

Maxi Sky 1000

Instructions for Use



CE

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General Information

Thank you for buying the Maxi Sky 1000 ceiling lift from ArjoHuntleigh.

Your Maxi Sky 1000 is part of a series of quality products designed specially for home care, nursing homes and other health care uses.

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.

Foreword

Please read this manual in its entirety before using your lift. The information in this manual is crucial to the proper operation and maintenance of the Maxi Sky 1000. It will help protect your product as well as ensure that the product performs to your satisfaction.

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

WARNING: Injuries can be attributed to the use of inadequate parts. Use only parts designated by ArjoHuntleigh on your Maxi Sky 1000.

WARNING: Unauthorized modifications on any ArjoHuntleigh product, including rail system installations, 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 modification to its products.

Tested according to standards by:  and 

Service and Support

A service routine must be performed on your Maxi Sky 1000 by trained service staff. This will ensure the safety and good function of your product. See the “Care and Maintenance” section.

Please contact your local ArjoHuntleigh agent if you need more information, want to report an unexpected event or notice any changes in the performance of your lift, or if you need any help in setting up, using or maintaining your Maxi Sky 1000. The agent can offer support and service programs to maximize the long-term safety, reliability and value of the product.

Contact your local ArjoHuntleigh agent for replacement parts.

Additional copies of this manual can be bought from your local ArjoHuntleigh agent. When ordering, include the *Instructions for Use* part number (see *front page*) and the product part number.

Manufacturer Information

This product has been manufactured by:
ArjoHuntleigh AB
Hans Michelsensgatan 10
211 20 Malmö
SWEDEN

General Information

Definitions 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.

Intended Use

The Maxi Sky 1000 is designed for lifting patients in a homecare setting, at nursing homes and other assisted living centers. Patient transferring is performed under the supervision of appropriately trained caregivers in accordance with the instructions found in this manual.

The product must only be used for the reasons stated above. It must be installed by ArjoHuntleigh authorized personnel and in accordance with local codes.

Operational Life

The equipment is designed and tested for a useful life of seven (7) years or 10 000 transfers, whichever comes first. It is subject to preventative maintenance as specified in the "Care and Maintenance" section. Time equivalence between the number of transfers versus the number of years is made clear in the table in Fig. 1.

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

Fig. 1

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

The red indicator light on the ceiling lift will blink when it is about halfway through its useful life, and again to indicate the end of the useful life period.

The operating life of this product corresponds directly to the safe operating time period before a complete service is required. Aging of the ceiling lift, frequency of use (transfers per day), the weight of the patient and maintenance frequency are factors that have an impact on the Maxi Sky 1000's life span. A transfer is defined as the displacement of a patient from one point to another. A transfer cycle includes a lifting and a descending action.

The expected operational life for fabric slings and fabric stretchers is approximately two years from purchase date. This life expectancy only applies if the slings and stretchers have been cleaned, maintained and inspected in accordance with the *ArjoHuntleigh Sling Application Guide*, the *Instructions for Use* and the *Preventive Maintenance Schedule*.

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

Product Identification

The unit's identification number (specification, model, serial number) appears on a silver nameplate attached at one end of the lift (see Fig. 34).










How to Use this Manual






WARNING: Do not attempt to use this product without fully understanding the information contained in this manual. A misuse of this unit may lead to a patient fall and to injuries.


Keep this manual with the lift and refer to it as required.

General Information

Symbols Used

General Symbols	Key to symbols
	This symbol is accompanied by a date to indicate the date of manufacture and by the address of the manufacturer.
	This symbol indicates the products comply with the medical device directive 93/42/EEC.
	This symbol indicates the approval of the Canadian Standards Association.
	This symbol indicates the approval of TÜV.
	This symbol is accompanied by the manufacturer's catalogue number.
	This symbol is accompanied by the manufacturer's serial number.
	This symbol refers to the <i>Instructions for Use</i> .
	This symbol indicates "separate collection" for all batteries and accumulators as per the WEEE Directive.
	This symbol indicates a type BF applied part as per IEC 60601 standard.

General Symbols	Key to symbols
	This symbol indicates a risk of pinching.
	This symbol locates the emergency stop system on the lift cassette.
	This symbol locates the emergency lowering system on the lift cassette.
SWL	Safe Working Load represents the maximum load the lifter is rated for safe operation.
IP_{N₁}N₂	Degree of protection provided by enclosure. N ₁ : Ingress of particles, N ₂ : Ingress of water.
	Direct current.
	Alternating current.

Charger Related Symbol	Key to symbols
	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.

Safety Instructions

General Instructions

WARNING: The Maxi Sky 1000 is for transferring patients only. Do not use the lift for any other purpose. It could get damaged and the safety of the patient may be compromised.

WARNING: Always place the sling around the patient according to the instructions enclosed. Failure to do so may result in injuries to you or to others.

CAUTION: Do not drop the ceiling lift. This could cause internal damage. If the ceiling lift is suspected to be damaged, contact your local ArjoHuntleigh agent.

Safe Working Load

The Maxi Sky 1000 has been designed with a lifting capacity of 454 kg (1000 lb).

WARNING: The Maxi Sky 1000 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 track system;
- the “maximum load” label on the Maxi Sky 1000;
- on the spreader bar;
- on the accessories;
- on the sling.

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

Important Safety Directions

Always ensure that:

- The ceiling lift is installed and put into service by an authorized ArjoHuntleigh contractor or installer.
- This product is used by trained staff.

WARNING: Before using the Maxi Sky 1000 lift, a clinical assessment of the patient's suitability for transfer must be carried out by a qualified health professional. A transfer conducted when it should not can degrade the patient's health condition.

- Special consideration is taken with a patient who is connected to electrodes, catheters or other medical devices.
- Violent impact during transfers is avoided.
- The sling is not damaged, torn or frayed.
- The lifting procedures found in this manual are followed.
- All controls and safety features are used only according to the rules specified in this manual. Never attempt to force a control or button on the lift.
- The charger is not stored in a shower, bath or other areas with high humidity.
- The sling straps are in good condition and properly fastened.
- The daily maintenance is carried out before using the lift.
- Any precautionary or instruction labels are read and those that cannot be easily read are replaced.

WARNING: There is possible strangulation risks related to the lifting strap, the hand control cable or the emergency pull cord. Necessary precautions should be taken to prevent these.

WARNING: This product contains small parts that might present a severe danger if swallowed or inhaled.

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

CAUTION: Keep all components of the lift clean and dry to avoid a malfunction of the device.

CAUTION: Excessive exposure of the hand control to water (or other liquid) could cause malfunction of the device.

Shock Prevention

- Do not touch or use a lift with bare conductors or a damaged power cord. If this is the case, contact your local ArjoHuntleigh agent immediately.
- Do not splash or expose electric parts of the device to water or moisture.

Safety Instructions

- Check nameplate for input voltage and frequency requirements. These requirements differ by country. Do not attempt to use the lift in an area that has a different voltage and frequency requirement.
- Do not attempt to expose, service or repair the lift, battery or charger. If any unit is malfunctioning, contact your local ArjoHuntleigh agent.
- Read batteries and charger instructions thoroughly before using or storing them.

Fire and Explosion Prevention

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

Human and Environmental Safety Practices

- Should the battery casing crack and cause contents to come in contact with skin or clothing, rinse immediately with plenty of water.
- If contents come in contact with the eyes, rinse immediately with plenty of water and seek medical attention.
- Inhalation of the contents can cause respiratory irritation. Provide fresh air and medical attention.
- 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. Fig. 2 below shows the symbols for disposal and recycling.

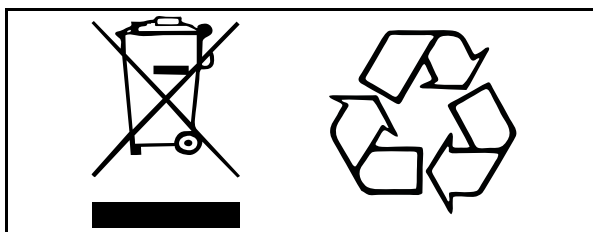


Fig. 2

WARNING: Failure to properly dispose of this equipment and its parts according to local regulations may constitute an infraction as well as may cause harm to the environment.

Environmental Advice

When disposing of any items associated with the equipment, contact the appropriate local authorities for information.

Battery and Battery Charger Safety Practices

NOTE: The following instructions is important to prolong the battery life.

WARNING: Do not operate the charger unit with a damaged cord or if the unit has been dropped or damaged. Do not bend the power cord by force, or place a heavy object on it. This will damage the cord and may cause fire or electrical shock.

- Do not expose the battery charger or connector to water.
- To avoid bodily injury, do not crush, puncture, open, dismantle or otherwise mechanically interfere with the batteries.
- Be careful not to drop the batteries.
- Only use the charger that has been supplied with the equipment.
- Do not charge the batteries in an unventilated area.
- The charger must not be covered or exposed to dust.

Homecare Environment Considerations

WARNING: The Maxi Sky 1000 is not intended to be operated by children. Serious injuries could occur.

NOTE: Rigorous cleaning actions are needed when the Maxi Sky 1000 is near animals. Pet hair trapped inside the device (through the strap opening) can reduce the product's performance.

Product Description

Maxi Sky 1000 Ceiling Lift and Charger Station

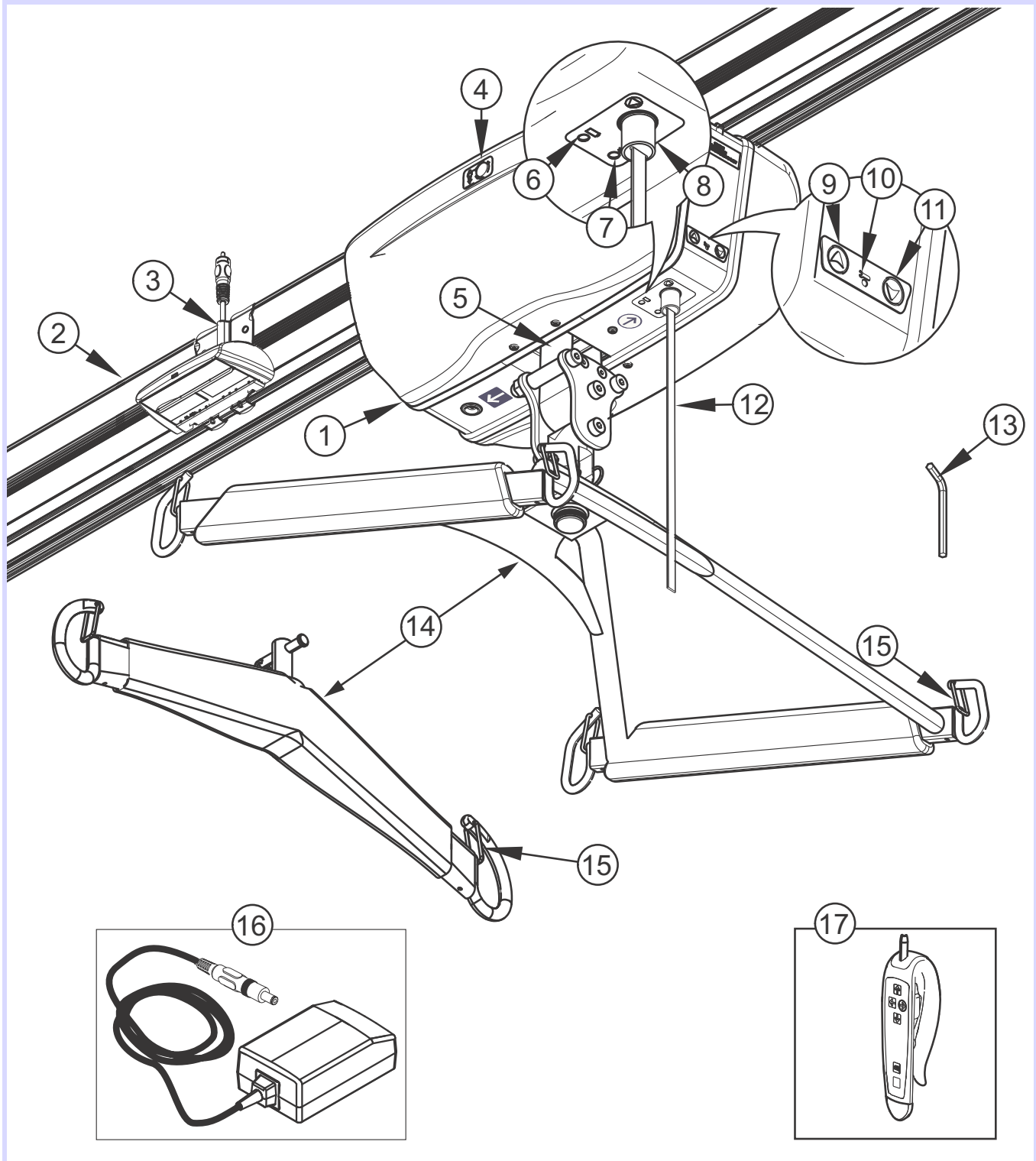


Fig. 3

Legend

- | | |
|--|--|
| 1) Ceiling lift | 10) Red maintenance/overheat light |
| 2) Track | 11) Alternate Down button |
| 3) Charging station | 12) Red emergency pull cord |
| 4) Emergency lowering mechanism access | 13) Allen key for emergency lowering mechanism |
| 5) Strap | 14) Spreader bar |
| 6) Amber charging light | 15) Safety latch |
| 7) Green power light | 16) Charger (cord-connected or wall-adapted) |
| 8) Power push-button | 17) Hand control |
| 9) Alternate Up button | |

Product Description

Hand control

The Maxi Sky 1000's hand control is used to operate the ceiling lift. Each function is described in Fig. 4. The up and down buttons raise or lower the spreader bar.

The "programming mode" button allows you to modify the functions of the lift. Refer to the "Maxi Sky 1000 Programming" section for more information.

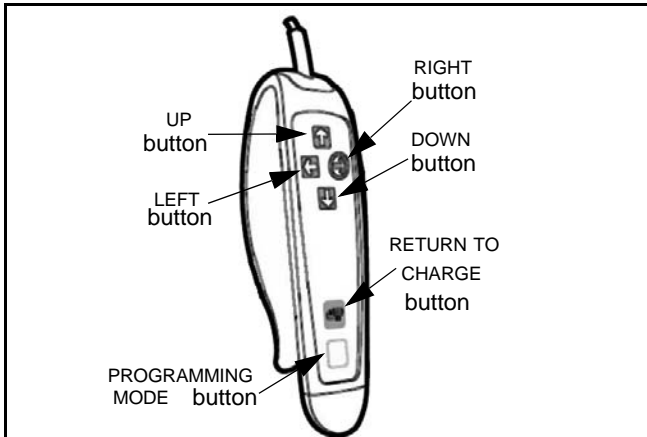


Fig. 4

ECS Rail System

(For Maxi Sky 1000 ECS Only)

The Maxi Sky 1000 lift is also available for use with the *KWIKtrak* Enhanced Charging System (ECS). This rail system allows the ceiling lift to benefit from continuous charging wherever it is on the track. It eliminates the need to send the unit back to the charging station after the patient transfer.

With the ECS option, the "return to charge" (RTC) feature is thus no longer obligatory. However, this feature can still be used to store the cassette at the end of the track, using a preprogrammed position station (PPP) until the next transfer.

Since the RTC is disabled by default, please refer to the "Maxi Sky 1000 Programming" section of this document for instructions on how to enable this feature, that for the ECS is called the "return to home" (RTH) feature.

Please see the "How to Use the Maxi Sky 1000 Lift" section in this manual.

Chargers

The Maxi Sky 1000 units are equipped with a wall-adapted charger that can be customized to fit AC voltage outlets around the world.

Note: Avoid positioning the charger such that access to the plug is limited, making disconnection difficult.

Overheat Protection Device

The Maxi Sky 1000 units are equipped with a safety system to prevent a misuse of the lift. If the lift is used above the amount specified by the duty cycle, a detection system will block the lifting of a load until the temperature of the transmission cools down. In the meantime, it will still be possible to activate the horizontal displacement and down functions. When the overheat protection is engaged, the red light will stay on during the cooling period. In addition, a buzzer will sound if the UP button is pressed. The cooling period is between 10 to 30 minutes depending on ambient conditions.

Battery Information

The Maxi Sky 1000 uses two 12 volts sealed lead-acid batteries. This battery type requires being fully charged at all time.

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

Batteries life is variable (2-3 years) and depends on: frequency of use, frequency of charging, temperature of operation/storage and storage time.

To prolong the batteries life, recharge them before the "Low Battery" indicator signal shows up.

To recharge the batteries, place the unit under the charging station. Check the battery status indicator to confirm that the batteries are charging.

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

NOTE: Batteries will not recharge when the emergency stop is applied.

NOTE: The unit will not lift or lower when it is in charging position.

See Fig. 5 for a graph illustrating the relationship between the number of lifts versus the load being lifted.

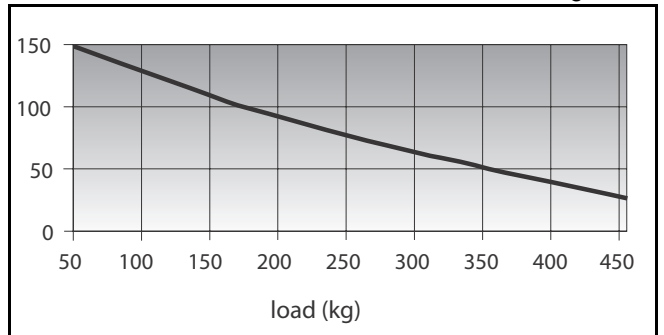
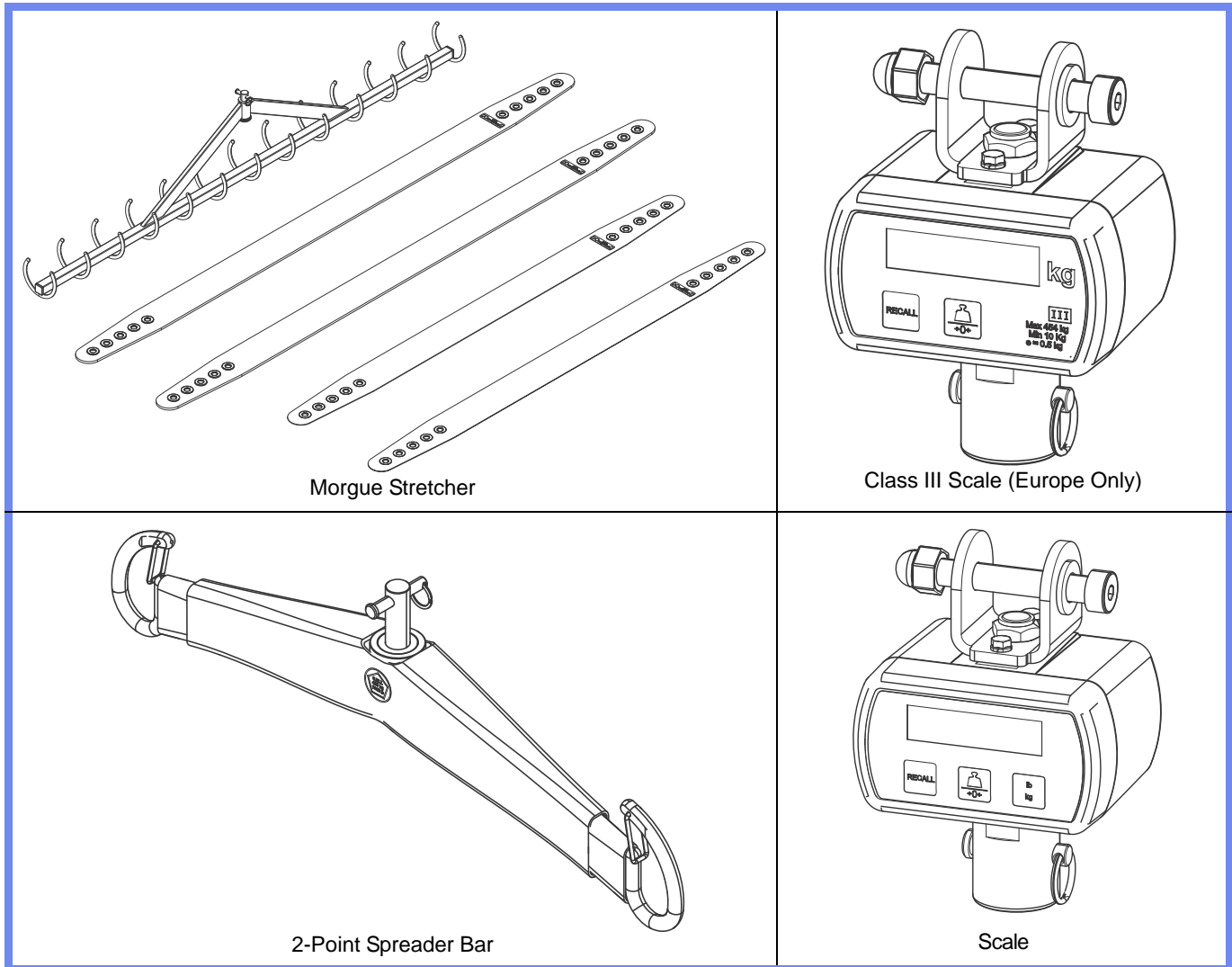


Fig. 5

Accessories



Morgue Stretcher

Class III Scale (Europe Only)

2-Point Spreader Bar

Scale

Fig. 6

How to Use the Maxi Sky 1000

Controls and Features

Emergency Lowering

In the unlikely event of an electrical failure, the Maxi Sky 1000 has an emergency manual lowering feature.

CAUTION: The emergency lowering feature is to be used only in case of emergency.

If the ceiling lift malfunctions when a patient is being transferred, the emergency lowering device provides a safe way of getting the patient down onto a chair, bed or wheelchair (see Fig. 7). To use it:

1) Pull the red emergency cord.

- 2) Remove the black cap located on each side of the lift.
- 3) Find the 8 mm Allen key that came with the ceiling lift. Insert the Allen key into the axle.
- 4) Turn the Allen key counter-clockwise to slowly lower the patient. Repeat on the other side of the lift if required.

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

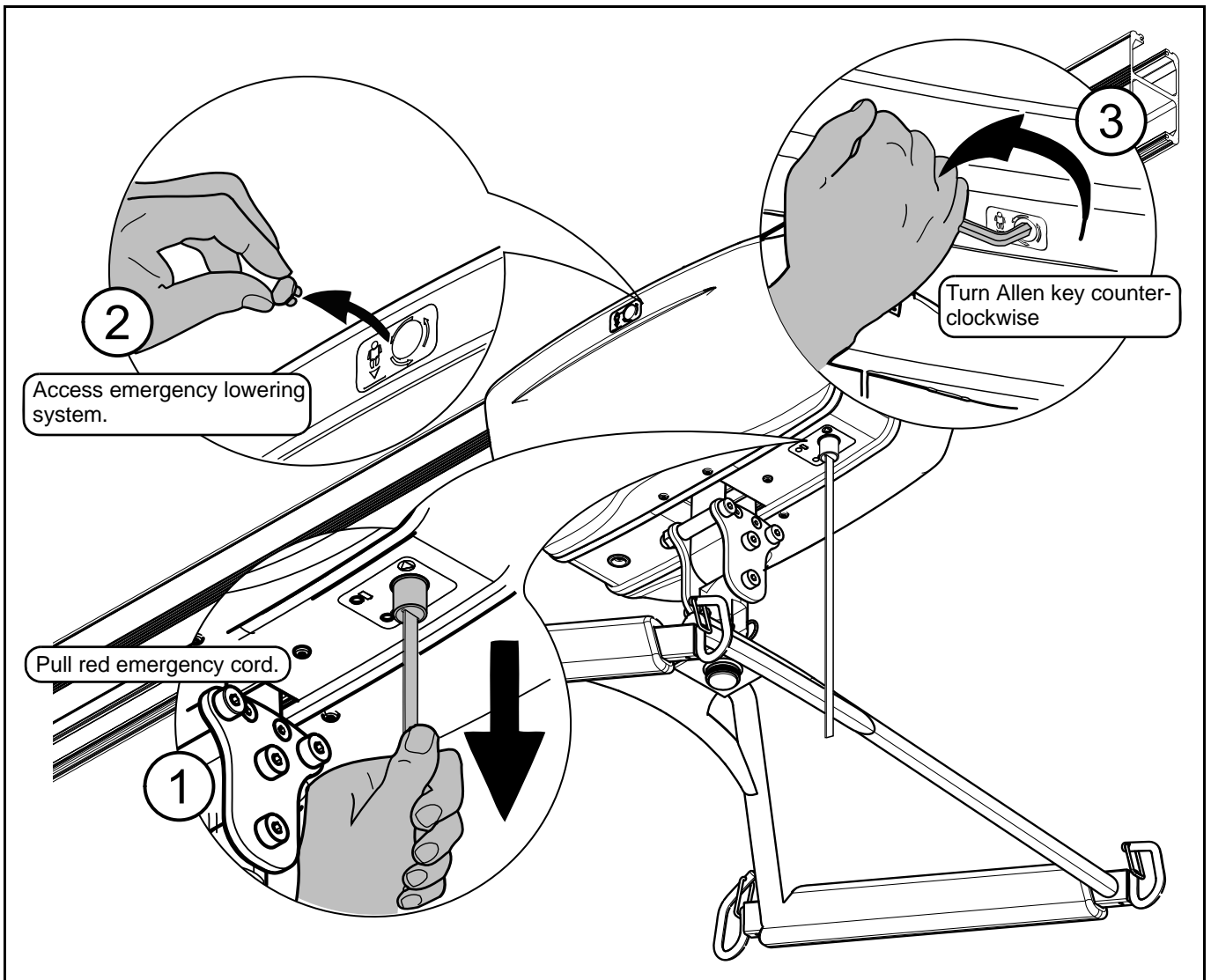


Fig. 7

How to Use the Maxi Sky 1000

Emergency Stop (red cord)

The emergency stop can be activated at any time to stop the functioning of the lift.

- 1) To stop the lift in any emergency, gently pull the red emergency cord until you hear a “click” (see Fig. 8 - A). You will notice that the reset switch’s plastic insert, at the very top of the red cord, has descended (see Fig. 8 - B). The green power light has also turned off. You may also notice that the patient begins to descend slowly when the emergency stop is activated. This is normal.

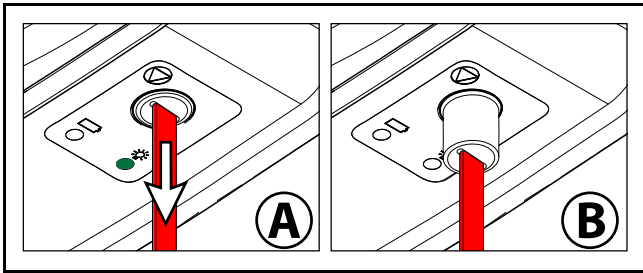


Fig. 8

CAUTION: Do not pull the red emergency cord with excessive force. If the cord is jerked too hard, the lift may become inoperable.

- 2) To reactivate the lift, push up on the reset switch’s plastic insert (for units equipped with infrared hand controls pull the red emergency cord again). A green light confirms that the Maxi Sky 1000 lift is on and ready for use.

Return to Charge (RTC)

The RTC (or for the ECS, the RTH) function is disabled by default. To activate this function, please refer to the “Maxi Sky 1000 Programming” section.

To engage the RTC function, press on the return to charge button of the hand control for 3 seconds. The spreader bar will raise all the way up to avoid any obstacles during the run. When the lift is at the charging station, the spreader bar lowers by itself to the preselected height so as to be easily accessible.

The RTC function is not an automatic transfer function. A safety weight detector is included in your device to prevent the use of the function when patient is present in sling.

NOTE: You can stop the return to charge at any time by pressing any button on the hand control or pulling on the red emergency cord.

WARNING: Constant surveillance is required when using the RTC function to prevent the spreader bar from hitting someone/something along the path.

Emergency Brake

The emergency brake is an additional safety feature that automatically prevents the patient from falling in the unlikely event of a transmission or motor failure.

WARNING: After an incident has occurred and the brake was deployed, never attempt to use any function of the lift. This may disengage the brake and make the patient fall.

The emergency brake is intended for single activation and therefore can only be used once. Call your ArjoHuntleigh agent to arrange for the unit to be replaced. The emergency lowering device cannot be used when the emergency brake has deployed.

Indicator Lights

The ceiling lift and the charging system have many indicator lights. It is important to understand their significance for the proper use and comprehension of the ceiling lift.






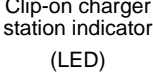
 Power light Green	OPERATING THE LIFT	
	Flashing	Low batteries
 Green	Solid	The lift is on and ready to use
	STATE OF BATTERIES	
 Charging light Amber	Flashing	In process of charging batteries
	Solid	Charging done; batteries charged
 Maintenance/overheat light Red	MAINTENANCE	
	Flashing	Maintenance required by your local agent
 Red	Solid	Lift was powered up in “service mode”, in “programming mode” or is under overheat protection
	CHARGING	
 Clip-on charger station indicator (LED)	Solid green	Clip-on charging station power is on
	Solid red	Problem with charger; do not use the charger

Fig. 9

How to Use the Maxi Sky 1000

Spreader Bar Attachment

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

Attaching the Spreader Bar to the Lift

WARNING: Before every use, always ensure that the strap is properly attached and that the attachment is secured with the split ring. Improper installation of the spreader bar could lead to a patient fall.

- 1) Insert the strap end onto the spreader bar attachment.
- 2) Insert the clevis pin through the attachment and the loop at the end of the strap.
- 3) Secure the clevis pin with the split ring.

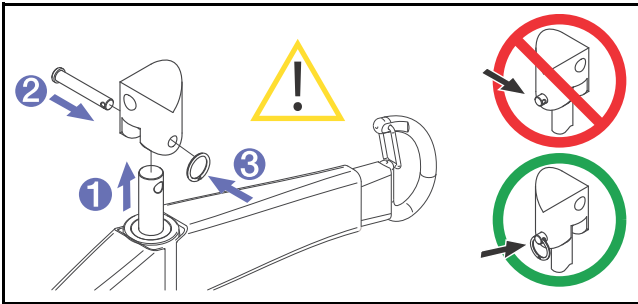


Fig. 10

Loop Sling Application

2-Point Spreader Bar Compatible Sling

WARNING: Slings shown in Fig. 11 are intended to be used only with the 2-point spreader bar.

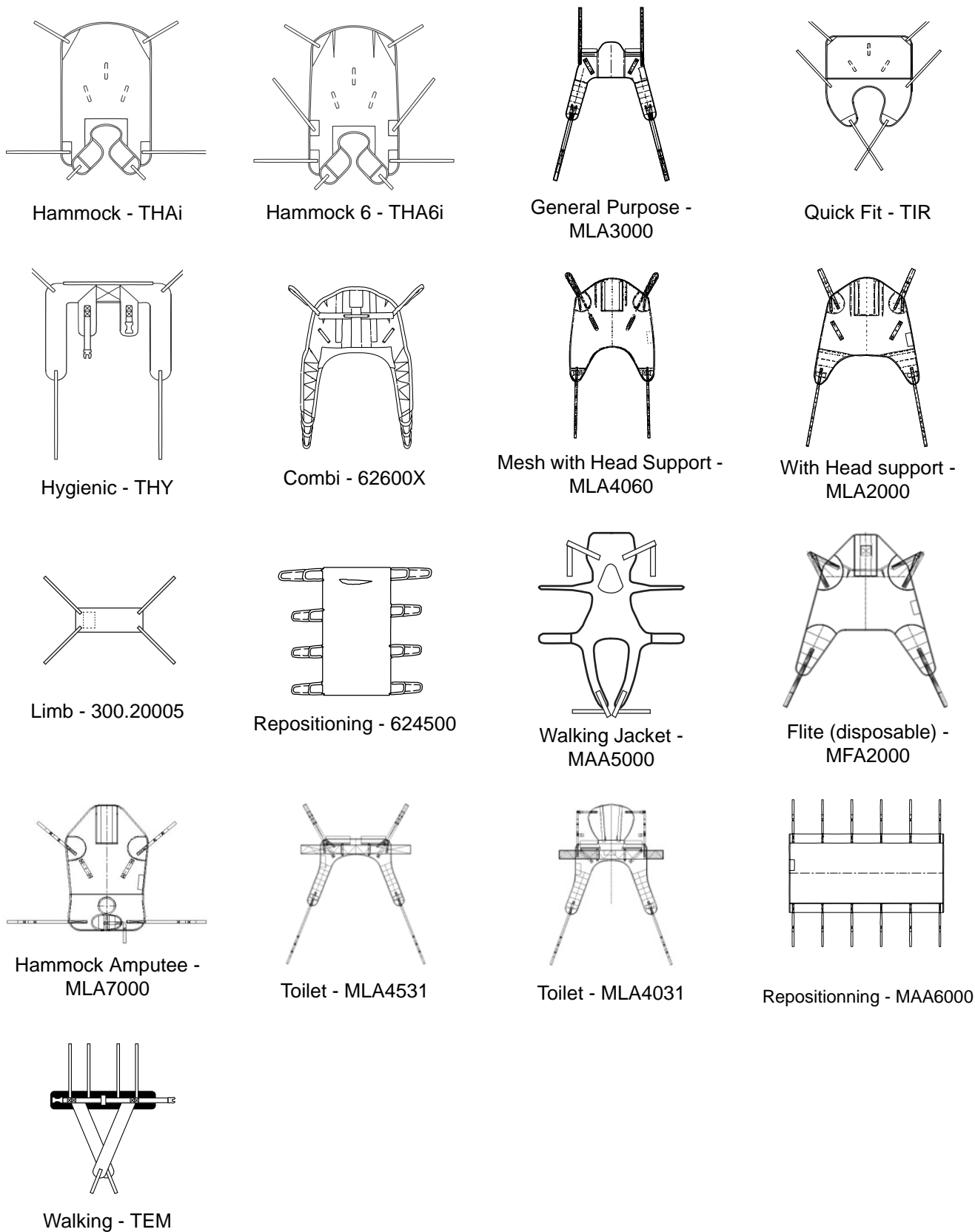


Fig. 11

NOTE: Other sling models are available. Please refer to your local ArjoHuntleigh agent to order.

Loop Sling Application

Slings Selection

The spreader bar that is attached to the Maxi Sky 1000 determines which sling can be used to transfer a patient.

Loop slings must be used with the 2-point spreader bar.

All slings are color coded for size by having a different colored edge binding or attachment strap coloring:

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

The correct size sling will be able to support the patient's shoulders during the transferring procedure.

ArjoHuntleigh offers the option of a head support for many of our slings if it is considered necessary for a particular patient. A range of special purpose slings are available as accessories, for these or for special size slings, contact your ArjoHuntleigh agent.

Note: If ArjoHuntleigh *Flites* slings (disposable) are to be used with the Maxi Sky 1000 lift, then always refer to the separate *Flites Instruction for Use* in conjunction with current *Instructions for Use*.

Attaching the Sling to the 2-point Spreader Bar

Place the attachment loops onto the hooks.

Make sure the loops are positioned correctly and that the latches are closing the hooks as shown below.

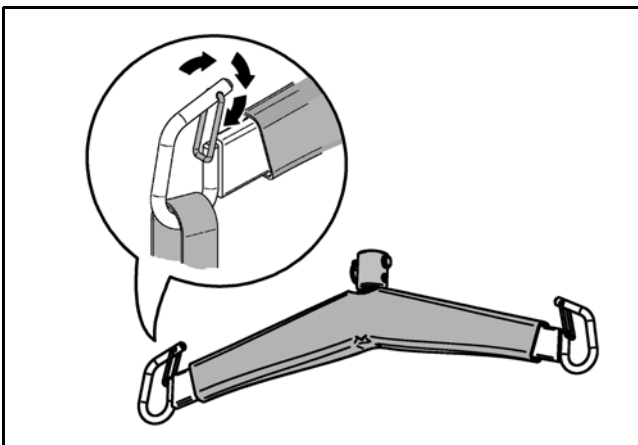


Fig. 12

Positioning the Patient

The specific sling loops 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.

BODY POSITION ACCORDING TO SELECTION OF LOOP STRAPS			
SHOULDERS	SHOULDERS	LEGS	HIPS*
	3	1	1
	2	1	1
	1	1	1
	1	1	2

*Hip loops only available on THA6i model

NOTE: Slings with more loops allow additional alternative positions.

Loop Sling Application

Before Approaching the Patient

Make sure to have on hand a sling that is of the correct model and of adequate size for transfer with the Maxi Sky 1000 unit.

Before performing the transfer, it is important to evaluate the patient's general condition. For example, an agitated patient will require a specific type of sling.

Attachment Methods

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.

Attachments Points

The attachment point designation shown here are only for the purpose of the explanations below.

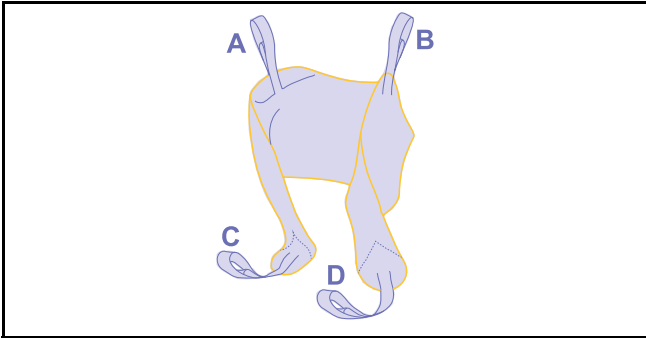


Fig. 13

Method 1 - Cross-through

(Legs closed with crossing straps)

This method is recommended for most general transfer.

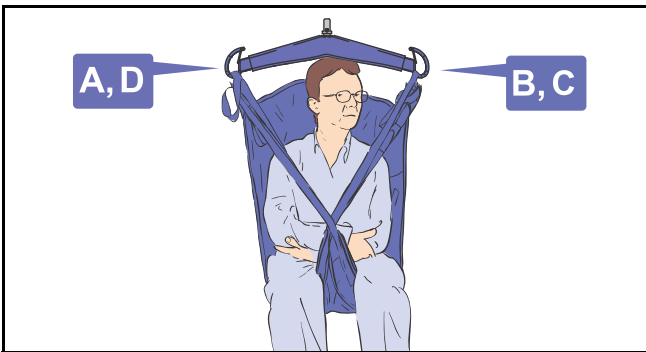


Fig. 14

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.



Fig. 15

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.

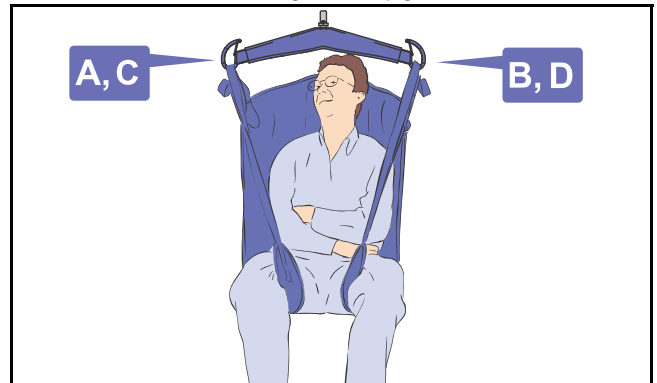


Fig. 16

Transferring Patient Using Loop Slings

Before using the Maxi Sky 1000:

- Always carry out the items marked as "Before every use" in the "Preventive Maintenance Schedule" before using the lift.
- To avoid the patient swinging excessively during lifting, the lift strap should be as vertical as possible, immediately prior to the lift.

WARNING: A patient should never be left unattended during a transfer. Certain safety features can only be accessed by the caregiver and patient could get stuck in the event of a malfunction.

Loop Sling Application

WARNING: This unit must never be operated by the patient but only by the caregiver. Patient could get stuck in the event of a malfunction.

WARNING: Always hold the spreader bar when near a patient. The spreader bar could hit the patient resulting in injury.

WARNING: Before raising the patient, always make sure the sling is not caught on any obstructions (for instance, the wheelchair brakes or armrests). Sling catching in such obstructions could result in patient fall.

WARNING: Always confirm that the sling remain attached as the weight of the patient is gradually taken up. A wrongly fastened attachment could detach resulting in patient fall.

WARNING: Make sure that the spreader bar is correctly attached to the lift. An unsecured spreader bar attachment may lead to patient fall.

WARNING: Make sure the intended route of travel is clear to prevent the patient from bumping any obstruction.

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

Lifting Patient from a Seated Position

- 1) 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.



Fig. 17

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

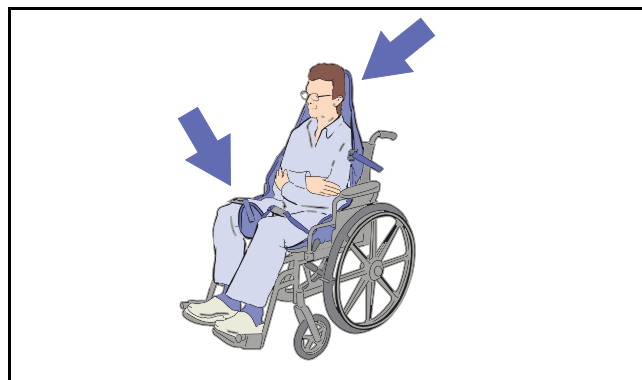


Fig. 18

- 4) 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 fix all the sling loops onto the spreader bar hooks.
- 5) Connect the shoulder loops, and then the leg section using one of the three methods previously described.

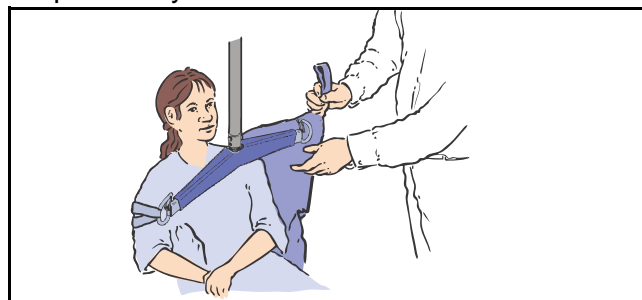


Fig. 19

- 6) If necessary, lower the spreader bar a little further.
- 7) Raise the patient.
- 8) Turn the patient to face the direction of travel, and keep at a normal chair height.
- 9) Proceed with the transfer.

Lowering Patient to a Seated Position

- 1) Once arrived at destination, lower the patient down onto the new location.
- 2) When the patient's body weight is fully supported, detach the sling.
- 3) Move the lift away from the patient.
- 4) Remove the sling from under the patient.

Loop Sling Application

Lifting Patient from a Supine Position

When lifting patient from a bed, make sure the bed is in correct working height before you start.

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

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

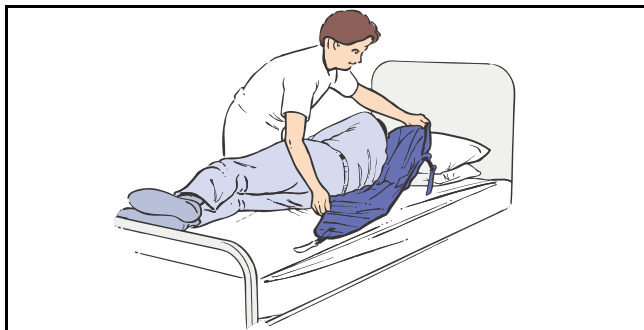


Fig. 20

- 3) 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.
- 4) If possible, slightly raise the head of the bed.
- 5) Approach the patient with the lift. Ensure that the spreader bar is close enough to be able to fix all the sling loops onto the spreader bar hooks.
- 6) Connect the shoulder loops, and then the leg section using one of the three methods previously described.
- 7) Raise the patient.
- 8) Turn the patient to face the direction of travel, and keep at a normal chair height.
- 9) Proceed with the transfer.

Lowering Patient to a Supine Position

- 1) Once arrived at destination lower the patient down onto the new location.
- 2) When the patient's body weight is fully supported, detach the sling.

Using Stretcher Frames and Stretchers

If any of the ArjoHuntleigh patient stretcher frames and stretchers are to be used with the Maxi Sky 1000 lift, always refer to the separate relevant stretcher frame and stretcher operating instructions supplements before use.

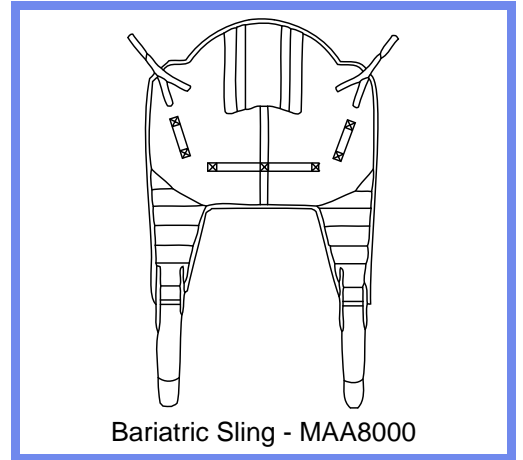
Bariatric Sling Application

Compatible Slings

For more information about sling use, please refer to the documentation included with your sling.

4-Point Spreader Bar Compatible Sling

WARNING: Sling shown in Fig. 21 is intended to be used only with the 4-point spreader bar.



Bariatric Sling - MAA8000

Fig. 21

Bariatric Sling Application

Slings Selection

The spreader bar that is attached to the Maxi Sky 1000 determines which sling can be used to transfer a patient. Bariatric slings must be used with the 4-point spreader bar.

All slings are color coded for size by having a different colored edge binding or attachment strap coloring:

- Yellow - Medium - M
- Green - Large - L
- Blue - Extra Large - XL
- Terracotta - Extra Extra Large - XXL

The correct size sling will be able to support the patient's shoulders during the transferring procedure.

ArjoHuntleigh offers the option of a head support for many of our slings if it is considered necessary for a particular patient. A range of special purpose slings are available as accessories, for these or for special size slings, contact your ArjoHuntleigh agent.

Note: If ArjoHuntleigh *Flites* slings (disposable) are to be used with the Maxi Sky 1000 lift, then always refer to the separate *Flites Instruction for Use* in conjunction with current *Instructions for Use*.

Before Approaching the Patient

Make sure to have on hand a sling that is of the correct model and of adequate size for transfer with the Maxi Sky 1000 unit.

Before performing the transfer, it is important to evaluate the patient's general condition. For example, an agitated patient will require a specific type of sling.

Transfer Using the 4-Point Spreader Bar

Attaching Bariatric Loop Slings to the 4-Point Spreader Bar

WARNING: When attaching a loop sling to the 4-point spreader bar, always ensure the sling attachment loops are positioned correctly into the retaining hooks (see Fig. 22). An improper installation of the sling may lead to a patient fall.

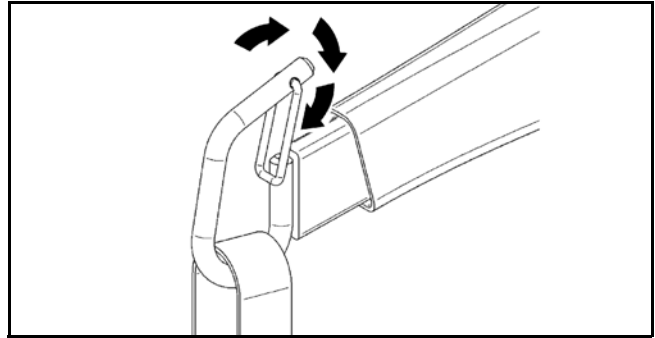


Fig. 22

WARNING: A patient should never be left unattended during a transfer. Certain safety features can only be accessed by the caregiver and patient could get stuck in the event of a malfunction.

WARNING: This unit must never be operated by the patient but only by the caregiver. Patient could get stuck in the event of a malfunction.

WARNING: Always hold the spreader bar when near a patient. The spreader bar could hit the patient resulting in injury.

WARNING: Before raising the patient, always make sure the sling is not caught on any obstructions (for instance, the wheelchair brakes or armrests). Sling catching in such obstructions could result in patient fall.

WARNING: Always confirm that the sling remain attached as the weight of the patient is gradually taken up. A wrongly fastened attachment could detach resulting in patient fall.

WARNING: Make sure that the spreader bar is correctly attached to the lift. An unsecured spreader bar attachment may lead to patient fall.

WARNING: Make sure the intended route of travel is clear to prevent the patient from bumping any obstruction.

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

Bariatric Sling Application

To Lift a Patient from a Bed

The lifting technique described here can be used for reclining patients regardless of where they may be lying: on the bed or on the floor.

- 1) Roll the patient towards you, fold the sling in half and place it on the bed, along the back of the patient (see Fig. 23). Ensure that the sling is positioned so that when rolled back, the patient will lie in the center of the sling. Also check that the head support area of the sling lies directly beneath the neck of the patient.

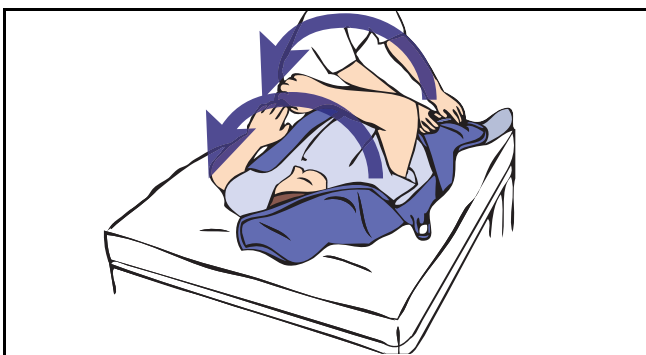


Fig. 23

- 2) 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 from beneath the patient. With heavy patients the use of a slide sheet is recommended. Please refer to slide sheet instructions for details.

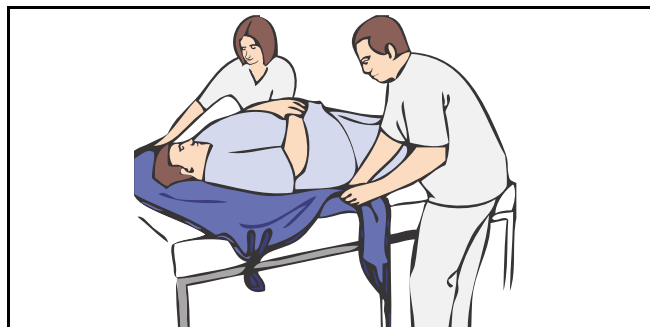


Fig. 24

NOTE: If the patient can sit easily, then the sling can be positioned in the same manner as if the patient was seated in a chair. See “To lift a Patient from a Chair” section.

- 3) Position the Maxi Sky 1000 directly over the patient.
- 4) Using the hand control, lower the spreader bar and connect the sling shoulder strap loops, taking care not to lower the spreader bar onto the patient.

- 5) The straps must be brought under the thighs. This may involve lifting one leg at a time, and may mean lowering the spreader bar a little more. When lifting from the bed, some caregivers prefer to connect the leg strap loops first. This in particular applies to patients with large thighs. To use this method, raise the hip and knee into maximum flexion, and hook up the leg strap loops.
- 6) Ensure that all four points of the sling are securely attached to the spreader bar, then lift the patient using the hand control, positioning him/her comfortably for transfer.

WARNING: To avoid the patient swinging excessively during lifting, the lift strap should be as vertical as possible, immediately prior to the lift.

Proceed with the patient transfer to a chair as in section “To lift from a Chair”, or place the patient onto a bed, (reversing the above procedure), by moving and then lowering the patient into the desired position.

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

Move the spreader bar away before removing the sling from under the patient.

To lift a Patient from a Chair

The lifting techniques described here, and represented in the images in following pages, can be used for seated patients regardless of where they may be seated (e.g. on the edge of a bed, in a chair, wheel-chair or similar).

- 1) Place the sling around the patient so that the base of his/her spine is covered, and the head support area of the sling is behind the head. Pull each leg strap under the thigh so that it emerges on the inside of the thigh.

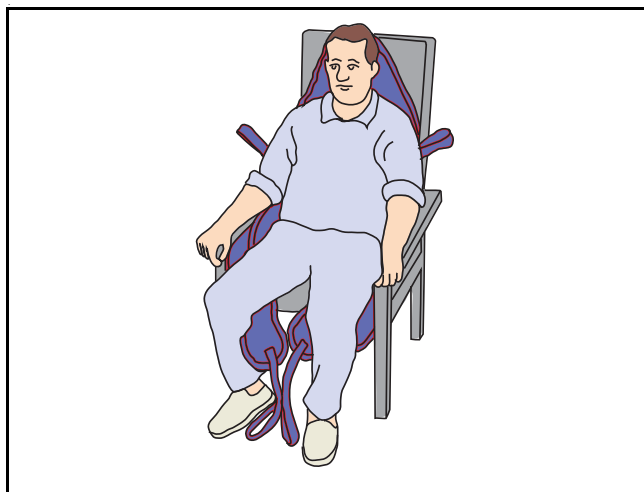


Fig. 25

Bariatric Sling Application

- 2) Ensure that all four strap loops are securely connected, then raise the patient using the hand control. The head support area of the sling should now come into use. This is the most comfortable position for the patient transfer, as it reduces pressure on the patient's thighs. The angle of recline can be increased for the comfort of more restless patients, when lowering the patient back into a chair or transferring to a chair from the bed (see Fig. 26).

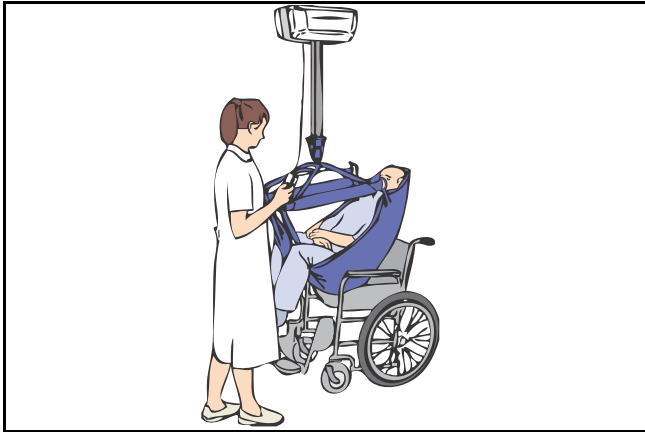


Fig. 26

- 3) During the transfer, turn the patient to face the direction of travel, and keep at a normal chair height, this affords the patient a measure of confidence and dignity. The patient should not be lifted above the caregiver's eye-level; this can lessen the impression of height that may confuse the patient. Support the patient to stop excessive swinging and to give a feeling of added security.
- 4) Proceed with the patient transfer to a chair, or place the patient onto a bed, by moving and then lowering the patient into the desired position (see Fig. 27).

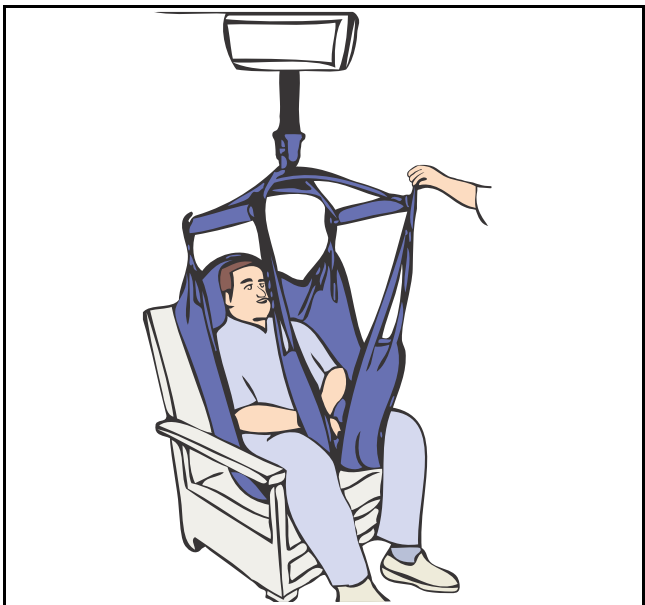


Fig. 27

To Lift a Patient from the Floor

The patient can be lifted from a completely reclined position on the floor, but for his/her comfort, a pillow can be placed under his/her head first.

- 1) Place the sling around the patient as in section "To Lift a Patient from a Bed" (see Fig. 23 and Fig. 24).
- 2) Attach the shoulder strap loops first, then connect the leg strap loops. This may mean lowering the spreader bar a little more.

When lifting from the floor, some operators prefer to connect the leg strap loops first (this in particular applies to patients with large thighs). To use this method, raise the hip and knee into maximum flexion and hook up the leg strap loops.

- 3) Attach the shoulder strap attachment loops. It will probably be easier to attach the longest loops.
- 4) When all the loops are securely attached, raise the patient from the floor in a semi-recumbent position (see Fig. 28).

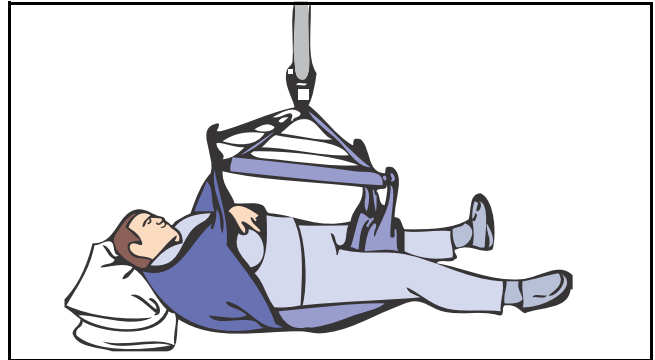


Fig. 28

The patient may then be positioned in a chair, or placed on a bed. Patients with extensor spasm may be lifted by the Maxi Sky 1000, but special attention should be paid to supporting the patient's legs during the early part of the transferring process.

- 5) Move the ceiling lift away from the patient.
- 6) When the Maxi Sky 1000 is no longer required, return the ceiling lift back to the charging station. The charging indicator light on the clip-on charging station must be on for the ceiling lift to detect it.

Verify the green light on the charger station and the amber light (flashing or solid) on the ceiling lift to ensure that the charging function is working properly.

Using the FIDO Function (Pre-Programmed Positions)

NOTE: This function can only be activated by a qualified technician.

- 1) Using the pre-programmed positions allows the unit to detect stations (positions) located along the track path. The unit will go to the indicated position by using the hand control.
- 2) To do so, indicate the desired position to go to by pressing the Prog button a number of times equal to the number of stations between the ceiling lift and the desired position. Then press direction button to start the function. For an example, to go to the third station push three times on the prog button followed by the direction (left or right buttons).

The unit will then go by itself to the requested station and stay on hold there.

If the position input is not correct, you may stop the ceiling lift at any time by pressing any button on the hand control. From this position, reprogram the ceiling lift to the new desired position. Count the number of stations from where you are and indicate the direction to go.

Maxi Sky 1000 Programming

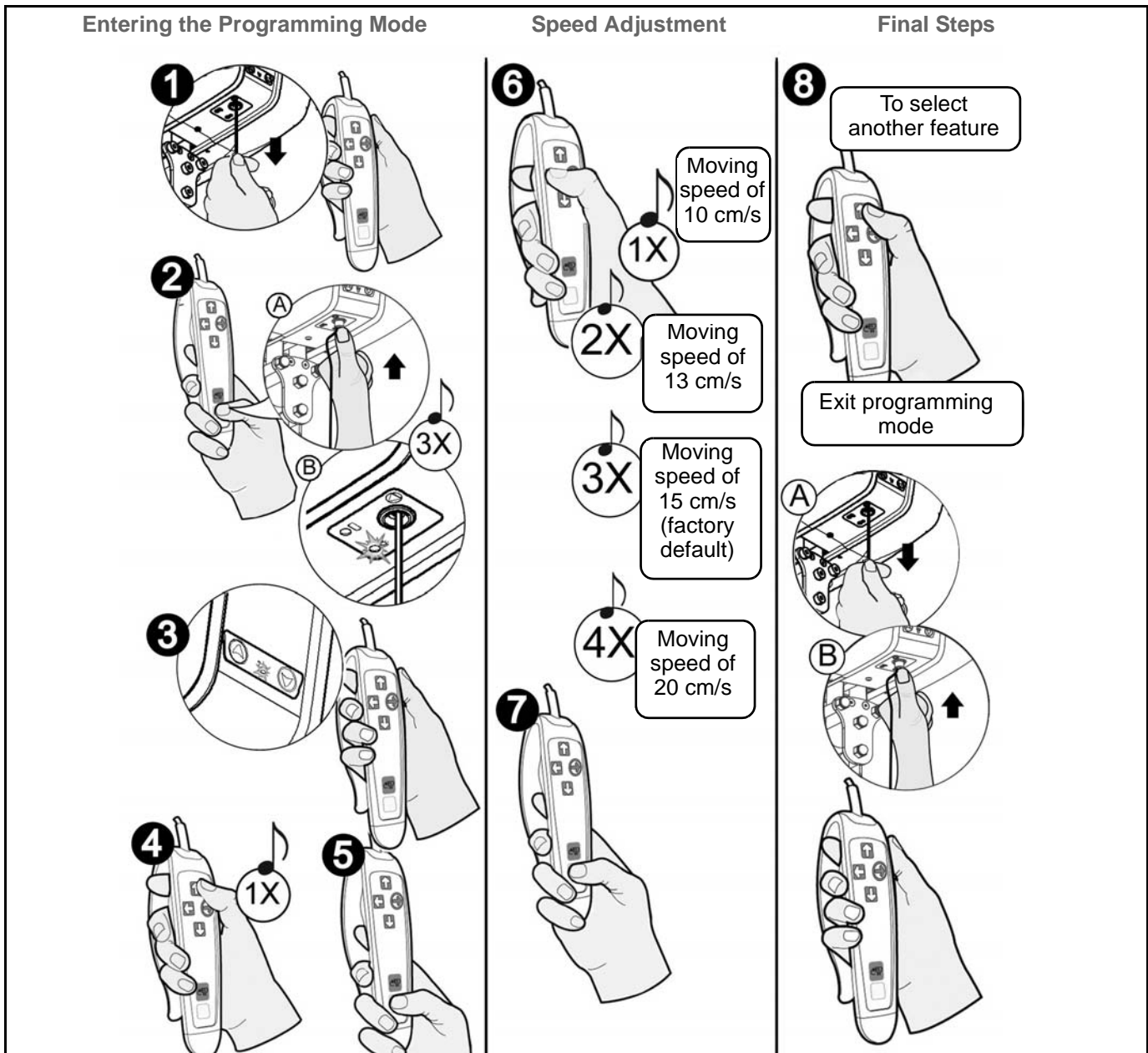


Fig. 29

Changing the Speed of Movement

- 1 Turn the ceiling lift off by pulling on the red cord. The green LED will turn off.
- 2 Press the PROG button on the hand control. At the same time, push the power on switch. The green light will flash, and you will hear three beeps.
- 3 The red LED will then illuminate. You can now release the PROG button.
- 4 Press once the UP button (you will hear one beep) for speed adjustment feature.
- 5 Now press the PROG button to confirm the selection.
- 6 Using the LEFT button, select one of four predetermined speeds.
- 7 Now press the PROG button to confirm the selected speed.
- 8 Press UP to continue within the programming mode, or to return to regular mode, pull on the red cord to turn the ceiling off. Push the power on switch. The lift will return to normal use.

Maxi Sky 1000 Programming

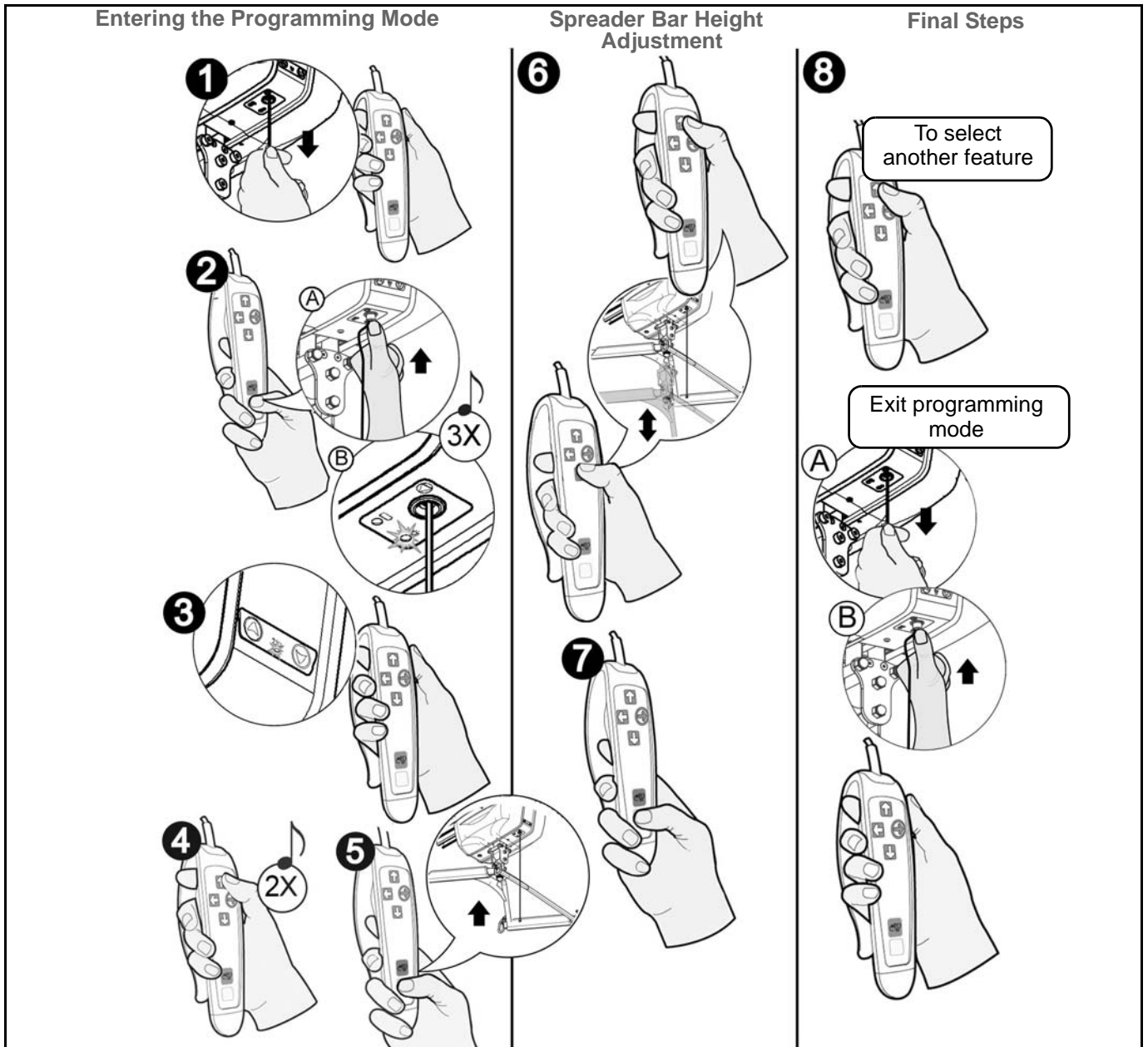


Fig. 30

Adjusting the Spreader Bar Height

- 1 Turn the ceiling lift off by pulling on the red cord. The green LED will turn off.
- 2 Press the PROG button on the hand control. At the same time, push the power on switch. The green light will flash, and you will hear three beeps.
- 3 The red LED will then illuminate. You can now release the PROG button.
- 4 Press the UP button twice (you will hear two beeps) to change the spreader bar height.
- 5 Now press the PROG button to confirm the selection.
- 6 The strap will begin winding up. Once it is completely wound up, press the UP and DOWN buttons to set the resting height of the spreader bar when the ceiling lift returns to the charging station.
- 7 Now press the PROG button to confirm the selected height.
- 8 Press UP to continue within the programming mode, or to return to regular mode, pull on the red cord to turn the ceiling off. Push the power on switch. The lift will return to normal use.

Maxi Sky 1000 Programming

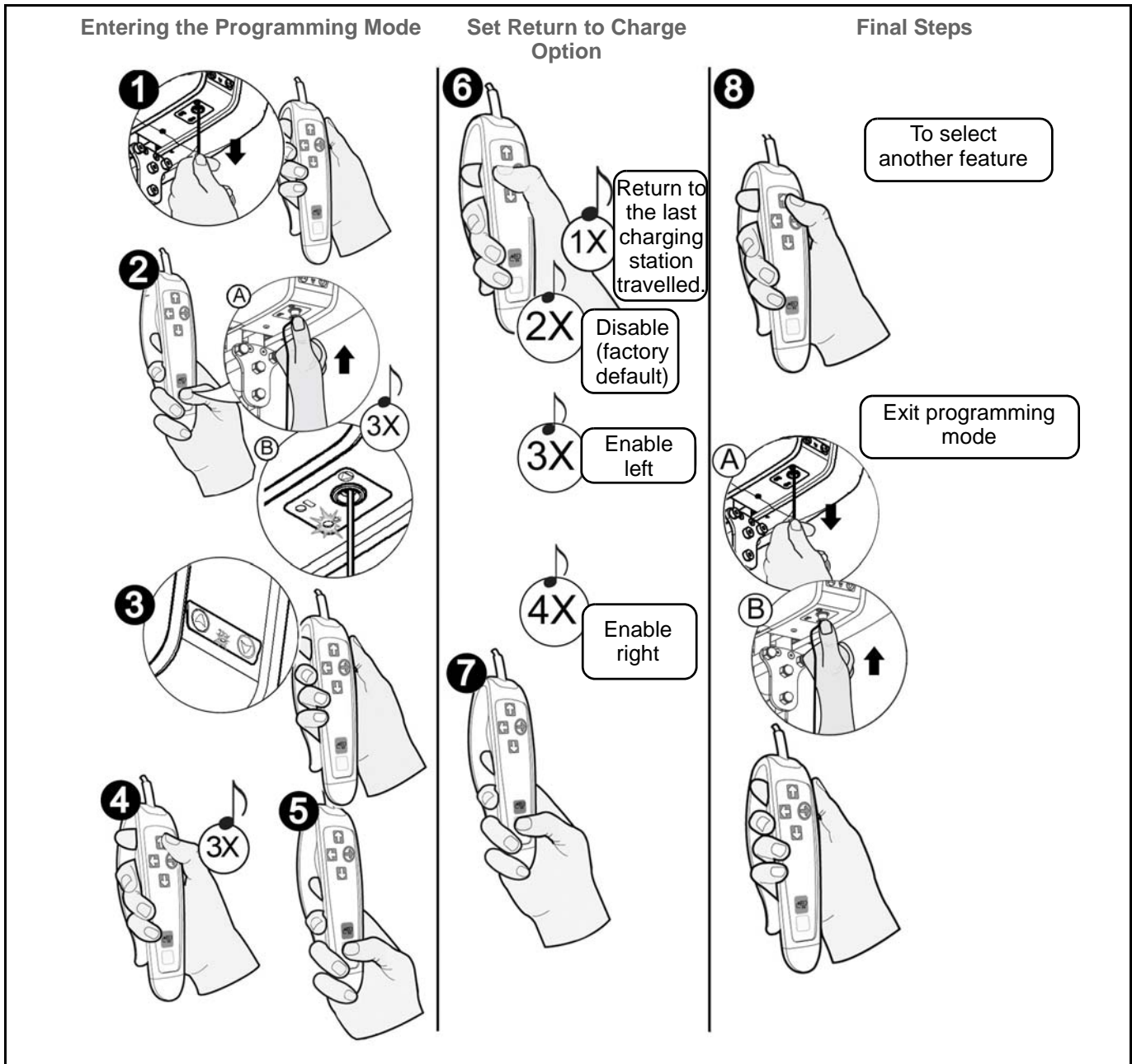


Fig. 31

Enable/Disable Return to Charge (RTC)

- 1 Turn the ceiling lift off by pulling on the red cord. The green LED will turn off.
- 2 Press the PROG button on the hand control. At the same time, push the power on switch. The green light will flash, and you will hear three beeps.
- 3 The red LED will then illuminate. You can now release the PROG button.
- 4 Press three times on the UP button (you will hear three beeps) to enable/disable the RTC.
- 5 Now press the PROG button to confirm the selection.
- 6 Using the left button, select one of the four predetermined selection.
- 7 Now press the PROG button to confirm the selected return to charge.
- 8 Press UP to continue within the programming mode, or to return to regular mode, pull on the red cord to turn the ceiling off. Push the power on switch. The lift will return to normal use.

Care and Maintenance

Preventive Maintenance Schedule

The product is subject to wear and tear, and the following maintenance instructions must be acted upon when specified to ensure that the product remains within its original manufacturing specifications. Care and maintenance must be carried out in accordance with the preventive maintenance schedule below.

The Maxi Sky 1000 is equipped with a maintenance monitoring device. The red light will flash when maintenance is necessary to ensure the durability of the unit and the security of the patient and user.

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 product without conducting regular inspections or when a fault is found may seriously compromise the safety of the user and of the patient. Service and preventive maintenance can be arranged with the manufacturer. 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.

User Inspections

Inspections for ceiling lift and track system	FREQUENCY					
	Initially	Before every use	Every two months or 500 cycles	Every four months or 1000 cycles	Every year or 2500 cycles	Every two years or 5000 cycles
Inspect for evidence of external damage, cracks, missing parts, broken panels or casing not properly aligned.	X	X				
Make sure that end stoppers and track caps are in place.	X	X				
Inspect strap for wear, discoloration or loose threads.		X				
Recharge batteries.	X	X				
Clean the track and the clip-on charging station contacts.				X		
Overall inspection by authorized personnel.					X	
Verify emergency stop cord.				X		
Verify emergency lowering device.				X		

Care and Maintenance

Inspections for spreader bar and slings	FREQUENCY					
	Initially	Before every use	Every two months or 500 cycles	Every four months or 1000 cycles	Every year or 2500 cycles	Every two years or 5000 cycles
Inspect all sling parts (attachments, fabric, stitch areas and strap) for signs of wear, discoloration, deterioration or loose threads.		X				
Clean sling as indicated on the tag.	When necessary					
Inspect the spreader bar for damage or cracks. Make sure all attachments are properly secured (e.g. split ring, clevis pins).		X			X	

Inspections by an Authorized Service Technician

Inspection for ceiling lift	FREQUENCY					
	Initially	Before every use	Every two months or 500 cycles	Every four months or 1000 cycles	Every year or 2500 cycles	Every two years or 5000 cycles
Replace strap.						X
Inspect frame parts interlock and hardware for malfunction and make sure there are no parts missing.					X	
Inspect gears for wear.					X	
Inspect connecting joints for proper attachment (trolley and spreader bar).					X	
Verify that the emergency brake on the drum is moving freely.					X	
Verify emergency lowering mechanism.					X	
Load test with the SWL (safe working load) recommended.					X	
Inspect wheels in track for damage, rust or cracks. Replace if damaged.					X	

Care and Maintenance

Inspections for tracks	FREQUENCY					
	Initially	Before every use	Every two months or 500 cycles	Every four months or 1000 cycles	Every year or 2500 cycles	Every two years or 5000 cycles
Make sure track joints are closed and that the spring pins are centered.	X				X	
Make sure the track is straight when it is not loaded.	X				X	
Make sure the SWL of the lift is equal or lower than the safe working load of the installation.	X				X	
Make sure that the attachments (ceiling brackets, wall post) have not been displaced.	X				X	
Inspect track end stoppers. Inspect and tighten hardware (if necessary). Torque end stoppers to 20 N. m. (15 lbf.ft).					X	

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 1000 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 in Fig. 32. These are most likely to enclose germs. Use a smaller brush and/or cotton swab to reach them.

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 petroleum-based solvents, as this may damage plastic parts.

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

Maxi Sky 1000's Special Areas to Clean

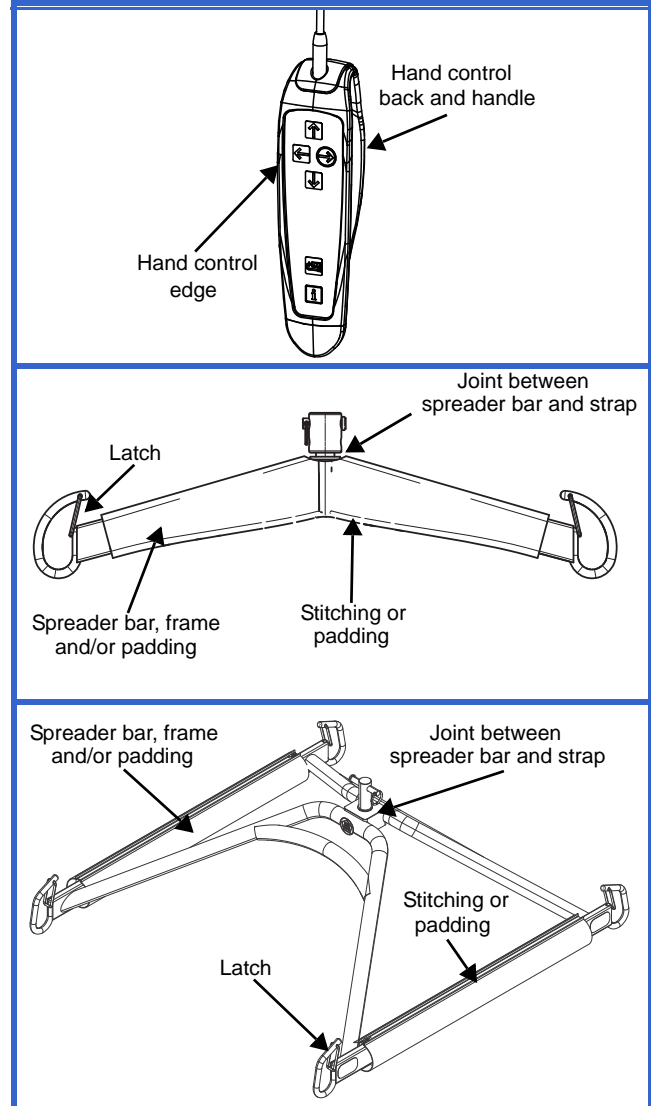


Fig. 32

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

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 straps every 2 months as follows:

- 1) Completely unwind the strap.
- 2) Look for any signs of wear or discoloration (see Fig. 33 below).

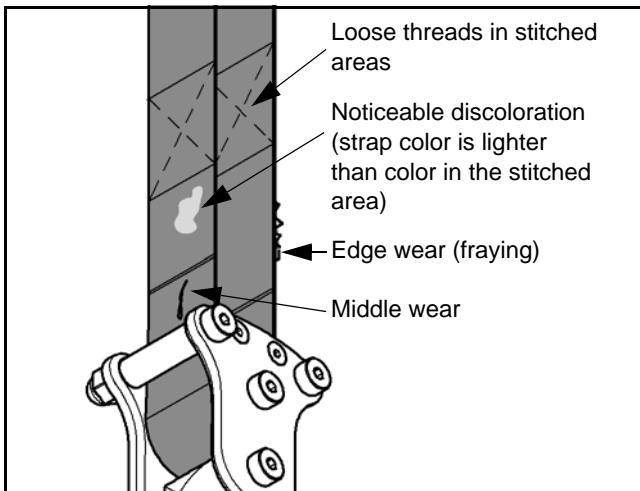


Fig. 33

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

NOTE: The manufacturer recommends changing the strap at least every two years or 5000 transfers, whichever comes first.

Handling 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 two weeks. This will prevent premature aging of batteries.

If you store or ship the Maxi Sky 1000, ensure that the power is turned off by verifying that the red emergency cord has been pulled and that the green light is off (see Fig. 3 for parts reference).

Battery Replacement

Replace the batteries when there is a noticeable reduction in the number of transfers that can be performed between charges.

To replace batteries, contact your local ArjoHuntleigh agent.

Sling Inspection and Care

See the documentation included with the sling.

Annual Inspection

WARNING: The Maxi Sky 1000 lift and accessories must be serviced by a qualified technician every 12 months as a minimum requirement. This inspection is mandatory to ensure the safe use of the device for the patient and caregiver.

Maintenance Requirements

The Maxi Sky 1000 is equipped with an electronic monitor that causes a red light to flash when a maintenance is necessary. Arranging for scheduled inspections ensures the durability of the unit and the security of the patient and user.

Once this red light begins to flash, please contact your local ArjoHuntleigh agent in order to perform necessary maintenance.

Troubleshooting

PROBLEM	TO CHECK
The light does not illuminate when there are batteries correctly installed in the Maxi Sky 1000.	<ul style="list-style-type: none"> • Make sure that the charger is correctly plugged into the AC outlet, and that the green light on the clip-on charging station is on. • Make sure that there is contact between the contact blades of the lift and the contacts of the charging station. • Check the AC wall outlet for power. • If the charging station's green light does not light up, contact your local ArjoHuntleigh agent for assistance.
The red "service" light is on and flashing.	<ul style="list-style-type: none"> • Contact your local ArjoHuntleigh agent to do maintenance.
The red light is solid.	<ul style="list-style-type: none"> • The ceiling lift is in overheat protection. Wait between 10 to 30 minutes until the red light turns off and press on the UP button to use the ceiling lift again.
The unit starts and stops repeatedly.	<ul style="list-style-type: none"> • If the load is over the safe working load, the unit will not work due to the overload protection on the motor.
The ceiling 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"> • Batteries may be low. Return the ceiling lift to the charging station.
The charger indicator (amber) on the ceiling lift does not light up when the lift is on the charger.	<ul style="list-style-type: none"> • Check that the charger is plugged into a mains outlet, and that the outlet has power. The green light on the clip-on charging station indicates that it is functioning.
When returning to charge, the ceiling lift passes the clip-on the charging station or goes in the wrong direction.	<ul style="list-style-type: none"> • Clean the contacts of the charging station with mild detergent. Pass the ceiling lift through the charging station using the handset controls once, then retry the return to charge function.
Batteries are always dead after only a few transfers (3 to 5).	<ul style="list-style-type: none"> • Verify the function of the ceiling lift charger and the contacts of the clip-on charging station. • Make sure lift is charging when it is under the charging station (amber light is flashing). • Contact your local ArjoHuntleigh agent to have the batteries replaced.
The amber light on the unit is solid, yet the ceiling lift will only perform one or two transfers.	<ul style="list-style-type: none"> • Contact your local ArjoHuntleigh agent to have batteries replaced.
The amber light on the unit is solid, yet the ceiling lift will only work when there is no one on the lift. When you try to transfer someone, the ceiling lift stops.	<ul style="list-style-type: none"> • Contact your local ArjoHuntleigh agent to have the batteries replaced.

Troubleshooting

PROBLEM	TO CHECK
<p>The ceiling lift does not work when you press the buttons on the hand control.</p>	<ul style="list-style-type: none"> • If the charging station light is on, move the ceiling lift away from the charging station in order to operate the lift. • If the emergency stop is activated, push the power on switch until the green light is on. • Check if the buttons on the ceiling lift cassette are working. If so, the problem may be coming from the hand control. If not, check the charge on the ceiling lift. • Check the hand control cables. • Slide the ceiling lift over the clip-on charging station. Verify if the amber light turns on. • If, after testing all of the above, the ceiling lift will not operate, contact your local ArjoHuntleigh agent.
<p>The charging light on the ceiling lift continues flashing amber and the light does not turn solid even after recharging the unit overnight.</p>	<ul style="list-style-type: none"> • If available, try another integrated clip-on charging station from another ceiling lift, or a spare one; clip it to the track and charge the unit for 3 hours. If the amber light is still flashing, contact your local ArjoHuntleigh agent. • If, after testing all of the above, the ceiling lift will not operate, contact your local ArjoHuntleigh agent.
<p>When you press the button to return the ceiling lift to its charger, the ceiling lift goes past the charger.</p>	<ul style="list-style-type: none"> • The charger is either plugged in properly into the mains outlet or is not working properly. Contact your local ArjoHuntleigh agent.
<p>ECS: Battery indicator LED does not light up.</p>	<ul style="list-style-type: none"> • Push on the red cord plastic insert to turn the cassette on (for units with infrared hand controls, pull the red emergency cord). • Verify that the electrical outlet has power. • Verify that the charger is connected to the ECS cable adaptor on the fixed rail. • Verify that all extensions used are connected. • Contact your local ArjoHuntleigh agent.

Labels on the Lift

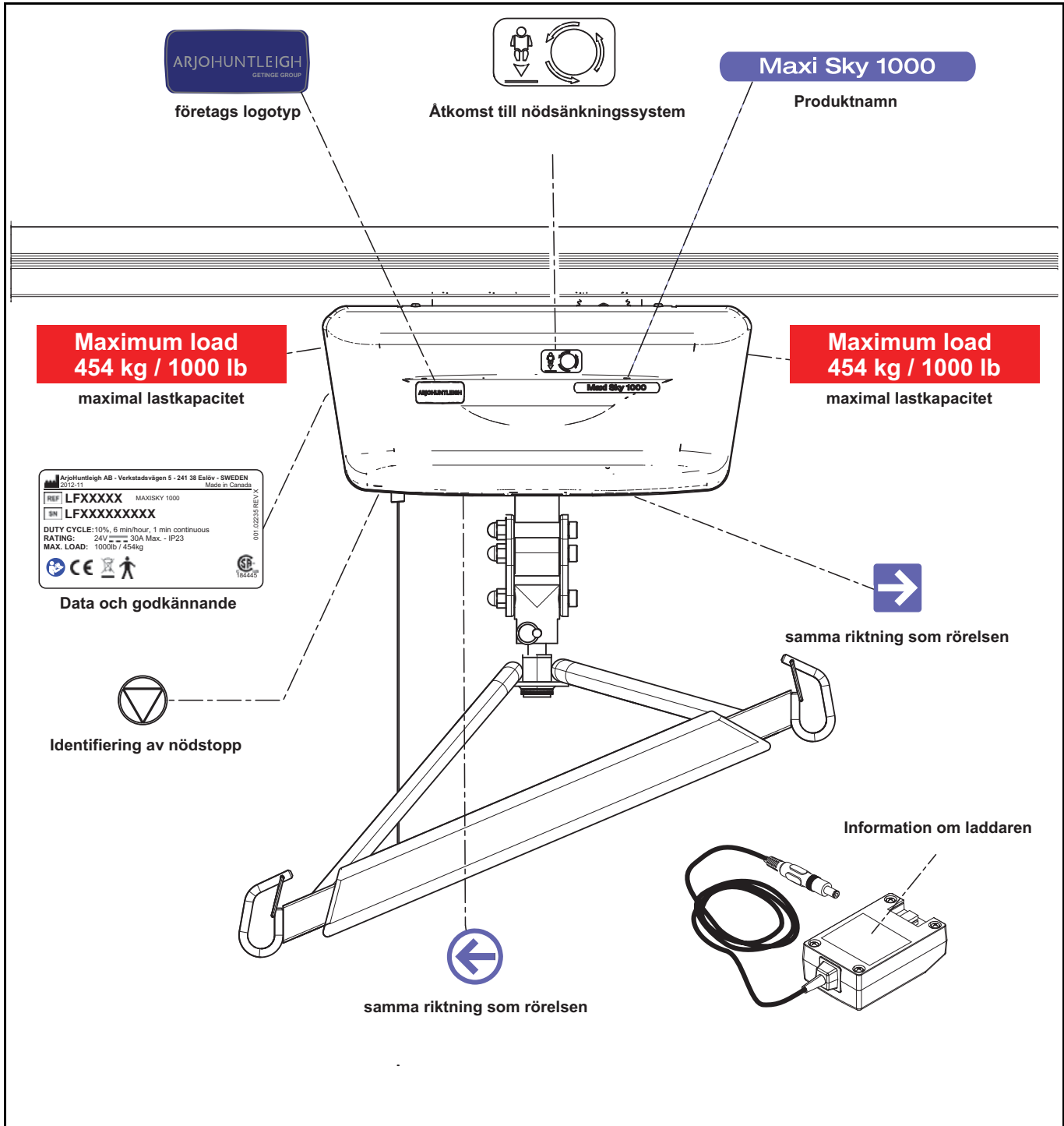


Fig. 34

Technical Specifications

PRODUCT INFORMATION		Maxi Sky 1000
Weight, complete		22 kg (48 lb)
Lifting capacity		454 kg (1000 lb)
Strap length		2300 mm (90.6 in)
Lifting speed		6.0 cm/s (2.4 in/s) without load 3.5 cm/s (1.4 in/s) at 230 kg (500 lb) 2.7 cm/s (1.2 in/s) at 454 kg (1000 lb)
Maximum stroke (from ceiling)		2300 mm (90.6 in)
Horizontal displacement speeds		10, 13, 15 and 20 cm/s. Speed is 15 cm/s (6 in/s) by default
Horizontal axis motor		24 VDC, 62 watts
Vertical axis motor (qty 2)		24 VDC, 110 watts
Operating force of control		< 5 N
ELECTRICAL		
Duty cycle		Max 10%, 6 min/hour, 1 minute continuously
Rating		24 VDC, 30 A max.
Noise level for either raising or lowering, with or without load		61 dBA max.
Medical equipment		Type BF protection against electrical shock in accordance with IEC 60601-1
The Maxi Sky 1000 is compliant with CAN/CSA C22.2 No. 601.1 (SUP1+AM2), UL 60601 1, CAN/CSA-C22.2 No. 60601-1-08, ANSI/AAMI ES60601-1: 2005 and ISO 10535: 2006.		
<p>WARNING: Wireless communications equipment such as wireless home network devices, mobile phones, cordless telephones and their base stations, walkie-talkies, etc. can affect the Maxi Sky 1000 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.</p>		
Battery type		Sealed rechargeable valve regulated lead acid battery Rating: 2 X 12 V, 7.5 Ah
Battery capacity		Provides up to 80 transfers with a load of 230 kg (500 lb), up to 25 transfers with a load of 454 kg (1000 lb).
Degree of protection - Hand control		IPX7
Degree of protection - Maxi Sky 1000		IP23
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
Battery Charger safety protection		Class 2, double insulated
OPERATION AND STORAGE CONDITIONS		
Ambient temperature range		Operation: 5 °C to 40 °C (41 °F to 104 °F) Storage: -25 °C to + 70 °C (-13 °F to 158 °F)
Relative humidity range		Operation: 15 % to 93 %, non-condensing Storage: Up to 93 %, non-condensing
Atmospheric pressure range		Operation: 700 hPa to 1060 hPa (2000 m Max) Storage: 500 hPa to 1060 hPa
<p>WARNING: This equipment is not suitable in the presence of flammable anesthetic mixtures with air or oxygen, or with nitrous oxide. Using the Maxi Sky 1000 in this environment might lead to an explosion. The lift might create some spark internally and ignite the gaz.</p>		
RECYCLING		
Battery		Sealed lead-acid, rechargeable, recyclable
Package		Cardboard recyclable
The lift		Separated and recycled, according to the European Directive 2002/96/EG (WEEE).

Technical Specifications

Lift Dimensions

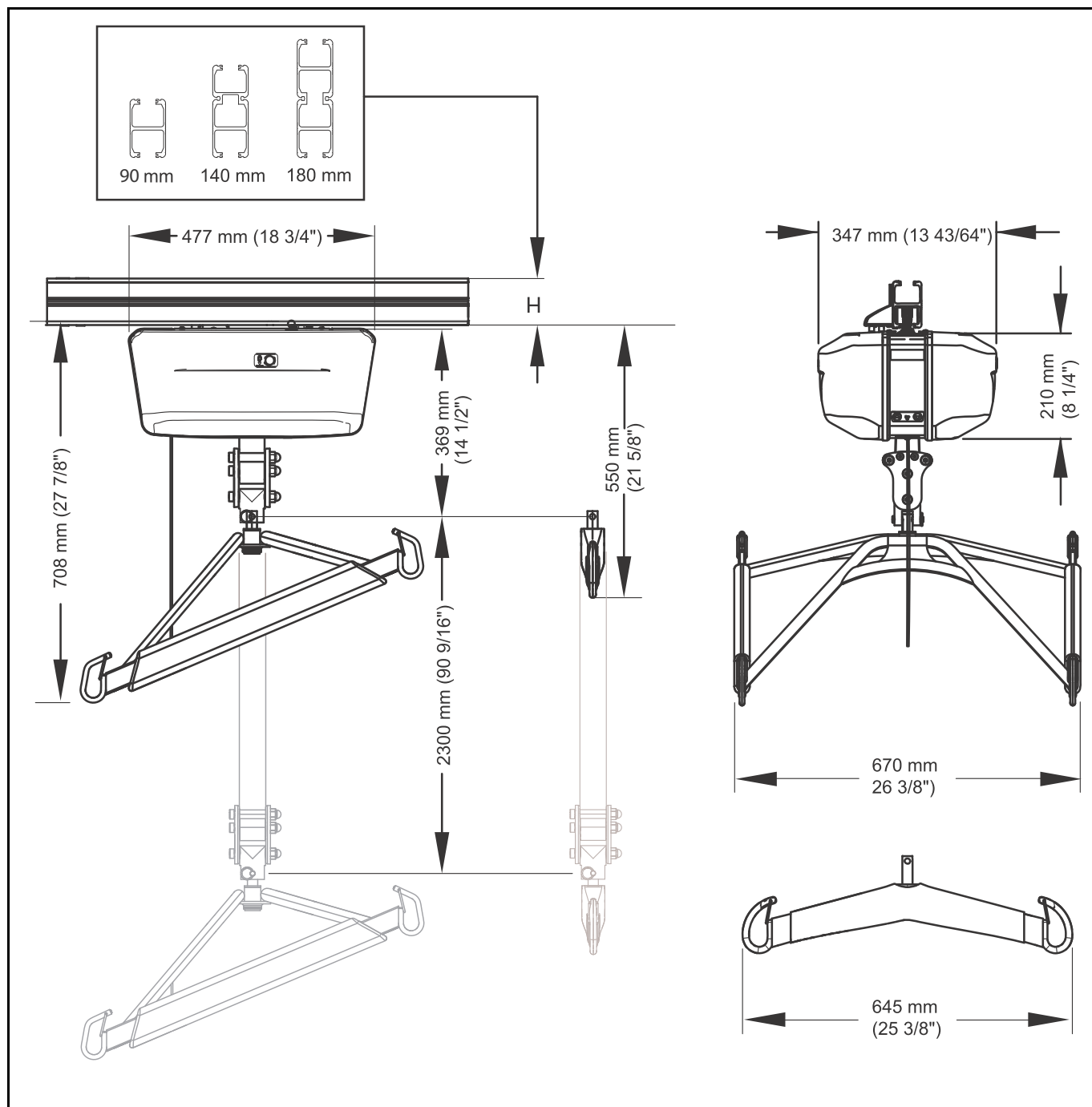


Fig. 35

Electromagnetic Compatibility

Electromagnetic Compliance

The Maxi Sky 1000 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 ceiling 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		
The Maxi Sky 1000 is intended for use in the electromagnetic environment indicated below. The customer or the user of the Maxi Sky 1000 should assure that it is used in such an environment.		
Emissions test	Compliance	Electromagnetic environment - guidance
RF emissions CISPR 11	Group 1	The Maxi Sky 1000 uses RF energy only for its internal function. Therefore, its RF emissions are very low and are not likely to cause any interference in nearby electronic equipment.
RF emissions CISPR 11	Class B	The Maxi Sky 1000 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.
Harmonic emissions	Class A	
Voltage fluctuations/flicker emissions IEC 61000-3-3	Complies	


Electromagnetic Compatibility

Electromagnetic Immunity

Guidance and Manufacturer's Declaration - Electromagnetic Immunity For all Equipment and Systems			
The Maxi Sky 1000 is intended for use in electromagnetic environment specified below. The customer or the user of the Maxi Sky 1000 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 61000-4-4	±2 kV for power supply lines ±1 kV for input/output lines	±2 kV for power supply lines ±1 kV 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	±1 kV differential mode ±2 kV for input/output	Mains power quality should be that of a typical commercial or hospital environment.
Voltage dips, short interruptions and voltage variations on power supply input lines IEC 61000-4-11	<5% <i>UT</i> (>95% dip in <i>UT</i>) for 0.5 cycle 40% <i>UT</i> (60% dip in <i>UT</i>) for 5 cycles 70% <i>UT</i> (30% dip in <i>UT</i>) for 25 cycles <5% <i>UT</i> (>95% dip in <i>UT</i>) for 5 sec.	<5% <i>UT</i> (>95% dip in <i>UT</i>) for 0.5 cycle 40% <i>UT</i> (60% dip in <i>UT</i>) for 5 cycles 70% <i>UT</i> (30% dip in <i>UT</i>) for 25 cycles <5% <i>UT</i> (>95% dip in <i>UT</i>) for 5 sec.	Mains power quality should be that of a typical commercial or hospital environment.
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: <i>UT</i> is the AC mains voltage prior to application of the test level.			

Electromagnetic Compatibility

(continued)

Guidance and Manufacturer's Declaration - Electromagnetic Immunity For Equipment and Systems that are Not Life-Supporting			
Immunity test	IEC 60601 test level	Compliance level	Electromagnetic environment - guidance
Conducted RF IEC 61000-4-6	3 Vrms 150 kHz to 80 MHz	10 Vrms 150 kHz to 80 MHz	<p>Portable and mobile RF communications equipment should be used no closer to any part of the Maxi Sky 1000, including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter.</p> <p>Recommended separation distance:</p> $d = \left[\frac{3,5}{10} \right] \sqrt{P}$ <p style="text-align: right;">150 KHz TO 80 MHz</p> $d = \left[\frac{3,5}{10} \right] \sqrt{P}$ <p style="text-align: right;">80 MHz to 800 MHz</p> $d = \left[\frac{7}{10} \right] \sqrt{P}$ <p style="text-align: right;">800 MHz to 2.5 GHz</p> <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)</p> <p>Interference may occur in the vicinity of equipment marked with the following symbol:</p> 
			<p>Radiated RF IEC 61000-4-3</p> <p>3 V/m 80 MHz to 2.5 GHz</p> <p>10 V/m 80 MHz to 2.5 GHz</p>
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.			
<p>(a) Field strengths from fixed transmitters, such as base stations for radio (cellular/cordless) telephones and land mobile radios, amateur radio, AM and FM radio broadcast and TV broadcast cannot be predicted theoretically with accuracy. To assess the electromagnetic environment due to fixed RF transmitters, an electromagnetic site survey should be considered. If the measured field strength in the location in which the Maxi Sky 1000 is used exceeds the applicable RF compliance level above, the Maxi Sky 1000 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 1000.</p>			
<p>(b) Over the frequency range 150 kHz to 80 MHz, field strengths should be less than 3 V/m.</p>			

Electromagnetic Compatibility

(continued)

Recommended Separation Distance Between Portable and Mobile RF Communications Equipment and the Maxi Sky 1000 For Equipment and Systems that are not Life-Supporting

Recommended separation distances between portable and mobile RF communications equipment and the Maxi Sky 1000.

The Maxi Sky 1000 is intended for use in electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of the Maxi Sky 1000 can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communication equipment (transmitters) and the Maxi Sky 1000 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	80 MHz to 800 MHz	800 MHz to 2.5 GHz
	$d = \left[\frac{3,5}{10} \right] \sqrt{P}$	$d = \left[\frac{3,5}{10} \right] \sqrt{P}$	$d = \left[\frac{7}{10} \right] \sqrt{P}$
0.01	0.04	0.05	0.07
0.1	0.11	0.11	0.22
1	0.35	0.35	0.70
10	1.11	1.11	2.21
100	3.5	3.5	7

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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