9

## EVOLVING NEUROSCIENCE AND BEHAVIOR RESEARCH

• Stereotaxic Instruments .	 . 6
• Surgical Instruments	 .50
• Anesthesia	 .34
• ( ANY-maze	 108
• 🕒 Ugo Basile	 136

 Behavior Testing Equipment ...and much more!

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620 Wheat Lane, Wood Dale, IL 60191 Neuro@StoeltingCo.com • 1-800-860-9775 Visit our website for full product information www.StoeltingCo.com

# **Company & Order Information**

## In need of assistance? We can help!

Contact Stoelting for all your scientific needs.



## U.S. & Canada Order Information:

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Motia Khan • New Delhi 110055



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(Outside of North America, Europe or India) Please contact Stoelting's North American office for assistance.

#### SALES INQUIRIES

Please contact our Sales Department at Stoelting with Neuroscience or ANY-maze related sales inquiries.

#### TECHNICAL ASSISTANCE Neuroscience

Please contact our Neuroscience Technical Staff at Neuro@StoeltingCo.com for technical assistance.

#### ANY-maze

Please contact ANY-maze Support at Support@ANY-maze.com or TechSupport@ANY-maze.com for technical assistance.

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For orders placed in Europe, please address your order to Stoelting Europe.

For orders placed in India, please address your order to Stoelting India.

All International orders (outside of North America, Europe and India) please contact our North American office for further assistance. Payments can be made using a credit card (Visa, Mastercard, American Express), bank transfer or purchase order (PO; pre-approved accounts only).

## **RETURNS AND REPAIRS**

Please contact our Returns Department at Stoelting for assistance with your return/repair. All returned items must be assigned a Return Materials Authorization (RMA) and be accompanied by a completed Equipment Decontamination form. Any merchandise that has not been assigned an RMA or does not include the Equipment Decontamination form will be returned to the sender. A restocking fee may be applied to all returned merchandise at the discretion of Stoelting Co. Customized equipment is not eligible for return. Following inspection, you will be contacted with a repair estimate prior to initiation of the repair. Repair costs can be paid by VISA, MASTERCARD, AMEX, bank transfer or purchase order (PO; pre-approved accounts only).

#### WARRANTY INFORMATION

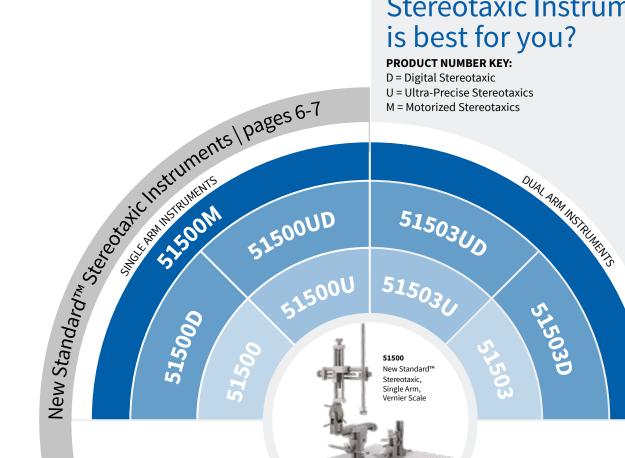
Stoelting Co. warrants its products against defects in materials and workmanship for a period of one-year from the date of shipment. For warranty repairs, please include a copy of your original invoice.

\*Prices and product availability subject to change without notice. Call or visit www.StoeltingCo.com for current prices.

We thank you for your interest in Stoelting products, and look forward to serving you today, and in the years to come.

# **Evolution of the Stereotaxic**

## Which New Standard™ Stereotaxic Instrument is best for you?



**51501** NEW STANDARD<sup>™</sup> BASE ONLY 51500 Single Arm, Vernier Scale
51500U Single Arm, Ultra-Precise
51503U Dual Arm, Ultra-Precise
51503 Dual Arm, Vernier Scale
51500D Single Arm, Digital
51500UD Single Arm, Ultra-Precise, Digital
51503UD Dual Arm, Ultra-Precise, Digital
51503D Dual Arm, Digital
51500M Single Arm, Motorized

www.StoeltingCo.com

# **Evolution of the Stereotaxic**

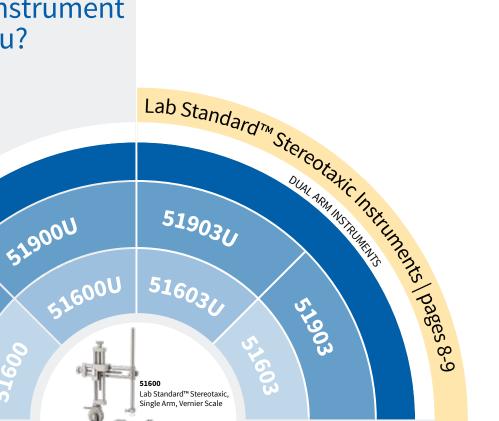
## Which Lab Standard™ Stereotaxic Instrument is best for you?

#### **PRODUCT NUMBER KEY:** D = Digital Stereotaxic

U = Ultra-Precise Stereotaxics M = Motorized Stereotaxics

SNOT RAINERING TO THE REAL PROPERTY OF THE REAL PRO

51900



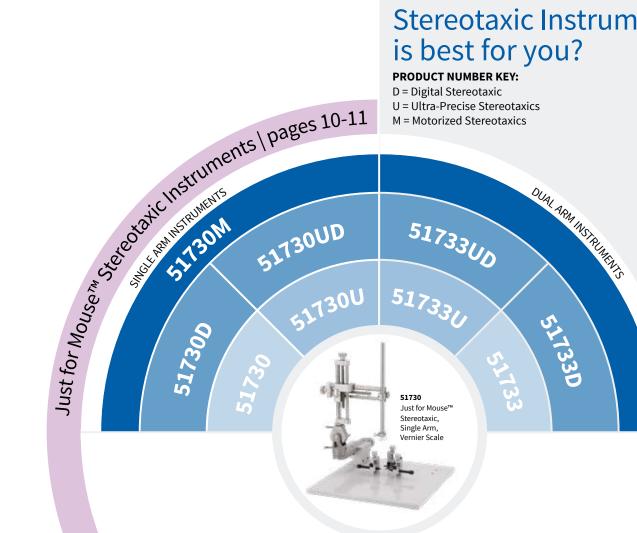
#### **51601** LAB STANDARD<sup>TM</sup> BASE ONLY

51600 Single Arm, Vernier Scale
51600U Single Arm, Ultra-Precise
51603U Dual Arm, Ultra-Precise
51603 Dual Arm, Vernier Scale
51900 Single Arm, Digital
51900U Dual Arm, Ultra-Precise, Digital
51903U Dual Arm, Ultra-Precise, Digital
51903 Dual Arm, Digital
51900M Single Arm, Motorized

www.StoeltingCo.com

# **Evolution of the Stereotaxic**

## Which Just for Mouse<sup>™</sup> Stereotaxic Instrument is best for you?



## 51731 JUST FOR MOUSE<sup>™</sup> BASE ONLY

51730 Single Arm, Vernier Scale 51730U Single Arm, Ultra-Precise 51733U Dual Arm, Ultra-Precise 51733 Dual Arm, Vernier Scale 51730D Single Arm, Digital 51730UD Single Arm, Ultra-Precise, Digital 51733UD Dual Arm, Ultra-Precise, Digital 51733D Dual Arm, Digital 51730M Single Arm, Motorized

www.StoeltingCo.com

# Rat and Mouse Stereotaxic Instruments

# New Standard<sup>™</sup> Stereotaxic Instrument for Rat and Mouse

The innovative design of the New Standard<sup>™</sup> Stereotaxic Instrument provides users with the ability to perform surgeries on a Mouse or a Rat on the same base. The New Standard<sup>™</sup> includes a 100 micron 3-axes, left-hand manipulator arm, separate rat and mouse adaptors, dual-sided (traditional and non-rupture) rat ear bars, dual-sided mouse ear bars, and corner-clamp probe holder. Also, available as Dual, Ultra-Precise, Digital or Motorized.

## New Standard<sup>™</sup> Features

- No U-Frame maximizes operating space
- Designed for a Rat or a Mouse on the same base
- Vertical and horizontal adjustment of ear and nose posts accommodates rodents of all sizes
- Scales at ear and nose posts allows for precise positioning
- Comes standard with integrated warming base!
- Gas anesthesia compatible

Equiped with Warming Base! See pages 38-39



Sign up now for our 3-day workshops for learning stereotaxic surgical techniques at theJackson Laboratory. Scan for details, or visit www.jax.org/stereotaxic

Revolutionary design has eliminated the U-frame allowing for greater flexibility and access to the animal.

**51500** New Standard<sup>™</sup> Stereotaxic Instrument

Most versatile Stereotaxic Instrument available!

# **Rat and Mouse Stereotaxic Instruments**

**51500M** Motorized New Standard<sup>™</sup> Stereotaxic Instrument.

Fing D. Beltal New Standard™ Sterotanic Insta

Fis Dual New Standard™ Stereotavic Instance

55000 UIT: A Precise Digital New Standard' Steloat



#### NEW STANDARD<sup>™</sup> STEREOTAXIC

51500	New Standard™ Stereotaxic, Rat and Mouse	
51503	Dual New Standard™ Stereotaxic, Rat and Mouse	
ULTRA-PI	RECISE	
51500U	Ultra-Precise New Standard™ Stereotaxic, Rat and Mouse	
51503U	Ultra-Precise Dual New Standard™ Stereotaxic, Rat and Mouse	
DIGITAL		
51500D	Digital New Standard™ Stereotaxic, Rat and Mouse	
51503D	Dual Digital New Standard™ Stereotaxic, Rat and Mouse	
DIGITAL U	JLTRA-PRECISE	
51500UD	Digital Ultra-Precise New Standard™ Stereotaxic	
51503UD	Dual, Digital Ultra-Precise New Standard™ Stereotaxic, Rat and Mouse	
MOTORIZ	(ED	
51500M	Motorized New Standard™ Stereotaxic, Rat and Mouse	
51555M	Optional Motorized Drill	



7

# Rat Stereotaxic Instruments

# Classic Lab Standard<sup>™</sup> Stereotaxic Instruments for Rats

The Classic Lab Standard<sup>™</sup> Stereotaxic Instrument has been a standard in research labs for nearly five decades. The time-proven U-Frame design provides stability and adaptability while the instrument's exclusive, triple-lead screws allow for smooth, consistent movements with rapid positioning. The Classic Lab Standard<sup>™</sup> includes a 100 micron, 3-axes, left-hand manipulator arm, rat adaptor, dual sided (traditional and non-rupture) ear bars, and corner-clamp probe holder. Also available as Dual, Ultra-Precise, Digital, Ultra-Precise Digital, or Motorized.

## Lab Standard<sup>™</sup> Features

Low cost

8

- Classic U-Frame design
- Interchangeable adaptors (for Mice or Rats)
- Gas anesthesia compatible
- Absolute lock at 90° vertical
- Dual-sided (traditional and non-rupture) ear bars
- Comes standard with integrated warming base!

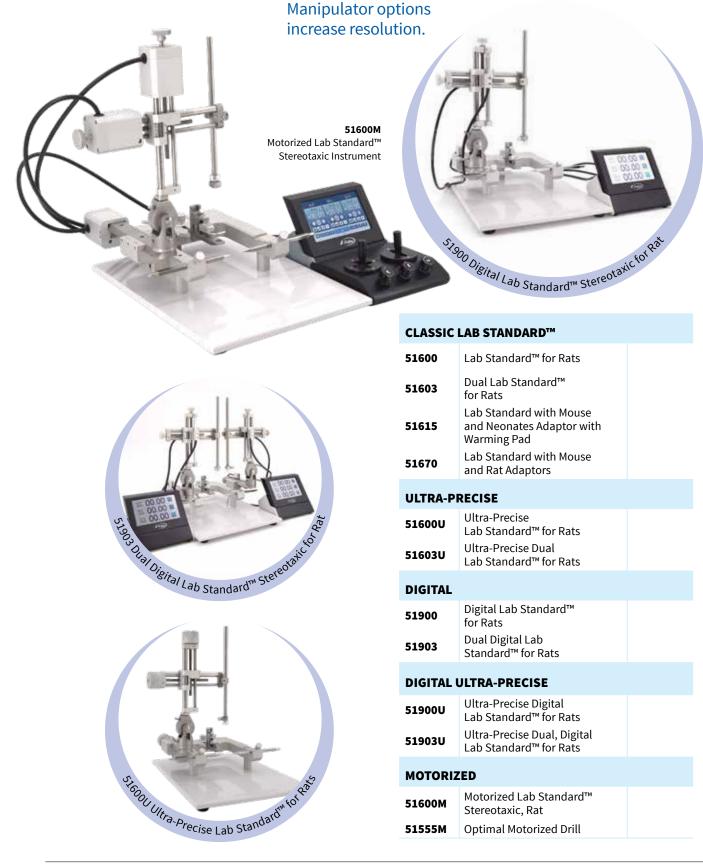
## The classic **U-frame** design has been a **standard in research labs** for nearly five decades!



Sign up now for our 3-day workshops for learning stereotaxic surgical techniques at theJackson Laboratory. Scan for details, or visit www.jax.org/stereotaxic



# **Rat Stereotaxic Instruments**



# Mouse Stereotaxic Instruments

# Just for Mouse™ Stereotaxic Instruments for Mice

**The Stoelting Just For Mouse™ Stereotaxic Instrument** was specifically designed for use with knock-out and transgenic mice. Includes a 10 x 10in (25 x 25cm) square base; 100 micron; 3-axes; left-hand manipulator arm; triple-point mouse and ear bars; snout clamp, and corner clamp probe holder. Also, available as Dual, Ultra-Precise, Digital, Digital Ultra-Precise, or Motorized.

## Just for Mouse™ Features:

- Dual-arm capable
- Small footprint
- Compact and cost-effective
- Ideal for knock-out and transgenic mice
- Offers multiple head-holding options
- Vertical post adjustment
- Gas anesthesia compatible (see product 51609M on page 26)
- Comes standard with intergrated warming base

The smallest stereotaxic making the biggest impact.

# Most affordable

stereotaxic available!

Traditional (18°) ear bars with rubber tips included. Non-rupture (45°) ear bars available upon request. See below and page 27.





Sign up now for our 3-day workshops for learning stereotaxic surgical techniques at theJackson Laboratory. Scan for details, or visit www.jax.org/stereotaxic

Equiped with Warming Base! See pages 38-39

**51730** Just for Mouse<sup>™</sup> Stereotaxic Instrument

## **Mouse Stereotaxic Instruments**

51730M Motorized Just for Mouse™ Stereotaxic Instrument

STEGSIM Mouse Anesthesia Mask, 51730

## Optional Mouse **Anesthesia Mask** on page 26.





#### Just For Mouse<sup>™</sup> Stereotaxic 51730 Instrument Dual Just For Mouse™ 51733 Stereotaxic Instrument **ULTRA-PRECISE** Ultra-Precise Just For Mouse™ 51730U Stereotaxic Instrument Ultra-Precise Dual Just For 51733U Mouse<sup>™</sup> Stereotaxic Instrument DIGITAL Digital Just For Mouse™ 51730D Stereotaxic Instrument Dual Digital Just for Mouse™ 51733D Stereotaxic Instrument **DIGITAL ULTRA-PRECISE** Ultra-Precise Digital Just for 51730UD Mouse Stereotaxic Instrument Ultra-Precise Dual Digital 51733UD Just for Mouse Stereotaxic Instrument MOTORIZED Motorized Just for Mouse™ 51730M Stereotaxic Instrument 51555M **Optional Motorized Drill** Gas Anesthesia Mask 51609M for Mouse Stereotaxic

JUST FOR MOUSE<sup>™</sup> STEREOTAXIC

Stereotaxic Instruments

# Motorized Stereotaxic Manipulator Arms

## NEW!

# Stoelting's Motorized Stereotaxic Manipulator Arms

**Stoelting's Motorized Stereotaxic Manipulator Arms** are designed for fast, accurate positioning during stereotaxic surgery. Ideal for inexperienced users, the motorized manipulator arms employ a touchscreen display and joystick controller for easy-to-control movement of each axis. Manual movement available anytime.

The joystick controller allows remote control of Optional Drill and LED light features.

#### Motorized Manipulator Arm Features:

- Automatic motorized movement using touchscreen display
- Various speeds (4mm/s to 0.1mm/s)
- Manual option always available
- Optional Drill feature
- 10µm movement
- Joystick Controller
   Included

**51600M** Motorized Lab Standard<sup>™</sup> Stereotaxic Instrument shown with optional Drill, not included.

#### **MOTORIZED STEREOTAXIC INSTRUMENTS**

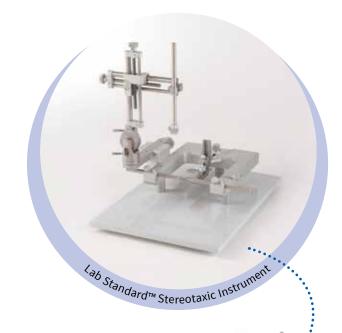
51500M	Motorized New Standard Stereotaxic, Rat & Mouse
51600M	Motorized Lab Standard Stereotaxic, Rat
51615M	Motorized Lab Standard Stereotaxic, with Mouse and Neonate Adaptor
51670M	Motorized Lab Standard Stereotaxic, with Mouse and Rat Adaptor
51730M	Just for Mouse Stereotaxic, Mouse
51555M	Optional Motorized Drill

Equiped with Warming Base! See pages 38-39

Quick and extremely accurate. Easy-to-control movement for an affordable price!

**Compare** to Neurostar's Robot Stereotaxic Instruments. See page 16.

# Stereotaxic Upgrades & Conversions



# **Motorized Conversion**

Stoelting's Motorized Stereotaxic Manipulator Arms are designed for fast, accurate positioning during stereotaxic surgery. Ideal for inexperienced users, the motorized manipulator arms employ a touchscreen display for easy-to-control movement of each axis. Manual movement available anytime. Optional Drill feature available.

## **Motorized Manipulator Arm Features:**

- Automatic motorized movement using touchscreen display
- Various speeds (4mm/s to 0.1mm/s)
- Manual option always available
- Optional Drill feature
- 10µm movement

#### **MOTORIZED CONVERSION**

51604MOT	Conversion to Motorized, 3-axes, Left
52702	Joystick for Motorized Control Base

orized

## **Keep your Stereotaxic Base** and upgrade with new **Motorized Axes!**

## Stereotaxic Care and Maintenance

• Wipe your stereotaxic instrument with soap or a mild detergent.

<sup>1</sup><sup>1</sup>Otorized Lab Standard™ Stereotaxic Instrume

- Keep your stereotaxic instrument free of dust and debris.
- Never autoclave your stereotaxic instrument.
- Sterilize your stereotaxic instrument using gas or a germicide if necessary.
- Stereotaxic instruments perform best at room temperature 70°-75°F (20°-24°C), and at 45-60% humidity.
- Call for details about calibration service!

# **Ultra-Precise Stereotaxic Manipulator Arms**

# **Ultra-Precise Manipulator Arms**

Ultra-Precise Manipulator Arms are ideal for use in stereotaxic surgery where high-accuracy positioning is required. Up to 80mm of travel is available in all directions, with up to 90° angle adjustment, in either the anterior-posterior or medial-lateral planes. Ultra-Precise Manipulators are compatible with all Stoelting Stereotaxics including New Standard<sup>™</sup>, Lab Standard<sup>™</sup>, and Just for Mouse<sup>™</sup>.

## **Ultra-Precise Features:**

- 10µm resolution
- Target small brain regions with confidence
- Upgrade ANY Stoelting Stereotaxic and most other stereotaxic brands

Extremely high accuracy...Precision like no other! Contact us for more details.



51500U	Ultra-Precise New Standard™ Stereotaxic, Rat and Mouse
51600U	Ultra-Precise Lab Standard, Rat
51730U	Ultra-Precise Just for Mouse™ Stereotaxic Instrument

## Stoelting **Ultra-Precise** Manipulator Arms offer **increased resolution!**

# **Digital Stereotaxic Manipulator Arms**

## Stoelting's Digital Stereotaxic Manipulator Arms

Stoelting's Digital Stereotaxic Manipulator Arms are designed for fast, accurate positioning during stereotaxic surgery. Ideal for inexperienced users, the digital manipulator arms employ an LED module that provides immediate coordinate feedback for repeatable targeting!

- 10µm resolution
- Upgrade or convert your existing Manipulator Arm (see page 13)

**Stoelting's** 

Digital Stereotaxic Manipulator Arms reduce the risk for human error.

00.00

No computer necessary

# DIGITAL WIPULATOR ARMS51904Digital 3-axes<br/>Manipulator Arm, Left51906Digital 3-axes<br/>Manipulator Arm, RightDIGITAL WIPULATOR ARMS51914Digital Conversion for<br/>Stoelting Manipulator Arm, Left

**51916**Digital Conversion for<br/>Stoelting Manipulator Arm, Right

## COMPLETE DIGITAL STEREOTAXIC INSTRUMENTS

51500D	Digital New Lab Standard Stereotaxic for Rats and Mice
51900	Digital Lab Standard Stereotaxic for Rats
51730D	Digital Just for Mouse Stereotaxic (Best Seller!)

Digital Manipulator Arms sold separately, or as part of our Digital Stereotaxic Instruments.

**Upgrading** increases resolution.

# Robotic Stereotaxic Instruments

## Neurostar Robotic Stereotaxic Instruments

Stoelting, the leading manufacturer in stereotaxic equipment and Neurostar, the pioneers in robotic stereotaxic solutions for animal research, have teamed up to produce the best robotic stereotaxic systems on the market! The robotic systems are ideal for both new and experienced users.

## Features include:

- StereoDrive software (computer not included)
- Atlas integration (Rat or Mouse)
- Motorized movement, computer controlled
- Correction for alignment inaccuracies (tilt correction)
- Correction for variation of brain size
- Auto-calculated angle adjustment
- 1 micron precision

**51700** Robotic Lab Standard, Rat

## ROBOTIC STEREOTAXIC INSTRUMENTS

51700	Robotic Lab Standard Stereotaxic, Rat
51715	Robotic Lab Standard Stereotaxic, Mouse
51770	Robotic Lab Standard Stereotaxic, Rat and Mouse
51753	Robotic Dual Arm Lab Standard Stereotaxic, Rat
ADD-ON, ROBOTIC MANIPULATOR ARMS	
51704	Robotic Manipulator Arm, ADD-ON, 3 Axis, LEFT

51706Robotic Manipulator Arm,<br/>ADD-ON, 3 Axis, RIGHT

Equipped ◄···· with Warming Base.

See page 38-39.

## Call Stoelting for dual and additional configurations.

# **Drill and Microinjection Robot**

# **Drill and Microinjection Robotic System**

The Drill and Microinjection Robotic System provides automated drilling followed by an intracranial injection using the same holder! This unique robotic stereotaxic is ideal or multiple injection sites with no tool exchange between the drill and injector.

## **Microinjection Features Include:**

- Integrated into the StereoDrive software (computer not included)
- Define/Store protocols
- Also available as Glass-Capillary Nanoinjector (page 18)
- Atlas integration

## **Drill Features Include:**

- Integrated into the StereoDrive software
- Depth controlled for safe drilling
- Auto stop function automated dura detection avoids brain damage
- Atlas integration

## **Drill and Injection Robotic Features include:**

- All the above plus NO TOOL EXCHANGE!
- Software synchronization of Drill and Microinjector
- High throughput for drill and inject.
- Time saving and accurate.
- Automated sequencing for multiple injection sites just program it and it does the work!

#### **COMPLETE STEREOTAXIC ROBOTS**

51705	Drill and Microinjector Robot, Rat/Mouse
51707	Drill and Microinjector Robot, Rat
51710	Drill Robot, Mouse
51709	Injection Robot, Mouse
51708	Optogenetics Robot (including drill + injector), Mouse

#### ACCESSORIES FOR STEREOTAXIC ROBOTS

58632	Smart Remote Control
58633	Automated Synchronization Device for Drill and Injector
51722	Laptop Computer

Compatible with Stoelting's Stereotaxic Instruments!

Complete Robotic Systems **for improved** stereotaxic **surgery** 

# **Robotic Stereotaxic Accessories**



# Glass-Capillary Nanoinjector

The Glass-capillary Nanoinjector was specially designed to perform accurate ultraprecise nanoliter volume injections using glass capillaries that can be pulled to ultrathin tips. Wireless solution available.

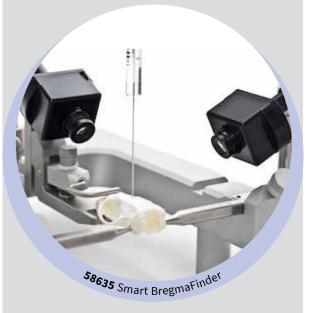
In combination with the automated drill it can be used in the Drill and Nanoinjection Robotic configuration.

## Features include:

- Computer controlled, intuitive interface
- User defined injection volumes, starting from 1nL
- User defined injection rates, starting from 2nL/s
- Can be mounted on micromanipulators/stereotaxic
- Automated sequencing for multiple injection sites-just program it and it does the work!

#### CAPILLARY NANOINJECTOR

51711	Drill and Capillary Nanoinjection Robot, Mouse
51712	Capillary Nanoinjection Robot, Mouse
58646	Capillary Nanoinjector (wireless for micromanipulators)



# Smart BregmaFinder

Breakthrough innovation provides automated camera-driven zero-positioning of the probe over Bregma. The Smart BregmaFinder controls the robotic stereotaxic in order to precisely position the tip of the probe to Bregma.

## **Features include:**

- Easy Bregma Detection
- Camera Driven Positioning
- Experiment Monitoring
- Video Streaming
- Highest Accuracy

#### SMART BREGMAFINDER

58635 Smart BregmaFinder

# Recommended Stereotaxic Accessories





Join us for a 3-day workshop learning surgical stereotaxic techniques with mice at the Jackson Laboratory!

Visit www.jax.org/stereotaxic for workshop schedule and to sign up!

# Large Animal Stereotaxic Instruments

## Parallel Rail Stereotaxic Instrument

Stoelting's Parallel Rail Stereotaxic Instrument is designed for large animals, but can be used on almost any laboratory animal with Stoelting's selection of animal species adaptors (page 22). Includes Parallel Rail frame; cat/monkey or dog/monkey adaptor; four 100 micron 2-axes manipulator arms (2 right-hand, 2 left-hand); traditional (18°) ear bars; swivel stand; base plate, and four corner- clamp probe holders.

## **Parallel Rail Features**

- Durable 2-axes positioning manipulator arms
- A/P microdrive available for increased resolution
- Adaptable for use with Rats and Mice

Parallel Rail is the MOST versatile stereotaxic instrument available!

#### PARALLEL RAIL STEREOTAXIC INSTRUMENT

51800	Parallel Rail Stereotaxic, 2 Manipulator Arms
51804	Manipulator on Rail Clamp, Left
51806	Manipulator on Rail Clamp, Right
51858	A/P Microdrive

Traditional (18°) ear bars included. Non-Puncture (45°) ear bars available upon request.

Platform base allows for off-table vertical adjustment.

**51800** Parallel Rail Stereotaxic Instrument (shown with optional A/P Microdrive)

# Lab Standard Mouse Adaptor

## Lab Standard with Mouse Adaptor Position easily and secure your animal gently

Stoelting's Mouse/Neonates Adaptor is designed for use with the traditional 'U' frame Stereotaxic instrument. It employs lightweight Delrin Ear Bars with tapered points on one end, and rubber tips on the other, to facilitate surgery on mice and rat pups.

The NEW Stoelting Mouse Adaptor Kit (page 23) uses a more traditional low profile hold for the head and snout of the mouse. Non-Rupture (45°) Ear Bars are included. The 51625-1 Elevated Platform with warming pad is ideal for this adaptor.

LAB STANDARD WITH MOUSE & RAT ADAPTORS		
51615	Digital Lab Standard with Mouse & Neonates Adaptor	
51615T	Lab Standard Stereotaxic, Mouse	
51925	Digital Lab Standard with Mouse & Neonates Adaptor	
51925T	Digital Lab Standard Stereotaxic, Mouse	

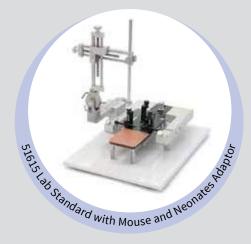
51625-1	Elevated Platform for Mouse wi Warming Pad		
51625W	Mouse & Neonates Adaptor with Warming Pad		



Add a **Rodent Warmer** Control Box to **utilize your Adaptors' warming feature!** See Rodent Warmer Control Box options on pages 38-39.







# Stereotaxic Animal Adaptors



## Mouse Adaptor Kit The Stoelting 51660-1 Mouse Adaptor Kit includes a nose

The Stoelting 51660-1 Mouse Adaptor Kit includes a nose clamp assembly with small tooth bar for easy placement. Non-Rupture (45°) Ear Bars are included. The 51625-1 Elevated Platform is ideal for this adaptor and has a built-in warming pad.

51660-1	Mouse Adaptor Kit, (45°) Ear Bars
51625-1	Elevated Platform for Mouse Lab Standard



All adaptors are available for use with Parallel Rail Stereotaxic Instrument!



51621 Rat Adaptor









The 51621 Rat Adaptor Kit is included with all Lab Standard<sup>™</sup> Stereotaxic Instruments for rats. The nose clamp assembly and either standard Traditional (18°) Ear Bars, or Non-Rupture (45°) Ear Bars are included.

**51621** Rat Adaptor, with dual-sided ear bars, (Traditional and Non-Rupture)

## Guinea Pig Adaptor Kit The Guinea Pig Adaptor includes the Non-Rupture (45°) ear bars required for guinea

The Guinea Pig Adaptor includes the Non-Rupture (45°) ear bars required for guinea pigs. Also, the nose clamp reaches further back behind the incisors than on the rat adaptors. Compatible with all Lab Standard<sup>™</sup> Stereotaxic Instruments.

51622

Guinea Pig Adaptor, Non-Rupture (45°) Ear Bars

# Small Bird Adaptor Kit

The Small Bird Adaptor Kit includes Non-Rupture (45°) Ear Bars, a beak support and "V" shaped beak clamp to secure the beak in place.

**51623** Small Bird Adaptor, Non-Rupture (45°) Ear Bars

## Large Animal Adaptor Kits

The Dog/Monkey Adaptor is available only for the 51800 series stereotaxic instruments. Includes one set of Traditional (18°) Ear Bars.

**51852**Dog/Monkey Adaptor, Traditional (18°) Ear Bars**51826**Cat/Monkey Adaptor, Traditional (18°) Ear Bars



## Marmoset Adaptor

The Marmoset Adaptor holds the marmoset head by means of a vertically adjustable palate bar with infra-orbital bars. The ear bars are Non-Rupture (45°) to prevent rotation of the head.

**51678** Marmoset Adaptor, Non-Rupture (45°) Ear Bars

# Stereotaxic Animal Adaptors

# Mouse & Neonates Adaptor

Stoelting's Mouse/Neonatal Rat Adaptor transforms the Lab Standard<sup>™</sup> stereotaxic for rats into an instrument equipped for mouse and rat pup surgeries.

Model organisms with soft skulls, such as the mouse and the neonatal rat, are difficult to secure firmly in a traditional stereotaxic instrument. The stainless steel ear bars used for adult rats are too heavy to provide a secure hold without compressing the sides of the auditory canal into which to insert the ear bars.

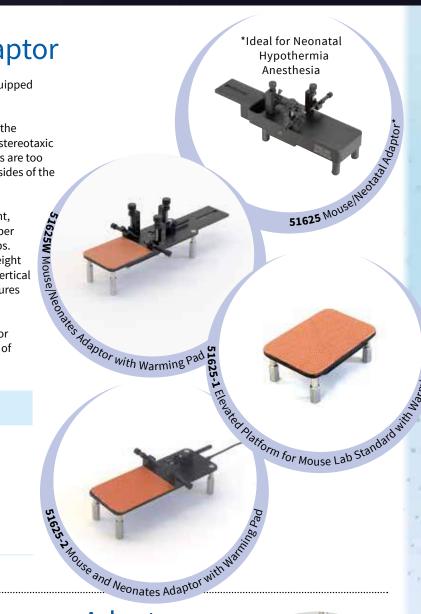
Stoelting's Mouse and Neonatal Rat Adaptor employs light, Delrin® ear bars with tapered points on one end, and rubber tips on the other, to facilitate surgery on mice and rat pups. Ear bars' height can also be independently adjusted in height to easily level the skull. Laser engraved scales show the vertical positions of the ear bars. A tooth bar and nose clamp secures the nose.

"Triple point" securing of the animal's head in this adaptor makes it the most versatile mouse adaptor available. Set of two jaw holder cuffs included.

#### **MOUSE AND NEONATES ADAPTOR**

51625	Mouse and Neonates Adaptor
51625W	Mouse and Neonates Adaptor with Warming Pad
51625-1	Elevated Platform for Mouse Lab Standard
51625-2	Microscope Platform for Mouse and Neonates

See ear bar options on page 27.



51695 Rat Spinal AdaP

Stereotaxic Accessories

# Stoelting Spinal Cord Surgery Adaptors

Stoelting's Spinal Cord Adaptors utilize the manipulator and base plate of the U-frame stereotaxic instrument, enabling precise spinal preparations. The spinal column is secured by up to four, independent transverse process clamps, as well as a spinous process clamp. **Different sizes for Mouse or Rat!** 

## **Spinal Cord Surgery Adaptor Features**

• For precise spinal surgery applications

STOELTING SPINAL CORD SURGERY ADAPTORS			
51695	Rat Spinal Adaptor		
51690	Mouse Spinal Adaptor		

Versatile and economical instrument for stabilizing the spinal colum.

# Stereotaxic Probe Holders



24 Stoelting Co. Web: www.StoeltingCo.com / Email: Neuro@StoeltingCo.com / Toll Free: 1-800-860-9775 / Phone: 1-630-860-9700

51631 Corner Clamp

## **Probe Holders**

Each Probe Holder has an 11mm square acrylic block, with grooves spaced 1 mm apart.

STANDARD PROBE HOLDERS		
51631	Holder with Corner Clamp	
51682	Horizontal Probe Holder, 90 ° (with Corner Clamp)* *Not Shown	
51632	Holder with Side Clamp	
51634	Holder with "C" Clamp	

The Large Probe Holder is compatible with shaft diameters from 6.5-13 mm (0.5 inch). This will hold Hamilton™ Micro-syringes or Stereotaxic Drills. The Extra-Large Drill Holder holds 51449 Micromotor Drill (see page 28) or 13-26 mm (one inch) shafts.

LARGE PROBE HOLDERS		
51633	Syringe Holder	
51630	Drill Holder for 51449	
51630L	Drill Holder with LED Light (for 51449)	
51630-1	Drill Holder for 51555 (See page 28)	
51630-1L	Drill Holder with LED Light (for 51555)	

The Microdialysis Probe Holder is customized, at Stoelting, to your specification. The hole may be drilled to fit probes from 1.5 to 6.0 mm. Default size is 1.5mm. Please call or email for details.

#### **MICRODIALYSIS PROBE HOLDER**

51637	Microdialysis Probe Holder		
CANNULA HOLDERS			
51636	Cannula Holder, Vertical		
51636-1	Cannula Holder, Horizontal		
51636-2	Cannula Holder for CMA 7, 11, and 12 Guide		

The Double-Head Large Probe Holder has a large "C" gripping component at each end, with the "V" clamp attachment. Dual heads allow a secure hold for two different components. Clamps  $\frac{1}{4}$ "- $\frac{1}{2}$ " (6.4 mm-12.7 mm) diameter.

Probe and Syringe Holders **designed to use with any** Stoelting Stereotaxic **Manipulator Arm.** 

Cannula Holders hold 3.4 mm Cannula Heads, as manufactured by Plastics One™, for cannula sets, and ALZET<sup>®</sup> Osmotic Pumps.

## **Probe Holder Features:**

- Allows vertical adjustment
- Mount to right- or left-hand micromanipulator
- Compatible with most brands of stereotaxic manipulators



# Gas Anesthesia Masks



## Gas Anesthesia Mouse

The Gas Anesthesia Mouse Mask provides for precise and secure positioning of an animal during anesthesia and surgery. The mask provides positioning of the animal head that is perfect, automatic and effortless! 51609M is for use with Mouse Stereotaxic Instruments (pages 10-11) and Mouse/Neonate Adaptor (page 23). 51509M is used with Lab Standard (pages 8-9) and New Standard (page 6-7) Stereotaxics. *We recommend this be used with a gas scavenger device.* 

#### GAS ANESTHESIA/MOUSE

Fish Rat Gas Anethesia Mask 51600 & 51

51609M	Gas Anesthesia Mouse Mask (51730 Series & Neonate Adapters)	
51509M	Mouse stereotaxic Gas Anethesia Mask (51600 and 51500 series)	

## Gas Anesthesia for Mouse and Rat

Stoelting's Gas Anesthesia Adapter for Mouse and Rat provides an easy solution for gas delivery to a mouse or rat while still holding the animals head firmly for stereotaxic surgery. This items can be used with most mouse and rat adaptors associated with the Stoelting Lab Standard and Stoelting New Standard Stereotaxic Instruments.

We recommend this item be used with a gas scavenger device.

#### GAS ANESTHESIA FOR MOUSE AND RAT

51509R	Rat Stereotaxic Gas Anesthesia Mask (51600 and 51500 Series)
51610	Gas Anesthesia Mask. Rat

## The Jackson Laboratory

Leading the search for tomorrow's cures Join us for a 3-day workshop learning surgical stereotaxic techniques with mice at the Jackson Laboratory!

**51610** Gas Anesthesia Mask-

Visit www.jax.org/stereotaxic for workshop schedule and to sign up!

# Stereotaxic Ear Bars

PRODUCT IMAGE	PRODUCT NUMBER	DESCRIPTION	STEREOTAXIC FRAME	ANIMAL	
	51616	Dual-Sided Ear Bar (18° and 45°)	51500 series and 51600 series	Rat, Guinea Pig, Bird, Monkey, Dog	
	51811	Traditional Ear Bar (18°)	51800 series, 51850 series	Rat, Monkey, Dog	
	51613	Traditional Ear Bar (20°)	51600 series	Cat, Monkey	
	51813	Traditional Ear Bar (20°)	51800 series, 51850 series	Cat, Monkey	
	51614	Non-Rupture Ear Bar (20°)	51600 series	Cat, Monkey	
	51814	Non-Rupture Ear Bar (20°)	51800 series, 51850 series	Cat, Monkey	
	51611M	Non-Rupture Ear Bar	51600 series	Mouse	
	51617	Dual-Sided Ear Bar (18° and Rubber Tips)	51500 series	Mouse	
	51617-1	Dual-Sided Ear Bar (45° and Rubber Tips)	51500 series	Mouse	
Statements and a state of the state	51648	Dual-Sided Ear Bar (18° and Rubber Tips)	51730 series, 51725 series, Mouse and Neonatal Rat Adaptor (51625)	Mouse	
00	51647	Serrated Cuff Holders (set of 2)	51730 series, 51725 series, Mouse and Neonatal Rat Adaptor (51625)	Mouse	
	51649	Dual-Sided Ear Bar (45° and Rubber Tips)	51730 series, 51725 series, Mouse and Neonatal Rat Adaptor (51625)	Mouse	
	51649-1	45° and Serrated Cuff Holder	51730 series, 51725 series, Mouse and Neonatal Rat Adaptor (51625)	Mouse	

# Surgical Drills

## Micromotor Drill Allows for a slender profile and easy hand-grip.

This high-speed, Micromotor Drill (up to 38,000 RPM) is configured for stereotaxic surgery, particularly in soft-skull animals, such as neonatal rats and mice. The compact control includes switches for Power On/Off, Forward or Reverse Rotation, with Manual or Foot Speed Control. Speed can be adjusted from low, to full speed, using the dial on the box; or with the foot pedal. Miniature Carbide Drill Bit Kit included (51448).

## High RPMs ideal for Mice and Neonatal Rats!

**51449** Micromotor Drill

# Portable Micro Motor Drill

- 0-30,000 RPM
- Lightweight hand piece
- Lithium Ion rechargeable battery
- Drill bits included

The Portable Micro Motor High-Speed Drill is the ideal choice for stereotaxic drills. Equipped with a light-weight hand piece and pocket size control unit, the micro motor drill provides maximum portability for a variety of applications. Control unit features a digital rpm display and dial speed control for easy monitoring as you work. Speed adjustment up to 30,000 RPM. Run time is approximately 5 hours when unit is fully charged. Optional Carrying Case and Nylon Carrying Pouch available online. Miniature Carbide Drill Bit Kit included (51448).

#### PORTABLE MICRO MOTOR DRILL

51555	Portable Micro Motor High-Speed Drill with Drill Bits		
51630-1	Stereotaxic Drill Holder for 51555		
51630-1L	Drill Holder with LED Light (for 51555)		
51555M	Micrometer drill with Drill Bits (QSI Motorized Stereotaxic)		

**Carrying Case Options Available Online!** 

**51448** Miniature Carbide Burr Drill Bits

## Actual Size! Can be mounted to stereotaxic

#### **MICROMOTOR DRILL**

51449	Micromotor Drill with Drill Bits
51630	Stereotaxic Drill Holder for 51449
51630L	Drill Holder withLED light (for 51449)
51448	Miniature Carbide Burr Drill Bits, Set of 7, Assorted

L Drill Holder W

The Portable Micro Motor Drill fits with Stoelting's NEW LED Light Drill Holder! See Page 24.

**51555** Portable High-Speed

MicroMotor Drill

55 Drill mounted on 51600 Stere

# Surgical Drills



# Flexible Shaft Drill

- Reliable performance
- Low vibration and noise
- Hands-free operation

A Lab Standard<sup>™</sup> drill for over 25 years. The powerful motor and flexible shaft offer very low vibration and noise for long-term, reliable performance. The motor may be suspended from the optional 58652 Motor Support with Table Clamp. The heavy metal foot pedal allows exact speed control, and does not slide away from your foot. The drill includes motor, foot pedal, 1/2" handpiece with 3/32" collet, standard for dental drill bits, and a wrench for changing the collet. Miniature Carbide Drill Bit Kit included (51448).

#### FLEXIBLE SHAFT DRILL

58650	Flexible Shaft Drill
58652	Motor Support with Table Clamp
51633	Large Probe Holder*

\*Required to mount drill to stereotaxic instrument See page 24

## Cordless Rechargeable Micro Drill

• Designed for balance and control

- No special tools required
- Up to 8 hours on a single charge

The Cordless Micro Drill is designed for research applications that require surgical drilling. Made of lightweight aluminum alloy for balance and control, the Micro Drill is powered by a rechargeable 6-volt nickel cadmium battery, and can function

for up to 8 hours under normal operating conditions. Speed is 14,400 RPM. Drill comes with a hard plastic case with die-cut foam for convenient storage, a recharger, and 5 carbide steel burrs.

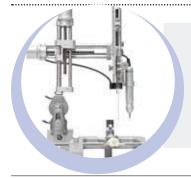
See Bone Anchor Screws & Dental Cement on page 48

**58610** Cordless Rechargeable Micro Drill

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#### CORDLESS RECHARGEABLE MICRO DRILL

58610 Cordless Micro Drill



Check out the Robot Stereotaxic Drill and Injection System–the complete automated, solution for positioning, drilling and injecting! Pages 16-18.

# Quintessential Stereotaxic Injector (QSI™)

NEW

FSIGN

Single body

construction

Low

profile

syringe

mount



## Stoelting Quintessential Stereotaxic Injector (QSI<sup>™</sup>) For Infusion and Withdrawal of Pico and Nanoliter Volumes

Stoelting's QSI<sup>™</sup> (Quintessential Stereotaxic Injector) is the standard for versatility and control in stereotaxic surgeries. Only the QSI<sup>™</sup> Injector enables the researcher to set volumes as small as 1 nanoliter and flow rates from 0.001µl/min to 363µl/min. The QSI<sup>™</sup> works with syringes from 0.5µl up to 250µl.

The QSI<sup>™</sup> stereotaxic injector allows accurate control of the volume and flow rate of injections without wasting precious fluids in excessively long tubing. The fluid goes directly through a needle on the syringe, mounted directly on most stereotaxic instruments.

## **Library of Syringes**

The QSI<sup>™</sup> contains a library of common Hamilton syringes and plunger diameters, so the user may simply scroll the list to select the desired Hamilton syringe. **Because of the Quintessential Stereotaxic Injector's unique design, it can be attached to any micromanipulator and accommodates practically any make of syringe.** 

## **Touch Screen Controller**

The touch screen controller is a microprocessor-based controller that facilitates operation with an easy-to-use display. A help menu is included to make infusion and withdrawal easier than ever.

## QSI<sup>™</sup> Features

- Easy-to-use Touch Screen Control Box
- Control Single or Dual Injections
- Preprogrammed Syringe Specifications
- Out-of-range Warnings



# \*Stereotaxic Instrument sold separately

**53311** Quintessential Stereotaxic Injector (QSI)™ Single Injection

## QUINTESSENTIAL STEREOTAXIC INJECTOR

53311	Quintessential Stereotaxic Injector (QSI)™, Single*
53312	Quintessential Stereotaxic Injector (QSI)™, Dual*
53326	Injector Head, Extra

# QSI and Manual Stereotaxic Injector



## \*Stereotaxic Instrument sold separately

Micrometer graduated in .01mm increments

Easy thumb-and finger-control knob for precise injections

Locking clamp •• to hold position

Luer Lock foreasy connection of most syringes

Secure and gentle hold of glass microsyringes

0)

## Stoelting Manual Stereotaxic Injector

Stoelting's Manual Stereotaxic Injector provides an economical means of injecting or withdrawing a calibrated volume with simple, precise manual control. The injector has a universal adaptor for all Hamilton syringes, ranging from 0.5 to 250µl sizes and enables a wide range of volumes to be delivered. Includes Holder for mounting to Stereotaxic Instrument.

## **Manual Injector Features:**

- Infusion/Withdrawal of nanoliter volumes
- Mounts directly to stereotaxic frame

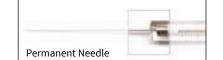
STOELTING MANUAL

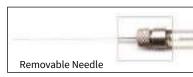
## STOELTING MANUAL STEREOTAXIC INJECTOR

**51639** Stoelting Manual Stereotaxic Injector

Tabletop Stereotaxic Syringe Pump See Page 100.

# Microsyringes







Hamilton microsyringes are made in the U.S.A. using state-of-the-art technology and the finest glass. Please visit our website StoeltingCo.com for additional syringes.

Syringes have removable or permanent needles included with either a 22° point (sharp) or no point (blunt). Luer-tip ends have no needle included.

# **Economical Micro-Volume Syringes** Tight tolerances between the plunger and the barrel. For use with liquids.

NEEDLE INCLUDED	5μL (26G)	10μL (26G)	25μL (22G)	50μL (22G)	100µL (22G)	250μL (22G)	500μL (22G)
REMOVABLE-SHARP	51104	51105	51107	51108	51109	51135	51136
PERMANENT-SHARP	51094	51095	51097	51098	51099	51133	51134
PERMANENT-BLUNT	51189	51090	51091	51092	51093	51101	51102

# **Ultra Micro-Volume Syringes**

Positive displacement syringe has a tungsten plunger wire that travels inside the needle. The needle acts as the syringe barrel; no dead volume. For use with liquids.

NEEDLE INCLUDED	0.5μL (25G)	1.0μL (25G)	2.0μL (25G)	5 ΟμL (24G)
REMOVABLE-SHARP	51079	51085	51081	51083
REMOVABLE-BLUNT	51080	51086	51082	51084

## Gastight Micro-Volume Syringes

These syringes have a precision-machined PTFE plunger tip that creates a leak-free seal. The plungers are replaceable. Recommended for use with gas or liquid samples.

NEEDLE INCLUDED	10µL (26G)	25μL (22G)	50μL (22G)	100µL (22G)	250μL (22G)	500μL (22G)
REMOVABLE-SHARP	53479	53480	53481	53482	53483	53484
REMOVABLE-BLUNT	53485	53486	53487	53488	53489	53490
RECOMMENDED	53485-1 (32G)*	NA	NA	NA	NA	NA
PERMANENT-SHARP	53469	53470	53471	53472	53473	NA
PERMANENT-BLUNT	53474	53475	53476	53477	53478	NA
*Customized for Stereotaxic Surgeries. Includes 6pk of extra needles.						
NEEDLE NOT INCLUDED						
LUER-TIP	53431	53432	53433	53434	53435	53436

# Neuros Syringe

# Neuros Syringe

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Hamilton Neuros<sup>™</sup> syringe provides unprecedented functionality for controlled animal injections. An industry first, the Neuros accurately dispenses 50 nL to 100 µL of liquid through an ultrafine blunt point needle that delivers the sample directly into the injection site.

Developed specifically for the neurosciences, the Neuros minimizes injection site damage by increasing needle rigidity and delivering a microvolume of liquid to an exact location.

## Benefits of the Neuros Design:

- Needle rigidity improves insertion path accuracy
- Minimal tissue damage reduces injection variability
- Reduced sample loss saves money and materials
- Fine gauge needle creates smaller injection sites
- Compatibility with most infusion pumps and stereotaxic holders means an easy integration into existing processes



	NEUROS S	YRINGE					
	53493	0.5 μl Syringe Neuros Model, 32ga., Blunt					
	<b>53494</b> 1.0 μl Syringe Neuros Model, 32ga., Blunt						
	53495	2.0 µl Syringe Neuros Model, 30ga., Blunt					
	53496	5 μl Syringe Neuros Model, 33ga., Blunt					
	53497	10 µl Syringe Neuros Model, 33ga., Blunt					
	53498	25 μl Syringe Neuros Model, 33ga., Blunt					
Ľ,	53499	50 µl Syringe Neuros Model, 33ga., Blunt					
0	53430	100 µl Syringe Neuros Model, 33ga., Blunt					
	53437	Neuros Replacement Needles, 33ga, Blunt, 5-100 µl, 6/PK					

Neuros Syringe is compatible with Stoelting's Large Probe Holder (Product No. 51633, page 24) or Stereotaxic Injectors (pages 30-31). Visit our website for more information.

# LINK 7 Complete Active Surgical Gas Anesthesia System

Stoelting's Link 7 Gas Anesthesia System is your all-inclusive anesthesia solution for stereotaxic and general surgery! This easy-to-use, effective small animal anesthesia system includes three anesthesia stations for increased throughput. Excess anesthetic scavenged away by active charcoal canisters also included. Systems available as tabletop or mobile.

See more of our gas anesthesia products at StoeltingCo.com!



# **Gas Anesthesia**

#### The complete system includes:

- Tabletop and/or Mobile Anesthesia System complete with Isoflurane Vaporizer
- EVAC 4 Active Gas Scavenger (53910 + 53911)

Jyggo LINK 7 Gas Anesthesia Sys

Hooded Induction Chamber (53915)

Op Induction Chambers

#### **COMPLETE ACTIVE SURGICAL GAS ANESTHESIA SYSTEM** LINK 7 Gas Anesthesia System, 53930 Tabletop w/Induction Chamber LINK 7 Gas Anesthesia System, 53931 Mobile w/Induction Chamber Gas Anesthesia System, Tabletop 53940 w/Induction Chamber ADDITIONAL GAS ANESTHESIA EQUIPMENT Anesthesia and Scavenger System 53900 (vaporizer not included) 53902 Isoflorane Vaporizer (LINK 7 only) 53910 EVAC 4 Active Scavenger System EVAC 2 Active Scavenger System 53910-2 53911 WAG Gas Filters, 4pk Induction Chamber, Hooded 53915 (Active Scav.Sys Only), 12x6x7in. 53916 Induction Chamber 5x5x5in. 53917 Induction Chamber 9x5x5in. 53918 Induction Chamber 12x6x6in. 53960 Posi-vac Anesthesia Mask, Small 53961 Posi-vac Anesthesia Mask, Medium 53962 Posi-vac Anesthesia Mask, Large atterson 53911 WAG Gas Filter cientific harroad Fiftration System

53902 Isoflorane Vaporizer

53915 Hooded Induction Chamber

WAG Anesthetic Gas

ORD WEIGHT BELOW EPON RECEIPT

GRAMS MI GAINS 200 GRAM GRD AND REPEACE

# Stoelting's Hazard Technology Vacuum Systems

51488 Stoelting Clipper

Vacuum System

## NEW! Stoelting Dander-Free Animal Clipper System

The Hair and Dander Vacuum attaches to the Animal Clipper so that hair and dander are vacuumed away as soon as they are cut, then collected in a small portable vacuum cleaner. The vacuum cleaner is equipped with a paper bag and a cloth filter backed by a HEPA filter. This combination is 99.97% efficient to 0.3 microns, without excessive filter replacement costs. The exhaust to the room is only clean air.

## Features:

- Designed for laboratory animal hair
- Vacuum is HEPA filtered (99.97% at 0.3 microns)
- Built-in noise suppression system
- Safe disposable collection bags
- Swing arm holds hose clear of work area
- Entire system is mounted on a portable cart

## STOELTING DANDER-FREE ANIMAL CLIPPER SYS-TEM

51488	Stoelting Clipper Vacuum System
51488BF	Replacement Bag Filters, Pk/10
51488CF	Cloth Filter
51488HF	Replacement HEPA Filter



## Stoelting's Hazard Technology Vacuum Systems

# Portable Down Draft Table for Rodent Surgery

Our Downdraft Table protects personnel and the environment from contamination by drawing air down through the table and into our seamless filters. Continuous airflow directs contamination away from the user, through the filter(s) and then recycles clean air back into the laboratory.

Item	Product	
52480	Downdraft Table	
52481	Anodized Aluminum Cart	



## Portable Fume Hoods

The Hazard Technology Portable Fume Hood is a simple yet widely used and highly successful means for removing hazardous fumes, vapors, and particles from the laboratory. Available in a variety of standard and custom sizes with filters for chemical and particulate applications.



况 Hazard Technology

## Hood, Downdraft & Workstation Filters

Made specifically for Hazard Technology Hoods, Downdraft Tables, and Workstations our various Filters protect from Hazardous fumes, vapors, and particles.

Item	Product	
52470B	Filter - Carbon & Permangenate 50/50, Pk/2	
52470C	Filter - Carbon, Pk/2	
52470F	Filter - Potassium Permangenate, Pk/2	
52470H	Filter - HEPA (3.5 in high)	
52470P	Filter - Polyester, Pk/5	
52470U	Filter - HEPA/Carbon Combo	

Item	Product		Hezard
52490-24	Portable Fume Hood, 24w X 18h X 18d		Statiye execution for a second
52490-30	Portable Fume Hood, 30w X 18h X 18d		
52490-50	Portable Fume Hood, 50w X 18h X 18d		
52492	PFH Scale Enclosure		
52490C	Portable Fume Hood, Custom		
Contact us to customize a hood specific to your needs!		Portable Fume Hood,	

## Rodent Warmer X1

Visit our website for more options!

## Rodent Warmer X1

STORETING Roder

Use Stoelting's Rodent Warmer before, during and after surgical procedures to improve surgical outcome and overall longevity. Monitor and maintain animal temperature with three programmable settings: animal specific, timer or use with thermal probe. Available with mouse, rat or home-cage heating pad. *Rectal Thermal probe sold separately.* 

### Features:

- Easy to use dial control
- Preprogrammed animal temperatures
- Use with or without rectal probe (sold seperately)
- Lightweight, small footprint

## Add a **Rodent Warmer** Control Box to **utilize your Stereotaxic Base's warming feature!**

### **RODENT WARMER X1**

53800	Stoelting Rodent Warmer Control Box with Cable* *For use with integrated Stereotaxic warming base
53800M	Stoelting Rodent Warmer X1 with Mouse Heating Pad
53800R	Stoelting Rodent Warmer X1 with Rat Heating Pad
53800C	Stoelting Rodent Warmer X1 with Cage Heating Pad
50304	Rectal Thermal Probe







## Rodent Warmer X2









## Rodent Warmer X2 with TouchScreen Display

Use Stoelting's Rodent Warmer X2 before, during and after surgical procedures to improve surgical outcome and overall longevity. The integrated touch screen allows for easy programming and controls 2 independent heating pads simultaneously. Available with mouse, rat or home-cage heating pad. *Rectal Thermal probe sold separately.* 

### Features:

- Integrated touch screen for easy programming
- Controls two independent heating pads simultaneously
- Rectal probe (sold seperately) for body temperature feedback
- Available with a combination of mouse, rat or cage size heating pads
- Heating pad included (mouse, rat or home cage)

### **RODENT WARMER X2**

53850	Stoelting Rodent Warmer Control Box X2 with Cable	
53850-MM	Stoelting Rodent Warmer X2 with Two Mouse Heating Pads	
53850-RR	Stoelting Rodent Warmer X2 with Two Rat Heating Pads	
53850-CC	Stoelting Rodent Warmer X2 with Two Cage Heating Pads	
50304	Rectal Thermal Probe	
*See website for additional combinations		

## Cautery



59017

## Battery-Operated Cautery

The perfect cauterizing tool, this batteryoperated Cautery System provides two operating temperatures: 2200° F and 1300° F (1204° C and 704° C).

The easily replaceable, autoclavable, Nickel-Chrome tips require less power and provide longer battery life. The convenient battery spacer converts the handpiece from high temperature to low temperature. Replacement tips are sold in packs of 10.

### **BATTERY-POWERED CAUTERY PENS**

59017	Battery-Operated Cautery System
59018	Replacement Tips, 5mm (10/box)
59019	Replacement Tips, 10mm (10/box)



## Low-Temperature Cautery Pens

These patented Aaron RAM<sup>™</sup> cauteries have an impressive shelf-life and are quite simply the best cauteries ever made. With a variety of low temperatures and fine tips the surgeon is assured of precise pinpoint hemostasis. All disposable cauteries are individually packaged, sterile, 10 per box.

## **High-Temperature Cautery Pens**

High- temperature cauteries are popular for many types of procedures including pinpoint hemostasis, controlling diffuse bleeders, vasectomies, and sculpting woven grafts. Individually packaged, sterile, 10 per box.

### LOW-TEMPERATURE CAUTERY PENS

59015	Micro fine tip, 850°F (454°C)
59117	Fine tip, 1300°F (704°C)
59118	Adjustable fine tip, 700°-1200°F (371°-649°C)
59119	Elongated fine tip, 1100°F (593°C)
HIGH-TE	MPERATURE CAUTERY PENS
59016	Fine tip 2200°F (1204°C)
59120	Loop tip 2200°F (1204°C)
59123	Adjustable fine tip, 1500-2100°F (816°-1149°C)
59125	Vasectomy tip, 1800°F (982°C)
59126	Fine tip micro, 2000°F (1093°C)
59127	Loop tip micro, 2000°F (1093°C)

59128 Vasectomy tip micro, 1600°F (871°C)

## Wound Closure



## Sutures

Monofilament nylon, braided silk (permanent) sutures, and chromic gut and synthetic absorbable sutures, are now available from Stoelting. Sold in packages of 12, with semicircular (cutting) needles. All suture indicated for use in general soft tissue approximation and/or ligation and ophthalmic surgery. Only nonabsorbable suture indicated for use in cardiovascular and neurological procedures.

## Sutures for all your surgical needs!

### NON-ABSORBABLE

	PRODUCT					
PRODUCT	NO.	MATERIAL	LENGTH	SIZE	NEEDLE	
Monofilament	50480	Nylon	30	4	19.0 mm	
	50481	Nylon	30	3	24.0 mm	
	50482	Nylon	30	2	26.0 mm	
Monomid	50483	Nylon	18	5	19.0 mm	
	50484	Nylon	18	4	19.0 mm	
	50485	Nylon	18	3	24.0 mm	
	50486	Nylon	18	2	26.0 mm	
Silk	50487	Silk-Braided	18	5	19.0 mm	
	50488	Silk-Braided	18	4	19.0 mm	
	50489	Silk-Braided	18	3	24.0 mm	
	50490	Silk-Braided	18	2	26.0 mm	
ABSORBABI	.Е					
Natural	50491	Chromic-Gut	30	4	19.0 mm	
	50492	Chromic-Gut	30	3	19.0 mm	
	50493	Chromic-Gut	30	2	24.0 mm	
	50494	Chromic-Gut	30	0	26.0 mm	
Synthetic	50495	Visorb (PGA)-Braided	30	5	19.0 mm	
	50496	Visorb (PGA)-Braided	30	4	19.0 mm	
	50497	Visorb (PGA)-Braided	30	3	19.0 mm	
	50498	Visorb (PGA)-Braided	30	2	24.0 mm	

### Nylon exhibits:

- Uniform diameter of the suture
- Maximum flexibility of the strand
- Excellent and consistent knot security
- Minimal Memory

### Silk exhibits:

• Smooth flow through tissue while maintaining optimal knot security

### **Chromic Gut exhibits:**

- Purity of collagen for optimal tensile strength and in vivo performance
- Surface smoothness to facilitate knot run-down and knot strength

### Visorb PGA exhibits:

- Excellent tensile strength throughout the critical wound-healing period
- Predictable absorption profile (absorption complete between 90-100 days)
- Excellent knot security

## Wound Closure

**59020** EZ Clip™ Kit, 9mm

## EZ Clip™ Wound Closing Kit

Perfect for rapidly closing wounds, providing maxium holding force with minimal trauma. Much easier, and faster to use than the conventional sutures and needles. The Applier works like a staple gun to rapidly apply clips closures. The Applier will hold a single rack of 20, 9mm wound clips, which are held firm and ready to use by a nonrusting beryllium-copper spring. The Applier will provide maxium holding force with minimal trauma. There is no need of assistance to opporate the applier or remover. When the wound is healed, clips are easily removed with the Remover. The EZ Clip™ Kit includes the Applier, case of 1,000, 9mm Wound Clips and Remover. *All parts are sold separately.* 

### **Features:**

- Autoclavable in the package!
- Smaller "teeth" provide better clamping and wound closure of the animal's skin
- Racks of 20 clips are individually packed for easy handling
- The clips are pyrogen free and non-sterile
- Designed for use with mice and rats

All components can be ordered separately! See website for details.

Stoelting **exclusive packaging** of **racks of 20 clips** in autoclavable polypropylene **provides unmatched ease of sterilization** and storage.

### **Reflex Wound Closing Kit-7mm**

The 7mm Reflex Wound Closing Kit is ideal for mice and other small animals. Wound clips are pre-filled on a rack ready to be loaded in the 7mm Reflex wound clip applier. The 7mm Reflex Wound Closing Kit includes the Applier, box of 100 7mm Wound Clips, and Remover. All parts are sold separately.

- Easy-to-use
- Designed for use with mice

### EZ CLIP™ WOUND CLOSING SYSTEM

59020	EZ Clip™ Kit, 9mm
59043	Wound Clip Applier
59046	Wound Clip Remover
59027	9mm Wound Clips, Case/1000
59022	9mm Wound Clips, Box/200
59027-5	9mm Wound Clips, Case/5,000

### **REFLEX CLIP WOUND CLOSING SYSTEM**

59038	Reflex 7mm Wound Clip Kit
59036	Wound Clip Applier
59037	Wound Clip Remover
59035	7mm Wound Clips, Box/100
59034	7mm Wound Clips, Case/1,000

Visit website for clip options.

## Surgical Shavers and Trimmers



## Surgical Shaver Kit for Mice and Rats

The Surgical Shaver Kit includes a powerful, cordless blade clipper providing easy mobility around animals. When fully charged, the clippers provide continuous operation for one hour. Kit includes: rechargeable clipper, #40 detachable blade set, charging stand, 2 Ni-MH battery packs, storage case, 4 oz. clipper oil.

### **Features:**

- Rechargeable, cordless
- 15% faster and 10% smaller than comparable models
- Quiet operation

### SURGICAL SHAVERS

andis

51465	Cordless Shaver with #40 Blade **Recommended**
51482	Blade, Surgical/Shaving #40, Steel, Extra
51483	Blade, Surgical/Shaving #50 Blade, Steel, Extra

## Rechargeable Surgical Trimmer Kit for Rats & Mice

The Surgical Trimmer is the shaver of choice for surgical prep! Kit includes a cordless, detachable blade trimmer, charger stand and #40 stainless steel blade for trimming around tight areas.

### **RECHARGEABLE SURGICAL TRIMMERS**



Two Speed

Surgical Clipper Professional two-speed clipper designed for extremely fast cutting! Includes: clipper, size 10 UltraEdge blade, and clipper oil.

51484 Surgical Clipper

### Features:

- Two speed operation: 3400 spm and 4400 spm
- Detachable blades for ease of changing and cleaning
- Maintenance free

### **TWO SPEED SURGICAL CLIPPERS**

51484	Surgical Clipper, Two Speed w/#10 blade
51485	Surgical Clipper, Two Speed, w/#10 & #40 blades
51483	Blade, Surgical/ Shaving #50, Steel, Extra

## Surgical Lights



### Stereotaxic LED Light Stoelting's Stereotaxic LED Light is useful for stereotaxic

Stoelting's Stereotaxic LED Light is useful for stereotaxic surgery or any location requiring LED light! On/Off switch option also available.

- Magnetic Base/Puck System to anchor Magnifier on non-magnetic surfaces
- Small base (1 5/8" diameter)
- 10" flex arm (25.4cm)
- Universal Power Supply included (110-220V)

### STEREOTAXIC LED LIGHT

59290	LED Stereotaxic Light
59291	On/Off Switch for LED Stereotaxic Light
59292	Stereotaxic Magnifier Glass

## Fiber-Lite<sup>®</sup> Illuminator

- UL, CE, and C-UL approved for global use
- All Fiber-Lite<sup>®</sup> Illuminators are backed with a 3-year warranty

Fiber-Lite Illuminators offer highintensity, cold light illumination when coupled with any of our single or dual fiber optic light guides, which provides a lamp life of over Sp258 Illuminator, 150W Single Gooseneck

200 hours at full intensity. Each light guide measures 23 inches (58.4cm) long.

### FIBER-LITE<sup>®</sup> ILLUMINATOR

- 59258 Illuminator, 150W, Single Gooseneck
- 59259 Illuminator, 150W, Dual Gooseneck
- 59212 Replacement Bulb

If your main power supply is 220V, add a "V" to the product number.



## **LED Coolight Illuminator**

LED Coolight Illuminator has a long-life LED source, and is environmentally and fiscally responsible. It would take 125 replacement bulbs before the LED Coolight hit 75% capacity. Energy use is just one-third of a 150W halogen. LED lights have almost no infared energy-they are truly a "cool light" source-unlike Halogen lamps that transmit IR heat that can damage a sample or specimen.

LED COOLIGHT ILLUMINATOR	
59254	Coolight Illuminator, LED, Dual Gooseneck

\*\*Recommended\*\*59253 Coolight Illuminator, LED, Single Gooseneck

## Atlases and Manuals

## The Rat Brain in Stereotaxic Coordinates, 7th Edition

### **Paxinos and Watson**

Since its first edition in 1982, the Paxinos and Watson Rat Brain Atlas has become the most trusted source of accurate coordinates and anatomical information in laboratories throughout the world. It has been cited



over 60,000 times, making it the most cited publication in neuroscience. The seventh edition incorporates new findings on developmental gene expression and presents the boundaries of neuromeres in sagittal sections.

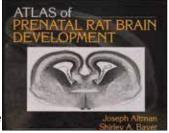
### THE RAT BRAIN

45026	The Rat Brain
45024	The Rat Brain Compact Edition, Spiral-Bound Paperback

## Atlas of Prenatal Rat Brain Development

### **Altman and Bayer**

Ten embryonic ages are presented with 20-35 plates each. Plates represent the brain of each age in sagittal and coronal planes. A unique 3-D reconstruction of the brain is presented for each of the ten ages. Computer aided



illustrations of brain regions add to the utility of this atlas. A detailed and logical classification of the germinal matrix at early stages is included. 664 pages.

### ATLAS OF PRENATAL RAT BRAIN DEVELOPMENT

**45036** Atlas of the Prenatal Rat Brain

## The Mouse Brain in Stereotaxic Coordinates, 5th Edition

### **Franklin and Paxinos**

The only stereotaxic atlas in print to depict the mouse brain. The same painstaking histology procedures as used in The Rat Brain in Stereotaxic Coordinates, by Paxinos and Watson, guarantee high quality and accurate



coronal sections. The new edition of the neuroanatomical mouse brain atlas is a must-have for all researchers studying the mouse nervous system. This is a package of the Mouse Brain Atlas plus a digital Ebook version.

THE MOUSE BRAIN IN STEREOTAXIC COORDINATES		
45044	The Mouse Brain in Stereotaxic Coordinates, 5th Ed. Print+Ebook	
45044P	The Mouse Brain in Stereotaxic Coordinates, 5th Ed. Print	

## Stereotaxic Surgery in the Rat: A Photographic Series Illustrated Step-by-Step Guide

### **Cooley and Vanderwolf**

Each step of stereotaxic surgery, from anesthetizing the animal to suturing, is clearly described and illustrated. The photos employ the "U"-Frame type stereotaxic instrument (Lab Standard™ 51600) and utilize the skull flat and bregma zero point



coordinate system. All aspects of the instrument and the technique are clearly described and illustrated. 100 pages.

### STEREOTAXIC SURGERY IN THE RAT: A PHOTOGRAPHIC SERIES

45015 Stereotaxic Surgery in the Rat

## **Surgical Preparation**



### Alcohol Prep Pads

Sterile, nonwoven sponges are saturated with 70% Isopropyl Alcohol. These pads provide maximum absorbency for scrubbing and cleansing. Packaged individually in sealed pouch. Case of 4,000.

### ALCOHOL PREP PADS

**50974** Alcohol Prep Pads, Sterile, 11/8" x 23/8" (2.86 cm x 6 cm), Case of 4,000



### Sterile Disposable Scalpels

Stainless steel surgical blades mounted on plastic handles with

**52186, 52187 & 52188** fluted finger-grips. Scalpel blade is safely protected by pull-off protector shield. Individually sealed in peel-apart, see-through package. Box of 10.

STERILE DISPOSABLE SCALPELS		
52186	Size 10, Box of 10	
52187	Size 11, Box of 10	
52188	Size 15, Box of 10	



### **Triadine**®

(Povidone/Iodine) Solution Non-irritating, non-staining, fast acting, antimicrobial solution. This antiseptic germicide kills all gram-positive and negative-bacteria, fungi, viruses, protozoa and spores.

### **TRIADINE® SOLUTION**

50996	Povidone/Iodine solution, 8oz (236.52 ml) bottle, Case of 24
50997	Povidone/Iodine solution, 16oz (473.04 ml) bottle, Case of 12
50999	Povidone/Iodine solution, Gallon (3.8 L) bottle, Case of 4

## Parafilm M<sup>®</sup> Laboratory Film

Parafilm M<sup>®</sup> is a semi-transparent, flexible thermoplastic. It molds and seals tightly around test tubes, flasks and irregular surfaces. The Dispenser/Cutter (51359) accommodates either 4" or 2" wide rolls, and a quick downward push cleanly cuts at the desired length. See right >



### Sharps Disposal Containers

Sharps Containers feature one-hand, onestep, no-touch sharps depositing. Containers feature horizontal loading. Non-mechanical sharps openings minimize tampering and contamination. Safe to autoclave or incinerate. *See website for additional items.* 

SHARPS DISPOSAL CONTAINERS		
52190	1 Gal. (3.8 L) Red, clear lid	
52191	2 Gal. (7.6 L) Red, clear lid	
52193	5 Qt. (4.7 L) Red, clear lid	



### PARAFILM M<sup>®</sup> LABORATORY FILM

51355	Parafilm <sup>®</sup> Roll 2"x250ft (5cmx76.2m)
51356	Case of 24, 2"x250ft (5cm x 76.2m)
51357	Parafilm® Roll, 4x125ft (10cm x 38.1m)
51358	Case of 12, Parafilm® Roll 4"x125 ft (10cm x 38.1m)
51359	Dispenser/Cutter

## **Surgical Preparation**



### Surgilube<sup>®</sup> Surgical Lubricant

Forms a transparent lubricating film that spreads readily. Non-irritating to tissue. Allows easy insertion of probes, catheters, surgical instruments, etc. Sterile and bacteriostatic. Box of 12.

Self-sealing, compatible with steam, chemical vapor

### SURGILUBE® SURGICAL LUBRICANT

50976	Surgilube <sup>®</sup> , 2 oz. (59 ml), Box of 12
50977	Surgilube <sup>®</sup> , 4 oz. (118.26 ml) Box of 12



More Pouches Available on our Website

and EO Gas sterilizing processes.

Sterilizing Pouches

### **STERILIZING POUCHES**

Sterilizing Pouches 3.5" x 5.25" 50985 (9cm x 13.3cm), Box of 200

### **Disposable Sterile** Surgical Drapes

Used in minor surgical or therapeutic procedures where a sterile field or drape is required. Poly interlined, 3-ply construction of tissue/poly/tissue provides superior absorbency. Avoids possible moisture or bacteria migration.

### SURGICAL DRAPES

50980

Surgical drape, fenestrated, 2<sup>3</sup>/<sub>4</sub>" (7cm) opening, 18" x 26" (45.7cm x 66 cm), Case of 300



### Sterile and Non-Sterile **General-Use Sponges** Unique rayon and polyester nonwoven

fabric provides strength, absorbancy and scrubbing texture. Sterile 2's have 2 sponges per envelope and 25 envelopes per box.

More Options Available on our Website

### NU GAUZE<sup>™</sup> STERILE SPONGES

- 50968 2" x 2" (5cm x 5cm), 4-ply Sterile 2's, Case of 30 boxes (50/box)
- 50970 4" x 4" (10cm x 10cm) Sterile Gauze, Case/1200
- 50971 2" x 2" (5cm x 5cm), Non-Woven Sponge Gauze, Case/8000



### Cotton-Tipped Applicators

Are non-sterile applicators, 6" long and packaged in autoclavable paper bags. Box of 1,000.

### COTTON-TIPPED APPLICATORS

Cotton-tipped applicators, 50975 box of 1,000



## **Earloop Style Mask**

Provides the user with 99% filtration efficiency at 1.0µ along with cool, breathable comfort. Elastic band holds mask in place while nosepiece provides superior fit.

### EARLOOP STYLE MASKS

Mask. Blue. 50953 Case of 500

Earloop style,



### **Bouffant Caps**

Made of lightweight, polypropylene fabric for comfort. Soft, non-irritating elastic band. Breathable, yet provides effective protection. Available in blue or white. Case of 500.

### **NURSES' BOUFFANT CAPS**

50951	Bouffant Caps, 24" (61cm) Blue,
	Case of 500

## Surgical Accessories



## **Bone Anchor Screws**

Bone Anchor Screws anchor cannulae or other chronically-attached appliances to skull. Stainless Steel Screws #0-80, 1.59 mm O.D., 3.2 mm long. Package of 100.

## Ideal for stereotaxic surgery! Stereotaxic drills pages 28-29

### **BONE ANCHOR SCREWS**

51457	Bone Anchor Screws, 100	
51462	Screw Driver for Bone Anchor Screws	
51455-5	Drill Bit,1.35mm, Pkg/6	



## **Dental Cement**

Dental Cement is used to affix stainless steel to skull or bone, for lab repairs, or for casting of hard acrylic parts. Can be cut, drilled or ground. Sets up in minutes. Kit includes items pictured.

DENTAL CEMENT KIT	
51458	Pink Opaque, 1 lb.
51459	Clear, 1 lb.
51456	Extra Solvent, 8 oz

These items are available only to the 48 contiguous states and via ground shipment.



## **Instrument Cup**

An instrument cup designed to arrange surgical instruments in the open position. Made of durable silicone, the instrument cup replaces glass and metal instrument pans, and won't damage delicate instrument tips. Large instruments rest against the bottom and side, while small instruments may be suspended from the scalloped brim. The Instrument Cup has a wide base (5 in/12.7cm) for stability, making it resistant to slippage on table surface.

### **INSTRUMENT CUP**

52194 Instrument Cup



## Latex-Free Nitrile Exam Gloves

This is a nitrile glove with a soft and stretchy feel. Fully textured, it protects while providing a reliable grip.

• Powder	& Latex Free	• Non-sterile	• Single Use	• Color: Blue
LATEX-FR	REE NITRILE EXAM	A GLOVES		
51035	Nitrile Exam Glo	ves, S, 100/box		
51037	Nitrile Exam Glo	ves, M, 100/box		
51039	Nitrile Exam Glo	ves, L, 100/box		
51041	Nitrile Exam Glo	ves, XL, 100/box		
52004	Nitrile Exam Glo	ves, 2XL, 100/box		



## Cobalt<sup>®</sup> Nitrile Exam Gloves

This is a nitrile glove with a soft and stretchy feel. Fully textured, it protects while providing a reliable grip.such as light-duty surgery and general procedures.

- Powder & Latex Free
   Non-sterile
   Single Use
- Color: Cobalt

### **COBALT® NITRILE EXAM GLOVES**

54120	Cobalt <sup>®</sup> Nitrile Exam Gloves, XS, 100/box, 10 boxes
54122	Cobalt <sup>®</sup> Nitrile Exam Gloves, S, 100/box, 10 boxes
54124	Cobalt <sup>®</sup> Nitrile Exam Gloves, M, 100/box, 10 boxes
54126	Cobalt <sup>®</sup> Nitrile Exam Gloves, L, 100/box, 10 boxes
54128	Cobalt <sup>®</sup> Nitrile Exam Gloves, XL, 100/box, 10 boxes



## MidKnight<sup>®</sup> Nitrile Exam Gloves

This is a nitrile glove with a soft and stretchy feel. Fully textured, with distinctive black color hides stains and provides contrast for improved visibility.

Powder & Latex Free 
 Non-sterile 
 Single Use 
 Color: Black 
 Case of 10 boxes

### NITRILE EXAM GLOVES

54140 MidKnight® Nitrile Exam Gloves, XS, 100/box
54142 MidKnight® Nitrile Exam Gloves, S, 100/box
54144 MidKnight® Nitrile Exam Gloves, M, 100/box
54146 MidKnight® Nitrile Exam Gloves, L, 100/box
54150 MidKnight® Nitrile Exam Gloves, 2XL, 100/box

## **Inside Surgical Instruments**



## Stoelting's **premiere** line of **surgical instruments** combines precision manufacturing with the **highest-grade** stainless steel.

### What's in this section

Spring Scissors
Operating Scissors
Dissecting Scissors
Fine Forceps
Forceps with Teeth70
Dressing Forceps
Hemostatic Forceps
Bone Instruments
Clamps
Stereotaxic Instrument Kit
Surgical Accessories



## **Micro-Dissecting Spring Scissors**

All instruments are shown in their actual size! **Micro-Dissecting Spring Scissors** are designed with small tips, useful for cutting delicate tissues during microsurgical procedures. Spring design eliminates handedness (can be used with left or right hand) and minimizes pressure required to close. Straight, curved and angled spring scissors available.

**52130-00P** McPherson-Vannas Spring Scissors, 8.5cm (3.3in), 0.3mm Straight Tips

**52130-01P** McPherson-Vannas Spring Scissors, 8.5cm (3.3in), 0.3mm Slightly Curved Tips



**52130-02P** McPherson-Vannas Spring Scissors, 8.5cm (3.3in), 0.2mm Straight Tips



**52130-03P** McPherson-Vannas Spring Scissors, 8.5cm (3.3in), 0.2mm Slightly Curved Tips



## Micro-Dissecting Spring Scissors

### All instruments are shown in their actual size!

### **52130-10P** Vannas Spring Scissors, 8.5cm (3.3in), 0.3mm Straight Tips

**52130-11P** Vannas Spring Scissors, 8.5cm (3.3in), 0.3mm Slightly Curved Tips

**52130-18P** Vannas Spring Scissors, 8.5cm (3.3in), 0.3mm Side Angled Tips

**52130-19P** Vannas Spring Scissors, 8.5cm (3.3in), 0.3mm Bent Tips

52

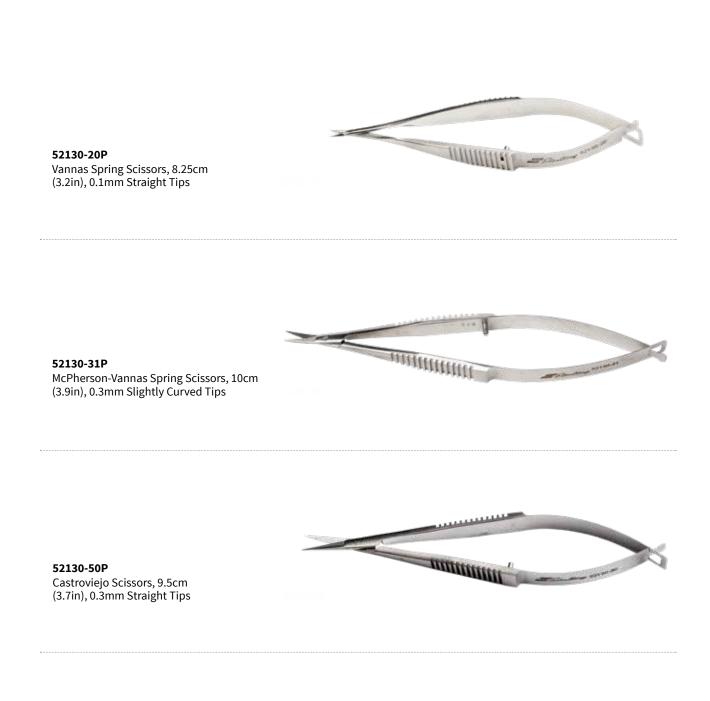


and some the





## **Micro-Dissecting Spring Scissors**





**52130-58P** Castroviejo Scissors, 9.5cm (3.7in), 0.3mm Angled Tips

## Mayo Scissors

### **Straight-blade Mayo Scissors**

Mayo Scissors are designed for cutting body tissue near the surface of a wound. Also, commonly used to cut suture. They have semiblunt tips that distinguish them from other surgical scissors. Straight or curved blade Mayo scissors are available

**52136-50P** Mayo Scissors, 14.6cm (5.75in), Straight Blades



**52136-55P** Mayo Scissors, 17cm (6.75in), Straight, Left-Handed Blades

5 x Stronger

than Stainless

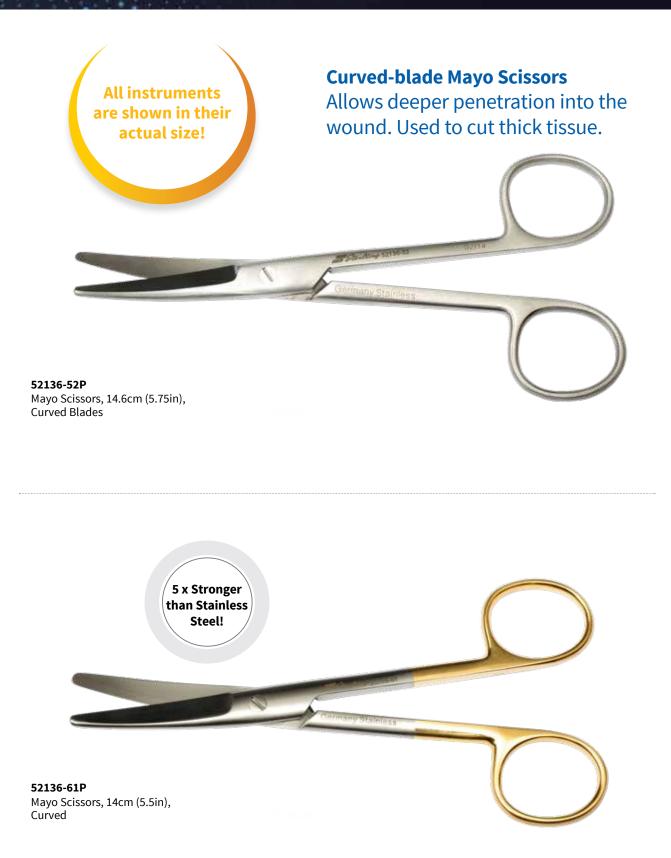
Steel!

Straight-Blade Mayo Scissors Used to Cut Suture.

### 52136-60P

Mayo Scissors, 14.6cm (5.75in), Straight

## **Mayo Scissors**



## **Metzenbaum Scissors**

Metzenbaum Scissors are used to cut delicate tissue like dura mater, connective tissue, ligated vessels and muscle. Straight or curved blade scissors of variable lengths available.





52142-50P Metzenbaum Scissors, 14.6cm (5.75in), Straight, Blunt Blades



Forget something? Add Stoelting's Dry Glass Bead Sterilizer to your order! Sterilizes instruments in 15 seconds or less. See Surgical Instrument Accessories starting on page 99.

### All instruments are shown in their actual size!

**Operating Scissors** are used to cut tissue during surgical procedures. Constructed of high-quality German stainless steel, operating scissors provide infinite hours of precise cutting. Straight or curved blades with sharp, blunt or sharp/blunt tips varieties available.



All instruments are shown in their actual size!

**52138-27P** Operating Scissors, 16.5cm (6.5in), Straight, Blunt/Blunt Blades

Straight, Sharp/Blunt Blades

ny Stainless

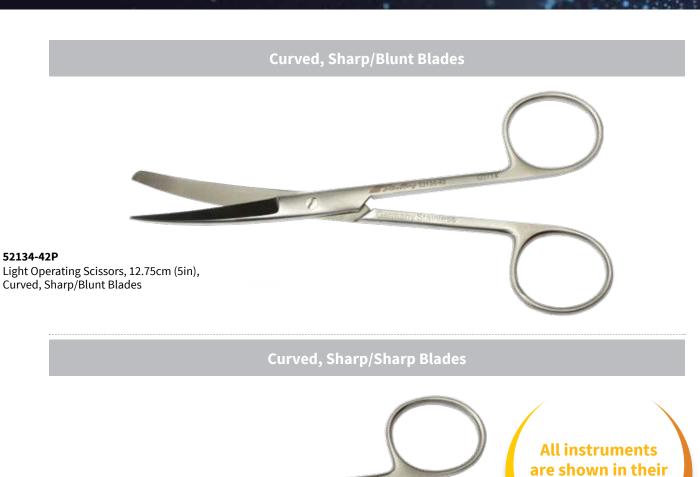








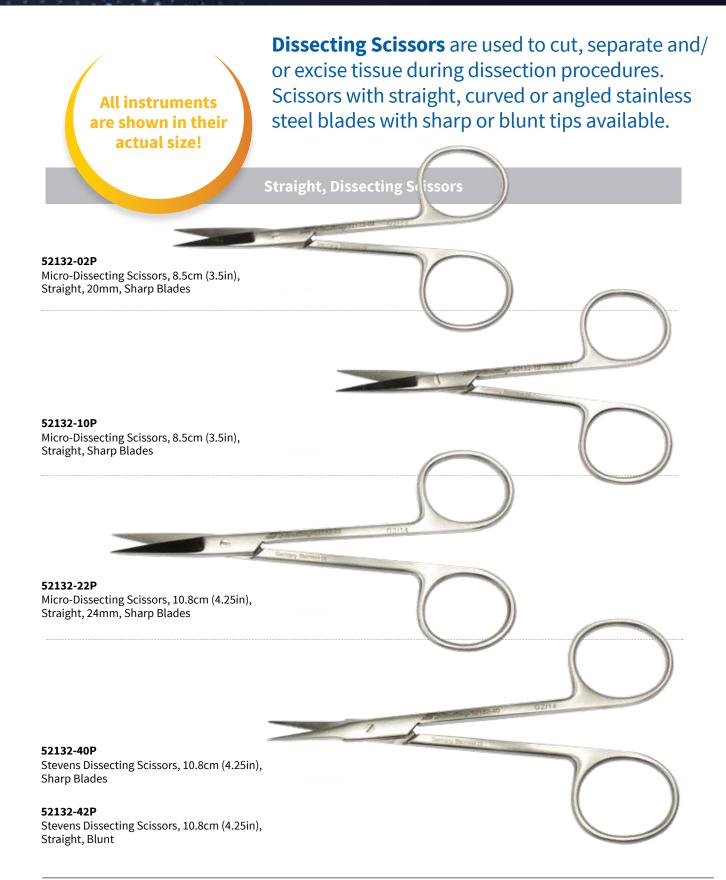
**Stoelting Europe** Web: www.StoeltingCo.com / Email: Info@StoeltingEurope.com / Phone: +353 1 524 2200 **61** 



actual size!

**52134-44P** Light Operating Scissors, 12.75cm (5in), Curved, Sharp/Sharp Blades

**52138-45P** Operating Scissors, 14.5cm (5.7in), Curved, Sharp/Sharp Blades



**Stoelting Europe** Web: www.StoeltingCo.com / Email: Info@StoeltingEurope.com / Phone: +353 1 524 2200 **63** 

5 x Stronger than Stainless Steel!

#### 52132-29P

Micro-Dissecting Scissors, 11.5cm (4.5in), Straight

### 52132-24P

Micro-Dissecting Scissors, 11.5cm (4.5in), Straight, Sharp, Left-Hand

#### 52132-14P\*

Large Ring Dissecting Scissors, 9.5cm (3.75in), Straight

#### \*Part of Stoelting's Stereotaxic Instrument Kit See page 97

#### 52132-16P

Large Ring Dissecting Scissors, 10.1cm (4in), Straight



#### 52132-04P

Bonn Scissors, 8.5cm (3.5in) Straight, Smooth Cut Blades

52132-06P SMOOTH CUT

Bonn Scissors, 8.5cm (3.5in) Straight, 15mm, Sharp/Sharp, Smooth Cut Blades

**52142-85P** Littauer Suture Scissors, 11.81cm (4.65in) Straight



**Stoelting Europe** Web: www.StoeltingCo.com / Email: Info@StoeltingEurope.com / Phone: +353 1 524 2200 **65** 

### **Curved & Angled Dissecting Scissors**



#### 52132-13P

Micro-Dissecting Scissors, 11.5cm (4.5in), Curved, 24mm, Sharp Blades



**52132-23P** Micro Dissecting Scissors, 10.8cm (4.25in), Curved, Sharp Blades



**52132-35P** O'Brien Dissecting Scissors, 9.5cm (3.75in), Angular Blades





**52132-43P** Stevens Dissecting Scissors, 10.75cm (4.25in), Curved, Sharp Blades

## For a more precise cut, try our Smooth Cut Scissors!



**52132-51P SMOOTH CUT** Micro Dissecting Scissors, 9cm (3.5in), Curved, Sharp/Sharp, Smooth Cut Blades

## **Fine Forceps**

All instruments are shown in their actual size! **Fine Forceps** are multipurpose forceps used for grasping, holding and retracting delicate tissues. Straight, curved and angled forceps available with, and without, serrated tips.

**52102-02P** McPherson Forceps 8.5cm (3.3in), Angled Tying Tips

#### 52102-13P

Graefe Forceps, 7.25cm (2.85in), Straight, Cross-Serrated Tips

#### 52102-30P

Micro-Dissecting Forceps, 10.2cm (4in), Straight, Serrated, 0.8mm Tips

#### 52102-32P

Micro-Dissecting Forceps, 10.2cm (4in), Straight, Serrated, 0.5mm Tips

#### 52102-36P

Micro-Dissecting Forceps, 10.2cm (4in), Slight Curve, 0.5mm Tips

#### 52102-35P\*

Micro-Dissecting Forceps, 10.2cm (4in), Curved, Serrated, 0.8mm Tips

> \*Part of Stoelting's Stereotaxic Instrument Kit See page 97

#### 52102-38P

Micro-Dissecting Forceps, 10.2cm (4in), Full Curve, 0.5mm Tips



Micro-Dissecting Forceps, 10.2cm (4in), Full Curve, 0.8mm Tips



Scantting 62102-30 5973



## **Fine Forceps**



**Stoelting Europe** Web: www.StoeltingCo.com / Email: Info@StoeltingEurope.com / Phone: +353 1 524 2200 69

## **Fine Forceps with Teeth**

All instruments are shown in their actual size!

1x2 Teeth Pattern

**52102-15P** Graefe Forceps, 7.25cm (2.875in), Straight Tips, 1x2 Teeth Pattern These **Fine Forceps** are designed with sharp serrated tips called teeth. The teeth of the forceps help to grasp, hold and retract large, superficial tissue. Straight or curved forceps with interlocking teeth patterns of 1x2, 2x3 or 3x4 available.



1x2 Teeth Pattern

### 52102-60P

Graefe Forceps, 10.2cm (4in), Full Curve, 1x2 Teeth Pattern, 0.5mm Tips



() 1x2 Teeth Pattern

### 52102-40P

Micro-Dissecting Forceps, 10.2cm (4in), Straight, 1x2 Teeth Pattern, 0.8mm Tips

1x2 Teeth Pattern

### 52102-41P

Micro-Dissecting Forceps, 10.2cm (4in), Straight, 1x2 Teeth Pattern, 0.5mm Tips

> \*Part of Stoelting's Stereotaxic Instrument Kit See page 97

## Fine Forceps with Teeth



Semken Forceps, 12.7cm (5in), Straight, 1x2 Teeth Pattern, 1.2mm Tips

## Forceps with Teeth

All instruments are shown in their actual size!

## **Tissue forceps** are used for compressing or grasping tissues during surgical procedures.

1x2 Teeth Pattern

**52108-60P** Tissue Forceps, 11.5cm (4.5in), 1x2 Teeth Pattern





**52108-62P** Tissue Forceps, 12.75cm (5in), 1x2 Teeth Pattern



1x2 Teeth Pattern

**52108-69P** Tissue Forceps, 14.5cm (5.75in), 1x2 Teeth Pattern



3x4 Teeth Pattern

**52108-80P** Tissue Forceps, 12.75cm (5in), 3x4 Teeth Pattern

# Forceps with Teeth

**Adson Forceps** are designed with sharp teeth for grasping and holding superficial tissue. Adson forceps with interlocking teeth patterns of 1x2 or 2x3 are available. Not recommended for use with delicate tissues, as sharp teeth may cause damage.



Adson Forceps, 12cm (4.7in), 2x3 Teeth Pattern

**Brown-Adson Forceps**, or pickups, are used to grasp and hold superficial or delicate tissues. Interlocking side teeth provide a secure grasp without the need to apply increased pressure.



**52104-31P** Brown-Adson Forceps, 12cm (4.7in), Side Teeth Pattern

# Jeweler's Style Forceps/Tweezers

**Dumont Style Forceps** are constructed of the highestquality stainless steel and are used in procedures requiring precise technique. Jeweler's Forceps are used for grasping fine, delicate tissues like nerves and small vessels.



**52100-02P** Stainless Steel Forceps, 12cm (4.75in), Straight Tips



**52100-79P\*** Stainless Steel Forceps, 12cm (4.75in), Straight Tip

> \*Part of Stoelting's Stereotaxic Instrument Kit page 97

# Kuehne Pan Forceps

All instruments are shown in their actual size! **Kuehne Pan Forceps** are specialized forceps, designed with flattened tips, best suited for lifting and transporting microscope slides and glass cover slips.



**52109-59P** Kuehne Pan Forceps, 10.2cm (4in), Straight, Flat Jaw



**52109-60P** Kuehne Pan Forceps, 10.2cm (4in), Angled

# **Dressing Forceps**

**Dressing Forceps** are used to remove gauze or sutures. Straight-tipped forceps with, or without, serrations available.



### 52109-30P

Thumb Dressing Forceps, 11.5cm (4.5in), Delicate Tips



**52109-36P** Splinter Forceps, 10.2cm (4in), Straight, Fine Tips

Concerning Strainberg

**52109-37P** Splinter Forceps 11.5cm (4.5in), Fine Tips

# **Dressing Forceps**

Surgical Instruments



14.0cm (5.5in)

# Forceps and Instrument Cup

**Hegenbarth Clip Applying Forceps** are used to apply wound clips to close All instruments surgical incisions. are shown in their actual size! See page 42 for Wound Closing Kits! 2in 52184-10P Hegenbarth Clip Applying Forceps, 13cm (5in) Forceps Storage to properly store delicate forceps. 7in 52107-00P Stainless Steel Forceps Storage, (8x4.5x2 in) 1in

Not shown in actual size.

**Hemostats clamp vessels** to control blood flow during surgical procedures. Handles can be locked into multiple positions, which regulate the degree of clamping force. Straight- or curved-tipped hemostats are available.

All instruments are shown in their actual size!

**52110-21P** Reynolds Hemostatic Forceps, 14cm (5.5in), Full-Curved Tips



**52110-31P** Gemini-Mixter Hemostats, 14cm (5.5in), Full-Curved, Delicate Tips



Surgical Instruments



**52110-11P** Halstead Mosquito Forceps, 12.7cm (5in), Curved Tips

### **Delicate Hemostatic Forceps**

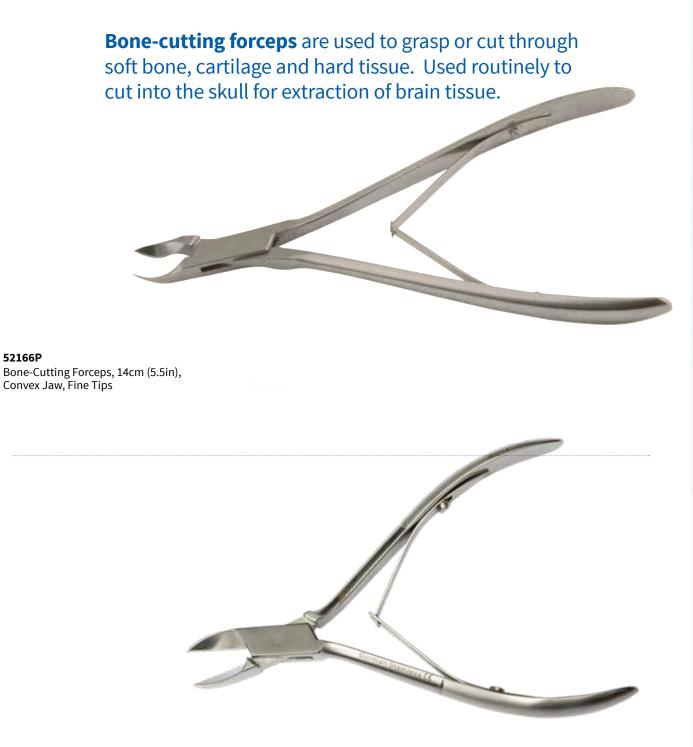


### 52110-12P

Halstead Mosquito Forceps, 12.7cm (5in), Straight, Delicate Tips



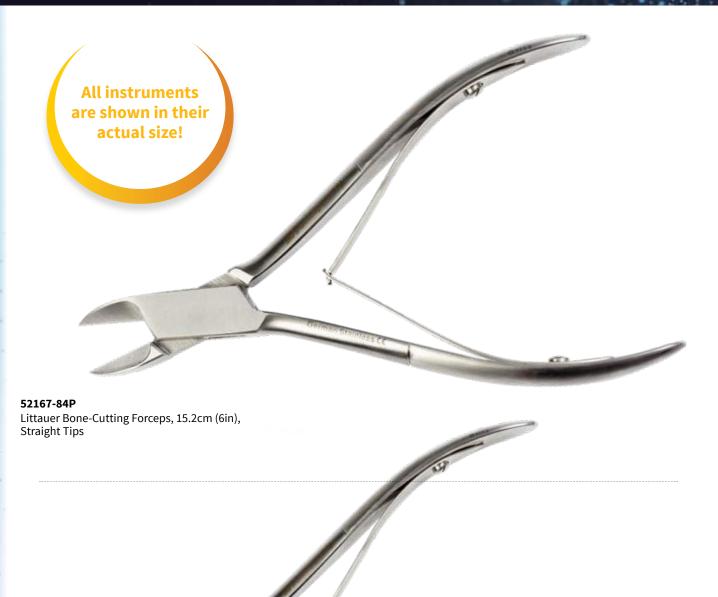
**52110-13P** Halstead Mosquito Forceps, 12.7cm (5in), Curved, Delicate Tips



52167-80P Littauer Bone-Cutting Forceps, 11.4cm (4.5in), Straight Tips

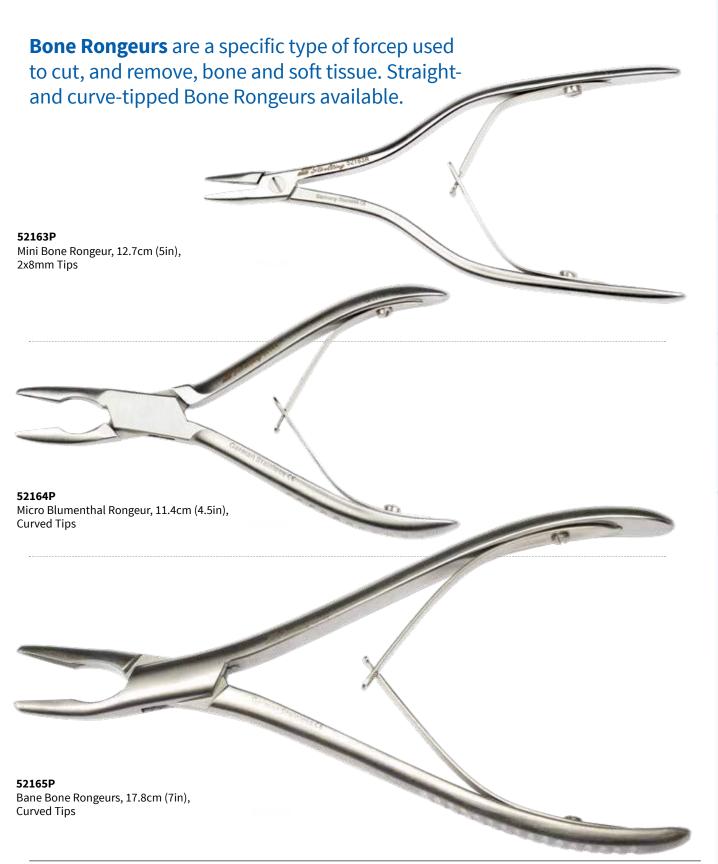
52166P

Surgical Instruments



**52167-82P** Littauer Bone-Cutting Forceps, 12.7cm (5in), Straight Tips

Surgical Instruments



All instruments are shown in their actual size!

Surgical Instruments

### 52160P

Friedman Rongeur, 14cm (5.5in), Curved, Delicate Tips

**52161-02P** Micro Friedman Rongeur, 14cm (5.5in), 1.3mm, Straight Tips

**52161-03P\*** Micro Friedman Rongeur, 14cm (5.5in), 1.3mm, Curved Tips

> \*Part of Stoelting's Stereotaxic Instrument Kit page 97

# **Freer Bone Elevator** is used to elevate, and separate, tissue from the bone.



**Freer Bone Chisel** is used to cut, or shave, bone during surgical procedures.

**52170P** Freer Bone Chisel, 16.5cm (6.5in)

# Specialized Dissection Tools

**Wecker Spatula** is a flat, blunt, flexible instrument used in cataract surgery. It can also be used for mixing, and applying, dental cement during stereotaxic surgery. The Blunt Dissection Probe is used to pinpoint structures, separate and examine tissues during dissection.



All instruments are shown in their actual size!

**52184P** Blunt Dissection Probe

# Retractors



52124P Agricola Retractor, 4.3cm (1.7in), 3x3 Prongs

Retractors are used to retract, and hold, skin and soft

Screw-type or self-retaining Retractors are available.

52125P Goldstein Retractor, 2.5cm (1in)

52179\* Kane Retractor (Stereotaxic Surgery Retractor), 1.5in, 5pk

\*Part of Stoelting's Stereotaxic Instrument Kit See page 97

Alm Retractor, 7.6cm (3in), 4x4 Prongs, 5.1cm (2in) Spread

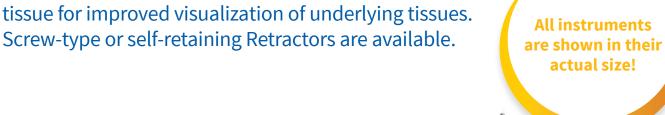
52126-14P



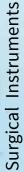












### Retractors



### **52127P** Castroviejo Retractor, 9.5cm (3.75in), Screw-type Adjustable



**52128-00P** Weitlaner Retractor, 2x3, 11.4cm (4.5in), Sharp Prongs

# **Bulldog Clamps**

Bulldog clamps are spring-loaded vascular clamps used to temporarily occlude blood vessels during surgery. Straight and curved clamps available.

52120-38P Dietrich Bulldog Clamp, 5.1cm (2in), Straight Tips

52120-39P Dietrich Bulldog Clamp, 5.1cm (2in), Curved Tips

52120-40P Hopkins Bulldog Clamp, 3.8cm (1.5in), Straight Tips

52120-42P Hopkins Bulldog Clamp, 3.8cm (1.5in), **Slight Curve Tips** 

52120-43P Hopkins Bulldog Clamp, 4.7cm (1.85in), Straight Tips

The Jackson Laboratory Leading the search for tomorrow's cures Upcomi

Join us for a 3-day workshop learning surgical stereotaxic techniques with mice at the **Jackson Laboratory!** 

Visit www.jax.org/stereotaxic for workshop schedule and to sign up!







# Dieffenbach Serrefine Clamp

**Dieffenbach Serrefine Clamps** are finely serrated clamps used to occlude blood flow to arteries during surgical procedures.

**52106-77P** Dieffenbach Serrefine 3cm (1.2in), Straight Tips



**Towel Clamps** are locking forceps, generally used to secure surgical towels and drapes, but can also function as skin retractors, or to grasp tissue during surgical procedures.

All instruments are shown in their actual size!

52122-80P Backhaus Towel clamp, 9.25cm (3.6in)





Surgical Drapes and additional accessories also available. For a complete list of Surgical Accessories visit our website at www.stoeltingco.com.

# Scalpel Handles & Blades

**Scalpels** are used to make sharp, clean incisions during surgical procedures. Available in a variety sizes and styles, scalpel handles and blades are suitable for any surgical procedure. Scalpel handles and blades must be purchased separately.



# **Needle Holders**

**Needle Holders** provide precise control and hold while maneuvering suture needles. Smooth, or serrated, needle holders of different lengths available. Looking for a stronger hold? Tungsten carbide needle holders provide five times the strength as stainless steel!



### 52182P

Castroviejo Needle Holder w/Catch 14cm (5.5in)



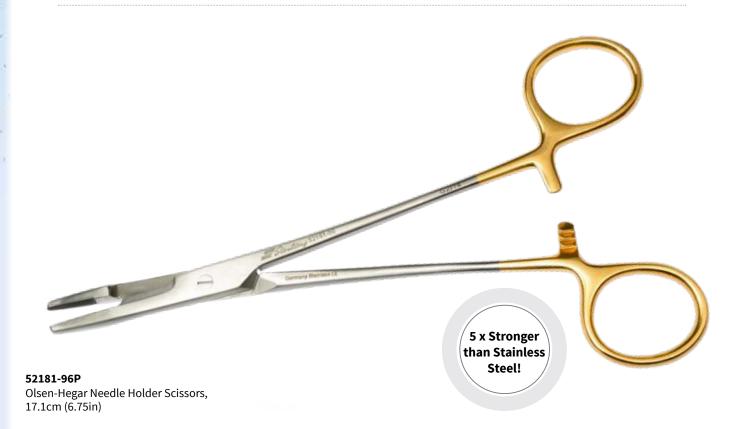
# Needle Holders



# Needle Holders



**52181-94P** Olsen-Hegar Needle Holder Scissors, 14cm (5.5in)

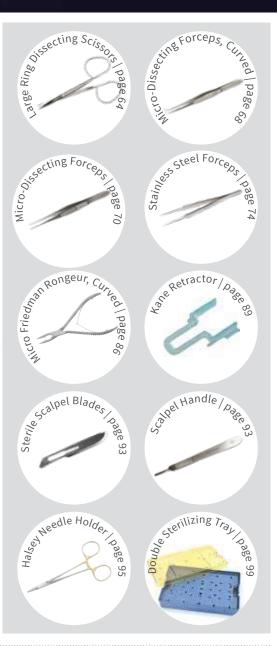


# Stereotaxic Instrument Kit

### NEW! Stoelting's Stereotaxic Instrument Kit

**Stoelting's Stereotaxic Surgical Instrument kit** contains all the necessary tools for mouse or rat stereotaxic surgeries. You will find precision Stoelting brand surgical instruments including a double sterilizing tray that will fit all the tools. Indeed, this kit also includes the Kane Clamp, exclusive to Stoelting for retracting the skin for optimal view of the skull without causing trauma to the surrounding tissue.





### STEREOTAXIC INSTRUMENT KIT

52189 Stereotaxic Surgical Tool Kit

# The Jackson Laboratory Leading the search for tomorrow's cures

Join us for a 3-day workshop learning surgical stereotaxic techniques with mice at the Jackson Laboratory!

Visit www.jax.org/stereotaxic for workshop schedule and to sign up!

# Did you know...

Stoelting supports **more than 40 scientific meetings** every year?

### Below is a list of Societies Stoelting has supported for over the past 25+ years!

- Society for Neuroscience
- Society for Behavioral Neuroendocrinology (SBN)
- International Behavioral Neuroscience Society (IBNS)
- NIH Research Festival
- Canada Neuroscience
- Federation of European Neuroscience Societies (FENS)
- AALAS

Surgical Instruments

ANY-maze Dugo bosile

- Neurotrauma
- International Narcotics Research Conference (INRC)
- Organization for the Study of Sex Difference (OSSD)



bugo basile

Please contact us if you think Stoelting would be a good fit for your conference!

We provide funding to the symposiums, conferences and meetings in sizes ranging from a few hundred, to tens of thousands of scientists. Not many other companies support the life sciences, particularly neuroscience, as much as Stoelting. Please keep that in mind when deciding where to purchase equipment or supplies. Ask yourself... does this company provide funding and support to the meetings that I attend so that I am able to present my data and interact with other scientists?



50287 **Dry Sterilizer** 

### Hot Glass Bead Dry Sterilizer Sterilization time 2-5 seconds

- Small footprint
- Meets new NIH guidelines

Insert the cleaned surgical instrument for 2-5 seconds, and remove. Within 30 seconds, the surgical instruments are cool enough to use. The chassis stays cool, even at the end of a full day of operations. The air above the unit is cool enough to insert an instrument into the well without discomfort. The working end is sterile before the handles get hot. The sterilizer's small size fits conveniently into the back corner of a hood or surgical table. One package of glass beads is included with the instrument.

HOT GLASS BEAD DRY STERILIZER	
50287	Dry Glass Bead Sterilizer
50287V	Dry Glass Bead Sterilizer, International 220V
50289	Glass Bead Refill, 10 oz. Pkg.

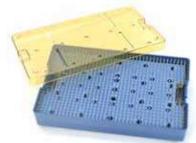
# Sentry Digital Ultrasonic Cleaner The Sentry Ultrasonic Cleaner is a high efficiency cleaner specially developed to clean surgical

instruments. Ultrasonic waves pump micron-sized bubbles into the water. These bubbles fit into the tightest spaces that would be impossible to clean by traditional methods. When the bubbles implode, water hits the instrument at speeds up to 250 mph-a very powerful cleaning action.

### SENTRY DIGITAL ULTRASONIC CLEANER

Ultrasonic Instrument Cleaner (Only available in 120V) 58620





52185P\*

Plastic Sterilizing Tray

\*Part of Stoelting's Stereotaxic Instrument Kit See page 97



52104

# **Plastic Sterilizing Tray**

- Tray is safe for all standard methods. Autoclave/dry heat up to 360°F, ETO, and cold solutions.
- Flexibility of layout. Finger-tip mats and "plug-in" inserts for individual instruments.
- Unique "grid" system in all bases, trays, and lids makes it easy to install mats or inserts to protect your instruments.
- Double-level trays to handle different instrument quantities. Double-level trays come with a removable upper-level insert and mat.

### PLASTIC STERILIZING TRAYS

CAT. NO.	DESCRIPTION	SIZE	
52185P*	Sterilizing Instrument Tray	6" x 10" x 1.5"	

### STAINLESS STEEL STERILIZING TRAYS

### ALL TRAYS ARE SOLID (NON-PERFORATED). LIDS SOLD SEPARATELY.

CAT. NO.	SIZE	LID CAT. NO.	
52104	13.5" x 9.75" x 0.75"	N/A	
52106	12.25" x 7.75" x 2.25"	52106L	
52108	10" x 6.5" x 2"	52108L	
52110	9" x 5" x 2"	52110L	

# Infusion/Withdrawal Syringe Pumps

states of the syringe pump, Tabletop System States of the syst

### See page 32 or our website, for a complete selection of available syringes.



# Stoelting Tabletop (QSI™) Stereotaxic Syringe Pump

We've tabled our classic Quintessential Stereotaxic Injector (QSI<sup>™</sup>) to provide an even more versatile injector suited for stereotaxic surgeries. Stoelting's Tabletop QSI<sup>™</sup> allows for dual simultaneous injections of nl-µl volumes. Program injection parameters (volume, rate, and syringe specifications) using the easy-to-use touch screen control box. Accommodates Hamilton syringes sized 0.5uL-250uL. If you already own a QSI<sup>™</sup> add the Tabletop system by simply purchasing the Tabletop Injector Only (53327). If purchased as a single injector, add a second injector at any time.

### QSI<sup>™</sup> Features

- Easy-to-use Touch Screen Control Box
- Dual, Simultaneous Injections
- Preprogrammed Syringe Specifications
- Out-of-range Warnings

### NAME OF PRODUCT

53325	QSI™ Dual Microliter Syringe Pump, Tabletop System
53327	Tabletop Stereotaxic Injector Only

\*Syringes NOT included

# Manual Microsyringe Pump

Stoelting's Manual Microsyringe Pump is a convenient instrument when using visual feedback to determine the amount to be infused or withdrawn. It also provides an economical means for any application requiring injecting/withdrawing a calibrated volume under manual control.

### **Applications Include:**

- ICSI microtitration
- Chromatography
- Microinjections

### **Accessories Included**

The Microsyringe Pumps includes one 100 Microliter syringe, 1 female Luer Lock-to-tubing adaptor and 10 ft. of Intramedic<sup>®</sup> PE polyethylene 60 tubing, .030" I.D., x .048" O.D.

MANUAL SYRINGE PUMP		
51222	Infusion/Withdrawal Pump	
51218	Infusion Pump	
51218D	Infusion/Withdrawl, Digital (LCD) Pump	

# **Tissue Preparation**

# McIlwain<sup>™</sup> Tissue Chopper

The McIlwain<sup>™</sup> Tissue Chopper is a proven instrument for rapidly sectioning living or fixed tissue, without freezing or embedding, to harden the tissue. It cuts living tissue into slices, cubes, arterial rings, etc. with a minimum of functional disturbance.

These preparations can be used in studies of metabolism or for electrophysiology. The McIlwain™ Tissue Chopper may also be used to cube fixed tissue for araldite embedding and EM.

The specimen is affixed to filter paper or plastic discs (51354) and clipped to the instrument's stainless steel table top (cyanoacrylate adhesive may be used to hold tissue pieces in otherwise unstable positions.) The table moves at a pre-set speed. As it moves, a chopping arm is raised automatically, and chops down at frequencies from zero to 200 strokes per minute. A pre-set stop prevents the attached blade from penetrating the filter paper and

### Stoelting Tissue Slicer Fast production of living tissue slices

.....

Originally designed to prepare thin slices of living brain, the tissue slicer is also excellent for slicing other tissues, blocking fixed tissue for histology, and slicing electrophoretic gels. Sections as thin as 150 microns can be reliably prepared. Tissue cutting is done with a standard double-edged razor blade.

Stats Tissue slicer with digital micrometer

impacting the instrument's stainless steel table. In this way, serial sections of live tissue from 0-1 mm thickness may be cut rapidly.

The thickness is pre-set with a micrometer graduated in



1 micron and 25 micron increments. After sectioning in one plane, the instrument's table may be rotated any number of degrees, and the process repeated, to obtain cubes or prisms.

Includes one pack of blades.

MCILWAIN™ TISSUE CHOPPER		
51350	McIlwain™ Tissue Chopper	
51352	Blades, Pkg/10	
<b>51354</b> Plastic Discs, Pkg/10		
If your main power supply is 220V, add a "V" to the product number.		

### Two Models

The 51425 Tissue Slicer has a conventional vernier micrometer, resolution 10 microns. The 51415 Digital Tissue Slicer has a digital display electronic micrometer, with 1 micron resolution.

.....

### Advantage of the 51415 Digital Tissue Slicer

- Switch from mm to inches
- Set zero at any point
- Set low- and high-tolerance limits
- Features over-travel warning signal and output to a printer, processor, data logger or computer

### **Reversible Handedness**

The tissue slicer can be reversed as to left or right handedness. In use, the tissue is placed on the moistened filter paper and moved beneath the cutting edge. The cutting arm is lifted by its handle. The pin is removed and the arm is released, falling by its own weight (and assisted by the spring) thereby slicing through the tissue at high velocity. The cut tissue slice is removed from the razor blade with a small artist's brush moistened in incubation media. The cutting arm is lifted, the dovetail slide moved for the next slice, and the process repeated.

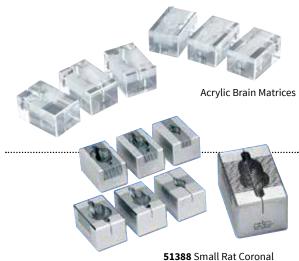
STOELTING TISSUE SLICER		
51425	Tissue Slicer, Vernier Micrometer	
51415	Tissue Slicer, Digital Micrometer	
51427	Metal Blades, Pkg/10	

# **Rodent Brain Dissection**

# **Rodent Brain Matrices**

These matrices are precisely machined and highly polished to ensure reproducible sectioning. Rat and mouse brain matrices are available. Coronal and sagittal sections at 1 mm intervals. All coronal brain matrices have an additional mid-line sagittal cut to aid in the separation of the left and right hemispheres. The mouse brain matrices can also be used on neonatal rat brains. Divisions are 1 mm apart.

### Dimensions: 1 Hx1.75 Lx1.125 W in. (2.54H x 4.45L x 2.86W cm)



Stainless Steel Brain Matrices

### Stainless steel, 0.5mm intervals also available! Visit StoeltingCo.com

### Brain Punch Set

This Brain Punch Set, with spring-loaded nylon expellers and a convenient handle, facilitates the "Palkovits Punch" technique of dissecting out specific brain nuclei for neurochemistry.

The nuclei are punched from frozen brain sections on glass slides, and expelled into the reagents. Spring-loaded expellers avoid risk of contamination that might be caused by expelling with breath.

Each punch has an electropolished sharp end for smooth cuts and minimal tissue adhesion. The Brain Punch Set includes the following: handle, 0.25, 0.50, 0.75, 1.0, and 1.25 (±5%, slight variation due to electropolish etching to sharpen). Other sizes available. Replacement punches available individually, visit StoeltingCo.com or StoeltingEurope.com.

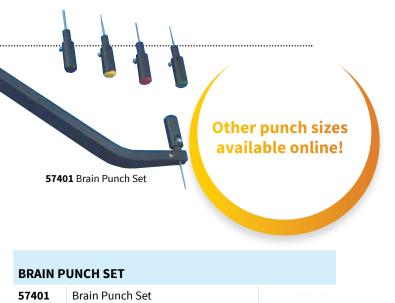
### ACRYLIC BRAIN MATRICES

51380	Acrylic Brain Matrix, Coronal, 40-75g
51381	Acrylic Brain Matrix, Saggital, 40-75g
51382	Acrylic Brain Matrix, Coronal, 175-300g
51383	Acrylic Brain Matrix, Saggital, 175-300g
51384	Acrylic Brain Matrix, Coronal, 300-600g
51385	Acrylic Brain Matrix, Saggital, 300-600g

### STAINLESS STEEL BRAIN MATRICES

Stainless Steel, 0.5 mm intervals also available. See StoeltingCo.com or StoeltingEurope.com for more information.

51386	Steel Brain Matrix, 1.0mm, Coronal, 40-75g
51387	Steel Brain Matrix, 1.0mm, Sagittal, 40-75g
51388	Steel Brain Matrix, 1.0mm, Coronal, 175-300g
51389	Steel Brain Matrix, 1.0mm, Sagittal, 175-300g
51390	Steel Brain Matrix, 1.0mm, Coronal, 300-600g
51391	Steel Brain Matrix, 1.0mm, Sagittal, 300-600g



Histology

# **Cervical Dislocator & Decapitators**

Histology



# **Cervical Dislocator**

The Cervical Dislocator is a completely humane and efficient means of sacrificing laboratory rodents bloodlessly. Evidence indicates that the brain stem is terminated instantly by a blow from the metal bar.

When used with the plastic restraint cones, the animal can be effectively and safely restrained during transfer between cages or through all necessary handling. The 5 cm opening is sufficient for most laboratory rodents. A 6 cm model is also available.

### **CERVICAL DISLOCATOR**

51360	Cervical Dislocator, 5 cm
51365	Cervical Dislocator, 6 cm
51361	Plastic Restraint Cones Pkg/50

# Decapitator

Stoelting's small animal decapitator has hardened and ground surgical stainless steel blades, aluminum base and stainless steel hardware. With its 1.5" (3.81 cm) square maximum blade opening, it is suitable for decapitating rats, mice and other small animals. The decapitator cuts cleanly and quickly through bone and tissue. The base has four holes for bench mounting.

### DECAPITATORS

51330 Small Animal Decapitator

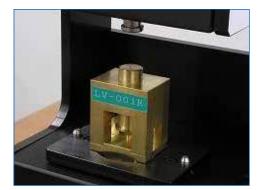
51330

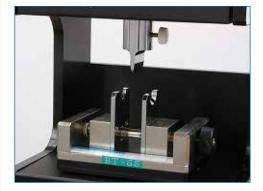
Cuts clean and quick!

# Rat and Mouse Bone Strength Tester









# **Bone Strength Tester**

Each Bone Strength Tester is configured for administration of the threepoint bending method yielding biomechanical parameters including force, stiffness and energy necessary for break. Torsion, Tensile Strength, Compression and Wound Breaking techniques can also be performed using optional sensors and accessories. Computer software is included for data acquisition.

### Used to analyze bone strength in studies associated with:

- Age-related Bone Loss
- Hormone Replacement Therapy
- Weight-Bearing Exercise
- Vitamin Deficiency

### BONE BREAKING DEVICE

50420	Bone Strength Tester, Small Animals	
50421	LV Compressing Adapter, Rat (5-350g)	
50422	LV Compressing Adapter, Rat (350-450g)	
50423	Sample Making Device for Bending Test	
50424	Sample Making Device for Torsion Test	
50425	Femoral Neck Compressing Test Kit	
50426	Tensile Test, Rat	
50427	Torsion Test, Rat	
50428	Bending Test, Mouse	
50429	Wound Breaking Strength Test, Mouse and Rat	

# **Small Animal Ventilators**

Physiology

# Sub-5-5 Rabbit Ventilator 50ml

# Ugo Basile Rodent/ Rabbit Ventilators

Ugo Basile's Rodent/Cat/Rabbit Ventilator is a volume-controlled mechanical ventilator (according to Starling's ventilation method), designed for use with rodents, cats, rabbits and animals of similar size. It consists of a variable speed geared motor linked by a novel variable stroke mechanism to easily interchangeable cylinder/piston assemblies.

### Features:

- Interchangeable cylinder/piston assemblies (5, 10, 30, 50 and 100ml)
- Quiet operation, both acustically and electrically (negligible R.F. broadcasting)
- Reliable mechanics and impeccable finishing: long lasting
- Synchronised START/STOP function available as optional

50094

Mouse Ventilator 1ml

# Ugo Basile Mouse Ventilator

### This new Respirator features:

- The tidal volume, in the range 0.1-1 ml (or 0.05-0.5 with the smaller piston installed)
- Ideal for use with mice,
- small birds and perinatal rats
- Unique design
- Compact
- Reliable
- Silent

### **UGO BASILE ANIMAL VENTILATORS**

50094Mouse Ventilator, 1.0ml50095Mouse Ventilator 0.5 ml50095-1Rat Ventilator, 10ml50095-2Rodent Ventilator 5 ml50195-5Rabbit Ventilator 50 ml

# Visit our website: StoeltingCo.com

**Stoelting Europe** Web: www.StoeltingCo.com / Email: Info@StoeltingEurope.com / Phone: +353 1 524 2200 **105** 

# **Blood Pressure**

**50370** Muromachi Blood Pressure Monitor

# **Blood Pressure Monitor**

### Non-invasive Blood Pressure Monitor

- Preheating of animals not required
- Use with animals under 10 grams
- Use with C57 BL6 Mice and colored Mice
- Use with Zucker Fatty Rats
- Use with Hamsters (with a leg cuff anesthetic)
- The only monitor that can be used with Guinea Pigs—even without anesthesia
- The only monitor that can be used with OB (diabetic model) Mice

### Preheating of animals not required

Provided the room temperature is at least 23°C, the animal's blood pressure can be measured without heating the animal. After photoplethysmographically measuring tail arterial blood pressure, pulses are stored in the computer memory and peak levels of the pulses are plotted on a display.

### **Easy Operation**

- Two operation modes are available–Mode 1: HR (Heart Rate) and SBP (Systolic Blood Pressure) and Mode 2: HR, SBP, MBP (Mean Blood Pressure) and DBP (Diastolic Blood Pressure, calculated value) can be measured.
- Continuous measurement can be performed up to ten (10) times.

The only non-preheating, non-invasive Blood Pressure Monitor for Mice and Rats

- Printout function
- Colored mice such as C57BL/6, neonatal mice, hamsters (anesthetized) and guinea pigs (non-anesthetized) can be measured.
- Sick animals can be measured. (e.g. animal with cardiac infarction)
- Multi-channel system is no longer needed. Just prepare multiple restrainers, and measurement can be done one after the other.
- Auto-Sequence Function blood pressure of a tail artery of an animal can be monitored automatically at specified time intervals, which can be 1-99 minutes in length.
- An RS-232C interface is provided on the rear panel of the main unit. Using the optional Data Collection Software (Windows OS only) the data obtained can be exported to a personal computer and stored as a CSV file.
- The animal holders are made of dark brown acrylic, allowing BP measurement under relatively stress-free conditions.

### **Included Accessories**

Includes built-in high-speed printer, 9" (22.86 cm) display, measuring stand, choice of cuff-pulse sensor, animal holder, and 5 rolls of thermal chart paper.

For PC compatibility, Data Collection Software 50391, sold below, is not required.

### **BLOOD PRESSURE MONITOR**

50370	Muromachi Blood Pressure Monitor
50391	Data Collection Software for Windows

If your main power supply is 220V, add a "V" to the product number.

# **Animal Restrainers**



### Mouse Restrainer, Head and Tail Access

These mouse restrainers are built in cylinder-shaped perspex. Lateral slots and holes allow for the animals ventilation and make the access for interperitaneal (i.p.) drug administration possible. The available space for the

animal can be adjusted by means of a sliding piston, thereby keeping the whole tail free for a pulse transducer and cuff positioning or for intravenous (i.v.) drug administration. The animal is led in from the back and can walk out in the front, thus avoiding dragging it backwards.

### **MOUSE RESTRAINER, HEAD AND TAIL ACCESS**

- 51324 Mouse Restrainer, Head and Tail access, 0-50g
- 51325 Mouse Restrainer, Head and Tail access, 0-35g
- 51326 Mouse Restrainer, Head and Tail access, 0-25g



### Rabbit Restrainer

Provides total visibility of the animal, and aids in retaining body warmth. The nonslip floor surface provides better footing and helps to calm the animal. A curved back/butt plate minimizes the possibility of a broken neck.



### **Head Access Rodent Restrainer**

Provides access to the head and allows access to food and water. Offered in four sizes to accommodate indicated rodent weights.

### HEAD ACCESS RODENT RESTRAINER

51332	Head Access Rodent Restrainer, 15-30g	
51339	Head Access Rodent Restrainer, 30-125g	
51333	Head Access Rodent Restrainer, 125-250g	
51334	Head Access Rodent Restrainer, 250-425g	

### **RABBIT RESTRAINER**

51328	Rabbit Restrainer, 0-4 kg
51329	Rabbit Restrainer, 4-7 kg



### Rodent **Restraint Cones**

Disposable plastic restraint cones hold the animal safely in position for injections through the plastic bag, for decapitation, for cervical dislocation, or for examination

of collected field specimens such as field mice or rats. The scientist avoids contact with feces or urine, and avoids bites and scratches.

The animal is easily loaded into the cone at the wide end, and heads for the breathing hole at the small end. Sold in packs of 50.

### **RODENT RESTRAINT CONES**

51361 Plastic Restraint Cones, Pk/50

### For more sizes, visit "Histology" on our website! www.StoeltingCo.com



### **Tail Access Rodent Restrainer**

The head is pushed back by the moveable disk so that the tail projects out the hole in the acrylic plate. Perfect for injections, blood sampling, or blood pressure monitoring. Offered in four sizes to accomodate indicated rodent weight.

### TAIL ACCESS RODENT RESTRAINERS

51338	Tail Access Rodent Restrainer, 15-30g
51337	Tail Access Rodent Restrainer, 30-125g
51336	Tail Access Rodent Restrainer, 125-250g
51335	Tail Access Rodent Restrainer, 250-500g

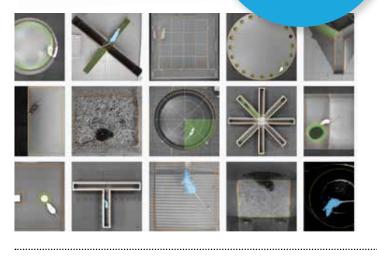
# ANY-maze Behavioral Tracking Software

# **EXAMPENDE Today's most advanced** video tracking system

Get a quick insight into the power & simplicity of ANY-maze at ANY-maze.com! ANY-maze is today's most advanced video tracking system. Trusted by thousands of researchers around the world, ANY-maze couples an unrivalled depth of features with a simple, familiar design, to provide automated testing in virtually any behavioural test.

### ANY-MAZE

60000 ANY-maze Software

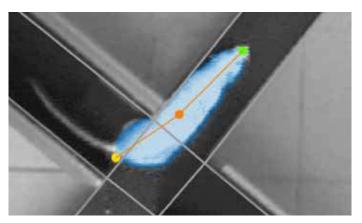


### Use literally any maze

**Zones:** Draw shapes to divide your apparatus into areas, then combine areas to create any number of zones.

**Sequences:** Define sequences to detect movements between areas or zones.

**Immobility and freezing:** Automatically detect immobility and freezing, perfect for fear conditioning.



# Track with precision

**Whole animal:** Use whole-animal tracking to precisely detect arm entries.

**Three-point tracking:** Track the head, centre and base of the tail to provide both location and orientation.

**Accuracy:** Track accurately, even in poor light or low contrast, without setting any obscure parameters.

# ANY-maze Behavioral Tracking Software





Test	Animal	Stage	Trial	Apparatus	Testin	g stat	tus.	Reason ended
1	1	Training	1	Barnes maze 1	Compl	eted	×	Entered escape hole
2	:4	Training	1	Barries maze 4	Compl	eted		Test duration
3	2	Training	1	Barnes maze 2	Compl	eted		Test duration
4	3	Training	1	Barnes maze 3	Compl	eted		Test duration
•	5	Training	1	Barries maze 1	Ready			
1	6	Training	1	Barnes maze 2	Ready	+		
•3	7	Training	1	Barnes maze 3	Ready	*:		
	8	Training	1	Barnes maze 4	Ready			
	9	Training	1	Barnes maze 1		0	Skip	this test
•	10	Training	1	Barnes maze 2				
	11	Training	1	Barnes maze 3			Oper	the Animal details report
•	12	Training	1	Barnes maze 4		100	1000	the Test details report
20	1	Training	2	Barnes maze 1			sther	one repusedation report
	2	Training	2	Barnes maze 2				

### Connect to almost anything

**Acquire:** Use purpose-built ANY-maze interfaces to acquire data from levers, photobeams, sensors, running wheels...

**Control:** Also control speakers, pellet dispensers, optogenetic lasers, syringe pumps, shockers, lights...

**Adjust:** Change shock intensity, alter tone frequency, set a laser's duty cycle...even while a test is being performed.

### Easily design complex tests

**Automate:** Use procedures, built from a few easily understood statements, to automate your tests.

**Straightforward:** Procedures can be simple – for example ending the test if the animal finds a water-maze island.

**Sophisticated:** Or they can incorporate complex rules for what should happen when, based on the animal's behaviour.

# Follow an intuitive test schedule

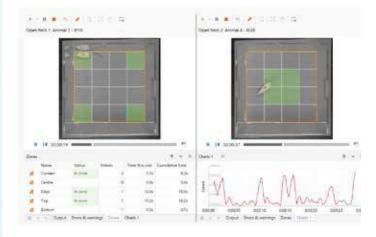
**Automatic:** ANY-maze automatically maintains a schedule showing the status of all the tests in your experiment.

**Stages and trials:** Break an experiment into multiple stages containing repeated trials – for example, training and probe.

**Stay in control:** The schedule is flexible-skip tests, retire animals, or just add tests as you go.

Easy to use: ANY-maze is consistently praised for its familiar intuitive design...

# ANY-maze Behavioral Tracking Software



# Animal and test information	
Apparatus measures	
- 2 Test duration	
- 🗹 Total distance travelled	
- First zone entered	
Visited zone list	
> Speed measures	
-> Turning/Rotation measures	
→ Miscellaneous measures	
d Comers zone measures	
Number of entries to the zone	
Number of exits from the zone	
Time in the zone	
- Was first zone entered	

### Benefit from flexible testing

**High throughput:** Increase throughput by running independent tests in up to 40 apparatus simultaneously.

**Live data:** View live information during tests, such as zone visits or the state of inputs and outputs.

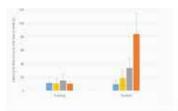
**Real-time warnings:** Have warnings, such as a dispenser running out of pellets, reported immediately and noted in the test's results.

# Access hundreds of measures

**Extensive:** Results are available for the whole apparatus and for each zone, point, sequence, behaviour, input and output.

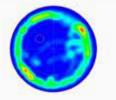
**Per zone:** Results are analysed for the entire apparatus and for each defined zone.

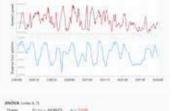
Across time: Results are reported for the duration of the test, for equal length timebins, and for any specific periods.



Distance travelled measures...

Distance travelled in the zor







### Visualise & analyse results

**Visualise:** Visualise test results using track plots, heat maps and charts.

**Analyse:** Analyse between treatments, strains, genders, trials, etc, using over 30 built-in parametric, non-parametric and post-hoc tests.

**Transfer:** Copy and save data in a variety of formats for easy transfer to programs such as Excel, SPSS and Statistica.

### Test ANY-maze for yourself!

Put ANY-maze to use in your research and see the software in action. **Download** the latest version of ANY-maze **at www.ANY-maze.com**, or contact us for a **FREE 30-day trial!** 

# **ANY-maze Equipment**

# **ANY-maze Interfaces**

What do you do if you need to count the number of licks at a water bottle, or determine how far an animal runs in an exercise wheel? Video tracking alone can't help. The answer is ANY-maze, the second generation of the popular ANYmaze interface. There are a total of seven ANY-maze devices which between them can detect and respond to inputs from, amongst other things, levers, running wheels, touch switches and nose-poke holes; and can control devices such as optogenetic lasers, shockers, pellet dispensers, cue lights and speakers. All the ANY-maze devices are fully integrated into ANY-maze and connect to the PC via USB, in most cases you don't even need a power cord.





# **Optogenetic Interface**

The ANY-maze Optogenetic interface is designed to independently control up to four optogenetic lasers during behavioural tests performed with ANY-maze. Using the interface, you can either pulse a laser with very high precision at a specific frequency and duty cycle for a set duration, or you can 'play' a series of arbitrary pulses. If your laser supports it, the interface can also dynamically adjust the laser's intensity.

### ANY-MAZE OPTOGENETIC INTERFACE

60060

Optogenetic Interface for ANY-maze

## Digital interface

The ANY-maze Digital interface is designed to connect ANY-maze to a wide range of equipment typically found in behavioural labs, such as: levers, photobeams, running wheels, some shockers and pellet dispensers, cue lights, etc.

### **ANY-MAZE DIGITAL INTERFACE**

60064

Digital Interface for ANY-maze





# **Touch Switch Interface**

The ANY-maze Touch switch interface is designed to detect when an animal touches something conductive. For example, this might be the animal licking a bottle spout, the animal's paw touching a metal plate on the wall of a cage, or the animal slipping from a grid and its paw touching a metal floor.

### ANY-MAZE TOUCH SWITCH INTERFACE

60061

Touch Switch Interface for ANY-maze

# **ANY-maze Equipment**



# **Relay interface**

The ANY-maze Relay interface has six output ports which can be used to turn things on and off under software control. For example, an output could switch on a shocker, turn on a light or activate a pellet dispenser.

### ANY-MAZE RELAY INTERFACE

60063 Relay Interface for ANY-maze

# **Analogue Interface**

The ANY-maze Analogue interface is designed to connect ANYmaze to devices which output analogue signals, for example a respiratory gas analyser, a blood pressure monitor or an EEG. The interface can also output digital signals, which can, for example, represent the location of the animal in the apparatus.

### **ANY-MAZE ANALOGUE INTERFACE**

60067 Analogue Interface for ANY-maze





# Audio Interface

The ANY-maze Audio interface has six outputs which can be connected to 4-ohm or 8-ohm speakers. Each output can independently play white noise, tones or a sound file under full software control.

### ANY-MAZE AUDIO INTERFACE

60068 Audio Interface for ANY-maze

# Synchronisation Interface

The ANY-maze synchronisation interface is designed to help synchronise tests in ANY-maze with tests in synchronisation systems. It consists of 6 TTL ports, each of which can be configured independently as an input or and output. Used in conjunction with the synchronisation element of the protocol, the interface allows you to output TTL signals when a test starts, when a new frame is captured from the camera and/or when ANY-maze stores the animal's position in its results.

### ANY-MAZE SYNCHRONISATION INTERFACE

60069 Synchronisation Interface for ANY-maze



# **ANY-maze Bundle Options**



## Operant Interface for ANY-maze (Med Associates)

#### ANY-MAZE OPERANT INTERFACE (MED ASSOCIATES)

60071	Operant Interface for ANY-maze (Med Assocation)	
60071P	Operant Interface Power Supply (US)	

### Operant Interface for ANY-maze (Coulbourn Inst)

### ANY-MAZE OPERANT INTERFACE (COULBOURN INST)

60071C	Operant Interfae for ANY-maze (Coulbourn Inst)
60071P	Operant Interface Power Supply (US)





# Operant Interface for ANY-maze (Lafayette Inst)

### ANY-MAZE OPERANT INTERFACE (LAFAYETTE INST)

60071L	Electrophysiology Interface (Lafayette Inst)	
60071P	Operant Interface Power Supply (US)	

# **ANY-maze Operant Interface**

### ANY-maze Video Tracking Bundle Options Your complete solution for small animal behavior testing!

ANY-maze is the most versatile, easy-to-use behavior tracking software available. Purchasing a complete ANY-maze package makes it even easier. Purchase an ANY-maze bundle and you'll receive everything you need for your research. All ANY-maze bundle packages include unlimited software technical support. Which ANY-maze Bundle is right for you? See page 134 for more ANY-maze Bundle Options!

# ANY-maze with Camera and Accessories Bundle



### ANY-maze Camera and Accessories Bundle Includes:

- (you supply the computer and maze/apparatus)
- ANY-maze License (Software)
- Camera
- Camera Accessories (lens, ceiling-mount & cables)

### ANY-MAZE CAMERA AND ACCESSORIES BUNDLE

60605 AN

ANY-maze System with Camera and Accessories Bundle

### ANY-maze with Computer and Accessories Bundle



### **ANY-maze Computer and Accessories Bundle**

**Includes:** (you supply the maze/apparatus)

- ANY-maze License (Software)
- Computer (Desk or Laptop)
- Camera
- Camera Accessories (lens, ceiling-mount & cables)

### **ANY-MAZE COMPUTER & ACCESSORIES BUNDLE**

60600	ANY-maze System with Computer and Accessories Bundle, Desktop	
60601	ANY-maze System with Computer and Accessories Bundle, Laptop	

### **Test ANY-maze for yourself!**

Put ANY-maze to use in your research and see the software in action. **Download** the latest version of ANY-maze **at www.ANY-maze.com**, or contact us for a **FREE 30-day trial!** 

# ANY-maze Cameras & Accessories

# ANY-maze

Sofera and Lens

**ANY-maze** can be paired with a variety of cameras and accessories to help meet, and optimize, your tracking needs. Additionally, if your research requires something unique, such as the ability to track using simultaneous capture from multiple cameras, or to track in complete darkness, we have options and solutions. Below are some of our recommendations, but if you need assistance in selecting a camera or accessories to meet your specific needs please contact us.

.....

UEDO		
USB Cable	USB CAM	IERA
	60516	B&W U (Lens S
No. of Contract of	60536	B&W U
Nari-Soothans	USB CAM	IERA LE
ari-6	60535	Vari-Fo
e nourting Bracket	60538	IR-Only
Junting Bracket	USB CAB	LES & F
Les Contraction	60517B	USB 2.0
and the formation of the second secon	60518B	Active (
ight Light Illuminato,	60537B	USB 3.0
Lared 1	60538B	Active I
	СОМРИТ	ERS
Vinate Remote	60555	ANY-ma
And the Remote	60557	ANY-ma
Ccable, Right Ang/e	ACCESSO	RIES
Cable, Right Angle	60545	Univers
Type C	60540	Infrared
	60057	ANY-ma

USB CAMERA					
60516	B&W USB 2.0 CMOS Camera (Lens Sold Separately)				
60536	B&W USB 3.0 CMOS Camera				
USB CAM	ERA LENSES (SOLD SEPARATELY)				
60535	Vari-Focal Lens (2.8-10mm) for 60516 & 60536				
60538	IR-Only Lens Filter for 60535				
USB CAB	LES & HUBS				
60517B	USB 2.0 Male to Mini Cable, 15ft.				
60518B	Active USB 2.0 Extension Cable, 16ft.				
60537B	USB 3.0 Type-C Cable, Right Angle, 16 ft.				
60538B	Active USB 3.0 Extension Cable, 16ft.				
COMPUTERS					
60555	ANY-maze Computer, Desktop				
60557	ANY-maze Computer, Laptop				
ACCESSO	RIES				
60545	Universal Camera Mounting Bracket				
60540	Infrared Night Light Illuminator				
60057	ANY-maze Wired Remote Control				

See more options and details at ANY-maze.com!

# **ANY-maze Accessories**



# ANY-maze photobeam

The ANY-maze photobeams detect when an animal breaks an infrared beam and can be used in a wide variety of situations, such as detecting when an animal passes through a door, detecting nose-pokes, detecting how far down a corridor the animal has travelled.

#### **ANY-MAZE PHOTO-BEAM**

60001-21

AMi Photo Beam, 1 set (IR Transmitter & Receiver)

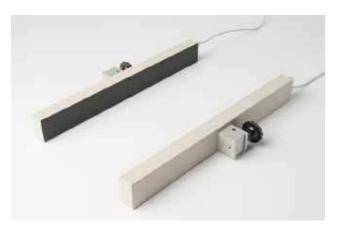
### ANY-maze Photobeam array

The ANY-maze photobeam array provide a 'curtain' of photobeams and is often used to detect when an animal rears. It can also be as a movement detector, which can generate reliable movement 'counts' in circumstances in which video tracking can't be used. Use with the ANY-maze Digital Interface (see page 111). Includes Stand.

#### **ANY-MAZE PHOTOBEAM ARRAY**

 60001-02
 AMi Photo-Beam Array, 40cm

 60001-03
 AMi Photo-Beam Array, 100cm



## ANY-maze animal shocker

The ANY-maze animal shocker administers scrambled shock to 8 independent outputs. The intensity, onset and duration of the shocker are all under software control, so for example, the intensity of the shock could be altered depending on the situation in a test.

### **ANY-MAZE ANIMAL SHOCKER**

60001-51 ANY-maze Programmable Shocker





See more options at ANY-maze.com!

# ANY-maze Cameras & Accessories



# ANY-maze Animal Scale

Based on settings you specify in the protocol, ANY-maze will prompt you to place an animal on the scales before a test; when you do this, it will weigh the animal and record the result. ANY-maze can also optionally calculate an animal's treatment dose based on its weight.

### ANY-MAZE ANIMAL SCALE

60052 ANY-maze Animal Scale

# **ANY-maze Cue lights**

The ANY-maze Cue lights are perfect for providing visible cues to animals during tests. The lights are water resistant and are available in a variety of colors and sizes (22mm, white shown here). Use with the ANY-maze Digital Interface (see page 111).

### **ANY-MAZE CUE LIGHTS**

60045

ANY-maze Cue lights

### More colors and options available online!



## ANY-maze Rotary encoder

The ANY-maze Rotary encoder detects rotations an axle. This can be useful in a variety of situations. For example, if the axle has a running wheel mounted on it, the encoder will detect rotations of the wheel; or, if the axle connects to an animal tether, the encoder will detect rotations of the animal. Use with the ANY-maze Digital Interface (see page 111).

### ANY-MAZE ROTARY ENCODER

60048 ANY-maze Rotary Encoder

### ANY-maze Infrared illuminator

The ANY-maze infrared illuminator allows you to track in very low light or even total darkness.

### ANY-MAZE INFRARED ILLUMINATOR

60540 ANY-maze Infrared illuminator

### Can be wall or ceiling mounted.



# ANY-box for Mice and Rats

# ANY-box Multiple Tests with a Single Base

ANY-box is a multi-configuration behavior apparatus designed to automate a range of standard behavioral tests in mice and rats. ANY-box uses the same basic components in different tests, creating a flexible and affordable solution for behavior analysis. Mouse and Rat complete automated systems include everything you need for automated assessment of:

Memory

- Drug Effects
- Locomotor Activity
- Anxiety

- Exploratory Activity
- ety
- Exploratory Activit
   Stress Response
- **TESTS INCLUDE:**

Open Field Hole Board Novel Object Recognition Light/Dark Box

Conditioned Place Preference

### Individual Automated Tests also available. Each individual automated system includes:

- ANY-box Software
- ANY-maze Interface
- Universal Base Plate
- Camera & Camera Accessories
- Enclosure of your choice: Open Field, Light/Dark, Conditioned Place Preference, Object Recognition, Hole Board or all 5 tests together!

ANY-box uses the ANY-maze software and camera to track X- and Y- movements. A photobeam IR array is included to track Z- movements (i.e., rearing behavior) which is incorporated into the software.

> Automate up to five behavior tests! Computer not included.

**ANY-box** Base (Includes camera and IR Array)

# ANY-box for Mice and Rats

62075 Automated Object Recognition, Mouse
62055 Automated Hole Board, Mouse *Hole Board not available for Rat.
<b>Rat</b> configurations will differ from the products pictured.
64000 Automated Conditioned Place Preference, Mouse
63000 Automated Light/Dark Box, Mouse

Multiple cage systems available. Call for details.

ANY-box		
65000	ANY-box 5-Behavior Test System, 40cm, Mouse	
COMPLE	TE AUTOMATED SYSTEMS	FOR MOUSE
62000	ANY-box Open Field, 40cm, Clear w/Photobeam Array	
62050	ANY-box Open Field, 40cm, Opaque w/Photobeam Array	
62055	ANY-box Hole Board Apparatus, 40cm, w/Photobeam Array	
62075	ANY-box Novel Object Recognition, 40cm, Clear w/Photobeam Array	
63000	ANY-box Light/Dark, 40cm, w/Photobeam Array	
64000	ANY-box Conditioned Place Preference, 40cm, w/Photobeam Array	
ANY-box	MOUSE ENCLOSURES ON	LY (40CM)
60111	Open Field, Clear, Mouse	
60122	Open Field, IR Transparent Black, Mouse	
62020	Object Recognition, Mouse	
62025	Hole Board, Mouse	
63100	Light/Dark Box, Mouse	
64100	Conditioned Place Preference, Mouse	
ANY-box	RAT ENCLOSURES ONLY (	100CM)
60220	ANY-box Open Field, Enclosure Only, 100cm, Clear	
60223	ANY-box Open Field, Enclosure Only, 100cm, IR Black	
60221	ANY-box Open Field, Enclosure Only, 100cm,	

63201

64201

65201

Opaque Light/Dark Box,

(set of 2)

Rat (set of 2)

Enclosure Only, Rat

**Conditioned Place** 

**Object Recognition**,

Enclosure Only, Rat

Preference, Enclosure Only,



### Water Maze

The Morris Water Maze is one of the most widely used methods in behavioral neuroscience to assess spatial and learning memory. The Water Maze tank is filled with water and equipped with a platform (60030) which acts as a means of escape for animals. During testing, animals learn the location of the platform using spatial cues. The Water Maze tank is made of aluminum and is available in three different sizes for testing of Mice, Rats or both. Platform (60030) is included.

### WATER MAZE

60135	Water Maze, Mouse, 3.5-4.5 ft Diameter (1.07-1.37m)
60136	Water Maze, Mouse/Rat, 4.5-5.5 ft Diameter (1.37-1.68m)
60235	Water Maze, Rat, 5.5-6.5 ft Diameter (1.68-2.0m)

### AVAILABLE ISLANDS

60030	4 in (10.2 cm) Diameter/12 in (30.5cm) Height	
60035	4 in (10.2 cm) Diameter/20 in (50.8cm) Height	

### **Barnes Maze**

The Barnes Maze is designed for testing spatial learning and memory. Within the maze, animals are motivated to escape from the brightly lit, open platform to a small dark recessed chamber (escape box). During testing, the animal learns the spatial location of the escape box. The maze also includes false escape boxes, which help to remove visual cues that might be observed from a distance or through an open hole.



	CATALOG NUMBER		HOLE DIA.	HEIGHT	
60170	Barnes Maze, Mouse	91cm	5cm	90cm	
60270	Barnes Maze, Rat	122cm	10cm	90cm	

Save money when purchasing an ANY-maze bundle! Maze bundle packages include: Laptop computer, USB Camera, Camera Accessories, ANY-maze software and a Stoelting maze of your choice! See page 131 for more details.

Open arms are equipped with heightadjustable lip to minimize falls.



# **Elevated Plus-Maze**

The Elevated Plus-Maze is used to assess anxiety in rodents. The maze exploits the conflict between the innate fear that rodents have of open areas, versus their desire to explore novel environments. The Elevated Plus-Maze is designed with an elevated plus-shaped platform, with two closed arms and two open. Both open arms are equipped with height-adjustable lip to minimize falls.

CATAL NUMB		LANE WIDTH	ARM LENGTH	WALL HEIGHT	LEG HEIGHT	
60140	Plus-Maze, Mouse	5cm	35cm	15cm	40cm	
60240	Plus-Maze, Rat	10cm	50cm	40cm	40cm	

## **Elevated Zero-Maze**

60140

**Elevated Plus-Maze** 

The Elevated Zero-Maze is a modification of the Elevated Plus-Maze, which incorporates both traditional and novel ethological measures, in the analysis of anxiety. The design comprises an elevated circular platform, with two opposite enclosed quadrants, and two open. This removes any ambiguity in interpretation of time spent on the central square of the traditional "plus" design, and allows uninterrupted exploration.

CATAL	OG NUMBER	DIA.	LANE WIDTH	WALL HEIGHT	LEG HEIGHT	
60190	Zero-Maze, Mouse	50cm	5cm	15cm	40cm	
60290	Zero-Maze, Rat	100cm	10cm	30cm	40cm	

**60190** Elevated Zero-Maze





## Radial-Arm Maze

The Radial-Arm Maze has been used extensively in evaluating spatial learning and memory. The apparatus consists of eight (or 12) equidistantly-spaced arms radiating from a small, circular central platform. The design ensures that, after checking for food at the end of each arm, the rodent is forced to return to the central platform before making another choice. The subject always has eight (or 12) possible options.

CATAL	OG NUMBER	LANE	ARM	WALL	
60150	8-Arm Radial Maze, Mouse	5cm	35cm	9cm	
60250	8-Arm Radial Maze, Rat	10cm	50cm	13cm	

### T-Maze

The T-Maze is used largely in preference and spatial learning tasks. Animals learn to alternate between arms, based on their memory of the previously visited arms, or choose an arm based on the reward presented. The simple, capital T-shape design incorporates a single choice point with only two alternatives.



# Mazes for all your behavior testing needs!

CATALOG NUMBER		LANE	STEM	ARM	ARM	
60181	T-Maze, Mouse	5CM	35CM	10CM	28CM	
60281	T-Maze, Rat	10CM	50CM	20CM	40CM	

# Y-Maze

The Y-maze is used to assess exploratory behavior and/or spatial recognition of rodents. Three identical, equidistant arms, designed with gradual turns, promote exploration of the apparatus. Barrier blocks (optional) can be used to employ recognition or reversal paradigms.

CATALO	G NUMBER	LANE WIDTH	ARM LENGTH	WALL HEIGHT			
60180	Y-Maze, Mouse	5cm	35cm	10cm			
60280	Y-Maze, Rat	10cm	50cm	20cm			
BARIER	BLOCKS						
60180B	Barrier Block Y-m	arrier Block Y-maze, Mouse, set of 2					
60280B	Barrier Block Y-m	aze, Rat, set of	2				



### 

ANY-maze Driven

Stoelting's Parallel Rod Foot Fault Apparatus is designed for assessing the effects of drugs, brain damage and disease on motor coordination and fatigue. Tests in up to 16 cages can be performed simultaneously using ANY-maze. This high throughput design makes the test an extremely versatile and valuable screening and phenotyping tool.

### **Parallel rod Features:**

- · Easier to use than Rota-Rod
- Provides similar measurements to Rota-Rod testing
- Provides two measurements not necessarily provided by other tests: Number of errors (foot slips) Horizontal distance traveled (cm)
- · ANY-maze Parallel Rod Software Included!

Using the ratio errors per cm traveled to index ataxia provides a robust and unique measure of genetic contributions to locomotor incoordination.

### PARALLEL-ROD FLOOR APPARATUS

61000

Parallel-Rod Floor Apparatus, Single Enclosure System

Comparing to Rota-Rod. Use to assess Ataxia and Motor Coordination.

> ANY-maze Touch Interface included! See page 111

61000 Parallel-Rod Floor Apparatu



# **Stoelting Lickometer**

The Stoelting Lickometer for Mouse can be used to measure licking/drinking behavior in mice. An electrical signal is generated from the tongue touching the sipper tube so each lick by the mouse is a recorded event. The Stoeltling Lickometer includes the Plexiglas cage and base, controller, and software. This is designed to work with the ANYmaze software, so a computer is required (not included). This Lickometer is designed to be a low-cost measurement of licking/drinking behaviors in mice.

- Easy to use
- Can be combined with other behavior apparatuses, such as Open Field, Y-maze, etc.
- Easy to clean apparatus

### 🛟 ANY-maze Driven

### **STOELTING LICKOMETER**

67100	Stoelting Lickometer System
67105	Stoelting Lickometer System with ANY-maze
67101	Stoelting Lickometer, water bottle mount



# Sociability Apparatus

### Ideal for the investigation of:

- Autism
- Social Memory
- Maternal Behavior
  - Sociability
- Dominance

The Sociability Apparatus is used to assess social interaction and conditions thereof. The three- chambered apparatus includes two gray "stranger" enclosures with wide grid bars to promote interaction, and a non-reflective gray floor to maximize contrast, for video tracking purposes. Rat sizes available.



### SOCIABILITY APPARATUS

60450	Sociability Cage, Mouse			
60449XL	Sociability Cage, Rat			

66000 Repeated Acquisition and Performance Chamber

### Repeated Acquisition and Performance Chamber (RAPC)

RAPC is a behavioral monitoring apparatus designed to completely automate and assess spatial learning and memory. RAPC enhances the accuracy of recording temporal measurements, and error scoring, during spatial learning and memory experiments, through the use of the ANYmaze data acquisition software and electronic sensors. In fact RAPC is an ANY-maze software driven product. The software can be used to track as many as 16 chambers simultaneously, and performs full statistical analysis of results immediately upon completion of the experiment.

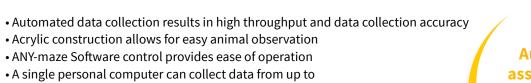
### **ANY-maze Driven**

- 16 chambers simultaneously
- ANY-maze software automatically configures the experiments
- ANY-maze controls the experiment flow, data collection and statistical analysis
- The chamber is equipped with two Mylar speakers to generate white noise or provide auditory cues

### STOELTING REPEATED ACQUISITION AND PERFORMANCE CHAMBER (RAPC)

66000 **RAPC** Repeated Acquisition and Performance Chamber

**Automated** assessment of spatial learning and memory!





# Porsolt "Forced Swim" Test

The Porsolt "Forced Swim" Test is commonly used as a test for depression in rodents. Rodents are subjected to forced swim with no means of escape. The animals learn that escape is impossible and become immobile, moving only to keep their heads above water. Increased immobility is interpreted as depression. The Porsolt cylinder accommodates top-down and side camera positioning for automated detection of immobility behavior with ANY-maze video tracking software.

- Designed for use with Rats and Mice
- Center drain
- Valve for water level adjustment
- Handles for convenient carrying, positioning, emptying and cleaning

# **Tail-Suspension Test**

- Designed specifically for use with ANY-maze
- Suitable for use with Rats and Mice
- Convenient, removable walls for easy cleaning

The Tail-Suspension Test is akin to the Forced Swim Test, but avoids the problems of hypothermia, and stress associated with forced swimming. Animals are suspended by their tails, and the amount of "immobility" is measured. Longer periods of immobility are associated with higher depressive scores, and immobility can be reversed with antidepressant treatment.



60125 Tail-Suspension Test

CATALOG NUMBER	DIA.	DEPTH	CATALOG NUMBER	HEIGHT	STATION WIDTH	OVERALL WIDTH	
CATALOG NOMDER	DIA.	DEFIII	60405				
60160 Porsolt (Forced Swim) Test	20cm	45cm	60125 Tail-Suspension Test	54cm	19cm	47cm	

Automate any Stoelting maze with ( ANY-maze! See page 108 for details.

# **Mouse Behavior Mazes**



**63101** Light/Dark Box 7x7 cm Doorway

## Light/Dark Box

The Light/Dark Box is a characteristic tool used in the assessment of anxiety. The basic measure is the animal's preference for dark, enclosed places over bright, exposed places. Time spent in the lit (light) half of the arena, and the related exploratory behaviors, are reliable parameters for assessing anxiolytic effects that may be useful in identifying and/or screening of anxiolytic and anxiogenic agents.

CATALOG NUMBER	OVERALL WIDTH		TEST CHAMBER DIMENSION	
<b>63101</b> LIGHT/DARK BOX, MOUSE	40cm	35cm	20x40cm	



# Conditioned Place-Preference Apparatus

The Conditioned Place-Preference (CPP) Apparatus is commonly used in the assessment of the rewarding or aversive properties of drugs or to identify the neuronal basis of reinforcement expression. Typically, the test involves association of an environment with drug effects, followed by the association of a different environment without the administration of drugs. Stoelting's Conditioned Place-Preference Apparatus is comprised of two chambers, barrier block and context kit for altering the environment of each chamber.



CATALOG NUMBER	OVERALL WIDTH & HEIGHT	TEST CHAMBER DIM.	START BOX DIM.	
<b>64101</b> CONDITIONED PLACE- PREFERENCE	40cm X 35cm	18 X 20cm	10 X 20cm	

# Hole-Board Test

Head dipping on a Hole-Board is frequently used as an indicator of exploratory tendencies in rodent studies. Exploratory behavior in the Hole-Board Apparatus is a highly sensitive measure commonly used to explore and determine pharmacological and genetic influences. Additionally, the holes of the Hole-Board Apparatus can be baited, so the test can be utilized in spatial learning and memory experiments.

ATALOG		ENCLOSUF	RE	<b>TEST CHAMBER HOLE</b>	
UMBER	WIDTH	LENGTH	HEIGHT	DIAMETER	
2 <b>015</b> DLE TEST, OUSE	40cm	40cm	35cm	3cm	

# **Mouse Behavior Mazes**

# Open Field

The Open Field test is commonly used to assess locomotor activity, exploratory behavior and anxiety in rodents. Open field apparatuses are available with a 40cm square (clear, gray or IR black) or round (clear or gray) enclosure, and gray base plate to maximize contrast, for video tracking.



# Novel Object Recognition Test

The Novel Object Recognition Test is based on the premise that rodents will explore a novel object, more than a familiar one, if the animal is able to remember the familiar one. The flexibility of the Novel Object Recognition Test allows for testing of short- or longterm memory, and can be used to selectively test the effects of an acute drug treatment on a specific stage of memory formation.

CATALOG	E			
NUMBER	WIDTH	DEPTH	HEIGHT	
<b>62017</b> Novel Object Test, Mouse	40cm	40cm	35cm	
<b>62007</b> Novel Object Accessorires Only (see page 129)	Set of 12 (Includes 2 ea. square and round blocks in gray, black and white)			



# **Open Field Maze with Backlighting**

### **NEW!**

# **Open Field Apparatus** with Backlighting

Stoelting's Backlit base is ideal for video tracking using the ANY-maze Software. The three different light levels, Low- 353 Lux, Medium-1156 Lux, and High-2770 Lux allow for better overall tracking of the body with head tracking behavior being greatly enhanced. Back lighting creates a near perfect contrast between the base and the animal.

### Features:

- Perfect for tracking multi-colored animals
- Improves contrast for video tracking
- Three different light levels
- 40cm x 40cm space
- Ideal for Novel Object Recognition testing
- Red light conditions available

### **ANY-maze Driven**

./•]

### **OPEN FIELD APPARATUS WITH BACKLIGHTING**

60112B	Backlit Base Plate, 40cm
60100B	Backlit Open Field, 40cm, Clear
60101B	Backlit Open Field, 40cm, Gray
60102B	Backlit Open Field, 40cm, IR Black
62017B	Backlit Novel Object, 40cm, Clear
64101B	Backlit Conditioned Place Preference, 40cm

### **Test ANY-maze for yourself!** Download the latest version at www.ANY-maze.com, or contact us for a FREE 30-day trial!



*Leading the search* for tomorrow's cures

Upcoming

Backlit **Open Field ideal** for Long-Evans and other **Multi-colored** animals!

ield Backlight, 40cm, Clear

101000 per



included with 62017B

Join us for a 3-day workshop learning surgical stereotaxic techniques with mice at the Jackson Laboratory!

Visit www.jax.org/stereotaxic for workshop schedule and to sign up!

# **Rat Behavior Mazes**

# Open Field

The Open Field Test is commonly used to assess locomotor activity and anxiety-related behaviors in rats. The test apparatus includes a 100cm base plate and a 100cm open field enclosure. Open field enclosures are available in clear, opaque black and IR black (for use with photobeam arrays). Optional Quad divider partitions the Open Field Apparatus into four, 50x50cm enclosures.

, ,
Visit our website
for more Rat
maze options!

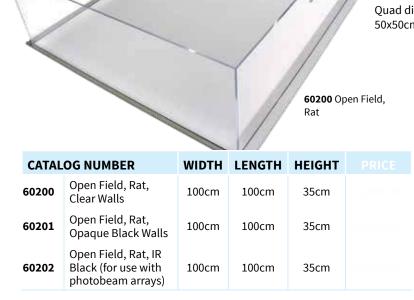
# Novel Object Recognition Test

The Novel Object Recognition Test is based on the premise that rodents will explore a novel object, more than a familiar one, if the animal is able to remember the familiar one. The flexibility of the Novel Object Recognition Test allows for testing of short- or long-term memory, and can be used to selectively test the effects of an acute drug treatment on a specific stage of memory formation. A set of novel object accessories is included (2 each of the square and round blocks in gray, black and white). Optional Quad divider partitions the Open Field Apparatus into four, 50x50cm enclosures.

CATALOG				
NUMBER	WIDTH	LENGTH	HEIGHT	
65200 NOVEL OBJECT TEST, RAT	100cm	100cm	35cm	
62007	Novel Object /			
60210	Quad Divider,			



**65200** Object Recognition Test, Rat



# Rat Behavior Mazes

# Conditioned Place-Preference Apparatus

The Conditioned Place-Preference (CPP) Apparatus is used in a wide variety of behavior paradigms. Most commonly it is used in the assessment of the rewarding property of drugs (or other natural reinforcers) or to identify the neuronal basis of reinforcement expression. Typically, a drug is injected, and the animal is placed in a test chamber with distinctive environmental cues.

Each test apparatus includes a 100cm base plate, two sets of place-preference enclosures used for testing two rats simultaneously, barrier block and context kit for altering the environment of each chamber.

Includes two test enclosures for testing two rats simultaneously! **64200** Conditioned Place-Preference (2 Enclosures)

CATALOG NUMBER	DESCRIPTION	OVERALL WIDTH	LENGTH	TEST CHAMBER DIMENSIONS	
64200	Conditioned Place-Preference Apparatus	100cm	100cm	50 X 100cm	
64200-BB	Acrylic Barrier Block				



The Light/Dark Box is commonly used to assess anxiety-related behaviors. Rodents exhibit an innate preference for dark, enclosed areas over brightly lit, exposed areas. Time spent in the brightly lit open area, and the related exploratory behaviors, are reliable parameters for assessing anxiolytic effects that may be useful in identifying and/or screening of anxiolytic and anxiogenic agents. Each test apparatus includes a 100cm base plate and two sets of light/dark enclosures used for testing two rats, simultaneously.

N1	CATALOG NUMBER	DESCRIPTION	OVERALL WIDTH	LENGTH	TEST CHAMBER DIMENSIONS	
63200 Light/Dark Box, 2 Enclosures	63200	Light/Dark Box	100cm	100cm	50x100cm	

### Check out our full product line at www.StoeltingCo.com

# **Unique Behavior Mazes**



**60185** Sleep Disrupter Water Tank for Mice

# Stoelting Sleep Disruptor Cage

Stoelting has developed a useful tool for the study of sleeping disorders, REM sleep, and neurodegenerative diseases in mice. The Stoelting Sleep Disruptor Cage produces a stressful environment by utilizing a water environment with 12 individual columns that are just above the water (30mm in diameter), just large enough for a mouse to sit on. But when the mouse goes into REM sleep, the mouse falls into the water. This cage can be used with the ANY-maze Behavioral Tracking Software for video recording and manually scoring other types of behavior.

### The following features are available:

- Food hopper and water bottle for studies greater than 24 hours
- Draining valve
- No mechanical parts that can break
- Easy to clean

### SLEEP DISRUPTOR CAGE

60185

Sleep Disrupter Water Tank, Mice

A new maze and animal model for exploring autonomic reflexes.

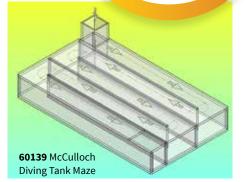
# McCulloch Rat Diving Tank

The McCulloch Diving Tank Maze can be used for measuring autonomic reflexes seen in rats. In response to submersion under water, the reflexly-induced response consists of apnea, bradycardia and an alteration of blood flow that maintains flow to the heart, brain and exercising muscles while limiting flow to viscera and non-exercising muscles.

### MCCULLOCH DIVING TANK MAZE

60139

McCulloch Diving Tank Maze



# ANY-maze Activity Wheel

Our Activity Wheels are great stand-alone tools, but they are far better when paired with ANY-maze. If you are already an ANY-maze user you can use the ANY-maze Activity Wheel with your current software, otherwise you can buy a low cost ANY-maze Activity Wheel license.

### ANY-MAZE ACTIVITY WHEEL

**68251** ANY-maze Activity Wheel, Rat

### **ANY-maze** Driven

In common with any experiment performed in ANY-maze, the system manages your entire experiment and can analyze your data between different groups.

- Available for rat and mouse
- Run up to 48 cages simultaneously
- Connects directly to the computer via USB

Visit StoeltingCo.com for more information!

e	68110	Activity Wheel & Cage, Mouse
Rat 68210	68210	Activity Wheel & Cage, Rat
	68100	Activity Wheel, Mouse with Cage & LCD Counter
e	68200	Activity Wheel, Rat with Cage & LCD Counter
een	68151	ANY-maze Activity Wheel, Mouse
	68251	ANY-maze Activity Wheel, Rat
JSB	68150	ANY-maze Activity Wheel, Mouse with Software
n!	68250	ANY-maze Activity Wheel, Rat with Software

# **Orofacial Pain Assessment Device**

## Orofacial Pain Assessment Device (OPAD) for Rats and Mice

The Stoelting OroFacial Pain Assessment Device (OPAD) provides an automated measurement of orofacial pain assessment in the trigeminal nerve in rats and mice via hot or cold or mechanical stimulation. Using an operant behavior conflict paradigm, rodents voluntarily (cognitivebased) decide between receiving a reward or avoiding an aversive stimulus to the orofacial region.

The OPAD begins to work when the animal touches and presses between dual Peltier-controlled temperature elements or mechanical protrusions to obtain a liquid reward. As the temperature (hot or cold) becomes aversive, the animal can withdraw. As for mechanical assessment, the animal's orofacial region will be forced to touch the protrusions to proceed to the liquid reward. The ANY-maze OroFacial Software will automatically track the number of licks, contact with elements (both the Peltier and mechanical protrusions).

**Features:** 

- Hot or Cold Temperature Control
- Mechanical Stimulation
- Objective Pain Assessment—Easy to use!
- Operant Testing and Measures (not reflexive based)
- High Throughput
- Rackable System
- Up to 16 Cages with a Single Computer
- 4° to 75°C Temperature Range
- Easy to Clean
- Easy USB Connection
- Designed for use with Mice and Rats

### Hardware

The OPAD cage for either mice or rats is seated on a metal base that is easily cleaned. A metal rack for rats and mice are enclosed; easily removed and cleaned between animals. Animals are trained and tested in the cage; the reward bottle is positioned to allow access when simultaneously contacting the thermode or mechanical protrusions with its orofacial region. The water bottle is connected to the data acquisition controller for recording each lick, in addition, contact with the thermode or mechanical protrusions will record each touch and duration. Each cage is easily attached to computer via USB port.

### Software

67500 Orofacial Pain

Assessment Device

(OPAD)

All of this data taken from the hardware will then be displayed and analyzed using the ANYmaze OroFacial Software. The software is used to set-up a protocol and will then display and track in real-time the following events: temperature changes and contacts with A New Tool for Hot, Cold or Mechanical Pain Assessment in Rats and Mice. All in a Single Instrument!

OPAD

the thermode or mechanical device. Following completion of the test, the OroFacial Software will display graphs and statistical analysis of the experiment(s); of course data can be downloaded to other software programs.

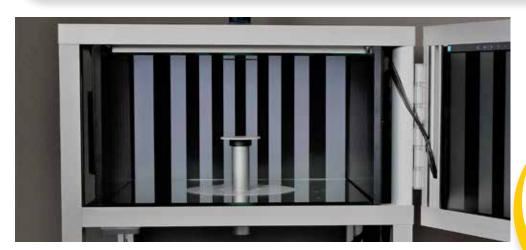
### 🛟 ANY-maze Driven

### **OROFACIAL PAIN ASSESSMENT DEVICE (OPAD)**

67500	OroFacial Pain Assessment Device (OPAD) System, Rat/ Mouse
67501	OroFacial Pain Assessment Device (OPAD) Additional Cage

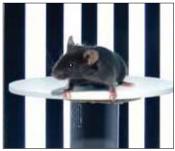
# Vision

### Call or email us to schedule a demonstration!



A new tool for optokinetic testing in rodents.

### **OptoDrum: Automated Measurement** of the Optomotor Reflex



The OptoDrum experience is fully automated. Place a mouse on the platform inside the arena, and the OptoDrum will present slowly rotating stripe patterns to the animal. The animals behavior is

and OptoDrum software determines if the animal follows the stripe pattern with its head movement. The stripe pattern will be adjusted over time until the animal no longer shows the reflex-driven behavior. The OptoDrum is incredibly easy to use, right out of the box.

### Features:

- Automated detection of gaze direction with freely moving animals
- Automated adjustment of stimulus pattern
- Automated behavioral analysis

65300	OptoDrum: Automated Measurement of the Optomotor Reflex, Mouse	
65310	OptoDrum: Automated Measurement of the Optomotor Reflex, Rat	
65350	Dark Adaptation Box	

### Keratometer

Based on the analysis of the reflection of IR LEDs on the corneal surface, the Keratometer automatically and conveniently measures the radius of the corneal curvature in alert small laboratory animals.



### **KERATOMETER**

65315 Keratometer

### **OPTODRUM** monitored by a camera

# Photorefractor

Based on the analysis of retinal reflection of an eccentrically placed IR light field, the Photorefractor automatically and conveniently measures the eye's refractive state in alert small laboratory animals.



### **PHOTOREFRACTOR**

\_\_\_\_\_

65311 Power Refractor Infrared Photorefractor

# ANY-maze Bundles



### ANY-maze Tracking Bundle Options Your complete solution for behavior testing!

ANY-maze is the most versatile, easy-to-use behavior tracking software available. Purchasing a complete ANYmaze package makes it even easier. Purchase an ANY-maze bundle and you'll receive everything you need for your research.

#### ANY-maze Tracking Bundle Includes:

(you supply the computer and maze/apparatus)

- ANY-maze License
- Camera
- Camera Accessories (lens, mount, cables)

#### **ANY-maze Computer and Accessories Bundle**

- Includes: (you supply the maze/apparatus)
- ANY-maze License
- Computer (Desk or Laptop)
- Camera
- Camera Accessories (lens, mount, cables)

#### Maze/Apparatus Bundles include everything you need:

- ANY-maze License 
   Computer (Desk or Laptop)
- Camera Camera Accessories (lens, mount, cables) Stoelting Maze/Apparatus of your choice

RADIAL-A	ARM MAZE BUNDLES	
68006	Radial-Arm Maze ANY-maze Bundle, 8-arm, Mouse, Desktop Computer	
68006L	Radial-Arm Maze ANY-maze Bundle, 8-arm, Mouse, Laptop Computer	
68007	Radial-Arm Maze ANY-maze Bundle, 8-arm, Rat, Desktop Computer	
68007L	Radial-Arm Maze ANY-maze Bundle, 8-arm, Rat, Laptop Computer	

### FORCED-SWIM BUNDLES

68019	Porsolt Forced-Swim Test ANY- maze Bundle, Desktop Computer
68019L	Porsolt Forced-Swim Test ANY- maze Bundle, Laptop Computer

### SOCIABILITY BUNDLES

68020	Sociability ANY-maze Bundle Package, Desktop Computer	
68020L	Sociability ANY-maze Bundle Package, Laptop Computer	



# ANY-maze Bundles

ZERO-MAZE BUNDLES		
68016	Zero-Maze ANY-maze Bundle, Mouse, Desktop Computer	
68016L	Zero-Maze ANY-maze Bundle, Mouse, Laptop Computer	
68017	Zero-Maze ANY-maze Bundle, Rat, Desktop Computer	
68017L	Zero-Maze ANY-maze Bundle, Rat, Laptop Computer	

#### **T-MAZE BUNDLES**

68012	T-Maze ANY-maze Bundle, Mouse, Desktop Computer	
68012L	T-Maze ANY-maze Bundle, Mouse, Laptop Computer	
68013	T-Maze ANY-maze Bundle, Rat, Desktop Computer	
68013L	T-Maze ANY-maze Bundle, Rat, Laptop Computer	

#### **Y-MAZE BUNDLES**

68014	Y-Maze ANY-maze Bundle, Mouse, Desktop Computer	
68014L	Y-Maze ANY-maze Bundle, Mouse, Laptop Computer	
68015	Y-Maze ANY-maze Bundle, Rat, Desktop Computer	
68015L	Y-Maze ANY-maze Bundle, Rat, Laptop Computer	

#### **ELEVATED PLUS-MAZE BUNDLES**

68004	Elevated Plus-Maze ANY-maze Bundle, Mouse, Desktop Computer
68004L	Elevated Plus-Maze ANY-maze Bundle, Mouse, Laptop Computer
68005	Elevated Plus-Maze ANY-maze Bundle, Rat, Desktop Computer
68005L	Elevated Plus-Maze ANY-maze Bundle, Rat, Laptop Computer

#### WATER MAZE BUNDLES Water Maze ANY-maze Bundle, 68001 Mouse, Desktop Computer Water Maze ANY-maze Bundle, 68001L Mouse, Laptop Computer Water Maze ANY-maze Bundle, 68002 Mouse/Rat, Desktop Computer Water Maze ANY-maze Bundle, 68002L Mouse/Rat, Laptop Computer Water Maze ANY-maze Bundle, 68003 Rat, Desktop Computer Water Maze ANY-maze Bundle, 68003L Rat, Laptop Computer

#### BARNES MAZE BUNDLES

68010	Barnes Maze ANY-maze Bundle, Mouse, Desktop Computer	
68010L	Barnes Maze ANY-maze Bundle, Mouse, Laptop Computer	
68011	Barnes Maze ANY-maze Bundle, Rat, Desktop Computer	
68011L	Barnes Maze ANY-maze Bundle, Rat, Laptop Computer	

#### **TAIL-SUSPENSION BUNDLES**

68018	Tail-Suspension ANY-maze Bundle, Desktop Computer
68018L	Tail-Suspension ANY-maze Bundle, Laptop Computer

See pages 120-130 for full maze descriptions and dimensions.

# Ugo Basile Behavior Mazes

Ugo Basile Products



# Stoelting is the **Exclusive** North American **Distributor of Ugo Basile** products!

### What's in this section

Active Avoidance
Agora Maze
Combination Hot/Cold Plate Analgesia Instrument 138
Electroconvulsive Device
Electronic von Frey <sup>™</sup>
Fear Conditioning System
Forced Swim Test
Grip Strength Meter
Hot/Cold Plate Analgesia Instrument
Incapacitance Tester, Rat and Mouse
Learned Helplessness
Lesion-Making Device
Multi-Maze System146
Operon
Passive Avoidance
Paw Pressure Analgesia Instrument
Plantar™ Analgesia Instrument
Plethysmometer
Pre-Pulse Inhibitor
Pressure Application Measurement (PAM)142
Rota-Rod
Tail-Flick Analgesia Instrument    143
Thermal Gradient Ring
Thermal Plantar Analgesia Instrument
Treadmill for Mice and Rats145
Von Frey™ Plantar Aesthesiometer141
Waterwheel Forced Swim Test

# **Thermal Gradient Ring**

# Ugo Basile Thermal Gradient Ring

Introducing the Ugo Basile Thermal Gradient Ring (TGR) for mice, a novel device for the analysis of comprehensive thermal preference phenotyping. The TGR consists of a circular track that creates a temperature gradient between two set temperature extremes. The mouse is able to freely move across each zone while ANY-maze records and analyzes the preference behavior.

### **Main Features**

- Thermal Insulated Aluminum Ring (runway ID 45cm, OD 57cm)
- Two heating devices to establish symmetric gradient
- Circular design guarantees bias-free, reproducible data no spatial cues or border effects
- Creates 12 zones per side ( $\Delta \approx 2.3$  °C between each zone)
- Includes USB camera and set of 4 dual (visible/I.R.) lights
- Thermal Gradient Ring Mode in ANY-maze for easy protocol set up

Video recording and analysis is performed through ANY-maze Video Tracking Software. The TGR simply connects to your computer via USB. The temperature of all 12 zones is monitored in real time through ANY-maze by the 4 thermocouples embedded in the TGR. Data output includes: preference temperature, time spent in each zone, and percent of time spent above the given temperature and so much more!

### ANY-maze Driven

#### THERMAL GRADIENT RING SYSTEM

65400	Thermal Gradient Ring System + ANY-maze Bundle
65400-TG	Thermal Gradient Ring System + TG Software
65401	Thermal Gradient Ring System, without Software



Thermal Gradient Ring tracking software



Thermal Gradient Ring tracking software in ANY-maze







55075 Combination

D HOT COLD PLATE

Hot/Cold Plate

Analgesia Instrument

Hot/Cold Plate screen controller. **Features:** Silent operation

E

# ugo basile TRANSFORMING IDEAS INTO INSTRUMENTS

**NEW FEATURES!** 

# **Ugo Basile Combination** Analgesia Instrument

The Ugo Basile Hot/Cold Plate is used to test thermal pain response in mice and rats. Two working modes allow for testing at a fixed or increasing/decreasing temperature (RAMP). All settings programmed with the easy to use touch

OPERATING TEMPERATURE: -5.0°C to 65.0°C

- OPERATING MODES: fixed or ramping temperature
- NEW Software on the touch screen unit
- DATA PORTABILITY: via the USB Memory-key (included)
- A NEW keyboard to score endpoints or behavior

#### **COMBINATION HOT/COLD PLATE ANALGESIA INSTRUMENT**

55075	Combination Hot/Cold Plate Analgesia Instrument
55076	Optional Hot Plate only
55200	Ugo Basile Thermal Preference

### Can be used as hot plate or cold plate



Reduces operator bias, optimizes repeatability, and saves time



# The Ugo Basile Incapacitance Tester is here!

Measures the weight distribution difference between an injured and unaffected hind paw of a mouse or rat. For the assessment of spontaneous pain in osteoarthritis, bone cancer, nerve injury and post-operative pain studies. Automatic operation reduces operator bias, optimizes repeatability, and saves time. Easy to set up. Data visualization to monitor trends. Fast and easy cleaning procedures.

### Features:

b

Automation of the measurement process using AutoStart, a unique feature that identifies immobility windows to optimize test repeatability and save operator time
Option to switch to manual mode with the included

- foot pedal for hands free operation.
  - Quick calibration of high quality, precision force sensors (0.1g resolution) using the reference weight supplied.
    - Quick, seamless management of settings and data using large, bright, color touch screen.

 Recorded parameters include average paw weight, Standard Deviation, and more.
 Easy transfer of data

using supplied USB key.



- No screws or protruding parts that can cause interference with the rodents and possibly compromise experiment results.
- Fast cleaning of foot pads (within seconds) because they are conveniently attached magnetically for easy removal.

### **UGO BASILE INCAPACITENCE TESTER**

54785	Ugo Basile Incapacitance Tester, Rat and Mouse
54783	Ugo Basile Incapacitance Tester, Mouse



Plantar Analgesia Instrument



# Ugo Basile Thermal Plantar (Hargreaves) Apparatus

# Measures paw sensitivity to heat stimulation

In the late '80s Dr. Hargreaves invented a method to assess thermal pain sensation in unrestrained rodents by stimulating the single hind paw and thus allowing for unilateral/contralateral experiments. Ugo Basile made a science-grade instrument to perform this stimulation and automatically measure response, it became a goldstandard with more than 2,000 publications.

### Features:

The Ugo Basile is the only available system which detects paw withdrawal latency automatically (or optionally manually), thanks to a light detector embedded in the control unit. It comes complete with:

- Emitter/Detector unit with strong and focused infra-red light source invisible to the animal
- Cross line engraved on the top of the emitter to ease the paw targeting
- Touch-screen electronic unit to set all parameters (light intensity, thresholds, etc.)
- Data export of the USB stick data into .CSV file for easy analysis in Excel
- Platform with semi-transparent glass panel
- Animal enclosures for up to 12 mice and 6 rats, fully modular included
- PC software included for data transfer

Use Durham Animal Restrainers for orofacial stimulation.

> **57102** Durham Animal Restrainer

#### UGO BASILE THERMAL PLANTAR HARGREAVES APPARATUS

55370	Ugo Basile Thermal Plantar, Rats & Mice
57390	Ugo Basile Radiometer for Calibration * See page 143
57102	Durham Animal Restrainers, Set of 2



# Ugo Basile von Frey™ Plantar Aesthesiometer

For assessment of animal sensitivity to mechanical touch on the paw

• Computer compatibility—direct connection to a PC

• Readout multifunction graphic display

• Memory stick included for data reporting and portability

The Ugo Basile Dynamic Aesthesiometer is

a microprocessor-controlled unit. The experimental data, stored in its internal memory, can be directly exported to the PC via a USB or serial port. The 57820 is provided with a USB memory key, and dedicated software to record all the experimental data of one or more sessions, and to program the experiment layouts from a remote PC.

#### UGO BASILE DYNAMIC PLANTAR AESTHESIOMETER

57820

Ugo Basile Dynamic Plantar Aesthesiometer, for Rats and Mice

# Ugo Basile Electronic von Frey™

The Ugo Basile Electronic von Frey Instrument is provides automated assessment of threshold to mechanical stimuli in mice and rats. Mechanical allodynia and hypersensitivity is assessed by stimulating the plantar surface of the animal's hindpaw and latency to paw withdrawal is recorded automatically.

Instrument includes an electronic unit, touch stimulator and software used to compare applied force with desired target force. Optional base assembly includes perforated metal base, with stand, and multi-configuration animal enclosures.

### UGO BASILE ELECTRONIC VON FREY™

**57814** Ugo Basile Electronic von Frey<sup>™</sup>

57816 Base Assembly for Plantar Stimulation



Q

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**57820** Ugo Dynamic Plantar Aesthesiometer

7.00

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ugo basile TRANSFORMING IDEAS TRANSFORMING IDEAS





**58500** Ugo Basile PAM Meter, Mouse and Rat



### Pressure Application Measurement (PAM)

The Pressure Application Measurement (PAM) device is a novel, easy-to-use tool for measuring mechanical pain threshold in experimental joint hypersensitivity models in rodents. The PAM device has been designed and validated specifically for the mechanical stimulation and assessment of joint pain, ideal for detecting arthritis in rats and mice.

### UGO BASILE PRESSURE APPLICATION MEASUREMENT

58500 Ugo Basile PAM Meter, Mouse and Rat





# Ugo Basile Plethysmometer

The Ugo Basile<sup>™</sup> Plethysmometer is a microprocessorcontrolled volume meter that has long been the standard instrument for measurement of inflammatory edema in the rat and mouse paw.

### **UGO BASILE PRESSURE PLETHYSMOMETER**

57140 Ugo Basile Plethysmometer, Mice and Rats

If your main power supply is 220V, add a "V" to the product number.



### Ugo Basile Paw Pressure Analgesia Instrument

The Paw Pressure Analgesia Instrument is for the Randall-Selitto Test, which requires the application of increasing pressure on the paw between a flat surface and a blunt pointer. It is usually used with animals with one paw inflamed, and one untreated paw, to evaluate drugs for analgesic action.

### UGO BASILE PAW PRESSURE ANALGESIA INSTRUMENT

57215	Ugo Basile Paw Pressure Analgesia Instrument
57222	Ugo Basile Paw Pressure Analgesia Instrument, Recording
57206	Ugo Basile Extra Disc Weight

142 Stoelting Co. Web: www.StoeltingCo.com / Email: Neuro@StoeltingCo.com / Toll Free: 1-800-860-9775 / Phone: 1-630-860-9700

# Grip Strength, Pain & Inflamation



## Ugo Basile Tail-Flick Analgesia Instrument

The Ugo Basile Tail Flick Instrument is used to automatically assess thermal nociceptive threshold in mice and rats. An infrared heat stimulus is focused on the animal tail and reaction time (time to flick) is automatically recorded. An optional Tilted Mouse Restrainer (57369) is necessary to keep the mouse tail on the emitter until stimulated.

### UGO BASILE TAIL FLICK ANALGESIA INSTRUMENT

57360	Ugo Basile Analgesia Instrument, Tail Flick
57369	Tilted Mouse Restrainer
57390	Ugo Basile Radiometer for Calibration

For **precise calibration** of infrared analgesia meters. To calibrate the I.R. emission of Tail-Flick and Ugo Basile Plantar Test, see page 140.



**57360** Ugo Basile Tail-Flick Analgesia Instrument



57390 Ugo Basile Radiometer for Calibration



ugo basile TRANSFORMING IDEAS INTO INSTRUMENTS

### Ugo Basile Grip Strength Meter

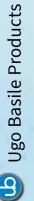
The Ugo Basile Grip Strength Meter automatically measures fore- and hindlimb grip strength in mice and rats. Peak pull force achieved by the limb is automatically measured and displayed. Each instrument includes control unit, base plate with grasping bar, and software used for comparing pulling force with desired target force rate.

### **UGO BASILE GRIP STRENGTH METER**

57107

Ugo Basile Grip Strength Meter For Mice and Rats

# Ugo Basile Rota-Rod



ugo basile TRANSFORMING IDEAS

# Ugo Basile Rota-Rod

Ugo Basile designed the first Rota Rod in the 1960s and with thousands of scientific references, is considered the industry leader in Rota Rod technology. The next generation Rota Rod from Ugo Basile combines the same functionality of the original Rota-Rod with additional new features:

- Silent Operation
- Stainless Steel Trip Plate for Easy Cleaning
- Touch Screen Display for Programming **Experimental Parameters and Data Collection**

Mouse Rota Rod consists of five rotating cylinders and allows for testing five mice, simultaneously. Height to fall is 16cm. Rat Rota Rod consists of four rotating cylinders and allows for testing four rats, simultaneously. Height to fall is 30cm.

### Settings

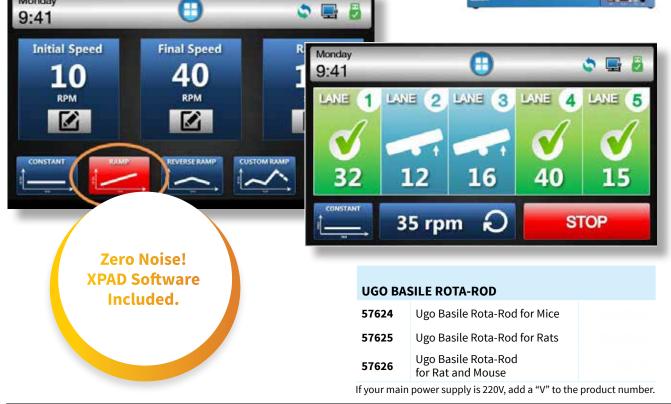
Monday

- Speed: 5-80 RPM, in steps of 1RPM
- Mode: Constant speed, ramp (accelerating) and multi-step ramp
- Rotation: Forward, reverse and rocking



**For another** method, see page 123 for **Stoelting's** Parallel Rod!





144 Stoelting Co. Web: www.StoeltingCo.com / Email: Neuro@StoeltingCo.com / Toll Free: 1-800-860-9775 / Phone: 1-630-860-9700

### Motor Activity & Rotational Behavior

## Ugo Basile Treadmill for Mice and Rats

Introducing Ugo Basile's Next Generation of Rodent Treadmills. Compact and user-friendly, the NEW Ugo Basile Treadmill can be used for both rats and mice. Experimental parameters are programmed into easy-to-use touch screen display. Endurance, distance (absolute and relative) and speed are automatically measured and recorded.

#### Features:

- Speed: from 3 to 100m/min, in steps of 1m/min amps
- Slope: positive (uphill) or negative (downhill), from -25 to + 25°, in 5° steps
- Shock: from 0-2mA (in 0.1mA steps), included
- Modes: constant, accelerating, custom ramps

#### **UGO BASILE TREADMIL FOR MICE AND RATS**

Same device to test both Mice and Rats. XPAD Software Included!

SETUP

USB STORAGE

57630	Ugo Basile Treadmil for Mice and Rats
57631	Ugo Basile Treadmil, Mouse
57632	Ugo Basile Treadmil, Rat
57630-AP	Ugo Basile Treadmil with Air-Puff Option, Rat/Mouse
57631-AP	Ugo Basile Treadmil with Air-Puff Option, Mouse
57632-AP	Ugo Basile Treadmil with Air-Puff Option. Rat

Monday, 20 Ju 9:41

EXPERIMENT

RESULTS

**Treadmil** with Included Rat Lanes

#### Air-Puff Motivation Option Available

<image>

**Stoelting Europe** Web: www.StoeltingCo.com / Email: Info@StoeltingEurope.com / Phone: +353 1 524 2200 **145** 

### Ugo Basile Multi-Maze System



ANY-maze Driven



ugo basile® TRANSFORMING IDEAS INTO INSTRUMENTS

### Ugo Basile Multi-Maze System

The Ugo Basile Multi-Maze for Mice is a modular system providing complete automation of spatial memory experiments including: Y-maze, T-maze and 8-arm Radial Arm Maze.

#### Use the Ugo Basile Multi-Maze to:

- Assess spatial memory
- Test basic working memory
- Discriminate working from reference memory
- Evaluate impairments in the working memory

Proprietary sliding doors retract into the maze floor smoothly and silently without disrupting the animal during testing. This sliding mechanism combined with the non-reflective, high contrast maze material provides optimal results with ANYmaze Video Tracking Software (sold separately as Product Number 60000, see page 108).

#### **MULTI-MAZE SYSTEM**

67503	Ugo Basile 3-arm Standard Multi-Maze (Y-maze), Mouse					
67504	Ugo Basile 3-arm Multi- Maze with Automated Start Compartment (Y- and T-mazes), Mouse					
67505	Ugo Basile 8-arm Multi-Maze (Radial Arm and Y-mazes), Mouse					





67506	Ugo Basile 3-arm Standard Multi-Maze (Y-maze), Rat	
67507	Ugo Basile 3-arm Multi- Maze with Automated Start Compartment (Y- and T-mazes), Rat	
67508	Ugo Basile 8-arm Multi-Maze (Radial Arm and Y-mazes), Rat	

### Ugo Basile Agora Maze/Forced Swim Test



60441 Ugo Basile Agora Maze

### Ugo Basile Waterwheel Forced Swim Test

Ugo Basile's Waterwheel Forced Swim Test is an automated alternative to the Porsolt Forced Swim Test. The Waterwheel Forced Swim Test consists of a water tank with a water wheel positioned across the center. Animals placed in the tank will attempt to escape by climbing on to the wheel, causing it to turn. The number of turns of the wheel provide an objective measure of escape behavior, eliminating the subjectivity of immobility measurements. Rotation encoder and temperature sensor included.

#### (C) ANY-maze Driven

Use with ANY-maze to automatically score number of rotations and perform statistical analysis.

#### **Main Features:**

- Compact and user friendly
- Automate up to 40 tests, simultaneously
- Eliminates subjectivity of immobility measurement
- Connects to ANY-maze for automated scoring and completed data analysis
- Continuous water temperature feedback

#### WATERWHEEL FORCED SWIM TEST

60165	Forced Swim Test with Water Wheel, w/o Software
60165S	Forced Swim Test with Water Wheel, Software

### Ugo Basile Agora Maze

The Ugo Basile Agora Maze is a new social interaction cage, designed after the SocioBox Method. The main principle is based on free choice by a subject mouse to spend time in any part of an open circular arena attached to 5 cubicles. Ideal for videotracking with ANY-maze!

The apparatus comes complete with central arena and 5 cubicles with blank walls. Detachable clear sliders divide each cubicle, and holes in the clear panels permit the exchange of odors.

#### **UGO BASILE AGORA MAZE**

60440	Agora maze, sociability apparatus for mice + ANY- maze Software
60441	Agora maze, sociability apparatus for mice, NO Software

uqo basile

Connect up to 40 units on the same PC for high-throughput screening of antidepressants.

**Stoelting Europe** Web: www.StoeltingCo.com / Email: Info@StoeltingEurope.com / Phone: +353 1 524 2200 **147** 

### Intra/Extra-Dimensional (ID-ED) Attentional Set-Shift

#### NEW!

### Ugo Basile Operon Attentional Set-Shifting Task

The Ugo Basile Operon is the ultimate intra/extra-dimensional (ID-ED) attentional set-shifting task for mice. This novel ID/ED Operon task is an effective preclinical tool for studying the executive dysfunctions and cognitive symptoms of psychiatric disorders. A dedicated version of ANY-maze software automatically manages all the Operon tools following a precompiled protocol and collects the data.

#### Features:

- Automated tridimensional stimulation (visual, odor, and texture)
- Two compartments each with an operant wall with lights, odor delivery, and revolving door
- Odor delivery system includes 2 channels and 10 independent flow meters
- Left and right nose pokes and pellet dispenser in each compartment
- Fully automated system through ANY-maze Video Tracking Software—includes precompiled protocol!

#### **UGO BASILE OPERON**

66500	Ugo Basile OPERON
66510	Ugo Basile IO factory System for OPERON
66505	Ugo Basile Air Control System for OPERON



#### Already an ANY-maze user? Contact us for special pricing!





### ANY-maze/Ugo Basile Fear Conditioning System



### ANY-maze/Ugo Basile Fear Conditioning System

The ANY-maze/Ugo Basile Fear Conditioning System is a stateof-the-art system for accurately detecting immobility, a behavior commonly associated with fear. The new design utilizes an on-board controller, allowing full atomization of all variables (sound, shock, and light) through ANY-maze.

#### The system employs ANY-maze Fear Conditioning Software to conduct contextual and auditory-cued fear conditioning paradigms and automate analysis of:

- Total freezing time
- Number of freezing episodes
- Duration of freezing episodes
- Latency between stimuli and freezing event

#### The system includes the following:

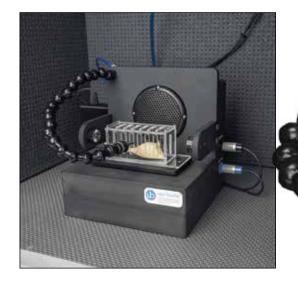
- ANY-maze Fear Conditioning Software
- New, on-board controller
- Shock-100Hz-40KHz; 1-150dB or white noise

- Sound-Constant Current 0.1-2.9mA in 0.1mA steps
- Dual visibile/I.R. light
- Camera and Camera Lens
- Animal Enclosure with Electrified-Grid Floor
- Sound-Attenuating Chamber
- Context Kit to Alter Enclosure Environment

#### **UGO BASILE FEAR CONDITIONING SYSTEMS**

60461S	Fear Conditioning System, 1 Mouse
60462S	Fear Conditioning System, 2 Mice
60463S	Fear Conditioning System, 4 Mice
60464S	Fear Conditioning System, 1 Rat
60465S	Fear Conditioning System, 2 Rats
60466S	Fear Conditioning System, 4 Rats

### Ugo Basile Startle Reflex (PPI)





### Ugo Basile Pre-Pulse Inhibition of Startle Reflex (PPI)

The Ugo Basile Pre-pulse inhibition of the Startle reflex (PPI)system can work with pre-pulses and pulse stimuli of several kinds (white noise, frequency noise, light, air puff). The PPI software allows for flexible programming of any kind of procedure with randomizations and seamless data capture.

#### Main features include:

- Automatic detection of Startle Reflex in mice
- Multiple Animal Boxes to match animal dimension
- Flexible testing, easy to set up. Simply define trial number, sound and light stimulus and timing of experimental sequences (all fully randomizable):
- Pulse
- Pre-pulse
- Inter-Pulse Interval
- Inter-Stimulus Interval



### UGO BASILE PRE-PULSE INHIBITION OF STARTLE REFLEX (PPI)

58000	Ugo Basile PPI/Startle Reflex System, 1 Cage
58001	Ugo Basile PPI/Startle Reflex System, 2 Cages
58002	Ugo Basile PPI/Startle Reflex System, 4 Cages
58003	Additional Mouse Unit for Startle/PPI

### Ugo Basile Passive Avoidance–Step through



### Ugo Basile Passive Avoidance–Step through

The Ugo Basile Passive Avoidance is used to assess memory function based on the association formed between a specific environmental context, which the animal learns to avoid and an aversive stimulus – represented by a mild foot shock.

#### Efficient and reliable.

Silent, automated sliding door divides the dark and light compartments. Systems for mice or rats. Manage up to 4 cages with one controller.

- The tilting floor ensures a simple and reliable detection mechanism to score the animal's movement across the two compartments.
- Easy, convenient testing using the
- 12-inch touch screen Controller:
- Set up and manage both Passive and Active Avoidance Tests including the 8-pole shocker.
- Connect up to 4 cages to the same Controller (using Expansion Box for each additional cage).
- Data is recorded, displayed and stored in the control unit. Transfer test data to your PC using the USB key (supplied) for further processing using Excel, Access, etc.
- Set ups available for mice and rats.



#### **UGO BASILE PASSIVE AVOIDANCE-STEP THROUGH**

57550	Ugo Basile Passive Avoidance (step-through), Rat	
57553	Ugo Basile Passive Avoidance (step-through), Mouse	
57562	Extra Rat Cage for 57550	
57563	Extra Mouse Cage for 57553	

### Ugo Basile Active Avoidance (Shuttle-Box)



### Ugo Basile Active Avoidance (Shuttle-Box)

A set up for testing active avoidance (also called automatic reflex conditioner or shuttle box), i.e. learning to predict the occurrence of an aversive event, based on the presentation of a specific stimulus. Enables performance of a wide range of avoidance experiments using a flexible schedule. Precise detection of avoiding aversive event. Manage up to 4 cages with one controller. The Ugo Basile Active Avoidance (Shuttle-Box) enables the researcher to perform a wide range of avoidance experiments, each according to a flexible schedule (using Timeline feature).

Precise detection of animal crossing (moving to a different compartment). A tilting floor provides a simple, reliable detection mechanism for scoring animal movement across the two compartments. A partition with an intercommunicating opening at floor level divides the cage.

### 

#### Measures recorded include:

- Number of avoidances (the mouse crossing to the other compartment during the warning signal)
- Number of non-responses (the mouse failing to cross to the other compartment during the trial)
- Response latency (latency to avoid or escape)
- Number of intertrial responses (i.e. crossing the barrier within the intertrial interval)

#### **UGO BASILE ACTIVE AVOIDANCE (SHUTTLE-BOX)**

55532	Ugo Basile Active Avoidance, Rat
55533	Ugo Basile Active Avoidance, Mouse

### **Ugo Basile Learned Helplessness**

GENERAL SETUP PROTOCOL

START/STOP

REPORT

Random Para

START

TEST

GENERAL SETUP PROTOCOL

Fixed Parameters

delay

TEST

TART

START

AME TRIAL

0:01:14.2

0:01:14.2s

STARI

- 60.1 s

1018

0 ← 0.5 m 0 ← 10.1 s 0 ← 10.1 s 10 s 1 ← 10.1 s

HELP

REPORT HELP

0:01:14.2

0:01:14.2



ugo basile® TRANSFORMING IDEAS INTO INSTRUMENTS

### Ugo Basile Learned Helplessness

The Ugo Basile Set-Up for Learned Helplessness is based on a sophisticated generator of unpredictable random shocks delivered to the grid floor of a rodent box where no escape is possible. Electric shocks can be randomized in terms of shock length, interval and complex trains can be programmed.

- A sophisticated generator of unpredictable random shocks delivered to the grid floor of a rodent box (dark isolation cube) rat and mouse models.
- Easy set up using a 12-inch touch screen controller. Randomize shocks based on time duration as well as intervals between shock events. Schedule a complex train of shock events.
- Up to 4 animals can be controlled simultaneously in 4 independent boxes using one touch screen controller.
- Easy data collection. Includes user-friendly reporting software to collect, visualize and export data into spreadsheets such as Excel.
- Optional expansion box available for multiple cages.

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#### **UGO BASILE LEARNED HELPLESSNESS**

57500	Ugo Basile Learned Helplessness for Rat
57501	Ugo Basile Learned Helplessness for Mouse
57500A	Extra Rat Cage for Learned Helplessness
57501A	Extra Mouse Cage for Learned Helplessness

### Electrophysiology

57800 Basile Electroconvulsive Device

> Designed for inducing convulsions.



### Ugo Basile Electroconvulsive Device

The Basile Electroconvulsive Device is designed for inducing convulsions in research animals. Consistent, reproducible current levels are produced by feedback circuitry that adjust for variance in impedance of the contact from animal to animal.

The impedance to the animal can be pre-measured and displayed, and a warning signal flashes if the impedance is too great to deliver the desired current level. The Electroconvulsive Device is supplied with auricular (ear lobe) electrodes.

UGO BASILE ELECTROCONVULSIVE DEVICE		
57800	Basile Electroconvulsive Device	
57802	Auricular Electrodes (included)	
57803	Corneal Electrodes, optional	
57805	Foot Pedal, optional	
57808	Biphasic Unit, optional	

If your main power supply is 220V, add a "V" to the product number.



### Ugo Basile Lesion-Making Device

This compact, solid state direct current (DC) Lesion Maker has been designed for the production of localized lesions in small animals. The current generator is protected against short circuit, which prevents the electronics from getting damaged when the electrodes accidentally come into contact with each other.

The Basile Lesion Making Device provides constant DC current in mA from 10 to 99.99 mA. The pulse duration may be timed by the instrument between 1 and 99 seconds, or manually controlled.

A yellow LED warns when the impedance is too high for the preset current. The current generator is protected against accidental short circuit of the output. Maximum electrode resistance is 20 M $\Omega$  (10 $\mu$ A) down to 2 K $\Omega$  (100mA) and Compliance Voltage is from 1-99V.



### **Operant Conditioning**

### Startle-Response Laboratory (SR-LAB<sup>™</sup>) System

The Startle-Response Laboratory (SR-LAB) System is the world's most widely-used startle-reflex behavioral research system, and the most successful for measuring Startle Habituation, Pre-Pulse Inhibition (PPI) and Fear Potentiated Startle (FPS).

Execute any–and all–startle-reflex testing paradigms using the SR-LAB Software and specialized additional kits.

#### The SR-LAB basic system includes:

- Test cabinet made of composite ABS plastic
- Animal enclosure in choice of standard sizes
- Power supply
- Input and Output cables
- Animal enclosure base
- Software and User Manual
- Software utilities for data analysis

### Please specify Animal Enclosure upon ordering:

- Small Animal Enclosure-10-25g
- Small/Medium Animal Enclosure-25-50g
- Medium Animal Enclosure-50-150g
- Large Animal Enclosure–150-450g
- X-Large Animal Enclosure-450-800g

The world's most widely used startle-response system!

> **59800** SR-LAB System

SR LAB

#### STARTLE-RESPONSE LABORATORY SYSTEMS

59800	SR-LAB System
59802	SR-LAB System, Additional Unit
59817	SR-LAB Software, FDA PART 11 COMPLIANCE

### Gemini Active and Passive Avoidance System

The GEMINI Active and Passive Avoidance System was designed specifically to test active and passive avoidance in rats and mice. Available in two configurations, shock or shock and air puff, GEMINI's unique design allows you to run up to 8 independently-operated stations directly from your laptop! The GEMINI animal shocker scrambles the shock across the grid floor, preventing the animal from determining a pattern, leading to more accurate responses.

#### **GEMINI ACTIVE AND PASSIVE AVOIDANCE SYSTEM**

57875	Gemini Avoidance System, Shock, Mouse and Rat	
57880	Gemini Avoidance System, Shock and Air Puff, Mouse and Rat	
57875M	Gemini Avoidance System, Shock, Mouse only	
57880M	Gemini Avoidance System, Shock and Air Puff, Mouse only	



#### **Stoelting Europe** Web: www.StoeltingCo.com / Email: Info@StoeltingEurope.com / Phone: +353 1 524 2200 **155**

### Grip Strength, Pain & Inflamation

### Touch Test™ Sensory Evaluator

The Semmes-Weinstein von Frey Aesthesiometer is used for clinical and preclinical assessment and diagnosis of hyper- or hypoesthesia.

#### The Touch Test Sensory Evaluator Kit features:

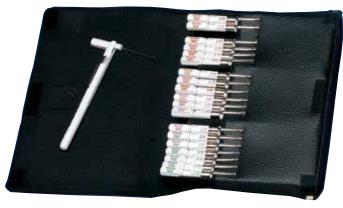
- Set of 20 Nylon Monofilaments
- Force Range 0.008-300g
- Retractable Mechanism to Protect Filament

The Semmes-Weinstein monofilaments provide an approximate logarithmic scale of actual force and a linear scale of perceived intensity. Rodents exhibit a paw withdrawal reflex when the paw is unexpectedly touched. The Touch Test Sensory Evaluator can be used on plantar surfaces of the mouse or rat paw. The animal indicates sensation by pulling back its paw. Kit includes set of 20 retractable monofilaments and protective case. Optional base assembly includes perforated metal base with stand and multi-configuration animal enclosures. Individual filaments also available for purchase.

**JVP Domes** 

The JVP Domes are the most sensitive method of measuring human tactile spatial resolution.

The set includes 8 acrylic probes with bar/groove widths measuring 0.35. 0.5, 0.75, 1.0, 1.25, 1.5, 2.0 and 3.0mm. Each probe has a columnar handle and a dome shaped head. The head has an alternating ridge/slot pattern of different width for each probe. The ridged head is pressed against the skin, and the patient/subject must report the alignment of the ridges, longitudinal or transverse. An extensive bibliography is available, including normative data on various body surfaces. Set comes with an illustrated manual with several citations.



58011 TouchTest<sup>™</sup> Sensory Evaluation Kit

TOUCH 1	EST™ SENSORY EVALUAT	OR

58011	Touch Test <sup>™</sup> Sensory Evaluator Kit
57816	Base Assembly for Plantar Stimulation



18020 JVP Domes Complete Set

JVP DOMES		JVP DOMES		
18020	Complete Set	18026	5.0mm	
18021	Blank Dome	18027	6.0mm	
18022	2.5mm	18028	8.0mm	
18023	3.5mm	18029	10.0mm	
18024	4.0mm	18030	12.0mm	
18025	4.5mm			

### **Behavior Scratch Counting Test**

### Automated Scratch Counting for Mice

#### The real-time, long-term, quick, and accurate quantification of scratching behavior in mice Scratching behavior is a critical biomarker for many laboratories,

Scratching behavior is a critical biomarker for many laboratories, and important for drug development. Quantification of scratching behavior manually is subjective. The novel Automated Scratch Counting Instrument for Mice calculates frame-to-frame differences by capturing the animals' behavior with image processing software.

The high-speed camera contains an image-processing system enabling real-time quantification of scratching behavior of mice. Records and analyzes scratching behavior continuously for up to 24 hours.

The recording platform has a built-in infrared light panel. Records scratching behavior, in a natural state, using the invisible nearinfrared light. This system allows evaluating of scratching behavior not only in regular light but also in the darkness.

#### SCRATCH COUNTING FOR LABORATORY ANIMAL-REAL TIME

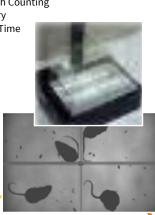
55600

Automated Scratch Counting, Mice

#### **Output Data:**

- Number of scratching behaviors
- Duration of scratching behavior
- Graphical representation of scratching behavior
- Test up to 4 mice at one time





Call or email us to schedule a demonstration!

### nano tag™

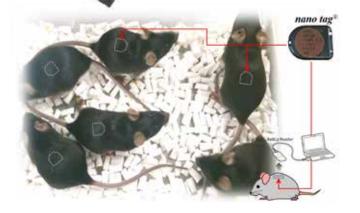
Continuously record activity and temperature for up to 60 days with nano tag<sup>™</sup>. Smaller than the size of a dime, nano tag is an implantable single-use recording device for mice. The nano tag<sup>™</sup>'s internal three-axis accelerometer and temperature sensor automatically collects and stores activity and temperature data. Data from animals housed in the same cage can be collected simultaneously!

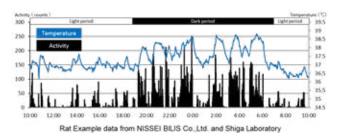
#### Features:

- Three Recording Modes: Loop, Memory and Timer
- Small and Lightweight
- Record from Multiple Animals Simultaneously

#### NANO TAG™

56745	nano tag™ for Mice and Rats (5/pk)	
56745S	nano tag <sup>™</sup> Viewer Software	





### **Animal Identification**

### Laboratory Animal Ear Tags

- Ear tags are numbered from 1-100 (available up to 999)
- Available in 5 colors
- (1.Red 2.Green 3.Blue 4. Light Blue 5.Black)
- Once applied, they cannot be easily removed
- Laser-etched number provides durability
- Custom numbering available (contact for details)
- Easy-to-read
- Corrosion resistant



Small Animal Ear Tags are specially suited for use with small lab and research animals (mice, rats and other rodents). The lightweight easy-to-read tags allow for trouble-free identification.

Ear Tag Applicator (sold separately) is required for application. Please specify number sequence when ordering.

**56791** Ear Tag Applicator (sold separately)

Stainless steel Ear Tags available! StoeltingCo.com for details.



#### LABORATORY ANIMAL EAR TAGS (SHEET OF 100)

FOR MOUSE

56779	Ear Tag, Mouse, 5 Colors	
56780	Ear Tag, Mouse, Red	
56781	Ear Tag, Mouse, Green	
56782	Ear Tag, Mouse, Blue	
56783	Ear Tag, Mouse, Light Blue	
56784	Ear Tag, Mouse, Black	
FOR RAT		
56785	Ear Tag, Rat, 5 Colors (20 each)	
56786	Ear Tag, Rat, Red (Box of 100)	
56787	Ear Tag, Rat, Green (Box of 100)	
56788	Ear Tag, Rat, Blue (Box of 100)	
56789	Ear Tag, Rat, Light Blue (Box of 100)	
56790	Ear Tag, Rat, Black (Box of 100)	
56791	Ear Tag Applicator	

Please specify number sequence when ordering.

### Ear Punch

Ear punches used for notching or punching mouse or rat ears at weaning for easy identification. The 56718 and 56719 have ergonomic handles for easy control. All punches are made of Stainless Steel. Instruments are for non-clinical use only (not for human use).

#### EAR PUNCH

56719	Ear Punch, 2mm hole, 4in
56717	Thumb Print Ear Punch, 2mm hole, 2in
56718	Ear Punch, 1mm hole, 4in



.....

### **Animal Identification**

### **Animal Markers**

The Animal Marker was developed for easy, long-lasting identification of laboratory animals. Unlike permanent markers and art markers, which can contain chemicals harmful to animals, Animal Marker use "legal pigments," which are approved and regulated by the Japanese Ministry of Health, Labor and Welfare, for use in food, drugs and cosmetics. These pigments are nontoxic and devoid of any hazardous materials. For use on the rodent's coat. Color will not remain on the animal's skin.

#### Features:

- Nontoxic and devoid of any hazardous materials
- A single marker can be used to mark 300-500 rats (depending upon animal size and/or applied area)
- Once applied, colors remain for 6-12 weeks
- Standard and fine tip markers available

#### **ANIMAL MARKERS**

50440	Animal Markers, Blue, Standard Tip, pk/2
50445	Animal Markers, Blue, Fine Tip, pk/3
50441	Animal Markers, Green, Standard Tip, pk/2
50446	Animal Markers, Green, Fine Tip, pk/3
50442	Animal Markers, Red, Standard Tip, pk/2
50447	Animal Markers, Red, Fine Tip, pk/3
50443	Animal Markers, Yellow, Standard Tip, pk/2
50448	Animal Markers, Yellow, Fine Tip, pk/3
50444	Animal Markers, Orange, Standard Tip, pk/2
50449	Animal Markers, Orange, Fine Tip, pk/3
50450	Animal Markers, Black, Standard Tip, pk/2
50451	Animal Markers, Black, Fine Tip, pk/3

#### Visit **www.StoeltingCo.com** for **full list** of marker and marking ink **color options!**







### **Unique Products**

### NEW! Vaginal Estrous **Cycle Monitor**

- The best method of determining proestrus stage
- Powerful tool for the improvement of reproduction efficiency
- Simple operation
- Battery operated

The Rat Vaginal Impedance Monitor is designed to obtain precise nformation to determine the optimum day for mating during the rat estrous cycle.

The conventional method (vaginal smear method) is a troublesome procedure requiring skill, time and labor.

The electrical impedance of the epithelial cell layer of vaginal mucosa is measured at the frequency of 1 kHz by insertion of the probe into the vagina. In the proestrus stage significantly higher impedance is produced compared to that in the other stages of the estrous cycle. 3 kohm of impedance can be considered a standard for indicating proestrus stage. Measuring range is 0-19.9kohm.

The Rat Vaginal Impedance Monitor is a reliable time and laborsaving device. Operation is so simple a novice can easily use it.

Important Notice: The 59160 was developed exclusively for Rats. A Mouse probe is available, but test results can not be guaranteed.

**Does not affect** reproduction or pregnancy rates.

#### SPECIFICATIONS

0-19.9 kohm
+/- 1% +/- 1 digit
LCD
4 Rechargeable Battery (Ni-MH) / 30 hr Battery Life
90W x 135D x 35mmH
Approximately 200g (battery excluded)

DANCE CHECKEN

99

#### VAGINAL ESTROUS CYCLE MONITOR

59160	Electronic Vaginal Estrous Cycle Monitor, Rat
59161	Mouse Probe (50mm x 3.5mm O.D.)
59162	Replacement Rat Probe (55mm x 4.5mm O.D.)

### **Automated Milker** for Rat and Mouse

#### Ideal for the analysis of breast milk composition

The Automated Milker provides researchers the ability to collect Rat/ Mouse milk directly from the teat. The Milker collects milk from lactating mothers by alternating negative and atmospheric pressures through two solenoid valves and a vacuum pump attached to a microcomputer.

Environmental pollutants, in particular carcinogenic substances and endocrine disrupting chemicals, are a worldwide concern. The influence that these substances have on babies and their development, through breast or cow milk, is of great concern. The ability to gather milk from Rats and Mice, widely used experimental animals, will aid in advancement of research in this area.

#### AUTOMATED MILKER FOR RAT AND MOUSE

59150 Automated Milker, Rat and Mouse



#### 59150 Automated Milker, Rat and Mouse





### OiS200 Modular Optical Imaging System

### The Modular Optical Imaging System (OiS200) can perform:

- Intrinsic Optical Imaging
- Fluorescence Imaging

#### **OIS200 MODULAR OPTICAL IMAGING SYSTEM**

55790	OiS200 Modular Optical Imaging System
ADD-ON:	
55790-1	Intrinsic Signal Optical Imaging
55790-2A	Fluorescence Imaging: Other wavelengths, 475nm, (other wavelengths available)
55790-3	Speckle Imaging
55790-4A	Optogenetic Stimulation 1-D
55790-4B	Optogenetic Stimulation 2-D
55790-5	Dual Camera Imaging, Add-on

#### Intrinsic Optical Imaging and fluorescence are a easy and minimally-invasive method for observing brain activity in vivo over a large area of the cortex.

• Speckle Imaging—quantify cerebral blood flow on surface vessels.

The imaging platform is portable and easy to set up. It offers great configuration flexibility from different camera options to illumination solutions. All images are acquired via a user-friendly software. The system allows imaging up to  $\pm 30^{\circ}$  angle. The height can also be adjusted. Illumination arms can be installed in multiple configurations. The plate is made of high-quality steel allowing the user to use magnetic accessories.

#### Applications

- Cerebral blood flow, neurovascular coupling & functional connectivity studies
- & functional connectivity studie
- Neurological disorders
- PharmacologyOptogenetics

#### Imaging Options

- Intrinsic Signal Optical Imaging (IOI with red, amber and green LEDs)
- Fluorescence Imaging (475 nm LED and others available)
- Laser Speckle Contrast Imaging (LSCI)

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