









# Adiabatic Water Cooler EWK-A



- Casing made of FGRP
- Fully automatic managed energy saving

system

Aerosol free

www.ewk.eu



### **Principle of operation**

Designed for cooling fluids ensuring minimum operating cost by combining two modes, dry and wet.

Dry mode operation would be cooling the fluid flowing through the copper – aluminum coil directly by the fresh air at dry bulb temperature, while wet mode operation is to modify the air humidity to achieve a cooler air to cool down the process fluid, thus, getting significant savings in energy consumption

#### Adiabatic cooling panel

- High humectation efficiency.
- Made of cellulose soaked with phenolic resin in order to increase the working live.
- No water remaining.
- Easily removable.

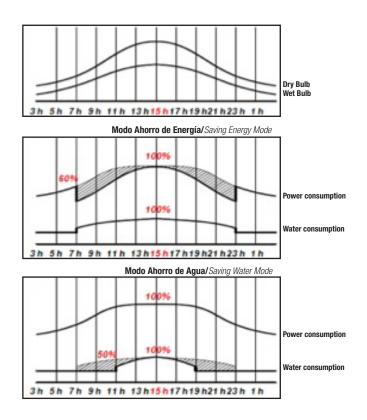
#### Low power consumption EC fans



By having incorporated inverters, fans can vary their rotating engine speed from 0 to 100%, thus, due to the floating set point the machine will consume only the necessary electrical power at all times, achieving thereby large energy savings. EC motors are the most efficient on the market, with ratios of 90% compared to 70% of standard AC motors.

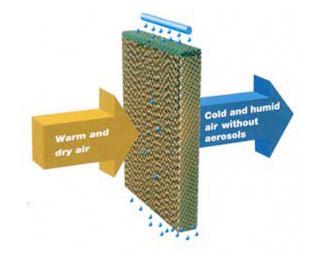
#### Full automatic managed energy saving system

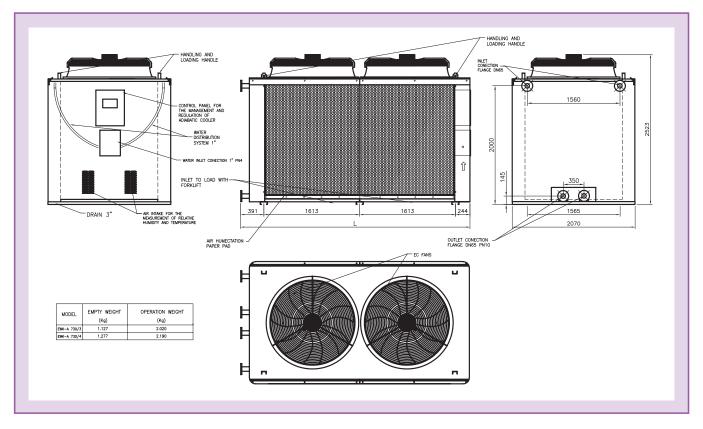
Thanks to our programmable PLC and its two modes, saving energy and saving water, this machine has a huge energy saving compared to standard aero coolers.



"Power Saving Mode", especially designed for those processes where the energy consumption takes priority to water consumes. As the dry temperature increases throughout the day, the fan will increase its speed to dissipate the required power, up to the point where, in order to reduce power consumption, the machine begin to moisturize the adiabatic cooling panels and due to that, the intake air will be cooler for cooling the copper- aluminum coils and, therefore the speed and consumption of the fans go down drastically. The water consumption is only necessary in high temperature seasons; the annual water consumption is very low. In addition, during the cold season, adiabatic cooling panels of the machine could be removed reducing the pressure drop of the air to get additional energy savings.

"Water saving mode", designed for areas where water is scarce and its cost is high. In this mode the water will not enter until, with the fan rotating at 100%, the equipment is not capable of reaching the desired temperature with ambient air. Only at that moment, the machine will begin to wet the adiabatic cooling panels, obtaining this way a cooler air intake, which will be able to get the above mention desired temperature.





EWK has a continuously advancing policy in the development of models, therefore the specifications are subject to changes without prior notice.

| Tower Type   | Rejected<br>Power (Kw) | Rejected<br>Power <i>(Kw)</i> | Number of fans & | Weight <i>(Kg)</i> |         | Dimensions (mm) |       |        |            |            |
|--------------|------------------------|-------------------------------|------------------|--------------------|---------|-----------------|-------|--------|------------|------------|
|              | 35/30°C                | 35/30°C                       | Power            | Empty              | In      | Length          | Width | Height | Inlet      | Outlet     |
|              | 24°C                   | 21°C                          | (Kw)             |                    | service | (L)             |       |        |            |            |
| EWK-A 730/3  | 262,5                  | 360,5                         | 2 x 4,1          | 1.127              | 2.040   | 3.660           | 2.070 | 2.317  | 2 x DN 65  | 2 x DN 65  |
| EWK-A 730/4  | 297,8                  | 404,8                         | 2 x 4,1          | 1.277              | 2.190   | 3.660           | 2.070 | 2.317  | 2 x DN 65  | 2 x DN 65  |
| EWK-A 1040/3 | 391,5                  | 538,5                         | 3 x 4,1          | 1.492              | 2.820   | 5.180           | 2.070 | 2.317  | 2 x DN 100 | 2 x DN 100 |
| EWK-A 1040/4 | 448,7                  | 608,9                         | 3 x 4,1          | 1.656              | 2.984   | 5.180           | 2.070 | 2.317  | 2 x DN 100 | 2 x DN 100 |
| EWK-A 1350/3 | 524,5                  | 720,5                         | 4 x 4,1          | 2.249              | 4.075   | 6.690           | 2.070 | 2.317  | 2 x DN 100 | 2 x DN 100 |
| EWK-A 1350/4 | 596,2                  | 809,9                         | 4 x 4,1          | 2.436              | 4.262   | 6.690           | 2.070 | 2.317  | 2 x DN 100 | 2 x DN 100 |
| EWK-A 1670/3 | 654,8                  | 899,7                         | 5 x 4,1          | 2.704              | 4.945   | 8.200           | 2.070 | 2.317  | 4 x DN 80  | 4 x DN 80  |
| EWK-A 1670/4 | 744,8                  | 1.012,0                       | 5 x 4,1          | 2.923              | 5.164   | 8.200           | 2.070 | 2.317  | 4 x DN 80  | 4 x DN 80  |
| EWK-A 1980/3 | 782,3                  | 1.076,1                       | 6 x 4,1          | 3.054              | 5.710   | 9.720           | 2.070 | 2.317  | 4 x DN 80  | 4 x DN 80  |
| EWK-A 1980/4 | 896,7                  | 1.217,1                       | 6 x 4,1          | 3.274              | 5.930   | 9.720           | 2.070 | 2.317  | 4 x DN 100 | 4 x DN 100 |
| EWK-A 2290/3 | 915,3                  | 1.258,2                       | 7 x 4,1          | 3.223              | 6.460   | 11.225          | 2.070 | 2.317  | 4 x DN 100 | 4 x DN 100 |
| EWK-A 2290/4 | 1.045,3                | 1.418,3                       | 7 x 4,1          | 3.693              | 6.930   | 11.225          | 2.070 | 2.317  | 4 x DN 100 | 4 x DN 100 |



## **Advantages**

- Lower maintenance cost compared to traditional aero cooler system.
- High saving power consumption thanks to the humidified cool air.
- Water treatment free.
- Aerosol free.
- Two working options, one energy saving and other water saving program.
- Casing made of fiber glass reinforced polyester.
- EC motor-fan unit with frequency converter included.





