Email : sales@scilabexport.com
Phone: +91-7082934803

Product Name :

Reciprocating Compressor

Product Code :

SLE/EFM/07



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Description :

The **Reciprocating Compressor** (Product Code: SLE/EFM/07) is a trolley-mounted test module containing a small compressor, an air receiver and instrumentation, used to show students how a piston compressor turns shaft power into compressed air. A valve and orifice on the receiveroutlet let the class set delivery pressure and measure the mass flow of air leaving the system.The module is manufactured by **Jain Scientific Equipments Pvt Ltd (ScienceLab)**, Ambala, an engineering lab equipment manufacturer, as lab equipment for technical institutes, engineering colleges and industrial training centres.

Specifications

Parameter	Detail
Module contents	Small reciprocating compressor, air receiver and instrumentation
Mounting	Robust, mobile trolley
Air path	Air enters the compressor and is delivered under pressure to the receiver
Pressure control	Valve releasing receiver pressure to atmosphere through an orifice; the valve sets receiver pressure and hence flow rate
Flow measurement	Orifice for accurate measurement of outlet air mass flow rate
Speed	Fully variable up to the maximum allowable for the compressor
Power measurement	Speed, torque and power absorbed measured by the separate Universal Dynamometer

Typical Use

Reciprocating compressors supply the air behind air tools, paint spray equipment, pneumatic actuators and control systems, so this module links directly to what students meet in workshops and plants. In a typical test the compressor runs at a chosen speed while the outlet valve is closed in steps; at each receiver pressure the class records mass flow from the orifice and the power absorbed from the dynamometer. The resulting curves show how the flow the compressor can deliver falls as delivered pressure rises, and let students calculate volumetric efficiency and the power needed per unit of air.

Repeating the series at different speeds shows the effect of running a compressor faster or slower, a practical point for anyone who will later size or operate a plant compressor. As engineering educational equipment for Indian diploma and degree programmes, the trolley mounting lets one module move between rooms. Release receiver pressure fully after each session, keep the orifice clean, and keep hands clear of moving parts while the machine runs.

Manufacturer

This compressor module is produced by Jain Scientific Equipments Private Limited, an Ambala, Harya
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