# SMD

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RWD New Products Catalogue-EN-20230223

# **PRODUCT CATALOG**

For Pathological Diagnosis and Cellular & Molecular Biology Research

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### **Company Profile**

RWD Life Science specializes in life science, animal healthcare, and medical devices. Founded in 2002 and headquartered in Shenzhen, our products and services cover more than 100 countries and regions. We are dedicated to contributing our wisdom and effort to the improvement of the quality of life. Moreover, we are firmly committed to being a globally-advanced science enterprise.

Oriented by customer demands and motivated by excellent talents, RWD is continuously establishing long-term partnerships with domestic and foreign universities. We also invest in our R&D to achieve innovation in our products, technologies, and service. We aim to provide solutions with higher quality to our customers.

Based on the Chinese market and serving customers around the world, RWD has not only achieved a strong reputation and advantage in the fields of respiratory anesthesia, neuroscience research, animal behavior research, surgery and nursing, and pathological analysis, but also gained constant trust and support from our domestic and foreign customers after our efforts during the past 20 years.

Looking into the future, we shall adhere to the core values of quality, integrity, responsibility and contribute to the advancement and development of pre-clinic and medical clinic applications.

#### THE DEVELOPMENT COURSE

#### 2002-2006

- ---- Founded in Shenzhen,China
- ----- Launched a self-developed brain stereotaxic instrument
- —• Products were sold to the US and European markets

#### 2007-2014

- → Launched the first micro-drug delivery system in China, breaking the monopoly of foreign technology
  - Launched a global brand strategy by officially registering the "RWD" trademark in the US and China.
- Awarded the China "National High-tech Enterprise" credential.
  - Launched animal anesthesia machines & ventilators
- Launched veterinary clinical animal diagnosis and treatment solutions, enter the field of animal health

#### 2015-Now

- Achieved market targets for products sold in 100 countries around the world.
  - Helping with talent cultivation: Launched the "RWD Basic Medicine (Notable) Scholarship" to well-known universities in China launched a donation program for animal anesthesia machines for colleges and universities
- Developed integrated solutions for brain science research
   The market share of stereotaxic instruments in China as the first
  - Developed solution for cell research.
    the market share of animal anesthesia machines in China among the top rank
- → Authenticated as "Guangdong Life Science Analytical Instruments Technology Research Center"
  - Launched microtomes, entering the field of clinical medicine
     Launched the first Automated Stereotaxic Instrumentsin China
  - Serviced for 17000+ global customers
    The No. of employee attain the scale of 600+

# CATALOGUE

#### 01

Minux<sup>®</sup> Rotary Microtomes

03

Minux<sup>®</sup> Cryostats

**05** Single Cell Suspension Dissociator

#### 07

Magnetic Microbeads Cell Separation Products

08 CO₂ Incubator

**10** Automated Cell Counter

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**18** Gradient Thermal Cycler





#### Visual pointer

 » Designed with the visual pointer on precise positioning system, easy to adjust the sample to the target angle, reducing trimming and sample waste.
 » Adjust multiple devices to the same angle easily and quickly.

#### Automatic section

» It is stable and maintains slice consistency.

» No extra skills required, easy to complete the operation. » Some specimens such as embryos and brains need to be cut for hundreds of pieces. It is hard for you, but easy for automatic section.

#### The side knobs

» Integrated with the machine, ergonomic design, make operation more comfortable and coordinated.
 » The sample feeding speed can be adjusted freely between 0-1800μm/s, more choice and more efficient.
 » Durable military-grade devices, service life is more than 20 million times.

#### Easily removable waste tray

 » With magnetic function, easy to disassemble and install.
 » Special coating materials tray, easy to clean up, shorten the cleaning time to a few seconds.

# **Technical Parameters**

Parameters Model	S700 Semi-Automated	S700A Fully-Automated
Section thickness setting range: 0.5 - 100 µm	$\checkmark$	$\checkmark$
Trimming section thickness setting range: 1 - 800 μm	$\checkmark$	$\checkmark$
Electric coarse feed speed: 0-1800µm/s	$\checkmark$	$\checkmark$
Specimen retraction: 0-250µm	$\checkmark$	$\checkmark$
Specimen feed: 28mm, vertical stroke: 70mm	$\checkmark$	$\checkmark$
Specimen orientation: X/Y axis 8°, Z axis 360°	$\checkmark$	$\checkmark$
Maximum specimen size:55*50*30mm	$\checkmark$	$\checkmark$
Automated mode and manual mode switch		$\checkmark$
Emergency stop button		$\checkmark$
Cut window function		$\checkmark$
Slice speed selection		$\checkmark$
Four slice modes: Int.,Single,Cont., Multi.		$\checkmark$
Pedals(optional)		$\checkmark$

#### Order Information

Cat No.	Product Description	
S700A	Fully-Auto rotary microtome, include a box of blades(50 pcs)	
S700	Semi-Auto rotary microtome, include a box of blades(50 pcs)	
S700-F3	Universal clamp	
S700-F4	Standard clamp	
S700-F7	Blade holder assembly	
S700-F9	Blade holder upper bracket	
S700-F10	Easy-clean waste tray	
S700A-F3	Foot Switch for Rotary & Cryostat Microtome (optional)	

# Disposable Microtome Blades-low profile



#### Features:

• Sharp and durable, cost-effective

- For rotary microtomes and cryostats use
- Packed in a push-out distribution box for easy access

#### **Order Information**

Cat No.	Product Description
PB-2	Disposable Microtome Blades, 80mm*8mm*0.25mm, 50 pcs, for paraffin and frozen section

# Minux<sup>®</sup> Cryostats

Cryostat is a device for rapidly cooling tissue to a certain hardness under low temperature conditions and then slicing. It is a quick and easy method. Hospitals mainly use it for rapid pathological diagnosis during surgery. Researchers use it for preparation of biological tissue samples for in situ hybridization, immunohistochemistry, etc.



# Features

#### Stable

- **Stable temperature:** advanced temperature control system, small temperature fluctuations. Even if the window is opened for more than 1 hour, the temperature is still stable.
- **Stable slice quality:** high-precision cross rail and screw, five-phase high-resolution sampling motor and horizontal sampling slider made of aviation aluminum, form a precise sampling system to ensure stable slice quality.

#### Safe

- UVC disinfection: the latest low-temperature UVC disinfection technology. The irradiation intensity can effectively kill bacteria and viruses, disinfect the inner surface and the air of the cabinet, and reduce the risk of contamination by infectious materials.
- Waste liquid management system: a waste liquid volume display on the touch screen. There are reminders of full bottle and not in place to prevent waste liquid from flowing out and contaminating the ground.

#### Efficient

- Efficient operation: the color touch screen, with a joystick that integrates coarse sample feeding, trimming and section switching, and slice parameter adjustment, constitutes an efficient operating system.
- Quick positioning: precise positioning system with  $\pm 8^{\circ}$  visual pointer, easy to adjust the specimen clamp to the target angle, reducing trimming and sample waste.
- Automatic sleep and wake-up: saving energy, simplify manual operation and reduce waiting time.
- **Sample installation and marking:** buckle design, convenient installation and firm fixation. The unique label design of specimen discs makes it easy to record and identify each sample to prevent confusion.
- Efficient and thorough defrosting: automatic defrosting for cryochamber, specimen head, quick-freeze shelf, more thorogh. For manual defrosting, there are different parts to choose to improve efficiency.

### **Technical Parameters**

Parameters Model	FS800 Semi-Automated	FS800A Automated
Section thickness setting range: 0.5 - 100 µm	$\checkmark$	$\checkmark$
Trimming section thickness setting range: 1 - 800 μm	$\checkmark$	$\checkmark$
Electric coarse feed speed: 0-1800µm/s adjustable	$\checkmark$	$\checkmark$
Specimen retraction: 0-250 μm	$\checkmark$	$\checkmark$
Specimen feed: 28mm	$\checkmark$	$\checkmark$
Vertical stroke: 70mm	$\checkmark$	$\checkmark$
Specimen orientation with visual pointer: X / Y axis 8°, Z axis 360°	$\checkmark$	$\checkmark$
Number of refrigerated sites: 15	$\checkmark$	$\checkmark$
Number of fast cooling sites: 2	$\checkmark$	$\checkmark$
Cryochamber temperature range: 0°C~-35°C	$\checkmark$	$\checkmark$
Automatic and manual defrosting	$\checkmark$	$\checkmark$
Automatic and manual UVC disinfection	$\checkmark$	$\checkmark$
Automated mode and manual mode switch		$\checkmark$
Emergency stop button		$\checkmark$
Cut window function		$\checkmark$
Slice speed selection		$\checkmark$
Four slice modes: Int.,Single,Cont., Multi.		$\checkmark$
Pedals(optional)		$\checkmark$

#### Order Information

Cat No.	Туре	Product Description	
	UV	UV Semi-Auto,with UVC disinfection function	
FS800	Specimen	Specimen Semi-Auto, with UVC disinfection, specimen cooling system	
Vacuum Semi-Auto, with UVC disinfection, Vacuum, specimen cooling system			
	Auto Fully-Auto, with UVC disinfection, specimen cooling system, auto section function		
FS800A Max Fully-Auto, with UVC disinfection, vacuum, specimen cooling system, auto secit		Fully-Auto, with UVC disinfection, vacuum, specimen cooling system, auto secition function	

### **Single Cell Suspension Dissociator**

RWD Single cell suspension dissociator uses tissue processing tubes, tissue dissociation kits, and built-in optimization programs for preparing high-activity single-cell suspension and tissue homogenate. The preparation of single-cell suspension with high cell viability can be completed within 15-30 minutes, which makes the experiments more reproducible. 4 or 8 independent operating channels and heating jackets can automate the processes and improve the efficiency of tissue processing. It is widely used in single-cell sequencing, primary cell culture, fluorescence activated cell sorting, cell therapy, and other research fields.







Visualized and editable programs

## **Product Characteristics**

#### Intelligent

- Pre-defined standard processes and customized processes supported.
- Processes can be imported and synchronized via USB ports.

#### Gentle

- Stable motor speed ranges from 0 to 4000 rpm.
- Customized tissue dissociation kits and tissue processing tubes can ensure cell viability and reduce experimental losses.

#### Safe

- Multiple alarms guarantee the safety of both operators and samples.
- Fully sealed tube prevents contamination of cells.

#### Efficient

- 4 or 8 independent channels work simultaneously for different tissue processing.
- Heating jackets are available for fully automated sample preparation.
- Capable of single-cell suspension and tissue homogenate.

# **Technical Parameters**

Model	DSC-400	DSC-800		
Sample volume	20-40	20-4000 mg		
Buffer volume	0.3-1	l0 mL		
Speed	0-4000 rpm			
Temperature	37°C			
Operation method	Touch screen			
Channels	4	8		
Dimensions (W*D*H)	215*380*190 mm	415*381*256 mm		
Weight	10.3 kg	18 kg		

#### Order Information

Cat No.	Product Description	
DSC-400	Single cell suspension dissociator	
DSC-800	Single cell suspension dissociator	
SCT-25	Tissue processing tube(25pcs/box)	
SCT-100	Tissue processing tube(100pcs/box)	
HJ-400	Heating Jacket(4 pcs)	

\*The tissue processing tubes of RWD are not available in the USA market



#### **Tissue Processing Tube**

• Ethylene oxide(EO) sterilized.

Independent packaging make it convenient for storage and use.

#### Order Information:

Model	SCT-25	SCT-100
Sample volume	20-4000 mg	
Buffer volume	0.3-10 mL	
Dimensions	35*89 mm	
Package	25pcs/box	100pcs/box

#### **Enzymatic Digestion Kit**

- Targeted optimization of enzymatic hydrolysis formula can ensure high cell viability
- Preserving cell surface epitopes leads to no effect for downstream experiments



#### Order Information:

Product Description	Model	Number of reactions
High Activity Tumor Tissue Enzymatic Digestion Kit (Mouse)	DHTE-5001	50T
High Activity Neonatal Brain Enzymatic Digestion Kit (Mouse and Rat)	DHNBE-5002	50T
High Activity Adult Brain Enzymatic Digestion Kit (Mouse and Rat)	DHABE-5003	50T
High Activity General Tissue Enzymatic Digestion Kit	DHGT-5004	50T
High Activity Tumor Tissue Enzymatic Digestion Kit (Human)	DHTEH-2505	25T
High Efficiency Debris Removal Kit	DHDR-5006	50T
High Activity Intestine Tissue Enzymatic Digestion Kit (Mouse)	DHIE-5007	50T
High Activity Brain Tumor Enzymatic Digestion Kit	DHBTE-2508	25T
High Activity Whole Skin Enzymatic Digestion Kit (Mouse)	DHWSE-2509	25T
High Activity Adipose Tissue Enzymatic Digestion Kit (Mouse and Rat)	DHAE-5010	50T

### Magnetic Microbeads Cell Separation Products

RWD cell separation products include self-developed magnetic microbeads cell separation kits and cell separation columns, which can obtain target cells with high purity and high viability through simple operation. Nano-sized magnetic beads do not need elution, and the separated cells can be directly used in downstream experiments such as flow cytometry, cell culture, single-cell sequencing, etc.





悬液4℃孵育

10-15min



将细胞悬液加入分选柱中,

只有被磁珠标记的阳性细

胞滞留在分选柱中

LSC Separator and stand



Lmmunology research Oncology research Neuroscience Stem cell research Cell therapy 

 LarSep Columns
 LSC Se

 Image: Column S
 Image: Column S

 <td

胞悬液4℃孵育

10-15min

洗脱 将分选柱从磁场中移 出,加入缓冲液将滞 留在分选柱中的阳性

细胞洗脱下来

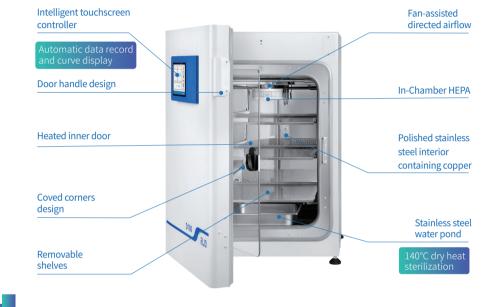
**Ordering Information** 

Cat NO.	Product name	Size	Capacity
K1301-10	Mouse CD3+ Cell Separation Kit	1ml*2	for 1*10^9 total cells
K1302-10	Mouse CD4+ Cell Separation Kit	1ml*2	for 1*10^9 total cells
K1303-10	Mouse CD8+ Cell Separation Kit	1ml*2	for 1*10^9 total cells
K1201-10	Human CD3+ Cell Separation Kit	1ml*2	for 1*10^9 total cells
K1202-10	Human CD4+ Cell Separation Kit	1ml*2	for 1*10^9 total cells
K1203-10	Human CD8+ Cell Separation Kit	1ml*2	for 1*10^9 total cells
HCSC-25	LarSep Columns (25pcs/box)	25pcs/box	/
HCSC-10	LarSep Columns (10pcs/box)	10pcs/box	/
LSC-S1	LSC Separator (single channel)	1pcs	/
SS01	Separation stand	1pcs	/
CSAK-01	Cell Separation assembly kit (single channel)	1set	Including LarSep Columns (25pcs), LSC Separator (single channel) 1pcs, Separation stand 1pcs

# **CO**<sub>2</sub> Incubator

#### Provide A More Suitable Environment for Cell Culture

D180 CO<sub>2</sub> incubator provides a more suitable culture environment for cells by controlling temperature, CO<sub>2</sub> concentration precisely and by maintaining a high relative humidity (rH). It is an indispensable cell culture tool in the fields of stem cell research, immunology research, neurobiology research and cancer research.



### Product Characteristics

#### Stable environment for cell culture

- Accurate IR sensor monitors the CO<sub>2</sub> concentration change.
- Six-sided air jacket heating system ensures fast heating.
- Optional humidity probe to monitor real-time humidity changes.

#### **Contamination control of inner chamber**

- High efficient sterilization by 140°C dry heat.
- In-chamber HEPA to filter the microorganism.
- Easy cleaning with coved corners and removable shelves design.

#### Intelligent operation

- 7-inch touchscreen controller for real-time display.
- Automatic data record of 7 days curve display.
- External USB port for fast and convenient data export..

#### Multiple alarm system

- Internal and external door open overtime alarm.
- Abnormal inner cavity core parameters alarm.
- High temperature sterilization over temperature alarm.

#### Convenient and flexible design

- Handle design enables a comfortable door opening.
- Optional bracket with casters for convenient moving of the chamber.
- Less consumables in cavity for easy cleaning.





Stainless steel liner & water pond

High efficiency filtration system

### 🚻 Technical Parameters

	Control & Range	±0.1°C@ 37°C, 5°C above ambient to 50°C
	Heating Method	Air jacket
	Uniformity	±0.3°C @ 37°C
Temperature	Alarm Setting	Customized, Upper limit: (T+0.1) ~ (T+5.0); Lower limit: (T-0.1) ~ (T-5.0)
remperature	Sensor	Pt1000 Platinum thermistor
	Controller	PID
	Readability & Setability	0.1°C
	Sterilization Method	140°C dry heat sterilization
	Control & Range	土0.1%@5%,0-20%
~~	Sensor	Heat-resistant infrared (IR) sensor
CO <sub>2</sub>	Inlet Pressure	1.0 bar (recommended)
Concentration	Uniformity	土0.3%
	Readability & Setability	0.10%
	Alarm Setting	Customized, Upper limit: (C+0.1) ~ (C+1.0); Lower limit: (C-0.1) ~ (C-1.0)
Humidity	Water Pond Volume	~3.8 L
rannarcy	Display	1% RH
	Dimensions	48.7×46.1 cm
Shelves	Surface Area	224.5 cm <sup>2</sup>
	Number (Standard & Max)	4;17
	Interior Volume	188 L
Size & Weight	Interior Dimensions	51.0(W)×54.7(D)×67.5(H) cm
Size a Weight	Exterior Dimensions	69.5(W)×67.0(D)×97.0(H) cm
	Net Weight	110 kg

#### **Order Information**

Device Options	Order no.	Description
CO <sub>2</sub> gas inlet pipe package	D180-F01	Connect cylinders to equipment
Horizontal shelves with bracket	D180-F02	Carrier for culture dishes
Water Pond	D180-F03	Holding water to increase humidity
HEPA filter	D180-F04	5.5 inch HEPA filter for inner air filtration
High efficiency filter	D180-F05	For air filtration at sampling port
Stacking racks	D180-F06	For stacking and fixing of equipment
Stacking Stand with castors	D180-F07	For supporting equipment and movement

Device Options	Order no.	Description
CO <sub>2</sub> Incubator with Humidity monitoring	D180	volume 175L; 140°C setrilization; humidity sensor; voltage 200 $\sim$ 240VAC, 50Hz, 5A
CO <sub>2</sub> Incubator with Humidity monitoring	D181	volume 175L; 140°C setrilization; humidity sensor;voltage 100~120VAC, 60Hz, 10A
CO <sub>2</sub> Incubator without Humidity monitoring	D180	volume 175L; 140°C setrilization; without humidity sensor; voltage 200 $\sim$ 240VAC, 50Hz, 5A
CO <sub>2</sub> Incubator without Humidity monitoring	D181	volume 175L; 140°C setrilization; without humidity sensor; voltage 100 ${\sim}120$ VAC, 60Hz, 10A

# Automated Cell Counters

RWD Automated Cell Counter adopts Trypan Blue staining method, intelligent image recognition and advanced optical imaging technology to achieve accurate and automatic cell analysis. The algorithm can identify both live and dead cells within 9 seconds. Information such as cell counts, viability, diameter can be obtained by just one-click.With fluorescence cube, C100&C100-Pro can display images in BF and FL channels simultaneously and clearly present cell counts and cell morphology. In order to meet the needs of cell therapy and biopharma, the data management and software system of C100-Pro fully conforms to FDA 21 CFR Part 11. It is an optimal device for cell analysis in cell therapy, biopharmaceutical, immunology and vaccine development, tumor research, stem cell and metabolism research.



### Product Characteristics

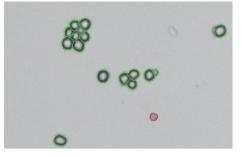
High accuracy• The self-developed algorithm can identify clustered cells.<br/>• Intelligently cell marks contribute to precise cell recognition.<br/>• RBC counting.<br/>• Low autofluorescence and high-transmit filter enable clear imaging.Time-saving• User-friendly UI and built-in user guide interfaces ensure easy operation.<br/>• Up to 1000 counting results can be stored. No need another device for extra storage.User-friendly• Autofocus and auto exposure.<br/>• Powerful computing capability ensures high efficiency.Compact design• Compact size fits into different placements.<br/>• Removable modular FL cubes allow easy switches among various scenes.

# **Accessories and consumables**





Disposable Cell Counting Slide



Clustered cell recognition algorithm





Clear fluorescence imaging

5	Result	2019-08-03
⑦ Current concetration: 5.36x10 <sup>4</sup> /ml	X Total V	Default Total concentra 2.08X10 /ml <sup>6</sup> (561)
Current dilution factor: Desired cell concetration? x How many mL do you need?	2 104 ✓ /mL /mL	Live 1.66X10%ml (448) Dead 4.16X10 <sup>5</sup> /ml (73)
MixmLof your cell solution with Desired cell concetration is greater than origina	nmL buffer	Save as Do

Pre-dilution calculator

Cell splitting calculator





### **Product Characteristics**

- FDA 21 CFR Part11 compliance
- \* Ensuring data security with account login and account permissions setting.
- Ensuring data integrity with electronic signature and electronic recording.
- Data transmission via LAN and server.





User manage

#### Electronic records

### Product Characteristics

Parameters		Description	
Model	C100-SE	C100	C100-Pro
		●(Ex :375/28nm ;E	m:460/50nm)
Optional fluorescence application	N/A	●(Ex:480/30nm;E	m:535/40nm)
		●(Ex :540/25nm ;E	m:620/60nm)
Amplification Factor		2.5×, 5.0 Megapixel	
Focus Method	Manual focusing & Autofocusing		
Counting Area	2.15 mm×1.62 mm		
Cell Type	Cell lines, stem cells, primary cells, pollens, beer yeast		
Cell Size Range	4-60 μm (Optimal: 7-60 μm)		
Cell Concentration Range	104-107 cells/mL		
Cell counting Time	Less than 9s		
Historical Data Storage	1000 counting reports and images at most		
Languages	Chinese and English		
Dimensions	212 mm(W)* 264 mm(H)* 165 mm (D)		
Weight	~3.0kg ~3.2kg ~3.5kg		

FL Cube	Excitation	Emission	General Dyes
FL Cube-01	375/28nm	460/50nm	DAPI, Hoechst, BFP
FL Cube-02	480/30nm	535/40nm	Acridine Orange (AO) , Calcein-AM, Alexa fluor 488, SYBR Green, FITC, GFP
FL Cube-03	540/25nm	620/60nm	Propidium Iodide (PI), DsRed, dTomato, RFP

#### **Order Information**

Cat No.	Product Description
C100-SE	Automated Cell Counter (BF)
C100	Automated Cell Counter (BF + FL)
C100-Pro	Automated Cell Counter (BF + FL, FDA 21 CFR Part 11 Compliance)
FL Cube-01	● (Ex :375/28nm ;Em:460/50nm)
FL Cube-02	● (Ex :480/30nm ;Em:535/40nm)
FL Cube-03	● (Ex :540/25nm ;Em:620/60nm)
DS-50	Disposable Slide (50 pcs/box)

### Centrifuge

### M1324R Refrigerated Microcentrifuge

RWD microcentrifuges M1324R and M1324 simplify centrifugation, which can work stably and quietly at the maximum speed of 15800rpm. Optional rotors for difffferent needs (PCR tubes, 1.5/2 mL EP tubes, etc.). Small footprint and low noise, touch screen interaction, all your user-defifined preset programs can be called by one click. The refrigerated microcentrifuge M1324R will still make sure the stable temperature centrifugation of samples at -10°C~40°C even at the highest speed.

All the functions are designed according to your needs, which is the best

M1324R Microcentrifuge

# Product Characteristics

choice for laboratory separation.

#### Efficient

- Quick precooling. From RT to 4 °C in only 8 minutes.
- The seamlessly fit for inner cavity winding technology enables high-efficient energy transfer.
- Adjustable 10 ACC/DEC ramps to satisfy different customers' needs.

#### Stable and Safe

- High-density foaming technology benefits energy-saving and heat-preservation.
- Standard aerosol-tight rotor with aerospace-grade aluminum alloy withstands high temperature sterilization and avoids biohazards.
- Qualified ultrasonic non-destructive test, Schenck balancing test and extreme blasting test to protect personnel safety.
- Mutiple Real-time rotor dynamic balancing monitoring system and alarm functions guarantee safe operation.

#### Simple

- Combination of touch screen and function keys provides quick and convenient setting and parameter use.
- 12 custom programs enable immediate centrifuge operation in multiple scenarios.
- Magnetic condensed water collection pan to eliminate inner water accumulation.
- Mechanical lock design for the centrifuge lid enables easy opening and closing.
- Quick-Lock rotor, closes with only a 4/4 turn.

#### Compact

- One-pipette-width compact design.
- Lid hinge design with suspending hovering optionally.







### Product Characteristics

#### **Excellent and Efficient**

- Unique heat dissipation material and duct design to enhance heat dissipation performance.
- Double cooling system to ensure stable centrifugation of samples at the highest speed.
- Running vibration amplitude  $\leqslant$  1um to maintain stable operation.

#### Stable and Safe

- Standard aerosol-tight rotor with aerospace-grade aluminum alloy withstands high temperature sterilization and avoids biohazards.
- Qualified ultrasonic non-destructive test, Schenck balancing test and extreme blasting test to protect personnel safety.
- Real-time rotor dynamic balancing monitoring system and multiple-imbalance alarm functions guarantee safe operation.

#### **Intelligent and Quiet**

- Dual noise control system with intelligent three-gear fan control, full load at maximum speed noise <50dB(A).
- Combination of touch screen and function keys provides quick and convenient setting and parameter use.
- Use EPP foam material to reduce noise pollution.

#### **Simple and Practical**

- Quick-lock rotor closes with only 1/6 turn for easy and secure sample handling.
- 10 acceleration and deceleration ramps meet the centrifugation needs of different samples.
- 48 custom programs enable immediate centrifuge operation in multiple scenarios.
- Automatic lid opening design, easy and quick to take samples.



### -Technical Parameters

Parameters	M1324R	M1324	
Max. Speed	15800 rpm		
Max. RCF	23444	×g	
Max. Capacity	5mL>	<10	
ACC/DEC Ramps	10/10		
Display	Touch screen		
Program	12	48	
Temperature Control	-10°C to 40°C	/	
Noise Level	<54dB(A)	<50dB(A)	
Dimension (W*H*D)	304mm*304mm*517mm	262mm*282mm*385mm	
Weight (with rotor)	33kg	~22kg	

#### Order Information

Model	Product Description
M1324R	Refrigerated Microcentrifuge (With M-F24QG rotor)
M1324	Ventilated Microcentrifuge (With M-F24QG rotor)
M-F10QG	Aerosol-tight Lid , 10×5 mL tube quick- lock rotor
M-F24QG	Aerosol-tight Lid, 24×1.5/2.0 mL tube quick- lock rotor
M-F24Q	24×1.5/2 mL tube quick- lock rotor
M-F24G	Aerosol-tight Lid, $24 \times 1.5/2$ mL tube rotor
M-F24	24×1.5/2 mL tube rotor
M-F4PCR	4 × PCR tube rotor
M-F18Kit	18 × Spin column rotor

## M1416R High-Speed Benchtop Refrigerated Centrifuge

RWD High-Speed Benchtop Refrigerated Centrifuge provides intelligent centrifugation, adapting various applications from micro to medium throughput with a speed up to 18,000 rpm (30,000 × g). Offer a broad selection of rotors and adaptors (swing-bucket rotors and fixed-angle rotors) to meet different customers' needs. The capacity of M1416R ranges from 24 x 2mL to 4 x 400mL, and the plate rotor also accommodates PCR and deep-well plates. In addition, equipped with a 7-inch touch screen, M1416R provides visual operation and a personalized account management system ensuring efficient and quality control.



#### Product Characteristics

- Provide touch screen for quick and convenient setting and parameter use.
- More than 100 custom programs enable immediate centrifuge operation in multiple scenarios.

Efficient

Simple

- Self-lock rotor with quick-lock lid enables fast installation in 3 seconds.
- Automatic rotor recognition function for maximum operational safety.

Safe

- Multiple real-time rotor dynamic balancing monitoring system and alarm functions guarantee safe operation.
- Qualified ultrasonic non-destructive test, Schenck balancing test and extreme blasting test to protect personnel safety.

Intelligent

• Personalized account management system provides organized programs and easy operation.



Parameters	Description
Max.RCF	30,000×g (M-F24-2QG Rotor)
Max.speed	18,000 rpm (M-F24-2QG Rotor)
Max.capacity	400 mL× 4 (M-S4-400 Rotor)
Display	7 inch touch screen, dpi. 800×480px
Temperature range	-10°C - +40°C
Noise level	55dB(A)
ACC/DEC ramps	9 /10
Program	100 set
Dimension(W*H*D)	627*409*688 mm
Weight(Without rotor)	90kg

#### **Order Information**

Model	Product Description
M1416R	High-Speed Benchtop Refrigerated Centrifuge
M-S4-400-P	4*400mL swing rotor (incl. 15mL/50mL adaptors)
M-S4-200-P	4*180mL swing rotor(incl. 15mL/50mL adaptors)
M-S2-DWP	2*3 Standard 96-well plate(2*1 DWP)
M-F24-2QG	Aerosol-tight Lid , 24 $ imes$ 2 mL tube quick- lock rotor
M-F30-2QG	Aerosol-tight Lid , 30 $ imes$ 2 mL tube quick- lock rotor
M-F48-2QG	Aerosol-tight Lid , 48 $ imes$ 2 mL tube quick- lock rotor
M-F18-5QG	Aerosol-tight Lid , 18 $ imes$ 5 mL tube quick- lock rotor
M-F8-50QG	8×50 mL tube carbon fiber quick- lock rotor
M-F14-50QG	14×50 mL tube carbon fiber quick- lock rotor
M-F6-100QG	6×100 mL tube carbon fiber quick- lock rotor
M-F30-15C	30×15 mL tube Clinic rotor



The M2-96G provides precise temperature control and an intelligent user operating system to achieve rapid and specific amplification of target DNA fragments. With temperature gradient function, 12 groups of gradient can be realized at one time to optimize PCR

It is widely used in molecular biology, microbiology, genetics, cell biology, food science and agronomy to carry out experimental research such as molecular cloning, gene expression analysis, genotype identification, sequencing, and pathogenic microorganism



**Product Characteristics** 

#### Intelligent and efficient linear gradient function

- 12 linear gradients in the same run allow to optimize the ideal annealing temperature.
- Temperature and time cycle can be incremented or decremented to realize different experiments like Touchdown PCR and Long PCR experiments.

#### Fast ramping and precise temperature control

- Fast ramp rate of up to 6 °C/s to realize efficient PCR runs.
- Long-life Peltier elements for temperature accuracy and uniformity.

#### Data visualization for easy operation

- 7 inch touch screen enables intuitive and quick programming.
- Personalized account management system provides organized programs and unwanted changes.

#### Thoughtful multifunctional design

- Processes can be imported and synchronized via USB ports and achieve multi-machine collaborative work.
- Capable for PCR experiments and constant temperature incubation function.



Personalized account management system

## ांसे Technical Parameters

Description	M2-96G
Sample Capacity	96x0.2 ml/0.1ml tubes or 1x96-well plate
Reaction volume	10~100 μL
Heating block	96-well
Temperature control range of the block	0~100°C
Gradient capability	Yes
Gradient range	30~100°C
Lid temperature range	40~110°C
Temperature accuracy	±0.25°C (35~100°C)
Temperature Uniformity	$\leq$ $\pm$ 0.35°C (After reaching a constant temperature of 95°C for 20s)
Max. heating and cooling rate	6.0°C/s;4.5°C/s
Average heating and cooling rate	4.5°C/s;3.5°C/s
Display	7 inch LCD touch screen
Max. amount of storage	2000
Max. number of program cycles	99
Max. number of program steps	64
Inc/Dec temp input range	±0.1~5°C
Inc/Dec time input range	±1~240s
Power-off protection	Yes
Interface	RS232、USB、Network ports
Dimensions (W×D×H)	264mm×470mm×259mm
Weight	16.5kg
Power supply	220V/50HZ;110V/60HZ
Max. power consumption	925W

#### Order information

Order no.	Description
M2-96G	96-well Gradient thermal cycler

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