

CuroCell® 4 AD

Alternating pressure system

Item number user manual: 95-001061



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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 4.4). 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 vapour permeable 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 improvement or to prevent skin damage.



Always read the user manual prior to use.

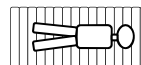
1.1 General information

This CuroCell® mattress is a medical device in accordance to 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 AD is an alternating pressure mattress that is placed directly on the bed frame. 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® 4 AD 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

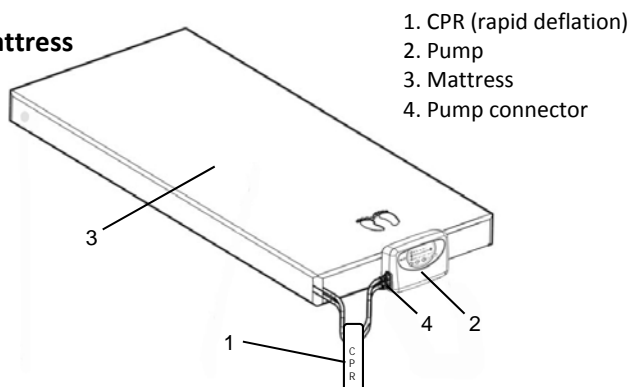
To achieve the best possible result for this product it is recommended that a well-planned and well-structured working environment be used. In our guideline "Action plan" you will find examples which can be applied and put into practice when using our products.

Mattress guide

This practical guide gives you as a care giver, help in choosing the correct mattress from the Care of Sweden's range. CuroCell® 4 AD 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.

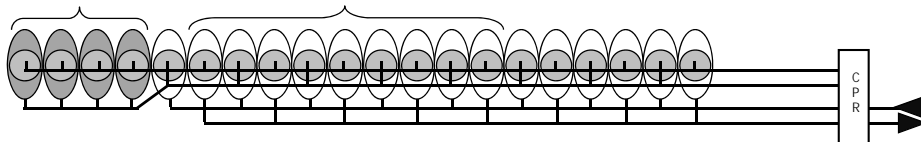
2. Product description

2.1 Pump and mattress

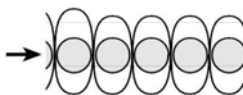


4 static head cells.

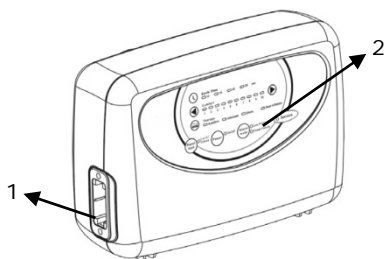
If the product is equipped with ventilated cells, they are located here (9 cells).



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

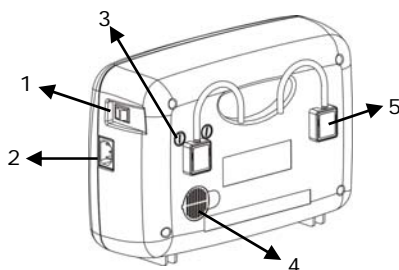


2.2 Pump



Front

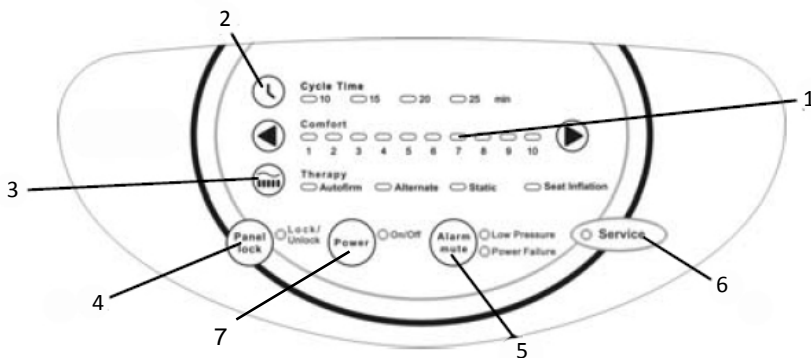
1. Quick connector unit, air
2. Control panel



Back

1. Off/On (0/1)
2. Power cord connection
3. Fuses (2 pcs)
4. Air filter
5. Bed hooks

2.3 Pump functions – control panel



1 COMFORT SETTING

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.

2 CYCLE TIME

There are four selectable cycle times. Press the button to select cycle time.

3 PROGRAM (THERAPY)

Change the mode by pressing the button, the chosen mode is indicated by the green light. The modes' order is: Autofirm, Alternate, Static, Alternate - seat inflation, Static - seat inflation.

A. Autofirm Autofirm is used to fill the mattress completely with air for firm support. The pump always starts in this mode. When the correct pressure is reached, it changes automatically to the previous setting or to the presetting outlined below.

Presetting features for Autofirm process

1. Program (Therapy): Select the required program.
2. Comfort setting: Set the required air pressure (1-10).
3. Cycle time: Select from 10, 15, 20 or 25 minutes.

Note: The preset Cycle Time, Comfort Level and Therapy mode will be illuminated to indicate the settings during the Autofirm process. (Autofirm LED is also illuminated.) After mattress is inflated, Autofirm LED will be turned off automatically.

B. Alternate In this mode, the pressure alternates between the cells and there are four different cycle times to choose from.

C. Static When 'Static' is chosen, the alternating cycle is discontinued and the pressure is equalized over the cells. This function makes all patient movements, as well as nursing and care of the patient, easier. The function can be used in association with patient care, repositioning/transferring in and out of bed. Press button to turn off. Otherwise, this is automatically done after about 20 minutes.

D. Seat inflation This mode gives extra support when sitting up and can be set for both alternating and static mode.

4 PANEL LOCK

Press down the Panel lock button for about 2 seconds to lock or unlock the panel.

5 ALARM MUTE

Press the ALARM MUTE button to temporary turn off the alarm. Should the situation not be resolved within 5 minutes, the alarm will be activated again. Please refer to section 8 to troubleshoot any problems with the alarm.

A. Power failure alarm

During a power failure, both the sound and light alarm will go on. Turn it off by pressing the ALARM MUTE button.

B. Low pressure alarm

When the low pressure light is on, the pressure in the mattress is below normal. Both the light and sound alarm will activate. The alarm will sound until the ALARM MUTE button is pressed. If the problem remains, see chapter 8 for trouble shooting.

6 SERVICE

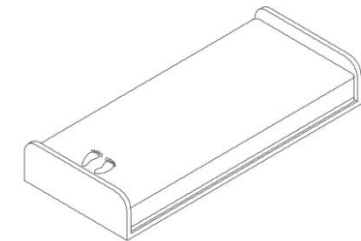
This light indicates a technical failure in the pump. First check that the air filter is clean and that the pump is not covered by anything (such as a pillow or a blanket). If the problem remains, please contact the manufacturer or your local dealer for further information.

7 POWER

Power on/off.

3. Assembly/Installation

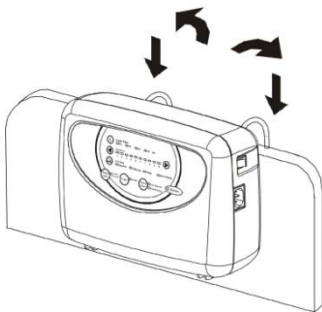
When unpacking the mattress, check that none of the parts are damaged. In the event of damage, contact the manufacturer or your local dealer before using the product.



1. Place the mattress on the bed frame. Secure the mattress to the bed with straps on the mattress bottom.

Note!

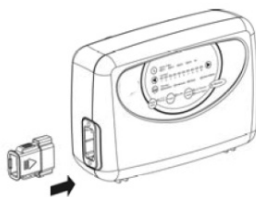
- Make the bed with sheets for added comfort.
- Check that the CPR valve is closed.
- The mattress must be attached to the bed's moving parts, if it is height adjustable.
- Check the cells and snaps to make sure that they have been attached correctly.



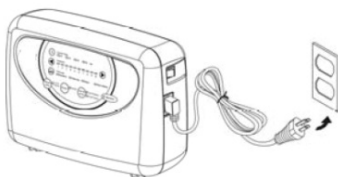
2. Hang the pump at the foot end of the bed or place it on a flat, steady surface.

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 crushed 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 at the side of the pump is set to 0 (off). Connect the plug to an approved electrical socket (220-240 V).

4. Operation



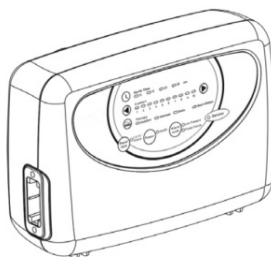
Note! Always read the user manual prior to use.

4.1 Start-up

1. Set the power switch on the side of the pump to 1 (On) and start the pump by pressing the power button on the front panel.
2. Air starts to inflate the mattress. It takes at least 20 minutes until the mattress is ready for use.

Note! The pump always starts in the Autofirm mode.

3. The light for 'Low pressure' is lit until the mattress has reached the set pressure. When the light goes out, the system changes mode (to previous settings) and the mattress are ready to be used.



4.2 Program selection

There are four different programs. Please refer to section 2.3 for more details. As a standard setting, we recommend an alternating mode and a 10 minute cycle time.

4.3 Comfort setting

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

kg		kg	
0-30	1	100-110	6
40	2	120-130	7
50	3	140-150	8
60	4	160-170	9
80-90	5	180-200	10

Note! The pump always starts in the Autofirm mode. When the mattress has reached the required pressure, the pump is set automatically to the previously used setting or to the settings made in the Autofirm program. Please refer to section 2.3 for more details.

The mattress is now ready for use.

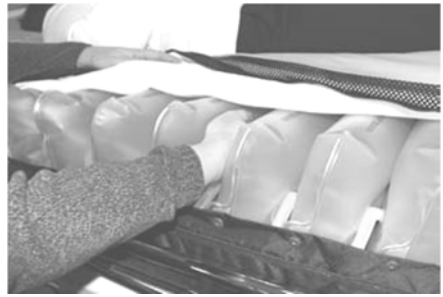
NOTE!

- We recommend the Seat inflation mode for all situations where the head of the bed is raised.
- 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.
- Always check the set pressure with a "hand check", see 4.4 for more information.
- Minimum/maximum user weight: up to 200 kg.

4.4 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.



4.5 CPR

In case of an emergency where CPR (cardiopulmonary resuscitation) is necessary: Rapidly pull the CPR band on the tubes between the pump and the mattress. Remove the tube connections on the side of the pump, for even faster deflation.

NOTE! Make sure that the CPR connector is properly connected after use.



4.6 Alarms

When the pressure drops to an abnormally low level, the Low Pressure diode lights up together with an audio alarm. Please refer to section 8 for troubleshooting. The alarm is deactivated by pressing the ALARM MUTE button on the pump's control panel. If the problem is not resolved within 5 minutes, the alarm will start again. The diode remains on until the pressure level is remedied and reset.

The pump is also fitted with a Power Failure alarm. An alarm sounds and flashes when the pump is disconnected from the electric power. Turn off the alarm by pressing the 'ALARM MUTE' button.

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.

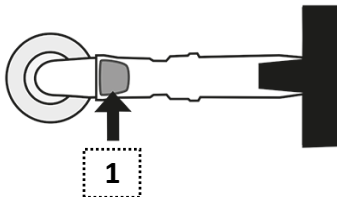
4.7 Transport function

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.



4.8 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 for another user. Consult the hygiene responsible or the supplier for help and instructions when unsure.

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 colours.



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 and disinfect the cells, all tubes and the CPR valve with an alcohol-based disinfectant/cleaner intended for this purpose. Perform, Virkon or Desisoft can also be used. Let it dry.
5. 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 %.
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.

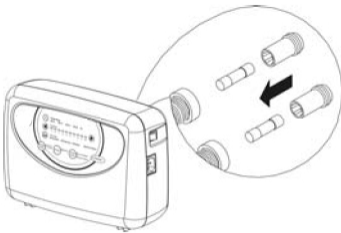
7. Maintenance

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.

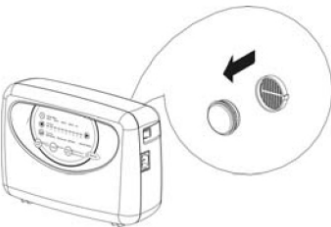
Contact the manufacturer or your local dealer for spare parts.

7.2 Changing fuses



1. Pull the plug out of the electrical socket before replacing fuses.
2. Remove the cover from 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 protective cover back in place. There are two fuses.

7.3 Changing the air filter



1. Unscrew the round safety plate on the back of the pump.
2. Lean the pump backwards in order for the filter to fall out from the holder.
3. Place the new filter in the filter holder and replace the safety 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 is 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 ("falls through")	The comfort setting may be set incorrectly. Increase the pressure and wait a few minutes. Do a Hand Check. Check the mattress as described in the section "Alarm is on" above. Read more in sections 4.2 and 4.3.
Mattress moves around	Check that the air mattress is fastened to the bed frame with the straps underneath (two at the head end and two at each side of the mattress).
Some cells have less air	This is normal, as air flow alternates between the cells for a set cycle period, depending on the designated cycle period (one cycle varies from 10 to 25 minutes depending on the setting used).
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 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® Vari
Voltage		220 V-240 V, 50-60 Hz
Power consumption		0.07 A
Type of fuse		T1AL, 250 V
Cycle periods		Variable, 10, 15, 20 or 25 min
Dimension (LxWxH)		29.1 x 20 x 11.7 cm
Weight		2.2 kg
Surroundings	Temperature	Operation: 10°C - 40°C
		Storage: -15°C - 50°C
		Shipping: -15°C - 70°C
	Humidity	Operation: 10% - 90% non-condensing
		Storage: 10% - 90% non-condensing
	Atmospheric pressure	700hPa-1060hPa
Classification		Class II, Type BF, IP41
MATTRESS		SPECIFICATION
Model		CuroCell® 4 AD
Dimension (WxLxH)		80/85/90/105/120x200/210x21 cm
Weight		10.5 kg (85x200x21 cm)

NOTE: The manufacturer 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 mattresses 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



Chlorine



Tumble dry



Do not tumble dry



Drip dry



Do not iron



Do not dry clean



Wipe off



Class II equipment
(Double Insulated)



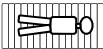
Type BF



IP-class
(Ingress Protection Rating)



Temperature range



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

10. Spare parts

Top part Olivia

Item no.	Size
CC-906911	80x200 cm
CC-906912	80x210 cm
CC-906913	85x200 cm
CC-906914	85x210 cm
CC-906916	90x200 cm
CC-906917	90x210 cm
CC-906910	105x200 cm
CC-906920	120x200 cm

Item no.	Name	Size	Item no.	Name	Size
CC-901310	Cell, PU	80x21 cm	CC-901330	Heel cell, PU	80x21 cm
CC-901311	Cell, PU	85x21 cm	CC-901331	Heel cell, PU	85x21 cm
CC-901312	Cell, PU	90x21 cm	CC-901332	Heel cell, PU	90x21 cm
CC-901313	Cell, PU	105x21 cm	CC-901333	Heel cell, PU	105x21 cm
CC-901314	Cell, PU	120x21 cm	CC-901334	Heel cell, PU	120x21 cm

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

CC-821	Fuse (set of 2)
CC-8202	Filter, disposable

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

11. Options and accessories

11.1 Optionals

Comfort fabric

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

Heel section

There are two options available to relieve sensitive heels. Emptying the air cells with release 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.

Sturdy transport bag

Transport and storage bag.

11.2 Accessories

Top part CuroCell LF (low friction)

Item no.	Size
CC-916210	80x200 cm
CC-916211	80x210 cm
CC-916212	85x200 cm
CC-916213	85x210 cm
CC-916214	90x200 cm
CC-916215	90x210 cm
CC-916216	105x200 cm
CC-916218	120x200 cm

CuroCell Comfort fabric

Item no.	Size
CC-907410	80x200 cm
CC-907411	80x210 cm
CC-907412	85x200 cm
CC-907413	85x210 cm
CC-907414	90x200 cm
CC-907415	90x210 cm
CC-907416	105x200 cm
CC-907418	120x200 cm

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

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-9075	Sheet holder CuroCell® (one of)

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

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