

MIRANTI

Operating and Product Care Instructions

ARJO



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Foreword

Thank you for purchasing ARJO equipment.

Your *Miranti* lift bath trolley is 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 ARJO product.

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

Please read this manual thoroughly!

Please read this manual in its entirety before using your *Miranti* lift bath trolley. Information in the manual is crucial to the proper operation and maintenance of the equipment, and will help protect your product and ensure that equipment performs to your satisfaction. Some of the information in this manual is important for your safety and must be read and understood to help prevent possible injury. ARJO strongly advise and warn that only ARJO designed parts, which are designed for the purpose, should be used on equipment and other appliances supplied by ARJO, to avoid injuries attributable to the use of inadequate parts.

Unauthorized modifications on any ARJO equipment may affect its safety. ARJO 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.

Service and Support

Service should be performed regularly on your *Miranti* every year by ARJO qualified personnel to ensure the safety and daily operation of your product. See chapter *Care and Preventive Maintenance*.

If you require further information, please contact your local ARJO representative who can offer comprehensive support and service programs to maximize the long-term safety, reliability and value of the product. Contact your local ARJO representative for replacement parts.

Your service representative stocks the parts you will need.

The telephone number appears on the last page of this manual.

Study the DVD for your Miranti.

A DVD accompanies this manual.

Please note that the DVD does not replace the information in this manual as the latter also contains additional important safety instructions.

Definitions in this manual:

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.

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



Safety Instructions

The equipment must be used in accordance with these safety instructions. Anyone using the equipment must also have read and understood the instructions in this manual.

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

Intended use

This equipment is intended for lifting and transporting 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 Operating and Product Care instructions. 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 160kg / 353lbs.
- 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 manual.

NOTE

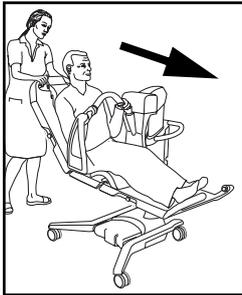
Modifications made to the equipment without expressed written consent of ARJO will invalidate the supplier's product liability.

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).

To avoid the possibility of injury always ensure that:

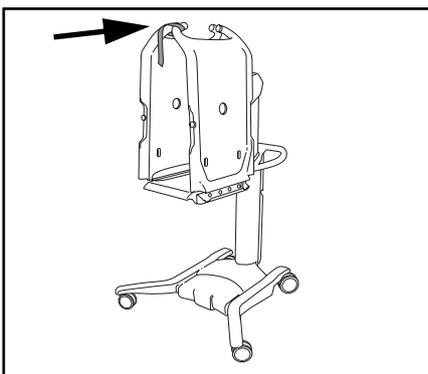
- the equipment is used by trained staff.
- the Miranti is moved with care, especially in narrow passages and over uneven surfaces.
- the Miranti is lowered to its ergonomically correct height during transportation.
- the driving direction during transportation is according to the illustration below.



- the wheels and brakes work freely.
- the brakes on the Miranti are activated when transferring a patient to/from a bed, etc.
- the brakes are always activated when the Miranti is not in use.
- the wheels on the bed are locked when transferring a patient to/from a bed.

WARNING

Make sure that the resident is lying/sitting in the middle of the stretcher.



- the parts of the stretcher are secured by the enclosed sling when the parts are fold upwards. See illustration above.
The stretcher parts are heavy!

Battery charger safety practices:

- The charger is designed for dry areas only and for normal air humidity conditions.
- Don't expose the charger to water or dust.
- The charger must not be covered.

Battery safety practices:

- Use only the charger supplied with the equipment.
- Do not charge batteries in a sealed container.
- Be careful not to drop the battery.
- Do not place batteries near a heat source or fire.
- Do not short-circuit the battery.
- Do not store batteries at a temperature higher than 50 °C (122 °F).
- Do not crush, puncture, open, dismantle or otherwise mechanically interfere with the batteries.
- Should the battery casing crack and cause contents to come in contact with skin or clothing, rinse immediately with 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. Sensitivity of nickel can cause allergic asthma. Provide fresh air and medical attention.
- Contact the appropriate local authority for advice when disposing of batteries.
- Check labels on the battery.

WARNING

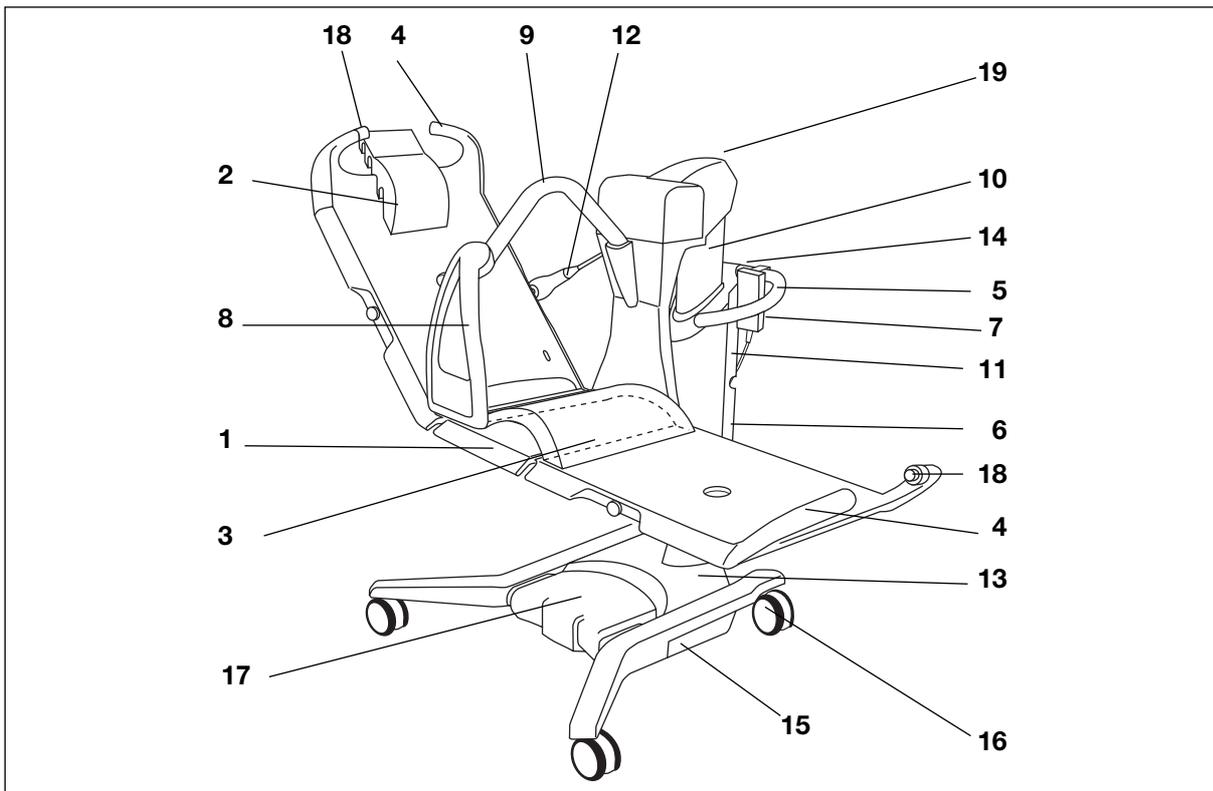
Don't expose the batteries or chargers to flames.

Don't expose the battery connector to water.

Don't use the charger in presence of inflammable anaesthetic gases.

Part designations

- | | |
|-------------------------|----------------------------------|
| 1 Stretcher | 15 Chassis |
| 2 Headrest | 16 Wheel |
| 3 Thigh-support cushion | 17 Power drive (optional) |
| 4 Transport handle | 18 Power drive handle (optional) |
| 5 Positioning handle | 19 Scale (optional) |
| 6 Battery | Safety belt/belts (see page 15) |
| 7 Handset | |
| 8 Sideguard | |
| 9 Patient security grip | |
| 10 Pillar | |
| 11 Emergency High/Low | |
| 12 Powered backrest | |
| 13 Central brakes | |
| 14 Control panel | |



Product description/function

Lifting

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

Central brakes

The brakes are two cylinders, placed under the chassis, operated from the control panel or the handset. The brake action is achieved when the cylinders descend and make contact with the floor.

Control panel

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

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

Handset

The handset (2) has an integrated hook which makes it easy to attach to various parts of *Miranti*.

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

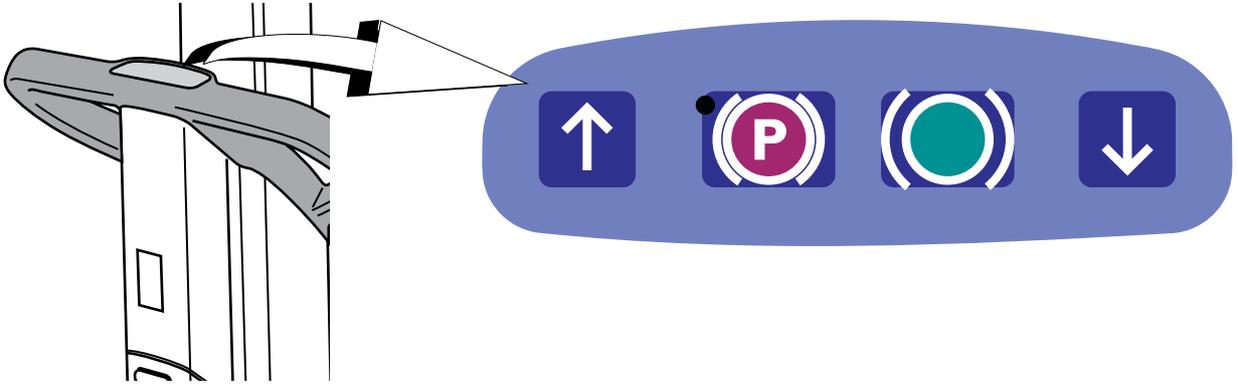
Positioning handle

- Use the positioning handles (3) for adjusting *Miranti* to a bath or bed.

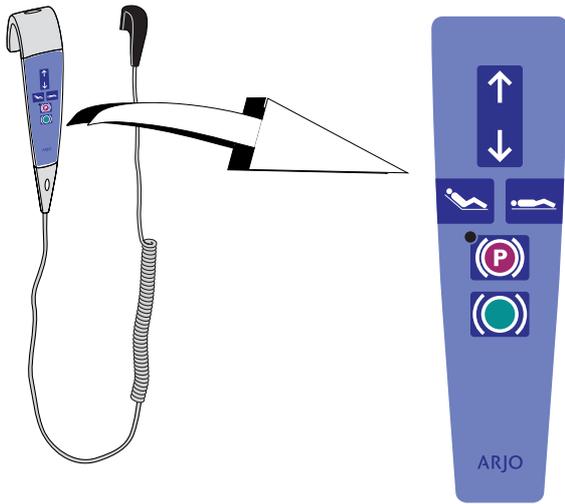
Electrical function

Only one function can be used at a time.

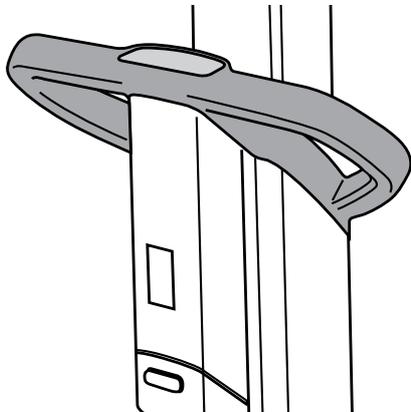
1



2



3



Sideguard and patient security grip

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

- Lift the bar upwards **(1)**.
- Hold the sideguard with one hand and the security grip with the other **(2)**.
- First lower the security grip away from the residents head, then you can position the sideguard.

See illustration.

Powered backrest

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

- Attach the hookrope to the button head on the stretcher **(3)**.
- See that the tap in the hole fits the notch in the button **(4A)**.
- Move the button head to the narrow part of the key hole.
- Turn the hook upwards and the rope is fixed **(4B)**.
- Doublecheck the hook fixation.

NOTE

Make sure the resident is positioned correctly on the stretcher.

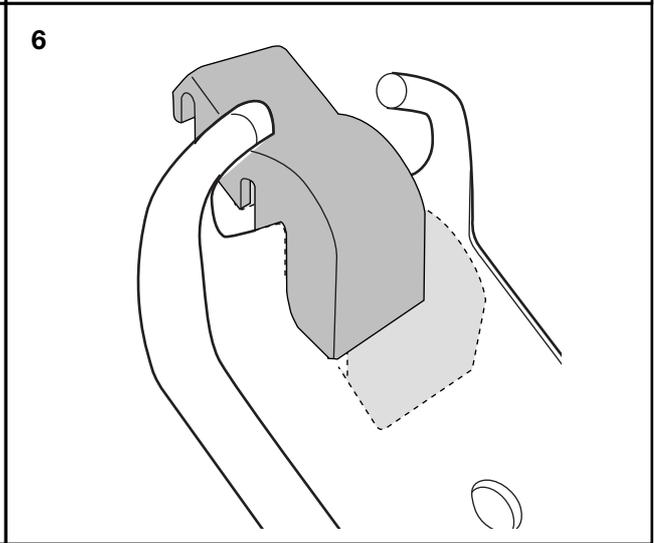
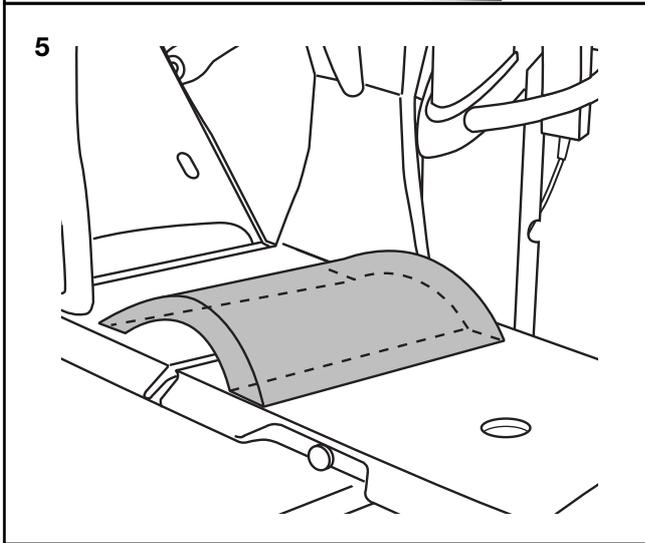
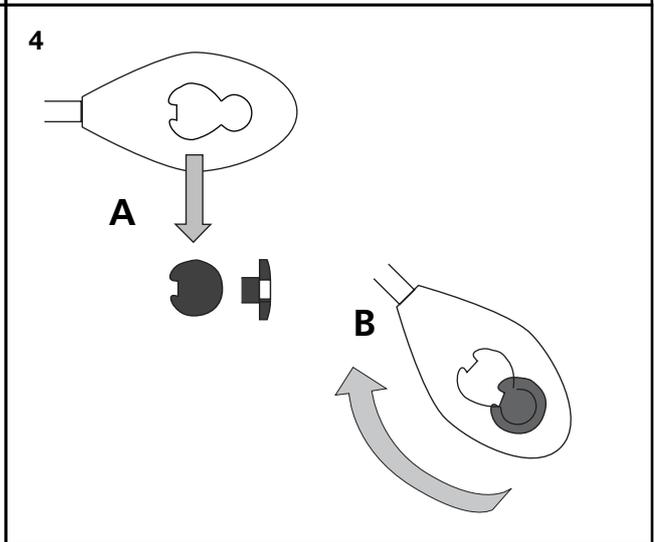
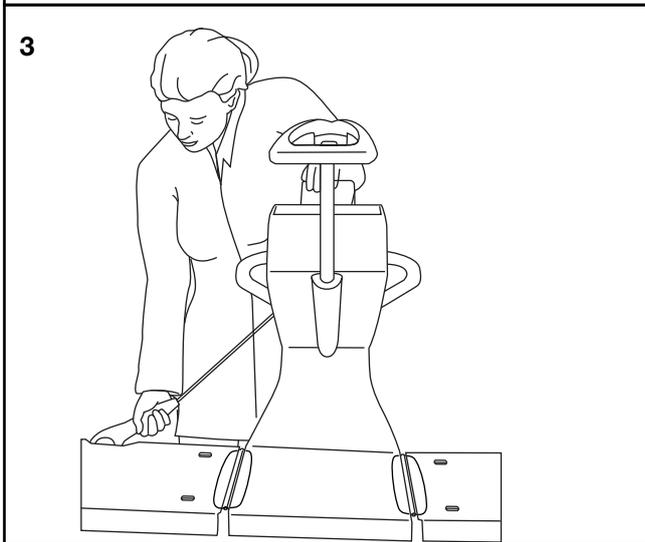
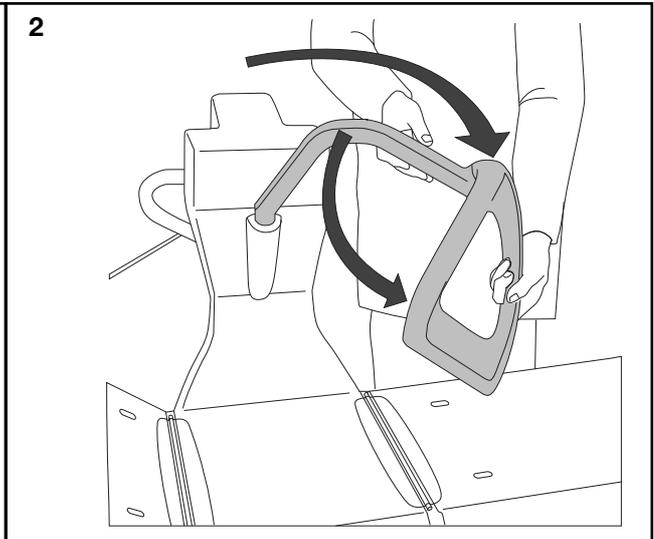
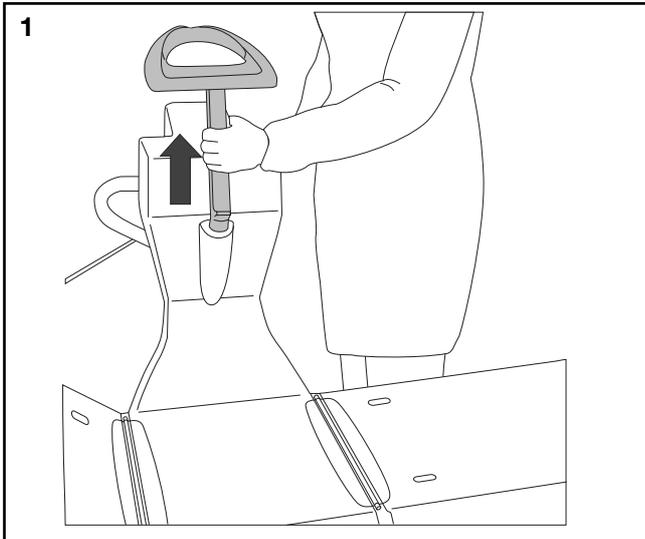
Thigh-support cushion

The support cushion **(5)** must be placed under the thighs of the resident for comfort during transport and bath.

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

Headrest

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



Emergency Stop

If, for any reason, *Miranti* does not respond to the control buttons, you can quickly stop lift movement by pressing the button on the battery and disconnect it (1).

Contact your local ARJO representative before re-using *Miranti*.

Emergency High/Low

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

- a Unplug the handset (2).
- b Control *Miranti* by pressing a blunt, thin object into the holes at the panel. (i.e. a pen) (3).
 - Press it into the hole next to the "up arrow" in order to raise *Miranti*.
 - Press it into the hole next to the "down arrow" in order to lower *Miranti*.

NOTE

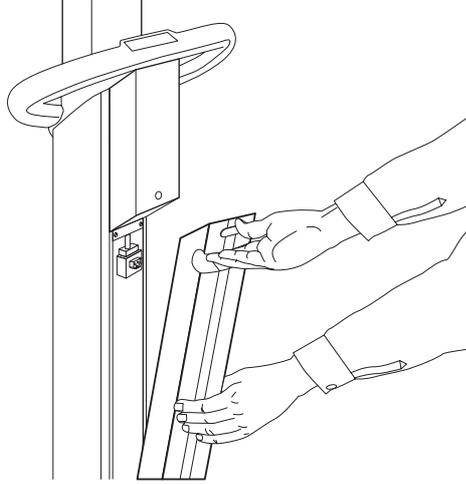
A continuous beeping sound is heard during action "up" and "down".

Contact your local ARJO representative before re-using *Miranti*.

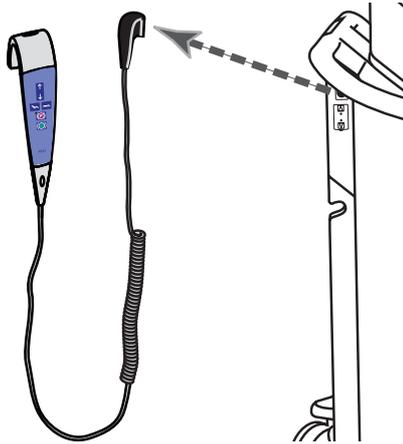
CAUTION

Do not use an object with sharp tip when pressing in the holes.

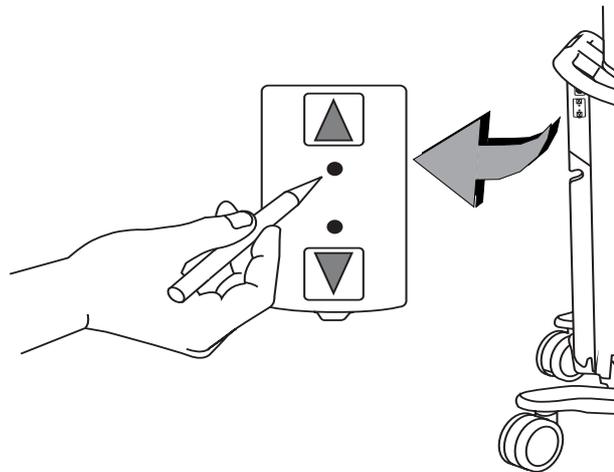
1



2



3



Battery charger

Attach the battery charger (1) to a suitable wall and connect it to a wall socket.

CAUTION

The battery charger is designed for use in a dry location and should not be installed in bathrooms, etc.

See separate instruction.

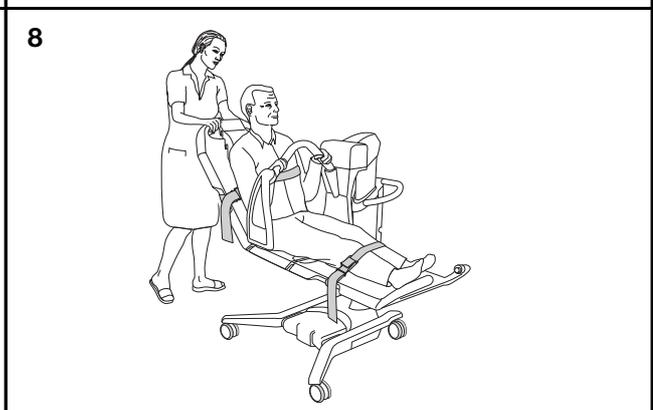
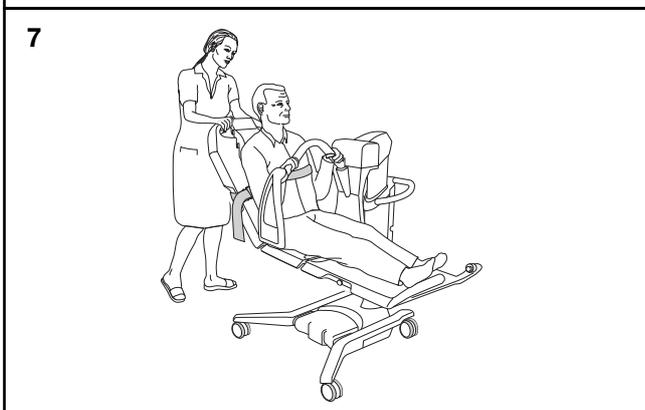
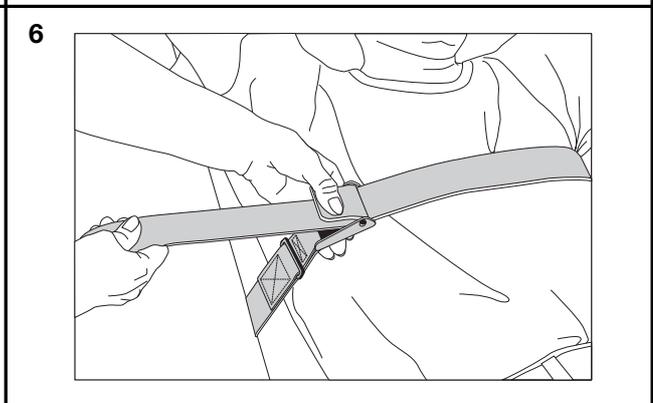
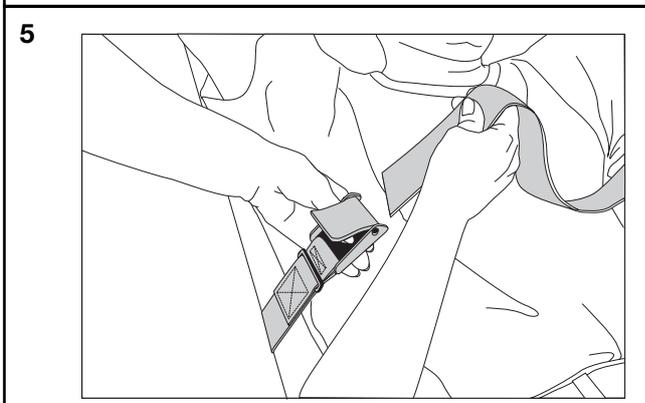
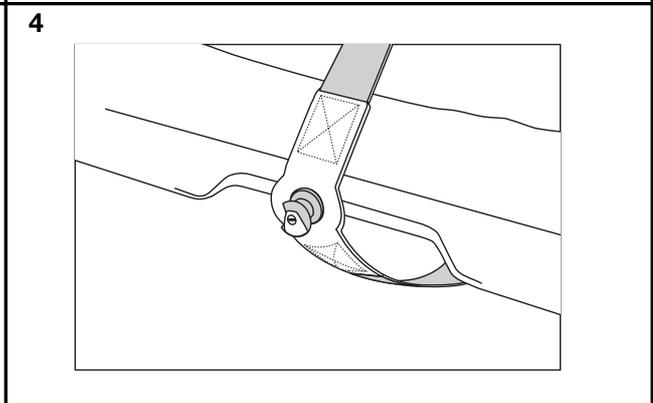
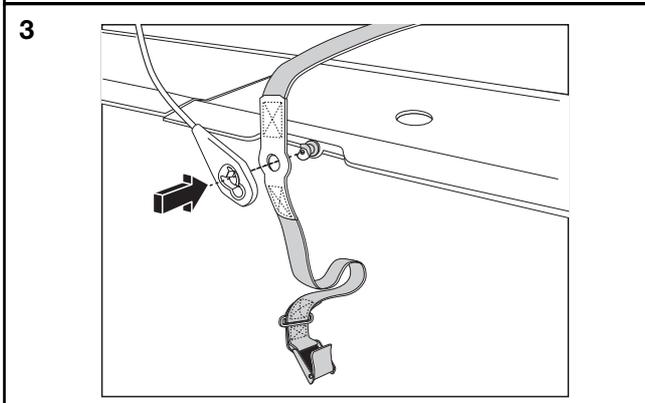
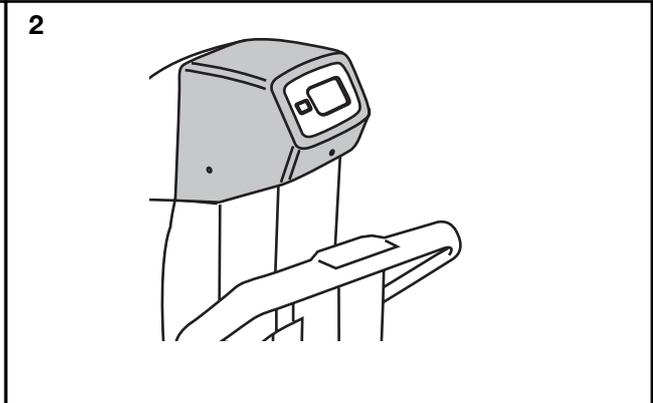
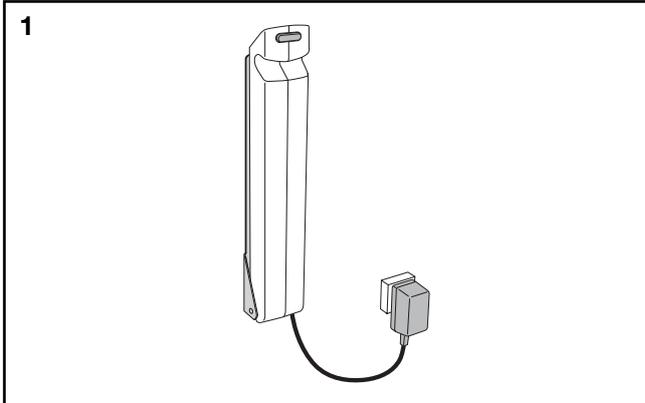
Scale (optional)

The scale (2) is integrated and located on the lift pillar.

See the separate scale instruction.

Safety belt

- Attach the safety belt as illustrated (3). Note that the belt should be fitted *before* the hook rope for raising the backrest.
- Make sure that the belt fits the knob (4) in the exact, inner position.
Make sure the buckle end of the belt is beneath the stretcher
- Place the belt around the resident. Run the end of the belt through the belt buckle (5).
- Lock carefully (6) .
- The belt should be put either around the chest or the legs of the resident (7) .
If required use both belts (8).



Power drive (optional)

An electric motor and a fifth wheel (A) are the powered drive (1). The wheel is maneuvered via a button on the right side of the transport handle from either end (B).

The *Miranti* 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 ~ 10mm).

How to drive

- Activate the drive by pressing the button on the transport handle (B).
- The fifth wheel is lowered and the drive starts after a few seconds.
- The drive continues for as long as the button is pressed.
- When you have released the button, the fifth wheel remains lowered for 4 seconds with the drive inactivated. During these 4 seconds 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.

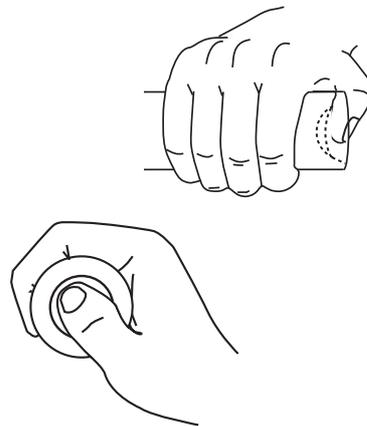
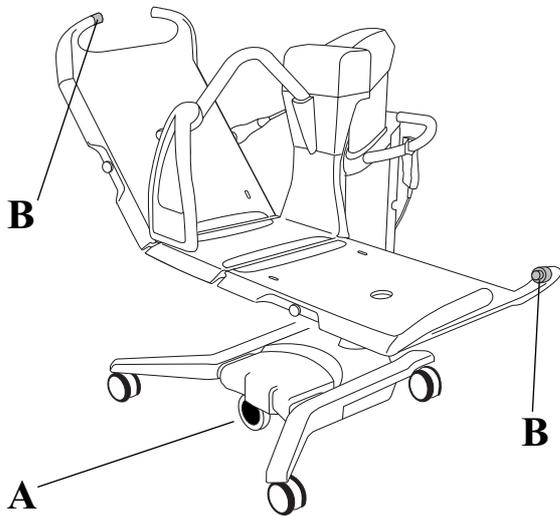
Manual drive

- Grip the transport handles (2A).
- Move the *Miranti* forwards.

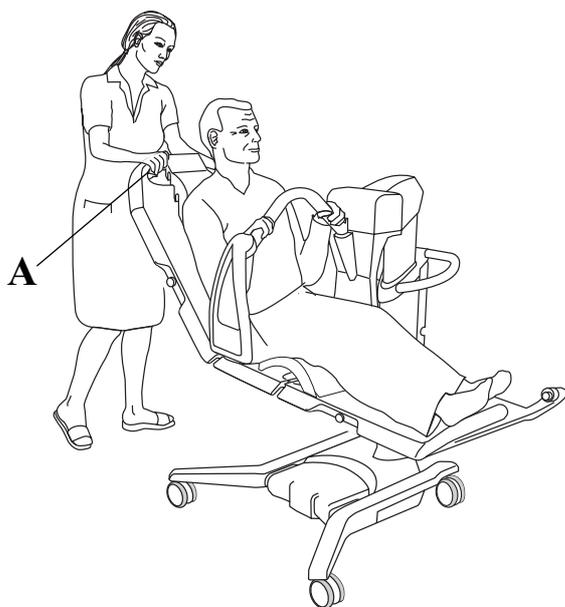
NOTE

Never activate the brakes during driving.

1



2



Transferring the resident

WARNING

Always pay close attendance to the resident during transferring, transporting and bathing.

From bed

Undress the resident in bed and dress him/her in a bathrobe, preferably one with buttons up the back.

If possible, approach the resident from the right side for transfer to the bath.

- Choose the appropriate end of the *Miranti* to act as a backrest and fasten the hookrope there for raising **(1)**. Attach safety belt/belts if required. Note that the belt must be fitted *before* the hookrope (*see page 10-11*). Put the thigh support cushion in place.
- Roll the resident on to his side.
- Move the stretcher in over the bed as close as possible to the resident **(2)** and lower so that it is resting firmly on the bed. The hookrope should be slack.
- Activate the brakes.
- Roll the resident over onto the stretcher **(3)**.
- **(4)** Lower the security grip and sideguard. Raise the backrest to a comfortable height for the resident. Let the resident put their hands on the security grip and put the headrest in place.
- Slightly raise the stretcher.
- Release the brakes and move the *Miranti* away from the bed **(5)**.
- Lower the stretcher to a comfortable height for the caregiver and hold the transport handles during transport **(6)**.

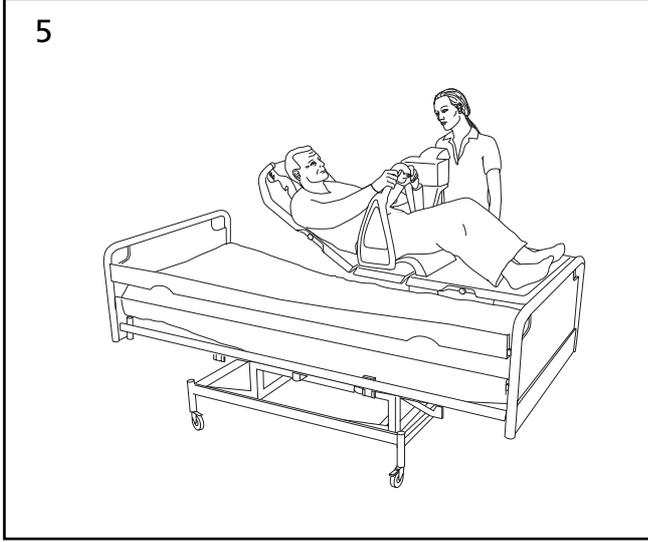
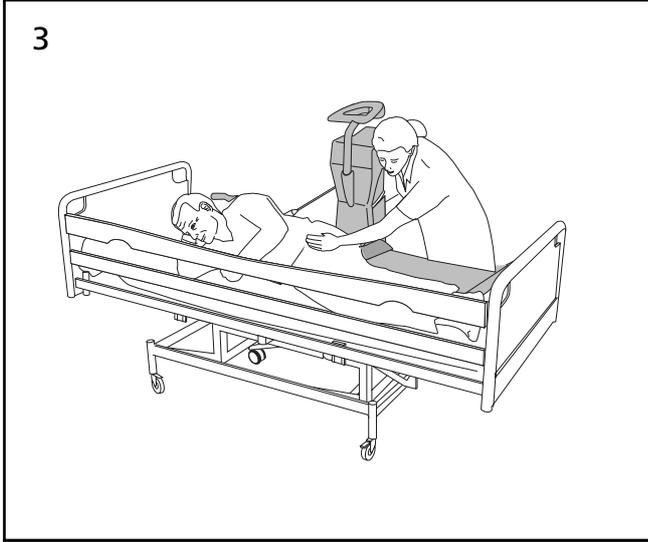
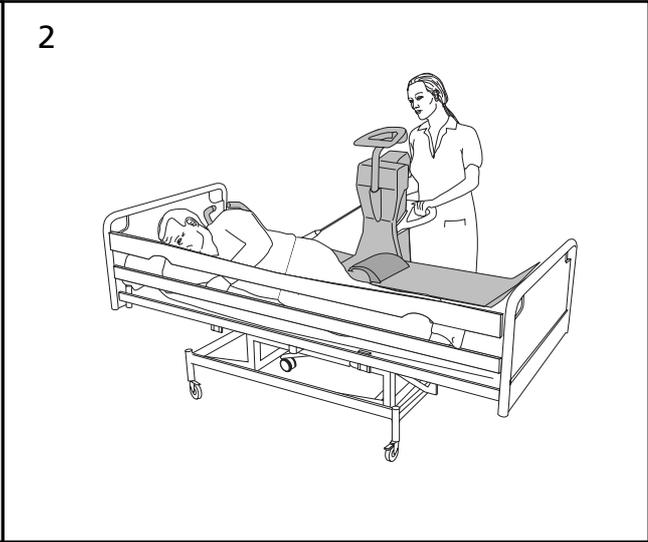
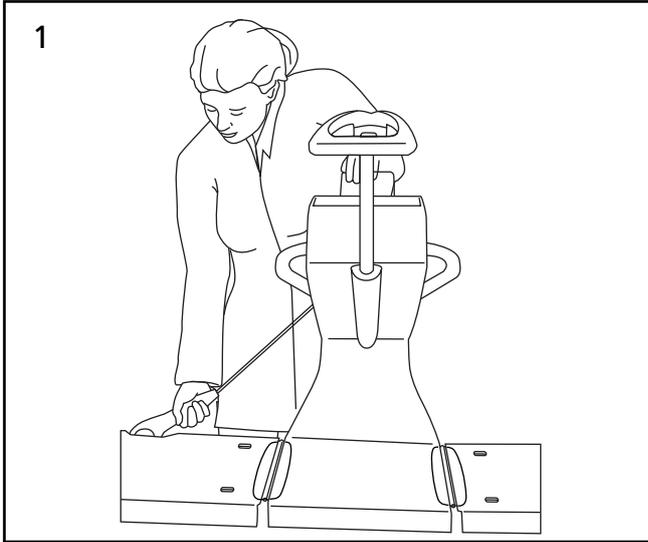
See the instructions for power drive function on page 16.

To bed

To transfer resident back to bed, perform “Transfer from bed” in reverse order.

WARNING

To avoid risk of injury, ensure resident's hands are on the security grip or their arms are across their chest.



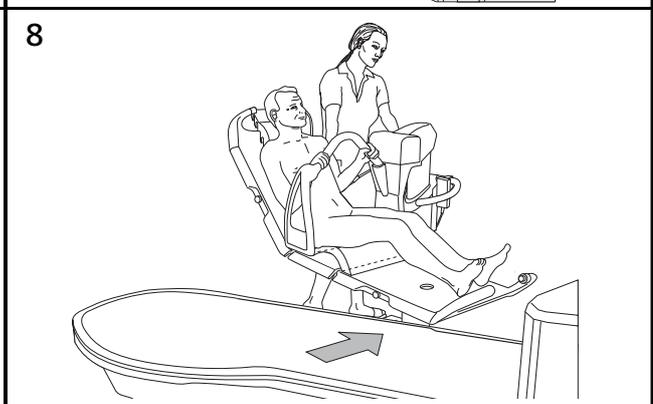
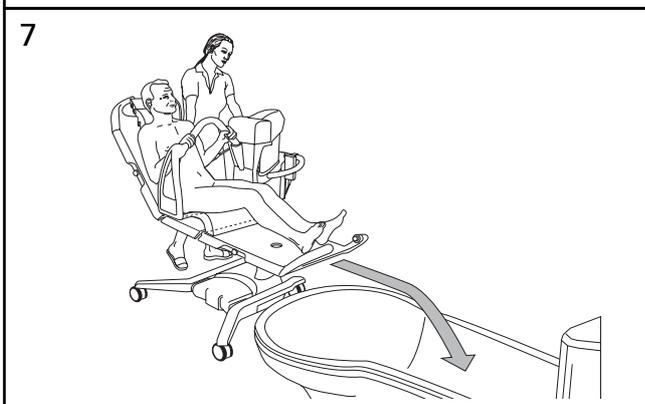
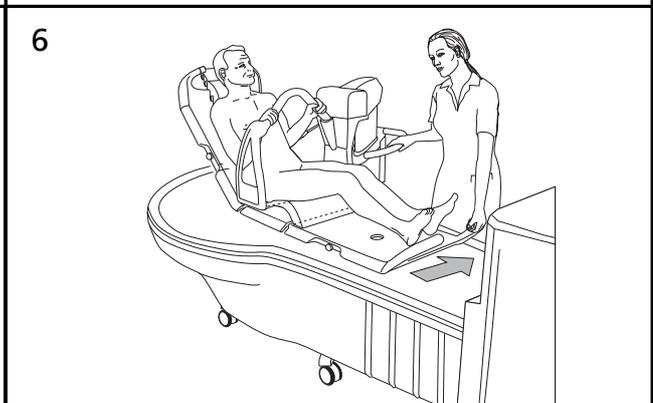
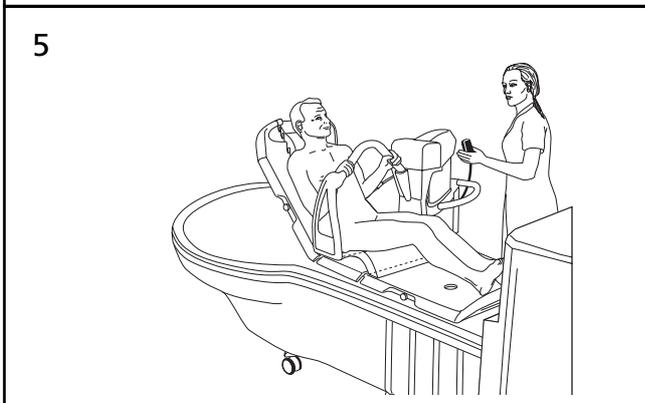
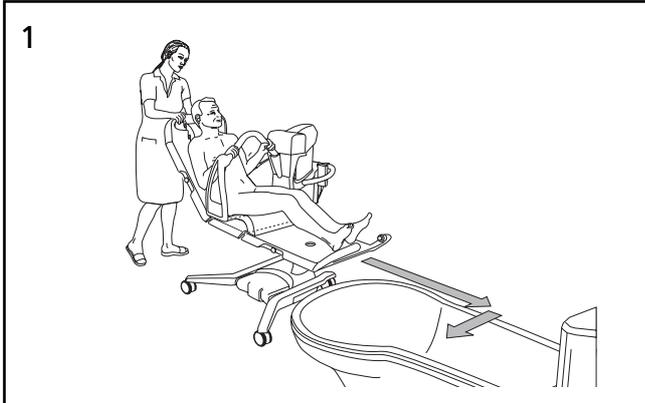
Bathing

Read the separate instructions for your bathing equipment.

- Raise the stretcher to clear the edge of the bath **(1)**. Activate the powerdrive and move the resident along the side of the bathtub and finally push transversely to it **(2)**. Watch out for bathtub legs.
- Raise the bathtub to a comfortable height **(3)**, if bathtub is adjustable.
- Lower the stretcher so that it is resting against the bottom of the bath.
- Lower the backrest to a comfortable position for the resident.
- Bathe the resident.
- After bathing, let the water run out of the bath. Raise the backrest. Let the resident put their hands on the security grip. Lower the bath to its lowest position. Shower the resident **(4)**.
- Dry the resident, as well as the underside of the stretcher, to prevent water from dripping onto the floor prior to moving the *Miranti* away from the bath. Raise the stretcher **(5)**.
- Activate the power drive and move the *Miranti* out from the bath **(6)**.

Manual drive

- Raise the stretcher to clear the edge of the bath and move the resident in over the bath **(7)**.
- Pull the *Miranti* away from the bath **(8)**.



Scale (optional)

Display functions

Upper indicator

- Shows weight in kg or lbs.
- - shows when negative weight (see daily use).

Unit

- Kg or lb.
- B/G =Brutto/Gross = indication of the weight in total (Net weight plus tare weight).
- NET=Netto= B/G minus tare weight (e.g. accessories).

Menu functions

- Shows *OPERATION* other function only when calibrating

Lock symbol

- If shown, contact Arjo Service Department.

0-symbol

- On, when the scale is in zero range. ($\pm 25g$; 0.05 lbs).

Dual range symbol

- L = Low: 2 - 120 kg (4- 264,6lbs).
- H = High: 4 - 182 kg (10- 400 lbs).
- The symbol is on for weights over 120 kg (264.6 lbs).

Min symbol

- Shown when the load is below 2 kg (4 lbs).

Max symbol

On when the load is above 182 kg (400 lbs).

If the scale is overloaded:

Remove the load immediately. Don't move the lift until the symbol is automatically switched off.

Battery symbol

Not in use. Power is supplied by the main battery.

Verification

All scales for medical purposes have to be verified within EU markets. The verification is documented by sealing marks under the cover and the notified body's verification mark.

Re-verifications should be performed according to local regulations.

CAUTION

If the seals are broken then the scale must be disqualified and not used again until re-verification has been carried out.

Labels and indicators

On the data label you will find the following information:

- standard approval certificate no.
- Article number
- W1=Range scale 1: 2 - 120 kg ($\pm 100g$)
W1=Range scale 1: 4 - 264.6 lbs (± 0.2 lbs)
- W2= Range scale 2: 4 - 182 kg ($\pm 200g$)
W2= Range scale 2: 10 - 400 lbs (± 0.5 lbs)
- d= actual scale division
- e=verified scale division

The values are equal in this scale.

Verification labels

After verification the following labels are to be found on the scale:(The marking in some countries may be different due to local regulations)

- Seal marks
- Authorized body's verification mark
- CE mark and year of 1st verification
- Green M mark

This scale fulfils the regulations of EN 45501/OIML R76-1.

The certification is according to the Council Directive 90/384 EEC,

Non-automatic Weighing Instrument Directive.

Calibration

Only on markets outside EU.

Regular checks ought to be done as well as recalibration, if necessary. Calibrations should be performed according to local regulations.

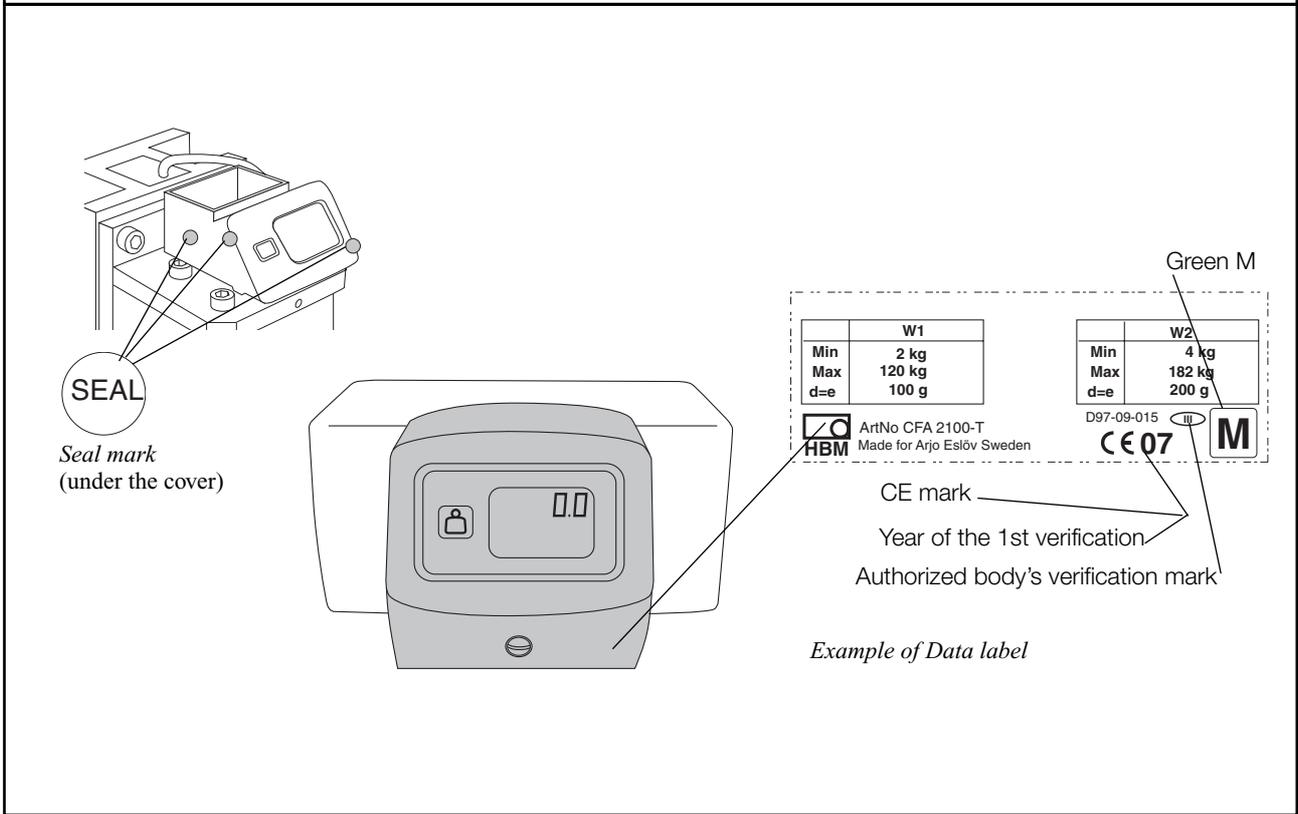
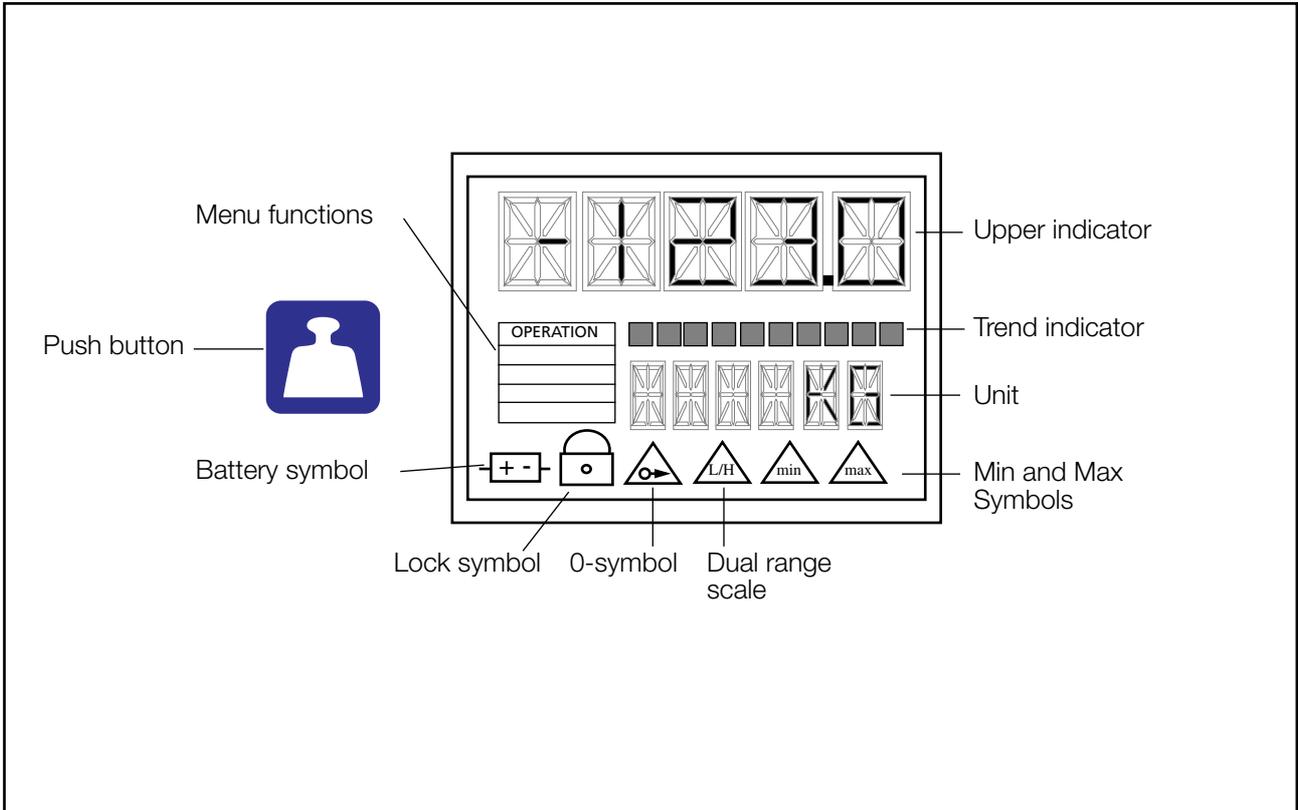
Weighing unit

The pre-installation of *Miranti* Scale is kg.

If you want to change from kg to lbs or vice versa, press the button for about 10 seconds.

NOTE

The weighing unit can not be changed on a verified scale.



Daily use; scale

NOTE

Make sure that the lift is in a horizontal position, because the display on a verified scale will show "TILT" if the lift isn't horizontal.

NOTE

Do not touch the stretcher, pillar or the resident during the procedure, because these are all integral parts of the weighing instrument.

The display is activated for 4 minutes. After that, the procedure has to be restarted.

There are two methods to weigh the resident with *Miranti Scale*:

Method A.

The scale is activated before the resident will enter the stretcher (1-2):

NOTE

To get the net weight of the resident, place all accessories on the stretcher before pushing the button.

- 1 Push the button.
- 2 A display test is performed, all segments are shown for about 1 second.
- 3 The display shows WAIT and after some seconds, 00. If the display shows any figures, push the button again. The display will then show 00 (net mode).
- 4 Let the resident get onto the stretcher.
- 5 Raise the lift so both the stretcher and the resident are clear of the floor, bed, etc.

The weight of the resident will be shown on the display.

Method B.

The resident is already lying/sitting on the stretcher when the scale is activated (3-4):

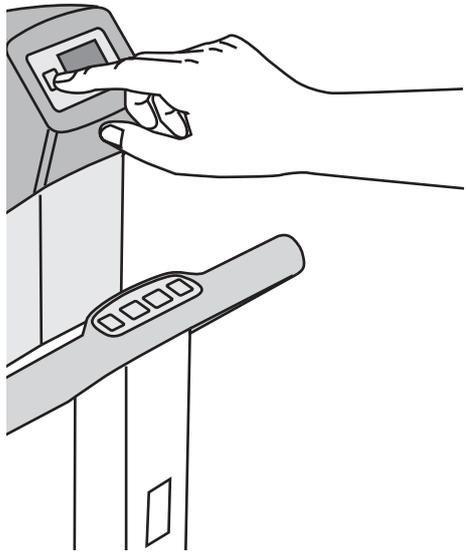
NOTE

To get the net weight of the resident, all accessories must remain on the stretcher.

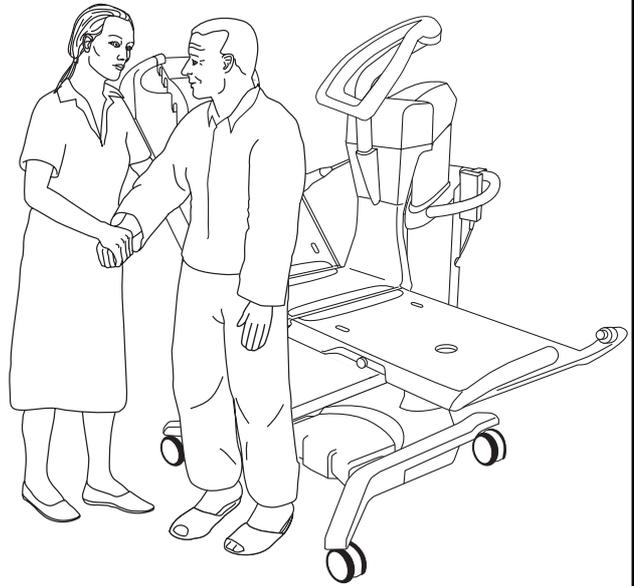
- 1 Raise the lift so both the stretcher and the resident are clear of the floor, bed, etc.
- 2 Push the button.
- 3 A display test is performed, all segments are shown for about 1 second.
- 4 If the display shows any figures, push the button again. The display will then show 00 (net mode).

When the resident leaves the stretcher, the display shows a negative value = the weight of the resident.

1



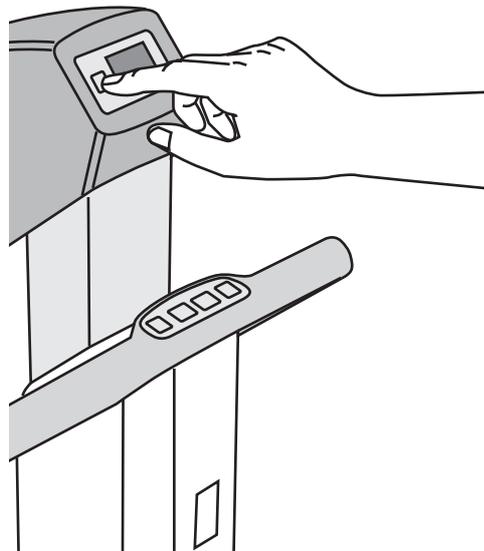
2



3



4



Battery and Battery charger

Installation

- The battery charger is designed for dry areas only and for normal air humidity conditions.
- The battery charger is not allowed to be used in living area of the residents.
- Fix the battery charger to a suitable wall and connect it to a wall socket (1).
- Recommended place to charge batteries is storage areas for lifters corresponding to the requirement above.

Charging batteries

- The charger converts mains voltage to low DC voltage.
- The charger must only be used for ARJO's battery type NDA 0100.
- The charger is ready for use as soon as it is plugged in.
- There is no On/Off button on the charger. Disconnect the mains by unplugging the charger.

CAUTION

The battery is heavy – be careful not to drop it!

- a Place the battery in the charger as shown (2).
- b The indicator lamp (a) shows yellow light during charging
- c The indicator lamp shows green light when the battery is fully charged.

NOTE

If your Miranti is equipped with a scale; Do not leave anything on the seat that could disturb the zero range when reconnecting the battery after charging.

Charging intervals

- To prolong life of batteries, charge at regular intervals.
- If the lift is used frequently, its recommended to use two batteries, one in operation and one being charged.
- It is recommended that batteries not in use are left in the charger, there is no risk of overcharging the batteries.

Low charge warning

If the battery needs charging a buzzing tone is heard when the lift is activated. At this time, there will be enough battery power to complete the immediate task.

Maintenance

- The charger does not require any maintenance.
- In case of a malfunction don't attempt to open the charger-cover.
- All repairs must be carried out by ARJO qualified personnel.

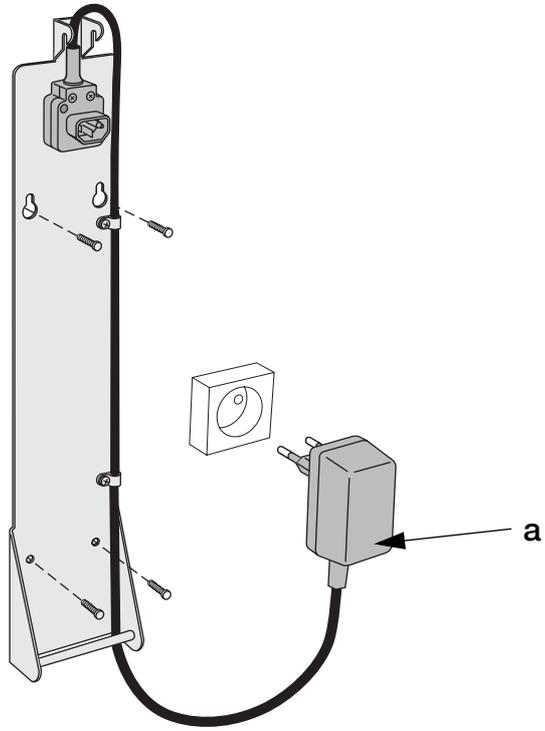
Storage of batteries

- Batteries are charged when delivered but we recommend you to recharge the batteries when received due to a slow selfdischarge.
- The batteries will slowly selfdischarge when not used
- Batteries that will not be used for a longer period should be kept in a cool place, not under 0 °C (32 °F) and not over room temperature + 25 °C (77 °F).

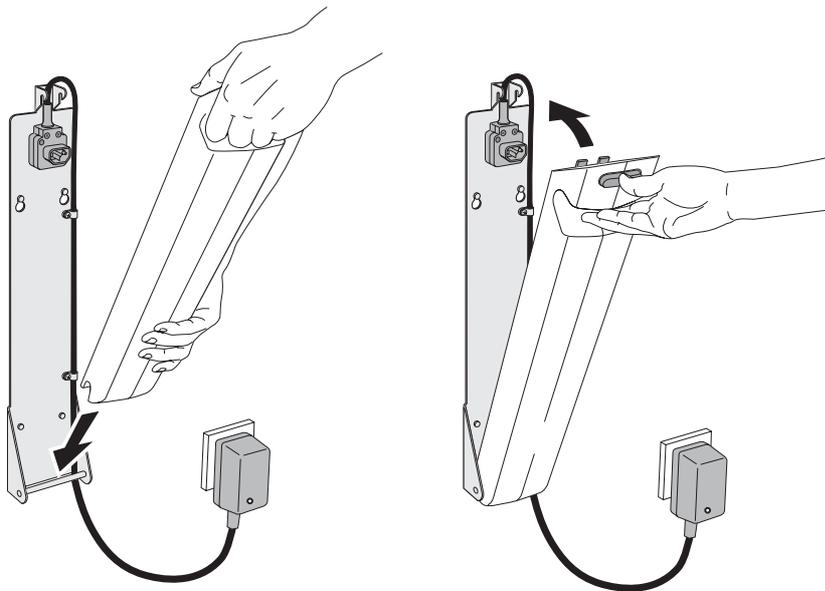
NOTE

Batteries that are charged for the first time or after a longer storage period must be charged until the indicator lamp turns green.

1



2



Cleaning instructions

For the best results, only use ARJO branded disinfectant cleansers.

If you have any questions regarding disinfecting the equipment, or wish to order cleaning fluid, contact ARJO Customer Service.

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

WARNING

Always use protective gloves and protective glasses when handling concentrated cleaning agents. Avoid getting the cleaning agent on your skin or in your eyes. If this does occur, rinse thoroughly with plenty of water. Seek medical advice if irritation occurs. Always consult the material safety data sheet for the disinfectant cleanser.

WARNING

Do not use phenol, citric acid or petroleum-based solvents, trichloroethylene, chlorines and hydrogen peroxides or similar cleaning agents as these may damage the plastic material. If a warm air drier is used, the temperature should not exceed 80 °C (176 °F). Steam or ethylene oxide sterilization can not be used either.

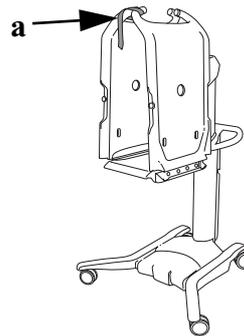
- Position the stretcher over the bath and lower it (1).
- Remove the headrest, the thigh support cushion (2a), the security grip (2b-2c) and safety belt/belts (when applicable). Place all in the bottom of the bath.
- Most ARJO baths are equipped with a spray handle for disinfecting purposes. Read the bathing equipment instructions on how to use the disinfection system. Using the disinfection handle, apply disinfection fluid over the *Miranti*. If you don't have the disinfection equipment, you can use an ordinary spray bottle instead, containing disinfection fluid mixed according to instructions on the container.
- Spray and scrub the upperside of the stretcher and pay extra attention to the hinges and the foundation of the security grip (3).

- Wash and disinfect the underside of the stretcher as well (4). Pay extra attention to the channel (5). Use a rag or disposable cloth. Scrub the loose parts.
- Allow a minimum of 2 minutes for the cleaning agent to work.
- Rinse thoroughly with water. The temperature of the water should not be higher than 60 °C (140 °F).
- Dry each part of the *Miranti* with a clean cloth. Pay extra attention to the channel underside of the stretcher (6).

WARNING

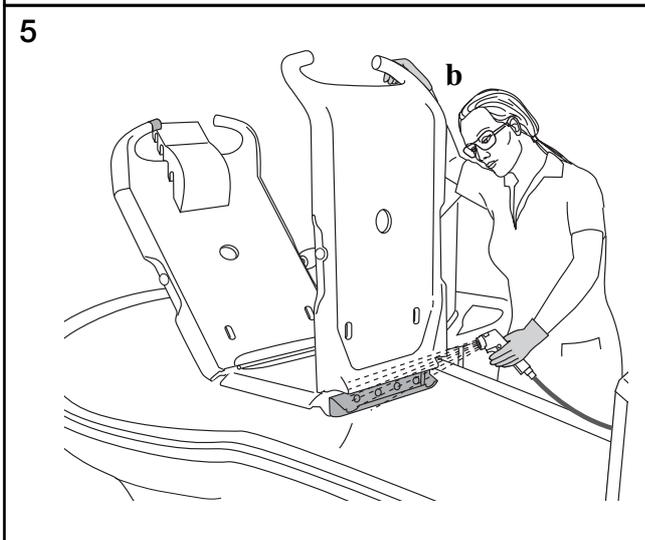
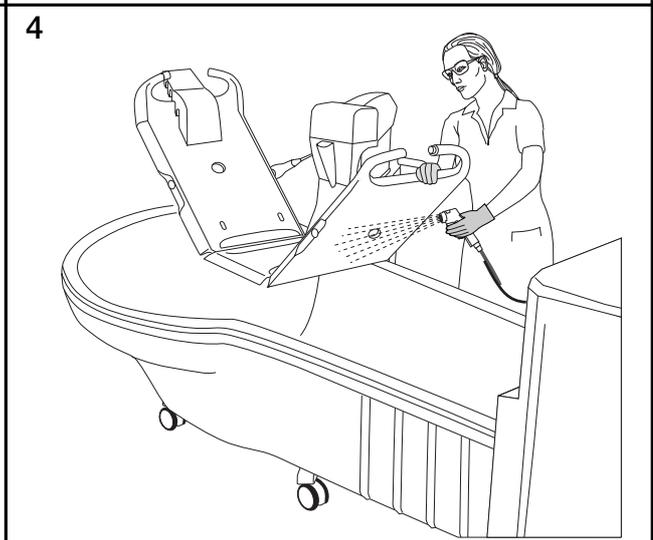
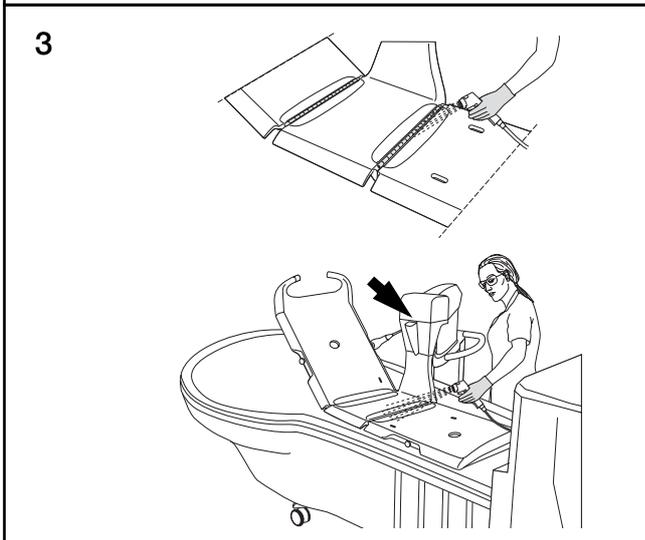
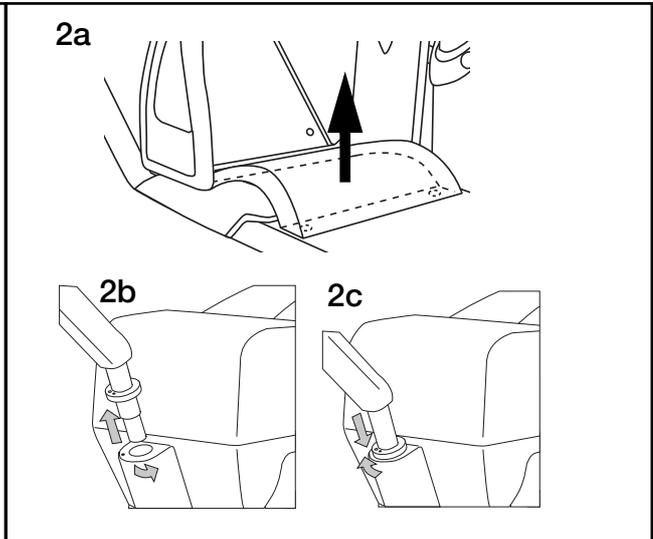
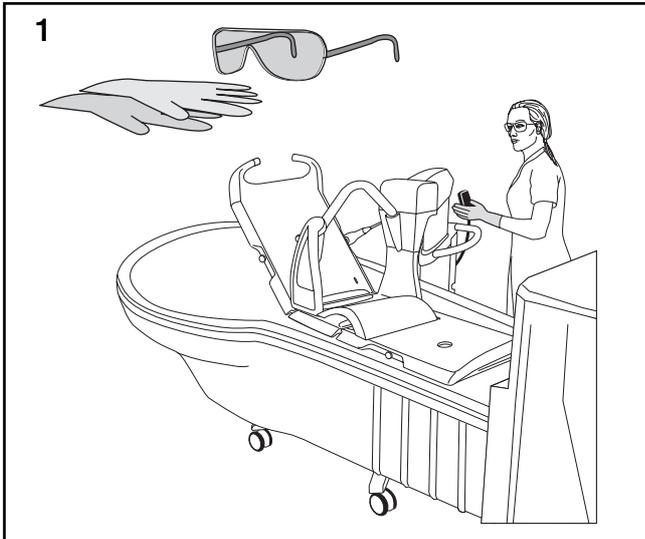
The stretcher parts are heavy!

When a part is fold upwards for showering or drying make sure that it is secured by (a) the enclosed sling or by a hand (b) during disinfection procedure (see illustrations).



Safety belt

The safety belt can be cleaned/disinfected together with *Miranti* as described above or be washed in 80°C/176°F water. The safety belt should never be bleached or ironed. Follow the instructions on the label attached on the belt.



Care and Preventive Maintenance

Miranti is subject to wear and tear, and the following actions must be performed when specified to ensure that the product remains within its original manufacturing specification

WARNING

The points on this checklist are the minimum the manufacturer recommends. In some cases due to heavy use of the product and exposure to aggressive environment, more frequent inspections should be carried out. Continuing to use this product without conducting regular inspections or continuing to use this product when a fault is found will seriously compromise the user and residents safety. Local regulations and standards may be higher than the manufacturers. Preventive maintenance specified in this manual can prevent accidents.

PREVENTIVE MAINTENANCE SCHEDULE MIRANTI

CAREGIVER OBLIGATIONS Action/Check	Every DAY	Every WEEK	Every YEAR	Every 2:nd YEAR
Cleaning/Disinfection	X			
Check of mechanical attachments		X		
Visually check the safety belt		X		
Check handset and cable		X		
Check and clean wheels		X		
Check brake function and brake pads		X		
Visually check battery charger and battery		X		
Visually check all exposed parts		X		
Check winch hook and rope		X		
Check attachment and locking of side guard and security grip		X		

WARNING

The following actions must be carried out by qualified personnel, using correct tools and knowledge of procedures. Failure to meet these requirements could result in personal injuries and/or unsafe product.

QUALIFIED PERSONNEL Action/Check	Every DAY	Every WEEK	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	
Replace winch hook and rope				X
Replace wheel parts*				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!** Wheels may require more or less frequent service/replacement, due to heavy use of the product and exposure to aggressive environment.

Caregiver obligations shall be carried out by qualified personnel following the instructions in this manual.

Trouble shooting

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

Every day

Miranti has to be cleaned immediately after every use. ARJO cleaning agents and shampoos should be used in **recommended concentrations**.

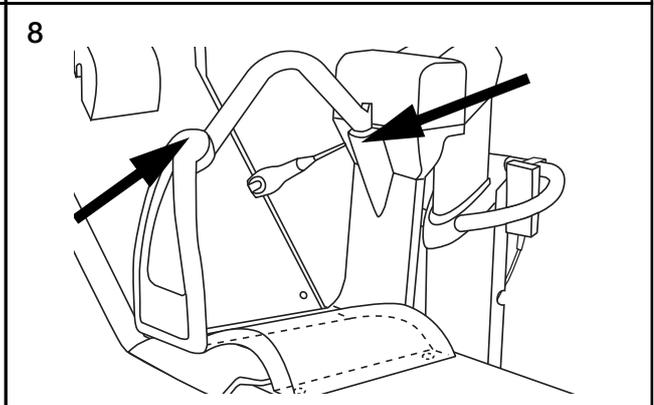
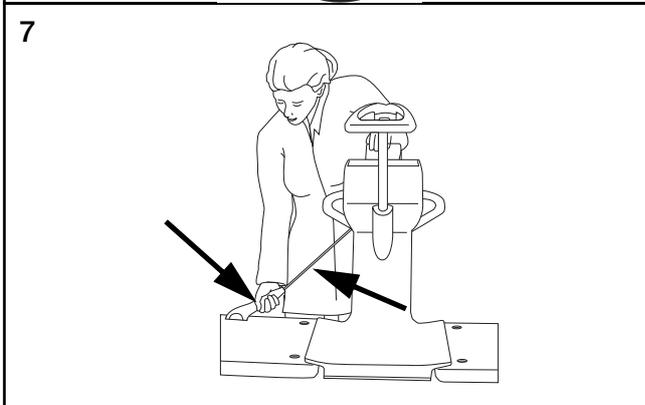
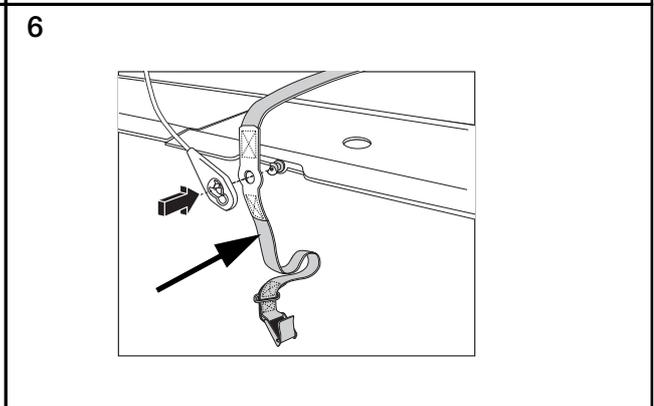
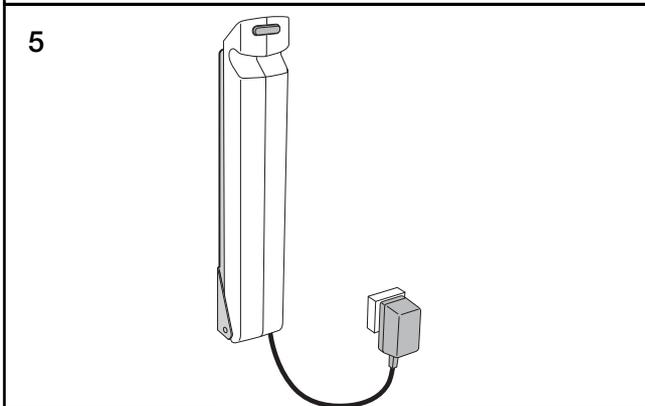
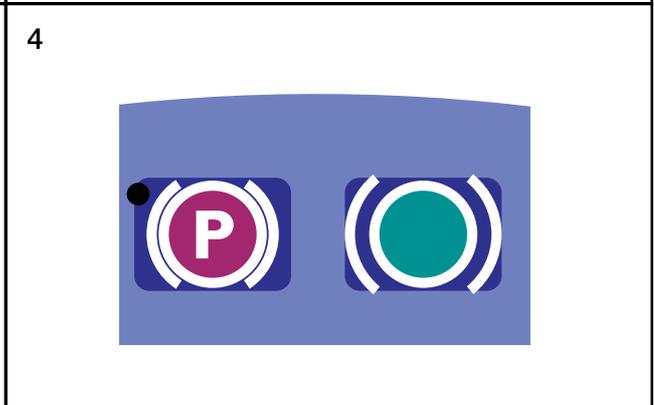
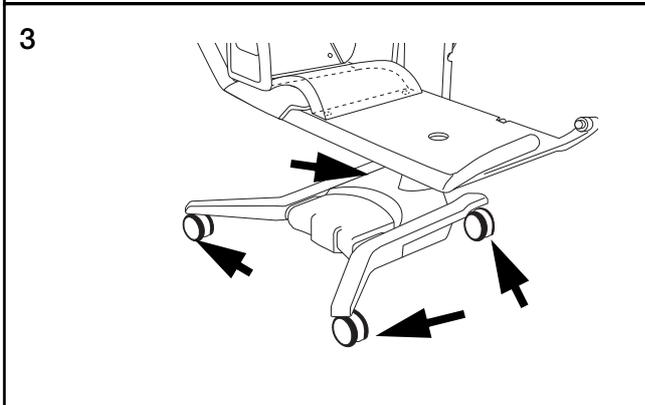
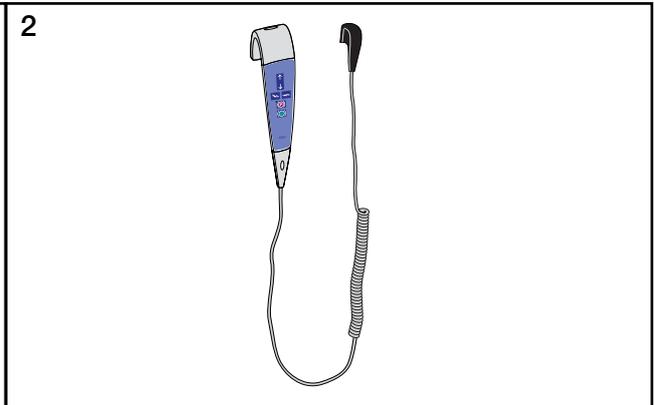
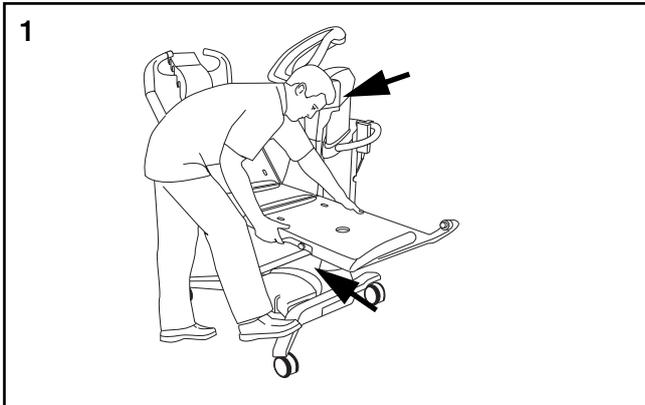
See further disinfecting/cleaning instructions on page 28.

Every week

- Visually check all exposed parts, especially where personal contact is made by either the resident or caregiver. Make sure no cracks or sharp edges have developed that could cause the resident 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 **(1)**.
- Check handset and cable: Visually check the condition of the handset and its cable. If found cut or damaged, replace it **(2)**.
- Check that the wheels 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) **(3)**.
- Check the central brake function and brake pads by activating the brake and try to move the hoist. It must be impossible to move without lifting the hoist from the floor **(4)**.
- Visually check the condition of the battery charger, its cable and the battery. Withdraw and replace immediately if damaged **(5)**.
- Visually check the safety belt. Check the complete length for fraying, cuts, loose stitching. If the belt is found damaged, replace it. **(6)**.
- Check winch hook and rope for damage. If any damages are found, replace **(7)**.
- Check attachment and locking of side guard and security grip. All attachments shall shape-in firmly into all positions **(8)**.

Yearly

Miranti has to be serviced according to the Preventive Maintenance Schedule (Qualified Personnel Action/Check).



Technical specifications

Miranti lift bath trolley model CEB 8X0X

Lifting capacity.	160 kg (350 lb)
Weight	95 kg (209 lb)
Weight with powerdrive and scale	103 kg (227 lb)
Measures with lift in lowest position	
Max height	1225 mm (48 1/4")
Max length	930 mm (36 5/8")
Seat height	475 mm (18 3/4")
Clearance height under seat	405 mm (16 ")
Max height when side support is reclined	1045 mm (41 1/8")
Max height of stretcher reclined	610 mm (24")
Max width	1970 mm (77 1/2")
Max height of stretcher, raised	1210 mm (47 5/8")
Max height of stretcher, parking position	1300 mm (51 1/8")
Measures with lift in highest position	
Max height	1815 mm (71 1/2")
Max length	930 mm (36 5/8")
Seat height	1065 mm (41 7/8")
Clearance height under seat	995 mm (39 1/8")
Max height when side support is reclined	1635 mm (64 3/8")
Max height of stretcher reclined	1200 mm (47 1/4")
Max height of stretcher, raised	1800 mm (70 7/8")
Max height of stretcher, parking position	1890 mm (74 3/8")
Clearance under chassis	28 mm (1 1/8")
Chassis max height	173 mm (6 3/4")
Max width of bathtub edge	90 mm (3 1/2")
Chassis width, front	530 mm (20 7/8")
Chassis clearance width, front	382 mm (15")
Chassis width, back	950 mm (37 3/8")
Chassis clearance width, back	790 mm (31 1/8")
Chassis max length	905 mm (35 5/8")
Turning diameter, reclined position	1995 mm (78 1/2")
Turning diameter, parking position	1190 mm (46 7/8")
Insertion length (150 mm clearance)	380 mm (15")
Lifting Stroke range	590 mm (23 1/4")
Clearance under stretcher min.	410 mm (16 1/8")
Clearance under stretcher max.	995 mm (39 1/8")
Max. width of stretcher	580 mm (22 7/8")
Maximum width for bathtub edge	90mm (3 1/2")

Miranti lift bath trolley model CEB 8X0X

Colour	grey/ bordeaux-red/blue
Medical equipment	type 
Usage temperature (water)	+20 °C - +45 °C (+68 °F - +113 °F)
Sound level	< 46 dBA
Mode of operation	ED max 10%; Max 2 min ON, Min 18 min OFF
Operating forces of controls	2.7 N

Charger model NDA 1200-EU, NDA 2200-GB, NDA 4200-US, NDA 6200-AU

Voltage,Frequency	230V ±10%, 50-60Hz 100-120V ±10%, 50-60Hz ±10%
Charge voltage and current	28.6 V, 1.2 A , yellow indicator
Standby charge voltage	27.6 V, green indicator
Max power	230V - 0.5 A, 100-120 V - 0,8 A
Weight	250 gram (0.55 pound)
Dimensions	60 x 70 x100 mm (2 3/8"x2 3/4"x 4")
Max Ambient temperature	+ 50°C (+ 122°F)
Max Relative humidity	75 %
Max Atmospheric pressure	1060 hPa
Degree of protection	IPX0
Mode of operation	continuous

Scale Model CFA2100-01

Weighing capacity	182 kg (400 lbs)
Weight	3,3 kg (7.3 lbs)
Height	178 mm (7")
Width	125 mm (4 7/8")
Depth	178 mm(7")
Relative humidity for accuracy	0-95%
Temperature (for accuracy)	+10 °C - +40 °C (+50 °F - +104 °F)
Temperature/storage (max temp will shorten the working life of the batteries)	-30 °C - +70 °C (-22 °F - +158 °F)
Protection class	IP65
Supply voltage	24 V

Transport and storage

Ambient temperature range	-10 °C to +50 °C (+14 °F to +122 °F)
Relative humidity range	10 % to 80 % at 20 °C (68 °F) including condensation
Atmospheric pressure range	500 hPa to 1060 hPa

Electricity

Battery No. NDA 0100	Sealed lead-acid battery 24 V, 4 Ah
Protection class	IP X4
Fuse	F1 F10AL 250 V
Fuse	F2 T2.5AL 250 V

Recycling

The device should be recycled according to national regulations	
Battery	Sealed lead-acid. Recyclable. Not for disposal. Environment danger
Package	Wood and corrugated cardboard, recyclable
The Lift	Electric , steel and plastic parts shall be separated and recycled according to marking on the unit

Labels on battery and battery charger

On the charger you will find the following information:

Charger model	NDA 1200-EU (Europe except for Great Britain) NDA 2200-GB (Great Britain) NDA 4200-US (USA, Canada and Japan) NDA 6200-AU (Australia)
Mains supply	230V, 50-60Hz ±10% 100-120V, 50-60Hz ±10%
Maximum rated power	230V - 0.5 A 100-120 V - 0,8 A
Output data	28.6 V 1.2 A- yellow 27.6V thereafter - green
NDA0100	ARJO battery intended for this charger
Class II	Insulation class
	Read the operation manual before use
IP2X	Use in dry areas

Approval label

CE marking in accordance with the Directive 93/42/EEC (The Medical Devices Directive).

The equipment has been EMC-tested and fulfils all requirements according to IEC 60601-1-2

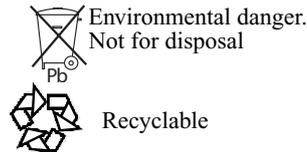


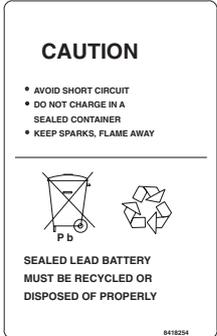
Classified by Underwriters Laboratories Inc. with respect to electric shock, fire, mechanical hazards and other specified hazards only in accordance with UL 60 601-1 and CAN/CSA - C 22.2 No 601.1-M90.

Identification label

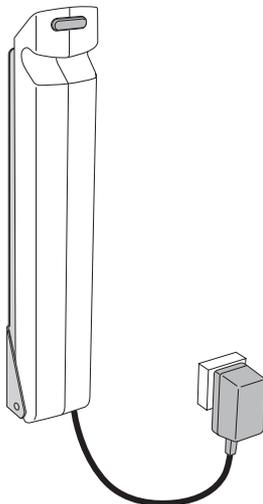
The identification label states the product and serial number and the manufacturing country.

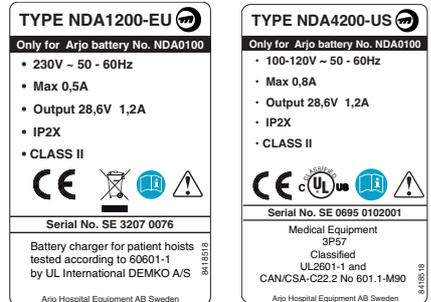
Battery label





Battery label





**Data / Approval label
EU and US**

Manufacturing country: SE=Sweden

Manufacturing works: E=Eslöv

Year: Year

Week: Week

Serial number: Serial number

SEE0102001



Identification label



**Identification label
on the battery charger**

Labels on the lift

The data label, the identification label and the approval label are located on the pillar, behind the battery.

On the data label you will find the following information:

SWL	Safe Working Load 160 kg (350 lbs).
	Lifting stroke 590 mm (23 1/4")
24V DC	Supply voltage
150 VA	Max power
Fuse F1	F10AL 250 V
Fuse F2	T2.5AL 250 V
IP X4	Protection class
	Type B Applied part: protection against electrical shock in accordance with IEC 60 601-1.
ED MAX 10%	Mode of operation for Hi/Lo function: Max 2min ON and 18 min OFF
NDA0100 24V 4Ah	Product no. of the battery
	Read the operation instructions before use.
	Contact your local ARJO Sales representative how to recycle the device according to European Directive 2002/96/EG (WEEE)

Identification label

The identification label states the type of equipment and serial number (see figure).

Safety label

The label is attached below the positioning handle and means:

Read the operating instructions before use.

Approval label

- CE marking in accordance with the Directive 93/42/EEC (The Medical Devices Directive)
- Classified with respect to electric shock, fire mechanical and other specified hazards only in accordance with UL60 601-1 and CAN/CSA C22.2 No 601.1-M90

Battery labels

The battery labels is attached on the back side of the battery.



Environmental danger. Not for disposal.



Recycleable.

MODEL: CEB8X0X

SWL Safe Working Load
160 kg / 350 lbs

590 mm
 23 1/4"

Type:

24 V DC
 Max: 150 VA
 F1: F10 AL 250 V
 F2: T2,5 AL 250 V
 IPX4

ED Max 10% Max 2 min ON
 Min 18 min OFF

Max Total Weight: 265 kg / 584 lbs

Accessory battery:
 No. NDA0100 24 V 4 Ah

Read the operating instructions before use
 Merci de prendre connaissance de la notice d'utilisation
 Lesen Sie bitte die Bedienungsanleitung durch

MADE BY ARJO HOSPITAL EQUIPMENT AB
 ESLOV, SWEDEN

84118275 C

Data label

CE 0086

TUV
 SUD
 CAN/CSA-C22.2
 No. 601.1-1090

MADE BY ARJO HOSPITAL EQUIPMENT AB
 ESLOV, SWEDEN

84118655 A

Example of Approval label

Manufacturing country SE=Sweden
 Manufacturing works E=Eslöv
 Year
 Week
 Serial number

SEE0102001

Product no
CDB81XX

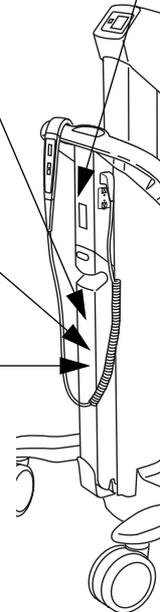
Serial no
SEE0102001

Made by Arjo in Eslöv, Sweden
 010115

Example of identification label

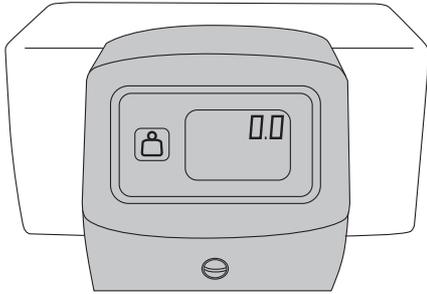


Safety label

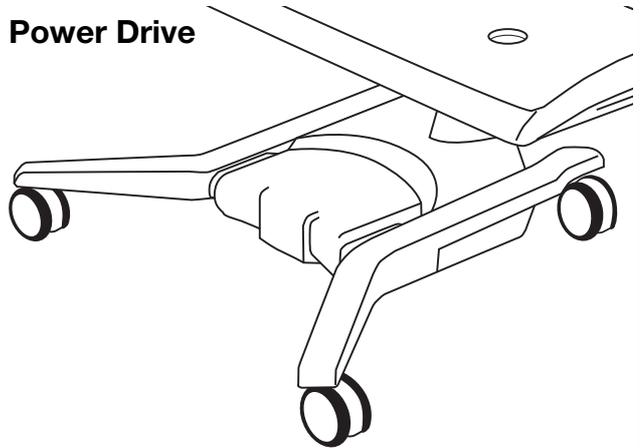


Accessories

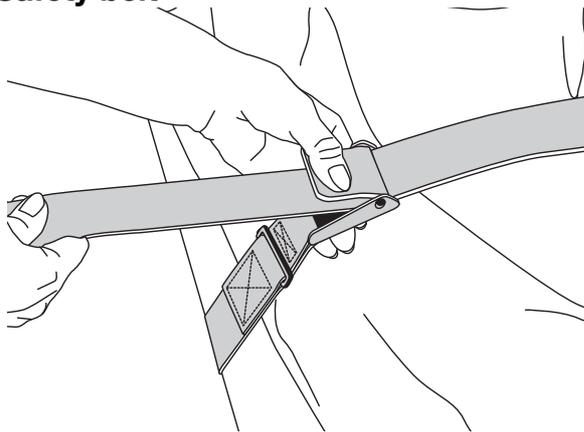
Electronic scale



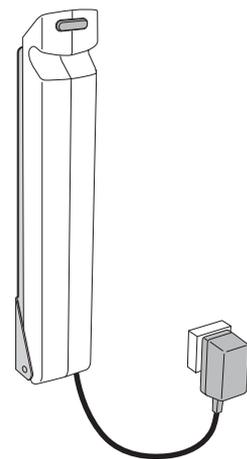
Power Drive



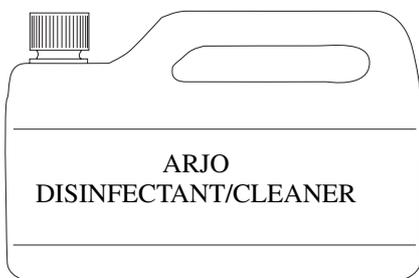
Safety belt



Battery and battery charger



Disinfectant / Cleaner





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