Khosla Scientific Instruments

INSTRUMENTS
GENERAL LAB

Scaling new heights
in Research
your accessible solution

Contents

Khosla Scientific Instruments

◆ Liquid Handling ◆

Khosla Scientific Liquid Handling range includes Micropipettes (Electronic Pipettes & Mechanical Pipettes), Pipette Filler, Pipette Controller and Stepper.

List of models:

Series	Image	Model	Application	Operation Method	Volume Range	Channel Option	Autoclavable	Page
Mechanical Pipatte		HiPette	Aqueous solution	Mechanical	0.1-10000ul	Single channel	YES	p.5
		MicroPette Plus	Aqueous solution	Mechanical	0.1-5000µL	Single Channel Adl & Fixed;	YES	p.7
					0.5-300µL	B Channel Ad. 12 Channel Adj..		
		MiniPette	Aqueous solution	Mechanical	25-300µl	Single Channel Fixed	YES	p.18
Bectronic Pipette		dPette+	Aqueous solution	Electronic	0.5-1000µL	Single Channel Adj.	YES (lower part)	p.11
					0.5-300 µL	8 Channel Adj		
		dPette	Aqueous solution	Electronic	0,5-1000µl	Single Channel Adi.	YES (lower part)	p.13
Pipette Filier		Levo Plus	Aqueous solution	Electronic	01-100ml	Single channel	YES (silicon adapter nozzle)	p.15
		Levo Me	Aqueous solution	Electronic	0,1-100ml	Single channel	YES (silicon adapter nozzle)	p.17
Pipette Controller		Levo	Aqueous solution	Mechanical	0,1-100ml	Single channel	YES (silicon adapter nozzle)	p.18
Pipette Pump		Levo E	Aqueous solution	Mechanical	2-25ml	Single channel	NO	p.18
Stenmar		StepMate	Aqueous solution, high viscosity or volatile solution	Mechanical	0.5-50ml	Single channel	NO	p.19

In addition to Pipettes, Liquid Handling series also include various Dispensers, Electronic Burette and Vacuum Aspiration System, which are used for the pipetting, dispensing, and collection of reagents with a wider range

List of BLAB models

Product Name	Bottle-Top Dispenser	New Bottle-Top Dispenser	Electronic Battle-Top Dispenser	Electronic Burette	Vacuum Aspiration System	Economical Vacuum Aspirator	Bench top compact vacuum aspirator
Model	DispensMate	DispensMate-Pro	dFlow	dTrite	SafeVac	EcoVac	Smart VAC
Application	Reagent pipetting and liquid dispensing			Used in taration operations in chemical analysis, food industry, environmental analys s	Liquid collection and storage treatment, including cell culture medium, suspension, supermatant.		The product features for the aspiration and processing of liquids including cell culture media, suspensions, and supernatants.
Operation	Manual	Manual	Electronic	Electronic	Electronic	Electronic	Electronic
Volume Range	0.5-5ml 1.0-10ml 2.5-25ml 5.0-50ml	0.5-5ml 1.0-10ml 2.5-25ml 5.0-50ml 10-100ml	0.1-99.9ml	0.01-99.99ml	Vocure range: 0-600mbar Bottle volume:4L	Vocure range: 0-500mbar Bottle volume:2L	Vacuum level 600mbar; Collection bottle volume: 1L
Reagent Recovery Function	NO	Yes	Yes	Yes	NO	NO	NO
Features	-	-Pro Glass piston (Part volume)	-	-	Sensitive level sensor, Self-closing connector	1L bottle optional, Switch manual and continuous aspiration	Opcional 500ml bottie and filtration flask
Fully autoclavable	The part where the liquid flows	Whole	-	-	The part where the liquid flows	The part where the liquid flows	The part where the liquid flows
Accessories	Screw adapter	Screw adapter	Spiral dispensing pipe	Spiral dispensing pipe	Handie adapter	Handie adapter	-
Page	P .25	P .24	P .23	P .22	P .26	P .28	P .30

HiPette

Fully Autoclavable Mechanical Pipette

The Khosla Scientific new generation lully autoclavable mechanical pipette has the best ergonomic design and ultralight weight. It has been designed keeping in mind the human form and human factors to offer smooth and effortless ergonomic pipetting experience. it is UV sterilisable and resistant to strong chemical corrosion. In addition, the volume lock helps protect from volume changing accidentally, and achieve reliable pipetting of smallest volume of liquids.

Ultra-light ergonomic design

Light weight and light pipetting force with soft range adjustment and piston movement offer effortless &fatigue-less pipetting experience.

Accurate pipetting

Special material and the updated components & technologies effectively reduce the operating force for accuracy, precision, and reliability.

Complete sterilization

The best-in-class pipette material used is fully autoclavable. It gives better protection against chemical & physical corrosion and offers enhanced UV resistance for higher durability.

Smooth, Low Force, Effortless Button

Smooth Knob Adjustment-
Light and smooth volume adjustment

Pull up the lock wheel to set the volume

One Key Volume Lock Setting

Push down the lockwheel to lock the volume

Ergonomic Design
Comfortable & Effortless, Precise & Accurate

Volume Display Window
New 4-digit volume display

Simple Disassembly
Easy routine maintenance

Filter Element
Reduces volatile liquids entry into the pipette body; helps avoid liquid back-flow caused by improper operation and t hus prevents piston corrosion and contamination
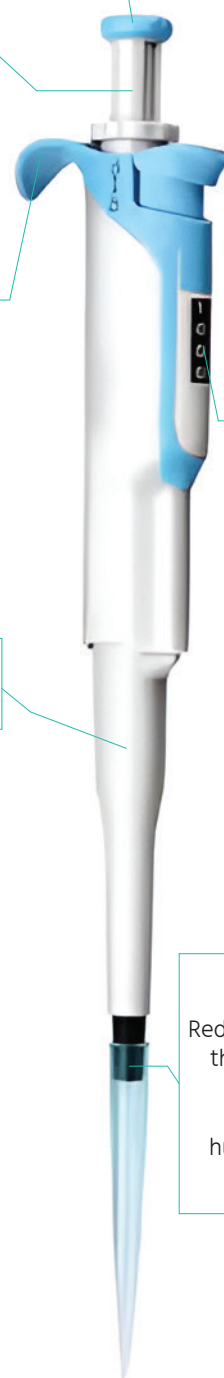
Specifications	SINGLE-CHANNEL ADJUSTABLE VOLUME PIPETTES (12 MODELS, COVERING 0.1µL-10mL.)

Volume Range	Increment	Test Volume	Systematic Error		Random Error	
µL	µL	µL	µL	%	µL	%
0.1-2.5	0.002	2.5	± 0.04	± 1.4	± 0.02	± 0.07
		1.25	± 0.03	± 2.5	± 0.02	± 1.5
		0.25	± 0.03	± 12.0	± 0.02	± 6.0
0.5-10	0.01	10	± 0.10	± 1.0	± 0.04	± 0.4
		5	± 0.08	± 1.5	± 0.04	± 0.8
		1	± 0.03	± 2.5	± 0.02	± 1.8
2-20	0.02	20	± 0.20	± 1.0	± 0.06	± 0.3
		10	± 0.12	± 1.2	± 0.06	± 0.6
		2	± 0.10	± 5.0	± 0.03	± 1.5
5-50	0.05	50	± 0.45	± 0.9	± 0.15	± 0.3
		25	± 0.35	± 1.4	± 0.20	± 0.8
		5	± 0.15	± 3.0	± 0.08	± 1.6
10-100	0.1	100	± 0.80	± 0.8	± 0.20	± 0.2
		50	± 0.50	± 1.0	± 0.15	± 0.3
		10	± 0.30	± 3.0	± 0.10	± 1.0
20-200	0.2	200	± 1.20	± 0.6	± 0.40	± 0.2
		100	± 1.00	± 1.0	± 0.30	± 0.3
		20	± 0.50	± 2.5	± 0.14	± 0.7
30-300	0.2	300	± 1.80	± 0.6	± 0.60	± 0.2
		150	± 1.50	± 1.0	± 0.45	± 0.3
		30	± 0.75	± 2.5	± 0.21	± 0.7
100-1000	1	1000	± 6.00	± 0.6	± 2.00	± 0.2
		500	± 5.00	± 0.1	± 1.00	± 0.2
		100	± 3.00	± 3.0	± 0.60	± 0.6
1000-5000	5	5000	± 30.00	± 0.6	± 10.00	± 0.2
		2500	± 15.00	± 0.6	± 7.50	± 0.3
		1000	± 12.00	± 1.2	± 3.00	± 0.3
500-5000	5	5000	± 30.00	± 0.6	± 10.00	± 0.2
		2500	± 15.00	± 0.6	± 7.50	± 0.3
		500	± 12.00	± 2.4	± 3.00	± 0.6
2000-10000	10	10000	± 60.00	± 0.6	± 20.00	± 0.2
		5000	± 40.00	± 0.8	± 10.00	± 0.2
		2000	± 30.00	± 1.5	± 6.00	± 0.6
1000-10000	10	10000	± 60.00	± 0.6	± 20.00	± 0.2
		5000	± 40.00	± 0.8	± 10.00	± 0.2
		1000	± 30.00	± 3.0	± 6.00	± 0.6

User calibration should refer to the industrial standard ISO8655-2

MicroPette Plus

Fully Autoclavable Mechanical Pipette

The MicroPette Plus pipette is fully autoclavable, being able to with-stand temperatures of 121°C and pressure of 1ATM, and does not need to be pre-treated prior. Following the autoclave cycle, a 12 hour cooling and drying period ensures that the high performance of the MicroPette Plus is retained. It is recommended the piston and rubber seals be greased after every 10 cycles of autoclaving.

121°C
FULLY
Autoclavable

Push button
(thumb button)

Push button rod

Cap

Grip cover

Tip ejector

Handle

Display cover

10.0

0.5-10µl

Tip ejector collar

Tip cone
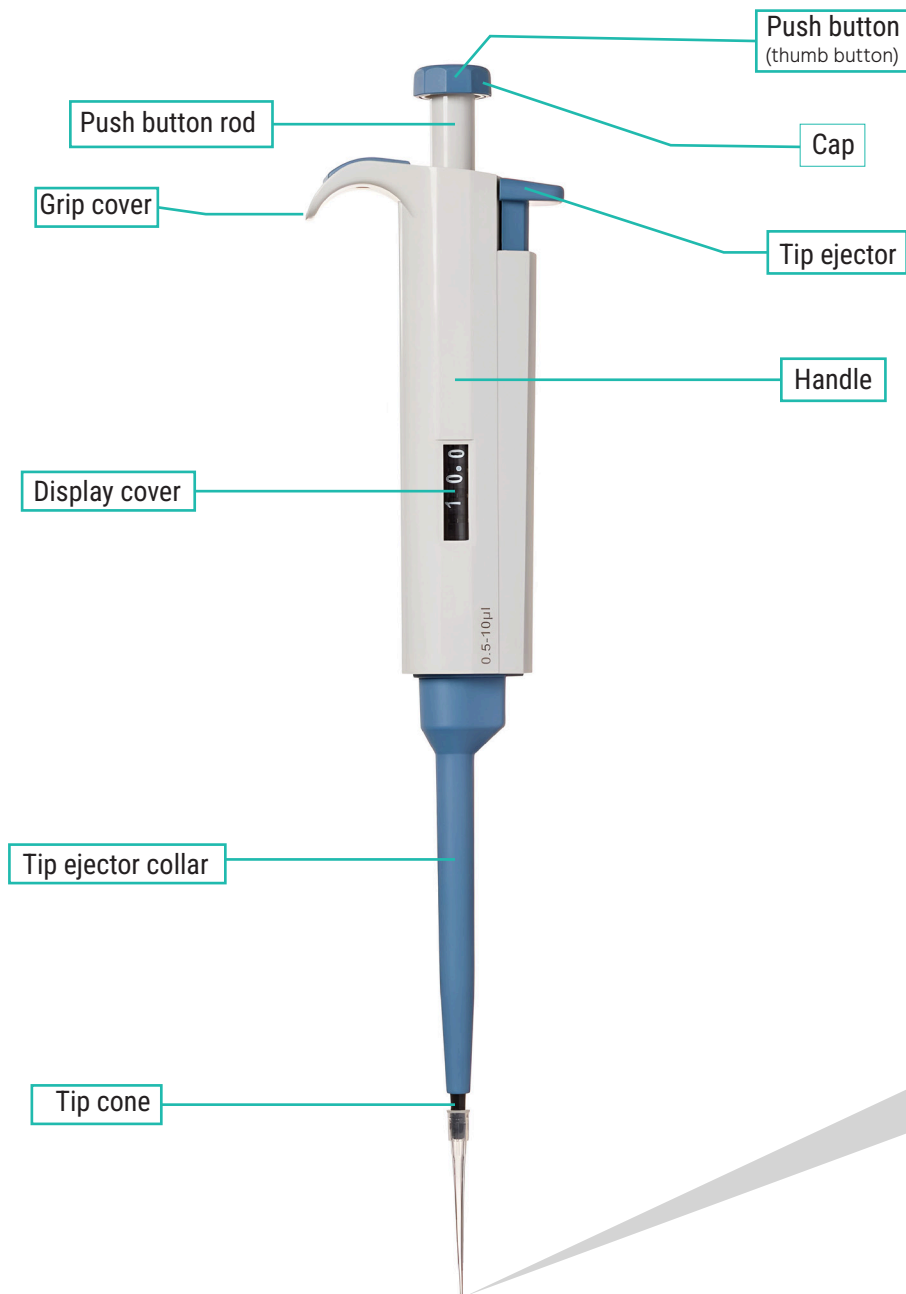
Features

- Available as Fixed Volume and Adjustable Volume formats
- Streamlined shape design
- Comprehensive volume range from 0.1µL to 10ml.
- Easy calibration and maintenance
- 8 and 12 channel pipette options
- Dispensing head rotates for effortless pipetting convenience
- Individual piston and tip cone assembly
- Spring loaded tip cones for easy cleaning and maintenance
- Compound material-made tip cone secures high sealing performance

Mechanical Pipette Volume Selection

Specifications

This volume list is for micropette and microprttr plus (Adjustable and Fixed volume)

Single-channel Adjustable Volume Pipettes						
Volume Range	Increment	Test Volume	Error limits in accordance with ISO8655-2			
			Systematic Error		Random Error	
μL	μL	μL	μL	%	μL	%
0.1-2.5	0.05	2.5	±0.0625	±2.50	±0.05	±2.00
		1.25	±0.0375	±3.00	±0.0375	±3.00
		0.25	±0.03	±12.00	±0.015	±6.00
0.5-10	0.1	10	±0.1	±1.00	±0.08	±0.80
		5	±0.075	±1.50	±0.075	±1.50
		1	±0.025	±2.50	±0.015	±1.50
2-20	0.5	20	±0.18	±0.90	±0.08	±0.04
		10	±0.12	±1.20	±0.1	±1.00
		2	±0.06	±3.00	±0.04	±2.00
5-50	0.5	50	±0.3	±0.60	±0.15	±0.30
		25	±0.225	±0.90	±0.15	±0.60
		5	±0.1	±2.00	±0.1	±2.00
10-100	1	100	±0.8	±0.80	±0.15	±0.15
		50	±0.5	±1.00	±0.2	±0.40
		10	±0.3	±3.00	±0.15	±1.50
20-200	1	200	±1.2	±0.60	±0.3	±0.15
		100	±0.8	±0.80	±0.3	±0.30
		20	±0.6	±3.00	±0.2	±1.00
50-200	1	200	±1.2	±0.60	±0.3	±0.15
		100	±0.8	±0.80	±0.3	±0.30
		50	±0.5	±1.00	±0.2	±0.40
100-1000	5	1000	±6	±0.60	±2	±0.20
		500	±3.5	±0.70	±1.25	±0.25
		100	±2	±2.00	±0.7	±0.70
200-1000	5	1000	±6	±0.60	±2	±0.20
		500	±3.5	±0.70	±1.25	±0.25
		200	±1.8	±0.90	±0.6	±0.30
1000-5000	50	5000	±25	±0.50	±7.5	±0.15
		5200	±15	±0.60	±7.5	±0.30
		1000	±7	±0.70	±3	±0.30
2000-10000 Do not apply to microPette plus	100	10000	±60	±0.60	±20	±0.20
		5000	±60	±1.20	±15	±0.30
		2000	±60	±3.00	±12	±0.60

User calibration should refer to the industrial standard ISO8655-2

Fixed Volume Pipettes

Volume Range	Increment	Test Volume	Systematic Error		Random Error	
µL	–	µL	µL	%	µL	%
5	–	5	±0.065	±1.3	±0.06	±1.2
10	–	10	±0.08	±0.8	±0.08	±10.8
20	–	20	±0.12	±0.6	±0.1	±0.5
25	–	25	±0.125	±0.5	±0.075	±0.3
50	–	50	±0.25	±0.5	±0.15	±0.3
100	–	100	±0.5	±0.5	±0.3	±0.3
200	–	200	±0.8	±0.4	±0.4	±0.2
250	–	250	±1.0	±0.4	±0.5	±0.2
500	–	500	±1.5	±0.3	±1.0	±0.2
1000	–	1000	±3.0	±0.3	±2.0	±0.2
2000	–	2000	±6.0	±0.3	±3.0	±0.15
5000	–	5000	±1.5	±0.3	±7.5	±0.15

8-channel Adjustable Volume Pipettes

Volume Range	Increment	Test Volume	Systematic Error		Random Error	
µL	µL	µL	µL	%	µL	%
0.5-10	0.1	10	±0.15	±1.50	±0.15	±1.50
		5	±0.125	±2.50	±0.125	±2.50
		1	±0.04	±4.00	±0.04	±4.00
5-50	0.5	50	±0.5	±1.00	±0.25	±0.50
		25	±0.375	±1.50	±0.25	±1.00
		5	±0.15	±3.00	±0.1	±2.00
10-100	1	100	±0.8	±0.80	±0.3	±0.30
		50	±0.5	±1.00	±0.4	±0.80
		10	±0.3	±3.00	±0.2	±2.00
50-300	5	300	±2.1	±0.70	±0.75	±0.25
		150	±1.5	±1.00	±0.75	±0.50
		50	±0.75	±1.50	±0.4	±0.80
100-1000	10	1000	±10	±1.00	±0.3	±0.30
		500	±10	±2.00	±2.5	±0.50
		100	±5	±5.00	±1	±1.00

12-channel Adjustable Volume Pipettes

Volume Range	Increment	Test Volume	Systematic Error		Random Error	
µL	µL	µL	µL	%	µL	%
0.5-10	0.1	10	±0.15	±1.50	±0.15	±1.50
		5	±0.125	±2.50	±0.125	±2.50
		1	±0.04	±4.00	±0.04	±4.00
5-50	0.5	50	±0.5	±1.00	±0.25	±0.50
		25	±0.375	±1.50	±0.25	±1.00
		5	±0.15	±3.00	±0.1	±2.00
10-100	1	100	±0.8	±0.80	±0.3	±0.30
		50	±0.5	±1.00	±0.4	±0.80
		10	±0.3	±3.00	±0.2	±2.00
50-300	5	300	±2.1	±0.70	±0.75	±0.25
		150	±1.5	±1.00	±0.75	±0.50
		50	±0.75	±1.50	±0.4	±0.80

specifications are used as guidelines and the user calibration should refer to the industrial standard ISO 8655

dPette+

Multi-functional 8-channel Electronic Pipette

Khosla Scientific multi-functional high performance 8-channel electronic pipette offers productive pipetting with its easy to understand operations. Its uniquely lightweight streamlined design ensures an effortless transfer of multiple samples with an increased throughput and data reproducibility

Function Wheel
Switch different functions pipetting, dispensing and mixing.

Parameter Knob
Set and confirm all parameters.

Motor Driven Digital Control

360° Rotation
Rotatable for convenient handling

Ingenious Curved Ejector
The tips fit optimally without any extra force

- **Easy Operation**
  Intuitive interface for setting functions and parameters.

- **Ergonomic Design**
  Low operation forces for complete work, which is exceptionally fatigue-free.

- **Convenient and Versatile**
  360° pipetting. Double knobs for simple and versatile control. Easy loading tip cones offers smooth and leak free operation.

- **Dual charging modes**
  Use of USB charger or the charging stand to ensure uninterrupted use

Three easy steps to operate Pette+

1

Long press the Parameter Knob for 2 seconds to Start

2

Rotate the knob back and forth quickly to Switch Pipetting, Continuous Dispensing, and other Function Settings

3

Quickly turn the Parameter Knob to unlock it, turn it to adjust the parameter such as volume, press it to pipette, long press it to
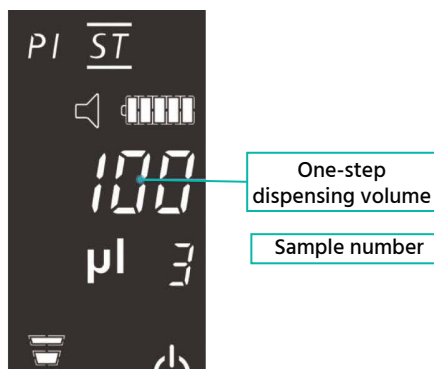
Pipetting function

Parameter Knob press $\longrightarrow$ Pipetting.
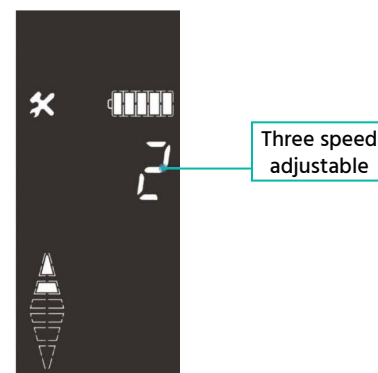
Long press $\longrightarrow$ Mixing
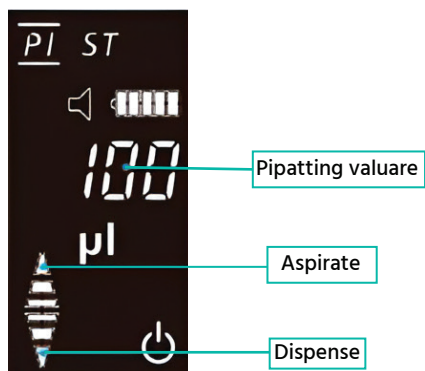
Stepper function

Maximum steps = Pipette nominal volume/One step dispensing volume

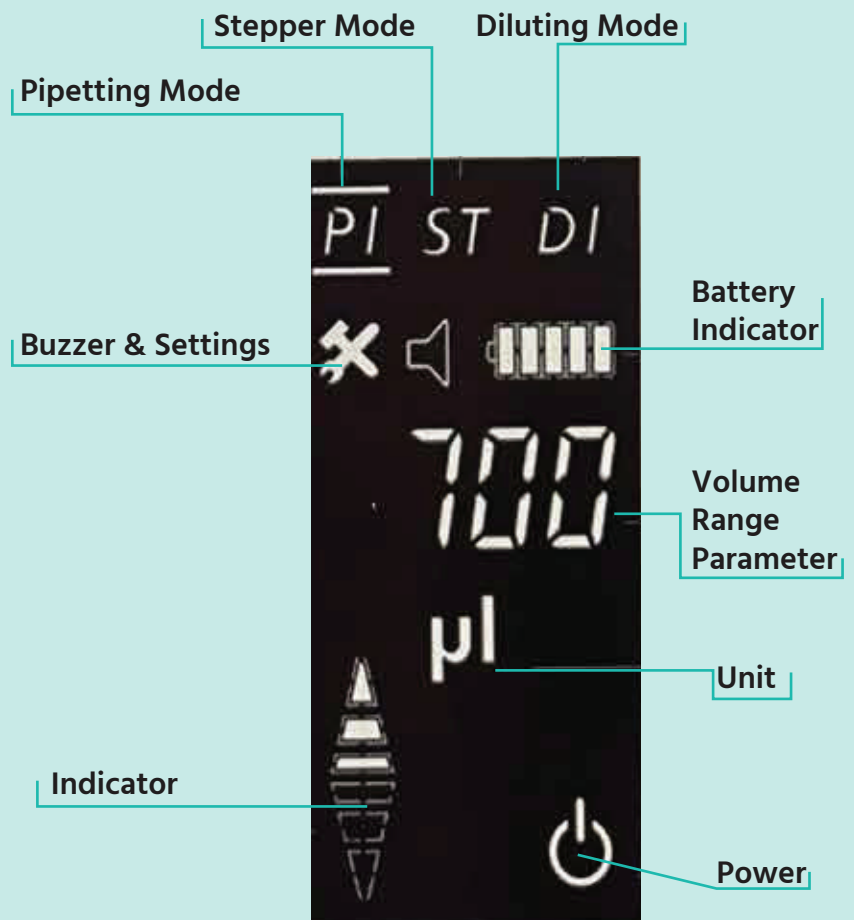## Other function

Pipetting speed adjustment
Key tone ON/OFF

PI ST
100
µl

Pipatting valuare

Aspirate

Dispense

PI ST
100
µl 3

One-step dispensing volume

Sample number

2

Three speed adjustable

Supports dual charging mode

USB Charging

Contact Charging

Support automatic Calibration

Connect it to the computer, with the free software provided for calibration

Channels	Volume Range (µL)	Increment (µL)	Test Volume (µL)	Systematic Error (µL)	Systematic Error (%)	Random Error (µL)	Random Error (%)
8	0.5-10	0.01	10	±0.20	±2.00	±0.10	±1.00
8	0.5-10	0.01	5	±0.20	±4.00	±0.10	±2.00
8	0.5-10	0.01	1	±0.08	±8.00	±0.05	±5.00
8	10-100	0.1	100	±0.80	±0.80	±0.30	±0.30
8	10-100	0.1	50	±0.50	±1.00	±0.40	±0.80
8	10-100	0.1	10	±0.30	±3.00	±0.20	±2.00
8	15-300	1	300	±1.80	±0.60	±0.90	±0.30
8	15-300	1	150	±1.50	±1.00	±0.75	±0.50
8	15-300	1	15	±0.60	±4.00	±0.15	±1.00
8	30-300	1	300	±1.80	±0.60	±0.90	±0.30
8	30-300	1	150	±1.50	±1.00	±0.75	±0.50
8	30-300	1	30	±0.90	±3.00	±0.30	±1.00

dPette is an innovative Electronic Pipette developed by **Khosla Scientific**. It combines manual pipette features, as ergonomics and lightweight, with electronic pipette features, such as labor-saving and high accuracy, offering new pipetting experience to users.

ELECTRONIC PIPETTE

Parameter Knob

Function Wheel

Display

Pipette Tip cone

Stepper Mode

Diluting Mode

Pipetting Mode

Buzzer & Settings

Battery Indicator

PI ST DI

700

µl

Volume Range Parameter

Unit

Indicator

Power

dPette+
Multi functional Electronic Pipette

dPette
Simple Electronic Pipette

Features

- Motor driven digitally control pipette with multifunctions
- Easy Operations and Handling
- Intuitive menu interface settings: functions and operations
- Minimal force for pipetting operation
- High performance ensuring accuracy & repeatability
- 2 buttons for all operational settings
- Adjustable speed for aspiration and dispensing
- Li-ion battery enable longer operation time
- Convenient and Versatile
- Self-calibration applicable

dPette+
For Pipetting, Mixing,Stepper and Dilution

dPette
For Pipetting and Mixing

Specifications

Channels	Volume Range	Increment	Test Volume	Systematic Error		Random Error	
	µL	µL	µL	µL	%	µL	%
1	0.5-10	0.01	10	±0.10	±1.00	±0.05	±0.50
			5	±0.10	±2.00	±0.10	±2.00
			1	±0.05	±5.00	±0.03	±3.00
1	5-50	0.1	50	±0.40	±0.80	±0.15	±0.30
			25	±0.25	±1.00	±0.25	±1.00
			5	±0.20	±4.00	±0.125	±2.50
1	30-300	1	300	±1.80	±0.60	±0.60	±0.20
			100	±1.00	±1.00	±0.40	±0.40
			30	±4.00	±4.00	±0.21	±0.70
1	100-1000	5	1000	±0.60	±0.60	±2.00	±0.20
			500	±5.00	±1.00	±1.00	±0.20
			100	±3.00	±3.00	±0.60	±0.60

specifications are used as guidelines and the user calibration should refer to the industrial standard ISO 8655

Levo Plus
Pipette Filler

Ergonomic fast pipetting solution with accurate speed control

Features

- Intuitive and convenient speed with 6 levels

- Lightweight pipette filler compatible with glass or plastic serological pipettes (0.1-100mL

- Ergonomic design for fatigue free and effective streamlined pipetting

- LCD screen displays battery status and pipetting speed

- Quiet and powerful motor and pump fills 25ml. pipette in less than 5 seconds

- Long-lasting lithium-ion battery

Select pipetting speed by Pressing button

Large LCD display for low battery warning and speed settings

Aspiration button

DLAB Levo Plus

Operating button for motor and gravity dispensing

CE

Specifications

Aspiration Speed	25ml<5s (6 level)
Dispensing Speed	Motor/Gravity
Battery	Replaceable lithium battery
Battery Service Life	4-5 Hours
Charging Time	Glass or Plastic Pipette (0.1-100mL), Pasteur Pipettes
Pipette Types	0.45um Hydrophobic
Filter	0.45um Hydrophobic
Weight	208g

Levo ME
Pipette Filler

Elegant design & reliable performance, with long-life battery

Features

- Enables single-handed operation with minimum effort
- Speed adjustment simply with finger tips
- Individually set aspiration (upper button) and dispensing (lower button) speeds
- Compatible with glass or plastic serological pipettes (0.1-100mL)
- 0.45µm replaceable hydrophobic filter
- High capacity Li-ion battery enables long opperation time

Specifications

Aspiration Speed	25mL<75
Dispensing Speed	Motor/Gravity
Battery	Lithium-ion
Battery Service Life	More than 8 Hours of intermittence Use
Charging Time	2-3 Hours
Pipette Types	Glass or Plastic Pipette (0.1-100mL), Pasteur Pipettes
Filter	0.45µm Hydrophobic
Weight	200g

Levo
Pipette Controller

Compress the suction bellows before attaching the pipette

Button to expel residual liquid when using blow-out pipette

Aspiration and dispensing comfortably achieved with a sensitive lever

3um replaceable Hydrophobic filter

Silicone adapter for 0.1-100mL pipette tip, fully autoclavable

Pipette Controller

- Reduce hands on time
- Can realize the midwey refill.
- Drip by drip drainage, precise control.
- Add the last drop of liquid discharge button
- Compatible with glass or plastic serological pipettes (0.1-100mL)
- 3μm replaceable hydrophobic filter.
- Fast suction, can absorb 25mL liquid in 4 secs.
- Humanized functional design, 118g ultra-light texture.
- Simple and sensitive liquid level regulation.
- Five color designs: blue, green, red, yellow, North Carolina blue, easy to distinguish between different applications

Levo pipetting is easy and effortless:

Manufacturing negative

Squeeze the ball to suck the liquid

Inhale:

The filling rate can be adjusted continuously with the help of the operating rod

Drainage

Press the operating lever to drain the liquid, The unique valve system ensures that the accuracy of the instrument is not affected by the drainage speed.

Blowout function:

When it is necessary to blow out the liquid, when the concave surface reaches the nozzle, press the blow out ball.

Mini Pipette

Mini Pipette is specially customized for fast pipetting with fixed volume and it is the first choice for IVD assay kit accessory. Ultra-light body, precise pipetting, smooth experience to customers. aspiration and dispensing bring an easier pipetting

Standard style

Ergonomic design, compact body, with easy operation;

Easy to press, consistent with standard manual pipettes in operating habits;

Multiple optional volume from 10 to 300ul, marked with different colors;

Compatible with the standard 200ul/300ul tips;

Accurate pipetting and reliable quality;

Support customization;

New style

Color	Light Green	Grey	Dark Green	Yellow	Orange	Gray	Red	Blue	Grayish green	Other
Mini Pipette	10μL	20μL	25μL	30μL	50μL	60μL	75μL	100μL	200μL	OEM
Color	Dark Green	Orange	Red	Light Blue	Blue	Gray	Purple	Other	—	—
Mini Pipette	25	50	75	80	100	200	300	OEM	—	—

Levo E
Pipette Pump

Designed for single-handed operation, Pipette Pump identifies itself with a thumbwheel, allowing precise aspiration or dispensing. The feature of side lever enables complete liquid dispensing, without a droplet remaining.

Features

- Volume capacity 2mL, 5mL, 10mL and 25ml.
- Colour-coded by volume with Blue, yellow, green and red
- Thumb wheel guarantees precise operation
- Resistant to acids and alkalis
- Easy for cleaning and maintenance

StepMate
Stepper

Positive displacement, continuously adjustable, repetitive dispenser

Optimized for smooth dispensing of even the smallest volumes

Volume selection dial

Side upwards to the dispenser tip

Easy to use, safe and durable

stop lever to secure the dispenser tip

Features

- Slim, light and robust
- Wide dispensing volume from 10μL to 5ml.
  Up to 48 dispensing steps in succession
- Equipped with durable dispenser tio stop
- lever
  Fits different sizes of disposable
- polypropylene dispenser tips from 5ml. to 50ml.

Applications

Ideal for any application requiring repetitive dispensing in the clinical, biological, chemical, food and beverage, pharmaceutical industry.

How to select dispensing volume

Find the required dispensing volume in the table.
Use the volume selection dial to set the required volume.
Select and insert a suitable dispenser tip.
Follow the maximum dispensing steps as stated

Precision Dispenser Tip

Khosla Scientific dispenser tips are convenient for viscous or foaming solutions, volatile liquids and applications where repetitive dispensing of volumes in long series is required

The dispenser tips are made from high quality materials without soft lubricants or other additives.

Specifications

Note: The first and last dispensing liquid should be discarded for precision

Dial setting	1	2	3	4	5
Number of steps	48	23	15	11	8

Cat. No.	dispenser tip volume	Dispensing volume per step					Systematic Error	Random Error	Description
	µL	µL					%	%	
17900032	0.50	10	20	30	40	50	±10.8	≤ 0.7	0.5ml, piston PE-HD, cylinder PP, 1 packing, 5 pcs/packing
17900032	1.25	25	50	75	100	125	±0.8	≤ 0.5	1.25ml, piston PE-HD, cylinder PP, 1 packing, 5 pcs/packing
17900032	2.50	50	100	150	200	250	±0.8	≤ 0.4	2.5ml, piston PE-HD, cyänder PP, 1 packing, 5 pcs/packing
17900032	5.00	100	200	300	400	500	±0.4	≤ 0.3	5m, piston PE-HD, cylinder PP, 1 packing, 5 pcs/packing
17900032	12:50	250	500	750	1000	1250	±0.3	≤ 0.3	12.5ml, piston PE-HD, cylinder PP, 1 packing, 5 pcs/packing
17900032	25.00	500	1000	1500	2000	2500	±0.2	≤ 0.3	25ml., piston PF-HD, cylinder PP, 1 packing, 2pcs/packing with 1 pc adapte
17900032	50.00	1000	2000	3000	4000	5000	±0.2	≤ 0.2	50mL, piston PE HD, cylinder PP, 1 packing, 2pcs/packing with 1 pc adapter

dTrite
Electronic Burette

Digital Burette-dTrite provides accurate, precise and convenient bottle-top titration with optimum operator safety. It combines both magnetic stirrer and Burette functions, making it easier for the user to achieve reproducible results in the field of analytical chemistry, food industry, water analysis etc

Features

- High quality motor with excellent precision and accuracy
- Electronic control provides fatigue-free operation
- Remote control panel prevents manual disturbance during operation
- Built-in magnetic stirrer for a complete and easy operation
- Large LCD display parameters

Specifications

Volume Range	0.01mL-99.99mL, Max piston lift is 10ml, resolution is 10pL
Volume Accuracy	R-0.2% CV-0.07%
Speed	16 Levels
Operating Temperature Range	10°C-30°C
Quality Control	DIN EN ISO 8655
Control Type	External control, including the stirrer and the burette program

Notice: R: Relative error, CV: coefficient of variation.

dFlow

Electronic Bottle-Top Dispenser

Error-free, easy to use, motorized solution

Features

- Motor controlled digital, fatigue free operation
- High quality stepper motor provides smooth and accurate dispensing
- Adjustable aspiration and dispensing speed
- Reagent recovery feature minimizes waste
- TFT display module for simple volume selection and control
- Two operation modes.continuous dispenser or stepper

Applications

Ideal for safe, accurate and precise dispensing of bases, saline solutions, acids and some organic solvents

Specifications

Volume Range	0.01mL-99.99mL, Max piston lift is 10ml, resolution is 10pL
Volume Accuracy	R-0.2% CV-0.07%
Speed	16 Levels
Operating Temperature Range	10°C-30°C
Quality Control	DIN EN ISO 8655
Control Type	External control, including the stirrer and the burette program

Notice: R: Relative error, CV: coefficient of variation.

DispensMate-Pro
Premium Bottle-Top Dispenser

Designed for safe, sturdy & stable dispensing directly from the bottle in the range of volumes up to 100 ml.

- Fast, precise, and reproducible volume locking mechanism on a clear scale

- Reagent recovery function reduces reagent waste and prevents dripping when not in use

- 6 adapters to comfortably fit most laboratory reagent bottles

- Adjustable aspirating tube for different bottle heights

Features

- High chemical compatibility with use of inert materials and glass/PTFE piston

- Easy to disassemble and clean for periodic maintenance

- Fully autoclavable at 121°C to ensure sterility

- Available in 5 dispensing volume ranges from 0.5mL to 100mL

- Supplied with most popular adapters (540, GL32, GL38, GL25, GL28)

Specifications

Cat, Ho	Volume Range	Gramation	Systematic Error		Bandom Error	
	ml	ml	µL	%	µL	%
7032212001	0.5-5	0.1	±25	±0.5	±10	±0.2
7032212002	10-10	0.2	±50	±0.5	±20	±0.2
7032212003	2.5-25	0.5	±125	±0.5	±50	±0.2
7032111004	5.0-50	1.0	±250	±0.5	±100	±0.2
7032111005	10-100	20	±500	±0.5	±200	±0.2

Cat. No	7032212001	7032212001	7032212001	7032212001	7032212001	7032212001	7032212001	7032212001	7032212001	7032212001	7032212001
Accessories	GLIZ Adapter, 43/33mm	GLBB, Adapter, 45/38mm	G125 Adapter, 32/25/mm	GL28, Adapter, 32/28mm	$40, Adapter, 45/40mm	Reagent Bottle (Brown, 1l)	Filling tube combination	Discharge tube (m) adapter 25ml 50ml, 100ml)	Discharge tube (m) adapter 5ml, 10ml)	Discharge tube Combination adapter 25ml 50ml, 100ml)	Discharge tube Combination adapter 25ml 50ml, 100ml)

DispensMate
Bottle-Top Dispenser

For safer and more efficient way to handle chemicals

Features

- Excellent chemical resistance, Inert and high strength components made of PTFE, FEP, BSG, PP

- Fully autoclavable at 121°C (only liquid accessible parts)

- Available in 4 dispensing volume ranges from 0.5mL. to 50mL

- Easy to disassemble and clean for periodic maintenance

- Supplied with most popular adapters (S40, GL32, GL38, GL25, GL28)

Applications

bottle-top dispensers offer high precision and accuracy with ISO 8655 conformed calibration for use in areas such as pharmacology, biotechnology, healthcare, food and beverage, chemistry, environmental monitoring and academy&research.

- Easy-to-use volume adjustment

- Smooth piston design provides effortless dispensing experience

- Easy-to-use closure cap protects user from exposure to reagent

- Adapters to comfortably fit most laboratory reagent bottles

Specifications

Cat, Ho	Volume Range	Gramation	Systematic Error		Bandom Error	
	ml	ml	µL	%	µL	%
7032212001	0.5-5	0.1	±25	±0.5	±10	±0.2
7032212002	10-10	0.2	±50	±0.5	±20	±0.2
7032212003	2.5-25	0.5	±125	±0.5	±50	±0.2
7032111004	5.0-50	1.0	±250	±0.5	±100	±0.2

Cat. No	17400131	17400132	17400133	17400134	17400135	17400037	17400021	17100073	17100553	17100696	17100767
Accessories	GL32, Adapter, 45/32mm	GL3R, Adapter, 45/38mm	GL25, Adapter, 32/25mm	GL28, Adapter, 32/28mm	540, Adapter, 45/40mm	Reagent Bottle Brown, ILI	Filing tube (m)	Discharge tube (m)	GL45 adapter. 45mm	Discharge tabe combination (adapter 25mL. 50mL	Discharge tube combination fadapter 5mL. 10mL)

SafeVac

Vacuum-Controlled Aspiration System

Safe and efficient system for labs handling critical
or biological liquid waste

Features

- Compact, user-friendly design
- Level detection system prevents bottle overfill
- Control knob for vacuum setting
- The parts in contact with liquids are autoclavable
- Easy to disassemble and clean
- Ideal tool to avoid lab air contamination and protect personnel safety
- Adjustable vacuum level with indicator light is designed for various applications

Applications

For laboratory waste recovery and separation of liquid and solid. It can be widely used in cell culture, DNA extraction, microplate waste removal, and any other liquid separation or recovery. Best replacement for the common vacuum pump, for all kinds of waste liquid recovery, especially biological, chemical and radioactive liquids.

Self-closing connectors to avoid escape of drops or aerosols from disconnected bottle

Stand for transferring the bottle securely and holding the hand operator

vacuum level indicator light

Sensitive level sensor to prevent liquid overflow

Specifications

Wide range of adapters to fit well with different tubes, microplate and disk plate, all of which can be fully autoclaved (At 121°C 1 bar for 20 minutes. After autoclaving the equipment must be cooled down before use).

Vacuum range	0-600mbar
Aspirating speed	15L/min (air)
Flow rate [liquid)	17mL/s
Bottle	4L
Autoclave component	Tube waste bottle operation handle;
Noise level	55dB
Input voltage	100-240VAC, 50/60Hz
Dimension WxDxH)	180x240x450mm
Weigh	3kg

A	8-channel tip detrusion adapter 200µl tip
B	8 channel needle 01.5mm
C	Single needle 02.5mm, 40mm
D	Single needle 02.5mm, 120mm
E	Single needle 01.5mm, 40mm
F	Single needle 01.5mm, 120mm
G	tiptip detrusion adapter 200µl. tip
H	tip detrusion adapter 1mL tip
I	SafeVac Handle bracket

EcoVac
Economical Vacuum Aspirator

Small, compact and easy to use system for the convenient handling of liquid waste disposal.

Easy to switch between manual aspiration and two-level adjustable continuous aspiration:
Level 1: Standard continuous aspiration mode
Level 2: Fast continuous aspiration mode enhanced

Hanging handles on both sides

Vacuum level indicator light

Features

- Small and compact to fit in the cabinet, on the benchtop or even beneath the bench

- Easy to switch between manual aspiration and continuous aspiration mode, reducing RSI (Repetitive Strain Injury) and improving efficiency

- Collection bottle outlet with hydrophobic filter prevents aerosol and liquid contamination.

- Brushless motor offers low noise and long life

- Different adapters are available to fit a multitude of laboratory supplies

- The parts in contact with liquids can be autoclaved

- Adjustable vacuum level with indicator light is designed for various applications

Specifications

Vacuum range	0-500mber
Max. Flow	15L/min(air
Max. aspiration speed	17mL/s(Liquid)
Bottle	2L standard, IL optional with adaptor
Motor type	Brushless Motor
Input voltage	100-220VAC, 50/60Hz
Dimension (WXDXH)	180×240×340 mm
Weight	2.8kg

Wide range of applications

EcoVac is suitable for any application where the single liquid suction volume is less than 21. The applicability includes use of various common consumables, which can be widely used in the collection and removal of liquids in experiments of microorganisms, molecules, proteins, cells, etc., and other applications such as RNA/DNA extraction, Western blots and ELISA

- Aspiration of supernatants after centrifugation
- Aspiration of eluent
- Removal of supernatants during nucleic acid extraction
- Removal of culture media
- Removal of wash solutions from immuno-assay well-plate
- Removal of buffers of Western blot strips
- Removal of excess liquid from slides and Petri dishes
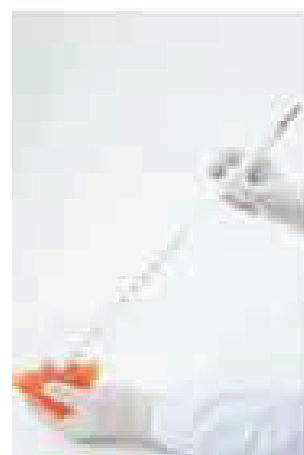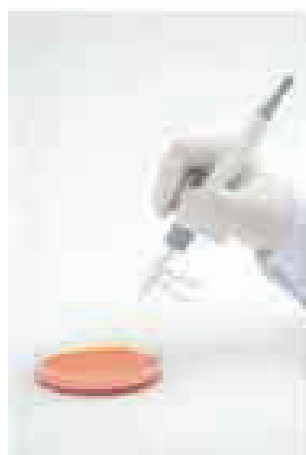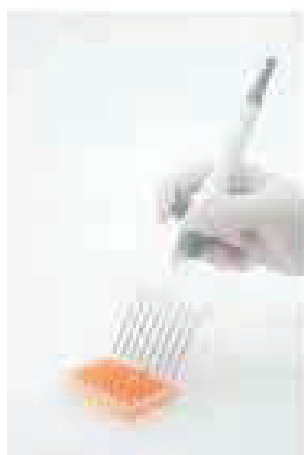
A	8-channel tip detrusion adapter 200µL tip
B	8 channel needle 01.5mm
C	Single needle 22.5mm, 40mm
D	Single needle 02.5mm, 120mm
E	Single needle #1.5mm, 40mm
F	Single needle 01.5mm, 120mm
G	tip detrusion adapter 200uL tip
H	tip detrusion adapter Lml. tip
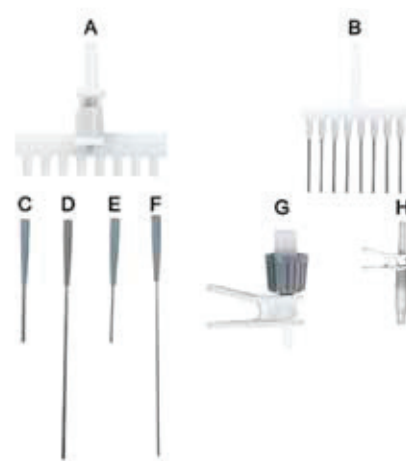
Smart VAC
Bench top compact vacuum aspirator

The 11 bench-top compact vacuum aspirator with replaceable battery is designed for flexible handling of small amounts of liquids, with one key control, easy operation and wide application.

Features

- **Compact and portable, small foot print**
  Suitable for any bench top space including laminar flow cabinet, the collection bottle is independent of the vacuum source and power supply, and can be placed at any position.

- **One-key start to work with built-in rechargeable battery independent of exterior power supply**
  Continuous work for 5 hrs after fully charged

- **Fast, safe and reliable**
  Aspiration speed up to 1.6 L/min; hydrophobic filters against contamination.

- **Dual function of aspiration and filtration**
  1L collection bottle in standard package, with 500ml. collection bottle (autoclavable) and filtration flask optional.

Specifications

Vacuum Range	0-600mbar
Aspiration speed	1.6 L/min(air)
Bottle	IL collection bottle in Standard package, 500ml, bottle with an adaptor, or filtration flask optional
Adapter	1mL tip detrusion adapter, 8-channel tip detrusion adapter
Motor type	Brushless DC motor/Brush motor
Power	DC 12V, 1.0A
Battery	Rechargeable lithium battery 2000mA/h
Noise Level	53dB
Dimension (WxDxH)	127 x 144 x 244mm
Weigh	0.5kg

- Removal of supernatant from pellets,
- Removal of culture media
- Quick removal of spillage from the bench top:
- Vacuum Filtration

Digital Dry Bath

The microprocessor controlled Digital Dry Baths offer control over both temperature and time, eliminating the
need for an external thermometer or timer.
Used to thaw, boil, incubate and warm samples for different applications in molecular biology, assay preparation,tissue/cell culture, biochemistry, genetics, histology, clinical, environmental and industrial laboratories.

Thermal Control

Dry bath provides precise temperature for various experiments. Thermo mix also has mixing function, and widely used in various fields such as molecular biology and cell biology, including gene synthesis, gene purification, gene cloning, gene expression, protein expression analysis, enzyme reaction, bacterial growth and so on.

List of **Khosla** Models

Model	Image	Function	Temp. setting range	Mixing Speed	Blocks	Page
HB8b-S		Heating	25°C,30°C,37°C, 45°C,60°C		5mL×30+10mL×8	p.34
HB12b-S/S0		Heating	25°C-120°C	-	0.2mlx54 0.5mlx40 1.5/2mlx40 5/15mLx25 5ml blood collection tube x45 (0.2ml+0.5ml+1.5/2ml)×18 0.2mLX96 PCR Microplate ELISA Microplate Bead/Water bath	p.34
HB10b-S1/S2		Heating	25°C-105°C	-	0.2mlx30 0.5mLx20 1.5mlx20 2mlx20 5ml×12 15mL×12 Sümix4 Bead/Water bath	p.34
HB15b-S1/S2		Heating	25°C-150°C			p.34
H100-pro		Heating	25°C-100°C			p.34
HC110-pro		Heating/ Cooling	-5°C-110°C		0.5mlx24 1.5mlx24 2mlx24 5mLx (Round/Cone Bottom) 15mlx8 50mlx4 0.2mLX96 PCR Microplate ELISA Microplate	
HCM110-PRO		Heating & Cooling & Mixing	0°C-100°C	200-1500rpm		
HM100-PRO		Heating & Mixing	15°C-100°C	200-1500rpm		

Dry Bath Series

HB105-S1/S2/HB150-S1/S2/HB120-S/SC/HB60-S/H100-Pro

Small footprint. Rapid & accurate temperature control. Overheating protection. Accommodates various types of tube holders to meet every lab need.

HB105-51

HB105-S2

HB105-S1

HB105-S2

HB120-S/SC

HB60-S

MiniHCL100

H100-Pro

Features

- Accurate and uniform temperature control
- Digital control and display of time and temperature
- Wide range of temperature control for different applications
- Monitor temperature in real-time, and set timer
- Wide range of heating blocks compatible with most popular lab tubes
- Overheating protection ensures sample and user safety
- Equipped with a lid for heat preservation, and preventing pollution
- User-friendly setting knob for easy and simple operation

HB105-S1 HB105-S2 HB150-S1 HB150-S2

Durable, reliable safe and convenient to use

Features

- Single and double heat block modules available
- Highest temperature up to 150 °C
- Buzzer alert when the time is up
- External temperature sensor PT1000

HB120-S/SC/HB60-S

Features

- Low profile - space saving design
- The max heating temperature is 120°C
- (HB120-S/HB120-SC), and the timer function support available
- Discrete heating temperature levels: 25 °C, 30 °C, 37 °C, 45 °C, 60 °C (HB60-S)
- 5mL X 30+10mL x8 dual purpose heating block
- Temperature calibration function inbuilt for users (HB120-SC)

H100-Pro

Digitally accurate with exceptional temperature uniformity

Applications

Suitable for clinical laboratories, for sample preparation, Enzyme-substrate reactions, biochemistry tests, serum coagulation tests and many other.

Feature

- Customizable user setting program with up to 6 sequential steps
- Temperature calibration function inbuilt for users
- Magnetic heat block mounting eliminating need of any tools
- Interchangeable sample blocks designed to provide versatility, easy cleaning and disinfecting
- Accurate temperature control of each heating block with lid to minimize the heat loss

Specifications	H100-Pro	H B150-S1 HB150-52	HB120-S	HB60-S
Temperature range[T]	Room temp+5-100	Room temp+5-105	Room temp+5-150	Room temp+5-120
Temperature Setting range [T]	15-100	25-105	25-150	25-120
Temperature control accuracy[T]	± 0.5	25-90: ±0.3 90-105: ±0.6	25-90: ±0.3 90-150: -±0.6	±0.5
Temperature uniformity@ 37°C[T]	± 0.5	±0.2	±0.2	±0.5
Power [W]	200	HB105-S1:100	H8150-S2:200	160
Time setting range	Omin-99h59min	Omin-99h59min	0min-99h59m in	0min-99h59min
External sensor	-	Yes	Yes	
Display	TFT	LED	LED	LED
Voltage, Frequency	110/220V,50/60HZ	110/220V,50/60H2	110/220V,50/60H	110/220V,50/601-12
External Dimension [WxDxH]	200x235X120	290x210X120	290x210X120	175X290X85
Weight (kg)	7-3	3.2	3.2	3
Operating temperature [°C]	10-40	10-40	10-40	10-40
Operating humidity [% RH]	<80	<80	<80	<8O
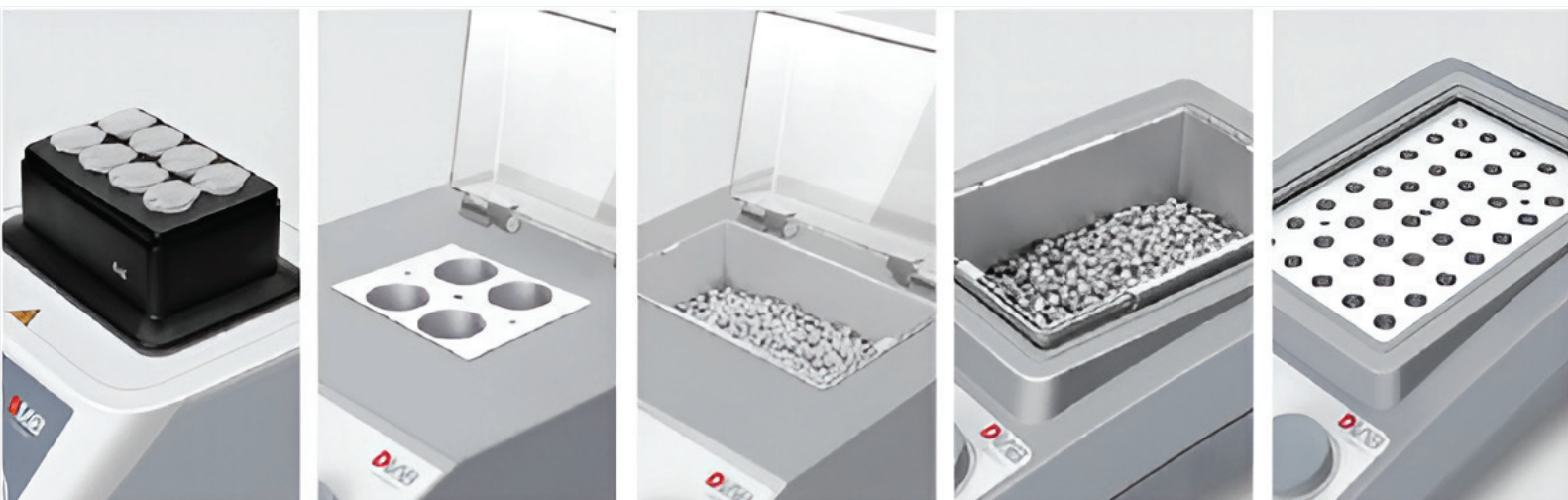
Mini Dry Bath

MiniHCL100/MiniHC100/MiniH100

Portable and option to power by automobile power adapter

Features

- Mini, lightweight, safe with LCD display
- Digital control over both temperature and time
- Built-in user recalibration function guaran-
- tees long term temperature accuracy
- Overheating protection
- Optional cooling function
- Interchangeable blocks for a wide variety
- of test tube sizes
- Mini HCL 100 with hot lid to prevent water
- condensing on the tube cap

Applications

Useful for rapid and uniform heating of biological samples in applications like preservation, denaturation of nucleic acids and proteins, and many other applications

Specifications	Mini HCL100	Mini HC100	Mini H100
Display	LCD	LCD	LCD
Temperature Setting Range (°C)	0-100	0-100	25-100
Temperature Range (°C)	Room temperature - 23-100	Room temperature - 23-100	Room temperature - 5-100
Temperature Control Accuracy (°C)	±0.5	±0.5	±0.5
Temperature Display Accuracy (°C)	0.1	0.1	0.1

Temperature Display Accuracy (°C)	0.1	0.1	0.1
Minimum Time Taken for Heating (25°C to 100°C)	≤20 min	≤20 min	≤20 min
Minimum Time for Cooling (20°C to 0°C)	≤25 min	≤25 min	—
Max. Heating Rate	8°C/min	8°C/min	6.5°C/min
Max. Cooling Rate	3°C/min	3°C/min	—
Time Setting Range	0-999 min / 0-999 sec	0-999 min / 0-999 sec	0-999 min / 0-999 sec
Program Memory	9 (2 steps for each)	9 (2 steps for each)	9 (2 steps for each)
Temperature Self-Recalibration	Support	Support	Support
Error Code Display	Support	Support	Support
Dimension (W×D×H) mm	110×162×140	110×162×140	110×162×140
Total Weight (kg)	≤1	≤1	≤1
Voltage, Frequency	100-240V, 50/60Hz or DC 12V	100-240V, 50/60Hz or DC 12V	100-240V, 50/60Hz or DC 12V
Power (W)	60	60	60
Operating Temperature (°C)	+10-40	+10-40	+10-40
Operating Humidity (% RH)	≤80	≤80	≤80

Thermo Mix

HCM100-Pro / HM100-Pro

Thermo Mix series integrates precise and efficient heating & cooling and mixing function.
HCM100-Pro: Heating / Cooling / Mixing
HCM100-Pro combines excellent mixing and accurate temperature control, to make your work efficiently and productively.
[Insert Image of Thermo Mix Device Here]

Module Compatibatibility
Flexible adapter selection, compatible with various tubes

Magnet adhesion techualogy
Quick interchange of blocks with magnet adhesion technology without any tool

Intuitive display
Flexible adapter selection, compatible with various tubes

Program keys
Freely Programmable Fast and Simple access Temperature and time Parameters save up to 9 user defined programs

Block self-recognition
The system can automatically identify the heating module to ensure the smooth completion of the experiment

add-ons
Three ponit temperatore calibration for precise temperature control

Temperature protection
Block equipped with a lid for heat preservation

Features

✓ Fully programmable

✓ Precise temperature control for heating and cooling

✓ Real-time display of speed, temperature, and time

✓ Excellent mixing (200-1500 rpm)

✓ Quick interchange of blocks without tools and automatic block recognition

✓ Compatible with most popular tubes

✓ Block equipped with a lid for heat preservation

✓ Temperature self-calibration

Applications

Precise and efficient heating/cooling and mixing is applicable for many applications such as:

✓ Gene synthesis

✓ Gene purification

✓ Gene and protein denaturation

Thermo Control
HC110-Pro
heating and cooling with digital display

Features

- Customizable user setting program with up to 6 sequential steps
- Temperature calibration function inbuilt for users
- Magnetic heat block mounting
- eliminating need of any tools
- Interchangeable sample blocks designed to provide versatility, easy cleaning and disinfecting
- Accurate temperature control of each heating block with lid to minimize the heat loss

As low as -5°C

Specifications	HCM100-Pro	HM100-Pro	HC110-Pro
Functions	Heating, Cooling & Mixing	Heating & Mixing	Heating & Cooling
Temperature range [°C]	Below room temp 15-100	Room temp 15-100	Below room temp 25-110
Temperature Setting range [°C]	0-100	15-100	5-110
Temperature control accuracy@20-45 [°C]	±0.5	±0.5	±0.5
Temperature uniformity@20-45 [°C]	±0.5	±0.5	±0.5
Power [W]	200	200	200
Time setting range	0min-99h30min	0min-99h30min	0min-99h30min
Max Heating speed	5.5°C/min	5.5°C/min	5.5°C/min
Max Cooling speed	5°C/min (100°C-room temp) 0.5°C/min (Below room temp)		2.5°C/min (100°C-room temp) 0.5°C/min (Below room temp)
Mixing speed [rpm]	200-1500	200-1500	
Mixing orbit [mm]	3	3	
Display	TFT	TFT	TFT
Program	9	9	9
Overheating protection [°C]	150	150	150
Voltage, Frequency	110/220V, 50/60Hz	110/220V, 50/60Hz	110/220V, 50/60Hz
Dimension [mm]	200x235x120	200x235x120	200x235x120
Weight [kg]	7.3	7.3	7.3
Operating temperature [°C]	10-40	10-40	10-40
Operating humidity [% RH]	<80	<80	<80

Blocks

H100-Pro/HC110-Pro/HCM100-Pro/HM100-Pro

Cat. No	Magnetic	18900401	18900402	18900403	18900404	18900405
	Mechanical fixation	18900344	18900343	18900345	18900637	18900638
Block types						
Capacity		0.5ml. x24	1.5mLx24	2mlx24	5mL X8 round battom	5mLX8 cone boltore
Speed		1500rpm	1500rpm	1500rpm	1500rpm	1500rpm
Diameter × depth		5.1×26mm	10.9×30.8mm	10.9×30.8mm	13.6×42mm	17x52.5mm

Cat. No	Magnetic	18900874	18900406	18900407	18900420	18900423
	Mechanical fixation	-	-	-	18900349	18900350
Block types						
Capacity		15mL×24 Chromatography Vial	15ml.x8	50mlx4	0.2mLx8 PCR strips or 0.2mlX96 PCR microplate	ELISA microplate
Speed		1500rpm	800rpm	600rpm	1500rpm	1500rpm
Diameter × depth		12×20.5mm	10.9×30.8mm	29.6 x 80mm	5.7×13.2mm	127×85mm

HB120-S/HB120-SC (Standard:151×95×50mm, Thin:151×95×36.5mm)

Cat. No	Standard	18900218	18900119	18900253	18500220	18900818	18900818
	Thin	18900274	18900275	18900276	18900277	-	-
Block types							
Capacity		0.2m×54	0.5mLx40	1.5mlx40	2m1.x40	2mL×60 Ampoules tubes	5/15mL×29
Diameterx depth		64x15mm	8.2×25.4mm	LLX34.7mm	11×34.7mm	12×37mm	17x45mm
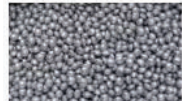
Cat. No	Magnetic	18900222	15900224	16900223	18900746	18900546	-
	Thin	-	18900278	18900279	-	-	18900574
Block types							
Capacity		50mL x8	0.2mL+0.5mL +1.5/2ml 18 +18+16	microplate	Deep well Plate	5ml blood collection tubex45	0.2ml x 8 PCR strips or 0.2ml x 96 PCR micoplate
Diameter × depth		29.8x48mm	Each capacity	127×85mm	137x86.5×42mm	13.5x48mm	5.7x33.2

Capacity	Cat. No. 18900523	Capacity	Cat. No. 18900523
Two-in-ane block, iced bath/water bath Adapt to 52		Aluminum beads	

HB105-S1/HB105-S2/HB150-S1/HB150-S2

Cat. No	18900459	18900460	18900461	18900462	18900463
Block types					
Capacity	0.2mlx30	0.5mLx20	1.5mL×20	2mL×20	5mlx12
Diameterx depth	6,4 x 15mm	7.85x26.4mm	11x34.7mm	31x34.7mm	16.6×46mm

Cat. No	18900464	18900465	18900522	18900523	18900520
Block types					
Capacity	15ml×12	50raLx4	Dual purpose block .bead bath/water bath Adapt to 51	Qual purpose block bead bath/water bath Adapt to S	Aluminum beads
Diameterx depth	16.6×73mm	19.2x/3.5mm	95×76×56mm	151×95×62mm	-

Dini HCL100/Mini HC100/Mini H100

Cat. No	18900414	18900415	16900416	18900428
Block types				
Capacity	0.2mlx40	0.5mlx24	1.5mL×15	20L×15
Diameterx depth	6.4X20 mm	8.2×28.4mm	11.2×31mm	11×31mm

Cat. No		18900464	18900465	18900522
Block types				
Capacity		5mLx6	15mlx4	50ml×2
Diameterx depth		17x31mm	16.4×45mm	29x45mm

TC1000-G
Thermal Cycler Gradient

TC1000-S
Thermal Cycler Gradient

Elegant design, excellent precision and accurate, reproducible results and precise PCR optimization. High performance with advanced thermal gradient technology, state-of-the-art electronics, precision peltier device and flexible user interface. The TC1000G/S is an essential laboratory instrument for molecular biology with applications such as sequencing, gene cloning, gene expression, mutagenesis, and it is also used in areas such as drug discovery, agricul-
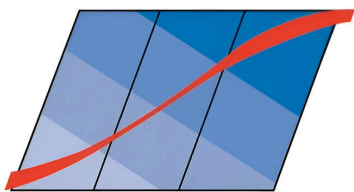
Excellent temperature uniformity

Temperature gradient

Features

• High performance Peltier and independent heating segments improving temperature control.

• Auxiliary heating mechanism diminishes the 'edge effect' and enhances temperature uniformity.

• Wide touchdown PCR temperature range (-9.9°C~+9.9°C) and Long PCR time range (9min 59s).

• Gradient temperature setting optimizes temperature easily in a single run.

• Color touch screen with user-friendly interface helps to edit programs easily.

More features

- Wide options of consumables: common PCR tubes, 8-well PCR strips and 96-well PCR plates can be used
- File customization, multi-file storage Power failure protection function, automatic program recovery
- Hot lid auto-off function: If module temperature is lower than 30 °C, the hot lid function will automatically turn off
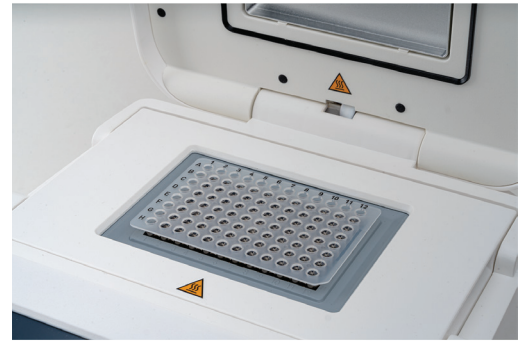
LCD touch panel

Excellent temperature accuracy

Technical Parameters	TC1000-G	TC1000-S
Sample Capacity	96 × 0.2mL PCR tube 12 × 0.2mL PCR–8 strips 0.2mL 96 PCR Microplate	96 × 0.2mL PCR tube 12 × 0.2mL PCR–8 strips 0.2mL 96 PCR Microplate
Heating Temperature Range /°C	4~105	4~105
Lid Temperature Range /°C	30~110	30~110
Temperature Display Accuracy /°C	± 0.1	± 0.1
Temperature Display Accuracy@55	± 0.3	± 0.3
Temperature uniformity@55°C	<0.3	<0.3
Max. Heating /Cooling Rate	5°C/Sec	5°C/Sec

Gradient Temperature Setting Range /°C	30~99°C	–
Gradient Range /°C	1~42°C	–
Adapter block material	Aluminum	Aluminum
Display	7" LCD 800x480	7" LCD 800x480
Input	Touch panel	Touch panel
User defined file system	Max. 30 segments 99 cycles max.16 folder and16 files each folder	Max. 30 segments 99 cycles max.16 folder and16 files each folder
Power off protection	Yes	Yes
Voltage,Frequency	100~120V/200~240V, 50/60Hz	100~120V/200~240V, 50/60Hz
Dimension[WxDxH] Weight	280x370x250 mm 11kg	280x370x250 mm 11kg

Stirring & Heating

Magnetic hotplate stirrers are used for low viscosity liquids or solid mixing, chemical synthesis, physical and chemical analysis, bio-pharmaceuticals etc. DLAB provides different series, heating range covers from 120°C-550°C:

Magnetic Hotplate Stirrers:

Series	Model	Image	Stirring Position	Display	Work plate Size	Max Heating Temp	Max. stirring quantityin.01	Page
550 series	MS7-H550-Pro		1	LCD	184x184mm	550°C	20L	p.51
	MST-H550-S		1	LCD	184x184mm	550°C	10L	p.51
500series	MS10-H500-Pro		1	LCD	254X254mm	500°C	30L	p.50
340 series	MS-H-ProM		1	LCD	0135mm	340°C	20L	p.53
	MS-H-Pro		1	LCD	0135mm	340°C	20L	p.55
	MS-H-Pro		1	LCD	0135mm	340°C	20L	p.55
	MS H-Pro		1	LCD	0135mm	340°C	20L	p.55
	MS-H-S		1	Scale	0135mm	340°C	20L	p.55
	MS-H340-54		4	LCD	0135mm	340°C	10L x 4	p.61
380 sertos	M5-H300-Pro		1	LCD	140x140mm	380°C	5L	p.56
209 sartos	MS-1280-9100		1	LCD	100mLBeaker	280°C	100ml	p.58
	MS-H250-8230		1	LCD	25mLBeaker	280°C	250ml	p.58

Magnetic Hotplate Stirrers:

Series	Model	Image	Stirring Position	Display	Work plate Size	Max Heating Temp	Max. stirring quantityin.01	Page
280 series	MS-H280-8500		1	LCD	500mLBeaker	280°C	20L	p.58
	MS-H280-81000		1	LCD	1000mLBeaker	280°C	10L	p.58
	5-H280-F100		1	LCD	100mLFlask	280°C	30L	p.58
	MS-H280-F250		1	LCD	200mLFlask	280°C	20L	p.58
	MS-H280-F500		1	LCD	500mLFlask	280°C	20L	p.58
	MS-H280-41000		1	LCD	1000mLFlask	280°C	20L	p.58
	MS-1280-Pro		1	LCD	0135mm	280°C	20L	p.56
	MS-H280-54		4	LCD	0134mm	280°C	20L	p.62
	MS-H280-56		6	LCD	0134mm	280°C	10L x 4	p.62
120 series	MS-H-510		10	Scale	180x450mm	120°C	5L	p.65

Magnetic Hotplate Stirrers:

Image	Model	Stirring Position	Display	Work plate Size	Max. stirring quantityin.01	Page
	MS7-S	1	Scale	184x184mm	10L	p.69
	MSG-Pro	1	LCD	140x140mm	5L	p.69
	MS-S	1	Scale	0135mm	20L	p.69
	MS-PA	1	LCD	0135mm	3L	p.70
	MS-PB	1	Scale	0135mm	3L	p.70
	EcoStir	1	Scale	120x115mm	1.5L	p.74
		1	Scale	0120mm	1.5L	p.73
	FlatSpin	1	-	090mm	0.8L	p.73
	MS-M-s4	4	LCD	0134	3LX4	p.63
	MS-M-s6	4	LCD	0134	3LX6	p.63
	MS-T-s15	15	LCD	460x304mm	0.4LX15	p.71
	MS-M-s10	10	Scale	180x450mm	0.4LX10	p.72

Hotplate:

Image	Model	Stirring Position	Display	Work plate Size	Max. stirring quantityin.01	Page
	HP500-Pro	LED	LCD	254x254mm	500	p.66
	HP550-5	1	LED	184x184mm	550	p.67
	P300-Fro	1	LCD	140x140ma	380	p.68

Magnetic Hotplate Stirrers:

Notice. MS-H380-Pro, HP380-Pro & MS-H280-Pro are not available for chemical fields.

Fields		MS10-H500-Pro MS7-8550-Pra/ MS7-8550-S/ HP500-pro HP550-S	MS-H-Pro/ MS-W-Pro/ MS-H-Pro/ MS-H-S/ MS-8340-S	MS-H380-Pro/ HP380-Pro	MS-H280-Pro	MS-H-$10	Magnetic Stirrers Inone heating models)
Pharmaceutical	Chemical Synthesis	■	■				
	Biochemical Drugs	■	■				
	Medicine Testing	■	■				
	Drug Formulation	■	■				
Chemical Industre	Petrochemical Industry	■	■				
	Inorganic Chemical Susthexis	■	■				
	Organic Chemical Synthesis	■	■				
	Daily Use Chemical industry	■	■				
	Painting/ Rubber/ Plastic	■	■				
	Fertilizer/ Pesticide	■	■				
Environmetal	Water Quality Analysis				■	■	■
	Pesticide Residue Testing				■	■	■
	Analysis Chemical Pollution				■	■	■
Research & Education	Basic Chernical Experiments	■	■		■	■	■
	Material Analysis			■	■	■	■
	Liquid Mising			■	■	■	■
	Chemica Synthesis	■	■				
Food Industry	Food Additive	■	■	■	■		
	Baby Products	■	■	■	■		
	Nutrition Analysis	■	■	■	■		
Bioligical Engineering	Cell Culture						
	Biological Reagents		■	■	■	■	
	Biochemistry		■	■	■	■	

Homogenizer series

Fields	Model	Speed Range	speed levels	Working valame	Mar, viscosity	Page
	D160	8000 32000rpm	10stage	0.1-250mL	5000Pas	P.79
	D500	10000-30000rpm	Eistage	10-40000ml	10000Pas	P.80

Overhead stirrers are used for middle or high viscosity samples mixing, widely used in chemical synthesis, pharmaceutical synthesis, physical and chemical analysis, petrochemical industries etc

Overhead stirrers:

Image	Models	Max. Stirring Quantity H^2o	Constant Spond	Display	Speed Range	Max Tergas	Viscosity Max	Page
	OS20 Pro	20L	YES	LCD	50-2200rpm	40N-cm	10000mPa˙s	P.83
	0570-5	20L	NO	LED	50 2200rpm	40N-cm	10000mPa˙s	P.84
	OS40-Pro	40L	YES	LCD	50-2200rpm	60N-cm	50000mPa˙s	P.83
	OS40-5	40L	NO	LED	50-2200rpm	60N-cm	50000mPa˙s	P.84
	OS70-Pro	70L	YES	LCD	50-1100rpm	300N-cm	100000mPa˙s	P.83

MS10-H500-Pro

LCD Sigital Magnetic Hotplate Stirrer
With 10 Inch Ceramic Plate

Features

- Large volume: Up to 30L of liquid on 10 inch hot plate with powerful magnetic stirring
- Glass ceramic work plate provides excellent chemical resistant performance and most efficient heat transfer
- LCD display for precise monitoring of speed and temperature. External temperature control is possible by connecting the temperature sensor (PT1000) with an accuracy at ±0.2°C
- Digital speed control of 100-1500rpm
- Max. heating plate temperature 500°C
- The " HOT" warning will flash when the work plate temperature is above 50°C even when the hotplate is turned off
- Data connector: The SD card records the instrument's running data in real time.
- Timing function: the running time of the instrument can be set

MS10-H500-Pro

LCD Digital Magnetic Hotplate Stirrer With 10 Inch Ceramic Plate

Features

Large Capacity: Capable of handling up to 30 liters of liquid on a 10-inch hot plate with powerful magnetic stirring.

Durable Work Plate: Features a glass ceramic work plate that offers excellent chemical resistance and efficient heat transfer.

Precise Monitoring: Equipped with an LCD display for accurate monitoring of speed and temperature. Supports external temperature control via a PT1000 temperature sensor with an accuracy of ±0.2°C.

Adjustable Speed: Digital speed control ranging from 100 to 1500 rpm.

High-Temperature Capability: Maximum heating plate temperature of 500°C.

Safety Feature: A "HOT" warning flashes when the work plate temperature exceeds 50°C, even when the hotplate is turned off.

Data Recording: Includes a data connector for real-time recording of the instrument's running data on an SD card.

MS7-H550-Pro

LCD Digital Magnetic Hotplate Stirrer With 7 Inch Ceramic Plate

MS7-H550-S

LED Magnetic Hotplate Stirrer With 7 Inch Ceramic Plate

Features

- LCD displays actual temperature & speed
- Built-in PID controller ensures safe heating of the medium with overheating protection
- Maximum heating plate temperature up to 550°C
- Glass ceramic work plate is resistant to corrosion and is easy to clean
- External temperature control is possible by connecting temperature sensor (PT1000) with an accuracy of ±0.2°C
- Digital speed control with a maximum range of 1500rpm
- Outstanding brushless DC motor offers more stirring power
- Two knobs enable easy adjustment of speed and temperature
- The "HOT" warning flashes when the work plate temperature is above 50°C even when the hotplate is turned off

MS-H-Pro^M

NEW

LCD Digital Enhanced Magnetic Hotplate Stirrer with Timer

Vivid LCD display for runtime temperature, speed, time and settings

Heating, Stirring and timer indicator of status

Function Knob

External temperature probe and its holder for accurate thermos controlVivid LCD display for runtime temperature, speed, time and settings

Ceramic coating aluminum work plate with rapid heat transmission, corrosion and abrasion resistance

Flame retardant metal housing with higher safety standard

Features

- Enhanced magnets and powerful motors for outstanding performance in the stirring of viscous liquid. Smooth acceleration and deceleration for stable running without spillage
- Timer control from 1 minute to 99 hours and 59 minutes. When the time countdown completes, it will keep stirring but turn off heating to keep the sample safe from heat damage.
- Three heating modes for different demands: A) Fast heating; B) Standard heating; C) Steady heating.
- "HOT" warning flashes on the LCD display if the work plate temperature is above 50 °C after the user turn off the power switch.
- Two independent safety circuits keep monitoring the instrument. When overheating is detected and the sensor malfunctions, it will stop heating and sound alarm; When short circuit is detected, it will cut off the power to ensure the human safety.
- Can be connected to PC with remote control.

Specifications — MS-H-ProM

Specifications	MS-H-ProM
Work plate dimension	21.35mm 15 inch)
Work plate material	Aluminum with ceramic coating
Motor type	Brushless DC motar
Stirring positions	1
Mas, stirring quantity (HO)	20L
Max, magnetic bar (length)	80mm
Motor rating output	15W
Speed range	100-1500rpm
Speed display	LCD
Temperature display	LCD
Heating temperature range	Room temperature-340°C, increment 1°C
Temperature control accuracy	±1°C(100°C), ±1%(>100°C)
Overheating protection	420°C
Temperature display resolution	01°C
External temperature sensor	PT1000 (accuracy ±0.2°C
"Hot" warning	50°C
Data connection	R5232
IP protection class	IP21
Timer range	Imin-99h59min
Motorrating input	18W
Motor rating ouput	10W
Total power	720W
Heating power	600W
Voltage, Frequency	100-120/200-240V, 50/60Hz
Dimensions (WxDxH)	260x260x100mm
Weight	2.8kg
Permissible ambient temperature and humidity	5-40°C, 80% RH

MS-H-PRO^A

Three heating models for selecting (fast heating, standard is pintaluolt longidos heating and stable heating

MS-H-PRO+

LCD Digital Magnetic Hotplate Stirrer

MS-H-Pro^T

LCD Digital Magnetic Hotplate Stirrer with Timer

MS-H-S

Analog Magnetic Hotplate stirrer

brushless dc motor

Features

- Brushless DC motor is maintenance free and explosion-proof
- Digital temperature control up to 340°C
- Digital speed control up to 1500rpm
- Maximum stirring quantity of H:O is 20L
- Safety circuits provide overheating protection
- "HOT" warning flashes if plate temperature is above 50°C even when hotplate is turned off
- Wide range timer function from 1 min to 99h 59min (MS-H-Pro only)
- High-resolution LCD display shows actual temperatures and speed
- (MS-H-Pro displays the time)
- External temperature control is possible by connecting the temperature sensor (PT 1000)with accuracy at ±0.2°C
- Work plate with ceramic coating provides good chemical-resistantperformance
- Remote function provides PC control and data transmission
- Wide variety of accessories available to choose

Security

- International safety certification: CE, CTÜVUS, FCC and other product safety cert, certifications issued by TUV Rheinland
- Safety circuits provide overheating protection
- "HOT" warning flashes if the work plate temperature is above 50°C
- Brushless DC motor is maintenance free and exposion-proof
- Fully enclosed aluminum alloy housing with good heat dissipation performance and reliable protection capability

External sensor   Rs232 connector   Wide range of assessories   Chemical resistance   Brushless dc motor

MS-H380-Pro

LCD Digital Magnetic Hotplate Stirrer

Features

- Maximum heating temperature is 380°C
- High resolution LCD displays actual temperature and speed
- Brushless DC motor is maintenance free
- Aluminum ceramic coating work plate, allowing immediate heat transfer
- External temperature control is possible with temperature sensor PT1000
- Digital speed control with maximum speed up to 1500rpm
- Maximum stirring quantity of H:O at 5L

MS-H280-Pro

LED Digital Magnetic Hotplate Stirrer

MS-H280-Pro is a perfect hotplate stirrer for handling small volume task and daily applications, with maximum temperature
of 280°C

Features

- Digital temperature control with maximum temperature up to 280°C
- Digital speed control with maximum speed up to 1500rpm
- Stainless steel with ceramic coating work plate provides high chemical resistant performance
- External temperature control is possible by connecting temperature sensor (PT1000) with an accuracy at ±0.2°C
- LED display shows temperature and stirring speed
- "HOT" warning flashes if work plate temperature is above 50°C

MS-H280-B100/250/500/1000&
MS-H280-F100/250/500/1000

LED Digital Magnetic Hotplate Stirrer

Heating Mantle

Power switch

LCD display screen

Temperature adjustment knob

Temperature probe and support assembly

Heating indicator

Stirring indicator

Speed adjustment knob

Heating Mantle model	HB100	HB250	HB500	HB1000	HF100	HF250	HF500	HF1000
Picture								
Specification	Beaker	Beaker	Beaker	Beaker	Flask	Flask	Flask	Flask	Flask
Capacity	100mL	250mL	500mL	1000mL	100mL	100mL	250mL	500mL	1000mL
Heating Mantle Inner Diameter	54.75mm	72.75mm	89.75mm	118.75mm	72.75mm	89.75mm	118.75mm	144.75mm

Advantages

- The smart magnetic stirrer can be flexibly set up with inter-changeable heating sleeves for 100mL, 250ml., 500mL, 1000ml. round-bottom flask, or 100ml., 250ml., 500mL, 1000ml. flat bottom beakers.
- Even more flexible configurations: as one heating magnetic stirrer, or as one heating sleeve plus one magnetic stirrer.
- Temperature self calibration function for higher temperature accuracy.
- Heating sleeve made of high-quality Aluminum silicate fiber cotton with accurate temperature control, uniform heating and corrosion resistance.
- Strengthened magnetic fields with enhanced stirring power.
- Fireproof metal outcast with higher safety level.
- Explosion-proof DC brushless motor free of maintenance and spark, and with long service life.
- The "HOT" warning will flash if the work plate temperature is above 50°C even when the hotplate is turned off, as long as the power cable is connected.
- Two independent safety circuits are designed to continuously monitor the equipment. When the sensor malfunctions and overheating occurs, an error code will be generated and the stirrer will stop heating. When the first safety circuit is shorted, the second safety circuit will cut off the power supply to ensure the safety of the operator

Applications

Magnetic stirrer with heating sleeve is a very popular product for laboratories in scientific research, industry and mining, food processing, biochemistry, agriculture, petrochemical, pharmaceutical, and educational aspect. It is used for heating and incubation of liquids at a certain temperature. It provides fast and uniform heating with highly precise temperature control and strong stirring power. It can serve as a magnetic stirrer with heating sleeve, or as a magnetic stirrer and a heating sleeve.

Specification

Model number	MS-H280-B100/250/500/1000	MS-H280-F100/250/500/1000
Motor type	Brushless DC motor	Brushless DC motor
Speed range [rpm]	200-1500rpm	200-1500rpm
Speed control accuracy [rpm]	±20rpm	±20rpm
Speed display	LCD	LCD
Temperature display	LCD	LCD
Temperature control range [°C]	25-280°C	25-280°C
"Hot" warning	50°C	50°C
Overheat protection [°C]	420°C	420°C
Temperature display accuracy [°C]	±0.1°C	±0.1°C
Heating liquid temperature control accuracy	±1°C(<100°C), ±1%(>100°C)	±1°C(<100°C), ±1%(>100°C)
External temperature sensor	PT1000 (accuracy ±0.2°C)	PT1000 (accuracy ±0.2°C)
Protection class	IP21	IP21
Motor input power [W]	1.8W	1.8W
Heating power [W]	210W/240W/380/440W	210W/240W/380/440W
Voltage, Frequency	100-120V,60Hz:200-240V,50Hz	100-120V,50Hz:200-240V,50Hz
Dimension [WxDxH	295X160X160mm	295X160X160mm
Weight	3.7Kg	3.7Kg
Permissible ambient temperature	5-40°C	5-40°C
Permissible ambient humidity	80%	
Compatible containers	100mL、250ml、500mL、1000ml, flat bottom beakers	100mL、250ml、500mL、1000ml, flat bottom beakers

MS-H340-S4

LCD 4-Channel Digital Magnetic Hotplate Stirrer

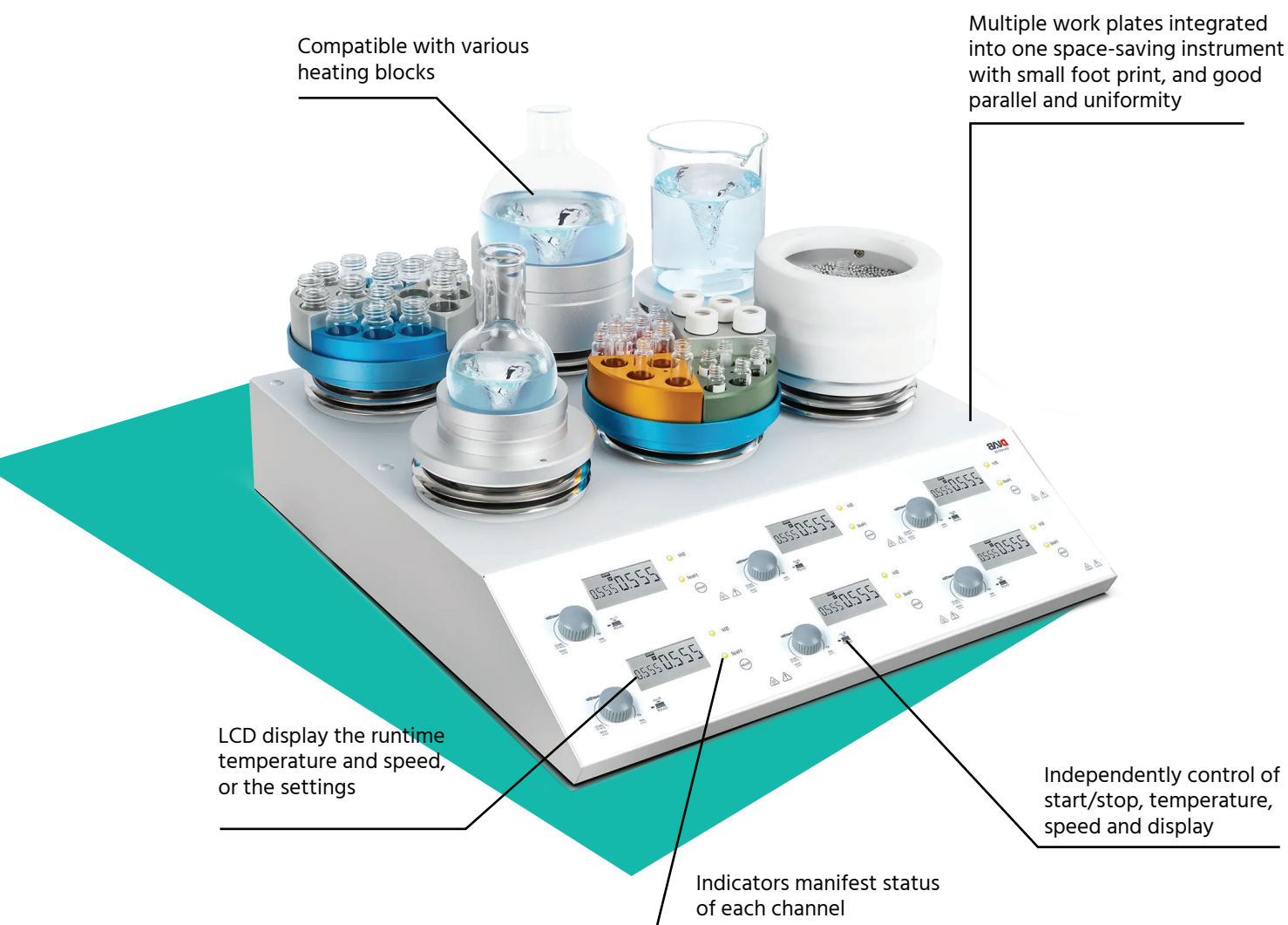It is widely used in chemical synthesis, physical and chemical analysis, bio pharmaceuticals etc

Features

- Independent heating and stirring control for each position
- LCD display shows real-time temperature and speed
- PID controller ensures a precise and stable heating process (maximum temperature up to 340°C)
- Brushless DC motor is quiet, reliable & maintenance free, and provides more powerful speed control
- External temperature sensor (PT1000) with accuracy 0.2°C
- Stainless steel work plate with ceramic coating provides good chemical resistance
- Wide variety of accessories available to choose from

Specifications	MS-H340-S4
Work plate dimension	135mm(5inch) x4
Plate material	Stainless steel with ceramic coating
Motor type	Brushless DC motor
Stirring positions	4
Max. fax, stirring quantity of single position (H2O)	10L x4
Max, magnetic bar	40mm
Speed range	200-1500rpm
Speed display	LCD
Temperature display	LCD
Control accuracy of sensor	±20rpm
Temperature range	25-340°C
Over temperature protection	420°C
Temperature display accuracy	±0.1°C
External temperature sensor	PT1000(accuracy ±0.2°C)
IP Protection class	IP20
Motor input power	1.8Wx4
Power	515Wx4
Heating Power	500Wx4
Voltage, Frequency	100-120V,60Hz, 200-240V,50 Hz
Dimensions (WxDxH)	698x270x128mm
Weight	9.5kg
Permissible ambient temperature	5-40°C
Permissible relative humidity	80%RH

MS-H280-S4/MS-M-S4/ MS-H280-S6/MS-M-S6

4/6 Channel LCD Digital Hotplate Magnetic Stirrer

Compatible with various heating blocks

Multiple work plates integrated into one space-saving instrument with small foot print, and good parallel and uniformity

LCD display the runtime temperature and speed, or the settings

Independently control of start/stop, temperature, speed and display

Indicators manifest status of each channel

Features

- 4/6 channels with independently control of start/stop, temperature, speed and display for better parallel experiment control

- Ceramic coating aluminum work plate with fast heat transmission and strong resistance to corrosion.

- Powerful, rapid heating with accurate PID temperature control

- Spark-free DC brushless motor with extended life and no maintenance

- Compatible with various heating block or reaction vessels for a variety of application scenario

- Ultra space-saving with 4/6 channel integrated in one instrument

- "HOT" warning flashes on the LCD display if the work plate temperature is above 50°C after the user turn off the power switch

- Two independent safety circuits keep monitoring the instrument. When overheating is detected and the sensor malfunctions, it will stop heating and sound alarm; When short circuit is detected, it will cut off the power to ensure the human safety.

- Reliable safety mechanism, compliant to IEC61010-1\UL61010-1\BSEN61010-1\CAN\CSA-C22.2NO.61010-1 and all other safety regulations of laboratory heating devices, competent with tasks without human surveillance.

Applications

The 4/6 channel hotplate magnetic stirrers are designed for parallel experiment and multiple parameter optimization, thus can serve as handy tools for Kjeldahl nitrogen determination, Soxhlet extraction and parallel synthesis, etc. They are ideal choices for test laboratories in food, animal feed, textile, soil, sewage, water treatment, pharmaceutical, polymerization, petroleum products, resin and plastic sectors. The user can handle 4 or 6 tests at the same time with stable performance, good reproducibility, high accuracy and easy operation.

MS-H280-S4

MS-H280-S6

MS-M-S4

MS-M-S6

The design of 4/6 channel hotplate magnetic stirrers aim to turn your laboratory into a space-saving, safe, highly efficient, tidy and neat benchmark among peers. They are well recognized by higher education, pharmaceutic manufacturer, biotech company, research institute and food manufacturer as an eco-friendly magnetic stirrer for synthesis.

Specifications	MS-H280-S4	MS-M-S4	MS-H280-S6	MS-M-S6
Work plate dimension	0134mm	0134mm	0134mm	0134mm
Work plate material	Aluminum with ceramic coating	Aluminum with ceramic coating	Aluminum with ceramic coating	Aluminum with ceramic coating
Motor type	Brushless DC motor	Brushless DC motor	Brushless DC motor	Brushless DC motor
Motor rating output	5Wx4	5WX4	5WX6	5WX6
Heating power	600WX4	-	600WX6	-
Total power	605WX4	5WX4	605WX6	5WX6
Voltage, Frequency	100-120V,60Hz; 200-240V,50Hz	100-240V,50/60Hz	100-120V,60Hz; 200-240V,50Hz	100-240V,50/60Hz
Stirring positions	4	4	6	6
Max. stirring quantity (H	3LX4	3LX4	3LX6	3LX6
Max. stirring quantity (H2O) per channel	3L	3L	3L	3L
Max. magnetic bar [length]	40mm	40mm	40mm	40mm
Speed range	200-1500rpm	200-1500rpm	200-1500rpm	200-1500rpm
Speed control accuracy [rpm]	±20	±20	±20	±20
Speed display	LCD	LCD	LCD	LCD
Temperature display	LCD	LCD	LCD	LCD
Heating temperature range	25-280℃	-	25-280℃	-
Overheating protection	420℃	-	420℃	-
Temperature display resolution	0.1℃	-	0.1℃	-
Temperature control accuracy	±1℃)<100℃), ±1%(>100℃	-	±1℃)<100℃), ±1%(>100℃	-
External temperature sensor	PT1000 (accuracy±0.2℃)	-	PT1000 (accuracy±0.2℃)	-
IP protection class	IP21	IP21	IP21	IP21
Dimensions (WxDxH)	701X265X127mm	701X265X127mm	564X523X127mm	564X523X127mm
Weight	8.7Kg	8.7Kg	12.7Kg	12.7Kg
Permissible ambient temperature and humidity	5-40℃, 80% RH	5-40℃, 80% RH	5-40℃, 80% RH	5-40℃, 80% RH

MS-H-S10

10-Position Magnetic Hotplate Stirrer

Specifications Specifications	MS-H-S10
Work plate dimension[WxD]	180x450mm
Work Plate material	Stainless steel covered with silicone cushion
Motor type	Brushless DC motor
Stirring positions	10
Max. stirring quantity	0.4x10
Max, magnetic bar (length]	40mm
Speed range	0-1100rpm
Speed display	scale
Temperature display	scale
Heating temperature range	Room temp.-120°C
Over temperature protection	140°C
IP Protection class	IP20
Motor rating input	12W
Motor rating output	4W
Power	490W
Heating Powe	470W
Voltage, Frequency	100-120/200-240V, 50/60Hz
Dimensions (WxDxH]	182x622x65mm
Weight	3.2kg
Permissible ambient temperature and humidity	5-40°C, 80%RH

Features

- Maintenance-free brushless DC motor "C
- Maximum speed 1100rpm
- Maximum temperature of work plate up. to 120°C
- Stainless steel work plate, Covered with silicone cushion, provide excellent of heating uniformity and skid resistance

Skidresistance

Multiple position

Brushless DC motor

HP500-Pro
LCD Digital Hotplate

Features

- LCD screen shows temperature, Max. temperature up to 500°C
- 10-inch glass ceramic work plate provides excellent chemical-resistant performance and most efficient heat transfer
- External temperature control is possible by connecting the temperature sensor (PT 1000) with an accuracy at ±0.2°C
- The "HOT" warning will flash if the work plate temperature is above 50°C even when the hotplate is turned off
- Heating temperature: room temperature -500°C
- Data connector: The SD card records the instrument's running data in real time.
- Timing function: the running time of the instrument can be set.

Specifications	HP500-Pro
Work plate Dimension (W x D)	254x254mm (10 inch)
Work plate material	Glass ceramic
Heating position	1
Heating temperature range	Room Temp. 500°C, increment 1°C
Temperature control accuracy	±1°C (<100°C) ±1%(>100°C)
Safety temperature	540°C
Temperature, time display	LCD
Timer function	1min-99h59min
Temperature display accuracy	±0.1
External temperature sensor	PT1000(±0.2°C)
"Hot" waming	50°C
Protection class	IP21
Power	1400W
Heating output	1350W
Voltage, Frequency	100-120/200-240V, 50/60Hz
Dimension[WxDxH]	328x424x138mm
Weight	7.2kg
Permissibleambient temperature and humidity	5-40°C. 80%RH

HP550-S
LED Hotplate

Specifications	HP500-Pro
Work plate Dimension (W x D)	184x184mm 17 inch)
Work plate material	Glass ceramic
Heating position	1
Heating temperature range	Room Temp. 550°C, increment 5°C
Control accuracy of work plate	±10°C
Safety temperature	580°C
Temperature display	LED
Temperature display accuracy	±1▯
External temperature sensor	PT1000 (accuracy±0.2°C)
Heating warning	50°C
Protection class	P21
Power	1010W
Heating Power	1000W
Voltage Frequency	100-120/200-240V, 50/60Hz
Dimension(WxDxH)	215x360x112mm
Weight	4.5kg
permissible ambient temperature and humidity	5-40°C 80%RH

Features

- LED screen display actual and accurate temperature
- Maximum temperature up to 550°C
- Separate safety circuits with safety temperature of 580°C
- External temperature control is possible by connecting temperature sensor (PT 1000) with an accuracy of ±0.2°C
- Work plate provides excellent chemical-resistant performance and most efficient heat transfer
- "HOT" warning flashes when the workplate temperature is above 50°C

HP380-Pro
LCD Digital Hotplate

Features

- Maximum heating temperature is 380 °C
- High resolution LCD displays actual temperature
- Aluminum ceramic coating work plate, allowing a immediate heat transfer
- External temperature control is possible with temperature sensor PT1000

Specifications	HP380-Pro
Work plate Dimension (W x D)	140x140mm (6 inch)
Work plate material	Aluminum cover with ceramic coating
Heating position	1
Heating temperature range	Room temp.-380°C increment 1°C
Over heat Protection	420°C
Temperature,time display	LCD
Temperature display accuracy	±1°C
External temperature sensor	PT1000(±0.2°C)
Protection class	IP21
Power	510W
Heating output	500W
Voltage, Frequency	100-120/200-240V, 50/60Hz
Dimension(WxDxH)	180x320x108mm
Weight	2.2kg
Permissibie ambient temperature and humidity	5-40°C, 80%RH

MS-S
Magnetic Stirrer

MS7-S
7" Square Magnetic Stirrer

- Speed range of 0-1500rpm
- Maximum stirring quantity of H_2O up to 10L
- Ceramic work plate provides excellent corrosion resistance

MS6-pro
LCD Digital Magnetic Stirrer

- High resolution LCD displays actual stirring speed
- Brushless DC motor is maintenance free
- Aluminum cover withceramic work plate for immediate heating
- Digital speed control up to 1500rpm
- Maximum stirring quantity of H_2O at 5L

MS7-S

MS-S

MS6-Pro

Specifications	MS7-S	MS-S	MS6-Pro
Work plate Dimension [W x D]	184x184mm (7 inch)	Ø135mm（5 inch）	140x140mm
Work plate material	Glass ceramic	Stainless steel cover with ceramic	Aluminum cover
Motor type	Shaded pole motor	Brushless DC motor	Aluminum cover with ceramic coating
Stirring positions	1	1	1
Max. stirring quantity[H_2O]	10L	20L	5L
Max.magnetic bar[length]	80mm	80mm	40mm
Speed range	0-1500rpm	0-1500rpm	200-1500rpm
Speed display	Scale	Scale	LCD
Protection class	IP21	IP42	IP21
Motor input Power	15W	18W	2.4W
Motor output Power	1.5W	10W	1.8W
Power	30W	30W	10W
Voltage	100-120/200-240V，50/60Hz	100-240V，50/60Hz	100-240V，50/60Hz
Dimension[WxDxH]	215x360x112mm	160x280x85mm	320x180x108mm
Weight	3.8kg	2.8kg	2.2kg
Permissible ambient temperature and humidity	5-40℃, 80%RH	5-40℃, 80%RH	5-40℃, 80%RH

MS-PA
LED Digital Magnetic Stirrer

MS-PB
Magnetic Stirrer

Features

- Digital speed control within the range of 0-1500rpm
- Maximum stirring quantity of H.O at 3L
- LED display shows stirring speed (MS-PA)

Specifications	MS-PA	MS-PB
Work plate Dimension	0135mm (5 inch)	0135mm (5 inch)
Work plate material	Nylon+GF	Nylon+GF
Motor type	Brushless DC motor	Brushless DC motor
Stirring positions	1	1
Max, stirring quantity[HO]	3L	3L
Max.magnetic bar[length]	50mm	50mm
Speed range	200-1500rpm	200-1500rpm
Speed display	LED	LED
Protection class	IP42	IP42
Motor input power	SW	SW
Motor output Power	3W	3W
Power	15W	15W
Voltage, Frequency	100-240V, 50/60Hz	100-240V, 50/60Hz
Dimension[WxDxH]	150x260x80mm	150x260x80mm
Weight	1.8kg	1.8kg
Permissibie ambient temperature and humidity	5-40°C, 80%RH	5-40°C, 80%RH

MS-T-S15

LED Digital Magnetic Hotplate Stirrer

Features

- Efficient, simple, safe, multi-position agitator is the ideal choice for sample testing.
- Simple and easy operation panel: 15 stirring positions are
- controlled by 3 independent channels, all channels are available at different speeds and times.
- Brushless DC motor and powerful magnetic ensure fast and accurate stirring speed.
- Aluminum laser engraving disk surface, skid and corrosion proof anti-abrasive.

Specifications	MS-T-S15
Work plate Dimension [WXD]	460x304mm
Work plate material	Aluminum
Motor type	DC brushless
Stirring positions	15
Max. stirring quantity [HO]	0.4Lx15
Max, magnetic bar(length)	40mm
Speed control accuracy	10rpm
Speed. Time display	LCD
Speed range	0-1500rpm
Timer function	0min-99h59min
Protection class	IP21
Power	40w
Voltage, Frequency	110V/220V50Hz/60Hz
Dimension (DxWxH] [mm]	615x307x90mm
Weight	9.2kg
Permissible ambient temperature and humidity	5-40 , 80%RH

0.4Lx15

0-1500rpm

Timer

Skid resistance

Multiple position

Brushless DC motor

MS-M-S10

10-Position Magnetic Stirrer

Specifications	MS-M-S10
Work plate Dimension (W x D	180×450mm
Work plate material	Stainless steel with silicone coating
Motor type	Brushless DC motor
Stirring positions	10
Max stirring quantity/H0	0,41x10
Max.magnetic bar length]	40mm
Speed range	0-1100rpm
Speed display	Scale
Protection class	1P20
Motor input Power	12
Motor output Power	4W
Power	20W
Voltage, Frequency	100-120/200-240V, 50/60Hz
Dimension WxDxH	622x205x55mm
Weight	3.2kg
Permissible ambient temperature and humidity	5-40°C, 80%RH

⬛ Skidr esistance

◉ Multiple position

Features

- Efficient, simple and safe stirring
- High performance and space-saving design to maximize the use of benchtop space and saving time by stirring multiple solutions
- Maintenance-free brushless DC motor
- Speed range 0-1100rpm
- Stainless steel work plate covered with silicone cushion, provides excellent performance of skid resistance

FlatSpin

Ultra-flat Compact Magnetic Stirrer

With excellent stirring functionality, the compact shape of FlatSpin takes less bench space and makes storage easier.

Specifications	MS-T-S15
Work plate Dimension	090mm
Work plate material	PET
Stirring positions	1
Max, stirring quantity(H:O]	0.8L
Max.magnetic bar length]	40mm
Speed range	15-1500rpm
Protection class	IP21
Output Power	3W
Power	5W
Voltage, Frequency	100-240V, 50/60Hz
Dimension (WxDxH)	175x120x15mm
Weight	0.3kg
Permissibleambient temperature and humidity	5-40°C,50%RH

- Speed range 15 to 1500rmp
- Automatic reverse rotation for excellent mixing
- PET top work plate provides excellent
- chemical resistance Motoriess technology provides ultra silent and vibration-free operation
- Perfect magnetic stirrer for use during titration (bottle-top burette) in analytical chemistry

EcoStir

Square Plate Magnetic Stirrer

Square Plate Magnetic Stirrer with electrode holder has a reliable design and a powerful stirring ability. It is a basic and ideal tool for electrochemistry measurements or water & environment monitoring; drug or food analysis; liquid culture mixing, etc

Features

- Compact design with small footprint, 12V voltage available for mobile labs.
- Square work plate supports 1.5L stirring capacity.
- Holder with clamp for pH electrode or other sensor.
- Default PET top provides excellent chemical resistance.
- Extra colorful stickers satisfy DIY design by yourself.
- Maintenance free brushless DC moto.
- An economical choice of a reliable & durable magnetic stirrer with an electrode holder for stable & powerful stirring ability

Specifications	EcoStir	EcoStir
Work plate material	120x115mm	Ø120mm
Motor type	PET	PET
Stirring position	Brushless DC Motor	Brushless DC motor
Max, stirring quantity (HO)	1	1
Max, magnetic bar [length	1.5L	1.5L
Speed range	40mm	40mm
Speed setting	300-2000rpm	300-2000rpm
Protection class	Scale	scale
Motor output power	IP21	IP21
Power	1.2	1.2%
Voltage, Frequency	1.20	7.2W
Dimension [WxDxH)	100-240V, 50/60Hz or DC 12V	100-240V, 50/60Hz or DC 12V
Weight	150x344x54mm	150x145x50mm
Permissible ambient temperature and humidity	0.3kg	0.3kg
	5-40°C, 80%RH	5-40°C, 80%RH

Tips for
temperature control

• It is recommended to use the beads with all full ranges hotplate magnetic stirrers

• Place the external temperature sensor in the hole on the heating bath and ensure that the

probe is submerged within 1/2-1/3 of the depth of the bead

Alloy-Bead Heating Bath

Features

- High strength aluminum alloy beads provides high thermal conductivity over wide temperature range
- Flexible, convenient, easy to operate and adaptable to
- reaction essels with different shapes and sizes
- Accommodates the external temperature probe on
- hotplate magnetic stirrer to achieve precise temperature control
- The alloy beads do not adhere to the container inside
- surface. whereas the silicone oil when used is difficult to dean in oil bath application
- Eco-friendly, pollution free, paisan free, fume free, highly safe and splash free heating
- PTFE shell can effectively retains the heat and ensure human safety fram burn injuries
- The beads are easy to clean and replace separately

Magnetic Stirrer accessories:

Cat. No.	Picture	Name	Specification	Instructions
18900798		Stainless Steel Pot (2.5L)	Volume: 2.5L Outside diameter: 20cm Inside diameter: 18cm Height: 11cm Bottom diameter: 18cm	
18900799		Stainless Steel Pot (3.5L)	Volume: 3.5L Outside diameter: 22cm Inside diameter: 20cm Height: 12cm Bottom diameter: 20cm	
18900800		Stainless Steel Pot (4.5L)	Volume: 4.5L Outside diameter: 24cm Inside diameter: 22cm Height: 13cm Bottom diameter: 22cm	
18900801		Stainless Steel Pot (5.5L)	Volume: 5.5L Outside diameter: 26cm Inside diameter: 24cm Height: 13.5cm Bottom diameter: 24cm	
18900813		Aluminum Alloy & Ceramic Coating Pot	Volume: 1.5L Outside diameter: 14cm Height: 12cm	
18900811		Aluminum Alloy Test Tube Holder (Ø23mm)	Ø23mm × 10	Used with 18900813
18900812		Aluminum Alloy Test Tube Holder (Ø33.5mm)	Ø33.5mm × 8	Used with 18900813
18900814		Beaker Cap	500mL & 1000mL & 2000mL	Suitable for 500mL, 1000mL, and 2000mL beakers
18204333		Magnetic Stirring Extension Assembly (M8)	M8	Adaptation: 18900540 Support Clamp
18204334		Magnetic Stirring Extension Assembly (M10)	M10	Adaptation: 18900017 Support Clamp

D-160

Handheld Homogenizer

Features

- Portable, lightweight with ergonomic design ideal for manual operations
- Processing volumes from 0.1-50ml. or 1-250mL
- Variable speed from 8,000 to 32,000 rpm
- 316L stainless steel shafts are fully autoclavable
- Interchangeable shafts for easy dismantling and cleaning

Applications

Designed for rapidly homogenize, emulsify, suspend and disrupt biological samples like tissue of animal, bacteria, yeast, plant samples, etc. in liquids. Ideal for samples from 0.1mL to 250ml. depending on shaft chosen

Specifications	D-160
Speed range	8000-32000гря
Max linear velocity	6.3m/sec or 14m/sc
Speed level	10 stage
Working volume (H:0	0.1-50ml(Dispersing shaft 05-160/5) 250mL (Dispersing shart DS 160/10)
Max viscosity	5,000m Pas
Material of Dispersing Shaft	55.316L stainless strel, PTFE
Noise Level	P20
Protection class	110-120V/60Hz
Voltage Frecuency	220-240V/50-60
Power	160%
Motor Type	AC carbo brush motor
Dimension (WxDxH)	45mm x 35mm x 190mm
Weight	0.54 kg
Permissible ambient temperature and humidity	0-40°C, 85%RH

DS-160/5 – Cat. No. 18900543

- Volume: 0.1–50mL
- Max circumferential speed: 6.3 m/sec
- Material: 316L stainless steel
- Application: Small amounts of solid/liquid mixture
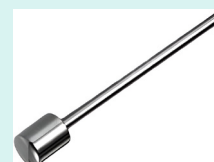- Function: Dispersing tool for solid/liquid media

DS-160/7 – Cat. No. 18900815

- Volume: 1–150mL
- Max circumferential speed: 10 m/sec
- Material: 316L stainless steel
- Application: Small amounts of solid/liquid mixture
- Function: Dispersing tool for solid/liquid media

DS-160/10 – Cat. No. 18900544

- Volume: 1–250mL
- Max circumferential speed: 14 m/sec
- Material: 316L stainless steel
- Application: Small amounts of solid/liquid mixture
- Function: Dispersing tool for solid/liquid media

D-500

High Shear Homogenizer

The high shear homogenizer D500 is applicable to various tasks from sample
preparation to formulation study. The motor drives the rotor to rotate at high speed, and the sample is homogenized or dispersed by the gap between the rotor and stator, usually in a short period of time.

Features

- High quality 316L stainless steel with corrosion and autoclave resistance
- Rotor with simple design can be dismounted, cleaned, and sterilized conveniently
- 6 speed levels
- Applicable for sample with viscosity up to 10000mPa's
- Replaceable rotors and stators sharing the same shaft, cost-effective
  Automatic overload protection mechanism maximizes the working life
  of motor.
- Smooth motor start, stable acceleration without spillage risk

Applications

Widely applied for histocyte lysis, cell homogenization, emulsion, nanometer scale dispersion process in biology. pharmaceutical, genetic and pathology study, diary product or fruit homogenization, polymerization reaction, production of fragrance, cosmetics, textile auxiliary, food, ink, paints, asphalt, fine chemicals, agricultural chemicals, and analysis in mineral exploration, environmental protection and energy resource exploration.

- Routine homogenization, emulsion, depolymerization, dispersion application
- Disperse substance to form suspension and emulsion
  Disperse pigment and resin
- Disperse animal or human tissue into various solution
- Facilitate the dissolve of solid substances
- Sample preparation for quality control test
  Animal or plant cell lysis
- Emulsion, cream cosmetics, and food formulation study
- Extraction of active pharmaceutical ingredient from pills and tablets

Specifications	D-500
Speed range	10000–30000 rpm
Max linear velocity	22.7–36 m/sec
Speed level	6 stage
Working volume	10–40000 mL
Max. viscosity	10000 mPa·s
Material of dispersing shaft	SS 316L stainless steel, PTFE
Noise level	79 dB(A)
Protection class	IP20
Voltage / frequency	110–120V/60Hz, 220–240V/50–60Hz
Power	500W
Motor type	AC carbon brush motor
Dimension (W×D×H)	75×75×280 mm
Weight	1.7 kg
Permissible ambient temperature and humidity	0–40°C, 85%RH

Dispersion Head Selection Guide

Material: All dispersion head components are made of high quality 316L stainless steel to ensure the mechanical performance while rotating at high speed of 30000rpm.
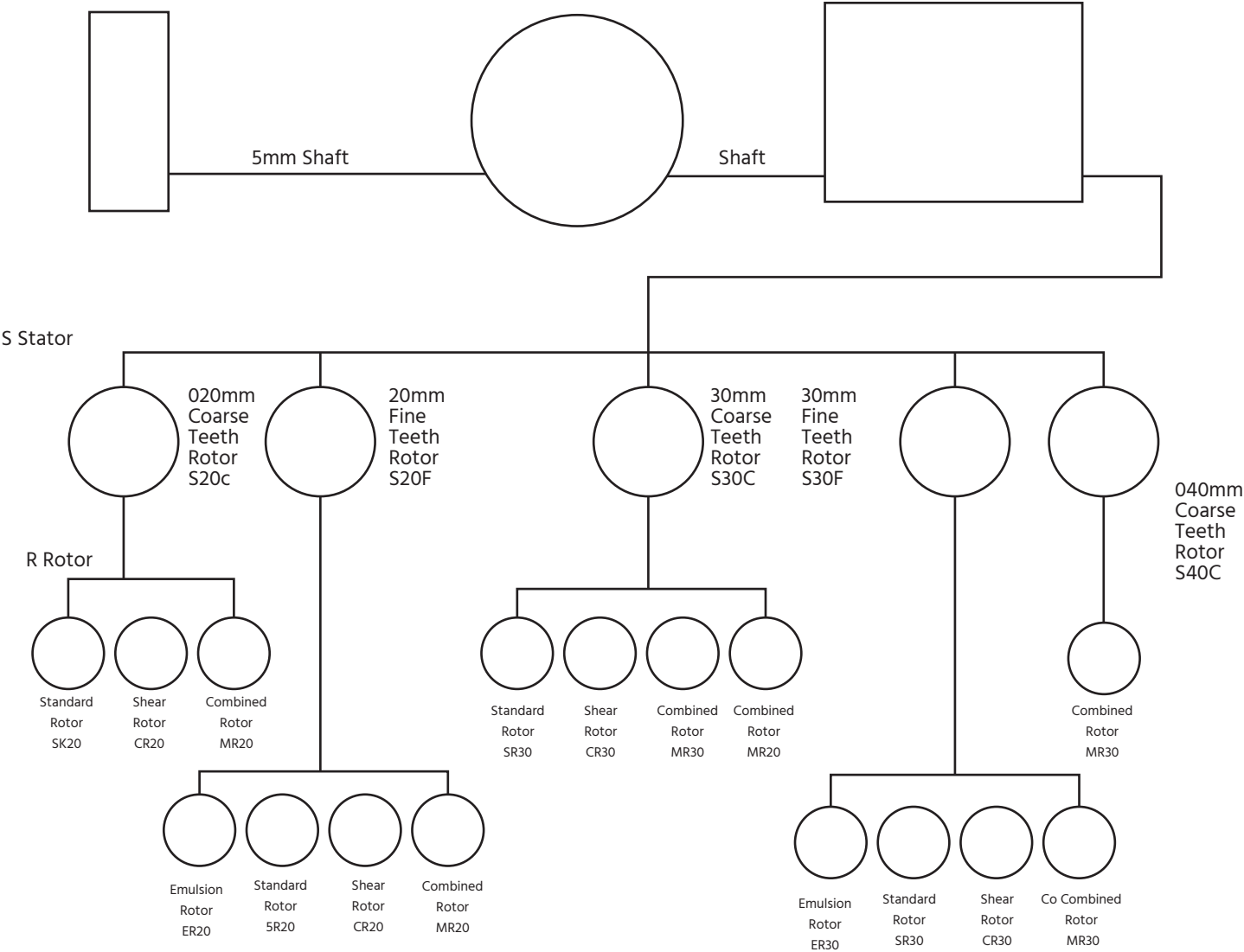
Bearing: Made of excellent material, the bearing is sturdy, durable and corrosion resistance. Its mechanical performance and chemical characteristics are stable.

Easy to clean: The dispersion head is designed to be easily dismantled and thus cleaned. The components can be cleaned manually or automatically, and can be autoclaved. Even the precision components can be removed to clean.

S Dispersion Shaft

20mm Standard Rotor SR20

20mm Coarse Teeth Stator S20C

5mm Shaft

Shaft

S Stator

R Rotor

020mm Coarse Teeth Rotor S20c

20mm Fine Teeth Rotor S20F

30mm Coarse Teeth Rotor S30C

30mm Fine Teeth Rotor S30F

040mm Coarse Teeth Rotor S40C

Standard Rotor SK20

Shear Rotor CR20

Combined Rotor MR20

Standard Rotor SR30

Shear Rotor CR30

Combined Rotor MR30

Combined Rotor MR20

Combined Rotor MR30

Emulsion Rotor ER20

Standard Rotor 5R20

Shear Rotor CR20

Combined Rotor MR20

Emulsion Rotor ER30

Standard Rotor SR30

Shear Rotor CR30

Co Combined Rotor MR30

DS-500/1   Cat No.18201331

Solid and liquid dispension
Volume 10-5000mL
Max. circum, Speed 22.7m/sec
General purpose
Emulsion granularity range 1-10μm
Suspension granularity range 10-50μm

DS-500/2   Cat No. 18201332

Emulsion
Volume 10-5000ml
Max, circum. Speed 22.7m/sec
General emulsion purpose
Emulsion granularity range 1-10μm
Suspension granularity range 10-50μm

DS-500/5   Cat No.18900117

Small amounts of solid and liquid dispersion
Volume 1-50mL
Max. circum. Speed 5.8m/sec
Compatible with 5mm stator and 3.8mm rotor
Special design for 1-50mL tissue
homogenization, mixing and suspension in
Eppendorf tube, tube strip and centrifuge tubes
for clinical and diagnostic application

Stator & Beler Combinatlans		Purpose	Werking Veluran	Max. circum Speed	Rotar Dia	Stator Dia	Min/Max	Grasslarity pl		Application
			mL	m/s	mm	mm	Immersion Depth	Suspension	Ersulsion	
18201331	SS20CSR20	Solid-liquid mix	10-5000	23.5	15	20	40/170	10-50	1-10	PCI, PC,SD
18900205 18900215	S20C CR20	Fiber	10-5000	23.5	15	20	40/170	10-50	1-10	SP,M.F.PT,TI
18900205 18900216	S20C MR20	Solid-liquid mix	10-5000	23.5	15	20	40/170	10-50	1-10	CI, PI
18701332	SS20FER20	Emulsion	10-5000	23.5	15	20	40/170	10-50	1-10	SP,PI,PT.P
18900206 18900215	S20F CR20	Fiber	10-5000	23.5	15	20	40/170	10-50	1-10	SP,BT,M,FPT,TI
18900206 18900216	S20F MR20	Solid-liquid mix	10-5000	23.5	15	20	40/170	10-50	1-10	CI,C,PLF,PT,PC
18900213 18900216	S30C MR20	As stirring paddle	250-20000	36.1	15	30	40/170	High speed mixing		CI,F,SP
18900213 18900208	S30C SR30	Salid-liquid mix	100-8000	36.1	23	30	40/170	5-25	1-5	SP,M,F,PT,P
18900213 18900209	S30C CR30	Fiber	100-8000	36.1	23	30	40/170	5-25	1-5	SP,M,F,PT,P
18900213 18900229	S30C MR30	Salid-liquid mix	100-8000	36.1	23	30	40/170	5-25	1-5	CI,PI
18900228 18900208	S30F SR30	Salid-liquid mix	100-8000	36.1	23	30	40/170	5-25	1-5	SP,PLPT,P
18900228 18900212	S30F ER30	Emulsion	100-8000	36.1	23	30	40/170	5-25	1-5	SP,PI,PT,P
18900228 18900229	S30F MR30	Salid-liquid mix	100-8000	36.1	23	30	40/170	5-25	1-5	CIC,P,F,DT,TI
18900214 18900729	S40C MR30	As stirring paddle	1000-40000	36.1	23	40	40/170	High speed mixing		CI,F,SP
18900117	SS5CSR5	Small amount solid-liquid mix	1-50	6.3	4	5	40/60	10-50	1-10	81,M

Note
BT: Biotech, F Food: P. Pharmaceutics, C: Cosmetics, M. Medicine Analysis, PC: Petroleum Chemistry: PT: Paper and Puls Industry; SP: Sewage Treatment; CI Ceramic industry: CH: Chemical Industry, Pt Paints Industry, Ti: Tabacco Industry
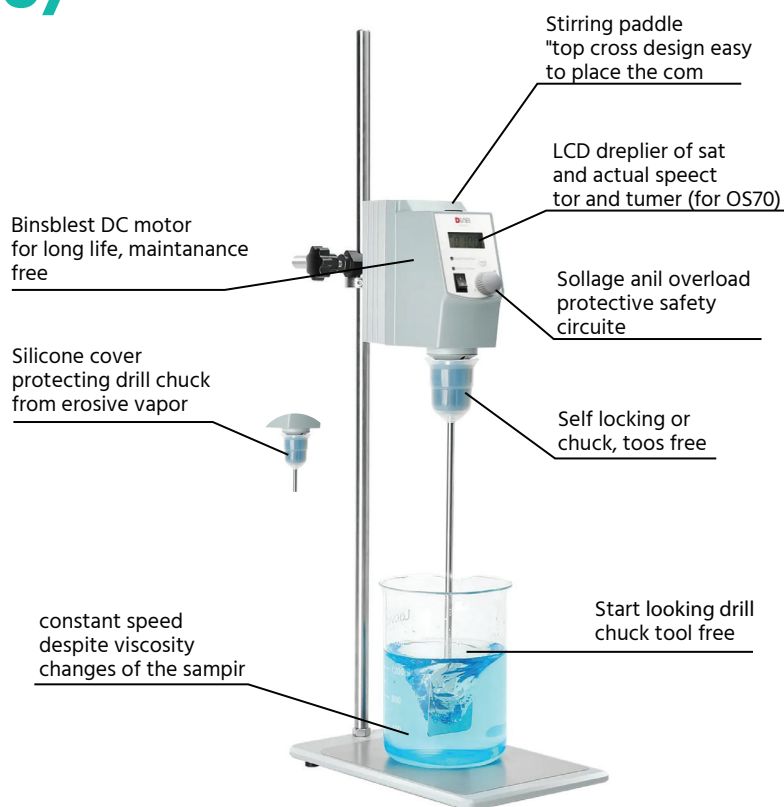The common combinations of rotor and stator are listed in the table above. Dispersion head can be mounted on the homogenizer main body and faed on the holder with furtures. All the components of dispersion head can be sterilized with all usual methods (including chemicals, autoriave, etc.)

OS20-Pro/0S40-Pro/ OS70-Pro

LCD Digital Overhead Stirrer

Overhead Stirrers are competent for most demanding tasks with guaranteed safety and performance. They are widely used in chemical synthesis, pharmaceutical synthesis, physical and chemical analysis, petrochemical industries, etc.

Stirring paddle "top cross design easy to place the com

LCD dreplier of sat and actual speect tor and tumer (for OS70)

Binsblest DC motor for long life, maintanance free

Sollage anil overload protective safety circuite

Silicone cover protecting drill chuck from erosive vapor

Self locking or chuck, toos free

constant speed despite viscosity changes of the sampir

Start looking drill chuck tool free

Specifications	OS20-Pro	OS40-Pro	OS70-Pro
Max. stirring quantity H2O]	201	201	201
Speed range	50-2200rpm	50-2200rpm	50-2200rpm
Speed display accuracy.	3rpm	3rpm	3rpm
Time settings range	-	-	-
Max, torque	40Ncm	40Ncm	40Ncm
Viscosity max	10000mPas	10000mPas	10000mPas
Weight	2.8kg	2.8kg	2.8kg
Motor type	Brushless DC motor	Brushless DC motor	Brushless DC motor
Voltage, Frequency	100-240V, 50/60 Hz	100-240V, 50/60 Hz	100-240V, 50/60 Hz
Speed display	LCD	LCD	LCD
Torque display	LCD	LCD	LCD
Overload protection display	LCD	LCD	LCD
Chuck clamp range ciameter	0.5-10mm	0.5-10mm	0.5-10mm
Motor input/output power	60W/50W	60W/50W	60W/50W
Power	7DW	7DW	7DW
Dimension WxHxD]	83 x 220 x 186mm	83 x 220 x 186mm	83 x 220 x 186mm
Protection class	IP21	IP21	IP21
Permissible ambient temperature and humidity	5-40°C,80%RH	5-40°C,80%RH	5-40°C,80%RH
Data interface	RS232	RS232	RS232

OS20-S/OS40-S-9820
LED Overhead Stirrer

Features

- High reliability and outstanding performance
- Wide range of speed from 50 to 2200rpm
- Brushless DC motor for long life, maintenance free and explosion proof
- LED screen for monitoring actual speed
- Safety circuits allow for safe stop function in anti-stall or overload conditions
- Large chuck diameter for many shaft types

Set of Overhead Stirrer tools	Cat.No. 18900743
	Contains one vertical rod, six stirring blades, Such as Propeller stirrer. Paddle stirrer, Centrifugal stirrer. Flat-blade stirrer. Radial-flow stirrer. Anchor stirrer and Disassembling tool

Specifications	OS20-S	OS40-S
Max. stirring quantity H$_2$O)	20L	400
Speed range	50-2200rpm	50-2200rpm
Max. Torque	40Ncm	50N-cm
Viscosity mas	10000mPa-s	50000mPa.s
Motor type	Brushless DC motor	Brushless DC motor
Speed display	LED	LED
Overload protection display	LED	LED
Chuck range diameter	0.5-10mm	0.5-10mm
Motor input power	60W	120W
Motor output power	50W	100W
Power	70N	130W
Voltage, Frequency	100-240V, 50/60 Hz	100-240V, 50/60 Hz
Dimension(WxHxD)	83 x 220 x 186mm	83 x 220 x 185mm
Protection class	P21	IP21
Weight	2.8kg	2.5kg
Permissible ambient temperature and humidity	5-40°C 80%RH	5-40°C 80%RH

Plate Stands

Universal Plate Stand (for OS20/40/70)
Cat. No.18900605
Dimension (WxDxH): 20x31x78cm Material: cast iron

Grand Plate Stand (for OS70)
Cat. No.18900497
Dimension (WxDxH]: 33.5x46.3x78cm Material: cast iron

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

Propeller stirrer	Cat. No.18900071
Shaft length: 40cm Stirrer diameter: 5cm Shaft diameter: 08mm staternal: 316L stainless steel Standard stirring applications at medium and high speed	

Paddle stirrer	Cat. No.18900073
Shaft length: 40cm Stirrer diameter: 6.8cm Shaft diameter: Ø8mm Material: 316L stainless steel For gentle mixing at low and medium speeds	

Straight stirrer	Cat. No.18900072
Shaft length: 40cm Stirrer diameter: 6cm Shaft diameter: 08mm Material: 316L stainless steel For low viscosity media at medium and high speeds	

Centrifugal stirrer	Cat. No.18900074
Shaft length: 40cm Stirrer diameter: 9cm Shaft diameter: 08mm Material: 316L stainless steel Blades open while speeding For narrow neck vessels at medium to high speed	

Propeller stirrer	Cat. No.18900075
Shaft length: 35cm Stirrer diameter: 6.5cm Shaft diameter: 08mm Material: PTFE coated Standard stirring applications at medium and high speed	

Paddle stirrer	Cat. No.18900077
Shaft length: 35cm Stirrer diameter: 6.8cm Shaft diameter: 28mm Material: PTFE coated For gentle mixing at low and medium speeds	

Straight stirrer	Cat. No.18900076
Shaft length: 35cm Stirrer diameter: 7cm Shaft diameter: Ø8mm Material: PTFE coated For low viscosity media at medium and high speeds	

Centrifugal stirrer	Cat. No.18900078
Snaft length: 35cm Stirrer diameter: 8.5cm Shaft diameter: 08mm Material: PTFE coated Blades open while speeding. For narrow neck vessels at medium to high speed.	

Grand propeller stirrer	Cat. No. 18900478
Shaft length: 60cm Stirrer diameter: 10cm Shaft diameter: Ø8mm Material: 316L stainless steel Standard stirring	

Grand paddle stirrer	Cat. No.18900499
Shaft length: 60cm Stirrer diameter: 10cm Shaft diameter: 28mm Material: 3161 stainless steel Gentle mixing for those stratify easily or sensitive to shear	

Grand anchor stirrer	Cat. No. 18900498
Shaft length: 60cm Stirrer diameter: 10cm Shaft diameter: Ø8mm Material: 316L stainless steel Standard stirring or for those easily precipitate	

Grand dissolving stirrer	Cat. No.18900500
Shaft length: 60cm Stirrer diameter: 10cm. Shaft diameter: Ø8mm Material: 316L stainless steel Breaking down granules in the mixture with strong shear	

Flat-blade stirrer	Cat. No. 18900625
Shaft length: 40cm Stirrer diameter: 6cm Shaft diameter: 28mm Material: 316L stainless steel Suitable for medium speed stirring. low viscosity and medium viscosity materiais	

Anchor stirrer	Cat. No.18900627
Shaft length: 40cm Stirrer diameter: 6cm Shaft diameter: Ø8mm Material: 316L stainless steel Suitable for low speed stirring, medium viscosity and high viscosity materials	

Radial-flow stirrer	Cat. No. 18900626
Shaft length: 40cm Stirrer diameter: 5cm Shaft diameter: Ø8mm Material: 316L stainless steel Suitable for medium speed or high speed agitation, low viscosity or medium viscosity materials, recommended for the treatment of gas in liquid	

Spiral stirrer	Cat. No. 18900628
Shaft length: 40cm Stirrer diameter: 5cm Shaft diameter: Ø8mm Material: 316L stainless steel Suitable for medium speed or high speed agitation, medium viscosity and high viscosity materials, recommended for liquid homogenization or suspension treatment	

Vaporation Solutions!
Leading Laboratory & Industrial Rotanaporator

Rotary evaporator is an indispensable equipment for processes of evaporation, concentration, crytallization, drying, Separation, and solvent recovery in many fields, and it is mainly used for continuous distillation of large amounts of volatile solvents under reduced pressure. It can be applied in different areas such as biological, pharmaceutical, chemical and even food&beverage industries.

Khosla Rotary Evaporator models:

Series	Image	Evaporating Flask Volume	Evaporation capacity	Temperature range	Automatic inting	Display	Page
RE100-Pro		50-3000mL	Max.1.561/h (H20)	RT-180°C	YES	LCD	p.90
RE100-S		50-3000ml	Max.1.56L/h (H20)	RT-180°C	No (Manual lifting)	LCD	p.91
RE200-Pro		20L	Max.4.5L/h (75% Alcohol)	RT-180°C	YES	LCD	p.88
RE500-E		5L	Max.2L/h (75% Alcohol)	20-100°C	YES	LCD	p.95
RE1000-E		10L	Max.3.81/h (75% Alcohol)	20-100°C	YES	LCD	p.95
RE2000-E		20L	Max.5L/h (75% Alcohol)	20-100°C	YES	LCD	p.95
RE5000-E		50L	Max.11L/h (75% Alcohol)	20-100°C	YES	LCD	p.95

RE200-Pro
20L Industrial Digital Rotary Evaporator
A promise of safety, reliability & highest level of efficiency for large volumes

Features

- Large LCD digital display with heating temperature, rotation speed, clockwise &anticlockwise and time information
- One-click automatic motor lifting (stroke 180mm), smooth and silent
- Water/oil heating bath with wide temperature range from RT to 180 °C
- Speed range from 10 to 150rpm, and interval operation in clockwise and anticlockwise directions for drying process
- Two-section vertical triple coil condensing tube with large area and strong evaporation capacity ensuring high-efficiency sample recovery
- The connector device allows for easy and quick installation of the evaporating flask
- PTFE double sealing ring with excellent sealing performance
- Switch valve for continuous collection without compromising the system vacuum and solvent distillation

Applications

Suitable for pilot-scale production, large-scale application in biology engineering, pharmaceutical industry. chemical industry, beauty industry, medical industry and food processing.

Large LCD display   Overheating protection   Chemical resistance

Two-section vertical triple coil condenser

large condensation area and strong evaporation capacity ensuring high efficient sample recovery

Switching valve design

switch valve for continuous collection without compromising the system vacuum and solvent distillation

Heating bath

- Water & oil bath
- Enhanced lifetime through exclusive use of corrosion free stainless-steel
- It adopts special heat insulation structure design so the surface temperature is far lower than the temperature in the bath to avoid personnel burns

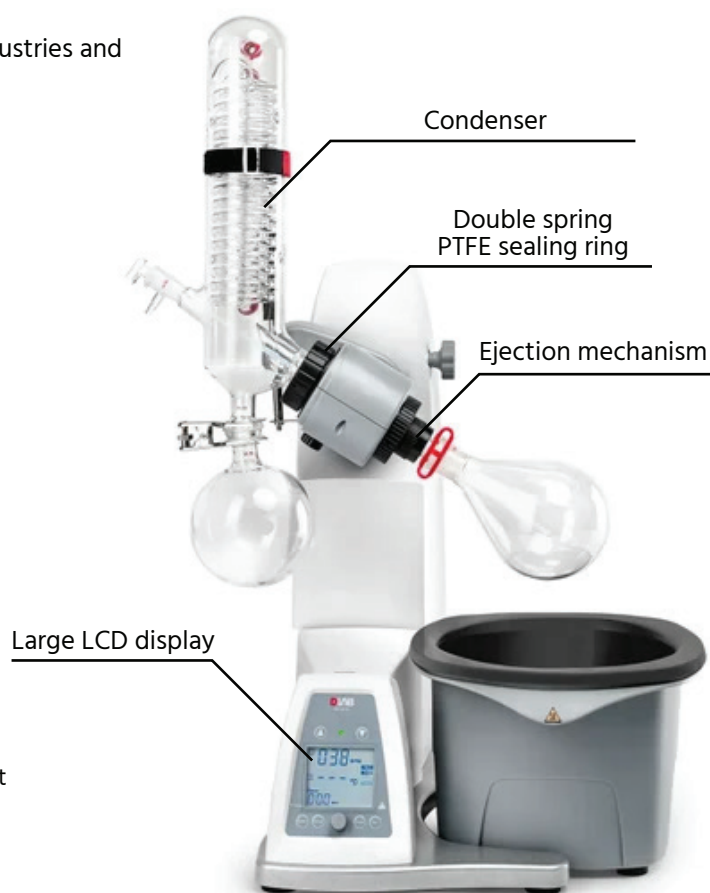| Specifications		RE200-Pra
performance	Temperature range	Room temp. 180°C (water and oil bath)
	Temperature control accuracy	Water: 11 COR: ±3°C
	Rotation Speed	10-150rpm
	Ultimate vacuum	Less 2.6mbar
	Evaporation capacity	Max.4.5L/h175% Alcohol
function	Temperature control	Micro processer PID control
	Display	LCD (temperature/speed/clockwise and Anti-clockwise/time)
	Time Setting Range	0-999min
	Lift stroke	Motorized 180mm
	Safety features	Motor over-current protection, earth leakage protection lifting overload protection, Boil dry protection, Overheating protection
components	Evaporation flask	Round flask 20L
	Receiving flask	Round flask 10L with drain valve
	Condenser	Two-section vertical triple coil condenser, cooling surface 1.2m^2
specification	Heating bath size	0450x240mm
	Hose connection	Cooling/suction nozzle outer diameter 16mm, vacuum pump nozzle outer diameter 16mm
Dimension DXWXH)		1160×600×1860mm
Voltage/Frequency		220V/50/60Hz
Power		4600w
Heating Power		4400w

RE100-Pro
Digital Rotary Evaporator

It is highly used in chemical industries, pharmaceutical industries and also higher learning institution

Features

- Digital LCD display of both rotation speed and heating temperature allows for optimal control of all distillation processes
- Automatic motor lift releases the evaporating flask to a safe position in case of power failure
- 5L heating bath with wide temperature range from room temperature to 180 °C Water/oil heating mode can be changed only through a switch
- Overheating protection temperature at 220 °C
- Boil-dry protection, automatically power off if heating without water/oil in the heating bath
- Speed range from 20 to 280rpm, and interval operation in clockwise and anticlockwise directions for drying process
- Condenser (cooling surface 1700cm^2) with excellent cooling effect
- Ejection mechanism ensures easy removal of evaporating flask
- Double spring sealing ring made of PTFE provides an excellent sealing performance
- Optional glassware with explosion proof film available

Condenser

Double spring PTFE sealing ring

Ejection mechanism

Large LCD display

Large LCD display

USB connector

Chemical resistance

Overheating protection

Compatible with all range of glassware

Specifications	RE100-Pro
Evaporating Flask Volume	50-3000m1.(Optional Thickened glass axis compatible with 31 evaporating flask)
Motor Type	Brushless DC motor
Speed Range	20-280rpm
Display	LCD(speed, temperature, time)
Direction of Rotation	Clockwise and counterclockwise
Heating Temperature Range	Room temp. to 180°C
Control Accuracy	water: ±1°C oil: ±3°C
Evaporation capacity	Max.1.561/h(H2O)
Heating Power	1300W
Lift stroke	Motorized 150mm
Timer	Yes
Time Setting Range	1-999min
Dimension [DXWXH]	465x457x583mm
Weight	15kg
Permissible Ambient Temperature	5-40°C
Permissible Relative Humidity	80%RH
Protection Class	IP20
USB Interface	Yes
Voltage/Frequency	100-120/200-240V, 50/60Hz
Power	

RE100-S
LED Digital Rotary Evaporator

LED Digital Rotary Evaporator is a basic chemical laboratory instrument suitable for evaporation, distillation and separation of chemicals. It can be used as a multifunctional system in combination with vacuum pump, vacuum controller and low temperature circulators to provide excellent distillation solutions in many laboratory applications.

Features

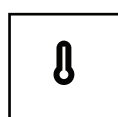- 5L heating bath with a wide temperature range (room temp.to180°C). Independent temperature control makes it can be used separately. Water/oil heating mode can be changed just through a switch

- Manual lift combined with auxiliary lift for precise positioning of the glassware

- PID control ensures high temperature accuracy at ±1°C (water)

- Overheating protection temperature at 220°C

- Boil-dry protection, automatically power off if heating without water/oil in the heating bath

- Speed range from 20 to 200rpm, timing interval operation in clockwise and anticlockwise directions for diying process

- Condenser (cooling surface 1200/1700cm^3 for selection), speeding up the flow rate of liquid with excellent cooling effect

- Ejection mechanism ensures easy exchange of evaporating flask

- Adjustable immersion angle

- Double spring sealing ring which is made of PTFE provides an excellent sealing performance

- Compatible with the entire range of RE100-Pro glassware

- Optional glassware with explosion proof film available
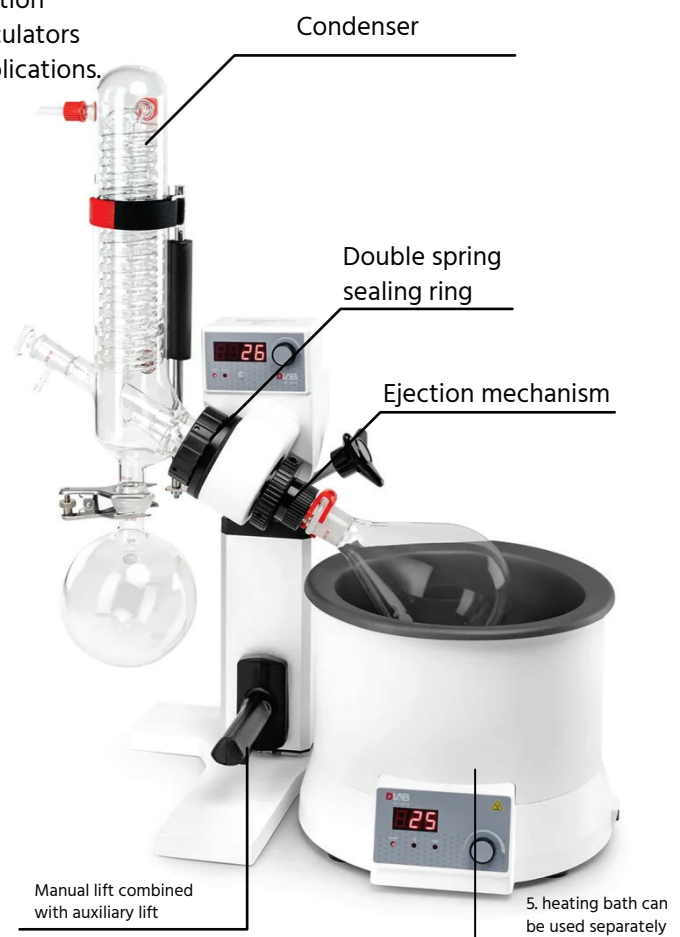
- High temperature warning when above 50°C

Condenser

Double spring sealing ring

Ejection mechanism

Manual lift combined with auxiliary lift

5. heating bath can be used separately

Chemical resistance

Overheating protection

Compatible with wide range of glassware

Specifications	RE100-Pro
Evaporating Rask Volume	50-3000mL(Optional Thickened glass axis compatible with 3L evaporating flask
Motor Type	Brushless DC motor
Speed Range	20-200rpm
Display	LED(speed, temperature, time)
Direction of Rotation	Clockovise and counterclockwise
Heating Temperature Range	Room temp to 180°C
Control Accuracy	water: ±1°Coll: ±3°C
Evaporation capacity	Max.1.56L/h(H20)
Heating Power	1200W
Lift stroke	Manual 110mm+auxiliary 100mm
Interval Time Setting Range	1-9995
DimensionDxWxH	Main Unit: 440X320×450mm Heating Bath: 300×300×240mm
Weight	Main Unit: 7kg Heating Bath: 3kg
Permissible Ambient Temperature	5-40°C
Permissible Relative Humidity	80%RH
Protection Class	IP20
USB Interface	Yes
Voltage/Frequency	100-120/200-240V, 50/60Hz
Power	1245W

Vertical

Cat. No.	Glassware type	Volume	Cooling surface
18900165	Evaporating flask(NS29/32) Receiving flask(KS35/20)	1000mL	1700cm^2
18900173	Evaporating flask (NS24/40) Receiving flask(KS35/20)	1000mL	1700cm^2
18900166	COATED) Evaporatingflask(NS29/32) Receiving flask (KS35/20)	1000mL	1700cm^2
18900174	(COATED) Evaporatingflask(NS24/40) Receiving flask (KS35/20)	1000mL	1700cm^2
18202410	Evaporating flask (NS 29/32) Receiving flask (KS 35/20)	1000mL	1700cm^2
18900476	Evaporating flask (NS 24/40) Receiving flask (KS 35/20)	1000mL	1700cm^2

Diagonal

Cat. No.	Glassware type	Volume	Cooling surface
18900163	Evaporating flask(NS29/32) Receiving flask(KS35/20)	1000mL	1700cm^2
18900171	Evaporating flask (NS24/40) Receiving flask(K$35/20)	1000mL	1700cm^2
18900164	(COATED) Evaporatingflask(NS29/321 Receiving flask (KS 35/20)	1000mL	1700cm^2
18900172	(COATED) Evaporatingflask(NS24/40) Receiving flask (KS35/20)	1000mL	1700cm^2

Heating Bath

Cat. No.	Description	Volume
18900201	Heating bath for Rotary Evaporator RE100-Pro, 220V	5L
18900202	Heating bath for Rotary Evaporator RE100-Pro, 110V	5L
6033100210	LED heating bath, 100V-120/200-240V,50/60HZ	5L

Heating Bath Lid

Cat. No.	Description	Volume
18900547	heating Bath lid for RE100-S, improve distillation efficency & ensure personnal safety from liquid splash	5L

Evaporating lask

Cat. No.	Volume	Size
18300116	50mL	NS 29/32
18300117	100ml	NS 29/32
18300118	250mL	NS 29/32
18300119	500ml	NS 29/32
18300120	1000mL	NS 29/32
18300121	2000ml	NS 29/32
18300122	3000ml	NS 29/32
18300655	50mL	NS24/40
18300201	100ml	NS24/40
18300202	250ml	NS24/40
18300203	500ml	NS24/40
18300204	1000mL	NS24/40
18300205	2000ml	NS24/40
18900204	3000ml	NS24/40
18900563	20L	RE200-P10

Foam brake

Cat. No.	Volume	Size
18300093	250mL	NS 29/32
18300207	250ml	NS 24/40

Glass axis

Cat. No.	Volume	Size
18100998	Glass axis	NS29/32
18203431	Thickened glass axis	NS24/40
18300206	Glass axis	NS 24/40
18204253	Thickened glass axis	N529/32

Receiving flask

Cat. No.	Volume	Size
18300107	100ml	KS 35/20
18300108	250mL	KS 35/20
18300109	500ml	KS 35/20
18300110	1000mL	KS 35/20
16300111	2000ml	KS 35/20
18900564	10L	RE200-Pro

Distilling spider with 5 flasks(without flask)

Cat. No.	Volume	Size
18900194	/	NS 29/32, NS24/29
18900177	/	NS 29/42, NS24/40

Distilling spider with 5 flasks(without flask)

Cat. No.	Volume	Size
16300094	/	NS 29/32, NS24/29
18300095	/	NS 29/32, N519/26
18300096	/	NS 29/32, NS14/23
18300199	/	NS24/40, NS19/72
18300200	/	NS 24/40, NS14/20
18900193	/	NS 24/40, NS 29/42

Optional Add-on

Distillation System Connection (For RE100-Pro&RE100-S)
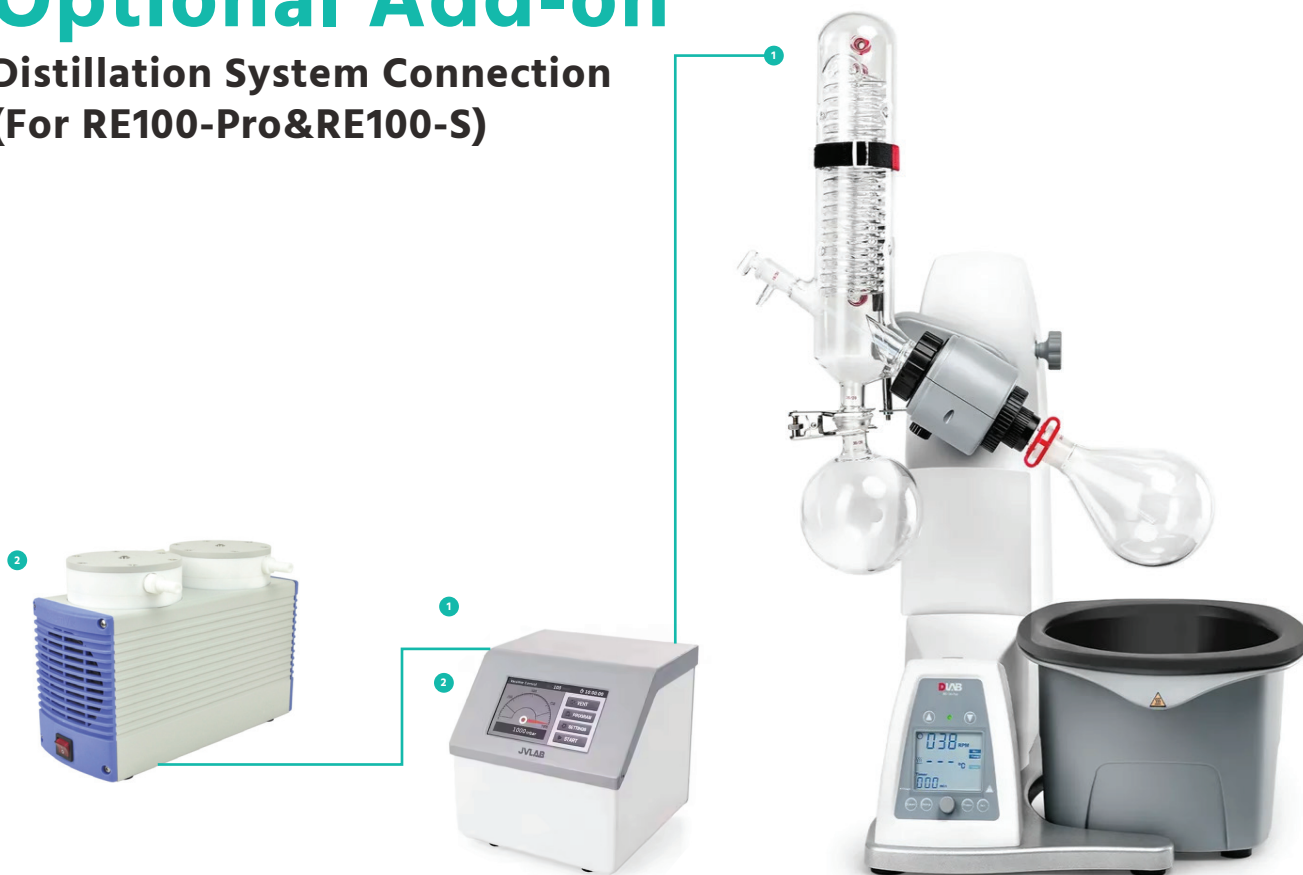
C410 Chemistry-design diapharm pump

Specifications

Maximum Vacuum:13mbar
Work Mode: Continuous Operation
Nozzle Size:8mm, Power: 95W
Motor speed:1450rpm
Flow Rate

mbar	1000	880	750	600	480	280
L/min	25	22	20	12	7.5	50

Noise:50dB

Regulator/Moisture

Cat. No.	Description
18900186	Material: PVDF, PTFE, ABS, Borosilicate Glass, Stainless Steel

Seals and other accessories

Cat. No.	Description
18204186	vacuum seal (PTFE+Viton)
18204187	Evaporation bottle spring Used with 18204186
18900190	Evaporation flask clip (red) NS29/42
18900188	Evaporation flask clip (green) NS24/40
18900744	Rotary Evaporator transparent safety shield (RE100-Pro)
18900789	Rotary Evaporator transparent safety shield (RE100-S)
18204228	Flask holder (50mL-1000mL)
	Flask holder(1L-20L)

RE500-E&RE1000-E& RE2000-E&RE5000-E

Pilot Scale Digital Control Rotary Evaporator

Features

- LCD digital display with intuitive interface for operation and control.
- PID controller, precise control, fast setting.
- Stepless automatic motor lifting of the heat bath, smooth and silent.
  The reciprocation rotation function is the most useful for concentration of sample with power or solid particles.
- Double-layer high efficiency condenser with anti-backflow design, large condensation surface area, strong evaporation capacity is a guarantee of high efficient sample recovery.
- Professional air tightness system design with PTFE sealing ring, featured with heat/corrosion resistance, and high durability.
- Optional vacuum controller to control the vacuum degree freely.
- Keep the outer surface of the heat bath at mild temperature with proprietary heat insulation design to avoid accidental personnel burn injury.
- Equipped with automatic switching valve, continuous collection can be carried out without affecting the negative pressure index of the system and solvent distillation.
- Optional water bath/oil bath heating mode (standard water bath).
- Solution can be continuously fed into evaporating flask.
- Digital display steam temperature sensing device can feed back the solvent steam temperature in real time

Specification

Photos				
Model	RE500-E	RE1000-E	RE2000-E	RE5000-E
Evaporating flask volume	5L	10L	20L	50L
Speed range	20-180	20-130	20-130	20-130
Display	LCD			
Evaporation Capacity [Max.L/h] For 75% Alcohol	2	3.8	5	11
Ultimate vacuum	9 mbar			
Timer	Yes			
Temperature range	20-100°C			
Temperature control accuracy [°C]	±1			
Heating Power [WI	2000	3000	4000	5000
Temperature Display	LCD			
Lifting mode	Motorized			
Lifting Stroke Imml	130	200	180	253
Time Setting Range	0-999min			
Voltage	220V			
Frequency IHzl	50/60			
Motor	Brushless DC motor			
Heat Bath	Teflon coating			
Protection Class	IP20			
Dimension[DxWxH]	600*290*720	790*480*1130	900*490*1320	1030*510*1370
Permissible ambient temperature [°C]	5-40			
Permissible ambient humidity	80			
Safety features	Motor over current protection, earth leakage protection, dry heating protection, overheat protection function			

Vertical

Cat. No.	Glassware type & Volume	Cooling surface
10900674	SL Main condenser	0.26m
18900639	10L Main condenser	0.49㎡
18900640	10L Secondary condenser	
18900688	20L Main condenser	1.29㎡
18900689	20L Secondary condenser	
18900648	50L Main condenser	1.75㎡
18900649	50L Secondary condenser	

Main condenser   Secondary condenser

Evaporating flask

Cat. No.	Volume	Size
18900677	5L	RE500-E
18900643	10L	RE1000-E
18900690	20L	RE2000-E
18900650	50L	RE5000-E

Receiving flask

Cat. No.	Volume	Size
18900678	3L	RE500-E
18900644	5L	RE1000-E
16900691	10L	RE2000-E
18900651	20L	RE5000-E

Three way bottle

Cat. No.	Volume	Size
18900676	-	RE50O-E
18900642	-	RE1000-E/RE2000-E/RE5000-E

Rotation axis

Cat. No.	Volume	Size
18204087	-	RE50O-E
18204034	-	RE1000-E/RE2000-E/RE5000-E

VC100
Vacuum Controller
Reliable, robust, effcient and extremely durable

The vacuum controller serves as a device for labs to display, adjust and control the degree of vacuum in vacuum systems. It generally constitutes the vacuum control system of rotary evaporator along with vacuum pump, which enables repeatable distillation experiment and recovery of many kinds of solvents in an efficient and automatic manner.

Features

- Wide range of measurement and control, 1-1,000mbar
- Two control modes available Single point control and programmed control
- Stores up to 5 programs, each containing up to 5 steps of programming control
- Large TFT touch screen display control provides easy operation
- All parts in contact with vapor or liquid are made of PTFE, ceramics or other high-performance materials which effectively resists corrosion caused by organic solvents, water, acid and alkali
- Built-in vent valve can feed inert gas into system equipment
- One-click decompression allows easy installation and dismantling of vacuum system
- Can be connected with pump power control for temporary shutdown of pump power supply after reaching stable degree of vacuum for energy conservation and environmental protection..
- Can also be operated in the normally open status of pump
- Reliable and functional design to fulfill essential needs of precise vacuum regulation

Specifications	HP500-Pro
Vacuum setting range	1-1000mbar
Vacuum measurement range	1-1000mbar
Control mode	Single-point control mode, Programmed control mode
Control program	Can store up to 5 programs, each containing 5-step control (capable to set the degree of vacuum and time)
Setting method	Touch screen setting
Display	5" TFT
Sensor overload pressure	1,500mbar
Connector diameter.	Bmm
Materials in contact with vapor	PTFE, PP, silicone and ceramics
Power	600%
Compatible conditions with vacuum pump	Power of 50Hz vacuum pump 400W Power of 60Hz vacuum pump 500W
Overall dimensionsWxDxH	189x207x193mm
Weight	4.0kg
Voltage, Frequency	110 240V,50Hz/60Hz
Operating environment	10°C-40°C 80%RH

Centrifuges

Centrifuge is used to separate liquid and solid particles or components in a liquid mixture, centrifuge series includes palm micro centrifuges, high-speed centrifuges (refrigerated and non-refrigerated), hematocrit centrifuges and low speed centrifuges.

List of Khosla models

Series	Model	Display	Max. Speed (RCF)	Rotor Capacity	Page
Palm Micro Centrifuge	D1012UA	OLED	10000rpm (7490×g)	44×0.2mL PCR tubes, 12×0.5/1.5/2mL + 4×8PCR Strips	p.102
Palm Micro Centrifuge	D1008	-	7000rpm (2680×g)	8×0.2/0.5/1.5/2mL, 0.2mL×32PCR tubes, 0.2mL×4×8PCR-strips	p.103
High speed Mini Centrifuge	D2012Plus	LCD	15000rpm (15100×g)	12×0.2/0.5/1.5/2mL	p.104
High speed Mini Centrifuge	D2012S	LCD	15000rpm (15100×g)	12×0.2/0.5/1.5/2mL	p.105
High speed Refrigerated Micro Centrifuge	D1524R	LCD	15000rpm (21380×g)	24×0.2/0.5/1.5/2mL, 36×0.5mL, 4×8PCR 8-strips	p.106
High speed Micro Centrifuge	D3024	LCD	15000rpm (21380×g)	12×5mL (cone bottom), 18×5mL (round bottom)	p.107
Hematocrit Centrifuge	DM1424	LCD	12000rpm (13680×g)	24× capillary tubes	p.109
Hematocrit Centrifuge	DM1224	LCD	12000rpm (13680×g)	24× capillary tubes	p.110
Low-speed Centrifuge	DM0412	LCD	4500rpm (2490×g)	8×15mL, 12×1.5-5/7/10mL	p.112
Multi-Purpose Low Speed Centrifuge	DM0424	LCD	4000rpm (2500×g)	Angle: 8×15mL, 12×1.5-5/7/10mL, Swing: 24×1.5mL, 6×15mL, 4×50mL	p.114
Multi-Purpose Low Speed Centrifuge	DM0408	LED	4000rpm (1900×g)	Angle: 8×15mL, 12×1.5-5/7/10mL	p.114
Multi-Purpose Low-speed	DM0506	LCD	5000rpm (2600×g)	6×1.5-5/7/10/15mL	p.116

D1012UA

High Speed Palm Micro Centrifuge

Applications

This centrifuges is ideal for quick spins, microfiltration of samples.cell separations and many other routine laboratory procedures

Features

· Max. Speed 10000rpm (7490xg):
· OLED display, may switch speed and time;
· DC motor drive. smooth and quiet operation:
· Safe, endurable and robust rotor with clamp locking design, easy to operate;
· Wide voltage technology: the speed is not affected by voltage fluctuations, high speed accuracy;
· Compatible with 0.5/1.5/2m1.×12 tubes+4×PCR8 strips, 0.2mL×44 PCR tubes,
· Screen buttons can adjust the start/stup of the motor, supports both soft braking and instant stop modes;
· Simple appearance and structure, only weight 1.5Kg;

Cat.No.19400132
SA02P2

0.2ml, rotor adapter
Used with FA12-2P rotor
12pcs/pk

Cat.No.19400133

0.5mL rotor adapter
Used with FA12-2P rotor
12pcs/pk

Specifications	D1012UA
Speed Range	2000-10000rpm,increment: 1000
Max RCF	6708xg-15/2mL) 6596-7490g-PCRS strips:
Rotor Capacity	10%-20min
Run Time	OLED
Display	112.
Acceleration/Deceleration	DC motor
Driving Motor	AC 100-240V/50Hz/60Hz
Power	40W
Noise Leve	55dB
Dimension (DxWxH)	210×180×130mm
Weight	15kg

D1008
Palm Micro Centrifuge

Applications

This centrifuges is ideal for quick spins, microfiltration of samples, cell separations and many other routine laboratory procedures.

Features

Easy to operate with dual start/stop function-Close lid for a spin speed up to 7000 rpm

Smooth and quiet operation (noise level <450B)

Accelerates and brakes in seconds

Safe, endurable and robust rotor with clamp locking design

Compatible with 2mLx8 and PCR8x4 rotors

Quick change rotor without any tool

Specifications	D1008
Max. Speed	7000rpm
Max, RCF	2680×g
Rotor Capacity	205⁄25/2mLxa D2mlx32PCR tubes 2mL×4PCR-strics
Rotor Capacity	0.2m05ml/1.5mL/2mL×22
Run time	Com nucus operation
Driving Macar DC motor	DC motor
Power Requirements	20W
Noise Level	≤45dB
Dimension DXWXH	160x170x222mm
Weight	0.5kg

Available rotors

A4-PCR8P	Cat.No.19201165

Max. speed 7000rpm
Max. RCF 2680g
Rotor capacity
02mL×32PCR bes
0.2mL×4PCR-rips
Rotor material: High strength plastic

A8-2P	Cat.No.19201164

Man speed:7000rpm
Max. RC2680×
Retor capecity
2mL/1.5ml 8.0.2m1x8,0.5ml
Rotor materialhigh strength plastic
Aval labic rotor acaptors SAO2P2, SAOSP2

Available adapters

SA02P2	Cat.No.19400029

0.2ml entor adapter
Used with AS 2F roter
Bors/pk

SA05P2	Cat.No.19400026

Chm rotor adapter
Used with 48-2P rotor
Bpcs/pk

10mm
1mm
18mm

D2012 Plus
High Speed Mini Centrifuge

Features

- Pulse operation for fast and convenient quick spins
- Speed up to 15000rpm (15100×g)
- Brushless DC motor drive quickly to the target speed
- Smooth and quiet operation (noise 54dB
- Automatic lid-lock and over-speed detection
- Passed rigorous explosion-proof test, certified with CE, CTUVUS, FCC
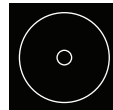
Brushless DC motor   LCD casay

Applications

Microcentrifuges are mainly used in molecular biology laboratories for Plasmid extraction, Nucleic acid purification; Pre-sequencing processing and other applications including extracting of DNA/RNA samples, sedimentation biological components, biochemical and chemical analyses of microsamples.

Available rotors

Specifications	D2012 plus
Max. Speed	15000rpm(500-15000pm), increment: 100rpm
Max RCF	15190xg, increment: 100Xg
Speed Accuracy	±20rpm
Rotor Capacity	0.2m05ml/1.5mL/2mL×22
Run Time	30sec-99min/Continuous
Acceleration/Beaking time	1281/954
Driving Motor	Brushless DC motor
Safety Devices	Door interlock, Over-speed detection, Over-temperature detection, Automatic internal diagnosis
Power Requirements	Single-phase, AC100V-240V, 50Hz/60Hz, 3A10DW
Noise level	≦54dB
Dimension(DxWxH)	255×245×140mm
Other functions	Speed/RCF switch, Short-time run function, sound-alert function

A12-2P	Cat.NO.1900010

Max. speed: 15000rom
Max. RCF: 15100xg
Rotor capacity
2mL/1.5ml×12.0.2mL×12,0.5mL×12
Rotor material: High strength plastic Available
rotor adapters: A02P2,A05P2

Available adapters

A02P2	Cat. No.19500001

0.2mL rotor adapter
Used with A12-2, A12-2P,
AS24-2 and A24-2P
rotors 24 pcs/pk

A05P2	Cat. No.19500002

0.5ml, rotor adapter
Used with A12-2,A12-2P,
A524-2 and A24-2P
rotors 24 pcs/pk

D2012S
High Speed Mini Centrifuge

Features

- Pulse operation for fast and convenient quick spins;
- Speed up to 15000rpm (15100xg);
- Brushless DC motor drive quickly to the target speed;
- Smooth and quiet operation (noise≤65dB);
- Automatic door lock and over-speed detection;
- Wide voltage technology:
  speed is not affected by voltage fluctuations,
  high speed accuracy:

Applications

Microcentrifuges are mainly used in molecular biology laboratories for plasmid extraction; Nucleic acid purification: Pre sequencing processing and other applications including extracting of DNA/RNA samples, sedimentation biological components, biochemical and chemical analyses of microsamples.

Specifications	D20125
Max. Speed	15000rpm (300-15000rpm, Increment: 100rpm)
Max RCF	15100xg
Speed Accuracy	±20rpm
Rotor Capacity	0.2m05ml/1.5mL/2mL×22 ;
Run Time	30sec-99min
Driving Motor	Brushless DC motor
Safety Devices	Door interlock, Over-speed detection, Over-temperature detection, Automatic internal diagnosis
Power	100-240 V, 50/60 Hz 70W
Noise level	≤65dB
Dimension(DxWxH)	272mm×260mm×154mm
Weight	6.2Kg
Other functions	Speed/RCF switch, Short-time run function, sound-alert function

D1524R
High-speed Refrigerated Micro Centrifuge

Applications

Ideal for centrifugation of temperature sensitive samples, such as live cells, animals or proteins, It allows them to be used in a multitude of applications, including pelleting of DNA and RNA samples, pelleting of PCR amplified nucleic acids, separation of antibody and protein precipitates, performing enzymatic tests, removing coll debris from cell homogenates, and achieving bacterial and yeast cell fractionation.

Ergonomic electronic door lock desig

Intuitive operation control panel

Clear LCD large display

Specifications	DI524R
Max. Speed	15,000гр 200-15,000rpm in 100m increments.
Max RCF	21.360xg, step: 10×g
Capacity	15.2m×24,0.2/0.5ml.x36. PCH-8 stripsx4,5mL×12,5ml×38
Terapeitsra setting	-20°C-40°C
Rur Tirre	305-39 min; HOLD icontinuous rumming
Acceleretion and deceitration time	25s 25s
Motor Type	Brushshless DC motor
Safety Perforinence	Dual door lock, over speed detection over-temperature detectios with internal diagnosis syste
Power Recernents	Single-phase, 100-120V/200-240% 50Hz/60Hz 500W
Noise Level	56dB
Dimensions[WxDxH]	332x53x283mm
Weight	30kg
Other functions	Rotation speed/RCP switchver inching poetics, ruming processindical Sound alert Adjustable acceleration/decelerati 9 invels program storage saat

Features

Electronic Magnetic door locking system the lid con be closed with one hand soft touch

Precooling, the compressor automatically starts cooling as long as the set temperature is lower than the ambient temperature

Sound indicator at the end of running

Temperature range -20°C to 40°C

Short pre-cooling time of only 7minutes from room temperature to 4°C

Up to 9 program storage capacity

3-layer sealed mtors ensure safe centifugation

High-strength aluminum alloy rotor can be fully autoclavable at 121°C

Rotor imbalance detection alarm

Adjustable acceleration/deceleration at 9 levels allows gentle braking at low speed for better separation

Five rotors with 0.2ml, 0.5ml, 1.5m, 2ml and Scit centrifuge tubes/PCR tubes capacity

An external condensation tank prevents water accumulation within centrifuge chamber

D3024
High Speed Micro Centrifuge

Features

- Double cooling air design ensures fast cooling of the rotor and low energy consumption
- 3- layer sealed rotors ensure safe centifugation
- Brushless motor drive, maintenance free
- Safety features include door interlock; excessive speed and temperature detection; automatic self-diagnostics
- Outstanding aluminum alloy rotors fully autoclavable at 121°C temperature and high pressure disinfection
- Five rotors are optional complete with 24 places 1.5/2.0mL tubes, 5.0ml., 0.2ml. and 0.5ml. tubes with adapters

Applications

Suitable for numerous biological, chemistry, clinical and research applications including molecular biology, clinical chemistry labs, wide variety of microbiology applications, such as DNA, RNA or protein isolation and many more

Brushless DC motor

Wide range of rotors

Hective Ventilation System   Conventional design

Double cooling design, enforcing air cooling from both the upper and lower side for the rotor .

Limited ventilation on the upper side of the raser

Rotors are manufactured from military-industrialgrade aluminum alloy with high mechanical strength for precise running and safety (excludes D2012 plus rotor)

- Every rotor can reach a maximum Speed of 15000rpm
- Rotors are seated on a tapered shaft, concentric and self-aligning, perfect to achieve running stability at high speeds
- D3024 & D1524R with three-layer sealed rotors/anti-sample overflow prevents accidental leakage
- D3024 & D1524R rotors have passed MCA test according to IEC/EN61010-2-20, including mechanical safety and bio-safety tests
- Powerful cooling system minimizes rotor heating. D3024 rotors maintain at 10°C and D1524R rotors less than 8°C after running an hour

Seals within the aluminum alloy rotor

Three rubber seals fitted to achieve hio safe condition
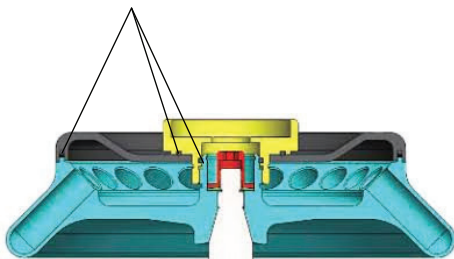
Rotor Features

Fully autoclavable

High strength aluminum alloy rotors are fully autoclavable, withstanding steam sterilizing at 121°C for 20 minutes

Three-layer seal

D3024 & D1524R rotors are designed to prevent sample leakage. Each and every rotor is hermetically sealed by three rubber seals.

Mechanical safety

Centrifuges confirm to MCA standard IEC/EN61010-2-20, causing disruption by partially cutting and overloading rotor assembly, and guarantees that no part shall be detached to cause danger to person or the environment

Specifications	DI524R
Max. Speed	15000rpm/200-15000rpm) increment: 10rpm
Max RCF	21380g, increment:laxs
Speed Accuracy	±20 rpm
Rotor Capacity	15/2mL×24,0.2/0.5mL×36 PCR-8 stripsx4,5mL×12.5m×19
Rur Tirre	30sec 99min/Continuous
Acceleration/Braking time [Sec]	25s 25s
Motor	Brushshless DC motor
Safety Devices	Dual door interlock Over-speed detection, Automatic internal diagnosis
Power Requirements	Single-phase, AC200V-400 50Hz/60Hz, 5A,AC100V-320 50Hz/60Hz, 8A 200W
Noise Level	<64dB
Dimensions[WxDxH]	280×364x266mm
Weight	12kg
Other functions	Speed/RCF switch; Short-time run function, sound-alert function

Available rotors

AS24-2 — Cat. No.19400069

for D3024 & D1524R

Max. speed: 15000rpm
Max. RCF: 21380xg
Rotor capacity:
2ml/1.5ml×24/0.2mL×24/0.5ml×24
Rotor material: Aluminum alloy
Biosealing: Yes
Available rotor adapters: A02P2,A05P2

AS12-5V (cone bottom) — Cat. No.19400036

for D3024 & D1524R

Max. speed: 15000rpm
Max. RCF: 21380×g
Rotor capacity: 5ml. x 12(Cone bottom)
Rotor material: Aluminum alloy
Biosealing: Yes

AS36-05 — Cat. No.19400071

for D3024 & D1524R

Max. speed: 15000rpm
Max. RCF: 21380×g
Rotor capacity: 0.5ml. x 36,0.2mL×36
Rotor material: Aluminum alloy
Biosealing: Yes
Available rotor adapters: A02P05

AS4-PCR8 — Cat. No.19400072

for D3024 & D1524R

Max, speed: 15000rpm
Max RCF: 21380g
Rotor capacity:0.2mL/PCRSX4
Rotor material: Aluminum alloy
Bioscaling: Yes

AS18-5 (Round bottom) — Cat. No.19400073

for D3024 & D1524R

Max speed 15000 pm
Max. RCF:21380Xg
Rotor capacity:Smlx 181 Round bottom
Rotor material Aluminum alloy
Biosealing Yes

Available adapters

A02P2 — Cat. No.19500001

0.2mLrelor acapter
Used with A12-2, A12 2P, AS24-2 and
A24-29 rotors 24pcs/pk

A05P2 — Cat. No.19500002

0.5ml. rotor acapter
Used Used with AL2-2, A12-2P, AS24-2
and A24-2P rotols
24pcs/pk

A02P05 — Cat. No.19500003

0.2mL rotor adapter
Used with AS36-05 totor
360cs/p

DM1424
Hematocrit Centrifuge

Features

- Speed range of 200-12000 rpm Precise and independent control of speed and time
- Easy operation with intuitive menu and LCD display
- Maintenance-free brushless DC motor
- Pulse operation for fast and convenient quick spins
- Advance features include speed/RCF switch; short-time run function; audible alert function
- Safety features include door interlock, overspeed detector over-temperature detector, automatic internal diagnosis and automatic rotor identification

DM1224
Economical Nematocrit Centrifuge

Features

- Speed range of 500-12000 rpm
- Precise control of speed and time
- Maintenance-free brushless DC motors
- Door interlock

Applications

Hematocrit centrifuges are used for determination of erythrocyte fractions in blood as well as micro solution separations. It provides hematocrit values (HCT) for testing in biochemistry, immunity, genetics, blood separation and for general clinical tests for diagnostic purposes and aiso for dope tests. They have special applications for the photometric determination of bilirubin content in neonate blood samples. They are suitable for extraction of DNA and RNA. Veterinary clinics and Vitamins testing for infants

Specifications	DM1424	DM1224
Speed Range	200-12000rpm, increment: 10rpm	500-120001pm, increment: 100rpm
Max. RCF	13680xg	13680×g
Speed Accuracy	±20	±100
Run Time	30sec-99min/Continuous	10sec-99min/Continuous
Motor	Brushless DC motor	Brushless DC motor
Display	LCD	LCD
Safety Devices	Door interlock, Overspeed detector: Automatic internal diagnosis, Automatic rotor identification	Door interlock
Acceleration/Braking time	30s 30s	40s 40s
Power Requirements	Single phase. 200V-240V, 50Hz/60Hz, SA: 100V-120V, 50Hz/60Hz, 5A 160W	Single-phase, 200V-240V,50Hz/ 60Hz, 5A; 350W
Dimension(WxDxH)	250x364x274mm	280×364×213mm
Weight	10.5kg	8.5Kg
Advanced features	Speed/RCF switch, Short-time run function; sound-alert function	Speed/RCF switch, Short-time run function, sound-alert function

Available adapters

AC24	Cat. No.19400047

DM1424 & DM1224

Max. speed: 12000rpm
Max. RCF: 13680xg
Rotor capacity: capillary tubes x24
Rotor material: High strength aluminurn

DM0412
Low Speed Centrifuge
Features

- Easy operation with intuitive menu and easy-to-read display
- Speed can be set in RPM/RCF
- Maintenance-free brushless DC motor
- Quick spin function with press and hold pulse key
- Lid with electric lock and automatic release function
- Automatic lid-lock release after running
- Braking time 2 steps adjustable only for A6-50P rotor
- High strength plastic rotor gives excellent balance to guarantee stable working
- Dual protection housing particularly benefit for safe running
- Gentle braking at low speeds with efficient separation
- CE marked, CTÜVus, and passed explosion proof test

Applications

DM0412 is ideal for separation of whole blood components, such as serum, plasma, buffy coat, red blood cells, as well as other bodily fluids.

Specifications	DI524R
Speed Range	300-4500rpm, increment: 100rpm
Max. RCF	2490xg
Speed accuracy	±20rpm
Rotor type	A12-10P, A6-SOP
Run Time	30sec-99min HOLD (Continuous operation)
Motor	Brushless DC motor
Display	LCD
Safety Devices	Door interlock, Overspeed detector Automatic internal diagnos
Acceleration/Braking time	A12-10P: 20s 1 1354 A6-50P: 2051 205/905-
Power Requirements	Single-phase, 100V-240V 50Hz/60Hz, 3A70W
Dimension (WxDxH)	354x304x215mm
Weight	6kg
Advanced features	Speed/RCF switch Short-time run function sound-alert function

Available rotors

A12-10P (round bottom)	Cat. No.19400068
for DM0412 & DM0424 & DM0408 Max speed: 4500rpm Max ROF: 2410xg Rotor capacity: FRx15ml 12x10mL Rotor material: High strength plastic	

A6-50P (round bottom)	Cat. No.19100197
For DM0412(A6-50P) Maxspeed 4000rpm Max ROF: 1800xg Rotor capacity: 50mL×6 or 15mLx6 Rotor material High strength plastic	

A12-10P and A6-50P are not interchangeable

Available tubes	Tube quantity	Dimension (OLxmm)	Adapters	Maximum speed(rpm)	Radius (CM)	Maximum RCF(xg)
1.5-5ml con	8	17x120	-	4500	11	2490
1.5-5ml.vacu	12	13x75	A10P15 & Plug	4500	9.8	2218
4-7mL vacu	12	13x100	A10P15	4500	11	2490
		16x107	Plug		9.8	2218
8.5-10ml vacu	12	16x107	-	4500	11	2490
2.7-3ml(EU) collection tube	12	11x66	A10P15 & Plug	4500	9.8	2218
7.5-8.2ml(EU) collection tube	12	15x92	A10P15	4500	11	2490

DM0424&DM0408
Multi-Purpose low Speed Centrifuge

Features

- Quiet, compact, and convenient with LCD display
- Maximum up to 4000rpm Speed can be set in RPM/RCF, with 3 customizable routine programs (Blood, Urine & Faecal)
- 3 acceleration level & 4 level deceleration
- Maximum capacity 50mL x4, Accommodating different sizes of blood collection tubes and centrifuge tubes suitable for swing out rotor and angle rotor
- Automatic internal diagnosis and self-detection
- Maintenance-free brushless DC motor

Applications

Multi-purpose low speed centrifuge are versatile and can be used in applications from clinical to biochemical for qualitative analysis of serum, plasma, blood, and urine.

Specifications	DM0424	DM0408
Speed range	500-4000rpm increment: 100rpm	300-4000rpm increment: 100rpm
Max. RCF	2500xg	1900×g
Speed accurally	±100rpm	±100rpm
Rotor	Swing6x15mL Swing4x50ml. Angle 24x15ml., Angle 12×10ml/8x15mL	Angel 8x15mL(Default). Angel 12x10ml.
Run time	1-29min, HOLD	1-99min, HOLD
Motor	Brushless DC motor	Brushless DC motor
Display	LCD	LED
Program	Blood: 3200rpm, 10min. Urine: 1800rpm,5min. Faecal: 1300rpm,10min.	Blood: 3200rpm, 10min Urine: 1800rpm,5min Faecal: 1300rpm, 10min
Safety Device	Automatic intemal diagnosis	Automatic internal diagnosis
Acceleration/deceleration	3 4 stops	25s 25s
Power Requirements	Single phase, 100-240V, 50Hz/60Hz, 110W	Single phase. 100-240V, 50Hz/60Hz, 85W
Dimension(WXDXH)	364×440×26mm	286x367x227mm
Weight	14.5kg	9.2kg
Noise Level	<60dB(A)	<60dB(A)

Available rotors

S6-15	Cat. No.19400082

for DM0424

Max, speed: 4000rpm
Rotor capacity: 15mL×6 Rotor
material: Aluminum alloy Default
adaptor: A15P22, ASP17

S4-50	Cat. No.19400100

for DM0424

Max. Speed: 4000rpm
Rotor capacity: 50ml x4
Rotor material: Aluminum alloy
Default adaptor: A15P30, ASP17

A24-15P	Cat. No.19400101

for DM0424

Max speed: 4000rpm
Rotor capacity: 15mL×24
Rotor material: High strength plastic
Defsuit adaptor: A15P22, ASP17

A8-15P	Cat. No.19400084

for DM0424/DM0408

Max. Speed: 4000rpm
Rotor capacity: 15mLXB
Rotor material: High strength plastic
Default adaptor: A15P22

A12-10P	Cat. No.19400068

for DM0424/DM0408
DM0412

Max.speed: 4000rpm
Rotor capacity: 8x15mL or 12×10mL Rotor
material: High strength plastic

Available adapters

A15P30	Cat. No.19500024

50mL. change 15mL adapter,
Adapted to 17x120mm centrifuge tube,
13/16×100mm blood collection tube 4pcs/pk

A15P22	Cat. No.19500021

15mL adapter for 12x120mm
centrifuge tube, 13/16×100mm blood
collection tube 24 pcs/pk, for S6-15,
A24-15P, AB-15P

A5P17	Cat. No.19500022

5mL adapter, Adapted to 13×75mm
blood collection tube 24 pcs/pk,
for $4-50, 56-15, A24 15P

A2P17	Cat. No.19500023

1.5/2ml. Cryogenic Vials/centrifuge
tube adapter, 24 pcs/pk, for $4-50,
56-15, A24-15P, A12-10P, A6-50P

DM0506
Low-speed Centrifuge

Available adapters

A5P17	Cat. No.19500022
SmL adapter, Adapted to 13×75mm blood collection tube	

A2P17	Cat. No.19500023
1.5/2ml. Cryogenic Vials/centrifuge tube adapter	

Specifications	DI524R
Speed Range	300-5000rpm, increment:10rpm
Max. RCF	2600xg, incement: 10xg
Speed accuracy	±20rpm
Rotor type	6x15ml/10mL/7mL/1.5-5ml
Run Time	30sac-99min, HD (continuous running)
Display	LCD
Preloaded Program	P1/P2
Acceleration/Deceleration	1 2
Safety Devices	Door interlock, Overspeed detecto Automatic internal diagnosis
Moto	Brushless DC motor
Power Requirements	Single-phase, 100V-240V, 50Hz/60Hz, 70N
Dimension WxDxH	300X240X180mm
Weight	5.2kg
Advanced features	Speed/RCF switch; sound-alert function

Features

- Speed range from 300-5000 rpm
- Set and displayed by RPM or G-force
- Two programs P1/P2, easy to start the procedure by one key
- Two deceleration speeds setting to meet different requirements
- Easy-to-read LCD display and sound alert
- Automatic lid-lock release after running
- Maintenance-free brushless DC motor

Applications

DM0506 is widely used in the medical industry. Ideal for separation of serum, plasma, urine, fecal samples in biochemical & medical laboratories. It is an essential equipment of every clinical laboratory, blood bank, medical college and medical research institute.

DM0636
Multi-Purpose Low-speed Centrifuge

Features

- Speed from 300-6000 rpm
- Maximum capacity: 100 mLx4
- 9 Acceleration/10 Brake speed settings to ensure optimal separation
- A wide range of rotors optional (fixed angle and swing-out rotors)
- Automatic rotor identification
- Pulse Key for quick spin
- 9 procedures stored in memory makes the operation much simplified
- Maintenance-free brushless DC motor
- Suitable for tubes with caps, blood collection or urine tubes
- Comprehensive and versatile range of accessories

Applications

DM0635 is ideal for chemistry, cytology. rescarch laboratories, industrial laboratories and other.
This is suitable for tubes with caps, blood collection or urine tubes. Swing out roters and adapters can be compatible with standard tubes up to 100mL at low speed.

Specifications	DM0636
Speed Range	300-6000rpm increment:10rpm
Max. RCF	4100xg
Speed accuracy	±20rpm
Max. Capacity	100mLx4
Run Time	30sec-99mins/continuous
Motor	Brushless DC motor
Display	LCD
Program Memory	9
Safety Devices	Door Imbalance protection Over speed & Over temperature detection
Acceleration/Deceleration	9 /10 steps
Power Requirements	660W, Single-phase AC220V-240V, 50Hz/60Hz, 6.3A; AC110V-120V,50Hz/60Hz,10A
Noise Level	65dB
Dimension (WxDxH)	570×445×295mm
Weight	36kg
Advanced features	speed/rcf switch; Rotor identification

SE4-100 (standard accessory)	Cat. No. 19400041
for DM0636 Max speed: 4000rpm Max. RCF: 2950×g Rotor material: stainless steel body and adapter	

Cat. No.	19400045		19400044			19400043		19400042				
bucket	x4											
tube	x 36		x 16			x8		x4	x4	x4	x8	x20
Nominal volume	3-7ml		10ml	12ml	15ml	50mL		100mL	85mL	50mL	15mL	3-7ml
ØXLmm	13x75	13x100	16x100	17x105	17x120	29.5x100		38x108	38x104	29.5x100	17x120 13x100 13x75	13x100 13x75
tube												
adapter	with plug	-	-	A15V		A50V		-	A100P80 A50V	A100P50/80	A100P15	A100P10
Package	36	-	-	16		8		-	4	4	4	4
Tubes per rotor	36	36	16	16	16	8		4	4	4	8	20
Radius(cm)	14	16.5	15.9	15.9	15.9	15.9		15.9	15.9	15.9	15.1	14.7
Max RCF (g-force)	2500	2950	2840	2840	2840	2840		2840	2840	2840	2840	2840

Available rotors

S2-MP — Cat. No.19400062

DM0636

Max. speed: 4000rpm
Max. RCF: 2250 * 8
Rotor capacityMicro-plates
384-PCR/96-PCR/Elisa plates x 8pcs; Deep well plates s * 4pcs Rotor material: stainless steel body and aluminum buckets

CAS6-50V (cone bottom) — Cat. No. 19400038

DM0636

Max speed: 6000rpm
Max. RCF: 4020g Rotor capacity:
50mL×6 or 15mlx6 Rotor material:
aluminum Biosealing: Yes

AS12-PCR8 — Cat. No.19400036

DM0636

Max speed: 6000rpm
Мак. RCF: 4020g
Rotor capacity: PCR 8 trips X 12 Rotor maturial: aluminum
Binsealing: Yes

AS18-5V (cone bottom) — Cat. No. 19400035

DM0636

Max. speed: 6000pm
Max. RCF. 4020xg
Rotor capacity: 5mL * 18 Rotor material: stainless steel body and aluminum buckets
Biosealing: Yes

AS30-2 — Cat. No.19400034

DM0636

Max speed: 6000rpm
Max, RCF: 4520g Rotor capacity: mE *
30 Rotor material: aluminum
Riosealing: Yes

A8-50 (round bottom) — Cat. No.19400039

DM0636

Max speed: 5000rpm
Max. RC: 3060xg
Cat. No.19400039
Rosor capacity: $* \mathbb{S} * \mathfrak{O} ^ (r - 1)$ 15mLx16
Rotor material: aluminum body and stainless steel adapter
Defa, l, adapters: SE10093168,SE100P17x16

AS60-2 — Cat. No.19400037

DM0636

Max speed: 6000rpm
Max RCF: C(4,25) * 6
Rotor capacity: 2mL * 60 Rotor material: aluminum
Biosealing: Yes

A30-15 (round bottom) — Cat. No.19400040

DM0636

Max speed: 4500rpm
Max. RCF: 3210xg
Cat. No.19400040
Rotor capacity: 15mL * 30 Rotor material: aluminum body and stainless steel adapter

Mixing

Mixers range can be divided into different series as per mixing speed, working mode, load capacity etc:

Series	Image	Model	Speed Range	Working mode	Capacity	Page
Vertes Miser		MX-S	0-3000rpm	Orbiral (touch+continuous model)	-	p.123
		MX-F	3000rpm (fixed)	Orbiral (touch+continuous model)	-	p.125
		MX-E	3000rpm (fixed)	Orbiral (touch model)	-	p.126
Cell disruptor		MX-C	0-3000rpm	Orbiral (touch+continuous model)	8x2mL	p.127
Microplate Mixer		MX-M	0-1500rpm	Orbiral (continuous model)	0.5kg	p.128
Dist Retatar		MX RD Pro	10-70rpm	360° rolling (Timer + continuous)	60x1.5mL 16x15ml, 8x50ml (available for 3 layers)	p.130
Retisserie Rutatar		MX-RL-Pro	10-70rpm	360° rolling (Timer + continuous)	45x1.5mL.24x15mL, 24x50mL	p.131
Disk Rotator		MX-RD-E	0-80rpm	360° rolling (continuous)	48x3ml 16x150. 8x50mL	p.133
Rotsrie Botator		MX-RI-E	0-80rpm	360° rolling (continuous)	32x2mL 20×15mm, 16x50mL	p.134
Faching Batator		SK-R305-E	0-30rpm	30+3 rocking (continuous)	10x10mL, 4x50ml	p.135
		SK-R30L-E	0-30rpm	30+3 rocking (continuous)	16x10ml 6x50mL	p.135
		SK-R30D-E	0-30rpm	40+3 rocking (continuous)	32x2ml,12x50ml	p.135
RollerMixer		MX-T6-Pro	0-70rpm	360° rocking&rolling (Timer continuous)	4kg	p.136
		MX-T6-S+	0-70rpm	360 racking&rolling (continuoust)	4kg	p.136

Shaker series can be divided to different types as per different motion models

Series	Image	Model	Plate Size	Display	Speed Range	Max Load Capacity	Page
Orbital Shaker		SK-0330-7 10-Pro	32x32cm	LCD	100-500rpm	7.5Kg	p.137
		5K-0180-Pro	25x24,5cm	LCD	100-800rpm	2.5Kg	p.137
		SK 033 0330 M	33.5x33.5cm	LCD	70-400rpm	3Kg	p.138
		SK-018 0180-5	28.30x26.8cm	LED	40-200rpm	2Kg	p.138
Linear Shaker		SK-13.30 Pro	32x32cm	LCD	100-350rpm	7.5Kg	p.140
		SK-L180-Pro	23-24.5cm	LCD	100-350rpm	2.5Kg	p.141
		SK-L1B0-S	26.8x25.5cm	LED	40-200rpm	2Kg	p.141
Rocking Shaker		SK-R330-Pro	30x28.5cm	LCD	10-70rpm	10Kg	p.142
		SK-K1807-5	20.8x208cm	LED	10-80rpm	2Kg	p.142
3D Shaker		SK-03309-Pro	30x28.5cm	LCD	10-70rpm	5Kg	p.143
		SK D1810-5	26.8X26.8cm	LED	10-80rpm	2Kg	p.143

MX-S
Variable speed Vortex Mixer

Features

• Variable speed of 0 to 3,000rpm for gentle shaking to rapid mixing of samples
Touch or continuous operation mode
• Includes a standard top head for mixing a single test tube or other small vessel up to 30mm in diameter
Electronic speed control maintains constant speed éven during changes in load
• Steel base with specially designed vacuum suction feet provides stability and dampens vibration
Robust aluminum-cast construction

VT1.1 Standard top(Default   **Cat. No.18900034**

for <030mm tubes and small
vessels

Specifications - MX-S (Adjustable Speed)

Parameter	Value
Voltage, Frequency	100–120V / 200–240V, 50/60Hz
Power	60W
Mixing motion	Orbital
Orbital diameter	4mm
Motor type	Shaded pole motor
Motor rating input	58W
Motor rating output	10W
Speed range	0–3000rpm
Speed display	Scale
Run type	Touch operation / Continuous
Dimension (W × H × D)	127 × 130 × 160mm
Weight	2.0kg
Permissible ambient temperature	5–40℃
Permissible relative humidity	80%RH
Protection class	IP20

MX-S Accessories and Tube Adapters

Accessory Name	Catalog Number	Description
VT1.3.1 tube adapter	Cat. No.18900020	for 48 test tubes, Ø6mm (1mL)
VT1.3.2 tube adapter	Cat. No.18900021	for 15 test tubes, Ø10mm (1.5~2mL)
VT1.3.3 tube adapter	Cat. No.18900022	for 16 test tubes, Ø12mm (5mL)
VT1.3.4 tube adapter	Cat. No.18900023	for 8 test tubes, Ø16mm (10mL)
VT1.3.5 tube adapter	Cat. No.18900024	for 8 test tubes, Ø20mm (10~15mL)
VT1.3.8 tube adapter	Cat. No.18900395	for 24 holes test tubes, Ø10mm
VT1.3.9 PCR tube adapter	Cat. No.18204185	for 56 test PCR tubes, strips of 8, Ø5mm (0.1mL~0.5mL)
VT1.2 Tube holding rod	Cat. No.18900044	used with tube adapters
VT1.3 Universal top plate	Cat. No.18900505	Ø100mm
VT1.3.6 Platform pad	Cat. No.18900043	Ø99mm, multiple small tubes and vessels
VT1.3.7 vacuum chuck	Cat. No.18900158	made of rubber
MX-S Microplate clamp	Cat. No.18900042	

Application of Accessories

Applicable for: Adjustable speed model (0–2500 rpm)

Accessories	Touch mode (High speed area)	Continuous mode (Low speed area)
VT1.1	Y	Y
VT1.2 + VT1.3.1	Y	
VT1.2 + VT1.3.2	Y	
VT1.2 + VT1.3.3	Y	
VT1.2 + VT1.3.4	Y	
VT1.2 + VT1.3.5	Y	
VT1.3 + VT1.3.6	Y	Y
VT1.3 + VT1.3.1		Y
VT1.3 + VT1.3.2		Y
VT1.3 + VT1.3.3		Y
VT1.3 + VT1.3.4		Y
VT1.3 + VT1.3.5		Y

MX-F
Fixed speed Vortex Mixer

Applications

Vortex mixers are ideal for mixing liquid components in tubes, resuspension of cells, using an eccentric mechanism. They are widely used in clinical labs performing virus diagnostic tests and in biological & chemical analysis applications

It is perfect for mixing high-viscosity materials, such as waxes and slurries; to mix battery slumes, paints pharmaceuticals and more.

Wide range of accessories

VT1.1 Standard top(Default)   **Cat. No. 18900034**

for <230mm tubes and small vessels

Specifications	MX-F (Fixed Speed
Parameter	Value
Voltage, Frequency	100–120V / 200–240V, 50/60Hz
Power	60W
Mixing motion	Orbital
Orbital diameter	4mm
Motor type	Shaded pole motor
Motor rating input	58W
Motor rating output	10W
Speed range	3000rpm
Speed display	-
Run type	Touch operation / Continuous
Dimension (W × H × D)	127 × 130 × 160mm
Weight	2.0kg
Permissible ambient temperature	5–40℃
Permissible relative humidity	80%RH
Protection class	IP20

MX-E

Economic Vortex Mixer

Features

Compact portable and fits nicelyon bench-top (erase desk-tops and table tops)

Touch operation, Fixed speed of 3,000rpm for rapid mixing of samples

Powerful and efficient 12V DC brushless motor is smooth operation and has long life

Foot pad design secures the mixer in place and does not wobble during operation

Applications

Used to rapidly mix small samples of liquids for lab research-es or othenworks like to mix Nail Polish, Gel Polish, Eyelash Adhesives acrylic paint, tattoo ink and so on

Specifications   MX-E

Parameter	Value
Voltage	100–240V
Frequency	50/60Hz
Power	12W
Mixing motion	Orbital
Revolving diameter	4.8mm
Motor rating output	10W
Rotational speed	3000rpm
Operating mode	Touch Operation
External dimension	133 × 133 × 80mm
Dimension of packing box	250 × 185 × 130mm
Weight	0.6kg
Permissible ambient temperature	5–40℃
Permissible relative humidity	≤80%RH
Protection class	IP21

MX-C
Cell Disruptor

Specification	Details
Functions	Disrupts cells, yeast, bacteria, algae, fungi, etc. to prepare cell lysates for further processing
Mixing motion	High–speed circumferential vortex and oscillation function
Orbital diameter	4mm
Speed range	0–3000rpm (Adjustable)
Speed display	Scale
Capacity	8 × 2mL
Power Requirements	200–240V / 100–120V, 50/60Hz, 60W
Dimension	127 × 130 × 160mm
Weight	2.0kg

Features

- Durable, reliable and affordable
- Easy to operate, rapid hands-free disruption of up to 8 microtubes
- Processes at a constant, controlled shear rate
- Maintains genome integrity of the biological samples
- Facilitates subsequent purification of genomic material
- Best suited for research laboratories demanding accurate, reproducible, repeatable results

Applications

Suitable for all sample types Lysis of yeast and fungi; for isolation of genomic material from faecal samples; fungi and bacteria samples; soil samples for Isolation of PCR-Ready Genomic DNA from Soil Samples; DNA & RNA Purification; Lysis of bacteria; Lysis of soft tissues; Isolation of genomic DNA, Purification of DNA; Cell Lysis; Used to lyse cell wall of yeast Break hard/brittle samples

MX-M
Microplate Mixer

Features

- Wide range of speed from 0 to 1,500 rpm (Double microplate:0-1,000 rpm)
- Excellent performance with electronic speed control
- High speed and effective mixing for microplates
- With adapters for most popular vessels and microtiter plates
- Used for various mixing applications with optional adapters
- Maintenance-free brushless DC motor

Applications

Microplate Mixer is used for holding single or double microplates. The footprint of MX-M Microplate Mixer occupies less bench space and makes the storage easier. It is widely used in life sciences including microbiology, cell and molecular biology, immunology and biotechnology

Accessory	Catalog Number	Description
VT1.3.1 tube adapter	Cat. No.18900020	For 48 holes test tubes, Ø6mm
VT1.3.2 tube adapter	Cat. No.18900021	For 15 holes test tubes, Ø10mm
VT1.3.3 tube adapter	Cat. No.18900022	For 8 holes test tubes, Ø12mm
VT1.3.4 tube adapter	Cat. No.18900023	For 8 holes test tubes, Ø16mm
VT1.3.5 tube adapter	Cat. No.18900024	For 8 holes test tubes, Ø20mm
VT1.3.8 tube adapter	Cat. No.18900395	For 24 holes test tubes, Ø10mm
VT1.3.9 PCR tube adapter	Cat. No.18204185	For 56 test PCR tubes, strips of 8, Ø5mm (0.1ml~0.5ml)
PS1.1 Universal top plate	Cat. No.18900067	Used with tube adapters
MX-M Microplate clamp	Cat. No.18204340	Standard single microplate clamp
MX-M Double microplate clamps	Cat. No.18204342	Double microplate clamps

Specification	Details
Shaking movement	Orbital
Orbital diameter	4.5mm
Max. shaking weight (with accessory)	0.5kg
Motor type	Brushless DC motor
Motor rating input	18W
Motor rating output	10W
Speed range	Single microplate: 0–1500rpm Double microplate: 0–1000rpm
Speed display	Scale
Voltage, Frequency	100–240V, 50/60Hz
Power	20W
Dimension	260 × 150 × 80mm
Weight	3kg
Permissible ambient temperature and humidity	5–40℃, 80%RH
Protection class	IP20

MX-RD-Pro
LCD Digital Tube Rotator

Features

- LCD display of speed and time
- Circular rotating action, gives gentle but effective mixing
- Adjustable speed range from 10 to 70 rpm
- Adjustable angle from 0 to 90"
- Brushless motor ideal for extended use, and longer life
- Wide variety of accessories are available

Applications

Laboratory Tube Rotators are ideal for Biochemistry, Molecular Biology and Clinical applications. Provides a gentle but effective mixing of biological samples in 1.5ml. to 50ml. micro tubes, used in a variety of applications including immune precipitations, prevention of blood coagulation, latex diagnostics etc

Specification	Details
Motor type	Brushless DC motor
Tilt angle	0–90°
Speed range	10–70rpm
Speed display	LCD
Timer display	LCD
Timer	1–1199min
Operation mode	Continuous / timer
Voltage, Frequency	100–240V, 50/60Hz
Power	40W
Dimension [D × W × H]	280 × 210 × 300mm
Permissible ambient temperature and humidity	5–40℃, 80%RH
Protection class	IP21

MX-RL-Pro
LCD Digital Tube Rotator, Horizontal

Features

- LCD displays speed and time
- Adjustable speed range of 10 to 70 rpm
- Provides gentle but effective rolling and mixing
- Can be used in cold rooms or incubators
- Wide variety of Disk accessories and Rotisserie accessories available

Applications

Laboratory Tube Rotators are ideal for Biochemistry, Molecular Biology and Clinical applications. Provides a gentle but effective mixing of biological samples in 1.5ml. to 50ml. micro tubes, used in a variety of applications including immune precipitations, prevention of blood coagulation, latex diagnostics etc

Specification	Details
Motor type	Brushless DC motor
Speed range	10–70rpm
Speed display	LCD
Timer display	LCD
Timer	1–1199min
Operation mode	Continuous / timer
Voltage, Frequency	100–240V, 50/60Hz
Power	40W
Dimension [D × W × H]	220 × 510 × 260mm
Permissible ambient temperature and humidity	5–40℃, 80%RH
Protection class	IP21

Accessory	Catalog Number	Description
Disk Accessories Type-1	Cat. No.18900160	Used for MX-RD-Pro, for 1.5mL×60 centrifuge tubes holder
Disk Accessories Type-2	Cat. No.18900161	Used for MX-RD-Pro, for 1.5mL×16 centrifuge tubes holder
Disk Accessories Type-3	Cat. No.18900162	Used for MX-RD-Pro, for 50mL×8 centrifuge tubes holder
Disk support rods	Cat. No.18900140	4 pcs in a group, used with disk accessories
Rotisserie Accessory Type-1	Cat. No.18900142	Used for MX-RL-Pro, for 1.5mL×48 centrifuge tubes held horizontally
Rotisserie Accessory Type-2	Cat. No.18900143	Used for MX-RL-Pro, for 15mL×24 centrifuge tubes held horizontally
Rotisserie Accessory Type-3	Cat. No.18900144	Used for MX-RL-Pro, for 50mL×24 centrifuge tubes held horizontally
Rotisserie Accessory Type-4	Cat. No.18900145	Used for MX-RL-Pro, for 1.5mL×32 centrifuge tubes held vertically
Rotisserie Accessory Type-5	Cat. No.18900146	Used for MX-RL-Pro, for 15mL×16 centrifuge tubes held vertically
Rotisserie Accessory Type-6	Cat. No.18900147	Used for MX-RL-Pro, for 50mL×16 centrifuge tubes held vertically

MX-RD-E
Effective affordable mixing

Features

· Speed controlled by Scale
· Adjustable speed range from 0 to 80 rpm

Plastic Clips
Used with MX-RL-E/MX RD-6 Disk/Rotisserie accessory, for 50ml, 15mLand 1.5mL

Applications

Laboratory Tube Rotators are ideal for Biochemistry, Molecular Biology and Clinical applications. Provides a gentle but effective mixing of biological samples in 1.5mL to 50ml. micro tubes, used in a variety of applications including immune precipitations, prevention of blood coagulation, latex diagnostics etc

Specification	Details
Motor type	DC motor
Speed range	0–80 rpm
Speed display	Scale
Operation mode	Continuous
Voltage, Frequency	100–240V, 50/60Hz
Power	20W
Dimension [D × W × H]	300 × 220 × 310 mm
Permissible ambient temperature and humidity	5–40℃, 80%RH
Protection class	IP21

MX-RL-E D-E
Economical Rotator

.

Features

- Provides gontie but effective rolling
- Adjustable speed range from 0 to 80 rpm

Applications

Rotisserie Horizontal Tube Rotator provides slow to vigorous mixing of your biological samples and solutions with advanced features you expect. Used in a variety of applications including Immune precipitations, prevention of blood coagulation, latex diagnostic tests etc. Not recommended for extended use in incubators or cold rooms.

Specification	Details
Motor type	DC motor
Speed range	0–80 rpm
Speed display	Scale
Operation mode	Continuous
Voltage, Frequency	100–240V, 50/60Hz
Power	20W
Dimension [D × W × H]	150 × 530 × 190 mm
Permissible ambient temperature and humidity	5–40℃, 80%RH
Protection class	IP21

Plastic Clips
Used with MX-RL-E/MX-RD-E Disk/Rotisserie accessory, for 50mL, 15ml and 15mL

Laboratory Deck Rocking Rotator Mixer

SK-R30S-E
Short Deck Rocking Rotator

SK-R3OL-E
Long Deck Rocking Rotator

SK-R30D-E
Long Deck Double Layer Rocking Rotator

Applications

Laboratory Deck Rocking Rotator Mixer is suitable for molecular biology, virology, microbiology, pathology, immunology and other laboratories in scientific research units, medical schools, emergency control centres, and medical and health units

Features

- Brushless DC motor
- Continuous mode of operation
- Available with various silicon mattress accessories

Specifications	SK-R30S-E	SK-R30L-E	SK-R30D-E
Tilt angle	30±3°	30±3°	40±3°
Load capacity	1kg	1kg	1kg
Motor type	Brushless DC motor	Brushless DC motor	Brushless DC motor
Speed range	0~30rpm	0~30rpm	0~30rpm
Operation mode	Continuous	Continuous	Continuous
Dimension (W×D×H)	295×160×120mm	405×160×120mm	405×160×160mm
Voltage, Frequency	100~240V, 50/60Hz	100~240V, 50/60Hz	100~240V, 50/60Hz
Power	15W	15W	15W
Weight	1.8kg	2kg	2.2kg
Permissible ambient temperature and humidity	5~40°C, 80%RH	5~40°C, 80%RH	5~40°C, 80%RH

Accessories Information

Cat. No. 18202835:   Silicone mattress for 16 × 5~10mL blood collection tubes on long decks (SK-R30L-E & SK-R30D-E)

Cat. No. 18202852: Silicone mattress for 10 × 5~10mL blood collection tubes on short decks (SK-R30S-E)

Cat. No. 18202846: Silicone mattress for 6 × 50mL test tubes on long decks (SK-R30L-E & SK-R30D-E)

Cat. No. 18202853: Silicone mattress for 4 × 50mL test tubes on short decks (SK-R30S-E)

MX-T6-Pro
LCD Digital Tube Roller

Features

- LCD displays the speed and time
- Rocking & rolling at variable-speed
- Adjustable speed range from 10 to 70 rpm
- Six roller design for gentle and efficient rolling, and easy to clean
- DC brushless motor quiet and maintenance free
- Cold room and incubator compatible

MX-T6-S
Standard tube roller

Features

- Adjustable speed range from 0 to 70 rpm
- Six roller design for gentle and efficient rolling, and is easy to clean

Applications

laboratory tube rollers provide a gentle and highly efficient rolling motions, deal for mixing blood samples, viscous substances and liquid-solid suspensions. Used in a variety of applications, such as the prevention of blood coagulation, immune precipitation, etc

Specifications	MX-T6-Pro	MX-T6-S+
Amplitude	24mm	24mm
Motor type	Brushless DC motor	Brushless DC motor
Rocking motion	Rocking and rolling	Rocking and rolling
Max. load capacity	4kg	4kg
Number of rollers	6	6
Roller size [length]	280mm	280mm
Speed range	10-70rpm	0-70rpm
Speed display	LCD	Scale
Timer	Yes	-
Timer display	LCD	-
Time setting range	1-1199min	-
Operation mode	Continuous/timer	Continuous
Voltage, Frequency	100-240V, 50/60Hz	100-240V, 50/60Hz
Power	30W	25W
Dimension [D×W×H]	485×250×100mm	485×250×100mm
Weight	5.1kg	4.5kg
Permissible ambient temperature and humidity	5-40°C, 80%RH	5-40°C, 80%RH
Protection class	IP21	IP21

SK-0330-Pro
SK-0180-Pro

LCD Digital Orbital Shaker

SK-0330-Pro

Features

- Independent LCD display for speed and time
  Compact footprint
- SK-0330-Pro
- Provides smooth and uniform shaking
- Two options: 7.5 kg (0330) with platform and 2.5kg (0180)
  with platform speed range 100-500 rpm and 100-800 rpm
- Continuous or timer operation mode
- Maintenance free brushless DC motor
- Over speed detection and protection
- Wide range of optional platform for flasks, and other
- popular vessels
- Remote function provides PC control and data
  transmission
- Free software for PC control & data logging

SK-0180-Pro

Applications

Suitable for mixing in culture dishes, flasks and beakers.
Ideal for aeration and extraction applications. It can be used
in environmental chambers and CO_2 incubators

Specification	SK-O330-Pro	SK-O180-Pro
Orbital diameter	10mm	4mm
Max. load capacity (with platform)	7.5kg	2.5kg
Motor type	Brushless DC motor	Brushless DC motor
Motor input power	28W	28W
Motor output power	15W	15W
Speed range	100-500rpm	100-800rpm
Speed display	LCD	LCD
Timer display	LCD	LCD
Time settings range	1min-99h59min	1min-99h59min
Voltage, Frequency	100-240V, 50/60Hz	100-240V, 50/60Hz
Power	30W	30W
Weight	12kg	8.1kg
Permissible ambient temperature and humidity	5-40°C, 80%RH	5-40°C, 80%RH
Dimension [W×D×H]	370×420×100mm	300×340×100mm
Protection class	IP21	IP20
Data connector	RS232	RS232

SK-0330-M
Fixed Plate LCD Digital Orbital Shaker

Features

- Double-screen display for time and speed respectively
- Compact footprint
- Provides smooth and uniform shaking
- Two options:
- 9.8kg (0330-M) and speed range 70-400rpm, 3.1kg (0180-5) and speed range 40-200rpm
- Continuous or timer operation mode
- Maintenance-free brushless DC motor
- Over speed detection and protection

Applications

Orbital Shaker is ideal for applications like bacterial suspension, solubility studies, growth of bacteria and yeast, extraction procedures, washing procedures, diagnostics tests, hybridization, general mixing, staining & destaining, mixing, and extracting.
It is suitable for almost any vessel from micro-centrifuge tubes through petri dishes and microplates to conical flasks

Qrbital Motion

Specification	SK-O180-S	SK-O330-M
Orbital diameter	20mm	10mm
Max. load capacity (with platform)	2kg	3kg
Motor type	Brushless DC motor	Brushless DC motor
Motor input power	20W	20W
Motor output power	16W	15W
Speed range	40–200rpm	70–400rpm
Speed display	LED	LCD
Timer display	LED	LCD
Time settings range	1min–99h59min	1min–99h59min
Voltage, Frequency	100–240V, 50/60Hz	100–240V, 50/60Hz
Power	20W	25W
Weight	3.1kg	9.8kg
Permissible ambient temperature and humidity	5–40°C, 80%RH	5–40°C, 80%RH
Dimension (W×D×H)	294×348×123mm	420×370×100mm
Protection class	IP21	IP21
Work plate Dimension (W×D)	268×268mm	335×335mm

SK-L330-Pro
LCD Digital Linear Shaker

Features

- Efficient Mixing: Employing a linear reciprocating shaking action ensures thorough and even mixing of samples within containers, enhancing experiment reliability and precision.

- Versatile Capacity: Offering two choices with different load capacities, suitable for experiments of various scales and sample handling needs, catering to diverse experimental requirements.

- User-Friendly Operation: The device is equipped with an independent LCD display, simultaneously presenting speed and time, facilitating an intuitive operation, allowing you to effortlessly oversee the experimental process.

- Broad Speed Range: It encompasses a wide speed range, enabling speed adjustment based on specific experimental demands, ensuring optimal outcomes.

- Reliability: Utilizing a maintenance-free brushless DC motor reduces equipment maintenance needs and extends its operational lifespan.

- Safety Measures: Featuring over-speed detection and protection functions, guaranteeing the equipment operates safely within prescribed parameters, mitigating potential issues.

- Diverse Selection: Providing multiple platform options, accommodating various container types and sizes, augmenting flexibility and diversity

Applications

Suitable for mixing in culture dishes, flasks and beakers.
Ideal for aeration and extraction applications
It can be used in environmental chambers and
CO2 incubators.

Linear Motion

Specifications	SK-L330-Pro
Amplitude	10mm
Max. load capacity (with platform)	7.5kg
Motor type	Brushless DC motor
Motor input power	25W
Motor output power	15W
Speed range	100-350rpm
Speed display	LCD
Timer display	LCD
Time settings range	Imin-99h59min
Power	30W
Weight	13.5kg
Permissible ambient temperature and humidity	5-40°C,80%RH
Dimension (WxDxH)	370x420x100mm
Protection class	IP21
Data connector	R5232

Specification	MS-H-Pro+	MS-H-Pro	MS-H-Pro^T	MS-H-S	MS-H380-Pro	MS-H280-Pro
Work Plate Dimension (W × D)	Ø135mm (5 inch)	Ø135mm (5 inch)	Ø135mm (5 inch)	Ø135mm (5 inch)	140×140mm	Ø135mm (5 inch)
Work Plate Material	Aluminum cover with ceramic coating	Stainless steel cover with ceramic coating	Stainless steel cover with ceramic coating	Stainless steel cover with ceramic coating	Aluminum cover with ceramic coating	Stainless steel cover with ceramic coating
Motor Type	Brushless DC	Brushless DC	Brushless DC	Brushless DC	Brushless DC	Brushless DC
Stirring Positions	1	1	1	1	1	1
Max. Stirring Quantity [H2O]	20L	20L	20L	20L	5L	3L
Max. Magnetic Bar Length	80mm	80mm	80mm	80mm	50mm	50mm
Speed Range	100–1500 rpm ±1rpm	100–1500 rpm ±1rpm	100–1500 rpm ±1rpm	0–1500 rpm	200–1500 rpm	200–1500 rpm
Speed Display	LCD	LCD	LCD	Scale	LCD	LED
Temperature Display	LCD	LCD	LCD	Scale	LCD	LED
Heating Temp. Range	Room temp. – 340°C (1°C increment)	Room temp. – 340°C (1°C increment)	Room temp. – 340°C (1°C increment)	Room temp. – 340°C	Room temp. – 380°C	Room temp. – 280°C
Heating Temp. Control Accuracy	±1°C (<100°C), ±1% (>100°C)	±1°C (<100°C), ±1% (>100°C)	±1°C (<100°C), ±1% (>100°C)	±1°C (<100°C), ±1% (>100°C)	±1°C (<100°C), ±1% (>100°C)	±1°C (<100°C), ±1% (>100°C)
Overheat Protection	420°C	420°C	420°C	420°C	420°C	420°C
Temp. Display Accuracy	±1°C	±1°C	±1°C	±1°C	±1°C	±1°C
External Temp. Sensor	PT1000 (±0.2°C)	PT1000 (±0.2°C)	PT1000 (±0.2°C)	PT1000 (±0.2°C)	PT1000 (±0.2°C)	PT1000 (±0.2°C)
"Hot" Warning	50°C	50°C	50°C	—	50°C	50°C
Data Connector	RS232	RS232	RS232	—	—	—
Protection Class	IP21	IP21	IP21	IP21	IP21	IP42
Timer Function	—	—	1 min to 99h59 min	—	—	—
Motor Rating Input	18W	18W	18W	18W	2.4W	5W
Motor Rating Output	10W	10W	10W	10W	1.8W	3W
Power	720W	550W	550W	530W	510W	515W
Heating Output	600W	500W	500W	500W	500W	500W
Voltage / Frequency	100–120 / 200–240V, 50/60Hz	100–120 / 200–240V, 50/60Hz	100–120 / 200–240V, 50/60Hz	100–120 / 200–240V, 50/60Hz	100–120 / 200–240V, 50/60Hz	100–120 / 200–240V, 50/60Hz
Dimension (W ×	280×160×100mm	160×280×100mm	160×280×100mm	160×280×100mm	320×180×108mm	150×260×100mm
Weight	2.8 kg	2.8 kg	2.8 kg	2.8 kg	3.0 kg	1.2 kg
Permissible Ambient Temp. & Humidity	5–40°C, 80%RH	5–40°C, 80%RH	5–40°C, 80%RH	5–40°C, 80%RH	5–40°C, 80%RH	5–40°C, 80%RH

SK-L180-Pro
LCD Digital Linear Shaker

SK-L180-S
LED Digital Linear Shaker

SK-L180-Pro

SK-L180-S

Features

- Ensure uniform mixing to enhance experiment reliability and accur
- Provide different load capacities suitable for experiments of varying scales and sample processing, meeting diverse experimental needs.
- Independent display screen, simultaneously showing speed and time, user friendly operation for easy control of the experiment process.
- Offer a wide range of speed settings that can be adjusted according to specific experimental requirements to ensure optimal results.
- Maintenance-free brushless DC motor for extended lifespan.
- Equipped with safety speed protection features.
- Provide various platform options to accommodate a variety of container types and sizes, increasing flexibility and versatility (SK-L180-Pro)

Linear Motion

Applications

Suitable for mixing in culture dishes, flasks and beakers, Ideal for aeration and extraction applications. It can be used in environmental chambers and CO_2 incubators.

Specifications	SK-L180-Pro	SK-L180-S
Amplitude	4mm	20mm
Max. load capacity with platform)	2.5kg	2kg
Motor type	Brushless DC motor	Brushless DC motor
Speed range	100-350rpm	40-200rpm
Speed display	LCD	LED
Timer display	LCD	LED
Time settings range	1min-99h59min	1min 99h55min
Voltage. Frequency	100-240V, 50/60Hz	100-240V 50/60Hz
Power	30W	20%
Motor input power	28W	16W
Motor output power	15W	10W
Weight	8.1kg	3.4kg
Permissible ambient temperature and humidity	5-40°C. 60%RH	5-40°C. 30%RH
Dimension WXDXH)	300X340X100mm	294X345X130mm
Protection class	IP21	IP 20
Data connector	RS232	

SK-R330-Pro
LCD Digital Rocking Shaker

SK-R1807-S
LED Digital Rocking Shaker

SK-R330-Pro

Features

- Rocking motion angle 9"(R330-Pro) and 7"(R1807-S)
- Two options:
  10kg (R330-Pro)and speed range 10-70rpm,
  2kg (R1807-S) and speed range 10-80rpm
- Double LCDS/LEDs for independent display of time and speed
- Continuous or timer operation mode
- Electronic time switching clock: 1min-99h59min
- Wide range of platforms for use with a variety of vessels (R330-Pro)
- Fixed work plate(R1807-S)
- Simple appearance, save operating space

SK-R1807-S

Applications

Designed for time-dependent and low rpmsensitive shaking applications such as ELISAwashes, enzyme immunoassays, proteinsynthesis, hybridization staining/destaininggels, immune precipitation and Western blots, cell culture, pharmaceutical profiling, etc.

 Rocking Motion

Specifications	SK-R330-Pro	SK-R1807-S
Tilt angle	9	7
Max. load capacity with platform)	10kg	2kg
Motor type	DC motor	DC motor
Motor input power	40W	20W
Motor output power	24W	16W
Speed range	10-70rpm	10-80rpm
Speed display	LCD	LED
Timer display	LCD	LED
Time settings range	1min-99h59min	1min-99h59min
Voltage, Frequency	100-240V, 50/60Hz	100-240V, 50/60Hz
Power	50W	20W
Weight	9kg	3.1kg
Permissible ambient temperature and humidity	5-40℃,80%RH	5-40℃,80%RH
Dimension[WXDXH]	360×410×200mm.	294x348x123mm
Protection class	IP21	IP21

SK-D3309-Pro
SK-D1810-S
LCD Digital 3D Shaker

SK-D3309-Pro

Features

- Provide a gentle three-dimensional motion shaker at a fixed tilt angle
- Anti slip silicone disc surface, better anti slip effect, and better sample processing effect
- Adjustable rotational mixing speed
- Independent LCD/LED display of time and speed
- Incubator compatible
- Various platform accessories (03309-Pro)

SK-D1810-S

Applications

3D shaker used for uniform shaking mixing in flasks, culture flasks, petri dishes and tubes. Ideal for culturing a variety of cell cultures, DNA extractions, distributing of cells and gel staining & destaining of cells.
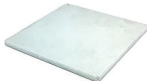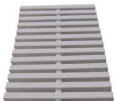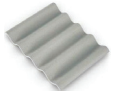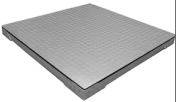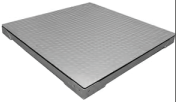
Wide range of accessories   3D Motion

Specifications	SK-D3309-Pro	SK-R1807-S
Tilt angle	9	7
Max. load capacity with platform)	5kg	3kg
Motor type	DC motor	Brushless DC motor
Motor input power	40W	16W
Motor output power	24W	10W
Speed range	10-70pm	10-50pm
Speed display	LCD	LED
Timer display	LCD	LED
Time settings range	1min-23h59min	1min-99h50m
Voltage, Frequency	100-240V, 50/60HZ	100-240/50/60HZ
Power	50W	200
Weight	5kg	3.7kg
Permissible ambient temperature and humidity	5-40°C 80%RH	5-40°C,80%RH
Dimension (WXDXH)	360x430x106mm	294X346X170mm
Protection class	IP21	IP20

Cat. No.	Description	SK-0330-Pro	SK-L330-Pro	SK-R330-Pro	SK-D3309-Pro	SK-0330-M	SK-01B0-Pro	SK-1180-Pro	SK-0180-5 Multifunctional models
18900155	SK330.5, Dish platform with non-slip mat and fixed string (8pcs) Dimension [WxD]: 30x28.5cm	■	■	■	■				
18202835	Silicone mattress for 16× 5-15mL tubes, use with SK330.5	■	■	■	■				
18202846	Silicone mattress for 6x 50mL tubes, use with SK330.5	■	■	■	■				
18900185	SK180.4, Dish attachment with non-slip mat Dimension [WxD]: 24x21.5cm						■	■	■
18900869	SK330.4 Dish platform with non-slip mat and fixed string (8 pcs), 34X34cm					■			
18900859	SK330.6 Transparent shield, serologic test for syphilis, 41X39.5X10cm	■	■			■			
18900860	SK180.5 Transparent Cover for Syphilis Serum Test, 32X32X8.3cm						■	■	
18202852	Silicone mattress for 10x 5-10mL. tubes						■	■	■
18202853	Silicone mattress for 4X 50mL tube						■	■	■
18900027	SK330.1, Universal attachment with 4 bars Size: 32x32cm Capacity for flask: 25mLx21pcs, 50mLx15pcs, 100mLx12pcs, 250mLx6pcs, 500x4pcs	■	■	■	■	■			
18900040	SK330.3 Lengthways roller attachment, Mainly used for separation funnel oscillation extraction applications 500mL*3pcs 250mL*4pcs 100/125mL*4pcs 50mL*5pcs	■	■	■	■	■			
18900025	SK180.1, Universal attachment with 3 bars Size: 25x24.5cm Capacity for flask: 25mLx10pcs, 50mLx8pcs, 100mLx6pcs, 250mLx4pcs, 500x2pcs						■	■	■
18900038	5183 Lengthiways roller attachment, Mainly used for separation funnel extraction applications biciliation extra 500ml 2p 250ml 3pcs 100/125ml 3pcs 50mm 4pcs						■	■	■

Cat. No.	Description	SK-0330-Pro	SK-L330-Pro	SK-R330-Pro	SK-D3309-Pro	SK-0330-M	SK-01B0-Pro	SK-1180-Pro	SK-0180-5 Multifunctional models
18900036	Bar for SK330.1 universal attachment	■	■	■	■				
18900037	Bar for SK180.1 universal attachment						■	■	■
18900280	Connect sticks for double dishes shaker	■	■	■	■	■	■	■	■
18900026	SK330.2, Taing clip attachment. Size: 32 x 32cm	■	■	■	■				
18900026	SK180.2. Fixing clip attachmen Sue: 25x24cm						■	■	■
18900029	Fising clip for flask volume 25m, used with SK330.219c SK180.2128pcs)	■	■	■	■		■	■	■
18900030	Tixing clip for flask volume 50ml, used with SH330.2 9pcs SK180.2/16pcs)	■	■	■	■		■	■	■
18900033	Fixing clip for Hask volume 100ml, used with 5x330.2/ 9pcs SK180.2 (1600)	■	■	■	■		■	■	■
18900032	Fixing clip for flask volume 200/250ml, used with SK330.2(4pcs SK180.29pcs	■	■	■	■		■	■	■
16900033	Fixing clip for flask volume 500mL, used with SK330.2/ 2pcs) SK180.2/9pcs)	■	■	■	■		■	■	■

UV-visible spectrophotometer

SP-V1000/SP-UV1000/
SP-V1100/SP-UV1100

Features

- The shape is professional, concise, friendly and mellow, and the appearance design conforms to ergonomics. The use of high-quality materials, fine craftsmanship, soft texture, showing a good user experience
- Attention to human-device experience, friendly interactive interface, easy for users to operate and detect
- Up to 128 sets of standard curves and 4000 test data can be saved
- Test data is saved in real time to avoid data loss in case of sudden power failure.
- Automatic wavelength calibration and dark current correction
- It can automatically switch the light source and turn off the corresponding light source, so as to prolong the ice life of the light source to the greatest extent
- The instrument has rich functions and can realize various functional operations, and the host can independe complete photometric measurement and quantitative test, kinetics measurement and other functions
- Can be used with automatic cell holder, film holder, tube rack, constant temperature cell holder, reflectivity acessory, variable optical path sample holder, variable angle solid sample hoider and other special accessories
- The computer software is designed with single interface and multiple functions, which has friendly interface, simple operation, rich and powerful functions, and fast response speed. Real-time monitoring data change. The unique shortcut toolbar makes the experimental process clear at a glance, which greatly facilitates the use, And can be extended more application functions, such as wavelength scanning, time scanning (kinetics), multi-wavelength scanning, and DNA/protein detection analysis.
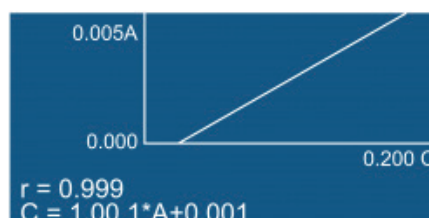
Applications

The spectrophotometer produced by our company refers to the absorbance or transmittance of a substance at a specific wavelength or within a certain wavelength range, carry out qualitative or quantitative analysis on that substance, as well as kinetic experiments, protein or DNA detection, DNA and RNA quantitative analysis, protein quantitative analysis and other applications. It can be widely used in medicine and health, clinical testing, biochemistry, petrochemical industry. environmental protection testing, food hygiene and quality control, it can also be used as a teaching demonstration and experimental instrument for related courses in colleges and universities.
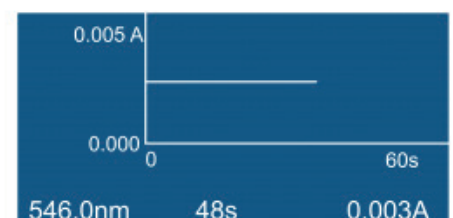
Photometry

546.0nm		0.001A
No.	WL.	Abs.
1	230.0	0.001
2	340.0	0.000
3	450.0	0.002
4	540.0	0.000
5	620.0	0.003

Quantitative

0.005A

0.000   0.200 C

r = 0.999
C = 1.00 1*A+0.001

Kinetics

0.005 A

0.000   0   60s

546.0nm   48s   0.003A

Model	SP-V1000	SP-UV1000	SP-V1100	SP-UV1100
Optical System	Single Beam	Single Beam	Single Beam	Single Beam
Light Source	Tungsten lamp	Tungsten lamp & Deuteriumlamp	Tungsten tamp	Tungsten lamp & Deuterium Lamp
Spectral Bandwidth	4.0nm	4.0nm	2.0nm	2.0nin
Wavelength Range	325-1000mm	200-1000m	320-2400mm	190-1100m
Wavelength Accuracy	+2nm	+2nm	+0.5nm	+0.5nm
Wavelength Repeatabiilty	<1nm	<1nm	<0.3nm	<0.3nm
Photometric Range	-0.3-3.04.0-200% T	-0.3-3.04.0-200% T	-0.3-3.04.0-200% T	-0.3-3.04.0-200% T
Photometric Accuracy	±0.003A@0.5A, ±0.006A @20A, ±0.5%T@100%T	±0.003A@0.5A, ±0.006A @20A, ±0.5%T@100%T	±0.003A@0.5A, ±0.006A @20A, ±0.5%T@100%T	±0.003A@0.5A, ±0.006A @20A, ±0.5%T@100%T
Photometric Repeatability	≤0.0015A@0.5A, ≤0.003A@1.0A, ≤0.25%T@100%T	≤0.0015A@0.5A, ≤0.003A@1.0A, ≤0.25%T@100%T	≤0.0015A@0.5A, ≤0.003A@1.0A, ≤0.25%T@100%T	≤0.0015A@0.5A, ≤0.003A@1.0A, ≤0.25%T@100%T
Stability	0.002 A/h 500 nm (after preheat 2 hours)	0.002 A/h 500 nm (after preheat 2 hours)	0.002 A/h 500 nm (after preheat 2 hours)	0.002 A/h 500 nm (after preheat 2 hours)
Stray Light	≤0.2%T@360nm	≤0.2%T@360nm	≤0.2%T@360nm	≤0.2%T@360nm
Sample Compartment	4-position, 10mm pathlength cuvette	4-position, 10mm pathlength cuvette	4-position, 10mm pathlength cuvette	4-position, 10mm pathlength cuvette
Display	LCD	LCD	LCD	LCD
Output	USB Port & Parallel Port (Printer)	USB Port & Parallel Port (Printer)	USB Port & Parallel Port (Printer)	USB Port & Parallel Port (Printer)
Power Requirements	110/220VAC, 50/60Hz, 80W	110/220VAC, 50/60Hz, 120W	110/220VAC, 50/60Hz, 80W	110/220VAC, 50/60Hz, 120W
Dimension(LxWxH)	490×360×210mm	490×360×210mm	490×360×210mm	490×360×210mm
Weight	12kg	14kg	12kg	14kg

item No	188003331

micro-volume cell holder

item No	18900332

4 position cell holder 100mm

item No	18900333

4 position cell holder(10mm)
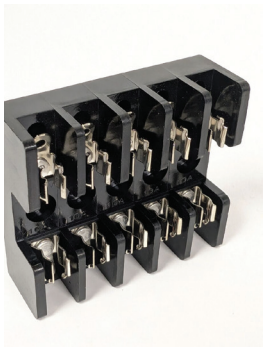
item No	188003331

4 position cell holder(10-50mm)

item No	18900332

Tuberack(e8 #22mm)
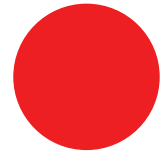
item No	18900333

Cuvette glass/quartz

item No	188003331

Tungsten lamp
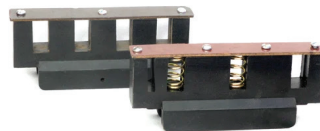
item No	18900332

Solid Specimen Holder
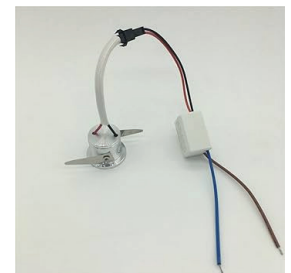
item No	18900333

Deuterium lamp

Also Available

Oven & Pump ●
Incubator ●
CO2 Incubator ●
Temperature & Humidity Chamber ●
Shaker ●
Shaking Incubator ●
Refrigerated Shaking Incubator ●
Water Bath ●
Magnetic Stirrer ●
Rotary Evaporator ●
Plant Growth Chamber ●
Laboratory Freezer & Refrigerator ●
Muffle Furnace ●
Chiller ●
Circulating Bath ●
Medical Stability Testing Chamber ●
Biological Safety Cabinet ●
Laminar Air Flow ●