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**Product Name :**  
Compressed Air Refrigeration Training Bench

**Product Code :**  
LBNY-0005-1410009



[www.laboratoryinstrumentindia.com](http://www.laboratoryinstrumentindia.com)

#### **Description :**

The demonstrates the types of systems that are used in a lot of small applications in dangerous environments where systems using electrical power cannot be used or where there is no electrical power supply. A Compressed Air Refrigeration Training Bench for studying refrigeration using compressed air. Using the whirling motion of a specially designed and shaped vortex distributor, the compressed air expands and is divided into a cold stream and a hot stream. This is an unusual method of producing cold air by the expansion of compressed air. The cold stream is utilised and the hot stream is exhausted into the environment. The designed and manufactured to incorporate all current safety standards.

#### **Experiments:**

Thermodynamics of compressed air  
Plotting the air transformation due to air expansion on a temperature-entropy diagram  
Coefficient of performance (C.O.P) determination  
Demonstration of producing hot and cold air through a system that has no moving parts  
Determining the outlet temperature in relation to the feed pressure  
Determining the useful refrigeration power  
Detecting the operating curve of a vortex tube by varying the inlet pressure and the weight ratio between hot and cold air.

#### **Technical Specification :**

Feed pressure regulator  
Electronic thermometers  
Vortex tube 300 l/min at 7 bars

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Pressure gauge

Double vortex compressed air expansion chamber.

**Flow meters:**

Quick connection for compressed air feed

Control of air flow entering the vortex tube by a pressure regulator located on the front panel.



**Laboratory Instrument India**