



TECHNICAL DESCRIPTION **“SULZER” COOLING TOWER MODUPOL®**

Advantages of FRP cooling towers:

- Modular design with totally separated cells allows maintenance.
- Counter flow cooling towers have lower power consumption. The installation of single units, with unrestricted airflow from all four sides, increases the efficiency of the towers even further.
- FRP cooling towers, manufactured in fire retardant FRP, (optional) are not a fire hazard.
- FRP has a longer lifetime than wood or steel (FRP does not rot or corrode).
- FRP towers have a smooth wall finish. This reduces the growth of Legionella and other bacteria. Therefore fewer chemicals are needed for fighting bacteria.
- “MODUPOL ®” FRP cooling towers have totally enclosed air inlet louvres, built with state of the art honeycomb type PVC louvres. Due to the block-out of sunlight, (as per Australian standard), the growth of algae is reduced; hence bacteria growth is also reduced.
- Easy to maintain.
- “MODUPOL ®” FRP towers are of proven AXIMA / (former SULZER ESCHER WYSS) design, with proven performance.
- Site erection is reduced due to pre-assembled modules delivered to site, and therefore minimizing the effect of site hold ups.

Technical description of EWK “MODUPOL®” cooling towers fully made of fibreglass reinforced polyester (FRP) material:

All fibreglass reinforced polyester parts are made of solid laminate, colour blue; fasteners are stainless steel, jointing material permanently elastic.

Basic type:

Consists of self-supporting casing modules and the mechanical device.



Casing module:

Consists of functionally shaped wall elements and the aerodynamically shaped fan inlet nozzle made of fibreglass-reinforced polyester; the factory pre-assembled casing modules comprise the following components:

- drift eliminator to reduce the spray loss to a minimum of less than 0.002%, made of Polypropylene or PVC-elements with an optimum separating capacity, low-pressure loss, heat-resistant up to 60 °C (or 80° of PP). The drift eliminators comply to the Australian standard AS3666/2002.
- water distribution system made of stainless steel pipes #304 SS with special conical plastic nozzles (ABS).
- fill material made of non-corroding Polypropylene or PVC-blocks with a high heat transfer capacity, for unpolluted water, heat-resistant up to 80 °C (or 60°C for PVC).
- inspection / maintenance access door 500 x 600 mm (1 piece each cooling tower cell) made of stainless steel #304 SS, as easy maintenance access to the water distribution system and the fill material.

Mechanical device

Delivered in single parts, consisting of:

- fan shroud segments made of fibreglass reinforced polyester
- fan supporting structure - in MSHDG
- non-walkable - contact protection grid - in MSHDG
- geared motor maintenance access walkway and vertical ladder – in MSHDG.

Axial fan:

- fan with aluminium (marine grade) fan blades
- fan hub and fan bolts of MSHDG.

Fan drive:

- two-stage gear box – with close coupled flange mounted motor
- motor winding according to insulation class F.

Air inlet frame:

Made of fibreglass reinforced polyester, with large-surface, aerodynamically optimised air inlet.

Air inlet module:

Made of fibreglass reinforced polyester. The air inlet module consists of air inlet with large-surface, aerodynamically optimised air inlet louvres made of PVC. Access louvres can be dismantled without tools for maintenance and cleaning work. They prevent water splash out and direct incidence of light into the cooling water basin.