

# Installation and Service Information

## Brine-to-air heat exchanger CWK 300-F-iso

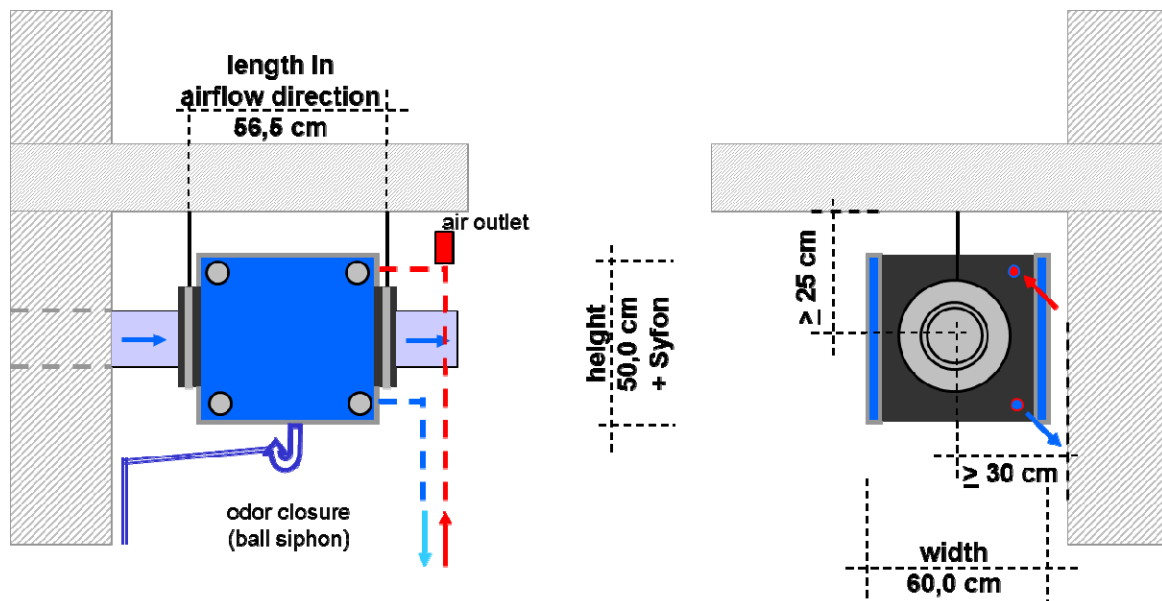
**Important:** The condense drain on the bottom of CWK 300 is sensitive. When unpacking the CWK300 don't place it on the bottom, but place it with condense drain upwards on the floor.

### Requirements for installation

CWK is to be installed so distanced to rooms ceiling or next wall, that the center of the air pipes is minimum 25 cm below the ceiling and min. 30 cm beside next wall (see following right sketch). If temperature sensor shall be installed inside CWK 300, 10 cm additional distance between ceiling and CWK 300 is needed. If it shall be installed directly under the ceiling, place the temperature sensor not inside CWK 300 but near by hanging inside the outgoing air pipe.

CWK is to be installed with airflow horizontally only. Otherwise condense water cannot flow out.

CWK 300 is designed to be installed indoor, but not outdoor directly in sunshine, rain or snow. But it is no problem to install CWK 300 in a cold, dry and shadowed room like a cellar, garage or carport.



### Fixing of CWK 300 under a ceiling

Install CWK 300 in correct airflow direction. The side with the two fluid pipes is the air outlet side, the side without fluid pipes is the air inlet side.

The CWK 300 is to be hung under a ceiling with the two threaded 8 mm rods enclosed. Drill 6 cm deep dowel holes in the center line of the air line with 56.5 cm distance (see upper left sketch)

### Air pipe connection

The air inlet and air outlet is designed for metallic pipe or PS-pipe with either 160 or 180 mm outer diameter. If metallic pipes are used, it is better, not to press naked metallic pipe directly into the CWK's body, but to use a pipe nipple with a rubber sealing lip. These connections are easier to install and tighter. If larger pipe diameters are needed, the air pipe openings can be expanded with a saw up to 315 mm.



### **Fluid pipe connection**

CWK 300 has 15 mm INOX steel fluid pipes. They look about 32 mm out of the EPP body. The connection to support pipes has to be made with crimp or pressure seals, not by soldering. The heat of soldering can otherwise damage the EPP body. The fluid may flow through the upper pipe into CWK 300 and through the lower pipe out of the CWK 300 (see right upper sketch). When system is first time filled with fluid, the fluid shall be pumped into by lower pipe. So air bubbles will become pushed out best. To enable later air bubbles to come out, a passive air outlet ventill shall be installed at the highest point of pipes (see left sketch).

### **Brine-Fluid and Antifreeze**

If CWK 300 is used to preheat frosty outer air in the winter, the fluid has to contain antifreeze. The antifreeze concentration shall be so, that the fluid cannot freeze also in the coldest expected outdoor temperature, like in a autocars cooling water circuit. What product of antifreeze can be used, depends on the environmental conditions of the property. Ask the local water supply authority to find out, whether there are restrictions or recommendations.

### **Connection of condensate drain**

To connect a condense drain hose, there is a multiadapter enclosed. The condense hose must have an odor lock, that is tight also against vacuum from the ventilation unit side. Siphons filled with water can be tight enough, but water level is to be controlled regularly. If syphon's water dries off, bad smelling waste water channel odor can be sucked into the ventilation unit. Better is a siphon with a ball siphon, which rests on a sealing ring and seals by its own weight, but floats for incoming water, thereby opening the drain.

### **Connection of temperature sensor into CWK 300**

If a Netec pump controller type HTR... are used, its temperature sensor is to be introduced into CWK 300, when the CWK 300 had been fixed and it fluid pipes are connected. The sensor cable inlet is in the middle of the top of CWK 300. It is a small soft foam rubber element with small hole in the middle. Slide the sensor cable through this element about 35 cm wide into CWK 300, thread it through the metal eyelet at the top of the outlet air channel, so it hangs in the middle of the outgoing air flow. If CWK 300 hangs so near under the ceiling, that you cannot slide the sensor cable this way, then drill a hole into the outgoing air pipe (from top) and slide it into here. The sensor shall hang in the middle of the outgoing airflow and shall have no contact to the airpipes wall.

### **Change of airfilter**

To change the air filter (f.e. annually) open the 4 wing screws of one of the side covers, open the cover and pull out the filter. When replacing a filter, look to the airflow direction symbol on the filters side. While closing the covers screws, press the cover with other hand manually to the body and tighten the screws only lightly by hand. Don't use much power. For replacement filters look at [www.sole-ewt.de](http://www.sole-ewt.de)