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Product Name :

Exhaust Gas Calori meter

Product Code :

SLE/EE/03



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Description :

Exhaust Gas Calori meter (Product Code: SLE/EE/03) is a gas-to-water heat exchanger used to measure the heat carried away in engine exhaust gases during IC engine tests in engineering laboratories. Exhaust flows through its multi-tube bundle inside a cooling-water jacket, and thermocouples with a four-channel digital display give the temperatures and flow needed for an engine heat balance. It is made by **Jain Scientific Equipments Pvt Ltd (ScienceLab)**, an OEM and technical educational equipment manufacturer, at its own factory in Ambala, India.

Specifications

Parameter	Detail
Heat exchanger	Gas-to-water shell and multi-tube heat exchanger on a sturdy base plate
Gas path	Exhaust gases from the test engine on the test set flow through the tubes
Cooling water	A jacket of constantly flowing cooling water surrounds the tubes
Flow measurement	Turbine flow meter measuring the cooling-water flow rate
Water flow control	Control valve; hand-operated valve mounted on the control console of the test set
Temperature sensing	Thermocouples measuring gas and water temperatures at inlet and outlet
Display	Digital four-channel temperature and flow display unit, mounted on the instrumentation rail of the test set console frame
Safety	Pressure-relief valve in case insufficient cooling water is flowing
Product code	SLE/EE/03
Manufacturer	Jain Scientific Equipments Pvt Ltd (ScienceLab) — OEM
Country of origin	India (made in Ambala, Haryana)

What Is the Exhaust Gas Calorimeter Used For?

In an engine heat-balance experiment, the energy in the fuel is divided between brake power, heat to the engine cooling water, heat carried out in the exhaust and other losses. This calorimeter quantifies the exhaust share: the heat picked up by the cooling water equals its mass flow rate multiplied by its specific heat and temperature rise, while the fall in gas temperature across the exchanger shows how much exhaust energy was recovered.

Establish a steady cooling-water flow with the console valve before the engine is started, and never pass exhaust through the exchanger without water – the pressure-relief valve is a safeguard, not a control. Take readings once all four channels have settled. For colleges setting up a calorimeter lab in India around a single engine test set, this unit adds the thermal meas

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