## **FROST PROTECTION SYSTEMS**



The cooling towers are vulnerable to freezing in cold weather. Ice formations can cause functional and structural damage to the equipment inside the tower. Therefore, these facilities are usually provided with frost protection systems.

## Frost protection system for counter flow cooling towers

The frost protection system for counter flow cooling towers (patented system) consists of installing an additional water distribution and dispersion system located all over the tower just below the fill, through which the entire water flow of the tower can be transited completely bypassing the distribution system itself and the tower fill.

This solution determines an increase of the water temperature in the most freeze vulnerable areas of the tower, while the overall cooling of the water stays within the technological limits. As a result, the occurrence of ice formations in the tower is stopped and the cooling capacity of the tower is adjusted assuring a more stable and fine control of the water temperature.



## Frost protection system for cross flow cooling towers

The frost protection system for cross flow cooling towers is composed of water dispersion devices with an elevation piece and adequate dispersers, located on the perimeter of the tower, outside the area provided with fill.

The nozzles of the frost protection system operate only in winter, increasing the water level in the water dispenser tank, ensuring additional warm water showers in the perimeter, outside the fill which is the most frost vulnerable tower area.

