

## **WATER PUMP**

### **ECOSS STAINLESS STEEL EVAPORATIVE CONDENSER**

The centrifugal pumps used in the condensers feature a constructive form to privilege the water flow at low pressure. The optimized points were developed to ensure the lowest consumption because of the required flow rate.

Before starting the pump, some care is required:

1. Installation of water inlet, drain, automatic bleed and overflow connections;
2. Cleaning the equipment tray as instructed by bulletin BT-10;
3. Removal of filter for inspection and cleaning of suction piping (see BT-10);
4. Filter installation as recommended by BT-10;
5. Ensure that the water supply pressure is in accordance with BT-10;
6. Check the opening of the suction piping valves and pump discharge;
7. Make sure the pump is fully supplied with water.

After starting the pump, the following points should be checked:

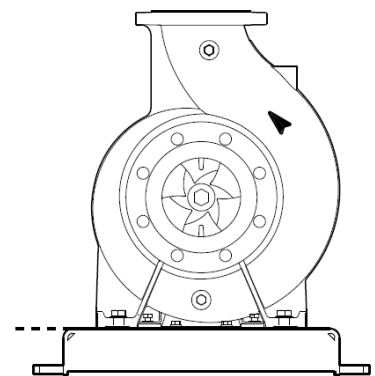
1. Motor rotation direction;
2. Operating current;

#### **Checking the direction of rotation:**

The pump has an indication of its direction of rotation next to the volute, as indicated in the image next to it.

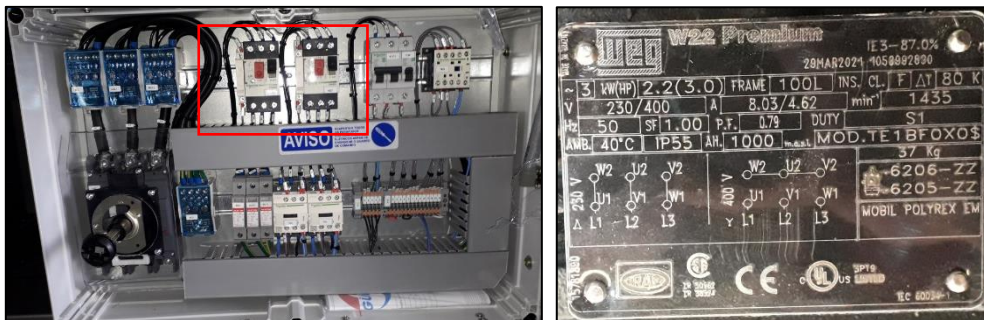
To check the rotation direction of the pump, two points can be checked:

1. Rotation direction of the cooling propeller;
2. Direction of cooling air flow.



**Checking of the operating current:**

1. Locate the switchboard installed at the bottom of the equipment;
2. Open the nearest lower inspection window;
3. Carefully open the locks of the switchboard and open the acrylic cover;
4. Locate the water pump motor breaker;
5. Carry out the measurement of the pump current with the use of a clamp meter;
6. Check the pump nameplate for the correct current;



Centrifugal pumps may experience some operating problems due to particular operating conditions or lack of proper maintenance. Some of the most frequent problems and their possible causes are listed below.

Symptom	Cause	Solution
The pump does not pump liquid or pumps too little	Incorrect electrical connection of the pump	Correct the electrical connection according to the technical data sheet of the pump.
	Incorrect direction of rotation	Change the electrical connection
	Air in the suction piping	Perform piping bleeding
	Clogged suction or rotor	Perform piping cleaning
	Pump sucking air (insufficient sealing)	Check the tightness of the flange bolts, the condition of the sealing joints and the mechanical seal.
Motor electric protection system disarms pump	Little liquid available at the pump suction, allowing air to be sucked.	Increase the liquid level of the tray to the level indicated by adjusting the water inlet float. Check that the suction piping valve is open.
	Pump clogged by impurities	Clean pump piping
	Incorrect motor breaker configuration	Check motor protection system configuration accordingly
	The motor is running in two phases	Check electrical installation and connection

BT-012/V2/ENG/10.2021

Symptom	Cause	Solution
The pump emits loud noise and/or vibrations	Low pressure at Inlet (cavitating pump)	Check the water level of the equipment tray and the opening of the suction pipe valve;
	The pump is sucking air due to low liquid level	Adjust the liquid level and readjust the tray float
	Air at pump suction piping	Perform the bleed of the air from the system
	Unbalanced rotor	Check the rotor
	Wear of internal parts	Replace the damaged parts
	Damaged bearings	Replace bearings
	Cooling fan damaged	Replace the fan
	Presence of debris inside the pump	Perform pump cleaning
	Operation with frequency inverter	For operation with frequency inverter, contact Güntner.
Liquid leaks	Incorrect tightening on the screws of the pump flanges	Check the tightening of the screws of the pump connection flanges
	Damaged or misplaced link gaskets	Replace or reposition gaskets on pump flanges
	Damaged mechanical seal	Replace mechanical seal
	Damaged shaft surface	Replace shaft
Very high pump or motor temperature	Air at suction piping or at pump	Perform air bleed in piping and pump
	Inlet pressure below required	Adjust liquid level, adjust tray float valve and water inlet pressure.
	Worn bearings	Replace bearings
	Improper electrical connection	Adjust the electrical connection according to the technical data sheet

BT-012/V2/ENG/10.2021

## Important!

For more information, refer to our technical department.