

Single Stage Air Compressor Study Unit (EDC-HT-31)

EXPERIMENTAL DATA:

- Study of construction and working of Single Stage Air compressor.
- Determining of the intake and delivery pressure.
- Determining of the Mechanical, Volumetric and isothermal efficiency.
- Determining of the air flow rate, compressor speed and temperatures at different points.



DESCRIPTION:

This Unit investigates the behavior during operation of a system with Single Stage Air Compressor. The single cylinder single stage air compressor driven by a motor takes air from the outside environment, compresses it and then air is stored in air tank cylinder. A pressure switch with motor ON/OFF switch is used to limit the pressure in the air tank.

The differential pressure sensor is used at intake to find out the volumetric flow rate of intake air. Sensors record the pressure of front and behind the compressor and also of the tank. The temperature change is also measured by temperature sensors. There is panel for measuring and control equipment with Touch LCD Display.

The unit has Touch LCD display for visualization of process and the measurements. The speed, temperatures, pressures and the mass flow rates of the air are recorded and displayed using sensors. Typical characteristic variables are determined.

A PC data acquisition (EDHT-31S) is also available (Optional).



TECHNICAL DATA:

- **Compressor**
- Single cylinder
- Single stage
- Power Consumption: 1hp
- Max. Pressure: 10 Bar
- Operating Pressure: 8 Bar

- **Intake Vessel:**
- 16L

- **Pressure Vessel:**
- 20L
- 16 Bar

- **Safety Switch:**
- Set at 8 Bar, having range up-to 10 Bar.

- **Instrumentation:**

The speed, temperatures, pressures and the mass flow rates of the air are recorded and displayed using sensors.

The unit has Touch LCD display for visualization of process and the measurements

DIMENSIONS AND WEIGHT:

L x W x H (mm):1200 x 800 x 1500

Weight: 140 kg

SCOPE OF DELIVERY:

- 1 x EDC-HT-31
- 1 x Instructional Manual