TECHNICAL DESCRIPTION
"SUPERCHILL" COOLING TOWER SC

The SC Cooling Towers built in Australia fully comply with the Australian standard AS3666/2002

The Cooling Tower consists of:

Motor Support

304 S.S. with HDG wire guard on top. (except SC10/SC15)

Fan

Statically balanced axial fans. Pitch of the aerodynamically profiled blades can be adjusted at standstill.

Blades: P.P.G.

Hub: Plastic or aluminium

The fan is mounted on top of the cooling tower and is driven by a directly coupled, foot-mounted electric motor – shaft down.

All motors can also be supplied in pole changing execution and for special voltage on request.

Water Distribution System

Consists of PVC pipes fitted with spray nozzles in PVC or ABS. These spray nozzles distribute the water uniformly over the fill.

Polypropylene, hot-dipped galvanized or stainless steel pipes available on request.

Cooling Tower Housing

Consists of a square or rectangular shaped casing made of ultra-violet *UV stabilized FRP. Even aggressive water cannot affect this high quality material. The water basin is an integral part of every standard "Superchill" cooling tower in the SC series, and is included in the quoted price unless stated otherwise. SC series cooling towers can also be supplied without water basin if their installation is foreseen upon an existing water sump.

Air inlet louvres are made of PVC (or PP) material – and are fitted in the casing to prevent splashing of water (by wind for example) outside of the cooling tower basin.

The complete unit is assembled in our factory and delivered fully assembled.

Strainer Basket and Float Valve

A strainer basket and a make-up water float valve are installed in the basin. The strainer basket is used to prevent coarse impurities entering into the water circulation system while the float valve is to regulate the fresh water supply.

The strainer basket is made of stainless steel.

Access Panel

Access to sump and strainer by removing one of the side FRP panels.

Filling Material

Manufactured as rigid honeycomb blocks and made from extruded Polypropylene (PP) or optional PVC material. It is UV stabilized and contains a large heat exchange surface area of ~240 m^2/m. In general the PP material can work up to an intermittent maximum operating temperature of 80°C (PVC up to 55°C). The largest fill segment dimension is 1,200 x 300 x 300 mm and weighs approximately 3 kg.

For higher operating temperatures please consult Superchill for alternative fill medium available.

Drift Eliminator

Made of UV stabilized PVC sheet (or optional PP). It is used to prevent carry over of water droplets by air stream. The drift eliminator in Superchill cooling towers reduces the water loss by drift to less than 0.002% of the total water flow through the cooling tower.

Internal Supports

Fill supports - FRP or #304 SS

Fasteners

All fasteners are #304 grade stainless steel.

OPTIONAL ITEMS

One or two stage thermostat

Regulates the fan speed according to the water temperatures. The two stage thermostats are used in controlling pole-changing motors only.

This device is equipped with a switchover contact. Lower temperature has to be set by means of a control button. The switch difference is set on the differential roll. The upper response temperature is given by the lower response temperature plus the temperature differential. It is recommended that the switching of motors should not be more than 3 to 4 times in an hour.

Low-level switch (electric) - (OPTIONAL)

A liquid level control device enabling dual point activation/deactivation of pumps,

Ladder - (OPTIONAL)

Made of aluminium to AS 1892.1.
Without safety cage.

Foundation

To suit installation of Superchill cooling towers. Information provided on request.

Colour

Colour is fixed during manufacturing process using special UV stabilized gel coat as a first layer. Standard colour: grey.
Other Colour is available on request but deviation from standard colour increases the cost and delivery time.

Corrosion

The cooling towers are practically CORROSION FREE. All plastic materials used in Superchill cooling towers are stabilized against UV radiation.

Spare Parts

Experience suggests that almost no spare parts will be required for the first five (5) years of operation of the tower if operated in accordance to our operating instructions. However, if any parts are required, they are available from our factory in Melbourne.

Note: There will be additional charges for any "optional" or "on request" items - unless specifically included in scope of supply.