WARNING
To avoid injury, always read this Instructions for Use and accompanied documents before using the product.

Mandatory to read the Instructions for Use

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Contents

Warnings, Cautions and Notes .................................................................................................................. 3

1. Introduction ........................................................................................................................................ 7
   Product overview ................................................................................................................................. 9

2. Clinical Applications .......................................................................................................................... 10
   Intended use ...................................................................................................................................... 10
   Indications ......................................................................................................................................... 10
   Contra-indications ............................................................................................................................. 11

3. Installation .......................................................................................................................................... 12
   Electricity supply ............................................................................................................................... 13
   Underbed light ................................................................................................................................... 13
   Mattresses ......................................................................................................................................... 14

4. Operation ........................................................................................................................................... 16
   Brakes and steering ............................................................................................................................ 16
   Foot Pedal for Adjustment of Bed Height (Optional) ....................................................................... 17
   How to use the 5th Wheel (Optional) ......................................................................................... 18
   Side rails ........................................................................................................................................... 19
   CPR backrest release ....................................................................................................................... 21
   X-ray cassette tray (Optional) ......................................................................................................... 22
   Operation .......................................................................................................................................... 22
   Bed length adjustment ..................................................................................................................... 24
   Bedstripper (linen shelf) (Optional) ................................................................................................. 26
   Lifting pole and accessory sockets ............................................................................................... 27
   Drainage bag rails ............................................................................................................................ 28
   Head and foot boards ....................................................................................................................... 29
   Adjusting the mattress platform ...................................................................................................... 30
   Patient controls ............................................................................................................................... 31
   Caregiver controls ............................................................................................................................ 31
   Patient handset (Optional) ............................................................................................................... 33
   Attendant Control Panel (ACP) ........................................................................................................ 34
   Function lockout .............................................................................................................................. 36
   Adjusting the calf position .............................................................................................................. 37
   Backup battery .................................................................................................................................. 38
   Duty cycle lockout 39

5. Product Care ...................................................................................................................................... 40
   Mattress platform sections .............................................................................................................. 40
   Decontamination ............................................................................................................................. 41
   Preventive maintenance .................................................................................................................... 43
   Troubleshooting ............................................................................................................................... 46
   Fault indications ............................................................................................................................... 47
   Product lifetime ............................................................................................................................... 47

6. Accessories and Cables ..................................................................................................................... 48

7. Technical Data ................................................................................................................................... 49

8. Warranty and Service ........................................................................................................................ 53

9. Electromagnetic Compatibility ........................................................................................................ 54
## Warnings, Cautions and Notes

<table>
<thead>
<tr>
<th>Icon</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>![Warning Icon]</td>
<td><strong>WARNING</strong></td>
<td>Indicates possible hazards in procedures or conditions which, if not correctly followed, could result in death, injury or other serious adverse reactions.</td>
</tr>
<tr>
<td>![Caution Icon]</td>
<td><strong>Caution</strong></td>
<td>Indicates possible hazards in procedures or conditions which, if not correctly followed, could result in equipment damage or failure.</td>
</tr>
<tr>
<td>![Note Icon]</td>
<td><strong>NOTE</strong></td>
<td>Explains or amplifies a procedure or condition.</td>
</tr>
</tbody>
</table>
General Warnings

⚠️ WARNING

Keep these instructions in a safe place; you may need to refer to them later on.

Read and understand these instructions before operating the bed. Caregivers must be trained in the proper use of this product, its functions and controls, and any accessories.

These instructions are mandatory for the safe and effective use of this product, including the safety of patients and caregivers.

Unauthorized modifications or repairs to this product may affect its safety and will invalidate any warranty. Arjo accepts no liability for any incident, accident or reduction in performance that may occur as a result of such repairs or modifications.

To avoid the risk of electric shock, this product must only be connected to an electricity supply with a protective earth.

Do not smoke or use naked flames near this equipment and do not expose it to extremes of temperature.

Do not use electrically powered beds in the presence of flammable gases such as anaesthetic agents e.g. in operating theatres.

The bed is intended for indoor use only and should not be used outside a normal hospital environment.

Do not use accessories that have not been designed or approved for use with the bed.

The user should carry out a risk assessment before using the bed with equipment from other suppliers or manufacturers.

Always apply the brakes when the bed is stationary.

To reduce the risk of injury due to falls, lower the bed to minimum height when the patient is unattended.

Patients should not be left in the Trendelenburg position when unattended.

To reduce the risk of overbalancing, do not allow the patient to get on or off the bed when the mattress platform is in a tilted (head down or foot down) position.
WARNING

Where risk assessment indicates that a patient is at high risk of entrapment owing to their medical condition or other circumstances, and where there is no medical benefit from their being left in a contoured position, place the mattress platform in the flat position when the patient is unattended.

It is recommended to use the Function Lockout facility on the Attendant Control Panel to prevent unintended movement in situations where objects may press against the patient’s controls.

When the bed is operated, make sure that obstacles such as bedside furniture do not restrict its movement.

When moving or operating the bed, take care that any accessories attached to it (e.g. lifting pole) do not strike doors, ceilings, etc.

Hold the head board or foot board when pushing or pulling the bed; do not hold the side rails or any attached accessories.

Before operating the bed, make sure the patient is positioned correctly to avoid entrapment or imbalance.

Take care not to squeeze or trap trailing cables from other equipment between moving parts of the bed.

Take care not to allow clothing or bed linen to become snagged on moving parts of the bed.

This product complies with the requirements of applicable standards for electromagnetic compatibility (EMC). However, medical electrical equipment requires special precautions regarding EMC and should be installed and used in accordance with the EMC information in the product service manual.

Medical electrical equipment can be affected by portable and mobile radio frequency communications equipment, e.g. cellular telephones.

If a serious incident occurs in relation to this medical device, affecting the user, or the patient then the user or patient should report the serious incident to the medical device manufacturer or the distributor. In the European Union, the user should also report the serious incident to the Competent Authority in the member state where they are located.
1. Introduction

These instructions contain information for the installation, use and maintenance of the Arjo Enterprise® 8000X acute care hospital bed. These beds have multiple functions to provide the optimum nursing position for both patient and caregiver.

**Standard features:**

- Folding split side rails with integrated controls
- Electrical adjustment of bed height and leg section elevation
- Electrically operated retracting backrest
- Bio-Contour® advanced profiling system
- Auto-Chair facility
- Electrical adjustment of head down tilt (Trendelenburg) and foot down tilt (reverse Trendelenburg)
- Manual selection of calf section vascular position
- Mattress support surface with removable panels
- Adjustable length mattress platform
- Drainage bag rails
- Underbed lights
- 125mm single wheel castors

**Optional features:**

- 150mm (single or dual wheel) castors
- Bedstripper (linen shelf)
- 5th Wheel
- DIN accessory rails
- Lockable foot board
- Full width brake bar
- Radio translucent backrest with X-ray cassette tray
- IndiGo™ Intuitive Drive Assist
- Foot Pedal for Adjustment of Bed Height
- Foot-end mounted Attendant Control Panel (ACP)

Optional features are specified by the customer at the time of ordering. The chosen options are indicated by the equipment model number.
The model number [REF] and serial number [SN] can be found on the specification label; this is located on the bed frame below the head board.

![Specification label](image)

⚠️ **Caution**

Before using the bed, ensure that the “Power in” rating on the specification label is compatible with the local electricity supply.
A. Head board
B. Head end side rail
C. Caregiver controls
D. Backrest section
E. Foot end side rail
F. Patient controls
G. Attendant Control Panel (ACP)
H. Seat section
I. Thigh section
J. Calf section
K. Calf extension sheet
L. Foot board
M. Bedstripper (linen shelf) (Optional)
N. Extension locking handle
O. Brake pedal / bar (Optional)
P. Accessory socket
Q. Extension catch bar
R. CPR release handle
S. Place for 5th Wheel (Optional, see page 18)
T. Drainage bag rail
U. Side rail release lever
V. Castor
W. Lifting pole socket
X. Head end brake pedal (Optional)
Y. Roller buffer

NOTE
Flat deck sheets are supplied as standard when the backrest with X-ray cassette tray is present.
2. Clinical Applications

WARNING

To ensure the patient can use the bed safely, their age and condition should be assessed by a clinically qualified person.

The use of head down tilt (Trendelenburg) or foot down tilt (reverse Trendelenburg) may be contraindicated for certain medical conditions. The tilt facility should only be used under the guidance of a clinically qualified person after assessment of the patient’s condition.

**Intended use**

This product is intended to provide support to patients during a stay in hospital or other care facility and allows positioning for CPR and Trendelenburg.

The bed is suitable for use in the following situations:

- Intensive/critical care provided in a hospital where 24-hour medical supervision and constant monitoring is required, e.g. ITU, ICU and CCU (*Application Environment 1).
- Acute care provided in a hospital or other medical facility where medical supervision and monitoring is required, e.g. general medical and surgical wards (*Application Environment 2).
- Long term care in a medical area where medical supervision is required and monitoring is provided if necessary, e.g. nursing homes and geriatric facilities (*Application Environment 3).

* Application Environments are defined in IEC 60601-2-52.

**Indications**

The bed is appropriate for high dependency patients who pose a movement and handling risk and / or whose clinical condition requires that they are positioned with minimal physical handling.

Patients with a moderate amount of independence can, at the caregiver’s discretion, use the controls to adjust their own position.

The mattress platform can be positioned to assist with such clinical procedures as may be required in the Application Environments defined above.
Contraindications

The bed is not suitable for use in the following situations:

- A domestic area, i.e. home healthcare (*Application Environment 4).
- Outpatient care (*Application Environment 5).

* Application Environments are defined in IEC 60601-2-52.

The bed is not suitable for patients under 40kg in weight.

The maximum recommended patient weight is 185kg.

The safe working load (SWL) of the bed is 250kg.

The safe working load is calculated as follows (in accordance with IEC 60601-2-52):

- Maximum patient weight: 185kg
- Mattress: 20kg
- Accessories (including attached loads): 45kg
- TOTAL: 250kg

WARNING

If the combined weight of the mattress and accessories exceeds 65kg, the maximum patient weight must be reduced accordingly.

The recommended patient size is; weight equal or above 40kg, height between 146cm and 190cm and BMI equal or above 17.

At the discretion of the carer, patients taller than 190cm may be accommodated by extending the bed - refer to "Bed length adjustment" on page 24. Ensure that the patient’s height does not exceed the “In-bed length” shown on page 50.
3. Installation

The following chapter describes how to install the bed.

WARNING

If the power supply cord or plug is damaged, the complete assembly must be replaced by authorised service personnel. Do not remove the fitted plug, or use a rewireable plug or adapter.

Make sure the power supply cord is not stretched, kinked or crushed.

Do not allow the power supply cord to trail on the floor where it may cause a trip hazard.

Make sure the power supply cord does not become entangled with moving parts of the bed or trapped between the bed frame and head board.

Disconnect the power supply cord from the electricity supply, and store it as shown, before moving the bed.

Caution

Before the first use, or if the bed has been unused for more than three months, connect the bed to the electricity supply for at least 24 hours to allow the backup battery to recharge fully; failure to do this may reduce the life of the battery. After charging, check that the battery is fully serviceable by carrying out a battery test as shown on page 45.
Electricity supply

Connect the mains plug to a suitable socket outlet. Make sure the plug is easily accessible so it can be disconnected quickly in an emergency.

Power supply cord and potential equalisation terminal

When the bed is connected to the electricity supply, an indicator will light on the Attendant Control Panel (see page 34).

The power supply cord (1) is fitted with a plastic hook (2). When not in use or before moving the bed, clip the hook onto the head board, coil up the cable and place it over the hook as shown.

To isolate the bed from the electricity supply, disconnect the mains plug from the socket outlet.

A potential equalisation terminal (3) is located at the head end of the bed.

When other electrical equipment is within reach of the patient or caregiver, potential differences between the equipment can be minimised by connecting together their potential equalisation terminals.

Underbed light

The underbed light illuminates the floor on either side of the bed.

The underbed light is always on unless the bed is in its low power state; refer to the section "Low power mode" on page 39.
WARNING
Always use a mattress of the correct size and type. Incompatible mattresses can create hazards.
Entrapment hazards may exist when using a very soft mattress, even if it is the correct size.
The maximum recommended mattress thickness for use with side rails is 18cm.
Read the instructions for use supplied with the mattress.
Where the maximum patient weight specified for the mattress is different to that specified for the bed, the lower value applies.

A label on the calf extension sheet indicates the correct mattress size:

NOTE
The numbers 1, 2 and 3 on the label indicate different mattress platform lengths; refer to Bed length adjustment on page 24.
**Mattresses and side rails**

When choosing bed and mattress combinations, it is important to consider the use of side rails based on clinical assessment of each individual patient and in line with local policy.

When assessing the suitability of a mattress for use with side rails, the following factors should be considered:

- The bed is designed to provide an acceptable side rail height when used with a foam mattress up to 18cm thick.
- Specialist powered air / foam replacement mattresses will typically envelop the patient when loaded and can generally be deeper than a foam mattress without compromising safety. Other makes of specialist mattress replacement must be assessed individually prior to use to verify sufficient clearance is maintained.
- Mattress overlays are not recommended for use with this bed.
- To ensure compliance with IEC 60601-2-52, an approved Arjo mattress should be used. Compliance with this standard when using other mattresses must be validated by the user.
- For more information on suitable mattresses and mattress replacements, contact your local Arjo office or approved distributor. A list of Arjo offices can be found at the back of this manual.
4. Operation

The following chapter describes how to operate the bed.

**WARNING**

Operate the brake pedals with your feet while wearing suitable shoes. Do not operate the pedals with your hands.

**Brakes and steering**

The pedals have three positions as shown below:

- **BRAKE**: brakes are applied on all four castors.
- **FREE**: all four castors are free to rotate and swivel.
- **STEER**: all four castors can rotate, but the steering castor (see below) is locked so that it cannot swivel. This helps to keep the bed on a straight line.

**Brake pedal bar**

The brake pedals at the foot end of the bed can be linked by a full width bar.

**Using the steering castor**

Position the bed so that all the castors line up in the direction of travel. Raise the pedals to lock the steering castor and move the bed by pushing it from the opposite end.

**NOTE**

The steering castor may be at either end of the bed, as specified by the customer.

**NOTE**

Brake pedal appearance may alter slightly on actual product, but functionality and user instructions remains unchanged.
Head end brake pedals

Brake pedals (1) are fitted at the head end of the bed. These operate in the same way as the foot end pedals.

Foot Pedal for Adjustment of Bed Height (Optional)

Bed height can be adjusted from bed control panels and from the foot pedal located near the foot end of the bed.

Lift cover of pedal with foot and press left side to raise the bed height. Press right side of pedal to lower the bed height.
How to use the 5th Wheel (Optional)

The 5th wheel provides improved mobility and steering.

**Activate 5th Wheel:**
1. Step down on the head end of the 5th wheel activation pedal (A). *(See Fig. 1)*
   The 5th wheel (B) will lower until it has contact with the floor.
2. Check that the brakes are unlocked and the brake pedal is in the “Free” position. *(See Fig. 2)*
3. The bed is ready for movement.

**Deactivate 5th Wheel:**
1. Step down on the foot end of the 5th wheel activation pedal (A). *(See Fig. 1)*
2. Make sure the 5th wheel (B) is raised from the floor.

---

**Fig. 1 - 5th wheel activation pedal**

**Fig. 2 - Free Position**
WARNING

The clinically qualified person responsible should consider the age, size and condition of the patient before allowing the use of side rails.

Side rails are not intended to restrain patients who make a deliberate attempt to exit the bed.

Ensure that the mattress is suitable for use with side rails - see Mattresses and side rails on page 15.

To prevent possible entrapment, make sure the patient’s head and limbs are clear of the side rails when adjusting the mattress platform.

Side rail contact points are identified by this symbol. Keep hands and fingers away from these areas.
To lower the side rail:
Hold either side rail handle (1). Pull the blue release lever (2) and lower the side rail (3), holding the side rail until it is completely lowered. The side rail folds down below the mattress platform.

![Side rail operation diagram]

**NOTE**
The head end and foot end side rails operate in the same way.

**WARNING**
Make sure the locking mechanism is securely engaged when the side rails are raised.

To raise the side rail:
Hold either side rail handle (1). Pull the side rail up and away from the bed until it locks in the raised position.
CPR backrest release

Manual CPR release handles are located below the calf section on either side of the bed.

If the patient suffers a cardiac arrest, pull the CPR release handle (1). This will lower the backrest (2) to enable cardiopulmonary resuscitation to be carried out.

WARNING
The backrest can fall quickly; keep hands clear to avoid trapping.

Caution
The manual CPR release should only be used in an emergency; repeated everyday use can cause premature wear.
**X-ray cassette tray (Optional)**

The X-ray cassette tray allows thoracic X-ray photography with the backrest at any angle and without the patient moving from the bed.

---

**WARNING**

Position the mattress platform at an ergonomic height to allow easy loading and removal of X-ray cassettes.

Return the X-ray cassette tray to its closed position below the backrest before raising or lowering the backrest.

Do not sit or place heavy objects on the X-ray cassette tray.

Ensure the X-ray cassette tray is held securely in place by the catch at all times.

---

**Operation**

Apply the brakes. Remove the head board from the bed.

Pull the knob (1) to release the catch and slide the tray out (2) as far as will go.

---

*X-ray cassette tray operation*
Release the knob to hold the tray in the fully open position (3). Position the X-ray cassette (4) on the tray with its bottom edge against the lip at the foot end of the tray.

Positioning the X-ray cassette

Pull the knob and slide the tray underneath the backrest. The red moulding on the top of the X-Ray sitting tool indicates the top right hand corner of the X-Ray cassette. Use this feature to assist in accurate positioning.

X-Ray Sitting Tool

Release the knob to hold the tray in one of the latching positions. After use, pull the tray out to the fully open position and remove the X-ray cassette. Return the tray to the closed position below the backrest and replace the head board.
Bed length adjustment

The length of the bed is adjustable to three set positions. These are typically used as follows:

1. Short, for manoeuvring the bed in confined spaces
2. Standard length, for normal use
3. Extended, to accommodate very tall patients

**WARNING**

Install a suitable foam mattress extension (squab) at the head end when the bed is extended.

Always adjust the bed frame and mattress platform to the same length and make sure both are latched securely in position.

Level the mattress platform before adjusting the bed length.

Take care not to pinch your fingers when lifting the catch bar.

To extend the bed frame:

Pull the blue extension locking handle (1). Pull out the bed frame (2) to the required position and release the handle.
To extend the mattress platform:
Lift the blue extension catch bar (1). Hold the middle of the end crossbar (2) and pull out the mattress platform to the required position. Release the catch bar.

Extending the mattress platform

WARNING
After extending the mattress platform make sure the calf extension sheet is clipped over the end of the mattress platform frame.

To shorten the bed:
Reverse the above procedure.
Bedstripper (linen shelf) (Optional)

The bedstripper is used for supporting clean linen when the bed sheets are being changed.

Pull out the bedstripper from its closed position below the foot board.

After use, push the bedstripper back to its closed position.

Caution

The safe working load of the bedstripper is 20kg.
Level the mattress platform before using the bedstripper.
Lifting pole and accessory sockets

Lifting pole sockets (1) are located at the head end of the mattress platform.

Sockets to support compatible accessories are located at the head end (2) and foot end (3) of the bed.
Drainage bag rails

Rails (1) to support drainage bags, etc. are located below the thigh and backrest sections on either side of the bed.

(Optional) The bed may also be fitted with DIN accessory rails (2).

Caution

The maximum weight that can be safely supported by each drainage bag rail and DIN rail is 5kg.
Head and foot boards

The head and foot boards can be easily lifted off the bed for access to the patient.

(Optional) The head and foot boards can each be fitted with locking catches (1) to prevent accidental removal. **To unlock a board:** pull out the catches (2) and rotate them a quarter-turn (3); the board can now be lifted off the bed.

Locking foot board (foot end shown in this example)

After replacing a board on the bed, rotate the catches until they spring back into the locked position.
Adjusting the mattress platform

**WARNING**

The controls require only a single press to activate. To prevent unwanted movement of the mattress platform, avoid leaning against the side rails and keep equipment on and around the bed clear of the controls.

Controls for use by the patient and caregiver are built into the head end side rails. These operate the bed’s basic functions. For patients who find it difficult to use the side rail controls, a separate handset is available as an optional extra.

An Attendant Control Panel (ACP) for use only by the caregiver is built into the foot end side rails. This provides full control of all the bed’s functions.

The functions of the patient and caregiver controls, and the ACP, are described over the next few pages.

To adjust the mattress platform: press and hold the appropriate button until the required position is achieved. Movement will continue until the button is released or the limit of travel is reached.

**NOTE**

If a warning tone (beep) sounds when pressing a button, this indicates that the bed is operating on the backup battery - refer to the section **Backup battery** on page 38.

**NOTE**

If a button is held down for more than 90 seconds, the function will be automatically inhibited until the button is released. The function must then be unlocked as described in the section **Function lockout** on page 36.
**Patient controls**  
The patient controls are located on the inside panel of both head end side rails.

**Caregiver controls**  
The caregiver controls are located on the outside panel of both head end side rails.

---

⚠️ **WARNING**  
The patient should be shown how to use these controls by the caregiver.
**Thigh section**  
These buttons raise and lower the thigh section.  
When the thigh section is first raised from the flat position, the calf section will be in the Fowler position (angled downwards).  
To change the calf section to the vascular (horizontal) position, refer to the section **Adjusting the calf position** on page 37.

**Backrest angle**  
These buttons raise and lower the backrest.

**Bio-Contour**  
The *Bio-Contour up* button simultaneously raises the backrest and thigh sections to provide upright patient profiling; the raised thigh section prevents the patient sliding down the bed.  
The *Bio-Contour down* button returns the mattress platform to a flat position.

**Mattress platform height**  
These buttons raise and lower the mattress platform.  
When the mattress platform is lowered to 38cm* above the floor, it will pause then continue to lower until it reaches its minimum height.  
(* 40cm on beds with 150mm castors.)

---

**WARNING**

At minimum height, clearance underneath the bed is reduced. Keep your feet away from the areas below the side rails and take extra care when using patient hoists or similar equipment.
**Patient handset**  
(Optional)

The controls on this handset operate in the same way as those on the side rails (see page 32).

---

**WARNING**

Store the handset on the side rail using the clip on the back; this will help to prevent accidental operation of the controls.

The patient should be shown how to use the handset by the caregiver.  
Take care not to squeeze or trap the handset cable between moving parts of the bed.

---

**NOTE**

On some models the patient handset does not have mattress platform height, backrest or thigh section controls.
Attendant Control Panel (ACP)

Attendant Control Panels are located on the outside panels of both foot end side rails. The ACP on the left side and right side of the bed have different button layouts. Additionally, an ACP can be mounted at the foot-end of the bed, either clipped onto the foot board or using an ACP holder (ENT-ACC11) in an accessory socket. The foot-end mounted ACP has the same button layout as the right side rail mounted ACP.

**Attendant Control Panel (patient’s right hand side)**

- **Power on indicator** - lights when the bed is connected to the electricity supply.
- **Battery indicator** - refer to the section **Backup battery** on page 38.

**Mattress platform height**

These buttons raise and lower the mattress platform.

When the mattress platform is lowered to 38cm* above the floor, it will pause then continue to lower until it reaches its minimum height.

(* 40cm on beds with 150mm castors.)

**WARNING**

At minimum height, clearance underneath the bed is reduced. Keep your feet away from the areas below the side rails and take extra care when using patient hoists or similar equipment.

**Back**

These buttons raise and lower the backrest.

The backrest will pause when it reaches an angle approximately 30° above the horizontal.
**Thigh section**

These buttons raise and lower the thigh section.

When the thigh section is first raised from the flat position, the calf section will be in the Fowler position (angled downwards).

To change the calf section to the vascular (horizontal) position, refer to the section **Adjusting the calf position** on page 37.

---

**Auto-Chair**

The *Auto-Chair up* button simultaneously raises the backrest and thigh sections, pausing when the backrest reaches 45º.

Continue to hold the up button to lower the foot end of the mattress platform into a chair position.

If the backrest angle is greater than 45º, it will return to 45º to prevent the patient from tipping forwards.

The *Auto-Chair down* button returns the mattress platform to a flat and level position.

---

**Tilt angle**

This button lowers the head end of the mattress platform (Trendelenburg position).

This button lowers the foot end of the mattress platform (reverse Trendelenburg position).

---

**CPR position**

If the patient suffers a cardiac arrest, press and hold the CPR button. This will flatten the mattress platform (and lower it if necessary) to enable cardio-pulmonary resuscitation to be carried out.

The CPR button overrides the function lockout settings.
Function lockout can be used to prevent operation of the controls, e.g. when inadvertent movement of the mattress platform could injure the patient.

To lock (prevent) or unlock (allow) functions:

Press the Function Lock button. The indicator above the button will light.

Press the ACP button(s) corresponding to the function(s) to be locked or unlocked. The “lock” indicator LED above each function button shows its current status:

- LED on = function locked
- LED off = function unlocked.

When all functions are locked or unlocked as required, press the Function Lock button again or wait for five seconds. The indicator above the Function Lock button will go out and the lockout settings are stored.

NOTE
When a function is locked, any associated functions are automatically disabled, e.g. locking the backrest also disables Bio-Contour and Auto-Chair.

NOTE
Function lockout settings are retained if the bed is disconnected from the electricity supply.
Adjusting the calf position

When the thigh section is raised, the calf section can be manually changed to the vascular (horizontal) position.

Hold the side of the calf section frame. Lift the calf section upwards (1) until it latches (2).

Changing from Fowler position (left) to vascular

To return the calf section to the Fowler position:

Use the caregiver controls or ACP to lower the thigh section to the flat position; then raise the thigh section again.

⚠️ WARNING
Take care when lifting the calf section. Observe local manual handling guidelines.
Backup battery

Caution

To ensure the battery is kept fully charged and prevent damage to the battery, the bed should be connected to the electricity supply at all times during normal use.

The battery is intended for short term use only. Its life will be reduced if it is used to power the bed for long periods.

The backup battery allows operation of the bed for short periods when it is disconnected from the electricity supply or in emergency situations when the electricity supply is not available.

The battery’s charge level is indicated as follows:

 Simpsons  

If an intermittent warning tone (beep-beep-beep) sounds when operating the bed, the battery is between 75% and 100% charged.

In this condition all bed functions remain operational.

Music  

If a continuous warning tone sounds when operating the bed, the battery is between 10% and 75% charged.

In this condition, all bed functions remain operational.

If the ACP battery indicator lights red, the battery is less than 10% charged.

In this condition, all functions are locked.
**Recharging the backup battery**

To recharge the battery, connect the bed to the electricity supply. Allow at least eight hours to recharge the battery when it is completely discharged.

While the battery is recharging, the ACP battery indicator lights yellow. The indicator will go out when the battery is fully charged.

---

**WARNING**

If the battery is left discharged for long periods, its operational life will be reduced.

The battery must only be recharged using the built-in charger. Do not use a separate charger or power supply.

The backup battery must be ventilated while recharging. Do not cover the battery vent hole or obstruct the area around it.

---

**Low power mode**

When the bed is disconnected from mains power, it enters a low power mode to conserve battery power. In this state, the underbed lights and the indicators on the control panels are turned off.

Pressing any of the control buttons brings the bed out of low power mode. The bed will return to low power mode two minutes after the last control button was pressed.

---

**Duty cycle lockout**

Continuous operation of the controls may exceed the duty cycle of the bed’s electrical system, causing the indicators above the buttons to flash. After 30 seconds, the indicators will light and all functions are locked.

If this happens, wait for at least 18 minutes then follow the unlocking procedure described in the section “Function lockout” on page 36.
5. Product Care

**WARNING**
Disconnect the bed from the electricity supply before starting any cleaning or maintenance activity. The bed will still operate on battery power if the function has not been locked on the ACP.

**Mattress platform sections**

The four mattress platform sections (backrest, seat, thigh and calf) can be removed by pulling them upwards off the mattress platform frame.

Lift off the calf extension sheet (1) before removing the calf section (2).

To replace each section, make sure it is correctly positioned on the mattress platform frame then press down firmly until it snaps into place.

Replace the calf extension sheet (1) by clipping it over the end of the mattress platform frame.
The bed should be cleaned and disinfected weekly, and before a new patient uses the bed.

**Cleaning**

Remove the mattress and all accessories from the bed. The head/foot boards and mattress platform sheets should be removed from the bed for cleaning.

Wearing suitable protective clothing, clean all surfaces with a disposable cloth moistened in hand hot water and a neutral detergent.

Start by cleaning the upper sections of the bed and work along all horizontal surfaces. Work methodically towards the lower sections of the bed and clean the wheels last. Take extra care to clean areas that may trap dust or dirt.

Wipe over with a new disposable cloth moistened with clean water, and dry with disposable paper towels.

Allow the cleaned parts to dry before replacing the mattress.

**Disinfecting**

After cleaning the bed as described above, wipe all surfaces with sodium dichloroisocyanurate (NaDCC) at a concentration of 1,000 parts per million (0.1%) of available chlorine.

In the case of pooling body fluids, e.g. blood, the concentration of NaDCC should be increased to 10,000 parts per million (1%) of available chlorine.

**Use of other disinfectants**

Arjo recommends sodium dichloroisocyanurate (NaDCC) as a disinfectant because it is effective, stable and has a fairly neutral pH. Many other disinfectants are used in healthcare facilities, and it is not possible for Arjo to test each one to determine whether it may affect the appearance or performance of the bed.

If facility protocols require the use of a disinfectant other than NaDCC (e.g. diluted bleach or hydrogen peroxide), it should be...
used with care and in accordance with the manufacturer’s instructions.

Caution
Do not use abrasive compounds or pads, or phenol-based disinfectants.
Do not use jet stream cleaning or wash tunnels.
Do not remove grease from the actuator pistons.
Preventive maintenance

This product is subject to wear and tear during use. To ensure that it continues to perform within its original specification, preventive maintenance procedures should be carried out at the intervals shown.

**WARNING**

This list indicates the minimum recommended level of preventive maintenance. More frequent inspections should be carried out when the product is subjected to heavy use or aggressive environments, or where required by local regulations.

Failure to carry out these checks, or continuing to use the product if a fault is found, may compromise the safety of both the patient and caregiver. Preventive maintenance can help to prevent accidents.

**NOTE**

Product cannot be maintained and serviced while in use with the patient.

<table>
<thead>
<tr>
<th>Actions to be done by caregiver</th>
<th>Daily</th>
<th>Weekly</th>
</tr>
</thead>
<tbody>
<tr>
<td>Check operation of side rails</td>
<td>✔</td>
<td></td>
</tr>
<tr>
<td>Visually check castors</td>
<td>✔</td>
<td></td>
</tr>
<tr>
<td>Check operation of the manual CPR release handles on both sides of the bed</td>
<td>✔</td>
<td></td>
</tr>
<tr>
<td>Visually check power supply cord and mains plug</td>
<td>✔</td>
<td></td>
</tr>
<tr>
<td>Carry out a full test of all electrical bed positioning functions (backrest, height, tilt, etc.)</td>
<td>✔</td>
<td></td>
</tr>
<tr>
<td>Check that the patient controls, caregiver controls and Attendant Control Panels operate correctly</td>
<td>✔</td>
<td></td>
</tr>
<tr>
<td>Check the mattress for damage and fluid ingress</td>
<td>✔</td>
<td></td>
</tr>
<tr>
<td>Examine the lifting pole, strap and handle (Optional)</td>
<td>✔</td>
<td></td>
</tr>
</tbody>
</table>

If the result of any of these tests is unsatisfactory, contact Arjo or an approved service agent.
**WARNING**

The procedures below must be carried out by suitably trained and qualified personnel. Failure to do so may result in injury or an unsafe product.

<table>
<thead>
<tr>
<th>Actions to be done by qualified personnel</th>
<th>Yearly</th>
</tr>
</thead>
<tbody>
<tr>
<td>Check that the bedstripper (linen shelf) (Optional) remains in its closed position when maximum foot down tilt is applied</td>
<td>✔️</td>
</tr>
<tr>
<td>Check that the bed operates correctly using the backup battery as described in the section <strong>Battery test</strong> on page 45.</td>
<td>✔️</td>
</tr>
<tr>
<td>Check operation of the castors, paying special attention to braking and steering functions</td>
<td>✔️</td>
</tr>
<tr>
<td>Check that the calf section moves to the Fowler position when the thigh section is raised</td>
<td>✔️</td>
</tr>
<tr>
<td>Check that the calf section latches securely in the horizontal (vascular) position when manually raised.</td>
<td>✔️</td>
</tr>
<tr>
<td>Check that the bed extension locks securely in all three positions</td>
<td>✔️</td>
</tr>
<tr>
<td>Examine the power supply cord and mains plug; if damaged, replace the complete assembly; do not use a rewireable plug</td>
<td>✔️</td>
</tr>
<tr>
<td>Examine all accessible flexible cables for damage and deterioration</td>
<td>✔️</td>
</tr>
<tr>
<td>Check all accessible nuts, bolts and other fasteners are present and correctly tightened</td>
<td>✔️</td>
</tr>
<tr>
<td>Check any accessories fitted to the bed, paying particular attention to fasteners and moving parts</td>
<td>✔️</td>
</tr>
</tbody>
</table>
**Battery test**

Check the condition of the backup battery by carrying out the following test.

1. Disconnect the bed from the electricity supply.

2. Raise the mattress platform to maximum height - ignore the battery warning tone.

3. Raise the backrest and thigh sections as far as they will go.

4. Press and hold the CPR button. The mattress platform will flatten and lower to a mid-height position.

5. Lower the mattress platform to minimum height.

6. Apply maximum head down tilt (Trendelenburg).

7. Return the mattress platform to the level position; then apply maximum foot down tilt (reverse Trendelenburg).

If this test is not completed successfully, connect the bed to the electricity supply for at least eight hours to recharge the battery then perform the test again. If the bed fails a second time, contact Arjo or an approved service agent.

To maintain best performance, the backup battery should be replaced every four years by an approved service agent.
## Troubleshooting

If the equipment fails to operate correctly, the table below suggests some simple checks and corrective actions. If these steps fail to resolve the problem, contact Arjo or an approved service agent.

<table>
<thead>
<tr>
<th>Symptom</th>
<th>Possible Cause</th>
<th>Action</th>
</tr>
</thead>
</table>
| “Beeping” sound when using the bed           | Bed is operating from the backup battery                 | Check the power supply cord is plugged in and the electricity supply is OK  
                                                |                                                                          | Check fuse in mains plug (where fitted)                             |
| One or more bed functions inoperative       | Function(s) locked on ACP                                | Unlock function(s) on ACP                                              |
| Bed is difficult to manoeuvre               | Brake pedals in “steer” position                         | Place brake pedals in the “free” position                             |
| All indicators on ACP lit or flashing       | Duty cycle of electrical system exceeded                 | Refer to the section **Duty cycle lockout** on page 39                 |
| Mattress platform cannot be lowered         | Height control software error                            | Raise the mattress platform to maximum height to reset software        |
| All functions remain locked after connecting mains power after a near flat battery (ACP battery indicator was red before mains power was connected) | Function(s) locked on all controls due to a low power state | To unlock all functions connect mains power and then press the Function Lock button twice in quick succession then select the function(s) to unlock |
| Bed movement function buttons do not respond | Control software error                                   | Disconnect and then reconnect the mains power to clear bed software errors |
Fault indications

The bed’s control software indicates problems in the electrical system by means of flashing indicators on the Attendant Control Panel (ACP). If you experience any of the indications below, contact Arjo or an approved service agent.

<table>
<thead>
<tr>
<th>Indication</th>
<th>Possible cause</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1" alt="Indication" /> ACP mattress platform height and head down tilt indicators flashing</td>
<td>Height actuator fault (foot end)</td>
</tr>
<tr>
<td><img src="image2" alt="Indication" /> ACP mattress platform height and foot down tilt indicators flashing</td>
<td>Height actuator fault (head end)</td>
</tr>
<tr>
<td><img src="image3" alt="Indication" /> ACP backrest indicator flashing</td>
<td>Backrest actuator fault</td>
</tr>
<tr>
<td><img src="image4" alt="Indication" /> ACP thigh section indicator flashing</td>
<td>Thigh section actuator fault</td>
</tr>
<tr>
<td><img src="image5" alt="Indication" /> Mattress platform height, head down tilt, backrest and thigh section indicators flashing</td>
<td>Control unit fault</td>
</tr>
</tbody>
</table>

Product lifetime

The lifetime of this equipment is typically ten (10) years. “Lifetime” is defined as the period during which the product will maintain the specified performance and safety, provided it has been maintained and operated in conditions of normal use in accordance with the requirements in these instructions.
6. Accessories and Cables

Recommended accessories for the bed are shown in the table below. Note that some items may not be available in all countries.

<table>
<thead>
<tr>
<th>Accessory</th>
<th>Product code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lifting pole with strap and handle</td>
<td>ENT-ACC01</td>
</tr>
<tr>
<td>IV pole</td>
<td>ENT-ACC02</td>
</tr>
<tr>
<td>IV pole steel hooks</td>
<td>ENT-ACC02 SH</td>
</tr>
<tr>
<td>Three-position lifting pole with strap and handle</td>
<td>ENT-ACC03</td>
</tr>
<tr>
<td>Angled IV pole</td>
<td>ENT-ACC04</td>
</tr>
<tr>
<td>Fracture frame</td>
<td>ENT-ACC05</td>
</tr>
<tr>
<td>Syringe pump holder</td>
<td>ENT-ACC07</td>
</tr>
<tr>
<td>Oxygen bottle holder (for CD, D, E &amp; PD cylinder)</td>
<td>ENT-ACC08</td>
</tr>
<tr>
<td>Small traction assembly</td>
<td>ENT-ACC10</td>
</tr>
<tr>
<td>ACP holder</td>
<td>ENT-ACC11</td>
</tr>
<tr>
<td>Additional hooks for IV pole</td>
<td>ENT-ACC14</td>
</tr>
<tr>
<td>Power supply cord storage hook (supplied with bed)</td>
<td>ENT-ACC15</td>
</tr>
<tr>
<td>Oxygen bottle holder (for B5 cylinder)</td>
<td>ENT-ACC18</td>
</tr>
<tr>
<td>Urine bottle holder</td>
<td>ENT-ACC19</td>
</tr>
<tr>
<td>Heavy duty IV pole</td>
<td>ENT-ACC24</td>
</tr>
<tr>
<td>Transducer mounting pole</td>
<td>ENT-ACC26</td>
</tr>
<tr>
<td>Head end traction assembly</td>
<td>ENT-ACC32</td>
</tr>
<tr>
<td>ITU head end panel (head board)</td>
<td>ENT-ACC34</td>
</tr>
<tr>
<td>Oxylolg® equipment bracket</td>
<td>ENT-ACC40</td>
</tr>
<tr>
<td>Bed pan holder</td>
<td>ENT-ACC56</td>
</tr>
<tr>
<td>Oxygen bottle holder</td>
<td>ENT-ACC58</td>
</tr>
<tr>
<td>Monitor shelf</td>
<td>ENT-ACC64</td>
</tr>
<tr>
<td>Lifting pole mounted IV fluid bag holder</td>
<td>ENT-ACC65</td>
</tr>
<tr>
<td>Foot end infill panels</td>
<td>ENT-ACC66</td>
</tr>
<tr>
<td>Urine bottle holder</td>
<td>ENT-ACC69</td>
</tr>
<tr>
<td>IV pole</td>
<td>ENT-ACC71</td>
</tr>
<tr>
<td>Monitor shelf</td>
<td>ENT-ACC74</td>
</tr>
<tr>
<td>Integrated IV Pole</td>
<td>ENT-ACC89</td>
</tr>
</tbody>
</table>

Oxylog is a registered trademark of Dräger Medical.

<table>
<thead>
<tr>
<th>No.</th>
<th>Name</th>
<th>Cable Length (m)</th>
<th>Whether shielding or not</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Cable</td>
<td>2.895</td>
<td>No</td>
<td>/</td>
</tr>
</tbody>
</table>
# 7. Technical Data

## General

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Safe working load</td>
<td>250kg</td>
</tr>
<tr>
<td>Maximum patient weight</td>
<td>185kg</td>
</tr>
<tr>
<td>Product weight (approx.)</td>
<td>150kg</td>
</tr>
<tr>
<td>Audible noise</td>
<td>50dB approx.</td>
</tr>
</tbody>
</table>

## Operating conditions

<table>
<thead>
<tr>
<th>Condition</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temperature</td>
<td>10°C to 40°C</td>
</tr>
<tr>
<td>Relative humidity</td>
<td>20% to 90% at 30°C, non-condensing</td>
</tr>
<tr>
<td>Atmospheric pressure</td>
<td>700hPa to 1060hPa</td>
</tr>
</tbody>
</table>

## Electrical data

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power input</td>
<td>1.6A max. at 230V a.c. 50/60Hz</td>
</tr>
<tr>
<td></td>
<td>1.6A max. at 230V a.c. 60Hz (KSA)</td>
</tr>
<tr>
<td></td>
<td>2A max. at 120V a.c. 50/60Hz</td>
</tr>
<tr>
<td>Duty cycle</td>
<td>10% (2 min. on, 18 min. off)</td>
</tr>
<tr>
<td>Safety standards USA/Canada</td>
<td>EN/IEC 60601-1:2005 AMD1:2012</td>
</tr>
<tr>
<td></td>
<td>CAN/CSA-C22.2 No. 60601-1:14</td>
</tr>
<tr>
<td></td>
<td>IEC60601-2-52:2015</td>
</tr>
<tr>
<td>Electric shock protection</td>
<td>Class I Type B</td>
</tr>
<tr>
<td>EMC</td>
<td>Complies with IEC 60601-1-2:2014</td>
</tr>
<tr>
<td>Potential equalisation terminal</td>
<td>Complies with EN 60601-1:2005 AMD1:2012</td>
</tr>
<tr>
<td>Liquid ingress protection</td>
<td>IPX4</td>
</tr>
<tr>
<td>Backup battery</td>
<td>2 x 12V series connected, sealed, rechargeable lead/acid gel, 1.3Ah</td>
</tr>
</tbody>
</table>
### Dimensions (subject to normal manufacturing tolerances)

<table>
<thead>
<tr>
<th></th>
<th>Head end board on mattress platform</th>
<th>Head end board base</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Overall length</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Position 1 (Short)</td>
<td>219cm</td>
<td>224cm</td>
</tr>
<tr>
<td>Position 2 (Standard)</td>
<td>230cm</td>
<td>235cm</td>
</tr>
<tr>
<td>Position 3 (Extended)</td>
<td>242cm</td>
<td>247cm</td>
</tr>
<tr>
<td><strong>In-bed length</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Position 1 (Short)</td>
<td>192cm</td>
<td></td>
</tr>
<tr>
<td>Position 2 (Standard)</td>
<td>203cm</td>
<td></td>
</tr>
<tr>
<td>Position 3 (Extended)</td>
<td>215cm</td>
<td></td>
</tr>
<tr>
<td><strong>Overall width</strong></td>
<td></td>
<td>103cm</td>
</tr>
<tr>
<td><strong>Height of mattress platform (centre of seat section to floor)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>With 125mm castors</td>
<td>32cm to 76cm</td>
<td></td>
</tr>
<tr>
<td>With 150mm castors</td>
<td>34cm to 78cm</td>
<td></td>
</tr>
<tr>
<td><strong>Head down tilt angle</strong></td>
<td></td>
<td>12° min.</td>
</tr>
<tr>
<td><strong>Foot down tilt angle</strong></td>
<td></td>
<td>12° min.</td>
</tr>
<tr>
<td><strong>Mattress size (refer to the section Mattresses on page 14)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Position 2 (Standard)</td>
<td>202cm x 88cm, 12.5 to 18cm thick</td>
<td></td>
</tr>
</tbody>
</table>

**Mattress platform angles**

- $a = 62°$ max.
- $b = 20°$ max.
- $c = 16°$ max.
- $d = 96°$ min.

**End of life disposal**

- Equipment that has electrical and electronic components should be disassembled and recycled per Waste of Electrical and Electronic Equipment (WEEE) or in accordance with local or national regulation.
- All batteries in the product must be recycled separately. Batteries are to be disposed in accordance with national or local regulations.
- Components that are primarily made up of different kinds of metal (containing more than 90% metal by weight) for example bed frame, should be recycled as metals.
## Transport and storage

Handle with care. Do not drop. Avoid shock or violent impact.

This equipment should be stored in a clean, dry and well-ventilated area which meets the following conditions:

<table>
<thead>
<tr>
<th>Condition</th>
<th>Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temperature</td>
<td>-10°C to 50°C</td>
</tr>
<tr>
<td>Relative humidity</td>
<td>20% to 90% at 30°C, non-condensing</td>
</tr>
<tr>
<td>Atmospheric pressure</td>
<td>700hPa to 1060hPa</td>
</tr>
</tbody>
</table>

⚠️ **Caution**

If the bed is stored for a long time, it should be connected to the electricity supply for 24 hours every three months to recharge the backup battery, otherwise it may become unserviceable.

## Symbols

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="250 kg/550 lb" /></td>
<td>Safe working load</td>
</tr>
<tr>
<td><img src="image" alt="185 kg/407 lb" /></td>
<td>Maximum patient weight</td>
</tr>
<tr>
<td><img src="image" alt="Alternating current (a.c.)" /></td>
<td>Alternating current (a.c.)</td>
</tr>
<tr>
<td><img src="image" alt="Caution" /></td>
<td>Caution</td>
</tr>
<tr>
<td><img src="image" alt="Refer to instructions for use" /></td>
<td>Refer to instructions for use</td>
</tr>
<tr>
<td><img src="image" alt="Type B applied part" /></td>
<td>Type B applied part</td>
</tr>
<tr>
<td><img src="image" alt="Applied parts are considered to be: Upper frame section, Bed controls, Safety Sides, Head and Foot Boards" /></td>
<td>Applied parts are considered to be: Upper frame section, Bed controls, Safety Sides, Head and Foot Boards</td>
</tr>
<tr>
<td><img src="image" alt="Manufacturer / date of manufacture" /></td>
<td>Manufacturer / date of manufacture</td>
</tr>
<tr>
<td><img src="image" alt="CE marking indicating conformity with European Community harmonised legislation" /></td>
<td>CE marking indicating conformity with European Community harmonised legislation</td>
</tr>
<tr>
<td><img src="image" alt="Indicates the product is a Medical Device according to EU Medical Device Regulation 2017/745" /></td>
<td>Indicates the product is a Medical Device according to EU Medical Device Regulation 2017/745</td>
</tr>
<tr>
<td>Symbols (continued)</td>
<td>Description</td>
</tr>
<tr>
<td>---------------------</td>
<td>-------------</td>
</tr>
<tr>
<td></td>
<td>Mandatory to read instructions for use</td>
</tr>
<tr>
<td></td>
<td>Serial number</td>
</tr>
<tr>
<td></td>
<td>Model number</td>
</tr>
<tr>
<td></td>
<td>Waste Electrical and Electronic Equipment (WEEE) - do not dispose of this product in general household or commercial waste</td>
</tr>
<tr>
<td></td>
<td>Potential equalisation terminal</td>
</tr>
<tr>
<td></td>
<td>Protective earth (ground)</td>
</tr>
<tr>
<td></td>
<td>Recommended mattress size</td>
</tr>
<tr>
<td></td>
<td>Recommended patient size</td>
</tr>
<tr>
<td></td>
<td>Total weight of the equipment including its safe working load.</td>
</tr>
<tr>
<td></td>
<td>Calf section vascular position</td>
</tr>
<tr>
<td></td>
<td>Mattress platform extension</td>
</tr>
</tbody>
</table>
8. Warranty and Service

Arjo standard terms and conditions apply to all sales; a copy is available on request. These contain full details of warranty terms and do not limit the statutory rights of the consumer.

For service, maintenance and any questions regarding this product, please contact your local Arjo office or approved distributor. A list of Arjo offices can be found at the back of this manual.

Have the model number and serial number of the equipment to hand when contacting Arjo regarding service, spare parts or accessories.
9. Electromagnetic Compatibility

Product has been tested for compliance with current regulatory standards regarding its capacity to block EMI (electromagnetic interference) from external sources.

Some procedures can help reduce electromagnetic interferences:

• Use only Arjo cables and spare parts to avoid increased emissions or decreased immunity which can compromise the correct functioning of the equipment.
• Ensure that other devices in patient-monitoring and/or life-support areas comply to accepted emissions standards.

<table>
<thead>
<tr>
<th>Warning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wireless communications equipment such as wireless computer network devices, mobile phones, cordless telephones and their base stations, walkie-talkies, etc. can affect this equipment and should be kept at least 1.5m away from the equipment.</td>
</tr>
</tbody>
</table>


Exceptions: HF Surgical Equipment and the RF Shielded room of an ME SYSTEM for magnetic resonance imaging.

<table>
<thead>
<tr>
<th>Warning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use of this equipment adjacent to or stacked with other equipment should be avoided because it could result in improper operation. If such use is necessary, this equipment and the other equipment should be observed to verify that they are operating normally.</td>
</tr>
</tbody>
</table>
### Guidance and manufacturer’s declaration – electromagnetic emission

<table>
<thead>
<tr>
<th>Emission test</th>
<th>Compliance</th>
<th>Guidance</th>
</tr>
</thead>
<tbody>
<tr>
<td>RF emissions CISPR 11</td>
<td>Group 1</td>
<td>This equipment uses RF energy only for its internal functions. Therefore its RF emissions are very low and are not likely to cause any interference in nearby electronic equipment.</td>
</tr>
<tr>
<td>RF emissions CISPR 11</td>
<td>Class A</td>
<td>This equipment is suitable for use in all establishments other than domestic and those directly connected to the public low-voltage power supply network that supplies buildings used for domestic purposes.</td>
</tr>
<tr>
<td>Harmonic emissions IEC 61000-3-2</td>
<td>Class A</td>
<td></td>
</tr>
<tr>
<td>Voltage fluctuations/ flicker emissions IEC</td>
<td>Complies</td>
<td></td>
</tr>
<tr>
<td>61000-3-3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Guidance and manufacturer’s declaration – electromagnetic immunity

<table>
<thead>
<tr>
<th>Immunity test</th>
<th>IEC 60601-1-2 test level</th>
<th>Compliance level</th>
<th>Electromagnetic environment-guidance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electrostatic discharge (ESD)</td>
<td>±2kV, ±4kV, ±8kV, ±15kV air</td>
<td>±2kV, ±4kV, ±8kV, ±15kV air</td>
<td>Floors should be wood, concrete or ceramic tile. If floors are covered with synthetic material the relative humidity level should be at least 30%.</td>
</tr>
<tr>
<td>EN 61000-4-2</td>
<td>±8kV contact</td>
<td>±8kV contact</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>


<p>| Conducted disturbances inducted by RF fields | 3V in 0.15 MHz to 80 MHz 6V in ISM and amateur radio bands between 0.15 MHz and 80 MHz 80% AM at 1 kHz | 3V in 0.15 MHz to 80 MHz 6V in ISM and amateur radio bands between 0.15 MHz and 80 MHz 80% AM at 1 kHz | Portable and mobile RF communications equipment should be used no closer to any part of the product, including cables, than 1.0m, if the transmitter’s output power rating exceeds 1W. Field strengths from fixed RF transmitters, as determined by an electromagnetic site survey, should be less than the compliance level in each frequency range. Interference may occur in the vicinity of equipment marked with this symbol: |
| Radiated RF electromagnetic field | Professional Healthcare environment 3 V/m 80 MHz to 2.7 GHz 80% AM at 1 kHz | Professional Healthcare environment 3 V/m 80 MHz to 2.7 GHz 80% AM at 1 kHz | |
| Proximity fields from RF wireless communications equipment | 385 MHz - 27 V/m 450 MHz - 28 V/m 710, 745, 780 MHz - 9V/m 810, 870, 930 MHz - 28 V/m 1720, 1845, 1970, 2450 MHz - 28 V/m 5240, 5500, 5785 MHz - 9V/m | 385 MHz - 27 V/m 450 MHz - 28 V/m 710, 745, 780 MHz - 9V/m 810, 870, 930 MHz - 28 V/m 1720, 1845, 1970, 2450 MHz - 28 V/m 5240, 5500, 5785 MHz - 9V/m | |
| Electrical fast transient/burst | ±1kV SIP/SOP ports ±2kV AC port 100kHz repetition frequency | ±1kV SIP/SOP ports ±2kV AC port 100kHz repetition frequency | Mains power supply should be that of a typical commercial or hospital environment. |
| Power frequency Magnetic field | 30A/m 50 Hz or 60 Hz | 30A/m 50 Hz | Power frequency magnetic fields should be at levels characteristic of a typical location in a typical commercial or hospital environment. |
| Surge | ±0.5kV ±1kV; ±2 kV, AC Mains, Line to Ground ±0.5kV ±1kV, AC Mains, Line to Line | ±0.5kV ±1kV; ±2 kV, AC Mains, Line to Ground ±0.5kV ±1kV, AC Mains, Line to Line | |</p>
<table>
<thead>
<tr>
<th>Voltage dips, short interruptions and voltage variations on power supply input lines IEC 61000-4-11</th>
<th>0% UT; 0.5 cycle At 0°, 45°, 90°, 135°, 180°, 225°, 270° and 315°</th>
<th>0% UT; 0.5 cycle At 0°, 45°, 90°, 135°, 180°, 225°, 270° and 315°</th>
</tr>
</thead>
<tbody>
<tr>
<td>0% UT; 1 cycle and 70% UT; 25/30 cycles Single phase: at 0°</td>
<td>0% UT; 1 cycle and 70% UT; 25/30 cycles Single phase: at 0°</td>
<td>0% UT; 250/300 cycle</td>
</tr>
<tr>
<td>0% UT; 250/300 cycle</td>
<td>0% UT; 250/300 cycle</td>
<td></td>
</tr>
</tbody>
</table>

NOTE: $U_T$ is the AC mains voltage prior to application of the test level.

\(^a\) Field strengths from fixed transmitters, such as base stations for radio (cellular/cordless) telephones and land mobile radios, amateur radio, AM and FM radio broadcast and TV broadcast cannot be predicted theoretically with accuracy. To assess the electromagnetic environment due to fixed RF transmitters, an electromagnetic site survey should be considered. If the measured field strength in the location in which the product is used exceeds the applicable RF compliance level above, the product should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary.

\(^b\) Over the frequency range 150 kHz to 80 MHz, field strengths should be less than 1 V/m.
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