

Constant Temperature Magnetic Stirring Reaction Bath

Magnetic Stirrer

Item Number: JL11



Introduction

Constant temperature magnetic stirring reaction bath with 0 to 100°C control 0.01°C resolution programmable safety protection fast cooling external circulation and adjustable magnetic stirring for laboratories materials research and process development battery chemistry powder processing ceramics and controlled thermal experiments

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Application	Description	Key Benefit
Battery Material Slurry and Precursor Research	Maintain a controlled thermal environment while magnetically stirring electrolyte-related solutions, precursor mixtures, or other small-batch research media.	Combines temperature control and agitation in one setup, reducing equipment around the vessel and improving process repeatability.
Advanced Materials Synthesis	Support temperature-controlled dissolution, precipitation, dispersion, and reaction development for functional materials and laboratory formulations.	Fine display resolution and software temperature correction provide clearer control of thermal conditions.
Powder Metallurgy and Ceramic Processing	Condition binders, additives, suspensions, and chemical preparation media used before powder or ceramic processing steps.	Stable mixing temperatures help maintain more consistent material preparation conditions.
Chemical Reaction Development	Conduct laboratory reactions requiring heating or cooling together with continuous magnetic agitation in reaction vessels from at least 100 mL.	Stepless speed adjustment and programmable timing simplify repeatable test procedures.
Academic and Teaching Laboratories	Demonstrate or evaluate temperature-dependent reaction behavior, mixing performance, and thermal process control.	Large-screen display and integrated control functions make operating data easy to observe.
External Heat Transfer Loops	Connect the external circulation inlet and outlet to compatible laboratory equipment or process fixtures using the provided 10 mm outer-diameter ports.	Internal and external circulation expand the equipment's usefulness across different experimental layouts.

Parameter	Specification
Model	JL11
Temperature range	-40~100°C
Temperature display resolution	0.01°C
Magnetic stirring speed listed for the product	0~1000 rpm/min
Magnetic stirring adjustment described for the series	0~1500 rpm steplessly adjustable
Bath volume	10 L
Minimum reaction vessel capacity	100 mL
Bath opening	180*190 mm
Bath depth	200 mm
Overall dimensions LWH	600*430*720 mm
Power	2.2 KW

Parameter	Specification
Pump flow rate	6 L/min
Temperature sensor	PT100
Display	Large-screen LCD
Temperature control	Intelligent software temperature control with PID automatic parameter tuning
PID adjustment	Automatic tuning according to different media; manual parameter adjustment supported for special users
Temperature correction	Software correction of displayed temperature against actual temperature
Stirring system	Built-in magnetic stirring device with bottom-protruding design
Cooling system	Fully enclosed compressor refrigeration
Cooling protection	Overheat and overcurrent protection
Circulation modes	Internal circulation and external circulation
External circulation ports	Inlet and outlet with 10 mm outer-diameter round tubes
Overtemperature protection	Available
Overtemperature alarm	Audible alarm with user-settable alarm temperature
Automatic protection response	Load can be automatically disconnected during overtemperature conditions
Timing function	Total operating time can be preset; load disconnects automatically when time expires
Control lock	Software digital lock for system setting values
Customization	Non-standard customization supported