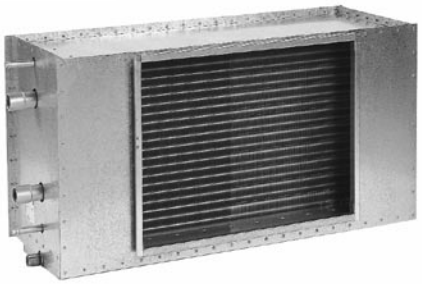
Installation Instructions for the TBKA, TBKC Air Coolers, GOLD/COMPACT

1. General



The TBKA/TBKC air coolers are used for cooling the supply air with chilled water or evaporative refrigerant as the cooling medium.

The air cooler must be installed for horizontal airflow.

The TBKA/TBKC air coolers are composed of copper tubes and profiled aluminium fins.

The TBKA has headers and water connections made of copper/brass, with male connection threads.

The TBKC has headers and distributor tubes made of copper. The connections are designed for brazed joints.

Extra accessories
The TBVA Valve set consisting of a 2(3)-way valve including actuator can be ordered. See the individual instructions for the TBVA valve set. If the air heater is to be installed outdoors or in a cold space, take into consideration the enclosure class of the actuator and the permissible ambient temperature. If necessary, see to it that required protection is arranged.

3. Maintenance

Check at least twice a year whether cleaning is necessary.

Cleaning shall only be done by blowing with compressed air against the ordinary direction of airflow, vacuum cleaning with a soft nozzle or wet cleaning with water and/or solvent. Before you begin wet cleaning, you should cover adjacent functional sections to protect them. After wet cleaning, you should blow the surfaces dry with compressed air to remove every trace of cleaning solvent.

If cleaning solvent is used, this solvent must not contain ingredients that will corrode aluminium or copper. Swegon's cleaning agent is recommended. This cleaning agent is sold by Swegon or Swegon Service.

While cleaning, check the air cooler for tightness and that the drainage pipework is not clogged. For the TBKA air coolers, also check the glycol content and vent the circuit.

3. Installation

For the installation of air coolers in duct systems, see the individual instructions entitled: Installation Instructions for Duct Accessories.

The capacity of the TBKA air cooler is dependent on the direction of airflow and correct connection of the water pipes. Parallel-flow circulation will decrease its capacity. For appropriate connections, see the figure. 1. Use a pipe wrench to restrain the pipe connections of the air cooler when tightening the external pipe connections to avoid damaging the tubes in the air cooler. Always fill the air cooler with liquid from the lowest connection. Vent the air cooler before you commission it.

In the case of the TBKC, the direction of airflow has an insignificant effect on its cooling capacity. The air cooler connections are designed for brazed joints. The inlet cooling medium pipe should be connected to the upper connection of the air cooler as shown in Fig. 2.

Connect the condensate discharge pipework across a water trap to a drain gulley. A TBXZ-1-40 water trap is available as an accessory. See individual instructions.

When connecting the condensate discharge pipework of air coolers with circular duct connections, connect the pipework to the drainage connection at the discharge air side of the air cooler. Blank off the drainage connection at the inlet air side using a plug! See Figure 3.

Mix anti-freeze agent in the water to prevent the risk of freeze damage in the TBKA air cooler for chilled water. If for some reason anti-freeze agent cannot be used, take other measures to prevent freezing.

Fig. 1
Connections, TBKA

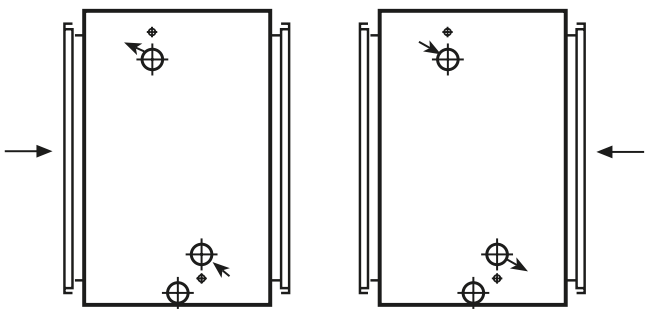


Fig. 2
Connections, TBKC

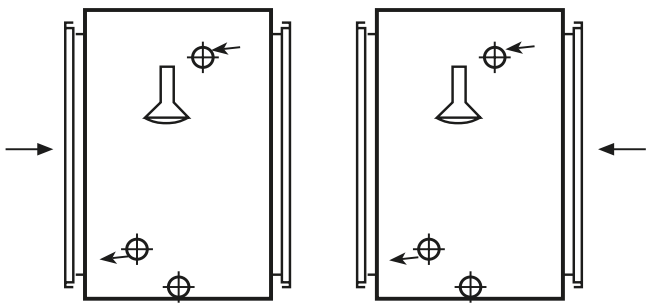


Fig. 3
Connection for drainage, air cooler with circular duct connections