



Heating Mantles & Hotplates

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Large Capacity Mantles and Hotplates

Melting Point Apparatus

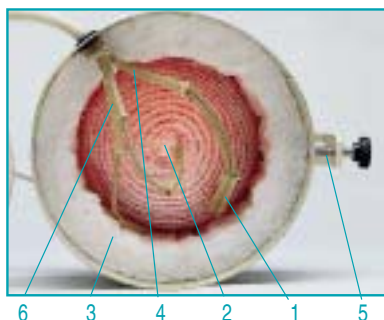
Safety Screened Mantles

Stirring Mantles





Heating mantles



Features

1. Hand woven mineral wool with flexible braiding, which adapts itself around the flask for optimum heat transfer.
2. The heating element is distributed homogeneously throughout the mantle, providing even heating with no hot spots. Connectors and cables protected by mineral fibre tubes. Efficient low power consumption, potential of 1 w/cm², Maximum mantle temperature of 450 °C.
3. Cool exterior, carcinogenic free thermal insulation between the mantle and the external case.
4. Pure Nickel connection terminals protected by mineral fibre tubing that prevent the deterioration of the contact due to high temperature, resulting in a longer life.
5. Support for retort bar.

Applications

For digestion distillation, extraction, evaporation and boiling processes.



Safety
Following CE standards, in the case of liquid spills an earth wire is woven into the mantle to prevent electric shocks.



Models selection summary table

| Capacity ml | Ø Flask mm | Fibroman C 2 positions | Fibroman D Woven | Fibroman O Funnel hole | Fibroman N Heater control | Stirring Woven | Kjeldahl Bank | No. Places | Extraction Bank | No. Places |
|-------------|------------|------------------------|------------------|------------------------|---------------------------|----------------|---------------|------------|-----------------|------------|
| 100 | 65 | 3003141 | - | - | 3000996 | - | 6014204 | 4 | - | - |
| 100 | 65 | - | - | - | - | - | 6014206 | 6 | - | - |
| 250 | 83 | 3003142 | 3004192 | - | 3000721 | 3000447 | - | - | - | - |
| 500 | 102 | 3003145 | 3004195 | - | 3000722 | 3000448 | 6003294 | 4 | 6003284 | 4 |
| 500 | 102 | - | - | - | - | - | 6003296 | 6 | 6003286 | 6 |
| 1000 | 132 | 3031410 | 3041910 | 3049110 | 3000723 | 3000449 | - | - | - | - |
| 2000 | 164 | 3031420 | 3041920 | 3049120 | 3000724 | 3000450 | - | - | - | - |
| 3000 | 190 | 3031430 | - | - | - | - | - | - | - | - |
| 4000 | 203 | 3031440 | - | - | - | - | - | - | - | - |
| 5000 | 222 | 3031450 | - | 3049150 | - | - | - | - | - | - |
| 6000 | 235 | 3031460 | - | - | - | - | - | - | - | - |
| 10000 | 290 | 3314100 | - | 3491100 | - | - | - | - | - | - |
| 20000 | 365 | 3314200 | - | 3491200 | - | - | - | - | - | - |



Heating mantles 'Fibroman-C'

TWO HEATING POWER POSITIONS.

..... With independent heating control

Features

Two position rocker switch heating control; 50 % and 100 %, with power on indicator lamp.

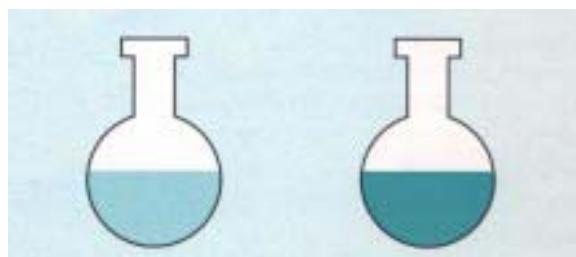
Technical description

- DUR ALLOY aluminium exterior case with corrosion resistant epoxy coating.
- Suspended mineral wool woven heating mantle.
- Heating element homogeneously distributed throughout the woven mantle.
- Cool exterior, carcinogenic free thermal insulation between the mantle and the external case.
- Nickel connectors.
- Retort stand clamp at the back of the unit.
- In the case of breakage or spills a drain hole is provided at the bottom of the mantle.
- Safety, woven in earth into the mantle.



| Part No. | Flask Capacity ml | Ø/Height (exterior) cm | Power W | Weight Kg |
|----------|-------------------|------------------------|---------|-----------|
| 3003141 | 100 | 16 11 | 120 | 1 |
| 3003142 | 250 | 16 11 | 120 | 1.1 |
| 3003145 | 500 | 17 12 | 250 | 1.2 |
| 3031410 | 1000 | 21 12.5 | 380 | 1.4 |
| 3031420 | 2000 | 24 15 | 500 | 2 |
| 3031430 | 3000 | 27 18 | 600 | 2.2 |
| 3031440 | 4000 | 31 19 | 700 | 2.8 |
| 3031450 | 5000 | 31 19 | 800 | 3.2 |
| 3031460 | 6000 | 31 19 | 1000 | 3.4 |
| 3314100 | 10000 | 38 22 | 1300 | 4.7 |
| 3314200 | 20000 | 48 26 | 2000 | 11 |

CROSS SECTION OF HEATED FLASKS



Position I
50 % power output

Position II
100 % power output

Controllers and regulators, see accessories

Accessory



Support bar
Dur-Aluminium of 12 Ø x 700 mm long.
Part No. 6000270





Heating mantles 'Fibroman-D'

Features

Made with a double woven mineral wool soft exterior. A mains switch and safety earth are also incorporated. The mantle can be supported by a retort ring or tripod stand.

Accessories

| Part No. | Capacity Flask ml | Ø/Height (exterior) cm | Power W | Wt Kg | Retort | Tripod Ring | Mantle Part No. |
|----------|----------------------|---------------------------|------------|----------|---------|----------------|--------------------|
| 3004192 | 250 | 15 6.5 | 120 | 0.8 | 7041921 | 7041922 | 3004192 |
| 3004195 | 500 | 17 7 | 250 | 0.9 | 7041951 | 7041952 | 3004195 |
| 3041910 | 1000 | 20 8.5 | 380 | 1 | 7419101 | 7419102 | 3041910 |
| 3041920 | 2000 | 24 11 | 500 | 1.5 | 7419201 | 7419202 | 3041920 |



Heating mantles, suitable for funnels 'Fibroman O'

COMPLETE WITH TRIPOD SUPPORT.

Applications

Suitable for round bottom flasks, Funnels and reaction flasks with a bottom drain.

Features

- Woven mantle of mineral fibre.
- Metal exterior with an epoxy corrosion resistant coating.
- On/Off switch.
- Safety earth interwoven throughout the mantle.

| Part No. | Flask Capacity ml | Ø /Height (exterior body) cm | Ø /Hole mm Bottom | Tripod Height mm | Power W | Weight Kg |
|----------|----------------------|---------------------------------|----------------------|---------------------|------------|--------------|
| 3049110 | 1000 | 24 10.5 | 80 | 340 | 380 | 1.5 |
| 3049120 | 2000 | 28.5 12 | 80 | 360 | 500 | 2.5 |
| 3049150 | 5000 | 37.5 17.5 | 90 | 380 | 800 | 3.5 |
| 3491100 | 10000 | 43.5 20 | 90 | 430 | 1300 | 5 |
| 3491200 | 20000 | 48 25 | 120 | 360 | 2000 | 13 |

Due to the size and capacity of the part no. 3491200 of 20000 ml, the case is made of a spun cylinder. See accessories for controllers and regulators.



Stirring heating mantles

REQUIRES THE MAGNETIC STIRRING CONTROLLER AND BASE "AGIMAN".

| Part No. | Flask Capacity ml | Ø/Height (exterior) cm | Power W | Weight Kg |
|----------|----------------------|---------------------------|------------|--------------|
| 3000447 | 250 | 15 6.5 | 120 | 0.8 |
| 3000448 | 500 | 17 7 | 250 | 0.9 |
| 3000449 | 1000 | 20 8.5 | 380 | 1 |
| 3000450 | 2000 | 24 11 | 500 | 1.5 |

Accessory

Stirring and heating controller AGIMAN with electronic temperature control and stir speeds of up to 1600 r.p.m. A connector at the back for sample temperature measurement and control permits the use of a digital or contact thermometer, "Sensoterm" or electronic temperature regulator "Electemp". See page 209 for more information. **Part No.** 7000446



AGIMAN with mantle

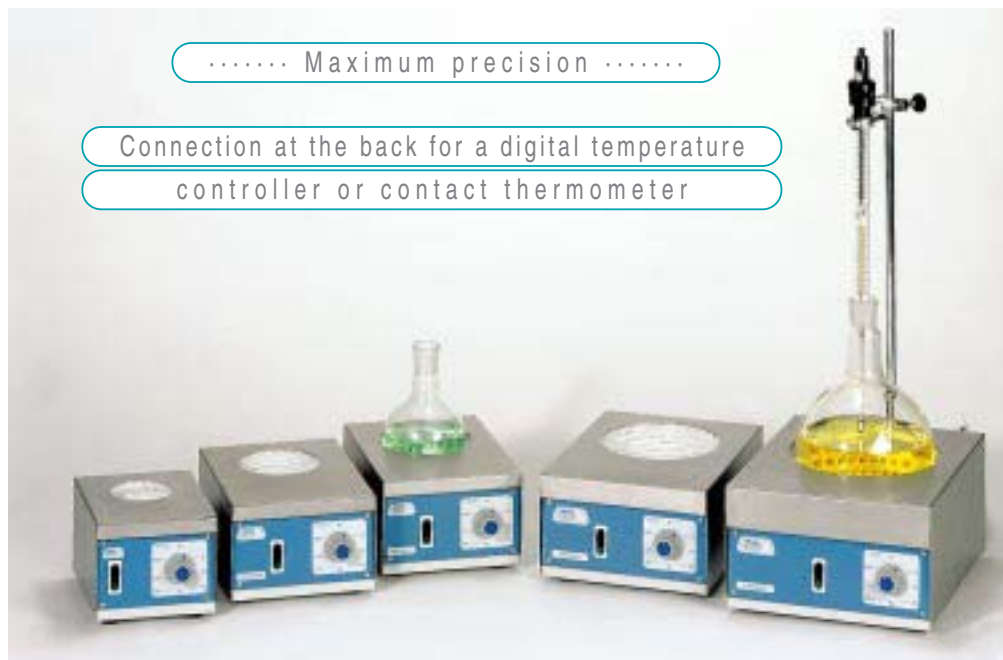
AGIMAN STIRRER

MANTLE



Heating mantles 'Fibroman-N'

HEATER CONTROL FROM 0-100 % WITH SAMPLE TEMPERATURE MONITOR CONNECTION.



..... Maximum precision

Connection at the back for a digital temperature controller or contact thermometer

Features

AISI 304 stainless steel outer casing with a rod support clamp at the back.
Safety earth woven into the mantle.

| Part No | Flask Capacity ml | Height/Width/Depth (exterior) cm | Power W | Weight Kg |
|---------|-------------------|----------------------------------|---------|-----------|
| 3000996 | 100 | 11 14 18 | 120 | 1.5 |
| 3000721 | 250 | 12 18 24 | 120 | 3 |
| 3000722 | 500 | 12 18 24 | 250 | 3 |
| 3000723 | 1000 | 13 21 27 | 380 | 4 |
| 3000724 | 2000 | 15 25 31 | 500 | 5 |

Control panel

Main power switch with power on indicator lamp

Heating control using a 0 to 100 % energy regulator.

Indicator lamp shows when the heating mantle is on.

To monitor the sample temperature, a connection at the back of the unit allows for a contact or digital thermometer "Sensoterm", to be connected. Alternatively an "Electemp" controller can be added to set and control the temperature of the unit.



Accessory

Support Bar made of Dur- aluminium, of Ø 12mm x 700 mm long.
Part No. 6000270

Heating mantle accessories



Double nut boss head.
Part No. 1000069



Spring clamp for holding thermometers.
Part No. 7000025



Clamp for supporting and holding condensers or other glassware. **Part No. 7000161**



Fibroman-N mantle accessories: controllers, regulators and thermometers

Contact thermometers.



| Part No. | Total length mm | Immersion length mm | Scale °C | Divisions °C |
|----------|--------------------|------------------------|-------------|-----------------|
| 3521159 | 465 | 150 | 0 - 100 | 1/1 |
| 3522159 | 465 | 150 | 0 - 200 | 2/1 |
| 3523159 | 465 | 150 | 0 - 300 | 5/1 |



Digital thermometer "Sensoterm".
Complete with Pt 1000 temperature probe.

Features

The digital thermometer has several advantages over the contact thermometer: the probe is separate from the control unit, keeping the electronics away from steam or other corrosive vapours and has no mercury content that could be spilled if broken.

Technical details

Temperature range - 50 to 300°C
 Temperature probe 3.5 dia x 250 mm immersion length
 Precision ± 1°C, ± 1 digit
 Resolution 1°C
 Temperature display LCD, display of 8 mm height
 Ambient conditions 0 to 60°C, relative humidity 80%
 Size (HWD) 130 x 71 x 24 mm (without temperature probe)

Part No. 1001009



Temperature controller "Electemp".

Features

Digital temperature control, P.I.D. operation, controlled by a microprocessor that is configurable to the users requirements.
 Temperature range from -150 °C up to 1300 °C.

Temperature sensor: thermo-resistance or thermocouple.

Functions: ON-OFF / P.I.D.

AUTOTUNNING. Automatically adjusts for the sample medium (Solid, liquid or air).

| Part No. | Height/Width/Depth (exterior) cm | | | Max. Power (at 230V) W | Weight Kg |
|----------|-------------------------------------|------|----|---------------------------|--------------|
| 3000887 | 10.5 | 13.5 | 21 | 3100 | 1.250 |

Accessory

Probe Pt 100.

Part No. 1000893

Probe K type.

Part No. 1000895

Fibroman-C-D-O mantle accessories: controllers and regulators



Energy controller "Enertron"

Interference free pulsed energy controller, from 4 to 100%

Connector at the back for a digital or contact thermometer.

| Part No. | Height/Width/Depth (exterior) cm | | | Max. Power (at 230V) W | Weight Kg |
|----------|-------------------------------------|------|----|---------------------------|--------------|
| 3000886 | 10.5 | 13.5 | 21 | 2500 | 1.2 |



Linear Triac digital controller "Triac".

Controllable applied power from 10 % to 100 %, Setting by voltage or current (Model dependent).

Selector (Volts/Amps) (Model dependent).

| Part No. | Height/Width/Depth (exterior) cm | | | Volts/Amps Selector | Max. Power W (at 230V) | Weight Kg |
|----------|-------------------------------------|------|----|------------------------|---------------------------|--------------|
| 3000888 | 10.5 | 13.5 | 21 | Yes | 1200 | 1.3 |
| 3000889 | 10.5 | 13.5 | 21 | Yes | 3000 | 1.3 |
| 3000890 | 10.5 | 13.5 | 21 | No | 1200 | 1.2 |
| 3000891 | 10.5 | 13.5 | 21 | No | 3000 | 1.2 |



Banks of heating mantles

Features

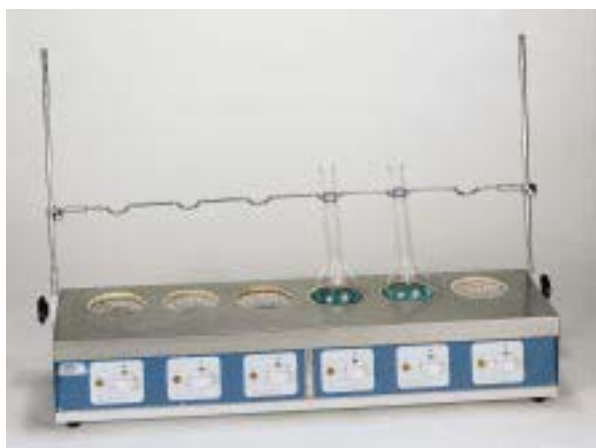
Independent heating control for each position.
Height adjustable bar to support condensers or other glassware, etc.

External case made of AISI 304 stainless steel.
Safety; An earth strip is woven into the mantle.

Control Panel

Temperature control by the use of a pulsed energy regulator. An indicator lamp shows when the mantle is on.

BANK OF HEATING MANTLES FOR KJELDAHL DIGESTIONS.
Adjustable mantle surface temperature up to 550 °C.



| Part No. | Application | Capacity Flask ml | No. of pos. | H/W/D (exterior) cm | | | Power W | Wt Kg |
|----------|----------------|-------------------|-------------|---------------------|-----|----|---------|-------|
| 6003294 | Macro-Kjeldahl | 300-500 | 4 | 18 | 76 | 25 | 1400 | 12 |
| 6003296 | Macro-Kjeldahl | 300-500 | 6 | 18 | 105 | 25 | 2100 | 16 |
| 6014204 | Micro-Kjeldahl | 100 | 4 | 16 | 59 | 21 | 600 | 9 |
| 6014206 | Micro-Kjeldahl | 100 | 6 | 16 | 81 | 21 | 900 | 12 |

BANK OF HEATING MANTLES FOR EXTRACTION APPLICATIONS
Mantle surface temperature adjustable up to 450 °C.



| Part No. | Capacity Flask | No. of places | H/W/D (exterior) cm | | | Power W | Wt Kg |
|----------|----------------|---------------|---------------------|-----|----|---------|-------|
| 6003284 | 500 | 4 | 18 | 76 | 25 | 1000 | 12 |
| 6003286 | 500 | 6 | 18 | 105 | 25 | 1500 | 16 |

Accessories (Digestion)



Fume extractor tube clips
Made of AISI 304 stainless steel.
Part No.
6000008 For bank of Macro-Kjeldahl.
6000009 For bank of Micro- Kjeldahl.



Borosilicate fume extractor tubes.
Part No.
1000104 For: Bank Macro-Kjeldahl,
4 positions.
1000106 For: Bank Macro-Kjeldahl,
6 positions.
1042044 For: Bank Micro-Kjeldahl,
4 positions.
1042066 For: Bank Micro-Kjeldahl,
6 positions.



Kjeldahl flask support
made of AISI304
stainless steel
Flasks 300-500 ml.
Part No. 1000002

Accessories (Extraction)



Double nut boss head.
Part No. 1000069



Clamp for holding condensers.
Part No. 7000403



Heating Tapes

HEATING TAPE SURFACE TEMPERATURES UP TO 210 °C, CONFORMS TO THE VDE. EN 60335-A. STANDARD.



Features

Heating elements distributed homogeneously between flexible moulded sheets of silicon.

Applications

For heating small areas such as heating ducts, valves and pipes etc.

| Part No. | Length m | Width mm | Power W |
|----------|-------------|-------------|------------|
| 3003178 | 0.80 | 25 | 180 |
| 3031710 | 1 | 25 | 210 |
| 3031715 | 1.5 | 25 | 265 |

Flexible heating cord



Features

For tape surface temperatures up to 180 °C. Thermally insulated using flexible silicon tube.

Applications

For heating small areas such as heating ducts, valves and pipes etc.

| Part No. | Length m | Ø Cord mm | Power W |
|----------|-------------|--------------|------------|
| 1000781 | 1,5 | 3 | 45 |
| 1000782 | 3 | 3 | 90 |
| 1000783 | 6 | 3 | 180 |
| 1000784 | 12 | 3 | 360 |

Heating mats for large surface area heating

MAT SURFACE TEMPERATURES UP TO 210 °C. CONFORMS TO VDE. EN 60335-A STANDARD.



Features

The heating element is insulated and distributed homogeneously between two sheets of flexible moulded silicon.

Heating Power: 0.39 W cm².

Surface temperature up to 210 °C.

Held in place by spring fittings or adhesives.

Applications

Heating applications: any type of surface heating from round to flat surfaces.

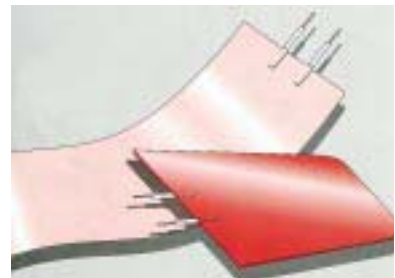
Drum heaters

Suitable for drums up to 200 litres with a diameter of 60 cm.

Total: 3 bands of 171 cm in length x 15 cm wide.

Power consumption 3000 w.

Part No. 4000200



MADE TO MEASURE ACCORDING
TO APPROVED PLANS

Accessories

See regulators and controllers



Heating Mantles

COOL EXTERIOR, WITH SAFETY EARTH SCREEN, CONTROLLED TO 450°C.

Features

Polypropylene cool exterior case around a ceramic fibre moulded mantle. A safety earth screen protects the user and mantle against spills. Replaceable mantle. Retort mountable.



Control Panel

A burst low spark controller controls the mantle. An indicator lamp shows when the mantle is heating up and is switched on.

Safety

These mantles have a circulation of air around the base of the unit maintaining a cool exterior. The earth screen protects the user against shocks in the case that there is a spill. This screen also acts as a heat diffuser preventing bumping.

| Model | Part No. | Capacity ml | H / W / D (exterior) cm | Power W | Wt. Kg |
|------------|----------|-------------|-------------------------|---------|--------|
| EM0 050 CE | 5200050 | 50 | 13 18 26 | 60 | 1 |
| EM0 100 CE | 5200100 | 100 | 13 18 26 | 60 | 1 |
| EM0 250 CE | 5200250 | 250 | 13 18 26 | 150 | 1 |
| EM0 500 CE | 5200500 | 500 | 15 24 31 | 200 | 1,5 |
| EM 1000 CE | 5201000 | 1000 | 15 24 31 | 300 | 1,5 |
| EM 2000 CE | 5202000 | 2000 | 19 35 40 | 500 | 2,5 |
| EM 3000 CE | 5203000 | 3000 | 19 35 40 | 500 | 2,7 |
| EM 5000 CE | 5205000 | 5000 | 19 35 40 | 800 | 3 |

Stirring Mantles

STIRRING MANTLES AUTO PICK MAGNETIC BAR PICK UP, REVERSIBLE ACTION, TEMPERATURE TO 450°C, 250 TO 2000ML

Features

Polypropylene cool exterior case around a ceramic fibre moulded mantle. A safety earth screen protects the user and mantle against spills. Replaceable mantle. Reversible stirring action with speeds up to 520r.p.m. Switching stirring direction every 20 seconds. Minimum bumping. Retort mountable.



Control

A burst low spark controller controls the mantle. An indicator lamp shows when the mantle is heating up and is switched on. The stir control is isolated at the bottom of the mantle.

Safety

These mantles have a circulation of air around the base of the unit maintaining a cool exterior. The earth screen protects the users against shocks in the case that there is a spill. This screen also acts as a heat diffuser preventing bumping.

| Models | Part No. | Capacity ml | H / W / D (exterior) cm | Heater / Motor Power W | Wt. Kg |
|-------------|----------|-------------|-------------------------|------------------------|--------|
| EMA0 250 CE | 5200253 | 250 | 15 18 26 | 150 20 | 2,3 |
| EMA0 500 CE | 5200503 | 500 | 16 24 31 | 200 20 | 3,3 |
| EMA 1000 CE | 5201003 | 1000 | 16 24 31 | 300 20 | 3,3 |
| EMA 2000 CE | 5202003 | 2000 | 20 35 40 | 500 20 | 6,7 |

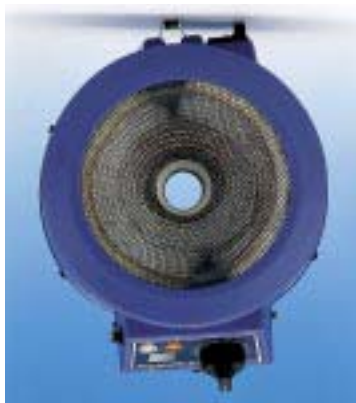


Funnel Mantle

SUITABLE FOR FUNNELS AND ACCOMMODATES SEVERAL FLASK SIZES. IN ONE MANTLE TEMPERATURE UP TO 450 °C. FROM 10 TO 5000 ml, FUNNELS UP TO 300 MM Ø

Features

Polypropylene cool exterior case around a ceramic fibre moulded mantle.
A safety earth screen protects the user and mantle against spills. Replaceable mantle.
The screen is moulded into three flask sizes.
A hole at the bottom of the mantle allows the use of funnels.
Two heat zones.
Retort mountable.



Control Panel

A burst low spark controller controls the mantle.
An indicator lamp shows when the mantle is heating up and is switched on.
A single switch heats the whole mantle or the lower half depending on the flask or funnel size.

Safety

These mantles have a circulation of air around the base of the unit maintaining a cool exterior.
The earth screen protects the users against shocks in the case that there is a spill. This screen also acts as a heat diffuser preventing bumping. The double heat zone prevents substances being burned on the side of the flask.



| Model | Part No. | Capacity ml | Ø int. mm | H / W / D (exterior) cm | Power W | Wt. Kg |
|-------------|----------|--------------------|-----------|-------------------------|---------|--------|
| EMV 50 CE | 5200051 | 10- 25 - 50 | 18 | 13 18 26 | 72 | 1,2 |
| EMV 250 CE | 5200251 | 100 - 150 - 250 | 18 | 13 18 26 | 120+ 60 | 1,2 |
| EMV 1000 CE | 5201001 | 500 - 1000 | 33 | 15 24 31 | 240+220 | 1,5 |
| EMV 5000 CE | 5205001 | 2000 - 3000 - 5000 | 68 | 20 33 40 | 600+360 | 3,8 |

Safety Screen Mantle

SUITABLE FOR RESINS AND SALTS. FOR TEMPERATURES UP TO 300 °C. FOR FLASKS OF 50 TO 1000 ML OR 500 TO 5000 ML AND FUNNELS OF 50 - 150 MM AND 100 - 300MM Ø.

Features

Polypropylene cool exterior case around a ceramic fibre moulded mantle.
A safety earth screen protects the user and



mantle against spills. Replaceable mantle.
A solid shield replaces the earth screen mould.
The shield is moulded into three flask sizes.
A hole at the bottom of the mantle allows the use of funnels. Two heat zones.
Retort mountable.

Control panel

A burst low spark controller controls the mantle.
An indicator lamp shows when the mantle is heating up and is switched on.
A single switch heats the whole mantle or the lower half depending on the flask or funnel size.

Safety

These mantles have a circulation of air around the base of the unit maintaining a cool exterior.
The shield catches any drips on the mantle from burning substances such as resins or salts.
This shields also acts as a heat diffuser preventing bumping.
The double heat zone prevents substances being burned on the side of the flask.

| Model | Part No. | Capacity ml | Ø interior mm | H / W / D (exterior) cm | Power W | Wt. Kg |
|---------------|----------|-------------|---------------|-------------------------|-----------|--------|
| EMX 1000 S-CE | 5201002 | 50 - 1000 | 24 | 15 24 31 | 150 + 80 | 1,8 |
| EMX 5000 S-CE | 5205002 | 500 - 5000 | 58 | 20 33 40 | 400 + 200 | 4 |



Universal mantle 3 in 1

EXTERNAL CONTROLLER, 3 SIZES IN ONE MANTLE. MAX TEMPERATURE 450°C

Features

Aluminium cool exterior case around a ceramic fibre moulded mantle.
A safety earth screen protects the user and



| Model | Part No. | Capacity ml | Ø / H (exterior) cm | Power W | Wt. Kg |
|-------------|----------|--------------|---------------------|---------|--------|
| KST 1000 CE | 5202510 | 250-500-1000 | 22 13 | 300 | 1,2 |

mantle against spills. Replaceable mantle.
The screen is moulded into three flask sizes.
Two heat zones.

Control Panel

External burst, low spark, controller controls the mantle.
An indicator lamp shows when the mantle is heating up and is switched on.
A single switch heats the whole mantle or the lower half depending on the flask or funnel size.

Safety

These mantles have a circulation of air around the base of the unit maintaining a cool exterior.
The earth screen protects the users against shocks in the case that there is a spill. This screen also acts as a heat diffuser preventing bumping.
The double heat zone prevents substances being burned on the side of the flask. Ideally suited for education

Safety Mantle CM-135

LOW TEMPERATURE SECURITY MANTLE EUROPE CLASS 1 AREA 1 BELOW FUME HOOD CEI 31-8 & CEI 64-2
CONSTRUCTION AND HEATING BELOW THE FLASH POINT OF THE SAMPLE WITH NO SPARK COMPONENTS.

Features

Uses a heating element around a soft mantle. Spark free external controller.
Pt100 monitors the temperature if it exceeds the set point, the mantle switches off.



Control panel

A separate wall mounted spark free controller
With safety cut-out. Digital setting of temperature and cut out temperature.

Safety

Safety approval to EN50.014-50.018 (Eexd 11 B-T3)
Used for volatile substances.
Maximum temperature 250°C

Ordering information: Both mantle and control panel need to be ordered,
Two mantles can be controlled from one controller.

| Model | Part No. | Capacity ml | Power W | Control Part No. |
|--------------|----------|-------------|---------|------------------|
| CM 135-250 | 5210250 | 250 | 150 | MC-91 |
| CM 135-500 | 5210500 | 500 | 250 | MC-91 |
| CM 135-1000 | 5211000 | 1000 | 400 | MC-91 |
| CM 135-2000 | 5212000 | 2000 | 500 | MC-91 |
| CM 135-3000 | 5213000 | 3000 | 600 | MC-91 |
| CM 135-5000 | 5215000 | 5000 | 900 | MC-93 |
| CM 135-10000 | 5210000 | 10000 | 1600 | MC-93 |
| CM 135-20000 | 5220000 | 20000 | 2400 | MC-93 |

Requires controller to be ordered separately. Part No. MC91 or MC93



Hotplates

(See Shakers, Mixers and Stirrers for Hotplate Stirrers)



Summary table of different models

| | | | | |
|--|---------------|------------|----------------|----------------|
| CIRCULAR WITH POWER CONTROL | | dia. 12 cm | dia. 15 cm | dia. 19 cm |
| Up to 400 °C | | 1000718 | 1000442 | 1000443 |
| Up to 250 °C | "SELECTEMP" | | 1000444 | |
| CIRCULAR WITH DOUBLE PLATE WITH ENERGY REGULATOR | | | | dia.19 cm |
| Up to 400 °C | "DUPLAC" | | | 4000634 |
| RECTANGULAR WITH ELECTRONIC CONTROL | | | 20 x 40 cm | 30 x 30 cm |
| Up to 400 °C | "COMBIPLAC" | | 3000156 | 3000718 |
| CIRCULAR WITH ELECTRONIC CONTROL | | | dia. 12 cm | dia. 19 cm |
| Up to 400 °C | "COMBIPLAC" | 3002301 | | 3002302 |
| RECTANGULAR WITH PRECISE CONTROL | | | 24 x 24 cm | 20 x 40 cm |
| 25 x 60 cm | | | | |
| Amb. + 5 °C up to 200 °C | "PLACTRONIC" | 6155100 | 6156100 | 6157100 |
| RECTANGULAR WITH HYDRAULIC THERMOSTAT | | | | 23 x 22 cm |
| Amb. + 5 °C up to 130 °C | "PLACFIN" | | | 7000497 |
| GLASS CERAMIC PLATE WITH ENERGY REGULATOR | | dia. 20 cm | 17 x 33 cm | 30 x 30 cm |
| Up to 400 °C | "CERAMICPLAC" | 3000919 | 3000920 | 3000921 |
| BANK OF HOTPLATES WITH ENERGY REGULATOR | | | 4 x dia. 12 cm | 6 x dia. 12 cm |
| Up to 400 °C | "UNIPLAC" | | 6002314 | 6002316 |



Hotplates-Circular

HOT PLATE TEMPERATURE UP TO 400 °C. 6 POSITION POWER CONTROLLER.

Features

Cast steel plate with embedded heating elements throughout.
Fast ramp rate to set temperature when using maximum power.

Enamelled outer casing that is resistant to high temperatures and corrosive agents.

Control Panel

6 position power regulator.

| Part No. | Plate dia. cm | Height/Width/Depth (exterior) cm | Power W | Weight Kg |
|----------|---------------|----------------------------------|---------|-----------|
| 1000718 | 12 | 8 20 20 | 1000 | 2.1 |
| 1000442 | 15 | 8 22 22 | 1500 | 3 |
| 1000443 | 19 | 8 26 26 | 2000 | 4.5 |



Hotplate - Circular 'Selectemp'

ADJUSTABLE TEMPERATURE FROM 45 °C UP TO 250°C. STABILITY ± 2 °C.

Features

Temperature control using a thermostat located in the center of the plate.
Non warping steel plate with embedded heating element throughout the plate surface.
Enamelled outer casing, resistant to high temperatures and corrosive agents with a top surface of AISI 304 stainless steel.

Control panel

Hydraulic thermostat temperature control synchronised with an indicator lamp.

Accessories

Circular sand, oil or water bath made of AISI304 stainless steel, suitable for the "Selectemp" hotplate. Dimensions 200 mm dia x 115 mm high. Comes complete with a lid with concentric reduction rings.

Part No. 7000008



| Part No. | Plate dia. cm | H/W/D (exterior) cm | Power W | Wt Kg |
|----------|---------------|---------------------|---------|-------|
| 1000444 | 15 | 6 30 22 | 1500 | 3 |



Hotplate -double- circular 'Duplac'

FOR PLATE TEMPERATURES UP TO 400 °C.

Features

Double hot plate with non warping cast steel plate with embedded heating elements throughout the hot plate surface.
Independent plate temperature control is maintained by pulsed energy controllers. The exterior being epoxy covered steel.

Control Panel

Two energy regulators synchronised with indicator lamps when in operation.

| Part No. | Plate dia. cm | H/W/D (exterior) cm | Power W | Wt Kg |
|----------|---------------|---------------------|---------|-------|
| 4000634 | 19 | 15 47 24 | 850 | 8.5 |





Hotplate- Rectangular ‘Combiplac’

PLATE TEMPERAURE ADJUSTABLE UP TO 400 °C.

Features

Electronic energy control. The non warp steel hotplate has heating elements embedded throughout the hotplate surface maintaining an even heat distribution.

The main case is made of AISI 304 stainless steel.

Control panel

Main power switch with luminous “ON” indicator lamp. Electronic energy control from 0 to 100 %. An indicator lamp shows when the unit is in operation.

A connector at the back of the unit permits the use of a contact or digital thermometer, alternatively when more accurate temperature control is required a “Sensoterm” or “Electrotemp” digital electronic controller can be used.



| Part No. | Plate Dims. Width/Depth cm | Height/Width/Depth (exterior) cm | Power W | Weight Kg |
|----------|-------------------------------|-------------------------------------|------------|--------------|
| 3000156 | 20 40 | 12 22 55 | 2000 | 9 |
| 3000718 | 30 30 | 13 33 46 | 2500 | 13 |

Accessories

Sand bath adapters.

Made entirely of AISI 310 stainless steel, removable for easy cleaning

| Part No. | Hotplate Part No. | H/W/D (Sand tray Dims.) cm |
|----------|----------------------|-------------------------------|
| 6000719 | 3000156 | 5.5 20 40 |
| 6000720 | 3000718 | 5.5 31 31 |



Hotplate-Circular ‘Combiplac’

PLATE TEMPERATURE ADJUSTABLE TO 400 °C

Features

Electronic energy controller with embedded heating element throughout the non warping steel hotplate surface.

A retort bar can be located on to the unit. The main case is made of AISI 304 stainless steel.

Control Panel

Main power switch with a luminous “ON” indicator. Temperature controlled by a 0 - 100% energy controller. An indicator lamp operates when the hot plate is on. A connector at the back of the unit permits the addition of a contact or digital thermometer. If better temperature control is required the “Sensoterm” or “Electrotemp” can be added.



| Part No. | Plate dia. cm | Height/Width/Depth (exterior) cm | Power W | Weight Kg |
|----------|------------------|-------------------------------------|------------|--------------|
| 3002301 | 12 | 10 16 27 | 500 | 2 |
| 3002302 | 19 | 13 21 30 | 875 | 3 |



Accessories for the hotplate range 'Combiplac'

12 cm diameter hotplate only Part No. 3002301.



Bath of AISI 304 stainless steel of 140 mm dia. x 75mm high, with concentric reduction ring lid, Suitable for water, oil or sand.
Part No. 7002510



Round bottom flask adapter made of aluminium and suitable for Kjeldahl flasks of 500 a 800 ml and round bottom flasks of 250 to 750 ml.
Part No. 1002280



Round bottom flask adapter made of aluminium and suitable for Kjeldahl flasks of 30 to 250 ml and 50 to 250 ml round bottom flasks.
Part No. 1002290

Support rod of 120 to 500 mm high, adaptable to the main body of the hotplate. Suitable for the Circular Combiplacs only.
Part No. 1000725

Contact thermometers.



Features

Adjustable temperature using lockable rotary magnet dial on the top.
An inert gas is sealed within the internal capillary of the thermometer.
Comes complete with connection cable.

| Part No. | Total length mm | Immersion stem length mm | Range °C | Division Scale |
|----------|-----------------|--------------------------|----------|----------------|
| 3521159 | 465 | 150 | 0 - 100 | 1/1 |
| 3522159 | 465 | 150 | 0 - 200 | 2/1 |
| 3523159 | 465 | 150 | 0 - 300 | 5/1 |



Digital thermometer "Sensoterm".
With a AISI 304 stainless steel Pt 1000 probe.

Features

Advantages include a separate Pt 1000 probe maintaining the main body away from steam and other vapours. Safer than a contact thermometer eliminating the risk of broken glass or risk of mercury spillage.

Technical data

Temperature range: from -40 °C to + 270 °C
Temperature probe: 3.5 mm dia. x 250 mm immersion.
Precision: ±1 °C.
Resolution: 1 °C.
Temperature Display: 8 mm high LCD display.
Ambient working range: 0 a 60 °C and a relative humidity of 80 %.
Dimensions: 130 x 71 x 24 mm. (Main body only)

Part No. 1001009



PID electronic temp. controller "Electemp".

Features

Microprocessor digital control of temperature and PID settings, suitable for a variety of applications. Temperature range from -150 °C to 1300 °C

Thermo- resistance temperature probe.

Functions ON-OFF/P.I.D. AUTOTUNNING.
Adjusts automatically for working medium (solids, liquids and air).

| Part No. | Height/Width/Depth (exterior) cm | Max. Power load (at 230 v) W | Weight Kg |
|--------------------|---|---|-----------|
| 3000887 | 10.5 - 13.5 - 21 | 3100 | 1.250 |
| Accessories | Probe Pt 100 Part No. 1000893 | K type probe Part No. 1000895 | |

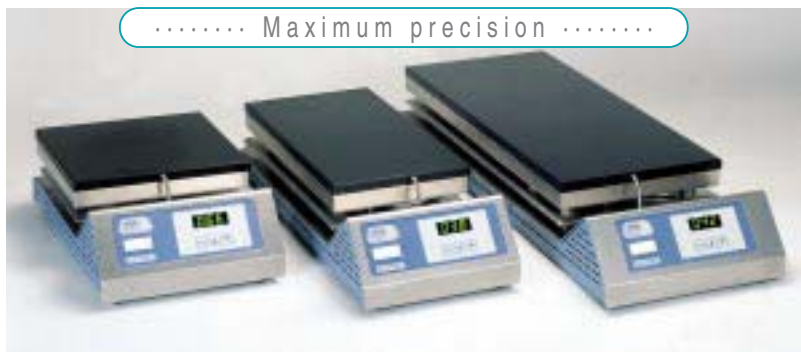


Rectangular precision hotplate 'Plactronic'

ADJUSTABLE TEMPERATURES FROM AMBIENT+5 UP TO 200 °C STABILITY ± 0.5 °C.
 WITH ELECTRONIC DIGITAL CONTROL AND DISPLAY. FOR THERMAL TESTS (NOT SUITABLE FOR BOILING).
 SURFACE PLATE COATED WITH PROTECTIVE TEFLON AGAINST CORROSION FROM CHEMICAL AGENTS.

Features

Electronic digital temperature control and display (3 digits).
 Display resolution: 1°C
 Temperature probe Pt 100.
 DUR aluminium alloy hotplate coated with Teflon, with heating elements embedded in the plate surface. Main case and element protective grill made of AISI 304 stainless steel distributed evenly throughout the plate.
 Suitable for slide mounting.



Control Panel

- Mains power switch.
- Digital temperature display.
- Push button temperature selection and control.

| Part No. | Width/Depth Hotplate | | Height/Width/Depth cm (external) | | | Power W | Weight Kg |
|----------|----------------------|----|----------------------------------|----|----|---------|-----------|
| 6155100 | 24 | 24 | 13 | 25 | 42 | 700 | 7.5 |
| 6156100 | 20 | 40 | 13 | 22 | 57 | 800 | 8 |
| 6157100 | 25 | 60 | 13 | 27 | 77 | 1000 | 16.5 |

Rectangular hotplate 'Placfin'

ADJUSTABLE TEMPERATURE ON THE HOT PLATE FROM AMBIENT +5 °C UP TO 130 °C. STABILITY 3 °C.
 SUITABLE FOR THERMAL TEST (BUT NOT BOILING AND SLIDE DRYING.)

Features

Temperature regulation by a hydraulic thermostat.
 Mercury thermometer from 0 °C to 130 °C.
 Hotplate surface protected by chemically treated aluminium, with heating elements evenly distributed throughout the hotplate surface.
 Enamelled external case with a AISI 304 stainless steel top.

Control Panel

Hydraulic thermostat control synchronised with a indicator lamp when functioning.



Accessory

Slide support adapter made of AISI 304 stainless steel
 Capacity: up to 18 slide of 76 x 25 mm (in a horizontal position.)
Part No. 7000498

| Part No. | Width/Depth (hot plate) cm | | Height/Width/Depth (exterior) cm | | | Power W | Wt Kg |
|----------|----------------------------|----|----------------------------------|----|----|---------|-------|
| 7000497 | 23 | 22 | 8 | 22 | 30 | 400 | 3.7 |





Ceramic top hotplates 'Ceramic-plac'

ADJUSTABLE TEMPERATURE UP TO 400 °C.

..... Excellent resistance to chemicals

..... Unaffected by thermal shock



Part No. 3000920

Part No. 3000919

Part No. 3000921

Features and advantages

The "CERAMIC-PLAC" has the following features and advantages:

- Flat, smooth surface.
- Not affected by thermal shocks.
- Short heating time to the set temperature.
- Excellent thermal qualities and penetration of infrared radiation.
- Easy to clean.

Features

- External case of AISI 304 stainless steel.
- Heating elements mounted on ceramic fibre thus making an insulated compact block.
- Temperature energy control from 6 % to 70 % of nominal power. (Part No. 3000919 and 3000920).
- Hydraulic thermostat temperature control up to 400 °C (Part No. 3000921).

Safety

- Conforms to the EN 61010 standard. Over temperature cut-out incorporated.

| Part No. | Heat zones | Hot surface Area dia./ area cm | Height/Width/Depth (exterior) cm | Power W | Weight Kg | Temp. Control System |
|----------|------------|-----------------------------------|-------------------------------------|------------|--------------|-------------------------------|
| 3000919 | 1 | 18 Ø | 10 28 33 | 1700 | 5.5 | Energy regulator |
| 3000920 | 2 | 14 Ø + 14 x 14 | 10 27 47 | 2000 | 7.5 | Energy regulator one per zone |
| 3000921 | 1 | 30 x 30 | 10 42 47 | 3500 | 11 | Hydraulic Thermostat |



HEATING AND COOLING DRY BLOCKS 'TEM BLOC' & 'BIOCOLD'

ELECTRONIC TEMPERATURE CONTROL WITH DIGITAL DISPLAY. ADJUSTABLE TEMPERATURE FROM 30 °C UP TO 200 °C. PELTIER COOLED BLOCK -15° TO 50 °C SELECTION OF BLOCKS FOR A VARIETY OF TUBE SIZES.

....Accurate and precise with no cross contamination

Applications

Suitable for clinical, biochemistry and chemistry applications.
Incubation of D.N.A., enzyme tests, test residues in milk, incubation and fusion of AGAR, cell culture, combinatorial chemistry.
Thermoregulation, drying, boiling, evaporation, concentration, hydrolysis, digestion and incubation, etc.

Features

Dry block systems have several advantages over wet contact methods such as: no risk of evaporation of heating liquid, higher working temperatures, better long term temperature stability and no sample cross contamination or germination of bacteria in the bath.
Heating elements are distributed evenly across the contact surface

maintaining an even distribution of heat.
Easy to use electronic temperature control with a digital display (3 Digits).
Built in temperature probe Pt 100.
Interchangeable blocks made of anodised DURAL alloy to accommodate a variety of tube diameters.
(Customer specific sizes also available.)
External case made of epoxy covered steel with an AISI 304 stainless steel top.

Control Panel

Mains power switch with indicator "On" lamp.
Digital temperature display.
Push button control for increasing / decreasing the set temperature.

Biocold Cooling and Heating Dry Block

Applications
Incubation of biological samples at low temperatures.
Cell culture.
Enzymatic tests using below ambient temperatures.
Sample preservation.

Features

Inert Teflon coated chamber.
Teflon Lid, prevents heat loss and ice formation.
To maintain the set temperature the unit must be used with the lid, maximum tube length 100 mm.
Exterior case of steel covered with an epoxy coating with a top surface of AISI 304 stainless steel.



Biocold - Part No 3001030



Temblock comes complete with thermometer 0-200 °C and block extractor rod.

Accessories

Metallic Blocks of 105 dia. x 55 mm high.
Part No.
7000346 For 34 tubes x 6mm dia.
7000714 For 18 Eppendorf tubes of 1.5 ml.
7001224 For 24 tubes x 12 mm dia.
7001618 For 18 tubes x 16 mm dia.
7000208 For 8 tubes x 20 mm dia.
7000256 For 6 tubes x 25 mm dia.
7000715 Customised blocks on demand.

Blocks need to be ordered separately.

| Model | Part No. | Temp. °C | Stability °C | Homogeneity % | Set error % | Resolution °C | H / W / D (external) cm | Power W | Wt Kg |
|----------|----------|----------|--------------|---------------|-------------|---------------|-------------------------|---------|-------|
| Temblock | 7462200 | 30 - 200 | ± 0.75 | ± 1.5 | ± 2 | 1 | 11 19 29 | 350 | 3.7 |
| Biocold | 3001030 | -15 +50 | ± 0.5 | ± 0.5 | ± 0.5 | 0.1 | 24 24 33 | 130 | 13 |



Melting Point IA9100, IA9200 and IA9400

MODEL IA-9100 & IA-9200 TEMPERATURE UP TO 400 °C.

MODEL IA-9400 (PELTIER COOLED) TEMPERATURES FROM 0 °C TO 80 °C.

Features

Small oven mounted on an adjustable arm for optimal positioning, view sample through x 8 eyepiece.

Internal light 12 V / 2,2 W.

Digital 12 mm temperature display.

Holder for 100 capillary tubes.

Printer computer interface RS 232 Models IA-9200 & IA-9400.

IA-9100 & IA-9200 melting point from 45 to 400 °C capacity 3 tubes 1.5 to 2mm dia.

IA-9400 (cooled) For viewing samples on a slide with adjustable temperature from 0°C to 80 °C

Models IA9200 and IA9400 with variable ramp rate and memory.

Applications

Test & control for testing the purity of drugs, raw chemicals and QC processes.



| Model | IA-9100 | IA-9200 | IA-9400 |
|-------------------------------------|--|--|-----------------------------|
| Part No. | 5609100 | 5609200 | 5609400 |
| Capillary tube 1.5 or 2 mm Ø | 3 tubes | 3 tubes | - |
| Slide | - | - | 1 slide |
| Memory points during analysis | 4 | 4 | 4 |
| Sample result memory with batch no. | - | 1000 | 200 |
| Ramped temperature | 2 ramps: 1 x 1 °C/min. 1 x 10 °C/min. set value ramp | 6 ramp: 5 set value and 1 user set. 0,2 °C to 10 °C/min. in steps of 0,1 °C | |
| Temperature range | 45 to 400 °C | 45 to 400 °C | 0 to 80 °C at 30 °C ambient |
| Digital temperature range | Ambient to 400 °C | Ambient to 400 °C | -10 °C to +100 °C |
| Temperature readability | 0,1 °C | 0,1 °C | 0,1 °C |
| Accuracy at 23 °C | 1 °C/min. with 2 mm Ø capillary: ±0,5 °C ±0,5 °C at 20 °C. ±1 °C at 350 °C ±1 digit | | |
| Power / Weight | 45 W / 2,5 Kg | 45 W / 2,5 Kg | 30 W / 2,7 Kg |
| Height extended and closed W x D cm | 85/45 x 20 x 35 | 85/45 x 20 x 35 | 11/45 x 20 x 42 |
| Interface RS-232 | - | Yes | Yes |

Accessories

Printer PR-2000B* with cable.

Print out of: date, time, batch number, Start

temp., ramp rate and melting point.

Suitable for IA-9200 & IA-9400.

Part No. 5602000

Capillary tube 1,5 mm Ø.

Box of 1000.

Part No. 5600150

Capillary tubes 2 mm Ø.

Box of 1000

Part No. 5600200

Slides with cavity

76 x 26 x 1,5 mm. 10 slides

Part No. 5600300

Slides

76 x 26 x 1,5 mm. 72 slides.

Part No. 5600400