INSTRUCTIONS FOR USE

Citadel Plus

Bariatric Care System



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with people in mind

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GENERAL WARNINGS

The following warnings should be considered prior to using this product:



Before using the bed, make sure that the Power in rating on the specification label is compatible with the local electricity supply.

To make sure 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 function should only be used under the guidance of a clinically-qualified person after assessment of the patient's condition.

All accessories added to the system reduce the safe working load of the frame by the same amount.

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

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

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

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

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

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 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.

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

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

Prior to engaging any mattress turn feature, make sure that bed frame has side rails and that all side rails are fully engaged in their full upright and locked position. Do not activate the turning feature on any mattress system when patient restraints are in use.

Patient restraints should be used in compliance with all applicable federal and state regulations and in accordance with the healthcare facility's own policies and procedures.

Patient restraints, even when correctly used, can result in entrapment or injury, particularly if the patient is disorientated or restless. The decision to use patient restraints must be made by the clinician overseeing the care of the individual patient, following a fully documented risk assessment.

Patient restraints are not intended as substitutes for good nursing practice. Arjo makes no recommendations regarding the use of such restraints.

To make sure 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 emergency, short term use only. Its life will be reduced if it is used to power the bed for long periods.

Only connect devices designed to be used with the bed.

Connecting devices not designed to be used with the bed may result in damage to the equipment or to the bed.

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

The weighing system should only be used by staff trained in the correct use of the weighing function.

The weighing system should only be used in closely supervised environments, where factors influencing patient weight (such as additions to the bed) can be controlled as described in the following instructions for use.

Scale Readings - Scales / patient weights are for reference only. Scale readings should not be relied upon for medication dosage. All equipment on the weighed portion of the unit is included in weight displayed.

The weighing system MUST be zeroed every time a new patient is to be placed on the bed.

The weighing system MUST be zeroed every time a mattress is changed.

The weighing system cannot be zeroed if a mattress or accessories weighing more than 50 kg (110 lb) are fitted. To make sure the bed can be zeroed correctly, only use Arjo-approved mattresses.

Data retrieved from the RS232 connection not intended to be used to make clinical decisions. All patient diagnosis, treatment and care should be performed under the supervision of an appropriate healthcare professional.

The manual CPR release should only be used in an emergency; repeated everyday use can cause permanent wear.

Disconnect the bed from the mains wall outlet before starting any cleaning or maintenance activity. The bed will still operate on battery power if the function has not been locked on the Attendant Control Panel.

To prevent cross contamination or equipment damage, Arjo recommends that the Citadel Plus Bariatric Care System be cleaned during use and between patients according to the ***Care and Cleaning*** *section in this IFU. Local protocols and regulations / procedures for blood borne pathogens may be used provided the manufacturer's instructions are followed.*

Always disconnect the Citadel Plus Bariatric Care System from mains wall outlet before cleaning. Failure do so could result in equipment damage and / or electric shock.

Do not allow fluids to penetrate the Citadel Plus Bariatric Care System control panels.

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.

Multiple people may be required to manually transport the bed depending on patient weight and floor conditions.

Assembly, operations, extensions, re-adjustments, modifications, technical maintenance or repairs must be performed by qualified personnel authorized by Arjo. Contact Arjo for information regarding maintenance and repair.

The nurse call button on Citadel Plus has not been evaluated for the requirements of Clause 17 (Normal Operation) of UL 1069. The user is responsible to determine the operability of the nurse call button with all systems to which the medical device is connected.

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.

Safety Information

General Protocols – Follow all applicable safety rules and institution protocols concerning patient and caregiver safety.

Brakes – Set all caster brakes before transferring patient.

Bed Height – To minimize risk of falls or injury, the bed should always be in the lowest practical position when the patient is unattended.

Fluids – Avoid spilling fluids on unit controls. If spills do occur, unplug unit, clean fluid from unit, wearing rubber gloves to avoid any possibility of shock. Once fluid is removed, check operation of components in area of spill.



Fluids remaining on controls can cause corrosion, which may cause components to fail or to operate erratically, possibly producing hazards for patient and staff.

Oxygen Use - Make sure that the unit is not contained in an oxygen enriched environment. Possible fire hazard when bed is used with oxygen administering equipment other than the nasal prongs, mask or half bed length tent type. Oxygen tent should not extend below mattress support level.

Lock-Outs – Lock-outs for bed functions should be used at staff's discretion to prevent unintentional operation of bed.

Power Cord – Make sure power cord is kept free from all pinch points, moving parts and is not trapped under casters. Improper handling of power cord can cause damage to the cord, which may produce risk of fire or electric shock. Pull the power cord out of the mains wall outlet to remove power from the unit.

Avoid Fire Hazards – To minimize the risk of fire, connect the unit's power cord directly into a wall-mounted outlet. Do not use extension cords or multiple outlet strips. In the US, review and follow FDA's Safety Tips for Preventing Hospital Bed Fires. Outside the US, consult the local Competent Authority or Government Agency for Medical Device Safety for specific local guidance.

Disposal – At the end of useful life, dispose of waste according to local requirements or contact the manufacturer for advice. There may be special requirements for disposal of batteries, leaded foam and / or angle sensors (if present in this product). Improper disposal of any component may result in regulatory non-compliance.

Moving Parts - Keep all equipment, tubes and lines, loose clothing, hair and parts of the body away from moving parts and pinch points.

Patient Entrance / Exit – Caregiver should always aid patient in exiting the bed. Make sure a capable patient knows how to get out of bed safely (and, if necessary, how to release the side rails) in case of fire or other emergency.

Side Rails / Patient Restraints - Whether and how to use side rails or restraints is a decision that should be based on each patient's needs and should be made by the patient and the patient's family, physician and caregivers, with facility protocols in mind. Caregivers should assess risks and benefits of side rail / restraint use (including entrapment and patient falls from bed) in conjunction with individual

patient needs, and should discuss use or non-use with patient and / or family. Consider not only the clinical and other needs of the patient but also the risks of fatal or serious injury from falling out of bed and from patient entrapment in or around the side rails, restraints or other accessories. In the US, for a description of entrapment hazards, vulnerable patient profile and guidance to further reduce entrapment risks, refer to FDA's Hospital Bed System Dimensional and Assessment Guidance To Reduce Entrapment.

Outside the US, consult the local Competent Authority or Government Agency for specific local guidance on Medical Device Safety. Consult a care giver and carefully consider the use of bolsters, positioning aids or floor pads, especially with confused, restless or agitated patients. It is recommended that side rails (if used) be locked in the full upright position when the patient is unattended. Make sure a capable patient knows how to get out of bed safely (and, if necessary, how to release the side rails) in case of fire or other emergency. Monitor patients frequently to guard against patient entrapment.

When selecting a standard mattress (as defined by IEC 60601-2-52:2009), make sure the distance between top of side rails (if used) and top of mattress (without compression) is at least 22 cm (8.66 in) to help prevent inadvertent bed exit or falls. Consider individual patient size, position (relative to the top of the side rail) and patient condition in assessing fall risk.



Make sure the distance between top of side rails (if used) and top of a speciality mattress (as defined by IEC 60601-2-52:2009) (without compression) is approximately 11.4 cm (4.5 in) or greater. Consider individual patient size, position (relative to the top of the side rail) and patient condition in assessing fall risk.

Skin Care – Monitor skin conditions regularly and consider adjunct or alternative therapies for high acuity patients. Give extra attention to skin over any raised side bolster and to any other possible pressure points and locations where moisture or incontinence may occur or collect. Early intervention may be essential to preventing skin breakdown.

Maximum Recommended Patient Weight - Total patient weight capacity should not exceed 454 kg (1000 lb). The use of accessories on the bed may decrease the patient weight capacity of the bed. Contact Arjo Customer Service for questions concerning the use of accessories and see the Questions and Contact Information section of this guide for contact information.

I.V. and Drainage Tubes – Prior to activating any positioning function assess the security of all invasive lines and tubes to accommodate the desired angle of articulation and minimize the risk of binding, disconnecting or dislodging. Tubes and lines should always have sufficient slack for articulation and patient movement.

Turning - Prior to engaging any mattress turn feature, make sure that bed frame has side rails and that all side rails are fully engaged in their full upright and locked position. Do not activate the turning feature on any mattress system when patient restraints are in use.

Scale Readings - Scales / patient weights are for reference only. Scale readings should not be relied upon for medication dosage. All equipment on the weighed portion of the unit is included in weight displayed.

Patient Migration – Specialty surfaces have different shear and support characteristics than conventional surfaces and may increase the risk of patient movement, sinking and / or migration into hazardous positions of entrapment and / or inadvertent bed exit. Monitor patients frequently to guard against patient entrapment.

Skeletal Traction or Unstable Fracture (if not contraindicated) – With skeletal traction, unstable pelvic fracture or any other unstable fracture (to the extent not contraindicated), maintain physician directed angle of articulation and guard against risks of patient migration or inadvertent deflation of surface.

Electromagnetic Interference – Although this equipment conforms with the intent of electromagnetic compatibility, all electrical equipment may produce interference. If interference is suspected, move equipment away from sensitive devices or contact the manufacturer.

Shock Hazard – Electrical shock hazard; do not remove electrical compartment covers. Refer to qualified service personnel.

Power Drive System Safety Information



To minimize the risk of serious injury, carefully read and follow all Safety Information and Operating Instructions before operating Power Drive System. Also make sure all physician orders and facility protocols are followed.

Steep Slopes - When operating on slopes, always use slow speed. Do not operate on slopes in excess of > 7°.

Wet Surfaces - Do not operate power drive system on wet surfaces.

Indoor Use Only - Do not operate power drive on outside walkways, outside ramps or parking lots.

Unplug - Ensure power cord is unplugged from wall and properly stored before transport.

Clear Area - Ensure area beneath power drive system is clear before engaging drive system.

Clear Path - Ensure pathway is clear of cords, hoses and obstacles before driving bed forward or backwards.

Avoid Trapping People - Ensure there is space to operate before forward or reverse movement. Take caution in crowded areas to prevent trapping a patient or caretaker between bed frame and wall, furniture, equipment or other objects.

Crowded Areas - Operate with caution in crowded hallways, elevators and rooms.

Navigate Slowly - Use slow speed when moving bed around corners and through elevators and rooms.

Limited Space Maneuvering - To maneuver the bed in small or tight areas, disengage the power drive from the floor and manually move the bed in the desired direction.

Automatic Brakes - When the Forward or Reverse switch is released, the power drive system will stop; brakes are automatically engaged to prevent continued movement.

INTRODUCTION

These instructions contain information for the installation, use and maintenance of the Arjo Citadel™ Plus Bariatric Care System. These beds have multiple functions to help provide optimal care and safety for both patient and care giver.

Product Overview

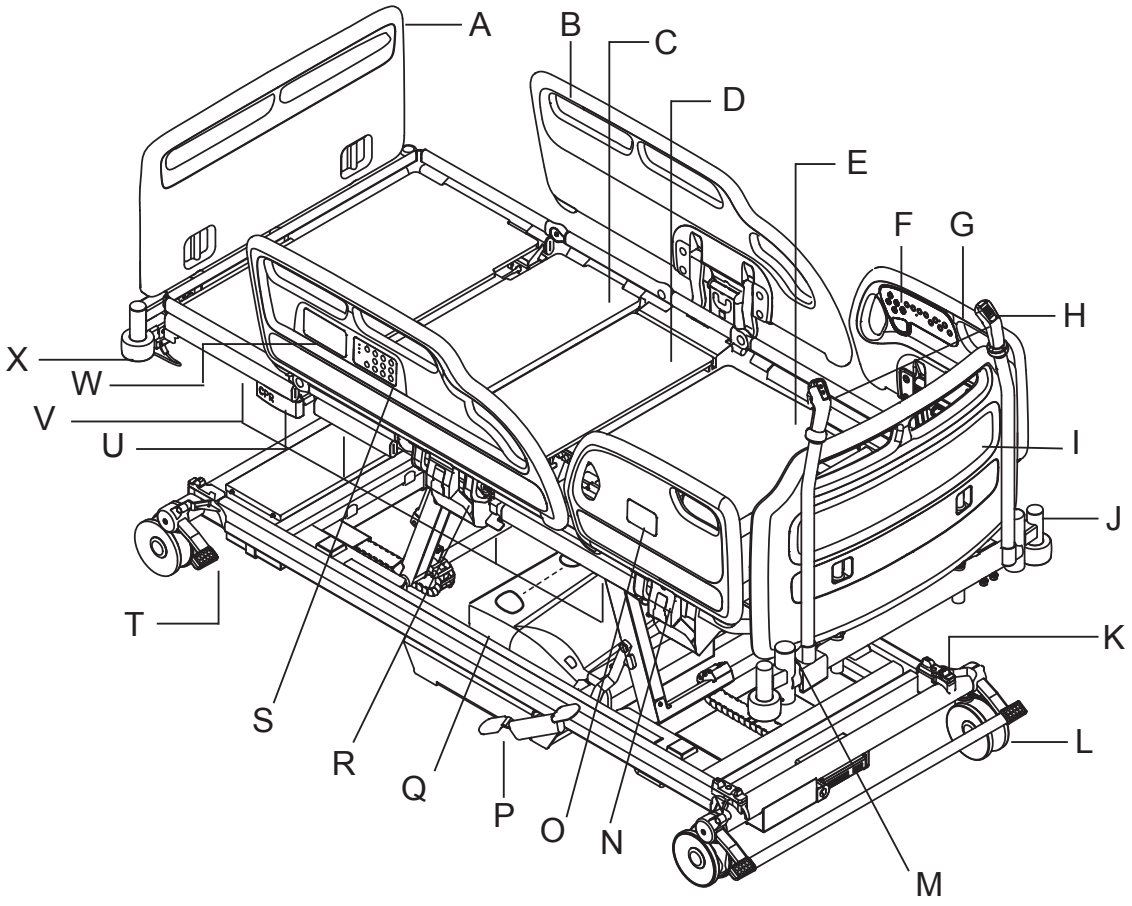


Figure 1: Product overview

A. Foot Board
B. Foot End Side Rail
C. Thigh Section
D. Seat Section
E. Backrest Section
F. Patient Controls
G. Head End Side Rail
H. Power Drive Controls (see page 48)
I. Head Board
J. Accessory Socket
K. Anti-Entrapment Sensor
L. Caster
M. Lifting Pole Socket
N. Side Rail Release Lever
O. Weighing / Movement Detection System Controls
P. Power Drive Lift Pedal
Q. Power Drive
R. Drainage Bag Rail
S. Attendant Control Panel (ACP)
T. Foot End Brake Pedal
U. CPR Release Handle
V. Width Extensions (total of eight see page 26)
W. Care Giver Controls
X. Roller Buffer

Not shown in this view:

Y. Leg Extension Latch (see page 25)
Z. Blue Extension Locking Handle (see page 25)

All *Citadel* Plus beds have the following standard features:

- Folding split side rails with integrated bed controls
- Electrical adjustment of bed height and leg section elevation
- Electrically operated retracting backrest
- Auto-Chair facility
- Electrical adjustment of head down tilt (Trendelenburg) and foot down tilt (reverse Trendelenburg)
- Electrical adjustment of calf section vascular position
- Mattress support surface with removable panels
- Adjustable length mattress support surface
- Drainage bag rails
- Under bed lights
- 150 mm dual casters
- Patient weighing and VariZone™ patient egress detection
- Anti-Entrapment System
- Width extension (adjustable width mattress support surface)

Optional features

- One-way nurse call
- Two-way nurse call
- Environmental controls
- RS232 connection allowing transfer of bed status data
- DIN accessory rails
- Foot pedal for adjustment of bed height
- Patient handset
- Power Drive
- Hinged power drive handles

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 and serial number can be found on the specification label which is located on the bed frame below the head board.

Before using the bed, make sure that the power-in rating on the specification label is compatible with the local electricity supply.

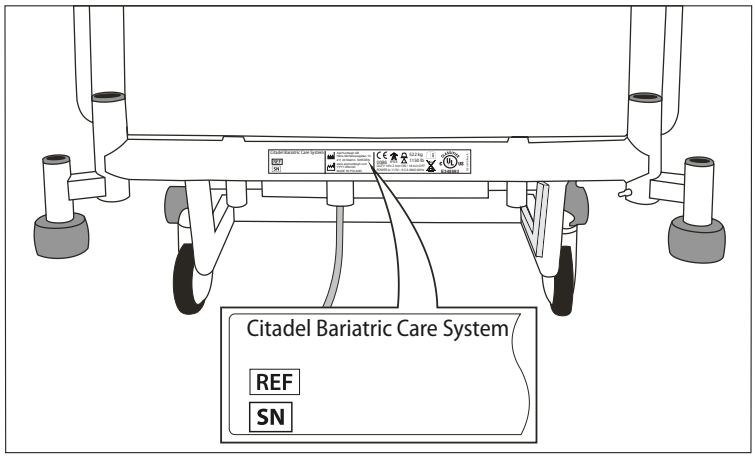


Figure 2: Specification label

CLINICAL APPLICATIONS

Intended Use

The *Citadel* Plus Bariatric Care System is intended for the acute and post-acute care environments. It is not intended for use in the home care environment.

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.
- Acute care provided in a hospital or other medical facility where medical supervision and monitoring is required, e.g. general medical and surgical wards.
- 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.

Indications

The *Citadel* Plus Bariatric Care System is indicated for medical purposes to aid the patient and staff during the performance of routine care.

Contraindications

The *Citadel* Plus Bariatric Care System is contraindicated for patients weighing in excess of 454 kg (1000 lb). The care giver should refer to and follow any contraindications in the product labeling for the pressure redistribution surface being used with the *Citadel* Plus Bariatric Care System.

Width extensions retracted: The bed is not suitable for patients under 45 kg (100 lb) in weight.
Width extensions expanded: The bed is not suitable for patients with a Body Mass Index (BMI) <30.



To make sure 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 function should only be used under the guidance of a clinically -qualified person after assessment of the patient's condition.

General Product Information

Safe working load (SWL)..... 522 kg (1150 lb)

Maximum patient weight..... 454 kg (1000 lb)

The recommended patient height is between 146 cm (58 in) and 190 cm (75 in). At the discretion of the care giver, patients taller than 190 cm (75 in) may be accommodated by extending the bed - refer to bed length adjustment on page 24. Make sure that the patient's height does not exceed the in-bed length.

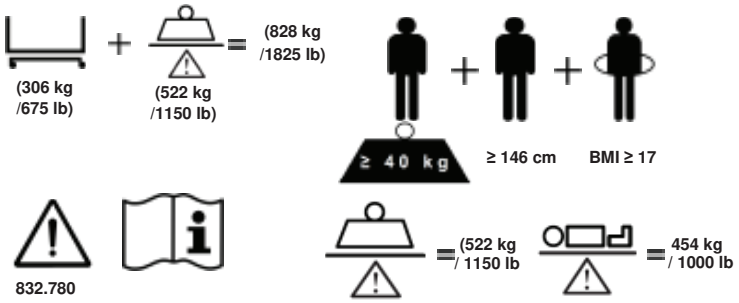


Figure 3a: Recommended Patient Height and Weight. Option without Power Drive.

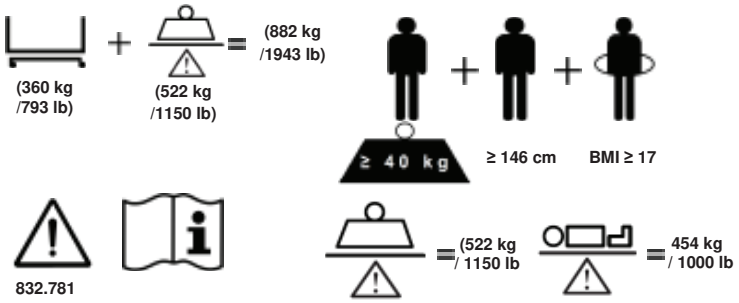


Figure 3b: Recommended Patient Height and Weight. Option with Power Drive.

All accessories added to the system reduce the safe working load of the frame by the same amount.

INSTALLATION

The following chapter describes how to install the bed.

Weighing System Preparation

Position the bed on a flat, level surface and apply the brakes.
Remove the four transport locking bolts (1) and washers (2); there are two locking bolts at the head end of the bed and two at the foot end.

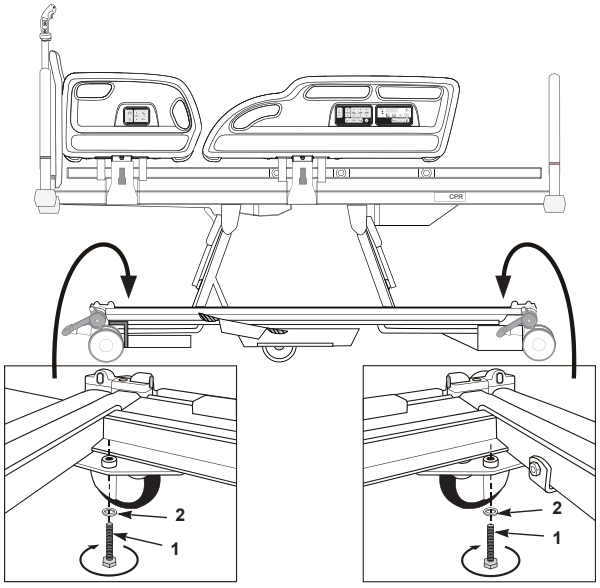


Figure 4: Removing the transport bolts

Retain the bolts and washers in case the bed needs to be transported at a later date.

To prevent damage to the weighing mechanism, replace the transport locking bolts and washers before transporting the bed. This is not necessary when moving the bed short distances.

When replacing the transport locking bolts care must be taken to avoid trapping or damaging any cables.

Power Drive Shipping Pin Removal

Do not lower power drive wheels without removing shipping pin.

If transporting frame to a new facility, insert shipping pin to lock the power drive pedal.

Before attempting to lower power drive wheels, remove the shipping pin (1) and store (2).

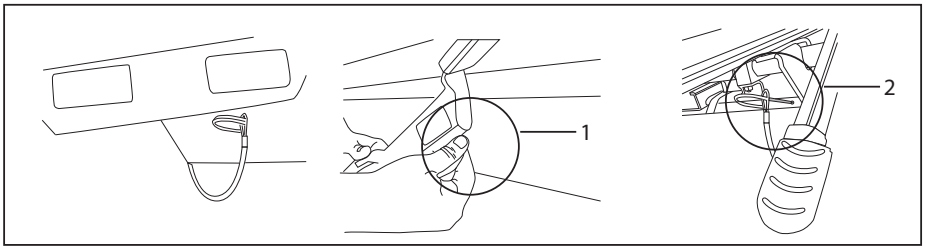


Figure 5: Removing the shipping pin

Electricity Supply

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 61.

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

When the bed is connected to the electricity supply, the Power On Indicator LED will light on the Attendant Control Panel (see page 33).

The footboard (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.

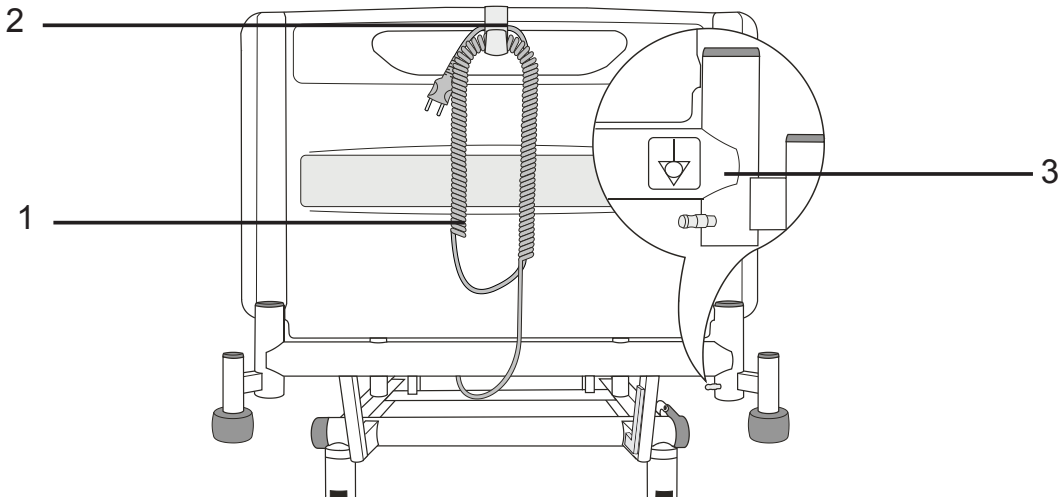


Figure 6: Power supply cord and potential equalization terminal

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

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

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

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

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

Unplug the power cord from the electricity supply, and store it, before moving the bed.

Potential Equalization Terminal

A potential equalization terminal (Figure 6, item 3) is located at the head end of the bed.
When other electrical equipment is within reach of the patient or care giver, potential differences between the equipment can be minimized by connecting together their potential equalization terminals.

Electrical Connections

The *Citadel* Plus Bariatric Care System contains the following electrical connections.

Frame:

- Power Cord
- Nurse Call Connector
- RS232 Connector (if specified)
- Auxiliary Power Outlet
- Skin IQ™ Family Power Cable

Power Cord

The power cord is located at the head end of the bed. Make sure power cord is kept free from all pinch points, moving parts and is not trapped under casters. Improper handling of power cord can cause damage to the cord, which may produce risk of fire or electric shock. Pull the power cord out of the mains wall outlet to remove power from the unit.

Nurse Call and RS232 Connections

1. Connect one end of the nurse call cable to the 37-pin D-type outlet, located below the head end of the bed on the patient's right hand side.
2. Connect the other end of the nurse call cable to a compatible nurse call system. The type of connector will vary depending on the nurse call system.
3. Connect one end of an RS232 cable to the 9-pin D-type outlet, located below the head end of the bed on the patient's right hand side.
4. Connect the other end of the RS232 cable to a device capable of receiving data through an RS232 connection.



Connection to the nurse call and RS232 connector must be made with the correct cables. Use of the wrong cables may cause malfunction of the bed or devices connected to the nurse call or RS232 connectors.

Verify correct operation of the nurse call system before placing a patient on the bed.

Do not allow the nurse call or RS232 cables to trail on the floor where they may cause a trip hazard. Unplug both cables before moving the bed.

Do not allow the cables to touch the bed frame as this may affect the accuracy of the weighing system.

Only connect devices designed to be used with the bed.

Connecting devices not designed to be used with the bed may result in damage to the equipment or to the bed.

Only use cables with an in-line breakaway connector (below). Failure to do so could result in damage to the bed or to other hospital equipment.

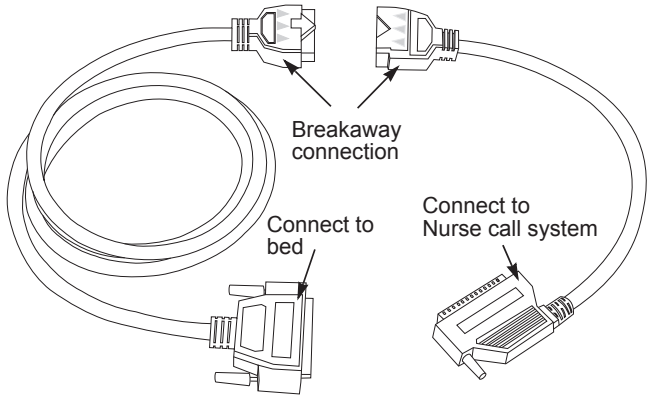


Figure 7: Example of an in-line breakaway connector

Auxiliary Power Outlet (Optional Feature)

Auxiliary power outlet is provided as a convenience for powering devices intended to be placed at or near the foot end of the bed.



Do not connect any critical or life-sustaining equipment to auxiliary outlet. These devices should be connected to hospital outlets.

Devices connected to this outlet shall not exceed:

- *115 VAC / 7A*
- *230 VAC / 4A*

This outlet does not remain powered when the bed is on battery backup.

Skin IQ Family Power Cable

Skin IQ Power Cable is provided for powering *Skin IQ*. This feature remains powered for four hours when the bed is on battery backup. A 12 VDC power cable is located at the foot end of the bed which provides a connection point for the *Skin IQ* of products.

The cable should only be used to power the Skin IQ Family of products.

Skin IQ Installation

1. Stretch the *Skin IQ* coverlet over existing surface and use straps to secure to existing mattress.
2. When using the *Skin IQ* on the *Citadel* mattress, the mattress comes already equipped with straps located mid way under the mattress exclusively for attaching the tie-down straps from the *Skin IQ* coverlet.
3. Use the 12 VDC power cable, centered at the foot end of the bed to plug in the *Skin IQ*. Cable has a tag indicating it is for *Skin IQ* use.

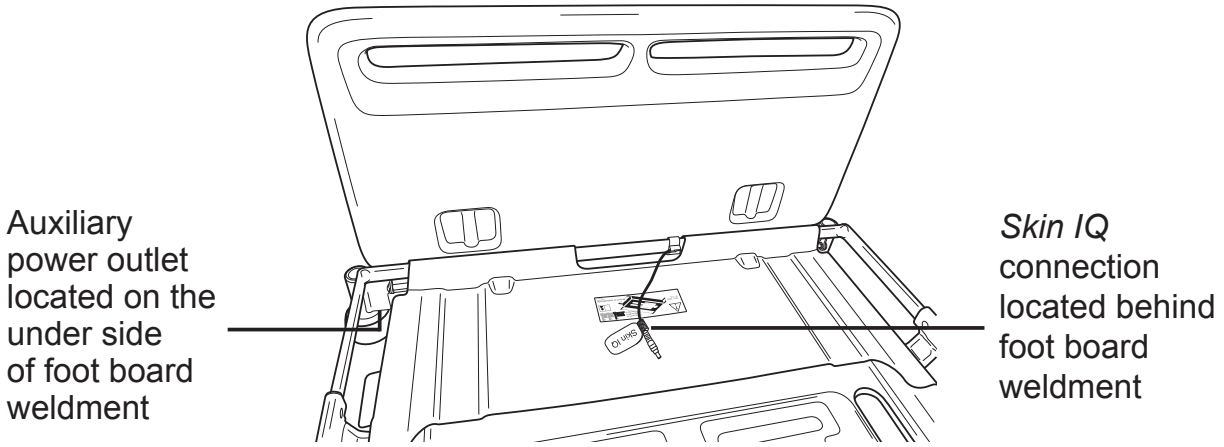


Figure 8: Auxiliary power outlet and *Skin IQ* Family power cable

Refer to *Skin IQ* Instructions for Use for detailed installation instructions.

Mattresses

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 between 15 cm (6 in) and 20.5 cm (8 in).

- Specialty 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 specialty mattress replacement must be assessed individually prior to use to verify sufficient clearance is maintained.

Make sure the distance between top of side rails (if used) and top of a speciality mattress (without compression) is approximately 4.5 in (11.4 cm) or greater. Consider individual patient size, position (relative to the top of the side rail) and patient condition in assessing fall risk.

- Arjo mattresses have been evaluated for use with this bed. All other mattresses must be validated by user.
- For more information on suitable mattresses and mattress replacements, contact your local Arjo office or an Arjo-approved distributor. A list of Arjo offices can be found at the back of this manual.

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

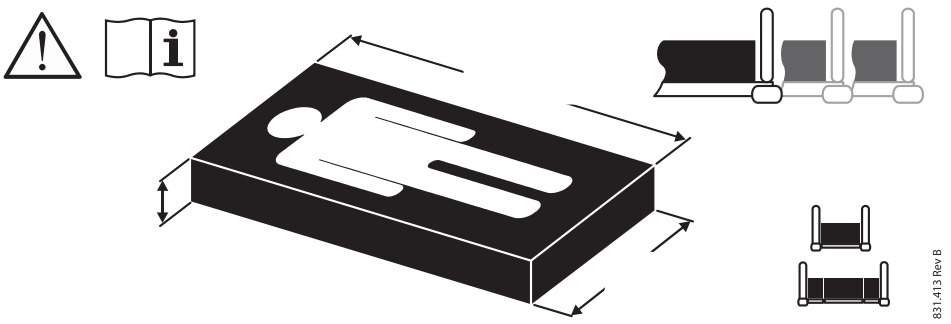


Figure 9: Mattress size label

The numbers 1, 2 and 3 on the label indicate different deck lengths; refer to Bed Length Adjustment on page 24.

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 standard mattress thickness for use with side rails is 20.5 cm (8 in).

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.

OPERATING INSTRUCTIONS

It is recommended that all chapters of this manual be reviewed prior to product use. Carefully read the **Contraindications**, **Risks and Precautions**, and **Safety Information** sections in the **Introduction** chapter of this manual prior to placing a patient on the *Citadel* Plus Bariatric Care System.

Lifting Pole and Accessory Sockets

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

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

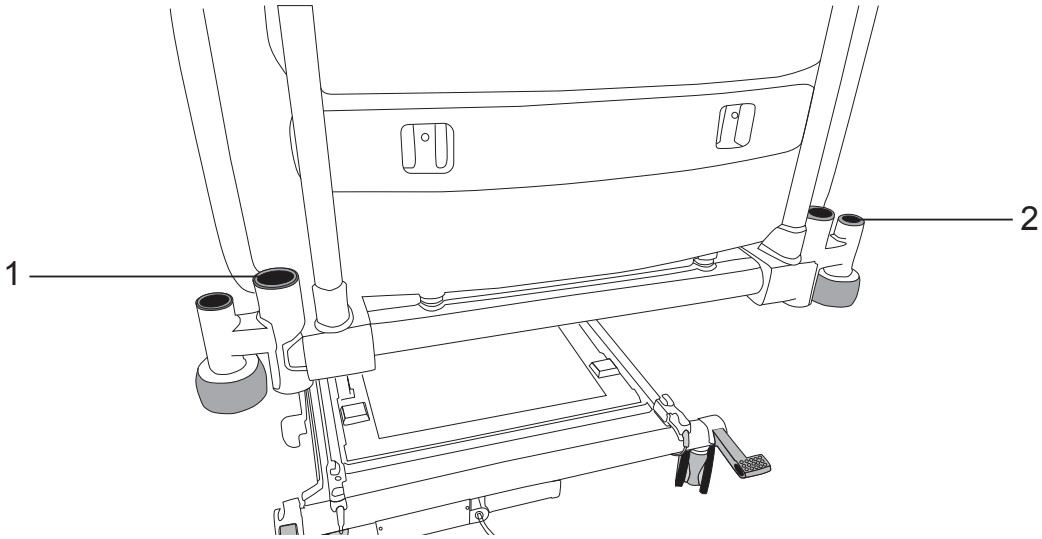


Figure 10: Lifting pole and accessory sockets (head end)

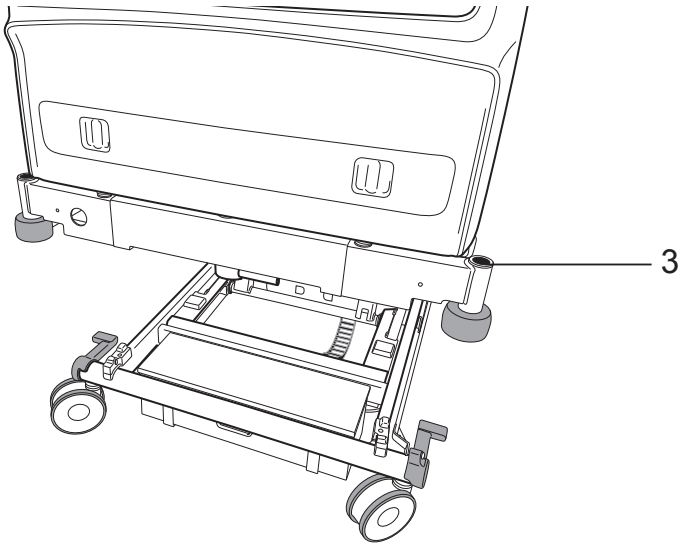


Figure 11: Accessory sockets (foot end)

Drainage Bag Rails

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

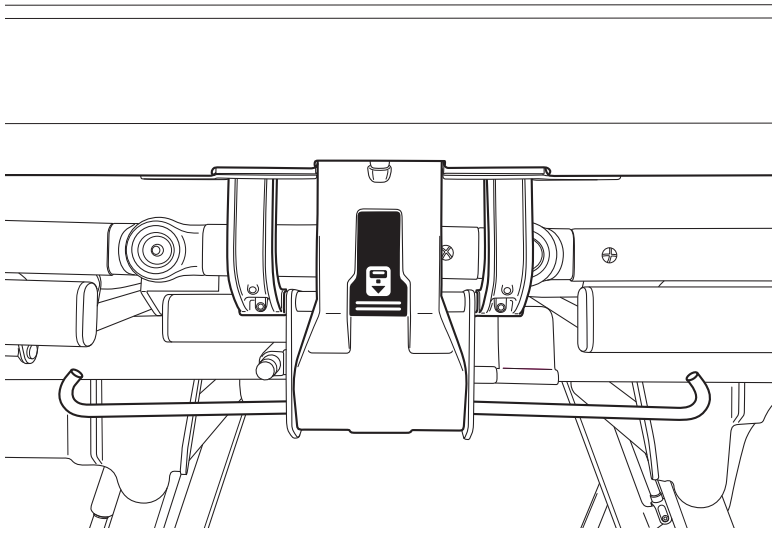


Figure 12: Drainage bag rails

The maximum weight that can be safely supported by each drainage bag rail and DIN rail is 5 kg (11 lb).

Items placed on the drainage bag rails (such as patient drains and urine bags) are included in the weighing calculation, and can influence measurement of patient weight - see Weighing Accuracy on page 38.

Bed Length Adjustment

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

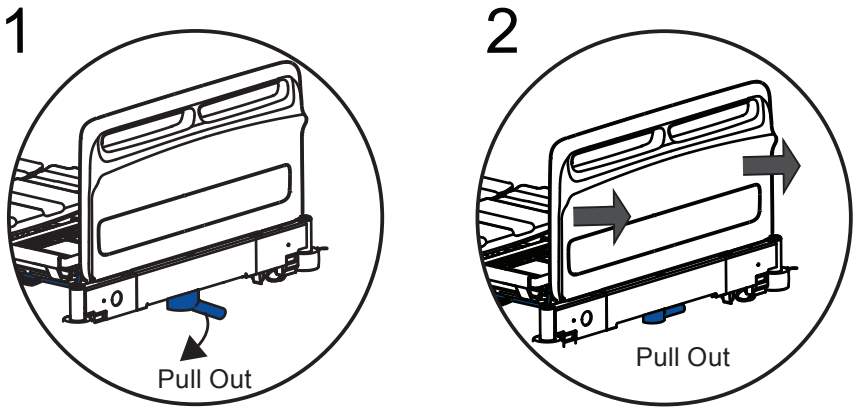
1. Standard length, for normal use. Sets deck length at 202 cm (80 in).
2. Extended, to accommodate tall patients. Sets deck length at 214 cm (84 in).
3. Extended, to accommodate very tall patients. Sets deck length at 224 cm (88 in).

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

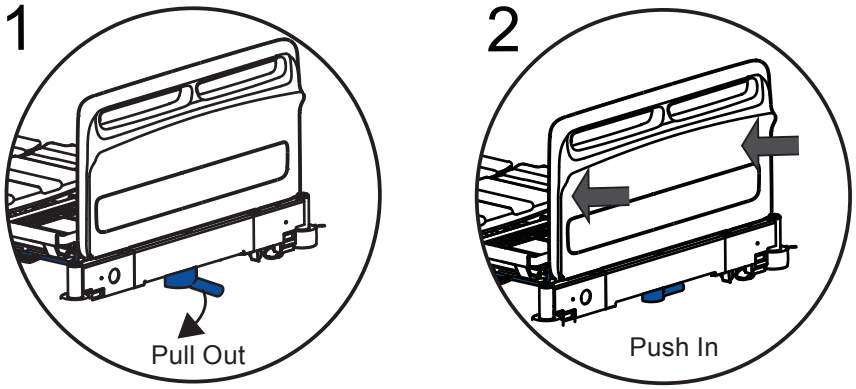
Always adjust the bed frame and deck to the same length and make sure both are latched securely in position.

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

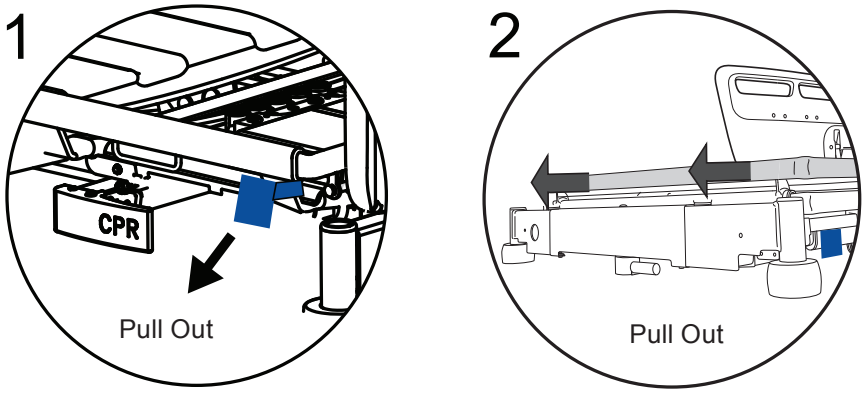
To extend the bed frame:



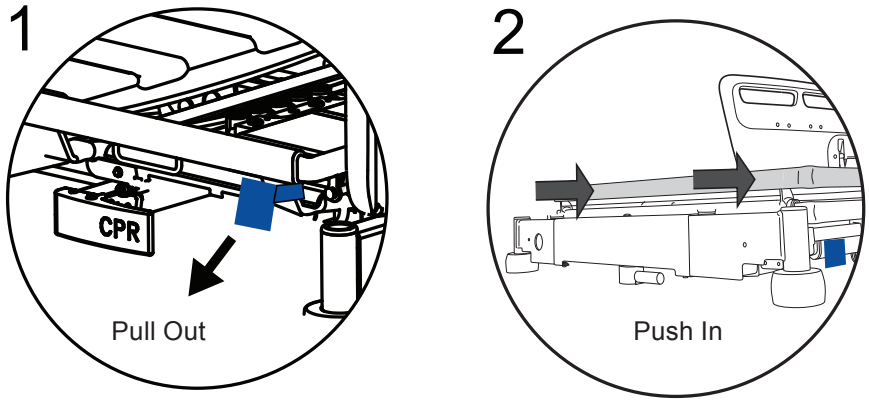
To retract the bed frame:



To extend the deck:



To retract the deck:



Bed Width Adjustment

To extend the width of the frame:

1. Locate the eight width extension latches located behind the extension symbol (four per side).

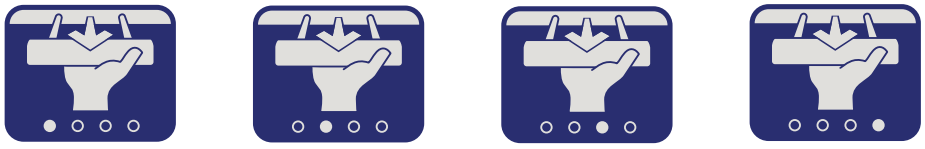


Figure 13: Patient Right Side Labels



Figure 14: Patient Right Side Labels

2. Squeeze extension latch to unlock and pull section until fully extended.

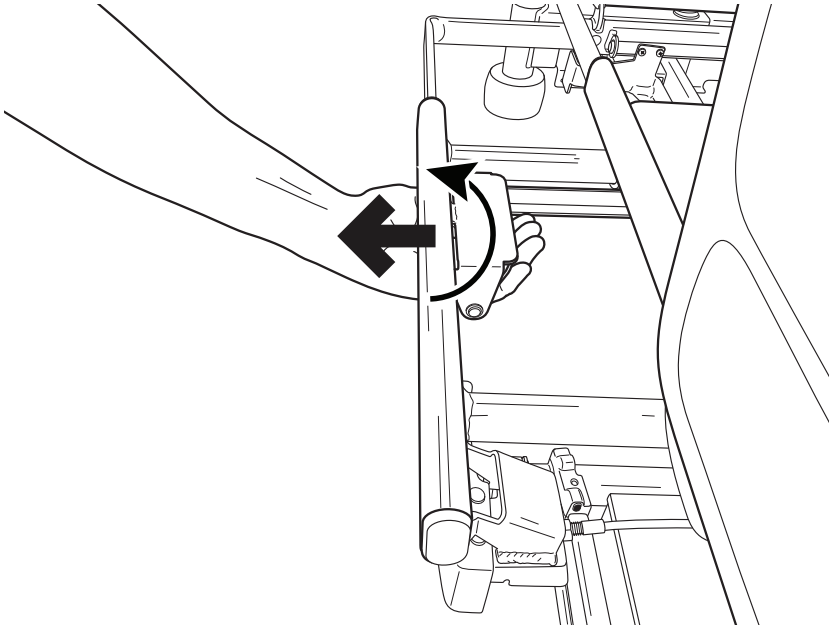


Figure 15: Unlock width extension

3. To retract, squeeze handle and push the section inward until fully aligned with mattress rail.

4. Repeat this step for all eight extension handles.

Make sure all eight width extension sections are extended. Using the bed without all extensions in the same position may cause damage to the bed as well as create an unsafe condition.

Foot Pedal for Adjustment of Bed Height (Optional Feature)

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

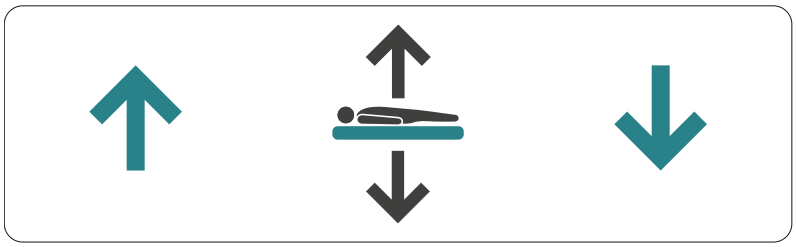


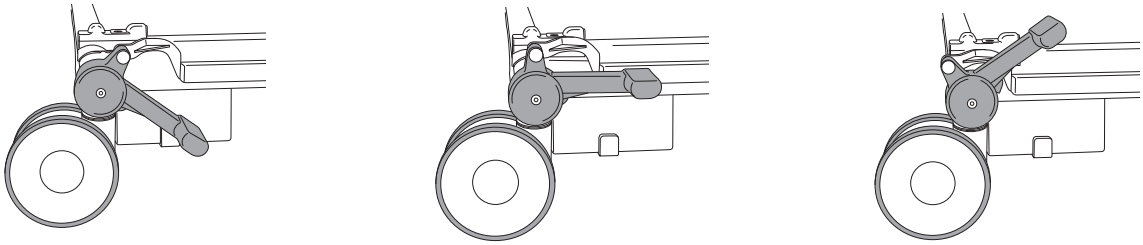
Figure 16: Foot Pedal Adjustment Label

Lift cover of pedal with foot and press left side to raise the bed height. Press right side of pedal to lower bed height.

Brakes and Steering

The pedals have three positions as shown below:

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



BRAKE FREE STEER

Figure 17: Brakes and Steering

Using the Steering Caster

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

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

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

Side Rails

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.

Make sure that the mattress is suitable for use with side rails - see Mattresses on page 21.

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

To avoid equipment failure or damage, do not use the side rails to move the bed.

To lower the side rail:

1. Hold either side rail handle.
2. Pull the blue release lever and lower the side rail, holding the side rail until it is completely lowered. The side rail folds down next to the deck.

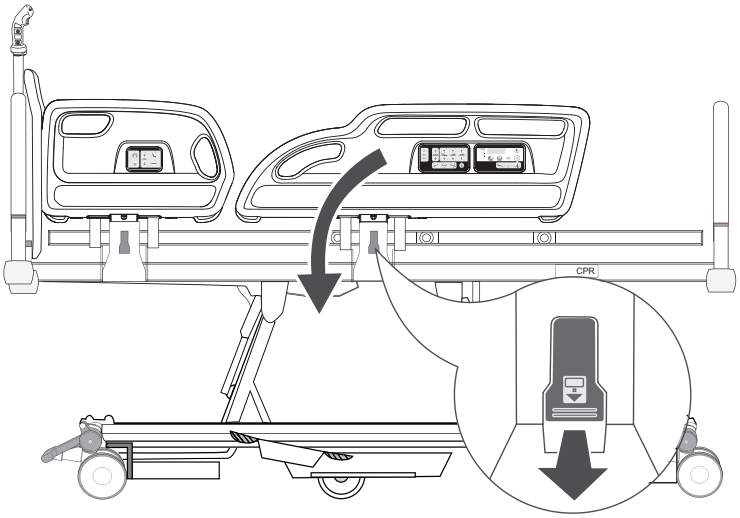


Figure 18: Side rail operation

To raise the side rail:

1. Hold either side rail handle. Pull the split side rail up and away from the bed until it locks in the raised position.
2. The head end and foot end side rails operate in the same way.

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

Head and Foot Boards

The head and foot boards can be easily lifted off the bed for access to the patient. To remove, pull straight up on the handle. To replace, align the rods with the holes in the frame and push straight down.

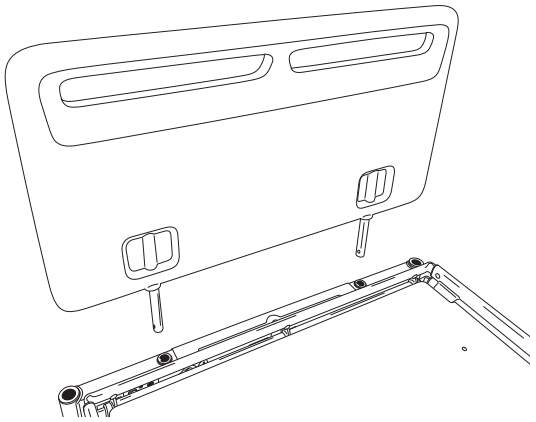


Figure 19: Align head / foot board with holes in frame to replace

Patient Restraints

Patient restraints can be attached to either side of the deck frame. Attachment points are provided on the backrest (1), thigh section (2) and calf section (3).

Do not activate the turning feature on any mattress system when patient restraints are in use.

Follow the instructions for use provided with the patient restraint devices.

Patient restraints should be used in compliance with all applicable federal and state regulations and in accordance with the healthcare facility's own policies and procedures.

Do not attach patient restraints to any part of the bed other than detailed below. Example: side rails or head / foot boards.

Patient restraints, even when correctly used, can result in entrapment or injury, particularly if the patient is disorientated or restless. The decision to use patient restraints must be made by the clinician overseeing the care of the individual patient, following a fully documented risk assessment.

Patient restraints are not intended as substitutes for good nursing practice. Arjo makes no recommendations regarding the use of such restraints.

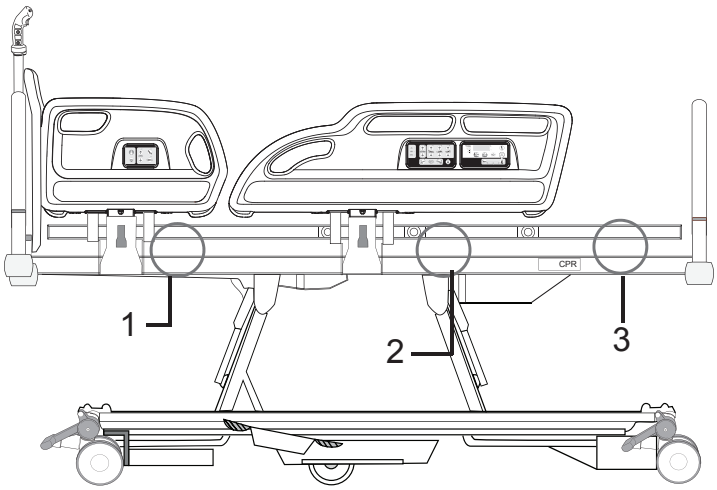


Figure 20: Patient restraint attachment points (circled)

Restraint straps should be attached as shown below to prevent sliding along the deck frame.

Backrest and calf section: feed the strap between the guide (1) and the frame of the backrest or calf section (2).

Thigh section: feed the strap around the thigh section frame (3) between the cross-members (4).

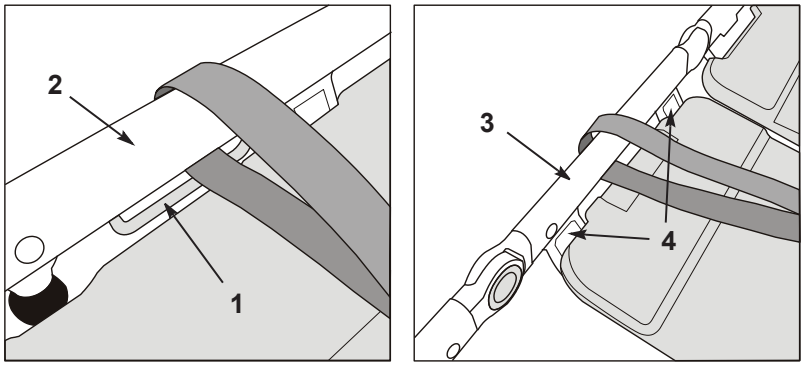


Figure 21: Restraint strap attachment - backrest / calf section (left) and thigh section (right)

Under Bed Light

The under bed light illuminates the floor on either side of the bed.
The under bed light can be turned on from the Nurse Control Panel unless the bed is in its low-power state.

Backup Battery

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

When the bed is unplugged from mains power, it enters a low-power mode to conserve battery power. In this state, the under bed lights, the indicator LEDs on the control panels and the weighing system display 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.

The battery's charge level is indicated as follows:

- 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.
- If a continuous warning tone sounds when operating the bed, the battery is between 10% and 75% charged. In this condition, all functions except CPR and Tilt will be locked five seconds after the last button is pressed. The other functions can be temporarily reinstated by pressing the Function Lock button once and then pressing the required Function button to unlock its operation.
- If the ACP battery indicator LED lights red, the battery is less than 10% charged. In this condition, all functions are locked. Plug bed in.

All functions will remain locked even after mains power is reconnected. To unlock all functions connect mains power and then press the Function Lock button, then select the function(s) to unlock.

To make sure 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 emergency short-term use only. Its life will be reduced if it is used to power the bed for long periods.

The backup battery will power Skin IQ for four hours before shutting off to preserve battery life for emergency bed functions. Skin IQ is only powered if plugged into the bed's Skin IQ 12 VDC power cable.

Recharging the Backup Battery



If the battery is left uncharged 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.

To recharge the battery, connect the bed to the electricity supply. Allow at least eight hours to recharge the battery when it is completely uncharged.
While the battery is recharging, the ACP battery indicator LED lights yellow. The indicator LED will go out when the battery is fully charged.

Over-Use Lockout

Continuous operation of the controls may cause the indicator LED above the buttons to flash. After 30 seconds, the indicator LEDs will light and all functions will be locked.

If this happens, wait for at least 20 minutes and then follow the unlocking procedure on page 34.

Attendant Control Panel (ACP), Nurse Control Panel and Patient Control Panel

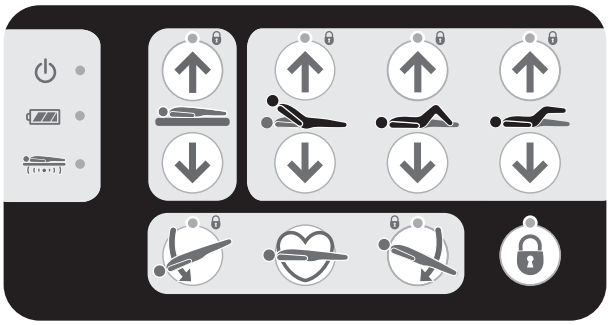


Figure 22: Attendant Control Panel

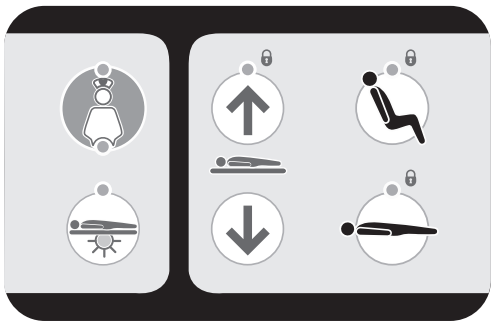


Figure 23: Nurse Control Panel

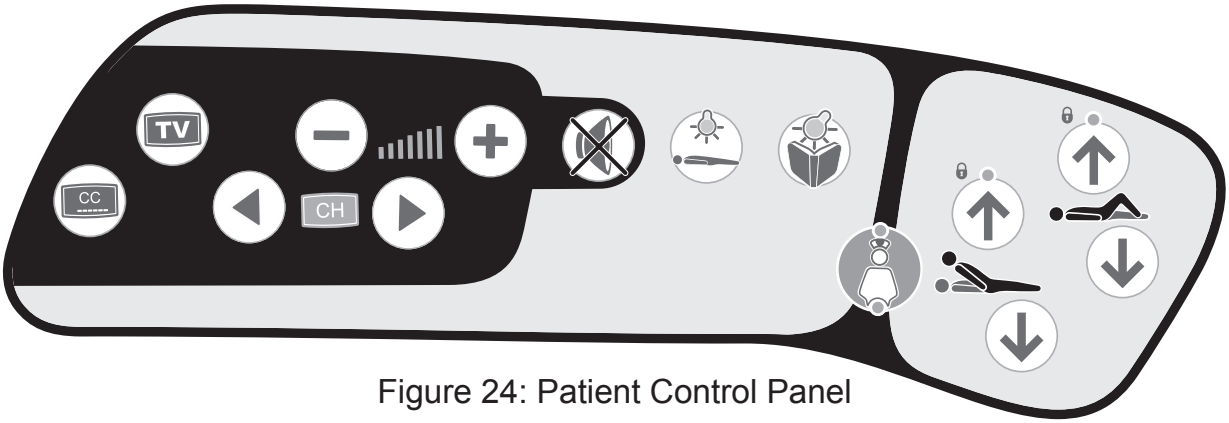


Figure 24: Patient Control Panel

Power On Indicator - Indicator LED lights when the bed is connected to the electricity supply.

Battery Indicator - Indicates status of the battery system. Refer to the section Backup Battery on page 31.

Anti-Entrapment System (AES) Indicator - Indicates status of the anti-entrapment system. Refer to the section Anti-Entrapment system on page 44.

Deck Height - These buttons raise and lower the deck. All sections will lower at maximum speed until the bed reaches low height (40cm*) where it will continue to lower at half speed until it has reached extra low height (32cm*). The deck will not lower to extra low height if the bed platform is tilted (in Trendelenburg or reversed Trendelenburg position).

(*Low height and extra low height dimensions are for reference only.)

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



Backrest Angle - These buttons raise and lower the backrest. The backrest will pause when it reaches an angle approximately 30º 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).



Calf Section - These buttons raise and lower the calf section.



Trendelenburg - This button lowers the head end of the deck (Trendelenburg position). When returning from a tilted position, the deck will pause at the level (no tilt) position.



Reverse Trendelenburg - This button lowers the foot end of the deck (reverse Trendelenburg position). When returning from a tilted position, the deck will pause at the level (no tilt) position.



CPR Position - Press and hold the CPR button to flatten the deck (and lower it if necessary) to enable cardio-pulmonary resuscitation to be performed.

The CPR button overrides all lockout settings.



Function Lockout - Function lockout can be used to prevent operation of the controls.

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

- Press the Function Lockout 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 Lockout button again or wait for five seconds. The indicator LED above the Function Lock button will turn off and the lockout settings are stored.

When a function is locked, any associated functions are automatically disabled. Example: locking the backrest also disables Auto-Chair.

Function lockout settings are retained if the bed is disconnected from the electricity supply.



Under bed Light - The under bed light illuminates the floor on either side of the bed. Press this button to turn the under bed lights on or off. The indicator LED above the button will light when the under bed lights are on.



Nurse Call - Press the Nurse Call button to request assistance. The indicator LED above the button will light to confirm operation.
At the nurse's station, the call location will be displayed and / or an audible alert will sound, depending on the type of nurse call system.
Procedures to reset nurse call vary from one system to another. Refer to the manufacturer's instructions for use.

Nurse call is only available in certain models.



Auto-Chair - The Auto-Chair up button simultaneously raises the backrest and thigh sections, pausing when the backrest reaches 45º. Continue to hold the button to lower the foot end of the deck into a chair position.

When the backrest and thigh sections are raised, pressing the Auto-Chair up button again lowers 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.



Auto-Chair Down - The Auto-Chair Down button returns the deck to a flat and level position.

Patient Handset (Optional Feature)

The controls on this handset operate in the same way as those on the side rails.

Store the handset on the split 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 care giver.

Take care not to squeeze or trap the handset cable between moving parts of the bed.



Figure 25: Patient handset

Weigh Scale Panels (With and Without Unit Selection)

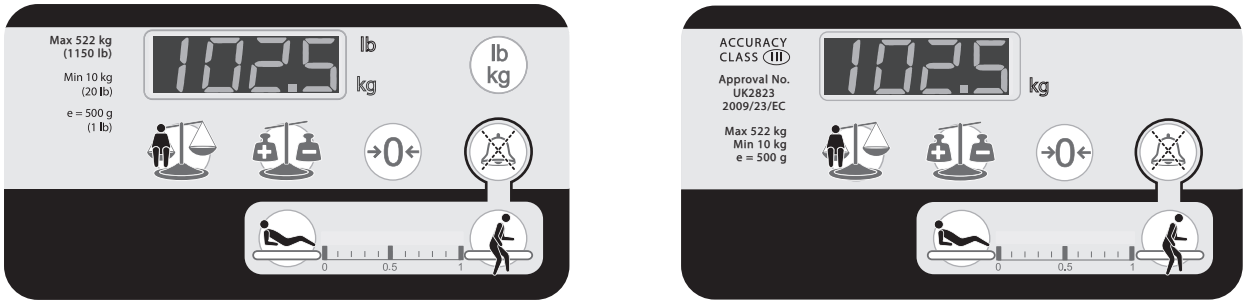


Figure 26: Weigh Scale Panels (Dependent on country)



Display - indicates the patient's weight. It can also be used to show other information. Example: bed section angles and error codes.



Weigh - This button is used to calculate and display the current patient weight. Weight is displayed for 10 seconds after a button press.



Auto Compensation (tare) - This button allows items to be added to or removed from the bed without affecting the indicated patient weight.



Zero - This button is used to reset the weighing system when the bed is first set up and before a new patient is placed on the bed.



Select Units - If available, this button will change the weight readings to either pounds or kilograms. An indicator next to the display will light to show the selected units (lb or kg).



VariZone Mute Button - This button will mute the bed exit alarm for three minutes



The weighing system is intended to provide reference data only. Be aware that scale readings may be affected by several factors, including but not limited to: improper zeroing, equipment added or removed without proper use of AutoComp, lack of regular scale calibration, and inappropriate use not in line with user instructions.

The weighing system should only be used by staff trained in the correct use of the weighing function.

The weighing system should only be used in closely supervised environments, where factors influencing patient weight (such as additions to the bed) can be controlled as described in the following instructions for use.

Weighing Accuracy

Patient weighing system	
Minimum verification interval (scale division)	500g (1 lb)
Minimum capacity	10kg (22 lb)
Maximum capacity	522kg (1150 lb)
Approvals[1]	EC type approval no. UK3074. Complies with 2014/31/EU Class III
Scales rating[2]	Class III
[1] applicable for countries an associate in CEN region [2] applicable for rest of the world	

The weighing system is very sensitive and can be affected by a number of
The weighing system is very sensitive and can be affected by a number of external factors. For best performance, observe the following precautions:

- Position the bed such that the lower frame and upper frame do not touch one another. This may require that the bed is raised from its lowest position.
- Make sure the bed is on a flat, level surface.
- Make sure the transport locking bolts and washers have been removed before use – refer to page 17.
- Position the bed so that it is clear of obstructions. Example: walls, furniture, cables and curtains.
- Make sure the patient is fully on the mattress during weighing.
- While weighing is taking place, the patient should keep as still as possible and other persons should keep clear of the bed.
- Make sure that the patient, pillows and bed linen do not touch the head board or floor during weighing.

The head board (1), head end lifting pole accessory sockets (2) and bed sub frame (3) do not influence the patient weighing system.

Any item attached to or placed on any other part of the bed will influence the patient weighing system. Use the AUTO COMPENSATION feature before adding or removing any items (example: urine bags, iv poles, mattress pumps, bed-clothes, etc.).

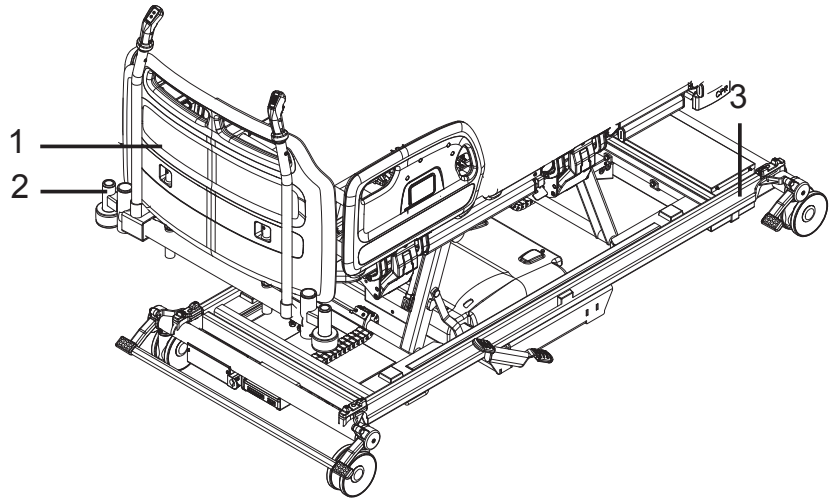


Figure 27: Area not influencing patient weighing

Weighing Initialization

After connecting the bed to the electricity supply, the weighing system must be initialized as follows:

1. Place the mattress, bed linen and all necessary accessories on the bed. The patient must not be on the bed at this point.
2. Press the Zero button once.
3. After a few seconds the display will read zero.
4. The patient can now be placed on bed.
5. The bed cannot be re-zeroed once a patient is on the bed. Use the Auto Compensation feature if adding or removing items from the bed such as linen or accessories

The weighing system MUST be zeroed every time a new patient is to be placed on the bed.

The weighing system MUST be zeroed every time a mattress is changed.

The weighing system cannot be zeroed if a mattress or accessories weighing more than 80 kg (176 lb) are fitted. To make sure the bed can be zeroed correctly, only use Arjo approved mattresses.

It is not recommended to zero the bed or take a weight reading in the lowest position.

Weighing

To calculate and display the patient's weight:



1. With the patient centered on the bed, press the Weigh button once.



2. The display will show a moving circular pattern until a stable weight reading is obtained.



3. The patient's weight will be displayed for ten seconds then the display will go blank.



Scale Readings - Scales / patient weights are for reference only. Scale readings should not be relied upon for medication dosage. All equipment on the weighed portion of the unit is included in weight displayed.

Weighing Units

On select models, weight readings can be viewed in pounds or kilograms by pressing the Select Units button. An indicator LED next to the display will light to show the selected units (lb or kg), if equipped.

To lock the Select Units button so that the display always shows readings in either pounds or kilograms, if equipped:

1. Hold down the Function Lockout button.
2. Press and hold the Select Units button. Keep both buttons pressed until you hear an audible tone. Check that the required indicator LED is illuminated (lb or kg), if equipped.

Normal operation of the Select Units button can be restored by repeating this procedure.

Auto Compensation

The Auto Compensation function allows weight (up to a maximum of 100 kg [220 lb]) to be added to or removed from the bed, without affecting the indicated patient weight.



1. With the patient lying on the bed, press the Auto Compensation button once.



2. The display will show a moving circular pattern until a stable weight reading is obtained.



3. The display will read AUTO to indicate that the system is in Auto Compensation mode.

4. Add or remove accessories, bed linen, pillows, etc. as required.



5. Press the Auto Compensation button again.



6. The display will show a moving circular pattern for a few seconds then revert to showing the patient's weight.

Weighing System Error Codes

Error codes are shown on the display. They are used to indicate a problem with the weighing system; this may be due to an operator error or a possible fault condition. The table below shows common error code displays with their causes and solutions.

Display	Cause	Solution
	More than safe working load applied to frame	Remove excess weight from frame
	More than 50 kg (110 lb) applied during scale zeroing	Remove excess weight prior to re-initalizing scale zeroing
	Components i.e. footboard and / or deck sections removed from the frame prior to zeroing.	Install missing components and re-initialize the weighing system
	Zero on battery power	Connect bed to mains supply and re-initialise the weighing system
	Auto Compensation weight decrease more than 100 kg (220 lb)	Replace weight removed from bed
	Auto Compensation weight increase more than 100 kg (220 lb)	Remove added weight from bed
	A stable weight reading was not obtained within 10 seconds	Refer to the points listed in the section Weighing Accuracy on page 38

If the display shows an error code other than those given above, refer to the product service manual or contact an Arjo-approved service agent.

Angle Indication

When operating the controls for backrest or tilt, the weighing system display shows the approximate angle in degrees of the selected function.



Angles are shown relative to the floor, so the displayed values of backrest angle and thigh angle change when the deck is tilted.



The tilt angle is shown as a positive value for head down tilt and a negative value for foot down tilt.

VariZone Patient Movement / Exit Detection

The patient movement detection system can be set to alarm when undesired movement of the patient occurs. The sensitivity of the patient movement detection, relative to the center of the deck, can be varied incrementally.
The controls for the patient movement detection system are located on the foot end split side rails.



Figure 28: Patient movement detection controls



In Bed - this button activates / deactivates patient movement detection and increases the sensitivity of the system.



Patient Movement Detection Threshold Display - an indicator shows the current system status and the selected sensitivity of patient movement detection.



Egress - this button activates / deactivates patient movement detection and decreases the sensitivity of the system.

Adjusting the deck profile while patient movement detection is active can trigger an alarm if patient movement detection is set to a high sensitivity.



***VariZone* Mute Button** - When the *VariZone* alarm is triggered, pressing the mute button will silence the audio portion of the alarm for three minutes. When the *VariZone* alarm is triggered and is muted, adding the patient weight +/- 10% back onto the bed will clear the alarm and re-enable *VariZone* to the last *VariZone* setting.

The patient movement detection function should be checked periodically for correct operation and before each new patient uses the bed.

Mattresses that are not approved by Arjo should be validated by the user to make sure correct operation with the VariZone system.

VariZone Operation

Before activating patient movement detection, make sure that:

- The patient's weight has been measured and recorded.
- All additional items (example: accessories) have been accounted for using the Auto Compensation function.
- The weighing system display is blank.

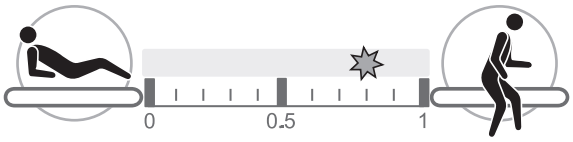
Before using patient movement detection, verify that the alarm can be easily heard by care givers. Example: at the nurse's station.



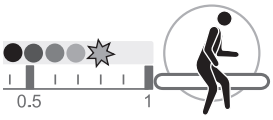
To activate patient movement detection, press and hold either the In Bed button or Egress button for two seconds.



The threshold display indicator LED will flash to show the alarm threshold level.
The further to the left the flashing indicator LED is, the lower the alarm threshold, and small movements of the patient in bed will be detected.
The further to the right the flashing indicator LED is, the higher the alarm threshold, and only large movements, such as the patient exiting the bed, will be detected.



To increase the patient movement detection threshold:



Press and hold the Egress button; the flashing indicator LED will move towards the right. When the required threshold is reached, release the button.

To reduce the patient movement detection threshold:



Press and hold the In Bed button; the flashing indicator LED will move towards the left. When the required threshold is reached, release the button.



After a few seconds the indicator LED will stop flashing and remain illuminated to show that patient movement detection is active.



If movement of the patient above the set threshold is detected, an audible tone will sound and the threshold indicator LED will flash.

To cancel the alarm or deactivate patient movement detection:



Press the In Bed button or Egress button once.



The alarm will be silenced and the threshold display indicator will go out to show that movement detection is deactivated.



To silence the alarm: Press the *VariZone* mute button. The alarm will be silenced for three minutes and the *VariZone* system will be re-enabled once patient weight is returned to the bed.

Anti-Entrapment System

The anti-entrapment system is designed to detect patient entrapment between the base and deck when the deck is lowered, or is placed into tilt or Auto-Chair.
The system is permanently active and cannot be switched off.

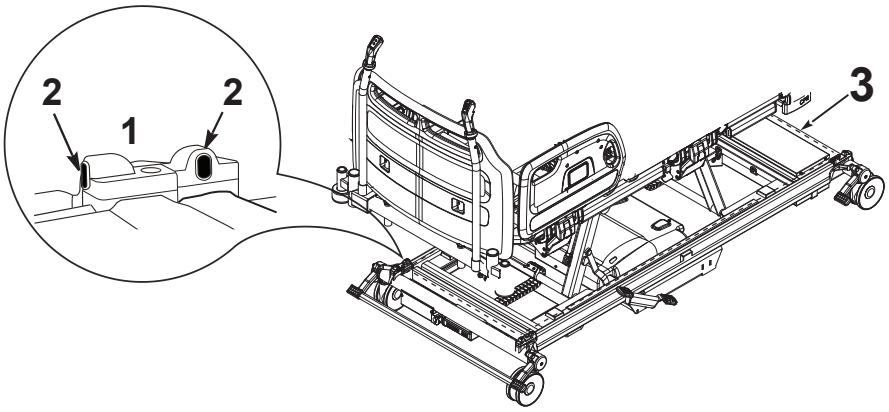
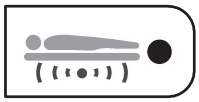


Figure 29: Anti-entrapment sensors and beam

There are four infrared sensors (1), one above each castor, which generate an invisible beam around the base of the bed (3).



If the beam is interrupted (example: by a patient's limb) while the deck is lowering, the deck stops moving, lifts slightly to allow the obstruction to be cleared, and the weighing system display reads AES.



In addition, the AES indicator LED on the ACP lights.
Upward movement of the deck is not affected.

The anti-entrapment system may also be triggered if the beam is interrupted by bed linen, etc.

Clean the lenses (See Figure 29, item 2) of the infrared sensors regularly using a soft dry cloth.

SafeSet™ (Optional Feature)

SafeSet visual status indicators **intended** *for patients at risk for falls. Patients should be assessed for fall risk by a clinically qualified person with facility protocols n mind.*

SafeSet visual status indicators provice a quick visual indication of optimum bed settings for patients identified as being at risk of falls.

SafeSet visual status indicators show four safety-critical bed parameters:

- Brake setting
- Side rail position
- Mattress platform height
- Movement detection status

Two identical *SafeSet* indicator panels are located just below the foot board.

Indicator lights (1) above each symbol light red to show a potentially unsafe condition, or green to indicate a safe condition.



Figure 31: SafeSet indicator panel

Symbol	Indicator light green ("safe" condition)	Indicator light red ("unsafe" condition)
	Brakes on	Brakes off
	All side rails raised*	If either of the head end panels are lowered If both foot end panels are lowered
	Mattress platform at minimum height (or within 25mm of minimum height)	Mattress platform not at minimum height

Symbol	Indicator light green ("safe" condition)	Indicator light red ("unsafe" condition)
	*VariZone* patient movement detection set	*VariZone* patient movement detection not set

* To comply with FDA guidelines, the system will still show a "safe" condition if one (but not both) of the foot end side rails are down.

The indicator lights are positioned so they can be easily seen at a distance. A sensor (2) will automatically reduce the brightness of the indicator lights in low light conditions, except when an indicator light is showing an unsafe (red) condition.

When *SafeSet* visual status indicators are not being used, the indicator lights can be turned off using the supplied magnetic key fob (3). Swipe the key fob horizontally across the bottom of the *SafeSet* indicator panel as shown to turn the indicator lights off.

Once disabled the lights cannot be re-enabled within four seconds.

Swipe the key fob again to turn the indicator lights back on.

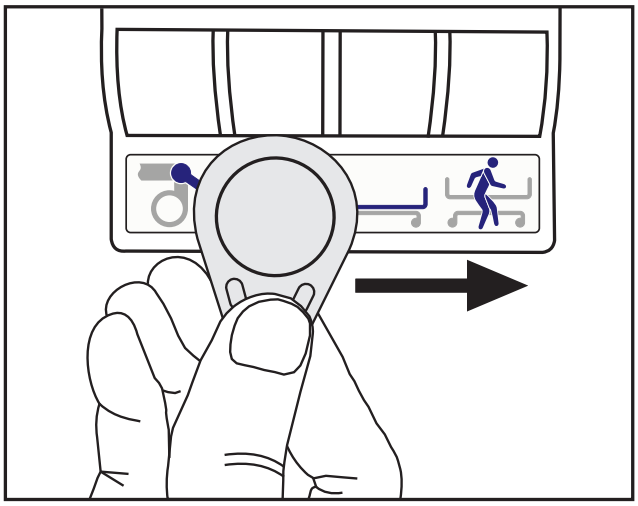


Figure 32: Turning the SafeSet indicator lights on / off

If the bed is disconnected from the electricity supply and operated on battery power the indicator lights will not illuminate.

When reconnected to the electricity supply the indicator lights do not automatically illuminate. Swipe the fob to re-enable. This is by design and is intended to conserve battery longevity.

RS232 Connection

The bed continuously transmits data about its status through an RS232 connection at the head end of the bed (see page 19).
The transmitted data can be recorded by a compatible device.

An RS232 serial cable is not supplied by Arjo.

Data is transmitted every ten seconds and includes the following information:

- Patient weight
- *VariZone Patient Movement Detection* / Bed exit alarm (on or off)
- Backrest angle in degrees relative to horizontal
- Bed height at low position (yes / no)
- Side rail position (up / down)
- Brake position (on / off)

This information can be stored in a database.

Data retrieved from the RS232 connection not intended to be used to make clinical decisions. All patient diagnosis, treatment and care should be performed under the supervision of an appropriate healthcare professional.

Controls for television and lighting

Button controls for television and lighting are located on the head end side rails. The side rails also contain loudspeakers for television sound.

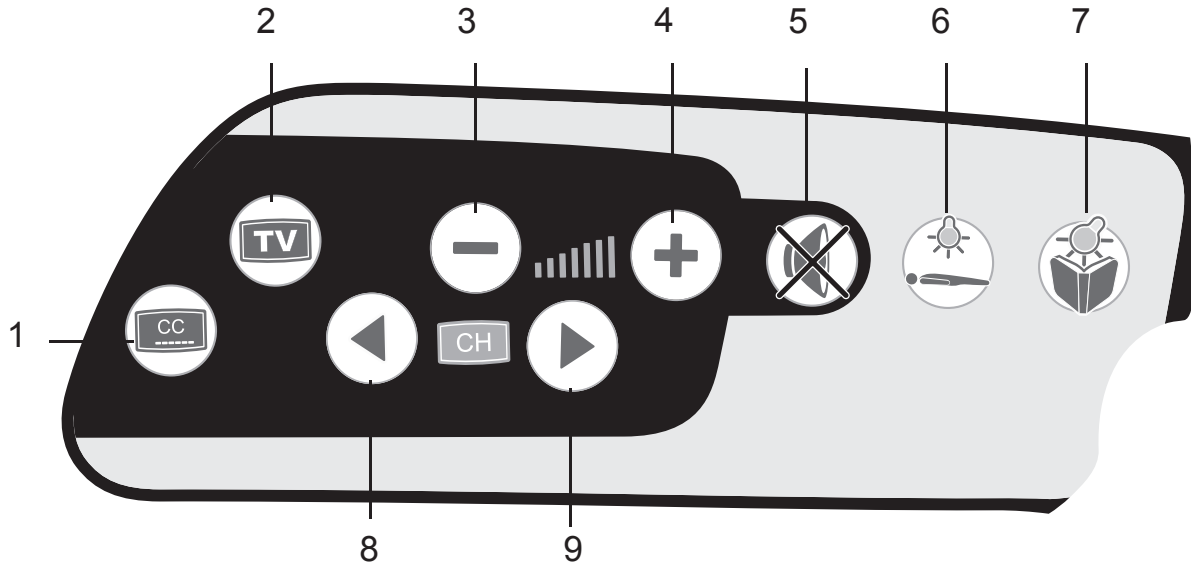


Figure 30: TV and lighting controls (patient's left hand side)

1. Closed Captioning on / off
2. Television on / off
3. Decrease volume
4. Increase volume
5. Sound on / off (mute)
6. Main room lights on / off
7. Reading lamp on / off
8. Channel down
9. Channel up

The bed must be connected to a compatible nurse call system for the TV and lighting controls to operate. The bed's electronics will recognize the type of television in use and configure the controls automatically.
The controls have been designed to be compatible with the majority of TV sets found in hospitals. If you encounter any problems, please contact the Arjo Service Department.

POWER DRIVE

The Power Drive System is designed to provide powered transport for the *Citadel* Plus Bariatric Bed Frame System.

The power drive system provides assist in forward and backward movement only. Left and right hand steering is controlled by the user.

To minimize the risk of serious injury; carefully read and follow all Safety Information on page 8 and Operating Instructions before operating power drive system. Also make sure all physician orders and facility protocols are followed.

Ensure steer lock and brakes are disengaged before operating power drive system.

Preparation for Transport

1. Unplug and store power cord.
2. Place casters in neutral position.
3. Laterally position bed into open space.

Power Drive LEDs

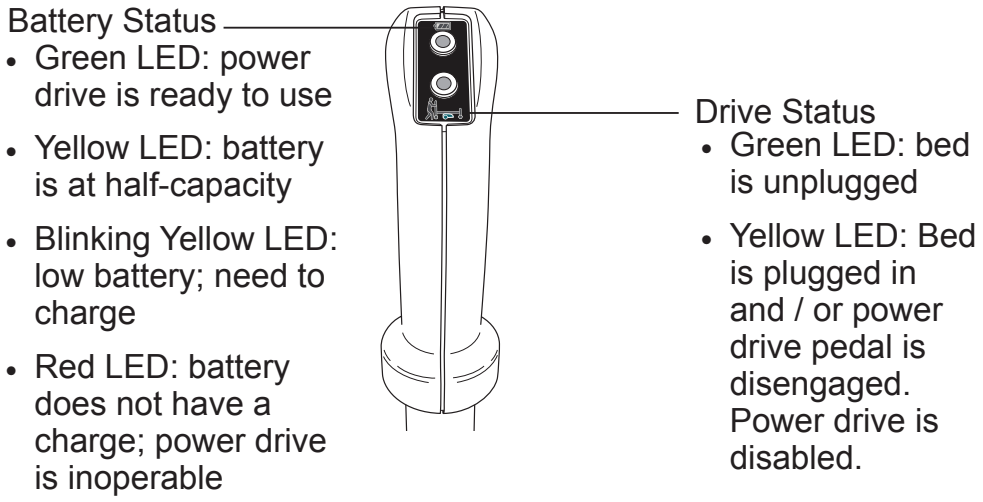


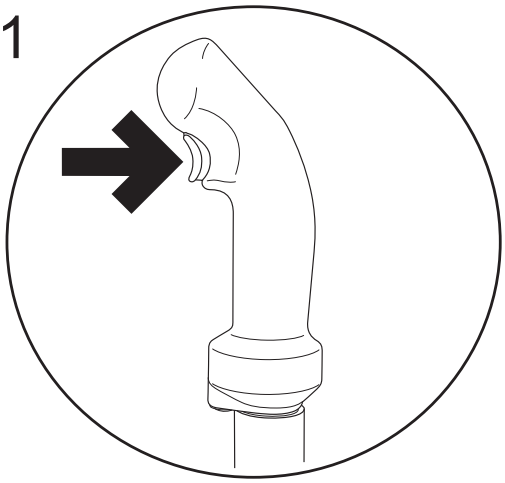
Figure 31: Power Drive Left Hand Control Grip and LEDs

If top and bottom LEDs are alternating red and yellow the power drive is malfunctioning. Refer to troubleshooting section or contact Arjo.

Left hand trigger must be held down during entire duration of power drive operation. Releasing left hand trigger will apply the power drive brake and make the power drive inoperable.

Operating Power Drive

1



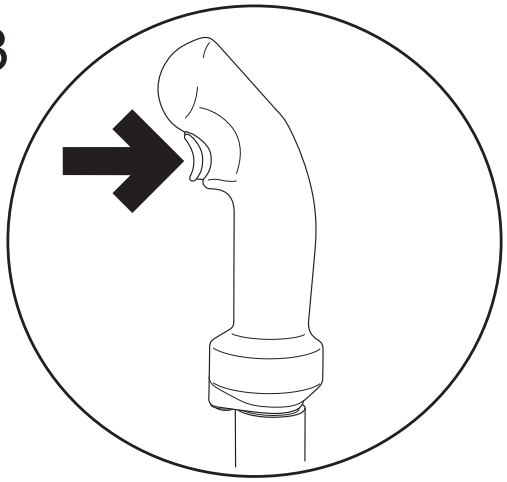
WAKE UP - Squeeze
Left Trigger Once

2



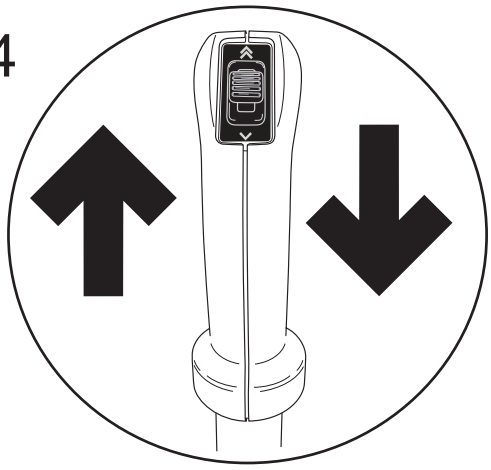
Engage Drive Wheel

3



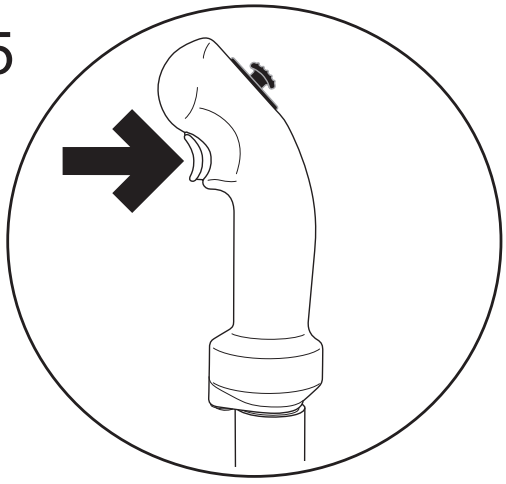
Squeeze and Hold Left Trigger -
Trigger must be engaged for entire
duration of power drive use

4



Select Direction

5



Squeeze Right Hand Trigger
To Increase Forward Speed

Power drive provides variable speed options:

- Hold down right hand trigger to go to full speed forward.
- Release right hand trigger to go half-speed forward.
- Bed will always move at slow speed when moving in reverse or while going down an incline, even while holding down trigger.

Power Drive Speeds in kph (mph)	
Full-speed forward	5 km/h (3 miles per hour)
Half-speed forward	2.4 km/h (1.5 miles per hour)
Reverse	1.2 km/h (.75 miles per hour)

To disengage power drive, release the left hand trigger.

PATIENT PLACEMENT

It is recommended that all chapters of this manual be reviewed prior to product use. Carefully read the **Contraindications, Risks and Precautions,** and **Safety Information** sections in the **Introduction** chapter of this manual prior to placing a patient on the *Citadel* Plus Bariatric Bed Frame System.

Power On

1. Plug the power cord into a wall outlet. Verify that the electrical outlet can be easily accessed when disconnecting device from wall outlet.

Do not use wall outlet controlled by a wall switch.

Arjo recommends keeping the frame plugged into a wall outlet when possible.

Preparation for Patient Placement

1. If applicable, connect nurse call system to connectors provided at the head end of the bed.
2. Apply the brakes to all four casters.
3. Make sure patient surface is level.
4. Adjust the bed to a comfortable working height.
5. Expand width extensions and length extensions if necessary.
6. Configure unit as required (add the pressure redistribution surface of choice, pillows, blankets, lines, IV poles, other equipment, accessories, etc., as necessary).
7. Press the Zero Button to reset the weighing scale to zero.

Scales / patient weights are for reference only. Scale readings should not be relied upon for medication dosage. All equipment on the weighed portion of the unit is included in weight displayed.

8. Adjust the height of the patient surface to the same level as the surface from which the patient is being transferred.
9. Make sure caster brakes on both units are locked.
10. Lower side rails.
11. Transfer patient following all applicable safety rules, institution protocols and patient placement instructions for the pressure redistribution surface used with the *Citadel* Bed Frame System.
12. Raise and lock side rails on both sides of unit.

Completion of Patient Placement

1. Press the In Bed or Egress buttons to activate and set the desired sensitivity of the *VariZone* patient movement detection system. Adjust patient surface for patient comfort.
2. Bring the bed to the lowest practical height for patient comfort.
3. Bring the bed to the desired angle of articulation for patient comfort.
4. Make sure caster brakes are locked.
5. Lock-out bed functions as required.

NURSING CARE

It is recommended that all chapters of this manual be reviewed prior to product use. Carefully read the **Contraindications**, **Risks and Precautions** and **Safety Information** sections of the **Introduction** chapter of this manual prior to performing nursing care for a patient on the *Citadel* Plus Bariatric Bed Frame System.

CPR

The following steps indicate how to place the bed into the CPR position.



1. **Press and hold the CPR button.** This will immediately flatten the head and knee sections and return the frame to level from the Trendelenburg or reverse Trendelenburg positions. If the bed is set to a height > 480 mm (19 in), then activating the CPR function will also lower the bed to 480 mm (19 in). The CPR buttons will flash on all control panels and an audible tone will sound.
2. Lower side rails.
3. Remove headboard, if necessary.
4. Depending on the patient support surface in use, a crash board may be needed.
5. Begin CPR. Follow institution CPR guidelines.
6. Reinstall headboard, if necessary.
7. Raise and lock side rails.
8. If applicable, resume therapy as directed by physician.
9. Adjust patient surface for patient comfort.

In a fault or power loss condition where the CPR button is not responding, use the CPR backrest release to position the patient for CPR.

CPR Backrest Release

CPR backrest release handles are located below the calf section on either side of the bed.
If the patient suffers a cardiac arrest, pull the CPR backrest release handle. This will lower the backrest to enable cardiopulmonary resuscitation to be performed.

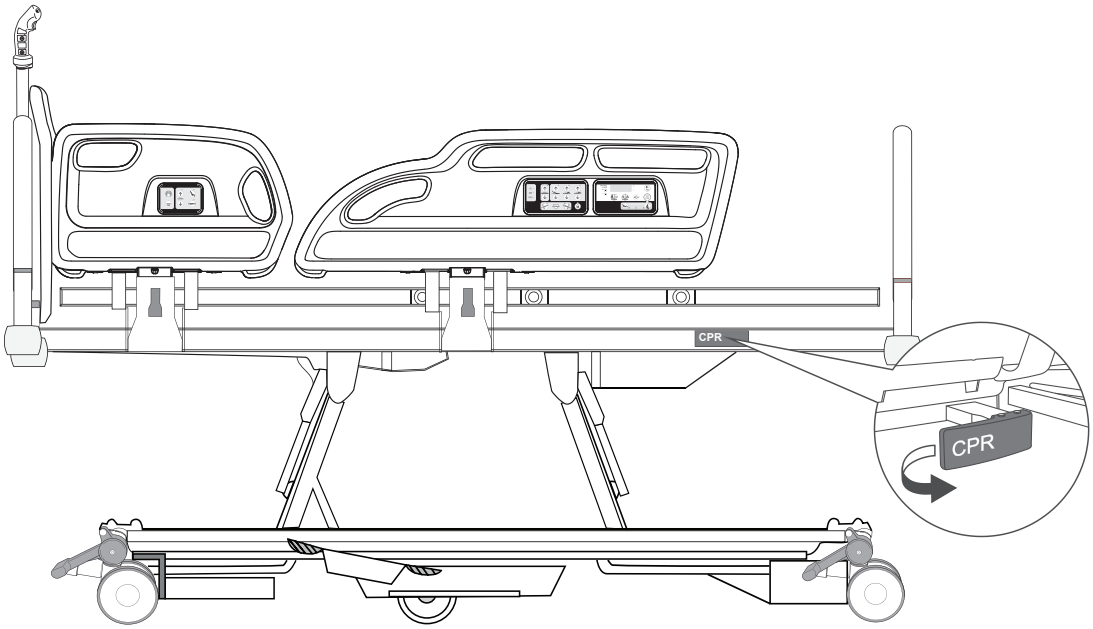


Figure 32: CPR backrest release

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

The CPR backrest release should only be used in an emergency; repeated everyday use can cause permanent wear.

Patient Bathing

1. Adjust height and level patient surface to facilitate ease of bathing.
2. Lower side rails (on care giver's side).
3. Bathe patient following institution protocols. Avoid spilling fluids on frame controls.

Fluids remaining on controls can cause corrosion, which may cause components to fail or operate erratically, possibly producing potential hazards for patient and staff.

4. Raise and lock side rails.
5. Adjust patient surface for patient comfort.

Patient Transfer from the *Citadel* Plus Bariatric Bed Frame

System

1. Level patient surface.
2. Adjust height of patient surface to same level as surface to which patient is being transferred.
3. Make sure caster brakes on both units are locked.
4. Lower side rails.
5. Transfer patient, following all applicable safety rules and institution protocols.
6. If patient will not be returning to frame, unplug the power cord from the wall outlet and press the battery power button to enter hibernation mode and disable battery power from the frame and immediately power down all functions.

Patient Transport

1. If necessary, place patient's IV therapy onto IV poles that may be placed into sockets located on all four corners of the frame.
2. Verify side rails are raised and locked.
3. Push in all width extensions prior to transport.
4. Unplug the power cord from the wall outlet and wrap the cord on to the brackets at the head end of the frame.
5. Unlock brakes.
6. If applicable, engage power drive to assist in transport (see page 47).
7. Transport patient following all applicable safety rules and institution protocols.
8. Plug power cord into wall outlet immediately following completion of patient transport.



Multiple people may be required to manually transport the bed depending on patient weight and floor conditions.

To make sure 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.

CARE AND CLEANING

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.

Deck Sections

The four deck sections (backrest, seat, thigh and calf) can be removed by pulling them upwards off the deck frame.
Lift off the calf extension sheet before removing the calf section.

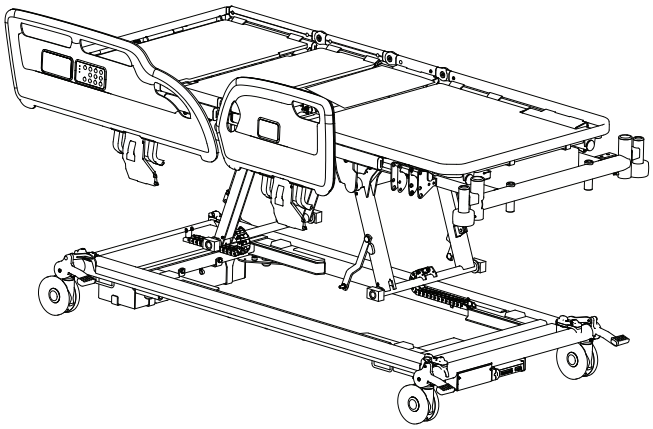


Figure 33: Deck sections (top view)

To replace each section, make sure it is correctly positioned on the deck frame then press down firmly until it snaps into place.
Replace the calf extension sheet (1) by clipping it over the end of the deck frame.

Decontamination

Do not allow the mains plug or power cord to get wet.

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.

Do not allow the accessory outlet to get wet.

These instructions also apply to accessories but not to mattresses.

For lifting straps and handles, refer to the manufacturer's instructions supplied with the product.

The bed should be cleaned and disinfected weekly, and before a new patient is placed on the bed.

Cleaning

- The bed should be cleaned and disinfected weekly, and before a new patient uses the bed.
- 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.

Disinfection

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



For cleaning and disinfection of the mattress, see mattress instructions for use.

General Recommendations

The following are the Arjo-recommended cleaning and infection control procedures for the *Citadel* Plus Bariatric Care System while it is in use.

It is recommended that all sections of this guide be reviewed prior to product use. Carefully read the **Risks and Precautions** and **Safety Information** sections in the **Introduction** chapter prior to performing cleaning procedures on the *Citadel* Plus Bariatric Care System.



To prevent cross contamination or equipment damage, Arjo recommends that the Citadel Plus Bariatric Care System be cleaned during use and between patients according to the instructions below. Local protocols and regulations / procedures for blood borne pathogens may be used provided the manufacturer's instructions are followed.



Always disconnect the Citadel Plus Bariatric Care System from mains wall outlet before cleaning. Failure do so could result in equipment damage and / or electric shock.

Cleaning the *Citadel* Plus Bariatric Bed Frame System While in Use



Do not allow fluid to penetrate the Citadel Plus Bariatric Care System control panels.

1. If possible, remove the patient from the bed prior to cleaning. Daily care and cleaning consists of wiping down all surfaces and side rails (as needed) during patient bathing.
2. Follow care and cleaning instructions for the specific patient support surface in use.
3. Unplug the *Citadel* Plus Bariatric Care System from wall outlet.
4. Inspect the power cord for any signs of wear or damage. The *Citadel* Plus Bariatric Care System should not be operated with a worn or damaged power cable. Contact Arjo if damage is found.
5. Using a cloth dipped in warm soapy water or approved hospital disinfectant (diluted according to manufacturer's instructions), wipe the surfaces of the *Citadel* Plus Bariatric Care System. Rinse with plain water and allow to dry completely.
6. Allow all components to dry completely before returning to use.
7. Inspect all parts of the *Citadel* Plus Bariatric Care System for damage prior to returning them to use. Contact Arjo as required for service or replacement.
8. Plug in bed to wall outlet and adjust settings.

PREVENTIVE MAINTENANCE

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



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, 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 care giver. Preventive maintenance can help to prevent accidents.

Actions to be completed by care giver	**Daily**	**Weekly**
Check operation of side rails	✓	
Visually check casters		✓
Check operation of the manual CPR release handles on both sides of the bed		✓
Visually check power supply cord and mains plug		✓
Carry out a full test of all electrical bed positioning functions (backrest, height, tilt, etc.)		✓
Check that the patient controls, care giver controls and Attendant Control Panels operate correctly		✓
Check that the weighing system controls operate correctly		✓
Check operation of the anti-entrapment system and clean the sensor lenses (see page 44)		✓
Check the mattress for damage and fluid ingress		✓
Examine the lifting pole, strap and handle	✓	
Power Drive		✓
Width Extensions		✓
Visually check power drive wheels		✓

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



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

Actions to be completed by qualified personnel	Yearly
Check that the bed operates correctly using the backup battery as described in the section Battery Test section below	✓
Check operation of the casters, paying special attention to braking and steering functions	✓
Check that the bed extension locks securely in all three positions	✓
Examine the power cord and mains plug; if damaged, replace the complete assembly; do not use a rewireable plug	✓
Examine all accessible flexible cables for damage and deterioration	✓
Check all accessible nuts, bolts and other fasteners to ensure they are present and correctly tightened	✓
Check any accessories fitted to the bed, paying particular attention to fasteners and moving parts	✓

Weighing System

The weigh system should be re-calibrated before the date of expiry shown on the bed. Make sure the bed is re-calibrated every 12 months.

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 deck to maximum height - ignore the battery warning tone.
3. Raise the backrest and thigh sections to highest position.
4. Press and hold the CPR button. The deck will flatten and lower to a mid-height position.
5. Lower the deck to minimum height.
6. Apply maximum head down tilt (Trendelenburg).
7. Return the deck 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 Arjo-approved service agent.
To maintain best performance, the backup battery should be replaced every four years by an Arjo-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 Arjo-approved service agent.

Symptom	Possible Cause	Action
Audible tone when using the bed	Bed is operating from the backup battery	Check that the power supply cord is plugged in and the electricity supply is functioning correctly 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 maneuver	Brake pedal in steer position	Place brake pedals in the free position
All indicator LEDs on ACP lit or flashing	Duty cycle of electrical system exceeded	Refer to the section Over-Use Lockout on page 32
Deck cannot be lowered	Height control software error	Raise the deck to maximum height to reset software
Error code E300 is displayed	Control button depressed for more than 90 seconds	Remove pressure from control buttons. If error code does not clear call an Arjo-approved service agent
Deck cannot be lowered and error code AES is displayed	Anti-Entrapment system activated	Remove obstruction(s) from below the deck. If bed still cannot be lowered, call an Arjo-approved service agent
Error code E410	Service Error	Call an Arjo-approved service agent
Alarm sounds when patient moves on the bed	Movement detection threshold set too low	Increase *VariZone* patient movement detection threshold setting
Errors in indicated patient weight	Deck obstructed	Check to ensure the deck is not touching furniture, curtains, cables, etc. Check to ensure that weight has not been added to the bed without using the auto compensation function. Raise the bed from its lowest position.
Nurse call function not working	Nurse call cable not connected or wrong type	Check to ensure cable is of correct type and properly connected
Backrest does not lower using the manual CPR backrest release handle	Mis-adjustment of the CPR backrest release cable.	Push the backrest down to initiate lowering
Weighing system display shows unknown value	System fault or operator error	Refer to the table of error codes on page 41
TV / lighting controls not working	Nurse call cable not connected or wrong type	Check to ensure cable is of correct type and properly connected

Symptom	Possible Cause	Action
Troubleshooting Power Drive		
Power Drive will not function	Bed plugged into wall outlet	Check Bed status LEDs and determine if bed is plugged into wall
	Caster brakes engaged	Check Bed status LEDs and brake pedals
	Battery too low	Check Bed status LEDs
	Power Drive wheels not engaged with the floor	Inspect Power Drive pedal, ensure wheels are down
	Constant pressure not applied to control handle trigger	Ensure constant pressure is applied to trigger during duration of Power Drive use.
Bed will not steer	Caster steer lock is engaged	Ensure caster brake pedals are in the neutral position.
No LED	Power Drive not awake	Depress left hand control trigger once

Error Codes

Display	Error Name	Description	Possible Reasons
E001	Zeroing the bed on battery	Zero on battery power	Connect bed to mains supply and re-initalize the weighing system
E002	Unsteady weight	Error when auto compensation weight is lower than minus 100 kg (220 lb	The E002 error will be cleared by adding weight until the auto compensation is above -100 kg and then pressing the auto-comp key (H1) again, or when weight is removed and weighing zeroed.
E003	Error when auto compensation weight is higher than minus 100 kg (220 lb)	The auto compensation weight of 100 kg (220 lb) change has been exceeded and the auto compensation will not be completed	Error will be cleared by removing weight until the auto compensation is below 100 kg (220 lb)
E102	The time out on 10 seconds for the roller (unsteady weight)	During a weight command, the weight was not stable and changing too much	The bed was touched or leaned on, repeat with no one touching the bed
E300	Button stuck error	Control button depressed for more than 90 seconds	Remove pressure from control buttons
E410	General Error	Service error which requires technical investigation	

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 Arjo-approved service agent.

Indication	Possible cause
ACP deck height and head down tilt indicator LEDs flashing	Height actuator fault (foot end)
ACP deck height and foot down tilt indicator LEDs flashing	Height actuator fault (head end)
ACP backrest indicator LED flashing	Backrest actuator fault
ACP thigh section indicator LED flashing	Thigh section actuator fault
ACP calf section indicator LED flashing	Calf section actuator fault
Deck height, head down tilt, backrest and thigh section indicator LEDs flashing	Control unit fault

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 for Use.

ACCESSORIES

Recommended accessories for the *Citadel* Plus Bariatric Bed Frame System range are shown in the table below. Note that some items may not be available in all countries.

Accessory	**Product code**
Lifting pole with strap and handle	ENT-ACC01
IV pole	ENT-ACC02
Angled IV pole	ENT-ACC04
Fracture frame	ENT-ACC05
Syringe pump holder	ENT-ACC07
Oxygen bottle holder (PD cylinder)	ENT-ACC08
Small traction assembly	ENT-ACC10
Double Bottle Holder	ENT-ACC12
IV bag holder for lifting pole	ENT-ACC13
Additional 2 hooks for IV pole	ENT-ACC14
Oxygen bottle holder (B5 cylinder)	ENT-ACC18
Urine bottle holder	ENT-ACC19
Heavy duty IV pole	ENT-ACC24
Transducer mounting pole	ENT-ACC26
Head end traction assembly	ENT-ACC32
Head end ITU panel	ENT-ACC34
Oxygen bottle holder (PD cylinder)	ENT-ACC58
Monitor shelf	ENT-ACC74
Socket adapter	ENT-ACC75
Trapeze Mount Assembly	ENT-ACC101

ELECTROMAGNETIC COMPABILITY (EMC)

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.



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 1.5 m away from the equipment.

Intended Environment: Professional Healthcare Facility Environment.
Exceptions: HF Surgical Equipment and the RF Shielded room of an ME SYSTEM for magnetic resonance imaging.



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.

<table>
<tr><th colspan="4">Guidance and manufacturer’s declaration – electromagnetic emission</th></tr>
<tr><th>Emission test</th><th>Compliance</th><th colspan="2">Guidance</th></tr>
<tr><td>RF emissions
CISPR 11</td><td>Group 1</td><td colspan="2" rowspan="4">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.

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>RF emissions
CISPR 11</td><td>Class A</td></tr>
<tr><td>Harmonic emissions
IEC 61000-3-2</td><td>Class A</td></tr>
<tr><td>Voltage fluctuations / flicker emissions
IEC 61000-3-3</td><td>Complies</td></tr>
<tr><th colspan="4">Guidance and manufacturer’s declaration – electromagnetic immunity</th></tr>
<tr><th>Immunity test</th><th>IEC 60601-1-2 test level</th><th>Compliance level</th><th>Electromagnetic environment - guidance</th></tr>
<tr><td>Electrostatic discharge (ESD)
IEC 61000-4-2</td><td>±2kV, ±4kV, ±8kV, ±15kV air
±8kV contact</td><td>±2kV, ±4kV, ±8kV, ±15kV air
±8kV contact</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>
</table>

Conducted disturbances inducted by RF fields EN 61000-4-6	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[a]. Field strengths from fixed RF transmitters, as determined by an electromagnetic site survey, should be less than the compliance level in each frequency range[b]. Interference may occur in the vicinity of equipment marked with this symbol: 
Radiated RF electromagnetic field EN 61000-4-3	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 EN 61000-4-3	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 EN 61000-4-4	±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 comercial or hospital environment.
Power frequency Magnetic field EN 61000-4-8	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 IEC 61000-4-5	±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	

Guidance and manufacturer's declaration – electromagnetic immunity			
Voltage dips, short interruptions and voltage variations on power supply input lines IEC 61000-4-11	0% UT; 0,5 cycle At 0°, 45°, 90°, 135°, 180°, 225°, 270° and 315° 0% UT; 1 cycle and 70% UT; 25/30 cycles Single phase: at 0° 0% UT; 250/300 cycle	0% UT; 0,5 cycle At 0°, 45°, 90°, 135°, 180°, 225°, 270° and 315° 0% UT; 1 cycle and 70% UT; 25/30 cycles Single phase: at 0° 0% UT; 250/300 cycle	
U_T is the a.c. mains voltage prior to the 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.			

WARRANTY AND SERVICE

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

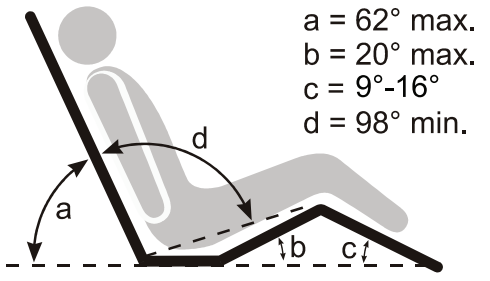
For service, maintenance and any questions regarding this product, please contact your local Arjo office or Arjo-approved distributor. A list of Arjo offices can be found at the back of this manual in the **Questions and Information** section.

Have the model number and serial number of the equipment available when contacting Arjo regarding service, spare parts or accessories.

SPECIFICATIONS

Specifications subject to change without notice.

General	
Safe working load	522 kg (1150 lb)
Maximum patient weight	454 kg (1000 lb)
Product weight (approx.) with power drive	360 kg (793 lb)
Product weight (approx.) without power drive	306 kg (675 lb)
Audible noise	<35dB approx.
Operating conditions	
Temperature	14°C to 35°C (58°F to 95°F)
Relative humidity	20% to 80% noncondensing
Altitude	up to 3,048 m (10,000 ft)
Electrical data	
Power input	15 A max at 115 VAC 60Hz 8 A max at 230 VAC 50Hz 8 A max at 230 VAC 60Hz (Kingdom of Saudi Arabia)
Duty cycle	10% (2 min. on, 18 min. off)
Safety standards USA / Canada CLASSIFIED c UL us E348583	ANSI / AAMI ES60601-1:2005 CAN / CSA C22.2 No.60601-1:08
Other Safety standards	IEC 60601-1:2012 & IEC 60601-2-52:2009
Electric shock protection	Class I Type B
EMC	Complies with EN 60601-1-2:2014
Potential equalization terminal	Complies with EN 60601-1:1990 and 2006
Liquid ingress protection	IPX4
Backup battery	2 x 12 V series connected, sealed, rechargeable lead/acid gel, 26Ah

Patient weighing system	
Minimum verification interval (scale division)	500 g or 1 lb
Minimum capacity	10 kg (22 lb)
Maximum capacity	522 kg (1150 lb)
Approvals[1]	EC type approval no. UK3074. Complies with 2014/31/EU Class III
Scales rating[2]	Class III
[1] applicable for countries an associate in CEN region [2] applicable for rest of the world	
Overall length	
Position 1 (Standard)	229 cm (90.2 in)
Position 2 (Mid)	240 cm (94.5 in)
Position 3 (Extended)	251 cm (98.8 in)
In-bed length	
Position 1 (Transport)	202 cm (80 in)
Position 2 (Standard)	214 cm (84 in)
Position 3 (Extended)	224 cm (88 in)
Overall width	103 cm (40.6 in)
Overall width extended	134 cm (52.7 in)
Height of deck (center of seat section to floor)	
With 150 mm (5.9 in) castors	36 cm to 80 cm (14.1 to 31.5 in) Flat Deck Sheets
Head down tilt angle	12° min.
Foot down tilt angle	12° min.
Mattress size (refer to the section Mattresses on page 21)	
Position 1 (Transport)	202 cm x 86.4 cm, 15 to 20.5 cm thick (80 in x 34 in, 6 to 8 in thick)
Position 2 (Extended)	214 to 224 cm x 122 cm, 15 to 20.5 cm thick (84 to 88 in x 48 in, 6 to 8 in thick)
Deck angles	

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. Do not stack or store product close to other equipment. This equipment should be stored in a clean, dry and well-ventilated area which meets the following conditions:	
Temperature	-29°C to 50°C (-20°F to 122°F)
Relative humidity	non-condensing
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.	
Power Drive	
Speed	
Half-speed / Full-Speed Forward	up to 2.4 / 5 km/h (1.5 / 3 miles per hour)
Reverse	1.2 km/h (.75 miles per hour)
Travel Distance	.8 km (.5 miles)

EXPLANATION OF SYMBOLS USED



Certified to UL Std. 60601-1



Temperature Low and High Limits



No Hooks

IPX4

Protected against ingress of liquids



Important Operational Information



Auxiliary Power Outlet



Warning of possible hazard to system, patient or staff



Refer to Instructions for Use

CE
2797

CE marking indicating conformity with European Community harmonised legislation.
Figures indicate Notified Body supervision.

SN

Serial Number

MD

Indicates the product is a Medical Device according to EU Medical Device Regulation 2017/745



This product or its parts are designated for separate collection at an appropriate collection point. At the end of useful life, dispose of all waste according to local requirements, or contact your local Arjo representative for advice.



Consult Instructions for Use



Alternating Current



Type B Applied Part



Shock Hazard



Manufacturer



Date of Manufacture

REF

Reference Number



Non-ionizing Radiation



Tripping Hazard



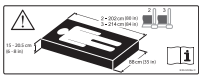
Do Not Shower



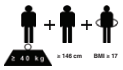
Protective earth (ground)

CPR

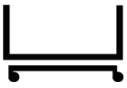
Cardiopulmonary Resuscitation



Recommended Mattress Size



Recommended Patient Size



Product Weight



Safe Working Load



Max Patient Weight

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Address page - REV 25: 01/2020

www.arjo.com

At Arjo, we are committed to improving the everyday lives of people affected by reduced mobility and age-related health challenges. With products and solutions that ensure ergonomic patient handling, personal hygiene, disinfection, diagnostics, and the effective prevention of pressure ulcers and venous thromboembolism, we help professionals across care environments to continually raise the standard of safe and dignified care. Everything we do, we do with people in mind.

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CE
2797