



## **GENERAL TECHNICAL DATA**

**General specifications and technical data for  
current Percussionaire® Cardiopulmonary  
Lung Recruitment Products**

**Document dated: 01-27-10**

## UNIT SPECIFICATIONS

<b>UNIT</b>	<b>MODEL #</b>	<b>Weight lb k</b>	<b>Height in cm</b>	<b>Width in cm</b>	<b>Depth in cm</b>
<b>IPV-1C®</b>	<b>F00001-C</b>	<b>4.4</b> <b>2.1</b>	<b>9.5</b> <b>24.1</b>	<b>6.7</b> <b>16.5</b>	<b>9.5</b> <b>24.1</b>
<b>IPV-2C®</b>	<b>F00002-C</b>	<b>4.5</b> <b>2.1</b>	<b>9.5</b> <b>24.1</b>	<b>6.7</b> <b>16.5</b>	<b>9.5</b> <b>24.1</b>
<b>IPV®-HC™ (115V)</b>	<b>F00012-HT</b>	<b>13.0</b> <b>5.9</b>	<b>8.0</b> <b>20.3</b>	<b>15.0</b> <b>38.1</b>	<b>11.0</b> <b>27.9</b>
<b>IPV®-HC™ (220V)</b>	<b>F00012-HT220</b>	<b>13.0</b> <b>5.9</b>	<b>8.0</b> <b>20.3</b>	<b>15.0</b> <b>38.1</b>	<b>11.0</b> <b>27.9</b>
<b>ACUTE CARE</b>	<b>F00019</b>	<b>0.7</b> <b>0.3</b>	<b>3.7</b> <b>9.5</b>	<b>2.7</b> <b>7.0</b>	<b>5.5</b> <b>14.0</b>
<b>IMPULSATOR®</b>	<b>F00012</b>	<b>23.0</b> <b>10.4</b>	<b>11.7</b> <b>29.8</b>	<b>13.0</b> <b>33.0</b>	<b>8.2</b> <b>21.0</b>
<b>SINUSOIDAL BRONCHOTRON®</b>	<b>F00038-1</b>	<b>4.8</b> <b>2.2</b>	<b>9.5</b> <b>24.1</b>	<b>6.7</b> <b>16.5</b>	<b>9.5</b> <b>24.1</b>
<b>VDR®-4</b>	<b>F00008-1</b>	<b>13.9</b> <b>6.3</b>	<b>8.0</b> <b>20.3</b>	<b>13.0</b> <b>33.0</b>	<b>10.0</b> <b>25.4</b>
<b>UNIVERSAL MONITRON®</b>	<b>F00007-B</b>	<b>3.6</b> <b>1.6</b>	<b>9.5</b> <b>24.1</b>	<b>6.7</b> <b>16.5</b>	<b>9.5</b> <b>24.1</b>
<b>MONITRON® II</b>	<b>F00007-1</b>	<b>9.8</b> <b>4.5</b>	<b>8.0</b> <b>20.3</b>	<b>13.0</b> <b>33.0</b>	<b>9.2</b> <b>23.4</b>
<b>OSCILLATRON® SERVO</b>	<b>F00036-2</b>	<b>4.6</b> <b>2.1</b>	<b>9.5</b> <b>24.1</b>	<b>6.7</b> <b>16.5</b>	<b>9.5</b> <b>24.1</b>
<b>TRANS RESPIRATOR®</b>	<b>F00038-2</b>	<b>12.6</b> <b>5.7</b>	<b>9.5</b> <b>24.1</b>	<b>17.5</b> <b>44.5</b>	<b>12.5</b> <b>31.8</b>
<b>TXP™</b>	<b>F00013</b>	<b>1.5</b> <b>0.7</b>	<b>4.5</b> <b>11.4</b>	<b>3.5</b> <b>8.9</b>	<b>4.5</b> <b>11.4</b>

## **SERVICE AND REPAIR**

**PERCUSSIONAIRE® CORPORATION recommends an annual preventive maintenance (PM) for each device. An annual PM consists of a thorough cleaning, filter change, functional evaluation, and, if necessary, recalibration.**

**A mandated remanufacture (overhaul) (OH) is required every three (3) years after the device is initiated into service or not later than four (4) years after first date of purchase. A factory remanufacture consists of replacing all elastomeric seals, sleeves, and diaphragms, with inspection of all components. The device is factory calibrated and receives a functional evaluation, conformance certification, and a one-year warranty on all parts installed during overhaul.**

**If replacement parts are required for repair, other than those specified for overhaul or preventive maintenance, the cost of the parts will be quoted to the customer in addition to the cost of the Preventive Maintenance (PM) or Overhaul (OH). Cleaning time allowed for OH or PM fifteen (15) minutes, any extra cleaning time will be charged at current hourly rate. (\$105.00/hour)**

**NOTE: BLENDERS, COMPRESSORS, FREQUENCY COUNTERS, AIRWAY PRESSURE ALARMS and MONITRON WAVEFORM ANALYZERS WILL BE SERVICED IN PERCUSSIONAIRE'S DESIGNATED MAINTENANCE CENTERS ON CONDITION.**

**Intervention by an unauthorized individual or repair maintenance facility will cause the immediate expiration of the clinical readiness of the device. Adulteration or invasion of any aeromedical product manufactured by Percussionaire® that violate the intent of the supervising agencies could be judged a federal offence.**

**To return a PERCUSSIONAIRE® MEDICAL DEVICE to factory service center for repair, overhaul or annual preventive maintenance contact: 800-850-7205 or (208) 263-2549**

**A return goods authorization number (RGA#) will be issued for each device identified by the serial number. The device shipped must be disinfected, cleaned, placed in a plastic bag and placed in a sturdy box with packaging material thoroughly surrounding unit. A packaging slip must accompany box with information including RGA#, P.O.#, SERIAL# of device, name and address of packager, work requested, shipping address and phone number. A PERCUSSIONAIRE® service representative will contact customer with an estimated cost for repair work required. Work will not start until Percussionaire® receives a documented approval of Percussionaire® cost estimates by shipper. Return delays will be the responsibility of the owner of the device for not immediately advising Percussionaire®**

**Remanufacturing cost for the Impulsator and VDR®-4 include the cost of a replacement housing; if the housing is still in good condition, this cost will be removed.**

**Any device showing damage may be subject to additional charge if the repairs require parts not normally replaced during remanufacturing.**

## **STORAGE**

**The Percussionaire® units should be stored in a clean environment and covered when not in use. Temperature should be maintained between -40°C to +40°C. (-40°F to +104°F) Humidity range is 0- 95% non-condensing.**

## **DISPOSAL OF EQUIPMENT**

**At the end of useful life of a unit, disposal should be in accordance with local, state, federal and international laws. The unit may also be packaged according to instructions found within this manual and shipped to authorized maintenance centers below for disposal.**

## **SHIPPING INFORMATION**

### **POSTAL ADDRESS**

**P.O. Box 817**

**Sandpoint ID 83864**

### **UPS SHIPPING ADDRESS**

**Percussionaire® Corporation**

**1655 Glengary Bay Rd. Sandpoint ID 83864**

### **FedEx SHIPPING ADDRESS**

**Percussionaire® Corporation**

**1655 Glengary Bay Rd. Sagle ID 83860**

### **Website ADDRESS**

**[www.percussionaire.com](http://www.percussionaire.com)**

**Phone (208) 263-2549**

**Fax (208) 263-0577**

## GLOSSARY OF SYMBOLS



ATTENTION! READ THE SAFETY INSTRUCTIONS AND THE ENTIRE INSTRUCTION MANUAL BEFORE USING THIS DEVICE



DANGEROUS VOLTAGE WITHIN THE DEVICE MAY CONSTITUTE A RISK OF ELECTRICAL SHOCK (Impulsator®, IPV®-HT™, Monitron II)



STOP! READ EXTRA CARE PRECAUTIONS



CLASS 1 EQUIPMENT

TYPE BF EQUIPMENT



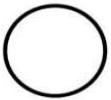
PROPER GROUNDING



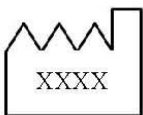
ALTERNATING CURRENT



POWER SWITCH ON



POWER SWITCH OFF



YEAR OF MANUFACTURE (xxxx = YEAR)

## **PERCUSSIONAIRE® CORPORATION CLEANING AND STERILIZATION PROCEDURES**

**These cleaning procedures supersede all others prior to May 1st, 2009.**

### **PERCUSSIONAIRE® EQUIPMENT**

**All new Percussionaire® products are packaged clean. They should not be considered sterile or decontaminated. Prior to use it is recommended that breathing circuit components be disassembled then cleansed and/or decontaminated.**

#### **GENERAL CLEANSING PROTOCOLS CHECKED BY PERCUSSIONAIRE®**

- 1. The devices may be sprayed by aerosolized Lysol Brand III or similar Hospital Grade Disinfectant.**

**\*\*\*DO NOT USE BUTCHER'S QUEST 256, THE USE OF THIS PRODUCT WILL DAMAGE THE MACHINE AND THIS DAMAGE IS NOT COVERED UNDER WARRANTY.**

**\*\*\*Professional Lysol® brand III Disinfectant spray meets AOAC Germicidal Spray product Test standards for hospital aerosol disinfectants.**

- 2. The devices after being sprayed down and allowed to dry are re sprayed with hospital wide spectrum aerosol consisting of the same germicidal agents with a timed exposure per labeling.**
- 3. After device has dried it is then mechanically wiped with a similar germicidal agent impregnated in a saturated wiping vehicle and allowed to dry per labeling instructions.**

4. **Further in-depth mechanical cleansing and rinse is accomplished with Lysol Brand III. As well as other germicidal household cleansers to remove any grime, dirt or other materials during the disassembly processes.**

**Percussionaire® does not deliver sterile devices, which are appropriately labeled per FDA.**

## **Sterilization**

### **STERRAD® 100S**

**Percussionaire® Corporation recommends the Sterrad® 110S sterilization system.**

**Follow instructions below on how to disassemble Percussionaire® breathing circuits.**

1. **Mechanically wash and dry all parts completely**
2. **Process through Sterrad® Sterilizer at a standard cycle with a 35% (2.080 Mg H<sub>2</sub>O/Liter) concentration.**
3. **Reassemble circuit.**

## **OTHER TECHNIQUES**

**The decision to use other decontamination techniques should be based upon the following parameters <280 Fahrenheit (137.8 Celsius).**

1. **Standard Phasitron® part # A50007, A50007-1**
2. **Aerosol Generator part # A50010, A50010-1, A50010-3, A50010-5**
3. **Interfacing tubing made of SILICONE part # A50034-1**

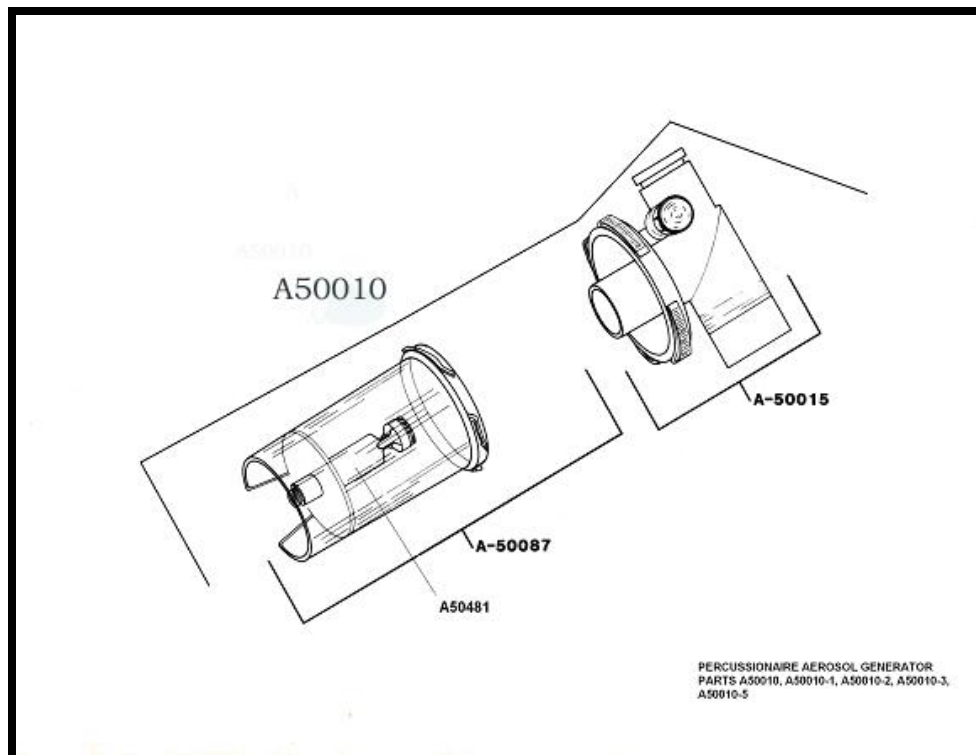
**The above components can withstand temperatures < 280 Fahrenheit (137.8 Celsius)**

**The following components are not autoclavable:**

- 1. Phasitron® Duo part # A50007-10**
- 2. Interface tubing assembly part # A50034**
- 3. These parts can withstand temperatures < 140 Fahrenheit (60 Celsius)**

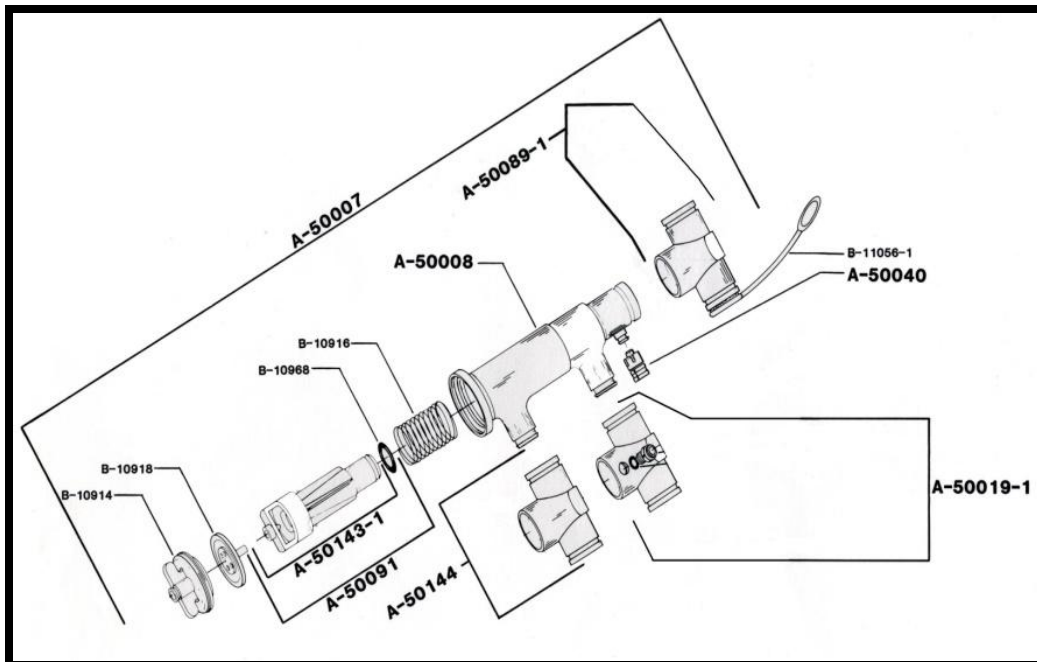
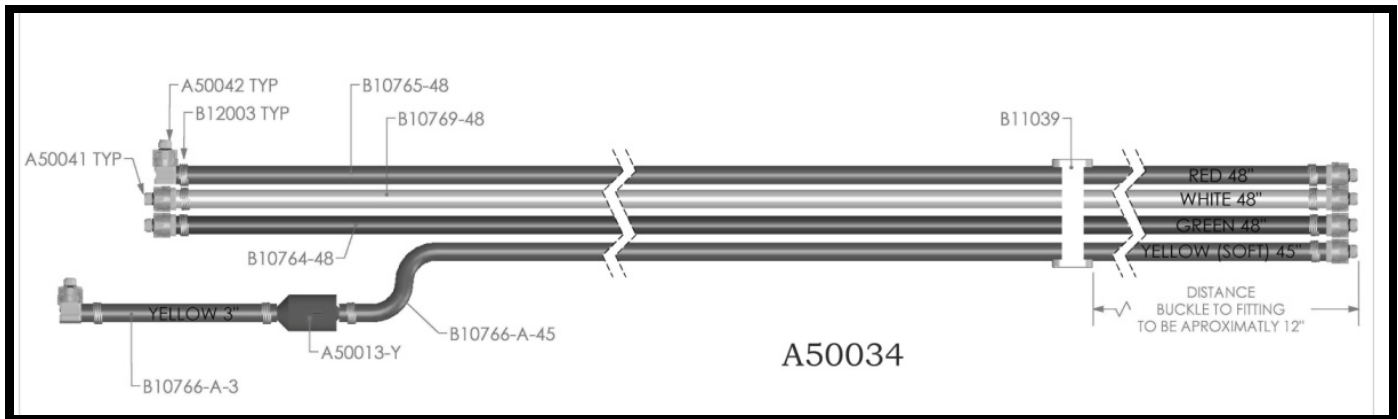
**Percussionaire® medical devices are not submersible.**

**Disassembly of Percussionaire® Aerosol Generator  
Part # A50010, A50010-1, A50010-2, A50010-3, A50010-5**



- 1. Disconnect colored tubing from service sockets.**
- 2. Release nebulizer cap part # A50015 or alternatively; by holding aerosol bowl assembly part A50087, then rotating nebulizer cap counterclockwise  $\frac{1}{4}$  turn.**

**Four channel breathing circuit interfacing tubing assemblies- A50034 non-autoclavable or autoclavable Silicone tubing assembly A50034-1**



**Disassembly of Percussionaire® Phasitron® Part # A50007, A50007-1**

- 1. Disconnect colored tubing from service sockets.**
- 2. Unscrew Phasitron® end cap part B10914.**
- 3. Withdraw venturi assembly from Phasitron® body by pulling out upon orificed diaphragm part B10918 attached to green or alternative red venturi assembly, parts A50143-1, A50143-2.**
- 4. Remove venturi O-ring part B10968.**

**5. Remove opening spring B10916 from around Venturi tube.**

**Phasitron Body exterior component disassembly steps.**

**6. Remove green Inspiratory Failsafe Tee assembly part A50144 by a pulling rotation. If applicable.**

**7. Remove red Expiratory Failsafe tee assembly part A50019-1. If applicable.**

**8. Remove proximal airway Swivel Tee assembly part A50040 by a pulling rotation. If applicable.**

**9. Remove Phasitron® Outlet Plug loop assembly, from Swivel Tee assembly part A50089-1 by pulling and rotating. If applicable.**

**Notes:**



**MANUFACTURED BY:**

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