
Miranti
Instructions for Use

ARJOHUNTLEIGH
GETINGE GROUP



WARNING

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



Mandatory to read the Instructions for Use

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Foreword

Thank you for purchasing ArjoHuntleigh equipment.

Your *Miranti* lift bath trolley is a part of a series of quality products designed especially for hospitals, nursing homes and other health care use.

We are dedicated to serving your needs and providing the best products available along with training that will bring your staff maximum benefit from every ArjoHuntleigh product.

Please contact us if you have any questions about the operation or maintenance of your ArjoHuntleigh equipment.

Please read this *Instructions for Use* thoroughly!

Please read this *Instructions for Use (IFU)* in its entirety before using your *Miranti* lift bath trolley. Information in this *IFU* is crucial to the proper operation and maintenance of the equipment, will help protect your product, and make sure that the equipment performs to your satisfaction. Some of the information in this *IFU* is important for your safety and must be read and understood to help prevent possible injury.

Unauthorized modifications on any ArjoHuntleigh equipment may affect its safety. ArjoHuntleigh will not be held responsible for any accidents, incidents or lack of performance that occur as a result of any unauthorized modification to its products.

Report Unexpected Operations or Events

Contact your local ArjoHuntleigh representative if any unexpected operations or events occur. The contact information appear on the last page of this *IFU*.

Service and Support

A service routine must be performed on your *Miranti* lift bath trolley every year by qualified personnel to make sure the safety and operating procedures of your product. See section *Care and Preventative Maintenance* on page 29.

If you require further information, please contact ArjoHuntleigh for comprehensive support and service programs to maximize the long-term safety, reliability and value of the product.

Contact your local ArjoHuntleigh representative for replacement parts. The telephone number appears on the last page of this *Instructions for Use (IFU)*.

Study the DVD for your *Miranti* Lift Bath Trolley

A DVD accompanies this *IFU*. Please note that the DVD does not replace the information in this *IFU*. The *IFU* contains additional important safety instructions.

Definitions in this *IFU*

WARNING

Means:

Safety warning. Failure to understand and obey this warning may result in injury to you or to others.

CAUTION

Means:

Failure to follow these instructions may cause damage to all or parts of the system.

NOTE

Means:

This is important information for the correct use of this system or equipment.



Means:

The name and address of the manufacturer.

Intended Use

This equipment must be used in line with its intended use and in accordance with these safety instructions. Anyone using this equipment must also have read and understood the instructions in this *Instructions for Use (IFU)*.

If there is anything you are not sure about, contact your ArjoHuntleigh representative.

This equipment is intended for lifting and transferring adult residents to and from a bathroom in a care facility and to be used in an assisted bathing process.

Miranti must be used by appropriately trained caregivers with adequate knowledge of the care environment, its common practices and procedures, and in accordance with the guidelines in the *Instructions for Use (IFU)*.

Any other use is prohibited. The equipment may only be used for the purpose specified here.

Resident Assessment

We recommend that facilities establish regular assessment routines. Caregivers should assess each resident according to the following criteria prior to use:

The resident's weight should not exceed 160 kg/
353 lbs.

The resident must be able to understand and respond to instructions to remain in a safe laying position on the stretcher or remain in such a position as a result of a limited physical capacity for movement.

If a resident does not meet these criteria an alternative lift shall be used.

The useful life of this equipment, unless otherwise stated, is ten (10) years, subject to preventative maintenance being carried out in accordance with the instructions for care and maintenance found in this *IFU*.

Lifetime of the Equipment

The equipment must only be used for the purposes stated above.

The lifetime of this equipment is ten (10) years and the service life of the safety belt is two (2) years. Depending on the storage of the battery, the use frequency and the charging intervals, the service life of the battery is 2-5 years.

The lifetime and service life are as stated providing that the preventative maintenance are being carried out in accordance with the instructions for care and maintenance in this *IFU*.

Depending on level of wear some equipment parts such as castors and hand control may need to be replaced during the equipment's lifetime according to information in the *IFU*.

Safety Instructions

WARNING

To avoid explosion or fire, never use the equipment in oxygen rich environment, in presence of heat source or flammable anaesthetic gases.

WARNING

To prevent cross-contamination, always follow the disinfection instructions in this *IFU*.

WARNING

To avoid entrapment, make sure to keep the patients hair, arms and feet close to the body and use designated grab supports during any movement.

WARNING

To avoid the device from tipping and the patient from falling, do not use the equipment on floor with recessed drains, holes or slopes exceeding a ratio of 1:50 (1.15°).

WARNING

To avoid injury, make sure that the patient is not left unattended at any time.

WARNING

To avoid falling during transfer, always make sure that the brakes are applied on all equipment being used.

WARNING

To avoid falling, make sure that the user weight is lower than the safe working load (SWL) for all products or accessories being used.

WARNING

To avoid falling, make sure that the patient is positioned correctly and that the safety belt is being used, properly fastened and tightened.

NOTE

All materials used in the *Miranti* lift bath trolley complies with established biocompatibility standards and have been tested accordingly (ISO 10993-5).

The body supported material in the seat and backrest is PUR (polyurethane).

Preparations

Actions Before First Use

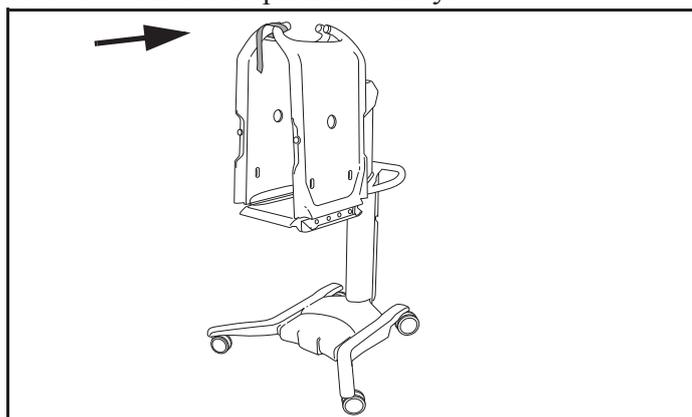
(10 steps)

- 1 Visually check the package for damage. If the product looks damaged due to freight, make a complaint to the transport agency.
- 2 The packaging should be recycled according to local regulations.
- 3 Check that all parts of the product are supplied. Compare with the section *Part Designations on page 8*. If any part is missing or damaged - do NOT use the product.
- 4 Read the *IFU*.
- 5 Disinfect the product according to section *Cleaning and Disinfection Instructions on page 24*.
- 6 Unpack the battery charger and install it according to the *Battery Charger IFU*.
- 7 Charge the battery for 24 hours.
- 8 Perform a functionality test. See section *Care and Preventative Maintenance on page 29*.
- 9 Choose a designated area, where the *IFU* should be kept and is easily accessible at all times.
- 10 Make sure to have a rescue plan ready in case of a patient emergency.

NOTE

If you have any questions, please contact your local ArjoHuntleigh representative for support and service. The contact numbers appear on the last page of this IFU.

The parts of the stretcher are secured by the enclosed sling when the parts are folded upwards. See illustration below. The stretcher parts are heavy!



Actions Before Every Use

(4 steps)

- 1 Check that all parts are in place. Compare to the *Parts Designation* page.
- 2 If any part is missing or damaged - do NOT use the product.

3

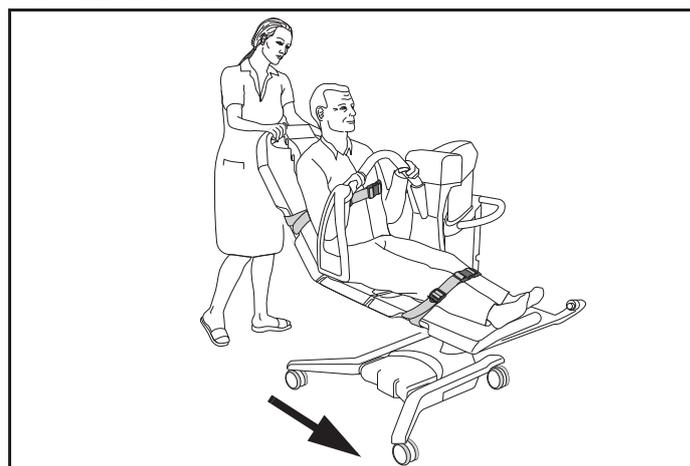
WARNING

To prevent cross-contamination, always follow the disinfection instructions in this *Instructions for Use*.

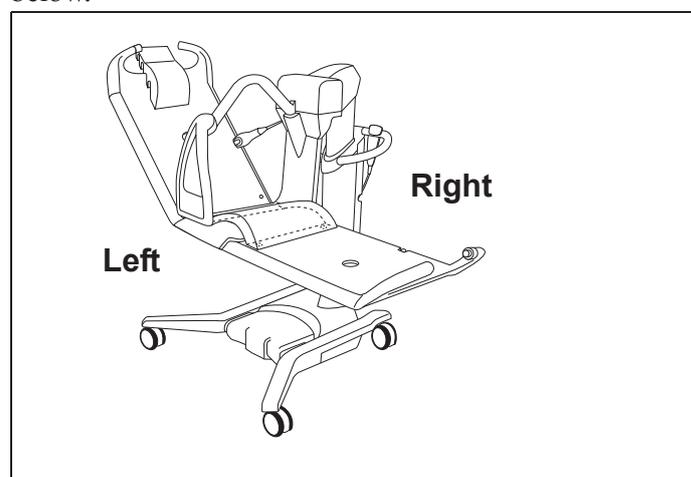
- 4 Make sure that the battery is fully charged.

Miranti Lift Bath Trolley Directions

The driving direction during the transfer is according to the illustration below.



The directions right or left in this *IFU* are given as below.

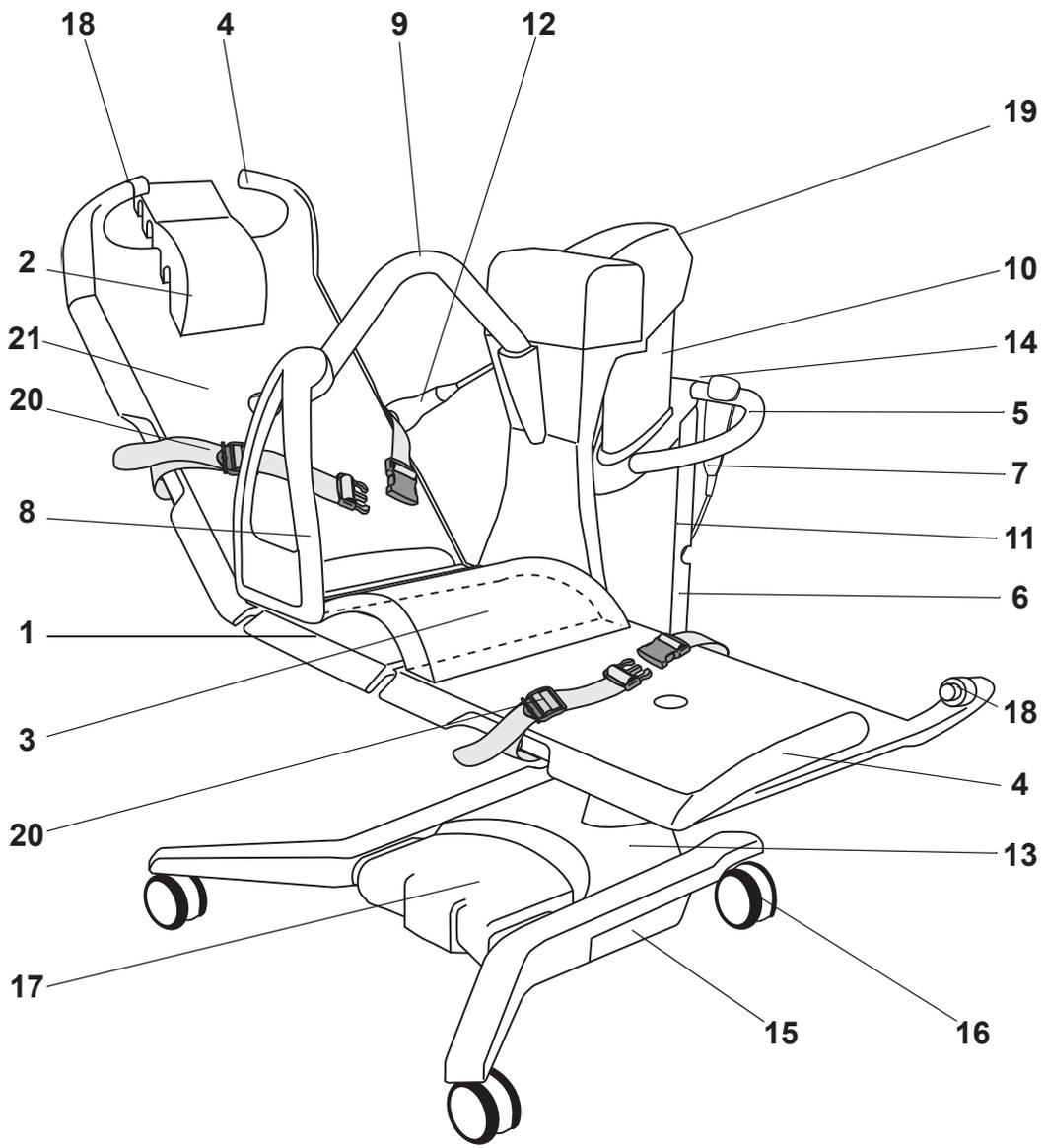


Part Designations

- 1 Stretcher and frame 
- 2 Headrest
- 3 Thigh-support cushion
- 4 Transfer handle
- 5 Positioning handle
- 6 Battery
- 7 Hand control
- 8 Side guard
- 9 Patient security grip
- 10 Pillar
- 11 Emergency High/Low
- 12 Hook rope
- 13 Central brake (placed under the chassis)
- 14 Control panel
- 15 Chassis
- 16 Castor
- 17 Power drive (optional)
- 18 Power drive handle (optional)
- 19 Scale (optional)
- 20 Safety belt/belts
- 21 Powered backrest

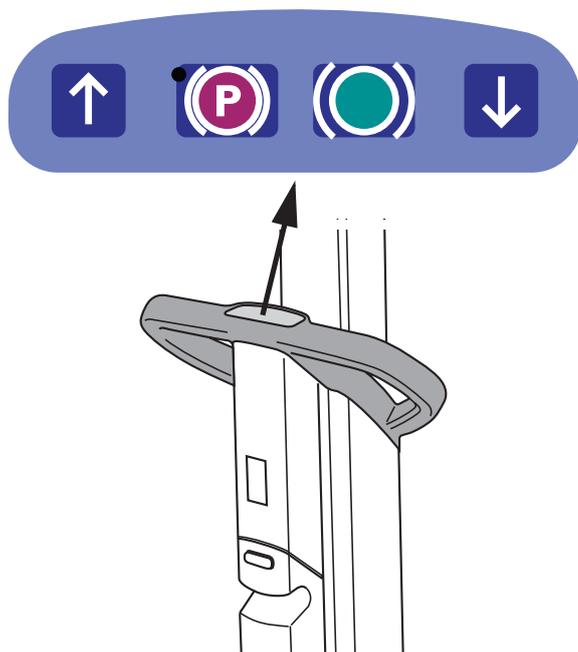


Applied part: Type B
Stretcher and frame including all attached parts to it. protection against electric shock in accordance with IEC 60601-1.



Product Description/Function

Fig. 1



Lifting

The lifting/lowering movement is performed by an actuator driven by an electric motor.

Central Brake

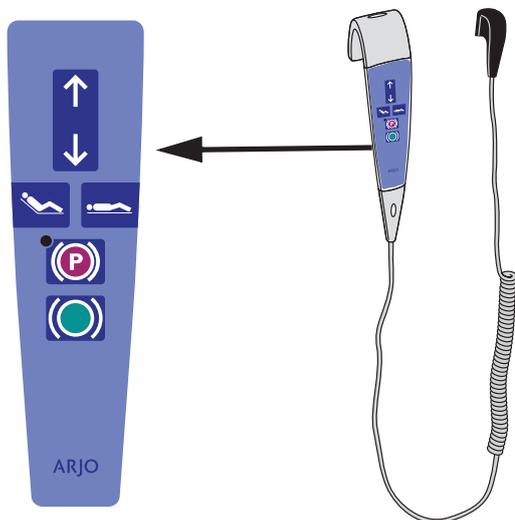
The central brake consists of two cylinders with brake pads, placed under the chassis. It is operated from the control panel or the hand control. When the brake is activated the brake pads are pressed down onto the floor.

Control Panel

The panel has four control buttons, marked as follows:
(See Fig. 1)

- Arrow pointing upwards, for raising the *Miranti* lift bath trolley.
- Arrow pointing downwards, for lowering the *Miranti* lift bath trolley.
- Dark red brake symbol, for activating the central brake, indicated by flashing light.
- Green brake symbol, for releasing the central brake.

Fig. 2

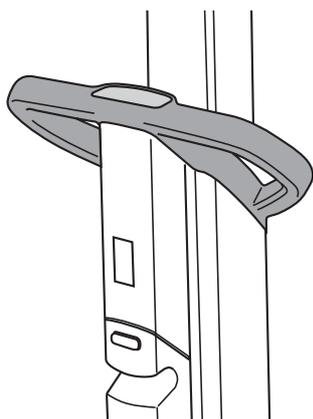


Hand Control

The hand control has an integrated hook which makes it easy to attach to various parts of the *Miranti* lift bath trolley. (See Fig. 2)

- Unhook the hand control and hold it in your hand.
- Press the “up arrow” button on the hand control in order to raise the *Miranti* lift bath trolley.
- Press the “down arrow” button on the hand control in order to lower the *Miranti* lift bath trolley.
- Press the dark red button to activate the brakes. Indicated by a flashing light.
- Press the green button to release the central brake.
- Press the button with the sitting figure to raise the backrest.
- Press the button with the lying figure to lower the backrest.

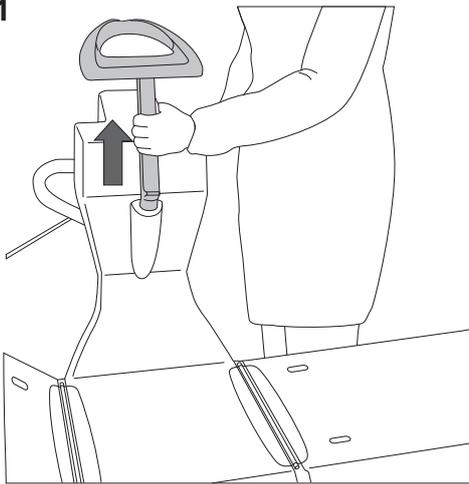
Fig. 3



Positioning Handle

Use the positioning handles for adjusting the *Miranti* lift bath trolley to a bath or bed. (See Fig. 3)

Fig. 1

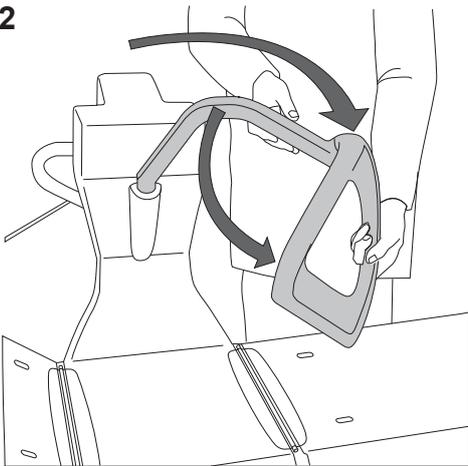


Side Guard and Patient Security Grip (3 steps)

The side guard, which prevents the patient falling to the side and the patient security grip, which the patient can hold, are integrated in a hinged bar.

1 Lift the bar upwards. (See Fig. 1)

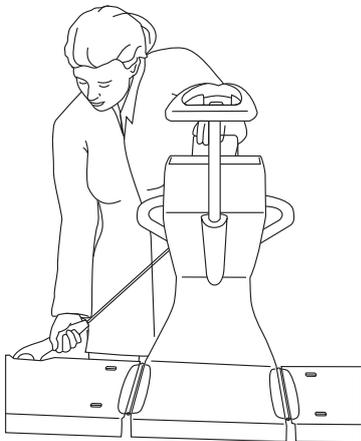
Fig. 2



2 Hold the side guard with one hand and the patient security grip with the other. (See Fig. 2)

3 First lower the patient security grip away from the patients head, then you can position the side guard.

Fig. 3

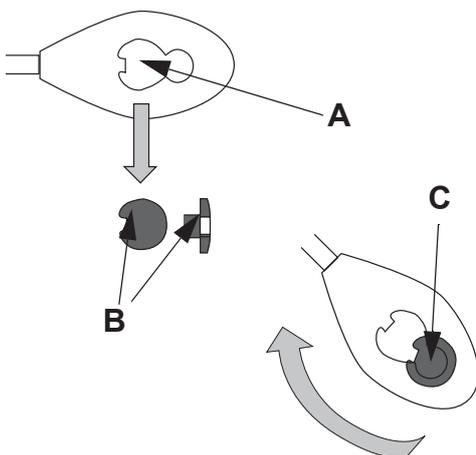


Powered Backrest/Hook Rope (5 steps)

Both ends of the stretcher can be used as a backrest and can be raised and lowered by an electric motor via the hand control. The hook rope, which guides the backrest has to be fixed to the selected side of the stretcher (backrest) either before or after the patient has entered the stretcher.

1 Attach the hook rope to the button head on the stretcher. (See Fig. 3)

Fig. 4



2 Check that the tap in the hole (A) fits the notch in the button (B). (See Fig. 4)

3 Move the button head to the narrow part of the key hole.

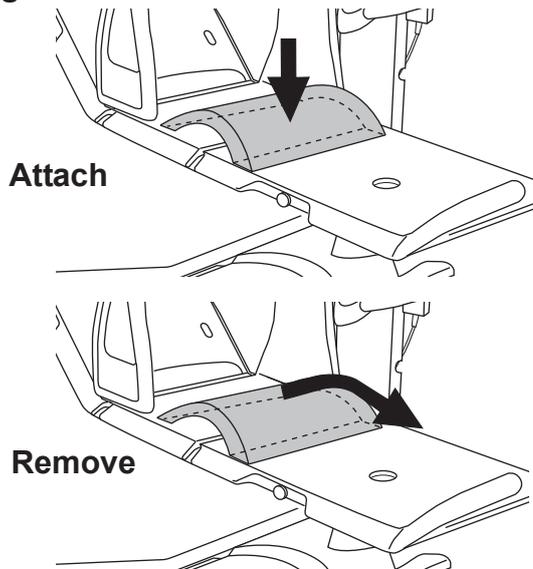
4 Turn the hook upwards and make sure the hook rope is fixed (C). (See Fig. 4)

5 Double check the hook fixation.

NOTE

Make sure the patient is positioned correctly on the stretcher.

Fig. 5



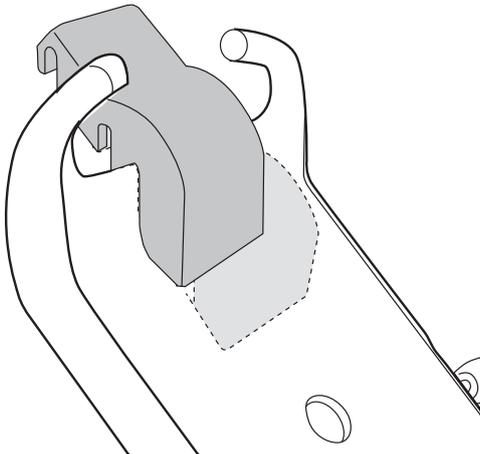
Thigh Support Cushion

The support cushion must be placed under the thighs of the patient for comfort during transfer and bath. (See Fig. 5)

The elastic part of the cushion should be against the patient's posterior. Push the cushion with the guide pins in the holes.

To remove the cushion, fold it back toward the leg rest.

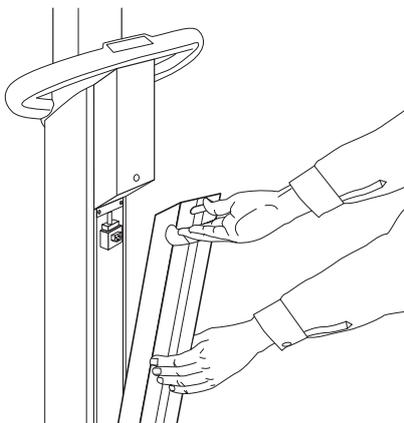
Fig. 6



Headrest

The headrest can easily be moved to the selected backrest side and adjusted to the patient's height. (See Fig. 6)

Fig. 7

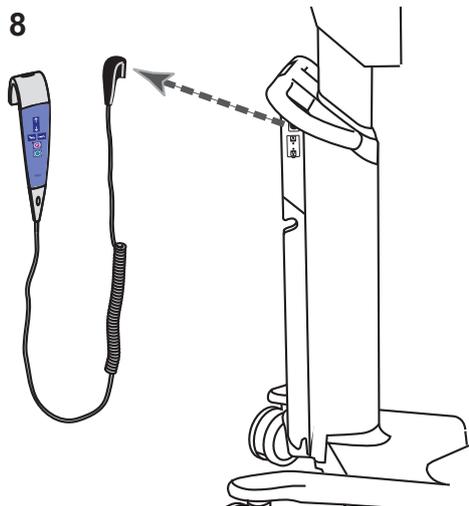


Emergency Stop

If, for any reason, the *Miranti* lift bath trolley does not respond to the control buttons, you can quickly stop lift movement by pressing the button on the battery and disconnect it. (See Fig. 7)

Contact your local ArjoHuntleigh representative before re-using the *Miranti* lift bath trolley.

Fig. 8



Emergency High/Low

(2 steps)

If, for any reason, the *Miranti* lift bath trolley does not respond to the control buttons, raise or lower the *Miranti* lift bath trolley by using the Emergency High/Low.

1 Unplug the hand control. (See Fig. 8)

2 **CAUTION**

Do not use an object with sharp tip for pressing into the holes.

Press a blunt, thin object into the holes at the panel. (i.e. a pen) (See Fig. 9)

- Press it into the hole next to the "up arrow" in order to raise the *Miranti* lift bath trolley.
- Press it into the hole next to the "down arrow" in order to lower the *Miranti* lift bath trolley.

NOTE

A continuous beeping sound is heard during action "up" and "down".

Contact your local ArjoHuntleigh representative before re-using the *Miranti* lift bath trolley.

Fig. 9

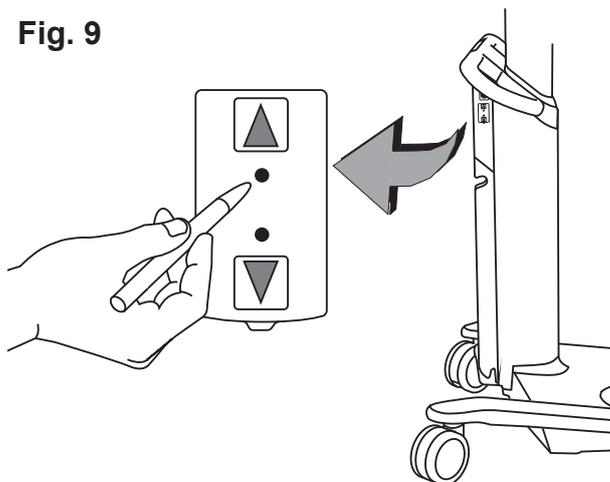
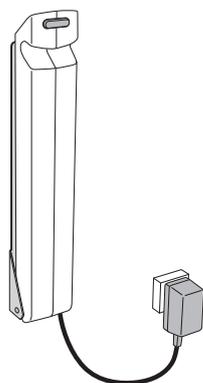


Fig. 10



Battery Charger

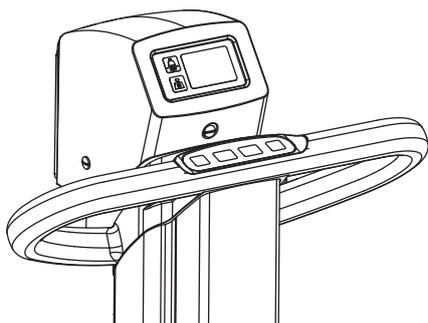
Attach the battery charger to a suitable wall and connect it to a wall socket. (See Fig. 10)

WARNING

To avoid fire and electric shock, make sure that the charger is installed and used in a dry and dust free environment.

See the *NDA 1200, 2200, 4200, 6200, 8200 Battery Charger IFU*.

Fig. 11

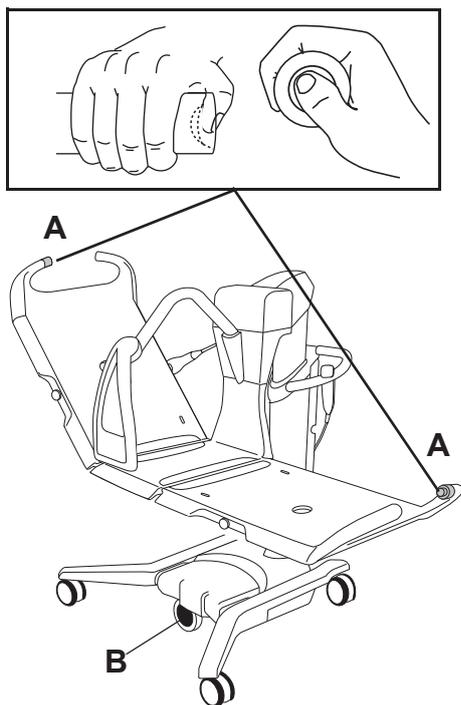


Scale (option)

The scale is integrated and located on the lift pillar. (See Fig. 11)

To use the scale, if available, refer to the *Scale IFU*.

Fig. 12



Power Drive (optional)

An electric motor and a fifth wheel (B) are the powered drive. The wheel is manoeuvred via a button on the right side of the transfer handle from either end (A). (See Fig. 12)

The *Miranti* lift bath trolley can only move forwards.

The wheel is spring-mounted so it can handle different floor levels e.g. thresholds and draining gutters, (difference in floor level ~ 10 mm).

How to drive

(4 steps)

- 1 Activate the drive by pressing the button on the transfer handle (A). (See Fig. 12)
- 2 The fifth wheel is lowered and the drive starts after a few seconds.
- 3 The drive continues for as long as the button is pressed.
- 4 When you have released the button, the fifth wheel remains lowered for 4 s with the drive inactivated. During these 4 s it is very easy to turn transversely or backwards because the wheel works as a steering wheel. Push the button again to drive on.

NOTE

The power drive can not be used when the brakes are activated.

Driving with precision

For better control of turning and manoeuvring in narrow passages - release and push the button at short intervals.

Study the accompanying *DVD*.

Manual Drive

(2 steps)

- 1 Grip the transfer handles. (See Fig. 13)
- 2 Move the *Miranti* lift bath trolley forwards.

NOTE

Never activate the brakes during driving

Fig. 13

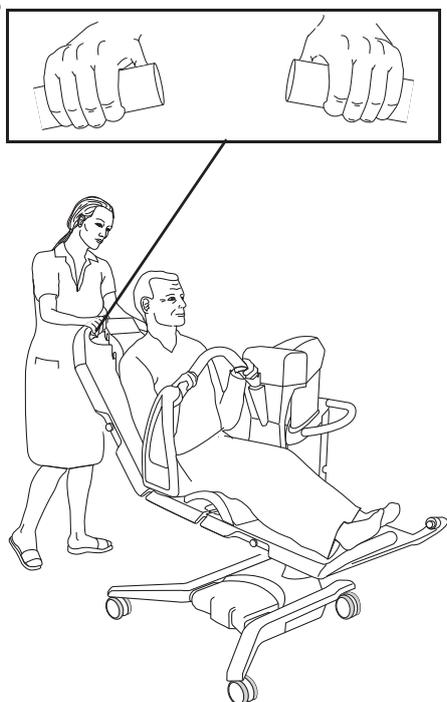
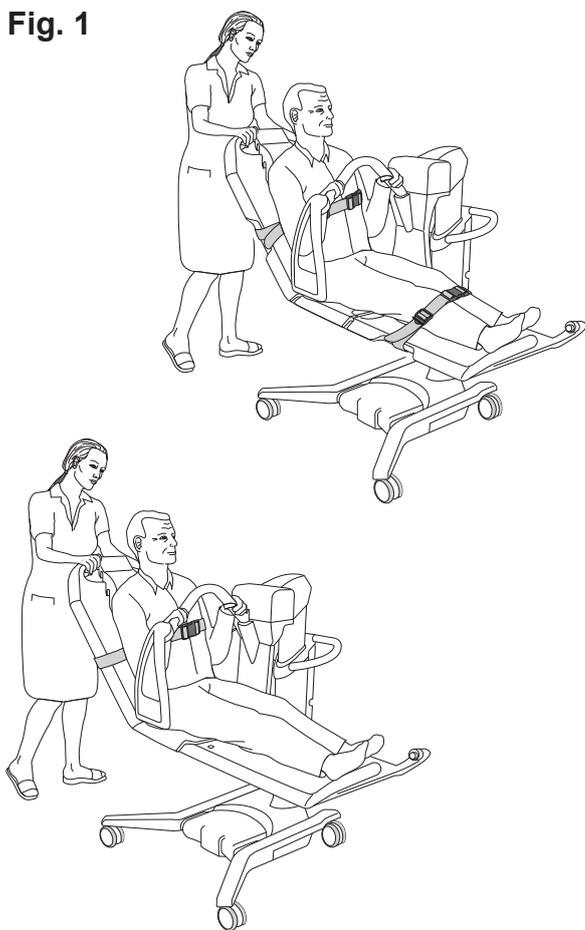


Fig. 1



Safety Belts

WARNING

To prevent the patient from falling, make sure the safety belts are undamaged. If damaged, do NOT use the safety belts, replace with new ones before use.

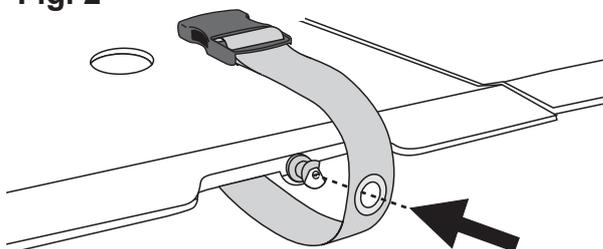
WARNING

To avoid falling, make sure that the patient is positioned correctly and that the safety belt is being used, properly fastened and tightened.

The *Miranti* lift bath trolley has two safety belts, one to be used over the chest and one over the legs. They are identical and are used in the same way.

The upper safety belt or both can be used. Do not use the lower safety belt only. (See Fig. 1)

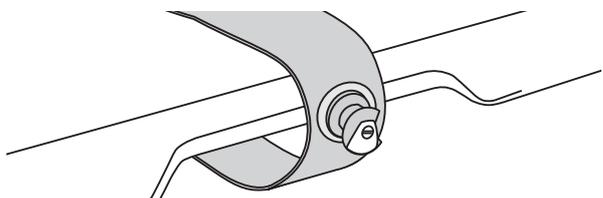
Fig. 2



Attach and Buckle (5 steps)

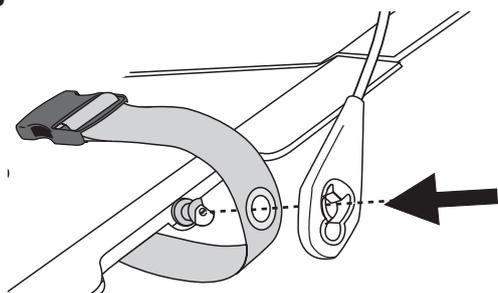
- 1 Attach the safety belt by pushing the eyelet closest to the buckle over the knob. (See Fig. 2)

Fig. 3



- 2 Make sure that the belt fits the knob in the inner position. (See Fig. 3)

Fig. 4



- 3 **Upper safety belt only:** Attach the hook rope over the safety belt and the knob according to section *Powered Backrest/Hook Rope* on page 11. (See Fig. 4)

Continue with the steps on the next page.

Fig. 5

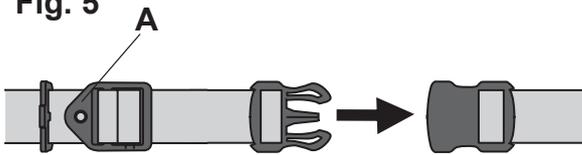
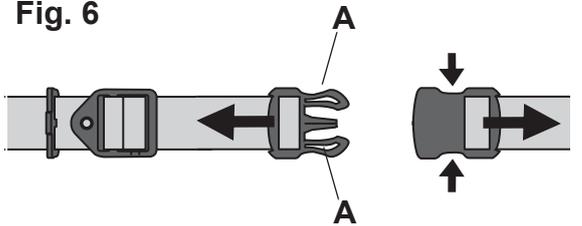


Fig. 6



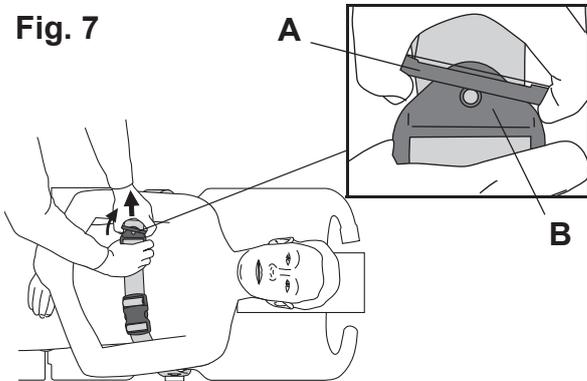
4 Buckle the safety belt by inserting the buckles into each other. Make sure the fastening clip has the arrow shaped side upwards (A). (See Fig. 5)

5 Unbuckle the safety belt by pressing the spring knobs (A), and at the same time pulling the buckles apart from each other. (See Fig. 6)

Adjust (6 steps)

Upper safety belt is shown

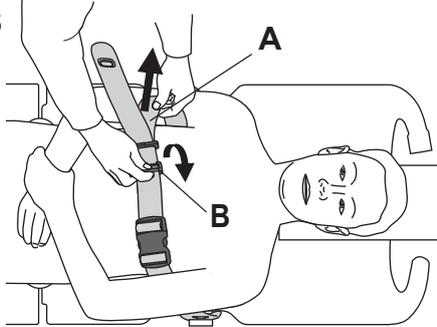
Fig. 7



1 Pull the fastening clips (A) and (B) apart by twisting the smaller fastening clip (A) slightly upwards. (See Fig. 7)

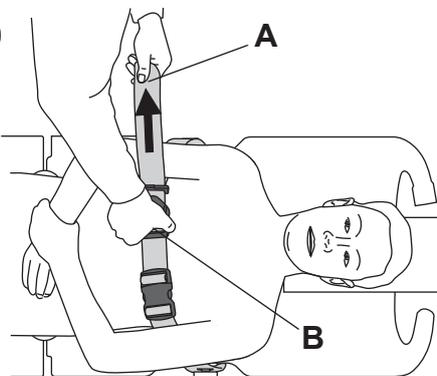
2 Loosen the safety belt by pulling the inner strap (A) and at the same time lifting the larger fastening clip (B). (See Fig. 8)

Fig. 8



3 Tighten the safety belt by pulling the outer strap (A) and at the same time holding the larger fastening clip (B). (See Fig. 9)

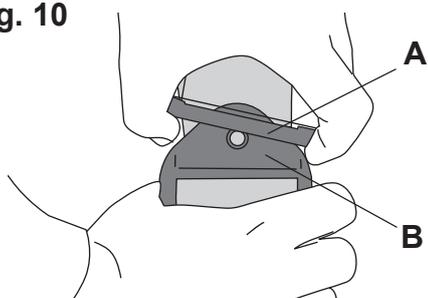
Fig. 9



4 Make sure the safety belt is firmly attached to the patient's body.

Continue with the steps on the next page.

Fig. 10



5 Lock the fastening clips by inserting the smaller fastening clip (A) into the larger fastening clip (B). (See Fig. 10)

6 Make sure the safety belt does not make a loop in the fastening clips after locking. (See Fig. 11)

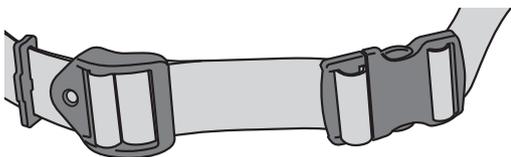
Fig. 11



When not in use (1 step)

1 Make sure that the safety belts are buckled over the stretcher when the *Miranti* lift bath trolley is not in use. (See Fig. 12).

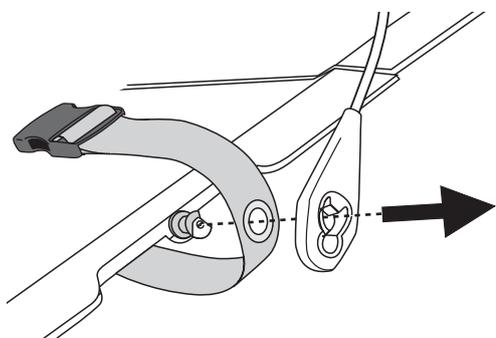
Fig. 12



Remove (1 step)

1 Pull the hook rope (**upper safety belt only**) and the safety belt away from the knob. (See Fig. 13).

Fig. 13



Transfer the Patient

WARNING

To avoid injury, make sure that the patient is not left unattended at any time.

From Bed

(17 steps)

- 1 Apply the wheel brakes on the bed, if applicable.
- 2 Fold down the bed rail.
- 3 Undress the patient in bed and dress him/her in a bathrobe, preferably one with buttons up the back.
- 4 Choose one end of the *Miranti* lift bath trolley to function as the backrest and fasten the hook rope in that end. If possible, approach the patient from the right side of the *Miranti* lift bath trolley for transfer to the bath.
- 5 Attach the safety belt/belts if required. The safety belt/belts must be attached **before** the hook rope. **(See Fig. 1)**
- 6 Put the thigh support cushion in place.
- 7 Turn the patient so he/she lays on the side facing away from the *Miranti* lift bath trolley.
- 8 Move the stretcher in over the bed as close as possible to the patient. **(See Fig. 2)**
- 9 Lower the *Miranti* lift bath trolley so that its seat gets pressed firmly onto the bed. Make sure no body parts get pinched between the seat and the bed. The hook rope has to be slack. **(See Fig. 2)**
- 10 Activate the *Miranti* lift bath trolley central brake.
- 11 Turn the patient on his/her back and make sure he/she is lying in the correct position on the stretcher. **(See Fig. 3)**

Fig. 1

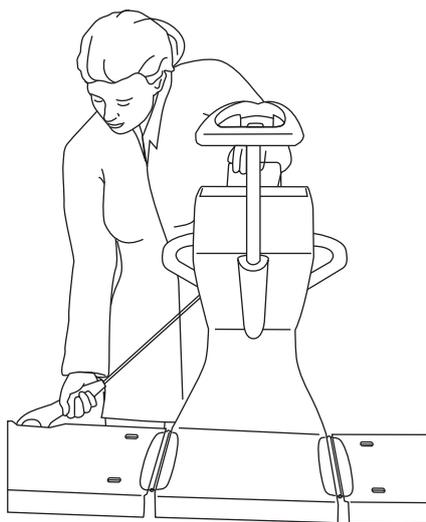


Fig. 2

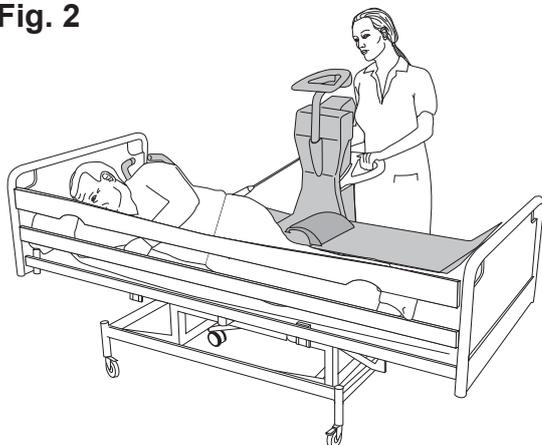
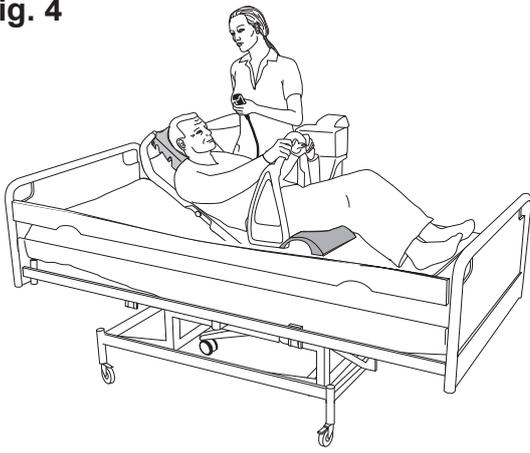


Fig. 3



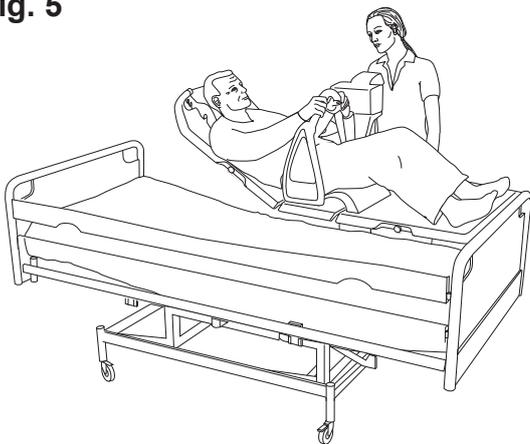
Continue with the steps on the next page.

Fig. 4



- 12 Lower the patient security grip and side guard. Put the headrest in place and raise the backrest to a comfortable height for the patient. Let the patient put his/her hands on the patient security grip. **(See Fig. 4)**
- 13 Raise the *Miranti* lift bath trolley's stretcher enough to move it away from the bed.
- 14 Release the *Miranti* lift bath trolley central brake.

Fig. 5



- 15 **WARNING**
To avoid entrapment, make sure to keep the patient's hair, arms and feet close to the body and use designated grab supports during any movement.

Pull the *Miranti* lift bath trolley away from the bed. Make sure the *Miranti* lift bath trolley is completely clear from the bed and any other devices. **(See Fig. 5)**

Fig. 6



- 16 **WARNING**
To avoid the device in use from tipping, do not raise or lower other equipment close to it and be aware of stationary object when lowering.

Lower the stretcher to a comfortable height for the caregiver. Hold the transfer handles during the transfer. **(See Fig. 6)**

- 17 After transferring the patient, always ensure he/she is in a correct sitting position.

To Bed (16 steps)

WARNING

To avoid falling during transfer, always make sure that the brakes are applied on all equipment being used.

- 1 Apply the wheel brakes on the bed, if applicable.
- 2 Fold down the bed rail.
- 3 If the *Miranti* lift bath trolley comes from a bath: place a towel on the bed to avoid making the bed wet.
- 4 Adjust the *Miranti* lift bath trolley height so the stretcher is at a safe distance from the bed. (See Fig. 1)

WARNING

To avoid entrapment, make sure to keep the patients hair, arms and feet close to the body and use designated grab supports during any movement.

Move the *Miranti* lift bath trolley in over the bed.

- 6 Activate the central brake.
- 7

WARNING

To avoid entrapment or pinching of genitals, make sure there is enough clearance during movement over the bathtub edge, toilet, bedpan or other furniture.

Let the patient put his/her hands on the patient security grip. Lower the *Miranti* lift bath trolley so that its seat gets pressed firmly onto the bed. Make sure no body parts get pinched between the stretcher and the bed. (See Fig. 2)

- 8 Lower the backrest until the stretcher is flat.
- 9 Raise the patient security grip and side guard.
- 10 Remove the safety belt from the patient.

Continue with the steps on the next page.

Fig. 1

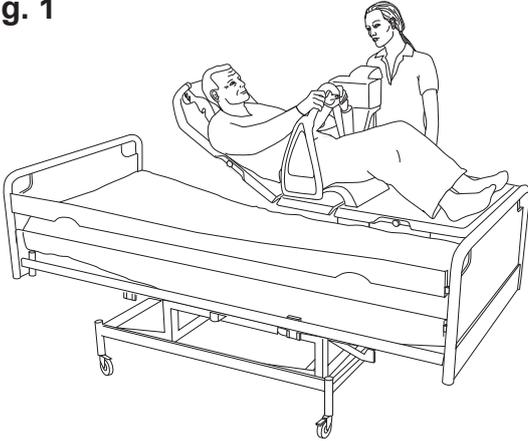


Fig. 2

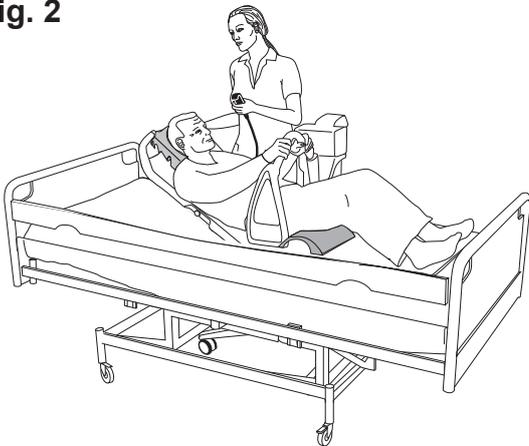
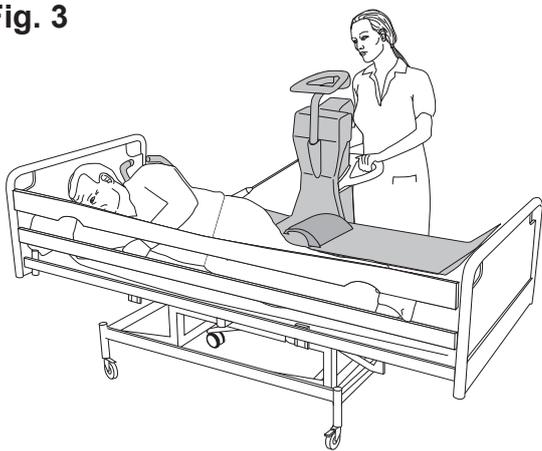


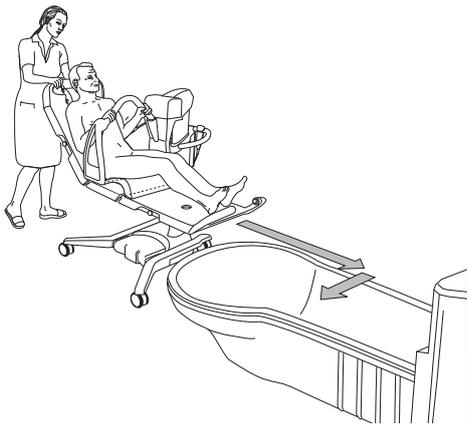
Fig. 3



- 11 Turn the patient so he/she lays on the side facing away from the *Miranti* lift bath trolley. (See Fig. 3)
- 12 Raise stretcher to separate it from the bed.
- 13 Release the central brake.
- 14 Pull the *Miranti* lift bath trolley away from the bed.
- 15 Turn the patient so he/she lays on the back.
- 16 Fold up the bed rail.

Bath the Patient

Fig. 1



Read the separate instructions for your bathing equipment.

Power Drive (9 steps)

1 Raise the stretcher to clear the edge of the bath. (See Fig 1)

Fig. 2



2 Activate the power drive and move the patient along the side of the bathtub and finally push transversely to it. Watch out for bathtub legs. (See Fig 2)

Fig. 3



- 3 Raise the bathtub to a comfortable height, if bathtub is adjustable. (See Fig 3)
- 4 Lower the stretcher so that it is resting against the bottom of the bath.
- 5 Lower the backrest to a comfortable position for the patient.
- 6 Bath the patient.

Fig. 4



7 After bathing, let the water run out of the bath. Raise the backrest. Let the patient put their hands on the patient security grip. Lower the bath to its lowest position. Shower the patient. (See Fig 4)

Continue with the steps on the next page.

Fig. 5



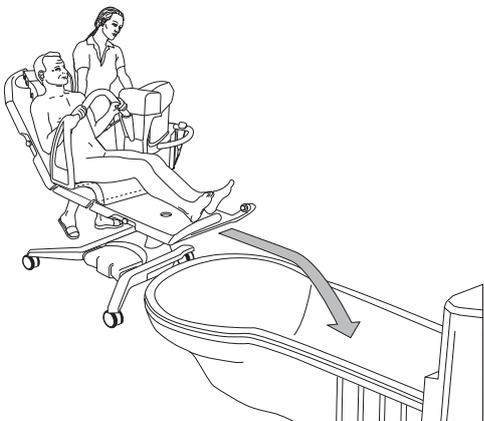
- 8 Dry the patient, as well as the underside of the stretcher, to prevent water from dripping onto the floor prior to moving the *Miranti* lift bath trolley away from the bath. Raise the stretcher. (See Fig 5)

Fig. 6



- 9 Activate the power drive and move the *Miranti* lift bath trolley out from the bath. (See Fig 6)

Fig. 7



Manual Drive (2 steps)

- 1 Raise the stretcher to clear the edge of the bath and move the patient in over the bath. (See Fig 7)

Fig. 8



- 2 Pull the *Miranti* lift bath trolley away from the bath. (See Fig 8)

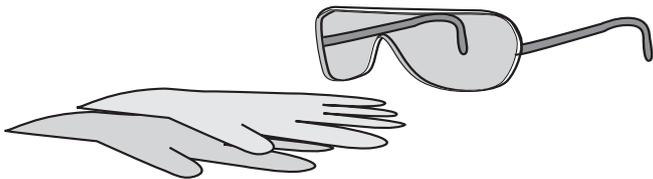
Cleaning and Disinfection Instructions

For the best results, only use ArjoHuntleigh branded disinfectant.

If you have any questions regarding disinfecting the equipment or wish to order disinfectant (see section *Parts and Accessories on page 42*), contact your local ArjoHuntleigh representative.

The following procedure should be carried out after every use and at the end of the day.

WARNING



To avoid eye and skin damage, always use protective glasses and gloves. If contact occurs rinse with plenty of water. If eyes or skin becomes irritated, contact a physician. Always read the IFU and the Material Safety Data Sheet (MSDS) of the disinfectant.

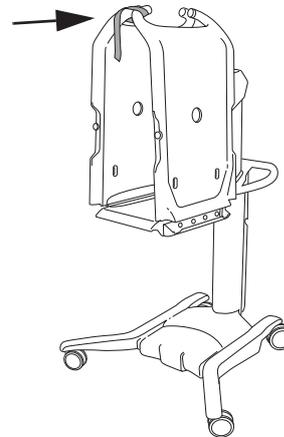
WARNING

To prevent cross-contamination, always follow the disinfection instructions in this IFU.

WARNING

To avoid eye or skin irritation, never disinfect in the presence of a patient.

WARNING



To avoid injury of the caregiver, make sure the stretcher is kept folded during disinfection procedure. Secure it by using enclosed strap or by hand.

CAUTION

To avoid damage on the equipment only use ArjoHuntleigh branded disinfectants.

Accessories for Disinfecting the Miranti Lift Bath Trolley

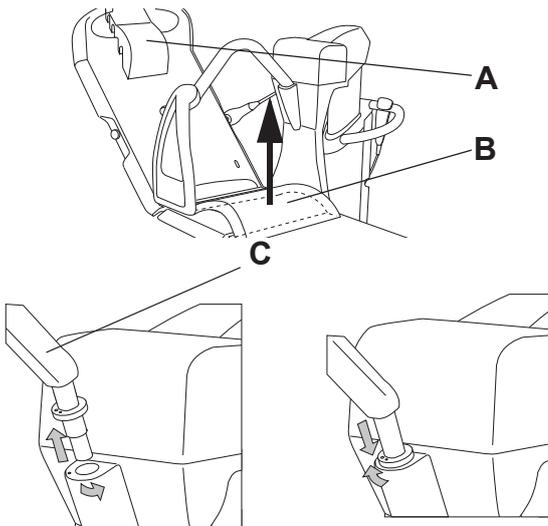
- Protective gloves
- Protective glasses
- Spray bottle with disinfectant
- Spray bottle with water
- Cloth wet and dry
- Disposable towels
- Soft bristled brush
- Long handled soft bristled brush

Always Follow these 17 Steps for Cleaning and Disinfection

Removing visual residue (step 1-3 of 17)

- 1 Remove the head rest (A), the thigh support cushion (B), the patient security grip (C) and the safety belt/belts, and place them at the bottom of the bathtub. (See Fig. 1)

Fig. 1



- 2 Position the *Miranti* lift bath trolley over the bathtub and lower it down. (See Fig. 2)

- 3 Clean:

- the upper part of the *Miranti* lift bath trolley (start from top and move downwards)
- all removed parts

from visible residue with a cloth soaked in water.

Alternatively shower with water using a brush and/or wipe with a cloth.

Fig. 2



Continue with the steps on the next page.

Fig. 3

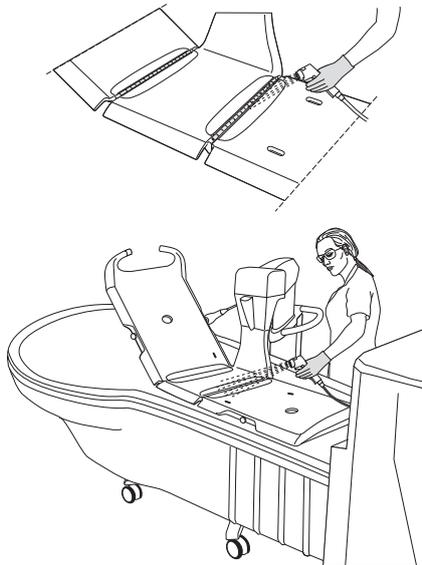


Fig. 4

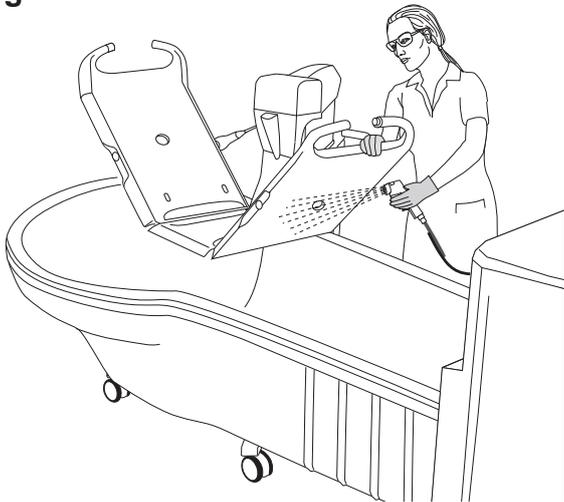
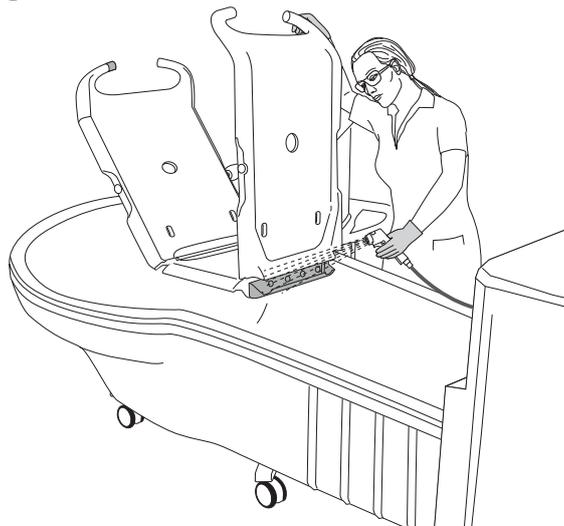


Fig. 5



Cleaning (step 4-11 of 17)

- 4 Put on protective gloves and glasses.
- 5 Most ArjoHuntleigh baths are equipped with a spray handle for disinfecting purposes. Read the bath instructions on how to use the disinfectant. Check the level of the disinfectant.
- 6 If you do not have the integrated disinfection equipment, you can use a spray bottle containing disinfectant mixed according to the printed instructions on the disinfectant bottle.
- 7 Spray disinfectant on (See Fig. 3, 4 and 5):
 - the upper part of the *Miranti* lift bath trolley
 - all removed partsUse a brush soaked in disinfectant and scrub thoroughly, especially on handles and hand control. On the *Miranti* lift bath trolley: pay extra attention to the hinges and the foundation of the patient security grip on the upper side of the stretcher and the channel on the underside of the stretcher.
- 8 Shower with water (approx. 25 °C (77 °F)) or spray with plenty of water and wipe off with a clean cloth to remove all disinfectant.
- 9 Soak a cloth in disinfectant and wipe all other areas of the *Miranti* lift bath trolley, such as chassis.
- 10 Wet a new cloth with water and remove all traces of disinfectant from all other areas of the *Miranti* lift bath trolley. The cloth should occasionally be rinsed in running water when removing disinfectant.
- 11 If all disinfectant cannot be removed, spray water on the affected part and wipe off with disposable towels. Repeat until all disinfectant has been removed.

Continue with the steps on the next page.

Disinfection (step 12-17 of 17)

12 Spray disinfectant on:

- the upper part of the *Miranti* lift bath trolley
- all removed parts

13 Soak a cloth in disinfectant and wipe all other areas of the *Miranti* lift bath trolley, such as chassis.

14 Allow a disinfection time according to the instructions on the disinfectant bottle label.

15 Spray or shower water (approx. 25 °C (77 °F)) and wipe with a clean cloth to remove all traces of the disinfectant on:

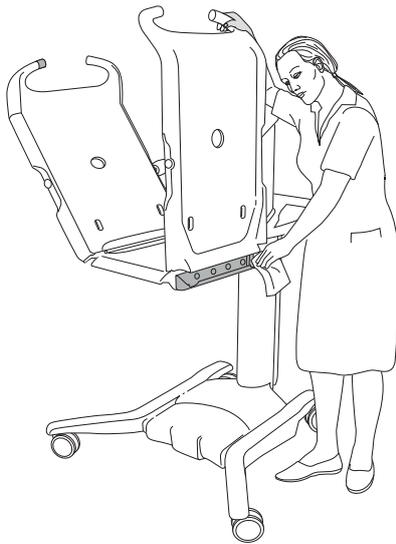
- the upper part of the *Miranti* lift bath trolley
- all removed parts
- all other areas of the *Miranti* lift bath trolley, such as chassis

The cloth should occasionally be rinsed in running water during removal of disinfectant. (See Fig. 6)

16 If all disinfectant cannot be removed, spray water on the affected part and wipe off with disposable towels. Repeat until all disinfectant has been removed.

17 Let all parts dry.

Fig. 6



Battery Instructions

WARNING

To avoid bodily injury, do NOT crush, puncture, open, dismantle or otherwise mechanically interfere with the battery.

- **Should the battery casing crack and cause contents to come in contact with skin or clothing, rinse immediately with plenty of water.**
- **If contents come in contact with the eyes, rinse immediately with plenty of water and seek medical attention.**
- **Inhalation of the contents can cause respiratory irritation. Provide fresh air and medical attention.**

- Be careful not to drop the battery.
- Contact the appropriate local authority for advice when disposing of batteries.
- Check label on the battery.

Low Charge Warning

A buzzer sound will go off when the battery reaches a low charge. The battery should then be recharged as soon as possible.

Storage of Battery

- The battery is delivered charged but we recommend you to recharge the battery when received due to a slow self discharge.
- The battery will slowly self discharge when not used.
- A battery in storage and transport and should be in a temperature range of -0 °C to +30 °C (32 °F to 86 °F), cooler temperatures will extend its service life.
- For maximum battery performance do not store the battery above 50 °C (122 °F).

Installation of Charger

See the *NDA 1200, 2200, 4200, 6200, 8200 Battery Charger IFU*.

How to Change the Battery

See the *NDA 1200, 2200, 4200, 6200, 8200 Battery Charger IFU*.

Care and Preventative Maintenance

The *Miranti* lift bath trolley is subject to wear and tear, and the following actions must be performed when specified to make sure that the product remains within its original manufacturing specification

WARNING

To avoid malfunction resulting in injury, make sure to conduct regular inspections and follow the recommended maintenance schedule. In some cases due to heavy use of the product and exposure to aggressive environment more frequent inspections should be carried out. Local regulations and standards may be more stringent than this recommended maintenance schedule.

NOTE

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

PREVENTIVE MAINTENANCE SCHEDULE Miranti lift bath trolley

CAREGIVER OBLIGATIONS Action/Check	Every DAY	Every WEEK	Every 2nd YEAR
Disinfect	X		
Check of mechanical attachments		X	
Visually check the safety belt		X	
Check hand control and cable		X	
Check and clean castors		X	
Check central brake function and brake pads		X	
Visually check battery charger and battery		X	
Visually check all exposed parts		X	
Check winch hook and hook rope		X	
Check attachment and locking of side guard and patient security grip		X	
Replace safety belt			X

WARNING

To avoid injury to both the patient and the caregiver, never modify the equipment or use incompatible parts.

Fig. 1



Fig. 2

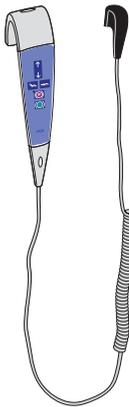


Fig. 3

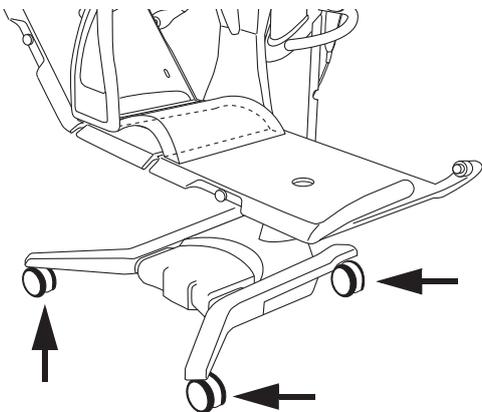
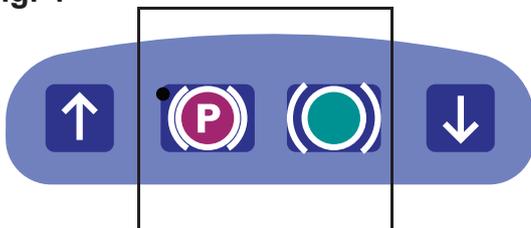


Fig. 4



Caregiver Obligations

Caregiver obligations shall be carried out by personnel with sufficient the *Miranti* lift bath trolley knowledge following the instructions in this *IFU*.

Every day

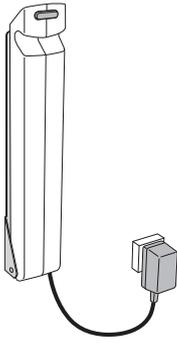
- **Disinfect.** The *Miranti* lift bath trolley has to be disinfected immediately after every use. ArjoHuntleigh disinfectants and shampoos should be used in **recommended concentrations**. See section *Cleaning and Disinfection Instructions* on page 24.

Every week

- **Visually check all exposed parts**, especially where personal contact is made by either the patient or caregiver. Make sure no cracks or sharp edges have developed that could cause the patient or user injury or that has become unhygienic. Replace damaged parts.
- **Check the mechanical attachments** by placing a foot on the chassis and pull the seat upwards with both hands. No gaps are allowed. (See Fig 1)
- **Check hand control and cable:** Visually check the condition of the hand control and its cable. If found cut or damaged, replace it. (See Fig 2)
- **Check that the castors are properly fixed and are rolling and swivelling freely.** Clean with water (the function can be affected by soap, hair, dust and chemicals from floor cleaning). (See Fig 3)
- **Check the central brake function and brake pads** by activating the central brake and try to move the hoist. It must be impossible to move without lifting the hoist from the floor. (See Fig 4)

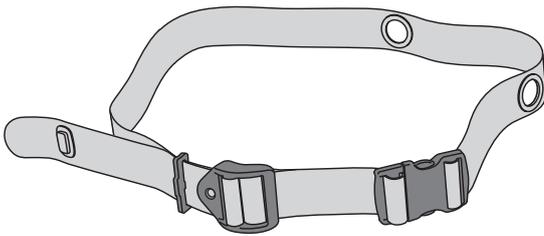
Continue with the steps on the next page.

Fig. 5



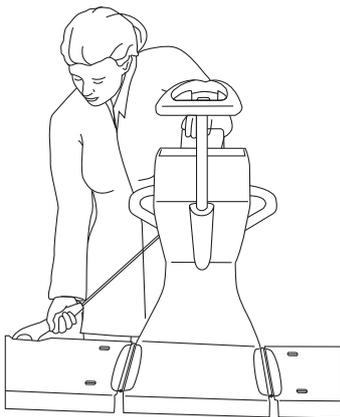
- **Visually check the condition of the battery charger, its cable and the battery.** Withdraw and replace immediately if damaged. (See Fig 5)

Fig. 6



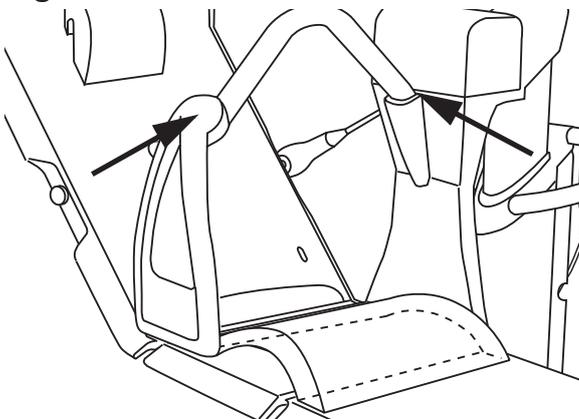
- **Visually check the safety belt.** Check the complete length for fraying, cuts, crack, tears, that no inner fabric is showing and that no other damage is visible. If the safety belt is found damaged, replace it. (See Fig 6)

Fig. 7



- **Check winch hook and hook rope for damage.** If any damages are found, replace. (See Fig 7)

Fig. 8



- **Check attachment and locking of side guard and patient security grip.** All attachments shall shape-in firmly into all positions. (See Fig 8).

Yearly

The *Miranti* lift bath trolley has to be serviced according to the table *QUALIFIED PERSONNEL Action/Check* on page 32.

WARNING

To avoid injury and/or unsafe product, the maintenance activities must be carried out at the correct frequency by qualified personnel using correct tools, parts and knowledge of procedure. Qualified personnel must have documented training in maintenance of this device.

QUALIFIED PERSONNEL Action/Check	Every YEAR	Every 2:nd YEAR
Replace brake pads	X	
Perform a safe working load test (local requirements)	X	
Lubricate inner profile	X	
Check battery and battery charger	X	
Check scale calibration (if attached and not verified)	X	
Check all vital parts for corrosion/damage	X	
Perform full feature functionality test	X	
Check mechanical attachments	X	
Check that the latest upgrades have been implemented	X	
Check the safety stop function	X	
Check the emergency High/Low function	X	
Inspect castors	X	
Replace winch hook and hook rope		X
Replace guide pieces, lower bushing and outer profile seal		X
Replace the plastic cross on the actuator		X
Check the power drive wheel		X
Lubricate the cog wheels on the winch		X
Lubricate the spiral cables		X

NOTE

All checkpoints in table *CAREGIVER OBLIGATIONS Action/Check on page 29* are to be checked when performing the checkpoints in table *QUALIFIED PERSONNEL Action/Check on page 32*.

Troubleshooting

PROBLEM	ACTION
It is only possible to lower the lift.	The lifting device of this equipment is equipped with a safety nut. If the safety nut will be activated it will only be possible to lower the equipment into a safe position. In case of this scenario stop using the equipment and contact qualified personnel for repair of the equipment.

NOTE

If the product does not work as intended, immediately contact your local ArjoHuntleigh representative for support.

Technical Specifications

The Miranti lift bath trolley model CEB8X0X	
Safe Working Load (SWL) (maximum patient weight)	160 kg (353 lbs)
Maximum weight of lift (lift and scale)	103 kg (227 lbs)
Medical equipment	type 
Usage temperature (water)	+20 °C - +45 °C (+68 °F - +113 °F)
Temperature	+10 °C to +40 °C (+50 °F to +104 °F) Operating -20 °C to +70 °C (-4 °F to +158 °F) Transport -20 °C to +70 °C (-4 °F to +158 °F) Storage
Humidity	30-75% at +20 °C (+68 °F) Operating 10-80% at +20 °C (+68 °F) Transport 10-80% at +20 °C (+68 °F) Storage
Atmospheric pressure	800 hPa to 1060 hPa Operating 500 hPa to 1100 hPa Transport 500 hPa to 1100 hPa Storage
Sound level	< 58 dBA
Mode of operation	ED maximum 10%; Maximum 2 minutes ON; Minimum 18 minutes OFF
Operating forces of controls	2.7 N
Pollution degree	2

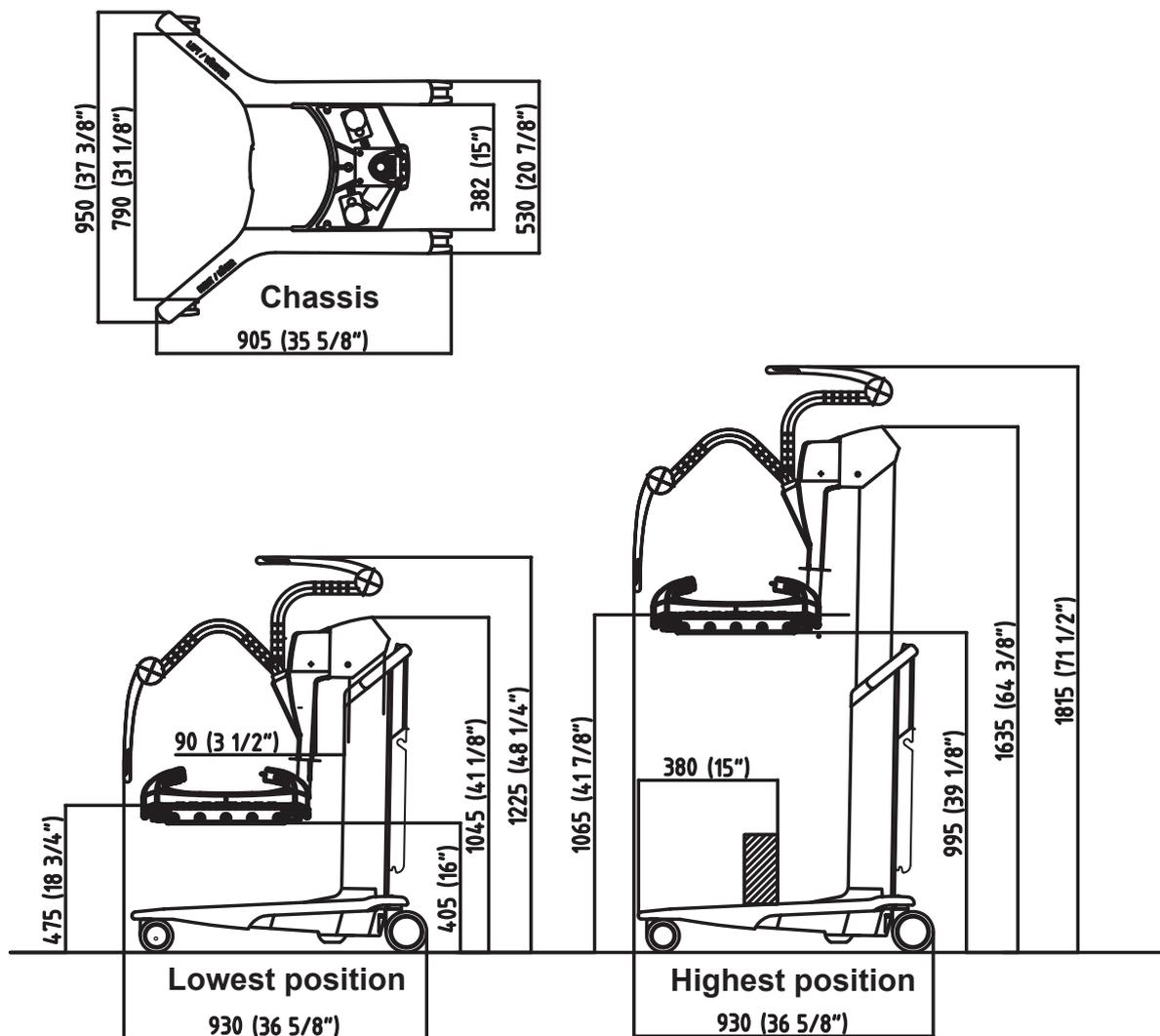
Electricity	
Battery No. NDA 0100	Sealed lead-acid battery 24 V, 4 Ah
Battery charger	NDA 1200-EU, NDA 2200-GB, NDA 4200-US, NDA 6200-AU and NDA 8200-INT
Protection class	IP X4
Fuse	F1 F10AL 250 V
Fuse	F2 T2.5AL 250 V

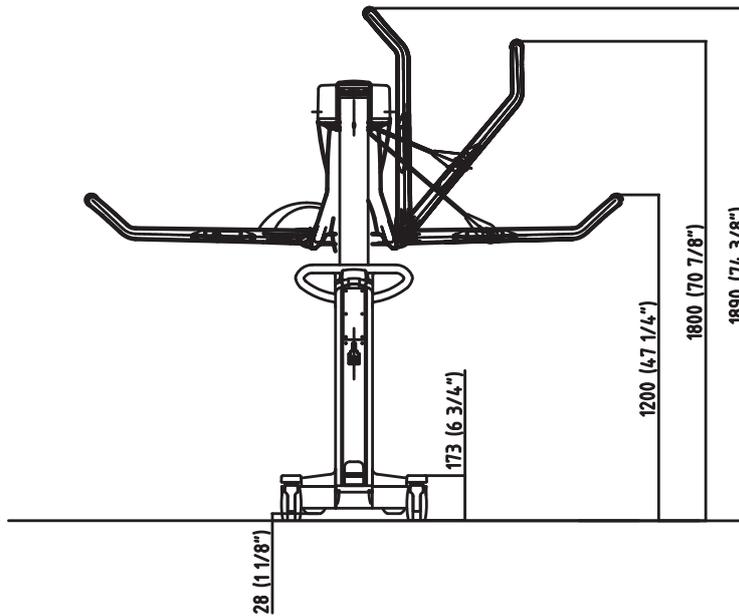
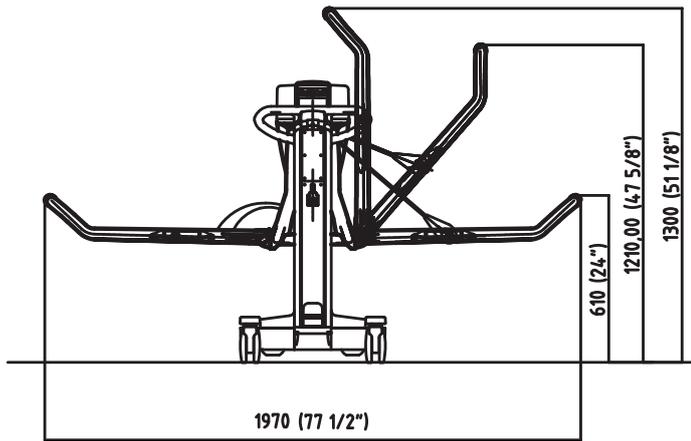
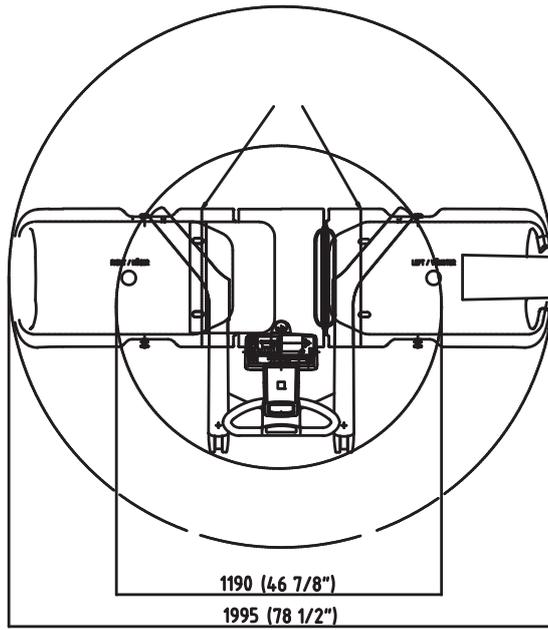
Allowed combinations	
The Miranti lift bath trolley panels integrate with the following ArjoHuntleigh products	Generic hospital/care facility bed with a clearance of 150 mm (5 7/8") System 2000 baths
No other combinations are allowed.	

Recycling The device should be recycled according to national regulations	
Package	Wood and corrugated cardboard recyclable
Battery	Sealed lead-acid Recyclable. Not for disposal. Environment danger
The lift and charger	Electric, metal and plastic parts shall be separated and recycled according to (WEEE) and according to markings on the unit.

Disposal of the Miranti lift bath trolley	
Lift	The device is marked with the WEEE symbol to indicate that it is electronic equipment covered by the Directive 2002/96/EC on waste electrical and electronic equipment. In European countries the crossed out wheeled-bin WEEE symbol reminds you that all the electrical and electronic products, batteries and accumulators must be taken to separate collection at end of their working life. This requirement applies in the European Union. Do not dispose these products as unsorted municipal waste. You can return your device and accessories to ArjoHuntleigh or you can contact your local authorities for advice on disposal.

Dimensions



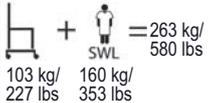
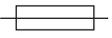


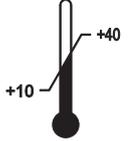
Labels

Label explanation

Attention Label	Important user information for correct use.
Battery Label	States safety and environmental information for the battery.
Data Label	States technical performance and requirements, e.g. Input Power, Input Voltage and maximum Patient Weight etc.
Identification Label	States the product identification, serial number and year and month of manufacturing. For example, 1402XXXXX where “14” states manufacturing year, “02” states manufacturing month and “XXXXX” states serial number.

Symbol explanation

	Type B, Applied part: protection against electrical shock in accordance with IEC 60601-1
SWL	Safe Working Load 160 kg (353 lbs).
	Total mass of equipment including its safe working load. 103 kg / 227 lbs + 160 kg / 353 lbs = 263 kg / 580 lbs
	Lifting stroke 590 mm (23 1/4")
24V DC	Supply voltage
MAX: 150 VA	Maximum power
	Fuse F1: F10AL 250 V Fuse F2: T2.5AL 250 V
IP X4	Degree of Protection (i.e. the product is protected against splashing water)
ED Max 10%	Mode of operation for Hi/Lo function: ED maximum 10%; Maximum 2 minutes ON; Minimum 18 minutes OFF
NDA0100-XX	Product number of the battery
	Read the <i>IFU</i> before use.

	A battery is the power source of this equipment.
	Separate electrical and electronic components for recycling in accordance with the European Directive 2012/19/EU (WEEE)
	Classified by Underwriters Laboratories Inc. with respect to electrical shock, fire, mechanical, hazards and other specified hazards only in accordance with the Approvals and List of Standards.
	CE marking in accordance with Medical Devices Directive 93/42/EEC.
	Environmental danger - contains lead. Not for disposal.
	Recyclable
	Name and address of the manufacturer
	Manufacturing date
Max	Maximum capacity of the weighing instrument
Min	Minimum capacity of the weighing instrument
e	Verification scale interval
	Metrology mark, indicating compliance with Directive 2014/31/EU (NAWI) yy = year (For Class III scales only)
	Model number
	Serial number
	Indicates min / max temp for use of weigh scales

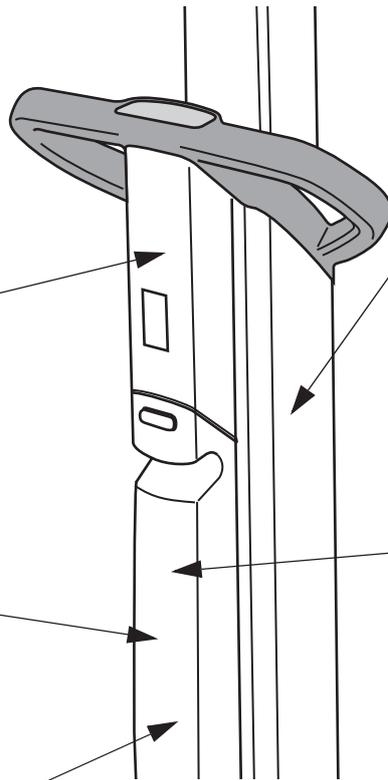


Attention Label

Approval Label
Battery Label
Data Label



Applied Part



Scale label

Identification Label

List of Standards and Certificates

STANDARD/CERTIFICATE	DESCRIPTION
EN/IEC 60601-1:2005 AMD1:2012	Medical Electrical Equipment - Part 1: General Requirements for Basic Safety and Essential Performance
ANSI/AAMI ES60601-1 (2005) AMD 1 (2012)	Medical Electrical Equipment - Part 1: General Requirements for Basic Safety and Essential Performance
CAN/CSA-C22.2 No. 60601-1:14	Medical Electrical Equipment - Part 1: General Requirements for Basic Safety and Essential Performance
ISO 10535:2006	Hoists for the transfer of disabled persons -- Requirements and test methods

Electromagnetic Compatibility

Medical electrical equipment needs special precautions regarding EMC (Electromagnetic compatibility) and needs to be used according to the EMC information below.

The *Miranti* lift bath trolley is intended for use in the electromagnetic environment specified below. The customer or the user of the *Miranti* lift bath trolley should assure that it is used in such an environment.

WARNING

Stacking or placing other electrical equipment next to this device is not recommended, it can interfere with the equipment's operation and safety. Portable and mobile radio-frequency (RF) communications equipment can interfere with this equipment operation and safety.

WARNING

The equipment may cause radio interference or may disrupt the operation of nearby equipment. It may be necessary to take action, such as reorienting, relocating the equipment or shielding the location.

Guidance and manufacturer's declaration - electromagnetic emissions		
Emissions test	Compliance	Electromagnetic environment - guidance
RF emissions CISPR 11	Group 1	The <i>Miranti</i> lift bath trolley uses RF energy only for its internal function. Therefore, its RF emissions are very low and are not likely to cause any interference in nearby electronic equipment.
RF emissions CISPR 11	Class B	The <i>Miranti</i> lift bath trolley is suitable for use in all establishments, those directly connected to the public low-voltage power supply network that supplies buildings used for domestic purposes.

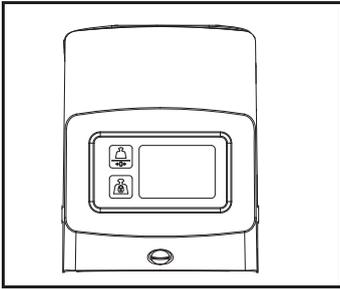
Guidance and manufacturer's declaration - electromagnetic immunity			
Immunity test	IEC 60601 test level	Compliance	Electromagnetic environment - guidance
Electrostatic discharge (ESD) IEC 61000-4-2	6 kV contact 8 kV air	6 kV contact 8 kV air	Floors should be wood, concrete or ceramic tile. If floors are covered with synthetic material, the relative humidity should be at least 30%.
Radiated RF IEC 61000-4-3	3 Vrms 80 MHz to 2.5 GHz	10 Vrms 80 MHz to 2.5 GHz	<p>Portable and mobile RF communications equipment should be used no closer to any part of the <i>Miranti</i> lift bath trolley, including cables, than 1 meter if the transmitters output power rating exceeds 1 W.</p> <p>Field strengths from fixed RF transmitters, as determined by an electromagnetic site survey,^a should be less than the compliance level in each frequency range.</p> <p>^bInterference may occur in the vicinity of equipment marked with the following symbol: </p>
<p>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 <i>Miranti</i> lift bath trolley is used exceeds the applicable RF compliance level above, the <i>Miranti</i> lift bath trolley should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary.</p> <p>b) Over the frequency range 150 kHz to 80 MHz, field strengths should be less than 1 V/m.</p>			

Recommended separation distances between portable and mobile RF communications equipment and the *Miranti* lift bath trolley.

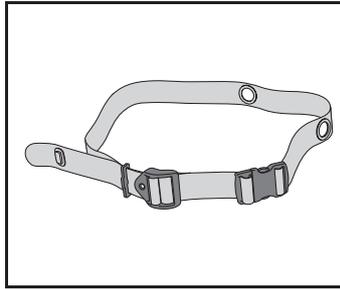
The *Miranti* lift bath trolley is intended for use in an electromagnetic environment in which radiated RF disturbances are controlled.

The customer or the user of the *Miranti* lift bath trolley can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the *Miranti* lift bath trolley by maintaining a distance of not less than 1 meter to any part of the *Miranti* lift bath trolley, including cables, if the transmitters output power rating exceeds 1 W.

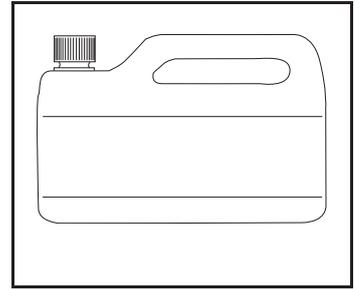
Parts and Accessories



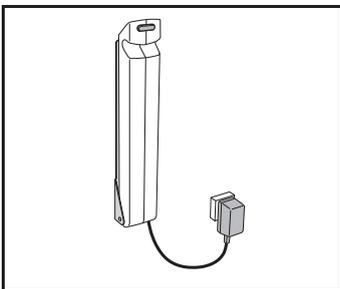
Electronic scale
CDA2100-01



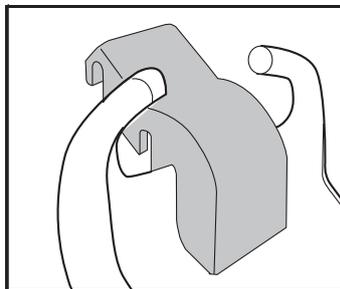
Safety belt
8664559



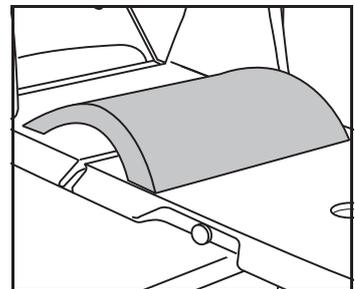
For disinfectant contact
the ArjoHuntleigh local
representative



Battery and battery
charger



Head rest



Thigh support cushion



Power drive