



designed for scientists



C 200 h

/// Data Sheet

The C 200 h package is designed for teaching and training purposes at technical schools and universities. Due to its semi-automated isoperibol mode it is also perfectly suitable for industrial laboratories with low number of analyses. The space-saving and standard-conforming combustion calorimeter determines the gross calorific value of liquid and solid samples.

The scope of delivery includes:

C 200 calorimeter measuring cell

C 5012 halogen resistant, catalytic activated decomposition vessel



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C 200.2 conversion kit for C 5012
C 248 oxygen filling station
Consumables for calibration and installation

The water and oxygen handling is conducted manually. In case of an increasing amount of measurements the water handling system can be further automated. For that purpose, the C 200.RC hose set as well as the RC 2 basic recirculating chiller are required. Both accessories are available separately.

The catalytic activated, halogen resistant decomposition vessel C 5012 is specifically designed for the combustion of samples that contain halogens and sulfur ($> 3\%$). The material of the decomposition vessel (Hastelloy) prevents corrosion caused by samples with high chlorine content. The catalytic activated inner-surface leads to higher recovery rates in case analysis of halogens and/or sulfur is required after the combustion.

Four different operation modes enable the user to control the measuring times according to individual requirements:

Isoperibol: approx. 17 min.

Dynamic: approx. 8 min

Manual: approx. 17 min (depends on the operator)

Time controlled: 14 min

Measurements are possible according to e.g. DIN 51900, ISO 1928, ASTM D240, ASTM D4809, ASTM D5865, ASTM D1989, ASTM D5468, ASTM E711.

The software C 6040 CalWin controls the unit and monitors the measurement of the samples. Additionally, collected data can be exported to e.g. Excel, Word, SQL and LIMS for further analysis. It is possible to operate several calorimeters with one PC. A PC is not part of the scope of delivery and needs to be provided by the operator. CalWin is sold separately.



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Technical Data

| | |
|--|-----------------|
| Measuring range max. [J] | 40000 |
| Measuring mode dynamic 25°C | yes |
| Measuring mode isoperibol 25°C | yes |
| Measuring time dynamic approx. [min] | 8 |
| Measuring time isoperibol approx. [min] | 17 |
| Reproducibility dynamic (1g benzoic acid NBS39i) [%RSD] | 0.1 |
| Reproducibility isoperibol (1g benzoic acid NBS39i) [%RSD] | 0.1 |
| Working temperature max. [°C] | 25 |
| Temperature measurement resolution [K] | 0.0001 |
| Interface printer | Centronix |
| Interface PC | RS232 |
| Decomposition vessel C 5012 | yes |
| Decomposition vessel, halogen resistant | yes |
| Works according to DIN 51900 | yes |
| Works according to DIN EN ISO 1716 | yes |
| Works according to DIN EN ISO 18125 | yes |
| Works according to DIN EN 15400 | yes |
| Works according to DIN CEN TS 14918 | yes |
| Works according to DIN CEN/TS 16023 | yes |
| Works according to DIN SPEC 19524 | yes |
| Works according to ASTM D240 | yes |
| Works according to ASTM D4809 | yes |
| Works according to ASTM D5468 | yes |
| Works according to ASTM D5865 | yes |
| Works according to ISO 1928 | yes |
| Works according to GOST Certified | yes |
| Dimensions (W x H x D) [mm] | 400 x 400 x 400 |
| Weight [kg] | 29.785 |
| Permissible ambient temperature [°C] | 20 - 25 |
| Permissible relative humidity [%] | 80 |
| Protection class according to DIN EN 60529 | IP 20 |
| RS 232 interface | yes |
| Voltage [V] | 100 - 240 |
| Frequency [Hz] | 50/60 |
| Power input [W] | 120 |

