CWW / CWK

Mech-Elec®

GB **Fitting instructions for CWW, CWK**
Important: Read these instructions before installing and connecting this product. Keep the instructions in a safe place for future use!

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GB

Water connecting

When connecting a heater/cooler to the water system, the following things should be considered:

1. The heater/cooler must be connected with clamping ring connectors.
2. The connecting pipes from the heat exchanger must under no circumstances be subjected to twisting or bending stresses when assembling the pipe connectors etc. Use suitable tools to counteract the twisting/bending moments during assembly.
3. Ensure that forces due to expansion in the system and the inrinsic weight of the piping system itself do not put loads on to the heat exchanger.
4. The water inlet should normally be connected to the lowest pipe connector in order to facilitate venting of the heat exchanger. A venting valve should normally be installed near the heat exchanger or at the highest point in the system.
5. The heater/cooler must be connected in such a way that the system is easy to empty in the event of repair work, a longer operational stop, or when there is a risk of freezing, etc.
6. Immediately after the system has been filled with water, the duct heater and its connections must be checked for water leaks. Leaks can cause water damage.

Operational data:
Max. operating temperature: 150˚C
Max. operating pressure: 1,0 MPa (10 bar)

WARNING!! If the water in the heat exchanger freezes, then it can burst, if this is the case water may leak from the system and cause water damage. Therefore, when there is a risk of freezing the heater/cooler must be protected by a freezing sensor which shuts down the system fans, shuts any outside air valves, opens the water valve to increase the water circulation through the heat exchanger, and activates the alarm circuit (if there is one).

Cleaning

The heat exchanger must be cleaned regularly in order to retain the best performance from the heater/cooler. The cleaning interval depends entirely on the cleanliness of the air and how the filter and remainder of the system are maintained.
The heat exchanger is readily accessible for cleaning when the cover on the heater/cooler is removed. First, the air entry side of the heat exchanger is cleaned with a brush and then the whole heat exchanger can be cleaned with compressed air, water or steam. The dirt is blown or washed away in a direction away from the exit side towards the entry side. Cleaning is facilitated by using a mild detergent (check first that the detergent does not have a detrimental effect on copper and aluminium).
Be careful not to damage the thin fins on the heat exchanger.

Mounting

The heater/cooler is designed to be inserted into standard spiral ducting and is fixed to the ducting with screws.

The heater/cooler should not be fitted too close to a fan outlet or a bend in the ducting because then there is a risk that the air flow through the heat exchanger is uneven which can result in lower efficiency.

An effective filter is recommended in the system to reduce maintenance work. See under the heading Cleaning.

Duct heater model CWW

The duct heater can be fitted in a horizontal or a vertical duct with optional direction of airflow. To facilitate venting of the heat exchanger, the unit should be fitted with the longitudinal tubes horizontal. The heater is normally fitted after the fan. However it can be fitted before the fan, but then a check must be made that the fan motor and other components are approved for the elevated temperature after the heater.

Duct cooler model CWK

The duct cooler must be fitted in a horizontal duct and the airflow must be in the direction of the arrow. The CWK must be insulated externally to prevent the formation of condensation on its outside surfaces. Normally, the ducts that transport cold air must also be insulated to prevent condensation. A drain pipe is required to drain off any condensed water. To prevent unnecessary condensed water remaining in the duct cooler, it must be tilted at an angle of 10-15 degrees to the horizontal in the direction of the drain. See the picture below. Drain connection is R 1/2. The duct cooler must be connected to the drain in such a way that the connection is protected from pulling, pressing or twisting. Otherwise there is a risk of water leakage.