

Avalon Floor Bed

User Guide



Overview

The Avalon Floor Bed by Novis combines modern design with modern technology for an incredibly versatile low-low nursing bed. Designed to reduce the risk of injury from falls and minimise the need for restraints, this fully featured, column-less electric bed can be lowered to an ultra low height of 170 mm from the floor.

With a range of design options and safety features, this versatile bed offers multiple positioning for maximum patient care and comfort

Standard Features

- Electrically adjustable 4 part profiling bed with Trendelenberg tilt
- Low minimum bed height and multiple positioning
- Column-less design
- In built mattress base extension
- 75 mm twin Tente castors
- Removable timber head and foot panels
- Soft contoured mattress retainer handles
- Safe working load (SWL) 250 kilograms
- Range of optional accessories
- Linked braking system

Important Notice

Before operating this medical equipment, it is important to read this manual and understand the operating instructions and safety precautions. Failure to do so could result in patient injury and/or damage to the product.

Therapeutic devices and/or medical equipment should only be used in accordance with manufacturer's instructions and under the consent, supervision and management of a suitably qualified health professional.









Optional Accessories

- Side Rails, Three Quarter Length
- Back Up Battery
- Self Help Pole
- IV Pole

Novis Healthcare has a policy of continuous product improvement and reserves the right to amend specifications presented in this guide. Information correct at time of production (April 2022).

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Definition of Symbols Used

-  Important information
-  Caution
-  Electrical hazard
-  Infection control
-  Do not...
-  Class II Protection against Electric Shock
-  Type B Applied part
-  Refer to Manual

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Safety Precautions

Conditions of Use

The bed may be used in an indoor environment where the:

- surrounding temperature range is from +10°C to +40°C
- relative humidity range is from 30% to 75%
- atmospheric pressure range is from 700 kPa to 1060 kPa

- ⊘ The bed is designed for use in indoor rooms for medical purposes. Electrical installations must therefore meet local standards laying down the necessary conditions for electrical installations.

In spite of this it is recommended to disconnect the bed from the mains during exceptional situations (ie severe electrical storm)

Refer to page 18 for environmental storage limits during storage and transport.

Safe Working Load

The Avalon Floor Bed is approved for a maximum safe working load (SWL) of 250 kilograms, including patient, mattress and bedding, and all bed accessories. Do not exceed this safe working load or you risk injury to the patient or carer, or damage to the product


- ⚠ A maximum patient weight of 215 kilograms is typically recommended, to allow for bed accessories and bedding.


Safety Warnings


- ⊘ DO NOT attempt to use this bed as a patient transport device.
- ⚠ Ensure bed castors are locked when nursing or positioning a patient.
- ⚠ Ensure patient is comfortable and not at risk of injury before activating the actuators and profiling the bed. If entrapment is a risk then bed is best left in a flat position.
- ⓘ Bed is best left in lowest position whilst patient is unattended to minimise risk of injury through falls.
- ⚠ Ensure all parts of a patient's body are kept away from all moving parts of the bed frame.
- ⓘ It is the responsibility of the caregiver to take the necessary precautions to ensure the safety of the patient. This includes, but is not limited to, the appropriate use of side rails to prevent falls and/or patient entrapment.
- ⊘ Ensure that bed frames and parts are kept clean at all times. Wipe down with an antibacterial solution to avoid risk of patient contamination from any bacterial buildup on bed components.
- ⓘ The bed's frame supports a mattress with maximum dimensions:
Standard: 860 mm wide and 1980 mm long
King: 1060 wide and 2020 mm long
Mattress height: 100 mm minimum, 170 mm maximum


Bed not extended


Safety Precautions


 Placing an incorrectly sized mattress on the bed frame will interfere in the operation of the bed and/or may result in patient injury.


 Only plug into a grounded power receptacle and ensure there is no damage to power cord or attachment to the main actuator.


 Exposure of electronic components to any liquid may result in a severe electrical hazard

 Disconnect the mains cord from the supply before moving the bed.


 Ensure the mains cord is kept clear of the wheels when moving the bed, and is never caught in the bed operating mechanism or in a side rail. It can be dangerous to run over the mains cord.


 Ensure the mains cord has enough slack when connected that it is not strained when the bed is raised and lowered.

 The actuators are precision electronic products. Use care when handling or transporting. Dropping, or other sudden impacts, may result in damage to these units.


 Risk of electric shock. **DO NOT OPEN.** Do not attempt to repair or service the actuators. Repairs and service should be conducted by an authorised Novis Healthcare Service Centre or trained technician.

If the actuators are not functioning properly, or have been damaged, unplug the unit and take it out of service immediately. Contact Novis Healthcare or authorised dealer for repair and service information.

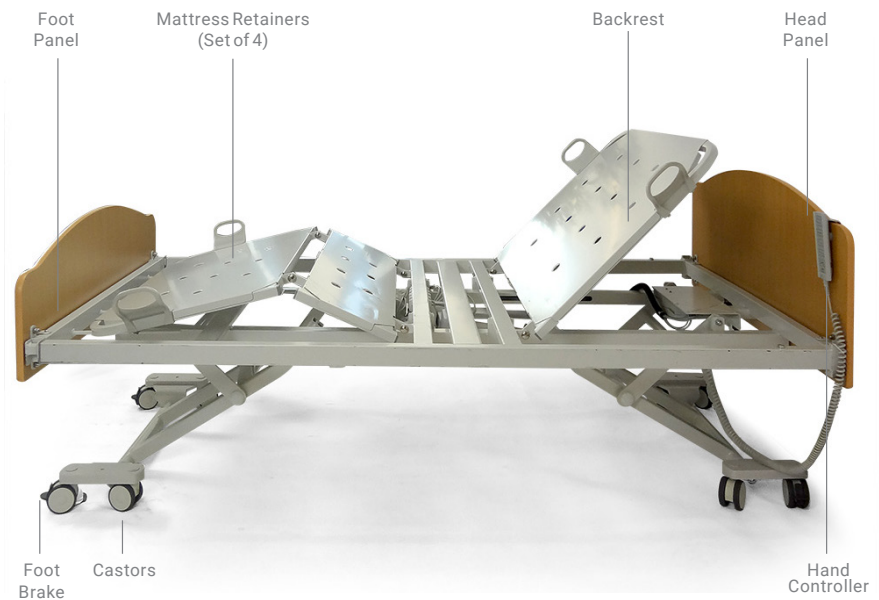
 Do not place any objects/items, such as blankets, on or over the actuator arms or joints. This could result in damage.

 The power cord to control box under the bed should be positioned to avoid a tripping hazard and/or damage to the cord.

Novis Healthcare recommends securing the cord under the bed frame using the cable clips, and attaching it to an electrical outlet by the head of the bed.

 It is the responsibility of the caregiver to take the necessary precautions to ensure the safety of the patient. This includes, but is not limited to, the appropriate use of side rails to prevent falls and/or patient entrapment

Layout



Operational Accessories

Collapsible side Rails

BE6002 (SOLD AS PAIR)

Collapsible metal side rail system attaches firmly to bed frame. Three quarter length rails for increased access. Simply fold down each rail for patient access or transfer

Back Up Battery

BE5002

A rechargeable battery pack designed for 10 to 15 full lift cycles, in the event of a power failure. Battery attaches under the bed frame.

Self Help Pole

BE7002

Support pole to aid patient repositioning while lying in bed. Mounts into inbuilt brackets at either side of bed head.

IV Pole

BE8002

For patients on intravenous fluids. Can be used in conjunction with the Support Pole on opposite side of bed

Alternative end panel options

Please contact Novis for specifications and codes


Set Up


Unpacking

The Avalon Floor Bed is shipped as a fully assembled item; the only assembly required before use is insertion of the head and foot panels.

Prior to use, ensure any excess packaging is removed and carefully check the bed for any damage that may have occurred in transit, paying particular attention to:

- ☐ any damage to the bed frame
- ☐ any damage to the head or foot panels
- ☐ any damage to the castors
- ☐ any damage to the power cord


 We recommend the bed frame is cleaned and disinfected before use.


 Please follow the cleaning instructions on page 18.


Preliminary Set Up

1 Move the bed into the proposed position. Leave a minimum 50 mm gap between the head of the bed and the wall or other equipment, to ensure the bed does not collide with wall or equipment when raised or lowered.

2 Connect the power cord to a grounded power outlet (240V) and switch on.

 Take up any excessive power cord supply and secure excess cord under the bed frame, using the cable clips if needed.

 Ensure the cord has sufficient slack when connected so that it is not stretched when the bed is operated or moved.


 Keep the cord away from the castors or any moving parts.


3 Ensure head and foot panels are securely mounted (see page 8).

4 Cut cable-ties securing mattress platform to bed frame.

5 Place mattress on the bed.

Attention


 If the mattress uses straps to secure the mattress to the bed frame, ensure straps are placed underneath the moving sections to ensure correct operation of the bed is not impacted. Failure to do so could cause damage to the mattress or the bed.

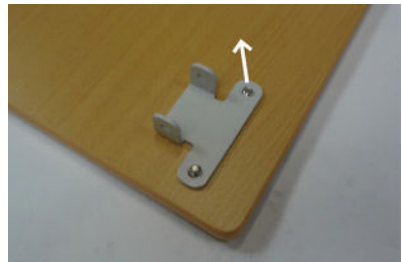
 When raising or lowering the bed, ensure that no person or any part of a person is under the bed. Failure to do so could result in serious injuries. Keep limbs clear of all moving parts of bed during operation.

Set Up

Head and Foot Panels

- 1 Remove head and foot ends from packaging and ensure you have all components as illustrated:
- 2 Affix mounting brackets to the bed ends (same procedure for the bed head or bed end) brackets are identical
- 3 Place the bracket on surface of bed end, with the bed frame attachment facing inwards
- 4 Feed the shorted bolts in from underneath
- 5 Secure with nuts, and tighten using a Hex Key and spanner
- 6 Repeat on both sides of the bed end and repeat on both ends
- 7 Slide the bed head end (the taller end) onto the frame at the head end of the bed (next to the backrest), and align with holes in the frame
- 8 Insert in the long screws (from above), secure with nuts (under the frame), and tighten using a Hex Key and spanner
- 9 Repeat with the foot end

 Ensure both head and foot end are secure before use



Operation

Castors

The Avalon bed uses eight 75 mm Tente castors for easy manoeuvrability (four braking and four free-wheeling castors, linked front and linked rear)



THE LINKED BRAKING CASTORS ARE ON THE 'ENDS' OF THE CASTOR SETS

Operating the Brakes



- To activate braking castors, push down firmly on the grey lever. Repeat for rear castors
- To release braking castors, place tow underneath the grey lever and lift upwards



- ⚠ Disconnect the power cord before moving the bed.
- ⚠ Do not use side rails or pull on hand controller to manoeuvre the bed.
- ⚠ It is recommended that shoes be worn to operate the locking bar.
- ⚠ Castors must be locked before repositioning the bed or during patient transfer.
- ⚠ It is recommended that the castor lock is applied whenever the bed is in use.

Operation

Hand Controller Operation

-  When raising or lowering the bed, ensure that no person or any part of a person is under the bed. Failure to do so could result in serious injuries.
-  Keep limbs clear of all moving parts of bed during operation.

Hand Controller Operation

The Avalon's bed adjustments are powered by four electric actuators, which are controlled by the buttons on the handset. Adjustment occurs only while a button is pressed. Adjustment will stop when the button is released, or the movement selection reaches the end of its range of adjustment.



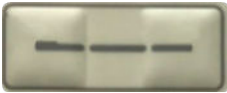
Operation



Backrest adjustment

Hold down the button to raise or lower the backrest.

The backrest can be adjusted through a range of between 0° and 70°.



Platform height adjustment

Hold down the button to raise or lower the mattress platform. The platform height can be adjusted from 170 mm minimum height 690 mm maximum height.



Knee adjustment

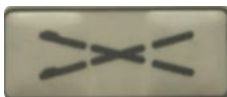
Hold down the button to raise or lower the knee positioning section.

The knee section is adjustable through a range of 0° to 35° for adjustable support to the patient's legs.




Auto contour adjustment

Hold down the button to raise or lower the auto contour positioning. Auto Contour provides synchronised movement of the backrest and knee positioning in one operation, to provide a more natural resting position for the patient.



Trendelenburg/Reverse Trendelenburg

 The Trendelenburg function should only be used under professional supervision.




The Trendelenburg button allows the bed to be tilted, with either head or foot end downwards. An angle between 0° and 14° is available for either option.

When using the tilt function the mattress platform may initially rise before tilting. The bed will automatically adjust to ensure there is sufficient clearance between the mattress platform and the mechanical structure of the bed before tilting.

When reversing the tilt angle of the bed, the mattress platform will pause at horizontal for 2 seconds before continuing the tilt movement.

Operation



Bed Extension

-  It is recommended that the bed platform be extended before placing the mattress on the bed. For caregiver safety, do not operate the extension with a patient lying on the mattress.
-  Always ensure that the foot panel is locked correctly before use of the bed.
-  The bed extension is designed for use as a bed extension only and is not meant to be sat on. The extra length of the bed with extra load can also make the bed unstable, potentially resulting in injury to the user and patient.




The integral bed extension is easily extended to add an extra 195 mm of length to the mattress platform. The bed extension is locked in the closed and fully open positions by two threaded hand wheels located towards the foot end of the bed.

Extending the Bed Extension

-  To extend the platform, unscrew the handwheels (both sides of the bed) anti clockwise until approximately 20 mm of thread is showing.
-  Pull the foot panel outwards using two hands evenly spaced on the panel. Once the Bed End is at the desired location, screw the threaded handwheel back to a closed position.

Reducing the Bed Extension

-  The same procedure in reverse is used to close the extension back to the standard bed position.

Operation

Side Rails (Optional)

The (optional) fold down rails are easily fitted by clamping to the side rail of the bed.

Fitting the Side Rails

- i** The rails are a left and right-hand set and when fitted correctly fold down towards the foot end of the bed.
- 1** Before fitting the rails unscrew the M10 bolts on both clamp brackets bringing the locking clamps into an open neutral position.
- 2** With both bolts now unscrewed, lift the rail into position. It is important that the rails are fitted to a specific position on the bed, which is indicated by the pin on the top of the side rail. Position the rail over the disc and tighten the bolts to the closed position.



Side Rail Operation

- A** Care should be taken whilst operating the side rails to ensure hands and fingers are kept away from potential squeeze hazards.
- A** Side rails should only be used after clinical assessment and within organisational policy and guidelines.
- A** Do not operate side rails when there is potential of entrapment, or crushing to the patient, caregivers, visitors and/or other equipment.

The rails are either fully raised, or folded down closed. When the side rail is raised to its full height position it will automatically lock in the positioning hole on the rails clamp plate. The release/lock knob feature can be both visually and audibly confirmed.



To raise Lift the top rail until the magenta locating pin/ knob (2) automatically clicks into its locked position at maximum height.

To lower Hold the top rail near the foot end of the bed (1) and gently pull out the magenta coloured operating knob (2) lowering the side towards the foot of the bed, whilst controlling the descent speed. As the side begins to be lowered the operating knob can be released.

Operation




Fold Down Side Rails (Optional) *continued*

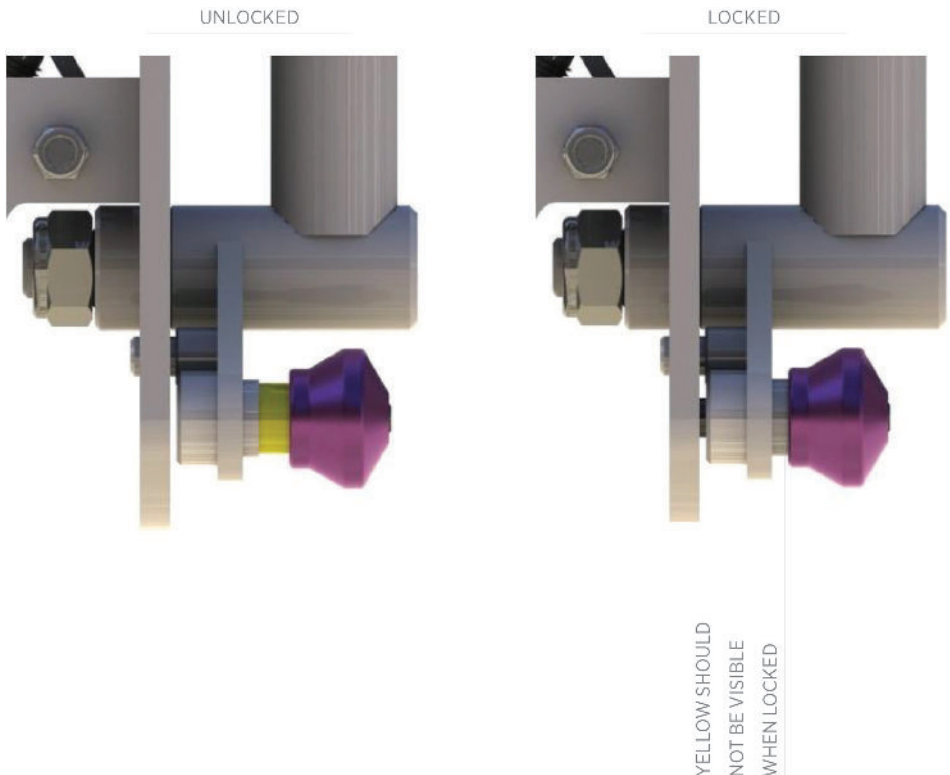
Side Rail Safety Lock Indicator

The side rail locating pin has a yellow coating that allows for visual inspection of the locking device.

When the side rail is in the raised position, viewing the release knob from the side there should be no yellow shaft visible. If there is yellow shaft visible the safety side is **not** securely locked in the upright position and needs to be adjusted.

The yellow coating should **not** be visible from above when the safety side is correctly locked in position.

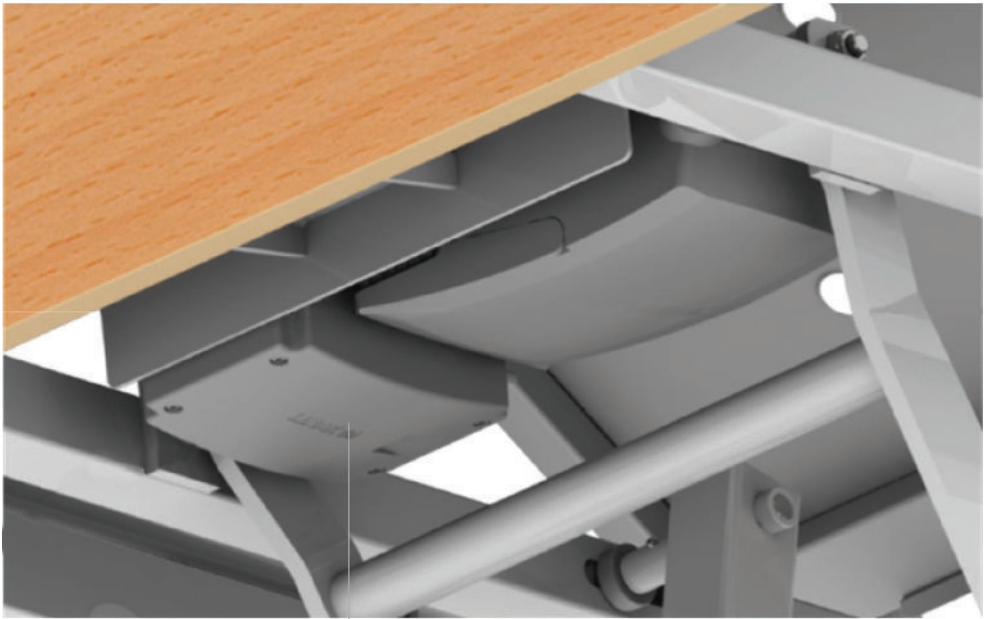
-  Side rail release and lock knob shown in unlocked and locked positions
-  After adjustment of the side rail visually check the locking pin location. There should be no yellow shaft on the locking pin visible if locked correctly.
-  DO NOT use other manufacturer's side rails on the Avalon bed.



Operation

Battery Back-Up (Optional)

If fitted with a battery back-up unit (located underneath the backrest of the bed) the bed will automatically switch to battery power in the event of a power failure. The period of use on battery is dependent on many variables (including weight of the user, range of movement used and age of the battery). In good condition, the battery would allow for a minimum of ten to fifteen full lift cycles.












OPTIONAL BATTERY BACKUP BOX

Troubleshooting

| PROBLEM | CAUSE | SOLUTION |
|---|-----------------------|---|
| Hand Controller inactive | AC power failure | <ol style="list-style-type: none">1 Check the power cord is firmly plugged into the mains outlet and the control unit; and check the mains power is switched on.2 Check both the actuator and hand controller cables are firmly fitted into the main actuator control box under the bed base.3 Check for any damage to or disconnection of any of the actuator power or hand controller cables. |
| Corresponding actuator does not respond when button is pressed on hand controller | Actuator system fault | <ol style="list-style-type: none">1 Ensure main actuator connections are inserted properly and are vertically aligned2 Check inside each connector to ensure that the pins are not bent or damaged3 Check that each connector is in its correct plug – this is clearly marked. |
| Castors not rolling | Castors locked | <ol style="list-style-type: none">1 Check if central locking system is activated; place foot underneath locking bar and lift up to release. |

If the problem cannot be resolved, please contact Novis Healthcare or your authorised Service Centre for further support.

Cleaning




-  Switch off mains power and disconnect the power cord from the electrical outlet before cleaning
-  Do not use high pressure cleaners, steam cleaners or harsh caustic chemicals.
-  Do not use solvents or alkalines such as cellulose or acetone thinners.
-  Do not directly spray the bed frame, especially the electrical parts.
-  The following procedure also applies to the beds accessories, but does not include mattresses.
-  Hand wipe bed frame surfaces with a damp cloth and mild disinfectant hand spray if necessary.
-  Use only officially recognised disinfectants and mild cleaning solutions.
-  Clean the main actuator unit separately ensuring no excessive amount of moisture is used and no liquids ingress the electronic or actuator openings.
-  Dry thoroughly before use.

Storage

-  Handle with care




The Avalon bed should be stored in a clean, dry, well ventilated area.

Do not drop and avoid shock, or violent impact when transporting.




-  Remove any accessories (including head and foot panels as required) and lower the bed to the minimum height.
-  Switch off mains power and disconnect the power cord from the electrical outlet.
-  Store all items safely together.

Limits



The following limits apply during transport and during a storage period of up to 15 weeks duration:

-  Ambient temperature -25°C to +70°C
-  Relative humidity 10% to 75%
-  Air pressure 50 kPa to 106 kPa




The following limits apply to normal operating conditions and for periods of storage longer than 15 weeks:

-  Ambient temperature +10°C to +40°C
-  Relative humidity 30% to 75%
-  Air pressure 70 kPa to 106 kPa

For Battery Back Up model

-  If storing the bed for an extended period of time, disconnect the battery Back Up by removing the power cord from the actuator control box.
-  Please note, to preserve the life of the Back Up battery, the battery must be charged for at least 10 hours every 4-5 months. Battery will recharge when bed is connected to a mains power source.

Maintenance

-  Annual service and maintenance is required every 12 months as a minimum, and should only be performed by Novis Healthcare or a qualified technician. Contact Novis Healthcare for service support.
-  It is recommended that the following routine inspection and cleaning procedures be conducted between patients or at a minimum every 12 months, whichever occurs first.
-  Switch off mains power and disconnect all power cables before inspecting the bed.

Visual Inspection:

Frame and Accessories

- Visually inspect all castors to ensure they are free of dirt and debris; and that they roll without restriction. Check to ensure all castors lock when foot brake is activated.
- Visually inspect the bed frame for damage or excessive wear and tear and check all bed functions are operating correctly
- Examine all welds for cracks or fatigue.
- Inspect the powder coating finish to ensure it is intact and no rust spots have developed.
- Inspect all bolts and screws to ensure they are securely tightened.
- Inspect the head and foot panels for damage.

Actuators, Cables and Hand Controller

- Check for noise and performance of all motors; ensure all bed functions operate without excessive noise.
- Visually inspect all power cords for chafing cuts or excessive wear; and ensure cables are free of obstruction and are not strained or pulled tight.
- Visually inspect all connectors are free of damage and firmly connected.
- For Back Up Battery (optional), check the battery is sufficiently charged overnight to operate the actuators.
- Check cables and power supply plug is not damaged. If either is damaged they must be replaced as a complete assembly by Novis or an approved service agent.

Side Rails (if fitted)

- The locking pin mechanism and striker plate arrangement should be checked every three months.
- Inspect the side rails for general wear and tear on fittings and pivot joints every six months.
- Check for rust, structural integrity of welds and paint finish every twelve months.
- Raise the side rail to the upright position until the locking mechanism clicks into place. Check that there is no yellow shaft visible. In the locked position, the yellow on the locking pin shaft should not be visible from above. Refer to the operating procedures on page 12 of this manual for further information.
- If the yellow shaft is visible when the side rail is in the raised and locked position, contact Novis for service advice.
- Check that the rails pivot axles are securely fitted to the bed. The pivot axles are locked into place by the manufacturer using a 10mm lock nut. It is rare that Re-tightening of the axles would be required, but in the case that it is, ensure that the nut is not over tightened during the tightening procedure.

Warranty Statement

Limited Warranty

This warranty is provided by Novis Healthcare (ABN 45 102 735 491) of Unit 12/12 Mars Road Lane Cove West New South Wales 2066.

Novis Healthcare (Novis) products are manufactured to the highest quality standards and are thoroughly tested and inspected before leaving our factory. In addition to any statutory rights and remedies you may have, Novis warrants all of its products sold directly or via an Authorised Novis Australia Dealer against defective workmanship and faulty materials from the date of purchase by the end user for a period of twelve months unless otherwise specified for that product and its components.

Warranty Claims

To claim under this warranty, please contact Novis Healthcare and have your receipt or proof of purchase available. Novis Healthcare may need to assess the defect before determining any claim, and additional information may be requested to process your claim. Claims without proof of purchase may not be able to be processed.

Novis Healthcare may at its option inspect the goods on site or require them to be returned to its premises or one of its Authorised Service Agents in person or freight prepaid by you.

Novis will undertake at its option, to repair or replace, free of charge, each product or part thereof on the condition that:

- ☐ The product found on examination, to be suffering from a manufacturing defect;
- ☐ The product or relevant part has been serviced regularly by Novis or one of its Authorised Service Agents and has not been subjected to misuse, neglect or been involved in an accident;
- ☐ The repairs are not required as part of normal wear and tear.

At our option

- ☐ Goods repaired may be replaced by refurbished good of the same type rather than being repaired.
- ☐ Refurbished parts may be used to repair goods.

Novis Healthcare will not be held responsible for any repair other than those carried out by it or one of its Authorised Service Agents.

Warranty repairs do not extend the length of the warranty period.

Limited Liabilities

Our liability under this manufacturer's warranty is subject to us being satisfied that a defect was caused by faulty parts, manufacture or workmanship, and was not caused or substantially contributed to by other factors or circumstances beyond our control, including (but not limited to) defective installation, maintenance or repair, product modification or alteration, any neglect, misuse, or excessive use, normal wear and tear or failure to follow manufacturer's instructions.

IMPORTANT NOTICE FOR AUSTRALIAN CONSUMERS:

Our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and for compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure. To obtain compensation, you will need to provide documentary evidence of the loss or damage suffered and documentary evidence that such loss or damage was a reasonable foreseeable consequence of a failure Novis Healthcare to comply with a consumer guarantee under the Australian Consumer Law. Subject to the provisions of the Australian Consumer Law, Novis Healthcare excludes, to the fullest extent permitted by law, all liability in respect of loss of profit or other economic loss, direct to indirect or consequential, special, general or other damages or other expenses or costs which may include negligence.

For further information relating to any specific product, please refer to the User Guide.

Technical Specifications

| | | | |
|--------------------------------|--|--|------------------------|
| SYSTEM | MODEL | Single | King Single |
| | CODE | BE1004-1 | BE2003-1 |
| | COMPLIANCE | IEC 60601-2-52 | |
| | ARTG | 300802 | |
| BASIC DIMENSIONS | OVERALL LENGTH | 2115 mm | < |
| | BASE EXTENSION | 195 mm | < |
| | OVERALL WIDTH | 920 mm | 1090 mm |
| | OVERALL WIDTH (RAILS FITTED) | 1025 mm | 1200 mm |
| | MATTRESS SURFACE LENGTH (BETWEEN PANELS) | 2030 mm | 2030 mm |
| | BED PLATFORM HEIGHT RANGE | 170 mm to 690 mm | < |
| | BACK REST ANGLE ADJUSTMENT | 0° to 70° | < |
| | KNEE BEND ANGLE ADJUSTMENT | 0° to 35° | < |
| | TRENDELENBERG TILT ADJUSTMENT (HEAD AND FOOT DOWN) | 0° to 14° | < |
| MATTRESS SIZE | RECOMMENDED MATTRESS SIZE | W 860 mm | W 1060 mm |
| | | L 1980 mm | L 2020 mm |
| | MAXIMUM MATTRESS DEPTH | 170 mm | < |
| BED WEIGHT & SAFE WORKING LOAD | MINIMUM MATTRESS DEPTH | 100 mm | < |
| | WITHOUT SIDE RAILS | 119 kg (approximately) | 125 Kg (approximately) |
| | WITH SIDE RAILS | 138 kg (approximately) | 144 Kg (approximately) |
| | SWL SAFETY FACTOR = 2 x S.W.L | 250 kg | < |
| ELECTRIC PARAMETER | POWER INPUT | 100-240V AC 50/60Hz, Max current 2.5A | |
| | RATE LOAD | Interruption 10%, Max 2 minutes / 18 minutes | |
| | LEAKAGE PROTECTION | Class 1 Type B | |
| | WATERPROOF GRADE | IP54 | |



All product specifications are subject to change without notice.

[illegible]



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Contact your Novis Healthcare representative for more information

novis.com.au | 1300 738 885
Enabling Independence

Scan QR code for more information
novis.com.au/avalon-bed



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