Invacare® MoblVac® Wound Care Pump

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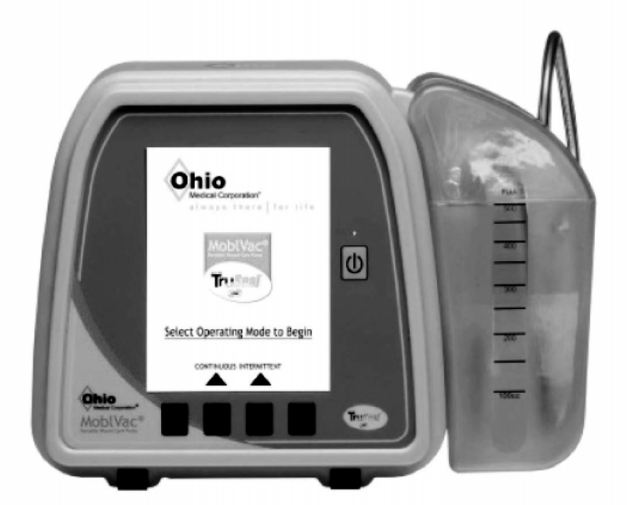
User Manual



This manual MUST be given to the user of the product.
BEFORE using this product, read this manual and save for future reference.

INVACARE

Yes, you can.

Contents

1 General

1.1 Symbols

Signal words are used in this manual and apply to hazards or unsafe practices which could result in personal injury or property damage. See the information below for definitions of the signal words.

DANGER!
Danger indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.

WARNING!
Warning indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

CAUTION!
Caution indicates a potentially hazardous situation which, if not avoided, may result in property damage or minor injury or both.

IMPORTANT
Indicates a hazardous situation that could result in damage to property if it is not avoided.

Gives useful tips, recommendations and information for efficient, trouble-free use.

1.2 Warranty

PLEASE NOTE: THE WARRANTY BELOW HAS BEEN DRAFTED TO COMPLY WITH FEDERAL LAW APPLICABLE TO PRODUCTS MANUFACTURED AFTER JULY 4, 1975.

This warranty is extended only to the original purchaser who purchases this product when new and unused from Invacare Continuing Care, Inc (ICCI) or a dealer. This warranty is not extended to any other person or entity and is not transferable or assignable to any subsequent purchaser or owner. Coverage under this warranty will end upon any such subsequent sale or other transfer of title to any other person.

This warranty gives you specific legal rights and you may also have other legal rights which vary from state to state.

ICCI warrants this product when purchased new and unused will be free from defects for a period of one (1) year from date of purchase from ICCI or a dealer, with a copy of the seller's invoice required for coverage under this warranty. If within such warranty periods any such product shall be proven to be defective, such product shall be repaired or replaced, at ICCI's option. This warranty does not include any labor or shipping charges incurred in replacement part installation or repair of any such product. ICCI's sole obligation and your exclusive remedy under this warranty shall be limited to such repair and/or replacement.

For warranty service, please contact the dealer from whom you purchased your ICCI product. In the event you do not receive satisfactory warranty service, please write directly to ICCI at the address on the back cover, provide dealer's name, address, and the date of purchase, indicate nature of the defect and, if the product is serialized, indicate the serial number. Do not return products to our factory without our prior consent.

Any product returned must be free from contamination by toxic or hazardous substances in accordance with OSHA HAZARD COMMUNICATION STANDARD 29 CFR, Section 1910.1200 and OSHA BLOOD BORNE PATHOGEN STANDARD 29 CFR, Section 1910.1030. Decontamination of items prior to their return is the responsibility of the customer. In the event a returned item is found to be contaminated, it shall be regarded as regulated waste and disposed of and no credit for the item shall be issued to the customer.

LIMITATIONS AND EXCLUSIONS: THE FOREGOING WARRANTY SHALL NOT APPLY TO SERIAL NUMBERED PRODUCTS IF THE SERIAL NUMBER HAS BEEN REMOVED OR DEFACED, PRODUCTS SUBJECTED TO NEGLIGENCE, ACCIDENT, IMPROPER OPERATION, MAINTENANCE OR STORAGE, PRODUCTS MODIFIED WITHOUT ICCI'S EXPRESS WRITTEN CONSENT (INCLUDING, BUT NOT LIMITED TO, MODIFICATION THROUGH THE USE OF UNAUTHORIZED PARTS OR ATTACHMENTS; PRODUCTS DAMAGED BY REASON OF REPAIRS MADE TO ANY COMPONENT WITHOUT THE SPECIFIC CONSENT OF ICCI, OR TO A PRODUCT DAMAGED BY CIRCUMSTANCES BEYOND ICCI'S CONTROL, AND SUCH EVALUATION WILL BE SOLELY DETERMINED BY ICCI. THE WARRANTY SHALL NOT APPLY TO NORMAL WEAR AND TEAR OR FAILURE TO ADHERE TO THE PRODUCT INSTRUCTIONS.

“THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IN LIEU OF ANY OTHER WARRANTIES WHATSOEVER, WHETHER EXPRESS OR IMPLIED, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, AND THE SOLE REMEDY FOR VIOLATIONS OF ANY WARRANTY WHATSOEVER, SHALL BE LIMITED TO REPAIR OR REPLACEMENT OF THE DEFECTIVE PRODUCT PURSUANT TO THE TERMS CONTAINED HEREIN. THE APPLICATION OF ANY IMPLIED WARRANTY WHATSOEVER SHALL NOT EXTEND BEYOND THE DURATION OF THE EXPRESS WARRANTY PROVIDED HEREIN. ICCI SHALL NOT BE LIABLE FOR ANY CONSEQUENTIAL OR INCIDENTAL DAMAGES WHATSOEVER.”

2 Safety

2.1 General Guidelines

WARNING!

- Do not use this product or any available optional equipment without first completely reading and understanding these instructions and any additional instructional material such as owner's manuals, service manuals or instruction sheets supplied with this product or optional equipment. If you are unable to understand the warnings, cautions or instructions, contact a healthcare professional, dealer or technical personnel before attempting to use this equipment - otherwise, injury or damage may occur.

Accessories

- Invacare products are specifically designed and manufactured for use in conjunction with Invacare accessories. Accessories designed by other manufacturers have not been tested by Invacare and are not recommended for use with Invacare products.

The information contained in this document is subject to change without notice.

Check all parts for shipping damage and test before using. In case of damage, do NOT use. Contact Invacare/Carrier for further instruction.

This product is a medical device and sale is restricted to or by order of a physician.

This device must only be used for the person for whom it was ordered and only for the use for which it was intended.

WARNING!

- Monitor patient for excessive bleeding, which may result in serious injury or death. If sudden or increased bleeding is observed, immediately stop therapy and seek medical attention.
- This device is to be used by or under the care of trained medical personnel only.
- DO NOT use this or any electrical device in an explosive or flammable environment or in the presence of flammable anesthetics.
- Infected wounds may require more frequent dressing changes. Constantly monitor wounds for signs of infection.
- Negative pressure wound therapy (NPWT) is not approved for use on children.

CAUTION!

- Prior to application of NPWT, it is the responsibility of the medical professional to properly assess the wound and to ensure that the proper course of treatment is being followed. See "Contraindications" and "Precautions".
- Use a contact dressing layer to completely cover any exposed tendons, ligaments, blood vessels, organs, any exposed bowel, nerves, and suture lines. Completely cover and protect prior to application of NPWT.
- The product is not to be used in a draining fistula site, non-enteric fistula or unexplored wound. Use of the product under such circumstances may cause excessive bleeding.

CAUTION!

- When dressing the wound, ensure that the gauze is properly saturated with normal saline before sealing the wound.
- When dressing the wound, ensure that the moistened gauze does not extend to the healthy periwound tissue.
- Do not use the MoblVac pump in Magnetic Resonance Imaging (MRI), Computed Tomography (CT) Scanning, Electrocardiogram (EKG or ECG), or in Hyperbaric Oxygen (HBO) therapy. Disconnect the pump from the patient, leaving the dressing intact, while these therapies are in use.

3 Clinical Considerations/Guidelines

3.1 Indications/Contraindications/Risk Factors

The MoblVac NPWT pump is an AC/DC powered portable aspirator that provides negative pressure for the application of wound drainage. Negative Pressure Wound Therapy has been used with many types of wounds including:[1-7]

- pressure ulcers
- chronic wounds
- acute wounds
- surgical wounds
- neuropathic and diabetic wounds
- explored enterocutaneous fistulas
- leg ulcers
- traumatic wounds
- fasciotomy wounds from compartment syndrome

Benefits

The potential clinical benefits of NPWT include increasing local blood flow, accurate measurement of wound exudates, decreasing microbial bioburden, enhancing formation of granulation tissue, and wound contraction, and promoting epithelialization.[7]

Contraindications

WARNING!

- Always consult the patient's physician before using the MoblVac system.
- The MoblVac NPWT pump should not be used under the following conditions:
  - necrotic tissue with eschar present
  - untreated osteomyelitis
  - non-enteric or unexplored fistulas
  - malignancy in wound
  - exposed vasculature
  - exposed nerves
  - exposed anastomotic site
  - exposed organs

WARNING!

– Precautions: Patient Risk Factors/Characteristics to consider before NPWT use

– The following is a list of health factors that your healthcare provider has been advised to consider before prescribing use of the MoblVac® as part of your medical treatment. If you have any questions or concerns about these risk factors, consult with your healthcare professional.

- Patients at high risk for bleeding and hemorrhage
- Patients on anticoagulants or platelet aggregation inhibitors (common types of blood thinners/antiplatelets include, but are not limited to: COUMADIN®, warfarin, heparin, LOVENOX®, aspirin, Plavix®, etc.), as excessive bleeding may occur. If you are unsure, please check with your physician. Always advise your physician of all medications you are taking. This includes both prescription medicines and those you buy over the counter.
- Patients with:
  - Friable vessels and infected blood vessels
  - Vascular anastomosis
  - Infected wounds
  - Osteomyelitis
  - Exposed organs, vessels, nerves, tendon, and ligaments
  - Sharp edges in the wound (i.e. bone fragments)
  - Spinal cord injury (stimulation of sympathetic nervous system)
  - Enteric fistulas

WARNING!

– The following is a continued list of health factors that your healthcare provider has been advised to consider before prescribing use of the MoblVac® as part of your medical treatment.

- Patients requiring:
  - MRI
  - Hyperbaric chamber
  - Defibrillation
- Patient size and weight
- Use near vagus nerve (bradycardia), such as neck (or anorectal) wounds where the vagus nerve may be exposed
- Circumferential dressing application in an extremity
- Mode of therapy – intermittent versus continuous negative pressure
- Position the device and tubing to avoid a tripping hazard and to avoid the patient lying on the tubing, or otherwise pulling it from the wound site, which could cause additional wounds
- DO NOT apply skin prep wipes directly onto open wounds
- Take extra precaution to ensure a sterile environment when NPWT is used on patients who are immuno-suppressed (such as patients with HIV, undergoing chemotherapy, with transplants or on certain medications) or patients who are colonized with exotic organisms

3.2 Wound Preparation

1. Debride necrotic tissue from wound bed
2. Cover tendon, bone, vessels, or organs with non-adherent dressing (such as oil emulsion)
3. May apply skin barrier to periwound skin
4. Cover any area of intact skin that may come in contact with dressing

3.3 Pressure Levels

There are many studies in NPWT with pressures ranging from 60 to 125 mmHg. In studies using gauze-based NPWT, pressure settings of 60-80 mmHg are frequently cited as being less painful and minimizing the risk of bleeding and tissue damage.[8-10] This corresponds to a MoblVac setting of 75 mmHg. Consult with your physician and facility protocol in setting appropriate pressure levels.

The MoblVac system supports continuous and intermittent therapy. Continuous therapy is recommended for unstable structures such as chest wall or non-intact fascia, for patients with increased risk of bleeding, highly exudating wounds, and enteric fistulas. Intermittent therapy is considered after the first 48 hours in treating some wound types. The following guidelines are general recommendations. Consult with your physician and facility protocols.

Type of Wound	NPWT
Abdominal Wounds	Continuous therapy
Enteric Fistulas	Continuous therapy
Other NPWT-indicated wounds	Continuous therapy for first 48 hours. Consider intermittent therapy for duration if exudate is stabilized

3.4 Dressing Changes

Initial Application

The TruSeal Link™ dressing kits should be changed 48 hours after the initial application of therapy.

Subsequent Dressing Changes

If the patient is comfortable and if no leak is present, dressing changes should occur 2-3 times per week. The TruSeal Link™ dressing kits use Kerlix™ AMD™ antimicrobial gauze by Covidien, which has been clinically proven to maintain an active healing environment and reduce the risk of infection for up to 72 hours[11–13]

WARNING!

- Dressings should be checked at regular intervals.
- In the event of heavy drainage or drainage with sediment, more frequent dressing changes may be needed. Infected wounds may require more frequent dressing changes. Consult with your physician and facility protocol in determining dressing changes.
- Ensure that all previous dressing materials are removed prior to new dressing application.

Dressing in Place without MoblVac Therapy

If MoblVac® Negative Pressure Wound Therapy is interrupted, the dressing may be left in place up to 72 hours from the initial application of that dressing, according to clinical documentation from the gauze dressing manufacturer.[11–13]

3.5 Wound Monitoring

1. Monitor for effective therapy resulting in:
   - reduction in wound surface area
   - reduction in wound depth
   - reduction in undermining and tunneling

- reduction in drainage

2. Discomfort:
   - apply non-adherent contact layer to wound bed before antimicrobial gauze
   - investigate for underlying cause
3. Complications:
   - Monitor patients for excessive bleeding which may cause serious injury or death. If bleeding is excessive, stop therapy. Call 911 (or local emergency number, unless the patient is already hospitalized) and take emergency measures to control bleeding.
   - Monitor patients for infection. If odor or clinical signs of infection are noted, contact the treating clinician immediately.
4. Battery and Canister:
   - Check that the battery is charged
   - The canister should be changed at least once a week or when 2/3 full
   - Dispose of used canisters in accordance with local ordinances, regarding disposal of potentially infected or biohazardous materials
   - Do not open canister
   - Excessively frequent canister replacement may be a sign of excessive bleeding
   - Do not block the vents on the battery cover

Refer to instructions on the back of the MoblVac pump and with the dressing kit. For more information, call 866-985-NPWT (6798) for the MoblVac Manual and dressing kit Instructions for Use.

These guidelines reflect the clinical experiences and opinions of our consultants.

The guidelines are presented for the purpose of providing information concerning NPWT. The guidelines should not be relied upon to suggest a course of treatment for a particular person. The guidelines should not be used in place of a visit, call, consultation or the advice of a licensed physician or other qualified healthcare provider. Patients with healthcare related questions or concerns are advised to contact a physician or other qualified healthcare provider promptly. Invacare makes no representations or warranties concerning the content or clinical efficacy or effectiveness of the guidelines.

4 Setup

4.1 Setup/Delivery Inspection

1. Inspect package for completeness. Ensure that you have received all of the following materials with your MoblVac Wound Care Pump (Item number 769600):

   - One pump with quick start guide
   - One operator's manual
   - 1 tubing set
   - 1 power cord
   - 1 collection canister with solidifier

   > If you are missing anything, please call the MoblVac Clinical/Technical Services Hotline at 866-985-NPWT (6798).

2. Visually inspect unit for physical damage that may have occurred during shipping.
3. Without connecting the DC adapter, depress the ⏻ button to turn the unit ON and observe the display and ensure it illuminates to show "MoblVac" and "Select Operating Mode to Begin".
4. If the display does not illuminate, connect the DC adapter and observe the display and ensure the battery symbol appears. Allow the battery to charge for at least one hour and then repeat step two of the preliminary check procedure.

   > If the unit has been stored for an extended period of time, the screen may not illuminate when the power adapter is initially plugged in, but the battery will continue to charge. Allow the unit to charge for a minimum of four hours and repeat step 2 of the "Preliminary Check".

5 Technical Data

5.1 Typical Product Parameters

DEVICE SPECIFICATIONS
Pump: 12 VDC oil-less diaphragm type
Performance: Vacuum Range: 0-200 mmHg
Controls: Vacuum Regulator: Integrated Digital Pressure Transducer Vacuum Gauge: LCD/TFT Display +/- 1% Full Scale Accuracy
Battery Type: Rechargeable Sealed Lead Acid Capacity: 12V, 1.2 Ah Average Run Time: 12 hours+ at Full Charge* ⓘ * Run time may vary based on effectiveness of dressing seal Charge Time: 6 hours or less to 85% charging
Collection Device: Canister: 500cc Disposable Plastic w/ Integrated Odor Control Filter and Electrical Shutoff

DEVICE SPECIFICATIONS
Electrical Requirements: 100-240 VAC, 50-60 Hz, 1.5-0.7 A, 24 V DC ⓘ Use only power supply model number: SNP-A049-M3. Manufactured by Skynet Electronics
Operating, Shipping and Storage: Temperature range: within -40C to +70C Relative humidity range: within 10% to 95% N. C. Atmospheric pressure range: within 500 to 1060 kPa
Electrical Classifications: Class I, Internally Powered Type B Applied Part IPXO Ordinary

5.2 Definitions and Symbols Legend

	Power On/Off
	Battery Status Indicator
	DC Adapter Connected
⚠ CANISTER ALARM ⚠	Collection Canister is Full
⚠ LEAK ALARM ⚠	System Leak Detected
	Type B applied Part

- Continuous Vacuum Mode: A constant vacuum pressure is applied based upon pressure level set by operator.
- Intermittent Vacuum Mode: Unit will automatically cycle negative pressure and atmospheric pressure based upon the timing level set by the operator.
- Vacuum Level: The operator can use the control panel to set the desired vacuum pressure level in increments of 25 mmHg.
- Pause: The operator can use the control panel to pause the unit and vent the negative pressure in order to make adjustments to the setup.
- Run: The operator can use the control panel to restart the pump after adjustments are made.
- Silence: The operator can use the control panel to silence the audible alarm in order to rectify the adverse condition.
- Options: The operator can push the options button in order to turn sleep mode off, or to utilize the lockout mode.
- Lockout: The lockout mode protects the unit from inadvertent button pushes and requires a two step button combination to be disabled. This feature will ensure that the vacuum level is not mistakenly changed during therapy.
- Sleep Off: This option allows the user to turn off the sleep mode and will keep the LCD display illuminated at all times.

It is recommended that the user only disable the sleep mode when the unit is plugged into wall power. The battery will drain very quickly with sleep mode disabled. Even when sleep mode is disabled, the screen will still dim one minute after the last button is pressed.

6 Quick Start Instructions

6.1 Quick Start Instructions

1. Remove the collection canister from its packaging. Firmly press the canister into place. Ensure the latch is firmly extended over the top of the canister.
2. Connect the extension tubing to the opening on the top of the collection canister.
3. Depress the button ⏻ on the front control panel of the unit and notice that the green light goes on.
4. Press the button on the control panel beneath the text **"CONTINUOUS"** unless you have been told to apply intermittent therapy.

   ℹ The digital gauge portion of the display will 25 mmHg. Increase the pressure to the level you have been instructed by the physician by pressing the button on the control panel beneath the word **"INCREASE"**. The display will increase in increments of 25 mmHg.

5. When therapy is complete, press the button to turn the unit off and disconnect the unit from patient.

   ℹ Refer to instructions on the back of the MoblVac unit. For more information, call **866-985-NPWT (6798)** or visit www.MoblVacNPWT.com for the MoblVac Manual.

Alarms

- Canister Full Alarm – The alarm will sound when the canister is full. Press the "PAUSE" button, and remove the collection canister. Replace with a new canister and restart. (For instructions on how to replace canister, please refer to section 9, part B on page 10). (If the unit continues to alarm, please refer to the "troubleshooting" section of this manual). **Excessive canister changes (or canister full alarms) may indicate that there is excessive bleeding.**
- Leak Alarm - If the pump runs constantly and the unit goes into a leak alarm mode, press the "SILENCE" button on the control panel, and check the patient dressing, canister, and tube connection for leaks. Once the leaks have been sealed, the pump will become silent. (If the unit continues to alarm, please refer to the "troubleshooting" section of this manual). **The leak alarm indicates that there is a leak in the dressing. This may be due to improper application, patient movement, or excessive bleeding.**
- Battery Alarm – The alarm will sound when the battery needs recharging. Plug the electric cord into an electric outlet to charge the battery.

7 Operating Instructions

7.1 Operating Instructions for Constant Suction

Upon receiving your new MoblVac pump, perform the following initial tests to ensure that your unit is in good working order and that no damage has occurred during shipment.

1. Remove the collection canister from its packaging and place onto the housing rail.
2. Depress the canister retaining latch and firmly press the canister into place.
3. Release the latch ensuring it is firmly extended over the top of the canister.
4. Connect the locally supplied patient tube to the hose barb on the exterior of the collection canister.
5. Depress the on/off button on the front control panel of the unit. Observe that the LED above the button illuminates, and that the display shows the home screen with the "MoblVac" logo and the text "Select Operating Mode to Begin".
6. To operate the unit in **"CONTINUOUS**" suction mode, (for **"INTERMITTENT"** mode proceed to section B) press the button on the control panel beneath the text **"CONTINUOUS"**.

   Once the button is depressed, the display will change to the **"CONTINUOUS VACUUM MODE"** screen, and the pump will pulse momentarily. The digital gauge portion of the display shall then read 25 mmHg. This is the actual vacuum that is being applied to the patient, and is the default pressure setting. After a few momentary pulses of the pump, the unit shall become silent.

7. If the pump runs constantly and the unit goes into a leak alarm mode, press the silence button on the control panel, and check the patient dressing, canister, and tube connection for leaks.

   Once the leaks have been sealed, the pump will become silent. (If the unit continues to alarm please refer to the "troubleshooting" section of this manual.)

8. To increase the vacuum pressure level, press the button on the control panel beneath the word **"INCREASE"**.

   Once the button is pressed the display will increase in increments of 25 mmHg, and the pump will pulse to increase the actual vacuum being applied to the patient. Once the pressure is stabilized, the internal vacuum sensor will hold the pressure at +/- 5 mmHg of the set point.

9. To decrease the amount of vacuum pressure being applied to the patient, press the button on the control beneath the word **"DECREASE",** until the desired pressure setting is reached.

   The unit will slowly bleed down to the desired pressure. If an immediate bleed down is required press the button beneath the word **"PAUSE"** on the control panel, and wait five seconds for all the negative pressure to vent, and then press the button beneath the word **"RUN"** on the control panel to restart the unit at the desired pressure. (Note that if the unit is left in the **"PAUSE"** mode for more than five minutes, the alarm will sound 3 times to remind the user that the pump is on.)

Canister Alarm

As the unit is running and evacuating fluid from the patient, the collection canister will begin to become full. Once it is entirely full the unit will automatically sense that the canister is full, and the **"CANISTER ALARM"** will sound, and the unit will automatically vent the pressure from the patient tube.

1. Press the button on the control panel beneath the word **"SILENCE"** to turn the alarm off.
2. Disconnect the patient tube from the collection canister.
3. Press the canister lock inward towards the housing, and lift the canister off of the support rail.
4. Dispose of the canister using proper disposal procedures.
5. Install a new canister. Refer to steps 1 —3 in Operating Instructions for Constant Suction.
6. Press the button on the control panel beneath the word **"RUN"** to restart the suction unit.

Disable Sleep Mode

1. Press the **"OPTIONS"** button
2. Press the **"SLEEP OFF?"** button.

These steps will disable the sleep mode and the screen will remain illuminated. After sleep mode is turned off, the text above the button will read **"SLEEP ON?"**

Enable Sleep Mode

1. Press the **"OPTIONS"** button.
2. Press the **"SLEEP ON?"** button.

These steps will enable the sleep mode. After sleep mode is turned on, the text above the button will read **"SLEEP OFF?"**

3. Once the final selection is made, the user can then press the ***"RETURN"*** button to return to the vacuum level screen.

It is recommended that the user only disable the sleep mode when the unit is plugged into wall power. The battery will drain very quickly with sleep mode disabled.

Lock Function

1. Press the **"OPTIONS"** button from the vacuum level screen.
2. Press the **"LOCKOUT"** button.

The lock icon appears next to the battery level indicator. All of the buttons on the unit are now disabled.

Unlock Function

1. Press and hold the **"HOLD TO UNLOCK"** button
2. Press the flashing **"UNLOCK"** button

The buttons are now enabled. Once the final selection is made, the user can then press the **"RETURN"** button to return to the vacuum level screen.

3. When therapy is complete, press the on/off button to turn the unit off and vent the negative pressure, and disconnect the unit from patient.

7.2 Operating Instructions - Intermittent Suction

1. Remove the collection canister from its packaging and place onto the housing rail.
2. Depress the canister retaining latch and firmly press the canister into place.

3. Release the latch ensuring it is firmly extended over the top of the canister.
4. Connect the locally supplied patient tube to the hose barb on the exterior of the collection canister.
5. Depress the on/off button on the front control panel of the unit.

   Observe that the LED above the button illuminates, and that the display shows the home screen with the "MoblVac" logo and the text "Select Operating Mode to Begin"

6. Press the button on the control panel beneath the word **"INTERMITTENT".**

   Once the button is depressed, the display will change to the **"SET ON TIME"** screen, and the number **"4"** will begin to flash.

7. Use the buttons on the control panel beneath the words **"INCREASE"** and **"DECREASE"** to set the prescribed "ON" time in minutes.

   This is the interval that negative pressure will be applied to the patient.

8. Once the desired time is set press the **"ENTER"** button, and observe that the number **"3"** beneath the **"SET OFF TIME"** heading begins to flash.
9. Use the buttons on the control panel beneath the words **"INCREASE"** and **"DECREASE"** to set the prescribed **"OFF"** time in minutes.

   This is the interval that negative pressure will be vented from the patient.

10. Once the desired time is set press the **"ENTER"** button.

    If at any time while setting the **"OFF"** timing the operator desires to readjust the **"ON"** timing, press the **"BACK"** button to return to the **"SET ON TIME"** option.

    Once the correct timing is set, and the **"ENTER"** button is pressed, the display will change to the **"INTERMITTENT VACUUM MODE"** screen, and the pump will pulse momentarily. The digital gauge portion of the display shall then read 25 mmHg. This is the actual vacuum that is being applied to the patient, and is the default pressure setting. After a few momentary pulses of the pump, the unit shall become silent. This will also commence the intermittent timing cycle.

11. If the pump runs constantly and the unit goes into a leak alarm mode, press the **"SILENCE"** button on the control panel, and check the patient dressing, canister, and tube connection for leaks.

    Once the leaks have been sealed, the pump will stop running and become silent. (if the unit continues to alarm please refer to the "troubleshooting" section of this manual)

12. To increase the vacuum pressure level, press the button on the control panel beneath the word **"INCREASE".**

Once the button is pressed the display will increase in increments of 25 mmHg, and the pump will pulse to increase the actual vacuum being applied to the patient. Once the pressure is stabilized, the internal vacuum sensor will hold the pressure at +/- 5 mmHg of the set point.

13. To decrease the amount of vacuum pressure being applied to the patient, press the button on the control beneath the word **"DECREASE"**, until the desired pressure setting is reached.

The unit will slowly bleed down to the desired pressure. If an immediate bleed down is required press the button beneath the word **"PAUSE"** on the control panel, and wait five seconds for all the negative pressure to vent, and then press the button beneath the word **"RUN"** on the control panel to restart the unit at the desired pressure.

(Note that if the unit is left in the ***"PAUSE"*** *mode for more the five minutes, the alarm will sound 3 times to remind the user the pump is on).*

Canister Alarm

As the unit is running and evacuating fluid from the patient, the collection canister will begin to become full. Once it is entirely full the unit will automatically sense that the canister is full, and the **"CANISTER ALARM"** will sound, and the unit will automatically vent the pressure from the patient tube.

1. Press the button on the control panel beneath the word **"SILENCE"** to turn the alarm off.
2. Disconnect the patient tube from the collection canister.
3. Press the canister lock inward towards the housing, and lift the canister off of the support rail.
4. Dispose of the canister using proper disposal procedures.

WARNING!
The full canister contains biohazardous material.
- Always use universal precautions when handling and disposing of a full collection canister.

5. Install a new canister. Refer to steps 1 —3 in Operating Instructions for Intermittent Suction.
6. Press the button on the control panel beneath the word **"RUN"** to restart the suction unit.

Disable Sleep Mode

1. Press the **"OPTIONS"** button
2. Press the **"SLEEP OFF?"** button.

These steps will disable the sleep mode and the screen will remain illuminated. After sleep mode is turned off, the text above the button will read **"SLEEP ON?"**

Enable Sleep Mode

1. Press the **"OPTIONS"** button.
2. Press the **"SLEEP ON?"** button.

These steps will enable the sleep mode. After sleep mode is turned on, the text above the button will read **"SLEEP OFF?"**

3. Once the final selection is made, the user can then press the ***"RETURN"*** button to return to the vacuum level screen.

It is recommended that the user only disable the sleep mode when the unit is plugged into wall power. The battery will drain very quickly with sleep mode disabled.

Lock Function

1. Press the **"OPTIONS"** button from the vacuum level screen.
2. Press the **"LOCKOUT"** button.

The lock icon appears next to the battery level indicator. All of the buttons on the unit are now disabled.

Unlock Function

1. Press and hold the **"HOLD TO UNLOCK"** button
2. Press the flashing **"UNLOCK"** button

The buttons are now enabled. Once the final selection is made, the user can then press the **"RETURN"** button to return to the vacuum level screen.

3. When therapy is complete, press the on/off button to turn the unit off and vent the negative pressure, and disconnect the unit from patient.

7.3 Battery Status Indicator

Assuming fully charged battery and a good dressing seal, the approximate battery life of a fully charged battery is 12 hours.

1. During operation, the unit will continuously monitor the state of the battery. The segments of the battery status monitor are defined as follows:

- Green = battery charged
- Yellow = battery partially charged
- Red = battery needs charging
- Blank and Flashing = Battery nearly depleted. Plug in immediately.

This battery status indicator is approximate and is based upon a properly set up and sealed dressing. If the pump is turned on without a collection canister and dressing in place, the colored bands in the battery status indicator may fluctuate until the system is properly sealed.

2. Once the battery is charged, the battery status monitor will stop ascending and will become a solid red, yellow and green segmented display. The "plug" icon will remain until the DC adapter is disconnected. On average, a fully charged battery will yield approximately 12 hours of continuous use with a properly sealed dressing.

Never store the unit with a discharged battery. This will decrease the overall shelf life of the battery. Once therapy is complete, it is recommended to fully charge the battery prior to storing the device. If the unit is to sit dormant for an extended period of time, it is recommended to charge the battery for a minimum of four hours every month to maximize the life of the battery.

CAUTION!

– The power cord is to be used for mains disconnection. Always use the power cord to disconnect the unit from the outlet.

8 Care and Maintenance

8.1 Processing and Cleaning Instructions

1. Discard all contaminated parts after any suctioning procedure. These components may include the collection canister, and all suction tubing.
2. Wipe the surface of the unit clean with a mild antiseptic, such as Isopropyl alcohol and a clean soft cloth. Do not allow any cleaning solution to spill onto the unit itself.

Washing and Showering

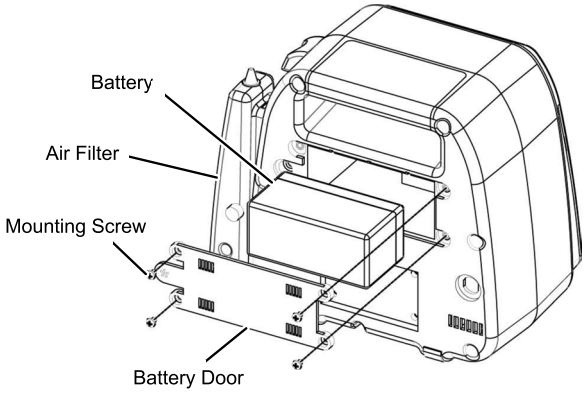
CAUTION!
- DO NOT use the MoblVac while washing or near water. DO NOT submerge.
- Disconnect the tubing from the MoblVac therapy unit before showering or washing to avoid damage to the unit.

The clear dressing which covers the wound is water resistant, but you should avoid submerging the dressing in water.

Reconnect the tubing to the MoblVac unit as soon as you have finished washing, and turn on the unit per the instructions below. Refer to "Operating the MoblVac".

8.2 Battery / Air Filter Replacement

The MoblVac uses a type of battery called a "lead acid" battery. This type of battery needs to be cycled on a regular basis. Batteries of this type, if they are unused for a certain period of time, may lose their "electrical potential" and thereby have a diminished capacity and performance.



If your MoblVac pump is not operating properly (i.e. flickering screen, not powering on, or not holding a charge), this may be a sign that the battery is no longer working properly. The battery would need to be changed (using Part Number 769721 Battery Replacement Kit), as per the instructions below.

1. Remove the four Phillips head screws from the rear of the unit.
2. Remove the battery door in order to access battery and air filter.
3. Disconnect the wires from the two battery terminals. When disconnecting, pull the clips on the terminal, not the wires themselves.
4. Remove the black air filter from the well next to the battery compartment.

Replace the air filter with only Invacare part number 769722.

Replace the battery with only Invacare Part Number 769721.

CAUTION!

– Use of non-approved batteries may cause damage to the unit and void the product warranty. When reassembling wires to battery, ensure that the white wire is placed on the **positive + (red)** terminal, and that the black wire is placed on the **negative - (black)** terminal. To prevent damage to the unit do not reverse the connection.

5. Place battery back into compartment and secure door with four screws.

Ensure that none of the vents on the back of the unit are obstructed after reassembly. The operator must repeat the preliminary check prior to placing the unit back into service.

9 Troubleshooting

9.1 Troubleshooting the MoblVac Unit

Problem	Cause	Solution
A. Pump does not turn on when the power switch is depressed.	Battery is not charged.	Charge battery for a minimum of 1 hour. Ensure that when the DC adapter is connected, the LCD screen illuminates and displays the battery icon. (If the screen does not illuminate when the DC adapter is connected, charge the unit for a minimum of 4 hours)
	Defective unit.	Call MoblVac Clinical/Technical Hotline at 866-985-NPWT (6798) for assistance.
B. Can't tell if pump is on	Green light is not functioning	The green light above the ⏻ button on the front control panel indicates that the pump is turned on.
		Check to see if the pump operates and screen illuminates. If the green light does not illuminate, please call MoblVac Clinical/Technical Hotline at 866-985-NPWT (6798) for assistance.

Problem	Cause	Solution
B. Can't tell if pump is on	Sleep Mode Feature	The green light above the ⏻ button on the front control panel indicates that the pump is turned on.
		To conserve energy, the pump goes into sleep mode and the screen is not illuminated. Touch any button to illuminate the screen.
		ⓘ To disable the energy conserving sleep mode, press the **"OPTIONS"** button, then press the **"SLEEP OFF?"** button. This will disable the sleep mode and the screen will remain illuminated. After sleep mode is turned off, the text above the button will change to read **"SLEEP ON?".** Pressing the button again will enable the sleep mode. Once the final selection is made, the user can then press the **"RETURN"** button to return to the vacuum level screen. It is recommended that the user only disable the sleep mode when the unit is plugged into wall power. The battery will drain very quickly with sleep mode disabled.
	Battery not charged or defective unit	Follow instructions above for Problem A
C. Pump continues to pulse or chirp after initiating therapy	Leak in dressing	Clamp the drain tubing and observe the wound site to check for leaks in the dressing. If the dressing noticeably grows in size and then shrinks again when the clamp is released, there is a dressing leak. Readjust the seal as necessary and reapply suction.
	Defective extension tubing, canister, or unit	Follow instructions below for Problem D.

Problem	Cause	Solution
D. Erratic leak alarm.	Improper tubing connection or leak in the patient dressing.	Check all patient vacuum connections to ensure they are air tight, and that the tubing is connected properly to the collection canister. Clamp the drain tubing and observe the wound site to check for leaks in the dressing. If the dressing noticeably grows in size and then shrinks again when the clamp is released, there is a dressing leak. If the alarm is silenced when the clamp is applied, there is a dressing leak. Readjust the seal as necessary and reapply suction.
	Canister is not sealed properly to housing.	Firmly press on the canister in a downward motion while the pump is running to ensure a proper seal.
	Dirt or contaminate on the collection canister seal.	Press the "PAUSE" button and remove the collection canister. Visually inspect the sealing area on the canister and the housing, and remove any debris or contaminate that is compromising the seal. Replace canister and restart. When the pump is running, the user should not manually occlude the brass vacuum port. If occluding of this port occurs, the unit is designed to automatically shut down.
	Canister is cracked or defective.	Replace collection canister.
	Exhaust vents are obstructed.	Remove obstruction from exhaust vents on back of unit.
	Defective unit.	Call MoblVac Clinical/Technical Hotline at 866-985-NPWT (6798) for assistance.
E. Keep screen illuminated – disable sleep mode	Sleep Mode Feature	Follow instructions above for Problem B

Problem	Cause	Solution
F. Erratic canister alarm.	Unit is not completely upright, causing fluid to prematurely sound alarm.	Unit must be used in completely upright position.
	Contaminate on canister alarm contact area.	Press the "PAUSE" button and remove the collection canister. Visually inspect the electrical contact area on the canister and the housing, and remove any debris or contaminate that is compromising the electrical connection. Replace canister and restart.
	Defective unit.	Call MoblVac Clinical/Technical Hotline at 866-985-NPWT (6798) for assistance.

Problem	Cause	Solution
G. No vacuum to patient.	Unit is in the **"PAUSE"** mode.	Press **"RUN"** button.
	Unit is in the **"OFF"** cycle during intermittent mode.	Wait for the **"OFF"** cycle to finish timing, and the unit will cycle to the **"ON"**.
	Collection canister is full and alarm has been silenced.	Replace collection canister, and restart unit.
	Pressure regulator is set at zero.	Press **"INCREASE"** button to raise vacuum pressure.
	Tubing is clamped.	Visually inspect the clamps on extension tubing and drain tubing. Ensure they are open.
	Obstruction in extension or drain tubing.	Disconnect extension and drain tubing ensuring the clamp on extension tube is open. Observe that the pump begins to run and using a gloved finger, check for the presence of vacuum at the tubing connector. If no vacuum is present, replace extension tubing.
	Obstruction in canister connection.	Remove the extension tubing from the canister, and using a gloved finger, check for the presence of vacuum. If no vacuum is present, replace canister.
	Defective unit.	Call MoblVac Clinical/Technical Hotline at 866-985-NPWT (6798) for assistance

Problem	Cause	Solution
H. Lockout Mode	Lockout	In order to utilize the lockout mode, press the **"OPTIONS"** button from the vacuum level screen. Press the **"LOCKOUT"** button. The operator will notice the lock icon appears next to the battery level indicator. All of the buttons on the unit are now disabled. To unlock the unit, press and hold the **"HOLD TO UNLOCK"** button, then press the flashing **"UNLOCK"** button. The buttons are now enabled. Once the final selection is made, the user can then press the **"RETURN"** button to return to the vacuum level screen.
I. Screen flickers, unit does not power on, or unit does not hold a charge.	Battery is no longer working properly	Replace battery by following instructions in section 8.2

10 Patient/Caregiver Information

10.1 Patient/Caregiver Training Checklist

WARNING!

- Monitor patient for excessive bleeding, which may result in serious injury or death. If sudden or increased bleeding is observed, immediately stop therapy and seek medical attention.
- This device is to be used by or under the care of trained medical personnel only.
- DO NOT use this or any electrical device in an explosive or flammable environment or in the presence of flammable anesthetics.
- Infected wounds may require more frequent dressing changes. Constantly monitor wounds for signs of infection.
- Negative pressure wound therapy (NPWT) is not approved for use on children.

Note to Healthcare Professional: This checklist should be completed by the patient/ caregiver after training has been completed. The checklist and the operation manual should be thoroughly reviewed by you prior to the NPWT system being released for in-home use as it may provide opportunities to discuss additional questions or concerns of the patient/caregiver or provide additional training. Please ensure that the Important Contact Information section is completed.

Checklist	Training Item
	Operating the MobIVac Unit Did you receive training from a healthcare professional (for example, your doctor, a nurse, or a home healthcare provider) so that you understand how to use your NPWT device?
	Were you able to demonstrate to your trainer proper use of the NPWT device?
	Instructions Did you get NPWT patient / caregiver instructions from your doctor, or Invacare representative?
	If YES, please keep these instructions where you can easily find them. If NO, please call your healthcare provider or distributor.
	Complications Do you understand that there may be some risks when using this device? Has your healthcare provider explained the risks to you?

Checklist	Training Item
	WARNING! Call your healthcare provider immediately if there is: • A change in the color or amount of fluid in the canister.* • The canister fills quickly with blood.* • The dressing leaks fluid or fails to seal.* • If the wound smells bad** • If the wound gets worse** • If you experience increased pain or discomfort** *This may indicate excessive bleeding, which may cause serious injury or death. If there is excessive bleeding, stop therapy immediately. Call 911 (or local emergency number) and take emergency measures to control bleeding **This may indicate an infection.
	Monitoring – these items should be checked periodically: I have been instructed on how to check and / or complete the following
	Ensure that vacuum is being applied to your wound
	Check that the battery is charged
	Check the canister to see if it needs to be changed (the canister should be changed at least once a week or when 2/3 full).
	Excessively frequent canister replacement may be a sign of excessive bleeding
	Dispose of used canisters in accordance with local ordinances, regarding disposal of potentially infected or bio-hazardous materials
	Do not open canister
	Do not block the vents on the battery cover
	Ensure that all previous dressing materials are removed prior to new dressing application
	Did you ask your healthcare professional whether you need to stop taking aspirin or any other medications that affect bleeding or blood clotting, and what the associated risk is of stopping or avoiding such medicines?
	Are you comfortable using the NPWT device at home? If your answer is NO, advise your healthcare professional.

Important Contact Information

Your nurse's name: _____ _____
Your nurse's number: _____ _____
Your doctor's name: _____ _____
Your doctor's number: _____
Distributor information: _____
MobIVac Clinical/Technical Support (toll free): 866-985-NPWT (6798)
Product Number:_____ _____
Product Serial Number_____ _____

11 Parts List

11.1 Parts List

MoblVac Wound Care Pump

Item Code	Description
769600	MoblVac Portable Wound Care Pump (includes: 1 pump with quick start guide, IFU/manual, tubing set, power cord, collection canister with solidifier)

Dressing Kits

Tri-Fold packaging with instructions for use:

Item Code	Description
769812	TruSeal Link Woundcare Kit (Value)
769813	TruSeal Link Woundcare Kit (Economy)
769814	TruSeal Link Woundcare Kit (Medium Channel)
769815	TruSeal Link Woundcare Kit (Small Round)
769816	TruSeal Link Woundcare Kit (X-Large Round)
769804	TruSeal Link Seal Kit

Other available accessories:

Item Code	Description
769703	Collection Canister with Solidifier
769703-NS	Collection Canister without Solidifier
769605	Replacement Power Supply
769700	Moblvac Premium Transport Bag
769606	Pole Clamp

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Notes

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Manufactured by Ohio Medical Corporation

1176097-A 2011-12-21

Yes, you can.