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**Product Name :**  
Two Stage Air Compressor Test Set Air Water Cooled

**Product Code :**  
LBNY-0005-1610006



#### **Description :**

The Two Stage Air Compressor Test Set Air Water Cooled is for studying the two stage reciprocating air compressor characteristics. The air receiver has a drain valve, a safety valve and a discharge valve. The piping system is arranged such that intercooler or second stage compressor can be by passed. An intercooler is provided between first and second stage. The unit is equipped with necessary measuring instruments and is on wheels. For educational purpose, the two stages are separated and can be operated at different speeds. Both stages are connected by vee-belts to the same motor with an advanced inverter. The second stage compressor has three alternative pulleys to vary the pressure ratio between the two stages.

#### **Experiments:**

Compressor characteristics eg. volumetric efficiency, isothermal efficiency, pressure ratio, temperature ratio.  
Effect of second stage drive ratio.  
Effect of compressor speed.  
Effect of intercooler.

#### **Technical Specification :**

##### **Compressors:**

Type : Air-cooled, two stage.  
Maximum working pressure : 12 kg/ cm<sup>2</sup>.  
Second stage : Completed with three different diameter pulleys.  
Displacement : Approx 300 ml.  
Intercooler : Water cooled, counter flow heat exchanger.  
Air receiver : Approx 90 l or as requested.

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**Measuring instruments:**

Air flow rate : Inlet orifice plate with air box and inclined water manometer.

Motor input power : Advanced inverter.

Speeds : Digital display.

Pressures : Pressure gauges at first stage and second stage outlets, and air receiver.

Temperatures : Air inlet and outlet of each stage, cooling water inlet and outlet.

Power supply : 220V 1Ph 50 Hz.

Input power : Advanced inverter.

Cooling water flow rate : Rotameter.

Accessory : Barometer.



**Laboratory Instrument India**