

Product Name :
Astra Scientific Air Conditioning System Trainer

Product Code :
RefrigerationLab0001



Description :

Astra Scientific 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
- Mixing different air flows

- Representation in the h-x diagram for humid air
- Humidification and dehumidification
- Heating and cooling
- Representation of the circuit in the log p-h diagram
- Effect of a cooling load (dry and wet)

SPECIFICATIONS:

- Air duct with transparent front
- Air duct with fan, air cooler, humidifier, flaps, air heater and sensors
- Chamber with wet (latent) and dry (sensitive) heat source as cooling load
- Air-cooled condensing unit
- 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

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)

Air velocity: 0...2,5m/s

- Required for operation

230V, 50Hz, 1 phase

230V, 60Hz, 1 phase



Astra Scientific

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