

C 2000 basic 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 basic 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, ASTM 240 D, ISO 1928, BSI etc.
- 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 controlling 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 resistant 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.

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]	0.0003
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]	60
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 (1977/84) [-]	yes	Analysis according to ASTM D240 (2002) [-]	yes
Analysis according to ASTM D4809 (2000) [-]	yes	Analysis according to ASTM D1989 (1992) [-]	yes
Analysis according to ASTM D5468 (2002) [-]	yes	Analysis according to ASTM D5865 (2001) [-]	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