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**Product Name :**  
Domestic Air Conditioning And Training Plant With Inverter

**Product Code :**  
ENGLABINGCAG9300010



**Description :**

Domestic Air Conditioning And Training Plant With Inverter

**Technical Specification :**

A Domestic Air Conditioning Training Unit with Inverter for investigating the hydraulic, mechanical and thermodynamic operation of a split-type air conditioning system equipped with an inverter.

Students investigate the refrigeration system, mechanical operation and thermodynamic cycles of a split-type air conditioning system with an inverter and understand how changes at different parts of the system affect efficiency.

The demonstrates how energy can be saved by regulating compressor rpm and fault simulation switches allow students to diagnose.

The has been designed and manufactured for safe operation in the laboratory environment and the refrigerant used is a which complies with current legislation.

**Experiments**

System start-up and system monitoring using the protection and safety devices incorporated into the pilot plant

Studying the operation of a split-type air conditioner with an inverter

Studying the operation of cooling, de-humidification and heating cycles

ON-OFF control

Analysis of system behaviour with varying:

Operating mode

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Set point temperature  
Evaporator flow rate  
Analysis of compressor speed variation against the temperature difference between set and detected temperatures  
Plotting the cycle on a refrigerant pressure-enthalpy diagram  
Obtaining data readings and calculation of:  
Heat balances for the evaporator, condenser and compressor  
Refrigerant mass flow  
Ideal and actual Energy Efficiency Ratio (E.E.R.)  
Ideal and actual coefficient of performance (C.O.P.)  
Volumetric compression efficiency



**Engineering Lab Equipment India**