

Data Sheet

Analytical line / Calorimeters



C 1

The C 1 static jacket oxygen bomb calorimeter represents a giant leap forward in calorimeter technology by featuring a high degree of automation in a compact design; the smallest calorimeter footprint available. It operates according to DIN 51900 and ISO 1928. The temperature readings are analyzed according to the classical isoperibol method of Regnault Pfaundler. The traditionally known, comparably heavy screw threaded decomposition vessel, has been replaced by a light and easily attachable combustion chamber. Due to the variety of different interfaces (PC, balance, printer) this unit is easily adaptable depending on the customer's specific application needs. Further adaption to data management and LIMS is possible with our calorimeter software C 6040 Calwin (Accessory).

The C 1 Calorimeter can only be operated together with a fitted cooling water supply unit. Therefore we recommend our C 1 Package 1/10 for best performance. It includes the chiller KV 600 NR and ensures best possible connectivity and function of the Calorimeter.

The unit contains all parts necessary to set up the unit. We also supply wear parts and consumables for the first approximately 500 experiments including 25 calibrations. The C 1.10 combustion chamber is equipped with the C 5010.5 large crucible holder and C 6 large quartz crucible.

Accessories: C 1.10 Combustion chamber, C 1.50 Dot matrix printer, C 1.30 Venting station, C 1.1012 Organizer, C 1.101 Set of spare parts, C 1.103 Ignition wire, C 1.123 Ignition wire platinum, C 27 Calorimeter preparation set, C 29 Pressure gauge, oxygen, RC 2 basic, RC 2 control, C 21 Pelleting press, C 5010.8 Crucible holder small, C 5010.5 Crucible holder big, C 710.4 Cotton thread, cut to length, C 710.8 Cotton thread, C 4 Quartz dish, C 5 Set of VA combustion crucibles, C 6 Quartz crucible, big, C 710.2 Set of VA combustion crucibles, 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 15 Paraffin strips, C 16 Parafilm, C 17 Paraffin, C 43 Benzoic acid NBS 39i, C 723 Benzoic acid, blister package, C 723 Benzoic acid BIG Package, AOD 1.11 Control standard, AOD 1.12 Control standard

| Technical Data | |
|--|-------|
| Measuring range max. [J] | 40000 |
| Measuring mode adiabatic 22°C | no |
| Measuring mode dynamic 22°C | no |
| Measuring mode isoperibol 22°C | no |
| Measuring mode static jacket 22°C | yes |
| Measuring mode adiabatic 25°C | no |
| Measuring mode dynamic 25°C | no |
| Measuring mode isoperibol 25°C | no |
| Measuring mode static jacket 25°C | no |
| Measuring mode adiabatic 30°C | no |
| Measuring mode dynamic 30°C | no |
| Measuring mode isoperibol 30°C | no |
| Measuring mode static jacket 30°C | yes |
| Measuring mode double dry (ISO 1928) | no |
| Measurements/h static jacket | 4 |
| Reproducibility static jacke (1g benzoic acid NBS39i) [%RSD] | 0.15 |
| Touchscreen | no |
| Working temperature min. [°C] | 20 |
| Working temperature max. [°C] | 30 |

| | |
|---|-------------------|
| Temperature measurement resolution [K] | 0.0001 |
| Cooling medium temperature min. [°C] | 18 |
| Cooling medium temperature max. [°C] | 29 |
| Cooling medium permissible operating pressure [bar] | 1.5 |
| Cooling medium | tap water |
| Type of cooling | flow |
| Flow rate min. [l/h] | 50 |
| Flow rate max. [l/h] | 60 |
| Rec. flow rate at 18°C [l/h] | 55 |
| Oxygen operating pressure max. [bar] | 40 |
| Interface scale | RS232 |
| Interface printer | RS232 |
| Interface PC | RS232 |
| Interface test rack | no |
| Interface ext. monitor | no |
| Interface ext. keyboard | no |
| Oxygen filling | yes |
| Degasification | yes |
| 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 6010 | no |
| Decomposition vessel C 6012 | no |
| Decomposition vessel C 62 | no |
| Decomposition vessel integrated | yes |
| Analysis according to DIN 51900 | no |
| Analysis according to DIN 51900 | yes |
| Analysis according to ASTM D240 | no |
| Analysis according to ASTM D4809 | no |
| Analysis according to ASTM D1989 | no |
| Analysis according to ASTM D5468 | no |
| Analysis according to ASTM D5865 | no |
| Analysis according to ASTM E711 | no |
| Analysis according to ISO 1928 | yes |
| Analysis according to BS 1016 | no |
| Dimensions (W x H x D) [mm] | 290 x 280 x 300 |
| Weight [kg] | 15 |
| Permissible ambient temperature [°C] | 5 - 40 |
| Permissible relative humidity [%] | 80 |
| Protection class according to DIN EN 60529 | IP 20 |
| USB interface | yes |
| RS 232 interface | yes |
| Analog output | no |
| Voltage [V] | 100 - 240 |
| Frequency [Hz] | 50/60 |
| Power input [W] | 120 |
| Ident. No. | 0003825000 |