

# Hotplate Stirrers

## Hotplate with Stirrer, 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 hotplate stirrers 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
Dimensions, mm (w x d x h)	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
IP Rating	32	32

### Ordering Information

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

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



CB162



SB162



# Hotplate Stirrers



**SB162-3**

## Hotplate Stirrer, 3 position, 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.

### Technical specification

Model	SB162-3
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
Dimensions, mm (w x d x h)	600 x 270 x 110
Net weight, kg	11
Electricity supply	230V, 50Hz, 2250W
IP Rating	32

### Ordering Information

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

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

# Hotplate Stirrers

## 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) hotplate stirrers, 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. The SCT1 is supplied as standard with a stainless steel probe.

### Technical Specification

SCT1	
Sensor type	PT100
Probe	Stainless steel
Temperature range °C	50 to 200°C
Accuracy, °C	±0.5°C
Resolution	1°C
Dimensions, mm (w x d x h)	90 x 75 x 123
Net weight, kg	0.3 (inc. probe)
IP Rating	54

### Ordering Information

Model	Description
SCT1	Temperature controller, 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® hotplate stirrer**



SCT1 with SCT1/1 Probe Holder



SCT1





# Hotplate Stirrers

## Hotplate Stirrers, 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 hotplate stirrers 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 SCT1 temperature controller 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 hotplate stirrer.

**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

Model	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	15 litres	15 litres
Dimensions, mm (w x d x h)	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
IP Rating	32	32

### 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 and SCT1/1



SC162 with SCT1 and SCT1/1

# Hotplate Stirrers

## Hotplate Stirrers, 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  $20^\circ\text{C}$  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.

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



# Hotplate Stirrers



## 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
Dimensions, mm (w x d x h)	190 x 300 x 110	190 x 300 x 110
Electrical supply	230V, 50/60Hz, 550W	230V, 50/60Hz, 750W
IP Rating	32	32

## Ordering Information

Model	Description
CD162	Digital stirrer/hotplate, ceramic plate, 550W
SD162	Digital stirrer/hotplate, aluminium plate, 750W

## Accessories

Model	Description
CD162/1	Temperature probe, stainless steel
CD162/2	Temperature probe, PTFE
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 are available for 160 x 160mm stirrers and hotplate stirrers. See page 20 for details.





# Hotplate Stirrers

## Hotplates stirrers, 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	15 litres	15 litres
Dimensions, mm (w x d x h)	300 x 365 x 105	300 x 365 x 105
Net weight, kg	7	7
Electrical supply	230V, 50Hz	230V, 50Hz
IP Rating	31	31

### Ordering Information

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



CB302



SB302

# Hotplate Stirrers



CR302

## Hotplate Stirrer, 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 hotplate stirrer 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 PTFE followers

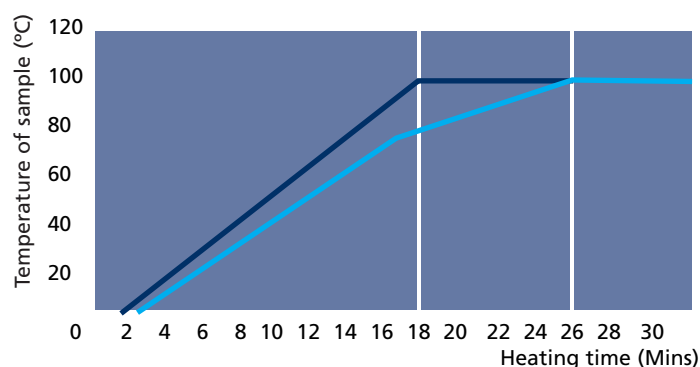
### Technical specification

#### CR302

Plate dimensions, mm	300 x 300
Heated area, mm	140 dia.
Heater power, W	900
Stirrer speed range	100 – 1500
Dimensions, mm (w x d x h)	300 x 365 x 105
Net weight, kg	4
Electricity supply	230V, 50Hz, 950W
IP rating	31

### Ordering Information

Model	Description
CR302	Hotplate stirrer, infra red



- CR302 infra red hotplate
- Conventional ceramic hotplate

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



# Stirrers

## Stirrer, magnetic, portable, SM27

- Battery powered or mains supply
- Tough, compact and light weight
- Variable speed up to 1300rpm

Powered by long life batteries or mains power this rugged little unit can be used almost anywhere. Ideal for use inside incubators, glove boxes or in the field. Housed in a tough, chemically resistant ABS case and supplied complete with batteries.

### Technical specification

	SM27
Max speed, rpm	1300
Capacity, litres H <sub>2</sub> O	1.5
Dimensions, mm (w x d x h)	150 x 160 x 70
Net weight, kg	1.3
Electricity supply	4 x alkaline batteries or 230V, 50Hz
Battery type	1.5V, size D, IEC No. LR20
Battery life	600 hours continuous use
IP rating	41

### Ordering Information

Model	Description
SM27	Portable magnetic stirrer complete with 4 x LR20 batteries and 25mm PTFE stir bar
SM27/1	Mains adapter, 9V a.c. for 230V, 50Hz supply with UK plug
SM27/2	Mains adapter, 9V a.c. for 230V, 50Hz supply with European 2 pin plug
SM27/3	Car battery adapter, 12V, Fitted with standard car cigarette/cigar plug

## Stirrers, magnetic, mini, SM4

- Compact and lightweight
- Up to 1300 rpm

Designed for easy fixing to retort rods and scaffolding. Compact metal case has retort clamp for rod diameters up to 16 mm. Electronic speed control up to 1300 rpm. Separate tuning control allows slow speed setting.

### Technical Specification

	SM4
Speed range	80 to 1300rpm
Dimensions, mm (w x d x h)	90 x 160 x 90
Net weight, kg	1
Electrical supply	230V, 50Hz, 50W
IP Rating	31

### Ordering Information

Model	Description
SM4	Stirrer, magnetic, mini



SM27



SM4



CB161



CB161

## Stirrers

### Stirrers, magnetic, CB161 & SB161

- Choice of robust stainless steel or chemically resistant ceramic tops
- Spillproof design which helps deflect spills away from the controls and the user
- Powerful magnets for strong stirring action

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

**Model CB161** has a glass ceramic top which has excellent chemical resistance. The chemical properties make the surface very easy to keep clean. The white surface ensures good visibility of colour changes, during titration for example.

**Model SB161** has a robust stainless steel top plate that does not produce eddy currents like aluminium and so ensures a very powerful coupling and stirring action.

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

#### Technical Specification

	CB161	SB161
Plate material	Glass ceramic	Stainless steel
Plate dimensions, mm	160 x 160	160 x 160
Stirrer speed, rpm	100 - 1500	100 - 1500
Max. stirring capacity, litres*	15	15
Dimensions, mm (w x d x h)	190 x 300 x 110	190 x 300 x 110
Net weight, kg	3.2	3.2
IP rating	32	32
Electrical supply	230V, 50Hz, 50W	230V, 50Hz, 50W

#### Ordering Information

Model	Description
CB161	Stirrer, ceramic plate
SB161	Stirrer, stainless steel plate

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

# Stirrers

## Stirrer, magnetic, 3 position, SB161-3

- Three independently controlled stirring positions
- Powerful magnets for strong magnetic coupling
- Stainless steel top plate

A space saving and economical unit with three independent stirring positions in a footprint only 600 x 270mm. Easily accommodates 3 x 2 litre beakers. The stainless steel top plate is robust and, unlike aluminium, does not produce eddy currents and so ensures a very powerful coupling and stirring action. 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.

### Technical specification

#### SB161-3

Plate material	Stainless steel
Plate dimensions, mm	550 x 210
Speed range, rpm	100 to 1500
Dimensions, mm (w x d x h)	600 x 270 x 110
Net weight, kg	7
Electricity supply	230V, 50Hz, 150W
IP Rating	31

### Ordering Information

Model	Description
SB161-3	Stirrer, magnetic, 3 position
SR3	Retort rod, 600mm plus bracket

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

## Stirrer, magnetic, heavy duty, SB301

- Robust construction with stainless steel top
- Powerful magnets for strong magnetic coupling
- Stirs up to 30 litres

Large and powerful stirrer for use with vessels up to 30 litre capacity. Powerful magnetic drive with electronic feed-back speed control which accurately maintains the set speed. Supplied complete with 1 x 100mm PTFE coated stir bar.

### Technical specification

#### SB301

Plate material	Stainless steel
Plate dimensions, mm	300 x 300
Speed range, rpm	100 - 600
Stirring capacity, litres	30
Dimensions, mm (w x d x h)	300 x 365 x 105
Net weight, kg	5
Electricity supply	230V, 50Hz, 50W
IP Rating	31

### Ordering Information

Model	Description
SB301	Stirrer, magnetic, heavy duty



SB161-3



SB301





Thank you for reading this data sheet.

For pricing or for further information, please contact us at our UK Office, using the details below.



**UK Office**

**Keison Products,**

**P.O. Box 2124, Chelmsford, Essex, CM1 3UP, England.**

**Tel: +44 (0)330 088 0560**

**Fax: +44 (0)1245 808399**

**Email: [sales@keison.co.uk](mailto:sales@keison.co.uk)**

Please note - Product designs and specifications are subject to change without notice. The user is responsible for determining the suitability of this product.