

***AERMEC PERIODICAL MAINTENANCE  
MANUAL FOR CHILLERS***

This Aermec maintenance manual has to be strictly followed in order to maintain properly the Aermec chillers.

The units covered by this manual are Air/water and Water/water Chillers.

In case of the maintenance operation will not be carried out as per the instructions below Aermec will not accept any warranty claim.

## PERIODICAL MAINTENANCE CONTROLS

### **Warning:**

In order to keep a long efficiency and life time of the unit it is a must to control periodically the correct working of the unit. The person that carried out the control have to be trained and with the knowledge of the Aermec unit. If the unit will be damage by a wrong operation or stressed beyond working limits Aermec will not accept any warranty claim. If in the Aermec unit we find that an Alarm has been reset for more than 5 times Aermec will not accept any warranty claim. The following maintenance procedure must be carried out and a report has to be sent ,within 30 days from the control, to the Aermec technical service (FAX +39044293566) or to the authorised Distributor / Agents, in order to fulfil the maintenance file of the unit. In case Aermec will not receive any information on the unit Aermec will not accept any warranty claim.

### **Monthly**

1. Check and record the following parameter: Water IN, Water OUT, High pressure, Low Pressure, Input Current and Input Voltage.
2. Check the mechanical filter at the evaporator inlet and if necessary clean it.
3. Check and verify all the safety control devices according to the Aermec START UP PROCEDURE FORM DOC.N°061103 chapter 5.
4. Check and record the correct working of the compressors heater. The heater has always to work even if the compressors have been turned OFF.
5. Check and record the oil level in the compressors. On the compressors with sight gauge the correct level during the compressors working must be between half and  $\frac{3}{4}$  of the indicator.
6. Check the cables tightening and the good electrical contact of all the cables. Tight all the bolts and screws of the terminals and check the correct insulation of the cables. **⚠ Warning operation to be done without power supply.**
7. Check and record the refrigerant charge through the liquid sight glass.
8. Check and record the overheating and subcooling values.

### **Half-yearly**

1. Check and verify the unit frame making attentino if there are corroded parts. If nessessary clean the parts and apply a proper paint.
2. For Air/Water chillers Check the condenser coils and if it is necessary clean it. The coils surface must be cleaned and free from dirty. Clean the aluminium (or copper) surface with high pressure air jet paying attention do not twist the fins, the direction of the jet should be opposite of the air flow. Control the overall condition of the coils.

3. Check and verify the fans fixing and if necessary tight the bolts.
4. If present, Check the sight glass in the refrigerant circuit. If the indicator is yellow means that there is humidity in the circuit and it is necessary change the dehydrator filter once the unit have works for some hours.

**Green colour (or blu) = dry**  
**Yellow colour (or pink): humidity.**

5. For heat pump units Check the correct functioning of the four way valve.

### ***Periodical control for the Bitzer Screw Compressors***

Nº	Type of Control	Frequency
1	Check the compressor insulation	Yearly
2	Check the quality of the compressor Oil.	20.000 hours/4 years
3	Check the satellite.	20.000 hours/4 years
4	Check the suction filter.	20.000 hours/4 years



**The following operation must be done with power supply.**

1. In order to check the wiring insulation of the compressor's motor it should be advisable to use the appropriate device.
  - 1.1. Remove the compressors electric box cover.
  - 1.2. Disconnect the power supply cables.
  - 1.3. Disconnect the cables from the thermic protection.
  - 1.4. Measure the wiring resistance. (With reference voltage of 500V, the value we should find is equal or bigger than 3M).
  - 1.5. Reconnect all the cables as the original connections. For any doubt please check the Aermec manuals.



**Warning:** Taking into consideration the peculiarity of the screw compressors please keep **ATTENTION** to the correct connection of the cables in particular for the phase sequence. A wrong connection of the cables will damage the compressors. The phase sequence controller **WILL NOT WORK** if there is a wrong connection of the cables on the compressors electric box.