

**Product Name :**  
Astra Scientific Exhaust Gas Calorimeter

**Product Code :**  
ThermalLab0005



**Description :**

Astra Scientific Exhaust Gas Calorimeter

**Technical Specification :**

The experimental exhaust gas calorimeter water heat exchange to be used with multi-cylinder engine. Small vertical finned tubes enclosed in insulated stainless steel chamber. Exhaust gas from engine can be connected to the calorimeter and flow around the finned tubes while cooling water flows inside the tubes. Chamber can be disassembled for cleaning the finned tubes. Instruments gear for display of water flow rate, temperatures of exhaust and water. Requires water supply.

Determination of the thermal exhaust gas losses is essential when calculating an energy balance for internal combustion engines. Calorimetric measurement is an established method of doing this. It involves a largely complete and loss-free heat exchange between the exhaust gas and a cooling medium.

**FEATURES:**

- Counter flow heat exchanger for calorimetric analysis of exhaust gases from internal combustion engines
- Determination of the amount of heat contained in the exhaust gas from test engines

- Calorimeter consisting of finned pipe heat exchanger and insulated tank
- Instrumentation: 4 temperature sensors, flow meter
- Measuring amplifier with digital displays
- Connection between engine and calorimeter using exhaust gas hose
- Cold water connection and drain required

**SPECIFICATIONS:**

- Calorimeter
- Insulated, stainless steel

**Finned pipe heat exchanger**

- Heat exchange area on exhaust gas side: 0,944m<sup>2</sup>
- Heat exchange area on water side: 0,141m<sup>2</sup>
- Measuring ranges
- Temperature:
  - o 2x 0...600°C (exhaust gas)
  - o 2x 0...200°C (cooling water)
- Flow rate: 0...160L/h



## **Astra Scientific**

www.astrascientific.com, **Email:** info@astrascientific.com

**Address:** K-88, 20th Street, Annanagar, Chennai, India – 600040 **Phone:** +91-8860605265