

# **Innovative Products for your Research needs**





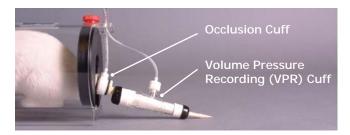
# **CODA™** Systems

# Are you measuring blood pressure?

#### **Features**

- · Measures awake and anesthetized animals
- 8 gram mice to 950 gram rats
- Systolic, diastolic, mean BP and heart rate
- Diastolic BP measured, not calculated
- Easily measure dark-skinned, C57/BL6 mice
- MRI Compatible





#### Volume Pressure Recording [VPR] is an accurate,

clinically validated, patented method to measure the blood pressure in mice and rats by determining the tail blood volume using a volume pressure recording sensor and an occlusion tail-cuff.

#### **Volume Pressure Recording**

- Systolic Blood Pressure
- · Diastolic Blood Pressure
- · Mean Blood Pressure
- Heart Rate
- Tail Blood Volume
- · Tail Blood Flow

#### Resources

Peer-Reviewed Validation Study 1,000+ Peer-Reviewed Research Papers Published White Paper Video Training Protocol DVD Clinical Scientist Support

# **CODA Surgical Monitor**

#### 1 Animal

- Built-in computer display
- Automatically measure blood pressure in real-time
- 99% accurate to direct blood pressure & telemetry
- Clinically validated Volume Pressure Recording (VPR)

#### includes:

NIBP Controller

Far infrared warming pad, 8"x10"

Infrared thermometer

Cardiovascular Genomics textbook

Product manual

#### Options:

Animal holder

Cuff Kits

Database software

Each system includes a 10-pack of disposable sleeve protectors for the far infrared warming pad. Additional sleeve protectors are available in 50-packs under reorder code DCT-1520P.

FREE RightTemp® with purchase of the CODA Monitor.



# **Noninvasive Blood Pressure**

# Non-Invasive Blood Pressure in Mice and Rats - Tail Cuff Method



# **CODA High Throughput**

2, 4, 6 or 8 Animals (Network up to 48 animals)

#### includes:

NIBP Controller

Database software

Far infrared warming platform(s)

Infrared thermometer

Cardiovascular Genomics textbook

Product manual

#### Options:

Animal holder

Cuff Kits

7 studies are published every week using the CODA Noninvasive Blood Pressure system!



The animal nose cone holders that accompany the CODA NIBP system were specifically designed for non-invasive tail blood pressure measurements. The clear acrylic holders provide unrestricted breathing and allow complete visibility to the researcher.





The VPR sensor incorporates a specially designed differential pressure transducer that measures the systolic and diastolic blood pressure by determining the blood volume in the tail. We have sizes for mice as small as 8 grams to rats as large as 950 grams.

### **CODA Holders and Cuffs**

Product #	CODA Holders
HLD-MS	Small Mouse Holder, up to 25g
HLD-MM	Medium Mouse Holder, 25 to 50g
HLD-ML	Large Mouse Holder, 50 to 75g
HLD-RS	Small Rat Holder, 75 to 200g
HLD-RM	Medium Rat Holder, 200 to 300g
HLD-RL	Large Rat Holder, 300 to 500g
HLD-RX	Extra Large Rat Holder, 500g+

Product #	Cuff Kits
MSE-CUFFKIT	Mouse Cuff Kit, 8g to 75g, includes 1 x-small, 1 small Occlusion Cuff and 1 small VPR Cuff
RAT-CUFFKIT	Rat Cuff Kit, 75g to 500g, includes 1 medium, 1 large Occlusion Cuff and 1 medium, 1 large VPR Cuff
RAT-CUFFKIT-XL	Rat Cuff Kit XL, 500g+, includes 1 large, 1 x-large Occlusion Cuff and 1 large, 1 x-large VPR

# **SomnoSuite®**

# Low-Flow Small Animal Anesthesia System



# The first, accurate gas delivery system using minimal anesthetic and oxygen for mice and rats

#### **Features**

- Integrated Digital Vaporizer (IDV)
- Vital sign monitor option
- Automated safety ventilator option
- Saves money; Less than 1mL of isoflurane an hour with typical use
- $\bullet \ Multiple \ Animal \ Capability \ ; \textit{An esthetize multiple animals at once}$
- Safer for the animal; Digital dial control for precise delivery
- No servicing or calibration needed; Cost-effective, reliable equipment
- Use room air or compressed oxygen;
   Deliver up to 500 mL/min with internal pump, 800 mL/min with compressed gas
- Built-in display for real-time monitoring
- Easily integrate into your stereotaxic set-up;

Use your own facemask or use one of ours

#### **Add-On Module Options:**

- All-in-one add-on modules significantly decrease equipment
- Multi-parameter display shows vital signs
- Start with what you need now and expand later!

#### **MouseSTAT** Pulse Oximeter & Heart Rate Monitor

Designed specifically for mice--works on larger animals too! Specialty sensor provides accurate results with no localized ischemia

#### **MouseVent Automatic Ventilator**

Fully automatic: Enter animal's weight, press RUN
Neonatal mice to 500g rats
Control ventilation by pressure or volume



# Low-Flow Small Animal Anesthesia System

How much would you save in one year with SomnoSuite®?

#### SomnoSuite



#### **Traditional**



### THE OLD WAY

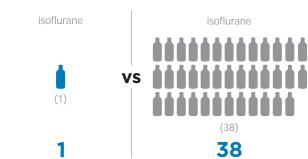


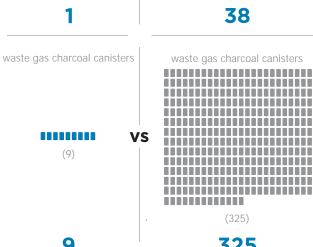
96 lbs, 44" x 32" – Standard small animal gas delivery, pulse oximeter and ventilation setup

#### THE NEW WAY



6 lbs, 15" x 15" SomnoSuite setup





\* Reference Time: 8 hours

Concentration: 2% isoflurane Subject: 30 g mouse Delivery: Nose cone

	SomnoSuite	Traditional
Oxygen use:	0 .02 L/min	1 L/min
Isoflurane use:	0 .15 mL/hr	6 mL/hr
250 mL bottle:	1.3 mL/day	48 mL/day
50 g canister:	0.04 canister/day	1.35 canisters/day

### SomnoSuite®

#### Three modules in one unit:

#### SomnoSuite Small Animal Anesthesia System

Flow Rate	
Internal Pump	0 to 500 mL/min
Compressed Gas	0 to 800 mL/min
Syringe	2 mL, 5 mL, and 10 mL glass syringes
Modes of Operation	Up to 4
Vaporizer	Internal Pump or Compressed Air
Ventilator	Internal Pump or Compressed Air
Max. Pusher Force	Greater than 36 kg
Carriage Position Detection	+/- 0.2 mm
Anesthetics	Isoflurane and Sevoflurane

#### MouseSTAT® Pulse Oximeter & Heart Rate Monitor

Heart Rate	Up to 900 bpm
Resolution	1%
SpO <sub>2</sub> Range	70 to 100%
Alarms	5, Programmable
Data Export	Yes
SpO <sub>2</sub> Sensors	Soft Touch Paw Sensors Large Animal Clip Sensors Pup Sensors

#### MouseVent® Automatic Ventilator

Control Modes	Volume-Controlled, Pressure-Controlled
I:E Ratio	1:1 to 1:5
PEEP	Built-In
Respiratory Assist	Automatic or Manual
Sigh Pressure	2 to 30 cmH20
Sigh Breath	Automatic or Manual
Respiratory Rate Range	20 to 350 bpm
Max Inspiratory Flow	1.5 SLPM
Weight Range	3 to 500 g

# **Vaporizers**

### **VetFlo™ Anesthesia System**



- Convenient tabletop design self-contained for efficiency
- Station specific delivery for precise control
- Custom configurations available

Our VetFlo Traditional Anesthesia Systems consist of:

- Tabletop stand
- One inlet flowmeter, 0 to 1000 mL (200 to 4000mL flowmeters are available, except on 6-channel systems)
- Multi-channel system has two, four or six outlet flowmeters (depending on # of channels)
- One set of inlet/outlet caps
- Charcoal filter canister
- High pressure oxygen hose with DISS fittings

VetFlo-1205S	Single Channel Anesthesia, 0-1000LPM
VetFlo-1210S	Single Channel Anesthesia, 200-4000LPM
VetFlo-1231	Vaporizer for Isoflurane, Tech 3, Funnel Filled
VetFlo-1215	Two Channel Anesthesia Stand, 200-4000LPM, includes tabletop stand, inlet/outlet caps, gas filter canister, oxygen tubing, oxygen tree, Vaporizer Sold Separately
VetFlo-1231K	Vaporizer for Isoflurane, Tech 3, Key Filled
VetFlo-1232	Penlon Sigma Delta Isoflurane Vaporizer, key-filled
VetFlo-1234	Penlon Sigma Delta Sevoflurane Vaporizer
VetFlo-2001-8	Activated Charcoal Absorption Filter 8pk
VetFlo-7105	Anti-Spill Device for Funnel-Filled Isoflurane Vaporizer
VetFlo-7106	Anti-Spill Device for Funnel-Filled Sevoflurane Vaporizer

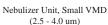
### **Aerosol Nebulizers**





- Produces a high-quality respirable aerosol with extremely low residual volume
- Aerosolizes a broad range of liquid formulations without altering molecular integrity
- $\bullet$  Utilizes  $OnQ^{TM}$  technology, providing a bridge from preclinical to clinical studies







Nebulizer Unit, Standard VMD (4.0 to 6.0 um)

AG-AL7000	Aeroneb Lab Control Module with universal A/C Adapter
AG-AL1000	Aeroneb Lab Nebulizer Unit, Standard VMD
AG-AL1100	Aeroneb Lab Nebulizer Unit, Small VMD
AG-AL7000SM	Aeroneb Lab Control Module Kit, small (inc. module, universal a/c adaptor and one small nebulizer unit)
AG-AL7000STD	Aeroneb Lab Control Module Kit, standard (inc. module, universal a/c adaptor and one standard nebulizer unit)
AG-ALSM-MSE-S	Mouse Nebulizer Delivery System, includes Small Module Kit, animal holder, tubing and connections (Air flow required). For mice up to 25g
AG-ALSM-MSE-M	Mouse Nebulizer Delivery System, includes Small Module Kit, animal holder, tubing and connections (Air flow required). For mice up to 25g to 50g
AG-ALSM-MSE-L	Mouse Nebulizer Delivery System, includes Small Module Kit, animal holder, tubing and connections (Air flow required). For mice up to 50g to 75g
AG-ALSMHLD-RAT	Rat Nebulizer Delivery System, includes Small Module Kit (AG-AL7000SM), animal holder and all of the required tubing and connections for quick set-up (Air flow required)



# **Animal Anesthesia System**

### **Low Profile Facemasks/Nose Cones**



Ideal for procedures involving:

- · open chest
- · access to eyes and head

Kits available for both traditional vaporizers and the SomnoSuite® digital vaporizer. Facemasks are designed for a tight fit when used with mice and rats. The Low Profile Facemasks provide limited opportunity for waste gas leaks.

SOMNO-0801 or VetFlo-0801	Low Profile Facemask, small (mice), includes 5 facemasks, 1 tubing set with facemask fitting
SOMNO-0802 or VetFlo-0802	Low Profile Facemask, medium (rats up to 100g), includes 5 facemasks, 1 tubing set with facemask fitting
SOMNO-0803 or VetFlo-0803	Low Profile Facemask, large (rats up to 300g), includes 5 facemasks, 1 tubing set with facemask fitting

## **Nose Cone/Breathing Circuit**



Rodent face masks are made from clear acrylic and fit all non-rebreathing systems.

The diaphragms on these masks seal the mask around the face of the rodent and reduce the amount of anesthetic gases that may leak into the room. Face mask diaphragms are made from 12 mil thick latex and openings can be cut in the diaphragm to accommodate rodents of different sizes. All masks include extra diaphragm material.

SOMNO-0304 or VetFlo-0304	X-Small nose cone with co-axial non-rebreathing system, nose cone is 17mm diameter, 19mm deep, includes extra diaphragm material (weanling mice)
SOMNO-0305 or VetFlo-0305	Small nose cone with co-axial non-rebreathing system, nose cone is 25mm diameter, 19mm deep, includes extra diaphragm material (up to 150g)
SOMNO-0306 or VetFlo-0306	Medium nose cone with co-axial non-rebreathing system, nose cone is 38mm diameter, 28.5mm deep, includes extra diaphragm material (150 to 200g)
SOMNO-0307 or VetFlo-0307	Large nose cone with co-axial non-rebreathing system, 44mm dia., 38mm deep, incl. extra diaphragm material (200 to 350g).
SOMNO-0308 or VetFlo-0308	X-Large nose cone with co-axial non-rebreathing system, 51mm dia., 44mm deep, incl. extra diaphragm material (350g+).
SOMNO-0309	Replacement Diaphragms for Nose Cones 6" X 36" 12MIL Latex Sheet for SOMNO nose cones

#### **Low Cost Chambers**



- Shatter-resistant plastic
- Easy to clean, autoclavable
- Air tight seal
- Resistant to standard anesthesia chemicals
- Small size reduces induction time and waste gas

Each chamber includes tubing to connect to the inlet and outlet of your vaporizer. The length of the SomnoSuite tubing is 12" and the length of the VetFlo tubing is 30".

SOMNO-0705	Low Cost Induction Chamber, 0.5L
or VetFlo-0705	(W 10.16cm x H 7.62cm x D 6.35cm)
SOMNO-0710	Low Cost Induction Chamber, 1.0L
or VetFlo-0710	(W 15.24cm x H 7.62cm x D 10.16cm)
SOMNO-0720	Low Cost Induction Chamber, 2.0L
or VetFlo-0720	(W 21.59cm x H 7.62cm x D 15.86cm)
SOMNO-0730	Low Cost Induction Chamber, 3.0L
or VetFlo-0730	(W 21.59cm x H 11.43cm x D 15.24cm)

# **Sliding Top Induction Chambers**



SOMNO-0530SM or VetFlo-0530SM	Induction chamber, box design sliding top (W 10.80cm x H 11.76cm x D 23.50cm) 3L
SOMNO-0530LG or VetFlo-0530LG	Induction chamber, box design sliding top (W 22.9cm x H 15.2cm x D 15.2cm) 5.4L

# **RoVent® Small Animal Ventilator**

### Small Animal Ventilator



- Smart fully automatic
- Touchscreen operation
- Safety alarms
- Volume control and pressure control

The RoVent Small Animal Ventilator is ideal for mice, rats and guinea pigs up to 1,250 grams. The ventilator is fully automatic, simply enter the animals weight and press run. You have the ability to control ventilation by either volume or pressure.

The built-in touchscreen display provides information about your current ventilator settings. You have the ability to customize the display; many of the parameters can easily be displayed as numeric numbers or on a real-time graph. The real-time display screen has the capability to show numeric readings, waveforms, or both simultaneously. View historical data with a touch of the screen.

#### **Product Specifications**

Control Modes	Volume Controlled, Pressure Controlled
I:E Ratio	1:1 to 1:5
PEEP (Advanced Module)	Built-in
Respiratory Assist (Advanced Module)	Automatic or Manual
Sigh Pressure	2 to 30 cmH20
Sigh Breath (Advanced Module)	Automatic or Manual
Respiratory Rate Range	20 to 400 bpm
Weight Range	3 to 1,250g

#### **Ordering Information**

Product #	Description
RoVent	RoVent Small Animal Ventilator



# **Ventilation System**

## **Mouse Intubation Kit**



- Integrated facemask

  Deliver isoflurane during intubation
- Independent neck positioner Align airway structures
- Fiber optic light

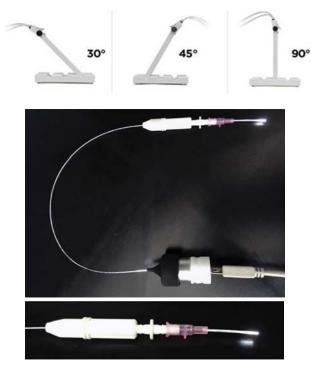
  Illuminate airway for enhanced visualization

The intubation of mice continues to be a challenge for researchers. With an integrated facemask, the Mouse Intubation Kit allows the delivery of isoflurane during intubation. This feature provides the researcher the time necessary to successfully intubate a mouse.

The ability to adjust the angle of the neck allows alignment airway structures for intubation.



The fiber optic guide light illuminates the airway to enhance visualization of the airway. Use as a stand alone intubation system or connect to your SurgiSuite Surgical Platform.



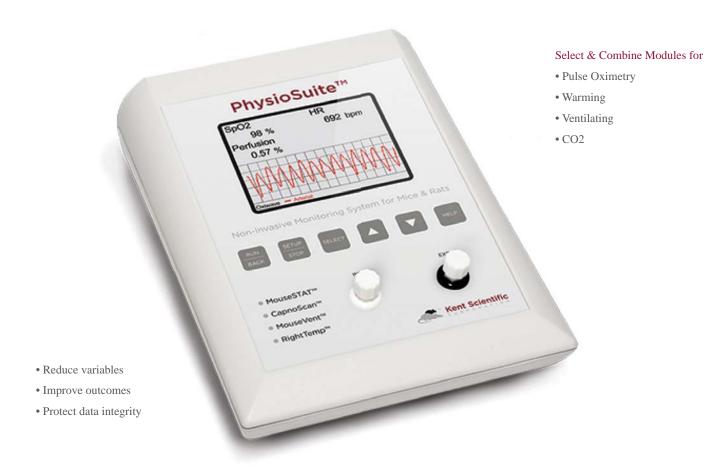
The Mouse Intubation Kit includes:

- (1) Mouse Intubation Platform, accommodate up to 3 angles for intubation; 30, 45 and 90-degree
- (1) Mouse Intubation Stand with adjustable head positioning
- (1) Facemask for anesthesia delivery during intubation
- (1) Facemask Tubing & Connectors
- (1) Fiber optic light and USB connection
- (1) Trans-Tracheal Illuminator
- (1) 5-pack 20G catheters
- (1) Suture, 1-meter length
- (1) Dental spatula
- (1) Dental mirror
- (1) Power supply

ETI-MSE	Mouse Endotracheal Intubation Kit, incl. platform/stand, facemask, cable/light, adapter, (5) 20G catheter, suture (1m), spatula, mirror
SURGI-ETI	SurgiSuite + Lighting and Mouse Intubation Kit bundle
ETI-MSE-12	Fiber Optic Lighting Assembly- includes lighting adapter fitting, fiber optic cable and adjustable coupling

# **PhysioSuite®**

# Are you monitoring during surgery?



# **Build-Your-Own PhysioSuite® Select and Combine modules:**

#### MouseSTAT® / Pulse Oximeter & Heart Rate Monitor

Clinically Validated Stand-Alone System Heart Rate, SpO<sub>2</sub>, Respiratory Rate



#### **RightTemp®** / Homeothermic Warming

Homeothermic Controller 1 Warming Pad, 8" x 10"





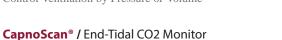
#### All PhysioSuite systems include the following:

- Integrated display
- Real-time recordings
- 5 safety alarms
- Internal memory for data storage
- Mini-USB for data output

#### **MouseVent®** / Automatic Ventilator

Fully Automatic: Enter animal's weight, press RUN Neonatal Mice to 500 g Rats

Control Ventilation by Pressure or Volume



Real-Time Capnography 5 Safety Alarms

Side Stream Sampling







# **Physiological Monitors**

### THE OLD WAY

33 lbs, 42" x 30" Standard setup





### THE NEW WAY

8 lbs, 22" x 18"



### Save space and streamline your workflow

# **PhysioSuite®**

#### Temperature Monitoring & Homeothermic Control / RightTemp®

2,252 Ohm Resistance Tolerance +/- 0.2°C 0~70°C -60°C to 150°C Operating Temp. Sensor Tip Diameter Mouse: 0.085" Rat: 0.137" Time Constant 15.0 seconds Dissipation 0.75 m/W (°C)

#### Pulse Oximeter & Heart Rate Monitor / MouseSTAT®

Up to 900 bpm Resolution 1% SpO<sub>2</sub> Range 70 to 100% Alarms 5, Programmable Data Export

SpO<sub>2</sub> Sensors Soft Touch Paw Sensors Large Animal Clip Sensors

Pup Sensors

#### Automatic Ventilator / MouseVent®

Control Modes Volume Controlled, Pressure Controlled I:E Ratio PEEP Respiratory Assist Automatic or Manual Sigh Pressure 2 to 30 cmH20

Sigh Breath Automatic or Manual Respiratory Rate Range 20 to 350 bpm Max Inspiratory Flow 1.5 SLPM Weight Range 3 to 500 g

#### End-Tidal CO<sub>2</sub> Monitor / CapnoScan®

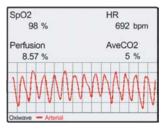
Transducer Type Sidestream Sensor Sample Rate 50 mL/min. +/- 10mL/min. **Initialization Time** Less than 15 seconds Measurement Range 0 to 16%, 0 to 120 mmHg

Rise Time Less than 60 ms

Resolution 0.1 mmHg 0 to 69 mmHg

 $0.25~\mathrm{mmHg}$ 70 to 150 mmHg

#### Screen shots of the PhysioSuite



Real-Time Signal

Peak Press 14.9 cm H2O PEEP		
ΛΛΛ		
7000		

Real-Time Trending

BPM	Peak Press
133 bpm	14.9 cm H2O
Tidal Vol	SpO2
0.08 ml	99 %
AveCO2	HR
5 %	648 bpm
Pad	Body
32 deg C	33 deg C

See All Parameters

SpO2		H	łR	
98	%		692	bpm
Perfusio	n			
0.57	%			
SpO2	HR	Perfus	Pad	Body
98	692	0.57	32	30
99	696	0.55	31	30
97	700	0.56	31	30
99	692	0.57	30	29
98	690	0.57	31	30

View Historical Data

# MouseSTAT Jr.

# Pulse Oximeter & Heart Rate Monitor

Pulse oximetry in the palm of your hands!



#### **Features & Benefits**

- Fits in the palm of your hand

  Easily integrates into your anesthesia set-up
- Clear display of heart rate and pulse oximetry

  Quick view of vital signs allows you to focus on your animal
- Visual alerts to confirm sensor placement

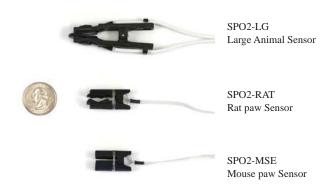
  Identify and maintain accuracy at the sensor site

The MouseSTAT Jr. uses the same technology used in the PhysioSuite system to provide you with accurate pulse oximetry in both mice (and rats too!). Unlike the PhysioSuite, the MouseSTAT Jr. has two displays, one for heart rate and one for pulse oximetry. Its sole function is to provide heart rate and pulse oximetry measurements. The MouseSTAT Jr. measures pulse oximetry on animals with heart rates up to 900bpm.

MouseSTAT® Jr. & PhysioSuite® with MouseSTAT® Comparison Chart

Products	MouseSTAT Jr.	PhysioSuite with MouseSTAT
Features		
Oxygen Saturation (SpO2)	Yes	Yes
Heart Rate (HR)	Yes	Yes
Respiratory Rate (RR)	No	Yes
Perfusion Index (PI)	No	Yes
Safety Alarms	2	5
Options		
Temperature	No	Yes FREE RightTemp Module
Warming	No	Yes FREE RightTemp Module
Far InfraRed Warming Pad	No	Yes FREE RightTemp Module
Ventilator Module (integrated)	No	Yes
CO2 Module (integrated)	No	Yes
Data Management		
Internal Memory	No	Yes
Export capability	No	Yes
Data Acquisition Compatible	No	Yes
Display		
Real-Time	Yes	Yes
Values	Numeric	Alpha-numeric/ Graphical
Format	Non-customizable	Customizable
user Menu	No	Yes

#### **Pulse Oximeter Sensors**





# KSC Infrared Pocket Thermometer with Laser Sighting



This thermometer comfortably fits your palm with a raised button on the side. Simple mode button steps through Max, Min, C/F, and adjustable emissivity. Ideal for monitoring tail temperature when measuring blood pressure noninvasively. To measure tail temperature, position the thermometer approximately one inch away from the base of the tail, making sure the light is shining on the tail, not on the warming platform.

IR-TW2 Non-Contact Infrared Thermometer with Laser Sight

### **Far Infrared Warming Pad**



A new way to warm your animal before, during and after surgery!

- Infrared heat provides over 60% deeper penetration than traditional warming methods
- Warms animal quickly and safely
- Portability allows for easy animal transportation
- Low voltage rechargable battery is safe and efficient
- Anti-bacterial surface provides sanitary environment

DCT-15	Far Infrared Warming Pad, 6" x 8" (15.2 cm x 20.3 cm) Includes battery, charger
DCT-20	Far Infrared Warming Pad, 8" x 10" (20.3 cm x 25.4cm) Includes battery, charger
DCT-25	Far Infrared Warming Pad, 14" x 14" (35.6 cm x 35.6 cm) Includes battery, charger

### Type J, K or T Thermocouple Meter



The Acorn Temp TC meter offers a wide -250 to 1372°C range. Use with any type J, K, or T thermocouple probes. Splash- resistant membrane keypad helps protect meter components from occasional spills. The large LCD gives you a clear reading at a glance, and warns user of low battery conditions or calibration errors.



Rectal Probes for Mice & Rats

WD-35627-00	Acorn Temp TC Thermocouple Meter
RET-2	Rectal Probe for Rats 0.8 sec Response, max temp. 125°C, non-isolated, tip dia 0.125"
RET-3	Rectal Probe for Mice 0.5sec Response, non-isolated, tip dia 0.065"

# **T/Pump Warm Water Recirculator**





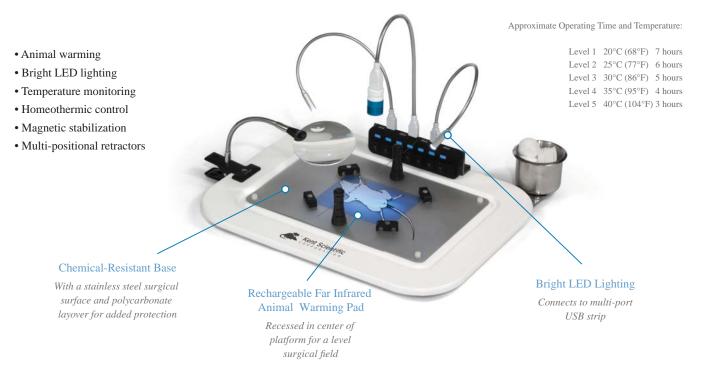
TP-700 T/Pump, 120v, formerly TP-650 code (pad not included)
Only available in 120v

TP-471 Multiple Animal Tubing Adaptor Kit, up to 4 blankets

TP-22G Reusable Warming Blanket, 38.4cmW x 58.1cmL

# **SurgiSuite**

# Multi-functional Surgical Platform



#### **SurgiSuite Includes:**

- (1) easy to clean, chemical resistant base
- (1) stainless steel surgical surface
- (1) integrated, rechargeable far infrared warming pad
- (2) magnetic nose cone/intubation tubing stabilizers, 1-small and 1-large
- (4) magnetic limb positioners (used with elastic wire)
- (1) elastic wire positioner (1-meter)
- (1) detachable procedure bowl
- (5) replacement surgical field covers

#### **Specifications:**

	SurgiSuite	SurgiSuite-LG
Base dimensions:	32.77 cm x 42.67 cm	40.01 cm x 45.21 cm
Stainless steel area:	30.23 cm x 20.07 cm	32.39 cm x 27.31 cm
Warming surface area:	13.08 cm x 10.16 cm	22.23 cm x 17.15 cm

# **Optional Add-Ons:**



# Monitor and regulate animal temperature

The PhysioSuite® homeothermic warming and temperature control easily connects to the included warming pad.

Ask about integrating pulse oximetry.



# Customize your lighting solution\*

LED lighting and magnification kit plugs directly into the included USB power strip.

\* Exact lighting may not be as shown due to product improvements



Maximum control with minimum clutter

Retractor wires lock into the included fixators to allow for linear and rotational adjustment.



# **FirstHand Surgical Instrument Kits for Mice and Rats**



INSMOUSEKIT	Mouse Surgical Kit includes one each of the following	
INS600095	Tweezer #5 Stainless steel, 11cm long	
INS600109	Needle Holder, serrated, straight, 12.5 cm long	
INS600124	McPherson-Vannas Scissors, straight, 8 cm long	
INS600130	Wire Speculum	
INS600393	Dissecting Scissors, straight, 10 cm long	
INS650915	Iris Forceps, serrated, 10cm long	
INS751313	Blunt probe, 14cm long, 1.0mm dia., Stainless Steel	



INSRATKIT	Rat Surgical Kit includes one each of the following	
INS600095	Tweezer #5 Stainless steel, 11cm long	
INS600110	Needle Holder, serrated, straight,12.5 cm long	
INS600124	McPherson-Vannas Scissors, straight, 8 cm long	
INS600225	Iris Scissors, straight, 12.5 cm long	
INS600240	ALM Self-retaining, serrated, 7 cm long	
INS650915	Iris Forceps, serrated, 10 cm long	
INS751313	Blunt probe, 14cm long, 1.0mm dia., Stainless Steel	

# **Rodent and Small Animal Guillotine**



DCAP	Guillotine for rodents and other small animals
DCAP-BLD	DCAP Replacement Blades

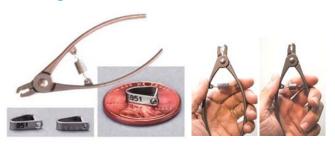
# **Ear Punch**



NOTE: The INS750075-5 thumb style ear punch is used for mice only.

INS750075-5	Mouse Ear Punch, 5cm long, 2mm diameter- 5/pack	
INS750078-5	Nail-Clipper Style Ear Punch, 2mm- 5/pack	
INS750076	Scissor Style Ear Punch, 10cm long, 1mm diameter	
INS750076-2	Scissor Style Ear Punch, 10cm long, 1mm dia 2/pack	
INS750077	Scissor Style Ear Punch, 10cm long, 2mm diameter	
INS750077-2	Scissor Style Ear Punch, 10cm long, 2mm dia 2/pack	

# **Ear Tags Mouse and Rat**



Mouse and Rat Ear Tags (ear tagging)

INS1005-1S	Ear Tag Applicator with Spring
INSEARAPKIT	Stemped Ear Tag Kit (100 Stamped Ear Tags & Applicator)
INS1005-1	Stamped Ear Tags, 100ea/pk
INS1005-1Z	Stamped Ear Tags, 1,000ea/pk
INSEARAPKIT-Z	Laser Etched Ear Tag Kit, (100 Laser-Etched Ear Tags & 1 Applicator)
INS1005-1LS	Laser Etched Ear Tags (one sided), 100ea/pk
INS1005-1LSZ	Laser Etched Ear Tags (one sided), 1,000ea/pk
INS1005-1LS-DBL	Laser Etched Ear Tags (two sided), 100ea/pk
INS1005-1LSZ-DBL	Laser Etched Ear Tags (two sided), 1,000ea/pk

# **Surgical**

### **Hot Bead Dry Sterilizer**



- Ideal for small animal lab instrument decontamination
- 15 second sterilization is fast and easy to use

The middle of the unit is loaded with dry glass beads that are heated to 260°C. All you need to do is insert the instrument into the beads, wait 15 seconds, and the portion of the instrument in the beads is sterilized.

INS700852	Hot Bead Dry Sterilizer, 220V (CE and UL certified)
INS700851	Replacement Glass Beads, 340g bag, 0.75mmOD
INS700900	Surgical Instrument Cleaner- 8 oz. Concentrated
INS700901	Surgical Instrument Lubricant Spray (Milk) - 8 oz.

### Micro Cannula



OD: 0.4mm ID: 0.2mm

KZ1101	Micro Cannula, 3"
KZ1106	Micro Cannula, 6"
KZ1108	Micro Cannula, 8"

### **Surgical Magnifier Glasses**



- Our eyeglass magnifiers with dual LED lights are ideal for your surgical procedures.
- Comfortable and lightweight.
- Includes 5 lenses-- 1x, 1.5x, 2x, 2.5x, 3.5x.

SL-001	Surgical Magnifier Glasses with LED lighting Includes 5 lenses
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# **Disposable Feeding Needles**



- Non-toxic and Non-pyrogenic
- Easily formed to desired shape
- Ball diameter is 0.115"

FN-9915	15G x 3", Ideal for rats, 250 to 300g, 100ea
FN-9918	18G x 2", Ideal for rats, 200 to 250g, 100ea
FN-9920	Malleable, 20G x 1.5", Flexible, Sterile Packed, Ideal for a mouse or rat pup, 100ea
FN-9921	Malleable, 20G x 1.5" Ideal for a mouse or rat pup, 100ea
FN-9925	Malleable, 15G x 3.07", Flexible, Sterile Packed Ideal for rats, 250 to 300g, 100ea
FN-9928	Malleable, 18G x 1.5", Flexible, Sterile Packed Ideal for rats, 200 to 250g, 100ea

# **Feeding Needles**



- Ideal for use on mice, rats, guinea pigs, rabbits and other small
- Smooth ball on tip helps prevent soft tissue injury

FNS-10-6	Straight, 10 Gauge, 5.9 inches (15.2cm) length, 6.4mm tip 200 to 350g rats, 400 to 600g guinea pigs
FNS-12-4	Straight, 12 Gauge, 3.9 inches (10cm) length, 6.4mm tip 200 to 350g rats, 400 to 600g guinea pigs
FNS-14-3	Straight, 14 Gauge, 2.9 inches (7.6cm) length, 4.0mm tip 200 to 350g rats, 400 to 600g guinea pigs
FNS-16-3	Straight, 16 Gauge, 2.9 inches (7.6cm) length, 3.0mm tip 100 to 200g rats
FNS-18-2	Straight, 18 Gauge, 1.9 inches (5cm) length, 2.4mm tip 25 to 30g mice, 50 to 75g rats
FNS-20-1.5	Straight, 20 Gauge, 1.4 inches (3.8cm) length, 2.4mm tip 20 to 25g mice, 50 to 75g rats
FNS-22-1.5	Straight, 22 Gauge, 1.4 inches (3.8cm) length, 2.4mm tip 15 to 20g mice
FNC-10-6	Curved, 10 Gauge, 5.9 inches (15.2cm) length, 6.4mm tip 200 to 350g rats, 400 to 600g guinea pigs
FNC-12-4	Curved, 12 Gauge, 3.9 inches (10cm) length, 6.4mm tip 200 to 350g rats, 400 to 600g guinea pigs
FNC-14-3	Curved, 14 Gauge, 2.9 inches (7.6cm) length, 4.0mm tip 200 to 350g rats, 400 to 600g guinea pigs
FNC-16-3	Curved, 16 Gauge, 2.9 inches (7.6cm) length, 3.0mm tip 100 to 200g rats
FNC-18-2	Curved, 18 Gauge, 1.9 inches (5cm) length, 2.4mm tip 25 to 30g mice, 50 to 75g rats
FNC-20-1.5	Curved, 20 Gauge, 1.4 inches (3.8cm) length, 2.4mm tip 20 to 25g mice, 50 to 75g rats
FNC-22-1.5	Curved, 22 Gauge, 1.4 inches (3.8cm) length, 2.4mm tip 15 to 20g mice



### **Blood Collection**

#### Microvette® CB 300 Blood Collection System



- Optimum serum/plasma recovery after centrifugation
- Two-in-one sample container and centrifuge tube
- Compatible with different analyzers as a primary tube for direct sampling

KMIC-EDTA	Microvette® Capillary Blood Collection System w/Potassium EDTA-Sample Container and Centrifuge Tube 100 / pk
KMIC-SER	Microvette® Capillary Blood Collection System w/Serum and Clotting Activator-Sample Container and Centrifuge 100 / pk
KMIC-LIHEP	Microvette® Capillary Blood Collection System w/Lithium Heparin-Sample Container and Centrifuge Tube 100 / pk

### Microvette® 100/200 Capillary Blood Collection



- Assembled capillary for blood collection according to the end-to-end principle
- Twist cap design is easy to open and minimizes aerosol effect
- Optimized tube geometry ensures thorough sample mixing
- Color-coded caps and print for easy identification

MCVT100-EDTA	Microvette® 100, EDTA, round bottom	100 /pk
MCVT100-SER	Microvette® 100, Serum, conical bottom	100 /pk
MCVT100-LiHEP	Microvette® 100, Li HEP, conical bottom	100 /pk
MCVT200-EDTA	Microvette® 200, EDTA, round bottom	100 /pk
MCVT200-SER	Microvette® 200, Serum, conical bottom	100 /pk
MCVT200-LiHEP	Microvette® 200, Li Hep, conical bottom	100 /pk

# **Prepared Micro Tubes with Screw Cap Closure**



- Integral O-ring for safe and secure sample closure
- 1.3ml capacity ensures accurate sample-to-additive ratio

MTSC-EDTA	Microvette® Micro tube, 1.3ml, screw cap, EDTA 100
MTSC-SER	Microvette® Micro tube, 1.3ml, screw cap, Serum 100
MTSC-LiHEP	Microvette® Micro tube, 1.3ml, screw cap, LiHEP 100

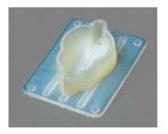
## **Brain, Tumor and Organ Matrices**



- Wide selection
- Repeatable slices to 0.5mm providing precise blocking prior to sectioning
- Can be chilled or sterilized

RBMA-200C	Adult Mouse Brain Matrix, Coronal Slices, Acrylic, 1mm
RBMA-200S	Adult Mouse Brain Matrix, Sagittal Slices, Acrylic, 1mm
RBMS-200C	Adult Mouse Brain Matrix, Coronal Slices, Stainless Steel, 1mm
RBMS-200S	Adult Mouse Brain Matrix, Sagittal Slices, Stainless Steel, 1mm
RBMS-205C	Adult Mouse Brain Matrix, Coronal Slices, Stainless, 0.5mm, 40g to 75g
RBMS-205S	Adult Mouse Brain Matrix, Sagittal Slices, Stainless Steel, 0.5mm
RBMA-300C	Rat Brain Matrix, Coronal Slices, Acrylic, 1mm, 175g to 300g
RBMA-300S	Rat Brain Matrix, Sagittal Slices, Acrylic, 1mm, 175g to 300g
RBMA-310C	Rat Brain Matrix, Coronal Slices, Acrylic, 1mm, 300g to 600g
RBMS-300C	Adult Rat Brain Matrix, Coronal Slices, Stainless, 1mm, 175g to 300g
RBMS-300S	Adult Rat Brain Matrix, Sagittal Slices, Stainless, 1mm, 175g to 300g
RBMS-305C	Adult Rat Brain Matrix, Coronal Slices, Stainless, 0.5mm, 300g to 600g
RBMS-305S	Adult Rat Brain Matrix, Sagittal Slices, Stainless, 0.5mm, 300g to 600g
BLADE	Sharp Matrix Blades, 100ea

#### **Economy Brain Matrix**



- Molded for accuracy at 1mm intervals
- Economical and consistent tissue samples

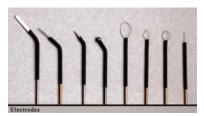
RMC1	Economy Rat Brain Matrix, 1mm Coronal Slices for 150 to 500g Rats
BLADE	Sharp Matrix Blades

# **Surgical**

### **Electrosurgical System**



Includes 2 year warranty (exclusive of accessories), Owner's Manual, autoclavable hand piece, autoclavable dispersive cable, unique "Flexi-plate" dispersive pad, and eight autoclavable electrode tips to cover a wide variety of surgical indications.



Accessories include professional bipolar coagulation forceps. The forceps are all insulated with precision tip alignment and delicate closing force. They fit virtually all electrosurgical generators and can be sterilized by all conventional methods.



Use of BiPolar Forceps with the MV-7A is possible without the Bipolar Adaptor only if they are being used for Coagulation and the unit is in the "COAG" mode. Any other use would require the BiPolar Adaptor.

MV-7A-220	Precision small animal electro-cautery unit, 220v
MF-31	Bipolar Forceps, Micro Non-serrated straight tips, 11.4cm
MF-32	Bipolar Forceps, Micro Non-serrated curved tips, 11.4cm
MF-34	Bipolar Forceps, Fine serrated straight tips, 10cm
MF-35	Bipolar Forceps, Fine serrated curved tips, 10cm

### **Cautery**





INS750389	High Temp. Cautery, includes 2 replaceable battery and 1 fine tip
INS750390	Low Temp. Cautery, includes 1 replaceable battery and 1 fine tip
INS750391	Low Temp. Cautery Kit, includes 1 replaceable battery, 2 disposable low temp fine tip, 1300°F (sterile) and 2 disposable low temp long tip, 1100°F (sterile)
INS750392	High Temp. Cautery Kit, includes 1 replaceable battery, 2 disposable high temp fine tip, 2200°F (sterile) and 2 disposable high temp loop tip, 2200°F (sterile)

#### **Rodent Holders**



RSTR541

RSTR554N



RSTR542	Flat Bottom Holder, 30 to 125g	
RSTR543	Flat Bottom Holder, 125 to 250g	
RSTR544	Flat Bottom Holder, 250 to 500g	
RSTR551	Economy Holder, 15 to 30g	
RSTR552	Economy Holder, 30 to 125g	
RSTR553	Economy Holder, 125 to 250g	
RSTR554	Economy Holder, 250 to 500g	
RSTR553N	Economy Holder with nose cone, 125 to 250g	

Economy Holder with nose cone, 250 to 500g

Flat Bottom Holder, 15 to 30g

### **Animal Weighing Scale**



- Ultra-flat, saves space only 19 mm/0.6 inch height
- High load capacity (5 kg/9 lb, 15 oz), accuracy (1 g/0.05 oz graduation)
- Practical add and weigh function (tare)

SCL66110	Olympia Plus animal weighing scale, 4,000g capacity

# **Illuminated Tail Vein Injection Unit**



We now offer an "Illuminated Rodent Tail Vein" unit that features a bright light illumination system with rechargeable batteries and recharge unit. The light bulbs are guaranteed for 20,000 hours of service. Both North American and Export models are available.

The Rodent Cone is useful for rodents weighing from 15g up to 500g. Four (4) suction cup feet hold the unit firmly to the lab counter top during procedures.

TL-562-220	Illuminated Tail Vein Injection Unit, 220v, includes base unit with cone, 2 batteries and charger
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# Surgical & Animal Handling

### **RFID Transponder System**



- Smallest transponder on the market for the smallest of animals
- Can be re-sterilized and reused, reducing your costs
- Patented technology provides data security

Micro-sized, implantable, wireless identification transponder tags are the only way to uniquely identify an animal from birth until deceased (not recommended for newborn mice). Identify any animal in any group with a simple hand held reader. Transfer the reader data to a database on a computer to track studies with the animals.

### **ID 100US Implantable Transponder with Lancet**

- Designed specifically for animal identification
- Individually packaged lancet with micro transponder
- Lancet designed to allow real-time visualization verification during insertion
- Biocompatible glass encapsulation
- Pre-sterilized and ready for use

#### LID 573 Pocket Reader

- Smallest portable reader
- Up to 1,600 readings can be stored
- Time and date stamp
- IRDA compliant interface and available in RS232 or USB connection

#### **GR-250 High Performance Portable Reader**

- Stores up to 3,072 readings with time/date stamp
- Rugged, ergonomic design
- Long reading ranges
- Maximum read area
- RS-232 port



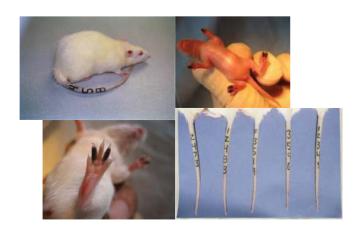
ID-100US	Micro Transponder with Lancet For Direct Implantation	
IM-100US	Pistol Grip Implanter for use w/ ID-100US	
LID-573	Pocket Reader with USB connection (includes USB cable)	
GR-250	High Performance Portable Reader	
GR-RS232	RS-232 Cable for GR-250	
LID-710	Bluetooth Low Energy Hand Held Reader	

#### **AIMS**

#### **Animal Tattoo Identification**

#### **AIMS Rodent Tattoo Systems**

- Equipment developed specifically for lab animal identification
- Proprietary pigments are safe and effective
- Techniques are humane and minimize pain and stress
- Permanent tattoos are quick and easy to read
- Unlimited technical support for your lab





NEO-9	AIMS NEO-9 Neonate Tattoo System
ATS-3	AIMS General Rodent Tattoo System
NEO-AP	Neonate Upgrade Kit
LLA-AP	Large Lab Animal Upgrade Kit
ATS-3L	Large Lab Animal Tattoo System

# Syringe Pump

### GenieTouch™ Syringe Pump Infusion/Withdrawal Dual Syringe Pump



#### **Standard Features**

Infusion/Withdrawal Multi-Syringe Capability Selectable Functions:

- Constant Rate
   Time Dispensing
   Volume Dispensing
- Ramp
- Pulse
- Stepped

Automatic Positioning/Stalling Detection Touchscreen Control-Glove Friendly USB Computer Interface Greater than 20 kg Linear Force Push-Pull Capability Bi-directional Left or Right Operation

#### **Specifications**

# of Syringes	Up to 4
Syringe Size	0.5 ul to 60 ml
User Interface	Touchscreen
Linear Force	Greater than 20 kg
Flow Rates	Min: 0.0001 ul/hr
	Max: 220.82 ml/min
Selectable Functions	Constant Rate
	Time Dispensing
	Volume Dispensing
	Ramp
	Pulsed
	Stepped
Programmable Fill/Empty	Yes
Pusher Block Stall Detection	Yes
Computer Interface	USB
Audible Alarm Indication	Yes
Carriage Position Detection	+/-0.2 mm
	17 0.2 111111
Multi-Syringe Rack	Optional
Multi-Syringe Rack Force Adjustment	
, <u>C</u>	Optional

