NoDec 3 Air-Stream
Three-cell cycle alternating pressure mattress replacement

Clinically Proven Pressure Elimination Therapy
Three-cell cycle total pressure elimination (also known as ‘zero pressure’) has been at the heart of Pegasus Healthcare’s Airwave technology products for over 20 years dating back to the grandfather of alternating pressure in 1985 the ‘Pegasus Airwave System’, and more recently the ‘Cairwave Therapy System’.

Now sees the continued success of pressure injury prevention and management maintained through the three-cell cycle zero pressure system from Pegasus – the ‘NoDec 3 Air-Stream’.

The NoDec 3 Air-Stream is a next generation three-cell cycle alternating pressure mattress system which is based on the same performance and design characteristics as the Airwave and Cairwave systems and provides an evolution in features, performance and clinical efficacy.

The NoDec 3 Air-Stream is designed to replicate the body’s natural spontaneous movement and is clinically demonstrated to provide complete pressure elimination at regular intervals, thus ensuring that it is perfect for the prevention and accelerated healing of all grades of pressure injuries irrespective of mobility.
Clinically Proven Therapy
By replicating what comes naturally the NoDec 3 Air-Stream’s three-cell technology has been clinically proven to stimulate reactive hyperaemia through periods of frequent complete pressure elimination.

Unrivalled Patient Safety and Comfort
The availability and ease of access to key safety features coupled with an innovative mattress design ensure that the NoDec 3 Air-Stream provides superior patient comfort and safety.

Nursing Staff Efficiency
The NoDec 3 Air-Stream has a range of intuitive and easy to access features which will allow nursing staff to manage their time efficiently whilst continuing to provide excellent levels of care within the demanding and pressurised environment of modern healthcare facilities.

Maximise Infection Control
Key features of the NoDec 3 Air-Stream such as an easy to clean, waterproof Dartex cover with welded seams help to maintain high levels of infection control.

The NoDec 3 Air-Stream is designed to replicate the body’s natural spontaneous movement and is clinically demonstrated to provide complete pressure elimination at regular intervals.
Clinical efficacy and proven effectiveness are essential aspects that should be considered when selecting the appropriate dynamic mattress for a particular patient as despite appearances not all pressure relieving devices are the same.

The NoDec 3 Air-Stream is based upon a clinically proven 7.5 minute three-cell cycle which is designed to replicate the body’s natural spontaneous movement and is clinically demonstrated to provide complete pressure elimination at regular intervals. The NoDec 3 Air-Stream features advanced technology to control the rapid changes in airflow ensuring that complete pressure elimination is possible.

Advanced Total Pressure Elimination

The need to completely eliminate pressure at frequent intervals has long been recognised in particular by Kosiak who concluded that “Since it is impossible to completely eliminate all pressure for a long period of time, it becomes imperative that the pressure be completely eliminated at frequent intervals in order to allow circulation to the ischaemic tissues.”¹

Advanced features of the NoDec 3 Air-Stream such as a double layer of cells which synchronously inflate and deflate and active vacuum assisted cell deflation combine to provide frequent periods of complete pressure elimination which stimulates reactive hyperaemia and promotes blood flow thereby maximising pressure relief to the high risk areas such as the sacrum, trochanter and heels.

7.5 minute cycle

The 7.5 minute cycle of the NoDec 3 Air-Stream facilitates pressure relief for up to 8 times an hour. This optimum frequency is firmly based on research, which indicates that if spontaneous movement during sleep exceeds 8 times each hour, tissue damage is unlikely to occur².

Proven healing rates

Clinical studies have shown the successful outcomes achieved using three-cell technology with proven wound healing and fewer new pressure ulcers when compared with alternative dynamic mattresses. A study by Wallenstein showed that “on average, the wound size of all pressure ulcers was reduced by 50% in 4 weeks³ using three-cell technology.

Three-cell cycle

The three-cell cycle of the NoDec 3 Air-Stream allows more of the body to be supported at any given moment while the proximity of fully inflated cells around a deflated cell allows total periodic pressure elimination at all body sites. This complete removal of load has been demonstrated in interface pressure studies and the beneficial physiological consequences quantified both in terms of blood supply, lymph flow and preventing increases in skin surface temperature.

Integrated cell structure

All cells in each layer are ultrasonically welded together to eliminate the risk of the patient ‘bottoming out’ whilst also preventing air-cell encroachment. Each deflating cell efficiently retracts away from the body contact area creating defined areas of high then low pressure beneath the vulnerable pressure points stimulating reactive hyperaemia.

References: 1. Etiology of Pressure Ulcers (Kosiak, M) 2. The Prevention of Pressure Ulcers: Significance of Spontaneous Bodily Movements (Exton-Smith) 3. Establishment of a Rate of Healing for Pressure Ulcers (Wallenstein, S).
The availability and ease of access to key safety features coupled with an innovative mattress design ensure that the NoDec 3 Air-Stream provides superior patient comfort and safety.

**Easily accessible Cardio Pulmonary Resuscitation (CPR)**
Intuitive, always visible and accessible CPR release valve provides rapid deflation in approx. 10 seconds for emergency situations to ensure CPR can commence as quickly as possible.

**Side formers**
Permanently inflated side formers provide a firm mattress edge to ensure patient safety and support during exits or transferring to a trolley/chair. They also provide a cradling effect for the patient whilst lying to enhance their security and comfort.

**Audible and visual alarms**
A sophisticated set of audible and visual alarm functions provide enhanced patient safety and ensures peace of mind for nursing staff.

**Comfort control**
Adjustable comfort control to Firm, Medium and Soft settings provide nursing staff with the ability to adjust air cell inflation pressures in either Static or Dynamic Mode to suit individual patient comfort or clinical requirements.

**Transport mode**
Easy to operate one way valve lets mattress remain inflated for at least 48 hours and also facilitates patient/bed movement without unnecessary risk to patient.

**Profiling and knee-break facility**
The mattress effortlessly conforms to the profiling of a modern electric profiling bed ensuring optimum comfort and performance.

**Dartex cover**
Soft, 2-way stretch, vapour permeable cover provides outstanding levels of breathability, which improves patient comfort, maintains maximum skin integrity and supports pressure care management.

**Unique anti-hammocking cover**
Unique pre-tensioned design ensures that the cover conforms tightly to the cell shape thereby eliminating hammocking across the deflated cell and optimising the zero pressure phase of the cycle.
Nursing Staff Efficiencies

The NoDec 3 Air-Stream has a range of intuitive and easy to access features which will allow nursing staff to manage their time efficiently whilst continuing to provide excellent levels of care within the demanding and pressurised environment of modern healthcare facilities.

**Auto adjustment**
Ergonomic patient management unit automatically adjusts pressure settings in response to changes in patient weight and position which ensures nursing staff are not burdened with difficult product set-up.

**Static mode**
Provides a firm and stable surface for essential nursing procedures such as physiotherapy, wound cleaning and changing linen. A safety automatic return to Dynamic mode after 30 minutes ensures that patients are not put at risk of pressure damage.

**Max inflate mode**
Allows nursing staff to quickly inflate the mattress to a firm setting for nursing procedures for duration of 20 minutes.

**Clearly marked foot end**
Allows nursing staff to easily identify the foot end of the mattress during installation for correct positioning of patient.

**Carrying handles**
Two sets of strong carrying handles for ease of mattress relocation are integrated in the bottom cover and conveniently located close to the mattress centre.

**Power cord storage**
A convenient compartment in the base of the patient management unit provides storage for the power cord during transportation or when not in use, thus ensuring it doesn’t become a trip hazard.

**Cable management system**
Compartment underneath waterfall flap ensures power cable can be safely retained to prevent it becoming a trip hazard and also avoid cable damage.
The NoDec 3 Air-Stream has been designed to ease the burden on hospital staff in the implementation of cleaning and decontamination procedures. Special features of the mattress design will assist hospital staff with infection control initiatives and minimise the risk of cross infection.

**Dartex cover**
Soft, easy to clean, waterproof Dartex cover provides a complete barrier against viruses and blood, minimising infection control risks. It can withstand high temperature washing and has a high chemical resistance to hospital grade disinfectant for easy wipe down.

**Welded seams on cover**
All seams are welded to prevent the ingress of fluids into the mattress providing maximum protection and longevity for the mattress.

**360° zip**
Ensures cover can be easily removed for infection control and laundry washing.

**Waterfall flap**
Generous waterfall flap protects the zip from ingress of fluids thus protecting the integrity of the cells.

**Integrated cell structure**
Superior infection control is achieved by the dual layers of ultrasonically joined cells which prevent the ingress of fluids between the layers. The smooth surfaces of the cells can be easily disinfected and wiped down helping to maintain high levels of infection control.
## Technical Specifications

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cycle Control</td>
<td>Microprocessor controlling solenoid valves</td>
</tr>
<tr>
<td>Cycle Time</td>
<td>7.5 Minutes (1-in-3 cell cycle)</td>
</tr>
<tr>
<td>Supply Voltage</td>
<td>230V, 50 Hz</td>
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<tr>
<td>Power Rating</td>
<td>Max – 100 Watts</td>
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<tr>
<td>Compressor Rating</td>
<td>24 litres/minute at 0.01 MPa</td>
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<tr>
<td>Electrical safety</td>
<td>Class II, Type B</td>
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<tr>
<td>Noise level</td>
<td>less than 30dB</td>
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<tr>
<td>Fuses</td>
<td>2 x 1 amp (internal)</td>
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<tr>
<td>Therapeutic Safe Working Load</td>
<td>286kg</td>
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## Nominal Dimensions

<table>
<thead>
<tr>
<th>Mattress Type</th>
<th>Standard Mattress</th>
<th>Narrow Mattress</th>
<th>Patient Management Unit</th>
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<tbody>
<tr>
<td>Length</td>
<td>1900mm</td>
<td>1900mm</td>
<td>130mm</td>
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<td>Width</td>
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<td>480mm</td>
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<tr>
<td>Height</td>
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<td>210mm</td>
<td>225mm</td>
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<tr>
<td>Weight</td>
<td>8.2 kg</td>
<td>8.0 kg</td>
<td>6.8 kg</td>
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