

Daicen Membrane Systems LTD.

# Water sprinkling system for outdoor unit of air-conditioning equipment

- Sprinkling reverse osmosis (RO) water prevents scales from adhering to fin

## Features

- Sprinkling RO water on fin of heat-exchange equipment realizes efficient energy savings using evaporation heat.
- Sprinkling RO water prevents scaling and corrosion on fin.
- In the case of air-conditioning capacity of over 100 kW, the payback time will be significantly short, at roughly two years.



after one month;no scale on the fin



after one month;scale on the fin

## Overview ( Technical principles, actions, etc.)

This system consists of pure water manufacturing equipment and water sprinkling nozzles. RO water refined by the pure water manufacturing equipment is pumped to be sprinkled on the aluminum fins of outdoor units (compressor and chiller) of air-conditioning equipment. The sprinkled water is evaporated to draw heat, dropping the temperature of the fins and the surrounding environment by seven degrees. As a result, the ambient temperature of the outdoor units drops, enabling operation of the air-conditioning equipment as if the temperature were seven degrees lower than the actual temperature. Furthermore, the accompanying temperature sensor can control the water sprinkling time, allowing maximum evaporation heat with a minimum amount of sprinkling.

## Introductory Track Record

- Thailand (Prachinburi): 4 systems installed
- Thailand (Ayutthaya): 1 system installed



## Effects

Increasing efficiency of heat-exchange equipment by sprinkling water can reduce electricity expenses by approximately 20 to 30 percent.

This also contributes to an equivalent reduction of CO2 emissions.

Inquiries

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