Multirall 200 is a flexible type of overhead lift with a versatile range of applications. It is easily movable without compromising on safety and functionality. Multirall also works perfectly as a room-to-room lift.

Multirall can be mounted to the rail system in two different ways, depending on intended use. When mounted with the lift strap under the lift unit (left picture) it works as a normal overhead lift and is easily movable between different rail systems, without the need of tools. When mounted with the lift strap above the lift unit (right illustration), Multirall becomes a flexible room-to-room lift that can be used for transfers of patients between different rail systems in different rooms without requiring openings over doorways.

Multirall is appropriate for all common lift and transfer situations; for example, from bed to wheelchair, to and from the floor, for visits to the lavatory, for gait training and for horizontal lifts with stretchers.

Accessories
A large and complete range of accessories is available for Multirall. Liko's product range includes many different sling models in several sizes and designs. Available as an accessory is also a practical trolley for transfer and storage, and an Extension Arm, which facilitates the connection of the lift to the rail system. Multirall is adapted to Liko's Quick-release Hook System, for quick and easy exchange of lifting accessories.

⚠️ is a warning triangle used for situations that demand extra care and attention.

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

⚠️ IMPORTANT!
Carefully read instructions for the lift and lifting accessories before use. Lifting and transferring a person always presents a potential risk. A thorough understanding of the contents of the instruction guide is essential. Only trained personnel should use the equipment. Please contact Liko in the event of any uncertainties or questions.
Table of contents

Safety Instructions.................................................................2
Definitions.............................................................................3
Technical Data.......................................................................3
Assembly................................................................................4
Operation..............................................................................5-6
Charging the Batteries............................................................6
Room-to-room with Multirall....................................................7-8
Maxum Load.........................................................................9
Recommended Lifting Accessories..........................................9-11
Simple Troubleshooting........................................................11
Care and Maintenance............................................................12

△ NOTE! This instruction guide contains information that is important for users of the product. A complete understanding of the contents of the instruction guide is essential, and only personnel who are well informed should use the equipment. Remember to keep the instruction guide readily accessible for users of the product.

Safety Instructions

Before using the first time ensure that:
• the lift is assembled according to the assembly instruction;
• lifting accessory is thoroughly attached to the lift;
• the batteries are charged for at least 8 hours;
• you have read and understood the instruction guide for the lift and lifting accessories;
• personnel using the lift are informed of the correct use of the lift and lifting accessories.

Before lifting always ensure that:
• the lift strap is not twisted or worn, and that it moves easily into the lift unit;
• the lifting accessories are not damaged;
• the lifting accessory is correctly and securely applied to the patient, so that no bodily injury can occur;
• the lifting accessory's strap loops are correctly fastened to the sling bar/stretcher hooks when the lifting accessory's straps are extended, but before the patient is lifted from the underlying surface;
• the correct lifting accessory has been chosen, with respect to model, size, material and design to safely meet the needs of the patient.

△ Never leave a patient unattended in a lifting situation!

Multirall has been tested by an accredited testing institute and complies with the requirements for MDD Class I products (MDD 93/42/EEC).
Multirall complies with the requirements according to IEC 60601-1, IEC 60601-1-2, EN ISO 10535, UL 60601-1 and CAN/CSA C22.2 No. 601.1.

△ No modification of this product is allowed. Contact Liko for further information.

Particular care must be taken when using strong sources of potential disturbance, such as diathermy, etc, so that diathermy cables, e.g., are not positioned on or near the lift. If you have questions, please consult the responsible assistive-device technician or the supplier.

The equipment is not suitable for use in the presence of flammable mixtures.
Definitions

1. Carriage (S65)
2. Q-link (quick fastener)
3. SSP Limit Switch
4. Emergency stop
5. End plate
6. Emergency lowering, mechanical
7. Emergency lowering/raising, electrical
8. Hand control
9. Contact for hand control
10. Hang-up, HandControl Hanger
11. Sling bar
12. Latches
13. Quick-release hook
14. Universal connector
15. Lift unit
16. Handle
17. Extension Belt connector
18. Lift strap

Technical Data

Maximum load: 200 kg / 440 lbs
Material: PC/ABS V0
Weight: 8.7 kg / 19 lbs
Dimensions (WxHxL): 210 x 230 x 295 mm / 8.27 x 9.06 x 11.61 inch.
Emergency lowering: Mechanical and electrical
Lifting speed (without load): 60 mm/s (2.36 inch./s)
Lifting range: 1600 mm / 63 inch.
Sound level: 62.2 dB(A)
Protection class:
  - IP 30 (lift unit)
  - IP 54 (hand control)
Expected life time: 10 years
Operating forces of controls:
  - Buttons on hand control: 4.5 N
  - Buttons on end plate: 4 N

Electrical data: 24 V DC, 8.5 A
Intermittent operation: Int. Op 10/90, active operation max 6 min. Out of a time of 100, active must be less than 10, however not more than 6 min.

Batteries: 12 V DC, 2.6 Ah, valve-regulated lead-acid gel-type batteries. New batteries are provided by your Liko representative.

Battery charger: CC-10-43-24. 100-240 V AC, 40-60 Hz, max 600 mA

The device is intended for indoor use.
Type B degree of protection against electrical shock.
Class II equipment.

Multirall is equipped with an SFS (Single Fault Safety) spool and speed guard. This patented safety design provides protection against uncontrolled lowering. The lift strap has a tenfold safety.
Assembly

△ Rail systems and carriages must be assembled and installed by personnel authorized by Liko and in accordance with installation instructions provided by Liko.

After installation Multirall can be mounted to the rail in two different ways. See alternatives below.

Alt. A. With the lift strap above the lift unit.
This alternative is recommended in cases where the lift is to be moved frequently between different rail systems, or when the lift is to be used for room-to-room transfers.

1. Feed out desired length of lift strap by applying tension to the lift strap and simultaneously pressing the electrical emergency lowering button.
2. Connect Q-link to the carriage hook and run the lift to the appropriate height.
3. Connect the desired lifting accessory to the lift unit's universal connector (see "Operation", page 5).

△ Operate the lift only when tension is applied to the lift strap!

Alt. B. With the lift strap below the lift unit.
This alternative is recommended in cases where the lift is to be installed in the same rail system for a longer period of time.

1. Mount Multirall with the universal connector directly into the carriage hook.
2. Connect the desired lifting accessory to Q-link, see "Operation", page 5. The lift strap and lifting accessory are then suspended under the lift unit.
3. Connect the lift’s functions correspond to the markings of the hand control;
   △ Multirall must not be equipped with a Strap Gripper when the lift is mounted with the lift strap under the lift unit. This may result in the Strap Gripper getting caught in the lift strap.

After assembly, make sure that:

• the lift’s functions correspond to the markings of the hand control;
• both the mechanical and the electrical emergency lowering devices function properly;
• the battery charger functions properly and the indicator lamps are illuminated during charging;
• the batteries are charged.
Operation

Multirall is operated by lightly pressing the buttons on the hand control. The arrows indicate the direction of movement. Release the buttons to stop the lift. Multirall can also be operated by pressing the directional buttons located on the end plate of the lift unit.

⚠️ The arrow corresponds to the direction of travel when the lift is mounted with the lift strap above the lift unit.

⚠️ Operate the lift only when tension is applied to the lift strap!

Exchanging lifting accessory

Multirall is adapted to Liko's Quick-release Hook System, for quick and easy exchange of lifting accessories.

Lifting accessories that are not equipped with Quick-release Hook can easily be updated with Quick-release Hook so that they can be used with Multirall. See "Quick-release Hook", page 9.

Electrical emergency lowering

If power is disrupted due to a malfunction in the electronics or the hand control, you can lower the patient by pressing the "Down" button located on the end plate.

⚠️ The arrow corresponds to the direction of travel when the lift is mounted with the lift strap above the lift unit.

Make sure to always lower the patient to a bed, wheelchair, or other suitable place.

Mechanical emergency lowering

Press the red button marked "Emergency" located on the end plate of the lift unit. Note: load must be applied to the lift in order for the mechanical emergency lowering to work.

Make sure to always lower the patient to a bed, wheelchair, or other suitable place.

Emergency stop

To activate: press the red button.

To reset: turn the button in the direction indicated by the arrows on the button.

The red button on the lift unit end cover is intended for use if an emergency situation occurs. When the button is pressed, contact between the motor and power source is broken, which stops the lifting motion.

Hang-Up HandControl Hanger

When not in use, the hand control can be hung on the Hang-Up.
SSP Limit Switch
It is important that the lift strap’s lifting motion is performed as vertically as possible to ensure a reliable operation. The SSP Limit Switch is intended to break the lifting motion if the lift strap is subjected to harmful strain, for example if it is pulled sideways or folded over during the lifting motion. The SSP Limit Switch also provides protection in case there is a risk of squeeze injuries. If the SSP Limit Switch is activated so that the lifting motion stops, the lift unit must first be run downward before upward motion can be resumed.

Charge Indicator
Multirall has two indicators for low battery charge:
• a buzzer sounds during lifting
• a diode lights up during lifting. The battery should be charged immediately when either of these indicators is activated (see "Charging the Batteries" below).

Adjustable friction brake
The speed at which the lift travels along the rail can be regulated via the friction brake on the carriage. Turn the friction brake clockwise to increase resistance and counter-clockwise to reduce resistance.

Charging the Batteries

To obtain maximum battery life, it is important that the batteries are being charged regularly. We recommend that you charge the batteries after use or every night. The batteries are fully charged after approximately 8 hours. When fully charged, batteries in good condition are sufficient for approximately 60 lift cycles.

Charging procedure
1. Make sure the emergency stop button is not activated.
2. Place the hand control in its intended place on the battery charger.
3. Connect the charger to a 100-240 V AC electric socket.

Charging starts automatically. The green light indicates that the charger is connected to power supply. The yellow light indicates that the batteries are charging. When the batteries are fully charged, the charger stops automatically and the yellow light shuts off.

NOTE! When the lift will not be in use for a longer period of time, the hand control should be placed in the charger. If the charger is not connected to a power source the emergency stop button should be activated in order to prevent battery discharge.

Old batteries are to be returned to authorized Liko personnel, or left at the nearest recycling station.
Room-to-Room with Multirall

Liko's R2R (Room-to-room) system is an effective solution for safe and easy transfer of patients between two or more rooms. The R2R system is mounted without making openings in walls and full isolation is therefore retained between the rooms supported by the system.

In order to perform room-to-room transfers with Multirall, the following conditions are required:

• Both rooms have separate rail systems, each with a carriage mounted into the rail.
• Between the rooms, suspended under the doorframe, a Room to Room Strap is mounted, acting as a bridge between the rooms.
• Multirall is equipped with Strap Gripper, which is mounted on one of the lift’s Extension Belt connectors.
• Extension Belt, adjustable, is mounted to the carriage, in order to obtain an appropriate working height. Alternatively, if the lifting height becomes too low when using the Extension Belt, Extension Arm/Helping Hand Multirall can be used for connecting Q-link directly to the carriage, which enables a maximum lifting height.

Room-to-room transfer

Below is a description of R2R-transfer with Multirall, Strap Gripper, Room to Room Strap and Extension Belt, adjustable.

⚠️ Check carefully at each stage to ensure that Q-link is correctly applied to the carriage hook/Extension Belt!

Mount the lift according to mounting alternative A, page 4. Mount the Strap Gripper in accordance with applicable assembly instruction.

Mount the Room to Room Strap between the two rooms. For mounting and length adjustment of Room to Room Strap, see applicable assembly instruction.

Multirall is mounted to the carriage, alt. an Extension Belt, in room 1. Move the lift with the patient forward, as close as possible to the doorway. Lower as much as possible with regard to patient comfort, but not so far down that the caregiver cannot reach the Room to Room Strap with the Strap Gripper.

Connect the Strap Gripper to the Room to Room Strap (see illustration to the right).
Lower Multirall until the Room to Room Strap carries the full weight of the patient. Then, run out an extra 10 cm (4 inch.) of lift strap to provide enough slack to enable it to be disconnected.

⚠️ Keep hand tension on the lift strap as you run it out of the lift motor.

Disconnect the lift strap from the carriage/Extension Belt in room 1 and connect it to the carriage/Extension Belt in room 2. To prevent the lift strap from twisting, which in turn may cause the SSP Limit Switch to activate (see page 6), the lift unit must be turned manually so that the lift strap is straight when it runs into the lift unit (see the small illustration).

⚠️ Check carefully to ensure that Q-link is correctly applied to the carriage hook/Extension Belt!

Only when the lift strap runs straight into the lift unit can the transfer to room 2 proceed (see the small illustration). Run the lift up until the weight of the patient has been fully transferred to the carriage in room 2.

⚠️ It is very important to ensure that the lift strap does not twist while it is running up into the lift unit.

Disconnect the Strap Gripper.

Transfer the patient to room 2.
Maximum Load

Different allowable maximum load may apply for the different products constituting the compound lift system: rail, lift, sling bar, sling and any other accessories that may be used. It’s always the product with the lowest maximum load that determines the maximum load for the compound lift system. For example: A Multirall that is approved for 200 kg (440 lbs) could be equipped with a sling bar that is approved for 300 kg (660 lbs). In this case, a maximum load of 200 kg (440 lbs) applies for the compound lift system. Study the markings of the lift and lifting accessory or contact your Liko representative if you have any questions.

Recommended Lifting Accessories

⚠️ Using other lifting accessories than those recommended below may induce risk.

Below is an overview of recommended lifting accessories available for Multirall 200.

To select suitable slings and other lifting accessories, please see, e.g., the "Lifting Accessories" brochure. For additional guidance in selecting a sling, study the instruction guide for the respective sling model. Here, you will also find guidance for combining Liko’s sling bars with Liko’s slings.

Contact your Liko representative or visit www.liko.com for advice and information on Liko’s product range.

Universal SlingBar 350 with Quick-release Hook
Max. 300 kg (660 lbs).
Prod. No. 3156084

Universal SlingBar 450 with Quick-release Hook
Max. 300 kg (660 lbs).
Prod. No. 3156085

Universal TwinBar 670 with Quick-release Hook
Max. 300 kg (660 lbs).
Prod. No. 3156087

Sling Cross-bar 450 with Quick-release Hook
Max. 300 kg (660 lbs).
Prod. No. 3156022

Sling Cross-bar 670 with Quick-release Hook
Max. 300 kg (660 lbs).
Prod. No. 3156019

SlingBar Mini 220*
Max. 205 kg (450 lbs).
Prod. No. 3156005

Universal SlingBar 600*
Max. 300 kg (660 lbs).
Prod. No. 3156076

* must be updated with Quick-release Hook in order to be used with Multirall, see "Quick-release Hook" below.

Quick-release Hook

Liko’s Quick-release Hooks form a system providing safe and easy exchange of lifting accessories. Liko’s Quick-release Hooks protect against unintentional detachment.


See "Guide to Liko’s Quick-release Hook System” which can be downloaded at our website www.liko.com or contact Liko for more information.
Horizontal stretchers
Most stretchers in Liko's product range can be used with Multirall.
Contact Liko for more information.

Scale for Multirall
In need of weighing persons in combination with Multirall, we recommend LikoScale 350. Adapter Kit LikoScale is required.
LikoScale 350 is certified according to the European Directive NAWI 90/384 (Non Automatic Weighing Instruments).
Contact Liko for more information.

Liko Support Springs for stand/gait training
Elastic springs are available as an accessory, to obtain a softer, springy motion during, e.g., gait training.
Short, 22 cm/8.7 inch., max 70 kg/154 lbs patient weight/pair: Prod. No. 3156512
Short, 22 cm/8.7 inch., max 100 kg/220 lbs patient weight/pair: Prod. No. 3156513
Long, 28 cm/11 inch., max 70 kg/154 lbs patient weight/pair: Prod. No. 3156511
Also see the instruction guide for Liko MasterVest, Model 60 and 64 or Liko LiftPants, Model 92, for more information.

Extension Arm Multirall
Facilitates the connection and disconnection of the lift strap from the carriage.
Fits Carriage S65 with Single Hook (Prod. No. 3136011).

Helping Hand Multirall
Facilitates the connection and disconnection of the lift strap from the carriage.
Fits Carriage S50 with Single Hook (Prod. No. 3136010).

Multirall Trolley
Convenient trolley for transfer and storage of Multirall and accessories.

Holder for Accessories
For attaching Extension Arm/Helping Hand Multirall to the Multirall Trolley.

Easy Switch
Fits Multirall hand control with membrane key.

Hang-Up HandControl Hanger
(10 pcs/set)

SlingBar Cover Paddy 30
Fits Universal SlingBar 350, 450 & 600 and SlingBar Slim 350.

Strap Grippper
For room-to-room transfers.

Extension Belt, adjustable
(length 30-40 cm/12-16 inch., 40-60 cm/16-24 inch., 60-100 cm/24-40 inch. and 100-140 cm/40-55 inch.)

Room to Room Strap
(length 117 cm/46 inch., 1770 cm/70 inch. and 237 cm/93 inch.)
Simple Troubleshooting

The lift doesn't work.

1. Check that the emergency stop is not activated (see p. 5).
2. Check that the battery is charged (see p. 6).
3. Check that the hand control is correctly connected.
4. **If the lift still does not work satisfactorily, contact Liko.**

The lift emits a repeated audible or LED signal.

1. Charge the battery immediately (see p. 6).
2. **If the lift still does not work satisfactorily, contact Liko.**

The lift stops in elevated position.

1. Check that the emergency stop is not activated (see p. 5).
2. Check that the battery is charged (see p. 6).
3. Check that the hand control is correctly connected.
4. Use indicated electrical or mechanical emergency lowering device to safely lower the patient onto a firm surface (see p. 5).
5. **If the lift still does not work satisfactorily, contact Liko.**

You hear unusual sounds.

**Contact Liko.**
Care and Maintenance

Care and inspection
For safe and troublefree operation, a few routine procedures should be performed every day the lift is used.

- Visually inspect the lift and check for external damage or wear.
- Check the sling bar attachment.
- Check the lift strap for wear and ensure that the lift strap is not twisted.
- Check that the latches of the lifting accessories function properly.
- Check the operation of the lift movement.
- Check that the emergency lowering functions properly.
- Charge the batteries every day the lift has been used, and check the charger function.

When necessary, clean the lift with a moist cloth, using warm water or disinfectant.

**NOTE! Do not use cleaning agents that contain phenol or chlorine, since these can damage aluminum and plastic materials.**

△ **The lift should not be exposed to running water.**

Service
Periodic inspection of Multirall should be carried out at least once per year.

△ **Periodic inspection, repairs and maintenance may only be performed according to Liko’s service manual, by personnel authorized by Liko and using original Liko spare parts.**

Service agreement
Liko offers the opportunity to enter into service contracts for the maintenance and periodic inspection of your Liko products.

Transport and storage
During transport, or if the lift is not going to be used for a long time, the emergency stop should be engaged. The environment where the patient lift is transported and stored should have a temperature between 10 °C and 40 °C and a humidity between 30 % and 75 %. The air pressure should be between 700 and 1060 hPa.

Recycling
For instructions on how to recycle your Liko product, please visit our website: www.liko.com.

Product changes
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.

Design and Quality by Liko 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.*