INSTALLATION AND OPERATING INSTRUCTIONS

OWNERS MANUAL

LOW VOLTAGE MEDICAL TREATMENT CABINETS

Reliance® MEDICAL PRODUCTS, INC.

RELIANCE INTERNATIONAL

SERIAL NUMBER

For your future reference, mark the serial number in the space provided.

SERIAL NUMBER(S)

FOR:

310 CABINET – 220 lbs.
410 CABINET – 245 lbs.
510 CABINET – 275 lbs.
610 CABINET – 301 lbs.

QUALITY MANAGEMENT
SYSTEM
REGISTERED TO
ISO 9001
ISO 13485

RELIANCE
INTERNATIONAL
MADE IN AMERICA

Reliance® Medical Products Inc. • 3535 Kings Mills Road • Mason, Ohio 45040-2303 • 1-800-735-0357 • www.reliance-medical.com

Table of Contents

IMPORTANT INFORMATION

SAFETY SYMBOLS

"DANGER", "WARNING", or "CAUTION"
The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in this Installation and Operating Instructions.

« DANGER », « AVERTISSEMENT », ou « PRÉCAUTION »
Le point d'exclamation à l'intérieur d'un triangle équilatéral vise à alerter l'utilisateur à la présence d'importantes instructions de fonctionnement et de maintenance (service) dans ce manuel d'installation et d'instructions de fonctionnement.

"NOTE"
Amplifies a procedure, practice, or condition.

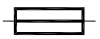
« REMARQUE »
Amplifie une procédure, pratique ou condition.

Type B, Applied Part

On/Standby

Dangerous Voltage / Shock Hazard

Disconnect Power Before Servicing



Fuse Rating Specification

Protective Earth Ground

Alternating Current-AC

Do Not Push

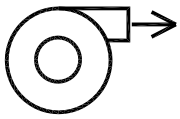
Refer To Instruction Manual/Booklet

Burn Hazard/Hot Surface

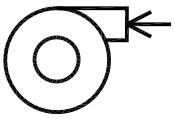
Battery Indicator

Bead Warmer

Mirror Warmer



Pressure Pump



Vacuum Pump

TRANSPORTATION / STORAGE CONDITIONS

Temperature: Operating: 59 to 104º F
15 to 40º C
Storage: -22 to +140º F
-30 to +60º C

Relative Humidity: Operating: 5% RH to 95% RH
without condensation
Storage: 10% RH to 100% RH,
including condensation

Atmospheric Pressure:
Operating: 700 hPa to 1060 hPa
Storage: 500 hPa to 1060 hPa

1. INTRODUCTION

1.1. This manual contains information applicable only to the Reliance® Models 310, 410, 510 and 610 Treatment Cabinets. Should you have a different model, please disregard any information that does not apply.

1.2. The ENT Cabinet and Main Panel with Membrane Switch is to provide the means to store, deliver, and adjust instruments used for ear, nose and throat examinations and treatments, and to control the electrical power supplied to each applicable instrument. The device is mainly used in medical practices, hospitals, and universities under normal ambient conditions. ENT physicians typically examine the ears, nose and throats of patients with a variety of battery-operated illuminated instruments. Physicians commonly irrigate these patients with pressurized fluids and suction instruments. Drugs in liquid form are also commonly administered. The user needs a place to store these fluids, drugs and instruments. The ENT Cabinet provides that storage. The ENT Main Panel with Membrane Switch controls electrical power.

1.3. Whenever you see the symbols shown below, heed their instructions! Always follow safe operating and maintenance practices.

"DANGER"- THE DANGER SYMBOL IDENTIFIES SPECIAL INSTRUCTIONS OR PROCEDURES WHICH, IF NOT CORRECTLY FOLLOWED, COULD RESULT IN LOSS OF LIFE OR PERSONAL INJURY.

''DANGER" - LE SYMBOLE DE DANGER IDENTIFIE LES INSTRUCTIONS SPÉCIALES OU LES PROCÉDURES QUI, SINON CORRECTEMENT SUIVI, POURRAIENT AVOIR COMME CONSÉQUENCE LA PERTE DE VIE OU DE BLESSURES.

"WARNING"- THE WARNING SYMBOL IDENTIFIES SPECIAL INSTRUCTIONS OR PROCEDURES WHICH, IF NOT CORRECTLY FOLLOWED, COULD RESULT IN PERSONAL INJURY.

"AVERTISSEMENT"-LE SYMBOLE D'AVERTISSEMENT IDENTIFIE LES INSTRUCTIONS SPÉCIALES OU LES PROCÉDURES QUI, SINON CORRECTEMENT SUIVI, POURRAIENT AVOIR COMME CONSÉQUENCE DES BLESSURES.

"CAUTION"- This caution symbol identifies special instructions or procedures which, if not correctly followed, could result in damage to or destruction of equipment.

"ATTENTION" - ce symbole d'attention identifie les instructions spéciales ou les procédures aux lesquelles, sinon correctement suivis, pourrait avoir comme conséquence les dégâts ou la destruction du matériel.

"NOTE"- Note indicates points of particular interest or additional information.

"REMARQUE" - La note indique des remarques d'intérêt particulier ou de l'information supplémentaire.

1.4. Should your product not perform properly, or if you have any questions concerning the use and care of any Reliance® product, contact the Reliance® Distributor, where you purchased this product or contact the Technical Service Department, Reliance® Medical Products, Inc., 3535 Kings Mills Road, Mason, Ohio 45040-2303, or call (800) 735-0358.

NOTE: Always have the model number and serial number available before contacting Reliance® or your authorized Reliance® Distributor.

REMARQUE: Ayez toujours le numéro et le numéro de série de type disponibles avant Reliance® entrant en contact ou votre distributeur autorisé de Reliance®.

"CLASSIFIED BY CANADIAN STANDARDS ASSOCIATION® CSA WITH RESPECT TO ELECTRIC SHOCK, FIRE AND MECHANICAL HAZARDS ONLY IN ACCORDANCE WITH IEC 60601-1."

According to Clause 5 in IEC 60601-1, sec 6.8.1, this unit is classified by the following:

- The type of protection against electric shock: EQUIPMENT energized from an external electrical power source: CLASS I EQUIPMENT
- The degree of protection against electric shock: TYPE B EQUIPMENT

- The degree of protection against harmful ingress of water: ORDINARY DEGREE (IPX0)

- The degree of safety of application in the presence of a FLAMMABLE ANAESTHETIC MIXTURE WITH AIR or WITH OXYGEN OR NITROUS OXIDE: EQUIPMENT not suitable for use in the presence of a FLAMMABLE ANAESTHETIC MIXTURE WITH AIR or WITH OXYGEN OR NITROUS OXIDE

- The mode of operation: CONTINUOUS OPERATION

Duty Cycle: 5 min on/ 5 min off

WARNING: TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

AVERTISSEMENT: POUR PRÉVENIR LE RISQUE D'INCENDIE OU DE CHOC, N'EXPOSEZ PAS CET APPAREIL À LA PLUIE OU À L'HUMIDITÉ.

POTENTIAL ELECTROMAGNETIC or OTHER INTERFERENCE

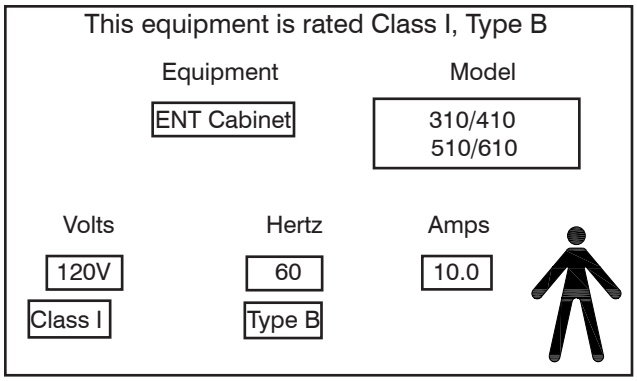
This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to other devices in the vicinity. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to other devices, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving device.
- Increase the separation between the equipment.
- Connect the equipment into an outlet on a circuit different from that to which the other device(s) are connected
- Consult the manufacture or field service technician for help.

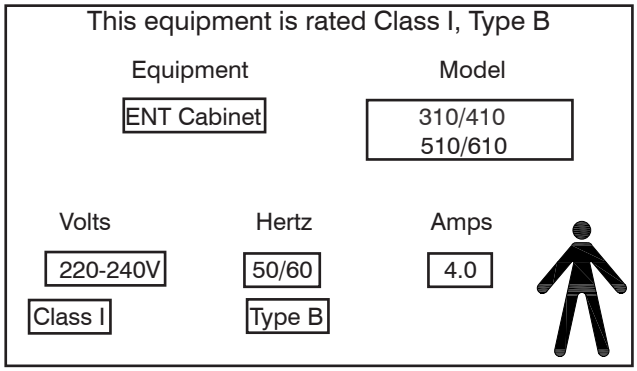
TECHNICAL SPECIFICATIONS

Rating for 120V ENT Cabinet



ANSI / AAMI
ES60601-1: 2005
CAN / CSA-C22.2
NO. 60601-1-08

Rating for 220V-240V ENT Cabinet



ANSI / AAMI
ES60601-1: 2005
CAN / CSA-C22.2
NO. 60601-1-08

IMPORTANT USER WARNINGS

WARNING- EXPLOSION: THIS TREATMENT CABINET MUST NOT BE USED IN THE PRESENCE OF FLAMMABLE ANESTHETICS.

“AVERTISSEMENT” - DÉCOMPOSITION : CE MODULE DE TRAITEMENT NE DOIT PAS ÊTRE UTILISÉ EN PRÉSENCE DES ANESTHÉSIQUES INFLAMMABLES.

WARNING- TO PREVENT SHOCK HAZARD, DISCONNECT POWER FROM THIS TREATMENT CABINET BEFORE SERVICING.

“AVERTISSEMENT” - POUR PRÉVENIR LE RISQUE DE CHOC, DÉMONTEZ L’ALIMENTATION ÉLECTRIQUE DE CE MODULE DE TRAITEMENT AVANT L’ENTRETIEN.

WARNING-THIS TREATMENT CABINET SHOULD ONLY BE OPERATED BY AUTHORIZED PERSONNEL WITH UNDERSTANDING OF THE CONTENT IN THIS MANUAL. QUALIFIED USERS SHOULD PREVENT USE BY UNAUTHORIZED PERSONS.

“AVERTISSEMENT” - CE MODULE DE TRAITEMENT DEVRAIT SEULEMENT ÊTRE ACTIONNÉ PAR LE PERSONNEL AUTORISÉ AVEC L’ARRANGEMENT DU CONTENU EN CE MANUEL. LES UTILISATEURS QUALIFIÉS DEVRAIENT PRÉVENIR L’UTILISATION PAR LES PERSONNES IMPROPRES.

WARNING- SHOULD YOUR PRODUCT NOT PERFORM PROPERLY CONTACT THE RELIANCE® DISTRIBUTOR, AND USE CAUTION WITH ONGOING USE.

“AVERTISSEMENT”- SI VOTRE PRODUIT EXÉCUTENT CORRECTEMENT ENTRENT EN CONTACT AVEC L’ALLUMEUR DE RELIANCE®, ET FONT ATTENTION AVEC L’UTILISATION CONTINUE.

WARNING - NO MODIFICATION OF THIS EQUIPMENT IS ALLOWED

AVERTISSEMENT - AUCUNE MODIFICATION DE CET ÉQUIPEMENT N’EST AUTORISÉ

WARNING- PORTABLE AND MOBILE RF COMMUNICATION EQUIPMENT CAN AFFECT THE USAGE OF MEDICAL ELECTRICAL EQUIPMENT.

AVERTISSEMENT - LES APPAREILS PORTABLES ET MOBILES DE COMMUNICATION RF PEUVENT AFFECTER L’UTILISATION DES APPAREILS ELECTRO-MEDICAUX

WARNING- THE ENT CABINET IS COMPATIBLE ONLY WITH DEVICES MENTIONED INSIDE THIS MANUAL. DO NOT CONNECT INCOMPATIBLE ACCESSORIES TO THE ENT CABINET. USING INCOMPATIBLE ACCESSORIES MAY RESULT IN AN INCREASE IN EMISSIONS OR A DECREASE IN IMMUNITY OF THE ENT CABINET AND/ OR SYSTEM.

AVERTISSEMEN- L’ENT CABINET N’EST COMPATIBLE QU’AVEC DES DISPOSITIFS MENTIONNES DANS CE MANUEL. NE CONNECTER PAS D’ACCESSOIRES INCOMPATIBLES AU CABINET ENT. L’UTILISATION D’ACCESSOIRES INCOMPATIBLES PEUT PROVOQUER UNE AUGMENTATION DES ÉMISSIONS OU UNE DIMINUTION DE L’IMMUNITÉ DU CABINET ENT ET / OU SYSTÈME.

WARNING-THE SYSTEM IS COMPATIBLE ONLY WITH THE DEVICES MENTIONED INSIDE THIS MANUAL. DO NOT CONNECT INCOMPATIBLE DEVICES TO THE SYSTEM.PERIPHERI

AVERTISSEMENT - LE SYSTEME N’EST COMPATIBLE QU’AVEC LES DISPOSITIFS MENTIONNES DANS CE MANUEL. NE CONNECTEZ PAS LES DISPOSITIFS INCOMPATIBLES AU SYSTEME.

WARNING- IF POSSIBLE, DO NOT PLACE OR STACK THE ENT CABINET OR SYSTEM NEXT TO OTHER EQUIPMENT. IF THIS IS UNAVOIDABLE, YOU MUST VERIFY THAT THE ENT CABINET AND ANY ACCESSORIES ARE WORKING PROPERLY BEFORE USE.

AVERTISSEMENT- SI POSSIBLE, NE PAS PLACER OU EMPILER L'ENT CABINET OU LE SYSTÈME A CÔTÉ D'AUTRE ÉQUIPEMENTS. SI CELA EST INEVITABLE, VOUS DEVEZ VERIFIER QUE LE CABINET ET LES ACCESSOIRES FONCTIONNENT CORRECTEMENT AVANT UTILISATION

WARNING- CARE MUST BE TAKEN WHEN OPERATING THIS DEVICE AROUND OTHER EQUIPMENT TO AVOID RECIPROCAL INTERFERENCE.

AVERTISSEMENT - LE SOIN DOIT ÊTRE PRIS LORS DE L'UTILISATION DE CE PÉRIPHÉRIQUE AUTOUR D'AUTRES ÉQUIPEMENTS AFIN D'ÉVITER LES INTERFÉRENCES RÉCIPROQUES.

WARNING-TO AVOID PERSONAL INJURY OR DAMAGE TO THE EQUIPMENT, ONLY TRAINED/QUALIFIED PERSONNEL WHO HAVE READ THIS MANUAL SHOULD OPERATE THIS EQUIPMENT. OPERATION BY UNAUTHORIZED USERS SHOULD BE PREVENTED.

AVERTISSEMENT POUR ÉVITER DES BLESSURES OU DOMMAGES PERSONNELS À L'ÉQUIPEMENT, PERSONNEL QUALIFIE FORMÉS / QUI ONT LIRE CE MANUEL DEVRAIT FONCTIONNER CET L'ÉQUIPEMENT. OPERATION PAR LES UTILISATEURS NON AUTORISÉ DOIVENT ETRE EVITES.

WARNING: THE CABINET CASTERS ARE PROVIDED FOR CONVENIENCE BUT NOT AS MEANS TO BE PUSHED ACROSS THRESHOLDS OR SIMILAR OBSTACLES. THE CABINET MUST BE MOVED FROM THE SIDE DURING TRANSPORTATION NOT FROM THE FRONT OR BACK.

AVERTISSEMENT : LE CABINET ROULETTES SONT FOURNIS POUR DES RAISONS DE COMMODITY, NON COMME UN MOYEN D'ÊTRE POUSSÉ À TRAVERS DES SEUILS OU DES OBSTACLES SIMILAIRES. L'ARMOIRE DOIT ÊTRE DÉPLACÉE DU LE CÔTÉ PENDANT LE TRANSPORT NON PAS DE L'AVANT OU L'ARRIÈRE.

WARNING: DO NOT ATTEMPT TO MOVE THE CABINET WITHOUT SECURING THE DRAWERS AND DOORS.

AVERTISSEMENT : N'ESSAYEZ PAS DE DÉPLACER L'ARMOIRE SANS SECURISER LES TIROIRS ET LES PORTES.

Guidance and manufacturer's declaration – electromagnetic emissions		
The Reliance Treatment Cabinet is intended for use in the electromagnetic environment specified below. The customer or the user of the Reliance Treatment Cabinet should assure that it is used in such an environment.		
Emissions test	**Compliance**	**Electromagnetic environment – guidance**
RF emissions CISPR 11	Group 1	The Reliance Treatment Cabinet uses RF energy only for its internal function. Therefore, its RF emissions are very low and are not likely to cause any interference in nearby electronic equipment.
RF emissions CISPR 11	Class B	The Reliance Treatment Cabinet is suitable for use in all establishments other than domestic, and may be used in domestic establishments and those directly connected to the public low-voltage power supply network that supplies buildings used for domestic purposes, provided the following warning is heeded: **Warning:** This equipment/system is intended for use by healthcare professionals only. This equipment/ system may cause radio interference or may disrupt the operation of nearby equipment. It may be necessary to take mitigation measures, such as re-orienting or relocating the Reliance Treatment Cabinet or shielding the location.
Harmonic emissions IEC 61000-3-2	Class A	
Voltage fluctuations/ flicker emissions IEC 61000-3-3	Complies	

Guidance and manufacturer's declaration – electromagnetic immunity

The Reliance Treatment Cabinet is intended for use in the electromagnetic environment specified below. The customer or the user of the Reliance Treatment Cabinet should assure that it is used in such an environment.

IMMUNITY test	IEC 60601 TEST LEVEL	Compliance level	Electromagnetic environment – guidance
			Portable and mobile RF communications equipment should be used no closer to any part of the Reliance Treatment Cabinet, including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter. **Recommended separation distance**
Conducted RF IEC 61000-4-6	3 Vrms 150 kHz to 80 MHz	3 V	$d = 1,17\sqrt{P}$
Radiated RF IEC 61000-4-3	3 V/m 80 MHz to 2.5 GHz	3 V/m	$d = 1,17\sqrt{P}$ 80 MHz to 800 MHz $d = 2,33\sqrt{P}$ 800 MHz to 2.3 GHz
			where P is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer and d is the recommended separation distance in meters (m). Field strengths from fixed RF transmitters, as determined by an electromagnetic site survey,[a] should be less than the compliance level in each frequency range.[b] Interference may occur in the vicinity of equipment marked with the following symbol: 

NOTE 1 At 80 MHz and 800 MHz, the higher frequency range applies.

NOTE 2 These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects, and people.

[a] Field strengths from fixed transmitters, such as base stations for radio (cellular/cordless) telephones and land mobile radios, amateur radio, AM and FM radio broadcast and TV broadcast cannot be predicted theoretically with accuracy. To assess the electromagnetic environment due to fixed RF transmitters, an electromagnetic site survey should be considered. If the measured field strength in the location in which the Reliance Treatment Cabinet is used exceeds the applicable RF compliance level above, the Reliance Treatment Cabinet should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as re-orienting or relocating the [ME EQUIPMENT or ME SYSTEM].

[b] Over the frequency range 150 kHz to 80 MHz, field strengths should be less than 3 V/m.

Guidance and manufacturer's declaration – electromagnetic immunity

The Reliance Treatment Cabinet is intended for use in the electromagnetic environment specified below. The customer or the user of the Reliance Treatment Cabinet should assure that it is used in such an environment.

IMMUNITY test	IEC 60601 test level	Compliance level	Electromagnetic environment – guidance
Electrostatic discharge (ESD) IEC 61000-4-2	± 2, 4, 6 kV contact ± 4, 4, 8 kV air	Level 3 Level 3	Floors should be wood, concrete, or ceramic tile. If floors are covered with synthetic material, the relative humidity should be at least 30 %.
Electrical fast transient/burst IEC 61000-4-4	± 2 kV for power supply lines ± 1 kV for input/output lines	Level 3	Mains power quality should be that of a typical commercial or hospital environment.
Surge IEC 61000-4-5	± 1 kV line(s) to line(s) ± 2 kV line(s) to earth	Level 2 Level 3	Mains power quality should be that of a typical commercial or hospital environment.
Voltage dips, short interruptions and voltage variations on power supply input lines IEC 61000-4-11	<5 % U_T (>95 % dip in U_T) for 0,5 cycle 40 % U_T (60 % dip in U_T) for 5 cycles 70 % U_T (30 % dip in U_T) for 25 cycles <5 % U_T (>95 % dip in U_T) for 5 s	Complies	Mains power quality should be that of a typical commercial or hospital environment. If the user of the Reliance Treatment Cabinet requires continued operation during power mains interruptions, it is recommended that the Reliance Treatment Cabinet be powered from an uninterruptible power supply or a battery.
Power frequency (50/60 Hz) magnetic field IEC 61000-4-8	3 A/m	Level 2	Power frequency magnetic fields should be at levels characteristic of a typical location in a typical commercial or hospital environment.

NOTE U_T is the a.c. mains voltage prior to application of the test level.

Recommended separation distances between portable and mobile RF communications equipment and the Reliance Treatment Cabinet

The Reliance Treatment Cabinet is intended for use in an electomagnetic environment in which radiated RF disturbances are controlled. The customer or the user of the Reliance Treatment Cabinet can help prevent electromagnetic interference b maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the Reliance Treatment Cabinet as recommended below, according to the maximum output power of the communications equipment.

Rated maximum output power of transmitter W	Separation distance according to frequency of transmitter m		
	150 kHz to 80 MHz $d = [\frac{3.5}{V_1}]\sqrt{P}$	80 MHz to 800 MHz $d = [\frac{3.5}{E_1}]\sqrt{P}$	800 MHz to 2,5 GHz $d = [\frac{7}{E_1}]\sqrt{P}$
0,01	0,12	0,12	0,23
0,1	0,37	0,37	0,74
1	1,17	1,17	2,33
10	3,69	3,69	7,38
100	11.67	11.69	23.33

For transmitters rated at a maximum output power not listed above, the recommended separation distance d in meters (m) can be estimated using the equation applicable to the frequency of the transmitter, where P is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer.

NOTE 1: At 80 MHz and 800 MHz, the separation distance for the higher frequency range applies.

NOTE 2: These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects, and people.

2. INSTALLATION

2.1. Unpacking

2.1.1. Open the shipping carton carefully and record any damage to the carton or its contents.

2.1.2. Remove all contents from the shipping carton.

2.1.3. Move the cabinet to the desired location before removing the tape that is holding the drawers and doors. Remove all contents from the drawers of the cabinet and set aside. These optional items may include glassware, cotton containers, rechargeable handles or otoscope heads

2.1.4. Pull the lower-most door handle toward you to gain access to the Pressure Pump, Vacuum Pump, and the Suction Container.

2.1.5. Locate and feed the Suction Hose through grommet.

2.1.6. Two restraining straps maintain the correct operating location of each pump. Refer to Figure 1

NOTE: Do not remove these straps

REMARQUE : Ne retirez pas ces courroies

3. UNIT SET-UP

3.1. Power Cord

3.1.1. Plug the Power Cord into the rectangular receptacle (AC Input Module) on the back of the unit. Refer to Figure 2.

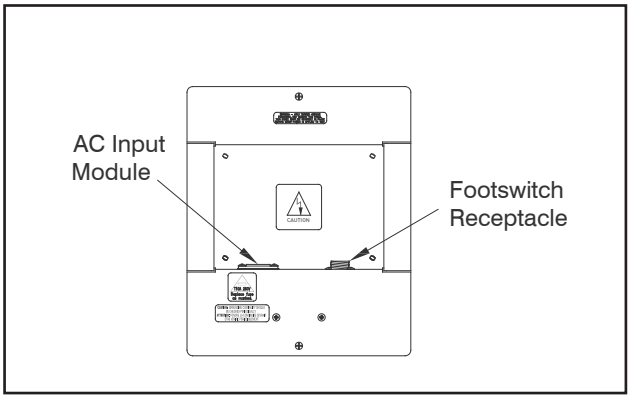


FIGURE 2

3.2. Footswitch (Optional Accessory)

3.2.1. If ordered, install the optional Footswitch. To accomplish this, plug the end of the Footswitch Cord into the round receptacle located on the back of the cabinet. Align the connector with the round receptacle and twist the connector clockwise to secure it in place. Refer to Figure 2.

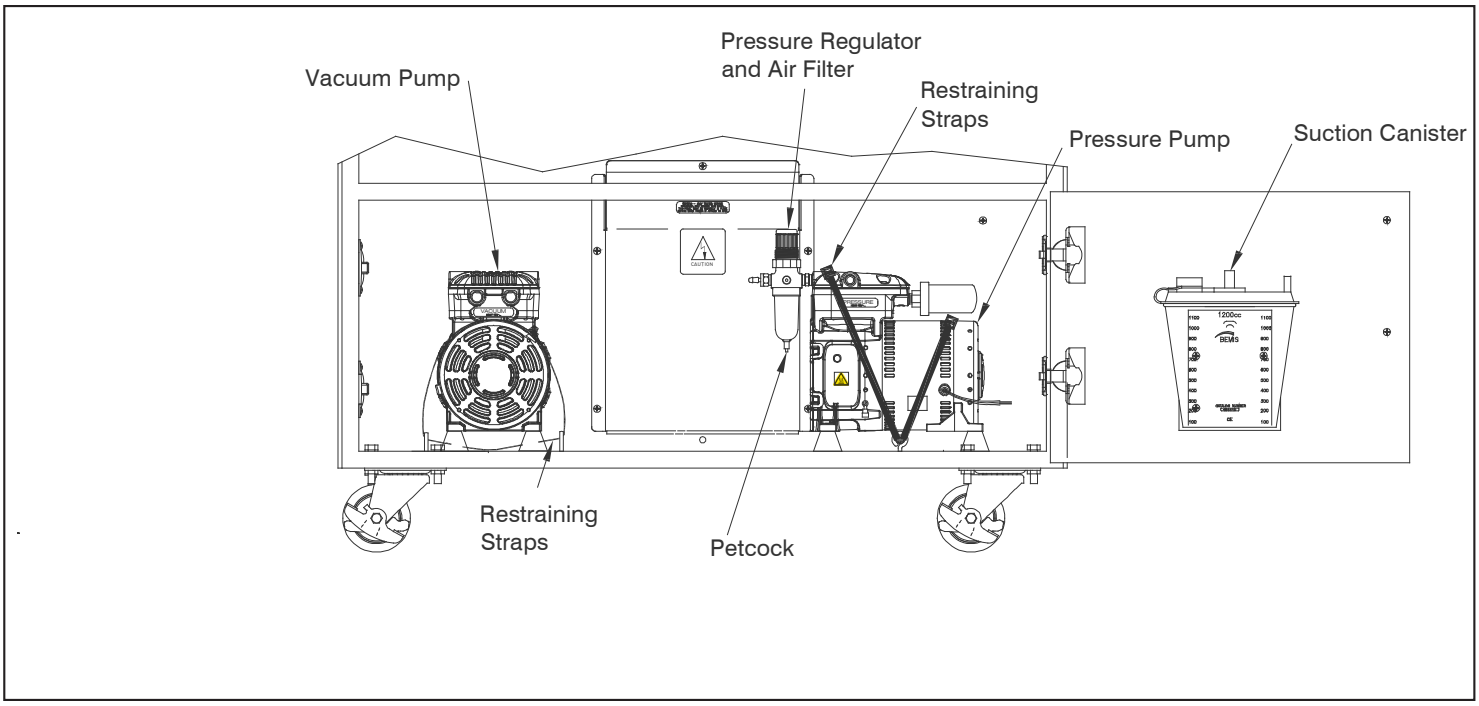


FIGURE 1

3.3. Pressure and Vacuum Hoses

3.3.1. Hang Pressure and Vacuum Hoses as required. Refer to Figure 3.

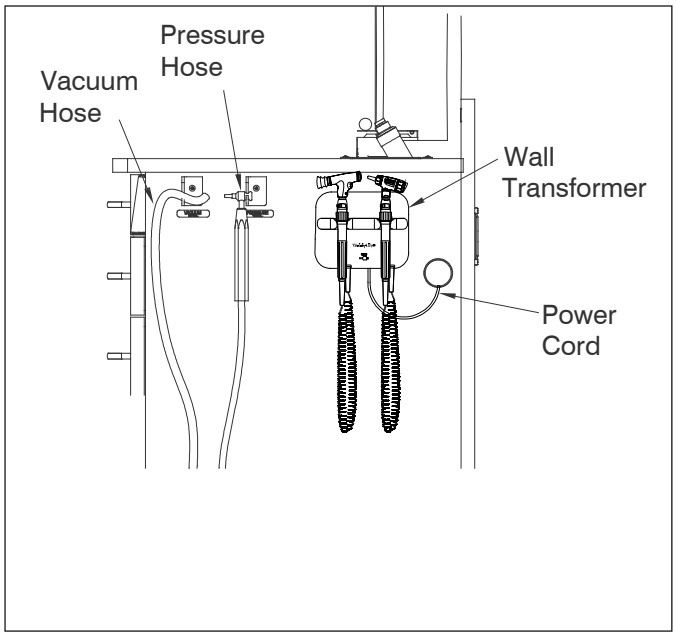


FIGURE 3 (310 Shown)

3.4. Glassware, Cotton Containers and Otoscopes (Optional Items)

3.4.1. Remove all glassware items from their original cartons. Assemble all glassware and place in their appropriate locations in the Drug Tray. See Figure 4.

3.4.2 Remove the Cotton Containers from drawer and place in their appropriate locations in the Drug Tray.

3.4.3 Remove all rechargeable battery handles from their original cartons.

3.4.4. Add Otoscope heads to rechargeable Battery Handles or corded Charger Handles as required. Place rechargeable Battery Handles into Wells located in the cabinet top. Hang corded Handles in the appropriate location in the Charger. (See Figure 4)

3.5. Tower

3.5.1. Locate the Tower and place it on top of the Curve Top. If the Curved Top is laminate secure the Tower to the top using (2) 1/4-20 X 2.00 Phillips Flat Head screws. (After placing screws place Nylon Hole Plug into holes. See Figure 4.)

3.5.2. If the Curved Top is solid secure the Tower using (2) 1/4-20 X 2.00 Phillips Flat Head screws and (2) 1/4-20 nuts. (After placing screws place Nylon Hole Plug into holes. See Figure 4.)

3.6. Wall Transformer

3.6.1. If ordered, install the optional Wall Transformer on the ENT Cabinet first plug one end of the Power Cord into the Wall Transformer. See Figure 3.

3.6.2. Place the Wall Transformer over the screws and pressing down on it. Let the Power Cord hang from hole. See Wall Transformer Power Cord

3.7. LED Light Source

3.7.1. If an external LED Light Source is ordered, install it by doing the following, remove the (3) #8 AB X 1/2 Self tapping Phil Screw located on the left side of the ENT Cabinet.

3.7.2. Locate the LED Light Source Bracket and attach the Bracket using the screws. Locate and place the LED Light Source onto the LED Light Source Mounting Bracket.

3.7.3. Take the LED Light Source Power Cord and run it through the hole and plug it into the Light Source. See Figure 4

NOTE: The Rechargeable Wells or Corded Charger will be pre-installed at the factory.

NOTE: Les puits rechargeables ou le chargeur attaché seront prémontés à l'usine.

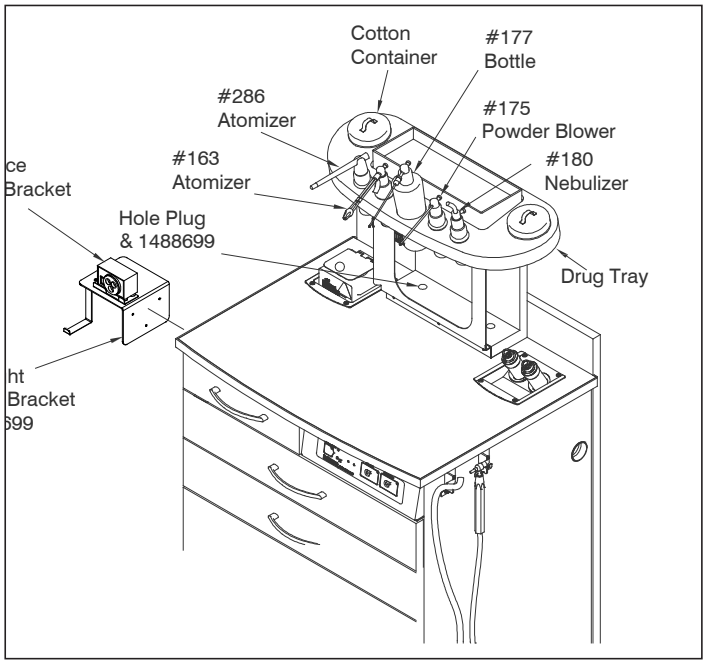


FIGURE 4 (310 Shown)

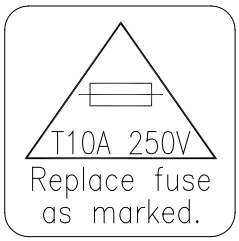
4. OPERATING INSTRUCTIONS

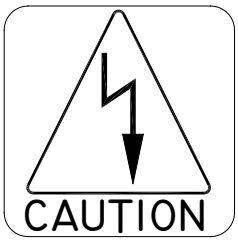
4.1. Power Cord

4.1.1. Plug the free end of the Power Cord into a 120V outlet capable of supplying at least 13.0 AMPS.

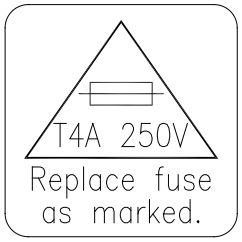
4.2. Fuses

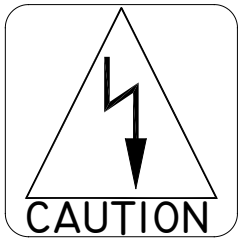
120V





220V-240V





WARNING- DISCONNECT TREATMENT CABINET FROM MAIN INPUT POWER BEFORE PROCEEDING WITH ELECTRICAL INSPECTIONS OR MAINTENANCE.

AVERTISSEMENT - DÉMONTEZ LE MODULE DE DEMANDE DE RÈGLEMENT DE LA PUISSANCE D'ENTRÉE PRINCIPALE AVANT DE PROCÉDER AUX INSPECTIONS OU À L'ENTRETIEN ÉLECTRIQUES.

WARNING- ONLY TRAINED SERVICE PERSONNEL MAY REMOVE THIS PANEL. THIS PANEL MUST BE SECURELY IN PLACE BEFORE MAINS POWER IS APPLIED TO UNIT.

AVERTISSEMENT- SEULEMENT UNE PERSONNE AUTORISEE PEUT ENLEVER CE PANNEAU DOIT ETRE FIXE EN PLACE AVANT DE METTRE LE CABINET SOUS TENSION.

CAUTION- Replace fuse(s) as marked. All fuses must be replaced with a fuse of the same size and rating. Refer to the wiring diagram on page 32.

ATTENTION- Changent le fusible (s) comme marqué. Tous les fusibles doivent être changés avec un fusible de la même taille et de la notation. Référez-vous aux diagramme de câblage à la page 32.

4.2.1. Treatment Cabinet contains two pre-installed fuses located inside the AC Input Module on the Outlet Plate Assembly located on the back of the cabinet.

Refer to Figure 2 and Figure 5.

4.2.2. The Bead Warmer contains a user replacement fuse. Contact Premier Medical Products for more information or Reliance Technical Service (800) 735-0358.

4.2.3. Fuse Replacement in AC Input Module.

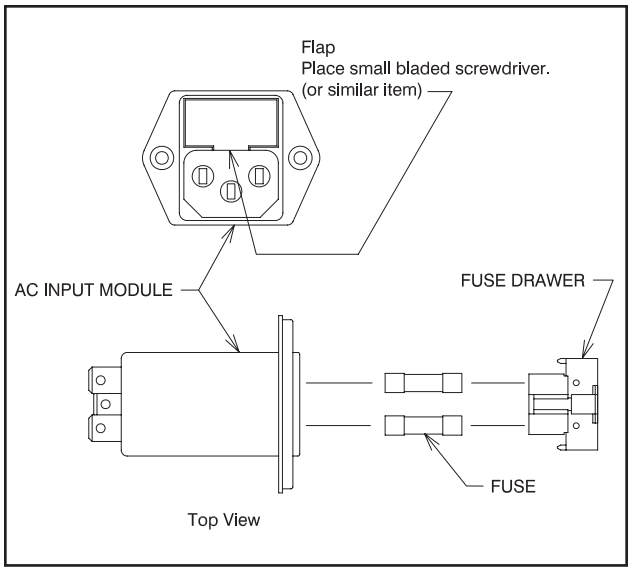


FIGURE 5

Method for removing fuse drawer:

4.2.3.1. The fuse drawer is located above the power cord, entry module.

4.2.3.2. Remove the power cord.

4.2.3.3. Place a small bladed screwdriver into appropriate slot (shown in Figure 5) and push the flat spring towards the center of the power module until a click is heard. (Click may not be heard in all cases.)

4.2.3.4. Once the flap has been pushed towards the center, the drawer will extend slightly beyond the power module.

4.2.3.5. Remove the drawer by pulling it out by your fingers.

CAUTION- To avoid a bind of the drawer in the AC Input Module, never install the drawer into the AC Input Module without fuses.

ATTENTION- Pour éviter un grippage du tiroir dans le module de puissance d'entrée à C.A., n'installez jamais le tiroir sur le module de puissance d'entrée à C.A. sans détonateurs.

4.3. On/Standby Switch

4.3.1. Push the Membrane Standby Switch to turn the unit on. The LED will change from orange to green when this is done. See Figure 6.

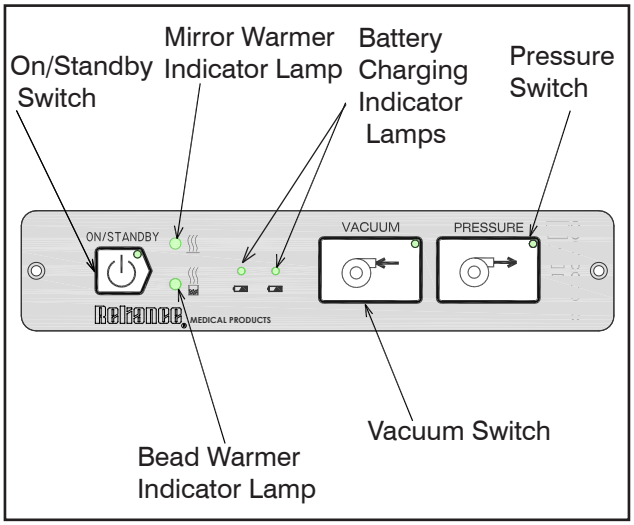


FIGURE 6

4.4. Pressure Switch

4.4.1. When depressed, the pressure switch will activate the pressure pump and the green LED on the switch will illuminate. Push switch again to turn pressure pump off. The pressure system has an Air Filter and Pressure Regulator built into the system as shown. See Figure 1.

4.4.2. The Air Filter filters particulate matter and moisture from the air pressure line.

For Pressure Pump Specifications see:

www.gastmfg.com

CAUTION- The Air Filter should be checked periodically and drained into a disposable container, if required, to keep the system functioning properly. To drain turn the petcock clockwise to open and counterclockwise to close.

ATTENTION -Le filtre à air à air devrait être contrôlé périodiquement et vidé dans un conteneur remplaçable, s'il y a lieu, pour continuer le système fonctionner correctement. Pour vider la spire le petcock dans le sens horaire pour s'ouvrir et dans le sens anti-horaire à la fin.

4.4.3. The Pressure Regulator is preset at the factory, but may be adjusted. Turn the Regulator clockwise to increase the pressure, or counter clockwise to decrease pressure.

CAUTION- To avoid overheating the Pressure Pump, DO NOT block the air flow for an extended period of time.

ATTENTION -Pour éviter de surchauffer la pompe de pression, ne bloquez pas la circulation d'air pendant une période étendue.

4.5. Vacuum Switch 

4.5.1. When depressed the vacuum switch will activate the vacuum pump and the green LED on the switch will illuminate. Push switch to turn vacuum switch off.

4.5.2. The vacuum system has a disposable canister built into the system to collect any debris.

For Vacuum Pump Specifications, see:

www.gastmfg.com

WARNING - THE DISPOSABLE LINER AND VACUUM LINE SHOULD BE REPLACED AFTER EACH USE.

AVERTISSEMENT - LA LIGNE REMPLAÇABLE DE DOUBLURE ET DE DÉPRESSION DEVRAIT ÊTRE SUBSTITUÉE APRÈS CHAQUE UTILISATION.

WARNING - REFER TO LOCAL OR HEALTHCARE PROFESSION GUIDELINES FOR DISPOSAL OF THE SUCTION CANISTER, ITS CONTENTS, AND TUBING IN A SAFE MANNER.

AVERTISSEMENT - RÉFÉREZ LES DIRECTIVES DE PROFESSION DE GENS DU PAYS OU DE SOINS DE SANTÉ POUR LA DISPOSITION DE LA BOÎTE D'ASPIRATION, DE SON CONTENU, ET DE TUYAUTERIE D'UNE FAÇON SÛRE.

CAUTION- To avoid overheating the Vacuum Pump, DO NOT block the flow of air for an extended period of time.

ATTENTION- Pour éviter de surchauffer la pompe de dépression, ne bloquez pas le flux d'air pendant une période étendue.

4.5.3. To replace the Disposable Suction Canister, lift the suction canister out of its Container Ring located inside the bottom compartment. (See Figure 1)

Remove all hoses, noting their location and remove canister. Add new Canister and reconnect the hoses to the appropriate fitting and place canister into the Container Ring.

4.5.4. To replace the Vacuum Tubing, first pinch or clamp the existing hose at the both ends to prevent leakage from the hose. Pull the hose from the bottom of the cabinet and properly dispose the hose. Run the new hose from the outside of the cabinet into the lower part of the cabinet and attach the hose to the Patient port of the lid on the suction canister. Refer to Figure 1 for Suction Canister and Figure 3 for location of Vacuum Hose.

For Support Data See: www.cardinal.com

NOTE: Assure that all conections are secure.

REMARQUE: Assurez que tous les conections sont bloqués.

WARNING - WHEN RELOCATING THE CABINET THE SUCTION CANISTER MUST BE SEATED PROPERLY IN THE CANISTER HOLDER TO AVOID SPILLAGE.

AVERTISSEMENT - EN REPLAÇANT LE MODULE LA BOÎTE D'ASPIRATION DOIT ÊTRE POSÉE CORRECTEMENT DANS LE SUPPORT DE BOÎTE POUR ÉVITER L'EFFUSION.

4.6. Rechargeable Instruments (Optional)

4.6.1. Two (2) Welch Allyn 3.5V NiCad rechargeable handles (see Figure 7) are supplied with one (1) Otoscope head and one (1) Transilluminator Tip. Assemble the Otoscope head to one of the handles and the Transilluminator tip to the other. Insert the two (2) handles into the recharging wells. Welch Allyn Li-Ion Handles will work with Welch Allyn Li-Ion adapter.

NOTE: The Heine Li-Ion rechargeable handles and batteries are not compatible with this cabinet.

REMARQUE: Les traitements et les batteries rechargeables de Li-Ion de Heine ne sont pas compatibles avec ce module.

4.6.1.1. To assure that the instruments are charging, two (2) green LEDs on the Membrane Switch will illuminate when the instruments are charging. See Figure 6.

NOTE: The green LEDs will stay lit (if charging) regardless of the position of the Standby Switch.

REMARQUE: Les DEL vertes resteront se sont allumées (si chargeant) indépendamment de la position du contact en attente.

4.6.1.2 Twist Otoscope head or Transilluminator tip to disassemble from rechargeable handle.

4.6.2. Refer to manufacturers instructions when replacing rechargeable batteries.

WARNING - REFER TO MANUFACTURERS INSTRUCTIONS OF RECYCLING/DISPOSAL OF BATTERIES.

AVERTISSEMENT - RÉFÉREZ LES INSTRUCTIONS DE CONSTRUCTEURS DE LA RÉUTILISATION/DISPOSITION DES BATTERIES.

For Rechargeable Handles Specifications, see:

Manufacturer's Instruction Manual or

www.welchallyn.com

4.7. Corded Handle (Wall Transformer) (Optional)

4.7.1. If chosen, the unit is supplied with corded instruments (Wall Transformer). To operate, push the Membrane ON/STANDBY Switch to turn the Wall Transformer on illuminating the Power Indicator. Remove one instrument from the holder and adjust the light intensity by pressing the button and turning the Rheostat on the handle. Turning the Rheostat clockwise will increase the intensity and counter clockwise will decrease the intensity.
Refer to Figure 8.

4.7.2. The instrument light will automatically turn off when the instrument is returned to its holder.

For Corded Handle (Wall Transformer) Specification, see:

Manufacturer's Instruction Manual or

www.welchallyn.com

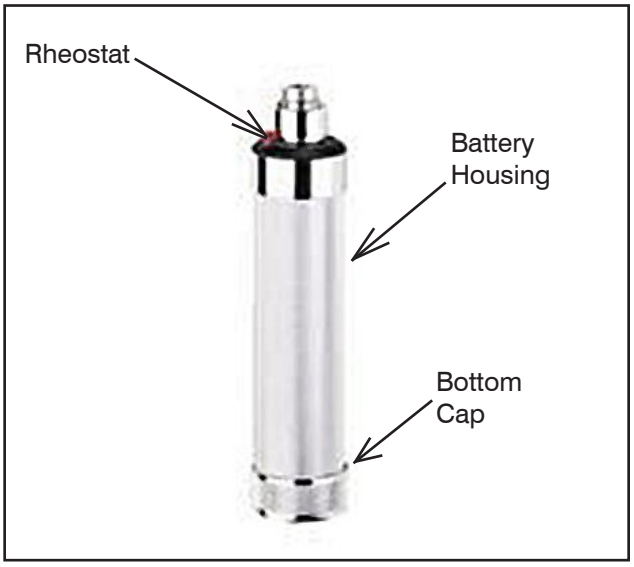


FIGURE 7
Refer to Section 4.6

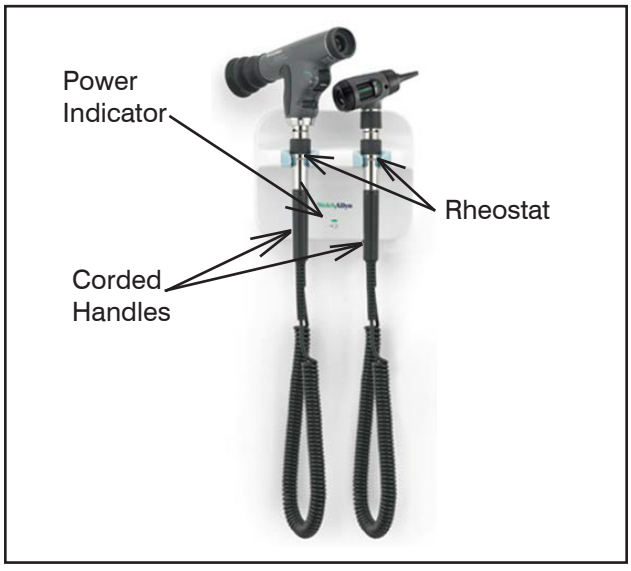


FIGURE 8
Refer to Section 4.7

4.8. Footswitch (Optional)

4.8.1. The Footswitch may be used to operate the Pressure Pump and Vacuum Pump independently of the Membrane Switch. To activate the Pressure Pump depress the right half of the Footswitch, marked "☞ ". Refer to Figure 9.

4.8.2. To activate the Vacuum Pump depress the left half of the Footswitch marked "☞ ". Refer to Figure 9.

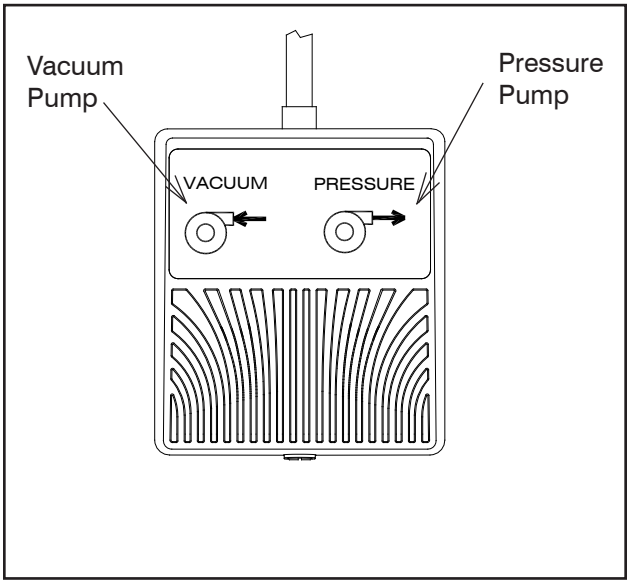


FIGURE 9

4.9. Mirror Warmer (Optional)

4.9.1 The Mirror Warmer System consists of heating elements located inside the cabinetsdirectly above the top cabinet drawer. Instruments and mirrors placed in this drawer will be heated to a temperature which will inhibit fogging when used.

4.9.2. The Mirror Warmer is energized by turning on the On/Standby switch. The green LED light will be on when the Mirror Warmer is energized. A stabilized system temperature will be reached approximately four hours after the system is energized. Designed with low power consumption (35 watts), the warmer can be left on overnight, but if not used for 24 hours or longer, the On/Standby switch should be turned off.

4.9.3. After inserting or removing instruments, close the drawer to maintain the temperature.

WARNING - AVOID ALL CONTACT WITH A PATIENT IF AN INSTRUMENT HAS BEEN OVERHEATED BY THE MIRROR WARMER.

AVERTISSEMENT - ÉVITEZ TOUT LE CONTACT AVEC UN PATIENT SI UN INSTRUMENT A ÉTÉ SURCHAUFFÉ PAR LE RÉCHAUFFEUR DE MIROIR.

WARNING - THE TEMPERATURE OF THE MIRROR WARMER WILL NOT CAUSE A BURN, BUT PROLONGED FLESH CONTACT SHOULD BE AVOIDED.

AVERTISSEMENT - LA TEMPÉRATURE DU RÉCHAUFFEUR DE MIROIR NE CAUSERA PAS UNE BRÛLURE, MAIS LE CONTACT PROLONGÉ DE CHAIR DEVRAIT ÊTRE ÉVITÉ.

4.10. Bead Warmer (Optional)

4.10.1. The Bead Warmer System consists of a Heated Glass Bead Container, Glass Beads, and a Thermometer to check unit for correct operation. Additional information on this unit is included inside the Manufacturer's Carton, along with the Beads and Thermometer.

NOTE: On a right handed cabinet, the Bead Warmer is normally located in the top on the left side of unit. It is located on the opposite side on a left handed unit. Refer to Figure 10.

REMARQUE: Sur un module droitier, le réchauffeur de programme est normalement situé dans le sommet sur du côté gauche de l'ensemble. Il est situé du côté opposé sur un ensemble gaucher. Référez le schéma 10.

4.10.2. A hinged lid covers the bead well of the warmer. Warmer must be cool to safely add the glass beads.

4.10.3. The Bead Warmer is energized by turning on the On/Standby Switch on the Membrane Switch. (Refer to Figure 6), along with the Bead Warmer switch pushed in the "on" position. The indicator light should be on when the Bead Warmer is energized. Refer to Figure 10.

WARNING- TEMPERATURE RISE IS FAIRLY RAPID SHORTLY AFTER POWER IS APPLIED. TO AVOID BURNS DO NOT TOUCH METAL PARTS OF BEAD WAMER.

AVERTISSEMENT- L'ÉLÉVATION DE LA TEMPÉRATURE EST ASSEZ RAPIDE PEU DE TEMPS APRÈS L'ALIMENTATION ÉLECTRIQUE EST APPLIQUÉE. POUR ÉVITER DES BRÛLURES NE TOUCHEZ PAS LES PIÈCES EN MÉTAL de WAMER DE PROGRAMME.

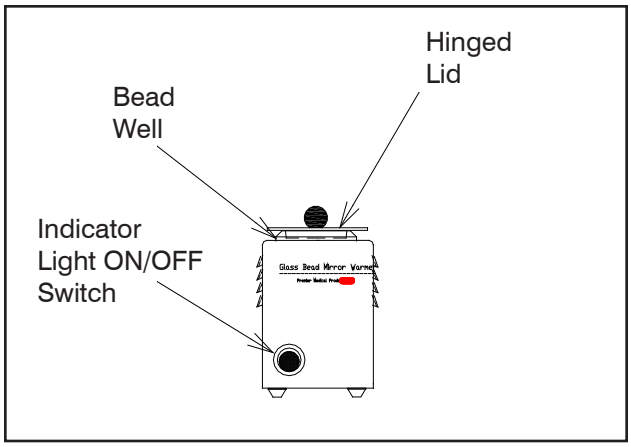


FIGURE 10

WARNING - AVOID ALL CONTACT WITH A PATIENT IF AN INSTRUMENT HAS BEEN OVERHEATED BY THE BEAD WARMER.

AVERTISSEMENT - ÉVITEZ TOUT LE CONTACT AVEC UN PATIENT SI UN INSTRUMENT A ÉTÉ SURCHAUFFÉ PAR LE RÉCHAUFFEUR DE PROGRAMME.

4.10.4. The Bead Warmer can be left on overnight, but if not used for 24 hours or longer, the On/Standby switch should be turned off.

For Bead Warmer Specifications, see:

Manufacturer's Instruction Manual or

www.premusa.com

4.11. LED Light Source (Optional)

4.11.1. The Fiber Optic Light Source consists of a self-contained Control Box that is mounted behind the front panel. The Light Source is a "3-Port -Turret" with one port emitting light through when manually rotated. All ports are supplied with

a customer specified cable adaptor.

4.11.2. This Fiber Optic Light Source will not operate unless the Membrane On/Standby Switch is “on” (Refer to Figure 6) and the Light Source Power Switch is on. 3 Port Turret will rotate to three different positions.

Refer to Figure 11.

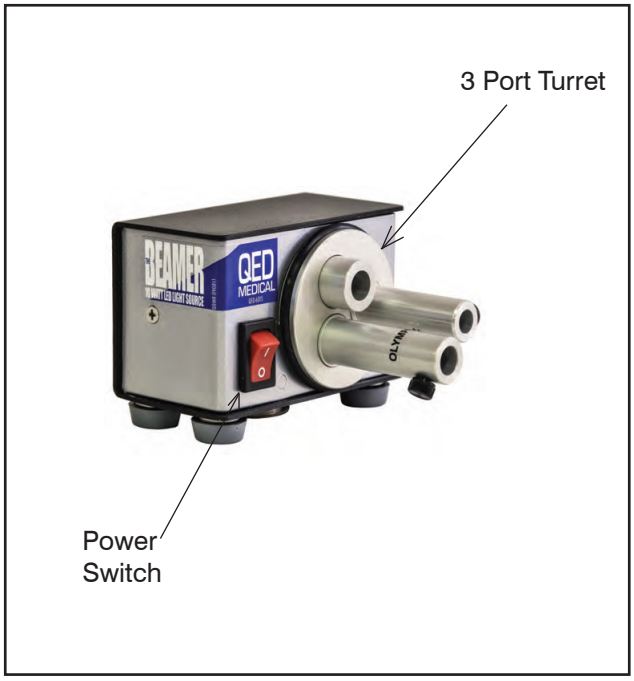


FIGURE 11 (LED Version)

This page is intentionally left blank.

TROUBLESHOOTING GUIDE

PROBLEM	PROBABLE CAUSE	SOLUTION
ENT Cabinet does Not Function.	1) Power Cord Not Correctly Connected.	Check Cord At Both Ends.
	2) No Power At Wall Outlet	Check For Voltage. Reset Breaker.
	3) Cable Disconnected At Circuit Board.	Check All Connections on Board.
	4) On/Standby Switch Failure.	Check Fuses. Replace If Necessary.Check Switch. Replace Membrane Switch If Necessary.
Rechargeable Wells Will Not Charge.	1) Cable Disconnected At Circuit Board.	Check Cable Connection On Board
	2) Fuse “Blown” At Outlet Plate.	Replace Fuses in AC Input Module.
	3) Handles Not Seated Correctly In Wells.	Check Wells For Foreign Objects.
Inadequate Suction.	1) Suction Hose Kinked Or Obstructed.	Replace Hose.
	2) Suction Liner Full.	Inspect Suction Liner. See Paragraph 4.5.3.
	3) Suction Container Cracked.	Replace Container.
	4) Low Suction	Check Muffler Filter. Replace If Necessary.
Inadequate Pressure.	1) Pressure Hose Kinked Or Leaking.	Replace Hose.
	2) Pressure Regulator Not Properly Adjusted.	Re-adjust Regulator. See Paragraph 4.4.3.
Moisture In Pressure Line.	1) Air Filter Trap Is Full Of Water.	Drain Filter. See Paragraph 4.4.2.

FIGURE 12

CLEANING AND MAINTENANCE

Cleaning Painted Surfaces

Painted metal surfaces are covered in durable, powder coat paint which is resistant to scratching and scuffing. Surfaces may be cleaned with a clean cloth dampened with mild, soapy water or equivalent household product that uses spray application.

Recommended Infection Control Products

Disinfectant/cleaner products that we have tested and recommend for our painted, laminated and plastic items are as follows.

- Cavicide® Hospital Disinfectant
- Precise® Hospital Foam Cleaner Disinfectant

CAUTION - Follow manufacturer's directions for concentration and application of disinfecting material. Avoid prolonged application of any disinfectant/cleaner products to prevent staining or discoloration of material.

ATTENTION - Suivez les sens du constructeur pour la concentration et l'application de désinfecter le matériau. Évitez l'application prolongée de tous les produits désinfectants/plus propres pour empêcher la souillure ou la décoloration du matériau.

WARNING - REFER TO LOCAL OR HEALTHCARE PROFESSION GUIDELINES FOR FREQUENCY OF CLEANING FOR INFECTION CONTROL.

AVERTISSEMENT - RÉFÉREZ LES DIRECTIVES DE PROFESSION DE GENS DU PAYS OU DE SOINS DE SANTÉ POUR LA FRÉQUENCE DU NETTOYAGE POUR LE CONTRÔLE D'INFECTION.

THIS PRODUCT IS LATEX FREE

PARTS LIST
RELIANCE® MODEL 310, 410, 510, AND 610
LV MEDICAL TREATMENT CABINET

Note: When ordering parts, please:

1. Advise dealer or factory of model and serial number of unit. These numbers are on the label that is located at rear, near the top of cabinet.

2. Specify color of painted parts. Painted parts have an asterisk(*) behind the part description.

REMARQUE : Quand pièces de commande, s'il vous plaît :

1. Informez le distributeur ou l'usine du modèle et du numéro de série de l'unité. Ces numéros sont de la plaque qui est située à l'arrière, près du dessus, du module.

2. Indiquez la couleur des pièces peintes. Les pièces peintes ont un astérisque (*) derrière la description de pièce.

Should your Treatment Cabinet not perform properly, or if replacement parts are needed, contact the Reliance® Distributor where you purchased this product or contact the Technical Service Department, Reliance® Medical Products, Inc., 3535 Kings Mills Road, Mason, Ohio 45040-2303, or call (800) 735-0358.

FIGURE 13

MODEL 310 TREATMENT CABINET ASSEMBLY

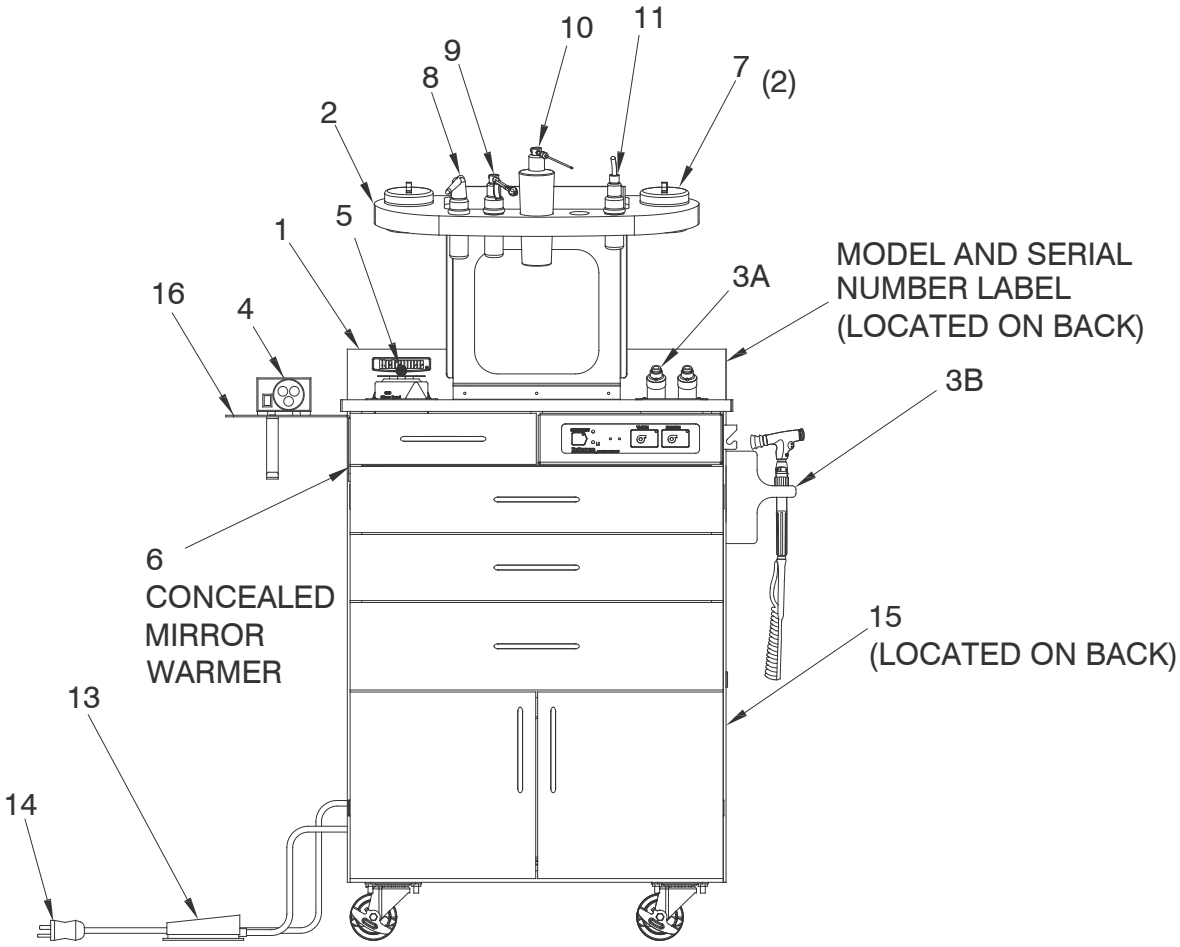


FIGURE 14

MODEL 410/510 TREATMENT CABINET ASSEMBLY

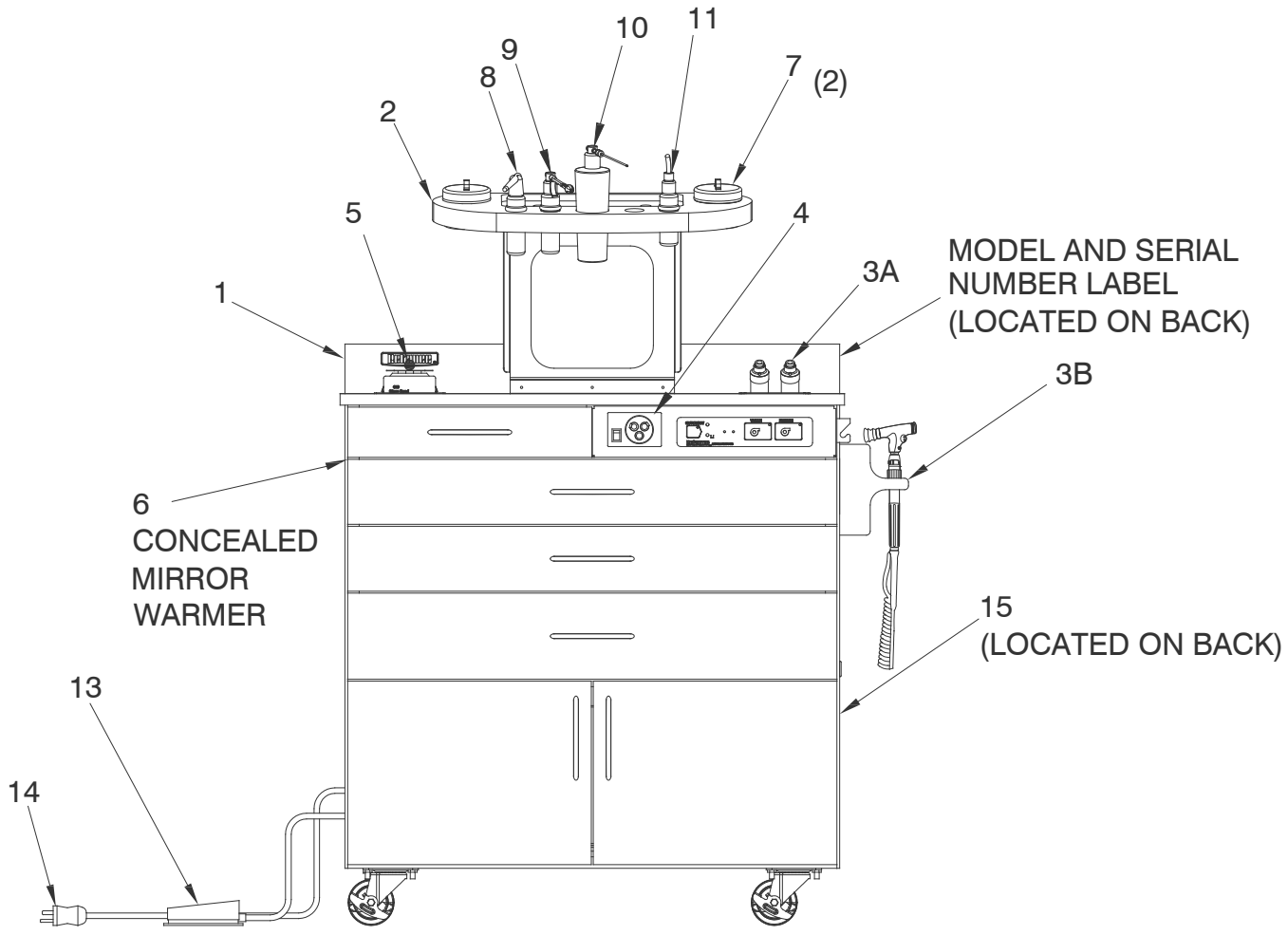
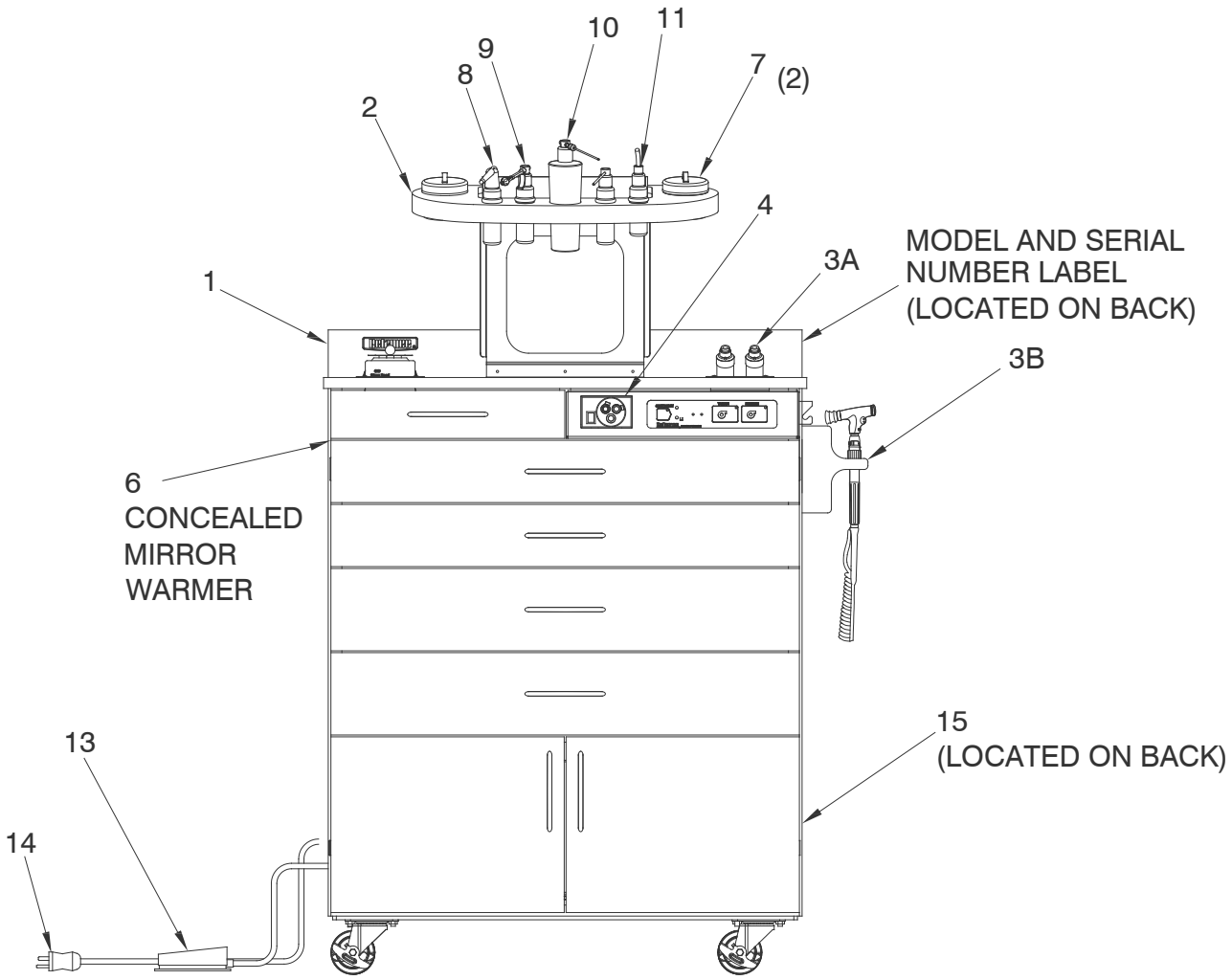


FIGURE 15

MODEL 610 TREATMENT CABINET ASSEMBLY



This page is intentionally left blank.

This page is intentionally left blank.

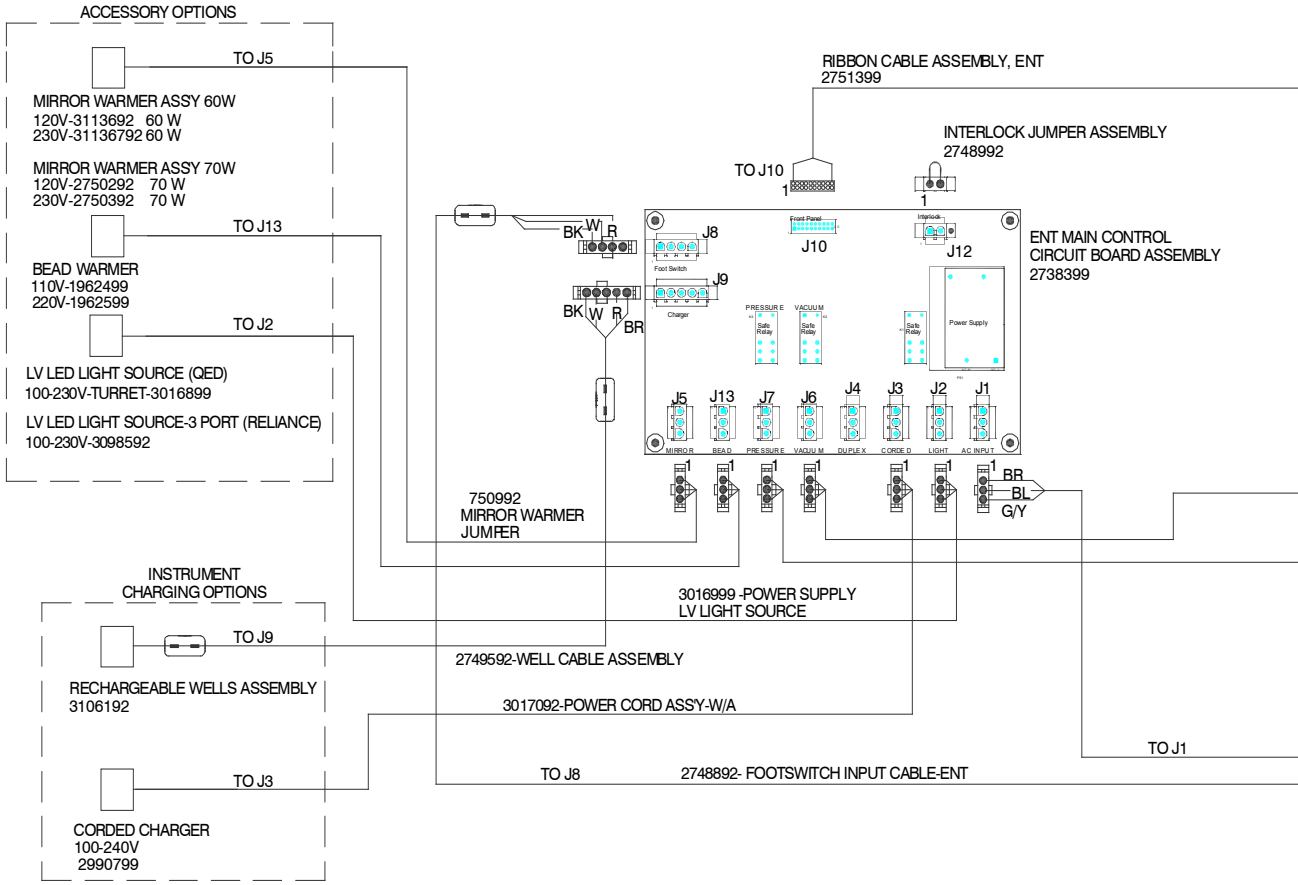
PARTS LIST

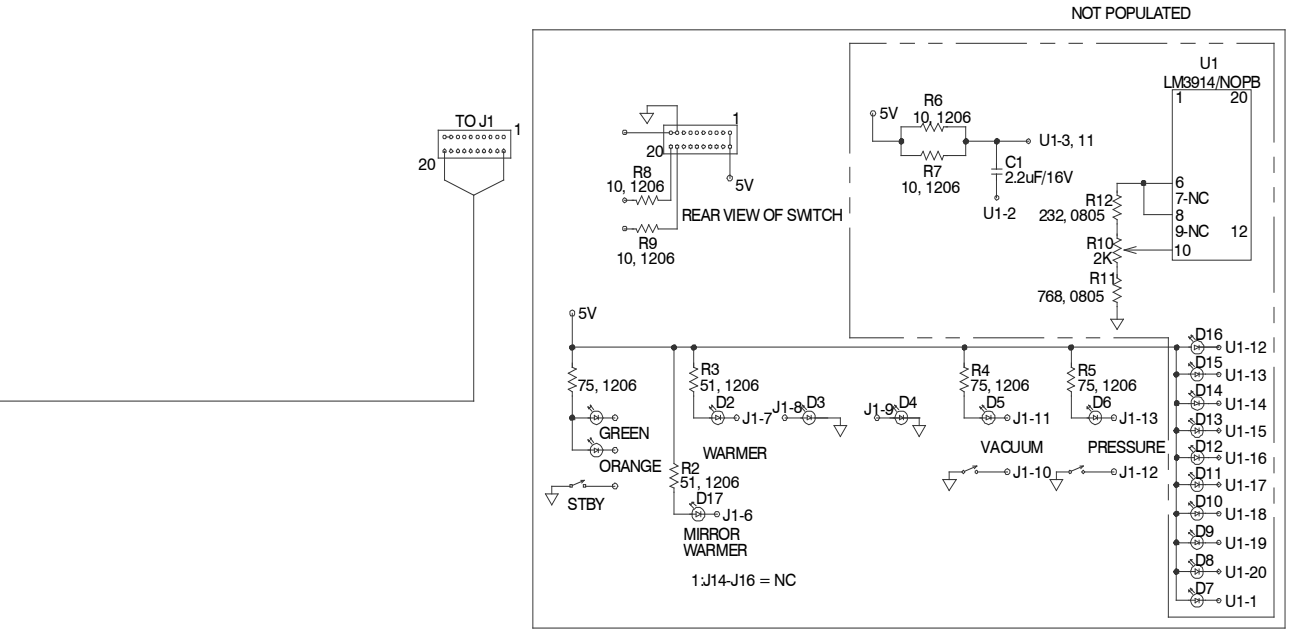
ITEM	PART NO.	DESCRIPTION
1		Cabinet Assembly* (See Figure)
2	3014199	Drug Tray
3A	3016192	Rechargeable Well Assembly
3B	2990799	Wall Transformer-Welch/Allyn GS77710
4	3016899	LED Light Source-3 Port (QED) 100-240V
	3098592	LED Light Source-3 Port (Reliance)100-240V
5	2749892	Bead Warmer Assembly-120V
	2749992	Bead Warmer Assembly-220-240V
6	2750292	Mirror Warmer Assembly-120V
	2750392	Mirror Warmer Assembly-220-240V
7	1259099	Cotton Container
8	1258599	#286 Atomizer
9	1258999	#163 Atomizer
10	1262899	#177 Bottle
11	1258699	#180 Nebulizer
12	1258899	#175 Powder Blower (Not Shown)
13	2882792	Footswitch Asembly
14	1659299	Power Cord Assembly-120V (US)
	2833299	Power Cord Assembly-220-240V (US)
15	2748492	Outlet Plate Assembly (Not Shown)
16	3105092	LED Light Source Bracket
AVAILABLE PARTS AND KITS		
	1575299	Drawer Tray-310/410 (Standard)
	3105899	Drawer Tray-410 (Small)
	3105999	Drawer Tray- 310 (Small)
	1682399	Fuse - 10 Amp/250V (120V)
	1634999	Fuse - 4 Amp/250V (220-240V)
	1259199	Welch Allyn 71670 Handles
	1259299	20200 Pneumatic Otoscope
	1259399	21700 Operating Otoscope
	1259499	Welch Allyn 25021 Regular Diagnostic Otoscope
	1259599	AP43300 Transilluminator
	1259699	Finoff Transilluminator
	3016492	Pressure Pump Assembly-120V
	3016692	Pressure Pump Assembly-220-240V
	3016592	Vacuum Pump Assembly-120V
	3016792	Vacuum Pump Assembly-220-240V

This page is intentionally left blank.

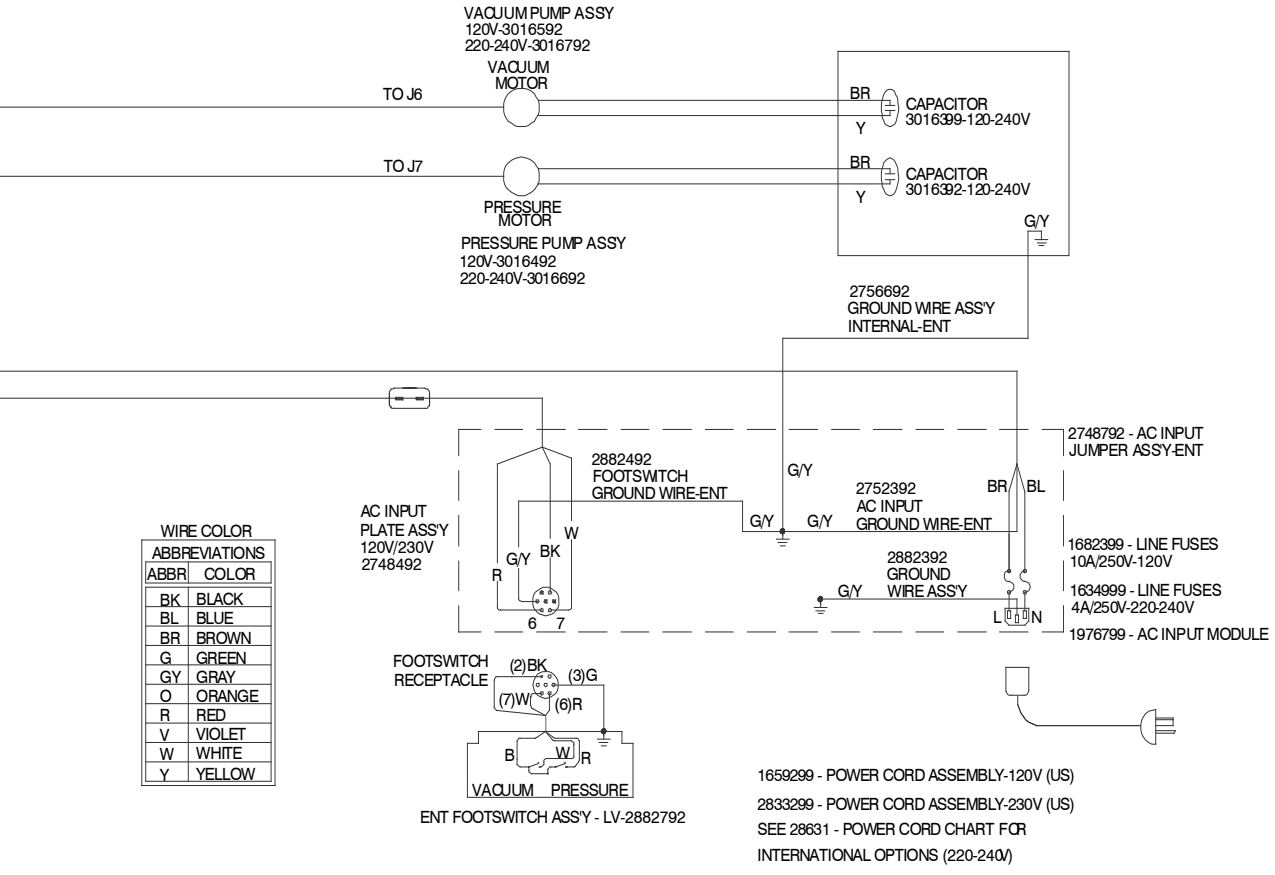
This page is intentionally left blank.

FIGURE 16
WIRING DIAGRAM-LV MEDICAL
TREATMENTCABINETS





2730398 OR 2730399-ENT MEMBRANE SWITCH



ENT FOOTSWITCH ASS'Y - LV-2882792

WIRE COLOR ABBREVIATIONS

ABBR	COLOR
BK	BLACK
BL	BLUE
BR	BROWN
G	GREEN
GY	GRAY
O	ORANGE
R	RED
V	VIOLET
W	WHITE
Y	YELLOW

(NOTES)

LIMITED WARRANTY

The Reliance® product must be used only for the purposes and in the manner described in the literature distributed with the product. The products are warranted against defective materials and workmanship for a period of one (1) year from date of installation. Products or parts thereof will be repaired or replaced as required at Reliance® Medical Products, Inc. Such repair or replacement shall be the sole remedy under this warranty. This warranty extends only to the original purchaser from an authorized Reliance® dealer and is subject to the following conditions:

1. The warranty card must be completed and returned to Reliance® Medical Products, Inc. within two (2) weeks from the date of installation.

2. Installation and servicing of the products must be performed by trained Reliance® equipment dealer service personnel in accordance with the appropriate instructions manual for the products. Warranty will be voided if installation is performed by a non-authorized individual

3. The products have not sustained breakage or other types of damage due to accident or misuse.

4. This warranty will not apply to Reliance® products which have had the serial number removed, altered or effaced.

EXCEPT FOR THE EXPRESS WARRANTY SET FORTH ABOVE, RELIANCE® DOES NOT GRANT ANY WARRANTIES, EITHER EXPRESS OR IMPLIED, INCLUDING IMPLIED WARRANTIES OF MERCHANTABILTY OR FITNESS FOR A PARTICULAR USE.

Reliance® Medical Products neither assumes nor authorizes any person to assume for it, any other liability in connection with the sale and use of its products.

REMEDIES ARE LIMITED EXCLUSIVELY TO REPAIR OR REPLACEMENT OF PARTS. RELIANCE® MEDICAL PRODUCTS, INC. EXPRESSLY DISCLAIMS LIABILITY FOR INCIDENTAL OR CONSEQUENTIAL DAMAGE RESULTING FROM THE USE OF THE EQUIPMENT.

Claims covered by this warranty will be honored when presented within one (1) month from discovery of a defect.

RELIANCE INTERNATIONAL

MADE IN AMERICA

Reliance Medical Products Inc.
3535 Kings Mills Road
Mason, Ohio 45040-2303 USA
1-800-735-0357(Customer Service)
1-800-735-0358 (Technical Service)
(513) 398-3937
Http://www.reliance-medical.com

EC REP **Authorized European Community Representative**

HAAG-STREIT UK

Edinburgh Way

Harlow, Exxex, England
CM20 2TT
United Kingdom

P/N 3100099 REV C

Printed in U.S.A.
Revised 2-2017-8867