



C 200 Calorimetersystem

C 200-System consists of the following components:

- Measuring cell C 200
- Decomposition vessel C 5010
- Oxygen filling station C 248
- Consumables for calibrations and installation

Space-saving and low cost combustion calorimeter for determining gross calorific values of liquid and solid samples.

Validation according to DIN 51900, ISO 1928, ASTM D240, ASTM D4809, ASTM D5865, ASTM D1989, ASTM D5468, ASTM E711.

Suitable for teaching and training, as well (f.e technical- schools, universities) and for industriell laboratories with less analyses..

Manual handling for water and oxygen filling.

Four different working methods, isoperibolic, dynamic, manual, time controlled makes possible an ideal adjustment of different operating tasks.

Clear and easily explained display which is simply to use .

With an external power pack, "world tension useable" from 100 - 240 V AC, 50/60 Hz. The operating voltage of the calorimeter is 24 V DC low- voltage.

Friendly in aftersales

Manual (teaching mode): ignition and end of the measurement will be done by the operator himself; the temperature increase will be indicated at the display each minute.

All calculations have to be done manually.

At the other three modes ignition and calculation of the gross calorific value will be done automatically.

The gross calorific value will be shown on the display. Acid corrections and calculations of the net calorific value have to be done manually.

The modes have different measuring times:

Isoperibolic: approx: 17 min.

Dynamic : approx. 8 min

Manual : approx. 17 min

(depend on the operator)

Time controlled : 14 min

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
Oxygen filling	no
Degasification	no
Decomposition detection	no
Decomposition vessel C 5010	yes
Dimensions (W x H x D) [mm]	400 x 400 x 400
Weight [kg]	21
Permissible ambient temperature [°C]	20 - 25
Permissible relative moisture [%]	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
Ident. No.	8802500

The decomposition vessel can be equipped in to use an combustible crucibles C 14 (accessory C 5010.4 attachment is necessary)

User-friendly software C 5040 Calwin for controlling the calorimeter and administration of measuring data (assecory). Transfer of the datas to Excel or Word are possible

Up to eight IKA measuring cells can be controlled by a single PC, using a multiseriaI plug in card PCI 8.2 (accessory)

Accessories: C 5010 Decomposition vessel, standard, C 5010.4 Attachment for combustible crucible C14, C 5010.5 Crucible holder, big, C 5030 Venting station, C 21 Pelleting press, C 200.1 Measuring cup 2000 ml, C 29 Pressure gauge, oxygen, C 710.4 Cotton thread, cut to length, C 5010.3 Ignition wire, spare, 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 723 Benzoic acid, blister package, C 723 Benzoic acid BIG Package, C 43 Benzoic acid NBS 39i, C 9 Gelatine capsules, C 10 Acetobutyrate capsules, C 12 A Combustion bags 70 x 35 mm, C 12 Combustion bags 40 x 35 mm, C 14 Combustible crucible, C 15 Paraffin strips, C 16 Parafilm, C 17 Paraffin

Data Sheet

Analytical line / Calorimeters



C 7000 basic equipment set 1

The C 7000 is the first IKA® calorimeter with a completely dry system for measuring the gross calorific value of solid and liquid samples. The temperature is measured directly in the decomposition system. This results in measurement times in the range of 3 to 7 minutes (depending on the sample). The system can manage up to 8 different decomposition vessels using a code ring scheme.

- High sample frequency
- Precise and reproducible determination of gross calorific values according to ISO 1928
- Reduction of routine work through automatic application flow
- Automatic decomposition vessel identification
- Interface connections for scale, printer and PC
- User-friendly software C 5040 CalWin for controlling the calorimeter and administration of measuring data
- The decomposition vessel can be changed over to use combustible crucibles C 14

C 7000 basic equipment set 1 consisting of:

- C 7000 Measurement cell
- C 7010 Decomposition vessel, standard
- C 7002 Cooling system
- C 48 Oxygen station

Accessories: C 7010 Decomposition vessel, standard, C 7012 Decomposition vessel, halogen resistant, C 5010.4 Attachment for combustible crucible C14, C 5010.5 Crucible holder, big, C 7010.8 Venting handle, C 7030 Venting station, C 5040 CalWin, C 5041.10 Connection cable, C 7002 Cooling system (230V), KV 600 cooling water supply, C 21 Pelleting press, C 48 Oxygen station, C 29 Pressure gauge, oxygen, C 5003.1 Aqua Pro stabilizing agent, C 710.4 Cotton thread, cut to length, C 10 Acetobutyrate capsules, C 5010.3 Ignition wire, spare, C 5012.3 Ignition wire, platinum, C 4 Quartz dish, C 6 Quartz crucible, big, C 5 Set of VA combustion crucibles, C 710.2 Set of VA combustion crucibles, C 723 Benzoic acid, blister package, C 723 Benzoic acid BIG Package, C 43 Benzoic acid NBS 39i, C 9 Gelatine capsules, C 12 Combustion bags 40 x 35 mm, C 12 A Combustion bags 70 x 35 mm, C 14 Combustible crucible, C 15 Paraffin strips, C 16 Parafilm, C 17 Paraffin, AOD 1.11 Control standard, AOD 1.12 Control standard

Technical Data	
Measuring range max. [J]	30000
Measuring mode double dry (ISO 1928)	yes
Measuring time double dry approx. [min]	3
Double dry reproducibility (1g benzoic acid NBS39i) [%RSD]	0.2
Working temperature max. [°C]	30
Temperature measurement resolution [K]	0.0001
Cooling medium temperature min. [°C]	12
Cooling medium temperature max. [°C]	30
Cooling medium permissible operating pressure [bar]	9
Cooling medium	tap water
Type of cooling	flow
Flow rate min. [l/h]	120
Flow rate max. [l/h]	180
Oxygen operating pressure max. [bar]	40
Interface scale	RS232
Interface printer	Centronix
Interface PC	RS232
Oxygen filling	no
Degasification	no
Decomposition detection	yes
Decomposition vessel C 7010	yes
Dimensions (W x H x D) [mm]	310 x 395 x 490
Weight [kg]	43
Permissible ambient temperature [°C]	18 - 30
Permissible relative moisture [%]	80
RS 232 interface	yes
Voltage [V]	220 - 240
Frequency [Hz]	50/60
Power input [W]	260
Ident. No.	8800900



C 5000 control package 2/12

The IKA® calorimeter C 5000 control is the only calorimeter in the world that offers a free selection of 3 working methods:

Thus it is possible to perform determinations of gross calorific values of liquid and solid samples in adiabatic (approx. 14 - 18 min), isoperibolic (approx. 22 min) and dynamic (reduced time: approx. 10 min) mode. A high level of automation in addition to an extensive range of accessories leave nothing more to wish for.

- Automatic water handling system includes tempering, filling and emptying of calorimeter inner vessel
- Automatic oxygen filling and degassing of the decomposition vessel
- Automatic decomposition vessel identification
- Validation according to DIN 51900, ISO 1928, ASTM D240, ASTM D4809, ASTM D5865, ASTM D1989, ASTM D5468, ASTM E711
- 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)
- LIMS integration is possible
- Cooling water supply via thermostat f.e IKA KV 600 (accessory) or firmly installed water connection, (temperature range 10 - 19 °C)
- Special halogen resistant vessel C 5012 for quantitative decomposition of halogens and sulfur
- The decomposition vessel can be changed over to use combustible crucibles C 14 (accessory C 5010.4 is needed)
- Standard consumables for calibrations and initial operation included with delivery

Accessories: KV 600 cooling water supply, C 5010 Decomposition vessel, standard, C 5012 Decomposition vessel, halogen resistant, C 5010.4 Attachment for combustible crucible C14, C 5010.5 Crucible holder, big, C 5030 Venting station, C 5020 Sample rack, C 5040 CalWin, C 5041.10 Connection cable, C 21 Pelleting press, C 29 Pressure gauge, oxygen, C 5003.1 Aqua Pro stabilizing agent, C 710.4 Cotton thread, cut to length, C 5010.3 Ignition wire, spare, C 5012.3 Ignition wire, platinum, C 4 Quartz dish, C 6 Quartz crucible, big, C 5 Set of VA combustion crucibles, C 710.2 Set of VA combustion crucibles, C 723 Benzoic acid BIG Package, C 723 Benzoic acid, blister package, C 43 Benzoic acid NBS 39i, 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 14 Combustible crucible, C 15 Paraffin strips, C 16 Paraffin, C 17 Paraffin, AOD 1.11 Control standard, AOD 1.12 Control standard

Technical Data

Measuring range max. [J]	40000
Measuring mode adiabatic 22°C	yes
Measuring mode dynamic 22°C	yes
Measuring mode isoperibol 22°C	yes
Measuring mode adiabatic 25°C	yes
Measuring mode dynamic 25°C	yes
Measuring mode isoperibol 25°C	yes
Measuring mode dynamic 30°C	no
Measuring mode isoperibol 30°C	no
Measuring mode double dry (ISO 1928)	no
Measuring time adiabatic approx. [min]	15
Measuring time dynamic approx. [min]	10
Measuring time isoperibol approx. [min]	22
Reproducibility adiabatic (1g benzoic acid NBS39i) [%RSD]	0.05
Reproducibility dynamic (1g benzoic acid NBS39i) [%RSD]	0.1
Reproducibility isoperibol (1g benzoic acid NBS39i) [%RSD]	0.05
Working temperature max. [°C]	25
Temperature measurement resolution [K]	0.0001
Cooling medium temperature min. [°C]	10
Cooling medium temperature max. [°C]	19
Cooling medium permissible operating pressure [bar]	9
Cooling medium	tap water
Type of cooling	flow
Flow rate min. [l/h]	18
Flow rate max. [l/h]	42
Oxygen operating pressure max. [bar]	40
Interface scale	RS232
Interface printer	Centronix
Interface PC	RS232
Interface test rack	yes
Interface ext. monitor	no
Interface ext. keyboard	no
Oxygen filling	yes
Degasification	yes
Decomposition detection	yes
Decomposition vessel C 5010	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]	560 x 400 x 380
Weight [kg]	42
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]	230
Frequency [Hz]	50/60
Power input [W]	1300
Ident. No.	8803400



C 5000 control package 2/10

The IKA® calorimeter C 5000 control is the only calorimeter in the world that offers a free selection of 3 working methods:

Thus it is possible to perform determinations of gross calorific values of liquid and solid samples in adiabatic (approx. 14 - 18 min), isoperibolic (approx. 22 min) and dynamic (reduced time: approx. 10 min) mode. A high level of automation in addition to an extensive range of accessories leave nothing more to wish for.

- Automatic water handling system includes tempering, filling and emptying of calorimeter inner vessel
- Automatic oxygen filling and degassing of the decomposition vessel
- Automatic decomposition vessel identification
- Validation according to DIN 51900, ISO 1928, ASTM D240, ASTM D4809, ASTM D5865, ASTM D1989, ASTM D5468, ASTM E711
- 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)
- LIMS integration is possible
- Cooling water supply via thermostat f.e IKA KV 600 (accessory) or firmly installed water connection, (temperature range 10 - 19°C)
- Special halogen resistant vessel C 5012 for quantitative decomposition of halogens and sulfur (accessory)
- The decomposition vessel can be changed over to use combustible crucibles C 14 (accessory C 5010.4 is needed)
- Standard consumables for calibrations and initial operation included with delivery

Accessories: KV 600 cooling water supply, C 5010 Decomposition vessel, standard, C 5012 Decomposition vessel, halogen resistant, C 5010.4 Attachment for combustible crucible C14, C 5010.5 Crucible holder, big, C 5030 Venting station, C 5020 Sample rack, C 5040 CalWin, C 5041.10 Connection cable, C 21 Pelleting press, C 29 Pressure gauge, oxygen, C 5003.1 Aqua Pro stabilizing agent, C 710.4 Cotton thread, cut to length, C 5010.3 Ignition wire, spare, C 5012.3 Ignition wire, platinum, C 4 Quartz dish, C 6 Quartz crucible, big, C 5 Set of VA combustion crucibles, C 710.2 Set of VA combustion crucibles, C 723 Benzoic acid BIG Package, C 723 Benzoic acid, blister package, C 43 Benzoic acid NBS 39i, 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 14 Combustible crucible, C 15 Paraffin strips, C 16 Parafilm, C 17 Paraffin, AOD 1.11 Control standard, AOD 1.12 Control standard

Technical Data

Measuring range max. [J]	40000
Measuring mode adiabatic 22°C	yes
Measuring mode dynamic 22°C	yes
Measuring mode isoperibol 22°C	yes
Measuring mode adiabatic 25°C	yes
Measuring mode dynamic 25°C	yes
Measuring mode isoperibol 25°C	yes
Measuring mode dynamic 30°C	no
Measuring mode isoperibol 30°C	no
Measuring mode double dry (ISO 1928)	no
Measuring time adiabatic approx. [min]	15
Measuring time dynamic approx. [min]	10
Measuring time isoperibol approx. [min]	22
Reproducibility adiabatic (1g benzoic acid NBS39i) [%RSD]	0.05
Reproducibility dynamic (1g benzoic acid NBS39i) [%RSD]	0.1
Reproducibility isoperibol (1g benzoic acid NBS39i) [%RSD]	0.05
Working temperature max. [°C]	25
Temperature measurement resolution [K]	0.0001
Cooling medium temperature min. [°C]	10
Cooling medium temperature max. [°C]	19
Cooling medium permissible operating pressure [bar]	9
Cooling medium	tap water
Type of cooling	flow
Flow rate min. [l/h]	18
Flow rate max. [l/h]	42
Oxygen operating pressure max. [bar]	40
Interface scale	RS232
Interface printer	Centronix
Interface PC	RS232
Interface test rack	yes
Interface ext. monitor	no
Interface ext. keyboard	no
Oxygen filling	yes
Degasification	yes
Decomposition detection	yes
Decomposition vessel C 5010	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]	560 x 400 x 380
Weight [kg]	40
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]	230
Frequency [Hz]	50/60
Power input [W]	1300
Ident. No.	8803200



C 5000 control package 1/12

The IKA® calorimeter C 5000 control is the only calorimeter in the world that offers a free selection of 3 working methods:

Thus it is possible to perform determinations of gross calorific values of liquid and solid samples in adiabatic (approx. 14 - 18 min), isoperibolic (approx. 22 min) and dynamic (reduced time: approx. 10 min) mode. A high level of automation in addition to an extensive range of accessories leave nothing more to wish for.

- Automatic water handling system includes tempering, filling and emptying of calorimeter inner vessel
- Automatic oxygen filling and degassing of the decomposition vessel
- Automatic decomposition vessel identification
- Validation according to DIN 51900, ISO 1928, ASTM D240, ASTM D4809, ASTM D5865, ASTM D1989, ASTM D5468, ASTM E711
- 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)
- LIMS integration is possible
- Special halogen resistant vessel C 5012 for quantitative decomposition of halogens and sulfur
- The decomposition vessel can be changed over to use combustible crucibles C 14 (accessory C 5010.4 is needed)

Standard consumables for calibrations and initial operation included with delivery

Accessories: C 5010 Decomposition vessel, standard, C 5012 Decomposition vessel, halogen resistant, C 5010.4 Attachment for combustible crucible C14, C 5010.5 Crucible holder, big, C 5030 Venting station, C 5020 Sample rack, C 5040 CalWin, C 5041.10 Connection cable, C 21 Pelleting press, C 29 Pressure gauge, oxygen, C 5003.1 Aqua Pro stabilizing agent, C 710.4 Cotton thread, cut to length, C 5010.3 Ignition wire, spare, C 5012.3 Ignition wire, platinum, C 4 Quartz dish, C 6 Quartz crucible, big, C 5 Set of VA combustion crucibles, C 710.2 Set of VA combustion crucibles, C 723 Benzoic acid BIG Package, C 723 Benzoic acid, blister package, C 43 Benzoic acid NBS 39i, 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 14 Combustible crucible, C 15 Paraffin strips, C 16 Parafilm, C 17 Paraffin, AOD 1.11 Control standard, AOD 1.12 Control standard

Technical Data	
Measuring range max. [J]	40000
Measuring mode adiabatic 22°C	yes
Measuring mode dynamic 22°C	yes
Measuring mode isoperibol 22°C	yes
Measuring mode adiabatic 25°C	yes
Measuring mode dynamic 25°C	yes
Measuring mode isoperibol 25°C	yes
Measuring mode dynamic 30°C	no
Measuring mode isoperibol 30°C	no
Measuring mode double dry (ISO 1928)	no
Measuring time adiabatic approx. [min]	15
Measuring time dynamic approx. [min]	10
Measuring time isoperibol approx. [min]	22
Reproducibility adiabatic (1g benzoic acid NBS39i) [%RSD]	0.05
Reproducibility dynamic (1g benzoic acid NBS39i) [%RSD]	0.1
Reproducibility isoperibol (1g benzoic acid NBS39i) [%RSD]	0.05
Working temperature max. [°C]	25
Temperature measurement resolution [K]	0.0001
Cooling medium	dist. water
Type of cooling	internal
Oxygen operating pressure max. [bar]	40
Interface scale	RS232
Interface printer	Centronix
Interface PC	RS232
Interface test rack	yes
Interface ext. monitor	no
Interface ext. keyboard	no
Oxygen filling	yes
Degasification	yes
Decomposition detection	yes
Decomposition vessel C 5010	no
Decomposition vessel C 5012	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]	740 x 400 x 380
Weight [kg]	58
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]	230
Frequency [Hz]	50/60
Power input [W]	1300
Ident. No.	8803300



C 5000 control package 1/10

The IKA® calorimeter C 5000 control is the only calorimeter in the world that offers a free selection of 3 working methods:

Thus it is possible to perform determinations of gross calorific values of liquid and solid samples in adiabatic (approx. 14 - 18 min), isoperibolic (approx. 22 min) and dynamic (reduced time: approx. 10 min) mode. A high level of automation in addition to an extensive range of accessories leave nothing more to wish for.

- Automatic water handling system includes tempering, filling and emptying of calorimeter inner vessel
- Automatic oxygen filling and degassing of the decomposition vessel
- Automatic decomposition vessel identification
- Validation according to DIN 51900, ISO 1928, ASTM D240, ASTM D4809, ASTM D5865, ASTM D1989, ASTM D5468, ASTM E711
- 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)
- LIMS integration is possible
- Special halogen resistant vessel C 5012 for quantitative decomposition of halogens and sulfur (accessory)
- The decomposition vessel can be changed over to use combustible crucibles C 14 (accessory C 5010.4 is needed)
- Standard consumables for calibrations and initial operation included with delivery

Accessories: C 5010 Decomposition vessel, standard, C 5012 Decomposition vessel, halogen resistant, C 5010.4 Attachment for combustible crucible C14, C 5010.5 Crucible holder, big, C 5030 Venting station, C 5020 Sample rack, C 5040 CalWin, C 5041.10 Connection cable, C 21 Pelleting press, C 29 Pressure gauge, oxygen, C 5003.1 Aqua Pro stabilizing agent, C 710.4 Cotton thread, cut to length, C 5010.3 Ignition wire, spare, C 5012.3 Ignition wire, platinum, C 4 Quartz dish, C 6 Quartz crucible, big, C 5 Set of VA combustion crucibles, C 710.2 Set of VA combustion crucibles, C 723 Benzoic acid BIG Package, C 723 Benzoic acid, blister package, C 43 Benzoic acid NBS 39i, 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 14 Combustible crucible, C 15 Paraffin strips, C 16 Parafilm, C 17 Paraffin, AOD 1.11 Control standard, AOD 1.12 Control standard

Technical Data	
Measuring range max. [J]	40000
Measuring mode adiabatic 22°C	yes
Measuring mode dynamic 22°C	yes
Measuring mode isoperibol 22°C	yes
Measuring mode adiabatic 25°C	yes
Measuring mode dynamic 25°C	yes
Measuring mode isoperibol 25°C	yes
Measuring mode dynamic 30°C	no
Measuring mode isoperibol 30°C	no
Measuring mode double dry (ISO 1928)	no
Measuring time adiabatic approx. [min]	15
Measuring time dynamic approx. [min]	10
Measuring time isoperibol approx. [min]	22
Reproducibility adiabatic (1g benzoic acid NBS39i) [%RSD]	0.05
Reproducibility dynamic (1g benzoic acid NBS39i) [%RSD]	0.1
Reproducibility isoperibol (1g benzoic acid NBS39i) [%RSD]	0.05
Working temperature max. [°C]	25
Temperature measurement resolution [K]	0.0001
Cooling medium	dist. water
Type of cooling	internal
Oxygen operating pressure max. [bar]	40
Interface scale	RS232
Interface printer	Centronix
Interface PC	RS232
Interface test rack	yes
Interface ext. monitor	no
Interface ext. keyboard	no
Oxygen filling	yes
Degasification	yes
Decomposition detection	yes
Decomposition vessel C 5010	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]	740 x 400 x 380
Weight [kg]	58
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]	230
Frequency [Hz]	50/60
Power input [W]	1300
Ident. No.	8803000

Data Sheet

Analytical line / Calorimeters



C 2000 control version 2

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 control 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, 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
 - 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
 - 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.
- A PC or notebook is required to operate the C 2000 control (not included with delivery)

Accessories: C 5010 Decomposition vessel, standard, C 5012 Decomposition vessel, halogen resistant, C 5010.4 Attachment for combustible crucible C14, C 5010.5 Crucible holder, big, C 5030 Venting station, C 5020 Sample rack, KV 600 cooling water supply, C 5040 CalWin, C 5041.10 Connection cable, C 21 Pelleting press, C 29 Pressure gauge, oxygen, C 25 Pressure regulating valve, C 62 Decomposition vessel, "high pressure", C 60 Conversion set for C 62, C 5003.1

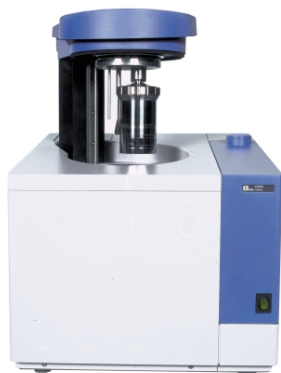
Technical Data

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	yes
Decomposition vessel C 5010	no
Decomposition vessel C 5012	yes
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
Ident. No.	8802100

Aqua Pro stabilizing agent, AOD 1.11 Control standard, C 710.4 Cotton thread, cut to length, C 5010.3 Ignition wire, spare, C 5012.3 Ignition wire, platinum, C 4 Quartz dish, C 6 Quartz crucible, big, C 5 Set of VA combustion crucibles, C 710.2 Set of VA combustion crucibles, C 723 Benzoic acid, blister package, C 723 Benzoic acid BIG Package, C 43 Benzoic acid NBS 39i, 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 14 Combustible crucible, C 15 Paraffin strips, C 16 Parafilm, C 17 Paraffin, AOD 1.12 Control standard

Data Sheet

Analytical line / Calorimeters



C 2000 control 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 control 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, 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
 - 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.
- A PC or notebook is required to operate the C 2000 control (not included with delivery)

Accessories: C 5010 Decomposition vessel, standard, C 5012 Decomposition vessel, halogen resistant, C 5010.4 Attachment for combustible crucible C14, C 5010.5 Crucible holder, big, C 5030 Venting station, C 5020 Sample rack, KV 600 cooling water supply, C 5040 CalWin, C 5041.10 Connection cable, C 21 Pelleting press, C 29 Pressure gauge, oxygen, C 25 Pressure regulating valve, C 62

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	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
Ident. No.	8802000

Decomposition vessel, "high pressure", C 60 Conversion set for C 62, C 5003.1
Aqua Pro stabilizing agent, C 710.4 Cotton thread, cut to length, C 5010.3 Ignition
wire, spare, C 5012.3 Ignition wire, platinum, C 4 Quartz dish, C 6 Quartz crucible,
big, C 5 Set of VA combustion crucibles, C 710.2 Set of VA combustion crucibles, C
723 Benzoic acid, blister package, C 723 Benzoic acid BIG Package, C 43 Benzoic
acid NBS 39i, 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 14
Combustible crucible, C 15 Paraffin strips, C 16 Parafilm, C 17 Paraffin, AOD 1.11
Control standard, AOD 1.12 Control standard

Data Sheet

Analytical line / Calorimeters



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 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

- 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.

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.	8802400

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

Data Sheet

Analytical line / Calorimeters



C 2000 basic version 2

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, 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
- 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
- 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.

Accessories: C 5010 Decomposition vessel, standard, C 5012 Decomposition vessel, halogen resistant, C 5010.4 Attachment for combustible crucible C14, C 5010.5 Crucible holder, big, C 5030 Venting station, C 5020 Sample rack, KV 600 cooling water supply, C 5040 CalWin, C 5041.10 Connection cable, C 21 Pelleting press, C 29 Pressure gauge, oxygen, C 25 Pressure regulating valve, C 62 Decomposition vessel, "high pressure", C 60 Conversion set for C 62, C 5003.1 Aqua Pro stabilizing agent, C 710.4 Cotton thread, cut to length, C 5010.3 Ignition wire, spare, C 5012.3 Ignition wire, platinum, C 4 Quartz dish, C 6 Quartz crucible,

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	yes
Decomposition vessel C 5010	no
Decomposition vessel C 5012	yes
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
Ident. No.	8801900

big, C 5 Set of VA combustion crucibles, C 710.2 Set of VA combustion crucibles, C 723 Benzoic acid, blister package, C 723 Benzoic acid BIG Package, C 43 Benzoic acid NBS 39i, 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 14 Combustible crucible, C 15 Paraffin strips, C 16 Parafilm, C 17 Paraffin, AOD 1.11 Control standard, AOD 1.12 Control standard

Data Sheet

Analytical line / Calorimeters



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, 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

- 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.

Accessories: C 5010 Decomposition vessel, standard, C 5012 Decomposition vessel, halogen resistant, C 5010.4 Attachment for combustible crucible C14, C 5010.5 Crucible holder, big, C 5030 Venting station, C 5020 Sample rack, KV 600 cooling water supply, C 5040 CalWin, C 5041.10 Connection cable, C 21 Pelleting press, C 29 Pressure gauge, oxygen, C 25 Pressure regulating valve, C 62 Decomposition vessel, "high pressure", C 60 Conversion set for C 62, C 5003.1 Aqua Pro stabilizing agent, C 710.4 Cotton thread, cut to length, C

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]	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]	35
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 / 100 - 120
Frequency [Hz]	50/60
Power input [W]	1800
Ident. No.	8801800

5010.3 Ignition wire, spare, C 5012.3 Ignition wire, platinum, C 4 Quartz dish, C 6 Quartz crucible, big, C 5 Set of VA combustion crucibles, C 710.2 Set of VA combustion crucibles, C 723 Benzoic acid, blister package, C 723 Benzoic acid BIG Package, C 43 Benzoic acid NBS 39i, 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 14 Combustible crucible, C 15 Paraffin strips, C 16 Parafilm, C 17 Paraffin, AOD 1.11 Control standard, AOD 1.12 Control standard

Data Sheet

Analytical line / Calorimeters



C 7000 basic equipment set 2

The C 7000 is the first IKA® calorimeter with a completely dry system for measuring the gross calorific value of solid and liquid samples. The temperature is measured directly in the decomposition system. This results in measurement times in the range of 3 to 7 minutes (depending on the sample). The system can manage up to 8 different decomposition vessels using a code ring scheme.

- High sample frequency
- Precise and reproducible determination of gross calorific values according to ISO 1928
- Reduction of routine work through automatic application flow
- Automatic decomposition vessel identification
- Interface connections for scale, printer and PC
- User-friendly software C 5040 CalWin for controlling the calorimeter and administration of measuring data
- Special halogen resistant vessel for quantitative decomposition of halogens and sulfur
- The decomposition vessel can be changed over to use combustible crucibles C 14

C 7000 basic equipment set 2 consisting of:

- C 7000 Measurement cell
- C 7012 Decomposition vessel, halogen resistant
- C 7002 Cooling system
- C 48 Oxygen station

Accessories: C 7010 Decomposition vessel, standard, C 5010.4 Attachment for combustible crucible C14, C 5010.5 Crucible holder, big, C 7010.8 Venting handle, C 7030 Venting station, C 5040 CalWin, C 5041.10 Connection cable, C 7002 Cooling system (230V), KV 600 cooling water supply, C 21 Pelleting press, C 48 Oxygen station, C 29 Pressure gauge, oxygen, C 7012 Decomposition vessel, halogen resistant, C 5003.1 Aqua Pro stabilizing agent, C 710.4 Cotton thread, cut to length, C 5010.3 Ignition wire, spare, C 5012.3 Ignition wire, platinum, C 4 Quartz dish, C 6 Quartz crucible, big, C 5 Set of VA combustion crucibles, C 710.2 Set of VA combustion crucibles, C 723 Benzoic acid, blister package, C 723 Benzoic acid BIG Package, C 43 Benzoic acid NBS 39i, 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 14 Combustible crucible, C 15 Paraffin strips, C 16 Parafilm, C 17 Paraffin, AOD 1.11 Control standard, AOD 1.12 Control standard

Technical Data

Measuring range max. [J]	30000
Measuring mode double dry (ISO 1928)	yes
Measuring time double dry approx. [min]	3
Working temperature max. [°C]	30
Temperature measurement resolution [K]	0.0001
Cooling medium temperature min. [°C]	12
Cooling medium temperature max. [°C]	30
Cooling medium permissible operating pressure [bar]	9
Cooling medium	tap water
Type of cooling	flow
Flow rate min. [l/h]	120
Flow rate max. [l/h]	180
Oxygen operating pressure max. [bar]	40
Interface scale	RS232
Interface printer	Centronix
Interface PC	RS232
Oxygen filling	no
Degasification	no
Decomposition detection	yes
Decomposition vessel C 7012	yes
Dimensions (W x H x D) [mm]	800 x 395 x 490
Weight [kg]	43
Permissible ambient temperature [°C]	18 - 30
Permissible relative moisture [%]	80
RS 232 interface	yes
Voltage [V]	220 - 240
Frequency [Hz]	50/60
Power input [W]	260
Ident. No.	8801400