



- 1 Motor fan directly coupled to the drive shaft, it permits **low installed powers, low noise levels**
- 2 Drift eliminators to guarantee maximum efficiency of droplet separation from the airflow produced by the fan
- 3 Water distribution system in PVC, **anti occlusion tangential spray nozzles** for a full cone spurt
- 4 Tower casing with walls consisting of 22 mm thick polyester resin sandwich panels reinforced with fibreglass and coloured with paste and gel-coat for UV-protection. **Three of the four side walls are readily and completely removable**
- 5 Cooled water collecting basin entirely in **fibreglass** reinforced polyester resin.

The models of the “**MCC**” series, designed for evaporative cooling in a closed circuit, consist of:

**LOAD BEARING AND REINFORCING STRUCTURE** in high thickness steel profiles, hot-dip galvanised after fabrication and assembled with butts and bolts in AISI 304 stainless steel.

**SIDINGS / CASING** consisting of 22 mm thick fibreglass sandwich panels coloured with a special UV-resistant gel-coat.

The seal between the load bearing structure and the panels is assured by a special bituminous sealing gasket.

**The casing and surrounding structure have been specially designed to ensure easy dismantling and removal for complete access to the inside of the tower and to the coil for inspection and/or cleaning operations.**

**INTEGRATED UPPER CAP AND FAN CYLINDER** entirely in fibreglass, suitably structured and reinforced, with external finish in special UV-resistant gel-coat.

**COOLING COIL** consisting of high quality steel tubes, fitted into a support frame made from steel profiles: the whole assembly is hot-dip galvanised after fabrication.

During manufacture every single circuit is carefully checked and air-pressure tested under water in a suitable tank: this pressure test is then repeated for the completed coil.

The coil geometry is such as to ensure complete wetting of the heat exchange surface and to optimise the external air-water contact to obtain maximum thermal capacity.

Moreover the slope of the tubes ensures the complete discharge of the fluid inside and the outlet connections are placed in line with the bottom of the outlet header to avoid dead zones.

**DROPLET ELIMINATOR** consisting of sheets in self-extinguishing PVC, vacuum thermoformed and subsequently glued one to the other to obtain panels of such shape and size as to guarantee maximum efficiency of droplet separation from the airflow produced by the fan.

**WATER DISTRIBUTION SYSTEM** connected to the submerged circulating pump, entirely in PVC consisting of a main header with UNI-PN 10 flanged side water inlet and side branches for fixing the static type wide-opening spray nozzles.

Such a system will guarantee perfect spraying of the entire surface of the coil, exploiting its capabilities to the maximum.

The spray nozzles will be in polypropylene, with full-cone spraying at an angle of 120°.

As a part of the water distribution system a glycerine hydrometer for the measurement the residual pressure of water entering the tower, fitted on the side opposite to that of the inlet flange, as well as a bleed-off tap for controlling water hardness are provided.

**AXIAL FAN**, operating at low rotation speed, consisting of a statically and dynamically balanced rotor with blades in plastic material and hub in alloy aluminium with an aerofoil profile and adjustable when at rest.

The rotor will be directly coupled to the electric motor with a conical bush to facilitate dismantling in case of necessity.

**ELECTRIC MOTOR** in sealed execution (IP 55), multi-voltage (220-240 / 380-415 Volts three-phase) and multi-frequency (50-60 Hertz) with tropicalized winding and class F insulation.

The motor will be without its own fan system (fan and fan cover) since cooling will be ensured by the airflow drawn in by the fan.

The motor-fan assembly will be firmly fixed to the metallic structure of the tower by means of an appropriate base in order to correctly centre it within the fibreglass fan-cylinder.

**ELECTRICAL JUNCTION BOX** mounted on the outside of the tower is provided to facilitate the electrical connection of the fan motor. The electrical wiring from the motor to the junction box is included in the supply.

**SCREEN GRILLE** in AISI 304 stainless steel.

**NUTS & BOLTS** in AISI 304 stainless steel.

**WATER COLLECTION BASIN OR PAN** entirely in fibreglass, complete with connections for water outlet, overflow, drain and for make-up of evaporated water via a float valve.

Basin complete of electric heater (to avoid ice making), with thermostat and minimum level switch.

The pan section will include a structure in steel, hot-dip galvanised after fabrication, whose function is to distance the main tower body from the basin itself so as to create an air intake zone and permit air flow; the anti-splash inlet louvers and windshield in extruded fibreglass will be fixed to the structure.

**CIRCULATING PUMP** for the spray-water of the evaporative cooling circuit, connected to the water distribution system, external to the coil, is fitted inside the tower pan and is equipped with PVC discharge piping and a regulating valve.

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Supply of the tower is limited to the parts listed above. So building and electrical works, pumps, collectors external to the tower, valves, hoisting gear and any scaffolding and labour are therefore excluded.

Any accessories and/or constructional variants are available on request.

**NOTE: M.I.T.A. S.r.l. may carry out constructional improvements without notice.**

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