



Operating Instructions for the
BIONIX SecureVac Pressure/Vacuum Pump
220-volt Version
Product #: SVRT-7103

The Bionix SecureVac Pressure/Vacuum Pump used to prepare SecureVac Bags which are intended to be used for the positioning and re-positioning of patients undergoing or receiving a course of external beam radiation therapy for the treatment of cancer and other diseases.

Caution: Federal law restricts this device to sale by or on the order of a licensed physician.

Read and understand the following information and instructions included with the BIONIX SecureVac Pressure/Vacuum Pump before using. This information is for your safety and to prevent damage to the pump.

SAFETY INFORMATION

1. Injury Prevention
 - a. Never operate this product if it has a damaged cord or plug. If it is not working properly, has been dropped, damaged or has fallen into water, please return the product to a service center for examination and repair.
 - b. Keep the cord away from heated surfaces.
 - c. Never block any air openings. The air openings are for ventilation of the motor inside the plastic housing. Keep all air openings free of lint, dirt and other foreign objects.
 - d. Never drop any object into any openings.
 - e. This pump has a single use (fuse) type of overload protector. If the motor should overheat, the protector will shut the unit off. If this should occur, unplug the pump and contact the service center.
 - f. Do not use any tools or attachments, other than those supplied with the unit, without first determining maximum air pressure for that tool or attachment.
 - g. Be sure to properly identify vacuum and pressure ports before using pump. See labels on pump next to hose fittings.
2. Electrocutation Prevention
 - a. Do not use this product in or near an area where it can fall or be pulled into water or other liquids.
 - b. Do not reach for this product if it has fallen into liquid. Unplug immediately.
 - c. Use indoors only.
3. Fire or Explosion Prevention
 - a. Do not use this pump in or near explosive atmospheres or where aerosol (spray) products are being used.
 - b. Do not use this station for organic, basic or acidic vapors.
 - c. Do not use this station in or near an area where flammable or explosive liquids or vapors may exist.
 - d. Do not use this product near flames.
4. Servicing Double-Insulated Products
 - a. In a double-insulated product, two systems of insulation are provided instead of grounding. No grounding means is provided on a double-insulated product, nor should a means for grounding be added to the product. Servicing of a double-insulated product requires extreme care and knowledge of the system and should be done only by qualified service personnel. Replacement parts for a double-insulated product must be identical to those parts in the product.



INSTALLATION

1. INTRODUCTION
 - a. This manual has been compiled not only for the care and maintenance of the BIONIX SecureVac Pressure/Vacuum Pump now in your possession, but as a helpful reference and guide to prevent many problems, which can occur if used improperly.
2. UNPACKING – BIONIX SecureVac Pressure/Vacuum Pump, Pressure/Vacuum Hose, Instructions and Warranty Information
 - a. Carefully remove the Pressure/Vacuum pump from the shipping carton. Preserve all paperwork for future reference. If damage has occurred from shipment, a claim must be filed with the carrier immediately; preserve the shipping carton for inspection by the carrier. If you are required to communicate with BIONIX, be sure to include your order numbers for quick identification. Do not return the pump to BIONIX without first calling for a returned merchandise number.
3. PUMP MOUNTING
 - a. Rubber bumper feet are attached to the pump. Rubber bumper feet are excellent for applications involving a semi-flexible surface such as a bench top; they help to isolate noise and eliminate creeping. The BIONIX SecureVac Pressure/Vacuum pump should be mounted on a horizontal surface.
4. PUMP LOCATION
 - a. The Pressure/Vacuum pump should be located preferably in a clean, dry and well-ventilated area. Please be sure not to block the ventilation ports located on the plastic housing. The pump should be placed where the surrounding temperature remains between 10°C and 40°C (50°F and 104°F). Always check to insure the location chosen is protected from direct or indirect moisture contact.
5. PRESSURE AND VACUUM CONNECTIONS
 - a. On the front of the plastic housing are two hoses connector fittings. The upper quick-connect fitting supplies pressure. The lower quick-connect fitting supplies vacuum.
 - b. Mount the tubings supplied in box with the pump on to each of the hoses connectors by firmly pressing the tubing onto the connector. Press the tubing straight onto the connector as far as possible.
 - c. Please use only the supplied fittings, which connect to the BIONIX SecureVac cushions. Be sure to call BIONIX Radiation Therapy technical service prior to start-up at (800) 624-6649 if you have any questions.
6. ELECTRICAL POWER
 - a. Power Source Review
 - b. Review the power source to be sure they agree in voltage, phase and frequency. Serious damage may occur to the motor if it is connected to an improper voltage.
 - c. DESIRED VACUUM/PRESSURE QUICK CONNECT FITTINGS
 - i. The BIONIX SecureVac Pressure/Vacuum Pump comes with tubings for the intake and discharge ports equipped with quick-connect fittings, which connect to the fittings on the Pressure/Vacuum hose supplied with your pump. Mount the tubing with quick-connect fittings as per the instructions in "Installation" step II-5 To attach, push the male



quick-connect fitting on the hose into the female fitting until it “clicks”, indicating a secure fit. To disconnect, squeeze the quick-connect fitting to release the hose.

OPERATION

1. STARTING THE PRESSURE/VACUUM PUMP
 - a. Before attaching the BIONIX SecureVac Pressure/Vacuum Pump to a SecureVac cushion, familiarize yourself with the function and action of the unit. Review the power requirements as described in section II-6. We recommend running the pump for a few minutes to warm it up before use. The warm-up improves the pump ability to handle humid air.
2. OPERATING PRESSURE RANGE
 - a. The BIONIX SecureVac Pressure/Vacuum Pump is designed to run from slightly below atmospheric to its maximum vacuum level on the vacuum side. The pump also may be run from atmospheric to 10 PSIG continuously, to 33 PSIG intermittent. Consult the Specification Table in the back of this manual for the specific ratings.
3. USING THE PRESSURE AND VACUUM CONNECTIONS
 - a. On the front of the plastic housing are two hoses with quick-connect fittings. The upper quick-connect fitting supplies pressure. The lower quick-connect fitting supplies vacuum. To attach the hose from the BIONIX SecureVac Cushion, push the male quick-connect fitting on the hose into the desired (Pressure/Vacuum) female quick-connect fitting until it “clicks”, indicating a secure fit. To disconnect, squeeze the quick-connect fitting to release the hose.
4. SHUTDOWN PROCEDURES
 - a. After use, we recommend the pump be run for about 2 minutes disconnected from the vacuum process. The air pumped through the mechanism will purge out water vapor or droplets of water condensate that may have formed on the inside of the pump. This purge of the pump mechanism helps extend the pumps service life.

MAINTENANCE

1. This BIONIX SecureVac Pressure/Vacuum unit is oil-free. The pump employs a PTFE piston sleeve and cylinder. No maintenance is necessary for the bearings. All bearings are sealed and permanently lubricated. Lubrication should not be attempted. The units are built for continuous and intermittent duty operation with the quietness and durability of a diaphragm, but with piston performance. The Compressor/Pump has a service free lifetime of 2,000 to 3,000 hours. The Compressor/Pump in the plastic housing is not field serviceable.

TROUBLESHOOTING

1. VACUUM PROBLEMS
 - a. Leakage, contamination and unusual out gassing are the most common causes of poor vacuum. To operate at maximum efficiency a system must be thoroughly clean. If the system is completely clean and free from leaks, and



unwarranted vacuum problems still exist, the pump should be checked by a qualified technician.

2. PRESSURE PROBLEMS

- a. Leakage and contamination are the most common causes of poor pressure. To operate at maximum efficiency a system must be thoroughly clean. If the system is completely clean and free from leaks, and unwarranted pressure problems still exist, the pump/compressor should be checked by a qualified technician.

SPECIFICATIONS

Free Air Displacement, CFM (L/min)	0.32 (9.2)
Max. Continuous Pressure, PSIG (Pascal)	10 (10 ⁴)
Max. Intermittent Pressure, PSIG (Pascal)	33 (3.3 x 10 ⁴)
Max. Vacuum, In. Hg (mm Hg)	21.3 (540)
Tubing Needed, I.D. in.	¼
Weight, lbs. (kg)	5 (2.3)
Electrical Requirements	220V, 50Hz, 1Ph2 wired with Cont, Euro (Schuko) plug

WARRANTY

The BIONIX SecureVac Pressure/Vacuum Pump is warranted to be free from defects in workmanship and materials, under normal use, for a period of one year from the date of original purchase from BIONIX. BIONIX' sole obligation under this warranty shall be, at BIONIX' option, to replace the product or part with a comparable product or part, repair the product or part, or if neither repair nor replacement is reasonably available, BIONIX may, in its sole discretion, refund to the customer the purchase price paid for the product or part.

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