

STEM RS9000

Heater/Shaker Reaction Station

The RS 9000 Heater/Shaker Reaction Station can be used within a robotic workstation or as a stand-alone apparatus in the lab. On a robotic platform, heating and shaking cycles can be controlled by external software or as part of a fully automated system through the RS232/ RS485/ GSIOC ports; for standalone use, there is the additional option of controlling heating and shaking cycles via the user friendly touchscreen.

The CTC panel (Capacitance Touch Control) of the touchscreen enables the temperature and shaking speeds to be changed using up/down arrows and the actual values are clearly displayed on a high definition LCD display which has an anti-glare coating. The LCD display is cool blue to be visible in both bright and dim lighting conditions, without deleteriously affecting light-sensitive chemicals. The touchscreen has a laminated toughened glass panel that is chemically resistant to most acids and solvents.

Temperature probe

The RS9000 operates over a temperature range of ambient 5°C to 150°C. An optional temperature probe can be purchased and plugged into the din socket on the front panel.

X-Y Gyration system

The RS9000 can handle heavy workloads and give 24 hour continuous operation with uniform agitation of between 100-600rpm. For stability, the RS9000 has a solid bronze chassis on which the X-Y gyration system is mounted, which is a robust two axis slide plate mechanism. Tapered roller bearings ensure smooth agitation cycles and give accurate control of agitation speed even at low revolutions. Advanced micro-controllers monitor temperature and agitation speed constantly and make the required adjustments as necessary which has been proven to provide many years of reliable service.

Interchangeable blocks

The RS9000 has a range of different reaction blocks that can be inter-changed to give a choice of both reaction vessel capacities and formats that can be fitted into the same working footprint. If desired, the reaction blocks can also be customised to accept different vessels and tray sizes.

Auto-Park

The RS9000 has a unique "auto-park" feature which ensures the platform always stops in the same X-Y co-ordinate. This allows for automated sampling and additions.

Key Features

- Very versatile as reaction blocks can be inter-changed to accommodate different vessels and tray formats
- Can be used on a robotic platform or within a laboratory
- Choice of touchscreen control or external control via RS232/ RS485/ GSIOC ports
- Operates over a temperature range of ambient to 150°C
- Agitation speed of 100-600 rpm
- Optional temperature probe
- 2-axis X-Y gyration system on solid bronze chassis that is both reliable and stable
- Auto-park feature enables use on robotic platforms
- Soft start ramping to minimise splashing
- Very safe to operate
- Provides many years of reliable use with continuous 24 hours heating and agitation



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Safety Features

The RS9000 has a thermal cut-off that eliminates runaway conditions. The 'Hot block' warning via a highly visible warning display icon alerts you to when the block temperature is above 50°C, even when the apparatus is unplugged from the power supply. The RS9000 can be stopped rapidly in case of emergency by pressing down on the front sliding door; the front display will indicate "Door Open" and immediately stop. Heating and stirring can be reset after stopping by closing the door and pressing the function key zones on the front panel to reactivate.

Soft Start Ramping

Soft Start Ramping allows controlled build-up to the set speed (from 0 to 10 mins). This feature minimises splashing of vessel contents, wetting of flask closures and fragmentation of specimens.

Technical Specification

Electrical requirements	230V, 50-60Hz, 900W
Heating temp. range	Ambient + 5°C to 150°C
Timer range	1 - 99 hours
Agitation speed	100 - 600 rpm
LCD display	Backlit blue double line 13 dot matrix
Glass touch panel	3mm clear with 2mm anti-reflective clear with a toughed grey laminate bonded sandwich
Touch key zones	Capacitance sensor touch
Product weight.	42kg (excluding a reaction block being in place)
Max. load weight	7 kg max for each reaction block
Dimensions (w x d x h), mm	240 x 510 x 165

Ordering Information

Part Code	Description
PS83000*	RS9000 Agitator Reaction Station
AZS4141	Heater Cartridge (110V)
AZS4142	Heater Cartridge (230V)
M7876	Motor Brushes. (2 per)
PS80052	Reaction Block for test tubes, 96 x 16mm OD
PS80064	Reaction Block for test tubes, 40 x 24mm OD
PS80074	Reaction Block for 4 x standard Micro-titre plates
PS80047	Reaction Block for 4 x 96 well PTFE Micro-titre plates
PS80065	Reactor for Charybdis (holds two blocks) Calypso System
PS80048	96 well PTFE Micro-titre plate, 9 x 8mm ID
PS80114	Reaction Block for 96 x 1.5ml Micro-titre tubes
PS80049	96 well PTFE Micro-titre plate lid
PS80051	96 well PTFE Micro-titre complete with lid
AZ140940	Temperature probe (external)

*Add x1 suffix for 115V model

Note: Customised reactor blocks also available

Accessories

For RS Series Reaction Stations

Part Code	Accessory	RS Model				
		600	900	1000	2500	5000
AT60067	Stir bar PTFE coated 15mm x 4mm		•		•	•
ATS10101	Adaptor sleeve 11mm - 25mm (10 pack)		•			
ATS10210	Adaptor sleeve 12mm - 25mm (10 pack)		•			
ATS10211	Adaptor Sleeve 25mm - 23mm (10 pack)		•			
ATS10212	Adaptor Sleeve 25mm - 18/16mm (10 pack)		•			
PS80087	Temperature probe	•	•	•	•	•
PS80155	Adaptor sleeve RS900 25-22mm (10 pack)		•			
AZ6745	Power cable without plug	•	•	•	•	•
AZ6746	115V Power cable with US plug	•	•	•	•	•
AZ6747	230V Power cable with EU plug	•	•	•	•	•
AZS4024	Fuse 8A SLO BLO	•	•			
AZS4010	Motor			•		
AZS4100	PCB Display			•		
AZS4101	PCB Microprocessor			•		
AZS4186	RS1000 front fascia label			•		
AZS4189	RS1000 115V power PCB assy			•		
AZS4310	Adaptor sleeve 25-24 dia (25 pack)				•	•
ATS10031	Stir bar retriever			•		
ATS10019	Inerting cap without valve (6 pack).			•		
ATS10020	Inerting cap assembly – (6 pack)			•		
ATS10025	Temp probe inerting caps (6 pack)			•		
ATS10026	Spare plug for ATS10025 (6 pack)			•		
ATS10028	Large elliptical mag bar (20 pack)			•		
ATS10029	Large octagonal mag bar (20 pack)			•		
ATS10030	Cross shape mag bar Medium (20 pack)			•		
ATS10033	Octagonal stir bar small (40 pack)			•		
ATS10034	Cross stir bar – small (40 pack)			•		
ATS10035	Elliptical stir bar – small (40 pack)			•		
PS80088	Reaction pot	•				
PS80013	PTFE caps sili septa to fit 80112 (100 pack)	•				
PS80134	Adaptor sleeve 57.5 to 35mm (6 pack)	•				
PS80142	Adaptor sleeve 57.5 to 50.5mm (6 pack)	•				
AZS4192	RS600 Motor	•				
AZ4194	RS600 M2 PT100 PCB	•				
AZ4195	RS600 Transformer	•				
ATS10056	Adaptor sleeve 24mm to 16mm (10 pack)		•	•		
ATS10201	Adaptor sleeve H/Pres RS600 (6 pack)	•				
ATS10240	Adaptor sleeve 56-28 (6 pack)	•				
ATS10242	Adaptor sleeve 44.0 to 26 dia. (1 off)	•				
ATS10381	Adaptor sleeve 56 - 24 (6 pack)	•				
PS80011	Adaptor sleeve 24mm to 20mm tubes (10 pack)		•	•		
PS80011A	Adaptor sleeve 25mm to 20mm (10 pack)		•	•		
PS80012	Adaptor sleeve 24mm to 16mm (10 pack)		•	•		
PS80012A	Adaptor sleeve 25mm to 16mm tubes (10 pack)		•	•		
PS80013	Adaptor sleeve 24mm to 20mm tubes (10 pack)		•	•		
PS80013A	Adaptor sleeve 25mm to 20mm tubes (25 pack)				•	
PS80014	Adaptor sleeve 24mm to 16mm tubes (25 pack)				•	

*Note: For 115V, add X1 suffix For 230V with EU plug, add X6 suffix

Part Code	Accessory	RS Model				
		600	900	1000	2500	5000
PS80014A	Adaptor sleeve 25 to 16mm (25 pack)				•	
PS80015A	Adaptor sleeve 25 to 18mm (10 pack)		•	•		
PS80016	Adaptor sleeve 24 to 20mm tubes		•	•	•	•
PS80016A	Adaptor sleeve 25 to 20mm tubes		•	•	•	•
PS80017	Adaptor sleeve 24 to 16mm tubes		•	•	•	•
PS80017A	Adaptor sleeve 25 to 16mm TU tubes BES		•	•	•	•
PS80018	Adaptor sleeve Liquid reflux 24-25mm tubes		•	•	•	•
PS80041	Adaptor sleeve 56mm to 47mm bottles (6 pack)	•				
PS80081	Adaptor sleeve 25mm to 24mm tubes (10 pack)		•	•		
PS80156	Adaptor sleeve 25mm to 17mm (50 pack)					•
PS80126	Adaptor sleeve 25mm to 20mm reflux unit (50 pack)					•
PS80131	Adaptor sleeve 57.5mm to 25mm (6 pack)	•				
PS80133	Adaptor sleeve 57.5mm to 45mm (6 pack)	•				
PS80134	Adaptor sleeve 57.5mm to 35mm (6 pack)	•				
PS80142	Adaptor sleeve 57.5mm to 50.5mm (6 pack)	•				
ATS10353	Reflux unit (liquid cooled) 6 x 50.5mm tubes	•				
PS80024	Reflux unit (liquid cooled) 10 x 24mm tubes		•	•		
PS80024A	Reflux unit (liquid cooled) 10 x 25mm tubes		•	•		
PS80026	Reflux unit (liquid cooled) 25 x 24mm tubes				•	
PS80026A	Reflux unit (liquid cooled) 25 x 25mm tubes				•	
PS80027	Reflux unit (liquid cooled) 50 x 24mm tubes					•
PS80027A	Reflux unit (liquid cooled) 50 x 25mm tubes					•

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Thank you for reading this data sheet.

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



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