

Heat of Combustion by Calorimeter (automatic)

ASTM D 240, ASTM D 1989 (obs.), ASTM D 4809, ASTM D 5468, ISO 1928, DIN 51900-1, DIN 51900-2, DIN 51900-3, JIS K2279

Product group(s): Fuel

User group(s): Biodiesel, Biofuel, Distillate Fuel, Fuel, Gas Oil, Gasoline, Jet Fuel, Kerosene, Motor Fuel, Power Plant

Scope: This test method covers the determination of the heat of combustion of liquid hydrocarbon fuels ranging in volatility from that of light distillates to that of residual fuels.

Features:

- Relieves you of routine tasks through automated measurement procedure
- Integrated oxygen filling
- To provide a supply of cooling water, the C2000 calorimeter is connected with a circulation cooler KV 500 digital or with an appropriate permanently installed water connection.
- Measurement of gross calorific values
- Automatic detection of decomposition vessel
- To protect the calorimeter against high water pressure (max: 1,5 bar), it is necessary to install the pressure reduction valve C 25. Using a water pipe the water temperature has to be between 12 °C and 28 °C.
- Calculation of the heat value
- Monitor and external keyboard can be connected
- Software for PC-operation available. (for up to 6 calorimeters upon request)



Calorimeter Test Equipment

to be composed of:

- Calorimeter System - Type C 2000
- Circulation Cooler

Technical Data

Ambient Temperature:	20 °C ...+25 °C
Power Consumption:	1.8 kW
Dimensions (W x D x H):	440 x 450 x 500 mm
Weight:	30 kg
Water Operating Pressure:	0.5 ... 10 bar
Interfaces:	2 x serial (RS 232)

Main Unit

13-1880

Calorimeter System - Type C 2000

ASTM D 240 - ASTM D 4809 - ASTM D 5468 - ISO 1928 -
DIN 51 900 -1-3 (ASTM D 1989) - JIS K2279

Consisting of:

measuring cell with control and evaluation unit, standard decomposition vessel, quartz crucible, consumables for calibration and start up.

Power supply: 230 V, 50/60 Hz (115 V available upon request)

Options & Accessories

13-1881	Circulation Cooler KV 500 digital Power supply: 230 V, 50/60 Hz (115 V available upon request)
13-1866	Aqua-Pro, 30 ml for water stabilization to avoid algae contamination
13-1882	Pressure Regulation Valve for regulating the pressure of the cooling water pipe. It is essential when using the C 2000 Calorimeter without the cooling thermostat KV 500 and a water pressure higher than 1.5 bar.
13-1870	PC-Software CalWin (Windows®) to prepare, control, evaluate and manage measurements of 1 calorimeter (also usable with model C 5000), incl. PC connection equipment
13-1871	Pressure Gauge to reduce the oxygen pressure from the bottle to 30 bar, 3/4 " right thread
13-1609	Combustion Crucible, set of 25 ASTM D 4809 made of stainless steel <u>Note!</u> One cup will last 25 tests.

Spare Parts

13-0617	Acetoburate Capsules, 100 pieces
13-0618	Benzoic Acid Pellets, 50 pieces 0.25 g each with certified calibration value
13-0614	Cotton Thread, 500 pieces cut to approximately 80 mm
13-1864	Decomposition Vessel (standard-type) not halogen resistant
13-1867	Ignition Wire, 5 pieces for approx. 200 tests
13-1608	Combustion Crucible, 38 ml, made of quartz (not for ASTM D 4809)

Order Guideline

Minimum equipment: 1x 13-1880, cooling
 Spares (approx. 1 year): 1x 13-0617, 1x 13-1867, 3x 13-1608, 1x 13-0614,
 1x 13-0618
 Additional requirements: