Lifting very heavy people requires special techniques and specially designed lifting equipment. Liko’s lift system for lifting over 300 kg (660 lbs) is called UltraTwin. The UltraTwin principle is based on the use of two Likorall lift units working in tandem to lift and position the patient. For lifting, both units are used, while for positioning in an upright, semi-seated or horizontal position, only one lift unit is used.

Specially adapted lifting accessories for lifting up to 500 kg (1100 lbs) are available in a range of models.

UltraTwist is that part of the UltraTwin lift system which enables full rotation (360 degrees) of both lift units simultaneously. This facilitates transfer of the patient and eliminates much of the need for refurbishing and the demand for extra space in the room.

UltraTwist is always installed in an UltraTwin overhead lift system. This requires either an UltraTwin straight rail system, an UltraTwin traverse system or a freestanding alternative such as UltraTwin FreeSpan or UltraTwin FreeSpan Traverse.

UltraTwist Slim and UltraTwist Wide can be used with slingbars for normal transfers in the seated position, e.g., between bed and wheelchair or to/from the toilet.

UltraTwist Wide can also be used with stretchers for horizontal transfer of the patient, e.g., in surgery or X-ray situations.

The slingbars and stretchers that are used have been developed specifically for lifting very heavy patients. These are equipped with Quick-release hooks for fast and convenient exchange of lifting accessories.

The lift units are controlled via the accompanying handcontrol, which has dual functions. One pair of buttons controls lifting motion up/down for both units simultaneously. The other pair of buttons allows you to raise and lower one of the lift units independently. In this way, you are able to adapt the lift for the best possible positioning for each individual patient.

(Alternatively, separate handcontrols for each lift unit can be used, although these are not included in the UltraTwist package).

For current product information, please refer to our website, www.liko.com. Instruction guides are also available on the website for downloading, free of charge.

In this document, the person being transferred is referred to as the patient and the person helping them is referred to as the caregiver.

⚠️ Caution triangles are used to warn of situations that demand extra care and attention.

**IMPORTANT!**
Read the instructions for both the patient lift and the lifting accessories before use. Lifting and transferring a patient always involves a degree of risk. A complete understanding of the contents of instructions is essential, and only trained personnel should use the equipment. When in doubt, contact Liko.
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⚠ NOTE! This instruction guide contains important information about the use of the product. All personnel who use this product must be thoroughly familiar with the contents of this instruction guide. Remember to keep the instructions where they are easily accessible for users of the product. When in doubt, contact Liko.

Safety Instructions

Before using the product, make certain that:
• the UltraTwist system has been assembled and installed according to the assembly instructions;
• lifting devices are properly connected to the lift;
• the batteries have been charged for at least 8 hours;
• you have read the instruction guides for the UltraTwist system, Likorall lift unit and accessories to be used;
• personnel using the products have received appropriate instructions and training;
• the correct lifting accessory has been chosen, with respect to type, size, material and design in relation to the needs of the patient.

Before lifting, always ensure that:
• the lift strap is not twisted or worn and can be run freely in and out of the lift unit;
• lifting accessories are not damaged;
• the sling/lift sheet is correctly and securely applied to the patient, so that there is no risk of personal injury;
• the lifting accessory is correctly applied to the lifting equipment;
• the sling’s/lift sheet’s strap loops are correctly applied to the slingbar hooks when the sling’s/lift sheet’s straps are extended, but before the patient is lifted from the underlying surface.

⚠ Never leave a patient unattended during a transfer situation!

UltraTwist Slim and UltraTwist Wide comply with the requirements of the directive for Class 1 medical-technical products (MDD 93/42/EEC).

Maximum Load

UltraTwist Slim, Prod. No. 3126045: max. load 500 kg (1100 lbs)
UltraTwist Wide, Prod. No. 3126047: max. load 500 kg (1100 lbs)

To maintain the 500 kg (1100 lbs) max. load rating, two Likorall 250 ES lift units are used. It is also essential that the accessories that are used are intended for the same max. load or greater. If an accessory with a lower max. load rating is used, the entire system’s max. load is reduced to this weight. Read the label on the lifting accessory, or contact a Liko representative.
Technical Data

Max. load: 500 kg (1100 lbs)
Dimensions: 550x305x105 mm (21.65x12.01x4.13 inch) LxWxH. - UltraTwist Slim
1130x306x184 mm (44.49x12.05x7.24 inch) LxWxH. - UltraTwist Wide
Weight: 18.7 kg (41 lbs) - Ultra Twist Slim (excl. lift units)
24.5 kg (54 lbs) - Ultra Twist Wide (excl. lift units)
Material (casing): Aluminium and steel

Built for indoor operation.

Definitions

UltraTwist Slim with Likorall lift units

1. Handcontrol UT
2. Q-Link
3. Lift strap
4. Emergency stop
5. Manoeuvre contact
6. Carriage pair
7. Rotation plate (360º)
8. Wheel set
9. Rail H70
10. Mounting rail
11. Lift unit
12. Connection box
13. Mounting bracket

UltraTwist Wide with Likorall lift units
Assembly

The UltraTwist system must be assembled and installed by authorized personnel in accordance with installation instructions provided by Liko. This instruction and assembly guide supplements the installation instructions. Recommended lift units for use on the UltraTwist systems are Likorall 242 S R2R, Likorall 242 ES R2R, Likorall 243 ES or Likorall 250 ES. When Likorall 243 ES or Likorall 250 ES are used the lift straps must be equipped with Q-link to enable use of the Quick-release Hook system on the intended lifting accessories. The lift units’ max. load ratings vary according to model. See the instruction guides for each model.

Mounting Likorall lift units on UltraTwist Slim (3126045)

1. Slide the lift unit’s mounting rail into the mounting bracket on the underside of the UltraTwist. Make sure the end plate with emergency stop button is facing towards the connection box on the UltraTwist.

2. Position the lift unit so that the hole in the centre of the mounting rail is aligned with the corresponding hole in the mounting bracket. Affix with accompanying bolt and nut (included in packing bag for hand-control).

3. Mount the other lift unit in the same way on the other mounting bracket.

4. Connect the manoeuvre contacts from the connection box to each lift unit.

5. Plug Handcontrol UT into the connection box. (Alternatively, two handcontrols can be used; these are connected directly to the two lift units).

6. You are now ready to connect lifting accessories to UltraTwist Slim, see page 6.
After assembly, it is important to ensure that:

- lift functions correspond to the markings on the handcontrol/handcontrols;
- the mechanical and electrical emergency lowering devices function;
- the battery charger functions and the indicator lights light up during charging;
- the batteries are charged.
Before lifting with the UltraTwist system, observe the following:

- Identify which of the lift units is controlled with the single arrows on the handcontrol. Make sure that this unit lifts at the head end of a stretcher (marked with a head symbol), alternatively, the wider of the two slingbars.
- We recommend that at least two caregivers assist when lifting with UltraTwist.
- Before the patient is lifted from the underlying surface, but when the sling/lift sheet straps are properly extended, it is important to ensure that the straps are correctly attached to the lifting accessory.
- Ensure that wheels/castors on the bed, gurney, etc. are locked during the lifting operation.
- Plan the lifting and transfer operation carefully, so the patient is as comfortable and secure as possible.
- Never leave a patient unattended during a transfer situation!

Operation

Charging
The lift unit batteries are charged via the handcontrol. One battery charger (accessory) is sufficient for the entire system if Handcontrol UT is used. For complete charging instructions, see the instruction guide for the respective lift unit.

Handcontrol UT (included with product)
Controls both lift units: Up  Down
Controls one of the lift units: Up  Down

Handcontrol S, ES, 2-button (accessory for Likorall)
Controls only the lift unit to which it is connected: Up  Down
Two such controls are required for an UltraTwin system.

Recommended accessories
Below, we present recommended slingbars and accessories for use with UltraTwist systems. For further guidance, study the instruction guide for the respective sling model. Contact your Liko representative or visit www.liko.com for advice and information on new products in Liko's range.

UltraTwist Slim – lifting in a seated position
For UltraTwist Slim, we recommend Ultra Slingbar (Prod. 3103603).
It consists of two slingbars of different widths, connected by a strap. The wider of the two slingbars is intended for use with the sling’s upper strap loops and the narrower slingbar is to be used with the leg support’s strap loops.
△ Load must be applied to all four hooks during lifting.

UltraTwist Wide – lifting in a seated position
For UltraTwist Wide, we recommend Universal Slingbar 450 (Prod. 3156085) together with Universal Slingbar 600 (Prod. 3156086).
The wider of the two slingbars is intended for use with the sling’s upper strap loops and the narrower slingbar is to be used with the leg support’s strap loops.
△ Load must be applied to all four hooks during lifting.

UltraTwist Wide – horizontal lifting
For horizontal lifting, we recommend UltraStretch (Prod. 3156058). This can be used with a full lift sheet (Prod. 3684105-106) or with lift straps (Prod. 3684100), see instruction guide for UltraStretch.
**From bed to chair/wheelchair with UltraTwist Slim**

Before starting the lifting operation it is important to ensure that the slingbars are properly connected to the lift units' lift straps. We recommend the use of Ultra Slingbar with UltraTwist Slim. The purpose of the strap connecting the two components of the Ultra Slingbar is mainly to prevent the patient from tilting excessively and it **should not** be removed. Below, we illustrate a transfer from bed to wheelchair using Ultra Slingbar and Original High Back Sling Mod. 20 alt. 26.

1. Apply the sling as described in the instruction guide. Before the patient is lifted from the underlying surface, but when the straps are properly extended, it is important to ensure that the straps are correctly attached to the slingbars. In conjunction with lifting, use the bed’s raising and lowering functions. For advice on how to regulate the patient’s sitting posture, see below.

2. Placement of the patient in a chair is facilitated by UltraTwist’s rotation function. Grasp the slingbars, sling and/or the patient’s legs/knees and rotate to the desired position.

3. Guide the patient toward the chair. Lower the patient.

⚠️ **When lifting, always lift with both lift units!**

**Regulating the patient's sitting posture (leaning in a seated position)**

Raising and lowering only one lift strap allows you to tilt the patient in the desired position. It may be advantageous to seat the patient upright (A) when placing them in a chair, while a more reclined posture (B) facilitates placement in bed. The patient’s sitting posture is regulated via the lower buttons (single arrows) on the Handcontrol UT, or with the handcontrol that regulates the lift unit which lifts the upper body.
From bed to chair/wheelchair with UltraTwist Wide

Before starting the lifting operation it is important to ensure that the slingbars are properly connected to the lift units’ lift straps. Recommended slingbars for UltraTwist Wide: Universal Slingbar 600 and Universal Slingbar 450. Universal Slingbar 600 is intended for the sling’s upper strap loops and is connected to the lift strap that is regulated via the lower buttons on the handcontrol. Universal Slingbar 450 is intended for the leg support’s strap loops. Below, we illustrate a transfer from bed to wheelchair using the above-mentioned slingbars and an Original High Back Sling Mod. 20 alt. 26.

1. Apply the sling as described in the instruction guide. Before the patient is lifted from the underlying surface, but when the straps are properly extended, it is important to ensure that the straps are correctly attached to the slingbar. In conjunction with lifting, use the bed’s raising and lowering functions. For advice on how to regulate the patient’s sitting posture, see below.

△ When lifting, always lift with both lift units!

2. Placement of the patient in a chair is facilitated by UltraTwist’s rotation function. Grasp the slingbars, sling and/or the patient’s legs/knees and rotate to the desired position.

3. Guide the patient toward the chair. Lower the patient.

Regulating the patient’s sitting posture (leaning in a seated position)

A. Raising and lowering only one lift strap allows you to tilt the patient in the desired position. It may be advantageous to seat the patient upright (A) when placing them in a chair, while a more reclined posture (B) facilitates placement in bed. The patient’s sitting posture is regulated via the lower buttons (single arrows) on the Handcontrol UT, or with the handcontrol that regulates the lift unit which lifts the upper body.
Lifting with a stretcher on UltraTwist Wide

UltraTwist Wide should be used when lifting with a stretcher. We recommend the use of UltraStretch (see page 6). Below, lifting with UltraStretch and Lift Sheet XL is illustrated. Carefully study the instruction guides for the accessories used.

1. Apply the lift sheet as described in the instruction guide. Guide the UltraStretch over the patient and lower to about half a metre above the bed. Hang all of the strap loops on the stretcher. Note that the stretcher has a head end and a foot end (see marking with head symbol).

⚠️ Ensure that all strap loops are properly hooked when the straps are extended but before the patient is lifted from the underlying surface.

2. During lifting, check to ensure that the patient is resting in the desired position: fully prone or with the head slightly higher. If necessary, this can be regulated by raising or lowering one of the lift units.

UltraTwist Wide can rotate 360°. This is a great advantage if you need to change bedding, lift to a stretcher or when lifting in confined spaces. Grasp the stretcher and rotate the patient to the desired position.
Care and Maintenance

To ensure trouble-free operation, certain components should be checked each day the lift system is used.

• Check the lift system for any signs of external damage.
• Check carriage function.
• Check the slingbar’s/stretcher’s Quick-release Hook safety function.
• Ensure that all screws, bolts and nuts are tight.

When necessary, clean the lift system regularly using a damp cloth. **NOTE! Do not use cleaning agents that contain phenol or chlorine, since these can damage aluminium and plastic materials.**

**Inspection**
The lift system should undergo thorough inspection for wear at least once per year. Inspection must be performed according to the Liko service manual and by authorized personnel.

⚠️ **IMPORTANT!**
Repairs and maintenance may only be carried out by personnel authorized by Liko using original Liko spare parts.

**Transport and storage**
The lift system must be stored at a temperature above the freezing point and at normal relative humidity (not exceeding 60%).

**Service agreements**
Liko invites you to sign a service agreement for regular maintenance and testing of your lift system.

Liko’s products undergo continuous development, which is why we reserve the right to make product changes without prior notice. Contact your Liko representative for advice and information about product upgrades.

**Recycling**
For instructions on how the lift system should be recycled, please see our website: www.liko.com.

**Made in Sweden**

*Liko is quality certified according to ISO 9001 and its equivalence for the medical device industry, ISO 13485. Liko is also certified according to environmental standard ISO 14001.*