Raffreddatore ibrido HBR

Cooling towers assembled on site

RM-OC Series
RM / OC Series Cooling Towers

RM/OC are induced draught cooling towers, counter-flow with axial fans, suitable for water flow from 1.700 m³/h (RM) to 5.500 m³/h (OC) per cell. Cooling towers of this series are used in all kind of industries with solutions for any water quality (power plants, steel, pulp & paper, chemicals, etc). A wide list of references throughout the world supports the good job of TORRAVAL since 1967.

General description

Cooling towers of this series consist of:
- Structure and cladding
- Water distribution system
- Filling
- Drift eliminator
- Mechanical equipment

Accessibility

The upper part of the tower consists of a hot dip galvanized steel deck. An inspection trap and an internal ladder (one by each cell) in order to allow the access to the interior of the tower are included, as well as a peripheral handrail. To reach the upper part, a ladder from the floor is available.

Air entry

At the air intake in the lower part of the tower, optionally, several louvers are placed with the double object of conducting air inlet and avoiding water splash out of the tower.

Filling

These cooling towers can incorporate different filling types according to water quality features:
- **Laminar:** clean and industrial waters. It is composed by plastic panels with flute size from 12 to 40 mm and highly efficient.
- **Semi-splash:** composed by hollow cylinders vertically installed. Ideal for waters in which the content of suspended solids is high.
- **Splash:** it is recommended for those cases in which the content of suspended solids is extremely high. This film is composed of L-shaped plastic splash bars placed horizontally and supported by vertical stainless steel meshes, allowing large passages for water and air, thus avoiding the possibility of clogging.

Water distribution system

- FRP open channels or plastic pipes, both systems trough gravity nozzles and impingement plates.
Construction details

1. Structure
   - Material:
     - RM Series - Profiles of hot dip galvanized steel or stainless steel
     - OM Series - Reinforced concrete composed of a system of beams and pillars

2. Cladding
   - Material:
     - RM Series - Fibreglass reinforced polyester
     - OM Series - Fibreglass reinforced polyester, concrete or water-proof covered bricks

3. Filling (or heat exchange surface)
   - Material: Self-extinguishing PVC or PP
   - Characteristics:
     - Laminar, semi-splash and splash

4. Mechanical equipment
   - Material: Totally enclosed and self-ventilated motors installed at the upper deck out of air current
   - Characteristics:
     - High efficiency axial fans made of FRP or aluminium. Adjustable blade pitch at standstill
     - Transmission with flexible coupling
     - Spiral-bevel gear reducers, special for cooling towers. Service factor according to AGMA

5. Hot water distribution system
   - Material: FRP open channels or plastic pipes
   - Characteristics:
     - Non-corroding
     - Uniform and complete spraying over the heat exchange surface/fill pack

6. Louvers at the air inlet (optional)
   - Material:
     - RM Series - FRP or PVC
     - OC Series - Concrete, FRP or PVC
   - Characteristics:
     - Non-corroding

7. Fan stack
   - Material:
     - RM Series - FRP
     - OC Series - Concrete or FRP

8. Drift eliminator
   - Material:
     - PVC or PP
   - Characteristics:
     - High efficiency

9. Ladder and handrail
   - Material:
     - Hot dip galvanized steel, stainless steel or FRP
   - Characteristics:
     - Non-corroding
RM / OC Series Cooling Towers

RM Series

OC Series