

User manual

2015-03-05

CuroCell® 4

Alternating pressure system

Item number user manual: 95-001044



Contents

Important safety precautions	3
Introduction	4
Product description	6
Assembly/Installation	8
Operation	9
Cleaning and reconditioning	11
Storage	12
Maintenance	13
Troubleshooting	14
Technical description	15
Spare parts	17
Options and accessories	18
Warranty	19
Other information	19

IMPORTANT SAFETY PRECAUTIONS

Read all instructions prior to use

Warning! To minimize the risk of fire, electric shocks or bodily injury:

1. The product must only be used for its intended purpose as described in this manual. The product may not be combined, assembled or repaired with other parts (e.g. pump and mattress), accessories or spare parts other than those described in this manual or other documentation from Care of Sweden.
2. Do not use the product in wet rooms or where there is a risk of the pump coming into contact with water or another liquid. Never handle a pump that has come into contact with water/liquid. Pull the plug out of the electrical socket immediately and send the product to an authorized service technician for servicing.
3. DO NOT USE in the vicinity of or in contact with fire sources/hot surfaces, such as fire, burning cigarettes or hot lamps. Although the product has undergone fire testing, it could become damaged if it comes into contact with fire sources.
4. Position and use the product in a manner that prevents it from becoming trapped or damaged. NOTE: Be particularly aware of trapping damage when using bed rails.
5. Never use the product if the pump power cord or plug is defective, the pump casing is damaged or it is not functioning properly. Contact a service technician for examination and repair.
6. Regularly check product functionality through a hand check (see section 4.3). Also check that the comfort setting is correct as indicated in the table on the pump.
7. Continual monitoring is required when the product is used for individuals needing special supervision, such as children.
8. The mattress are protected with a hygiene cover; please try to avoid the simultaneous use of multiple hygiene cover with this mattress. Because of the risk that the vapour permeability can be destroyed.
9. The hygiene cover does not allow liquid or air to penetrate, but is vapour permeable. Make sure that the patient is positioned correctly to avoid the risk of suffocation.
10. Prevent damage to the hygiene cover from sharp objects.
11. If the cover are supplied with handles on the long sides, theses handles are only to be used for lifting and moving the mattress itself. All other use will be at your own responsibility and is not covered by the product warranty.

1. Introduction

CuroCell® air mattresses operate according to the alternating pressure principle, a technique that is well proven and been used for a long time. Alternating pressure is when the pressure regularly alternates between the mattress cells to replicate body movement. Variable pressure cycles are set up where there is little or no pressure. This is optimal for skin recovery or to prevent skin damage.



Always read the user manual prior to use.

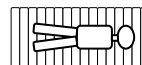
1.1 General information

This system is a medical device and is CE-marked in accordance with MDD 93/42/EEC. According to statutory regulations made by the authorities regarding medical devices, the manufacturer is required to report all accidents or incidents involving there products. We would be very grateful for all information involving accidents or incidents relating to our products, by reporting them immediately to us, here at Care of Sweden. The system has been tested and approved according to the following standards: IEC 600601-1, IEC 60601-1-2, SS-EN ISO 12182, SS-EN ISO 14971, SS-EN ISO 10993, EN 597-1, EN 597-2, EN 14126.

1.2 Intended use

CuroCell® 4 is an alternating pressure relief mattress replacement system. The mattress can be used in all kinds of caring environments to prevent pressure ulcers, as well as treatment up to Category 4⁽¹⁾ pressure ulcers. The mattress is meant for use for persons of a recommended minimum length of 120 cm. The recommended user weight is up to 200 kg. CuroCell® is a replacement mattress and shall be placed directly on the bed frame. We recommend that position changes are made regularly. The time interval must be evaluated by the responsible personnel, depending on the patient's status diagnosis and general condition.

The mattress should only be used lying in the lengthwise direction on the mattress with the feet at the end marked with the feet symbol.



The mattress must always be cleaned between patients.

NOTE!

- For certain patients, such as amputees, are the recommended minimum weight not valid. These users may however have other requirements as the entire mattress is not being loaded. Please refer to sections 4.2 and 4.3 for operating control.
- When used together with positioning pillows, read the user's manual carefully to ensure correct positioning of the patient.
- If you are using this product with an evacuation sheet, it is the user's responsibility to ensure that it is safe to use for evacuation.
- Be careful when using bed rails or other protection on the bed so that the mattress does not become trapped or damaged.
- The mattress must not be lifted with a person lying on it or used for any other type of transport other than a possible evacuation using an evacuation sheet.
- This mattress is unsuitable for use during x-ray examinations because of the risk of blurred images or artefacts that may lead to diagnostic errors.

(1) National Pressure Ulcer Advisory Panel, European Pressure Ulcer Advisory Panel and Pan Pacific Pressure Injury Alliance. Prevention and Treatment of Pressure Ulcers: Quick Reference Guide. Emily Haesler (Ed.). Cambridge Media: Osborne Park, Western Australia; 2014.

1.3 Other information

Action plan Pressure ulcers

To achieve the best possible result for this product it is recommended that a well-planned and well-structured working environment be used. In our guideline "Action plan" you will find examples which can be applied and put into practice when using our products.

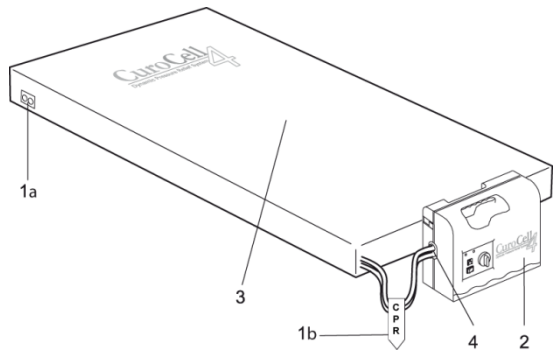
Mattress guide

This practical guide gives you as a care giver, help in choosing the correct mattress from the Care of Swedens range. CuroCell® 4 is a mattress in function group C. This information can be found on our website www.careofsweden.com or you can order a copy from our Customer services by sending your details to info@careofsweden.se.

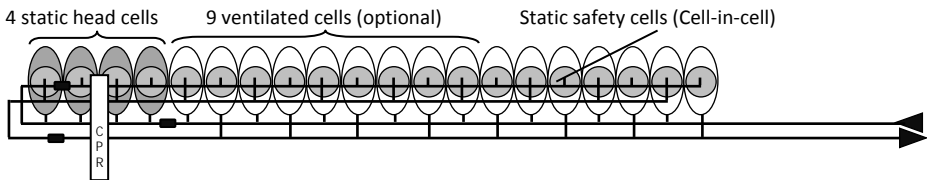
2. Product description

2.1 Pump and mattress

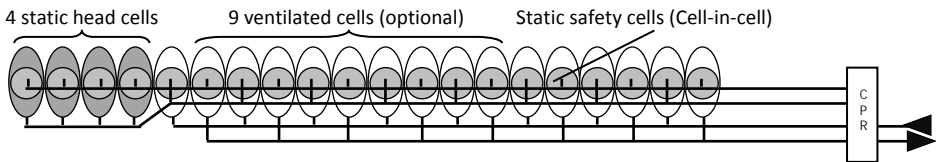
1. CPR (rapid deflation)
 - a) Head
 - b) Foot
2. Pump
3. Mattress
4. Pump connector



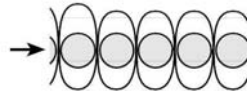
1a) Tubing system with CPR in head



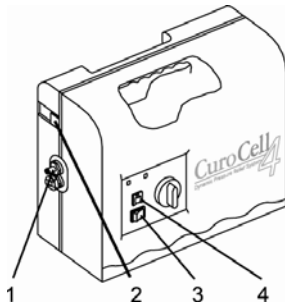
1b) Tubing system with CPR in foot



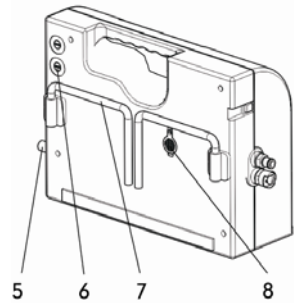
With the optional "heel section" is the four cells in the foot end a bit lower to in order to relief the heels.



2.2 Pump



1. Quick connector unit, air
2. Alarm off
3. Off/On (0/1)
4. Static mode
5. Power cord
6. Fuses (2)
7. Bed hooks
8. Air filter



2.3 Pump functions

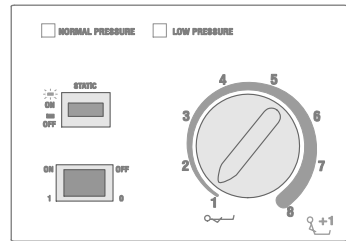
1. Power on/off (1/0) **ON/OFF**

Button to turn the power on or off.

2. Lamp for normal pressure **NORMAL PRESSURE**

At start-up: Lights when the mattress has reached the set pressure and is ready for use.

During operation: Steady green light while pressure is normal.



3. Comfort setting **1 – 8**

Suitable air pressure is set with the comfort dial (1-8). Guidelines based on user weight is given in the table on the pump.

NOTE! In all uses where the head of the bed is raised, the pressure must be increased at least one (1) step.

4. Static mode **STATIC**

When the 'STATIC' button is pressed, the alternating process is terminated and the pressure between the cells evens out. The function can be used in association with patient care, repositioning/transferring in and out of bed. Turn off this function by pressing the button. It will return automatically to cycling after approx. 30 minutes.

5. Low pressure **LOW PRESSURE**

The pump has an acoustic and light alarm that is triggered when pressure in the mattress is too low. The alarm continues to sound until the 'ALARM OFF' button is pressed on the side of the pump.

In the event of an alarm, check the following: Disconnected/pinched tubes, open CPR valve, leakage at air cell/connector.

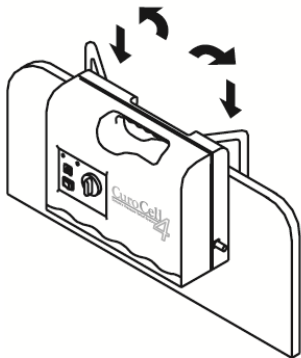
The CuroCell® 4 mattress is made up of the patented 'cell-in-cell' system. Inside every air cell is an inner cell, which is continuously filled with air. This acts as a safety layer if a leak occurs.

6. Alarm off **ALARM OFF**

This turns off the acoustic alarm. It will be activated again after about 3 minutes, if the pressure does not return to normal. In case of problems with the alarm, see paragraph 8 for troubleshooting.

3. Assembly/Installation

When unpacking the mattress, check that none of the parts are damaged. In the event of damage, contact the manufacturer or your local dealer before using the product.



1. Place the mattress on the bed base; use the straps on the cover to securely fasten the mattress to the bed base.

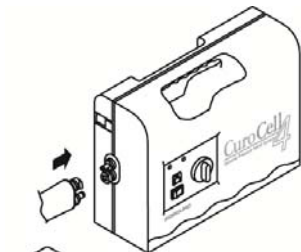
Note!

- Make the bed with sheets for added comfort.
- Check that the CPR valve/valves are properly closed.
- If the bed is height adjustable, the mattress must only be attached to the bed's moving parts.
- Check the cells and snaps to make sure that they have been attached correctly.

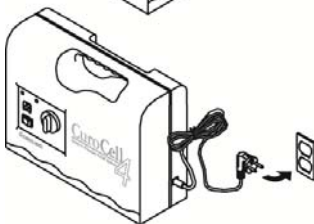
2. Hang the pump at the foot end of the bed or place it on a flat, steady surface.

Route the power cord so that there is no risk of it causing someone to trip, being run over by the bed wheels or getting pinched when the bed is raised or lowered.

If a cable holder is used (optional): open the snaps, position the power cord in the pocket and close the snaps.



3. Connect the air tubes from the mattress to the side of the pump. There is an audible "click" sound when the connectors are properly attached.



4. Check that the power switch on the side is set to 0 (OFF). Connect the plug to an approved electrical socket (220 V).

4. Operation



Note! Always read the user manual prior to use.

4.1 Start-up

1. Start the pump by pressing 1 (On).
2. Air starts to inflate the mattress.

Note! We recommend that the comfort dial be set to 8 (max) when inflating a mattress.



4.2 Comfort setting

The air pressure in the mattress can be adjusted according to the user's desire for comfort. Always consult the prescriber or other authorized personnel for appropriate setting.

1. Use the comfort dial to set a suitable air pressure based on the settings table on the pump.
2. When the green indicator lamp for normal pressure lights, the mattress has reached the set pressure.
3. The mattress is now ready for use.

kg		
0-30	1-2	3
40	2-3	4
50	3-4	5
60-70	4-5	6
80-90	5-6	7
100-110	6-7	8
120-140	7-8	8
150-200	8	8

NOTE!

- If the head of the bed is raised, pressure must be increased at least one (1) level.
- When only parts of the mattress are under load, e.g. if the patient is an amputee, the pressure should be increased (1 or 2 levels).
- For recommended user weights, refer to section 1.2.

4.3 Hand check

Hand check is used to ensure that the mattress is properly inflated. This should be done regularly, once per shift and after changing the position in the bed or changing the comfort settings.

Insert your hand between the air cells directly underneath the user's pelvic region, use a vertical hand. There should be a clearance of 2-3 fingers between mattress base and the patient.



If the distance is not sufficient, increase the comfort setting to the next highest step. Wait 10 minutes and perform a new hand check.

4.4 Alarms

When the pressure in the mattress drops to an abnormally low level, the yellow low pressure lamp lights and an acoustic alarm sounds.

First, check that the CPR valve is closed and that all connections are intact and correctly installed in accordance with paragraph 3. The yellow LED blinks until the pressure is corrected and restored.

The alarm is deactivated by pressing the alarm off button. If the problem is not resolved within 3 minutes, the alarm will sound again. The yellow lamp flashes until the pressure is corrected and reset.

See section 8 for troubleshooting.

WARNING!

If the air pressure remains low, check the mattress and tubes for damage. Repair if necessary or contact the manufacturer or your local dealer for help.

4.5 CPR

In the event of an emergency requiring CPR (cardiopulmonary resuscitation): Quickly pull the CPR strap, remove the quick connectors at the side of the pump to deflate the mattress as fast as possible. On this product, there are two possible positions for the CPR valve – at the head end (1a) or the foot end (1b).

Position 1a. At the head end of the mattress, on the right side (user's right hand side).

NOTE: This connector is held in place with the elastic strap.

Position 1b. On tubes, between the pump and mattress.



Note! Make sure that the CPR valve is properly connected after use.

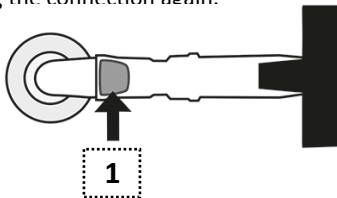
4.6 Transport function

If the patient must be moved in bed, the tubes can be connected together (detached from the pump) and the mattress put in “transport mode”. We recommend using this mode only for short periods of time.



4.7 Heel function (with check valves, option)

This feature allows pressure relief of the heels. Disconnect the air cell which is directly under the heel. This air cell will then be emptied for air. Press the bottom (1) and disconnect the plug. Let the cell remain in its place in the mattress. The air cell is activated by assembling the connection again.



5 Cleaning and reconditioning

It is important to follow the instructions below before using the product to another user. Consult the hygiene responsible or the supplier for help and responsible or the supplier for help and instructions when ensure.

5.1 Cleaning

PUMP

WARNING!

Do not open the pump housing – risk of electric shock. Service and maintenance must be performed by authorised technicians. Do not get the pump wet or submerge it in any liquid.



Wipe off the pump with a damp cloth and a mild cleaning solution for this purpose such as: alcohol with or without tensides, Isopropanol 70 %, oxidating solutions or chlorine max 1 %. If using a different agent, choose one that does not affect the pump housing.

MATTRESS COVER



Covers can be wiped off with a mild cleaning solution for this purpose such as: alcohol with or without tensides, Isopropanol 70 %, oxidating solutions or chlorine max 1 %. Excrements and blood spots must be removed immediately with cold water. Carefully follow local instructions and usage instructions for the cleaner.



Multi-layer covers should be divided before washing. Wash with like colors.



Chlorine and phenol-based cleaners could have a negative impact on the PU surface and should be avoided. If chlorine is used, we recommend a mixture of max. 1 %.

INNER COVER AND COMFORT FABRIC (accessories)



Clean the affected area with a mild cleaning solution for this purpose such as: alcohol with or without tensides, Isopropanol 70 %, oxidating solutions or chlorine max 1 %.

5.2 Reconditioning

PUMP

See section 5.1 for instructions.

MATTRESS

1. Disconnect the tubes and let the air out, also open the CPR valve.
2. Remove the cover. See instructions in chapter 5.1 for cleaning covers. If the product is equipped with a foam core this should be removed and cleaned separately.
3. Move the mattress to a clean area, which is suitable for cleaning.
4. Wipe off the cells, all tubes and the CPR valve with a mild cleaning solution for this purpose such as: alcohol with or without tensides, Isopropanol 70 %, oxidating solutions or chlorine max 1 %. Let it dry.
5. Wipe off and disinfect all the work surfaces with an alcohol-based cleaning agent intended for this purpose.
6. Put the mattress together. If cells for any reason have loosened from the tubes, these must be replaced according to drawing in chapter 2.1.

NOTE!

Check the hygiene cover each time the product is cleaned. If damaged, it must be replaced or repaired. Also check the pump, tube connectors and power cord during cleaning. Damaged parts must be replaced or repaired.

6. Storage

The mattress and pump are best stored in the product bag (optional extra). Handle the packed product with care. Do not put anything heavy on top of it.

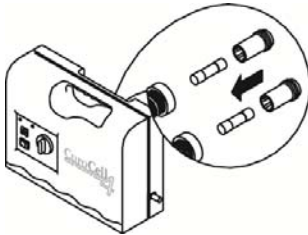
7. Maintenance

7.1 General

1. Check the power cord and plug for damage and scratches.
2. Check that the mattress cover is intact and that the cover and air cells are correctly assembled.
3. Check that the air flow alternates between each outlet on the side of the pump.
4. Check for damaged or pinched tubes and connectors.

Contact the manufacturer or your local dealer for spare parts.

7.2 Changing fuses



1. Pull the plug out of the electrical socket before replacing fuses.
2. Remove the cover for the fuses with a screwdriver. Pull out the fuse holder.
3. Fit a new fuse of the same type T1AL, 250 V and screw the cover back on. There are two fuses.

7.3 Changing the air filter



1. Unscrew the small round cover plate at the back of the pump.
2. Lean the pump backwards and the filter slides out of its holder.
3. Place the new/cleaned filter in the holder and refit to the cover plate.

If the pump is used in a dirty environment, the filter should be checked regularly.

8. Troubleshooting

Problem	Solution
Pump does not start	Check that the power cord is connected to the power socket. Check the fuses.
Alarm is on = mattress is deflating	Check that the quick connectors to the air tubes on the side of the pump are properly connected. Check that the CPR valve/valves are closed. Open the mattress and check for leaks from air cells or tubes. Check that all tube connectors are properly fitted and connected.
No air in head cells	When the mattress is inflated, the 4 static head cells are filled last.
Patient is bottoming	The comfort setting may be set incorrectly. Increase the pressure and wait a few minutes. Do a hand check. Refer to section 4.3. Check that the CPR valve/valves are properly closed.
Mattress moves around	Check that the air mattress is fastened to the bed frame with the straps underneath (two at the head and two at each side of the bed).
Some cells have less air	This is normal since the air flow alternates between every other cell for a set cycle time (one cycle = 10 minutes).
Pump is noisy; vibrations are felt	Check how the pump is hung on the bed. Resonance can occur in parts of the bed. Remove the pump and listen to see whether this makes a difference. Can be resolved by putting the pump on a flat, steady surface or by placing a towel between the pump and bed.
If your questions are not answered in the above information, please contact Care of Sweden or your local dealer.	

9. Technical description

9.1 Technical specification

PUMP		SPECIFICATION
Model		CuroCell® 4
Voltage		220V-240 V, 50-60 Hz
Power consumption		0.17 A
Type of fuse		T1A, 250 V
Cycle periods		10 min
Dimension (LxWxH)		30 x 10.5 x 22.5 cm
Weight		3.4 kg
Surroundings	Temperature	Operation: 10°C - 35°C
		Storage: -15°C - 50°C
		Shipping: -15°C - 70°C
	Humidity	Operation: 20% - 80% non condensing
		Storage: 10% - 90% non condensing
	Atmospheric pressure	700hPa-1060hPa
Classification		Class II, Type BF, IP21
MATTRESS		SPECIFICATION
Model		CuroCell® 4
Dimension (LxWxH)		80/85/90/105/120x200/210x21 cm
Weight		10.5 kg (80x200 cm)

NOTE: Care of Sweden retains the right to modify the product specification at any time.

WARNING!

Follow operating and maintenance instructions carefully to prevent injury, as well as damage to the product or other equipment.

9.2 Labelling

The mattress are labelled with product name, production date, article number, size, care and wash instructions, EAN-bar code, as well as space for own labelling. The product also displays which side is up/down and head/foot.

9.3 Symbol Definitions



Article No



Manufacturer

XXXX-XX-XX

Year-Month-Day



Foot placement



Read the user manual



Group of function



CE marked acc. to
MDD 93/42/EEC



Recycling



Not in domestic refuse,
follow recycling instructions



Recommended user weight



Patient information
– category



Directly on bed base



Counteract shear force



Heel function



Do not wash



Machine wash at 70 °C



Machine wash at 95 °C



<1%
Chlorine



Tumble dry



Do not tumble dry



Drip dry



Do not iron



Do not dry clean



Wipe off



Class II equipment
(Double Insulated)



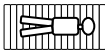
Type BF



IP-class
(Ingress Protection Rating)



Temperature range



The mattress should only be
used lying in the lengthwise
direction on the mattress

10. Spare parts

Storlek	Top part Olivia	Top part CuroCell LF	CuroCell Comfort fabric	Bottom part CuroCell
80x200 cm	CC-906911	CC-916210	CC-907410	CC-905511
80x210 cm	CC-906912	CC-916211	CC-907411	CC-905512
85x200 cm	CC-906913	CC-916212	CC-907412	CC-905513
85x210 cm	CC-906914	CC-916213	CC-907413	-
90x200 cm	CC-906916	CC-916214	CC-907414	CC-905616
90x210 cm	CC-906917	CC-916215	CC-907415	CC-905617
105x200 cm	CC-906910	CC-916216	CC-907416	CC-905510
120x200 cm	CC-906920	CC-916218	CC-907418	CC-905521

Art.no.	Name	Size
CC-901310	Cell, PU	80x21 cm
CC-901311	Cell, PU	85x21 cm
CC-901312	Cell, PU	90x21 cm
CC-901313	Cell, PU	105x21 cm
CC-901314	Cell, PU	120x21 cm

Please make a note on your order when ordering ventilating cells.

CC-901330	Heel cell, PU	80x21 cm
CC-901331	Heel cell, PU	85x21 cm
CC-901332	Heel cell, PU	90x21 cm
CC-901333	Heel cell, PU	105x21 cm
CC-901334	Heel cell, PU	120x21 cm

CC-8217	Fuse (set of 2)
CC-8201	Filter, washable

If other spare parts are needed, please contact Care of Sweden or your local dealer for further assistance.

11. Options and accessories

11.1 Options

Comfort fabric

For patients who are sensitive to fluctuations in the mattress a padded inner cover can be placed over the air cells to increase comfort.

Heel section

There are two options available to relieve sensitive heels. Emptying the air cells with check valves or lower air cells. **NOTE!** These options are only available with new orders.

Cable holder

A pocket along one long side of the mattress that holds the power cord in place to minimise the risk of tripping over the cord or the cord becoming trapped under the wheels of the bed. **NOTE!** This option is only available with new orders.

Sheet holder

Specialised clips to which the sheet can be attached. Six required per mattress.

11.2 Accessories

Art. no.	Description and size
CC-900220	Heel function with valve (4 cells)
CC-900222	Heel function with valve (3 cells)
CC-9094	Transport bag 80/90 cm
CC-9095	Transport bag 105/120 cm
CC-9075	Sheet holder CuroCell® (one of)

Top part LF (low friction) - Top part with increased sliding function, can be used for heavy immobile patients.

11.3 Other accessories

To ensure the best level of comfort, we recommend use of accessories from Care of Sweden since our products are designed to work well together. Please contact Care of Sweden or your local dealer for accessories or more information on our products.

12. Warranty

12.1 Scope

This CuroCell® system is covered by a 2-year warranty for manufacturing defects. The warranty does not apply to normal wear and tear or product impairment or damage stemming from negligence or improper handling/care.

12.2 Service and maintenance

This CuroCell® mattress is a medical device, in accordance with MDD 93/42/EEC, that is used as an aid in preventing and treating pressure ulcers. For this reason, we recommend that the pump be regularly serviced and inspected to maintain functionality and performance. Like other technical devices, a pump that is properly cared for works better and lasts longer.

Service and maintenance must always be performed by Care of Sweden or one of its authorised technicians. Only use spare parts that have been approved by Care of Sweden. Use of non-approved spare parts invalidates the warranty.

A warranty claim must be submitted to Care of Sweden before the product is returned.

Please contact Care of Sweden or your local dealer if you have questions regarding warranty and service.

12.3 Life expectancy

This product's expected life is estimated to be 5 years.

13. Other information

13.1 Disassembly and recycling

Except for certain parts of the pumps, energy recovery is possible for almost all material in CuroCell® products through incineration in waste incineration facilities.

Pump:

A used CuroCell® pump must not be disassembled. It must instead be taken to a recycling centre and sorted as electronic waste.

Mattress:

A used CuroCell® mattress must be taken to a recycling centre and sorted as combustible waste.

For more information, please contact Care of Sweden or your local dealer.

13.2 Returns and complaints

Complaints are to be reported to the supplier. Return of a product shall follow the supplier's instructions and can only be done after the complaint has been reported. Damages due to the transportation should be reported to the transportation agent.



Manufactured by

care of sweden
Supporting Life

Contact:

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SWEDEN

Supplied by