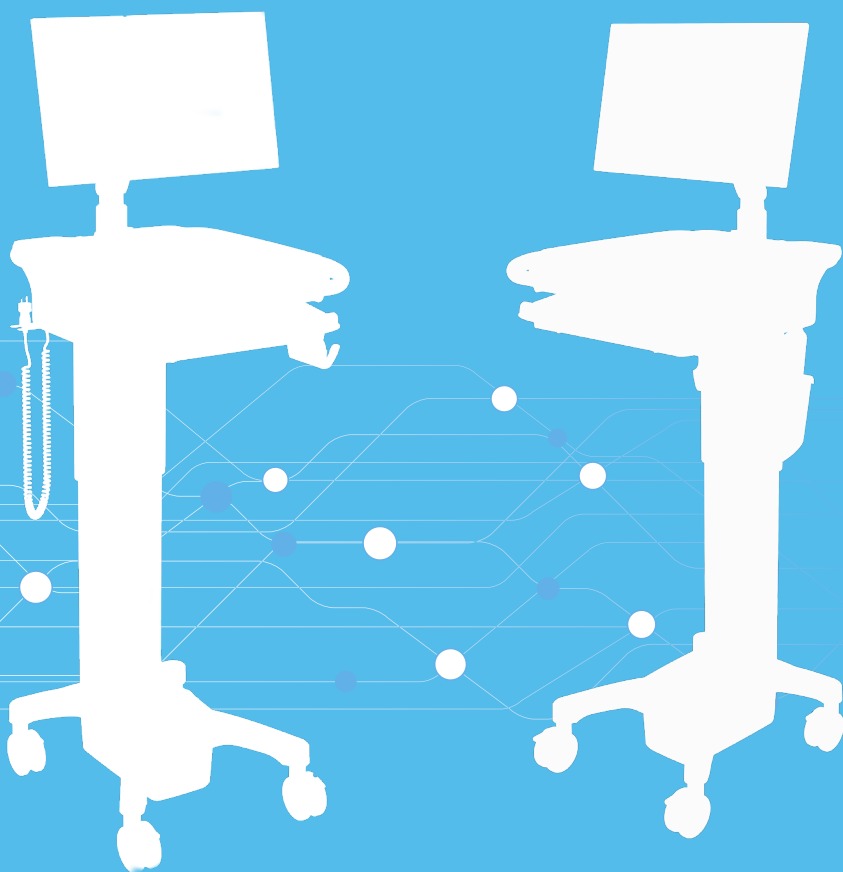


envoy

MOBILE EHR WORKSTATION



envoy

MOBILE EHR WORKSTATION

Envoy Manual

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THE ENOVATE MEDICAL ENVOY WORKSTATION WAS DESIGNED TO SET A NEW STANDARD IN QUALITY. ENOVATE MEDICAL'S GOAL IS TO PROVIDE A WORKSTATION THAT IS BUILT RIGHT, READY FOR YEARS OF USE, AND BACKED BY A COMMITMENT OF EXEMPLARY SERVICE AND SUPPORT.

THANK YOU FOR PURCHASING THE

Enovate Medical Envoy



Distributed by:
Enovate Medical
1152 Park Avenue
Murfreesboro, TN 37129
Support@enovatemedical.com
Toll free 888.909.8906

For laptop compatibility please check with your local
Enovate Medical Representative or call us toll-free (877) 890-6131

Welcome

Congratulations on your purchase of the Enovate Medical Envoy Mobile EHR Workstation. Please do not use your workstation until you have read this manual in its entirety as it contains important safety and use information. The Enovate Medical workstation should only be used as outlined in this manual. Be sure to keep this manual in a safe place for future reference. If at any time you have questions or concerns about the contents of this manual or the use of your Enovate Medical workstation, please contact Enovate Medical Customer Service toll free at 888.909.8930. This manual, product informational and safety labels related to the Enovate Medical workstation frequently employ the use of symbols with or without accompanying text. Health products regulatory agencies require the use of symbols, often in place of textual statements, to enhance the legibility of labeling and thus improve the conspicuousness of required information such as important safety information. Your attention to the presence and content of symbols used in this manual will help to ensure the safe use of your Enovate Medical workstation. The Symbols and Warnings chart depicts the symbols used and provides a definition for each symbol found in this manual and in the labels and labeling materials of the Enovate Medical workstation.

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Product Models Covered by this document

Model	Description
ENV0-1DC000-000	Envoy Corded Workstation, Standard EcoFlex, AutoTrax
ENV0-1DC000-050	Envoy Corded Workstation, Standard EcoFlex, AutoTrax Plus
ENV0-1DC000-A00	Envoy Corded Workstation, Standard EcoFlex, SightLine, AutoTrax
ENV0-1DC000-A50	Envoy Corded Workstation, Standard EcoFlex, SightLine, AutoTrax Plus
ENV0-1DCAC0-000	Envoy Corded Workstation, Hybrid EcoFlex, AutoTrax
ENV0-1DCAC0-050	Envoy Corded Workstation, Hybrid EcoFlex, AutoTrax Plus
ENV0-1DCAC0-A00	Envoy Corded Workstation, Hybrid EcoFlex, SightLine, AutoTrax
ENV0-1DCAC0-A50	Envoy Corded Workstation, Hybrid EcoFlex, SightLine, AutoTrax Plus
ENV0-2DC000-000	Envoy Mobius Workstation, Standard EcoFlex, AutoTrax
ENV0-2DC000-050	Envoy Mobius Workstation, Standard EcoFlex, AutoTrax Plus
ENV0-2DC000-A00	Envoy Mobius Workstation, Standard EcoFlex, SightLine, AutoTrax
ENV0-2DC000-A50	Envoy Mobius Workstation, Standard EcoFlex, SightLine, AutoTrax Plus

Symbols

The term “symbols” refers to the use of graphical symbols without equivalent accompanying text. Symbols are used by medical device manufacturers to create uniform labels and labeling for the United States, European Union, and any other countries that may permit their use in medical products.

The use of symbols on the product labels are intended to conform to international consensus standards. The following chart depicts the symbols used and provides a definition for each symbol found in the labels.

	ALTERNATING CURRENT
	DIRECT CURRENT
	CAUTION – IN CASE OF APPLICATION AS A SAFETY SIGN, THE RULES ACCORDING TO ISO 3864-1 ARE TO BE ADHERED TO. SEE SAFETY SIGN ISO 7010- W001
	OPERATING INSTRUCTIONS
	DANGEROUS VOLTAGE
	CAUTION, RISK OF ELECTRIC SHOCK
	DATE OF MANUFACTURE
	MANUFACTURER
	WEEE SYMBOL
	GENERAL SYMBOL FOR RECOVERY/RECYCLABLE
	ARC FLASH
	NO PUSHING, TO PROHIBIT PUSHING AGAINST AN OBJECT
	EMERGENCY STOP

Warnings



Important Warnings



Electrical Shock Warning

The above symbols represent safety warnings that require significant attention when seen on the Encore Workstation or in the user manual. Failure to do so could result in minor injury, major injury, or even death.



NOT SUITABLE FOR USE IN AN OXYGEN RICH ENVIRONMENT! Do not use in the presence of an anesthetic mixture with air or with oxygen or nitrous oxide.



USE A NONFLAMMABLE CLEANER WHEN CLEANING THE UNIT! Failure to do so can result in death, explosion, and/or fire.



DO NOT LEAVE THE UNIT UNATTENDED AROUND CHILDREN! Failure to do so can result in injury, and/or death.



CAUTION: MAIN BATTERY IS REMOVABLE BY HANDLE. You must use proper lifting techniques. Failure to do so can result in injury.



AVOID USING AN EXTENSION CORD WITH THE UNIT! If an operational error occurs, the plug should be immediately removed from the socket.



THIS CHARGER IS DESIGNED FOR USE WITH LITHIUM BATTERIES!



For safety reasons, this charger must be used only for Mobius batteries



DO NOT ATTEMPT TO SERVICE OR REPLACE ANY PART OF THE ENCORE WORKSTATION unless directed to do so through Enovate Medical approved documentation (i.e., this User Manual or other instructions). Only Enovate Medical or an Enovate-certified entity may service or replace the Workstation components. If any component on the Workstation is missing or damaged, the Workstation must not be used. Contact Enovate Medical immediately to request service.



MAINTENANCE During preventive maintenance workstation should be turned off by removing main battery or disconnecting holster charger.



DO NOT TRANSPORT THE WORKSTATION UP OR DOWN STAIRS! Workstation must be in lowered position and all drawers must be closed during transport.



TRANSPORT THE WORKSTATION IN A LOWERED POSITION



Workstation must be lowered to reduce the risk of overbalancing during transport.



DO NOT OPEN THE POWER SYSTEM! Unauthorized personnel opening the power system may cause injury and/or death. If the unit is not working properly, please contact Enovate Medical at 888-909-8930



DO NOT USE THE UNIT IN/NEAR WATER OR OTHER LIQUIDS! If the unit becomes wet, unplug it immediately, wipe away any excess liquid and allow it to dry before use. Failure to do so may cause electric shock, damage to the unit, voiding the warranty, injury or death.



ALWAYS KEEP THE UNIT WELL VENTILATED! Do not block ventilation airways or insert items into the ventilation slots. Failure to do so can cause the power system to overheat and possibly cause fire, explosion, and/or death.



THE CHARGER CONTAINS DANGEROUS VOLTAGES AND THE COVER SHOULD NOT



BE REMOVED. All service or maintenance work should be carried out by qualified service personnel by contacting Enovate Medical at 888-909-8930



GROUNDING Connect the Enovate workstation or bay charger to an equivalent receptacle marked "Hospital Only" or "Hospital Grade" to ensure ground



WARNING: To avoid risk of electric shock, this equipment must only be connected to a supply mains with protective earth



WARNING: Do not push the workstation from the side. Always use the handle to move or adjust the workstation position.



WARNING: Emergency Stop. Large RED switch located on back of work surface cuts power to workstation actuator in the event of continuous activation presenting a hazard. Electrical function: push to shut off, pull or twist to release.

STATEMENT OF USE

The Envoy Mobile EHR Workstation facilitates mobile computing in healthcare environments to aid in clinical documentation. Designed to set a new standard in quality, ease of use, and customer satisfaction, our goal is to provide a product that is built to exacting standards and is ready for years of durable service in a healthcare environment. This product is designed to be safely used within general patient areas and is meant to aid in the entering or retrieving of clinical data. It complies with IEC 60601-1 electromagnetic leakage and safety requirements if used in accordance with the boundaries and suggestions of this manual.

SAFETY GUIDELINES

EcoFlex™ Power and MobiusPower® are designed to ensure both the highest level of product quality and safety for the user. To maintain both quality and safety, follow the guidelines and instructions in this manual.

Use the EcoFlex Power and Mobius Power system only as intended.

- Do not place the power system components near a window. Exposing the power system to rain, water, moisture, or constant, direct sunlight can severely damage it.
- The EcoFlex Power and Mobius Power systems have no user-serviceable, internal parts. To maintain your warranty, refer all servicing to Enovate Medical qualified personnel.
- Do not cover or obstruct any venting holes on the Envoy workstation with EcoFlex Power or the Mobius Power Charging Stations.
- Store the workstation with EcoFlex Power within 10 to 30 degrees Celsius (50 to 86 degrees Fahrenheit) for optimum backup battery life. Storing the system outside the temperature range could result in premature backup battery failure.
- Use and maintain the cord set provided with the EcoFlex Power and Mobius Power Charging Stations.
- Position workstation in a manner that does not obstruct or make it difficult to disconnect from external power source.
- If any cord or cable is frayed or damaged, replace it immediately with another of the same type and rating as supplied by Enovate Medical.
- To clean the exterior of the workstation or components, follow the IEC 60601-1 standard for use in a hospital environment. See "Maintenance" for more information.
- Before cleaning a Mobius Power Charging Station, disconnect the enclosure from its power source.
- **CAUTION! Do NOT ship individual Mobius Power Battery Packs by air. Certain restrictions apply. Contact Enovate Medical for shipping instruction.**

CLASSIFICATIONS

- Charger: Class 1
- Main Controller: Class 1, Internally Powered
- Degree of Protection against Harmful Ingress of Water, IPX0
- EQUIPMENT not suitable for use in the presence of a FLAMMABLE ANAESTHETIC MIXTURE WITH AIR or WITH OXYGEN OR NITROUS OXIDE

TRANSPORT / STORAGE ENVIRONMENT

Care should be taken to transport and store this system within the following:

Ambient Temperature Range: -20 °C to +50 °C (-4 °F to 122 °F)

Atmospheric Pressure: 50 kPa to 106 kPa

Relative Humidity: 5% to 85% non-condensing

STORAGE REQUIREMENTS

The lithium ion Battery Pack must not be fully charged prior to storing. 50% state of charge recommended.

OPERATING ENVIRONMENT

- Ambient Temperature Range: 0 °C to +40 °C (32 °F to 104 °F)
- Atmospheric Pressure: 50 kPa to 106 kPa
- Relative Humidity: 20% – 85% non- condensing

WARRANTY

2 and 4 year limited warranty on battery packs

2 year warranty on labor

6 year warranty on electronic and mechanical components

6 year structural warranty

Contact Enovate Medical directly for full warranty details

COMPLIANCE

Workstation	IEC 60601-1 3rd Edition
Bay Charger	UL 1012 CAN/CSA-E60335 IEC 60335
Mobius Battery	IEC 62133 2nd Edition UL 62133 <ul style="list-style-type: none">Only part numbers: 3117615, 3117715, 3117815, 3117915, 3118015, 3118115, 3118215, 3118315, 3118415 UN 38.3
Iron Phosphate Battery	IEC 62133 UL 1642, UL 2054 UN 38.3 FCC, CE

EMI (Electromagnetic Interference)

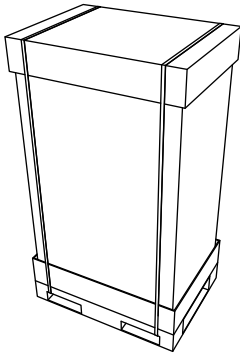
Portable and mobile RF communications equipment can affect Medical Electrical Equipment. The use of accessories, transducers, and cables other than those specified by the manufacturer, may result in increased Emissions or decreased Immunity of the System. The System should not be used adjacent to or stacked with other equipment and that if adjacent or stacked use is necessary, the System should be observed to verify normal operation in the configuration in which it will be used.

These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy, and if not installed and used in accordance with the instruction manual, may cause interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio, television or Medical Electrical Equipment reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference using one or more of the following measures: reorient or relocate the receiving antenna; increase the separation between the equipment and the receiver; connect the equipment into an outlet on a circuit different from that which the receiver is connected; consult the dealer or an experienced radio/television technician for help. The user must use shielded cables and connectors with this product.

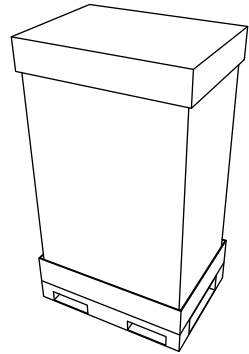
Any changes or modifications to this product not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) This device must accept any interference received, including interference that may cause undesired operation. EcoFlex Power meets or exceeds FCC Class A limits for EMI.

Unpacking

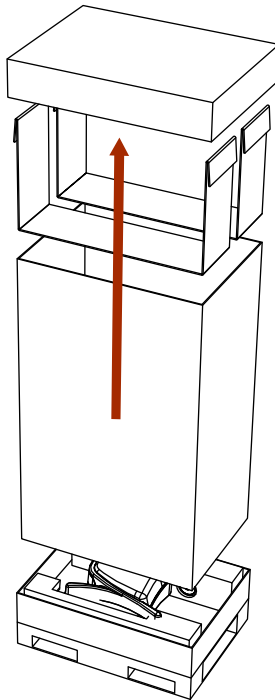
Promptly unpack your products to check for completeness and damage caused by shipping. Immediately after receiving your Workstations, ALL batteries must be fully charged to ensure the duration of their warranty.



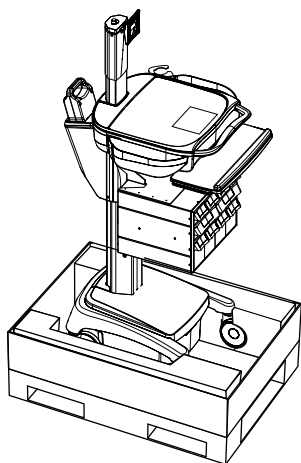
- 1** Before removing the Envoy from a shipping container check over the packaging and pallet to prevent accepting an item with shipping damage.



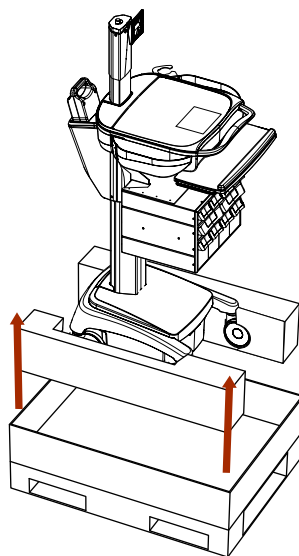
- 2** Use scissors or a utility knife to cut and remove the two outer straps.



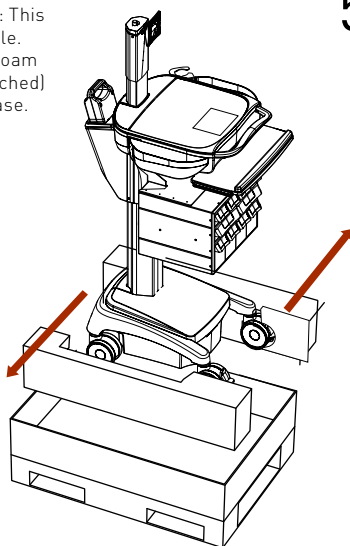
- 3** Remove cardboard lid and cardboard spacers.



- 4** Remove cardboard walls and plastic bag. NOTE: This step requires two people. Lift Workstation (with foam castor braces still attached) out of the cardboard base.



- 5** Remove foam castor braces.



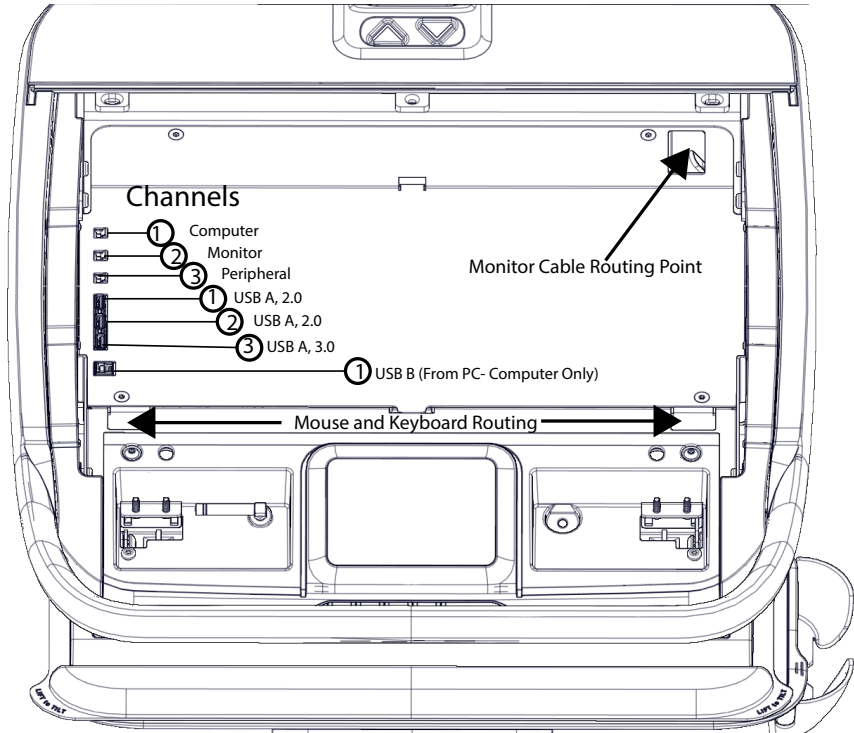
- 6** Open tray and check for integration kit and locate all optional accessories.

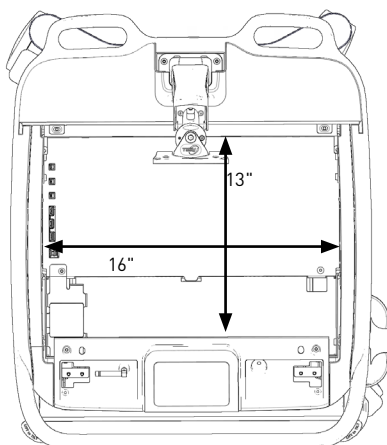
Cable Management

Cable Management Illustration

ROUTE POWER, VIDEO AND AUDIO CABLES INTO CPU COMPARTMENT

- Plug CPU power into channel 1
- Plug monitor power into channel 2.
- Plug in all USB, video and audio cables into channel 1,2,3





WEIGHTS

Total Mass = 70.3 kg (155 lbs.)

*Includes battery, power and maximum accessory limits.

ACCESSORIES

Monitor Pole = 7.3 kg (16 lbs.)

Monitor Arm = 4.1 kg (9 lbs.)

CPU Compartment = 4.5 kg (10 lbs.)

Work Surface = 4.5 kg (10 lbs.)

Keyboard Tray = [3 lbs.]

Column Accessories = 4.5 kg (10 lbs.)

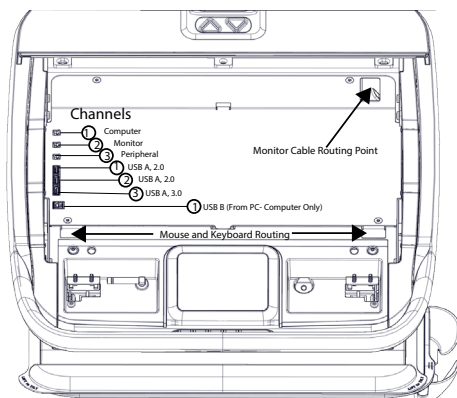
Column Drawer = 9.1 kg (20 lbs.)

CPU COMPARTMENT:

Width: 406.4mm (16")

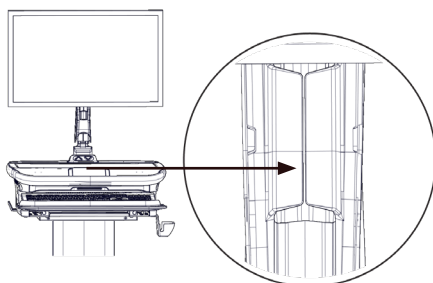
Depth: 330.2mm (13")

Height: 57.2mm (2.25")

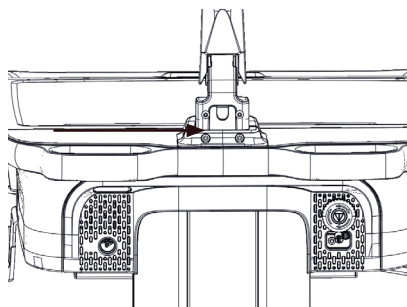


I/O PORTS:

- Computer
- Monitor
- Peripheral
- USB A, 2.0 (hub)
- USB A, 2.0 (hub)
- USB A, 3.0 (hub)
- USB B (from PC)
- 120 VAC, 1.0 A, 60 Hz
- Hybrid models only



MONITOR ARM CABLE ROUTING CLIP



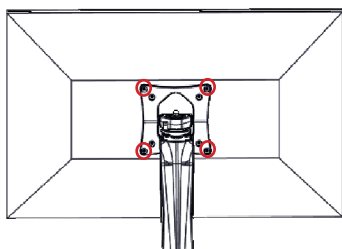
MONITOR ARM REAR CABLE ROUTING POINT

FOR FULL FEATURE LIST VISIT:

WWW.ENOVATEMEDICAL.COM

Envoy specification document

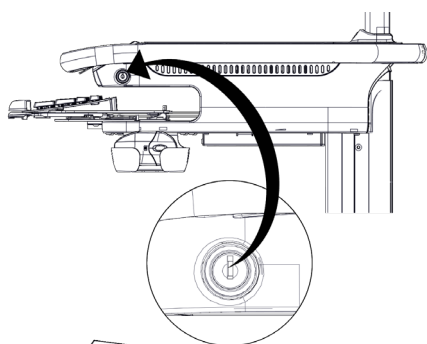
Initial Setup



MONITOR AND LAP TOP/NUC INSTALLATION

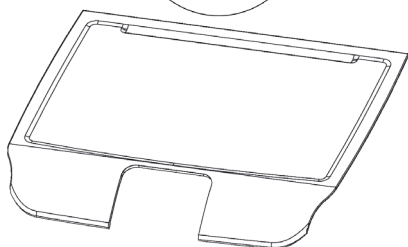
STEP 1

Align four screws with the monitor pole VESA plate and tighten the screws.



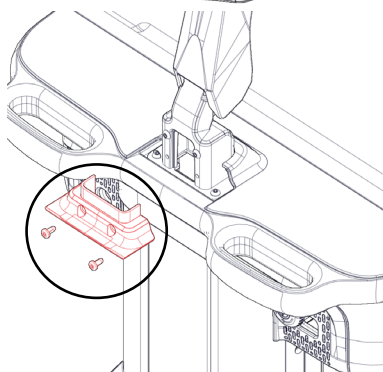
STEP 2

Unlock both sides of the work surface.



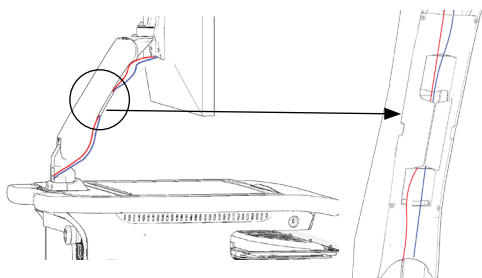
STEP 3

Remove work surface by lifting up.



STEP 4

Remove cable cover at the monitor base routing point.

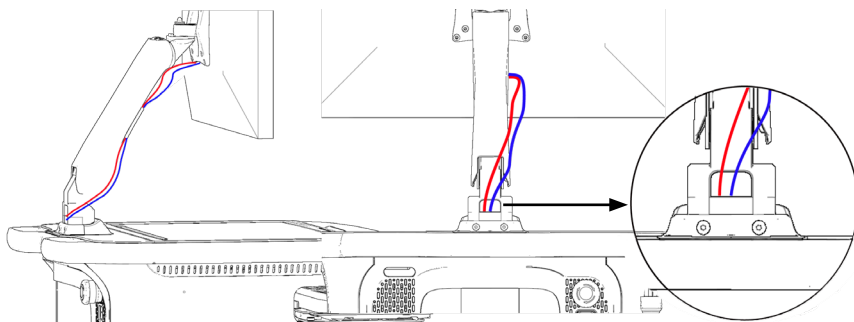


STEP 5

Connect the monitor's power cable (pictured in red for demonstration purposes only) and the video cable (pictured in blue for demonstration purposes only). Route each cable from the monitor through the cable management cover located on the front of the monitor arm. Leave enough slack above the cable management cover to allow the monitor to extend fully upward.

STEP 6

Continue routing each cable behind the arm and through the rear cable port at the base of the monitor arm.



STEP 7

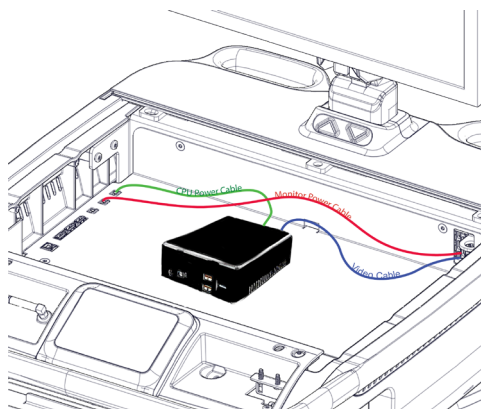
Follow Steps 1 - 6 for Monitor and Computer Installation

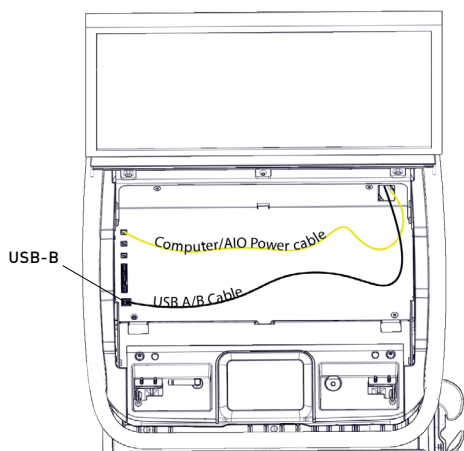
STEP 8

Plug Monitor Power Cable (pictured in red for demonstration purposes only) into channel 2 monitor port and connect the video cable (pictured in blue for demonstration purposes only) to the computer to your NUC/ Laptop or Thin Client.

STEP 9

Connect your NUC/Laptop or Thin Client CPU Power cable (pictured in green for demonstration purposes only) to channel 1 computer port. Replace rear cable cover, replace and lock desk surface.



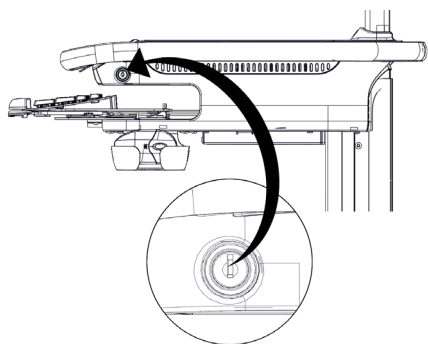
**ALL IN ONE INSTALLATION****All in One**

Follow steps 5 - 6 for computer/AIO power cable and USB/AB Cable

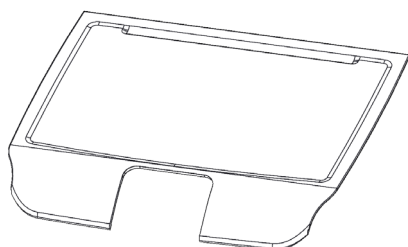
All in one Computer power cable should be plugged into Channel 1.

USB A/B cable should be plugged into USB-B

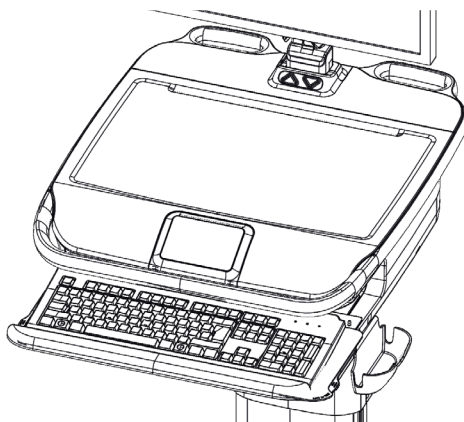
KEYBOARD INSTALLATION



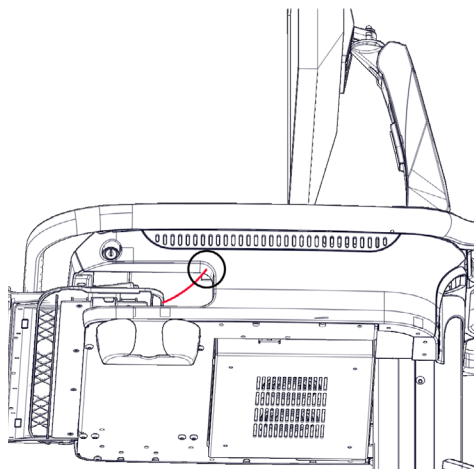
STEP 1
Unlock both sides of the work surface.



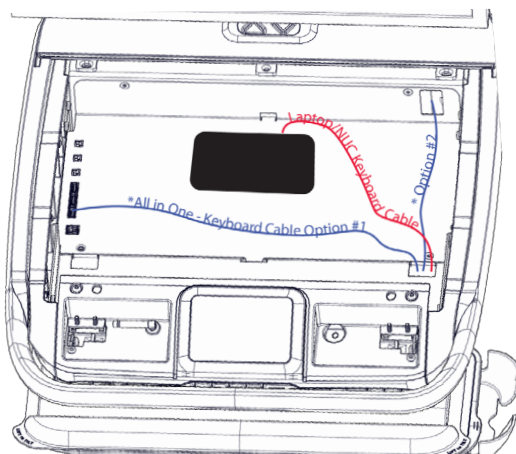
STEP 2
Remove work surface by lifting up.



STEP 3
Pull the keyboard tray forward to full extension. (This will simulate the full length requirement of the keyboard cable.)



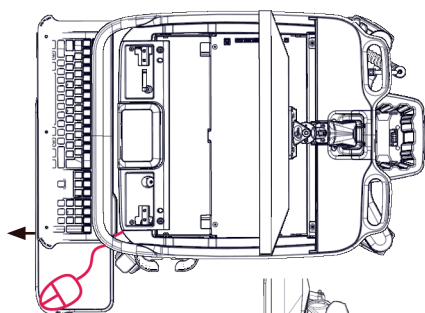
STEP 4
Route the keyboard cable up through the desk tray,



STEP 5
Plug the keyboard cable into the appropriate location on CPU/Laptop (shown in red).
For All in Ones (shown in blue), Option #1 plug into the USB port or Option #2 run to the All in One Computer and plug in.

STEP 6
Replace the work surface and cable cover at the base of the monitor arm, close and lock, or, continue to next step and install mouse.

MOUSE INSTALLATION

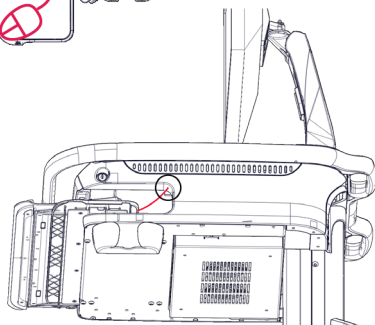


STEP 1

Follow steps 1 through 3 for keyboard installation.

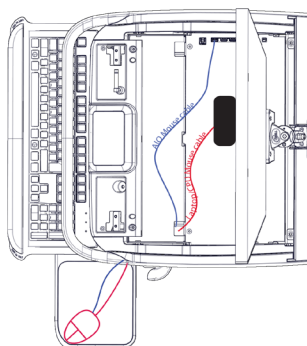
STEP 2

Pull the mouse tray to full extension. (The mouse tray can be pulled either left or right based on preference). Position the mouse on the mouse tray at the furthest corner, (this will ensure appropriate cable length.)



STEP 3

Route the cable under and through the tray.

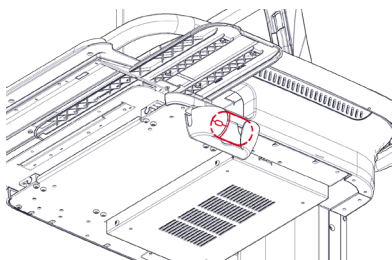


STEP 4

Plug the mouse cable into the appropriate location on CPU/Laptop (*shown in red*). For All in One mouse cable (*shown in blue*), Option #1 plug into the USB port or Option #2 run to the All in One Computer and plug in.

STEP 5

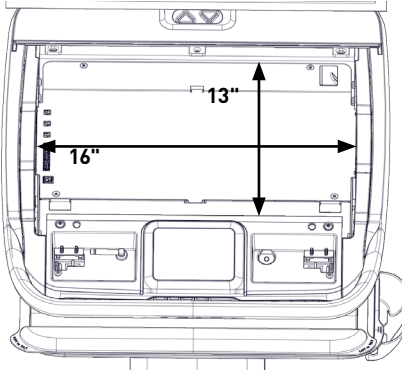
Replace the work surface, close and lock.



STEP 6

Stow mouse in mouse holder.

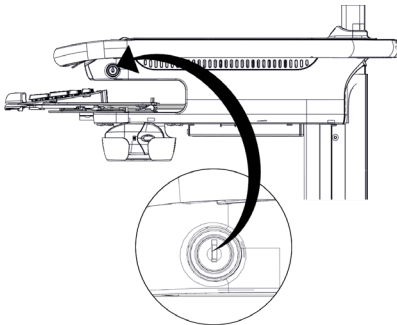
LAPTOP AND MINI FORM FACTOR INTEGRATION



STEP 1

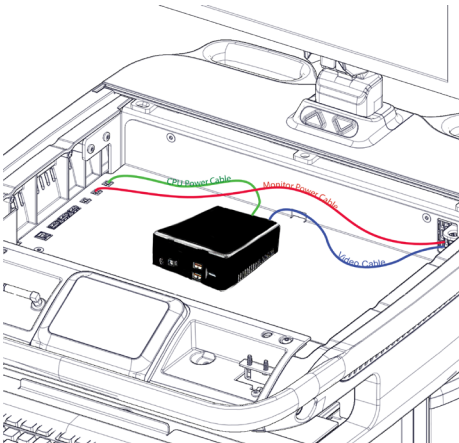
Make sure the computing device fits within the following dimensions:

- Width: 406.4mm (16")
- Depth: 330.2mm (13")
- Height: 57.2mm (2.25")



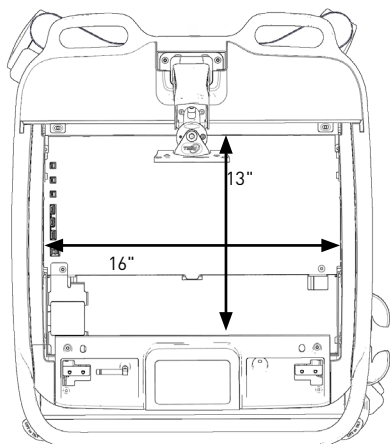
STEP 2

Open the CPU compartment by unlocking and removing the work surface. (locks are located either side of the desk)



STEP 3

Set the computer onto the platform beneath the work surface. **NOTE:** Take care in computer placement; consider orientation based on direction of cable inputs and sizes **INCLUDING** monitor input, power input, mouse, keyboard and any peripherals. Make cable connections within the tray.



WEIGHTS

Total Mass = 70.3 kg (155 lbs.)

*Includes battery, power and maximum accessory limits.

ACCESSORIES

Monitor Pole = 7.3 kg (16 lbs.)

Monitor Arm = 4.1 kg (9 lbs.)

CPU Compartment = 4.5 kg (10 lbs.)

Work Surface = 4.5 kg (10 lbs.)

Keyboard Tray = (3 lbs.)

Column Accessories = 4.5 kg (10 lbs.)

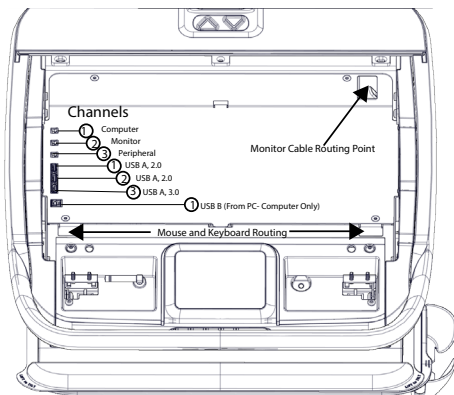
Column Drawer = 9.1 kg (20 lbs.)

CPU COMPARTMENT:

Width: 406.4mm (16")

Depth: 330.2mm (13")

Height: 57.2mm (2.25")



I/O PORTS:

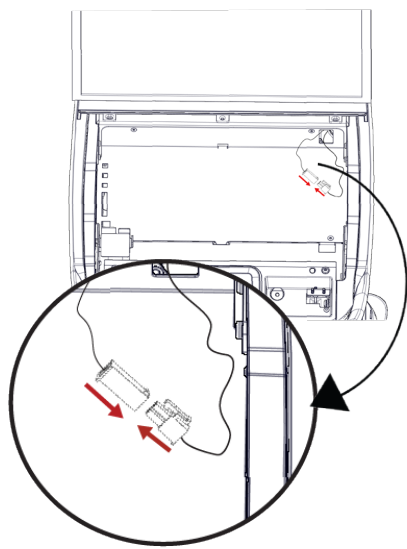
- Computer
- Monitor
- Peripheral
- USB A, 2.0 (hub)
- USB A, 2.0 (hub)
- USB A, 3.0 (hub)
- USB B (from PC)
- 120 VAC, 1.0 A, 60 Hz
- Hybrid models only

FOR FULL FEATURE LIST VISIT:

WWW.ENOVATEMEDICAL.COM

Envoy specification document

Powering On

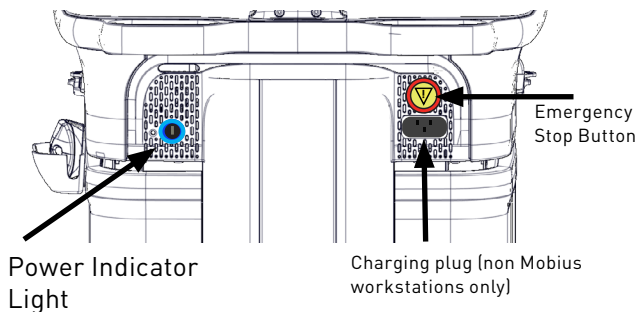


STEP 1

Raise the desk top and connect the power cable as shown. Once connected the power on indicator light will turn blue.

IMPORTANT:

IF THIS IS THE FIRST TIME THE UNIT IS BEING TURNED ON OR IF THE UNIT HAS BEEN INACTIVE FOR A PROLONGED PERIOD OF TIME RESULTING IN COMPLETE POWER DRAINAGE. UPON DEPLOYMENT, THE BATTERY DISCONNECT CABLES UNDER THE WORKSURFACE MUST BE CONNECTED PRIOR TO USE, AND IF THE WORKSTATION IS BEING PLACED IN LONG TERM STORAGE THE WORKSTATION MUST BE UNPLUGGED PRIOR TO DISCONNECTING THE BATTERY CABLE.



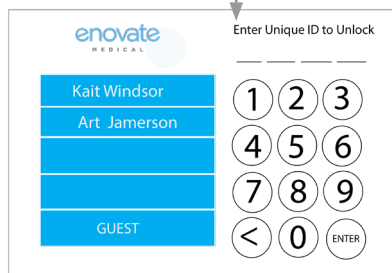
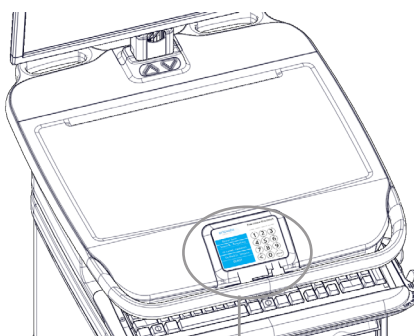
IMPORTANT: Check to ensure that the emergency stop button is not pushed in. If it is, **twist left** to re-enable the actuator power. (The emergency stop button interrupts the up/down movement of the workstation.)

CHARGING THE WORKSTATION

STEP 1

Plug the workstation into an electrical outlet to charge, or if the unit is a Mobius workstation, insert a fully charged Mobius battery.

User Interface



User Login Screen

LOGGING INTO THE WORKSTATION

Once the workstation is powered on, the login touch screen will appear (this takes approximately 30 seconds).

THERE ARE THREE WAYS TO LOGIN TO THE ENVOY

STEP 1

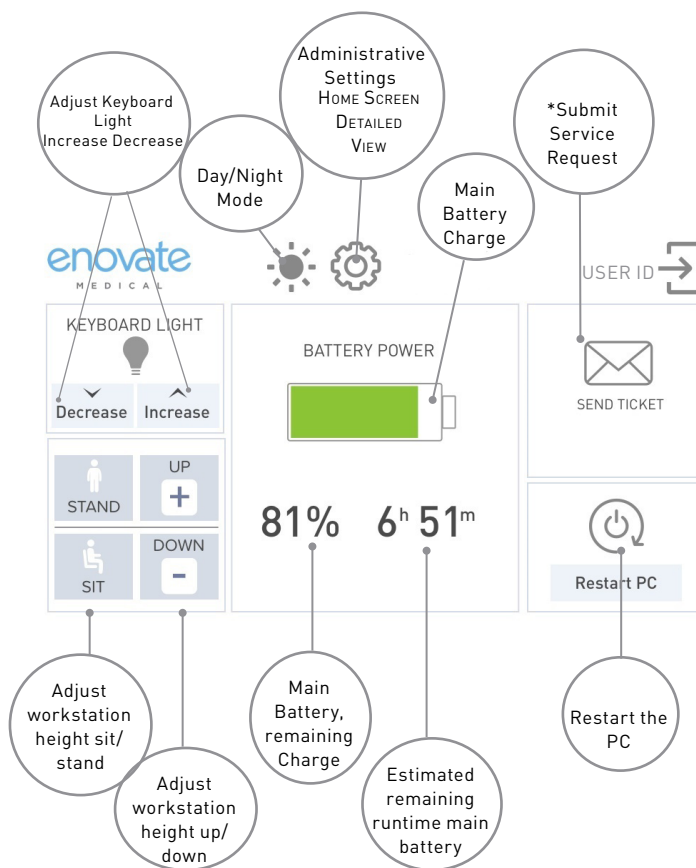
Key FOB Login: Ensure your key FOB is powered on, and select your name from the list when it appears. (Please see your IT department for key FOB login details).

STEP 2

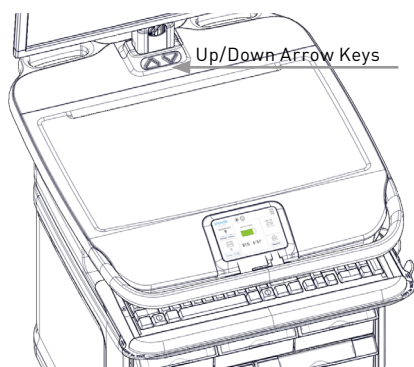
Manual Login: Enter your PIN code. (Please see your IT department for PIN code details).

STEP 3

Guest Login: Sign in as a "Guest" by selecting "Guest" from the user list.



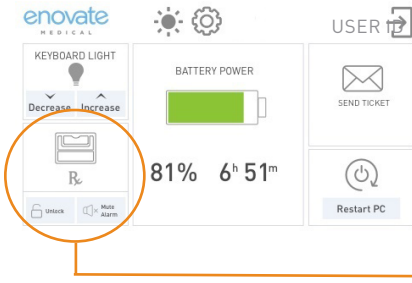
HEIGHT ADJUSTMENT



Adjust the height of the workstation with the up/down arrow keys on the touch display or the up/down arrows at the base of the monitor arm.

If the workstation has a medication bins, use the up/down arrow key on the workstation located directly in front of the monitor pole.

* Submit "service request" feature only available on workstations connected to RHYTHM.

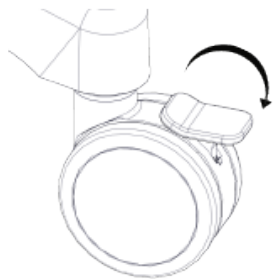
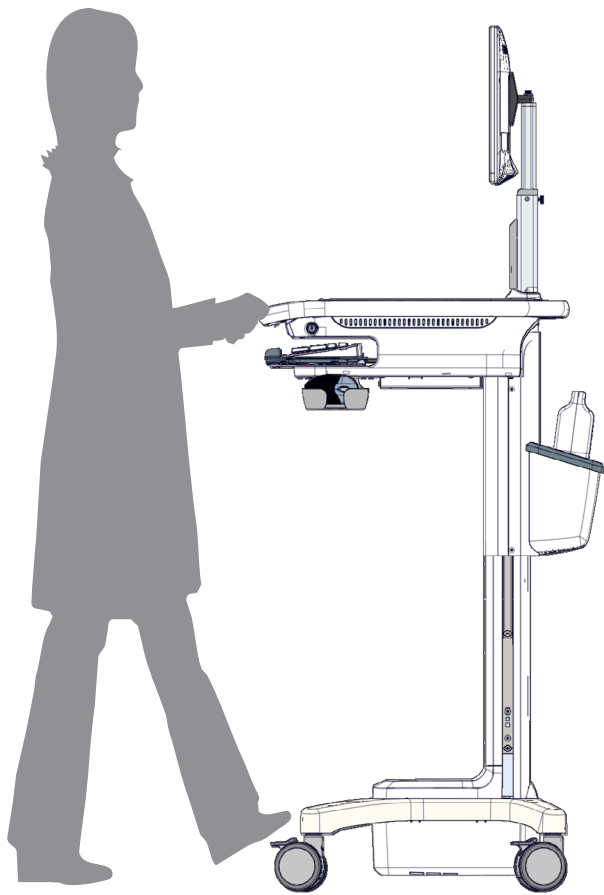


IMPORTANT: If your workstation has medication bins, the up/down arrow icons will be replaced with a medbin icon.

HOME SCREEN DETAIL VIEW - MEDBIN UNIT

For complete instructions, please visit our website at www.enovatemedical.com, [Drivers and Downloads, Envy Software User Guides, Touch Screen User Interface]


Movement




Release brakes to allow movement.
Autotrax casters automatically engage.


Press down on brake to lock casters, push
brake up to release.


Position 9


5/23/2018
Model: EcoFlex
Input: 9.0 - 14.6V (14.6V) ~~~~
Output: 5 - 24V ~~~~
Channel 1 = 5 - 24V ~~~~ 5A max
Channel 2 = 5 - 24V ~~~~ 5A max
Channel 3 = 5 - 24V ~~~~ 5A max





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Murfreesboro, TN 37129
USA
1.888.909.8906

REF A0000796
SN 





M0001234


5/23/2018
Model: EcoFlex
Input: 9.0 - 14.6V (14.6V) ~~~~
Output: 5 - 24V ~~~~
Channel 1 = 5 - 24V ~~~~ 5A max
Channel 2 = 5 - 24V ~~~~ 5A max
Channel 3 = 5 - 24V ~~~~ 5A max




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USA
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REF A0000797
SN 



M0001235

Position 10



CAUTION

BATTERY TO BE CHANGED BY QUALIFIED SERVICE PERSONEL ONLY

RISK OF FIRE IF BATTERY IS REPLACED BY AN INCORRECT TYPE

DISPOSE OF USED BATTERIES ACCORDING TO THE INSTRUCTIONS

M0001234

Position 11



To download Product Manual, Quick Start Guide, Drivers and Apps, visit us at:



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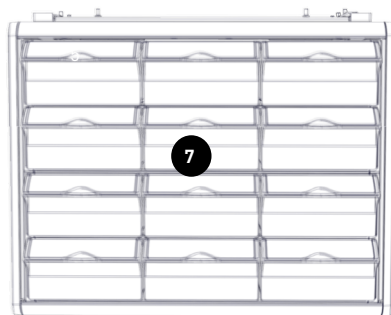
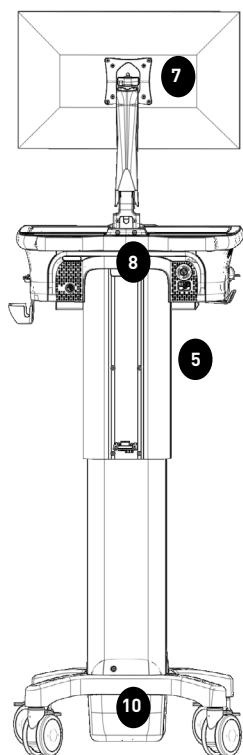
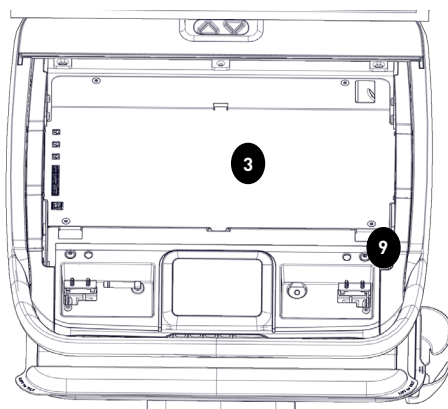
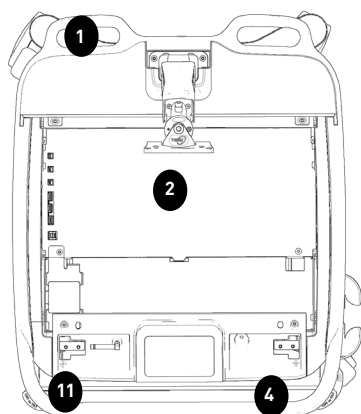
Pour télécharger le manuel du produit, Guide de démarrage rapide, pilotes et applications, visitez-nous à :





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 WARNING	1	Tipping Hazard: Transport Workstation in lowered position
	1	Safe Working Load: 4.5 kg (10 lbs.); Work Surface: 4.5 kg (10 lbs.)
	1	Total Mass: 70.3 kg (155 lbs.)
	1	Actuator Duty Cycle: 10% Max, 2min. (ON) / 18min. (OFF)
	2, 3	CPU Compartment: 4.5 kg (10 lbs.)
	4	Keyboard Tray: 1.4 kg (3 lbs.)
	5	Column Mounted Accessories (below keyboard tray): 4.5 kg (10 lbs.)
	6	Maximum Monitor Weight: 7.3 kg (16 lbs.), telescoping pole
	6	Do not push
	7	Safe Working Load per Tier: 2.3 kg (5 lbs.)
 INFORMATION	8	Workstation serial number label, Emergency Stop
	9	EcoFlex serial number label
	10	Lithium battery replacement
	11	Download Product Manual, Quick Start Guide, Drivers and Apps

Maintenance and Repairs



No user serviceable parts. Repairs and/or upgrades are to be performed only by an authorized service provider.

MAINTENANCE

Your device provides reliable and efficient operation with a minimum of care. Although specific maintenance is not required, the following periodic checks ensure dependable operation:

LCD STATUS WINDOW

The LCD Envoy interface touch screen may be cleaned with a soft cloth or tissue dampened with water (or a mild detergent-water solution). If a detergent solution is used, rinse with a clean tissue dampened with water only.

CAUTION

The LCD Envoy touch screen is not watertight. Do not use abrasive wipes or tissues on the LCD screen – abrasive wipes may scratch the glass. Never use solvents on the screen – solvents may damage the finish or glass.

WORK SURFACE

All configurations of Envoy workstations utilize an external plastic covering that is designed to resist the effects of harsh chemicals in a health care environment.

WORKSTATION CLEANING INSTRUCTIONS

Nonabrasive cleaners or mild cleaning solutions should be used. As a precaution, we recommend testing the suitability of a cleaning product by applying to an inconspicuous area, minimizing the time of exposure and the amount of cleaning agent used (dilute as recommended by the supplier) to prevent any damage to the surface.

TESTED AND APPROVED CLEANING AGENTS

- Quaternary ammonium compound
- Bleach Solution (generic)
- *Alcohol Solution (91% isopropyl: Avoid Use on Base)
- Hydrogen Peroxide
- Sani-Cloth® Plus Wipes
- Super Sani-Cloth® Wipes
- Contamination by intensely colored substances such as: coffee, iodine, or dyes, must be removed immediately.
- Power System should be inspected bi-annually to ensure vent holes and pan guard are free of dust and debris.
- All paints and plastic Workstation components will withstand cleaning by most commonly used diluted non- abrasive solutions such as: quaternary ammonia compounds, or bleach.

PRECAUTIONS

Do not use steel wool or other abrasive cleaners, solvents, polishes, waxes or steam cleaning tools that will damage the surface finish.

- Do not use strong solvents such as trichloroethylene and acetone; these materials will damage the surface finish.
- Caution should be used in the application of cleaning agents containing Ethylene Glycol Monobutyl Ether including: CaviWipes™, 409® Cleaner, Windex® and ammonia cleaners which have been shown to cause increased brittleness in PC/ABS components over time.
- The use of Zymit® Enzyme Cleaner, Virex® 256, or Micro-90® is not recommended.
- To avoid risk of electric shock, do not expose electrical components to water, cleaning solutions or other potentially corrosive liquids or substances.
- Do not immerse the Workstation or Workstation components in liquid or allow liquids to flow into the Workstation. Wipe cleaner off surface immediately using a damp cloth. Thoroughly dry surface after cleaning.
- Do not use flammable cleaners on Workstation surfaces due to proximity of electrical power and equipment.

IMPORTANT INFORMATION

The preceding recommendations should not be construed to guarantee infection control. The hospital infection control administrator should be consulted regarding cleaning procedures and processes.

- In some cases, alcohol will strip paint stampings like custom branding and graphics

INSPECTING CORDS AND CONNECTORS

Equipment can be damaged during use and when it's moved from one location to another. Damage can render equipment unsafe to use. Device interface cables, both power and data, ship installed in the Envoy workstation.

PERFORM THE FOLLOWING SAFETY CHECKS BEFORE ENERGIZING EQUIPMENT

- When properly installed, the plug should fit snug and not wobble in the socket. Look for visible damage to equipment, wall disconnects, enclosures and electrical devices
- **IMPORTANT!** If External charging cord set is present, ensure power supply cord has proper grounding with a 3-prong plug
- Inspect cables for wear; look for defects and missing, bent or broken plugs
- Inspect external sheaths of power supply cords to ensure they are not cut, frayed, twisted, or damaged
- Ensure the inner cores of power supply cords are not exposed where they connect to equipment, plugs and/or sockets
- Ensure inner cores of power supply cords are not exposed or twisted along the cord's length
- Ensure there are no exposed, unprotected electrical conductors
- Ensure electrical tape or anything that can cover damage has not been applied to power supply cords and devices
- **NOTE:** If any of the above items exist, immediately tag the item, remove from service and notify a supervisor or facilities management
- In Addition:
- Switch off disconnects and equipment before connecting or disconnecting power supply cords
- Keep power supply cords clear of walkways
- Keep power supply cords away from heat, sharp edges and moving parts that can damage cord sheath and insulation
- To prevent overheating, do not use extension cords
- Notify maintenance if a power supply cord feels more than comfortably warm
- Never use adapters to convert 3-prong plugs into 2-prong plugs
- Pull the plug, not the cord when unplugging equipment. Pulling the cord causes unnecessary wear and adversely affects wiring to the plug
- Walk or look all around equipment prior to moving to ensure it has been completely disconnected

Power Systems

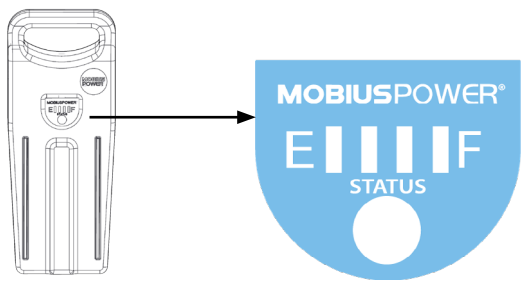
MOBIUSPOWER® 4.0



Each Battery Pack has a “fuel gauge” to indicate charge level/capa




- You may check a Battery Pack’s charge capacity at any time.
- To check the remaining charge on a Battery Pack, press and release the white circle on the Battery Pack’s fuel gauge display.
- The charge level is indicated in 25% increments by the number of status lights appearing between the E-Empty and F-Full.
- After 3 seconds, the status lights will turn OFF.

Power Systems



	Charge Capacity	LED 1	LED 2	LED 3	LED 4
	0% - 10%	FLASH	OFF	OFF	OFF
	11% - 25%	ON	OFF	OFF	OFF
	26% - 50%	ON	ON	OFF	OFF
	51% - 75%	ON	ON	ON	OFF
	76% - 100%	ON	ON	ON	ON

Includes 2-Battery or 4-Battery Charging Stations. Once the Charging Station is placed and plugged into an outlet, slide a Battery Pack into any open slot making sure the FLASHING GREEN indicator light turns on. The charge cycle is complete when the indicator light is illuminated SOLID GREEN.

	FULLY CHARGED Solid Green Light
	CHARGING Blinking Green Light
	ERROR Solid or Blinking Yel- low Light

MOBIUS POWER CHARGING IN THE WORKSTATION HOLSTER

Not available at this time (Mobius Plus models only)

BATTERY DISPOSAL

Industrial batteries contain materials which are considered 'hazardous substances'. If batteries are improperly disposed of, for example, thrown in the trash or illegally dumped, these substances can eventually leak out and contaminate the surrounding soil and groundwater supply.

It is a violation of federal law to improperly dispose of batteries once they can no longer be used. Once a battery is purchased, full liability and responsibility lies on the owner to dispose of the battery. The law says that responsibility is still on the owner if the battery is disposed of improperly by dumping in a landfill, or shipping to a scrap dealer who does not handle it properly and in which environmental damage occurs.

It is illegal to dispose of batteries in any way other than 'thermal recovery' or recycling of the hazardous substances in batteries according to the Environmental Protection Agency (EPA).

The Department of Transportation (DOT) has strict guidelines for the shipping of hazardous materials, which result in large fines if they are not followed.

Check with your local ordinances for proper disposal procedures. SDS sheets are available on-line at <http://www.enovatemedical.com>. Batteries are consumable goods.

RECYCLING MOBIUS POWER BATTERIES

Rechargeable batteries power everything from portable phones and cordless phones to laptops and PDAs. Batteries are a unique product comprised of heavy metals which include nickel cadmium, alkaline, mercury, nickel metal hydride and lead acid, which can threaten our environment if not properly discarded or handled. There are many ways to properly dispose of batteries, most of which depends on the type of battery you have. Lithium-ion rechargeable batteries are less toxic than many others, but it is still recommended that they be recycled.

The Rechargeable Battery Recycling Corporation (RBRC) manages a collection and recycling program for rechargeable batteries. The RBRC accepts rechargeable nicad, NiMH, Lithium-Ion, and small (under 2-lb) sealed lead-acid batteries. The RBRC has made it very convenient for you to recycle your rechargeables by getting retail stores like Home Depot, Target, Wal-Mart, and others to serve as collection points. And it's all free of charge. To find a drop-off point near you in the US or Canada use the Call2Recycle Locator tool at <http://www.call2recycle.org/> (U.S.); <http://www.call2recycle.ca/> (Canada).

Remember: Batteries enable our mobility, so it's likely our society will be using a lot more batteries in the future. To ensure that we're not slowly poisoning our highly mobile selves, it's important that we do a good job of recycling batteries.

UNDERSTANDING MOBIUS POWER LITHIUM BATTERIES

One of the most common questions asked by mobile computing users is "How long does the Mobius battery last?" The answer is not simple. Users inevitably discover that battery run time varies depending on how long the mobile device is used and what peripherals are being powered. The estimated time remaining shown on the system status display may seem to jump around but it's a reflection of the ever changing power demands placed on the system by the various devices powered by the battery.

NOTE: Battery life will vary depending on the computing configuration, product model, applications loaded on the computer, power management setting of the peripherals and the features used by the customer. As with all batteries, the maximum capacity will decrease with time and usage.

As mobile computing becomes more prevalent, users need to understand how environmental and usage factors impact battery run time and life span. The following explains these factors, describes the battery technology built into Mobius batteries, and recommends practices to maximize battery life.

BATTERY SAFETY

Enovate Medical takes safety very seriously and makes battery SDS (Safety Data Sheet – formerly MSDS) available for Mobius and any third party (non-Enovate) batteries used in Enovate Medical products. In addition, Enovate Medical works closely with third-party battery suppliers to drive continuous safety and design improvements that help deliver higher levels of safety and reliability. In the unlikely event of a potential safety issue, Enovate Medical uses proven best-in-class processes and works closely with the appropriate worldwide regulatory agencies to help deliver the highest possible level of safety and best customer experience.

- **WARNING:** Enovate Medical equipment has been tested and fulfills the requirements of EN 60601-1:2006 + A1:2013, ANSI/AAMI ES60601-1:2005 + C1:2009 + A2:2010 + A1:2012, and CAN/CSA-C22.2 No. 60601-1:2014. Any unauthorized changes or modifications to the equipment not expressly approved by the manufacturer may void the equipment's general requirements for basic safety and essential performance.
- **NOTE:** Batteries supplied by Enovate Medical contain certain requirements for reliable operation and Certificates of Conformity to ensure safety. Replacement batteries not provided by or authorized by Enovate Medical may compromise performance and safety.

WHAT CAUSES A LITHIUM BATTERY TO AGE?

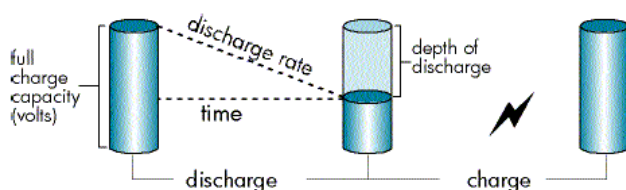
The main enemies of battery longevity are age, the number of charge cycles, amount of time at full charge, and high temperature. Cycling, elevated temperature and aging decrease a battery's performance over time. The performance of a battery is measured in capacity, a leading health indicator.

Battery cycle life is the total number of discharge-charge cycles (Figure 1) a battery yields before it can no longer hold a useful amount of charge. Estimating the cycle life of a rechargeable lithium battery is affected by the average operating temperature of the battery and its energy discharge rate.

Basically, higher temperatures and higher energy discharge rates decrease battery cycle life. The operating temperature of the battery depends on the air temperature as well as the heat generated by the battery pack itself and by its immediate environment. The energy discharge rate depends on the type of applications running on the computing equipment and by its power management settings.

For example, running computer-intensive applications such as discrete graphics, audio and video drains the battery faster and decreases its cycle life more than running word processing applications.

FIGURE 1: DISCHARGE CYCLE



A cycle for a rechargeable lithium battery is the cumulative amount of discharge approximately equal to its full charge capacity. For example, 10 occurrences of a 10% depth of discharge or 2 occurrences of a 50% depth of discharge represent one cycle.

WHAT IS BATTERY CAPACITY?

Battery capacity is expressed in ampere-hours (Ah). Battery energy, expressed in watt-hours (Wh), is the product of the battery capacity (Ah) and the battery voltage (V). **The operating voltage range of a lithium battery pack remains relatively constant throughout its useful life; however, its capacity begins to decrease in a roughly linear manner as soon as it is put into service.** New batteries are classified by their rated capacity.

Over time, the actual battery capacity decreases due to electrochemical inefficiencies within each cell. This loss in capacity (aging) is irreversible; it cannot be restored by cycling the battery. Gradually, less and less active material is available within each cell to electrochemically store a charge. Consequently, the user experiences reduced battery run time.

A practical way to express the actual capacity of a battery over time is called full charge capacity (FCC). FCC is expressed as a percentage of the initial rated capacity of the battery. FCC is influenced by the typical discharge load on the battery and by the usage profile. Under normal discharge loads, lithium batteries have a lengthy service life. With moderate use, lithium batteries will deliver years of service.

Similar to a mechanical device that wears out faster with heavy use, the depth of discharge (DoD) determines the cycle count of the battery. The smaller the discharge (low DoD), the longer the battery will last.

HOW DOES ENOVATE MEDICAL DETERMINE THE WARRANTY PERIOD?

Enovate Medical provides multiple limited warranty periods for Mobius Power lithium batteries. The warranty period is based upon capacity and cycles at low to moderate power loads. High power loads may cause a battery to reach the maximum percent of initial capacity in less than the warranty period. The additional heat generated by running high power applications accelerates the loss of capacity and could reduce the battery cycle life by as much as 25%. Lithium batteries will continue to operate below the percent capacity threshold; however, the capacity (run time) delivered between charges will continue to decrease.

MAXIMIZING THE CAPACITY AND LIFE SPAN OF THE BATTERY

After reading the information presented here, you should be aware that the following conditions negatively impact battery run time and life span.

FACTORS THAT CONTRIBUTE TO LOSS OF BATTERY CAPACITY

- Lithium battery cells suffer gradual, irreversible capacity loss with each discharge-charge cycle. Such aging occurs more rapidly as temperature and discharge loads increase.
- The self-discharge rate of a lithium battery is higher if the battery is left in an unpowered device or charger at a State of Charge (SoC) greater than 50%.
- Leaving the battery in a depleted condition for an extended period will accelerate the decrease in FCC. Leaving the battery at a high level of charge in a high-temperature environment for extended periods will also accelerate the loss of capacity.
- Running high-end applications accelerates the loss of capacity. For example, viewing high resolution graphics will lower FCC faster than using word processing applications.

RECOMMENDED BATTERY CARE PRACTICES

- Recommendations for battery use and storage are covered in the Mobius Power User Guide. Additional battery care practices are as follows:
- Store lithium batteries between 20°C and 25°C (68°F and 77°F) with 30% to 50% SoC.
- Do not disassemble, crush, or puncture a battery; do not short the external contacts on a battery; and, do not dispose of a battery in fire or water.
- Do not leave batteries exposed to high temperatures for extended periods. Prolonged exposure to heat (for example, on a loading dock or in direct sunlight) will accelerate the deterioration of Li-Ion cells.
- Remove the battery if the workstation will be stored.
- Remove the battery from the charging bay if the battery will be plugged into AC power continuously (left on charge without use) for more than 2 weeks. Follow temperature and SoC recommendations for storage.
- Keep the battery away from children.
- Use only the battery pack provided with the Mobius Power system.

SHOULD I FULLY CHARGE THE BATTERY BEFORE I USE THE COMPUTER?

Yes. Always use a Mobius Battery pack that has fully charged when replacing (swapping) packs in the workstation.

WILL I STILL HAVE VISIBILITY ON RHYTHM IF I USE MY LAPTOP BATTERY FOR POWER?

No, without Mobius Power you cannot see your workstation on RHYTHM.

TIPS FOR CONSERVING BATTERY POWER

You can manually change the power consumption of your computing device and conserve battery power.

- **Do not use a laptop battery as a backup and let the workstation power down.** Following a Mobius battery swap, the workstation backup and computing device batteries will charge and reduce run times while accelerating cycle life.
- **Remove internal battery packs from computer and printing devices whenever possible.** Mobius Power utilizes a backup battery that recharges after each battery swap. Having a device's battery pack installed will add to the number of batteries being charged by Mobius Power and decrease run time while accelerating cycle life.

Adding as little as 1.5 amps of current draw to recharge batteries can reduce run times by as much as 2 hours (based on a 3.5 amp average current draw).

- **Enable advanced battery charge configurations on your laptop.** If you cannot remove the internal battery from a laptop, enable the ability to change the battery charge configuration and set it to "Standard" or the lowest rate of charge that can be configured.
- **Set laptop custom charge threshold to increase lifespan and reduce temperature.** By setting the custom charge threshold to start at 40% capacity and stop at 50% your device's battery will last longer and not generate as much heat when charging.
- **Reduce the brightness of the screen to the minimum readable level.** Some notebooks use function keys to adjust the brightness. Stand-alone LCD displays will have an on screen display adjustment in front at the bottom of the bezel.
- **Remove peripherals when not in use.** External USB drives and other peripheral devices can draw power from your battery even when they are not in active use. Disconnect each when you have finished using them.
- **Reduce the speed of your processor.** The faster your computer works, the more quickly it uses up the supply of power. By cutting down on processor speed, you can extend the charge of your battery. Methods to reduce processor speed vary from model to model, and your manual should provide instructions for doing so.
- **Check for programs running in the background.** Some programs automatically install a quick-start utility and run in the background when the computer is started. You can decrease the power requirements by periodically searching for and removing unnecessary programs.

Power Specifications

ECOFLEX POWER

Model	ENV0-1DC000-XX0	ENV0-1DCAC0-XX0	ENV0-2DC000-XX0
Input Voltage:	100 – 240 VAC	100 – 240 VAC	10.8 VDC
Input Current:	4.2 A max	4.2 A max	26.1 Ah max
Input Frequency:	50 – 60 Hz	50 – 60 Hz	DC
Output Voltage:			
Channel 1:	5 – 24 VDC	5 – 24 VDC	5 – 24 VDC
Channel 2:	5 – 24 VDC	5 – 24 VDC	5 – 24 VDC
Channel 3:	5 – 24 VDC	5 – 24 VDC	5 – 24 VDC
Output Current:	5 A max, each channel	5 A max, each channel	5 A max, each channel

BATTERY SPECIFICATIONS

Mobius Battery – One Year / Four Year	Power Sonic PSL-12450
Chemistry: Lithium Ion	Chemistry: Lithium Iron Phosphate
Capacity: 26.1 Ah	Capacity: 45 Ah
Voltage: 10.8 (nominal)	Voltage: 12.8 (nominal)
Energy: 281.88 Wh	Energy: 576 Wh
Charge Time: < 4 hrs.	Charge Time: < 3 hrs.
Measurements: 31 cm [12.2"] H	Measurements: U1; 18.3 cm [7.2"] H x 18.3
x 12.7 cm [5"] W x 8 cm [3.14"] D	cm [7.2"] W x 13.0 cm [5.2"] D
Weight: 2.5 kg [5.5 lbs.]	Weight: 5.8 kg [12.8 lbs.]

MOBIUS CHARGING STATION SPECIFICATIONS DUAL CHARGING STATION

Inlet:	IEC 320 C14
Protection:	10 A, 250 VAC Fuse
Input Voltage:	120V +/- 10%
Input Frequency:	60Hz
Input Current:	3.6 Amps max
Output Voltage:	12.6 VDC
Output Current:	9.0 A per bay (max)
Output Power:	115 Watts (max) per bay
Measurements:	32 cm [12.6"] H x 43.2 cm [17"] W x 14.7 cm [5.8"] D

QUAD CHARGING STATION

Inlet:	IEC 320 C14
Protection:	15A Breaker, 250VAC
Input Voltage:	120V +/- 10%
Input Frequency:	60Hz
Input Current:	7.2 Amps max
Output Voltage:	12.6 VDC
Output Current:	9.0 A per bay (max)
Output Power:	115 Watts (max) per bay
Measurements:	32 cm (12.6") H x 68.6 cm (27") W x 14.7 cm (5.8") D

MAIN CONTROLLER SPECIFICATIONS

POWER CONTROLLER

	Mobius	Iron Phosphate
Input Voltage:	10.8 VDC (nominal)	12.8 VDC (nominal)
Input Voltage Range:	9.0 VDC – 12.6 VDC	9.6 VDC – 14.6 VDC
Input Current:	14.5 A (max)	14.5 A (max)
Output Voltage:	3 Channels variable 5 VDC – 24 VDC	3 Channels variable 5 VDC – 24 VDC
Output Power:	3 Channels 120 W (max) each	3 Channels 120 W (max) each
Output Power Total:	161 W (nominal)	191 W (nominal)
Output Protection:	Yes	Yes
Overload Recovery:	Yes	Yes
Overload Protection:	Yes	Yes

HOLSTER SPECIFICATIONS

Holster Assembly

Input Voltage:	8.5 VDC ~ 15 VDC
Input Frequency:	DC
Input Current:	30 A (max)

DC/AC INVERTER

AC Output:	Output Voltage:	120 VAC \pm 3%
	Output Current:	1 A
	Output Frequency:	60 Hz \pm 1%
	Output Waveform:	Pure Sine Wave
	Total Harmonic Distortion:	< 3%
	Continuous Output Power:	120 W
	Surge Output Power:	120 W
	Peak Efficiency:	88%
DC Input:	Nominal DC Input Voltage:	13 VDC
	DC Input Voltage Range:	10 – 16.5 VDC
	Maximum Input Current:	15 A
	DC Input Current at No Load:	< 500 mA
Protections:	Low DC Input Voltage:	Shutdown at \leq 10 V; Auto-reset at \geq 11.5 V
	High DC Input Voltage:	Shutdown at \geq 16.5 V; Auto-reset at \leq 16.5 V
	Short Circuit / Overload:	Output voltage drops, but does not shut down. Auto-reset on removal.
	Over Temperature:	Shut down when internal hot spot if \geq 105°C / 221°F. Auto-reset on cooling.
	Reverse Polarity on DC Input Side:	Automotive Mini Blade Fuse: 32 V, 15 A
Compliance:	Safety:	Conforms to ANSI/AAMI Standard ES60601-1
	EMI:	FCC Part 15(B), Class B / EN 55022: 2006; EN 55024: 1998+A1; 2001 +A2; 2003
	EMC:	EN 61000-3-2: 2006 / EN 61000-3-3: 1995+A1; 2001 +A2: 2005
Environment:	Operating Temperature Range:	0°C to 40°C / 32°F to 104°F

System Electromagnetic Emissions

MEDICAL ELECTRICAL EQUIPMENT needs special precautions regarding EMC and needs to be installed and put into service according to the EMC information provided in the ACCOMPANYING DOCUMENTS.

WARNING: Use of unapproved ACCESSORIES may result in degradation.

Guidance and Manufacturer's Declaration – Cables, Transducers and Accessories

The listed cables, transducers and accessories have been determined by Enovate Medical to be compliant with the emissions and immunity requirements of IEC 60601-1-2: 2014.

Part No.	Description	Max Possible Length	Shielded (Y/N)
P0000937	CABLE, IEC AC INLET, ENVOY	304.8 cm (10')	N
ENDC0001	ECOFLEX R7 DC PWR CABLE	609.6 mm (24")	N
ENDC0001L	ECOFLEX R7 DC PWR CABLE 50 IN	1270 mm (50")	N
ENDC0002	ECOFLEX DC PWR CABLE 2.5 X5.5X9	609.6 mm (24")	N
ENDC0002L	ECOFLEX DC PWR CBL 2.5X5.5X9 50 IN	1270 mm (50")	N
ENDC0003	ECOFLEX DC PWR CABLE 2.5X5.5X14	609.6 mm (24")	N
ENDC0003L	ECOFLEX DC PWR CBL 2.5X5.5X14 50IN	1270 mm (50")	N
ENDC0004	ECOFLEX DC PWR CABLE 2.1 X 5.5	609.6 mm (24")	N
ENDC0004L	ECOFLEX DC PWR CBL 2.1 X 5.5 50IN	1270 mm (50")	N
ENDC0005	ECOFLEX DC PWR CABLE MP205	609.6 mm (24")	N
ENDC0005L	ECOFLEX DC PWR CABLE MP205 50IN	1270 mm (50")	N
ENDC0006	ECOFLEX DC PWR CABLE 2.1X5.5X14	609.6 mm (24")	N
ENDC0006L	ECOFLEX DC PWR CBL 2.1X5.5X14 50IN	1270 mm (50")	N
ENDC0007	ECOFLEX DC PWR CBL HP PC 150W or less	609.6 mm (24")	N
ENDC0007L	ECOFLEX DC PWR CBL HP PC 150W or less 50IN	1270 mm (50")	N

TABLE 201 – GUIDANCE AND MANUFACTURER’S DECLARATION – ELECTROMAGNETIC EMISSIONS – FOR ALL EQUIPMENT AND SYSTEMS

Guidance and Manufacturer’s Declaration – Electromagnetic Emissions		
EcoFlex Power is intended for use in the electromagnetic environment specified below. The customer or the user of EcoFlex Power should assure that it is used in such an environment.		
Emission Test	compliance	Electromagnetic environment guidance.
RF emissions CISPR 11 EN 5505: 2009 + A1: 2010	Group 1	EcoFlex Power 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.
Harmonic emissions IEC 61000-3-2 EN610003-2: 2014	Class A	EcoFlex Power 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
Voltage fluctuations / flicker emissions IEC 61000-3-3 EN 61000-3-3: 2013	All Parameters	

TABLE 202 – GUIDANCE AND MANUFACTURER'S DECLARATION – ELECTROMAGNETIC IMMUNITY – FOR ALL EQUIPMENT AND SYSTEMS

Guidance and manufacturer's declaration – electromagnetic immunity			
EcoFlex Power is intended for use in the electromagnetic environment specified below. The customer or the user of EcoFlex Power should assure that it is used in such an environment.			
Immunity test	IEC 60601 test level	Compliance level	Electromagnetic environment – guidance
Electrostatic discharge (ESD) IEC 61000-4-2 EN 61000-4-2: 2009		±2, 4, 6 & 8 kV contact ±2, 4, 8 & 15 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 transient/burst IEC 61000-4-4 EN 61000-4-4: 2012		±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 EN 61000-4-5: 2006		±1 kV differential mode ±2 kV common mode	Mains power quality should be that of a typical commercial or hospital environment.
Voltage dips, short interruptions and voltage variations on power supply input lines IEC 61000-4-11 EN 61000-4-11: 2004	<5% Ut (>95% dip in Ut) for 0.5 cycle @ 0°, 45°, 90°, 135°, 180°, 225°, 270°, 315° 70% Ut (30% dip in Ut) for 25 cycles <5% Ut (>95% dip in Ut) for 5 sec <5% Ut (>95% dip in Ut) for 1 cycle 40% Ut (>60% dip in Ut) for 5 cycle	<5% Ut (>95% dip in Ut) for 0.5 cycle @ 0°, 45°, 90°, 135°, 180°, 225°, 270°, 315° 70% Ut (30% dip in Ut) for 25 cycles <5% Ut (>95% dip in Ut) for 5 sec <5% Ut (>95% dip in Ut) for 1 cycle 40% Ut (>60% dip in Ut) for 5 cycle	Mains power quality should be that of a typical commercial or hospital environment. If the user of the EcoFlex Power requires continued operation during power mains interruptions, it is recommended that the EcoFlex Power be powered from an uninterruptible power supply or a battery.
Power frequency (50/60 Hz) magnetic field IEC 61000-4-8 EN 61000-4-8: 2010	30/ A/m	30 A/m	Power frequency magnetic fields should be at levels characteristic of a typical location in a typical commercial or hospital environment.
NOTE: Ut is the a.c. mains voltage prior to application of the test level.			

TABLE 204- GUIDANCE AND MANUFACTURER'S DECLARATION – ELECTROMAGNETIC IMMUNITY
– FOR EQUIPMENT AND SYSTEMS THAT ARE NOT LIFE-SUPPORTING

Guidance and manufacturer's declaration – electromagnetic immunity			
EcoFlex Power is intended for use in the electromagnetic environment specified below. The customer or the user of EcoFlex Power should assure that it is used in such an environment.			
Immunity test	IEC 60601 test level	Compliance level	Electromagnetic Immunity Guidance
			Portable and mobile RF communications equipment should be used no closer to any part of the EcoFlex Power including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter. Recommended separation distance
Conducted RF	3 Vrms outside industrial, scientific and medical (ISM) and amateur radio bands. 6 Vrms in ISM and amateur radio bands	6 Vrms 150 kHz to 80 MHz	$d = [1.17]VP$
IEC 61000-4-6 EN 61000-1-6: 2014	150 kHz to 80 MHz		
Radiated RF	10 V/m	10 V/m	$d = [1.17]VP...80 \text{ MHz to } 800 \text{ MHz}$
IEC 61000-4-3 EN 61000-4-3: 2006+ A1: 2008 + A2:2010	80 MHz to 2.7 GHz	80 MHz to 2.7 GHz	$d = [2.33]VP...800 \text{ MHz to } 2.5 \text{ GHz}$
	27 V/m, 18 Hz PM 385 MHz 28 V/m, 50% 18 Hz PM 450 MHz	27 V/m, 18 Hz PM 385 MHz 28 V/m, 50% 18 Hz PM 450 MHz	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)

TABLE 204 CONTINUED- GUIDANCE AND MANUFACTURER'S DECLARATION –
ELECTROMAGNETIC IMMUNITY – FOR EQUIPMENT AND SYSTEMS THAT ARE NOT LIFE-
SUPPORTING


Guidance and manufacturer's declaration – electromagnetic immunity			
EcoFlex Power is intended for use in the electromagnetic environment specified below. The customer or the user of EcoFlex Power should assure that it is used in such an environment			
Immunity Test	IEC 60601 test level	Compliance Level	Electromagnetic Immunity Guidance
	9 V/m, 217 Hz PM 710 MHz	9 V/m, 217 Hz PM 710 MHz	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: 
	9 V/m, 217 Hz PM 745 MHz	9 V/m, 217 Hz PM 745 MHz	
	9 V/m, 217 Hz PM 780 MHz	9 V/m, 217 Hz PM 780 MHz	
	28 V/m, 18 Hz PM 780 MHz	28 V/m, 18 Hz PM 780 MHz	
	28 V/m, 18 Hz PM 810 MHz	28 V/m, 18 Hz PM 810 MHz	
	28 V/m, 18 Hz PM 870 MHz	28 V/m, 18 Hz PM 870 MHz	
	28 V/m, 18 Hz PM 930 MHz	28 V/m, 18 Hz PM 930 MHz	
	28 V/m, 217 Hz PM 1720 MHz	28 V/m, 217 Hz PM 1720 MHz	
	28 V/m, 217 Hz PM 1720 MHz	28 V/m, 217 Hz PM 1720 MHz	
	28 V/m, 217 Hz PM 1845 MHz	28 V/m, 217 Hz PM 1845 MHz	
	28 V/m, 217 Hz PM 1970 MHz	28 V/m, 217 Hz PM 1970 MHz	
	27 V/m, 217 Hz PM 2450 MHz	27 V/m, 217 Hz PM 2450 MHz	
	9 V/m, 217 Hz PM 5240 MHz	9 V/m, 217 Hz PM 5240 MHz	
	9 V/m, 217 Hz PM 5500 MHz	9 V/m, 217 Hz PM 5500 MHz	
	9 V/m, 217 Hz PM 5785 MHz	9 V/m, 217 Hz PM 5785 MHz	
<p>NOTE 1: At 80 MHz and 800 MHz, the higher frequency range applies</p> <p>NOTE 2: These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.</p> <p>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 EcoFlex Power is used exceeds the applicable RF compliance level</p> <p>above, the EcoFlex Power should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as reorienting or relocating EcoFlex Power.</p> <p>b. Over the frequency range 150 kHz to 80 MHz, field strength should be less than [V1] V/m.</p>			

TABLE 206 – RECOMMENDED SEPARATION DISTANCES BETWEEN PORTABLE AND MOBILE RF COMMUNICATIONS EQUIPMENT AND THE EQUIPMENT OR SYSTEM – FOR EQUIPMENT AND SYSTEMS THAT ARE NOT LIFE SUPPORTING

Recommended separation distances between portable and mobile RF communications equipment and the EcoFlex Power			
EcoFlex Power is intended for use in an electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of EcoFlex Power can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and EcoFlex Power as recommended below, according to the maximum output power of the communications equipment.			
Rated maximum output power of transmitter W	Separation distance according to frequency of transmitter m		
	150 kHz to 80 MHz $d = [1.17] \sqrt{P}$	80 MHz to 800 MHz $d = [1.17] \sqrt{P}$	800 MHz to 2.5 GHz $d = [2.33] \sqrt{P}$
0.01	0.12	0.12	0.23
0.1	0.37	0.37	0.75
1	1.17	1.17	2.33
10	3.70	3.70	7.36
100	11.70	11.70	23.30
For transmitters rated at a maximum output power not listed above, the recommended separation distance d in meters (m) can be estimated using the equation applicable to the frequency of the transmitter, where P is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer.			
NOTE 1 At 80 MHz and 800 MHz, the separation distance for the higher frequency range applies.			
NOTE 2 These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.			

