

30th
ANNIVERSARY
Since
1988

UPGRADED DESIGN



PRODUCT CATALOG

ANESTHESIA VENTILATORS FOR ALL SIZE ANIMALS
FIFTH EDITION



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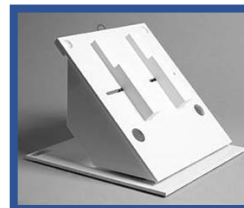


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Pedestal Stand Attachments

Featuring Tool Free Installation Design



Convenient design allows multiple attachment configuration options.
These items will fit 1-3/4" diameter column pedestals.
All units can be customized to adapt to a square post.

Pedestal Stand Attachments cont.

000A6179 – Mayo Instrument Side Tray

000A6185 – IV Pole Attachment

(Unit also comes with rolling stand to use as a stand-alone unit)

000A6186 – E-Cylinder Tank Attachment

000A6189 – Basket Attachment #1, 10.5” x 5” x 13”

000A6190 – Basket Attachment #2, 9” x 6” x 11.5”

000A6191 – Basket Attachment #3, BP Cuff

000A6192 – O2 DISS Dual Interface Attachment

(Custom gas interfaces can be made)

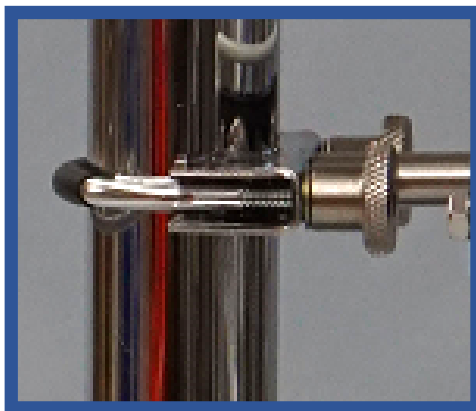
000A6193 – Power Strip Attachment

(Hospital Grade, 4 outlet w/15’ Cord, 15Amp)

*****Mounting can be customized to other sized columns and square posts*****

No more maintenance calls!

Our NEW tool free design makes installation a snap with the comfortable knurled hand-tights. The tool free design allows these units to be just as easily removed, adjusted, and relocated by simply undoing the knurled knobs. Units come with easy to read instructions.





VetTrends® V plus Veterinary Vital Signs Monitor

Continuing to improve veterinary patient outcomes

ECG, SpO2, Indirect Veterinary Blood Pressure, Temperature with optional/modular:

- Mainstream or Sidestream Masimo EtCO₂ and/or Printer
- Optional: Invasive Blood Pressure

- o Still... dedicated SOLELY to Veterinary Medicine
- o Still... 100% manufactured in the United States
- o Still... uniquely designed for the veterinary patient
- o Still... simple to use with no confusing, expensive touch screen
- o Still... loved by veterinary clinicians and staff with over 17 years in veterinary use



Key Features

- o **Quality** – Manufactured 100% in Boston, MA by an FDA certified vital signs manufacturer for VetTRENDS
- o **Serviceability** – Serviced in Boston by certified Vital Signs monitor service personnel
- o **Reliability** – CE, UL, FDA Certificated Manufacturer with a 3 year warranty
- o **Portability/Adaptability** – Lightweight with heavy features, user replaceable lithium ion smart battery, modular printer and EtCO₂ that can travel to other clinical areas... better utilization and cost savings
- o **Accuracy** – All the Vet Trends patient parameters are uniquely developed for the veterinary patient
- o **Viewable** – High definition intuitive color screen with all patient parameters presented for easy interpretation
- o **Durability** – Built for the Veterinary clinic... a hostile environment
- o **Expandability** – The Vet Trend V plus is a Windows product design with a commitment to grow with your veterinary clinical and economic needs
- o **Value** – Finally! A real American Veterinary expandable monitoring system, designed for veterinary clinicians, staff, and patients at an affordable price.



Right Side View with Optional Printer

The Many Faces and Functions of the Vet Trends plus

Finally a veterinary monitor that grows with your clinical and economic needs. Simple to operate, yet powerful enough to meet your current and future clinic needs.

This will be the only veterinary monitor you will ever need to buy!



Base Screen



Patient Data Entry



Trend Screen



Advanced Screen

VetTRENDS® V Plus Veterinary Monitoring System Model Options

One Veterinary Monitoring System Meeting all Current & Future Monitoring Requirements

Standard features in all BASIC options:

- Windows Operating System
- ECG w/ Dual Vector and Cascade Features
- Non-Invasive Blood Pressure (NIBP) Validated for Veterinary Use
- Pulse Oximetry SpO2 w/ Nellcor Lingual Sensor
- Temperature
- Patient Data Entry on the Monitor
- USB Storage

135A6441 -- VetTRENDS V Plus Monitor - Opt. 01 BASIC

135A6442 -- VetTRENDS V Plus Monitor - Opt. 02 BASIC w/ Printer

135A6443 -- VetTRENDS V Plus Monitor - Opt. 03 BASIC w/ EtCO2

135A6444 -- VetTRENDS V Plus Monitor - Opt. 04 BASIC w/ EtCO2 & Printer

135A6445 -- VetTRENDS V Plus Monitor - Opt. 05 BASIC w/ EtCO2 & Invasive BP

135A6446 -- VetTRENDS V Plus Monitor - Opt. 06 BASIC w/ EtCO2, Invasive BP & Printer

135A6481 -- VetTRENDS V Plus Monitor - Opt. 07 BASIC w/ EtCO2 & Anesthetic Agents

135A6482 -- VetTRENDS V Plus Monitor - Opt. 08 BASIC w/ EtCO2, Anesthetic Agents & Printer

135A6483 -- VetTRENDS V Plus Monitor - Opt. 09 BASIC w/ EtCO2, Invasive BP, Anesthetic Agents & Printer

135A6484 -- VetTRENDS V Plus Monitor - Opt. 10 BASIC w/ EtCO2, Invasive BP, Anesthetic Agents w/O2 & Printer



**Fully Configured
w/ All Patient Parameters**



Extensive ECG Capabilities



For additional specifications,
refer to Operator Manual

(Specifications subject to change without notice)



www.VetTrends.com

Hallowell Model 2002^{PRO} Ventilator

UPGRADED DESIGN
Includes a 2 Year Warranty

The Model 2002 became our best-selling ventilator with the addition of a fine volume control valve. Now with the Model 2002^{PRO} we have simplified the Model 2002 with the replacement of the two volume control valve knobs to one volume control valve knob which has the functionality of both. In addition, we have added the previously optional Low Supply Gas Pressure Alarm to the list of standard features. All other parts and accessories for the Model 2002^{PRO} have remained the same.

Also available the Model 2002IE^{PRO}

The single valve turns a total of nine and a half times; the first two and a half turns utilize the slight, minute changes for the pediatric animal patient while the remaining rotations are to be used with the adult and extra large sized bellows and housings.

Low 50 psi Supply Gas Alarm – The Low Supply Gas Alarm is activated when the supply gas pressure drops below 35 psi (2.4 bar). During an alarm condition, the yellow light on the front panel is illuminated and a steady, continuous tone is heard. This alarm automatically resets when the pressure increases above 40 psi (2.7 bar).



Electronic control - Eliminates the substantial driving gas required to operate pneumatically controlled ventilators.

Time cycled - Ensures consistently spaced breaths. The possibility of stacking breaths or auto-PEEP is eliminated by keeping the I:E ratio constant at 1:2. This means that regardless of the respiratory rate, setting two-thirds of the breath will remain for expiration. The respiratory rate is adjustable from 6 - 40 breaths per minute (BPM).

Volume constant - Ensures that each delivered breath will have essentially the same volume, independent of changes in patient compliance and airway resistance. The deliverable tidal volume (TV) range is from approximately 20 cc to 3,000 cc.

Pressure Limited - Provides for patient safety by limiting the maximum working pressure (MWPL) to a user adjustable pressure range of 10 - 60 cm H₂O.

All Hallowell Ventilators are equipped with dual airway pressure alarms that monitor and sound when the Peak Inspiratory Pressure (PIP) of any breath either exceeds the preset Maximum Working Pressure Limit (MWPL) or fails to reach 6 cm H₂O as in the case of a disconnect.

Please see model options on page 9

The Model 2002^{PRO} replaces both the Model 2000 and the Model 2002 with the functionality of both units in one machine. Technical Service, Upgrades and Repairs will still be available and continue on the 2000 and 2002 Models.

Model 2002^{PRO} and 2002IE^{PRO} Series Ventilators



000A5765 - Multiflow 2002^{PRO} Anesthesia Ventilator 0-300 ml.

000A5766 - Multiflow 2002^{PRO} Anesthesia Ventilator 300-1600 ml.

000A5767 - Multiflow 2002^{PRO} Anesthesia Ventilator 1600-3000 ml.

000A5768 - Multiflow 2002^{PRO} Anesthesia Ventilator 300-1600ml; also includes 0-300ml attachment.

000A5769 - Multiflow 2002IE^{PRO} Anesthesia Ventilator with Adjustable I:E Ratio 0-300 ml.

000A5770 - Multiflow 2002IE^{PRO} Anesthesia Ventilator with Adjustable I:E Ratio 300-1600 ml.

000A5771 - Multiflow 2002IE^{PRO} Anesthesia Ventilator with Adjustable I:E Ratio 1600-3000 ml.

000A5772 - Multiflow 2002IE^{PRO} Anesthesia Ventilator with Adjustable I:E Ratio 300-1600 ml; also includes 0-300ml attachment.

After purchasing your new Model 2002^{PRO} Series ventilator keep in mind we do recommend your unit be made available at least once a year for our cleaning/calibration service.

000A2790 - Ventilator Calibration/ Cleaning

If you are having problems with your Ventilator, or would just like routine maintenance performed on it, send it in to us for our Calibration & Cleaning Service. Our knowledgeable technicians will service your machine till it's like new. Please call us at (413) 445-4263 before sending your machine back.

We will ask you a few simple questions and then issue you a Return Authorization number.



Hallowell EMC Loaner Program

This program is specifically designed for our established customers who are in need of a ventilator for a short period of time; this could be for a one-time procedure or to offset the time of sending their unit back for a Service/Cleaning & Calibration. Program document available upon request.

Model 2000/2002/2002^{PRO} Options and Accessories

000A3017A – Upgrade Modification 2000/2002 to a 2002^{PRO}

A single multiturn flow valve will replace the current coarse and fine flow valves of the Model 2000 and Model 2002 ventilators. The feature of the multiturn valve controls the fine and coarse adjustments that can regulate the inspiratory flow from ~0 to 100 lpm. The VOLUME control knob divides 100 liters/minute of drive gas into 9-1/2 turns of the valve. This option is particularly useful in making small changes to any VOLUME adjustment, as it provides increased resolution making volume adjustment much easier and precise with small dogs and cats.



UNAA0979 - Modification of Model 2000/2002/2002^{PRO}: Add Adjustable I:E Ratio

Available on all Model 2000, 2002 and 2002^{PRO} is the option of having an adjustable I:E Ratio control. Normally, without this option, the I:E Ratio is fixed at 1:2; that is, 1/3 of the period of each breath is inspiration and 2/3 of each breath is exhalation. Regardless of the respiratory rate, the patient will always have 2/3 of the cycle to exhale.

The adjustable range is from 1:1.5 to 1:4. The pros and cons are that this option affords the operator more flexibility in dealing with animals that have compromised lung function. But during anesthesia most patients are lung healthy, and the addition of this control can add to the complexity of setting the ventilator. For example, consider that you have a hypocapnic patient. To bring that patient's CO₂ level to a more normal range, you must decrease the overall gas exchange, the Minute Volume (MV). Without this option, only one knob controls the MV, which is the Volume control. With this option, however, increasing the I:E ratio would also cause a reduction in MV.

000A2425A - Low 50psi Supply Gas Pressure Alarm (Option)

(All Model 2002^{PRO} and Model 2002IE^{PRO} Series units have this as a standard feature.)

This alarm is an option for all versions of Model 2000 and 2002 Ventilators. It was not a standard feature because many facilities have central alarm systems on their oxygen supplies. If however you do not have a central alarm, use oxygen from small bottles, or use another gas as driving gas, this may be a beneficial option for your facility.

When the supply pressure drops to below 35 psi, the alarm light is illuminated and the ventilator emits a steady continuous tone, signaling the point at which the output of the ventilator will begin to drop proportionally to the supply pressure.

Model 2000/2002/2002^{PRO} Options and Accessories cont.



000A4632A – *Remote Inspiratory Hold Push Button Installation Kit

Useful for CT or X-ray machines. The remote inspiratory hold button allows the breathing cycle hold function to be initiated by the operator at a distance (up to 30ft) from the ventilator.

***This added option would consist of returning the controller portion of the ventilator for modification to accommodate the remote switch. Also can be ordered with the purchase of a new machine.**

000A4632B – *Remote Inspiratory Hold Push Button with O₂ Flow Interruption Installation Kit



Useful in MRI, CT or X-ray machines. The remote inspiratory hold button allows the breathing cycle hold function to be initiated by the operator at a distance (up to 30ft) from the ventilator. The O₂ flow interrupter stops the flow from the anesthesia machine at the same time as the hold. For MRI installation, see the document entitled “Installation of a Hallowell Ventilator in an MRI Environment with an MRI Compatible Anesthesia Machine”.

***This added option would consist of returning the controller portion of the ventilator for modification to accommodate the remote switch. Also can be ordered with the purchase of a new machine.**



000A2420B – Airway Pressure Sampling Tee with Tubing

This device connects the patient side of the Inspiratory valve of your anesthesia machine to the “Pressure Transducer” port on the back of your ventilator. The ventilator monitors the breathing system pressure from this line to watch for two alarm conditions: a low breathing system pressure and a breathing system pressure that equals or exceeds the maximum working pressure limit setting (MWPL).

Model 2000/2002/2002^{PRO} Options and Accessories cont.

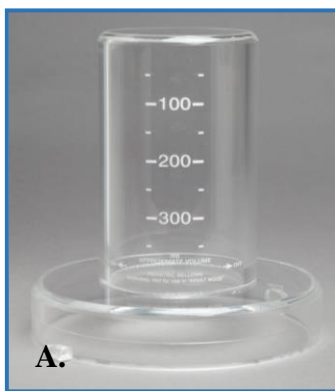
Bellows and Housings

000A0487A – Bellow 0-300 mL for patients up to 30 lbs/13.5kg

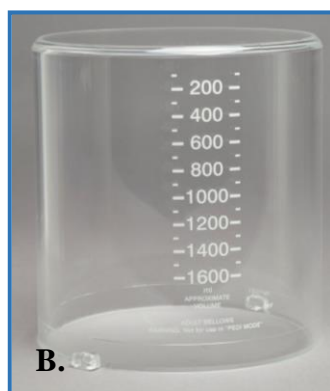
000A0488A – Bellow – 300-1600 mL for patients from 25-220 lbs/11.5-100kg

000A1866 – Bellow 1600-3000 mL for patients from 200-440 lbs/90-200kg

All bellows are made of a non-latex material. Bellows can be used as replacements for those used on the Fraser-Harlake 701, Penlon AV500 and 600, and the Ohmeda 7000. The housing can be used as a replacement for the AV 500 ventilators.



A.



B.



C.

(A.) **200A2288** – Bellows Housing, 0-300mL

(B.) **200A2289** – Bellows Housing, 300-1600mL

(C.) **200A1867** – Bellows Housing, 1600-3000mL



000A0481 – 0-300mL Attachment

This attachment groups three separate parts into one item number. It includes a pediatric bellow (000A0487A), a 0-300mL bellows adapter (000A0486), and a 0-300mL acrylic bellows housing (200A2288).

Model 2000/2002/2002^{PRO} Options and Accessories cont.

Ventilator Stands and Mounting Options



000A0076 - Stand, 5 leg, 40" (1016mm) with Casters for Permanent Mounting

This stand has a plate welded to the top of the column. To mount the ventilator onto the plate remove the 4 rubber feet from the bottom of the ventilator with a Phillips Head screwdriver. Place the ventilator on the plate and screw the feet back on capturing the plate with the same 4 screws. Should you decide later you would rather place the ventilator elsewhere, you will still have the 4 rubber feet for table top use.



220A0083 - Mounting Arm

Permits attachment of the ventilator directly to the Matrx VMC. Must be used with Mounting arm extension (220A0897) for the VMS.

220A0897 - Mounting Arm Extension VMS

The mounting arm extension is designed to facilitate mounting our ventilator on the Matrx VMS anesthesia machine. It has two holes, one on each end, that are 5/8". The holes are 7 inches apart. The material is anodized aluminum.



Model 2000/2002/2002^{PRO} Options and Accessories cont.

Ventilator Stands and Mounting Options



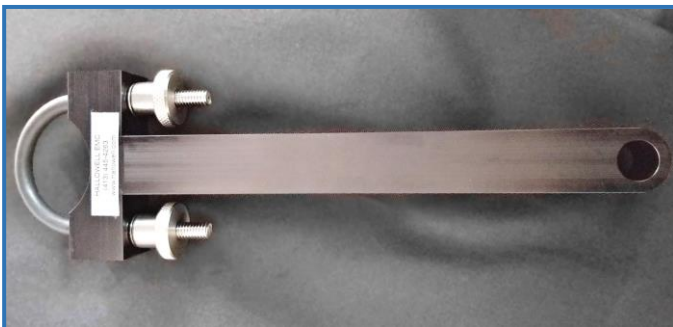
000A1868 – Mounting Plate

000A0899 - Mounting Plate Assembly with Arm,VMC/VMS

Includes: Mounting Plate (000A1868) and Mounting Arm (220A0083). Permits attachment of the ventilator directly to the Matrix VMC. Mounting Arm Extension (220A0897) is also required for use with a VMS.



210A5193A – HEMC Pole Mount Bracket, 2” Diameter



This bracket can be used in conjunction with any, and most, rolling stand and anesthesia machine poles. The bracket attaches to the pole with a U-Bolt and the tool free hand tighters are fastened to ensure a tight fit. This item is meant to be used in conjunction with 000A1868 or 000A0899, listed above. The hole in the bracket will accept either of the pins on the items above, keeping your operating suite tidy and conveniently mobile.

000A3397 - Mounting Kit for VMS Plus

Used when the ventilator sits on top of a shelf far from the bag connection. The screws are to fix the ventilator down so it does not fall off the shelf; the elbow goes on the back of the ventilator breathing system connection and points towards the floor. The tube is 48" instead of 36" and goes from the elbow to the bag connection.



Gas Supply Hoses and Fittings

Please inquire about our NEW
Medical Gas Fittings Catalog.

It includes a wide variety of DISS, Schrader,
Puritan, Chemetron, and Ohmeda:

- Quick Connects
- Demand Valves
 - Adaptors
 - Check Valves
- Pipe Thread Fittings
- Many Other Options Available!



All listed Demand Wyes have one DISS female hand-tight nut and two DISS male demand valves. The demand valves remain closed until a mated fitting is attached. When the mating fitting is connected the valve opens permitting bidirectional flow.



150A1692 – White DISS O2 Demand Wye
150A1691 – Green DISS O2 Demand Wye

150A2956 – White DISS O2 Demand Wye 90°
150A2951 – Green DISS O2 Demand Wye 90°



Also available in ISO and all quick connect styles

Typical usage:

This part may be needed to provide a 50psi oxygen source for the ventilator if your anesthesia machine does not have a power-take-off, a 50psi oxygen outlet. To install the Demand Wye:

1. Turn off the oxygen supply to the anesthesia machine.
2. Remove the oxygen supply hose at the back of the anesthesia machine.
3. Check to see that the connection on the back of the anesthesia machine is a DISS O2 male connection.
4. Connect the hand tight fitting of the Demand Wye to the anesthesia machine.
5. Reconnect the oxygen supply hose.

The system is now restored to its original integrity with the addition of an available source of oxygen for the ventilator. The next step would be to connect an oxygen hose between the remaining male connection on the wye and the ventilator. Hallowell EMC provides Parts 000A0489 and 000A0490 for this purpose, custom hose assemblies are also available.

Gas Supply Hoses and Fittings cont.



000A0490 - White DISS O2 Supply Hose
FxF Hand Tight 4' (1220 mm)

000A0489 – Green DISS O2 Supply Hose
FxF Hand Tight 4' (1220 mm)

These hoses are used to connect the ventilator to the O2 power outlet of your anesthesia machine or Demand Wye. Custom lengths are available.

Other Supply Hose Variations

- **000A2768** – Green DISS O2 Supply Hose FxF Hand Tight 6' (1830mm)
- **000A2768A** – Green DISS O2 Supply Hose, FxF Hand Tight 10' (3048mm)
- **000A5249** – White DISS O2 Supply Hose, FxF Hand Tight 6' (1830mm)
- **000A5249A** – White DISS O2 Supply Hose, FxF Hand Tight 10' (3048mm)
- **000A5251** – Green DISS O2 Custom Length
- **000A5250** – White DISS O2 Custom Length

Extension Blocks; O2, DISS Hand-Tight Female Inlet x DISS Demand Outlets



150A5682 - O2, DISS Round Pole Mount Interface, 1-3/4"





















All of the above Medical Gas Fitting Products can be special ordered to reflect the gas source in operation. The available products and ordering variations are listed in our Medical Gas Fittings Product Catalog.

Custom Hose Assemblies

*We are able to create a custom hose to specifically fit your facilities' needs.
Please call with any questions you have or send an e-mail to: info@hallowell.com*

Color-coding is used as a gas identifier worldwide for medical gas fittings and connectors. The following chart shows the USA standards on the left and International standards on the right.

	USA	ISO
Carbon Dioxide	 Grey	 Grey
He-O₂	 Brown and Green	 Brown and White
Medical Air	 Yellow	 Black and White
Nitrogen	 Black	 Black
Nitrous Oxide	 Blue	 Blue
O₂-He	 Green and Brown	 White and Brown
Oxygen	 Green	 White
Vacuum (Suction)	 White	 Yellow
WAGD (EVAC)	 Purple	 Purple



Schrader



Ohmeda



Puritan



Chemetron

Quick connects, female couplers, USA and ISO color-coding available!

TAFONIUS

(Wind God)

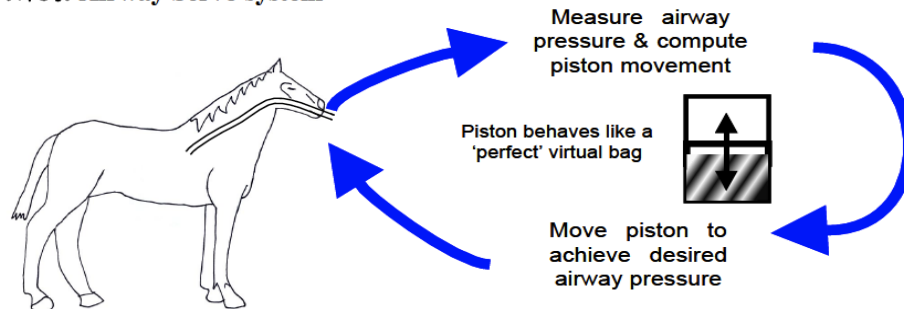
"Tafonius - undeniably the last word
in mechanical lung ventilators"

The University of Edinburgh Royal (Dick) School of Veterinary Studies

TAFONIUS does not use any pressurized gas to drive the ventilator. Instead, a precision motor system controls piston movement. This results in silent operation, reduced running costs, and precise control. The advanced motor system and motor control means that the piston can behave like a virtual bag during spontaneous ventilation and during the expiratory phase of controlled ventilation. Also, any part of the respiratory cycle can be executed as a series of phases of varying lengths. Any phase can have a resolution of less than 1/100th second. During normal IPPV, for example, only one phase is used during inspiration and it lasts the full length of inspiration. During expiration, multiple phases are used each one lasting 5ms (200 times per second). In each of these phases, airway pressure is measured and the piston moved accordingly. Not only does this system provide very smooth control of breathing but allows the implementation of an Airway Servo System to control patient airway pressure.



TAFONIUS: Airway Servo system



If the Servo Airway pressure is set to 0 cm H₂O then the patient experiences no resistance to breathing out, significantly reducing the work of breathing. To the patient it feels like exhaling to ambient with no machine attached. If the Servo Airway pressure is set to 5cm H₂O then the patient experiences 5cm of CPAP or PEEP. With the combination of multiple phases and an Airway Servo System, any pattern of breathing can be designed and implemented. In time, researchers will develop a library of ventilating modes, patterns, sequences and maneuvers that can be used to ventilate your patient. You will no longer need to buy another machine to obtain new features.

TAFONIUS JUNIOR



TAFONIUS JUNIOR has grown out of the demand for a large animal ventilator with the versatility of TAFONIUS, but without the inherent cost of the integrated monitoring.

JUNIOR fulfills that role by using the same controlling technology for the piston control and the same mechanics for piston, valve assembly and soda-lime canister. The footprint of Junior is kept small, and the height is reduced compared to TAFONIUS. JUNIOR still has full battery back-up and only requires oxygen for patient delivery, not as a driving gas. JUNIOR also uses the same auxiliary back-up controller found on TAFONIUS as its primary controller.

We have added the following features to JUNIOR that were not originally on the auxiliary control built into TAFONIUS (These features are now standard on all JUNIOR machines):

- CPAP or PEEP facility
- A flow-triggered Inspiratory assist mode
- Manual Exhaust valve control

Variants:

- One variant has no anesthetic circuit included and hence no valves or patient tubes. It is “without gas,” and a ventilator only. There is a single tube leading from the piston to your existing large animal anesthetic circuit. In this format, JUNIOR will immediately integrate with your own anesthetic circuit, if you do not already have a ventilator.
- The second variant of JUNIOR is a machine with in-built anesthetic circuit, “with gas”.

Options available for Junior include:

- A second gas
- An E-cylinder mount and regulator – P/N 000A5266 for CGA or 000A5268 for ISO color code
- An IV pole – P/N 000A5246
- VML mounting post – P/N 000A5247

TAFONIUS Accessories



000A4640 – 22mm Breathing System for Tafonius



000A4638 – DRYLINE Water Trap for Tafonius



000A4635 – Mini Flexible Waterproof Keyboard



000A5625 – IV Pole



000A4621 – Absorber Pan, Taf.



000A4636A – Breathing Tube Adapter for Taf.



200A4439A – Coupling for 2" Breathing System Tubing

These stainless-steel couplings can be used to extend the length of any standard 2" breathing tube for situations such as an MRI.

The tubes can be placed through a wave or if the anesthesia machine is located within the magnet room the extended tubes can simply run across the floor.

TAFONIUS delivers each breath with compliance compensation; having extra-long tubes is no problem at all. The animal always receives the set TV regardless of the size of the breathing system. Before each case, TAFONIUS measures the compliance of the breathing system currently attached. Based on this information it delivers the set TV plus the volume that will be lost to the compliance or compression volume of the breathing system.

Please see page 38 for two-inch tubing options

Large Animal Wyes

Hallowell Equine Wyes can be used with both Funnel fit, Bivona, and Drager style metal endotracheal tube adapters.



200B0018B – Wye 2” (50.8mm)
Basic Equine Wye

220B0140C – Wye 2” (50.8mm)
Equine Wye with Gas Sampling Port



220B0255 – Wye, 2” (50.8mm)
Equine Wye with Gas Sampling Port and
Bronchodilator Injection Port

220B0256 – Wye, 2” (50.8mm)
Equine Wye with Gas Sampling Port, pressure
pickup, and Bronchodilator Injection Port



Anesthesia WorkStation

000A2770 - Anesthesia WorkStation (AWS)

The solution for supplying both anesthetic gas delivery and ventilatory support for pocket pets, avian, exotic and laboratory animal applications in one easy to use package.

A compact (9"x 9"x 15"h), portable (15lb.), convenient, circle system for use on animals under 7kg (15 lbs) or now up to 14kg (30lbs) with the 200mL attachment.



The AWS has proven itself to be well suited for both short and long term anesthetic procedures with animals ranging in weight from about 150 grams to 6 or 7 kilograms. In procedures with these small animals, the AWS has been used for mask inductions and the subsequent maintenance of spontaneously breathing masked or intubated patients as well as providing

ventilatory support for the intubated patient for minutes or days at a time. Throughout these procedures the AWS, with any precision vaporizer, has been shown to facilitate the administration of gas anesthetics, holding the subject in a very smooth controlled anesthetic plane. This device, with a circle system designed uniquely for small animals, helps cut down on hypothermia problems with its heated ventilator, CO₂ absorber chamber, and the humidified breathing gas delivered to the patient. The AWS is currently being used on many diverse species such as rabbits, turtles, tamarins, woodchucks, crows, Cooper's hawks, various ducks, Canadian geese, snakes, rats, ferrets, owls and even cats and dogs.

The Hallowell EMC Anesthesia WorkStation is easy to use as BOTH a basic respirator (irrespective of anesthetic regimen, gas, or injectable) and delivery source for inhalant anesthetics. It incorporates a time-cycled volume ventilator with an adjustable pressure safety limit. The only additional component necessary for immediate utilization is a vaporizer for the agent of your choice.

The System Includes:

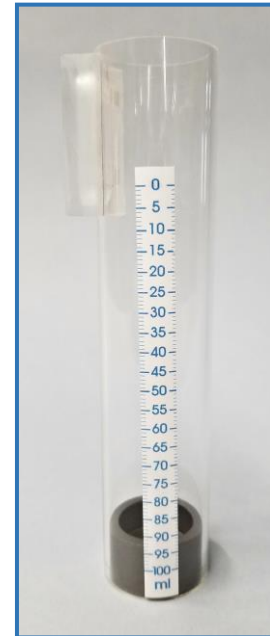
- Oxygen Flow Meter, 0.2 to 1 lpm.
- Oxygen Flush Button, 5 lpm and interlocked with the expiratory phase of the breathing cycle for improved patient safety.
- Connections to and from an anesthetic vaporizer.
- Adjustable High Pressure Limit, 10 - 30 cmH₂O as indicated on the 30 segment airway pressure bar graph.
- High Breathing System Pressure Alarm
- Airway Pressure Manometer in bar graph format, 0 - 30 cmH₂O.
- Low Breathing System Pressure Alarm
- 0 - 100 ml Tidal Volume displacement ventilator tube.
- 300 ml CO₂ absorber.
- Enclosed and heated breathing system chamber.
- Power on/off switch and indicator.
- Volume Control.
- Rate Control, 4 - 80 breaths per minute and large LED display.
- Standby/Ventilate switch and indicator.
- Low Oxygen Supply Pressure Alarm.
- Alarm Silence pushbutton.
- DISS Male Oxygen supply inlet connection.
- 19mm Scavenging port.
- 90/240 Vac, 47/440 Hz operation.
- Circle system tubes with standard 15mm ET tube connection.
- 2.5mm low dead space ET tube adaptor that fits luer catheters.

AWS Attachments and Accessories

240A3267 – Anesthesia WorkStation 100ml Attachment

Comes standard with the 000A2770 – Anesthesia WorkStation.
Allows for a maximum tidal volume (TV) of 100ml, for patients
up to 15 pounds.

Please use this part number if ordering a replacement cylinder.



000A3393 - Anesthesia WorkStation 200ml Attachment

Doubles the maximum tidal volume (TV) deliverable from your Anesthesia WorkStation. Patients upwards of 30 pounds can now be anesthetized and/or ventilated with the Hallowell EMC Anesthesia WorkStation.

This option has made the AWS the anesthesia machine/ventilator of choice with Ophthalmologists and Criticalists operating on small dogs and cats because it is small, compact, precise, and easy to use.



220B0126B – Anesthesia WorkStation Absorber Body Assembly

Holds 300cc of carbon dioxide absorbent material.
The AWS is unique because, when attached to the machine, this Absorber Body Assembly is heated, effectively helping to cut down on hypothermia problems in small animals.

AWS Attachments and Accessories cont.



000A2777 - Anesthesia WorkStation Accessory Kit

1. (2) 152A1264 for vaporizer connecting tubes
2. (2) 200A2692 AWS Valve Disk
3. (1) 210A2845 5/32" Hex Key
4. (2) 210A2846 Cotton Swab
5. (1) 152A1261 ETTA, 2.5mm x15mm Low Dead Space with Port
6. (2) 152A1265 ET Tube Adapter, 8.5 mm x 15 mm
7. (2) 201A3364 AWS Breathing System Tube, Clear, 10 mm x 24"
8. (1) 220A3264B AWS Wye

000A3400 - AWS Breathing System Circuit 18" (457 mm)

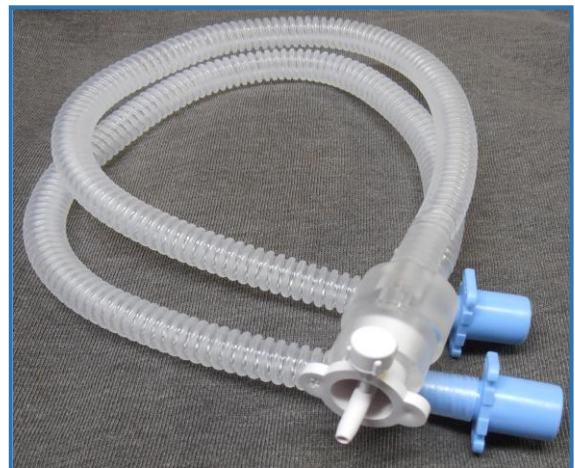
000A3401 - AWS Breathing System Circuit 24" (609 mm)

000A3402 - AWS Breathing System Circuit 30" (762 mm)

000A3403 - AWS Breathing System Circuit 48" (1220 mm)

Anesthesia Workstation Breathing System Circuit

Each comes with one 2.5 x 15mm low dead space with port ETTA, two 8.5 x 15mm ETTAs, an acrylic AWS wye, and two pieces of tubing.



000A3404 - Vaporizer/connector tube kit, AWS

MicroVent1 Accessories and Options



070A0739
Power Adapter, AUS



070A0737
Power Adapter, EURO



070A0738
Power Adapter, UK



070A0736
Power Adapter, US



090A0276 – MicroVent1
Power Supply (Included)



000A3798 – MicroVent1 Vaporizer Bypass Tube
(Included)

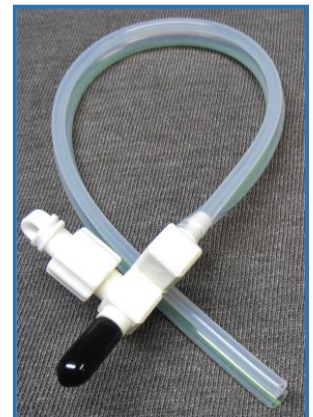


200A5537A - Breathing Circuit Hub Replacement, MicroVent1

Our newly improved hub allows for this part of the breathing circuit to be easily detached from the machine.
Useful when being stored or shipped back for servicing.

200A3586B – Breathing Circuit Replacement, MicroVent1

Attaches to the Breathing Circuit Hub (pictured above) and then to the small animal patient.



DRIPASSIST

000A2773 – DRIPASSIST



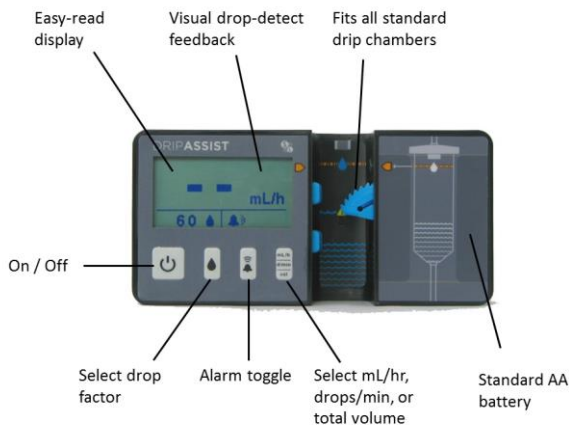
Hallowell EMC, in collaboration with Shift Labs, is excited to announce the addition of the DRIPASSIST to our product line. DRIPASSIST is a very simple, intuitive device that counts and times the drips running through the drip chamber on an IV bag. The information collected is, at your selection, displayed as ml/hr, drips/min or ml from the start.

Select the drip factor matching your drip set, 10, 15, 20 or 60 drops/ml, slide the DRIPASSIST onto the drip chamber, and observe a quantitative measurement of the drip rate that was manually set. Use the alarm function to alert you when the infusion rate changes significantly, an occlusion, kinked line, or an empty bag. Using this device reduces the possibility of human error.

Without an infusion pump, monitoring IV fluids and getting a documentable measurement is a time-consuming and difficult task. This problem is now easily remedied with the acquisition of DRIPASSIST.

DRIPASSIST is useful for many tasks:

- Transfusion medicine, in lieu of recent publications that indicate pumps damage the cells, decreasing the value of a transfusion.
- Busy surgery and referral services to substitute for broken IV pumps.
- Document gravity drip deliveries.
- Small day practices that want to start or do more fluid therapy.
- Administer known volumes from partially used bags, eliminating waste.



The DRIPASSIST simplifies IV fluid administration for veterinarians. Get precision measurement and monitoring without the complexity of expensive infusion pumps.



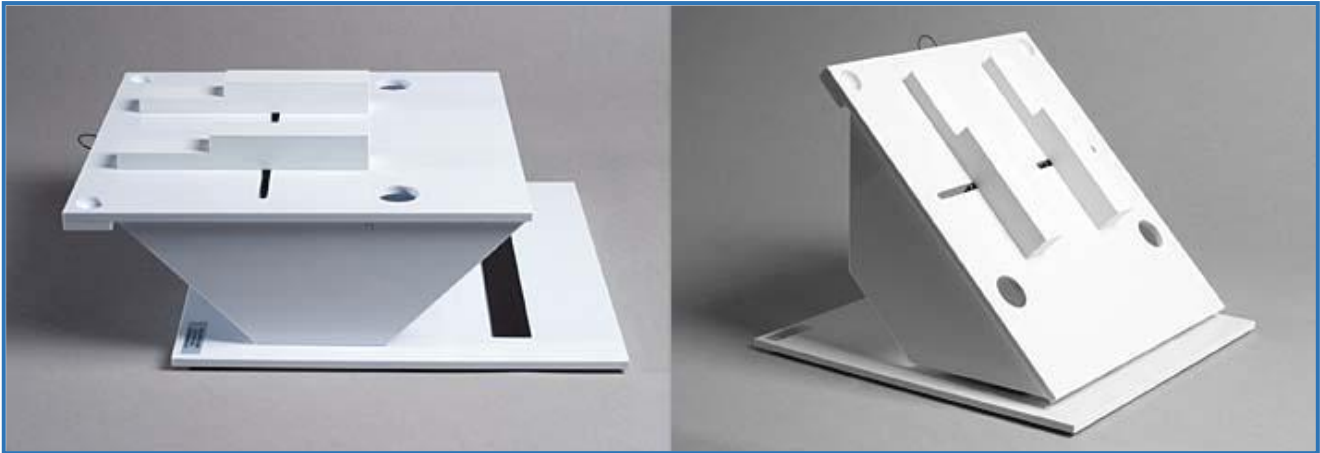
A digital eye to tirelessly watch

Eliminate human error from gravity IV infusion.
No more watching and counting drops to ensure accurate and consistent care.

DRIPASSIST does NOT CONTROL the rate of flow

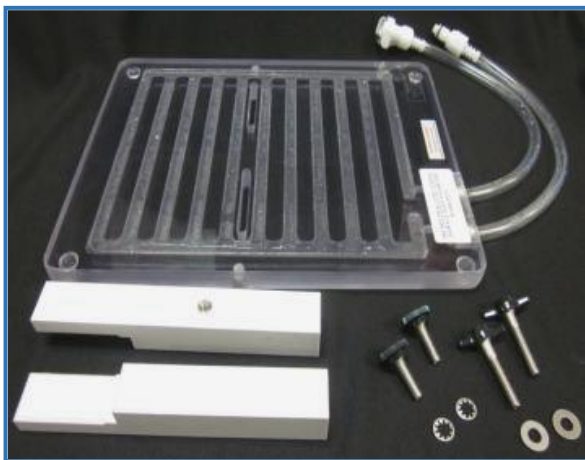
Rodent WorkStand

000A3467 – Rodent, Tilting WorkStand



The Rodent WorkStand has been developed in collaboration with George A. Vogler, D.V.M., DACLAM of Saint Louis University Medical School Department of Comparative Medicine, for the express purpose of facilitating various procedures required of today's laboratory technicians. The Rodent WorkStand is designed to support rats, mice and similar small rodents in a stable and comfortable position for the technician during endotracheal intubation, intratracheal dose instillation, and other similar procedures. 12" wide x 15" deep x 4" high when flat, tilted it is 12" wide x 12" deep x 9 1/2" high. (Flat-30.48cm x 38.1cm x 10.16cm, Tilted- 24.13 cm high)

000A5643 – Heated Hard Pad for the Rodent WorkStand



The Heated Hard Pad for the Rodent WorkStand is a 9" x 12" Heated Hard Pad that has been modified to work in conjunction with the Rodent WorkStand and a circulating pump. It may also be used without the WorkStand. Its design gives you the ability to use the heated surface, while still enjoying the benefits of the tilted WorkStand.

Intubation Packs



000A3746 – Rat Intubation Pack



000A3747 – Mouse Intubation Pack

These items are for use in conjunction with the Rodent WorkStand.

Each pack is designed to hold all the tools and supplies needed to perform quick, efficient, and minimally traumatic orotracheal intubation of small rodents. The Intubation Packs come with a specially designed and molded, autoclavable intubation speculum, a Lidocaine applicator, an endotracheal tube guide wire, an incisor loop and a brief video tutorial of how to perform the intubations. In addition, the Rat Pack contains scissors, umbilical tape, and a mirror for the verification of tracheal intubation and the Mouse pack includes two sizes of Hallowell's NEW mouse endotracheal tubes. Packaged neatly and conveniently in a 13" x 8" x 2" polypropylene organizer box with each compartment labeled for contents, reordering information, and what the part is used for. It can be stored most anywhere and always be ready for use.

(Both these packs do not include the otoscope as there are three approved models to choose from. Lidocaine HCL Jelly is not included as Hallowell EMC does not have a pharmacy license. Ordering instructions are included.)

Replacement Parts for Intubation Packs



200A3687 - Organizer Box

A 13" x 8" x 2" polypropylene organizer box with each compartment labeled for contents, reordering information and what the part is used for. It can be stored most anywhere and always be ready for use.



**210A3832A - Cotton Swab Pkg,
Mini Round (5 Packs of 25)**



**210A3490A - Incisor Loop
(Pack of 5)**



**200A3686A - Rat ET Tube, 5pk.
14GA Clear Catheters**



**200A3589L - Mouse Intubation
Specula, Long (Autoclavable)**



**200A3589S - Mouse Intubation
Specula, Short (Autoclavable)**



**200A3588 - Rat Specula
(Autoclavable)**



**210A3491 - Mouse ET
Tube Introducer**



**210A3492 - Rat ET
Tube Introducer**



**210A3496 - Mouse Lidocaine
Applicator**



**200A3683 - Mirror for
Intubation Verification**



210A3497 - Scissor



210A3488 - Umbilical Tape

Otosopes

* Indicates that Otoscope Head (Part F) is included but not pictured



Includes Batteries

A



B*



C



D*



E*



F

- A. **000A3748** - MDS Otoscope, with Operating Head, NiCAD Non Rechargeable Batteries
- B. **000A3768** - Otoscope, Welch Allyn Li-Ion with operation Head, UK Charger and Stand
- C. **000A3755** - Otoscope, Welch Allyn NiCAD with Operating Head and Euro Charger
- D. **000A3749** - Otoscope, Welch Allyn NiCad with operating Head and Integral US Charger
- E. **000A3754** - Otoscope, Welch Allyn Li Ion with Operating Head and US Charger
- F. **060A1084** - Otoscope Head, 3.5v w/o Specula
- G. **000A3756** - Otoscope, Welch Allyn Li-Ion with operation Head, Euro Charger and Stand



G

Heated Hard Pads and Pumps



000A4076A - Heated Hard Pad,
6" W x 8" D
(152mm x 203mm)

000A2789B - Heated Hard Pad,
9" W x 12" D
(228mm x 304mm)

000A2788B - Heated Hard Pad,
15" W x 24" D
(381mm x 609mm)

000A2787B - Heated Hard Pad,
21" W x 24" D
(533 x 609mm)



000A4084 – Heat Therapy (water)
HTP-1500 Pump – 120v

Flexible, Very Durable, Reusable Heating Pads are Available

These reusable pads are the perfect solution for veterinary warming. Available in 4 sizes, the pads fit table-tops, surgery tables and in kennel cages. The pads are made to fit Adroit HTP-1500 pumps, but adapters are available should you have a different pump. Pads may be used directly against the skin or covered with pillow cases or light-weight fabric for added protection against damage.



-----Heat Pads-----

000A3453 – 16" x 20"

000A3454 – 20" x 29"

000A3455 – 20" x 44"

000A3456 – 20" x 57"



Adapters and Fittings

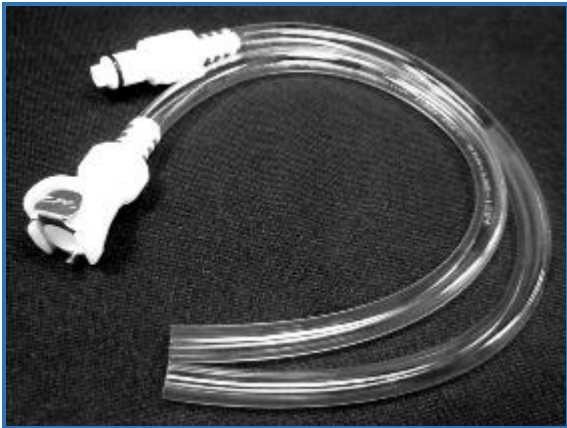


154A3417 – Female Heated Hard Pad Colder Shutoff Connector (Pictured above, left)

154A3418 – Male Heated Hard Pad Colder Shutoff Connector (Pictured above, right)



000A4637 – Gaymar Pump Adapter Kit



000A4083 – Hard Pad Replacement Connector Kit



000A4629 – HTP-1500 Adapter Kit



000A5270 – Circulating Pump Extension Kit, 25'

This item allows a longer range of use for your Heat Therapy Pump. It also includes two each of 154A3417 and 154A3418, female and male colder shutoff connectors. The tubing is paired together using double clamps. Also, available in 5' increments over the 25' length.

Vacuum/Scavenging Interface



This is the only scavenging interface system available with a backup, alternative method of scavenging. A newly designed vacuum/scavenging interface with scavenging redundancy.

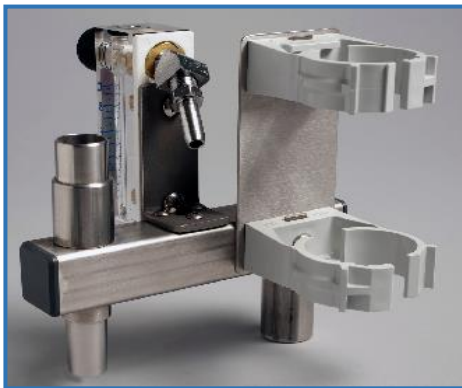
In the event of vacuum system failure, the anesthetics (not N₂O) in the waste gases are filtered by activated charcoal prior to exhausting into the room and the reservoir bag will not over distend.

No valves or the problems associated with moving parts. Scavenging flow is easily and precisely controllable between 1 and 10 lpm - visually verifiable at any time.

Scavenging connections (2) designed to accommodate both 19 and 22mm tubes. No more searching for adapters or white tape. Wall mount, pole mount, post mount, wall outlet mount, and ceiling drop mount configurations are available with any standard suction (vacuum) or EVAC connection, i.e., DISS, Ohio, Chemtron, Schrader or Puritan style quick connects and hose barb.

Create Your Vacuum/Scavenging Interface System

First, select one of the following five mounting options:



000A5631 – Vac/Scav Interface Round Pole Mount Options

Pole Clamps available in sizes:

**1" (#25), 1 1/8" (#28), 1 1/4" (#32), 1 1/2" (#36),
1 3/4" (#40), 2" (#47), and 2 1/4" (#59)**

The flowmeter connection for the Round Pole Mount consists of a 45 degree chrome elbow with a 1/4"ID chrome hose barb, which can be connected to an existing hose or an added hose made to length with a chosen Vacuum Source connector.

000A5632 – Vac/Scav Interface Square Post Mount Options

Set up to fit a **2" wide by a 1 to 1-1/2" deep** square post. Assemblies can be made to accommodate other size square posts.

The flowmeter connection for the Square Post Mount consists of a 45 degree chrome elbow with a 1/4"ID chrome hose barb, which can be connected to an existing hose or an added hose made to length with a chosen Vacuum Source connector.



Vacuum/Scavenging Options



000A5633 – Vac/Scav Interface Ceiling Drop Mount Options

The flowmeter connection for the Ceiling Drop Mount consists of a 90 degree chrome elbow with the orientation pointing up. This can be connected to an existing hose or an added hose made to length with a chosen Vacuum Source connector.

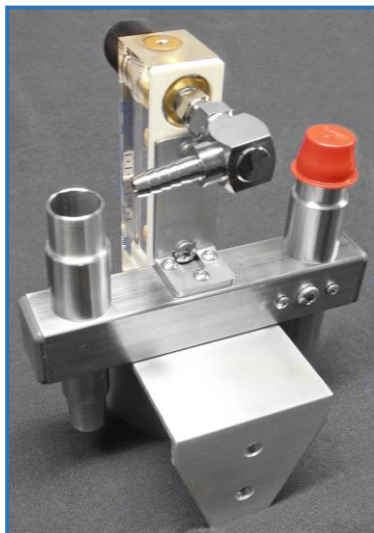
000A5634 – Vac/Scav Interface Wall Outlet Mount Options

The flowmeter connection for the Wall Outlet Mount will be determined by the outlet gas supply fitting. The unit will have a 2" nipple and a connector attaching straight to the wall plate.



000A5762 – Vac/Scav Interface Wall Mount

The flowmeter connection for the Wall Mount consists of a swivel barb, in order to easily orientate in the needed direction. This can be connected to an existing hose or an added hose made to length with a chosen Vacuum Source connector.



Vacuum/Scavenging Options cont.

VAC or EVAC hose?



How many feet of hose do you need?

Available Connectors:

DISS



Chemetron



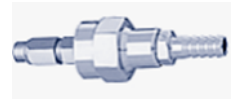
Ohmeda



Puritan



Schrader



Vacuum/Scavenging Accessories Included



200A3510 – Bag, 2 liter EVAC
Purple Reservoir



240A1450 – f/Air Canister



201A3367 – Tube, Scavenger 19mm
Purple 12” Segments, 10’ Long

TEC 3 Style Vaporizers

- 000A3441** – TEC-3 Style Vaporizer, with 250ml Sump (ISO, Well, Cage)
- 000A3443** – TEC-3 Style Vaporizer, with 250ml Sump (SEVO, Well, Cage)
- 000A3445** – TEC-3 Style Vaporizer, with 250ml Sump (ISO, Key, Cage)
- 000A3447** – TEC-3 Style Vaporizer, with 250ml Sump (SEVO, Key, Cage)



000A2786 – Service/Calibration Service for Vaporizer



Other style Vaporizers Available Upon Request



150A3072 - FS-2 Cage Mount Vaporizer Outlet Tubing Adapter for 5/16" ID Hose



150A3071 - FS-2A Cage Mount Vaporizer Inlet Tubing Adapter for 5/16" ID Hose



210A4839 - Vaporizer Mounting Bracket for 1" Diameter Pole

210A3314 - Vaporizer Mounting Bracket for 1-3/4" Diameter Pole

210A4838 - Vaporizer Mounting Bracket for 2" Diameter Pole



000A3404 – Vaporizer/Connector

PEEP Valves



- 242A1407 - Peep Valve 2.5 cm H₂O
- 242A1408 - Peep Valve 5.0 cm H₂O
- 242A1409 - Peep Valve 7.5 cm H₂O
- 242A1410 - Peep Valve 10.0 cm H₂O
- 242A1401 - Peep Valve 12.5 cm H₂O
- 242A1406 - Peep Valve 15.0 cm H₂O
- 242A1403 - Peep Valve 20.0 cm H₂O

Available in pressures ranging from 2.5 to 20 cm H₂O. Can be installed on the expiratory limb of the circle system to provide the desired level of positive end expiratory pressure.

200A3707 – Tee 22mm
Male x Female x Female Run Tee



In combination with the 22mm run tee above, the 20cm PEEP valve can be used as a relief valve to limit the peak airway pressure to 20cm H₂O while training a person how to squeeze a bag. Also, it can be used to give them a feel for what squeezing the bag to 20cm H₂O feels like.

Breathing System Tubing

Small Animal



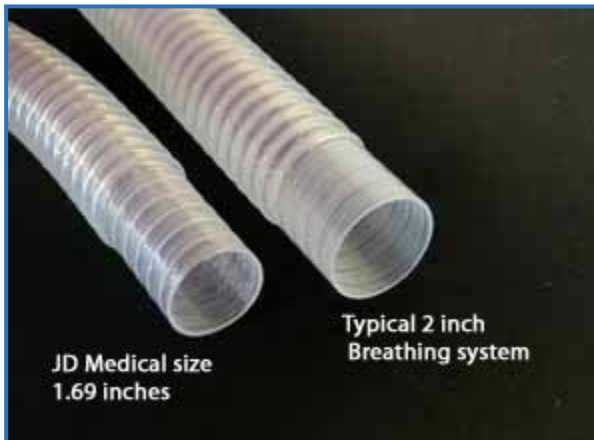
Clear, lightweight construction. Flexible yet low compliance. Kink free. Permits visual detection of condensation, mucous or blood in the lines. They drain well and dry quickly.

- 201A3363** - Anesthesia WorkStation Breathing System Tubing, Clear 10mm x 18 inches (457mm)
- 201A3364** - Anesthesia WorkStation Breathing System Tubing, Clear 10mm x 24 inches (609mm)
- 201A3365** - Anesthesia WorkStation Breathing System Clear Tubing 10mm x 30 inches (762mm)
- 201A3366** - Anesthesia WorkStation Breathing System Tubing, Clear 10mm x 48 inches (1220mm)
- 201A1615** - Breathing System Tubing, Clear 22mm x 36 inches (915mm)
- 201A1616** - Breathing System Tubing, Clear 22mm x 48 inches (1220mm)
- 201A1617** - Breathing System Tubing, Clear 22mm x 60 inches (1524mm)

- 202A2895** - Breathing System Tubing, Gray with cuffs, 22mm x 36 inches (915mm)
- 202A2896** - Breathing System Tubing, Gray with cuffs, 22mm x 48 inches (1220mm)
- 202A2897** - Breathing System Tubing, Gray with cuffs, 22mm x 60 inches (1524mm)



Large Animal



201A3373 - Breathing System Tubing for JD Medical Vet-Tech, Clear 1.69" x 36" (42mm x 914mm)

201A2921 - Breathing System Tubing for JD Medical, Clear 1.69 inches x 60 inches

201A3374 - Breathing System Tubing for JD Medical Vet-Tech, Clear 1.69" x 78" (42mm x 1981mm)

201A3377 - Breathing System Tubing, Clear 2 inches x 9 inches (50mm x 228mm)

- 201A3371** - Clear 2 inches x 40 inches (50mm x 1000mm)
- 201A1618** - Clear 2 inches x 60 inches (50mm x 1525mm)
- 201A1619** - Clear 2 inches x 78 inches (50mm x 1982mm)
- 201A4313** - Clear 2 inches x 120 inches (50mm x 3048mm)

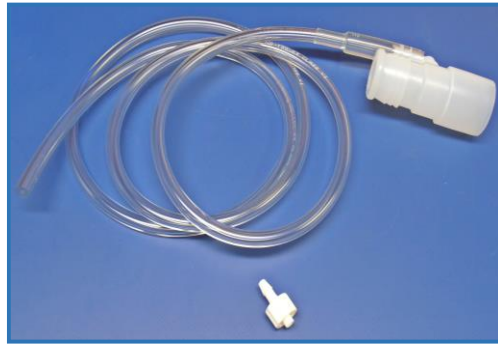


200A4439A – Coupling for 2" Breathing System Tubing

Replacement Parts and Accessories



110A1118 – Power Cord,
IEC 320 USA



000A2420B - Airway Pressure
Sampling Tee with Tubing
This device connects the breathing system
pressure to our Model 2000, 2002, and
2002PRO Ventilators enabling the high
pressure limit and low breathing system
pressure alarms.



000A0495 – Drive Gas Tube
Model 2000, 2002
& 2002^{PRO}



210A2344 – Thumbscrews
For Bellows Base
(4 Pack)



210A2343 – Thumbscrews
For Pop-Off Valve (3 Pack)



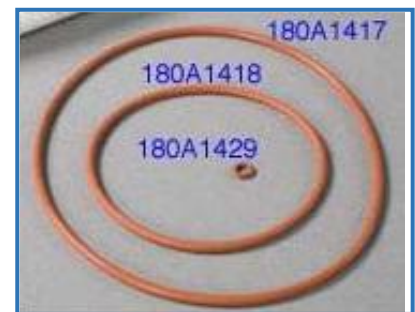
000A0485 – Pop-Off Valve



200A3707 – Tee 22mm
Male x Female x Female
Run Tee



230A2493A – Parker Super-O-Lube
.5 Ounce Tube



180A1417 - O-Ring, Base to
Housing
180A1418 - O-Ring, Bellows
adapter
180A1429 - O-Ring, Base to
Pop-off valve

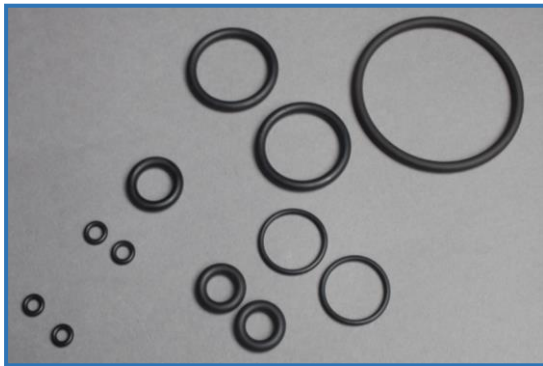
Replacement Parts and Accessories cont.



000A0510 – Bellows Base Assembly
Includes: Black base, four thumbscrews, four bayonet locks, pop-off valve, and three red pop-off valve thumbscrews.

000A2777 - Anesthesia WorkStation Accessory Kit

1. (2) 152A1264 for vaporizer connecting tubes
2. (2) 200A2692 AWS Valve Disk
3. (1) 210A2845 5/32" Hex Key
4. (2) 210A2846 Cotton Swab
5. (1) 152A1261 ETTA, 2.5mm x15mm Low Dead Space with Port
6. (2) 152A1265 ET Tube Adapter, 8.5 mm x 15 mm
7. (2) 201A3364 AWS Breathing System Tube, Clear, 10 mm x 24"
8. (1) 220A3264B AWS Wye



180A3406 – AWS O-Ring Replacement Kit *Includes:*

1. 180A1433 (x1) – O-Ring for the Manifold/Absorber
2. 180A1434 (x2) – O-Rings for the Manifold/Vent Tube and Cap
3. 180A1436 (x2) – O-Rings for the Valve Covers
4. 180A1438 (x2) – O-Rings for the Top Mount
5. 180A1439 (x2) – O-Rings for the Absorber Cap Thumbscrews
6. 180A1440 (x1) – O-Ring for the Absorber Cap
7. 180A3231 (x2) O-Rings for the Vent Cap Thumbscrews

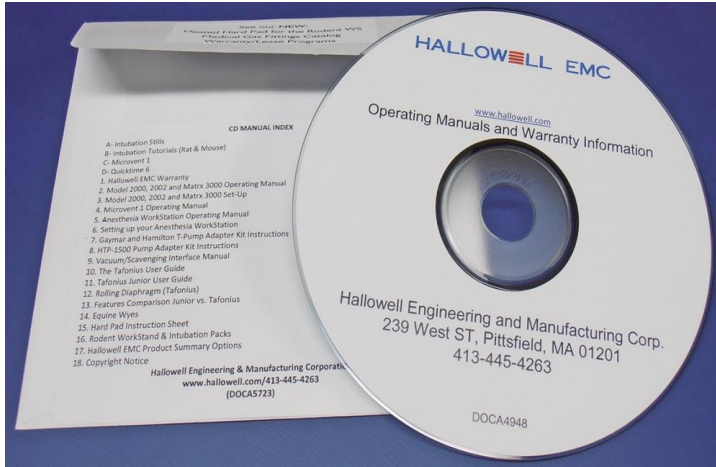


152A1264 – ET Connector, 6mm (AWS to 1/4" vaporizer tube)
152A1289 – ET Connector, 7.5mm (AWS to 5/16" vaporizer tube)
152A1265 – ET Connector, 8.5mm (Breathing System tube to AWS)

152A1261 – Low Dead Space ET Adapter 2.5mm x 15mm with luer sampling port
152A1262 – Low Dead Space ET Adapter 3.0mm x 15mm with luer sampling port
152A1263 – Low Dead Space ET Adapter 3.5mm x 15mm with luer sampling port



Information Available



DOCA4948B – Hallowell EMC Operating Manuals and Warranty Information

Comes with all Hallowell EMC Ventilators, Anesthesia WorkStations, MicroVents, Heated Hard Pads, Circulating Pumps, and Rodent WorkStands.

Contains setup and usage instructions for all items listed above, as well as our Warranty Information.



DOCA5726 – Medical Gas Fittings Catalog

This catalog shows the wide variety of medical gas fittings we are able to provide you with.

If you are unsure of what you need, or wish to request a custom assembly, contact us today! We are happy to construct an assembly to fit your facilities' specific needs.



DOCA6418 – Hallowell EMC Tafonius/Junior Product Catalog

A more detailed look at the Tafonius/Junior options available. Complete with comparison chart, parts and accessories.

Here's who to contact at Hallowell EMC with your questions and comments:

- W. Stetson Hallowell: President, Product Sales and Customer Support, Dealer Inquiries - Stetson@Hallowell.com
 - Rob Banister: Plant Manager/Purchasing (Materials Vendor's Agent) – Rob@Hallowell.com
- Nancy Palacios (English & Spanish): Technical Support, Return Authorizations – Nancy@Hallowell.com
- Sam Zeygerman (Russian & English): Technical Support, Return Authorizations – Sam@Hallowell.com
 - Bill Jennings: Accounts Payable/Receivable – Bill@Hallowell.com
 - Jenna DeMartino: Support Service – Jenna@Hallowell.com

All of us can be reached at +413-445-4263 or by fax to +413-496-9254.

**We take pride in giving our customers
the best service, knowledge, and
solutions to make your products serve
you at their full potential.
Stop by our website www.hallowell.com
and see how we may help you today.**

**Send inquiries and requests to
info@hallowell.com or give us a call at
413-445-4263**