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

Product Name :

Exhaust Gas Calorimeter

Product Code :

SLE/MCE/54



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Description :

Connected to a test engine by an exhaust gas hose, the Exhaust Gas Calorimeter finds how much heat the engine loses in its exhaust. Inside an insulated stainless steel tank, the gas passes through a counter-flow finned pipe heat exchanger. Four temperature sensors and a 0–160 L/h water flow meter feed digital displays througha measuring amplifier.

Finned counter-flow exhaust calorimeter specifications

Parameter	Detail
Heat exchanger	Counter-flow, finned pipe type, in an insulated stainless steel tank
Heat exchange area	0.944 m² on the exhaust gas side; 0.141 m² on the water side
Exhaust gas temperature	2 × 0–600 °C
Cooling water temperature	2 × 0–200 °C
Water flow rate	0–160 L/h (flow meter)
Instrumentation	4 temperature sensors, flow meter, measuring amplifierwith digital displays
Engine connection	Exhaust gas hose
Power supply	230 V, 50 Hz, single phase
Size and weight	600 × 600 × 1300 mm; approx. 103 kg
Product code	SLE/MCE/54
Minimum order	10 units
Dispatch	Usually within 7 to 10 working days
Manufacturer	ScienceLab (Jain Scientific Equipments Pvt Ltd), Ambala, India

Exhaust heat experiments with the finned calorimeter

Setting up at the engine. Run the exhaust gas hose from the four stroke four cylinder petrol engine test bench to the calorimeter inlet. Start the water and set a steady flow on the flow meter before any exhaust passes through, then hold it steady so the outlet water stays well below boiling.

Exhaust heat by two routes. From the water side, students find the heat taken up from flow, specific heat and temperature rise. From the gas side, they use fuel flow from a manual volumetric fuel gauge plus the air flow, and the gas temperature fall. The

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