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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.

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

Safety belt/belts (see page 15)
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.
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 resident’s 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.
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.
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 side guard.

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.
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).
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. (± 25g ; 0.05 lbs).

Dual range symbol
- L = Low: 2 - 120 kg (4 - 264.6 lbs).
- 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 (± 100g)
  W1=Range scale 1: 4 - 264.6 lbs (± 0.2 lbs)
- W2= Range scale 2: 4 - 182 kg (± 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,

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

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):

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.

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.

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

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

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.

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.
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.

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.

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.
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.

Do not use phenol, citric acid or petroleum-based solvents, trichloroethylene, clorines 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.
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

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<th>Every WEEK</th>
<th>Every YEAR</th>
<th>Every 2nd YEAR</th>
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<tr>
<td>Cleaning/Disinfection</td>
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<tr>
<td>Check of mechanical attachments</td>
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<tr>
<td>Visually check the safety belt</td>
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<tr>
<td>Check handset and cable</td>
<td>X</td>
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<tr>
<td>Check and clean wheels</td>
<td>X</td>
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<tr>
<td>Check brake function and brake pads</td>
<td>X</td>
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<tr>
<td>Visually check battery charger and battery</td>
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<td>Visually check all exposed parts</td>
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<td>Check winch hook and rope</td>
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<tr>
<td>Check attachment and locking of side guard and security grip</td>
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### QUALIFIED PERSONNEL Action/Check

![Table](https://example.com/table.png)

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

*NOTE! Wheels may require more or less frequent service/replacement, due to heavy use of the product and exposure to aggressive environment.*

**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.
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

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Lifting capacity.</strong></td>
<td>160 kg (350 lb)</td>
</tr>
<tr>
<td><strong>Weight</strong></td>
<td>95 kg (209 lb)</td>
</tr>
<tr>
<td><strong>Weight with powerdrive and scale</strong></td>
<td>103 kg (227 lb)</td>
</tr>
<tr>
<td><strong>Measures with lift in lowest position</strong></td>
<td></td>
</tr>
<tr>
<td>Max height</td>
<td>1225 mm (48 1/4&quot;)</td>
</tr>
<tr>
<td>Max length</td>
<td>930 mm (36 5/8&quot;)</td>
</tr>
<tr>
<td>Seat height</td>
<td>475 mm (18 3/4&quot;)</td>
</tr>
<tr>
<td>Clearance height under seat</td>
<td></td>
</tr>
<tr>
<td>Max height when side support is reclined</td>
<td>405 mm (16&quot;)</td>
</tr>
<tr>
<td>Max height of stretcher reclined</td>
<td>1045 mm (41 1/8&quot;)</td>
</tr>
<tr>
<td>Max height of stretcher, raised</td>
<td>610 mm (24&quot;)</td>
</tr>
<tr>
<td>Max width</td>
<td>1970 mm (77 1/2&quot;)</td>
</tr>
<tr>
<td>Max height of stretcher, raised</td>
<td>1210 mm (47 5/8&quot;)</td>
</tr>
<tr>
<td>Max height of stretcher, parking position</td>
<td>1300 mm (51 1/8&quot;)</td>
</tr>
<tr>
<td><strong>Measures with lift in highest position</strong></td>
<td></td>
</tr>
<tr>
<td>Max height</td>
<td>1815 mm (71 1/2&quot;)</td>
</tr>
<tr>
<td>Max length</td>
<td>930 mm (36 5/8&quot;)</td>
</tr>
<tr>
<td>Seat height</td>
<td>1065 mm (41 7/8&quot;)</td>
</tr>
<tr>
<td>Clearance height under seat</td>
<td>995 mm (39 1/8&quot;)</td>
</tr>
<tr>
<td>Max height when side support is reclined</td>
<td>1635 mm (64 3/8&quot;)</td>
</tr>
<tr>
<td>Max height of stretcher reclined</td>
<td>1800 mm (70 7/8&quot;)</td>
</tr>
<tr>
<td>Max height of stretcher, raised</td>
<td>1890 mm (74 3/8&quot;)</td>
</tr>
<tr>
<td>Clearance under chassis</td>
<td>28 mm (1 1/8&quot;)</td>
</tr>
<tr>
<td>Chassis max height</td>
<td>173 mm (6 3/4&quot;)</td>
</tr>
<tr>
<td>Max width of bathtub edge</td>
<td>90 mm (3 1/2&quot;)</td>
</tr>
<tr>
<td>Chassis width, front</td>
<td>530 mm (20 7/8&quot;)</td>
</tr>
<tr>
<td>Chassis clearance width, front</td>
<td>382 mm (15&quot;)</td>
</tr>
<tr>
<td>Chassis width, back</td>
<td>950 mm (37 3/8&quot;)</td>
</tr>
<tr>
<td>Chassis clearance width, back</td>
<td>790 mm (31 1/8&quot;)</td>
</tr>
<tr>
<td>Chassis max length</td>
<td>905 mm (35 5/8&quot;)</td>
</tr>
<tr>
<td>Turning diameter, reclined position</td>
<td>1995 mm (78 1/2&quot;)</td>
</tr>
<tr>
<td>Turning diameter, parking position</td>
<td>1190 mm (46 7/8&quot;)</td>
</tr>
<tr>
<td>Insertion length (150 mm clearance)</td>
<td>380 mm (15&quot;)</td>
</tr>
<tr>
<td>Lifting Stroke range</td>
<td>590 mm (23 1/4&quot;)</td>
</tr>
<tr>
<td>Clearance under stretcher min.</td>
<td>410 mm (16 1/8&quot;)</td>
</tr>
<tr>
<td>Clearance under stretcher max.</td>
<td>995 mm (39 1/8&quot;)</td>
</tr>
<tr>
<td>Max. width of stretcher</td>
<td>580 mm (22 7/8&quot;)</td>
</tr>
<tr>
<td>Maximum width for bathtub edge</td>
<td>90mm (3 1/2&quot;)</td>
</tr>
</tbody>
</table>
## Miranti Lift Bath Trolley Model CEB 8X0X

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colour</td>
<td>Grey/bordeaux-red/blue</td>
</tr>
<tr>
<td>Medical Equipment Type</td>
<td></td>
</tr>
<tr>
<td>Usage Temperature (Water)</td>
<td>+20 °C - +45 °C (+68 °F - +113 °F)</td>
</tr>
<tr>
<td>Sound Level</td>
<td>&lt; 46 dBA</td>
</tr>
<tr>
<td>Mode of Operation</td>
<td>ED max 10%; Max 2 min ON, Min 18 min OFF</td>
</tr>
<tr>
<td>Operating Forces of Controls</td>
<td>2.7 N</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voltage, Frequency</td>
<td>230V ±10%, 50-60Hz</td>
</tr>
<tr>
<td>Charge voltage and current</td>
<td>28.6 V, 1.2 A, yellow indicator</td>
</tr>
<tr>
<td>Standby charge voltage</td>
<td>27.6 V, green indicator</td>
</tr>
<tr>
<td>Max Power</td>
<td>230V - 0.5 A, 100-120 V - 0.8 A</td>
</tr>
<tr>
<td>Weight</td>
<td>250 gram (0.55 pound)</td>
</tr>
<tr>
<td>Dimensions</td>
<td>60 x 70 x 100 mm (2 3/8”x2 3/4”x 4”)</td>
</tr>
<tr>
<td>Max Ambient Temperature</td>
<td>+ 50°C (+122°F)</td>
</tr>
<tr>
<td>Max Relative Humidity</td>
<td>75%</td>
</tr>
<tr>
<td>Max Atmospheric Pressure</td>
<td>1060 hPa</td>
</tr>
<tr>
<td>Degree of Protection</td>
<td>IPX0</td>
</tr>
<tr>
<td>Mode of Operation</td>
<td>continuous</td>
</tr>
</tbody>
</table>

## Scale Model CFA2100-01

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weighing Capacity</td>
<td>182 kg (400 lbs)</td>
</tr>
<tr>
<td>Weight</td>
<td>3.3 kg (7.3 lbs)</td>
</tr>
<tr>
<td>Height</td>
<td>178 mm (7”)</td>
</tr>
<tr>
<td>Width</td>
<td>125 mm (4 7/8”)</td>
</tr>
<tr>
<td>Depth</td>
<td>178 mm (7”)</td>
</tr>
<tr>
<td>Relative Humidity for Accuracy</td>
<td>0-95%</td>
</tr>
<tr>
<td>Temperature (for accuracy)</td>
<td>+10 °C - +40 °C (+50 °F - +104 °F)</td>
</tr>
<tr>
<td>Temperature/Storage</td>
<td>-30 °C - +70 °C (-22 °F - +158 °F)</td>
</tr>
<tr>
<td>Protection Class</td>
<td>IP65</td>
</tr>
<tr>
<td>Supply Voltage</td>
<td>24 V</td>
</tr>
</tbody>
</table>

---

35
### Transport and storage

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ambient temperature range</td>
<td>–10 °C to +50 °C (+14 °F to +122 °F)</td>
</tr>
<tr>
<td>Relative humidity range</td>
<td>10 % to 80 % at 20 °C (68 °F) including condensation</td>
</tr>
<tr>
<td>Atmospheric pressure range</td>
<td>500 hPa to 1060 hPa</td>
</tr>
</tbody>
</table>

### 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

<table>
<thead>
<tr>
<th>Component</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Battery</td>
<td>Sealed lead-acid. Recyclable. Not for disposal. Environment danger</td>
</tr>
<tr>
<td>Package</td>
<td>Wood and corrugated cardboard, recyclable</td>
</tr>
<tr>
<td>The Lift</td>
<td>Electric, steel and plastic parts shall be separated and recycled according to marking on the unit</td>
</tr>
</tbody>
</table>
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

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.

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

**Battery label**

- Environmental danger.
- Not for disposal
- Recyclable

**Approval label**


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

**Identification label**

IP2X Use in dry areas
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:

**Safe Working Load** 160 kg (350 lbs).

**Lifting stroke** 590 mm (23 1/4”)

**Supply voltage** 24V DC

**Max power** 150 VA

**Fuse F1** F10AL 250 V

**Fuse F2** T2.5AL 250 V

**Protection class** IP X4

**Applied part** Type B 

**Mode of operation for Hi/Lo function**: Max 2min ON and 18 min OFF

**Product no. of the battery** NDA0100

**Voltage** 24V 4Ah

**Environmental danger. Not for disposal.** Recycleable.

**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.
Accessories

Electronic scale

Power Drive

Safety belt

Battery and battery charger

Disinfectant / Cleaner

ARJO
DISINFECTANT/CLEANER