

Overhead stirrer

High-speed
High-torque

Model overview & comparison



	High-speed						High-torque					
	Analog		Digital				Analog		Digital			
	Integrated controller		Integrated controller		Remote controller		Integrated controller		Integrated controller		Remote controller	
Model	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 l	20 l	10 l	20 l	10 l	20 l	40 l	60 l	40 l	60 l	40 l	60 l
Max. viscosity (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 rating (input / output)	83/75 W (1/10 hp)	130/120 W (1/6 hp)	83/75 W (1/10 hp)	130/120 W (1/6 hp)	83/75 W (1/10 hp)	130/120 W (1/6 hp)	83/75 W (1/10 hp)	130/120 W (1/6 hp)	83/75 W (1/10 hp)	130/120 W (1/6 hp)	83/75 W (1/10 hp)	130/120 W (1/6 hp)
Max. torque (Ncm) at chuck	85	145	85	145	85	145	300	500	300	500	300	500
Max. impeller diameter	8 mm						10 mm					
Speed range (rpm)	200 - 3,000 rpm						50 - 1,000 rpm					
Motor rating	Direct driven motor						3.5 : 1 ratio; worm-gear motor					
Controller	Analog phase		Jog-Shuttle		Jog-Shuttle via remote		Analog phase		Jog-Shuttle		Jog-Shuttle via remote	
Display	-		Digital LCD (for timer, rpm and power)				-		Digital LCD (for timer, rpm and power)			
Operation environment	Temperature range: 0 - 40°C, maximal humidity: 80%											
Safety mechanism	overheat protection		overheat and overload protection				overheat protection		overheat and overload protection			
Dimensions (WxDxH mm)	90x145x180				90x100x180		90x180x130	90x210x130	90x180x130	90x210x130	155x180x110	155x230x110
Weight (kg)	4.5	5.3	4.5	5.3	3 + 2.5*	3.8 + 2.5*	3.5	4	3.5	4	3.5 + 2.5*	4 + 2.5*
Others	smooth start and change of stirring speed while operation impeller height adjustable chrome-plated stainless steel chuck CE certified and unique serial number for tracing						smooth start and change of stirring speed while operation storage function for timer and speed impeller height adjustable chrome-plated stainless steel chuck CE certified and unique serial number for tracing					
Power supply	AC 230V or AC 120V											

* weight of remote controller

Material	Viscosity (mPas)	Recommended overhead stirrer			
Water	1	HS-30D	HS-100D	HT-50DX	HT-120DX
Milk	3				
Soyabean oil	160				
Varnish	500	HS-50A	HS-120A	HT-50AX	HT-120AX
Lacquer	1,000				
Honey	3,000				
Standard viscosity	10,000	HS-30T	HS-100T	HT-50T	HT-120T
Standard viscosity	15,000				
Ketchup	30,000				
Standard viscosity	50,000				
Mustard	70,000				
Corn syrup	100,000				
Standard viscosity	150,000				
Peanut butter	250,000				

powerful DC motor for various stirring applications (direct-driven or worm-gear)

high-speed or high-torque versions available

digital feedback controller

steady and constant stirring speed

chrome-plated stainless steel chuck to prevent corrosion

anti-trembling system - the impeller is fixed at two points within the body and chuck

adjustable impeller position (height)

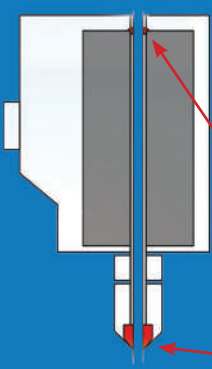
motor overload and overheat protection for highest safety and long lifetime

available as set with impeller, plate stand and clamp

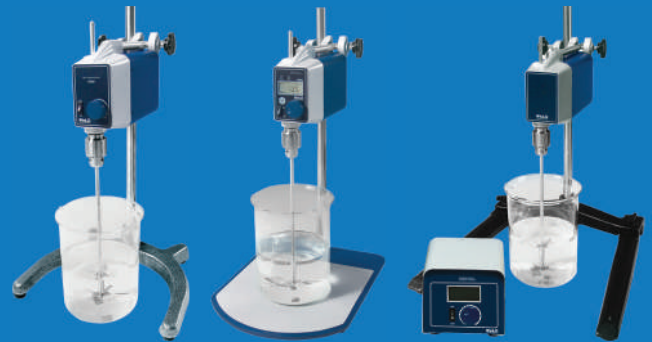
many different impellers and plate stands available (see page 122 & 123)



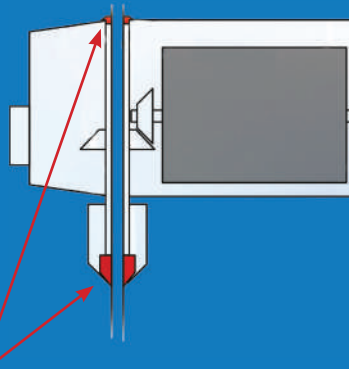
High-speed (HS models)



The direct driven motor ensures high-speed at all recommended viscosities (see previous page).



High-torque (HT models)



The worm-gear motor ensures high-torque at all recommended viscosities (see previous page).

The impeller is fixed at two points within the body to ensure smooth operation without trembling.



Anti-rust chuck - chrome-plated stainless steel

The anti-rust chuck is chrome-plated to prevent from corrosion by dropping or smoking liquids.

The chuck also fixes the impeller within the body and allows smooth operation without trembling.

Overhead stirrer | high-speed

digital, up to 10 / 20 liter, 10,000 / 50,000 mPas, 200 - 3,000 rpm

200-3,000 rpm
10,000 mPas
50,000 mPas



HS-100D Set

HS-D high-speed digital

Ideal for:

- all mixing applications in the laboratory
- specialized for low- to medium-viscosity materials

Features:

- maximal 10 / 20 liter
- 200 - 3,000 rpm
- maximal viscosity 10,000 / 50,000 mPas
- direct driven motor
- digital LCD display
- smooth start and change of stirring speed while operation
- storage function for timer and speed
- impeller height adjustable
- chrome-plated stainless steel chuck
- CE certified and unique serial number for tracing

Safety mechanism:

- timer 99h 59min with timer-end signal
- error status
- locking mode
- overload protection
- overheat protection
- operation LEDs

Controller:

- **Jog-Shuttle** controller with touch-button

Model	HS-30D	HS-100D
Design	high-speed	
Controller-type	digital, integrated, Jog-Shuttle	
Stirring capacity (H ₂ O)	max. 10 l	max. 20 l
Max. viscosity (mPas)	10,000 mPas	50,000 mPas
Max. torque (N cm) at chuck	85 N cm	145 N cm
Max. impeller shaft	Ø 8 mm	
Speed range	200 - 3,000 rpm	
Timer & alarm	99hr 59min (with continuous run), error status and timer-end	
Controller	digital Feedback Controller with Jog-Shuttle (Turn+Push)	
Display	digital LCD with backlight function	
Permissible temperature & RH %	ambient temperature 0 ~ 40°C, 80% RH	
Safety device	overheat & overload protection	
Dimension & weight	90x145xh180 mm, 4.5 kg	90x145xh180 mm, 5.3 kg
Packaging size	320x300xh180 mm, 5 kg	320x300xh180 mm, 8 kg
Material	ABS & Aluminium	
Power supply	1 Phase AC 120V, 60 Hz or AC 230V, 50/60 Hz	
Order number 230V	Unit: DH.WOS01015 Set: DH.WOS01016	Unit: DH.WOS01025 Set: DH.WOS01026
Order number 120V	Unit: DH.WOS02015 Set: DH.WOS02016	Unit: DH.WOS02025 Set: DH.WOS02026

Set includes: Unit HS-D
Impeller HS-30D: PL010 3-bladed Ø50 mm, HS-100D: PL015 4-bladed Ø70 mm
Clamp CL200
Plate stand HS-30D: ST110 20x35 cm, HS-100D: ST120 30x40 cm

Accessories: Impellers and plate stands on page 122 & 123

Overhead stirrer | high-speed

digital remote controller, up to 10 / 20 liter, 10,000 / 50,000 mPas, 200 - 3,000 rpm

200-3,000 rpm
10,000 mPas
50,000 mPas



HS-T high-speed digital

Ideal for:

- all mixing applications in the laboratory
- specialized for low- to medium-viscosity materials
- convenient for applications where remote control is needed

Features:

- maximal 10 / 20 liter
- 200 - 3,000 rpm
- maximal viscosity 10,000 / 50,000 mPas
- direct driven motor
- digital LCD display on remote controller
- smooth start and change of stirring speed while operation
- storage function for timer and speed
- impeller height adjustable
- chrome-plated stainless steel chuck
- CE certified and unique serial number for tracing

Safety mechanism:

- timer 99h 59min with timer-end signal
- error status
- locking mode
- overload protection
- overheat protection
- operation LEDs

Controller:

- **Jog-Shuttle** remote controller with touch-button

Model	HS-30T	HS-100T
Design	high-speed	
Controller-type	digital, remote, Jog-Shuttle	
Stirring capacity (H ₂ O)	max. 10 l	max. 20 l
Max. viscosity (mPas)	10,000 mPas	50,000 mPas
Max. torque (N cm) at chuck	85 N cm	145 N cm
Max. impeller shaft	Ø 8 mm	
Speed range	200 - 3,000 rpm	
Timer & alarm	99hr 59min (with continuous run), error status and timer-end	
Controller	remote digital Feedback Controller with Jog-Shuttle (Turn+Push)	
Display	digital LCD with backlight function	
Permissible temperature & RH %	ambient temperature 0 ~ 40°C, 80% RH	
Safety device	overheat & overload protection	
Dimension & weight	90x100xh180 mm, 3 kg	90x100xh180 mm, 3.8 kg
Packaging size	580x340xh230 mm, 5 kg	580x340xh230 mm, 8 kg
Material	ABS & Aluminium	
Power supply	1 Phase AC 120V, 60 Hz or AC 230V, 50/60 Hz	
Order number 230V	Unit: DH.WOS01035 Set: DH.WOS01036	Unit: DH.WOS01045 Set: DH.WOS01046
Order number 120V	Unit: DH.WOS02035 Set: DH.WOS02036	Unit: DH.WOS02045 Set: DH.WOS02046


Set includes: Unit HS-T
Impeller HS-30T: PL010 3-bladed Ø50 mm, HS-100T: PL015 4-bladed Ø70 mm
Clamp CL200
Plate stand HS-30T: ST110 20x35 cm, HS-100T: ST120 30x40 cm

Accessories: Impellers and plate stands on page 122 & 123

Overhead stirrer | high-speed

analog, up to 10 / 20 liter, 10,000 / 50,000 mPas, 0 - 3,000 rpm

200-3,000 rpm
10,000 mPas
50,000 mPas




HS-50A Set

HS-A high-speed analog

Ideal for:

- all mixing applications in the laboratory
- specialized for low- to medium-viscosity materials

Features:

- maximal 10 / 20 liter
- up to 3,000 rpm
- maximal viscosity 10,000 / 50,000 mPas
- direct driven motor
- smooth start and change of stirring speed while operation
- impeller height adjustable
- chrome-plated stainless steel chuck
- CE certified and unique serial number for tracing

Safety mechanism:

- overheat protection
- operation LED

Controller:

- **Analog phase** controller with control knob

Model	HS-50A	HS-120A
Design	high-speed	
Controller-type	analog, integrated, phase controller	
Stirring capacity (H ₂ O)	max. 10 l	max. 20 l
Max. viscosity (mPas)	10,000 mPas	50,000 mPas
Max. torque (N cm) at chuck	85 N cm	145 N cm
Max. impeller shaft	Ø 8 mm	
Speed range	up to 3,000 rpm	
Controller	analog phase controller with control knob	
Permissible temperature & RH %	ambient temperature 0 ~ 40°C, 80% RH	
Safety device	overheat protection	
Dimension & weight	90x145x180 mm, 4.5 kg	90x145x180 mm, 5.3 kg
Packaging size	320x300x180 mm, 5 kg	320x300x180 mm, 8 kg
Material	ABS & Aluminium	
Power supply	1 Phase AC 120V, 60 Hz or AC 230V, 50/60 Hz	
Order number 230V	Unit: DH.WOS01210 Set: DH.WOS01211	Unit: DH.WOS01215 Set: DH.WOS01216
Order number 120V	Unit: DH.WOS02210 Set: DH.WOS02211	Unit: DH.WOS02215 Set: DH.WOS02216

Set includes: Unit HS-A
Impeller HS-50A: PL010 3-bladed Ø50 mm, HS-120A: PL015 4-bladed Ø70 mm
Clamp CL200
Plate stand KA1177 34x29 cm

Accessories: Impellers and plate stands on page 122 & 123

Overhead stirrer | high-torque

digital, up to 40 / 60 liter, 100,000 / 150,000 mPas, 50 - 1,000 rpm

50-1,000 rpm
100,000 mPas
150,000 mPas



HT-50DX Set



HT-DX high-torque digital

Ideal for:

- all mixing applications in the laboratory
- specialized for light watery solutions up to high-viscosity fluids

Features:

- maximal 40 / 60 liter
- 50 - 1,000 rpm
- maximal viscosity 100,000 / 150,000 mPas
- worm-gear motor (ratio 3.5:1)
- digital LCD display
- smooth start and change of stirring speed while operation
- storage function for timer and speed
- impeller height adjustable
- chrome-plated stainless steel chuck
- CE certified and unique serial number for tracing

Safety mechanism:

- timer 99h 59min with timer-end signal
- error status
- locking mode
- overload protection
- overheat protection
- operation LEDs

Controller:

- **Jog-Shuttle** controller with touch-button

Model	HT-50DX	HT-120DX
Design	high-torque	
Controller-type	digital, integrated, Jog-Shuttle	
Stirring capacity (H ₂ O)	max. 40 l	max. 60 l
Max. viscosity (mPas)	100,000 mPas	150,000 mPas
Max. torque (N cm) at chuck	300 N cm	500 N cm
Max. impeller shaft	Ø 10 mm	
Speed range	50 - 1,000 rpm	
Timer & alarm	99hr 59min (with continuous run), error status and timer-end	
Controller	digital Feedback Controller with Jog-Shuttle (Turn+Push)	
Display	digital LCD with backlight function	
Permissible temperature & RH %	ambient temperature 0 ~ 40°C, 80% RH	
Safety device	overheat & overload protection	
Dimension & weight	90x180xh130 mm, 3.5 kg	90x210xh130 mm, 4 kg
Packaging size	320x300xh180 mm, 5 kg	320x300xh180 mm, 8 kg
Material	ABS & Aluminium	
Power supply	1 Phase AC 120V, 60 Hz or AC 230V, 50/60 Hz	
Order number 230V	Unit: DH.WOS01051 Set: DH.WOS01052	Unit: DH.WOS01071 Set: DH.WOS01072
Order number 120V	Unit: DH.WOS02051 Set: DH.WOS02052	Unit: DH.WOS02071 Set: DH.WOS02072

Set includes: Unit HT-DX
Impeller PL020 4-bladed Ø90 mm
Clamp CL200
Plate stand HT-50DX: ST120 30x40 cm, HT-120DX: ST200 39x up to 75 cm

Accessories: Impellers and plate stands on page 122 & 123

Overhead stirrer | high-torque

digital remote controller, up to 40 / 60 liter, 100,000 / 150,000 mPas, 50 - 1,000 rpm

50-1,000 rpm
100,000 mPas
150,000 mPas



HT-50T Set

HT-T high-torque digital

Ideal for:

- all mixing applications in the laboratory
- specialized for light watery solutions up to high-viscosity fluids
- convenient for applications where remote control is needed

Features:

- maximal 40 / 60 liter
- 50 - 1,000 rpm
- maximal viscosity 100,000 / 150,000 mPas
- worm-gear motor (ratio 3.5:1)
- digital LCD display on remote controller
- smooth start and change of stirring speed while operation
- storage function for timer and speed
- impeller height adjustable
- chrome-plated stainless steel chuck
- CE certified and unique serial number for tracing

Safety mechanism:

- timer 99h 59min with timer-end signal
- error status
- locking mode
- overload protection
- overheat protection
- operation LEDs

Controller:

- **Jog-Shuttle** remote controller with touch-button

Model	HT-50T	HT-120T
Design	high-torque	
Controller-type	digital, remote, Jog-Shuttle	
Stirring capacity (H ₂ O)	max. 40 l	max. 60 l
Max. viscosity (mPas)	100,000 mPas	150,000 mPas
Max. torque (N cm) at chuck	300 N cm	500 N cm
Max. impeller shaft	Ø 10 mm	
Speed range	50 - 1,000 rpm	
Timer & alarm	99hr 59min (with continuous run), error status and timer-end	
Controller	remote digital feedback controller with Jog-Shuttle (Turn+Push)	
Display	digital LCD with backlight function	
Permissible temperature & RH %	ambient temperature 0 ~ 40°C, 80% RH	
Safety device	overheat & overload protection	
Dimension & weight	155x180xh110 mm, 3.5 kg	155x230xh110 mm, 4 kg
Packaging size	580x340xh230 mm, 5 kg	580x340xh230 mm, 8 kg
Material	ABS & Aluminium	
Power supply	1 Phase AC 120V, 60 Hz or AC 230V, 50/60 Hz	
Order number 230V	Unit: DH.WOS01065 Set: DH.WOS01066	Unit: DH.WOS01075 Set: DH.WOS01076
Order number 120V	Unit: DH.WOS02065 Set: DH.WOS02066	Unit: DH.WOS02075 Set: DH.WOS02076

Set includes: Unit HT-T
Impeller PL020 4-bladed Ø90 mm
Clamp CL200
Plate stand HT-50T: ST120 30x40 cm, HT-120T: ST200 39x up to 75 cm

Accessories: Impellers and plate stands on page 122 & 123

Overhead stirrer | high-torque

analog, up to 40 / 60 liter, 100,000 / 150,000 mPas, up to 1,000 rpm

up to 1.000 rpm
100.000 mPas
150.000 mPas



HT-50AX Set



HT-AX high-torque analog

Ideal for:

- all mixing applications in the laboratory
- specialized for light watery solutions up to high-viscosity fluids

Features:

- maximal 40 / 60 liter
- up to 1,000 rpm
- maximal viscosity 100,000 / 150,000 mPas
- worm-gear motor (ratio 3.5:1)
- smooth start and change of stirring speed while operation
- impeller height adjustable
- chrome-plated stainless steel chuck
- CE certified and unique serial number for tracing

Safety mechanism:

- overheat protection
- operation LED

Controller:

- **Analog phase** controller with control knob

Model	HT-50AX	HT-120AX
Design	high-torque	
Controller-type	analog, integrated, phase controller	
Stirring capacity (H ₂ O)	max. 40 l	max. 60 l
Max. viscosity (mPas)	100,000 mPas	150,000 mPas
Max. torque (N cm) at chuck	300 N cm	500 N cm
Max. impeller shaft	Ø 10 mm	
Speed range	up to 1,000 rpm	
Controller	analog phase controller with control knob	
Permissible temperature & RH %	ambient temperature 0 ~ 40°C, 80% RH	
Safety device	overheat protection	
Dimension & weight	90x180xh130 mm, 3.5 kg	90x210xh130 mm, 4 kg
Packaging size	320x300xh180 mm, 5 kg	320x300xh180 mm, 8 kg
Material	ABS & Aluminium	
Power supply	1 Phase AC 120V, 60 Hz or AC 230V, 50/60 Hz	
Order number 230V	Unit: DH.WOS01251 Set: DH.WOS01252	Unit: DH.WOS01271 Set: DH.WOS01272
Order number 120V	Unit: DH.WOS02251 Set: DH.WOS02252	Unit: DH.WOS02271 Set: DH.WOS02272

Set includes: Unit HT-AX
Impeller PL020 4-bladed Ø90 mm
Clamp CL200
Plate stand KA1177 34x29 cm

Accessories: Impellers and plate stands on page 122 & 123

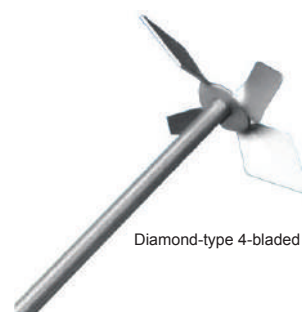
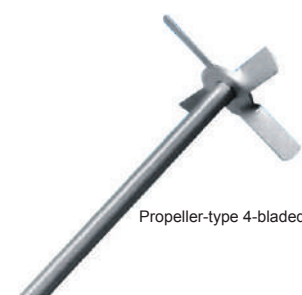
Overhead stirrer | Jar tester

Accessories: Stirring impellers and plate stands

Stirring impellers for high-speed and high-torque overhead stirrer - Ø8mm

- universal-types and wide-range-types
- shaft made of stainless steel, blades made of stainless steel or PTFE-coated
- excellent resistance to acids, chemicals, corrosion and high temperature

Type	Blades	Rod	Article	Order number
Propeller-type	3-bladed Ø50 x h15mm	Ø8 x L500 mm	PL010	DH.WOS501010
Propeller-type	3-bladed Ø60 x h15 mm	Ø8 x L500 mm	PL011	DH.WOS501011
Propeller-type	3-bladed Ø80 x h20 mm	Ø8 x L650 mm	PL012	DH.WOS501012
Propeller-type	3-bladed Ø100 x h24 mm	Ø8 x L650 mm	PL013	DH.WOS501013
Propeller-type	4-bladed Ø50 x h20 mm	Ø8 x L500 mm	PL014	DH.WOS501014
Propeller-type	4-bladed Ø70 x h25 mm	Ø8 x L500 mm	PL015	DH.WOS501015
Propeller-type	4-bladed Ø90 x h35 mm	Ø8 x L650 mm	PL016	DH.WOS501016
Propeller-type	4-bladed Ø110 x h35 mm	Ø8 x L650 mm	PL017	DH.WOS501017
Diamond-type	4-bladed Ø70 x h20 mm	Ø8 x L500 mm	PL019	DH.WOS501019
Diamond-type	4-bladed Ø90 x h25 mm	Ø8 x L500 mm	PL020	DH.WOS501020
Diamond-type	4-bladed Ø100 x h25 mm	Ø8 x L650 mm	PL021	DH.WOS501021
Centrifugal-type PTFE-coated	2-bladed Ø50 x h14 mm	Ø8 x L500 mm	PL029	DH.WOS501029
Centrifugal-type PTFE-coated	2-bladed Ø70 x h17 mm	Ø8 x L500 mm	PL030	DH.WOS501030
Centrifugal-type PTFE-coated	2-bladed Ø100 x h24 mm	Ø8 x L650 mm	PL031	DH.WOS501031
Anchor-type	2-bladed Ø70 x h14 mm	Ø8 x L500 mm	PL035	DH.WOS501035
Anchor-type	2-bladed Ø90 x h16 mm	Ø8 x L650 mm	PL036	DH.WOS501036



Stirring impellers for high-torque overhead stirrer - Ø10mm

- universal-types and wide-range-types
- shaft made of stainless steel, blades made of stainless steel or PTFE-coated
- excellent resistance to acids, chemicals, corrosion and high temperatures

Type	Blades	Rod	Article	Order number
Propeller-type	3-bladed Ø60 x h15 mm	Ø10 x L500 mm	PL111	DH.WOS501111
Propeller-type	3-bladed Ø80 x h20 mm	Ø10 x L650 mm	PL112	DH.WOS501112
Propeller-type	3-bladed Ø100 x h24 mm	Ø10 x L800 mm	PL113	DH.WOS501113
Propeller-type	4-bladed Ø90 x h35 mm	Ø10 x L650 mm	PL116	DH.WOS501116
Propeller-type	4-bladed Ø110 x h40 mm	Ø10 x L800 mm	PL117	DH.WOS501117
Propeller-type	4-bladed Ø110 x h40 mm	Ø10 x L1000 mm	PL118	DH.WOS501118
Diamond-type	4-bladed Ø110 x h25 mm	Ø10 x L650 mm	PL121	DH.WOS501121
Centrifugal-type PTFE-coated	2-bladed Ø100 x h24 mm	Ø10 x L650 mm	PL130	DH.WOS501130
Anchor-type	2-bladed Ø90 x h16 mm	Ø10 x L650 mm	PL135	DH.WOS501135
Anchor-type	2-bladed Ø140 x h25 mm	Ø10 x L800 mm	PL136	DH.WOS501136
Anchor-type	2-bladed Ø160 x h30 mm	Ø10 x L1000 mm	PL137	DH.WOS501137

