



Stirrers

- Smart Design of Body made by Aluminum Die-Casting (MS, MSH models)
- Digital LCD Display for RPM, Power Bar Graph and Status
- User's Self-Compensation Function: to Control Difference between Real Temp. and Indicated Temp. (±20.0°C) (MSH model)
- Patented Jog-Shuttle Control system and Digital LCD with Back-light (Digital Model)
- Chrome-Plated & Stainless Steel Chuck Prevention from Corrosion (HS, HT models)
- High-Speed and High-Torque Overhead Stirrer with Powerful DC Motor

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Digital / Analog Magnetic Stirrer



> Multi-point Magnetic Stirrers













HS-30D-Set

"witeg" WiseStir® MS-A Premium Magnetic Stirrer, 180×180mm Ceramic-Coated Plate with PWM Control System, Precise Speed Control, Ceramic Coated Al-Plate, up to 1.500 rpm, Max. 20 Lit.

■ Ceramic Coated Plate-Chemical/Acid Resistance

■ CE Certified

- * Ideal for Heat-sensitive Procedures such as Microbiology and Biochemistry Applications
- * Mixing for Chemical, Laboratory, Pharmaceutical Materials
- * Superior Linearity for the Control of Stirring Speed by Specially Designed Control Circuitry
- * Smart Design of Body : Made by Aluminum Die-Casting
- * Powerful Motor for Stirring Quantities of up to 20Lit. (Water)
- * Ceramic Coated Plate-Chemical/Acid Resistance
- * Free Voltage (AC 80V ~ 240V, 50 / 60Hz) by SMPS
- * Included 1ea 3cm Magnetic Stirrer Bar

Specification

Model		180 × 180mm Plate-type "MS-20A"	
Plate Size (mm)		180×180	
Stirring Capacit	y (H₂O)	Max. 20Lit.	
Speed Range		Max. 1.500 rpm	
Motor Rating		9 / 4 W	
Controller		Superior Linearity PWM Controller	
Stirring Bar		3cm bar-included, Usable : up to 5cm bar	
Permissible Amb	ient Temperature	Ambient +5 ~ 50 ℃	
Permissible Relative Moisture		85%	
Material	Plate	Ceramic Coated Aluminum (Chemical / Acid Resistance)	
wateriai	Body	Powder Coated Aluminum	
Dimension (w×	d×h) (mm)	206×307×99	
Weight (kg)		3,1 kg	
Others		CE Certified	
Packing Size (w	×d×h) (mm)	400×280×200	
& Gross Weight	t [5 kg	
Power Consum	ption	10 W	
Power plug type)	Hybrid E+F	
Power Supply*		AC 230V, 1N~, 50/60Hz	

^{*} Other Specifications are available upon Customer's Request.

Ordering Information

DH.WMS03122 Magnetic Stirrer, 180×180mm, 230V, "MS-20A", with stir bar

Optional Accessories

DH.WHP503036 (1) Stand Rod, "RD200", Stainless Steel, screw,

 ϕ 12 × L450mm, for **HP-20A/20D**, **MSH-20A/20D**,

MSH-50A/55A,MSH-50D/55D and SMHS

DH.WHP503012 (2) Holder/Clamp/Clip, "CL220", for Temp. Probe

- * You will find matching beakers and flasks in our general catalogue at following pages: 33, 34, 293-296.
- * You will find matching stirring bars in our general catalogue at following pages: 362, 363.

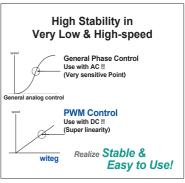


Premium Magnetic Stirrer with Stir Bar "MS-20A"



Specialized Features





"witeg" WiseStir® MS-D Digital Magnetic Stirrer, 180×180mm Ceramic-Coated Plate with Digital Feedback Control System, Precise Speed Control, Back Light LCD Display, 80~1.500 rpm, Max. 20 Lit.

Cat. No



Premium Magnetic Stirrer (MS-20D)



- Digital Feedback Control by High-Performance Microprocessor
- Ceramic Coated Plate Chemical / Acid Resistance
- Patented Jog-Shuttle Control System
- **CE Certified**
- * Ideal for Heat-sensitive Procedures such as Microbiology and Biochemistry Applications
- * Mixing for Chemical, Laboratory, Pharmaceutical Materials
- * Digital Feedback Control by High-Performance Microprocessor
- * Digital LCD Display with Back-Light Function
- * Smart Design of Body made by Aluminum Die-Casting (MS-20D)
- * Ceramic Coated Plate-Chemical/Acid Resistance
- * Storage function for the set values : RPM and Time
- * Digital Timer Function (99hr 59min)
- * Alarm Function : Error Status and Timer-End
- * Locking Mode Supported for Experimental Safety (Input to Jog-Shuttle can be Disabled)
- * Free Voltage (AC 80V ~ 240V, 50 / 60Hz) by SMPS

Specification

<u> </u>			
Model		180×180mm Plate-type "MS- 20D"	
Plate Size (mm))	180×180	
Stirring Capacit	ty (H₂O)	Max. 20Lit.	
Speed Range		80 ~ 1.500 rpm	
Motor Rating		9 / 4 W	
Speed Accurac	y (%)	± 5	
Speed Control Re	esolution	5 rpm	
Timer & Alarm		99hr 59min (with Continuous run.), Error status & Timer-end	
Display		Digital LCD Display with Back-Light Function	
Controller		Digital Feedback Controller with Jog Shuttle Switch(Turn+Push)	
Stirring Bar		3cm bar-included, Usable : up to 5cm bar	
Permissible Amb	oient Temperature	Ambient +5 ~ 50 °C	
Permissible Re	lative Moisture	85%	
Matarial	Plate	Ceramic Coated Aluminum (Chemical / Acid Resistance)	
Material	Body	Powder Coated Aluminum	
Dimension (w×	(d×h) (mm)	206×307×99	
Weight (kg)		3,1 kg	
Others		CE Certified Storage Function (RPM, Timer) Locking Mode (Jog-Shuttle Input Disabled) Alarm (Error Status and Timer-end)	
Packing Size (w	v×d×h) (mm)	400×280×200	
& Gross Weight	t	5 kg	
Power Consum	ption	10 W	
Power plug type	9	Hybrid E+F	
Power Supply*		AC 230V, 1N~, 50/60Hz	

^{*} Other Specifications are available upon Customer's Request.

Ordering Information

DH.WMS03022 Magnetic Stirrer, 180×180mm, **230V, "MS-20D"**, with stir bar

Optional Accessories

(1) Stand Rod, "RD200", Stainless Steel, screw, DH.WHP503036

 ϕ 12 × L450mm, for **HP-20A/20D**, **MSH-20A/20D**,

MSH-50A/55A,MSH-50D/55D and SMHS

DH.WHP503012 (2) Holder/Clamp/Clip, "CL220", for Temp. Probe

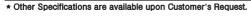
- * You will find matching beakers and flasks in our general catalogue at following pages: 33, 34, 293-296.
- * You will find matching stirring bars in our general catalogue at following pages: 362, 363.

"witeg" WiseStir® MS-MP Digital Multi-point Magnetic Stirrers, 4-/8- Points, Max. 500ml per Point with Digital Feedback Control System, Digital LCD Display, Synchronous Operation, 80~1.200 rpm

- Ideally Suitable for Use in Incubators and Climatic Chambers
- Excellent for Multi-use and wide range of Sample Testing
- Patented Jog-Shuttle Control System
- **CE Certified**
- * Ideally Suitable for Use in Incubators and Climatic Chambers
- * Excellent for Multi-use and wide range for Sample Testing
- * Ideal for Heat-sensitive Procedures such as Microbiology and Biochemistry Applications
- * Synchronous Operation of 4 / 8 Stirring Points
- * Increased Effectiveness by Microprocessor Control
- * Digital LCD Display with Back-Light Function * Up to 0.5 Lit. Stirring Capacity per Point
- * Smooth Start and Change of Stirring Speed * Digital Timer Function (99 hr 59 min)
- * Storage Function for the Set Values : RPM and Timer
- * Extraordinary Mechanical, Physical and Chemical Resistance
- * Locking Mode supported for Experimental Safety (Input to Jog-Shuttle can be Disabled)
- * Free Voltage (AC 80V ~ 240V, 50 / 60Hz) by SMPS

Specification

Number of Stirring Points & Models		4 (2×2) Stirring Points "MS-MP4"	8 (4×2) Stirring Points "MS-MP8"		
Plate Size (mn	n)	210×300	210×500		
Stirring Capac	city (H ₂ O)	Max. 0,5 L	it. per Point		
Distance betwe	en Stirring Points	100	mm		
Speed Range		80 ~ 1.2	200 rpm		
Motor Rating		16/	9 W		
Speed Control	Resolution	5 r	pm		
Timer & Alarm	1	99hr 59min (with Continuous r	un.), Error status & Timer-end		
Display		Digital LCD Display wi	th Back-Light Function		
Controller		Digital Feedback Controller with	Jog Shuttle Switch(Turn+Push)		
Stirring Bar		3cm bar-included, Usable : up to 3cm bar			
Permissible Am	bient Temperature	Ambient +5 ~ 50 °C			
Permissible R	elative Moisture	85%			
Material	Plate	Stainless S	teel (#304)		
waterial	Body	Power Coated Steel			
Dimension (w	×d×h) (mm)	210×300×65	210×500×65		
Weight		2,5 kg	3,5 kg		
Others		CE Certified Storage Function (RPM, Timer) Locking Mode (Jog-Shuttle Input Disabled) Alarm (Error Status and Timer-end)			
Packing Size (w×d×h) (mm)	330×300×180	540×330×180		
& Gross Weig	ht	6 kg			
Power Consul	mption	20 W			
Power plug type	oe	Hybrid E+F			
Power Supply	*	AC 230V, 1N~, 50/60Hz			



Ordering Information

4 Points Magnetic Stirrer, "MS-MP4", with Cord/Plug

DH.WMS03036 Multipoint Magnetic Stirrer, 230V, "MS-MP4"

8 Points Magnetic Stirrer, "MS-MP8", with Cord/Plug

DH.WMS03038 Multipoint Magnetic Stirrer, 230V, "MS-MP8"

- * You will find matching beakers and flasks in our general catalogue at following pages: 33, 34, 293-296.
- * You will find matching stirring bars in our general catalogue at following pages: 362, 363.



4-Point Stirrer, Digital Multi-Point Magnetic Stirrer "MS-MP4"



8-Point Stirrer, Digital Multi-Point Magnetic Stirrer "MS-MP8"

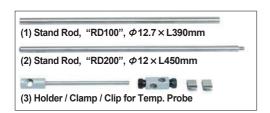
"witeg" WiseStir® MSH-A Premium Hotplate Stirrer, Ceramic-Coated Plate, up to 380°C, 1.500 rpm Built-in Linearity PWM Controller, Superior Temperature Uniformity, Precise Control of Temp. & RPM, 180×180mm or 260×260mm



180 × 180mm Plate-type Hotplate Stirrer "MSH-20A"



260 × 260mm Plate-type Hotplate Stirrer "MSH-30A"



- * You will find matching beakers and flasks in our general catalogue at following pages: 33, 34, 293-296.
- * You will find matching stirring bars in our general catalogue at following pages: 362, 363.

- Superior Temperature Uniformity: Less than 10% on the Plate at Ambient Temperature
- **Superior Linearity for Temperature Control & Stirring Speed**
- Ceramic Coated Plate-Chemical / Acid Resistance
- CE Certified
- * Excellent for Sample Drying and most General Lab Heating Applications
- * Superior Temperature Uniformity: Less than 10% on the Plate at Ambient Temperature
- * Superior Linearity for Temperature Control & Stirring Speed by Specially Designed Control Circuitry.(PWM Control)
- * Smart Design of Body made by Aluminum Die-Casting (MSH-20A)
- * Ceramic Coated Plate-Chemical/Acid Resistance
- * Maximum Temperature of 380°C

Specification

Мо	del	180×180mm Plate-type "MSH-20A"	260×260mm Plate-type "MSH-30A"	
Material		Powder Coated Aluminum	Powder Coated Steel	
waterial	Plate	Ceramic Coated Aluminum (Chemic	cal / Acid Resistance, Easy to Clean)	
Stirring Capa. 8	Motor Rating	Max. 20 Li	it., 9/4W	
Speed Range		Max. 1.	500 rpm	
Temp. Range		Max.	380°C	
Temp. Uniformi	ty	Specially Designed Heating Module : Temp. Difference 10% less		
Heating Power/	Consumption	600W	1,2 kW	
Controller		Superior Linearity PWM Controller		
Stirring Bar		3cm bar-included, Usable : up to 5cm bar		
Permissible Ter	np. & RH %	Ambient +5 ~ 50 ℃, 85% RH		
Dimension & W	eight	206×307×h99mm, 2,8kg	286 × 387 × h99mm, 3,3kg	
Packing Size & Gross Weight		400×280×h200mm, 5 kg	430×320×h200mm, 5 kg	
Power plug type		Hybrid E+F		
Power Supply*		AC 230V, 1N~, 50/60Hz		

^{*} Other Specifications are available upon Customer's Request.

Ordering Information

With 180 × 180mm Plate-type Hotplate Stirrer, "MSH-20A"

DH.WMH03120 180×180mm Plate-type, 230V, with stir bar

With 260 × 260mm Plate-type Hotplate Stirrer, "MSH-30A"

DH.WMH03121 260×260mm Plate-type, 230V, with stir bar

Optional Stand Rod & Holder/Clamp

DH.WHP503011 (1) Stand Rod, "RD100", Stainless Steel, none screw ϕ 12.7 × L390mm, for **HP-30A / 30D, MSH-30A/30D**

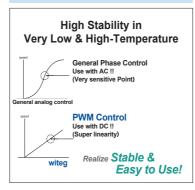
(2) Stand Rod, "RD200", Stainless Steel, 1.5p screw,

DH.WHP503036

 ϕ 12 × L450mm, for **HP-20A / 20D, MSH-20A/20D,** MSH-50A/55A, MSH-50D / 55D and SMHS

DH.WHP503012 (3) Holder / Clamp / Clip, "CL220", for Temp. Probe

Specialized Features





"witeg" WiseStir®MSH-50A Premium Compact Hotplate Stirrer, Round-Type Plate, *ϕ* 135 mm Ceramic Coated or Anodized Plate, Superior Temperature Uniformity, Precise Control of Temp. & RPM, up to 380 °C, 1.500 rpm

- Superior Temperature Uniformity: Less than 10 % on the Plate at **Ambient Temperature**
- Superior Linearity for the Control of Temperature & Stirring Speed
- Ceramic Coated Plate (MSH-50A) for Chemical/Acid Resistance or Anodized Plate (MSH-55A) for Scratch Prevention
- **CE Certified**
- * Excellent for Sample Drying and most General Lab Heating Applications.
- * Superior Temperature Uniformity: Less than 10 % on the Plate at Ambient Temperature.
- Superior Linearity for Temperature Control & Stirring Speed by Specially Designed Control Circuitry. (PWM Control)
- * Smart Design of Body made by Aluminum Die-Casting.
- * Ceramic Coated Plate (MSH-50A) for Chemical/Acid Resistance or Anodized Plate (MSH-55A) for Scratch Prevention.
- * Maximum Temperature of 400 °C

Specification

Models	Ceramic Coated Aluminum Plate "MSH-50A"	Black Anodized Aluminum Plate "MSH-55A"			
Features	Good Resistance of Chemicals & Acid, Easy to Clean	Prevention of Crack or Chip, and More Even Heating Surface			
Plate Size(mm)	φ.	135			
Stirring Capa. & Motor Rating	Max. 20 Lit.(H ₂ O), 9/4W				
Speed Range	Max. 1.500 rpm				
Temp. Range	Max. 400 °C (Over 70°C)				
Temp. Uniformity	Specially Designed Heating Module : Temp. Difference 10% less				
Heating Power/Consumption	400 W				
Controller	Digital Feedback Controller with	Jog Shuttle Switch (Turn+Push)			
Stirring Bar	3cm bar-included, L	Isable : up to 5cm bar			
Permissible Temp. & RH %	Ambient +5 ~ 5	50°C, 85% RH			
Dimension & Weight	w160 × d280 × h95mm, 2,3kg				
Packing Size & Gross Weight	w400×d280×h200mm, 4 kg				
Power plug type	Hybrid E+F				
Power Supply*	AC 230V, 1N~, 50/60Hz				

^{*} Other Specifications are available upon Customer's Request.

Ordering Information

With Ceramic Coated Plate, "MSH-50A" Package-set & Unit

DH.WMH03150 Hotplate Stirrer, **MSH-50A**, *Ф* 135 mm, Ceramic Coated Plate, $0\sim1.500$ rpm, to 380 $^{\circ}\mathrm{C}$

With Black Al-anodized Plate, "MSH-55A" Package-set & Unit

DH.WMH03155 Hotplate Stirrer, MSH-55A, ϕ 135 mm, Anodized Plate,

0~1.500 rpm, to 380 °C

Additional Function Accessories

DH.WHP503036 Stand Rod. RD200. Stainless Steel.

 ϕ 12×L 450 mm, for **HP-20A / 20D, MSH-20A / 20D**

MSH-50A/55A, MSH-50D / 55D and SMHS

DH.WHP503012 Holder + Clamp, CL220, for Temperature Sensor

- * You will find matching beakers and flasks in our general catalogue at following pages: 33, 34, 293-296.
- * You will find matching stirring bars in our general catalogue at following pages: 362, 363.

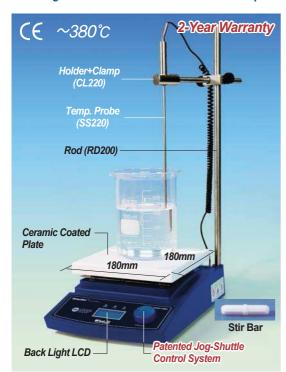


Premium Compact Hotplate Stirrer, Round Type & Anodized Plate (MSH-55A)



Premium Compact Hotplate Stirrer, Round Type & Ceramic-Coated Plate (MSH-50A)

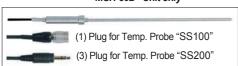
"witeg" WiseStir® MSH-D Digital Hotplate Stirrer, Ceramic-Coated Plate, up to 380%, $\pm 0.3\%$ with Digital Feedback Control, Accurate Temp. Control, 180×180mm or 260×260mm Plate, 80 ~ 1.500 rpm



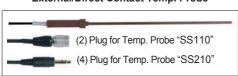
180×180mm Plate-type Digital Precise Hotplate "MSH-20D" Package-set



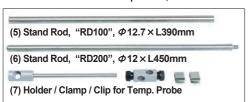
180 × 180mm Plate-type Digital Precise Hotplate "MSH-30D" Unit only



External/Direct Contact Temp. Probe



External/Direct Contact Temp. Probe, Teflon Coated



■ Digital Feedback Control by High-Performance Microprocessor

■ Patented Jog-Shuttle Control System

- * Excellent for Sample Drying and most General Lab Heating Applications
- * User's Self-Compensation Function: to Control Difference between Real Temp. and Indicated Temp. (±20,0°C)
- * Accurate Temp. Control of the Sample in the Vessel using PT100 Sensor (optional)
- * Storage Function for the set Values : Temp. and Timer
- * Locking Mode Supported for Experimental Safety (Input to Jog-Shuttle can be Disabled)
- * Superior Temperature Uniformity: less than 10% on the Plate at Ambient Temperature

Specification

Model		180×180mm Plate-type "MSH-20D"	260×260mm Plate-type "MSH-30D"	
Material	Body	Powder Coated Aluminum	Powder Coated Steel	
Waterial	Plate	Ceramic Coated Aluminum (Chemic	cal / Acid Resistance, Easy to Clean)	
Stirring Capa. &	Motor Rating	Max. 20 L	it., 9/4W	
Speed & Contro	l Resolution	80 ~ 1.500	rpm, 5 rpm	
Temp. Range &	Accuracy	Max. 380°C, ± 0,3°C at Set Temperature(Over 70°C)		
Temp. Resolution	on	0,1 °C - Display, 0,5 °C - Control		
Temp. Uniformi	ty	Specially Designed Heating Mod	dule : Temp. Difference 10% less	
Heating Power/	Consumption	600W	1,2 kW	
Timer & Alarm		99hr 59min (with Continuous run.), Error status & Timer-end		
Display		Digital LCD Display with Back-Light Function		
Controller		Digital Feedback Controller with Jog Shuttle Switch (Turn+Push)		
Stirring Bar		3cm bar-included, Usable: up to 5cm bar		
Safety Circuit		Over Temp. Protection		
Permissible Ter	np. & RH %	Ambient +5 ~ !	50℃, 85% RH	
Dimension & W	eight	206×307×h99mm, 3,3kg	286×387×h99mm, 3,5kg	
Packing Size & Gross Weight		400×280×h200mm, 5 kg	430×320×h200mm, 5 kg	
Power plug type)	Hybrid E+F		
Power Supply*		AC 230V, 1N~, 50/60Hz		

^{*} Other Specifications are available upon Customer's Request.

Ordering Information

* "MSH-20D" Package-set: Complete with ① Hotplate Stirrer Unit, ②: "SS200" PT100

External / Direct Contact Temp. Probe, 3 "RD200" Stainless steel Support Rod ϕ 12×L450mm

4 "CL220" Holder + Clamp for External Temp. Probe

* "MSH-30D" Package-set: Complete with ① Hotplate Stirrer Unit, ②: "SS100" PT100

External / Direct Contact Temp. Probe, 3 "RD100" Stainless steel Support Rod $\dot{\phi}$ 12×L450mm

4 "CL220" Holder + Clamp for External Temp. Probe

With 180 × 180mm Plate-type, "MSH-20D" Package-set & Unit

DH.WMH03021 180×180mm Plate-type, Package-set, 230V

DH.WMH03020 , Unit only, 230V, with stir bar

With 260 × 260mm Plate-type, "MSH-30D" Package-set & Unit

DH.WMH03023 260 × 260mm Plate-type, Package-set, 230V

DH.WMH03022 , Unit only, 230V, with stir bar

Additional Function Accessories

DH.WHP503020 (1) External / Direct Contact Temp. Probe, "SS100",

PT100, for HP-30D, MSH-30D and SMHS

Probe ϕ 4×L250mm, Cable L190cm

DH.WHP503021 (2) External / Direct Contact Temp. Probe, "SS110",

PT100, Teflon Coated, for HP-30D, MSH-30D, SMHS

Probe *Ф*4×L250mm, Cable L190cm

DH.WHP503030 (3) External / Direct Contact Temp. Probe, "SS200"

PT100, for **HP-20D**, **MSH-20D**, Probe $\phi 4 \times L250$ mm, Cable L190cm DH.WHP503031 (4) External / Direct Contact Temp. Probe, "SS210"

PT100, Teflon Coated, for HP-20D, MSH-20D

Probe $\phi 4 \times L250$ mm, Cable L190cm

DH.WHP503011 (5) Stand Rod, "**RD100**", Stainless Steel, φ12,7×L390mm

for HP-30A/30D, MSH-30A / 30D, none Screw

DH.WHP503036 (6) Stand Rod, "RD200", Stainless Steel, ϕ 12 × L450mm for HP-20A / 20D, MSH-20A / 20D, MSH-50A / 55A, MSH-50D / 55D and SMHS, 1,5p Screw

DH.WHP503012 (7) Holder/Clamp/Clip, "CL220", for Temp. Probe

* You will find matching beakers and flasks in our general catalogue at following pages: 33, 34, 293-296.

* You will find matching stirring bars in our general catalogue at following pages: 362, 363.

"witeg" WiseStir® MSH-50D Digital Compact Hotplate Stirrer, Round-type Plate, *Φ* 135mm with Ceramic Coated or Al-anodized Plate, Digital Feedback Control, Back Light LCD, up to 400° C, $\pm 0.3^{\circ}$ C, $80 \sim 1.500$ rpm

- Digital Feedback Control by High-Performance Microprocessor
- Choice of Models with Ceramic Coated Aluminum Plate (MSH-50D) for Chemical/Acid Resistance and Easy to Clean, or Anodized Aluminum Plate (MSH-55D) for Prevention of Crack/Chip and More **Even Heating Surface**
- Patented Jog-Shuttle Control System
- **CE Certified**
- * Excellent for Mixing and most General Lab Heating Applications.
- * Accurate Temp. Control of the Sample in the Vessel using PT100 Sensor (optional).
- * User's Self-Compensation Function:
 - To Control Difference between Real Temp. and Indicated Temp. ($\pm 20,0^{\circ}$ C).
- * Smart Design of Body made by Aluminum Die-Casting, Powder Coated.
- * Storage Function for the set Values : RPM, Temp. and Timer.
- * Locking Mode Supported for Experimental Safety (Input to Jog-Shuttle can be Disabled).

Specification

Models	Ceramic Coated Aluminum Plate "MSH-50D"	Black Anodized Aluminum Plate "MSH-55D"		
Features	Good Resistance of Chemicals & Acid, Easy to Clean	Prevention of Crack or Chip, and More Even Heating Surface		
Plate Size(mm)	φ.	135		
Stirring Capa. & Motor Rating	Max. 20 Lit.(H ₂ O), 9/4W		
Speed & Control Resolution	80 ~ 1.500	rpm, 5 rpm		
Temp. Range & Accuracy	Max. 400 °C, ±0,3 °C a	at Set Temp.(Over 70°C)		
Temp. Resolution	0,1 °C -Display, 0,5 °C -Control			
Temp. Uniformity	Specially Designed Heating Module : Temp. Difference 10% less			
Heating Power/Consumption	400 W			
Timer & Alarm	99hr 59min (with Continuous run.), Error status & Timer-end			
Display	Digital LCD Display with Back-Light Function			
Controller	Digital Feedback Controller with	Jog Shuttle Switch (Turn+Push)		
Stirring Bar	3cm bar-included, L	Isable : up to 5cm bar		
Safety Circuit	Over Temp. Protection	Auto-off: 420 °C Over		
Permissible Temp. & RH %	Ambient +5 ~ 5	50°C, 85% RH		
Dimension & Weight	w160 × d280×	h95mm, 2,3kg		
Packing Size & Gross Weight	w400×d280×	h200mm, 4 kg		
Power plug type	Hybrid E+F			
Power Supply*	AC 230V, 1N~, 50/60Hz			

^{*} Other Specifications are available upon Customer's Request.

Ordering Information

* Package-Set: Complete with (1) Hotplate Stirrer Unit with 3cm Stirrer Bar, (2) "\$\$500" PT100 External / Direct Contact Temp. Probe, (3) "RD200" Stainless steel Support Rod ϕ 12 × L450mm, and (4) "CL220"Holder + Clamp for External Temp. Probe

With Ceramic Coated Plate, "MSH-50D" Package-set & Unit

DH.WMH03051 Ceramic Plate-type, Package-set, 230V DH.WMH03050 , Unit only, 230V, with stir bar

With Black Al-anodized Plate, "MSH-55D" Package-set & Unit

DH.WMH03056 Al-anodized Plate-type, Package-set, 230V DH.WMH03055 , Unit only, 230V, with stir bar

Additional Function Accessories

DH.WHP503060 (1) Direct Contact Temp. Probe, SS500, PT100, for MSH50D/55D

Probe *Ф*4×L250mm, Cable L190cm

DH.WHP503061 (2) Direct Contact Teflon Coated Temp. Probe. SS510

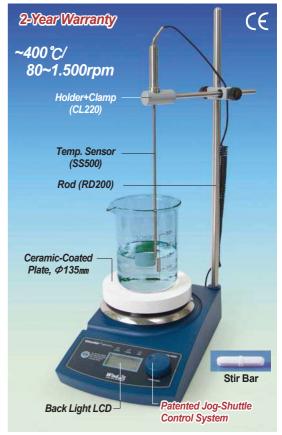
PT100, for **MSH50D/55D**, Probe $\phi 4 \times L250$ mm, Cable L190cm

DH.WHP503036 (3) Stand Rod, "RD200", Stainless Steel, φ12×L450mm

for HP-20A / 20D, MSH-20A / 20D, MSH-50A / 55A, MSH-50D / 55D and SMHS, Screw

DH.WHP503012 (4) Holder/Clamp/Clip, "CL220", for Temp. Probe

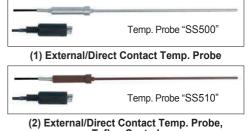
- * You will find matching beakers and flasks in our general catalogue at following pages: 33, 34, 293-296.
- You will find matching stirring bars in our general catalogue at following pages: 362, 363.



Ceramic Coated Plate-type: Package-set "MSH-50D"



Black Al-anodized Plate-type: Unit only "MSH-55D"



Teflon Coated



"witeg" WiseStir® SMHS Systematic Multi-Hotplate Stirrers, 3- or 6- Places, Ceramic-Coated Plates with Digital Feedback Control, Independent Heating & Stirring Control, Back Light LCD, , up to 350 °C, 80~1.500 rpm



3×1 Plates-type Multi-Hotplate Stirrer "SMHS-3"

- Excellent for Multi-use and wide range Sample Testing
- Patented Jog-Shuttle Control System
- **CE Certified**
- * Systemized 3- and 6-Hotplate Stirrer
- * Independent Heating and Stirring Control
- * Digital Feedback Control by High-Performance Microprocessor
- * Ceramic Coated Plate-Chemical/Acid Resistance
- ★ Maximum Temperature of 350°C with ±0,3°C Control Accuracy
- * Accurate Temp. Control of the Sample in the Vessel using PT100 Sensor (Optional)
- * Digital LCD Display with Back-Light Function
- * Digital Timer Function Included: 99 hr 59 min
- * Storage Function for the Set Values : Temperature, RPM and Timer
- * Locking Mode for Experimental Safety Supported

Specification

Number of Plates, Models	3×1 Plates-type "SMHS-3"	3×2 Plates-type "SMHS-6"		
Material	Plate : Ceramic Coated Aluminu	m, Body: Powder Coated Steel		
Plate Size(mm)	140>	< 140		
Stirring Capa. & Motor Rating	Max. 20 Lit.(H ₂ O), 9/4W×3	Max. 20 Lit.(H ₂ O), 9/4W×6		
Speed & Control Resolution	80 ~ 1.500	rpm, 5 rpm		
Temp. Range & Accuracy	Max. 350 °C, ±0,3 °C at Set Temp.(Over 70 °C)			
Temp. Resolution	0,1 °C - Display, 0,5 °C - Control			
Temp. Uniformity	Specially Designed Heating Module : Temp. Difference 10% less			
Heating Power/Consumption	400 W × 3 Plates 400 W × 6 Plates			
Timer & Alarm	99hr 59min (with Continuous run.), Error status & Timer-end			
Display	Digital LCD Display wi	th Back-Light Function		
Controller	Digital Feedback Controller with	Jog Shuttle Switch (Turn+Push)		
Stirring Bar	3cm bar-included, U	Isable : up to 5cm bar		
Permissible Temp. & RH %	Ambient +5 ~ 5	50°C, 85% RH		
Dimension & Weight	510×240×h100mm, 10kg 510×410×h180mm, 18			
Packing Size & Gross Weight	540×330×h170mm, 10kg	$570 \times 540 \times \text{h230mm}$, 18kg		
Power plug type	Hybrid E+F			
Power Supply*	AC 230V, 1N~, 50/60Hz			

^{*} Other Specifications are available upon Customer's Request.

Ordering Information

3 × 1 Plates-type Multi-Hotplate Stirrers "SMHS-3", with Cord /Plug

DH.WMH03503 3×1 Plate-type, 230V, "SMHS-3", with stir bar

3 × 2 Plates-type Multi-Hotplate Stirrers "SMHS-6", with Cable

DH.WMH03506 3×2 Plate-type, 230V, "SMHS-6", with stir bar

* 3 Rear Hotplate Stirrer SMHS-6 have 3 Ports available to connect External Temp. Probe.

Additional Function Accessories

DH.WHP503020 (1) External / Direct Contact Temperature Sensor, "SS100",

PT100, for HP-30D, MSH-30D and SMHS

Probe ϕ 4×L250mm, Cable L190cm

DH.WHP503021 (2) External / Direct Contact Temperature Sensor, "SS110",

PT100, Teflon Coated, for HP-30D, MSH-30D, SMHS

Probe $\phi 4 \times L250$ mm, Cable L190cm

DH.WHP503036 (3) Stand Rod, "RD200", Stainless Steel, ϕ 12 × L450mm

for HP-20A/20D, MSH-20A/20D, MSH-50A/55A,

MSH-50D/55D and SMHS, 1,5p Screw

DH.WHP503012 (4) Holder / Clamp / Clip, "CL220", for Temp. Probe

- * You will find matching beakers and flasks in our general catalogue at following pages: 33, 34, 293-296.
- * You will find matching stirring bars in our general catalogue at following pages: 362, 363.



3×2 Plates-type Multi-Hotplate Stirrer "SMHS-6"

* 3 Rear Hotplate Stirrer SMHS-6 have 3 Ports available to connect External Temp. Probe



(1) External/Direct Contact Temp. Probe

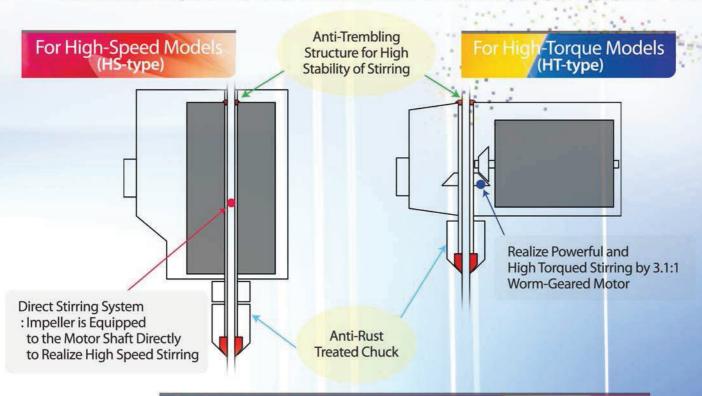


(2) External/Direct Contact Temp. Probe, **Teflon Coated**



WiseStir® HS-/HT-type Overhead Stirrers The World Best Selling Overhead Stirrer!! Anti-Trembling System!!

- Powerful DC Motor Designed by witeg Wisd 22 Technology which is Ideal for Various Stirring Applications in Laboratories
- ☑ Two Main Categories for High-Speed(HS-type) and High-Torque(HT-type) (Refer Selection Guide on Page. 149)
- ☐ Digital Feedback Control System: Offered the Steady and Constant Stirring Speed Accurately Against the Viscosity Change of Sample (for all Digital Models)
- □ Chrome-plated Stainless Steel Chuck: Prevented from Corrosion During Operation in Fume Generated Solution
- □ The Position(Height) of Impeller is Adjustable
- ☐ Anti-Trembling System: Impeller is Fixed at Two Points of Both the Chuck and the Shaft
- ☑ Over-Load Protection and Over-Heat Protection Functions For Motor
- ☑ Various Kinds of Impellers and Stands are Available (Refer to Standard Accessories on Page. 156~157)



Superior Anti-rusted Chuck for All Overhead Stirrer Models



Impeller Holding Part which is Requires Precision and Anti-Oxidization Stainless Steel

Handle to Tighten and Loosen the Chuck Chrome-plated: Prevent from Corrosion During Operation in Fume Generated Solution for Long Time

WiseStir® Digital Overhead Stirrer Product Line / Selection Guide

		High Speed				High Torque							
		Analog	Model	Digital Model Analog N		Model		Digital	Model				
		Integrated Controller		Integrated	Controller	Remote	Remote Controller		Integrated Controller		Controller	Remote Controller	
		HS-50A	HS-120A	HS-30D	HS-100D	HS-30T	HS-100T	HT-50AX	HT-120AX	HT-50DX	HT-120DX	HT-50T	HT-120T
Max. Stirring	Capacity (H ₂ O)	10 Lit.	20 Lit.	10 Lit.	20 Lit.	10 Lit.	20 Lit.	40 Lit.	60 Lit.	40 Lit.	60 Lit.	40 Lit.	60 Lit.
Max. Viscos	sity (mPas)	10.000	50.000	10.000	50.000	10.000	50.000	100.000	150.000	100.000	150.000	100.000	150.000
Motor Rati (Input / Ou	•	83 / 75 W	130 / 120 W	83/75 W	130 / 120 W	83 / 75 W	130 / 120 W	83 / 75 W	130 / 120 W	83 / 75 W	130 / 120 W	83/75 W	130 / 120 W
Max. Torque ((Ncm) at Chuck	85	145	85	145	85	145	300	500	300	500	300	500
Max. Impeller	Diameter (mm)				8					1	10		
Speed Ran	ge (rpm)			200 ~	3.000					50~	1.000		
Motor Rating	(Input / Output)			Direct Dri	ven Motor				3,5	: 1 Ratio Wo	rm-Geared Mo	otor	
Controller	ntroller		Analog Phase Controller		Controllor with log Shuttle Contr		Digital Feedback Controller with Jog Shuttle Switch(Tum+Push), Remote type		Analog Phase Controller		Digital Feedback Controller with Jog Shuttle Switch (Turn+Push), Remote type		nuttle Switch Push),
Display		No	one	Digital Lo	CD (Timer, RP	M & Power B	ar-graph)	No	one	Digital LO	CD (Timer, RP	M & Power B	ar-graph)
Operating	Ambient Temp. Range (°C)						0~	~40					
Environmen	Max. Permissible Humidity (%)						8	80					
Safety Dev	/ice		Protector for Over Load & Heat Protector for motor Over Heat Protector motor					Over Load & Heat Protector for motor			motor		
Body Dime (w×d×h n	ension nm)		90×14	5×180		90×10	00×180	90×180 90×210 ×130 ×130		90×180 ×130	90×210 ×130	155×180 ×110	155×230 ×110
Body Weig	ght (kg)	4,5	5,3	4,5	5,3	3*	3,8*	3,5	4	3,5	4	3,5	4
Others		- Smooth Start and Change of the Stirring Speed for stable running - Storage Function (RPM & Timer) : Only Digital Models				- Storage - Locking	Function (R Mode (Jog-	PM & Time Shuttle Inpu	e Stirring Sper): Only Digit disabled): end): Only D	tal Models Only Digital	Models		
Power Sup	ply **	AC 230V, 1N~, 50/60Hz											

^{*} Weight of Remote Controller = 2,5 kg

Standard Viscosity

(Unit: mPas)

Material	Viscosity	Recommended Models				
Water	1					
Milk	3					
Soybean oil	160	HS-30D				
Varnish	500	HS-30D HS-50A HS-30T				
Lacquer	1.000	HS-301	HS-100D HS-120A			
Honey	3.000		HS-100T	HT-50DX HT-50AX	HT-120DX	
Standard Viscosity	10.000			HT-50AX	HT-120AX	
Standard Viscosity	15.000				HT-120T	
Ketchup	30.000					
Standard Viscosity	50.000					
Mustard	70.000					
Corn Syrup	100.000					
Standard Viscosity	150.000					
Peanut Butter	250.000					

^{**} Other Specifications are Available Upon Customer's Request.

"witeg" WiseStir® HS-A High-Speed Analog Overhead Stirrers, Max. 10/20Lit., Max. 3.000rpm With Easy-to-Use Dial for Speed Setting, for Low- to Medium-Viscous Samples, up to 50.000 mPas

- High Speed Stirring by Direct Driven Motor
- Over-Heat Protection Function for motor
- **CE Certified**
- * General Purpose Basic Laboratory Mixing
- * Ideal for Stirring Low-to Medium-Viscous Material
- * Ideal for Schools, Universities and Inspection Laboratories
- * Smooth Start and Change of the Stirring Speed
- * Easy-to-use Dial for Speed Setting
- * The Position (Height) of Impeller is Adjustable
- * Over-Heat Protection Function for Motor
- * Chrome-Plated & Stainless Steel Chuck Prevention from Corrosion

Specification

Stirring Capacity & Models	Max. 10 Lit. (H ₂ O) "HS-50A"	Max. 20 Lit. (H ₂ O) "HS-120A"			
Maximum Viscosity	10,000 mPas	50,000 mPas			
Maximum Torque	85 Ncm	145 Ncm			
Speed Range & Motor	0 ~ 3.000 rpm, Worm-Geared DC Motor				
Motor Rating (Input / Output)	83 / 75 W, 1 / 10 HP	130 / 120 W, 1 / 6 HP			
Controller	Analog Phase Controller				
Max. Impeller Shaft Diameter	10 mm				
Permissible Temp. & Humidity	0~40℃, 80%				
Safety Device	Over Heat Pro	tector for motor			
Material	ABS and	Aluminum			
Dimension & Weight	90×145×h180mm, 4,5 kg	90×145×h180mm, 5,3 kg			
Packing Size & Gross Weight	320×300×h180mm, 5 kg 320×300×h180mm, 8				
Power Consumption	85 W 130 W				
Power plug type	Hybrid E+F				
Power Supply*	AC 230V, 1N~, 50/60Hz				

^{*} Other Specifications are available upon Customer's Request.

Ordering Information

*"HS-50A"Package-set: Complete with ① Overhead Stirrer Unit ② "PL010" Stainless

Steel Impeller (Rod ϕ 8×L500mm, Blade ϕ 50mm) 3 "CL200" Clamp 4 "KA1177" Safety Stand (Rod ϕ 23 × L800mm, Stand Base w34 × d29cm)

*"HS-120A"Package-set: Complete with ① Overhead Stirrer Unit ② "PL015" Stainless

Steel Impeller (Rod ϕ 8 × L500mm, Blade ϕ 70mm) 3 "CL200" Clamp 4 "KA1177" Safety Stand Rod ϕ 23 × L800mm, Stand Base w34 × d29cm)

With 10 Lit. Stirring Capa., 10.000 mPas, "HS-50A" Package-set & Unit

DH.WOS01211 High Speed-type Overhead Stirrer, Package-set, 230V DH.WOS01210 , Unit only, 230V

With 20 Lit. Stirring Capa., 50,000 mPas, "HS-120A" Package-set & Unit

DH.WOS01216 High Speed-type Overhead Stirrer, Package-set, 230V DH.WOS01215 , Unit only, 230V

* You will find matching beakers in our general catalogue at following pages: 292

- * Refer to page 156, 157 for Accessory Specifications.
- * Refer to page 149 for Product Line & Selection Guide



High-Speed Analog Overhead Stirrer "HS-50A -Set"



High-Speed Analog Overhead Stirrer "HS-120A -unit"

"witeg" WiseStir® HS-D High-Speed Digital Overhead Stirrer, Max. 10/20Lit., 200 ~ 3.000 rpm with Digital Feedback Control, Steady & Constant Stirring Speed Against Viscosity, up to 50.000 mPas



High-Speed Digital Overhead Stirrer "HS-30D -Set"



High-Speed Digital Overhead Stirrer "HS-100D -Unit"

- Digital Feedback Control: Steady and Constant Stirring Speed against Viscosity Change of a Sample during Reaction
- Patented Jog-Shuttle Control System
- **CE Certified**
- * General Purpose Basic Laboratory Mixing
- * Ideal for Stirring Low-to Medium-Viscous Material
- * Digital Feedback Control: Steady and Constant Stirring Speed against Viscosity Change of a sample during Reaction
- * Digital LCD Display with Back-Light Function * Smooth Start and Change of the Stirring Speed
- * Overload Protection and Over-Heat Protection Functions for Motor
- * High Speed Stirring by Direct Driven Motor * Digital Timer Function (99hr 59min)
- * Alarm Function : Error status and Timer-end
- * The Position(Height) of Impeller is Adjustable. * Storage Function for Set Value: RPM & Timer
- * Chrome-Plated & Stainless Steel Chuck-Prevention from Corrosion

Specification

	Max. 10 Lit. (H ₂ O)	Max. 20 Lit. (H ₂ O)
Stirring Capacity & Models	"HS-30D"	"HS-100D"
Maximum Viscosity	10.000 mPas	50.000 mPas
Maximum Torque	85 Ncm	145 Ncm
Speed Range & Resolution	200 ~ 3.000 rpm, 1 rpm-Display / 1 rpm-Control	
Motor	Worm-Geared DC Motor	
Motor Rating (Input / Output)	83 / 75 W, 1 / 10 HP	130 / 120 W, 1 / 6 HP
Timer & Alarm	99hr 59min (with Continuous run.), Error status & Timer-end	
Display	Digital LCD Display with Back-Light Function	
Controller	Digital Feedback Controller with Jog Shuttle Switch (Turn + Push)	
Max. Impeller Shaft Diameter	10 mm	
Permissible Temp. & Humidity	0~40℃, 80%	
Safety Device	Overload & Heat Protector for Motor	
Material	ABS and Aluminum	
Dimension & Weight	$90 \times 145 \times h180$ mm, 4,5 kg	90×145×h180mm, 5,3 kg
Packing Size & Gross Weight	$320 \times 300 \times h180$ mm, 5 kg	$320\times300\times h180$ mm, 8 kg
Power Consumption	85 W	130 W
Power plug type	Hybrid E+F	
Power Supply*	AC 230V, 1N~, 50/60Hz	

^{*} Other Specifications are available upon Customer's Request.

Ordering Information

* "HS-30D" Package-set: Complete with ① Overhead Stirrer Unit ② "PL010" Stainless Steel Impeller (Rod $\phi 8 \times L500$ mm, Blade $\phi 50$ mm)

> 3 "CL200" Clamp 4 "ST110" Standard Plate Stand (Rod ϕ 16 × L800mm, Plate w20 × d35cm)

* "HS-100D" Package-set: Complete with ① Overhead Stirrer Unit ② "PL015" Stainless Steel Impeller (Rod $\phi 8 \times L500$ mm, Blade $\phi 70$ mm)

③ "CL200" Clamp ④ "ST120" Wide Plate Stand (Rod ϕ 23 × L1.000mm, Plate w30 × d40cm)

With 10 Lit. Stirring Capa., 10,000 mPas, "HS-30D" Package-set & Unit

DH.WOS01016 High Speed-type Overhead Stirrer, Package-set, 230V DH.WOS01015 , Unit only, 230V

With 20 Lit. Stirring Capa., 50,000 mPas, "HS-100D" Package-set & Unit

DH WOS01026 High Speed-type Overhead Stirrer, Package-set, 230V DH.WOS01025 , Unit only, 230V

- * You will find matching beakers in our general catalogue at following pages : 292
- * Refer to page 156, 157 for Accessory Specifications.
- * Refer to page 149 for Product Line & Selection Guide

"witeg" WiseStir® HS-T High-Speed Digital Overhead Stirrer, with Remote Controller, 200 ~ 3.000 rpm with Remote Digital Feedback Control System, Steady & Constant Stirring Speed Against Viscosity, up to 50.000 mPas

- Remote Digital Feedback Controller: Steady and Constant Stirring Speed against Viscosity Change of a Sample during Reaction
- **Patented Jog-Shuttle Control System**
- **CE Certified**
- * Ideal for Stirring Low-to Medium-Viscous Material, General Purpose Basic Laboratory Mixing
- * Digital LCD Display for RPM, Power Bar Graph and Status
- * Overload Protection and Over-Heat Protection Functions for Motor
- * Smooth Start and Change of the Stirring Speed
- * High Speed Stirring by Direct Driven Motor
- * The Position(height) of Impeller is Adjustable
- * Storage Function for Set Value : RPM and Timer
- * Chrome-Plated & Stainless Steel Chuck Prevention from Corrosion

Specification

Stirring Capacity & Models	Max. 10 Lit. (H ₂ O) "HS-30T"	Max. 20 Lit. (H ₂ O) "HS-100T"
Maximum Viscosity	10.000 mPas	50.000 mPas
Maximum Torque	85 Ncm	145 Ncm
Speed Range & Motor	200 ~ 3.000 rpm, Direct Driven DC Motor	
Motor Rating (Input / Output)	83 / 75 W, 1/10 HP	130 / 120 W, 1/6 HP
Timer & Alarm	99hr 59min (with Continuous run.), Timer-end Alarm	
Display	Digital LCD Display with Back - Light Function	
Controller	Remote type Digital Feedback Controller with Jog Shuttle Switch	
Max. Impeller Shaft Diameter	Φ8 mm	
Permissible Temp. & Humidity	0~40℃, 80%	
Safety Device	Overload & Heat Protector for motor	
Material	ABS and Aluminum	
Dimension & Weight*	90×100×h180mm, 3 kg	$90\times100\times$ h 180 mm, 3.8 kg
Packing Size & Gross Weight	580×340×h230mm, 5 kg	$580 \times 340 \times h230$ mm, 8 kg
Power Consumption	75 W	120 W
Power plug type	Hybrid E+F	

^{*} Weight of Remote Controller = 2.5kg

Ordering Information

* "HS-30T" Package-set: Complete with ① Overhead Stirrer Unit with Remote Controller

② "PL010" Stainless Steel Impeller(Rod $\phi 8 \times L500$ mm. Blade ϕ 50mm) ③ "CL200" Clamp ④ "ST110" Standard Plate Stand(Rod ϕ 16 × L800mm, Plate w20 × d35cm)

 $\hbox{\bf *"HS-100T"} Package-set: Complete with \ \textcircled{1} \ Overhead \ Stirrer \ Unit with \ Remote \ Controller$

② "PL015" Stainless Steel Impeller(Rod Φ8×L500mm. Blade ϕ 70mm) ③ "CL200" Clamp ④ "ST120" Wide Plate Stand

(Rod ϕ 23×L1.000mm, Plate w30×d40cm)

With Remote Controller, 10 Lit. Stirring Capa., 10.000 mPas, "HS-30T" Package-set & Unit

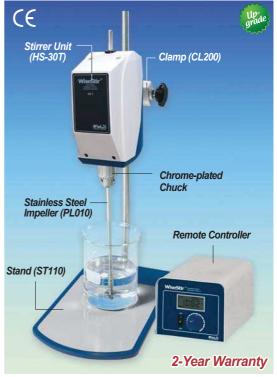
DH.WOS01036 High Speed-type Overhead Stirrer, Package-set, 230V DH.WOS01035 , Unit only, 230V

With Remote Controller, 20 Lit. Stirring Capa., 50.000 mPas, "HS-100T" Package-set & Unit

DH.WOS01046 High Speed-type Overhead Stirrer, Package-set, 230V DH.WOS01045 , Unit only, 230V

* You will find matching beakers in our general catalogue at following pages: 292

- * Refer to page 156, 157 for Accessory Specifications.
- * Refer to page 149 for Product Line & Selection Guide



High-Speed Digital Overhead Stirrer, with Remote Controller, "HS-30T" Package-set



High-Speed Digital Overhead Stirrer, with Remote Controller, "HS-100T" Unit only

^{**} Other Specifications are available upon Customer's Request.

"witeg" WiseStir® HT-AX High-Torque Analog Overhead Stirrer, Max.40-/60-Lit., Max.1.000rpm with Chrome-Plated & Stainless Steel Chuck, Easy-to-Use Dial for Speed Setting, for High-Viscosity Fluids, 150.000 mPas



High-Torque Analog Overhead Stirrer, "HT-50AX" Package-set



Analog High-Torque Overhead Stirrer, "HT-120AX" Unit only

- High Torque Stirring by 3,5:1 Ratio Worm-geared Motor
- Smooth Start and Change of the Stirring Speed
- **CE Certified**
- * Ideal for Stirring Material of Viscosities Ranging from Light Watery Solutions to High-Viscosity Fluids
- * Ideal for Schools, Universities and Inspection Laboratories
- * Food, Beverage, Dairy, Sugar & Candy Production
- * Smooth Start and Change of the Stirring Speed
- * Easy-to-use Dial for Speed Setting
- * The Position(height) of Impeller is Adjustable
- * Over-Heat Protection Function for Motor
- * Chrome-Plated & Stainless Steel Chuck-Prevention from Corrosion

Specification

Stirring Capacity & Models	Max. 40 Lit. (H ₂ O) "HT-50AX"	Max. 60 Lit. (H ₂ O) "HT-120AX"
Maximum Viscosity	100.000 mPas	150.000 mPas
Maximum Torque	300 Ncm	500 Ncm
Speed Range & Motor	0 ~ 1.000 rpm, Worm-Geared DC Motor (3,5:1 Ratio)	
Motor Rating (Input / Output)	83 / 75 W, 1 / 10 HP	130 / 120 W, 1 / 6 HP
Controller	Analog Phase Controller	
Max. Impeller Shaft Diameter	10 mm	
Permissible Temp. & Humidity	0~40℃, 80%	
Safety Device	Over Heat Protector for motor	
Material	ABS and Aluminum	
Dimension & Weight	90×180×h130mm, 3,5 kg	90×210×h130mm, 4 kg
Packing Size & Gross Weight	320×300×h180mm, 5 kg	320×300×h180mm, 8 kg
Power Consumption	85 W	130 W
Power plug type	Hybrid E+F	
Power Supply*	AC 230V, 1N~, 50/60Hz	

^{*} Other Specifications are available upon Customer's Request.

Ordering Information

 $\hbox{\bf *"HT-50AX"} Package-set: Complete with ① Overhead Stirrer Unit ② \hbox{\bf "PL020"} Stainless$

Steel Impeller (Rod ϕ 8 × L500mm, Blade ϕ 90mm) 3 "CL200" Clamp 4 "KA1177" Safety Stand (Rod ϕ 23 × L800mm, Stand Base w34 × d29cm)

* "HT-120AX" Package-set: Complete with ① Overhead Stirrer Unit ② "PL020" Stainless

Steel Impeller (Rod ϕ 8 × L500mm, Blade ϕ 90mm) 3 "CL200" Clamp 4 "KA1177" Safety Stand (Rod ϕ 23 × L800mm, Stand Base w34 × d29cm)

With 40 Lit. Stirring Capa., 100.000 mPas, "HT-50AX" Package-set & Unit

DH.WOS01252 High Torque-type Overhead Stirrer, Package-set, 230V DH.WOS01251 , Unit only, 230V

With 60 Lit. Stirring Capa., 150.000 mPas, "HT-120AX" Package-set & Unit

DH.WOS01272 High Torque-type Overhead Stirrer, Package-set, 230V DH.WOS01271 , Unit only, 230V

- * You will find matching beakers in our general catalogue at following pages : 292
- * Refer to page 156, 157 for Accessory Specifications.
- * Refer to page 149 for Product Line & Selection Guide

"witeg" WiseStir® HT-DX High-Torque Digital Overhead Stirrer, Max.40-/60-Lit., 50 ~ 1.000 rpm with Digital Feedback Control, Steady & Constant Stirring Speed Against Viscosity, for High-Viscosity Fluids, up to 150.000 mPas

■ Patented Jog-Shuttle Control System

■ CE Certified

- * Ideal for Stirring Material of Viscosities Ranging from Light Watery Solutions to High-Viscosity Fluids
- * Food, Beverage, Dairy, Sugar & Candy Production
- * Digital Feedback Control: Steady and Constant Stirring Speed Against Viscosity Change of a Sample
- * High Torque Stirring by 3,5:1 Ratio Worm-Geared Motor
- * Digital LCD Display with Back-Light Function * Smooth Start and Change of the Stirring Speed
- * The Position (Height) of Impeller is Adjustable
- * Storage Function for the set values : RPM and Timer
- * Locking Mode Supported for Experimental Safety (Input to Jog-Shuttle can be Disabled)
- * Chrome-Plated & Stainless Steel Chuck Prevention from Corrosion

Specification

Stirring Capacity & Models	Max. 40 Lit. (H ₂ O) "HT-50DX"	Max. 60 Lit. (H ₂ O) "HT=120DX"
Maximum Viscosity	100.000 mPas	150.000 mPas
Maximum Torque	300 Ncm	500 Ncm
Speed Range & Resolution	50 ~ 1.000 rpm, 1 rpm-Display / 1 rpm-Control	
Motor	Worm-Geared DC Motor (3,5:1 Ratio)	
Motor Rating (Input / Output)	83 / 75 W, 1 / 10 HP	130 / 120 W, 1 / 6 HP
Timer & Alarm	99hr 59min (with Continuous run.), Error status & Timer-end	
Display	Digital LCD Display with Back-Light Function	
Controller	Digital Feedback Controller with Jog Shuttle Switch (Turn + Push)	
Max. Impeller Shaft Diameter	10 mm	
Permissible Temp. & Humidity	0~40℃, 80%	
Safety Device	Overload & Heat Protector for Motor	
Material	ABS and Aluminum	
Dimension & Weight	90×180×h130mm, 3,5 kg	90×210×h130mm, 4 kg
Packing Size & Gross Weight	320×300×h180mm, 5 kg	320×300×h180mm, 8 kg
Power Consumption	85 W	130 W
Power plug type	Hybrid E+F	
Power Supply*	AC 230V, 1N~, 50/60Hz	

* Other Specifications are available upon Customer's Request.

Ordering Information

*"HT-50DX"Package-set: Complete with ① Overhead Stirrer Unit ② "PL020" Stainless

Steel Impeller (Rod $\phi 8 \times L500$ mm, Blade $\phi 90$ mm) 3 "CL200" Clamp 4 "ST120" Wide Plate Stand (Rod ϕ 23×L1,000mm, Plate w30×d40cm)

*"HT-120DX"Package-set: Complete with ① Overhead Stirrer Unit ② "PL020" Stainless

Steel Impeller (Rod $\phi 8 \times L500$ mm, Blade $\phi 90$ mm) ③ "CL200" Clamp ④ "ST200" Deluxe Safety Stand (Rod ϕ 23 × L1,200mm, Stand Base w39 × up to 75cm)

With 40 Lit. Stirring Capa., 100.000 mPas, "HT-50DX" Package-set & Unit

DH.WOS01052 High Torque-type Overhead Stirrer, Package-set, 230V DH.WOS01051 , Unit only, 230V

With 60 Lit. Stirring Capa., 150.000 mPas, "HT-120DX" Package-set & Unit

DH.WOS01072 High Torque-type Overhead Stirrer, Package-set, 230V DH.WOS01071 , Unit only, 230V

- * You will find matching beakers in our general catalogue at following pages: 292
- * Refer to page 156, 157 for Accessory Specifications.
- ※ Refer to page 149 for Product Line & Selection Guide



High-Torque Digital Overhead Stirrer, "HT-50DX" Package-set



High-Torque Digital Overhead Stirrer, "HT-120DX" Unit only

"witeg" WiseStir® HT-T High-Torque Digital Overhead Stirrer, with Remote Controller with Remote Digital Feedback Controller, Steady & Constant Stirring Speed Against Viscosity, 50 ~ 1.000 rpm, to 150.000 mPas



Digital High-Torque Overhead Stirrer with Remote Controller "HT-50T-Set"

Remote Controlle

2-Year Warranty



Digital High-Torque Overhead Stirrer "HT-120T-Unit"

- Remote Digital Feedback Controller: Steady and Constant Stirring Speed against Viscosity Change of a Sample during Reaction
- Patented Jog-Shuttle Control System
- **CE Certified**
- * Food, Beverage, Dairy, Sugar & Candy Production
- * Ideal for Stirring Material of Viscosities Ranging from Light Watery Solutions to High-Viscosity Fluids
- * Digital LCD Display with Back-Light Function
- * Overload Protection and Over-Heat Protection Functions for Motor
- * High Torque Stirring by 3,5:1 Ratio Worm-geared Motor
- * Smooth Start and Change of the Stirring Speed
- * Storage Function for the set Values: RPM and Timer
- * The Position (Height) of Impeller is Adjustable
- * Locking Mode supported for Experimental Safety (Input to Jog-Shuttle can be Disabled)
- * Chrome-plated & Stainless Steel Chuck-Prevention from Corrosion

Specification

Stirring Capacity & Models	Max. 40 Lit. (H ₂ O) "HT-50T"	Max. 60 Lit. (H ₂ O) "HT-120T"
Maximum Viscosity	100.000 mPas	150.000 mPas
Maximum Torque	300 Ncm	500 Ncm
Speed Range & Motor	50 ~ 1.000 rpm, Worm-Geared Motor(3,5:1 Ratio)	
Motor Rating (Input / Output)	83 / 75 W, 1/10 HP	130 / 120 W, 1/6 HP
Timer & Alarm	99hr 59min (with Continuous run.), Timer-end Alarm	
Display	Digital LCD Display with Back - Light Function	
Controller	Remote type Digital Feedback Controller with Jog Shuttle Switch	
Max. Impeller Shaft Diameter	Φ10 mm	
Permissible Temp. & Humidity	0~40°C, 80%	
Safety Device	Overload & Heat Protector for motor	
Material	ABS and Aluminum	
Dimension & Weight*	155 \times 180 \times h110mm, 3,5 kg	155×230×h110mm, 4 kg
Packing Size & Gross Weight	$580 \times 340 \times \text{h230mm}$, 5 kg	$580 \times 340 \times \text{h230mm}$, 8 kg
Power Consumption	75 W	120 W
Power plug type	Hybrid E+F	
Power Supply*	AC 230V, 1N~, 50/60Hz	

^{*} Weight of Remote Controller = 2.5kg

Ordering Information

* "HT-50T" Package-set: Complete with ① Overhead Stirrer Unit with Remote Controller ② "PL020" Stainless Steel Impeller(Rod Φ8 × L500mm,

Blade ϕ 90mm) ③ "CL200" Clamp ④ "ST120" Wide Plate Stand(Rod ϕ 23×L1.000mm, Plate w30×d40cm)

* "HT-120T" Package-set: Complete with ① Overhead Stirrer Unit with Remote Controller

② "PL020" Stainless Steel Impeller(Rod ϕ 8×L500mm, Blade ϕ 90mm) ③ "CL200" Clamp ④ "ST200" Deluxe Safety Stand (Rod ϕ 23×L1.200mm, Stand Base 39×up to 75cm)

With Remote Controller, 40 Lit. Stirring Capa., 100.000 mPas, "HT-50T" Package-set & Unit

DH.WOS01066 High Torque-type Overhead Stirrer, Package-set, 230V DH.WOS01065 , Unit only, 230V

With Remote Controller, 60 Lit. Stirring Capa., 150,000 mPas, "HT-120T" Package-set & Unit

DH.WOS01076 High Torque-type Overhead Stirrer, Package-set, 230V DH.WOS01075 , Unit only, 230V

- * You will find matching beakers in our general catalogue at following pages: 292
- * Refer to page 156, 157 for Accessory Specifications.
- * Refer to page 149 for Product Line & Selection Guide

^{**} Other Specifications are available upon Customer's Request.

Standard Accessories for **WiseStir®** Overhead Stirrers

"witeg" Stirring Impeller for Overhead Stirrer, Stainless Steel #304

- Specially designed Stainless Steel #304 (High-grade) used
- Excellent Resistance of Acids, Chemicals, Corrosion and High Temperature.
- Universal-Types and Wide-Ranges

For Both High Speed-type & High Torque-type Overhead Stirrers

(1) Propeller-types, $3 \times$ Bladed, Rod ϕ $8 \times$ L500/650 mm, Blade ϕ 50/60/80/100 mm

```
DH.WOS501010 Impeller, "PL010", #304, \phi8×L500mm Rod, \phi50mm Blade
DH.WOS501011
                       , "PL011", #304, \phi8×L500mm Rod, \phi60mm Blade
                       , "PL012", #304, \phi8×L650mm Rod, \phi80mm Blade
DH WOS501012
DH.WOS501013
                       , "PL013", #304, \phi8×L650mm Rod, \phi100mm Blade
```

(2) Propeller-types, $4 \times$ Bladed, Rod ϕ 8 × L500/650 mm, Blade ϕ 70/90/100 mm

```
DH.WOS501015 Impeller, "PL015", #304, \phi8×L500mm Rod, \phi70mm Blade
DH.WOS501016
                         , "PL016", #304, \phi8×L650mm Rod, \phi90mm Blade
DH.WOS501017
                         , "PL017", #304, \phi 8 \times L650mm Rod, \phi 100mm Blade
```

(3) Diamond-types, $4 \times$ Bladed, Rod ϕ 8 \times L500/650 mm, Blade ϕ 90/100 mm

```
DH.WOS501020 Impeller, "PL020", #304, \phi8×L500mm Rod, \phi90mm Blade
DH.WOS501021
                        , "PL021", #304, \phi8×L650mm Rod, \phi100mm Blade
```

(4) Centrifugal-type, $2 \times$ Bladed, Rod ϕ 8 \times L500mm, Blade ϕ 100mm

DH.WOS501025 Impeller, "**PL025**", #304, φ8×L500mm Rod, φ100mm Blade

(5) Teflon Coated Centrifugal-type, $2 \times$ Bladed, Rod ϕ 8 \times L500/650mm, Blade ϕ 90/120mm

```
DH.WOS501030 Impeller, "PL030", #304, \phi8×L500mm Rod, \phi90mm Blade
DH.WOS501031
                        , "PL031", #304, \phi8×L650mm Rod, \phi120mm Blade
```

(6) Anchor-types, $2 \times$ Bladed, Rod ϕ 8 \times L500/650 mm, Blade ϕ 70/90 mm

DH.WOS501035 Impeller, "**PL035**", #304, φ8×L500 mm Rod, φ70mm Blade DH.WOS501036 , "PL036", #304, ϕ 8×L650 mm Rod, ϕ 90mm Blade

For High Torque-type Overhead Stirrers (HT-AX, HT-DX, HT-T)

(1) Propeller-types, $3 \times$ Bladed, Rod ϕ 10 \times L500/650/800 mm, Blade ϕ 60/80/100 mm

```
DH.WOS501111
                Impeller, "PL111", #304, \phi10×L500mm Rod, \phi60mm Blade
DH.WOS501112
                       , "PL112", #304, \phi10×L650mm Rod, \phi80mm Blade
DH.WOS501113
                        , "PL113", #304, Ф 10 × L650mm Rod, Ф 100mm Blade
```

(2) Propeller-types, $4 \times$ Bladed, Rod ϕ 10 \times L650 mm, Blade ϕ 90/100 mm

```
DH.WOS501116
                Impeller, "PL116", #304, \phi10×L650mm Rod, \phi90mm Blade
DH.WOS501117
                        , "PL117", #304, \phi10×L650mm Rod, \phi100mm Blade
```

(3) Diamond-types, $4 \times$ Bladed, Rod ϕ 10×L650 mm, Blade ϕ 100 mm

DH.WOS501121 Impeller, "**PL121**", #304, ϕ 10×L650mm Rod, ϕ 100mm Blade

(6) Anchor-types, $2 \times$ Bladed, Rod ϕ 10 \times L650/800 mm, Blade ϕ 90/140 mm

DH.WOS501135 Impeller, "PL135", #304, ϕ 10×L650 mm Rod, ϕ 90mm Blade DH.WOS501136 , "**PL136**", #304, ϕ 10×L800 mm Rod, ϕ 140mm Blade

Please Note!

Other Specification of a Rod or Blade is available upon Customer's Request.



(1) Propeller-type 3×Bladed



(2) Propeller-type 4 × Bladed



(3) Diamond-type 4 × Bladed



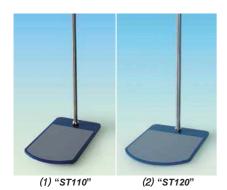
(4) Centrifugal-type 2×Bladed



(5) Teflon Coated Centrifugal-type



(6) Anchor-type 2×Bladed



WiseStir® Premium Plate Stand, High Quality, with Stainless Steel Rod ϕ 16/23 mm

- High-Quality Plate-type Stand with Support Rod
- Silicon Rubber Pad adhered
- Wide and Thick Steel Plate for Safety Mechanism
- Support Rod made of Stainless Steel specially designed

(1) Standard Plate Stand, "ST110", for Stirrer and Homogenizer

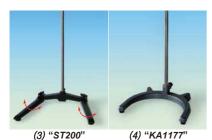
 ϕ 16×h800 mm/1,5P Screw Rod, "**RD 511**",

20 × 35 cm Plate, with Silicone Pad

DH.WOS501515 (2) Wide Plate Stand, "ST120", for Stirrer and Homogenizer

Φ23×h1.000 mm/1,5P Screw Rod, Rod, "RD 522",

30 × 40 cm Plate, with Silicone Pad



WiseStir® Heavy Duty Safety Stand, High Safety, with Stainless Steel Rod ϕ 23 mm

- Never Fall Down by Safety Mechanism. ■ High-Safety H-/U-type Stand with Support Rod
- **Provides Sturdy Support for Stirrers during Mixing Procedure**
- Support Rod made of Stainless Steel specially designed
- Adjustable Foot Distance (ST200)

DH.WOS501520 (3) Deluxe Safety Stand, "ST200", H-type

 ϕ 23×h1200 mm Rod, 39×up to 75cm Stand Base

DH.WOS1177 (4) Safety Stand, "KA1177", U-type

 ϕ 23×h800 mm Rod, 34×29 cm Stand Base



(5) Clamp "CL200"

WiseStir® Universal Jumbo Clamp Holder, for Stand/Rod

DH.WOS502020 (5) Clamp Holder, "CL200"

Cast Aluminum, Grip Capacity, \$\phi\$23mm for Stand/Rod



Steel Retort Base Duo Stand

Steel Retort Base Duo Stand, up to ϕ 16mm Rods, for 2 Rods Nonskid Feet equipped, with Hinged Screw M6, Rod Excluded

* Can Fix Rods up to 2ea (Below ϕ 16mm) * Stand Thickness: 8mm

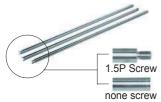
Retort Stand, Only Stand Base

US.2040 Stand, "US2040", r = 150 mm US.2041 , "US2041", r =185 mm

Optional Stainless Steel Rod

DH.WOS502001 Stainless steel Rod, "RD501", ϕ 16 × h800mm, non-screw DH.WOS502002 "RD502", ϕ 16 × h1000mm, non-screw DH.WOS502003 "RD503", *Ф* 16 × h1200mm, non-screw

"witeg" WiseStir® High-Quality Stainless Steel (#304) Rod. for Plate Stand, ϕ 16/23 mm



Stainless steel Rod

Plain-type ϕ 16mm Rod, without Screw

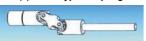
DH.WOS502001 Stainless steel Rod, "RD501", ϕ 16×h800mm, non-screw , "RD502", ϕ 16×h1000mm, non-screw , "RD503", ϕ 16×h1200mm, non-screw DH.WOS502002 DH.WOS502003 DH.WOS502031 "RD531", \$\phi\$23 × h800mm, non-screw DH.WOS502033 "RD533", *Ф* 23 × h1200mm, non-screw

1.5P Screw-type ϕ 16 & 23mm Rod

Stainless steel Rod, "RD511", ϕ 16 \times h800mm, 1.5P Screw DH.WOS502011 DH.WOS502012 "RD512", Ф16×h1000mm, 1.5P Screw DH.WOS502013 "RD513", \$\phi\$ 16 \times h1200mm, 1.5P Screw "RD521", ϕ 23×h800mm, 1.5P Screw "RD522", ϕ 23×h1000mm, 1.5P Screw DH.WOS502021 DH.WOS502022 DH.WOS502023 , "RD523", ϕ 23×h1200mm, 1.5P Screw



(6) Basic-type Coupling



(7) Heavy-duty Metal Coupling

"witeg" WiseStir® Flexible Coupling for Safety Stirring, Up to ϕ 14mm Shafts

(6) "Witeg" Basic Rubber / Metal Coupling, for ϕ 6~10mm Shafts

Coupling, WI.1445000 "W1-COR-6", for ϕ 6~8mm Shafts WI.1445010 "W1-COR-8", for ϕ 8~10mm Shafts

(7) "KGW" Heavy-duty Metal Coupling, for $\phi 6 \sim \phi$ I 4mm Shafts

KG.40477 Coupling, Metal, "PKK-10", for ϕ 6~8mm Shafts KG.40478 , "PKK-16", for *Φ* 12~14mm Shafts

"witeg" WiseStir® JT-M6 Digital Jar Tester, 6-Paddle Stirrer for Flocculation Test, 300 rpm with Programmable Digital Feedback Control, 6 Impellers, 6 Independent Light Source, up to 6×1Lit. Beakers

- Ideal for Flocculation Testing in Water Treatment Laboratories
- 6 Independent Light Source for Each Stirring Point
- **Geared DC Motor and Specially Designed Timing Belt Used**
- **CE Certified**
- * Deciding on Coagulant Chemistries
- * Ideal for Flocculation Testing in Water Treatment Laboratories
- * 6 Independent Light Source for each Stirring Point
- * Digital Feedback Control using Microprocessor
- * Geared DC Motor and Specially Designed Timing Belt used
- * Stable and Accurate Stirring Speed by Feedback Control
- * Digital Display for RPM, Power Bar-Graph and Status
- * Digital LCD with Back-Light Function
- * Programmable Operation: 10 Step, 6 Programs
- * Overload Protection and Over-Heat Protection Functions for Motor
- * Storage Function for Set Values: RPM and Timer

Specification

Model	Shaft: <i>Φ</i> 6×L400mm "JT - M6"	Shaft : <i>Ф</i> 8×L400mm "JT -M6C"
6×Paddler	<i>ϕ</i> 6×L400mm	<i>φ</i> 8×L400mm
(Stainless steel Shaft)	Straight Blade w75 × h25mm	
Stirring Capacity	6×1 Liter Beaker	
Motor	Geared DC Motor (10 : 1 ratio), 40W	
Speed	20~300 rpm	
Speed Accuracy	±5 rpm	
Timer	99hr 59min 59sec (Programmable)	
Display	Digital LCD with Back-Light Function	
Controller	Programmable Digital Feedback Controller with Jog-Shuttle Switch (Turn + Push)	
Program Function	10 Steps, 6 Programs	
Florescent Lamp	20W×6 (Independent Light Source for Each Sample)	
Dimension (w×d×h) (mm)	1.000×310×535	
Safety Device	Overload & Over Heat Protector for motor	
Others	CE Certified	
	Storage Function (RPM, Timer)	
Packing Dimension (w×d×h) (mm)	1.120×430×740	
Gross Weight	69 kg	
Power Consumption	40 W	
Power plug type	Hybrid E+F	
Power Supply*	AC 230V, 1N~, 50/60Hz	



Ordering Information

with ϕ 6mm \times L400mm Shaft, 6 Impellers, "JT-M6" DH.WJT06010 Jar Tester, 230V, "JT-M6", 300 rpm

with ϕ 8mm \times L400mm Shaft, 6 Impellers, "JT-M6C" DH.WJT06020 Jar Tester, 230V, "JT-M6C", 300 rpm



Jar Tester, φ6×L400mm Shaft "JT-M6"



Timing Belt