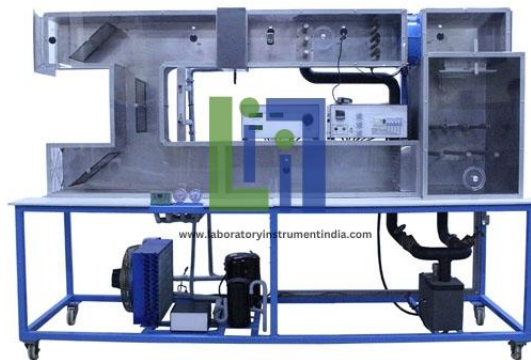




Email : sales@laboratoryinstrumentindia.com

**Product Name :**  
Recirculation Air Conditioning Unit With Climatic Chamber

**Product Code :**  
LBNY-0005-11200072



#### **Description :**

Inlet air is cooled and preheated by a heater and latent heat by a humidifier before entering the climatic chamber for demonstration of climate control. The air in the climatic chamber is further heated by a heater and a humidifier before leaving. Recirculation Air Conditioning Unit With Climatic Chamber is a recirculating air conditioning unit with transparent windows and a climatic chamber. A fan after the preheater circulates the air. Part of the air leaving the climatic chamber is vented and the remaining is recirculated with make up fresh air entering the inlet duct. Measuring instruments are provided for air flow rate, and temperature and humidity at various stages. Additional instruments are provided for measurement of refrigerant flow rate, temperature and pressure as well as power for the compressor and heat sources. The amount of air recirculation is controlled by ventilation flaps. Steam generator, compressor and condenser are underneath the duct.

#### **Experiments:**

Demonstration of preheating, cooling and dehumidification, humidification, reheating, and mixing processes on psychrometric chart.

Demonstration of refrigeration cycle on Pressure-Enthalpy diagram of the refrigerant.

Determination of recirculating and mixing process of moist air.

Familiarization with recirculating air conditioning system and components.

Effects of climatic chamber heat loads.

Determination of preheating, cooling and dehumidification, humidification, and reheating processes.

Energy balance in the preheater, evaporator, and reheater.

#### **Technical Specification :**

#### **Technical Data:**

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Climatic chamber : Approx 180 l.  
Fan maximum airflow : 750 m<sup>3</sup>/hr.  
Air duct : 250 x 250 mm section.



**Laboratory Instrument India**