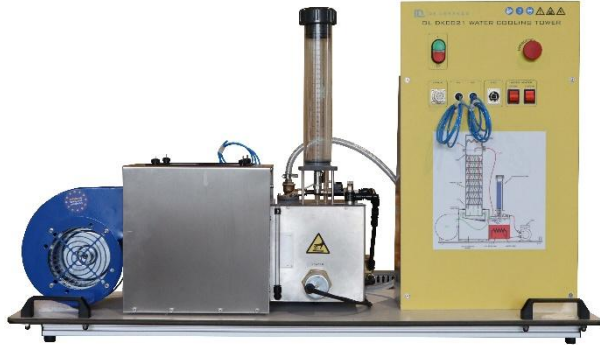




WATER COOLING TOWER



DL DKC021

The trainer is designed to demonstrate the most widespread cooling method in industry.

The demonstrated method shows the cooling of hot water to room temperature. Air at room temperature is introduced by a fan from the lower part of the system at the bottom of the tower. While hot water is sprayed in the upper section of the tower, hot water cools down until it reaches room temperature, then it is reheated and the process starts again.

The unit is supplied with a personal computer.

TRAINING OBJECTIVES

- Thermodynamic fundamentals of cooling tower
- Measuring the air flow, air and water temperatures and of humidity
- Changes of state of the air in a h-x chart
- Determination of the cooling capacity
- Energy balances
- Calculation of process parameters such as cooling distance limit, width of the cooling zone, etc.

TECHNICAL DATA

- Cross section: 150x150 mm.
- Air flow measurement by calibrated orifice $\varnothing 80\text{mm}$.
- Three steps adjustable heater: 0,5kW, 1kW and 1.5kW.
- Maximum hot water temperature: 60°C.
- Centrifugal fan:
 - Power consumption: 90W.
 - Maximum air flow: 510m³/h.
- Peripheral pump:
 - Maximum flow: 10 l/min (5m M WC)
 - Power consumption: 180W.
- Hot water circuit with bypass.
- Electronic regulation of the hot water flow and airflow through the computer system.
- The unit is supplied with an electronic control system with visualization and a computer system with software.

Requirements:

- Power supply: 230V/50 Hz.
- Tap water supply
- the system requires at least ONE of the cooling towers for functioning



TYPE A COOLING TOWER



DL DKC022

Type A tower is as a blank tower without wetting surface.

TYPE B COOLING TOWER



DL DKC023

Type B tower is a tower with 8 levels and 7 panels per level.

TYPE C COOLING TOWER



DL DKC024

Type C tower is a tower with 8 levels and 10 panels per level.

TYPE D COOLING TOWER



DL DKC025

Type D tower is a tower with 8 levels and 19 panels per level.



TYPE E COOLING TOWER



DL DKC026

Type E tower is a tower with 8 levels and 19 panels per level, with temperatures sensors in 3 points.

These sensors are:

- 7 dry bulb temperature sensors.
- 7 wet bulb temperature sensors.
- 3 water temperature sensors.