RWD

A Leading Manufacturer for Pre-clinical Research

PRODUCT CATALOGUE

13th Edition
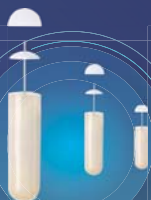
Osmotic Pumps
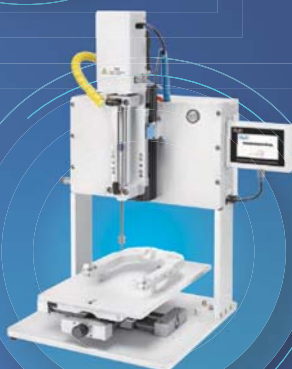
CO₂ Incubators

Laser Speckle Imaging System

Precise Impactors

Minux® Rotary Microtomes

Stereotaxic Instruments

Fiber Photometry System

Anesthesia Machines

RWD Life Science

RWD

RWD Life Science

Microcentrifuges

Intelligent Optogenetics System

Digital Microscope

Syringe Pumps

Minux® Cryostats

Automated Cell Counters

RWD not only focus on individual instrument, but also whole solution

we are all with you

Dover

ShenZhen

Learn more about us at:
www.rwdstco.com

CONTENT

RWD

Introduction

Established in 2002, RWD Life Science has been dedicated to being a leading manufacturer in research and veterinary equipments worldwide. We specialize in anesthesia, physiological and surgical equipments, used by pre-clinical researchers and veterinarians. Our mission is to provide high quality products and integrated solutions for our customers with prompt and professional support.

For more information about our supplies, such as Laser Speckle Perfusion Imager，Anesthesia Machine, Ventilator, Stereotaxic Instrument, Syringe Pump, Cannula System and Surgical tools, please check our website: **www.rwdstco.com**

RWD Life Science

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Laser Speckle Imaging System（RFLSI Ⅲ）
Laser Speckle Perfusion Imager

RFLSI Ⅲ is based on the LSCI (Laser Speckle Contrast Imaging) technology design, non-invasive with non-contact, high time resolution, high spatial resolution and full-field rapid imaging it provides real-time dynamic blood flow monitoring and recording method for research in life sciences.

High time & spatial resolution

Non-contact, No contrast agent

Product Features

Continuous imaging, No need to scan

Multi-output: Video, Image, Blood flow rate, Diameter

Performance Characteristics:

- Analyze vascular perfusion volume, tube diameter, tube angle, and other data online and offline to meet hemodynamic research.
- Multiple data acquisition methods including continuous acquisition, specified interval acquisition, specified frame number acquisition, etc.
- Indicating laser plus autofocus function makes it easy to use the instrument.
- High-definition camera (full-frame 2048 x 2048 resolution) helps you see the end of blood vessels and open the world of blood vessel microcirculation images.
- The high-speed camera (up to a maximum frame rate of 120 frames per second) allows us to record changes every second and record more details of blood vessel changes after intervention.
- Package-type supporting solutions and timely after-sales service will help you to be one step ahead in your scientific research.

References：

- Meningeal lymphatics clear erythrocytes that arise from subarachnoid hemorrhage
- 14-3-3ζ-c-Src-integrin-β3 complex is vital for platelet activation
- Aging exacerbates impairments of cerebral blood flow autoregulation and cognition in diabetic rats
- Arterial Supercharging Is More Beneficial to Flap Survival Due to Quadruple Dilation of Venules
- DW14006 as a Direct AMPKα Activator Ameliorates Diabetic Peripheral Neuropathy in Mice
- Microvascular Injury in Mild Traumatic Brain Injury Accelerates Alzheimer-like Pathogenesis in Mice
- Snake C-Type Lectins Potentially Contribute to the

▶ **Application Areas**

☑CBF ☑MCAO model ☑Gastrointestinal blood flow ☑Lower limb ischemia / Angiogenesis

☑Burns assessment ☑Skin patch test ☑Cerebral cortex diffusion inhibition

Technical Parameters:

Type	RFLSI Ⅲ
Scale	0 – 5000PU
Imaging acquisition rate	up to 120 FPS
Working distance	10-35cm
Imagine size	1.57 × 1.57mm – 90 × 90mm
Image camera size	2048 × 2048 (5 million)
Zoom range	12× optical zoom with auto-focus
Max resolution at 20 × 20 mm	up to 3μm/pixel
Wavelength	785nm

▶ **Study Cases**

Tree shrew (nonhuman primate) cerebral cortical blood flow imaging ▶
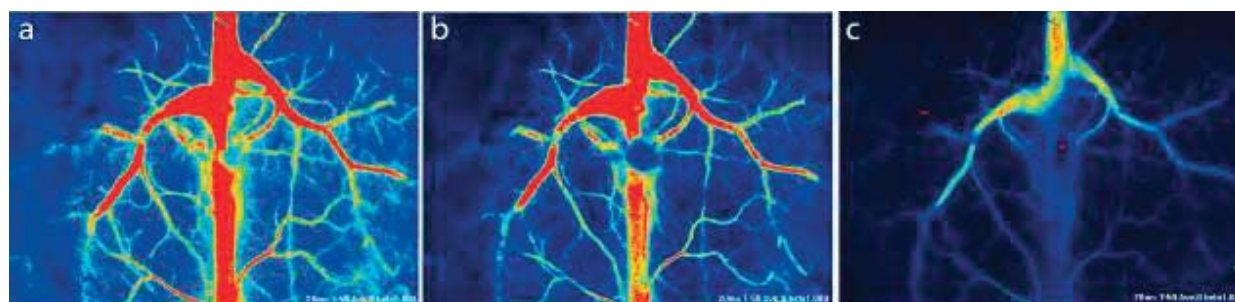
(a) Normal cerebral cortical blood flow distribution of tree shrew; (b) The distribution of cerebral cortical blood flow when start to over anesthesia; (c) The distribution of dying cerebral cortical blood flow when severe overdose of anesthesia.

Cerebral cortical blood flow distribution of the rat mini-stroke model ▶
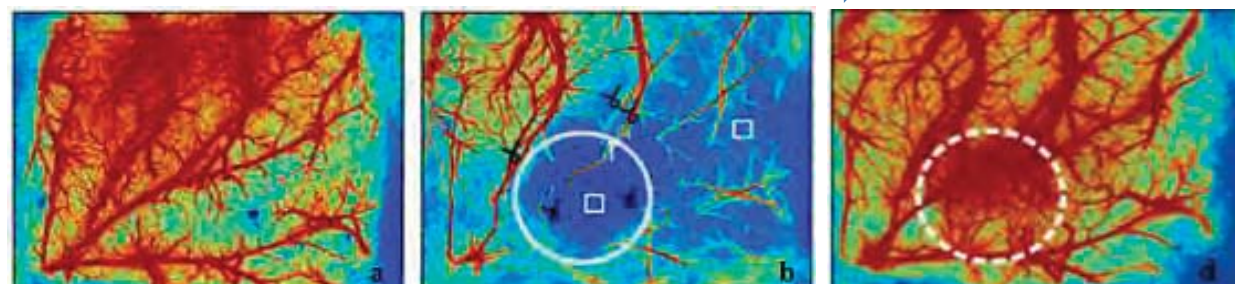
(a) Normal cerebral cortical blood flow distrbution; (b) Cortical blood flow distribution after established the mini-stroke model; (c) Cortical blood flow distribution after removal of the mini-stroke model for 24h

Ear

Brain

Intestinal mucosa
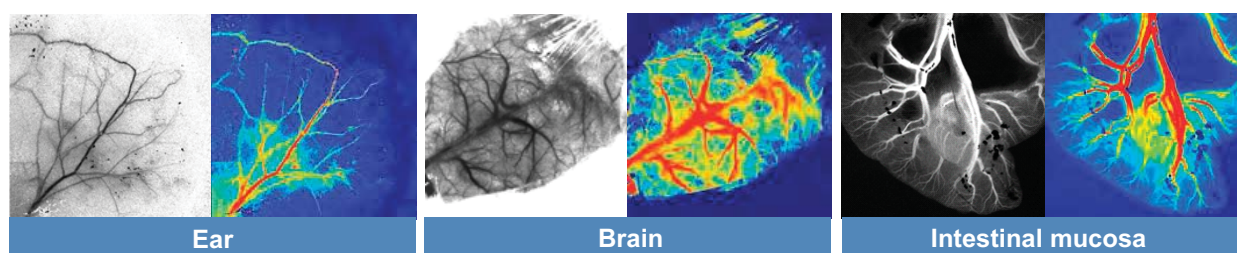
MCAO Sutures

RWD MCAO suture utilizes high-quality nylon thread to induce ischemic stroke model. The within-group variation of stroke models can be maximally reduced by the super smooth surface and evenness of RWD suture. And without rupturing the vesicle, RWD suture makes its insertion into the animal brain much easier. The stability is also greatly increased for the cerebral ischemia modeling and more consistent data. RWD sutures are available in nylon monofilament material, diameters of silicone-rubber coated part range from 0.19mm to 0.44mm; Length of suture from 2-3cm.

Features:

- It adopts high-quality nylon thread with very good flexibility, not easy to puncture blood vessels, which increase the success of stroke model development.
- Ensure high uniformity and stability of the MCAO model.
- Silicone-rubber coated in tip, greatly reduce the risk of puncturing blood vessels.
- The line is marked with black dots, increased the observability during plugging into the blood vessel.
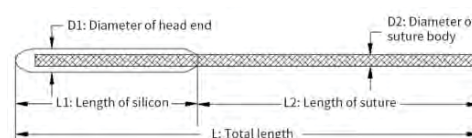
★L1 in mouse suture: 3~4mm
★L1 in rat suture: 5~6mm
★L1 could be customized: 2~8mm

Order Information:

No.	Model	Diameter of Head end D1 (mm)	Diameter of suture body D2 (mm)	Total Length L (mm)	Animal's weight (g)	Packing (pcs)	
1	MSMC19B100PK50	0.17-0.19	0.10	30	15-20g	50	
2	MSMC21B120PK50	0.20-0.21	0.12	30	21-25g	50	
3	MSMC23B120PK50	0.22-0.23	0.12	30	26-30g	50	Mouse
4	MSMC25B150PK50	0.24-0.25	0.15	30	31-35g	50	
5	MSMC26B150PK50	0.25-0.26	0.15	30	>35g	50	
6	MSRC32B200PK50	0.31-0.32	0.20	40	<200g	50	
7	MSRC35B200PK50	0.33-0.35	0.20	40	200-250g	50	
8	MSRC37B200PK50	0.36-0.37	0.20	40	251-280g	50	Rat
9	MSRC40B200PK50	0.38-0.40	0.20	40	281-330g	50	
10	MSRC42B200PK50	0.41-0.42	0.20	40	331-400g	50	
11	MSRC45B200PK50	0.43-0.45	0.20	40	>400g	50	

Note: Customized service is available.

Fiber Photometry System
R810 Dual Color Multichannel Fiber Photometry System

The fiber photometry system records changes in the fluorescence intensity of neurons in a specific brain area to characterize changes in neuronal population activity. In the study of neural circuits, the optical fiber recording system can perform long-term stable monitoring of the neurons in the group of freely moving animals, and then explore the correlation between neuronal activity and animal behavior.

R810 Dual Color Multichannel Fiber Photometry System has two excitation light sources, 410nm and 470nm, of which the unique 410nm can be used as a background signal to ensure effective acquisition of real fluorescence data. It can collect data of no less than 7 channels at the same time, suitable for simultaneous recording of multiple brain regions or multiple animals.

R810

Multimode Fiber Bundles

Stainless Steel Ferrule

Optical Fiber

Cannula

Features:

- Two kinds of excitation light sources (410/470nm), 410nm light source as the reference light source, 470nm light source excites GCaMP, effectively removes motion artifacts.
- Ultra-high sensitivity scientific research-grade sCMOS camera, with higher quantum conversion efficiency, and the acquisition frequency can reach 300fps.
- Supports up to 9 channels of simultaneous acquisition, suitable for simultaneous recording of multiple nerve nuclei.
- Integrated digital signal synchronization module, 4 Input interfaces, 4 Output interfaces, meeting closed-loop research.
- Professional integrated software, fluorescence data and animal behavior video can be collected and analyzed simultaneously.
- Support multiple start and end condition settings and multiple excitation light output modes.
- For complex experiments with multiple stimuli, 10 kinds of manual marking and automatic marking are supported, and 9 behavioral ROIs can be set.
- The analysis results can be exported to CSV, Heat-map, df/f, Z-Score and other chart formats.

Parameter item	Specification
Frame Rate of CMOS	0-300FPS multiple gear selection
CameraCMOS camera resolution	2048*2048Pixel
Exposure time setting range	1~100 ms
Fluorescence band	500-550nm
Central wavelength of excitation light	410 nm、560 nm
LED power adjustable percentage	0~100%
410nm LED Output Power Range	0~100 μW
470nm LED Output Power Range	0~100 μW

71000 Automated Stereotaxic Instrument

71000 automated stereotaxic instrument is a more automatic and intelligent brain stereotactic locator. Stepper motor is precisely controlled by computer software to drive the manipulator of the stereotactic locator to move.Compared with the traditional manual positioner, the electric positioner can calibrate Bregma points, record and store multiple coordinate points, and display the probe position in real time. It can also run automatically through various experimental target in the software.It can reduce the error caused by human operation, and it is more convenient and intuitive to carry out stereo positioning of the brain. Meanwhile, it is equipped with micro operation to meet more flexible operation requirements.
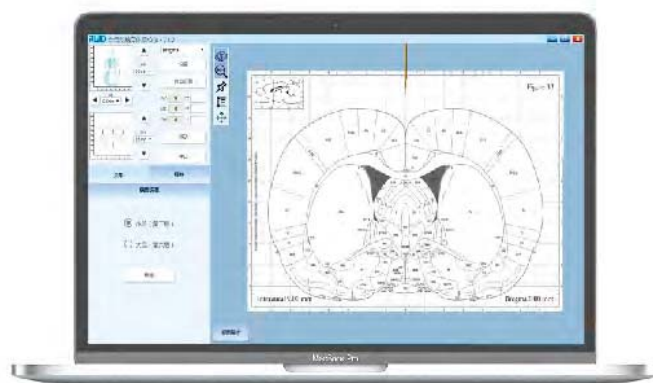
Features & Technical Parameters:

- Select high-precision stepping motor drive, displacement resolution 1μm;
- The software integrates brain maps of rats and mice, which can be displayed in three dimensions to assist in quickly and accurately positioning the target brain area;
- The target position can be set in the software by itself;
- The software interface can display the probe trajectory and position in real time;
- Multi-point program setting function, which can store and mark 10 coordinate points;
- Can accurately control the depth of entry;
- Two Optional control methods: computer or micro-operation control;
- Set Bregma with one click;
- The software presets various tasks such as automatic craniotomy, virus injection and aspiration tissue, which can meet a variety of experimental needs;
- Displacement safety prompt and error alarm function;
- Software operating system is compatible with Win7, Win10, free switching between Chinese and English.

▶ Lens implantation experiment module (optional)

It is used for GRIN lens implantation in deep brain calcium imaging experiments.
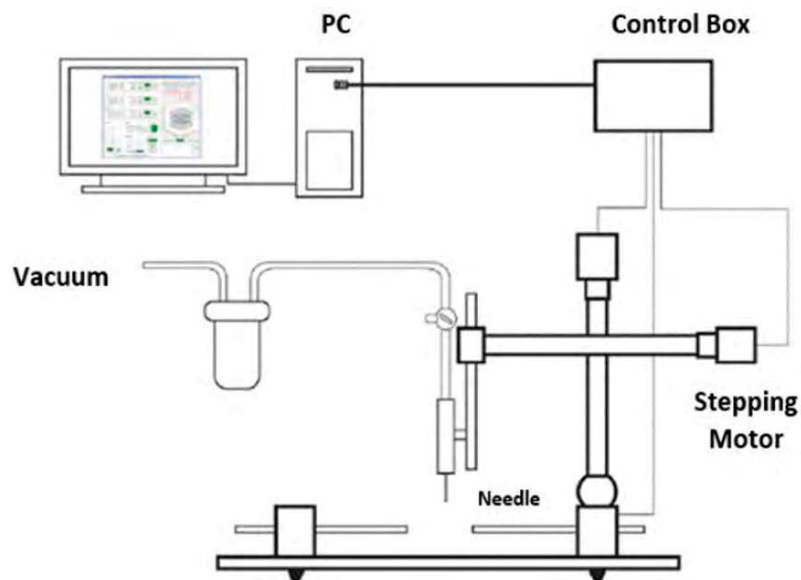
More smoothness, less damage	Improve neuron survival, better imaging
Auto ⋙	
Handle ⋙	
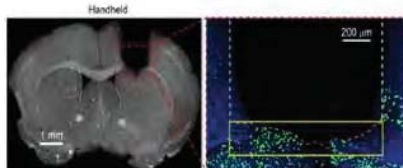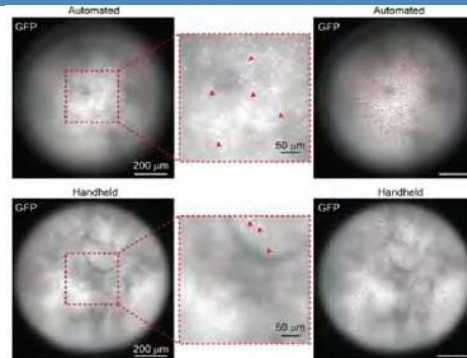
Features :

- Configure a vacuum pump, the software can set the suction depth, sequence, and number of repetitions to automatically and accurately remove brain tissue;
- The software can set the depth and speed of lens implantation, one-click implantation;
- Ensure the flatness of the wound end surface and reduce damage;
- Improve the survival of neurons per unit area and enhance the imaging effect;
- Reduce the error caused by traditional manual operation and enhance the repeatability of the experiment.

Ultra Precise Rotational Stereotaxic Instrument

This Ultra Precise Rotational Stereotaxic Instrument is to manipulate and refine the position of the head in three dimensional space, which make it easier to explore inside the head and brain with the clamping device.

The instrument is fitted with a sagittal positioning plate design and includes a centering height gauge. When the bregma is mounted on the sagittal plate, the adapter allows maximum adjustment of the animal's head level, tilt, and centerline alignment. Quickly calibrate the level of skull to achieve accurate positioning.

Nose clip adopts inhalation anesthesia mask head clip, which can cooperate with anesthesia machine for safe and stable inhalation anesthesia. Different mask head can be used for different animals, such as mice and rats, and the accessories are complete. After replacing different holder, different positioning tools can be used to achieve injection, stimulation, recording and other operations on animals, and maintain an accurate common vertical center line. This valuable feature will help reduce surgical time and potentially time-consuming errors, as well as increase the hit rates and provide a repeatable platform for your research.

Recommended Accessories:

69130

Centering Scope 40X used to assist with positioning the stereotaxic manipulator accurately over the centering height gauge located on the stereotaxic base.

69131

Aligment Indicator provides dimensional feedback required for leveling the head.

Features:

- The rotation adapter can Manipulate head position in 3 dimensional space.
- The displacement distance of the head rotating adapter X, Y and Z is 30mm, the left and right angles are rotated ±15°, the front and rear swing Angle is ±10°, and the bottom plate is rotated ±10°.
- 0.01mm resolution in digital display, supply by battery, no electronic interference.
- The UP Mark in z-axis to prevent z-axis manipulate from misoperation.
- The manipulator drives by electrode more than 100,000 times with Minimum deviation.
- Double head screw design makes the 3-axis more stable and accurate.

Order Information:

Model	Specification
69100	Ultra Precise Rotational Stereotaxic Instrument for Mouse, Digital, SGL M, 69110 Adaptor Incl.
69101	Ultra Precise Rotational Stereotaxic Instrument for Mouse, Digital, Dual M, 69110 Adaptor Incl.
69102	Ultra Precise Rotational Stereotaxic Instrument for Rat, Digital, SGL M, 69112 Adaptor Incl.
69103	Ultra Precise Rotational Stereotaxic Instrument for Rat, Digital, Dual M, 69112 Adaptor Incl.
69130	Centering Scope 40X
69131	Aligment Indicator

DOM-1001 Digital Microscope

11.6-inch IPS Full HD display

Electric adjustment knob

Gooseneck illuminator

LED ring illuminator

Cross arm bracket

DOM-1001 is a digital microscope without eyepiece, with dual light sources and a cross arm bracket. High-end optical components and 16 million pixel CMOS camera can be used to capture real-time images and video, realizing multi-person sharing. Mainly used in life science, university teaching, industrial manufacturing, material science and other fields.

Features:

- **Novel and unique integrated design**

    High-end optical components and a 16 million pixels digital camera, combined with LED ring lights and gooseneck light control components, and optional brackets for various scenarios, together create a powerful DOM-1001 digital surgical microscope system.

- **Excellent ergonomic design**

    The comfortable electric adjustment knob on the side is combined with the foot focus adjustment, and with the 11.6-inch display, the operator can maintain a correct and comfortable working posture, reducing fatigue and damage caused by long-term use.

- **Real-time ultra high-definition projection screen**

    Built-in digital camera with zoom optical components, high depth of field (maximum depth of field 6.7mm), adjustable magnification 8-44X, support real-time display with high-definition monitor or notebook computer connection.

- **Convenient and practical remote control**

    With the infrared remote control, you can directly perform remote control, including many functions such as taking pictures, recording videos, flipping and zooming, adjusting brightness and contrast of images, and white balance.

- **Homogeneous and coaxial optical design**

    Always displayed in the center of the field of view in a clear and optimal state-no need to refocus even when changing the magnification.

- **Greater operating space**

    The working distance of 180 mm, the lens body can be adjusted at multiple angles, which greatly improves the operating space and ensures that observation and operation are performed simultaneously.

Osmotic Pump

RWD osmotic pump is a precise drug delivery tool. Usually, 3 days, 1 week, and 2 weeks dosing a osmotic pump requires 6-8, 12-24, 24-48 hours of incubation, after which the osmotic pump can administer the drug at a constant rate (within a predictable range). The liquid pump is released until only about 5% of the solution remains in the storage tank, and then the rate drops to zero.

The method RWD uses to estimate the pumping rate of the osmotic pump is to measure the pumping rate of the osmotic pump in 37% (± 0.5°C) 0.9% saline in vitro. This in vitro test method has good reproducibility, whether it is the test of the same batch of osmotic pump or different batches of osmotic pump at different periods, and is used to estimate the pump's expected pumping rate. For example, in rats and mice, the deviation of the subcutaneous or intraperitoneal pumping rate of the implanted osmotic pump from the in vitro rate is within 5%.

100µL   200µL   2mL

The osmotic pump can be directly implanted in the abdominal cavity or the back of the neck for drug administration, or it can be applied to specific tissue and organ, such as blood vessels, brain, spinal cord, lungs, liver, etc., by connecting the catheter or other accessories.
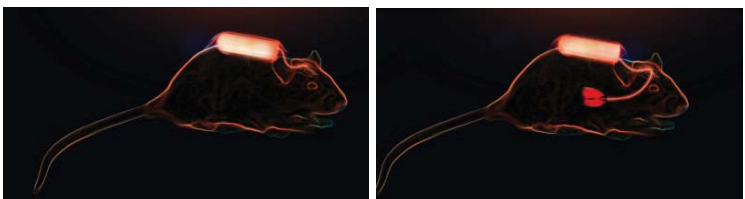
Different accessory kits

Features:

- Ensure continuous and uninterrupted administration, maintaining the preset speed for the administration of the animal.
- Storage capsules have good drug compatibility, and protection for short half-life drugs.
- Capsules have good biocompatibility and do not affect the physiology of animals.
- Easy to use, an experiment requires only one administration, no longer need night or weekend experiment.
- Avoid the stress caused by repeated administration, reducing the impact of non-experimental factors on the experimental results.
- Small size, can be applied to experiments on mice, neonatal rats and other small animal.
- Ensure that the drug is delivered to the target site accurately.

pellicle
storage capsules
drug
flow regulator
salt interlayer
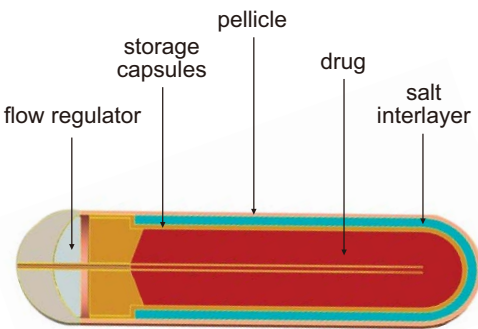
Technical Parameters:

	Drug capacity	100µL				200µL				2mL		
Capsule (10pcs/box)	Type	1003D	1001W	1002W	1004W	2003D	2001W	2002W	2004W	2ml1W	2ml2W	2ml4W
	Duration	3d	1w	2w	4w	3d	1w	2w	4w	1w	2w	4w
	Pumping Rate(µL/hr)	1.0	0.5	0.25	0.11	2.0	1.0	0.5	0.25	10.0	5.0	2.5
Flow regulator (10pcs/box)	Cap	Without				PE material						
	Draft tube	304 stainless steel material										
Infusion tube (1pcs/box)	Syringe	Flat head for the injection of liquid										

 coming soon

Inhalation Anesthesia Solutions

Advantages of Inhalation Anesthesia:

● Can offer an improved level of control over depth and duration of anesthesia, especially for prolonged procedures.

● Relatively insolubility and faster elimination in blood enables rapid recovery.

● Be of rapid onset and offset with minimal side effects.

● Have little or no toxic effect thanks to non-metabolism characteristic of sevoflurane and isoflurane.

● Be safer and more efficient performance to reduce morbidity rates and increase the chance for successful outcomes.

Small Animal Anesthesia Machines

Compact (see P21)

Multi-output (see P22)

Portable (see P23)

VentStar Ventilator (see P34)

Veterinary Anesthesia Machine

Portable (see P24)

Intelligent animal ventilator (see P30)

Complete Anesthesia and Respiration Solutions

Multi-function Anesthesia Solutions

Air Pump

Small Animal
Anesthesia Machine
see P21-24

Mask
see P27-28

Induction Chamber
see P28

Gas Evacuation
Apparatus
see P26

Gas Filter Canister
see P26

The experimental system is equipped with a gas recovery system to provide a safe experimental environment to maximize the protection of the operator; by replacing different types of anesthesia machines and masks to meet the needs of animal experiments, such as cerebral ischemia and myocardial ischemia model, osteoporosis model, tail vein injection, abdominal aorta blood sampling, heart blood sampling, ventricular injection, tissue / organ removal and other animal surgery experiments.

Stereotaxic Anesthesia Solutions

Stereotaxic Instrument
seeP31-36

Stereotaxic Frame
Nosecone Mask
see P28

Temperatuere
Controller
see P43

By changing the different types of stereotaxic instruments and adaptors to meet the needs of different animal experiments, such as the neurological disease models (such as Parkinson, Alzheimer's disease, craniocerebral injury, spinal cord injury, etc.), brain drug injection, Cannula Implantation (long term repeated administration), physiology experiment (such as nerve stimulation, signal recording, wireless telemetry, etc.), microdialysis experiments (probe implantation and short-term dialysis) and other experiments.

Animal Anesthesia

Combination Solutions of Ventilator to Anesthesia System

Small animals

Small animal ventilator

This program is the combination of anesthesia machine and ventilator. While keeping the animal under anesthesia, it provides a certain volume (tidal volume) of oxygen and respiratory rate to support the normal breathing of animals.

It can meet the requirements of long surgeries or surgeries on animals suffering from certain diseases (such as cardiovascular and cerebrovascular diseases, hypertension, cerebral infarction, thrombosis), and suitable for mice, rats, rabbits, cats and other animals within 1kg.

Large animals

Oxygen Concentrator

Circular anaesthetic mask

Laryngoscopes

Endotracheal Tubes

Calcium lime

This program is suitable for the anesthesia and auxiliary respiration of animals within 100kg, such as pigs, monkeys, dogs and cats.

Animal Anesthesia

Small Animal Anesthesia Machines ▶

R500 Compact Anesthesia Machine

Regular assembly (R500-A),vaporizer(R580),Inlet/Outlet End Caps(R580-IO)and tube accessory kit are included in the R500 anesthesia machine.Different air supply, induction chambers,small animal masks, filter canisters and gas evacuation apparatuses can be selected for anesthesia recovery of different animals.

Suitable for rats, mice, hamsters, guinea pigs, rabbits, cats and other animals within 7kg

120mL internal capacity,isoflurane concentration adjustment range 0-5% (sevoflurance 0-8%)

0.1-4L/min oxygen flowmeter, reserved additional flowmeter mounting hole, makes dual flowmeter is achievable

Isoflurane or sevoflurane vaporizer is optional

You can choose Pour Fill or Easy Fill or Key Fill for adding drugs (see P25)

Stable concentration output unaffected by flow, temperature and pressure

Can be upgraded into portable anesthesia machine to save space and facilitate movement

Aluminum alloy material, the whole weight less than 7.5kg

Toggle switch, quick switching of gas circuit, more than 100 thousand times of life

Oxygen flush button, flush rate is up to 10L / min

Oxygen or air can be chosen as gas supply

Note: Oxygen flush is commonly used to flush out anesthetic gas to the filter canister before opening the induction chamber to avoid the escape of anesthetic gas into the personnel.

Order Information:

Model	Product Description	Configuration	Remarks
R500IE	Compact Small Animal Anesthesia Device-Isoflurane, Easy Fill, 0-4L	●	Contains connection tubing for mask&induction chamber
R500IP	Compact Small Animal Anesthesia Device-Isoflurane, Pour Fill, 0-4L	●	
R500IK	Compact Small Animal Anesthesia Device-Isoflurane, Key Fill, 0-4L	●	
R500SE	Compact Small Animal Anesthesia Device-Sevoflurane, Easy Fill, 0-4L	●	
R500SP	Compact Small Animal Anesthesia Device-Sevoflurane, Pour Fill, 0-4L	●	
R500SK	Compact Small Animal Anesthesia Device-Sevoflurane, Key Fill, 0-4L	●	
R510-S	Portable Stand for R510 Series Anesthesia Machine	○	Upgrade to portable type

Note: ●Recommended configuration   ○ Optional

R550 Multi-output Anesthesia Machine

Regular assembly (R550-A), vaporizer (R580), Inlet/Outlet End Caps (R580-IO) and tube accessory kit are included in the R550 anesthesia machine. Different air supply, induction chambers, small animal masks, filter canisters and gas evacuation apparatuses can be selected to form the experimental platform for anesthesia recovery of different animals.

With the latest design, it can be applies to simultaneous anesthesia of multiple mice, rats, cats, rabbits and other animals (1-5 small animals), and every channel can be controlled independently.

Aluminum alloy material, the whole weight less than 7.5kg

0.1-4L/min oxygen flowmeter, reserved additional flowmeter mounting hole, makes dual flowmeter is achievable

Gas flow of induction chamber can be adjusted independently, ranging from 0 to 2.5 L/min

Stable concentration output, unaffected by flow, temperature and pressure

Toggle switch, quick switching of gas circuit, 100 thousand times of life

Can be upgraded into portable anesthesia machine to save space and facilitate movement

Order Information:

Model	Product Description	Configuration	Remarks
R550IE	Enhanced Small Animal Anesthesia Device-Isoflurane, Easy Fill, 0-4L	●	Contains connection tubing for mask & induction chamber.
R550IP	Enhanced Small Animal Anesthesia Device-Isoflurane, Pour Fill, 0-4L	●	
R550IK	Enhanced Small Animal Anesthesia Device-Isoflurane, Key Fill, 0-4L	●	
R550SE	Enhanced Small Animal Anesthesia Device-Sevoflurane, Easy Fill, 0-4L	●	
R550SP	Enhanced Small Animal Anesthesia Device-Sevoflurane, Pour Fill, 0-4L	●	
R550SK	Compact Small Animal Anesthesia Device-Sevoflurane, Key Fill, 0-4L	●	
R510-S	Portable Stand for R510 Series Anesthesia Machine	○	Upgrade to portable type

Note: ●Recommended configuration   ○ Optional

Animal Anesthesia

R530 Portable Anesthesia Machine

Regular assembly (R540-A), vaporizer (R580), Inlet/Outlet End Caps (R580-IO), induction chamber, fixed bracket for gas evacuation apparatus, air pump, and portable assembly (R510-S), tubing are included in the R520 anesthesia machine.
Different air supply, induction chambers, small animal masks, filter canisters and gas evacuation apparatus should be purchased separately. The difference between R520 & R530 is only the anesthesia assembly.

Stable concentration output, unaffected by flow rate, temperature, and pressure

Different size of induction chambers for rats and mice (see P28)

V100-A

Filter canister with high efficiency to absorb 200-240g gas (see P26)

Low noise(40dB), oxygen tank and E-oxygen tank optional

R510-25A

Gas evacuation apparatus, Vonline weighing adjustable wind speed, replacement reminder (see P26)

R510-46A

Optional filter canister weighing apparatus (R548), real-time display weight, replacement reminder (see P26)

★ The circled item should be purchased separately

R530

Order Information:

Model	Product Description	Configuration	Remarks
R530IE	Portable Anesthesia Machine, Isoflurane, Easy Fill, 0-4L	●	Including fixed bracket for induction chamber, evacuation apparatus, filter canister.
R530SE	Portable Anesthesia Machine, Sevoflurane, Easy Fill, 0-4L	●	

Note: ●Recommended configuration   ○ Optional

Animal Anesthesia

Veterinary Anesthesia Machines ▶

R620-S1 Universal Veterinary Anesthesia Machine

R620-S1 universal veterinary anesthesia machine is applicable to clinical anesthesia of dogs, cats, pigs, monkeys, rodent, reptiles, birds etc. With minimal operation design, vets shall feel easy, safe and reliable to perform surgery on pets.

User-friendly design
Blocking bar design for breathing circuit, wheel brake for Universal wheel, and tray shelf for placing monitor

Rail-mounted CO_2 absorber
With simply 2 steps and one hand, one can install and disassemble the canister easily. Set your hand free, and save time and effort

Full inspection policy
Every single vaporizer is inspected to ensure they will arrive at customers' hands with high accuracy quality

Minimal operation design
Just press to close APL valve; turn the switch to shift between rebreathing and non-rebreathing circuit; with only one action to install and uninstall the vaporizer; With one switch to turn, the smart weighing canister start to work

Intelligent waste gas scavenging
The intelligent alarm design of weighing meter can prevent waste gas leakage due to overload of the filter canister, in turn avoid anesthesia gas pollution in operation room.

Item	Specification
Vaporizer	Output concentration: 0~5%(Isoflurane); 0~8%(Sevoflurane) Accuracy: ±0.1(0-1%); ±0.15(>1%) work temperature: 10~35℃ Volume>120ML
Flowmeter	0.1-4L/min
CO_2 Absorber	1.8L
Filter canister	Self-weight is 800g, Maximum absorption capacity is 200g
Weighing device	Alarm range>1000g （R510-31 filter canister）; Resolution:1g

Optinal: MRI Conditional Animal Anesthesia Machine are available for purchase.

Order Information:

Model	Product Discription	Configuration	Remarks
R620-S1-IECS	Veterinary Anesthesia Machine-Pole Mount, Isoflurane, Easy Fill, Cagemount	●	Super package. Comparedwith the basic package, an additional oxygen valve,calcium lime,a trachea cannula hanger ,Mounting Braket for Weighing Meter，and an automatic Weighing Apparatus are included.
R620-S1-SECS	Veterinary Anesthesia Machine-Pole Mount, Sevoflurane, Easy Fill, Cagemount	●	
R620-S1-IECP	Veterinary Anesthesia Machine-Pole Mount, Isoflurane, Easy Fill, Cagemount	●	
R620-S1-SECP	Veterinary Anesthesia Machine-Pole Mount, Sevoflurane, Easy Fill, Cagemount	●	
R620-MRI	MRI Conditional Animal Anesthesia Machine	●	

Note: ● Recommended configuration ○ Optional

Animal Anesthesia

Anesthesia Machine Accessories ▶

(Anesthesia Machine) Vaporizer

R580 series vaporizer adopts the most advanced design, which can accurately control the output concentration of anesthetics. RWD offers Pour Fill,Easy Fill and Key Fill Cagemont and Selectatec.

Two kinds of vaporizers
Three dosing methods
Two installation

Isoflurane vaporizer   Sevoflurane vaporizer

Features:

- The built-in temperature compensator ensures the stable concentration of anesthetic gas at different temperatures and flow rates, the flow range is 0.2-10L/min
- Mixed anesthetic gas output pressure range $\triangle P \leq 2.5kPa$
- Applicable temperature range: 10-35 ℃
- Good tightness, internal 50kPa pressure can be maintained, zero leakage, safe and reliable
- Internal capacity is not less than 120ml, and the range of isoflurane vaporizer concentration is 0-5% (Sevoflurane: 0-8%)
- Anti-accident open lock structure and closed state security protection structure to ensure safety
- The average filling rate is greater than 2ml/s, and the dosing adapter can withstand the pressure of 0.1mpa without leakage (Key Fill)

new

Pour-Fill   Easy-Fill   Key-Fill

Note: When purchasing a Cagemont vaporizer, vaporizer endcaps (model: R580-IO) should be purchased separately.

Vaporizer of Easy Fill includes adapter R582-01 or R583-01.

Vaporizer of Key Fill includes adapter R584-01 or R585-01.

Order Information:

Cat No.	Product Description
R580S	Vaporizer - Isoflurane/Pour Fill/Cagemont
R581S	Vaporizer - Sevoflurane/Pour Fill/Cagemont
R582S	Vaporizer - Sevoflurane/Easy Fill/Cagemont
R583S	Vaporizer - Isoflurane/Easy Fill/Cagemont
R584S	Vaporizer-Isoflurane/Key Fill/Cagemount
R585S	Vaporizer-Sevoflurane/Key Fill/Cagemount
R580-IO	Vaporizer Endcaps (1 pair)

Isoflurane & Sevoflurane

Isoflurane   Sevoflurane

Order Information:

Model	Product Description
R510-22-16	Isoflurane-100mL (16 bottles/box)
R510-22-8	Isoflurane-100mL (8 bottles/box)
R511-22-04	Sevoflurane-100mL (4 bottles/box)

Animal Anesthesia

Gas Evacuation Apparatus

The gas evacuation apparatus (GEA) was designed to safely and actively remove waste gas associated with everyday inhalation anesthesia. The waste gas from cone mask, concentric tubing mask and stereotaxic frame nosecone masks can be pulled through activated charcoal canister so that the air can be re-circulated into the room. The GEA will accommodate waste gas supply from at least 5 masks. The new one has been upgraded with a wider range of exhaust flow, Low noise, and Exquisite exterior design.

Features:

- New design make it more exquisite and easy to carry.
- A wide range of flow rate-8~60LPM, display on the LED screen could in real time.
- No venting hood is required while using.
- Powerful capture allows to accommodate waste gas supply from 1 to 5 masks.
- The velocity of "pull" or "draw" can be adjusted depending on the stations (masks).
- Great remove effectiveness to replace the traditional exhaust fan with remove. ability less than 5g.
- Small size 232mm (W)*200mm (D)*184mm (H).
- Onlineweighing,gettheweightofcanisterdirectlyfromthedisplay.
- Two level overweight alarm: 990g and 1010g.
- Power: 100-240V, 50/60Hz

R546Pro

Order Information:

Model	Product Description
R546Pro	Gas Evacuation Apparatus with Weight Monitoring, 110-240V

Automatic Weighing Apparatus

Exhaust gas inlet
(from mask or induction chamber)

- One key to reset, real-time display the weight of filter canister, accurate to 1g.
- Two level saturation alarm to remind, replace filter canister .
  - ◆Level Ⅰ: large canister reaches 1000-1020g, small canister reaches 300-310g,0.5Hz
  - ◆Level II: large canister reaches 1020-1500g, small canister reached 310-500g, 2Hz
  - ◆Overweight alarm: more than 1500g, stable 1 second, lasting lighting and buzzing
- Mounting bracket (R548-MB) is optional, to mount on the mobile stand.

Model	Product Description
R548	Automatic Weighing Mecharism for Gas Filter Canister
R548-MB	Weighing Bracket

Gas Filter Canister

Used to absorb isoflurane, sevoflurane and enflurane and other gases，

disposable， large and small size are available, large canister (net weight: 800g) absorb 200-240g gas; small canister (net weight: 250g) absorb 50g gas.

Order Information:

Model	Product Description
R510-31-6	Gas Filter Canister, Large, pkg of 6pcs
R510-31S-6	Gas Filter Canister, Small, pkg of 6pcs
R510-31S-16	Gas Filter Canister, Small, pkg of 16pcs

Animal Anesthesia

Small Animal Anesthesia Mask

● Concentric Tubing Masks

Using Concentric Tubing design, sturdy and durable, can be placed arbitrarily on the desktop.
The entire mask (including tubing) is made of non-metallic material suitable for MRI environments.

◎ The mask can be secured by fixed bracket (68625), height of the mask is adjustable, and it can also be fixed and placed in MRI, PET and SPECT imaging systems

R-FM-EOC

68625
R510-87
R546Pro
R510-31
R510-89
R510-54

Single　　　　**Dual Channel**　　　　**Five Channels**

Order Information:

Model	Product Description
R510-86	SGL MRI Compatible Mask for Mouse
R510-88	Dual MRI Compatible Masks for Mouse
R510-54	Five-channel Tubing Anesthesia Mask Kits-rat/mouse

Model	Product Description
R510-87	SGL MRI Compatible Mask for Rat
R510-89	Dual MRI Compatible Masks for Rat
68625	MRI Compatible Mounting Bracket for Tubing or Cone Mask, optional

● Cone Masks

● Special designed with inlet tubing inside make the animal anesthesia exhaust gas can be absorbed by gas fillter canister.

● Allows access to eyes, ears and top of head.

● The cone masks can be installed onto 68630 operation bed for single cone mask (300*210*75mm) or 68657 manifold for five cone masks.

R-CT-6/15

68685
68684
68683

Nosecone

68656　　　R510-31

68682

68630　　　R510-31

Order Information:

Model	Product Description	O.D. (size)	I.D.(size)	D(size)	Nosecone Model
68680	Cone Mask with Tubing for Neonatal Mouse(<15g)	13mm	5mm	24mm	68683
68681	Cone Mask with Tubing for Mouse or Neonatal Rat(15-40g)	20mm	10mm	28.5mm	68684
68682	Cone Mask with Tubing for Rat(200-350g)	25mm	15mm	38mm	68685

Model	Product Description
R-CT-6/15	Concentric Tubing, 6mm Inlet/15mm Outlet, 45cm
68656	Manifold for Single Cone Mask

Model	Product Description
68657	Manifold for Five Cone Masks
68630	Anesthesia Operation Platform

● Stereotaxic Frame Nosecone Masks

- This type of anesthetic masks is specifically designed to fit most stereotaxic frame and deliver anesthetic gases with minimal exposure during surgery. They are locked onto the adaptor with the cone opening toward the open "U". The animal's teeth is placed over the incisor bar.
- Two kinds of Stereotaxic Frame Nosecone Masks are available: one is "passive" mask with collinear inlet and outlet, and the other one is "active" mask with separate (non-collinear) inlet and outlet on both sides. Tthe "passive" mask is used with charcoal canister only, and the "active" mask can be used with evacuation apparatus.

68665
68663

(only be for 68030, 68036 and 68055 mouse adaptors)

68666
68667

(only be for 68021 and 68088 rat adaptors)

68601

68055

68602

(only be for 68030, 68036 and 68055 mouse adaptors)

(only be for 68021 and 68088 rat adapters)

Order Information:

Model	Product Description	Remarks
68601	Stereotaxic Anesthesia Mask Kit -mice or neonatal rat（<70g，Canister & Tubing included）	For Passive Scavenging
68602	Stereotaxic Anesthesia Mask Kit - rats（<300g，Canister & Tubing included）	
68663	Stereotaxic Anesthesia/Evacuation mask- mice or neonatal rats (<30g)	For Active Scavenging
68665	Stereotaxic Anesthesia/Evacuation mask- mice or neonatal rats (30～70g)	
68666	Stereotaxic Anesthesia/Evacuation mask- rats (<300g)	
68667	Stereotaxic Anesthesia/Evacuation mask- rats (>300g)	

Induction Chambers

The anesthetic gas is inducted into the chamber, and exhausted to the connected charcoal canister. With following features:

- Transparent plexiglass material, durable, easy to clean, convenient to observe the anesthetic state of animals.
- Positive pressure gaskets at lids.
- Both ports on one side to reduce tubing in procedure

Order Information:

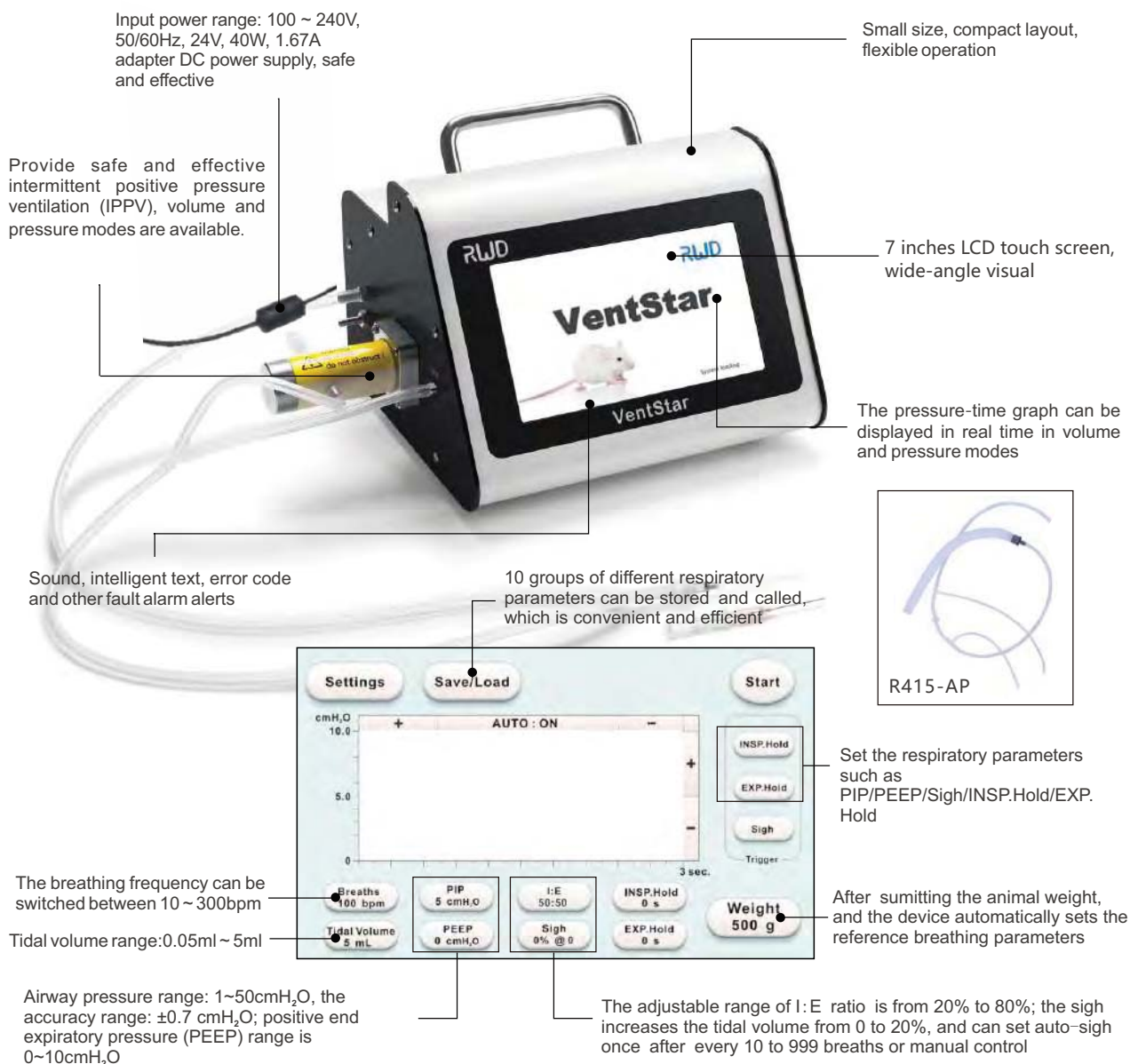| Model	Product Description	Remarks
V100	Induction Chamber-mouse (15cm*10cm*10cm)	Contains 1 plexiglass box, 1.2m bellows and 1 gas filter canister (R510-31S)
V101	Induction Chamber-rat (24cm*12cm*18cm)	
V102	Induction Chamber-rabbit/cat (40cm*18.5cm*25cm)	
V103	Induction Chamber-large animal (50cm*30cm*30cm)	

Animal Anesthesia

Ventilator ▶

VentStar Small Animal Ventilator

Animal ventilator is the commonest instrument for assisting animal respiration, which is widely used in scientific researches of preclinical medicine, clinical medicine and veterinary medicine (such as myocardial ischemia model), as well as respiratory management in animal surgery, emergency treatment and respiratory therapy.

Suitable for mice, rats and guinea pigs and other animals weighing 10g-1kg

Input power range: 100 ~ 240V, 50/60Hz, 24V, 40W, 1.67A adapter DC power supply, safe and effective

Small size, compact layout, flexible operation

Provide safe and effective intermittent positive pressure ventilation (IPPV), volume and pressure modes are available.

7 inches LCD touch screen, wide-angle visual

The pressure-time graph can be displayed in real time in volume and pressure modes

Sound, intelligent text, error code and other fault alarm alerts

10 groups of different respiratory parameters can be stored and called, which is convenient and efficient

R415-AP

Set the respiratory parameters such as PIP/PEEP/Sigh/INSP.Hold/EXP.Hold

The breathing frequency can be switched between 10 ~ 300bpm

Tidal volume range: 0.05ml ~ 5ml

After sumitting the animal weight, and the device automatically sets the reference breathing parameters

Airway pressure range: 1~50cmH$_2$O, the accuracy range: ±0.7 cmH$_2$O; positive end expiratory pressure (PEEP) range is 0~10cmH$_2$O

The adjustable range of I : E ratio is from 20% to 80%; the sigh increases the tidal volume from 0 to 20%, and can set auto-sigh once after every 10 to 999 breaths or manual control

Model	Product Description
R415	Small Animal Ventilator
R415-AP	Accessory package for Anesthesia and Ventilator

R419 Intelligent animal ventilator

R419 intelligent animal ventilator as mechanical ventilation device, which is completely according with veterinary clinical practice. There are 3 modes of operation, including VCV, PIPCV and APNEA, to meet multiple clinical applications.

CE

Equipped with two different sizes of bellows, the output tidal volume 20 ~ 300mL and 300 ~ 1500mL

Three working modes：
Capacity control mode (VCV)
Pressure control mode (PIPCV)
APNEA mode

R419

Bellow-1500ml

5-inch LCD color display, realtime display device power, air pressure column, tidal volume, respiratory rate, suction ratio, pressure peak, average and other parameters

Respiratory rate (2 ~ 60 BPM) linear adjustable, respiratory ratio (1: 1.0 ~ 1: 4.0) real-time adjustable and airway pressure rate (5 ~ 35cmH2O) realt imeadjustable to meet the respiratory demand of different kinds of animals

- Adjustable power supply (110 / 220V)
- Light weight, portable, user-friendly design, multi-parameter fixed platform, easy to operate
- Provides safe and effective intermittent positive pressure ventilation (IPPV)
- Provide internal battery power, which can work more than 4 hours

Order Information:

Model	Product Description
R419	R419 Intelligent animal ventilator
R409-MB	Mounting Bracket for R409 Ventilator

Stereotaxic Instrument Solutions

Stereotaxic instruments are widely used in many fields such as neuroanatomy, neurophysiology, neuropharmacology and neurosurgery etc.

RWD offer a series of stereotaxic instruments to meet the experimental needs of rat, mouse, guinea pig, tree shrew, cat, rabbit, dog, monkey and other different animals . Moreover, RWD stereotaxic instrument is fully equipped (see P41-47), which greatly improves the applicability and application of each stereotaxic instrument.

So, how to choose a most suitable stereotaxic instrument?

First of all, according to the experimental object and the type of experiment, you can choose the following type, like: standard type, compact type, rail-mounted type, large animal type etc. (the following figure shows the basic version, see P41-47).
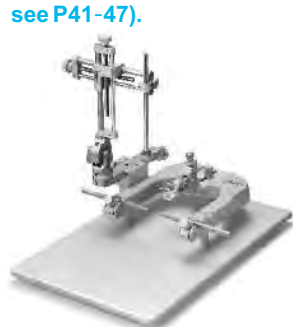
Standard type   **Compact type**   **Rotational type**   **Large animal type**

Secondly, according to the preferred experimental accuracy to choose the stereotaxic instruments with different accuary 100um, 10um, two different precision readings are available.

Standard (100μm)   **Digital (10μm)**   **Automatic (1μm)**

In addition, all of the manual stereotaxic instruments can be upgraded into digital stereotaxic instruments, while the single manipulator can be upgraded into double-manipulator and can be converted freely.

SGL M   **Dual M**

Standard Stereotaxic Instruments

Classical U-type base design, professional services in the laboratory for 15 years!

Relieve eyestrain by light-interrupted

Unique UP indicator to prevent incorrect operation

Working distance 80mm, reading accuracy of 100microns

Double-lead screw design, more stable and accurate operation

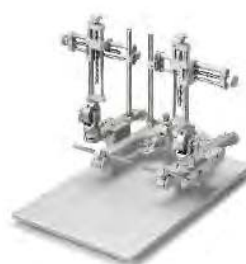Vertical locking and positioning button are separate to ensure absolute 90 ° vertical

Wide Y-axis operating range, spacing is up to 28mm

Adaptors of rats, mice, birds, cats and other different animal are optional

Curved nose clamp secure the animal firmly

Distance from tip of the ear bar to the base plate:51mm

U−frame base space 115mm

Ear bar plate pressing design, ensure more stability

Extended base plate 400mm x 255mm

68001

68002

Composition:
68001 and 68002 are complete sets of stereotaxic (see figure), both containing 68861N base plate, 68401 three-dimensional manipulator - left, 68021 rat adaptor, 68301 rat 18 ° ear bar, 68201 standard holder, and 68002 includes an extra 68402 three-dimensional manipulator - right.

Order Information:

Model	Product Description	Remarks
68001	Stereotaxic for Rat, SGL M, 18 Deg	
68002	Stereotaxic for Rat, Dual M, 18 Deg	
68005	Stereotaxic for Rat, SGL M, 45 Deg	
68006	Stereotaxic for Rat, Dual M, 45 Deg	
68037	Stereotaxic for Mouse, SGL M, 68030 Adaptor Incl	
68038	Stereotaxic for Mouse, Dual M, 68030 Adaptor Incl	
68043	Stereotaxic for Mouse, SGL M, 68055 Adaptor, 60 Deg	
68044	Stereotaxic for Mouse, Dual M, 68055 Adaptor, 60 Deg	
68535	Stereotaxic for Mouse, SGL M, 68077 Adaptor, 60 Deg	
68536	Stereotaxic for Rat, SGL M, 68078 Adaptor, 18 Deg	
68861N	Stereotaxic Base Plate, Standard	

Stereotaxic

Desktop Digital Stereotaxic Instruments
Digital displacement display, higher accuracy, higher efficiency!

Precise displacement sensor, accurate to 10μm

Compatible with anesthesia mask or anesthesia adapter for inhalation anesthesia

LCD digital display, real-time shows displacement distance, accuracy 10μm

One key to reset, no secondary readings and calculations

Powered by AA battery, no electronic interference
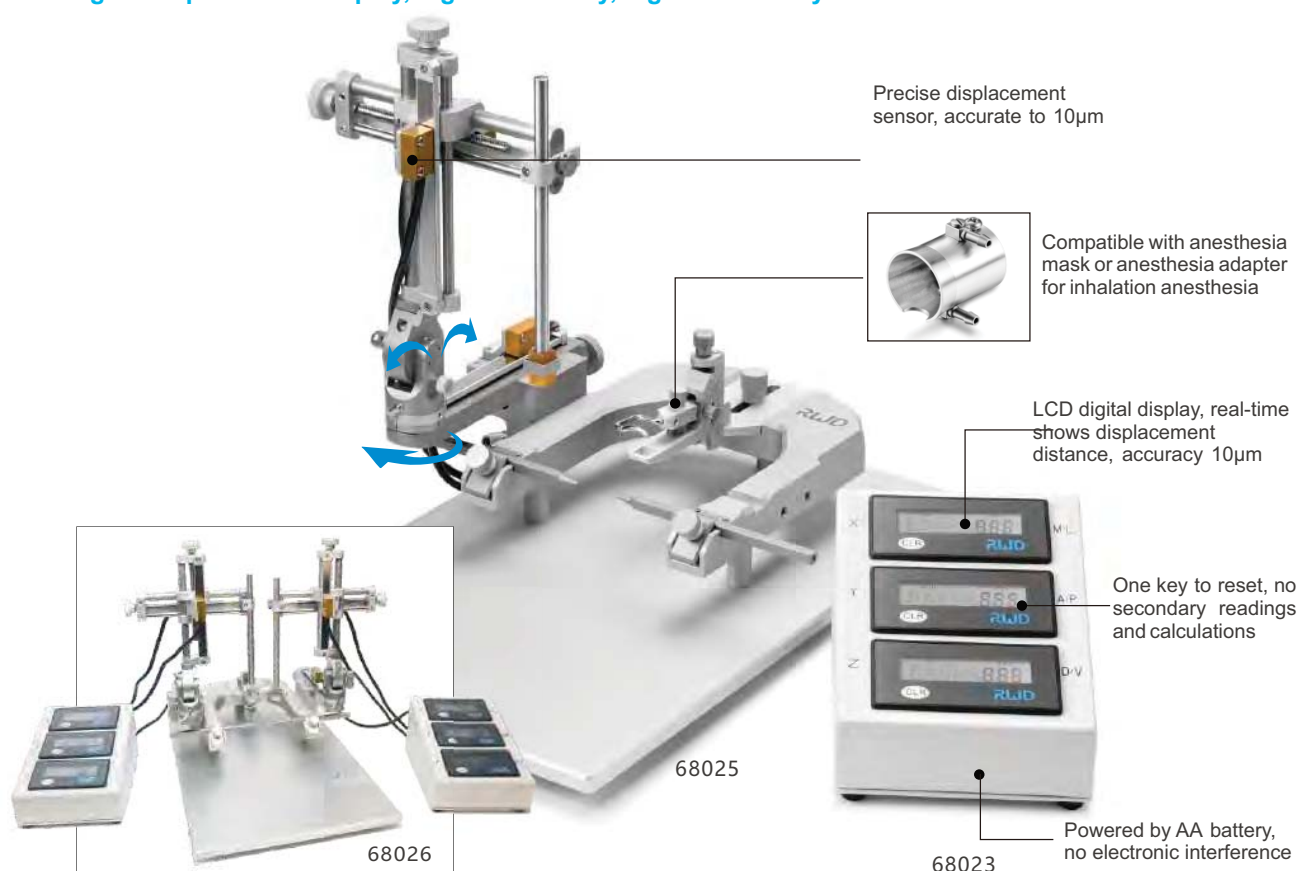
68025

68026

68023

Composition:
68025 and 68026 are complete sets of stereotaxic (see figure), both containing 68861N base plate, 68401 three-dimensional manipulator - left, 68021 rat adaptor, 68301 rat 18 ° ear bar, 68201 standard holder, 68026 includes an extra 68402 three-dimensional manipulator-right and 68023 digital display module.

Order Information:

Model	Product Description	Remarks
68025	Stereotaxic for Rat, SGL M, Digital, 18 Deg	
68026	Stereotaxic for Rat, Dual M, Digital, 18 Deg	
68027	Stereotaxic for Rat, SGL M, Digital, 45 Deg	
68028	Stereotaxic for Rat, Dual M, Digital, 45 Deg	
68018	Stereotaxic for Mouse, SGL M, Digital, 68030 Adaptor Incl	
68019	Stereotaxic for Mouse, Dual M, Digital, 68030 Adaptor Incl	
68045	Stereotaxic for Mouse, SGL M, Digital, 68055 Adaptor, 60 Deg	
68046	Stereotaxic for Mouse, Dual M, Digital, 68055 Adaptor, 60 Deg	
68537	Stereotaxic for Mouse, SGL M, Digital, 68077 Adaptor, 60 Deg	
68538	Stereotaxic for Rat, SGL M, Digital, 68078 Adaptor, 18 Deg	
68861N	Stereotaxic Base Plate, Standard	
68023	3-axis Digital Readout for Upgrade-68000	With digital base and displacement sensor

Compact Mouse Stereotaxic Instruments

Dorsal/Ventral adjustment range for adaptor and ear bar: 20mm

Unique UP indicator to prevent incorrect operation

The ear bar is made of polyoxymethylene resin, 4 different fixed points with 1mm resolution for scales.

Specific fixed base for mice, fixed more quickly

68513

68507

Small base plate: 255mm x 255mm
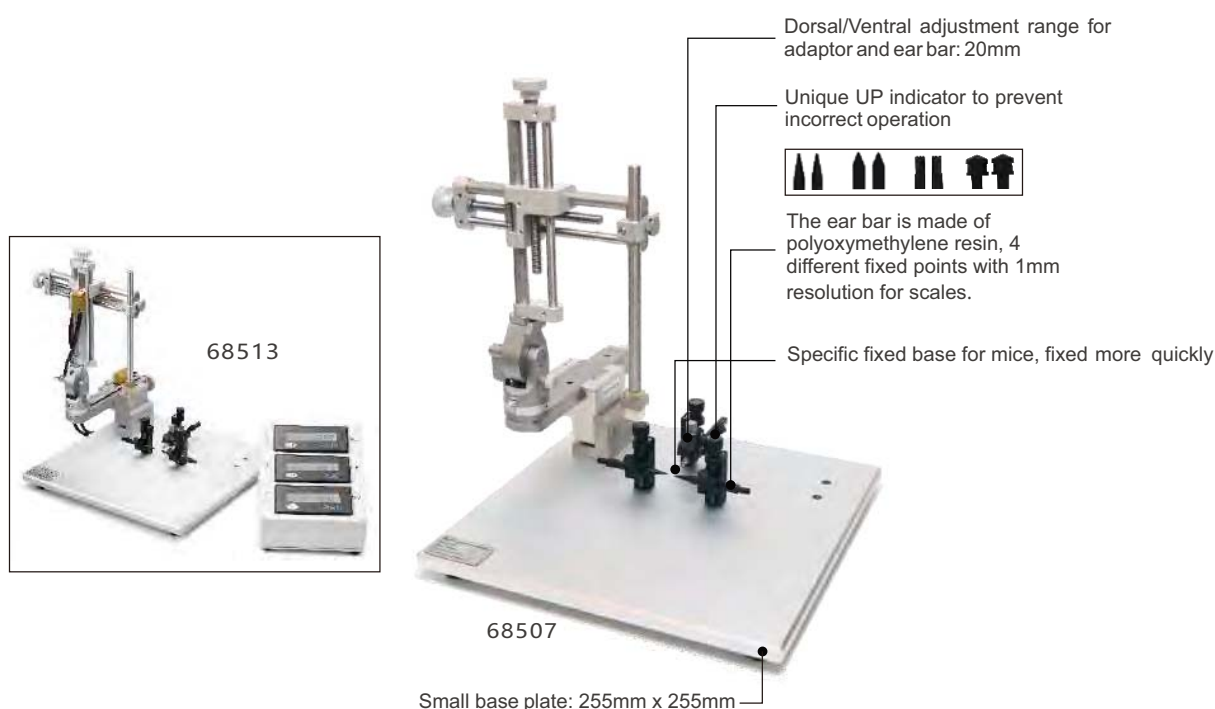
Order Information:

Model	Product Description
68507	Stereotaxic for Mouse, SGL M, Portable
68510	Stereotaxic for Mouse, Dual M, Portable
68513	Stereotaxic for Mouse, Digital and Portable, SGL M
68516	Stereotaxic for Mouse, Digital and Portable, Dual M

Warming Stereotaxic instrument new

Heating range: 20-45℃, 0.1℃ resolution,±0.3 accuracy

Saving space with integrated built-in thermal system

Real-time display of the working status of the heating pad, and monitor the working state

More safe when heating with a sensor in probe and heating pad

Heating up fast with the base made of Aluminum alloy

Soft smooth probe make it easy to insert and a little stimulate

Stereotaxic

Portable Rat & Mouse Stereotaxic Instruments

Unique UP indicator, adjustable
vertical direction range

Replace ear bar & adaptors,
to hold different rodents

68306

68301

68526

68528

68087
Mouse adaptor and 60° ear bar

68088
Rat adaptor and 18° ear bar
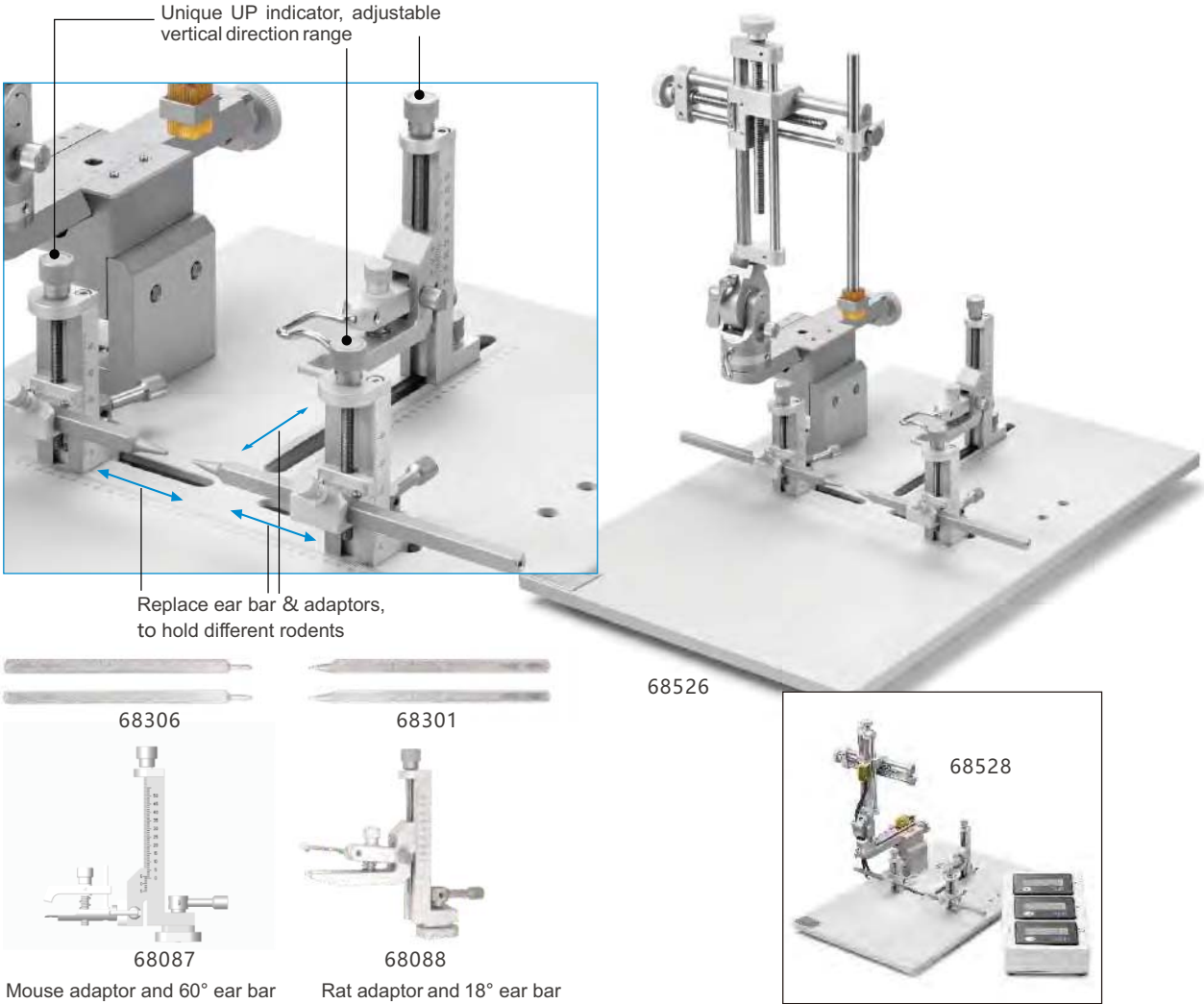
Composition:

68526 is a complete set stereotaxic configurations, containing 68867S base plate, 68401 three-dimensional manipulator - left, 68087 mouse adaptor and 68088 rat adaptor, 68301 rat 18° ear bars and 68306 mouse 60 ° ear bars, 68201 standard holder; Digital version 68528 adds 68023 three-dimensional digital display module.

Order Information:

Model	Product Description	Remarks
68526	Stereotaxic for Rat and Mouse, SGL M, Portable	
68527	Stereotaxic for Rat and Mouse, Dual M, Portable	
68528	Stereotaxic for Rat and Mouse, SGL M, Digital and Portable	
68529	Stereotaxic for Rat and Mouse, Dual M, Digital and Portable	
68867S	Stereotaxic Base Plate for Rat and Mouse, Portable, SGL M	
68867D	Stereotaxic Base Plate for Rat and Mouse, Portable, Dual M	
68087	Mouse adaptor (Stereotaxic for Rat and Mouse)	
68088	Rat adaptor (Stereotaxic for Rat and Mouse)	

Stereotaxic

Large Animal Stereotaxic Instruments

Adaptors are available for dogs, monkeys, pigs, and other large animals.

Unique jaw plate design better stabilizes the heads of large animals of varying weights.

Y-axis rail design, longer moving range: ± 100mm, 1mm resolution

Combined with microdriver (68104, see P56), the resolution of vertical reading can be promoted to 50µm

Holds up to six manipulator arms

68024

68902

68942

Composition:
68902 is a complete set of stereotaxic, containing 68868N base plate, 68941 two-dimensional manipulator - left, 68942 two-dimensional manipulator - right,68081 dog/monkey adaptor, 68303 cat/ monkey 18 ° ear bar, 68201 standard holder; Digital version 68916 adds 68024 two-dimensional digital display module.

Order Information:

Model	Product Description	Remarks
68901	Stereotaxic for Dog/Monkey, SGL M, 68081 Adaptor Incl	
68902	Stereotaxic for Dog/Monkey, Dual M, 68081 Adaptor Incl	
68911	Stereotaxic for Cat/Monkey, SGL M, 68041 Adaptor Incl	
68912	Stereotaxic for Cat/Monkey, Dual M, 68041 Adaptor Incl	
68916	Stereotaxic for Dog/Monkey, Digital, SGL M, 68081 Adaptor Incl	
68917	Stereotaxic for Dog/Monkey, Digital, Dual M, 68081 Adaptor Incl	
68920	Stereotaxic for Cat/Monkey, Digital, SGL M, 68041 Adaptor Incl	
68921	Stereotaxic for Cat/Monkey, Digital, Dual M, 68041 Adaptor Incl	
68024	2-axis Digital Readout for Upgrade-68000	
68868N	Stereotaxic Base Plate for Dog, Pig, Monkey etc	
68941	2-axis Manip for Dog/Monkey Stereotaxic, Left Hand	
68942	2-axis Manip for Dog/Monkey Stereotaxic, Right Hand	Adaptor/ear bar see P50-54
68944	2-axis Digital Manip for Dog/Monkey Stereotaxic, Left Hand	
68945	2-axis Digital Manip for Dog/Monkey Stereotaxic, Right Hand	

Stereotaxic Instruments Accessories

Electrode Holder

68201 Standard Probe Holder-Corner

V-groove design, widely used for syringe needles or electrodes with diameter 0.3mm-1.5mm.

68211 Cannula Holder

Compatible with stereotaxic instruments with dual manipulators. Holds electrodes or cannulas of 2.1mm to 5.0mm in diameter. It can place them within a distance of 0.3mm.
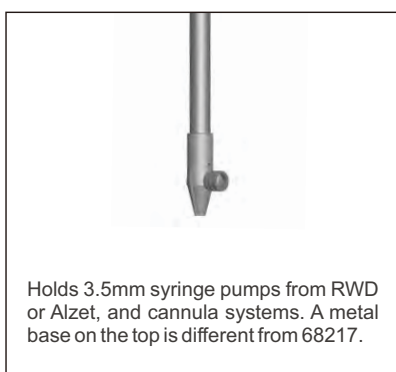
68210 Electrode Holder

Holder is specifically designed for electrophysiological experiments. Two electrodes, controlled individually, can be located very close to each other. Holds thin electrodes with diameter from 0.7mm to 2.5mm.
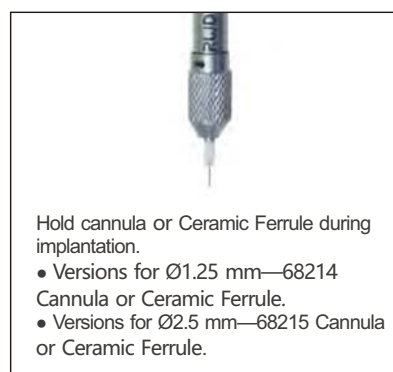
Cannula Holders

68205 Cannula Holder

Holds 3.5mm syringe pumps from RWD or Alzet, and cannula systems. A metal base on the top is different from 68217.

68217 Cannula Holder

Suitable for holding the single cannula or double cannula with the outer diameter of 3.5mm plastic base.

68214/68215 Ceramic Ferrule Holder

Hold cannula or Ceramic Ferrule during implantation.
● Versions for Ø1.25 mm—68214 Cannula or Ceramic Ferrule.
● Versions for Ø2.5 mm—68215 Cannula or Ceramic Ferrule.

Multi-function Holders

68202 Large Probe Holder

Lateral fixation, holds micro syringe needles, large diameter electrodes and flexible drill handles etc, V-groove design with 6mm-12mm diameters.

68218 Syringe Holder

Holder is applicable for micro-injection, which holds syringe and needle simultaneously, and the clamping of the syringe is more stable, the syringe holding range is 3mm to 12mm and needle's is 0.3mm to 1.5mm.

68605 Microdrill Holder

Holder secures the microdrill to sterotaxic instruments. Controls the depth of drilling by the manipulator. Easy and accurate operation protects brain tissue from damage caused by excessive drilling. Holds the microdrill with diameter about 14.5mm.

Stereotaxic

Adaptors ▶

Mouse Adaptors

68030 Mouse/Neonatal Rat Adaptor
(with 18° ear bars 68034 and 45° ear bars 68313)
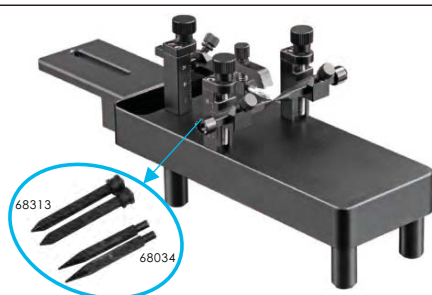
The ear bars of this adaptor are made of resin and the tips are specially treated, which ensures that the head is held firmly without damage to the skull. There are scales on the incisor and the earbars. The height can be adjusted flexibly, which is good for experiments from different angles.

Considering there is no ear canal for neonatal rat, this adaptor employs a cheekbone locker to replace the ear bars. This design provides noninvasive and stable way to hold the neonatal rat.

68055 Mouse Adaptor

It holds the mouse head by a palate and incisor, and offers vertical regulation to make the head level or at certain angle. The Vertical adjustable range from +10mm to -20mm, with 100μm resolution; Horizontal adjustable range of 43.5mm; Horizontal rotatable range of 35°.

68057 Mouse Gas Anesthesia Head Holder

This model offers maximal adjustment for positioning the head. The adaptor can rotate the head to multianglewithout blocking the anesthetic gas delivery.

- Vertical adjustable range: 30mm (+10mm~-20mm), with 100μm accuracy.
- Vertical rotatable range: 70° (-35°~ +35°), with 5° accuracy.
- Horizontal rotatable range: 70° (-35°~ +35°), with 5° accuracy.
- Horizontal adjustable range: 43.5mm
- Diameter of inlet/outlet of the mask: 2mm
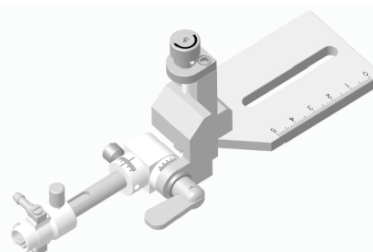
Rat Adaptors

68021 Rat Adaptor
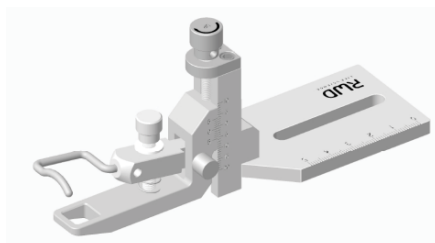
It holds rat head firmly through incisor, nose clip and ear bars. This adaptor can be adjusted 30 mm vertically along dovetail slide with 100μm resolution and 50mm horizontally, which makes it applicable for rats of different weight.

68053 Rat Anesthesia Adaptor

This adaptor integrates the gas anesthesia mask function while hold the rat head firmly. The adaptor can rotate the head to multianglewithout blocking the anesthetic gas delivery.

- Vertial adjustment range is 30mm (-20mm ~ + 10mm), with 100μm accuracy.
- Vertically rotatable range is 70°(-35° ~ + 35°), with 5°accuracy.
- Horizontal rotatable range is 70° (-35°~ + 35°), with 5°accuracy.
- Horizontal adjustment range is 43.5mm.

Stereotaxic

Multi-function Adaptor

68091 Spinal Cord Adaptor for Rat & Mouse

The adaptor is ideal for spinal securing of rat and mouse. The base plate is 210mm(L) x 165mm(W) x 15mm(H), which can be attached to RWD 68000 series small animal stereotaxic instruments. There are 3 vertical bars and locking blocks. which can be easily disassembled through the T slots without wrench. The adjustment range of vertical bar is 56mm. The height of locking block can be easily adjusted by screw. This adaptor can be adjusted in Vertical/Lateral, Anterior/Posterior and Ventral/Dorsal directions. Standard accessories contain: Base plate, 3 vertical bars and locking blocks and spinal cord clamp (3 pairs).

Specifications:

● Accurate and reliable positioning.

● Wide various components and accessories can be used in module.

● Simple, fast and effective clamping and locking.

● Compatible with small animal stereotaxic instruments.

Stage Platform

Balance the animal's body and head to ensure that the animals breathe freely during the operation.

Specifications:
Platform: 195mm(L) x 90mm(W) x 11mm(H)
Base plate: 195mm(L) x 110mm(W) x 12mm(H)
Lift height: 50mm

Non-metallic platform, grinding treatment, anti-skidding, polished non-metallic platfrom anti-skidding, easy to clean

Metal plate, firm

68607

Ear Bars ▶

RWD ear bar with the scale of 35mm,1mm resolution, square 6.15mm

68301
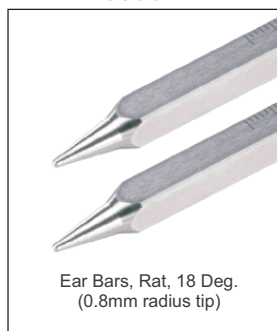
Ear Bars, Rat, 18 Deg.
(0.8mm radius tip)

68302

Ear Bars, Rat, 45 Deg (for guinea pigs, prairie rats, birds, squirrel monkeys 0.8mm tip)

68306
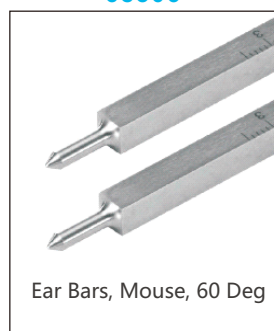
Ear Bars, Mouse, 60 Deg

68314
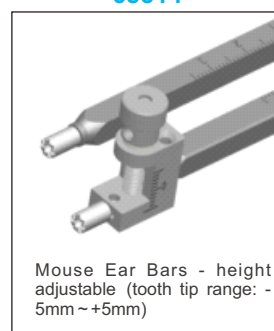
Mouse Ear Bars - height adjustable (tooth tip range: -5mm～+5mm)

68307

Ear Bars, Mouse, Non-Rupture, Cuff
(Suitable for neonatal rats are available)

68308
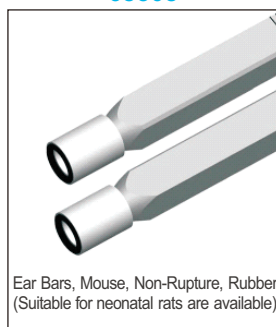
Ear Bars, Mouse, Non-Rupture, Rubber
(Suitable for neonatal rats are available)

68303
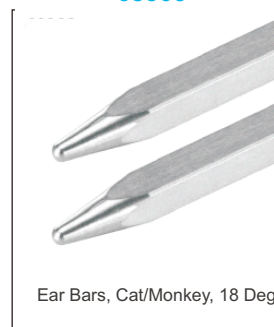
Ear Bars, Cat/Monkey, 18 Deg

68304
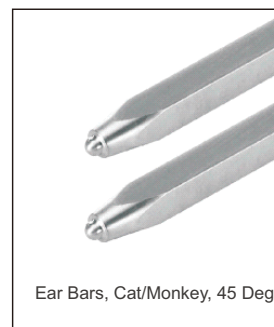
Ear Bars, Cat/Monkey, 45 Deg

Stereotaxic

Other Accessories

Brain & Heart Matrices

RWD Brain and Heart matrices is made of stainless steel, electroless plating, through precision machining and highly polished, strong durability, which can be heated, chilled, autoclaved scrubbed and use in variety of harsh conditions. The surface will not be damaged by thermal pressure, and will not be damaged by mechanical impact, keeping the product in use for a long time.

Brain matrices have coronal sections and sagittal sections, each section can be as 0.5 mm or 1 mm. Widely use in preparing pathological tissue section and cut out TTC dyeing organization.

Heart matrices have coronal sections. The section can be as 0.5 mm or 1 mm. The mouse heart matrices are also suitable for neonatal rats. It can be used for the experiment on myocardial ischemia, ischemia reperfusion and other cardiac related experiments. It can also be chilled and used in experiments of freezing tissue.

| 68709 | 68712 | 68715 | 68718 |

| 68719 | 68720 | 68721 | 68722 |

Order Information:

| Model	Product Description	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	Depth (mm)	Diagram
68707	Brain Matrix, Mouse 40-75g, Coronal, 1mm, Stainless steel	3.18	11.1	8.73	19.1	12.5	7.40	
68708	Brain Matrix, Mouse 40-75g, Sagittal, 1mm, Stainless steel	3.18	11.1	8.73	19.1	12.5	7.40	
68709	Brain Matrix, Rat, 175-300g, Coronal, 1mm, Stainless steel	4.76	17.9	14.7	36.6	27.35	8.94	
68710	Brain Matrix, Rat, 175-300g, Sagittal, 1mm, Stainless steel	4.76	17.9	14.7	36.6	27.35	8.94	
68711	Brain Matrix, Rat, 300-600g, Coronal, 1mm, Stainless steel	4.76	19.8	14.7	36.6	25.7	10.91	
68712	Brain Matrix, Rat, 300-600g, Sagittal, 1mm, Stainless steel	4.76	19.8	14.7	36.6	25.7	10.91	
68713	Brain Matrix, Mouse, 40-75g, Coronal,0.5mm, Stainless steel	3.18	11.1	8.73	19.1	12.5	7.40	
68714	Brain Matrix, Mouse, 40-75g, Sagittal, 0.5mm,Stainless steel	3.18	11.1	8.73	19.1	12.5	7.40	
68715	Brain Matrix, Rat, 175-300g, Coronal, 0.5mm, Stainless steel	4.76	17.9	14.7	36.6	27.35	8.94	
68716	Brain Matrix, Rat, 175-300g, Sagittal, 0.5mm, Stainless steel	4.76	17.9	14.7	36.6	27.35	8.94	
68717	Brain Matrix, Rat, 300-600g, Coronal, 0.5mm, Stainless steel	4.76	19.8	14.7	36.6	25.7	10.91	
68718	Brain Matrix, Rat, 300-600g, Sagittal, 0.5mm, Stainless steel	4.76	19.8	14.7	36.6	25.7	10.91	
68719	Heart Matrix, Mouse 20-75g, Coronal, 1mm, Stainless steel	8.3	12.7	—	—	—	4.8	
68720	Heart Matrix, Rat 175-400g, Sagittal, 1mm, Stainless steel	12.7	19.9	—	—	—	9.6	
68721	Heart Matrix, Mouse 20-75g, Coronal, 0.5mm, Stainless steel	8.3	12.7	—	—	—	4.8	
68722	Heart Matrix, Rat 175-400g, Sagittal, 0.5mm, Stainless steel	12.7	19.9	—	—	—	9.6	

Stereotaxic

Manual Syringe Pumps(68606)

Compatible with RWD stereotaxic instruments, simple installation, with 10μm displacement accuracy and up to 25mm distance, it is an economical and practical microinjection pump!

Micormeter in 0.1mm increments

Easy thumb and finger control knob for precise injections

Luer Lock for easy connection of most syringe

Large probe holder for easy attachment to most stereotaxic instruments

68606
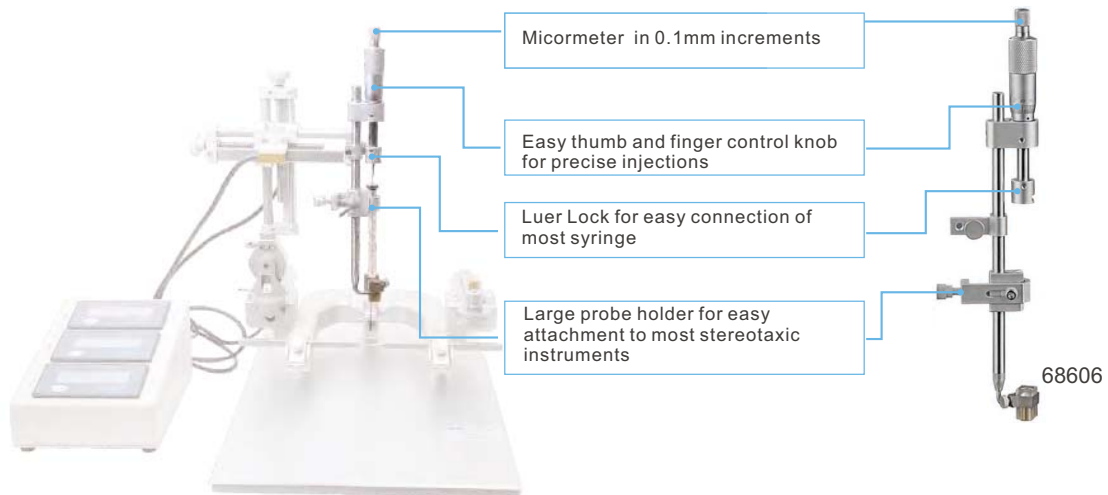
Features:

- Precisely-controlled infusion/withdrawal of picoliter volume.
- Provides an economical means of injecting or withdrawing a calibrated volume with simple,precise manual control.
- The injector has a universal adaptor for all RWD and Hamilton 700,7000 or Gas-Tight Series syringers,ranging from 1 to 100μl sizes and enables a wide range of volumes to be deliverd-both infusion and withdrawal operation.
- The Manual Stereotaxic injector is graduated in 0.01mm increments. One complete revolution advances the plunger of the syring 0.5mm.

Cordless Microdrill

No need to connect the power supply, convenient, easy to operation, space saving.

Features:

- Cordless design, simple & controllable operation
- The double-bearing design is used at the joint of the drill bit, make drilling and grinding more stable
- 750mA lithium battery, can be used continuously for 45 mins after fully charged
- Wide range of applications, can be used with a 2.3mm diameter drill bit for drilling and polishing
- It can be equipped with a cranial drill holder (68228) fixed to Stereotaxic, free hands operation
- Speed: 12000rpm
- Stall torque: 1.25 oz./in
- Power: 100-240V
- Dimension: length 20cm, body diameter 19.5mm

87001

68228

Order Information:

Model	Product Description
87001	Cordless Microdrill (Bits Not Included,some details see below)
68228	Cordless Microdrill Holder(Holds the microdrill with diameter about 19.5mm.)

Stereotaxic

Microdrill

It takes only one second to drill the skull, easy to operate and control. It can also be used for grinding the skull.

for drilling   for grinding

Features:

- Speed up to 38,000rpm
- Forward or reverse available
- Controlled manually or by foot pedal

- Can be installed onto the stereotaxic instrument by the microdrill holder (Model: 68605) and controlled by the manipulator
- Various drill bits available, diameter from 0.5-2.3mm

Order Information:

Cat No.	Product Description	Cat No.	Product Description
78001	Microdrill (bits not included)	78050	Drill Bits HM1027 2.7mm, Round Tip, pkg of 2
78040	Drill Bits HM1005 0.5mm, Round Tip, pkg of 5	78060	Drill Bits HM31008 0.8mm, Flat Tip, pkg of 5
78041	Drill Bits HM1006 0.6mm, Round Tip, pkg of 5	78061	Drill Bits HM31010 1.0mm, Flat Tip, pkg of 5
78042	Drill Bits HM1008 0.8mm, Round Tip, pkg of 5	78062	Drill Bits HM31012 1.2mm, Flat Tip, pkg of 5
78043	Drill Bits HM1010 1.0mm, Round Tip, pkg of 5	78063	Drill Bits HM31014 1.4mm, Flat Tip, pkg of 5
78044	Drill Bits HM1012 1.2mm, Round Tip, pkg of 5	78064	Drill Bits HM31016 1.6mm, Flat Tip, pkg of 5
78045	Drill Bits HM1014 1.4mm, Round Tip, pkg of 5	78065	Drill Bits HM31018 1.8mm, Flat Tip, pkg of 5
78046	Drill Bits HM1016 1.6mm, Round Tip, pkg of 5	78066	Drill Bits HM31021 2.1mm, Flat Tip, pkg of 5
78047	Drill Bits HM1018 1.8mm, Round Tip, pkg of 5	78067	Drill Bits HM31023 2.3mm, Flat Tip, pkg of 5
78048	Drill Bits HM1021 2.1mm, Round Tip, pkg of 5	68605	Microdrill Holder
78049	Drill Bits HM1023 2.3mm, Round Tip, pkg of 5		

Fiber-lite Illuminator

（Halogen Fiber-lite Illuminator and LED Fiber-lite Illuminator are available in RWD）

The halogen fiber-lite illuminator adopts dual－piple pipe optic coaxial lighting, provide better field of view, with good brightness; stable output voltage, safe and reliable light bulb; size is about 280 x, 100 x 165mm, and the light intensity can be adjusted continuously , with color temperature 3200K.

Order Information:

Halogen fiber-lite illuminator

Model	Product Description	Remarks
76301	Fiber-Lite Illuminator(150W)	Dual-Pipe Fiber Optic, Bulb and Main Engine
76304	Main Engine	
76310	Dual-Pipe Fiber Optic(Included in illuminator)	
76306	Bulb(21V 150W)-Philips	

ThermoStar Homeothermic Monitoring System

During the process of animal surgery or acute anesthetized animal experiment, maintaining animals' body temperature is very important for the accuracy and reliability of results, furthermore, it is an important way to reduce the mortality of the animals. In order to fulfill this need, RWD launched a new generation of homothermic monitoring system "Thermostar", the control unit acquired a 4.3 inch color LCD touch screen, allows users to clearly view the subject's real-time body temperature, set the target temperature, view the heating state and set audible alarms when subject's body temperature turns abnormal. A specific control separate circuit for heating pad and rectal probe, respectively to ensure the stability and safety of the system.

heating pad (69023 / 69024 / 69025)   **temperature probe (69022)**

Features:

- Real-time display of the working status of the heating pad, and monitor the working state of every channel, show: IDLE, WARNING, STANDBY, and WORKING
- Heating range: 20-45℃, 0.1℃ resolution, Degrees Celsius and Fahrenheit can be switched

- Power supply: 100-240V, 50/60Hz
- Control unit size: L205 x W148 x H80 mm
- Control unit weight: 1.3kg

Order Information:

Type	Model	Product Description	Remarks
Complete system	69020	ThermoStar Temperature Controller, 69023 pad incl.	A heating pad (69023) and a temperature probe (69022) incl.
	69026	ThermoStar Temperature Controller, 69024 pad incl.	A heating pad (69024) and a temperature probe (69022) incl.
	69027	ThermoStar Temperature Controller, 69025 pad incl.	A heating pad (69025) and a temperature probe (69022) incl.
Temperature probe	69022	Temperature Probe	1.5mm diameter, 30mm rod length, 150 line length (rat/mouse)
Heating pad	69023	Heating Pad -12.0*20.5cm	
	69024	Heating Pad -9.0*17.0cm	
	69025	Heating Pad -7.0*10.0cm	

Stereotaxic

Microscope

77001S Desktop Binocular Stereo Microscope equips with universal support; researchers can observe in high resolution and three-dimension.

Features:

NO.	Products Name	Products Detail
1	Eyepiece	10X Eyepieces, View field diameterφ22mm
2	Objective Lens	0.67X-4.5X Objective lens ratio 1:6.7
3	Binocular Drawtube	Pupil Distance 55-77mm Diopter adjustment±5 ,Diopter 45°Incline 360°Spin
4	View field Range	31.2 mm -5.1mm
5	Total Magnification	6.7X-45X(10X Eyepiece),3.35X-22.5X(10X Eyepiece +0.5X Assist lens)
6	Working Distance	Working distance 105mm(10X Eyepiece),Working distance 177mm (10X Eyepiece +0.5X Assist lens)
7	Focusing Mechanism	Focusing hand wheel is adjustable
8	Universal Support	360°Spin，Retractable
9	Lighting	DPD-60HW Ring LED Illumination
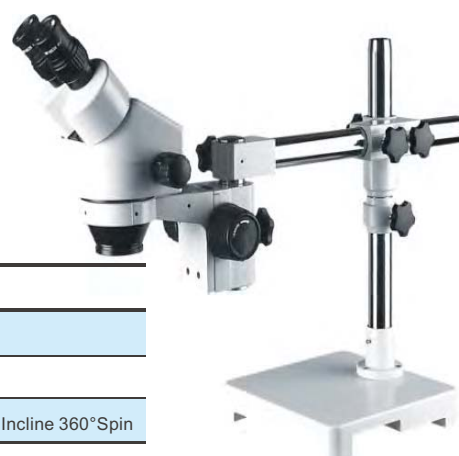
77001S

On the basis of the binocular microscope, 77008S Trinocular Zoom Stereo microscope increase the interface, so that the camera, video camera can be installed in the microscope to achieve real time observing of the objects.

Animal Restrainer

Tubular type Restrainer

Tubular type restrainer is used to restrict the animal from turning or moving, by fixation on rear-end and flexibly regulated.Unique design of tapered nose restrainer provide easy-access for animals, meanwhile makes animals feel safety.

Taper restrainer is a new fixed tool design for animal injection, suitable for fast and efficient batch injection.

Restrainer

Taper restrainer

Ordering Information：

Model	Products Description
9131	Small restrainer for up to 25g Mouse/L110xI.D.20mm
9132	Medium restrainer for 25-50g Mouse/L135xI.D.30mm
9133	Large restrainer for 50-75g Mouse/L160xI.D.40mm
9134	Small restrainer for 75-200g Rat/L200xI.D.50mm
9135	Medium restrainer for 200-300g Rat/L210xI.D.60mm
9136	Large restrainer for 300-500g Rat/L220xI.D.70mm
9137	Extra Large restrainer for above 500g Rat/L230xI.D.80mm
9138	Taper restrainer for Rat and Mice/L150xH130xO.D.100mm

Rats & Mice Shaver

Features:

- Applicable to shave off hair on animals' cephalosome, face, legs and ear
- AA batteries use
- Low vibration and noise as well as ergonomic design
- Suitable for small animals

CP-5200

Stereotaxic

Precise Impactors

68099 II New upgraded Precise Impactor for Rat/Mouse

68099 II , the new upgraded precise impactor is a very friendly tool for evaluate traumatic brain injury mechanisms in basic medical research. This system is a popular way to make a traumatic brain injury modeling, which is controlled by pneumatic and electric device, and increased accuracy and reproducibility in brain injury modeling. In addition, a unique sensor is used to automatically detect the zero-interface reference point at the impact point of the model accurately and reliably before the start of the impact procedure, thus reducing the tedious process of manual zeroing, it is helpful to make precise and highly repeatable in brain injury modeling. In the experiment, the standard cylindrical head hammers with different size are available. The parameters such as impact depth, velocity and dwell time could be precisely controlled to ensure that the damage level to be accurate. It is an accurate tool with high efficiency, repeatability and stability, ensuring the reproducibility of the damage model.

Features:

- Pneumatic pure electric control a popular way to make a traumatic brain injury modeling
- High efficiency, automatic detection of zero interface, avoid the cumbersome manual process before the strike.
- Use ball screw to control displacement, stable and reliable rotation, large screw handle, easy operation.
- Color LCD touch screen interface, with friendly and easy operated software.
- Strike speed: up to 5.6m/s, speed range: 0.5-5.6m/s, resolution ratio: 0.1m/s.

Speed range: 0.5-5.6m/s

Speed	5.6	m/s
Depth	5.00	mm
Dwell Time	5.00	sec

Confirm   Cancel

- Control the dwell time and strike depth, the time range: 0-5.00s, resolution ratio:0.01s, the depth range: 0-5.00mm, resolution ratio: 0.01mm.
- Avariety of cylindrical flat head hammers, the outer diameters are 1mm, 2mm, 3mm, 4mm and 5mm.

5mm

1mm

Head Hammers

Ultra Precise Rotational adapter for Mouse and Rat

Rotational Adaptor for Mouse and Rat

- Control the dwell time and strike depth, the time range: 0-5.00s, resolution ratio:0.01s, the depth range: 0-5.00mm, resolution ratio: 0.01mm.
- Avariety of cylindrical flat head hammers, the outer diameters are 1mm, 2mm, 3mm, 4mm and 5mm.
- Support a variety of gas supply, containing 9/16 "and φ8 quick connection, easy to connect oxygen tanks or aerostatic press.
- Solid and heavy frame, stable, effective against air recoil.
- Ultra Precise Rotational adapter is flexible and fast to meet the needs of different points of impact.

Impactor

Rodents and Monkey Spinal Cord Impactor

RWD's spinal impactor is a unique tool to evaluate the mechanisms of injury spinal cord model. It adopts the precise laser to achieve the precise location and measurement. Used together with the rat and mouse adaptor or the monkey spinal cord adaptor, the spinal impactor solve the problem of modeling error caused by spinal collapse, thus to ensure the effectiveness and uniformity during the experiment.

68100 Mouse and Rat Spinal Cord Impactor

68098 Monkey Spinal Cord Impactor

Features:

- New design & easy operation, suitable for mouse, rat, or monkey within 5 kg, such as Macaca Fascicularis.
- Pneumatic control on speed, depth, dwell time.
- Professional laser sensor to ensure accurate measurement, with 0.01mm accuracy.
- Speed, dwell time and displacement graph can be displayed in PC through software and recorded.
- Data can be recalled at any time to review an experiment. High reliability as better simulation trauma biomechanics characteristic.

68095
68094
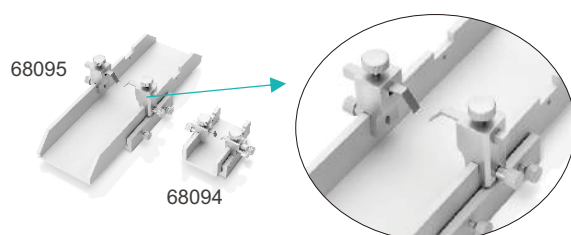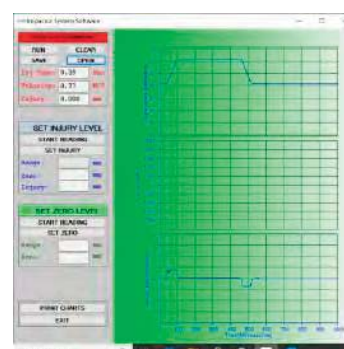
Spinal Cord Adapters for Mice and Rats
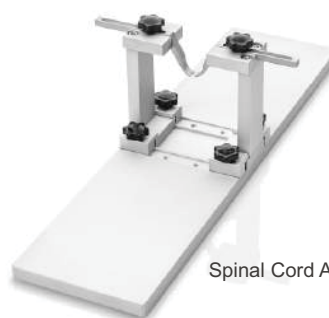
Spinal Cord Adapters for Monkey

- The cylindrical flat hammer, OD 3 mm, can be dismountable
- Be of high temperature and high pressure sterilization Convenient to trigger by depressing the button or clicking on the software.
- Speed 0.00~2.00m/s, depth 0.00~10.00mm, dwell time 0.05~5.00s.
- The spinal cord adapter hold the spinal cord from bilateral processus transversus, avoiding the depth measurement error due to animals breathe; it also avoid the subsidence of the spinal cord on impacting. Windows XP, 7,8,10 compatible.
- Computer not included.

Microinjection

Microinjection

Cannula (Single or Double) ▶

Cannula implantation is the international general method for acute and chronic intracranial drug administration in animal experiments. RWD offers customized services for users, the users can customize according to specific experimental requirements.

Single Cannula

Components:

Guide cannula

Guide cannula consists of a threaded cylindrical plastic pedestal and a stainless steel tube. It has to be preimplanted into brain and fixed with dental cement. Both dummy cannula and internal cannula can be inserted into guide cannula individually.

Dummy cannula

Stainless steel wire and threaded plastic cap make a dummy cannula. It can be inserted into guide cannula and fixed by screw to seal the guide cannula and prevent outflow of tissue fluid after injection. The length of the stainless steel wire can be customized.

Metal Cannula

The metal materials avoid biting after the cannula implantation.

Internal cannula

Internal cannula can be fixed into guide cannula through fixing screw and its tail end is connected with PE tube for injections. The length can be customized.

Fixing screw

Fixing screw fixes internal cannula to guide cannula.

Cording Diagram:

Single-Cannula connection

Diagrams:

- A - The length of the stainless steel tubing below the plastic pedestal.
- B - The height of the cylindrical plastic base.
- C - The length of the stainless steel tubing below the plastic pedestal, can be customized.
- D - External diameter of stainless steel guide cannulas.
- E - External diameter of cylindrical plastic base.
- F1 - External diameter of Lock nut.

- F2 - External diameter of Dummy Cannulas.
- H1 - Height of Lock nut.
- H2 - Height of Dummy Cannulas.
- G1- The internal cannulas projection length beyond the guide cannulas tip, can be customized.
- G2- The dummy cannulas projection length beyond the guide cannulas tip, can be customized.

Guide Cannula	Dummy Cannula	Internal Cannula	Fixing Screw	A	B	C	D	E	F1	H1	F2	H2
62001	62101	62201	62502	1	8	15	0.64	3.5	5.5	7.5	5	7
62002	62102	62202	62502	1	8	15	0.56	3.5	5.5	7	5	6.5
62003	62102	62203	62502	1	8	15	0.48	3.5	5.5	7	5	6.5
62004	62104	62204	62502	1	8	15	0.41	3.5	5.5	7	5	6.5
62005	62101	62201	62502	0	8	15	0.71	3.5	5.5	7.5	5	7

Ordering Instructions:

- D-outer diameter of the Guide Cannula, five sizes 0.64, 0.56, 0.48, 0.41 and 0.71mm are available

- C-length (Unit: mm) of the metal tube below the plastic pedestal (B), that is, also the vertical distance from the skull to Target Nuclei

- G1-length (Unit: mm) of the protrudent Injector through the Guide Cannula, 0.5 or 1.0mm is recommended

- G2-length (Unit: mm) of the protrudent Dummy Guide, 0.5 or 1.0mm is recommended
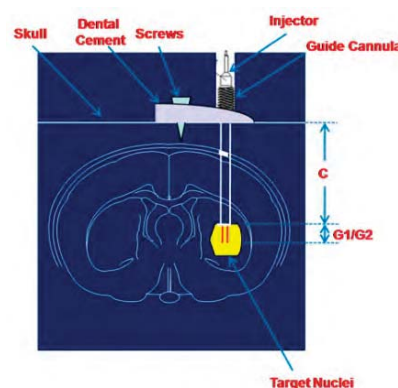
Diagram for Customization

Order information (Unit: mm):

Matching	Guide Cannula (OD x ID)	Dummy Cannula (plastic)	Dummy Cannula (metal)	Internal Cannula (OD x ID)	Fixing Screw (OD x L)	PE Tube (OD x ID)
1	62001	62101	62106	62201	62502	62329
	0.64 x 0.45	OD 0.40	OD 0.40	0.41 x 0.25	5.5 x 7.0	1.50 x 0.50
2	62002	62102	62107	62202	62502	62329
	0.56 x 0.38	OD 0.30	OD 0.30	0.36 x 0.20	5.5 x 7.0	1.50 x 0.50
3	62003	62102	62107	62203	62502	62329
	0.48 x 0.34	OD 0.30	OD 0.30	0.30 x 0.14	5.5 x 7.0	1.50 x 0.50
4	62004	62104	62108	62204	62502	62329
	0.41 x 0.25	OD 0.20	OD 0.20	0.21 x 0.11	5.5 x 7.0	1.50 x 0.50
5	62005	62101	62106	62201	62502	62329
	0.71 x 0.45	OD 0.40	OD 0.40	0.41 x 0.25	5.5 x 7.0	1.50 x 0.50

Notes: Plastic or mental dummy cannula is optional

Double Cannula

Introduction:

RWD has launched I, II, III and IV series double cannula systems for acute and chronic intracranial drug administration in animal experiments.

Series I: Recommended for rat or mouse use, 0.48mm (outer diameter) x 0.34mm (internal diameter).

Series II: Recommended for rat use, 0.64mm (outer diameter) x 0.45mm (internal diameter).

Series III: Specifically for mouse use, 0.48mm (outer diameter) x 0.34mm (internal diameter).

The height of cylindrical plastic pedestal of Guide cannula is different from Series I.

Series IV: 0.41mm (outer diameter) x 0.25mm (internal diameter).

Application:

Double cannula system is used for bilateral implantation, suitable for injecting one or two drugs into two different brain regions.

Cording Diagram:

Dual-Cannula connection
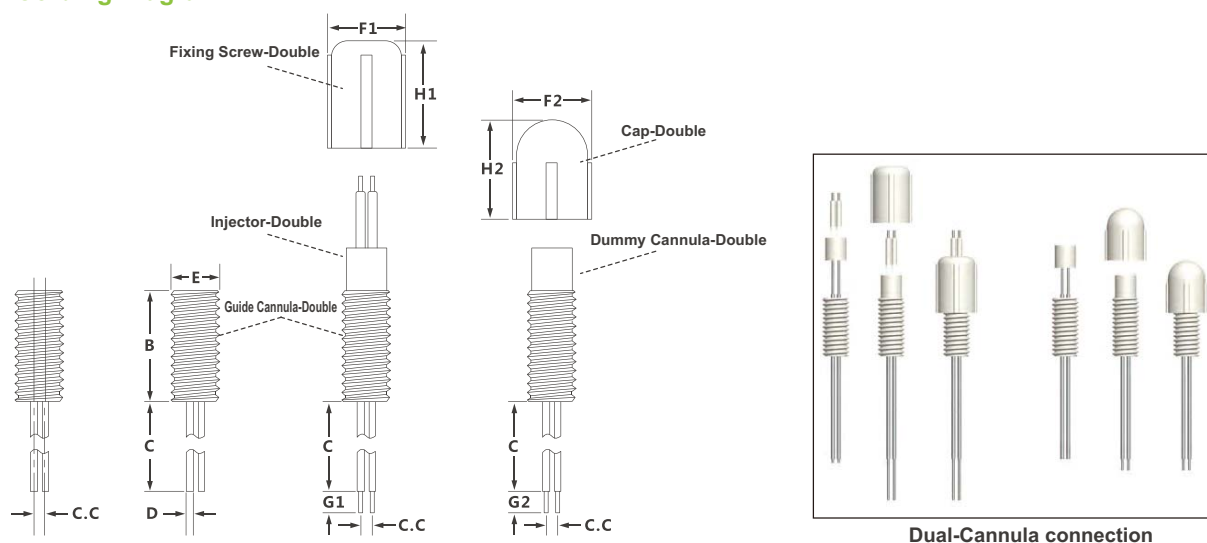
Comments:

- B - Height of cylindrical plastic pedestal, which is 7.8mm for Series I, II & IV and 5.5mm for Series III

- ★C - Length of stainless steel tube below the cylindrical plastic pedestal. The default value is 13.7mm for Series I & III, 20.0mm for Series II and 10.0mm for Series IV. The length can be customized with default value as maximum

- ★C.C - Center distance between double guide cannulas, double dummy cannulas and double injectors. These 3 values should be the same in one system. It can be customized (range: 0.5mm-3.0mm, the minimal increment 0.1mm)

- D - Outer diameter of stainless steel tube and it has 3 sizes: 0.48mm for Series I & III, 0.64mm for Series II and 0.41mm for Series IV

- E - Outer diameter of the cylindrical plastic pedestal and it comes with 3.5mm or 5.0mm. It is related to the outer diameter and centre distance between double guide cannulas

- F1 - Outer diameter of fixing screw and it comes with 5.5mm (when E=3.5mm) or 7.0mm (when E=5.00mm)

- F2 - Outer diameter of guide cannula cap and it comes with 5.5mm (when E=3.5mm) or 7.0mm (when E=5.0mm)

- H1 - Height of the fixing screw which is 7.5mm

- H2 - Height of guide cannula cap and it comes with 7.00mm (when E=3.5mm) and 7.5mm (when E=5.0mm)

- ★G1 - Length of protruding part after internal cannula is inserted into guide cannula. The default value is 5.5mm for Series I, 3.5mm for Series II, 7.5mm for Series III and 4.0 mm for Series IV. This length can be customized

- ★G2 - Length of protruding part after dummy cannula is inserted into guide cannula. The default value is 3.0mm for Series I, 4.0mm for Series II, 5.5mm for Series III and 4.0 mm for Series IV. This length can be customized

Ordering Instructions:

Determine the target brain region for drug administration and then determine target values of C, C.C, G1 and G2. These values can not exceed the default ones. Please refer to :

★ part of comments of cording diagram for more detail.

★ C: Maximal customized length is 13.7mm for Series I & III, 20.0mm for Series II and 10.0mm for Series IV.

★ C.C: Customized range is 0.5mm-3.0mm with minimal increment 0.1mm.

★ G1: Maximal customized length is 5.5mm for Series I, 3.5mm for Series II, 7.5mm for Series III and 4.0mm for Series IV.

★ G2: Maximal customized length is 3.0mm for Series I, 4.0mm for Series II, 5.5mm for Series III and 4.0mm for Series IV.

Microinjection

Order Information:

Series I:

	C.C	Guide Cannula	Dummy Cannula	Injector	Cap	Fixing Screw	PE Tube
Guide Cannula: O.D.0.48mm x I.D.0.34mm	C.C 0.5mm	62021	62121	62250	62523	62521	62320
Dummy Cannula: O.D.0.30mm	C.C 0.6mm	62022	62122	62250			
Injector: O.D.0.30mm x I.D.0.14mm	C.C 0.8mm	62023	62123	62223			
	C.C 1.0mm	62024	62124	62224			
Cap: F2 5.5mm x H2 7.0mm (62523) F2 7.0mm x H2 7.5mm (62524)	C.C 1.2mm	62025	62125	62225			
	C.C 1.3mm	62026	62126	62226			
Fixing Screw: F1 5.5mm x H1 7.5mm (62521) F1 7.0mm x H1 7.5mm (62522)	C.C 1.4mm	62027	62127	62227			
	C.C 1.5mm	62028	62128	62228			
Plastic Pedestal of Guide Cannula: Height B = 7.8mm	C.C 1.6mm	62029	62129	62229			
	C.C 1.8mm	62030	62130	62230			
Diameter E = M3.5mm	C.C 2.0mm	62031	62131	62231			
	C.C 2.2mm	62032	62132	62232	62524	62522	62329
	C.C 2.4mm	62033	62133	62233			
Plastic Pedestal of Guide Cannula: Diameter E = 5.0mm	C.C 2.6mm	62034	62134	62234			
	C.C 2.7mm	62035	62135	62235			
	C.C 3.0mm	62036	62136	62236			

Series II:

	C.C	Guide Cannula	Dummy Cannula	Injector	Cap	Fixing Screw	PE Tube
Double Cannula: O.D.0.64mm x I.D.0.45mm	C.C 0.8mm	62037	62137	62237	62523	62521	62323
Dummy Cannula: O.D.0.40mm	C.C 1.0mm	62038	62138	62238			
Injector: O.D.0.41mm x I.D.0.25mm	C.C 1.2mm	62039	62139	62239			
Cap: F2 5.5mm x H2 7.0mm (62523) F2 7.0mm x H2 7.5mm (62524)	C.C 1.3mm	62040	62140	62240			
Fixing Screw: F1 5.5mm x H1 7.5mm (62521) F1 7.0mm x H1 7.5mm (62522)	C.C 1.4mm	62041	62141	62241			
Plastic Pedestal of Guide Cannula: Height B = 7.8mm	C.C 1.5mm	62042	62142	62242			
Diameter E = M3.5mm	C.C 1.8mm	62043	62143	62243			
	C.C 2.0mm	62044	62144	62244	62524	62522	62329
	C.C 2.2mm	62045	62145	62245			
Plastic Pedestal of Guide Cannula: Diameter E = M5.0mm	C.C 2.4mm	62046	62146	62246			
	C.C 2.5mm	62047	62147	62247			
	C.C 2.8mm	62048	62148	62248			
	C.C 3.0mm	62049	62149	62249			

Series III:

	C.C	Guide Cannula	Dummy Cannula	Injector	Cap	Fixing Screw	PE Tube
Guide Cannula: O.D.0.48mm x I.D.0.34mm	C.C 0.5mm	62050	62121	62250	62523	62521	62320
Dummy Cannula: O.D.0.30mm	C.C 0.6mm	62051	62122	62250			
Injector： O.D.0.30mm x I.D.0.14mm	C.C 0.8mm	62052	62123	62223			
	C.C 1.0mm	62053	62124	62224			
Cap： F2 5.5mm x H2 7.0mm (62523) F2 7.0mm x H2 7.5mm (62524)	C.C 1.2mm	62054	62125	62225			
	C.C 1.3mm	62055	62126	62226			
Fixing Screw： F1 5.5mm x H1 7.5mm (62521) F1 7.0mm x H1 7.5mm (62522)	C.C 1.4mm	62056	62127	62227	62523	62521	62320
	C.C 1.5mm	62057	62128	62228			
Plastic Pedestal of Guide Cannula: Height B = 5.5mm	C.C 1.6mm	62058	62129	62229			
	C.C 1.8mm	62059	62130	62230			
Diameter E = M3.5mm	C.C 2.0mm	62060	62131	62231			

Series IV:

Guide Cannula:
O.D.0.41mm x I.D.0.25mm
Dummy Cannula:
O.D.0.20mm
Injector:
O.D.0.21mm x I.D.0.11mm
Cap:
F2 5.5mm x H2 7.0mm (62523)
Fixing Screw:
F1 5.5mm x H1 7.5mm (62521)
Plastic Pedestal of Guide Cannula:
Height B = 5.5mm
Diameter E = M3.5mm

C.C	Guide Cannula	Dummy Cannula	Injector	Cap	Fixing Screw	PE Tube
C.C 0.5mm	62061	62161	62251	62523	62521	62320
C.C 0.6mm	62062	62162	62251			
C.C 0.8mm	62063	62163	62263			
C.C 1.0mm	62064	62164	62264			
C.C 1.2mm	62065	62165	62265			
C.C 1.3mm	62066	62166	62266			
C.C 1.4mm	62067	62167	62267			
C.C 1.5mm	62068	62168	62268			
C.C 1.6mm	62069	62169	62269			
C.C 1.8mm	62070	62170	62270			
C.C 2.0mm	62071	62171	62271			

Notes: For Dummy Cannula, plastic or metal is optional, 68525 is for mental Dummy while 68523 is plastic Dummy.The difference between Class Ⅰ and Class Ⅲ is the height of the pedestal, the former is 7.8mm and the later is 5.5mm, and Class Ⅲ is specially designed for mice.

PE & Silicone Tubings

PE(Ployethylene) / HDPE(High Density Ployethylene) tube, with good fluidity, high thermal stability and good flexibility, is widely used in the field of life science. Currently, RWD has 9 types of PE tube and 1 type of silicone tube, including the international standard tubes PE10, PE20 and PE50, which can be used in microdialysis, animal artery intubation, venous cannula, bile duct intubation, subcutaneous implantation of buried pipe, lateral ventricle buried pipe, portal vein intubation and so on. These tubes can be used together with syringe, guide cannula, microdialys connector and luer stubs.

Order Information:

No.	Model	Product Description
1	62320	PE Tubing-0.85*0.42mm,pkg of 10m
2	62321	PE Tubing (HDPE)-0.85*0.42mm, pkg of 10m
3	62322	PE Tubing-0.50*0.25mm, pkg of 10m
4	62323	PE Tubing-1.00*0.50mm, pkg of 10m
5	62324	PE10 Tubing-0.61*0.28mm, pkg of 10m
6	62325	PE20 Tubing-1.09*0.38mm, pkg of 10m
7	62326	PE25 Tubing-0.91*0.46mm, pkg of 10m
8	62327	PE50 Tubing-0.97*0.58mm, pkg of 10m
9	62328	PE60 Tubing-1.20*0.80mm, pkg of 10m
10	62329	PE Tubing-1.50*0.50mm, pkg of 10m

Note: Except 62322,other PE tube can be High-pressure steam sterilization(121℃, 30min).

Screws

Model	Product Description
62513	Screw-M1.0xL2.0mm
62514	Screw-M1.2xL2.0mm
62515	Screw-M1.4xL2.5mm

Microinjection

Syringe Pumps

RWD series syringe micro-injection pumps are widely used in scientific research. The upgrade from the first generation to the current second-generation products includes single-channel and dual-channel options.

Features:

- Control the stepper motor for stable and high-precision operation at low speed.
- The communication with the touch screen of the host computer can control the output torque and rotation speed of the stepper motor according to the input, and then control the injection thrust and injection speed.
- Reserved communication interface (BNC, USB-B, and PC communication, RS485 multi-injection pump communication).
- TTL output input signal, 15-pin D-sub Connector.
- With encoder, feedback speed, alarming when speed is abnormal, equipment operation suspend.
- Safety certification: EMC, ESD, and CE.
- Running indicator: convenient for users to intuitively discover the current status of the pump.

Technical Parameters:

Operating mode	Injection/withdrawal
Injection accuracy	± < 0.35%
Repeatability	± < 0.05%
Syringe range	0.5μL-60 mL
Minimum flow rate	0.0001 μL / min (0.5 μL syringe)
Maximum flow rate	102 mL/min (60 mL syringe)
Linear thrust	50lbs (23 kg)
Operating temperature	4 ° C to 40 ° C
Storage temperature	-10 ℃ ~ 70 ℃
Humidity	20% to 80%, non-condensing
Communication interface	USB-B, BNC, RS485 and TTL ports
Advance stroke per step	0.046μm / step
Display	5.0-inch LCD touch screen

Order Information:

Model	Name	Note
R462	RWD 462 Syringe Pump	Dual-channel

Microinjection

Touch screen interface

Simple operation

new

Audible and visual alarm

Stable output

Intelligent Optogenetics System

The Intelligent Optogenetics System integrates light source output and control together. Convenient operation with stable performance, it greatly simplifies the experimental process and the setting of parameters.

Features:

● Integrating the output and control of the light source, simplifying the operation of the experiment.

● Touch screen operation interface with convenient parameter setting and control and visible waveform state.

● Group custom editing and data import or export are available.

● High power laser output from 0 to 100mw with good stability (<1%), Power adjustable.

● Acousto-optic alarm at the end of the experimental process or when the temperature of the laser is abnormal.

● Compatible with electrophysiological, behavioral devices and other devices.

Optogenetics System

Software Interface:
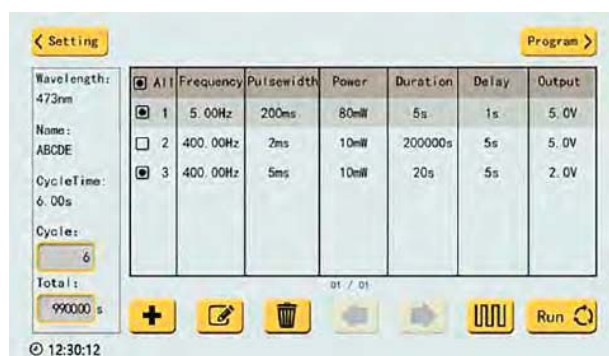
Parameter Setting Interface
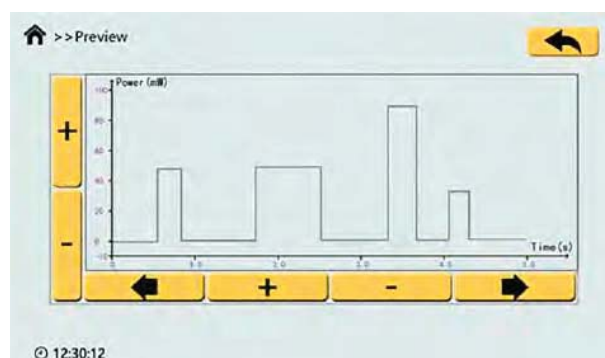
Program Running Interface

Technical Parameters:

Technical Item	Description
PowerTouch	0-100mW (Blue light), 0-100mW (Yellow light), 1mw resolution, adjustable power
screen pixels	7-inch capacitive touch screen, 1024PX * 600PX resolution
Stability	1%
Wavelength	450nm, 473nm, 532nm, 589nm and 610nm (optional)
TTL signal output	10mV-5V
Light source interfac	FC/PC
Dimensions	316*258*163 (L*W*H)

Order Information：

Model	Product Description
LIOG473-80-A1	Intelligent Optogenetics System（473nm）
LIOG589-100-A1	Intelligent Optogenetics System（589nm）

Patchcord and Optical Fiber

- Low insertion loss ● Good Repeatability ● High return loss ● Stable temperature
- Good mutual insertion performance ● Optional fiber
- Applicable wavelength: 400nm-1100nm ● Numerical aperture: 0.22, 0.39,0.50
- Default length is 1m ,Optical fiber length: 0.5m-5m,step 0.5m (customized)
- Core diameter: 100μm,200μm,300μm,400μm

Patchcord

Optical Fiber

Order Information:

Model	Product Description
R-FC-PC-N2-100-L1	FC/PC Optical Fiber Patch Cables(m) - 100μm,0.22NA,1m
R-FC-PC-N2-200-L1	FC/PC Optical Fiber Patch Cables(m) - 200μm,0.22NA,1m
R-FC-PC-N2-300-L1	FC/PC Optical Fiber Patch Cables(m) - 300μm,0.22NA,1m
R-FC-PC-N2-400-L1	FC/PC Optical Fiber Patch Cables(m) - 400μm,0.22NA,1m
R-FC-PC-N3-200-L1	FC/PC Optical Fiber Patch Cables(m) - 200μm,0.39NA,1m
R-FC-PC-N3-300-L1	FC/PC Optical Fiber Patch Cables(m) - 300μm,0.39NA,1m
R-FC-PC-N3-400-L1	FC/PC Optical Fiber Patch Cables(m) - 400μm,0.39NA,1m
R-FC-PC-N5-200-L1	FC/PC Optical Fiber Patch Cables(m) - 200μm,0.50NA,1m
R-FC-PC-N5-400-L1	FC/PC Optical Fiber Patch Cables(m) - 400μm,0.50NA,1m
R-FC-L-N2-100-L1	Optic Fiber(m), FC/PC Adapter with Ø1.25 mm Ceramic Ferrule, 100μm Core,0.22NA,1m
R-FC-L-N2-200-L1	Optic Fiber(m), FC/PC Adapter with Ø1.25 mm Ceramic Ferrule, 200μm Core,0.22NA,1m
R-FC-L-N2-300-L1	Optic Fiber(m), FC/PC Adapter with Ø1.25 mm Ceramic Ferrule, 300μm Core,0.22NA,1m
R-FC-L-N2-400-L1	Optic Fiber(m), FC/PC Adapter with Ø1.25 mm Ceramic Ferrule, 400μm Core,0.22NA,1m
R-FC-P-N2-100-L1	Optic Fiber(m), FC/PC Adapter with Ø2.5 mm Ceramic Ferrule, 100μm Core,0.22NA,1m
R-FC-P-N2-200-L1	Optic Fiber(m), FC/PC Adapter with Ø2.5 mm Ceramic Ferrule, 200μm Core,0.22NA,1m
R-FC-P-N2-300-L1	Optic Fiber(m), FC/PC Adapter with Ø2.5 mm Ceramic Ferrule, 300μm Core,0.22NA,1m
R-FC-P-N2-400-L1	Optic Fiber(m), FC/PC Adapter with Ø2.5 mm Ceramic Ferrule, 400μm Core,0.22NA,1m
R-FC-L-N3-200-L1	Optic Fiber(m), FC/PC Adapter with Ø1.25 mm Ceramic Ferrule, 200μm Core,0.39NA,1m
R-FC-L-N3-300-L1	Optic Fiber(m), FC/PC Adapter with Ø1.25 mm Ceramic Ferrule, 300μm Core,0.39NA,1m
R-FC-L-N3-400-L1	Optic Fiber(m), FC/PC Adapter with Ø1.25 mm Ceramic Ferrule, 400μm Core,0.39NA,1m
R-FC-P-N3-200-L1	Optic Fiber(m), FC/PC Adapter with Ø2.5 mm Ceramic Ferrule, 200μm Core,0.39NA,1m
R-FC-P-N3-300-L1	Optic Fiber(m), FC/PC Adapter with Ø2.5 mm Ceramic Ferrule, 300μm Core,0.39NA,1m
R-FC-P-N3-400-L1	Optic Fiber(m), FC/PC Adapter with Ø2.5 mm Ceramic Ferrule, 400μm Core,0.39NA,1m
R-FC-L-N5-200-L1	Optic Fiber(m), FC/PC Adapter with Ø1.25 mm Ceramic Ferrule, 200μm Core,0.50NA,1m
R-FC-L-N5-400-L1	Optic Fiber(m), FC/PC Adapter with Ø1.25 mm Ceramic Ferrule, 400μm Core,0.50NA,1m
R-FC-P-N5-200-L1	Optic Fiber(m), FC/PC Adapter with Ø2.5 mm Ceramic Ferrule, 200μm Core,0.50NA,1m
R-FC-P-N5-400-L1	Optic Fiber(m), FC/PC Adapter with Ø2.5 mm Ceramic Ferrule, 400μm Core,0.50NA,1m

Ceramic Ferrule

Features:

- Material: Ceramic
- Type: White Series/Black Series
- Applicable wavelength: 400-2200nm
- Core diameter: 100μm, 200μm, 300μm, 400μm
- Numerical aperture: 0.22, 0.39,0.50
- Outer diameter: 1.25mm（6.4mm long）, 2.5mm（10.5mm long）
- Optical fiber length: 2mm-20mm,step 0.5mm (customized)

Ø2.5mm

Ø1.25mm

Order Information:

No.	Model	Product Description
1	R-FOC-L200C-39NA	Fiber Optic Cannulae with Ø1.25 mm Ceramic Ferrule, 200um Core, 0.39NA, 20/pkg
2	R-FOC-L300C-39NA	Fiber Optic Cannulae with Ø1.25 mm Ceramic Ferrule, 300um Core, 0.39NA, 20/pkg
3	R-FOC-L400C-39NA	Fiber Optic Cannulae with Ø1.25 mm Ceramic Ferrule, 400um Core, 0.39NA, 20/pkg
4	R-FOC-F200C-39NA	Fiber Optic Cannulae with Ø2.5 mm Ceramic Ferrule, 200um Core, 0.39NA, 20/pkg
5	R-FOC-F300C-39NA	Fiber Optic Cannulae with Ø2.5 mm Ceramic Ferrule, 300um Core, 0.39NA, 20/pkg
6	R-FOC-F400C-39NA	Fiber Optic Cannulae with Ø2.5 mm Ceramic Ferrule, 400um Core, 0.39NA, 20/pkg
7	R-FOC-L200C-22NA	Fiber Optic Cannulae with Ø1.25 mm Ceramic Ferrule, 200um Core, 0.22NA, 20/pkg
8	R-FOC-L300C-22NA	Fiber Optic Cannulae with Ø1.25 mm Ceramic Ferrule, 300um Core, 0.22NA, 20/pkg
9	R-FOC-L400C-22NA	Fiber Optic Cannulae with Ø1.25 mm Ceramic Ferrule, 400um Core, 0.22NA, 20/pkg
10	R-FOC-F200C-22NA	Fiber Optic Cannulae with Ø2.5 mm Ceramic Ferrule, 200um Core, 0.22NA, 20/pkg
11	R-FOC-F300C-22NA	Fiber Optic Cannulae with Ø2.5 mm Ceramic Ferrule, 300um Core, 0.22NA, 20/pkg
12	R-FOC-F400C-22NA	Fiber Optic Cannulae with Ø2.5 mm Ceramic Ferrule, 400um Core, 0.22NA, 20/pkg
13	R-FOC-L200C-50NA	Fiber Optic Cannulae with Ø1.25 mm Ceramic Ferrule, 200um Core, 0.50NA, 20/pkg
14	R-FOC-F200C-50NA	Fiber Optic Cannulae with Ø2.5 mm Ceramic Ferrule, 200um Core, 0.50NA, 20/pkg
15	R-FOC-L400C-50NA	Fiber Optic Cannulae with Ø1.25 mm Ceramic Ferrule, 400um Core, 0.50NA, 20/pkg
16	R-FOC-F400C-50NA	Fiber Optic Cannulae with Ø2.5 mm Ceramic Ferrule, 400um Core, 0.50NA, 20/pkg

Notes: The above white series specifications can be customized to black.

Optogenetics System

No.	Model	Product Description
17	R-FOC-BL200C-39NA	Fiber Optic Cannulae（Black） with Ø1.25 mm Ceramic Ferrule, 200um Core, 0.39NA, 20/pkg
18	R-FOC-BL300C-39NA	Fiber Optic Cannulae（Black） with Ø1.25 mm Ceramic Ferrule, 300um Core, 0.39NA, 20/pkg
19	R-FOC-BL400C-39NA	Fiber Optic Cannulae （Black） with Ø1.25 mm Ceramic Ferrule, 400um Core, 0.39NA, 20/pkg
20	R-FOC-BF200C-39NA	Fiber Optic Cannulae （Black） with Ø2.5 mm Ceramic Ferrule, 200um Core, 0.39NA, 20/pkg
21	R-FOC-BF300C-39NA	Fiber Optic Cannulae （Black） with Ø2.5 mm Ceramic Ferrule, 300um Core, 0.39NA, 20/pkg
22	R-FOC-BF400C-39NA	Fiber Optic Cannulae （Black） with Ø2.5 mm Ceramic Ferrule, 400um Core, 0.39NA, 20/pkg
23	R-FOC-BL100C-22NA	Fiber Optic Cannulae （Black） with Ø1.25 mm Ceramic Ferrule, 100um Core, 0.22NA, 20/pkg
24	R-FOC-BL200C-22NA	Fiber Optic Cannulae （Black） with Ø1.25 mm Ceramic Ferrule, 200um Core, 0.22NA, 20/pkg
25	R-FOC-BL300C-22NA	Fiber Optic Cannulae （Black） with Ø1.25 mm Ceramic Ferrule, 300um Core, 0.22NA, 20/pkg
26	R-FOC-BL400C-22NA	Fiber Optic Cannulae （Black） with Ø1.25 mm Ceramic Ferrule, 400um Core, 0.22NA, 20/pkg
27	R-FOC-BF100C-22NA	Fiber Optic Cannulae （Black） with Ø2.5 mm Ceramic Ferrule, 100um Core, 0.22NA, 20/pkg
28	R-FOC-BF200C-22NA	Fiber Optic Cannulae （Black） with Ø2.5 mm Ceramic Ferrule, 200um Core, 0.22NA, 20/pkg
29	R-FOC-BF300C-22NA	Fiber Optic Cannulae （Black） with Ø2.5 mm Ceramic Ferrule, 300um Core, 0.22NA, 20/pkg
30	R-FOC-BF400C-22NA	Fiber Optic Cannulae （Black） with Ø2.5 mm Ceramic Ferrule, 400um Core, 0.22NA, 20/pkg
31	R-FOC-BL200C-50NA	Fiber Optic Cannulae （Black） with Ø1.25 mm Ceramic Ferrule, 200um Core, 0.50NA, 20/pkg
32	R-FOC-BF200C-50NA	Fiber Optic Cannulae （Black） with Ø2.5 mm Ceramic Ferrule, 200um Core, 0.50NA, 20/pkg
33	R-FOC-BL400C-50NA	Fiber Optic Cannulae （Black） with Ø1.25 mm Ceramic Ferrule, 400um Core, 0.50NA, 20/pkg
34	R-FOC-BF400C-50NA	Fiber Optic Cannulae （Black） with Ø2.5 mm Ceramic Ferrule, 400um Core, 0.50NA, 20/pkg

Notes: The above white series specifications can be customized to black.

Fiber Optic Rotary Joint

Applicable to long time stimulation and observation experiments on awake and free moving animals, avoids twining of the fiber optic.

Order Information:

Model	Product Description
R-FC-1x1	FC-FC Optic Fiber Commutator

Ceramic Cannula & Ceramic Ferrules Protective Cap

Order Information:

Model	Product Description
R-MS-1.25	LC Mating Sleeves, Ø1.25mm (20pcs/pkg)
R-MS-2.5	FC Mating Sleeves, Ø2.50mm (20pcs/pkg)
R-DC-2.5	FC/PC Ceramic Ferrules Protective Cap-Ø2.50mm (200pcs/pkg)
R-DC-1.25	LC/PC Ceramic Ferrules Protective Cap-Ø1.25mm (200pcs/pkg)

L=11.5mm
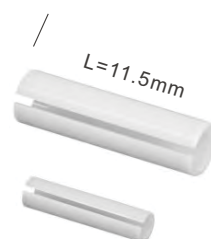
Ceramic Cannula

Ceramic Ferrules Protective Cap

Laser Goggles

R-LS-Y Laser Goggles against Green and Yellow Light
R-LS-G Laser Goggles against Blue and Green Light

R-LS-Y

R-LS-G

To prevent or reduce the damage to human eye from laser.

Fiber Tongs

● Suitable for 100um-800μm fiber for stripping fiber coating

R-OFT-600

Optogenetics System

Animal Surgical Instruments

RWD surgical instruments cover surgical scissors, surgical forceps, orthopedic instruments, scalpels and blades, vascular forceps, needle forceps, with more than 1,000 kinds of models.

Surgery Instrument Kit ▶

SP0001-G
General Surgery Instrument Kit for Rodents

Cat.No.	Product Description	Qty
S11001-08	VANNAS Spring Scissors (Triangular)-S/S Str/8*1.5mm/8cm	1
S11002-08	VANNAS Spring Scissors (Triangular)-S/S Cvd/8*1.5mm/8cm	1
S12009-11	IRIS-Fine Scissors (Round Type)-S/S Str/25*5.6mm/11.5cm	1
S12010-11	IRIS-Fine Scissors (Round Type)-S/S Cvd/23.5*6mm/11.5cm	1
S12005-10	IRIS-Fine Scissors (Round Type)-S/S Str/23*5mm/10.5cm	1
S12004-09	IRIS-Fine Scissors (Round Type)-S/S Cvd/24*4.6mm/9.5cm	1
F11001-11	Micro Forceps-Str, head length 30mm, Tip 0.2*0.12mm, 11cm	1
F11004-11	Micro Forceps-Cvd, head length 26.8mm, Tip 0.2*0.12mm, 11cm	1
F12010-10	Dressing Forceps-Str, Tip width 1.8mm, teeth length 15mm, 10.5cm	1
F12011-10	Dressing Forceps-Cvd, Tip width 1.9mm, teeth length 15mm, 10.5cm	1
F21001-12	HALSTED Artery Forceps-Str/23.5*1mm/12.5cm	2
F21002-12	HALSTED Artery Forceps-Cvd/24*1mm/12.5cm	2
F22002-10	HARTMAN Mosquito Forceps-Str/20*0.8mm/10.5cm	2
F22003-10	HARTMAN Mosquito Forceps-Cvd/20.8*1mm/10cm	2
F31047-12	OLSEN-HEGAR Needle Holders with Scissors-Str, 10*2.15mm/12cm	1
S13029-14	MAYO-STILLE Dissecting & Operating Scissors-B/B Str/37*9mm/14cm	1
S15001-11	SPENCER Ligature Scissors (Slender Type-27*6mm/11cm	1
S21010-15	BOHLER Rongeurs (Double)-Light Cvd/2*19mm/15cm	1
S22004-11	Bone Cutters with Flat Blades (SGL)-15*6.8mm/11cm	1
S14014-12	Operating Scissors (Round Type)-S/S Str/37.6*8.5mm/12.5cm	1
S31011-01	11# Scalpel Blades (Box of 100pcs)	1
S32003-12	Scalpel Handles with Ruler 3# Solid-12.5cm	1
S33009-06	Scalpel Blade Remover-6.5cm	1
F13019-12	ADSON 1x2 Teeth Tissue Forceps, Tip width 1.8mm, 12cm	1
R21027-12	STEVENS Hooks, 1 Angled Tooth , 5mm depth, 12.5cm	1
R22009-01	ALM 4x4 Teeth Retractors-Blunt, 65mm Spread, 7.5cm	1
R22005-45	3x3 Teeth Retractors-Blunt, 30mm Spread, 5cm	1
R51003-11	Dual-end Micro Spatula w/tip W. 2mm x Thk. 0.3mm - Cvd/11cm	1
F35204-70	NA Nylon Sutures w/Needle-△3/8/2.5×5/30cm/7-0 (50/Box)	0.2
F35305-50	Absorbable PGA Sutures w/Needle-○1/2/4×10/90cm/5-0 (50/Box)	0.2
R31006-06	SS Micro Clamps-Cvd/L*W 6.6*1mm/17mm	5
R31005-06	SS Micro Clamps-Str/L*W 6*1mm/19mm	5
R34001-14	Clip Applicator for R31005- and R31006-Clamps-8.4*5mm/14cm	1
SP0000-P	Instrument Storage Portfolio, 32*22cm	1

SP0001-G
RWD

SP0003-R
Microsurgery Instrument Kit for Rat, Cat, Rabbit etc.

Cat.No.	Product Description	Qty
S12005-10	IRIS-Fine Scissors (Round Type)-S/S Str/23*5mm/10.5cm	1
S12010-11	IRIS-Fine Scissors (Round Type)-S/S Cvd/23.5*6mm/11.5cm	1
F31047-12	OLSEN-HEGAR Needle Holders with Scissors-Str, 10*2.15mm/12cm	1
F11001-11	Micro Forceps-Str, head length 30mm, Tip 0.2*0.12mm, 11cm	1
R31005-06	SS Micro Clamps-Str/L*W 6*1mm/19mm	5
R34001-14	Clip Applicator for R31005- and R31006-Clamps-8.4*5mm/14cm	1
S11001-08	VANNAS Spring Scissors (Triangular)-S/S Str/8*1.5mm/8cm	1
S11002-08	VANNAS Spring Scissors (Triangular)-S/S Cvd/8*1.5mm/8cm	1
F22006-12	HALSTED Mosquito Forceps-Str, 21*1.2mm/12.5cm	1
F22007-12	HALSTED Mosquito Forceps-Cvd, 23.5*1mm/12.5cm	1
F35401-50	NA Terylene Sutures w/Needle-○3/8/3×10/90cm/5-0 (50/Box)	0.2
S32003-12	11# Scalpel Blades (Box of 100pcs)	1
S31011-01	Scalpel Handles with Ruler 3# Solid-12.5cm	1
SP0000-P	Instrument Storage Portfolio, 32*22cm	1

SP0003-R
RWD

SP0003-M
Microsurgery Instrument Kit for Mice

Cat.No.	Product Description	Qty
S12005-10	IRIS-Fine Scissors (Round Type)-S/S Str/23*5mm/10.5cm	1
S12004-09	IRIS-Fine Scissors (Round Type)-S/S Cvd/24*4.6mm/9.5cm	1
F31047-12	OLSEN-HEGAR Needle Holders with Scissors-Str, 10*2.15mm/12cm	1
F11001-11	Micro Forceps-Str, head length 30mm, Tip 0.2*0.12mm, 11cm	1
R31005-04	SS Micro Clamps-Str/L*W 4*0.75mm/16mm	5
R34001-14	Clip Applicator for R31005- and R31006-Clamps-8.4*5mm/14cm	1
S11001-08	VANNAS Spring Scissors (Triangular)-S/S Str/8*1.5mm/8cm	1
S11002-08	VANNAS Spring Scissors (Triangular)-S/S Cvd/8*1.5mm/8cm	1
F22002-10	HARTMAN Mosquito Forceps-Str/20*0.8mm/10.5cm	1
F22003-10	HARTMAN Mosquito Forceps-Cvd/20.8*1mm/10cm	1
F35401-50	NA Terylene Sutures w/Needle-○3/8/3×10/90cm/5-0 (50/Box)	0.2
S32003-12	11# Scalpel Blades (Box of 100pcs)	1
S31011-01	Scalpel Handles with Ruler 3# Solid-12.5cm	1
SP0000-P	Instrument Storage Portfolio, 32*22cm	1

SP0003-M
RWD

Surgical Instruments

SP0004-M
Brain Microdialysis Surgery Instrument Kit for Mice

Cat.No.	Product Description	Qty
S31011-01	Scalpel Handles with Ruler 3# Solid-12.5cm	1
S32003-12	11# Scalpel Blades (Box of 100pcs)	1
S33007-12	ZIEGLER Knives-8mm Cutting Edge/1.5mm Width/12cm	1
S12005-10	IRIS-Fine Scissors (Round Type)-S/S Str/23*5mm/10.5cm	1
S12004-09	IRIS-Fine Scissors (Round Type)-S/S Cvd/24*4.6mm/9.5cm	1
S14014-11	Operating Scissors (Round Type)-S/S Str/36.5*8.5mm/11.5cm	1
F12005-10	IRIS Dissecting Forceps-Str, Tip width 1mm, teeth length 14mm, 10cm	2
F12006-10	IRIS Dissecting Forceps-Light Cvd, Tip width 1mm, teeth length 13.5mm, 10cm	1
F22002-10	HARTMAN Mosquito Forceps-Str/20*0.8mm/10.5cm	2
F31047-12	OLSEN-HEGAR Needle Holders with Scissors-Str, 10*2.15mm/12cm	1
F35204-70	HARTMAN Mosquito Forceps-Str/20*0.8mm/10.5cm	0.2
F22003-10	HARTMAN Mosquito Forceps-Cvd/20.8*1mm/10cm	2
SP0000-P	Instrument Storage Portfolio, 32*22cm	1

SP0004-M

SP0004-R
Brain Microdialysis Surgery Instrument Kit for Rat

Cat.No.	Product Description	Qty
S31011-01	Scalpel Handles with Ruler 3# Solid-12.5cm	1
S32003-12	11# Scalpel Blades (Box of 100pcs)	1
S33007-12	ZIEGLER Knives-8mm Cutting Edge/1.5mm Width/12cm	1
S12005-10	IRIS-Fine Scissors (Round Type)-S/S Str/23*5mm/10.5cm	1
S12006-10	IRIS-Fine Scissors (Round Type)-S/S Cvd/22*4.5mm/10.5cm	1
S14014-12	Operating Scissors (Round Type)-S/S Str/37.6*8.5mm/12.5cm	1
F12010-10	Dressing Forceps-Str, Tip width 1.8mm, teeth length 15mm, 10.5cm	2
F12011-10	Dressing Forceps-Cvd, Tip width 1.9mm, teeth length 15mm, 10.5cm	1
F22006-12	HALSTED Mosquito Forceps-Str, 21*1.2mm/12.5cm	2
F31047-12	OLSEN-HEGAR Needle Holders with Scissors-Str, 10*2.15mm/12cm	1
F35204-70	HARTMAN Mosquito Forceps-Str/20*0.8mm/10.5cm	0.2
R22009-01	ALM 4x4 Teeth Retractors-Blunt, 65mm Spread, 7.5cm	1
F22007-12	HALSTED Mosquito Forceps-Cvd, 23.5*1mm/12.5cm	2
SP0000-P	Instrument Storage Portfolio, 32*22cm	1

SP0004-R

SP0002-G
General Ophthalmic Surgery Instrument Kit for Rodents

Cat.No.	Product Description	Qty
S11001-08	VANNAS Spring Scissors (Triangular)-S/S Str/8*1.5mm/8cm	1
S11002-08	VANNAS Spring Scissors (Triangular)-S/S Cvd/8*1.5mm/8cm	1
S11003-08	VANNAS Spring Scissors (Triangular)-S/S Angled/6.3*1.35mm/8.5cm	1
S12005-10	IRIS-Fine Scissors (Round Type)-S/S Str/23*5mm/10.5cm	1
S12006-10	IRIS-Fine Scissors (Round Type)-S/S Cvd/22*4.5mm/10.5cm	1
S15006-09	O'BRIEN Stitch Scissors-S/S Angled/13.5*4mm/9.5cm	1
F12013-10	Dressing Forceps w/o Serrations-45°Cvd, S/S, Tip 0.5*0.2mm, 10cm	1
F13019-12	ADSON 1x2 Teeth Tissue Forceps, Tip width 1.8mm, 12cm	1
F12005-10	IRIS Dissecting Forceps-Str, Tip width 1mm, teeth length 14mm, 10cm	1
F12006-10	IRIS Dissecting Forceps-Light Cvd, Tip width 1mm, teeth length 13.5mm, 10cm	1
F18011-09	McPHERSON Forceps w/5mm Platform-Str, Tip 0.4*0.9mm, 9cm	1
F31047-12	OLSEN-HEGAR Needle Holders with Scissors-Str, 10*2.15mm/12cm	1
F35401-50	NA Terylene Sutures w/Needle-○3/8/3×10/90cm/5-0 (50/Box)	0.2
R21027-12	STEVENS Hooks, 1 Angled Tooth , 5mm depth, 12.5cm	1
R22029-04	Colibri Eye Specula-15mm spread, 4cm	1
SP0000-P	Instrument Storage Portfolio, 32*22cm	1

SP0002-G

SP0007-M
Univeral dissecting Surgery Instrument Kit for Mice

Cat.No.	Product Description	Qty
S12005-10	IRIS-Fine Scissors (Round Type)-S/S Str/23*5mm/10.5cm	1
S12004-09	IRIS-Fine Scissors (Round Type)-S/S Cvd/24*4.6mm/9.5cm	1
S13003-11	STEVENS Fine Dissecting Scissors (Flat Type)-B/B Str/25*4mm/11.5cm	1
S13004-11	STEVENS Fine Dissecting Scissors (Flat Type)-B/B Cvd/28*5mm/11.5cm	1
S15001-09	SPENCER Ligature Scissors (Slender Type)-20.3*4mm/9cm	1
S32003-12	11# Scalpel Blades (Box of 100pcs)	1
S31015-01	15# Scalpel Blades (Box of 100pcs)	1
F12005-10	IRIS Dissecting Forceps-Str, Tip width 1mm, teeth length 14mm, 10cm	2
F12006-10	IRIS Dissecting Forceps-Light Cvd, Tip width 1mm, teeth length 13.5mm, 10cm	2
F22002-10	HARTMAN Mosquito Forceps-Str/20*0.8mm/10.5cm	2
F22003-10	HARTMAN Mosquito Forceps-Cvd/20.8*1mm/10cm	2
F13029-10	IRIS 1x2 Teeth Tissue Forceps-Str, Tip width 1.3mm, 10.5cm	1
F31047-12	OLSEN-HEGAR Needle Holders with Scissors-Str, 10*2.15mm/12cm	1
F35305-50	Absorbable PGA Sutures w/Needle-○1/2/4×10/90cm/5-0 (50/Box	0.2
R22005-45	3x3 Teeth Retractors-Blunt, 30mm Spread, 5cm	1
R31005-04	SS Micro Clamps-Str/L*W 4*0.75mm/16mm	5
R42002-12	Spinal Cord Hook - Tip Dia. 3mm/12cm	1
R34001-14	Clip Applicator for R31005- and R31006-Clamps-8.4*5mm/14cm	1
SP0000-P	Instrument Storage Portfolio, 32*22cm	1

SP0007-M

SP0005-R
Brain Microinjection Surgery Instrument Kit for Rat

Cat.No.	Product Description	Qty
S31011-01	Scalpel Handles with Ruler 3# Solid-12.5cm	1
S32003-12	11# Scalpel Blades (Box of 100pcs)	1
S12005-10	IRIS-Fine Scissors (Round Type)-S/S Str/23*5mm/10.5cm	1
S12006-10	IRIS-Fine Scissors (Round Type)-S/S Cvd/22*4.5mm/10.5cm	1
F12010-10	Dressing Forceps-Str, Tip width 1.8mm, teeth length 15mm, 10.5cm	2
F12011-10	Dressing Forceps-Cvd, Tip width 1.9mm, teeth length 15mm, 10.5cm	2
F22006-12	HALSTED Mosquito Forceps-Str, 21*1.2mm/12.5cm	2
F22007-12	HALSTED Mosquito Forceps-Cvd, 23.5*1mm/12.5cm	2
F31047-12	OLSEN-HEGAR Needle Holders with Scissors-Str, 10*2.15mm/12cm	1
S14014-12	Operating Scissors (Round Type)-S/S Str/37.6*8.5mm/12.5cm	1
F35204-70	HARTMAN Mosquito Forceps-Str/20*0.8mm/10.5cm	0.2
R22009-01	ALM 4x4 Teeth Retractors-Blunt, 65mm Spread, 7.5cm	1
R51003-11	Dual-end Micro Spatula w/tip W. 2mm x Thk. 0.3mm - Cvd/11cm	1
SP0000-P	Instrument Storage Portfolio, 32*22cm	1

SP0005-R

SP0005-M
Brain Microinjection Surgery Instrument Kit for Mice

Cat.No.	Product Description	Qty
S31011-01	Scalpel Handles with Ruler 3# Solid-12.5cm	1
S32003-12	11# Scalpel Blades (Box of 100pcs)	1
S12005-10	IRIS-Fine Scissors (Round Type)-S/S Str/23*5mm/10.5cm	1
S12004-09	IRIS-Fine Scissors (Round Type)-S/S Cvd/24*4.6mm/9.5cm	1
S14014-11	Operating Scissors (Round Type)-S/S Str/36.5*8.5mm/11.5cm	1
F12005-10	IRIS Dissecting Forceps-Str, Tip width 1mm, teeth length 14mm, 10cm	2
F12006-10	IRIS Dissecting Forceps-Light Cvd, Tip width 1mm, teeth length 13.5mm, 10cm	2
F22002-10	HARTMAN Mosquito Forceps-Str/20*0.8mm/10.5cm	2
F31047-12	OLSEN-HEGAR Needle Holders with Scissors-Str, 10*2.15mm/12cm	1
F35204-70	HARTMAN Mosquito Forceps-Str/20*0.8mm/10.5cm	0.2
F22003-10	HARTMAN Mosquito Forceps-Cvd/20.8*1mm/10cm	2
R51003-11	Dual-end Micro Spatula w/tip W. 2mm x Thk. 0.3mm - Cvd/11cm	1
SP0000-P	Instrument Storage Portfolio, 32*22cm	1

SP0005-M

SP0006-M
Bone Surgery Instrument Kit for Mice

Cat.No.	Product Description	Qty
S14014-11	Operating Scissors (Round Type)-S/S Str/36.5*8.5mm/11.5cm	1
S16014-09	NAIL Scissors (Broad Type)-S/S Str/24*8.5mm/9cm	1
S21020-14	Friedman-Pearson Rongeurs (SGL)-Str/0.7*6mm/14.5cm	1
S22004-11	Bone Cutters with Flat Blades (SGL)-15*6.8mm/11cm	1
S21023-14	Friedman-Pearson Rongeurs (SGL)-Cvd/0.7*7mm/14cm	1
S23007-12	LAMBOTTE Osteotomes - 4mm Cutting Edge/12.5cm	1
S33006-13	GRAEFE Scalpels-25*3mm/13cm	1
SP0000-P	Instrument Storage Portfolio, 32*22cm	1

SP0006-R
Bone Surgery Instrument Kit for Rat, Cat, Rabbit etc.

Cat.No.	Product Description	Qty
S14014-15	Operating Scissors (Round Type)-S/S Str/48*10mm/15.5cm	1
S16014-09	NAIL Scissors (Broad Type)-S/S Str/24*8.5mm/9cm	1
S21021-14	Friedman-Pearson Rongeurs (SGL)-Str/1*6.5mm/14cm	1
S22005-12	Bone Cutters with Flat Blades (SGL)-15.2*7.4mm/12.5cm	1
S23007-12	LAMBOTTE Osteotomes - 4mm Cutting Edge/12.5cm	1
S23002-16	FREER Chisels - Cvd/12*4mm/16cm	1
S33006-13	GRAEFE Scalpels-25*3mm/13cm	1
S21024-14	Friedman-Pearson Rongeurs (SGL)-Cvd/1*6.5mm/14cm	1
SP0000-P	Instrument Storage Portfolio, 32*22cm	1

SP0007-C
Univeral Dissecting Surgery Instrument Kit for Cat, Rabbit

Cat.No.	Product Description	Qty
S12005-10	IRIS-Fine Scissors (Round Type)-S/S Str/23*5mm/10.5cm	1
S12010-11	IRIS-Fine Scissors (Round Type)-S/S Cvd/23.5*6mm/11.5cm	1
S12031-11	IRIS-Standard Scissors (Round Type)-S/S Full Cvd/29*6mm/11.5cm	1
S13005-14	METZENBAUM Dissecting Scissors (Round Type)-B/B Str/40*6.3mm/14.5cm	1
S13006-14	METZENBAUM Dissecting Scissors (Round Type)-B/B Cvd/44*7.5mm/14.5cm	1
F12010-13	Dressing Forceps-Str, Tip width 1.3mm, teeth length 17mm, 13cm	2
F12011-13	Dressing Forceps-Cvd, Tip width 1.2mm, teeth length 16mm, 13cm	2
F21001-12	HALSTED Artery Forceps-Str/23.5*1mm/12.5cm	2
F21002-12	HALSTED Artery Forceps-Cvd/24*1mm/12.5cm	2
S15001-11	11# Scalpel Blades (Box of 100pcs)	1
S32003-12	15# Scalpel Blades (Box of 100pcs)	1
S31015-01	15# Scalpel Blades (Box of 100pcs)	1
F13014-12	SEMKEN 1x2 Teeth Tissue Forceps-Str, Tip width 1mm, 13cm	1
F31047-14	OLSEN-HEGAR Needle Holders with Scissors-Str, 17.3*1.7mm/14cm	1
F35305-50	Absorbable PGA Sutures w/Needle-○1/2/4×10/90㎝/5-0 (50/Box	0.2
R22015-02	WULLSTEIN 3x3 Teeth Retractors-Blunt, 13cm	1
R31008-26	Schwartz Micro Clamps-Str/11*2mm/28mm	5
R42002-12	Spinal Cord Hook - Tip Dia. 3mm/12cm	1
SP0000-P	Instrument Storage Portfolio, 32*22cm	1

SP0007-R
Univeral Dissecting Surgery Instrument Kit for Rat

Cat.No.	Product Description	Qty
S12005-10	IRIS-Fine Scissors (Round Type)-S/S Str/23*5mm/10.5cm	1
S12006-10	IRIS-Fine Scissors (Round Type)-S/S Cvd/22*4.5mm/10.5cm	1
S12010-11	IRIS-Fine Scissors (Round Type)-S/S Cvd/23.5*6mm/11.5cm	1
S13005-14	METZENBAUM Dissecting Scissors (Round Type)-B/B Str/40*6.3mm/14.5cm	1
S13006-14	METZENBAUM Dissecting Scissors (Round Type)-B/B Cvd/44*7.5mm/14.5cm	1
F21001-12	HALSTED Artery Forceps-Str/23.5*1mm/12.5cm	2
F21002-12	HALSTED Artery Forceps-Cvd/24*1mm/12.5cm	2
F12010-10	Dressing Forceps-Str, Tip width 1.8mm, teeth length 15mm, 10.5cm	2
F12011-10	Dressing Forceps-Cvd, Tip width 1.9mm, teeth length 15mm, 10.5cm	2
F13029-10	IRIS 1x2 Teeth Tissue Forceps-Str, Tip width 1.3mm, 10.5cm	1
F31047-12	OLSEN-HEGAR Needle Holders with Scissors-Str, 10*2.15mm/12cm	0.2
S15001-11	SPENCER Ligature Scissors (Slender Type-27*6mm/11cm	1
S32003-12	11# Scalpel Blades (Box of 100pcs)	1
S31015-01	15# Scalpel Blades (Box of 100pcs)	1
F35305-50	Absorbable PGA Sutures w/Needle-○1/2/4×10/90㎝/5-0 (50/Box)	1
R22009-01	ALM 4x4 Teeth Retractors-Blunt, 65mm Spread, 7.5cm	1
R31005-06	SS Micro Clamps-Str/L*W 6*1mm/19mm	5
R42002-12	Spinal Cord Hook - Tip Dia. 3mm/12cm	1
R34001-14	Clip Applicator for R31005- and R31006-Clamps-8.4*5mm/14cm	1
SP0000-P	Instrument Storage Portfolio, 32*22cm	1

SP0008-M
Cardio-cerebral Perfusion Surgery Instrument Kit for Mice

Cat.No.	Product Description	Qty
S14014-11	Operating Scissors (Round Type)-S/S Str/36.5*8.5mm/11.5cm	1
S12005-10	IRIS-Fine Scissors (Round Type)-S/S Str/23*5mm/10.5cm	1
S11001-08	VANNAS Spring Scissors (Triangular)-S/S Str/8*1.5mm/8cm	1
F12007-10	IRIS Dissecting Forceps-Large Cvd, Tip width 0.9mm, teeth length 10mm, 10cm	1
F12010-09	Dressing Forceps-Str, Tip width 1.8mm, teeth length 13.5mm, 9.5cm	2
F22002-10	HARTMAN Mosquito Forceps-Str/20*0.8mm/10.5cm	2
F22003-10	HARTMAN Mosquito Forceps-Cvd/20.8*1mm/10cm	2
F35305-50	Absorbable PGA Sutures w/Needle-○1/2/4×10/90㎝/5-0 (50/Box	0.2
F35204-70	HARTMAN Mosquito Forceps-Str/20*0.8mm/10.5cm	0.2
R21027-12	STEVENS Hooks, 1 Angled Tooth , 5mm depth, 12.5cm	1
R22005-45	3x3 Teeth Retractors-Blunt, 30mm Spread, 5cm	1
F31047-12	OLSEN-HEGAR Needle Holders with Scissors-Str, 10*2.15mm/12cm	1
R31005-04	SS Micro Clamps-Str/L*W 4*0.75mm/16mm	5
R34001-14	Clip Applicator for R31005- and R31006-Clamps-8.4*5mm/14cm	1
R42002-12	Spinal Cord Hook - Tip Dia. 3mm/12cm	1
SP0000-P	Instrument Storage Portfolio, 32*22cm	1

SP0008-R
Cardio-cerebral Perfusion Surgery Instrument Kit for Rat

Cat.No.	Product Description	Qty
S14014-12	Operating Scissors (Round Type)-S/S Str/37.6*8.5mm/12.5cm	1
S12005-10	IRIS-Fine Scissors (Round Type)-S/S Str/23*5mm/10.5cm	1
S11002-08	VANNAS Spring Scissors (Triangular)-S/S Cvd/8*1.5mm/8cm	1
F12007-10	IRIS Dissecting Forceps-Large Cvd, Tip width 0.9mm, teeth length 10mm, 10cm	1
F12005-10	IRIS Dissecting Forceps-Str, Tip width 1mm, teeth length 14mm, 10cm	2
F22006-12	HALSTED Mosquito Forceps-Str, 21*1.2mm/12.5cm	2
F22007-12	HALSTED Mosquito Forceps-Cvd, 23.5*1mm/12.5cm	2
F35305-50	Absorbable PGA Sutures w/Needle-○1/2/4×10/90㎝/5-0 (50/Box	0.2
F35204-70	HARTMAN Mosquito Forceps-Str/20*0.8mm/10.5cm	0.2
R21027-12	STEVENS Hooks, 1 Angled Tooth , 5mm depth, 12.5cm	1
R22005-45	3x3 Teeth Retractors-Blunt, 30mm Spread, 5cm	1
F31047-12	OLSEN-HEGAR Needle Holders with Scissors-Str, 10*2.15mm/12cm	1
R31005-06	SS Micro Clamps-Str/L*W 6*1mm/19mm	5
R42002-12	Spinal Cord Hook - Tip Dia. 3mm/12cm	1
R34001-14	Clip Applicator for R31005- and R31006-Clamps-8.4*5mm/14cm	1
SP0000-P	Instrument Storage Portfolio, 32*22cm	1

Surgical Instruments

SP0009-R
General Surgery Instrument Kit for Rat

Cat.No.	Product Description	Qty
F11020-11	Micro Forceps-Str, head length 36mm, Tip 0.05*0.01mm, 11cm	1
F11021-11	Micro Forceps-45°Angled, head length 30mm, Tip 0.1*0.06mm, 11cm	1
S32003-12	Scalpel Handles with Ruler 3# Solid-12.5cm	1
S31011-01	11# Scalpel Blades (Box of 100pcs)	1
F35401-50	NA Terylene Sutures w/Needle-○3/8/3×10/90㎝/5-0 (50/Box)	0.2
F35204-70	NA Nylon Sutures w/Needle-△3/8/2.5×5/30㎝/7-0 (50/Box)	0.2
F31047-12	OLSEN-HEGAR Needle Holders with Scissors-Str, 10*2.15mm/12cm	1
S11001-08	VANNAS Spring Scissors (Triangular)-S/S Str/8*1.5mm/8cm	1
S11002-08	VANNAS Spring Scissors (Triangular)-S/S Cvd/8*1.5mm/8cm	1
R22009-01	ALM 4x4 Teeth Retractors-Blunt, 65mm Spread, 7.5cm	1
F12005-10	IRIS Dissecting Forceps-Str, Tip width 1mm, teeth length 14mm, 10cm	1
F12006-10	IRIS Dissecting Forceps-Light Cvd, Tip width 1mm, teeth length 13.5mm, 10cm	1
F12007-10	IRIS Dissecting Forceps-Large Cvd, Tip width 0.9mm, teeth length 10mm, 10cm	1
F13029-10	IRIS 1x2 Teeth Tissue Forceps-Str, Tip width 1.3mm, 10.5cm	1
S12009-11	IRIS-Fine Scissors (Round Type)-S/S Str/25*5.6mm/11.5cm	1
S12010-11	IRIS-Fine Scissors (Round Type)-S/S Cvd/23.5*6mm/11.5cm	1
F21001-12	HALSTED Artery Forceps-Str/23.5*1mm/12.5cm	1
F21002-12	HALSTED Artery Forceps-Cvd/24*1mm/12.5cm	1
SP0000-P	Instrument Storage Portfolio, 32*22cm	1

SP0009-R

SP0009-M
General Surgery Instrument Kit for Mouse

Cat.No.	Product Description	Qty
F11020-11	Micro Forceps-Str, head length 36mm, Tip 0.05*0.01mm, 11cm	1
F11021-11	Micro Forceps-45°Angled, head length 30mm, Tip 0.1*0.06mm, 11cm	1
S32003-12	Scalpel Handles with Ruler 3# Solid-12.5cm	1
S31011-01	11# Scalpel Blades (Box of 100pcs)	1
F35401-50	NA Terylene Sutures w/Needle-○3/8/3×10/90㎝/5-0 (50/Box)	0.2
F31047-12	OLSEN-HEGAR Needle Holders with Scissors-Str, 10*2.15mm/12cm	1
S11001-08	VANNAS Spring Scissors (Triangular)-S/S Str/8*1.5mm/8cm	1
S11002-08	VANNAS Spring Scissors (Triangular)-S/S Cvd/8*1.5mm/8cm	1
R22029-04	Colibri Eye Specula-15mm spread, 4cm	1
F12005-10	IRIS Dissecting Forceps-Str, Tip width 1mm, teeth length 14mm, 10cm	1
F12006-10	IRIS Dissecting Forceps-Light Cvd, Tip width 1mm, teeth length 13.5mm, 10cm	1
F12007-10	IRIS Dissecting Forceps-Large Cvd, Tip width 0.9mm, teeth length 10mm, 10cm	1
F13029-10	IRIS 1x2 Teeth Tissue Forceps-Str, Tip width 1.3mm, 10.5cm	1
S12005-10	IRIS-Fine Scissors (Round Type)-S/S Str/23*5mm/10.5cm	1
S12004-09	IRIS-Fine Scissors (Round Type)-S/S Cvd/24*4.6mm/9.5cm	1
F22002-10	HARTMAN Mosquito Forceps-Str/20*0.8mm/10.5cm	1
F22003-10	HARTMAN Mosquito Forceps-Cvd/20.8*1mm/10cm	1
SP0000-P	Instrument Storage Portfolio, 32*22cm	1

SP0009-M

SP0010-B
Basic Surgical Instrument Kit for Rat & Mice

Cat.No.	Product Description	Qty
S11001-08	VANNAS Spring Scissors (Triangular)-S/S Str/8*1.5mm/8cm	1
S12005-10	IRIS-Fine Scissors (Round Type)-S/S Str/23*5mm/10.5cm	1
F12005-10	IRIS Dissecting Forceps-Str, Tip width 1mm, teeth length 14mm, 10cm	1
F12006-10	IRIS Dissecting Forceps-Light Cvd, Tip width 1mm, teeth length 13.5mm, 10cm	1
F11020-11	Micro Forceps-Str, head length 36mm, Tip 0.05*0.01mm, 11cm	1
F22002-10	HARTMAN Mosquito Forceps-Str/20*0.8mm/10.5cm	1
F22003-10	HARTMAN Mosquito Forceps-Cvd/20.8*1mm/10cm	1
F31047-12	OLSEN-HEGAR Needle Holders with Scissors-Str, 10*2.15mm/12cm	1
S33007-12	ZIEGLER Knives-8mm Cutting Edge/1.5mm Width/12cm	1
R31005-06	SS Micro Clamps-Str/L*W 6*1mm/19mm	1
R31006-06	SS Micro Clamps-Cvd/L*W 6.6*1mm/17mm	1
SP0000-P	Instrument Storage Portfolio, 32*22cm	1

SP0010-B

SP0011-B
MCAO Surgical Instrument Kit for Rat & Mice

Cat.No.	Product Description	Qty
S32003-12	Scalpel Handles with Ruler 3# Solid-12.5cm	1
S31015-01	15# Scalpel Blades (Box of 100pcs)	1
S14014-14	Operating Scissors (Round Type)-S/S Str/46*9mm/14.5cm*	1
S12005-10	IRIS-Fine Scissors (Round Type)-S/S Str/23*5mm/10.5cm	1
S12006-10	IRIS-Fine Scissors (Round Type)-S/S Cvd/22*4.5mm/10.5cm	1
F12005-10	IRIS Dissecting Forceps-Str, Tip width 1mm, teeth length 14mm, 10cm	1
F12006-10	IRIS Dissecting Forceps-Light Cvd, Tip width 1mm, teeth length 13.5mm, 10cm	1
F13029-10	IRIS 1x2 Teeth Tissue Forceps-Str, Tip width 1.3mm, 10.5cm	1
F13030-10	IRIS 1x2 Teeth Tissue Forceps-Light Cvd, Tip width 1.3mm, 10.5cm	1
R21013-02	MANNERFELT Hooks, 1 Tooth, Blunt, 15.5cm	4
R31005-06	SS Micro Clamps-Str/L*W 6*1mm/19mm	5
F11028-13	Micro Forceps-Cvd, head length 38mm, Tip 0.1*0.06mm, 13cm	1
F11027-13	Micro Forceps-Str, head length 37.5mm, Tip 0.1*0.06mm, 13cm	1
F11003-13	Micro Forceps-45°Angled, head length 30mm, Tip 0.15*0.1mm, 13cm	1
F11002-11	Micro Forceps-Str, head length 36.5mm, Tip 0.15*0.1mm, 11cm	1
F22002-10	HARTMAN Mosquito Forceps-Str/20*0.8mm/10.5cm	1
F22003-10	HARTMAN Mosquito Forceps-Cvd/20.8*1mm/10cm	1
S11001-08	VANNAS Spring Scissors (Triangular)-S/S Str/8*1.5mm/8cm	1
F31047-14	OLSEN-HEGAR Needle Holders with Scissors-Str, 17.3*1.7mm/14cm	1
F35204-70	NA Nylon Sutures w/Needle-△3/8/2.5×5/30㎝/7-0 (50/Box)	0.2
SP0001-P	Instrument Storage Portfolio	1

SP0011-B

Sterilizer

The sterilizer provides a safe, convenient and affective method for sterilizing your surgical instruments before and during surgery, ensuring the tools free of pathogens and microbial contaminants.

The highest temperature can reach 300 ℃. The surgical instrument could sterilized completed Within 5 seconds.

Order Information:

Cat No.	Product Name	Price
RS1502	150g Glass Bead Sterilizer-4x8cm(220V)	
RS3002	300g Glass Bead Sterilizer-4x14cm(220V)	
RS1500	Glass Beads for Sterilizer, 1500g	

Surgical Instruments

Ophthalmic instruments ▶

Note: the price of the surgical instruments as noted in this product manual will fluctuate with the market price, and the final price will be subject to the quotation of the company.

Corneal/Conjunctival Scissors

Mainly used in corneal transplantation surgery, glaucoma surgery, etc., cutting the cornea, conjunctiva and other tissues

SC11001R-12

SC11001T-12

Cat No.	Description of Blade	Cutting Edge (Length)	Cutting Edge (Width)	Total Length
SC11001R-12	Curved | Sharp&Sharp	15mm	3mm	12cm
SC11001T-12	Curved | Sharp&Sharp	15mm	3mm	12cm

SC11002R-11

SC11002T-11

Cat No.	Description of Blade	Cutting Edge (Length)	Cutting Edge (Width)	Total Length
SC11002R-11	Curved | Sharp&Sharp	12mm	3mm	11cm
SC11002T-11	Curved | Sharp&Sharp	12mm	3mm	11cm

Cataract Scissors

Mainly used for cataract surgery, the head is slender and easy to enter a small incision to cut the capsule tissue

SC12002R-13

Cat No.	Description of Blade	Cutting Edge (Length)	Cutting Edge (Width)	Total Length
SC12002R-13	Curved | Sharp&Sharp	19mm	1mm	13cm

SC12001R-13

Cat No.	Description of Blade	Cutting Edge (Length)	Cutting Edge (Width)	Total Length
SC12001R-13	Straight | Sharp&Sharp	19mm	1mm	13cm

Tying Forceps

Mainly used for traction, knotting and other operations for clamping sutures in various ophthalmological operations, and sometimes for clamping eye tissues

FC11001R-11

Cat No.	Description of Blade	Tip Length	Tip Width	Tip Thickness	Total Length
FC11001R-11	Straight	23.5mm	0.3mm	0.5mm	11cm

FC11001T-11

Cat No.	Description of Blade	Tip Length	Tip Width	Tip Thickness	Total Length
FC11001T-11	Straight	23.5mm	0.3mm	0.5mm	11cm

FC11002R-08

FC11002T-08

Cat No.	Description of Blade	Tip Length	Tip Width	Tip Thickness	Total Length
FC11002R-08	Straight	26.5mm	0.3mm	0.5mm	8.5cm
FC11002T-08	Straight	26.5mm	0.3mm	0.5mm	8.5cm

Corneal Forceps

Used to clamp eye tissue in various ophthalmological operations, also used for suture knotting or fixing the eyeball

FC12001R-11

FC12001T-11

Cat No.	Description of Blade	Tip Length	Tip Width	Tip Thickness	Total Length
FC12001R-11	Straight	28mm	0.3mm	/	10.7cm
FC12001T-11	Straight	28mm	0.3mm	/	10.7cm

FC12002R-08

FC12002T-08

Cat No.	Description of Blade	Tip Length	Tip Width	Tip Thickness	Total Length
FC12002R-08	Curved	28mm	0.3mm	/	8.5cm
FC12002T-08	Curved	28mm	0.3mm	/	8.5cm

Surgical Instruments

Tissue Forceps

Used to clamp eye tissue in various ophthalmological operations, also used for suture knotting or fixing the eyeball

FC13001R-11

FC13001T-11

Cat No.	Description of Blade	Tip Length	Tip Width	Tip Thickness	Total Length
FC13001R-11	Straight	28mm	0.3mm	0.5mm	10.7cm
FC13001T-11	Straight	28mm	0.3mm	0.5mm	10.7cm

FC13002R-08

FC13002T-08

Cat No.	Description of Blade	Tip Length	Tip Width	Tip Thickness	Total Length
FC13002R-08	Straight	28mm	0.3mm	0.5mm	8.5cm
FC13002T-08	Straight	28mm	0.3mm	0.5mm	8.5cm

Capsulorhexis Forceps

Used in cataract surgery to tear the capsule

FC14001R-11

FC14001T-11

Cat No.	Description of Blade	Tip Length	Tip Width	Tip Thickness	Total Length
FC14001R-11	Curved	14mm	0.6mm	0.6mm	11cm
FC14001T-11	Curved	14mm	0.6mm	0.6mm	11cm

Surgical Instruments ▶

Note: the price of the surgical instruments as noted in this product manual will fluctuate with the market price, and the final price will be subject to the quotation of the company.

★The size of the picture is 1:1 to the actual size.

Micro Spring Scissors

S11001-08

S11002-08

S11003-08

Cat No.	Description of Blade	Cutting Edge (Length)	Cutting Edge (Width)	Total Length
S11001-08	Straight | Sharp&Sharp	8.0mm	1.5mm	8.0cm
S11002-08	Curved | Sharp&Sharp	8.0mm	1.5mm	8.0cm
S11003-08	Curved | Sharp&Sharp	6.3mm	1.35mm	8.5cm

S11035-08

S11037-08

Cat No.	Description of Blade	Cutting Edge (Length)	Cutting Edge (Width)	Total Length
S11035-08	Straight | Sharp&Sharp	3.5mm	1.3mm	8.0cm
S11036-08	Straight | Sharp&Sharp	8.2mm	1.5mm	8.0cm
S11037-08	Curved | Sharp&Sharp	8mm	1.5mm	8.0cm

Micro Spring Scissors

S11005-09

Cat No.	Description of Blade	Cutting Edge (Length)	Cutting Edge (Width)	Total Length
S11005-09	Curved | Blunt&Blunt	9mm	2.15mm	9.0cm

S11029-12

Cat No.	Description of Blade	Cutting Edge (Length)	Cutting Edge (Width)	Total Length
S11029-12	Curved | Blunt&Blunt	13mm	1.3mm	11.5cm

S11024-11

Cat No.	Description of Blade	Cutting Edge (Length)	Cutting Edge (Width)	Total Length
S11024-11	Curved | Sharp&Sharp	15.7mm	2.4mm	11.5cm

S11014-12

Cat No.	Description of Blade	Cutting Edge (Length)	Cutting Edge (Width)	Total Length
S11014-12	Straight | Sharp&Sharp	5.5mm	1.9mm	12.5cm

S11007-12

Cat No.	Description of Blade	Cutting Edge (Length)	Cutting Edge (Width)	Total Length
S11007-12	Straight | Sharp&Sharp	19mm	4.25mm	12.5cm

Delicate Scissors

S12003-09

Cat No.	Description of Blade	Cutting Edge (Length)	Cutting Edge (Width)	Total Length
S12003-09	Straight | Sharp&Sharp	24.5mm	5.0mm	9.0cm
S12005-10	Straight | Sharp&Sharp	23mm	5.0mm	10.5cm
S12014-13	Straight | Sharp&Sharp	35mm	8.3mm	13cm

Surgical Instruments

S12004-09

Cat No.	Description of Blade	Cutting Edge (Length)	Cutting Edge (Width)	Total Length
S12004-09	Curved | Sharp&Sharp	24mm	4.6mm	9.5cm
S12006-10	Curved | Sharp&Sharp	22mm	4.5mm	10.5cm
S12010-11	Curved | Sharp&Sharp	23.5mm	6.0mm	11.5cm
S12015-13	Curved | Sharp&Sharp	26mm	7.4mm	13cm

S12011-12
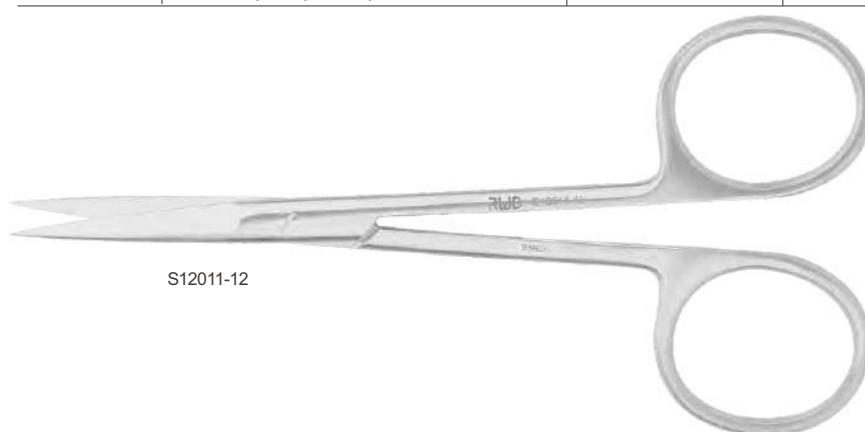
Cat No.	Description of Blade	Cutting Edge (Length)	Cutting Edge (Width)	Total Length
S12012-12	Curved | Sharp&Sharp	24.6mm	5.6mm	11.5cm

S12030-11

S12029-11
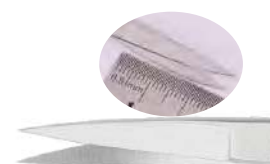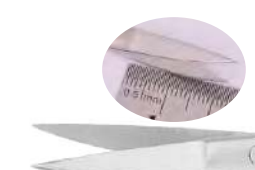
S12031-11

Cat No.	Description of Blade	Cutting Edge (Length)	Cutting Edge (Width)	Total Length
S12030-11	Curved | Sharp&Sharp	26mm	5.5mm	11.5cm
S12031-11	Curved | Sharp&Sharp	29mm	6mm	11.5cm
S12034-12	Straight | Sharp&Sharp	17mm	6mm	12.5cm
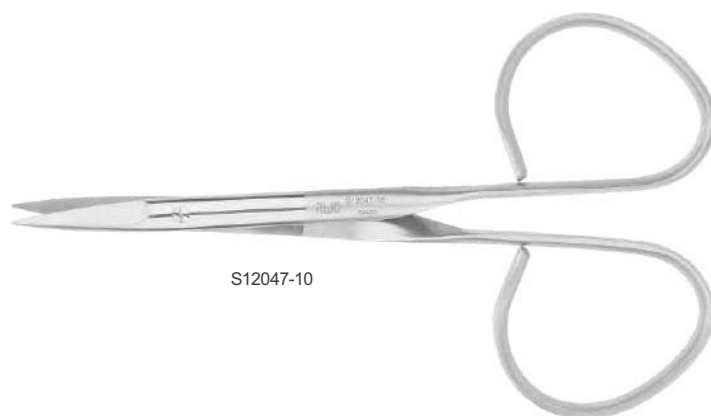
S12047-10

Cat No.	Description of Blade	Cutting Edge (Length)	Cutting Edge (Width)	Total Length
S12047-10	Straight | Sharp&Sharp	18mm	4.5mm	10cm

S18001-09

S18002-09

Cat No.	Description of Blade	Cutting Edge (Length)	Cutting Edge (Width)	Total Length
S18001-09	Straight | Sharp&Sharp (Teeth)	22mm	5mm	9cm
S18001-11	Straight | Sharp&Sharp (Teeth)	25mm	4.8mm	11.5cm
S18002-09	Curved | Sharp&Sharp (Teeth)	21.5mm	5mm	9cm
S18002-10	Curved | Sharp&Sharp (Teeth)	23mm	5mm	10cm
S18002-11	Curved | Sharp&Sharp (Teeth)	25mm	6mm	11.5cm

S18004-09

Cat No.	Description of Blade	Cutting Edge (Length)	Cutting Edge (Width)	Total Length
S18004-09	Curved | Sharp&Sharp	20.5mm	5mm	9cm
S18004-10	Curved | Sharp&Sharp	20mm	5mm	10.5cm
S18004-11	Curved | Sharp&Sharp	22mm	5mm	11.5cm
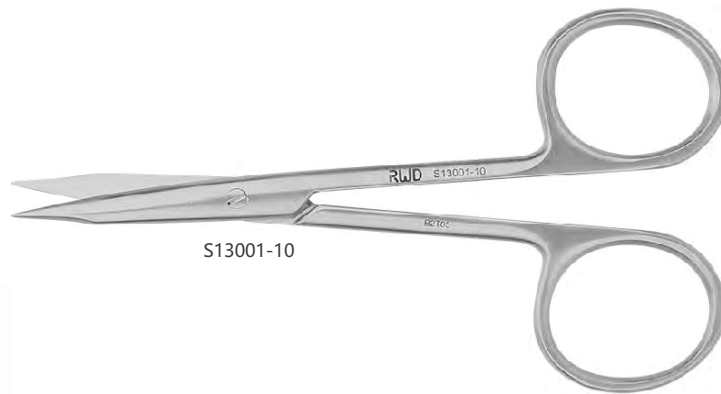
S13001-10

Cat No.	Description of Blade	Cutting Edge (Length)	Cutting Edge (Width)	Total Length
S13001-10	Straight | Sharp&Sharp	25.5mm	6mm	6cm

S13003-11
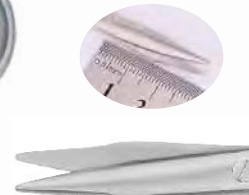
S13004-11

Cat No.	Description of Blade	Cutting Edge (Length)	Cutting Edge (Width)	Total Length
S13003-11	Straight| Blunt&Blunt	25mm	4mm	11.5cm
S13004-11	Curved| Blunt&Blunt	28mm	5mm	11.5cm
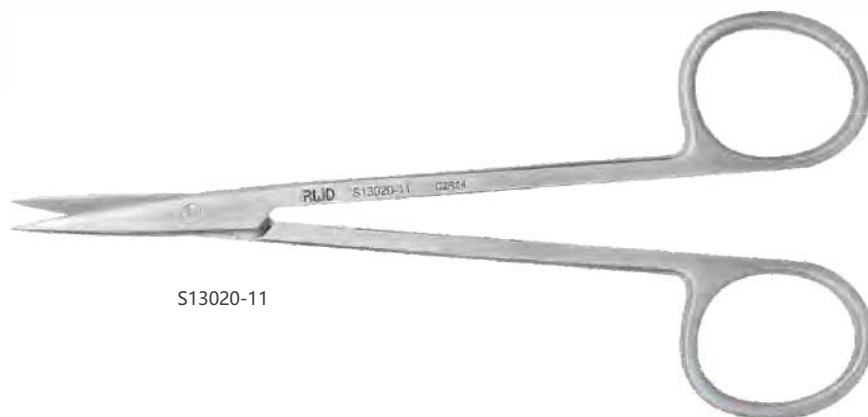
S13020-11

Cat No.	Description of Blade	Cutting Edge (Length)	Cutting Edge (Width)	Total Length
S13020-11	Straight | Sharp&Sharp	20mm	5mm	12cm

Dissecting Scissors

S13027-18

S13005-14

S13006-14

Cat No.	Description of Blade	Cutting Edge (Length)	Cutting Edge (Width)	Total Length
S13027-18	Straight| Blunt&Blunt	35mm	7mm	18cm
S13005-14	Straight| Blunt&Blunt	36mm	6.8mm	14.5cm
S13006-14	Curved| Blunt&Blunt	36mm	6.8mm	14.5cm
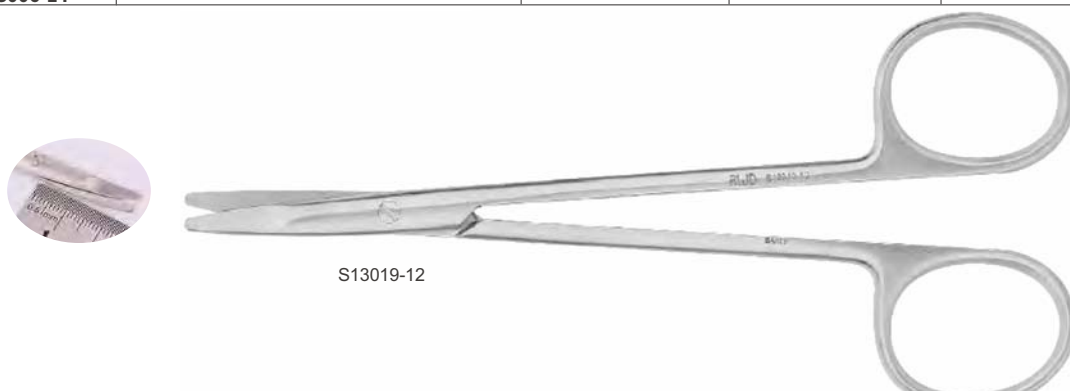
S13019-12

Cat No.	Description of Blade	Cutting Edge (Length)	Cutting Edge (Width)	Total Length
S13019-12	Curved| Blunt&Blunt	25mm	4.5mm	12.5cm
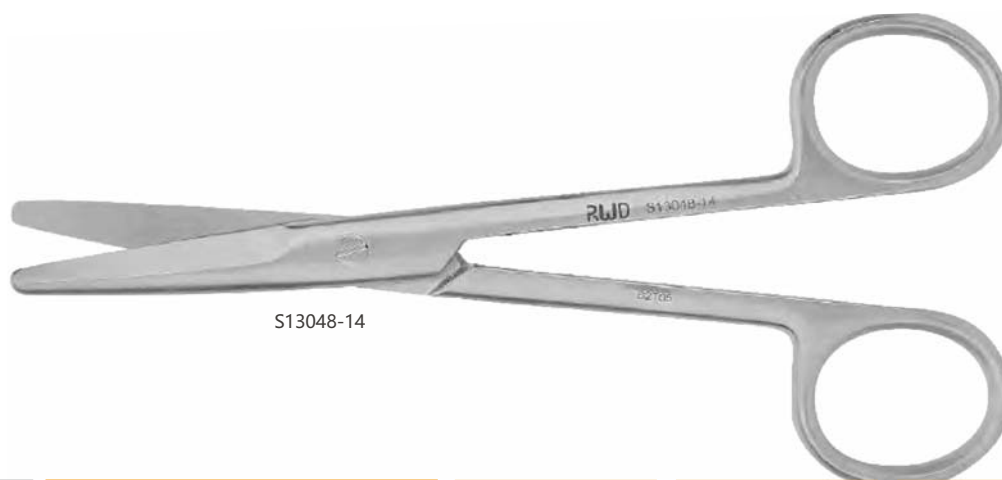
S13048-14

Cat No.	Description of Blade	Cutting Edge (Length)	Cutting Edge (Width)	Total Length
S13048-14	Curved| Blunt&Blunt	32mm	9mm	14cm

Surgical Instruments

S13035-16

Cat No.	Description of Blade	Cutting Edge (Length)	Cutting Edge (Width)	Total Length
S13035-16	Straight | Blunt&Blunt	45mm	9.5mm	16.5cm

S13047-14

Cat No.	Description of Blade	Cutting Edge (Length)	Cutting Edge (Width)	Total Length
S13047-14	Straight| Blunt&Blunt	43mm	10mm	14.5cm

S13029-14

S13030-14

Cat No.	Description of Blade	Cutting Edge (Length)	Cutting Edge (Width)	Total Length
S13029-14	Straight| Blunt&Blunt	37mm	9mm	14cm
S13030-14	Curved| Blunt&Blunt	41mm	9.5mm	14cm

S13031-17

Cat No.	Description of Blade	Cutting Edge (Length)	Cutting Edge (Width)	Total Length
S13031-17	Straight| Blunt&Blunt	50mm	13mm	17cm

S13038-14

Cat No.	Description of Blade	Cutting Edge (Length)	Cutting Edge (Width)	Total Length
S13038-14	Straight| Blunt&Blunt	41mm	10mm	14.5cm

Surgical Scissors

S14011-13

Cat No.	Description of Blade	Cutting Edge (Length)	Cutting Edge (Width)	Total Length
S14011-13	Straight	Sharp&Sharp	28.5mm	10mm	13cm

S14016-11

Cat No.	Description of Blade	Cutting Edge (Length)	Cutting Edge (Width)	Total Length
S14016-11	Curved | Sharp&Sharp	34.4mm	7.5mm	11.5cm
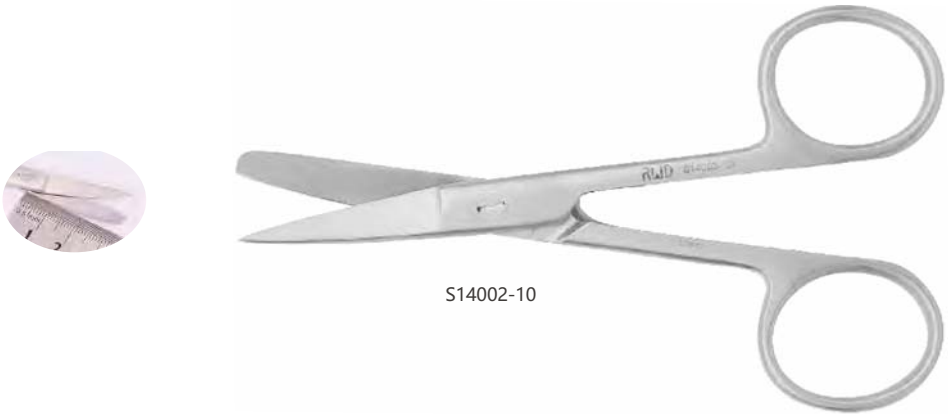
S14002-10

Cat No.	Description of Blade	Cutting Edge (Length)	Cutting Edge (Width)	Total Length
S14002-10	Curved | Sharp&Blunt	30mm	7mm	10cm
S14002-13	Curved | Sharp&Blunt	42.5mm	8.5mm	13cm
S14002-14	Curved | Sharp&Blunt	48.2mm	10mm	14.5cm
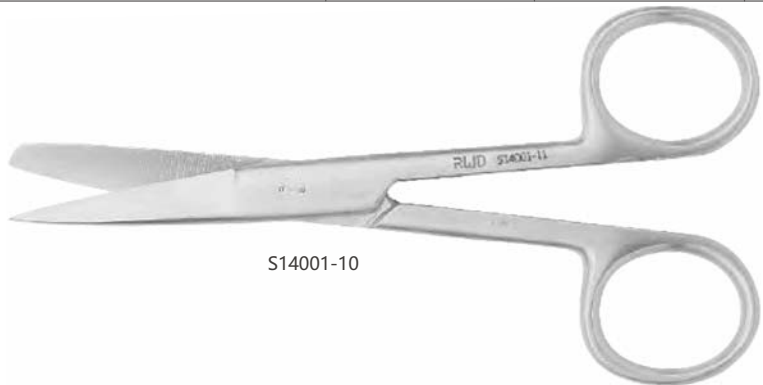
S14001-10

Cat No.	Description of Blade	Cutting Edge (Length)	Cutting Edge (Width)	Total Length
S14001-10	Straight|Sharp & Blunt	33mm	7.5mm	10.5cm
S14001-11	Straight|Sharp & Blunt	37mm	8.2mm	11.5cm
S14001-13	Straight|Sharp & Blunt	40.5mm	9.4mm	13cm
S14001-14	Straight|Sharp & Blunt	48mm	10mm	14.5cm
S14001-15	Straight|Sharp & Blunt	50mm	10mm	15.5cm
S14001-16	Straight|Sharp & Blunt	53mm	10mm	16.5cm

S14014-10

Cat No.	Description of Blade	Cutting Edge (Length)	Cutting Edge (Width)	Total Length
S14014-10	Straight | Sharp&Sharp	32.7mm	8.45mm	10.5cm
S14014-11	Straight | Sharp&Sharp	36.5mm	8.5mm	11.5cm
S14014-12	Straight | Sharp&Sharp	38mm	8.5mm	12.5cm
S14014-13	Straight | Sharp&Sharp	45mm	9.8mm	13cm
S14014-14	Straight | Sharp&Sharp	46mm	9mm	14.5cm
S14014-15	Straight | Sharp&Sharp	48mm	10mm	15.5cm
S14014-16	Straight | Sharp&Sharp	54.5mm	10mm	16cm
S14014-17	Straight | Sharp&Sharp	57mm	12.5mm	17.5cm

S14015-10

Cat No.	Description of Blade	Cutting Edge (Length)	Cutting Edge (Width)	Total Length
S14015-10	Straight | Blunt&Blunt	35mm	7.5mm	10.5cm
S14015-11	Straight | Blunt&Blunt	36mm	7mm	11.5cm
S14015-12	Straight | Blunt&Blunt	37mm	7mm	12.5cm
S14015-14	Straight | Blunt&Blunt	46mm	7.5mm	14.5cm
S14015-16	Straight | Blunt&Blunt	54mm	9.0mm	16.5cm
S14015-17	Straight | Blunt&Blunt	54mm	9.5mm	17.5cm

S14017-10

Cat No.	Description of Blade	Cutting Edge (Length)	Cutting Edge (Width)	Total Length
S14017-10	Curved | Blunt&Blunt	34.5mm	7.5mm	10.5cm
S14017-16	Curved | Blunt&Blunt	52mm	10.5mm	16cm

Surgical Instruments

S14003-14

Cat No.	Description of Blade	Cutting Edge (Length)	Cutting Edge (Width)	Total Length
S14003-14	Straight|sharp & blunt	48.6mm	9.5mm	14.5cm

S15006-09

Cat No.	Description of Blade	Cutting Edge (Length)	Cutting Edge (Width)	Total Length
S15006-09	Curved|sharp &sharp	13.5mm	4cm	9.5cm

Ligature Scissors
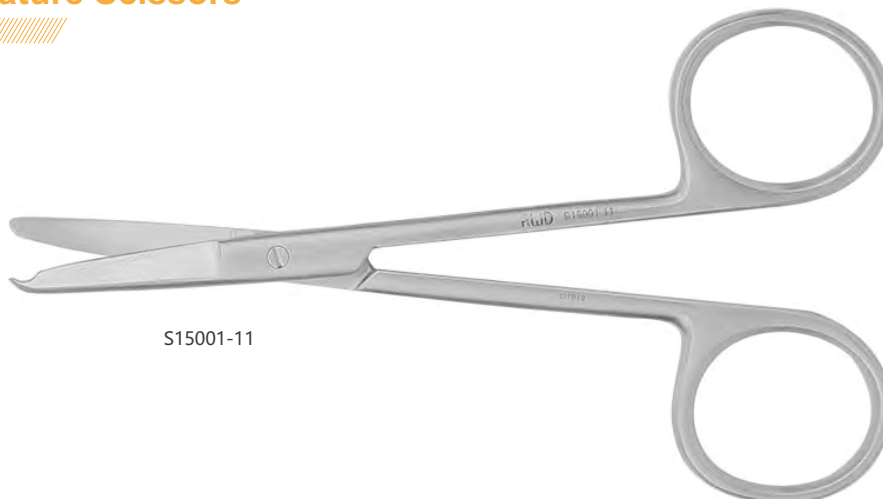
S15001-11

Cat No.	Description of Blade	Cutting Edge (Length)	Cutting Edge (Width)	Total Length
S15001-11		27mm	6mm	11cm
S15001-09		20.3mm	4mm	9cm

Bone Cutters

S16001-10

Cat No.	Description of Blade	Cutting Edge (Length)	Cutting Edge (Width)	Total Length
S16001-10	Straight	21mm	10mm	10.5cm

S22005-12

Cat No.	Description of Blade	Cutting Edge (Length)	Cutting Edge (Width)	Total Length
S22005-12	plane	15.2mm	7.4mm	12.5cm
S22004-11	plane	15mm	6.8mm	11cm

Bone Chisel

S23002-16

S23007-12

Cat No.	Description of Blade	Cutting Edge (Length)	Cutting Edge (Width)	Total Length
S23002-16	Curved	12mm	4mm	16cm
S23007-12			4mm	12.5cm

scalpel

S33007-12

S33006-13

Cat No.	Description of Blade	Cutting Edge (Length)	Cutting Edge (Width)	Total Length
S33007-12		8mm	1.5mm	12cm
S33006-13		25mm	3mm	13cm

Surgical Handles

S32003-12　　(matches 10#, 11#, 12#, 15# blades)

S32004-13　　(matches 20#, 21#, 22#, 23# blades)

S32005-12　　(matches 10#, 11#, 12#, 15# blades)

Cat No.		Total Length
S32003-12	3#(Ruler)	12.5cm
S32004-13	4#(Standard)	14cm
S32005-12	7#	12.5cm

Surgical Blades

Cat No.		
S31010-01	10#	Box of 100pcs

Cat No.		
S31011-01	11#	Box of 100pcs

Cat No.				Total Length
S31012-01	12#		Box of 100pcs	

Cat No.		Total Length
S31015-01	15#	Box of 100pcs

Cat No.		
S31023-02	23#	Box of 100pcs

Cat No.		Total Length
S33009-06	Blade Remover	6.5cm

Delicate Forceps

F11001-11

Cat No.	Tip Shape	Tip Length	Tip Width	Tip Thickness	Total Length
F11001-11	Straight	30mm	0.20mm	0.12mm	11cm
F11002-11	Straight	36.5mm	0.15mm	0.1mm	11cm
F11001-13	Straight	33mm	0.15mm	0.1mm	13cm
F11020-11	Straight	36mm	0.05mm	0.01mm	11cm

F11003-11

Cat No.	Tip Shape	Tip Length	Tip Width	Tip Thickness	Total Length
F11003-11	45°Curved	30mm	0.3mm	0.15mm	11cm
F11021-11	45°Curved	30mm	0.10mm	0.06mm	11cm
F11003-13	45°Curved	30mm	0.15mm	0.1mm	13cm

F13002-11

Cat No.	Tip Shape	Tip Length	Tip Width	Tip Thickness	Total Length
F13002-11	Straight	34mm	0.35mm	0.55mm	11cm

F13004-11

Cat No.	Tip Shape	Tip Length	Tip Width	Tip Thickness	Total Length
F13004-11	Curved	32mm	0.3mm	0.15mm	11.5cm
F11004-11	Curved	26.8mm	0.2mm	0.12mm	11cm
F11022-11	Curved	32mm	0.1mm	0.06mm	11.5cm

F11008-09

Cat No.	Tip Shape	Tip Width	Tip Thickness	Total Length
F11008-09	1x2Teeth| 5mm Platform	0.2mm	0.4mm	9.5cm

F11014-11

F11019-11

F11016-11

Cat No.	Tip Shape	Tip Length	Tip Width	Tip Thickness	Total Length
F11014-11	Straight	33.5mm	0.15mm	0.1mm	11cm
F11019-11	Straight	34.5mm	1.2mm	0.14mm	11cm
F11016-11	Straight	31.5mm	0.3mm	0.15mm	11cm
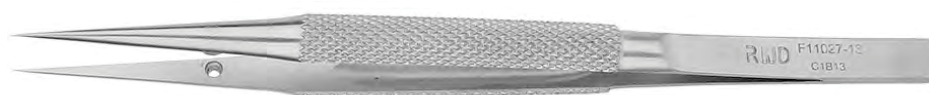
F11027-13

F11028-13

Cat No.	Tip Shape	Tip Length	Tip Loidth	Tip Thickness	Total Length
F11027-13	Straight	37.5mm	0.1mm	0.06mm	13cm
F11028-13	Curved	38mm	0.1mm	0.06mm	13cm

F11029-11

F11030-11

F11031-11

Cat No.	Tip Shape	Tip Length	Tip Width	Tip Thickness	Total Length
F11029-11	Straight | Titanium Alloy	30mm	0.14mm	0.09mm	11cm
F11030-11	45°Curved | Titanium Alloy	32mm	0.1mm	0.06mm	11cm
F11031-11	Curved | Titanium Alloy	35.5mm	0.07mm	0.03mm	11cm

Dissecting Forceps

F12002-12

F12003-12

Cat No.	Tip Shape	Tip Length	Tip Width	Total Length
F12002-12	Dissecting Forceps	11.5mm	0.6mm	12cm
F12003-12	Dissecting Forceps	18mm	1.5mm	12cm

F12012-10

F12013-10

Cat No.	Tip Shape	Tip Length	Tip Width	Total Length
F12012-10	Straight |Not Teeth		0.4mm	10cm
F12013-10	45°Curved | Not Teeth	7.5mm	0.5mm	10cm
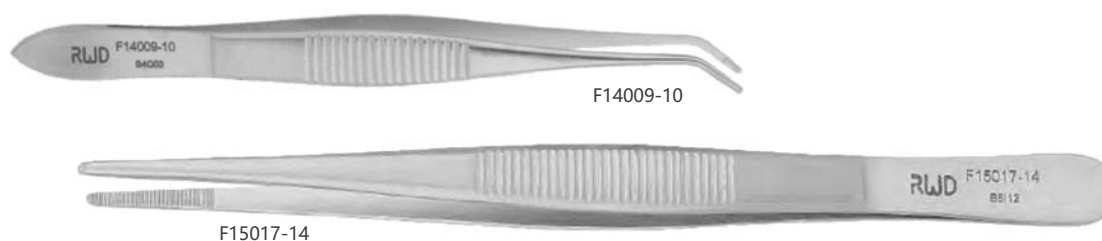
F14009-10

F15017-14

Cat No.	Tip Shape	Tip Length	Tip Width	Total Length
F14009-10	Curved	7mm	1mm	10.5cm
F15017-14	Straight	17.5mm	1.5mm	15.5cm

F12010-09

Cat No.	Tip Shape	Tip Length	Tip Width	Total Length
F12010-09	Straight	13.5mm	1.8mm	9.5cm
F12010-10	Straight	15mm	1.8mm	10.5cm
F12010-11	Straight	16.5mm	2.5mm	11.5cm
F12010-13	Straight	17mm	1.3mm	13cm

F12011-09

Cat No.	Tip Shape	Tip Length	Tip Width	Total Length
F12011-09	Curved	11mm	1.8mm	9.5cm
F12011-10	Curved	15mm	1.9mm	10.5cm
F12011-13	Curved	16mm	1.2mm	13cm

F12019-10

Cat No.	Tip Shape	Tip Length	Tip Width	Total Length
F12019-10	Straight	15mm	2.0mm	10.5cm
F12019-11	Straight	16.5mm	1.9mm	11.5cm
F12019-13	Straight	18mm	2.0mm	13cm
F12019-16	Straight	20mm	1.8mm	16cm

F12018-10

Cat No.	Tip Shape	Tip Length	Tip Width	Total Length
F12018-10	Straight	15mm	2.2mm	10.5cm

F12016-15

F12029-09

Cat No.	Tip Shape	Tip Length	Tip Width	Total Length
F12016-15	Straight	19mm	1.4mm	15.5cm
F12029-09	Straight	13mm	0.8mm	9.5cm

Ophthalmic forceps

F12005-10

F12006-10

F12007-10

F14012-10

Cat No.	Tip Shape	Tip Length	Tip Width	Total Length
F12005-10	Straight	14mm	1.0mm	10cm
F12006-10	Curved	13.5mm	1.0mm	10cm
F12007-10	Curved	10mm	0.9mm	10cm
F14012-10	Curved	13mm	0.5mm	10cm

Tissue Forceps

F13023-14

Cat No.	Tip Shape	Tip Length	Tip Width	Total Length
F13023-14	Straight| 1x2Teeth		1.8mm	14cm

F13028-15

Cat No.	Tip Shape	Tip Length	Tip Width	Total Length
F13028-15	Straight | circinal	9.5mm	7.0mm	15cm

F13019-12

Cat No.	Tip Shape	Tip Length	Tip Width	Total Length
F13019-12	Straight| 1x2Teeth		1.8mm	12cm

F13027-12

Cat No.	Tip Shape	Tip Length	Tip Width	Total Length
F13027-12	7x7Teeth | Straight	4.8mm	2.3mm	12cm
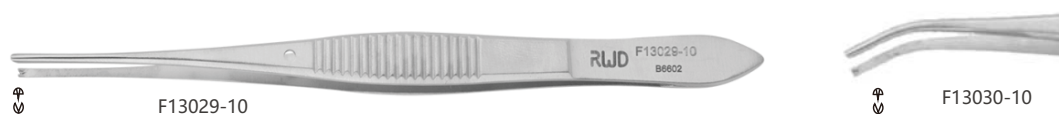
F13029-10

F13030-10

Cat No.	Tip Shape	Tip Length	Tip Width	Total Length
F13029-10	Straight		1.3mm	10.5cm
F13030-10	Curved		1.3mm	10.5cm
F13009-11	Straight		1.6mm	11cm

F13014-12

Cat No.	Tip Shape	Tip Length	Tip Width	Total Length
F13014-12	Straight| 1x2Teeth		1.2mm	13cm

Soldering Tweezers

F18003-12

Cat No.	Tip Shape	Tip Length	Tip Width	Total Length
F18003-12	Straight		0.5mm	12cm

McPHERSON Forceps

F18011-09

Cat No.	Tip Shape	Tip Length	Tip Width	Total Length
F18011-09	Straight	16mm	0.4mm	9cm

LONDON College Pliers

F15007-15

Cat No.	Tip Shape	Tip Length	Tip Width	Total Length
F15007-15	50°Curved	13mm	1.2mm	15cm

Glass Cover Forceps

F18015-10

F18001-10

Cat No.	Tip Shape	Tip Length	Tip Width	Total Length
F18015-10	Straight	11mm	6.0mm	10.5cm
F18001-10	Curved	12mm	5.4mm	10.5cm

Tissue Forceps
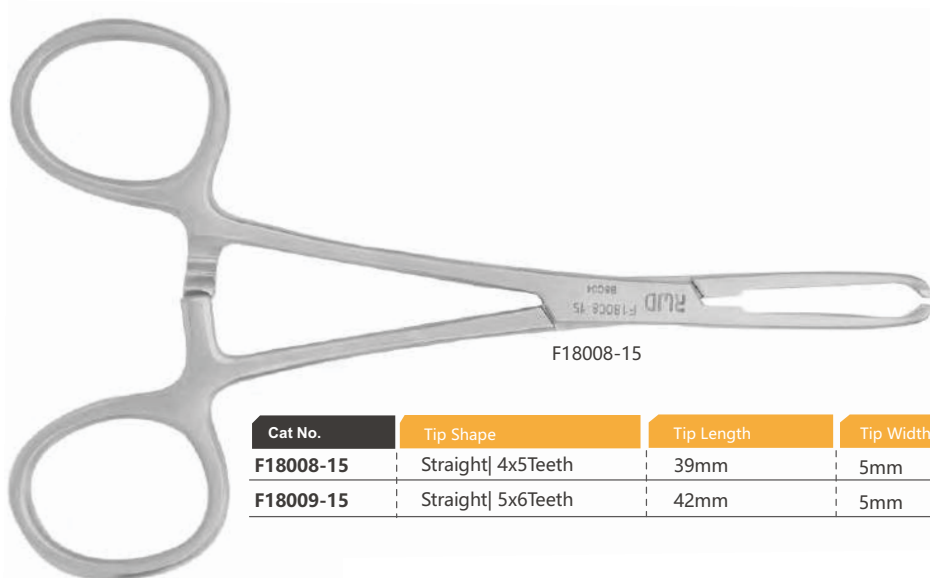
F18008-15

Cat No.	Tip Shape	Tip Length	Tip Width	Total Length
F18008-15	Straight| 4x5Teeth	39mm	5mm	15.0cm
F18009-15	Straight| 5x6Teeth	42mm	5mm	15.5mm
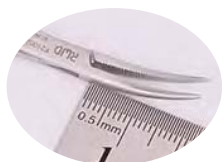
F21001-12
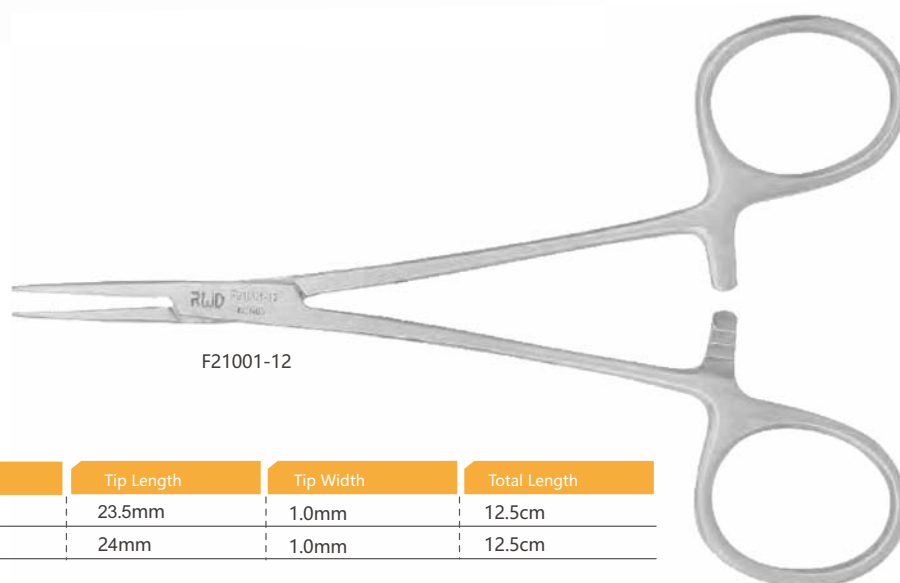
F21002-12

Cat No.	Tip Shape	Tip Length	Tip Width	Total Length
F21001-12	Straight	23.5mm	1.0mm	12.5cm
F21002-12	Curved	24mm	1.0mm	12.5cm

Haemostatic Forceps
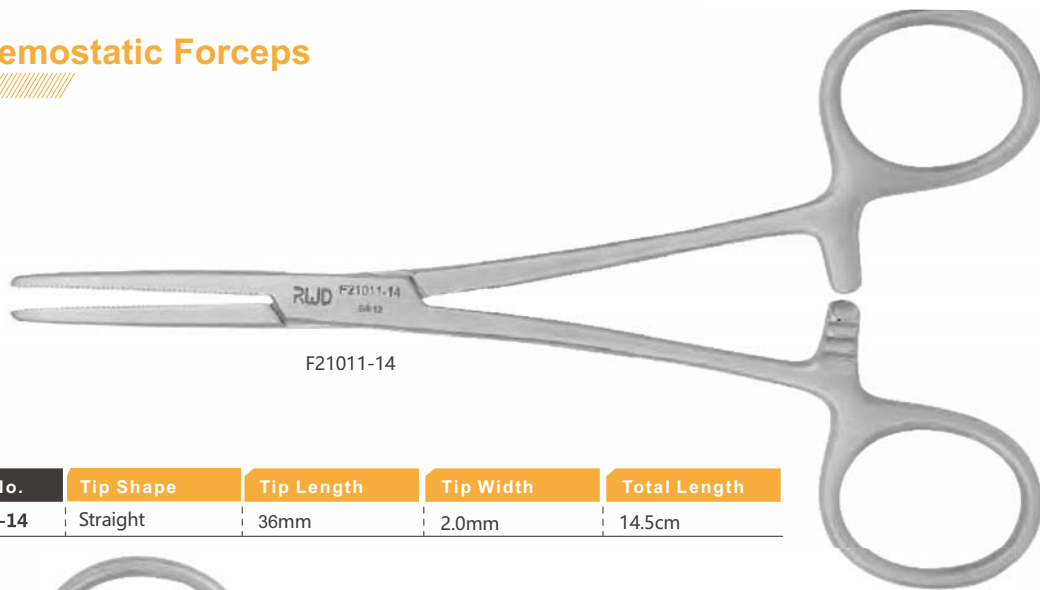
F21011-14

Cat No.	Tip Shape	Tip Length	Tip Width	Total Length
F21011-14	Straight	36mm	2.0mm	14.5cm
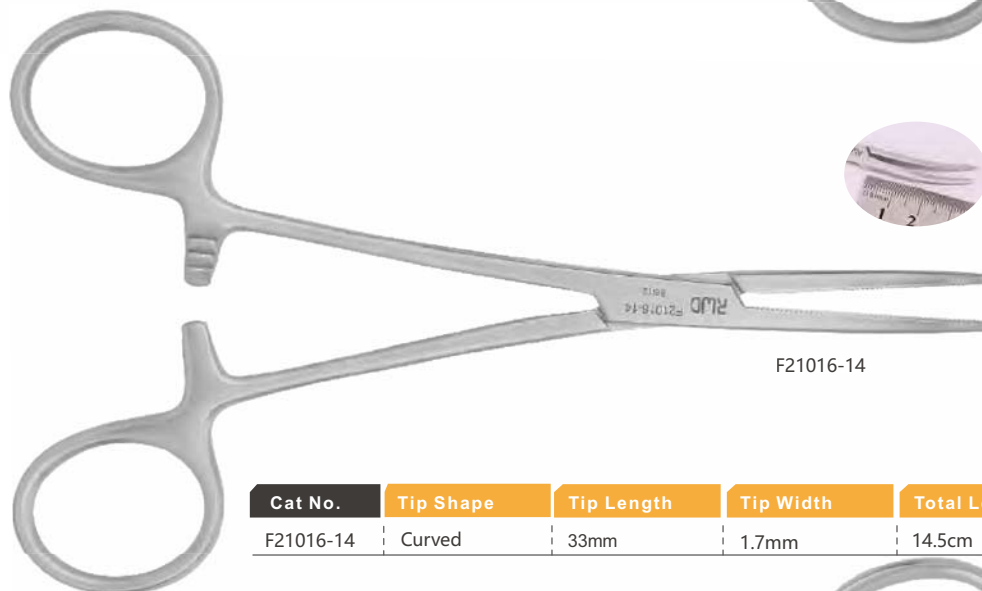
F21016-14

Cat No.	Tip Shape	Tip Length	Tip Width	Total Length
F21016-14	Curved	33mm	1.7mm	14.5cm

F21020-16

F21019-16

Cat No.	Tip Shape	Tip Length	Tip Width	Total Length
F21019-16	Straight	37mm	1mm	16cm
F21020-16	Curved	35mm	1.5mm	16cm
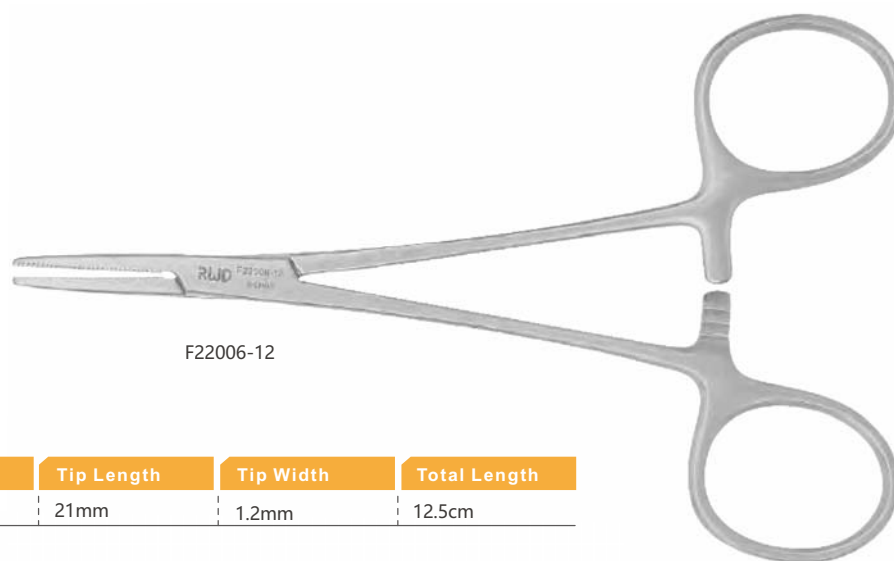
F22006-12

Cat No.	Tip Shape	Tip Length	Tip Width	Total Length
F22006-12	Straight	21mm	1.2mm	12.5cm
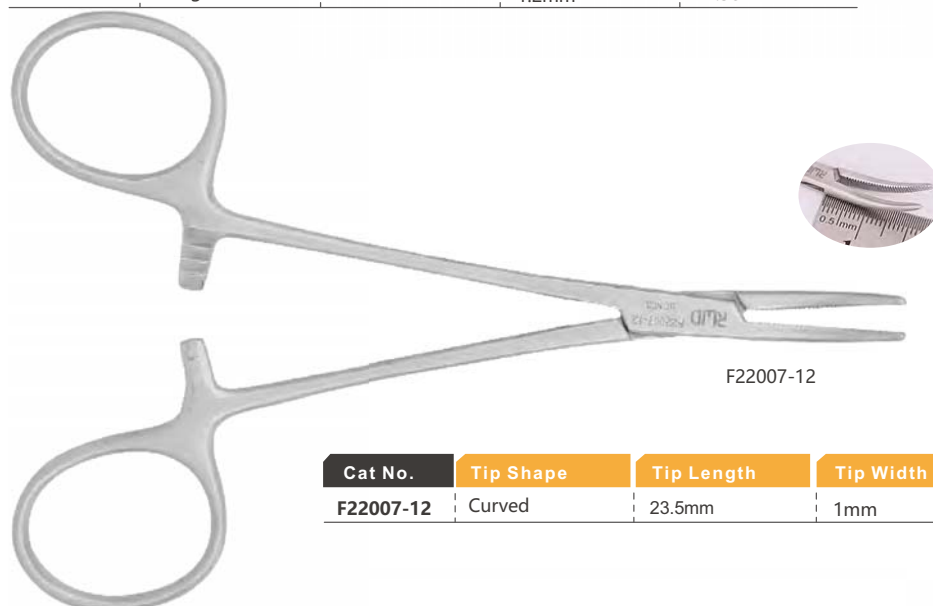
F22007-12

Cat No.	Tip Shape	Tip Length	Tip Width	Total Length
F22007-12	Curved	23.5mm	1mm	12.5cm
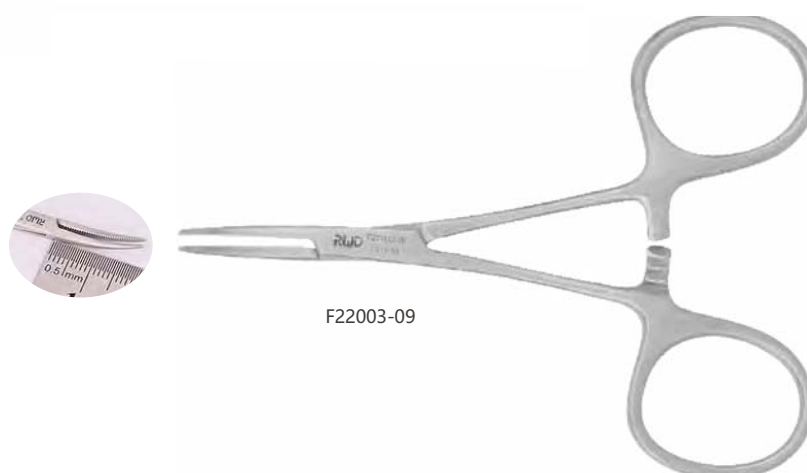
F22003-09

Cat No.	Tip Shape	Tip Length	Tip Width	Total Length
F22003-09	Curved	18.8mm	1.0mm	9cm
F22003-10	Curved	20.8mm	1.0mm	10cm

F21004-12

F21003-12

Cat No.	Tip Shape	Tip Length	Tip Width	Total Length
F21003-12	Straight| 1x2Teeth	23.5mm	1.5mm	12.5cm
F21004-12	Curved | 1x2Teeth	21mm	1.6mm	12.5cm
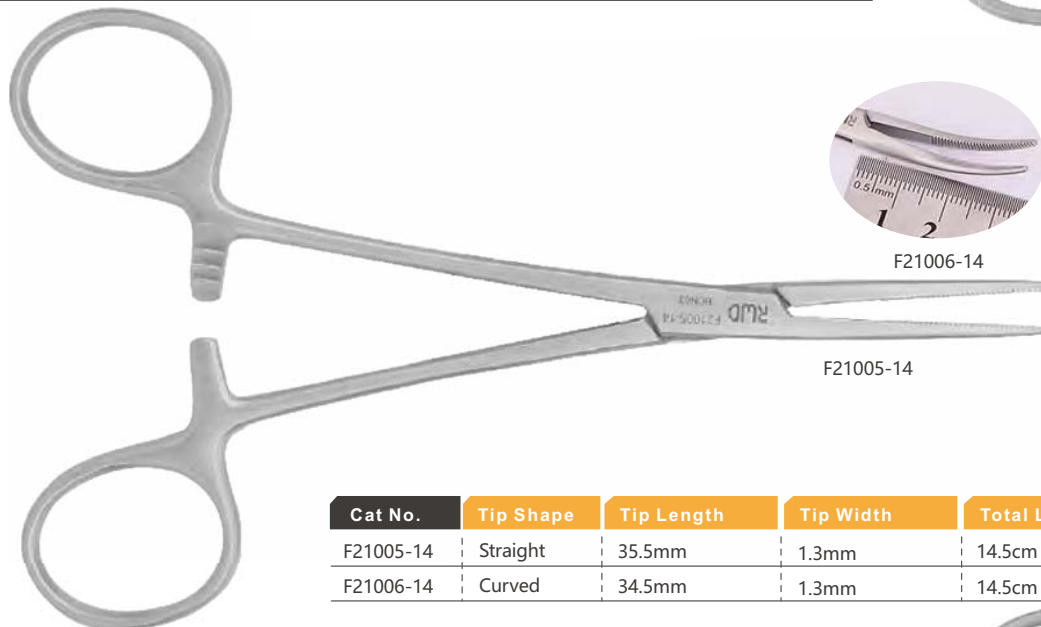
F21006-14

F21005-14

Cat No.	Tip Shape	Tip Length	Tip Width	Total Length
F21005-14	Straight	35.5mm	1.3mm	14.5cm
F21006-14	Curved	34.5mm	1.3mm	14.5cm
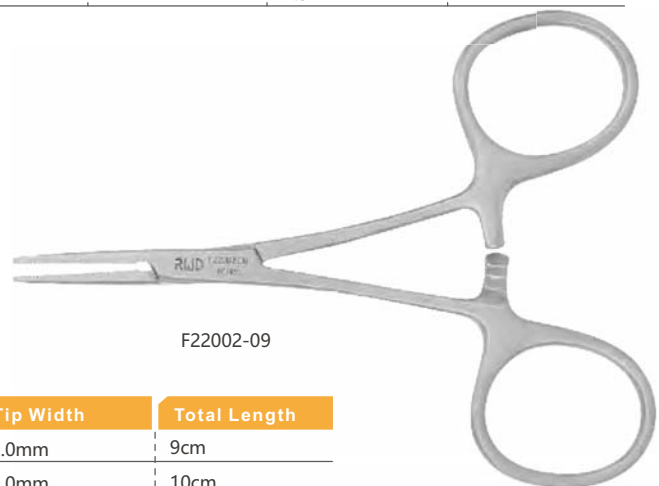
F22002-09

Cat No.	Tip Shape	Tip Length	Tip Width	Total Length
F22002-09	Straight	17.5mm	1.0mm	9cm
F22002-10	Straight	20mm	1.0mm	10cm

F21015-16

Cat No.	Tip Shape	Tip Length	Tip Width	Total Length
F21015-16	Straight	33mm	1.8mm	16cm
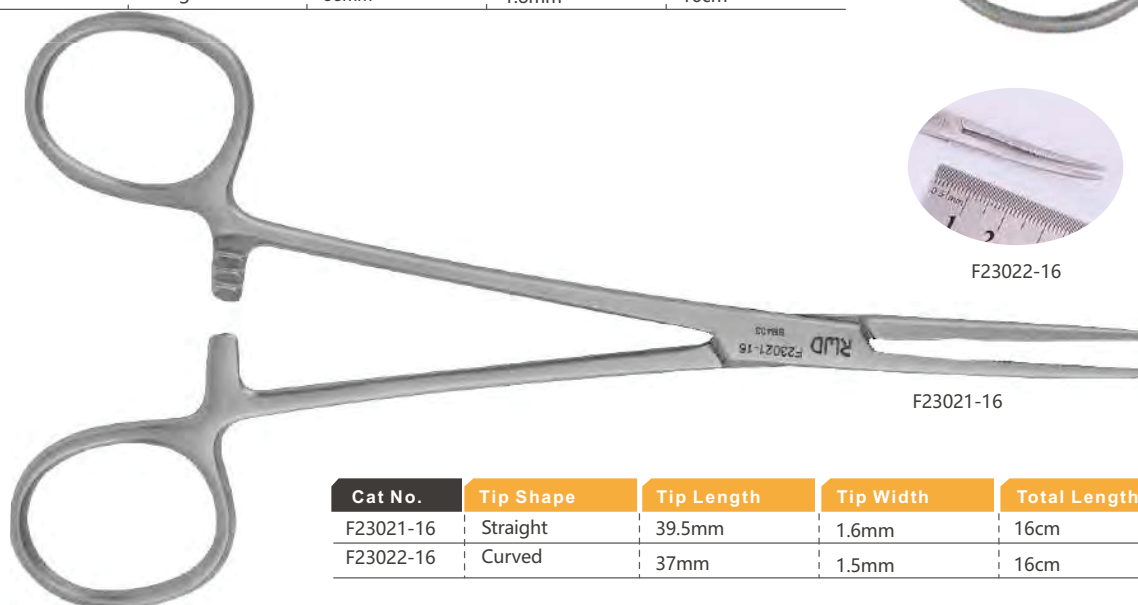
F23022-16

F23021-16

Cat No.	Tip Shape	Tip Length	Tip Width	Total Length
F23021-16	Straight	39.5mm	1.6mm	16cm
F23022-16	Curved	37mm	1.5mm	16cm

F31047-12

Cat No.	Tip Shape	Tip Length	Tip Width	Total Length
F31047-12	Straight	10mm	2.15mm	12cm
F31047-14	Straight	17.3mm	1.7mm	14cm

Surgical Instruments

BACKHAUS Towel Forceps
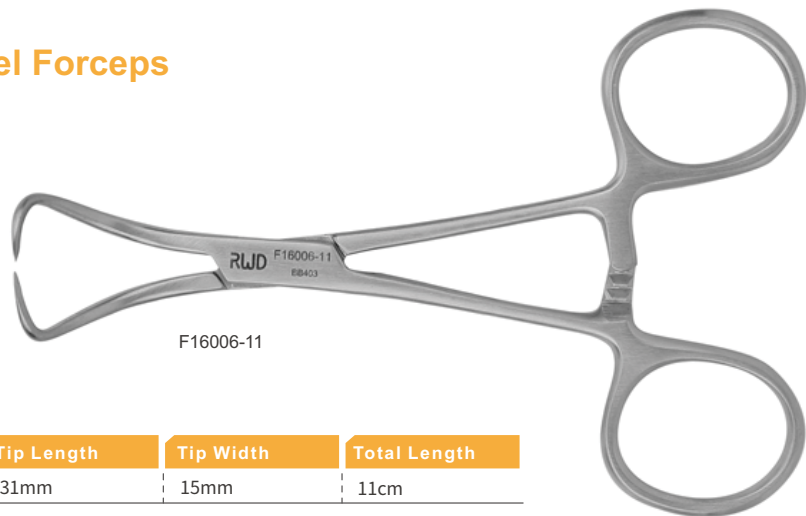
F16006-11

Cat No.	Tip Shape	Tip Length	Tip Width	Total Length
F16006-11		31mm	15mm	11cm

Needle Holders

F31007-13

F31002-13

Cat No.	Tip Shape	Tip Length	Tip Width	Total Length
F31002-13	Straight	14mm	1.0mm	13.5cm
F31007-13	Straight	12.5mm	1.0mm	13.0cm
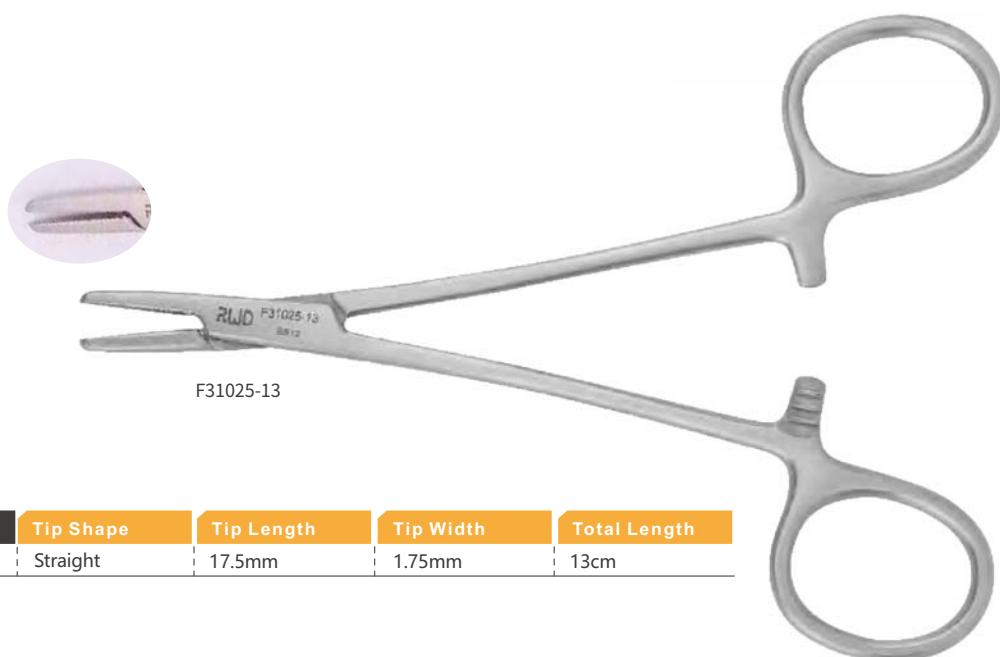
F31025-13

Cat No.	Tip Shape	Tip Length	Tip Width	Total Length
F31025-13	Straight	17.5mm	1.75mm	13cm

F31031-15

Cat No.	Tip Shape	Tip Length	Tip Width	Total Length
F31031-15	Straight	21mm	2.5mm	15.5cm
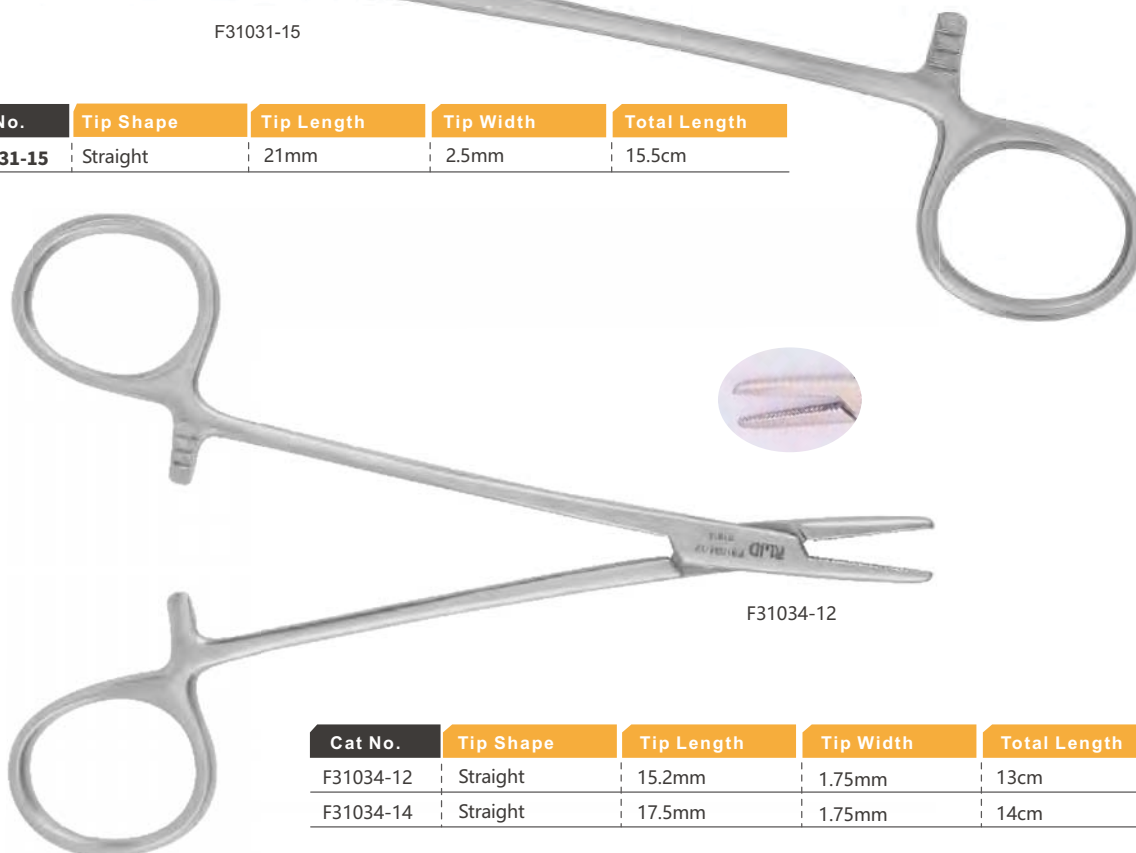
F31034-12

Cat No.	Tip Shape	Tip Length	Tip Width	Total Length
F31034-12	Straight	15.2mm	1.75mm	13cm
F31034-14	Straight	17.5mm	1.75mm	14cm

Suture

Sutures w/Needle-△3/8/2.5×5/30cm/7-0 (50/Box)
No. F35204-70

PGA Sutures w/Needle-○1/2/4×10/90cm/5-0 (50/Box)
No. F35305-50

Needle-○3/8/3×10/90cm/5-0 (50/Box)
No. F35401-50

Bone Rongeurs

S21019-14

Cat No.	Jaw Shape	Jaw Size (Cup)	Jaw Length	Total Length
S21019-14	Straight	0.5mm	7.5mm	14.5cm
S21020-14	Straight	0.7mm	6mm	14.5cm
S21021-14	Straight	1.0mm	6.5mm	14cm
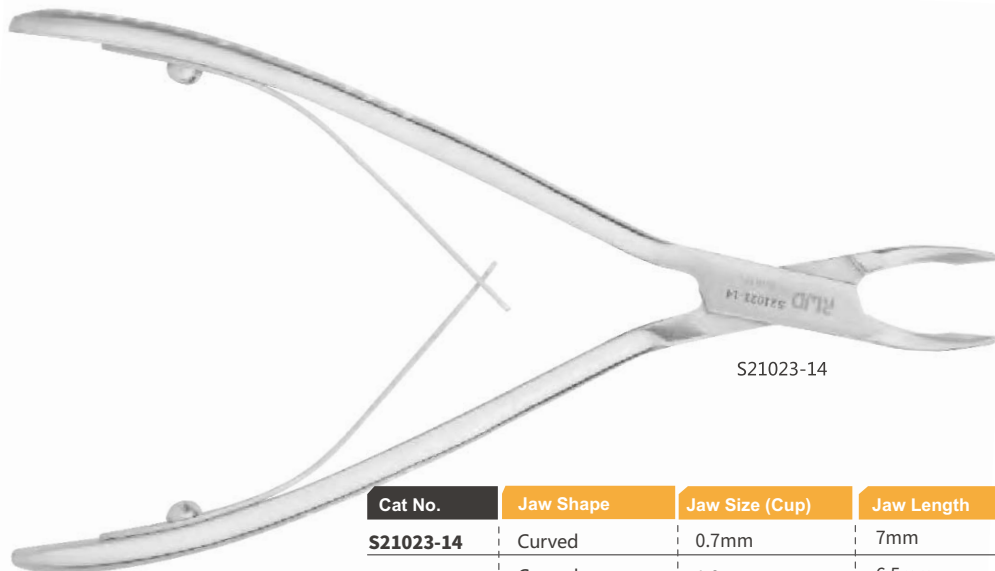
S21023-14

Cat No.	Jaw Shape	Jaw Size (Cup)	Jaw Length	Total Length
S21023-14	Curved	0.7mm	7mm	14cm
S21024-14	Curved	1.0mm	6.5mm	14cm
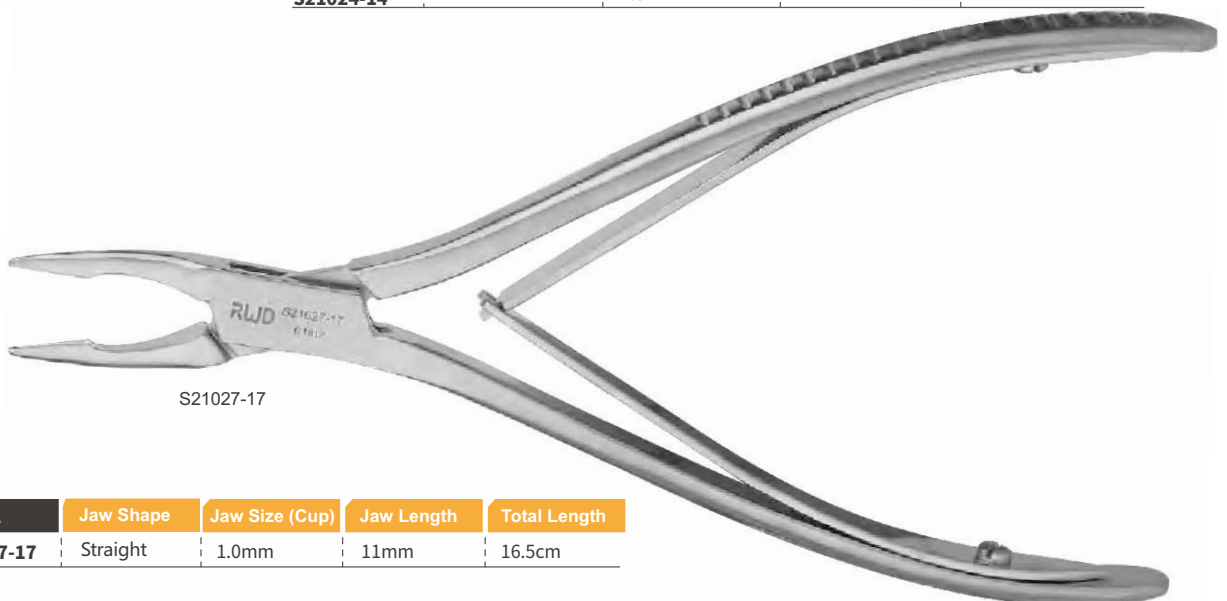
S21027-17

Cat No.	Jaw Shape	Jaw Size (Cup)	Jaw Length	Total Length
S21027-17	Straight	1.0mm	11mm	16.5cm

S21002-15

Cat No.	Jaw Shape	Jaw Size (Cup)	Jaw Length	Total Length
S21002-15	Curved	3.0mm	12.5mm	15cm
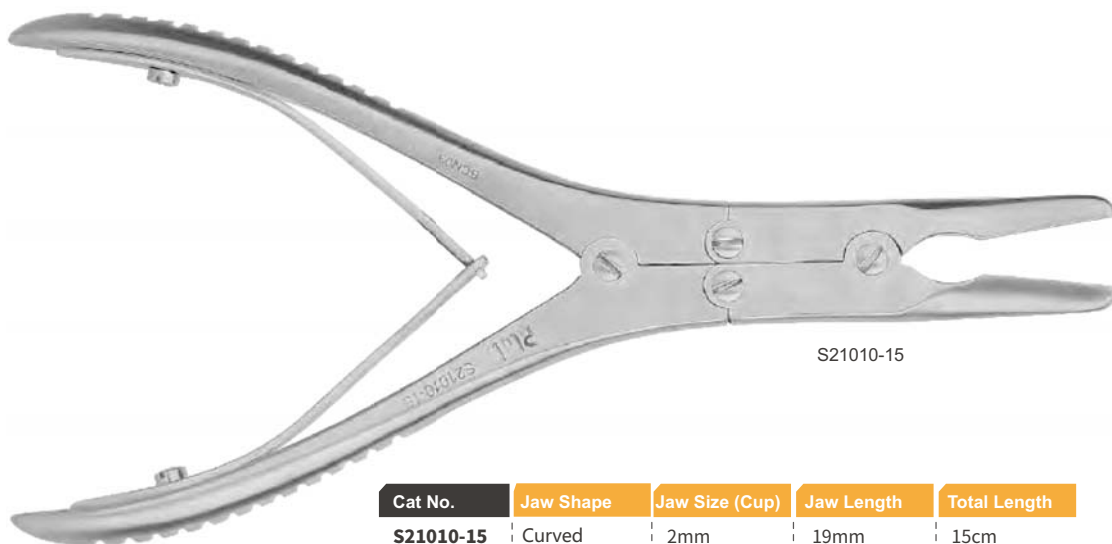
S21010-15

Cat No.	Jaw Shape	Jaw Size (Cup)	Jaw Length	Total Length
S21010-15	Curved	2mm	19mm	15cm

Finger Loop Ear Punch

C22001-10

Cat No.	Jaw Shape	Jaw Size (Cup)	Total Length
C22001-10	Finger loop	1mm	10.5cm
C22002-10	Finger loop	2mm	10.5cm

Blood Vessel Clamps

The vascular clip of the R31005 and R31006 series must be used with the R34001-14 vascular clip holder

R31005-04 R31005-06 R31005-08 R31005-10

R31006-04 R31006-06

R31008-26 R31009-26 R31010-26

R33001-48 R33001-38

R33002-48 R33002-38

R33003-02 R33003-01

Cat No.	Tip Shape	Tip Length	Tip Width	Total Length
R31005-04	Straight	4mm	0.75mm	16mm
R31005-06	Straight	6mm	1.0mm	19mm
R31005-08	Straight	8mm	2.0mm	18mm
R31005-10	Straight	10mm	2.0mm	20mm
R31006-04	Curved	6.3mm	1.0mm	17mm
R31006-06	Curved	6.6mm	1.0mm	17mm
R33001-38	Straight	11mm	3.8mm	38mm
R33001-48	Straight	14mm	4mm	48mm
R33002-38	Curved	11mm	3.8mm	38mm
R33002-48	Curved	15mm	4mm	50mm
R33003-01	Straight	17mm	3.7mm	58mm
R33003-02	Curved	18.5mm	4.0mm	58mm
R31008-26	Straight	11mm	2.0mm	28mm
R31009-26	30°Curved	14mm	2.5mm	28mm
R31010-26	45°Curved	15mm	2.5mm	26.5mm

R34001-14
Used only to clamp R31005, R31006 series vascular clamps.

Cat No.	Tip Shape	Tip Length	Tip Width	Total Length
R34001-14		8.4mm	5mm	14mm

Retractors
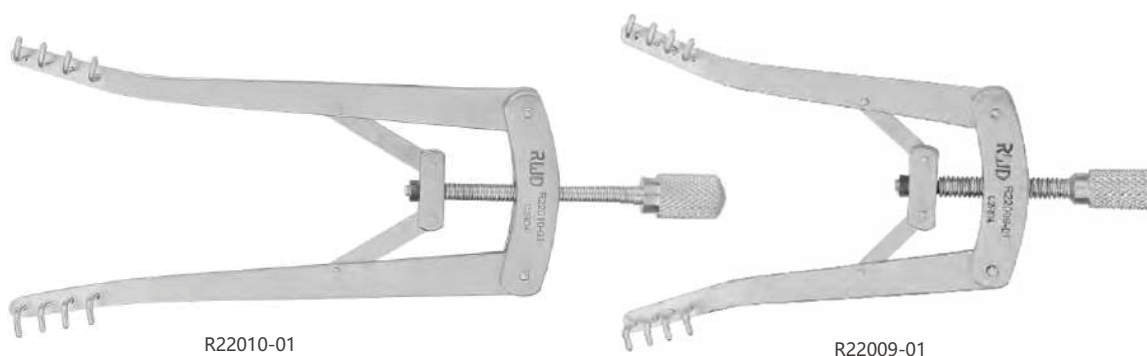
R22010-01

R22009-01

Cat No.	Teeth Shape	Teeth Length	Teeth Width	Teeth Depth	Maximum Spread	Total Length
R22009-01	Blunt | 4x4Teeth	10mm	4mm	3.5mm	65mm	7.5cm
R22010-01	Blunt | 4x4Teeth	12mm	4mm	4.5mm	75mm	10cm

Cat No.	Teeth Shape	Teeth Length	Teeth Width	Teeth Depth	Maximum Spread	Total Length
R21027-12		6mm	1.2mm	5mm		12.5cm

R22029-03

R22012-45

Cat No.	Teeth Shape	Teeth Length	Teeth Width	Teeth Depth	Maximum Spread	Total Length
R22029-03		10.5mm	6mm	6.5mm	15cm	3cm
R22029-04		13.5mm	6.5mm	7mm	15mm	4cm
R22012-45		13mm	6.5mm	7.5mm	22mm	4.5cm
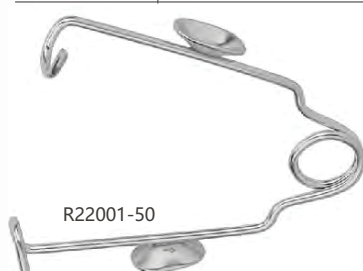
R22001-50
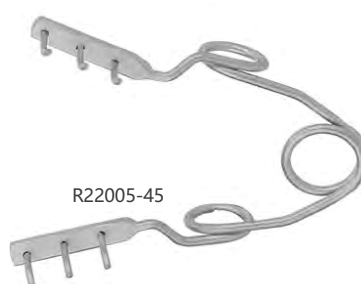
R22005-45
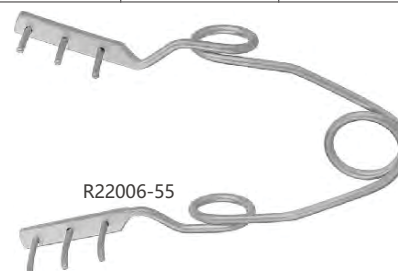
R22006-55

Cat No.	Teeth Shape	Teeth Length	Teeth Width	Teeth Depth	Maximum Spread	Total Length
R22001-50	Blunt | 1x1Teeth	7.5mm	1.5mm	8.9mm	40mm	5cm
R22005-45	Blunt | 3x3Teeth	9.5mm	5.5mm	7mm	30mm	5cm
R22006-55	Blunt | 3x3Teeth	11mm	1mm	3mm	36mm	5.5cm
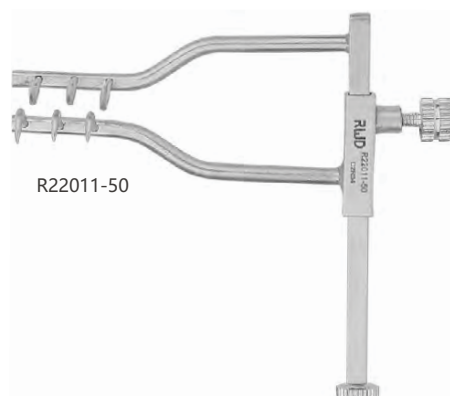
R22011-50

Cat No.	Teeth Shape	Teeth Length	Teeth Width	Teeth Depth	Maximum Spread	Total Length
R22011-50	Sharp | 3x3Teeth	9mm	4.5mm	10.5mm	30mm	5.5cm
R22030-03	Sharp | 3x3Teeth	7mm	3.5mm	5mm	20.5cm	3cm
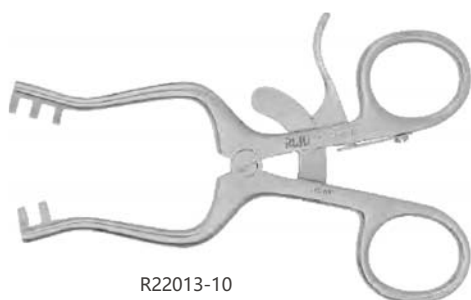
R22013-10

R22015-02

Cat No.	Teeth Shape	Teeth Length	Teeth Width	Teeth Depth	Maximum Spread	Total Length
R22013-10	Blunt | 2x3Teeth		2.2mm	6.5mm	61mm	10cm
R22015-02	Blunt | 3x3Teeth	13.5mm	2.2mm	6.5mm	62mm	13cm

C12005-01 With Holes

C12005-02 With Holes and Handle

Cat No.	Shape	Dimensions
C12005-01		210*120*50mm
C12005-02		240*160*50mm
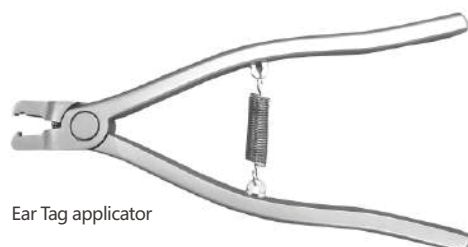
Ear Tag applicator

Ear tags

Cat No.	Name	Tip Width	Total Length
C23001-14	Ear Tag applicator	2.55mm	14.5mm
23001-5	Ear tags	/	/

**For Pathological Diagnosis
and Cell & Molecular Biology Research**
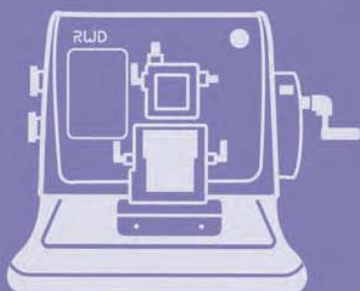
Minux® Rotary Microtomes

Rotary microtome is a device for paraffin section,widely used in medical and biological research. It is used for pathological diagnosis in clinical,and used for research at the tissue and cell level.

5-inch large touch screen, operable even with gloves

Visual pointer , visible angle adjustment

Side sample feeding knob, make operation more comfortable

Double locking system for handwheel to keep safe

Section thickness range
0.5-100µm
0.5 - 5.0 µm in 0.5µm increments
5- 20µm in 1µm increments
20 - 30 µm in 2µm increments
30- 60 µm in 5µm increments
60- 100µm in 10µm increments

Knife guarding , protect the safety of the operator

▶ Features:

Visual pointer

» Visible angle adjustment. When adjusting the angle of different tilt tissue, reduce trimming, thereby reducing tissue sample waste.
» Adjust multiple devices to the same angle easily and quickly.

Side knob

» Integrated with the body, ergonomic design, more comfortable operation.
» The sample feeding speed can be adjusted freely between 0-1800um/s, more humanize and efficient.
» Durable German-made military-grade devices. Operation life is more than 10 million times.

Automatic section

» It is stable and maintains slice consistency.
» 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.

Easily removable waste tray

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

Pathological Diagnosis

▶Product Advantage

High quality sectioning

- **Appilication:** puncture sample section
- **Advantage:**precise section,uniform thickness,good continuity

Visual pointer

- **Application:** when you adjust the angle of the sample holder,or when you need to adjust different microtomes to the same angle
- **Advantage:**visible angle adjustment, precisely adjust the direction of the sample holder,easy to operate,saving time and effort.
  Quickly adjust different microtomes to the same angle.
  Samples are sliced at the same angle,to reduce sample waste.

Side sample feeding knob

- **Application:**coarse feed
- **Advantage:**ergonomic design,the knob integrated with the machine, more comfortable operation.
  Adjustable feed speed, the larger the knob angle, the faster the injection speed,to improve the efficiency.

Easily removable waste tray

- **Appilication:** clean up waste
- **Advantage:** special coating, easy to clean,reduce cleanup time from minutes to seconds.
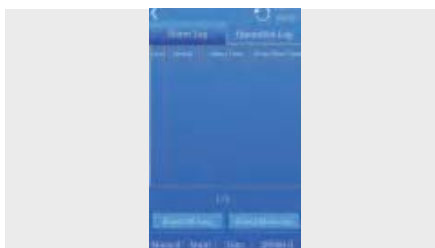
The historical record system

- **Application:**public equipment management
- **Advantage:**view all operation and alarm logs,and the data can be exported through the USB port,to facilitate information tracking.
  Data storage: slice count to 2million, total slice thickness to 20million μm.

▶ **Technical Parameters**

Model	S700 Semi-Automated	S700A Automated
Section thickness setting range: 0.50 - 100 μm	✓	✓
Trimming section thickness setting range: 1 - 800 μm	✓	✓
Electric sectioning speed: 0-1800μm	✓	✓
Specimen retraction: 0-250μm	✓	✓
Specimen feed: 28mm, Vertical stroke: 70mm	✓	✓
Specimen orientation: X/Y axis 8°, Z axis 360°	✓	✓
Maximum specimen size：55*50*30mm	✓	✓
Automated mode and manual mode switch		✓
Emergency stop button		✓
Cut window function		✓
Slice speed selection		✓
Four slice modes: Int.,Single,Cont., Multi.		✓
Pedals		✓

United States-Northwest University

Flat and smooth,with uniform thickness

Show results

▶**Order Information**

Cat No.	Product Description
S700A	Fully-Auto rotary microtome, include a pedal, a box of blade(50 pcs)
S700	Semi-Auto rotary microtome, include a box of blade(50 pcs)
S700-F3	Universal clamp
S700-F4	Standard clamp
S700-F7	Blade holder assembly
S700-F9	Blade holder upper bracket
S700-F5	Easy-clean waste tray
S700-F6	Antistatic waste tray

Minux® Cryostats

Introduction

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

High quality sectioning

- **Advanced temperature control system:** small temperature fluctuation range,more precise temperature control. It helps cut out high-quality slices.

- **Visual pointer:** sample adjustment angle can be displayed directly.It facilitates the precise adjustment of the sample to reach the target position.

- **Specimen cooling system:** specimen cooling system（optional）maintains the ideal object temperature for specific specimens through various methods including compressor, refrigerant,electronic refrigeration.

- **Anti-roll function:** the optional vacuum sectioning aid achieves time-saving section preparation and reduces section curling.

Safety

- **UVC disinfection**：
  - ‣ For an extra measure of safety,the inside of the instrument features an ozone-free UVC disinfection system.
  - ‣ UVC disinfection at any time and temperature.

- **Section Waste Removal System**：
  - ‣ Section waste is easily removed by using section Waste Removal System (optional) during trimming.
  - ‣ To protect the laboratory environment from contamination, inner loop design to deal with the air from the removal system.

- **Ergonomic design**：
  - ‣ Ergonomic exterior cabinet design with rounded edges and comfortable working height.
  - ‣ For individual user comfort,the height adjustable foot rest are available as optional accessories.

Pathological Diagnosis

Efficient and convenient

- **Quick operation：**
  - ‣ Touch screen design, intuitive and easy to operate.
  - ‣ Supplemented with joystick and buttons to control, multiple operation ways to fulfill user's different needs.

- **Auto section：** for extra ease of use and consistent sectioning of all specimen types, an optional auto section is available.

- **Separate defrosting：** manually defrost the quick-freezing table, sample head, and cabinet separately.

- **Waste liquid bottle reminder function：** display of the water level, reminder of full bottle and bottle not in place to prevent the water from accidentally flowing out.

- **Label design of sample holder：** convenient to record the sample and prevent the samples from being mixed up.

▶ Technical Parameters

Model	FS800 Semi-Automated	FS800A Automated
Section thickness setting range: 0.50 - 100 μm	✓	✓
Trimming section thickness setting range: 1 - 800 μm	✓	✓
Electric sectioning speed: 0-1800μm ajustable	✓	✓
Specimen retraction: 20±5μm	✓	✓
Specimen feed: 28mm	✓	✓
Vertical stroke: 70mm	✓	✓
Specimen orientation with visual pointer: X / Y axis 8°, Z axis 360°	✓	✓
Number of refrigerated sites: 15	✓	✓
Number of fast cooling sites: 2	✓	✓
Freezer refrigeration temperature: 0℃～－35℃	✓	✓
Sample holder minimum cooling temperature: －50℃	✓	✓
Automated mode and manual mode switch		✓
Emergency stop button		✓
Cut window function		✓
Slice speed selection		✓
Four slice modes: Int.,Single,Cont., Multi.		✓
Pedals		✓

▶ Order Information

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

Pathology Consumables
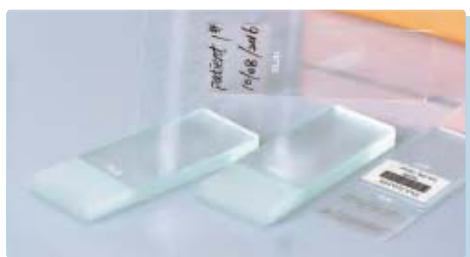
▶ Disposable Microtome Blades-low profile

▶ 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-1	Disposable Microtome Blades, 80mm*8mm*0.25mm, 50 pcs, for paraffin and frozen section

▶ Single Frosted Microscope Slides

▶ Features:

- It can be marked by traditional labeling method, 2B pencil and designated marker.Not available for print.
- There is a 20mm long frosted writing surface on one side of one end,which can withstand common chemicals and dyes.

Order Information

Cat No.	Size	Package	Product Description
SF-1	25x75x1.1mm	50pcs/box, 2500pcs/carton	Pathological grade, polished edges, 45° angle

▶ Microscope Paint Slides

▶ Features:

- With special white painted writing surface.
- Available for print, effectively reduce the possibility of human error and improve the sample's identification and traceability

Order Information

Cat No.	Size	Package	Product Description
MS-1	25x75x1.1mm	50pcs/box, 2000pcs/carton	Pathological grade, polished edges, 45° angle, white,for inkjet/thermal printer
MS-1	25x75x1.1mm	50pcs/box, 2000pcs/carton	Pathological grade, polished edges, 45° angle, white,for laser printer

▶Adhesion Microscope Slides

▶ Features:

- Suitable for immunohistochemical staining;routine H&E and eosin staining of special tissue sections like brain,adipose,skin,bone;tissue chip.
- Carrying long-lasting positive charges, which can tightly fix tissue sections or cells on the surface of the slide. Excellent performance in acid and alkali antigen repair solution.

Order Information

Cat No.	Size	Package	Product Description
AS-1	25x75x1.1mm	50pcs/box, 2000pcs/carton	Positively charged slide, white, Suitable for manual immunohistochemical staining, Leica and Dako automatic immunohistochemical staining
AS-1	25x75x1.1mm	50pcs/box, 2000pcs/carton	Super hydrophilic adhesive slide, white, Suitable for Roche Ventana automatic immunohistochemical staining , as well as centrifugal, membrane and sedimentation liquid-based cytology production

▶ Microscope Cover Glass

▶ Features:

- Pure white flat glass material, with good optical performance, stable molecular structure, flat surface and highly consistent size.
- Packed in hinged plastic box and vacuum-packed with independent aluminum foil.
- For manual operations of histopathology, cytology, urine analysis, and microbiology, such as manual sealing, manual blood smear,etc.

Order Information

Cat No.	Size	Package	Product Description
MC-1	24×50mm, thickness 0.13-0.16mm	100pcs/box, 2000pcs/carton	For manual operations of histopathology, cytology, urine analysis, and microbiology

▶ Tissue Embedding Cassettes

▶ Features:

- Siamese breakable design, simple and convenient operation.
- P.O.M material, resistant to corrosion by various chemical solvents during tissue treatment and embedding.
- 45° writing surface, suitable for most inkjet, thermal transfer, automatic printers.
- The drawer-type middle box is more convenient to store andtake.
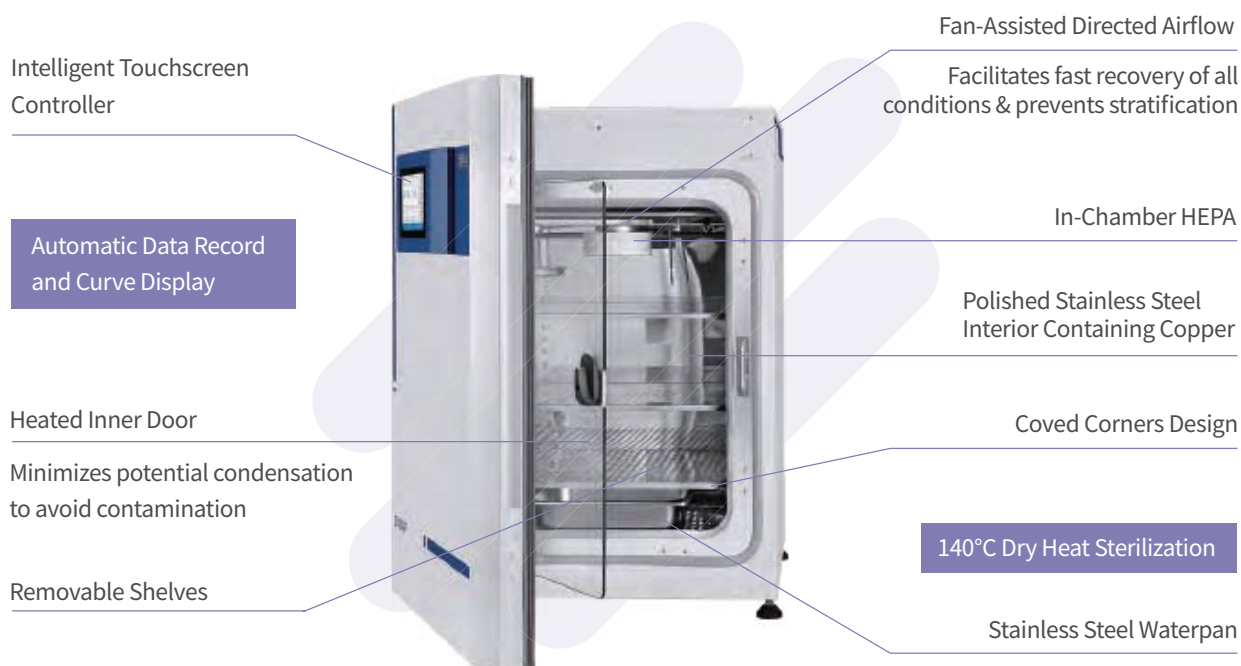
Order Information

Cat No.	Size	Package	Product Description
TE-1	Long hole shape, 5.0mmx1.0mm	250pcs/box, 2000pcs/carton	Lid with break, white, suitable for inkjet and thermal printer, suitable for routine histology samples
TE-2	Long hole shape, 5.0mmx1.0mm	250pcs/box, 2000pcs/carton	Lid with break, white, suitable for laser printer, suitable for routine histology samples
TE-3	Fine grid hole, 0.9mmx0.9mm	250pcs/box, 2000pcs/carton	Lid with break, white, suitable for inkjet and thermal printer, suitable for biopsy samples
TE-4	Fine grid hole, 0.9mmx0.9mm	250pcs/box, 2000pcs/carton	Lid with break, white, suitable for laser printer, suitable for biopsy samples

Pathological Diagnosis

CO₂ Incubators

Provide a more suitable cell culture environment

D180-P is a well-designed air-jacketed CO2 incubator for primary cells, stem cells, and all kinds of cell lines or tissues. It can provide a more suitable culture environment for cells by controlling temperature, CO2 concentration precisely. The built-in 140°C dry-heat sterilization program helps to prevent bacterial contamination. Also, all the data and interactions are visible on the 7-inch touchscreen.

With reliable temperature stability, purity environment, and operation simplicity, D180-P will be an indispensable device in the fields of cancer research, stem cell research, immunology research, pharmaceutical research, and neurobiology research.

Intelligent Touchscreen Controller

Automatic Data Record and Curve Display

Heated Inner Door

Minimizes potential condensation to avoid contamination

Removable Shelves

Fan-Assisted Directed Airflow

Facilitates fast recovery of all conditions & prevents stratification

In-Chamber HEPA

Polished Stainless Steel Interior Containing Copper

Coved Corners Design

140°C Dry Heat Sterilization

Stainless Steel Waterpan

Structure of D180-P

▶ Product characteristics

Purity

Minimize the risk of microorganisms contamination with the 140°C dry-heat sterilization program, which can effectively maintain the purity of the inner atmosphere.

The combination of HEPA (High Efficiency Particulate Air filter) with the active air circulation system makes the inner atmosphere more uniformity as well as cleaner. The HEPA filters air in the chamber every minute, which will reach the Class 100 level within 5 minutes.

The interior is made of copper-containing stainless steel with round corner design greatly resist bacteria as well as cleaning simplicity.

Stability

Six-sided air jacket heating method significantly reduces the time to target temperature.
The non-dispersive infrared sensor for CO2 detection is quite accurate with low drift rate compared with the TC sensor. It can also tolerate high temperature up to 140 °C, therefore there is no need to remove the sensor during sterilization.

Intelligence

All the data and interactions including temperature, CO2 concentration, operation log as well as alarm records are visible on the 7-inch touchscreen.
The changes inside the incubator within 7 days could be recorded automatedly and displayed in the curve. Data older than 7 days up to 6 months can be export through a USB drive.

Safety

Customizable alarm settings allow users to modify upper and lower alarm limits.
Multiple system alarms can keep the machine from abnormal operation, so that precious samples and operators are protected well.

High Efficiency Particulate Air Filter System

Stainless Steel Waterpan
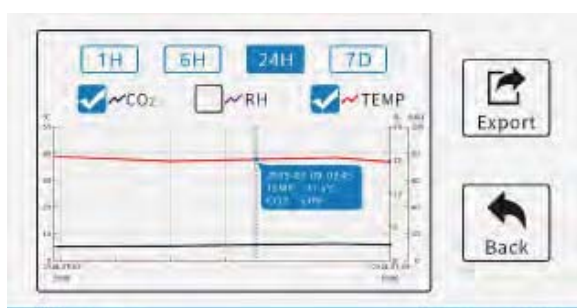
Parameter change curve in seven days

Real-time display of carbon dioxide concentration, temperature and humidity

▶ Technical Parameters

Temperature	Control & Range	±0.1℃, 5℃ above ambient to 50℃
	Heating Method	Air jacket
	Uniformity	±0.3℃ @ 37℃
	Alarm Setting	±5℃
	Sensor	Platinum thermistor
	Controller	PID
	Readability & Stability	0.1℃
	Sterilization Method	140℃ dry heat sterilization
CO_2 Concentration	Control & Range	Better than ±0.1% ; 0-20%
	Sensor	Heat-resistant infrared (IR) sensor
	Inlet Pressure	1.0 bar (recommended)
	Uniformity	±0.3%
	Readability & Stability	0.10%
	Alarm Setting	±1%
Humidity	Humidity Pan Volume	~3.8 L
	Display	1% RH
Shelves	Dimensions	47.0×47.0 cm
	Surface Area (Standard & Max)	214. 6 cm² ; 220.7 cm²
	Number (Standard & Max)	3 ; 16
Size & Weight	Interior Volume	175 L
	Interior Dimensions	51.0 (W) ×54.7 (D) ×67.5 (H) cm
	Exterior Dimensions	66.0 (W) ×67.0 (D) ×97.0 (H) cm
	Net Weight	110 kg (242.5 lbs)

▶ Order Information

Cat No.	Product Description
D180-P	Air-jacketed CO2 incubator (Equipped with humidity display and high temperature sterilization function), 220V-240V VAC 50/60 Hz
D181-P	Air-jacketed CO2 incubator (Equipped with humidity display and high temperature sterilization function), 120V-120V VAC 50/60 Hz (50pcs)

Automated Cell Counters

Accurate, Simple, Multiple application

RWD C-100 automated cell counter is a reliable cell counting devices with its highly intelligent analysis software and excellent microscopy optics structure. Under autocouting mode, it can accurately identify the live cells, dead cells and the ones with specific fluorescence in a few seconds, which may liberate researchers from heavy work of daily cell counting

▶ **Product Characteristics**

Accurate	
	• Vision-based analysis technology, C100 can automatically identify, label and calculate live/dead cells.
	• The unique cluster recognition algorithm contributes to recognize aggregated cells clearly to minimize the resulting error.
	• All the parameters including focus, brightness, cell size range, roundness range, etc. are adjustable to enable more accurate counting. They also can be saved as preset programs to facilitate one-click operation.

Simple	
	• Perform operations via the touch screen, and the software of C100 is developed based on practicality with the characteristics of intelligence and friendly interaction.
	• Auto-focus & auto-exposure mode can be used in all programs and there is also quick-count mode that can be used after setting focus, greatly reducing time wastage. All the parameters can be re-gated at any time during one counting.
	• The automatic data record system can save more than 1000 counting reports, including cell concentration, images and statistical data. Various result formats are available, such as JPG, PDF, CSV, PNG, etc.

Multiple application	
	• With great scalability, C100 can be upgraded to a counting system with fluorescence capabilities.
	• Dual-channel fluorescence superimposed results help analyze complex cell samples.

▶ **Accessories and consumables**

Disposable Cell Counting Slide

Fluorescent column

● Clear imaging system

● Intuitive result display

● Report output function

● Custom profiles

▶ Technical Parameters

Parameters	Description
Amplification Factor	2.5×, 5 mega-pixel
Focus Method	Manual focusing & Autofocusing (less than 3s)
Counting Area	2.15 mm×1.62 mm
Fluorescence Application	PI(Ex:540/25nm; Em:575/lp nm),
	DAPI(Ex:375/28nm; Em:460/50nm),
	AO/GFP(Ex:480/30nm; Em:535/40nm)
Cell Type	Cell lines, stem cells, primary cells
Cell Size Range	4-60 µm (Optimal: 7-60 µm)
Cell Concentration Range	10^4- 10^7 cells/mL
Cell Counting Time	Less than 15s
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	~3.2 kg

▶ Order Information

Cat No.	Product Description
C100	Automated Cell Counter
FL Cube-01	FL Cube (DAPI), Ex:375/28nm; Em:460/50nm
FL Cube-02	FL Cube (AO/GFP), Ex:480/30nm; Em:535/40nm
FL Cube-03	FL Cube (PI), Ex:540/25nm; Em:575/lp nm
DS-50	Disposable Slide (50 pcs/box)

Microcentrifuges

Simplify the centrifugation

With the patented refrigeration system, the M1324R can make sure the stable temperature centrifugation of samples in the temperature range of -10℃~40℃, even at the highest speed.

Small footprint and low noise, touch screen interaction, all your user-defined preset programs can be called by one click.

All the functions are designed according to your needs, which simplify the centrifugation.

M1324R Microcentrifuges

▶ Product characteristics

Stable
- Max. speed: 15,000 rpm (21,130×g).
- Compact footprint.
- Less vibration and low noise, reducing the impact on samples and users.
- Multiple alarms to ensure the safety of experimenters.
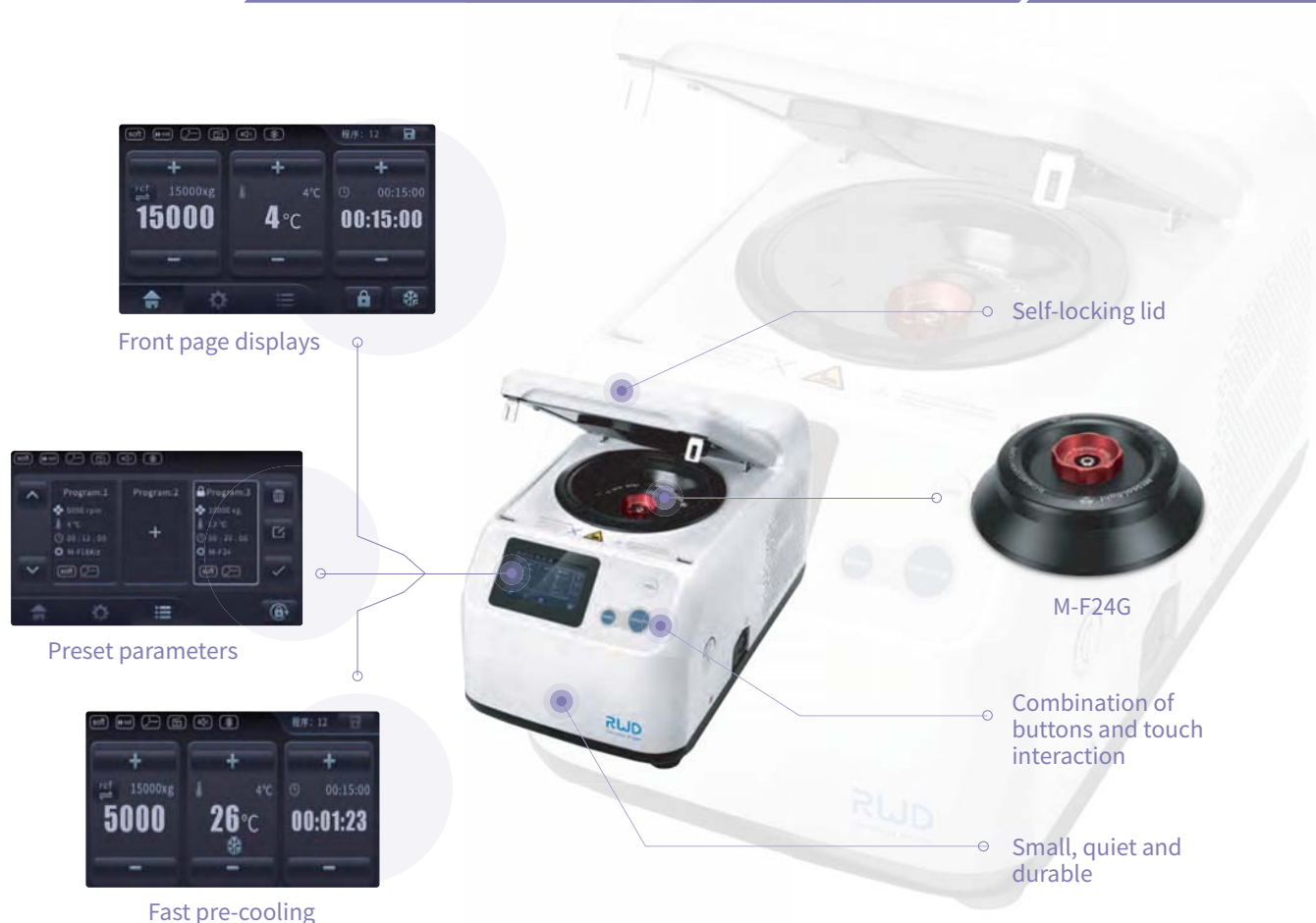
Durable
- Aerospace-grade aluminum alloy rotor is durable and autoclavable.
- It can automatically stand by without using for 8 hours, saving energy and prolonging the service life.

Simple
- Combination of buttons and touch interaction.
- Instantaneous centrifugal button design, press and hold to centrifuge according to the required

Efficient
- Motor self-locking lid design can keep at any position and automatic opening after centrifugation.
- 12 programs of commonly used parameters can be preset and chosen with just one click.
- Screen lock effectively prevent from being changed by accident.
- The pre-cooling mode only takes 8 minutes cooling down to 4℃.
- Optional timing mode starts timing when the speed reaches the set value, making the centrifugation reproducible.

Cell&Molecular Biology

Front page displays

Preset parameters

Fast pre-cooling

Self-locking lid

M-F24G

Combination of buttons and touch interaction

Small, quiet and durable

▶ Technical Parameters

Parameters	Description
Temperature range	-10°C to 40°C
Max. speed	15000rpm(21130×g)
Max. capacity	1.5/2mL×24
Display	Touch screen
Program	12 set
Dimension((W*H*D)	304mm*304mm*517mm
Weight	33kg

▶ Order Information

Model	Product Description
M1324R	Refrigerated Microcentrifuge(Rotor with Aerosol-tight Lid, M-F24G)
M-F24G	Aerosol-tight Lid,24×1.5/2 mL EP tube Rotor
M-F24	24×1.5/2 mL EP tube Rotor
M-F4PCR	4 × PCR tube Rotor
M-F18Kit	18 × spin column Rotor