



**AIR-COOLED WATER  
CHILLER**

**WSAT-2**

**2.230-2.260-2.280-2.300**

**2.360-2.400-2.440-3.450-3.540-**

**3.580-3.620-3.660-4.720**

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## **WATER CONNECTIONS**

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### **CONTENTS:**

#### **GENERAL NOTES CHILLED WATER CIRCUIT (EVAPORATOR)**

As standard, the air vent is mounted on the upper part, and the drain valve on the lower part or the side of the evaporator, on the opposite side to the refrigeration connections.

#### **GENERAL NOTES**

- Observe the safety regulations in force for an exact design and consecutive installation.
- Install ON/OFF valves next to the parts which are subject to maintenance. This allows their substitution without emptying the pipe work.
- It is suggested to install thermometers and pressure gauges at the inlet/outlet of the heat exchangers. It will help the routine control and maintenance of the unit.
- It is suggested to install a steel mesh strainer on the suction side of the pump to protect the pump itself and the exchangers from extraneous materials.
- Control accurately the absence of leaks during the filling phase of the plumbing.
- Flow switches are part of the system and must be installed even if they aren't supplied with the unit. For their correct operation, they must be installed on a straight part of the pipe which is long at least 10 times the pipe diameter.

#### **CHILLED WATER CIRCUIT (EVAPORATOR)**

The pipework must be designed with the minimum possible difference in height.

Install automatic or manual vents on the high points of the chilled water piping to allow the outlet of the air in the circuit. The system can be kept at the right pressure by means of an expansion tank or of a combined pressure reduction-discharge valve.

All the pipework of the chilled water must be insulated in order to prevent the condensation on the piping itself. Make sure that the insulation is of the vapor seal type.

Make sure of the integrity of the piping (check for any leaks) before insulating it. Air-venting and draining connections must jut out of the insulation thickness to be accessible

HYDRAULIC CONNECTIONS ARE OF THE VICTAULIC TYPE.

**INSTRUCTIONS FOR CONNECTIONS:**

- Take off the solder pipe connection issued with the Victaulic coupling.
- Weld the connection to the pipework.
- Connect the evaporator to the pipeline by means of the Victaulic joint.

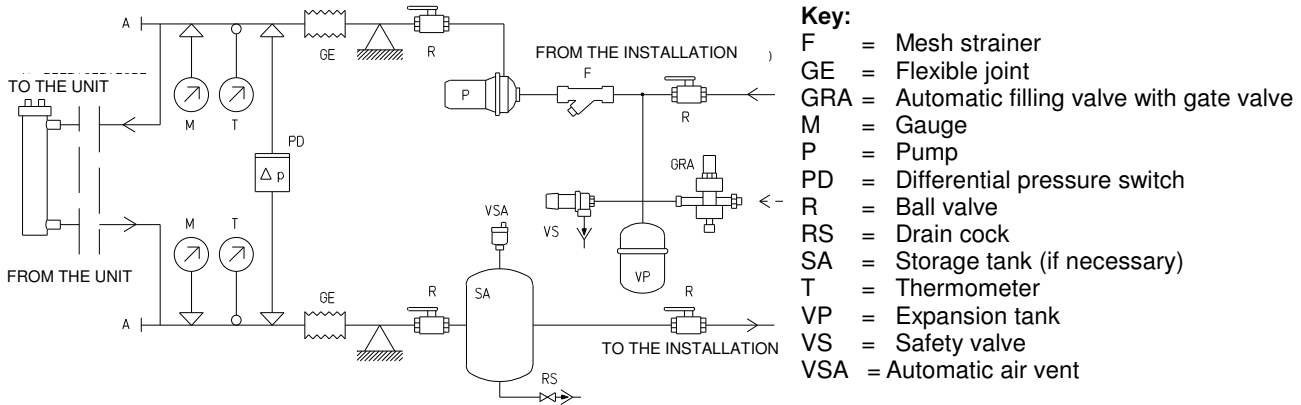
**Nota:**

- Make sure that water distribution in the water circuit is equal for each evaporator.
- Check that the single evaporator's IN/OUT temperature deviation, in unit at full capacity, is  $\Delta T=5^{\circ}\text{C}$ .

**WARNING**

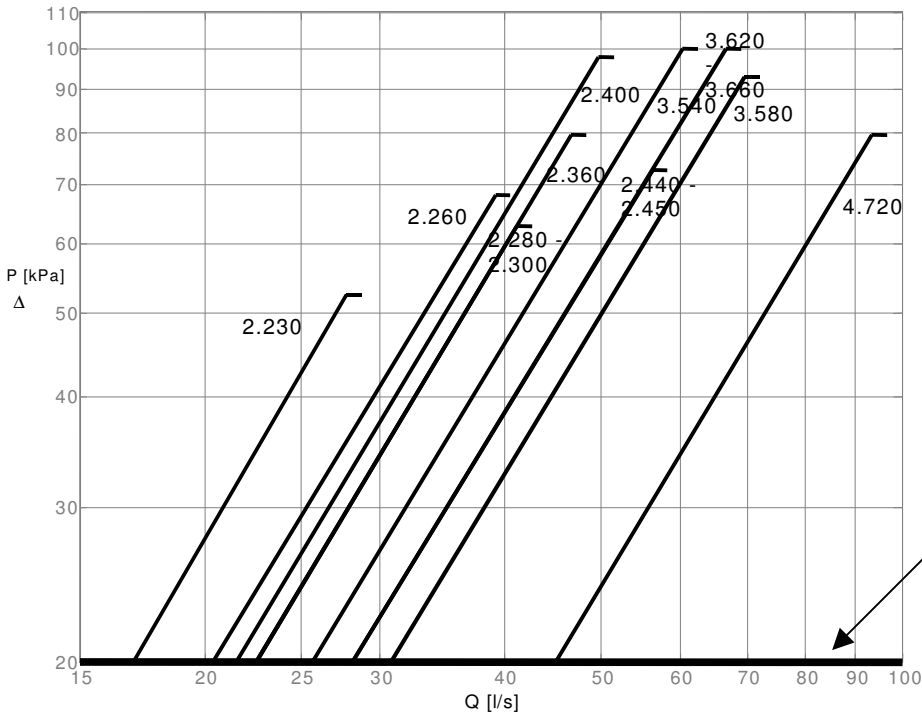
DO NOT WELD THE PIPEWORK AND THE EVAPORATOR CONNECTION PIPE IF THE VICTAULIC JOINT IS STILL CONNECTED. ITS RUBBER WASHER COULD BE IRREPARABLY DAMAGED.

EVAPORATOR WATER CIRCUIT CONNECTING DIAGRAM



**N.B.:** The following diagram is purely indicative and non-binding

**INTERNAL EXCHANGER PRESSURE DROP (SC - ST - LN - EN )**



SIZE	Q <sub>MIN</sub> [l/s]	Q <sub>MAX</sub> [l/s]
2.230	16.9	27.8
2.260	20.4	39.2
2.280	22.5	41.2
2.300	22.5	41.2
2.360	22.5	46.7
2.400	21.5	49.7
2.440	28.2	56.2
2.450	28.2	56.2
3.540	25.7	60.3
3.580	30.8	69.7
3.620	28.2	66.7
3.660	28.2	66.7
4.720	45.0	93.3

EVAPORATOR PRESSURE DROP LIMIT.  
CAUTION: DO NOT USE UNDER THIS LIMIT