

Hotplates

T-14S/14R/17S/17R (max. 350°C)

Provide high safety functions and precise temperature control for general purpose heating applications



Model ¹⁾		T-14S	T-14R	T-17S	T-17R	
Technical Data	Heating	Temperature Range (°C / °F)	Max. 350 / 662			
		Control	Feedback Control with PID / Scale			
		Display	LED digital (0.1°C resolution)			
		Heating Power (W)	600		800	
	Safety	Hot Top Indicator (°C / °F)	Warning lamp (50 / 122)			
		Over Temp.	Top plate / Main body / PCB			
		Over Current	Current limit protection			
Timer	2 type, 1 min to 99 hrs 59 min					
Load, Max (kg / lbs)	25 / 55.1					
General Data	Top Plate	Material	Ceramic coated aluminum			
		Dimension (Ø, mm / Inch)	140 / 5.5		170 / 6.7	
	Body	Material	Aluminum			
		Dimension (WxDxH, mm / Inch)	161x290x100 / 6.34x11.42x3.94	210x294x99 / 8.27x11.57x3.90	191x330x101 / 7.52x12.99x3.98	240x324x100 / 9.45x12.76x3.94
		Net Weight (kg / lbs)	2.2 / 4.9	2.4 / 5.3	2.9 / 6.4	3 / 6.6
Electrical Requirements (230V, 50Hz / 60Hz)	3.0 A			4.0 A		
Cat. No.	AAH35015K	AAH35115K	AAH35025K	AAH35125K		
Electrical Requirements (120V, 60Hz)	5.0 A			6.7A		
Cat. No.	AAH35013U	AAH35113U	AAH35023U	AAH35123U		

1) S-model : Straight type, R-model : Round type with handles

* Permissible environmental conditions: temperature (5-40°C) and relative humidity (up to 80%).

* Above specifications can be changed without prior notice.



High heat transfer rate of the tightly integrated structure of heater and ceramic-coated aluminum alloy top plate

Optimum heating level is adjustable depend on your application

Hot top warning indicator will blink whenever the top plate temp. is over 50°C to prevent accidental injuries

Various overheat prevention system protecting motor, PCB, top plate

User configurable temperature limit setting for user's convenience and safety

Precise and fast heating by Microprocessor PID control

Auto-tuning and temperature calibration

Keypad lock button

Multi-functional temperature control modes

- Optimal Mode / Fast Mode / Slow Mode / User Mode / Point Mode
- Select the best suitable mode depending on the application

Two user-selectable timer activation modes

- Timer 1 starts immediately after the timersetting
- Timer 2 is activated only when the set temperature is reached

Separate operation RUN/STOP button to avoid unintentional heating

Non-slip heating bath with concavo-convex bottom prevents unintentional slips of the bath (optional)

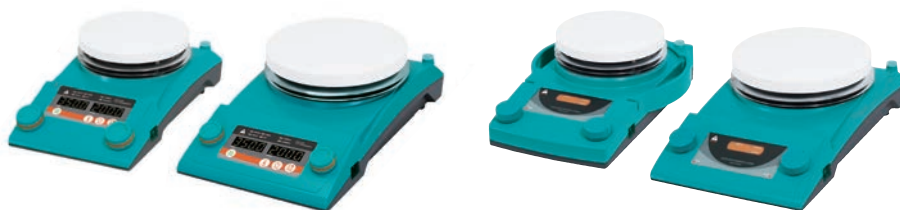
Accessories

For detailed information of accessories, please refer to the page 13-15.

Hotplate Stirrers

TS-14S/17S, TM-14SB/14RB/17SB/17RB (max. 350°C, max. 2000 rpm)

Reflect user's perspective by providing outstanding stirring and heating performance with optimum safety features



Advanced Models (TS-14S, TS-17S)

Basic Models (TM-14RB, TS-17SB)



Model ¹⁾		TS-14S	TS-17S	TM-14SB	TM-14RB	TM-17SB	TM-17RB		
Technical Data	Heating	Temperature Range (°C / °F)	Max. 350 / 662						
		Control	Feedback Control with PID			Scale			
		Display	LED digital (0.1 °C resolution)			None			
	Stirring	Heating Power (W)	600	800	600		800		
		Speed Range (RPM)	30 to 2,000			50 to 2,000			
		Capacity (L / cu ft, H ₂ O)				20 / 0.71			
	Safety	Magnetic Bar, Max. (ØxL, mm / inch)	8 x 40 / 0.31 x 1.57						
		Hot Top Indicator (°C / °F)	Warning lamp (50 / 122)						
		Over Temp.	Top plate / Main body / PCB						
	General Data	Over Current	Current limit protection						
Motor		BLDC motor							
Timer		2 type, 1min to 99 hrs 59 min			None				
Load, Max (kg / lbs)		25 / 55.1							
General Data	Top Plate	Material	Ceramic coated aluminum						
		Dimension (Ø, mm / inch)	140 / 5.5	170 / 6.7	140 / 5.5		170 / 6.7		
	Body	Material	Aluminum						
		Dimension (WxDxH, mm / inch)	161x290x100 / 6.34x11.42x3.94	191x330x101 / 7.52x12.99x3.98	161x290x100 / 6.34x11.42x3.94	210x294x99 / 8.27x11.57x3.9	191x330x101 / 7.52x12.99x3.98	240x324x100 / 9.45x12.76x3.94	
Net Weight (kg / lbs)	2.8 / 6.17	3.5 / 7.72	2.8 / 6.17	3.0 / 6.61	3.5 / 7.72	3.6 / 7.94			
Electrical Requirements (230V, 50Hz / 60Hz)		3.0 A	4.0 A	3.0 A		4.0 A			
Cat. No.		AAH34415K	AAH34425K	AAH34215K	AAH34315K	AAH34225K	AAH34325K		
Electrical Requirements (120V, 60Hz)		5.0 A	6.7A	5.0A		6.7A			
Cat. No.		AAH34413U	AAH34423U	AAH34213U	AAH34313U	AAH34223U	AAH34323U		

1) S/SB-model : Straight type, RB-model ; Round type with handles

※ Permissible environmental conditions: temperature (5 - 40 °C) and relative humidity (up to 80%).

※ Above specifications can be changed without prior notice.



Common Features

High heat transfer rate of the tightly integrated structure of heater and ceramic-coated aluminum alloy top plate

Optimum heating level is adjustable depend on your application

Hot top warning indicator will blink whenever the top plate temp. is over 50 °C to prevent accidental injuries

Various overheat prevention system protecting motor, PCB, top plate

Fast and precise stirring speed control even at high temperature

Virtually no decoupling of stir bars with viscous media and high speed

Large stirring capacity up to 20 liter in case of water

Instant halt of the stirring operation

Non-slip heating bath with concavo-convex bottom prevents unintentional slips of the bath (optional)

Additional Features of TS-S

Constant stirring speed by intelligent feedback control

Temperature probe is included (PT100, Max. 250°C)

Precise and fast heating by Microprocessor PID control

Auto-tuning and temperature calibration

User configurable temperature limit setting for user's convenience and safety

Multi-functional temperature control modes

- Optimal Mode / Fast Mode / Slow Mode / User Mode / Point Mode
- Select the best suitable mode depending on the application

Two user-selectable timer activation modes

- Timer 1 starts immediately after the timer setting
- Timer 2 is activated only when the set temperature is reached

Separate operation RUN/STOP button to avoid unintentional heating



- Temperature Probe (PT100, Max. 250°C) only for TS-S

Hotplate Stirrers, Magnetic Stirrers

MS-33MH/53MH(max. 120°C, max. 2000 rpm), MS-23M/32M/33M/51M/52M/53M (max. 2000 rpm)

Selectable stirrer models with heating or without heating performance

Supported various number of multi position stirring to meet user's demands



Multi-position Hotplate Stirrers
(MS-33MH/53MH)

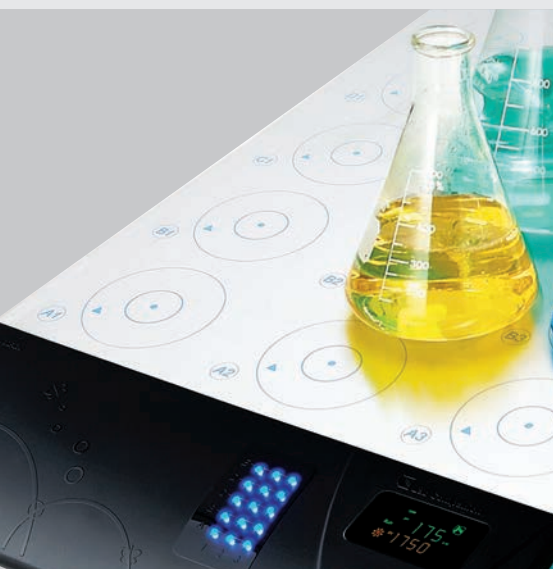


Multi-position Magnetic Stirrers
(MS-23M/32M/33M/51M/52M/53M)



CE Certification only for MS-M Models

Model		MS-33MH	MS-53MH	MS-23M	MS-32M	MS-33M	MS-51M	MS-52M	MS-53M	
Technical Data	Heating	Temperature Range (°C / °F)	Max. 120 / 248		-	-	-	-	-	
		Control	Scale		-	-	-	-	-	
		Heating Power (W)	600	1000	-	-	-	-	-	
	Stirring	Speed Range (RPM)	30 to 2,000							
		Control	Feedback control with PID							
		Stirring Positions	9	15	6	6	9	5	10	15
		Stirring Point Distance (WxD, mm / inch)	117x90 / 4.61x3.54		117x170 / 4.6x6.69	117x90 / 4.6x3.54	117x90 / 4.6x3.54	90 / 3.54	117x90 / 4.6x3.54	
		Timer	1min. to 99 hours 59 min.							
		Motor	BLDC motor							
		Motor Rating Input / Output (W) per each point	2.9/1.6							
Safety	Magnetic Bar, Max. (ØxL, mm / Inch)	8x30 / 0.31x1.18								
	Over Temp.	Top plate	-	-	-	-	-	-	-	
General Data	Top plate	Over Current	Current limit protection							
		Load, Max (kg / lbs)	30 / 66.14							
		Material	Aluminum				Stainless Steel			
Electrical Requirements (230V, 50Hz / 60Hz)	Cat. No.	Dimension (WxD, mm / Inch)	385x328 / 15.16x12.91	385x493 / 15.16x19.41	377x434x81 / 14.8x17.1x3.2	254x434x81 / 10x17.1x3.2	377x434x81 / 14.8x17.1x3.2	130x591x75 / 5.1x23.3x2.9	251x591x75 / 9.9x23.3x2.9	378x591x75 / 14.9x23.3x2.9
		Net Weight (kg / lbs)	10 / 22.05	15 / 33.06	6 / 13.23	5 / 11.02	7 / 15.43	4 / 8.82	8 / 17.64	11 / 24.25
Electrical Requirements (120V, 60Hz)	Cat. No.	4.1 A	5.8 A	AC 100 ~ 240V, 50 / 60Hz						
		AAHK34015K	AAHK34025K	AAH332115K	AAH332215K	AAH332315K	AAH332415K	AAH332515K	AAH332615K	
		8.0 A	11.2 A	AC 100 ~ 240V, 50 / 60Hz						
		AAHK34013U	AAHK34023U	AAH332115U	AAH332215U	AAH332315U	AAH332415U	AAH332515U	AAH332615U	



Common Features

Ideal for the multiple sample testing under the same condition

- Maximum 15 independently controlled stirring positions

User-friendly operation and time setting modes allowing various ways of multi-position stirring to meet users' demands (single point, multiple point, whole row, whole column, etc.)

Bright and vivid LED position indicating lamps

Chemical-resistant #304 grade stainless steel top-plate (only for MS-M)

Additional Features of MS-MH

Fast and precise stirring operations are enabled by BLDC motor and extremely strong magnetic coupling power

Various stirring control modes are available

- All Mode / Column Mode / Row Mode / Point Mode

Built in thermal shutdown and current limit protection

Integrated design of the heater and the top plate provides exceptional heat transfer rate and quick heat up capability

High heat transfer aluminum top-plate.

Non-slip silicon plate mat is attached on the top plate to prevent unintended slips

Accessories

For detailed information of accessories, please refer to the page 13-15.

Magnetic Stirrers

MS-12B/12T/17B/17T/22B, MS-17G/22G (max. 2500 rpm, max. 2000 rpm)

Magnetic Stirrers (scale&digital)

Powerful magnets and motors guarantee a high-speed and a good-management of the device



Scale Models (MS-B/T)



Basic Models (MS-G)



Certifications only for MS-B, G Models

Model ¹⁾		MS-12B	MS-12T	MS-17B	MS-17T	MS-22B	MS-17G	MS-22G	
Technical Data	Speed Control	Electronic speed control				Feedback control with PID			
	Stirring Capacity (Liter, H ₂ O)	2		4		5	4	5	
	Speed Range (RPM)	150 to 2,500				30 to 2,000			
	Speed Display	None				VFD			
	Motor Rating Input / Output (w)	2.9 / 1.6							
	Magnetic Bar (∅xL, mm / Inch), Max.	8x30 / 0.31x1.18	8x30 / 0.31x1.18	8x40 / 0.31x1.57	8x30 / 0.31x1.18	10x50 / 0.39x1.97	8x40 / 0.31x1.57	10x50 / 0.39x1.97	
Top Plate	Load, Max (kg / lbs)	15 / 33.07	10 / 22.05	20 / 44.09	20 / 44.09	25 / 55.12	20 / 44.09	25 / 55.12	
	Material	Polypropylene with non-slip silicon cover							
General Data	Dimension (mm / inch, ∅)	120 / 4.72	115 / 4.53	170 / 6.69	165 / 6.5	220 / 8.66	170 / 6.69	220 / 8.66	
	Body Material	Polypropylene							
	Dimension (mm / inch, WxDxH)	130x130x65 / 5.12x5.12x2.56	181x176x57 / 7.13x6.93x2.24	185x185x65 / 7.28x7.28x2.56	246x243x57 / 9.69x9.57x2.24	230x230x65 / 9.06x9.06x2.56	210x280x72 / 8.27x11.02x2.82	260x360x72 / 0.24x14.17x2.82	
	Weight (kg / lbs)	0.6 / 1.32		0.9 / 1.98		1.1 / 2.43	1.35 / 2.98	1.75 / 3.86	
	Electrical Requirements	AC 100 ~ 240V, 50 / 60Hz with power adapter				AC 100 ~ 240V, 50 / 60Hz	AC 100 ~ 240V, 50 / 60Hz		
	Power Consumption (w)	5		6		6			
Cat. No.	Protection Class (DIN EN 60529)	IP42							
	Persian Blue	KR plug	AAH330115BK	AAH333115BK	AAH330215BK	AAH333215BK	AAH330315BK	AAH331215BK	AAH331315BK
		US plug	AAH330115BU	AAH33316BU	AAH330215BU	AAH33326BU	AAH330315BU	AAH331215BU	AAH331315BU
	Yellow	KR plug	AAH330115YK	-	AAH330215YK	-	AAH330315YK	AAH331215YK	AAH331315YK
		US plug	AAH330115YU	-	AAH330215YU	-	AAH330315YU	AAH331215YU	AAH331315YU
	Orange	KR plug	-	AAH333115RK	-	AAH333215RK	-	-	-
		US plug	-	AAH33316RU	-	AAH33326RU	-	-	-

1) B-models: round type, T-models; triangle type.



Common Features

Best-in-the-class with broad speed range and suitable for high-speed rotation experimental environment

Ergonomic designed, lightweight, easy to operate, and low profile

Wide top plate

Two non-slip silicon plate covers (white & black) are provided

Non-slip strength rubber feet

Sparkless, silent and durable BLDC motor

Built-in thermal shutdown and current limit protection

Additional Features of MS-G

Bright and vivid VFD and responsive touch screen buttons

Gradual start-up to protect users against splashing of samples

M10 threaded hole to hold a support rod



• Plate Covers(white & black), Magnetic Stirring Bar