

Oska Alto Clinical Justification

FEATURE	CLINICAL BENEFIT/JUSTIFICATION
1:2 Cell Configuration	<p>The 1:2 cell configuration of the alternating air mattress offers several key benefits. Firstly, it operates on a 1-in-2 cell cycle, inflating one cell while deflating the other. This balanced alternation provides consistent and gentle tissue loading and off-loading, crucial for avoiding prolonged pressure on any specific body area and reducing the risk of pressure ulcers. Secondly, it enhances blood flow and tissue reperfusion by allowing sufficient time for circulation, benefiting individuals with compromised vascular health, and supporting natural tissue healing.</p> <p>Additionally, the mattress ensures continuous support, with 50% of the body supported by the inflated cells at any given time. This constant level of comfort and pressure relief is vital for individuals requiring extended bed rest, such as those recovering from surgery or with limited mobility. The 1:2 cell configuration also guarantees that 50% of the body is off-loaded during each cycle, relieving pressure on vulnerable areas like the sacrum, heels, or elbows and reducing the risk of tissue damage. Moreover, the alternating pattern not only prevents pressure ulcers but also allows for sufficient tissue recovery, especially beneficial for patients with longer oxygen recovery requirements, ensuring optimal healing.</p> <p>Finally, for individuals with vascular pathology, the alternating air mattress becomes a critical component of their care plan. It helps maintain adequate blood circulation, minimizing the risk of complications associated with poor circulation, such as ulcers, oedema, or thrombosis.</p>
20 Air cells 100mm cell depth for each cell	<p>The presence of 20 air cells offers enhanced comfort and pressure redistribution. This greater number of air cells allows for more precise adjustment and support, ensuring optimal comfort for patients.</p> <p>It is important to note that small cell alternating pressure mattresses or overlays with cells smaller than a diameter of 10 cm may not provide adequate pressure redistribution. These smaller cells cannot be sufficiently inflated to support the body effectively, potentially leading to uneven pressure distribution and an increased risk of pressure ulcers. Therefore, using mattresses or overlays with larger and numerous air cells are advised.</p> <p>The Pan Pacific Guideline recommends avoiding use of cells less than diameter of 10cm or overlays. Sufficient depth and width of the cell ensures the body is supported high to allow the offloaded cell to achieve complete offloading, thereby contributing to the reduction of pressure injury risk. Smaller cells cannot be adequately inflated to support the body, potentially leading to uneven pressure distribution and an elevated risk of pressure ulcers.</p>
2-part cell design: Cell-in-cell and cell-on-cell structure	<p>The 2-part cell design employs two key systems: “cell-on-cell” and “cell-in-cell.” These systems are vital for maintaining the cell’s integrity when subjected to load and preventing issues like cell collapse, overlap, and constant skin pressure during the alternating cycle.</p> <p>CELL-ON-CELL DESIGN:</p> <p>In the “cell-on-cell” system, there are essentially three layers of cells, with one layer positioned on top of another. The bottom layer of cells remains fully inflated at all times and serves as a stable base. This static layer ensures that the client does not “bottom out” onto the bed frame. In other words, it prevents direct contact with the hard surface beneath, which is essential for client comfort and safety, particularly during power failures or loss of air pressure.</p> <p>CELL-IN-CELL DESIGN:</p> <p>The top layer of cells, known as the ‘cell-in-cell’ system, features a unique design. It contains a membrane within the top cell, resulting in two nested cells. This nested structure is crucial for preventing the cell from expanding outward and for maintaining its width when subjected to pressure. If a cell were to collapse under pressure, it could release pressure into adjacent cells, leading to overlapping and continuous skin pressure during the alternating cycle. This overlap is counterproductive to pressure ulcer prevention. With the ‘cell-in-cell’ design, the mattress ensures that each cell maintains its integrity, preventing overlap and associated skin pressure. It increases user safety and greater surface stability.</p>



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<p>Minimum of 10-minute Cycle time whereby every 10 minutes each set of 2 cells complete and inflation and deflation period.</p> <p>4 Cycle times: 10/ 15/ 20/ 25 mins</p>	<p>Variable cycle times allow for carers to meet the specific comfort needs of a range of users. A recommended 10-minute cycle ensures adequate alternation between loading and off-loading, which mimics natural nocturnal movement. Cycle times can be extended up to a 25-minute cycle, which can benefit clients who cannot tolerate shorter cycles. However, longer intervals between alternations pose a higher risk of extended pressure exposure.</p> <p>Healthy individuals change positions regularly, and research suggests that an 11.6-minute minimum physiological mobility requirement (MPMR) helps maintain healthy tissue. Increasing movement frequency reduces pressure ulcer development. Vulnerable clients who move significantly every 7-12 minutes are less likely to experience tissue damage. Therefore, a 10-minute cycle, comprising 5 minutes of loading and 5 minutes of offloading, closely mimics natural movement patterns, promoting optimal pressure ulcer prevention and client comfort.</p> <p>These insights are supported by research such as Exton-Smith and Sherwin's work on the significance of spontaneous bodily movements in preventing pressure sores and Keane's research on the minimum physiological mobility requirement for individuals supported on soft surfaces.</p>
<p>Active / Alternating mode</p>	<p>Mattress periodically redistributes pressure to protect vulnerable areas by alternately inflating and deflating cells beneath the client. This dynamic action helps prevent the development of pressure ulcers and maintains client comfort.</p>
<p>Reactive/Static mode</p>	<p>The Reactive/Static mode provides a valuable alternative for situations when the user cannot tolerate the alternating movement of the mattress. This mode is particularly beneficial during activities such as eating or when the user is experiencing difficulty falling asleep. It also serves as a slow introduction to the alternating mattress for those who may need an adjustment period.</p> <p>In Reactive/Static mode, cell pressure is equalised to redistribute the body weight over a larger surface area. This creates a stable and static surface, ideal for clients who are unable to tolerate movement. This mode ensures comfort and support for users during specific activities or times when a static surface is preferred, promoting a more adaptable and client-centred approach to care.</p>
<p>Cell changeover</p>	<p>There is a static period between each alternation where both cells are inflated ensures the user remains stationary and ensures that the user does not move vertically as the cell change occurs. If the inflated cell begins to deflate prior to the deflated cell rising the person will drop with the deflating cells and re-rise with the inflating cells causing discomfort and motion sensitivity.</p>
<p>Auto firm mode</p>	<p>The Auto-Firm mode rapidly inflates the mattress to its maximum static pressure for a finite time, establishing a stable surface beneficial for various care procedures. Specifically engineered to support care activities like transfers, dressing changes, repositioning, and wound care, it maximises air pressure in the mattress cells, ensuring stability during critical moments.</p> <p>Moreover, the Auto-Firm mode addresses practical aspects of client care, including the use of a bedpan and the implementation of slide sheets. The heightened air pressure in this mode ensures a firm and supportive surface, minimizing client discomfort and simplifying bedpan use. The stable surface aids in the efficient use of slide sheets as there will be sufficient slide sheet contact for smoother movements and repositioning.</p> <p>Additionally, there is a safety setting that prompts a return to alternation after 30 minutes, ensuring ongoing client comfort and preventing prolonged exposure to maximum pressure.</p>
<p>Rate of Change</p>	<p>The rate of change in an air mattress, refers to its fast offload speed and ability to rapidly deflate to 0mmHg. This plays a critical role in preventing pressure injuries. This quick deflation is essential for maximizing the duration of tissue offloading, minimizing the time tissues are under pressure, and allowing for reactive hyperaemia and tissue reperfusion. Efficient offloading contributes to the reduction of pressure injury risks by preventing prolonged pressure on the skin and underlying tissues, ultimately promoting the overall well-being of clients and safeguarding against potential skin and tissue damage.</p>

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Thermoplastic polyurethane cell material	The use of Thermoplastic Polyurethane (TPU) as cell material in medical devices, particularly in the context of microclimate management, offers a crucial advantage in maintaining skin health. TPU's versatility and flexibility make it an ideal choice for creating medical surfaces such as mattresses, designed to regulate the microclimate around the skin. Effective microclimate management is vital because even a modest 1°C increase in skin temperature corresponds to a significant 13% rise in tissue oxygen demand, rendering the skin more susceptible to mechanical damage from factors like shear and friction. TPU, with its durable and biocompatible properties, assists in preventing such complications by contributing to optimal temperature control.
Static cells in head end	Prevents the discomfort associated with alternating motion such as feelings of motion sickness, ensuring a stable and motionless surface for users. This stability not only addresses potential discomfort but also enhances overall user experience by providing a consistent and comfortable surface for the head. The absence of alternating motion contributes to improved sleep quality, promoting a restful and undisturbed sleep environment. Moreover, the use of static cells aligns with individual preferences for a stable head end, increasing user compliance and satisfaction.
Self-sealing cells. Ability to deflate top cell to offload heel completely	The ability to deflate the top cell of a mattress to completely offload the heel aligns with international (Pan Pacific) guidelines, emphasizing the importance of maintaining heel freedom from the bed surface. According to these guidelines, offloading the heel is essential, and it is recommended to do so in a manner that distributes the weight of the calf without exerting pressure on the Achilles tendon and popliteal vein. This specific feature allows for targeted pressure relief, reducing the risk of pressure ulcers and ensuring optimal support in accordance with established healthcare standards.
CPR valve	The CPR (Cardiopulmonary Resuscitation) valve is a crucial feature in medical mattresses, designed for rapid deployment during emergencies. Activated when CPR is conducted, the valve ensures a swift deflation of the mattress, creating a firm surface essential for resuscitation procedures effectively. Its design prioritises user convenience, featuring a quick-release mechanism that allows for single-handed operation. The CPR valve is easily visible and is deliberately positioned to remain clear of the mattress cover, facilitating immediate identification in urgent situations. Importantly, the valve is engineered to resist accidental release when knocked or moved, ensuring stability during routine use.
Anti deflation mode in event of power loss with Self-sealing cell	<p>The inclusion of self-sealing cells in a mattress provides a robust and versatile safety feature. In the unlikely event that a bladder or cell is compromised, users can simply disconnect it, and the mattress will continue to operate normally. This feature is especially valuable for targeted pressure relief, as specific areas such as heels can be disconnected to achieve complete offloading.</p> <p>Furthermore, the self-sealing mechanism has an added advantage during power failures. In the absence of power, the cells automatically seal to prevent the mattress from deflating. This functionality transforms the mattress into a reactive static air surface, maintaining its usability even in emergency situations. This dual capability not only enhances the safety of the mattress but also ensures that clients continue to receive adequate support and pressure relief during unforeseen circumstances, contributing to the overall reliability and resilience of the medical device.</p>
Active Microclimate Management	<p>Active microclimate management, facilitated by multi-stretch, vapor-permeable covers, is integral to optimizing support surfaces. These covers allow for efficient air circulation around the mattress cells, effectively reducing moisture from various sources, including incontinence, wound exudates, sweat, and spills. Simultaneously, they contribute to temperature regulation, preventing increases in tissue temperature over time, which can lead to discomfort and sweating. It is important to note that the materials used in both the support surface and covers play a distinct role in temperature management. The integration of these features not only promotes hygiene but also enhances overall sleep surface comfort, creating a supportive and comfortable environment for users.</p> <p>Support surfaces with a high degree of immersion and envelopment can increase temperature at the body support surface interface.</p>

OSKA ALTO COVER CLINICAL JUSTIFICATION

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Multiway stretch	<p>A multiway stretch cover is designed to address the hammocking effect, ensuring that the pressure-relieving and redistribution properties of the mattress are preserved. The cover's ability to stretch in multiple directions (four ways) aligns with the dynamic movements of the human body, allowing the material to conform and adapt as needed. This flexibility is crucial because if the cover is too tight, it can create a hammocking effect and result in material tension, diminishing the mattress's pressure-relieving capabilities. By avoiding this tension and maintaining optimal stretch, the multiway stretch cover contributes to lower interface pressure, enhancing the overall comfort and support provided by the mattress. The emphasis on flexibility and conformity in the cover's design is instrumental in promoting an effective and responsive pressure management system.</p>
Waterfall flap	<p>The inclusion of a waterfall flap serves dual purposes, primarily focusing on infection control and extending product longevity. This design feature provides a protective barrier against fluid ingress, particularly through zippers, enhancing the overall infection control measures of the product. By preventing contaminants and fluids from entering through vulnerable points like zippers, the waterfall flap contributes to maintaining a hygienic environment.</p> <p>Simultaneously, this protective design also acts as a barrier against potential damage caused by fluid exposure, increasing the overall longevity of the product. By safeguarding against the negative effects of moisture and contaminants, the waterfall flap ensures that the product remains resilient over time, reducing the risk of wear and tear.</p>
Dual Cable management system	<p>Cable management is standard on both sides. Preventing risks associated with loose or unmanaged cables. One primary benefit is the reduction of trip hazards, minimizing the likelihood of individuals tripping over cables. Additionally, the system mitigates the risk of cables getting caught in bed mechanisms, preventing potential damage to the cable or, in more severe cases, cable severance, which could pose a risk of electric shock. By eliminating trailing cables, the cable management system significantly reduces the risk of injury to users and caregivers, enhancing overall safety.</p>
4-sided zipper	<p>This zipper configuration allows for easy removal of the cover, facilitating the inspection of the mattress and enabling machine washing. The ability to machine wash the cover provides an effective means of ensuring the mattress is free from contaminants, promoting a hygienic environment.</p> <p>Moreover, the 4-sided zipper design minimises the risk of particle buildup that could compromise the integrity of the cover surface. By allowing thorough inspection and machine washing, this feature contributes to maintaining a clean and uncontaminated surface, thus enhancing infection control practices.</p>
Buckle Straps	<p>Buckle straps are employed to securely fasten the mattress to the bed frame, providing stability and preventing shifting or displacement. This feature ensures that the mattress remains in place, enhancing user safety and comfort during use. The buckle straps function as a reliable mechanism for securing the mattress, offering a practical solution to maintain proper alignment and support within the bed frame.</p>

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VIGUARD TECHNOLOGY	CLINICAL BENEFIT/JUSTIFICATION
Vapour permeable	<p>The vapour permeable feature in a mattress is designed to facilitate the passage of vapour, promoting free airflow for breathability, and preventing the buildup of temperature and moisture against the user's skin. This permeability is quantified through the Moisture Vapour Transmission Rate (MVTR). By wicking away moisture from the user's skin and reducing heat, this characteristic contributes to improved microclimate management, creating a more comfortable environment. Microclimate management plays a key role in reducing the risk of pressure injuries. Furthermore, the bi-elastic PU/polyester coating enhances this by allowing interface movement, lowering the risk of shear damage, friction, and helping disperse moisture. Ultimately, the vapour permeable feature not only addresses the reduction of pressure injury risks but also enhances user compliance and overall experience by promoting a breathable and comfortable sleep surface.</p>
Moisture impermeable WPR >5m (Water penetration resistance)	<p>The cover has an effective barrier against fluid ingress. This resistance ensures that moisture particles are prevented from penetrating the surface, allowing them to remain on the exterior where they can be easily wiped away or cleaned. The material strikes a balance between having fibres wide enough for breathability and small enough to prevent liquid ingress. This design minimises the risk of strikethrough when the product is used, cared for, and maintained correctly.</p> <p>This significantly contributes to infection control and enhances the product's longevity. By providing a resilient barrier against fluid ingress, the material promotes a hygienic environment and safeguards the product from potential damage caused by exposure to moisture.</p>
Autoclave resistant	<p>Autoclave resistance denotes the capability to withstand steam sterilization, one of the most rigorous and commonly utilised methods for sterilizing medical devices. This attribute is pivotal for ensuring thorough sterilization and maintaining the integrity of the product through repeated autoclaving processes.</p> <p>Beyond its technical significance, autoclave resistance significantly contributes to infection control measures and enhances the overall longevity of the product. By withstanding steam sterilization, the material supports a hygienic environment and extends the product's usable life, making it a robust and durable option for medical applications.</p>
Antibacterial and Antifungal treated	<p>The antibacterial and antifungal treatment of a product is a key element in infection control. This treatment serves to inhibit the growth of bacteria and fungi, minimizing the risk of microbial contamination. By incorporating these protective features, the product becomes an effective barrier against harmful pathogens, enhancing its role in maintaining a hygienic environment. This treatment contributes significantly to infection control practices, promoting a safer and more sterile setting for medical applications.</p>
Wipeable Washable to 95°C Dry cleanable Resistance to active chlorine <10 000 ppm concentration	<p>The product is designed to be easily maintained with its wipeable and washable features, accommodating various cleaning methods. It can be washed at temperatures up to 95°C, making it suitable for machine washing and dry cleaning. With resistance to active chlorine at concentrations below 10,000 ppm, it tolerates disinfection chemical wiping, further promoting decontamination and cleaning processes. These attributes contribute significantly to infection control measures and increase the product's longevity. For routine cleaning, a simple wipe down with warm water and mild detergent is recommended, ensuring a convenient and effective approach to maintaining hygiene and cleanliness.</p>
Low friction fabric Anti-decubitus	<p>The fabric minimises local shear and strain on the skin during user movement and repositioning by incorporating a smooth fabric with multi-directional stretch. It strikes a delicate balance, providing enough friction to prevent excessive sliding in the fowler position while ensuring quietness and comfort.</p> <p>Moreover, the mattress is anti-decubitus, meaning it helps prevent the onset of wounds resulting from friction or rubbing. This feature is crucial for avoiding excessive skin crushing during extended hospital stays, preventing the occlusion of subcutaneous capillaries that could lead to conditions such as oedema or necrosis.</p> <p>These attributes collectively contribute to the reduction of pressure injury risk, enhancing overall user compliance and improving the user experience.</p>

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Vanguard Technology	Clinical Benefit/Justification
High Frequency (HF) Welded seams	Unlike regular sewn seams that inherently provide spaces for bacteria to accumulate, HF Welded seams are created by melting or welding materials together using high-frequency vibrations. This process ensures that there are no holes or gaps in the seams, leaving no avenues for bacteria to infiltrate or proliferate. By eliminating potential breeding grounds for bacteria, HF Welded seams play a crucial role in reducing the risk of infection spread.
Meets latest legislative requirements	The product adheres to the latest legislative requirements, being DecaBDE and Halogen-free, compliant with Reach and ROHS standards. Additionally, it meets the standards of the Biocidal Products Regulation. The flame-retardant cover enhances safety by mitigating the risk of fire. This comprehensive compliance ensures that the product aligns with current regulations, emphasizing environmental responsibility, safety, and health standards.

OSKA ALTO PUMP CLINICAL JUSTIFICATION

Features	Clinical Benefit/Justification
Auto pressure recalibration for varied weight and posture	This feature dynamically adjusts and optimises pressure distribution based on individual characteristics, automatically adapting to changes in weight and posture. By providing consistent and appropriate pressure relief, it enhances comfort, support, and overall effectiveness in preventing pressure injuries. Continuous fine-tuning of pressure distribution in real-time ensures that maximum contact pressure on bony prominences remains lower when adjusted according to the user's body mass. This not only contributes to clinical efficacy but also enhances the ease of use for both users and caregivers.
Fully digital pump	The fully digital pump is designed for ease of use, providing clear and easily readable information. This feature significantly reduces stress for caregivers, ensuring a straightforward interface that minimises the risk of activating incorrect settings. With clear weight and alternating cycle settings, the fully digital pump enhances precision and accuracy in adjusting the support surface. This not only simplifies the operation of the system but also contributes to a safer caregiving environment, where caregivers can confidently manage settings for optimal client comfort and support.
Safe working load of 175kg	The surface is designed to safely support individuals with weights up to 175 kgs, reducing the risk of structural issues or injuries. Beyond safety, this feature enhances versatility, accommodating a broader range of clients and contributing to the adaptability of the equipment in various healthcare settings. The prevention of complications, such as inadequate support or bottoming out, is paramount, promoting effective pressure injury prevention and ensuring client comfort.
Sound and vibration protection 20dB	The whisper-quiet operation of the pump is particularly advantageous for clients on long-term use, promoting enhanced relaxation and improved sleep quality. This not only reduces stress for clients but also creates a more tranquil healthcare environment, conducive to both recovery and focused care delivery. The innovative hibernation feature further adds to these benefits by automatically switching off the pump when optimal pressure is achieved, minimizing disruptions, and ensuring a seamless, unobtrusive user experience. With a noise level as low as 20dB, the mattress prioritises client comfort, supports restorative sleep, and aligns with a client-centred approach to care.
Transport function	A practical feature that ensures the maintenance of air pressure even when unplugged from power. This is achieved by connecting the inlet and outlet tubes together. When the mattress is removed from the power source, the transport function allows it to maintain a constant air pressure for a few hours. However, it's important to note that in this state, the mattress cannot alternate. This capability is particularly valuable during transportation or temporary power disruptions, ensuring that the mattress remains adequately inflated for a limited duration, enhancing convenience and client comfort during transitions or unforeseen circumstances.

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ANTICIPATED FUNCTIONAL OUTCOMES	CLINICAL JUSTIFICATION
Facilitate social participation	<p>The mattress promotes social participation by ensuring good sleep, which enhances energy levels and cognitive function, encouraging social engagement. Comfort and pain management, by preventing pressure sores, increase the likelihood of users being active and participating in social activities. Additionally, the mattress's quiet pump technology minimises disruptions, aiding concentration in social interactions and creating a peaceful environment in shared spaces, beneficial for both users and caregivers.</p>
Activity engagement	<p>The Auto-Firm mode of the mattress offers a stable and supportive surface for activities like transfers, dressing changes, and wound care. This stability not only ensures safety during care routines but also supports rehabilitation exercises, aiding in mobility and strength recovery. It aligns with goals such as fostering independence and enhancing functional capacity. Additionally, the mattress helps prevent pressure ulcers and manage pain, reducing secondary complications from immobility and enabling uninterrupted participation in daily and therapeutic activities.</p>
Injury prevention	<p>The alternating air cells prevents prolonged pressure on specific body areas and supports with offloading, contributing to injury prevention, especially in vulnerable regions prone to pressure sores.</p> <p>The ability to deflate cells for full heel offloading prevents pressure ulcers at the heels.</p>
Capacity to remain in own home	<p>Pressure-relieving features in the mattress, such as alternating pressure, low friction fabric, and appropriate pressure distribution, play a pivotal role in preventing pressure injuries. This is crucial for users who may be prone to such complications due to prolonged immobility or existing health conditions. By minimizing the risk of pressure sores, the mattress not only enhances the comfort and safety of users in their own homes but also significantly reduces the likelihood of hospital readmissions and the need for additional medical interventions.</p> <p>The versatility of the mattress, designed for both healthcare facilities and home use, makes it an integral component in enabling individuals to live independently or with minimal support. It addresses key health risks associated with immobility, thereby easing the caregiving burden, and making home care more manageable.</p> <p>Furthermore, the prevention of pressure sores and other complications supports the user's ability to maintain a higher quality of life and engage actively in community life. Features that allow customization and user control add to the sense of autonomy and personal comfort, further empowering individuals in their day-to-day living environments.</p>
Promote independence	<p>The ease of use of the fully digital pump and the simplicity of adjusting settings contribute to the independence of users and caregivers in managing the support surface.</p> <p>The mattress's alternating pressure system minimises the frequency of manual repositioning by caregivers. This feature allows users to maintain a level of autonomy in managing their positioning and comfort, reducing their dependency on others for such adjustments.</p> <p>Good sleep is crucial for cognitive function, mood regulation, and overall health. By providing a comfortable sleeping environment and reducing pain and discomfort, the OSKA Alto mattress can improve sleep quality, which in turn supports the user's daily functioning and independence.</p>
Compatible with other AT/supports	<p>The mattress can be used in conjunction with specialised positioning aids, such as wedges or cushions, to enhance comfort and support during therapeutic activities or routine care tasks.</p> <p>A firm foam surround can be added around the alternating air single size mattress which can allow for it to be compatible with a King single bed frame.</p> <p>Other supports:</p> <p>The CPR valve facilitates compatibility with emergency medical procedures, ensuring a seamless integration with life-saving interventions.</p>

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ANTICIPATED FUNCTIONAL OUTCOMES	CLINICAL JUSTIFICATION
Support Capacity building	<p>Improved sleep quality directly impacts overall health, including mental and emotional well-being. Well-rested individuals are more likely to have the energy and cognitive ability to engage in capacity-building activities like skill development, therapy, or social interaction.</p> <p>Comfortable resting and sleeping conditions can improve focus and participation in capacity building activities, whether they are conducted from bed or after a good rest.</p> <p>The fully digital pump is designed for ease of use, enabling users, even those with limited technical skills, to adjust settings according to their comfort and therapeutic needs. This empowerment and control are crucial for fostering independence and self-management, key components of capacity building.</p>
Value for Money	<p>The construction and materials used in the OSKA Alto mattress are designed for durability, suggesting a longer lifespan and less frequent need for replacement. This durability translates to cost savings over time. e.g. the cover features: Welded seams, waterfall flap, Wipeable, Washable to 95°C, Dry cleanable, Resistance to active chlorine <10 000 ppm concentration.</p> <p>By reducing the need for manual repositioning, the mattress can decrease the burden on caregivers. This might lead to reduced costs in home care assistance or nursing care.</p> <p>(While the mattress can reduce the frequency of manual turning, it does not eliminate the need entirely as the person still requires lateral turning.)</p> <p>The mattress's ability to prevent pressure sores, manage pain, and improve sleep quality can lead to significant long-term health benefits. This may reduce the need for more costly medical interventions, such as treatment for severe pressure sores or hospital readmissions.</p>
Standards Compliance	IEC/EN 60601-1-11: 2015 ARTG#308171

CLIENT ATTRIBUTES	CLINICAL BENEFIT/JUSTIFICATION
Current or history of Pressure Ulcers	Alternating pressure mattresses are particularly beneficial for individuals who are immobile or have limited mobility, such as those recovering from surgery, bedridden clients, or those with neurological conditions. The mattress's design, offering regular movement and pressure redistribution, is critical for these users. It helps in mitigating the risks of pressure ulcers by continuously shifting pressure points on the body, thus promoting better skin integrity, and reducing the likelihood of ulcer development or recurrence. This regular movement and pressure relief are essential in both preventing new pressure ulcers and aiding in the healing of existing ones.
Poor Trunk control	<p>Clients with poor trunk control often have difficulty in repositioning themselves, leading to increased risk of pressure sores. The alternating pressure system helps in redistributing pressure and reducing this risk, even when the client cannot frequently change positions independently.</p> <p>Features like the Auto-Firm mode can offer enhanced stability which is crucial for clients with poor trunk control. This stability assists in maintaining proper alignment and reducing the risk of falls or slippage when sitting over the edge of the bed or when performing transfers. The mattress surround accessory can also add more stability for clients with poor trunk control.</p>
Involuntary movement	<p>The dynamic support offered by alternating pressure mattresses accommodates involuntary movements. The alternating cycle ensures that no single area is continuously subjected to pressure, allowing the mattress to adapt to the individual's movements without causing excessive friction or shear forces.</p> <p>Involuntary movements can sometimes result in shear and friction forces, which can contribute to skin damage. Alternating pressure mattresses, particularly those with low friction covers, help minimise these forces, reducing the risk of skin breakdown.</p>

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Elderly or Frail	<p>The alternating pressure feature of the mattress is essential for individuals with fragile skin, as it helps redistribute pressure gently and continuously. This minimises the risk of pressure ulcers, which elderly or frail individuals are particularly prone to due to thinner skin and reduced mobility.</p> <p>The mattress cover's microclimate management properties help regulate temperature and moisture, which is crucial for maintaining skin integrity. Elderly skin is often more susceptible to damage from moisture and temperature extremes.</p> <p>The cover material's low shear properties are particularly beneficial for elderly or frail individuals, reducing the risk of skin tears and injuries during movements or transfers.</p>
Spinal Cord Injuries	<p>The alternating air cells in the mattress help redistribute pressure, which is crucial for individuals with spinal cord injuries who often cannot shift their weight independently. This feature helps prevent pressure injuries; a common concern due to limited mobility.</p> <p>The mattress cover's microclimate management properties are beneficial for maintaining skin integrity. Individuals with spinal cord injuries may have impaired temperature regulation and sweat production, making microclimate management essential to prevent skin breakdown and discomfort.</p>
Bariatric Clients	<p>Bariatric clients, often facing limited mobility and higher body weight, are at an increased risk of pressure sores due to prolonged pressure and compromised circulation. Alternating pressure mattresses like the OSKA Alto are crucial for these clients, as they redistribute pressure automatically, reducing the frequency of manual repositioning and easing caregiver burden.</p> <p>The OSKA Alto's mattress cover is designed for temperature regulation and moisture management, essential for bariatric clients who may overheat and perspire more due to larger body mass. This microclimate management is key to preventing skin breakdown, common in bariatric clients because of increased skin folds and moisture-related skin issues. The cover's moisture-wicking and vapour permeable properties are vital for maintaining skin integrity.</p> <p>It is also important to note that the OSKA Alto has a Safe Working Load (SWL) of up to 175 kg.</p>
Critical Care and Post-Surgery	<p>Clients in critical care or those recovering from surgery often spend extended periods in bed. Alternating pressure mattresses assist in preventing formation of pressure ulcers during recovery.</p>
Reduced Sensation or Nerve Damage	<p>Individuals with conditions like spinal cord injuries or diabetes-induced neuropathy often have reduced sensation or nerve damage, making them unaware of prolonged pressure on their body, thereby increasing their risk of pressure injuries. Alternating pressure mattresses are essential in this context as they redistribute body weight and continuously shift pressure points, preventing extended pressure on any single area. This is especially important for those who cannot feel early signs of pressure sores.</p>
Immobility or Limited Mobility	<p>Individuals who are immobile or have limited mobility, such as those recovering from surgery, bedridden clients, or those with neurological conditions, benefit significantly from the regular movement provided by alternating pressure mattresses like the OSKA Alto. Even in sleep, the human body requires subtle movements to maintain healthy blood circulation and prevent the development of pressure sores, a process often hindered by immobility. Through its alternating pressure mechanism, the mattress periodically redistributes pressure across the body. This innovative design mimics the natural movements that occur in sleep, effectively reducing the risk of pressure sores.</p> <p>The alternating pressure points also enhance blood flow, vital for nutrient and oxygen delivery to tissues, aiding in healing and reducing complications associated with immobility.</p>

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Back Pain	<p>Prolonged inactivity, specific sitting or lying positions can worsen back pain by disrupting blood flow, potentially leading to discomfort, skin issues, tingling, numbness, or pain. An alternating pressure mattress can alleviate back pain by effectively redistributing pressure, reducing the risk of pressure sores and discomfort. It promotes improved blood circulation, aiding in the delivery of oxygen and nutrients to the back muscles and tissues, facilitating their recovery and minimizing discomfort.</p> <p>Lumbar back pain is common, exacerbated by insufficient support from a soft or worn-out mattress, leading to misalignment and discomfort during sleep. Adjustable mattress settings offer tailored support for back pain sufferers, addressing individual needs effectively.</p>

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