Стереотаксическая аппаратура

Описание

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Digital U-Frame Stereotaxic Instruments

Digital U-Frame Stereotaxic Instruments add a digital manipulator arm with a displacement transducer to the U-frame instruments. The compact LCD display allows for real-time coordination presentation of all three axes up to resolution of 10 µm. Digital U-Frame instruments are available for rat, mouse and mouse/neonatal rat.

Item No.	Description
75-1806	Elevated U-Frame Stereotaxic Instrument, Rat, 45° Ear Bar, Single Manipulator, Digital
75-1810	Elevated U-Frame Stereotaxic Instrument, Mouse, Single Manipulator, Digital
75-1815	Elevated U-Frame Stereotaxic Instrument, Mouse/Neonatal Rat, Dual Manipulator, Digital



The Harvard Apparatus Digital U-Frame Stereotaxic Instruments add a digital manipulator arm with a displacement transducer to the . The compact LCD display allows for real-time coordination presentation of all three axes up to resolution of 10 µm. The display has the ability to run on either AC power or battery power, drastically reducing electronic noise and making it suitable for electrophysiology experiments.

The base plate of the Standard U-Frame Stereotaxic Instrument measures 40.0 x 25.5 cm allowing it to accommodate a wide range of different small animals. Complete systems are offered for rat, mouse, and mouse/neonatal rat. A selection of available adapters allows the system to be utilized for additional species such as guinea pig and small bird.

Key Features

- Standard U-frame design
- Adapters for rat, mouse, mouse/neonatal rat
- Resolution of 10 µm
- Single or dual manipulator arm

This complete system comes with:

- Base plate
- Digital 3-axis manipulator arm
- Species adapter
- Ear bars
- Holder with corner clamp

Stereotaxic Anesthesia Masks for Passive Scavenging

Stereotaxic Anesthesia Masks for Passive Scavenging

Item No. Description

75-1859

Rat Gas Stereotaxic Anesthesia Mask for Passive Scavenging



DETAILS

Nosecone anesthesia masks are specifically designed to fit most stereotaxic frames 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 are placed over the incisor bar.

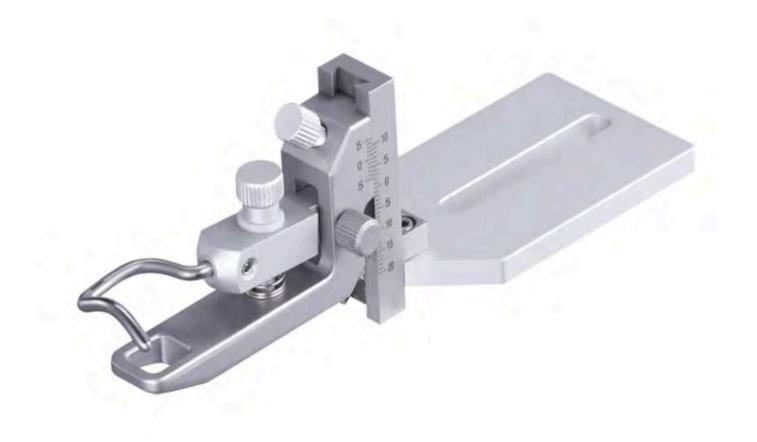
Two kinds of stereotaxic frame nosecone masks are available:

- "Passive" mask with collinear inlet and outlet, used with charcoal canister only
- "Active" mask with separate (non-collinear) inlet and outlet on both sides, used with evacuation apparatus

Stereotaxic Species Adapters for Stereotaxic Instruments

Adapters to convert stereotaxic instruments to hold different species. Available for rat, mouse, mouse/neonatal rat, neonatal mouse, cat/monkey.

Item No.	Description
75-1849	Rat Stereotaxic Adapter
75-1850	Mouse Stereotaxic Adapter
75-1851	Mouse/Neonatal Rat Stereotaxic Adapter
75-1854	Spinal Cord Stereotaxic Adapter for Rat Only



These species adapters allow you to covert the Harvard Apparatus stereotaxic instruments to accept other species. Available for rat, mouse, mouse/neonatal rat, neonatal mouse, cat/monkey and for rat/mouse spinal cord.

Mouse/Neonatal Rat Adapter

This elevated platform fits into the Harvard Apparatus Standard U-Frame Stereotaxic Instrument. It is height adjustable and converts U-Frame to securely hold mouse or neonatal rat. The ear bars of this adapter are made of resin and the tips are treated to ensure the head of the animal is securely held without damaging the skull. For neonatal rat, a cheekbone locker is used rather than ears bars because the ear canals have not yet formed.

Neonatal Mouse Adapter

This adapter has been specifically designed for use with neonatal mice. It has a base plate measuring 150 x 100 mm which can easily be placed on the Harvard Apparatus stereotaxic instruments. Both 20° and 45° ear bars are included with this adapter. The incisor, nose clip, and ear bars can all be adjusted to ensure the skull of the neonatal mouse remains level.

Spinal Cord Adapter for Mouse and Rat

This adapter is ideal for securing the spinal of rat and mouse. The base plate measures 210 x 165 x 15 mm and can be attached to the Harvard Apparatus Standard U-Frame stereotaxic instruments. The Spinal Cord Adapter is comprised of three stands, which a height range of 56 mm, and a locking block. This adapter can be adjusted in the vertical/lateral, anterior/posterior, and ventral/dorsal directions.

Key Features:

- Adapters to convert stereotaxic instruments to hold different species
- Mouse, rat, neonates, cat/monkey adapters available
- Spinal cord adapter for rat and mouse

Stereotaxic Anesthesia Masks for Active Scavenging

This type of anesthetic mask 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 are placed over the incisor bar.

Item No.	Description
75-1883	Mouse or Neonatal Rat (<30 g) Gas Stereotaxic Anesthesia Mask for Active Scavenging
75-1878	Mouse or Neonatal Rat (30 to 70 g) Gas Stereotaxic Anesthesia Mask for Active Scavenging
75-1879	Rat (<300 g) Gas Stereotaxic Anesthesia Mask for Active Scavenging

DETAILS

Nosecone anesthesia masks are specifically designed to fit most stereotaxic frames 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 are placed over the incisor bar.

Two kinds of stereotaxic frame nosecone masks are available:

- "Passive" mask with collinear inlet and outlet, used with charcoal canister only
- "Active" mask with separate (non-collinear) inlet and outlet on both sides, used with evacuation apparatus

Digital Compact Stereotaxic Instruments for Mouse and Rat

The Digital Compact Stereotaxic Instrument for Rat and Mouse includes a digital manipulator arm with a displacement transducer. The compact LCD display allows for real-time coordination presentation of all three axes up to resolution of 10 µm. The Rat/Mouse Digital Stereotaxic Instrument is available with either a single or dual 3-axis manipulator arm.

Item No.	Description
75-1828	Compact Mouse and Rat Stereotaxic Instrument, Single Manipulator, Digital
75-1829	Compact Mouse and Rat Stereotaxic Instrument, Dual Manipulator, Digital



The Harvard Apparatus Digital Compact Stereotaxic Instrument for Mouse and Rat adds a digital manipulator arm with a displacement transducer to the . The compact LCD display allows for real-time coordination presentation of all three axes up to resolution of 10 µm. The display has the ability to run on either AC power or battery power, drastically reducing electronic noise and making it suitable for electrophysiology experiments.

The dual-lead screw design ensures stable, accurate and smooth manipulations while the laser engraved scales offer ease of reading. The instrument offers 180° vertical rotation and 360° horizontal rotation, with the ability to lock at any angle. Either the mouse or rat adapter and ear bars can be installed this base instrument. The rat/mouse base plate measures 40.0 x 25.5 cm.

Key Features

- Small footprint
- Adapters for rat, mouse, mouse/rat
- Resolution of 10 µm
- Single or dual manipulator arm

This complete system comes with:

- Base plate
- Digital 3-axis manipulator arm
- Species adapter
- Ear bars
- Holder with corner clamp

Stereotaxic Ear Bars

Ear bars are used to stabilize the head during stereotaxic surgeries.

Item No.	Description
75-1863	Rat Ear Bars, 18°
75-1864	Rat Ear Bars, 45° (non-rupture)
75-1866	Rat Ear Bars, Hollow, 45°
75-1867	Mouse Ear Bars, 60°
75-1868	Mouse Ear Bars, Rubber (non-rupture)
75-1869	Mouse Ear Bars, Cuff



Ear bars for stereotaxic surgeries come in different sizes and types for different applications. Available for mouse, rat, cat and monkey. Non-rupturing options are available as well as hollow ear bars for rat auditory studies.

18° Ear Bars: Allow the tip to deeply penetrate into the ear canal creating a more secure hold and puncturing the tympanic membrane.

45 ° Ear Bars: Do not penetrate as deeply as the 18 degree ear bars and do not puncture the tympanic membrane.

60° Ear Bars: Specifically for mice and do not puncture the tympanic membrane.

Hollow Ear Bars: Designed to be used when performing auditory studies on rats.

Holders for Stereotaxic Instruments

A variety of holders are available for Harvard Apparatus's Stereotaxic Instruments. The varied selection supports a wide range of diameters allowing for customization.

Item No.	Description
75-1870	Probe Holder, Corner Clamp (0.3 to 1.5 mm)
75-1873	Large Probe Holder (6 to 12 mm)
75-1874	Micro Drill Holder (14.5 mm diameter)



A variety of holders are available for Harvard Apparatus Stereotaxic Instruments. The varied selection supports a wide range of diameters allowing for customization. Many different diameters can be accommodated with these stereotaxic instrument holders. Holders for specific functions are available:

- Standard corner clamp holder
- Micro drill specific holder
- Large probe holder suitable for glass syringes

Digital Compact Stereotaxic Instruments for Mouse Only

The Digital Compact Stereotaxic Instrument for Mouse includes a digital manipulator arm with a displacement transducer. The compact LCD display allows for real-time coordination presentation of all three axes up to resolution of 10 µm. The Mouse Digital Stereotaxic Instrument is available in either a single, dual, or two mouse configuration.

Item No.	Description
75-1822	Compact Mouse Stereotaxic Instrument, Single Manipulator, Digital
75-1823	Compact Mouse Stereotaxic Instrument, Dual Manipulator, Digital



The Harvard Apparatus Digital Compact Stereotaxic Instrument for Mouse adds a digital manipulator arm with a displacement transducer to the . The compact LCD display allows for real-time coordination presentation of all three axes up to resolution of 10 µm. The display has the ability to run on either AC power or battery power, drastically reducing electronic noise and making it suitable for electrophysiology experiments.

The Mouse Digital Stereotaxic Instrument is available in either a single, dual, or two mouse configuration. The mouse base plate measures 25.5 x 25.5 cm. The two mice base plate is larger, measuring 40 x 25.5 cm, allowing it to accommodate two animals simultaneously.

Key Features

- Small footprint
- Adapters for rat, mouse, mouse/rat
- Resolution of 10 µm
- Single or dual manipulator arm

This complete system comes with:

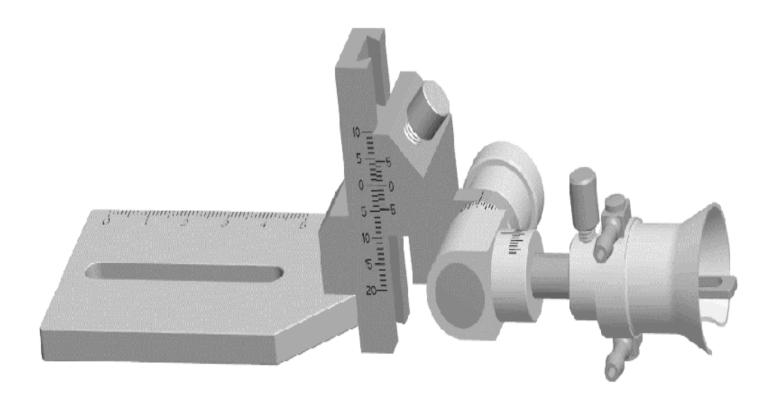
- Base plate
- Digital 3-axis manipulator arm
- Species adapter
- Ear bars
- Holder with corner clamp

Stereotaxic Anesthesia Adapters with Anesthesia Masks

Modifications of the species adapters that provide an integrated gas anesthesia mask while securing the head of the animal for stereotaxic procedures.

These masks are for rat, mouse, and neonates and interface with the Harvard Apparatus stereotaxic instruments.

Item No.	Description
75-1856	Mouse Anesthesia Adapter with Mask and Tubing for Active Scavenging
75-1889	Rat Anesthesia Adapter with Mask and Tubing for Active Scavenging



These anesthesia adapters are modifications of the species adapters that provide an integrated gas anesthesia mask while securing the head of the animal for stereotaxic procedures.

These masks are for rat, mouse, and neonates and interface with the Harvard Apparatus stereotaxic instruments.

Key Features:

- Integrates a gas anesthesia mask while securing the head of the animal
- Mouse, rat, and neonatal options available

Micro Drill

High speed drill used for breaking through the skull during stereotaxic procedures.

Features

- Speeds up to 38,000 rpm
- Forward or reverse rotation
- Easily interfaces with all Harvard Apparatus Stereotaxic Instruments with the use of the micro drill holder

Item No.	Description
75-1874	Micro Drill Holder (14.5 mm diameter)
72-6066	Micro Drill Burr Set of 5 (0.6mm, 0.8mm, 1.00mm, 1.20mm and 1.60mm burrs)
62-0020	Carbide Drill Bit, Round, 0.6 mm, pkg. of 5
62-0021	Carbide Drill Bit, Round, 0.8 mm, pkg. of 5
62-0022	Carbide Drill Bit, Round, 1.0 mm, pkg. of 5
62-0023	Carbide Drill Bit, Round, 1.2 mm, pkg. of 5
62-0024	Carbide Drill Bit, Round, 1.4 mm, pkg. of 5
62-0025	Carbide Drill Bit, Round, 1.6 mm, pkg. of 5
62-0026	Carbide Drill Bit, Round, 1.85 mm, pkg. of 5
62-0027	Carbide Drill Bit, Round, 2.1 mm, pkg. of 5



The Harvard Apparatus Micro Drill is a high speed drill used for breaking through the skull during stereotaxic procedures. When used with the 75-1874 Micro Drill Holder, the micro drill easily interfaces with Harvard Apparatus stereotaxic instruments. The micro drill can operate in either forward or reverse rotation and can be controlled either manually or with the footswitch. The micro drill includes the hand piece and stand, controller, and footswitch. Drill bits must be purchased separately.

Features

- Speeds up to 38,000 rpm
- Forward or reverse rotation
- Easily interfaces with all Harvard Apparatus Stereotaxic Instruments with the use of the micro drill holder

Drill Bit Sample Kit

Several drill bit options are available. The sample kit includes a selection of round carbide drill bits ranging in diameter from 0.6 mm to 1.6 mm. All drill bits have a length of 4.5 cm and a shaft diameter of 2.33 mm. With the exception of the sample kit, all drill bits are supplied in a package of five.

Compact Stereotaxic Instruments for Mouse Only

The Harvard Apparatus Compact Stereotaxic Instrument for mouse is sold with the base plate, 3-axis manipulator arm, species adapter, ear bars and holder with corner clips all suited for applications involving mice.

Item No. Description

75-1820

Compact Mouse Stereotaxic Instrument, Single Manipulator



The Harvard Apparatus Compact Stereotaxic Instrument for Mouse is a high quality stereotaxic instrument ideal for a number of applications. The dual-lead screw design ensures stable, accurate and smooth manipulations while the laser engraved scales offer ease of reading. The instrument offers 180° vertical rotation and 360° horizontal rotation, with the ability to lock at any angle. The unit creates a very small footprint; the single mouse base plate measures 25.5 x 25.5 cm while the dual mouse base plate measures 40 x 25.5 cm.

Key Features

- Small footprint
- Adapters for rat, mouse, mouse/neonatal rat and more
- Resolution of 100 μm for manual versions and 10 μm for digital versions
- Single or dual manipulator arm available in manual or digital

This complete system comes with:

- Base plate
- 3-axis manipulator arm
- Species adapter
- Ear bars
- Holder with corner clamp

Digital manipulator arms are available and provide the addition of a displacement transducer and compact LCD display. Together these additions allow real-time coordination presentation of all three axes to a resolution of 10 µm. The display has the ability to run on either AC power or battery power, drastically reducing electronic noise and making it suitable for electrophysiology experiments.

Compact Stereotaxic Instruments for Mouse and Rat

The Harvard Apparatus Compact Stereotaxic Instrument for Mouse and Rat comes complete with base plate, 3-axis manipulator arm (dual option comes with two manipulator arms), species adapters for both mouse and rat, ear bars for both mouse and rat, and holder with corner clamp.

Item No.	Description
75-1826	Compact Mouse and Rat Stereotaxic Instrument, Single Manipulator
75-1827	Compact Mouse and Rat Stereotaxic Instrument, Dual Manipulator
75-1828	Compact Mouse and Rat Stereotaxic Instrument, Single Manipulator, Digital
75-1829	Compact Mouse and Rat Stereotaxic Instrument, Dual Manipulator, Digital



The Harvard Apparatus Compact Stereotaxic Instrument for Mouse and Rat allows for the use of both mouse or rat adapters and ear bars to be used on a single base unit. The dual-lead screw design ensures stable, accurate and smooth manipulations while the laser engraved scales offer ease of reading. The instrument offers 180° vertical rotation and 360° horizontal rotation, with the ability to lock at any angle.

The Mouse and Rat Compact Stereotaxic Instrument allow for either the mouse or rat adapter and ear bars to be installed on a single instrument. The base plate mesures 40.0 x 25.5 cm.

Key Features

- Small footprint
- Adapters for rat, mouse, mouse/neonatal rat and more
- Resolution of 100 μm for manual versions and 10 μm for digital versions
- Single or dual manipulator arm available in manual or digital

This complete system comes with:

• Base plate

- 3-axis manipulator arm
- Species adapters for mouse and rat
- Ear bars for maouse and rat
- Holder with corner clamp

Digital manipulator arms are available and provide the addition of a displacement transducer and compact LCD display. Together these additions allow real-time coordination presentation of all three axes to a resolution of 10 µm. The display has the ability to run on either AC power or battery power, drastically reducing electronic noise and making it suitable for electrophysiology experiments.

Standard U-Frame Stereotaxic Instrument for Mouse

The Harvard Apparatus U-frame Stereotaxic Instrument for mouse comes complete with the base plate, 3-axis manipulator arm, mouse species adapter, ear bars and holder with corner clamp.

Item No.	Description
75-1808	Elevated U-Frame Stereotaxic Instrument, Mouse, Single Manipulator
75-1809	Elevated U-Frame Stereotaxic Instrument, Mouse, Dual Manipulator
75-1810	Elevated U-Frame Stereotaxic Instrument, Mouse, Single Manipulator, Digital



Stereotaxic surgeries on mice can be made simple with the complete Harvard Apparatus Standard U-Frame Stereotaxic Instrument for mouse. This complete system offers everything you have come to expect in a high quality stereotaxic instrument. The dual-lead screw design ensures stable, accurate and smooth manipulations while the laser engraved scales offer ease of reading. The instrument offers 180° vertical rotation and 360° horizontal rotation, with the ability to lock at any angle.

Key Features

- Standard U-Frame design
- Adapters for rat, mouse, mouse/neotatal rat and more
- Resolution of 100 μm for manual versions and 10 μm for digital versions
- Single or dual manipulator arm available in manual or digital

This complete system comes with:

- Base plate
- 3-axis manipulator arm
- Species adapter

- Ear bars
- Holder with corner clamp

Digital single and dual manipulator arm (with two three-axis manipulator arms) options are available. The digital arm provides the addition of a displacement transducer. Together, these additions allow real-time coordination presentation of all three axes to a resolution of 10 µm. The display has the ability to run on either AC power or battery power, drastically reducing electronic noise and making it suitable for electrophysiology experiments.

Remote Infuse/Withdraw Pump 11 Elite Nanomite Programmable Syringe Pump

The Pump 11 Elite Nanomite is a single syringe infusion/withdrawal programmable syringe pump with a flow rate range of 3.66 pl/min to 3.818 ml/min with 11 lb of adjustable force across the entire flow rate range. It can accommodate syringes from 0.5 µl to 1 ml.

The Pump II Elite Nanomite Syringe Pump is very easy to use with an LCD color touch screen and icon interface. This pump allows you to create, save and run simple to complex Methods without a PC. The Method profiles available on this pump are Constant Rate, Ramp, Gradient (binary) and Autofill. Delays can be set using the relative time clock.

The Message Area of the touch screen is used to display helpful instructions for the currently displayed screen. It is also used to display error or warning messages to indicate problem conditions in a Method or error conditions during pump operation. The Run Screen shows all of the pump parameters on one screen for easy review.

Item No.	Description
70-4507	Pump 11 Elite Nanomite Infusion/Withdrawal Programmable Syringe Pump
70-2277	Nanomite Kit for Direct Injection



The Pump 11 Elite Nanomite is a single syringe infusion/withdrawal programmable syringe pump with a flow rate range of 3.66 pl/min to 3.818 ml/min with 11 lb of adjustable force across the entire flow rate range. It can accommodate syringes from 0.5 µl to 1 ml.

Features

- Easy-to-use LCD color touch screen with GUI interface
- Light weight makes it ideal for hand-held or stereotaxic injection
- Up-front control knobs for ease of operation
- Quick start methods
- Easily Program simple to complex methods without a PC
- Relative time clock
- Vertical or horizontal orientation
- 11 lb linear force adjustable across the entire flow range

- Can daisy chain pumps
- CE, ETL (CSA, UL), WEEE, EU RoHS, CB Scheme Approved
- 2-year warranty

Applications

- Cellular Injections
- Drug Delivery
- Microinjections
- Hand-held Automated Delivery
- Stereotaxic Injections
- Feeding Cells
- Regenerative Medicine

The Pump II Elite Nanomite Syringe Pump is very easy to use with an LCD color touch screen and icon interface. This pump allows you to create, save and run simple to complex Methods without a PC. The Method profiles available on this pump are Constant Rate, Ramp, Gradient (binary) and Autofill. Delays can be set using the relative time clock.

The Message Area of the touch screen is used to display helpful instructions for the currently displayed screen. It is also used to display error or warning messages to indicate problem conditions in a Method or error conditions during pump operation. The Run Screen shows all of the pump parameters on one screen for easy review.

The software is organized into three main navigational branches, the quick start Methods, user-defined Methods, and system settings. You can control operations directly through the touch screen or remotely from an independent computer or device via the external I/O interface.

The Pump II Elite Nanomite has a footswitch input, USB serial port for computer control, RS-485 ports for daisy chaining pumps and Digital I/O for external control via an independent computer or device. There is also an option for daisy chaining pumps through the RS-232 (RJ-II) ports. This option must be ordered at the time the pump is ordered.

This pump consists of a control unit, an injection unit, a 6-foot cable to connect the two units and a footswitch.

SPECIFICATIONS

Specifications 70-4507

Accuracy	±0.5%
Classification	Class I
Dimensions, Control Box, L x D x H	9.0 x 7.0 x 3.67 in (22.6 x 17.78 x 9.32 cm)
Dimensions, Mechanism, L x D x H	2.5 x 2.0 x 7.5 in (6.35 x 5.08 x 19.05 cm)
Mechanism Mounting Post, OD	0.3125․ (0.793 cm) OD
Mechanism Mounting Post, Length	3.25․ (8.25 cm)
Display	4.3" WQVGA TFT Color Display with Touchpad
Drive Motor	1.8° Stepper Motor
Environmental Humidity	20% to 80% RH, non condensing
Environmental Operating Temperature	40°F to 104°F (4°C to 40°C)
Environmental Storage Temperature	14°F to 158°F (-10°C to 70°C)
Flow Rate Maximum	3.818 ml/min using 1 ml syringe
Flow Rate Minimum	3.66 pl/min using 0.5 µl syringe
I O TTL Connectors	15-pin D-Sub Connector
Input Power	12-30 VDC
Installation Category	II
Max Linear Force	11 lb @ 100% Force Selection
Mode of Operation	Continuous
Motor Drive Control	Microprocessor with 1/16 microstepping
Net Weight, Control Box	4.32 lb (1.96 kg)
Net Weight, Remote Mechanism	1.01 lb (0.458 kg)
No of Syringes	1
Non Volatile Memory	Storage of all settings
Number of Microsteps per one rev of Lead Screw	3,200
Pollution Degree	1
Pump Configuration	Remote
Pump Function	Infuse/Withdraw, Programmable
Pusher Travel Rate Maximum	228.97 mm/min
Pusher Travel Rate Minimum	0.433 μm/min
RS 232 Connectors	optional RJ-11

Specifications 70-4507

Regulatory Certifications	CE, ETL (UL, CSA), WEEE, EU ROHS & CB Scheme
Step Rate Maximum	52 µsec/µstep
Step Rate Minimum	27.5 sec/µstep
Syringe Rack Type	Standard Rack
Syringe Size Maximum	1 ml
Syringe Size Minimum	0.5 μΙ
USB Connectors	Туре В
Voltage Range	100-240 VAC, 50/60 Hz

Standard U-Frame Stereotaxic Instrument for Rat, 45° Ear Bar

The Harvard Apparatus U-frame Stereotaxic Instrument for rat comes complete with the base plate, 3-axis manipulator arm, rat species adapter, 45° ear bars for rat and holder with corner clamp. The 45° atraumatic ears bars are designed to hold the animal's head firmly without deep penetration into the ear canal, avoiding damage to the tympanic membrane.

Item No.	Description
75-1804	Elevated U-Frame Stereotaxic Instrument, Rat, 45° Ear Bar, Single Manipulator
75-1806	Elevated U-Frame Stereotaxic Instrument, Rat, 45° Ear Bar, Single Manipulator, Digital



Stereotaxic surgeries on rats can be made simple with the complete Harvard Apparatus Standard U-Frame Stereotaxic Instrument for rats. This complete system offers everything you have come to expect in a high quality stereotaxic instrument. The dual-lead screw design ensures stable, accurate and smooth manipulations while the laser engraved scales offer ease of reading. The instrument offers 180° vertical rotation and 360° horizontal rotation, with the ability to lock at any angle.

Key Features

- Standard U-Frame design
- Adapters for rat, mouse, mouse/neotatal rat and more
- Resolution of 100 µm for manual versions and 10 µm for digital versions
- Single or dual manipulator arm available in manual or digital

This complete system comes with:

- Base plate
- 3-axis manipulator arm
- Rat species adapter
- 45° ear bars for rats
- Holder with corner clamp

The 45° atraumatic ears bars are designed to hold the animal's head firmly without deep penetration into the ear canal, avoiding damage to the tympanic membrane.

Digital single and dual manipulator arm (with two three-axis manipulator arms) options are available. The digital arm provides the addition of a displacement transducer. Together, these additions allow real-time coordination presentation of all three axes to a resolution of 10 µm. The display has the ability to run on either AC power or battery power, drastically reducing electronic noise and making it suitable for electrophysiology experiments.

Standard U-Frame Stereotaxic Instrument for Mouse and Neonatal Rat

The Harvard Apparatus U-frame Stereotaxic Instrument for stereotaxic surgery on mouse and neonatal rat comes complete with the base plate, 3-axis manipulator arm, species adapter, ear bars and holder with corner clamp.

Item No.	Description
75-1812	Elevated U-Frame Stereotaxic Instrument, Mouse/Neonatal Rat, Single Manipulator
75-1815	Elevated U-Frame Stereotaxic Instrument, Mouse/Neonatal Rat, Dual Manipulator, Digital



Stereotaxic surgeries can be made simple with the complete Harvard Apparatus Standard U-Frame Stereotaxic Instrument for mouse and neotatal rat. This complete system offers everything you have come to expect in a high quality stereotaxic instrument. The dual-lead screw design ensures stable, accurate and smooth manipulations while the laser engraved scales offer ease of reading. The instrument offers 180° vertical rotation and 360° horizontal rotation, with the ability to lock at any angle.

Key Features

- Standard U-Frame design
- Adapters for rat, mouse, mouse/neotatal rat and more
- Resolution of 100 µm for manual versions and 10 µm for digital versions
- Single or dual manipulator arm available in manual or digital

This complete system comes with:

- Base plate
- 3-axis manipulator arm
- Species adapter
- Ear bars
- Holder with corner clamp

Digital single and dual manipulator arm (with two three-axis manipulator arms) options are available. The digital arm provides the addition of a displacement transducer. Together, these additions allow real-time coordination presentation of all three axes to a resolution of 10 µm. The display has the ability to run on either AC power or battery power, drastically reducing electronic noise and making it suitable for electrophysiology experiments.

Homeothermic Monitoring System

The Harvard Apparatus Homeothermic Monitoring System is a closed loop temperature control system for small rodents. It features an easy-to-use touchscreen, small flexible rectal probe, and heating pads available in several sizes to meet all your surgical needs. The Homeothermic Monitoring System is the perfect addition to any lab utilizing anesthesia in small rodents.

Key Features

- Easy-to-use color touchscreen
- Flexible rectal probe
- Easy to clean, flexible heating pad
- Multiple heating pad sizes available
- Insulation pad insulates heating pad from surgical surface to prevent heat loss and improve efficiency

Accessories and replacement items are also available. Please see Item Listing

Item No.	Description
55-7020	Homeothermic Monitoring System includes: Homeothermic Control Unit, Flexible Rectal Probe, Standard Size Heating Pad (12.0 x 20.5 cm), Insulation Pad and USB cable
55-7034	Homeothermic Monitoring System includes: Homeothermic Control Unit, Flexible Rectal Probe, Large Size Heating Pad (20.3 x 25.4 cm), Insulation Pad and USB cable
55-7030	Homeothermic Monitoring System includes: Homeothermic Control Unit, Flexible Rectal Probe, Mouse Stereotaxic Heating Pad (7.0 x 14.5 cm), Insulation Pad and USB cable
55-7031	Homeothermic Monitoring System includes: Homeothermic Control Unit, Flexible Rectal Probe, Stereotaxic Gas Anesthesia Heating Pad (3.7 x 14.5 cm), Insulation Pad and USB cable

Item No.	Description
55-7021	Flexible Rectal Probe, 1.6 mm OD
55-7022	Heating Pad, standard, 12.0 x 20.5 cm
55-7023	Heating Pad, for Mouse Stereotaxic Adapter, 7.0 x 14.5 cm
55-7025	Insulation Pad, for Standard Heating Pad, 12.0 x 20.5 cm
55-7033	Insulation Pad, for Large Heating Pad, 20.3 x 25.4



The Homeothermic Monitoring System is a closed loop temperature control system for small rodents. The subject's core body temperature can by accurately controlled utilizing a small, flexible rectal probe to monitor the animal's core temperature and a heating pad to provide heat input. The system is provided complete and includes the control unit, flexible rectal probe, standard size heating pad (12 x 20.5 cm) and an insulation pad that insulates the heating pad from the surgical surface to prevent heat loss and improve efficiency.

- Easy-to-use color touchscreen
- Flexible rectal probe
- · Easy to clean, flexible heating pad
- Multiple heating pad sizes available

The easy-to-use touchscreen allows users to set the target temperature and clearly view the subject's current core body temperature, as well as the set temperature, at all times. Additionally, audible alarms can be set to advise the user should the animal's core body temperature deviate ±1° C from the set temperature.

Heating pads are available in three sizes to fit all your surgical needs. The standard size is appropriate for mice and rats and fits nicely into standard stereotaxic instruments. Two additional sizes are available to fit the common stereotaxic instrument adapters. The pads are flexible enough to fully wrap the animals, which allows the animal to be warmers from all sides rather than just the front or back.

SPECIFICATIONS

Temperature Range	20 to 50°C (68 to 122°:F)
Resolution	0.1°C
Integrated Temperature Sensor	Yes
Temperature Stability	+/-0.1°C
Temperature Display	User selectable °C and °F
Pad Material	Silicone
Pad Size	12.0 x 20.5 cm (4.72 x 8.07 in)
Probe	Flexible rectal probe
Probe Tip Diameter	1.6 mm (0.06 in)
Probe Shaft Diameter	1.6 mm (0.06 in)
Probe Shaft Length	100 mm (3.94 in)
Serial Communication	RS-485
Analog Output	0 to 5 V, 20 to 50°
Analog Input	0 to 5 V, 20-50°

Dimensions (HxWxD)	12.0 x 22.6 x 15.8 cm (4.72 x 8.91 x 6.21 in)
Weight	0.68 kg (1.5 lb)
Power	100 to 240 VAC, 50/60 Hz
Regulatory	CE, ETL (UL, CSA), WEEE, EU ROHS
Warranty	1 year

Ideal Micro Drill Surgical Drill

The Ideal Micro-Drill™ is designed for research applications that require surgical burrs and trephines. The drill is constructed of light-weight aluminum alloy for balance and control and is powered by a rechargeable 6-volt nickel metal hydride (NiMH) battery (charger included). Under normal operating conditions the unit will function for 8 hours between recharging.

- Rechargeable
- Light-weight design
- Hard plastic case with die-cut foam for convenient storage
- Excellent balance and handling

Item No.	Description
72-6065	MICRO DRILL KIT, 110 VAC 60HZ, INCLUDES SET OF 5 BURRS 0.6mm, 0.8mm, 1.0mm, 1.2mm and 1.6mm
72-6066	Micro Drill Burr Set of 5 (0.6mm, 0.8mm, 1.00mm, 1.20mm and 1.60mm burrs)
72-6071	MICRO DRILL KIT, 220 VAC 50HZ, EU. INCLUDES SET OF 5 BURRS 0.6mm, 0.8mm, 1.0mm, 1.2mm and 1.6mm
72-6072	MICRO DRILL KIT, 220 VAC 50HZ, UK. INCLUDES SET OF 5 BURRS 0.6mm, 0.8mm, 1.0mm, 1.2mm and 1.6mm



The Ideal Micro-Drill is designed for research applications that require surgical burrs and trephines. The drill is constructed of light-weight aluminum alloy for balance and control and is powered by a rechargeable 6-volt nickel metal hydride (NiMH) battery (charger included). Under normal operating conditions the unit will function for 8 hours between recharging.

- Rechargeable
- Light-weight design
- Hard plastic case with die-cut foam for convenient storage
- Excellent balance and handling

SPECIFICATIONS

Specifications

72-6065 72-6071 72-6072

Diameter Metric	1.9 cm
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Specifications

72-6065 72-6071 72-6072

Length Metric	17.5 cm
Material	Light Weight Aluminum Alloy
Power Supply	6V DC NiMH battery
Size	12,000 rpm
Stall Torque English	1.25 oz/in
AC Adapter/Charger	110 60Hz/220 50Hz In, 6V DC Out

HSE Anesthesia Masks for Stereotaxic Instruments

These anesthesia masks for rodent are optimized for different models of Stereotaxic instruments.

- ONLY series of stereotaxic mask with a nose clamp to further minimize the animal's head movement
- · Coaxial design for secure supply and scavenging of anesthesic gas
- Optimized for mouse or rat
- Easily interfaces with the Fluosorber or F/air canisters

See our full line of .

Item No.	Description
73-4921	Anesthesia Mask, with Rod for Mouse Specific Stereotaxic Instrument
73-4924	Anesthesia Mask for Mouse to use with Mouse/Rat Stereotaxic Instrument
73-5011	Anesthesia Mask for Mouse Stereotaxic Instrument, Standard U-Frame
73-4922	Anesthesia Mask for Rat Stereotaxic Instrument
73-4959	Anesthesia Mask for Mouse, compatible with KOPF frame, including tooth bar and Adapter to Kopf 923b Holder



These anesthesia masks for rodent are optimized for different models of Stereotaxic instruments.

- ONLY series of stereotaxic mask with a nose clamp to further minimize the animal's head movement
- Coaxial design for secure supply and scavenging of anesthesic gas
- Optimized for mouse or rat
- Easily interfaces with the Fluosorber or F/air canisters

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