

### Small Animal Anesthesia Machine RWD510

The Small Animal Anesthesia Machine RWD510 is designed for safe, simple and controllable inhalation of isoflurane or Halothane anesthesia for rats, small rodents, etc. It includes an anesthesia tank and oxygen flowmeter, powered by flow air in the oxygen jar, mixed the oxygen and isoflurane in the anesthesia tank. Animals inhale the gas through the mask or ventilator. It can manage short-term and long-term controllable anesthesia and precise anesthesia volume, within 2 minutes the animal can come to alive once finishes the anesthesia. Both opened mask and professional ventilation can be applied to this Anesthesia Machine.



Small Animal Anesthesia Machine RWD510

#### Features:

1. Non-rebreathing anesthetic delivery system.
2. Simple flip lever locking mechanism allows you to easily seal the absorber canister.
3. Easy-to-view inhalation/exhalation valves allow easy monitoring of respiration for animal safety.

This machine includes isoflurane or Halothane vaporizer, stable output, high impermeability and reliable safety, no disturbance by the change of flow rate, temperature and pressure. It possesses the following features:

1. Automatic temperature compensation
2. Automatic pressure compensation
3. Precise regulation ensures the accuracy of output
4. Full lock equipment prevents unexpected drug volatilization
5. Clear window is easy for monitoring drug usage
6. Simple inhalation device is convenient to operate



Isoflurane



Anesthesia inducing box



Multipled Parts

#### Ordering information :

Part NO.	Description
RWD510	Small animal Anesthesia Machine
R510-11	Anesthesia Vaporizer
R510-12	Acrylic Resin Oxygen Flowmeter
R510-20	Anesthesia Multipled Parts
V100	Anesthesia inducing box-rat (24x12x18cm)
V101	Anesthesia inducing box-rabbit/cat (40x18.5x25cm)
V102	Anesthesia inducing box-mouse (15x10x10cm)
V103	Anesthesia inducing box-big animal (50x30x30cm)

### Gas Anesthesia Scavenging System

The Gas Anesthesia Scavenging System provides an extremely easy and practical method of anaesthetizing small mammals like mouse, rat and cat. It is able to deal with any organic anesthetic agent (e.g. Halothane, Isoflurane, Sevoflurane etc.). In practice, the anesthetic vaporizer is administered to the animal via the inner tube and excess vapor is scavenged via the outer tube of the mask. This excess is then drawn through a filter which is a canister containing charcoal which adsorbs the anesthetic agent very efficiently onto the surface of specially treated charcoal granules.

It includes Gas Scavenger, Gas Anesthesia Canister and masks.



### Gas Anesthesia Scavenging System

(including six Gas Filter Canister, One Gas Evacuation Apparatus, One Mask)

Ordering information:

Part NO.	Description
R510-17	Gas Evacuation System-Rat
R510-18	Gas Evacuation System-Mouse
R510-19	Gas Evacuation System-Cat
R510-30	Gas Evacuation Apparatus
R510-31	Gas Filter Canister
R510-13	Accessories for Anesthesia Machine

### Gas Anesthesia Mouse/ Rat Mask 68601/68602



68601

Gas Anesthesia Mouse Mask



Mouse Anesthesia Mask

(For Mouse Adaptor 68009, 68010, 68052)

68602  
Gas Anesthesia Mouse Mask

Anesthetic is required in conducting the experiment with the Stereotaxic Instrument, thus the anesthesia mask is used to match with the anesthesia machine, which prevents the researchers' exposure to the anesthetic gas. Be together with the Gas Anesthesia Mask, the platform provides precise and secure positioning for mouse anesthesia and surgery. It is installed in the adaptor, with the cone opening toward the open "U". It is available for mouse and rat.

68601 used for adaptor 68020, 68030, 68050, 68070;

68602 used for adaptor 68020, 68050, 68070;

68617 used for adaptor 68009, 68010, 68052.

### Platform for Rat & Mouse Mask



68620

Adjustable Platform for Rat & Mouse Mask

The adjustable platform is used to position the hole of the rat or mouse mask. So the height of the hole is correct for the rat's or mouse's mouth.



Mouse/Cat/Rat Mask



68614

Mask Ordering Information:



Mouse/Rat/Cat Mask

(For Gas Anesthesia Scavenging System)

Part NO.	Description
68610	Rat/Cat Mask-Dia 22mm
68611	Cat/Rabbit Mask-Dia 28mm
68612	Cat/Dog Mask-Dia 35mm
68613	Neonatal Mouse Mask-Dia 5mm
68614	Rat Taper Mask
68615	Mouse Mask-Dia 10mm
68616	Rat Mask-Dia 15mm
68617	Mouse Anesthesia Mask (For Mouse Adaptor 68009, 68010, 68052)
R510-32	Mouse Mask-Dia. 9mm, SGL Tube & Connector
R510-33	Rat Mask-Dia. 18mm SGL Tube & Connector
R510-34	Dog Mask-Dia. 54mm SGL Tube & Connector
R510-35	Mouse Mask-Dia. 9mm DUL Tube & Connector
R510-36	Rat Mask-Dia. 18mm DUL Tube & Connector
R510-37	Dog Mask-Dia. 54mm DUL Tube & Connector
R510-38	Rat/Cat Mask-Dia. 24mm SGL Tube & Connector
R510-39	Cat/Rabbit Mask-Dia. 31mm SGL Tube & Connector
R510-40	Cat/Dog Mask-Dia. 40mm SGL Tube & Connector
R510-41	Rat/Cat Mask-Dia. 24mm DUL Tube & Connector
R510-42	Cat/Rabbit Mask-Dia. 31mm DUL Tube & Connector
R510-43	Cat/Dog Mask-Dia. 40mm DUL Tube & Connector



#### Small Animal Ventilator RWD407

Animal ventilator is the most popular instrument for assisting animal breathe, largely applied to research in the field of Basic Medicine, Clinical Medicine and Animal Medicine and Artificial Respiration, Respiration Management, Animal Emergency Aid and Respiratory Treatment in the animal clinical surgery. Small Animal Ventilator RWD407 is newly designed by RWD Life Science for small animals from 250g to 10kg (22lb) such as rat, guinea pig, rabbit, cat, dog, etc. The operating principle of this ventilator is based on electric generator as its power and driving circuit control, rhythmic air output flow which, through a gas tube, the gas enters into and enlarges the animal lung to finally achieve gas exchange. RWD407 ventilator critically adopts imported motor, speed reducer and controller, no need of external high pressure air input. This instrument enjoys the advantage of easy to use, low noise, precise control and extended-year high stability.

#### Parameters:

RWD407 Small Animal Ventilator comes standard with two piston and cylinder assemblies. The smaller piston (which comes installed) allows tidal volume to be set from 0.5 to 5.0cc in 0.5cc increments and the larger cylinder allows tidal volumes of 3.0 to 30.0cc in 0.3cc increments. Setting the cylinder stroke between graduations is possible to achieve finer resolution in tidal volume settings.

#### Accessories:

Medical silicon tube (ID 3mm)  
Three channel valve with Y adapter (PP-ID 1/8")  
Male luer adapter (PP-ID 1/8")  
Rat cannula tube

#### Features:

- ◆ Numerical LED to display the respiratory rate
- ◆ Respiratory rates set from 18-150 strokes/minute
- ◆ Volume and rate settings can be adjusted while the ventilator is running.
- ◆ Four gas inlet and outlet ports: supply gas, gas out (to animal), gas return (from animal) and ventilator exhaust
- ◆ The ventilator exhaust can be attached to a column of water to achieve PEEP (positive end expiratory pressure) when long term animal ventilation is necessary
- ◆ Monitor the PEEP, new tube coupling can easily apply to different sized tube
- ◆ The permanent calibrated volume on the air pump will not be damaged
- ◆ Volume and speed apply the linear control mode.

### Mouse Ventilator RWD405

Mouse ventilator RWD405 is newly designed by RWD Life Science for mouse and neonate rat.



### Features

The RWD405 Ventilator features a numerical LED to display the respiratory rate which can be set from 18 to 150 strokes/minutes. Volume and rate settings can be adjusted while the ventilator is running. The piston travels to the end of the cylinder completely emptying the cylinder and minimizing the dead space of the breathing circuit. The RWD405 Ventilator has four gas inlet and outlet ports: supply gas in, gas out (to animal), gas return (from animal) and ventilator exhaust. The ventilator exhaust can be attached to a column of water to achieve PEEP (positive end expiratory pressure) when long-term animal ventilation is necessary. RWD405 has the ability to monitor PEEP. New tubing graduated sizing connectors that accommodate different size tubing easily. Permanent etched volume graduations on the cylinder so they can't rub off. Volume and rate control are linear.

### Specifications:

The Model RWD405 Ventilator comes standard with one piston and cylinder assemblies.

This ventilator allows tidal volumes to be set from 0.1 to 1.0 cc in 0.1 cc increments. Setting the cylinder stroke between gradations is possible to achieve finer resolution in tidal volume settings.

### Ordering Information :

Accessories:  
 Medical silicon tube (ID 1.5-0.8mm)  
 Three channel valve with Y adapter (PP-ID 1/16")  
 Male luer adapter (PP-ID 1/16")  
 Micro cannula tube-20G

Part NO.	Description
RWD405	Mouse Ventilator-220V
RWD405V	Mouse Ventilator-110V
RWD407	Small Animal Ventilator-220V
RWD407V	Small Animal Ventilator-110V

## Microdialysis System

Microdialysis is a technique to monitor the chemistry of the extracellular space in living tissue. It gives you a preview of what goes on in tissues before chemical events can be reflected as changes in systemic blood levels. Microdialysis has been used to study brain neurophysiology and the release of neurotransmitters, monoamines and metabolites, amino acids and other small endogenous compounds. The system is used for monitoring the specific tissue of subcutaneous, hippocampus, brainstem, etc. The basic research portfolio includes a broad range of probes, pumps, fraction collectors, analyzers.

## Syringe Pump

RWD designed this compact, flexible, dual syringe pump with low pulse-free flow rates suitable for microdialysis and other low flow experiments. The flow rates are shown on the LED displays. It fits for the microdialysis syringe at brain, blood vessel and other tissues.



### Features:

- ◆ Holds two syringes and controls independently 1-10ml syringes
- ◆ Flow rate ranges 0.01uL/min to 20uL/min
- ◆ Advance rate: 2.4um/min-1.2mm/min
- ◆ Power: 10W, remote control capable
- ◆ Quick advance and withdrawal
- ◆ Human-machine interface: preset infusion volume, rate and syringe inner diameter
- ◆ Key settings: start, stop, quick advance, quick withdrawal, confirm, digit key
- ◆ Power-fail memory, EEPROM save the presetting parameters

Microdialysis System includes:  
Microdialysis Syringe Pump  
Microdialysis Probes and Cannula  
System for Freely Moving Animals

Accessories:  
Syringe, Tubing, Adaptors, Screw, collector

### Brainlink Microdialysis Probes



The Univentor 820 Microsampler is a fraction collector designed to collect liquid samples from 1-300 µL with the possibility of keeping them cool. It can collect 20 samples from one source (Single Mode), for example, a microdialysis probe or 2x10 samples from two sources (Dual Mode) at the same time. It is very user-friendly, having a self-explanatory control panel on which collection time (up to 99 minutes) can be set, and refrigeration (+8°C) can be switched on or off. It operates as a stand-alone instrument; an external TTL signal may be used to control the action of the collectors. Microsampler with Syringe Pump the system can be computer-controlled via RS-232; which enables the user to customize the collection process. This Microfraction Collector is small, compact and has low noise.

#### Specifications:

Dimensions: 150(W)x130(D)x110(H) mm

Weight: 2.2 kg

Temperature control: +8°C with room temperature not exceeding 28°C

Maximum collection time: 99 Minutes

Minimum collection volume: 1 µL

Number of fractions: 1x20 vials or 2x10 vials

### MetaQuant Probes

The shafts made from fused silica tubing (outer diameter = 0.45 mm) and consist of two inlet tubings: one for the slow flow (0.15 µL/minute) and the other for the carrier flow (0.8 µL/minute) and the outlet tubing.



#### Conventional Microdialysis Probes

These are available with inlet and outlet. The shafts made from fused silica tubing and the outer diameter is 0.45 mm. Number of standard membrane lengths are available: 1, 1.5, 2, 3, 4 and 5 mm made from polyacrylonitrile and regenerated cellulose. Guide cannulas are available from 1, 2, 3 to 10 mm with corresponding dummy.

### MetaQuant Probes

The shafts made from fused silica tubing (outer diameter = 0.45 mm) and consist of two inlet tubings: one for the slow flow (0.15 µL/minute) and the other for the carrier flow (0.8 µL/minute) and the outlet tubing.



#### Materials

Shaft: Fused silica tubing (outer diameter 0.45 mm)

Inlet(s)/outlet: PEEK

Membranes: Polyacrylonitrile (PAN, outer diameter 300 µm, cut-off 45 kDa)

Regenerated Cellulose (RC, outer diameter 220 µm, cut-off 13 kDa or 18 kDa)

#### Available lengths

Shaft: 3.0 mm to 15.0 mm

Membrane: 1.0 mm to 6.0 mm

#### Guides with style

Guides compatible for conventional and MetaQuant microdialysis probe.



#### Used materials:

Shaft guide: PEEK

Dum: SS

### System for Freely Moving Animals

System for Freely Moving Animals enables Microdialysis studies on conscious, small laboratory animals over long periods of time. The animal bears small burden with the light jacket. The swivel is composed of stainless steel and quartz, with small void volume, pressure resisting, not easy to leak. Includes: Plastic Bowl, Swivel Assembly, Balance arm, Tubing.



System for Freely Moving Animals



Tubing Adapters

FEP Tubing

Stereotaxic Instruments are the basic research equipments in the study of Neurotomy, Neurophysiology, Neuropharmacology and Neurosurgery. Based on its multifunction, it is used in establishing the animal model of Parkinson's disease, Epilepsy and Intracerebral Neoplasms and the research of Neural Stem Cells Transplants as well as Cerebral Ischemia.

68000 series Stereotaxic Instruments from RWD are developed under the guidance of neuroscience experts. The basic U frame used in this instrument provides easy access to all-directional operation on animal and it is mounted directly to the base plate. Various adaptors are available for use with rat, mouse, cat, guinea pig, gecko and small bird. We develop a variety of cannula and electrode holders for different research. We also welcome and supply custom design for Stereotaxic accessories.



68001  
Stereotaxic, SGL Manip 18deg.

Configuration for 68001 Stereotaxic, SGL Manip 18deg.

(3) 68021-Rat Adaptor-Nose Clamp

(4) 68201-Probe Holder-Corner



68002  
Stereotaxic, Dual Manipulator 18Deg.

#### Features:

- Adaptors available for use with rats, mice, birds, cats, dogs, monkeys, rabbits, geckos, guinea pigs and other species
- 80mm of vertical, lateral and anterior-posterior travel
- 180° rotation and lock at any angles vertical
- 360° rotation and lock at any angles level
- Syringe pump, micro camera and drill can be attached to the Stereotaxic Instruments directly
- Dual leads screws allow the most stable and accurate movement
- Maintain accuracy and flexibility under different temperatures. With advanced surface processing technique, base and frame are easy to clean
- Available for various animals with the extended base plate 400mm X 255mm
- The Unique anti-clockwise mark engraved in the knob signifying vertical operation effortless
- Vertical lock and fixing knob are separated to ensure accurate position at any angle
- The precisely designed rotary knob and the U-frame supply sufficient space for the anterior-posterior operation
- Laser engraved scales and darkened rod make numbers easy to read
- Curve design of nose clamp fixes the head of the animals more tightly.
- Use plate pressing rather than clamping in locking the Ear bar. Without the embedded spring, the knob and the lead screw connect compactly

#### Configuration for 68002 Stereotaxic, Dual Manipulator 18deg.

- 68802-Stereotaxic Basic Module (Including U-Frame and Base Board, Dual Manipulator)
- 68301-Ear Bars, Pairs, Rat, 18Deg.
- 68021-Rat Adaptor-Nose Clamp
- 68201-Probe Holder-Corner

#### Electrode Angle Calibrator 68400

The Electrode Angle Calibrator 68400 provides a quick and reliable method for accurate placement of electrodes at any angle; including right and compound angles. It can help to determine the coordinate position both in level and vertical. The manipulator arm of calibrator is mounted on the axis. While angle set, regulate the manipulator arm, moving the tip of electrodes to the correct coordinate at vertical direction.

A scale vernier with 0.1mm calibration is mounted on the movable sliding block in level. When sliding block set at 0, the Zero point of slide way and ear bar coincides. Level slide way and the rotation bar at vertical fix on the Zero. This Calibrator is adapted exclusively for use with the 68000 series stereotaxic instrument.



68400  
Electrode Angle Calibrator

Ordering Information	Description
68001	Stereotaxic, SGL Manipulator 18Deg
68002	Stereotaxic, Dual Manipulator 18Deg
68005	Stereotaxic, SGL Manipulator 45Deg
68006	Stereotaxic, Dual Manipulator 45Deg
68012	Stereotaxic, SGL Manipulator/mouse 68010
68013	Stereotaxic, Dual Manipulator/mouse 68010
68037	Stereotaxic, SGL Manipulator/mouse 68030
68038	Stereotaxic, Dual Manipulator/mouse 68030
68400	Scaling block for stereotaxic instruments
68401	Manip, 3AXES, LH (not including 68201)
68402	Manip, 3AXES, RH (not including 68201)
68501	Stereotaxic W/O Manip. (UFrame, Rat adaptor & Board)
68502	Stereotaxic W/O Manip. (UFrame, Mouse adaptor & Board)



#### 68025 Digital Stereotaxic, Desktop, SGLM, 18Deg

Digital Stereotaxic, Desktop features all the characteristics of the Standard Stereotaxic Instruments, and it distinguishes itself for a sealed electronic sensor and compact LCD display, which setup independently. The easy-to-read digital display offers 10 micron resolution in all three axes. And the zeroing function for targeting specific coordinates simplifies the experiment. With battery instead of AC power, this instrument does not generate electronic noise, which makes it applicable for the electrophysiology experiment and keeps the workbench tidy. The Standard Stereotaxic Instrument can be updated to Digital Stereotaxic with the Desktop Digi.SGLM, Module.



68025

Digital Stereotaxic, Desktop, SGLM, 18Deg.

## Features

- Adaptors available for use with rats, mice, birds, cats, geckos, guinea pigs and other species;
- 80mm of vertical, lateral and anterior-posterior travel;
- 180° rotation and lock at any angles vertical;
- 360° rotation and lock at any angles level;
- Syringe pump, micro camera and drill can be attached to the Stereotaxic Instruments directly; Dual-
- leads screws allow the most stable and accurate movement;
- Maintains accuracy and flexibility under different temperatures;
- With advanced surface processing technique, base and frame are easy to clean;
- Zeroing function for targeting specific coordinates;
- Precision of manipulator in all directions reaches 10um;
- The sensor and the display are installed separately, making it easy to read;
- Battery can be used for long time, without electronic noise, easy for electrophysiology experiment;
- Available for various animals with the extended base plate 400mm X 255mm;
- The Unique anti-clockwise mark engraved in the knob signifying vertical operation for effortless;
- Vertical lock and fixing knob are separated to ensure accurate position at any angle;
- The precisely-designed rotary knob and the U frames supply sufficient space for the anterior-posterior operation; Laser
- engraved scales and dark rod make numericals easy to read;
- Curved design of nose clamp fixes the head of the animals more tightly;
- Use plate pressing rather than clamping in locking the Earbar;
- Without the embedded spring, the knob and the lead screw connect compactly.

Configuration for 68025—Stereotaxic, Desktop Digi, SGLM, 18Deg.

- (1) 68801-Stereotaxic Basic Module (Including U-Frame and Base Board, SGL Manipulator)
- (2) 68301-Ear Bars, Pairs, Rat, 18Deg.
- (3) 68021-Rat Adaptor-Nose Clamp
- (4) 68023-Stereotaxic Desktop Digital Display
- (4) 68201-Probe Holder-Corner

## Ordering information

Part No.	Description
68016	Stereotaxic, Desktop Digi, SGLM, w/mouse 68010
68017	Stereotaxic, Desktop, Digi, DualIM, w/mouse 68010
68018	Stereotaxic, Desktop, Digi, SGLM, w/mouse 68030
68019	Stereotaxic, Desktop, Digi, DualIM, w/mouse 68030
68023	Desktop Digi, SGL Module
68025	Stereotaxic, Desktop Digi, SGLM, 18Deg.
68026	Stereotaxic, Desktop, Digi, DualIM, 18Deg.
68027	Stereotaxic, Desktop, Digi, SGLM, 45deg.
68028	Stereotaxic, Desktop, Digi, DualIM, 45deg.

#### 68901 Stereotaxic for Dog/Monkey/ SGLManip

The parallel-rail Stereotaxic instrument possesses the extraordinary flexibility and performance; it can be used on virtually any laboratory animal when combined with different adaptors. Up to six manipulators can be conveniently positioned on the two parallel rails. Thus, different operation may be independently conducted in one animal, e.g., stimulating in one area and recording in another.

With the swivel stand, the rail can rotate 360° freely and can be fixed on the base plate or workbench. With two-dimensional manipulators, 180° rotation vertical and 360° rotation level are available, helping users to conduct position which is more flexible and accurate. Precision of manipulator in all sides reaches 100µm, while the reading accuracy of the parallel rail is up to 100µm with the same verniers scale.



68901  
Stereotaxic for Dog/Monkey/Swine/ SGLManip

#### Features:

- ◆ Extraordinary flexibility
- ◆ Accurate range of rail reading extends to 200mm
- ◆ Adaptors available for use with most kinds of dogs, monkeys
- ◆ Six manipulator arms can be conveniently installed on the two parallel rails
- ◆ Combined with the microdriver, the resolution of vertical reading can be extended to 10µm
- ◆ With swivel stand, the rail can rotate 360° freely
- ◆ The resolution of rail reading is 100µm and further extended to 10µm with the AP-Microdriver
- ◆ Adaptors used with Standard Stereotaxic Instruments are also available



68102

#### Configuration for 68901

##### Stereotaxic for Dog/Monkey/Swine/ SGLManip

- (1) 68951-Stereotaxic U-Frame and Base Board
- (2) 68941-Manip. for Dog/Monkey/LH (Including all disassembly)
- (3) 68201-Probe Holder-Corner
- (4) 68080-Dog/Monkey Adaptor

#### AP-Microdriver (10µm) 68102

It moves the manipulator on the rail of 68900 series of Large Animal Stereotaxic Instruments. As 10µm per stepping, it can be adjusted slightly in anterior-posterior within 25mm length.



68902

StereotaxicforDog/Monkey/Swine/DualManip

## Ordering information

PartNo.	Description
68901	StereotaxicforDog/Monkey/Swine/SGL Manip
68902	StereotaxicforDog/Monkey/Swine/DualManip
68903	StereotaxicforDog/Monkey/Swine/ThreeManip
68904	StereotaxicforDog/Monkey/Swine/FourManip
68911	StereotaxicforCat/Monkey/SGLManip
68912	StereotaxicforCat/Monkey/DualManip
68913	StereotaxicforCat/Monkey/ThreeManip
68914	StereotaxicforCat/Monkey/FourManip
68916	StereotaxicforDog/Monkey/Swine/SGL Manip,Desktop,Digi
68917	StereotaxicforDog/Monkey/Swine/DualManip,Desktop,Digi
68918	StereotaxicforDog/Monkey/Swine/ThreeManip,Desktop,Digi
68919	StereotaxicforDog/Monkey/Swine/FourManip,Desktop,Digi
68920	StereotaxicforCat/Monkey/SGLManip,Desktop,Digi
68921	StereotaxicforCat/Monkey/DualManip,Desktop,Digi
68922	StereotaxicforCat/Monkey/ThreeManip,Desktop,Digi
68923	StereotaxicforCat/Monkey/FourManip,Desktop,Digi

68915 Dog/Monkey MRI Stereotaxic Instrument is specifically designed to successfully stabilize an animal within a MRI device without generating electromagnetic interference. It achieves different operations such as intracellular recording and stimulation etc.

The Dog/Monkey Adaptor locates the animal firmly and accurately by means of tapered ear bars which fit into the external auditory meatus. Adjustable infra-orbital clamps and tooth bar prevent rotation of the skull. MRI Stereotaxic Instrument is processed with special nonmetal material, which is compatible with MRI environment. It satisfies the unique requirement of accurate location of animal brain research.



## Features:

- ◆ A/P Bar(s)-19.00X19.00mm<sup>2</sup>
- ◆ A/P Bar length-325mm
- ◆ A/P Bar calibration-100mm each side of zero (ear bar centerline)
- ◆ Frame Bar centerline distance-178.5mm
- ◆ A/P zero to posterior end of bar-123mm
- ◆ Ear Bar locator position is aligned to A/P zero
- ◆ Base Plate is 420X200mm<sup>2</sup>
- ◆ Eye Bar A/P adjustment-95mm
- ◆ Palate Bar A/P adjustment-80mm, D/V adjustment-35mm
- ◆ Adaptor Plate A/P adjustment-40mm
- ◆ Material of Dog/Monkey MRI Stereotaxic Instrument-plastic
- ◆ Adapt to big animal like dog, monkey, etc.

### Compact Rat Stereotaxic Instrument 68505

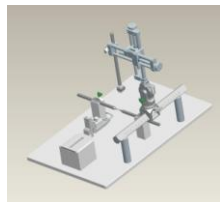


This stereotaxic instrument is designed to use adaptor block to replace the traditional "U" frame assembly, and it satisfies the requirement of holding the rat firmly. This instrument provides easy access to the animal and offers an open working area for additional surgical instruments.

#### Features:

- ◆ Base plate dimensions is 400mmX255mm
- ◆ 18° Tip Rat Ear Bars (35mm of calibration)
- ◆ Ear bar zero to posterior end of base plate is 35.5mm
- ◆ Ear bars slots have 0.1mm verniers for ease in centering the rat
- ◆ Adaptor Plate A/P adjustment is 43.5mm
- ◆ Dorsal/Ventral adjustment is 30mm(+10mm~-20mm)
- ◆ Dorsal/Ventral adjustment calibrated in 0.1mm increments
- ◆ Dual arm optional
- ◆ Digital LED display optional

### Small animal stereotaxic rail 68506

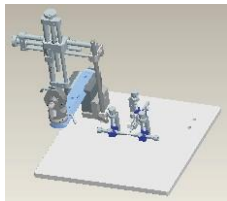


The instrument includes a rail instead of traditional stereotaxic U-frame assembly; its side stereotaxic range is larger than that of the traditional one. A variety of manipulators are available for use with this Stereotaxic assembly.

#### Feature:

- ◆ Base plate dimensions is 400mmX255mm
- ◆ 18° Tip Rat Ear Bars (35mm of calibration)
- ◆ Ear bar zero to posterior end of base plate is 55.5mm
- ◆ Ear bars slots have 0.1mm verniers for ease in centering the rat
- ◆ Adaptor Plate A/P adjustment is 43.5mm
- ◆ Dorsal/Ventral adjustment is 30mm(+10mm~-20mm)
- ◆ Dorsal/Ventral adjustment calibrated in 0.1mm increments
- ◆ Available for use with various animals

### Compact Mouse Stereotaxic Instrument 68507



This stereotaxic instrument is designed to use adaptor block to replace the traditional U-frame assembly, and it satisfies the requirement of holding the mouse or neonatal rat firmly without the use of traditional U-frame assembly. This instrument provides easy access to the animal and offers an open working area for additional surgical instruments.

#### Feature:

- ◆ Base plate dimensions is 255mmX255mm
- ◆ Unique and light ear bars are composed of polyoxymethylene resin
- ◆ Ear bar and palate clip height regulation range is 20mm(0mm~-+20mm) Laser engraved scales show on the ear bars, easy to operate
- ◆ Ear bars, two types of head holder provide a secure hold without compressing the sides of the skull inward
- ◆ Dual arm optional
- ◆ Digital LED display optional

## Accessories for Stereotaxic

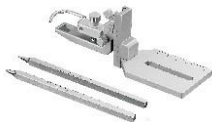
### Adaptors for Stereotaxic



Mouse Adaptor 68009

Model 68009 mouse adaptor holds the animal head by means of a palatal bar and nose clamp. It offers vertical regulation to make the head level at certain angle.

Vertical adjustment 30mm (+10mm - 20mm) with increments 0.1mm, A-P travel adjustment 43.5mm, coronal adjustment 35°. This adaptor is available with either mouse serrated or rubber earbar.



Rat Adaptor 68020

The Rat Adaptor is included in the Stereotaxic Instruments. It has 30mm of vertical travel along dovetail slide while possessing precision of 100µm, and has 50 mm of A-P travel. Curve design of nose clamp fixes the head of the animal more tightly. Thenose clamp assembly and 18° earbars are included. The 45° ear bars are optional.



Cat/Monkey Adaptor 68040

Cat/Monkey Adaptor includes ear bar and base plate, and fixes the head through auditory canal and the eye socket. The adaptor can be used with standard Stereotaxic series for small animal and Parallel Rail Series for large animal.



Mouse Adaptor 68010

This is a simple mouse adaptor. It holds the mouse head by means of a palatal bar and nose clamp, rather than using ear bars. Ear bars can cause breathing difficulties and bleeding of mice.



Mouse/Neonatal Rat Adaptor 68030

Mouse and Neonatal Rat Adaptor employs slight, Delrin ear bars with tapered point on one end and cuffs on the other, to avoid hurting fragile skull of mouse. Further, the neonatal rat has no auditory canal to insert the ear bars, and our adaptor with cuff can help out to facilitate the surgery.



Guinea Pig Adaptor 68050

Guinea Pig Adaptor locates the head through the 45° ear bars and nose clamp. It has 30mm of vertical travel along dovetail slide and 50mm of A-P travel like the rat adaptor.



#### Prairie Vole Adaptor 68052

Model 68052 Prairie Vole Adaptor holds the animal head by means of a palate bar and nose clamp. It offers vertical regulation to make the head level at certain angle. Vertical adjustment 30mm (+10mm~-20mm) with increments 0.1mm, A-P travel adjustment 43.5mm, coronal adjustment 35°. Hollow 45° earbar is optional.



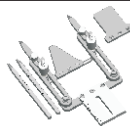
#### Ear Bar Adaptor 68060

This Ear Bar Adaptor can fix the animal in any place outside the U-shaped base of the instrument and can be used along with the 18° earbar.



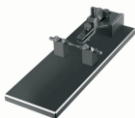
#### Small Bird Adaptor 68070

Small Bird Adaptor uses 45° earbars and Curve-shaped beak clamp to fix the head of the bird, and moves vertically through the dovetail.



#### Dog/Monkey/Swine Adaptor 68080

To fit dog/monkey/swine in most size, the extended securing plate is convenient to fix the animal firmly and easily together with the 18° earbars. The 45° earbars are optional. It is used with 68900 series of Stereotaxic for large animal.



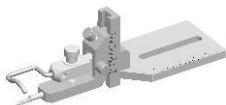
#### MRI Rat Adaptor 68011

MRI Rat Adaptor is designed for MRI equipments, the special materials avoid magnetic interference, thus to secure the animal more stably. Dimension: (L 360mm) X (W 125mm) X (H 96mm)



#### Rat Adaptor r-Aural 68022

Rat Adaptor r-Aural secures the rat by the eye socket instead of by ear or incisor, which frees from obstacles to the animal auditory stimulus.



#### Neonatal Rat Adaptor 68029

The Neonatal Rat Adaptor contains a nose clamp and adjustable palate bar, providing different adjustments.

Dorsal/Ventral adjustments: 30mm (+10mm~-20mm), calibrated in 100µm.

A/P adjustment 43.5mm

Mouse ear bar, Non-rupture, Cuff 68307 and Mouse ear bar, Non-rupture, Rubber 68308 are optional.



#### Mouse Gas Anesthesia Adaptor 68061

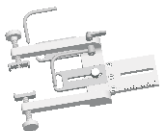
By positioning the mouse head in different angles, the Mouse Gas Anesthesia Adaptor allows the researcher to deliver the anesthesia without any obstruction. Dorsal/Ventral adjustments: 30mm (+10mm~-20mm), calibrated in 100µm.

Vertical angle: 70° (-35°~+35°) accuracy: 5°

Lateral angle: 70° (-35°~+35°) accuracy: 5°

A/P adjustment 43.5mm

Gas Anesthesia Mask (Diameter 2mm for both inlet and outlet ports)



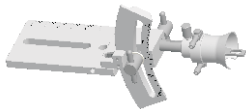
#### Rabbit Adapter 68085

Rabbit Adapter holds the animal's head by means of zygomatic clamps, adjustable tooth bar and nose clamp. An infant and adult tooth bar and nose clamp are included. A screw adjustment allows precise alignment of the bregma and lambda landmarks.

Adult tooth bar A/P adjustment 43.5mm

Infant tooth A/P adjustment 26.5mm

Adaptor plate A/P adjustment 40mm



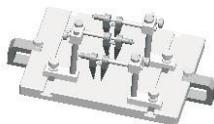
#### Rat Gas Anesthesia Adaptor 68062

Rat Gas Anesthesia Adaptor is designed to provide a reliable means for stabilizing the head, allowing versatility to angle the head without obstruction on the ability to deliver the gas anesthesia. Arch mounted tooth bar provides head adjustment focused around ear bar zero. In addition, we have incorporated a custom nose clamping mask that can be utilized for delivering gas anesthesia.

Dorsal/Ventral adjustments 40° (+20°~-20°), calibrated in 1°

Adaptor A/P Adjustment 43.5mm

Gas Anesthesia Mask inlet/outlet ports (dia. 2mm)



#### Rat Spinal Adaptor 68091

The Rat Spinal Adaptor is ideal for rat spinal securing. The plate of the adaptor, including five vertical bars and clamps, is 210mm (L) x 165mm (W) x 15mm (H), which can be attached with RWD small animal stereotaxic 68000 series. The two T slots can be mounted and removed rapidly even without the use of a wrench. The adjustment of vertical bar ranges 56mm; and the locking block can be easily regulated in its height through the connecting screw. This design achieves the regulation in Vertical/Lateral, Anterior/Posterior, and Ventral/Dorsal.

Stand accessories contain: Base Plate, mounts, spinal clamps (3pair), rats vertebrate clamp (3pair).

Features:

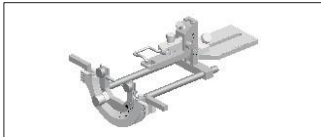
Accurate and reliable placement  
Modularity allows the use of a wider range of components and accessories.  
Simple, fast and positive clamping and locking.  
Compatible with small animal stereotaxic.

68092 Mouse Spinal Adaptor

68094 Mouse Spinal Clamp (3pair)

68095 Rat Spinal Clamps (3pair)





#### Rotational Rat Adaptor-18 Deg Ear Bar 68063

Rotational Rat Adaptor is specially designed for particular lab use by RWD. It provides coronal rotation of the head by means of a pair of ear bar, nose and palate holder. It is available for the rotation of the head in line with experiment requirements, flexible for various angle adjustments of the head. Dorsal/Ventral adjustments ranges 30mm (+10mm~20mm), Calibrated in 100um.

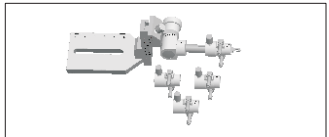
Adaptor A/P adjustment 43.5mm

Head rotation adjustment range 60° (-30°~+30°)

18° tip ear bars

Rotational Rat Adaptor-45° Deg Ear Bar 68064

Rotational Mouse Adaptor-60° Deg Ear Bar 68065



#### Neonatal Rat Anesthesia Adaptor 68066

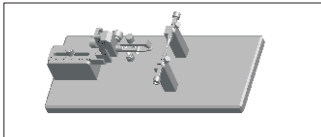
Neonatal Rat Anesthesia Adaptor offers maximum stereotaxic adjustment for positioning the head, allowing versatility to angle the head without obstructing the ability to deliver anesthetic gas. Dorsal/Ventral adjustments: 30mm (+10mm~20mm), calibrated in 100um.

Vertical angle: 70° (-35°~+35°) accuracy: 5°

Lateral angle: 70° (-35°~+35°) accuracy: 5°

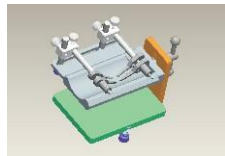
A/P adjustment: 43.5mm

Gas Anesthesia Mask-inlet/outlet ports (dia. 2mm)



#### MRI Mouse Adaptor 68069

MRI Mouse Adaptor is designed for MRI equipments, the special materials avoid magnetic interference, thus to secure the animal more stably. Dimension: (L 280mm)X(W 120mm)X(H 93mm), Dorsal/Ventral adjustments: 30mm (+10mm~20mm), calibrated in 0.1mm, A/P adjustment-45mm; Laser engraved scales show on the ear bars, easy to operate; Ear bars with two types of head holder provide a secure hold without compressing the sides of the skull inward.



#### Mouse Spinal Adaptor 68066

This spinal adaptor is good for mouse study. The body of mouse is hang avoiding the breath infect. The body can be rotated for the convenience of observation. The screw on the board can fix the adaptor on the platform of microscope.



**Large ProbeHolder 68202**  
Large ProbeHolder is for shafts with diameters from 3mm-12mm. It can hold micro-syringe barrel, electrode of larger diameter or flexible shaft drills.



**Cannula Holder 68203**  
The wedge-shaped structure makes it easy to observe the whole experiment. It holds the Cannula from 1mm to 3.5mm and the front thickness is 4mm.



**Holder for CMA Clip 68204**  
For this special use of fixing CMA microdialysis probe clip, it holds rods with diameters from 2mm to 6mm.



**Microdialysis Holder 68205**  
Holds 3.4mm Cannula heads manufactured by Plastics One for Cannula sets as well as syringe pump manufactured by Alzet Osmotic Pumps. This holder is specially fit for the Cannula series developed by RWD.



**Cannula Holder 68209**  
Cannula Holder employs the side clamp to secure the Cannula or electrode more conveniently. It holds Cannula with diameters from 2mm to 4.5mm.



**Electrode Holder 68210**  
Electrode Holder perfectly meets the requirement of electrophysiological experiments. It holds the electrode with diameters from 0.5mm to 1.5mm.



**Cannula Holder 68211**  
Fit for the dual manipulator Stereotaxic to close up the Guide Cannula in 0.3mm. It holds the Cannula head from 1.5mm to 4.5mm and RWD's Cannula series.



**Standard Probe Holder/CClamp 68212**  
This holder is for probes from 0.3mm to 2mm with C design and side clamp, which makes it easy to implant the electrode or micro-syringe.



Standard Probe Holder  
w/side Clamp 68213

The Standard Probe Holder w/side Clamp is of the same structure with the Standard Probe Holder 68201, but applied to more electrode or syringe. It holds from 0.3mm~3.5mm.



Electrode Holder 68216

This Electrode Holder is designed for the dual-operating experiments like Electrophysiology; the distance between the two electrodes can reach 200um while operating on two manipulators. It holds electrodes with diameters from 0.3mm~2.5mm.



Cannula Holder 68217

Holds 3.4mm Cannula heads manufactured by Plastics One for Cannula sets as well as syringe pump manufactured by Alzet Osmotic Pumps. This holder is specially fit for the Cannula series developed by RWD.



Syringe Holder 68218

It is for the experiment of micro-injection, to hold the syringe barrel and needle. It holds the syringe more stably, the diameter of syringe barrel from 3mm to 12mm and needle from 0.3mm to 1.5mm.



Electrode Holder 68219

This Electrode Holder is of the same structure with the standard holder, but it holds the electrode or needle in level, and the diameters from 0.3mm~1.5mm.



Electrode Holder 68220

Adapting the wedge-shaped structure, it holds from 0.9mm~3mm.



Cannula Holder 68221

Uses the thread as the locking method, is specially fit for the 3.5mm Cannula series developed by RWD.



Holder for Microdrill 68605

The Holder for Microdrill makes easy work of securing the microdrill. It controls the depth of drilling by the manipulator. The easy and accurate operation prevents the damage or excessive drill of animal tissues.

## EarBars

We provide kinds of ear bars for different animal and Stereotaxic Instruments. All the Ear Bars have laser engraved scales and well polished.

68301



EarBars, Pair, Rat, 18Deg68301  
68301 18° ear bars taper at the tip to penetrate far into the ear canal for a more secure fixing. The ear bars are used with 68000 series small animal stereotaxic.

EarBars, Pair, Mouse, Non-Rupture, 60Deg68306



68306 Ear Bars are specifically designed for mice because of the fragile skull. This Ear Bar is of 60° tip and can be used easily. The ear bars are used with 68000 series small animal stereotaxic.

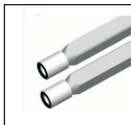
EarBars, Pair, Rat, 45Deg68302  
68302 45° ear bars, Non-puncture ear bars have a 45° taper and do not puncture the tympanic membrane. It is good for long term study with rats. The ear bars are used with 68000 series small animal stereotaxic.



EarBars, Pair, Mouse, Non-Rupture, Cuff68307

With hollow serrated, the 68307 provides a secure fixing without compressing the sides of the skull inward (which closes the airways and impedes blood flow).

EarBars, Pair, Cat/Monkey, 18Deg68303  
68303 ear bars taper at the tip to penetrate far into the ear canal for a more secure fixing. The ear bars are used with 68900 series large animal stereotaxic.



EarBars, Pair, Mouse, Non-Rupture, Rubber68308

68308 installed with O-ring rubber tip to fix the mouse head firmly without any damage to the skull.

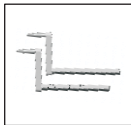
EarBars, Pair, Cat/Monkey, 45Deg68304  
68304 ear bars non-puncture ear bars have a 45° taper and do not puncture the tympanic membrane. It is good for long term study. The ear bars are used with 68900 series large animal stereotaxic.



Hollow 30° ear bars 68309

68309 30° ear bars for rats are accommodated to the auditory stimulation experiment. The signal is transmitted through the hole with 0.7mm front diameter and 3.00mm back diameter for auditory stimulating.

Hollow 45° ear bars 68305  
68305 45° ear bars for rats are accommodated to the auditory stimulation experiment. The signal is transmitted through the hole with 1.00mm front diameter and 3.00mm back diameter for auditory stimulating.



Riser ear bar 68413

RWD's Riser ear bar 68413 allows to raise the animal's head to 50mm (Length can be custom). There is the scale of 55 mm in the bar. Riser ear bars are useful for making temporal placements.

### Microdriver (10μm) 68101



For the application of stimulating and recording in electrophysiology study, more accurate movements of electrodes are needed. The Micrometer makes it easy and accurate for penetrating the electrode. The resolution of the movement is 10μm. We can supply custom design for different electrodes.

### Adjustable Stage Platform 68604



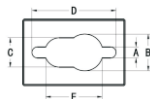
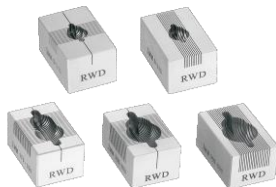
Adjustable Stage Platform is used to lift body of different animals with Stereotaxic Instruments. Adjustable height and position of Platform secure the animal more stable and easy. Dimension of Platform: 195x90x11mm Dimension of Base: 195x110x12mm Lifting Height: 20mm (68604), 50mm (68607)

### Manual syringe pump 62431



For some precise injection, our manual syringe pump is your best choice. With the compact structure, the syringe needle can be easily installed in the holder, and then control the injector's movement by the micro-driver. It is compatible with most micro syringes, its volume of infusing and withdrawing ranges from 1ul to 100ul. The displacement gives 10um accuracy to the resolution with the distance of 25mm.

### Brain Matrix



### Ordering information for Brain Matrix

Part No.	Description	Dim A	Dim B	Dim C	Dim D	Dim E	Depth
68707	Brain Matrix, Adult mouse 45-75g, Coronal, Stainless steel	3.18mm	11.1mm	8.73mm	19.1mm	12.5mm	7.40mm
68708	Brain Matrix, Adult mouse 45-75g, Sagittal, Stainless steel	3.18mm	11.1mm	8.73mm	19.1mm	12.5mm	7.40mm
68709	Brain Matrix, Rat 175-300g, Coronal, Stainless steel	4.76mm	15.9mm	12.7mm	36.6mm	24.5mm	7.61mm
68710	Brain Matrix, Rat, 175-300g, Sagittal, Stainless steel	4.76mm	15.9mm	12.7mm	36.6mm	24.5mm	7.61mm
68711	Brain Matrix, Rat, 300g-600g, Coronal, Stainless steel	4.76mm	19.8mm	14.7mm	36.6mm	25.7mm	10.91mm
68712	Brain Matrix, Rat, 300g-600g, Sagittal, Stainless steel	4.76mm	19.8mm	14.7mm	36.6mm	25.7mm	10.91mm

## Microdrive Adapter Headstage 68100



With C design, the Microdriver allows to fix the micro-amplifier easily, with vertical precision 10µm.

## Zero Point Calibrator 68004



Zero Point Calibrator allows electrodes to be set while the animal is in the instrument. The vertical distance of this zero point is 30 mm above ear bar zero. Designed exclusively for RWD 68000 series stereotaxics. "

## Headstage Holder 68000



With C design, the Headstage Holder allows to fix the micro-amplifier easily, with diameters 0.1-7mm.

## V Attachment 68207



This parts widely used for adding syringe pump, micromanipulator and the instrument to manipulator.

## Rotation Adapter 68412



Rotation Adapter 68412 allows a rotation axis with up to 360° added to any RWD manipulator, with accuracy 5°. With our Rotation Adapter you can obtain a third rotation axis for achieving specific angles required.

## A/P Slide Attachment 68491



A/P Slide Attachment provides fine control for A/P settings offering 60 mm of A/P adjustment at the end of the lateral manipulator slide , and the accuracy is 0.1mm. Electrodes or electrodes can be placed in the horizontal direction. A/P Slide Attachment offers great convenience to researcher when writing an atlas. "

## Stereotaxic Impactor 68093

Based on the Principle of Free Fall, the Stereotaxic Impactor, which is made up of striker, weight, mental tube and Stereotaxic Instrument, is used to establish the animal cerebral injury model.



### Feature:

1. Axes of X, Y, Z can be adjusted manually
2. Diameter of striker: 4.5mm
3. Length of striker: 30mm
4. Weight: 40g and 20g available
5. Length of mental tube: 30cm
6. Impactors are applied to mice, rats, guinea pigs, rabbits, cats, dogs and other species.

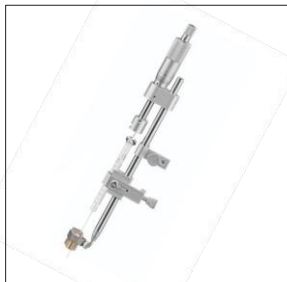
### Case of Instruction

Secure the head and limbs of rats in prone position, then incise the scalp along the midline after disinfection and extend the cut by 45 degrees in front left, forming a triangular flap. Expose the left skull after opening the flap and stripping the periosteum off. In order to establish a round circle with 6mm diameter in the left skull, you need to take the left eye socket as a supporting point and turn a small cranium bone over by the needle holder to show the dura mater. Then it turns to the last step. Place the hitting bar outside the round circle in the left skull and let it be perpendicular to the metal tube, use the hitting bar of 40 gram to hit the striker from 20cm high, the impulsive force extends to 4x20cm.g, which cause cerebral confusion and laceration in the left hemisphere.

## Manual Stereotaxic Injector 68606

The Manual Stereotaxic Injector provides an economical means of injecting/ withdrawing a calibrated volume with simple, precise manual control. Mounted directly to a stereotaxic manipulator, it allows precise injection directly through the needle into the brain tissue. The easy thumb and finger control knob permits the precise injections. The syringe volume ranges from 1µl to 500µl, with the movement accuracy of 10µm and the total of 25mm.

The competitive price and simple operation make the Manual Stereotaxic Injector your best choice.



### Ordering information:

- .10µl Syringe - 0.0018µl/div
- .25µl Syringe - 0.00416µl/div
- .50µl Syringe - 0.012µl/div
- .100µl Syringe - 0.0167µl/div
- .250µl Syringe - 0.0417µl/div
- .500µl Syringe - 0.0833µl/div



## Nanoliter



WPI's microprocessor-controlled Nanoliter2010 uses direct piston displacement. By either pushing the injection button on the control box or pressing on the optional foot switch, a calibrated volume will be smoothly injected. The process is quiet and vibration free. Capillary filling and injection speeds are 23  $\mu\text{L}/\text{sec}$  and 46  $\mu\text{L}/\text{sec}$  (emptying speeds are 92  $\mu\text{L}/\text{sec}$  and 230  $\mu\text{L}/\text{sec}$ ). Maximum fluid ejection is 5  $\mu\text{L}$ . Each unit comes with sufficient glass to pull at least 300 tips. Glass is 1.14mm O.D. (nominal) and 0.5mm I.D. By setting the DIP switch, the injection volume can be changed from 2.3 to 69.0  $\mu\text{L}$  in 16 steps. Up to 100 injections may be triggered per filling. Since the volume of a normal *Xenopus* oocyte is about 500  $\mu\text{L}$ , the instrument has the capability to inject from less than 1% to over 10% of the total volume of the oocyte in one preset step increment.

Included: 1 vial 3.5in. capillaries (100); 1 vial 7in. capillaries (100) replacement "O" rings; Allen wrench; MicroFil™ MF34G backfilling needle; and two sample pre-pulled micropipettes.

## Nanoliter Specifications

INJECTION VOLUME	Variable
REMOTE CONTROL	Yes
GLASS O.D.	1.14mm
GLASS I.D.	0.5mm
STEP	12.7 $\mu\text{L}/\text{step}$
INJECTION SPEED: Slow	23nL/sec
INJECTION SPEED: Fast	46nL/sec
FILL SPEED: Slow	23nL/sec
FILL SPEED: Fast	46nL/sec
EMPTY SPEED	92nL/sec
VARIABLE VOLUME RANGE	2.3-69.0nL
SMALLEST VOLUME	2.3nL
TO CHANGE VOLUME	Set switch
INJECTIONS PER FILLING, MAX.	100 injections
SHIPPING WEIGHT	3lb. (1.1kg)

## Micro-syringes



Micro-syringes	Description
79001	Syringe 0.5ul-Bevelled Needle
79002	Syringe 1ul-Bevelled Needle
79003	Syringe 2ul-Bevelled Needle
79004	Syringe 5ul-Bevelled Needle
79005	Syringe 10ul-Bevelled Needle
79006	Syringe 25ul-Bevelled Needle
79007	Syringe 50ul-Bevelled Needle
79008	Syringe 100ul-Bevelled Needle
79009	Syringe 250ul-Bevelled Needle
79010	Syringe 500ul-Bevelled Needle
79011	Syringe 1000ul-Bevelled Needle
79012	Syringe 0.5ul-Blunt Needle
79013	Syringe 1ul-Blunt Needle
79014	Syringe 2ul-Blunt Needle
79015	Syringe 5ul-Blunt Needle
79016	Syringe 10ul-Blunt Needle
79017	Syringe 25ul-Blunt Needle
79018	Syringe 50ul-Blunt Needle
79034	Syringe 100ul-Blunt Needle
79035	Syringe 250ul-Blunt Needle
79036	Syringe 500ul-Blunt Needle
79037	Syringe 1000ul-Blunt Needle



## Micromotor Drill 78001

This kit is ideal for high speed applications up to 38,000 rpm. Micromotor technology allows the handpiece itself to contain the motor, yet still maintain a slender profile for easy hand grip. The original imported hand drill is easy to use and maintain. The high speed drills are configured for stereotaxic surgery, particularly in soft skull animals such as rats and mice. The micro drill can be secured to the Stereotaxic Instrument by the micro drill holder and controlled by the manipulator.



### Ordering information

Part NO.	Description
78002	Drill bits 0.6mm HM1006 Round Tip
78003	Drill bits 0.8mm HM1008 Round Tip
78004	Drill bits 1.0mm HM1010 Round Tip
78005	Drill bits 1.2mm HM1012 Round Tip
78006	Drill bits 1.4mm HM1014 Round Tip
78007	Drill bits 1.6mm HM1016 Round Tip
78008	Drill bits 1.8mm HM1018 Round Tip
78009	Drill bits 2.1mm HM1021 Round Tip
78010	Drill bits 2.3mm HM1023 Round Tip
78012	Drill bits 0.5mm HM1005 Round Tip
78021	Drill bits 0.8mm HM31008 Flat Tip
78022	Drill bits 1.0mm HM31010 Flat Tip
78023	Drill bits 1.2mm HM31012 Flat Tip
78024	Drill bits 1.4mm HM31014 Flat Tip
78025	Drill bits 1.6mm HM31016 Flat Tip
78026	Drill bits 1.8mm HM31018 Flat Tip
78027	Drill bits 2.1mm HM31021 Flat Tip
78028	Drill bits 2.3mm HM31023 Flat Tip

Note: Round tip is used for punching the animal skull and the Flat tip for making the animal skull flat.

## Temperature Controller



This temperature controller is designed to maintain animal's body temperature at a pre-set target value during anesthesia. A thermistor probe provides feedback to the controller with the animal's body temperature. The controller adjusts current to the heating pad as needed to maintain the desired body temperature. The circuit is well designed without electrical noise. It is good for long time electrophysiology study.

### Ordering information

Part NO.	Description
69001	Temperature Controller for Rat
69002	Temperature Controller for Mouse
69003	Heating Pad-Rat (220x140mm)
69004	Heating Pad-Mouse (96x68mm)

## Fiber-Lite Illuminator



The Fiber-Lite Illuminator is the industry standard, and an excellent choice for most laboratory lighting requirements. A selection of fiber optic bundles mounts directly on the 150 watt Fiber-Lite illuminator. Aside from allowing easy changing of the light bulb, noise reduction design minimizes both auditory and electrical noise.

### Specifications:

Focusing light, great intensity  
 Voltage: 110V/220V, Power: 150W or 250W  
 Dimension: 18.5x20x12.5  
 Net Weight: 3.12KG  
 Lamp life: 200 hours at full intensity

### Ordering information

Part NO.	Description
F-150C	Fiber-Lite Illuminator (150W, Stand)
F-150S	Fiber-Lite Illuminator (150W, Crouch)
76310	Dual-Pipe Fiber Optic (Included in illuminator)
76306	Bulb (21V150W)

## Cannula System

## Binocular Zoom Stereo Microscope 77019



This microscope is especially intended for those research staffs and QC controllers. It enjoys excellent optical performance, keeping object ways in focus during whole zooming travel. Without additional accessories, the standard 117mm

long working distance allowing easy handing of the sample with its magnification range from 4X-200X. It has the high magnifications and high zoom ratio, the plain stand features a trim design that makes handing samples much easier. With high resolution and definition, it not only can be used for research teaching, but also for accessories assembly and inspection in electronic industry and precise mechanical industry.

## Specifications:

1. Zoom ratio: 6.3:1
2. Total Magnification: 8X-50X
3. WF Eyepiece: WF 10X/22mm (optional 15X, 20X eyepiece, magnification 8X-200X)
4. Working distance: 115mm
5. Available 0.5X auxiliary objectives with long working distance.
6. Illumination: optional LED, circular fluorescent
7. Double eyepieces with 45° tilt and interpupillary distance range 52-75mm

## Features:

1. With high resolution image, wide vision and long working distance, display vivid three-dimensional image.
2. Creative man-machine dynamic design.
3. Stable Focusing adjustment with the ability of auto-protection, even excessive force will not damage the gear.
4. Adjustable eye oxypter secures operator with any eyesight can regulate a high resolution image without eye fatigue.
5. Trinocular microscope can configure with digital camera (such as single-lens reflex camera Nikon D3100, D90, Canon 450D, 1000D, etc.), 135 camera.

## Ordering information

Part NO.	Description
77019	Binocular Zoom Stereo Microscope
77020	Trinocular Zoom Stereo microscope
77021	15X eyepiece
77022	20X eyepiece
77023	0.5X objective lens
77024	2X objective lens
77025	Ring Fluorescence Illumination
77026	LED Illumination

## Surgical Microscope on Post Stand 77002

With Coaxial illumination, easy and simple operation, the surgical microscope on post stand operates flexibly and meets the researchers' requirement.



## Specifications: Eyepiece: 1

- ◆ 2.5X Adjustable
- ◆ Diopter:  $\pm 5D$
- ◆ Interpupillary Distance Range: 55mm-70mm
- ◆ Objective Focal Distance: 200mm
- ◆ Working Distance: 190mm
- ◆ Total Magnification: 5.3X, 8X, 12X
- ◆ Field of View: 37mm, 25mm, 17mm
- ◆ Illumination: Variable halogen light source with cold reflection (12V/100W) Coaxial illumination  $\geq 20000lx$
- ◆ Stretch Radius of Arm: 870mm
- ◆ Vertical Movement Range: 700mm-1100mm
- ◆ Fine Focus Adjustment range: 30mm
- ◆ Electricity safety standard: IEC601-1, Typel
- ◆ Shipping weight: 41kg

## Ordering information

Part NO.	Description
77002	Surgical Microscope on Post Stand
77013	F200 Objective Lens
77014	F2500 Objective Lens
77015	F4000 Objective Lens

## Cannula system

Used with our company's Stereotaxic Instrument and the related holders, our Cannula system will provide the researcher institutions with a set of effective experimental tool in the whole operation process.

Our Cannula system consists of several accessories: guide Cannula, Cannula during Internals Cannula, Screw, Tubing and manual syringe pump for injection.

### Guide Cannula

GuideCannula is an implanted hollow stainless steel tube with threaded cylindrical plastic pedestal molded around, which use for mounting on the skull of the small animal using dental cement.



### Dummy Cannula

Dummy Cannula is a stainless steel wire molded into a plastic cap with internal screw. Installed to seal the top of the Guide, it prevents tissue entry after removal of the Internal. The length of the stainless wire can be tailored in accordance with the actual need.



### Fixing Screw-Connecting Injector and Guide Cannula

The screw is used to connect the Guide Cannula with the Internal Cannula during the injection for freely moving small animal.



### Injector for Guide Cannula

Injector for Guide Cannula also calls an Internal Cannula or Infusion Cannula. Locking on the top of the Guide Cannula makes it able to penetrate to a consistent depth. The length of the Internal Cannula can be cut by the researchers.



### Screw :

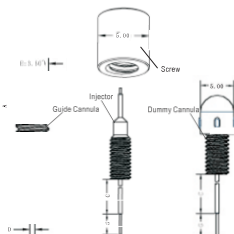
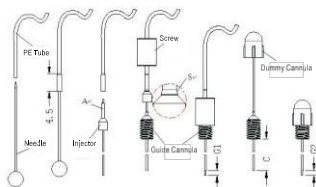
Specification  
(O.D-1.0mm)\*(L-2.0mm)  
(O.D-1.2mm)\*(L-2.0mm)  
(O.D-1.4mm)\*(L-2.5mm)



### PETube

The tubing connects the Internal Cannula with syringe for injection.

Specification:  
O.D.1.1mm I.D.0.6mm  
O.D.0.85mm I.D.0.42mm  
O.D.0.5mm I.D.0.25mm






## Surgical Instruments

## Cannula Specifications

Cannula	A	B	C	In/Outer Diameter of Guide	E	H	Injector for Guide Cannula	Outer Diameter of Product	Dummy Cannula	Fixing screw connecting injector and guide cannula
62001	1.00	9.00	*20.00	0.64(22g)	3.50	8.00	62201	0.41(26g)	62101	62501
62002		7.00	*22.20	0.56(23g)		7.00	62202	0.36(27g)	62102	62502
62003		6.00	*15.00	0.48(24g)			62203	0.30(28g)		

## How to Order Custom Length Cannulas

1. Determine the target area according to research. To determine exact length, you must refer to a Rat Brain Atlas, Mouse Brain Atlas, etc.
2. Once you determine the length you need, please refer to our Ordering Information list below. The available largest length of Guide is 20mm, with 3 kinds of O.D.: 0.64mm(62001), 0.56mm(62002), 0.48mm(62003).

Guide Cannulas	Injector Cannulas	Dummy Cannulas
Tell us the length of the stainless steel tubing below the plastic pedestal that you need.	Tell us the length of the Guide Cannula is to fit and what projection length beyond the tip is needed.	Tell us the length of the Guide Cannula is to fit and what projection length beyond the tip is needed.
Guide/Spc 6mm	Inerals/Spc to fit C=6mm Guide with G=1mm projection	Dummy/Spc to fit C=6mm Guide without projection
		

## Ordering Information

Part NO.	Description
62001	Guide Cannula for Rat-O.D. 0.64/I.D. -0.45mm
62002	Guide Cannula for Rat and Mice-O.D. 0.56/I.D. -0.38mm
62003	Guide Cannula for Mice-O.D. 0.48/I.D. -0.34mm
62101	Dummy Cannula- mates with 62001
62102	Dummy Cannula- mates with 62002 and 62003
62201	Injector for Guide Cannula-O.D.-0.41/I.D.-0.25mm, mates with 62001
62202	Injector for Guide Cannula-O.D.-0.36/I.D.-0.20mm, mates with 62002
62203	Injector for Guide Cannula-O.D.-0.30/I.D.-0.14mm, mates with 62003

Part NO.	Description
62301	PE Tube O.D.-1.1mm, ID-0.6mm
62302	PE Tube O.D.-0.85mm, ID-0.42mm
62303	PE Tube O.D.-0.5mm, ID-0.25mm
62501	Fixing Screw-Connecting Injector and Guide Cannula 62001
62502	Fixing Screw-Connecting Injector and Guide Cannula 62002 and 62003
62510	Screw-(O.D.-1.0mm)*(L-2.0mm)
62511	Screw-(O.D.-1.2mm)*(L-2.0mm)
62512	Screw-(O.D.-1.4mm)*(L-2.5mm)

Our products and solutions, including the following 7 series: Stereotaxic Instruments and Accessories, Anesthesia machine, Ventilator, Syringe Pumps, Microdialysis System, Cannula System, Surgical Instruments, have been distributed worldwide, in which stereotaxic instrument enjoys good reputation home and abroad. Aiming to provide customers with higher quality products, RWD has introduced international advanced equipment and many professionals conduct research, thus to provide more efficient and accurate solutions in the field of Medical Research and Clinical Application.

Based on domestic market, RWD is largely expanding its international market and aiming to build its unique brand worldwide. Presently, RWD has distributed its products to more than 80 countries worldwide, achieving a competitive place in the international market.

Through continuous customer-oriented strategy, we intend to provide our customers with high quality products and perfect service, and we have established long-term friendly cooperation relationship with various domestic and overseas scientific research institute and medical academy, such as, The Chinese University of Hong Kong, Peking University, Tsinghua University, S CAS, GlaxoSmithKline, Chinese Center For Disease Control And Prevention, Guangji Institute of Science and Technology, University of Western Ontario, INSERM etc...

Through more than 10 years innovation and production, RWD has achieved 26 patent technology, including 3 patents of invention and 23 patents of product of utility, novelty and design. With the unwavering commitment to technology and quality, RWD has gained a leading position in the field of life science and industry since its inception.

#### RWD Enterprise Culture and Core Ideology

**【Vision】** : To Be Core Force in Improving Life Quality

**【Mission】** : To provide the best solution to Medical Research and Clinical Application

**【Core Value】** : Quality Integrity Responsibility

**【Quality Policy】** : Full Participation Scientific Management Continuous Improvement Perfect Service

