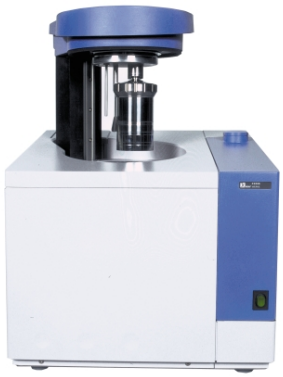
Data Sheet

Analytical line / Calorimeters



C 2000 control version 1

The C 2000 basic IKA- calorimeter is a combustion calorimeter for determining gross calorific values of liquid and solid samples. A high level of automation with extremely simple handling characterizes this instrument. In addition to the isoperibolic measurement procedure (static jacket), a dynamic (reduced-time) working method is also available. To provide the calorimeter with cooling water, it needs to be connected to a thermostat f.e. IKA KV 600 (accessory) or a firmly installed water connection. The C 2000 control is equipped with a very convenient console to operate the unit.

- Automatic water handling system includes tempering, filling and emptying of calorimeter inner vessel
- Automatic oxygen filling of decomposition vessel
- Automatic decomposition vessel identification
- Automatic sample ignition
- Validation according to DIN 51900,ISO 1928, ASTM D240, ASTM D4809, ASTM D5865, ASTM D1989, ASTM D5468, ASTM E711
- Working methods:
isoperibol, measurement time: approx. 22 min
dynamic, measurement time: approx. 7 min
- Compact, integrated modular design for convenient operation
- Cooling water supply via thermostat f.e. IKA KV 600 (accessory) or firmly installed water connection (C 25 pressure regulating valve recommended)
- Interface connections for each of the following: scale, printer, monitor and sample rack C 5020
- User-friendly software C 5040 CalWin for controling the calorimeter and administration of measuring data
- Up to eight measurement cells can be controlled by a single PC, using a multi-serial plug-in card PCI 8.2 (accessory)
- LIMS integration is possible
- Special halogen resistent vessel for quantitative decomposition of halogens and sulfur (accessory)
- The decomposition vessel can be changed over to use combustible crucibles C 14 (accessory C5010.4 is needed)
- Consumables for calibrations and initial operation are included with delivery.

A PC or notebook is required to operate the C 2000 control (not included with delivery)

Accessories: C 5010 Decomposition vessel, standard, C 5012 Decomposition vessel, halogen resistent, C 5010.4 Attachment for combustible crucible C14, C 5010.5 Crucible holder, big, C 5030 Venting station, C 5020 Sample rack, KV 600 cooling water supply, C 5040 CalWin, C 5041.10 Connection cable, C 21 Pelleting press, C 29 Pressure gauge, oxygen, C 25 Pressure regulating valve, C 62

Technical Data	
Measuring range max. [J]	40000
Measuring mode adiabatic 22°C	no
Measuring mode isoperibol 22°C	no
Measuring mode dynamic 25°C	yes
Measuring mode isoperibol 25°C	yes
Measuring mode dynamic 30°C	yes
Measuring mode isoperibol 30°C	yes
Measuring mode double dry (ISO 1928)	no
Measuring time dynamic approx. [min]	7
Measuring time isoperibol approx. [min]	22
Reproducibility dynamic (1g benzoic acid NBS39i) [%RSD]	0.1
Reproducibility isoperibol (1g benzoic acid NBS39i) [%RSD]	0.05
Working temperature max. [°C]	30
Temperature measurement resolution [K]	0.0001
Cooling medium temperature min. [°C]	12
Cooling medium temperature max. [°C]	28
Cooling medium permissible operating pressure [bar]	1.5
Cooling medium	tap water
Type of cooling	flow
Flow rate min. [l/h]	0.3
Flow rate max. [l/h]	70
Oxygen operating pressure max. [bar]	40
Interface scale	RS232
Interface printer	Centronix
Interface PC	RS232
Interface test rack	yes
Interface ext. monitor	yes
Interface ext. keyboard	yes
Oxygen filling	yes
Degasification	no
Decomposition detection	yes
Decomposition vessel C 5010	yes
Decomposition vessel C 5012	no
Decomposition vessel C 7010	no
Decomposition vessel C 7012	no
Decomposition vessel C 62	no
Analysis according to DIN 51900	yes
Analysis according to ASTM D240	yes
Analysis according to ASTM D4809	yes
Analysis according to ASTM D1989	yes
Analysis according to ASTM D5468	yes
Analysis according to ASTM D5865	yes
Analysis according to ASTM E711	yes
Dimensions (W x H x D) [mm]	440 x 500 x 450
Weight [kg]	30
Permissible ambient temperature [°C]	20 - 25
Permissible relative moisture [%]	80
Protection class according to DIN EN 60529	IP 21
RS 232 interface	yes
Voltage [V]	220 - 240
Frequency [Hz]	50/60
Power input [W]	1800
Ident. No.	**8802000**

Decomposition vessel, "high pressure", C 60 Conversion set for C 62, C 5003.1 Aqua Pro stabilizing agent, C 710.4 Cotton thread, cut to length, C 5010.3 Ignition wire, spare, C 5012.3 Ignition wire, platinum, C 4 Quartz dish, C 6 Quartz crucible, big, C 5 Set of VA combustion crucibles, C 710.2 Set of VA combustion crucibles, C 723 Benzoic acid, blister package, C 723 Benzoic acid BIG Package, C 43 Benzoic acid NBS 39i, C 9 Gelatine capsules, C 10 Acetobutyrate capsules, C 12 Combustion bags 40 x 35 mm, C 12 A Combustion bags 70 x 35 mm, C 14 Combustible crucible, C 15 Paraffin strips, C 16 Parafilm, C 17 Paraffin, AOD 1.11 Control standard, AOD 1.12 Control standard, C 26 Prep Stand