

ARJO

MAXI SKY⁴⁴⁰ OPERATING AND PRODUCT CARE INSTRUCTIONS



001.16000.33.EN rev 5
September 2008



CE

Table of Contents

Introduction	6
Foreword	6
Please read this manual thoroughly	6
Service and support	6
Supplier information	6
How to use this manual	7
Symbols used in this manual	7
Key to symbols	7
Intended use	8
Operational life	8
Equipment identification	8
Verifying the package contents	8
Safety Instructions	9
General	9
Important safety advices	10
Shock prevention	10
Fire and explosion prevention	11
Human and environment safety practices	11
Battery and battery charger safety practices	11
Equipment warning labels	11
Labels on the Lift	12
Serial number label	13
Approval label	13
Labels on the Battery & Battery Charger	14
Battery label	15
Battery charger label	15

Table of Contents

Part Designation	16
Lift cassette and charger station	16
How to use the <i>Maxi Sky</i> ⁴⁴⁰	18
Emergency shut-off	18
Emergency lowering	18
Battery information	18
Charging the batteries	20
Pass Through Hook	21
Raising and lowering the resident	24
Folding sling supports	24
Transferring the resident	26
Procedures for attaching loop slings to the Maxi Sky 440 folding sling supports	27
To lift a resident from a bed	30
To lift a resident from a chair	30
To lift a resident from the floor	32
Before transporting a resident	32
Care and Maintenance	33
Preventive Maintenance Schedule	33
Daily Checklist	35
Inspection and cleaning	35
Strap Inspection	36
Handling and Storage	36
Battery Replacement	37
Verification of Charger Power Source	37
Sling Inspection and Care	37
Inspection	37

Table of Contents

Annual Inspection.	38
Maintenance Requirements	38
Troubleshooting	39
Technical Specifications	40
Product information	40
Accessories	42

Introduction

Thank you for purchasing ARJO equipment.

Your *Maxi Sky⁴⁴⁰* is part of a series of quality products designed especially for acute care hospitals, elderly care facilities 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 your local ARJO representative if you have any questions about the operation or maintenance of your ARJO equipment.

Foreword

Please read this manual thoroughly

Please read this manual in its entirety before using your *Maxi Sky⁴⁴⁰*. Information in the manual is crucial to the proper operation and maintenance of the equipment, and will help protect your product and ensure that the equipment performs to your satisfaction. Lifting and transferring a person always present a potential risk. 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.

Tested according to standards by:

TÜV, Product Service and



Service and support

A service routine has to be done on your *Maxi Sky⁴⁴⁰* by ARJO authorized service personnel to ensure the safety and operating procedures of your product. See chapter *Care and Maintenance*.

If you require further information, please contact your local ARJO representative which can offer comprehensive support and service program 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.

Introduction

How to use this manual



WARNING:

Do not attempt to use this equipment without understanding this manual.

To ensure safe operation, read the entire manual carefully, especially the section on “Safety Instructions and Warnings”, before installing, operating, or servicing this equipment.

If anything is not completely understood, please contact your local ARJO representative for more details. Failure to comply with warnings in this manual may result in injury.

Keep this manual with the lift and refer to it as required. Make sure that all operators are regularly trained in the use of the equipment according to this manual.

Symbols used in this manual

Throughout this manual the following symbols are used. Pay particular attention to the information provided under these headings. These special annotations are easily recognized as follows:



WARNING:

This symbol is intended to alert the user to hazards or unsafe practices, which could result in serious injuries. Failure to understand and obey this warning may result in injury to you or to others.

NOTE!

This symbol is intended to alert the user of the presence of important operating and maintenance instructions, which could prevent product damage or possible personal injury.

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

CAUTION

This symbol offers helpful information concerning certain operating procedures. Failure to follow these instructions may cause damage to all or parts of the system.

Additional copies of this manual can be purchased from your local ARJO representative. Include the User Manual product number and equipment identification number, *see front page*.

Key to symbols

The following symbol is used on the *Maxi Sky⁴⁴⁰* ceiling lift cassette:



The symbol indicates the “Service” indicator light.

The following symbols are used on the charger:



The symbol indicates the power-on indicator light.



The symbol indicates the charging indicator light.

Introduction

Intended use

The *Maxi Sky⁴⁴⁰* is intended for lifting residents at acute care hospitals, elderly care facilities and other health care facilities under the supervision of appropriate trained caregiver staff in accordance with the instructions outlined in this Operating and Product Care Instructions. All other uses must be avoided.

The equipment must only be used for the purposes stated above, and must be installed by ARJO authorized personnel and in accordance with local codes.

Operational life



WARNING:

The manufacturer cannot ensure full safety for a ceiling lift or an accessory of which the lifespan is exceeded.

The equipment is conceived and tested for a useful life of 10 000 transfers, 3 to 7 years, whatever comes first, subject to preventative maintenance as specified in the Operating and Product Care Instructions, the Assembly and Installation Instructions and the Spare Part Instructions. Time equivalence between number of transfers / number of years is made clear in the table in *figure 1*. The red indicator on the ceiling lift will blink for a while when it is halfway to its useful life, and again to indicate the end of the useful life period.

The operating life of this equipment corresponds directly to the safe operating time period before a complete overhaul is required. Age of the cassette, frequency of use (number of beds / transfers per day), resident weight and maintenance frequency are factors that have an impact on the *Maxi Sky⁴⁴⁰* lifespan. A transfer is defined as the displacement of a resident from one point to another. A transfer cycle includes a lifting and a descent action.

Transfers per day	Years (10 000 transfers)
4	7
6	4.5
8	3.5

Figure 1

The expected operational life for fabric slings and fabric stretchers is approximately 2 years from date of purchase. This life expectancy only applies if the slings and stretchers have been cleaned, maintained and inspected in accordance with the “ARJO Sling Information” documents, the “Operating and Product Care Instructions” and the “Preventive Maintenance Schedule”.

The expected life for other consumable products, such as batteries, fuses, lamps, slings, straps and cords is dependent upon the care and usage of the equipment concerned. Consumables must be maintained in accordance with published “Operating and Product Care Instructions” and the “Preventive Maintenance Schedule”.

Equipment identification

The unit's identification number (specification, model, serial number) appears on a silver nameplate attached at the end of the lift.

Verifying the package contents

Always ensure that the ceiling lift shall be installed by an ARJO authorized contractor or installer.

Upon receipt of the equipment, verify it against the packing list to ensure it is complete and inspect the equipment for possible damage due to shipping. If there is any damage, notify the carrier immediately to file a claim. Provide complete information concerning damage claims or shipping errors to your local ARJO representative. Include all equipment identification numbers and group part numbers (if any) as described above along with a full description of damaged parts.

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 local ARJO representative.

General

Keep these Safety Instructions with the ceiling lift at all times.

Read Operation and Product Care Instructions in this manual before installing, operating, or servicing this equipment.



WARNING:

Maxi Sky⁴⁴⁰ is for transferring residents only. Do not use the lift for any other purpose.



WARNING:

Maxi Sky⁴⁴⁰ is intended to be used for residents within the specified weight limit indicated for the lift. Do not attempt to lift more than the weight limit indicated.



WARNING:

Always place the sling around the resident according to the instructions enclosed. Failure to do so may result in injury to you or to others.

CAUTION

DO NOT drop the ceiling lift cassette or batteries, since that may cause internal damage that is not easily seen. If the ceiling lift is suspected to be damaged, contact your local ARJO representative for servicing.

Safety Instructions

Important safety advices

Always ensure that:

- The ceiling lift is installed by an authorized contractor or installer.
- The equipment is used by trained staff.
- Installation is conformed to accept a 200 kg (440 lbs) load, this will be done by the ARJO installation team.
- The resident is assessed by qualified professional before attempting to move the resident.
- You are prepared before attempting to transfer a resident.
- Violent impact during transportation is avoided.
- The sling is intended to be used for this lift and can take the weight of the resident.
- The sling is not damaged, torn or frayed.
- The lifting procedures outlined in this manual are followed.
- All controls and safety features are used only according to the rules specified in this manual. Never attempt to force a control or button on the lift.
- The charger is not stored in a shower, bath or other areas with high humidity.
- The safety straps are in good condition and properly fastened.
- The daily maintenance is carried out before using the lift.
- Any precautionary or instruction labels that cannot be easily read is replaced.
- The humidity when storing the *Maxi Sky⁴⁴⁰*, when not in use, not exceeds 80 % at 20°C (68°F).
- The ambient temperature range when storing *Maxi Sky⁴⁴⁰* should be -10°C to +50°C (+14°F to +122°F).

NOTE!

ARJO ceiling lifts are specifically designed for ARJO KwikTrak ceiling rail systems, slings and accessories. If slings of any other manufacturer for some reason are used, always make sure these slings are CE-marked and are attended by the manufacturer of the sling to be used on the *Maxi Sky⁴⁴⁰*.

CAUTION

Keep all components of the lift clean and dry, and have electrical and mechanical safety checkpoints done as instructed in the Care and Maintenance section of this manual.

Shock prevention

- Do not touch or use a lift with bare conductors or a damaged power cord. Electrically live equipment can result in serious injuries. If the lift or charger has any exposed or damaged wires contact your local ARJO representative immediately.
- Do not splash or expose electric parts of the device to water or moisture.
- Check nameplate for voltage and cycle requirements. These requirements differ by country. Do not attempt to use the lift in an area that has a different voltage and cycle requirement.
- Do not attempt to expose, service or repair the lift, battery or charger. If any unit is malfunctioning, contact your local ARJO representative.
- Read batteries and charger instructions thoroughly before using or storing them.

Safety Instructions

Fire and explosion prevention



WARNING:

Do not place or store the battery under direct sunlight or near a heat source. Do not expose the batteries or battery charger to flames. Do not use the charger in presence of inflammable anaesthetic gases.

- Do not short-circuit the battery terminals.
- Do not incinerate the battery.

Human and environment safety practices

- 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.
- For recycling and disposal of the batteries the rules according to the WEEE directive (Waste of Electronic and Electrical Components) and local rules and regulations must be followed. If not they may explode, leak and cause personal injury. When returning batteries, insulate their terminals with adhesive tape etc., otherwise, the residual electricity in used batteries may cause fire or explosion.

Figure 2 below shows the symbols for disposal and recycling.

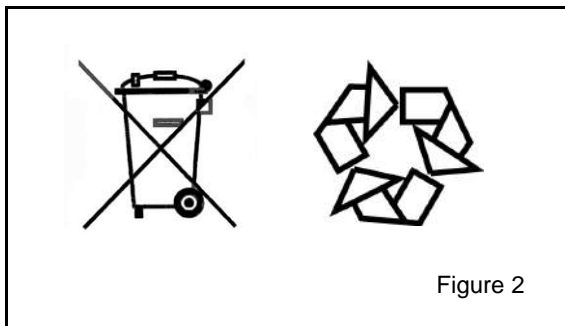


Figure 2

Battery and battery charger safety practices



WARNING:

Do not expose the battery connector or the battery charger to water. The charger is designed for dry areas only and for normal air humidity conditions.

- Be careful not to drop the battery.
- Use only the charger supplied with the equipment.
- Do not charge batteries in unventilated room areas.
- The charger must not be covered or exposed to dust.
- Do not short-circuit the battery.
- Do not crush, puncture, open, dismantle or otherwise mechanically interfere with the batteries.
- Do not store batteries at a temperature higher than 50°C (122°F).

Equipment warning labels

- Carefully read the labels on the battery and follow the instructions.
- Inspect all precautionary labels on the equipment. Order and replace all labels that cannot be easily read.

Labels on the Lift

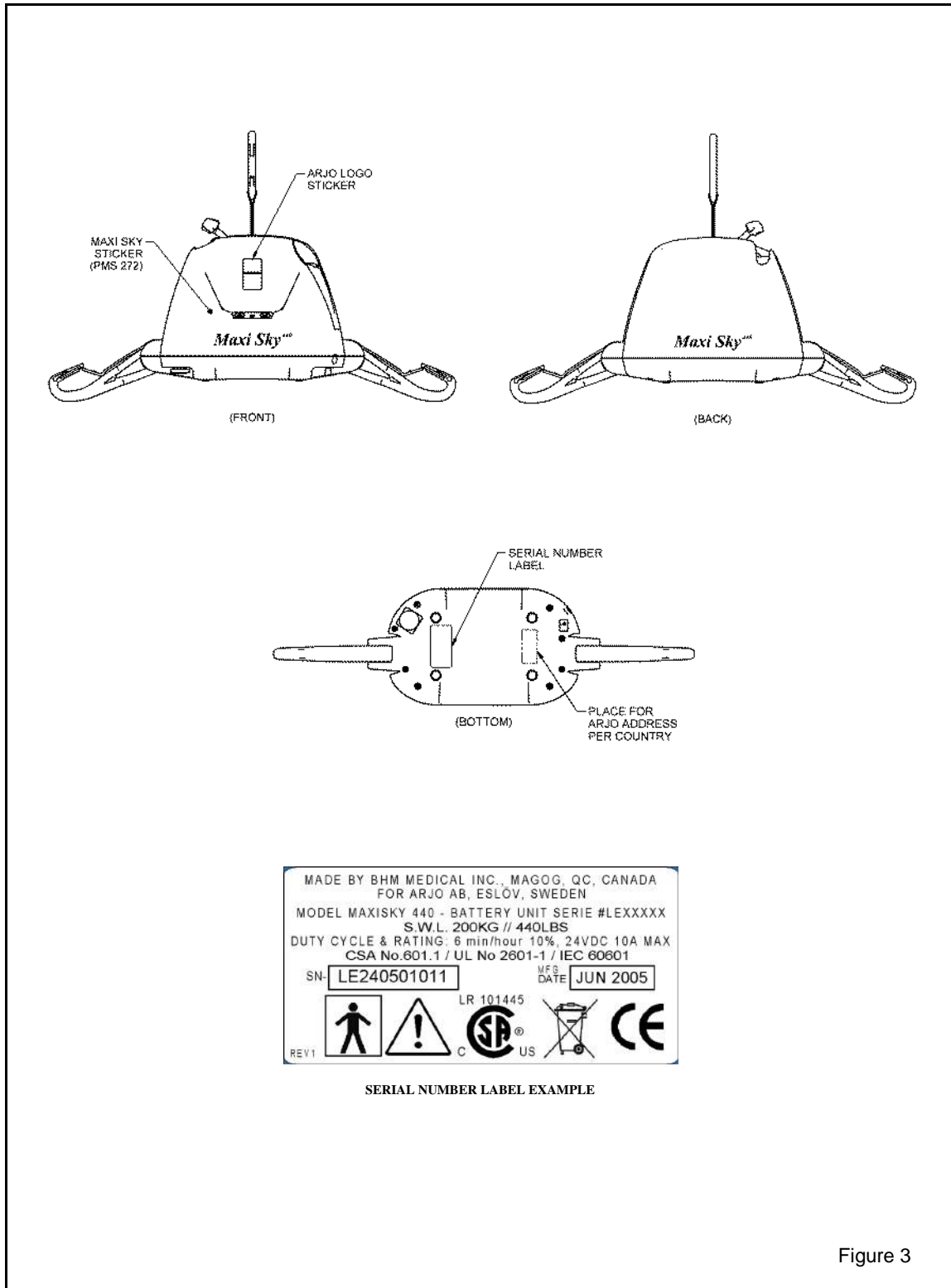


Figure 3

Labels on the Lift

On the ceiling lift cassette data labels you will find the following information. *See figure 3:*

Serial number label

- Model name and number: MAXI SKY 440 #LEXXXXX.
- Approvals: CAN CSA C 22.2 No. 601.1/ UL No. 2601-1/ISO 10535.
- Charge maximum load: 200 kg (440 lbs).
- Duty cycle: Max 10%, Max 6min/hour.
- Rating: 24 VDC, 10 A Max.
- Serial number.
- Manufacturing date.



Type BF.

Applied part: protection against electric shock in accordance with EN 60601-1, double insulated.



Read the operating instructions before use.



This symbol is required to be displayed on regulated products for sale in the European Market. It indicates that the product complies with applicable European Directive for Medical Devices.



Canadian Standards Association approval.

SWL

Safe Working Load represents the maximum load the ceiling lifter is rated for to ensure safe operation.



Environmental danger. Not for disposal.
To be recycled in accordance with the European Directive 2002/96/EG (WEEE).

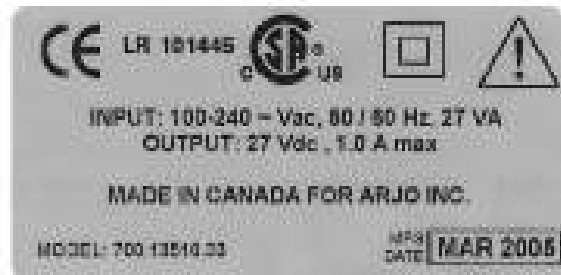
Approval label

- CE marking in accordance with the Directive 93/42/EEC (The Medical Device Directive) and classified to class 1.
- The lift has been safety tested according to:
IEC 60601-1
ISO 10535
CAN CSA C 22.2 No. 601.1.
- The lift has been EMC-tested and fulfills all requirements according to IEC 60601-1-2. ARJO is not aware of any reciprocal electromagnetic interference between *Maxi Sky⁴⁴⁰* and other electrical products.

Labels on the Battery & Battery Charger



Battery label



Battery charger label

Figure 4

Labels on the Battery & Battery Charger

On the ceiling lift cassette battery label and the battery charger label you will find the following information. *See figure 4:*

Battery label

- Type: Sealed Rechargeable Valve Regulated Lead Acid Battery.
- Constant Voltage Charge.
- Cycle use: 14.1 - 14.4 V.
- Standby use: 13.5 - 13.8 V.
- Initial current: Less than 2.00 A.
- Rating: 12 V, 2,3 Ah.



CAUTION

Do not short battery terminals.
Avoid charging in a sealed container.
Keep away from sparks and flames.
Keep away from children.



Approval of plastic materials according to:
UL No. 2601-1.



This symbol is required to be displayed on regulated products for sale in the European Market. It indicates that the product complies with applicable European Directives related to health, safety and environment and consumer protection.



Environmental danger. Not for disposal.
To be recycled in accordance with the European Directive 2002/96/EG (WEEE).



Recyclable.

Battery charger label



This symbol is required to be displayed on regulated products for sale in the European Market. It indicates that the product complies with applicable European Directives related to health, safety and environment and consumer protection.



Canadian Standards Association approval.



Insulation class II



CAUTION

Read the operating instructions before use

- Input: 100-240 Vac, 50/60 Hz, 27 VA
- Output: 27-29 Vdc, 1.0 A max.

Part Designation

Lift cassette and charger station

- A Emergency key
- B Pass Through Hook
- C Carabiner
- D Hand control pocket
- E Hand control
- F DC inlet, charger
- G Charger
- H Front Panel with UP/DOWN button
- I Power cord, 1.5 m

Part designation

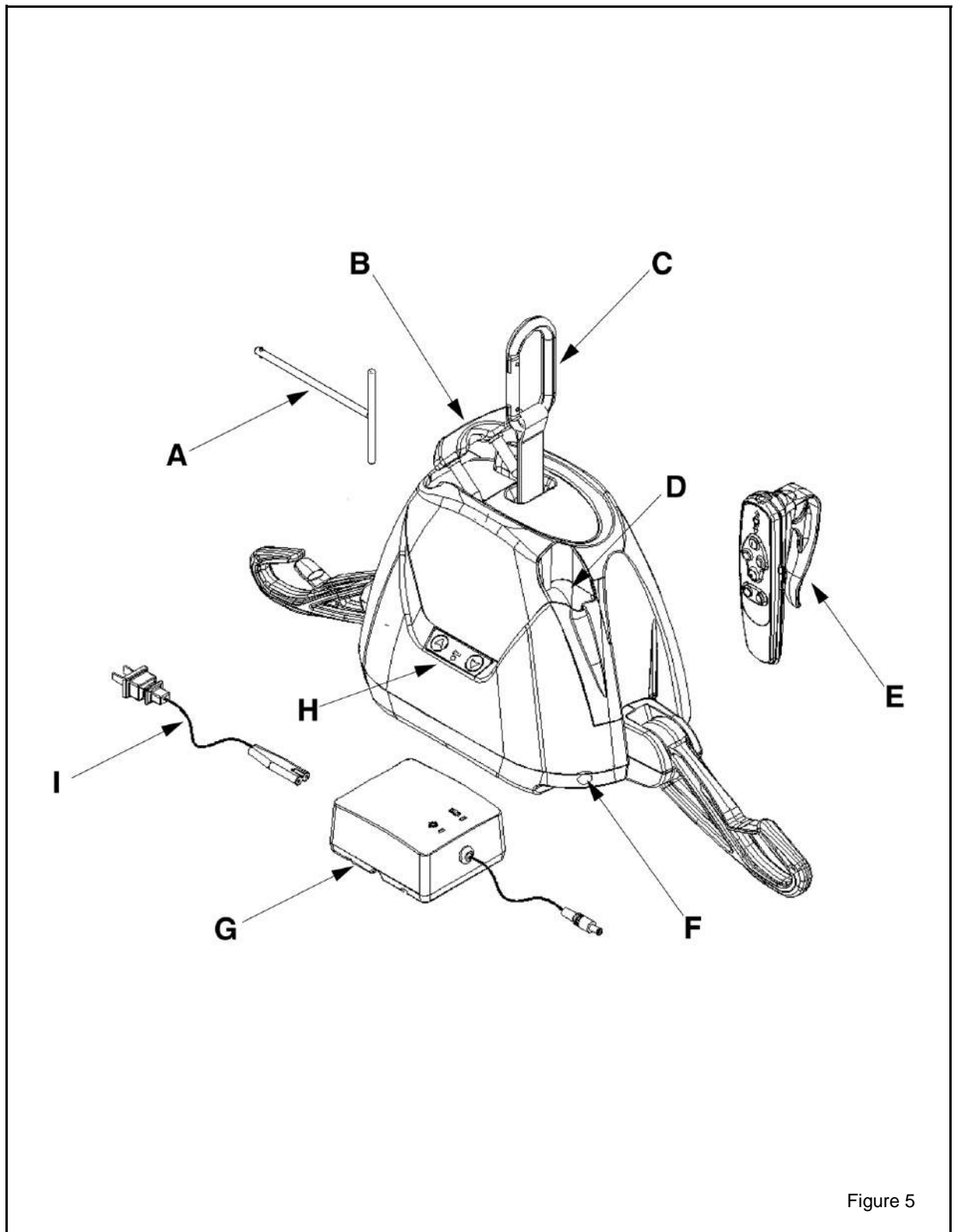


Figure 5

How to use the *Maxi Sky*⁴⁴⁰



WARNING:

Always read the Safety Instructions before using the *Maxi Sky*⁴⁴⁰.

NOTE!

Always carry out the daily checklist before each lift use.

Operating the *Maxi Sky*⁴⁴⁰ is simple and requires little instructions. By using the lift, an operator is able to raise, transfer and lower the resident safely.

CAUTION

The *Maxi Sky*⁴⁴⁰ should not be used in conjunction with any resident slings other than the Ergofit slings that are especially designed for the system. The manufacturer disclaims any responsibility for improper use employing any other sling.

NOTE!

Instructions provided here are described from the operator's point of view, i.e. when positioned in front of the lift and ready to transport the resident.

Emergency shut-off

The operator can shut off the electrical power at any time by pressing the red mushroom shaped emergency button under the lift. The button is reset by a half-turn clockwise in the direction of the arrows. First time users should practice the shut-off manoeuvre before operating the lift with a resident. See figure 1.

Emergency lowering

The *Maxi Sky*⁴⁴⁰ is equipped with a special safety feature that allows the lift to be lowered even if the electrical system does not operate.

Located on the right side of the lift (near the folding sling support), the emergency lowering device is activated by the insertion of the special key included with this manual.

To lower safely a resident, follow these steps:

- 1 Press on the Emergency shut-off red button under the lift. See figure 1.
- 2 Move the lift with the resident over the bed or the wheelchair.
- 3 Remove the plastic cap covering the Emergency lowering entry. See figure 2.
- 4 Insert the special key into the opening then turn it clockwise to lower the resident. See figure 3. The key rotation turns the motor directly so for each key turn, the resident will lower slightly. Once the resident is lowered safely on a bed or into a wheelchair, remove the key from the lift and call a certified technician to service your *Maxi Sky*⁴⁴⁰.

Battery information

The batteries included in the *Maxi Sky*⁴⁴⁰ are 12 VDC, 2.3 Ah and rechargeable. They provide 10 to 30 transfers per battery charge.

NOTE!

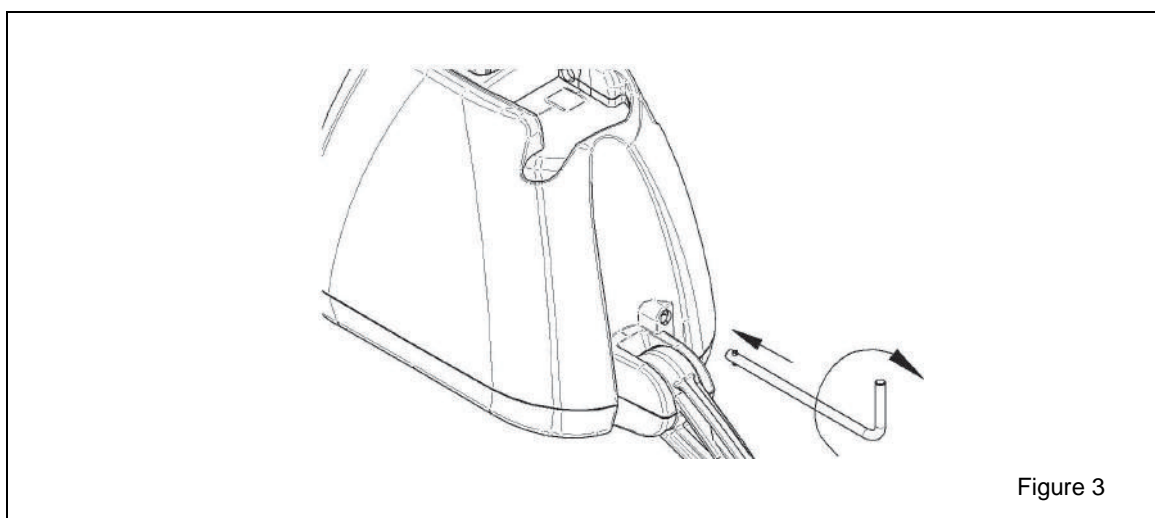
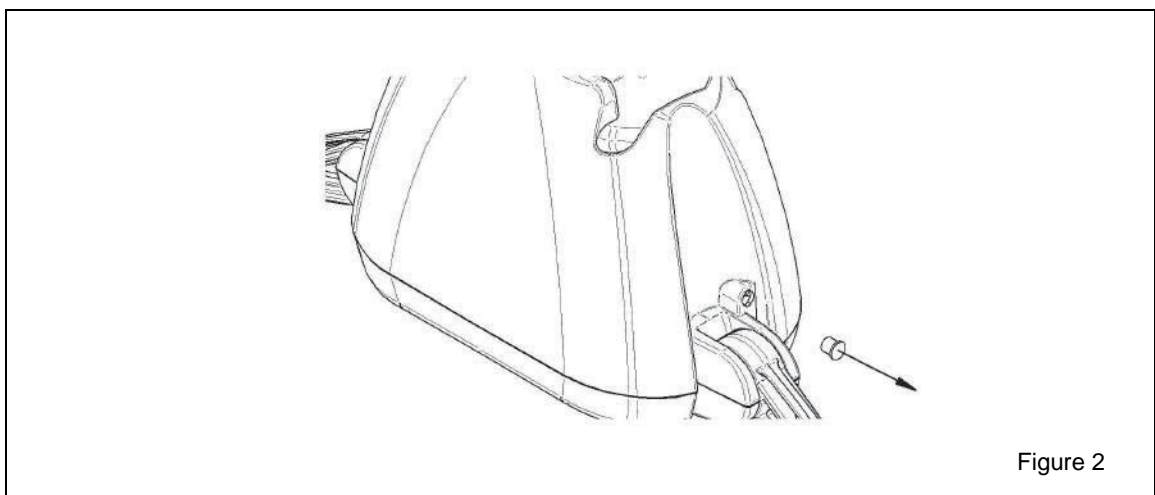
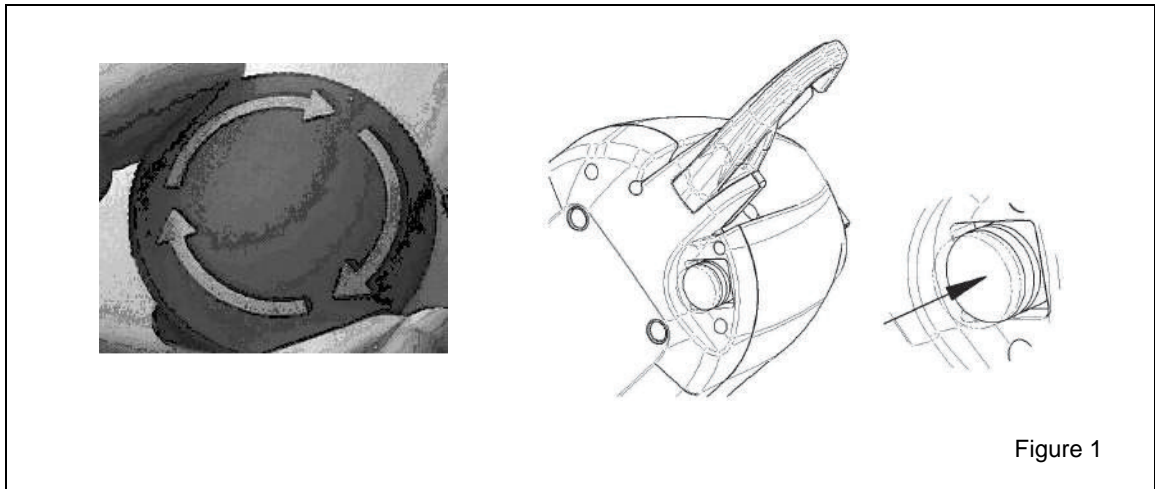
The number of transfers may vary depending on the resident weight and the batteries condition.

NOTE!

To prolong the batteries life, plug the charger to the lift whenever the lift is not in use. Do not worry, the batteries will not overcharge.

The manufacturer uses sealed lead-acid batteries. Contrary to nickel-cadmium, the batteries do not have any memory effect. Therefore, batteries should not be completely drained before recharge.

How to use the *Maxi Sky*⁴⁴⁰



How to use the *Maxi Sky*⁴⁴⁰

CAUTION

Do not drain batteries excessively. This will dramatically reduce the batteries life span. If the low battery buzzer sounds, be sure to recharge the batteries as soon as possible.

Charging the batteries

Plug the charger into a wall socket compatible with universal voltage input from 90 Vac to 240 Vac. See figure 4.

Check to make sure the green light on the charger is illuminated. This indicates that the charger is on.

Plug the charger DC connector to *Maxi Sky*⁴⁴⁰ DC inlet.

The charger indicator light turns yellow while the battery is charging. When batteries are fully charged, the charging indicator light will turn off. The unit is ready to use.

If the battery is low, it will take approximately 2 hours for a full charge.

NOTE!

Connect the charger to the lift when the lift is not in use. At minimum, charge the batteries until the light is yellow before using the lift again. This will extend the life of the batteries.

When you need the lift again, pull out the charger plug from it.

The power cord can remain plugged into the wall indefinitely, convenient for overnight charging.

The charger can either be installed on the wall or be free. If you install it on the wall, the back of the charger is designed to be clipped on screws head.

The lift can be charged for an extended period of time without damaging either the charger or the batteries.

NOTE!

If the green indicator light does not go on when you plug the charger into an electrical outlet, see the "Troubleshooting" section included in this manual.



WARNING:

Do not operate the charger with a damaged cord or if the units housing has been damaged.

Do not forcibly bend the power cord or place a heavy object on it. This will damage the cord and may cause a fire or an electrical shock.

Do not attempt to use a battery not authorized by the manufacturer. The *Maxi Sky*⁴⁴⁰ and its charging system use specially designed batteries by the manufacturer. Using unauthorized batteries may seriously damage the lift or the charger.

The lift should not remain stored for long period of time without charging the batteries.

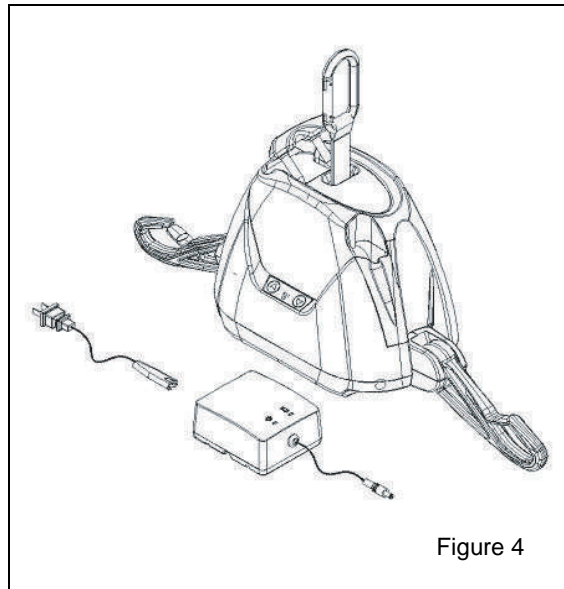


Figure 4

How to use the *Maxi Sky*⁴⁴⁰

Pass Through Hook

The Pass Through Hook feature is an ergonomic handle serving to transport the lift and a practical way to transfer a resident from one rail to the other without removing the lift or the resident. To do so, follow every step of this procedure:

- 1 Bring the *Maxi Sky*⁴⁴⁰ at the end of the rail.



WARNING:

- The track must be installed by ARJO authorized personnel and in accordance with local codes.
 - All tracks are closed with end stoppers or are connected to other closed track component.
 - Before use, make sure all end stoppers are in place and tightened.
- 2 Bring the trolley at the end of the rail where the lift will be transferred.
 - 3 Measure the distance (L) between the two trolleys. See figure 5.
 - 4 To adjust correctly the strap length, use two times the distance measured between the trolleys. See figure 6.

NOTE!

Before attempting any transfer, make sure that the rails are:

- Face to face. See figure 7.
- Non parallel with a 45° angle. See A and B figure 8.

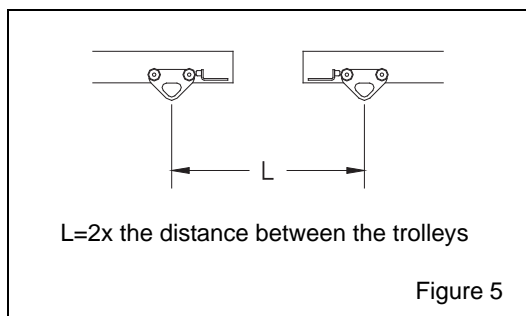


Figure 5

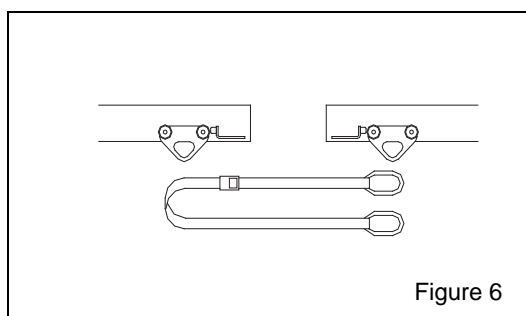


Figure 6

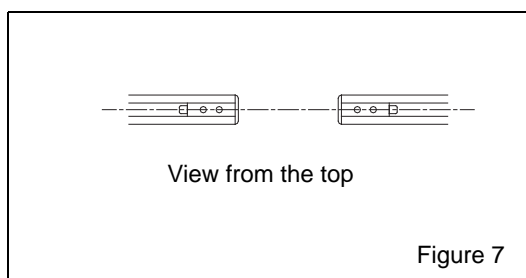


Figure 7

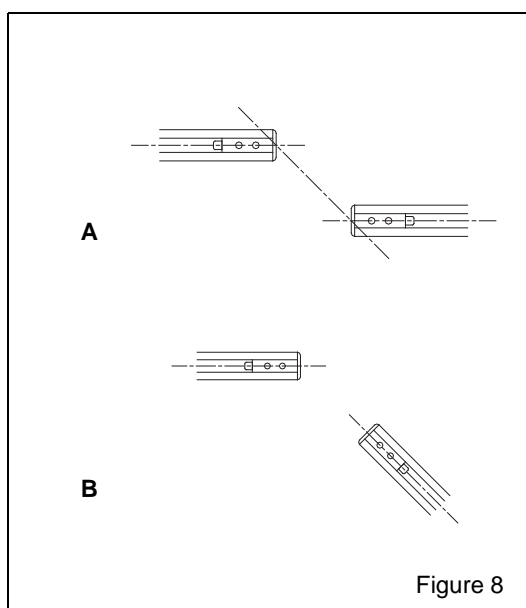


Figure 8

How to use the *Maxi Sky*⁴⁴⁰



WARNING:

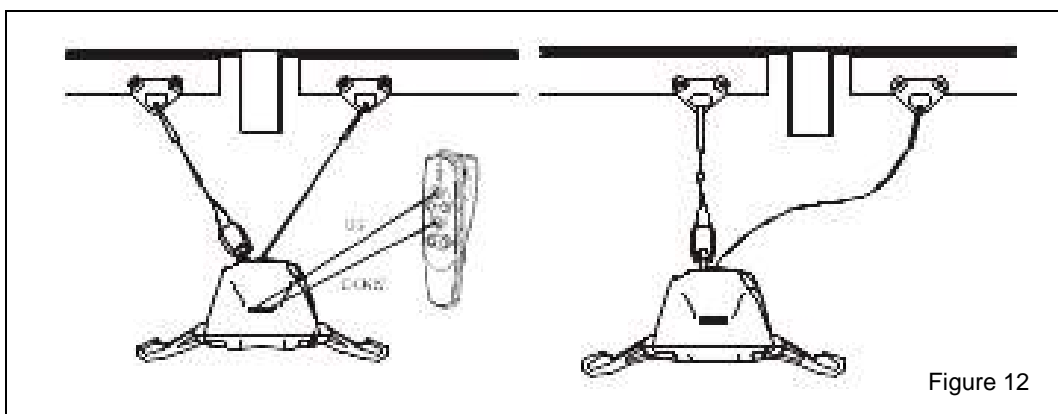
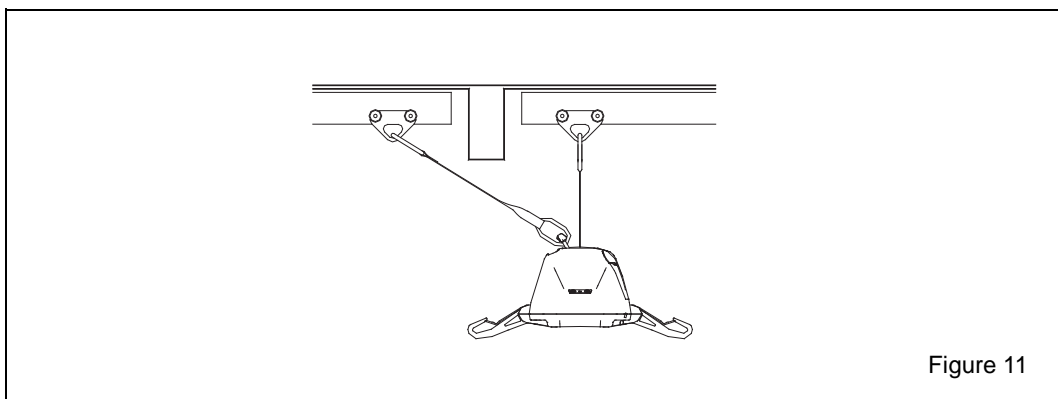
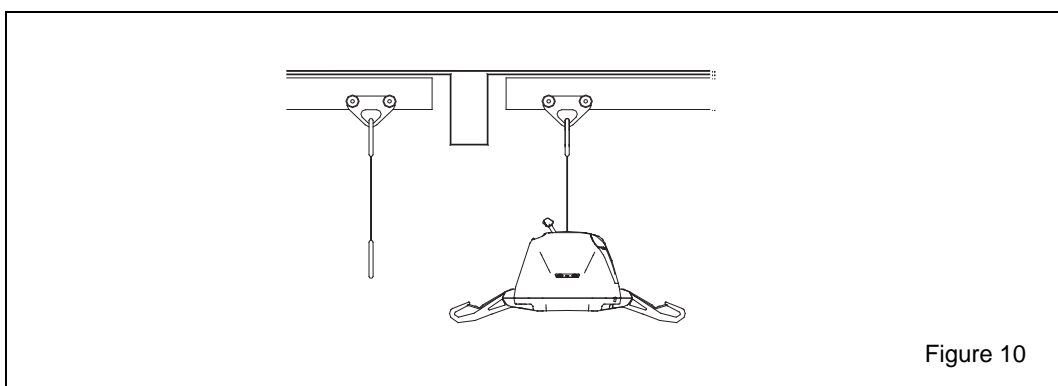
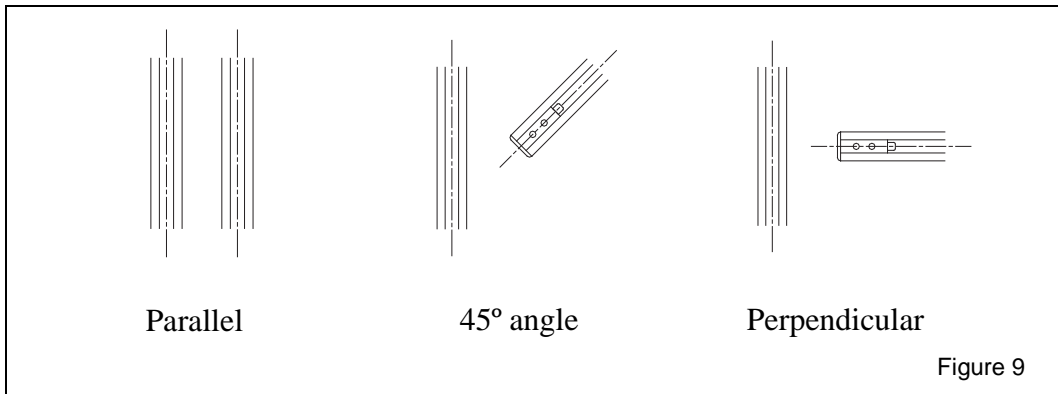
Do not attempt to use the Pass Through Hook in any X-Y rails.

Here are some examples of rail path where a transfer with the Pass Through Hook **MUST NOT BE DONE**. *See figure 9.*

Any suspended rail with lateral brackets are forbidden. If any of the diagrams above represents your current installation, **DO NOT USE** the Pass Through Hook feature. Failure to comply to these warnings could result in serious injury or damage to the product.

- 5 Hook the adjustable strap on the second trolley. *See figure 10.*
- 6 Press the DOWN button on your hand control until the lift is halfway between the rail and the ground.
- 7 Unfold the Pass Through Handle and hook safely the adjustable strap on it. *See figure 11.*
- 8 Press the DOWN button on your hand control. This will pull slowly the unit and the resident under your second point of transfer. Do not stop until the lift has completely transferred under the trolley on the other rail. Be sure that your adjustable strap is completely tightened before finalizing the transfer. *See figure 12.*

How to use the *Maxi Sky*⁴⁴⁰



How to use the *Maxi Sky*⁴⁴⁰

- 1 Unhook the lift from the first trolley and hook it to the second trolley. When the transfer is complete, press the UP button on the hand control until the resident is in a comfortable height. *See figure 13.*
- 2 Unhook the adjustable strap and fold back the Pass Through Hook, then you can move the resident through the second unit. *See figure 14.*

Raising and lowering the resident

The hand control can be used to operate the lift while at the same time the caregiver moves to a position where he/she can be with the resident continuously. *See figure 15.*

To raise the resident:

Touch the "UP" button on the hand control. Keep your finger on the button until the resident is at the desired height, release finger pressure and the unit stops.

Auxiliary "UP" and "DOWN" buttons are located in front of the lift. These controls serve two functions:

- they are secondary controls in the event the hand control stops functioning or,
- if two attendants are involved in the transfer, one can use the auxiliary controls while the other moves into a position where they are with the resident continuously.

To lower the resident:

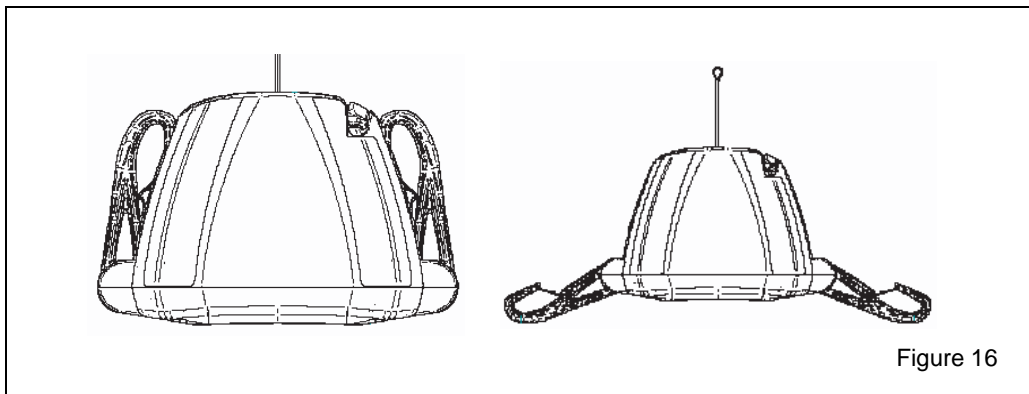
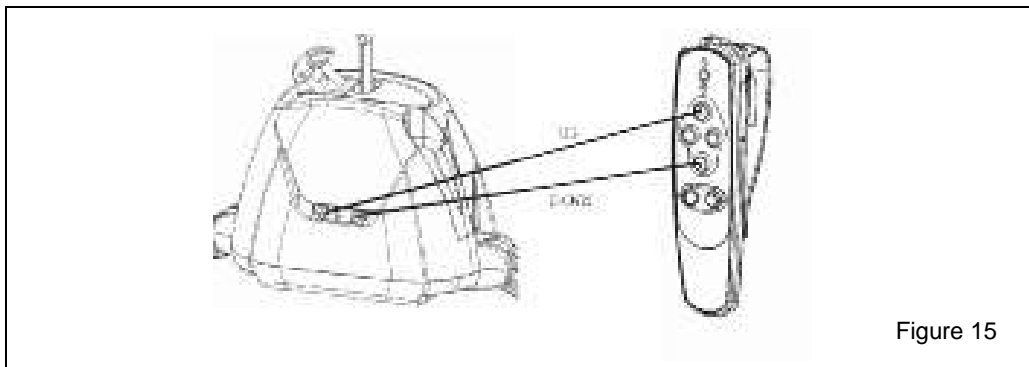
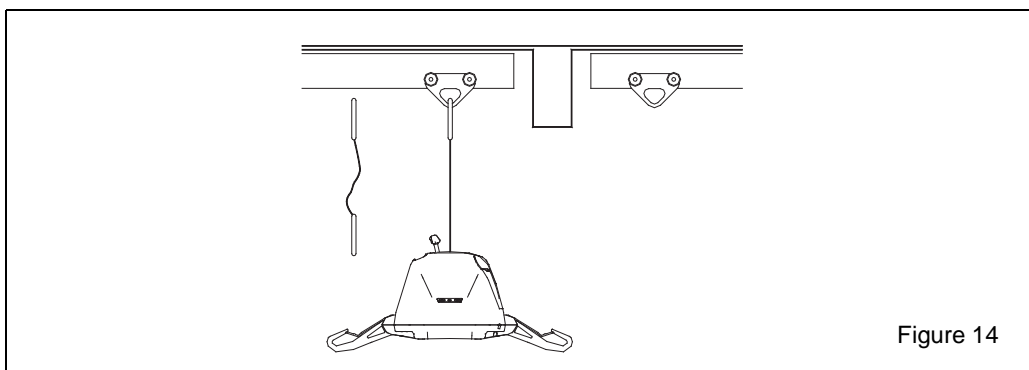
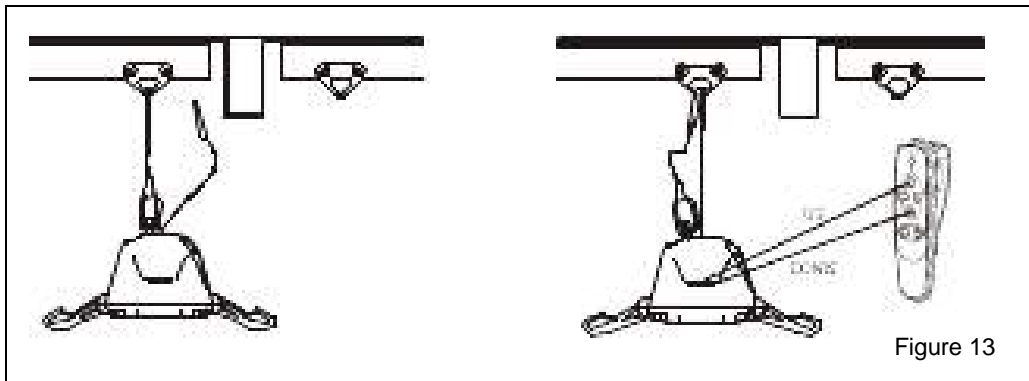
Touch the "DOWN" button on the hand control. Keep your finger on the button until the resident is at the desired height, release finger pressure and the unit stops.

Folding sling supports

The *Maxi Sky*⁴⁴⁰ lift is set up with folding sling supports that optimize the resident comfort when unfold and optimize its storage space when fold. *See figure 16.*

The folding sling supports are resistant and safe. Now it is easy and safe to fix the sling straps to the supports. You just put your strap on the security flap and pull it to insert it on the closed hook. The safety flaps will prevent the strap to come out and endanger your resident. *See figure 17.*

How to use the *Maxi Sky*⁴⁴⁰



How to use the *Maxi Sky*⁴⁴⁰

Transferring the resident

Install the resident into the sling according to the "Use of Slings" included in this manual. Unwind the strap. Press the DOWN button on the hand control while holding a tension on the strap with the other hand. Note: there must be tension on the strap for the lift to function.

Attach the carabiner to the trolley and then move the lift over the resident. Lower the lift below the chin and unfold supports before attaching the sling straps (this will avoid facial contact caused by movement of the lift). Note: for a resident in a prone position, lower the lift near the chest, unfold supports then install the straps. For sling attachments, refer to the "Use of Slings" section in this manual.

NOTE!

The back of the sling has sewn handles to allow better positioning for the caregiver and enhancing resident safety.

To install a sling, unfold the support on each side of the lift then insert the strap loop on the support and pull gently the strap. The clip support will lower then slide the strap. The strap will be trapped inside the support and the clip will automatically block the entrance. *See figure 17.* Do not attempt to transfer a resident if the flap is not blocking the support entrance.



WARNING:

BEFORE LIFTING THE RESIDENT:

- 1 Make sure that all straps are attached to the supports.**
- 2 Make sure the resident is comfortable.**
- 3 Make sure the sling is not caught on any obstruction (wheelchair brake or arm of chair).**

If any of the above occurs - lower the resident immediately and correct the problem.

If none of the warnings above occurs, lift the resident slightly by pressing the UP button on the hand control.

NOTE!

Only slings with loops may be used with the Maxi Sky 440. (Slings with clips do not fit this system).

Lift the unit until the resident's buttock clears the arms supports of the wheelchair, the top of the bath or the bed before moving the resident. Guide the legs past any obstacles.

When the resident is located above the desired point of transfer and ready to be lowered, press the DOWN button.

NOTE!

Sewn handles are provided on the back of sling to allow better positioning for the caregiver when transferring safely the resident on a wheelchair. Be sure to lock the casters of the wheelchair.

Once the resident is properly seated, loosen the straps and remove the sling from the lift

CAUTION

Hold the lift with one hand at all times when near a resident.

Slide the lift away from the resident. Unhook the lift from the trolley and use the hand control to shorten the strap. You can now remove the sling from around the resident.

CAUTION

When you transfer a resident, be sure to be assisted with another caregiver.

Use of Slings

Procedures for attaching loop slings to the Maxi Sky 440 folding sling supports



WARNING:

The Maxi Sky 440 (see *figure 16*) has folding slings support hooks for use only with slings equipped with loops.

When attaching a loop sling to the Maxi Sky sling supports, always ensure the sling attachment loops are positioned correctly into the retaining hooks as shown in the inset in *figure 17*.



WARNING:

Do not use slings equipped with clips on the Maxi Sky 440 portable lift, these require spreader bars that are fitted with attachment lugs.

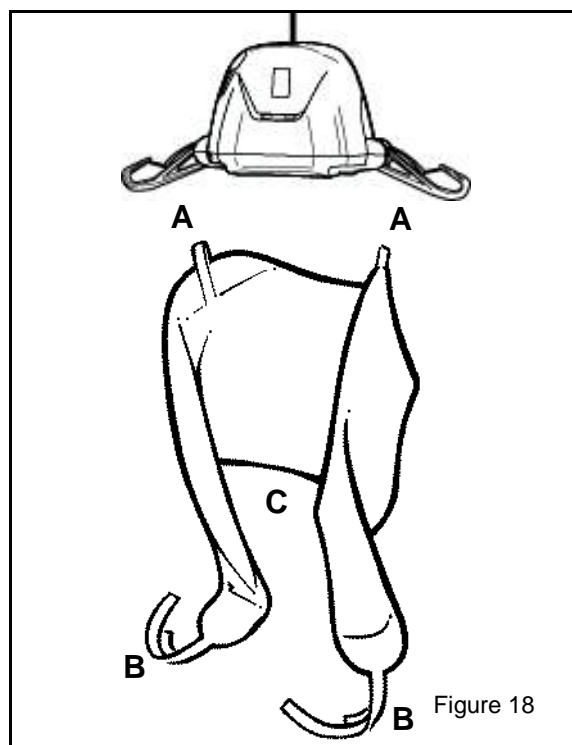
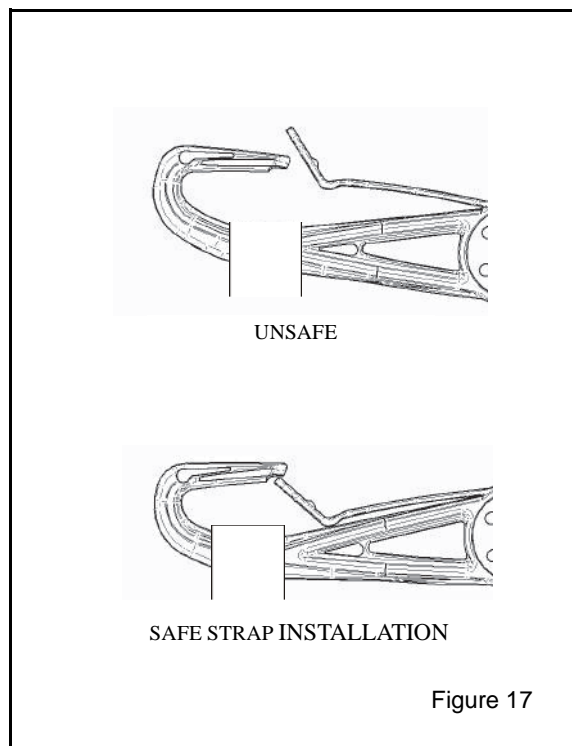
The Maxi Sky 440 has 2 hooks. Always use these 2 hooks to attach both the shoulder and leg strap sling loops.

The specific sling loops chosen determine the position of the resident.

Different combinations of loops can be used to allow the resident to be lifted and transported in positions ranging from semi-reclined to seated.

Once the loop sling has been fitted around the resident there are three methods of applying the loop sling, with each of the 3 methods described it is necessary to first connect each shoulder loop (points A), of the sling to the (same side) hook on the Maxi Sky 440 folding sling supports.

See *figure 18*.



Use of Slings

Method 1: With the sling correctly positioned around the resident, slide the left hand leg section of the sling under the resident's left thigh and the right hand leg section under the resident's right thigh, attach each leg loop (points **B**) of the sling to the "opposite side" outer hook of the Maxi Sky 440. *See figure 19.*

Method 2: With the sling correctly positioned around the resident, pass each leg section of the sling under both thighs of the resident, then attach each leg loop (points **B**) to the outer hook (opposite side) on the Maxi Sky folding sling supports. *See figure 20.*

Method 3: With the sling correctly positioned around the resident, slide the left hand leg section of the sling under the resident's left thigh and the right hand leg section under the resident's right thigh, then attach each leg loop (points **B**) to the same side hook on the maxi Sky 440 folding sling supports. *See figure 21.*

This particular method holds the residents legs in abduction, and is useful for toileting.

Use of Slings

METHOD 1

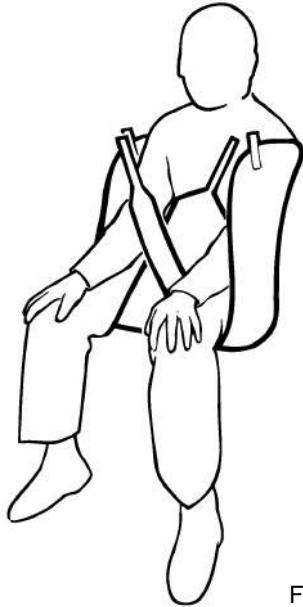


Figure 19

METHOD 2

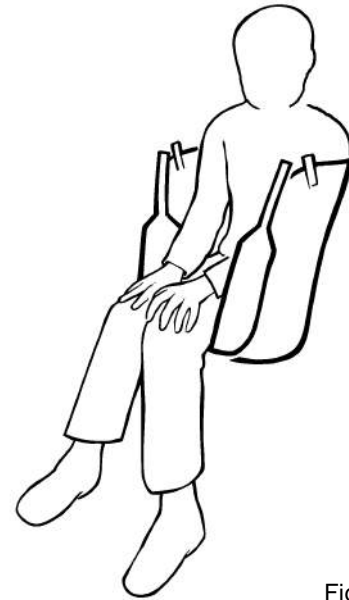


Figure 20

METHOD 3



Figure 21

Use of Slings

To lift a resident from a bed

If the resident cannot attain a sitting position, then roll the resident toward you, fold the sling in half length-wise and place it along the resident's back. Position the sling so that when rolled back, the resident will lie in the middle of the sling.

Align the bottom of the sling with the resident's coccyx. *See figure 22.*

When the resident is lying in the correct position on the sling, carefully flex the resident's legs and bring the sling "leg pieces" under the thighs, ready to attach the complete sling to the Maxi Sky 440.

If the resident can sit easily, the sling can be positioned the same way as if the resident was seated in a chair: i.e. by easing the resident forward, (if necessary) slide the sling down the resident's back until seam **C** (*see figure 18*) reaches the base of the spine. Take attachment points **B** and pass the leg sections of the sling underneath the residents thighs, as appropriate to the method of lifting (*see previous Methods*) ensure the sling sections are not twisted underneath the resident.

Attachment of the sling to the Maxi Sky 440 can be done using any of the methods described previously, depending on suitability.

To lift a resident from a chair

Lower the Maxi Sky 440 until you can easily attach the loops of the sling, use your hand to stabilise it, taking care not to allow the bar to touch the resident.

NOTE!

The design of the Maxi Sky 440 and sling allows one person to perform the lift.



WARNING:

This patient lift should never be used by a patient on their own.

Once the sling has been positioned and attached securely to the Maxi Sky 440 as described in any of the methods 1 to 3, lifting can be carried out using the hand control.

Avoid lifting the resident higher than the eyes of the attendant to lessen the impression of height to confused residents.



WARNING:

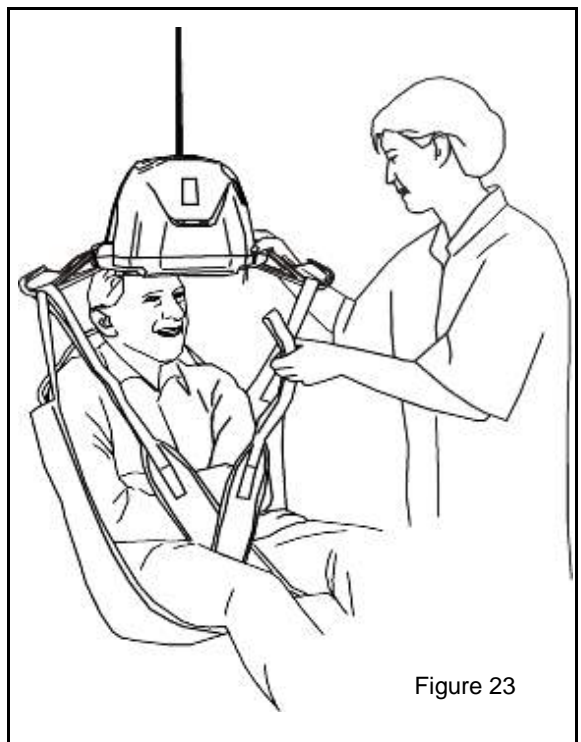
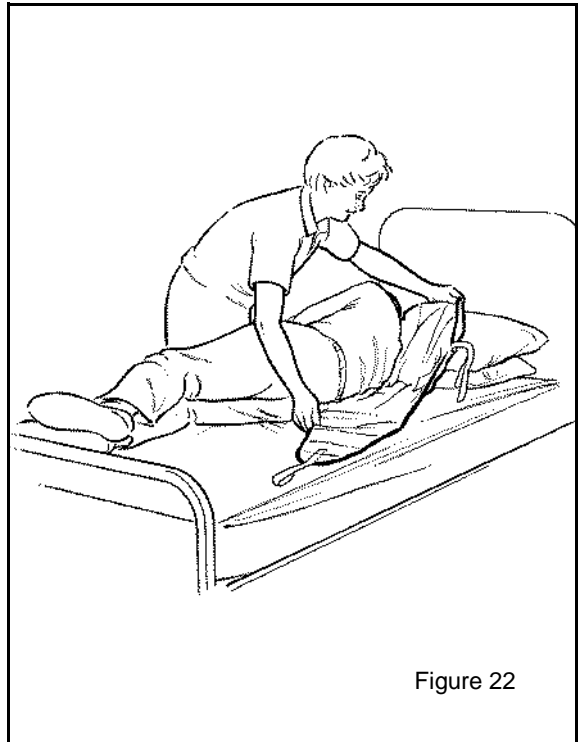
Important: Always hold the Maxi Sky 440 until at least a couple of loops are attached to the Maxi Sky 440, to prevent it from striking the resident. *See figure 23.*

Before removing the loops from the hooks, hold on to the Maxi Sky 440 with your hand so the Maxi Sky 440 will not strike the resident.

Sling attachment to folding sling supports:
Chose the colour of the position that is best suited for the patient. For a larger patient, choose blue for both the leg and shoulder straps. A smaller patient may be better suited for the black loops on both the shoulder and leg straps.

The loop colour coding on BHM slings is used for patient positioning not patient size - sling app guide has a good positioning graphic.

Use of Slings



Use of Slings

To lift a resident from the floor

(Some attendants prefer to use a larger sling for this operation)

Raise and support the resident into a sitting or half sitting position. *See figure 24.* Slide the sling down the resident's back as described previously, bring the leg sections of the sling into position and under the residents thighs. Lower the Maxi Sky 440 (taking care not to contact the resident) until the Maxi Sky 440 is low enough to attach the sling shoulder loops. Flex up the residents knees to connect the leg pieces of the sling



WARNING:

Check that the sling attachment loops are securely positioned within the folding sling supports hooks. *See figure 17.* Before lifting the resident and that the loops remain that way as the resident is gradually lifted.

When the resident has been returned to the bed he/she may be reclined before the sling is detached from the Maxi Sky 440 folding sling supports.

Before transporting a resident

Turn the resident to face the direction of travel, and keep at a normal chair height - this gives confidence and dignity.



WARNING:

Ensure any obstructions are removed from the intended route of travel.

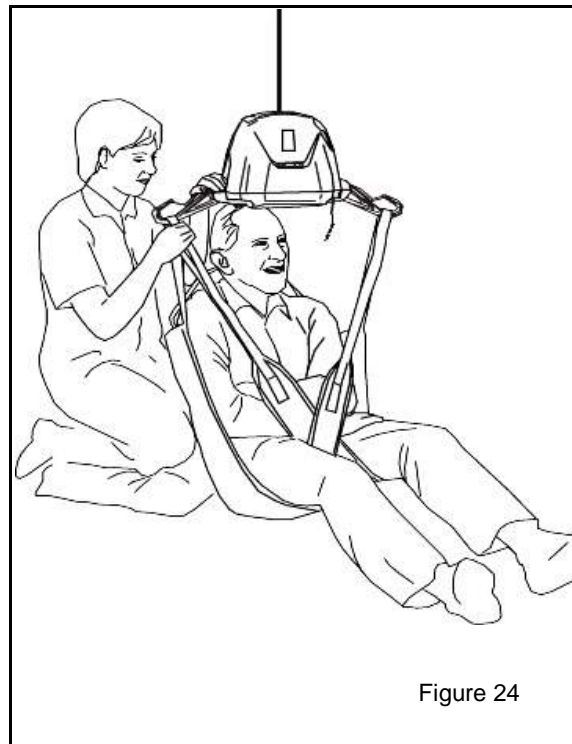


Figure 24

Care and Maintenance

Preventive Maintenance Schedule

The equipment is subjected to wear and tear, and the following maintenance instructions must be performed when specified to ensure that the equipment remains within its original manufacturing specification. Care and Maintenance shall be carried out in accordance with the Preventive Maintenance Schedule below.

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



WARNING:

Safety related maintenance must be carried out by qualified personnel, fully trained in servicing by ARJO, using correct tools and knowledge of procedures. Failure to meet these requirements could result in personal injuries and/or unsafe equipment.

Action/check	Initially	Before every use	Every 2 months	Every 4 months	Every year	Every 2 years
Customer obligations						
Lift device						
Inspect for missing hardware or broken panel	X	X			X	
Inspect strap for wear		X	X			
Inspect if Pass Through Hook has any damage (seems loose or notice cracks)						
Recharging batteries		X				
Inspect the folding sling supports on the strap of the lift for damage or cracks					X	
Inspect wheels in rail for damage, rust or cracks. Replace if damaged					X	
Clean the rail and the clip on charging station contacts				X		
Overall inspection by authorized personnel					X	
Sling and hardware						
Check all sling attachments for sign of wear		X				
Inspect sling material for wear or deterioration		X				
Inspect sling straps for wear		X				
Inspect for any defects or loose threads in the "stitched areas"		X				
Cleaning sling as indicated on the tag	When necessary					
Verify emergency stop cord				X		
Verify emergency lowering device				X		



WARNING:

Before each use, make sure all end stoppers are in place and tightened.

Care and Maintenance

NOTE!

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



WARNING:

Authorized service should be carried out by a certified technician.

Action/check	Initially	Before every use	Every 2 months	Every 4 months	Every year	Every 2 years
Authorized Service						
Replace strap						X
Inspect the welding aspect on the frame to detect cracks					X	
Inspect transmission					X	
Inspect connecting joints for proper attachment					X	
Verify that the emergency brake on the drum is turning freely					X	
Verify emergency devices for good functioning					X	
Load test with SWL (maximum working capacity)					X	

Care and Maintenance



WARNING:

Always carry out the daily checklist before each lift use. Alterations made to the *Maxi Sky⁴⁴⁰* by someone else than a certified technician may cause serious injury and voids the warranty.



WARNING:

The *Maxi Sky⁴⁴⁰* and accessories must be inspected annually by a certified technician in addition to the daily and other periodic visual checks done by the user specified in this section. Preventive maintenance specified in this manual can prevent accidents and reduce repair costs.

Daily Checklist

The following procedures must be followed before each use:

- Charge the batteries. Park the lift on the charger whenever the lift is not in use.
- Inspect the lift for any damage. If the lift casing does not look properly aligned, or there are any cracks or other damage on the lift, or any parts are missing – do not use it. Contact your local representative to have the lift serviced. If any parts are missing on the lift - **DO NOT USE IT.**
- Inspect the strap for any visible signs of wear, frays, loose threads or other damage. If there is any evidence of damage – do not use it. Contact your local representative to have the lift serviced.
- Inspect the sling for tears, frayed straps or loose stitching. If the sling has any of the above damage – do not use it. Contact your local representative to have the sling replaced or repaired. Inspect the adjustable extension strap (if you have this option) for frayed or loose stitches.
- Inspect the folding sling supports for any signs of cracking or damage. Inspect the hook at the top of the strap to ensure that it is properly attached.
- Before each use, make sure all end stoppers are in place and tightened.

Inspection and cleaning

Clean the *Maxi Sky⁴⁴⁰* with a soft dry cloth, or a soft cloth slightly moistened with a mild detergent solution. Do not use any type of solvent that may damage the finish.



WARNING:

Do not immerse lift in water.

To ensure a better rolling surface for the trolley wheels, clean the inside of the track every 4 months. To do so, insert a damp cloth in the opening and slide it from one end of the track to the other.



WARNING:

Always reinstall the rail end stopper (if it has been removed) after servicing.

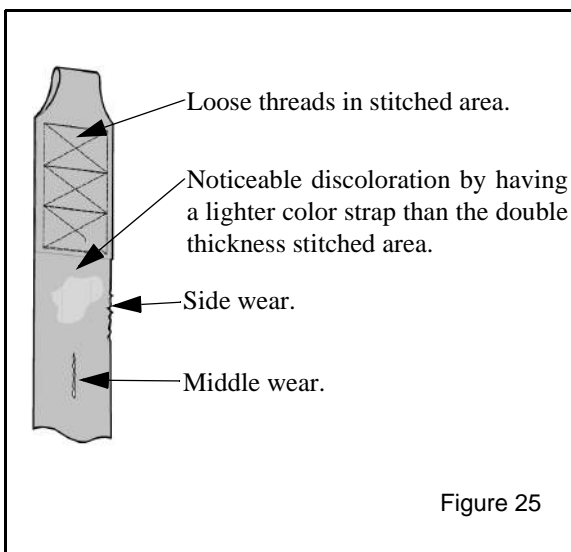
Care and Maintenance

Strap Inspection

If the strap is damaged or shows signs of wear, the acceptable load on the strap before rupture can drop rapidly and present a danger for the patient or caregiver.

ARJO recommends thoroughly inspection of the straps every 2 months as follows:

- 1 Completely unwind the strap.
- 2 Look for any signs of wear. *See figure 25.*



WARNING:

If there is any sign of wear as indicated here or other visual defects, the strap should be changed immediately. By continuing to use the lift without changing the strap, the safety of the caregiver or patient is greatly compromised.

NOTE!

The manufacturer recommends changing the strap at least every two years. By continuing to use the lift without changing the strap, the safety of the caregiver or patient is greatly compromised.

Handling and Storage

Avoid violent impact during transportation.

The lift should not remain stored for long periods of time without recharging the batteries.

NOTE!

ARJO recommends charging of batteries at least every two weeks even if the lift is not used. This will prevent premature ageing of batteries.

Care and Maintenance

Battery Replacement

ARJO uses sealed lead-acid batteries. Contrary to nickel-cadmium. ARJO batteries do not have any memory effect. Therefore, batteries should not be completely discharged before recharging.

Replace the battery when there is a noticeable reduction in the number of transfers that can be performed between charges. If you notice the *Maxi Sky⁴⁴⁰* lift “beeping” and a red light flashing, see the instructions in “Troubleshooting” to ensure it is a problem with the battery.

To replace a battery, contact your local dealer or representative.

CAUTION

Do not attempt to use a battery not authorized by ARJO.

ARJO batteries are specially designed for ARJO charging systems. Attempting to use an unauthorized battery may seriously damage the lift and/or the charger.

Verification of Charger Power Source

If the light does not illuminate when there are batteries in, do the following steps:

- 1 Make sure that the power cord is correctly plugged into the charger in the wall and charging indicator green light is on.
- 2 Make sure the charger connector is properly connected to unit.
- 3 Check the power of the outlet.
- 4 If the yellow or green light of the charger do not light up, contact your local dealer or representative for assistance.

Sling Inspection and Care

For maximum patient safety and hygiene, read the following instructions:

Inspection



WARNING:

The slings should be checked before and after using it for each patient and if necessary washed according to instructions on the sling. This is especially important when using the same equipment for another patient, to minimise the risk of cross infection. Also refer to *sling instruction sheet MAX.01510.INT*.

NOTE!

With regard to laundering, slings should not be classified as linen, but as an accessory to a patient transfer lifter and therefore classified as a medical device. Slings should be cleaned and disinfected only in strict accordance with the manufacturers instructions.

Before washing the slings that have head support pockets always remove the plastic reinforcement inserts. Always refit the inserts before re-using the sling.

Mechanical pressure should be avoided during the washing and drying procedure e.g. rolling or pressing, as these can damage parts vital to the safe and comfortable operation of the sling.

The stretcher cross straps and suspension straps should be checked and if necessary washed. Washing and drying temperatures must not exceed 80°C (176°F). Wash using normal detergents, do not iron. also refer to *Sling Instruction sheet MAX.01510.INT*.

It is essential that the sling attachment cords, the slings, their straps and attachment clips are carefully inspected before each and every use. If the slings, cords or straps are frayed, or the clips damaged, the sling or attachment cord should be withdrawn from use immediately and replaced.

Care and Maintenance

Annual Inspection

The *Maxi Sky⁴⁴⁰* and its accessories must be inspected annually by a certified technician.



WARNING:

The *Maxi Sky⁴⁴⁰* and accessories must be serviced every 12 months as a minimum requirement.

Do not attempt to do the inspection unless you are certified to do so.

As a part of the annual inspection an annual load test with the safe working load must be performed on the *Maxi Sky⁴⁴⁰* as required for CE Mark Maintenance.

Maintenance Requirements

The *Maxi Sky⁴⁴⁰* is equipped with an electronic monitor. This red light will flash when maintenance inspection is necessary to ensure the durability of the unit and the security of the patient and user.

Once this red light begins to flash, please contact your local representative in order to perform the necessary maintenance inspection.

Troubleshooting



WARNING:

Do not attempt to open the *Maxi Sky⁴⁴⁰* lift. Only a certified technician is authorized to open the *Maxi Sky⁴⁴⁰* lift.

Alternations made to the *Maxi Sky⁴⁴⁰* lift by someone other than a certified technician may cause serious injury.

Problems	To check
The red light “Service” is on and flashing	<ul style="list-style-type: none"> Contact your supplier or your local representative to do maintenance
The unit starts and stops repetitively	<ul style="list-style-type: none"> If the load is over a safe working load, the unit will not work due to an overload protection on the motor Batteries are low and need to be charged
The lift emits a “beep” during utilization. The unit may stop lifting but can still lower it	<ul style="list-style-type: none"> Batteries are low. Recharge them
Charger indicator on the lift (yellow) does not light up when the charger is connected to the lift	<ul style="list-style-type: none"> Check that the charger is plugged into a standard outlet, and that the outlet have power. Green light indicator confirms the functionality of the charger
The lift does not work when you press the buttons on the hand control	<ul style="list-style-type: none"> If the emergency stop is activated, gently release the emergency button Check if the buttons on the lift are working. If not, check the charge on the lift. If they are working, the problem may come from the hand control Check if the hand control is plugged in properly into the lift. The hand control may be slightly pulled out from its socket and yet appear as though it is plugged in. Check the connection If, after testing all of the above, the lift will not operate, contact your local dealer or your representative

Technical Specifications

Product information

Maxi Sky⁴⁴⁰ LIFT

Weight, complete	6.35 kg (14 lbs)
Lifting capacity	200 kg (440 lbs)
Strap length	2200 mm (88 in)
Lifting speed	4.3 cm/s (1.7 in/s)
Noise level	60.5 dB
Duty cycle	6 min/hr.

BATTERY AND CHARGER UNIT

Batteries	Qty: 2, rechargeable, 12 VDC, 2.3 Ah
Battery capacity	Provides up to 30 transfers with a load of 80 kg (180 lbs)
Battery Charger input	90-240 VAC, 50/60 Hz
Battery Charger output	27-29 VDC, 27 VA, 50/60 Hz
Battery Charger safety protection	Class 2, double insulated

HAND CONTROL

Degree of protection	IP 44
----------------------	-------

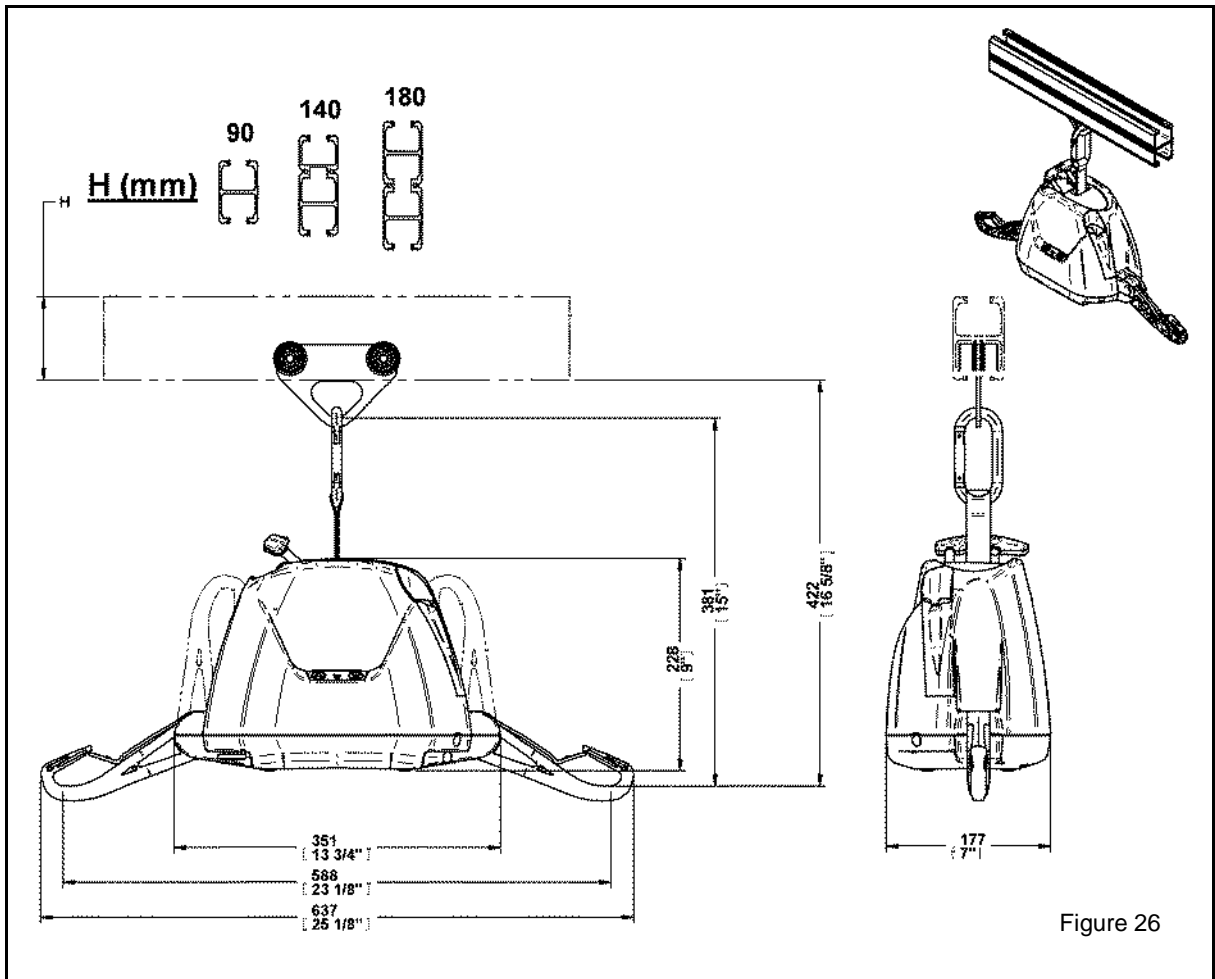
TRANSPORT AND STORAGE

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

RECYCLING

Battery	Sealed lead acid, recyclable
Package	Wood and cardboard, recyclable
The Lift	Separated and recycled according to the European Directive 2002/96/EG (WEEE).

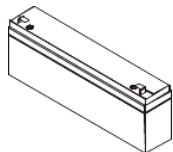
Technical Specifications



Accessories

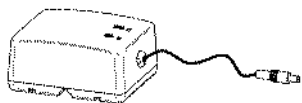
BATTERIES

Product No. E6585



CHARGER

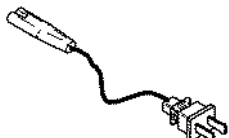
Product No. 700.13510.33



CHARGER POWER CORD

Product No.

- 402.00001 - USA (UL)
- 402.00002 - Japan
- 402.00003 - CE (Europe)
- 402.00004 - Australia
- 402.00005 - UK



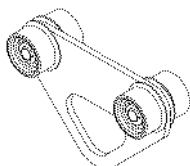
HOOK

Product No.000.08000



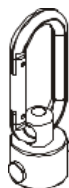
KWIKTRAK TROLLEY

Product No. 700.10650



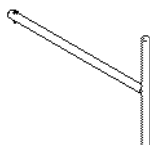
SWIVEL ADAPTOR

Product No. 700.10950



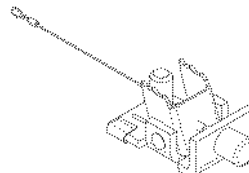
EMERGENCY TOOL

Product No. 005.16500



KWIKTRAK RAIL STOPPER

Product No. 700.11005



ARM EXTENSION

Product No.

- 24 in/61 cm - 700.08310
- 36 in/91 cm - 700.08320



ADJUSTABLE STRAP EXTENSION

Product No. A3710



RACK DEMO KWIKTRAK

Product No. 700.09010



HAND CONTROL

Product No. 700.13600.33
2 buttons



TRAVEL HAND BAG

Product No. 002.08150

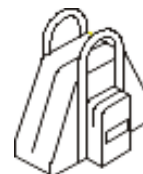


Figure 27