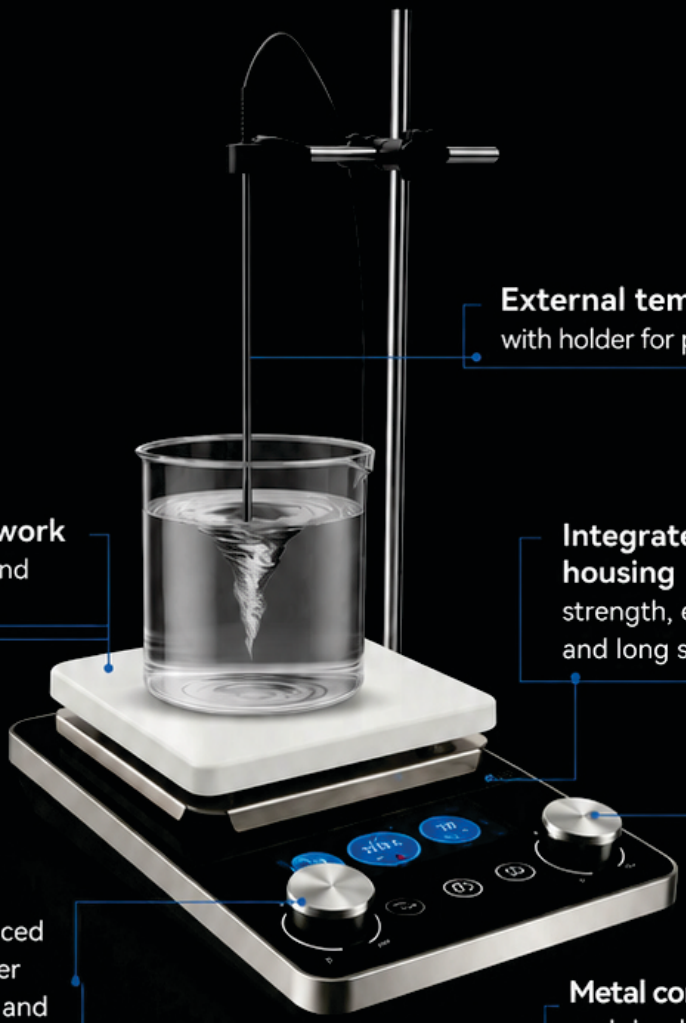
BIOSPECTRIX

ADVANCED LABORATORY SOLUTIONS

MAGNETIC STIRRER HOT PLATE

MS SERIES



External temperature probe with holder for precise thermal control

Ceramic-coated aluminum work plate with rapid heat transfer and corrosion resistance

Integrated die-cast aluminum housing provides high structural strength, excellent heat dissipation, and long service life.

Vivid LCD display on advanced models provides clear parameter monitoring with timer function and RS485 communication interface.

Metal control knobs ensure precise and durable parameter adjustment.

Features

- Heating temperature up to 350°C provides precise and stable thermal control for demanding laboratory applications.
- CNC cast aluminum working plate with ceramic corrosion-resistant coating offers excellent durability and chemical resistance.
- LCD display on advanced models provides clear parameter monitoring with timer function and RS485 communication interface.
- High-performance brushless DC motor enables powerful stirring up to 20 L, ensuring smooth, quiet, and maintenance-free operation.

SPECIFICATIONS

Model	BS-MS-HS320F	BS-MS-HS350F-Pro
Image		
Voltage	AC110V/220V 50Hz	
Power	500W	
Display Content	LCD High-Definition Color Screen	
Speed Range (rpm)	100-2000	
Temperature Range(°C)	Working Plate: RT-320	Working Plate: RT-350
Temperature Acuurancy	Working Plate: ±1°C Solution: RT-100°C: ±0.5°C; >100°C: ±1°C	
Working Plate Size(mm)	150	
Working Plate Material	CNC Cast aluminum + ceramic corrosion resistant coating	
Shell Material	Aluminum	
Maximum Stirring H2O Volume (L)	20	
Control Method	Stepless speed regulation	
Timing Function	1-99h59min	
Switch	Yes	
RS485	/	Yes
Program Control	Yes	
Residual Heat Warning	Screen interaction	
Magnet Size(mm)	Φ8*30	
Motor Type	DC Brushless motor	

TYPICAL APPLICATIONS



Chemical synthesis and organic reactions



Reagent heating and solution preparation



Sample digestion and laboratory pretreatment



Pharmaceutical research and formulation development



Material synthesis and polymer dissolution



Environmental sample preparation and analysis

Overhead Stirrer

Overheads stirrers are used for mixing medium– to high–viscosity samples and are widely used in industries such as chemical synthesis, pharmaceutical synthesis, physicochemical analysis, and petrochemicals.

Series	Model	Product Image	Max.Stirrer Volume (H20)	Speed Range	Max. Torque	Viscosity Max.
EOS	BS-EOS-60SH		20L	100–2000rpm	10	10000mpa.s
	BS-EOS-120SH		40L	100–2000rpm	18	20000mpa.s
	BS-ESO-200SH		60L	100–2000rpm	25	50000mpa.s
	BS-EOS-60PLUS		20L	60–2000rpm	25	10000mpa.s
	BS-EOS-120PLUS		40L	60–2000rpm	35	50000mpa.s
	BS-EOS-200PLUS		60L	60–2000rpm	50	80000mpa.s
RWX	BS-RWX-120PRO		50L	35–2200rpm	50	50000mpa.s
	BS-RWX-150PRO		70L	35–2200rpm	70	50000mpa.s
	BS-RWX-200PRO		100L	35–2200rpm	100	150000mpa.s

Homogenizer

Homogenizer is designed for homogenization, dispersion, emulsification and mixing in routine laboratory applications.

Series	Model	Product Image	Max.Stirrer Volume (H20)	Speed Range	Max. Torque	Viscosity Max.
YJ	BS-YJ-1		0–35000rpm	6	0.1–250ml	5500mpa.s
	BS-YJ-2		5000–28000rpm	6	0.2–250ml	2000mpa.s
	BS-YJ-3		0–35000rpm	6	0.1–250ml	5000mpa.s
	BS-YJ-6		10000–30000rpm	6	0.5–250ml	11000mpa.s

Overhead Stirrer

EOS SERIES



Product Overview

EOS Series Overhead Stirrer ensures reliable mixing from low to high viscosity liquids, with high torque and stable performance for demanding and large-volume applications.

Key Features

- High-torque motor ensures stable mixing under high-viscosity conditions.
- Precision collet enables secure and accurate shaft installation.
- Microprocessor control provides overload protection and parameter memory.
- LCD display offers clear and intuitive operation feedback.
- Reinforced structure ensures stability for large-volume processing.

Specifications

Model	BS-EOS-60SH	BS-EOS-120SH	BS-ES0-200SH	BS-EOS-60Plus	BS-EOS-120Plus	BS-EOS-200Plus
Image						
Voltage	AC100–240V 50–60Hz					
Power	72W	120W	200W	72W	120W	200W
Display Model	LCD display					
Timing Function	1min–99h59min					
Speed Range (rpm)	100–2000			60–2000		
Accuracy (rpm)	±1					
Max Stirring H2O Volume (L)	20	40	60	20	40	60
Max Stirring Viscosity (mPa.s)	10000	20000	50000	10000	50000	80000
Motor Type	Permanent Magnet Motor			Brushless Motor		
Switch Function	/			Yes		

Typical Applications



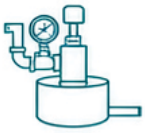
High-viscosity liquid mixing



Polymer and material synthesis



Pharmaceutical formulation



Chemical processing



Pilot-scale laboratory experiments

Overhead Stirrer

RWX SERIES



Product Overview

RWX Series Overhead Stirrer is designed for high-torque mixing of low to high viscosity liquids, delivering powerful and stable performance for demanding and large-volume laboratory applications.

Key Features

- High-performance brushless DC motor delivers enhanced torque for handling high-viscosity and complex sample systems.
- Top-mounted feed-through structure enables smooth and precise vertical adjustment of the stirring shaft.
- Self-locking precision chuck ensures secure and accurate installation under high-load conditions.
- Full-view color LCD with tempered glass panel provides clear, intuitive and real-time operation feedback.
- Reinforced base with dedicated clamp ensures superior stability for high-torque and large-volume processing.

Specifications

Model	BS-RWX-120PRO	BS-RWX-150PRO	BS-RWX-200PRO
Image			
Voltage	AC100–240V 50–60Hz		
Power	120W	150W	200W
Display Model	LCD display		
Timing Function	1min–99h59min		
Speed Range (rpm)	35–2200		
Accuracy (rpm)	±1		
Max Stirring H2O Volume (L)	50	70	100
Max Torque(N.cm)	50	70	100
Max Stirring Viscosity (mPa.s)	50000	80000	150000
Motor Type	DC Brushless motor		
Switch Function	Yes		

Optional RS485 Programmable Control

Typical Applications


High-viscosity liquid mixing


Polymer and high-molecular material synthesis


Pharmaceutical formulation and scale-up


Chemical process development


Pilot-scale and industrial laboratory applications

Homogenizer

YJ Series



Product Overview

YJ Series Homogenizer is designed for reliable homogenization of small-volume samples, combining handheld flexibiiity with stable bench-top operation for routine laboratory applications.

Key Features

- Portable and bench-top design supports flexible handheld and stand-mounted operation.
- Detachable shaft allows easy removal, cleaning and replacement.
- Six-step speed control enables precise adjustment for different sample viscosities.
- Suitable for small-volume homogenization, dispersion, emulsification and mixing.
- 316 stainless steel shaft sleeve ensures corrosion resistance and long-term durability.

Specifications

Model	BS-YJ-1	BS-YJ-2 (Charge)	BS-YJ-3
Image			
Voltage	AC220V 50Hz	AC100–240V 50–60Hz	AC220V 50Hz
Power	145	/	160
Speed level	6		
Speed Range (rpm)	0–35000	500–28000	0–35000
Continuous Operation Time	≤10 min		
Processing Volume (ml)	0.5–50mL (Dispersing shaft DS–6) 1–100mL (Dispersing shaft DS–8) 5–250mL (Dispersing shaft DS–10)		
Max Stirring Viscosity (mPa.s)	5500	2000	5000
Motor Type	DC Brushless motor		

DS–6 — Volume: 0.5–50ml

Max. Circum.Speed:6m/sec
Material:SUS316L
Application: small amounts of solid liquid mixed
Function: dispersing tool for solid/liquid media



DS–8 — Volume: 1–100ml

Max. Circum.Speed:8m/sec
Material:SUS316L
Application: small amounts of solid liquid mixed
Function: dispersing tool for solid/liquid media



DS–10 — Volume: 5–250ml

Max. Circum.Speed:10m/sec
Material:SUS316L
Application: small amounts of solid liquid mixed
Function: dispersing tool for solid/liquid media



Typical Applications



Animal and plant tissue homogenization



Bacteria and yeast sample disruption



Biological sample emulsification and suspension



Small-volume sample preparation



Routine laboratory homogenization tasks

Homogenizer

YJ-6



Product Overview

The high shear homogenizer is designed for high-capacity homogenization of liquid and low- to medium-viscosity samples. With a processing range of 0.5–30 L and a powerful 1300 W motor, it provides efficient and stable performance for laboratory scale-up, pilot processing and routine large-volume sample preparation.

Key Features

- High-capacity processing from 0.5–30 L.
- 1300 W motor for stable and powerful operation.
- Stepless speed control with 6-level adjustment.
- 316 stainless steel shaft for corrosion resistance and durability.
- Suitable for homogenization, dispersion and emulsification.

Specifications

Model	BS-YJ-6
Image	
Voltage	250V 50Hz
Power	1300W
Speed level	6
Speed Range (rpm)	10000–30000rpm
Processing Capacity (H_2O)	0.5–20L (Dispersing shaft DS-20) 0.5–30L (Dispersing shaft DS-25) 0.5–50L (Dispersing shaft DS-35)
Stand Material	304 Stainless Steel
Working Head Size (Dia.×Length)	Standard: Φ25×240mm /Optional: Φ20/35×240mm
Immersion Depth of Working Head	180mm
Working Head Material	316 Stainless Steel

DS-20 Max.Volume:30L

Max. Circum.Speed:20m/sec
Material:SUS316L
Application: Routine sample homogenization and dispersion.
Function: For emulsification and solid/liquid dispersion.



DS-25 Max.Volume:20L

Max. Circum.Speed:25m/sec
Material:SUS316L
Application: Suspension, emulsion, pigment and resin dispersion.
Function: For homogenization and deagglomeration.



DS-35 Max.Volume:50L

Max. Circum.Speed:35m/sec
Material:SUS316L
Application: Large-volume tissue, pigment and emulsion processing.
Function: For high-capacity homogenization and dispersion.



Typical Applications



Routine homogenization, emulsification, deagglomeration and dispersion



Dispersion of substances to form suspensions and emulsions



Dispersion of pigments and resins



Dispersion of animal or human tissue in various solutions



Formulation research for emulsions, creams, cosmetics and food products

Overhead Stirrer provides a variety of stirring tools, such as impellers, paddles and blades:

Model	Four Blades Stirring Paddle							
Image								
Blade Width (mm)	50	60	70	80	60	80	60	80
Shaft Length (mm)	300	300	300	300	350	350	400	400
Shaft Diameter (mm)	8	8	8	8	8	8	8	8

Model	Three Blades Stirring Paddle							
Image								
Blade Width (mm)	50	60	70	80	60	80	60	80
Shaft Length (mm)	300	300	300	300	350	350	400	400
Shaft Diameter (mm)	8	8	8	8	8	8	8	8

Model	Dissolver Stirring Paddle										
Image											
Blade Width (mm)	30	40	50	60	70	80	30	50	80	60	100
Shaft Length (mm)	300	300	300	300	300	300	350	350	400	400	400
Shaft Diameter (mm)	9	8	8	8	8	8	8	8	8	8	8

Model	Anchor Stirring Paddle						
Image							
Blade Width (mm)	40	50	60	70	80	90	100
Shaft Length (mm)	300	300	300	300	350	350	400
Shaft Diameter (mm)	8	8	8	8	8	8	8

Model	Sawtooth Dispersion Stirring Paddle						
Image							
Blade Width (mm)	40	50	60	70	80	90	100
Shaft Length (mm)	300	300	300	300	350	350	400
Shaft Diameter (mm)	8	8	8	8	8	8	8

Model	Flat Blade Stirring Paddle			
Image				
Blade Width (mm)	40	50	60	80
Shaft Length (mm)	300	300	350	350
Shaft Diameter (mm)	8	8	8	8

Paddle Selection Guide

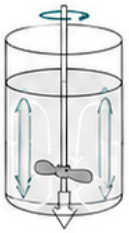
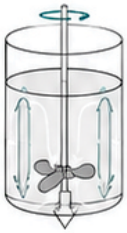
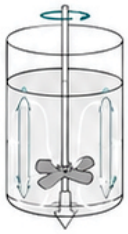
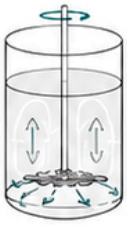
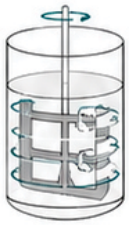
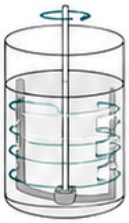
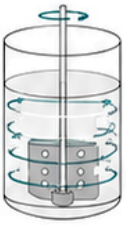
Choose The Right Impeller To Achieve Optimal Mixing Performance For Your Application

AXIAL
Flow Parallel To The Shaft Optimal Top-To-Bottom Circulation.

RADIAL
Flow Moves Outward From The Center, High Shear And Dispersion

TANGENTIAL
Flow In Circular Direction, Ideal For Wall Scraping And High-Viscosity Mixing

Specifications

Name	Propeller 2-Bladed	Propeller 3-Bladed	Propeller 4-Bladed	Dissolver	Frame	Anchor	Flat Blade Paddle
Image							
Flow direction (Diagram)							
Tip speed / circumferential speed (m/s)	2 – 15	2 – 15	2 – 15	8 – 20	1 – 5	1 – 5	1 – 3
Direction	AXIAL	AXIAL	AXIAL	RADIAL	TANGENTIAL	TANGENTIAL	TANGENTIAL
Mixing speed	Medium – high	Medium – high	Medium – high	Medium – high	Low	Low	Low – medium
Shear forces	Low	Medium	Medium	Very High	Low	Low	Low
Viscosity	Low	Low – medium	Low – medium	Low	High	High	Medium – high
Applications	• Biological samples • Foam-sensitive systems • Low-shear processes (e.g., pre-treatment for cell culture)	• Dissolving solids (salts, powders) • Rapid mixing reactions • Small-volume laboratory solutions	• Biochemical reaction liquids • Fermentation broths • General chemical reactions	• Powder dissolution • Pigment dispersion • Emulsion preparation • Rapid laboratory mixing	• Medium to high viscosity liquids • Industrial reaction tanks • Batch mixing processes • Coatings and resin systems	• Colloids, pastes, emulsions • Cosmetics (creams, lotions) • Pharmaceutical products (ointments, gels) • High-viscosity chemical liquids	• Aqueous solutions, buffer solutions • Chemical reagent mixing • Small-scale laboratory reactions

NOTE: Consider Fluid Properties, Vessel Geometry, And Process Goals When Selecting The right Impeller.