EngineeringLabChina

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Product Name : Air Conditioning System Trainer	**Product Code :** CHINAELABC2560001

Description :

Air Conditioning System Trainer

Technical Specification :

The Air Conditioning System Trainer represents a complete air conditioning system with an air duct and a climatic chamber.
The main components of the air conditioning system are the air cooler with condensing unit, fan, steam humidifier and air heater.
Three motorized ventilation flaps control the air distribution in the air conditioning system.
The climatic chamber is equipped with two different heat sources (wet and dry).
Temperature and relative humidity are measured at relevant points in the air duct and displayed digitally.
For the refrigeration circuit two manometers with integrated temperature scale and a flow meter provide all relevant measurements.

FEATURES:
Air conditioning system and its components
Conditioning room air
Effect of a cooling load (dry and wet)
Humidification and dehumidification
Heating and cooling
Mixing different air flows
Representation in the h-x diagram for humid air
Representation of the circuit in the log p-h diagram

SPECIFICATIONS:

Air duct with transparent front
Air duct with fan, air cooler, humidifier, flaps, air heater and sensors
Air-cooled condensing unit
Chamber with wet (latent) and dry (sensitive) heat source as cooling load
Power consumption: 140W at -10°C
Refrigeration capacity: 320W at +5/40°C
Humidifier
Heating power: 400W
Air heater
Heating power: 360W
2 heaters in the chamber as cooling load
Power output: 0…250W each, freely adjustable
Flow cross-section of the air duct
WxH: 155x155mm
Refrigerant: currently available in the market
Filling volume: 1,2kg
CO2-equivalent: 0,8t

Measuring ranges :
Air velocity: 0…2,5m/s
Temperature: 0…50°C
Rel. humidity: 10…90%
Power consumption: 0…600W (condensing unit)
Power: 2x 0…300W (cooling load)
Pressure: -1…9bar / -1…24bar (refrigerant)
Flow rate: 1,5…23,5L/h (refrigerant)

Required for operation :
230V, 50Hz, 1 phase
230V, 60Hz, 1 phase