

Magnetic Stirrer

Digital type



Accurate and smooth feedback speed control

Structural Functional Features

- Maintains accurate speed with feedback control even when sample viscosity and amount change.
- Polypropylene (PP) material with excellent chemical resistance.
- Minimized vibration during high-speed stirring with rubber feet.
- Using special permanent magnets for maintaining stirring ability.

Use Convenience Features

- Simultaneous display of set speed and actual speed.
- Timer (up to 99 hours 59 minutes) and program operation function. (2-step repeat pattern)
- Clamp Rod (option) can be added to the main body to fix other equipment such as burette, sensor, etc.
- 4 models provided according to the quantity and size of stirring.
- The two types of black and white covers are very useful for observing changes according to samples.



Outstanding Safety

- Safety ensured by BLDC motor that does not generate sparks.
- Spill-proof design minimizes inflow solution into device.
- Prevents samples splash with smooth operation at the start and stop of stirring.
- Provides silicon-based top plate cover to prevent slipping accidents of glassware.



Specification

Model		MS-17G	MS-22G	
Stirring	Speed range (rpm)	30 to 2000	30 to 2000	
	Capacity (H ₂ O, L)	4	5	
	Speed stability (± %)	1	1	
	Magnetic bar, Max. (L x Ø, mm / inch)	40 x 8 / 0.31 x 1.57	50 x 10 / 1.97 x 0.39	
	Load, Max. (kg / lbs)	20 / 44.09	25 / 55.12	
Material	Top plate	Polypropylene with silicone cover	Polypropylene with silicone cover	
	Body	Polypropylene	Polypropylene	
	Motor type	BLDC (Brushless Direct Current)	BLDC (Brushless Direct Current)	
Dimensions	Top plate	170 (Ø, mm) / 6.69 (inch)	220 (Ø, mm) / 8.66 (inch)	
	Exterior (W x D x H, mm / inch)	210 x 280 x 72 / 8.27 x 11.02 x 2.83	260 x 355 x 72 / 10.23 x 13.98 x 2.83	
	Net weight (kg / lbs)	1.4 / 3.09	1.8 / 3.97	
Electrical requirements		AC 100 ~ 240V, 50/60Hz, 0.2A		
Power consumption (W)		6	6	
Cat. No.	Persian blue	KR plug	AAH331215BK	AAH331315BK
		US plug	AAH331215BU	AAH331315BU
	Orange	KR plug	AAH331215YK	AAH331315YK
		US plug	AAH331215YU	AAH331315YU

Accessories [Page 141](#) Plate Cover, Clamp Rod, Clamp Holder, Magnetic Bar, Magnetic Retriever

Magnetic Stirrer

Analog type



Quick speed control of stirring with real time response

Structural Functional Features

- 10 models according to size, shape and color.
- Polypropylene (PP) material with excellent chemical resistance.
- Minimized vibration during high-speed stirring with rubber feet.
- Using special permanent magnets for maintaining stirring ability.

Use Convenience Features

- Quick control of stirring speed in real time according to degree of control knobs.
- The two types of black and white covers are very useful for observing changes according to samples.
- Convenient LED lamp for checking operation status.
- Lightweight makes handling convenient.

Outstanding Safety

- Safety ensured by BLDC motor that does not generate sparks.
- Spill-proof design minimizes inflow solution into device.
- Provides Silicon-based top plate cover to prevent slipping accidents of glassware.



MS-12B

MS-17B



MS-12T

MS-17T

Stirrer & Mixer

Specification

Model		MS-12B	MS-17B	MS-22B	MS-12T	MS-17T	
Stirring	Speed range (rpm)	150 to 2500	150 to 2500	150 to 2500	150 to 2500	150 to 2500	
	Capacity (H ₂ O, L)	2	4	5	2	4	
	Magnetic bar, Max. (L x Ø, mm)	30 x 8 / 1.18 x 0.31	40 x 8 / 1.57 x 0.31	50 x 10 / 1.97 x 0.39	30 x 8 / 1.18 x 0.31	30 x 8 / 1.18 x 0.31	
	Load, Max. (kg / lbs)	15 / 33.07	20 / 44.09	25 / 55.12	10 / 22.05	20 / 44.09	
Material	Top plate	Polypropylene with silicone cover	Polypropylene with silicone cover	Polypropylene with silicone cover	Polypropylene with silicone cover	Polypropylene with silicone cover	
	Body	Polypropylene	Polypropylene	Polypropylene	Polypropylene	Polypropylene	
	Motor type	BLDC (Brushless Direct Current)	BLDC (Brushless Direct Current)	BLDC (Brushless Direct Current)	BLDC (Brushless Direct Current)	BLDC (Brushless Direct Current)	
Dimensions	Top plate (Ø or W x D, mm / inch)	120 / 4.72	170 / 6.69	220 / 8.66	115 / 4.53	165 / 6.5	
	Exterior (W x D x H, mm / inch)	130 x 133 x 65 / 5.11 x 5.24 x 2.56	180 x 186 x 65 / 7.09 x 7.32 x 2.56	230 x 235 x 65 / 9.05 x 9.25 x 2.56	181 x 176 x 64 / 7.13 x 6.93 x 2.52	246 x 243 x 64 / 9.68 x 9.57 x 2.52	
	Net weight (kg / lbs)	0.6 / 1.32	0.9 / 1.98	1.1 / 2.42	0.6 / 1.32	0.9 / 1.98	
Electrical requirements		AC 100 ~ 240V, 50/60Hz with power adapter, 0.1A					
Power consumption (W)		5	6	6	5	6	
Cat. No.	Persian blue	KR plug	AAH330115BK	AAH330215BK	AAH330315BK	AAH333115BK	AAH333215BK
		US plug	AAH330115BU	AAH330215BU	AAH330315BU	AAH333116BU	AAH333216BU
	Orange	KR plug	AAH330115YK	AAH330215YK	AAH330315YK	AAH333115RK	AAH333215RK
		US plug	AAH330115YU	AAH330215YU	AAH330315YU	AAH333116RU	AAH333216RU

Accessories **Page 141** Plate Cover, Power Adapter, Magnetic Bar, Magnetic Retriever

Magnetic Stirrer

Multi Position type

Differentiated multi-stirring control for multi-purpose use

Structural Functional Features

- Maintains accurate speed with feedback control even when sample viscosity and amount change.
- Display of stirring position on the upper part of the stainless steel.
- Using special permanent magnets for maintaining stirring ability.

Use Convenience Features

- Simultaneous display of set speed and actual speed.
- Count-down timer provided. (up to 99 hours and 59 minutes)
- Six models provided according to the quantity and size of stirring.

Outstanding Safety

- Safety ensured by BLDC motor that does not generate sparks.
- Spill-proof design minimizes inflow solution into device.
- Prevents samples splash with smooth operation at the start and stop of stirring.
- Silicon pad (option) to prevent slip-related accidents of glassware.



MS-53M

Differentiated Multi Control

- Four kinds of stirring control methods and timer function allow for performance of various stirring experiments simultaneously. (MS-51M has two control methods.)
- Display LED point window for easy setting and confirmation.

All Mode

Simultaneous stirring with same speed.

Column Mode

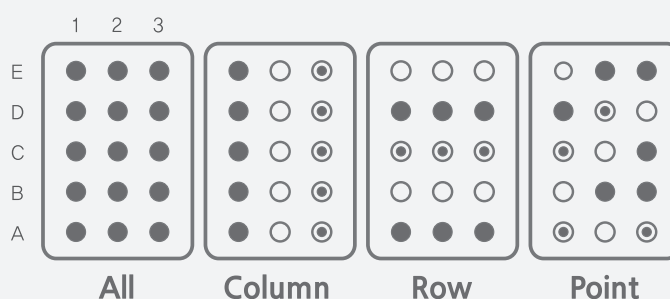
Stirring with different speeds for each column.

Row Mode

Stirring with different speeds for each row.

Point Mode

Stirring with different speeds for each point



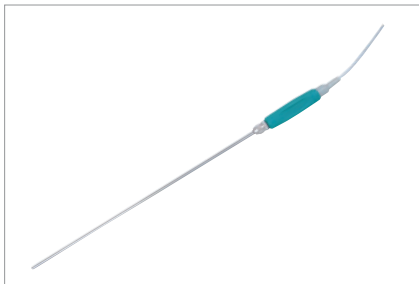
**MS-52M****MS-53M****MS-33M****MS-51M****MS-32M****MS-23M****Stirrer & Mixer**

Specification

Model		MS-51M	MS-23M	MS-32M	MS-33M	MS-52M	MS-53M
Stirring	Speed range (rpm)	30 to 2000	30 to 2000	30 to 2000	30 to 2000	30 to 2000	30 to 2000
	Capacity per point at 2000rpm (H ₂ O, mL)	250	250	250	250	250	250
	Operating mode	2 (All, Point)	4 (All, Column, Row, Point)	4 (All, Column, Row, Point)	4 (All, Column, Row, Point)	4 (All, Column, Row, Point)	4 (All, Column, Row, Point)
	Postion (Row x Column)	5 (5 x 1)	6 (2 x 3)	6 (3 x 2)	9 (3 x 3)	10 (5 x 2)	15 (5 x 3)
	Point distance (W x D, mm / inch)	90 / 3.54	117 x 170 / 4.61 x 6.69	117 x 90 / 4.61 x 3.54	117 x 90 / 4.61 x 3.54	117 x 90 / 4.61 x 3.54	117 x 90 / 4.61 x 3.54
	Magnetic bar , Max. (L x Ø, mm / inch)	30 x 8 / 1.18 x 0.31	30 x 8 / 1.18 x 0.31	30 x 8 / 1.18 x 0.31	30 x 8 / 1.18 x 0.31	30 x 8 / 1.18 x 0.31	30 x 8 / 1.18 x 0.31
	Load, Max. (kg / lbs)	30 / 66.14	30 / 66.14	30 / 66.14	30 / 66.14	30 / 66.14	30 / 66.14
Material	Top plate	Stainless steel	Stainless steel	Stainless steel	Stainless steel	Stainless steel	Stainless steel
	Body	Powder coated steel, PET	Powder coated steel, PET	Powder coated steel, PET	Powder coated steel, PET	Powder coated steel, PET	Powder coated steel, PET
	Motor type	BLDC (Brushless Direct Current)	BLDC (Brushless Direct Current)	BLDC (Brushless Direct Current)	BLDC (Brushless Direct Current)	BLDC (Brushless Direct Current)	BLDC (Brushless Direct Current)
Dimensions	Top plate (W x D, mm / inch)	124 x 485 / 4.88 x 19.09	362 x 318 / 14.25 x 12.52	242 x 318 / 9.53 x 12.52	362 x 318 / 14.25 x 12.52	246 x 485 / 9.68 x 19.09	367 x 485 / 14.45 x 19.09
	Exterior (W x D x H, mm / inch)	131 x 603 x 82 / 5.56 x 23.74 x 3.23	377 x 436 x 82 / 14.84 x 17.16 x 3.23	254 x 436 x 82 / 10 x 17.16 x 3.23	344 x 436 x 81 / 13.54 x 17.16 x 3.19	254 x 602 x 82 / 10 x 23.7 x 3.23	377 x 599 x 82 / 14.84 x 23.58 x 3.23
	Net weight (kg / lbs)	4 / 8.81	6 / 13.23	5 / 11.02	7 / 15.43	8 / 17.64	11 / 24.25
Timer	Max. 99 hrs 59 min.	Max. 99 hrs 59 min.	Max. 99 hrs 59 min.	Max. 99 hrs 59 min.	Max. 99 hrs 59 min.	Max. 99 hrs 59 min.	Max. 99 hrs 59 min.
Electrical requirements		AC 100 ~ 240V, 50/60Hz, 5.0A					
Power consumption (W)		45	45	45	54	85	135
Cat. No.	AAH332415K	AAH332115K	AAH332215K	AAH332315K	AAH332515K	AAH332615K	
	AAH332415U	AAH332115U	AAH332215U	AAH332315U	AAH332515U	AAH332615U	

Accessories Page 141 Silicone Pad, Magnetic Bar, Magnetic Retriever

Accessories for Hotplate & Magnetic Stirrer



Temperature Probe, B Class

With external temperature sensor, it is possible to check and control the temperature of the sample when it is connected to the equipment. (TS model)



Heating Bath

Top plate combines concave and convex structure, resulting in no slippage.



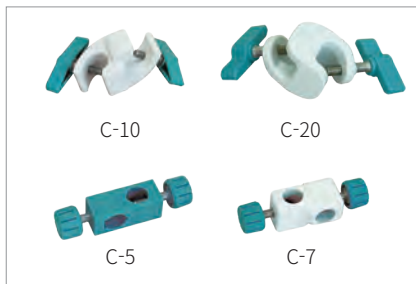
Clamp Rod

Two pieces can be fixed on the left and right of the back of the main body.



3 Prong Clamp

Various types of instruments can be fixed.



Clamp Holder

Clamp rod and clamp can be fixed.



Transparent Shield

Safely observe experiments.

Magnetic Bar [Page 142](#)

- Applied to a magnetic stirrer when stirring within the temperature range up to +280°C.
- Turbo type can be applied at high temperature of 400°C.



Magnetic Retriever [Page 143](#)

- Used when taking out magnetic bar.
- Uses ALNICO V magnets and samarium cobalt magnets.

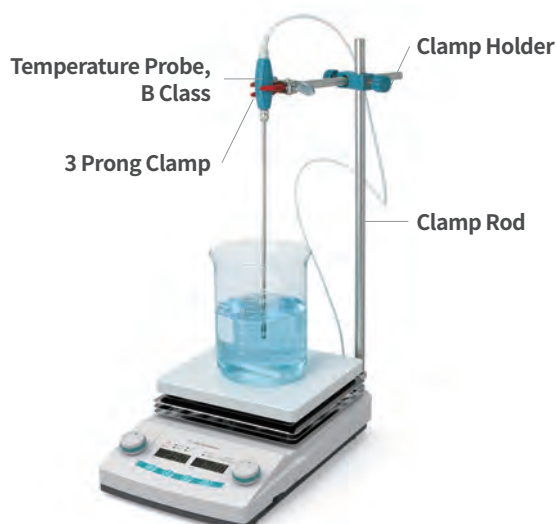


Silicone Cover

내용필요함



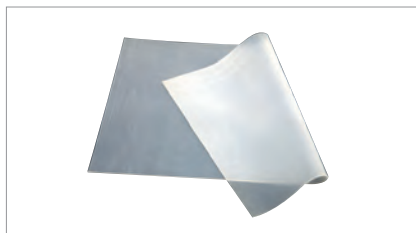
Cat. No.	Description
AAA34501	Temperature Probe, B Class (Max. 250°C)
AAA34502	Temperature Probe, A Class (Max. 400°C)
00HPS0000012	Heating Bath (TS-14SG, TM-14SG, T-14SG)
00HPS0000015	Heating Bath (TS-17SG, TM-17SG, T-17SG)
00MTT0000132	Clamp Rod (Ø12, 400 mm)
BEA1000011	3 Prong Clamp (80 mm grip)
BEA1000012	3 Prong Clamp (60 mm grip)
BEA1000013	3 Prong Clamp (20 mm grip)
AAA37511	Clamp Holder (max. Ø27, C-20)
AAA37512	Clamp Holder (max. Ø17, C-10)
AAA37513	Clamp Holder (max. Ø12, C-7)
AAA37514	Clamp Holder (max. Ø12, C-5)
00HPS0000059	Transparent Shield (TS-14SG, TM-14SG, T-14SG)
00HPS0000039	Transparent Shield (TS-17SG, TM-17SG, T-17SG)
00HPS0000190	Silicone cover (TS-14SG, TM-14SG, T-14SG)



Accessories for Magnetic Stirrer



Plate Cover (Black, White)



Silicone Pad



Clamp Rod

Plate Cover

Cat. No.	Description	Model
00MTT0000002	White color, Silicone (Ø120)	MS-12B
00MTT0000003	White color, Silicone (Ø170)	MS-17B/G
00MTT0000004	White color, Silicone (Ø220)	MS-22B/G
00MTT0000005	Black color, Silicone (Ø120)	MS-12B
00MTT0000006	Black color, Silicone (Ø170)	MS-17B/G
00MTT0000007	Black color, Silicone (Ø220)	MS-22B/G
00MTT0000144	White color, Silicone (Ø115)	MS-12T
00MTT0000143	Black color, Silicone (Ø115)	MS-12T
00MTT0000146	White color, Silicone (Ø165)	MS-17T
00MTT0000145	Black color, Silicone (Ø165)	MS-17T

Silicone Pad

Cat. No.	Description (W x D x H, mm / inch)	Model
00MTS0000015	355 x 475 x 1 / 13.98 x 18.7 x 0.04	MS-53M
00MTS0000016	235 x 475 x 1 / 9.25 x 18.7 x 0.04	MS-52M
00MTS0000017	115 x 475 x 1 / 4.53 x 18.7 x 0.04	MS-51M
00MTS0000041	235 x 310 x 1 / 9.25 x 12.2 x 0.04	MS-32M
00MTS0000042	355 x 310 x 1 / 13.98 x 12.2 x 0.04	MS-23M / 33M

Power Adapter & Clamp Rod

Cat. No.	Description	Model
00MTT0000001	Power Adapter (100~240V, 50/60Hz)	MS-12B/17B
		MS-12T/17T
00MTT0000132	Clamp Rod (Ø12 x 400 / Ø0.47 x 15.75", M10)	MS-17G/22G

Clamp Holder



- Up to Ø27 mm rods mountable.
- Manufactured using aluminum die-casting and plastic for lightweight but strong fixation.
- Knob structure that is comfortable to handle when locking / unlocking.
- The contact surface with the stand support is stable and does not slip.
- C-20 and C-10 models are suitable for the overhead stirrer.
- The C-10, C-7 and C-5 models are suitable for use with hotplate and magnetic stirrer.

Model	C-20	C-10	C-7	C-5
Max. Ø (mm / inch)	27 / 1.06	17 / 0.66	12 / 0.47	12 / 0.47
Open Ø (mm / inch)	20 / 0.79	15 / 0.59	-	-
Body material	Aluminum	Aluminum	Aluminum	Polypropylene
Knob material	Polypropylene	Polypropylene	Polypropylene	Polypropylene
Bolt material	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel
Suitable for	Overhead Stirrer	Overhead Stirrer	-	-
	-	Hotplate & Magnetic Stirrer	Hotplate & Magnetic Stirrer	Hotplate & Magnetic Stirrer
Cat. No.	AAA37511	AAA37512	AAA37513	AAA37514

Accessories Magnetic Bar

Features of Magnetic Bar

- Chemically stable with PTFE inert material.
- Completely sealed structure with no cracks or pores.
- Smooth finish to avoid absorption or cross contamination.
- Working Temperature Range: up to +280°C.
- Can be sterilized using chemical or physical (thermal) methods. (except γ Radiation)
- Magnet-ALNICO V, PTFE Coated.

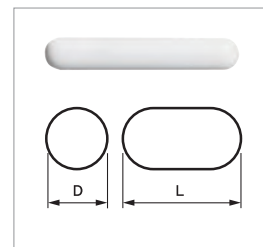
※ The size of the magnetic bar is the average value, and there may be an error of $\pm 5\%$ in length and $\pm 10\%$ in diameter.



Cylindrical Magnetic Bar

- Smooth and round shape.
- The most commonly used magnetic bar for a variety of applications.

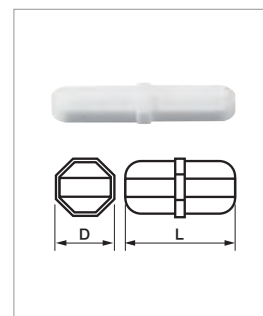
Cat. No.	D (mm / inch)	L (mm / inch)
BCW0011138	8 / 0.31	13 / 0.51
BCW0011156	6 / 0.23	15 / 0.59
BCW0011208	8 / 0.31	20 / 0.78
BCW0011258	8 / 0.31	25 / 0.98
BCW0011308	8 / 0.31	30 / 1.18
BCW001140	8 / 0.31	40 / 1.57
BCW001150	8 / 0.31	50 / 1.96



Octahedral Magnetic Bar

- Octagonal design for more efficient sample mixing.
- Used in containers having slight slopes or uneven surfaces.
- The center of the pivot ring selects the best position for stirring.
- Bigger turbulence than pivot ring is generated at lower speeds.
- Pivot ring reduces friction and noise.

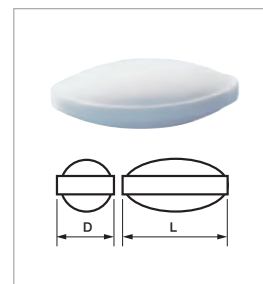
Cat. No.	D (mm / inch)	L (mm / inch)
BCW001513	8 / 0.31	13 / 0.51
BCW001515	8 / 0.31	15 / 0.59
BCW001522	8 / 0.31	22 / 0.86
BCW001525	8 / 0.31	25 / 0.98
BCW001528	8 / 0.31	28 / 0.10
BCW001538	8 / 0.31	38 / 1.49
BCW001541	8 / 0.31	41 / 1.61
BCW001551	8 / 0.31	51 / 2.00
BCW00155110	10 / 0.39	51 / 2.00



Oval Magnetic Bar

- Designed to fit round-bottom flasks, the bar itself has a central axis.

Cat. No.	D (mm / inch)	L (mm / inch)
BCW001610	5 / 0.19	10 / 0.39
BCW001615	6 / 0.23	15 / 0.59
BCW001620	10 / 0.39	20 / 0.78
BCW00162510	10 / 0.39	25 / 0.98
BCW001630	16 / 0.63	30 / 1.18
BCW001635	16 / 0.63	35 / 1.38
BCW001640	20 / 0.78	40 / 1.57
BCW001650	20 / 0.78	50 / 1.96



Accessories Magnetic Retriever

Polypropylene

- Product with built-in ALNICO V magnet and coated with polypropylene.
- Convenient structure having ring part at the end for hanging after use.

PTFE

- Product with built-in ALNICO V magnet and coated with PTFE. (teflon)



Polypropylene



PTFE



Cat. No.	L (mm)	Ø (mm)	Description
BCW0041300	300	10	Polypropylene, ALNICO V
BCW0041350	350	10	
BCW0041450	450	10	
BCW004150	150	10	PTFE, ALNICO V
BCW004250	250	10	
BCW004350	350	10	
BCW004450	450	10	

Accessories Power Divider

Clear arrangement the power supply lines of a lot of small appliance

Simultaneously provides power up to 5 devices

- Simultaneously supplies DC 12V power of up to 0.7A per device for 5 devices in each channel.

LED lamp displaying operation state for each of 5 channels

- Green light indicates normal operation.
- Red light indicates over-current.

Convenient and safe structure and functions

- Rod supplied to fix on stand.
- Excellent durability with moisture-proof structure.
- Rubber stopper for each channel.
- Built-in over current protection function.

Model	PD-5
Input	DC 12V, Min. 3.5A
Output	DC 12V, Max. 0.7A per channel
Dimension (W x D x H, mm)	126 x 78 x 33
Weight (kg)	0.16
Cat. No.	AAH33501

Application model: MS-17T, MS-12B, MS-17B

