

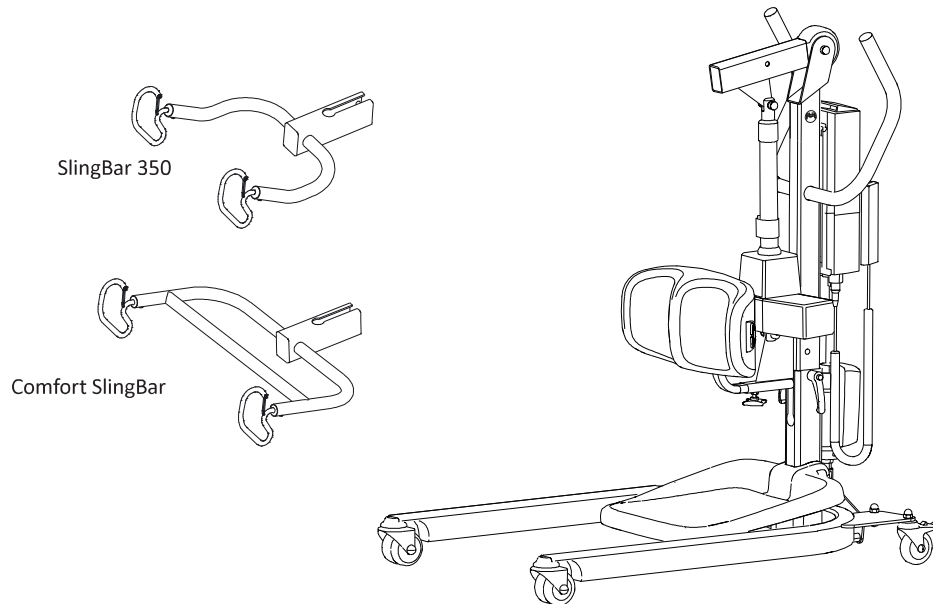
Sabina II EE

Sit-to-stand lift



Instructions for Use

Sabina II EE sit-to-stand lift	Prod. No. 2020003
Sabina II Slingbar 350	Prod. No. 2027002
Sabina II Comfort Slingbar	Prod. No. 2027003
Sabina II SeatStrap SlingBar	Prod. No. 2027007
Sabina II HeelSupport	Prod. No. 2027011
Calf Strap	Prod. No. 20290022



Product Description

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

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

Sabina II 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.



IMPORTANT!

Lifting and transferring a patient always involves a certain level of risk. Read the instructions for use for both the patient lift and lifting accessories before use. It is important to completely understand the contents of the instructions for use. The equipment should only be used by a trained caregiver. To be trained, a caregiver needs to read and understand the Instructions for Use. Ensure that the lifting accessories are suitable for the lift used. Exercise care and caution during use. As a caregiver, you are always responsible for the patient's safety. You must be aware of the patient's ability to make it through the lifting situation. If something is unclear, contact the manufacturer or supplier.

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Safety Information

Intended use

The **Sabina II EE** sit-to-stand lift is intended for use in the following environments: health care, intensive care, emergency ward, rehabilitation, habilitation environment, and home healthcare environment. The **Sabina II** sit-to-stand lift can be used to assist people who have difficulty raising from a sitting to a standing position, for example from a wheelchair, chair, bed or when using the toilet. Contact your Hillrom representative for support and advice.

Intended users

The equipment should only be used by trained caregivers. The intended users of this product are healthcare professionals and lay operators (caregivers) who have been trained to use the product. The intended users have the physical strength and cognitive skills to operate and control the product. A lay operator is a person without medical training. In the home environment the lay operator can be a designated family member. 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. This product is used as a means to perform the lift but is not in contact with the patient; therefore we do not go into the various patient conditions in this manual. Contact your Hillrom representative for support and advice.

Certain environments and conditions can limit the correct use of the mobile lifts, including:

Thresholds, unlevel floor surfaces, various obstacles, and extra-thick carpets. These environments and conditions can cause the wheels of the mobile lift not to roll as intended, possible imbalance in the mobile lift, and increased exertion by the caregiver. If you are uncertain that your care environment fulfils the requirements for correct use of the mobile lift, please contact your Hillrom representative for further advice and assistance.

Never leave a patient unattended during a lifting situation!

Lifting a patient by using a sit-to-stand aid may cause injury to the patient if their balance and/or strength is not sufficient for the chosen activity/accessories.

Never leave children unattended in the vicinity of the lift!

If the lifting accessory selected does not meet the patient's needs in size this may cause soft tissue damage.

Incorrect attachment of lifting accessory may cause injury to the patient.

After use, store the lift against a wall with the lift mast closer to the wall. Make sure that unauthorized users do not have access to the lift.

Do not store the lift or battery where it will be exposed to direct sunlight, or to heat sources, such as a radiator, fireplace, or stove/oven!

Make sure that the patient and caregiver stay clear of pinch points and moving parts during a lifting event. Injury could occur.

Evaluate patients for entrapment risk and monitor patients appropriately. Make sure that the patient's head and limbs are not in or between sling loops during lifting event. Failure to do either of these could cause serious injury or death.

Before use, make sure that:

- The lift is assembled in accordance with the assembly instructions.
- The lifting accessories are properly attached to the lift.
- The battery has been charged for at least 6 hours.
- You have read the instruction for use 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 prevent injuries.
- 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 correctly connected to the sling bar hooks when the straps are stretched up but before the patient is lifted from the underlying surface.
- As a caregiver make sure that the patient is not at risk of falling forward or to any side during lifting.



Sabina II EE sit-to-stand lift is tested by an accredited testing institute.

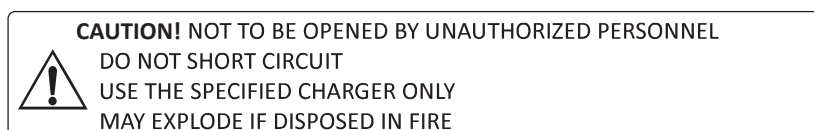


-  **No modification of the product is allowed.**
-  **Use of the product adjacent to other equipment should be avoided because it could result in improper operation. If such use is necessary, observe and verify that this equipment and the other equipment is operating normally.**
-  **Electromagnetic 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.**
-  **The device has not been tested for use in the Magnetic Resonance Imaging (MRI) setting. Transfer the patient to a compatible surface to do an MRI, and remove the lift from the MRI room.**

If you have questions, please consult the responsible assistive device technician or the supplier.

The product may not be used in areas where flammable mixtures may occur, such as where flammable goods are stored or used.

This Caution statement is found on the Battery:



This Caution statement is found on the Control box:



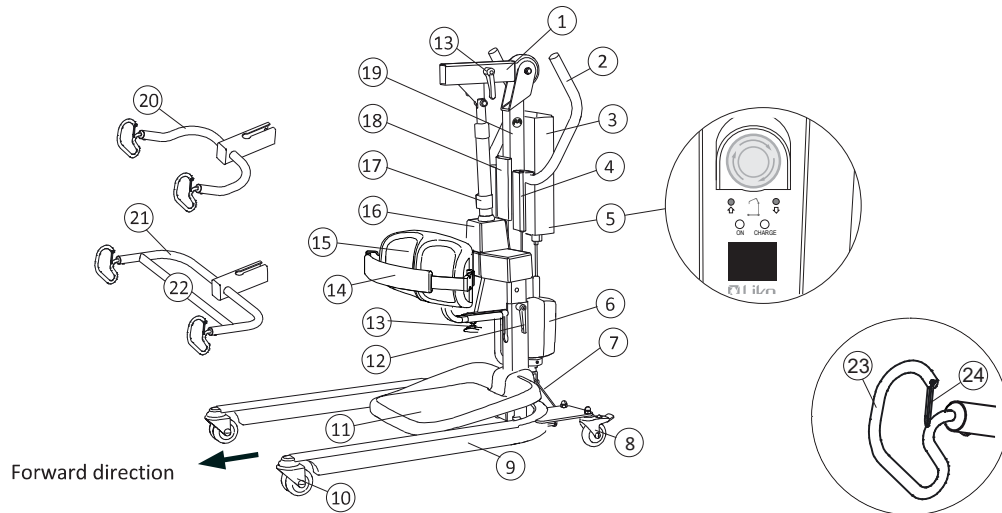
Symbol Description

These symbols may be found in this document and/or on the product.

Symbol	Description	Symbol	Description
	The device is intended for use indoors.		
	The product has extra protection against electric shock (Insulation Class II).		
	Protection level against electric shock: Type BF.		
	Detachable parts (intended to be detached without the use of tools) of the hoist with a mass of more than 10 kg (22 lbs.).		
	Mass (weight of the lift when ready for use).		
	Warning; this situation requires extra care and attention. This symbol is a yellow triangle with a black border, and a black exclamation mark at the center.		
	Never move the lift by pulling on the actuator. This symbol shows a hand grasping the actuator, with a red circle and slash overlaid on the hand and actuator.		
	Risk for pinching. This symbol is a red triangle with an image of a pinched foot.		
	Read instructions for use before use. This symbol is a blue circle with a white image of a person reading a book.		
	CE-mark. European Union medical device conformity mark, Class I Medical Device.		
IP24	IP (ingress protection) rating indicates how well a device is protected against solid objects and liquids. The IP24 rating indicates that the device is protected against solid objects up to 12.5 mm in diameter, and is protected from splashing water from any direction.		
	Battery.		
	Manufacturer.		Date of manufacture.

Symbol	Description	Symbol	Description
	Caution! consult instructions for use.		Consult instructions for use for more information.
	Product Identifier.		Serial Number.
	Medical Device.		Unique Device Identifier.
	All batteries in this product must be recycled separately. Do not dispose as unsorted municipal waste.		
	All Electrical and Electronic Equipment in this product must be recycled separately. Do not dispose as unsorted municipal waste. Indicate this product have been placed on the market after 2005.		
	All batteries in this product must be recycled separately. Do not dispose as unsorted municipal waste. Batteries containing lead.		
	Recyclable.		
	UL Recognized Component Mark for Canada and the United States.		
	EFUP, Environmental Friendly Usage Period (years). This symbol is orange, and shows two arrows circling around the number 10.		
	Environmentally friendly product which can be recycled and reused. This symbol is green, and shows two arrows circling around a stylized lowercase letter e.		
	Verification of Electromagnetic Compatibility testing.		
	Proof of Product compliance to North American safety standards.		
	Swiss authorized representative		
	The Australian Safety/EMC.		PSE Mark (Japan).
	Non-ionizing electromagnetic radiation.		
	Duty cycle for non-continuous operation. The maximum active operation time X% of any given time unit, followed by a deactivation time, Y%. The active operation time shall not exceed the specified time in minutes, T.		
	GS1 Data Matrix Barcode that may contain following information. (01) Global Trade Item Number. (11) Production Date. (21) Serial Number.		
	Stacking limit.		
	This way up.		Fragile, handle with care.
	Keep dry.		Temperature limit.
	Humidity limitation.		Atmospheric pressure limitation.

Definitions



- | | |
|--|--|
| 1. Lift arm | 12. Locking handles |
| 2. Handles | 13. Wheel for lower leg support adjustment |
| 3. Battery | 14. Calf strap (accessory) |
| 4. Hand control | 15. Lower leg support |
| 5. Control box with: | 16. Lift motor |
| Emergency stop | 17. Mechanical emergency lowering |
| Electrical emergency lowering | 18. Holder for quick reference guide (accessory) |
| Battery charger indicators | 19. Lift mast |
| Information display | 20. SlingBar 350 (Width: 350 mm / 13.8 inch) |
| 6. Motor for base-width adjustment | 21. Comfort SlingBar (Width: 600 mm / 23.6 inch) |
| 7. Decal: shows risk of pinching against the floor | 22. Cross bar (only Comfort SlingBar) |
| 8. Rear wheels fitted with brake | 23. Lifting hook |
| 9. Base | 24. Latches |
| 10. Front steering wheels | |
| 11. Footrest (removable) | |

Technical Data

Maximum load:	Active lifting: 200 kg (440 lbs) Passive lifting: 150 kg (330 lbs)	Turning diameter:	1180 mm (46.5 in)
Material:	Powder-coated steel	Emergency lowering device:	Mechanical and electrical
Weight :	Sabina lift (excl sling bar, battery, charging cable): 39.7 kg (87.5 lbs) Sabina II 350 SlingBar: 3.3 kg (7.3 lbs) Sabina II Comfort SlingBar: 4.5 kg (9.9 lbs) Battery lead-acid gel: 2.8 kg (6.2 lbs) Battery Li-Ion: 1.5 kg (3.3 lbs) Charging Cable: 0.2 kg (0.4 lbs)	Lifting interval:	SlingBar 350: 825 mm (32.5 in) Comfort SlingBar: 785 mm (30.9 in)
Weight of heaviest part:	Heaviest detachable part (lift mast with lift arm, lift motor including cable, control box with hand control: 13.4 kg (29.5 lbs)	Lifting Speed (no load):	SlingBar 350: 54 mm/s (2.13 in/s) Comfort SlingBar: 47 mm/s (2.1 in/s)
Mass (weight of the lift when ready for use)	Sabina lift with Sabina II 350 SlingBar, charging cable, lead-acid gel battery Total: 46.0 kg (101.4 lbs) Sabina lift with Sabina II 350 SlingBar, charging cable, Li-Ion battery Total: 44.7 kg (98.5 lbs) Sabina lift with Sabina II Comfort SlingBar, charging cable, lead-acid gel battery Total: 47.2 kg (104 lbs) Sabina lift with Sabina II Comfort SlingBar, charging cable, Li-Ion battery Total: 45.9 kg (101.2 lbs)	Sound pressure level:	Max load: 47.6 dBA Unloaded: 46.9 dBA
Minimum user mass:	No minimum limit	Sound power level:	Max load: 45.9 dB Unloaded: 45.1 dB
Maximum user mass:	Maximum load same as maximum patient weight (excluding body-support unit)	Protection class:	IP24
Wheels:	Standard front: 75 mm (3 in) twin wheel Standard back: 75 mm (3 in) individual wheel fitted with brake	Operating forces of controls:	Hand control: 5 N
Footrest:	Detachable	Electrical data:	24 V
Lower-leg support:	Adjustable in terms of height and depth, removable	Intermittent operation:	The lift motor is intended to be operated for only 10% of a given time period. Do not use the lift motor for more than 2 minutes of continuous operation.
		Batteries:	Lead-acid gel, valve-regulated battery - 24 V 2.9 Ah Prod. No. 2006106 Li-Ion, Lithium Iron Phosphate (LiFePO ₄) 25.6 V 3.3 Ah Prod. No. 2006110
		Battery charger:	Internal charger, 100-240 V AC, 50-60 Hz, max 400 mA
		Lift motor:	24 V, 9.2 A, permanent magnetic motor with mechanical safety mechanism
		Motor for base-width adjustment:	24 V, 5 A, permanent magnetic motor
		Surrounding functional environment:	Temperature: +10°C to +40°C (50°F to 104°F), relative humidity: 20% to 80% at 30°C non-condensing, atmospheric pressure: 700 hPa to 1060 hPa, altitude: max. 3000m
		Applied Parts:	Foot plate; lower leg support

Conforms to ISO 10535 with ANSI/AAMI Std. ES60601-1 and is certified to CSA Std. Z10535.1 with Std. C22.2 No. 60601-1.

Weight and dimension measurements are approximate and subject to change.



The device is intended for use indoors.

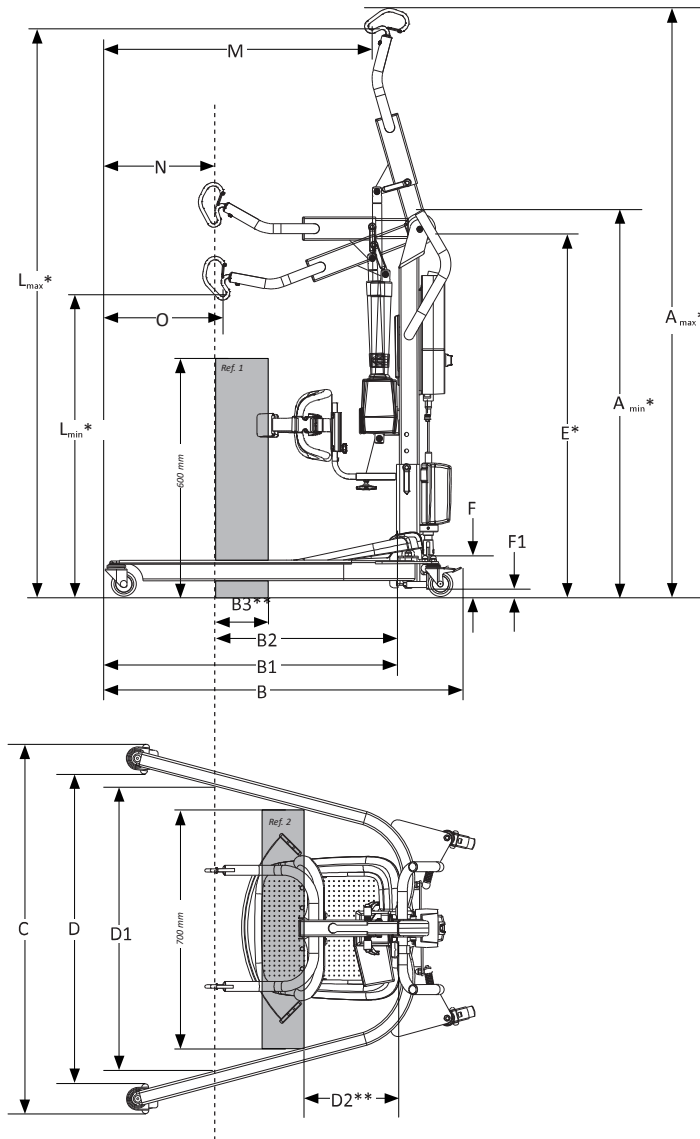


Type BF, in accordance with the electrical shock protection class.



Class II equipment.

Dimensions



SABINA II EE lift with SlingBar 350

	A _{min} *	A _{max} *	B	B1	B2	B3	C	D	D1	D2**	E*	F	F1	L _{max} *	L _{min} *	M	N	O
mm	1050	1770	1060	870	590	190	690-1115	530-1005	915	210	900-1000	107	22	1725	800	790	280	310
inch	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

SABINA II EE lift with Comfort SlingBar 600

	A _{min} *	A _{max} *	B	B1	B2	B3	C	D	D1	D2**	E*	F	F1	L _{max} *	L _{min} *	M	N	O
mm	1050	1750	1060	870	555	150	690-1115	530-1005	900	210	900-1000	107	22	1695	810	790	315	340
inch	41.3	68.9	41.7	34.2	21.8	5.9	27.2-44.9	20.9-39.5	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 and Setup", page 13. 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.

EMC Table

Guidance and Manufacturer's Declaration – Electromagnetic Emissions		
The product is intended for use in the electromagnetic environment specified below. The customer or the user of the product should assure that it is used in such an environment. "Essential performance according to the manufacturer: The product shall not move unintentionally while being submitted to disturbances."		
Emissions test	Compliance	Electromagnetic environment - guidance
RF emissions CISPR 11	Group 1	The lift uses RF energy only for its internal function. Therefore, its RF emissions are very low and are not likely to cause any interference in nearby electronic equipment.
RF emissions CISPR 11	Class B	The lift is suitable for use in all establishments including domestic establishments and those directly connected to the public low-voltage power supply network that supplies buildings used for domestic purposes.
Harmonic emissions IEC 61000-3-2	Complies	
Voltage fluctuations/ flicker emissions IEC 61000-3-3	Complies	

Guidance and Manufacturer's Declaration – Electromagnetic Immunity			
The product is intended for use in the electromagnetic environment specified below. The customer or the user of the product should assure that it is used in such an environment. "Essential performance according to the manufacturer: The product shall not move unintentionally while being submitted to disturbances."			
Immunity test	IEC 60601 test level	Compliance level	Electromagnetic environment - guidance
Electrostatic discharge (ESD) IEC 61000-4-2	+/- 8 kV contact +/- 2 kV, +/- 4 kV, +/- 8 kV, +/- 15 kV air	+/- 8 kV contact +/- 2 kV, +/- 4 kV, +/- 8 kV, +/- 15 kV air	Floors should be wood, concrete or ceramic tile. If floors are covered with synthetic material, the relative humidity should be at least 30 %.
Electrical fast transient / Burst IEC 61000-4-4	+/- 2 kV for power supply lines +/- 1 kV for input/output lines	+/- 2 kV for power supply lines +/- 1 kV for input/output lines	Mains power quality should be that of a typical commercial or hospital environment.
Surge IEC 61000-4-5	+/- 0.5 kV, +/- 1 kV Line to Line	+/- 0.5 kV, +/- 1 kV Line to Line	Mains power quality should be that of a typical commercial or hospital environment.
Voltage dips, short interruptions and voltage variations on power supply input lines IEC 61000-4-11	0 % U_T for 0.5 cycle at 0°, 45°, 90°, 135°, 180°, 225°, 270°, & 315° 0% U_T ; 1 cycle at 0° 70 % U_T for 25 cycles 50 Hz at 0° 0% U_T ; 250 cycle at 50 Hz	0 % U_T for 0.5 cycle at 0°, 45°, 90°, 135°, 180°, 225°, 270°, & 315° 0% U_T ; 1 cycle at 0° 70 % U_T for 25 cycles 50 Hz at 0° 0% U_T ; 250 cycle at 50 Hz	Mains power quality should be that of a typical commercial or hospital environment. If the user of the [Equipment or System] requires continued operation during power mains interruptions, it is recommended that the [Equipment or System] be powered from an uninterruptible power supply or battery.
Power frequency (50/60 Hz) magnetic field IEC 61000-4-8	30 A/m	30 A/m	Power frequency magnetic fields should be at levels characteristic of a typical location in a typical commercial or hospital environment
Proximity Magnetic Fields IEC 61000-4-39	8 A/m with CW modulation at 30 kHz 65 A/m with 2.1 kHz pulse modulation at 134.2 kHz 7.5 A/m with 50 kHz pulse modulation at 13.56 MHz	8 A/m with CW modulation at 30 kHz 65 A/m with 2.1 kHz pulse modulation at 134.2 kHz 7.5 A/m with 50 kHz pulse modulation at 13.56 MHz	Proximity magnetic fields should be at levels characteristic of a typical location in a typical commercial or hospital environment.
NOTE U_T is the AC mains voltage prior to application of the test level.			

Guidance and Manufacturer's Declaration – Electromagnetic Immunity

The product is intended for use in the electromagnetic environment specified below. The customer or the user of the product should assure that it is used in such an environment. "Essential performance according to the manufacturer: The product shall not move unintentionally while being submitted to disturbances."

Immunity test	IEC 60601 test level	Compliance level	Electromagnetic environment - guidance
Conducted RF IEC 61000-4-6	3 V 0.15 MHz – 80 MHz with increased test level to 6 V in ISM and amateur radio bands between 0.15 MHz and 80 MHz.	6 V 0.15 MHz – 80 MHz Including ISM and amateur radio bands	<p>Portable and mobile RF communications equipment should be used no closer to any part of the lift, including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter.</p> <p>Recommended separation distance</p> $d = (0.58)\sqrt{P}$ $d = (1.17)\sqrt{P} \text{ 80 MHz to 800 MHz}$ $d = (2.33)\sqrt{P} \text{ 800 MHz to 2.7 GHz}$ <p>where P is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer and d is the recommended separation distance in meters (m).</p> <p>Field strengths from fixed RF transmitters, as determined by an electromagnetic site survey, ^a should be less than the compliance level in each frequency range. ^b</p> <p>Interference may occur in the vicinity of equipment marked with the following symbol.</p> 
Radiated RF IEC 61000-4-3	10 V/m 80 MHz to 2.7 GHz	10 V/m 80 MHz to 2.7 GHz	

NOTE 1 At 80 MHz and 800 MHz, the higher frequency range applies.

NOTE 2 These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflected from structures, objects and people.

^a Field strengths from fixed transmitters, such as base stations for radio (cellular/cordless) telephones and land mobile radios, amateur radio, AM and FM radio broadcast and TV broadcast cannot be predicted theoretically with accuracy. To assess the electromagnetic environment due to fixed RF transmitters, an electromagnetic site survey should be considered. If the measured field strength in the location in which the mobile lift is used exceeds the applicable RF compliance level above, the mobile lift should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as reorienting or relocating the mobile lift.

^b Over the frequency range 150 kHz to 80 MHz, field strengths should be less than 10 V/m.

Recommended separation distances between portable and mobile RF communications equipment and the products listed above

⚠ Portable RF communications equipment (including peripherals such as antenna cables and external antennas) should be used no closer than 30 cm (12 in) to any part of the product, including cables specified by the manufacturer. Otherwise, degradation of the performance of this equipment could result.

The product is intended for use in an electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of the product can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the product as recommended below, according to the maximum output power of the communications equipment.

Rated maximum output power of transmitter (W)	Separation distance according to frequency of transmitter (m)		
	150 kHz to 80 MHz $d = (0.58)\sqrt{P}$	80 MHz to 800 MHz $d = (1.17)\sqrt{P}$	800 MHz to 2.7 GHz $d = (2.33)\sqrt{P}$
0.01	0.06	0.12	0.23
0.1	0.18	0.37	0.74
1	0.58	1.17	2.33
10	1.84	3.69	7.38
100	5.83	11.67	23.33

For transmitters rated at a maximum output power not listed above, the recommended separation distance d in meters (m) can be estimated using the equation applicable to the frequency of the transmitter, where P is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer.

Note 1: At 80 MHz and 800 MHz, the separation distance for the higher frequency range applies.

Note 2: These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.

For Radiated RF immunity test level:

$$E = \frac{6}{d} \sqrt{P}$$

Where P is the maximum power in W, d is the minimum separation distance in m, and E is the immunity test level in V/m. The factor of 6 is a compromise for a range of antenna factors, to simplify the test.

Guidance and Manufacturer's Declaration – Electromagnetic Immunity

The product is intended for use in the electromagnetic environment specified below. The customer or the user of the product should assure that it is used in such an environment.

"Essential performance according to the manufacturer: The product shall not move unintentionally while being submitted to disturbances."

Test frequency (MHz)	Band ^{a)} (MHz)	Service ^{a)}	Modulation ^{b)}	IMMUNITY TEST Level (V/m)
385	380 - 390	TETRA 400	Pulse modulation ^{b)} 18 Hz	27
450	430 - 470	GMRS 460, FRS 460	FM ^{c)} +/- 5 kHz deviation 1 kHz sine	28
710	704 - 787	LTE Band 13, 17	Pulse modulation ^{b)} 217 Hz	9
745				
780				
810	800 - 960	GSM 800/900, TETRA 800, IDEN 820, CDMA 850, LTE Band 5	Pulse modulation ^{b)} 18 Hz	28
870				
930				
1720	1700 - 1990	GSM 1800, CDMA 1900, GSM 1900, DECT, LTE Band 1, 3, 4, 25 UMTS	Pulse modulation ^{b)} 217 Hz	28
1845				
1970				
2450	2400 - 2570	Bluetooth, WLAN, 802.11 b/g/n, RFID 2450 LTE Band 7	Pulse modulation ^{b)} 217 Hz	28
5240	5100 - 5800	WLAN 802.11 a/n	Pulse modulation ^{b)} 217 Hz	9
5500				
5785				

NOTE If necessary to achieve the IMMUNITY TEST LEVEL, the distance between the transmitting antenna and the ME EQUIPMENT or ME SYSTEM may be reduced to 1 m. The 1 m test distance is permitted by IEC 61000-4-3.

a) For some services, only the uplink frequencies are included.

b) The carrier shall be modulated using a 50 % duty cycle square wave signal.

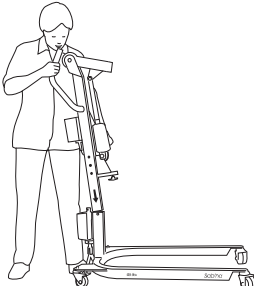
c) As an alternative to FM modulation, the carrier may be pulse modulated using a 50% duty cycle square wave signal at 18 Hz. While it does not represent actual modulation, it would be worst case.

Assembly and Setup

Before assembly, make sure you have the following parts:

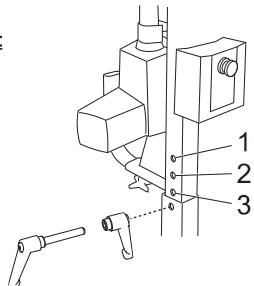
- Lift mast with lift arm, control box, and lift motor.
- Sling bar with safety latches and locking handles.
- Hand control with cable.
- Battery.
- Base incl. motor for base-width adjustment and locking handles.
- Footrest and frame for the footrest.
- Lower leg support.
- Instruction for use, charger connector cable, and extension cord.

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



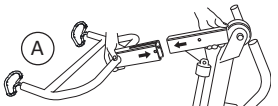
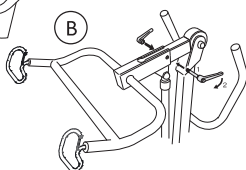
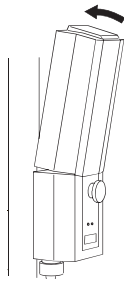
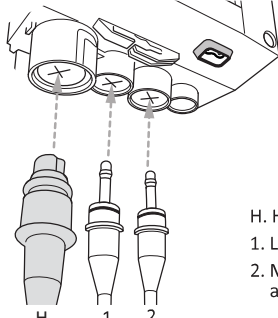
Individual adjustment of lifting height

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



1. For maximum comfort, the lift mast should be attached to the base in the best possible of the three fastening holes. 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 in (see illustration above). Secure the lift mast in the base with the included locking handle.

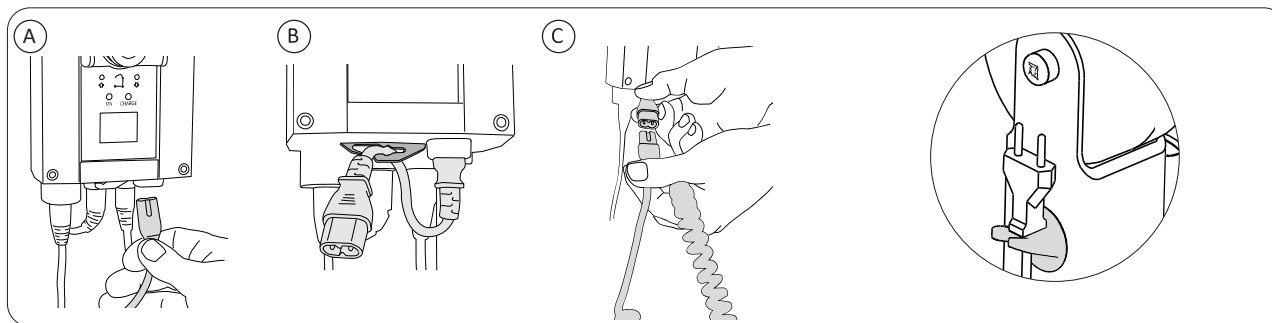





3. A) Remove the locking handle from the lift arm. Slide the sling bar onto the lift arm with the opening on the lifting hooks facing upward (see illustration).
B) Attach the locking handle and tighten.

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 (see illustration):
- lift motor cable (1)
- base-width adjustment motor cable (2)
- hand control cable (H).
Make sure plugs are fully seated.

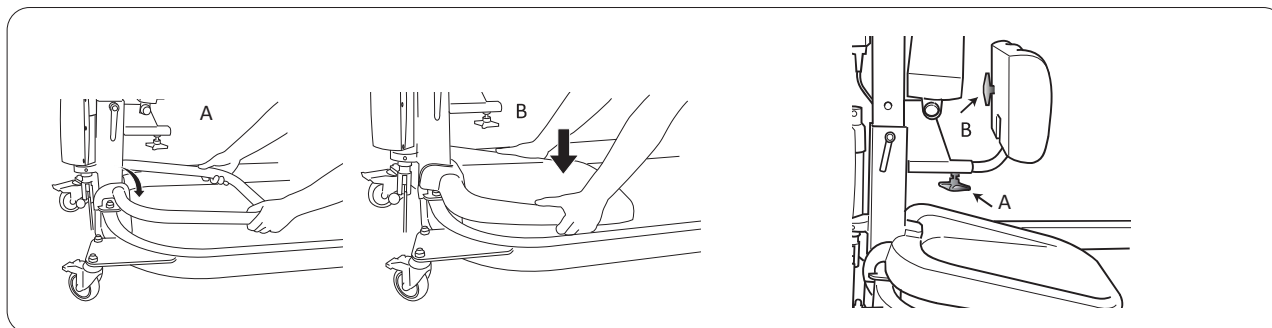
⚠ Incorrectly attached connectors may result in lift not working as intended.



6. A: Connect the extension cable for the charging cable to the control box.
 B: Insert the extension cable in the tension clip underneath the control box.
 C: Connect the charging cable to the extension cable.

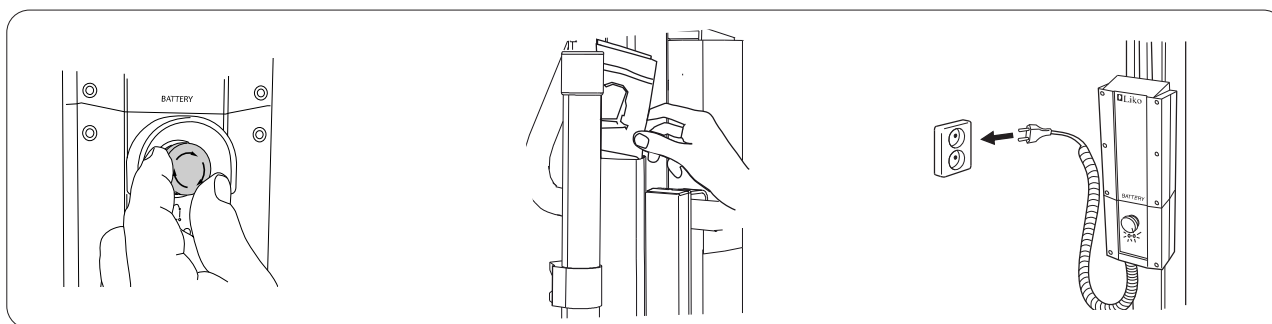
7. Place the charger cable on the hook provided on the mast after completed charging.

NOTE! Always charge the battery before using the lift the first time, see "Charging the Batteries" on page 17.



8. A) Put the frame for the footrest 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 knob A in order to adjust the distance to the patient's lower legs. Loosen knob B in order to adjust the height setting. After adjustment, lock knob A and B.



10. Reset the emergency stop by turning the button clockwise.

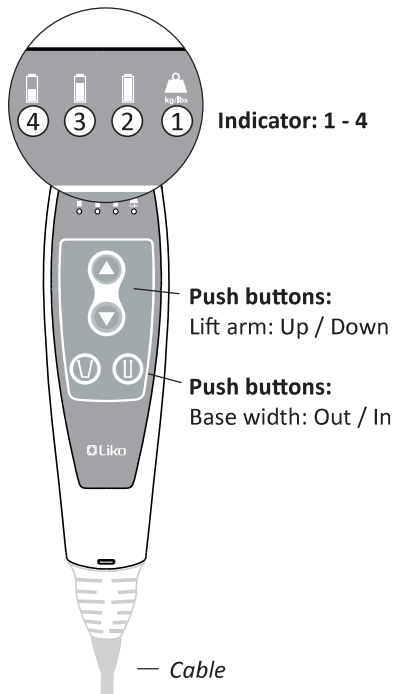
11. *If applicable:*
 Attach the holder for the quick reference guide on the lift mast according to the assembly instruction. Place the quick reference guide in the holder.

12. Before the first use, the lift's battery should be charged for at least 6 hours. For detailed instructions, see "Charging the Batteries" on page 17.

After assembly and charging, make sure that:

- The battery has been fully charged (approximately 6 hours).
- Lift arm motions correspond with the buttons on the hand control.
- Service interval is activated! Push and hold the following buttons on the hand control simultaneously: Up ▲ / Down ▼, until an audio signal (single beep) is heard = service interval activated.
(Alternatively use the push buttons simultaneously for emergency lifting up and down on the control box)
- Base width adjustment corresponds with the buttons on the hand control.
- Emergency lowering works properly (mechanical and electrical).
- Rear wheel brakes function properly.

Operation



Hand control operation and indicators

Operate the lift using the push buttons on the hand control. For raising and lowering: Directional arrows show the direction of movement (up/down). The lift arm movement and base adjustment stop when the push button is released.

Indicator: 1 - 4

- 1 - Overload (kg/lbs) light flashes yellow: too much load is applied to the lift.
 - 2 - Green light: battery power (100 - 50%)
- will constantly light up green when charger is connected to mains (AC power source).
 - 3 - Yellow light: battery power (50 - 25%), battery needs charging.
 - 4 - Yellow light: battery power (Less than 25%), battery needs charging.
A buzzer will sound when pressing a push button.
- NOTE!** If the buzzer sound starts during an ongoing, lift complete the lift and charge the lift afterwards!
- 4 - Light flashes yellow and a buzzer will sound when pressing a push button.
Charge the lift immediately! The remaining battery power can only make the lift arm go down.

NOTE! Please see "Charging the Batteries" on page 17 for more information.

Control Box operation and information

1. Emergency Stop button
- Activate: Push the red button
- Reset: Turn the red button clockwise.
2. UP (Arrow), Electrical emergency lifting.
3. DOWN (Arrow), Electrical emergency lowering.

Operation of the push buttons 2 and 3 is done by pressing with a narrow object into the circle mark above each (Arrow).
The Actuator movement stops as soon as the push button is released.

4. "ON" - lights up green when the charger is connected to mains.*
5. "CHARGE" - lights up yellow constantly during charging.
6. Display Pop-up information:



Battery power (100 - 50%) Ok!



Battery power (50 - 25%) Battery needs charging.



Battery power (Less than 25%) battery needs charging.

A buzzer will sound when pressing a push button.

NOTE! If the buzzer sound starts during an ongoing lift, complete the lift and charge the lift afterwards!



Charge the lift immediately! A buzzer will sound when pressing a push button. The remaining battery power can only make the lift arm go down.



The lift is connected to the mains.



Overload! Too much load is applied to the lift.



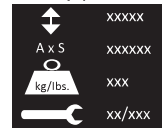
Short circuit warning!
Check cables and connections.
Warning is shown until repaired!



Service needed; contact Hillrom.

6. Information display:

Briefly press and release the UP button to activate the information display.



→ Total number of lift cycles with load

→ Work done by actuator; Amp. x Sec.

→ Number of overload indications

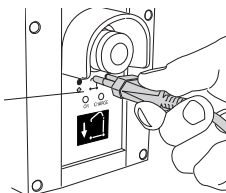
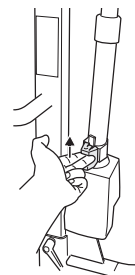
→ Days since last service/Days between services.

Li-ion battery - specific information

Sleep mode! The sleep mode will be activated in a Li-ion battery if not in use or charged in one week or more. The sleep mode switches off the battery and its electronics to save power. The battery will stay in sleep mode until the battery is set back to operation mode again.

How to set the Li-ion battery back in operation mode; Charge the battery. When the "CHARGE" indicator, ⑤ is lit the battery has been set back in operation mode and ready for use. **NOTE!** We recommend charging the battery until charging is completed, see "Charging the Batteries" on page 17 for more information and instructions.

Delay! A delay to indicators for current battery power at the control box and hand control occurs if the emergency stop function is activated and restored, see 1 above.



To activate the emergency stop:

Push the red Emergency stop button on the control box.

To reset the emergency stop:

Turn the button clockwise.

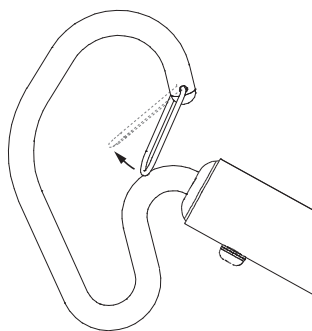
Electrical emergency lowering / lifting

Use a narrow object to press into the circle mark above each (Arrow), see "Operation" on page 15 for more information.

⚠ Do not use sharp objects since this may cause damage on the control box!

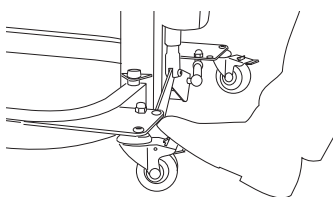
Mechanical emergency lowering

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.



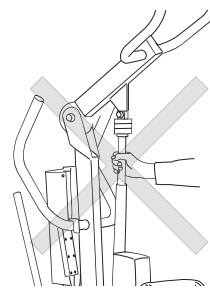
Installation of latches

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



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, pedal 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 center of gravity.

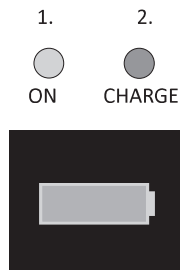


⚠ Never move the lift by pulling on the actuator!

Charging the Batteries

Charger information

1. "ON" - lights up green when the charger is connected to mains (AC wall power).
2. "CHARGE" - lights up yellow constantly during charging.



It is important that the lift battery is charged regularly. Always activate the lift's charging system or place the battery in a charger when the lift is not in use. Full charge is achieved after maximum 6 hours. Regular charging is important to maximize battery life.

With a fully charged battery, approximately 30 normal* lifts with a load of maximum 100 kg (220 lbs) can be carried out.

*A normal lift = 15 cm (6 in) down with a load, followed by 55 cm (22 in) up with a load, followed by 55 cm (22 in) down with a load, followed by 15 cm (6 in) up with a load.

NOTE! If the control box charger cannot be used, remove the battery, and place it in a wall-mounted charger. If the control box charger is the only charger available and cannot be used, activate the emergency stop function to prevent the battery from draining.

The control box charger will not charge the battery when the emergency stop is activated.

NOTE! Charging a deep discharged Li-ion battery

When charging a deep discharged Li-ion battery the charger will start charging at a low charging rate to protect the battery. During the low rate charging the charge indicator will not light up.

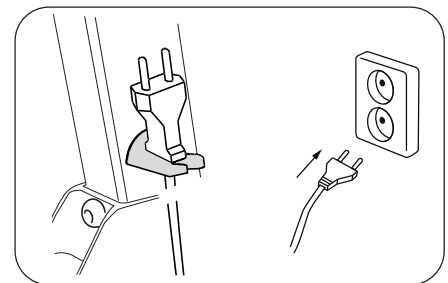
When the low-rate charging is completed, the charger will automatically switch to normal charge rate and the "CHARGE" indicator will light up yellow.

Charging with the control box internal charger (standard)

Plug the charger cable into mains (100-240 VAC), see "Charger information" on page 18 on top of this page. When the battery is fully charged, the charger turns off automatically.

We recommend charging after each use or every night.

⚠️ Never charge batteries in a wet area!



NOTE! If the charger cable is stretched out it should be replaced to avoid the risk of the cable getting caught and damaged.

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

NOTE! A damaged battery shall be replaced and contact with leaking fluids shall be avoided.

Alternative charging procedure

Wall mounted charger:

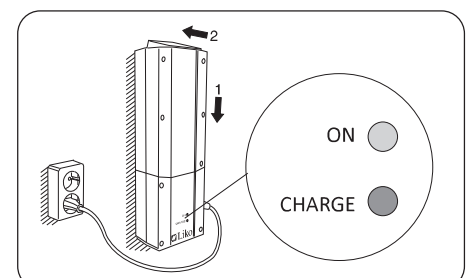
Loosen the holder for the charger cable. Remove the battery pack from the control box by loosening the locking device on top of the battery pack. See "Assembly and Setup" on page 13.

Charger information:

"ON" - lights up green when the charger is connected to mains.

"CHARGE" - light up yellow constantly during charging.

Place the battery pack on the wall mounted charger. Plug the charger cable into mains (100-240 VAC) check that both "ON" and "CHARGE" on the charger lights up.



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.

Study the markings on the lift and lifting accessories or contact your Hillrom representative if you have any questions.

Recommended Lifting Accessories

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

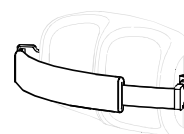
Below is a description of recommended lifting accessories for **Sabina II** sit-to-stand lift. Also study the instructions for use for respective sit-to-stand vest/sling or lifting accessory for further guidance.

Contact your Hillrom representative for advice and information on Liko product range.

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 footrest.

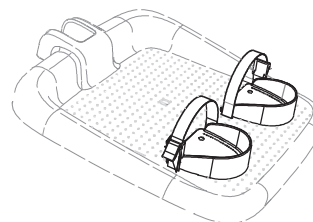


Heel Support SABINA

Prod. No.2027011

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

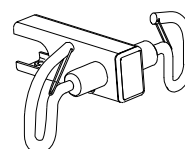
⚠ Be aware of any decreased mobility and/or the risk of hyperextension of the knee joints when using SABINA Heel Support.



SeatStrap SlingBar

Prod. No. 2027007

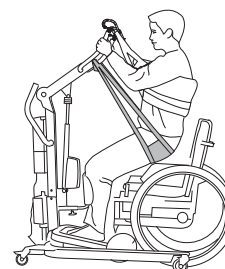
Can be used with **Sabina II** sit-to-stand lift.
Maximum load: 200 kg (440 lbs).



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.



LIKO SupportVest

Fits **Sabina II** 350 SlingBar

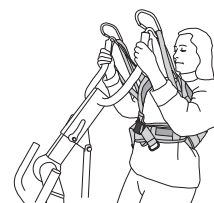
The SupportVest in size XL can be used in combination with the Comfort SlingBar on the **Sabina II** sit-to-stand lift.

Prod. No. 3591134

Prod. No. 3591135

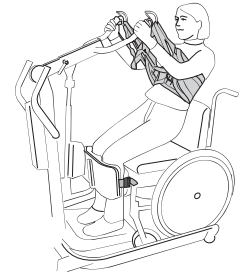
Prod. No. 3591136

Prod. No. 3591137



LIKO SafetyVest
Fits **Sabina II 350 SlingBar**

Prod. No. 3593115
Prod. No. 3593116



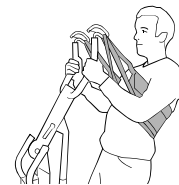
LIKO ComfortVest
Fits Comfort SlingBar

Prod. No. 3595414
Prod. No. 3595415
Prod. No. 3595416
Prod. No. 3595417



Solo SupportVest
Fits **Sabina II 350 SlingBar**
Nonwoven material. Not washable.

Prod. No. 35911915-4
Prod. No. 35911916-4



Optional Components for Use with Lift

Holder for Quick Reference Guide

Prod. No. 2000100



Quick Reference Guide SABINA II

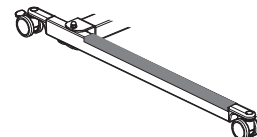
Swedish/Finnish
Norwegian/Danish
English/Spanish
German/French
French/Dutch
Italian/Portuguese

Prod. No. 2020100SVFI
Prod. No. 2020100NODK
Prod. No. 2020100ENES
Prod. No. 2020100DEFR
Prod. No. 2020100FRNL
Prod. No. 2020100ITPT



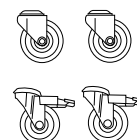
Leg Protector

Prod. No. 20190029



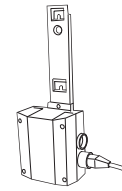
Wheel set 100/100 (higher base clearance)

Prod. No. 2014305



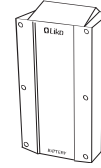
Battery charger
For wall mounting

Prod. No. 2004106



Battery
Lead battery (Pb)

Prod. No. 2006106



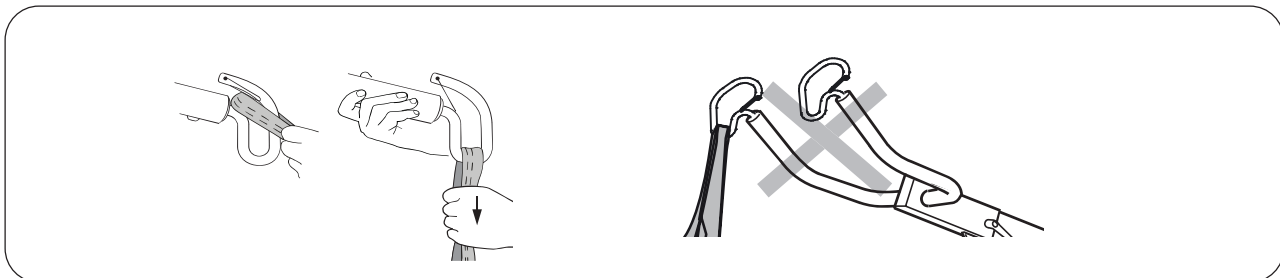
Battery
Li-Ion battery

Prod. No. 2006110

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

There are two different sling bar options available for **Sabina II** 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 for use for the lifting accessories used. Before using **Sabina II** sit-to-stand lift, it is important to make an individual setting of the lifting height, see "Assembly and Setup" on page 13.

How to attach a sling to the slingbars



Lift correctly!

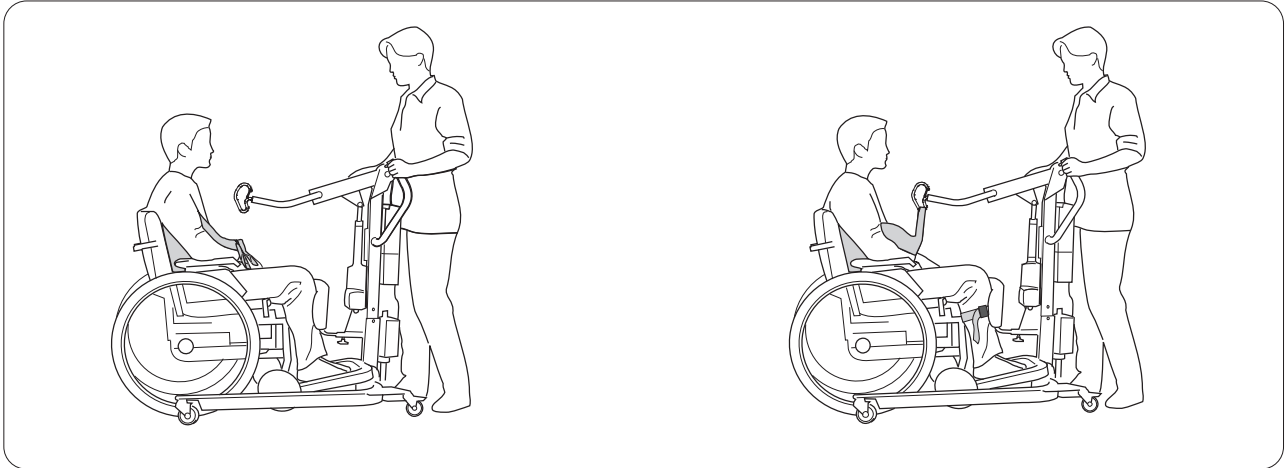
Before each lift, make sure that:

- the sling loops at opposite sides of the sling are at the same height
- the sling loops are fastened securely into the slingbar hooks

⚠ An improper lift can be uncomfortable for the user and cause damage to the lift equipment!

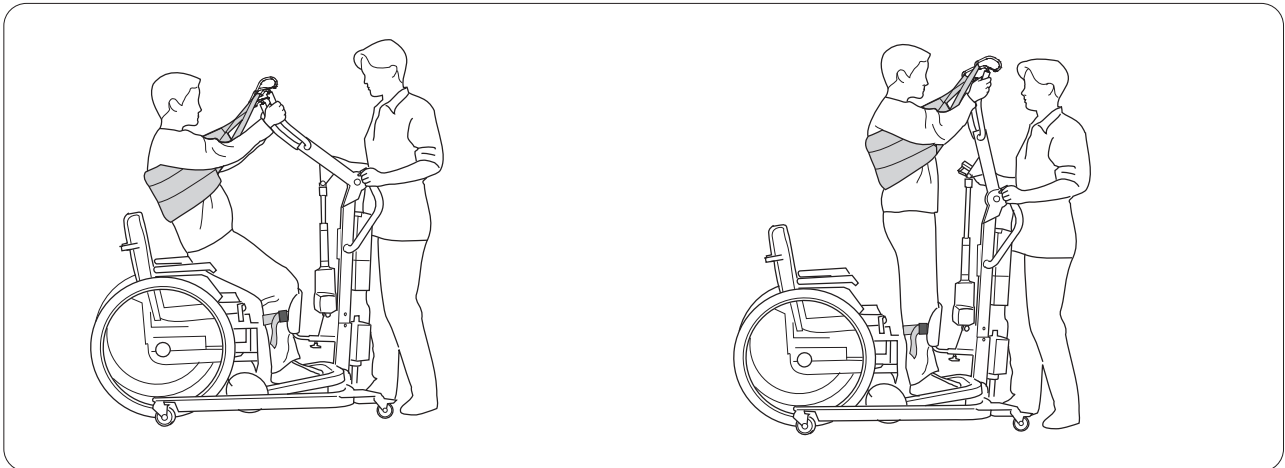
Raising a person with active lifting using SABINA II sit-to-stand lift with SlingBar 350

For this sling bar, we recommend **Liko** SupportVest mod. 91 or **Liko** SafetyVest mod. 93. When using SlingBar 350, the patient shall have arms outside the vest. SlingBar 350 in combination with SafetyVest mod. 93 gives the patient extra support in the standing-up situation. Below is a description of the use of the SupportVest mod. 91. See the instructions for use for the respective sit-to-stand vest for more information. For maximum comfort, the lift mast should be affixed to the base in the best possible of the three fastening holes. See "Assembly and Setup" on page 13.



1. Place the SupportVest around the patient according to the vest's instruction for use. Place the **Sabina II** sit-to-stand lift in front of the patient and adjust the width of the base. Place the feet in the middle of the footrest 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.



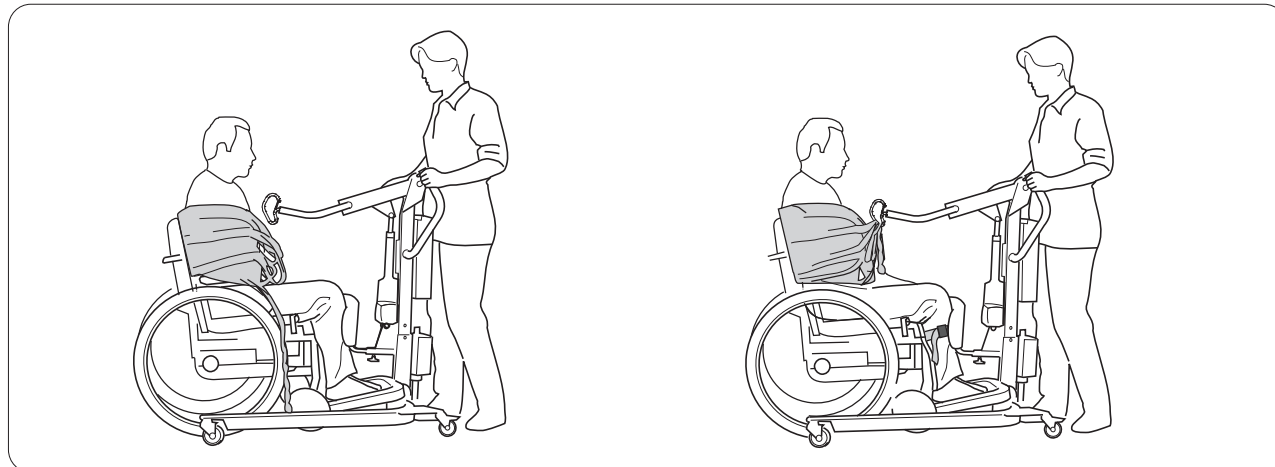
3. Raise the sling bar about 10–20 cm (4-8 in). The patient grabs the sling bar. Continue the lifting procedure. If the patient leans backwards, the raising will be made easier, preventing the vest from sliding up. The height to which the lift should proceed varies from person to person.

⚠ 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** 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 "Assembly and Setup" on page 13.

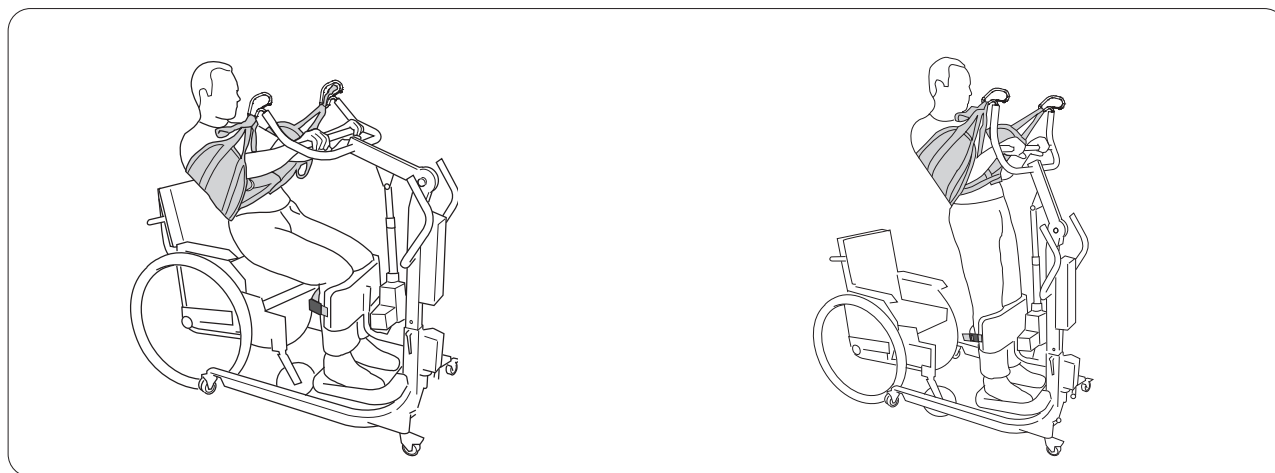
Raising a person with active lifting using SABINA II sit-to-stand lift with the Comfort SlingBar

For this sling bar, we recommend **Liko ComfortVest mod. 95**. This combination is suitable for people who are especially sensitive to pressure under their 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 SupportVest mod.91** for larger patients. Below is a description of how to use ComfortVest mod. 95. See the instructions for use for the respective sit-to-stand vest for more information. For maximum comfort, the lift mast should be affixed to the base in the best possible of the three fastening holes. See "Assembly and Setup" on page 13.



1. Place the ComfortVest around the patient according to the vest's instruction for use. Place the **Sabina II** sit-to-stand lift in front of the patient. Adjust the width of the base. Place the feet in the middle of the footrest 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** 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 "Assembly and Setup" on page 13.

Problems while helping a patient get to their feet

The patient does not reach a sufficiently upright position:

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** II 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 13.
- 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:

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" on page 18, or read the instruction for use for **Sabina** SeatStrap.

Using SABINA II 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 safety. 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 footrest does not bear any of the load.

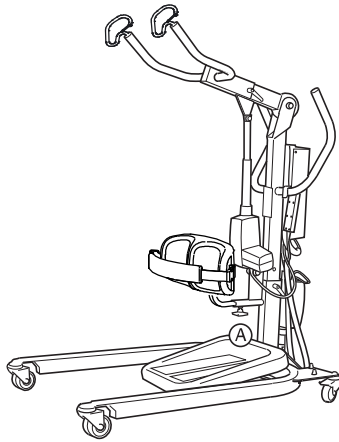
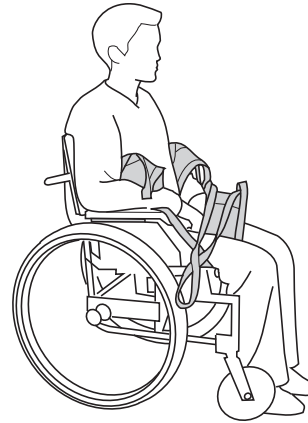
SABINA II sit-to-stand lift with SlingBar 350 (bar width 350 mm)

For this sling bar, we recommend **Liko** HygieneSling mod. 41 and 45.

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

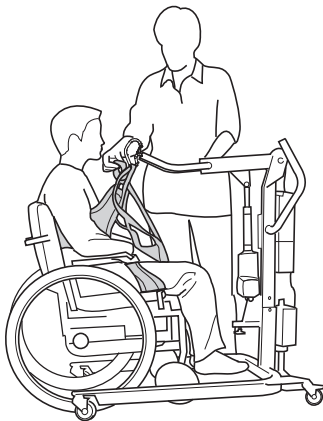
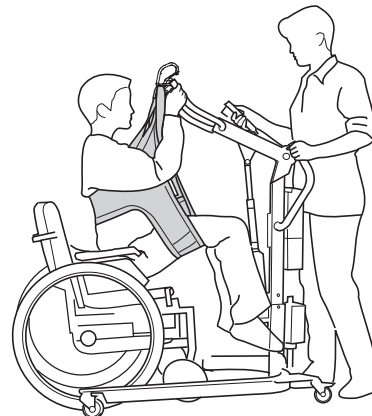
For this sling bar, we recommend **Liko** UniversalSling mod. 000. See the respective instruction for use for the sling model for more information or contact your Hillrom representative for further guidance.

Passive lifting using SABINA II sit-to-stand lift with SlingBar 350



1. Disassemble the lower leg support: Unscrew screw A. Pull out the lower leg support. Remove the footrest: 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 for use. 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 13.

⚠ 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 II** 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. The function is intended as a temporary solution when the patient cannot manage an active raising motion using **Sabina II** sit-to-stand lift. If the need for passive lifting persists, we recommend that you switch to one of the lifts mentioned above.

Troubleshooting

The lift does not move up/down with Hand Control.

The base-width adjustment does not move (in/out) with the Hand Control.



1. Make sure that the emergency stop button is not pressed in.
2. Check the battery capacity.
3. Make sure that the battery is properly seated in the control box.
4. Check that the charger cable is not connected to an electric outlet.
5. Check that the hand control cable is correctly connected to the control box.
6. Check that the lift arm actuator cable is correctly connected to the control box.
7. Check that the base width actuator cable is correctly connected to the control box.
8. *If the problem persists, please contact Hillrom Technical Support.*

The charger does not charge the lift.



1. Check that the charger cables are connected correctly.
2. Make sure that the battery is properly seated in the control box.
3. Try an alternative mains outlet.
4. *If the problem persists, please contact Hillrom Technical Support.*

The lift is stuck in the high position.



1. Make sure that the emergency stop button has not been activated (shall not be pressed in).
2. Make sure that the battery is properly seated in the control box.
3. Check the battery capacity.
Check if the Li-Ion battery has been set in to sleep mode, see "Operation" on page 15.
4. Check that the hand control cable is connected correctly.
5. Electrical emergency lowering, use the operation panel to lower the patient onto a firm surface, see "Operation" on page 15.
6. Use the mechanical emergency lowering device to lower the patient onto a firm surface, see "Operation" on page 15.
7. *If the problem persists, please contact Hillrom Technical Support.*

If you hear unusual sounds from the lift.



Contact Hillrom Technical Support.

Recycling Instructions



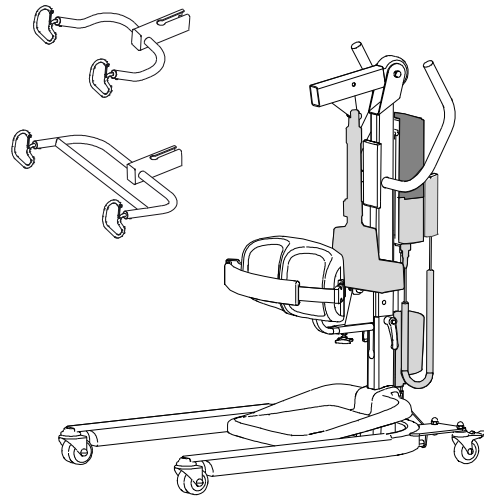
Lead battery (Pb)



Waste of Electrical and Electronic Equipment (WEEE).



Metals



Sabina II EE sit-to-stand lift comply with the Directive WEEE II 2012/19/EU 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 Hillrom.

Hillrom evaluates and provides guidance to its users on the safe handling and disposal of its devices to aid in the prevention of injury, including, but not limited to: cuts, punctures of the skin, abrasions, and any required cleaning and disinfection of the medical device after use and prior to its disposal. Customers should adhere to all federal, state, regional, and/or local laws and regulations as it pertains to the safe disposal of medical devices and accessories.

If in doubt, the user of the device shall first contact Hillrom Technical Support for guidance on safe disposal protocols.

Cleaning and Disinfection

To prevent accumulation of lint and dust, clean the lift regularly with a moist cloth and check that the wheels are free from dirt. Cleaning frequency will vary based on use and facility requirements. At a minimum, clean the lift when it is visibly dirty, and disinfect the lift between patients.

⚠ The lift should not be exposed to running water.

Safety recommendations

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

- Wear protective equipment according to manufacturer's instructions and per facility protocol throughout the cleaning operations, such as: gloves, eye protection, 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: gloves, eye protection, apron, face mask and shoe covers) as recommended by the facility protocol and manufacturer's instructions.
- Clean buckets.
- Cloths for washing and drying.
- Soft brush.
- Warm water.
- For Cleaning detergents/Disinfectants compatibility on **Liko** products, follow the "Application of commonly used Cleaning detergents / Disinfectants on LIKO products" on page 29.

⚠ Unplug mains (AC power source) before cleaning and disinfection.

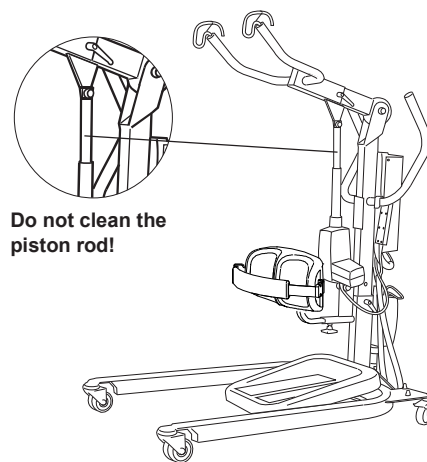
Cleaning instructions

1. 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.
2. Wipe the entire lift, except for the piston rod, with a cloth moistened with clean water starting from the top and working down. Do not use a cloth that is dripping wet. 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.

NOTE! Do not clean the piston rod!

3. Pay special attention to the following areas:

- Sling bar (different designs)
- Mechanical emergency lowering
- Handles
- Control box
- Battery
- Hand control
- Emergency stop
- Lower-leg support
- Footrest
- Locking handles
- Wheels



Disinfection Instructions

1. For a list of suitable disinfectants see "Application of commonly used Cleaning detergents / Disinfectants on LIKO products" on page 29.
2. Use the disinfectant according to the manufacturer's instructions. Wipe the entire lift, except for the piston rod, starting from the top and working down. Do not use a cloth that is dripping wet. To access all areas, raise the lift to the highest and lowest positions and extend the base width adjustment entirely in and out. Remove the battery to have access behind the battery.
3. Remove traces of disinfectant after disinfection. Wipe the lift, except for the piston rod, with a cloth moistened with clean water starting from the top and working down. Do not use a cloth that is dripping wet.

-  **The lift must not be cleaned with CSI or equivalent.**
-  **The hand control must not be cleaned with Viraguard or equivalent.**
-  **The control box must not be cleaned with Anioxy Spray or equivalent.**
-  **The footrest must not be cleaned with Terralin Protect, Virex II or equivalent.**
-  **The leg support on SABINA II, S/N up to 460899 must only be cleaned with warm water and a facility approved neutral detergent.**
-  **The leg support on SABINA II S/N from 460900 must be cleaned with the recommended disinfectants.**



Application of commonly used Cleaning detergents / 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	Footrest for Sabina lift 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 lift 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 lift 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 lift, Liko M220 lift, Liko M230 lift, Uno lift, Sabina lift, Golvo lift, LikoLight , Roll-On , Likorall lift, Multirall lift
Benzyl-C12-18-alkyldimethylammonium, chlorides	Benzyl-C12-18-alkyldimethylammonium, chlorides (22 %) 2-Phenoxyethanol (20 %) Tridecylpolyethylenglycolether (15 %) Propan-2-ol (8 %)	approx. 8.6 in use	Terralin Protect	Shülke	Footrest for Sabina lift 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 lift and ceiling lifts
Ethanol	Hydrogen peroxide (2.5-10 %) Lauryldimethylamine oxide (0-2.5 %) Ethanol (2.5-10 %)	7	Anioxy-Spray WS	Anios	Control box for all mobile lifts
Trosclosene sodium	Adipic acid 10-30% Amorphous silica < 1% Sodium Toluene sulphonate 5-10 % Trosclosene sodium 10-30 %	4-6 in use	Chlor-Clean	Guest Medical Ltd	The lift straps for Golvo lift and ceiling lifts

*) Or equivalent

Inspection and Maintenance

For trouble-free use, certain details should be checked before each use:

- 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.

Service

A periodic inspection of the lift should be carried out at least once per year.

⚠️ Periodic inspection, repair and maintenance should be performed only in accordance with the LIKO Service Manual, and by personnel authorized by Hillrom and using original LIKO spare parts.

⚠️ Service activities are not allowed with the patient in the lift.

Service Agreement

Hillrom offers the opportunity to enter into service contracts for the maintenance and regular inspection of your **Liko** product.

Expected Lifetime

The product has an expected lifetime of 10 years when correctly handled, serviced, and periodically inspected in accordance with **Liko** instructions.

Parts listed below are subject to wear and tear and have specific expected lifetime:

- Hand control, expected lifetime 2 years.
- Battery, expected lifetime 3 years. The Li-Ion battery can be expected to have longer lifetime than the lead-acid gel battery.

Transport and Storage

The lift can be disassembled for transport and storage. To disassemble the lift, do the steps of "Assembly and Setup" on page 13 in reverse order. Hillrom recommends the disassembled lift to be transported in its original packaging. During transport, or if the lift is not to be used for a long time, the Emergency Stop should be activated. To remain suitable for use, charge the battery at least every 6 months.

The environment where the lift is transported and stored should have a temperature of -10°C to +50 °C (14°F to 122°F), 20% to 90% relative humidity, and atmospheric pressure 700 hPa to 1060 hPa.

The environment where batteries is transported and stored should have a temperature of -10°C to +40°C (14°F to 104°F), 20% to 80% relative humidity, and atmospheric pressure 700 hPa to 1060 hPa.

Notice to Users and/or Patients in EU

Any serious incident that has occurred in relation to the device, should be reported to the manufacturer and the competent authority of the Member State in which the user and/or patient is established.

Product Changes

Liko products undergo continuous development. We reserve the right to make product changes without prior notice. Contact your Hillrom representative for advice and information about product upgrades.

Design and Quality by Liko in Sweden

The management system for both manufacturing and development of the product is certified in accordance with ISO9001 and its equivalent for the medical device industry, ISO13485. The management system is also certified in accordance with the environmental standard ISO14001.

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Enhancing outcomes for
patients and their caregivers:

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