



Air Compressor Study Unit Single Stage (SMT-HT-16)

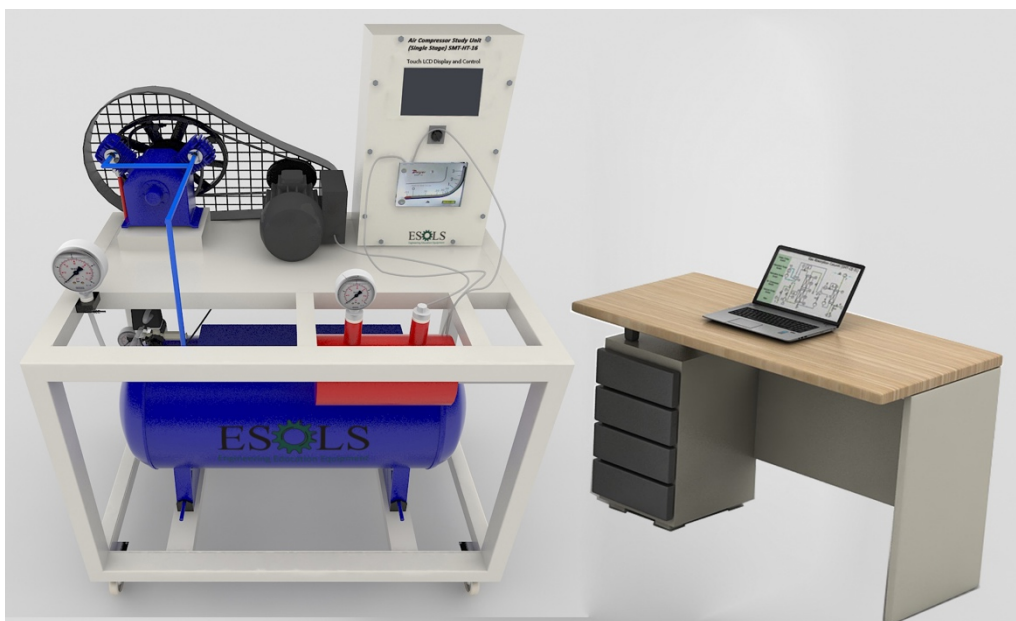
The trainer enables investigations and experiments to be performed on a single-stage compressor system. The compressed air generated is stored in a tank and is available as the working medium. The universal drive and brake unit is required to operate the trainer. It contains the motor that drives via a V-belt. Speed and torque measurements are also integrated in the apparatus. The system is equipped with sensors for pressure, flow rate, speed and temperature measurements. The measured values can be read on digital displays. At the same time, the measured values can also be transmitted directly to a PC using Data Acquisition Card (Optional).

The unit has Touch LCD display for visualization of process and the measurements. The Unit is also connected to Software for computer connectivity and data analysis. The Touch screen and computer software is included in the package.

Technical Specifications

Specifications:

- Trainer to investigate a machine sensors and displays for air flow rate, pressure, temperature and compressor speed.
- Intake vessel, with nozzle to measure the airflow rate, pressure sensor and additional manometer.
- Pressure vessel with safety valve, control valve and outlet silencer, additional manometer.
- Drive via V-Belt, motor.



Technical Data:

- Compressor, 1 cylinder, single-stage:
 - Power consumption: 750W.
 - Nominal speed: 980rpm.
 - Operating pressure: 8bar.
 - Max. pressure: 10bar.
 - Intake capacity: 150L/min at 8bar.
 - Safety valve blow off pressure: 10bar.
- Pressure vessel:
 - 16bar.
 - Capacity: 20L.
- Intake vessel: 20L.
- Measuring ranges:
 - Temperature: 2x 0 to 200°C.
 - Pressure: -1 to 1bar / 0 to 16bar.
 - Differential pressure: 0 to 10mbar.
 - 2 manometers: -1 to 4bar / 0 to 16bar.
- 230V, 50Hz, 1 phase
230V, 60Hz, 1 phase
120V, 60Hz, 1 phase
- Touch LCD with GUI Interface for better monitoring and accurate measurement of Plant variables.
 - ESOLS DAQ Software for monitoring and control.
 - Graphical visualization.
 - Security mechanism for login.
 - USB Connected
 - Compatible with Windows 7,8.1,10.
 - Digital Instrumentation
 - Capability to modify according to end user.
 - Can be used in Research Purposes.

Experiments:

- Measurement of intake and delivery pressure.
- Airflow rate.
- Compressor speed.
- Temperatures.
- Determination of the volumetric and isothermal efficiency.