Data Sheet

Analytical line / Calorimeters

C 2000 basic high pressure

The C 2000 basic high pressure calorimeter is the newest system from IKA® for determining
explosion heat and heat of combustion of solid propellants. 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 need to be connected to a thermostat
f.e. IKA KV 600 (accessory) or a firmly installed water connection. The C 2000 basic high
pressure is a combination of the C 2000 basic, the decomposition vessel C 62 and the
conversion set C 60.

- Automatic water handling system includes tempering, filling and emptying of calorimeter inner vessel
- 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 controlling the calorimeter and administration of measuring data (accessory)
- Up to eight measuring cells can be controlled by a single PC, using a multi-serial plug- in card
PCI 8.2 (accessory)
- LIMS integration is possible

Accessories: C 62 Decomposition vessel, "high pressure", KV 600 cooling water supply, C 5040 CalWin, C 25 Pressure regulating valve, C 5003.1 Aqua Pro stabilizing agent

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	no
Decomposition vessel C 5010	no
Decomposition vessel C 5012	no
Decomposition vessel C 7010	no
Decomposition vessel C 7012	no
Decomposition vessel C 62	yes
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
Ident. No.	**8802300**