LAB ENGINEERING

Email :
purchase@elabengineeringequipments.com
Phone: +91-9811375383

Product Name : Computerized Cooling Tower Test Bench	**Product Code :** RAC0008

Description :

Computerized Cooling Tower Test Bench

Technical Specification :

The Computerized Cooling Tower Test Bench examines the main components and principle of a wet cooling tower with forced ventilation.
Water is heated in a tank and transported by a pump to an atomizer.
The atomizer sprays the water to be cooled over the wet deck surface.
The water trickles from the top to the bottom along the wet deck surface whilst air flows from the bottom to the top.
The heat is transferred directly from the water to the air by convection and evaporation.
The evaporated water volume is recorded.
The airflow is generated by a fan and adjusted using a throttle valve.
The cooling column is transparent allowing clear observation of the wet deck surface and the trickling water.
Interchangeable cooling columns enable comparative studies.
The measured values can be read on digital displays.
At the same time, the measured values can also be transmitted directly to a PC via USB.
Software for data acquisition via USB.
All important process parameters are recorded (volumetric air flow rate, temperatures of air and water, air humidity, water flow rate).
The data acquisition software is included.
The changes of state of the air are represented in an h-x diagram.
FEATURES:
Thermodynamic principles of the wet cooling tower

Changes of state of the air in the h-x diagram
Determination of the cooling capacity
Energy balances
Calculation of process parameters, such as maximum cooling distance, cooling zone width etc.
SPECIFICATION:
Cooling column :
Specific surface of the wet deck surface: 110m2/m3
Cross-section: 150x150mm
Volumetric airflow measurement via orifice: Ø 80mm
Heater, adjustable in three stages :
500W
1000W
1500W
Thermostat: switches off at 50°C
Fan :
Power consumption: 250W
Max. Pressure difference: 430Pa
Max. Volumetric flow rate: 13m3/min
Pump :
Max. Head: 70m
Max. Flow rate: 100L/h
Tank for additional water: 4,2L
Measuring ranges :
Differential pressure: 0…1000Pa (air)
Flow rate: 12…360L/h (water)
Temperature: 2x 0…50°C, 3x 0…100°C
Rel. humidity: 10…100%
Required for operation :
230V, 50Hz, 1 phase
230V, 60Hz, 1 phase