

AC07 – RADIANT HEAT TESTER
TECHNICAL DATASHEET

Apparatus is intended for determining of heat transmission through materials or material assemblies used in protective equipment when exposed to radiant heat.

These tests are carried out on representative single or multi-layer textiles for clothing.

Complying with:

EN ISO 6942 Protective clothing – Protection against heat and fire – Method of test: Evaluation of materials and material assemblies when exposed to a source of radiant heat


Technical features:

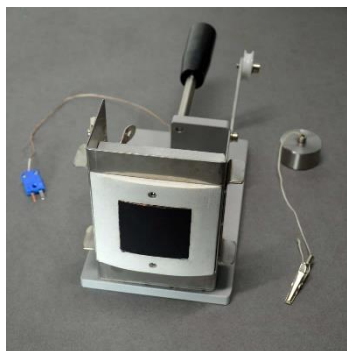
- The device consists of metal chassis, armour cage for protection of direct contact with heating source, 6 pieces of silicon carbide heating rods (1.100 °C) – with automatic electronically controlled power compensation due to ageing of rods and line voltage variations mounted on moving support with automatic positioning, central unit for auto-calibration from 5 to 80 kW/m² and fully automatic measuring process (times to achieve temperature rise of 12, 24 and 30 °C),
- Specimen holders for test A and test B
- Calorimeter for method B, copper plate and copper constantan thermocouple, output in millivolts.
- LCD display for adjustments and results, USB output for data storage and safety power overload turn-off.
- The cooling mechanism works with a continuous water flow which is provided by an inlet and outlet on the testing device.

- Procedure method A exposes a specimen in a free-standing frame to a defined heat radiation for a defined time period. The intensity of the heat radiation is controlled by the distance between specimen and heat radiation source. After the test the specimen and its different layers are examined for visual changes.

- In procedure method B the specimen is fixed onto a calorimeter and exposed to a defined heat radiation. The time needed for a temperature rise in the calorimeter of 12°C and 24°C respectively is measured.

On the basis of this data the heat throughput rate is calculated from the difference between passed and incident heat flow density.

The software provides the calculations and evaluation of the standard.



Calorimeter



Configuration including:

- Furnace made with radiation source with silicon carbide rods of 356 mm, to reach a temperature of 1100 ° C.
These rods are placed in a U shaped support made of insulating material and are wired to the 220 V supply.
- The heating source with protection realized according to safety standards with automatic compensation of the electronically controlled power due to the aging of the bars and to the variations in line voltage. Mounted on a mobile support with central unit for self-calibration from 5 to 80 kW / m2
- 300 x 300 mm test frame, sliding, protected by a water-cooled screen from a copper piping system.
- n.3 steel plate samples holder dimensions 90 x 90 x 25 mm
- CALORIMETER in copper 50 X 50 mm (max temperature 200 ° C), thermocouple output in millivolts, mounted on non-combustible material 90 x90 mm (conductivity 0.18W (m.k) ± 10%)
- Specimen holder B is integrated into the calorimeter structure.
- Controller converter with 7 "colour TOUCH SCREEN display for temperature control, rising graph and irradiation power calibration functions.
- DataLink software – the data to store in the report of the test can be transferred via USB to a Personal Computer
- (optional)


General:

Dimensions 1000 X 700 X 1300 mm
 Power supply: 380V, three phases
 Consumption 6500 watt



Code	Description
100191307	AC07 RADIANT HEAT TESTER
00100228	Data link software
10109013	Calorimeter 50 X 50 mm ISO 6942

