



INSTRUCTIONS FOR USE - MEDICART IT PACK

version 1.0

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REVIEW HISTORY

Version	Date	Code	Remark
1.0	16/12/2016	00003 00030	-

This edition supersedes all previous editions.

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1. Definitions



HAZARD

Indicates an immediate hazardous situation that, if not prevented, will result in serious injury or death.



WARNING

Indicates a possible hazardous situation that, if not prevented, could result in serious injury or death.



CAUTION

Indicates a possible hazardous situation that, if not prevented, could result in slight or moderate injury. This can also be used to point to unsafe use.

2. General safety regulations

In the interest of your safety and to ensure correct use, it is important that you read these instructions carefully, including any tips and warnings, before using the product. Keep these instructions and ensure that users are properly informed as regards the use and safety of the product.

» Belintra is not liable for:

- Damage caused by a failure to follow the instructions or by improper use.
- Consequences of modifications made to the product by the user.
- Damage incurred by use other than as described in the intended use.



Hazard

- Electrical wiring, equipment and the battery unit must not come into contact with water or other liquids under any circumstances in order to prevent the attendant short-circuit, overheating and/or fire.
- Ensure that the mains lead does not get damaged. A damaged mains lead can result in fire or electric shocks.



Warning

- The Battery Unit in the Medicart must not be used as a power supply for equipment placed in direct contact with patients.



Caution

- Only use the IT-Pack in a technically correct condition in accordance with the use specified and the environment for which it is intended, taking into account the user manual. The manufacturer is not responsible for damage incurred by use other than specified in the purpose of use.
- Make sure that no loose objects are lying on the cart when moving the cart. This prevents items from falling off the cart and break and/or cause injury/damage.
- When moving the trolley, check to ensure that any leads connected to it have been removed from wall sockets and any other equipment not on the trolley.
- Run the battery charging lead away from pedestrian routes and prevent anyone from tripping over it.

- Always stow the lead away in its dedicated compartment when used on the move.
- Keep children away from the cart.
- Persons under the influence of drugs, alcohol or medication must not use the cart.
- Children and persons with physical, sensory or mental impairments must not use the device.

 Remark:

- The IT-Pack may only be connected to a TT or TN-S network. In addition, the Power Pack may only be connected to an earthed power socket protected by a residual current device.
- All installation, commissioning and maintenance work requires to be carried out by accredited and qualified personnel. The following guidelines require to be complied with: VDE 0100, EN 50110, EN 60204, EN 50178, EN 60335, fire safety guidelines and guidelines for preventing accidents at work.
- Making changes to the specifications or modifying this product other than as described in this manual is not permitted.
- Do not use a mains lead other than the one you received with this unit.
- Do not twist the mains lead or extend it more than 2 metres.
- Never pull on the lead. Hold the plug itself rather than the lead when disconnecting the mains lead.

3. Introduction

This manual describes the correct use, installation and basic maintenance of the Belintra IT-Pack for Medcart.

The IT Pack in combination with the Power Pack is an option which makes it possible to provide the Medcart with integrated ICT. This integrated ICT enables medical staff (doctors and/or nurses) to look up and/or implement information in the hospital IT network. The ability to look up patient information at any time increases patient safety and achieves more efficient workflow for medical staff. The IT Pack consists of the following components:

Power Pack

The Power Pack is located at the bottom of the Medcart and provides the power for the integrated ICT and the electronic lock. The Power Pack consists of a battery and the COW Controller.

The internal low-voltage system and charging the battery in the Power Pack are controlled from the COW controller. Battery charging and discharging are controlled by a microprocessor which record and processes vital information. In addition, the COW controller also protects the battery against deep discharge.

The user interface on the COW controller displays real-time information on the battery on the screen of the in-built PC.

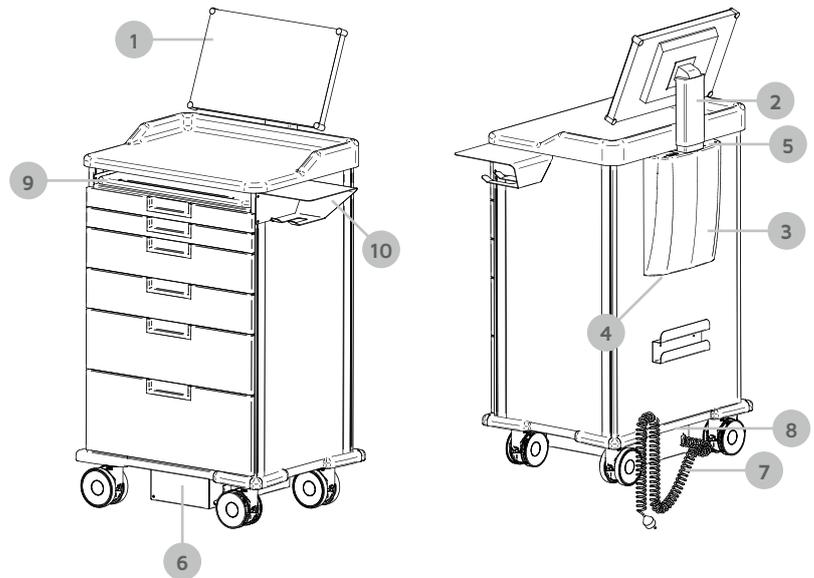
Back Pack

The Back Pack houses WIFI antennas and an optional PC and is installed on the back of the Medcart. The internal devices are protected by a plastic cover. The Back Pack is provided with an adjustable monitor support where the optional display can be fitted.

4. Product

» Overview of components

1. Display
2. Bracket to attach the screen
3. Back Pack
4. ICT On-Off switch
5. USB connection
6. Power Pack
7. Power cord
8. Emergency opening (bottom)
9. Fold-out worktop (optional)
10. Mouse worktop + scanner bay (optional)



5. Installation instructions

» 5.1. General actions

Carefully remove the packaging material. Make sure not to damage the cart when using cutting tools.



REMARK

The recipient of this product is responsible to report transport damage and handling any claims for damages with the transport firm.

On delivery check carefully whether the packaging and the product were not damaged during the transport.

If damage is found, please contact the transport firm immediately and keep the packaging.



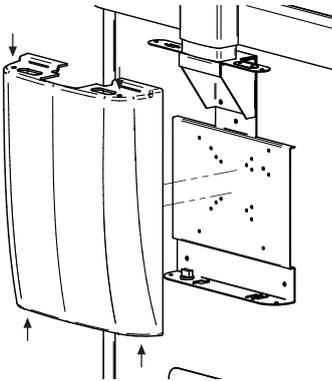
REMARK

Before any use, connect the IT Pack using the coiled lead included with it to the mains and leave the battery to charge for at least 12 hours without interruption before first use.

5.2. Actions for the design without optional PC or display (IT-ready)

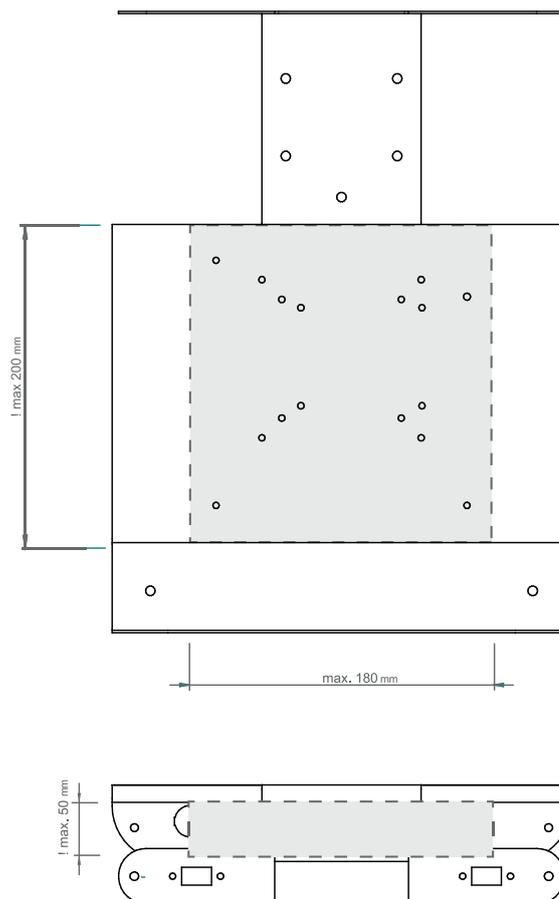
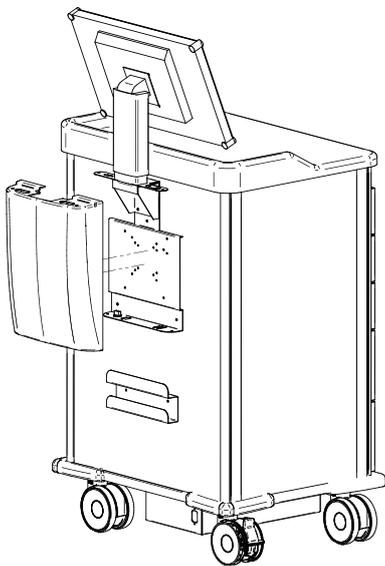
Step 1: Open the plastic cover

Open the plastic cover at the back of the Medicart by unscrewing the 4 bolts.



Step 2: PC or thin client mounting

A PC or thin client is mounted using a standard VESA 75 or VESA 100 fixing. Hardware bolts or screws are not included. The maximum space available for the hardware is specified in the illustration below.



INFORMATION

The PC will no longer be accessible once the Medicart casing has been closed. Change the "After Power Failure" setting in the PC BIOS to "Power ON". The PC will boot up as soon as the Medicart power switch is switched on.

*Designation may vary, depending on the manufacturer.

Step 3: Display mounting

The display needs to be mounted on the standard VESA 75/100 bracket. Fixing bolts or screws for mounting the screen are not included. The maximum load capacity of the monitor arm is 7.2 kg. The low-voltage power supply cable for the display needs to be connected with the terminals marked accordingly.



WARNING

Do not exceed the stated maximum load capacity. This can result in serious injury or damage to the equipment.

Once the display has been fitted, it may be the case that the adjustable monitor arm does not stay in the desired positions.

Increasing lift tension:

If the display which has been installed is too heavy or if the display does not stay up when raised, you will need to increase lift tension. You can do so by tightening the screw underneath the monitor arm with a screwdriver.

Lower the lift tension:

If the display which has been installed is too light or if the display does not stay down when pushed down, you will need to reduce lift tension. You can do so by loosening the screw underneath the monitor arm with a screwdriver.



Setting tilt:

The display can be tilted 90° to the right. You can do so easily by turning the screen manually.

Step 4: Peripheral equipment cables

To connect peripheral equipment use the 2 holes in the monitor bracket and, if necessary, fix with lashing straps and atolls. Two external USB connections are also provided at the top of the Back Pack. There are a total of 3 available USB connections in the Back Pack. Fixed peripheral equipment like keyboard and mouse can best be connected on the inside.

Step 5: Close the plastic cover

Close the plastic cover at the back of the Medicart by fastening the 4 bolts again.

5.3. Installing the COW Controller software (installation on the client PC):

The COW Controller software can be downloaded via the following link:

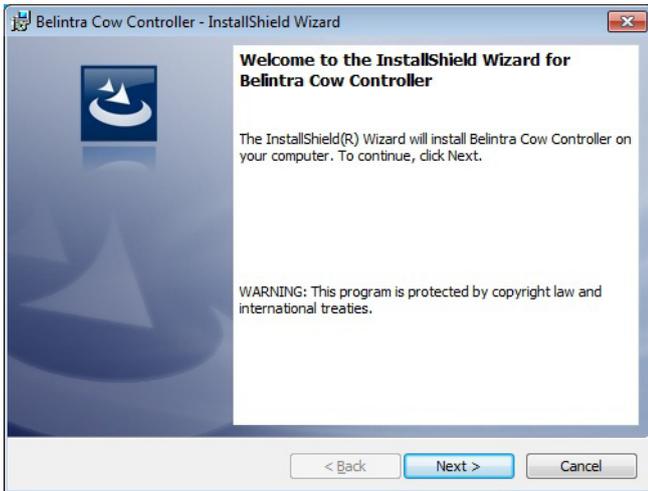
<http://www.belintra.com/support>.



The COW Controller software has been developed for the Windows® OS and needs to be installed locally. If the COW Controller software is not installed, the COW Controller functionality will remain unchanged except for soft shutdown in the event of insufficient battery charge, and there will be no display of the battery status on the screen (see below).



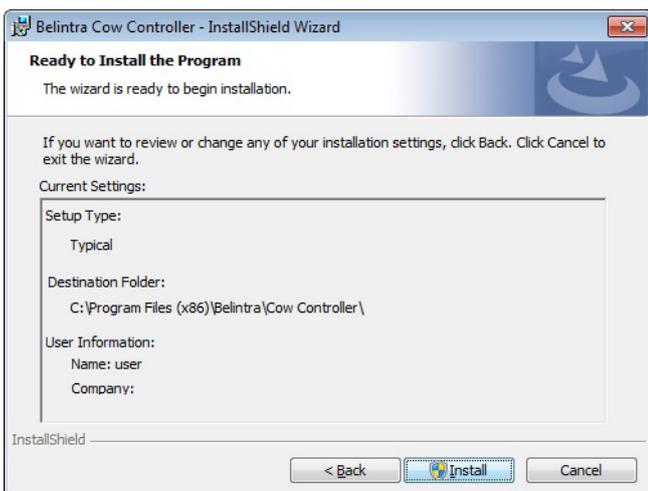
Ensure you have full administrator rights in your Windows profile.



1. Open the installation file.
Click **Next** when the InstallShield Wizard appears

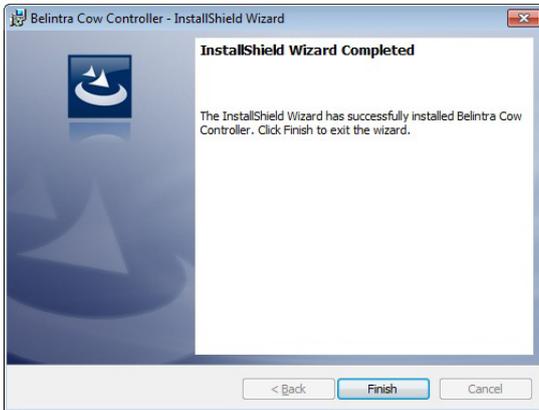


2. The user has is prompted to change the installation folder. Leave it preferably unchanged and click **Next**.



3. Click **Install** when the current settings list appears.

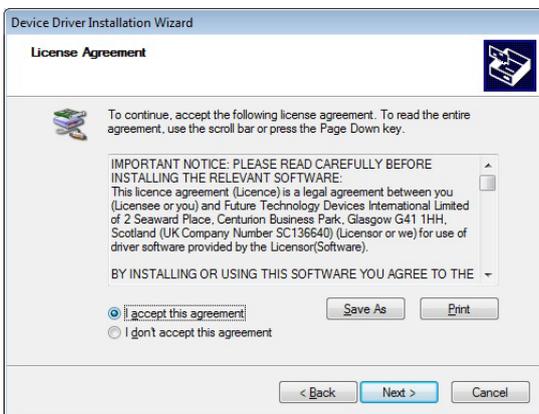




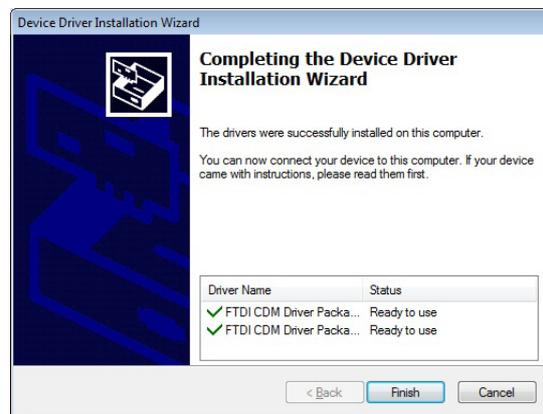
4. Next, click **Finish** to exit the wizard.



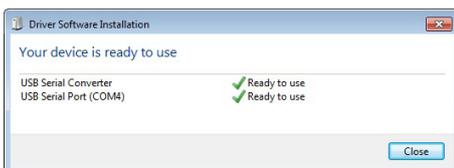
5. The USB drivers will be installed after the Battery Monitor software. Click **Next** to start.



6. Read and accept the user agreement and the click **Next**.



7. The drivers are now installed and ready for use. Click **Finish** to complete.



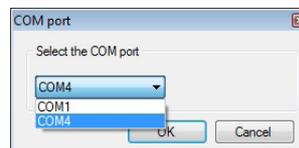
8. Now connect the COW Controller to the PC via the USB connection. The drivers will be installed. Make a note of or remember the COM port number (4 in this example). This will come up in a subsequent procedure.



9. To open the Battery Monitor, in the Start menu you click: Belintra/ COW Controller/Belintra COW Controller. This icon appears in the Windows tray. The yellow triangle indicates that there is no communication between the PC and the COW Controller. You will need to click the yellow triangle to set the correct COM port.



10. The above window appears, click on **COM port**.



11. The COM port previously indicated when installing the driver software (see item 8) can be selected in the next window. Select the COM port and click OK. The software is now installed and configured.



After installation add "Belintra COW controller" to the Windows "Startup" folder. The Battery Monitor software must be active in order to utilise the entire COW Controller functionality.

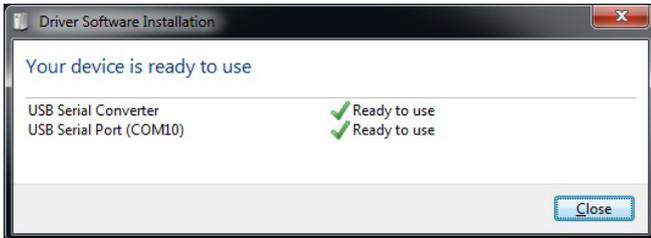
5.4. Open-Close ClickOnce application for the electronic lock

The Open-Close application software can be downloaded via the following link:

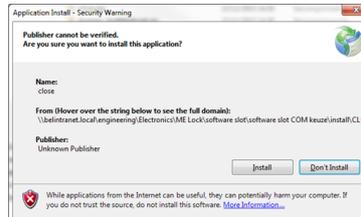
<http://www.belintra.com/support>.



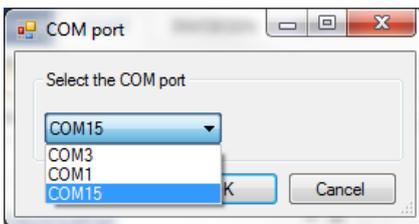
Ensure you have full administrator rights in your Windows profile.



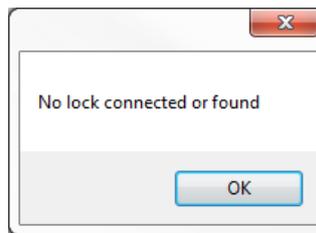
1. Connect the USB cable of the lock with the PC. The controllers will be installed. Write down or remember the COM port number.



2. To install the Open application, open the installationj file setup.exe in the deploy folder.



3. The screen below will appear. Select the right COM port when the installation is completed.



4. If an incorrect port was selected or a problem occurs with the electronic wiring of the lock, the above screen will be displayed. Repeat from step 3 selecting another COM port.

5. Repeat these steps for the Close application.

5.5. Software update

In order to be able to install a new version of Battery Monitor or the Open-Close application, it will be necessary to uninstall the existing version.



Ensure you have full administrator rights in your Windows profile.

- Uninstall the software in Windows Settings screen/Programs and Features.
- Restart the PC after the software has been uninstalled.
- Install the new version as described in **section 5: Installation instructions**.

» 5.6. Control the lock directly via commands to the COM port.

As an alternative for the above Open-Close ClickOnce applications the lock for the drawers can also be controlled via direct commands to the correct COM port.

Function	Command	Response
Open	O	
Close	C	
Status	S	"O" or "C"

COM settings	
Baud	2400
Data Bits	8
Stop Bits	1
Parity	even

6. Instructions for use

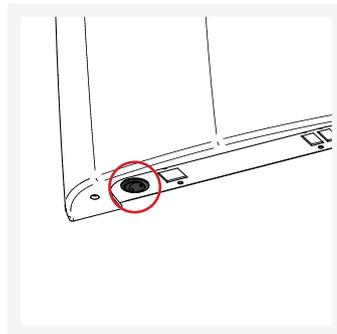
» 6.1. ICT On-Off switch

This switch is at the bottom left of the Back Pack casing.



WARNING

This switch switches off the power to the PC/thin client and the display only. When the Medicart is connected to the mains supply, the battery charging process continues unabated and components of the unit remain live.



» 6.2. Battery status indicator

A LED indicator is located at the front of the Power Pack casing. This indicator provides a simple visual check on battery status when the cart is not in use.



A. Discharging

	Green: The remaining charge in the battery is between 100 and 70%
	Orange (green-red): The remaining charge in the battery is between 69 and 40%
	Red: The remaining charge in the battery is between 39 and 10%
	Flashing red: The battery has a remainign capacity of 9% or less or a fault occurs in the electrical part of the Medcart. Refer to section 10: Frequently asked questions

B. Charging

	Flashing red: between 0 and 39% charged
	Flashing (green-red): between 40 and 69% charged
	Flashing green: between 70 and 99% charged
	Green: 100% charged

The LED is switched off while the controller is in sleep mode.

» 6.3. Using the COW Controller software (Battery Monitor)



If the COW Controller software is not installed, the COW Controller functionality will remain unchanged except for soft shutdown in the event of insufficient battery charge, and there will be no display of the battery status on the screen (see below).

Deep discharge may damage batteries irreparably. An inadequate recharge can also damage them. The life of a battery is determined to a large extent by whether or not it is used correctly.

The Battery Monitor provides information on the battery charge status at a glance. This information enables you, the user, to take appropriate action and thus prevent deep discharge.

A. The user interface

Battery status is shown on the desktop in real time.

To open the Battery Monitor, you click the battery icon bottom right in the Windows status bar.



The Battery Monitor shows battery status in a pictogram. The remaining battery charge is shown to the right of the pictogram as a percentage. Click the cross to close the window.



The Battery Monitor can also be configured to ensure that it always remains at the foreground of the screen. By right-clicking in the Battery Monitor screen and then selecting "Always on top".



	The remaining charge in the battery is between 100 and 70%
	The remaining charge in the battery is between 69 and 40%
	The remaining charge in the battery is between 39 and 10%
	The remaining charge in the battery is 9% or less
	The Medcart is connected to the mains supply and the battery is being charged

A warning will appear if the battery charge drops below 5%.



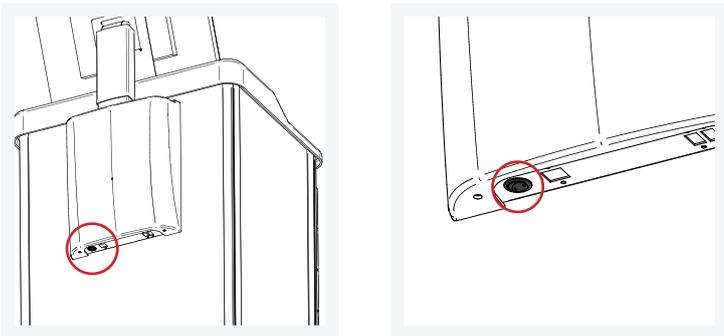
The Power Pack run time is now very limited. In order to protect the battery against deep discharge, the COW Controller will force the PC to shut down after a few minutes. The COW Controller will go into sleep mode and the status LED at the front of the Power Pack will go out. The battery will not undergo any further discharge. All it requires is to connect the Power Pack to the mains supply again to reactivate the COW Controller.

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The situation in which the computer switches itself off due to insufficient battery charge must be considered as exceptional. It is recommended that the Medcart be connected as often as possible to the mains supply when not in use. In this way you will avoid downtime and a shorter battery life.

» 6.4. Integrated Intel® NUC Mini PC (only for IT Standard & IT High End)

The PC is built into the Back Pack and cannot be accessed from the outside. After a shut-down, forced or otherwise, the PC can be restarted by switching the switch underneath the Back Pack casing off and on again.

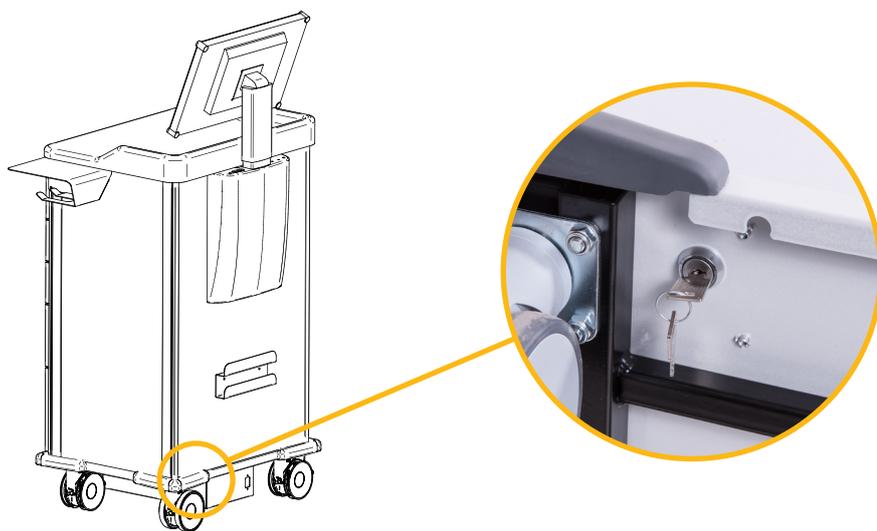


» 6.5. Neovo display (only for IT Standard & IT High End)

The display has touchscreen keys to change screen settings, among other things. The keys can be locked in order to prevent unauthorised or inadvertent changes. You will find information on locking/unlocking keys in the manual supplied with the unit.

» 6.6. Emergency opening of electronic lock

If the electronic lock no longer opens, the emergency opening can be used. To do so use the key delivered with the product and the lock at the bottom of the Medica™.



Careful: the emergency opening can only be used when the electronic lock is out of order. When the electronic lock is in working order again, the emergency opening must be closed.

7. Maintenance and inspection

» 7.1. Replacing the battery



WARNING

Replace the battery in every case with a genuine type from Belintra. Belintra cannot be held liable for any loss or damage arising from a failure to observe this rule. Installing batteries other than the type quoted above will void the product warranty and may cause the low-voltage system to fail. Failure to observe this warning may result in damage to the battery and the COW Controller and could cause a fire.



REMARK

Ensure that the Medicart is disconnected from the mains supply and that any devices connected have been switched off before replacing the battery. Careful with metal non-insulated tools. These can cause a short circuit.

The battery is located in the Power Pack installed at the bottom of the Medicart. To replace the battery the following procedure must be followed:

Step 1: Remove the manual screw at the front of the Medicart



Step 2: Slide the Power Pack completely out of the runners at the back of the Medicart. The battery can now be accessed.



WARNING

Make sure that no cables are damaged when removing the Power Pack. Hold the Power Pack tightly when sliding it from underneath the cart, making sure it does not fall on the ground.



- Lift the battery out of the unit using a vacuum lifter / suction pad.
- Put the battery upright.
- Disconnect the battery by unscrewing both terminals.
- The battery is provided with a calendar, mark the installation date before installing the new battery. This provides information on battery life at the next battery replacement.
- Connect the new battery.



REMARK

Ensure that the vacuum lifter / suction pad is suitable for a weight of at least 20 kg.



REMARK

Check the polarity: first connect the blue wire to the black minus pole, then the brown wire to the red plus pole of the battery.

- Carefully put the connected battery back.
- Slide the Power Pack back into place.



WARNING

Make sure that no cables are damaged when removing and re-installing the Power Pack.

- Lock the Power Pack back into place by means of the hand screw.



REMARK

Immediately after connecting the battery, connect the Medcart using the coiled lead included with it to the mains and leave the battery to charge for at least 12 hours without interruption.



REMARK

After replacing the battery, the Battery Monitor might display an "Unknown" message where the remaining battery charge indication is normally shown. It means that the COW Controller has not recognised the battery yet and it may take a while before the battery charge status shows up again.

» 7.2. Replacing the main fuse

The main fuse is located in the Power Pack mounted underneath the Medcart.

You will find the instructions for opening the Power Pack in section 7. Maintenance and inspection - 7.1. Replacing the battery.



REMARK

- Always replace a blown fuse with an equivalent type of the same amperage rating.
- The COW Controller will go into sleep mode whenever the fuse in the Battery Unit is replaced. All it requires is to connect the Battery Unit to the mains supply again to reactivate the COW Controller.
- After replacing the fuse, the Battery Monitor might not display any message where the remaining battery charge indication is normally shown. It means that the COW Controller has not recognised the battery yet and it may take a while before the battery charge status shows up again.

» 7.3. Inspection

The IT Pack must be inspected at least once a year by technical personnel, together with the Medcart. Any electrical engineering work needed to carry out maintenance on the unit requires to be carried out by a qualified technician.

Do not pull on cables on the inside of the unit when checking and/or using it, and do not move or damage them.

Check regularly if the IT Pack continues to work properly. If you notice any discrepancies, have them investigated by qualified staff. Belintra does not accept responsibility for damage due to improper use or handling, or due to bad maintenance.

Check the battery for potential distortion or damage to the casing. Replace the battery in the event of any irregularities being found.



WARNING

If a damaged battery is not replaced immediately, it may result in reduced capacity, electrolyte leakage or gassing. Further distortion will occur in the battery and there will be a risk of explosion of the battery.

» 7.4. Cleaning

- Switch the unit off and withdraw the plug from the power socket before carrying out any maintenance.
- Clean the IT Pack using a slightly dampened cloth with non-corrosive (household) cleaning agents.
- Never use corrosive solvents such as alcohol, thinners and saline solutions.
- Never use abundant liquids (water) since water ingress to the unit may occur. This could give rise to hazardous situations and faults.

8. Warranty and service

The warranty of this product covers material and manufacturing errors in the products as of the production date. Please make sure to store your proof of purchase. The warranty no longer applies in case of incorrect use, improper handling, use of violence, repairs or by non-qualified persons and/or opened electronic units. Please contact Belintra for more information about the warranty conditions.

If you bought your Medcart directly from Belintra, please contact Belintra for technical support.

<http://www.belintra.be/service>. If not, contact your distributor.

9. Disposal instructions

At the end of its life cycle this device cannot be disposed of together with other domestic waste. Keep this device separated from other types of waste and take it to a collection point for the reuse of electrical and electronic equipment. This will avoid potential damage to the environment and human health as a result of the uncontrolled disposal of waste.



10. Frequently asked questions

Q: How long can the IT Pack run cordlessly?

Cordless run time depends to a large extent on the peripheral equipment connected.

At 30 W total nominal consumption, the Medicart will run cordlessly for up to 20 hours with a fully charged battery.

Bear in mind that the capacity of a battery (and consequently its cordless run time) will be reduced by the following factors and all that goes with them:

- The age of the battery.
- Repeated use of the battery with insufficient charge.
- The number of charge cycles completed.
- Deep discharge.
- Ambient temperature.

Make use of energy-saving functions in connected devices as much as possible.

Q: What is the service life of the battery?

The capacity of a fully charged battery is adversely affected by:

- The number of charge/discharge cycles completed.
- Sustained operation with insufficient charge. That is why you should leave the battery to recharge fully once every 24 hours.
- Ambient temperature.

In normal use the battery has a service life of up to 2 years.

Q: Can one overcharge the battery?

The battery cannot be overcharged. The electronics in the COW Controller protect the battery against overcharging as well as deep discharge.

Q: The IT Pack has a very limited autonomy.

The battery needs to be replaced. You will find the instructions for replacing the battery in section 7.



REMARK

Immediately after connecting the battery, connect the IT Pack using the coiled lead included with it to the mains and leave the battery to charge for at least 12 hours without interruption.

Q: The indicator LED does not light up and the PC won't start up

The COW Controller has gone into sleep mode due to insufficient battery charge.

All it requires is to connect the IT Pack to the mains supply again. The PC will start up automatically and the battery charge status will be shown by the Battery Monitor.

Q: The Battery Monitor is not showing the remaining battery charge and the pictogram is showing "charged" status.

A fault has occurred in the COW Controller. Please contact Belintra Service or your distributor (See section 8).



www.belintra.com

Belintra N.V. makes every effort to provide accurate and complete information about the installation and use of this product. The information contained in this manual may be amended without prior notice. The illustrations included in it are for reference only and may contain information or functions that is/are not applicable to your unit. Belintra N.V. is not liable for technical or editing errors or omissions in this manual. You can always contact Belintra N.V. for the most up-to-date product information.