Assembly and Installation Instructions
water heat exchanger of the series D-HWT / D-TWT / D-SHWT / D-NWT / D-KWT

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 cross-flow heat exchangers consist of a casing and inside is a coiled tubing made out of stainless steel or titanium.

1. Purpose:

These heat exchangers are made to heat up bathing water using warm water from heating, solar systems, heat pumps or low temperature heating systems.

2. Safety Instructions:

This device has not been designed for being used neither by individuals (including children) with physical, mental or sensory disabilities nor by people who lack the necessary experience and/or knowledge, unless they are under the supervision of someone entrusted with their safety or they are instructed by that person in how the device should be used.

3. Hazards:

3.1 Do not exceed the maximum allowable pressure loads. Bathing water circuit 3 bar * or 2 bar **– heating circuit 10 bar* or 6 bar **.

3.2 Attention! Danger of getting burned! Without bathing water flowing through it, the heat exchanger might heat up to the primary temperature of the heating water.

The hot water connections can reach temperatures up to 100 °C.

To prevent burns and/or the destruction of the heat exchanger as a result of overheating, **it is essential that the filter pump must stop the heating pump.** It should not be possible to switch it on if the filter pump is not in operation. The installation of a switch-off delay for the filter pump is recommended. Disconnect the heating pump from the circuit approximately 10 minutes before the filter pump.

3.3 To prevent damage to the heat exchanger and its surroundings, check the heat exchanger regularly (at least once a week) during the bathing season for external signs of damage and for leaks.

4. Installation:

4.1 **Always install the heat exchanger after the filter.**

4.2 The heat exchanger needs to be protected against frost.

4.3 During assembly, carefully follow the directions in the diagram below (see 4.8). This way, damage and performance decrease can be avoided. Keep the loops of the pipes in mind to prevent idling!

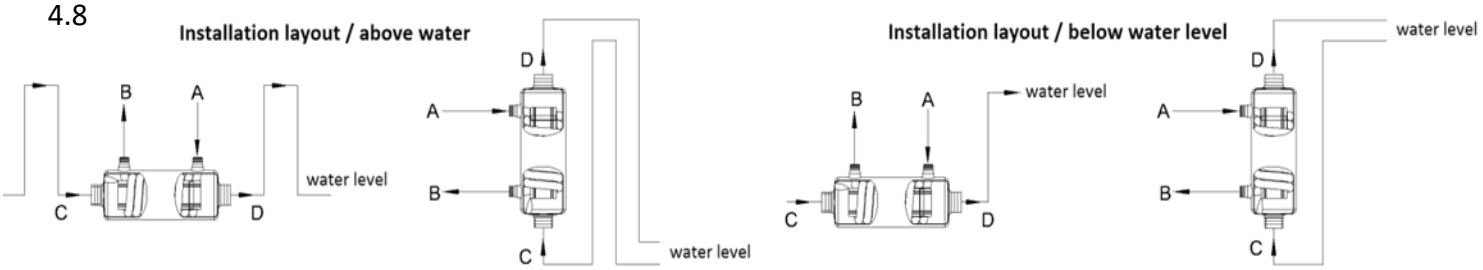
4.4 To prevent corrosion, be careful that no metals containing iron get washed into the heat exchanger (contact corrosion).

4.5 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. Under these circumstances, vertical positioning of the heat exchanger is an advantage.

4.6 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.

4.7 Install a backflow preventer on the primary input (**A**) as overheat protection.

4.8



5. Important information regarding water quality:

Do not exceed the following parameters:

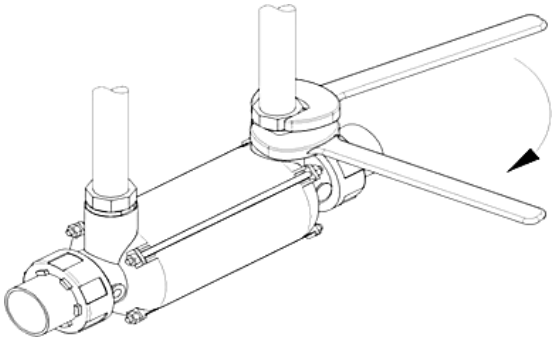
Stainless steel AISI:	Chloride content: max. 500 mg/l Free chlorine: max. 1 mg/l PH: max. 6,8 – 7,8	titanium:	Chloride content: max. 3000 mg/l Free chlorine: no limit PH: max. 6,8 – 7,8 Salt: max. 3%

5.1 If these limits are being disregarded, the heat exchanger might be damaged through corrosion.

5.2 Always install the disinfection devices after the heat exchanger and in a way that chemicals or other gases cannot get into the heat exchanger.

5.3 Please consider 4.3 and 4.5 also as prevention against corrosion. 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.

6. Appropriate fitting of pipes in the heating circuit with model D-KWT:



To prevent the stainless steel fitting from detaching itself from the heat exchanger housing and, as a result, also from the corrugated coil, and to prevent leaks from occurring, the stainless steel fitting should be firmly tightened with a second spanner or pliers.
(See illustration)

7. Important general note:

The heat exchanger needs to be installed in an area with sufficiently dimensioned drainage. If heat exchangers, filters and similar devices are damaged, water may leak uncontrollably. Basements and nearby rooms may quickly get flooded and suffer material damage.

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

05.07.2022 max dapràKG-daprà andreas&Co Via Graf 2, I-39050 Fiè allo Sciliar

technical changes reserved

*) the model D-HWT / D-TWT / D-SHWT / D-NWT

**) the model D-KWT

TECHNICAL INFORMATION FOR ALL WATER/WATER COILED TUBE HEAT EXCHANGERS

type	capacity	temperature difference	heating area	pump capacity primary	pump capacity secondary	loss primary	loss secondary
	90°C						
D-HWT 12	14 kW	70 °C = 0,2 kW/°C	0,08 m²	1,2 m³/h	10 m³/h	0,03 bar	0,05 bar
D-HWT 24	28 kW	70 °C = 0,4 kW/°C	0,13 m²	1,8 m³/h	12 m³/h	0,11 bar	0,06 bar
D-HWT 35	42 kW	70 °C = 0,6 kW/°C	0,17 m²	2 m³/h	10 m³/h	0,18 bar	0,10 bar
D-HWT 54	63 kW	70 °C = 0,9 kW/°C	0,29 m²	3 m³/h	12 m³/h	0,20 bar	0,16 bar
D-HWT 65	84 kW	70 °C = 1,2 kW/°C	0,35 m²	3 m³/h	12 m³/h	0,23 bar	0,22 bar
D-HWT 93	133 kW	70 °C = 1,9 kW/°C	0,56 m²	4 m³/h	15 m³/h	0,44 bar	0,22 bar
D-HWT 122	175 kW	70 °C = 2,5 kW/°C	0,80 m²	2 x 4 m³/h	20 m³/h	0,27 bar	0,5 bar
D-HWT 182	259 kW	70 °C = 3,7 kW/°C	0,99 m²	2 x 4,3 m³/h	25 m³/h	0,44 bar	0,8 bar
	50°C						
D-NWT 18	30 kW	30 °C = 1 kW/°C	0,35 m²	2 m³/h	10 m³/h	0,12 bar	0,18 bar
D-NWT 35	60 kW	30 °C = 2 kW/°C	0,79 m²	2,8 m³/h	12 m³/h	0,34 bar	0,25 bar
D-NWT-Ti 45	60 kW	30 °C = 2 kW/°C	0,79 m²	2,8 m³/h	15 m³/h	0,34 bar	0,25 bar
	50/90°C						
D-SHWT 9/35 solar	18 kW	30 °C = 0,6 kW/°C	2 x 0,17 m²	2 x 2 m³/h	10 m³/h	0,18 bar	0,12 bar
D-SHWT 9/35 heating	42 kW	70 °C = 0,6 kW/°C	2 x 0,17 m²	2 x 2 m³/h	10 m³/h	0,18 bar	0,12 bar
D-SHWT 18/35 solar	30 kW	30 °C = 1 kW/°C	0,35 + 0,17 m²	2 x 2 m³/h	10 m³/h	0,22 bar	0,20 bar
D-SHWT 18/35 heating	42 kW	70 °C = 0,6 kW/°C	0,35 + 0,17 m²	2 x 2 m³/h	10 m³/h	0,22 bar	0,20 bar
	90°C						
D-TWT 35	42 kW	70 °C = 0,6 kW/°C	0,17 m²	2,2 m³/h	10 m³/h	0,19 bar	0,10 bar
D-TWT 65	84 kW	70 °C = 1,2 kW/°C	0,35 m²	3 m³/h	15 m³/h	0,23 bar	0,25 bar
D-TWT 93	126 kW	70 °C = 1,8 kW/°C	0,56 m²	4 m³/h	15 m³/h	0,44 bar	0,22 bar
D-TWT 115	154 kW	70 °C = 2,2 kW/°C	0,79 m²	3,8 m³/h	15 m³/h	0,56 bar	0,25 bar
	90°C						
D-KWT-VA 25	25 kW	70 °C = 0,36 kW/°C	0,09 m²	2 m³/h	8 m³/h	0,10 bar	0,11 bar
D-KWT-VA 45	46 kW	70 °C = 0,66 kW/°C	0,15 m²	2 m³/h	10 m³/h	0,15 bar	0,15 bar
D-KWT-VA 85	91 kW	70 °C = 1,3 kW/°C	0,33 m²	2 m³/h	12 m³/h	0,28 bar	0,22 bar
D-KWT-VA 105	126 kW	70 °C = 1,8 kW/°C	0,54 m²	2 m³/h	15 m³/h	0,36 bar	0,30 bar
	90°C						
D-KWT-Ti 25	25 kW	70 °C = 0,36 kW/°C	0,09 m²	2 m³/h	8 m³/h	0,10 bar	0,11 bar
D-KWT-Ti 45	46 kW	70 °C = 0,66 kW/°C	0,15 m²	2 m³/h	10 m³/h	0,15 bar	0,15 bar
D-KWT-Ti 85	91 kW	70 °C = 1,3 kW/°C	0,33 m²	2 m³/h	12 m³/h	0,28 bar	0,22 bar
D-KWT-Ti 105	126 kW	70 °C = 1,8 kW/°C	0,54 m²	2 m³/h	15 m³/h	0,36 bar	0,30 bar