

Serene Air

Improving pressure injury prevention and nursing workflow for post-acute care delivery

Over 60% of post-acute patients with pressure injuries do not receive proper wound care, leading to persistent high pressure injury risk and incident rate.⁶ Research focusing on US long-term care facilities found 8% of skilled nursing facilities (SNF) patients are high-risk long-stay residents with pressure injuries, with 41% not discharged home, 30% requiring rehospitalization, and 39% deceased during stay.¹⁻³

More than 1 in 10 nursing facility residents develop pressure injuries. Improper care results in late-stage pressure injuries, multiple readmissions, and hospitalization by up to 12 days. The broad range of special needs, impairments, complications, and age-related health risks significantly increase pressure injury risks, length of stay, and nursing complications.⁴⁻⁶

Serene Air improves caregiving workload and pressure injury prevention for post-acute care patients by delivering a gentler, softer pressure redistribution to improve blood circulation. High airflow ventilates and prevents heat and moisture buildup between the skin and the surface, ensuring proper skin microclimate and reducing pressure injury risk.



Pulsation therapy, gentler pressure redistribution

Hypersensitive patients may fear the discomfort from repositioning and alternating pressure. Clinical guideline suggests a slow, gentle, yet firm pressing to prevent tissue damage while improving blood circulation and comfort during patient recovery and sleep.

Air cells + foam padding improve safety and comfort

Clinical Guideline advocates for bottoming out prevention to improve recovery and comfort. Serene Air combines air cells with foam padding and seat inflation fine-tuning to optimize cushioning, pressure relief, comfort, and safety during sitting.

True low air loss reduces skin damage and pressure injury risks

Clinical guideline recommends active airflow management to dissipate moisture and heat buildup on the skin. Serene Air's blower (>1,300 lpm) provides reliable true low air loss to prevent the development of new and worsening of existing pressure injuries.

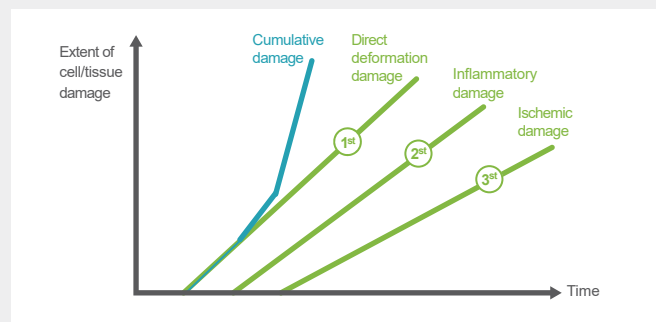
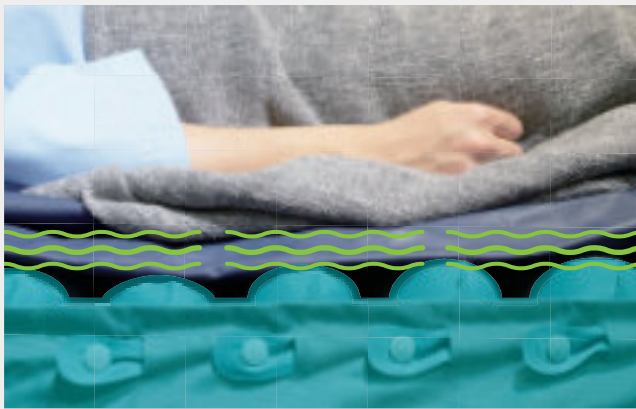
Fully inflates under 2 minutes, accelerating care delivery

Blower system fully inflates the air mattress in under 2 minutes, minimizing prep time and optimizing treatment and patient care efficiency. Firm air cells paired with foam pad provide a stable surface for daily activities like rehabilitation, recreation, and more.

Clinical Application


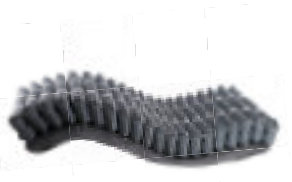
Lower trunk and heel pressure injuries are common for immobile patients and extend the length of stay. The superficial wounds on the bony prominences quickly expand into subcutaneous tissues to cause irreversible damage to the muscle, tendons, and bones.^{4,6}

Immobility, poor tissue perfusion and oxygenation, hemodynamic instability, and hypersensitivity in severely diseased or ill patients (such as postoperative or burn patients) add additional risk factors and workflow complications. The clinical practice guideline recommends a slow, gentle, yet firm pressing (similar to massage) to improve blood circulation, prevent potential tissue damage, and reduce pressure injury risks.^{7,8}



Each damage event contributes to the cumulative cell and tissue damage, which develops in an escalated manner as a result of the added contributions of the events.^{7,8}

1. CMS. (n.d.). PQDC. Data.cms.gov. Retrieved December 6, 2022, from <https://data.cms.gov/provider-data/topics/nursing-homes>
2. Kerr, Kirk & Brunton, Cory & Arensberg, Mary. (2021). Outcomes and Treatment Costs of Skilled Nursing Facility Patients with Pressure Injuries and Malnutrition. *Innovation in Aging*, 5, 1021-1021. 10.1093/geroni/ggab046.3624.
3. Park-Lee, E., & Caffrey, C. (2009). Pressure ulcers among nursing home residents: United States, 2004. *NCHS data brief*, (14), 1-8.
4. Hahnel, E., Lichterfeld, A., Blume-Peytavi, U., & Kottner, J. (2017). The epidemiology of skin conditions in the aged: A systematic review. *Journal of tissue viability*, 26(1), 20-28. <https://doi.org/10.1016/j.jtv.2016.04.001>
5. Walsh, E. G., Wiener, J. M., Haber, S., Bragg, A., Freiman, M., & Ouslander, J. G. (2012). Potentially avoidable hospitalizations of dually eligible Medicare and Medicaid beneficiaries from nursing facility and Home- and Community-Based Services waiver programs. *Journal of the American Geriatrics Society*, 60(5), 821-829. <https://doi.org/10.1111/j.1532-5415.2012.03920.x>
6. Lee, Y. N., Kwon, D. Y., & Chang, S. O. (2022). Bridging the Knowledge Gap for Pressure Injury Management in Nursing Homes. *International journal of environmental research and public health*, 19(3), 1400. <https://doi.org/10.3390/ijerph19031400>
7. European Pressure Ulcer Advisory Panel, National Pressure Injury Advisory Panel, & Pan Pacific Pressure Injury Alliance. (2019). Prevention and treatment of pressure ulcers/injuries : clinical practice guideline : the international guideline 2019. National Pressure Injury Advisory Panel. (Original work published 2022)
8. Falloon, S. S., Abbas, S., Stridfeldt, C., & Cottenden, A. (2018). The Impact of Microclimate on Skin Health With Absorbent Incontinence Product Use. *Journal of Wound, Ostomy and Continence Nursing*, 45(4), 341-348. doi:10.1097/won.0000000000000449

Specifications	Serene Air																		
Pump																			
	<tr> <td>Dimension</td><td>31.2 x 26 x 16 cm / 12.3 x 10.2 x 6.3 in 5</td></tr> <tr> <td>Weight</td><td>kg / 11lbs</td></tr> <tr> <td>Case material</td><td>Fire Retardant ABS</td></tr> <tr> <td>Supply voltage</td><td>110-120V 60Hz, 4.5A</td></tr> <tr> <td>Operating cycle</td><td>5/ 10 / 15 / 20 minutes</td></tr>	Dimension	31.2 x 26 x 16 cm / 12.3 x 10.2 x 6.3 in 5	Weight	kg / 11lbs	Case material	Fire Retardant ABS	Supply voltage	110-120V 60Hz, 4.5A	Operating cycle	5/ 10 / 15 / 20 minutes								
Dimension	31.2 x 26 x 16 cm / 12.3 x 10.2 x 6.3 in 5																		
Weight	kg / 11lbs																		
Case material	Fire Retardant ABS																		
Supply voltage	110-120V 60Hz, 4.5A																		
Operating cycle	5/ 10 / 15 / 20 minutes																		
Mattress																			
	<tr> <td>Mattress type Dimension</td><td>20 cm / 8 in replacement + 5 cm / 2 in foam</td></tr> <tr> <td></td><td>200 x 90 / 107 / 122 x 20 cm (mattress) + 5 cm (foam)</td></tr> <tr> <td>Cell height Weight</td><td>78.7 x 36 / 42 / 48 x 8 in (mattress) + 2 in foam</td></tr> <tr> <td>Top cover material</td><td>(foam) 20 cm / 8 in cells</td></tr> <tr> <td>Cell material</td><td>7.5 / 8.5 / 9.5 kg ; 16.5 / 18.8 / 21lbs</td></tr> <tr> <td>Maximum patient weight</td><td>4-way stretch PU</td></tr> <tr> <td>Flame retardant standards</td><td>Nylon / PU</td></tr> <tr> <td></td><td>180 / 300 / 420 kg ; 397 / 661 / 926 lbs</td></tr> <tr> <td></td><td>EN597-1; EN597-2</td></tr>	Mattress type Dimension	20 cm / 8 in replacement + 5 cm / 2 in foam		200 x 90 / 107 / 122 x 20 cm (mattress) + 5 cm (foam)	Cell height Weight	78.7 x 36 / 42 / 48 x 8 in (mattress) + 2 in foam	Top cover material	(foam) 20 cm / 8 in cells	Cell material	7.5 / 8.5 / 9.5 kg ; 16.5 / 18.8 / 21lbs	Maximum patient weight	4-way stretch PU	Flame retardant standards	Nylon / PU		180 / 300 / 420 kg ; 397 / 661 / 926 lbs		EN597-1; EN597-2
Mattress type Dimension	20 cm / 8 in replacement + 5 cm / 2 in foam																		
	200 x 90 / 107 / 122 x 20 cm (mattress) + 5 cm (foam)																		
Cell height Weight	78.7 x 36 / 42 / 48 x 8 in (mattress) + 2 in foam																		
Top cover material	(foam) 20 cm / 8 in cells																		
Cell material	7.5 / 8.5 / 9.5 kg ; 16.5 / 18.8 / 21lbs																		
Maximum patient weight	4-way stretch PU																		
Flame retardant standards	Nylon / PU																		
	180 / 300 / 420 kg ; 397 / 661 / 926 lbs																		
	EN597-1; EN597-2																		

Pump: water resistant standards (IP21); Mattress: flame retardant standards (EN597-1, EN597-2), RoHS, WEEE; HCPCS code: E0277



+44 208 577 2789

enquiries@24-7healthcare.co.uk

<https://24-7healthcare.co.uk>