WEG Solution for Cooling Tower

Economy with high efficiency

Cooling Tower

The Cooling Tower is a device to cool the water used in different processes, whether for air conditioning systems or industrial processes.
The variation in their operating conditions enables the system automation, quite accessible to any application with great reduction of operating costs.

WEG Solution

WEG solution consists of a high-efficiency W22 Premium motor and a CFW701 HVAC Frequency Inverter, which provides a reduction of up to 80% in electric energy consumption and average savings of 427 thousand liters of water per year.
WEG solution automatizes the system, varying the speed of the tower fans according to the process requirements and ambient temperature. Variable production or operation in winter or summer demands different cooling capacities, which are automatically adjusted by WEG solution. These variations are recognized by the temperature sensor, interconnected to the drive, which controls the motor speed through an exclusive WEG software providing substantial energy savings, since the electric motor only uses the necessary energy for the necessary work, without waste. In addition, the speed variation control reduces water evaporation. With the installation of this solution, the average water saving in a tower with fan motor of 10 cv, is 1170 liters of water a day, which is equivalent to 58 20-liter water bottles a day, or 427 thousand liters per year.

Cooling Tower Solution

Real benefits for each application

Reduction of energy consumption of up to 80%

Average saving of 427 thousand liters of water a year*

System automatization

Drive with energy saving function that reduces the motor consumption and improves efficiency

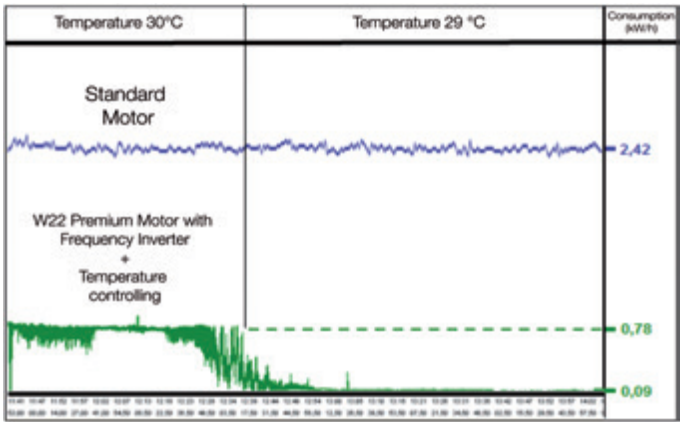
Reduced maintenance

Speed variation of the fans according to the process requirement

Guaranteed payback

*This result is based on the water consumption of one of the two Cooling Towers analyzed for two years with a 10 cv motor for ventilation. Study validated by the cooling tower manufacturer.

Measurement of the electric energy consumption



Measurements carried out to compare energy consumptions between Standard motors (standard efficiency) and W22 Premium (high-efficiency) motors with CFW701 HVAC Frequency Inverters.

Savings confirmed

Output	Energy saving (kWh /year)	Pay Back in years R$ 0,20	Pay Back in years R$ 0,25	Pay Back in years R$ 0,30
15	27.935	2,2	1,7	1,4
20	37.417	2,2	1,7	1,4
25	45.742	2,2	1,7	1,4
50	90.195	1,7	1,4	1,1
60	108.871	2,0	1,6	1,3
75	133.065	1,8	1,4	1,2
100	180.481	1,7	1,3	1,1
150	263.298	1,8	1,4	1,2

Running time - 20h/day and 300 days/year.

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