



USER MANUAL

# OptiCell Air1

Hybrid foam/air mattress  
Air1 · Air1 S · Air1 SX



*Järven Health Care*

*Thank you for choosing the OptiCell air mattress system. Our goal is for you to be satisfied with both in terms of function and longevity. We therefore ask you to spend a few minutes to read through this user manual to handle your OptiCell air mattress system in the best possible way.*

*If you have any questions that are not covered in this manual, please contact us at Järven Health Care. You'll find our contact details on the back of these Instructions for use.*

## Warning and information boxes



Warning box that informs about an important safety aspect or hazard. If you do not understand or follow the information, you may injure yourself or others!

Information box with instructions which, if not followed, may damage the product and/or impair the function and performance of the system.

Read this user manual carefully.

The user manual must be stored in an easily accessible place known to all those who will be working with the system.

## CE marking

OptiCell's air mattress systems and covers are CE marked according to MDR 2017/745. The labelling means that OptiCell has manufacturer responsibility and ensures that the product fulfils the essential requirements and that there is technical documentation and declaration that must be retained for at least ten years.



## Quality work

**Our quality work and customer focus** are realized by being responsive to customers' needs and expectations, and by working in all respects to promote a partnership based on a long-term approach and trust. Continuous improvement of our products and services is the foundation of our ability to satisfy our current and future customers.

Our fundamental quality work also includes finding evaluation methods and standards that offer the quality in terms of comfort, function, durability and price. OptiCell focuses in particular on, thorough competent and committed employees, and continuously training and developing the skills of healthcare professionals. Our hope is that it will lead to high-quality care with a focus on preventing pressure ulcers and healthcare-associated infections, as well as reducing the number of fire incidents in healthcare.

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# Safety instructions

Read the following information before using your health care mattress!

- **The product should only be used in accordance with these instructions for use.**
- The product must be visually assessed before and after each use.  
*Read more about inspecting your mattress on pages 24 and 25.*
- The product should not be combined, assembled or repaired with parts, accessories or spare parts other than those described in this user manual or other documentation from Järven Health Care.
- Ensure that the mattress is not crushed or damaged during storage.
- Avoid sharp objects in the vicinity of the mattresses and covers.
- Avoid mechanical shocks.
- To avoid damage, the products must not come into contact with hot sources or fire, such as glowing cigarettes, hot lamps or similar.
- Ensure that you use the right mattress size for the intended bed and the right model for the patient in question.
- Position the patient so that the airways are kept clear.
- When handling or disposing of the mattress, follow the local instructions for specific infections or situations.
- Ensure that the cover is intact! A damaged cover is no longer hygienic as there is a risk of body fluids penetrating the cells and or eventual foam. Therefore, check carefully that there is no damage to the mattress cover.
- Always inspect the electrical cable before use. Damaged or broken electrical cables must not be used.
- Follow the standards for electrical safety.
- Do not cover the pump with blankets, clothing or similar.
- Connect the product to an earthed wall socket so that as short a section of the cord as possible lies on the floor

According to the Medical Products Agency's regulations on medical devices, the manufacturer is obliged to report accidents and incidents that can be linked to the manufacturer's product.

**Therefore, any incidents or accidents related to our products must be reported to us immediately.**

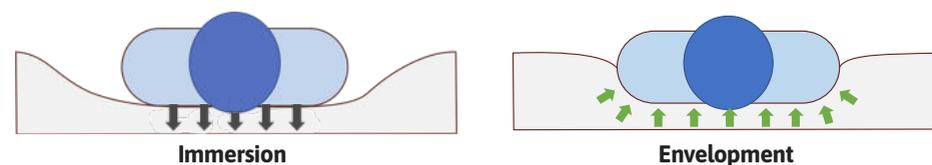
# Product information

The OptiCell Air1 range of air mattress systems consists of

- **Air1 hybrid mattress, foam with integrated cells, with manometer**
- **Air1 S & Air1 SX alternating hybrid mattresses, foam with integrated cells, with electric pump.**

The mattresses have been developed to be part of a preventive and therapeutic care work. The mattresses have different levels of pressure relief and are suitable for all care environments.

The mattresses adapt to the contours of the body to distribute pressure across the body surface through Envelopment and Immersion, the two most important biomechanical properties to reduce the risk of pressure ulcers [1].



## OptiTex mattress cover

The OptiCell air mattress system comes with an OptiTex hygienic PU cover. An elastic cover that contributes to the pressure-relieving properties of the mattress through its structure.

The OptiTex cover has an integrated, waterproof cable channel that contributes to better hygiene, keeps the power cord out of the way and protects the air hoses.

The cover is made of a PU material on both the top and bottom and incorporates a drip shield which protects the waterproof zipper on all four sides. All seams are welded.

The hybrid mattress cover includes an anti-slip function and four attachment straps to secure the mattress to the bed frame. The covers also include 2 handles on each long side handles for easy transport of the mattress.

**OptiTex Evac, with evacuation function** (for mattress Air1 Evac, Air1S Evac and Air1SX Evac) The base cover is equipped with a non-friction evacuation function and includes strong and well-positioned handles for easy handling, and safety straps for securing the user.



The mattress cover must always be placed right side up ensuring that the drip edge acts as a protective shield over the zip.

[1] Wounds International 2020 | Vol 11 utgåva 4 | Gefen A and Soppi E, sid 39

“The two most important biomechanical properties that determine how effectively a support surface reduces the risk of pressure ulcers in patients with impaired mobility or sensory functions are immersion and envelopment.

- **Immersion** is the depth that a patient's body penetrates when placed on a support surface.
- **Envelopment** is the ability of the support surface to adapt itself around the patient's body.”

## Fire standard

OptiCell's mattress systems are fire tested according to standards SS 876 00 01, EN 597-1 & 2.

## Intended use

**The mattress systems covered by this manual are intended for use in acute and post-acute care settings, including long-term care, home care and private homes.**

OptiCell Air1 is designed as an aid in the preventative and therapeutic care of pressure ulcers (or pressure injuries) when combined with a customized and comprehensive pressure ulcer treatment program (e.g. repositioning, nutritional supplements and skin care).

The mattress systems are intended to be used with a sheet between patient and mattress.

The OptiCell Air1 is part of the pressure injury (pressure ulcer) management protocols. All other aspects of care must be considered by the prescribing physician. If existing pressure injuries do not improve, or if new ones develop, the entire treatment plan should be reviewed by the prescribing physician.

For all pressure injury care, clinical assessment and experience must determine whether, and which, dynamic air pressure system is to be used.

**The OptiCell air mattress system can be used as a (bed) mattress in the following environments, defined in standard IEC 60601-2-52**

- Application environment 1 (*acute care*).
- Use environment 2 (*short-term care in hospitals or other healthcare facilities*).
- Use environment 3 (*long-term care in healthcare facilities*).
- Application environment 4 (*home care*).
- Use setting 5 (*outpatients or outpatient care*).

## Contraindications

The systems covered by these instructions for use must not be used by patients with unstable cervical, thoracic and/or lumbar fractures, cervical traction or skeletal traction.

## Precautions

If the patient has other unstable fractures or conditions that may be complicated by a soft or moving surface, the appropriate physician should be consulted before use.

## Life expectancy

Under normal conditions and proper care, the life expectancy of our OptiCell air mattress systems is between 5-10 years.



# Before use

## Receiving and unpacking

The OptiCell Air1 is delivered packaged in cardboard. Avoid using a knife when unpacking and handling the product to prevent risk of damage. First check the product for any damage. In the event of transport damage, see page 37.

Please sort and recycle the packaging to reduce environmental impact.

OptiCell Air1, Air1S, and Air1SX are supplied with:

- Mattress with integrated cells, Air1 S and Air1 SX come with air hose and CPR valve
- Power cable (6 meters) for pump (not an accessory for Air1)
- OptiTex cover

Depending on the model, the following are also included:

- Air1 - pressure gauge
- Air1 S - 1 OC20 pump
- Air1 SX - 1 OC55 pump

## To think about...

- **The air pump must not be used in damp areas**, nor left outdoors during inclement weather. Avoid handling a pump that has been exposed to damp until it is dry again.
- **The comfort and function of the mattress changes depending on the user weight.** Also remember that a tall user may have a similar weight to a smaller user but need a different pressure. This must always be checked carefully for each user.
- **The user must not be positioned so that their respiratory tract faces the mattress.**
- **Handle the air hoses, pump and electrical wiring (Air1 S and Air1 SX) with care.** Air hoses and electrical wiring (Air1 S and Air 1 SX) can be squashed and damaged by bed rails etc.
- **The comfort and function of the mattress** changes depending on the air pressure of the mattress in relation to user weight. Keep in mind that a tall user may have a similar weight to a smaller user but prefer a different pressure. This must always be checked carefully for each user.
- **The Air1 hybrid mattress requires no electricity and is ready to use right out of the box.**

Avoid knives, keyrings or other objects with sharp edges that can cut, puncture, or otherwise damage the product..



# Installation

Before installation, check that the bed frame is compatible with the size of the mattress in question. Using the wrong size mattress for the bed frame can lead to undesirable effects.

## Inspection of the system

At the time of installation, a visual inspection of the hose set, cover and cells must be made. If any damage or contamination is suspected, a more thorough check must be carried out before using the system. If the air pressure system is damaged, the product must not be used and must be replaced. In the event of contamination, the system should be cleaned if possible. (See *Care - Cleaning* on page 26.)

## Positioning of the mattress

(Models Air1, Air S och Air1 SX)

**The OptiCell Air1 can be deployed and used immediately.** No installation or other preparations are necessary. The included manometer is only to be used when there is a need to check and adjust the air pressure in the integrated air cells. The mattress is placed directly on the bed frame. It is the caregiver's responsibility to ensure that the mattress is securely positioned within the bed frame..

## Positioning of pump

(Models Air1 S och Air1 SX)

We recommend hanging the pump on the foot end of the bed frame via the pump suspension hooks. (See illustration) If it is placed otherwise, ensure the pump is not at risk of damage due to falling, or being kicked or struck. The care provider is responsible for ensuring the pump is in a safe position.



For considerations regarding installation in a home environment, see "*Care in the home*" on page 13.

# Care in the home

Before using the OptiCell mattress system in a home environment, the personnel or family members who will manage the system should read and understand these user instructions and be given training from experienced personnel or Järven Health Care.

Pets must be kept away from the mattress to reduce the risk of damage to the cover, air hoses and cells.

Other safety aspects that these user instructions cover also apply to home care.



Beds in private homes often have spring mattresses. These must not be used as there is a risk that the Air1 and user could slide off the bed.

## Things to consider when installing a mattress in your home

When installing the mattress system in a home environment, special consideration should be given to ensuring:

- Pets do not come into contact with the mattress.
- That the user instructions are available.

### For Air1 S and Air1 SX the following also applies:

- That air hoses and electrical wiring are intact and fully protected against damage.
- That the hose and electric cable do not pose a suffocation risk for children.
- That the pump is not placed such that it risks falling onto the floor.
- That the pump is visible and not covered.
- That no unauthorised person can access the pump.



# Connect and start up pump Air1 S and Air1 SX

The mattress is placed according to the instructions in the "Installation" section. Air1 S and Air1 SX have a pump with an accompanying power cable. To start-up, follow the steps below.

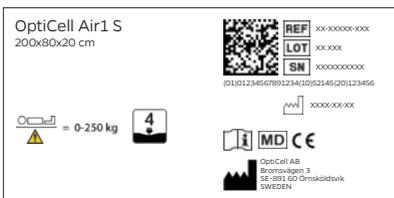
- Place the pump power cable in the mattress cable channel together with the hose set air hoses to avoid the risk of anyone tripping over a loose cable. For the same reason try to run the power cable to the power socket as discreetly as possible.
- Power cable and hose set are connected to air pump
- With the pump switch in the off position, connect the power cable to a socket. The power socket must be within easy reach to enable the mattress to be disconnected if necessary..

## Checking for correct pump connection

To ensure proper functioning, healthcare professionals must always check that the correct pump is used for the mattress.

- Check the mattress label (see illustration). The label shows the product name, for example: OptiCell Air1 S, Air1 SX.
- Connect the air hose for the mattress to the pump labelled with the same name on the front of the pump. (see page 34 for a picture of the pump label)  
Example: a mattress labeled OptiCell Air1 S/SXT is to be connected to a pump labelled OptiCell OC20/SMART.
- The air hose is designed so that it can only be connected to the correct pump.

**IMPORTANT** It is important always to check the labelling to avoid mix-ups.



## When installing a new air mattress system

### 1. Start the pump

### 2. Place the patient on the mattress.

Hybrid mattresses can be started with the patient already in place, as they are foam mattresses with integrated air cells. This means there is no risk of the patient sinking through the mattress despite the empty air cells.

## When installing a previously used air mattress system

Om systemet har varit i bruk hos en annan brukare bör pumpen fabriksåterställas för att rensa eventuella tidigare inställningar (se "Återställa fabriksinställningar" längre ner på sidan).

Följ sedan stegen för "Vid installation av nytt luftmadrasssystem" ovan.

## When reinstalling at the same user

Start the pump, which automatically returns to the previous settings.

Check the pump setting, especially comfort mode and cycle time, to ensure that they match the user's needs.

Then follow the steps above for "When installing a new air mattress system"

# Restore factory settings

To restore the pump to its factory settings, proceed as follows:

### 1. Press and hold the "SILENCE ALARM" button.

(see "Overview", page 30 & 32 position C resp H.)

### 2. Start the pump, with the "SILENCE ALARM" button still pressed.

If this is done correctly, three beeps will be heard at start-up indicating that the pump has been restored to its factory settings.

If the pump does not make a sound, start again with the same procedure. If it still does not beep, contact Järven Health Care.

Perform a factory reset of the pump every time a new mattress system is installed. This will ensure that any stored user settings in the pump built-in memory will be deleted.

# Handling

## Setting the comfort mode and cycle time

When the pump is started, the air pressure is automatically adjusted based on the user's weight, height, posture, movements, and position in the bed. The pump's comfort mode and cycle time can be adjusted while maintaining the automatic function.

The comfort mode is adjusted by raising or lowering the general air pressure. The pump's factory setting is comfort mode "0".

The time interval for the cell exchange (cycling) can be adjusted. The factory setting provides an exchange every 10 minutes.

For more information on how to set up the pump, please refer to the overview for the respective pump (page 30 or page 32).

The clinical assessment of the patient's condition, combined with the patient's experience of the mattress, forms the basis for setting the pump's functions.

Under normal circumstances, no adjustments are needed. Note, however, that the anatomy of different patients will affect this.

## In case of power outage

In the event of a power outage, whether planned or not, the mattress will, under normal conditions, retain air pressure for a period of time. This enables e.g. the bed to be moved to another room.

**Disconnect the hose from the pump and replace the protective cap to ensure that the air in the mattress is retained for as long as possible.**

A replacement mattress will maintain an acceptable air pressure for at least 12 hours. Bed and combination mattresses will maintain the air pressure for about 8 hours. These mattresses rest on a foam core, which ensures that the user will not lie through.

**These times are guidelines and the air pressure of the mattress should be checked at regular intervals to ensure that the user does not lie through the mattress during power outages.**

## Storage

OptiCell air pressure systems should be stored in dry, room-temperature premises. The mattress should be handled gently during storage to reduce the risk of damage. Avoid exposing the mattress to direct sunlight for extended periods.

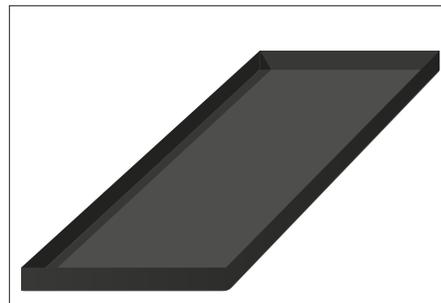


According to the NPUAP/EPUAP guidelines, the patient's condition must be regularly monitored.

# The mattress structure

OptiCell air pressure mattresses are structured as below.

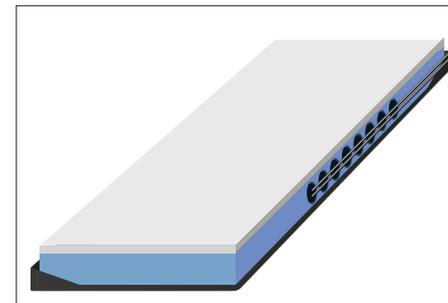
## Underside of the cover (PU)



The underside of the mattress is made of hardwearing PU with four sturdy handles (not the bed mattress) for moving the mattress without the user. The underside is black.

The underside also features an integrated cable channel with a waterproof zipper and drip edge (applies to Air1 S and Air1 SX).

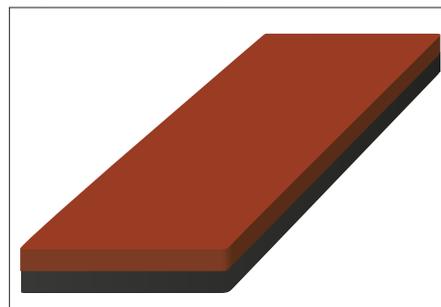
## Foam core with cells



The OptiCell Air1 has a foam core with drilled channels for the air cells. The air cells have non-return valves and are interconnected by two air hoses.



## Top of the cover (PU)



The mattress top is made of a soft, silent, elastic polyurethane fabric.



The four handles at the bottom are designed to move the mattress without a patient. These must not be used when a patient is on the mattress.

# Guide mattresses

## OptiCell Air1 - three models

Air1 is OptiCell's series of pressure-relieving hybrid mattresses featuring a foam core and integrated air cells. The air cells form a closed air system, which provides a distribution of air that give each mattress uniquely low test values during pressure testing. The OptiCell Air1 range is designed, developed and manufactured as an aid in the prevention and treatment of pressure ulcers when combined with an individualized and comprehensive pressure ulcer management program (e.g. repositioning, nutrition, hydration, and skin care).

Mattress model	Mattress type	Pressure ulcer category
Opticell Air1	Hybrid mattress foam/air	3
Opticell Air1 S	Hybrid foam/air mattress with pump OC20	4
Opticell Air1 SX	Hybrid foam/air mattress with pump OC55	4

## All models of the mattress come in two different thicknesses

Mattress	Height	Max load
Opticell Air1 R7 (all models)	18 cm	230 kg
Opticell Air1 R8 (all models)	20 cm	250 kg

# Air1 - Manometer

Air1 is supplied with the following manometer.

Please note that the manometer is available in different models and may differ from the image below.

The manometer is used to check the air pressure in the cells and, if necessary, add or release air to adjust the air pressure in the cells.

Recommended air pressure is 30 mmHg for a good therapeutic effect with a tolerance of +/- 10 mmHg (green zone). If there are special needs or the patient wishes to adjust the comfort level, the air pressure can be adjusted by +/- 20 mmHg (yellow zones) in consultation with an approved medical practitioner.

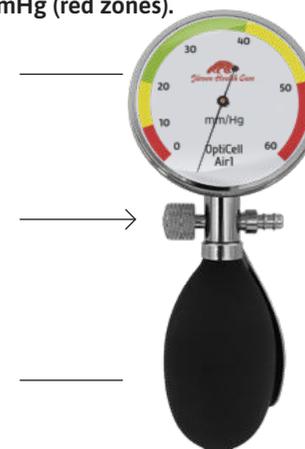
**Air pressure should not be outside 10-50 mmHg (red zones).**

**Manometer** (air pressure in mmHg).

**Valve to release air**

By unscrewing this valve, air is released and the pressure falls. It is important to ensure this valve is closed to prevent air leaking, which can reduce the therapeutic effect.

**Rubber bellow** to pump the cells with air.



The manometer is sensitive to physical impact and must be handled with care. Ensure that it is not subjected to shocks or dropped on the floor.

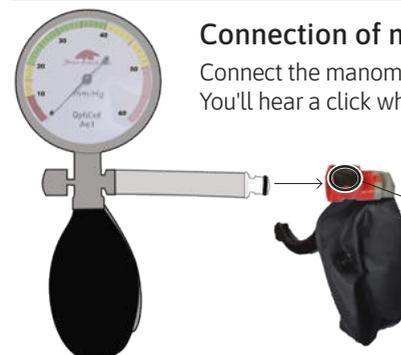
**Connection of manometer**

Connect the manometer to the cell connector (see illustration below). You'll hear a click when the connection is secure.

**Disconnect manometer**

Press the button on the top of the cell connection to disconnect the manometer.

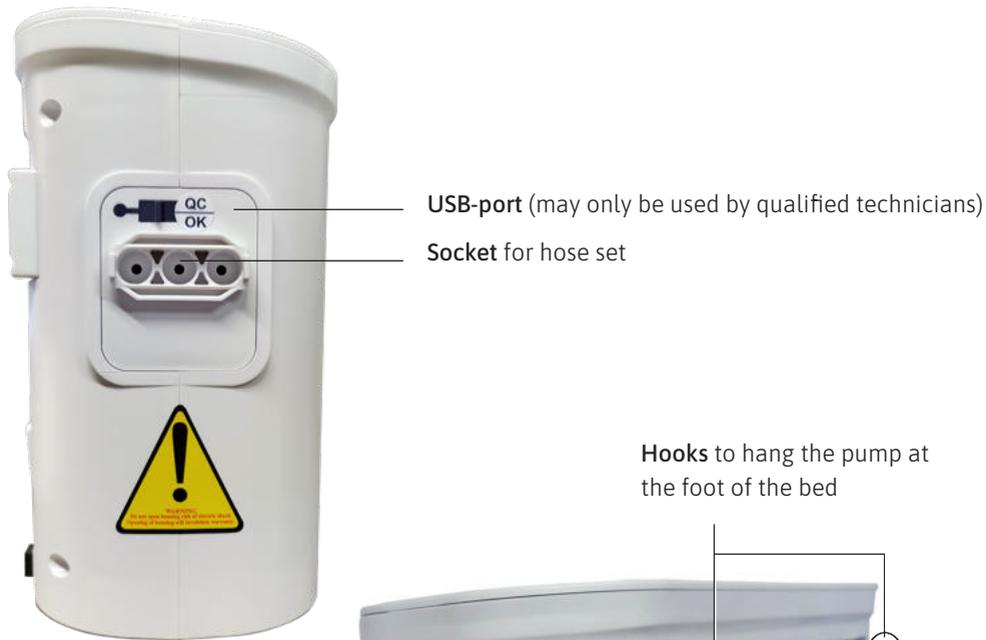
**Always disconnect the manometer after adjusting/checking the air pressure.**



The connection to the cells is located on the right side of the mattress, at the foot end.

# Air1 S - OC20 electric pump

Air1 S comes with an OC20 electric pump.



Hooks to hang the pump at the foot of the bed

Power button

Power socket

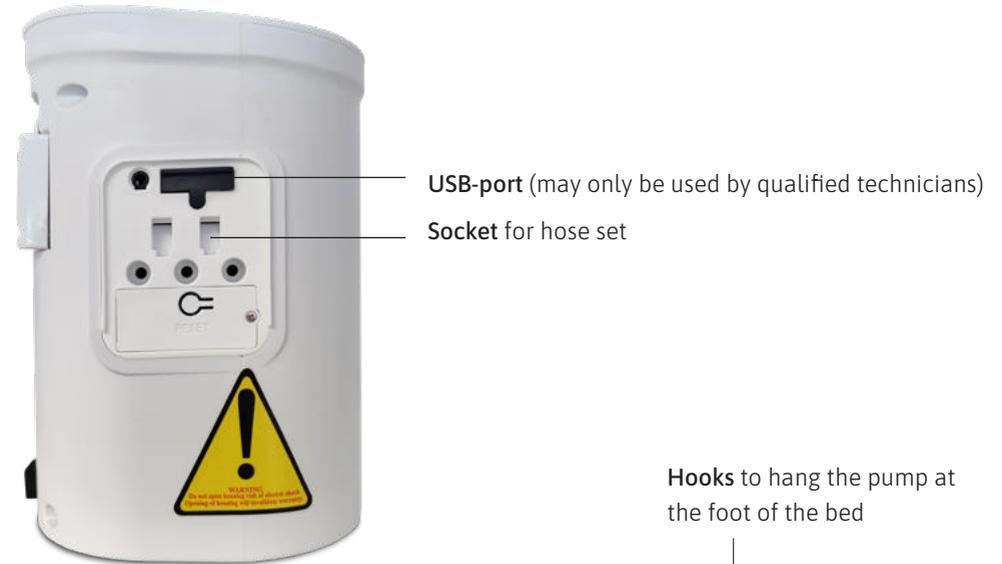
Cover for pump fuse



Cover for air filter

# Air1 SX - OC55 electric pump

Air1 SX comes with an OC55 electric pump.



Hooks to hang the pump at the foot of the bed

Power button

Power socket

Cover for pump fuse



Cover for air filter

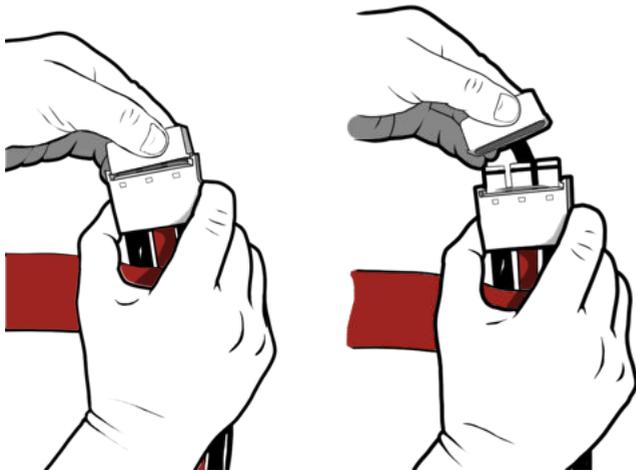
# Connecting the air hoses

## Air1 S (Pump OC20)

### Connect the air hoses to the pump

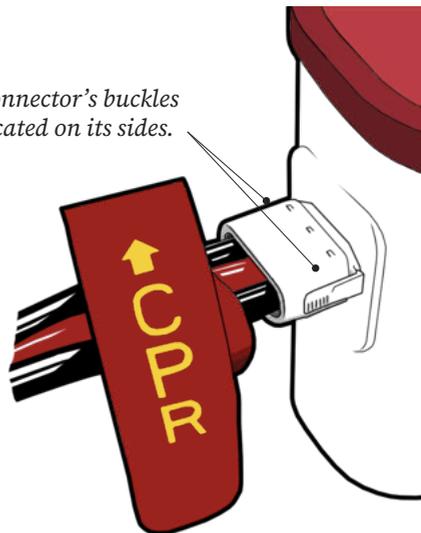
To connect or disconnect the air hoses and to remove the protective cap on the air connector, press in the two buckles on the side of the connector. This releases the hooks that hold the connector in place.

Once the connector is correctly fitted to the pump, it is held in place by the hooks.



The air hose coupling is fitted with a simple hand manoeuvre. No special tools are required.

The connector's buckles are located on its sides.



# Connecting the air hoses

## Air1 SX (Pump OC55)

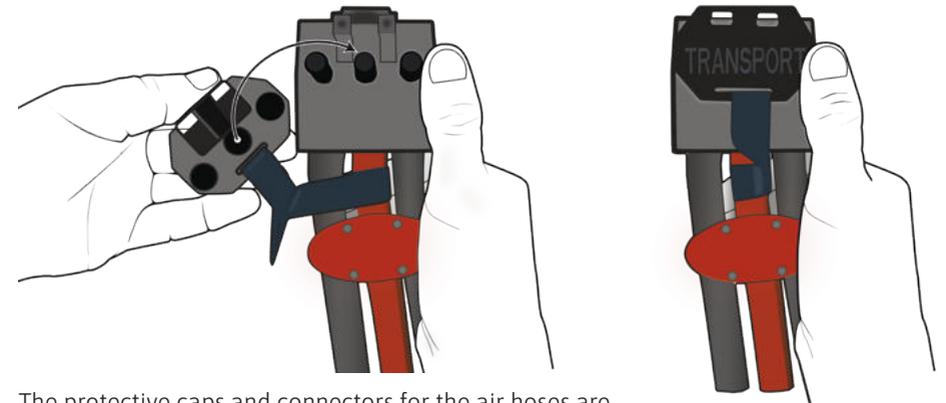
### Connect the air hoses to the pump

Press the connector firmly to connect the air hoses to the pump.

Press the button on the top of the connector to disconnect the air hoses from the pump and to remove the protective cap on the connector. (See illustration)

### To minimise the risk of air leaks at the connector, check:

- That the hook is not damaged and retains its tension.
- That the black O-rings on the three air tubes at the connector are not missing, misaligned or worn.
- That no debris is blocking the air tube or preventing a good seal.



The protective caps and connectors for the air hoses are attached with a simple hand movement. No special tools required.

Press the button on the top of the



# Care - Inspection Care

## **Inspection of your Air1 mattress**

An inspection plan for the mattress system should be established to ensure function and durability. Contact Järven Health Care if you need help with this. Contact details can be found on the last page of the user manual

## **Inspection of Optitex hygiene cover**

Regularly inspect the cover for visible signs of damage or wear, such as tears, cracks, holes, stains or discolouration. Check all sides (including the underside of the cover).

## **Inspection of mattress, foam and hose set**

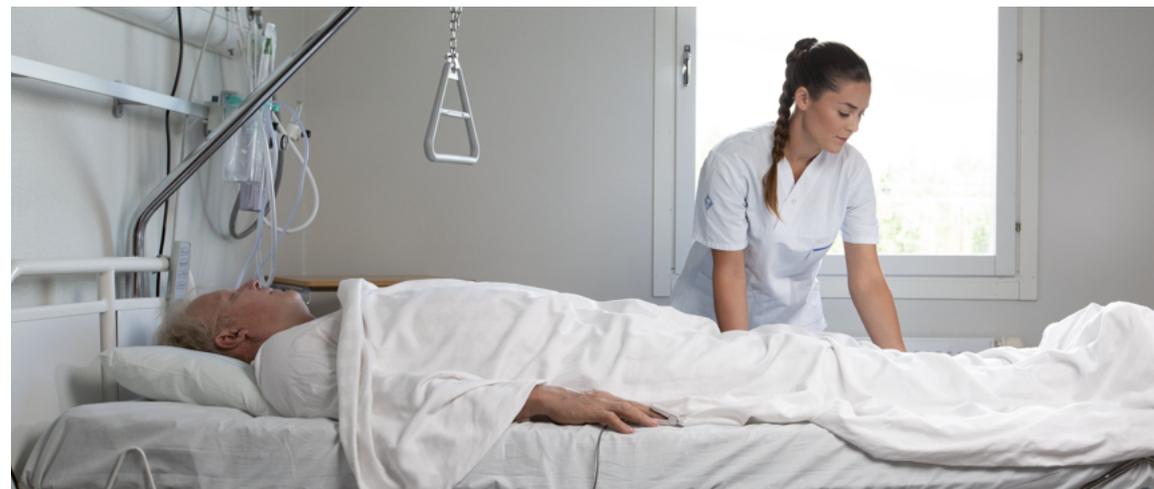
- Check the power cord and plug for damage or abnormal wear.
- Check the air hoses for damage or abnormal wear.
- Check the connection of the air hoses (see page 23).
- Check that the air hoses are correctly attached to the cell valves.
- Check any foam for discolouration and contamination.
- Check cells for contamination

## **Inspection of the pump (Air1 S och Air1 SX)**

Check that the pump has no visible signs of damage or wear, such as cracks, holes, stains or dirt. Check all sides (including the underside of the pump).



If contamination of the foam core is found, the foam core should be discarded and replaced to maintain a safe care environment.



# Care - Cleaning

## Cleaning the cover

The cover is made of a PU material on both the top and bottom surfaces and can be easily wiped down and cleaned with an alcohol-based disinfectant.

For a more thorough cleaning, the entire cover (top and bottom surfaces) must be laundered at a minimum of 70°C for at least 10 minutes using an unscented detergent (in accordance with the standard "SS-EN 14065:2016 Textiles - Textiles treated in laundries - Biocontamination control system"). The maximum washing temperature for the cover is 95°C.

The cover can be cleaned with a chlorine-based cleaning agent provided the chlorine content is less than 1,000 ppm (0.1%).

## Cleaning of cells and air hose

The cells can be washed individually or together. Use a damp cloth and gentle detergent. The air hose can be wiped clean with a damp cloth and mild detergent.

## Cleaning the pump (Air1 S and Air1 SX)

Before cleaning the pump, it is important to disconnect the power cable from the power socket. For cleaning, use either surface disinfectant or a damp cloth together with a mild detergent (this applies to both the pump housing and the power cable).

## Cleaning the air filter (Air1 S and Air1 SX)

The pump has an air filter that can be easily accessed by opening the inspection hatch on the back of the pump. (See below). Wash the filter with water and mild detergent.



Protective cover for air filter on the back of the pump.



The air filter is located on the protective cover inside and can be easily removed.



# Actions in case of alarm

## Air1 S and Air1 SX



The alarm is an indication that the system is not working properly. MEASURES TO FIND THE CAUSE MUST BE INITIATED IMMEDIATELY.

### Ensure the air pressure of the mattress

Depending on what happened, the mattress may have lost its air pressure so it is important to ensure that the patient is not bottoming out to reduce the risk of complications.

An assessment should be made of whether the patient should be moved to another mattress or whether the fault can be rectified within a reasonable time.

The fault is usually of such a nature that it can be rectified quickly, which is why it usually does not require the patient to be moved.

### If the alarm indicates an electrical fault

- Check that the power cord is correctly connected to both the pump and the wall socket.
- Check the wall socket. Check that other equipment is working (e.g. bedside lamp) in the wall socket.
- Check the pump's fuse. (See figure 1, page 28)

If all of the above checks have been carried out and no fault is found, the pump should be replaced.

### If the alarm indicates a fault with the air pressure

This alarm is triggered when the pump cannot provide the required air pressure. The cause is either a leak or that the pump has been damaged. By far the most common is a leak, which is why it is checked first

- Check the air hose connection at the pump. Ensure that the connection is properly secured. Check the coupling's black rubber rings (O-rings) (see image 2, page 29).
- Check the CPR valve to ensure that it has not been accidentally opened.
- Check the hose set. Check that the hoses are connected to each cell in the correct way. Also open the cover's cable channel and ensure that the three quick couplings on each hose located on each hose are correctly positioned.
- Check the cells. Examine the cells for any damage causing air leakage.

If all of the above checks have been carried out and no fault is found, the pump should be replaced.

The air pressure fault alarm has a delay of 30 minutes at start-up and 20 minutes thereafter. This is to prevent the alarm from being triggered when the bed and mattress are moved.

### Detailed image

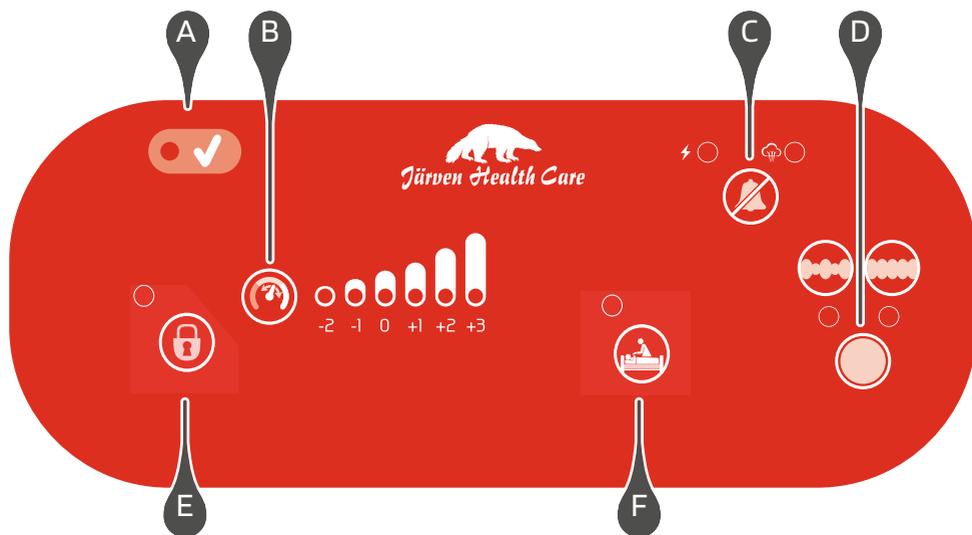


**Figure 1**  
The pump's fuse is located behind a cover, positioned below the power connection. The cover is released with a small screwdriver or similar.

## Resetting the alarm

Once the cause of the alarm has been detected and rectified, the alarm is reset by pressing the "SILENCE ALARM" button is pressed and held while the pump is switched on and off. The pump will then return to the factory settings and resets the alarm. If this is done correctly you will hear three beeps at start-up. All lights will flash at start-up, press any button to switch them off. If the patient had specific pump settings the pump is adjusted so that these are set again.

If the alarm is reactivated, either the fault has not been rectified correctly or there is further problems. The checks listed on the previous page should then be carried out again for continued troubleshooting.



## Overview pump - OC20 (Air1 S)

The switch is located on the right-hand side of the pump. Press ON/OFF to switch the pump on/off.

- A** The green light indicates that the mattress is ready for use. Filling an empty mattress normally takes about 5 minutes. When the light is on, the mattress is ready
- B** **Setting the comfort mode**  
The air pressure of the mattress can be fine-tuned by pressing this button. The user's experience and comfort are affected by the comfort mode selected. The pump's factory setting/default position is mode '0'
- C** **Silent alarms**  
In the event of an air pressure or electrical fault, the pump sounds an audible alarm. Press this button to silence this audible signal and start troubleshooting. In the event of an electrical fault, the lamp at "⚡" lights up. In the event of an air pressure fault, the lamp at "🚫" lights up.  
**Has the alarm gone off? See page 28 - "Actions in case of alarm".**
- D** **Dynamic or Static mode**  
Press this button to choose the required operating mode, either dynamic (alternating) or static mode. The dynamic mode is the pump's factory-set/default mode and is recommended under normal conditions. When the right-hand indicator is lit, the mattress is set to static mode. When the left-hand indicator is lit, the mattress is set to dynamic mode (alternating pressure). The alternating cycle time is 10 minutes.

- E** **Unlock the panel**  
The panel's buttons are locked after a period of time in order to exclude accidental or unauthorised change of the system's settings. To unlock the panel, press and hold this button for 5 seconds.  
*(NOTE! This button is not available on older models)*
- F** **Nursing/care mode**  
This selection sets the pump to static mode with maximum pressure. The function is used to facilitate nursing situations. Nursing/care mode is cancelled by pressing this button again. If the button is not pressed again the mattress system will automatically return to the previous mode after 30 minutes.  
*(NOTE! This button is not available on older models)*

### Specifications, pump

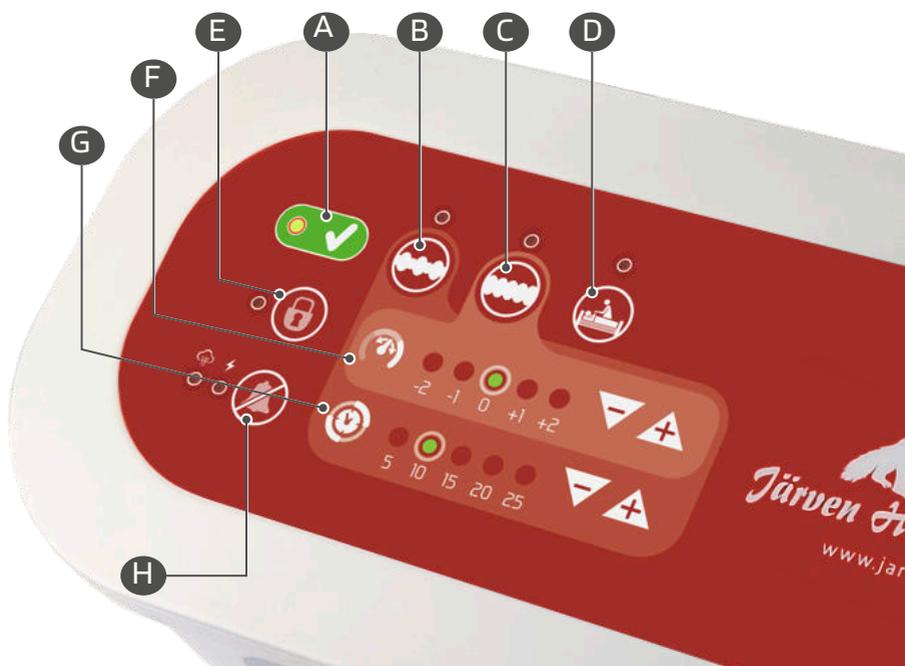
Pump OC20	Specifikations
Size	28,0 x 11,0 x 20,5 cm
Shipping weight	2,6 kg
Pressure range	20 ~ 70 mm Hg
Cycle time	10 minuter
Classification	Class II; IP21, Typ BF**
Power specification	~230 V AC/50 Hz, 1A, 12 W
Fuse specification	250 V, T 1 A
Degree of protection against electric shock	Class II, double insulated and without functional earth. Connects to the mains. Type BF
Degree of protection against liquid ingress	IP 21
Environmental requirements	TEMPERATURE Use: 10° ~ 35° C Retention: -15° ~ 50° C Transport: -15° ~ 70° C HUMIDITY Use: 20% ~ 80% without condensation Retention: 10% ~ 90% without condensation

For spare parts and accessories, please contact your distributor or Järven Health Care. Contact information is provided on the last page.

# Overview – Pump OC55

Inflating the mattress normally takes approx. 15 minutes.

- A** “Ready”, when the light is on, the mattress is inflated – ready to use.
- B** Dynamic/alternating mode.
- C** Static mode.
- D** Nursing mode, provides maximum static pressure to facilitate nursing care times. The mattress automatically returns to the previous settings after 30 minutes.
- E** The buttons on the panel are locked to prevent unauthorised adjustment of pump operation. To unlock the panel, press and hold the button for 5 seconds.
- F** Adjust comfort mode, there are five comfort modes to choose from. Reduce the air pressure by pressing “▽”. Increase the air pressure by pressing “▲”.
- G** Select the cycle time for switching in minutes. Reduce the interval by pressing “▽”. Increase the interval by pressing “▲”.
- H** Silence alarm, press to silence any alarm. The “⚡” light comes on when the air pressure in the mattress is low. Check for any leaks. The “🔊” light comes on in the event of a power failure.



## Specifications, pump

Pump OC55	Specifications
Size	28.0 x 11.0 x 20.5 cm
Weight	3.4 kg
Pressure range	20 ~ 70 mmHg
Cycle times	5, 10, 15, 20 or 25 minutes
Classification	Class II; IP21, Type BF
Power specification	AC 220-240 ~ 50 Hz 1A, 17W
Fuse specification	250 V, T 1 A
Degree of protection against electric shock	Class II, double insulated and without functional earth. Connects to the mains power supply. Type BF
Degree of protection against liquid ingress	IP 21
Operating requirements	<p>Temperature</p> <p>Usage: 10° ~ 35° C</p> <p>Retention: -15° ~ 50° C</p> <p>Transport: -15° ~ 70° C</p> <p>Humidity</p> <p>Usage: 20% ~ 80% without condensation</p> <p>Retention: 10% ~ 90% without condensation</p>

For spare parts and accessories, please contact your distributor or Järven Health Care. Contact information is provided on the last page.

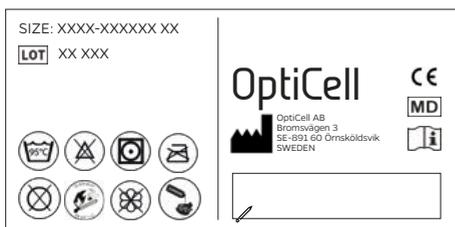
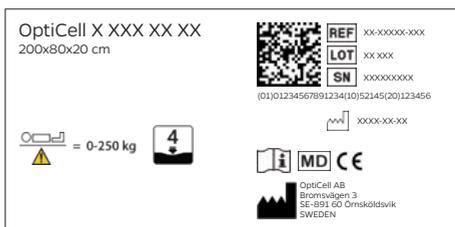
# Marking

## Mattress labels

Your OptiCell mattress system has several labels. Below is a schematic of where to find them.

Note that the number of labels and their individual design vary from model to model.

The label for the system is located at the foot of the upper part.



The label with the cover washing instructions can be found in a plastic sleeve inside the cover.



The label for washing instructions for the foam core is located on one short side of the foam core.

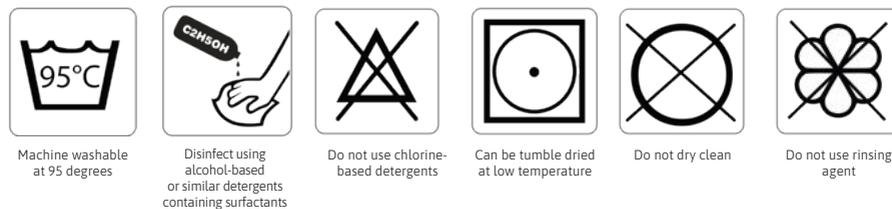
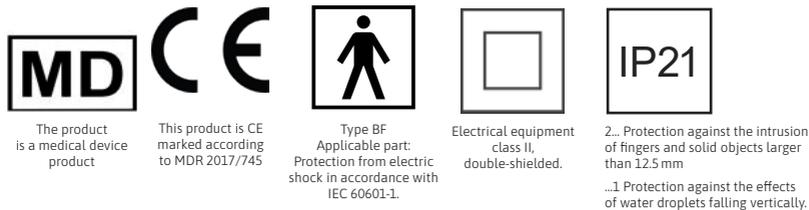
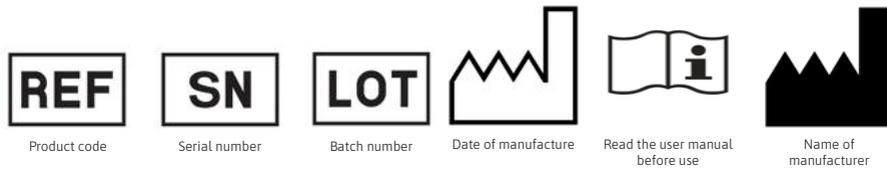
## Pump labels

On the front of the pump there is a *Quick Reference Guide* with the pump designation which describes the functions of the pump buttons, among other things. You can also see here which mattress type is suitable for the pump.

On the back of the pump is a label with the pump serial number and general information, e.g. pump model number and date of manufacture (year and month).



# Key to symbols



# Other information

## OptiCell's product liability

Product liability refers to the manufacturer's, importer's or vendor's statutory liability for any damage caused by the product. The Product Liability Act establishes the manufacturer's, importer's or vendor's statutory liability for any damage caused by the product. The rules apply to physical products in the form of movables, and products that are connected to other movables or fixtures. If no product has caused any kind of property or personal injury, product liability legislation is not relevant.

## Recycling

All materials in OptiCell air mattress systems, except for certain parts in the pump, are suitable for energy recovery via combustion at waste to energy power stations. The product does not contain PVC.



### Pump

Used OptiCell® pumps must not be dismantled, but deposited at a recycling station. Disposed of as "Electronic waste".

### Mattress

OptiCell air mattresses can be deposited at a recycling station and disposed of. For products made of both textile and combustible materials, please separate the components before disposal.

**Textile components:** To be disposed of as textile waste. Drop them off at a municipal textile collection facility or at recycling stations for textile recycling.

**Combustible material:** If the product contains foam or other combustible materials, please dispose of these as combustible waste. This must be disposed of through regular waste collection for incineration or energy recovery, as "Combustible waste". For more information please contact Järven Health Care.

## Returns and claims

Claims must be made in writing to Järven Health Care. Product returns are to be done according to our instructions once a claim has been approved.

If the product is returned before the claim is approved, the case is considered closed and no compensation will be paid to the customer.

### Transport damage

Transport damage must be noted on the waybill before signature to be valid. Please then contact customer service at Järven Health Care (+46 (0)660 22 28 50, healthcare@jarven.se) and provide relevant information. To process your claim more quickly, we kindly request that you photograph any transport damage as thoroughly as possible before contacting customer service.

# Evacuation with OptiTex Evac

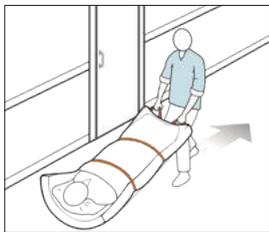
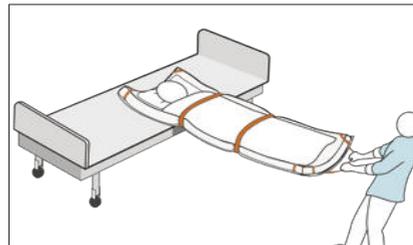
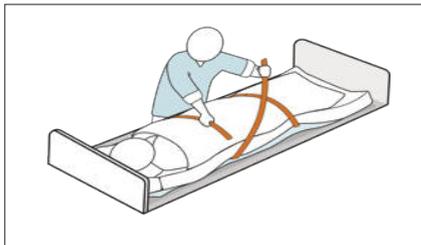
## Evacuation from bed:

1. Inform the user about what is happening.
2. Unplug the power cable from the wall socket.
3. Place the power cable on the mattress.
4. Disconnect the air hose (see pump illustration) and the power cable from the pump.
5. Put the transport cover on the air hose. (see page 16)
6. Place the air hose on the mattress.
7. Lower the bed as far as it will go (if there is time to do so).
8. Pull out the straps on the long side of the mattress cover.
9. Secure the user, cable and hose set using the straps. (see the illustration below)
10. Grasp the pull handles at the foot end and pull the mattress, at a 45-degree angle, from the bed onto the floor. (see the illustration below)

To release the air hose, press in the clips located on the sides of the connector.  
(For OC55 - To release the air hose, press the button on the top of the connector.)



For evacuation on stairs – follow the illustrated instructions at the bottom of the page for safe evacuation.



## EVACUATION ON A LEVEL SURFACE

1. Pull the mattress with the handles at the foot end.
2. Tilt your body back slightly. This facilitates evacuation and relieves strain on the arms. **Walk at normal speed – do not run!**



## EVACUATION ON STAIRS

1. **Go backwards** until most of the mattress has slid down over the top step.
2. **Turn completely** so that you are facing in the direction of travel, **without letting go** of the mattress.
3. Hold one hand firmly on the handrail and pull with the other hand.
4. Follow the stairs down and let the mattress stop against your legs if necessary. **Walk down at a normal speed – do not run!**



# Accessories



## OPTIEX HYGIENE COVERS

Hygiene covers made of PU with integrated, watertight cable channel to reduce the risk of bacterial spread. The cover has drip-proof, waterproof zips on all four sides. All seams are welded.



## TRANSPORT CASE

A practical case for use during transport and storage. The case is made of a durable material and is washable.

## Associated products, positioning



## FLEXIBLE HEEL PAD

Provides effective pressure relief for patients with pressure-sensitive areas from the lower leg to the foot/heel. The heel pad comes with LENTEX laminate for additional hygiene control.



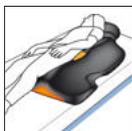
## THE SCHAMPI SUPPORT PILLOW

Offers a safe sitting position for patients who are unable to sit up without support. Järven Health Care, in collaboration with healthcare professionals, has developed the Schampi pillow, which is easy to place behind the user's back.



## JÄRVEN WEDGE PILLOW

The Järven wedge pillow helps to position the user and relieve pressure to reduce the risk of pressure sores. It can be used as a lateral support or to raise the head or foot end.



## 30° POSITIONING WEDGE – SYST'AM P910L

A sturdy aid for healthcare staff performing frequent patient repositioning. The wedge helps to prevent pressure sores and other complications that often occur with prolonged bed rest.



## HEEL SUPPORT BOOT – SYST'AM P903T

A comfortable heel support specifically designed for patients with normal or slightly limited mobility. It reduces pressure on the most vulnerable areas of the foot and reduces the risk of pressure sores.

# Summary, warning boxes



The mattress cover must always be placed right side up ensuring that the drip edge acts as a protective shield over the zip.



Beds in private homes often have spring mattresses. These must not be used as there is a risk that the Air1 and user could slide off the bed.



According to the NPUAP/EPUAP guidelines, the patient's condition must be regularly monitored.



The four handles at the bottom are designed to move the mattress without a patient. These must not be used when a patient is on the mattress.



If contamination of the foam core is found, the foam core should be discarded and replaced to maintain a safe care environment.



The alarm is an indication that the system is not working properly. MEASURES TO FIND THE CAUSE MUST BE INITIATED IMMEDIATELY.

# Prevention of pressure sores

## Mandatory nursing measures (Care Manual)

The care manual sets out the following mandatory nursing measures to reduce the risk of pressure sores associated with care:

- Carry out a visual skin assessment.
- Conduct a structured risk assessment which includes a clinical assessment together with a risk assessment tool.
- Reduce pressure, shear and friction, e.g. by repositioning the patient and relieving pressure.
- Keep the skin dry, soft and supple by means of preventive skincare.
- Meet and monitor nutritional and hydration needs.
- Involve the patient and/or relatives in prevention of pressure sores.
- Communicate risk factors and preventive measures to the next care unit. See the section on collaborative care for more information on discharge.
- Document, regularly monitor and evaluate all actions in a personalised care plan.

## Repositioning for pressure relief

Repositioning reduces pressure on sensitive areas and promotes comfort, hygiene and mobility. Patients should be encouraged to be active, as movement is the body's natural defence against pressure sores. Patients who lack the ability to spontaneously reposition themselves need regular assistance according to a personalised turning schedule.

The skin must be inspected every time the patient is repositioned in order to identify pressure-related redness. The frequency of the surface should be adjusted if the person does not respond as expected. Avoid positioning the person on an existing pressure sore or skin redness.

### Positioning in bed:

*Lateral positioning:* 30-degree angle with pillow support.

*Supine positioning:* Wedge pillows to reduce pressure, head end max. 30 degrees except at mealtimes.

*Heels:* Release cells with Multi Zone Relief or relieve pressure with pillows/heel protectors to prevent injury.

Even a minor amount of repositioning is important and should be included in the care plan.

See page 40 for positioning aids.

# Mattress review

Regular inspection and cleaning of the cover is not sufficient, as liquids can penetrate invisible damage or leaky seams. That is why the foam core and cells should be systematically checked, particularly if the surface layer is showing signs of wear or if leakage is suspected.

By regularly checking mattresses, healthcare providers can improve the work environment and reduce the risk of infection, benefiting both staff and patients. Therefore, remove the mattress cover regularly and check the foam core. Look for wet spots, discolouration, signs of damage and wear and tear, or if the mattress smells unpleasant due to bodily fluids. **Immediately discard mattresses with contaminated foam cores to reduce the risk of spreading infection!**

## Mattress review for the benefit of the patient

Checking the foam in a healthcare mattress for contamination is crucial to ensure patient safety and hygiene. The foam can absorb liquids, such as blood, urine and wound fluid, creating an environment where bacteria and mold spores can grow. If the mattress is contaminated, there is a risk of spreading infection and impaired wound healing in patients.

## Mattress audit for the sake of your staff

A contaminated mattress can deteriorate the working environment and increase the workload for care staff:

- The risk of spreading infection increases if staff are exposed to bacteria and mold that may be present in the contaminated mattress. This can increase the risk of your own health.
- The stress of working with potentially infectious surfaces can affect the psychosocial work environment.
- Bad odours and (in)visible contaminants can create an unpleasant work environment.
- Extra care work may be required when a healthcare-associated infection occurs.
- The physical strain on staff increases if a patient needs to be moved more frequently due to a contaminated mattress or if mattresses need to be replaced urgently.

## Mattress audit for the sake of economy

Regular mattress checks can reduce the risk of healthcare associated infections (HAIs), which in turn can lead to shorter hospitalisation times and lower costs for antibiotics and intensive care. The initial cost of inspections and mattress changes is then outweighed by savings from fewer infections and complications if the number of patients infections are reduced as a result of the mattress audit.



## *Järven Health Care*

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