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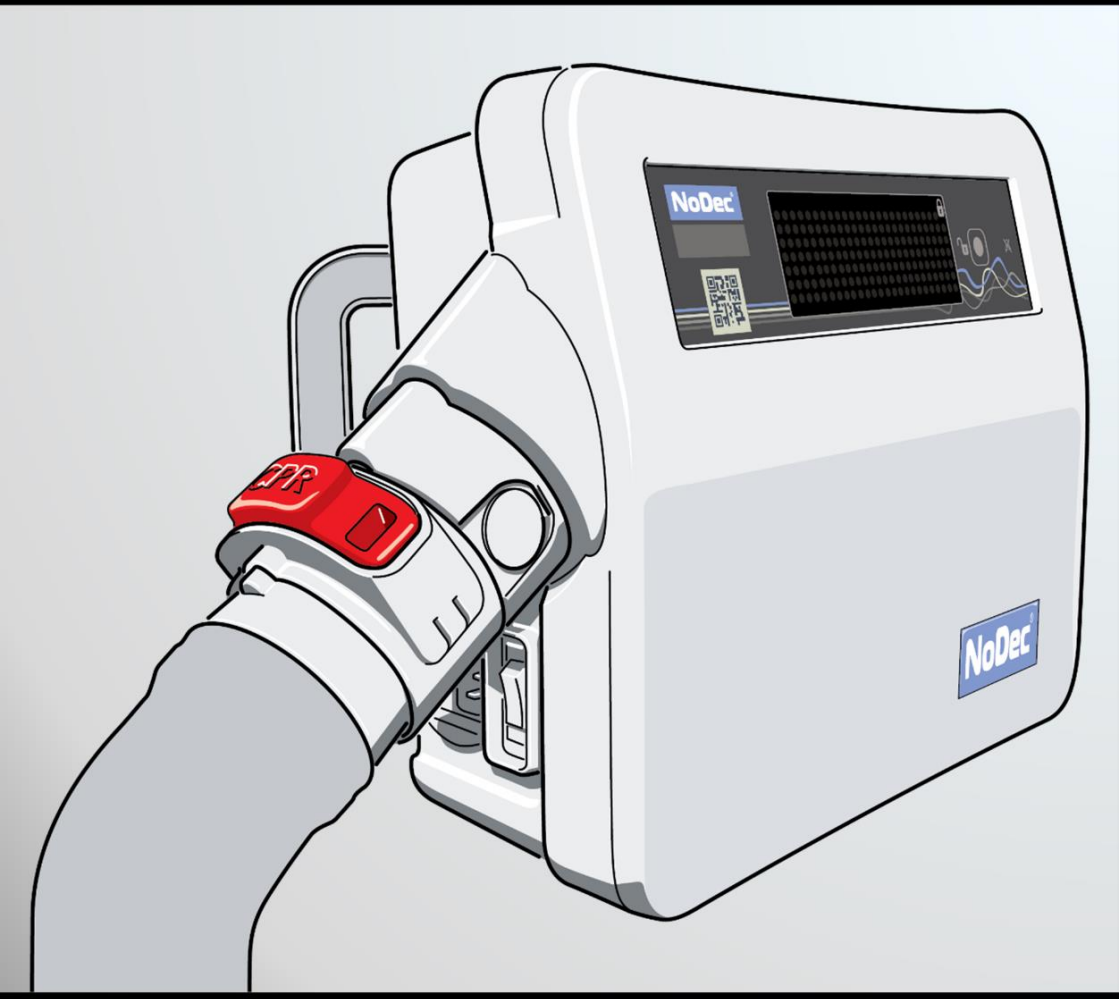

NoDec®

AIRSTREAM

USER INSTRUCTION MANUAL

ROBER

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AIRSTREAM

USER INSTRUCTION MANUAL

INSTRUCTIONS FOR USE

Version 5.0

Sep 2025

Version History

Version	Implemented By	Revision Date	Approved By	Approval Date	Reason
1.0	Ben Smith	N/A	G. Ball	June '15	Original copy
1.1	Ben Smith	July '15			Corrective actions by Cranage EMC Testing Limited. (*IEC 60601-1)*
2.0	Ben Smith	Dec '17	M. Hutson	Dec '17	Update to graphics and Alarm Conditions
2.1	M Hutson	May 2021	M Hutson	May 2021	Added CE and EU rep
3.0	R Smith	Jul 2023	M Hutson	Aug 2023	Intended Use and Incident Reporting sections added, labelling updated
4.0	R Smith	Apr 2024	M Hutson	Apr 2024	Bed Hook operation instructions updated
5.0	R.Smith	Sep 2025	M Hutson	Sep 2025	UKCA Mark Added

Contents Table

Introduction

Congratulations on purchasing the NoDec® AIRSTREAM two-cell cycle alternating pressure air mattress system. This high quality medical product, if installed and cared for in accordance with these instructions, will provide many years of trouble free service and outstanding clinical performance.

The NoDec® AIRSTREAM is an alternating pressure mattress replacement system designed for the prevention of pressure ulcers.

This mattress system is manufactured to conform with international standards, EN 60601-1, EN 60601-1-2, and is registered to CE & UKCA.

Please read this Instruction Manual thoroughly before using the NoDec® AIRSTREAM.

Incident Reporting

In the event of a serious incident ocurring in relation to this device, this should be reported to the manufacturer (Rober Ltd) and the competent authority of the member state in which you are situated.

Intended Use

The NoDec® AIRSTREAM is a two-cell cycle alternating pressure air mattress overlay system. It is designed to prevent and treat pressure sores for patients who are at medium to high risk of developing them. It also aids the healing of pressure sores in patients with existing Grade 1 and 2 pressure injuries.

The objective of the NoDec® AIRSTREAM is to reduce the contact pressure created by the patient lying on the mattress. This is achieved by sequentially inflating and deflating the air cells of the mattress overlay. This regularly reduces the contact pressure which restores blood flow and tissue oxygenation in the deep tissues about the vulnerable bony prominences.

The overlay can be used on top of any high specification foam mattress to replace conventional mattress in hospitals, nursing homes and in the community. This mattress replacement system is quiet, comfortable and simple enough for a single caregiver installation. All operator controls have been deliberately minimised to improve user interaction.

The system consists of an air filled mattress that is placed on top of a conventional bed frame and is connected via an air supply hose to a separate microprocessor controlled Power Unit.

The Power Unit is software driven using a solid-state pressure sensor so it has the capability to monitor the air pressure in the mattress continuously. The system is completely self regulating and automatically alters the air pressure depending on the weight of the patient and their position in bed.

An emergency deflation valve system is incorporated to allow cardiac resuscitation procedures. Named appropriately as a CPR unit, it also has self sealing valves which allow the mattress to remain inflated for 24 hours when disconnected from the system.

A number of audio and visual alarms exist to warn caregivers of any problems within the system.

Further Information

The NoDec® AIRSTREAM replaces the mattress on any hospital, style bed frame. This mattress replacement system is quiet, comfortable and simple enough for a single caregiver installation.

The frequent relief of contact (interface)pressure has been demonstrated to reduce the risk of pressure injury which is caused by reduced capillary blood flow in the tissue surrounding the bony prominences. The **NoDec® AIRSTREAM** is also a valuable aid in the treatment of existing pressure injuries up to Grade IV.

The objective of the NoDec® AIRSTREAM is to reduce the contact pressure created by the patient lying on the mattress. This is achieved by sequentially inflating and deflating the air cells of the mattress. This regularly reduces the contact pressure which restores blood flow and tissue oxygenation in the deep tissues about the vulnerable bony prominences.

The system consists of an air filled mattress that is placed on top of a conventional bed frame and is connected via an air supply hose (umbilical) to a separate control unit. This mattress consists of two intergrated cell structures, protected by the cover.

The control unit is software driven which gives the capability to maintain the air pressure in the cells at the required level and to automatically alter the air pressure depending on the weight of the patient and their position in bed.

The additional presence of a CPR valve located at the side of the power unit permits the rapid deflation of the mattress in an emergency.

Contraindications

As with all alternating mattress systems, the NoDec® AIRSTREAM is contraindicated for use where patients have unstable fractures or spinal injuries.

Descriptions of Symbols

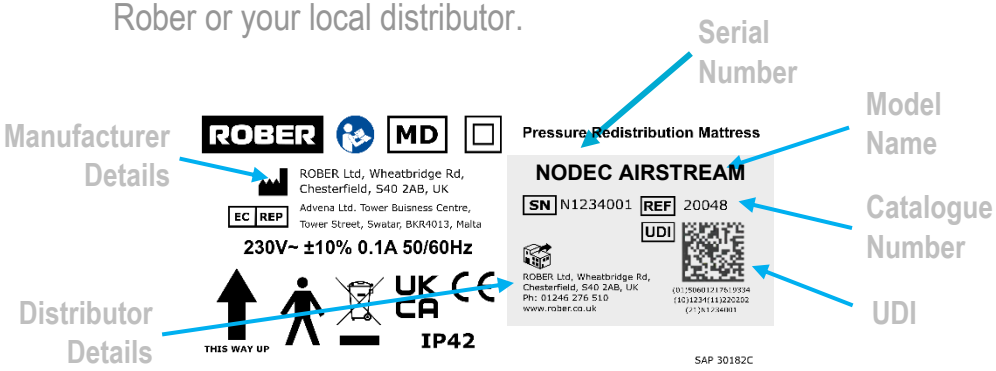
Throughout this user manual and on the pump unit itself, the NoDec® AIRSTREAM has numerous symbols:

Symbol	Explanation
	*Type B – Applied Part*
	*Class II Medical Device (certified to class 1)*
I / O	*On / Off*
	*Refer to Instruction Manual*
	*General Warning*
	*Button (for operation of pump unit only)*

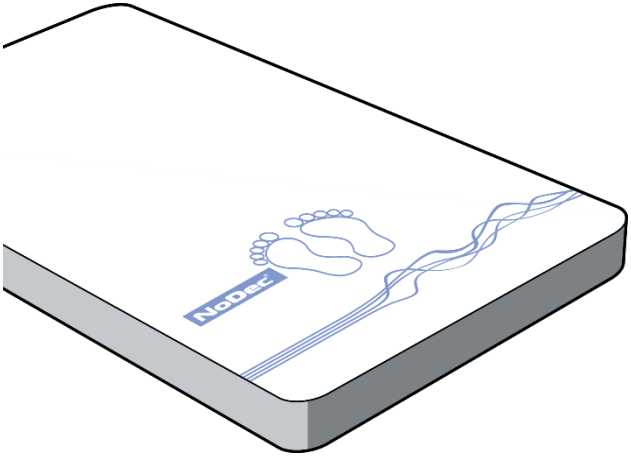
List of Components

Unpack your NoDec® AIRSTREAM mattress system and check that you have the following:

- NoDec® AIRSTREAM Pump Unit:
- Please note the Name, Model and the Serial Number of your pump in case you need to reference these when contacting Rober or your local distributor.



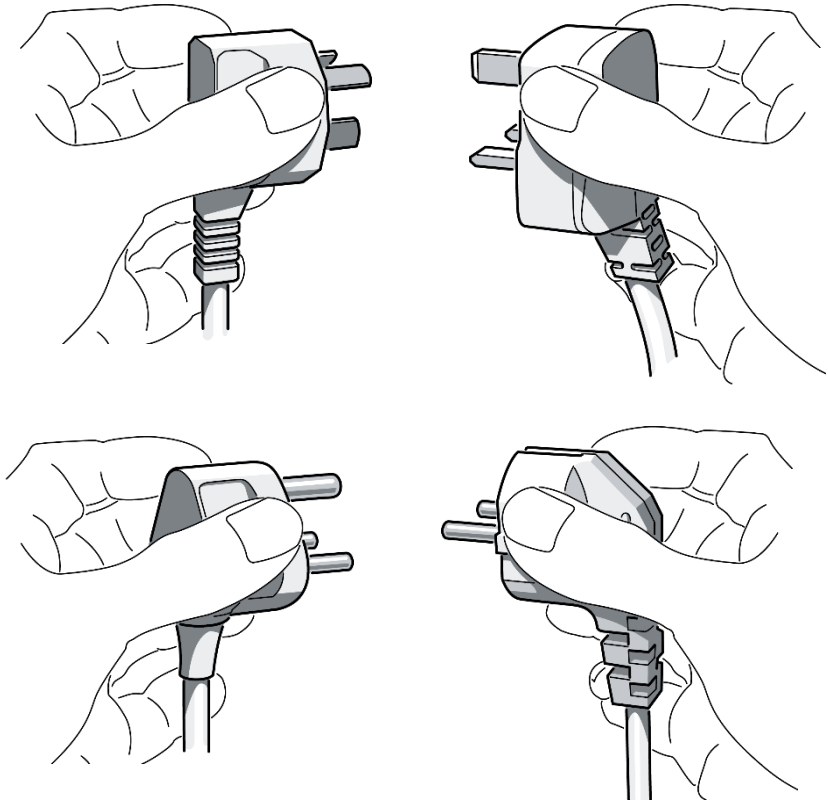
- NoDec® AIRSTREAM2 Mattress:



The top cover is made from Dartex™ which is an antimicrobial, mutli-stretch, vapour permeable, PU coated fabric. The bottom cover is made from durable PVC coated Nylon.

- Power Cord:

The power plug should be appropriate to your country or region.



General Cautions / Warnings

Before setting up the mattress, it is important to read all of the safety instructions below. Any actions or operations performed outside the guidance of this manual are carried out at the user's risk. Rober and/or the supplier are not liable for any such actions.

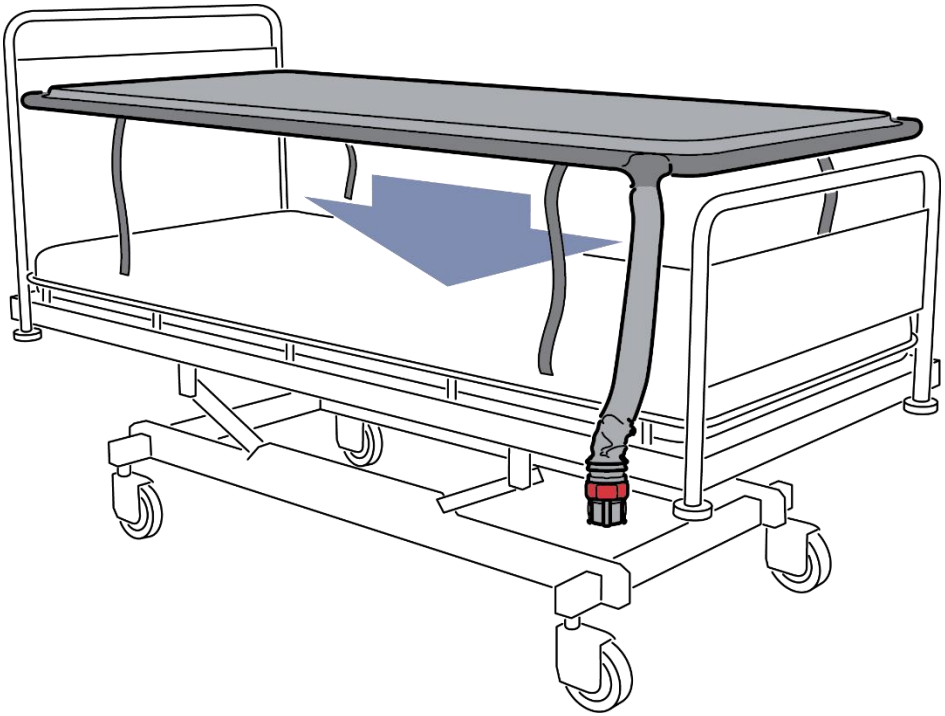
- Inspect before use. If any faults are discovered, the mattress system should not be used and the supplier immediately notified.,
- Check the power cord is positioned so there is no risk of obstruction or potential injury.
- **Risk of explosion:**
  Do not use in the presence of flammable chemicals or gases.
- **Risk of fire:**
  Do not place near heat sources or naked flames.
- **Risk of electrocution:**
  Ensure that the mains power is fully earthed.
  Never partially or fully submerge electrical equipment in fluids.
  Check the power cord is free from any damage.
  Never handle the plug with wet hands.
  Do not open the case.Any repairs should be made by qualified service engineers.
  Do not spill food or liquids on the pump unit. *If spillage occurs, disconnect from the mains and allow to dry before re-use.*
- Do not use phenol based cleaning solutions on the mattress or cover.
- Do not place any components of the mattress system in either heat or steam autoclaves.

- **Risk of Suffocation:**
  The cover is not air permeable. Ensure the patient can use the product safely.
- Do not drop the pump unit and do not drop objects onto it.
- Never use sharp objects on or near the mattress.
- Never insert objects into the pump.

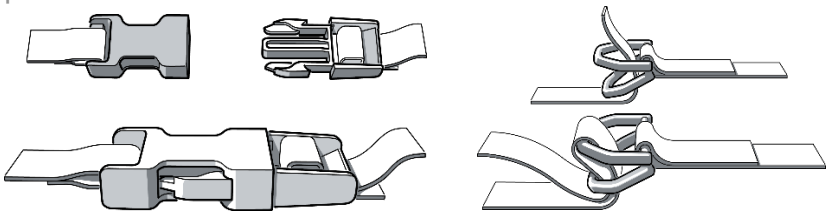
Installation

Please follow these instructions to install your NoDec® AIRSTREAM mattress replacement safely and appropriately.

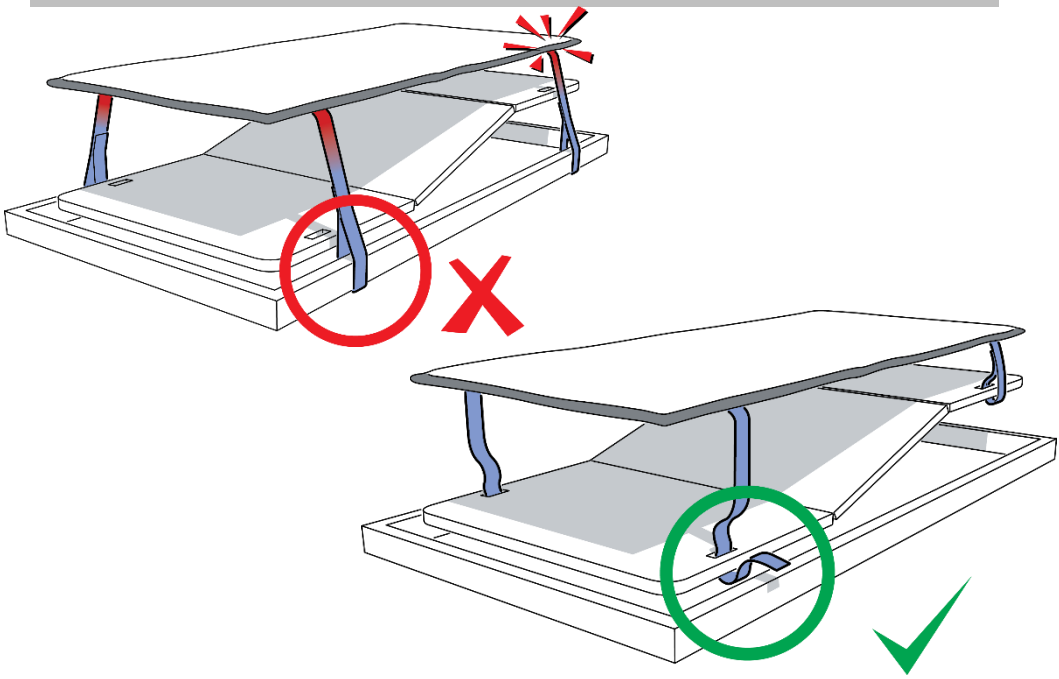
1. Place the mattress onto the bed frame, ensuring the light grey top cover is facing upwards and the air supply hose (umbilical) is positioned at the foot end of the bed.



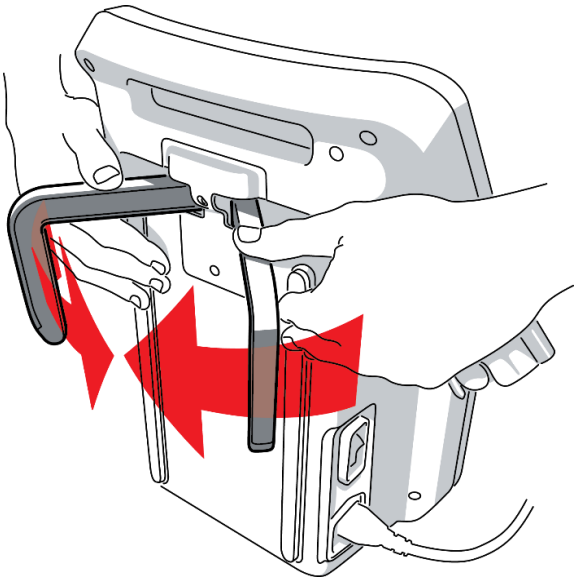
2. Secure the mattress to the bed using the straps and fasteners provided.



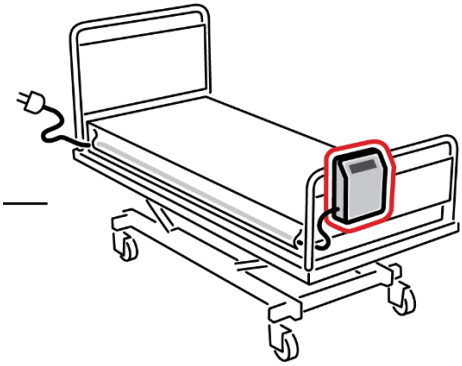
Ensure that fastened straps do not restrict the operation of any moving parts of the hospital bed. Straps attached around both moving parts and fixed parts of a bed frame will cause severe damage to the mattress. After installation carefully test the functions of the bed to ensure the mattress moves freely with the bed platform.



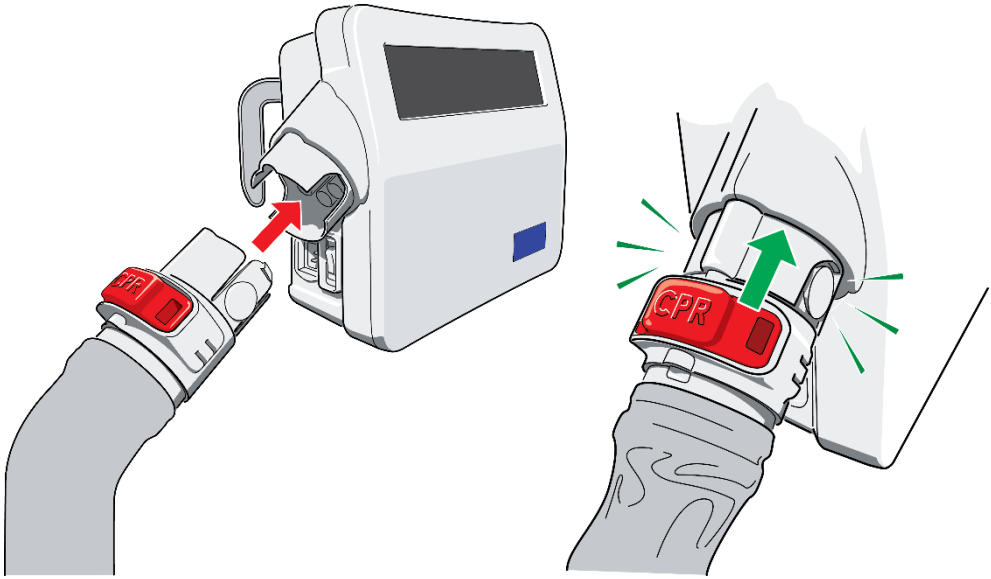
3. The hooks on the back of the NoDec® AIRSTREAM have been designed to accommodate a variety of bed frames and can be adjusted easily by opening out the hooks and rotating. Once released they will clamp to the bed frame using spring pressure.



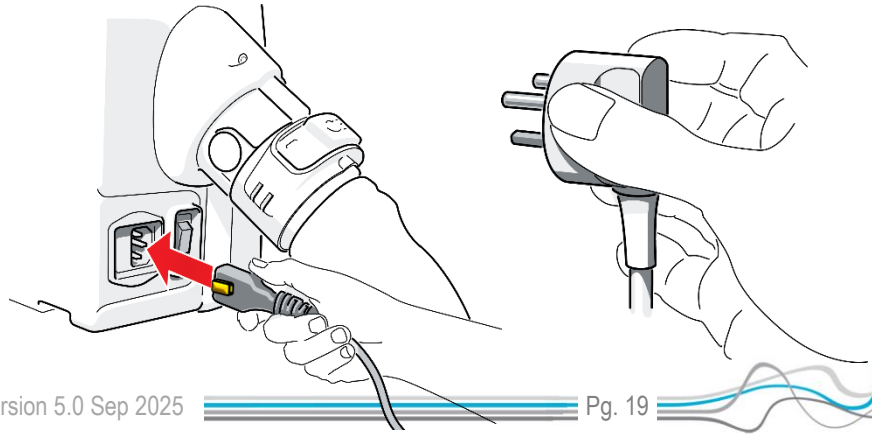
4. Hang the unit onto the bed frame at the foot end of the bed with the control panel facing outwards



5. Check that the CPR clip is in the closed position and plug the umbilical hose into the dock.

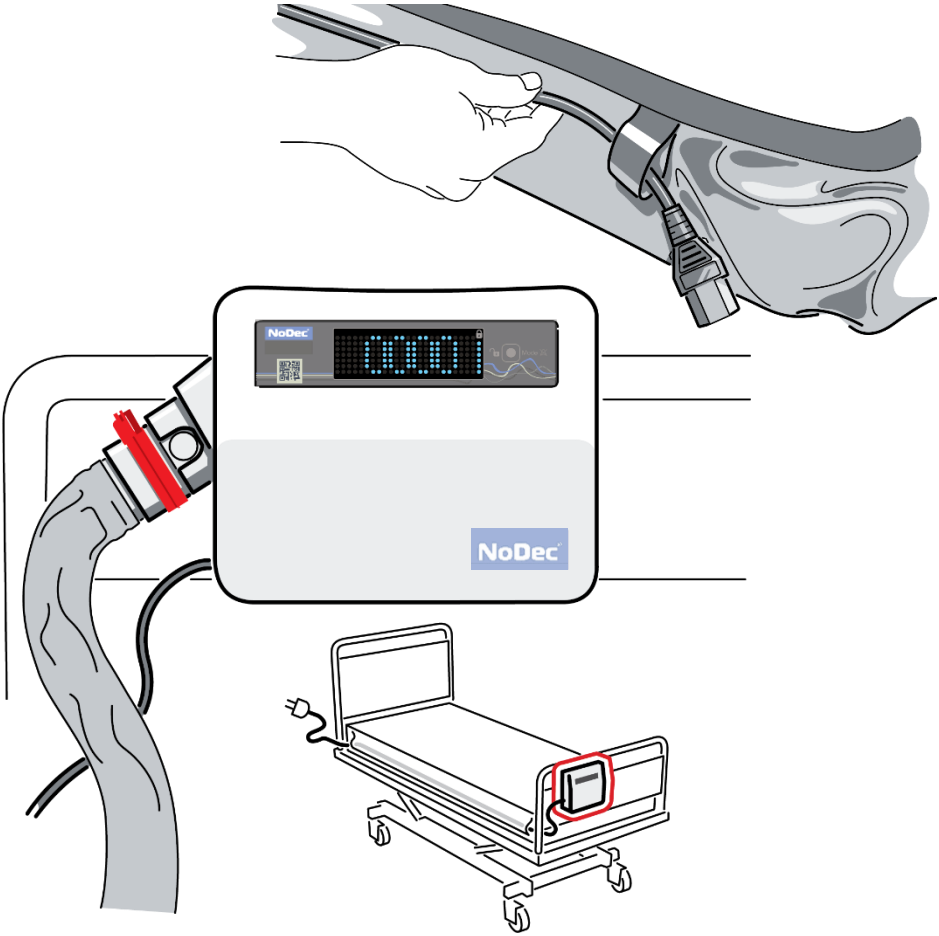


6. Plug the power cable into the pump using the international connector and then plug the other end (*the main disconnection device*) into an **easily accessible** mains supply socket. Turn the unit on using the switch to the right of the unit's international plug socket



Due to the special design on the power cable's connection, it cannot be pulled out without pushing the yellow button. Ensure that the pump unit is positioned so this button is accessible.

Ensure that the power cable is safely guided through the loops located under the skirt (waterfall). This will help reduce any hazards in relation to the power cable.



7. Wait for approximately 20 minutes and your **NoDec® AIRSTREAM** Mattress Replacement System is ready for use.

Display Screens / Operation Modes

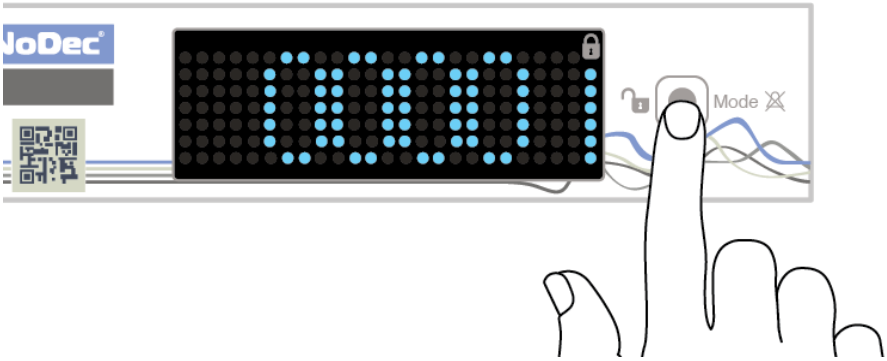
Before using your NoDec® AIRSTREAM it is important to understand the display on the front panel of the pump unit and the various operation modes of the system.

Loading

There will be 4 cells shown slowly inflating simultaneously on the screen whilst the NoDec unit pumps up the mattress.

Unlocking

60 seconds after either full inflation or mode change, the system will automatically lock out the display panel.



This is indicated by the BLUE DOTTED LINE beneath the padlock symbol. To unlock the front panel hold down the “Mode” button until the blue line goes out.

Automatic Alternating Mode

Once the unit has inflated the mattress it will automatically default to Firm Alternating Mode (see below) and calibrate to the patients weight.

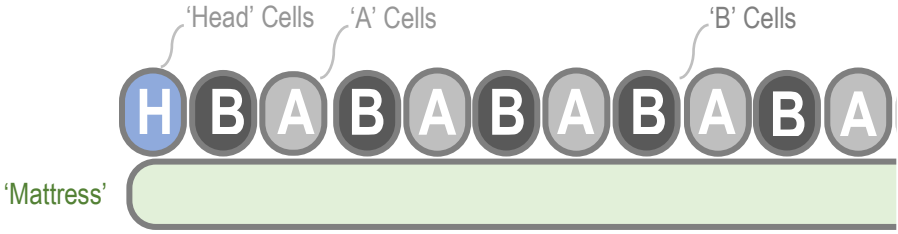
Different Modes / Displays

The NoDec® AIRSTREAM mattress overlay has two configurations. One configuration is made up of 17 single air cells and two side formers (Single Cell), the other is configured into one deck (Integrated Cells) of 18 air cells and two side formers.

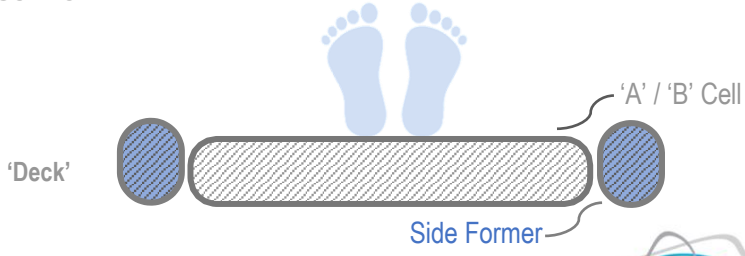
Both configurations essentially work the same where the air cells are connected into two groups. The main difference is that the Single Cell configuration has 1 Head Cell that remains inflated (static) alongside the Side Formers.

Mattress Structure

Side Profile



Foot View

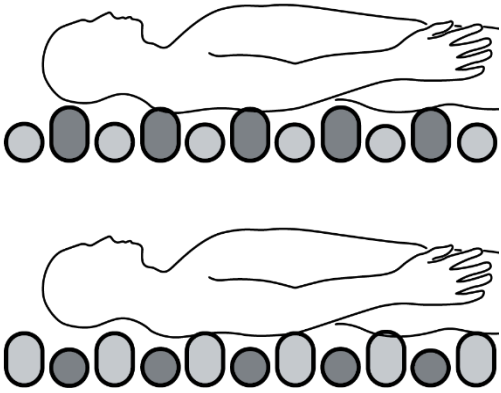


Alternating Mode

The air cells inflate and deflate in a 1 in 2 pattern with a cycle time of 10 minutes.

When the "A" cells deflate, pressure is reduced in that portion of the body in contact with those cells.

After 5 minutes, the "A" cells re-inflate and the "B" cells deflate for the next 5 minutes.



At the end of 10 minutes, contact pressure is reduced under all parts of the body in contact with the active components of the mattress.

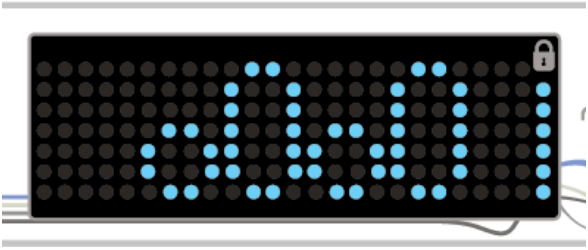
The NoDec® AIRSTREAM has four different modes:

- **Firm Alternating**
- **Firm Static**
- **Soft Alternating**
- **Soft Static**

When pressing the mode button multiple times the screen will cycle through these different modes until the desired mode is found.

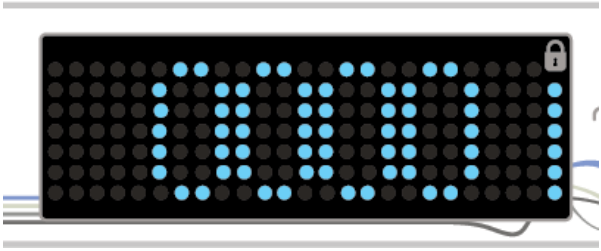
Firm Alternating

On Start-up the system defaults to Firm alternating mode and automatically calibrates to patient weight and body position.



Firm Static

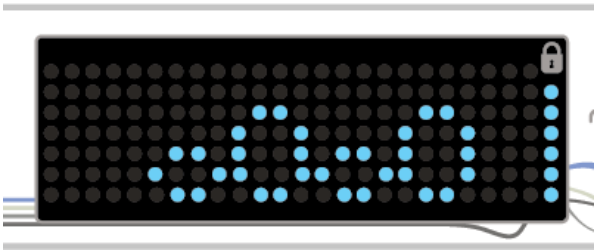
The mattress calibrates to patient weight and remains in static mode. In static mode all cells are inflated.



N.B. It is advised to enter static mode anytime before the patient is removed from the mattress

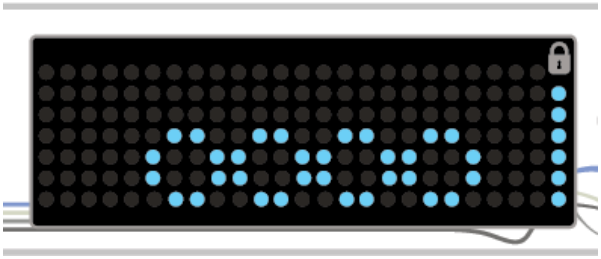
Soft Alternating

The mattress changes to a lower range of pressure settings more suited to the comfort of small and under weight patients.



Soft Static

The mattress remains at the lower range of pressure settings and alternation ceases.



N.B. It is advised to enter static mode anytime before the patient is removed from the mattress

The 'SOFT' setting of the NoDec® AIRSTREAM is suitable for frail underweight patients and children.

N.B. *Both Static Modes revert to Alternating Mode after a preset period of 30 or 120 minutes, depending on your local distributor.*

Alarms

Each of the following alarm displays will be accompanied by a fixed tone audible alarm. The audible alarm can be cancelled by pressing the “Mode” Button, however if the cause of the alarm is not resolved after 15 minutes the audible alarm will reactivate.

To turn off the alarm permanently, or reset the pump after fixing the cause of the alarm, simply switch the pump unit off and then on again.

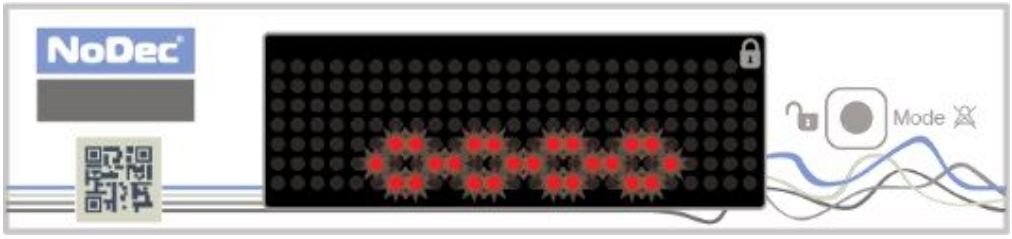
High Pressure Alarm

This condition could be caused by an over pressure in the mattress e.g. by another person sitting on the mattress. This alarm is shown by **FOUR fully inflated cells FLASHING RED**.

To resolve this issue, carefully push the CPR button and let out a small amount of air and then re attach the hose end. Reset the pump afterwards. Persistent high pressure alarms may indicate an internal fault. If if this occurs Care should cease. The pump should immediately be sent for servicing.

Low Pressure Alarm

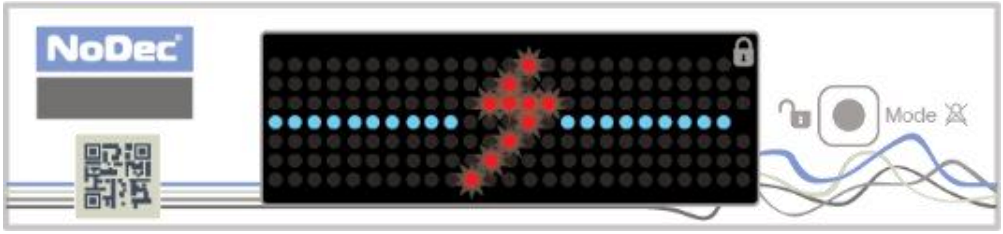
This condition could be caused by releasing the CPR valve or a leak in the mattress. This alarm is shown by **FOUR flat deflated cells FLASHING RED.**



It is also possible for this alarm to be triggered if the patient is removed from the mattress without turning off the unit or switching to Static Mode (see page 22)

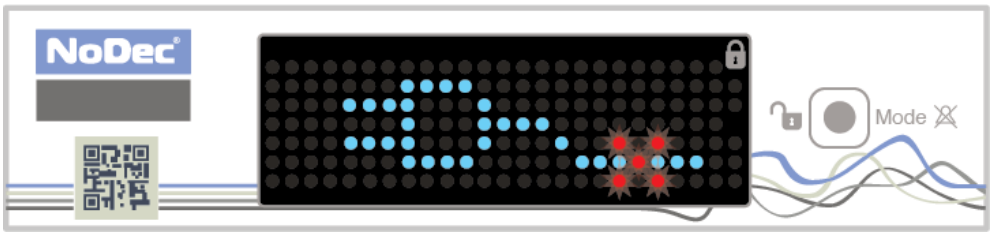
Electrical Failure

If the 3-way valves within the pump should fail then a **FLASHING RED lighting bolt** will appear across a **BLUE LINE**.



Power Failure Alarm

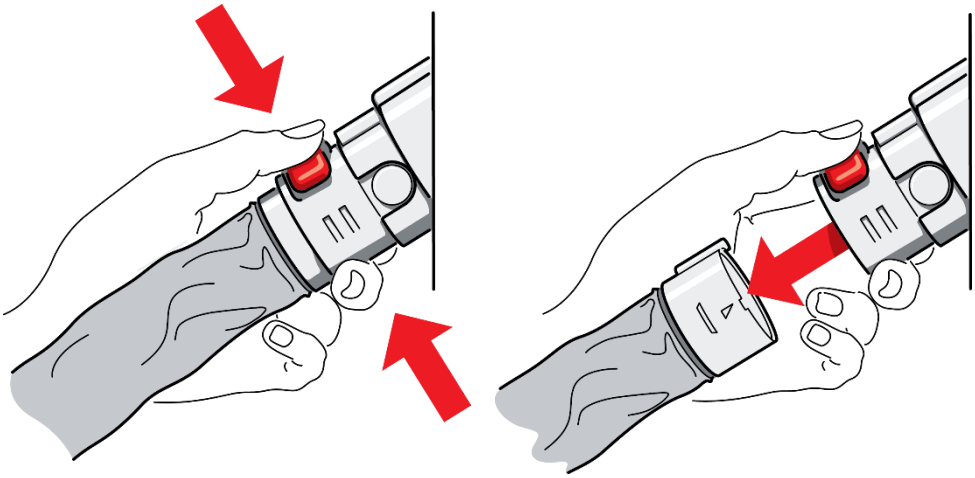
If there is a failure of the mains power supply or the unit is accidently unplugged form the mains then a plug symbol with a **RED FLASHING** cross will show.



N.B. *The Power Failure Alarm is powered through a small battery. The sole function of this battery is to operate the alarm in case of a mains power failure.*

CPR Emergency

In the case of a patient emergency where CPR may be necessary, the NoDec® AIRSTREAM has been equipped with a CPR release which rapidly deflates the mattress so that cardiac resuscitation can be performed on a firm surface.



To deploy this emergency system, simply grip the CPR unit and push the RED BUTTON. The hose end closest to the mattress should spring out and the mattress will rapidly deflate.

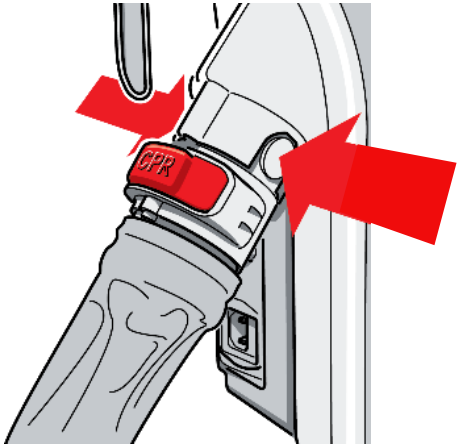
Ensure that after the CPR release has been disconnected, and CPR is complete, the hose end is pushed back in until an audible click is heard from the Red Button and then the pump is reset.

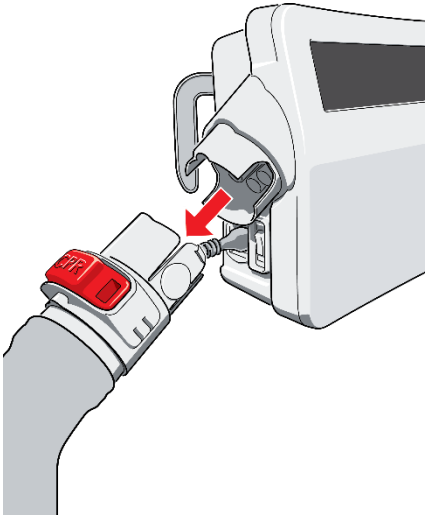
Transportation Mode

In this configuration the mattress can be transported easily around the hospital.

Preparation

When separating the pump unit from the mattress the unit should first be SET TO STATIC MODE.





When all cells are inflated the pump should be SWITCHED OFF and the umbilical hose separated

Simply push the buttons on the sides of the umbilical dock and the umbilical will disconnect. The mattress itself will remain inflated for several hours.

Storage (and Shipping)

The Power Unit should be stored standing upright in a vertical manner NOT laid flat.The following conditions should apply, where possible, for the longevity of internal components:

Ambient Temperature	+10°C – +35°C
Relative Humidity	10% – 100% non condensing
Atmospheric Pressure	700hPA – 1060hPA

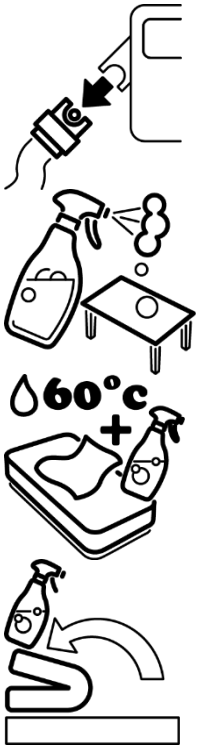
Cleaning and Maintenance

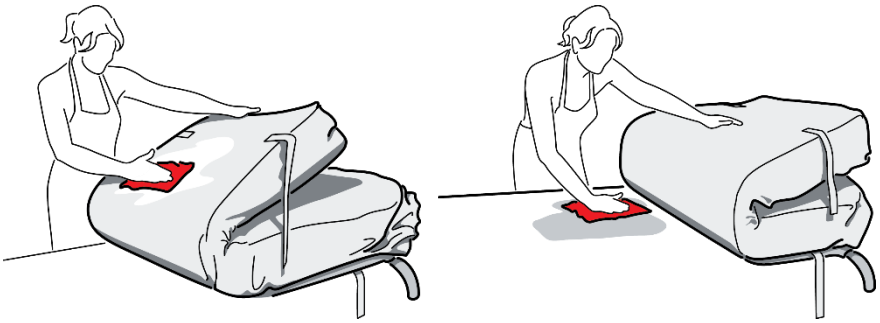
Cleaning Procedures

Cleaning the mattress system every week is recommended, or sooner if heavily soiled. Please make sure that hands are cleaned and appropriate protective clothing is worn before commencing the cleaning process.

Cleaning the mattress

1. *Leave the cover on the mattress and disconnect the mattress from the unit.*
2. *Clean the surface of the wash-down table with hypochlorite solution or an equivalent disinfectant.*
3. *Wash mattress top cover using hot water (60 °C) and detergent. Dry with a paper towel.*
4. *Fold mattress in half-length ways and clean both the table and the exposed mattress.*





5. *Turn over mattress so the other bottom half is exposed and clean both mattress and table.*

6. *Repeat Steps 3 – 5 using hypochlorite solution or equivalent disinfectant.*

7. *Wipe the umbilical hose with hot water and detergent. Dry with a paper towel and repeat wiping down using hypochlorite or equivalent solution.*

*If required, the cover can be removed and machine-washed at a temperature of **80 - 90 °C for a minimum of 10 minutes.***

The cover may also by sterilised using ETO or Draeger processes.

Cleaning the Pump Unit

The Pump Unit can be cleaned by wiping a cloth dampened by a disinfectant solution or sterilized using ETO or Draeger processes.

Ensure the unit is disconnected from the mains electricity supply before cleaning.

DO NOT autoclave the mattress or pump unit

Maintenance

Only qualified technicians, trained or formally approved by Rober Limited, may carry out maintenance, modifications or repairs on the mattress system.

NO maintenance or servicing should take place while the Mattress System is in use. Ensure that the patient is clear of the system, when carrying out maintenance.

Technical Parameters

Power Unit

Model	NoDec® AIRSTREAM
Dimensions (L x W x H)	400 x 160 x 250 mm
Weight	2.8 Kg
Power Supply	230V~ ±10%, 50 / 60 Hz
Power Consumption	20w max
Ingress Protection Rating	IP42
Classification	Class B Medical Device Class II. (certified to class 1)
Fuses	2 x T1.6A, 250V~ 5 x 20mm
Operating Cycle	Continuous
Flammability Rating	UL94 V0

Mattress

Model	NoDec® AIRSTREAM
Dimensions (L x W x H)	2000 x 850 x 120 mm *(Single Cell)* *2000 x 850 x 160 mm (with foam insert)* 1850 x 880 x 100 mm *(Integrated Cell)*
Number of Air Cells	17 *(Single Cell)*, 18 *(Intergrated Cell)*
Weight	5.5 kg *(Single Cell)*, 5 kg *(Intergrated Cell)*
Mattess Material	PU / PU coated Nylon
Cover Material	Dartex / PVC Coated Nylon
Flammability Rating	Complies with BS7175 Ignition Source 0, 1 and 5
Maximum Weight of Patient	**180 kg**

Internal Components Operating Conditions

Ambient Temperature	+10°C to +35°C
Relative Humidity	30% – 75% non condensing
Atmospheric Pressure	700hPA – 1060hPA

Your local distributor is:-

Registered Manufacturer

Rober Limited, Wheatbridge Road, Chesterfield, Derbyshire. UK. S40 2AB

CE UKCA

EC REP

Advena Ltd. Tower Business Centre, 2nd Flr, Tower Street, Swatar, BKR 4013, Malta.