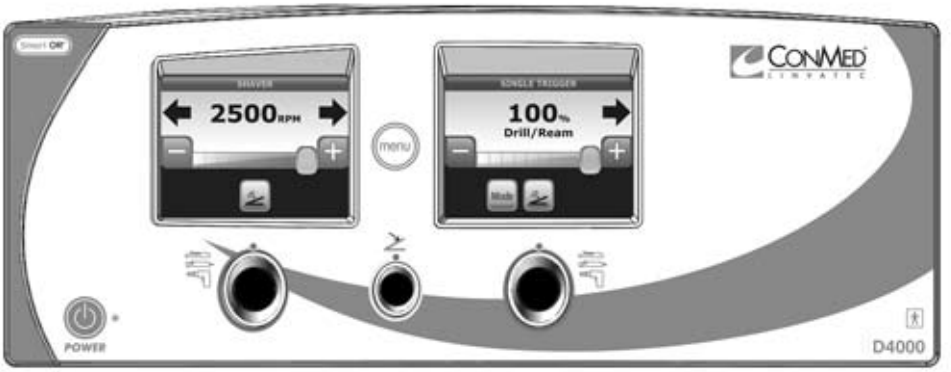
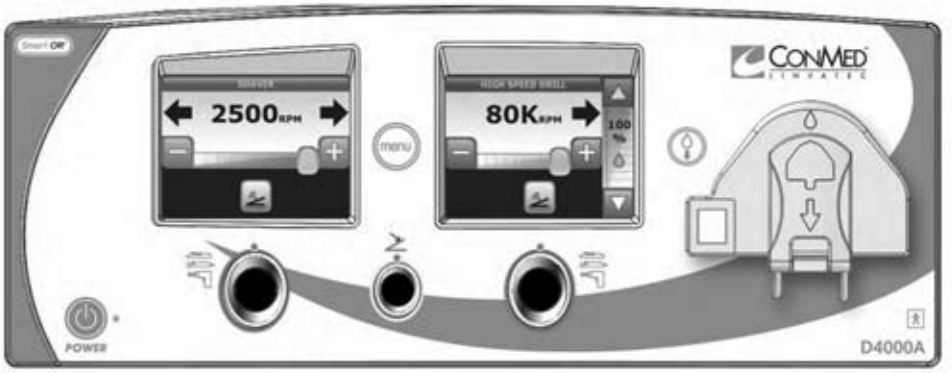
The D4000/D4000A System
Instruction Manual





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Record the Model and Serial Numbers of the Console and date received. Retain for future reference.

Console Model No. _____ Serial No _____ Date _____

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1.0 INTRODUCTION

It is recommended that personnel study this manual before attempting to operate, clean, or sterilize this or associated equipment. The safe and effective use of this equipment requires the understanding of and compliance with all warnings, precautionary notices, and instructions marked on the product, and included in this manual.

This equipment is designed for use by medical professionals completely familiar with the required techniques and instructions for use of the equipment. Service intervals, as listed in section **"3.4Maintenance Schedule"**, are required to keep the equipment at its optimum operating performance.

1.1. Operating Principle

The D4000/D4000A console functions as a powered instrument console for driving powered instruments and accessories used in the cutting of soft tissue and bone at the surgical site.

The D4000/D4000A console is a non-sterile device and must be located in a non-sterile area of the operating suite. Additionally the D4000A console offers an irrigation pump that, when used with tubbing sets, provides a sterile fluid supply to the blades, burs, and drill bits, at the surgical site, for lavage and cooling. The handpiece, handpiece cord, and irrigation tube sets are sterile. The handpiece is used in the sterile field with the cord connected to the console. The irrigation tube set is used on the handpiece in the sterile field with the cassette connected to the console. The footswitch is non-sterile and placed on the floor.

The console provides two handpiece drive ports that are used with a variety of handpieces. Handpiece functionality can be controlled directly by the handpiece, and/or by a corded footswitch or wireless footswitch (if equipped).

Handpiece speed, direction, user settings, irrigation flow rate, and footswitch settings are controlled with the touch-screen displays.

Consult the associated CONMED handpiece or footswitch instruction manual prior to operating this equipment.

1.2. Indications for Use

The D4000/D4000A System functions as a powered instrument system consisting of handpieces and accessories to perform cutting of soft tissue and bone. The fields of application include Arthroscopic, Foot, Hand, Medial Sternotomy, Neurological, Orthopedic, Otolaryngological, Oral/Maxillofacial, Plastic/Reconstructive, and Spinal surgical procedures.

1.3. Intended Use

Same as Indications for Use above.

1.4. Contraindications

The D4000A console's irrigation pump and tubing sets are contraindicated for distention.

1.5 Warnings and Precautions

DO NOT bypass this section. It contains warnings and precautions that must be thoroughly understood before operating any of the equipment. Lack of understanding or adherence to these warnings and precautions may result in injury or even death to the patient.

The words **WARNING, PRECAUTION,** and **NOTE** carry special meanings and they must be read carefully.

WARNING - A warning contains critical information regarding serious adverse reactions and potential safety hazards that can occur in proper use or misuse of the equipment. Failure to observe the information or procedures presented in a Warning may result in injury, death or other serious adverse reactions to the patient and/or surgical staff.

PRECAUTION - A precaution contains instructions for any special care to be exercised by the practitioner for the safe and effective use of the equipment. Failure to observe the information or procedures presented in a Precaution may result in damage to the equipment.

NOTE: A note is added to provide additional focused information. This information has no critical effect on the patient or equipment.

1.5.1 Warnings

Warnings: Console

1. Eye protection is recommended when operating equipment. Eye injury may result.
2. It is the surgeon's responsibility to be familiar with the appropriate surgical techniques prior to use of the equipment and its associated accessories.
3. Do not use equipment if, upon receipt, package is opened, damaged, or shows any signs of tampering.
4. Do not use equipment in the presence of flammable anesthetics, gases, disinfecting agents, cleaning solutions, or any material susceptible to ignition due to electrical sparking.
5. To avoid the risk of electric shock, this equipment must be connected to a supply mains with protective earth. The voltage and frequency characteristics must be compatible with those listed on the unit or in this manual. Do not use plug adapters or extension cords; such devices may defeat the safety ground and could result in injury.
6. Do not use sterile equipment beyond the expiration date listed on the label. Sterility of the product cannot be assured beyond the expiration date.
7. Do not excessively bend or kink the power cord or accessory cord. Always inspect cords for signs of excessive wear or damage. If wear or damage is found, discontinue use and replace immediately. Using a damaged power cord could possibly cause injury.
8. Do not immerse the equipment in fluids. Immersion may render the device inoperable.
9. Do not attempt to attach or remove a tubing set, handpiece, footswitch, or cable while the console is operational. Damage or injury could occur.
10. The front panel power switch places the console in standby mode. To remove mains power, disconnect the power cord. Position the console with easy access to the power cord.

11. Do not simultaneously contact the console and patient. This may contaminate the sterile field and create an unsafe electrical condition.

12. This system may cause radio interference or may disrupt the operation of nearby equipment. Avoid stacking equipment. It may be necessary to take mitigation measures, such as re-orienting or relocating the D4000/D4000A or shielding the location.

Warnings: Handpieces, Attachments and Accessories

1. When a handpiece is not in use and prior to connecting or removing attachments and accessories, always place the handpiece in its SAFE or OFF position.

2. Do not place a handpiece on a patient. Failure to comply may cause patient injury, such as burns or tissue injury.

3. Do not place a handpiece on or near a magnetic device. A magnetic field can activate a handpiece. Failure to comply may cause injury to the patient or operating room personnel.

4. Continually check all handpieces and attachments for overheating. If overheating is sensed, immediately discontinue use and return equipment for service. Overheating of the bur, bit or blade may cause damage to the bur, bit or blade and may cause thermal necrosis.

5. Avoid contact with other non "BF" rated powered instruments while in contact with the patient, as this may create a current leakage path to earth.

6. Do not connect known damaged equipment or equipment that is corroded or wet. Failure to comply may cause injury or result in damage to equipment.

7. Do not contact the moving parts on the handpiece. Injury to the operator may occur.

8. All cutting accessories and tubing sets are single-use only. Do Not Re-sterilize. Single Use Only. The ability to effectively clean and re-sterilize this single use device has not been established and subsequent re-use may adversely affect the performance, safety and/or sterility of the device. After use, dispose of properly.

9. The tubing sets used on this device contains the phthalate plasticizer DEHP, which may leach into the patient during administration of irrigant. Animal studies have shown that high-level exposure to DEHP may affect male fertility and reproductive development; these findings have not been confirmed in clinical studies. In determining use of this device in a child, or a pregnant or nursing female, the clinical benefits should outweigh any potential risk to the infant.

   Note: CONMED manufactures Orthopedic tubing sets either with or without DEHP. Check the product labeling to determine if the DEHP-symbol is present.

10. Refer also to appropriate Handpiece and Wireless Footswitch Instructions for Use.

Warnings: 24k Irrigation System

1. Refer to 24k Irrigation System Instruction for Use.

1.5.2 Precautions

1. United States Federal law restricts sale of this device to or on the order of a physician.
2. This device should only be used in compliance with its intended use.
3. Handle all equipment carefully. If any equipment is dropped or damaged in any way, return it immediately for service.
4. Use only associated CONMED approved equipment, attachments and accessories. They have been tested and certified to specific medical standards. Using unapproved accessories may result in improper operation, may negatively affect EMC performance and may result in non-compliance to medical standards.
5. The warranty becomes void and the manufacturer is not liable for direct or resulting damage if:
   - The device or the accessories are improperly used, prepared or maintained;
   - The instructions in the manual are not adhered to;
   - Non-authorized persons perform repairs, adjustments or alterations to the device or accessories.
6. There are no user-serviceable parts inside. No modification of this equipment is allowed. Removing the cover may introduce an electrical shock hazard by exposing you to dangerously high voltages or other risks.

7. Prior to each use, perform the following:
   - Ensure all accessories are correctly and completely attached. (Refer to section **"2.2 Assembly/Installation Instructions"**)
   - Perform the required Preoperative Functional Tests for the equipment and accessories. (Refer to section **"2.4 Preoperative Functional Test"**
8. Clean and sterilize all the equipment and associated accessories according to instructions for use. (Refer to section **"3.1 Cleaning Information"** and section **"3.2 Sterilization Information"**).
9. Do not handle the equipment by the cord. Do not pull on the cord to remove it from other equipment. Damage can occur.
10. Do not use any instrumentation, especially sharp objects, to make selections on the touchscreen displays. Damage may result.
11. Ensure the optical cassette sensor window next to the pump cassette mechanism is kept clean at all times.

Precautions: Handpieces, Attachments and Accessories

1. Refer to appropriate Handpiece and Wireless Footswitch Instructions for Use.

Precautions: 24k Irrigation System

1. Refer to 24k Irrigation System Instruction for Use.

1.6 Environmental Directives

WEEE Directive [2002/96/EC] on Waste Electrical and Electronic Equipment. This statement only applies to European countries with regard to the Waste Electrical and Electric Equipment (WEEE) European Directive.

The WEEE symbol on the product or its packaging indicates that this product must not be disposed of with other waste. Instead, it is your responsibility to dispose of your waste equipment by handing it over to a designated collection point for the recycling of Waste Electrical and Electronic Equipment. The separate collection and recycling of your waste equipment at the time of disposal will help conserve natural resources and ensure that it is recycled in a manner that protects human health and the environment. For more information about where you can drop off your medical equipment at the end of its useful life for recycling, please contact CONMED.

A Lithium battery is used in this device. Disposal of the battery shall be based on national regulations. Battery must be recycled or disposed of properly.

NOTE for State of California, USA:

State of California Requirement: Lithium Batteries contain Perchlorate Material - special handling may apply. See “http://www.dtsc.ca.gov/HazardousWaste/Perchlorate”.

1.7 Product Photographs and Drawings

The pictures in this manual are for reference only. Items shown may not represent the actual product. However, procedural steps are identical, unless otherwise specified. When necessary, the actual pictures will be represented.

1.8 Symbol Definitions

1.8.1 Product Symbols

	Stand-by (ON/OFF)		Prime Button
	Menu Button		Handpiece Port
	24K Port (Output)		Corded Footswitch Port
	CONMED Communications Port (Input/Output)		

NOTE: Refer to Section "2.3.6 Menu Operation" for button descriptions and functionality.

1.8.2 Warning and Information Symbols

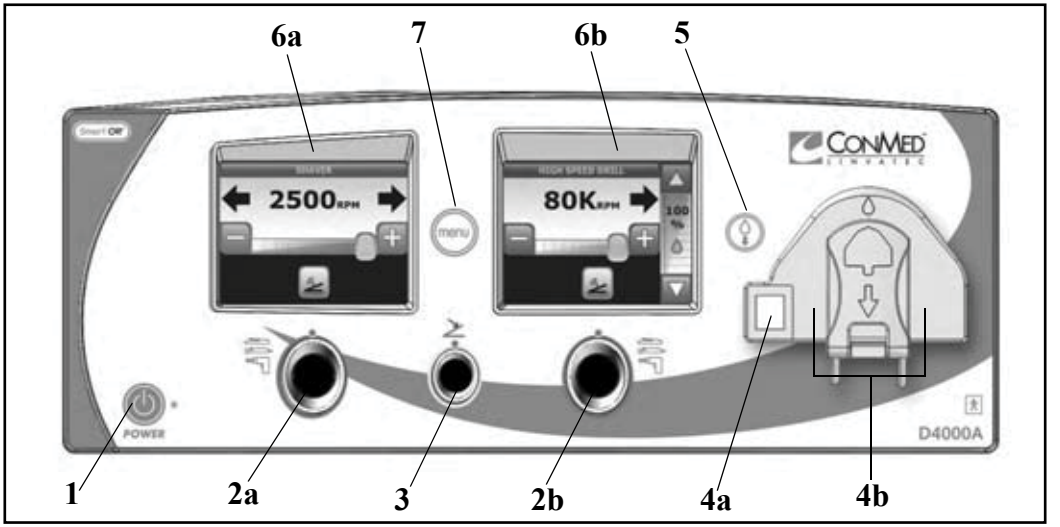
REF	Catalog Number	SN	Serial Number
	Manufacturer		Date of Manufacture
	Consult Instructions for Use		Refer to Instruction Manual/Booklet (for critical safety instruction). The color is blue.
	Caution		DEHP Symbol
EC REP	Authorized Representative in the European Community	CE 2797	CE Mark of Conformity
Rx ONLY	Prescription Only: Federal Law restricts this device to sale by or on the order of a physician		No User Service Recommended. Refer servicing to qualified CONMED service personnel
	Non Sterile	STERILE	Sterile
STERILE EO	Sterile - Sterilized Using EO	STERILE R	Sterile - Sterilized Using Irradiation
	Do Not Steam Sterilize		Do Not Sterilize
	Do Not Resterilize		Do Not Reuse (for Single Use Only)
	Do Not Use Oil		Do Not Use for Plunge Cutting
	Eye Protection Required		Biohazard Risk
	Do Not Immerse	QTY	Quantity
	Type B Applied Part		Type BF Applied Part
	UL Classification Mark		UL Recognized Components
	Rating Fuse		Fuse Location

	Alternating Current		Protective Earth Ground
	Equipotentiality (Equipment Potential)		Non-Ionizing Electromagnetic Radiation (RF Symbol)
	Temperature Limitation		Humidity Limitation
	Atmospheric Pressure Limitation		Use by Date
	Fragile		This Side Up
	Do Not Use if Package is Damaged		Keep Dry
	Warning: Corrosive Substance		Warning: Electrical Hazard/High Voltage
	Waste Electrical and Electronic Equipment (WEEE) Symbol. Regarding European Union end-of-life of product, indicating separate collection for electrical and electronic equipment		
	Recycle. Batteries contain materials which must be recycled or disposed of properly. The disposal of batteries as municipal waste is prohibited. Dispose or recycle in accordance with your local, state and governmental regulations. In the U.S. call 1 (866) 426-6633, or outside the U.S. contact your local CONMED representative for additional information on battery disposal or recycling.		
	Japan Radio Law Certification Telecommunications Business Act Certification		

2.0 SYSTEM INSTALLATION AND OPERATION

2.1 Product Description

2.1.1 Console Front Panel



1. **Power Button and Indicator** — Press this standby button to activate the console, LED indicator illuminates green. Press this button again to set the console to stand-by mode, LED indicator will illuminate amber.

2. **Handpiece Ports (2a and 2b)** — Connect handpieces to either Port. When handpiece requires irrigation or cooling (D4000A), connect only to right Port (2b).

3. **Footswitch Port** — Connect a corded footswitch here.

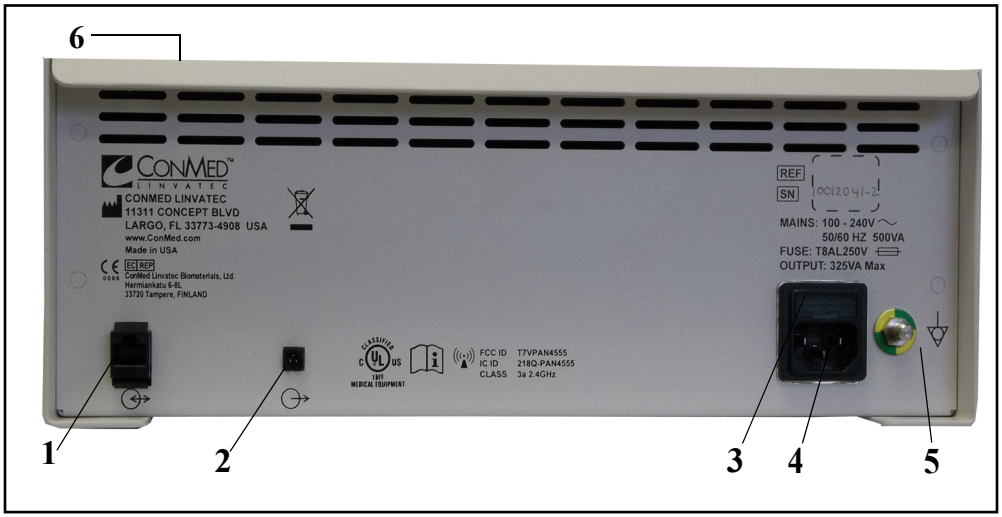
4. **Tubing Cassette Receptacle** — Accepts various tubing sets if irrigation is used (4b). Optical sensor confirms when a tubing set is connected (4a). Available on D4000A model only.

5. **Prime Button** — When a tubing set is installed, press and hold to run the pump to prime the tubing set. Available on D4000A model only.

6. **Color Touch Screen Displays** — Touchscreen displays (6a and 6b) show attached equipment information such as handpiece description, speed, mode, direction, irrigation information and other status messages. Touchscreen buttons allow the user to change settings for the handpiece, footswitch or irrigation connected to the associated handpiece or footswitch Port. Any settings related to irrigation are accessible only from the right display (6b), and right Port (2b).

7. **Menu Button** — Press to access the menu system. Menu selections are shown on 6a and the available options to each selection on 6b. (Refer to section **"2.3.6 Menu Operation"**).

2.1.2 Console Back Panel



1. **CONMED Communication Port** — Input/Output.

2. **24k Connector** — The 24k Pump Interface Cable (D4024) connects between here and the connector on the 24k Irrigation System. The D4000/D4000A communicates that a shaver handpiece is in use. The D4000/D4000A will not communicate by touch screen with the 24k Irrigation System without this cable connected.

3. **Fuse Module** — Contains two T8AL 250V fuses. To replace, Refer to section **"3.5 Fuse Replacement"**

4. **Power Input Receptacle** — Accepts hospital grade power cord (100 - 240 V~, 50/60 Hz).

5. **Potential Equalization Connector** — Potential Equalization Connector per DIN 42801.

6. **Irrigation Bag Holder Receptacle** — This receptacle is designed to accept an optional Fluid Bag Holder Rod (Cat. number 5040-180).

2.2 Assembly/Installation Instructions

Installation:

1. Place the console on a sturdy flat surface or use the Controller Stand.
2. Plug the power cord into the console receptacle and to a properly grounded supply outlet (e.g., receptacle marked “Hospital Grade” or “Hospital Only”).
3. Press the “POWER” button. The LED indicator changes to green. If no handpiece is connected, console displays “Connect Handpiece”. If a handpiece is connected, the corresponding display will show the current handpiece settings.

4. Connect handpiece(s). With the red dot on the cord connector facing upward, insert it into either handpiece Port. When handpiece requires irrigation or cooling (D4000A), connect to right Port (2b) only.

5. For handpieces with a removable cord, plug the other end of the handpiece cord(s) into the handpiece(s) cord connector. Push together until fully seated.

NOTE: When a handpiece is connected, the console recognizes the handpiece model. The default or last-used settings show on the associated display. Refer to section “2.3 Operating Instructions” to adjust user settings.

6. Connect attachment or cutting accessory to the handpiece(s). See the associated handpiece manual or IFU for installation information.

7. Connect the corded footswitch. With the red dot on the cord connector facing upward, insert it into the footswitch (center) Port. The footswitch icon shows on both displays. The footswitch defaults to the right display. Press the icon on either display to reassign the footswitch to the other display/handpiece.

Mounting to Controller Stand (Optional):

1. Attach the mounting bracket to the bottom of the console with four screws provided.
2. Slide mounting bracket into controller stand until spring loaded retention mechanism engages.

Fluid Bag Hanger (Optional):

A fluid bag hanger rod (5040-180) is available for irrigation use, to mount to the top of the console. The hanger rod holds a one liter fluid bag. To attach the hanger rod:

1. Insert the threaded portion of the hanger rod into the hole. Turn clockwise until approximately 1/2 in. (12 mm) of the rod is threaded into the hole.
2. Secure the hanger rod by tightening the knurled lock nut.
3. Hang the fluid bag on the arm of the hanger rod.

Irrigation Use (Optional):

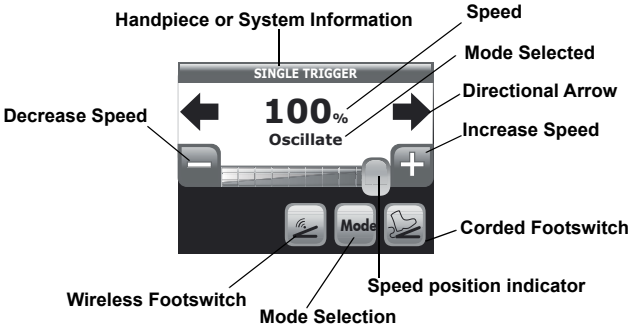
Recommended when using the E9010 CoolFlex High Speed Drill, E9005 High Speed Shaver, and Micropower High Speed Drills. Refer to section **"4.3 Accessories"**. Refer to appropriate Handpiece Instructions for Use for further details. Use surgical aseptic techniques to attach the tubing set as follows:

1. Open the tubing package.
2. Remove the tubing set from the sterile package and pass the black cassette and bag spike line out of the sterile field.
3. Install the cassette over the pump rotor on the console with the black tab behind the plastic bracket.
4. To remove the cassette, pull out on the back tab at the bottom of the cassette.

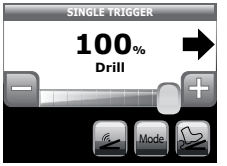
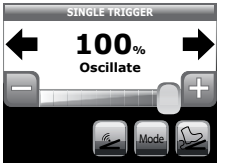
2.3 Operating Instructions

2.3.1 Power On/Run Screen

When first powered on, the console displays an initialization sequence. When the sequence completes a message to connect a handpiece appears. When a handpiece is connected the run screen appears.



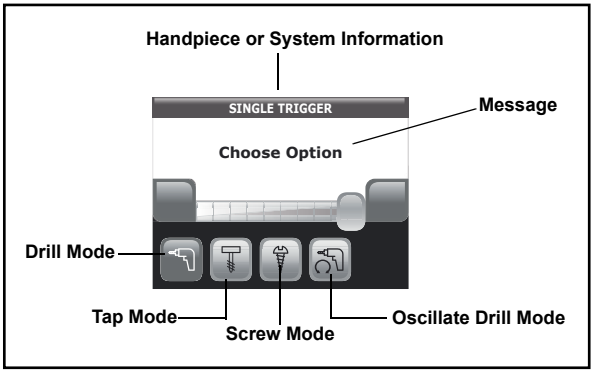
When the direction of the handpiece is changed, the arrows on the screen change and show the direction of the handpiece.

Forward	
Reverse	
Oscillate	

For PRO6100 Handpiece Only

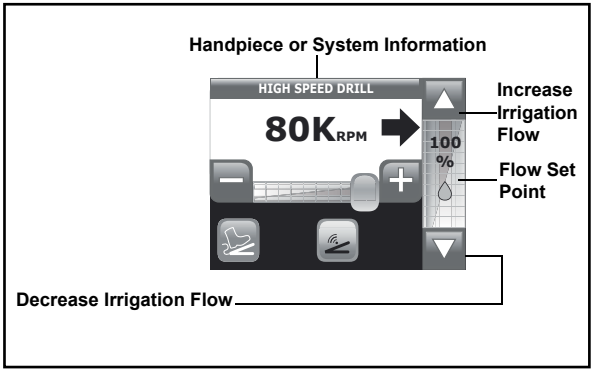
Some handpieces have different operating modes associated with them, such as: Drill, Oscillate Drill, Screw, Tap. To change the mode of the handpiece using the touchscreen, press the “Mode” button displayed on the screen. Below are some of the available options. Depending on the handpiece attached and the functional options of the handpiece, only valid options will appear.

After Pressing the “Mode” Button



2.3.2 Irrigation Control - D4000A Only

When an irrigation or cooling cassette is installed, the irrigation control bar appears only on the right display. When the handpiece is turned on, the irrigation pump runs at the flow rate set point. When the handpiece is turned off, the irrigation pump stops.

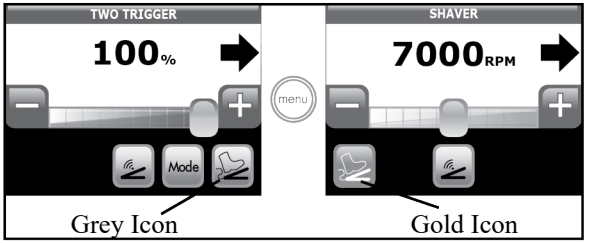


2.3.3 Corded Footswitch Operation

- MicroChoice Footswitch, 2 pedal (5020-053)
- MicroChoice Footswitch, 3-pedal (C9863)

NOTE: PowerPro Handpieces can not be operated with a Footswitch.

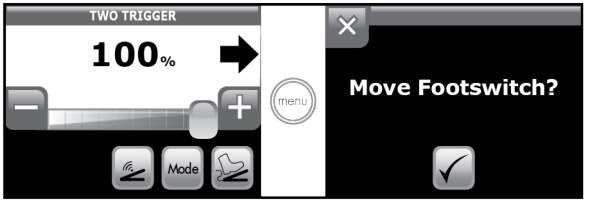
When a corded footswitch is connected to the console, a footswitch icon appears on both displays.



The gold icon indicates the assignment of the corded footswitch. The gray icon indicates an inactive footswitch.

1. Press either corded footswitch icon to assign the footswitch to the other display/handpiece.

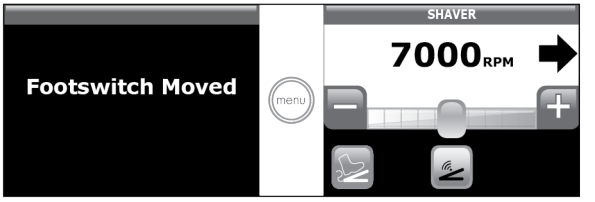
The “Move Footswitch?” message appears.



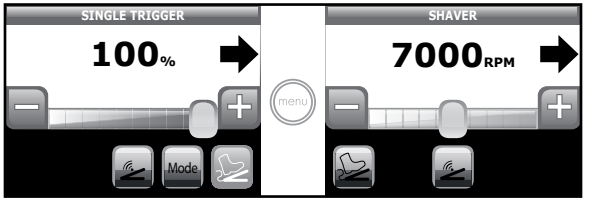
2. Press the check mark button to move to the other port.
3. Press the close/exit button to cancel the move.

NOTE: A time out occurs if no action is taken and the default screen returns. The footswitch is not moved.

When the check mark is chosen, the “Footswitch Moved” message appears.



A gold icon appears on the other display confirming the move.



NOTE: When disconnecting the corded footswitch, the connector has a locking feature that needs to be disengaged by pulling the metal sleeve before removing the cord.

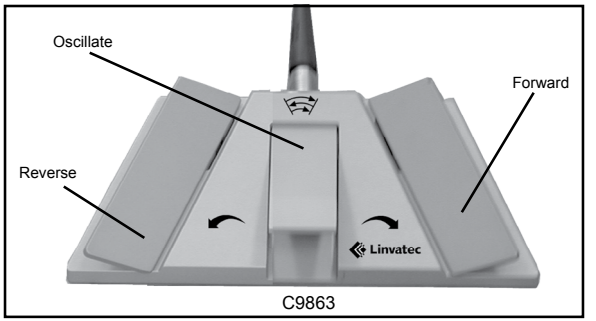
MicroChoice Footswitch, 2 Pedal Footswitch (5020-053)

Shaver Handpieces Only

1. When window indexing is enabled, the footswitch operates as ON/OFF only.

All Handpieces Except Shavers and PowerPro

MicroChoice Footswitch, 3 Pedal (C9863)



1. The Oscillate (middle) pedal is inoperative when a handpiece is connected to the console that does not offer the oscillate feature.
2. When window indexing is enabled (Shaver handpiece only) the footswitch operates as ON/OFF only.

2.3.4 Wireless Footswitch Operation (If Equipped)

NOTE: PowerPro Handpieces can not be operated with a Footswitch.

The W1000 Wireless Footswitch MAY NOT be a compatible with some versions of the D4000 and D4000A, as the feature was discontinued. If your unit does not have the Non Ionizing Electromagnetic Radiation (RF Symbol) indication on the rear panel (refer to "Section 2.1.2 Console Back Panel"), the W1000 is incompatible and will not function.

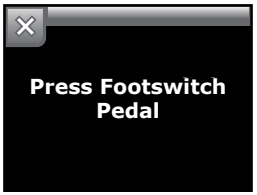
Connecting a Wireless Footswitch (WFS)

- Zen Wireless Footswitch (W1000)

To connect the wireless footswitch (WFS) to the D4000/D4000A console:

1. Press the wireless footswitch icon on the appropriate display.

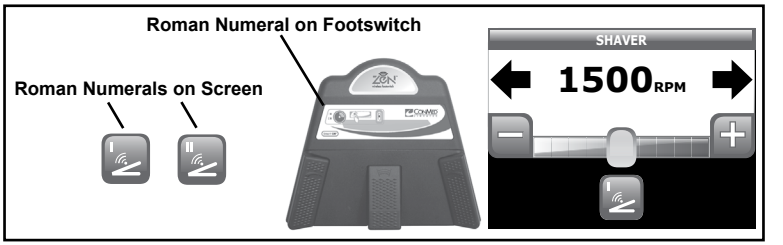
The "Press Footswitch Pedal" message appears.



2. Press and hold any pedal or the connect/disconnect button on the footswitch within 15 seconds to initiate the connection.

   A “Successful Connection” message appears within 10 seconds of pressing the footswitch pedal.

When the connection is complete, the WFS icon changes to match the color of the display. A roman numeral appears on the icon and corresponds to the LED’s on the footswitch.



NOTE: For more detailed information, see the W1000 Instructions For Use (IFU).

Refer to section **“3.3 Troubleshooting”** if you experience problems obtaining a successful connection.

Reassigning a Wireless Footswitch (WFS)

When a successful connection is established, a WFS can be reassigned to the other port.

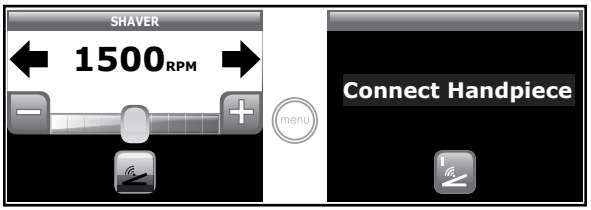
1. Press the WFS icon .

   The Choose Option screen appears.

2. Press the arrow button to move the footswitch to the other port.
3. Press the close/exit button to cancel the move.

   When you press the arrow button, the “Footswitch Moved” message appears on the adjacent screen.

Indication of the move is present on the adjacent screen, and the icon reverts to the gray state while the opposite screen is now colored.

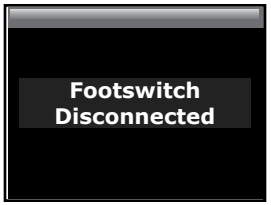


Disconnecting a Wireless Footswitch (WFS)

To disconnect the wireless footswitch (WFS) from the D4000/D4000A console:

1. Press the WFS icon .
2. Press the disconnect icon or connect/disconnect button on the footswitch.

   The "Footswitch Disconnected" screen appears.



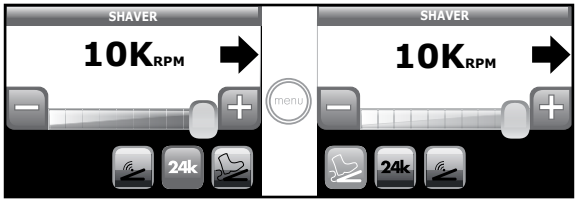
The W1000 footswitch LED's are no longer illuminated.

2.3.5 Communication with the CONMED 24k Irrigation System

Connect the D4024 interface cable between the D4000 console and the 24k Irrigation System. (Refer to section **"2.1.2 Console Back Panel"**) for more details.

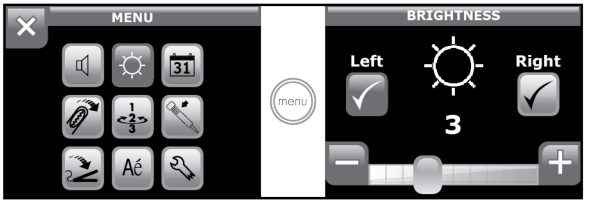
The console signals the 24k Irrigation System when the shaver is on or off. When one shaver is connected to the console, the handpiece communicates with the equipment regardless of which side is connected.

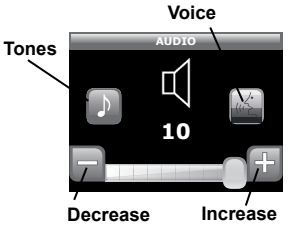
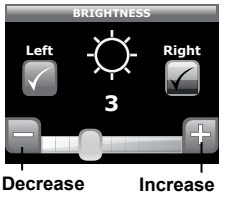
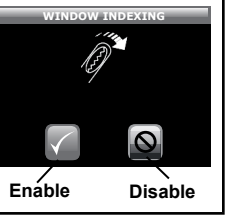
When two shavers are connected to the console, a 24k button appears on each screen. The first shaver connected is activated and the 24k button is illuminated. To change to the second shaver, press the 24k button on the other screen.

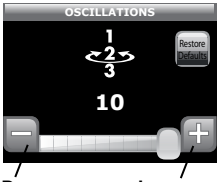
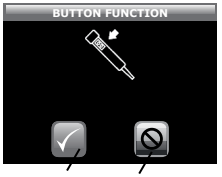
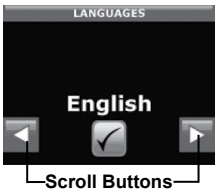


2.3.6 Menu Operation

The console displays options the user can adjust from the menu button. The options display on the left screen and the adjustment on the right. All adjustments are updated immediately. See the table below for more information.



Button	Description	Screen
	Audio - Use to adjust the volume level 1-10. Press the Tone button to activate. Press the Voice button to activate.	
	Brightness - Use to adjust the brightness of the screen from1-10. Use the Left and Right buttons to select the screen to be adjusted.	
	Day to Day Memory - Enable or disable the ability to store the last configuration used by the surgeon.	
	Window Indexing - Use to turn window indexing capability on or off	

	Shaver Oscillation - Use to select number of oscillations from 1-10 for shaver handpieces. Press Restore Defaults to return to factory defaults.	
	Shaver Buttons - Use to enable or disable shaver buttons.	
	Variable Footswitch - Use to turn the footswitch variability on or off. This control changes the function of both corded and wireless footswitch.	
	Languages - Use to select from the available languages.	 
	Locked Service Menu - Password protected. Used by CONMED service personnel only.	

2.3.7 Using the Handpiece Cord Button to Change Speed/Mode

Speed Change, MicroChoice & Micropower Pencil Grip Drills and Saws

1. To enter the Speed Menu, quickly press the handpiece cord button twice for the decrease option or three times for the increase option. The display banner will turn yellow.
2. After entering the Speed menu, press and release the handpiece cord button to increase or decrease the speed.
3. When the desired speed is reached, stop. The handpiece is ready for use and the display banner will return to its original color.

Mode Change, PRO6100 Handpiece Only

1. To change modes, quickly press the handpiece cord button twice.
2. After entering the Mode menu, the display banner will turn yellow, press and release the handpiece cord button to cycle through Drill/Ream, Tap, Screw or Oscillate Drill modes.
3. When the desired mode is selected, stop. The handpiece is ready for use and the display banner will return to its original color.

2.3.8 Using the Shaver Handpiece Buttons to Change Speed

This applies to the D9824, D9924, and D4240 Shaver handpieces and only when it is not running.

1. Press and hold the handpiece “DIRECTION SELECT” button (approximately 1.5 seconds). When the console enters the speed change function it will beep twice and the display banner color will change to yellow. Now press and release the “DIRECTION SELECT” button to increase the speed or the ON/OFF button to decrease the speed. If no button is pressed for approximately 1.5 seconds the console will beep twice and return to normal operation.

NOTE: While in normal button operation, press and release the “DIRECTION SELECT” button to change direction.

2.3.9 Turbo Mode Using Ultra Series Shaver Blades (Console software revision V 2.0 or higher)

This applies to the D9824, D9924, and D4240 Shaver handpieces only and when it is actively running in oscillate mode.

1. Press and hold the handpiece ON/OFF button (approximately 1 second). The handpiece will run in the preset forward mode for as long as the ON/OFF button is held down. Release the ON/OFF button and the handpiece will resume running in the oscillate mode.
2. Press and hold the handpiece “DIRECTION SELECT” button (approximately 1 second). The handpiece will run in the preset reverse mode for as long as the “DIRECTION SELECT” button is held down. Release the “DIRECTION SELECT” button and the handpiece will resume running in the oscillate mode.

2.3.10 Using Shaver Blade Window Indexing

This applies to the D9820, D9824, D9920, D9924, D4200, and D4240 Shaver handpieces and only when it is not running.

1. Using the console front panel “Menu” button, turn window indexing on. (Refer to section **“2.3.6 Menu Operation”**).

Using the Shaver Handpiece ON/OFF Button to Set the Blade Window Location

This applies to the D9824, D9924, and D4240 Shaver handpieces and only when it is not running.

2. Press and hold the ON/OFF button (approximately 1.5 seconds). When the console enters the window function it will beep once and display the message “Set Blade Window” with a yellow banner. The blade will rotate slowly. When the desired blade window position is located, release the ON/OFF button. Now when the handpiece stops, the blade window will return to this location.

NOTE: While in normal button operation, press and release the ON/OFF button to turn the handpiece on and off.

Using the Footswitch to Set the Blade Window Location

This applies to the following footswitches:

5020-053, MicroChoice Footswitch, 2 Pedal, right pedal only

C9863, MicroChoice Footswitch, 3 Pedal, left and right pedals only

W1000, ZEN Wireless Footswitch, left and right pedals only

1. Slightly press and hold the footswitch pedal (approximately 1 second). When the console enters the set window function it will beep and display the message “Set Blade Window” with a yellow banner. The blade will rotate slowly. The pedal can now be fully pressed. When the desired blade window position is located, release the pedal. Now when the handpiece stops, the blade window will return to this location.

NOTE: While in normal pedal operation, fully press the pedal to turn the handpiece on and off.

2.4 Preoperative Functional Test

Prior to operating the console, perform the following preoperative tests to verify proper functioning. Any operating difficulties should be reported to your local Sales Representative or CONMED Customer Service.

1. Disconnect all accessories from the front of the controller and set them aside temporarily.
2. Depress the standby power switch on the front of the controller to toggle the power “OFF” and then back “ON”.
3. Observe the digital displays as the controller initiates and verify the “Connect Handpiece” message appears. The controller then is ready for operation.

3.0 MAINTENANCE

3.1 Cleaning Information

3.1.1 Warnings, Precautions and Notes

1. Follow universal precautions for protective apparel when handling and cleaning contaminated instruments.
2. Clean instruments within 30 minutes after use to minimize the potential of blood and debris drying.
3. Never clean equipment in an ultrasonic cleaner.
4. Always detach accessories prior to cleaning.
5. Never clean equipment with bleach, chlorine-based detergents, liquid or chemical disinfectants, or any products containing sodium hydroxide (such as, INSTRU-KLENZ or Buell Cleaner). These products degrade the anodized aluminum coating and may result in reduced equipment reliability.
6. For aluminum surfaces, a neutral-pH agent should be used. To prevent corrosion, avoid contact with strong alkaline solutions (pH over 10.5) or agents containing iodine or chlorine.
7. Only use an alcohol wipe to clean the console displays. Do not use other cleaners as the displays may be damaged.
8. For handpiece, footswitch, cables and other accessories see appropriate instructions for use, IFU.
9. Dispose of all tubing sets, irrigation tips, burs, saw blades and bits properly after use.

Refer also to section **“1.5 Warnings and Precautions”**

3.1.2 Manual Cleaning Instructions

1. Turn the equipment power off. Disconnect the equipment from the electrical power source.
2. Remove any accessories from the equipment that may be attached.
3. Wipe the equipment with a clean, soft cloth dampened with a mild, pH-balanced detergent of your choosing. Ensure you follow the manufacturer’s instructions for the cleaning product that you select that it is approved for use on plastics. Failure to follow these guidelines may cause damage to the equipment. Repeat cleaning if necessary until clean.
4. Ensure equipment is free of all debris.
5. After disinfecting the equipment, wipe it again with distilled or sterilized water.
6. Dry all areas thoroughly with a clean, soft cloth.
7. Perform functional checks according to Section **“2.4 Preoperative Functional Test”**. Check mating accessories closely for proper assembly.
8. Remove and repair any damaged equipment. Repeat Manual Cleaning Instructions as necessary.

3.1.3 Corded Footswitch and 24K Pump Interface Cable Cleaning Instructions

1. Wipe the equipment with a clean, soft cloth dampened with a mild, pH-balanced detergent of your choosing. Ensure you follow the manufacturer's instructions for the cleaning product that you select that it is approved for use on plastics. Failure to follow these guidelines may cause damage to the equipment. Repeat cleaning if necessary until clean.
2. Ensure equipment is free of all debris.
3. After disinfecting the equipment, wipe it again with distilled or sterilized water.
4. Dry all areas thoroughly with a clean, soft cloth.
5. Remove and repair any damaged equipment. Repeat Cleaning Instructions as necessary.

3.1.4 Handpiece and Wireless Footswitch Cleaning Instructions

For handpiece and wireless footswitch cleaning instructions, see appropriate Instructions For Use, IFU.

3.2 Sterilization Information

3.2.1 Warnings, Precautions and Notes

1. The use of disinfecting solutions for an exterior instrument wipe will not sterilize the equipment and is not recommended.
2. Do not sterilize equipment or accessories using Ethylene Oxide (EtO).
3. Do not sterilize equipment or accessories using a STERIS system or by comparable sterilization methods.
4. Do not sterilize equipment or accessories in cold sterilants like CIDEX.
5. Always detach accessories from equipment prior to sterilization.
6. Do not sterilize the console. Damage will occur.
7. For handpiece, footswitch, tubing, cables and other accessories see appropriate instructions for use, IFU.

Refer also to section **"1.5 Warnings and Precautions"**

3.2.2 Sterilization Instructions

There are no sterilization instructions for this device.

3.2.3 Corded Footswitch and 24K Pump Interface Cable Sterilization Instructions

There are no sterilization instructions for this device.

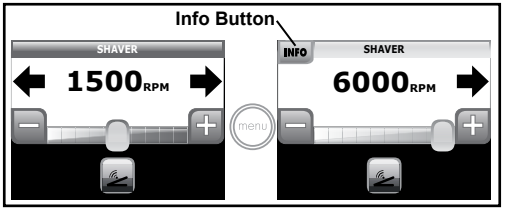
3.2.4 Handpiece and Wireless Footswitch Sterilization Instructions

For handpiece and wireless footswitch sterilization instructions, see appropriate Instructions For Use, IFU.

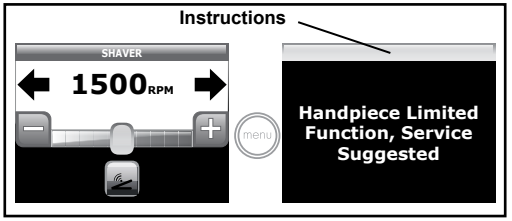
3.3 Troubleshooting

The D4000/D4000A system can determine if a system failure is related to the console, footswitch, or the handpiece/cord. When the console detects an abnormal condition, the banner changes color on the display.

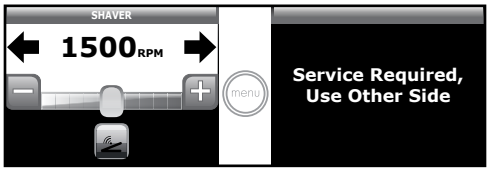
When a shaver handpiece is connected and a yellow banner and INFO button appear, the console has detected a fault in the shaver blade/bur sensor circuit in the handpiece or the handpiece was plugged in with a bur already loaded. The handpiece will operate with the following limited function. The bur preset is not available. When a bur is used, the maximum speed is 6K RPM and it will oscillate.



When you press the INFO button and the message “Handpiece Limited Function, Service Suggested” displays, the handpiece is functional and the procedure can continue. Return the handpiece for service as soon as possible.



A red display banner represents a hard failure. The text displayed on the screen determines whether the accessory or the console is inoperable. Please return the components recommended via the display.



Some errors are unable to be detected and displayed on the screen. To aid in troubleshooting these conditions, please refer to the following troubleshooting chart.

Table 1: Troubleshooting Guide

Symptom	Possible Cause	Corrective Action
Console does not power on when POWER button is pressed.	• Power cord unplugged or faulty. • Blown fuse. • Console faulty.	• Plug in power cord. • Replace power cord. • Replace fuse. (Refer to section **"3.5 Fuse Replacement"**). • Return for service.
Handpiece does not operate.	• Handpiece safety is in the SAFE or OFF position. • Handpiece cord not connected securely. • Handpiece cord and/or button faulty. • Handpiece faulty. • If using a corded footswitch, footswitch cord not connected securely. • Footswitch cord or Footswitch faulty. • If using a wireless footswitch, footswitch not connected. • W1000 is incompatible	• Move safety to the appropriate operating position. • Securely connect handpiece cord to handpiece, and the console receptacle. • Replace handpiece cord. If handpiece cord is permanently affixed, return handpiece for service. • Return for service • Securely connect footswitch cord to console receptacle. • Return for service. • Try reconnecting the wireless footswitch. If footswitch still doesn't connect, return for service.
Console Status Messages		
"Connect Handpiece" message displays when handpiece is connected.	• Handpiece not connected securely. • Handpiece, handpiece cord and/or console faulty.	• Securely connect handpiece. • Replace handpiece. If symptom is corrected, return faulty handpiece for service. • Replace handpiece cord. If symptom is corrected, return faulty handpiece cord for service. • If either of the above do not resolve the issue, return console for service.
"Check Handpiece"	• Motor stalled. • Handpiece faulty.	• Apply less pressure to handpiece. • Disconnect, then reconnect the handpiece • Return for service.
"Check Blade/Handpiece"	• Motor stalled. • Handpiece faulty.	• Remove debris from the blade/bur. • Apply less pressure to handpiece. • Disconnect, then reconnect the handpiece • Return for service.
"Remove Blade and Reinstall"	• Bur installed before handpiece Connected. • Handpiece Faulty.	• Remove blade and reinstall it on handpiece. • If the above does not resolve the issue, return handpiece for service.

Table 1: Troubleshooting Guide

Symptom	Possible Cause	Corrective Action
"Check Bur Lock"	• Motor stalled.	• Rotate the handpiece collet red dot to the lock position. • Apply less pressure to handpiece.
	• Handpiece faulty.	• Disconnect, then reconnect the handpiece • Return for service.
"Handpiece/Cable Service Required"	• Handpiece or handpiece cord faulty.	• Replace handpiece. If symptom is corrected, return faulty handpiece for service.
	• Console unable to identify handpiece.	• Replace handpiece. If symptom is corrected, return faulty handpiece for service. • Handpiece not operated on this console.
"Service Required Use Other Side"	• Console faulty.	• Return console for service.
"Handpiece Service Required"	• Handpiece faulty.	• Return handpiece for service.
	• Console unable to identify handpiece.	• Handpiece not operated on this console

3.4 Maintenance Schedule

Regular and proper maintenance of your equipment is the best way to protect your investment. It is essential that you have your equipment serviced as scheduled in order to retain its optimum performance and reliability, which will reward you with safer, less problematic product performance over time.

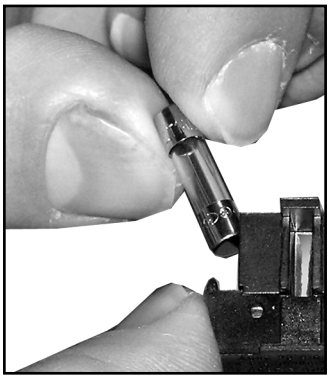
The equipment is not field repairable. Your CONMED authorized service department is the most knowledgeable about this equipment and its accessories and will provide competent and efficient services. Service at CONMED at the recommended service interval is mandatory to keep your product warranties in effect. Any services and/or repairs done by any unauthorized repair facility may result in reduced performance of the equipment or equipment failure. (Refer to section **"5.0 CUSTOMER SERVICE"**).

The D4000/D4000A console shall be returned every 36 months for servicing.

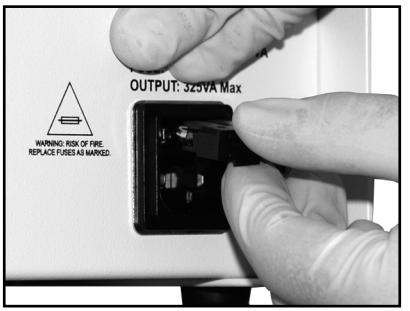
3.5 Fuse Replacement

1. Turn the equipment power off and disconnect the mains power cord.
2. Using a flat blade tool, remove the fuse holder.

3. Replace the fuses with the correct value, as stated on the equipment or in the **"4.0 TECHNICAL SPECIFICATIONS"** section of this manual.



4. Replace the fuse holder.



4.0 TECHNICAL SPECIFICATIONS

Medical electrical equipment complies with and was tested with respect to electric shock, fire, electromagnetic compatibility, mechanical and other specified hazards only, in accordance with UL60601-1, CAN/CSA C22.2 No. 601.1-M90, IEC60601-1:1988 +A1:1991 +A2:1995, ES60601-1:2005 +A1: 2009 +A2: 2010, CAN/CSA C22.2 No.60601-1-1-08 and IEC60601-1:2005 +C1:2006 +C2:2009.

Tested to IEC60601-1-2:2007 and Part 15 of the FCC Rules as follows: 1) The system may not cause harmful interference: 2) The system will accept interference, including interference that might cause undesired operation. If interference occurs, separate the instruments. For more information, contact customer service.

4.1 Product Technical Specifications

4.1.1 Technical Specifications

Classification:	Class 1, Type BF applied part
Protection Ingress of Fluids:	IPX0, Ordinary, no protection
Mode of Operation:	Continuous operation, with intermittent loading
Duty Cycle:	2 minutes ON, 6 minutes OFF at 325VA max. For 8 cycles then wait 1 hour.
Input Voltage:	100-240 VAC
Frequency:	50/60 Hz
Enclosure (Touch) Leakage:	< 100 µa, normal condition < 300 µa, single fault condition, balanced input voltage < 500 µa, single fault condition, unbalanced input voltage
Power Consumption:	500 VA
Fuses:	T8AL 250V
Total Port Output:	325 VA max.
Pump Flow Rate: (D4000A Only)	0 - 150 mL/minute
Displayed-Revolutions Per Minute (RPM):	± 15% or ±100, whichever is greater.

<table>
<tr><td colspan="2">D4000/D4000A: (Continued)</td></tr>
<tr><td>Wireless Specifications:</td><td>

IEEE 802.15.4 - 2003
Frequency Range: 2400 MHz - 2485MHz
Effective RF Range:
-up to 50 feet
-15 feet recommended for uninterrupted operation
Class: 3a
Modulation: DSSS
Power: Nominal: -9.55 dBm (111 µW)
FCC ID: T7VPAN4555
Industry Canada ID: 216Q-PAN4555

<table>
<tr><th colspan="3">Quality of Service Level of Performance</th></tr>
<tr><th></th><th>Typical</th><th>Worst Case</th></tr>
<tr><td>Available Throughput</td><td>3700 Bits Per Second (bps) (payload of 21 bytes)</td><td>1000 bps (payload of 5 bytes)</td></tr>
<tr><td>Requires Throughput</td><td>168 bps</td><td>400 bps</td></tr>
<tr><td>Quality of Service Network Throughput Over-provisioning ratio</td><td>22x</td><td>2.5x</td></tr>
</table>
</td></tr>
<tr><td>Dimensions:</td><td>14 in. (W) × 5.6 in. (H) × 16.5 in. (D)
35.6 cm (W) × 14.2 cm (H) × 41.9 cm (D)</td></tr>
<tr><td>Weight:</td><td>14 lbs.</td></tr>
</table>

4.1.2 Power Cord Requirements

Mains Cord	
North American Mains Cord Specifications:	UL and CSA Certified. Male Plug: NEMA 5-15P Hospital Grade with Green Dot, 15A/125V Cord: UL style SJT, 18AWG X 3 conductor, color coding black, white, green. Cord Length: 10 ft. max. Female Plug: IEC320/C13 EN60320, 10A/125V
International Mains Cord Specifications:	Country/Region Certified Male Plug: 10A/250V Cord: H05VV-F3G1.0 or country/region recognized equivalent, $1mm^2$ X 3 conductor, color coding brown, light blue, green/yellow stripe or country/region requirement. Cord Length: 3.6m max. Female Plug: IEC320/C13 EN60320, 10A/250V

4.1.3 Tubing Set Technical Specifications

Material:	PVC, ABS, Polycarbonate, Silicone, Acrylic
Overall Dimensions:	Approximately 14.0 feet (4.2 m)
Weight:	E9414 - 3.5 oz. (99 g) E9415A - 4.0 oz. (115 g) E9416/E9417 - 2.5 oz. (72 g) E9418 - 2.1 oz. (61 g)

4.1.4 Handpiece Technical Specifications

E9000 Handpieces	E9005	E9010	E9015
Operating Speed:	500 - 10,000 rpm F/R	5,000 - 80,000 rpm	100% (750 rpm) Forward Only
	500 - 5,000 rpm Single and Multi-Turn Oscillate	N/A	N/A
Default Speed:	5,000 rpm F/R	60,000 rpm	100% (750 rpm) Forward Only
	3,000 rpm Oscillate	N/A	N/A
Torque:	9.0 in. oz. (6.4 N•cm)	2.0 in. oz. (1.4 N•cm)	14 in.-lbs. (158 N•cm)

MicroPower Handpieces	6020-021/6021-021 PRO7100SE	6020-022/6021-022 PRO7200SE	6020-023/6021-023 PRO7400SE
Operating Speed:	1,000 to 25,000 rpm in 2,000 rpm increments	20-100% (25,000 Cycles Per Minute (cpm)) in 10% increments	20-100% (17,000 cpm) in 10% increments
Default Speed:	25,000 rpm	100% (25,000 cpm)	100% (17,000 cpm)
Torque:	6 in. oz. (4.2 N•cm)	N/A	N/A

MicroPower Handpieces	6020-024/6021-024 PRO7300SE	6020-025/6021-025/6020-026/6021-026 PRO7000DE/PRO7000SE
Operating Speed:	20 - 100% (25,000 cpm) in 10% increments	10,000 to 100,000 rpm in 10,000 rpm increments
Default Speed:	100% (25,000 cpm)	70,000 rpm
Torque:	N/A	2.0 in. oz. (1.4 N•cm)

Shaver Handpieces	Advantage Turbo D9920/D9924 and Ergo D4200/D4240	Advantage D9820 and D9824
Operating Speed:*	500 - 12,000 rpm, F/R 500 - 4,000 rpm, Single- and Multi-turn Oscillate	500 - 10,000 rpm, F/R 500 - 4,000 rpm, Single- and Multi-turn Oscillate
Torque (nominal):	35 in. oz. (24.7 N•cm)	22 in. oz. (15.5 N•cm)

* Operating speeds may vary depending on console software revision and blade/bur selection.

PowerPro Handpieces	PRO6100	PRO6125-Saw	PRO6135-Saw
Operating Speed:	10-100% in 10% increments	20-100% (11,000 cpm) in 10% increments	20-100% (14,875 cpm) in 10% increments
Default Speed:	100%	100% (11,000 cpm)	100% (14,875 cpm)
Drill/Ream Mode			
Drill Attachments:			
Speed Range:	0-1500 rpm	N/A	N/A
Torque:	25 in-lbs. (282 N•cm)	N/A	N/A
Reaming Attachments:			
Speed Range:	(5:1) 0-300 rpm (3.1) 0-500 rpm	N/A	N/A
Torque:	(5.1) 125 in-lbs (1412 N•cm) (3:1) 75 in-lbs (847 N•cm)	N/A	N/A
Screw Mode			
Speed Range:	0-250 rpm	N/A	N/A
Torque:			
(forward - nominal):	18 in-lbs (203 N•cm)	N/A	N/A
(reverse):	25 in-lbs (282 N•cm)	N/A	N/A
Tap Mode			
Speed Range:	0-250 rpm	N/A	N/A
Oscillating Drill Mode			
Speed Range:	0-750 rpm	N/A	N/A

4.1.5 Corded Footswitch (5020-053 and C9863) Technical Specifications

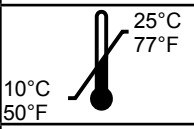
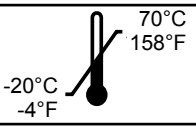
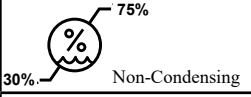
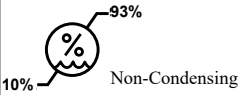
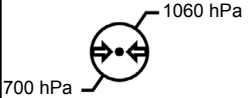
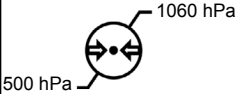
Dimensions:	10.0 in. (W) x 1.87 in. (H) x 4.75 in. (D) 25.4 cm (W) x 4.75 cm (H) x 12.0 cm (D)
Cord Length:	Approximately 10 ft. (3 m)
Weight:	3.5 lbs. (1.58 kg)

4.1.6 Wireless Footswitch (W1000) Technical Specifications

Refer to appropriate Wireless Footswitch Instruction for Use.

4.2 Product Environmental Requirements

4.2.1 Environmental Technical Specifications

Environmental Conditions	Operating	Storage and Transport
Temperature:		
Relative Humidity:		
Atmospheric Pressure:		

4.2.2 Electromagnetic Requirements

Table 2: Guidance and Manufacturer's Declaration - Electromagnetic Emissions

The D4000/D4000A system is intended for use in the electromagnetic environment specified below. The customer or the user of the D4000/D4000A system should assure it is used in such an environment.		
Emissions Test	**Compliance**	**Electromagnetic Environment Guidance**
RF Emissions CISPR 11	Group 1	The D4000/D4000A system 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 A	The D4000/D4000A system is intended for use by healthcare professionals only and is suitable for use in all establishments other than domestic and those directly connected to the public low-voltage power supply network that supplies buildings used for domestic purposes.
Harmonic Emissions IEC 61000-3-2	Class A	
Voltage fluctuations/flicker emissions IEC 61000-3-3	Complies	

Table 3: Guidance and Manufacturer's Declaration - Electromagnetic Immunity

The D4000/D4000A system is intended for use in the electromagnetic environment specified below. The customer or the user of the D4000/D4000A system should assure 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	± 6 kV contact ± 8 kV air	± 6 kV contact ± 8 kV air	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 transients/bursts IEC 61000-4-4	± 2 kV for power supply lines ± 1 kV for input/output lines	± 2 kV for power supply lines ± 1 kV for input/output lines	Mains power quality should be that of a typical commercial or hospital environment.
Surge IEC 61000-4-5	± 1 kV line to line ± 2 kV lines to earth	± 1 kV line to line ± 2 kV lines to earth	Mains power quality should be that of a typical commercial or hospital environment.
Power frequency (50/60 Hz) magnetic field IEC 61000-4-8	3 A/m	3 A/m	Power frequency magnetic fields should be at levels characteristic of a typical location in a typical commercial or hospital environment.
Voltage dips, short interruptions and voltage variations on power supply input lines IEC 61000-4-11	<5% *Ut* (>95% dip in *Ut*) for 0.5 cycle 40% *Ut* (60% dip in *Ut*) for 5 cycles 70% *Ut* (30% dip in *Ut*) for 25 cycles <5% *Ut* (>95% dip in *Ut*) for 5 seconds	<5% *Ut* (>95% dip in *Ut*) for 0.5 cycle 40% *Ut* (60% dip in *Ut*) for 5 cycles 70% *Ut* (30% dip in *Ut*) for 25 cycles <5% *Ut* (>95% dip in *Ut*) for 5 seconds	Mains power quality should be that of a typical commercial or hospital environment. If the user of the D4000/D4000A system requires continued operation during power mains interruptions, it is recommended that the D4000/D4000A system be powered from an uninterruptable power supply or battery.
NOTE: Ut is the a.c. mains voltage prior to application of the test level.			

Table 3: Guidance and Manufacturer's Declaration - Electromagnetic Immunity

The D4000/D4000A system is intended for use in the electromagnetic environment specified below. The customer or the user of the D4000/D4000A system should assure it is used in such an environment.

Portable and mobile RF communications equipment should be no closer to any part of the D4000/D4000Asystem, including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter.

Immunity Test	IEC 60601 Test Level	Compliance Level	Electromagnetic Environment Guidance
Conducted RF IEC 61000-4-6	150 kHz to 80 MHz	3 Vrms	**Recommended Separation Distance** $d = 1.2 \sqrt{P}$
Radiated RF IEC 61000-4-3	80 MHz to 2.5 GHz	3 V/m	$d = 1.2 \sqrt{P}$ 80 MHz to 800 MHz $d = 2.3 \sqrt{P}$ 800 MHz to 2.5 GHz

Where P is the maximum output 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/or 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 D4000/D4000A systems used exceeds the applicable RF compliance level above, the D4000/D4000A system should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as re-orienting or relocating the D4000/D4000A system.

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

Table 4: Recommended Separation Distances Between Portable and Mobile RF Communications Equipment and the D4000/D4000A Systems

The D4000/D4000A system is intended for use in an electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of the D4000/D4000A system can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the D4000/D4000A system as recommended below, according to the maximum output power of the communications equipment.

Read Maximum Output Power of Transmitter W	Separation Distance According to Frequency of Transmitter		
	m		
	150 kHz to 80 MHz $d = 1.2 \sqrt{P}$	80 MHz to 800 MHz $d = 1.2 \sqrt{P}$	800 MHz to 2.5 GHz $d = 2.3 \sqrt{P}$
0.01	0.12	0.12	0.23
0.1	0.38	0.38	0.73
1	1.2	1.2	2.3
10	3.8	3.8	7.3
100	12	12	23

For transmitters rated at a maximum output power not listed above, the recommended separation distances 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.

NOTES:

- **At 80 MHz and 800 MHz, the separation distance for the higher frequency range applies.**
- **These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects, and people.**

4.3 Accessories

REF	Description
	Consoles
24k	24k Irrigation Console
	Cords
C7104	Ac Power Cord (115 VAC)
C7105	Ac Power Cord (230 VAC)
	Footswitches
5020-053	MicroChoice Footswitch, 2 Pedal
C9863	MicroChoice Footswitch, 3 Pedal
W1000	Wireless Footswitch (If Equipped)
	Handpieces
6020-021/6021-021	MicroPower Medium Speed Drill (Removable Lever/Permanent Lever)
6020-022/6021-022	MicroPower Sagittal Saw (Removable Lever/Permanent Lever)
6020-023/6021-023	MicroPower Reciprocating Saw (Removable Lever/Permanent Lever)
6020-024/6021-024	MicroPower Oscillating Saw (Removable Lever/Permanent Lever)
6020-025/6021-025	MicroPower Oral Max High Speed Drill (Removable Lever/Permanent Lever)
6020-026/6021-026	MicroPower High Speed Drill (Removable Lever/Permanent Lever)
D4200	Ergo Basic Shaver Handpiece
D4240	Ergo 2-Button Shaver Handpiece
D9820	Advantage Basic Shaver Handpiece
D9824	Advantage 2-Button Shaver Handpiece
D9920	Advantage Turbo Basic Shaver Handpiece
D9924	Advantage Turbo 2-Button Shaver Handpiece
E9005	High Speed Shaver Handpiece

Handpieces (Continued)

E9010	CoolFlex High Speed Drill Handpiece
E9015	Cranial Perforator Drive Handpiece
MC9840	MicroChoice Small Shaver Handpiece
PRO6100	PowerPro Electric II Modular Handpiece
PRO6125	PowerPro Electric II Oscillator Handpiece
PRO6135	PowerPro Electric II Reciprocator Handpiece

Miscellaneous

5040-180	Fluid Bag Hanger Rod
D4024	24k Pump Interface Cable
MC5057	Universal Handpiece Cord, 12 ft. (3.6m)

Tubing Sets

E9414	Tubing Set used with the CoolFlex® High Speed Drill to provide cooling for the handpiece body.
E9415A	Tubing Set used with the CoolFlex High Speed Drill to provide cooling for the handpiece body and irrigation for the surgical site. It has an irrigation tip that attaches to applicable bur guards used with the CoolFlex Drill.
E9416	Tubing Set (4.2 mm) used to provide irrigation to irrigated shaver blades and burs.
E9417	Tubing Set (3.7 mm) used to provide irrigation to irrigated shaver blades and burs.
E9418	Tubing Set used to provide irrigation for blades, bits and burs while using MicroChoice and Micropower Drills or Saws.

NOTE: For information on any particular equipment listed above, reference the associated Information For Use (IFU) documentation.

5.0 CUSTOMER SERVICE

5.1 Assistance and Repair

If you need technical assistance regarding the use or application of this product, or you encounter a problem that requires servicing or repair, contact CONMED Customer Service at 1 (866) 426-6633 or your CONMED Sales Representative. Outside the U.S. contact your local CONMED Representative.

Report any events involving injuries or malfunctions to the CONMED Regulatory Product Support Department.

Returning products for any reason requires an authorized Service Request (S.R.) number prominently displayed on the box and included on all paperwork. Refer to this number if making inquiries about the repair status. Please call CONMED Customer Service and provide the following information to obtain an S.R. number prior to returning any product for repair:

- Product Number
- Serial/Lot Number
- Reason for Return
- Original Invoice Number
- Date of Purchase
- Detailed description of the problem

CONMED
Attn.: Customer Service Dept.
11311 Concept Boulevard
Largo, Florida 33773-4908 USA

Customer Service

(within U.S.)	**Phone:**	**1 (866) 426-6633**
(outside U.S.)	**Phone:**	**+1 (727)-219-3310**

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