

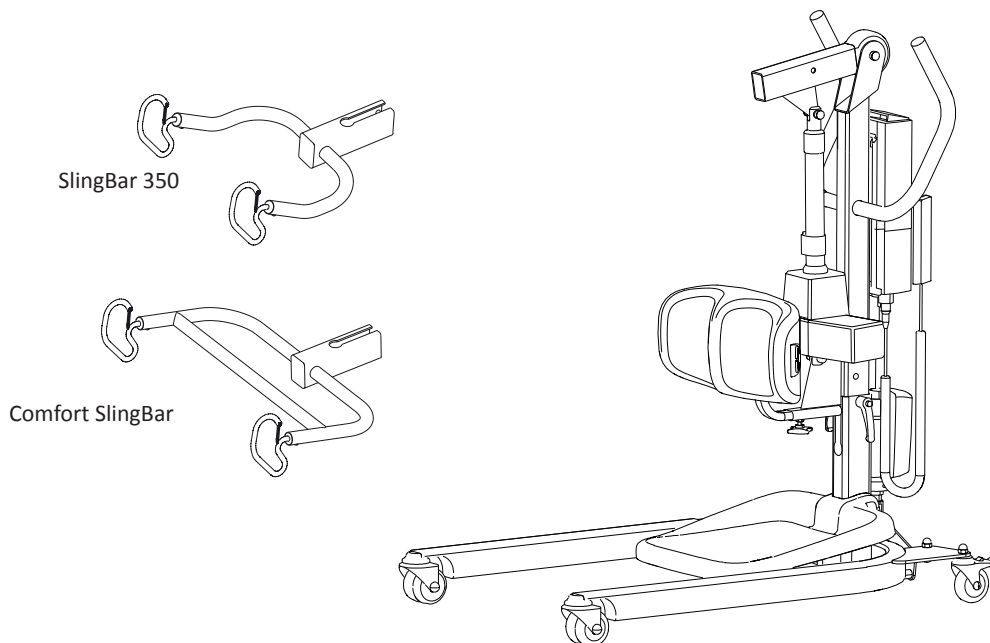
Sabina™ II

Sit-to-stand lift

Instruction Guide



Sabina II EE Prod. No. 2020003



Product Description

The Sabina sit-to-stand lift is especially designed for people who have difficulty in standing up on their own from a seated position.

Sabina sit-to-stand lift is intended for use with patients who are able to actively participate in the raising motion. When standing, they can be moved to a wheelchair or to a toilet; this gives them standing practice in connection with the transfer.

There are two different sling bar options for Sabina sit-to-stand lift, as well as many different sit-to-stand vests. The patient's overall mobility determines the choice of sling bar and sit-to-stand vest.

The Sabina sit-to-stand lift equipped with the Comfort SlingBar combined with the Liko ComfortVest provides an especially gentle lifting action without putting pressure under the arms. This combination is suitable for those who are especially sensitive to pressure under the arms, such as people who are paralyzed on one side.

Sabina sit-to-stand lift can also, to a limited extent, be used for passive lifting of a patient sitting in a sling.

In this document, the person being lifted is referred to as the patient, and the person helping 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 guide. The equipment should be used by trained personnel only. Please contact Hill-Rom in the event of any uncertainties or questions.

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NOTE!

This instruction guide contains important information for users of the product. All those 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

Intended use: The product is intended for use in following environments: Health care, Intensive care, Emergency ward, Rehabilitation, Habilitation environment. This product is not intended to be used by the patient alone. Lifting and transferring a patient shall always be performed with the assistance of at least one caregiver. Contact your Hill-Rom representative for support and advice.

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 6 hours
- you have read the instruction guides for the lift and lifting accessories
- personnel using the lift are trained 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 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 bodily injury
- the lifting accessory is correctly applied to the sling bar
- the sling bar latches are intact. Missing or damaged latches must always be replaced with new ones;
- the sit-to-stand vest's/sling's straps are properly connected to the sling bar hooks when the straps have been fully extended but before the patient is lifted from the underlying surface.
- as a caregiver assure that the patient not are at risk of falling forward or to any side during lifting.

△ After use, store the lift in forward direction towards a wall and out of reach of unauthorized!

△ Never leave a patient unattended in Sabina sit-to-stand lift!



Sabina II EE sit-to-stand lift have been tested by accredited testing institutes, and comply with the requirements for MDD Class 1 products (MDD 93/42/EEC).

Sabina II EE sit-to-stand lift comply with the requirements of EN ISO 10535:2006, and applicable parts of 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. Please contact Hill-Rom for more information.

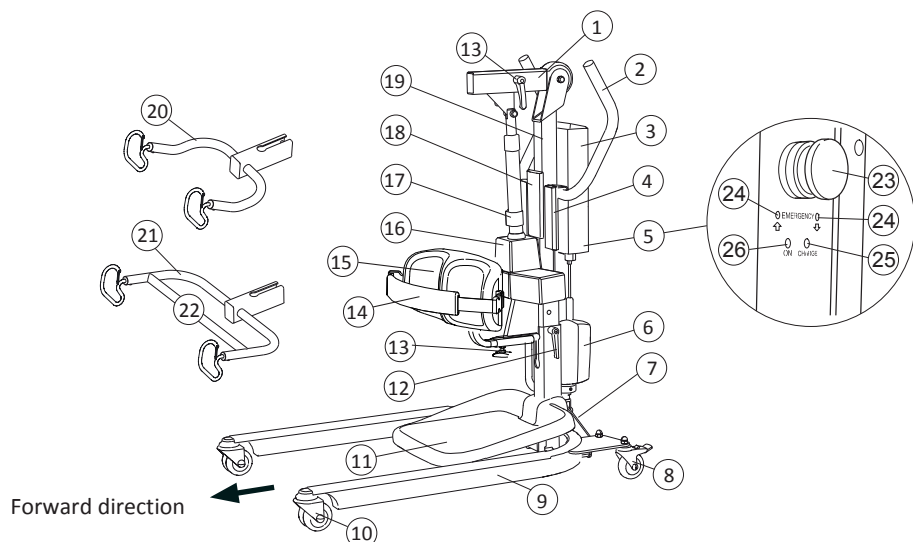
Use of the product adjacent to other equipment should be avoided because it could result in improper operation, if such use is necessary, observe and verify that the other equipment is operating normally.

Electromagnetic disturbance, may affect the lifting performance of the product. Modification using other parts than original spare parts (cables etc.) may affect the electromagnetic compatibility of the product.

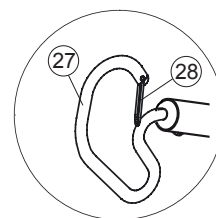
Particular care must be taken when using strong sources of potential disturbance, such as diathermy, etc, so that cables are not positioned on or near the lift. If you have questions, please consult the responsible assistive-device technician or the supplier.

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




Definitions



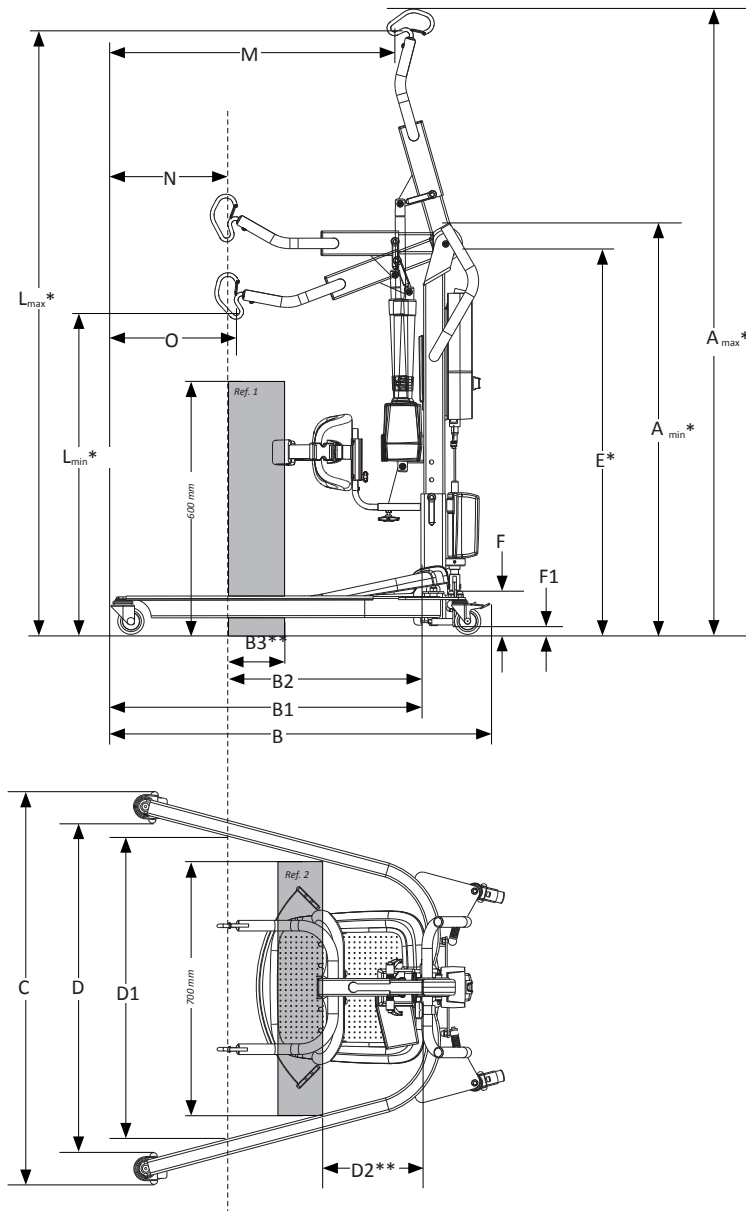
- | | |
|--|--|
| 1. Lift arm | 16. Lift motor |
| 2. Handles | 17. Mechanical emergency lowering |
| 3. Battery | 18. Holder for quick reference guide with colourcode for sling sizes (accessory) |
| 4. Hand control | 19. Lift mast |
| 5. Control box with emergency stop | 20. SlingBar 350 |
| 6. Motor for base-width adjustment | 21. Comfort SlingBar |
| 7. Decal: shows risk of crushing against the floor | 22. Cross bar (only Comfort sling bar) |
| 8. Rear wheels fitted with brake | 23. Emergency stop |
| 9. Base | 24. Electrical emergency lowering/raising |
| 10. Front steering wheels | 25. Indicator lamp, charging (Charge = charging) |
| 11. Foot rest (removable) | 26. Indicator lamp, charging (ON = switched on) |
| 12. Locking handles | 27. Lifting hook |
| 13. Wheel for lower leg support adjustment | 28. Latches |
| 14. Calf strap (accessory) | |
| 15. Lower leg support | |



Technical Data

Maximum load:	Active lifting: 200 kg (440 lbs) Passive lifting: 150 kg (330 lbs)	Operating forces of controls:	2.4 N
Material:	Powder-painted steel.	Intermittent operation:	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.
Weight:	Total: 41 kg (90 lbs) Heaviest removable part: 23 kg (50 lbs)	Batteries:	2 x 12 V 2.9 Ah. Valve-regulated lead-acid gel-type batteries. New batteries are provided by the supplier.
Wheels:	Standard front: 75 mm twin wheel. Standard back: 75 mm individual wheel fitted with brake	Battery charger:	Built-in charger for 100-240 VAC, 50-60 Hz, max 400 mA.
Foot rest:	Removable.	Lift motor:	24 V 9,2 A, permanent magnetic motor with mechanical safety mechanism.
Lower-leg support:	Adjustable in terms of height and depth. Removable.	Motor base:	24 V, 5 A, permanent magnetic motor.
Turning diameter:	1180 mm (46.5 inch.)	 The device is intended for use indoors.	
Emergency lowering device:	Mechanical and electrical.	 Type B, in accordance with the electrical shock protection class.	
Lifting interval:	SlingBar 350: 825 mm (32.5 inch.) Comfort SlingBar: 785 mm (30.9 inch.)	 Class II equipment.	
Lifting Speed (without load):	SlingBar 350: 54 mm/s (2.13 inch./s) Comfort SlingBar: 47 mm/s (2.1 inch./s)		
Maximum noise output:	46 dB(A)		
Protection class:	IP X4		

Measurement



Measurements

	(mm.)																	
Sabina II EE	A_{min}^*	A_{max}^*	B	B1	B2	B3	C	D	D1	D2**	E*	F	F1	L_{max}^*	L_{min}^*	M	N	O
SlingBar 350	1050	1770	1060	870	590	190	690-1115	530-1005	915	210	900-1000	107	22	1725	800	790	280	310
Comfort SlingBar	1050	1750	1060	870	555	150	690-1115	530-1005	900	210	900-1000	107	22	1695	810	790	315	340

	(inch.)																	
Sabina II EE	A_{min}^*	A_{max}^*	B	B1	B2	B3	C	D	D1	D2**	E*	F	F1	L_{max}^*	L_{min}^*	M	N	O
SlingBar 350	41.3	69.6	41.7	34.2	23.2	7.5	27.2-44.9	20.9-39.5	36.0	8.2	35.4-39.3	4.2	0.9	67.9	31.5	31.1	11.0	12.2
Comfort SlingBar	41.3	68.9	41.7	34.2	21.8	5.9	27.2-44.9	20.9-9.5	35.4	8.2	35.4-39.3	4.2	0.9	66.7	31.8	31.1	12.4	13.4

* Different measurements depending on the height-setting position, please see "Assembly", page 6. Note! The measurements are based on the lift being equipped with standard wheels. When changing wheels, check that the lift still achieves desired lifting height.

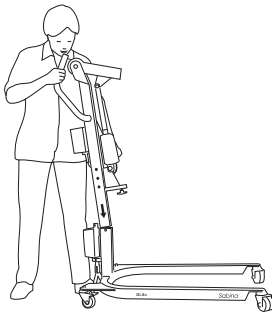
** Reference measurement according to Standard EN ISO 10535:2006.

Assembly

Before assembly, make sure you have the following parts:

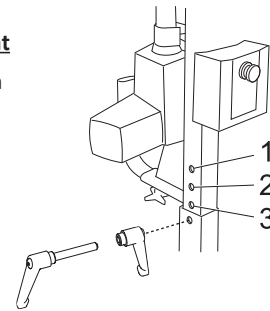
- Lift mast with lift arm, control box, lift motor
- Sling bar with safety latches and locking handles
- Hand control with cable
- Battery incl. holder for the charging cable
- Base incl. motor for base-width adjustment and locking handles
- Foot rest and frame for the foot rest
- Lower leg support
- Bag containing instruction guide, charger connector cable, and extension cord.

NOTE! The sling bar is supplied separately, either as SlingBar 350 or the Comfort SlingBar. We show the Sabina sit-to-stand lift with Comfort SlingBar in this description.

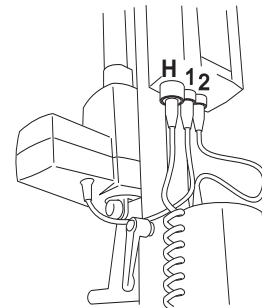
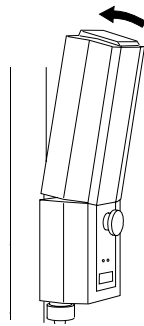
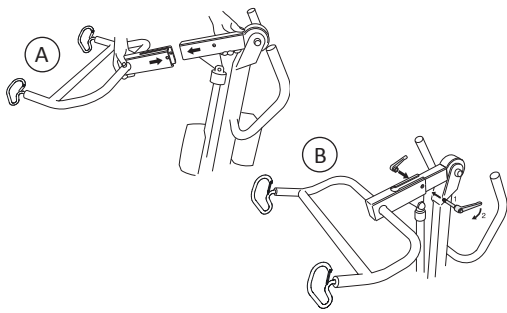


Individual adjustment of lifting height

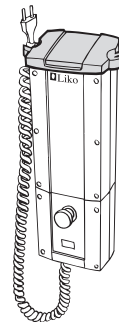
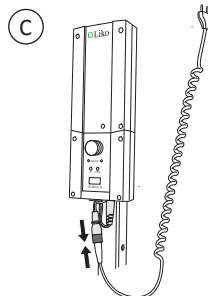
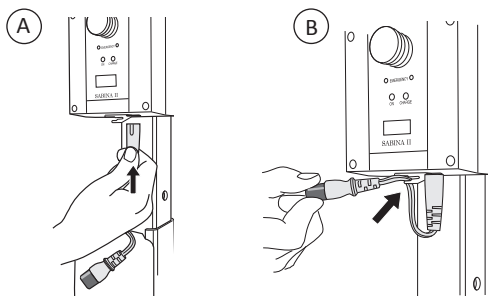
Height of patient	Position
< 170 cm / 67 inch.	1
160-190 cm / 63-74.8 inch.	2
> 180 cm / 70.9 inch.	3



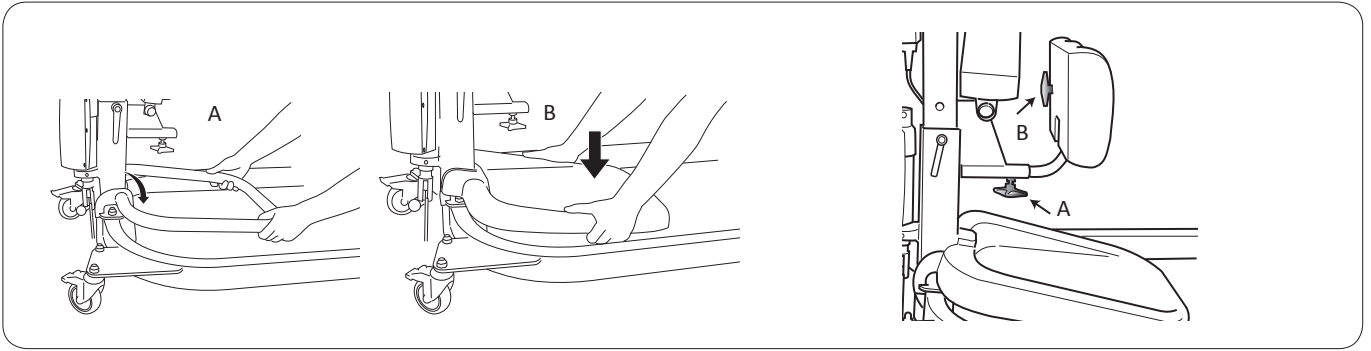
1. Remove the locking handle from the base. Place the lift mast in the foot of the base.
2. With the lift mast, the lifting height may be adjusted to three different levels. Choose one of the three holes depending on the height of the patient; the distance between holes is 5 cm/2 inch. (see illustration above). Secure the lift mast in the base with the included locking handle.



3. A) Remove the locking handle from the lift arm. Slide the sling bar onto the lift arm with the opening on the lifting hooks facing forward (see illustration).
B) Attach the locking handle and tighten.
4. Place the battery in the control box. Make sure that the battery is secured (a click will be heard).
5. Connect the cables as follows:
 - 1. cable, lift motor.
 - 2. cable, motor for base-width adjustment.
 - H. cable, hand control.

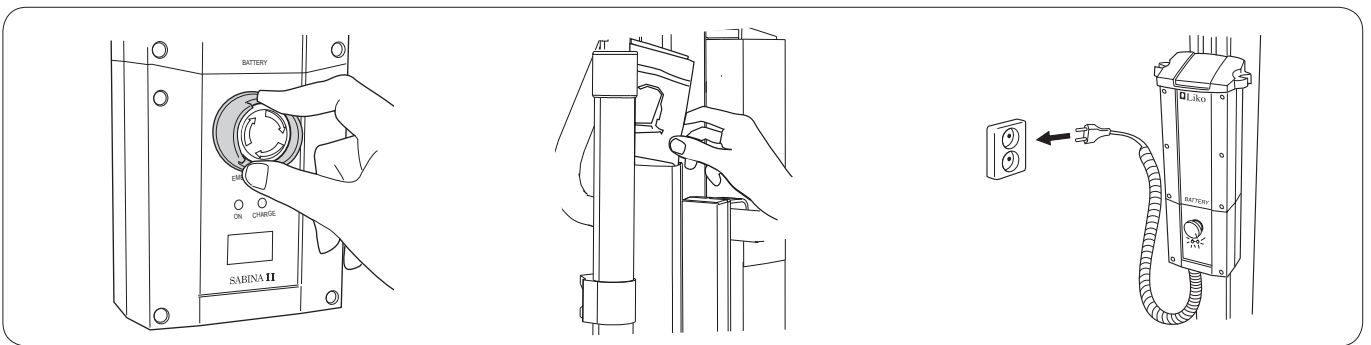


6. A) Connect the charger cable to the socket under the control box.
B) Attach the connector cable to the strain relief system.
C) Plug the charger cable into the connector cable.
7. Install the holder for the charging cable: Hook it on the front edge of the battery and push down on the back until you hear a clicking sound.



8. A) Put the frame for the foot rest over the lift mast's bracket to the base. Make sure the frame is securely in place.
 B) Push the footrest into the frame.

9. Install the lower leg support on the lift mast. Loosen wheel A in order to adjust the distance to the patient's lower legs. Loosen wheel B in order to adjust the height setting. After adjustment, lock wheels A and B.



10. Release the emergency stop by turning the button in the direction indicated by the arrows on the button.

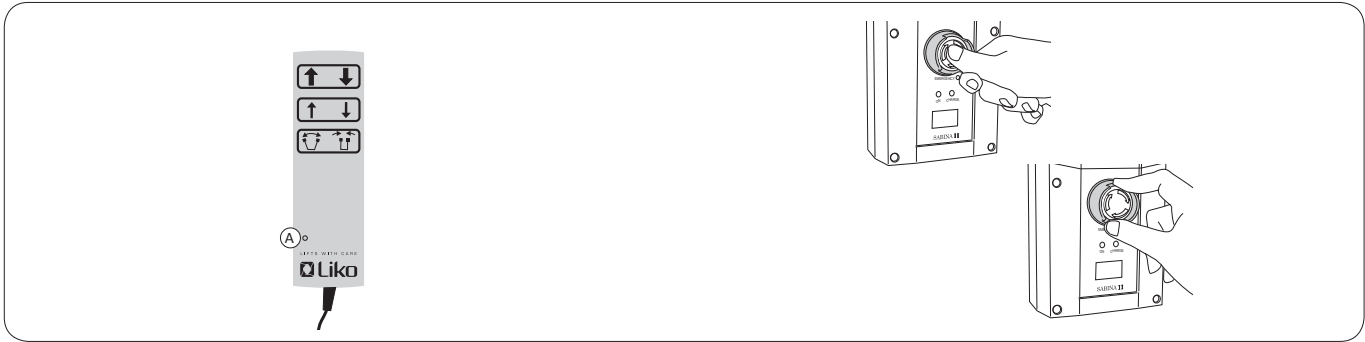
11. *If applicable:*
 Attach the holder for quick reference guide on the lift mast according to the assembly instruction. Place the quick reference guide in the holder.

12. Before the first use, the lift's battery should be charged for at least 6 hours. For detailed instructions, see "Charging the Batteries", page 9.

After assembly, make sure that:

- the motion of the lift arm corresponds to the buttons on the hand control
- the emergency lowering device works (mechanically and electrically)
- the base-width adjustment works
- the wheel brakes are working
- the indicator lamps on the front of the control box illuminate during charging.

Operation



Hand control

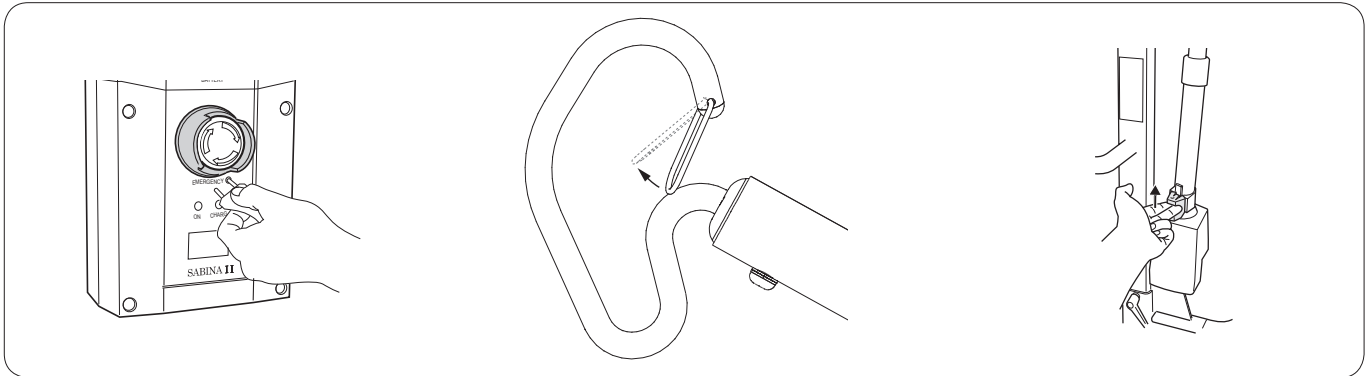
Indicator lamp (A) - charge the battery of the lift!

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 . For lower lifting speed use the thinner arrows. The lifting motion stops as soon as the push button is released. For adjustment of the base width, press or .

Emergency stop

Activate: Press the red button on the control box.

Reset: Turn the button in the direction shown by the arrows until the button springs out.



Electrical emergency lowering/raising

Use a narrow object to push the buttons inside the labelled holes on the control box.

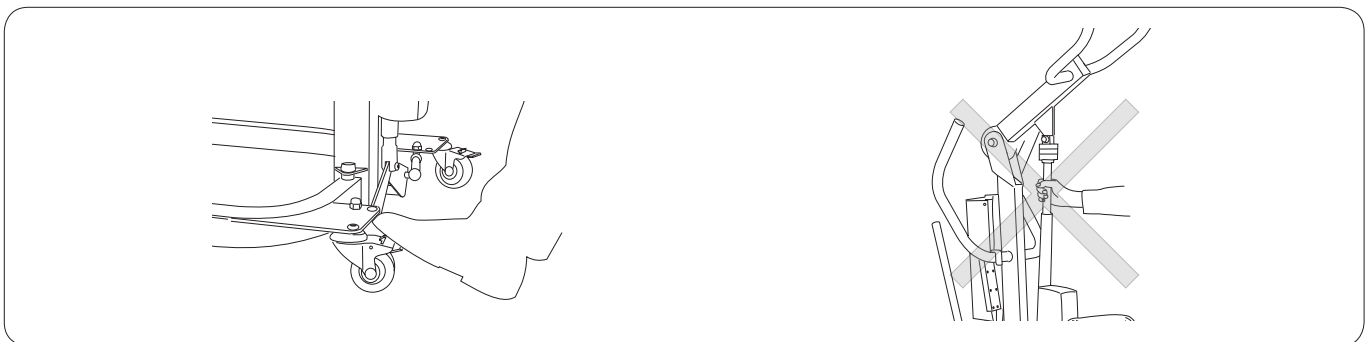
△ The object used to press must not be sharp, since this may cause damage on the control box!

Installation of latches

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

Mechanical emergency lowering

Pull the red emergency lowering control straight upwards. Mechanical emergency lowering only works when the lift arm is under load, i.e. when a patient is standing/sitting in the lift. The lowering motion is slightly delayed.




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, push on the raised button at the wheel. During passive/active lifting, the wheels should be unlocked so that the lift can be moved to the patient's centre of gravity.

△ Never move the lift by pulling on the actuator!

Charging the Batteries

Indications for charging the battery

In the event of low battery voltage, a signal from the control box will sound. At the same time, an indicator on the hand control will illuminate. When this happens, the battery must be charged as soon as possible. However, there is sufficient power for a few more lifts. There is a display on the control box indicating current battery capacity. When all fields are black, the battery is fully charged. When the symbol () is displayed, the battery must be re-charged as soon as possible.

Battery charging and maintenance

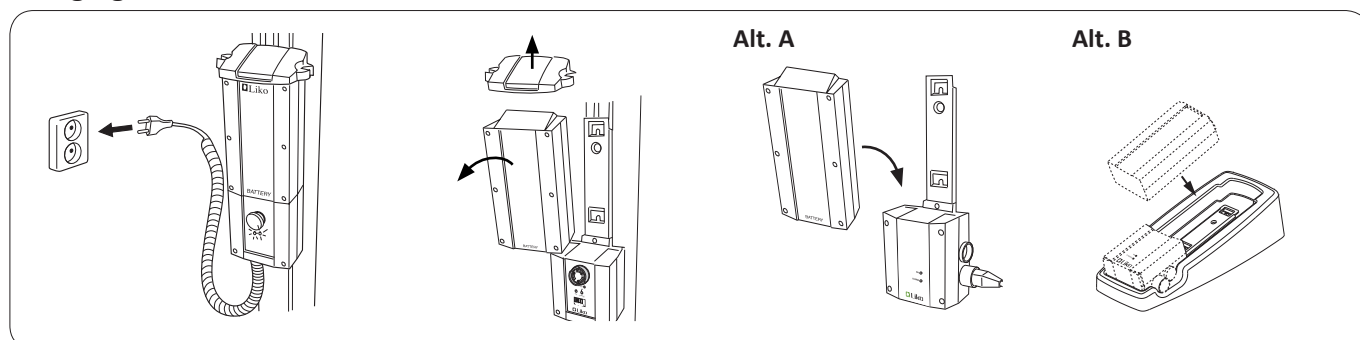
To get maximum life time, it is important to charge the battery regularly. We recommend charging after use of the lift or every night. Batteries are fully charged after approx. 6 hours. When the battery is fully charged, the charger is switched off automatically. If the lift is not used every day, we recommend connecting the lift to the charger, or pushing in the emergency stop after use, in order to turn off the current and save the battery. Ensure that the battery is fully charged before pushing the emergency stop.

NOTE! The lift cannot be charged with the emergency stop engaged.

NOTE! When charging, a yellow indicator lamp on the control box will illuminate. The yellow lamp turns off when the battery is fully charged. If the lamp has not turned off after 8 hours of charging, the battery probably needs to be replaced. Stop charging and replace the battery.

⚠ Never charge batteries in a wet area.

Charging



Built-in charger (standard.):

Connect the charger cable to a socket (100-240 V AC). Make sure that both indicator lamps on the charger are illuminated. The yellow lamp indicates that charging is taking place, while a green lamp indicates that power is being supplied to the charger. If the charger cable is beginning to stretch, it should be replaced in order to minimize the risk of the cable getting stuck and breaking.

Wall-mounted charger or table charger:

Detach the holder for the charger cable. Remove the battery from the control box by releasing the blocking bolt on top of the battery.

Alt. A. Place the battery on the wall-mounted charger. Plug the charger into a socket (100-240 V AC). Make sure that both indicator lamps on the charger are illuminated. The yellow lamp indicates that charging is taking place, while a green lamp indicates that power is being supplied to the charger.

Alt. B. Place the battery on the charger in the table charger housing. Plug the charger into a socket (100-240 V AC). Make sure that both indicator lamps on the charger are illuminated. The yellow lamp indicates that charging is taking place, while a green lamp indicates that power is being supplied to the charger.

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



Sabina II EE sit-to-stand lift 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 Hill-Rom.

Maximum Load

Different maximum loads may apply to different products on the assembled lift unit: lift, sling bar, sit-to-stand vest and any other accessories used. For the assembled lift unit, including accessories, the maximum load is always the lowest maximum load rating for any of the components. Check the markings on the lift and lifting accessories, contact your Hill-Rom representative if you have any questions.

Recommended Lifting Accessories

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

Below is a description of recommended lifting accessories for Sabina II. Study also the instruction guide for respective sit-to-stand vest/sling or lifting accessory for further guidance.

Contact your Hill-Rom representative for advice and information on Liko's product range.

Holder for Quick Reference Guide

Prod. No. 2000100



Quick Reference Guide Sabina II

Swedish/Finnish
Norwegian/Danish
English/Spanish
German/French
French/Dutch
Italian/Portuguese

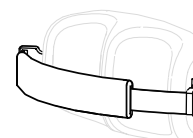
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Calf Strap

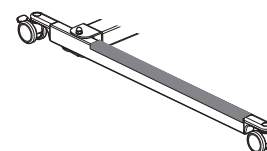
Prod. No. 20290022

Calf strap may be used for those patients who need securing of a weak leg or need a prompt not to step off of the foot rest.



Leg Protector

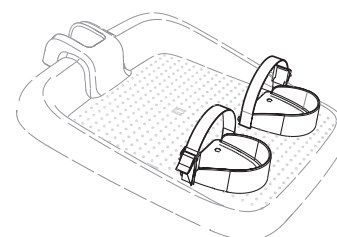
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Heel Support Sabina

Heel supports are used if the patient's feet need to be fixed to the foot rest. Foot straps are included.

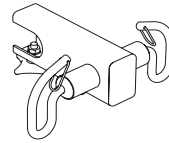
△ Be aware of any decreased mobility and/or the risk of hyperextension of the knee joints when using Sabina Heel Support.



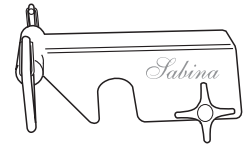
SeatStrap SlingBar

Prod. No. 2027007: can be used with Sabina II sit-to-stand lift.

Prod. No. 2027006: can be used with earlier Sabina sit-to-stand lift models, but can also be used with Sabina II sit-to-stand lift.



Prod. No. 2027007

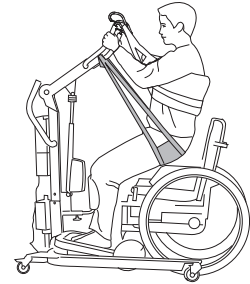


Prod. No. 2027006

Sabina SeatStrap

Prod. No. 3591115

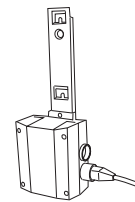
The SeatStrap is an accessory that facilitates the first part of the raising motion. The SeatStrap is connected to a SeatStrap SlingBar, which helps the patient move the seat up when raising. In standing position, the SeatStrap can be easily disconnected so that it is not in the way when, e.g., going to the toilet.



Battery charger, wall-mounted

Prod. No. 2004106

or for use with a table charger housing



Extra battery

Prod. No. 2006106

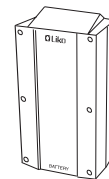
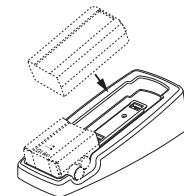


Table charger housing

Prod. No. 2107103

excl. charger and battery

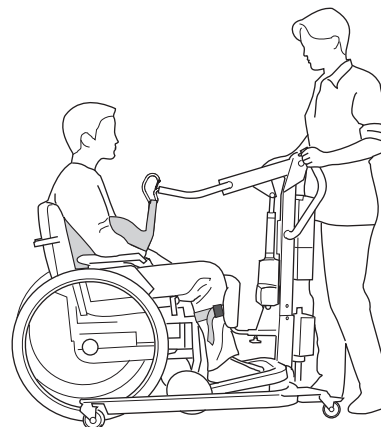
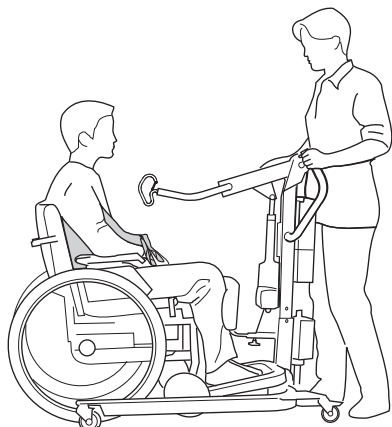


Using Sabina sit-to-stand lift to Assist Users into a Standing Position

There are two different sling bar options available for Sabina sit-to-stand lift, as well as many different sit-to-stand vests. The patient's overall mobility determines which sling bar and sit-to-stand vest to use. Carefully read the instruction guide for the lifting accessories used. Before using Sabina sit-to-stand lift, it is important to make an individual setting of the lifting height, see page 6.

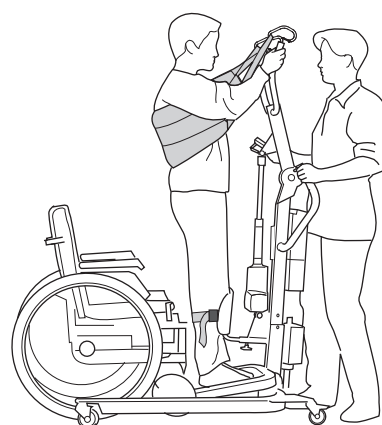
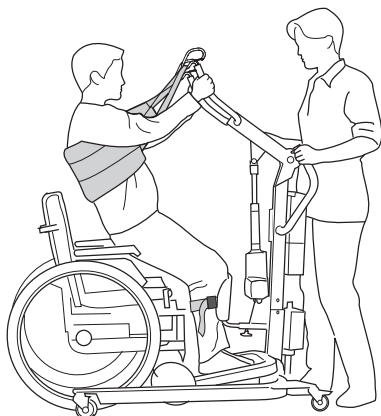
Raising a person with active lifting using Sabina sit-to-stand lift with SlingBar 350

For this sling bar, we recommend Liko SupportVest mod. 91 or Liko SafetyVest mod. 93, 94. When using SlingBar 350, the patient has the arms outside the sling. SlingBar 350 in combination with SafetyVest mod. 93, 94 gives the patient extra support in the standing-up situation. Below please find a description of the use of the SupportVest mod. 91. See the instruction guide for the respective sit-to-stand vest for more information.



1. Place the SupportVest around the patient according to the vest's instruction guide. Place Sabina sit-to-stand lift in front of the patient and adjust the width of the base. Place the feet in the middle of the foot rest with the lower legs parallel to the lower leg support. Adjust the height and depth of the lower leg support as needed for comfortable support below the kneecap.

2. Connect the vest's straps to the sling bar's hooks.
If applicable: tighten the calf strap.



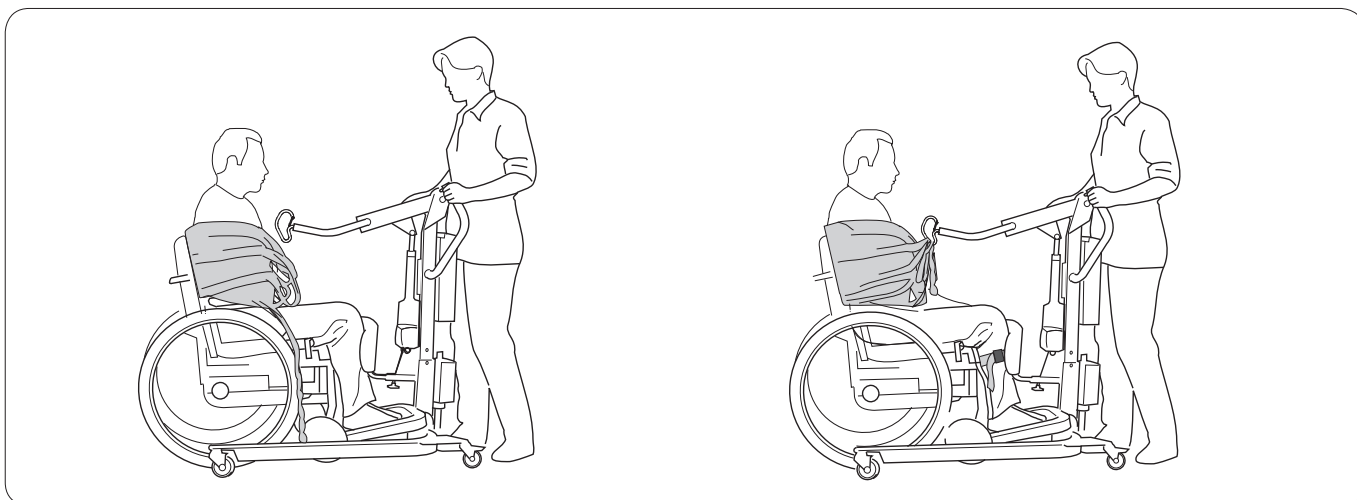
3. Raise the sling bar about 10–20 cm (4-8 in). The patient grabs the sling bar. Continue the lifting procedure. If the patient leans backwards, the raising will be made easier, preventing the vest from sliding up. The height to which the lift should proceed varies from person to person.

△ Before the patient is lifted from the underlying surface, but after the straps have been fully extended, make sure the straps are properly connected to the sling bar.

4. For a more upright position, continue the lifting motion to the uppermost position. The raising motion can be experienced as unpleasant for the person not used to it. Remember that Sabina II EE sit-to-stand lift has two different speeds. For maximum comfort, the lift mast should be affixed to the base in the best possible of the three fastening holes. See page 6.

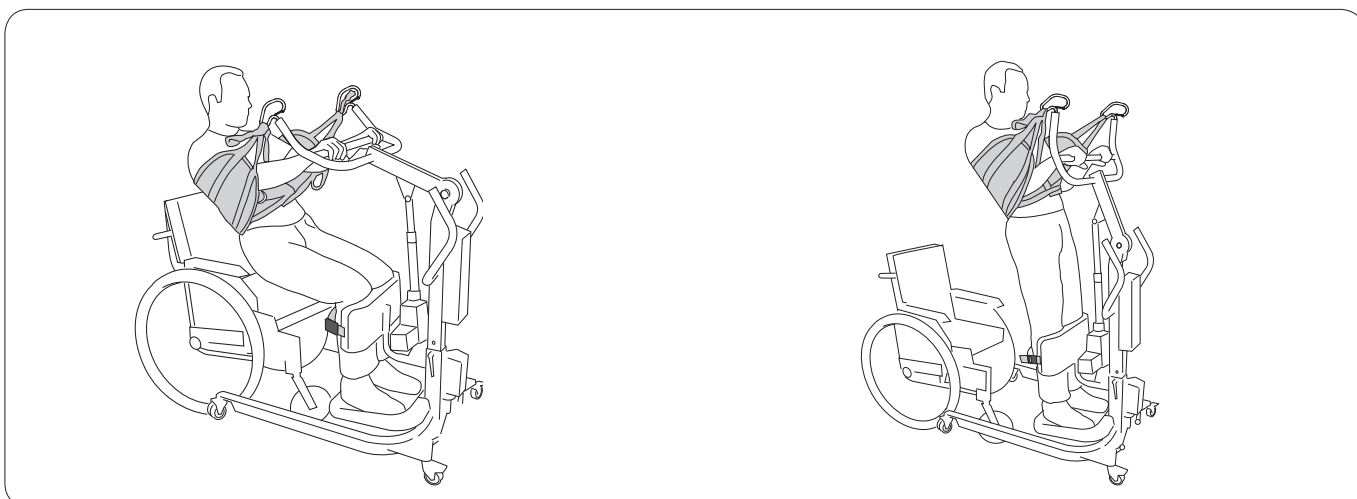
Raising a person with active lifting using Sabina sit-to-stand lift with the Comfort SlingBar

For this sling bar, we recommend Liko ComfortVest mod. 95. This combination is suitable for people who are especially sensitive to pressure under the arms, such as people who are paralyzed on one side. The ComfortVest is designed to lift behind the back and on the outside of the arms. The Comfort SlingBar can also, to a limited extent, be used with Liko SafetyVest mod. 93 and 94, especially for larger patients. Below is a description of how to use ComfortVest mod. 95. See the instruction guide for the respective sit-to-stand vest for more information.



1. Place the ComfortVest around the patient according to the vest's instruction guide. Place Sabina sit-to-stand lift in front of the patient. Adjust the width of the base. Place the feet in the middle of the foot rest with the lower legs parallel to the lower-leg support. Adjust the height and depth of the lower-leg support as needed for comfortable support below the kneecap.

2. Connect the vest's straps to the sling bar's hooks.
If applicable: tighten the calf strap.



3. Raise the sling bar about 10–20 cm (4-8 in). The patient grabs the sling bar. Continue the lifting procedure. If the patient leans backwards, the raising will be made easier, preventing the vest from sliding up. The height to which the lift should proceed varies from person to person.


△ Before the patient is lifted from the underlying surface, but after the straps have been fully extended, make sure the straps are properly connected to the sling bar.

4. For a more upright position, continue the lifting motion to the uppermost position. The raising motion can be experienced as unpleasant for the person not used to it. Remember that Sabina II EE sit-to-stand lift has two different speeds. For maximum comfort, the lift mast should be affixed to the base in the best possible of the three fastening holes. See page 6.

Problems while helping a patient get to his feet

The patient does not reach a sufficiently upright position - what is to be done?

Sometimes this is due to the patient's state of health or mobility: weakened musculature, lack of strength and/or diminished mobility in hip or knee joints. In order to get the best possible use out of Sabina sit-to-stand lift, there are some things to keep in mind:

- 1 Connect the vest's inner strap loop (B) to the sling bar hooks. 
- 2 Raise the lift mast to achieve higher lifting height. See adjustment of lifting height, page 6.
- 3 Try a smaller vest size. A smaller vest means a shorter distance to the hooks and a more upright standing position.

The patient has a hard time participating in the first part of the raising motion - what is to be done?

Sabina SeatStrap is an accessory meant for patients who need extra help with raising the seat during the first part of the raising motion. For more information, see "Recommended Lifting Accessories," page 10-11, or read the instruction guide for Sabina SeatStrap.

Using Sabina sit-to-stand lift in Passive Lifting Situations

For passive lifting, we recommend a sling model that does not restrict the lifting height too much. Adjustment on a case-by-case basis is always important to functionality and security. The patient's overall mobility determines the choice of sling model and sling bar. Remember that the maximum load for passive lifting is reduced from 200 kg (440 lbs) to 150 kg (330 lbs); this is due to the fact that during passive lifting, the foot rest does not bear any of the load.

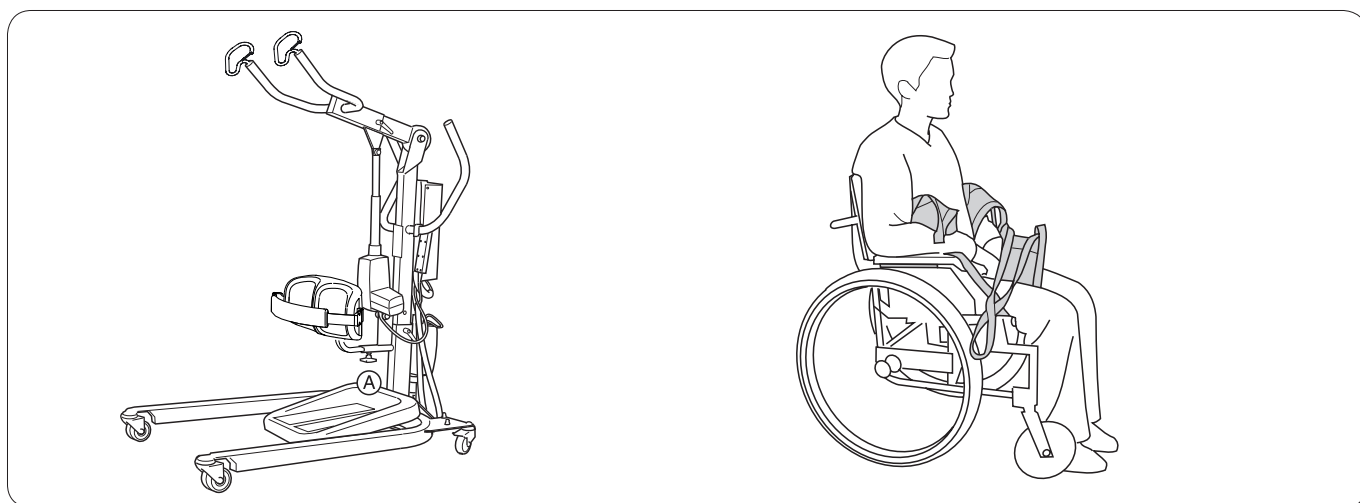
Sabina sit-to-stand lift with SlingBar 350 (bar width 350 mm)

For this sling bar, we recommend Liko OriginalSling mod. 10 and 11, Liko HygieneSling mod. 40, 41, 45 and 46, as well as the Liko Straps.

Sabina sit-to-stand lift with Comfort SlingBar (bar width 600 mm)

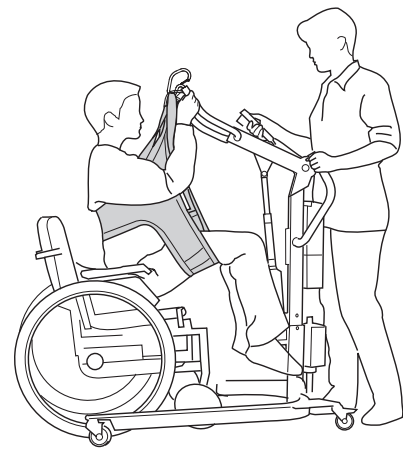
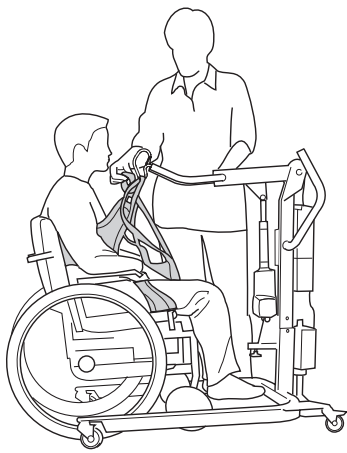
For this sling bar, we recommend Liko UniversalSling mod. 000 and 002, as well as Liko OriginalSling mod. 10 and 11. See the respective instruction guide for the sling model for more information or contact Hill-Rom for further guidance.

Passive lifting using Sabina sit-to-stand lift with SlingBar 350



1. Disassemble the lower leg support: Unscrew screw A. Pull out the lower leg support. Remove the foot rest: Grab the front edge of the frame. Fold it up and lift it off the base.

2. Apply suitable sling according to the sling's instruction guide. Above Liko HygieneSling mod. 40 is applied.



3. Advance the lift. Connect the sling's suspension loops to the sling bar's hooks. The height setting of the lift mast may have to be adjusted, see page 6.

△ Before the patient is lifted from the underlying surface, but after the sling's straps have been fully extended, make sure the straps are properly connected to the sling bar.

4. Raise the sling bar to the lowest height necessary to perform the transfer.

△ Make sure that the lifting motion is not so high that the patient gets too close to the lift mast!

△ NOTE!

Lifting seated persons with Sabina sit-to-stand lift cannot replace lifting procedures for sitting persons using traditional mobile lifts, e.g. using Viking™ mobile lift, Uno™ mobile lift, Golvo™ mobile lift, or LikoLight™ mobile lift. The function is intended as a temporary solution when the patient cannot manage an active raising motion using Sabina sit-to-stand lift. If the need for passive lifting persists, we recommend that you switch to one of the lifts mentioned above.

Simple Troubleshooting

The lift does not go up/down.
Base width adjustment does not work (in/out).



1. Check that the emergency stop has not been engaged.
2. Make sure that the cables to the control box are connected correctly.
3. Make sure that the charging cable is not connected to a socket.
4. Check the battery voltage.
5. Check that the battery's contact plates are not defective or broken.
6. *If the lift still does not work properly, please contact Hill-Rom.*

The charger doesn't work.



1. Check that the emergency stop has not been engaged.
2. Check that the battery's contact plates are not defective or broken.
3. *If the lift still does not work properly, please contact Hill-Rom.*

The lift is stuck in a high position.



1. Check that the emergency stop has not been engaged.
2. Use the selected electrical emergency lowering device to lower the patient onto a firm surface.
3. Use the selected mechanical emergency lowering device to lower the patient onto a firm surface.
4. Check the battery voltage.
5. *If the problem remains, please contact Hill-Rom.*

If you hear unusual sounds.



Contact Hill-Rom.

Recycling Instructions



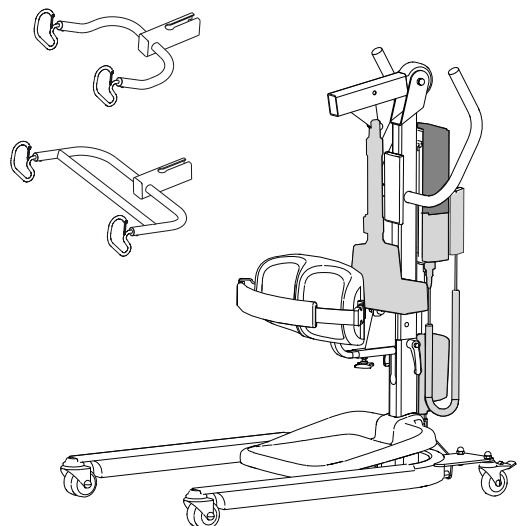
Lead battery (Pb)



Waste of Electrical and Electronic Equipment (WEEE).



Metals



Cleaning and Disinfection

Safety Recommendations

Cleaning and disinfecting procedures for Liko™ Mobile lifts. This instructions do not replace the facility's own cleaning and disinfection policies.

- Wear protective equipment according to manufacturer's instruction and per facility protocol throughout the cleaning operations, such as: rubber gloves, goggles, apron, face mask and shoe covers.
- Unplug mains (AC power source) before cleaning and disinfection.
- Never clean the lift by pouring water on it, steam cleaning it, or by using a high-pressure jet.
- Refer to the recommendations made by the cleaning and disinfecting product manufacturer.

Equipment

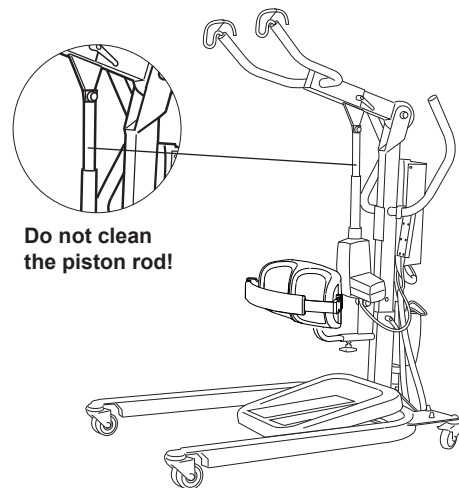
- Protective equipment (such as: rubber gloves, goggles, apron, face mask and shoe covers) as recommended by the facility protocol and manufacturers instructions
- Clean buckets
- Cloths for washing and drying
- Soft brush
- Warm water
- To find Cleaning / Disinfectants compatible or not compatible for use on Liko's products, follow the "Application of commonly used Cleaning / Disinfectants on Liko products" in this document.

Cleaning Instructions

1. **⚠ Unplug mains (AC power source) before cleaning and disinfection.**
2. Clean the lift with a cloth moistened with warm water and a neutral cleaning agent approved by your organization. A soft brush may be used to remove stains and resistant dirt.
3. Wipe off the entire lift with a cloth moistened with clean water starting from the top and working down. The cloth shall not be so damp that it drips. To have access to all areas run the lift into the highest and lowest positions and extend the base width adjustment entirely in and out. Remove the Battery to have access behind the battery. The calf strap may be machine washed 60-80°C (140-176°F), see "Care and Maintenance of Liko Slings" for more information.

NOTE! Do not clean the piston rod!

4. Pay special attention to the following areas:
 - Sling bar (different designs)
 - Handles
 - Mechanical emergency lowering (different designs)
 - Hand control
 - Emergency stop
 - Lower-leg support
 - Foot rest
 - Locking handles
 - Wheels



Disinfection Instructions

1. For the use of suitable disinfectants see "Application of commonly used Cleaning / Disinfectants on Liko products" in this document.
2. Use the choice of disinfectant according to the manufacturer's instructions and repeat the work step as in "Cleaning Instructions"
3. Remove traces of disinfectant after disinfection. Wipe off the lift with a cloth moistened with clean water starting from the top and working down. The cloth shall not be so damp that it drips.

△ **The lift may not be cleaned with CSI or equivalent.**

△ **The hand control may not be cleaned with Viraguard or equivalent.**

△ **The control box may not be cleaned with Anioxy Spray or equivalent.**

△ **The foot rest may not be cleaned with Terralin Protect, Virex II or equivalent.**

△ **The leg support on Sabina II, S/N up to 460899 may only be cleaned with warm water and a facility approved neutral detergent.**

△ **The leg support on Sabina II S/N from 460900 may be cleaned with the recommended disinfectants.**

Application of commonly used Cleaning / Disinfectants on Liko products

Chemical class	Active ingredient	pH	Cleaners / Disinfectant *)	Manufacturer *)	May not be used on the following items:
Quaternary ammonium chloride	Didecyl dimethyl ammonium chloride = 8.704% Alkyl dimethyl benzyl ammonium chloride = 8.19%	9.0 – 10.0 in use	Virex II (256)	Johnson/Diversey	Foot rest for Sabina™ and Roll-On™
Quaternary ammonium chloride	Alkyl dimethyl benzyl ammonium chloride = 13.238% Alkyl dimethyl ethylbenzyl ammonium chloride = 13.238%	9.5 in use	HB Quat 25L	3M	
Accelerated Hydrogen Peroxide	Hydrogen Peroxide 0.1 -1.5% BenzylAlcohol: 1-5% Hydrogen Peroxide 0.1 -1.5% BenzylAlcohol: 1-5%	3	Oxivir Tb	Johnson/Diversey	The lift straps for Golvo™ and ceiling lifts
Phenolic	Ortho-Phenylphenol = 3.40% Ortho-Benzyl-para-Chlorophenol = 3.03	3.1 +/- 0.4 in use	Wexcide	Wexford Labs	
Bleach	Sodium hypochlorite	12.2	Dispatch	Caltech	The lift straps for Golvo™ and ceiling lifts
Alcohol	Isopropyl alcohol = 70%	5.0 – 7.0	Viraguard	Veridien	Hand controls for all lifts
Quaternary ammonium	n-Alkyl dimethyl benzyl ammonium chlorides = 0.105% n-Alkyl dimethyl ethylbenzyl ammonium chlorides = 0.105%	11.5 - 12.5	CSI	Central Solutions Inc.	Viking™, Liko M220™, Liko M230™, Uno™, Sabina™, Golvo™, LikoLight™, Roll-On™, Likorall™, Multirall™
Benzyl-C12-18-alkyldimethylammonium, chlorides	Benzyl-C12-18-alkyldimethylammonium, chlorides (22 %) 2-Phenoxyethanol (20 %) Tridecylpolyethyleneglycolether (15 %) Propan-2-ol (8 %)	approx 8.6 in use	Terralin Protect	Shülke	Foot rest for Sabina™ and Roll-On™
Organic peroxide (type E, solid)	Magnesium monoperoxyphthalate hexahydrate (50-100%) Anionic surfactant (5-10%) Nonionic surfactant (1-5%)	5.3 in use	Dismozon Pur	Bode	The lift straps for Golvo™ and ceiling lifts
Ethanol	Hydrogen peroxyde (2.5-10 %) Lauryldimethylamine oxid (0-2.5 %) Ethanol (2.5-10 %)	7	Aniox-Spray WS	Anios	Control box for all mobile lifts
Trocirosene sodium	Adipic acid 10-30% Amorphous silica < 1% Sodium Toluene sulphphonate 5-10 % Trocirosene sodium 10-30 %	4-6 in use	Chlor-Clean	Guest Medical Ltd	The lift straps for Golvo™ and ceiling lifts

*) Or equivalent

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 functionality of the locking handles.
- Check the functionality of the latches.
- Check the raising, lowering 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 and check that the wheels are free from dirt. Find more detailed information regarding cleaning and disinfection of your Liko product in chapter; *Cleaning and Disinfection*.

△ The lift should not be exposed to running water.

Service

Sabina sit-to-stand lift should be periodically inspected at least once a year. Service are not allowed with patient in lift.

△ Periodic inspection, repair and maintenance should be performed only in accordance with the Liko Service Manual and by personnel authorized by Hill-Rom and using original Liko spare parts.

Service Agreement

Hill-Rom 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 periodically 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 to 75 %. The air pressure should be 700–1060 hPa.

Product Changes

Liko's products undergo continuous development, which is why we reserve the right to make product changes without prior notice. Contact your 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.



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Enhancing outcomes for
patients and their caregivers:

Hill-Rom