

ARJO

# MAXI TWIN™

Operating and Product Care Instructions



04.KT.00/1GB  
May 2006



CE

# Introduction

---

**GETINGE GROUP** is a leading global provider of equipment and systems that contribute to quality enhancement and cost efficiency within healthcare and life sciences. Equipment, services, and technologies are supplied under the brands **ARJO** for patient hygiene, patient handling and wound care, **GETINGE** for infection control and prevention within healthcare and life science and **MAQUET** for surgical workplaces, cardiopulmonary and critical care.

ARJO strongly advise and warn that only ARJO designed parts, which are designed for the purpose, should be used on equipment and other appliances supplied by ARJO, to avoid injuries attributable to the use of inadequate parts.

Unauthorized modifications on any ARJO equipment may effect its safety. ARJO will not be held responsible for any accidents, incidents or lack of performance that occur as a result of any unauthorized modification to its products.

© ARJO Hospital Equipment AB 2006

ARJO products are patented or patent pending. Patent information is available by contacting ARJO Hospital Equipment AB.

Our policy is one of continuous development, and we therefore reserve the right to make technical alterations without notice. The content of this publication may not be copied either whole or in part without the consent of ARJO Hospital Equipment AB

# Contents

---

SECTION	Page No.
Foreword.....	4
Safety Instructions .....	5
Product description/function.....	6-10
Parts referred to in this manual.....	6
Slings .....	7
Control Handset.....	9
Emergency stop button (red) .....	9
System failure emergency lowering .....	9
Automatic cutout .....	9
Adjustable width chassis legs.....	10
Chassis castor Brakes .....	10
Jib and spreader bars .....	10
Using your Maxi Twin.....	11-20
Before approaching the patient.....	11
Powered opening 'V' chassis.....	11
Maxi Twin 'quick release' system .....	11
Using the DPS spreader bar.....	12
To lift from a chair.....	12
To lift from a bed.....	14
To raise from the floor .....	15
Powered DPS spreader bar (if fitted).....	17
Using the loop spreader bar .....	18
To lift from a chair.....	18
To lift from a bed.....	19
To raise from the floor .....	20
Lift Battery charging.....	21
Care of your Maxi Twin .....	22-24
Sling care and cleaning.....	22
Lift care and cleaning .....	22
Periodic Testing .....	23
Service Advice.....	23
Labels.....	24-25
Technical Specification.....	26-27
Component weights .....	26
Electrical .....	26
Maximum capacities .....	27
Lift Dimensions .....	28

# Foreword

---

## General

Your Maxi Twin is part of a series of quality products designed especially for hospitals, nursing homes and other health care uses.

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

Techniques described in these instructions for fitting slings and lifting patients from a reclining position can be used for patients regardless of where they may be lying, on the bed or on the floor.

Similarly, lifting a patient from a chair employs the same techniques as when lifting a patient from a wheelchair or from a sitting position on the edge of a bed.

All references to the patient in these instructions refer to the person being lifted, and references to the attendant refer to the person who operates the Maxi Twin.

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

These instructions specifically show both the four-point clip attachment slings being used with the standard Dynamic Positioning System (DPS) and the loop attachment slings with the three point spreader bar. The same methods and techniques described for the standard DPS can also be applied to the optional "Open Style" DPS.

**NOTE!**

All versions of the Maxi Twin shown in this manual are not available on all markets.

## Intended Use

Maxi Twin is a mobile passive lift. Maxi Twin is intended to be used for lifting and transfer in hospitals, nursing homes or other health care facilities for the different categories of residents/patients.

where the resident/patient;

- sits in a wheelchair
- has no capacity to support him/herself
- cannot stand unsupported and is not able to bear weight, not even partially
- is dependent on the caregiver in most situations

or, where the resident/patient;

- is passive
- might be almost and/or completely bedridden
- is often stiff or has contracted joints
- is totally dependent on the caregiver.

Maxi Twin shall always be handled by a trained caregiver and in accordance with the instructions outlined in these Operating and Product Care Instructions.

Maxi Twin is intended to be used with ARJO slings. Only use ARJO-supplied slings that are designed to be used with Maxi Twin.

### Battery charger

This charger is intended for charging ARJO battery NEA 0100 only, outlined in these Operating and Product Care Instructions.

All other use must be avoided.

## Conditions

- The unit is cared for and serviced in accordance with recommended, published "Operating and Product Care Instructions" and the "Preventive Maintenance Schedule".
- The unit is maintained to the minimum requirements as published in the "Preventive Maintenance Schedule".
- The servicing and product care, in accordance with ARJO requirements, must begin on first use of the unit by the customer.
- The equipment must be used for its intended purpose only and is operated within the published limitations.
- Only ARJO designated spare parts should be used.
- The actions (marked S) described in the "Preventive Maintenance Schedule" must be carried out by qualified personnel, using correct tools and knowledge of procedures. Failure to meet these requirements could result in personal injuries and/or unsafe product.

## Operational Life

The expected operational life of your ARJO lift is 10 (ten) years from the date of manufacture, providing the following conditions are adhered to:-

The operational life of the sling is dependent on the actual use conditions. Therefore, Before use, always make sure that the sling, loops, cords and straps do not show signs of fraying, tearing or other damage and that there is no damage, (i.e. cracking, bending, breaking) to the attachment clips. If any form of damage is found do not use the sling.

The expected life for other consumable products, such as batteries, fuses, lamps, gel cushions, filters, seal kits, seat inserts, mattresses, safety belts, padded covers, straps and cords is dependent upon the care and usage of the equipment concerned. Consumables must be maintained in accordance with published "Operating and Product Care Instructions" and the "Preventive Maintenance Schedule".


## Policy on number of staff members required for resident/patient transfer


ARJO's passive and active series of lifts are designed for safe usage with one caregiver. There are circumstances, such as combativeness, obesity, contractures etc. of the individual that may dictate the need for a two person transfer. It is the responsibility of each facility and a professional medical person to make a determination if a one or two person transfer is more appropriate, based on task, resident load, environment, capability, and skill level of the staff member.

# Safety Instructions

Before using your Maxi Twin, familiarise yourself with the various parts and controls and please read this manual thoroughly in its entirety before using your Maxi Twin. Information in the manual is crucial to the proper operation and maintenance of the equipment, and will help protect your product and ensure that the equipment performs to your satisfaction. Some of the information in this booklet is important for your safety and must be read and understood to help prevent possible injury. If there is anything in the manual that is confusing or difficult to understand, please call ARJO or their appointed distributor (the telephone number appears on the last page of this manual).

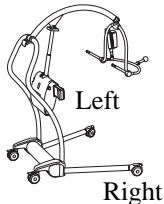
Symbols used adjacent to the text in these instructions:-


 **Warning:** Means:- failure to understand and obey this warning may result in injury to you or to others.

 **Caution:** Means:- failure to follow these instructions may cause damage to all or parts of the system or equipment.


• **Note:** Means:- this is important information for the correct use of this system or equipment.


This product has been designed and manufactured to provide you with trouble free use, however, this product does contain components that with regular use are subject to wear.


 The directions right or left on the Maxi Twin are given as shown in the illustration.


 **Warning:** SOME OF THESE PARTS ARE SAFETY CRITICAL TO THE OPERATION OF THE LIFT AND WILL NEED EXAMINING AND SERVICING ON A REGULAR BASIS AND MUST BE REPLACED WHEN NECESSARY.

See also “Care of your Maxi Twin” section.

 **Warning:** Use only ARJO slings that have been specifically designed for the Maxi Twin.

 **Warning:** Before lifting a patient, a clinical assessment of the patients’ condition and suitability to be lifted should be carried out by a qualified person.


 **Warning:** Patients with spasms can be lifted, but special attention should be paid to supporting the patient’s legs.

 **Warning:** Do not overload the Maxi Twin beyond the approved lifting capacity of the lowest rated attachment/accessory.


The Maxi Twin may be used on gentle slopes with caution.


Care should be taken when manually lifting alternative/optional components e.g. spreader bars, to avoid injury.

Do not attempt to manually lift the complete lift.

 **Caution:** Although manufactured to a high standard the Maxi Twin and accessories should not be left for extended periods in humid or wet areas.

Do not under any circumstances spray the Maxi Twin or accessories (excluding slings or ARJO approved wet environment equipment) with water e.g. under the shower.

 **Warning:** It is advisable to familiarise yourself and understand the operation of the various controls and features of the Maxi Twin and ensure that any action or check specified is carried out before commencing to lift a patient.

 **Warning:** The ARJO Maxi Twin has been designed as a mobile lift for raising and transporting patients in hospitals and care facility environments, and should only be used for this purpose.

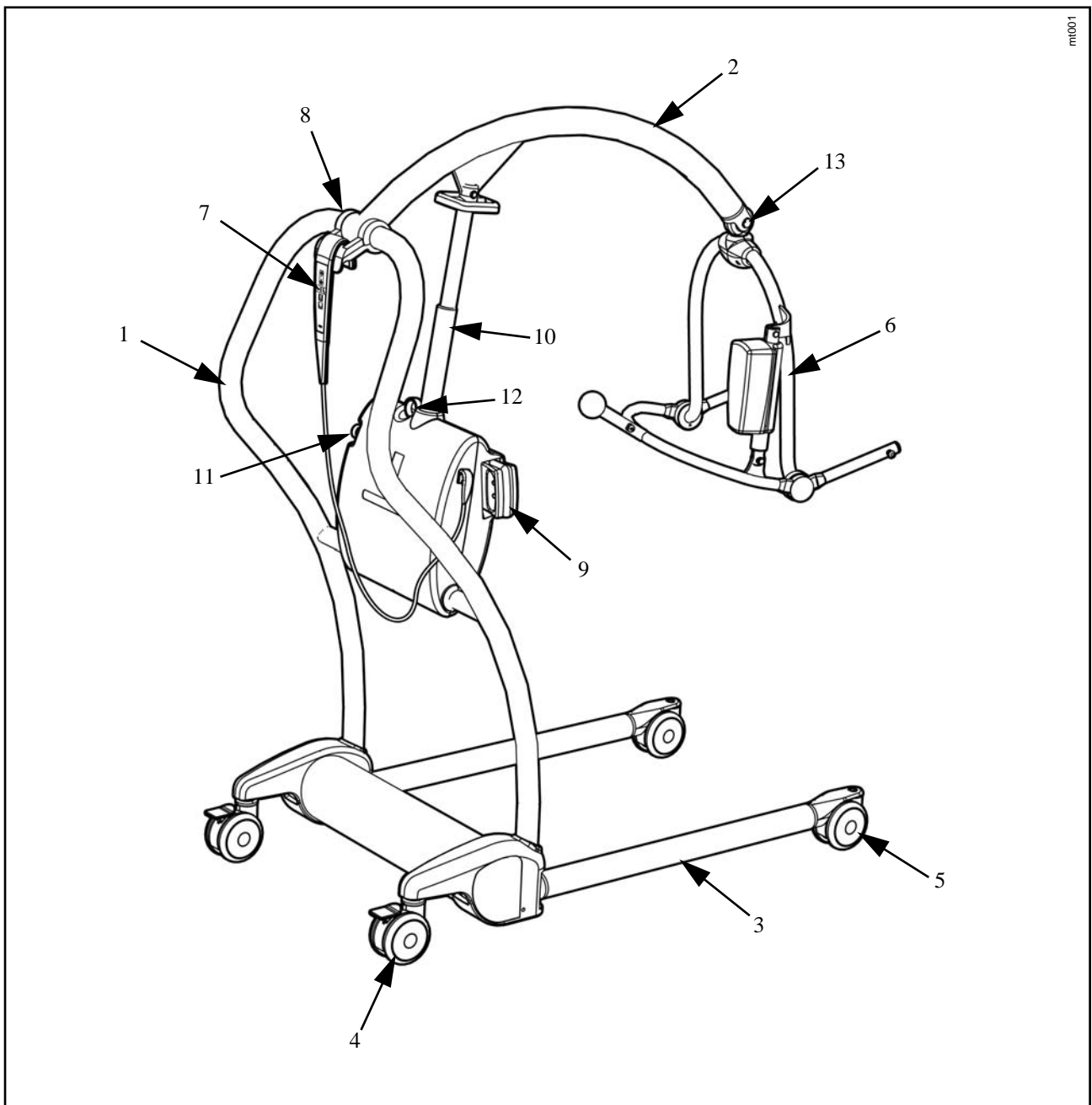
The ARJO Maxi Twin can be supplied with a variety of optional attachments, which may not be described in these instructions. If your Maxi Twin has been fitted with an alternative/optional sub assembly then always refer to the separate relevant operating instructions supplement, as well as these instructions, before attempting to operate the lift.

This product is intended to be operated entirely by an attendant. No functions regarding the control of this product should be performed by the patient. A second attendant may be required with certain patients.

# Product Description/Function

## Parts referred to in this manual

1. Mast/Lift manoeuvring handle
2. Jib
3. Adjustable chassis legs
4. Braked castors (rear)
5. Non-braked castors (front)
6. Powered DPS spreader bar
7. Control handset
8. Handset hang point
9. Lift battery pack
10. Main lift actuator
11. Emergency stop button/Reset button
12. System failure -Emergency lowering
13. Pivot bolt (for dedicated spreader bar)  
Quick release pin (for detachable spreader bars)



# Product Description/Function

---

## Slings

- Note: All ARJO slings are coded for size by having different coloured edge binding as follows:

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

Make sure never exceed the **safe working load of the sling or the lift.**

A label is fitted to the hanger frame for quick colour to size reference (see “Labels” section).

A range of special purpose slings are available as accessories, for these or for special size slings, contact your ARJO representative.



Warning: Only use ARJO supplied slings that are designed to be used with Maxi Twin. The sling profiles illustrated will help to identify the various ARJO slings available.

If ARJO Flites (disposable slings) are to be used with the Maxi Twin, then always refer to the separate operating instructions for ARJO Flites, (literature reference part No. MAX01720), as well as these instructions before using.

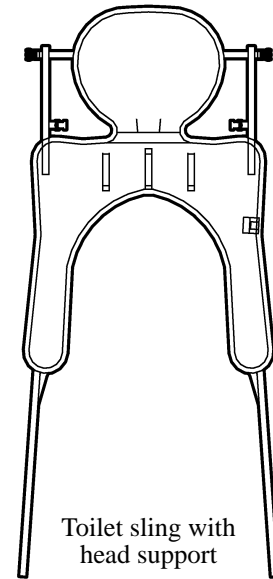


Warning: ARJO slings with head support have two pockets at the head section which contain plastic reinforcement pieces during use. Always ensure these reinforcement pieces have been inserted into the sling pockets before using the sling.

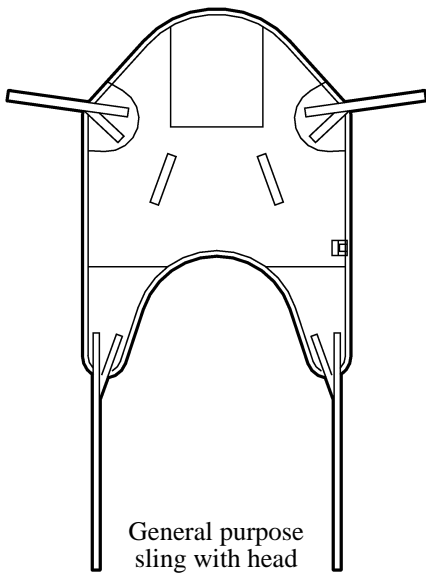
# Product Description/Function

## ARJO standard sling profiles that can be used with the Maxi Twin

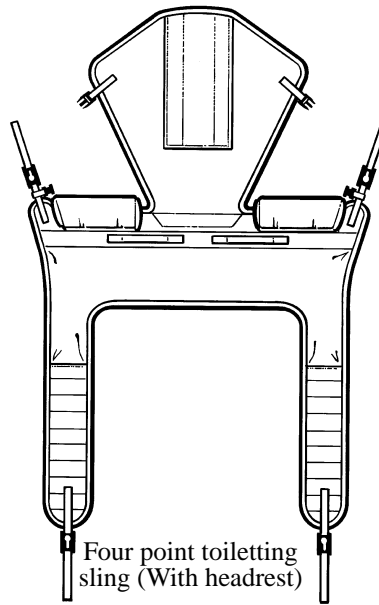
mp1271max1e



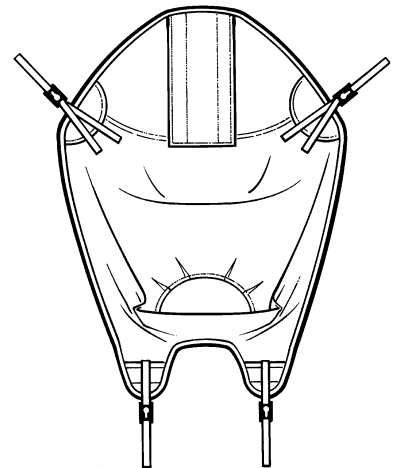
Toilet sling with head support



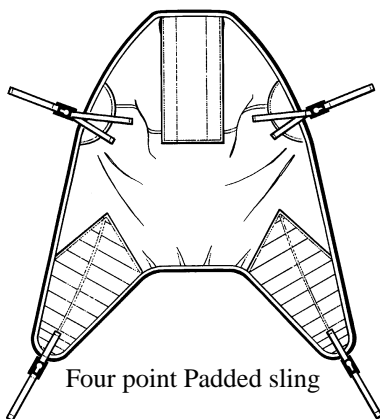
General purpose sling with head support



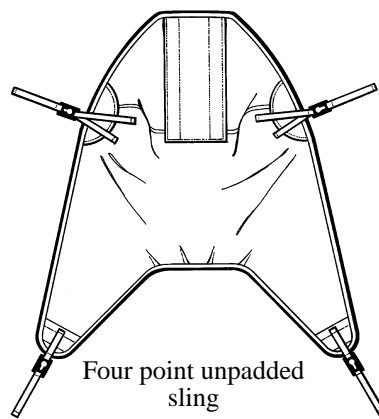
Four point toileting sling (With headrest)



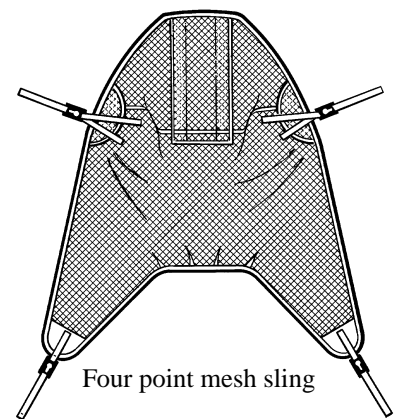
Four point amputee sling



Four point Padded sling



Four point unpadded sling



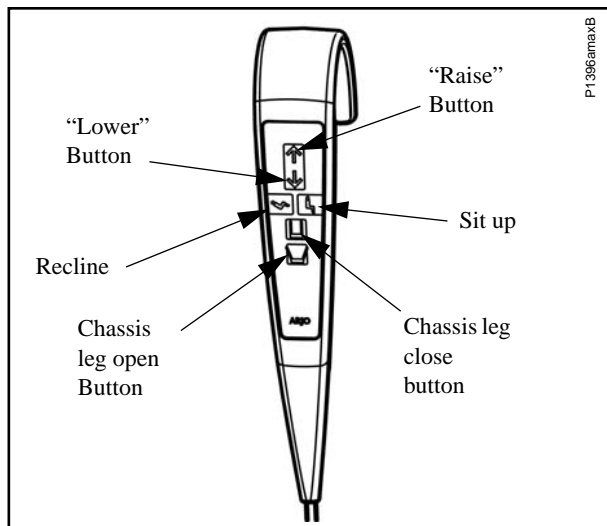
Four point mesh sling



# Product Description/Function

## Controls and features

**Control Handset:-** Raising and lowering the jib and opening and closing the chassis legs, is achieved by pressing the appropriate button on the control handset. Note: icons with direction arrows are printed on each button for quick reference.

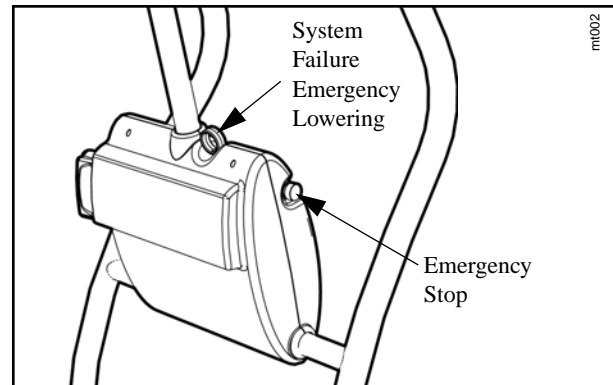


If pressure is released during any function powered motion will cease immediately. Do not drop the handset into water, e.g.: bath etc., although if this does happen inadvertently no harm will come to patient or attendant.

When not in use, the handset can be conveniently kept ready for use by hooking it over the handset hang point at the top of the mast.

**Emergency Stop Button (Red):-** (see below) If, in an emergency, you have to immediately stop any powered movement, (other than by releasing pressure on the control handset button), press the "emergency stop button", situated on the side of the main lift actuator cover.

Once the emergency stop button has been operated, it will have to be reset before any powered movement can be utilised.



**System Failure Emergency Lowering:-** (see above) This can be used in the event of main control failure. In the unlikely event that the control handset fails to operate the lift, with a patient still supported by the sling, provision for lowering has been made, using the "System Failure Emergency Lowering" control, situated on the top of the main lift actuator housing, a green and white identification label is positioned near the control for quick and easy recognition. Pull the control up to operate, release the control during use and lowering will stop.

**NOTE!** Due to internal friction, the speed of lowering vary depending on the weight of the patient. You may have to assist the downwards movement by pulling down the jib.

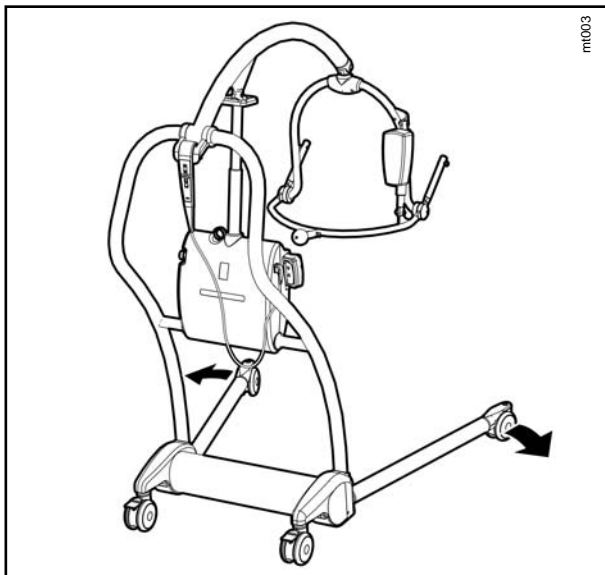
**Automatic cut out:-** (not an operator control but a function built into the lift electronics)

If the lift is inadvertently overloaded (trying to lift a patient heavier than permitted), an automatic 'cut out' operates to prevent the lift lifting a load in excess of one and a half times the maximum rated load; this will stop the lift motion automatically.

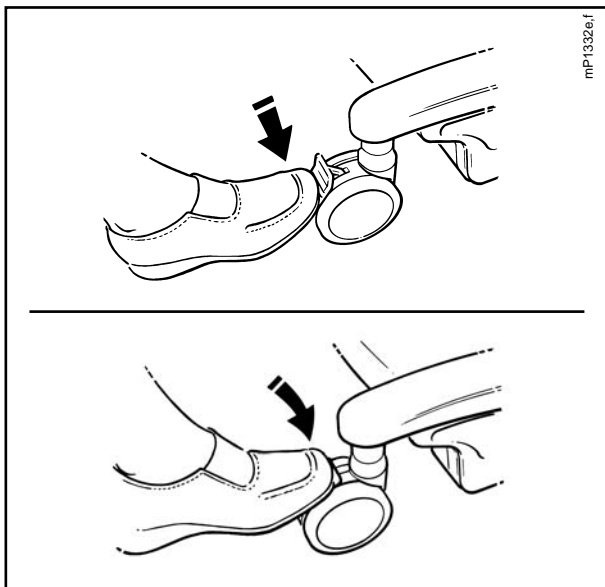
If this occurs, when pressure is released from the lift button on the handset, after a short delay the electronics will reset and enable the patient to be lowered only by pressing the lower button. Remove the patient from the lift.

# Product Description/Function

**Adjustable width chassis legs:-** By operating the appropriate button on the control handset the chassis legs can be opened to any variable width. When pressure is released from the button, movement will stop and the chassis legs will remain securely in position. Always transport with the chassis legs in the parallel (closed) position.

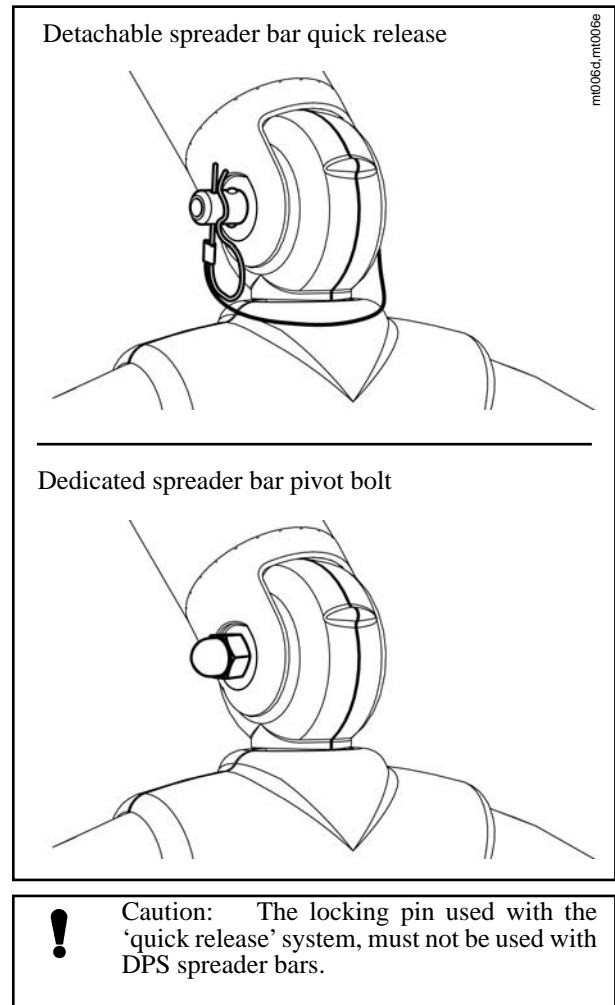


**Chassis castor Brakes:-** The chassis rear castors have brakes which can be foot operated to keep the Maxi Twin in position.



**Jib and spreader bars:-** If your Maxi Twin has not been supplied with a 'dedicated' or permanently attached, spreader bar, then it will be supplied with the 'quick release' system jib. This jib is fitted with a carrier, able to accommodate any of the Maxi Twin Loop spreader bars (see "Using your Maxi Twin" section for full instructions on fitting or changing attachments).

The illustration below shows the two systems available.



# Using your Maxi Twin

## Before approaching the patient

Ensure the battery pack supplied is fully charged before use (for charging, see instructions in “Lift Battery Charging” section). When the battery pack is fully charged remove it from the charger unit and insert it into the battery position of the Maxi Twin situated on the side of the main lift actuator housing.

- Note: The battery is shaped so that only correct fitment to the lift is possible with the raised edge of the battery upper most.

Push the battery firmly into place. Electrical connection will be made automatically.

Ensure a selection of sling types and sizes are easily available for all types of lift likely to be encountered when using the ARJO Maxi Twin.

The attendant should always tell the patient what they are going to do, and have the correct size sling ready. Where possible, always approach the patient from the front.



**Warning:** To ensure maximum patient comfort, do not allow the patient to hold onto the spreader bar.

If required, the chassis legs may be opened to go around a chair or wheelchair.

## Powered opening ‘V’ chassis

Select the appropriate button on the control handset and keep it depressed until the required width is achieved. To close, press the appropriate button. Movement will stop if pressure is released, whether opening or closing.

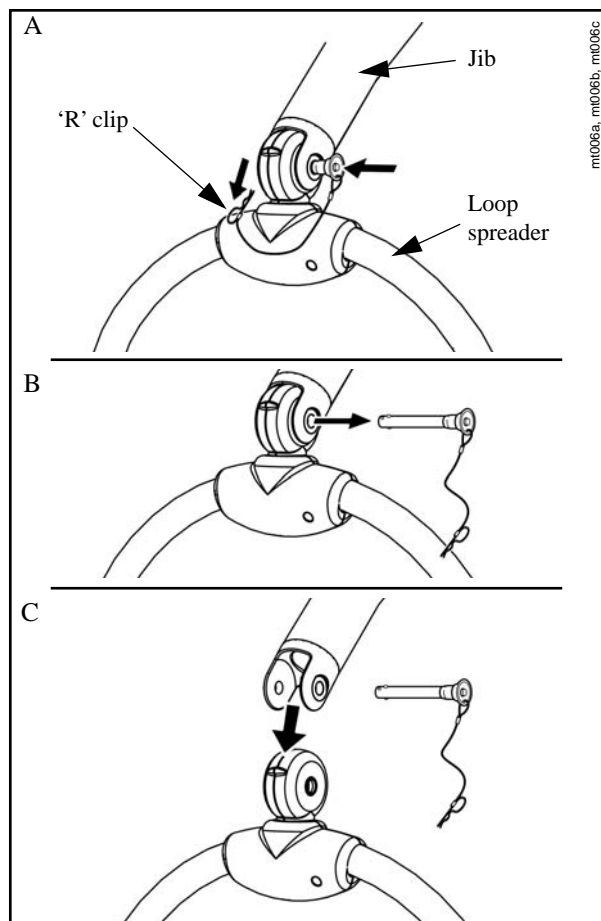


**Warning:** When opening or closing the legs on a powered chassis, care must be taken not to allow anyone to stand in the way of the moving chassis legs.

Transport the Maxi Twin with the chassis legs in parallel (closed) position only.

## Maxi Twin ‘quick release’ system

If your Maxi Twin has not been supplied with a ‘dedicated’ or permanently attached, spreader bar, then it will be supplied with the ‘quick release’ system jib. If you need to fit or change the attachment, (i.e. spreader bar) proceed as follows.

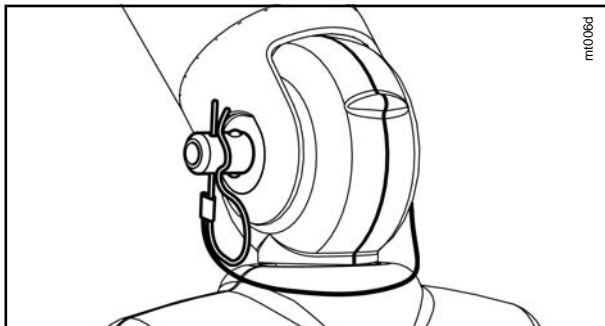


To remove an existing attachment; first, remove the ‘R’ clip from the locking pin. Then support the attachment and depress the button on the end of the locking pin (shown in (A) above). Keeping the attachment supported and the button depressed, withdraw the locking pin (shown in (B) above), then lower the attachment down and away from the jib (shown in (C) above). Store the attachment carefully for future use.

Fitting an attachment is the reverse of the above procedure, carefully lift the attachment up into position, depress the button on the end of the locking pin and push the locking pin into position. Finally, replace the ‘R’ clip through the end of the locking pin.

# Using your Maxi Twin

Correctly installed, the two balls on the locking pin shaft should be clearly visible, and the 'R' clip fitted as illustrated below.



**Warning:** Before use always check that the locking pin is pushed fully into position and the 'R' clip is fitted.



**Warning:** Care must be taken when the weight of the attachment comes away from the jib.

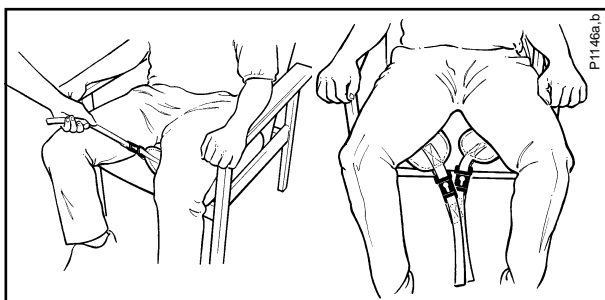
For larger attachments or if in any doubt about being able to lift and hold the attachment securely use more than one person for the operation, or support the attachment on a bed or chair.

## Using the DPS spreader bar

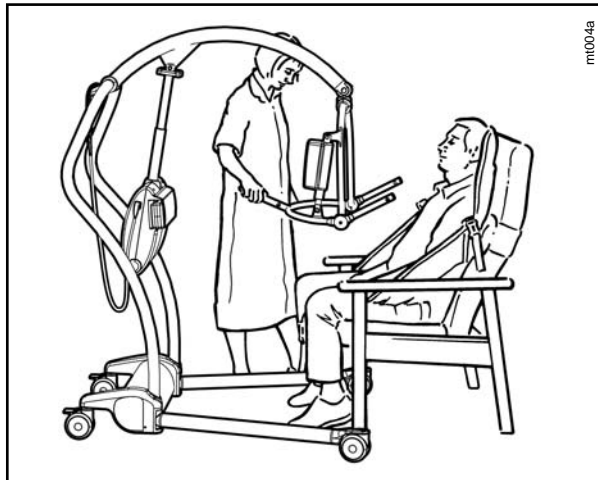
Ensure the DPS spreader bar is securely connected to the jib before commencing with the lifting procedure.

## To Lift from a Chair

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



Ensure the positioning handle on the spreader bar is facing away from the patient, and that the wide part of the spreader bar is at, or just below shoulder level.



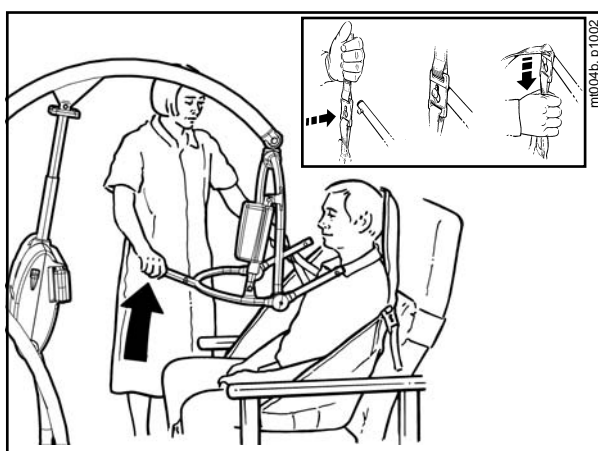
Ensure that the Maxi Twin is close enough to be able to attach the shoulder clips of the sling to the spreader bar. To accomplish this you may have to put the patients feet on, or over the chassis.



**Warning:** When fitting and lifting using the sling with the DPS spreader bar, ensure the patients hands and arms are at all times kept inside the sling. Do not allow the patient to 'hold on' to the hanger frame.

Once the Maxi Twin is in position, attach the shoulder strap attachment clips to the pegs on the spreader bar.

- Note:** The chassis rear castors have brakes which can be foot operated when required. Do not apply the castor brakes at this stage, as the position of the patient will adjust to his/her own centre of gravity when lifted.

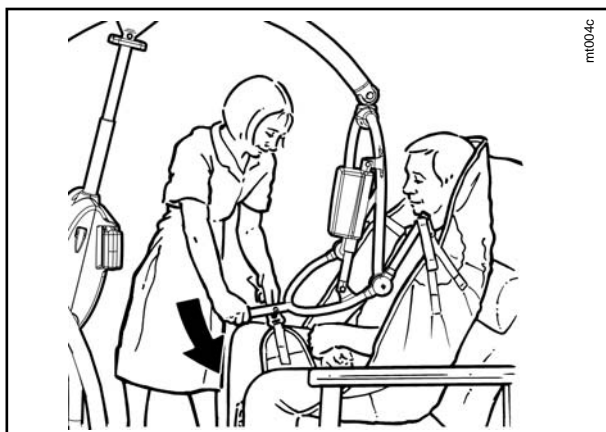


# Using your Maxi Twin



**Warning:** Apply the castor brakes to keep the Maxi Twin in position on a sloping surface.

Press down on the positioning handle of the spreader bar and attach the leg strap attachment clips.



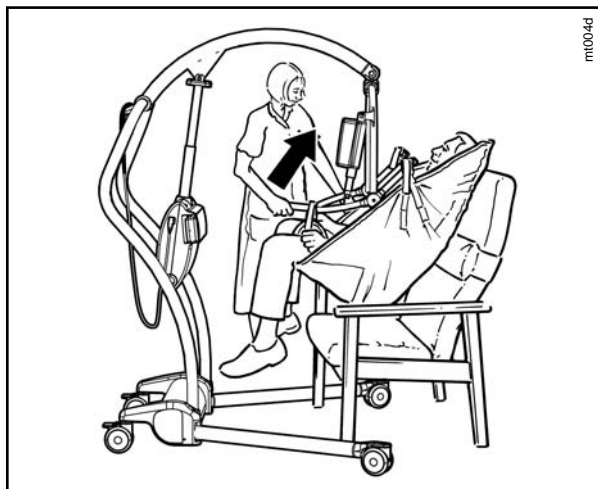
If necessary, lower the spreader bar using the handset control, being careful not to lower it onto the patient. Although if this should happen do not continue to press the handset lowering button.

- **Note:** If the handset button is released during lifting or lowering, powered motion will stop immediately.

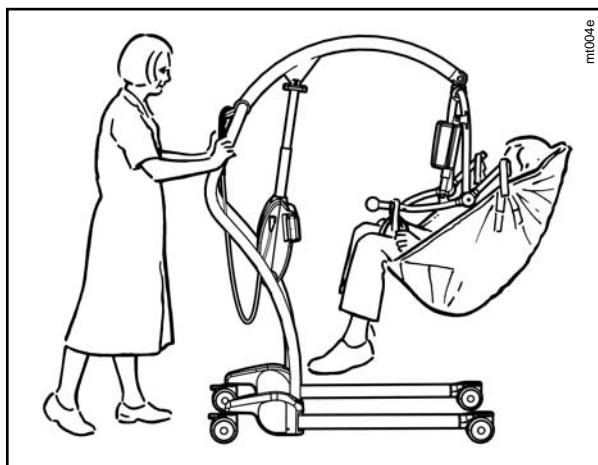


**Warning: IMPORTANT:** Always check that the sling attachment clips are fully in position before and during the commencement of the lifting cycle, and in tension as the patient's weight is gradually taken up.

Raise the patient by operating the handset control, move the lift away from the chair then carefully lift the positioning handle until the patient is reclined in the sling - the head support will now come into use. This is the most comfortable position for transportation, as it reduces pressure on the thighs. The angle of recline can be adjusted for increased comfort if the patient is restless.



Before transportation, turn the patient to face the attendant at approximately normal chair height. This gives confidence and dignity and also improves the Maxi Twin's stability.



Remember to release the brakes, if they have been applied, before attempting to transport the patient.

When lowering the patient back into a chair - or when transferring from bed to chair - push down on the positioning handle to put the patient into a good sitting position. This avoids further lifting effort. Take care not to push down too quickly, as this may jerk the patient's head forward.



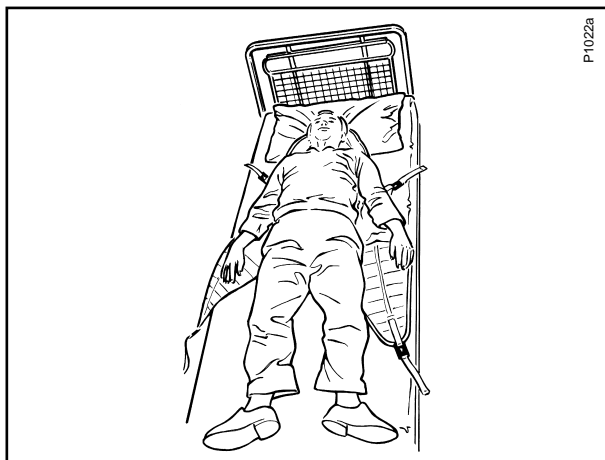
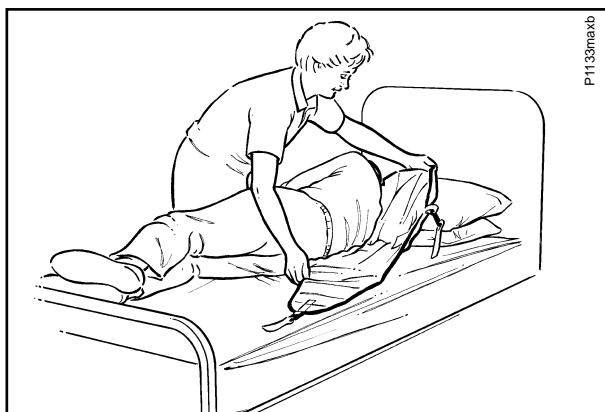
**Warning:** When lowering the lift ensure that the patient's or attendant's legs and feet are well clear of the moving mast.

# Using your Maxi Twin

## To Lift from a Bed

Before lifting a person from a bed, ensure there is sufficient clearance underneath to accommodate the Maxi Twin chassis legs.

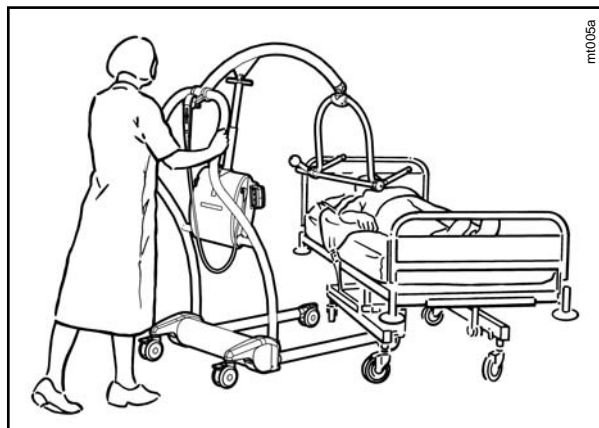
Position the patient onto the sling by rolling the patient towards you then folding the sling in half and placing it behind the patient's back. Position the sling carefully so that when rolled back the patient will lie centrally on the sling and check that the head support area of the sling covers the patient's neck.



- **Note:** When rolling the patient back onto the sling, roll the patient slightly in the opposite direction so that the folded part of the sling can be brought out.

Alternatively, the patient can be brought into a sitting posture then position the sling as detailed in the section "To Lift From A Chair".

Approach the bed with the open side of the spreader bar towards the patient's head.

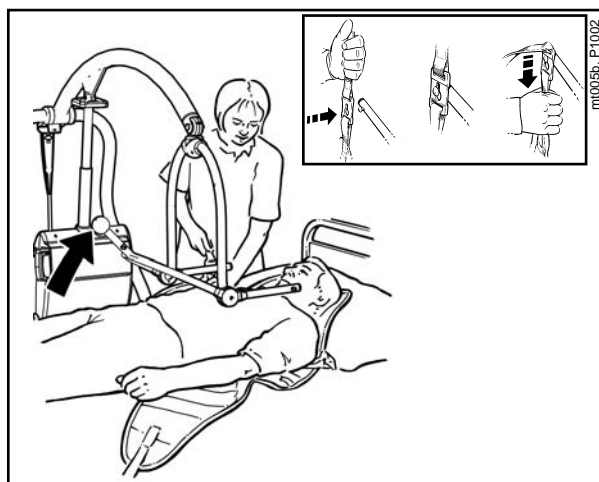


Using the adjustable width chassis, it is possible to make adjustments to chassis leg widths to assist manoeuvrability around obstructions, for example, bed legs.

Position the Maxi Twin so that the spreader bar is just above, and centrally situated over the patient.



**Warning:** Care must be taken not to lower the spreader bar onto the patient.

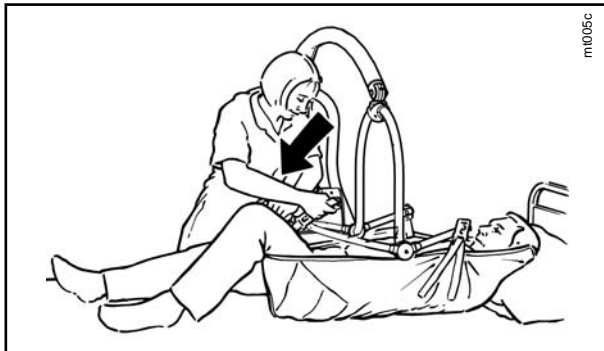


Using the positioning handle, tilt the spreader bar until the shoulder attachment points can be connected to the sling shoulder strap attachment clips.

Press down on the positioning handle until connection of the sling leg pieces is possible. The leg pieces must be brought under the thighs to connect up, this may involve lifting one leg at a time to connect up. You may need to lower the spreader bar a little more, using the handset control.



# Using your Maxi Twin

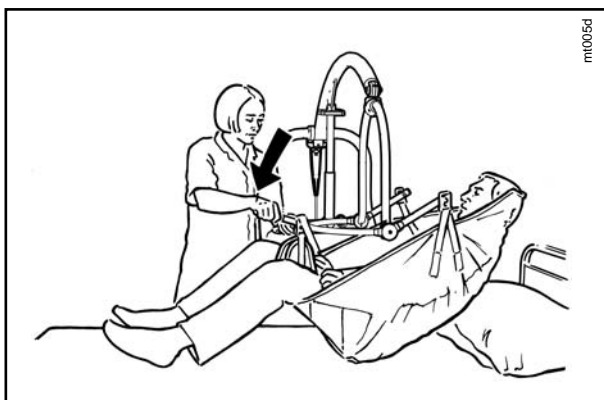


When lifting from the bed, some attendants prefer to connect the leg pieces first. This particularly applies to patients with large thighs. In this case, raise the hip and knee into maximum flexion, and attach the leg strap attachment clips, then tilt the spreader bar towards the shoulders for connection.



**Warning: IMPORTANT:** Always check that the sling attachment clips are fully in position before and during the commencement of the lifting cycle, and in tension as the patient's weight is gradually taken up.

Lift the patient using the handset control, and adjust to a comfortable position for transfer. The specially designed sling together with its' integral head support, enables one person to carry out the complete lifting function without additional help.



If returning the patient to a bed, move into the desired position above the bed adjusting the sling position as necessary, and then lower using the handset control.



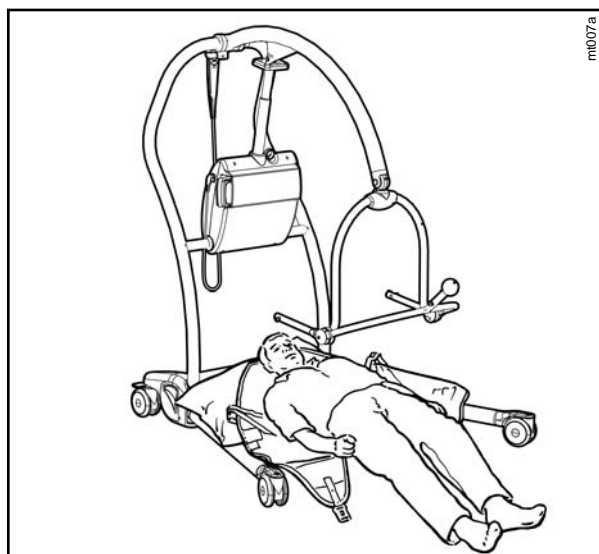
**Warning:** When lowering the lift ensure that the patient's or attendant's legs and feet are well clear of the moving parts.

Only when the patient's body weight is fully supported by the bed may the sling leg connection clips be detached, followed by the shoulder connections.

Move the Maxi Twin away before removing the sling under the patient. If transferring the patient to a chair refer to the section "To Lift from a Chair".

## To raise from the floor

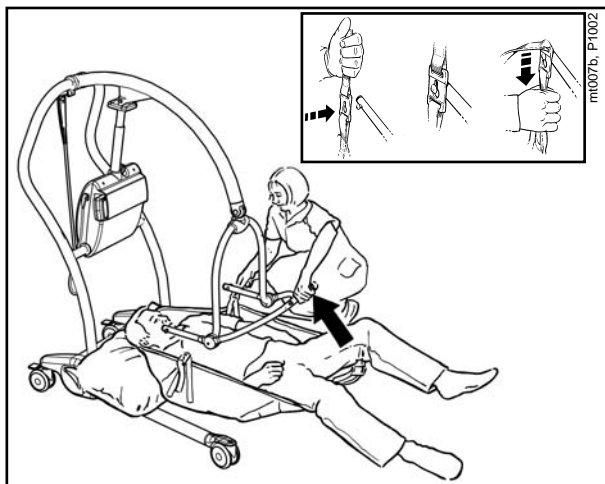
Put the sling around the patient as before, by using the rolling or sitting up method. Depending on circumstances, space and/or position of patient etc. approach the patient with the open part of the chassis. Open the chassis legs if necessary.



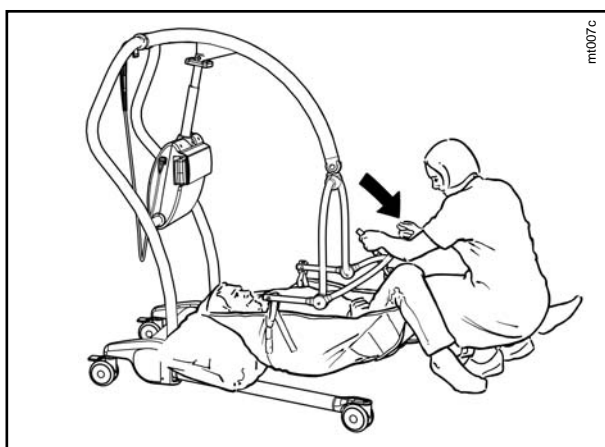
The patient's head and shoulders could be raised on pillows for comfort, if required, but this is not essential when connecting up the sling to the spreader bar.

# Using your Maxi Twin

With the open part of the spreader bar pointing down towards the shoulders, attach the shoulder strap attachment clips.



Once connected, raise the hip and knee into maximum flexion, and push down on the positioning handle in order to connect the leg strap attachment clips. This will have the effect of raising the patient's head and shoulders slightly.



**Warning: IMPORTANT:** Always check that the sling attachment clips are fully in position before and during the commencement of the lifting cycle, and in tension as the patient's weight is gradually taken up.

When lifting from the floor, some attendants prefer to connect the leg pieces first. This in particular applies to the very large patient with large thighs. In this case, raise the hip and knee into maximum flexion, and attach the leg straps first, then tilt the spreader bar towards the shoulders to enable the shoulder straps to be connected.

When all the straps have been properly connected, raise the patient from the floor in a semi-recumbent position. Supporting the head can be comfortable and reassuring for the patient. The leg sections of the sling will tend to be fairly high in the crotch, so straighten them out for added comfort. The patient may be positioned in a chair, or placed onto a bed. If the patient is prone to extensor spasm, he/she may be lifted by the Maxi Twin, but special attention should be paid to supporting the head during the early part of the lift.

When lifting patient's with leg amputations, use an amputee sling (available as an accessory from ARJO). This sling is specially designed to accommodate the differing patient centre of gravity.



**Warning:** When lowering the lift ensure that the patient's or attendant's legs and feet are well clear of the moving parts.

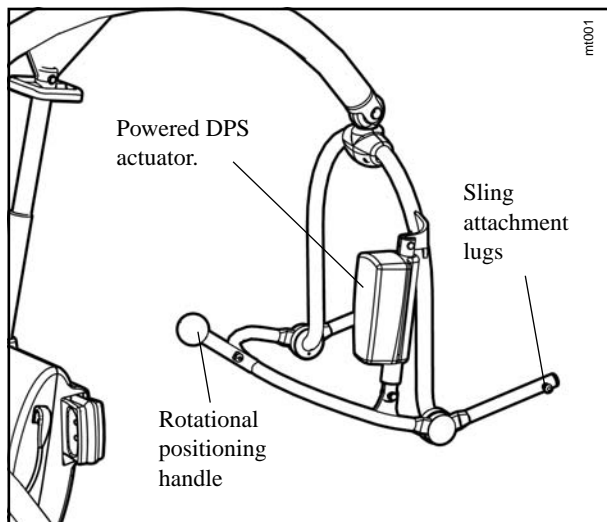
Transportation of a patient should always be done with the chassis legs parallel (closed) manoeuvrability will be easier, especially through doorways, with the chassis legs closed. The patient should be positioned facing the attendant.



# Using your Maxi Twin

## Powered DPS spreader bar (if fitted)

If your lift has been supplied fitted with a powered DPS spreader bar, the use of this type of spreader bar including sling positioning with patient, sling connection to the spreader bar, and patient handling, is the same as the non-powered DPS spreader bar described previously in these instructions.



The fundamental difference being, the powered DPS spreader bar has the added advantage of enabling the patient positioning manoeuvre to be performed with minimal physical effort by the attendant.

Rotation of the powered spreader bar is manual and is the same as the manual patient positioning spreader bar.



**Warning:** Before using your lift when fitted with the powered DPS spreader bar, familiarise yourself with the various parts, then read and thoroughly understand the following operating instructions.

The powered DPS spreader bar must be used in accordance with the following instructions and in conjunction with the operating instructions previously described for the manually operated (non-powered) four point spreader bar.

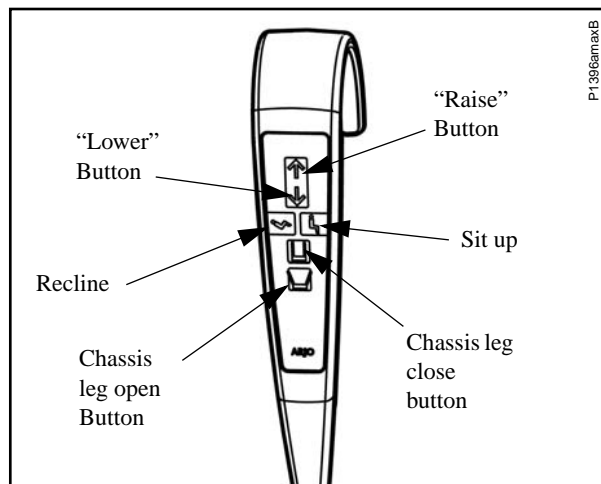
The lifting capacity of the lift when fitted with the powered DPS spreader bar remains the same as the non-powered patient positioning spreader bar version.

The powered DPS is waterproof and is classified by ARJO as a wet environment unit and has a blue and white circular label to qualify this, attached. (See "Labels" Section). This label signifies that the lower end of the unit may be immersed in bath water, or used for showering.

To operate the powered patient positioning function, ensure the isolator/cut off switch is in the on position

When ready to perform the patient positioning function (as described previously) operate the powered DPS control button to achieve spreader bar movement in the required direction.

Powered movement will continue until pressure is released from the control switch.



**Warning:** To stop any powered movement, release pressure from the control switch or press the emergency stop button.

The spreader bar will remain firmly in position, once powered movement has ceased.



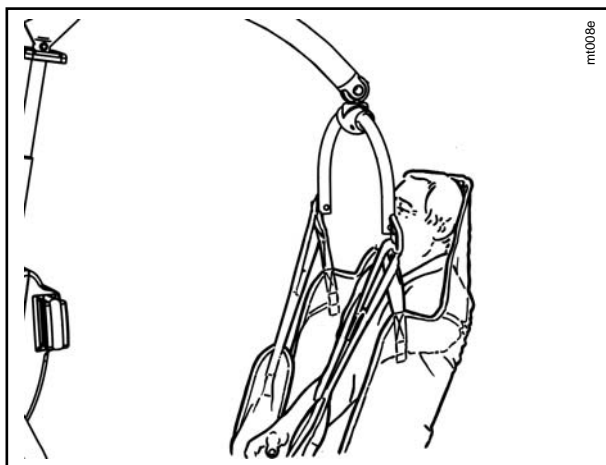
**Warning:** Before and during operating the powered DPS spreader bar, ensure all obstructions are well clear of the spreader bar, support frame and jib.



**Warning:** The actuator covers contain moving parts, care must be taken not to damage these covers. Should the covers become damaged, withdraw the lift from use and arrange replacement of the actuator before re-using the lift.

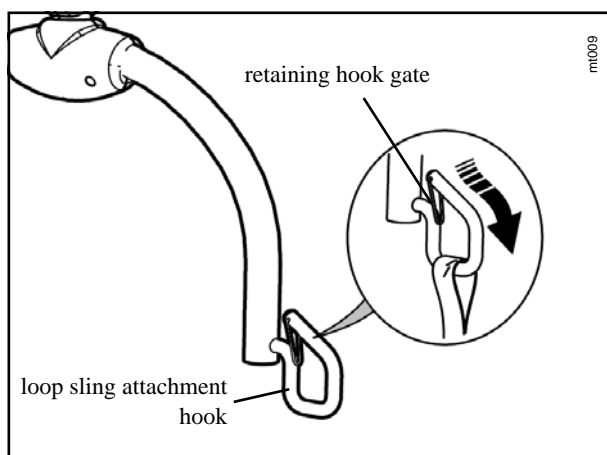
# Using your Maxi Twin

## Using the loop spreader bar



**Warning:** Before attaching the sling ensure the spreader bar is rotated into position so the eventual lift will resemble the above figure.

When attaching a loop sling to the loop spreader bar always ensure the sling attachment loops are positioned correctly into the retaining hooks and that the retaining hooks gates move freely as shown below.

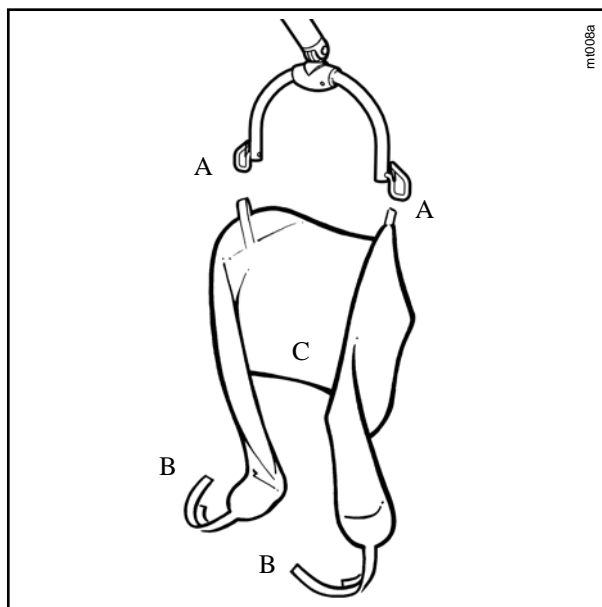


The slings to be used with the loop spreader bar are the ARJO loop slings. They are available in different sizes, (small, medium, large and extra large etc.) all colour coded. A range of more specialised slings are available please contact ARJO or their authorised distributors for details.

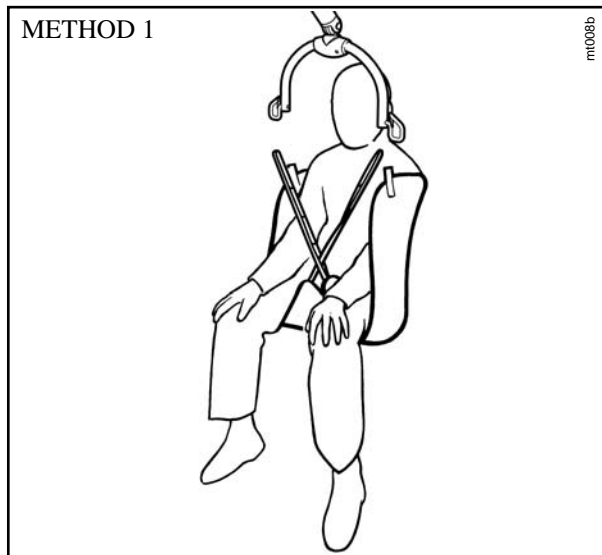
The loop sling is available with or without head support. A mesh sling is also available in all sizes with or without head support.

## To Lift from a Chair

Method 1 - Easing the patient forward, if necessary, slide the sling down the patient's back until seam "C" reaches the base of the spine. Take attachment points "B" and loop the tails of the sling underneath the patient's thighs, ensuring the sling pieces are not twisted underneath the patient. Hook the loops onto the "opposite side" outer hooks on the spreader bar.



### METHOD 1



Method 2 - As method 1 above, but pass each tail portion of the sling under both thighs, and then out the other side before attaching points "B" to the outer hooks on the spreader bar.

# Using your Maxi Twin

METHOD 2



Method 3 - As method 1 above, but loop a tail portion of the sling under each thigh and attach to the same side hook as the shoulder attachment (left straps to left hook and right straps to right hook). This method holds the legs in abduction, and is useful for toileting.

METHOD 3



Once the sling has been positioned and attached securely to the spreader bar then lifting can be carried out using the control handset. For general patient manoeuvring and transportation see also section "Using the DPS spreader bar".



**Warning:** Always check that all the sling attachment loops are fully in position before and during the commencement of the lifting cycle, and in tension as the patient's weight is gradually taken up.

When lowering the lift ensure that the patient's or attendant's legs and feet are well clear of the moving parts.

Apart from the methods listed above, the loop spreader bar with loop slings is also extremely useful for lifting patients who have contracted legs, where the patient leg position prohibits the use of the DPS spreader bar. Attach the sling in the normal manner as described in "lifting from the bed".

## To lift from a bed

Place the sling under the patient as if it were a drawsheet. Flex the patient's legs, and bring the sling leg pieces under the thighs, attach the sling to the spreader bar using any of the methods 1-3 above.



**Warning: IMPORTANT:** Check that all four points of the sling are securely connected before lifting.

# Using your Maxi Twin

---

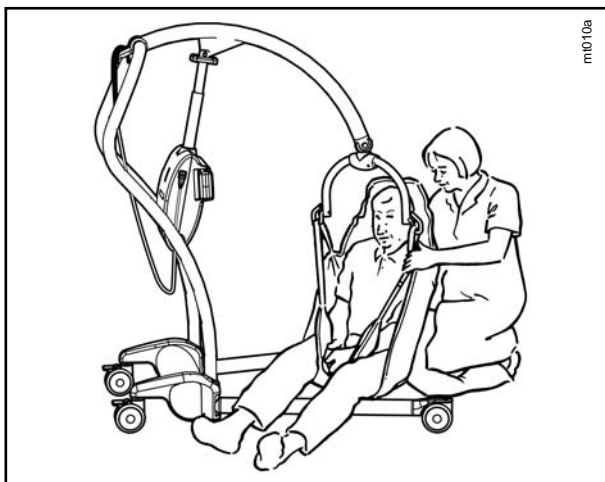
## To raise from the floor

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

Raise and support the patient into a sitting, or half sitting position. Feed the sling down the patient's back, bring the leg pieces of the sling into position. Raise the patient's legs over the chassis, and bring the lift into position. With the jib as low as possible, attach the shoulder loops. Bend up the patient's knees to connect up the leg pieces.



Warning: Make sure not to get fingers trapped between chassis and moving legs of the lift.



Warning: Check all the loops are securely attached before lifting.

When lifting or lowering a patient who is supported by a sling it is not necessary to use the brakes, this allows the lift to move to the correct position relative to the centre of gravity of the patient.



Warning: Apply the castor brakes to keep the Maxi Twin in position on a sloping surface.

When the patient has been returned to the bed he/she may be reclined before the sling is detached.



Warning: When lowering the jib ensure that the patient's or attendant's legs and feet are well clear of the moving parts.

# Lift Battery Charging

## Installation



**Warning:** The battery charger is designed for dry surroundings and may not be installed in bathrooms or any other wet areas.

The charger is to be plugged in a standard power outlet.  
The charger is not allowed to be used in a residential environment.

## Charging Batteries

### General

The charger converts mains voltage to low DC voltage.  
The charger must only be used for Arjo's battery type NEA0100.

The charger is ready for use as soon as it is plugged in.  
A green indicator shows that the charger is ready for charging, there is no ON/OFF button on the charger.

### Charging intervals

To prolong the life of batteries, charge at regular intervals.

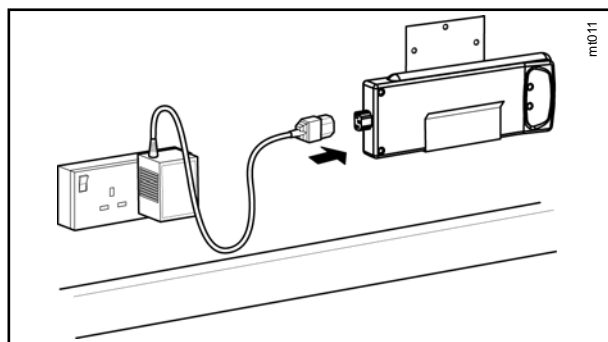
If the lift is used frequently, it is recommended to use two batteries, one in operation and one being charged.

It is recommended that batteries not in use are left in the charger, there is no risk of overcharging the batteries.

**Note:** A buzzing tone will be heard when the battery needs charging.

## Charging procedure

1. Plug in the charger in a power outlet.
2. The LED will show a green light.
3. Connect the charger cable to the battery.



4. The LED will show a yellow light.
5. The charger will charge the battery for 14 hours and the LED will switch from yellow to green to indicate that the battery is fully charged.

## Fitting the battery to the lift

When the battery pack is fully charged remove it from the charger unit and insert it into the battery position of the Maxi Twin situated on the side of the main lift actuator housing.

- **Note:** The battery is shaped so that only correct fitment to the lift is possible with the raised edge of the battery upper most.

Push the battery firmly into place. Electrical connection will be made automatically.

## Maintenance

The charger does not require any maintenance.



**Warning:** In case of a malfunction, do not attempt to open the charger cover.

All repairs must be carried out by Arjo authorised personnel.

## Storage of batteries

Batteries are charged when delivered but we recommend you charge the batteries when received due to a low self discharge.

The batteries will slowly discharge when not used.

Batteries that will not be used for a long period should be kept in a cool place, between 0°C (32°C) and 25°C (77°C).

Batteries that are charged for the first time, or after a long period of storage, must be charged for 14 hours or until the LED turns green.

# Care of your Maxi Twin

How often the following actions are taken depends on how often the equipment is used.

Unless otherwise stated, before each and every use follow the cleaning, care and inspection procedures described in this section.

## Sling care and cleaning



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

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

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

Washing and drying temperatures must not exceed the temperatures specified on the sling and the sling instruction sheet. Wash using normal detergents, do not iron. Refer to Sling Instruction sheet.

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

- **Note:** “ARJO CLEAN” - disinfectant cleaner is available from ARJO or their approved distributors.



**Caution:** Do not over wet areas of the product which could cause problems with electrical components or internal corrosion.

If a hot air dryer is used to dry the lift, the temperature must not exceed the temperatures specified on the sling and the sling instruction sheet.

Do not use petroleum based solvents or similar, since this may damage plastic parts.



**Warning:** For disinfection of contaminated lifts, equipment and accessories, use the preferred method of wiping the product completely with “hard surface disinfectant wipes” that are supplied impregnated with a 70% v/v solution of Isopropyl Alcohol.

- **Note:** A rubbing action will be necessary when using the wipes to promote effective disinfection of the surfaces.



**Warning: IMPORTANT:** Cleaning and disinfection products must be used in accordance with the manufacturers instructions and suitable eye, hand and clothing protection must be worn at all times when handling disinfectants.

- **Note:** 70% v/v Isopropyl Alcohol wipes have been proved to be effective against MRSA and several other micro-organisms under light soiling conditions.

## Lift care and cleaning



**Warning:** It is recommended that patient lifts, equipment, accessories are regularly cleaned and/or disinfected between each patient use if necessary, or daily as a minimum. If the lift and/or equipment needs cleaning, or is suspected of being contaminated, follow the cleaning and/or disinfection procedures recommended below, before re-using the equipment.

For cleaning your lift, equipment and accessories wipe down with a damp cloth using warm water to which a disinfectant/cleaner has been added e.g. “ARJO CLEAN” - disinfectant/cleaner or equivalent



# Care of your Maxi Twin

## The following checks should be carried out daily.

Ensure that the battery pack is always in a good state of charge.



**Warning:** Ensure that the castors are firmly secured to the chassis.

Carefully inspect all parts, in particular where there is personal contact with the patient's body, ensure that no cracks or sharp edges have developed which could injure the patient's skin or become unhygienic.

Check that all external fittings are secure and that all screws and nuts are tight.

Ensure that all instruction labels are firmly attached and in good readable condition.

## Periodic Testing

To be carried out at weekly intervals.

Periodic testing of the operational functions is advisable from time to time to ensure everything operates satisfactorily.

**Test for full and efficient movement of the lift / lower mechanism:-** Raise and lower the jib using the control handset to check for full and efficient movement.

**Emergency Stop:-** Test the emergency stop facility by operating the control handset to lift or lower the jib, and whilst operating, press the emergency stop button. Powered movement should stop immediately.

Reset the button and repeat for chassis legs opening/closing function.

Reset the button.

**System Failure Emergency Lowering:-** Test this function simply by ensuring the jib is well above its lowest position then operate the system failure emergency lowering control. The jib will lower without the need to operate the control handset. The emergency lowering facility will still operate even with the handset control cable unplugged.

NOTE! It could be necessary to pull down an unloaded jib.

**Adjustable Width Chassis Function:-** Open and close the chassis legs using the control handset to check for full and efficient movement.

**General lift Condition:-** A general visual inspection of all external parts should be carried out, and all functions should be tested for correct operation, to ensure that no adverse damage has occurred during use.



**Warning:** If in any doubt about the correct functioning of the Maxi Twin, withdraw it from use and contact ARJO Service Department.

## Servicing Advice



**Warning:** ARJO recommend that the Maxi Twin is maintained at regular intervals, see ARJO Maxi Twin Preventive maintenance schedule (ARJO Literature Part No. 04.KT.01./Maxi Twin)

With regular use the following items are subject to wear:- slings, batteries, straps, castors. These items must be regularly checked as described previously, and replaced as necessary.



**Warning: UK LIFTS ONLY:** Important legislation came into force on 5th December 1998, which has an impact on the schedule of service for your patient lift(s), variable height baths and other raising and lowering equipment. The Lifting Operations and Lifting Equipment Regulations (LOLER) 1998 and The Provision and Use of Work Equipment Regulations (PUWER 98) must be satisfied by the duty holder. A scheme of six monthly thorough examinations has been devised to comply with the law and details can be obtained from ARJO Service UK

Parts list and circuit diagrams are available from ARJO or their approved distributors on request.



**Warning:** Spare parts, if required are available from ARJO or their approved distributors.

Special tools are required for certain component replacement



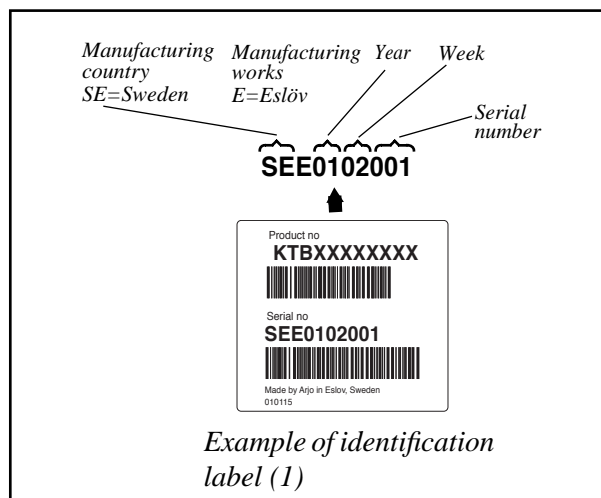
**Warning:** The simplest, safest and most effective way to maintain your product in good working order, is to have it methodically and professionally serviced by an ARJO approved engineer using ARJO approved spare parts.

For information on service and maintenance contracts, please contact your local ARJO distributor.

# Labels

## Key to Labels:

1. Identification label (see elucidation beside)
2. Emergency lowering label
3. ARJO logo
4. Product name label
5. Product data label
6. Sling size guide and safe working load label
7. Battery part number label
8. Battery information and recycle label



On the data label (5) you will find the following information:



SWL-Safe Working Load  
(Maximum lifting capacity)  
170 kg (375 lb)



Stroke 1240 mm (48 3/4")



Supply voltage 24 V DC



Engine power 200VA



Protection class IP 44



Type B  
Applied part; protection  
against electrical shock in  
accordance with EN 60 601-1



Mode of operation, ED max  
10% (2 min/18 min)



Product no. and data of the  
battery



CE marking in accordance  
with the Directive  
93/42/EEC (The Medical  
Devices Directive) and classi-  
fied to class I

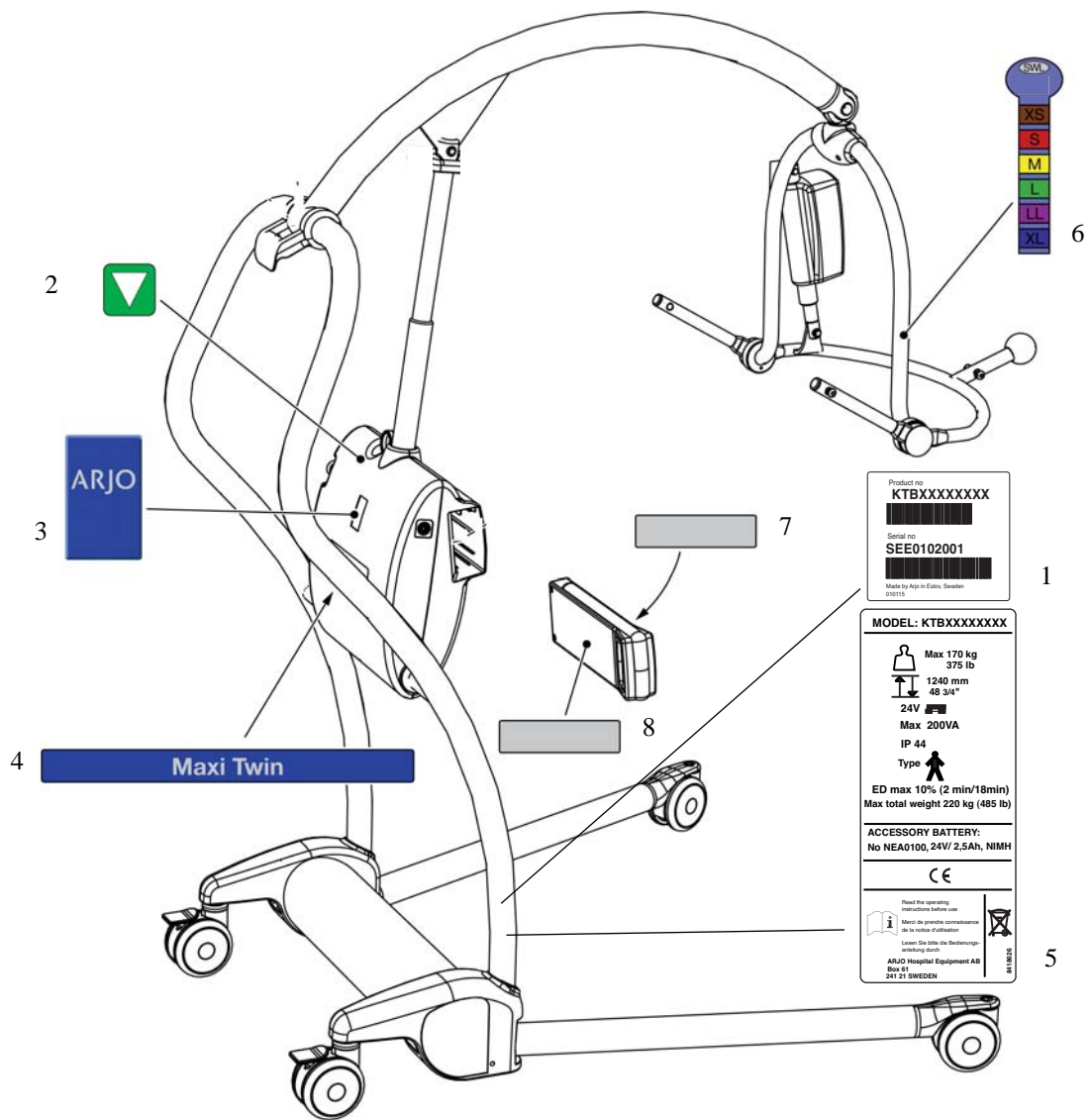


Read the operating instruc-  
tions before use



Separate electrical and elec-  
tronic components for  
recycling in accordance  
with the European Direc-  
tive 2002/96/EG (WEEE)





# Technical Specification

---

## Component Weights

	kg	lbs
Maxi Twin lift only (no spreader bar or battery).....	41.7	..(92)
Medium powered DPS spreader.....	6.9	....(15.2)
Medium DPS spreader .....	5	.....(11)
Small loop spreader.....	1.7	....(3.7)
Medium loop spreader.....	1.9	....(4.2)
Large loop spreader.....	2.8	....(6.2)
Battery pack .....	1.5	....(3.3)

## Electrical

Battery type and part number .....	(Rechargeable - NiMH) NEA0100
Battery capacity .....	2.5Ah
Battery charger part number .....	GB,EUUS, AUS
.....	NEA2000NEA1000NEA4000NEA6000
Lift protection class .....	IP 44
Handset protection class.....	IPX 7
Lift nominal voltage .....	24V DC

Medical Equipment:- type **B**  protection against electrical shock in accordance with EN 60 601-1

ARJO patient handling products meet the requirements of Electromagnetic Compatibility (EMC) as stated in clause 12.5 of the Medical Devices Directive 93/42/EEC



Although compliant with EMC requirements there is a remote chance that close proximity usage may affect over-sensitive electrical equipment.

Conforms to UL 2601-1 and CAN/ CSA C22.2 No 601.1-M90

	Duty cycle
Mast Lift Actuator .....	10% (2 min/18 min)
V* Chassis Actuator .....	10% (2 min/18 min)
Powered DPS .....	10% (2 min/18 min)

Turning radius .....1450 mm (57 1/8")

Sound level .....49 dB (A)

# Technical Specification

---

## Environment

Air humidity .....	80% @ 20°C (68°F)
Usage temperature range (ambient) .....	+5°C (41°F) to +35°C (95°F)
Optimum usage temperature (ambient).....	+20°C (68°F) to +25°C (77°F)

## Transport and storage environment

Ambient temperature range .....	-10°C (14°F) to +45°C (113°F)
Air humidity .....	80% @ 20°C (68°F)
Atmospheric pressure range .....	500 hPa to 1060 hPa

## Recycling

Battery .....	NiMH. Recyclable.
.....	Not for disposal. Environment danger
Package.....	Wood and corrugated cardboard, recyclable
The Lift.....	Electric, steel and plastic parts shall be
.....	separated and recycled according to
.....	marking on the unit

## Maximum Capacities of Maxi Twin

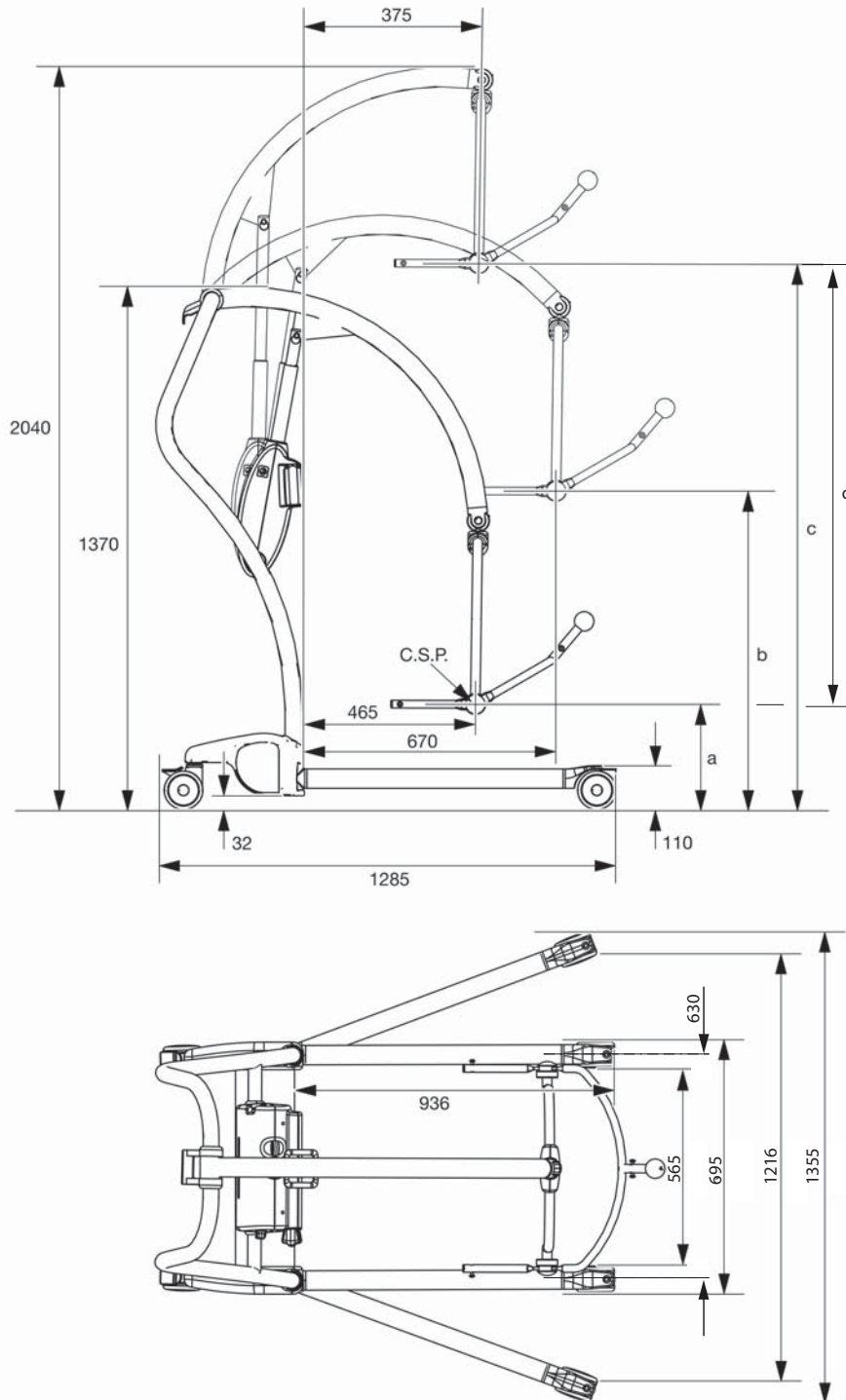
The Maxi Twin should not be loaded with a weight in excess of the lowest rated attachment fitted (see table below for lift and attachments maximum lifting capacities).

	<b>kg</b>	<b>lbs</b>
All slings	170	(375)
Powered DPS spreaders	170	(375)
DPS spreaders	170	(375)
Loop spreaders	170	(375)

The capacities given are correct for the lift configurations listed, but some accessories/additional/optional sub assemblies may reduce the maximum capacity. Always refer to the maximum weight limit printed on the label fixed to the lowest rated fitted attachment. The use of 'low-height' castors does not affect the lifting capacities.

# NOTES:

## Lift Dimensions



m012c

All dimension shown in millimetres

	dimension			
	a	b	c	d
DPS & powered DPS spreader	250	830	1490	1240
S & M loop spreader	420	1000	1660	1240
L loop spreader	590	1170	1830	1240

**AUSTRALIA**

ARJO Hospital Equipment Pty Ltd  
154 Lytton Road  
BULIMBA  
Brisbane QLD 4171  
Australien  
Tel: 07-3395 6311  
Faxnr. 07-3395 6712

**AUSTRIA**

ARJO-Sic GmbH  
Föhrenweg 5  
A-6065 THAUR  
Tel: 05223-49 33 50  
Faxnr. 05223-49 33 50 - 75

**BELGIUM**

ARJO Hospital Equipment nv-sa  
Ternesseelei 248  
B-2160 WOMMELGEM  
Tel: 03 353 91 00  
Fax: 03 353 91 01  
E-mail: info@arjo.be

**CANADA**

ARJO Canada Inc.  
1575 South Gateway Road  
Unit "C"  
MISSISSAUGA, ON, L4W 5J1  
Tel: 1-800-665-4831  
Fax: 1-800-309-1116  
E-mail: info@arjo.ca  
Web page: www.arjo.ca

**CZECH REPUBLIC**

ARJO Hospital Equipment s.r.o.  
Hlinky 118  
CZ- 603 00 BRNO  
Tel.: 549 254 252  
Fax: 541 213 550

**DENMARK**

ARJO Scandinavia  
Postboks 51  
DK-4632 BJAEVERSKOV  
Tel: 45 93 27 37  
Fax: 45 93 27 39

**FAR EAST**

ARJO Far East Limited  
1001-03 APEC Plaza  
49 Hoi Yuen Road, Kwun Tong, Kowloon  
HONG KONG  
Tel: 2508 9553  
Fax: 2508 1416

**FINLAND**

OY Vestek AB  
Martinkuja 4  
FI-02270 ESPOO  
Tel: 9 8870120  
Fax: 9 88701291

**FRANCE**

ARJO Equipements Hospitaliers S.A.  
45, Avenue de l'Europe  
Eurocit BP 133  
F-59436 RONCQ CEDEX  
Tel: 03 20 28 13 13  
Fax: 03 20 28 13 14  
E-mail: info@arjo.fr

**GERMANY**

ARJO GmbH  
Christof - Ruthof - Weg 6  
D-55252 MAINZ-KASTEL  
Tel: 06134-186-0  
Fax: 06134 186 160  
E-mail: info@arjo.de

**GREECE**

C. Psimitis Co Ltd  
Dimitriou Andr. 59  
GR-16121 KAISARIANI ATTIKIS  
Tel: 21 0724 36 68  
Fax: 21 0721 55 53

**ITALY**

ARJO Italia S.p.A.  
Via Tor Vergata 432  
I-00133 ROMA  
Tel: 06-87426211  
Fax: 06-87426222  
E-mail: promo@arjo.it

**THE NETHERLANDS**

ARJO Nederland BV  
De Blomboogerd 8  
4003 BX TIEL  
Postbus 6116  
NL-4000 HC TIEL  
Tel: 0344-64 08 00  
Fax: 0344-64 08 85  
E-mail: info@arjo.nl

**NORWAY**

ARJO Scandinavia  
Enebakveien 117  
N-0680 OSLO  
Tel: 98 28 11 70  
Fax: 22 57 06 52

**POLAND**

ARJO Poland Sp.z o.o.  
Ul. Lirowa 27  
PL-02-387 WARSZAWA  
Tel: 22 882 06 26  
Fax: 22 882 06 29

**PORTUGAL**

RTL  
Edificio d'AS  
R. Moreiró, 65 Gandra  
PT-4580 PAREDES  
Tel: 224 119 070  
Fax: 224 119 079

**SPAIN**

ARJO Spain, S.A.  
C/ San Rafael, No. 6  
E-28108 ALCOBENDAS  
Tel: 091 490 06 36  
Fax: 091 490 06 37  
E-mail: arjospain@eresmas.net

**SWEDEN**

ARJO Scandinavia AB  
Verkstadsvägen 5  
Box 61  
SE-241 21 ESLÖV  
Tel: 0413-645 00  
Fax: 0413-645 83  
E-mail: kundservice@arjo.se

**SWITZERLAND**

ARJO-Sic AG  
Florenzstr. 1d  
Postfach  
CH-4023 BASEL  
Tel: 061-337 97 77  
Fax: 061-311 97 42

**UNITED KINGDOM**

ARJO Ltd  
St Catherine Street  
GLOUCESTER GL1 2SL  
Tel: 08702 430 430  
Fax: 01452-525 207

**USA**

ARJO Inc.  
50 North Gary Avenue  
ROSELLE, IL 60172  
Tel: 1-800-323-1245  
Fax: 1-888-594-2756



FM 24321 ISO 9001  
MD 87841 ISO 13485



153210

**ARJO** ...with people in mind.

[www.arjo.com](http://www.arjo.com)

[info@arjo.com](mailto:info@arjo.com)

MEMBER OF THE GETINGE GROUP

If your country is not listed here, please contact your local distributor  
or: ARJO INTERNATIONAL AB, Box 61, S-241 21 ESLÖV, SWEDEN  
Tel: +46 413 645 00; Fax: +46 413 645 63;  
[www.arjo.com](http://www.arjo.com)