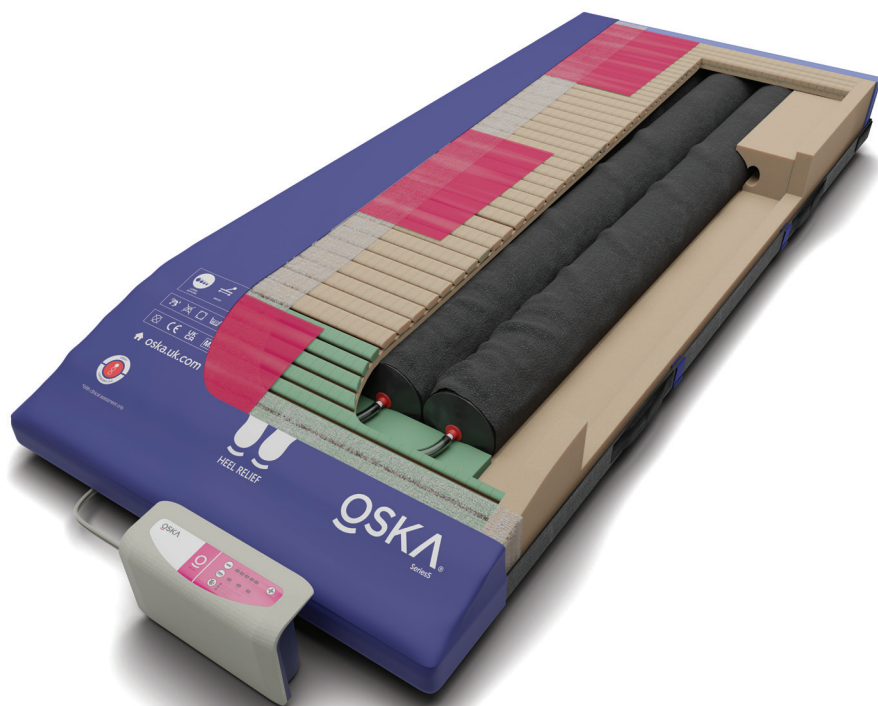


OSKA®

User Guide

Series5 Mattress



Version 10: 12.12.2023

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Know your symbols

This manual contains different typefaces and symbols to make the content easier to read and understand:

Standard text - used for regular information. **Boldface text** - stresses a word or phrase.

NOTE: - sets apart special information or important instruction clarification.

Please read the following instructions carefully and observe the warning instructions before using the system.



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Edward House, 5 Penner Road, Havant, PO9
1QZ UK



Advena Limited
Tower Business Centre, 2nd Flr., Tower
Street, Swatar, BKR 4013 Malta

Mattress



European conformity marking



Non sterile



Catalogue number



Serial number



Authorized representative in the European Community



Foot end



Manufacturer



Not made with natural rubber latex



Batch code



Medical Device



UKCA marked

Pump (This Pump is not an OSKA Product.)



European conformity marking



See the user manual for use instructions



See user manual for use instructions for 230V system



WEEE



Type BF applied part

IP21

Protection against the ingress of fingers or similar objects and dripping water



Authorized representative in the European Community



Manufacturer

70°C max



-25°C min.

Temperature limitation
Operation: 10°C to 40°C (50°F to 104°F)
Storage: -15°C to 50°C (5°F to 122°F)
Shipping: -15°C to 70°C (5°F to 158°F)



Serial number



Double insulation

About your mattress

Description

The system consists of a foam shell with a high-density foam topper serving as the support surface underneath the patient. The foam shell also includes a safety edge that bolsters at the sides of the mattress, this provides added patient/ resident stability and positioning.

Included in the system design is a unique Heel Zone that is designed to further reduce pressure for the sensitive heel area.

Within the foam body of the mattress is the inflation system that consists of air cylinders, which run lengthwise within the mattress. The air control unit connects to the mattress at the patient foot-end.

Modes of Operation

The Series5 provides options of alternating pressure, basic lateral rotation, powered flotation and auto-firm.

Contraindications

Not recommended for patients for whom rotation or turning is contraindicated, such as, but not limited to, unstable spinal cord injury, unstable skeletal fractures requiring immobilisation and/ or skeletal traction, physician orders prohibiting rotation, or severe posterior burns requiring skin grafts.

Indications for Use

Series5 mattresses are powered, flotation therapy mattresses providing a pressure management surface for the prevention and treatment of pressure ulcers. The lateral rotation mode is indicated for use as a preventive tool against further complications associated with critically ill patients or immobility.



CAUTION!

The Series5 is not for use by those with unstable spinal chords



CAUTION!

A notice to the user and/or patient that any serious incident that has occurred in relation to the device should be reported to the manufacturer and competent authority of the member state in which the user and/or patient is established.



10 ways to reduce risk of electrocution

01. Always unplug this unit immediately after use.
02. Do not operate near water.
03. Do not place or store where it can fall or be pulled into a bath or sink.
04. Do not place or drop into water or any other liquid.
05. Do not reach for a product that has fallen into water; unplug it immediately.
06. Use this unit only for its intended purpose.
07. Never operate this product if it has a damaged chord/plug, if it's not working properly, if it has been dropped or damaged.
08. Keep the chord away from heated surfaces.
09. Never drop or insert any object into any opening.
10. Do not use outdoors.



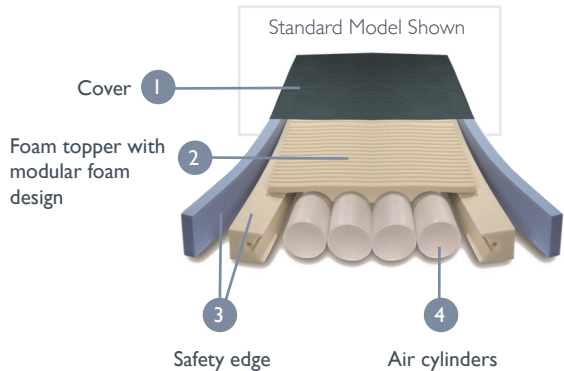
10 Ways to reduce risk of burns, electrocution, fire or injury to persons

01. Use this unit only for its intended use as described in the operating instructions.
02. Never operate this product if it has a damaged cord or plug, if it is not working properly, if it has been dropped or damaged, or dropped into water: Return the unit for examination and repair.
03. Keep the cord away from heated surfaces. Discontinue use if power cord is damaged or worn.
04. Never drop or insert any object into any opening or hose. Keep away from sharp objects.
05. Do not use outdoors.
06. Possible explosion hazard if used in the immediate proximity of flammable gases (risk of explosion).
07. Use only original spare parts.
08. Plug this product into a correctly grounded outlet only.
09. Before cleaning, unplug from power source.
10. Do not use harsh cleansers, solvents, or detergents. Do not expose the unit to excessive moisture. Equipment damage could occur.

Design features

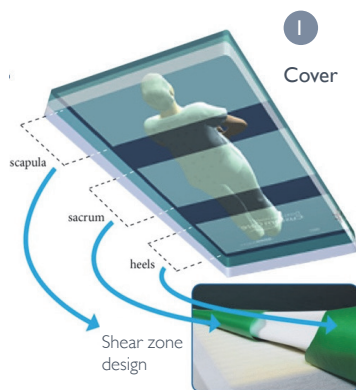


5 Mattress toggle switch



Shear zones

In addition to the modular foam top surface, the exclusive shear zones design provides an additional measure of shearing protection in the form of the silicone-coated, shear-minimising fabric bands located on the underside of the bi-directional stretch cover.



The shear zone design helps:

- Prevent heels, sacrum, and scapula from “digging into” surface.
- “Glide” user back to original position following HOB elevation.
- Protect against damaging effects of micro shear, macro shear, and rotational (pivot induced) shear.
- Provide patient stability by transferring shear to more shear-tolerant anchor points.
- Polycarbonate-fortified for unsurpassed resistance to damaging effects of diluted bleach and other aggressive cleaners and disinfectants.
- Engineered for ideal combination of immersion and patient mobility.
- Environmentally friendly.

Design features

The air-cylinder inflation system and the foam shell work in concert to maintain low interface pressures throughout the surface, making the mattress effective for prevention and treatment of pressure ulcers.

Series5 Covers

Both models include replaceable, zipped covers which are antimicrobial, flame-resistant, fluid-impervious, tear-resistant, and have a low moisture vapour transmission rate (MVTR). Covers easily wipe clean with standard, hospital-grade cleaners. Cover of Series5 mattress features bi-directional stretch top fabric designed to allow full integration of the user into the surface. Top is made from proprietary polycarbonate-fortified healthcare fabric which provides unsurpassed resistance to the damaging effects of diluted bleach and other aggressive cleaners and disinfectants. Also includes patented Shear Zones incorporated beneath top fabric creates shear-minimising bands beneath heels, sacrum and scapula. Zones help prevent these bony prominences from digging into the surface, while protecting against the damaging effects of micro shear, macro shear, and rotational (pivot-induced) shear. Design also helps "glide" the user back to their original position following HOB elevation. Exclusive split bottom design helps reduce sliding of mattress while also reducing the "gatching noise" typical of non-slip fabrics.

See bottom of page 6 for illustration and complete description.

Foam Topper

The foam topper is a high density, medical grade foam. The unique modular design consists of over 800 individual cells, each of which acts individually to redistribute pressure, to reduce heat and moisture build-up on the skin, and to reduce shear to underlying tissues. This foam topper is 2" in height and includes the unique heel relief slope feature, designed to further reduce pressure for the sensitive heel area.

Safety Edge Bolster

The inflation system consists of four urethane air cylinders in standard models that run head to foot underneath the body and the foam topper. These cylinders perform the alternating pressure therapy, and the lateral rotation therapy. Cylinders inflate and deflate in a fixed 10-minute cycle. The cycles and inflation levels are designed to provide and maintain low interface pressures throughout the mattress, and to redistribute peak interface pressure points during the alternating cycle.

Air Cylinders

The air-cylinder inflation system and the foam shell work in concert to maintain low interface pressures throughout the surface, making the mattress effective for prevention and treatment of pressure ulcers.

Mattress Toggle Switch

The toggle switch changes modalities from alternating pressure to lateral rotation. The switch is located under a fabric flap on the side of the mattress at the foot end.

How to set up your mattress

- Place the Series5 mattress on the bed frame with the airline connectors at the foot end of the bed. The mattress has a black bottom cover that should be placed directly on the bed frame; the mattress cover will have airline connectors on the bottom left corner; make sure this matches with the airline connectors on the mattress. The blue top cover should face upwards, with the foot icon at the bottom of the bed frame.



- Check the bed frame is appropriate for use with the mattress, i.e. the length and width of the mattress are appropriate for the frame. Place directly on a healthcare bedframe only, never on top of another mattress.
- Hang the control unit on the foot board at the end of the bed using fold-out hangers (Figure A). Connect airlines to control unit by pressing quick connector into port on the side of unit. "Triangle" symbol should face front. (Figure B) Audible "click" indicates secure connection. Press flap closed.



Figure A



Figure B

NOTE: The hanger lock strip (included, item # P10064, Fig. C) can be used to help hold control unit more snugly in place on thin foot boards such as those often found on home health care beds. To use, place the strip in position around the hanger hooks as shown in Figure D.



Figure C



Figure D



WARNING!

To avoid potential for injury to patient's foot, the control unit should be positioned such the hangers remain flush to the headboard and do not extend on to the sleep surface. This may require use of the hanger lock strip. See note above.



CAUTION!

Do not cut air lines to increase separation. If additional separation is needed to connect air lines to the mattress, gently pull airlines away from one another to lengthen the split



Figure E



Figure F



Figure G

- Connect the ends of the air lines with two right angle male connectors (Figure E) to the ports on the side of the mattress. Ports (Figure F) are located beneath a fabric flap (Figure G) near the left corner at the foot end of the mattress. Ensure that the airlines are not kinked or twisted. Press connectors into ports until you hear an audible "click" for each.
- Ensure that the Toggle switch is in the "Alternating Pressure" position.

06. Ensure that green On/Off switch at side of control unit is "Off". Plug power cord into wall outlet. Press On/ Off switch "ON".



Never thread airline through mechanical parts of the bed or bed rails where normal bed movement may damage the airlines, power cord or the control unit itself. Check to be sure the motion of the bed does not interfere with the airlines, power cord or plug.



Always plug the power cable securely into the wall outlet. Make sure the wall-mounted outlet will accommodate a heavy duty or hospital-grade plug and that the outlet is in good working order. The plug of the power cord should fit tightly into the wall outlet. The plug body, the wall outlet, and the wall plate should not be cracked or chipped. The plug blades should be securely retained in the plug body. The ground pin of the plug should be intact and secure.



Do not connect the power cord to an extension cord or to a multiple outlet strip. If the use of extension cords or multiple outlet strips cannot be avoided, use only heavy duty or hospital-grade connectors that are approved by the facility engineering department. Multiple outlet strips should be mounted on a fixed object to reduce the risk of liquid spills and physical damage. In addition, if multiple-receptacle outlet boxes are used, they also should be protected from the risk of liquid spills and physical damage.

All extension cords and multiple outlet strips should be tagged and inspected routinely.

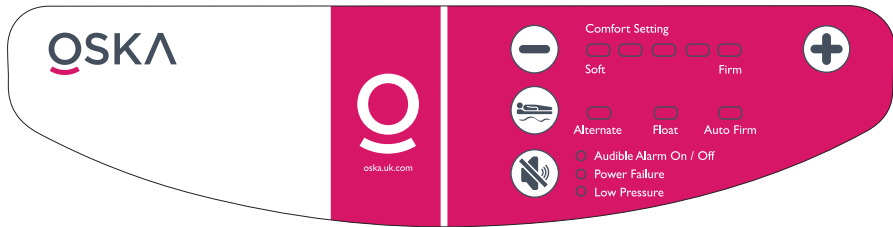


Do not cover the power cord with a rug or carpet. Rugs or carpets can prevent normal air flow, which can lead to greater heat built-up. Place the cord in a low or no traffic area. Check to be sure the motion of the bed does not interfere with the bed's power cord or plug.

07. When power switch is turned to ON, the unit will power up in "Auto Firm" mode and begin performing a system check. This fills the air system completely, in order to confirm the proper connection and function of both the mattress and the control unit prior to a patient being placed on the surface. If the mattress is completely empty of air, this can take as long as 20 minutes. You must leave the mattress for a full 20 minutes to fully inflate before using or trying to change the comfort setting.
08. System will remain in "Auto Firm" mode until this process is complete. "Low Pressure" indicator light and audible alarm will remain on as well. Audible Alarm can be disengaged during this process by pressing the Audible Alarm On/Off button.
09. When system check is complete, the control unit will revert to previous comfort setting and "Alternate" mode. Low Pressure indicator light will turn off. System is now ready to be set for the next user.

NOTE: If "Low Pressure" remains on after 30 minutes, call for service.

Using the pump

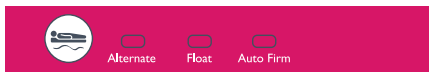


Selecting the comfort setting



Use the +/- buttons to select the patient's preferred comfort setting.

Mode selection



"Alternate" mode: Creates an "A-B" sequence of inflation and deflation of the mattress's four air cylinders designed to change loading across the surface in a 10-minute cycle. Use the toggle switch on the side of the mattress to select between two patterns of alternation:

Lateral Rotation therapy

With mattress toggle switch set to "Lateral Rotation", two air cylinders on one side inflate, while the two on the opposite side deflate, gently rotating the patient approximately 20° to one side.

After approximately 5 minutes, the inflation pattern reverses and the patient is rotated to the opposite side.



Alternating Pressure therapy

With mattress toggle switch set to "Alternating Pressure", air cylinders 1 and 3 inflate while 2 and 4 deflate.

After approximately 5 minutes, the pattern reverses.

“Float” (powered flotation therapy) mode

Suspends cyclical inflation/deflation of the air cylinders and instead provides powered flotation therapy.

In this mode, all four air cylinders are evenly inflated, and the system maintains ideal pressure management by adjusting in response to any repositioning of the user on the surface.

“Auto Firm” mode

Suspends cyclical inflation/deflation and sets system to firmest inflation level for 20 minutes to facilitate user transfer; feeding, dressing changes, and other activities of daily living (ADLs), and CPR.

After 20 minutes, system will revert to previous comfort setting and “Alternate” mode.

Audible Alarm On/Off



When indicator light is on, an audible alarm will sound if either the Low Pressure or Power Failure indicator light is on.

Press button to silence the alarm.

Alarm can also be toggled off in advance if audible alarm is not desired for low pressure conditions

Power Failure

During power failure situation or upon power down, the Power Failure indicator light will come on and the audible alarm will sound. Press the mute button to silence the alarm. (See “Power Loss”)

The air cells will retain their pressure only temporarily. Air slowly seeps out through the pump and is lost. This can take anywhere from 30 minutes to 2 hours depending on what “firmness” setting the product was in, and where in its cycle it was interrupted.

When the pump is disconnected and with the transport cap in place all the air is sealed into the mattress permanently. This serves as a “transport” mode also.

Low Pressure

If “Low Pressure” indicator light comes on after initial set-up or when moving mattress or control unit, first check that all airlines are properly connected and that they are not kinked. If light is still on after 30 minutes, call for service.

General directions

Electromagnetic or other interference

See Appendix A p23.

This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to other devices in the vicinity.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to other devices, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving device.
- Increase the separation between the equipment.
- Connect the equipment into an outlet on a circuit different from that to which the other device(s) are connected.
- Consult the manufacturer for help.

Power loss / patient transport

To seal air into mattress, simply disconnect the quick connector from the control unit, and place “transport” cap into place on connector (Page 8, Figure A). Press cap into place until you hear a “click”, which confirms that the airlines are sealed. With the transport cap in place, all the air is sealed

into the mattress. In this mode, the cylinders will distribute air evenly among the four cylinders, providing an even, static air surface to protect the user's skin until power is restored.

Head-of-bed elevation

All support surfaces using air as a support medium are designed for distributing pressures over the body in a flat, horizontal position. Bending the support surface and the body at the midpoint when elevating the HOB concentrates the body weight over the centre of the surface, stressing that small area.

This extreme change in dynamics creates a challenge for all air support surfaces. Maximum pressure management benefits are realised between zero and 30° HOB elevation. Beyond 30°, the amplitude of the changes in the air cylinders begins to decrease in proportion to the increased elevation of the HOB. Although the mattress will maintain its support and therapeutic capabilities up to and including 70° HOB, for maximum benefit we recommend that any pressure management surface be used with the head of the bed elevated as little as possible, and for limited periods at a time.



WARNING!

DO NOT MOVE USER ON MATTRESS ONLY.

Mattress should not be used alone for user/patient transport.



WARNING!

Lateral rotation mode should not be used with head of bed elevated beyond 30°. Instead, select alternating pressure or powered flotation (float) mode. With HOB elevated, the alternating pressure mode can facilitate maximum pressure management effectiveness while minimising the possibility of patient falls.

Troubleshooting patient complaints

Occasionally a patient will complain of feeling as if they are "sinking into a hole".

01. Sometimes this happens when the head of the bed is elevated and the mattress is in either lateral rotation or alternating pressure. This sensation is a combination of the deflation of the cylinders during their cycle and the increased weight of the patient on the sacrum and pelvis when the head of the bed is elevated. This demonstrates the need to minimise elevation of the head of the bed. To improve this situation decrease elevation of the head of the bed.
02. Often patients complain when they are supine or side-lying and are not used to the changing pressures within the air system. Reassure the resident that this is normal functioning, as the cylinders alternately inflate and deflate. The "deflated" tubes are not fully deflated. Some air is always maintained in them to prevent bottoming out. After reassurance, patients get used to the changing pressures

Bed linens

Use flat sheets, knitted stretch-fit sheets, or deep-pocket fitted sheets. Use as few layers of linens or underpads beneath the patient as possible to allow best possible envelopment, immersion and pressure management performance.



CAUTION!

Be careful not to puncture the mattress with needles or sharp instruments. This may result in loss of integrity of the cover or internal air system. Regularly inspect the mattress cover for cuts, rips, cracks or tears. Do not use the mattress if the cover is damaged.

Bed rails

Due to concerns over the possibility of patient entrapment, OSKA recognises that the use of rails of any length is a matter currently addressed by laws/guidelines, and by individual facility protocol. It is the responsibility of the facility to be in compliance with these laws, which typically require that decisions on the use of bed rails of any type are based on assessment of the physical and mental status of each patient individually. If bed-rails are needed by the patient to prevent fall-related injury, as determined by this facility assessment, we recommend that the bed-rails be locked in the up position at all times. We do not require use of bed-rails unless the patient is deemed to be safer with them than without them.

CPR

To deflate the mattress for CPR, simply detach the mattress from the pump by unplugging the airlines from the pump (see Figure B).

Storage and transportation

Store the mattresses in a clean, dry place. Once the mattress is removed from the box, store in a flat position if possible. If mattress must be stored on its side, ensure that the inflation system is in correct position within the mattress prior to placing a user on the surface. Protect from damage. Avoid temperature extremes (below freezing or above 48°C). Allow to acclimate to room temperature before use. Do not stack more than 10 high. Do not stack other equipment on top of the mattresses.

Store the control unit in a clean, dry place, protected from accidental damage or falls.

Avoid temperature extremes (below freezing or above 48°C). Do not stack other equipment on top of the control unit.

Avoid storage of other equipment on top of the mattress. When removing the mattress from storage, always ensure the internal inflation system is aligned correctly prior to placing a patient on the surface.

For transportation, secure to prevent damage or falls. For shipment, use box and packaging as provided by the manufacturer.

Environmental conditions for use of pump

- Indoor Use
- Altitude up to 2000 meters
- Operation Temperature 10°C to 40°C, Storage Temperature: -15°C to 50°C, and Shipping Temperature: -15°C to 70°C
- Operation humidity: 10% to 90% non-condensing, Storage Humidity: 10% to 90% non-condensing and Shipping humidity: 10 % to 90% non-condensing.
- Mains Supply Voltage Fluctuation up to 10 +/-% of the nominal voltage
- Over-voltage Category II
- Pollution Degree 2

Warranty for pump

All models are unconditionally guaranteed against failure due to manufacturing defects under normal use for 18 months.

Use in wound care

Use of Series5 mattress is only one element of care in the prevention and treatment of pressure ulcers. Frequent repositioning, proper care, routine skin assessment, wound treatment and proper nutrition are but a few of the elements required in the prevention and treatment of pressure ulcers. As there are many factors that may influence the development of a pressure ulcer for each individual, the ultimate responsibility in the prevention and treatment of pressure ulcers is with the health care professional.

Evacuation base

The Series5 comes with evacuation straps within it's base.

It is very important that the safety equipment, as well as the evacuation procedures, are well planned and known in advance.

These covers can significantly help you be prepared in the case of a fire or other emergency when a less mobile patient will need to be evacuated.

Handles appear on all 4 sides of the cover and the velcro fire evacuation straps are housed securely in pockets on the 2 longer sides with their ends sticking out for easy access. These straps are used in the case of an emergency to secure the patient to the mattress before transporting them to safe area.

Evacuation instructions

- Let the patient know what is about to happen.
- Lower and lock the bed in position.
- Pull the velcro evacuation straps out of the base and fasten.
- Using the outer handles at the foot end of the mattress, turn it outwards from the bed.
- Carefully drag the mattress and patient down on to the floor.
- Use the outer handles at the foot end of the mattress. The working position should be a little bit leaning back.

Down the stairs

- Walking backwards, continue until the main part of the mattress slides pass the top stair.
- Turn your back towards the patient and look in the direction you are moving.
- Holding one hand on the stair rail and the other hand on the middle handle of the mattress, begin to pull.



Walk down the stairs maintaining speed, without running, is important.

Training/practise

To bear in mind when training.



WARNING!

It is imperative that anyone performing an evacuation must have acquired the necessary training. Before commencing any evacuation always check the equipment, cover and mattress to ensure the evacuation can be carried out safely.

Ensuring the mattress is safe to use for evacuation is the user's responsibility.

Pulling down from the bed:

- Make sure the patient in the bed is not at the very top of the mattress. If they are, it increases the risk of hitting their head on the bed when pulling down.

Pulling on the stairs:

- Practice this technique by pulling an empty mattress down the stairs.
- When training with a person on the mattress, fasten a string or rope onto the handles at the head end. This enables another person to then walk behind the mattress and help out.
- Practicing on the stairs where an evacuation may be necessary is advisable.



General:

- The purpose of the training is not to carry it out at high speed, but to grasp the correct technique.

Training covers:

- When the equipment is used to evacuate, heavy strain is put on the seams and handles.

Always check the seams and handles at the end of training. It is advisable to mark any equipment used for training as "Training equipment" and use it only for this purpose

Explanations

- Always use the velcro straps when evacuating a patient to prevent the patient sliding/rolling down from the mattress.
- Pulling at the foot end reduces the strain on the puller; which means faster and safer evacuation is possible.
- Pulling the mattress on the stairs is the hardest part of the evacuation and should therefore be practised carefully.

Keep the patients arms inside the velcro straps. This prevents the user grabbing hold of something out of fear.

Cleaning

V-Guard cleaning and after-care guidelines

OSKA V-Guard technology covers are durable but, as medical devices, they need treating with great care. The surface is vapour permeable so it is waterproof, but breathable to reduce sweating of patient. This outer barrier must not be penetrated. Even the smallest breach of this barrier will cause fluid to penetrate the mattress.

There are specific cleaning and care instructions that need to be strictly adhered to prolong the life of the product.

1. General directives

- 1.1 Abrasive cleaning agents should NOT be used.
- 1.2 In addition, due to the range of cleaning chemicals and conditioners being used, customers should ascertain that any fabric performs as expected, without any adverse effect.
- 1.3 Some surface wrinkling may result from cleaning procedures. This should have no adverse effect on the fabric's properties.

- 1.4 If customers have their own particular cleaning methods that must be used and that are not covered in this article, they should consult OSKA for further direction and guidance.

2. Washing and disinfection

- 2.1 All polyurethane coatings need to be treated with care when cleaning the surface. Many industrial cleaning agents are extremely harsh on the coating and can cause it to break down.
- 2.2 For superficial dirt use a disposable wipe and a warm solution of neutral detergent. Do not use abrasive cleaners.
- 2.3 Disinfect in situ using 0.1% sodium hypochlorite solution (1000ppm available chlorine). Wipe off any residue with clean water: V-Guard covers can tolerate 10,000ppm chlorine but using a weaker solution of 1,000 ppm will reduce the risk of a high concentrate being left on the surface.
- 2.4 The fabrics are able to be washed in warm soap water at up to 95°C.
- 2.5 All cleaning agents and disinfectants must be thoroughly rinsed off and the item dried before storage.

3. Drying

- 3.1 Spin and tumble dry on a low setting (not more than 130°C. The fabric surface may wrinkle but this will not impede function). The operator ensures it is removed as soon as all moisture is removed. The fabric must not be left sitting on the heated bowl of the drier when drying is complete.
- 3.2 Do not mangle.
- 3.3 Do not iron.

4. Storage

- 4.1 Store in a cool dry area.
- 4.2 Avoid excessive pressure and always thoroughly dry fabric before re-use or storage.

Do not fold away wet or store in damp conditions.

- 4.3 Keep away from sharp objects.

5. Damages and replacement

- 5.1 Regularly check the inside of the cover for any signs of leakage
- 5.2 If the cover leaks then the waterproof barrier has been broken and a new cover should be purchased from OSKA

General guidelines

Do not puncture the mattress with needles or sharp instruments. This may result in loss of integrity of the mattress air system and will void the warranty. Inspect the covers and zipper area for signs of damage, puncture, or wear that could result in fluid pass-through. If the cover is stained, soiled, or torn, inspect the internal components for signs of contamination. If contamination is evident, quarantine the mattress and remove from service following infection control procedures.

The air control unit should be dusted every 30 days and cleaned with a damp cloth and mild detergent.



Disconnect air lines from control unit and use "transport" cap to seal air into mattress (see PATIENT TRANSPORT page 11). Turn unit off and unplug from wall before cleaning. Wipe down with using damp sponge or cloth that has been thoroughly wrung out to remove excess liquid. Do not allow liquids to penetrate the user panel.

Air filter preventive maintenance

The air filter for the Control Unit should be checked routinely for signs of dirt or contamination.

The frequency for cleaning depends on the air quality. The air filter is accessible from the backside of the Control Unit. As the filter is white, the need to clean is obvious. Simply turn the controller off and remove the plastic cover; remove the filter; and hand wash using warm water and mild detergent. Rinse thoroughly and allow to air dry. Replace the filter and the plastic cover.

Delamination

Delamination is when the layers within the structure of the mattress cover separate. This can be caused by using incorrect chemicals or too high a concentrate of cleaning chemicals on the surface.

How to prevent delamination

OSKA V-Guard Technology covers incorporate a special layering system to make them much more resistant to delamination than many other mattress covers. However, to help prevent delamination:

01. Always abide by the cleaning instructions
02. Avoid using chemicals with too high concentration.
03. Ensure cleaning chemicals are always thoroughly rinsed off before allowing to dry
04. The V-Guard covers can tolerate up to 10,000ppm chlorine but using a weaker solution of 1,000ppm will reduce the risk of a high concentrate being left on the surface
05. Ensure the covers are thoroughly dry before using or storing the mattress

Strikethrough

Strikethrough occurs when the fibres in the mattress covers start to break down. Small cracks develop, which on inspection, may not be visible. This means fluids and other contaminants can pass

through the cover and contaminate the core of the mattress.

How to prevent strikethrough

Covers are most susceptible to strikethrough damage when they are wet. During cleaning, extra care should be taken to avoid abrasion of the surface. OSKA V-Guard Technology covers incorporate a special layering system to make them much more durable than many other mattress covers. However, to help prevent strikethrough:

01. Always abide by the cleaning instructions
02. Avoid using chemicals with too high concentration.
03. Ensure cleaning chemicals are always thoroughly rinsed off before allowing to dry
04. The V-Guard covers can tolerate up to 10,000ppm chlorine but using a weaker solution of 1,000ppm will reduce the risk of a high concentrate being left on the surface
05. Ensure the covers are thoroughly dry before using or storing the mattress



Routine inspection of power cord and safety tips to prevent fires

01. Assure that the electrical resistance of the safety ground conductor and the level of leakage current (line conductor-to-safety ground and neutral conductor-to-safety ground) meet applicable standards for resistivity and leakage current. Protection afforded by the ground pin is negated if the receptacle is not properly grounded. If you have questions about the adequacy of your facility's building wiring, contact a qualified electrician or consult the code authority in your area.
02. Check all electrical outlets, including accessory outlets for cleanliness, physical integrity and functionality. The IEEE standard 602-1996, section 4.2.2 advises that hospital-grade outlets be used and that they should be

mounted with the ground pin or neutral blade up to assure that any metal that may drop between the plug and the wall will most likely contact an unenergized blade.

03. Check the power cord to assure that contact pins are straight and secure.
04. Routinely inspect the power cord for damage sustained from crushing, pinching, shearing, cutting, or from being worn through. They can be damaged by bed movement, deterioration from use or aging, or human or equipment traffic. The cord's insulation should be intact and there should be no evidence of bulging, stretching, crimping, cracking, or discolouration, especially at the ends, where the cord is attached to the plug body and the control unit
05. Regularly inspect as parts of the bed frame, motor, mattress and controller, and the floor beneath and near the bed for build-up of dust and lint.
06. Inspect the cover of the control panel to assure that the covering is not cracked or damaged, allowing liquids or other conductive material to penetrate to the switches.
07. Report any unusual sounds, burning odours, or anything unusual to maintenance personnel. Discontinue use of the power cord immediately and contact OSKA for replacement.

Mattress

Inspect the covers and zipper area for signs of damage, puncture, or wear that could result in fluid pass-through. If the cover is stained, soiled, or torn, inspect the internal components for signs of contamination. If contamination is evident, quarantine the mattress and remove from service following infection control procedures. You may use the Preventive Maintenance Log provided at the end of this manual to monitor and document regular inspection and maintenance of your mattress and control unit.

Specifications

Cover

Bacteriostatic, flame resistant, fluid-proof, tear resistant

Foam

High-density open-cell polyurethane.

Conforms to NFPA 101 small scale and Cal TB# 117

Air cylinders

Urethane

Pump specifications

manufactured by Span America,
Model No. : 3200CEG,220-240v,
VAC, 50 Hz, 0.08A,
Class I device as per MDD/MDR

Control unit

3200CEG (UK)
Classification: Class II, Type BF
No AP or APG protection
Weight: 2.1kg
29.21cm x 17.78cm x 11.43cm

Pump cycle time

10 minutes (digital control unit)

Placement

All mattresses can be placed directly on a healthcare bed frame.

Warranty

V-Guard Cover - 4 years pro rata

Year 1 - 100%

Year 2 - 75%

Year 3 - 50%

Year 4 - 25%

Base Cover - 3 years pro rata

Year 1 - 100%

Year 2 - 75%

Year 3 - 50%

Foam and Air cells

5 years

Pump

18 months

Specifications / Part numbers

The OSKA Series5 is available in the following sizes:

Mattress dimension (W x L x H)	Mattress weight (KG)	Maximum User Weight (KG / ST)	Part. No
87 x 200 x 18cm	17kg	159kg / 25st	PR13-606
89 x 200 x 18cm	17.5kg	159kg / 25st	PR13-601
105 x 200 x 18cm	19kg	159kg / 25st	PR13-076

Troubleshooting guide

Problem	Possible Cause	Solution
System will not power up. Note: Always plug power supply into properly earthed receptacle.	The system is not plugged in.	Plug power cord into wall
	There is no power at outlet.	Restore power
	Power chord is damaged.	Call for service
	Blown fuse	Call for service
Patient not turning/alternating properly.	System is not turned ON	Plug power cord into wall
	Patient not centred on mattress	Reposition patient
	Patient has severe contractures	Turning can be difficult to observe in patients with severe contractures. Observe someone without contractures lying on the bed for 20 minutes (2 cycles) to confirm turning is functioning properly.
	Head of bed is elevated or knees are gatched	The degree of patient turn achieved is reduced with elevation of the head of bed or gatching of the knees. Adjust each as necessary to meet patient needs while maximizing turn angle.
	Defective control unit	Call for service
	Patient exceeds weight limit	Call OSKA for alternative products
Mattress not inflating or patient reports a sinking feeling,	Control unit is not turned on	Turn control unit on
	Airlines not connected	Ensure secure connection of airlines at control unit and mattress
	Airlines or quick disconnect connectors are damaged	Call for replacement
	Head of bed elevated	Lower head of bed and allow air to equalise. Return head of bed to elevated position that is comfortable for patient.
	Defective control unit (mattress fills without patient, sinks with patient weight)	Call for service

Technical Service: 02394 318 318

Troubleshooting guide

Problem	Possible Cause	Solution
Low pressure indicator illuminated.	Air lines not connected.	Disconnect and reconnect air lines to verify they have all locked into place.
	Air lines or quick disconnect connectors are damaged.	Call for replacement.
	Defective Control Unit.	Call for service.
	Leaking inflation system.	Call for replacement. To replace, turn mattress upside down and unzip cover. Remove inflation system, install new system, zip cover and restore mattress to upright position.
Interference produced to electronic equipment/devices in surrounding area.	Electromagnetic interference caused by the unintentional emission of electromagnetic waves of energy. These waves are transmitted through the air at various frequencies which may produce interference such as abnormal functioning to nearby electronic equipment.	<p>Determine if emissions are causing the interference by turning the equipment off and on. If the interference in the affected device subsides when control unit is off, proceed with the following steps.</p> <ul style="list-style-type: none">a) Reorient or relocate the affected device.b) Increase the distance between the equipment.c) Connect the equipment into an outlet on a circuit different than that of the affected device.d) Consult the field service technician or manufacturer of the affected device.
Technical Service: 02394 318 318		

Technical description for pump

Item		Specification
Power Supply (Note: See rating label on the product)		AC 220-240V 50 Hz, 0.08A (for 230V system)
Fuse Rating		T1 AL 250V for 230V system
Cycle time		Fixed
Environment	Temperature	Operation: 10°C to 40°C (50°F to 104°F) Storage: -15°C to 50°C (5°F to 122°F) Shipping: -15°C to 70°C (5°F to 158°F)
	Humidity	Operation: 10% to 90% non-condensing Storage: 10% to 90% non-condensing Shipping: 10 % to 90% non-condensing
	Atmospheric Pressure	Operation: 70 – 106 kPa Storage: 50 – 106 kPa Shipping: 50 – 106 kPa
Classification		Class II, Type BF, IP21, Applied Part: Air Mattress Not suitable for use in the presence of a flammable anaesthetic mixture (No AP or APG protection)

In-Home Style models, usage notes

In-Home styles are intended for use by a single user sleeping alone in a bed that is wider than standard healthcare dimensions, or by a user in need of a powered air therapy surface who shares a bed. Depending on need, mattress model should be selected with powered air therapy cylinders located in Centre of mattress (for a user sleeping alone), or on Patient Right Side (for two users, or for a single user who cannot/prefers not to move to centre of mattress). Air cylinders not connected to digital control unit must be maintained at desired pressure through regular adjustment/inflation with manual pump kit, item # SERVICE-00.



Powered air therapy in Centre
"Patient Right Side" refers to location with patient in
back lying position.



Powered air therapy on patient right



CAUTION!

Failure to maintain adequate pressures in these non-powered cylinders can lead to instability on the surface where therapy cylinders in the "down" portion of the powered therapy cycle are positioned next to inadequately inflated non-powered cylinders.



CAUTION!

In-Home models are intended for use atop a variety of stable bed foundations types, including healthcare, platform, and box spring. Weight of mattress is typically adequate to maintain the mattress in a safe position on any of these surfaces. If mattress cannot maintain position on foundation without slipping, discontinue use immediately until mattress can be safely secured.

Appendix A: EMC information for Pump.

Guidance and Manufacturer's Declaration- Electromagnetic Emissions:

This device is intended for use in the electromagnetic environment specified below.The user of this device should make sure it is used in such an environment.

Emissions test	Compliance	Electromagnetic Environment-Guidance
RF emissions CISPR 11	Group 1	The device uses RF energy only for its internal function.Therefore, its RF emissions are very low and are not likely to cause any interference in nearby electronic equipment.
RF emissions CISPR 11	Class B	
Harmonic emissions IEC61000-3-2	Class A	
Voltage fluctuations / Flicker emissions IEC61000-3-3	Complies	




WARNING!

- 01. The device should not be used adjacent to or stacked with other equipment. If adjacent or stacked use is necessary, the device should be observed to verify normal operation in the configuration in which it will be used.
- 02. Use of accessories, transducers and cables other than those specified or provided by the manufacturer of this equipment could result in increased electromagnetic emissions or decreased electromagnetic immunity of this equipment and result in improper operation.
- 03. Portable RF communications equipment (including peripherals such as antenna cables and external antennas) should be used no closer than 30 cm (12 inches) to any part of the Pump, including cables specified by the manufacturer. Otherwise, degradation of the performance of this equipment could result.

Guidance and Manufacturer's Declaration- Electromagnetic Emissions:

This device is intended for use in the electromagnetic environment specified below. The user of this device should make sure it is used in such an environment.

Basic EMC standard	Immunity Test Levels		Compliance Levels	Electromagnetic Environment-Guidance
	Professional healthcare facility environment	Home healthcare		
Electrostatic Discharge (ESD) IEC61000-4-2	±8kV contact ±15kV air		±8kV contact ±15kV air	Floors should be wood, concrete or ceramic tile. If floors are covered with synthetic material, the relative humidity should be at least 30%.
Electrical fast transient/ burst IEC61000-4-4	±2kV for power supply line ±1kV for input/output line		±2kV for power supply line ±1kV for input/output line	Mains power quality should be that of atypical commercial or hospital environment.
Surge IEC61000-4-5	±1 kV line(s) to line(s) ±2 kV line(s) to earth	±1 kV line(s) to line(s)	±1 kV line(s) to line(s)	Mains power quality should be that of atypical commercial or hospital environment.
Voltage dips, short interruptions and voltage variations on power supply input lines IEC61000-4-11	Voltage Dips: i) 100% reduction for 0.5 period, ii) 100% reduction for 1 period, iii) 30% reduction for 25/30 period, Voltage Interruptions: 100% reduction for 250/300 period		240 V	Mains power quality should be that of a typical commercial or hospital environment. If the user of this device requires continued operation during power mains interruptions, it is recommended that the device be powered from an interruptible power supply or a battery.
Power frequency (50/60Hz) magnetic field IEC61000-4-8	3 A/m	30 A/m	30 A/m	Power frequency magnetic fields should be at levels characteristic of a typical location in a typical commercial or hospital environment.

Radiated RF EM Fields IEC61000-4-3	3 V/m 80 MHz to 2.7 GHz 80 % AM at 1 kHz	10 V/m 80 MHz to 2.7 GHz 80 % AM at 1 kHz	10 V/m	Recommended separation distance $d = \sqrt{P}$ 150 kHz to 80 MHz $d = 0.6\sqrt{P}$ 80 MHz to 800 MHz $d = 1.2\sqrt{P}$ 800 MHz to 2.7 GHz
	385-6000 MHz, 9-28 V/m, 80% AM(1 kHz) pulse mode and other modulation	385-6000 MHz, 9-28 V/m, 80% AM(1 kHz) pulse mode and other modulation		Where P is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer and d is the recommended separation distance in meters (m). ^b Field strengths from fixed RF transmitters, as determined by an electromagnetic site survey, should be less than the compliance level in each frequency range. Interference may occur in the vicinity of equipment marked with the following symbol: 

NOTE 1: UT is the a.c. mains voltage prior to the application of the test level

NOTE 2: At 80 MHz and 800 MHz, the higher frequency range applies.

NOTE 3: These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people

a) Field strengths from fixed transmitters, such as base stations for radio (cellular/cordless) telephones and land mobile radios, amateur radio, AM and FM radio broadcast and TV broadcast cannot be predicted theoretically with accuracy. To assess the electromagnetic environment due to fixed RF transmitters, an electromagnetic site survey should be considered. If the measured field strength in the location in which the device is used exceeds the applicable RF compliance level above, the device should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as reorienting or relocating the device.

b) Over the frequency range 150 kHz to 80 MHz, field strengths should be less than 10 V/m.

Recommended separation distances between portable and mobile RF communications equipment and this device:

This device is intended for use in an electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of this device can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and this device as recommended below, according to the maximum output power of the communications equipment

Rated maximum output power of transmitter (W)	Separation distance according to frequency of transmitter m		
	150 kHz to 80 MHz $d=\sqrt{P}$	80 MHz to 800 MHz $d=0.6\sqrt{P}$	800 MHz to 2.7 GHz $d=1.2\sqrt{P}$
0.01	0.1	0.06	0.12
0.1	0.31	0.19	0.38
1	1	0.6	1.2
10	3.1	1.9	3.8
100	10	6	12

For transmitters rated at a maximum output power not listed above, the recommended separation distance using the equation applicable to the frequency of the transmitter; where P is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer:

- NOTE 1:** At 80 MHz and 800 MHz, the separation distance for the higher frequency range applies.
- NOTE 2:** These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects, and people.

Series5 preventive maintenance and repair log

Date	Air filter	Power cord	Mattress	Repair
Manufacturer: OSKA		Serial Number/ D/O/B:		C=Cleaned
Date Purchased:				OK=Okay
				R=Repaired/Replaced

Series5 preventive maintenance and repair log

Date	Air filter	Power cord	Mattress	Repair
Manufacturer: OSKA Date Purchased:		Serial Number/ D/O/B:		C=Cleaned OK=Okay R=Repaired/Replaced

Series5 preventive maintenance and repair log

Date	Air filter	Power cord	Mattress	Repair
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Manufacturer: OSKA Date Purchased:		Serial Number/ D/O/B:		C=Cleaned OK=Okay R=Repaired/Replaced



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