The TRINOVA Dynamic Cushion and Mattress System is suitable for patients showing any of the following characteristics:

- Assessed to be up to very high risk of pressure sore development.
- Require therapy to promote pressure sore healing.
- May have limited mobility but can be repositioned if necessary.
- Can sit out of bed for more than a few minutes.

The TRINOVA System reduces skin surface pressure at frequent intervals. This encourages the blood flow necessary to maintain healthy tissue, thereby giving therapy and prevention from pressure sores in vulnerable patients.

The mattress system offers a Step Down mode which is a static, lower pressure mode to assist in the assessment of patients whose condition continues to improve.

The system also offers comfort for the patient, firm side supports to facilitate bed/chair transfers and ease of use for the carer.

Patients who are immobile and/or cannot be repositioned when necessary, are therefore at greater risk and can be nursed on the CAIRWAVE Therapy System.

**NOTE:** Optimal performance is, in part, dependent on attaining a good seated position (chair height and posture), see Section I.
# TRINOVAC

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SECTION A - GETTING STARTED

LIST OF PARTS

Mattress

Cushion

Patient Management Unit (PMU)

Power Lead
SETTING UP THE MATTRESS AND PMU

1. Remove bed mattress.

2. Place system mattress on bed - ensure there are no sharp objects to damage the mattress.

3. Secure mattress fixing straps loosely to moving parts of bed frame. Do not secure straps to removable head or foot boards.
4. Connect mains lead and secure using the cable clamp.

5. Hang PMU on foot of bed or place on floor.

6. Connect airpipe connector and turn to ‘normal’ position.
7. Plug Patient Management Unit (PMU) into mains socket and switch on. Alarm will beep 6 times and all lights will illuminate.

8. Check mattress is inflating (max 30 minutes) remove and check straps. During inflation ‘Static’ light will flash.
9. On completion of inflation, smooth cover, check and tighten straps.

SETTING UP THE CUSHION

1. If the system is not set up:
   a. Remove the chair cushion, check the chair base is in good condition and will support the patient.
   b. Place the system cushion on the chair base, ensuring it is pushed to the back of the chair.
   c. Connect the airpipe to the PMU, plug the PMU into the mains socket and switch on.

   NOTE: The power unit can be mounted on the foot of the bed, or placed on the floor in a convenient position.

   d. Wait until the cushion is fully inflated and operating (cycling) correctly before use (approx 4 minutes).
   e. The Cushion Connected light will illuminate.

2. If the system is operating with the mattress connected:
   a. Disconnect the mattress from the PMU (the Check Air Connector light may flash and the audible alarm may sound).
   b. Connect the cushion.
   c. Wait until the cushion is fully inflated and operating (cycling) before use.
Cushion disassembly

1. REMOVE COVERS (SEE SECTION F)

2. UNDO THE AIR CONNECTOR

3. UNDO 6 POPPERS (3 EITHER SIDE) AND REMOVE CELLS

4. UNDO 2 POPPERS AND REMOVE CELLS

NOTE: Each inflatable part of the cushion has a serial number label (marked **) attached for identification.

Cushion assembly

1. PLACE THE TRANSVERSE CELLS BETWEEN THE SIDES OF THE HORSESHOE CELL

2. ROUTE AIRPIPE AS SHOWN

3. FASTEN THE TWO FRONT POPPERS
4. PLACE SEAT CELLS ON TOP OF TRANSVERSE CELLS. PUSH THE WINGS UNDER THE HORSESHOE CELL. FASTEN THE SIX POPPERS.

5. ROUTE AIRPIPES AS SHOWN. REPLACE AIRPIPE COVER TYING TAPES AROUND THE SEAT CELL TUBING. GENTLY PULL THE CELL TUBING FORWARD TO ENSURE IT IS NOT UNDERNEATH THE SEAT CELLS (UNDO THE TWO FRONT POPPERS TO REPLACE THE COVER IF REQUIRED, ENSURING THEY ARE RE-FASTENED ON COMPLETION).

6. RE-CONNECT CUSHION TO POWER UNIT AND INFLATE. ENSURE SEAT CELLS ARE CENTRALISED, PULLING INTO POSITION IF REQUIRED.
The PMU front panel both controls and indicates the various functions of the system and includes audible and visual indicators. The functions are described on the next page.

7. While inflating, turn the cushion over.
   By lifting and straightening the bottom sheet and manipulating the transverse cells, ensure the rear of the transverse cells align with the rear of the seat cells.

8. Replace the cushion cover as detailed in Section F.
FAST INFLATE MODE
(Fast Mattress Inflation)

When switched ON with the air connector in Normal position and the mattress fully deflated, the system will automatically go into Fast Inflation Mode to ensure the mattress inflates quickly, allowing the system to be used in the shortest possible time (max 30 min). While the system is in Fast Inflate Mode, the amber Static Mode indicator light will continually flash.

If the system is switched ON with a partially inflated mattress, Fast Inflation will continue for a shorter period before reverting to Normal Mode.

NORMAL MODE
(Normal System Operation)

When the Fast Inflation Mode is completed, the system will automatically go into Normal Mode with the mattress cells inflating and deflating (cycling) and the green Normal Mode indicator light constantly illuminated.

STATIC MODE
(Mattress not Cycling)

**WARNING:** The patient will not receive the full benefits of the system while it is in Static Mode, therefore the system should be returned to Normal Mode as soon as possible.

Some nursing procedures may require a static, fully inflated mattress. This is achieved by pressing the Normal/Static pushbutton to initiate Static Mode. A single beep will sound to indicate Static Mode is selected. Static Mode enables the PMU to inflate all cells fully and to maintain full inflation. When Static Mode is selected, the amber Static Mode indicator light will illuminate.

Static Mode runs for 30 minutes, after which it reverts to Normal Mode, unless an extension is made.

An alarm sounds after 25 minutes to warn of a return to Normal Mode.

To extend Static Mode for a further 30 minutes within the last 5 minutes, press the Normal/Static Mode pushbutton twice. If Static Mode is re-selected within the last 5 minutes, or up to 15 minutes after reversion to Normal Mode, the system assumes an extension has been made and will not allow a further extension.

Only one extension is allowed and Static Mode cannot be selected for 30 minutes after the extension is finished.

**NOTE:** You can toggle between Normal and Static Modes by pressing the Normal/Static Mode pushbutton, unless it is within 30 minutes of a Static Mode extension.

STEP DOWN MODE
(Mattress not Cycling)

Enables a patient assessment to be made of the requirement for continued use of the system. Step Down Mode can only be selected when in Normal or Static Modes.

To start or stop Step Down Mode, press and hold the Alarm Reset and Normal/Static pushbuttons at the same time until a beep is heard. When Step Down Mode is selected, the mattress becomes static and the pressure automatically reduces.

Step Down Mode has High and Low pressure settings. To toggle between the two settings press and hold the Normal/Static Mode pushbutton once each time until a beep is heard. The pressure selected can be seen by the Static Mode LED flashing in groups of two (low pressure) and three (high pressure) flashes.
To ensure a regular check is made of the patient and the nursing staff are aware of the system being in Step Down Mode. An alarm will sound after 2 hours in groups of 2 or 3 beeps depending on pressure selected and will continue to sound at regular intervals. The alarm can be cancelled by pressing the Alarm Reset pushbutton but will sound again after 2 hours.

NOTE: While in Step Down Mode, the patient only receives pressure care equivalent to a quality pressure redistributing foam mattress.

CARDIO PULMONARY RESUSCITATION (CPR)

In the event of cardiac arrest, turn the air connector to the CPR position. The mattress will immediately begin to deflate.

When the connector is turned to the CPR position the alarm will sound for a few seconds and the red heart will flash. The flashing red heart will cancel when CPR is no longer selected or if the Patient Management Unit (PMU) is switched off.

If CPR is required while the bed is being moved and the system is in Transport Mode, ensure the connector is disconnected from the PMU, turn the air connector to the deflate position. This will allow the mattress to deflate to enable CPR to be carried out.
CUSHION CONNECTED

When the cushion is connected in place of the mattress, the cushion indicating light will illuminate and all other lights will extinguish.

ALARM FUNCTIONS

CHECK AIR CONNECTOR INDICATOR LIGHT

The amber Check Air Connector indicator light will flash when the air connector is not correctly in place or is in the Transport Mode with the PMU turned on.

SERVICE REQUIRED INDICATOR

The amber Service Required indicator light will flash after 10,000 hours of use, when a routine system service is recommended - contact the Service Organisation. The system will continue to function normally whilst in this state.

SYSTEM ALARM

The red System Alarm indicator light will flash and the audible alarm will sound if there is a system fault.

There will only be an audible alarm:

1. Every 2 hours when in Step down Mode.
2. Within the last 5 minutes of Static Mode.
3. If the air connector is disconnected.
4. For 10 seconds when CPR is selected.

The System Alarm indicator light can only be reset by turning off the PMU.

ALARM RESET BUTTON

Resets the audible alarm when pressed.

All alarms other than the power down alarm will return after 30 minutes if no corrective action is taken.
TRANSPORT MODE
(Mattress not Cycling)

WARNING: The patient will not receive the full benefits of the system while it is in Transport Mode. Therefore the system should be returned to Normal Mode as soon as possible.

NOTE: Prior to disconnecting the mattress for transport, it is recommended that Step Down Mode is selected to provide support for the patient during transport (for Step Down Mode, see page 11).

When moving the bed with the mattress still inflated, or in the case of power failure, turn the air connector to the Transport position and disconnect. This will maintain the cells in their present state for approximately 24 hours.

The amber Check Air Connector indicator light will flash and the audio alarm will sound until the Patient Management Unit (PMU) is switched OFF.

Turn OFF the PMU and unplug from the mains supply. An audible alarm will sound - cancel the alarm by pressing the Alarm Reset pushbutton. The bed can now be moved.

When the bed has been moved to its new location, connect the PMU to the mains supply as soon as possible and turn ON. Reconnect the air connector and turn to the Normal position.

The system will restart in Fast Inflation Mode, then automatically revert to Normal Mode.

PROFILING AND KNEE-BREAKING

The system may be used while the bed is in the profiled or knee-break position:

1. With the bed in its present position, loosen the mattress securing straps.
2. Change the bed to the required position (profiled or knee-break).
3. Re-tighten the securing straps.
SECTION C - SYSTEM REMOVAL

PATIENT MANAGEMENT UNIT

Switch off, silence alarm, disconnect from mains.

MATTRESS

Disconnect airpipe connector and turn to deflation position.

Roll up mattress.

Remove PMU.
CUSHION

Disconnect airpipe connector (remove cushion from chair if required).

SECTION D – ALARMS AND FAULT FINDING

ALARM FUNCTION

The System has audible and visual indicators to alert the user to the system status.

In normal conditions with mains power available, the Patient Management Unit (PMU) turned on and the mattress fully inflated and cycling, the Normal Mode indicator light on the PMU front panel will be green and the mains light on the switch socket illuminated.

If at any time the mains power should be removed from the PMU, an audible alarm will be heard. The audible alarm may be cancelled by pressing the Alarm Reset Pushbutton on the PMU.

Should your system develop a fault whilst in use, the System Alarm indicator light will turn red and an audible alarm will be heard. This alarm may be cancelled by switching OFF the PMU and then pressing the Alarm Reset Pushbutton.

NOTE: The red fault light may flash in a series of two, three, four, five or six flashes. This is to assist the supplier when contacted about the fault.

FAULT FINDING

<table>
<thead>
<tr>
<th>SYMPTON</th>
<th>ACTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>No lights on PMU</td>
<td>Check PMU is connected to the mains power supply and that the PMU mains switch is turned ON.</td>
</tr>
<tr>
<td>‘Check Air Connector’ indicator light flashing and alarm sounding</td>
<td>Reset audible alarm by pressing the Alarm Reset Pushbutton. Check air connector is connected and turned to the Normal position. The Check Air Connector indicator light will automatically go out.</td>
</tr>
</tbody>
</table>
SECTION E - CLEANING

MATTRESS AND CUSHION CLEANING

It is recommended that the system is cleaned regularly and after each patient use.

CAUTION:

Cleaning guidelines

In many cases it will only be necessary to remove the mattress top cover or cushion cover for cleaning. Where there is obvious soiling a full cleaning or sterilization procedure will have to be carried out.

Ensure fully dry before use.
PATIENT MANAGEMENT UNIT CLEANING

Cleaning guidelines

CAUTION

SODIUM HYPOCHLORITE
(1,000 - 10,000 parts per million available chlorine (Cl))

DECONTAMINATE USING ETO (ETHYLENE OXIDE) OR DRAEGER SYSTEM

60°C
SECTION F – REPLACEMENT OF COVERS

MATTRESS AND AIRPIPE

Fully unzip the cover and remove the top section.

Release the strap securing the airpipe cover to the mattress pipes and remove the airpipe cover.

Undo the 6 clips securing the mattress to the cover bottom section, pull the airpipes through the sleeve in the cover and lift the mattress out of the cover bottom section.

Replacement is the reverse of the above, with the following additions:

To ensure the cover sits over the mattress snugly, when the mattress is inflated pull down on the top cover sides to straighten the cover, then smooth down.
NOTE: When fitting the airpipe cover, ensure the elasticated end fits fully into the groove on the air connector. Loosely refit the strap around the internal pipes.
SECTION G - USER SERVICING AND SERVICE

The system has been designed for ease of use and contains no user serviceable items.

If you have any queries about the operation of the system contact your supplier.

To help identify your system when telephoning, please make a note of the unit serial numbers which you will find on the label by the PMU mains switch, on the label on the rear of the PMU, or on the air connector of the mattress and cushion.

---

PEGASUS LIMITED
PEGASUS HOUSE WATERBERRY DRIVE
WATERLOOVILLE HAMPSHIRE PO7 7XX ENGLAND
Tel: + 44 (0)23 9278 4200 Fax: + 44 (0)23 9278 4251
email: custserv@pegasus-uk.com

TRINOVA™
CUSHION & MATTRESS REPLACEMENT SYSTEM
MODEL No. 7101  SER No. 
MADE IN THE UNITED KINGDOM  220-240 VOLTS ~50 Hz 40VA
Isolate from mains before removing cover.
Unit contains no user serviceable parts.
Only to be opened by qualified service personnel.

---

SERIAL NUMBER LABEL
SECTION H - TECHNICAL DATA

<table>
<thead>
<tr>
<th>Cycle Control</th>
<th>Purpose designed distributor valve supplying operating air to the inflatable cells</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cycle Time</td>
<td>7.5 minutes (mattress and cushion)</td>
</tr>
<tr>
<td>Supply Voltage</td>
<td>220/240Vac 50Hz</td>
</tr>
<tr>
<td>Power Rating</td>
<td>Maximum 40VA</td>
</tr>
<tr>
<td>Fuse Rating</td>
<td>1A Antisurge (x2)</td>
</tr>
<tr>
<td>Noise Level</td>
<td>NC30</td>
</tr>
<tr>
<td>Nominal Dimensions</td>
<td>Mattress (Inflated) 450mm deep 120mm deep 880mm wide 500mm wide 210mm high 125mm high Weight 9.5kg</td>
</tr>
<tr>
<td>Model</td>
<td></td>
</tr>
<tr>
<td>Patient Management Unit</td>
<td></td>
</tr>
<tr>
<td>1930mm long 400mm wide 210mm high</td>
<td>120mm deep 400mm wide 210mm high 210mm high Weight 2.5kg Weight 3.5kg</td>
</tr>
<tr>
<td>Electrical Safety</td>
<td>Conforms to BSEN 60601-1</td>
</tr>
<tr>
<td>Classification</td>
<td>Class 1, Type B</td>
</tr>
<tr>
<td>Mode of Operation</td>
<td>Continuous</td>
</tr>
<tr>
<td>Symbols</td>
<td>Fused with two 1A Antisurge Fuses</td>
</tr>
<tr>
<td></td>
<td>Alternating Current</td>
</tr>
<tr>
<td></td>
<td>Mains Switch - 1 (On) Power connected to the mains supply 0 (Off) Power disconnected from mains supply</td>
</tr>
<tr>
<td></td>
<td>Type B</td>
</tr>
<tr>
<td>Environment (Usage and Storage)</td>
<td>30% to 75% Air Humidity: 0°C (32°F) to 40°C (104°F)</td>
</tr>
<tr>
<td>EMC</td>
<td>This equipment complies with EMC requirements. If effects are noticed the affected equipments should be moved apart.</td>
</tr>
</tbody>
</table>

This product carries the CE mark in accordance with EC Directive on Medical Devices (93/42/EEC).

Pegasus Limited cannot be held responsible for any damage caused to our products (by foreign objects – needles, sharps, eating utensils, etc) other than due to normal wear and tear as defined in the product warranty agreement. Nor for any injury or incident which relates to the use of cot sides, profiling or any other mechanical or electrical device used in conjunction with this product unless supplied and/or manufactured by Pegasus Limited.
SECTION I - USER POSTURE

USER POSTURE

To provide optimum protection and therapy, ensure the user is provided with a chair at the correct height to encourage a good seated posture.

NORMAL SITTING POSITION

For those who have difficulty with posture e.g. muscular or skeletal abnormalities or those who have persistent lateral shift please contact your Pegasus representative or an appropriate Health Care Professional for advice.

PELVIC OBLIQUITY WITH RESULTANT SCOLIOSIS
PEGASUS LIMITED

Pegasus House
Waterberry Drive   Waterlooville   Hampshire
PO7 7XX   England
Tel:  +44 (0) 23 9278 4200
Fax:  +44 (0) 23 9278 4250
E-Mail:  custserv@pegasus-uk.com
Website:  www.pegasus-uk.com

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