



Air Immersion Paediatric Dynamic Mattress





# **Current Challenges**

Whilst there is a lot of focus on pressure ulcer prevention and treatment in adults, there are limited products available that have been tailored specifically for paediatric and neonatal patients. Few manufacturers fully acknowledge the clinical challenges around maintaining skin integrity in this vulnerable group of patients.

### Challenges include<sup>1,2</sup>





Structural differences; the cells are smaller and the collagen fibres are thinner. Increased use of sedation and paralysing agents, resulting in decreased mobility.



Reduced ability to thermoregulate.

Specifically designed for paediatrics

Optimal therapy and immersion

Enhanced comfort





Increased body surfaceto-weight ratio, resulting in higher pressures.



**Reduced barrier function**, increasing the risk of infection and further complications.



# Introducing the **Medstrom Aria Junior**

Based on the successful air immersion technology within the Aria family of products, the Aria Junior offers dual modality of two clinically effective therapy modes that are suitable for the vulnerable paediatric patient:



### **Constant Immersion**

Constant immersion is an advanced reactive technology that is activated by the patient's weight and position on the mattress. This allows the immersion logic board to accurately immerse the patient without compromising the stability required to self-mobilise.

Whilst in bed, the immersion will be automatically adjusted each and every time the patient moves, ensuring that they remain optimally supported at all times.

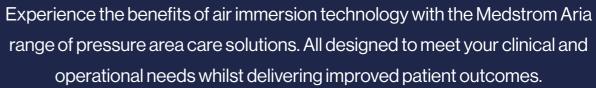
## **Gradient Immersion**

Fear or emotional distress within the paediatric population increases pain intensity, therefore enhancing comfort and managing pain is key<sup>2</sup>. Anecdotally, traditional alternating systems can exacerbate discomfort and pain. Gradient Immersion within the Aria Junior offers a more effective and comfortable active technology using very subtle periodic changes within the mattress cells.

This is also activated by the patient's weight and position on the mattress, with adjustments made automatically based on these factors.



# Right product, right patient, right time

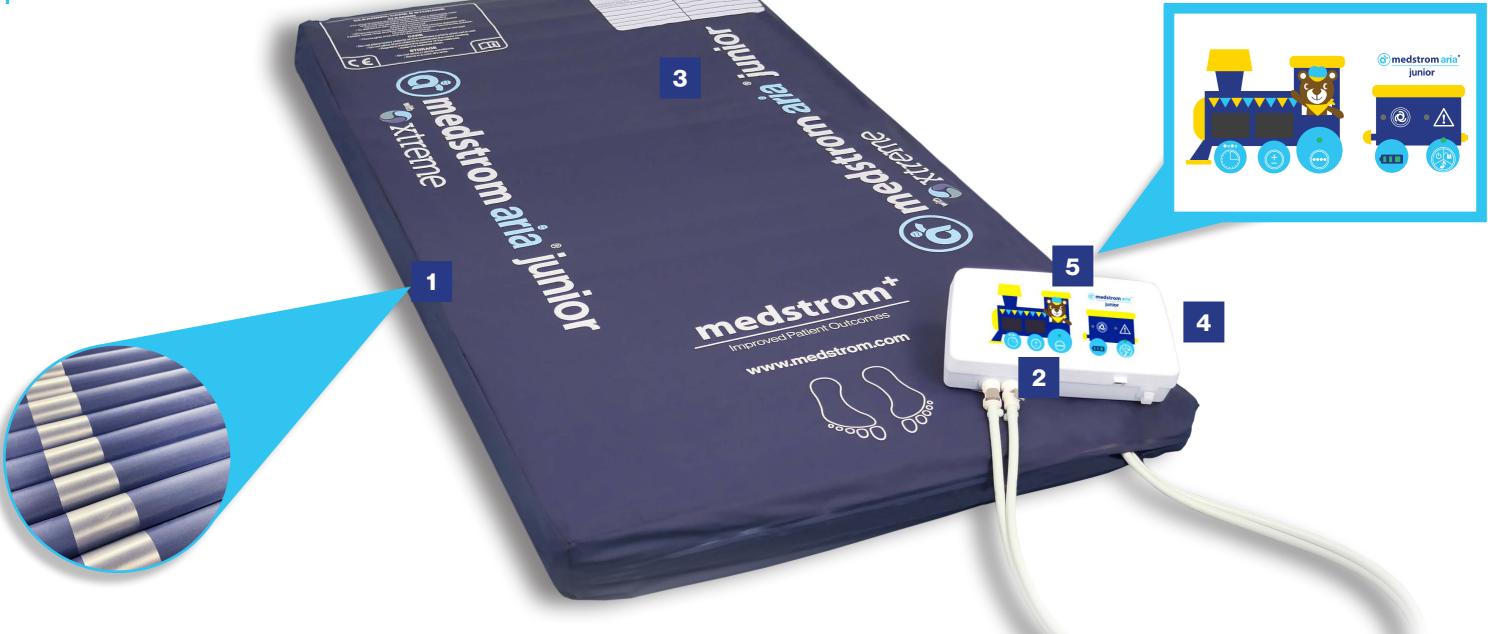


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# Designed specifically for paediatrics...



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Junior cells: Specifically designed narrow cells provide optimal therapy for lighter and smaller patients. 1 The junior cells also enable specific pressure redistribution to be achieved over smaller areas, such as the child's torso and heels.

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Comfort adjust: With five comfort settings within a therapeutic window, the Medstrom Aria Junior can be fully customised to suit the needs of the individual child.

Infection prevention: Medstrom's range of X-treme covers are durable, waterproof, moisture-vapour-3 permeable and multi-stretch, offering complete governance to infection prevention and providing an effective absorption for frictional and shear forces.

- Whisper quiet: Using modern technology, the Medstrom Aria Junior is an almost silent system, ensuring sleep and rest can be restored.
- Friendly design: Fun and vibrant design suitable for Children's wards and hospitals. The easy-to-use 5 interface is equipped with an eight hour battery life for caregiver convenience and maintained therapy in circumstances where the child is transported to procedures or different wards.

## The Medstrom Aria Junior is modified for the prevention and treatment of pressure damage for paediatric patients.



### **Technical Specification:**

Max patient weight:	25kg
Mattress dimensions:	70cm x 140cm x 3.8cm
Control unit dimensions:	24.5cm x 15.5cm x 6.1cm
Weight of mattress:	3.5kg
Weight of control unit:	0.92kg

#### **References:**

1. Community Practitioner. 10th October 2010. The anatomy of skin [online].

2. Elsass, F. December 2019. Pediatric Patients - Wound Source [online].

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