

RWD Life Science

PRODUCT CATALOGUE

BEST SURGICAL SOLUTIONS FOR
SCIENTIFIC RESEARCHERS

11th Edition



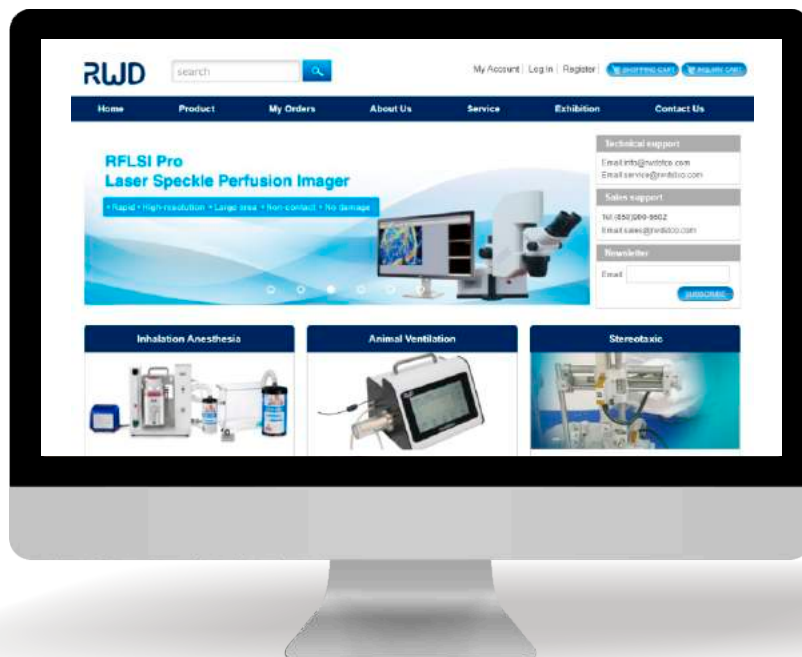
The specialized quality pursue is remarkable

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

we are all with you



Learn more us at
www.rwdstco.com





Introduction

Established in 2002, RWD Life Science has been dedicated to being a leading manufacturer in veterinary and research equipments worldwide. We specialize in anesthesia, physiological and surgical equipments, used by veterinarians and pre-clinical researchers. 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

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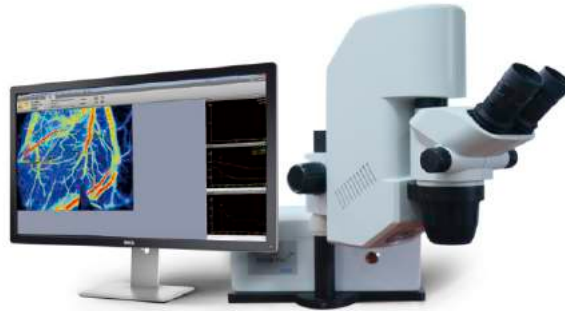
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RFLSI Pro⁺ Laser Speckle Perfusion Imager new

●Rapid ●High-resolution ●Large area ●Non-contact ●No damage ●All in one design

A new RFLSI Pro Laser Speckle Perfusion Imager is based on the latest LSCI technology (Laser Speckle Contrast Imaging/LSCI, Laser Speckle Ratio Analysis). With the advantages of the unique non-contact, high time and spatial resolution, rapid imaging, it provides a new recording way for the life sciences basic research and clinical medical, which can achieve real-time dynamic blood flow monitoring and video imaging, it is the vital basis for understanding the organization, organ pathology and physiological indicators. Contrast agent is not needed, time resolution can be in milliseconds, spatial resolution can be in microns. It also achieves the requirements of real-time observation of microvascular blood flow distribution and relative changes in values. RWD adopts a new all in one design to improve the operability for the user.



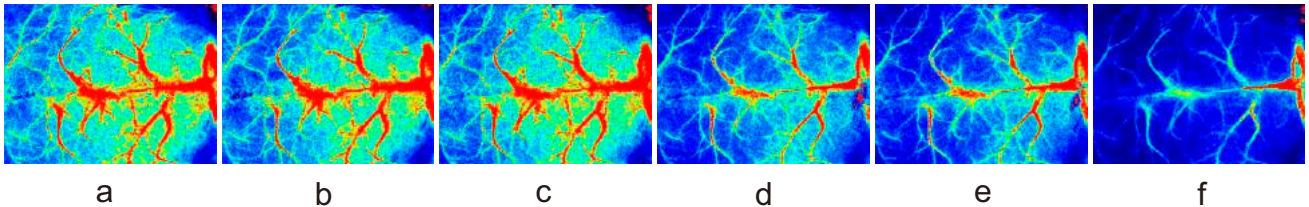
High time & spatial resolution, High contrast

Continuous imaging, No need to scan

Product Features

Non-contact, No contrast agent

Multi-output: Video, Image, Blood flow data, Diameter analysis



► Performance Advantages

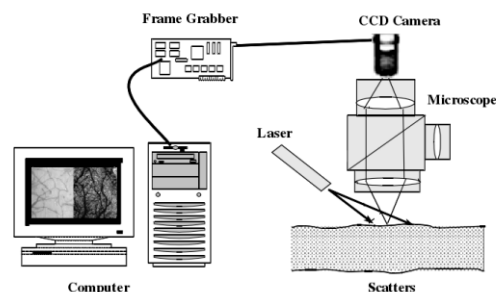
- Real-time monitoring of two-dimensional blood flow images in microns. Use corrected static tissue structure interference and multiple scattering effects algorithm to quantitatively analyze blood flow changes and improve the accuracy of blood flow monitoring in vessels of different diameter.
- With the function of real-time online and off-line analysis of mean flow-rate and the vascular diameter in ROI (Region of Interest), and off-line analysis of mean and standard deviation of ROI (Region of Interest), supporting the selection, copy, and deletion of ROI for any shape and quantity, and the ROI position and size can be adjusted with the mouse by free dragging and dropping.
- Maintain a high imaging speed of not less than 60fps under Full-Frame state (the camera's area array is all used).
- The positioning grid can be adjusted arbitrarily to meet the image positioning of different groups of experiments.
- The distance scale and real-time ROI area are added to facilitate the acquisition of relevant information.
- Real-time focal length adjustment, read the magnification directly, no calculations required.
- Select multiple vessels, online/off-line analysis of vascular diameter and its changes to meet the requirements of hemodynamics research.
- Multiple data storage format: Original blood flow-rate data /Standard images in various formats (jpg, bmp, png) / .avi format video / etc.
- Multiple blood flow image acquisition methods: flexible continuous acquisition, designated time interval acquisition, designated frame number acquisition, etc.
- Highly coherently stable laser light source and low noise 12bit fast camera ensure the stability of excellent flow-rate measurement.
- All-inclusive supporting solutions and after-sales service.
- The function of saving and load of ROI files has been added to meet the requirement of synchronous ROI analysis between different groups of experiments.

► Application Areas

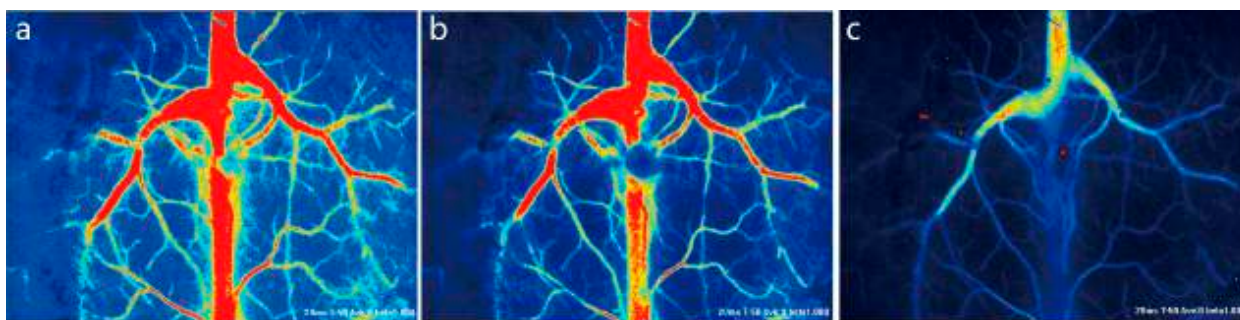
- ☒ CBF ☒ MCAO model ☒ Gastrointestinal blood flow ☒ Lower limb ischemia / Angiogenesis
- ☒ Burns assessment ☒ Skin patch test ☒ Cerebral cortex diffusion inhibition

► Technical Parameters

- The range of the blood flow monitoring is from zero to infinity. The spatial resolution of the blood flow imaging is $3.3\mu\text{m}/\text{pixel}$, and the maximum is $2\mu\text{m}/\text{pixel}$.
- Laser type: laser diode, wavelengths 785nm, monitoring camera power 90mW.
- Highly coherently stable laser light source and low noise 12bit fast camera ensure the stability of excellent flow-rate measurement.
- Monitoring distance: 110mm, directly read the magnification, no autofocus measurement distance calibration.
- In the recording process, choose any number of blood vessels, real-time display diameter changes and angle.
- The effective pixels in the unit area are no less than $1800000 \text{ pixels}/\text{cm}^2$; the monitoring pixel is 656×494 pixels.
- With two modes of continuous recording and interval recording.
- The image monitoring area is 14.4×10.9 – $2.15 \times 1.62\text{mm}$, and the imaging speed is not less than 60 fps in full amplitude state.
- ROI area and vessel diameter measurements are be added arbitrarily during the recording process or off-line analysis to support any shape and number of ROI choices.
- Optical magnification: conventional 0.67–4.5 times, 0.071NA, optional 0.5 times, 2 times auxiliary objective lens; increase the auxiliary objective lens, the monitoring area and blood flow imaging spatial resolution will be adjusted accordingly.
- The monitoring records can be exported to AVI format video files, including curves, blood flow, experimental process records, the output video can be adjusted as required.

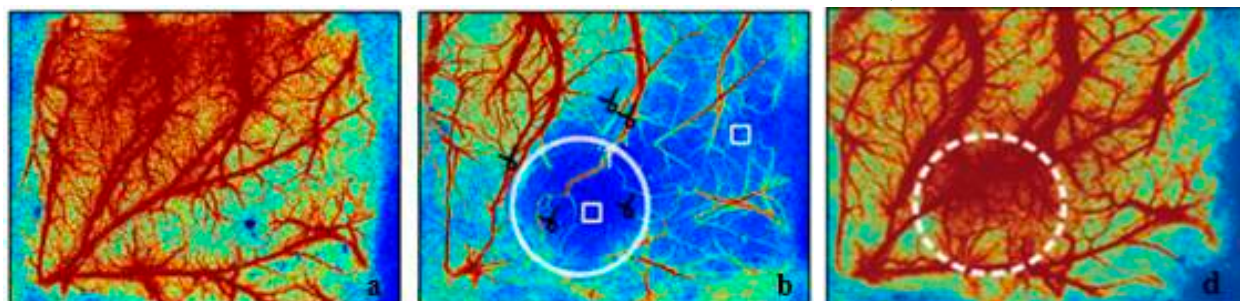


Tree shrew (nonhuman primate) cerebral cortical blood flow imaging ►



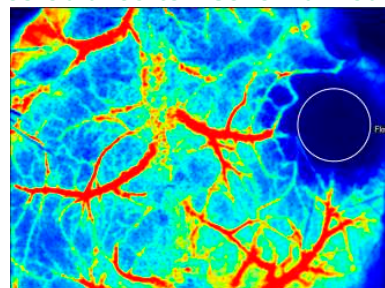
(a) Normal cerebral cortical blood flow distribution of tree shrew; (b) The distribution of cerebral cortical blood flow when start to over anesthesia; (c) The distribution of dying cerebral cortical blood flow when severe overdose of anesthesia.

Cerebral cortical blood flow distribution of the rat mini-stroke model ►

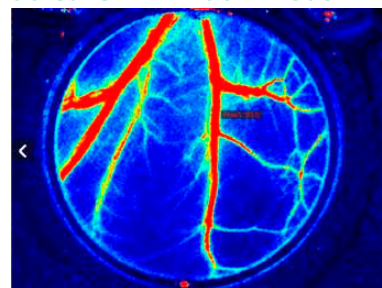


(a) Normal cerebral cortical blood flow distribution; (b) Cortical blood flow distribution after established the mini-stroke model; (c) Cortical blood flow distribution after removal of the mini-stroke model for 24h

Photochemical induction of mouse cerebral cortex ischemia model ►



The blood flow imaging of the rat dorsal skin window model ►



Precise Impactor



68099 Precise Impactor for Rat/Mouse

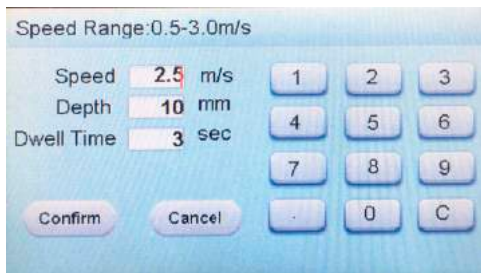
68099, the precise impactor is a very friendly tool for assessing spinal cord injury mechanisms in basic medical research. This impactor, combined with our adapters- 68094 (Mice) and 68095 (Rats), can perfectly locked and impacted the spinal cord.

This system uses pneumatic standard pure electric control, touch screen operation, user-friendly interface, easy to master. Using standard cylindrical metal flat heads to impact small rodents' spinal cords, the sunken depth of the cortex can be precisely controlled. Show the speed of the impact moment, the dwell time and the sunken depth of the cortex.

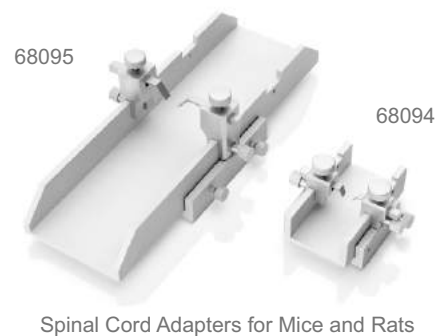
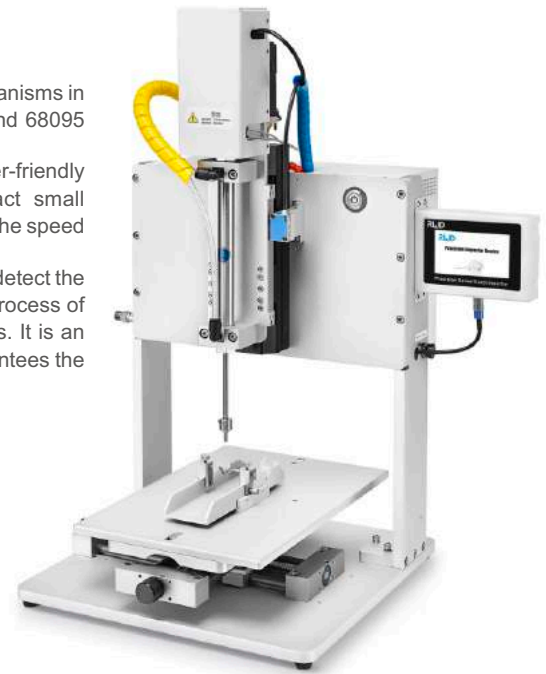
In addition, a unique sensor contact mechanism is used to accurately and reliably auto-detect the cortical surface datum point before the impact process. Reducing the cumbersome process of manual zeroing helps to produce accurate and reproducible spinal cord injury models. It is an accurate tool with high efficiency, high repeatability and good stability, effectively guarantees the reproducibility of injury model.

Features:

- Pneumatic pure electric control.
- Color LCD touch screen interface, with friendly and easy operated software.
- Strike speed is up to 3m/s, speed range: 0.5-3m/s, accuracy: 0.1m/s.



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



- 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.
- Support a variety of gas supply, containing 9/16" and $\phi 8$ quick connection, easy to connect oxygen tanks or aerostatic press.
- Solid and heavy frame, stable, effective against air recoil.
- The spinal cord adapters provide stable spinal fixation and improve the success rate of modeling.

Application

- | | | | |
|---|--|--|--|
| <input checked="" type="checkbox"/> Neurology | <input checked="" type="checkbox"/> Surgery | <input checked="" type="checkbox"/> Chinese Medicine | <input checked="" type="checkbox"/> Emergency Medicine |
| <input checked="" type="checkbox"/> Pediatrics | <input checked="" type="checkbox"/> Psychiatry | <input checked="" type="checkbox"/> Pharmacy | <input checked="" type="checkbox"/> Endocrinology |
| <input checked="" type="checkbox"/> Clinical Medicine | <input checked="" type="checkbox"/> Biology | <input checked="" type="checkbox"/> Oncology | <input checked="" type="checkbox"/> Psychology |
| | | <input checked="" type="checkbox"/> Related Researches | |

Monkey Spinal Cord Impactor new

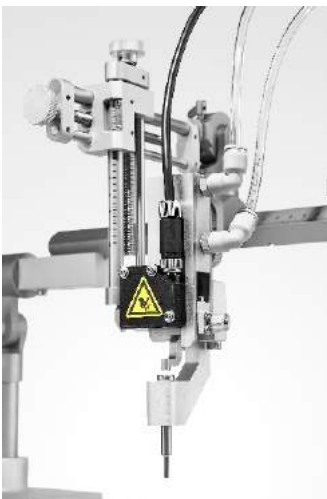
68098 Monkey Spinal Cord Impactor

RWD's monkey 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 large animal stereotaxic instrument and 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.

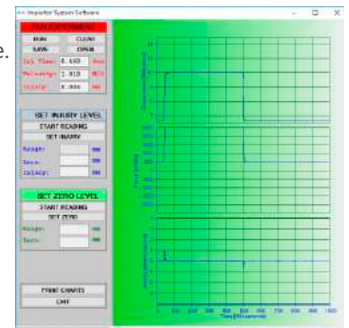


Specification:

- New design & easy operation, suitable for 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.



- 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 0.00~1.00m/s, depth 0.00~9.00mm, dwell time 0.05~1.00s.
- 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.
- 3 axis manual position control
 - X — Range: 8" (200mm)
 - Y — Range: 3" (80mm)
 - Z — Range: 3" (80mm)



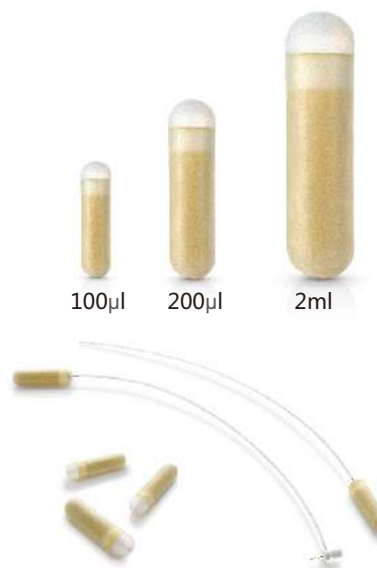
Implantable Osmotic Pump



The implantable osmotic pump is a micro device that uses osmotic pressure as a power to pump liquid stored in the capsule at a constant rate and release it into a specific site or blood.

The implanted osmotic pump has been the best tool for the delivery of drugs in the life sciences study. It can be implanted into the subcutaneous or abdominal cavity of experimental animals, and the test agent is delivered continuously and accurately through the catheter at a rate of $\mu\text{l/h}$, up to four weeks. Multi-disease animal models can be established by continuous administration of osmotic pump, such as hypertension and Parkinson's diseases animal models. It is widely used in drug and molecular screening, pharmacodynamics and other fields of research.

- Simple, convenient, reliable, low cost
- No battery, no power supply, no mobile module
- High repeatability and continuity
- Minimal side effects on animals and stress interference



Different Accessories kit

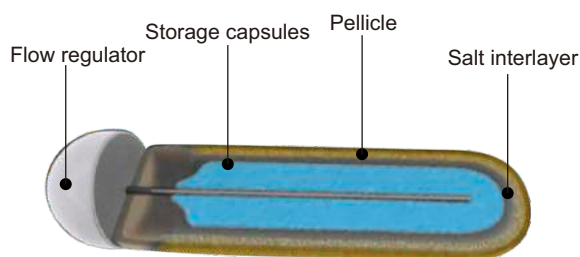
The catheter can be introduced into different sites, such as: the cranial cavity and spinal cord, intravascular, liver, spleen and other organs and trauma.



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.

Specifications:



| Capsule | Drug capacity | 100 μl | | | | 200 μl | | | | | | 2ml | | |
|----------------|-------------------------------------|---|-------|-------|-------|-------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| | Cat No. | 1003D | 1001W | 1002W | 1004W | 2001D | 2003D | 2001W | 2002W | 2004W | 2006W | 2ml1W | 2ml2W | 2ml4W |
| | Cycle | 3d | 1w | 2w | 4w | 1d | 3d | 1w | 2w | 4w | 6w | 1w | 2w | 4w |
| | Injection rate ($\mu\text{l/hr}$) | 1.0 | 0.5 | 0.25 | 0.11 | 7.0 | 2.0 | 1.0 | 0.5 | 0.25 | 0.15 | 10.0 | 5.0 | 2.5 |
| Flow regulator | Cap | PE material, a variety of colors optional, remove the air and prevent leakage | | | | | | | | | | | | |
| | Draft tube | 304 stainless steel material | | | | | | | | | | | | |
| Infusion tube | 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 P09)



Tabletop(see P10)



Multi-output(see P11)



Portable(see P12)



VentStar Ventilator(see P22)

Veterinary Anesthesia Machine



Tabletop(see P15)



Portable(see P13)



Smart Wall-hung(see P14)



Smart Portable(see P14)



R409plus Ventilator(see P24)

Complete Anesthesia and Respiration Solutions

Multi-function Anesthesia Solutions



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



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.

Combination Solutions of Ventilator to Anesthesia System

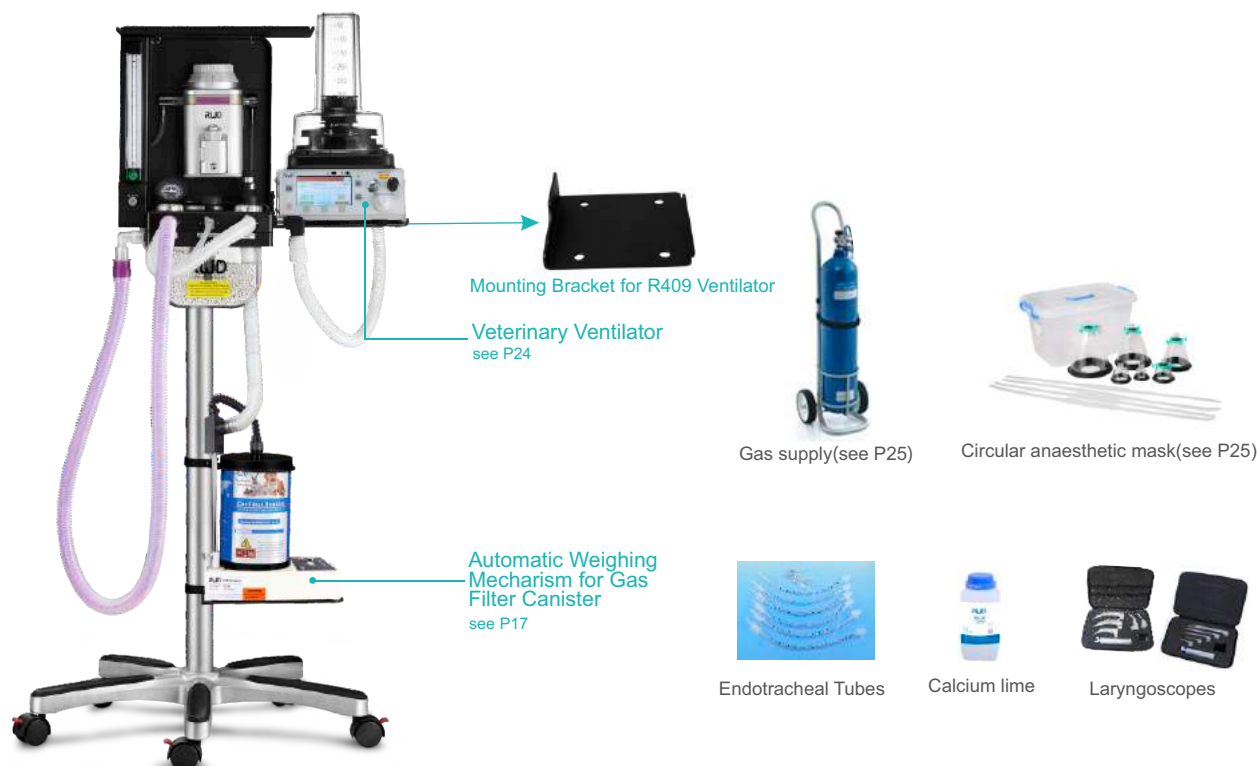
Small animals



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 5KG.

Large animals



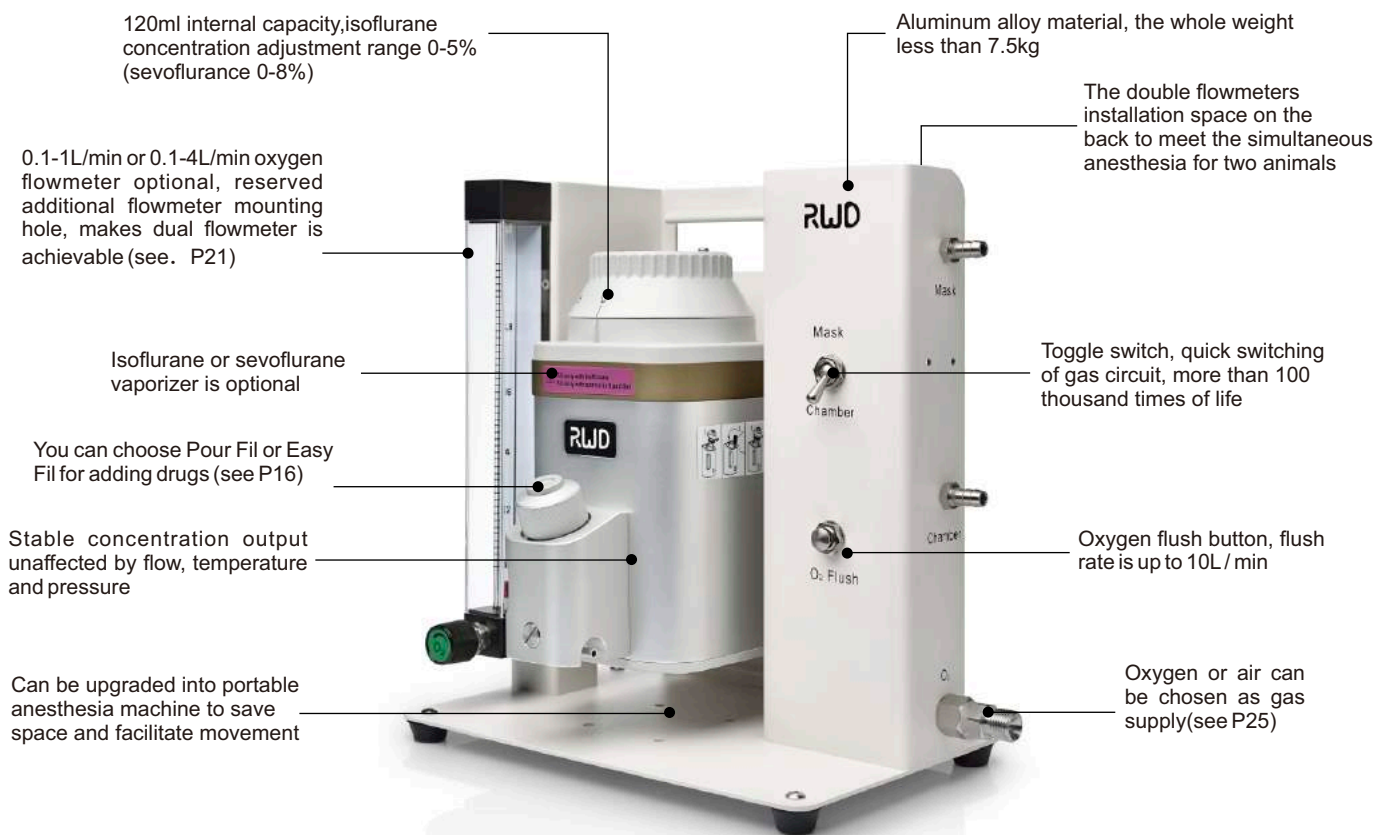
This program is suitable for the anesthesia and auxiliary respiration of animals within 50kg, such as pigs, monkeys, dogs and cats.

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



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:

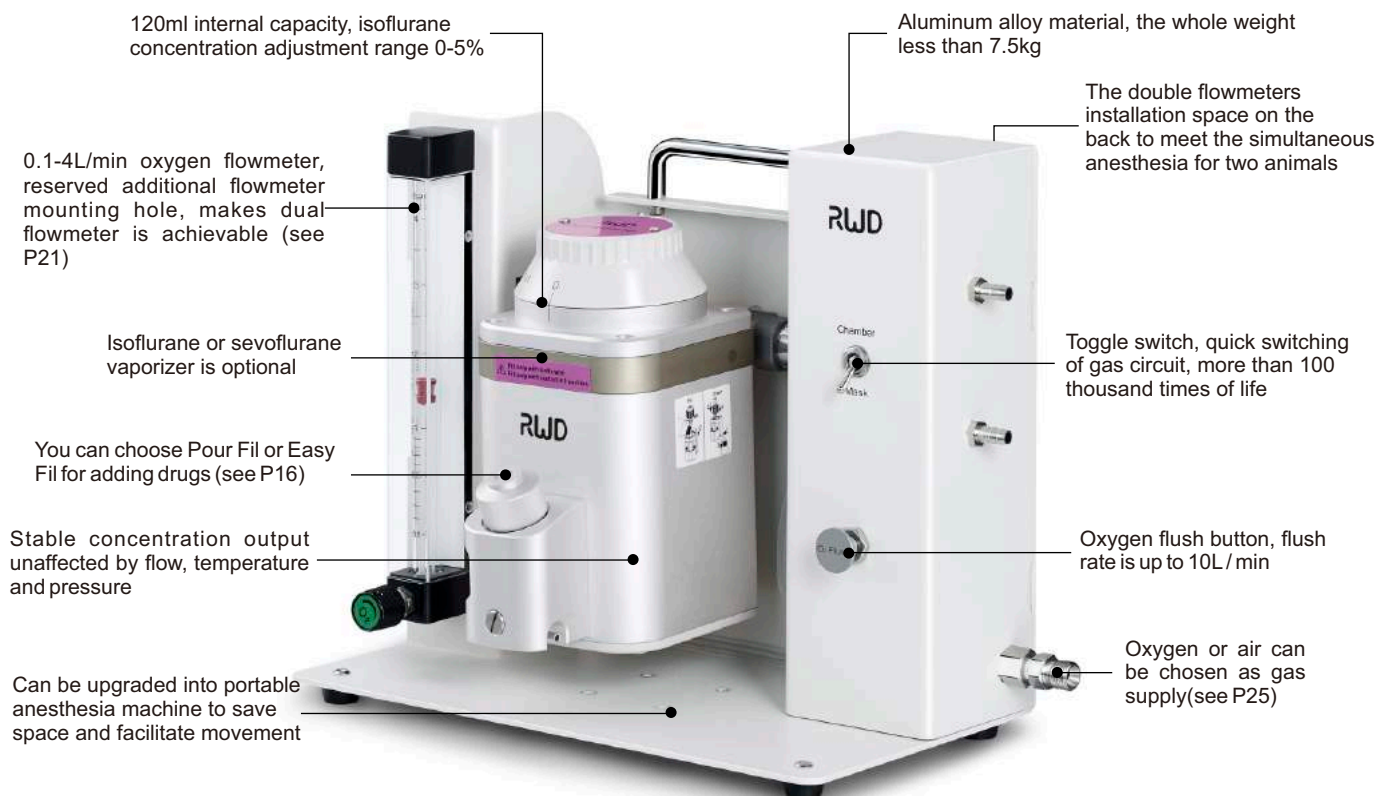
| Cat No. | Product Description | Configuration | Remarks |
|-------------|--|---------------|--|
| R500IE | Compact Small Animal Anesthesia Device-Isoflurane, Easy Fill, 0-1L/0-4L | ● | Contains connection tubing for mask&induction chamber |
| R500IP | Compact Small Animal Anesthesia Device-Isoflurane, Pour Fill, 0-1L/0-4L | ● | |
| R500SE | Compact Small Animal Anesthesia Device-Sevoflurane, Easy Fill, 0-1L/0-4L | ● | |
| R500SP | Compact Small Animal Anesthesia Device-Sevoflurane, Pour Fill, 0-1L/0-4L | ● | |
| R510-S | Portable Stand for R510 Series Anesthesia Machine | ○ | Upgrade to portable type |
| R600-N2O-4E | Expansion Assembly with 0.1-4LPM N ₂ O Flowmeter | ○ | |
| R510-09 | 2ch Flowmeter for Anesthesia, range 0.1-1.0L/min each | ○ | Simultaneous anesthesia for two animals (adjusted independently) |

Note: ● Recommended configuration ○ Optional

R540 Enhanced Anesthesia Machine

Regular assembly (R540-A), vaporizer(R580), Inlet/Outlet End Caps(R580-IO) and tube accessory kit are included in the R540 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



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:

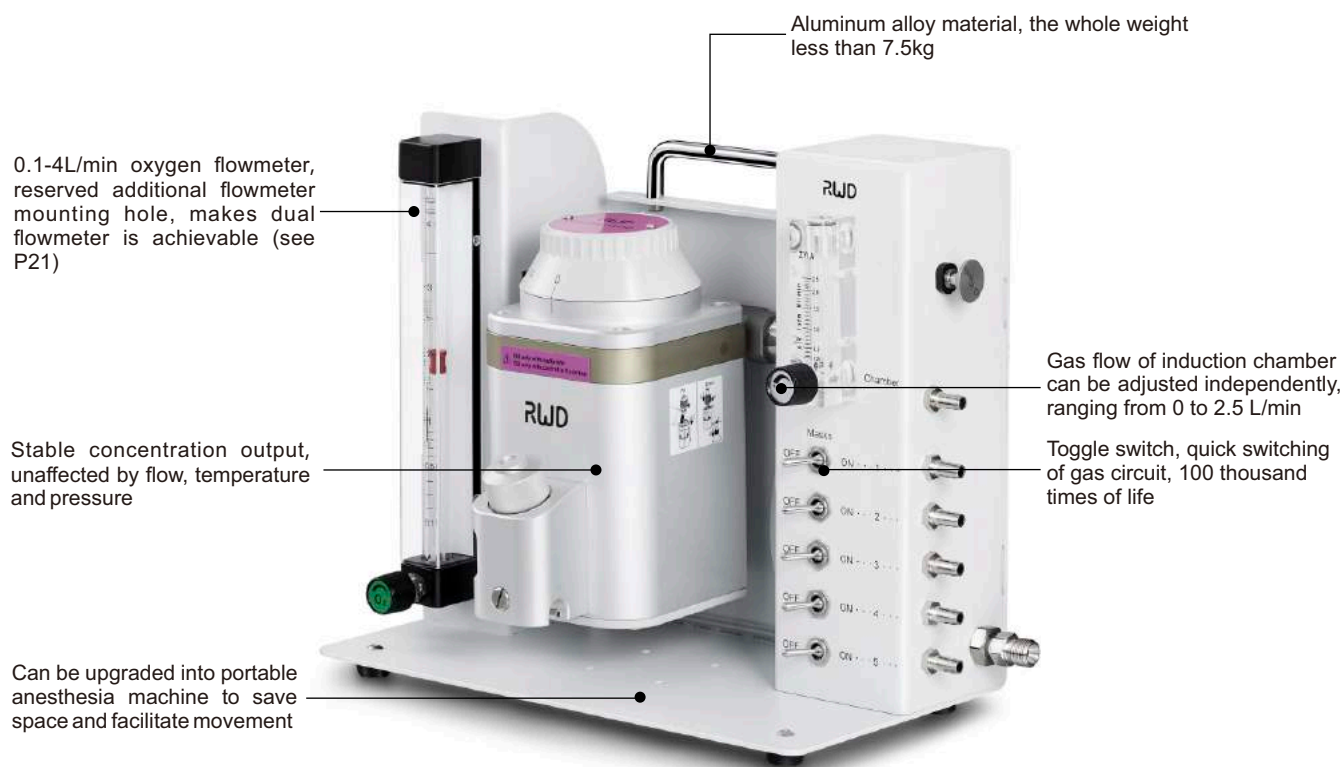
| Cat No. | Product Description | Configuration | Remarks |
|-------------|---|---------------|--|
| R540IE | Enhanced Small Animal Anesthesia Device-Isoflurane,Easy Fil,0-4L | ● | Contains connection tubing for mask&induction chamber |
| R540IP | Enhanced Small Animal Anesthesia Device-Isoflurane,Pour Fil,0-4L | ● | |
| R540SE | Enhanced Small Animal Anesthesia Device-Sevoflurane,Easy Fil,0-4L | ● | |
| R540SP | Enhanced Small Animal Anesthesia Device-Sevoflurane,Pour Fil,0-4L | ● | |
| R510-S | Portable Stand for R510 Series Anesthesia Machine | ○ | Upgrade to portable type |
| R600-N2O-4E | Expansion Assembly with 0.1-4LPM N ₂ O Flowmeter | ○ | |
| R510-09 | 2ch Flowmeter for Anesthesia, range 0.1-1.0L/min each | ○ | Simultaneous anesthesia for two animals (adjusted independently) |

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.



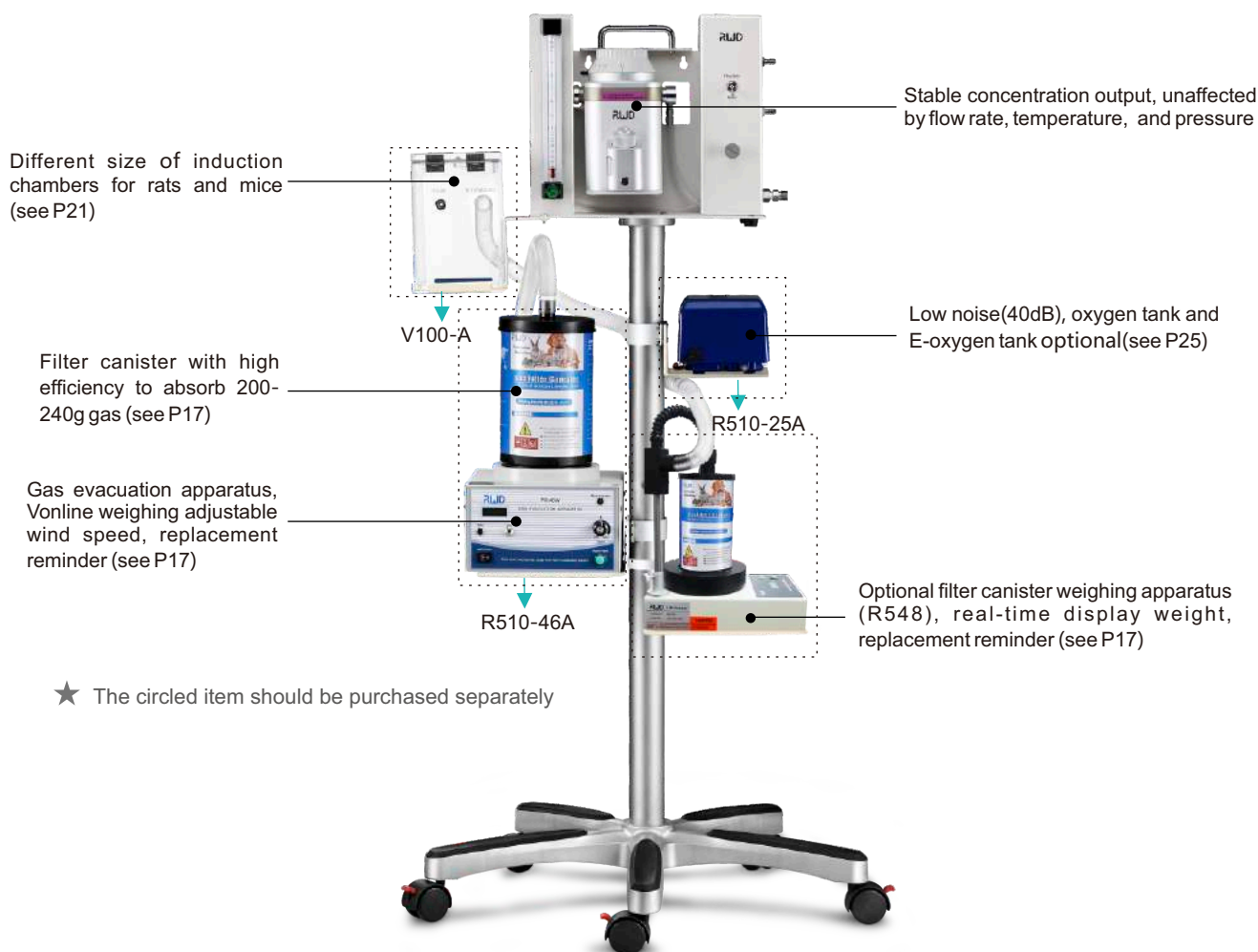
Order Information:

| Cat No. | Product Description | Configuration | Remarks |
|-------------|---|---------------|---|
| R550IE | 5ch Small Animal Anesthesia Machine-Isoflurane,Easy Fil,0-4L | ● | Contains connection tubing for mask & induction chamber |
| R550IP | 5ch Small Animal Anesthesia Device-Isoflurane,Pour Fil,0-4L | ● | |
| R550SE | 5ch Small Animal Anesthesia Machine-Sevoflurane,Easy Fil,0-4L | ● | |
| R550SP | 5ch Small Animal Anesthesia Machine-Sevoflurane,Pour Fil,0-4L | ● | |
| R510-S | Portable Stand for R510 Series Anesthesia Machine | ○ | Upgrade to portable type |
| R600-N2O-4E | Expansion Assembly with 0.1-4LPM N ₂ O Flowmeter | ○ | |

Note: ● Recommended configuration ○ Optional

R520 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.



Order Information:

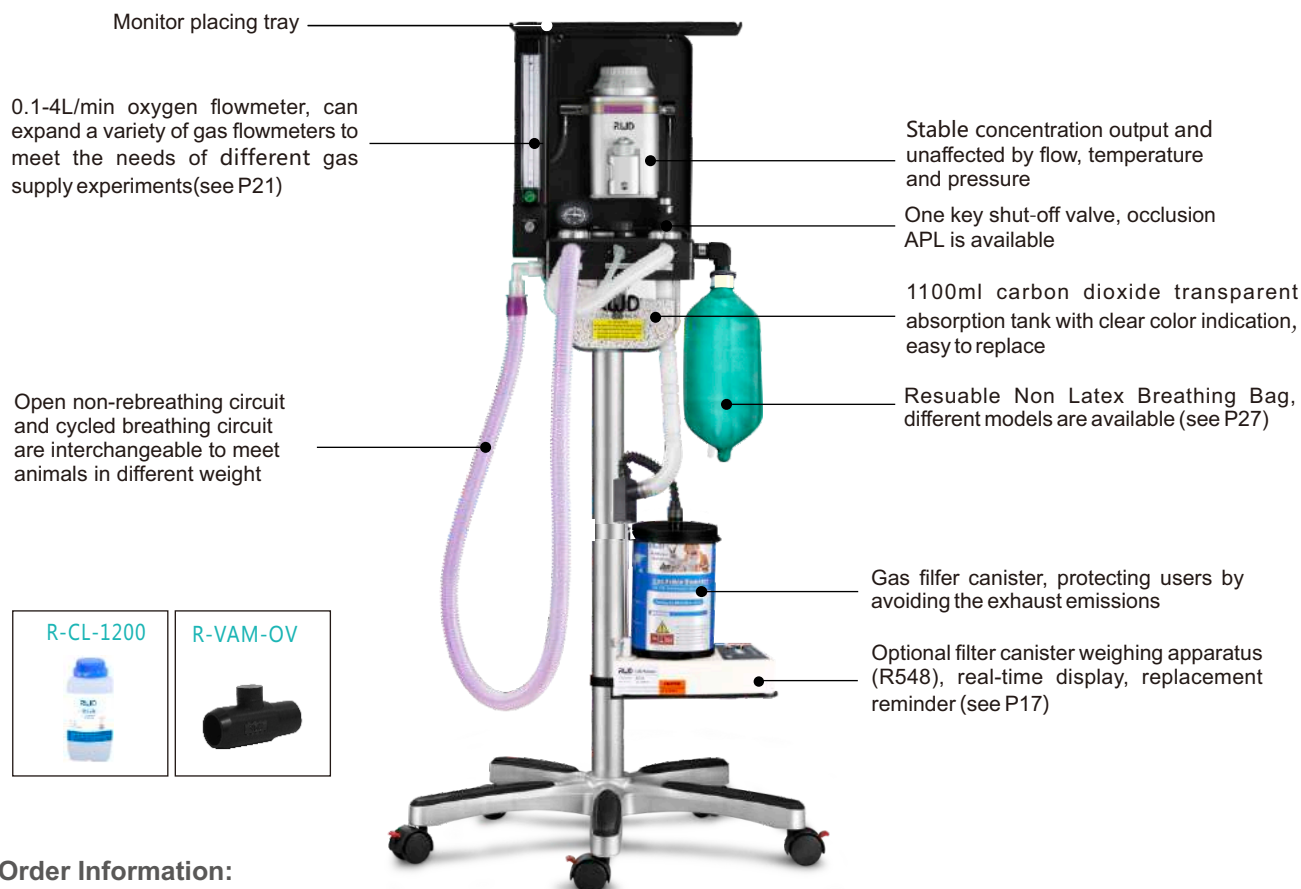
| Cat No. | Product Description | Configuration | Remarks |
|-------------|---|---------------|---|
| R520IE | Movable Small Animal Anesthesia Machine-Isoflurane,Easy Fil,0-4L | ● | Including fixed bracket for induction chamber, evacuation apparatus, filter canister. |
| R520IP | Movable Small Animal Anesthesia Machine-Isoflurane,Pour Fil,0-4L | ● | |
| R520SE | Movable Small Animal Anesthesia Machine-Sevoflurane,Easy Fil,0-4L | ● | |
| R520SP | Movable Small Animal Anesthesia Machine-Sevoflurane,Pour Fil,0-4L | ● | |
| R600-N2O-4E | Expansion Assembly with 0.1-4LPM N ₂ O Flowmeter | ○ | |
| R510-09 | 2ch Flowmeter for Anesthesia, range 0.1-1.0L/min each | ○ | simultaneous anesthesia for two animals (adjust independently) |

Note: ●Recommended configuration ○ Optional

R620 Portable Anesthesia Machine

Applicable to the inhalation anesthesia of cat, dog, monkey, pig and other animals within 50 kg, save space, easy to move.

Oxygen tube (R-AH-80), anesthesia machine mounting kit (R620-A), vaporizer(R580 Series), Inlet/Outlet End Caps(R580-IO), breathing circuits (Circulating R-BC-DL and acyclic R-NBC-F (JR)), endotracheal tube(R600-ET), the gas filter canister (R510-31) are included in the R620 anesthesia machine. And the anesthetics, gas supply, calcium lime, laryngoscope, mask should be purchased separately.



Order Information:

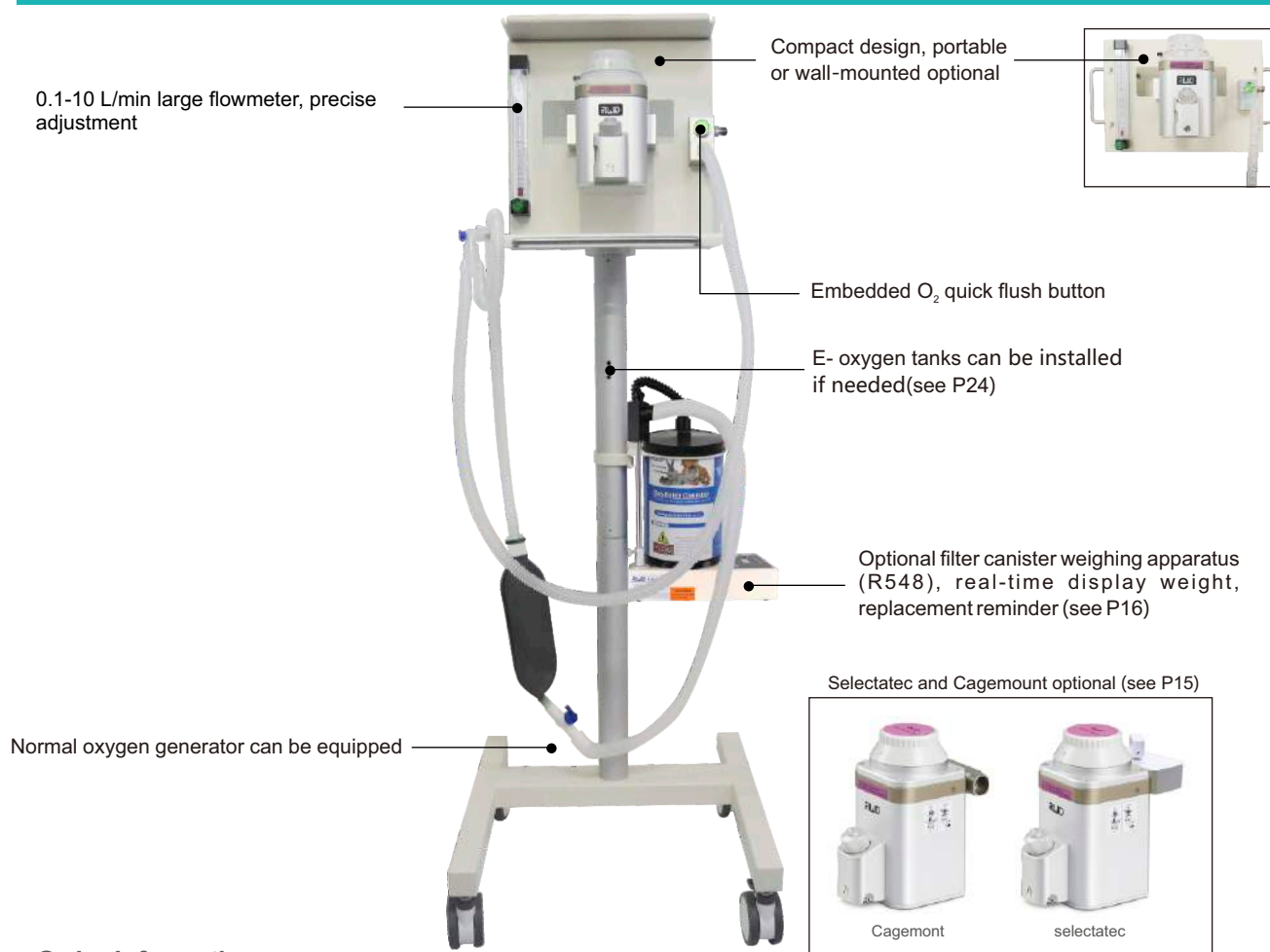
| Cat No. | Product Description | Configuration | Remarks |
|-----------|---|---------------|---|
| R620IE | Veterinary Anesthesia Machine -Portable,Isoflurane, Easy Fil,0-4L | ● | Basic package. One filter canister is included. And the isoflurane, gas supply, calcium lime, laryngoscope, masks should be purchased separately. |
| R620IP | Veterinary Anesthesia Machine-Portable,Isoflurane, Pour Fil,0-4L | ● | |
| R620SE | Veterinary Anesthesia Machine-Portable,Sevoflurane, Easy Fil,0-4L | ● | |
| R620SP | Veterinary Anesthesia Machine-Portable,Sevoflurane, Pour Fil Fil,0-4L | ● | |
| R620IES | Veterinary Animal Anesthesia Machine - Portable, Isoflurane, Easy Fil,0-4L | ● | Super package. Compared with the basic package, an additional oxygen valve, calcium lime and a bottle of trial isoflurane are included. |
| R620IPS | Veterinary Animal Anesthesia Machine - Portable, Isoflurane, Pour Fil,0-4L | ● | |
| R620SES | Veterinary Animal Anesthesia Machine - Portable, sevoflurane, Easy Fil,0-4L | ● | |
| R620SPS | Veterinary Animal Anesthesia Machine - Portable, Sevoflurane, Pour Fil,0-4L | ● | |
| R620IEP | Veterinary Animal Anesthesia Machine - Portable, Isoflurane, Easy Fil,0-4L | ● | Luxury package. Compared with the super package, an extra mask kit 68643 and lamp laryngoscope C45001-00 are included. (see P24) |
| R620IPP | Veterinary Animal Anesthesia Machine - Portable, Isoflurane, Pour Fil,0-4L | ● | |
| R620SEP | Veterinary Animal Anesthesia Machine - Portable, sevoflurane, Easy Fil,0-4L | ● | |
| R620SPP | Veterinary Animal Anesthesia Machine - Portable, Sevoflurane, Pour Fil,0-4L | ● | |
| R-VAM-OV | one button shut-off valve | ○ | |
| R-CL-1200 | Calcium Lime (1.2Kg / barrel) | ○ | |

Note: ● Recommended configuration ○ Optional

R640 Smart Animal Anesthesia Machine

The R640 is a non-circulating inhalation anesthesia system designed for small animals and is a newly launched product based on the extensive collection of customer needs. With the advantages of stylish, compact design, and simple operation, suitable for the anesthesia application of small dogs, cats, rabbits, monkeys and other animals.

Oxygen tube (R-AH-80), anesthesia machine bracket (portable or Wall-mounted), vaporizer (R580 Series), vaporizer accessories, breathing circuit (non-circulating R-NBC-F (JR)), endotracheal tube (R600-ET), gas filter canister (R510-31) are included in the R640 anesthesia machine. And the anesthetics, gas supply, calcium lime, laryngoscope, mask and filter canister weighing mechanism should be purchased separately.



Order Information:

| Cat No. | Product Description | Configuration | Remarks |
|----------|---|---------------|---------|
| R640IES | Veterinary Anesthesia Machine - Portable/Isoflurane/Easy Fil/Selectatec, 0-10L | ● | |
| R640IEC | Veterinary Anesthesia Machine - Portable/Isoflurane/Easy Fil/Selectatec, 0-10L | ● | |
| R640IESS | Veterinary Animal Anesthesia Machine - Portable/Isoflurane/Easy Fil/Selectatec, 0-10L | ● | |
| R640IECS | Veterinary Animal Anesthesia Machine - Portable/Isoflurane/Easy Fil/Cagemont, 0-10L | ● | |
| R640IESP | Veterinary Animal Anesthesia Machine - Portable/Isoflurane/Easy Fil/Selectatec, 0-10L | ● | |
| R640IECP | Veterinary Animal Anesthesia Machine - Portable/Isoflurane/Easy Fil/Cagemont, 0-10L | ● | |
| R640-H | R640 Animal anesthesia machine bracket - Wall-mounted | ○ | |
| R640-EP | R640 Loop extensions (Portable) | ○ | |
| R640-EH | R640 Loop extension (wall-mounted) | ○ | |

Note: ● Recommended configuration ○ Optional

Veterinary Anesthesia Machines ►

R610 Tabletop Anesthesia Machine (customized)

Apply to the inhalation anesthesia of cats, dogs, monkeys, pigs and other animals within 50 kg.

Note: oxygen tube (R-AH-80), Manifold with 4LPM O₂ flowmeter, vaporizer (R580), Inlet/Outlet End Caps (R580-IO), endotracheal tubes, gas filter canister, (R510-31) are included in R610 anesthesia machine. And the anaesthetic, calcium lime laryngoscope, mask should be purchased separately.



Note: Non-rebreathing circuit (for animals within 7kg)
Cycled breathing circuit (for animals above 7kg)

Order Information :

| Cat No. | Product Description | Configuration | Remarks |
|---------|--|---------------|---------|
| R610IE | Veterinary Anesthesia Machine-Tabletop, Isoflurane, Easy Fil, 0-4L (customized) | ● | |
| R610IP | Veterinary Anesthesia Machine-Tabletop, Isoflurane, Pour Fil, 0-4L (customized) | ● | |
| R610SP | Veterinary Anesthesia Machine-Tabletop, Sevoflurane, Pour Fil, 0-4L (customized) | ● | |
| R610SE | Veterinary Anesthesia Machine-Tabletop, Sevoflurane, Pour Fil, 0-4L (customized) | ● | |

Note: ● Recommended configuration ○ Optional

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 Fil and Easy Fil, Cagemont and Selectatec.

Two kinds of vaporizers, two dosing methods, two installation



Isoflurane vaporizer



Sevoflurane vaporizer



Pour-Fil



Easy-Fil



R583-01
(Purple, isoflurane)
R582-01
(Yellow, sevoflurane)



Cagemont



Selectatec

Feature:

- 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 $\Delta P \leq 2.5\text{kPa}$
- Applicable temperature range: 10-35 °C
- 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

Order Information:

| Cat No. | Product Description |
|---------|---|
| R580S | Vaporizer - Isoflurane/Pour Fil/Cagemont |
| R581S | Vaporizer - Sevoflurane/Pour Fil/Cagemont |
| R582S | Vaporizer - Sevoflurane/Easy Fil/Cagemont |
| R583S | Vaporizer - Isoflurane/Easy Fil/Cagemont |
| R580-IO | Vaporizer Endcaps (1 pair) |

| Cat No. | Product Description |
|---------|---|
| R580SS | Vaporizer - Isoflurane/Pour Fil/Selectatec |
| R581SS | Vaporizer - Sevoflurane/Pour Fil/Selectatec |
| R582SS | Vaporizer - Sevoflurane/Easy Fil/Selectatec |
| R583SS | Vaporizer - Isoflurane/Easy Fil/Selectatec |
| R580-SA | Vaporizer Suspension Assembly - R640 |

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

When purchasing a Selectatec vaporizer, the vaporizer mount assembly(model:R580-SA) should be purchased separately.

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

Isoflurane & Sevoflurane



Isoflurane



Sevoflurane

Order Information:

| Cat No. | Product Description |
|------------|-----------------------------------|
| R510-22-04 | Isoflurane-100ml (4 bottles/box) |
| R510-22-08 | Isoflurane-100ml (8 bottles/box) |
| R510-22-16 | Isoflurane-100ml (16 bottles/box) |
| R511-22 | Sevoflurane-100ml |
| R511-22-04 | Sevoflurane-100ml (4 bottles/box) |

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.

- 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 215mm (W)*215mm (D)*170mm (H).
- Easy to connect to your vaporizer system and insert a activated charcoal canister.
- Online weighing, get the weight of canister directly from the display.
- Two level overweight alarm: 990g and 1010g.



R546W

R546W, with the latest design of weighing, will be additionally used to weigh the activated charcoal canister at any time to check its saturation. Two levels alarm (990g and 1010g), indicator light and buzzer remind to change the canister and maintain its effectiveness.

Order Information:

| Cat No. | Product Description |
|---------|---|
| R546W | Gas Evacuation Apparatus with Weight Monitoring, 110-240V |

Automatic Weighing Apparatus



- 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
 - ◇ Audible and visual alarm, 0.5hz (0.5 time/s)
 - ◆ Level II: large canister reaches 1020-1500g, small canister reached 310-500g
 - ◇ Audible and visual alarm, 2hz (2 time/s)
- Overweight alarm: more than 1500g, stable 1 second
 - ◇ Audible and visual alarm, lasting lighting and buzzing
- Automatically identify RWD's large & small canister.
- Long press the mute button to suspend alarm.
 - ◆ Short press the mute button, restore alarm after 5min of mute
 - ◆ Long press the mute button 3s, restore alarm after 30min of mute
- Compact size, save space.
- Mounting bracket (R548-MB) is optional, to mount on the mobile stand.

| Cat No. | Product Description |
|---------|--|
| R548 | Automatic Weighing Mechanism 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:

| Cat No. | Product Description |
|------------|---|
| R510-31-6 | Gas Filter Canister, Large, pkg of 6pcs |
| R510-31S-6 | Gas Filter Canister, Small, pkg of 6pcs |

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) or the fixed platform (68626), height of the mask is adjustable, and it can also be fixed and placed in MRI, PET and SPECT imaging systems



- Simultaneous experiments can be performed on 2-5 rats or mice with five channels of anesthesia mask



- Universal bracket (R510-55) can be used to fix the R510-32, R510-33 Tubing mask.



Order Information:

| Cat No. | Product Description | Cat No. | Product Description |
|---------|---|---------|--|
| R510-86 | SGL MRI Compatible Mask for Mouse | R510-87 | SGL MRI Compatible Mask for Rat |
| R510-88 | Dual MRI Compatible Masks for Mouse | R510-89 | Dual MRI Compatible Masks for Rat |
| R510-54 | Five-channel Tubing Anesthesia Mask Kits-rat/mouse | | |
| 68625 | MRI Compatible Mounting Bracket for Tubing or Cone Mask, optional | 68626 | MRI Compatible Mounting Platform for Tubing or Cone Mask-rat/mouse |
| R510-32 | Mouse Mask-Dia.9mm-Evacuation System W/SGL.Tube | R510-33 | Rat Mask-Dia.18mm-Evacuation System W/SGL.Tube |
| R510-55 | Universal Stand for Tube Anesthesia Mask | | |

● Cone Masks(Bowl Masks)

- Clear cone for full visualization of muzzle.
- The Cone Masks can be installed onto 68620 anesthesia operation platform(300*210*75mm) to secure the animal in it.
- Height of the mask can be adjusted to meet different experimental needs.
- Special semi-enclosed mask design, coordinating with the evacuation apparatus to absorb and remove the waste gas outside the mask completely.

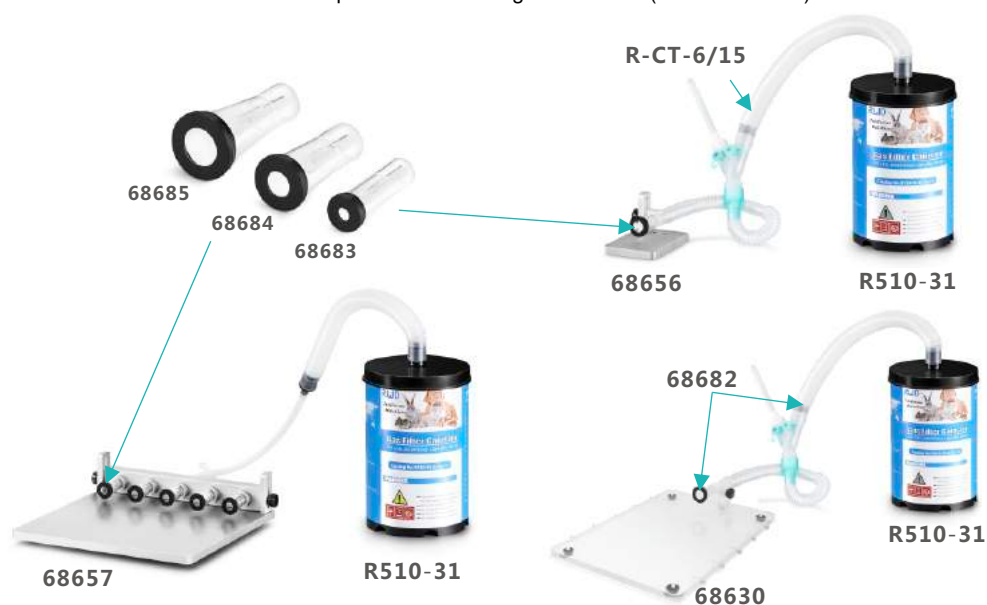
Order Information:

| Cat No. | Product Description |
|---------|---|
| 68620 | Small Animal Anesthesia Operation Platform (bellows(R-CT-18)) |
| 68634 | Juvenile Rat mask -44mm OD*5mm ID*24mm depth |
| 68635 | Mouse mask -44mm OD*10mm ID*24mm depth |
| 68636 | Rat mask -44mm OD*15mm ID*24mm depth |



● Cone Masks

- Special designed with inlet tubing inside make the animal anesthesia exhaust gas can be absorbed by gas filter 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.



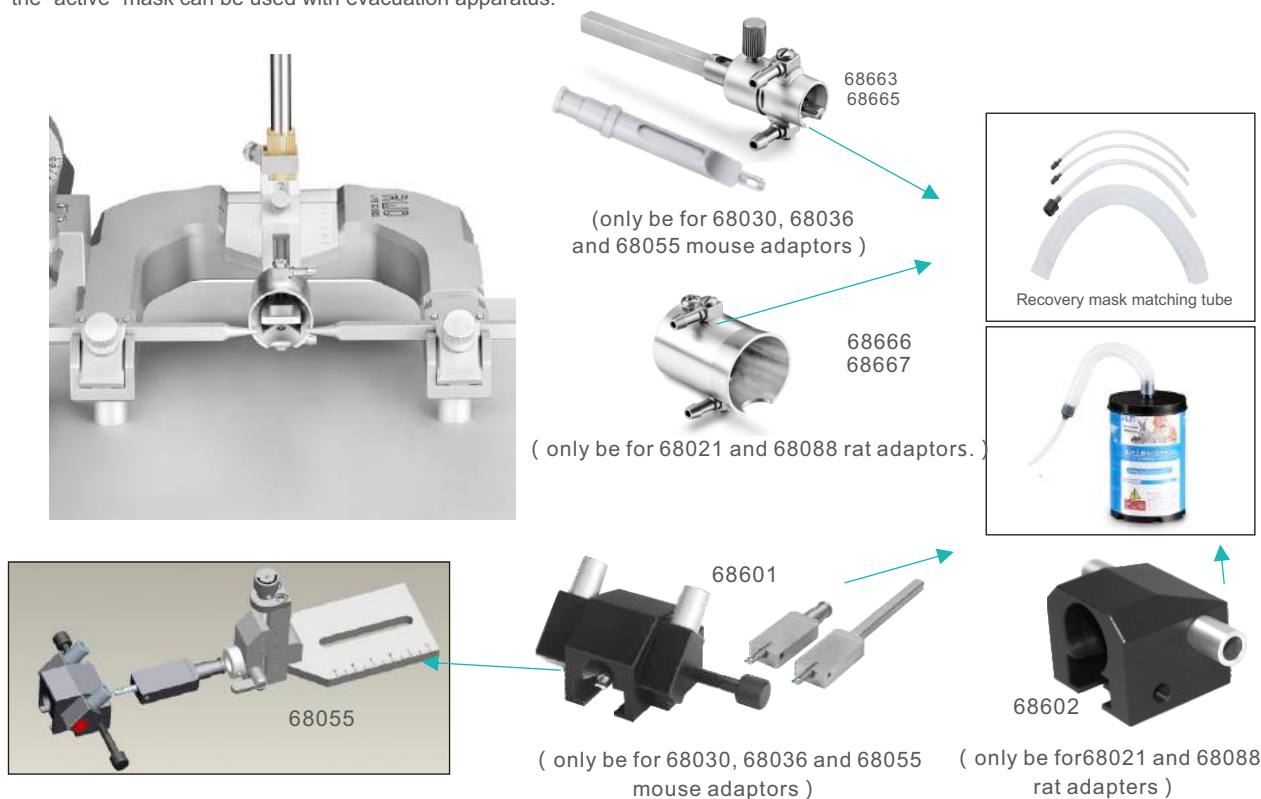
Order Information:

| Cat No. | Product Description | OD (size) | ID(size) | D(size) |
|-----------|---|-----------|----------|---------|
| 68680 | Cone Mask with Tubing for Neonatal Mouse(<15g) | 13mm | 5mm | 24mm |
| 68681 | Cone Mask with Tubing for Mouse or Neonatal Rat(15-40g) | 20mm | 10mm | 28.5mm |
| 68682 | Cone Mask with Tubing for Rat(200-350g) | 25mm | 15mm | 38mm |
| R-CT-6/15 | Concentric Tubing, 6mm Inlet/15mm Outlet, 45cm | | | |
| 68656 | Manifold for Single Cone Mask | | | |
| 68657 | Manifold for Five Cone Masks | | | |
| 68630 | Anesthesia Operation Platform | | | |
| 68683 | Cone Mask for Neonatal Mouse(<15g) | 13mm | 5mm | 24mm |
| 68684 | Cone Mask for Mouse or Neonatal Rat(15-40g) | 20mm | 10mm | 28.5mm |
| 68685 | Cone Mask for Rat(200-350g) | 25mm | 15mm | 38mm |

● 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. The "passive" mask is used with charcoal canister only, and the "active" mask can be used with evacuation apparatus.



Order Information:

| Cat No. | 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) | |

● Imaging Mask

This mask mainly works with ultrasound animal imaging heating platform and the anesthetic mask for the actual operation of ultrasound imaging to ensure that animals are quiet, fixed, to meet the needs of special environmental imaging.

Order Information:

| Cat No. | Product Description |
|---------|---|
| 68669 | Anesthesia mask - mouse and neonatal rat (<70g) |
| 68670 | Anesthesia Mask - rat (<300g) |



Induction Chambers

For rapid induction of anesthesia before animal surgery, takes only 2-5 minutes; Animal status can be observed in real time during anesthesia.

The anesthetic gas is induced 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 area.



Order Information:

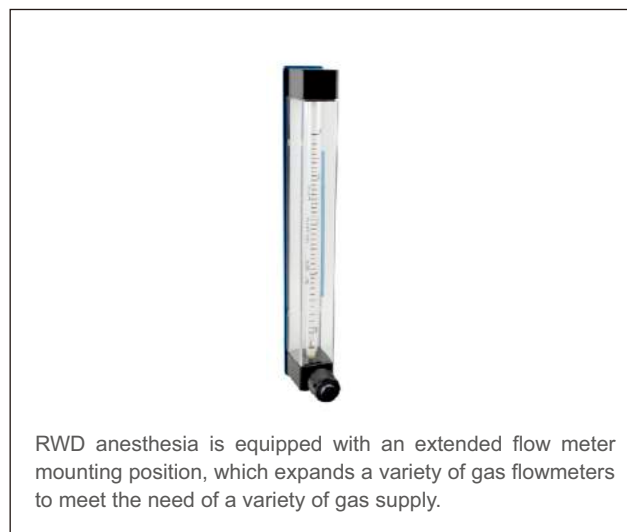
| Cat No. | Product Description | Remarks |
|---------|---|--|
| V100 | Induction Chamber-mouse (15cm*10cm*10cm) | Contains 1 plexiglass box, 1.2m bellows and 1 gas filter canister (R510-31S) |
| V101 | Induction Chamber-rat (24cm*12cm*18cm) | |
| V102 | Induction Chamber-rabbit/cat (40cm*18.5cm*25cm) | |
| V103 | Induction Chamber-large animal (50cm*30cm*30cm) | |

Flowmeters

Multi-output flowmeter



Extended flowmeter



Order Information:

| Cat No. | Product Description | Remarks |
|-------------|---|---|
| R510-09 | Dual Channel Flowmeter - Range 0.1-1L / min | Standard contains 2.2 meter silicon tube (ID:6.0mm) |
| R500-N2O-1E | Expansion Assembly with 0.1-1LPM N ₂ O Flowmeter | Silicone tube and Y-three way and other accessories |
| R600-O2-4E | Expansion Assembly with 0.1-4LPM O ₂ Flowmeter | Silicone tube and Y-three way and other accessories |

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

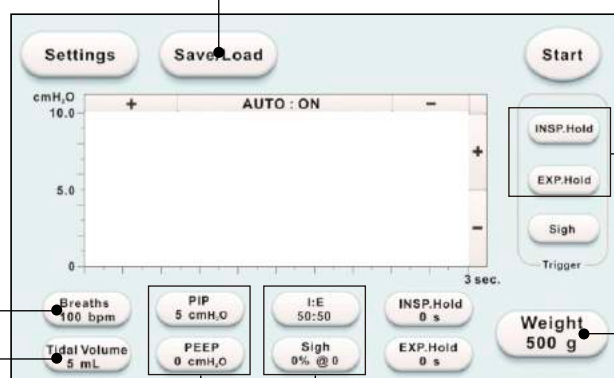


R415-AP

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

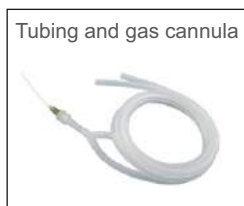
Airway pressure range: 1~50cmH₂O, the accuracy range: ± 0.7 cmH₂O; positive end expiratory pressure (PEEP) range is 0~10cmH₂O

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

| Cat No. | Product Description |
|---------|---|
| R415 | Small Animal Ventilator |
| R415-AP | Accessory package for Anesthesia and Ventilator |

Small Animal Ventilator

Equipped with high quality motor, speed reducer and controller, RWD's ventilator with low noise, precisely control and durable. They could be run separately with air or oxygen as the gas source, or together with anesthesia machine for improving the anesthetic effect.



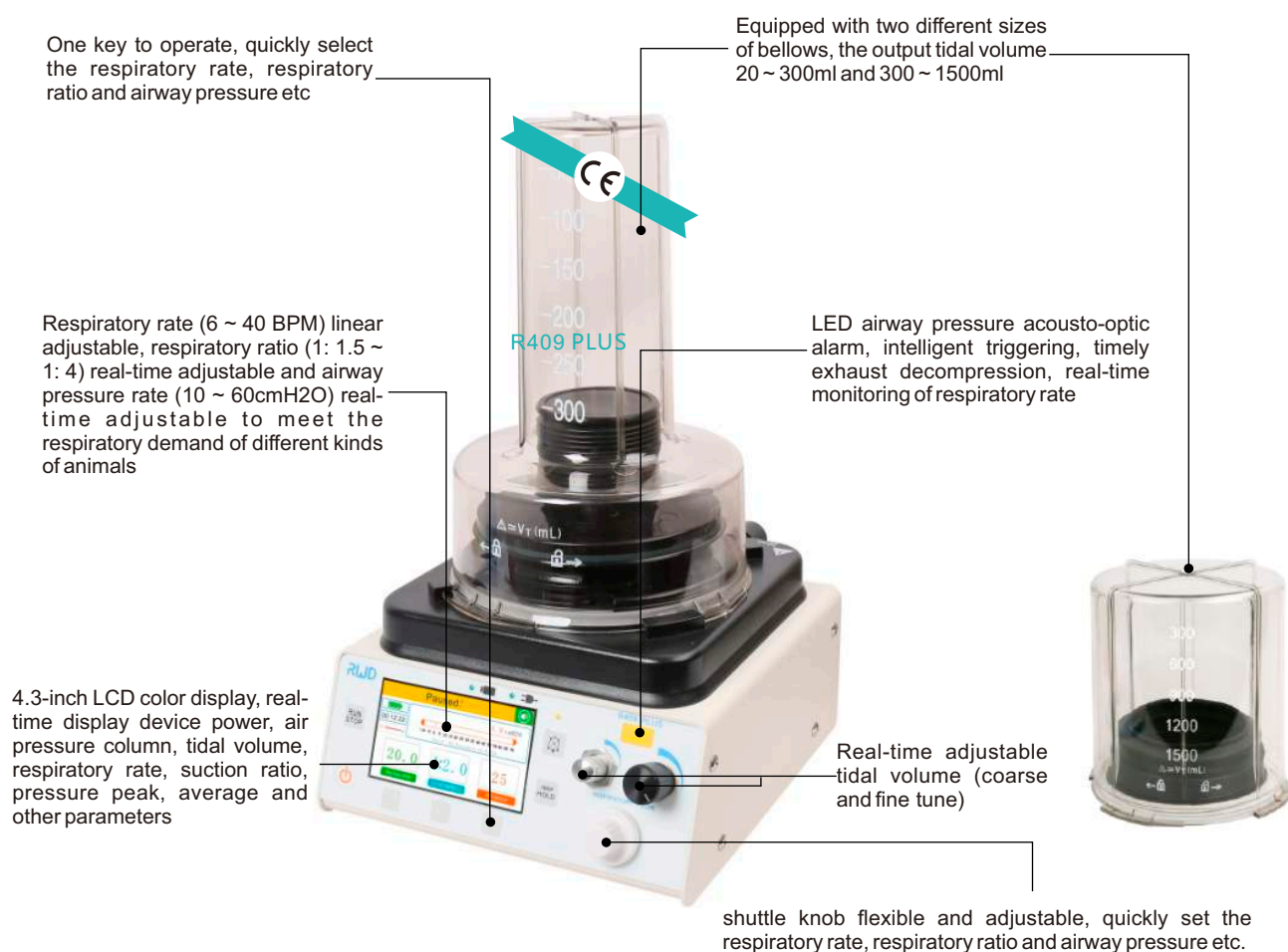
- Application: R405 is for mouse, neonatal rat, while R407 is for rat, hamster, rabbit, cat, puppy and other animal within 5kg
- The digital LED panel shows the respiratory rate in real time
- Tidal volume and respiratory rate are linear controlled, can be adjusted while the ventilator is running
- R405: tidal volume 0.1-1.0cc, adjustment accuracy 0.1cc
- R407: equipped with two sizes of pistons (large piston: tidal volume of 3-30cc, adjustment accuracy of 3cc; small piston: tidal volume of 0.5-5cc, adjustment accuracy of 0.5cc)
- Respiratory rate range: 18-150 breaths / min
- Control positive end expiratory pressure (PEEP)

Order Information:

| Cat No. | Product Description | Remarks |
|---------|---|--|
| R405 | Mouse Ventilator, 220V | Including Ventilator, connecting silicon tube and trachea cannula (20G) |
| R405V | Mouse Ventilator, 110V | |
| R407 | Small Animal Ventilator, 220V | Including Ventilator, connecting silicon tube and trachea cannula (14G)- 1.85mm OD |
| R407V | Small Animal Ventilator, 110V | |
| R510-27 | Accessory Package for Anesthesia and Ventilator | |

Veterinary Ventilator

R409 Plus is a pneumatic control ventilator which is particularly suitable for animal laboratories, pet hospital, clinics etc. clinics etc, is specially designed to help the respiration of animals within 100 kg including rabbits, dogs, monkeys, pigs, sheep etc, and can be used in conjunction with various anesthesia systems.



- 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:

| Cat No. | Product Description |
|-----------|--|
| R409 PLUS | Veterinary Ventilator - Color Screen/ Battery (100-240V) |
| R409-MB | Mounting Bracket for R409 Ventilator |

Anesthesia and Respiration Accessories

Gas Supply



Air Pump
(R510-29/R510-30)



R-PG-O2-1M(CN)Pro



Medical Oxygen Tank



R-GM-ET(S)



R-GM-ET(D)



E- Oxygen Tank

Oxygen or air can be chosen as gas supply of small animal anesthesia machines. Air pump (R510-29/R510-30) can provide air as gas supply; medical oxygen and E-oxygen tanks can provide oxygen as gas supply (you need to buy oxygen relief valve (R-GM-ET(S)) for Oxygen tanks, E-oxygen tanks are only suitable for portable anesthesia machines and need to purchase E-oxygen tank (R-GM-ET(S)) or double tanks (R-GM-ET (D)) mounting bracket, (as shown above), oxygen is provided by the user.

Breathing Circuits



R-NBC-F(JR)



R-BC-DL

Order Information:

| Cat No. | Product Description |
|-------------|---|
| R-NBC-F(JR) | Mapleson F Non-rebreathing Circuit (Jackson-Rees) |
| R-BC-DL | Breathing Circuit Duo-Limb, 22mm(M)/15mm(F), 1.5m |

Feline/Canine Masks

Apply to the anesthesia induction, breathing rescue of felines, canines and the same size of animals.



Order Information:

| Cat No. | Product Description |
|---------|--|
| 68637 | Feline Mask, 44mm(OD)*22mm(ID)*24mm(Depth) |
| 68638 | Feline Mask, 57mm(OD)*30mm(ID)*29mm(Depth) |
| 68639 | Feline Mask, 60mm(OD)*33mm(ID)*35mm(Depth) |
| 68640 | Canine Mask, 87mm(OD)*30mm(ID)*73mm(Depth) |
| 68641 | Canine Mask, 110mm(OD)*42mm(ID)*97mm(Depth) |
| 68642 | Canine Mask, 130mm(OD)*54mm(ID)*121mm(Depth) |
| 68643 | Feline/Canine Mask Set of 6 pcs |

Laryngoscopes

Apply to medium or large animals' laryngeal examination and tracheal intubation.

| Type | Specification | Technical Parameter |
|-----------------------------------|---------------|------------------------------------|
| Handle | | Length L: 150mm, diameter D: 23mm |
| Curved lens (Bulb and fiber) | 1# | Length L1: 80mm, width W1: 8mm |
| | 2# | Length L1: 95mm, width W1: 10mm |
| | 3# | Length L1: 105mm, width W1: 13mm |
| | 4# | Length L1: 135mm, width W1: 15mm |
| | 5# | Length L1: 155mm, width W1: 15mm |
| Straight lens (Bulb and fiber) | 1# | Length L2: 80mm, width W2: 11mm |
| | 2# | Length L2: 105mm, width W2: 11mm |
| | 3# | Length L2: 155 mm, width W2: 14 mm |
| | 4# | Length L2: 195 mm, width W2: 14 mm |
| | 5# | Length L2: 205 mm, width W2: 17 mm |



Macintosh Laryngoscope



Miller Laryngoscope

Order Information:

| Cat No. | Product Description |
|-----------|---|
| C45001-00 | Miller Lamp Laryngoscope, 5 Blades+Handle+Case |
| C45002-00 | Miller F.O. Laryngoscope, 5 Blades+Handle+Case |
| C45003-00 | Macintosh Lamp Laryngoscope, 5 Blades+Handle+Case |
| C45004-00 | Macintosh F.O. Laryngoscope, 5 Blades+Handle+Case |

Endotracheal Tubes

Medical non-toxic PVC design, suitable for the obstruction of animal throat, respiratory dysfunction and respiratory obstruction. After tracheotomy, the trachea is inserted to keep breathing, with features of smooth/firm tube design, comfortable feeling after intubation etc., ISO standard interface (OD: 15MM), and can be connected with breathing circuit.

Order Information:

| Cat No. | Product Description | Remarks |
|-------------|---|-----------|
| R600-ET | Cuffed Endotracheal Tubes 2.0-10.0mm (1 set) | |
| R600-ET-20 | Uncuffed Endotracheal Tubes-I.D.2.0mm*O.D.3.3mm(Without airbag) | 10psc/box |
| R600-ET-25 | Cuffed Endotracheal Tubes-I.D.2.5mm*O.D.3.7mm | 10psc/box |
| R600-ET-30 | Cuffed Endotracheal Tubes-I.D.3.0mm*O.D.4.0mm | 10psc/box |
| R600-ET-35 | Cuffed Endotracheal Tubes-I.D.3.5mm*O.D.4.7mm | 10psc/box |
| R600-ET-40 | Cuffed Endotracheal Tubes-I.D.4.0mm*O.D.5.3mm | 10psc/box |
| R600-ET-45 | Cuffed Endotracheal Tubes-I.D.4.5mm*O.D.6.0mm | 10psc/box |
| R600-ET-50 | Cuffed Endotracheal Tubes-I.D.5.0mm*O.D.6.7mm | 10psc/box |
| R600-ET-55 | Cuffed Endotracheal Tubes-I.D.5.5mm*O.D.7.3mm | 10psc/box |
| R600-ET-60 | Cuffed Endotracheal Tubes-I.D.6.0mm*O.D.8.0mm | 10psc/box |
| R600-ET-65 | Cuffed Endotracheal Tubes-I.D.6.5mm*O.D.8.7mm | 10psc/box |
| R600-ET-70 | Cuffed Endotracheal Tubes-I.D.7.0mm*O.D.9.3mm | 10psc/box |
| R600-ET-75 | Cuffed Endotracheal Tubes-I.D.7.5mm*O.D.10.0mm | 10psc/box |
| R600-ET-80 | Cuffed Endotracheal Tubes-I.D.8.0mm*O.D.10.7mm | 10psc/box |
| R600-ET-85 | Cuffed Endotracheal Tubes-I.D.8.5mm*O.D.11.3mm | 10psc/box |
| R600-ET-90 | Cuffed Endotracheal Tubes-I.D.9.0mm*O.D.12.0mm | 10psc/box |
| R600-ET-95 | Cuffed Endotracheal Tubes-I.D.9.5mm*O.D.12.7mm | 10psc/box |
| R600-ET-100 | Cuffed Endotracheal Tubes-I.D.10.0mm*O.D.13.3mm | 10psc/box |
| R-ET-WHF | Wall Hanging Frame for Endotracheal Tubes(ID 2.0-13.0mm) | |



Wall Hanging Frame for Endotracheal Tubes



Breathing Bags

Order Information:

| Cat No. | Product Description |
|--------------|--|
| R600-NL-0.5L | Resuable Non Latex Breathing Bag, 0.5L |
| R600-NL-1L | Resuable Non Latex Breathing Bag, 1L |

| Cat No. | Product Description |
|------------|--------------------------------------|
| R600-NL-2L | Resuable Non Latex Breathing Bag, 2L |
| R600-NL-3L | Resuable Non Latex Breathing Bag, 3L |



Tubing Connector



Order Information:

| Cat No. | Product Description | Cat No. | Product Description |
|------------|--|---------------|--|
| R-LCM-1/8 | Luer Connector-Male, 1/8" | R-RC-3/8-1/4 | Reduced Connector - T-type, 3/8" x 3/8" x 1/4" |
| R-Y-1/4 | Y-three Way Valve-PP-1/4" | R-RC-1/4-3/8 | Reduced Connector -1/4"-3/8" |
| R-Y-1/8 | Y-three Way Valve-PP-1/8" | R-T-1/4 | Three way Valve- combined with R-LCF-1/4(1 PCS) and R-LCM-1/4(2 PCS) |
| R-Y-1/16 | Y-three Way Valve-PP-1/16" | R-Y-7/8 | Y-connector-OD: 22mm |
| R-LCF-1/4 | Luer Connector-Female, 1/4" | R-TC-22-22/15 | Reduced Connector-15mm(M)-22mm(M)/15mm(F) |
| R-LCM-1/4 | Luer Connector-Male, 1/4" | R-RC-15-15/22 | Reduced Connector-15mm(M)-15mm(F)/22mm(M) |
| R510-25-86 | 9/16 TO Ø8 Cone Connector | R409-TC | T-connector – 9/16 |
| R-AH-C | Oxygen Tube Connector-9/16(F)-M16*1.5(F) | | |

Tubes



Order Information:

| Cat No. | Product Description | Cat No. | Product Description |
|----------|-------------------------------------|------------|---|
| R-PT-80 | PVC Tubing - ID: 8.0mm | R-CT-18 | Corrugated Tube - ID 22.0mm, L1.2m |
| R-ST-15 | Silicone Tubing - ID:1.5, OD:4.5mm | R-CT-22-03 | Corrugated Tube - ID 22.0mm, L0.3m |
| R-ST-30 | Silicone Tubing - ID:3.0, OD:6.0mm | R-AH-80 | O ₂ Hose - ID8.0- M16*1.5-9/16 Connector, 2m |
| R-ST-60 | Silicone Tubing - ID:6.0, OD:9.0mm | R409-AH-80 | O ₂ Hose - ID8.0-2*9/16 Connector, 1m |
| R-ST-60A | Silicone Tubing - ID:6.0, OD:10.0mm | | |

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 P35–42), 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 P28–34).



Standard type



Compact type



Rail-mounted type



Large animal type

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



Standard (100um)



Digital (10um)

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.



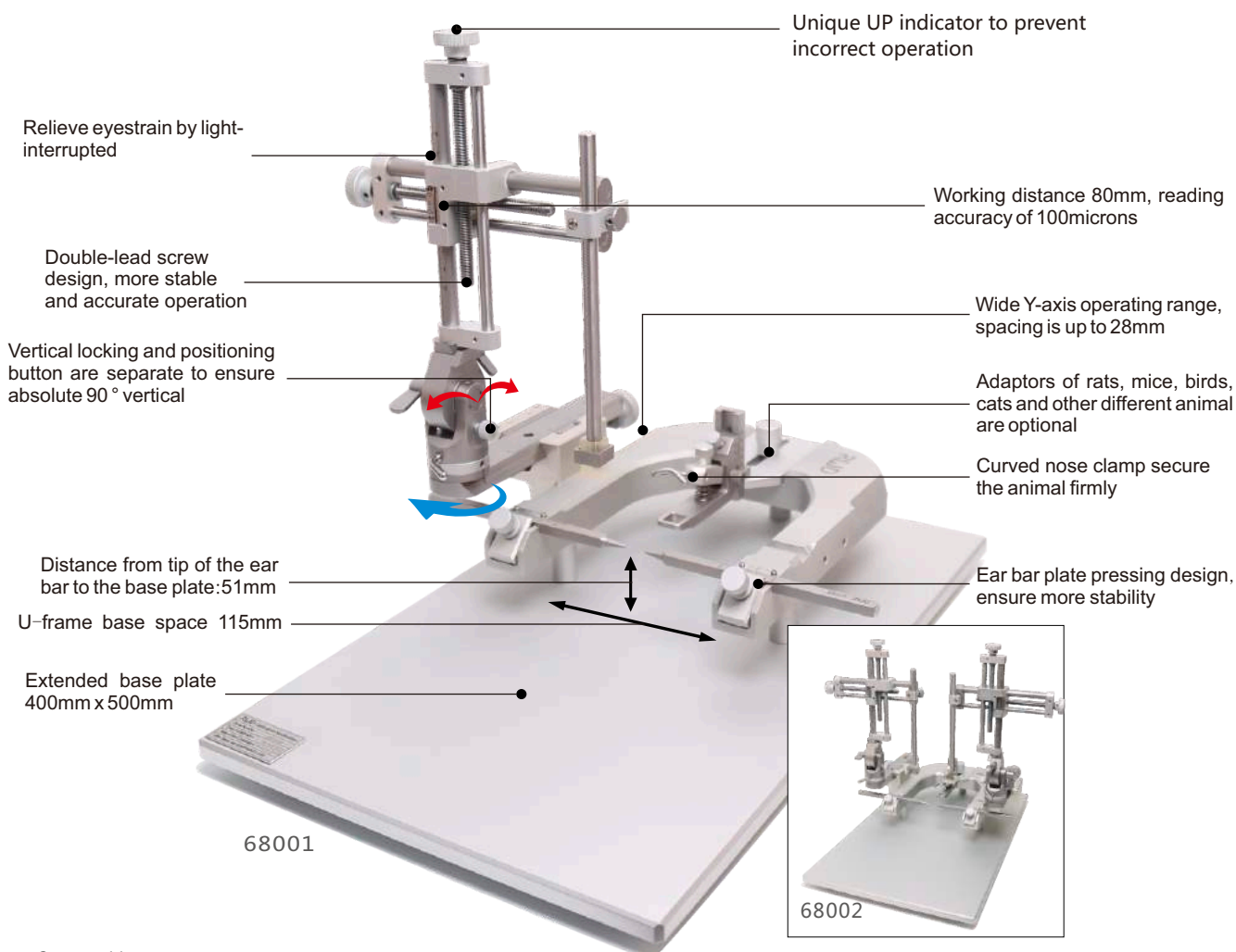
SGL M



Dual M

Standard Stereotaxic Instruments

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



Composition:

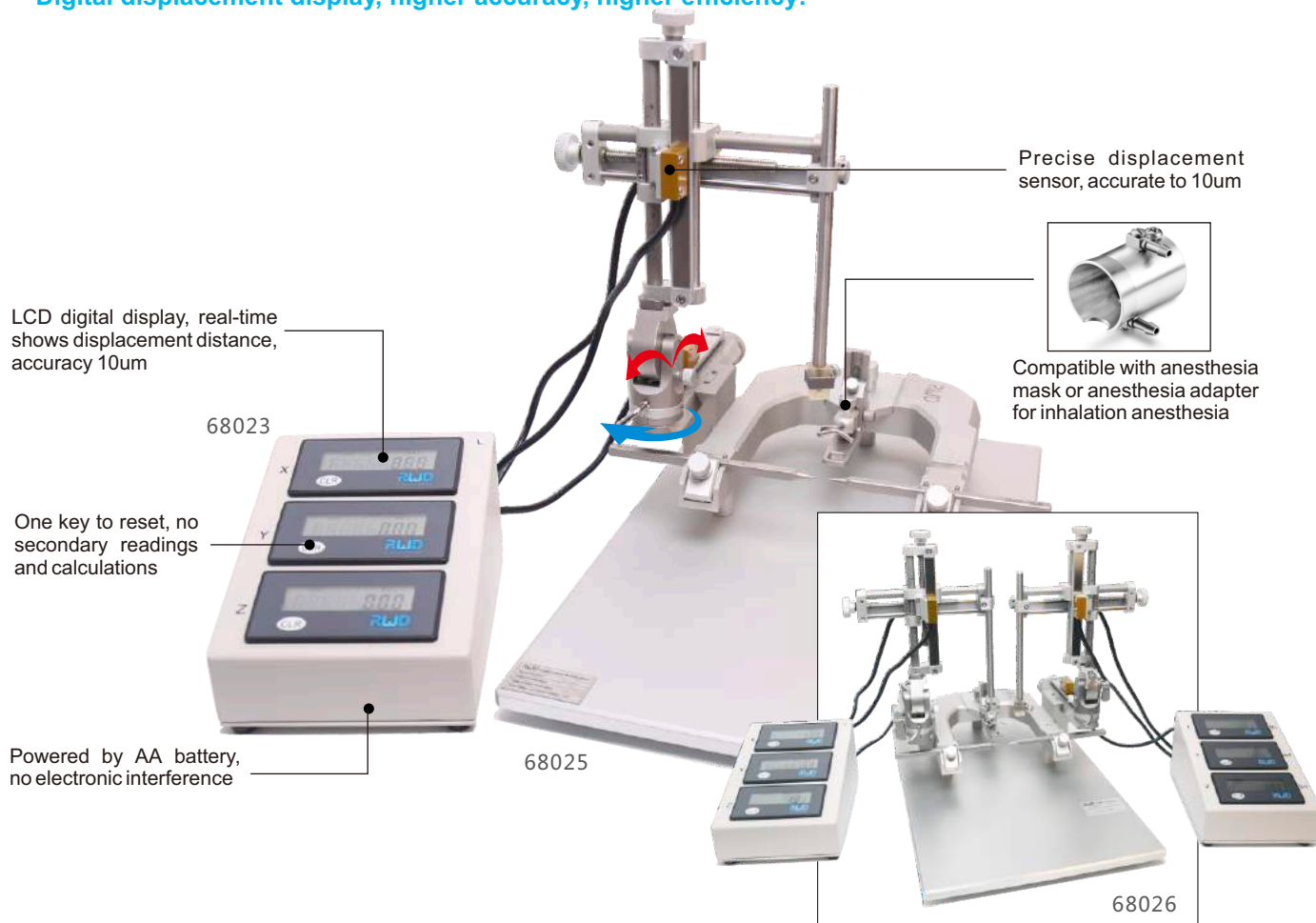
68001 and 68002 are complete sets of stereotaxic (see figure), both containing 68861N base plate, 68401 three-dimensional manipulator - left, 68021 rat adaptor, 68301 rat 18° ear bar, 68201 standard holder, and 68002 includes an extra 68402 three-dimensional manipulator - right.

Order Information:

| Cat No. | 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 Rat, 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 | |

Desktop Digital Stereotaxic Instruments

Digital displacement display, higher accuracy, higher efficiency!



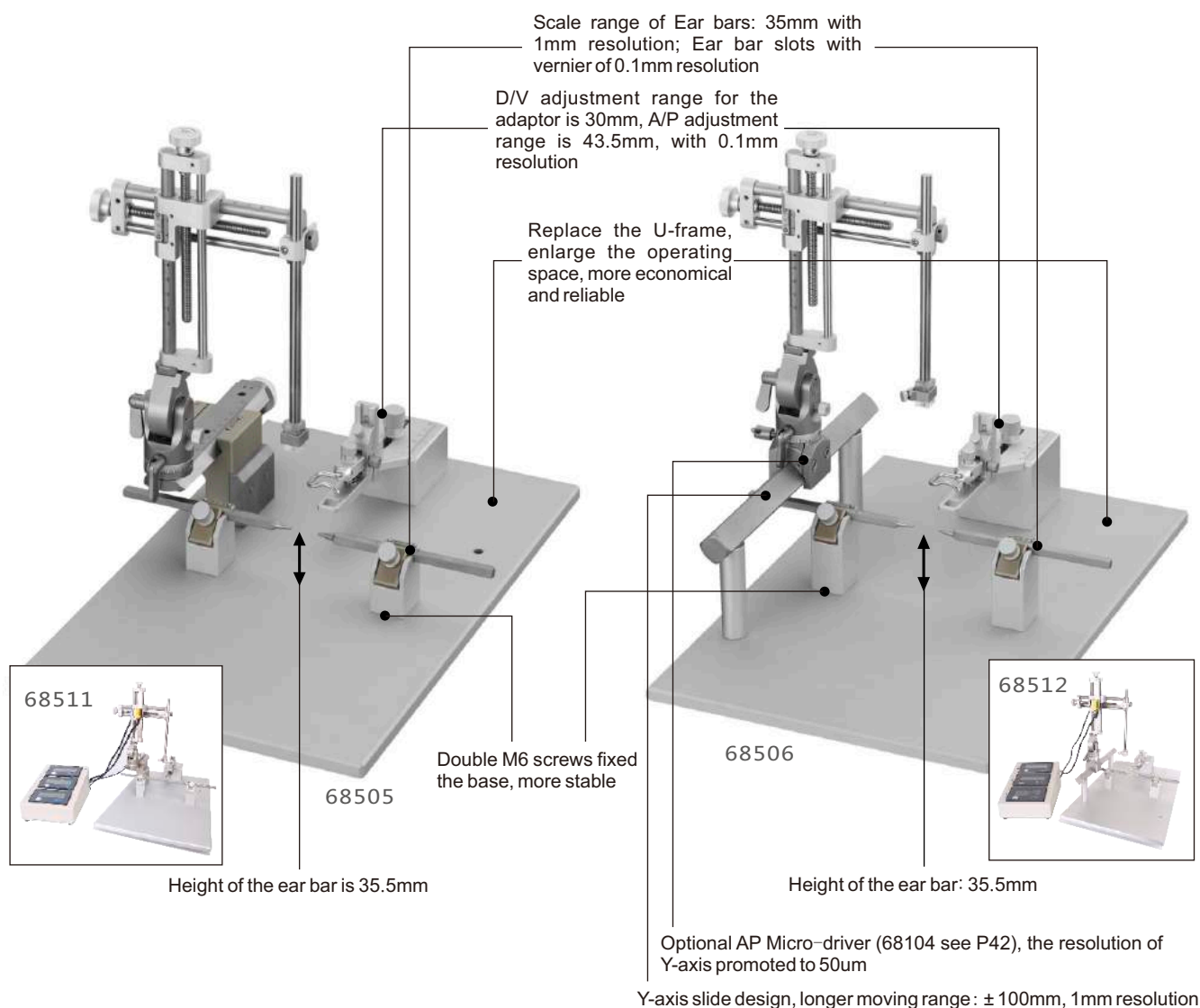
Composition:

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:

| Cat No. | 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 |

Portable/Rail Rat Stereotaxic Instruments



Composition:

68505 and 68506 are a complete sets of stereotaxic (see figure), both containing 68021 rat adaptor, 68301 rat 18° ear bar, 68201 standard holder, 68505 with the 68864S base plate and a 68401 three-dimensional manipulator - left, 68506 with the 68865S base plate and 68851 two-dimensional manipulator - left.

Order Information:

| Cat No. | Product Description |
|---------|---|
| 68505 | Stereotaxic for Rat, SGL M, Portable |
| 68508 | Stereotaxic for Rat, Dual M, Portable |
| 68511 | Stereotaxic for Rat, Digital and Portable, SGL M |
| 68514 | Stereotaxic for Rat, Digital and Portable, Dual M |
| 68864S | Stereotaxic Base Plate for Rat, Portable, SGL M |
| 68864D | Stereotaxic Base Plate for Rat, Portable, SGL M |

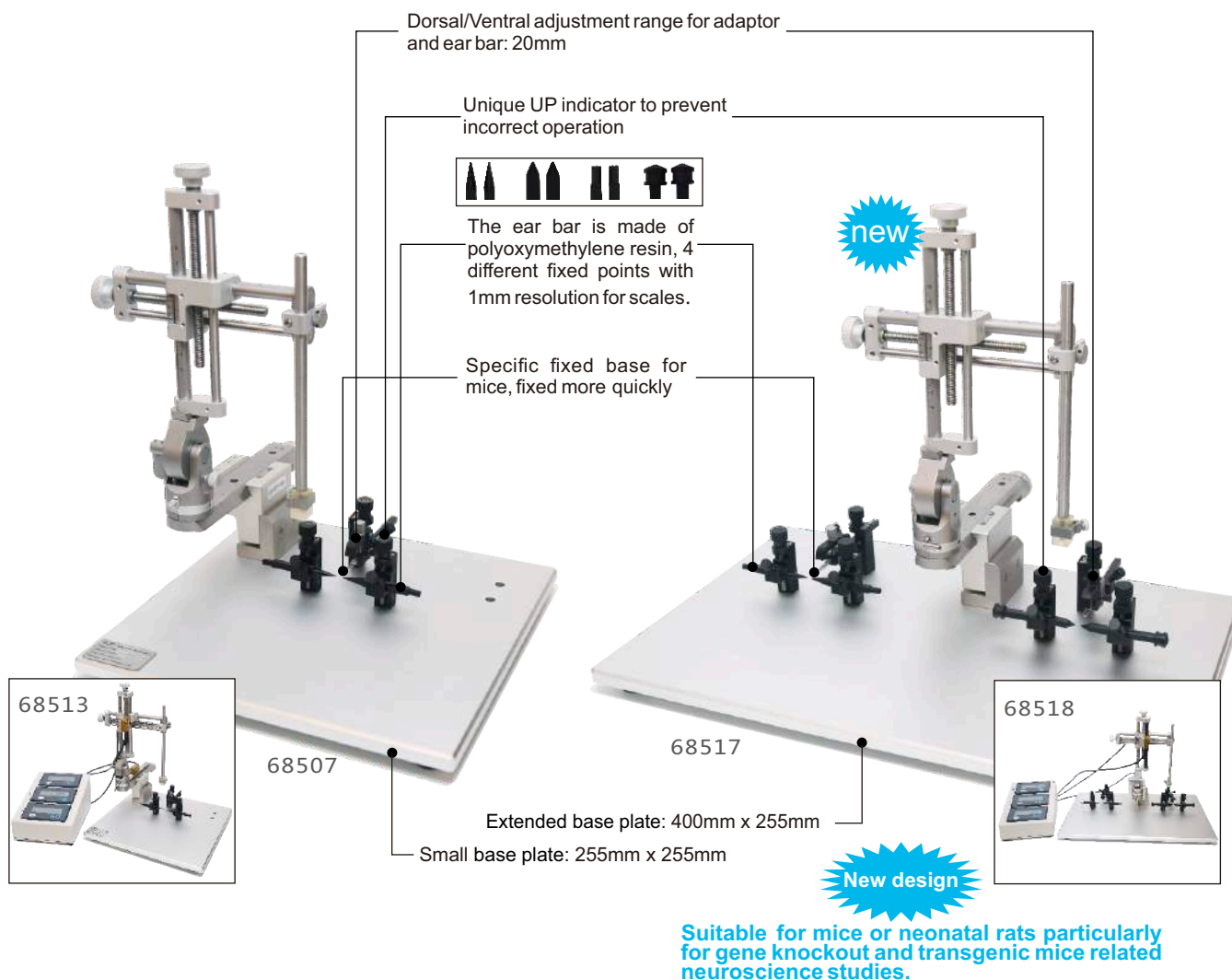
Order Information:

| Cat No. | Product Description |
|---------|--|
| 68506 | Stereotaxic for Rat, SGL M, Rail-type |
| 68509 | Stereotaxic for Rat, Dual M, Rail-type |
| 68512 | Stereotaxic Frame for Rat, Portable, SGL M |
| 68515 | Stereotaxic for Rat, Digital and Rail-type, Dual M |
| 68865S | Stereotaxic Base Plate for Rat or Mouse, Rail-type, SGL M |
| 68865D | Stereotaxic Base Plate for Rat or Mouse, Rail-type, Dual M |
| 68941 | 2-axis Manip for Rat Stereotaxic, Left Hand |

Compact Mouse Stereotaxic Instruments

(One Mouse)

(Two Mouse)



Composition:

68507 and 68517 are complete sets of stereotaxic (see figure), both containing 68033 mouse nose clip, 68034 and 68313 mouse 18° and 45° ear bars, 68201 standard holder, 68401 three-dimensional manipulator - left, 68507 with 68863S base plate, while 68517 with 68866N base plate, Digital version 68513 and 68518 adds 68023 three-dimensional digital display module.

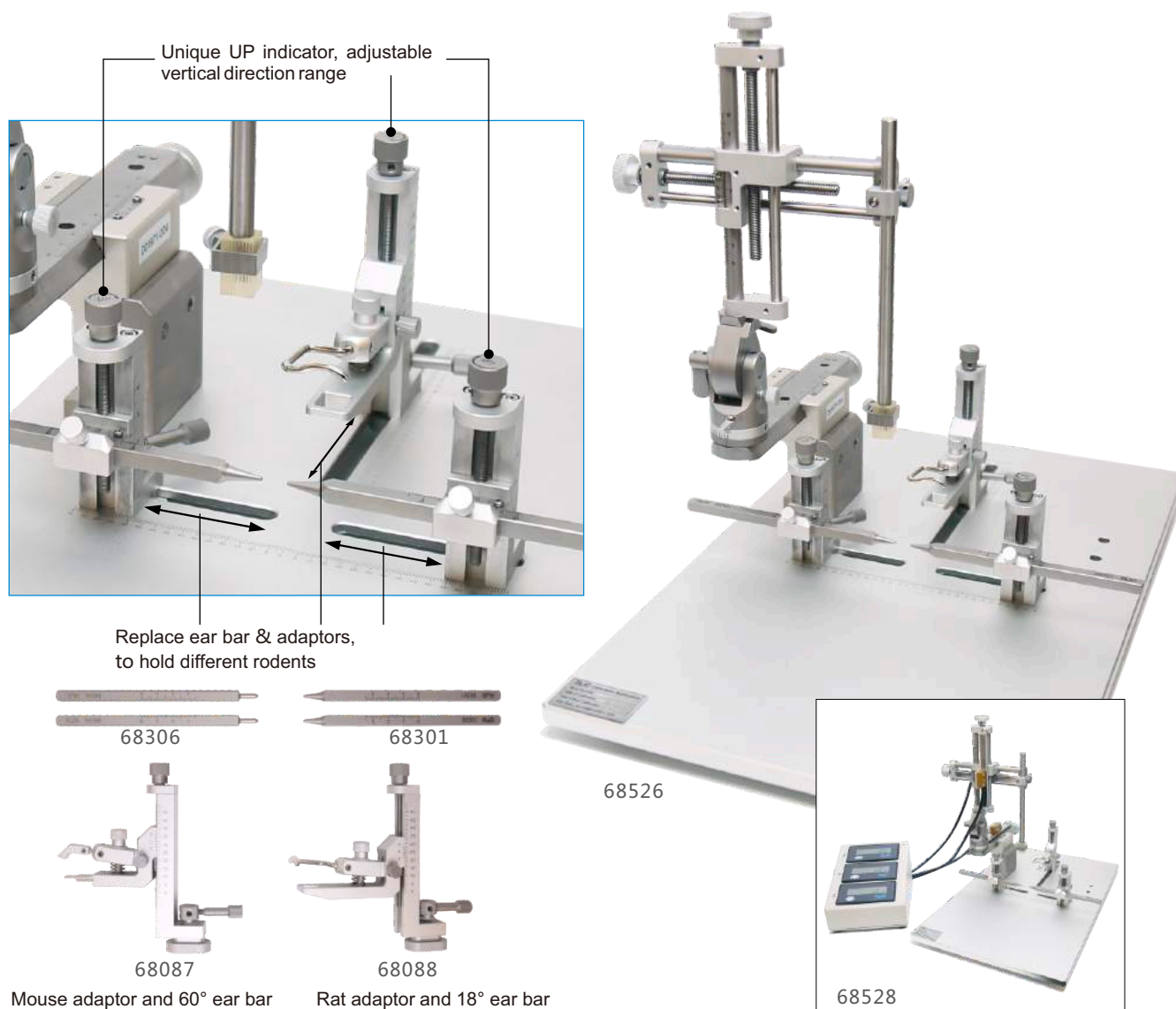
Order Information:

| Cat No. | 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 |
| 68863S | Stereotaxic Base Plate for Mouse, Portable, SGL M |
| 68863D | Stereotaxic Base Plate for Mouse, Portable, Dual M |

Order Information:

| Cat No. | Product Description |
|---------|---|
| 68517 | Stereotaxic for 2 Mice, Portable, SGL M |
| 68518 | Stereotaxic for 2 Mice, Digital & Portable, SGL M |
| 68866N | Stereotaxic Base Plate for Two Mice, Portable |

Portable Rat & Mouse Stereotaxic Instruments



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:

| Cat No. | 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) | |

Large Animal Stereotaxic Instruments

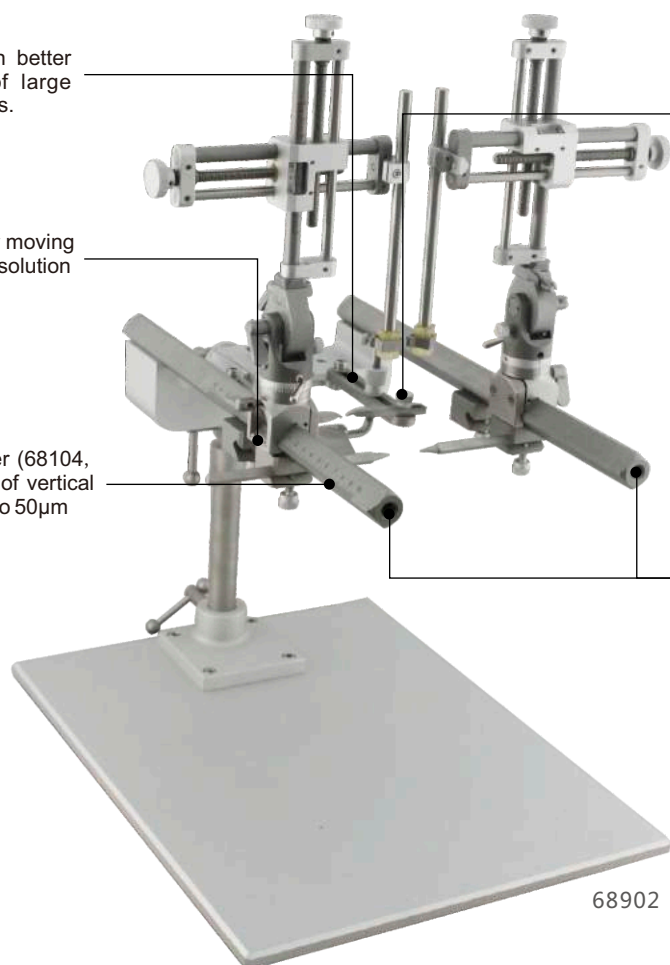
Unique jaw plate design better stabilizes the heads of large animals of varying weights.

Y-axis rail design, longer moving range: $\pm 100\text{mm}$, 1mm resolution

Combined with microdriver (68104, see P42), the resolution of vertical reading can be promoted to $50\mu\text{m}$

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

Holds up to six manipulator arms



68902

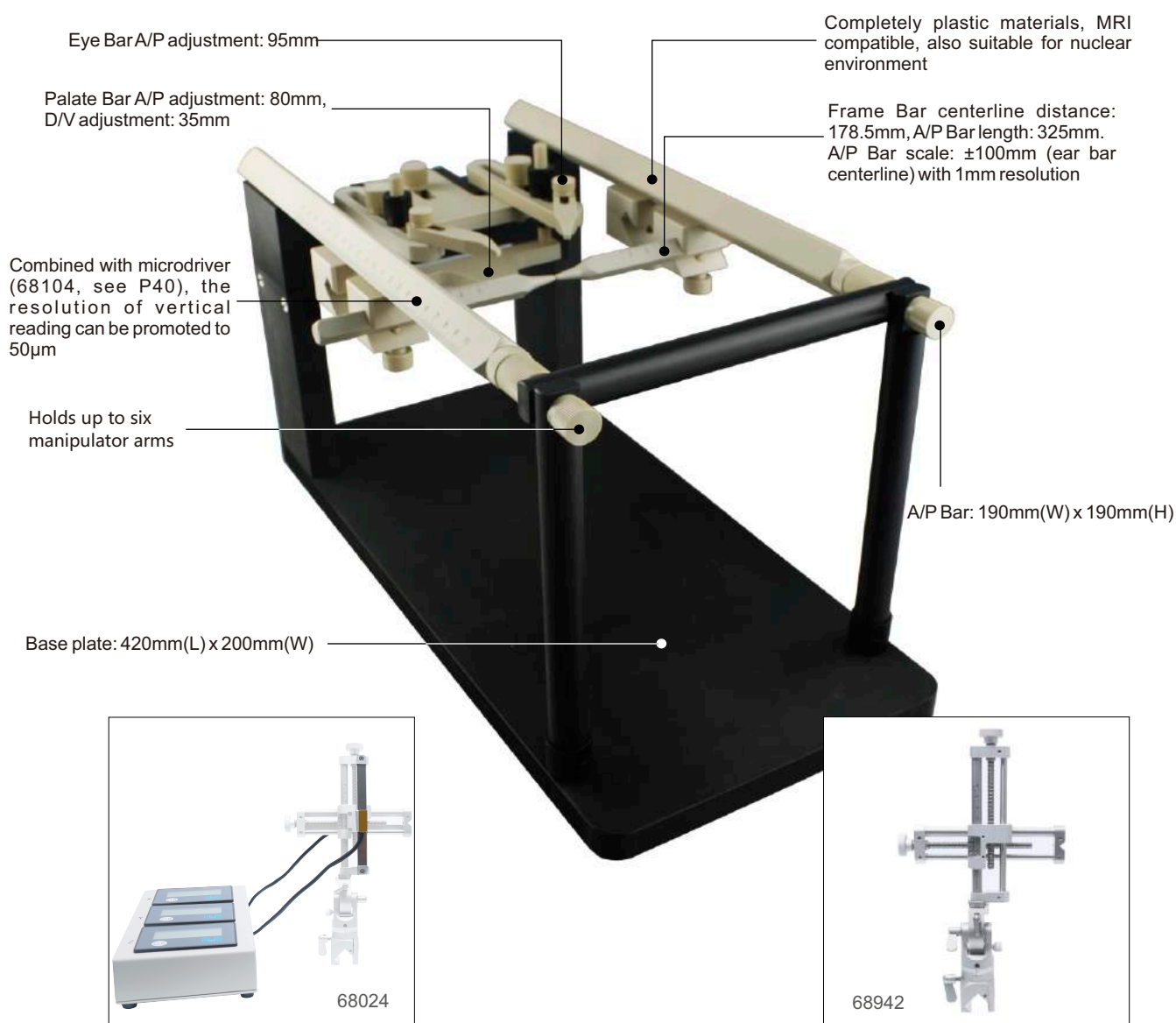
Composition:

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:

| Cat No. | 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. | |
| 68868N | Stereotaxic Base Plate for Dog, Pig, Monkey etc. | Adaptor/ear bar see P37-41 |
| 68941 | 2-axis Manip for Dog/Monkey Stereotaxic, Left Hand | |
| 68942 | 2-axis Manip for Dog/Monkey Stereotaxic, Right Hand | |
| 68944 | 2-axis Digital Manip for Dog/Monkey Stereotaxic, Left Hand | |
| 68945 | 2-axis Digital Manip for Dog/Monkey Stereotaxic, Right Hand | |

Dog/Monkey MRI Stereotaxic Instruments (Customized)



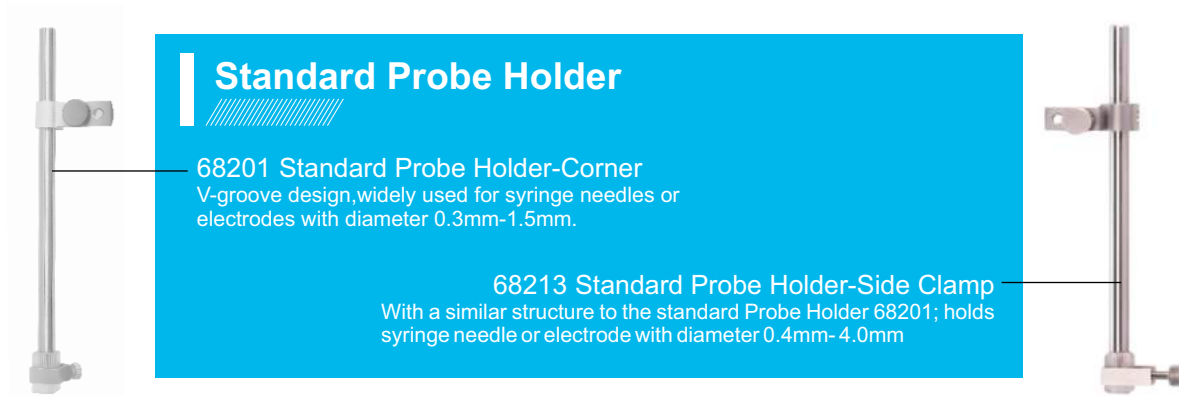
Order Information:

| Cat No. | Product Description | Remarks |
|---------|---|-----------------------------|
| 68915 | MRI Compatible Stereotaxic for dog/monkey/68081/Base Plate (Customized) | manipulator is not included |
| 68941 | 2-axis Manip for Dog/Monkey Stereotaxic, Left Hand | Adaptor/ear bar see P37-41 |
| 68942 | 2-axis Manip for Dog/Monkey Stereotaxic, Right Hand | |
| 68024 | 2-axis Digital Readout for Upgrade-68000 | |
| 68944 | 2-axis Digital Manip for Dog/Monkey Stereotaxic, Left Hand | |
| 68945 | 2-axis Digital Manip for Dog/Monkey Stereotaxic, Right Hand | |
| 68104 | AP-Microdriver (50µm) | |

Stereotaxic Instruments Accessories

Holders

RWD offers various holders to fix different shapes and ranges of electrodes, needles, cannulas, headstages, probes, drills, injectors etc.



Standard Probe Holder

68201 Standard Probe Holder-Corner
V-groove design, widely used for syringe needles or electrodes with diameter 0.3mm-1.5mm.

68213 Standard Probe Holder-Side Clamp
With a similar structure to the standard Probe Holder 68201; holds syringe needle or electrode with diameter 0.4mm-4.0mm

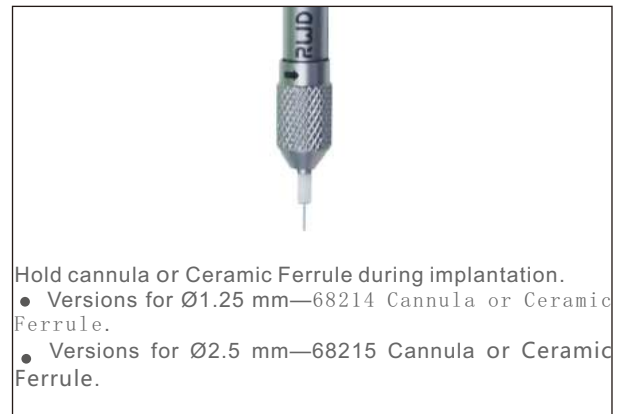
Cannula Holders

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.

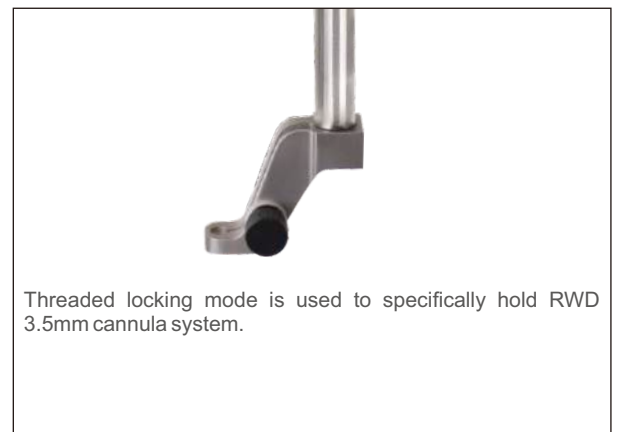
- Versions for Ø1.25 mm—68214 Cannula or Ceramic Ferrule.
- Versions for Ø2.5 mm—68215 Cannula or Ceramic Ferrule.

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.

68221 Cannula Holder



Threaded locking mode is used to specifically hold RWD 3.5mm cannula system.

Electrode Holder

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.

68220 Electrode Holder



Head of the holder is wedge-shaped and holds electrodes with 0.9mm to 3mm diameters.

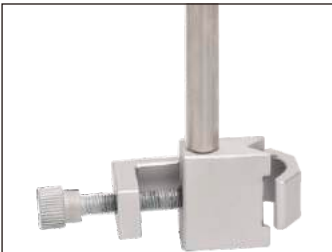
68216 Electrode Holder



Holder is designed for the dual operating electrophysiology experiments. Distance between two electrodes can be as close as 200µm. Holds electrodes with 0.4mm to 1.5mm diameters.

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.

68106 Headstage Holder



Holder is designed for holding micro amplifier or headstage (Such as TBSI headstage and Plexon microelectrode amplifier). C-shaped head and suitable for diameter from 0.1-7.0mm.

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 stereotaxic instruments. Controls the depth of drilling by the manipulator. Easy and accurate operation protects brain tissue from damage caused by excessive drilling.

68397 Level Calibrator - Rat

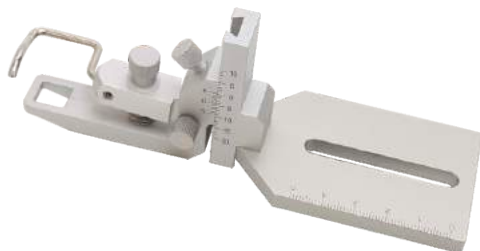


68397 calibrator refers to the International Brain Atlas of rats and take craniofacial Bregma and Lambda as the reference points, The distance between B(0) and L(0) is about 7.67mm. When the animal craniofacial is in the horizontal state, these two points should be on the same level. When fixed to the X-Z manipulator of stereotaxic instrument and descends, the tip of B(0) and L(0) should touch to craniofacial at the same time, otherwise, the adaptor should be adjusted to meet the requirements.

Adaptors

Rat Adaptors

68021 Rat Adaptor



Note: Matched with the ear bar, see P41

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 multiangle without blocking the anesthetic gas delivery.

- Vertical 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.

You can also choose the other Anesthesia Adaptor (68078) like 68077 in page39

68011 MRI Rat Adaptor (customized)



This adaptor is designed for MRI equipments, with special materials to avoid magnetic interference. The fixation of animal is convenient and stable.

size: 360mm(L)x125mm(W)x96mm(H)

68022 Rat Adaptor-Aural (customized)

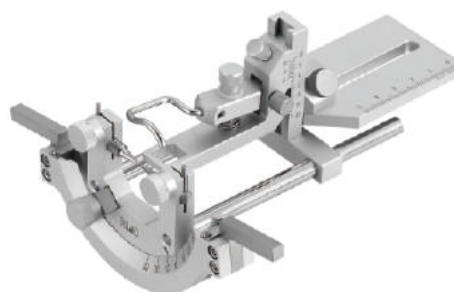


This adapter is designed for auditory research. Instead of holding the rat head by ear bars and incisors, it holds the head firmly by orbital approach to ensure no obstacle while auditory stimulation. Currently, RWD is the only company in the world offering this kind of product.

68063 Rat Rotation Adaptor (with 18 ° ear bar 68310)(customized)

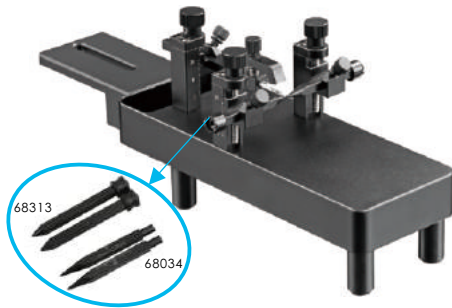
This adaptor is specifically designed for some special applications. The head of the rat will be fixed by a pair of ear bars, nose and incisors, and can be rotated according to the experimental requirements to facilitate the operation of different parts of the rat head in different directions. The vertical adjustable range of the adaptor is 30mm (-20mm ~ +10mm), the adjustment accuracy is 100µm; Horizontal adjustable range of the adaptor is 43.5mm; the rotation angle of the head is 60° (-30° ~ +30°)

68065 Mouse Rotation Adaptor (with 60° ear bar 68312).



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.

68036 Mouse Warm Water Adaptor (with 18° and 45° ear bars)



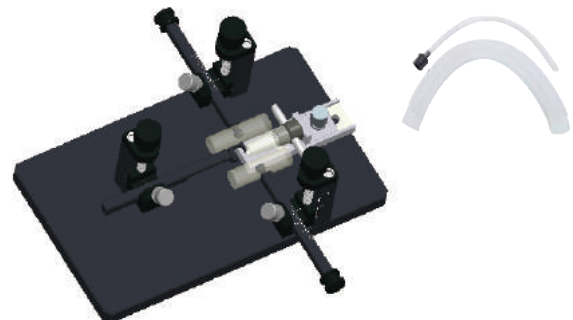
This unique stereotaxic adaptor is upgraded with water-cycled heating platform to use with warm water recirculator. The temperature of the platform surface is stable, uniform and comfortable. Warm water recirculator should be purchased separately (see P44).

68014 Neonatal Mouse Adaptor (with 20° ear bars 68315 and 45° ear bars 68316)

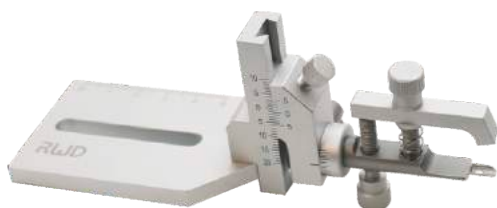


This adaptor is specifically for neonatal mice. It has extended base plate (150mm(L) x 100mm(W)) and provides more operating space for researchers. It can be easily placed on the RWD stereotaxic instruments. The incisor, nose clip and ear bars can be adjusted up and down in 20mm range to ensure the skull level.

68072 Neonatal Mouse Anesthesia Adaptor



After repeated testing and validation, RWD researchers developed the neonatal mouse anesthesia adaptor suitable for stereotaxic instruments in conjunction with the needs of multiple laboratories. It can achieve lasting gas anesthesia and fixation on neonatal mice without affecting the physiological function. And it's easy to implement long-term brain experiments.

68055 Mouse Adaptor

Note: Matched with the ear bar, see P41

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 100 μ m resolution; Horizontal adjustable range of 43.5mm; Horizontal rotatable range of 35°.

68077 Mouse Anesthesia Adaptor (Tubing included)

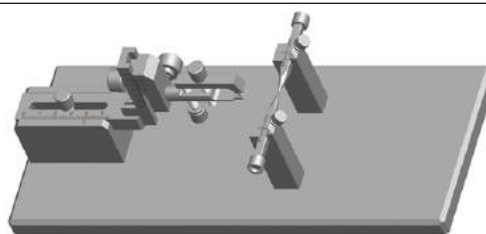
Note: Matched with the ear bar, see P41

It holds the mouse head by mask and incisor bar, with stable and good effect, and the mask outlet can be connected with the gas evacuation apparatus to evacuate the waste gas and ensure the safety and cleanliness of the operators and the environment.

The screw connection between the head and the fixed plate ensures convenient vertical adjustment.

68033 Nose Bar For Mouse/Neonatal Rat

This nose bar is available for 68030 and 68036 adaptors, and portable mouse stereotaxic instruments (like 68507, 68510, 68513, 68516, 68517 and 68518 portable stereotaxic instruments). The arch design fits for the mouse nose to make head-holding more stable.

68069 MRI Mouse Adaptor (customized)

Vertical adjustable range: 30mm (+10mm~-20mm), with 100 μ m accuracy.

Horizontal adjustable range: 45mm.

Ear bars laser engraved scale, good for operation.

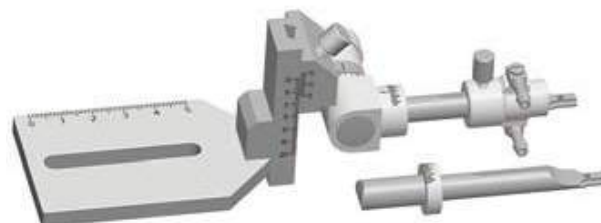
Two ear bar fixing modes for preventing damage to skull.

Plate dimension: 280mm(L) x 120mm(W) x 93mm(H)

68057 Mouse Gas Anesthesia Head Holder

This model offers maximal adjustment for positioning the head. The adaptor can rotate the head to multiangle without blocking the anesthetic gas delivery.

- Vertical adjustable range: 30mm (+10mm~-20mm), with 100 μ m 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.



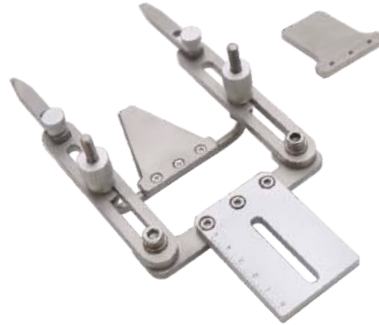
Other Adaptors

68041 Cat/Monkey Adaptor



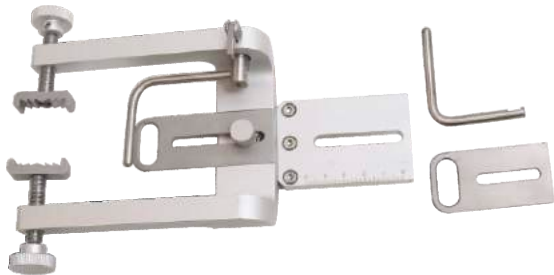
This adaptor includes ear bars and raising block (65mm). It holds the head through ear canal and eye socket. The adaptor can be used with standard stereotaxic instruments and large animal stereotaxic instruments.

68081 Dog/Monkey/Pig Adaptor



This adapter is used for large animal stereotaxic instrument, and it is ideal for dogs, monkeys and pigs around 10kg. The extended palate and screw is convenient to hold the animal firmly.

68085 Rabbit Adaptor (customized)



It holds the rabbit head by special malar clamp, adjustable incisor buckle and nose bar. The distance between the two zygomatic clamps can be precisely adjusted by the screw knob.

Ward and backward adjustable range of adult rabbit is 43.5mm, neonatal rabbit is 26.5mm and the adaptor is 40mm.

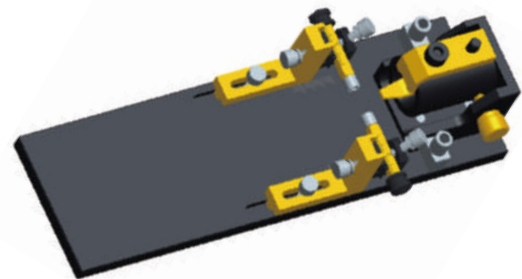
68076 Tree Shrew Anesthesia Adaptor Kit (with tubing/ customized)



According to the brain three-dimensional structure of tree shrews, RWD specially developed a adaptor that can be worked with stereotaxic apparatus, to solve the problem of tree shrew three-dimensional positioning (with a real-time anesthesia inhalation structure)

68075 MRI Adaptor for Tree Shrews (customized)

For PET/CT brain imaging of animals, it is difficult to hold the head firmly while anesthetized status. Based on PET/CT imaging requirement, RWD specifically developed this adaptor for holding the head of tree shrew with high quality non-metallic materials. Moreover, this adaptor has gas anesthesia mask. The tree shrews can wake up in 2-5 minutes after the experiment. Since the PET/CT system varies in different brands, RWD provides customized adaptors for different PET/CT system. The applicable animals include rat, mouse, rabbit, cat etc.



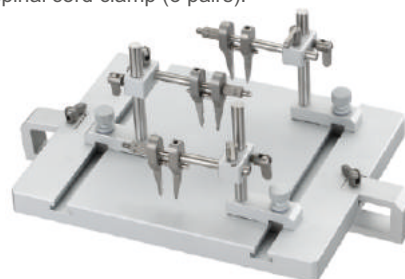
Multi-function Adaptor

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.



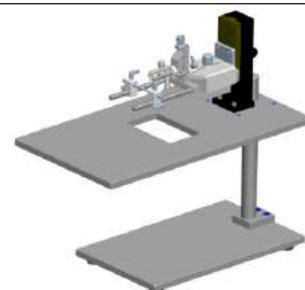
68073 Head Rotation Platform for Rats and Mice

The height of the platform can be adjusted according to the specific experimental requirements; the head holder can be adjusted in the vertical direction and 360° rotation in the horizontal direction, the platform below the head is suspended, especially for rats and mice that require 180° rotation in the head and body during surgery, such as, the experimental study on cerebral ischemia by thread embolism, real-time monitoring the changes of the blood flow in animals' head (fixed fiber on the skull surface) to determine whether the model is successful or not.

68071 Animal rotation platform - Mouse (with mouse rotation adaptor and 60° ear bar)

68074 Animal rotation platform - Rat (with rat rotation adaptor and 18° ear bar)

68073 Animal rotation platform - Rat/Mouse (with rat and mouse rotating adaptor and ear bar)



Ear Bars

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

68301



68302



68305



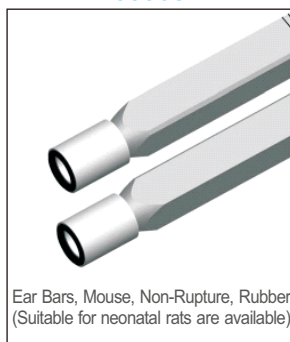
68306



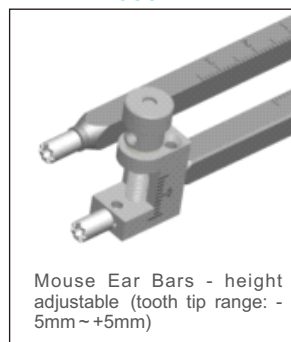
68307



68308



68314



68303



68304



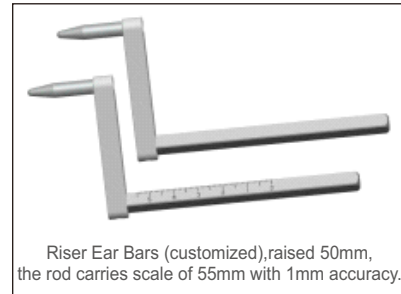
Ear Bars, Cat/Monkey, 45 Deg

68060



Ear Bar Adaptor - Rat
(with 18° ear bar)

68413



Riser Ear Bars (customized), raised 50mm,
the rod carries scale of 55mm with 1mm accuracy.

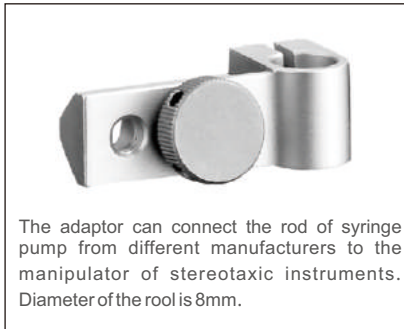
Other Accessories ►

68104 AP-Microdriver (50µm)



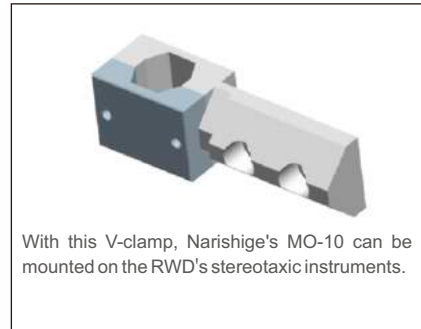
This microdriver can be fine-tuned in the range of 25mm with 50µm step. It makes the travel of manipulators more accurately on the rails of MRI compatible stereotaxic, large animal stereotaxic and rail-mounted stereotaxic instruments.

68207 V attachment



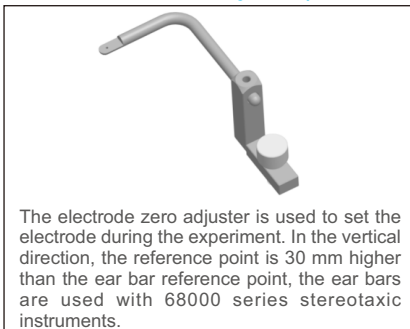
The adaptor can connect the rod of syringe pump from different manufacturers to the manipulator of stereotaxic instruments. Diameter of the rod is 8mm.

R-VTA-08 V-clamp



With this V-clamp, Narishige's MO-10 can be mounted on the RWD's stereotaxic instruments.

68399 Electrode Zero Adjuster (customized)



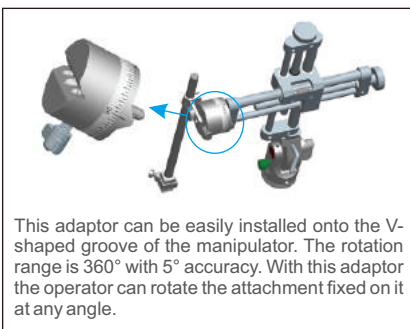
The electrode zero adjuster is used to set the electrode during the experiment. In the vertical direction, the reference point is 30 mm higher than the ear bar reference point, the ear bars are used with 68000 series stereotaxic instruments.

68400 Electrode Calibrator (customized)



This electrode angle calibrator allows the electrode to be quickly and accurately positioned at any angle. Use the calibrator to determine the coordinates of the front and back, horizontal and vertical directions, to choose the angle and move horizontally to the correct coordinate position. The manipulator is placed on the dovetail arm, after setting the angle, adjust the manipulator until the tip of the electrode moves to the correct coordinate in the vertical direction. The movable slider of the horizontal chute is provided with a vernier caliper with an accuracy of 0.1mm. When the slider is set at zero, the zero of the chute is located at the zero of the ear bar, and the rotating rods are fixed to the zero in horizontal chute and the vertical direction. It is only suitable for 68000 series stereotaxic instruments.

68412 D/V Rotation Adaptor
(2-axis Manipulator not included customized)



This adaptor can be easily installed onto the V-shaped groove of the manipulator. The rotation range is 360° with 5° accuracy. With this adaptor the operator can rotate the attachment fixed on it at any angle.

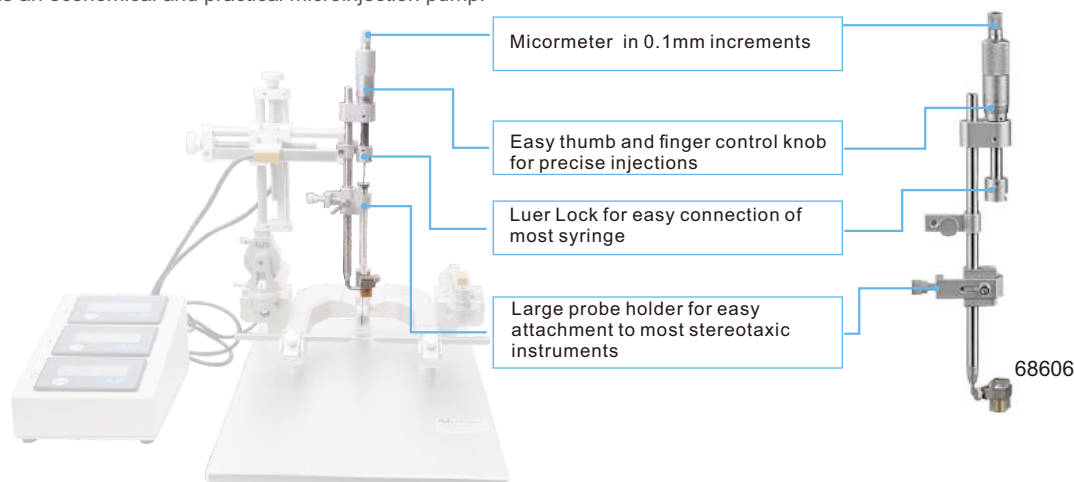
68398 A / P Zero Calibrator (customized)



The A/P zero aligner can set the electrode when the animal is fixed on the stereotaxic instruments. It contains a 255mm A/P rail, rails engraved with +100mm ~ -100mm scale, and the accuracy is 1mm; the rail fixed to a 255mmx128mm aluminum plate, and the aluminum plate is fixed with a rail and A/P rails 0 scale in the horizontal and vertical direction of the projection of the alignment of the cylinder, the position relation between the apex of the cylinder and the A/P rail is consistent with the position between the origin of the ear bar and the rail of the large animal stereotaxic instrument, a three-dimensional coordinate system is established by using the two-dimensional manipulator and the A/P rail, and the space conversion between the electrode zero and the A/P Zero calibrator can be achieved.

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!



- Precisely-controlled infusion/withdrawal of picoliter volume.
- Provides an economical means of injecting or withdrawing a calibrated volume with simple, precise manual control.
- Allows precise injection directly through the needle into the tissue. Avoids the compliance issues that arise when injections are forced through plastic tubing. Volumes as small as 200 picoliters may be infused.
- It is simple to pick up even one small sample. This results in minimal waste, preventing degradation of precious samples.
- The injector has a universal adaptor for all RWD and Hamilton 700,7000 or Gas-Tight Series syringers, ranging from 1 to 100ul sizes and enables a wide range of volumes to be delivered-both infusion and withdrawal operation.
- The Manual Stereotaxic injector is graduated in 0.01mm increments. One complete revolution advances the plunger of the syringe 0.5mm.

Microdrill

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



Specifications:

- 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 | | |

Stage Platform

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

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

Metal plate, firm

68607

Specifications:

Platform: 195mm(L) x 90mm(W) x 11mm(H)

Base plate: 195mm(L) x 110mm(W) x 12mm(H)

Lift height: 50mm

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 homeothermic 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.

Specifications:

- 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°C, 0.1°C 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 | Cat No. | Product Description | Remarks |
|-------------------|---------|--|---|
| Complete system | 69020 | ThermoStar Temperature Controller, 69023 pad incl. | A heating pad (69023) and a temperature probe (69022) are included |
| | 69026 | ThermoStar Temperature Controller, 69024 pad incl. | A heating pad (69024) and a temperature probe (69022) are included |
| | 69027 | ThermoStar Temperature Controller, 69025 pad incl. | A heating pad (69025) and a temperature probe (69022) are included |
| Temperature probe | 69022 | Temperature Probe | 1.5mm diameter, 30mm rod length, 150cm line length (suitable for 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 | |

Water Circulation System

During anesthesia, the animal surgical operation platform can choose the water circulation system to keep the animals warm.

Water circulation pump:

- High-resolution LED displays real-time water temperature.
- Water temperature setting from room temperature to 55°C.
- Intelligent keys, easy to operate, simple and intuitive.
- Alarm and off-power due to water depletion and over temperature protection assure safety.
- Power: 110v/220v, 50/60Hz, 60W;
- Dimension: 236mm*160mm*115mm.

Order Information:

| Cat No. | Product Description |
|---------|--|
| 68661 | Warm Water Recirculator, 110V |
| 68662 | Warm Water Recirculator, 220V |
| 68664 | Water Heated Surgical Bed, Flat Type, 360*300*25mm |
| 68036 | Mouse Warm Water Adaptor with 18°and 45°Ear Bars |



LED Fiber-lite Illuminator

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

The halogen fiber-lite illuminator adopts dual-pipe 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.

LED Fiber-lite Illuminator using high-power single-chip LED as the light source, with the advantages over the halogen illuminator like high light efficiency, energy saving, true "cool light" source, long life, low noise(<42db) and small size: 210mm*100mm*150mm.



Halogen fiber-lite illuminator

LED Fiber-lite Illuminator

Order Information:

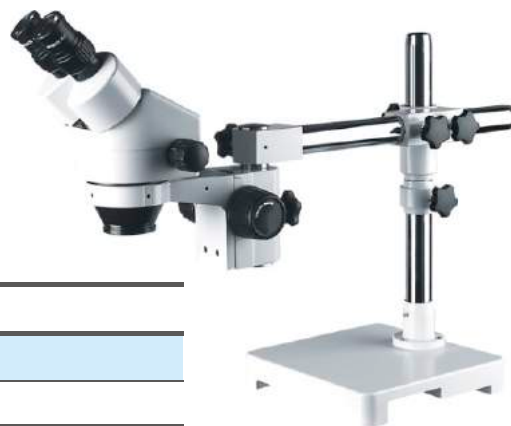
| Cat No. | Product Description | Remarks |
|---------|--|---|
| 76301 | Fiber-Lite Illuminator(150W) | Dual-Pipe Fiber Optic, Bulb and Main Engine |
| 76304 | Main Engine | |
| 76310 | Dual-Pipe Fiber Optic(Included in illuminator) | |
| 76306 | Bulb(21V 150W)-Philips | |
| 76312 | LED Fiber Optic Illuminator, 20W, 90-260V | Include Main unit, Dual Pipe and Focus End for Fiber Optic Pipe(1 pair) |
| 76313 | LED Fiber Optic Illuminator Controller, 20W, 90-260V | |
| 76314 | Double Fiber | |
| 76315 | Kohler Condenser (1) | |

Microscope

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

Order Information:

| NO. | Products Name | Products Detail |
|-----|---------------------|--|
| 1 | Eyepiece | 10X Eyepieces, View field diameter ϕ 20mm |
| 2 | Objective Lens | 0.7X-4.5X Objective lens ratio 1:6.4 |
| 3 | Binocular Drawtube | Pupil Distance 55-77mm Diopter adjustment \pm 5 ,Diopter 45°Incline 360°Spin |
| 4 | View field Range | 31.2 mm -5.1mm |
| 5 | Total Magnification | 7X-45X(10X Eyepiece),3.5X-22.5X(10X Eyepiece +0.5X Assist lens) |
| 6 | Working Distance | Working distance 100mm(10X Eyepiece),Working distance 170mm (10X Eyepiece +0.5X Assist lens) |
| 7 | Focusing Mechanism | Focusing hand wheel is adjustable |
| 8 | Universal Support | 360°Spin, Retractable |



77001

Standard Configuration: Universal support(1 unit), Binocular drawtube (1 unit), 10X Eyepiece(1pair), 0.5X Objective Lens (1 unit), Blinder (1 unit), Dust cover (1 unit), Instruction Manual (1 unit).

Configuration :

| NO. | Specification | Product name |
|-----|---------------|---|
| 1 | 77025 | Ring Fluorescence Illumination, one piece |
| 2 | 77026 | Ring LED Illumination, one piece |

On the basis of the binocular microscope, 77008 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.

77002 Binocular Surgical Microscope

77002 Binocular Surgical Microscope is a simple binocular coaxial illumination surgery microscope, with compact design and high flexibility to meet the requirements of general animal microsurgery.

Features:

- Eyepieces: 12.5X Focus length of objective: 200mm
- Working distance: 190mm Total magnification: 5.3X, 8X, 12X
- Visual field(mm): 38mm, 25mm, 17mm
- Diopter adjustment range: +5D
- Pupil distance range: 50mm~70mm
- Bulb: 12V/100W (Medical halogen lamp Bulb with coldreflection)
- Type of Illumination: 6°+ 0°cold light source coaxial illumination
- Intensity of Illumination: 20000Lx or up
- Maximum stretching radius of arm: 870mm
- Vertical movement range (from floor to front surface of big objective): 700mm~1100mm
- Range of fine focusing adjustment: 30mm
- Input voltage: AC220V \pm 10%, 50Hz \pm 1Hz Input power: 120VA
- Fuse: AC250V T1.25A Net weight: 41kg



77002

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. To reduce injury caused by animal movements. Unique design of tapered nose restrainer provide easy-access for animals, meanwhile makes animals feel safety. In addition, a vent located on nose restrainer makes the animal to breath easier. Tail is able to stretch, helped the animal to stay still for over 1 hour.

Taper restrainer is a new fixed tool design for animal injection, suitable for fast and efficient batch injection, it has the characteristics of transparent, durable, easy to clean and stable.

★Typical Application

Conscious animal non-invasive blood pressure measurements, tail blood sampling, intravenous infusion, tail root subcutaneous or intracutaneous injection, tail tenderness, animal behavior observation, etc.



Restrainer



Taper restrainer

Ordering Information:

| Specification | 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

Microinjection

Single Cannula

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



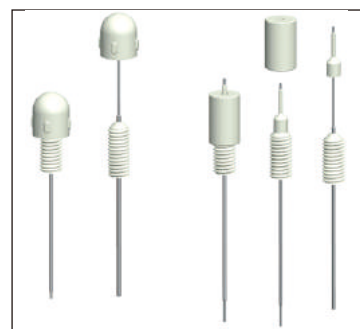
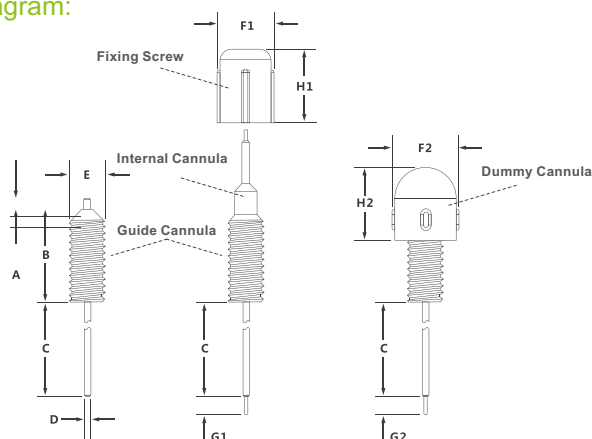
Internal cannula can be fixed into guide cannula through fixing screw and its tail end is connected with PE tube for injections. The length can be customized.

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.
- H1 - Height of Lock nut.
- F2 - External diameter of Dummy Cannulas.
- 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 | 62501 | 1 | 9 | 20 | 0.64 | 3.5 | 5.5 | 7.5 | 5 | 7 |
| 62002 | 62102 | 62202 | 62502 | 1 | 7 | 22 | 0.56 | 3.5 | 5.5 | 7 | 5 | 6.5 |
| 62003 | 62102 | 62203 | 62502 | 1 | 6 | 15 | 0.48 | 3.5 | 5.5 | 7 | 5 | 6.5 |
| 62004 | 62104 | 62204 | 62502 | 1 | 6 | 13 | 0.41 | 3.5 | 5.5 | 7 | 5 | 6.5 |
| 62005 | 62523 | 62205 | 62501 | 0 | 9 | 32 | 0.71 | 3.5 | 5.5 | 7.5 | 5.5 | 7 |

Ordering Instructions:

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

2.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.

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

4.G2-length (Unit: mm) of the protrudent Dummy Guide, 0.5 or 1.0mm is recommended.

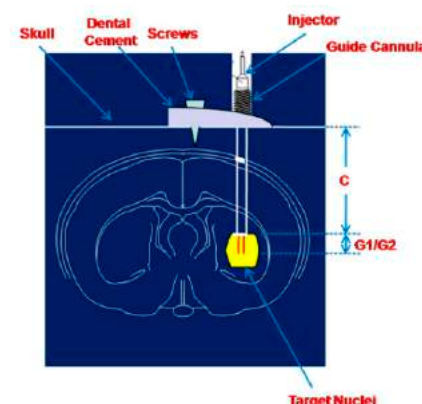


Diagram for Customization

Order information (Unit: mm):

Cannula

| Matching | Guide Cannula | Dummy Cannula (plastic) | Dummy Cannula (metal) | Internal Cannula | Fixing Screw | PE Tube |
|----------|-------------------|-------------------------|-----------------------|-------------------|---------------|-------------------|
| 1 | 62001 | 62101 | 62106 | 62201 | 62501 | 62320 |
| | OD 0.64 x ID 0.45 | OD 0.40 | OD 0.40 | OD 0.41 x ID 0.25 | OD 5.5 x L7.5 | OD 0.85 x ID 0.42 |
| 2 | 62002 | 62102 | 62107 | 62202 | 62502 | 62320 |
| | OD 0.56 x ID 0.38 | OD 0.30 | OD 0.30 | OD 0.36 x ID 0.20 | OD 5.5 x L7.0 | OD 0.85 x ID 0.42 |
| 3 | 62003 | 62102 | 62107 | 62203 | 62502 | 62320 |
| | OD 0.48 x ID 0.34 | OD 0.30 | OD 0.30 | OD 0.30 x ID 0.14 | OD 5.5 x L7.0 | OD 0.85 x ID 0.42 |
| 4 | 62004 | 62104 | 62108 | 62204 | 62502 | 62320 |
| | OD 0.41 x ID 0.25 | OD 0.20 | OD 0.20 | OD 0.21 x ID 0.11 | OD 5.5 x L7.0 | OD 0.85 x ID 0.42 |
| 5 | 62005 | 62101 | 62106 | 62205 | 62501 | 62320 |
| | OD 0.71 x ID 0.45 | OD 0.40 | OD 0.40 | OD 0.41 x ID 0.25 | OD 5.5 x L7.5 | OD 0.85 x ID 0.42 |

Notes:

1. Plastic or mental dummy cannula is optional.
2. 62320 PE tubes could be connected to syringes with needle size 0.45-0.65mm in outer diameter.
3. 62523 Dummy cannula should be used together with Dummy cannula 62105.

Screws



| Cat No. | Product Description |
|---------|---------------------|
| 62513 | Screw-M1.0xL2.0mm |
| 62514 | Screw-M1.2xL2.0mm |
| 62515 | Screw-M1.4xL2.5mm |

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).

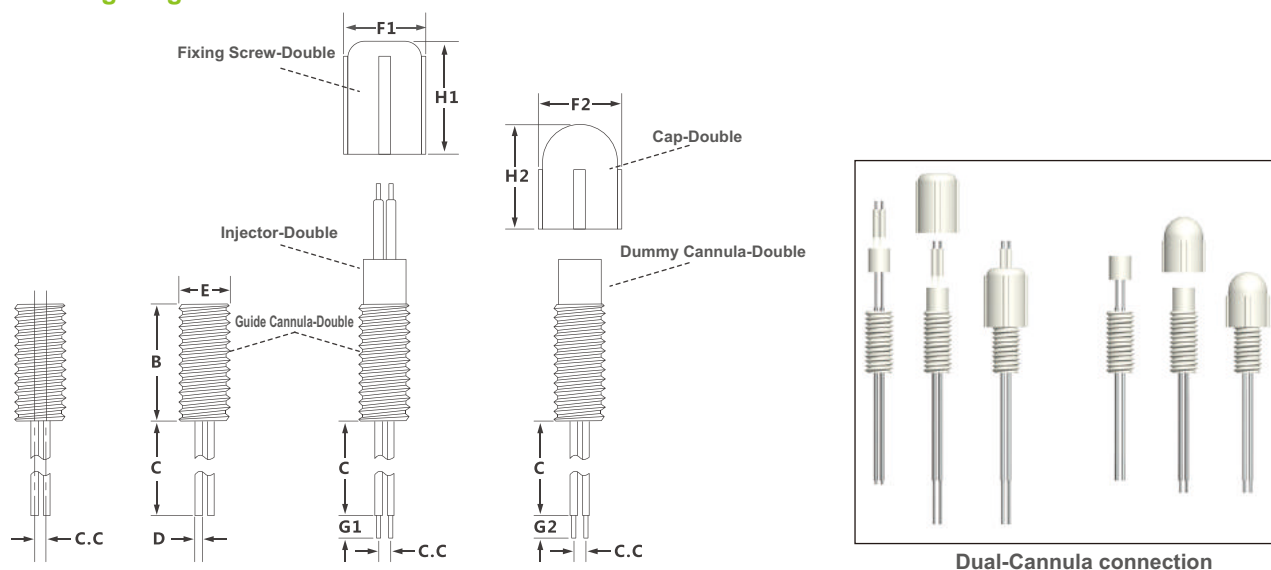
The height of cylindrical plastic pedestal of Guide cannula is different from Series I.

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:



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).
- H1 - Height of the fixing screw which is 7.5mm.
- F2 - Outer diameter of guide cannula cap and it comes with 5.5mm (when E=3.5mm) or 7.0mm (when E=5.0mm).
- 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.

Order Information:**Series I:**

| | C.C | Guide Cannula | Dummy Cannula | Injector | Cap | Fixing Screw |
|---|-----------|---------------|---------------|----------|-------|--------------|
| Guide Cannula: O.D.0.48mm x I.D.0.34mm Dummy Cannula: O.D.0.30mm Injector: O.D.0.30mm x I.D.0.14mm Cap: F2 5.5mm x H2 7.0mm (62523) F2 7.0mm x H2 7.5mm (62524) Fixing Screw: F1 5.5mm x H1 7.5mm (62521) F1 7.0mm x H1 7.5mm (62522) Plastic Pedestal of Guide Cannula: Height B = 7.8mm Diameter E = M3.5mm | C.C 0.5mm | 62021 | 62121 | 62250 | 62523 | 62521 |
| | C.C 0.6mm | 62022 | 62122 | 62250 | | |
| | C.C 0.8mm | 62023 | 62123 | 62223 | | |
| | C.C 1.0mm | 62024 | 62124 | 62224 | | |
| | C.C 1.2mm | 62025 | 62125 | 62225 | | |
| | C.C 1.3mm | 62026 | 62126 | 62226 | | |
| | C.C 1.4mm | 62027 | 62127 | 62227 | | |
| | C.C 1.5mm | 62028 | 62128 | 62228 | | |
| | C.C 1.6mm | 62029 | 62129 | 62229 | | |
| | C.C 1.8mm | 62030 | 62130 | 62230 | | |
| Plastic Pedestal of Guide Cannula: Diameter E = 5.0mm | C.C 2.0mm | 62031 | 62131 | 62231 | 62524 | 62522 |
| | C.C 2.2mm | 62032 | 62132 | 62232 | | |
| | C.C 2.4mm | 62033 | 62133 | 62233 | | |
| | 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 |
|--|-----------|---------------|---------------|----------|-------|--------------|
| Double Cannula: O.D.0.64mm x I.D.0.45mm Dummy Cannula: O.D.0.40mm Injector: O.D.0.41mm x I.D.0.25mm Cap: F2 5.5mm x H2 7.0mm (62523) F2 7.0mm x H2 7.5mm (62524) Fixing Screw: F1 5.5mm x H1 7.5mm (62521) F1 7.0mm x H1 7.5mm (62522) Plastic Pedestal of Guide Cannula: Height B = 7.8mm Diameter E = M3.5mm | C.C 0.8mm | 62037 | 62137 | 62237 | 62523 | 62521 |
| | C.C 1.0mm | 62038 | 62138 | 62238 | | |
| | C.C 1.2mm | 62039 | 62139 | 62239 | | |
| | C.C 1.3mm | 62040 | 62140 | 62240 | | |
| | C.C 1.4mm | 62041 | 62141 | 62241 | | |
| | C.C 1.5mm | 62042 | 62142 | 62242 | | |
| | C.C 1.8mm | 62043 | 62143 | 62243 | | |
| Plastic Pedestal of Guide Cannula: Diameter E = M5.0mm | C.C 2.0mm | 62044 | 62144 | 62244 | 62524 | 62522 |
| | C.C 2.2mm | 62045 | 62145 | 62245 | | |
| | 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 |
|---|-----------|---------------|---------------|----------|-------|--------------|
| Guide Cannula: O.D.0.48mm x I.D.0.34mm Dummy Cannula: O.D.0.30mm Injector: O.D.0.30mm x I.D.0.14mm Cap: F2 5.5mm x H2 7.0mm (62523) F2 7.0mm x H2 7.5mm (62524) | C.C 0.5mm | 62050 | 62121 | 62250 | 62523 | 62521 |
| | C.C 0.6mm | 62051 | 62122 | 62250 | | |
| | C.C 0.8mm | 62052 | 62123 | 62223 | | |
| | C.C 1.0mm | 62053 | 62124 | 62224 | | |
| | 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) Plastic Pedestal of Guide Cannula: Height B = 5.5mm Diameter E = M3.5mm | C.C 1.4mm | 62056 | 62127 | 62227 | 62523 | 62521 |
| | C.C 1.5mm | 62057 | 62128 | 62228 | | |
| | C.C 1.6mm | 62058 | 62129 | 62229 | | |
| | C.C 1.8mm | 62059 | 62130 | 62230 | | |
| | C.C 2.0mm | 62060 | 62131 | 62231 | | |

Series IV:

| | C.C | Guide Cannula | Dummy Cannula | Injector | Cap | Fixing Screw |
|---|-----------|---------------|---------------|----------|-------|--------------|
| 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 0.5mm | 62061 | 62161 | 62251 | 62523 | 62521 |
| | 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 (polyethylene) 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. | Cat No. | Product Description |
|-----|---------|--|
| 1 | 62320 | PEDAX 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 |

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



Syringe Pumps ▶

Multi-channel Syringe Pumps

This multi-channel syringe pump is specifically designed for those applications that require constant flow rates and precise injection delivery. It can be used for single or chronic, repeated microinjections through a cannula system.

Features:

- Easy to install syringes.
- Straightforward operation: simply enter syringe diameter, injection rate and Volume to start injection.
- Storage of customized parameters.
- Display of real time injection status on LCD screen.
- Built-in standard syringe parameters, for convenient use.

Specifications:

- Accuracy: <1%
- Repeatability: $\pm 0.1\%$
- Syringe range: 10 μ l-140ml
- Flow rate: 0.001 μ l/min-138.7ml/min
- Stroke distance: 0.039 μ m/step
- Stroke rate: 0.0094mm/min-87.211mm/min
- Dimension: 27cm×25cm×12cm
- Linear force: 18Kg
- LCD screen: 128×64px
- Five customized parameters can be stored
- RS232 interface is used to communicate with the computer
- RS485 interface is used for the communication between machines
- Interface: RS232, RS485
- Running temperature: 20-40°C



R404
(Syringe does not include)



R452
(Syringe does not include)

Order Information:

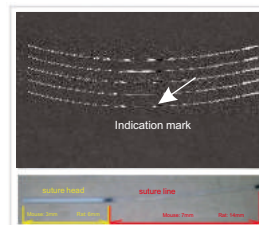
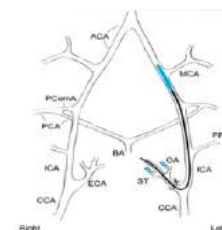
| Cat No. | Product Name | Remarks |
|---------|--------------------------------------|--|
| R404 | 4ch Syringe Infusion Pump | Single motor, simultaneous injection of four syringes(10 μ l-140ml) |
| R452 | 2ch Syringe Infusion/Withdrawal Pump | Single motor, simultaneous injection or withdrawal of two syringes(10 μ l-140ml) |

Physiological And Pharmacological

MCAO Sutures

To meet the need for novel therapeutic approaches, experimental stroke research frequently employs rodent models of focal cerebral ischaemia. Proximal occlusion of MCAO via the intraluminal suture technique (so called Middle Cerebral Artery Occlusion filament or suture model) is probably the most frequently used model in experimental stroke research. A silicon coated filament is introduced into the common carotid artery and advanced along the internal carotid artery into the Circle of Willis, where it blocks the origin of the middle cerebral artery. Therefore, MCAO Sutures are the key materials for the stroke modeling on rats, mice and other animals.

RWD MCAO suture utilizes high-quality silicon rubber-coated monofilaments 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 0.21 mm to 0.50 mm; Length of suture from 3-5cm.



Specifications:

1. Soft silicon rubber-coated monofilaments effectively reduced the occurrence of the insufficient occlusion by increasing the suture dimension but not rigidity. This results the blood vessel to be completely occluded and ensures the success of cerebral ischemia modeling.
2. Surgeon can easily sense the inserting resistance when reach its targeted position, because of the softness of RWD suture. Insert the suture until the position close to the bifurcation of external carotid artery and carotid artery show in the picture.
3. RWD suture has been ultraviolet sterilized thoroughly, therefore, it can be use directly upon open the package.
4. The suture can be customized according to specific demands.

Order Information:

| No. | Specification | Diameter of Head end (mm) | Diameter of suture body (mm) | Length (cm) | Animal' s weight (g) | Packing (pcs) | |
|-----|-----------------|-----------------------------|--------------------------------|---------------|------------------------|-----------------|-------|
| 1 | MSMC21B102PK50 | 0.21±0.02 | 0.102 | 3 | 19-20.5 | 50 | Mouse |
| 2 | MSMC21B102PK100 | | | | | 100 | |
| 3 | MSMC22B104PK50 | 0.22±0.02 | 0.104 | 3 | 20.5-22 | 50 | |
| 4 | MSMC22B104PK100 | | | | | 100 | |
| 5 | MSMC23B104PK50 | 0.23±0.02 | 0.104 | 3 | 22.5-24 | 50 | |
| 6 | MSMC23B104PK100 | | | | | 100 | |
| 7 | MSMC24B104PK50 | 0.24±0.02 | 0.104 | 3 | 24-26 | 50 | |
| 8 | MSMC24B104PK100 | | | | | 100 | |
| 9 | MSMC25B104PK50 | 0.25±0.02 | 0.104 | 3 | 26-29 | 50 | |
| 10 | MSMC25B104PK100 | | | | | 100 | |
| 11 | MSMC27B104PK50 | 0.27±0.02 | 0.104 | 3 | 30-35 | 50 | Rat |
| 12 | MSMC27B104PK100 | | | | | 100 | |
| 13 | MSRC35B235PK50 | 0.35±0.03 | 0.235 | 5 | 190-210 | 50 | |
| 14 | MSRC35B235PK100 | | | | | 100 | |
| 15 | MSRC40B260PK50 | 0.40±0.03 | 0.26 | 5 | 235-255 | 50 | |
| 16 | MSRC40B260PK100 | | | | | 100 | |
| 17 | MSRC43B260PK50 | 0.43±0.03 | 0.26 | 5 | 270-280 | 50 | |
| 18 | MSRC43B260PK100 | | | | | 100 | |
| 19 | MSRC47B260PK50 | 0.47±0.03 | 0.26 | 5 | 300-310 | 50 | |
| 20 | MSRC47B260PK100 | | | | | 100 | |
| 21 | MSRC50B260PK50 | 0.50±0.03 | 0.26 | 5 | 350-400 | 50 | |
| 22 | MSRC50B260PK100 | | | | | 100 | |

Note: Customized service is available.

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.



Order Information:

| Cat No. | 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 | 15.9 | 12.7 | 36.6 | 24.5 | 7.61 | |
| 68710 | Brain Matrix, Rat, 175-300g, Sagittal, 1mm, Stainless steel | 4.76 | 15.9 | 12.7 | 36.6 | 24.5 | 7.61 | |
| 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 | 15.9 | 12.7 | 36.6 | 24.5 | 7.61 | |
| 68716 | Brain Matrix, Rat, 175-300g, Sagittal, 0.5mm, Stainless steel | 4.76 | 15.9 | 12.7 | 36.6 | 24.5 | 7.61 | |
| 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 | |

Fiber Optogenetic System

Optogenetics Stimulation

The application of optogenetics has been rapidly developing since 2010, its research field covers several classical experimental animal species, such as flies, *C. elegans*, mice, rats, zebrafish, primates (Monkey, cynomolgus monkey, rhesus monkey, etc.). These animals generally have the advantages of short developmental and reproductive cycle and easy integration of foreign genes, thus facilitating the introduction of Photosensitive Protein Gene and the screen of the state of expression.



Common configuration options:

| No. | Product Name | Cat No. | Quantity | Remarks |
|-----|---|-------------------|----------|----------|
| 1 | Arbitrary Waveform/Function Generator-20MHz | AFG2021-SC | 1 | |
| 2 | 473nm Blu-ray Laser-50mW/power adjustable/stability<5% | R-LG473-50-A5 | 1 | Optional |
| 3 | 532nm Green Laser-50mW/power adjustable/stability<5% | R-LG532-50-A5 | 1 | |
| 4 | 593nm Yellow Laser-50mW/power adjustable/stability<5% | R-LG593-50-A5 | 1 | |
| 5 | FC/PC Optical Fiber Patch Cables(m) - 200um, 0.22NA, 1m | R-FC-PC-N2-200-L1 | 1 | |
| 6 | FC-FC Optic Fiber Commutator | R-FC-1x1 | 1 | |
| 7 | Optic Fiber(m), FC/PC Adapter with Ø1.25 mm Ceramic Ferrule, 200um Core, 0.22NA, 1m | R-FC-L-N2-200-L1 | 1 | |
| 8 | Ceramic Sleeves, Ø1.25mm, pkg of 20pcs | R-MS-1.25 | 1 | |
| 9 | Ceramic Ferrule-Ø1.25mm/200um/0.22NA (20/pkg) | R-FOC-L200C-22NA | 10 | |
| 10 | Ceramic Ferrules Protective Cap, Ø1.25mm, pkg of 200pcs | R-DC-1.25 | 1 | |
| 11 | Fiber Stripper- suitable for 100um - 600um fiber | R-OFT-600 | 1 | |
| 12 | Laser Goggles against Green and Yellow Light | R-LS-Y | 1 | Optional |
| 13 | Laser Goggles against Blue and Green Light | R-LS-G | 1 | |
| 14 | Laser Power Meter -40mW | LP-1 | 1 | |

Waveform Generator

Adjusting and controlling the output of Laser, like frequency of output, duty ratio, etc.



Laser

Features:

- Wavelength: Blue Light 473nm, Green Light 532nm, Yellow Light 593nm;
- Stability: <10%, <5% and <1%;
- Output power: 0-50mW, 0-100mW and 0-200mW;
- Connect a variety of fibers, FC-PC connectors;
- Connect the waveform generator or stimulator to control the light output;
- Reliable performance, long lifetime, average life expectancy is more than 10 thousand hours;
- Exquisite appearance, compact size, portable;



Laser Power Meter

Features:

- Using a silicon photodiode probe, applicable to multiband measurement with broad spectrum range;
- Short response time, good thermal stability, small volume, convenient installation and fixation;
- Convenient to operate with digital display, applicable to the measurement on a variety of laser power;
- Automatic shut down (about 30 minutes) to save battery power.

Specifications:

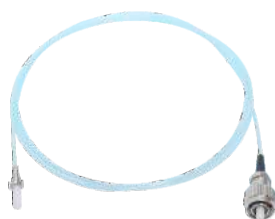
| | |
|----------------------|--|
| Spectral range | 400-1100nm |
| Models | LP-1 |
| Measure range | 0-40μW,0-400μW,0-4mW,0-40mW multiple ranges can be selected. |
| Measurement accuracy | 0.01μW |
| Optical probe | silicon photodiode probe(φ9mm) |
| Measurement error | ±5% |



Application: Accurately measure the power of continuous laser stable temperature.

Optical Fiber and Patchcord

- Low insertion loss • Good Repeatability • High return loss • Stable temperature
- Good mutual insertion performance • Optional fiber
- Applicable wavelength: 400nm-1100nm • Numerical aperture: 0.22, 0.37
- Default length is 1m, Optical fiber length: 0.5m-5m, step 0.5m (customized)
- Core diameter: 100μm, 200μm, 300μm, 400μm



Order Information:

| Model No. | Product Description |
|-------------------|---|
| R-FC-PC-N2-100-L1 | FC/PC Optical Fiber Patch Cables (m) - 100um, 0.22NA, 1m |
| R-FC-PC-N2-200-L1 | FC/PC Optical Fiber Patch Cables (m) - 200um, 0.22NA, 1m |
| R-FC-PC-N3-200-L1 | FC/PC Optical Fiber Patch Cables (m) - 200um, 0.37NA, 1m |
| R-FC-L-N2-100-L1 | Optic Fiber(m), FC/PC Adapter with Ø1.25 mm Ceramic Ferrule, 100um Core, 0.22NA, 1m |
| R-FC-P-N2-100-L1 | Optic Fiber(m), FC/PC Adapter with Ø2.5 mm Ceramic Ferrule, 100um Core, 0.22NA, 1m |
| R-FC-L-N2-200-L1 | Optic Fiber(m), FC/PC Adapter with Ø1.25 mm Ceramic Ferrule, 200um Core, 0.22NA, 1m |
| R-FC-L-N3-200-L1 | Optic Fiber(m), FC/PC Adapter with Ø1.25 mm Ceramic Ferrule, 200um Core, 0.37NA, 1m |
| R-FC-P-N2-200-L1 | Optic Fiber(m), FC/PC Adapter with Ø2.5 mm Ceramic Ferrule, 200um Core, 0.22NA, 1m |
| R-FC-P-N3-200-L1 | Optic Fiber(m), FC/PC Adapter with Ø2.5 mm Ceramic Ferrule, 200um Core, 0.37NA, 1m |



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 No. | Product Description |
|-----------|------------------------------|
| R-FC-1x1 | FC-FC Optic Fiber Commutator |

Ceramic Ferrule

Specifications:

- Material: Ceramic
- Applicable wavelength: 400-2200nm
- Core diameter: 100um, 200um, 300um, 400um
- Numerical aperture: 0.22, 0.37
- Outer diameter: 1.25mm (6.4mm long) , 2.5mm (10.5mm long)
- Core-inserting length: 10.5mm (customized)
- Optical fiber length: 2mm-20mm, step 0.5mm (customized)



Order Information:

| No. | Model No. | Product Description |
|-----|------------------|---|
| 1 | R-FOC-L200C-37NA | Ceramic Ferrule-Ø1.25mm/200um/0.37NA (20/pkg) |
| 2 | R-FOC-L300C-37NA | Ceramic Ferrule-Ø1.25mm/300um/0.37NA (20/pkg) |
| 3 | R-FOC-L400C-37NA | Ceramic Ferrule-Ø1.25mm/400um/0.37NA (20/pkg) |
| 4 | R-FOC-F200C-37NA | Ceramic Ferrule-Ø2.5mm/200um/0.37NA (20/pkg) |
| 5 | R-FOC-F300C-37NA | Ceramic Ferrule-Ø2.5mm/300um/0.37NA (20/pkg) |
| 6 | R-FOC-F400C-37NA | Ceramic Ferrule-Ø2.5mm/400um/0.37NA (20/pkg) |
| 7 | R-FOC-L100C-22NA | Ceramic Ferrule-Ø1.25mm/100um/0.22NA (20/pkg) |

| No. | Model No. | Product Description |
|-----|------------------|---|
| 8 | R-FOC-L200C-22NA | Ceramic Ferrule-Ø1.25mm/200um/0.22NA (20/pkg) |
| 9 | R-FOC-L300C-22NA | Ceramic Ferrule-Ø1.25mm/300um/0.22NA (20/pkg) |
| 10 | R-FOC-L400C-22NA | Ceramic Ferrule-Ø1.25mm/400um/0.22NA (20/pkg) |
| 11 | R-FOC-F100C-22NA | Ceramic Ferrule-Ø2.5mm/100um/0.22NA (20/pkg) |
| 12 | R-FOC-F200C-22NA | Ceramic Ferrule-Ø2.5mm/200um/0.22NA (20/pkg) |
| 13 | R-FOC-F300C-22NA | Ceramic Ferrule-Ø2.5mm/300um/0.22NA (20/pkg) |
| 14 | R-FOC-F400C-22NA | Ceramic Ferrule-Ø2.5mm/400um/0.22NA (20/pkg) |

Ceramic Cannula & Ceramic Ferrules Protective Cap

Ceramic Cannula: With Ø1.25 mm and Ø2.5 mm two specifications, suitable for temporary connections of two optical fibers, to build a simple, quick release connection structure, standard length is 11.5mm.

Ceramic Ferrules Protective Cap: Use to protects the Ceramic Ferrules PC/UPC end face, as well as the ST/SC/FC patch cord.



Order Information:

| Model No. | 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) |



Fiber Tongs

Product Features:

- Suitable for 100um-800um fiber for stripping fiber coating
- Does not damage the fiber
- All cutting surfaces have precision mechanical tolerances to ensure clean, smooth operation
- According to the ergonomic design of the handle, comfortable grip
- When not working, the blade lock is closed



R-OFT-600

Laser Goggles

Features:

- Comfortable shape • Wide frame • Wide viewing angle
- High-definition • Anti-extrusion deformation material

R-LS-Y Laser Goggles against Green and Yellow Light
Transmittance T<1%, Applicable wavelength range: 528 nm-561 nm and 572nm-584nm

R-LS-G Laser Goggles against Blue and Green Light
Transmittance T<1%, Applicable wavelength range: 200nm-550nm.



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