

# CuroCell® A4

Pressure injuries are a widespread and distressing issue in healthcare systems worldwide. They do not only cause unnecessary suffering for those affected but also impose a significant financial burden on the healthcare system.

To provide the best possible care for individuals at risk of pressure injuries, we must not only treat their medical conditions but also consider values that affect well-being and quality of life, such as reduced pain and improved comfort.

This is where CuroCell® A4 and the Pulsating Mode™ comes into play.



## With focus on patient-centered care

CuroCell® A4 has been developed to allow healthcare professionals to focus on patient-centered care. Using artificial intelligence (AI) and high precision sensors, the system continuously monitors the individual's weight, height, and position, adapting to each individual.

If the patient shifts in position, the system reacts and adjusts the contact pressure between the patient and the support surface. The outcome is enhanced comfort, reduced risk of cell damage as well as decreased necessity for manual adjustment. This, in turn, simplifies the caregivers process, ensuring a smoother experience for everyone involved.

## Undisturbed sleep and reduced pain

Sleep and a calm environment are key components for recovery and well-being. It is during sleep that the cells in the body are repaired<sup>(5)(6)</sup>, promoting wound healing.

The Pulsating Mode™ is developed to improve comfort and stability by reducing movements and fluctuations in the support surface. In addition, the silent running<sup>(3)(4)</sup> of the control units enables conditions for undisturbed sleep and recuperation. In a clinical study, the individuals even reported pain reduction while using a support surface with the Pulsating Mode™<sup>(1)</sup>.

## Prevention and treatment of pressure injuries

While prioritizing preventive care is crucial, the Pulsating Mode™ has also demonstrated efficacy as an aid in the actual treatment of pressure injuries. The Pulsating Mode™ has been proven to treat pressure injuries in 30 days<sup>(1)</sup>, compared to the expected healing time of up to 155 days<sup>(2)</sup>.

The cost of pressure injury care decreases significantly when these wounds can heal within a shorter time-frame. The time and care that healthcare professionals need to spend on each patient also decreases, freeing up resources that can be used more efficiently within the healthcare system<sup>(10)</sup>.

## Streamline resources and enhance patient safety

The control unit and support surface are CE-marked separately. This signifies that if a control unit needs replacement, the individual unit can be replaced without replacing the entire system.

This approach aims to ensure a more secure experience for the individual by avoiding unnecessary movements of patient. Additionally, caregivers do not face extra workload or an increased risk of injury from moving patients more than necessary.

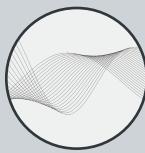
Due to the recirculation of air within the support surface, the system does not require continuous operation. This reduces wear and tear, allowing us to offer a service-free system for the initial five years.

# CuroCell® A4



## Fully autonomous

Internal pressure automatically adjusts based on the patient's weight, height, and position.



## Quiet and comfortable

The Air Flow Control™ system reuses air, enabling the control unit to operate quietly and intermittently, supporting restful sleep and recovery.



## The Pulsating Mode™

By using artificial intelligence, the Pulsating Mode™ combines soft, alternating movements with constant low pressure to offer a large contact area and to reduce high peak pressures. The Pulsating Mode™ is recommended by Care of Sweden due to its documented clinical effectiveness<sup>(1)</sup>.



## Gentle Alternating Low Pressure™ (GALP)

Dynamic program that regularly alternates the air pressure with soft movements to relieve the pressure on the body, offering prevention of pressure injuries and comfort.



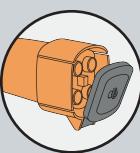
## Constant Low Pressure (CLP)

In the Constant Low Pressure mode, the pressure is evenly distributed over the entire support surface. In this mode, the cells do not alternate but are filled with an equal amount of air all the time.



## Maximum pressure (Caring mode)

The air cells are filled with maximum air pressure to provide stability during bed entry/exit and during patient care. Returns to the previous settings after 20 minutes.



## Maintains air during transport and power failure

By disconnecting and sealing the CPR connection, the air pressure in the support surface can be maintained for at least 12 hours without being connected to the control unit.



## Pack & Go

The control unit deflates the support surface in 20 minutes.



## Comfort settings

The air pressure can be increased in two stages according to the patient's comfort preferences.



## Technical specification

Pressure injury category	Up to and including category IV <sup>(5)</sup>
Technical life time	5 years
Size control unit	11 cm x 30 cm x 20 cm
Sound level control unit	Max 17 dBA <sup>(3)</sup> , 25 dBA <sup>(4)</sup>
Output voltage	12 V DC
Input voltage	100-240 V / 50-60 Hz / 0,6 A
Material air cells	TPU
Cleaning instruction	Cleaning of cover: Wipe with cleaning agent and/or disinfectants. Machine wash max 95 °C, tumble drying
Optional	Transport bag
CE-marking	Control unit and support surfaces are registered and marked separately in accordance with MDR (EU) 2017/745. 
Other features	PVC-free materials, individual and replaceable cells

## References

(1) Raepsaet, C., Zwaenepoel, E., Manderlier, B., Van Damme, N., Verhaeghe, S., Van Hecke, A., & Beeckman, D. (2021). A fully automated pulsating support system for pressure injury prevention and treatment in 10 Belgian nursing homes: An observational study. *Journal of Wound, Ostomy and Continence Nursing*, 48(2), 115–123. <https://doi.org/10.1097/WON.0000000000000746> (2) Dealey, C., Posnett, J., & Walker, A. (2012). The cost of pressure ulcers in the United Kingdom. *Journal of Wound Care*, 21(6), 261–264. <https://doi.org/10.12968/jowc.2012.21.6.261> (3) EN ISO 11201:2010. *Acoustics — Noise emitted by machinery and equipment — Determination of emission sound pressure levels*. SP, 2018. (4) ISO 3746:2010. *Acoustics — Determination of sound power levels and sound energy levels of noise sources using sound pressure — Survey method using an enveloping measurement surface over a reflecting plane*. (5) National Pressure Injury Advisory Panel, European Pressure Ulcer Advisory Panel & Pacific Pressure Injury Alliance. (2025). *Prevention and Treatment of Pressure Ulcers/Injuries: Clinical Practice Guideline*. The International Guideline (4th ed.). Emily Haesler (Ed.). (6) Centers for Disease Control and Prevention. (2003). *Guidelines for Environmental Infection Control in Health-Care Facilities*. Updated 2019. (8) SS-EN ISO 15495:2004; DIN 53122-1. *Textiles — Measurement of water vapour permeability*. (10) Wound Management and Prevention, 60(1), January 2014. *Providing Quality Skin and Wound Care for the Bariatric Patient: An Overview of Clinical Challenges*. ISSN 1943-2720.



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# CuroCell® A4

Comparison of main features	CuroCell® CX10	CuroCell® CX15	CuroCell® CX16	CuroCell® CX20
Recommended user weight	Up to 200 kg	Up to 220 kg	Up to 200 kg	Up to 250 kg
Height	10 cm	15 cm	16 cm	20 cm
Sizes	80/85/90/100/105/120 x 200/210 cm			
Overlay mattress	✓			
Replacement mattress		✓	✓	✓
Safety air mattress		✓		✓
Safety foam mattress			✓	
Carrying handles		✓	✓	✓
Integrated cable holder	✓	✓	✓	✓
Replaceable top part		✓	✓	✓

## A modular mattress system

The CuroCell® A4 system is modular, offering mix-and-match flexibility. This means the same control unit can adapt to various care needs by seamlessly integrating with multiple support surfaces. The control unit can be replaced individually without the need to replace the entire system, reducing unnecessary patient movement.



## Designed to reduce the risk of shear

With the CuroCell® CX15, we offer a 15 cm replacement mattress featuring a two-layered construction, allowing the two layers to move relative to one another. Shear forces occurs between the two air layers instead of between the skin and the surface, reducing the risk of PI's caused by shear. The lower mattress height of 15 cm is compatible with most hospital beds, ensuring that standard safety rails are sufficient to maintain patient safety.

## Covers for hygiene and reduced shear

The support surface is supplied with a removable and liquidproof hygiene cover for easy cleaning. The hygiene cover is manufactured in a four-way stretch fabric to reduce the risk of shear forces, and is vapour permeable<sup>(8)</sup> to lower the risk of skin maceration. The hygiene cover also features a liquidproof zipper.

Available covers:



### Stone (CuroCell CX10)

- Welded seams
- Color: dark grey
- Material: 61 % polyester, 39 % polyurethane coating



### Olivia (CuroCell CX10)

- Stitched seams
- Color: light grey
- Material: 55 % polyester, 45 % polyurethane coating



### Integrated heel function

The support surface is designed with an integrated heel function, aiming to reduce pressure on the heels.



### Adapts to type of support surface

The CPR connection features an identifier that automatically selects the corresponding program in the control unit based on size and type of support surface.



### In the event of a CPR-situation

Disconnect the CPR connection from the control unit and leave the lid open to quickly deflate the mattress.



### Bottom part CuroCell

- Color: black
- Material: 100 % polyester polyurethane
- Integrated cable holder, carrying handles (for replacement mattresses only)



### Bottom part Evac

- Color: black
- Zippers on four sides
- Handles on short and long sides for moving the mattress
- Velcro straps for securing patients in emergency situations
- Material: 100 % polyester polyurethane
- Integrated cable holder