

## TH 525 AIR - TO - WATER HEAT PUMP



### GENERAL DESCRIPTION:

A table top air conditioning system is used to demonstrate how heat is transferred from air to water.

A water cooled heat exchanger is used as a condenser while the liquid refrigerant is evaporated in an air cooled evaporator. Instruments are provided for measurement of temperatures, pressures, and water flow rate. The system requires outside water supply.

Instruction manual is also included.

### EXPERIMENT CAPABILITIES:

- Design and operation of air to water heat pump.
- P-h diagram.
- Energy balances.
- Coefficient of performance.
- Overall heat transfer coefficients for evaporator and condenser.
- Effects of loads variation.

### TECHNICAL DATA:

- Compressor : 0.37 W
- Refrigerant : R134a
- Evaporator : Air cooled.
- Condenser : Co-axial coil heat exchanger
- Measuring instruments:
  - Pressure gauges : 2 ea.
  - Water rotameter : 1 ea.
  - Sensors with digital display : Temperature for compressor inlet and outlet, condenser outlet, evaporator inlet and condenser cooling water inlet and outlet
- Software for data display and analysis by computer (separately supplied).
- Power supply : 220V 1Ph 50Hz. Other power supply is available on request.

### OPTIONAL EQUIPMENT:

- Watt meter for compressor input power
- Concentric tube heat exchanger instead of co-axial coil heat exchanger

Net (unpacked) shipping dimensions WxLxH : 80 x 95 x 75 cm

Net weight : 60 kg