



# TES HYBRID COOLER

**Our Hybrid cooler reduces carbon footprint with reduced power consumption**

**The Hybrid solution incorporates standard refrigeration with free cooling**

## Design Criteria:

- Fluid Type: Water/20% Ethylene glycol
- Fluid On: 32 °C
- Fluid Off: 22 °C
- Ambient: 32 °C
- Refrigerant: R407C
- Supply: 400 v 3 ph 50 Hz
- Control: 110v 1 ph 50 Hz

## Free Cooling Coil:

- Copper tubes
- Aluminium fins
- Galvanised steel case

## Mains Water Cooling:

Mains water feeds an internal brazed plate heat exchanger which in turn cools the glycol circuit in the event of both refrigeration and free cool failure. Manually operated valve with switch sending signal to control system.

## Pumps:

Main process pump, dual duty and standby auto changeover on low flow or pump trip.

Stainless steel end switch

Free Cooling pump in line bronze

## Compressor:

Fully hermetic model

## Condensor:

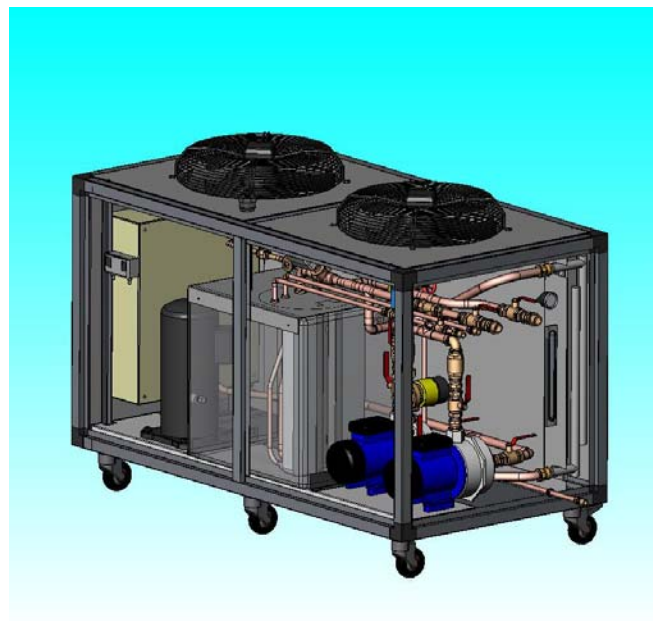
Copper tubes, aluminium fins, galvanised steel case

## Fan:

Axial type

## Tank:

- Non ferrous construction
- Capacity 150 litres (approximately)



<b>Heat Exchanger (Evaporator) Refrigeration Controls</b>	Brazed Plate type Liquid Line Drier Liquid Line Solenoid Valve Liquid Line Sight Glass Thermostatic Expansion Valve <b>Head Pressure Control</b> Head pressure switches control fans in stages when liquid line pressure / temperature reaches setpoint. <b>HP/LP Pressure control</b>
<b>Water Controls</b>	<b>Flow Switch:</b> to protect evaporator <b>Y Strainer:</b> <b>Pressure Relief Valve:</b> to balance system <b>Water Level Sight Glass:</b> for quick easy level indication
<b>Electrical Details</b>	<b>Control panel location</b> <ul style="list-style-type: none"> <li>• On the main frame work - with remote control station including stop/start on/fault and mains water cooling indicators</li> <li>• IP55 protection.</li> </ul> <b>Controls and indication</b> <i>The system will be provided with the following front panel controls:-</i> <ul style="list-style-type: none"> <li>• Lockable isolator.</li> <li>• Microprocessor temperature controller</li> </ul> <i>The following indications will be provided by the above:-</i> <ul style="list-style-type: none"> <li>• Fault</li> <li>• Low water level (level switch)</li> <li>• Unit on</li> <li>• Temperature reading</li> <li>• No flow</li> </ul>
<b>Enclosure</b>	<b>Enclosed frame design</b> <ul style="list-style-type: none"> <li>• Extruded aluminium framework.</li> <li>• Inset stainless steel panels.</li> <li>• Stainless steel screws.</li> <li>• Skids for fork truck lifting.</li> <li>• Fitted with castors.</li> </ul>

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