

C 2000 control high pressure



The C 2000 control 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 needs 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, 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 measuring cells can be controlled by a single PC, using a multi-serial plug-in card PCI 8.2 (accessory)
- LIMS integration is possible

Special consumables for C 2000 control high pressure:

C 08 Spool of ignition wire (pure iron) with given gross calorific values and

C 62.2 Combustion crucibles (stainless steel) for C 62 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 min. [°C]	25	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]	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		



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