

***Maxi Sky 2***  
Instructions for Use



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# Foreword

## Thank you for Buying ArjoHuntleigh Equipment

Your ArjoHuntleigh Maxi Sky® 2 ceiling lift is part of a series of quality products designed especially for your health care facility.

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

Contact us if you have any questions about the use or maintenance of your ArjoHuntleigh product.

## Please Read this Manual Thoroughly!

The information in this manual is crucial to the proper operation and maintenance of the *Maxi Sky 2*. It will help protect your product as well as ensure that the equipment performs to your satisfaction.

Lifting and transferring a person always presents a potential risk. Some of the information in this manual is important for your safety and must be read and understood to help prevent injuries.

**WARNING:** ArjoHuntleigh strongly advises and warns that only parts designated by ArjoHuntleigh should be used on products and other devices supplied by ArjoHuntleigh. Injuries can be caused by the use of inadequate parts.

**WARNING:** Unauthorized changes on any ArjoHuntleigh product may affect its safety. ArjoHuntleigh will not be held responsible for any accidents, incidents or deficiencies of performance that occur as a result of any unauthorized changes to its products.

## Service and Support

A service routine must be performed on your *Maxi Sky 2* ceiling lift by qualified service personnel. This will ensure the safety and good function of your product. See "Care and Maintenance" section in this manual.

Please contact your local ArjoHuntleigh agent if you need more information, notice any changes in the performance of your lift, want to report an unexpected event or need any help in setting up, using or maintaining your *Maxi Sky 2*. The agent can offer comprehensive support and service programs to maximize the long-term reliability, safety and value of the product.

Additional copies of this manual can be provided by your local ArjoHuntleigh agent. When ordering, include the *Instructions for Use* manual product number 001-15698.

## Manufacturer Information

This product was manufactured by:  
ArjoHuntleigh AB  
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241 38 Eslöv  
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## Warning Symbols Used in this Manual

### WARNING:

Means: Failure to understand and follow these instructions may result in injury to yourself and others.

### CAUTION:

Means: Failure to follow these instructions may cause damage to the product.

### NOTE:

Means: This is important information regarding the correct use of the equipment.

# Safety Instructions

## Intended Use

The *Maxi Sky 2* ceiling lift is designed to assist caregivers in hospitals, nursing homes or other assisted living centres, lifting patients with reduced mobility for the following reasons:

- Transferring to or from adjacent location, such as chair, wheelchair, bed, bath, toilet, floor, or stretcher;
- Supporting the patient for rehabilitation training;
- Assisting patient with tasks such as, toileting and bed repositioning.

Patient lifting and/or transferring must be done by a trained caregiver as per the instructions found in this manual.

**WARNING:** This product is not intended to be operated by the patient. In the unlikely case of a failure, the patient might get stuck in the unit.

**WARNING:** The *Maxi Sky 2* must be only used for the reasons stated above. It must be installed by ArjoHuntleigh authorized personnel as per the local codes and ArjoHuntleigh's general guidelines. Do not use the lift for any other purpose. Serious injuries could occur.

## Operational Life

The *Maxi Sky 2* ceiling lift has been designed and tested to achieve up to 10 000 cycles with a load of 600 lb/272 kg.

It is subject to preventive maintenance as specified in the "Care and Maintenance" section.

The following table shows equivalent number of years in relation to cycles per day. One cycle is defined as transferring a 600 lb load including a 60 cm (24") raising action, a lateral displacement and a 60 cm (24") descending action.

Cycles per Day	Years (10,000 transfers)
4	7
6	4.5
8	3.5

**WARNING:** The manufacturer cannot ensure full safety for a lift or an accessory of which the operational life has been exceeded. Wear may cause the breakage of a part and lead to a patient fall.

The expected life for other consumable products, such as batteries, fuses, slings, straps and cords is dependent upon the care and usage of the product concerned. Consumables must be maintained in accordance with published *Instructions for Use* and the "Preventive Maintenance Schedule".

## Important Safety Instructions

**WARNING:** ArjoHuntleigh warns of possible strangulation risks related to the lifting strap, the hand control cable, the accessories' cable, or the emergency pull cord, and advises to take necessary precautions to prevent these.

**NOTE:** ArjoHuntleigh lifts are specifically designed for KWIKtrak™ ceiling rail systems, ArjoHuntleigh slings and accessories.

**CAUTION:** Keep all components of the lift clean and dry. Have electrical and mechanical safety checks done as instructed in the "Care and Maintenance" section to avoid malfunction of the device.

Keep this manual at proximity from the lift and refer to it as required. Make sure that all users are regularly trained in the use of the equipment according to the information found therein.

**CAUTION:** Do not drop either the lift or the batteries, since they may have internal damage. If the lift is suspected to be damaged, contact your local ArjoHuntleigh agent.

All controls and safety features are used only as per the rules specified in this manual. Never attempt to force a control or button on the lift.

## General Instructions

### Safe Working Load (SWL)

The *Maxi Sky 2* ceiling lift has been designed with a maximum lifting capacity of 272 kg (600 lb).

SWL can be lowered to 200 kg (440 lb) or 120 kg (265 lb) to accommodate lower capacity rail systems.

**WARNING:** The *Maxi Sky 2* is intended to be used for patients whose weight is within a specified safe working load. Do not attempt to lift more than the lowest weight limit indicated on the following:

- the rail system;
- the “maximum load” label on the lift;
- the spreader bar;
- the accessories;
- the sling.

Surcharge of any of these elements may lead to a patient fall and to injuries.

### Battery and Battery Charger Safety Practices

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

- Only use the charger that has been supplied with the product.
- Do not charge the batteries in an unventilated area.
- The charger must not be covered or exposed to dust.
- Do not crush, puncture, open, dismantle or otherwise mechanically interfere with the batteries.
- Do not store lift at a temperature higher than 70°C (158°F).
- Stop using battery if any damage or deformation is noted. Inform technical service before further use.
- Avoid positioning the charger such that access to the plug is limited, making disconnection difficult.

### Shock Prevention

- Do not touch or use a lift with bare conductors or a damaged power cord. If this the case, contact your local ArjoHuntleigh agent immediately.
- Do not attempt to expose, service or repair the lift, battery or charger. If the unit is malfunctioning, contact your local ArjoHuntleigh agent.

## Fire and Explosion Prevention

**CAUTION:** Do not place or store the battery under direct sunlight or near a heat source.

**CAUTION:** Do not expose the batteries or battery charger to flames. They might open, causing a chemical leak.

**CAUTION:** Do not use the charger in the presence of flammable anaesthetic gases. These are inflammables. The charger might generate a spark, which could cause an implosion.

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

## Human and Environmental Safety Practices

- Should the battery casing crack, allowing its contents to come into contact with skin or clothing, rinse immediately with water. If the contents comes in contact with the eyes, rinse immediately with plenty of water and seek medical attention.
- Inhalation of the contents can cause respiratory irritation. Sensitivity to nickel can cause allergic asthma to result. Seek out fresh air and medical attention.
- For recycling and disposal of the batteries, the rules according to the WEEE directive (Waste of Electronic and Electrical Equipment) as well as local laws and regulations must be followed. If not they may explode, leak and cause personal injury. When returning batteries, insulate their terminals with adhesive tape. Otherwise, the residual electricity in used batteries may cause fire or explosion. Figure below shows the symbols for disposal and recycling.

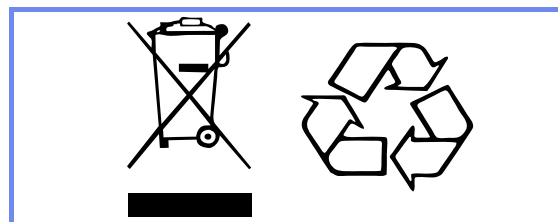


Figure 1

# Product Description

## Maxi Sky 2

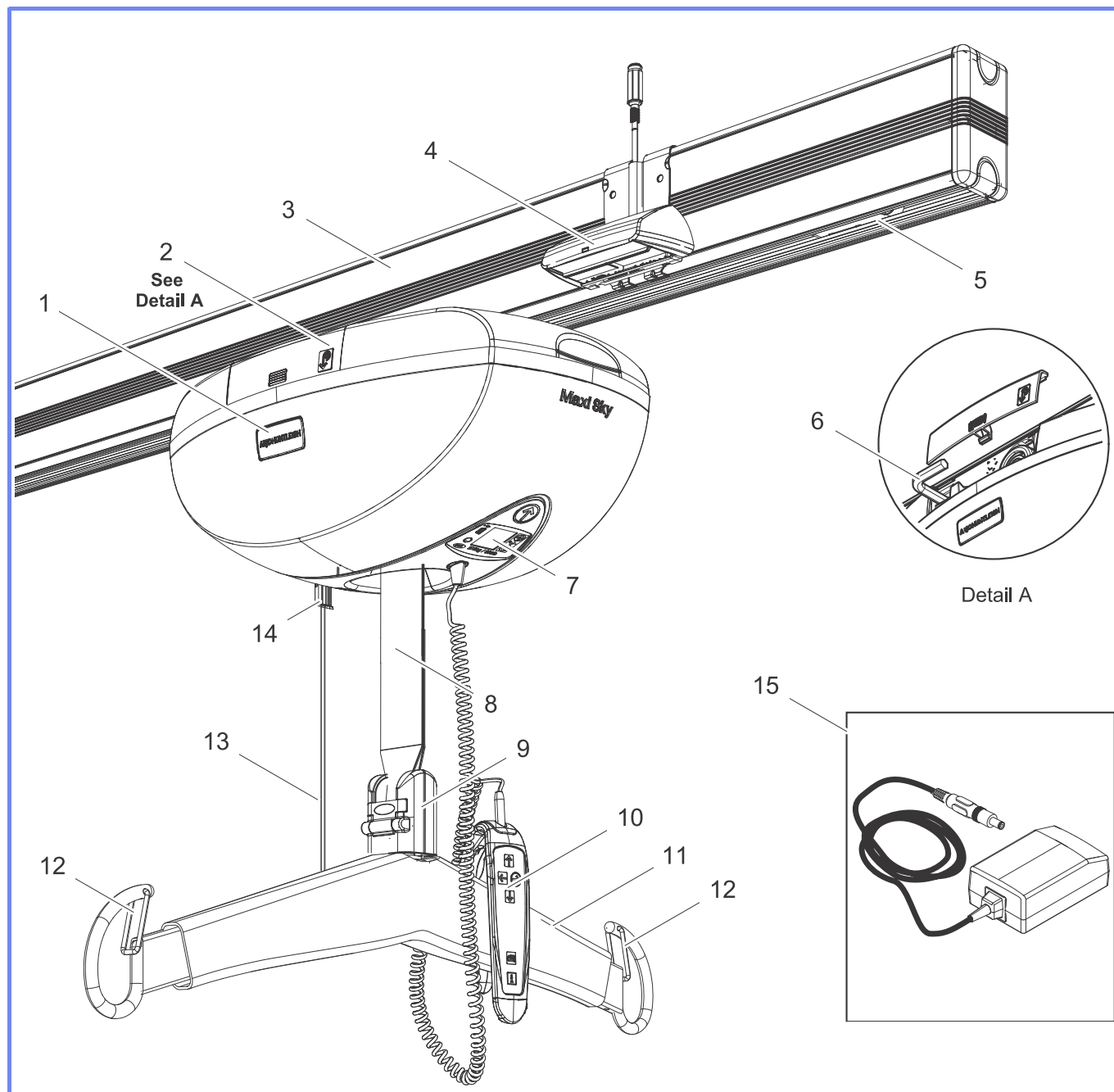


Figure 2

- |  |                  |   |
|--|------------------|---|
| 1) Lift  | 6) Hex key       | 11) Spreader bar  |
| 2) Access door for manual emergency lowering mechanism | 7) Control panel | 12) Latches   |
| 3) KWIKtrak rail                                       | 8) Strap         | 13) Red emergency stop cord                               |
| 4) Charging station*                                   | 9) Quick connect | 14) Power on switch - PUSH<br>Emergency off switch - PULL |
| 5) Rail end stopper                                    | 10) Hand control | 15) Universal charger                                     |

\* Does not apply to lifts equipped with ECS.

# Labels & Symbols

## General



This symbol is accompanied by the date of manufacture and the address of the manufacturer.



This symbol indicates the product complies with the medical device 93/42/EEC.



This symbol indicates the approval of the Canadian Standards Association.



This symbol indicates the approval of the Technischer Überwachungs-Verein.



This symbol is accompanied by the manufacturer's catalogue number.



This symbol is accompanied by the manufacturer's serial number.



This symbol indicates "separate collection" for all batteries accumulators as per the WEEE Directive.



This symbol identifies material that can be recycled.



This symbol indicates a risk of pinching.



This symbol indicates a type BF protection against electrical shock in accordance with IEC60601-1 standard.

IP<sub>N1</sub>N<sub>2</sub>

Degree of protection provided by enclosure. N1: Ingress of particles, N2: Ingress of water.



These symbols refer to the *Instructions for Use*.

SWL

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



This symbol locates the manual emergency lowering mechanism on the lift.



These symbols refer to the hand control lateral displacement button.



Direct current.

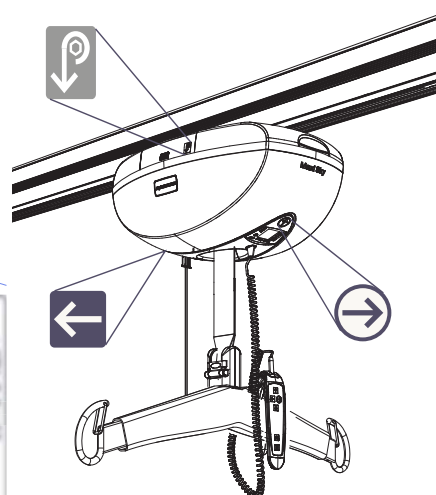
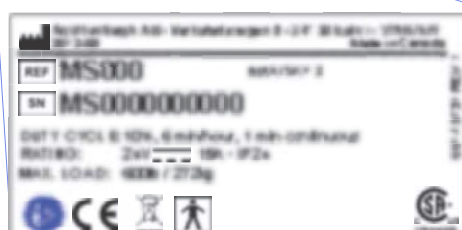
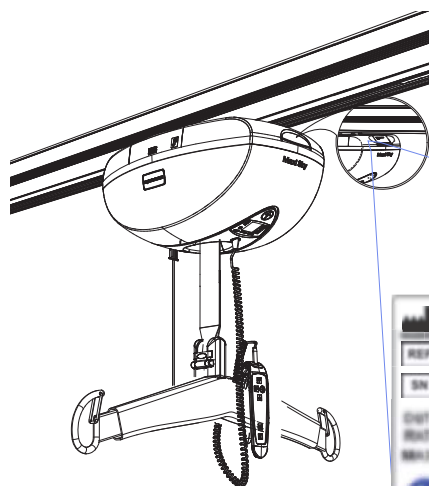


Alternating current.

## Battery charger related



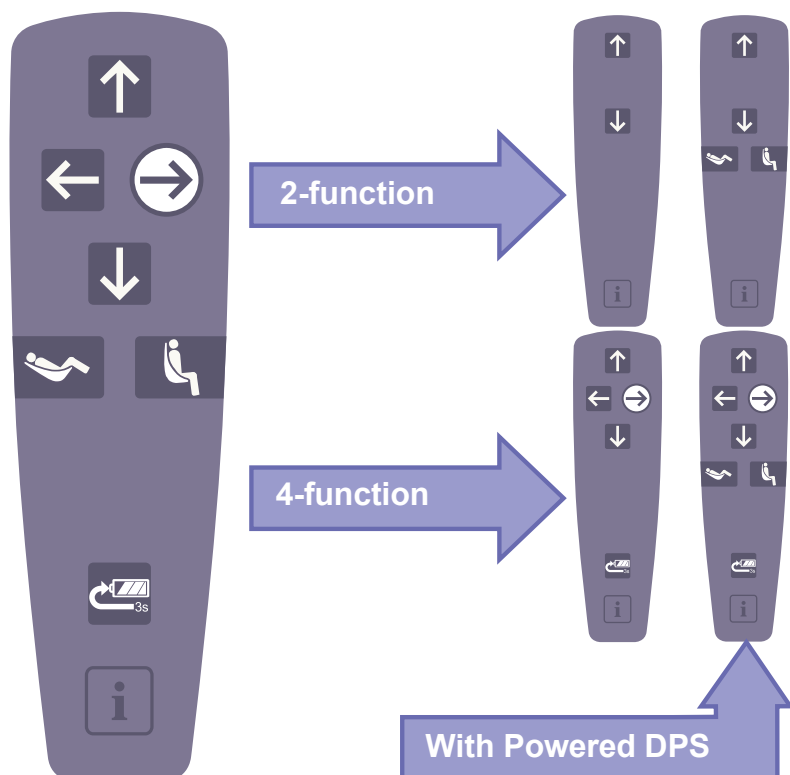
This symbol indicates a class II electrical equipment: term referring to electrical equipment in which protection against electric shock does not rely on basic insulation only.



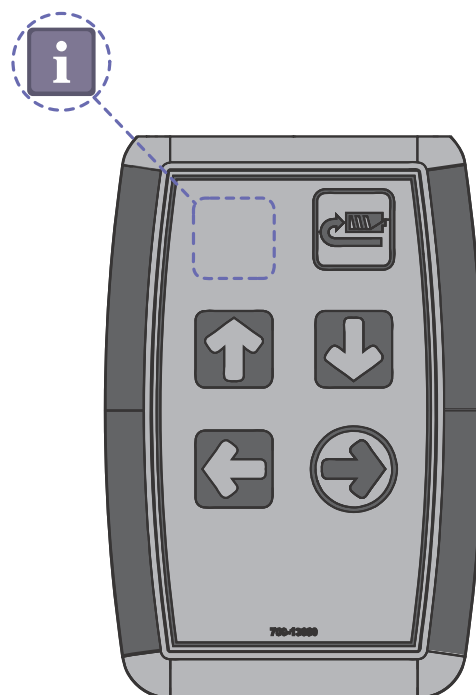


# Hand Control

## Wired Hand Controls



## Infra-Red Hand Control



Icon	Button Description	2-Function	4-Function	Infra-Red
	Up Button	✓	✓	✓
	Down Button	✓	✓	✓
	Right Button		✓	✓
	Left button		✓	✓
	Reclined Button	✓*	✓*	
	Sit Button	✓*	✓*	
	RTC (Return to Charge) RTH (Return to Home) Button		✓	✓
	Programming / Information Button	✓	✓	✓ (No Label)
* With Powered DPS Option				

See "Controls and Features" section on page 18 for additional details.

**WARNING:** Never let go of the hand control while the cord is extended as this could cause injuries to others. When not used, put the hand control on the spreader bar.

# Control Panel





## Control Panel

The control panel regroups several elements intended to provide information to the user related to:

- Command acknowledgement
- Maintenance requirement
- Customizing menus
- Status LED
- USB access port
- Auxiliary Up-Down button



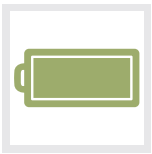
## Auxiliary Up-Down Button

- The  and  buttons are used to complete a transfer if a problem occurs with the hand control during the operation.



## Status LED

- The LED is a complement to the display to draw user's attention that a message is being displayed on the screen.
- The LED will flash Green to confirm charging is in progress or light up solid Green when batteries are fully charged and lift is ready to use.
- The LED will light up Red when an abnormal situation occurs.
- Refer to "Customizing" section to set enable/disable parameters.



## Display

- This is the message centre that informs the user of the different statuses of the lift by means of intuitive Icons (see "Display Symbols" for details).



## SWL Rating

- This label indicates the maximum lifting capacity of the lift.
- The *Maxi Sky 2* is built to operate in three different maximum weight settings.
  - 120 kg / 265 lb
  - 200 kg / 440 lb
  - 272 kg / 600 lb



## USB Access Port

- The USB port is intended for service technician only. It allows to access certain functions such as; customizing, query history data and firmware updating.



## Beeper

- The Control Panel is also equipped with a component that provides beeping sounds for acknowledging commands or to draw user's attention that a message is being displayed on the screen.



# Display Symbols

Following is a description of all the symbols that may be presented on the display.



## Battery Charge Level

- Several symbols showing a battery at a different charge level. These symbols indicate status regarding the batteries and/or the regular charging system (see "Battery Information" and "Charging the Batteries" on page 21 for details).



## ECS Indicator

- On units equipped with ECS option, this symbol shows up when the batteries are charging, confirming that the ECS system is operational.



## RTC (Return to Charge)

- This symbol indicates that the RTC function was activated by the hand control.



## RTH (Return to Home)

- This symbol indicates that the RTH function was activated by the hand control.



## PPP (Pre-Programmed Position)

- This symbol indicates that the PPP function was activated by the hand control.



## Over Duty Cycle

- This symbol flashes when the lift is used for a long period without allowing it to cool down. This security feature disables the function (Up, Sit/Lay or Left/Right) that is being used beyond recommended duty cycle to prevent damages.
- When the overheat protection is engaged, the function, which exceeded the duty cycle, is disabled while all other functions remain active.
- The red light will stay on during a cooling period. In addition, a single beep will be heard.



## General Malfunction (Warning symbol accompanied with a **numeric** character)

- This symbol flashes when the lift encounters a malfunction.
- The lift needs to be inspected / repaired by a qualified service technician.
- The red light will stay on and a single beep will be heard.




## Maintenance Required (Wrench symbol accompanied with a **letter** character)

- This symbol is shown for 7 seconds (accompanied with 2 beeps) when the lift is waking up from sleep mode and flashes each 5 seconds to draw user's attention.
- Contact your ArjoHuntleigh service centre for maintenance.



## Overweight

- This symbol flashes when a transfer is attempted with a load exceeding the lift's capacity.
- The red light will stay on (accompanied with 4 rapid beeps) until the patient is lowered.
- The  function is disabled while all other functions remain active.

## Charging System

The *Maxi Sky 2* is equipped with 1 of 2 different type of charging system.

Whenever the lift is being used, it automatically disconnects from the charging system and re-establish connection after usage to protect it from excessive current draw.

### Regular Charging System

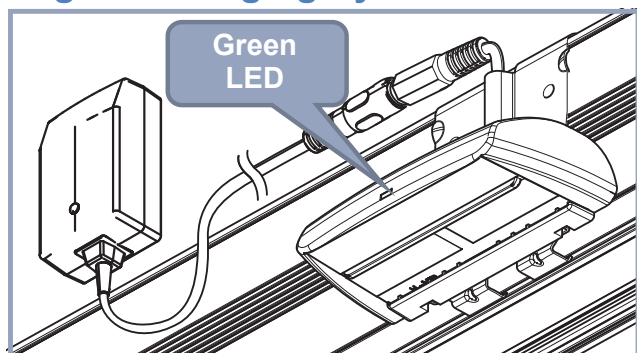


Figure 3

The *Maxi Sky 2* ceiling lift is equipped with a universal charger (#700-15501) that can be customized to fit the AC voltage outlets where it is sold.

Avoid positioning the charger in a way that access to the plug is limited, making it difficult to disconnect.

The charger is feeding a charging station located on the rail to transfer power to the lift for recharging the batteries.

The charging station features a small Green LED to indicate when power is present on its contacts.

The RTC is disabled by default. See "Customizing" on page 17 for instructions on how to enable this feature.

### KWIKtrak ECS Rail System

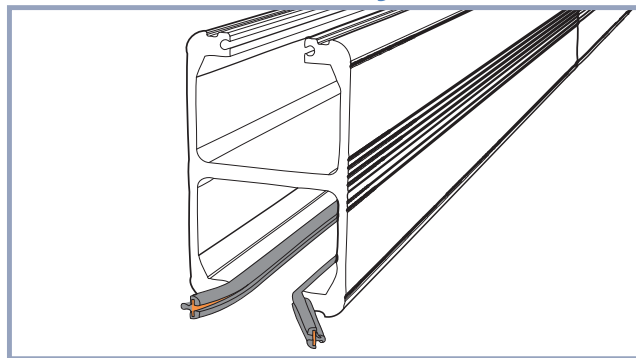


Figure 4

The *Maxi Sky 2* ceiling lift is also compatible for use with the *KWIKtrak* Enhanced Charging System (ECS).

This rail system allows the lift to benefit from continuous charging wherever it is on the rail. It eliminates the need to send the lift back to the charging station after the patient transfer.

With the ECS option, the (RTC) feature is no longer necessary. However, it may be of interest to park the lift out of the way. In this case the RTH feature could be enabled in combination with the use of PPP stations added onto the rail at the desired parking (Home) locations.

# Preparation

## Verifying the Package Contents

Upon receipt of the equipment, verify the lift and accessories against the packing list to ensure it is complete. Inspect them for possible damage due to shipping. If this is the case, do not use the damaged equipment, and contact your local ArjoHuntleigh agent.




**NOTE:** Batteries need to be charged for a minimum of 8 hours prior to the initial use of the lift.

## Initial Start-up

- Push the Power On Switch button in.

## Setting Date / Time

When the lift is started-up for the first time, it will go into a mode requesting to set the date and the time. It is important to correctly set the date as the lift will inform the users that maintenance is due based on the recorded date. Refer to "Customizing" section if you need to change these settings.

Press the  or  button on the hand control to change the value. Once the parameter is set correctly, press the  button to acknowledge selection and to pass to the next parameter. After the last parameter is set the lift will get into normal mode.

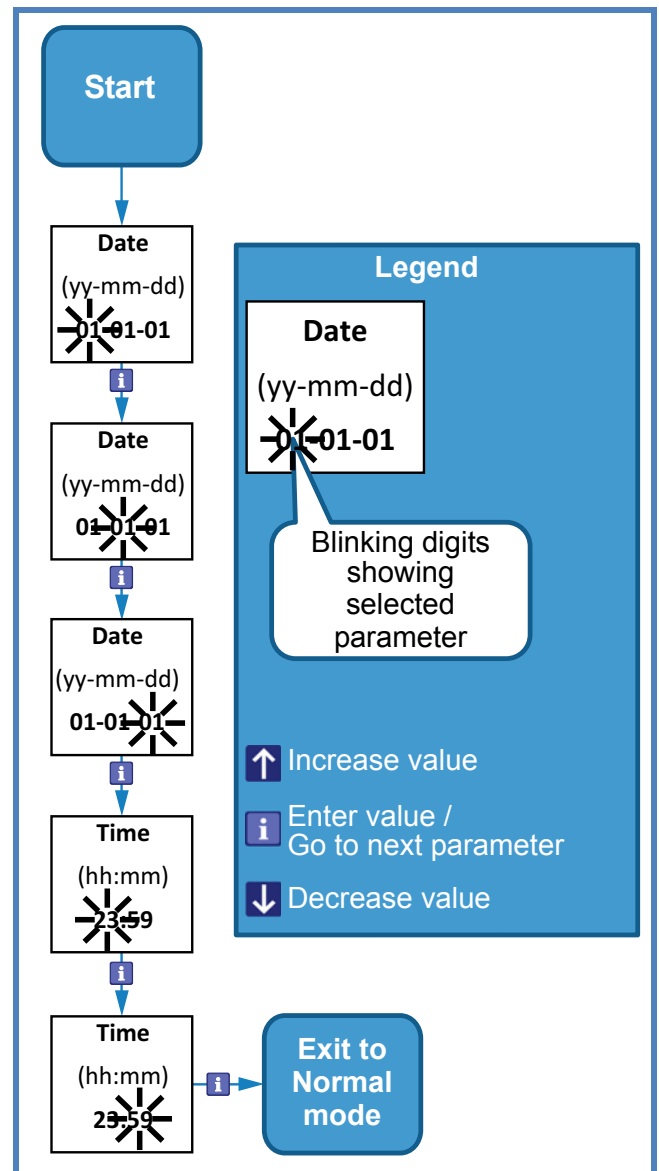


Figure 5

Refer to "Customizing" section on page 17 for settings of other parameters.

## Actions before the First Use

Always ensure that:

- The rail system and the lift are installed by an authorized ArjoHuntleigh agent in accordance with local codes.
- A weight load test has been performed on the rail, as per ArjoHuntleigh's instructions.
- All rails must be closed and secured with end stoppers or connected to other closed rail components.

## Actions before Every Use

**NOTE:** The need for a second attendant to support the patient must be assessed in each individual case.

Always ensure that:

- The product is used by trained caregivers.

**WARNING:** Before an attempt is made to move a patient, a clinical assessment of the patient's suitability for transfer must be carried out by a qualified health professional considering that, among other things, the transfer may induce substantial pressure on the patient's body. A transfer conducted when it should not can degrade the patient's health condition.

- Special consideration is taken when transferring a patient who is connected to electrodes, catheters, or other medical devices.

**WARNING:** Before transferring a patient, make sure there are no obstacles in the transfer path. Injuries could occur.

- The sling is inspected.
- The lifting procedures found in this manual are followed.
- At any time, if the patient becomes agitated, stop transferring and safely lower the patient.
- The daily maintenance is carried out before using the lift paying special attention to the following elements:
  - Inspect strap for wear, discoloration or loose threads.
  - Inspect all sling parts (attachments, fabric, stitch areas and strap) for signs of wear, discoloration, deterioration or loose threads.
  - Inspect the spreader bar for damage or cracks. Make sure all attachments are properly secured, and that all the quick connect's components (cover and latch) are present.
  - Inspect for evidence of external damage, missing parts or broken panels.
  - Make sure all end stoppers and end caps are presents.

- When raising or lowering the patient, always remember to keep the strap as straight as possible for security purposes and to prevent premature wear of the lift's components. Never exceed maximum values as shown in Figure 6.

**WARNING:** Ensure that there is no objects in the running way of the strap. It could damage or cut the strap, causing a patient fall.

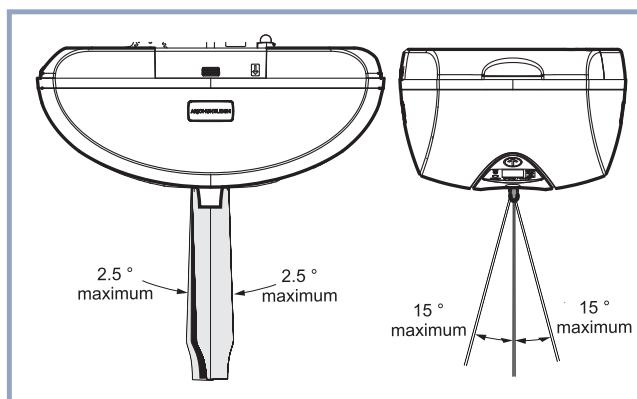


Figure 6

# Customizing

With the *Maxi Sky 2* ceiling lift, a trained user can customize certain parameters to optimize its interaction with the environment in which it is installed.

## Entering Customizing Mode

To enter customizing mode, press and hold the **i** button for three seconds.

When the display shows the programming menu, press the **↓** button to select **customizing** then press the **i** button to enter customizing mode.

The display will show the first parameter with its actual setting (refer to Figure 7).

Use the **↓** and **↑** buttons to navigate through the menu.

When a parameter option needs to be changed, press the **i** button to enter parameter setting mode, then use the **↓** or **↑** button to select an option (next/previous) or to set (increase/decrease) numeric values.

Once the parameter is set to desired option, press the **i** button to accept selection. A short beep is heard and the lift returns to customizing menu.

To exit customizing mode, select "back" and press the **i** button or wait for 60 sec. without pressing any button.

## Programmable Parameters

The following table lists parameters that can be set to fit your needs.

Table 1

Parameter	Description	Settings (default in bold character)
motor speed	Displacement speed along the rail	10 cm/s (4 in/s) 15 cm/s (6 in/s) <b>20 cm/s (8 in/s)</b>
rtc/rth function	RTC/RTH options	( <b>disable</b> ), auto, <b>←</b> , <b>→</b>
ppp function	Enabling / Disabling PPP	<b>disable</b> , enable
strap length	RTC/RTH mode strap unwinding duration	<b>13 cm - 152 cm</b> ( <b>5 in - 60 in</b> ) Has no effect when both RTC/RTH and PPP functions are disabled
detection time	Maximum time allowed finding Charger or PPP station	0.5 to 5 min. ( <b>1.5 min.</b> ) Has no effect when both RTC/RTH and PPP functions are disabled
ready state	Lift resting duration before entering sleep mode	1 to 20 min. ( <b>10.5 min.</b> )
hoist led	Enabling / Disabling* green LED	disable, <b>enable</b>
date/time	Actual date/time	Depends on value set at initial start-up ( <b>11-01-01 00:00</b> )
back	Exit Customizing Mode	

\* Red signals always remain enabled.

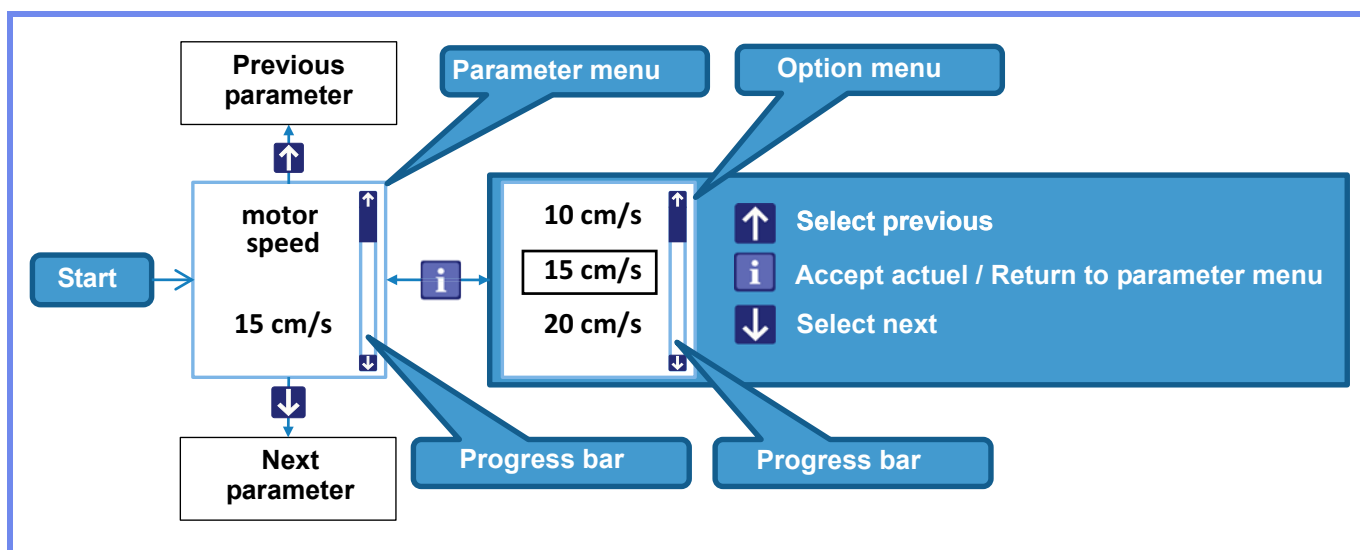


Figure 7

# How to Use the *Maxi Sky 2* Ceiling Lift

## Controls and Features

### Sleep Mode

The lift turns the display off to save energy consuming whenever it is not being used for more than the ready state parameter configured time (refer to "Ready state" parameter in Table 1). Therefore, the ceiling lift must not be powered off after every use.

The LED remains solid green to indicate that the batteries charge is above 25% or flashing green if the lift is charging.



The Status LED turns to red when the batteries charge drops below 25% of their full charge. The lift will beep twice every 10 seconds when batteries reaches the critical point (less than 5%).

The lift awakes every 15 minutes to display low battery messages and goes into sleep mode again after 30 seconds. Pressing any buttons on the hand control wakes up the lift.





### Movement Controls

Moving the *Maxi Sky 2* ceiling lift is achieved with the aid of the hand control which includes all the command buttons to operate the lift.



#### Vertical Movement

- The  and  buttons are used to raise or lower the patient. Auxiliary buttons can also be used.
- The raising and lowering functions accelerate gradually to prevent any abrupt movement as soon as the button is pressed, and remain active for as long as the button is pressed.
- The movement decelerates gradually to prevent any abrupt movement when the button is released.



#### Horizontal Movement

- The four-function models are equipped with the  and  buttons which activate a lateral motor to move the lift along the rail. With the two-function model, the lift must be moved manually.
- The  and  functions accelerate gradually to prevent any abrupt movement as soon as the button is pressed, and remain active for as long as the button is pressed.
- The displacement decelerates gradually to prevent any abrupt movement when the button is released.

**WARNING:** Do not pull the lift with handset, which may spring back with high speed, and therefore cause injuries.

**WARNING:** Do not push or pull on the patient. Move the lift by pulling or pushing the spreader bar while holding it or use the  or  button.

### Powered Dynamic Positioning System (PDPS)

Models equipped with a PDPS are supplied with a hand control having the  and  buttons which allow positioning the patient in the upright or reclined position according to the transfer starting and / or destination position.




Press and hold to bring patient to sit position.



Press and hold to tilt patient to reclined position.

### Return to Charge / Return to Home

This function is disabled from the factory, see "Customizing" section on page 17 for instructions on how to enable this feature.



When the RTC / RTH function is enabled, the  button is intended to automatically send the lift back to a charging station or to a predetermined location along the rail to stand-by for the next eventual use.

**WARNING:** Before using the RTC/RTH verify that nobody is on the path. Contact with the lift or its accessories could cause injuries.

- Press and hold the RTC button for 3 seconds to send the lift back to the charging station.
- On an ECS system, as there is no charging station, pressing the RTH button for 3 seconds will send the lift to a PPP station.

**Note:** This feature is not available on an embedded rail system.

The function can be programmed, by a service technician, in three different modes.

- Auto: In this mode, the unit memorizes the location of the charging station and automatically goes in its direction when the function is activated.
-  /  : In these modes, the unit always goes in the respective preset direction when the function is activated.

The RTC/RTH can be stopped at any time by:

- pressing any button on the hand control
- pulling on the red emergency stop cord
- holding onto the spreader bar.

The *Maxi Sky 2* ceiling lift is equipped with a load sensor that will stop any motion if a load variation is detected when lifting. Make sure there are no obstacles in the path.

**WARNING:** DO NOT use the RTC/RTH function when a patient is attached to the lift as this could cause injuries to the patient.



**WARNING:** The weight detector, within the lift, that prevents the RTC/RTH from functioning when a patient is attached to the lift, can only detect a minimum load of 20 kg (45 lb). Extra care should be exercised when manipulating the hand control to transfer a patient weighing 20 kg (45 lb) or less.

## Usage Monitoring

The *Maxi Sky 2* ceiling lift is equipped with a maintenance monitor informing the user that maintenance is necessary based on the number of transfers, usage history, a regular schedule or malfunctions (refer to “Display Symbol” section).

### Required maintenance

The beeper and red LED is used to draw the user’s attention indicating that a maintenance or malfunction relating message is being presented on the display.

## Displaying Usage Data

The *Maxi Sky 2* ceiling lift also records the number of times it has been used to assist the technician servicing the lift.

Accessing the usage history data is achieved in 2 different ways depending on the PPP function enabling state.

### Accessing Usage Data when PPP is Disabled

Momentary pressing the **i** button will bring the display into usage history screens.

Scroll through the screens using the **i** button.

The lift will exit the data screens when pressing the **i** button while the “Average Lifts/Day” is displayed. It is also possible to exit the usage history at any time using the **↓** or **↑** button.

Following is a list of the information available in this mode.

Label	Detail
Total Lifts	Cumulate lifts since initial start-up
Lifts Last Day	Updates at 00:00
Lifts Last Week	Sunday to Saturday
Average Lifts/Day	Based on last 7 days

### Accessing Usage Data when PPP is enabled

Press and hold the **i** button for 3 seconds will bring the user into a menu screen which requires a confirmation to view the data info (see Figure 8).

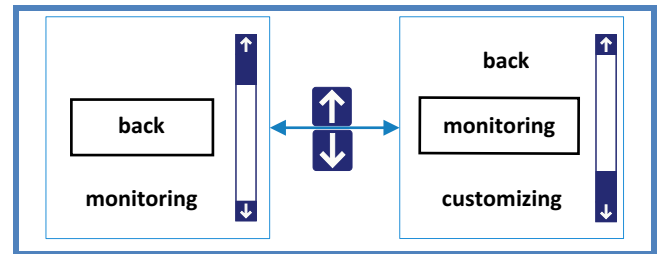


Figure 8

Navigate through the menu using the **↓** or **↑** button and select "monitoring", press the **i** button to accept selection.

Following is a list of the information available in this mode. Use the **↓** or **↑** button to navigate into the menu.

- Total Lifts
- Lifts Last Day
- Lifts Last Week
- Average Lifts/Day
- Hours of Use
- Overweight Lifts
- Over Duty Cycles
- Version / Serial No

To exit any data screens, select “back” then press **i** to accept.

### Emergency Stop (Red cord)

This device is an easily and rapidly accessible feature allowing disabling the lift completely in the event that an uncontrolled situation would happen.

**CAUTION:** Do not move the lift with pulling the red emergency stop cord. This could cause malfunction or damage.

**CAUTION:** Damage to the lift may occur if the cord is pulled with excessive force.


When pulling the cord:

- The lift stops all activities, the display and all indicators shut off.
- A small red plastic insert comes out of the casing.

Note that the patient, weighing more than 55 kg (120 lb), might descend slowly when the emergency stop is activated.

### To Reactivate the Lift

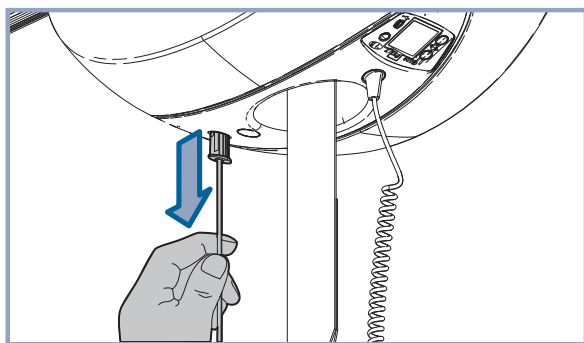
Push up on the red plastic insert.

- The lift is ready to use when the  or **ECS** icon appears on the display.

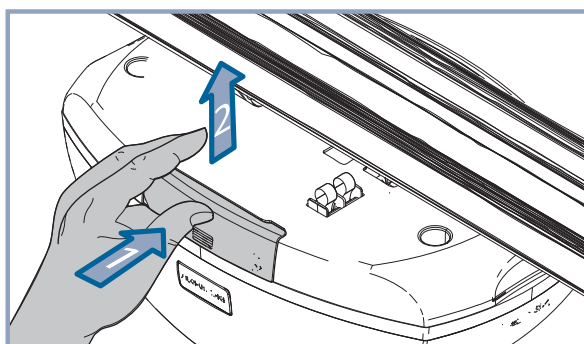
## Emergency Lowering Mechanism

In the unlikely event of an abnormal situation, as example an electrical failure, the emergency lowering mechanism provides a safe way of getting the patient down onto a chair, bed or wheelchair.

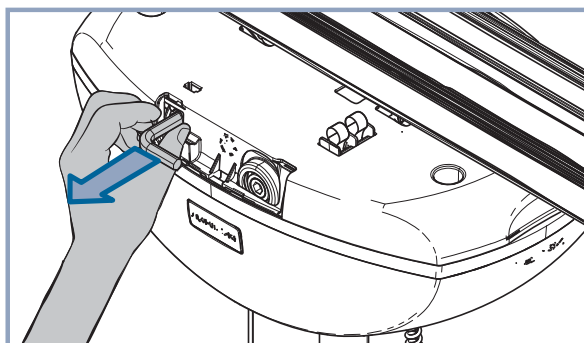
The emergency lowering mechanism is to be used only in case of an emergency.



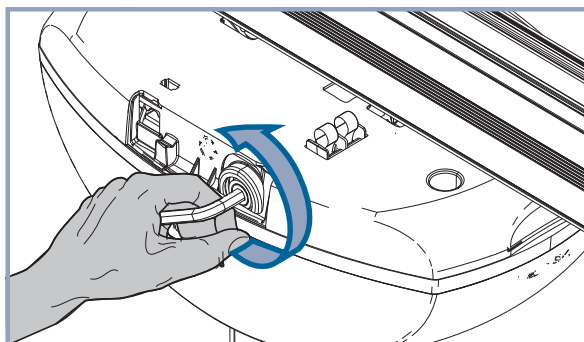
Pull the red emergency stop cord.



Open the small side door to access the lowering mechanism.



Pull the 8 mm hex key from its storage compartment.



Insert the hex key deep into the axle. Turn the hex key counter-clockwise to slowly lower the patient.

Once the patient is lowered and secured within a chair, bed or wheelchair, call a qualified technician to inspect the lift.













## Emergency Brake

In the unlikely event of an abnormal situation, as example a mechanical failure, the lift is equipped with a brake system that automatically engages to block the descent. In this situation, the emergency lowering mechanism will not be functional.

**WARNING:** If the emergency brake activates, turn the unit off, apply a warning sign on the lift to prevent any further usage and call your local ArjoHuntleigh agent for an inspection.



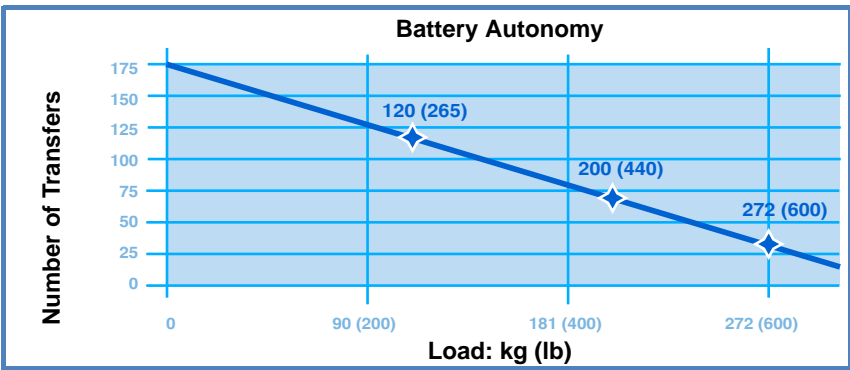
# Battery Information

Display	Battery Charge	Remarks
	100%	Normal operating range
	75%	
	50%	
	25%	Low Accompanied with a short beep when one of the following button is pressed      
 	< 5%	Critical Icons alternate accompanied with a two short beep every 10 seconds

The batteries for this device are rechargeable lead-acid batteries. For safe handling and to extend the battery lifetime, please follow and remember these instructions. Not following these instructions can cause short battery life and may, in extreme cases, put user at risk.

Battery life depends on many factors. These are: frequency of use, frequency of charging, temperature of operation, storage and storage time.

Using lead-acid batteries below 5% charge can damage the battery resulting in shorter battery life. The 5% charge is indicated by the critical battery level symbol flashing on the display. At this time, the lift will allow only the down function. Make sure to recharge the batteries as soon as possible. Let the batteries recharge until the display shows 100% capacity before using the lift.



This graph illustrates the relationship between the number of lifts that can be performed before reaching battery critical level, versus the load being lifted.




## Charging the Batteries

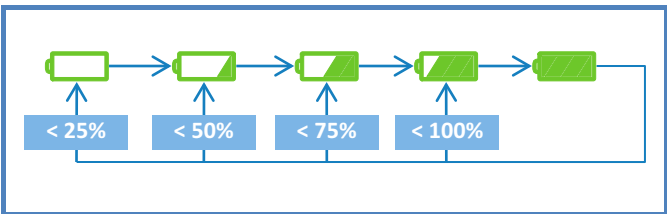
**WARNING:** Do not operate the charging station with a damaged cord or if the station has been dropped or damaged. Do not bend the power cord by force, or place a heavy object on it, since it could damage the cord and may cause fire or electrical shock.

**NOTE:** The lift can be operated at any time during the batteries' charging, which will stop automatically.

### Regular Charging System

**2-function model:** Move the lift under the charging station.

**4-function model:** Press the  and  buttons or the  button to bring the lift to the charging station.

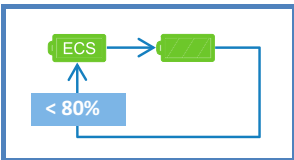



Check the LED to confirm that batteries are charging properly.

- The LED will flash green until batteries are fully charged.
- The display will cycle through charge level icons according to actual battery charge level to show the charging progress.

If the batteries have been completely drained it could take up to 8 hours to completely recharge them.

### ECS Charging System



System equipped with ECS will display the  icon when batteries are charging confirming that the system is operational.

- The LED will flash green until batteries are fully charged.

If the ECS system is not supplying voltage due to a system fault or power failure, the display will show actual battery level as for a non ECS system.

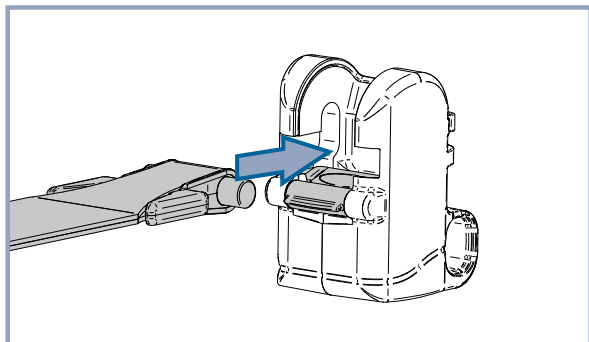
## Spreader Bar

### Quick Connect

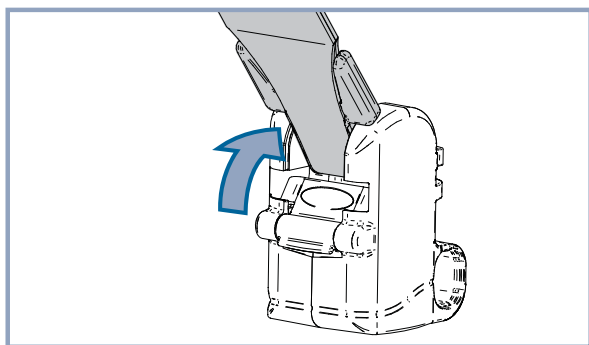
The spreader bar features an attachment which allows the caregiver to change it in a few steps without using any tools.

**WARNING:** Spreader bars must only be installed by a trained person. To prevent the patient from falling, before every use, always ensure that the strap is secured with the attachment and that the attachment latch is closed.

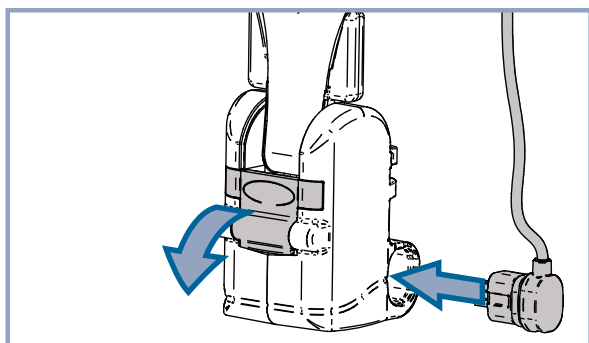
### Attaching the Spreader Bar to the Lift



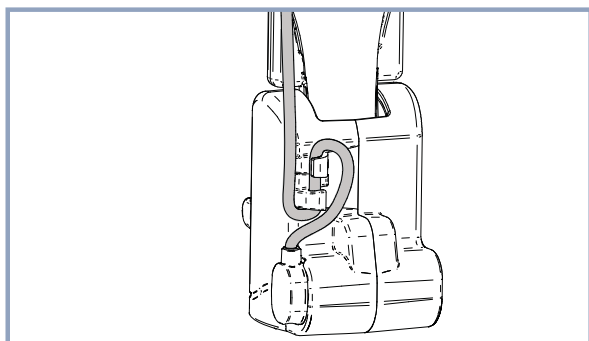
Insert the strap with the pivot into the quick connect by pushing it inward.



Rotate the strap upward.

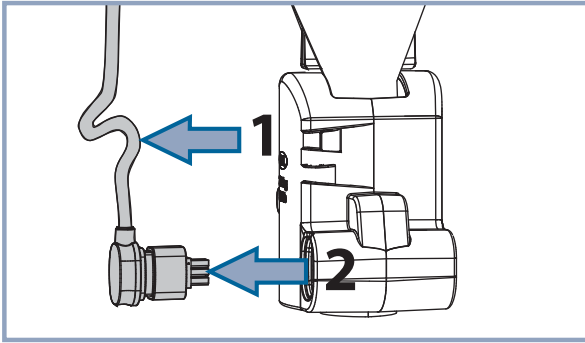


Ensure that the latch is closed.  
If using a PDPS, connect the cable.

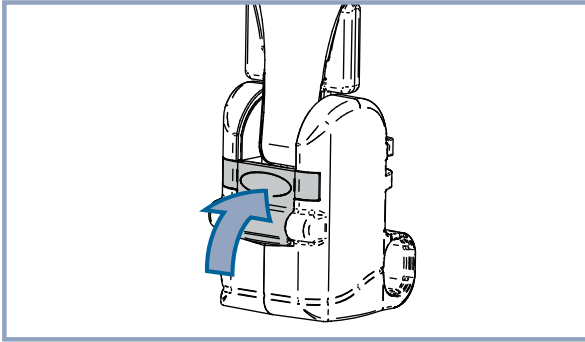


If using a PDPS, secure the cables on the back of the quick connect as shown.

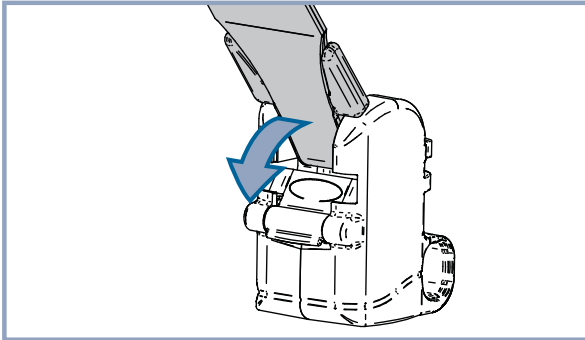
## Removing the Spreader Bar from the Lift



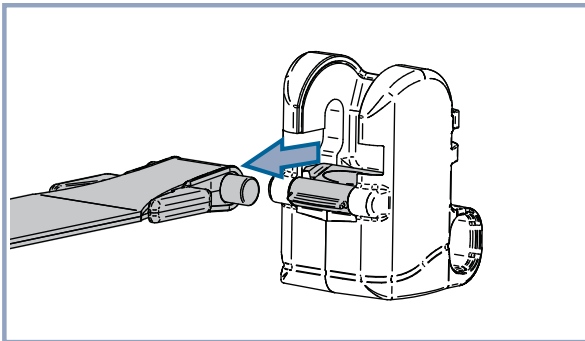
If using a PDPS, detach the cable from the back of the housing and then disconnect the connector.



Open the latch that locks the strap in place by pushing it inward.



Rotate the strap towards the latch.


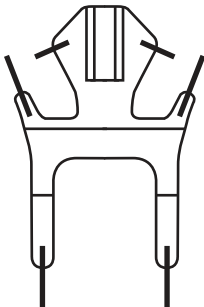


Pull the strap out of the attachment.

# Clip Sling Applications

## Clip Sling Compatibility

Following is a list of typical ArjoHuntleigh clip slings that are compatible with the *Maxi Sky 2* ceiling lift.

Application for Sling	Sling Layout
General Transfer	
Hygienic	

## Sling Selection

The spreader bar that is attached to the lift determines what slings can be used to transfer a patient.

Most slings are colour coded for size by having a different colour edge binding or attachment strap colouring:

- Teal - Extra Extra Small - XXS
- Brown - Extra Small - XS
- Red - Small - S
- Yellow - Medium - M
- Green - Large - L
- Purple - Large Large - LL
- Blue - Extra Large - XL
- Terracotta - Extra Extra Large - XXL

Note that it is not every sling that is available in all sizes.

A wide variety of slings are available for each application. Please contact your local ArjoHuntleigh agent for more information.



Flites® (single patient multi-use slings) are also available for most sling models. If ArjoHuntleigh *Flites* slings are to be used with the *Maxi Sky 2* ceiling lift, refer to the separate ArjoHuntleigh *Flites* slings instruction for use.

**NOTE:** Only use ArjoHuntleigh slings with the *Maxi Sky 2* ceiling lift .

## Spreader Bar Compatibility

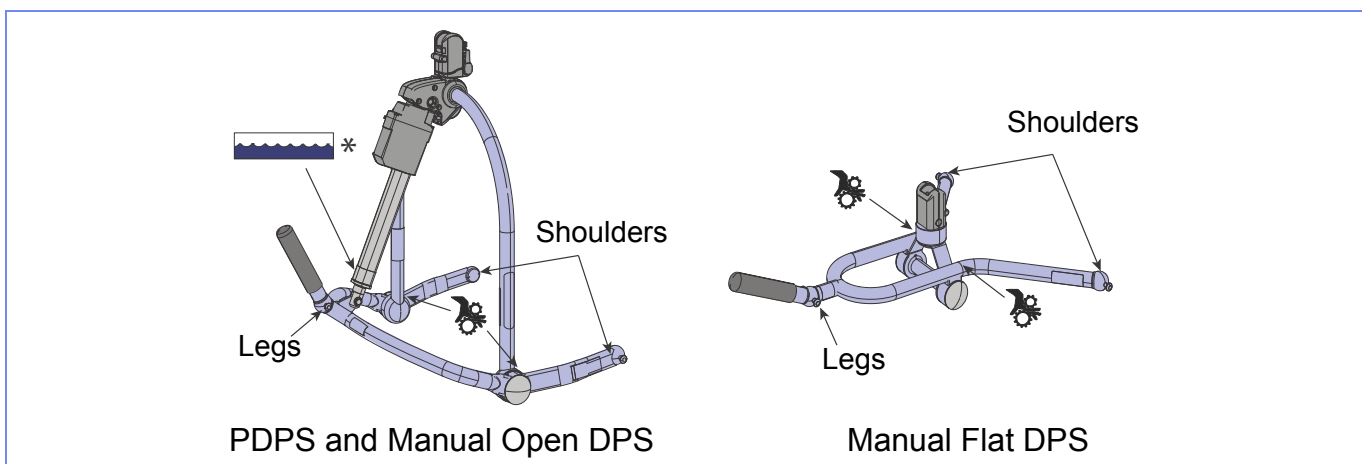
Following is a list of all ArjoHuntleigh spreader bars to use with clip slings recommended with the *Maxi Sky 2* ceiling lift.

Other combinations could be suitable based on facility assessment. Clinical judgement must be applied when choosing a size and a combination.

Spreader Bar	Description	Clip Sling Sizes							
		XXS	XS	S	M	L	LL	XL	XXL
 700-19475	Manual Flat DPS (see warning)	✓	✓	✓	✓	✓	✓	✓	
 700-19480	Manual Open DPS (see warning)		✓	✓	✓	✓	✓	✓	
 700-19350	Medium PDPS		✓	✓	✓	✓	✓	✓	
 700-19355	Large PDPS					✓	✓	✓	✓

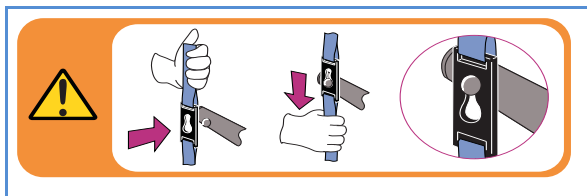
**WARNING:** Using the flat DPS or the open DPS with amputee sling may cause injuries if not used correctly.

## Attachment points



\*This label signifies that anything above its position must not be soaked in water, either when bathing or showering the patient.

## Attaching the Sling to the DPS

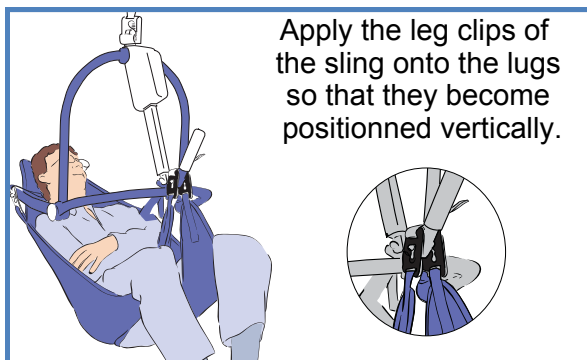


Insert the clip attachment over the lug on the PDPS/DPS.

Secure the clip in place by pulling the sling down so that the lug is in the top portion of the clip hole.

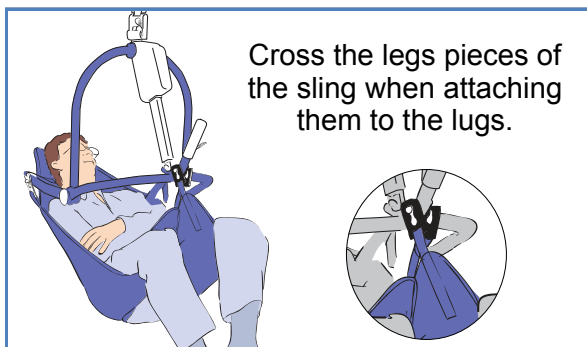
(The graphic on the left represents the label located on the spreader bar that recalls this procedure.)

### Method 1 - Straight Attachment



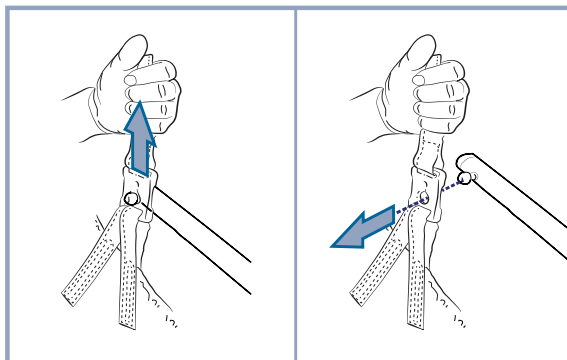
For most patients, the straight attachment of the leg clips is recommended use.

### Method 2 - Crossed Legs Attachment



If the patient is prone to kicking off the leg clip, the crossed attachment of the leg clips shall be applied, which will prohibit the clip from being kicked off.

## Detaching the Sling from the DPS



Pull the sling up to release the lock.



Remove the clip attachment from the lug on the PDPS or DPS.

## Operating the DPS and PDPS

**WARNING:** To ensure maximum patient comfort and safety, do not allow the patient to hold onto the spreader bar. Arm or finger pinching could occur when operating the DPS/PDPS.



The DPS spreader bar is adjusted by raising or lowering the tilt handle until the patient is in the desired position.

To operate the powered DPS spreader bar, use the  and  buttons on the hand control. Press and hold the appropriate positioning button until the patient is in the desired position. Powered movement will continue until the travel limit has been reached, or until the button is released. The spreader bar will remain firmly in position once powered movement has ceased.

## Transferring Patients Using Clip Slings

**WARNING:** Always hold the spreader bar when near patients to avoid hitting them with it. This could cause an injury.

**WARNING:** Before moving the lift, ensure there is enough clearance with patients to not hit them. Injuries could occur.

**WARNING:** When raising patients, make sure the sling is not caught on any obstructions (for instance, the wheelchair brakes or armrests). Injuries could occur.

## Transferring Patient from a Seated Position

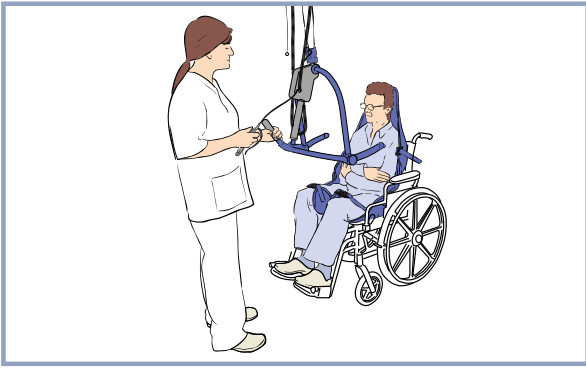
The techniques described here can be used for transferring patients regardless of where they may be seated (e.g. in a bed, in a chair, wheelchair or similar).



Place the sling around the patient so that the base of the sling sits slightly below the tail bone. A MaxiSlide® or MaxiTube® positioning aid can be used to assist with placement of the sling.

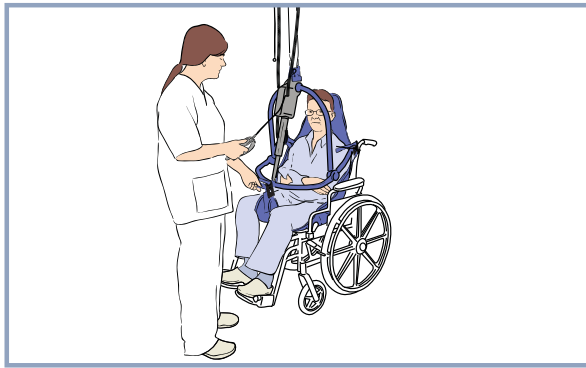


Ensure that the head support area of the sling is behind the head covering it. Pull each leg strap under the thigh so that it emerges on the inside of the thigh.



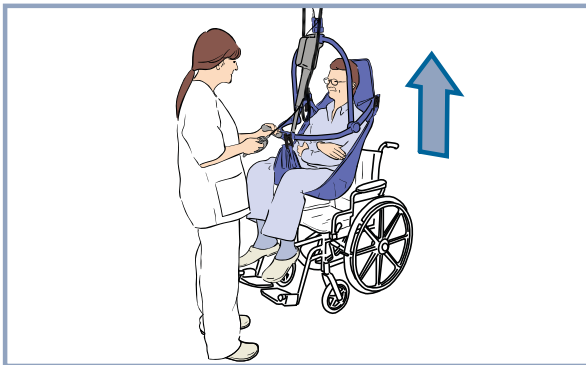
Approach the patient with the lift, ensure that:

- The spreader bar is in reclined position.
- The wide part of the spreader bar is at or just below shoulder level.
- The spreader bar is close enough to be able to connect the shoulder strap clips of the sling to the frame.

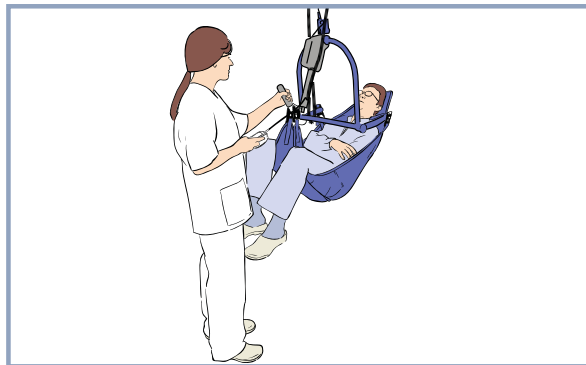


Connect the shoulder strap clips, then tilt the frame and attach the leg sections. If necessary, lower the spreader bar a little further, being careful not to lower it onto the patient.

**WARNING:** Make sure that the sling attachment clips are correctly attached and remain in tension as the weight of the patient is gradually taken up. This will prevent a patient fall.

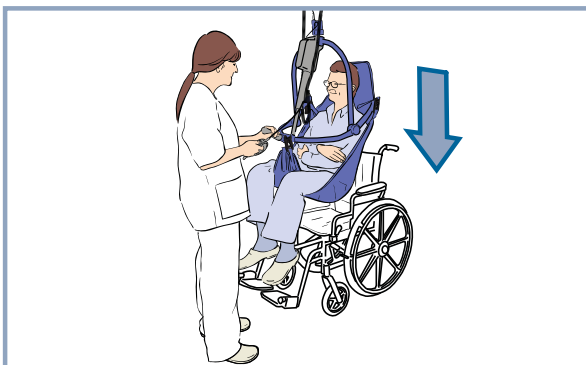


Raise the patient using the hand control, positioning him/her comfortably to a semi-reclined position for the transfer. The patient should not be lifted above the caregiver's eye-level.



Proceed with the transfer keeping a hand on the spreader bar to stop excessive swinging and to give a feeling of added security.

**CAUTION:** Do not attempt to pull the lift along the rail using the hand control cable. This can cause damage to the cable and eventually jeopardize the function of the hand control.



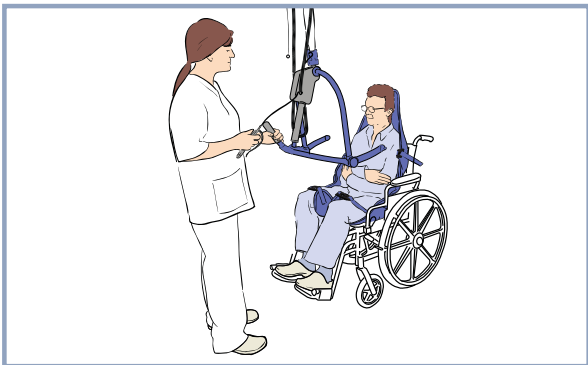
Once the patient has arrived at destination, reposition the patient according to the destination position.

Lower the patient down onto the new location by making small adjustments during the descent so that the patient is always in the best comfortable position.

**WARNING:** When using the lowering function be careful to not hit the patient with the spreader bar as this could cause an injury.

Once the patient's body weight is fully supported, detach the leg strap clips, then the shoulder strap clips.





Move the lift away from the patient.

Remove the sling from behind the patient.

## Transferring Patient from a Supine Position

The technique described here can be used for transferring patients regardless of where they may be laying (on the bed or on the floor of the exercise area).

Before you start, make sure the bed is in correct working height.

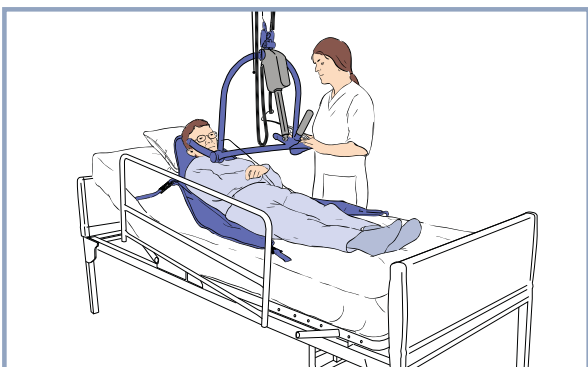


Roll the patient onto their side. Fold the sling in half and place on the bed or on the floor land marking it, along the back of the patient so that the base of his/her spine is aligned with the base of the sling, making sure the sling extends to the top of the patient's head.

**WARNING:** Make sure that the bed safety side is installed to prevent the patient from falling.



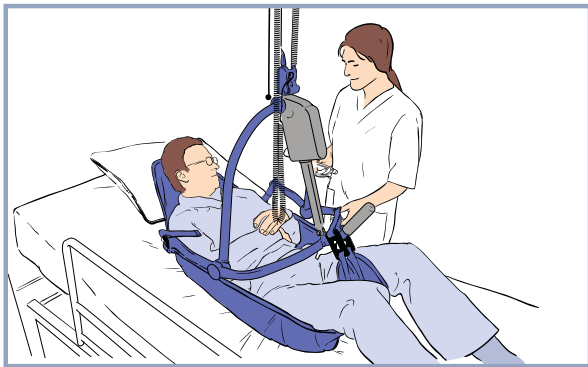
Roll the patient back onto the sling and then slightly further in the opposite direction, so that the folded part of the sling can be unfolded.



If possible, slightly raise the head of the bed.

Approach the patient with the lift, and ensure that:

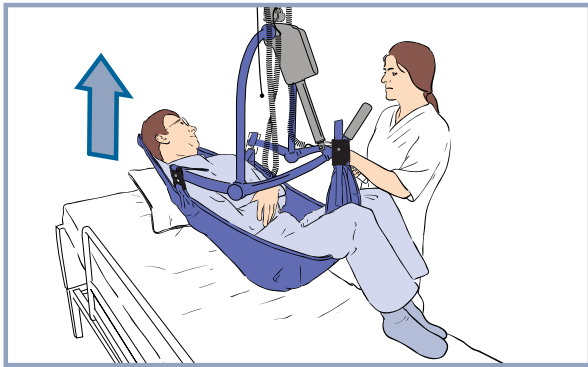
- The spreader bar is in reclined position.
- The spreader bar is close enough to be able to connect the shoulder strap clips of the sling to the frame.



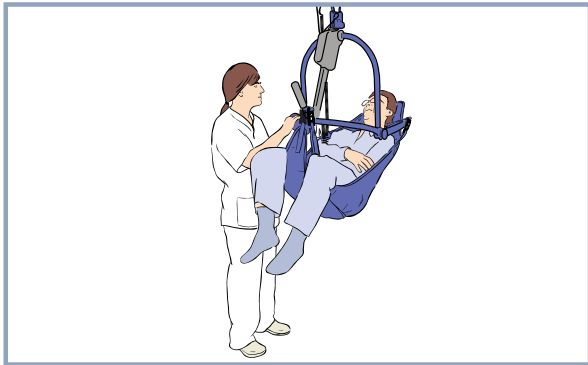
Using the hand control, lower the spreader bar taking care not to lower the frame onto the patient.

Connect the sling shoulder and leg strap clips to the spreader bar.

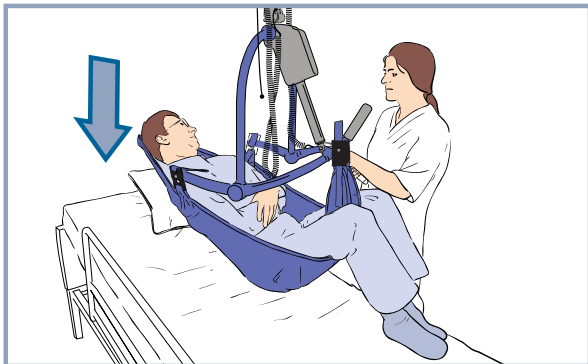
**WARNING:** Always confirm that the sling attachment clips are correctly attached and remain in tension as the weight of the patient is gradually taken up. This will prevent a patient fall.



Raise the patient using the hand control, positioning him comfortably to a semi-reclined position for the transfer. The patient should not be lifted above the caregiver's eye-level.



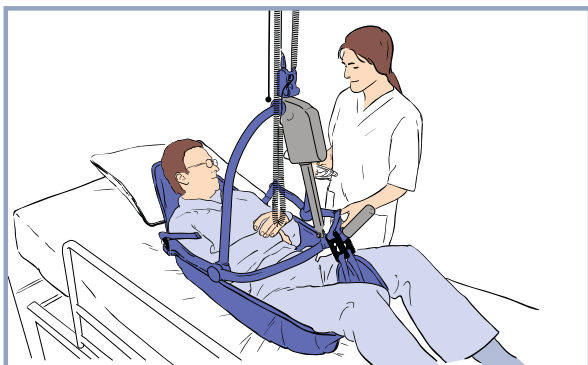
Proceed with the transfer, while using the hand control, keeping a hand on the spreader bar to stop excessive swinging and to give a feeling of added security.



Once the patient has arrived at destination reposition the patient according to the destination position.

Lower the patient down onto the new location by making small adjustments during the descent so that the patient is always in the best comfortable position.

**WARNING:** When using the lowering function be careful to not hit the patient with the spreader bar as this could cause an injury.



When the patient's body weight is fully supported, detach the connections clips.

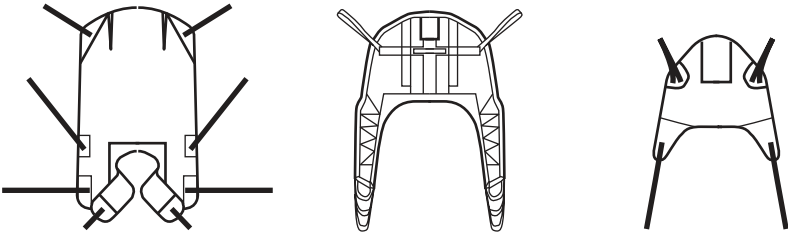
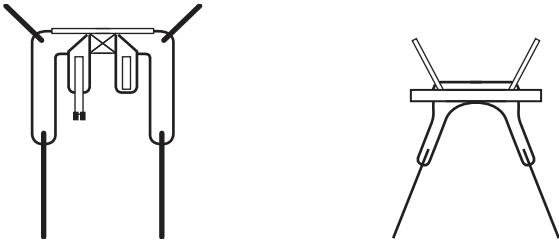
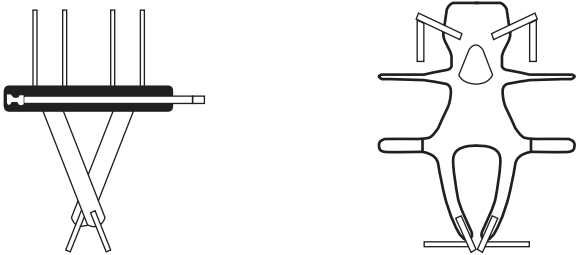
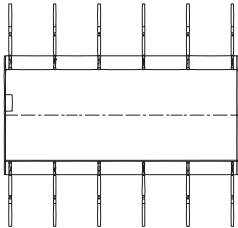
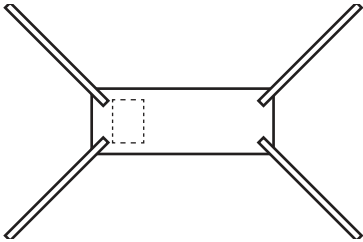
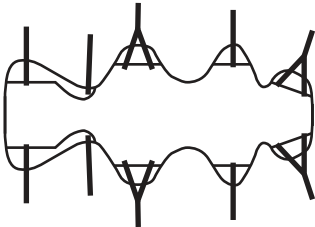
Move the lift away from the patient.

Remove the sling from under the patient.

# Loop Sling Applications

## Loop Sling Compatibility

Following is a list of all ArjoHuntleigh loop slings that are compatible with the *Maxi Sky 2* ceiling lift.

Application for Sling	Sling Layout
General Transfer	
Hygienic	
Gait Training	
Bed Repositioning	
Limb	
Supine Position Transfer	

## Sling Selection

The spreader bar that is attached to the *Maxi Sky 2* ceiling lift determines what slings can be used to transfer a patient.

Most slings are colour coded for size by having a different colour edge binding or attachment strap colouring:

- Grey or Teal - Extra Extra Small - XXS
- White or Brown - Extra Small - XS
- Red - Small - S
- Yellow - Medium - M
- Green - Large - L
- Blue - Extra Large - XL

Note that it is not every sling that is available in all sizes.

A wide variety of sling are available for each application. Please contact your local ArjoHuntleigh agent for more information.

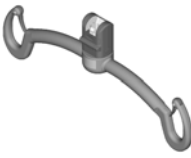
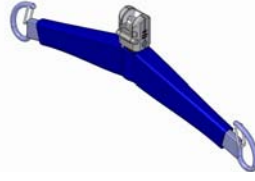

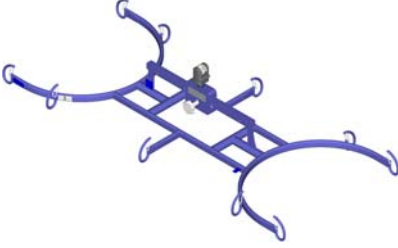
*Flites* slings (single patient multi-use slings) are also available for most sling models. If ArjoHuntleigh *Flites* slings are to be used with the *Maxi Sky 2* ceiling lift, refer to the separate ArjoHuntleigh *Flites* sling *Instructions for Use*.

**NOTE:** Only use ArjoHuntleigh slings with the *Maxi Sky 2* ceiling lift.

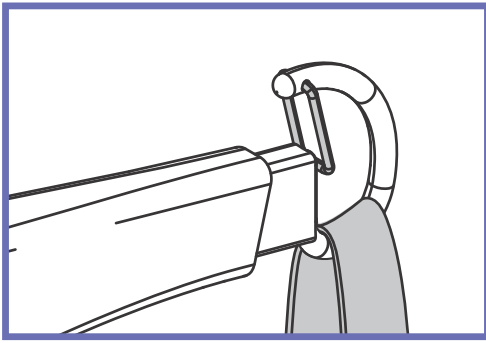
## Spreader Bar Compatibility

Following is a list of all ArjoHuntleigh spreader bars to use with loop slings that are compatible with the *Maxi Sky 2* ceiling lift.

Other combinations could be suitable based on facility assessment. Clinical judgement must be applied when choosing a size and a combination.

Spreader Bar	Description	Loop Sling Sizes					
		XXS	XS	S	M	L	XL
 700-19420	Small 2-hook spreader bar	✓	✓	✓	✓		
 700-19415	Medium 2-hook spreader bar			✓	✓	✓	
 700-19430	4-hook spreader bar			✓	✓	✓	✓
 700-15695	Stretcher					✓	✓

## Attaching the Sling to the Spreader Bar

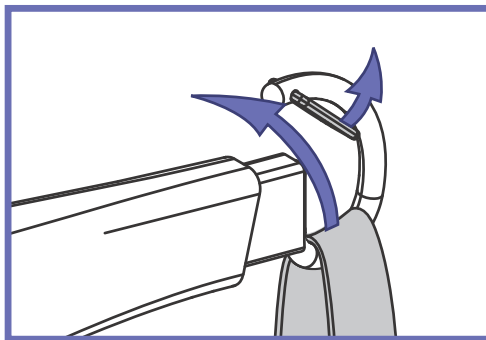


Place the attachment loop onto the hook.

Make sure loop is positioned correctly and that the safety latch is closing the hook.

Repeat same procedure for all loops.

## Removing the Sling from the Spreader Bar



Open the latch and remove the loop from the hook.

Repeat same procedure for all loops.

## Transferring Patients Using Loop Slings

Loop slings are available in many sizes. The correct size sling will be able to support the patient's shoulders during the transferring procedure.


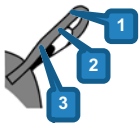
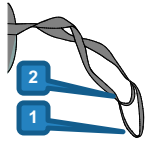




**WARNING:** Always hold the spreader bar when near patients to avoid hitting them with it. This could cause an injury.

**WARNING:** Ensure any obstructions are removed from the intended route of travel. Injuries could occur.

**WARNING:** Make sure the sling is not caught on any obstructions. Injuries could occur.

**WARNING:** Before moving the lift, ensure there is enough clearance with patients to not hit them. Injuries could occur.

## Positioning the Patient

Body position according to loop strap position combinations			
SHOULDERS	SHOULDERS	LEGS	HIPS*
			
LEGS			
	3	1	1
	2	1	1
	1	1	1
	1	1	2

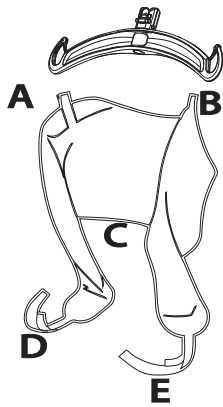
The specific loop sling chosen determine the position of the patient. Different loop combinations can be used to allow the patient to be lifted and transferred in positions ranging from semi-reclined to seated.

Note: Slings with more loops allow additional alternative positions.

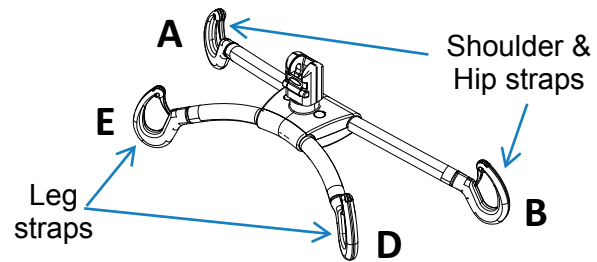
Once the loop sling has been fitted around the patient, it can be configured in three ways. With each of the three methods described below, it is necessary to first connect each shoulder loop of the sling to both sides of the spreader bar.

\*Hip loops only available on THA6i model

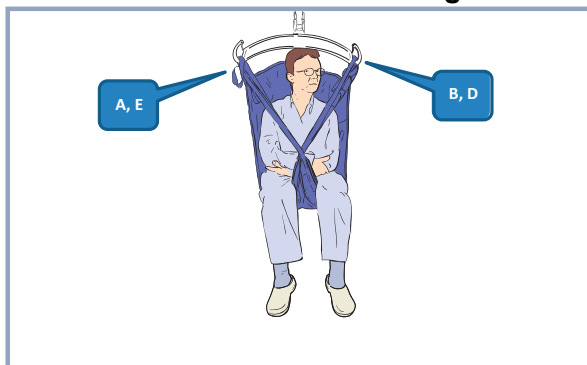
## Attachment Points



**NOTE:** On the 4-hook spreader bar, sling straps must be mounted as follows.



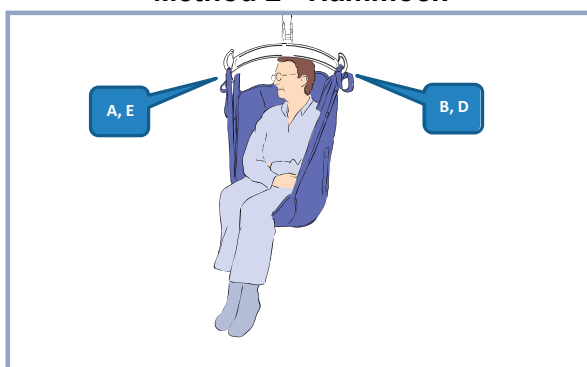
### Method 1 - Cross-through



Legs closed with crossing straps

This method is recommended for most general transfer.

### Method 2 - Hammock



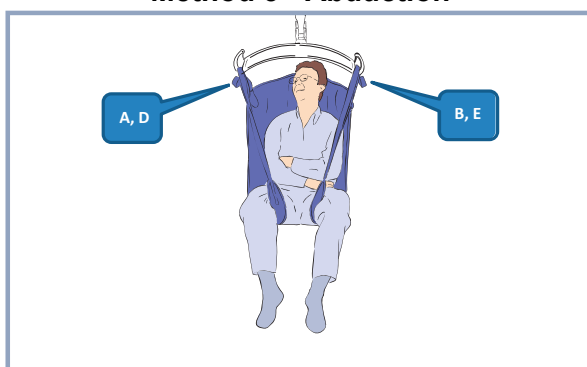
Bridge, legs closed

This method can provide a comfortable cradle for amputee patient.

It is also a useful method for patients with contractures, making it difficult to bring a sling strap between the legs.

**WARNING:** Method 2 might not be suitable for confused, combative or erratic patients as they can fall forward and get injured.

### Method 3 - Abduction



Legs opened with non-crossing straps

In this method, legs are held in abduction which is convenient for toileting and hygiene care.

**WARNING:** Method 3 might not be suitable for patients with no upper body control as they can slide down and almost out of the sling.

## Transferring Patient from a Seated Position

The techniques described here can be used for transferring patients regardless of where they may be seated (e.g. in a bed, in a chair, wheelchair or similar).



Place the sling around the patient so that the base of the sling sits slightly below the tail bone. A *MaxiSlide* or *MaxiTube* can be used to assist with placement of the sling.



Ensure that the head support area of the sling is behind the head covering it, also pull each leg strap under the thigh so that it emerges on the inside of the thigh.



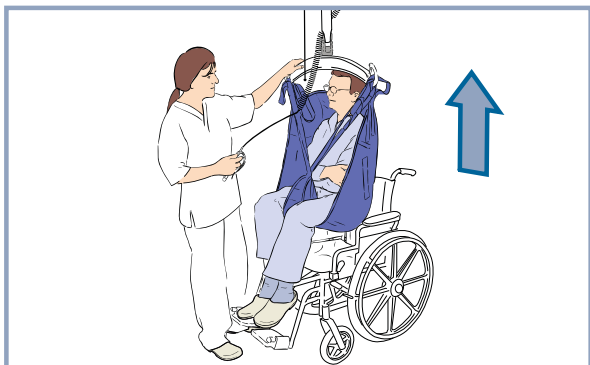
Approach the patient with the lift, ensure that:

- The spreader bar is at or just below shoulder level.
- The spreader bar is close enough to be able to connect the shoulder loops.



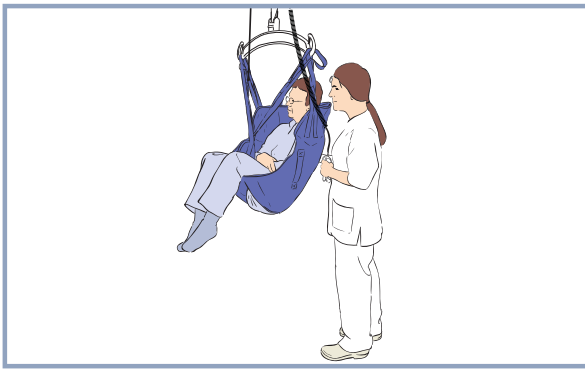
Connect the shoulder loops, and then the leg section using one of the three methods previously described.

If necessary, lower the spreader bar a little further.



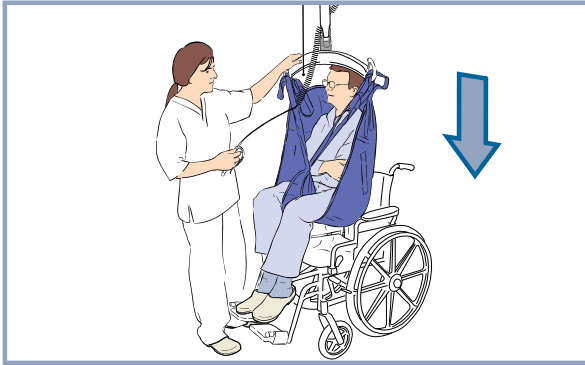
Raise the patient using the hand control. The head support area of the sling should now come into use.

**WARNING:** Always confirm that the sling attachment loops are correctly attached and remain in tension as the weight of the patient is gradually taken up. This will prevent a patient fall.



Proceed with the transfer keeping a hand on the spreader bar to stop excessive swinging and to give a feeling of added security.

**CAUTION:** Do not attempt to pull the lift along the rail using the hand control cable. This will damage the cable and eventually ruin the function of the hand control.



Once the patient has arrived at destination, lower him/her down onto the new location.

**WARNING:** When using the lowering function be careful to not hit the patient with the spreader bar as this could cause an injury.

When needed, use the handles on the back of the sling to position the patient when transferring into a chair. Hold the handle firmly to ensure a proper seated position.



When the patient's body weight is fully supported, detach the leg loops, then the shoulder loops.

Move the lift away from the patient.

Remove the sling from behind the patient.



## Transferring Patient from a Supine Position

The techniques described here can be used for transferring patients regardless of where they may be laying down (e.g. in a bed, on the floor or stretcher).



Roll the patient towards you, fold the sling in half and place it on the bed or on the floor, along the back of the patient so that the base of his spine is aligned with the base of the sling.

**WARNING:** Make sure that the bed safety side is installed to prevent the patient from falling.



Roll the patient back onto the sling and then slightly further in the opposite direction, so that the folded part of the sling can be unfolded.



If possible, slightly raise the head of the bed.

Position the *Maxi Sky 2* ceiling lift directly over the patient.

**WARNING:** Using the hand control, lower the spreader bar taking care not to lower it onto the patient. Injuries could occur.



Connect the shoulder loops, and then the leg section using one of the three methods previously described.



Raise the patient using the hand control.

**WARNING:** Always confirm that the loops are correctly attached and remain in tension as the weight of the patient is gradually taken up. This will prevent a patient fall.



Proceed with the transfer keeping a hand on the spreader bar to stop excessive swinging and to give a feeling of added security.

**CAUTION:** Do not attempt to pull the lift along the rail using the hand control cable. This will damage the cable and eventually ruin the function of the hand control.



Lower the patient down onto the new location.

**WARNING:** When using the lowering function be careful to not hit the patient with the spreader bar as this could cause an injury.



When the patient's body weight is fully supported, detach sling connections.

Move the lift away from the patient.

Remove the sling from under the patient.

## Repositioning

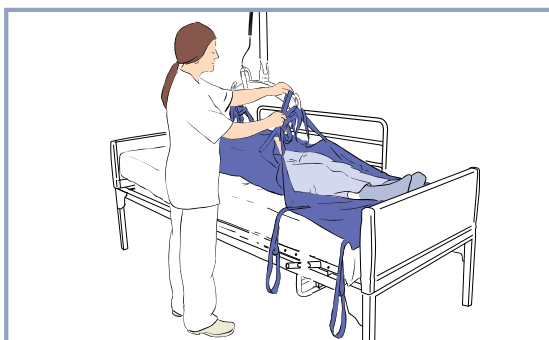
Patients that are completely confined to bed need to be frequently repositioned. For some of those patients, a repositioning sling could be permanently placed under the sheets.

### Move Up in Bed



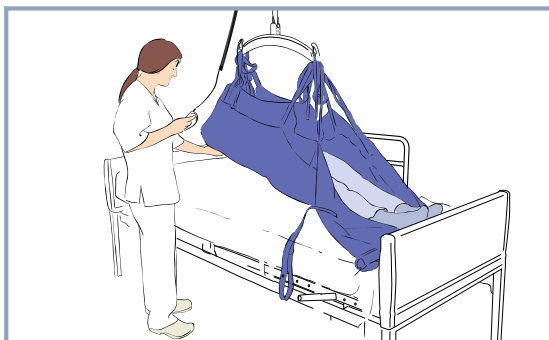
Position the *Maxi Sky 2* ceiling lift directly over the patient.

**WARNING:** Using the hand control, lower the spreader bar **perpendicular or parallel** to the patient taking care not to lower the spreader bar onto the patient, causing injuries.



Connect as many loops as possible to the spreader bar. Make sure to distribute loops on both hooks.

Select loop length in order to lift the patient as straight as possible.



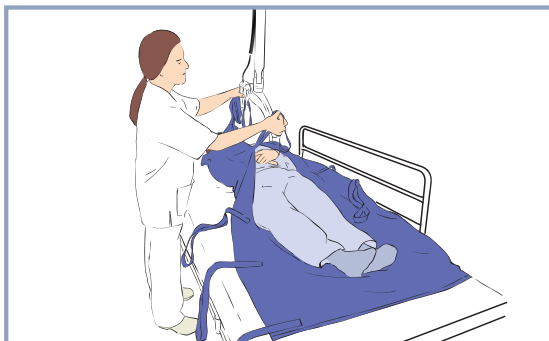
Raise the patient using the *Maxi Sky 2* ceiling lift until patient's hips are supported and until it is possible to move the patient up in the bed. Use a *MaxiTube* sheet if needed.

**NOTE:** Supporting the head may be necessary for some patients depending on his medical condition.



Lower the patient down onto the new location.

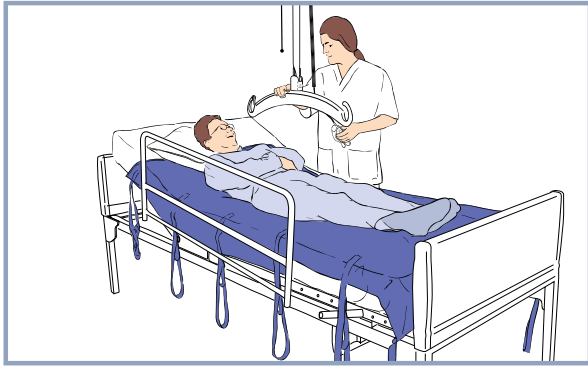
**WARNING:** When using the lowering function be careful to not hit the patient with the spreader bar as this could cause an injury.



When the patient's body weight is fully supported, detach all loops.

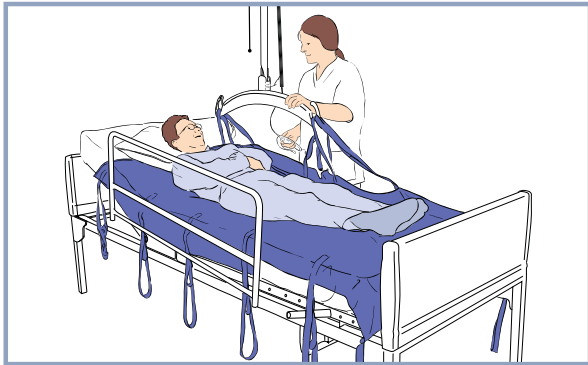
Move the lift away from the patient.

## Bed Turning



Position the *Maxi Sky 2* ceiling lift directly over the patient.

**WARNING:** Using the hand control, lower the spreader bar **perpendicular or parallel** to the patient taking care not to lower the spreader bar onto the patient, causing injuries.

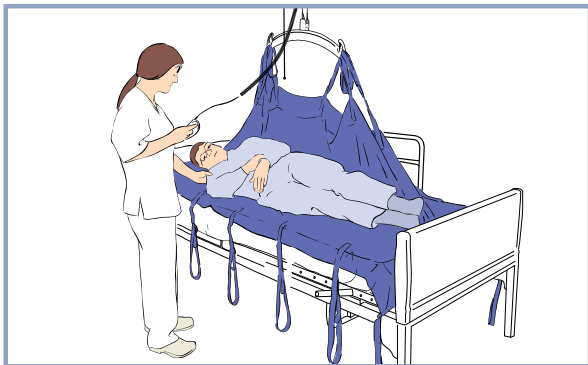


Connect as many loops as possible from one side of the repositioning sling to the spreader bar.

Make sure to distribute loops on both hooks.

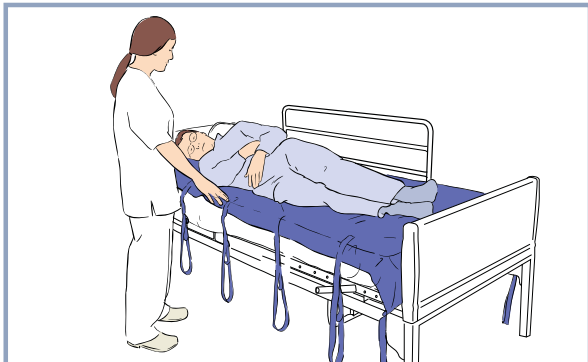
Select loop length in order to roll the patient as straight as possible.

**WARNING:** Make sure that the bed safety side is installed to prevent the patient from falling.



Raise the spreader bar until the patient is rolled into the appropriate position.

**NOTE:** Place some pillows to prevent the patient from rolling back and to maximize his comfort.



Lower the spreader bar to release tension on the loops.

**WARNING:** When using the lowering function be careful to not hit the patient with the spreader bar as this could cause an injury.

Disconnect all loops.

Move the lift away from the patient.

## Gait Training

The *Maxi Sky 2* ceiling lift can be used to assist patients in rehabilitation training as they remain attached preventing them from falling.



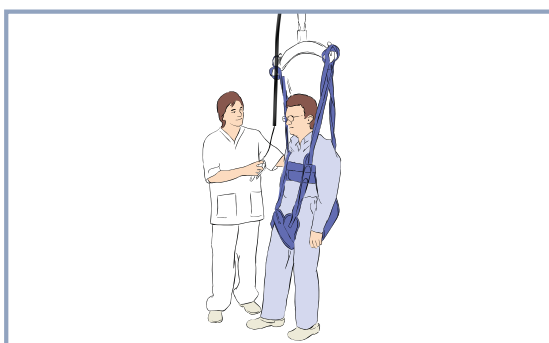
Place the rehabilitation sling around the patient.



Approach the *Maxi Sky 2* ceiling lift so that the spreader bar is close enough to be able to connect the loops.

**WARNING:** When using the lowering function be careful to not hit the patient with the spreader bar as this could cause an injury.

Connect the loops to the spreader bar.



Ensure that all loops are securely connected, and then raise the spreader bar until desired weight bearing condition for the patient.

**NOTE:** The patient can only travel in the direction of the rail.

When gait training activities are done, lower the patient to a seated position and remove the sling.

## Transferring Patient in Supine Position

**WARNING:** Only use ArjoHuntleigh soft stretcher slings. Do not use any other type of soft stretcher sling with the *Maxi Sky 2* ceiling lift.

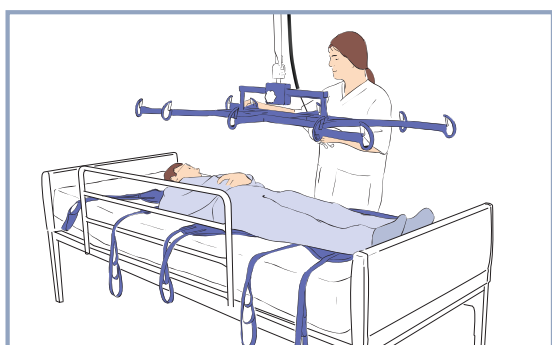
**CAUTION:** Before the soft stretcher can be used with the *Maxi Sky 2* ceiling lift, ensure the stretcher frame has been correctly attached to the strap.



Identify the head section of the soft stretcher. Look for a label sewn to the end of the head section.

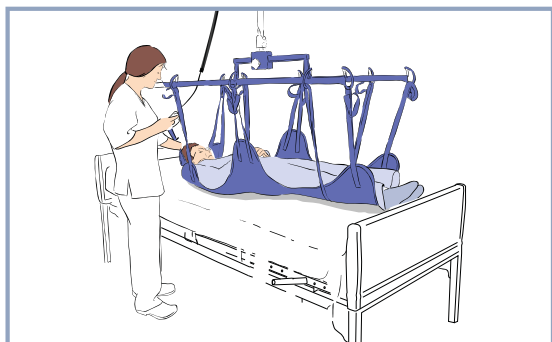
Position the soft stretcher sling by rolling the patient over. Ensure that the top section of the sling is under the patient's head, with the top edge of the sling levelled with the top of the head.

**NOTE:** If the patient is not able to roll on his/her side, use a *MaxiSlide* sheet to apply sling.



With the stretcher frame as high up as possible, move the lift until the frame is directly over the patient.

**NOTE:** The frame is symmetrical and can be used from either side.

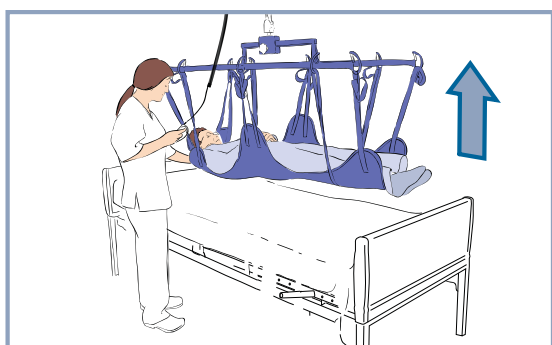


Lower the stretcher frame carefully over and just clear of the patient, aligning the centre of the frame approximately over the patient's navel.

**WARNING:** When using the lowering function be careful to not hit the patient with the stretcher frame as this could cause an injury.

Connect all the sling loops securely.

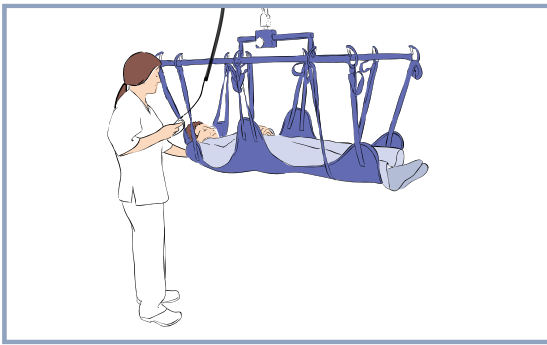
**NOTE:** The attachment straps have several connection loops. Choose whichever loop is considered the best to enable the patient to lie in the most comfortable position.



As the patient is raised slightly off the bed, assess if the frame needs to be adjusted to accommodate the patient's centre of gravity so that a level position is maintained.

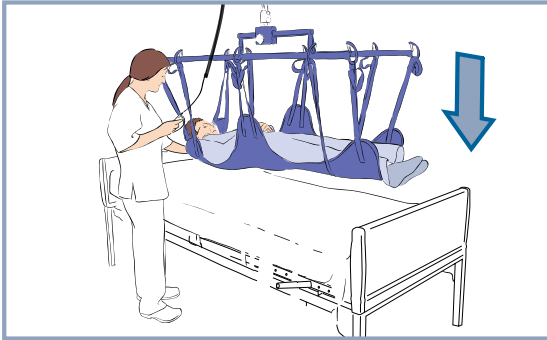
Lower the patient onto the bed and adjust as needed. Refer to specific stretcher literature for details.

Raise and move the patient away from the bed.



Proceed with the transfer keeping a hand on the spreader bar to stop excessive swinging and to give a feeling of added security.

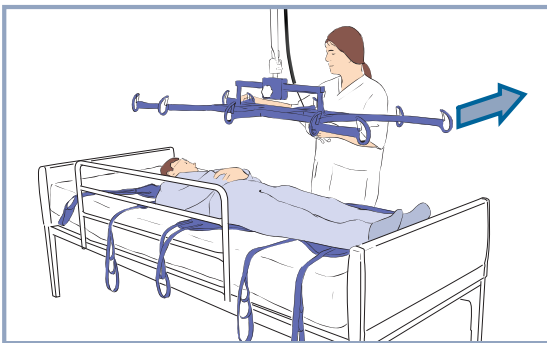
**CAUTION:** Do not attempt to pull the lift along the rail using the hand control cable. This will damage the cable and eventually ruin the function of the hand control.



Lower the patient down onto the new location.

**WARNING:** When using the lowering function be careful to not hit the patient with the stretcher frame as this could cause an injury.

When the patient's body weight is fully supported, detach sling connections.



Move frame away from the patient.

Remove the sling from under the patient.



## Limb Support

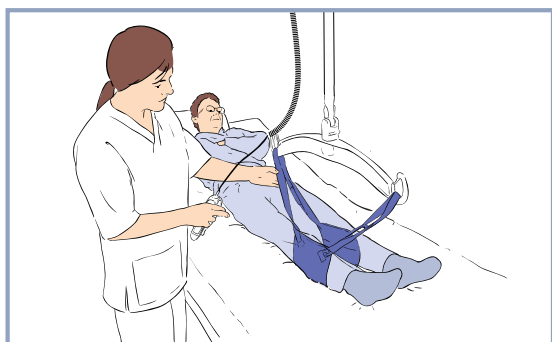
The *Maxi Sky 2* ceiling lift can be used to assist with procedures when limb needs to be supported in elevated position.

**WARNING:** To prevent a fall risk, do not activate RTC or RTH function while performing the limb support task.



Place the Limb sling around the patient's limb.

**WARNING:** Using the sling is only possible after examination of the limb by a health professional.

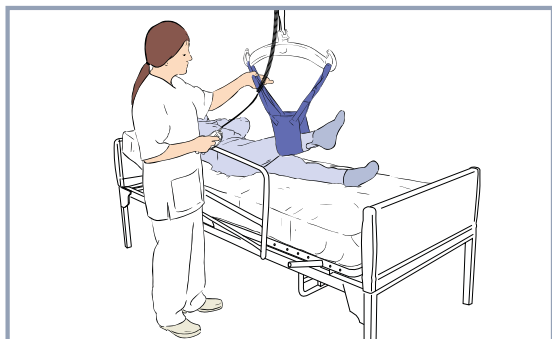


Approach the lift so that the spreader bar is close enough to be able to connect the loops.

**WARNING:** When using the lowering function be careful to not hit the patient with the spreader bar as this could cause an injury.

Connect the loops to the spreader bar.

**WARNING:** To avoid patient limb from falling, always confirm that the loops are correctly attached and remain in tension as the weight of the limb is gradually taken up. Injury could occur.



Raise the patient's limb using the hand control until patient's limb is at desired height. Be careful to not over stretch the limb.



When supporting the patient's limb is no longer required, lower the spreader bar, put the lift away and remove the sling.

**WARNING:** When using the lowering function be careful to not hit the patient with the spreader bar as this could cause an injury.

# Use of Accessories

## Room Assessment

Following is an assessment example that shows the different accessories to give a general idea of where they can be encountered in a desired environment.

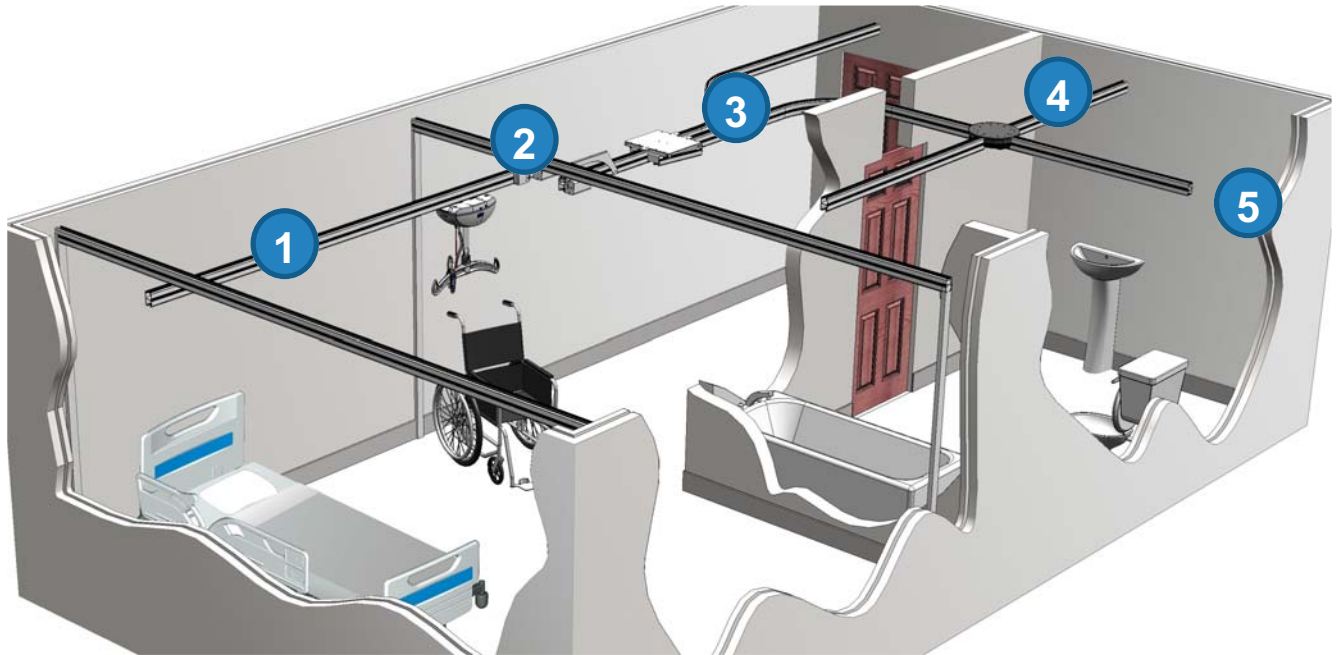
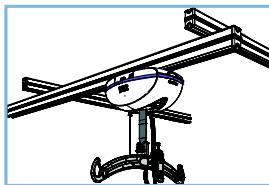


Figure 9

## KWIKtrak Accessories

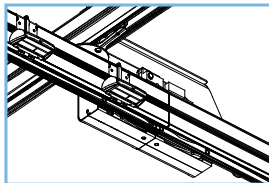
1



### The X-Y Rail System

The X-Y rail system allows the lift to be moved in any direction over a predetermined area to cover its entire surface.

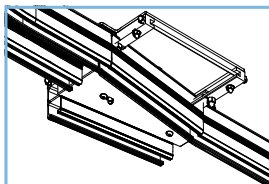
2



### The Gate

The Gate is a security device which blocks the access between an X-Y rail system and a fixed rail system to prevent the lift from falling out of the rail when these 2 systems are not aligned.

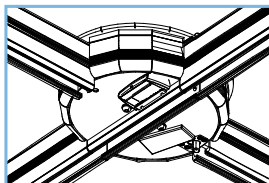
3



### The Exchanger

The exchanger allows the lift to change path over to a different rail system which leads to a different care area.

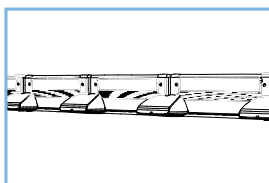
4



### The Turntable® Accessory

The *Turntable* accessory allows the lift to change route on a multi-directional rail system.

5

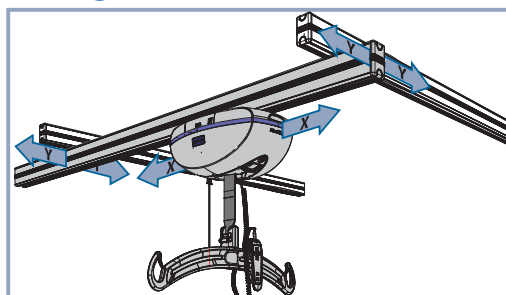


### The PPP

The PPP is a feature which allows positioning the lift along the tracking layout to predetermined positions in which the PPP activation stations are placed. There may be more than one PPP activation station on the layout, depending on the room configuration.

## How to Use the X-Y Rail System



### Moving the Lift in the Lateral Direction



#### 2-function models:

Moving the lift in the lateral direction (X axis) is achieved by pushing or pulling on the spreader bar.

#### 4-function models:

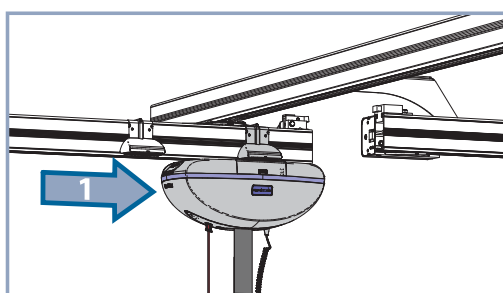
Moving the lift in the lateral direction (X axis) is achieved by using the  or  button on the hand control.

### Moving the Lift in the Facing Direction

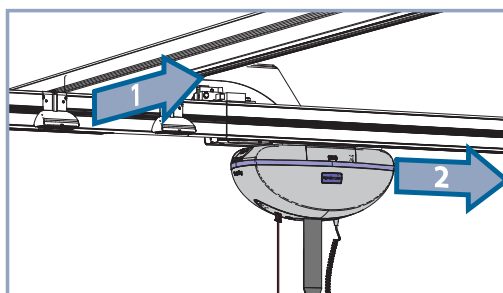
Moving the lift in Y-axis direction requires moving the lift and the traversing rail simultaneously. To achieve this, push or pull on the spreader bar in the Y-axis direction and the traversing rail will follow.

## How to Use the Gate

### Exiting the X-Y System



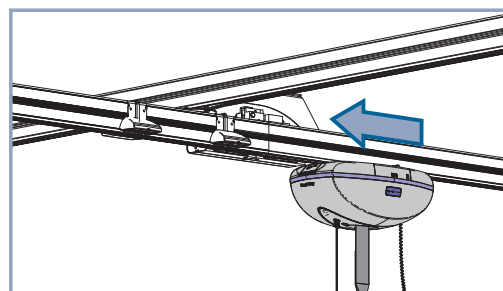
Move the lift in the X-axis to the extremity of the traversal rail in which the Gate is installed on the side of the traversal rail. The lift will be automatically in contact with the activation station.



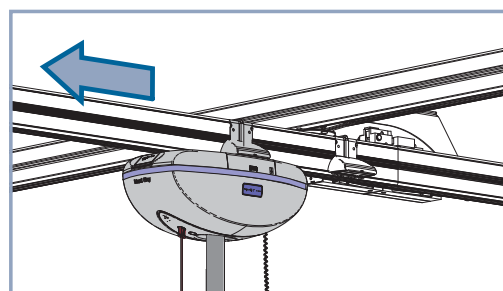
Move both, the lift and the traversal rail in the Y-axis, to align the traversal rail with the oncoming rail. This action will be detected by the Gate, locking the two rails together, permitting the lift to pass through.

**NOTE:** The traversal rail will remain in the locked position, in order to release the traversal rail refer to the “Entering the X-Y System” section.

### Entering the X-Y System



When entering the X-Y system from the oncoming rail, the traversal rail will be in place. Pass the lift through the Gate.



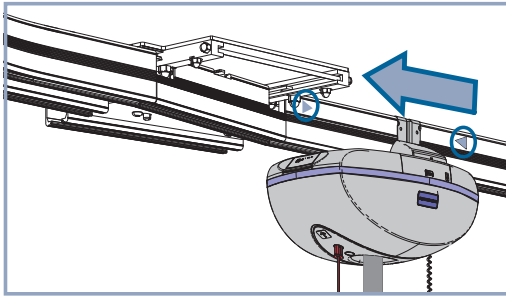
When the lift has passed the deactivation station, the Gate will release, permitting the traversal rail to move in the Y-axis.

## How to Use the Exchanger

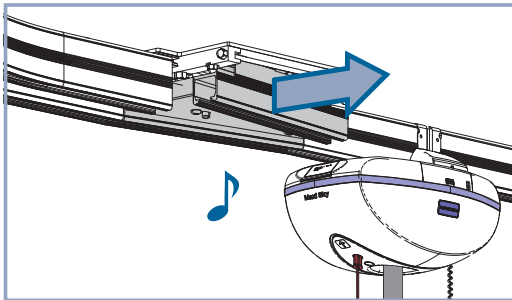
If the exchanger is already positioned in the appropriate path, keep moving the lift through the exchanger without stopping at the activation station.

If the exchanger is not already aligned in the appropriate path proceed as described below.

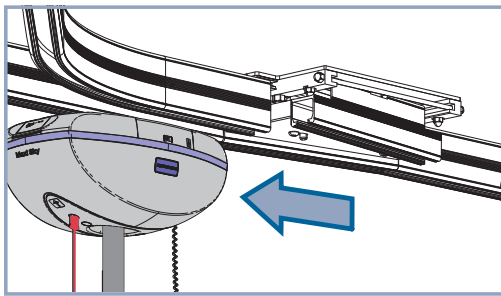
### Changing the Path



Bring the lift to the activation station next to the exchanger. Position the lift between the ►◄ marks on the rail.

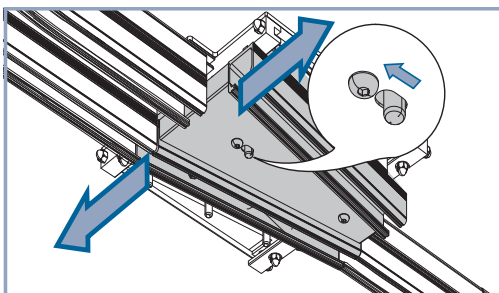


Once the exchanger detects the lift, it acknowledges with a short beep and changes the path.



Wait until the exchanger has stopped completely then the lift can be moved through the exchanger.

### Quick Release

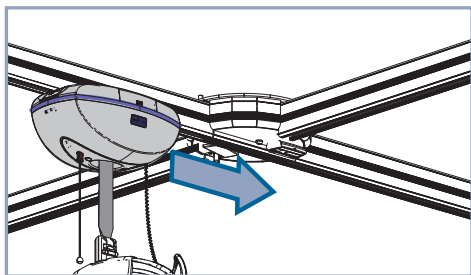


If the exchanger fails to operate automatically, or if there is an emergency situation, engage the quick-release located underneath the exchanger and slide the plate manually to change the path completely.

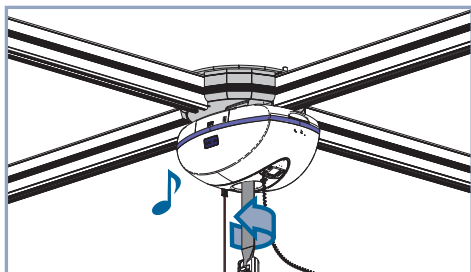
**WARNING:** Be careful not to place your hand or fingers in the path of the sliding plate to prevent pinching.

**WARNING:** Do not activate the quick release if the lift is in the exchanger to prevent the unit from falling.

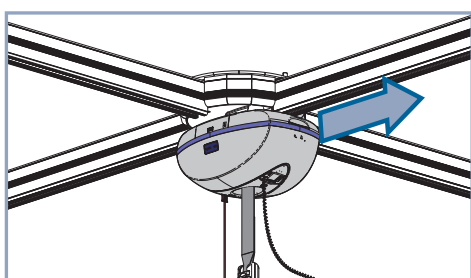
## How to Use the *Turntable* Accessory



Move the lift to the activation station in the *Turntable* accessory.

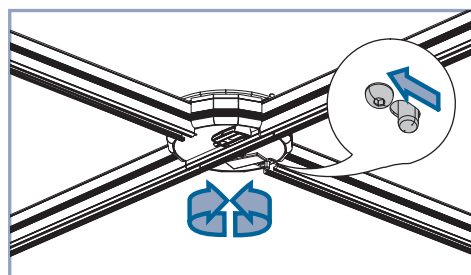


Once the *Turntable* accessory detects the lift, it acknowledges with a beep and starts turning to align with the other rail path.



Wait until the *Turntable* accessory has stopped completely then the lift can be moved out of the *Turntable* accessory.

## Quick Release



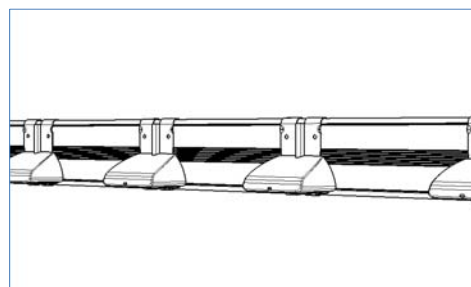
If the *Turntable* accessory fails to operate automatically or if there is an emergency situation, engage the quick-release located underneath the *Turntable* accessory and rotate the plate manually to change the path completely.

**WARNING:** Be careful not to place your hand or fingers in the path of the rotating plate.

## How to Use the PPP

**WARNING:** Do not use the PPP function when a patient is attached to the lift. Injuries could occur.

Using the PPP allows the lift to detect stations (positions) located along the rail.



To send the unit to a specific PPP station, press the **i** button the number of times required corresponding to the desired PPP contact station you wish to send the lift to, then press the **←** or **→** button in the direction of that PPP station. The LED will light up Green to acknowledge reception of the command and the display will blink the "PPP" indicator.

The lift will raise the spreader bar and start moving in the direction of the pressed button, until it encounters as many stations as the **i** button was pressed, then stops to the station.

The command can be cancelled at any time by pressing any button on the hand control or by adding weight on the spreader bar.

**WARNING:** The weight detector, within the lift, that prevents the PPP from functioning when a patient is attached to the lift, can only detect a minimum load of 20 kg (45 lb). Extra care should be exercised when manipulating the hand control to transfer a patient weighing 20 kg (45 lb) or less.

**NOTE:** The PPP is available only on four-function lift model. The PPP is a programmable feature which is set to "disabled" at the factory and can only be activated by a qualified technician. Refer to "Customizing" section.



# Care and Maintenance

## Cleaning the Lift

**NOTE:** It is recommended to clean the lift and its accessories between each patient use.

### Removing visible residues:

- 1) Use a cloth soaked with water.
- 2) Remove visible residues from the lift and its accessories from top to bottom.

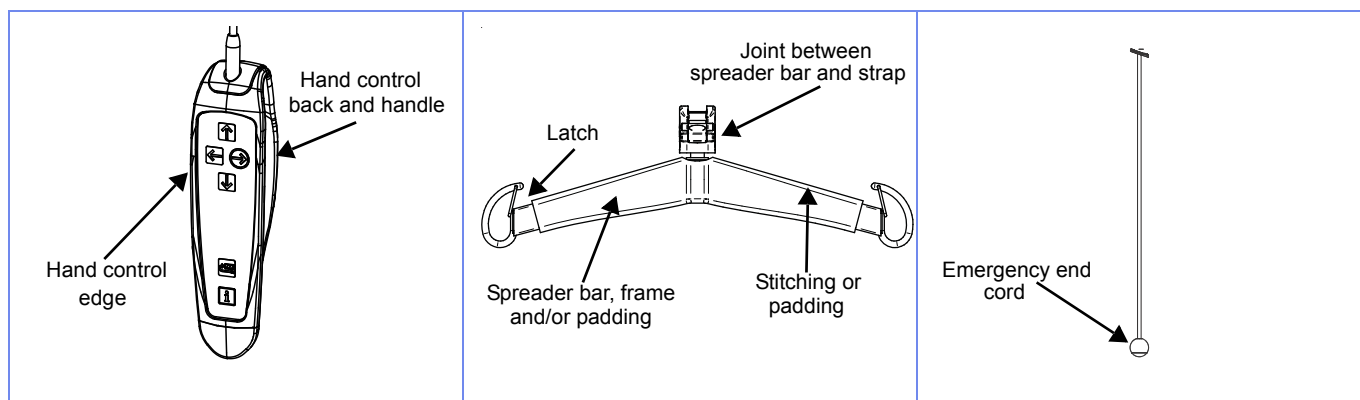
### Cleaning:

- 1) To clean the *Maxi Sky 2* and its accessories, spray cleaning fluid on the product, and use a brush (to remove any deposits).

- 2) Use a clean damp cloth with clear water to wipe off all spots of cleaning fluids.
- 3) If cleaning fluid cannot be removed on some hard-to-access parts, spray water on the affected part and wipe off with disposable towels/cloth. Repeat until all of the cleaning fluid has been removed.
- 4) Repeat steps 1 to 3 as necessary.
- 5) Let the parts dry.

**NOTE:** Pay special attention to areas pointed below. These are most likely to enclose germs. Use a smaller brush and/or cotton swab to reach them.

## Maxi Sky 2's Special Areas to Clean



Rub the equipment vigorously when using the wipes, to promote an effective cleaning of the lift's surfaces.

**CAUTION:** Do not drench the product, as this could damage electrical components and cause internal corrosion.

If a hot air dryer is used to dry the lift, the temperature must not exceed 80°C (176 °F).

Do not use methanol-based or any other type of solvents that may damage the finish or plastic parts.

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

**WARNING:** To avoid eye and skin injuries, cleaning products must be used in accordance with the instructions. Wear appropriate eye, hand and clothing protection at all times when handling cleaning products.

## Caring for Accessories

Other than cleaning, no user maintenance is required, but some components may need to be serviced or replaced periodically. This should be carried out by an ArjoHuntleigh qualified service technician. For more information contact ArjoHuntleigh or their approved distributor.

## Handling, Transport and Storage

Avoid violent impacts while transporting the lift.

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

**NOTE:** Even if the lift is not used, ArjoHuntleigh recommends charging the batteries at least every 2 weeks. This will prevent premature aging of batteries.

If you store or ship the *Maxi Sky 2* ceiling lift, ensure that the power is turned off (no green light) beforehand.

## Battery Replacement

ArjoHuntleigh uses sealed lead-acid batteries in the *Maxi Sky 2* ceiling lift. ArjoHuntleigh 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 hear the *Maxi Sky 2* ceiling lift beeping and notice a red light flashing, see instructions in the "Troubleshooting" section of this manual to determine if it is a problem with the battery.

To replace batteries, be sure to contact your local ArjoHuntleigh agent.

**CAUTION:** Do not attempt to use a battery that was not supplied by ArjoHuntleigh. Batteries are specially designed for ArjoHuntleigh charging systems. Attempting to use an unauthorized battery may seriously damage the lift and/or the charger.

## Annual Inspection

The *Maxi Sky 2* ceiling lift and accessories must be serviced every 12 months as a minimum requirement. Do not attempt to do the inspection unless you are qualified to do so.

## Strap Inspection

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

ArjoHuntleigh recommends a thorough inspection of the strap every 4 months as follows:

- Completely unwind the strap.
- Look for any signs of wear or discoloration as shown on figure below.

**WARNING:** If there is any sign of wear as indicated above or any other visual defects, the strap must be inspected by qualified personnel and changed if required.

The manufacturer recommends changing the strap at least every 2 years or every 2850 cycles—which ever comes first.

By continuing to use the lift without changing a damaged strap, the safety of the caregiver or patient is greatly compromised.

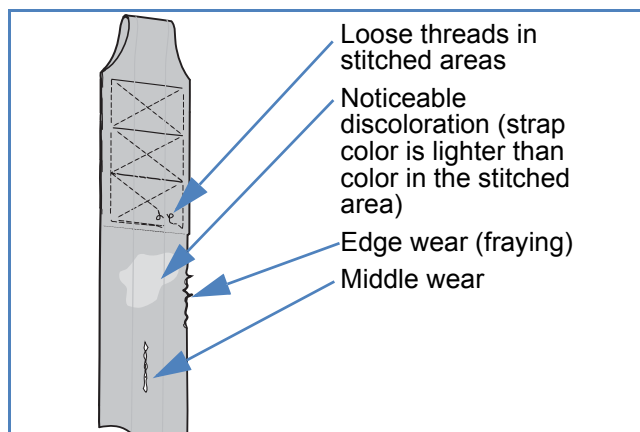


Figure 10

**WARNING:** We recommend changing the strap at least every 2 years. By continuing to use the lift without changing the strap, the safety of the caregiver or patient is greatly compromised.

## Maintenance Requirements

The *Maxi Sky 2* ceiling lift is equipped with a maintenance monitor which informs the user that a maintenance inspection is necessary. The screen will display the maintenance required symbol to draw the user's attention indicating that maintenance related message is being displayed on the screen.

Arranging for scheduled inspections ensures the durability of the unit and the security of the patient and user.

## Preventive Maintenance Schedule

The equipment is subjected to wear and tear, and the following maintenance instructions must be acted upon when specified to ensure that the equipment remains within its original manufacturing specifications.

**WARNING:** The maintenance described in the following checklist is the minimum that the manufacturer recommends. In some cases more frequent inspections should be carried out. Continuing to use this equipment without conducting regular inspections or when a fault is found will seriously compromise the safety of the user and of the patient. Local regulations and standards may be higher than those of the manufacturer. A load test must be performed on the entire system every 12 months. Service and preventive maintenance can be arranged with the ArjoHuntleigh distributor. Preventive maintenance specified in this manual can prevent accidents and reduce repair costs.

**WARNING:** Safety related maintenance and authorized service must be carried out by qualified personnel, fully trained in servicing procedures by ArjoHuntleigh, and equipped with correct tools and proper documentation, including Parts List and Service Manual. Failure to meet these requirements could result in personal injuries and/or unsafe equipment.



Inspections for the Lift	FREQUENCY				
	Every two years or 5000 cycles				
	Every year or 2500 cycles				
	Every four months or 1000 cycles				
	Before every use				
Inspections for the Lift	Initially				
	↓	↓	↓	↓	↓
	↓	↓	↓	↓	↓
	↓	↓	↓	↓	↓
	↓	↓	↓	↓	↓
USER INSPECTION					
Inspect for evidence of external damage, missing parts or broken panels.	√	√			
Inspect strap for wear, discoloration or loose threads.		√	√		
Recharge batteries.	√	√			
Verify emergency stop mechanism.			√		
Verify functionality of the emergency lowering mechanism.				√	
INSPECTION BY AN AUTHORIZED SERVICE TECHNICIAN					
Replace strap.					√
Inspect frame parts interlock and hardware for malfunction and make sure there are no parts missing.				√	
Inspect wheels in rail for damage, rust or cracks. Replace if damaged.				√	
Inspect gears for wear and lubricate as necessary.				√	
Inspect connecting joints for proper attachment (trolley and spreader bar).				√	
Verify that the emergency brake's latches are moving freely.				√	
Verify emergency lowering mechanism.				√	
Verify auxiliary up and down buttons on lift.				√	
Load test with the SWL (safe working load).				√	




Inspections for Accessories	FREQUENCY				
	Every two years or 5000 cycles				
	Every year or 2500 cycles				
	Every four months or 1000 cycles				
	Before every use				
Inspections for Accessories	Initially				
	↓	↓	↓	↓	↓
	↓	↓	↓	↓	↓
	↓	↓	↓	↓	↓
	↓	↓	↓	↓	↓
USER INSPECTION					
Inspect all sling parts (attachments, fabric, stitch areas and strap) for signs of wear, discoloration, deterioration or loose threads.		√			
Clean sling as indicated on the tag.	When necessary				
Inspect the spreader bar for damage or cracks. Make sure all attachments are properly secured.		√		√	

Inspections for Rails	FREQUENCY				
	Every two years or 5000 cycles				
	Every year or 2500 cycles				
	Every four months or 1000 cycles				
	Before every use				
	Initially				
USER INSPECTION	↓	↓	↓	↓	↓
Clean the inside of the rail to remove accumulated dust on the rolling surface.	√		√		
Clean the charging station contacts with a damp cloth.			√		
Make sure that end stoppers and rail caps are in place and tightened.	√	√			
INSPECTION BY AN AUTHORIZED SERVICE TECHNICIAN	↓	↓	↓	↓	↓
Torque end stoppers to 20 N. m. (15 lbf. ft).	√			√	
Make sure that the bracket locking device is not visible.	√			√	
Make sure rail joints are closed and that the spring pins are centred.	√			√	
Make sure the rail is levelled when it is not loaded.	√			√	
Make sure the adjusted load setting of the lift is equal or lower than the safe working load of the installation.	√			√	
Check that the accessories (X-Y system, Gate, Exchanger, <i>Turntable</i> and PPP) are complete and correctly maintained.	√			√	
Make sure that the attachments (ceiling brackets, wall post, wall brackets) have not been displaced, damaged or removed.	√			√	
Inspect track end stoppers. Inspect and tighten hardware (if necessary).				√	
Load test with the SWL (safe working load).				√	

**NOTE:** If the product does not work as intended, immediately contact your local ArjoHuntleigh distributor for support.

**WARNING:** Before each use, make sure all end stoppers are in place and secured to prevent a fall risk.

# Troubleshooting

PROBLEM	TO CHECK
After power ON, the LED does not light and nothing appears on display.	<ul style="list-style-type: none"> <li>Bring the unit to the charging station.</li> <li>If the unit is not charging, contact your ArjoHuntleigh agent for a maintenance.</li> </ul>
The LED is RED and nothing appears on display.	<ul style="list-style-type: none"> <li>The lift may be in "Sleep mode". Press a button on the hand control and see if something appears on the display.</li> <li>If the problem persists, contact your ArjoHuntleigh agent for maintenance.</li> </ul>
The LED is GREEN and nothing appears on display.	<ul style="list-style-type: none"> <li>The lift may be in "Sleep mode". Press a button on the hand control and see if something appears on the display.</li> <li>If problem persists, contact your ArjoHuntleigh agent for maintenance.</li> </ul>
If a maintenance code appears on the display after a sleep mode.	<ul style="list-style-type: none"> <li>The unit can be used but maintenance shall be done as soon as possible by an ArjoHuntleigh technician.</li> </ul>
The icon  symbol is displayed on display and flashing.	<ul style="list-style-type: none"> <li>The duty cycle has been reached for the motor in use. It could be the left-right, up-down or sit-lay motor. Wait until the "triangle-exclamation point" symbol disappears from display before reusing the motor.</li> </ul>
LED does not light at all. Display is working properly.	<ul style="list-style-type: none"> <li>Check in "customize" menu if LED is in ENABLED state.</li> <li>If LED is in ENABLED state and it still does not light up, contact your ArjoHuntleigh agent to do maintenance.</li> </ul>
The lift emits a beep during utilization. The unit may stop lifting but the lowering function can still be used.	<ul style="list-style-type: none"> <li>Batteries are low (see if display indicates a low battery). Return the lift to the charging station.</li> </ul>
The battery level is not full and the LED does not flash GREEN when the unit is on the charger.	<ul style="list-style-type: none"> <li>Check that the charger is plugged into a standard outlet and that the outlet has power. The green light on the charging station indicates that it is functioning.</li> <li>Check if the two blades make good contact with charging station.</li> <li>With a mild detergent, clean the lift contact blades and/or the contact plates of the charging station if necessary.</li> <li>If problem persists, contact your ArjoHuntleigh agent for maintenance.</li> </ul>
RTC does not work when pressing the RTC button for 3 seconds.	<ul style="list-style-type: none"> <li>Check if the RTC function is enabled (refer to the "Customizing" section).</li> <li>If the parameter is set to "Auto", bring the unit to the charging station using the  or  button. After the lift starts charging, move it away from the charging station and test the RTC function again. Note: The lift loses track of the charging station location when it is turned OFF. In this event, repeat above procedure to allow the unit to memorise the location of the charging station.</li> </ul>

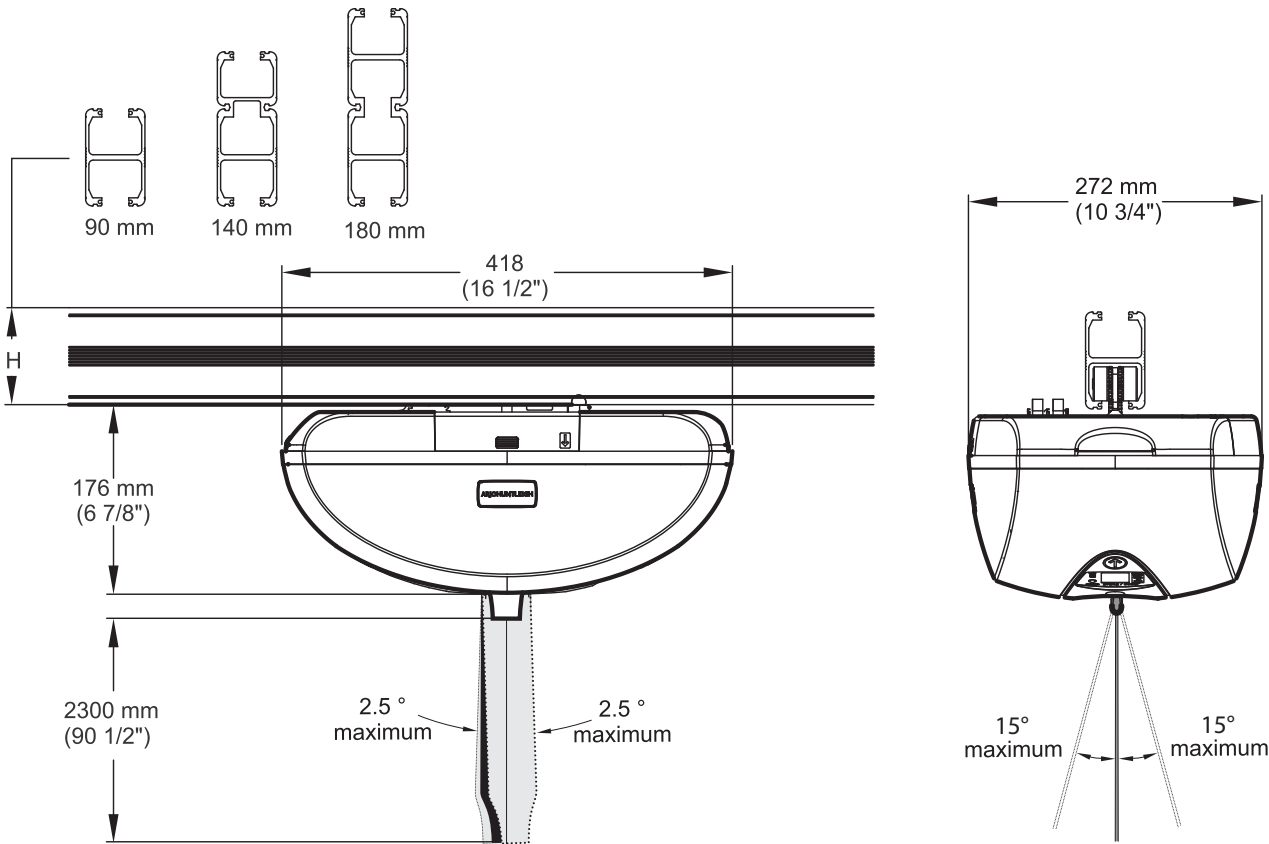
PROBLEM	TO CHECK
When returning to charge, the lift passes the clip on the charging station.	<ul style="list-style-type: none"> <li>• Check that the charging station is plugged into a standard outlet and that the outlet has power. The green light on the charging station indicates that it is functioning (refer to “Charging System” section).</li> <li>• Clean the blades of the charging station with mild detergent.</li> <li>• Check if the contact blades of the lift are clean or have good geometry.</li> <li>• Pass the lift manually through the charging station and observe if the lift is charging then retry the RTC function.</li> <li>• If problem persists, contact your ArjoHuntleigh agent for maintenance.</li> </ul>
Batteries are always discharged after only a few transfers (3 to 5).	<ul style="list-style-type: none"> <li>• Put the lift at the charging station for a minimum of 8 hours.</li> <li>• If the lift does not detect the charging station:</li> <li>• Check that the charging station is plugged into a standard outlet and that the outlet has power. The green light on the charging station indicates that it is functioning (refer to “Charging System” section).</li> <li>• Check if contact blades make good contact with charging station. Clean the unit blades and/or the contact plates of the charging station if necessary. If problem persists, contact your ArjoHuntleigh agent for maintenance.</li> </ul>
The display indicates good battery charge but when you try to transfer someone, the lift stops.	<ul style="list-style-type: none"> <li>• Contact your local ArjoHuntleigh agent to have the batteries replaced.</li> </ul>
The lift does not work when pressing buttons on the hand control.	<ul style="list-style-type: none"> <li>• If the emergency stop is activated, gently push up the Power On Switch to turn the unit back ON.</li> <li>• Check if the auxiliary up/down buttons of the lift (located near the display) are working. If so, the problem may be coming from the hand control.</li> <li>• Contact your local ArjoHuntleigh agent to have the hand control replaced.</li> </ul>
Only the UP button on the hand control does not work.	<ul style="list-style-type: none"> <li>• Check if the strap is completely rolled inside the lift.</li> <li>• If display indicates a malfunction code (refer to “Display Symbol” section), contact your local ArjoHuntleigh agent.</li> <li>• Check if the auxiliary UP button of the lift (located near the display) is working. If so, the problem may be coming from the hand control.</li> <li>• Contact your local ArjoHuntleigh agent to have the hand control replaced.</li> </ul>
Only the DOWN button on the hand control does not work.	<ul style="list-style-type: none"> <li>• Check if the strap is completely rolled outside of lift.</li> <li>• Check if there is more than 20 lb (9.1 kg) suspended to the lifting strap. The lift needs a minimum tension to operate.</li> <li>• If unit display indicates a malfunction code, contact your local ArjoHuntleigh agent.</li> <li>• Check if the auxiliary DOWN button of the lift (located near the display) is working. If so, the problem may be coming from the hand control.</li> <li>• Contact your local ArjoHuntleigh agent to have the hand control replaced.</li> </ul>
When hanging the hand control on the spreader bar RTC function stops.	<ul style="list-style-type: none"> <li>• The lift detects a weight variation and cancels the RTC/RTH function.</li> <li>• Hang the hand control before activating the RTC/RTH function.</li> </ul>

PROBLEM	TO CHECK
The LED still flashing GREEN after 24 hours of continuous charging with lift under charging station.	<ul style="list-style-type: none"> <li>Batteries might not charge or charging station might be defective.</li> <li>Contact your local ArjoHuntleigh agent to have the batteries replaced or charging system maintenance.</li> </ul>
ECS: Even with low batteries, lift GREEN LED does not flash 15 minutes after the last activation of the lift.	<ul style="list-style-type: none"> <li>Check if wall charger is connected to a standard outlet.</li> <li>Check if wall charger outlet has power.</li> <li>Check if the charger is connected to the ECS cable adaptor on the fixed track.</li> <li>Check if all extensions used are connected properly.</li> <li>Check if there is an interrupted contact strip along both sides of the track.</li> <li>If all above checks are OK and GREEN LED still not flashing, contact your local ArjoHuntleigh agent.</li> </ul>
ECS: After continuous 24 hours batteries charging, the ECS symbol still appears on display and GREEN LED still flashing.	<ul style="list-style-type: none"> <li>Batteries might not charge or charging station might be defective.</li> <li>Contact your local ArjoHuntleigh agent to have the batteries replaced or charging station maintenance.</li> </ul>

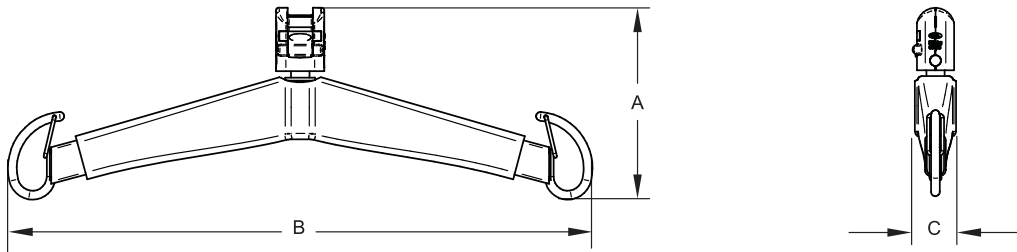
# Technical Specifications

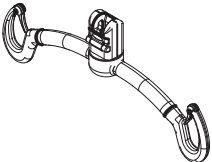
## Overall Dimensions

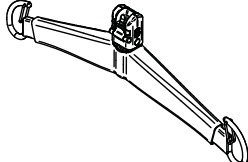
### Maxi Sky 2

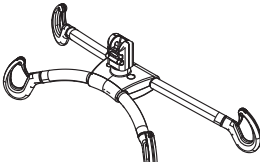


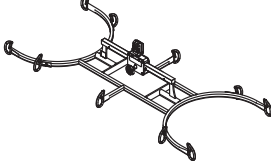
## Loop Sling Spreader Bars



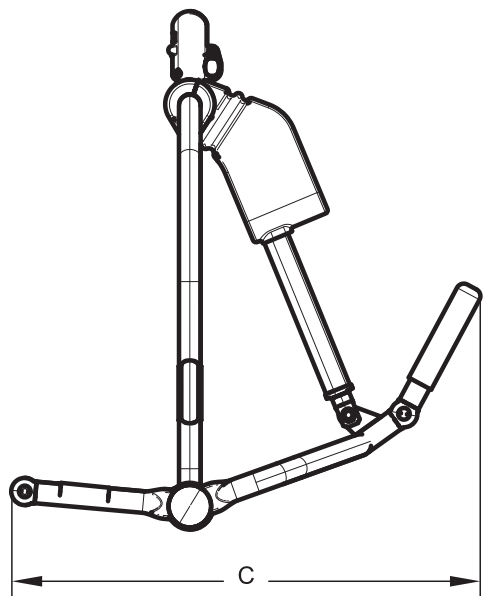
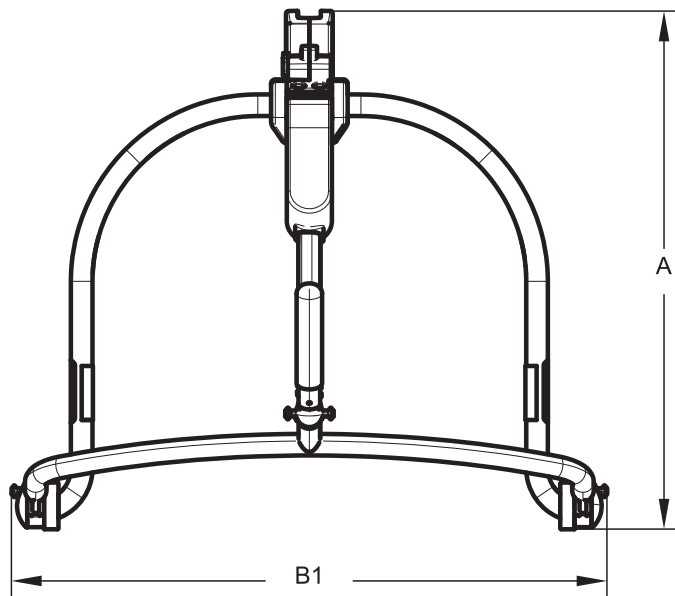
700-19420			
		mm	in
	A	187	7 3/8
	B	474	18 11/16
	C	57	2 1/4
2.5 kg / 5.5 lb			

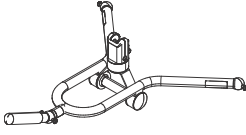
700-19415			
		mm	in
	A	206	8 1/8
	B	628	24 3/4
	C	45	1 3/4
1.5 kg / 3.3 lb			

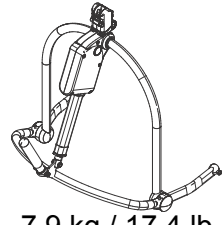
700-19430			
		mm	in
	A	200	7 7/8
	B	650	25 9/16
	C	254	10
4.4 kg / 9.7 lb			

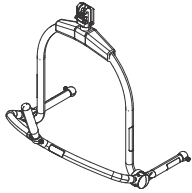
700-15695			
		mm	in
	A	282	11 1/8
	B	1443	56
	C	635	25
10 kg / 22.2 lb			

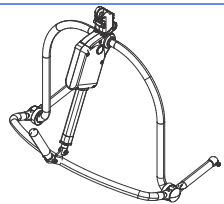
# Dynamic Positioning Spreader Bars



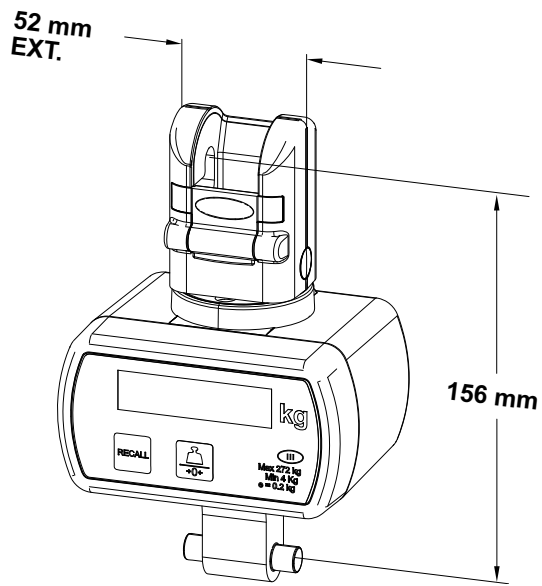
700-19475			
 <p>3.4 kg / 7.5 lb</p>		mm	in
	A	194	7 5/8
	B	552	21 11/16
	C	638	25 3/16

700-19350			
 <p>7.9 kg / 17.4 lb</p>		mm	in
	A	610	24
	B	620	24 3/8
	C	547	21 1/2

700-19480			
 <p>5.7 kg / 12.5 lb</p>		mm	in
	A	604	23 3/4
	B	582	22 15/16
	C	503	19

700-19355			
 <p>8.4 kg / 18.5 lb</p>		mm	in
	A	610	24
	B	700	27 1/2
	C	547	21 1/2

## Scale



Model	700-19485	700-19490
Type	Standard	Class III
Dimensions	52 mm X 156 mm (2 in X 6 in)	52 mm X 156 mm (2 in X 6 in)
Weight	0.76 kg/1.7 lb	0.76 kg/1.7 lb





## Technical Data

PRODUCT INFORMATION		Maxi Sky 2	
Weight, complete (Four-function model)	12.3 kg (27 lb)		
Weight, complete (Two-function model)	11.6 kg (26 lb)		
Lifting capacity	120 kg (265 lb), 200 kg (440 lb), 272 kg (600 lb)		
Strap length	2500 mm (98.4 in)		
Lifting speed	5.1 cm/s (2.0 in/s) without load 4.2 cm/s (1.7 in/s) at 120 kg (265 lb) 3.8 cm/s (1.5 in/s) at 200 kg (440 lb) 3.3 cm/s (1.3 in/s) at 272 kg (600 lb)		
Maximum stroke (from ceiling)	2300 mm (90.6 in)		
Horizontal displacement speeds	10, 15 and 20 cm/s (4, 6 and 8 in/s)		
Operating force of control	< 5 N		
ELECTRICAL			
Duty cycle	Up/Down Motor: Left/Right Motor: Sit/Reclined Motor:	Max 10%, 1 minute continuously Max 20%, 5 minutes continuously Max 10%, 2 minutes continuously	
Horizontal axis motor	24 VDC, 62 watts		
Vertical axis motor	24 VDC, 110 watts		
Rating	24 VDC, 15 A max.		
Noise level for either raising or lowering, with or without load	61 dBA max. (with or without load)		
Medical equipment	Type BF protection against electrical shock in accordance with IEC 60601-1		
<b>WARNING: Wireless communications equipment such as wireless home network devices, mobile phones, cordless telephones and their base stations, walkie-talkies, etc. can affect the <i>Maxi Sky 2</i> and should be kept at least 2.3 m away from it. Cables from potentially strong sources of electromagnetic fields should not be placed near the unit.</b>			
Battery type	12 V, 5 Ah, sealed rechargeable valve regulated lead acid battery		
Battery capacity	Provides up to 120 transfers with a load of 100 kg (220 lb), up to 70 transfers with a load of 200 kg (440 lb)		
Degree of protection - hand control	IPX7		
Degree of protection - <i>Maxi Sky 2</i>	IP24		
Lift - protection class - shock prevention	Internally powered equipment		
Battery charger input	100-240 VAC, 50-60 Hz, 57 - 70 VA.		
Battery charger output	28.1 VDC, 1 A max, 28.1 VA		
Battery Charger safety protection	Class 2, double insulated		
OPERATION, TRANSPORT AND STORAGE CONDITIONS			
Normal Operation	Ambient temperature range: 10°C to 30°C (50°F to 86°F) Relative humidity range: 10% to 70% Atmospheric pressure range: 700 hPa to 1060 hPa		
Transport / Storage	Ambient temperature range: -40°C to 70°C (14°F to 158°F) Relative humidity range: 10% to 70% Atmospheric pressure range: 500 hPa to 1060 hPa		
<b>WARNING: This equipment is not suitable in the presence of flammable anesthetic mixtures with air or oxygen, or with nitrous oxide.</b>			

## Approvals and list of Standards

The *Maxi Sky 2* ceiling lift is tested according to standards by:

- Canadian Standards Association: 
  - CAN/CSA C22.2 No.601.1-M90 (AM1+AM2), UL60601-1 (1st ed.) et IEC60601-1 (2nd edition)
  - CAN/CSA C22.2 No.60601-1-08, ANSI/AAMI ES60601-1:2005 et IEC60601-1:2005
- Technischer Überwachungs-Verein: 
  - ISO 10535 : 2006 standard
- CE Marking: 

## Recycling

Package	Corrugated cardboard, recyclable Expanded polystyrene (EPS), recyclable
The product	Electric, steel and plastic parts shall be separated and recycled according to marking on the lift
Battery	The device contains a lead-acid battery that shall be disposed according to local regulations

## Electromagnetic Compliance

*Maxi Sky 2* has been tested for compliance with current regulatory standards regarding its capacity to block EMI (electromagnetic interference) from external sources.

Nonetheless, some procedures can help reduce electromagnetic interferences:

- Use only ArjoHuntleigh cables and spare parts to avoid increased emissions or decreased immunity which can compromise the correct functioning of the equipment.
- Ensure that other devices in patient-monitoring and/or life-support areas comply to accepted emissions standards.
- Maximize the distance between electro-medical devices. High-powered devices may produce EMI that can affect the lift. Refer to separation distance table further on in this document.

For more information on how to manage the unit's RF electromagnetic environment, please consult the AAMI TIR 18-1997 - Guidance on Electromagnetic Compatibility of Medical Devices for Clinical/Biomedical Engineers.

## Electromagnetic Emissions

Guidance and Manufacturer's Declaration		
Electromagnetic Emissions - For all Equipment and Systems		
<i>Maxi Sky 2</i> is intended for use in the electromagnetic environment indicated below. The customer or the user of the <i>Maxi Sky 2</i> should assure that it is used in such an environment.		
Emissions test	Compliance	Electromagnetic environment - guidance
RF emissions CISPR 11	Group 1	<i>Maxi Sky 2</i> uses RF energy only for its internal function. Therefore, its RF emissions are very low and are not likely to cause any interference in nearby electronic equipment.  <i>Maxi Sky 2</i> is suitable for use in all establishments, including domestic establishments and those directly connected to the public low-voltage power supply network that supplies buildings used for domestic purposes.
RF emissions CISPR 11	Class B	
Harmonic emissions	Not applicable	
Voltage fluctuations/ flicker emissions IEC 61000-3-3	Not applicable	

## Guidance and Manufacturer's Declaration

### Electromagnetic Immunity - For all Equipment and Systems

*Maxi Sky 2* is intended for use in electromagnetic environment specified below.

The customer or the user of the *Maxi Sky 2* should assure that it is used in such an environment.

Immunity test	IEC 60601 test level	Compliance level	Electromagnetic environment - guidance
Electrostatic discharge (ESD) IEC 61000-4-2	±6 kV contact ±8 kV air	±6 kV contact ±8 kV air	Floors should be wood, concrete or ceramic tile. If floors are covered with synthetic material, the relative humidity should be at least 30%.
Electrical fast transient/burst IEC 61000-4-5	±2 kV for power supply lines ±1 kV for input/output lines	±2 kV for power supply lines Not applicable for input/output lines	Mains power quality should be that of a typical commercial or hospital environment.
Surge IEC 61000-4-5	±1 kV differential mode ±2 kV for input/output	Not applicable	
Voltage dips, short interruptions and voltage variations on power supply input lines IEC 61000-4-11	<5% UT (>95% dip in UT) for 0.5 cycle 40% UT (60% dip in UT) for 5 cycles 70% UT (30% dip in UT) for 25 cycles <5% UT (>95% dip in UT) for 5 sec.	Not applicable	
Power frequency (50/60 Hz) magnetic field	3 A/m	3 A/m	Power frequency magnetic fields should be at levels characteristic of a typical location in a typical commercial or hospital environment.


NOTE: UT is the AC mains voltage prior to application of the test level.

## Guidance and Manufacturer's Declaration

### Electromagnetic Immunity - For Equipment and Systems that are Not Life-Supporting

*Maxi Sky 2* is intended for use in electromagnetic environment specified below.

The customer or the user of the *Maxi Sky 2* should assure that it is used in such an environment.

Immunity test	IEC 60601 test level	Compliance level	Electromagnetic environment - guidance
Conducted RF IEC 61000-4-6	3 Vrms 150 kHz to 80 Mhz	3 Vrms 150 kHz to 80 MHz	<p>Portable and mobile RF communications equipment should be used no closer to any part of the <i>Maxi Sky 2</i>, including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter.</p> <p>Recommended separation distance:</p> $d = \left[ \frac{3,5}{V1} \right] \sqrt{P} \quad 150 \text{ KHz to } 80 \text{ MHz}$ $d = \left[ \frac{3,5}{E1} \right] \sqrt{P} \quad 80 \text{ MHz to } 800 \text{ MHz}$ $d = \left[ \frac{7}{E1} \right] \sqrt{P} \quad 800 \text{ MHz to } 2.5 \text{ GHz}$ <p>where P is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer and d is the recommended separation distance in meters.</p> <p>Field strengths from fixed RF transmitters, as determined by an electromagnetic site survey,(a) should be less than the compliance level in each frequency range. (b) Interference may occur in the vicinity of equipment marked with the following symbol:</p> 
Radiated RF IEC 61000-4-3	3 V/m 80 MHz to 2.5 GHz	10 V/m 80 MHz to 2.5 GHz	

NOTE 1: At 80 MHz and 800 MHz, the higher frequency range applies.

NOTE 2: These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.

(a) Field strengths from fixed transmitters, such as base stations for radio (cellular/cordless) telephones and land mobile radios, amateur radio, AM and FM radio broadcast and TV broadcast cannot be predicted theoretically with accuracy. To assess the electromagnetic environment due to fixed RF transmitters, an electromagnetic site survey should be considered. If the measured field strength in the location in which the *Maxi Sky 2* is used exceeds the applicable RF compliance level above, the *Maxi Sky 2* should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as reorienting or relocating the *Maxi Sky 2*.

(b) Over the frequency range 150 kHz to 80 MHz, field strengths should be less than 3 V/m.

## Recommended Separation Distance Between Portable and Mobile RF Communications Equipment and the *Maxi Sky 2* - for Equipment and Systems that are not Life-Supporting

Recommended separation distances between portable and mobile RF communications equipment and the *Maxi Sky 2*.

*Maxi Sky 2* is intended for use in electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of the *Maxi Sky 2* can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communication equipment (transmitters) and the *Maxi Sky 2* as recommended below, according to the maximum output power of the communications equipment.

Rated maximum output power of transmitter W	Separation distances according to frequency of transmitter m		
	150 kHz to 80 MHz $d = \left[ \frac{3,5}{V1} \right] \sqrt{P}$	80 MHz to 800 MHz $d = \left[ \frac{3,5}{E1} \right] \sqrt{P}$	800 MHz to 2.5 GHz $d = \left[ \frac{7}{E1} \right] \sqrt{P}$
0.01	0.12	0.12	0.24
0.1	0.38	0.38	0.74
1	1.2	1.2	2.4
10	3.8	3.8	7.4
100	12	12	24

For transmitters rated at a maximum output power not listed above, the recommended separation distance  $d$  in metres (m) can be estimated using the equation applicable to the frequency of the transmitter, where  $P$  is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer.

NOTE 1: At 80 MHz and 800 MHz, the separation distance for the higher frequency range applies.

NOTE 2: These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.

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**GETINGE GROUP** is a leading global provider of products and systems that contribute to quality enhancement and cost efficiency within healthcare and life sciences. We operate under the three brands of **ArjoHuntleigh**, **GETINGE** and **MAQUET**. **ArjoHuntleigh** focuses on patient mobility and wound management solutions. **GETINGE** provides solutions for infection control within healthcare and contamination prevention within life sciences. **MAQUET** specializes in solutions, therapies and products for surgical interventions and intensive care.

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