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**Product Name:** 

Air Conditioning System Trainer

Product Code: RAC0001



### **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

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