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

Product Name :

Vapour Absorption Refrigeration Trainer

Product Code :

SLE/MCE/84



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Description :

Vapour Absorption Refrigeration Trainer (Product Code: SLE/MCE/84) is a heat-driven refrigeration training unit used to show how an absorption system produces cooling from thermal energy instead of a mechanical compressor, in refrigeration and air-conditioning laboratories.This engineering educational equipment in India works with an ammonia-water solution andhydrogen as auxiliary gas, driven by a 125 W electric heater, with an adjustable 50 W evaporatorheater as the cooling load. It is made by **Jain Scientific Equipments Pvt Ltd (ScienceLab)**, anOEM technical educational equipment manufacturer, at its own factory in Ambala, India.

Specifications

Parameter	Detail
Working medium	Ammonia-water solution
Auxiliary gas	Hydrogen
Electric heater	125 W
Evaporator heater	50 W, adjustable
Measuring range – temperature	4 × ?80 to 180 °C
Measuring range – power	0–150 W
Dimensions	800 × 750 × 1200 mm
Weight	Approx. 85 kg
Power supply options	230 V, 50 Hz, 1 phase or 230 V, 60 Hz, 1 phase
Product code	SLE/MCE/84
Manufacturer	Jain Scientific Equipments Pvt Ltd (ScienceLab) — OEM
Country of origin	India (made in Ambala, Haryana)

What Is the Vapour Absorption Refrigeration Trainer Used For?

Absorption refrigeration systems run on thermal energy — for example industrial waste heat or heat from solar collectors — and small mobile units such as camping refrigerators or hotel minibars generate that heat electrically or with a gas burner. The trainer demonstrates the principle behind them: a liquid evaporates at low temperature when its pressure is reduced, and the ammonia vapour is taken up by water and driven out again by heat rather than being compressed. In process plants the same idea lets waste heat be used for cooling.

Students record temperatures at four points together with the heater powers, then load the evaporator with the adjustable heater to find the cooling effect and compare it with the heat input to estimate the coefficient of performance. Because an absorption system takes time to reach steady operation, switch the 125 W heater on well before the practical and take readings only once temperatures have settled.

Wha

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