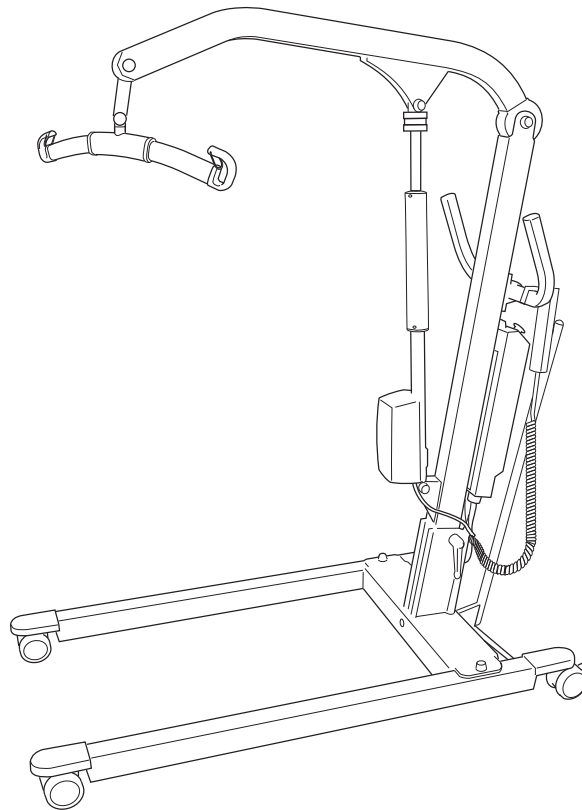


Viking S  
Viking XS

**Applies to the following models:**  
Prod. No. 2040006  
Prod. No. 2040007



## Product Description

Viking XS and Viking S are two flexible mobile lift models which are excellent in environments with limited space. The application areas are the most commonly used lifting situations, such as transfer between bed and wheel chair, to and from the toilet and lifting to and from the floor.

Viking XS and Viking S have electric raising and lowering of the lift arm and mechanical base widening.

Viking S has three height settings on the lift mast in order to give an optimal lifting interval for different needs.

The middle position is the standard setting; the lowest is suitable for, for instance, lifting children to and from the floor. Select the highest position for lifting extra high, for instance to beds/gurneys with fixed heights.

Individual fitting of the sling and other lifting accessories is of utmost importance for function and safety when using the lift.

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

**△ is a warning triangle used for situations which require extra care and attention.**

### **IMPORTANT!**

Read the instruction guide for both the patient lift and lifting accessories before use. Lifting and transferring a person always involves a certain level of risk. It is important to completely understand the contents of the instruction guides. The equipment should only be used by trained personnel. Please contact your Liko/Hill-Rom representative in the event of any uncertainties or questions.

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## △ NOTE!

This instruction guide contains important information for the user of the product.  
All who use the product should review and completely understand the contents of the instruction guide.  
Remember to keep the instruction guide in a place where it is always available to those using the product.

## Safety Instructions

### Before using the first time make sure that:

- the lift is assembled in accordance with the assembly instructions
- the lifting accessories are properly attached to the lift
- the batteries have been charged for at least 12 hours
- you have read the instruction guides for the lift and lifting accessories
- personnel using the lift are informed of the correct operation and use of the lift.

### Before lifting, always make sure that:

- the lifting accessories are not damaged
- the lifting accessory is correctly attached to the lift
- the lifting accessory hangs vertically and can move freely
- the lifting accessories are selected appropriately in terms of type, size, material and design with regard to the patient's needs
- the lifting accessory is correctly and safely applied to the patient in order to avoid injuries
- the sling bar latches are intact; missing or damaged latches must always be replaced
- the sling's strap loops are correctly connected to the sling bar hooks when the sling strap is extended, but before the patient is lifted from the underlying surface.

## △ Never leave a patient unattended during a lifting situation!



Viking S/Viking XS have been tested by an accredited testing institute and fulfil the requirements specified in the Medical Device Directive 93/42/EEC, for Class 1 products.

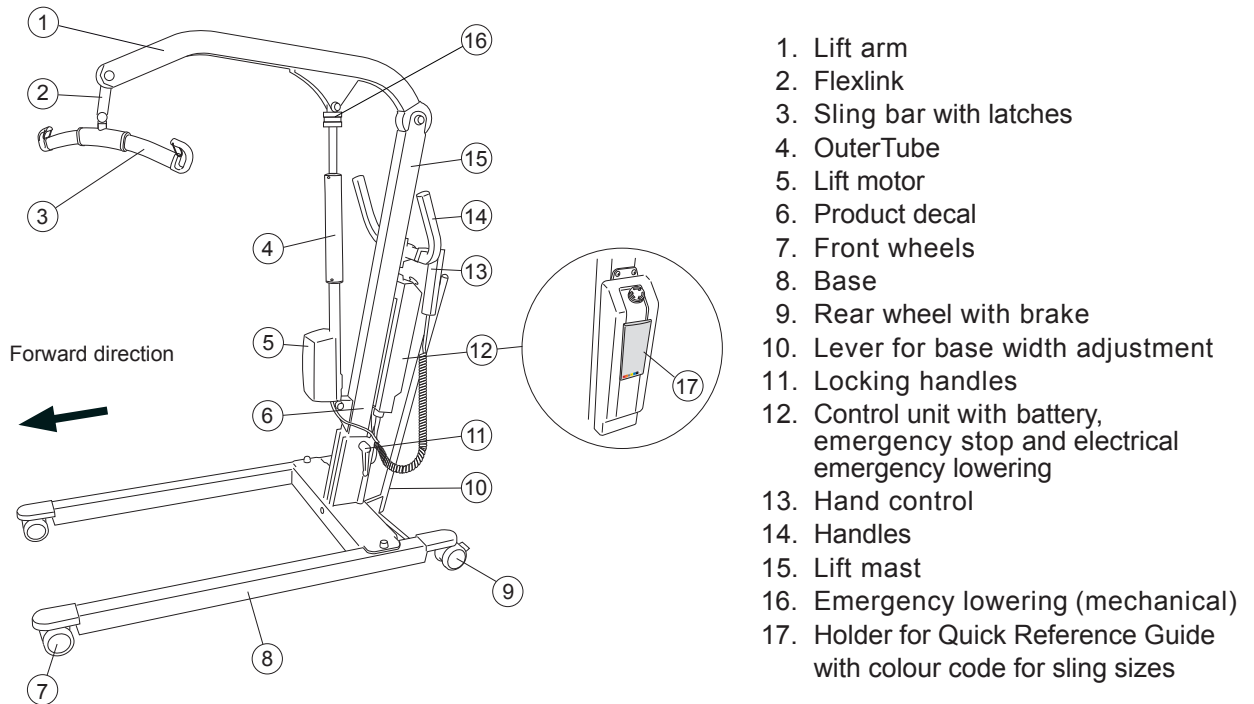
Viking S/Viking XS complies with the requirements in EN ISO 10535:2006, IEC 60601-1, IEC 60601-1-2, ANSI/AAMI ES60601-1, and CAN/CSA C22.2 no 60601-1.

## △ Under no circumstances must the lift be modified. If you have any questions, please contact Liko/Hill-Rom.

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

The lift must not be used in areas where flammable mixtures may occur, for example in areas where flammable goods are stored.

## Definitions



## Technical Data

**Maximum load:** Viking S: 160 kg (350 lbs)  
Viking XS: 160 kg (350 lbs)

**Material:** Aluminium

**Weight:** Viking S: 26.8 kg (59 lbs)  
Viking XS: 25.4 kg (56 lbs)  
Heaviest removable part:  
14 kg (30 lbs)

**Wheels:** Front: 75 mm (3 inch.) twin wheels  
Rear: 75 mm (3 inch.) twin wheels  
with brakes

**Emergency lowering:** Mechanical and electrical

**Lifting interval:** Viking S: 1300 mm (51 inch.)  
Viking XS: 1130 mm (44 inch.)

**Turning diameter:** Viking S: 1350 mm (53 inch.)  
Viking XS: 1170 mm (46 inch.)

**Lifting Speed (without load):** Viking S: 30 mm/s (1.18 inch./s)  
Viking XS: 30 mm/s (1.18 inch./s)

**Sound level:** 59.8 dbA (max)

**Protection class:** IPX4

**Operating forces of controls:** 2.4 N

**Electrical data:** 24 V


**Intermittent power:** Int. Op 10/90, active operation max 2 min. Only 10% of a given length of time may be active, yet no more than 2 min.

**Battery:** 2 x 12 V 2.9 Ah. Valve-regulated lead-acid gel-type batteries. New batteries are provided by the supplier.

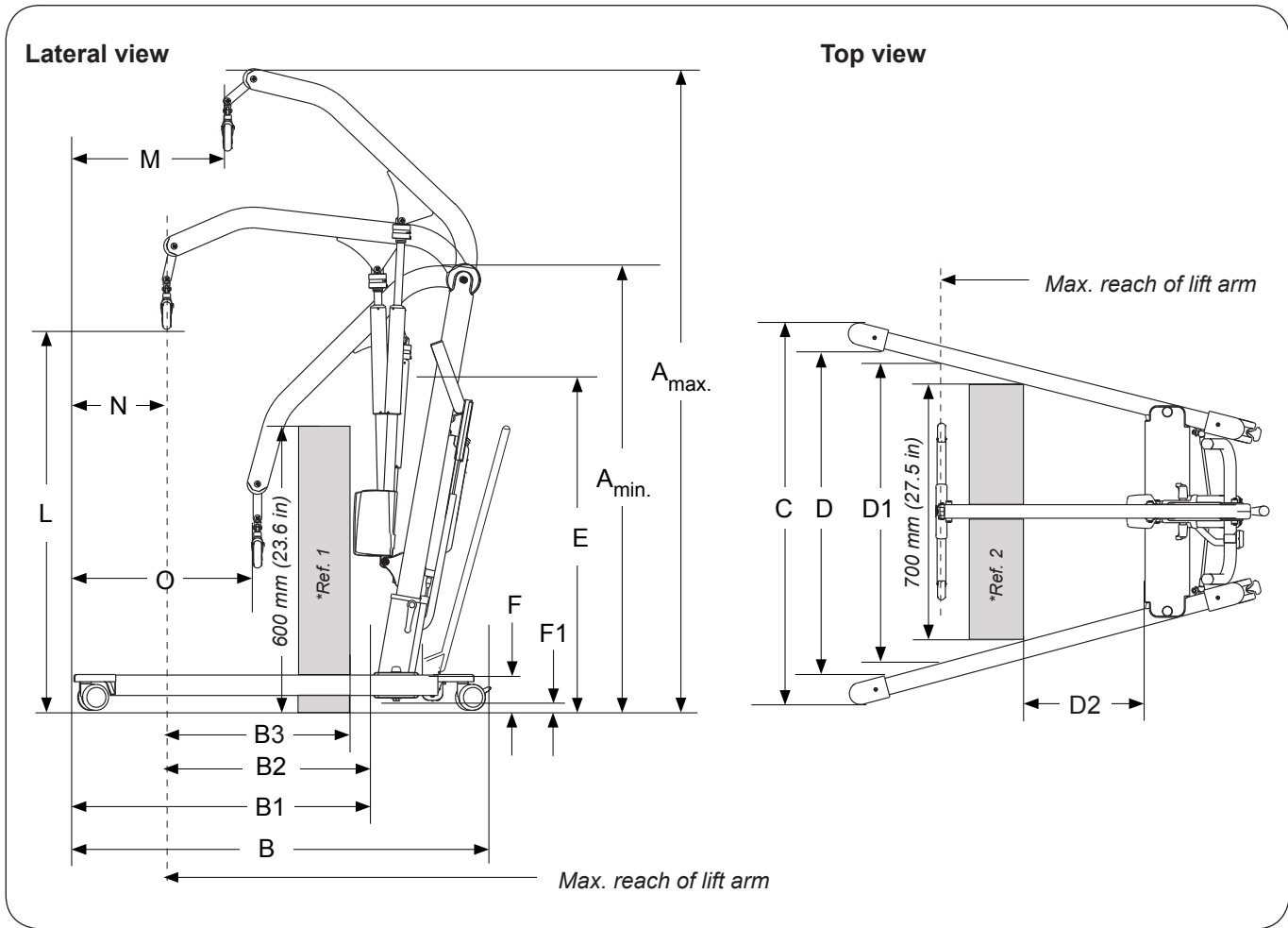
**Battery charger:** CH01: In; 100-240 V AC, 50-60 Hz, max 250 mA. Out; 24 V, max 500 mA.

**Lift motor:** 24 V, permanent magnetic motor with mechanical safety mechanism.

 The device is intended for use indoors.

 Type B, in accordance with the electrical shock protection class.

# Measurements



**Table of measurement: Viking S**

(mm.)

A*max	A*min	B	B1	B2	B3**	C		D		D1	D2**	E*		F	F1	L*		M	N	O
						max.	min.	max.	min.			max.	min.			max.	min.			
1970	1310	1260	910	600	545	1130	645	1010	520	880	245	1100	1000	110	30	1750	450	450	280	530

(inch.)

A*max	A*min	B	B1	B2	B3**	C		D		D1	D2**	E*		F	F1	L*		M	N	O
						max.	min.	max.	min.			max.	min.			max.	min.			
77.6	51.6	49.6	35.8	23.6	21.5	44.5	25.4	39.8	20.5	34.6	9.6	43.3	39.3	4.3	1.2	68.9	17.7	17.7	11	20.9

**Table of measurement: Viking XS**

(mm.)

A max	A min	B	B1	B2	B3**	C		D		D1	D2**	E	F	F1	L*		M	N	O
						max.	min.	max.	min.						max.	min.			
1778	1185	1105	760	518	437	940	530	815	403	730	447	980	110	30	1575	445	475	225	395

(inch.)

A max	A min	B	B1	B2	B3**	C		D		D1	D2**	E	F	F1	L*		M	N	O
						max.	min.	max.	min.						max.	min.			
70.0	46.7	43.5	29.9	20.4	17.2	37.0	20.9	32.1	15.9	28.7	17.6	38.6	4.3	1.2	62.0	17.5	18.7	8.9	15.6

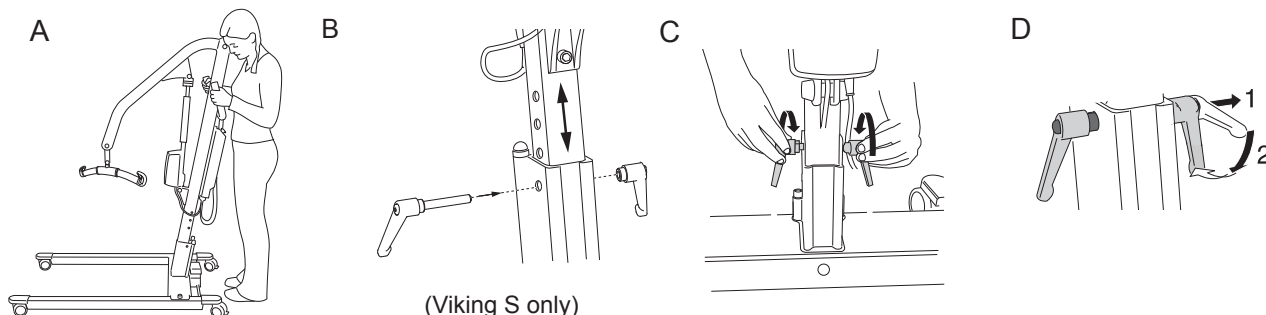
\* Different measurements depending on the height setting (Viking S only). Please see assembly of lift mast on p. 5.  
 Note! The measurements are based on the lift being equipped with standard sling bar. When changing to other lifting accessory, ensure that the lift still achieves desired lifting height.

\*\* Reference measurement according to Standard EN ISO 10535:2006.

# Assembly

**Before assembly, make sure you have the following parts:**

- lift mast with lift arm, motor for lift arm, sling bar and control unit
- base, lever for base width adjustment
- hand control with cable
- locking handles (1 pair)
- bag containing instruction guide, quick reference guide and adapter for battery charger
- battery charger.

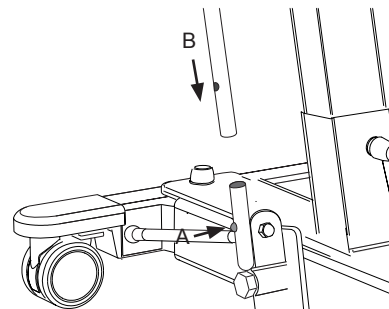
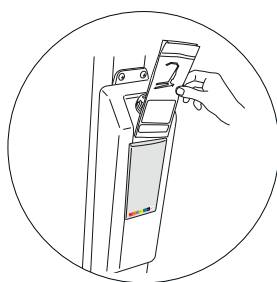
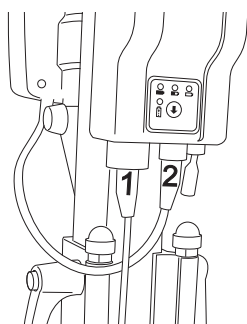


1. A: Lock both rear wheels. Place the lift mast in the foot on the base.

B: Adjusting the lifting height (Viking S only):  
The lifting height can be set to three different levels. The middle hole is recommended in most cases. The lowest hole of the lift mast is recommended for extra high lifting height. The highest hole is recommended for lower lifting heights. The distance between two holes is 50 mm (2 in). See the measurement table on p. 4.

C: Secure the lift mast in the base with the locking handles provided.

D: Adjust the position of the locking handles so that they are facing downwards.

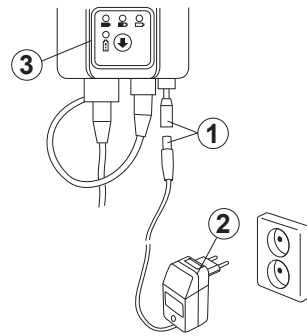
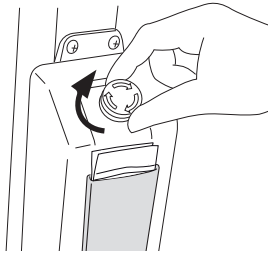


2. Connect the cables as follows:  
- Cable from hand control to socket 1  
- Cable from lift motor to socket 2

3. A quick reference guide is provided with the lift and should be kept in the intended holder on the control unit so that the user of the lift can easily check how the lift should be used.

**△ NOTE! The quick reference guide does not replace the instruction guide for the lift!**

4. Mount the Lever for base width adjustment:  
- Press in the pin (A) on the attachment device.  
- Fit the lever (B) in place. Make sure the lever locks in place.



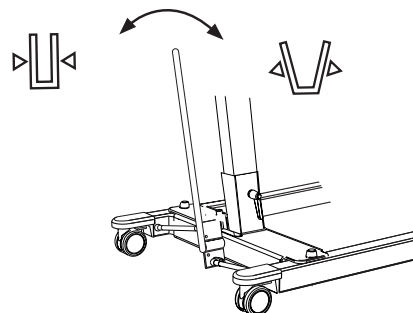
4. Reset the emergency stop by turning the red button in the direction of the arrows.

5. Before the first use, the lift's battery should be charged for at least 12 hours. For detailed instructions, see "Charging the Batteries", p. 8.



#### After assembly, make sure that:

- the motion of the lift arm corresponds to the buttons on the hand control
- the emergency lowering functions are working (mechanical and electrical)
- the wheel brakes are working
- the base-width adjustment works
- the lift charges.

## Operation

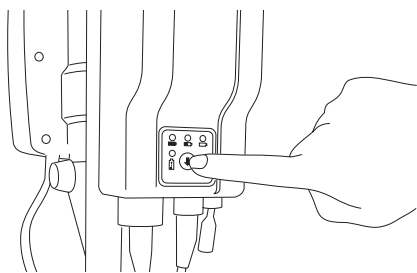


#### Hand Control

Indicator light (A) - charge the battery of the lift!  
The lifting motion is operated with the push buttons on the hand control. The direction in which the arrows are pointing applies when the hand control is held as shown in the picture. To raise or lower the lift arm, press  or . The lifting motion stops as soon as the push button is released.

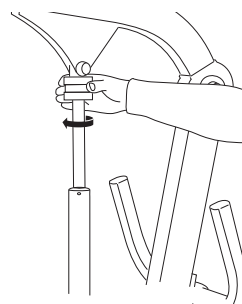
#### Adjustment of Base

To adjust the base width; push the Lever to the right or to the left.



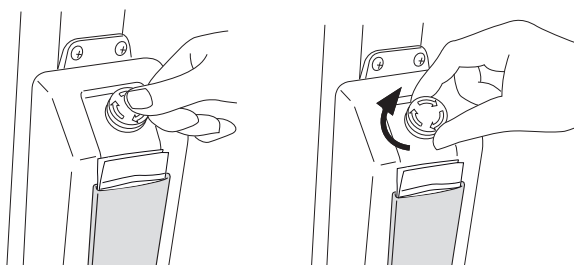
### Electrical Emergency Lowering

Lower the lift arm by pressing the marking for "down" (⬇️) on the control unit.



### Mechanical Emergency Lowering

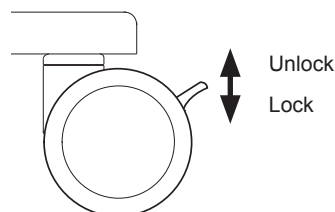
Turn the red emergency lowering cylinder in the direction of the arrows.



### Emergency Stop

*To activate the emergency stop:* Press the red button.

*To reset the emergency stop:* Turn the red button in the direction of the arrows.

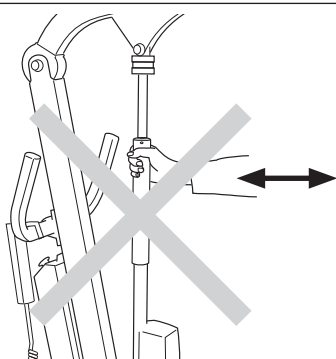


### Locking the Wheels

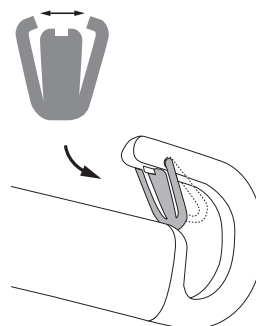
The rear wheels can be locked to prevent rotating and turning. To lock the wheels, push down the lock pedal with your foot. To unlock the wheels, lift up the lock pedal with your foot.

When lifting, the wheels should be unlocked so that the lift can be moved to the patient's centre of gravity. The wheels should be locked however, if there is a risk of the lift rolling into the patient, for instance, when lifting from the floor.

**⚠️ Locked wheels during lifting can increase the risk of tipping.**



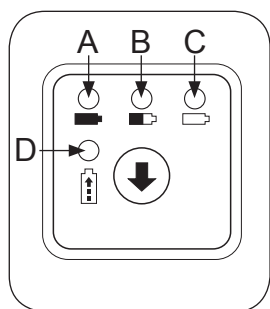
**⚠️ Never move the lift by pulling on the actuator!**



### Installation of Latches

After installation, check that the latch locks and runs freely in the sling bar hook.

## Charging the Batteries



The control unit has a display indicating the current battery capacity.

When the hand control is activated, a diode/light indicating battery capacity is illuminated for 10 secs.:

**A Green: at least 50%**

**B Yellow: 25-50 %**

**C Yellow: 0-25 %**

**D** The light indicates that charging/ trickle charging is taking place. This light is always on when the charger is connected.

When the yellow light (C) is on and the battery charge has become too low, the lift is automatically turned off to prevent discharge of the battery. The lift then has to be charged before it can be used again.

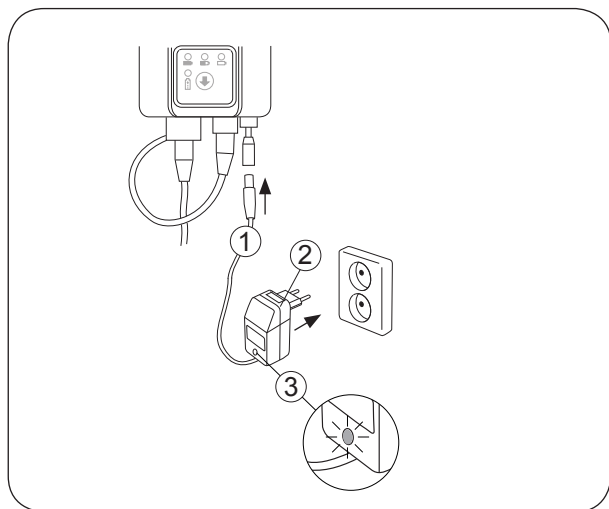
To obtain maximum life time, it is important to charge the batteries regularly. We recommend charging the batteries after each use of the lift or every night. If the lift is not used every day, we recommend pushing in the emergency stop after use, in order to turn off the current and save the battery. Maximum charge is obtained after about 12 hours.

When the batteries are fully charged, the charger switches to trickle charging automatically. To check the state of the battery, activate the hand control after max. charging and read the control unit display. Green light indicates good battery conditions. If any of the yellow lights is lit, battery change is recommended.

**The lift cannot be charged with the emergency stop engaged.**

**Never charge batteries in a wet area.**

### Charging



**According to the illustration:**

1. Connect the charging cable to the outlet for charging under the control unit.
2. Connect the charger to the wall socket (100-240 V AC).
3. On the charger the indicator flashes:
  - yellow during ongoing charging
  - green during trickle charging.

**NOTE! The lift cannot be used when the charger cable is plugged into a wall socket.**



Viking S and Viking XS comply with the Directive 2002/96/EC on waste electrical and electronic equipment. Old batteries are to be deposited at the nearest recycling facility in accordance with local regulations or given to personnel authorized by Liko/Hill-Rom.



# Maximum Load

Different maximum loads may apply to different products on the assembled lift unit: lift, sling bar, sling and any other accessories used. For the assembled lift unit, the maximum load is always the lowest maximum load rating for any of the components. For example, a Viking XS or Viking S which is approved for 160 kg (350 lbs) can be equipped with a sling bar which is approved for 300 kg (660 lbs). In this case, the maximum load of 160 kg (350 lbs) applies to the assembled lift unit. Check the markings on the lift and lifting accessory or contact your Liko/Hill-Rom representative if you have any questions.

## Recommended Lifting Accessories

**△ Using lifting accessories other than those approved can entail a risk.**

Recommended sling bars and accessories for Viking XS and Viking S are described below.

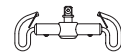
When changing sling bar and with extra lifting accessories, the highest possible lifting height of the lift is affected. Before changing lifting accessories you should therefore ensure that the lift, after change, can fulfil the desired lifting height in order to manage the lifting situations for which the lift is to be used.

To select suitable slings and other lifting accessories, please see the "Lifting Accessories" brochure. For additional guidance in selecting a sling, study the operating instructions for the respective sling models. Here, you will also find guidance for combining Liko's sling bars with Liko's slings.

Contact your Liko/Hill-Rom representative or visit [www.liko.com](http://www.liko.com) for advice and information on Liko's product range.

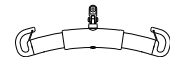
**SlingBar Mini 220**  
Max 205 kg (450 lbs)

Prod. no. 3156005



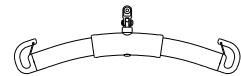
**Universal SlingBar 350\***  
Max 300 kg (660 lbs)

Prod. No. 3156074



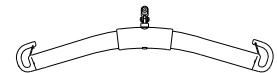
**Universal SlingBar 450\***  
(Standard for Viking S, Viking XS)  
Max 300 kg (660 lbs)

Prod. No. 3156075



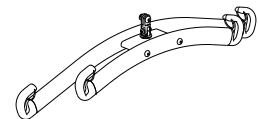
**Universal SlingBar 600\***  
Max 300 kg (660 lbs)

Prod. No. 3156076



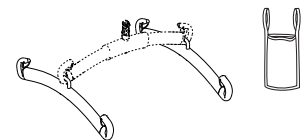
**Universal TwinBar 670 Twin\***  
Max 300 kg (660 lbs)

Prod. No. 3156077



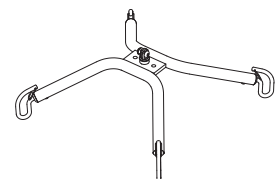
**Universal SideBars 450**  
**incl. bag**  
Max 300 kg (660 lbs)

Prod. No. 3156079



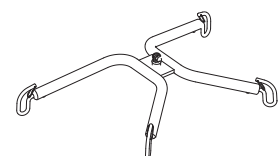
**Sling Cross-bar 450\***  
Max 300 kg (660 lbs)  
(Can be used to a limited extent with Viking XS)

Prod. No. 3156021



**Sling Cross-bar 670\***  
Max 300 kg (660 lbs)  
(Can be used to a limited extent with Viking XS)

Prod. No. 3156018



\* also available equipped with Quick-Release Hook

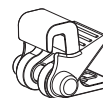
### Quick-Release Hook

Liko's Quick-Release Hooks are a system for quick change of lifting accessories on Liko's mobile and stationary lifts. Viking must be equipped with the Q-link 13 in order to be used with the Quick-release Hook.

The Quick-Release Hook Universal fits the Universal Bars 350, 450 and 600 (prod. no. 3156074 - 3156076). Quick-Release Hook TDM fits the SlingBar Mini 220 (prod. no. 3156005), Sling Cross-bar 450 and 670 (prod. no. 3156021 and 3156018) and Universal TwinBar 670 (prod. no. 3156077).

When changing to a sling bar with quick release hook, the lifting height is affected by 33 mm (1.3 in) in comparison with a fixed sling bar.

See the "Guide to Liko's Quick-Release Hook System", which can be downloaded from our website [www.liko.com](http://www.liko.com), or contact your Liko/Hill-Rom representative for more information on the advantages of the Quick-Release Hook system.



**Quick-Release Hook Universal**

Prod. No. 3156508



**Quick-Release Hook TDM**

Prod. No. 3156502

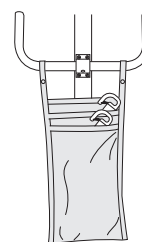


**Q-link 13**

Prod. No. 3156509

### Bag for SlingBars

Prod. No. 2001025



### SlingBar Cover Paddy 30

(fits Universal SlingBar 350, 450 and 600 and SlingBar Slim 350)

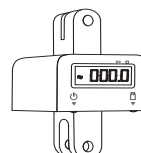
Prod. No. 3607001



### Scale

For weighing patients in combination with Viking, we recommend LikoScale 350 (adapter 2016504 required). LikoScale 350 is approved in accordance with European Directive NAWI 90/384 (Non-Automatic Weighing Instruments).

Contact your local Liko/Hill-Rom representative for more information.



**LikoScale 350**

Prod. No. 3156228

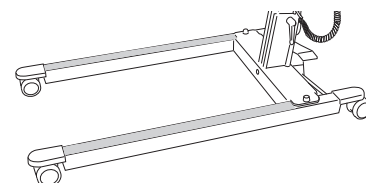


**Adapter 12 mm**

Prod. No. 2016504

### Leg Protector Viking S

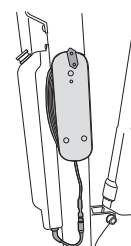
Prod. No. 2046011



### Cable reel EU

Accessory enabling mounting of external charger and charger cable on the lift.

Prod. No. 2107104



## Simple Troubleshooting

**The lift doesn't work up/down**



1. Make sure that the emergency stop is not been activated.
2. Check the battery voltage.
3. Make sure that the control unit cables are connected correctly.
4. Check that the charging cable is not connected to a wall socket.

*If the problem remains, please contact Liko/Hill-Rom.*

**The charging of the lift's battery doesn't work**



1. Check that the emergency stop button is not activated.
2. Check that the wall socket is energized.
3. Check that the charging cable is correctly connected.

*If the problem remains, please contact Liko/Hill-Rom.*

**The lift stops in the high position**



1. Make sure that the emergency stop is not been activated.
2. Check the battery voltage.
3. Use the electrical emergency lowering to lower the patient onto a firm surface.
4. Use the mechanical emergency lowering to lower the patient onto a firm surface.

*If the problem remains, please contact Liko/Hill-Rom.*

**If any noises are heard**



*Contact Liko/Hill-Rom.*

# Inspection and Maintenance

## Care and Maintenance

For trouble-free use, certain details should be checked each day the lift is used:

- Inspect the lift and check to make sure that there is no external damage.
- Check the sling bar attachment.
- Check the functionality of the latches.
- Check the integrity of the lifting motion and the base-width adjustment.
- Check to make sure that the emergency lowering (both electrical and mechanical) works.
- Charge the batteries each day the lift is used and make sure the charger works.

When necessary, clean the lift with a moist cloth, using warm water or disinfectant and check that the wheels are free from dirt. **NOTE! Do not use cleaning agents that contain phenol or chlorine, since these can damage aluminium and polyamide material.**

△ The lift should not be exposed to running water.

## Service

Viking S and Viking XS should be periodically inspected at least once a year.

△ **Periodic inspection, repair and maintenance should be performed only in accordance with the Liko Service Manual and 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 regular inspection of your Liko product.

## Expected Life Time

The product has an expected life time of 10 years when correctly handled, serviced and inspected in accordance with Liko's instructions.

## Transport and Storage

During transportation, or when the lift is not to be used for a long time, the emergency stops should be engaged. The environment where the lift is transported and stored should have a temperature of 10–40 °C (50–104 °F) and a relative humidity of 30–75 %. The air pressure should be 700–1060 hPa.

## Recycling

For instructions on how to recycle your Liko product, please visit our website: [www.liko.com](http://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/Hill-Rom representative for advice and information about product upgrades.

## Design and Quality by Liko in Sweden

*Liko is quality-certified in accordance with ISO 9001 and its equivalent for the medical device industry, ISO 13485. Liko is also certified in accordance with environmental standard ISO 14001.*



A  Company

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

## Manufacturer:

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Sweden  
[info@liko.se](mailto:info@liko.se)