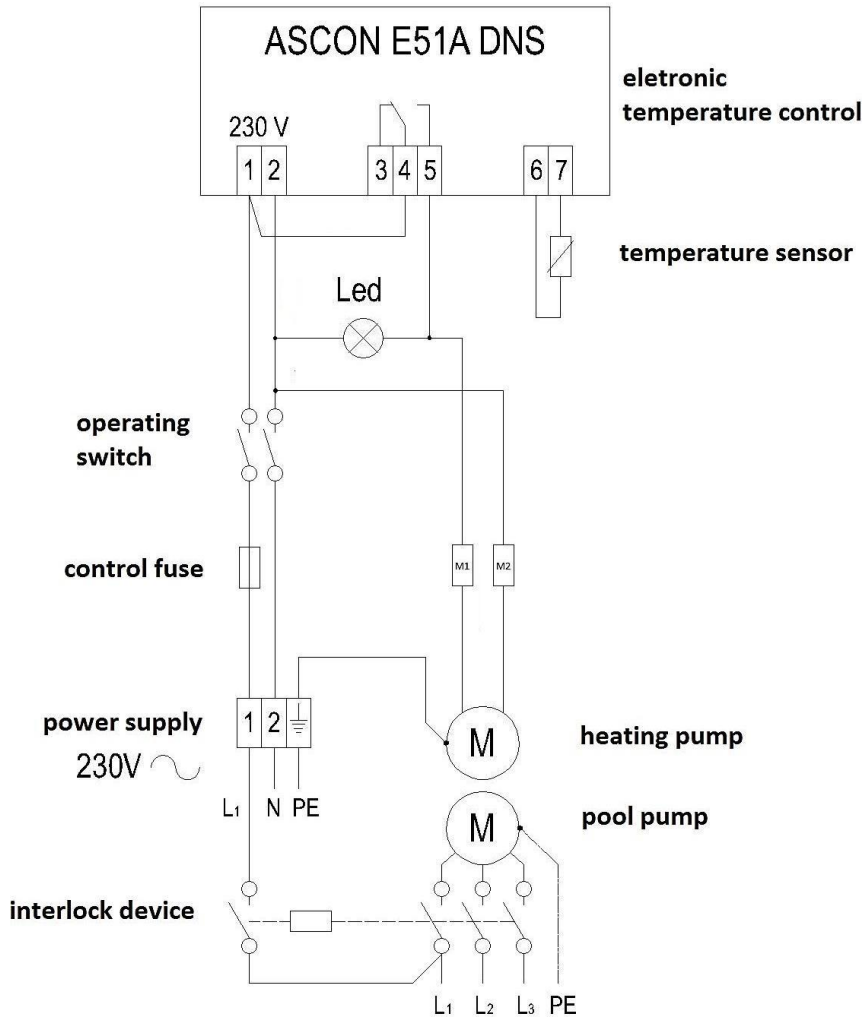
10. Setting of the desired bathing water temperature:

- 10.1 Press the button „P“ briefly. The display will show alternately „SP“ and the set point (bathing water temperature).
- 10.2 By pressing the up or down arrow buttons ( or ) the set point (bathing water temperature) can be changed. The minimum temperature is 1°C, the maximum 40°C
- 10.3 To confirm press „P“ or the selected number will be saved automatically after 15 seconds.

11. Setting the differential temperature:

- 11.1 The difference is factory set at 0,5°C. When the bathing water has reached the set temperature the heating pump will switch off until the bathing water temperature has cooled down 0,5°C.
- 11.2 This differential value can be changed. By keeping the button „P“ pressed you will get to the menu. „d“ will start blinking. Press „P“ briefly and the set value will appear, which can now be changed with the arrow buttons. The range is from 0,1°C to 30°C and can be adjusted in 0,1°C increments. Confirm by pressing „P“ again.
- 11.3 Exiting the menu will happen automatically after 30 seconds or if you keep the  button pressed.

12. Circuit diagram:



13. Important general note:

It is essential that the Electric Heat Exchanger is installed in an area with adequate floor drainage.

If heat exchangers, filters and similar devices are damaged, water may escape uncontrollably.

Cellars and similar areas may quickly become flooded and suffer material damage!

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

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technical changes reserved