



Stirrer Hotplates



Stirrers, magnetic, with hotplate, CB162 & SB162



CB162



SB162

- Choice of robust aluminium or chemically resistant ceramic tops
- Advanced safety features:
 - Flashing 'Hot' warning light
 - Spillproof design
 - Independent safety circuit to protect against overheating
- Microprocessor control for accurate temperature setting

Stylish and economical general purpose stirrer hotplates designed with safety as well as performance in mind. The cast aluminium body is shaped for stability and helps deflect spills away from the controls and the user. The 'Hot' warning light will flash whenever the plate temperature is above 50°C even when the hotplate is turned off and connected to the mains. Independent safety circuit prevents overheating in the event of control failure and internal electronic components are protected against corrosion. Powerful magnets and motor give stirring speed up to 1500rpm and volumes up to 15 litres*.

Model CB162 has a glass ceramic top which has excellent chemical and temperature resistance. The surface is easy to clean and the thermal properties allow very high plate temperatures while ensuring the edges stay cooler, reducing the chance of accidental burns. The white surface ensures good visibility of colour changes.

Model SB162 has a robust aluminium/silicon alloy top plate for good heat transmission. A 700W element gives rapid heating and ensures even temperature distribution across the whole of the plate. Fitting for retort rod and supplied with 2 x 25mm PTFE coated stir bars.

Technical Specification

| Model | CB162 | SB162 |
|-------------------------------------|------------------|-------------------------|
| Plate material | Glass ceramic | Aluminium/silicon alloy |
| Plate dimensions, mm | 160 x 160 | 160 x 160 |
| Heated area, mm | 120 x 120 | 160 x 160 |
| Heater power, W | 500 | 700 |
| Max. plate temp. °C | 450 | 325 |
| Stirrer speed, rpm | 100 - 1500 | 100 - 1500 |
| Maximum stirring capacity, litres * | 15 | 15 |
| Overall dimensions (w x d x h), mm | 190 x 300 x 110 | 190 x 300 x 110 |
| Net weight, kg | 3.4 | 3.4 |
| Electrical supply | 230V, 50Hz, 750W | 230V, 50Hz, 550W |

Ordering Information

| Model | Description |
|-------|------------------------------------|
| CB162 | Stirrer/hotplate, ceramic plate, |
| SB162 | Stirrer/hotplate, aluminium plate, |
| SR1 | Retort rod, 600mm x 12mm diameter |



Stirrer, magnetic, 3 position with hotplate, SB162-3

- Three independently controlled stirring/heating positions
- Separate "Hot" warning lights for each plate
- Powerful magnets for strong magnetic coupling

A space saving and economical unit with 3 independent heating/stirring positions in a footprint only 600 x 270mm. Easily accommodates 3 x 2 litre beakers.

Unit only requires one power point and is ideal for quality control applications where multiple samples require simultaneous heating and stirring, under the same conditions.

A "Hot" warning light for each plate will flash whenever its temperature is above 50°C and will operate even when the hotplate is turned off and connected to the mains.

The top plates are a robust aluminium/ silicon alloy, providing even plate temperature.

Powerful magnets and motor give stirring speed up to 1500rpm and volumes up to 15 litres.*

Supplied complete with 3 x 25mm PTFE coated stir bars.



SB162-3

Technical specification

| | |
|------------------------------------|-------------------|
| Plate material | Al/Si alloy |
| Individual plate dimensions, mm | 160 x 160 |
| Heater power, W | 3 x 700 |
| Maximum plate temperature. °C | 325 |
| Speed range, rpm | 100 - 1500 |
| Overall dimensions (w x d x h), mm | 600 x 270 x 110 |
| Net weight, kg | 11 |
| Electricity supply | 230V, 50Hz, 2250W |

Ordering Information

| Model | Description |
|---------|--|
| SB162-3 | Stirrer, magnetic, 3 position with heating |
| SR3 | Retort rod, 600mm plus bracket |

*Based on water contained on a 20 litre glass bottom boiling flask.



SCT1



Temperature Controller, SCT1

- Accurate liquid temperature control
- Built in retort fitting and probe holder
- Detachable temperature probe
- Bright, easy to read LED display
- Compact and light weight
- Comprehensive range of accessories

The Stuart® SCT1 temperature controller is the ideal instrument for the accurate temperature control of aqueous or oil based samples in the laboratory. Designed for use with the Stuart® metal top (SC162) or ceramic top (CC162) stirrer hotplates, the SCT1 can be used either as a precise controller of temperature up to a maximum of 200°C or as a digital thermometer up to 325°C.

The SCT1 temperature controller features an in-built clamp allowing the controller to be mounted either on a horizontal or vertical retort rod, providing flexible positioning of the controller. In addition, the stainless steel temperature probe, used to measure the temperature of the sample, is detachable, allowing the main body of the SCT1 temperature controller to be positioned away from potentially damaging fumes. The SCT1 temperature controller regulates the hotplate to accurately control the temperature of the sample, which is set via the large LED display. When not in use the temperature probe can be held securely by the in-built probe holder.

A range of accessories is available to allow for a complete set up of temperature controller, probe and stirrer hotplate in the laboratory. An accessory probe holder clamps on to a retort rod to allow secure positioning of the temperature probe in the sample. A PTFE probe is also available as an accessory for those applications requiring a chemically resistant probe.

Technical Specification

| | |
|------------------------|---------------------|
| Sensor type | PT100 |
| Probe | Stainless steel |
| Temperature range °C | 50° to 200°C |
| Accuracy, °C | ±0.5°C |
| Resolution | 1°C |
| Dimensions (w x d x h) | 90mm x 75mm x 123mm |
| Weight | 0.3kg (inc. probe) |

Ordering Information

| Model | Description |
|--------|------------------------------|
| SCT1 | Contact thermometer, digital |
| SCT1/1 | Probe holder |
| SCT1/2 | PTFE probe |

NB: the SCT1 can only be used with the SC162 and CC162. It is not compatible with any other Stuart stirrer hotplate



Stirrers, magnetic, with hotplate, CC162 & SC162

- Choice of robust aluminium or chemically resistant ceramic tops
- For use with SCT1 digital temperature controller
- Powerful stirrer
- Advanced safety & communication features:
 - Flashing 'Hot' warning light
 - Spillproof design
 - Overheat protection
 - Visible indication of temperature control

The SC162 and CC162 stirrer hotplates are specifically designed for use with the Stuart® SCT1 temperature controller.

Available in a choice of either robust aluminium or chemically resistant ceramic top, each is equipped with a range of advanced safety and communication features. To alert the user, a 'Hot' warning light will flash whenever the plate temperature is above 50°C, even when the hotplate is turned off and connected to the mains. The cast aluminium body is shaped for stability and helps deflect spills away from the controls. An Independent safety circuit prevents overheating in the event of control failure and internal electronic components are protected against corrosion. Powerful magnets and motor give stirring speed up to 1500rpm and volumes up to 15 litres.

The units automatically detect when the contact thermometer is plugged in. Communication with the SCT1 temperature controller is visible by an illuminated LED on the hotplate, providing reassurance that the temperature of the sample is precisely controlled at all times. Both CC162 and SC162 models can be used independently of the SCT1 temperature controller as a general purpose stirrer hotplate.

Model CC162 has a glass ceramic top, which has excellent chemical and temperature resistance. The surface is easy to clean and the thermal properties allow very high plate temperatures.

Model SC162 has a robust aluminium/silicon alloy top plate for good heat transmission. A 700W element gives rapid heating and ensures even temperature distribution across the whole of the plate.

Technical Specification

| | CC162 | SC162 |
|------------------------------------|------------------|-------------------------|
| Plate material | Glass ceramic | Aluminium/silicon alloy |
| Plate dimensions, mm | 160 x 160 | 160 x 160 |
| Heated area, mm | 120 x 120 | 160 x 160 |
| Heater power, W | 500 | 700 |
| Max. plate temp. °C | 450 | 325 |
| Stirrer speed, rpm | 100 to 1500 | 100 to 1500 |
| Maximum stirring capacity, litres | 15 | 15 |
| Overall dimensions (w x d x h), mm | 190 x 300 x 110 | 190 x 300 x 110 |
| Net weight, kg | 3.4 | 3.4 |
| Electrical supply | 230V, 50Hz, 550W | 230V, 50Hz, 750W |

Ordering Information

| Model | Description |
|-------|--|
| CC162 | Stirrer/hotplate, ceramic plate, probe socket. |
| SC162 | Stirrer/hotplate, aluminium plate, probe socket. |
| SR1 | Retort rod, 600mm x 12mm diameter |



CC162 with SCT1



SC162 with SCT1



Stirrer hotplates, digital, CD162 & SD162

- Digital setting and control of both temperature and speed
- Supplied complete with temperature probe for accurate control of liquid temperature
- Advanced safety features:
 - Flashing "Hot" warning light
 - Independent safety circuit to protect against overheating
- Choice of robust aluminium or chemically resistant ceramic tops

Sophisticated stirrer hotplates offering digital control of both temperature and stirring speed. Comes complete with a detachable PTFE coated probe which when immersed in a liquid sample can very accurately control its temperature to within $\pm 0.5^{\circ}\text{C}$ even over a very long period of time.

As the hotplate heats the sample to the set temperature, the advanced microprocessor automatically measures the rate of temperature rise to judge the capacity and nature of samples (e.g. oil or aqueous). It then optimises the heating rate to minimise overshoot and time to set point. An audible alert sounds when the set temperature has been reached.

Both set and actual temperature of the sample are displayed simultaneously on a bright, easy to read vacuum fluorescent display.

For maximum security, an independent safety circuit automatically sets to 20°C above the set temperature and shuts off the heater if the temperature exceeds this. Therefore, the hotplate is safe to leave on continuously, even unsupervised e.g. overnight. Internal electronic components are protected against corrosion with a special coating.

Stirring action gives much better temperature uniformity within samples because the liquid is mixed effectively. Powerful magnets and motor give stirring speeds up to 1300 rpm and volumes up to 15 litres*.

Stirring speed is set and displayed digitally so that exactly the same speed can be used each time for reproducibility.

If the probe is unplugged, the temperature of the top plate can be set on the display. This can be useful for applications where accurate surface temperature is important such as warming microscope slides and microarrays and specialist electronics.

There are two models to choose from:

Model CD162 has a glass ceramic top plate, which is chemically resistant and gives very fast heat up times.

Model SD162 has an aluminium / silicon alloy top plate which gives a very even plate temperature and quick response to changing set temperature.

With fitting for retort rod and supplied complete with PTFE coated probe and 2 x 25mm PTFE coated stirrer bars



CD162



SD162



Technical Specification

| Model | CD162 | SD162 |
|------------------------------------|---------------------|-------------------------|
| Plate material | Glass ceramic | Aluminium/silicon alloy |
| Plate dimensions, mm | 160 x 160 | 160 x 160 |
| Heated area, mm | 120 x 120 | 160 x 160 |
| Heater power, W | 500 | 700 |
| Display resolution °C | 1 | 1 |
| Max. plate temp. °C | 450 | 300 |
| Max. liquid temp, with probe °C | 200 | 200 |
| Control accuracy with probe °C | ±0.5°C | ±0.5°C |
| Stirrer speed, rpm | 200 - 1300 | 200 - 1300 |
| Max. stirring capacity, litres * | 15 | 15 |
| Net weight, kg | 3.4 | 3.4 |
| Overall dimensions (w x d x h), mm | 190 x 300 x 110 | 190 x 300 x 110 |
| Electrical supply | 230V, 50/60Hz, 550W | 230V, 50/60Hz, 750W |

Ordering Information

| Model | Description |
|-------|---|
| CD162 | Digital stirrer/hotplate, ceramic plate, 500W |
| SD162 | Digital stirrer/hotplate, aluminium plate, 700W |

Accessories

| | |
|---------|------------------------------------|
| CD162/1 | Temperature probe, stainless steel |
| SR1 | Retort rod, 600 x 12mm |

* Based on water contained in a 20 litre flat bottom boiling flask.



Hotplate/stirrers accessories

A wide range of accessories available for 160 x 160mm stirrers and stirrer hotplates. See page 20 for details.





CB302

Stirrer hotplates, large capacity CB302 & SB302

- Choice of robust aluminum or chemically resistant ceramic tops
- Flashing 'Hot' warning light to warn when top plate is too hot to touch
- Independent safety circuit to protect against overheating
- Powerful stirring action
- ◆ Ideal for handling large vessels

Stylish and economical, general purpose stirrer hotplates designed with safety as well as performance in mind.

The 'Hot' warning light will flash whenever the plate temperature is above 50°C and will operate even when the hotplate is turned off and connected to the mains.

Powerful magnets and motor give stirring speed up to 1500rpm and volumes up to 15 litres.

Model CB302 has a glass ceramic top that has excellent chemical and temperature resistance. The chemical properties make the surface very easy to keep clean and the thermal properties allow very high plate temperatures while ensuring the edges stay cooler, reducing the chance of accidental burns.

Model SB302 has a robust aluminium/silicon alloy top plate. The very good heat transmission of this material gives rapid heating and ensures even temperature distribution across the whole of the plate.

With fitting for retort rod and supplied complete with 2 x 25mm PTFE coated stir bars.

Technical specification

| | CB302 | SB302 |
|--|-----------------|-----------------|
| Plate dimensions, mm | 300 x 300 | 300 x 300 |
| Heated area, mm | 200 x 200 | 300 x 300 |
| Plate material | Glass ceramic | Al / Si alloy |
| Heater power, W | 1200 | 600 |
| Max. plate temp. °C | 450 | 300 |
| Stirrer speed, rpm | 100 - 1500 | 100 - 1500 |
| Maximum stirring capacity, litres | 15 | 15 |
| Overall dimensions, mm, (w x d x h) mm | 300 x 365 x 105 | 300 x 365 x 105 |
| Net weight, kg | 7 | 7 |
| Electrical supply | 230V, 50Hz | 230V, 50Hz |

Ordering Information

| Model | Description |
|-------|--|
| CB302 | Stirrer/hotplate, ceramic plate, 1200W |
| SB302 | Stirrer/hotplate, aluminum plate, 600W |
| SR1 | Retort rod, 600 x 12mm |



SB302



Stirrer, magnetic, with infra red heating, CR302

- Very efficient heating saving time and energy
- Powerful magnetic stirring
- "Hot" warning light for user safety
- Chemically resistant ceramic top

Using a very efficient infra red heater of just 900W this stirrer unit will boil 1 litre of water over 30% faster than a conventional ceramic hotplate of 1200W.

Rare earth magnets give powerful stirring of up to 15 litres with feedback control from 100 to 1500rpm.

This highly efficient stirrer hotplate is ideal when large volumes of liquid need to be heated and stirred, particularly microbiological media. With fitting for retort rod and supplied with 2 x 25mm followers

Technical specification

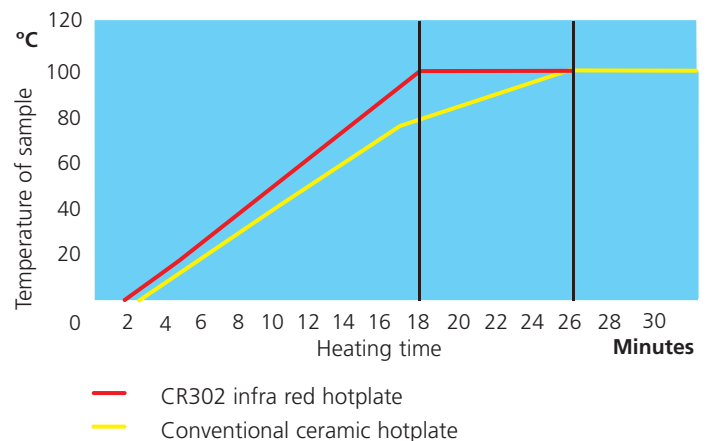
| | |
|----------------------|------------------|
| Plate dimensions, mm | 300 x 300 |
| Heated area, mm | 140 dia. |
| Heater power, W | 900 |
| Stirrer speed range | 100 – 1500 |
| Overall dimensions | 300 x 365 x 105 |
| Mass, kg | 4 |
| Electricity supply | 230V, 50Hz, 950W |

Ordering Information

| Model | Description |
|-------|-----------------------------|
| CR302 | Stirrer hotplate, infra red |



CR302



Heating rates for 1 litre of water in a 2 litre **Pyrex** beaker.

Stacks of choice

With a choice of digital and analogue models, a range of sizes and a stacking option, Stuart's new tube rollers offer unrivalled flexibility and performance.

All Stuart rollers provide a gentle but effective rocking and rolling motion and analogue models have a fixed rotation speed.

Digital models allow the rotation speed to be adjusted to suit different applications and also include a programmable timer.

Both digital and analogue versions are available in either 6-roller or 9-roller sizes, and when space is at a premium, up to three units can be stacked vertically using innovative magnetic blocks.

3 year warranty as standard.



For more information see page 52.



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