

# the Misting Company

Commercial, Industrial and Residential Misting Systems

## PRE-COOLING MISTING SYSTEMS

We design, install and sell misting systems for the pre-cooling of air conditioning systems and air-cooled refrigeration. These systems pre-cool the air intake for industrial air conditioners and evaporative coolers, thus enhancing the performance of the existing air conditioning units, whilst dramatically reducing the cost of operation by as much as 30%. This reduction is accomplished because the misting system reduces the compressor load and the head pressure thus reducing unit cycling and the resulting energy required to operate.

Air conditioning and refrigeration systems can consume up to 75% of a typical building's energy usage. As temperatures increase, air conditioning systems will dramatically increase energy usage which, with the current cost of power, can be quite expensive. In extreme heat, air conditioning systems will not only operate longer and draw more power as they run but risks excessive ambient loads on the condensing coil and even outright shutting down of the unit.



### How it Works

The high-pressure misting systems operate at over 70 Bar, producing an extremely small water droplet that uses the principal of "flash evaporation" reducing the temperature without getting the coils noticeably wet. This misting system lowers the temperature of the air surrounding the condenser. At a lower ambient temperature the condensers cooling capacity increases and the systems operate more efficiently. As the head pressure falls, the saturated liquid temperature also falls and cooling capacity increases. Therefore, the air conditioning or refrigeration system does not have to operate as long to satisfy the load and energy use is reduced. Reduced head pressure lengthens compressor life, increases cooling reliability, and lowers running and maintenance costs and extends the life of the conditioner.

### Applications

We design systems for every application. These systems can be a simple misting system or as complex as the job requires, and can include controlled sensors, including timers, humidistats and thermostats allowing for effective pre-cooling without excessive moisture.

### Benefits and savings

Our pre-cooling misting systems reduce the energy usage that leads to decreases in demand. Benefits include reduced maintenance costs, increased cooling capacity, and reduced energy usage during normal and peak times. Most importantly it reduces the overall electrical bill from the electrical company. This is a great investment because it will pay for itself in a short amount of time and continue to reduce energy and maintenance costs for years to come.