Electrothermal

Electromantle

Metal Heating Mantles

The original Electrothermal "Electromantles" revolutionised round bottom flask heating by incorporating a coiled flexible heating element, which ingeniously wraps the heater around the flask to optimise heat transfer. For maximum safety, the flask is held away from direct contact with the heating element via a grounded earth screen.

This design principle has stood the test of time and has been imitated the world over. With many years of experience, Electrothermal remains at the forefront of laboratory heating and its associated controlling technology.

We have a wide range of metal-cased Electromantles to service your laboratory's needs and all of our Electromantle CMU series feature:

- An easy to clean, stove-painted aluminium outer casing
- "Cool-to-the-touch" design through a unique patented air flow through the heater's base housing
- Added safety features such as a grounded earth screen and double fuses

CMU Electromantles

For heating of round bottom flasks

Electrothermal's metal-cased CMU Electromantles are the culmination of years of experience and continuous design improvement. These well-established products are used throughout many industries for a huge variety of applications. Today, we can confidently guarantee to give you quality products whose reliability and safety continue to make them market leaders.

Key features are:

- Round bottom flask capacity of between 50ml-5000ml
- "Cool-to-the-touch" design
- Element temperature up to 450 °C
- Built-in energy regulator
- Indicator lamps for power and heater operation
- Replaceable insulated heater cartridge
- An easy to clean, stove-painted aluminium outer casing
- Non-skid feet and support rod clamps
- Added safety features such as a grounded earth screen and double fuses
- One year warranty parts and labour
- Certification: CE and CSA

MC-5 Controller

For remote working

Uncontrolled CMU Electromantles are also available in all the above sizes, for use with the MC-5 Controller. This may be valuable when remote working is preferred, for example when experiments are being conducted in fume hoods.

For more information, please visit: http://www.electrothermal.com/product.asp?dsl=750

CMUT Electromantles

For heating of flasks

The CMUT Electromantle is an adjustable volume CMU Electromantle, able to accommodate round bottom flasks of between 250ml to 1000ml capacity. Its key features are otherwise the same as for the CMU Electromantle.

Key features are:

- Round bottom flask capacity of between 250ml-1000ml
- "Cool-to-the-touch" design
- Element temperature up to 450 °C
- Built-in energy regulator
- Indicator lamps for power and heater operation
- Replaceable insulated heater cartridge
- An easy to clean, stove-painted aluminium outer casing
- Non-skid feet and support rod clamps
- Added safety features such as a grounded earth screen and double fuses
- One year warranty parts and labour
- Certification: CE CSA

Robust and economical

Easy to use and flexible

You can rely on CMU Electromantles to be the heating workhorse within your laboratory: They are economical to run, robust and easy to use, and our wide range of products caters for most sizes, making them flexible enough to meet almost all of your laboratory's heating requirements. Larger capacity products have multiple heating elements to ensure a more even and accurate heat transfer

For more information, please visit: http://www.electrothermal.com/product.asp?dsl=746

CMUA Electromantles

For heating and stirring of flasks

The CMUA Stirring Electromantle shares all the excellent features of the CMU Electromantle but with the added functionality of magnetic stirring. For convenience and safety, the electric circuitry for stirring is built into the base of the heater, enabling powerful stirring over a wide range of solution volumes and viscosities using a magnetic stir bar.

Key features are:

- Round bottom flask capacity of between 50ml to 5000ml
- Stirring speed up to 2000rpm
- Auto-recapture of magnetic stir bar; simple switch to re-activate stirring

Plus, all of the standard CMU Electromantle features:

- "Cool-to-the-touch" design
- Element temperature up to 450 °C
- Built-in energy regulator
- Indicator lamps for power and heater operation
- Replaceable insulated heater cartridge
- A chemically-resistant polypropylene outer casing
- Support rod clamps
- Added safety features such as a grounded earth screen and double fuses
- One year warranty parts and labour
- Certification: CE CSA

Magnetic stirring

Bi-directional and easily adjustable

Stirring operation is simply achieved by placing the correct style and sized magnetic stir bar into the flask, selecting the minimum speed on the stirring dial control and then ramping up slowly to the required speed. The correct style and size of stir bar is determined according to the flask volume and the viscosity of its contents.

Stir speed is bi-directional and easily adjustable, and as an added feature, there is an auto-recapture switch fitted. Occasionally, the magnetic coupling to the stir bar may be interrupted and the stirring motion may be temporarily lost. Should there be a need to re-activate stirring, this can be quickly remedied by reducing the stir speed and then activating the auto-recapture switch; normal stirring can then be resumed at the desired speed.

For more information, please visit: http://www.electrothermal.com/product.asp?dsl=754

CMUV Electromantles

For heating of large flasks and funnels

The CMUV Electromantles deliver the benefits of the CMU Electromantle, but do so for very large 60° funnels, as well as pear-shaped and round bottom flasks. This is achieved through a "V-shaped" design for the heating mantle, with funnels being accommodated through a bottom opening in the Electromantle base.

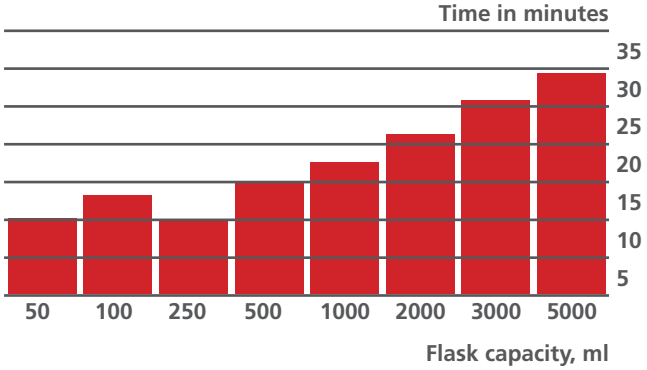
Key features are:

- Accepts 60° funnels
- Accommodates pear-shaped and round bottom flasks
- Large flask/funnel capacities of between 10 to 22 litres
- Spill-proof protection against electric shocks via a stainless steel mesh screen between the flask and the heating element
- Available with and without controls
- Controller available for uncontrolled model

Plus, all of the standard CMU Electromantle features:

- "Cool-to-the-touch" design
- Element temperature up to 450 °C
- Built-in solid state Simmerstat energy regulator (if controlled)
- Indicator lamps for power and heater operation
- Replaceable insulated heater cartridge
- A chemically-resistant polypropylene outer casing
- 3 Support rod clamps due to large flask size
- Added safety features such as a grounded earth screen and double fuses
- One year warranty parts and labour
- Certification: CE and CSA

Time required for boiling



The bar graph illustrates the time required for a half filled flask of water to reach boiling point in each of the flask capacities. For all the boiling tests the ambient temperature was 17°C.

Maximum element temp:	450°C
Voltage:	115V or 230V AC
Wattage:	See table for nominal wattage of each flask capacity at rated voltage.
Indicator lights:	Clear for power. Amber for heater
Support Rod Clamp:	For 12.7mm (1/2") diameter support rods

For more information, please visit: http://www.electrothermal.com/product.asp?dsl=749

Digi-Mantles

Digi-Mantles enable a flask of 250ml, 500ml or 1000ml capacity to be stirred, heated up to 220 °C (or 300°C upon request) and cooled to -30 °C through precise electronic control.

Key features are:

- Round bottom flask capacity of between 250ml-1000ml
- "Cool-to-the-touch" design
- Replaceable insulated heater cartridge maintains an even temperature distribution (±0.3°C)
- Cooling plug enables -30 °C to be reached
- Greater stirring stability and speeds from 250 to 800 rpm
- Controller with display menus and touch pad interface
- Indicator lights for power, stirrer and heater operation
- Support rod clamps
- One year warranty parts and labour
- CE certification

Technical Information

Controlled Model	Capacity	Electrical Requirement
OMCA0250	250ml	230V
OMCA0250/X1	250ml	115V
OMCA0500	500ml	230V
OMCA0500/X1	500ml	115V
OMCA1000	1000ml	230V
OMCA1000/X1	1000ml	115V

Heater Cartridge

The heater cartridge ensures that the temperature is uniformly distributed across the block. Even at 220 °C, it remains "cool-to-the-touch" due to a unique patented air flow through ventilation slots beneath and around the rim of the case.

Cooling plug

In addition, Digi-Mantles enable cooling down to down to -30 °C when used in conjunction with a cooling plug, which greatly expands the types of chemistry that can be performed with this equipment. The cooling plug is simply inserted into the base block and new cooling lines are then attached to the inlet/outlet via quick disconnects.

Controller

Used to control both temperature and stirring speed independently, the controller is easy to operate; both temperature and stirring speed are individually adjustable using the up/down arrows. The control panel has separate indicators lights for the power, heater and stirrer functions, along with a 3-digit display indicating the actual temperature from -30 °C to 220 °C. Stirring speeds from 250 to 800 rpm are obtained by lightly touching the stirrer speed keys.

For more information, please visit: http://www.electrothermal.com/product.asp?dsl=859

CMU Electromantle

Controlled Model	Uncontrolled Model	Stirring and Heating	Capacity	Electrical Requirment
CMU0050/CE	CMU0050/E	CMUA0050/CE	50ml	230V 50/60Hz, 80W
CMU0050/CEX1	CMU0050/EX1	CMUA0050/CEX1	50ml	115V 50/ 60Hz, 96W
CMU0050/CEX6	CMU0050/EX6	CMUA0050/CEX6	50ml	230V 50/ 60hz, 80W EU Plug
CMU0100/CE	CMU0100/E	CMUA0100/CE	100ml	230V 50/ 60Hz, 80W
CMU0100/CEX1	CMU0100/EX1	CMUA0100/CEX1	100ml	115V 50/ 60Hz, 96W
CMU0100/CEX6	CMU0100/EX6	CMUA0100/CEX6	100ml	230V 50/ 60hz, 80W EU Plug
CMU0250/CE	CMU0250/E	CMUA0250/CE	250ml	230V 50/ 60Hz, 170W
CMU0250/CEX1	CMU0250/EX1	CMUA0250/CEX1	250ml	115V 50/ 60Hz, 210W
CMU0250/CEX6	CMU0250/EX6	CMUA0250/CEX6	250ml	230V 50/ 60Hz, 170W EU Plug
CMU0500/CE	CMU0500/E	CMUA0500/CE	500ml	230V 50/ 60Hz, 220W
CMU0500/CEX1	CMU0500/EX1	CMUA0500/CEX1	500ml	115V 50/ 60Hz, 270W
CMU0500/CEX6	CMU0500/EX6	CMUA0500/CEX6	500ml	230V 50/ 60Hz, 220W EU Plug
CMU1000/CE	CMU1000/E	CMUA1000/CE	1000ml	230V 50/ 60Hz, 320W
CMU1000/CEX1	CMU1000/EX1	CMUA1000/CEX1	1000ml	115V 50/ 60Hz, 400W
CMU1000/CEX6	CMU1000/EX6	CMUA1000/CEX6	1000ml	230V 50/ 60Hz, 320W EU Plug
CMU2000/CE	CMU2000/E	CMUA2000/CE	2000ml	230V 50/ 60Hz, 520W
CMU2000/CEX1	CMU2000/EX1	CMUA2000/CEX1	2000ml	115V 50/ 60Hz, 595W
CMU2000/CEX6	CMU2000/EX6	CMUA2000/CEX6	2000ml	230V 50/ 60Hz, 520W, EU Plug
CMU3000/CE	CMU3000/E	CMU3000/CE	3000ml	230V 50/ 60Hz, 500W
CMU3000/CEX1	CMU3000/EX1	CMU3000/CEX1	3000ml	115V 50/ 60Hz, 500W
CMU3000/CEX6	CMU3000/EX6	CMU3000/CEX6	3000ml	230V 50/ 60Hz, 500W, EU Plug
CMU5000/CE	CMU5000/E	CMU5000/CE	5000ml	230V 50/ 60Hz, 800W
CMU5000/CEX1	CMU5000/EX1	CMU5000/CEX1	5000ml	115V 50/ 60Hz, 800W
CMU5000/CEX6	CMU5000/EX6	CMU5000/CEX6	5000ml	230V 50/ 60Hz, 800W, EU Plug

CMUV Electromantles

Controlled Model	Uncontrolled Model	Capacity	Electrical Requirement
CMUV10/CL	CMUV10/L	10 Litres	230V, 50/60Hz, 2000W
CMUV10/CLX1	CMUV10/LX1	10 Litres	115V, 50/60Hz, 2000W
CMUV10/CLX6	CMUV10.LX6	10 Litres	230V, 50/60Hz, 2000W, EU Plug
CMUV12/CL	CMUV12/L	12 Litres	230V, 50/60Hz, 2000W
CMUV12/CLX1	CMUV12/LX1	12 Litres	115V, 50/60Hz, 2000W
CMUV12/CLX6	CMUV12.LX6	12 Litres	230V, 50/60Hz, 2000W, EU Plug
CMUV22/CL	CMUV22/L	20-22 Litres	230V, 50/60Hz, 3000W
CMUV22/CLX1	CMUV22/LX1	20-22 Litres	115V, 50/60Hz, 3000W
CMUV22/CLX6	CMUV22/LX6	20-22 Litres	230V, 50/60Hz, 3000W, EU Plug

CMUT Electromantles

Model	Capacity	Electrical Requirement
CMUT1000/CE	250 - 1000ml	230V
CMUT1000/CEX1	250 - 1000ml	115V
CMUT1000/CEX6	250 - 1000ml	230V, EU Plug

MC-5 Controller

Controlled Model	Electrical Requirement
MC5	230V, 50/60Hz, 800W
MC5X6	230V, 50/60Hz, 800W, EU Plug

Also available in the Electrothermal range

EM Electromantles

EM Electromantle heating mantles are used in wet chemistry to heat liquids in round bottom flasks. The plastic case is designed to remain "cool-to-the-touch" when in operation. Electrothermal heating mantles have a grounded stainless steel earth screen covering the element and are double fused for added safety.

EMA Electromantle Heating and Stirring Mantles

EMA models have all the features of the EM range of heating mantles with the addition of variable speed stirring in single direction or auto reverse modes.

EMV and EMX 'V'-Shaped Electromantles

EMV heating mantles accept a large range of flask and funnel sizes and are available with extra spill-proof protection as the EMX range.

EME Extraction Heaters

The Electromantle extraction heaters are available with six or three recesses and feature a durable chemically resistant polypropylene top casing. All versions have built in electronic controllers and a wide range of flask sizes can be accommodated, with or without stirring.

Macro-Kjeldahl

The Macro-Kjeldahl Extraction Heaters accept volume sizes from 80 to 800ml. Individual built-in controllers regulate quartz fibre heating elements up to 550°C to 800°C. These multibank units have a stainless steel housing that accepts an integral glassware support.

Micro-Kjeldahl

The Micro-Kjeldahl Extraction Heaters accept volume sizes from 18 to 50ml. Individual built-in controllers regulate quartz fibre heating elements up to 550°C to 800°C. These multibank units have a stainless steel housing that accepts an integral glassware support.

Controllers

The Electrothermal Controllers include a range of models for single, double and triple place and percentage off/on. Controller line includes the ideal controller to pair with your heating mantles, cords and tapes.

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