



# Symbioso 200

Integrated air surface  
for Multicare hospital bed

# Symbioso 200

next generation Low Air Loss System

## **SOLUTION THROUGH INNOVATION**

The dual modes of Constant Low Pressure (CLP) and MicroClimate Management (MCM) help keep the patient's skin safe from damage due to moisture and pressure. The combination of these two systems can effectively help against pressure ulcer development due to elimination of pressure and moisture between the patient's body and mattress surface.

## **CLINICAL EFFECT + COMFORT**

- Dual modality MCM & CLP
- 4 way stretch cover with high MVP
- Simply plug and play
- Specially designed for heel protection
- Easy maintenance and operation
- One touch CPR for bed and mattress

# Multicare & Symbioso 200

integrated Air Mattress for Multicare

## **MAINTAIN OPEN ARCHITECTURE**

- Intuitive and easy to use controls built into the bed frame
- No control box on the footboard
- It is possible to use virtually any support surface with the open architecture of the Multicare frame



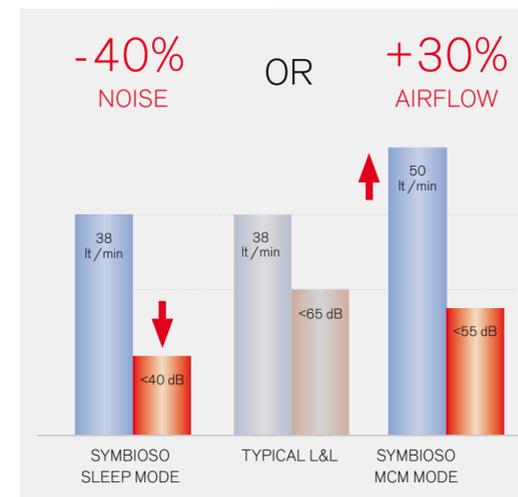
# MicroClimate Management

Skin temperature and moisture levels are important factors in pressure ulcer prevention. The Symbioso 200 mattress system provides the optimum conditions for micro climate management.

In the context of pressure ulcers, microclimate usually refers to skin temperature and moisture conditions at the skin-support surface interface. The system helps maintain the natural thermoregulation by continuously blowing air into the mattress surface.

- MCM pushes 50l/minute of air under high risk areas of the patient's body.

## QUIET AND EFFICIENT



## SLEEP MODE

### MINIMISE SLEEP DISTURBANCE

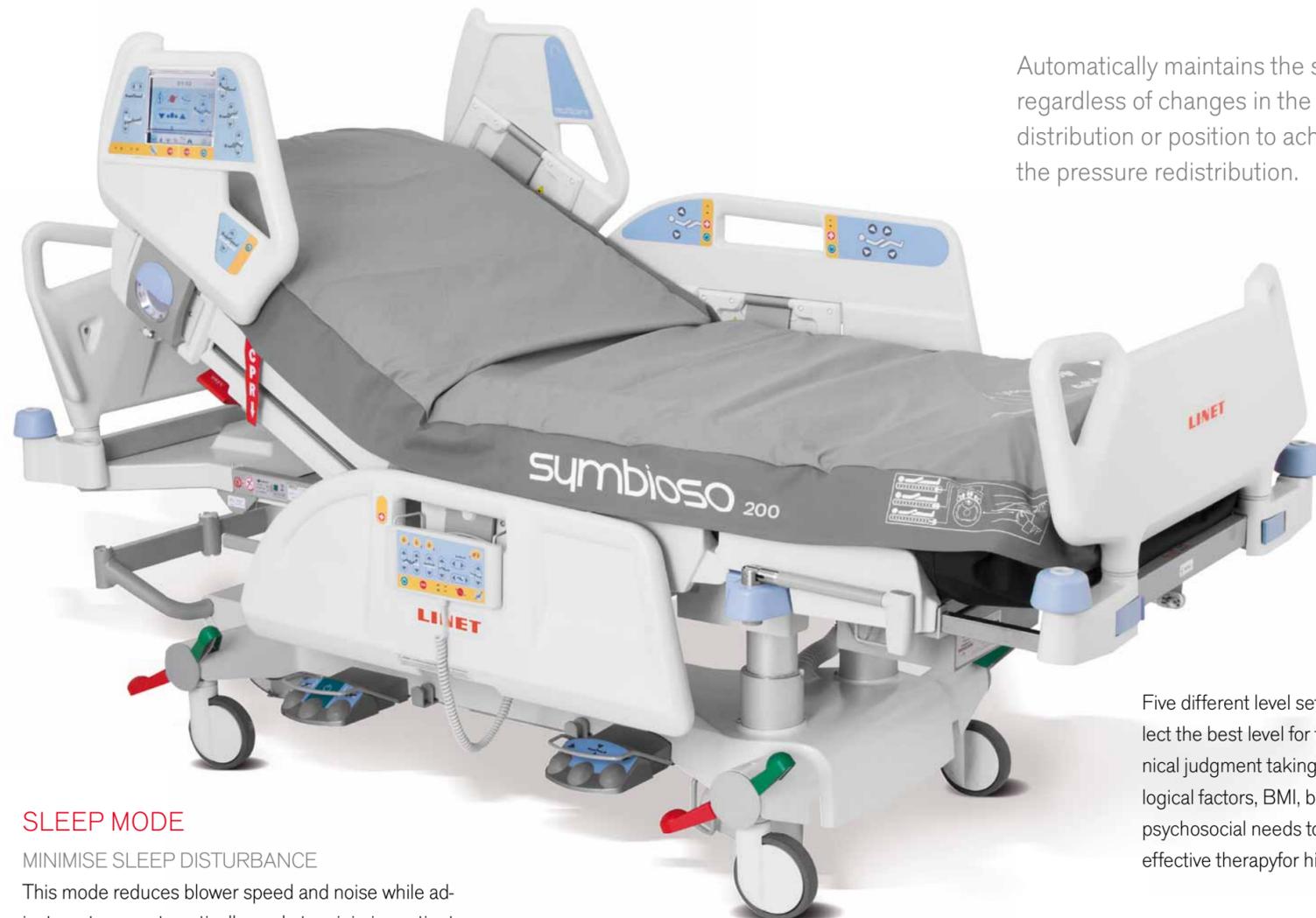
This mode reduces blower speed and noise while adjustments are automatically made to minimize patient disturbance during sleep.

- Sleep mode still delivers an effective 38 litres per minute of dynamic air flow.

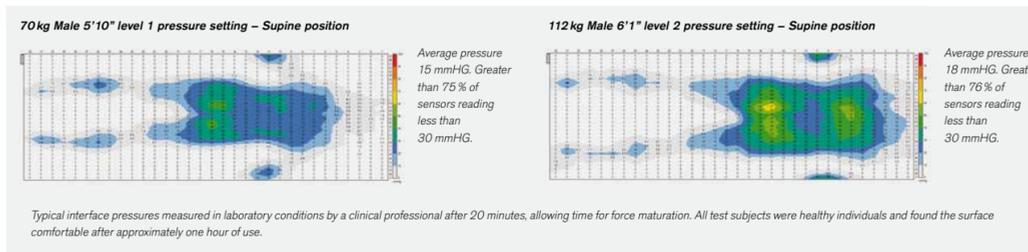
Symbioso is 15% quieter than the leading competitors, while delivering 30% more airflow beneath the patient.

# Constant Low Pressure (CLP)

Automatically maintains the selected pressure regardless of changes in the patient's weight distribution or position to achieve constant levels of the pressure redistribution.



Five different level settings enable the caregiver to select the best level for their patients based on their clinical judgment taking into consideration the physiological factors, BMI, body position, weight and their psychosocial needs to achieve maximum comfort and effective therapy for higher risk patients.



# Why MicroClimate Management?

**AGEING SKIN** is less resilient and more vulnerable to damage than younger skin because it is generally thinner, structurally weaker and drier<sup>2</sup>.

**IN THE USA** the Agency for Health Care Policy and Research guidelines the prevention of pressure ulcers recommends avoiding ambient relative humidity below 40% to reduce the likelihood of dry skin<sup>3</sup>.

**RELATIVE HUMIDITY** also affects the strength of the stratum corneum; at a relative humidity of 100% the stratum corneum is 25 times weaker than at 50% relative humidity<sup>4</sup>.

**INCREASED SKIN MOISTURE**, as measured by electrical capacitance, has been found in a pilot study to correlate with the development of pressure ulcers<sup>5,6</sup>.

# Why Constant Low Pressure?

**THE USE OF ACTIVE PRESSURE REDISTRIBUTION** products, such as CLP is recommended for use for patients at higher risk of pressure ulcer development where frequent manual repositioning is not possible<sup>5</sup> and is supported by direct scientific evidence from properly designed and implemented clinical studies.

**CLP REFERS TO SYSTEMS** that reduce, by redistribution, the contact pressure at the skin mattress interface by increasing the surface area over which the patient is supported. Redistribution is achieved by Immersion 'the ability of a support surface to allow a patient to sink into it' and Envelopment 'how well a support surface moulds to body contours and accommodates irregular areas, such as folds in clothing or bedding'.<sup>1</sup>

**AVERAGE PRESSURE** being the average pressure measured over total number of sensors in contact with the patient. Pressure Area Index, being the percentage of pressure sensors reading below chosen threshold levels. The most commonly used of these 30 mmHg, being just below the figure of 32 mmHg traditionally used as the figure for arteriolar closure.<sup>2</sup>

**HOWEVER MANY STUDIES** have also demonstrated a wide range of pressure in capillaries at various anatomical locations, with values dependent on age and concomitant disease.<sup>3</sup> Also, it has been shown that the body can tolerate lower pressures for much longer periods of time.<sup>4</sup>

## MCM REFERENCES:

1. Microclimate in Context. M.Clark, M. Romanelli, SI Reger, K Ranganathan, J Black, C Dealey. 'International review. Pressure ulcer prevention: pressure, shear, friction and microclimate in context. A consensus document. London: Wounds International, 2010'
2. Dealy C Skin care and pressure ulcers. Adv Skin wound care 2009; 22(9):421-28
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4. Brienza DM, Geyer MJ, Using support surfaces to manage tissue integrity. Adv Skin wound care 2005; 18:151-57
5. Suriadi, Sanada H, Sugama J et al. Risk factors in the development of pressure ulcers in an intensive care unit in Potianiak Indonesia. Int Wound J 2007; 4(3): 208-15
6. Bates-Jensen BM, McCreath HE, Kono A, et al. Sub epidermal moisture predicts erythema and stage 1 pressure ulcers in nursing home residents: a pilot study. J Am Geriatric Soc 2007; 55: 1199-1205

## CLP REFERENCES:

1. National Pressure Ulcer Advisory Panel. Support surfaces standards Initiative. Terms and definitions related to support surfaces. NPUAP 2007.
2. Landis EM. Micro-injection studies of capillary blood pressure in human skin. Heart 1930; 15: 209-28
3. Pressure, Shear, Friction and microclimate in context. HL Orsted, T Ohura, K Harding. 'International review. Pressure ulcer prevention: pressure, shear, friction and microclimate in context. A consensus document. London: Wounds International, 2010'
4. Resnick JB, Rogers JE. Experience at Los Amigos Hospital with devices and techniques to prevent pressure sores. In Kenedi RM, Cowden JM, Scales JT (eds) Bedsore Biomechanics London: Macmillan, 1976 p.301-10
5. EPUAP and NPUAP Prevention and treatment of pressure ulcers: Quick Reference Guide. Washington DC: National Pressure Ulcer Advisory Panel: 2009

# Integrated Air Surface

[01] COMFORT LAYER covers air cells to aid in patient comfort.

[02] ACTIVE AIR CELLS inflate to the selected pressure level and adjust automatically to accommodate for patient movement on the mattress.

[03] TWO EXTRA AIR CELLS for mattress extension or to create a 'Heel Zone' to help manage pressure in this high risk area.



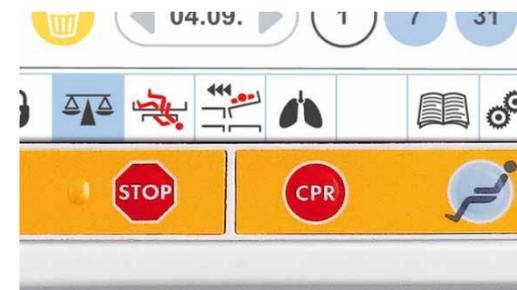
[04] Full length AIR SIDE FORMERS for improved patient safety and security whilst in bed and during egress.

[05] THE FOAM SUPPORT BASE LAYER provides stability and support under air cells.

PROTECTIVE MATTRESS COVER is waterproof and vapor permeable and offers a 4-way stretch to allow for patient immersion and envelopment. The zipper is protected by a flap to prevent fluid from penetrating inside the mattress.

# Practical Function

## ONE BUTTON CPR



One touch CPR simultaneously flattens the bed frame and deflates the air mattress. There is also a manual CPR release on the mattress for quick deflate during transport.

## MAX INFLATE MODE



Air mattress fully inflates to provide a firm surface for delicate nursing procedures or common procedures such as transfers and patient repositioning.

## LATERAL THERAPY



Automatic lateral therapy (ALT®) is a function that maintains the bed and the patient in it in a permanent cycle of programmed lateral tilts.

## AUTOMATIC FOWLER BOOST



Fowler boost automatically increases the pressure level in the seat section when the back rest is raised above 30° degrees. This function can be deactivated.

## TRANSPORT MODE



Facilitates the transport of the patient on a bed as the mattress remains inflated for a minimum of 12 hours when disconnected from the control unit.

## ERGOFRAME



Positioning of the patient by tilting the bed can help reduce excessive pressure acting on places on the patient's body with a high risk of developing pressure ulcers.

# Safety on both sides

- Sophisticated alarm system
- GO button
- Integrated cables
- Automatic pressure adjustment
- Time return from MAX inflation mode after 30 minutes
- Easy to clean for infection control
- Air side formers
- Quick & simple CPR
- Continuous connected cells
- Transport mode



## EASY CLEANING AND MAINTENANCE

The modular construction of the mattress allows for quick and easy cleaning and repair of mattress components. The mattress cover can be wiped down or laundered for cleaning and disinfection.



## TECHNICAL SPECIFICATIONS

Mattress dimensions	2140×860×200 mm
SCU dimensions	360×220×100 mm
Mattress weight	9.5 kg
SCU weight	3.5 kg
Max. patient weight	250 kg

## ELECTRICAL SPECIFICATIONS

Power supply	220–240 V; 50 Hz
Electrical safety standard	EN 60601-1
Electrical safety Classification	class I, type B

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