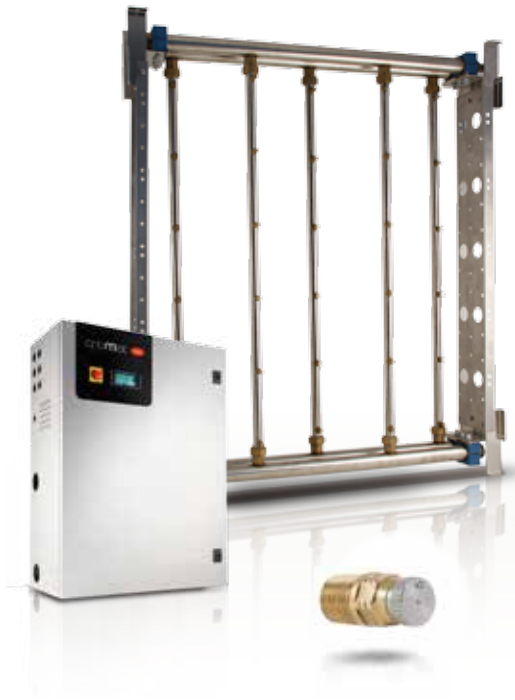
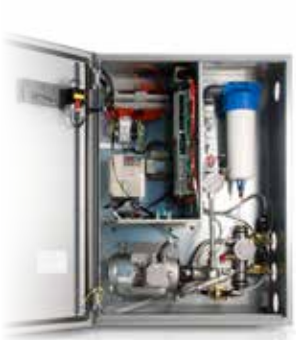
optiMist:
evaporative cooling and humidification

Two functions in just one unit! optiMist is the smart solution to replace wet pad humidifiers, with higher performance and avoiding hygiene problems, expensive periodical maintenance and energy wastage due to pressure drop in the duct.



"Green" AHU: global energy saving inside the air handling unit by combining evaporative cooling and adiabatic humidification.



drain valves

droplet separator

optiMist combines the simplicity of a maintenance-free medium pressure rotary vane pump, with a powerful electronic controller capable of integrating perfectly into an AHU.
optiMist can operate on both demineralized water and drinking water. The pump is controlled by an inverter that adjusts flow-rate according to load, avoiding waste; the distribution system for ducts is made from stainless steel pipes with special nozzles and compression fittings for easy assembly. The droplets produced are easily absorbed into the air stream, which is humidified and cooled. Indeed, optiMist can be used to both humidify and cool, combining the action of the inverter with sequential, two-step modulation; alternatively, it can work in both humidification and indirect evaporative cooling modes, supplying two separate distribution racks. Six models are available, with a maximum flow-rate from 13 to 264 gal/h (50 to 1,000 L/h).
Like all CAREL humidifiers, optiMist is designed in accordance with VDI6022 guidelines, and special care has been paid to prevent any stagnant water from remaining inside the unit when not operating.

Energy saving
optiMist guarantees overall energy savings in the AHU of 68 kW each 26.4 gal/h (100 l/h) of evaporated water, with very low power consumption and pressure drop 30 Pa (0.12 in. WC).

Precision
optiMist can continuously and precisely modulate the production of atomized water. This means the potential of evaporative cooling can be fully exploited without wasting water.

Integrated solution
optiMist is a single solution that efficiently manages direct evaporative cooling (DEC), indirect evaporative cooling (IEC) and adiabatic humidification.