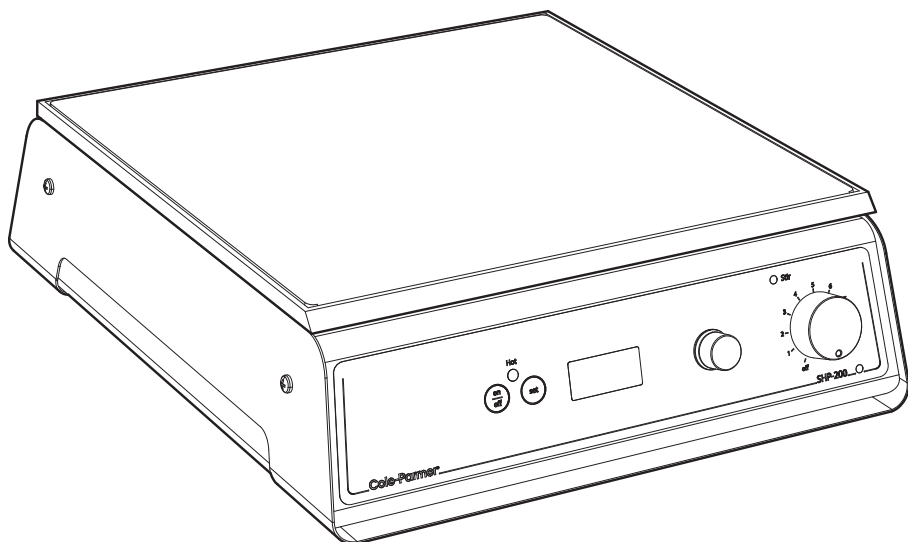


Cole-Parmer®

HP-200 Series

Hotplate & Hotplate Stirrers



Distributed by:

NELSON JAMESON INC.

800-826-8302 nelsonjameson.com

Instruction Manual
260-009 Version 1.2

Cole-Parmer®
essentials

English

Before Use

Thank you for purchasing this Cole-Parmer product. To get the best performance from the equipment, and for your own safety, please read these instructions carefully before use.

If the equipment is not used in the manner described in this manual the protection provided may be impaired.

This equipment is designed to operate under the following conditions:-

- ❖ For indoor use only
- ❖ Use in a well ventilated area
- ❖ Ambient temperature range +5°C to +40°C
- ❖ Altitude to 2000m
- ❖ Relative humidity not exceeding 80%
- ❖ Mains supply fluctuation not exceeding 10%
- ❖ Overvoltage category II IEC60364-4-443
- ❖ Pollution degree 2 IEC664
- ❖ Use with a minimum distance all around of 200mm from walls or other items

Electrical Installation

Before connection please read and understand this instruction manual and ensure that the line supply corresponds to that shown on the rating plate.



120V, 60Hz, ~, single phase.
230V, 50Hz, ~, single phase.

Power consumption is:

Model	Power
ST-200-L-S	50W
HP-200D-L-S	600W
SHP-200D-L-S	650W
HP-200-IR-L	900W
SHP-200-IR-L	950W
HP-200D-L-C	1200W
SHP-200D-L-C	1250W
HP-200D-XL-S	1500W
HP-200D-XL-C	2250W



THIS INSTRUMENT MUST BE EARTHED

All models are supplied with two mains leads fitted with IEC plugs for connection to the instrument. One has a U.K. 3 pin plug and the other has a 2 pin "Schuko" plug for connection to the mains. Choose the lead appropriate for your electrical installation and discard the other.

Should neither lead be suitable, take the lead with the U.K. plug and replace the plug with a suitable alternative. This involves cutting off the moulded plug, preparing the cable and connecting to the rewirable plug in accordance with its instructions.

IT IS IMPORTANT THAT THIS OPERATION SHOULD ONLY BE UNDERTAKEN BY A QUALIFIED ELECTRICIAN

NOTE: Refer to the equipment's rating plate to ensure that the plug and fusing are suitable for the voltage and wattage stated.

The wires in the mains cable are coloured as follows:

BROWN or BLACK -	LIVE
BLUE or WHITE -	NEUTRAL
GREEN / YELLOW -	EARTH

The instruments are fitted with an IEC socket at the rear of the instrument for connection of the mains lead. The appropriate mains lead should be connected BEFORE connection to the mains supply.

Should the mains lead need replacement a cable of 1mm² of harmonised code H05W-F connected to an IEC320 plug should be used.

N.B. The UK mains lead is protected by a 10A fuse mounted in the plug top.

IF IN DOUBT CONSULT A QUALIFIED ELECTRICIAN

When connected to the mains electricity supply, digital models will show "OFF" on their display, and analogue models will illuminate with a green light on their front panel.

Safety Advice Before Use

- ❖ If the mains supply is interrupted the unit will restart with its current settings on the restoration of the electricity supply.
- ❖ Do not use an instrument with a ceramic top if the top plate is scratched, chipped or shows signs of chemical etching.
- ❖ Position the instrument on a firm level surface away from any heat sensitive or flammable material.
- ❖ Do not use the unit with flammable liquids or in a hazardous atmosphere.
- ❖ There is a danger of liquid spills if vessels are stirred too vigorously. Always build stirrer speed slowly and never stir faster than necessary.
- ❖ Never move or carry the instrument until it has been switched off and allowed to cool.
- ❖ Never move or carry the unit with containers on the top plate or while the instrument is connected to the mains electricity supply.

Hot Surfaces



WARNING: The top surface of the instrument may be HOT. Do not leave heaters switched on when not in use.



WARNING: When the surface becomes too hot to touch the red "HOT" warning light on the front panel will begin to flash. This will continue to flash while the plate temperature is above 50°C even if the unit is switched off as long as it is connected to the electricity supply.



WARNING: Do not disconnect or switch off the electricity supply until the "HOT" warning light has ceased flashing.



WARNING: The plate may still be hot when large masses are left on the plate, even though the "HOT" warning light has gone out.



WARNING: The top surface of the instrument may be HOT, especially in free air when a surface temperature of up to 450°C can be achieved on some of the ceramic top models and 300°C on the metal top models.

Operation

Note: When using any of the ceramic hotplates (HP-200D-L-C, SHP-200D-L-C, HP-200D-XL-C, HP-200-IR-L and SHP-200-IR-L) at temperatures over 180°C, the base of any equipment or any conductive/thermal conductive material used to protect the ceramic plate must not make contact with the ceramic plate outside the Hot Zone, see figures 1, 2, 3 and 4.

Antylia Scientific Ltd will not accept liability for any damage incurred as a result of improper use.

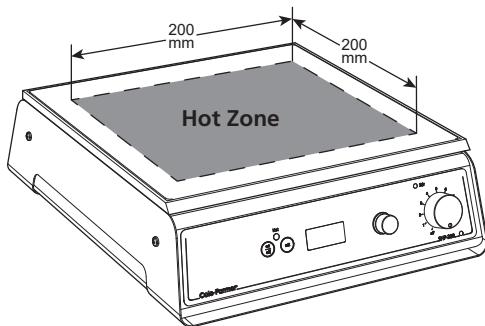


Figure 1 - HP-200D-L-C and SHP-200D-L-C

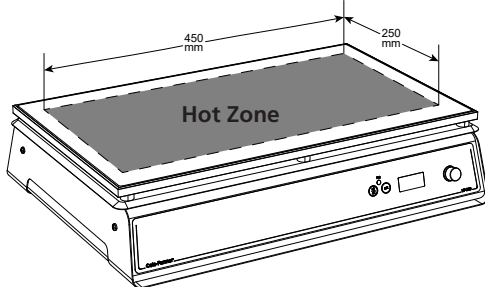


Figure 2 - HP-200D-XL-C

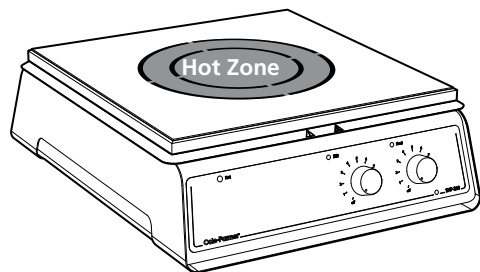


Figure 3 - HP-200-IR-L and SHP-200-L-C

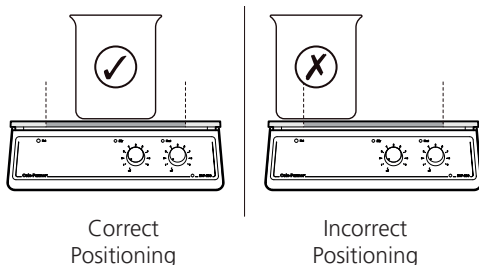


Figure 4

Heating

Models HP-200D-L-S, SHP-200D-L-S, HP-200D-XL-S, HP-200D-L-C, SHP-200D-L-C and HP-200D-XL-C:

When connected to the mains electricity supply the digital display will illuminate and show the word "OFF".

Switch the unit on by pressing the left hand one of the 2 buttons located to the left of the digital display. The display will now show the actual plate temperature in degrees Celsius.

Press and hold the "set" button, the right hand one of the 2 buttons located to the left of the digital display. The display will now show the set temperature.

The set temperature may be adjusted by turning the knob located to the right of the digital display whilst continuing to hold in the "set" button. When the desired setting is displayed release the "set" button. The display will revert to show the actual plate temperature and the instrument will begin to heat.

The set temperature can be observed at any time by pressing the "set" button.

Turning the adjusting knob without pressing the "set" button will have no effect on the hotplate setting.

Models HP-200-IR-L and SHP-200-IR-L:

The knob labelled "Heat" on the front panel controls the heat output and hence the plate temperature. When the heat is switched on the amber pilot light illuminates.

The knob is graduated from 1 - 9. Increasing the value increases the heat output.

In operation only the area defined by the pattern will become fully heated. The outer edges remain cooler for safety considerations.

Vessels larger than the described area should not be used. Failure to observe this could give rise to overheating of the outer parts of the instrument.

NOTE: To prevent overheating of the infrared heater a temperature limiter is fitted which switches off the heater should the temperature exceed 580°C.

Stirring

Models ST-200-L-S, SHP-200D-L-S, SHP-200D-L-C and SHP-200-IR-L:

The knob labelled "Stir" on the front panel controls the stirrer speed.

It is labelled with an arbitrary numeric scale, 1 - 9 and turning the knob to a higher setting increases stirrer speed.

When the stirrer is switched on the amber pilot light illuminates.

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