**Table of Contents**

HEAT THERAPY WATER PADS –NEW— 4  
Model 2002\textsuperscript{PRO} – Model 2002IE\textsuperscript{PRO} –UPDATED DESIGN-- 5-6  
Model 2000/2002/2002\textsuperscript{PRO} Options and Accessories 7-8  
Model 2000/2002/2002\textsuperscript{PRO} Bellows and Housings 9  
Model 2000/2002/2002\textsuperscript{PRO} Ventilator Stands and Mounting Options 10-11  
Gas Supply Hoses and Fittings 12-13  
Custom Hose Assemblies 14  
\textsc{Tafonius} 15  
\textsc{Junior} 16  
\textsc{Tafonius} and \textsc{Junior} \ Comparison Chart 17-18  
\textsc{Tafonius} Accessories 19  
Large Animal Wyes 20  
Anesthesia WorkStation (AWS) 21  
AWS Attachments and Accessories 22-23  
MicroVent1 24  
MV-1 Attachments and Accessories 25  
\textsc{DripAssist} 26  
Rodent WorkStand 27  
Intubation Packs 28  
Intubation Packs Replacement Parts 29  
Otoscopes 30  
**Heated Hard Pads/Pumps/Flexible Heating Pads –IMPROVED DESIGN--** 31  
Heated Hard Pads Adapters and Fittings 32  
Vacuum/Scavenging Interface 33-35  
TEC3 Style Vaporizers/Mounting Options and Adapters 36  
PEEP Valves 37  
Breathing System Tubing 38  
Replacements Parts and Accessories 39-40  
Additional Information 41  
Order Form 42  
Contacts 43  

March 2016  
DOCA3678-4
INTRODUCING THE LATEST IN HEAT THERAPY WATER PADS

CONDUCTIVE WARMING FOR VETERINARY MEDICINE

FLEXIBLE, VERY DURABLE & REUSABLE HEAT THERAPY WATER PAD

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”

----------Heat Pumps----------
000A4084 – HTP 1500 120v
000A5003 – HTP 1500 220v

If you're in the market for a rigid heat therapy pad, check out Hallowell's line of Heated Hard Pads (page 30). Made with a new improved process and now with a 5 year warranty.
Hallowell Model 2002\textsuperscript{PRO} Ventilator

**UPGRADED DESIGN**
Includes a 2 Year Warranty

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.

The Model 2002 became our best-selling ventilator with the addition of a fine volume control valve. Now with the Model 2002\textsuperscript{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 Oxygen Pressure Alarm to the list of standard features. All other parts and accessories for the Model 2002\textsuperscript{PRO} have remained the same.

Also available the Model 2002IE\textsuperscript{PRO}

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 6*

The Model 2002\textsuperscript{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<sup>PRO</sup> and 2002IE<sup>PRO</sup> Series Ventilators

NEW 000A5765 - Multiflow 2002<sup>PRO</sup> Anesthesia Ventilator 0-300 ml; includes bellow, housing, and adapter.

NEW 000A5766 - Multiflow 2002<sup>PRO</sup> Anesthesia Ventilator 300-1600 ml; includes bellow and housing.

NEW 000A5767 - Multiflow 2002<sup>PRO</sup> Anesthesia Ventilator 1600-3000 ml; includes bellow and housing.

NEW 000A5768 - Multiflow 2002<sup>PRO</sup> Anesthesia Ventilator 300-1600ml; also includes 0-300ml attachment.

NEW 000A5769 - Multiflow 2002IE<sup>PRO</sup> Anesthesia Ventilator with Adjustable I:E Ratio 0-300 ml; includes bellows, housing, and adapter.

NEW 000A5770 - Multiflow 2002IE<sup>PRO</sup> Anesthesia Ventilator with Adjustable I:E Ratio 300-1600 ml; includes bellows and housing.

NEW 000A5771 - Multiflow 2002IE<sup>PRO</sup> Anesthesia Ventilator with Adjustable I:E Ratio 1600-3000 ml; includes bellows and housing.

NEW 000A5772 - Multiflow 2002IE<sup>PRO</sup> Anesthesia Ventilator with Adjustable I:E Ratio 300-1600 ml; also includes 0-300ml attachment.

After purchasing your new Model 2002<sup>PRO</sup> 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.


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 an option you would appreciate.

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.

**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).

**000A4632 – Remote Inspiratory Hold Push Button**

Useful in CT or X-ray rooms. The controller portion of the ventilator must be returned to Hallowell EMC for modification to add a female jack assembly in order to accommodate the remote switch.

**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).

Bellows and Housings

000A0487A – Bellow 0-300mL 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.

200A2288 – Bellows Housing, 0-300mL

200A2289 – Bellows Housing, 300-1600mL

200A1867 – Bellows Housing, 1600-3000mL
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 feet, place the ventilator on the plate and screw the feet back on capturing the plate. Should you decide later you would rather place the ventilator elsewhere, you will still have the 4 rubber feet.

000A2610 - Stand, 5 leg, 40 inches (1016mm) with Casters and Bushing Mount (000A1868 needed to mount ventilator)
This stand has a bushing at the top of the column with a locking hand screw. The bushing has a 5/8" hole in it to accept our mounting arm (PN 220A0083) and mounting plate (PN 000A1868). This stand is useful if you have an anesthesia machine on which the ventilator is normally mounted with the mounting arm and/or plate, but on occasion you would like to place it on a stand.

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**<sub>PRO</sub> 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.

**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.

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 resorted 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

150A5678 - 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.

<table>
<thead>
<tr>
<th></th>
<th>USA</th>
<th>ISO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbon Dioxide</td>
<td>Grey</td>
<td>Grey</td>
</tr>
<tr>
<td>He-O₂</td>
<td>Brown and Green</td>
<td>Brown and White</td>
</tr>
<tr>
<td>Medical Air</td>
<td>Yellow</td>
<td>Black and White</td>
</tr>
<tr>
<td>Nitrogen</td>
<td>Black</td>
<td>Black</td>
</tr>
<tr>
<td>Nitrous Oxide</td>
<td>Blue</td>
<td>Blue</td>
</tr>
<tr>
<td>O₂-He</td>
<td>Green and Brown</td>
<td>White and Brown</td>
</tr>
<tr>
<td>Oxygen</td>
<td>Green</td>
<td>White</td>
</tr>
<tr>
<td>Vacuum (Suction)</td>
<td>White</td>
<td>Yellow</td>
</tr>
<tr>
<td>WAGD (EVAC)</td>
<td>Purple</td>
<td>Purple</td>
</tr>
</tbody>
</table>

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

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.
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
## Features comparison of Junior and Tafonius Large Animal Machines

<table>
<thead>
<tr>
<th></th>
<th>Junior sans gas</th>
<th>Junior w/gas</th>
<th>Tafonius (stripped)</th>
<th>Tafonius (full boat)</th>
<th>Feature as of 1/February/2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ventilator only</td>
<td>Gas machine and ventilator</td>
<td>Gas machine, ventilator and more</td>
<td>Gas machine, ventilator, monitoring and advanced features</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15 seconds</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>• Stainless and Aluminum construction with white powder coated finish</td>
</tr>
<tr>
<td>30 seconds</td>
<td>30 seconds</td>
<td>2 seconds</td>
<td>2 seconds</td>
<td></td>
<td>• Quick access to internal cleaning of the “bellows”.</td>
</tr>
<tr>
<td>2 seconds</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>• 8” wheels, front wheel locks</td>
</tr>
<tr>
<td>2 seconds</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>• Accommodates a wide range of patients 100 lbs – 2000 lbs (maybe more or less!)</td>
</tr>
<tr>
<td>Future</td>
<td>Future</td>
<td>Future</td>
<td>Future</td>
<td>√</td>
<td>• Future, new modes of ventilation and features will be software upgradeable.</td>
</tr>
<tr>
<td>15 seconds</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>• Always powered by two 12v rechargeable batteries, AC keeps them topped off</td>
</tr>
<tr>
<td>30 seconds</td>
<td>30 seconds</td>
<td>2 seconds</td>
<td>2 seconds</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 seconds</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>• Servo driven piston, NO BELLOWS.</td>
</tr>
<tr>
<td>2 seconds</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>• Control Settings for Tidal Volume, Respiratory Rate, Insp-time, MWPL, CPAP/PEEP. Displays the Resulting MV, I-flow, E-time and I:E ratio</td>
</tr>
<tr>
<td>2 seconds</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>• Displays above parameters when patient is spontaneously breathing; Respiratory.</td>
</tr>
<tr>
<td>2 seconds</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>• Tidal volumes up to 20 liters in 100 ml increments with 25 ml resolution</td>
</tr>
<tr>
<td>Future</td>
<td>Future</td>
<td>Future</td>
<td>Future</td>
<td>√</td>
<td>• Delivers compliance compensated TVs insures the patient actually receives the set TV</td>
</tr>
<tr>
<td>15 seconds</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>• Respiratory Rate 1 – 30 breaths per minute</td>
</tr>
<tr>
<td>30 seconds</td>
<td>30 seconds</td>
<td>2 seconds</td>
<td>2 seconds</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 seconds</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>• Maximum Working Pressure Limit adjustable from 10 – 80 cmH2O</td>
</tr>
<tr>
<td>2 seconds</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>• Implementation of PEEP and CPAP up to 50cmH2O</td>
</tr>
<tr>
<td>2 seconds</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>• Implementation of Assist Mode Ventilation</td>
</tr>
<tr>
<td>2 seconds</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>• Inspiratory flow rates up to 900 lpm</td>
</tr>
<tr>
<td>2 seconds</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>• Facilitates the implementation of Closed Circuit Anesthesia with add-a-liter feature</td>
</tr>
<tr>
<td>2 seconds</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>• Scavenging flowmeter</td>
</tr>
<tr>
<td>2 seconds</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>• Backup scavenging system</td>
</tr>
<tr>
<td>2 seconds</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>• Uses NO driving gas to compress the “bellows”; a major ongoing cost savings</td>
</tr>
<tr>
<td>2 seconds</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>• Oxygen is used only for patient uptake</td>
</tr>
<tr>
<td>Optional</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>• Airway pressure gauge</td>
</tr>
<tr>
<td>Add $282.48</td>
<td>Add $282.48</td>
<td>Add $282.48</td>
<td>Add $282.48</td>
<td></td>
<td>• IV pole</td>
</tr>
<tr>
<td>15 seconds</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>• 22mm Foal Breathing Circuit included</td>
</tr>
<tr>
<td>30 seconds</td>
<td>30 seconds</td>
<td>2 seconds</td>
<td>2 seconds</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 seconds</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>• Lightweight clear breathing tubes</td>
</tr>
<tr>
<td>2 seconds</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>• Accommodates both funnel fit and Bivona/Drager style ET tube adapters</td>
</tr>
<tr>
<td>2 seconds</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>• Absorber pan holds 6.5 liters, 11.7 lbs, 5.3 kg of absorbent</td>
</tr>
<tr>
<td>2 seconds</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>• Oxygen flowmeter for manual use</td>
</tr>
<tr>
<td>2 seconds</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>• Oxygen flush button for manual use</td>
</tr>
<tr>
<td>2 seconds</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>• Hospital line pressure gauge</td>
</tr>
<tr>
<td>2 seconds</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>• Low oxygen supply pressure alarm</td>
</tr>
<tr>
<td>2 seconds</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>• Optional N2O and/or Air flowmeters</td>
</tr>
<tr>
<td>2 seconds</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>• Bronchodilator injection port</td>
</tr>
<tr>
<td>2 seconds</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>• Pullout swiveling keyboard tray</td>
</tr>
<tr>
<td></td>
<td></td>
<td>√</td>
<td>√</td>
<td>• Dual mount Select-a-Tec™ vaporizer back bar</td>
<td></td>
</tr>
<tr>
<td>--------------</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---------------------------------------------</td>
<td></td>
</tr>
<tr>
<td></td>
<td>n</td>
<td>√</td>
<td>√</td>
<td>• Swivel valve block permits the breathing tubes to exit to the right or the left.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>n</td>
<td>√</td>
<td>√</td>
<td>• Stainless hoop handle and bumpers</td>
<td></td>
</tr>
<tr>
<td></td>
<td>n</td>
<td>√</td>
<td>√</td>
<td>• GFI protected with 3 auxiliary AC power outlets</td>
<td></td>
</tr>
<tr>
<td></td>
<td>n</td>
<td>√</td>
<td>√</td>
<td>• Panel mount e-cylinder pressure gauge</td>
<td></td>
</tr>
<tr>
<td></td>
<td>n</td>
<td>√</td>
<td>√</td>
<td>• &quot;Crash cart&quot; drug drawer below work surface</td>
<td></td>
</tr>
<tr>
<td></td>
<td>n</td>
<td>√</td>
<td>√</td>
<td>• Absorbtent can be changed in seconds</td>
<td></td>
</tr>
<tr>
<td></td>
<td>n</td>
<td>√</td>
<td>√</td>
<td>• Two work lights and a built in maintenance tool kit</td>
<td></td>
</tr>
<tr>
<td></td>
<td>n</td>
<td>√</td>
<td>√</td>
<td>• Accommodates two oxygen e-cylinders for backup, temporary disconnect, or field use.</td>
<td></td>
</tr>
<tr>
<td>add $370</td>
<td>add $370</td>
<td></td>
<td>□</td>
<td>□</td>
<td>• Optional oxygen e-cylinder mount for backup, temporary disconnect, or field use.</td>
</tr>
<tr>
<td></td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>• Footprint 30&quot;wide x 36&quot;deep, height is 72&quot;</td>
</tr>
<tr>
<td></td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>• Redundant computer systems</td>
</tr>
<tr>
<td></td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>Main control 15” 1028x768 touchscreen computer w/GUI interface and 40Gigabyte HD</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Main control</th>
<th>Main control</th>
<th>Main control</th>
<th>Backup control</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Main control</td>
<td>Main control</td>
<td>Main control</td>
<td>Backup control</td>
</tr>
<tr>
<td></td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Future</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Future</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Future</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td></td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td></td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>add $1530</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Optional</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td></td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Future</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Future</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Future</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td></td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td></td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td></td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td></td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td></td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td></td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Optional</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Add $163.87</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Optional</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td></td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
</tbody>
</table>

$18,918  $25,774  $34,970  $49,950  USA Pricing

*Note: It is possible to upgrade Junior with gas to have many of the features of TAaronius. The features that would not be available are indicated by the symbol "n" in the table above. Pricing for features indicated as "Optional" has not been determined.*
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, Tafonius

000A4636A – Breathing Tube Adapter for Tafonius

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

19
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 x 15mm 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

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.

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)

000A3404 - Vaporizer/connector tube kit, AWS
MicroVent1

The MicroVent 1 is a dual mode ventilator. It will operate to deliver standard intermittent positive pressure ventilation (IPPV) or it will operate to deliver high frequency oscillatory ventilation (HFOV). The entire breathing system has a volume of less than 1cc. There are just four parameters to control: Oxygen flow, Frequency (breaths per minute), Amplitude (tidal volume) and Mean Airway Pressure (Mean Paw).

In operation, a small flow of fresh gas, in the range of 50-100ml/min, is set. This gas can be oxygen as provided by the built-in flow meter, or any mixture of gases you provide from an external source. This gas may flow through an anesthetic vaporizer if you desire using gas anesthetics, then on to the breathing system where it passes the patient connection, flows through an open needle valve, and on to your scavenging system as required. The animal may breathe spontaneously from this stream of gas as it passes the patient connection at all times. The needle valve is used to adjust Mean Paw as seen on the pressure manometer. As the valve is closed, gas flow is restricted causing pressure in the breathing system, and thus in the animal's lungs, to increase. This Mean Paw will maintain the expanded lungs permitting continuous gas exchange with a minimum of atelactatic alveoli.

The breathing system is also connected to a glass cylinder containing a floating puck, which is set in motion as per the settings for frequency and amplitude. In IPPV mode the frequency selectable ranges from 75 to 240 breaths per minute (BPM). The tidal volume (TV) deliverable is from zero to 10ml. This does not limit the usefulness of the MicroVent 1 to extremely small animals. A switch to HFOV mode changes the frequency range to 750 to 2400 "breaths" or more accurately cycles per minute. The "tidal volume" during HFOV is generally an order of magnitude, less than it would be during IPPV, and is now used to set up an oscillation of the molecules of gas from the breathing system down to the alveoli. This oscillation helps promote the diffusion of the different gases in the system. There is a gradient in the partial pressures of oxygen and anesthetic gas in the system; from a peak where the fresh gas flows past the patient connection to a low in the alveoli where the concentrations have been decreased by patient uptake. There is also a gradient in the partial pressure of carbon dioxide in the system from a high in the alveoli to a low in the fresh gas stream. The oxygen and anesthetic molecules continually migrate toward the alveoli while the carbon dioxide continually migrates toward the fresh gas stream as they all seek to come into equilibrium within the system.

The oscillations are superimposed on the set Mean Paw, "all" the alveoli are held open in virtually a steady state as the frequency is very high and volume of the oscillations is minuscule. The animal now only vibrates slightly. Gas exchange is accomplished by the diffusion of molecules as motivated by the difference in pressure gradients. No longer do you have the gross movement of the respiratory cycle that is distracting to the microsurgeon. The animal lays still as the gas exchange proceeds and the operation continues, uninhibited by movement within the patient.

In addition, depending on the amplitude of each cycle, a value of resulting continuous positive airway pressure, CPAP, can be observed on the pressure manometer. This feature naturally allows, and virtually assures, that the operator will be implementing lung protective strategies as described by Amato and Ranieri, et al. The alveoli are no longer collapsing on expiration, then snapping open again as they expand with each breath. This condition has been shown to cause damage to the alveolar epithelium and endothelium.

Incorporated into the MicroVent1 is a system that allows you to either connect it directly to the vacuum, or to an active or passive scavenging system. Placing the Scavenger Select switch in the Active/Passive position directs the waste gases directly to the scavenging port where you can connect a charcoal canister or an active system that already has a scavenging interface valve in place. Switching to the Vacuum position directs the gasses into an internal open interface system allowing you to connect a vacuum line directly to the scavenging port. In this case the scavenging flow rate is then adjusted on the flow meter on the front panel.
MicroVent1 Accessories and Options

070A0739
Power Adapter, AUS

070A0737
Power Adapter, Euro

070A0738
Power Adapter, UK

070A0736
Power Adapter, US

000A3798 – MicroVent1 Vaporizer Bypass Tube (Included)

090A0276 – MicroVent1 Power Supply (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.
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
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)

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

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 Loops (Pack of 5)
200A3686A - Rat ET tube 5 pack, 14ga clear catheters

200A3589L – Mouse Intubation Specula, Long (Autoclaveable)
200A3589S – Mouse Intubation Specula, Short (Autoclaveable)
200A3588 – Rat Specula (Autoclaveable)

210A3491 – Mouse ET Tube Introducer
210A3492 – Rat ET Tube Introducer
210A3496 – Mouse Lidocaine Applicator

200A3683 – Mirror for Intubation Verification
210A3497 – Scissor
210A3488 – Umbilical Tape
Otoscopes
* Indicates that Otoscope Head (Part F) is included but not pictured

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
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 (288mm 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)

Flexible, Very Durable Heating Pads are Available

000A348 – Gaymar T/Pump, TP 700, 120V, 60hz, USA

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

000A5003 – Heat Therapy (water) HTP-1500 Pump – 220v

-------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)

000A4083 – Hard Pad Replacement Connector Kit

000A4637 – Gaymar Pump Adapter 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 barbs.

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.

000A5761 – 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

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

000A3404 - Vaporizer/Connector Tube Kit, AWS

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
**PEEP Valves**

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.

- **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

**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)
Replacement Parts and Accessories

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

**110A1118** – Power Cord, IEC 320 USA

**000A0495** – Drive Gas Tube Model 2000, 2002 & 2002PRO

**210A2344** – Thumbscrews For Bellows Base (4 Pack)

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

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

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

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

**000A0485** – 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**

**DOCA4948A – Hallowell EMC Operating Manuals and Warranty Information**


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.
Ordering Form

Copy this page and fax your order to us

Phone: 413 445 4263 Fax: 413 496 9254
Email: Info@Hallowell.com
PDF order form Available on our website:

Necessary Information:
Your name: __________________________
Telephone #: __________________________
Fax #: __________________________
Email: __________________________
Company name: __________________________

Billing Address:
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

Shipping Address:
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
PO#: __________________________
or

Credit Card #: __________________________ CVR code: ________
Circle one: Visa MC Amex
Expiration date: __________________________

Item # and quantity
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
Here's who to contact at Hallowell EMC with your questions and comments:

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

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.