

INNOV8 iQ

SIDHIL



Innov8 iQ
General Ward Bed

Instructions for use

www.sidhil.com

Welcome to Sidhil

Still making it better...

At Sidhil, everything we do is designed around quality. From our modern and efficient manufacturing plant in Halifax, West Yorkshire, we manufacture a range of products for the healthcare market using leading edge production technology and finishing processes.

We are the only remaining volume manufacturer of hospital beds in the UK, bringing together innovation in product development, sales, customer service and logistics to provide clear benefits for our customers in terms of flexibility, short production timescales and support for our nationwide network of service and maintenance centres.

Excellence in customer service is our key objective. Alongside our focus on innovation, research and product development, we use our UK manufacturing facility to ensure optimum levels of product and spares availability, with unparalleled levels of reliability and performance.

Corporate social responsibility is also an issue for Sidhil. We have now received accreditation to ISO 14001, underlining our commitment to maintaining the highest levels of environmental awareness and sustainability across our manufacturing operation.

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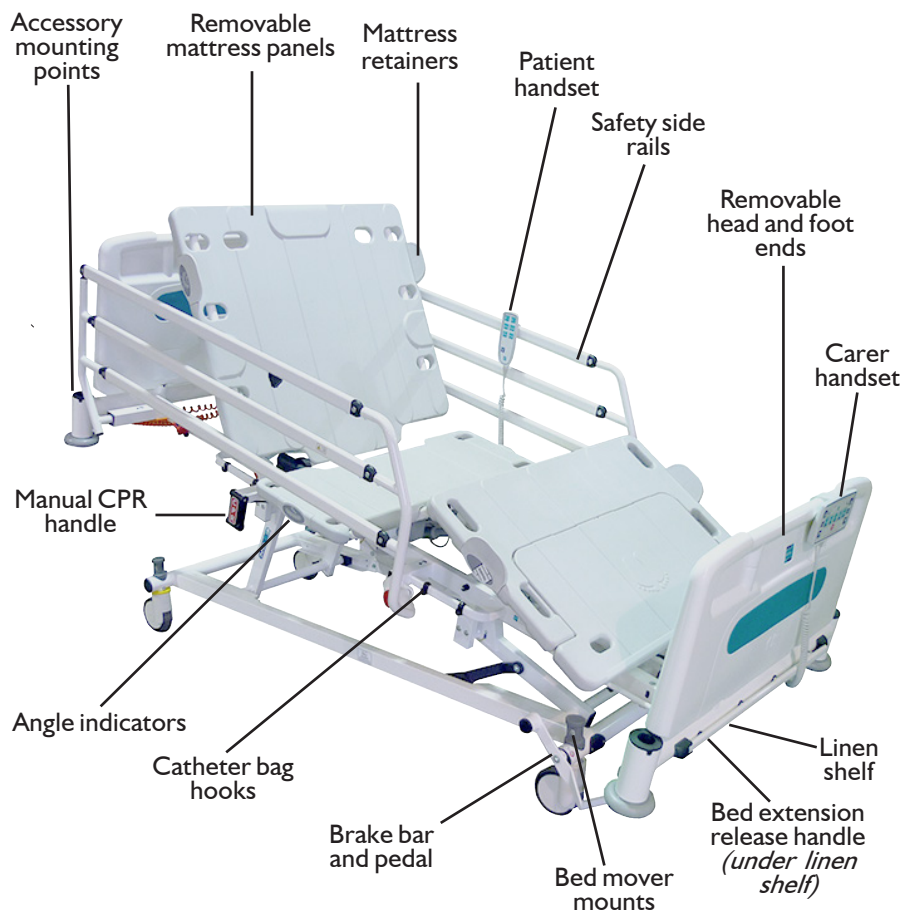
I. INTRODUCTION

Thank you for purchasing a Sidhil Innov8 iQ General Ward Bed. **For safety reasons it is imperative that the instructions for use is read and fully understood before the bed is used for the first time.** If you have any questions concerning the operation or maintenance of the bed please contact Sidhil Ltd.

I.1 Features

- Electrically operated backrest, height and leg section
- Auto regressing backrest
- Infinitely variable electrically operated head and foot down tilt (Trendelenburg & Reverse Trendelenburg)
- iQ Contour – simultaneous adjustment of the backrest and knee break
- Cardiac chair position
- Battery backup
- Patient handset and carer handset with integral function lockout
- Removable head and foot ends
- Removable mattress platform panels
- Mattress platform extension
- Under bed light
- Backrest and tilt angle indicators
- Linen shelf
- Four castor braking with brake, free and tracking modes
- Moveable catheter bag hooks

1.2 Bed Features



1.3 Warnings and Cautions



Warnings in these instructions for use highlight potential hazards that if disregarded could lead to injury or death.



Cautions in these instructions for use highlight potential hazards that if disregarded could lead to equipment damage or failure.

2. CLINICAL USE

2.1 Typical Use

The Innov8 iQ bed covers every need required from an acute care environment through to intensive/critical care use where 24 hour medical supervision and constant monitoring may be a necessity.

At the carer's discretion patients can use the controls to adjust the bed to their preferred position for patient recovery and comfort. The carer may fully lower and raise the bed using the carer handset, however when travelling below patient control range (when the mattress platform is lower than 420mm) the bed will reduce speed and a short audible warning alarm will sound (see page 30).

2.2 Risk Assessment

Before a patient uses the bed a risk assessment must be performed on a patient by patient basis. The risk assessment should include, but is not limited to:

- Entrapment
- Falling out of the bed
- Small children (and adults)
- Patients with learning difficulties
- Unauthorised people
- Items/equipment/cables under the bed

Warning



Bed functions must be locked out if there is any doubt about the ability of the patient to operate the bed safely.

2.3 Bed Load



The safe working load of the bed is: **255kgs (40 stone)**



The maximum patient weight of the bed is: **190kgs (30 stone)**

Safe Working Load is the sum of;

- Patient mass
- Mattress mass
- Accessories mass
- Mass of the SWL supported by the accessories (excluding patient mass)

Warning



The maximum loads shown above are for the bed occupied by one patient only. The bed is not designed to take the weight of visitors sitting on the side of the bed. Additional weight could damage components or cause the bed to topple, causing injury.

2.4 General Warnings

Warning



- Misused electrical equipment can be hazardous.
- Accessories that have not been approved or designed for use with the bed should not be used.
- Electrically operated beds should not be used in the presence of flammable gasses.
- Electrically operated beds should not be used in operating theatres.
- Ensure cables are kept away from moving parts of the bed to avoid damage to the bed and/or cabling.
- The bed is not intended to be used in an oxygen rich environment - Risk of fire.

Caution



Ensure cables are kept away from moving parts of the bed, to avoid damage to the bed and/or cabling.

2.5 Transport & Storage Conditions

The following conditions should be followed when transporting and storing the Innov8 iQ. This does not apply to the transfer of the bed between wards.

- Bed set to lowest height
- Brakes applied
- All profiling sections secured (transport only)
- All functions locked out
- Covered to protect from fluid ingress (if required)
- The beds must not be stored one on top of another

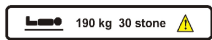
Ambient temperature: -10°C to +50°C

Humidity: 20% - 90% at 30°C - not condensing

Atmospheric pressure: 70kPa to 106kPa (Rated to operate at an altitude $\leq$ 2000m)

3. SYMBOL DEFINITION

The following symbols are found on the bed:

Symbol	Description
	Warning
	Refer to instructions for use
	Refer to instructions for use
	Safe Working Load
	Maximum User Weight
	Place of Manufacture
	W.E.E Label (Do not discard in general waste, follow local recycling policy)
	Type B Applied part
	Refer to instructions for use for mattress suitability

4. INSTALLATION

Prior to operating the bed for the first time the following simple checks must be performed:

- Ensure the bed and all accessories are at room temperature.
- Ensure the bed has been cleaned and disinfected (page 42).
- Connect the mains cable to an appropriate mains socket outlet.
- Using the carer handset, raise the mattress platform to its maximum height to ensure the bed is level (page 30).

If the electrical functions are not active it may be because the functions have been locked out on the carer handset, see page 29 for activation.

Warning



- Ensure the orange coiled mains cable is not in tension when connected to the mains supply.
- Ensure that cables and handsets are clear of all moving parts to prevent damage to the electrical components.
- To avoid the risk of an electric shock, this equipment must only be connected to a supply mains with protective earth.
- Inappropriate handling of the mains cable could cause kinking or shearing of the cable which may lead to exposed live wires, causing an increased risk of electrocution.
- Care should be taken when routing from external equipment around the bed to ensure that cables do not become trapped or damaged. When applicable use the accessory cable clips (page 40).
- Any electrical cable that is part of the bed frame or associated ancillary equipment that is found to be damaged must be replaced immediately. Damaged electrical cables can create a risk of electrocution.
- The mains plug is the disconnect device for the means of isolating the bed from the mains supply, the plug must be accessible at all times.

Caution



- Special care should be taken when fitting an air mattress to the bed as incorrect fitting could damage the bed.
- The bed is not designed to run off battery power for long periods and should always be plugged into the mains supply during normal use. Allowing the battery to discharge fully may impair its performance.
- Connect the bed to the mains supply and do not activate any functions for 6hrs. This is to allow the bed frame and electronic system to adjust to the environmental conditions of the room.

5. MANUAL OPERATION OF THE BED

5.1 General Safety

- When the bed is operated, ensure that obstacles such as over bed tables and other furniture/objects are not causing an obstruction, particularly when lowering to the minimum height with the carer handset.
- Ensure the bed is positioned an appropriate distance from walls/other furniture to prevent damage or patient injury when operating the bed (particularly when operating in tilt).
- Ensure the electrical cables are not in tension.
- Ensure that any mattresses used are of the correct size and type and have been fitted correctly. A range of suitable pressure relieving and pressure reducing mattresses are available from Sidhil Ltd.
- Ensure the mattress fitted is used with the correct side rail (see page 16 for more information).
- Before operating the bed ensure the patient is positioned appropriately.

Warning



When a patient is left unattended the carer must determine whether the bed should be set to the minimum height of the patient handset (420mm) or lowered to the minimum height using the carer handset (340mm).

Note: If the bed is lowered to the minimum height using the carer handset the patient will be able to raise the bed, but will not be able to lower the bed back down below 420mm using the patient handset.

5.2 Brake & Steering System

5.2.1 Brake Bar/Pedal Operation

There are two brake pedals linked by a brake bar at the foot end of the bed which operate all four castors simultaneously. The brake and steer functions can be operated using either of the pedals or the brake bar:



- Brake bar down (brake):
All four castors are locked, the bed cannot move.



- Pedal horizontal (free):
No locked or tracking castors, allowing all castors to swivel freely.



- Brake bar up (track):
Both castors at the head end are set in a specific 'tracking' position, allowing the bed to be steered from the foot end of the bed.

Warning



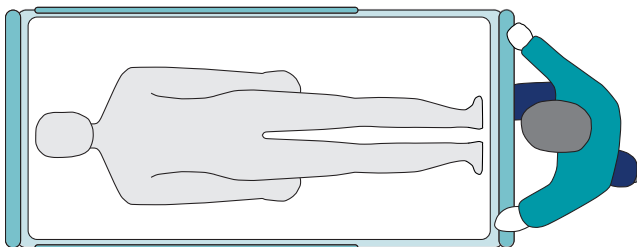
The brake must always be engaged when the bed is stationary.

5.2.2 Moving the Bed

Before moving the bed the following checks must be performed:

- Side rails must be raised if there is a patient in the bed, to minimise the risk of falling.
- The platform must be horizontal.
- The platform must be raised/lowered to a suitable height for pushing.
- The mains lead must be unplugged and stored on the cable tidy hooks.

When moving the bed long distances, i.e. between wards along straight corridors, it is advisable to set the steering function to 'track' by pulling the brake bar up and pushing the bed from the foot end of the bed. In this way the person pushing the bed is able to monitor the condition of the patient during transport and can keep the bed moving in a straight line with minimal effort.



Warning



- If the bed is to be pushed up/down a slope Sidhil advise that two people move the bed, with one person at each end.
- If the bed is to be pushed with a heavy load it should be assessed whether or not two people should move the bed, this is dependent upon the situation and load on the bed.

5.3 Side Rails

The Innov8 iQ can be specified with two different types of folding side rail, this is to provide the optimum mattress/side rail combination for both foam and air mattress of varying thickness. When specifying a mattress and side rail combination a clinical assessment of the patient's needs must be carried out in line with the local policy.

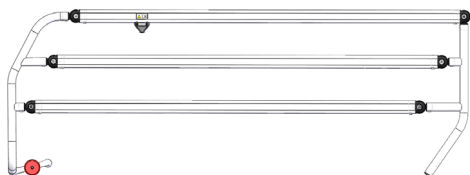
Warning



The side rails available for the Innov8 iQ are product specific due to how close the mattress platform travels to the ground and the relative positions of the mattress surfaces. Other than Innov8 iQ side rails (IQ/SR & IQ/HSR), no other side rail should be used with the bed.

5.3.1 Mattress Thicknesses

Standard, 3 bar, cantilever side rail



152mm maximum mattress thickness (6")

High, 4 bar, cantilever side rail



279mm maximum mattress thickness (11")

5.3.2 Side Rail Safety Notice



Sidhil Ltd only recommends the use of Sidhil bed side rails with Sidhil beds.

Sidhil Ltd does not recommend the use of any Sidhil bed side rails when caring for children, as they are not designed for this use.

ENTRAPMENT AND ASPHYXIATION

Whilst every care has been taken to ensure that the design of the Innov8 iQ side rails meet the relevant safety standards, beds fitted with bed side rails can still pose a potential risk of death from entrapment and asphyxiation.

All staff responsible for the purchase, selection for use, and adjusting of bed side rails should be aware of the potential risk of entrapment and asphyxiation when a bed is occupied.

Care must be taken when positioning and adjusting bed side rails to ensure that any spaces between the bed side rails, mattress or bed frame will not allow entrapment of the occupant's head or body. In addition, consideration should be given to the size and physiological condition of the occupant and an assessment undertaken to ensure that the spacing between the bars of the bed side rails is not wide enough to present a potential risk of entrapment and asphyxiation.

All staff responsible need to be aware that increased vigilance is required when nursing patients in beds fitted with bed side rails.

If an overlay air mattress is used it may be necessary to use a thinner foam mattress for the combined height to maintain the specified dimension.

Refer to MHRA Device Bulletin DB2006 (06) v2.0 'Safe use of bed rails'.

Warning



- Side rails must only be used with a mattress of the correct size and type that is approved for use with the Innov8 iQ bed.
- Ensure the side rails are locked in place at all times when in the raised position.
- A risk assessment should be carried out to consider the age, condition and size of the patient to assess the suitability of side rails.
- Side rails are not designed to act as restraints for patients.
- Side rails are not designed to be used as a patient lifting aid.

Caution



Do not use the side rails to move the Innov8 iQ bed.

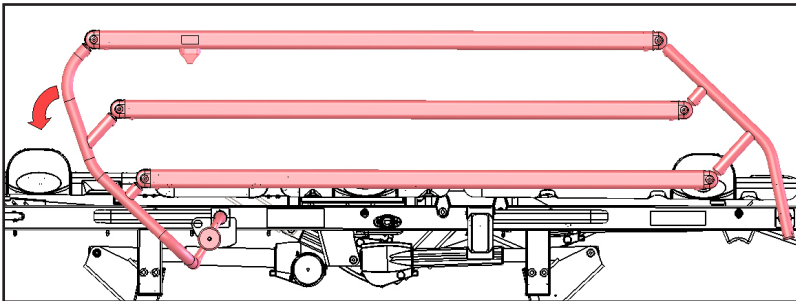
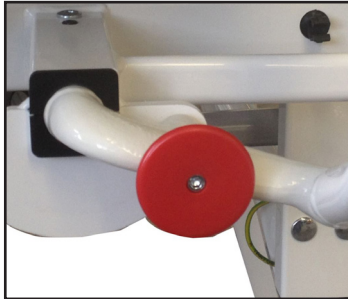
5.3.3 Operating the Side Rails

To lower:

Hold the top rail and pull out the release plunger. Gently lower the side rail towards the foot end of the bed.

To raise:

Hold the top rail and lift the side rail until it locks into the vertical position.



Warning



- Ensure the side rail release plunger is fully engaged when the side rails are in the raised position.
- When operating the side rails ensure they are free from obstructions, to prevent injury/entrapment.

Caution



When lowering do not drop the side rail, damage could be caused.

5.4 Bed Extension

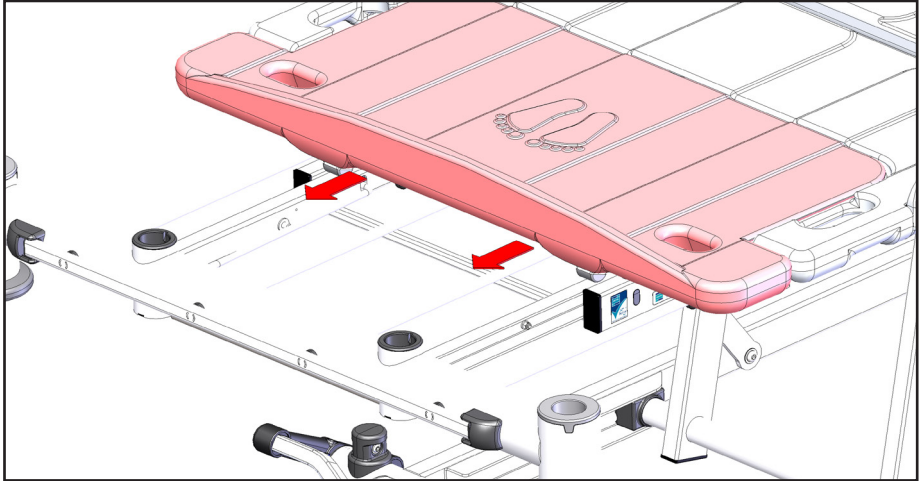
The bed comes with an integral bed extension which allows the bed to be adjusted in length, according to the patients needs.

To extend the bed extension:

- If the bed is in tilt the platform must be levelled first (see page 33).
- Locate the release bar under the large round tube at the foot end of the bed. Using one or both hands lift the bar to disengage the lock mechanism.
- Whilst lifting the bar, pull out the mattress platform extension to its maximum extent.
- Let go of the release bar to lock the mattress platform extension in position.



- Grip the foot extension with both hands under the end of the plastic panel – this may be made easier by first removing the vertical foot board.
- Pull out the leg extension to its maximum extent.



To retract the bed extension:

- Push in the leg extension until it butts up to the plastic calf panel.
- Using one or both hands lift the release bar to disengage the lock mechanism.
- Push the mattress platform extension fully in.
- Let go of the release bar to lock the mattress platform extension in position.

Warning

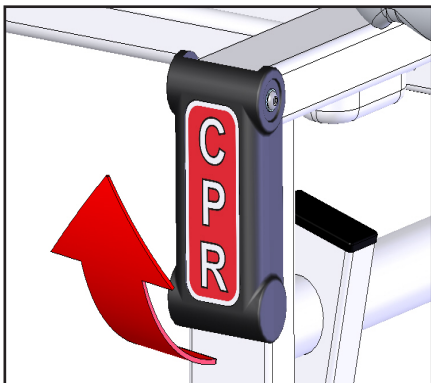
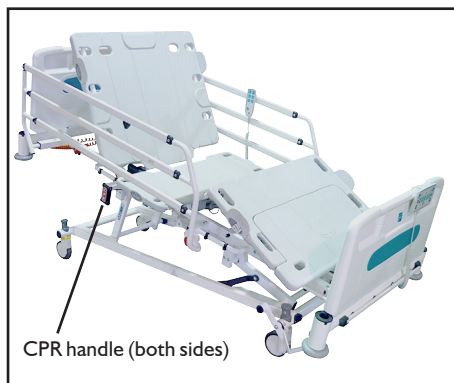


- Never pull the leg extension out without the mattress platform extension being pulled out.
- Always fit a mattress extension block when the platform is extended.
- Always ensure the extension is locked in position, both in the extended and retracted state.

5.5 Emergency CPR Function - Manual

The backrest can be levelled using the manual CPR handles located on both sides of the bed.

To flatten the backrest in an emergency, pull one of the red and black handles outwards; the backrest will now drop into a flattened state.



Note: The platform will not level itself or change height when the manual handles are pulled, this function is only available with the electrical CPR function – see page 34.

Warning

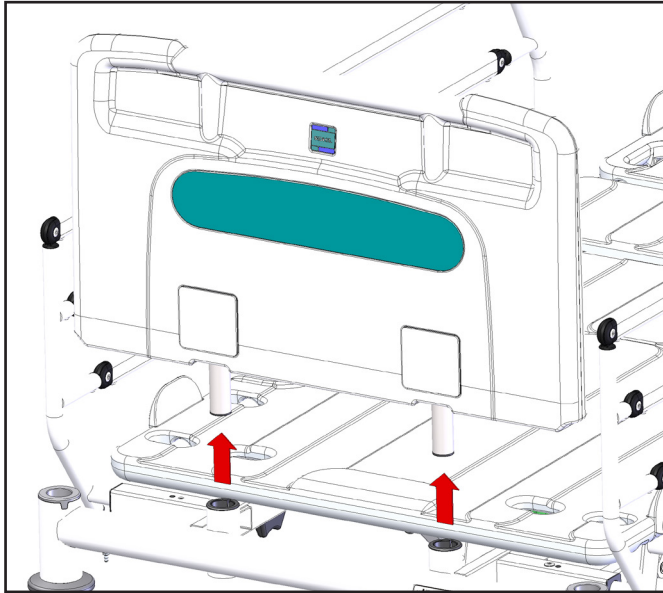


The backrest may fall quickly, ensure that limbs and equipment are clear.

5.6 Bed Ends

The bed has plastic end panels which are easily removable, allowing for fast patient access.

To remove, hold the panel with both hands and lift squarely.



The mass of each panel is as follows:

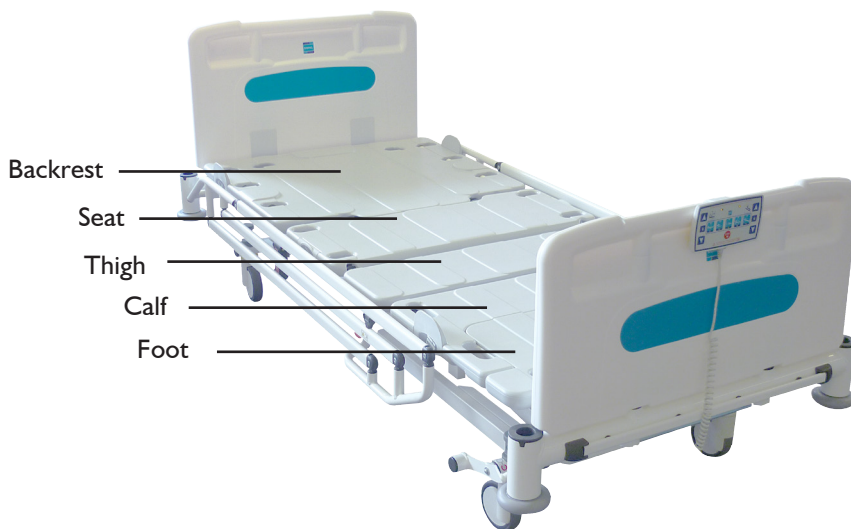
Head end: 4.2kg

Foot end: 4.0kg

Note: The plastic head and foot ends are of different heights – the foot panel is shorter and can be identified by the small foot motif on one side of the panel and should be placed at the foot end of the bed.

5.7 Mattress Panels

The mattress panels are held onto the metal tubes of the bed with loose-fitting clips. A light force should be used to install and remove the panels for access when cleaning the bed.



The mass of each panel is as follows:

Backrest:	4.5kg
Seat:	2.5kg
Thigh:	1.5kg
Calf:	2.5kg
Foot:	2.0kg

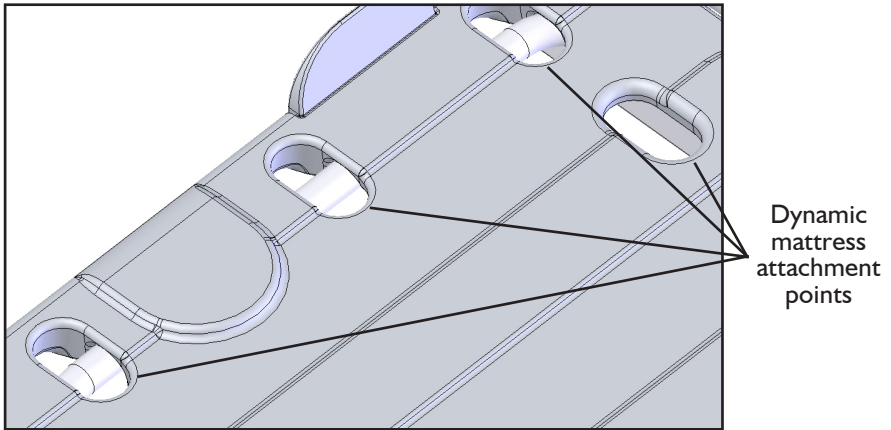
Warning



The mattress platform and side rails have been designed to accommodate specific mattress sizes (see page 49 for details). If mattresses with dimensions other than those specified and of suppliers other than Sidhil are used, there is an increased risk of entrapment and falls due to the difference in foam densities and overall dimensions. When considering using an alternative mattress, contact the Sidhil customer service department for advice.

5.7.1 Dynamic Mattresses

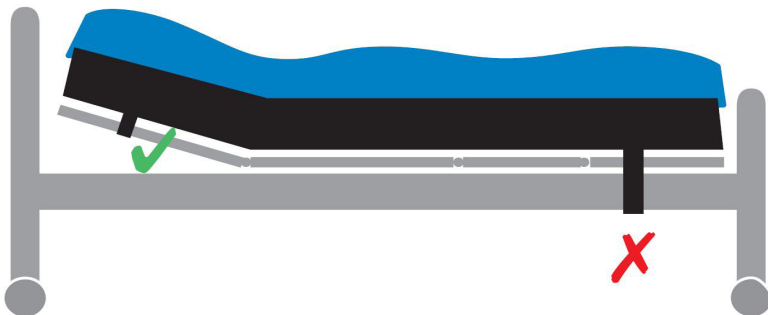
The mattress panels are designed with holes around the outside of the bed to accommodate a range of dynamic mattress straps.



Caution

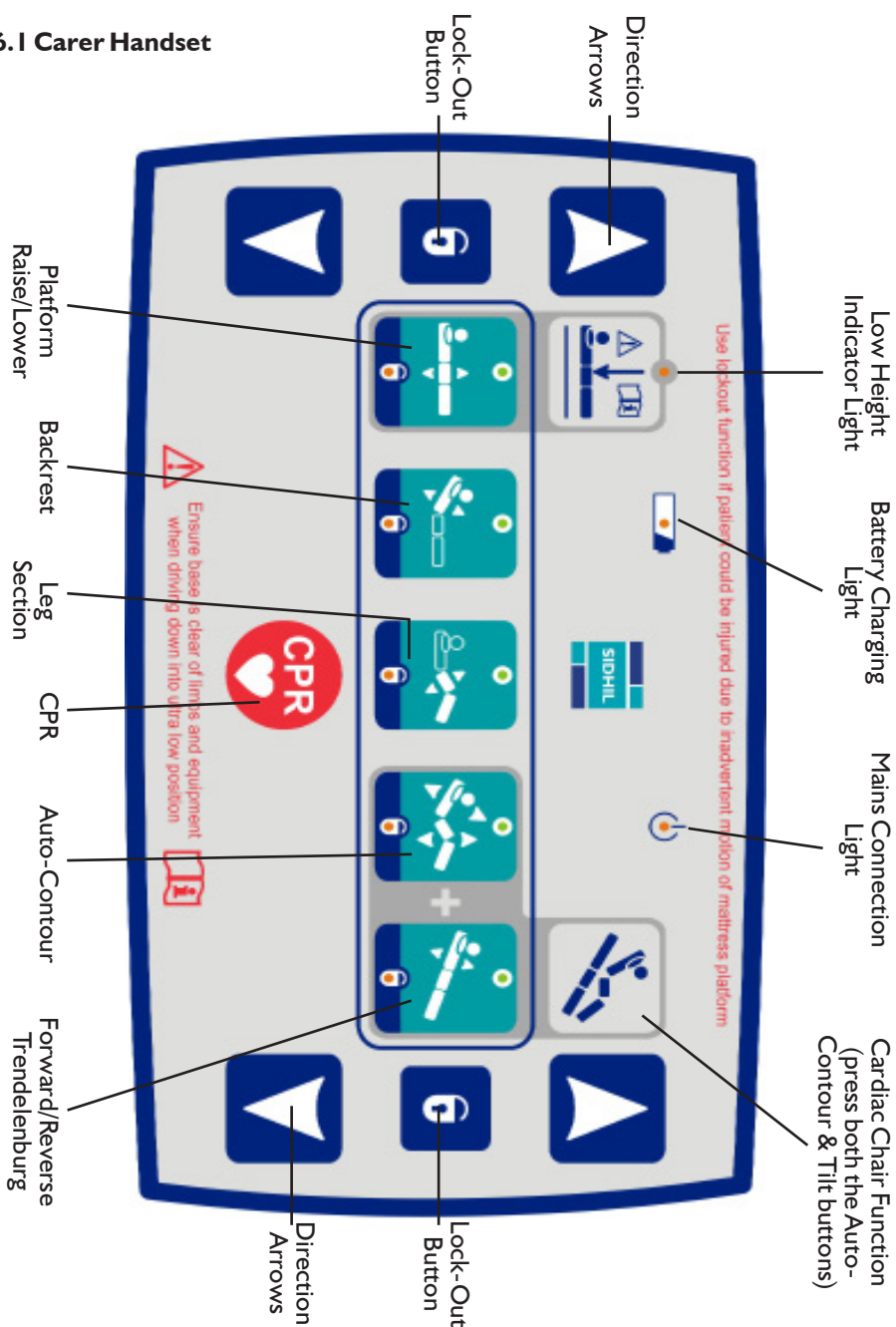


It is essential that dynamic mattress straps are only attached to the moving parts of the profiling mattress platform. If the straps are incorrectly fitted around the main section of the mattress platform, serious damage could occur to various components of the bed.



6. ELECTRICAL OPERATION OF THE BED

6.1 Carer Handset



The carer handset controls all bed functionality; it is to be used only by the carer. The carer handset is designed to be stored at the foot end of the bed by clipping it over the bed end panel.

The carer handset enables the carer to fully operate and position the bed according to the patient's needs (including lowering to the lowest height); for safety reasons it is imperative that the operating instructions in this booklet are fully read and understood before the Innov8 iQ is used.

When lowering the bed from maximum height the bed will travel at full speed until it reaches 420mm, at which point it will slow, a short audible signal will sound and a visual indicator will light on the handset, this is intended to signify to the carer that the bed is being operated in the low height region and care should be taken.

Warning



Ensure limbs and equipment are not overhanging/below the mattress platform before lowering.

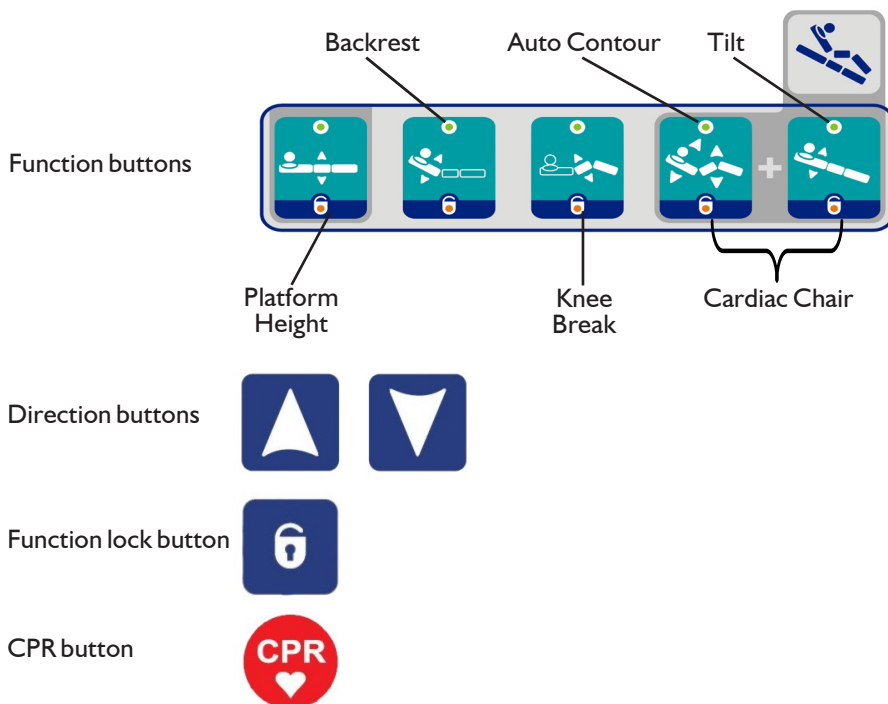
Caution



Ensure bed is on a level surface, and that equipment and objects are clear of the base before lowering.

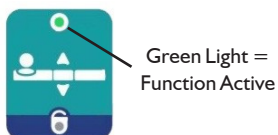
The bed will always travel at full speed with an upward command, regardless of position.

6.1.1 Carer Handset Features



6.1.2 Operating the Carer Handset

Activating a function



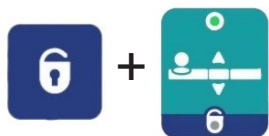
To activate a function, press the desired function button. A green light will illuminate at the top of the function button, this indicates the function is now active.



Once the function button is active hold down one of the direction keys, until the required position is reached.

Note: The function will stay active for 5 seconds. If after 5 seconds a direction button has not been pressed the function will de-activate and the green light will extinguish.

Disabling / Enabling Bed Functions



To lockout a function one of the padlock symbols must be pressed **simultaneously** with the function required for lockout. An amber light will illuminate at the bottom of the function button, this indicates the function is now locked out.

To unlock a function the above process is repeated, the amber light will extinguish.

Note: When a function is locked out on the carer handset, the patient handset (see page 36) will have the corresponding function locked out.

Platform Height



The platform height button allows adjustment of the mattress platform height.

The carer handset can be used to lower the mattress platform to a lower height than can be achieved using the patient handset.

Amber Light:
Bed in Low
Zone



When the bed reaches a 'safe' height of 420mm, a single audible signal will sound and the platform speed will slow to signify to the carer that the bed is being operated in the low height region and care should be taken to ensure that no equipment is placed under the bed. In addition to the audible signal and the difference in speed, an amber indicator light is activated on the carer handset to further highlight to the carer that the bed is moving into the low height region and that care should be taken whilst operating.

Note: The patient handset is only able to lower the bed to a height of 420mm. This means that the patient is not able to operate the bed in the low zone.

Warning



- Ensure limbs and equipment are not overhanging the mattress platform before lowering.
- Ensure individuals and objects are clear of the space under the bed when lowering the bed to its minimum height.
- To reduce the risk of injury due to falls it is advised that the bed is left in its lowest position when the patient is unattended.

Caution



- Ensure the bed is on a level surface and that equipment and objects are clear of the base before lowering.
- If the bed is to be used with a hoist, ensure that the clearance under the bed is sufficient when the bed is in the low zone; there is a risk of collision if the hoist has legs that are designed to pass under the bed which are higher than 75mm.

Backrest



The backrest button on the carer handset allows adjustment of the backrest angle.

The backrest is fitted with a ratchet actuator which will cause the mechanism to stop lowering if an obstruction is detected under the mechanism. The actuator will produce a clicking noise to alert the carer that damage to an individual or equipment could be caused if the obstruction is not removed.

Warning



Ensure limbs and equipment are kept free from the space under the backrest before lowering.

Caution



Repeated use of the ratchet mechanism in the actuator may reduce the life of the component. If the clicking noise is heard, immediately stop the use of the function and remove the source of the obstruction.

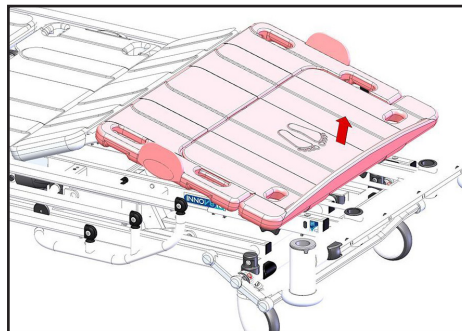
Knee Break



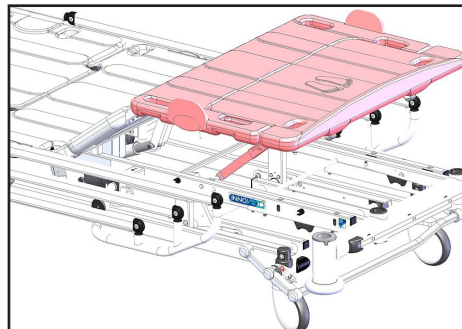
The knee break button on the carer handset allows adjustment of the thigh section angle.

Adjusting the height of the foot section requires a **manual** operation:

- Using the carer handset, adjust the thigh section to maximum angle.
- Lift the foot section and position to the required height using the ratchet mechanism – to lower, lift the foot section to its maximum height and then lower.
- The knee break button on the carer handset will now raise/lower the leg section.



The height adjustment of the foot section requires a manual operation.



Auto Contour



When the auto contour button is pressed both the backrest and knee break functions operate together.

iQ Contour:

For improved comfort and safety of the patient, the Innov8 iQ software incorporates special programming to reduce skin shear during profiling. To reduce the risk of the patient sliding down the bed when the backrest is flattening, the leg section will lower in small steps in order to maintain the position of the patient on the mattress. This feature is called 'iQ Contour'.

Note: The operation of the leg section will vary dependent on the position of the foot section as detailed on page 32.

Note: If the backrest or knee break are locked out this will automatically disable the auto contour function.

Tilt



Head down tilt (Trendelenburg) and foot down tilt can be applied using the carer handset.

When in tilt, in order to level the bed the opposite direction button should be pressed and held until the bed stops, the platform will now be level.

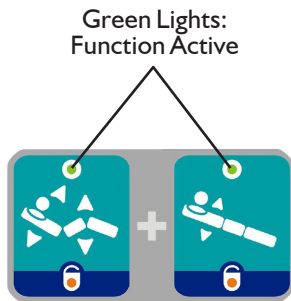
To continue tilting the bed in the opposite direction, press the same direction button again and hold until the desired angle is reached.

Caution



When the bed is put into head down tilt there must be sufficient space behind the bed to ensure the head board and/or any ancillary equipment cannot clash with the wall.

Cardiac Chair



The bed can be automatically profiled into a cardiac chair position, where the platform is automatically profiled into the auto contour position and moves into foot down tilt. This allows for a comfortable seated position for the patient whilst remaining in the bed.

When the auto contour and tilt buttons are pressed within 5 seconds of each other the cardiac chair function is activated. Pressing either of the 'up' buttons orientates the bed into the cardiac chair position. Any one of the two 'down' buttons takes the bed out of cardiac chair and levels the platform utilising the iQ Contour function (see page 33 for description).

Electrical CPR



Pressing the CPR button automatically levels, flattens and lowers the platform. Once the platform is at minimum patient operating height (420mm) it then drives up to maximum height. Regardless of position the backrest always lowers first, so that it is flat in the quickest possible time.

Note: pressing the CPR function overrides all locked out functions.

Warning



The mechanical CPR function will flatten the backrest quicker than the electrical CPR, but will not level the knee break or lower the platform.

Mains Power Indicator



The carer handset has an amber mains power light in the upper right corner. If it is illuminated it signifies that the bed is plugged in and operating on mains power. If it is not illuminated the bed is either unplugged or has a fault (see page 45).

Battery Indicator



The carer handset has a battery light that shows when the battery is charging.

Note: This light does not indicate when the bed is being run off battery power.

Caution



The bed is not designed to run off battery power for long periods and should always be plugged into the mains supply during normal use. Allowing the battery to discharge fully may impair its performance.

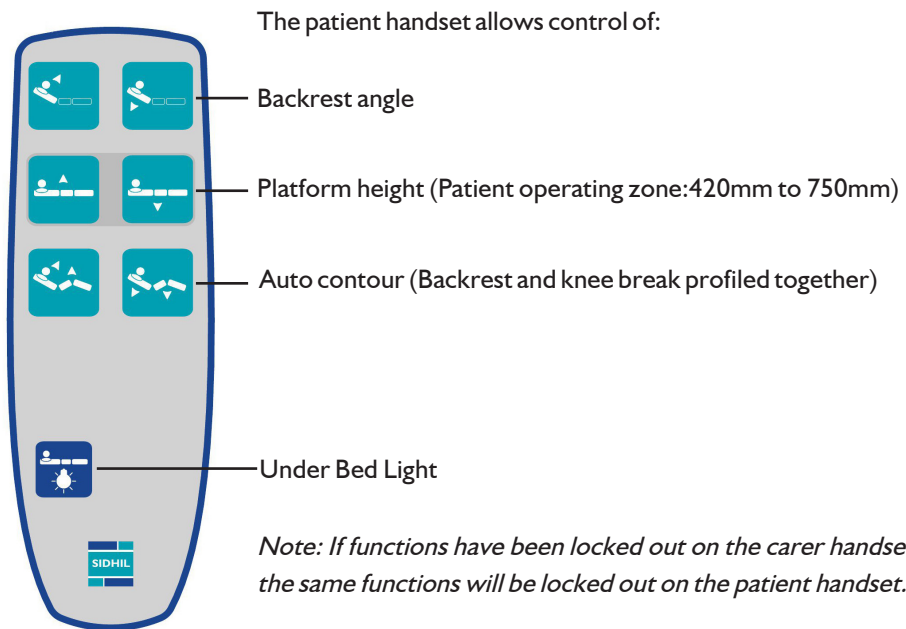
6.2 Patient Handset

The patient handset is designed to give limited control to the patient. It allows control of the backrest, knee break and mattress platform height.

The mattress platform height may only be adjusted between 420mm and 750mm using the patient handset, to reduce the chance of entrapment when the patient is unsupervised. If the bed is to be lowered below the minimum patient operating height it must be done so by the carer, using the carer handset.

The patient may raise the bed out of the lowest position (below 420mm) if required, however the handset will not allow them to re-lower the bed below the minimum patient operating height.

Note: If the mattress platform is in a tilted position, the patient will be able to flatten the platform using the platform height function. If this is not desired, the carer must lock out the tilt function on the carer handset in order for the bed to remain at a set angle. The patient will still be able to adjust the height of the bed.



Note: If functions have been locked out on the carer handset the same functions will be locked out on the patient handset.

6.3 Under Bed Light



When the under bed light button is pressed it operates a light on both sides of the platform, providing a small pool of light either side of the bed for the convenience of the bed user.

Note: The brightness and size of the area that is illuminated will vary depending on the height of the mattress platform.

7. ADDITIONAL FEATURES

7.1 Angle Indicators

In order to facilitate the optimum positioning of the bed for patient comfort and recovery, the Innov8 iQ is fitted with two indicators on both sides of the bed to show the backrest angle and the tilt angle.



Backrest angle

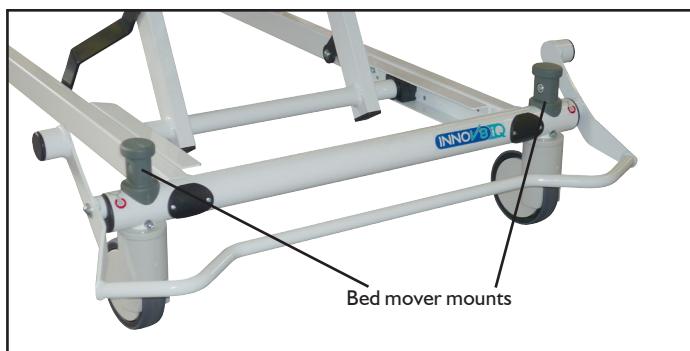


Tilt angle

7.2 Bed Mover Mounts

In order for the bed to be moved using a bed mover, the Innov8 iQ has been fitted with mounts that can be used with a variety of bed movers in common use in most hospitals.

The bed mover mounts are located at the head and foot end of the bed and can be used when the brake bar is set to the 'free' position (see page 14).



7.3 Linen Shelf

The linen shelf is supplied to support bed linen during bed making and stripping activities. Extend the linen shelf by holding the central bar and pulling out to its maximum extent.



Store the linen shelf by pushing the shelf back into the bed where it will be held by the two plastic bumpers.

Caution



- Ensure the linen shelf is stowed correctly after use as it could cause entrapment issues or damage to equipment when the bed is operated.
- The linen shelf is designed to support a maximum weight of 20kg.

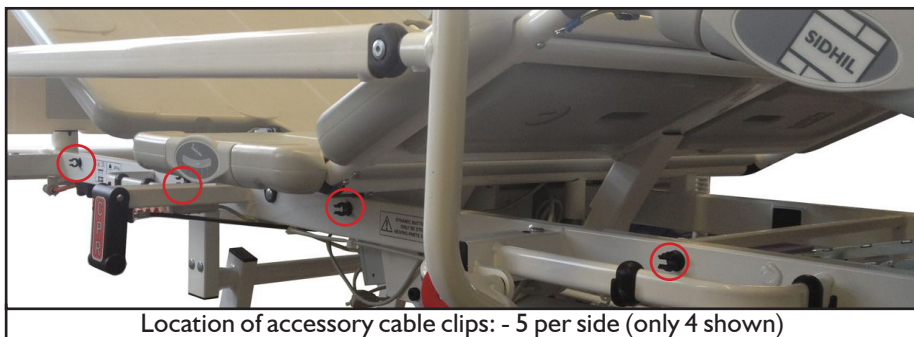
7.4 Patient Handset Locator

The folding cantilever side rails are fitted with a handset locator that can be used to hold the patient handset in position – this allows the side rails to be raised and lowered with the reduced risk of the handset falling.



7.5 Accessory Cable Clips

Accessory cable clips have been provided to reduce the risk of accessory cables – for example dynamic mattress pumps - becoming trapped or a trip hazard. The accessory clips are located down each side of the mattress platform.



Location of accessory cable clips: - 5 per side (only 4 shown)

7.6 Catheter Bag Hooks

There are two rails located on both sides of the bed which are fitted with plastic catheter bag clips. These can be removed and fitted to alternate rails if required by grasping the clip from underneath and bending it slightly to disengage from the rail. The clip can then be fastened onto an alternate rail.



7.7 Equipotential Terminal

The Innov8 iQ is fitted with an equipotential terminal to allow the connection of electrical items such that they are of the same electrical potential. This can reduce the risk of static or electrical discharge between two pieces of electrical equipment.



In certain situations the electrical potential of all unprotected metal parts must be equalised. If the bed is not connected to the mains, resulting in a grounded connection being unavailable, an equipotential cable (using 2 POAG-KBT6DIN connectors) must be connected to the terminals between the bed and relevant device.

Please contact the Sidhil customer service team for details of the necessary cable.

Warning



Only items that have been inspected by a trained electrical professional and under their advice should be connected to the Innov8 iQ equipotential terminal. Failure to follow this could cause damage to individuals or equipment.

7.8 Corner Sockets

The corner sockets are intended to fit various Sidhil accessories - IV pole, lifting pole, oxygen cylinder carrier and traction frames (please refer to the individual instructions for use in reference to fitting).

Warning



When the lifting pole is fitted to the bed frame the head board must be in place at all times.

8. DECONTAMINATION

8.1 Cleaning & Disinfection Guidelines

Warning



Always disconnect the bed from the main power supply prior to cleaning.

To aid cleaning, the plastic bed ends and mattress platform panels can be removed. It is also advisable to remove any accessories that are fastened to the bed.

These instructions apply to all accessories apart from soft products (e.g. mattresses).

- All surfaces to be wiped down with a disposable soft cloth moistened with a mild detergent and diluted in warm water (40°C).
- The bed should be cleaned by starting with the cleanest parts of the bed and systematically moving to the dirtiest parts. Extra care should be taken around areas where excess dirt or dust may gather.
- The cloth should be changed during the cleaning process if it becomes soiled.
- Rinse down with clean water to remove detergent residue.
- Wipe surfaces down with 1,000 parts per million chlorine solution (0.1%).
- Dry off with a paper towel.
- Always ensure the cleaned parts are allowed to dry before putting the mattress back in place.

Note: If any of the 3 stages stated above (detergent, rinse down & chlorine solution) are omitted or combined it will reduce the effectiveness of the clean.

In cases of blood spills or other bodily fluids it is recommended that a chlorine solution of 10,000 parts per million (1%) is used instead.

Note: The use of neat bleach or similar surface cleaners is not recommended as damage may be caused to the bed surfaces.

Alternatively:

Sidhil recommend the use of **Tristel** 'Fuse' sachets and **Tristel** 'Jet' gel. Follow the product documentation for concentration guidelines and instructions for use.

Tristel Codes:

FUS/SUR/FRA (Fragranced) 1 x 40 sachets

FUS/SUR/UNF (Unfragranced) 1 x 40 sachets

JET/head 1 x JET Trigger Head

JET/PACK/FRAG 1 x refill pack fragranced

JET/PACK/UNF 1 x refill pack unfragranced

NHS Supply Chain Codes:

FAL649 (Fuse for Surfaces Fragranced)

FAL650 (Fuse for Surfaces Unfragranced)

FAL688 1 x Jet Trigger Head

FAL696 1 x refill pack fragranced

FAL697 1 x refill pack unfragranced

Sidhil also recommend the use of Chlor-clean tablets. Follow the product documentation instructions for concentration guidelines and instructions for use.

Refer to the Sidhil infection control policy, copies are available from Sidhil Ltd. Contact details can be found on the back of this booklet.

8.2 Steam Cleaning

The Innov8 iQ can be dry steam cleaned. The individual manufacturer's instructions should be followed when using a steam cleaner and the following precautions observed:

- Avoid directing steam directly at electrical components and reduce steam pressure when cleaning near electrical items and connections.
- Use soft brushes and wiper cloths as recommended by the steam cleaner manufacturer.
- Do not use high pressure hoses on the bed as they could cause damage to electrical components.
- Do not use excessive force or steam pressure on labels.
- Ensure the bed is dry and all debris from the cleaning process has been removed prior to re-use.
- Ensure all electrical functions operate as normal once the bed has been cleaned and dried.

Warning



Always disconnect the bed from the main power supply prior to cleaning.

9. MAINTENANCE

Only authorised service personnel or Sidhil service engineers should carry out repairs or service activities. For Service & Support outside the UK & Northern Ireland please contact the local distribution company from where this equipment was purchased. Failure to do so may result in the manufacturer's warranty becoming void. **The bed must be serviced at least once yearly, as a minimum.** Sidhil also recommends the carer performs frequent visual and operational inspections. If there are any signs of damage, or if the bed is not performing as it should, withdraw it from service until repaired and determined 'fit for use'.

Periodically check to ensure that:

- The bed operates as per its intended purpose.
- All parts are present and free from damage.
- All fixtures and fittings are tight.
- The frame is mechanically sound, no signs of cracked paint.
- No parts show signs of excessive wear.
- The bed is cleaned following the guidelines in these instructions for use.

Warning



- Always disconnect the bed from the main power supply prior to performing any maintenance procedures.
- No modification of this equipment is allowed.
- The bed should be vacated by the patient before any maintenance or inspection takes place. If this is not possible due to the patient's mobility care should be taken for the service engineer not to make contact with the patient when working on electrical items.
- Only Linak & Sidhil approved components, specified for the iQ bed, to be used - if in doubt contact Sidhil Ltd or your local distributor.

9.1 Fault Finding

Listed below are a set of electrical faults that may occur within the service life of the bed. If a fault does occur please try the following suggestions, as these may help in diagnosing the fault.

Fault	Possible Cause	Remedy
Electrical function(s) do not work	Functions locked out on carer handset	Unlock function(s) (page 29)
	Mains lead not plugged into the control box or wall and batteries flat	Check to see if the mains power indicator on the carer handset is lit and the mains lead is plugged in at both ends
	Battery not plugged into Control Box	Check to see if the cable between the battery and control box is fitted correctly
	Fuse has blown in the mains plug	Check to see if the mains power indicator on the carer handset is illuminated, if not replace fuse
	Actuator/handset leads not plugged in	Check plug connections
	Damage to mains cable, actuator cable or handset cables	Turn off at the mains and contact the approved service engineer
	Unidentified fault	Reset / Initialise System (to be conducted by Sidhil approved personnel only)
Electrical functions working slowly	Mains lead not plugged into the control box and working off battery backup	Check that the mains lead is fully located into the control box and the mains power indicator on the carer handset is illuminated
	Bed is in low position and has slowed to alert carer	Drive the platform upwards. The platform will travel upwards at full speed
	Heavy load on the bed	No corrective action required – check that the load on the bed does not exceed the Safe Working Load (SWL)
The bed will not level	The electrical system has become out of sync	Reset / Initialise System (to be conducted by Sidhil approved personnel only)
Bed alarming	Running off battery backup	Check to see if the 'power on' light on the handset is lit and the mains lead is plugged in at both ends
	'Other' fault alarm	Turn off at the mains and contact the approved service engineer

9.2 General Maintenance

Sidhil recommend that the following maintenance procedure is performed every 12 months.

- Check that all electrical functions operate correctly on both handsets.
- Check all parts are present.
- Check the frame is mechanically sound, with no sign of cracked paint.
- Check all welds are present and show no cracks or signs of failure.
- Check that all electrical cables are in good condition.
- Check the electrical component housings are not cracked or damaged.
- Check that the bed works correctly when run off battery back up.
- Check that the mains cable and plug are in good condition, if either is damaged it must be replaced with a complete assembly, the plug must never be re-wired.
- Check that all nuts, bolts and fasteners are tight and that none are missing or incomplete.
- Check the manual CPR mechanism works correctly.
- Check the bed extension extends and retracts correctly and locks/disengages in both positions.
- Check the leg extension extends correctly and locks in the retracted position.
- Put the castor pedal into the brake position (see page 14). Push the bed with a reasonable amount of force; ensure the bed does not move.
- Put the castor pedal into the steer position (see page 14). Push the bed and check that the bed runs straight.
- Raise and lower the safety sides. Check that they move smoothly.
- Check that the lock on the safety sides automatically engages when raised.

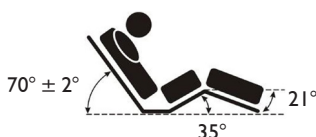
Refer to the service manual for cable routing diagrams, parts codes/lists, maintenance instructions etc. Copies are available from Sidhil Ltd. Contact details can be found on the back of this booklet or at www.sidhil.com

10. SPECIFICATION

10.1 Bed Data

Overall length:	2280mm
Integral length extension:	200mm
Overall width:	1030mm
Mattress platform height:	340mm – 750mm
Under bed clearance:	150mm (platform at 420mm) 80mm (platform at 340mm)
Mattress platform length:	2000mm
Mattress platform width:	880mm
Head down tilt:	0 - 13°
Foot down tilt:	0 - 13°

Mattress platform angles (max):



Safe working load: 255kgs (40 stone)

Maximum patient weight: 190kgs (30 stone)

Product weight

Innov8 iQ Bed only:	95kgs
IQ/SR - Standard side rail (pair):	14kgs
IQ/HSR - High side rail (pair):	18kgs
IQ/BE - Bed ends set:	8kgs
IQ/PANELS - Panel set:	13kgs
Total - IQ/AQ/SR	130kgs
Total - IQ/AQ/HSR:	134kgs

Mattress requirements:

Length:	2000mm maximum
Width:	864mm recommended (880mm maximum)
Thickness:	see page 16
Weight:	15kg maximum

Application environment: 1 and 2

Shock and vibration: To be used on a flat level floor (e.g. vinyl based)

UV: Intended for indoor use only

10.2 Electrical Data

Voltage in:	230V $\pm$ 10%, ~50/60Hz.
Current in:	2A
Mains cable fuse:	3-5A
Mains plug:	Type G/BS1363

*Duty cycle:	10%
	2 mins of continuous use followed by 18 mins not in use.

*Electrically operated beds are intended to be operated intermittently rather than continuously. If the bed is operated continuously for up to 2 minutes it must then be left for at least 18 minutes before re-use to allow the electrical system to cool sufficiently. **If the bed is continuously used for an extended period of time and it exceeds the duty cycle the control box may become temporarily disabled or irreparably damaged.**

Safety standards:	IEC 60601-1: 2005 IEC 60601-2-52: 2009
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EMC:	IEC 60601-1-2:2007
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The Innov8 iQ bed is compliant to the requirement of 60601-1-2: 2007, the RF emissions are very low and are not likely to cause any interference to nearby electronic equipment, however interference to sensitive equipment is possible.

Qualified users of the Innov8 iQ bed can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters). If the Innov8 iQ bed or any alternative equipment is found to be operating abnormally mitigation measures are to be taken, such as the separation distances being increased and/or the products being re-orientated.

Electrical shock protection:	Class I 
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Applied parts:	Mattress platform Profiling sections Bed ends Carer & patient handsets
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Liquid ingress protection:	IPX4
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The bed is only suitable for use when:

Ambient temperature:	+5°C to +40°C
Relative humidity:	20% - 90% at 30°C - not condensing
Atmospheric pressure:	70kPa to 106kPa (Rated to operate at $\leq$ 2000m)
Pollution:	Degree 2

11. ACCESSORIES

A full range of accessories, including various approved mattresses are available from Sidhil Ltd.

Lifting pole	INNOV8/LP
IV pole	INNOV8/DP
Oxygen Cylinder Carrier	INNOV8/RANGE/OC
Traction – Balkan beam	INNOV8/TBB
Traction – foot end	INNOV8/TFE
Cantilever side rails (standard)	IQ/SR
Cantilever side rails (high)	IQ/HSR

Characteristics of the accessories can be found in the relevant accessory instructions for use.

The bed has been tested and approved with the following mattresses:

Acclaim VE –	MAT/ACCL/VE/W
Softrest Contour –	MAT/SOFT/CON
Essential Foam –	MAT/BASIC
Trio II Dynamic –	DYN/DIG/TRIO/2
Plus II Dynamic –	DYN/DIG/PLUS/2
Soloxtra Dynamic –	DYN/DIG/SOLO/XTR

For mattresses not shown on the above list please contact Sidhil Ltd to check compatibility. Other mattresses available upon request.

12. WARRANTY

Sidhil Ltd guarantees this product is free from defects in material and workmanship under normal use for 3 year (1 year full parts and labour, 2 further years parts only) from the date of purchase from Sidhil Ltd, its subsidiary companies, authorised dealers and international distributors. Proof of purchase must be presented with any claim. Except as provided herein, Sidhil Ltd, product warranty does not cover damage caused by misuse or abuse, accident, the attachment of any unauthorised accessory, alteration to the product, or any other conditions whatsoever that are beyond the control of Sidhil Ltd. Sidhil Ltd, its subsidiary companies, authorised dealers and international distributors shall have no liability or responsibility to customers or any other person or entity with respect to any liability, loss or damage caused directly or indirectly by use or performance of the product or arising out of any breach of this warranty, including but not limited to any damages resulting from inconvenience, loss of time, property, revenue, or profit or any indirect, special, incidental or consequential damages, even if Sidhil Ltd, its subsidiary companies, authorised dealers or international distributors have been advised of the possibility of such damages.

In the event of a product defect during the warranty period you should contact your supplier, whether it be Sidhil Ltd, its subsidiary companies, authorised dealers or international distributors who will at their option unless otherwise provided by law; a) correct the defect by product repair without charge for parts and labour b) replace the product with one of the same or similar design or c) refund the purchase price. All replaced parts and products on which a refund is made become the property of Sidhil Ltd. New or reconditioned parts and products may be used in the performance of the warranty service. Repaired or replaced parts and products are warranted for the remainder of the original warranty period. You will be charged for repair or replacement of the product made after the expiration of the warranty period.

This warranty does not cover; a) damage or failure by or attributes to acts of God, abuse, accident, misuse, improper or abnormal usage, failure to follow instructions, improper installation or maintenance, alterations, lightning or other incidence of excess voltage or current, b) any repairs other than those provided by a Sidhil Ltd authorised technician, c) consumables such as fuses, d) cosmetic damage, e) transportation, shipping or insurance costs or f) costs of product removal, installation setup service adjustment or re-installation.

This limited 3 year warranty gives you specific legal rights and you may also have other rights.

Sidhil Ltd cannot be held responsible for any injury or incident which relates to the use of this bed in conjunction with accessories manufactured by companies other than Sidhil Ltd.

All products carry the CE mark in accordance with EC Directive on Medical Devices (93/42/EEC).

Sidhil has a policy of continual product improvement and reserves the right to amend specifications covered in this document.

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