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Product Name :

Water To Air Heat Exchangers

Product Code :

SLE/EA/20



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Description :

Water To Air Heat Exchangers (Product Code: SLE/EA/20) is a benchtop test unit used to study cross-flow heat exchangers that pass heat from hot water to a stream of cooling air in engineering laboratories. Mirroring air heating and water cooling applications, it combines a hot water supply, an orifice-metered air duct with a centrifugal fan, and all the instruments needed for testing. It is made by **Jain Scientific Equipments Pvt Ltd (ScienceLab)**, an OEM manufacturer and lab equipment exporter in India, at its own factory in Ambala.

Key Details

Parameter	Detail
Application	Mirrors air heating and water cooling applications; tests on cross-flow heat exchangers
Mounting	Fits on a benchtop; includes hot water supply, cooling air duct and all instruments needed
Water side	Electrically operated valve fills the tank; precision needle valve and flow meter control and measure the water flow rate
Tank protection	Against over temperature, low water level and overfilling
Air path	Air passes down a vertical duct with an orifice plate, through a fixed speed centrifugal fan, along a horizontal duct containing the heat exchanger, and exits through a hand-operated slide valve
Air flow measurement	Orifice plate connected to a differential pressure transducer; flow controlled with the slide valve
Temperatures	Thermocouples at the water connectors and in the air duct for hot and cold inlet and outlet temperatures
Connections	Self-sealing quick connectors for the heat exchangers' water supply
Room impact	Heat output gives good results without greatly affecting the temperature of a reasonable-size classroom or laboratory
Product code	SLE/EA/20
Manufacturer	Jain Scientific Equipments Pvt Ltd (ScienceLab) — OEM
Country of origin	India (made in Ambala, Haryana)

What Is the Water to Air Heat Exchanger Unit Used For?

Students set the hot water flow on the needle valve and the air flow on the slide valve, read the air flow from the orifice plate pressure difference, and record the inlet and outlet temperatures of both streams. Comparing the heat given up by the water with the heat picked up by the air gives an energy balance, the same principle behind a car radiator or an air-conditioning coil.

Changing the air flow while holding the water conditions steady shows how strongly the air side gover ize room and therm