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INSTALLATION AND OPERATIONAL MANUAL

FOLDSMART ELS

ELEVAND
elevating patient handling

TABLE OF CONTENTS

1. INTRODUCTION

Congratulations on choosing the Elevand FoldSmart ELS patient lift for your design and production needs.

By following the recommendations in the user manual and utilising the provided information, you can ensure this mobile lift's safe, long-lasting, and faultless operation. Please direct any comments or observations about the lift's performance or the contents of this manual to the following address:

Distribution and service by:

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GENERAL REMARKS:

1. The product should only be operated by qualified, trained personnel who have read these instructions.
2. Using, operating, or servicing the product inconsistently with these instructions is prohibited. Such action may cause damages that create a financial burden for the user, for which the Producer is not responsible.
3. The device manufacturer does not allow any modifications to be made to the product.
4. If the operation and parameters are incompatible with the description in the instructions, the product must not be used. This issue must be reported immediately to the manufacturer or distributor.
5. Each product repair should be conducted by an authorised service centre or the factory and documented in the repair list that comes with the warranty card. Please adhere to this requirement to ensure the product warranty remains valid.
6. Any serious incident involving the Elevand FoldSmart ELS patient lift must be reported immediately to the manufacturer and the relevant authority in the Member State where the user or patient resides.
7. The warranty covers all material and manufacturing defects.
8. A technical description of the device, including a list of spare parts and their replacement methods, is available upon request from the manufacturer.

Warranty terms will be honoured only if the product is used according to its intended purpose and in compliance with the terms stated in this manual.

The manufacturer is not responsible for any consequences resulting from improper use of the Elevand FoldSmart ELS, which includes any use that does not comply with the conditions outlined in this manual.

1.1SYMBOLS

CAUTION !

In this manner are indicated activities, which if performed inconsistently with the instruction manual may cause deterioration of conditions or safety hazard to the user and / or personnel operating the device ref.

Indicates the need for the user to consult the instructions for use.

Applied part type B.

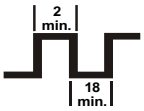
Manufacturer
XXXX-XX – year and month of production.

For indoor use.

Appliance class II (electrical safety).

Direct current.

Alternating current.



Acutator operation type.

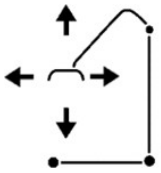
Indicates maximum safe working load (SWL) of the lift and patient weight when raising/lowering the arm.

Hand control - Battery level status.

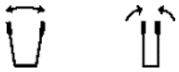
Hand control - Service indicator.

Hand control - Overload symbol.

Safe security mounting.



Hand control:
Raising / lowering the patient
Tilt the sling forward / backward.



Hand control - Spreading legs of the base the lift.

Prohibition of gripping of the actuator.

Emergency electric lowering.

Charging diodes.

Medical device.

Catalogue number.

Serial number.

Protection level (electrical safety).

Elevand FoldSmart ELS patient lift is manufactured in accordance with Medica Device Regulation 2017/745 (class I, 13 rule) and has a CE marking, according to the manufacturer declaration.

All electrical and electronic equipment waste must be disposed of properly at recycling facilities according to the European Union's WEEE directive or equivalent regulations. It is essential that all devices containing substances harmful to the environment or humans are recycled properly in relevant facilities and not disposed of with general or household waste. These regulations ensure the reduction of electronic waste and proper recycling of electronic devices. Proper recycling is crucial as electronic waste may contain substances harmful to the environment and human health.

Recycable materials.

2. ELEVAND FOLDSMART ELS PATIENT LIFT CHARACTERISTIC

2.1. Purpose

CAUTION !

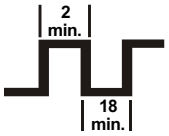
The device is designed for moving individuals over short distances within a room or during daily activities, such as transferring to the toilet. It should only be used on horizontal, flat surfaces within a single-floor building. If transportation on flat, sloping surfaces is necessary, an additional person should assist to ensure the patient's safety. The lift is intended for use with individuals whose weight does not exceed the maximum lifting capacity of the lift or lifting belt, whichever is lower. The device should be used only after a thorough evaluation of the patient by the attending physician

CAUTION !

This product is not intended for use by the patient alone. Lifting and transferring a patient should always be carried out with the help of at least one caregiver.

The Elevand FoldSmart ELS patient lift is an electric mobile lift designed for a caregiver to safely and comfortably lift one patient at a time. It allows for smooth transfers to and from a wheelchair, toilet, bed, stretcher, or the floor.

2.2. Technical characteristics

Type			
Length of frame		1280 mm	
Width of frame		610 mm	
Height		1360 mm	
Height of the push bar.		960 - 1190 mm	
Raising height (min.)		720 mm	
Raising height (max.)		1940 mm	
Minimum legs width (int./ext.)		490 / 610 mm	
Maximum legs width (int./ext.)		1000 / 1120 mm	
Height of device legs (from floor)		95 mm	
Hanger bar width **- 2P35, 2P45, 2P60**		350 mm, 450 mm, 600 mm	
Hanger bar radius **4PSB**		max. 660 mm	
Hanger bar radius **4ESB-S**		-	max. 640 mm
Hanger bar angle **4ESB-S**		-	-17° ÷ +42°
Hanger bar radius **4MSB**		max. 780 mm	
Hanger bar angle **4MSB**		13˚, 29˚, 45˚	
Turning diameter of the product (min)		1400 mm	
Turning diameter of the product (max)		1520 mm	
Lifting speed (raising)		34 sec	
Lifting speed (lowering)		33 sec	
Diameter of castors with brake		100 mm	
Diameter of castors without brake		75 mm	
Type of work		Discontinuous, short-term load (10%) max 2 min. work (ON), min. 18 minutes pause (OFF)	
Power supply	Voltage	100-240V ~	
	Frequency	50/60 Hz	
	Consumed current	Max. 400 mA	
Battery		24 V ⎓ / 2,9 Ah	
Protection class against electric shock		II, ⧈	
Applied part		type B,	
Protection level of the control box		IPX4	
Protection level of the battery		IPX5	
Protection level of the main actuator		IPX4	
Protection level of the hand control		IPX6	
Maximum safe load of the device when lifting / lowering the arm		≤ 160 kg	≤ 160 kg ≤ 120 kg (**with hanger bar 4ESB-S**)
Operation force	Finger	< 5N	
	Foot	< 250N	
Lift mass		45 kg	
Max. sound level		52 dB	

2.3. Elevand FoldSmart ELS patient lift

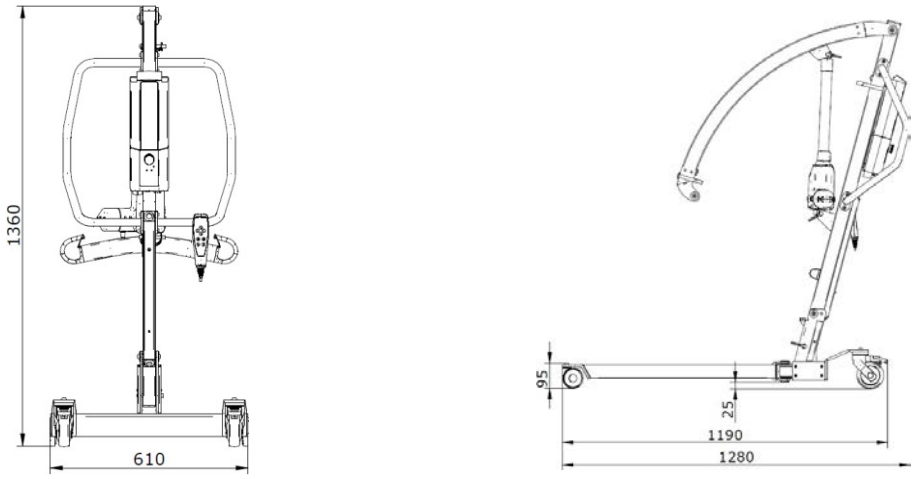


Figure 1a – The main dimensions

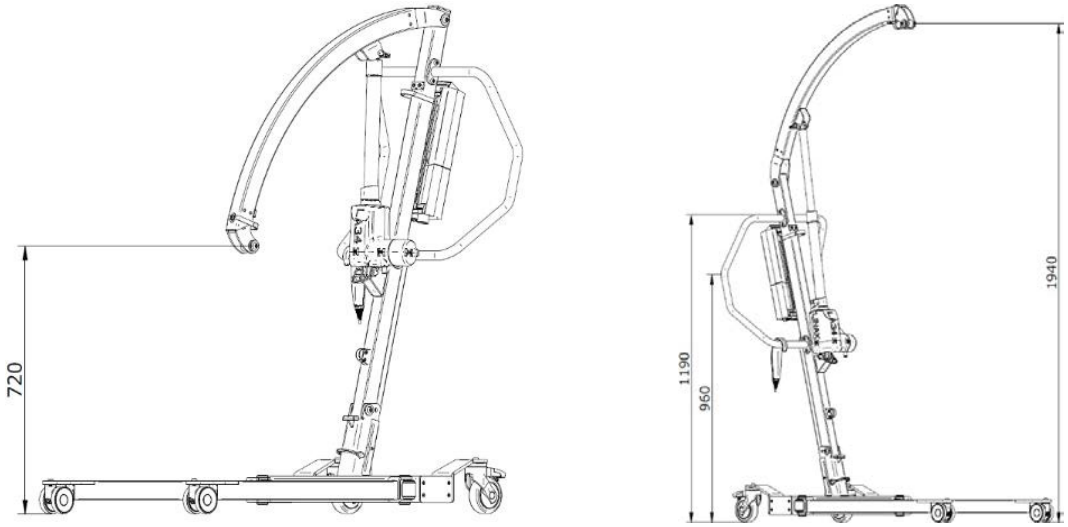


Figure 1b – Lifting range and height of the Elevand FoldSmart ELS patient lift

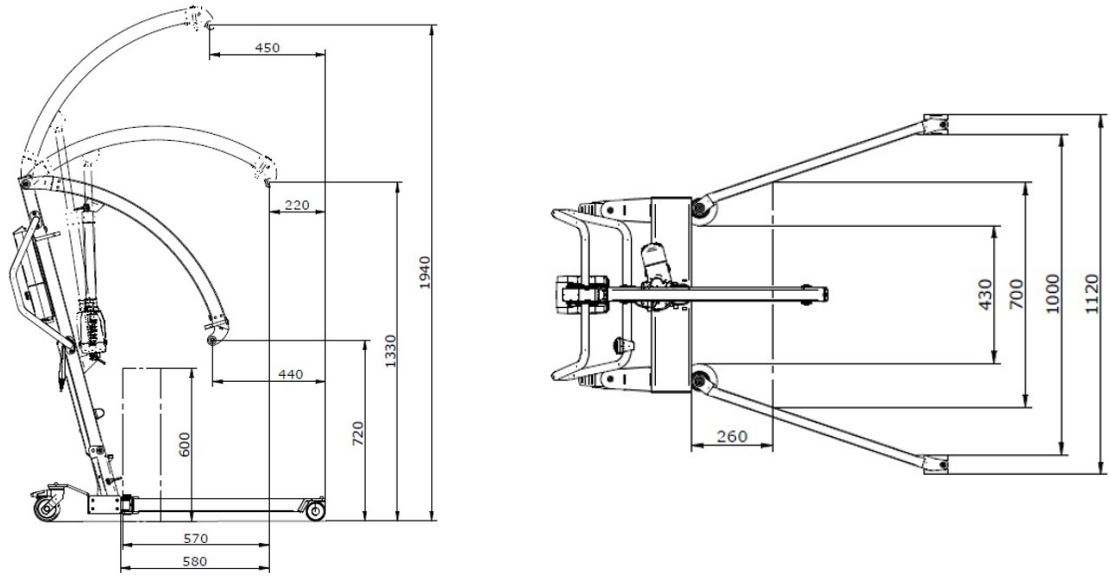


Figure 1c – Additional dimensions of the Elevand FoldSmart ELS patient lift

3. CONSTRUCTION AND OPERATION OF ELEVAND FOLDSMART ELS PATIENT LIFT

3.1. Construction components

The design of the Elevand FoldSmart ELS patient lift is made of welded powder-coated steel sections and consists of the following components:

Figure 2a – Elevand FoldSmart ELS patient lift construction components with electric adjustment of the legs

Elevand FoldSmart ELS hanger bar 2P45 (option: 2P35, 2P60)	Elevand FoldSmart ELS hanger bar 4PSB	Elevand FoldSmart ELS hanger bar 4MSB	Elevand FoldSmart ELS hanger bar 4ESB-S
			

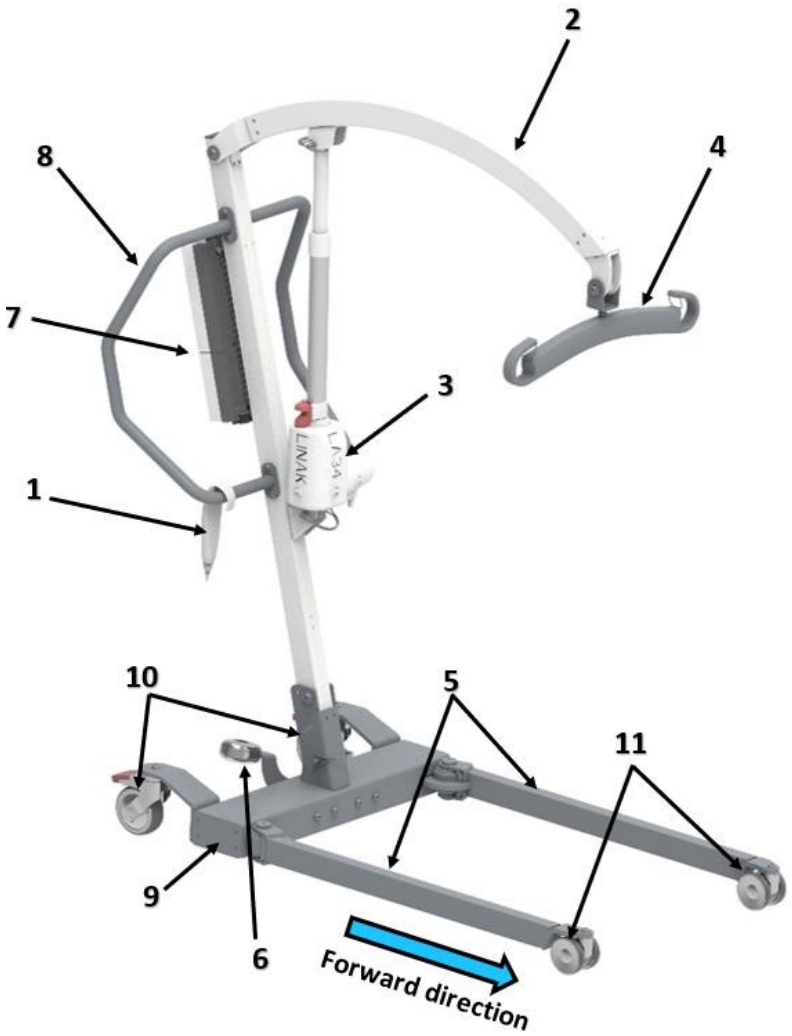


Figure 2b – Elevand FoldSmart ELS patient lift construction components with mechanical adjustment of the legs

Elevand FoldSmart ELS hanger bar 2P45 (option: 2P35, 2P60)	Elevand FoldSmart ELS hanger bar 4PSB	Elevand FoldSmart ELS hanger bar 4MSB
		

1 **Hand control**
enables control of patient lifting

2 **Lifting arm**
Allows for raising and lowering the sling.

3 **Main actuator**
electric actuator for raising the lifting arm

4 **Hanger bar -** allows the sling to be attached
for a list of available slings, see section 3.2.

5 **Spreading legs of the base**
allow you to drive under chairs, wheelchairs, etc.

6 **Foot lever to spreading of the device's legs of the base (Figure 2b)**
foot levers allow to spreading range of the device's legs of the base

7 **Push bar**
A handle used by the operator to control the device.

8 **Control box + battery**
Manages the operation of the actuator.

9 **Base equipped with four castors**

10 **Rear castors with brake**

11 **Front castors without brake**

3.2. Accessories and additional equipment

CAUTION!

The device must be used with a sling certified in accordance with the Medical Device Regulation 2017/745 and in accordance with ISO 10535:2006.

Name and description of the hanger bar	Picture	SWL [kg]	Elevand FoldSmart ELS	Elevand FoldSmart ELS
2P35 fixed 2-point		160	X	X
2P45 fixed 2-point		160	X	X
2P60 fixed 2-point		160	X	X
4PSB fixed 4-point		160	X	X
4MSB manual 4-point		160	X	X
4ESB-S electrical 4-point		120	X	-

3.3. Device set

ELEVAND FOLDSMART ELS patient lift	1 pc.
User Manual	1 pc.
Charging cable	1 pc.
Battery	1 pc.
Accessories and additional equipment	as per order

3.4. Transport

The device is transported in a cardboard box on a pallet. Up to three cartons with devices on one pallet are allowed, and the pallet is secured by wrapping it with stretch tape and straps according to the packing instructions. Stacking pallets with devices is not permitted. Polyurethane profiles, bubble wrap, and stretch wrap protect the device. The carton is reinforced with a secondary carton, providing space for the battery and charger.

When moving the elevator indoors, prevent its outer edges from being exposed to impacts and abrasions.

3.5.Locking Pins (only for patient lifts with 2-point hanger bar)

The Elevand FoldSmart ELS patient lift with a 2-point hanger bar features universal locking pins for quick and safe installation and removal without the need for tools. This is crucial for easy transportation or servicing of the device.

- To unlock the pin, pull the safety catch and lift it (Figure 3a).
- To lock the pin, pull the safety catch and secure it over the pin (Figure 3b).

a)

b)

Figure 3 – a) pin unlocking b) pin locking

3.5. Unfolding the device (only patient lift with 2-point hanger bar)

CAUTION!

When unfolding the unit, press the brakes!

After unpacking the Elevand FoldSmart ELS, the patient lifts it with a 2-point hanger bar and follows these steps to unfold the device.

- While holding the upper part of the device, remove the locking pin (Figure 4);

Figure 4 – Removing the locking pin

- Lift the upper part of the device and secure it with a pin (Figure 5);

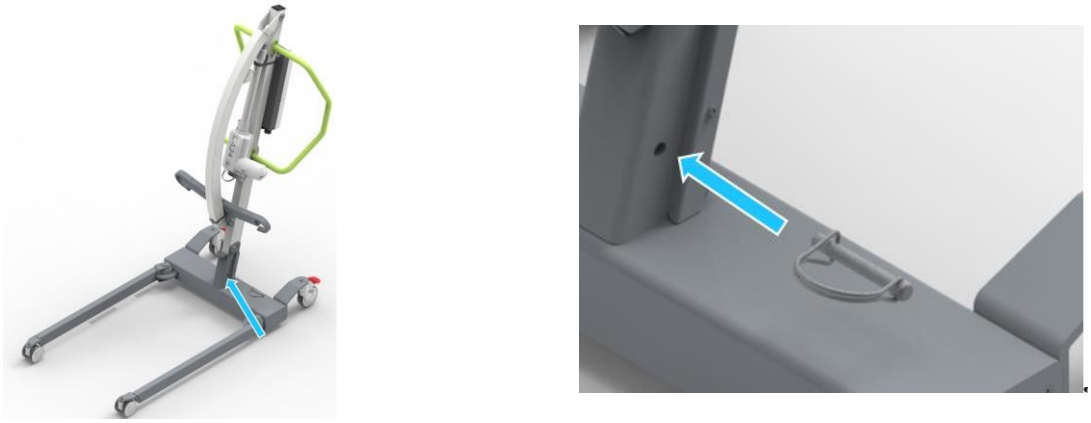


Figure 5 – Lifting and locking the top frame

- Detach the Velcro tape holding the lifting arm (Figure 6);

Figure 6 – Detaching Velcro tape holding the lifting arm

- Lift the lifting arm and remove the Velcro tape of the attached actuator (Figure 7);

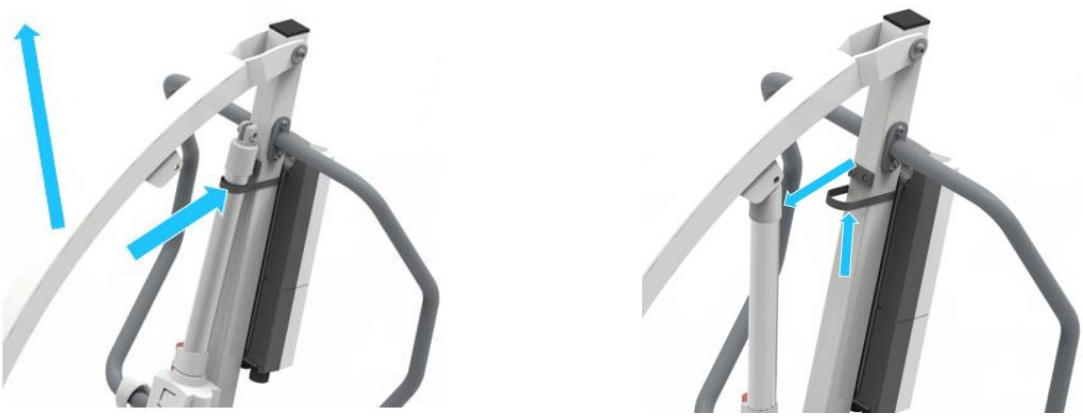


Figure 7 – Detaching Velcro tape holding the actuator

- Tilt the actuator into its fixed position and secure it with a pin (Figure 8).

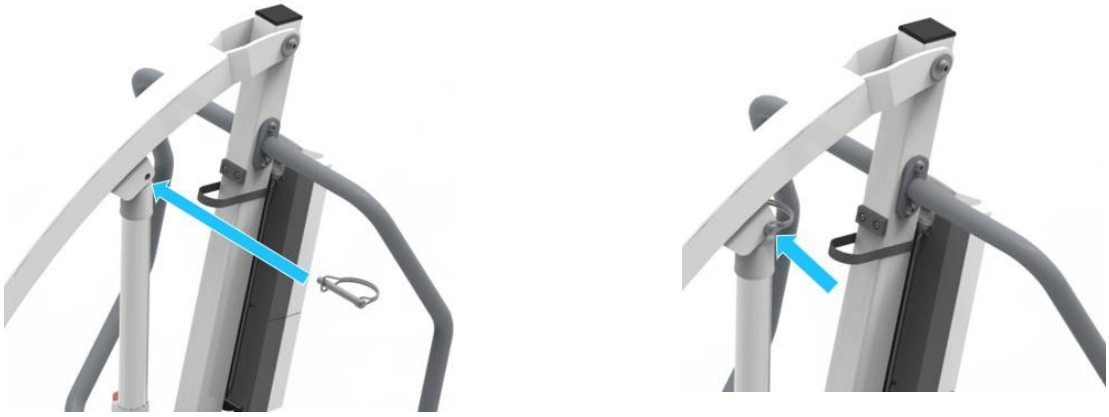


Figure 8 – Actuator attachment

- Detach the Velcro tape from the hanger bar (Figure 9);

Figure 9 – Detaching Velcro tape holding the hanger bar

The Elevand FoldSmart ELS patient lift is now ready for use.

3.6. Folding the device

CAUTION!

When folding the unit, press the brakes!

The lift can be folded for easy storage.

To assemble the device, follow these steps:

- Lower the arm to its lowest position and secure the hanger bar to the arm using Velcro tape (Figure 10).

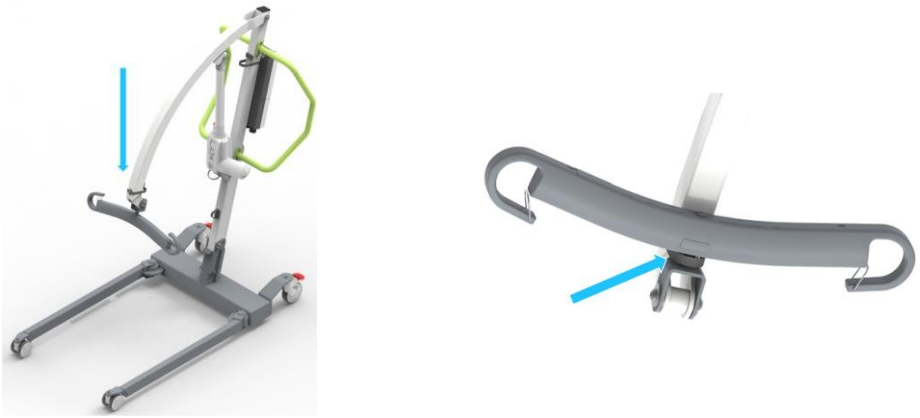


Figure 10 – Folding the hanger bar

- remove the upper pin of the actuator (Figure 11);

Figure 11 – Remove the pin

- While raising the lifting arm, position the actuator onto the device and fasten it with Velcro tape (Fig 12).

Figure 12 – Fixing the actuator

- Lower the arm to its lowest position and attach the rotating axis of the hanger bar to the frame using Velcro tape (Fig.13)

Figure 13 – Fastening the lifting arm

- Remove the vertical lock pin (Figure 14);

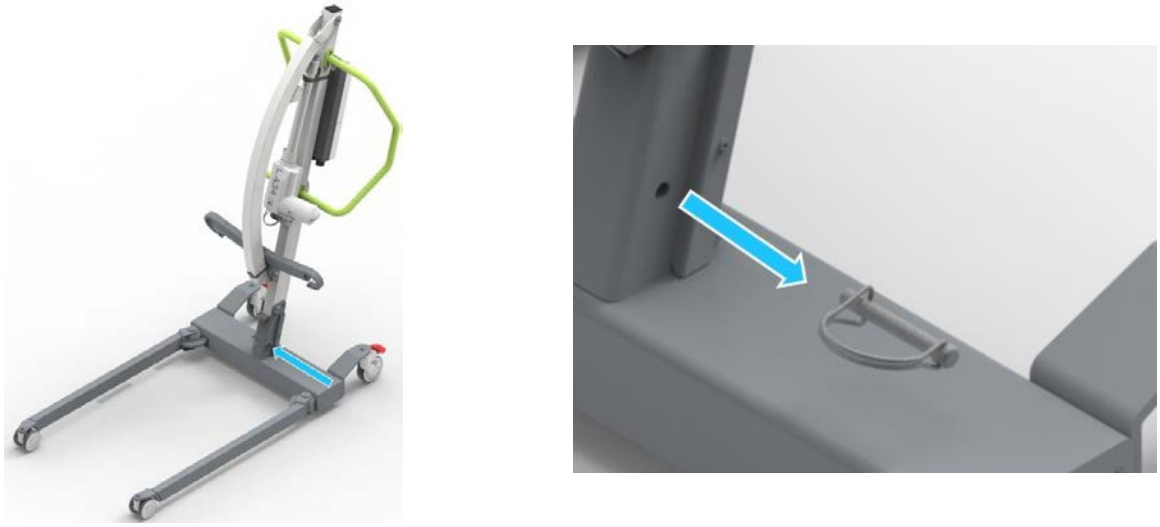


Figure 14 – Remove the pin

- Tilt the top of the device forward until the pin can be inserted and locked into place (Figure 15).

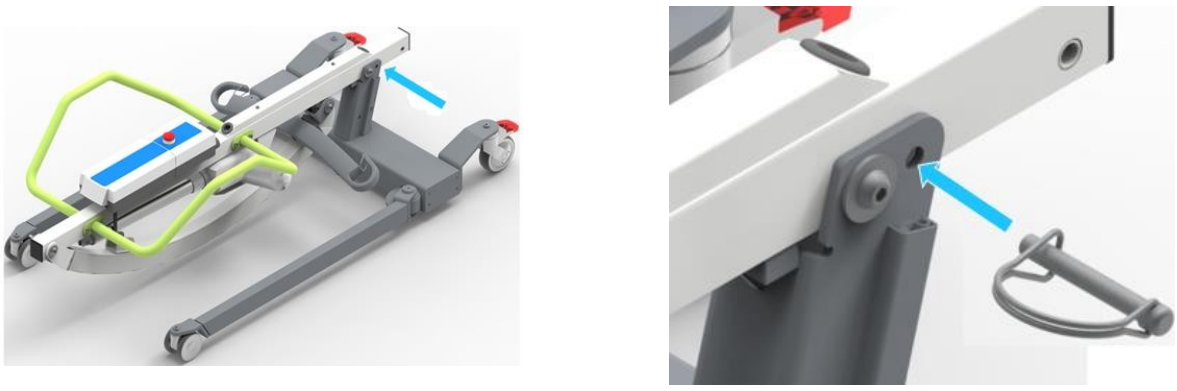


Figure 15 – Locking the pin

3.7. Storage

Store the device in a cool and dry room. The ambient conditions should ideally be within the following ranges:

- Ambient temperature: 10 to 40ºC (recommended below 20ºC)
- Air humidity: 30 to 75%
- Air pressure: 700 to 1060 hPa

The patient lift with the 2-point hanger bar can be folded for mobility or storage, following the procedure outlined in section 3.7.

4. GENERAL WARNINGS AND SAFETY MEANS

CAUTION!

Any modification of the device without the written authorization of the Manufacturer is prohibited.

CAUTION!

The Manufacturer reserves the right to make changes to the design that do not violate the basic requirements of functionality and security.

While using the Elevand FoldSmart ELS patient lift, the following points should be abided firstly:

1. The Mobile lift should only be used for its intended purpose.
2. Keep a safe distance from the lifting mechanisms during operation, as moving parts pose a crushing risk.
3. The lift should only be operated by medical personnel who have been properly instructed and have the appropriate expertise.
4. Before using the device, read the entire instruction manual to avoid damage from incorrect operation and to understand all necessary instructions and important information.
5. Ensure the lift is in good condition before each use. (see sections 8.1 and 8.2).
6. Repairs should be performed by authorised service personnel.
7. Before using the lift, assess whether the patient can safely use the device (e.g., consider the risk of swooning).
8. If the maximum load capacities of the lift and sling differ, always adhere to the lower maximum load.
9. Ensure no moisture enters the electrical system. IPX4 protection is only valid when the battery is connected (see section 6.7).
10. Charge the battery in a well-ventilated area.
11. Make sure to leave children unattended near the device. If necessary, remove the battery. The lift is not a toy.
12. Do not leave a patient using the device unattended, as an unconscious patient may fall out.
13. If you hear unusual noises, stop using the device, remove the battery, and contact an authorised dealer.

5. PREPARATION FOR USE

CAUTION!

Do not stand on the device's base legs when using the device. Injuries could occur during their movement. Additionally, maintain adequate distances to accommodate the device's leg deflection system.

CAUTION!

The arm (hanger) assembly should only be raised by the actuator. Manually lifting the arm assembly may damage the actuator.

CAUTION!

Do not use the lift in an environment with other devices that emit radio frequency energy. The lift control system, like any electronic device, generates, uses, and can emit radio frequency energy. If not used according to the instructions, it may interfere with nearby equipment. The manufacturer does not guarantee that interference will not occur in a particular location. To check for interference, change the lift's position or disconnect the battery. You can try to correct the interference by changing the usage area, increasing the distance from the affected equipment, or consulting service.

CAUTION!

The device can be used in wet rooms, such as bathrooms, but it must not be used in the shower. Ensure the environmental conditions are within the following limits:

- Temperature: 10 ÷ 40ºC
- Air humidity: 30 ÷ 75%
- Air pressure: 700 ÷1060 hPa

CAUTION!

Avoid strong sunlight on the lift.

Ensure that the patient lift is positioned in a location with ample space on all sides for maneuvering. Refer to Figure 16 for the device's turning diameter.

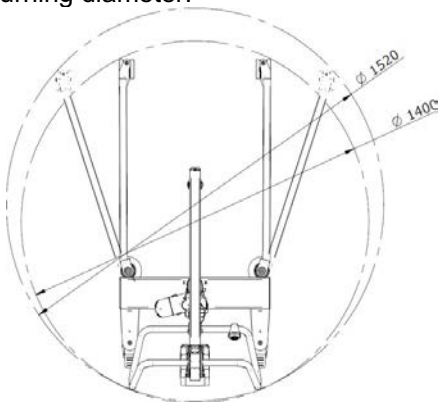


Figure 16 – The device's turning diameter

6. PREPARING THE DEVICE FOR USE

6.1. Patient lifting and transport

To assist a person who requires lifting, follow the steps below:

- If the patient is lying down, gently turn them onto their side with their back towards the caregiver.
- Fold the sling in half and place the lower edge of the back panel under the patient's coccyx, ensuring the upper edge reaches the shoulders.
- Turn the patient onto their side and pull the folded half of the sling through.
- Turn the patient onto their back, ensuring their entire backrest is on the sling.
- Confirm the back loops are positioned on the upper back, and the thigh loops are on the patient's thighs.
- Raise the bed's headboard to a seated position for the patient.
- Position the lift so the hanger bar is at eye level but not too close to the patient's face.
- Before attaching the sling to the hanger bar, ensure the loops at the arms and legs are the same height.
- Attach the shoulder loops to the outer hooks of the hanger bar.
- Attach the thigh loops.
- Raise the lifting arm until the sling loops are taut. Verify that the sling is correctly positioned and that the patient is comfortable.
- Once confirmed, proceed to lift the patient.
- Upon reaching the desired height, engage the stop levers (if necessary, spread the base legs before lifting).
- Press and hold the appropriate button to lower the patient until seated and the sling loops are loose.
- Unfasten all loops securely.
- Release the stop levers.
- Move the device away.

6.2. Adjustment Legs of Mobile Lift

The Elevand FoldSmart ELS patient lift offers two options for adjusting the legs: mechanical and electrical. In both configurations, the legs can spread from 0˚ to 37˚.

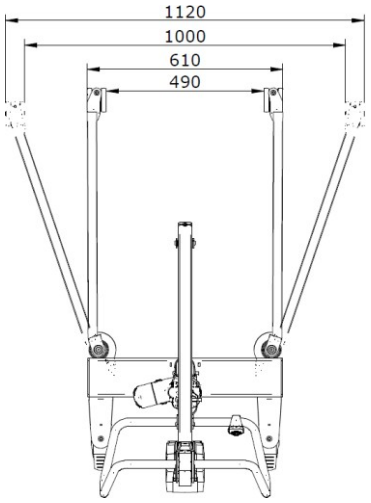


Figure 17 – Spreading range of the device's legs of the base

a) Mechanical (only for Elevand FoldSmart ELS)

Use the designated foot lever to adjust the legs of the Elevand FoldSmart ELS patient lift mechanically. Pressing the right-side foot lever (Figure 18a) spreads the device's legs, while the left-side lever (Figure 18b) reduces the spread range.

a)

b)

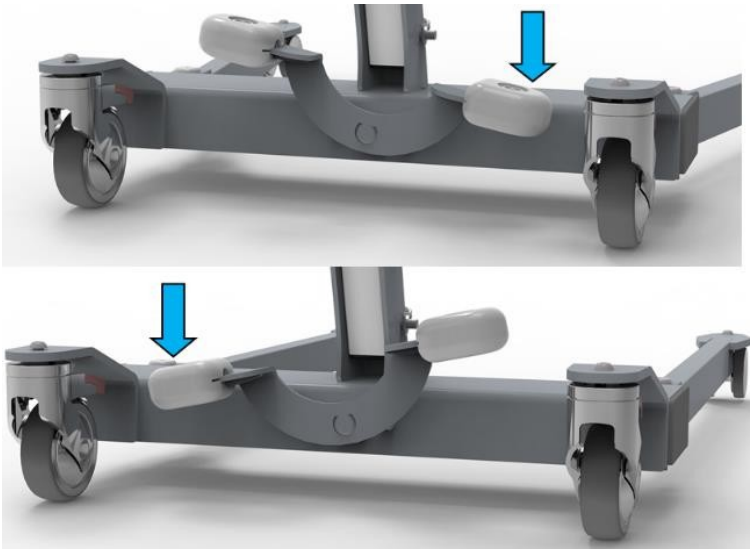


Figure 18 – Spreading range of the device's legs of the base

b) Electric (only for Elevand FoldSmart ELS)

Use the hand control for the Elevand FoldSmart ELS patient lift with electric leg adjustment. Press and hold the button to spread (1) or fold (2) the legs of the device as needed (Figure 19).

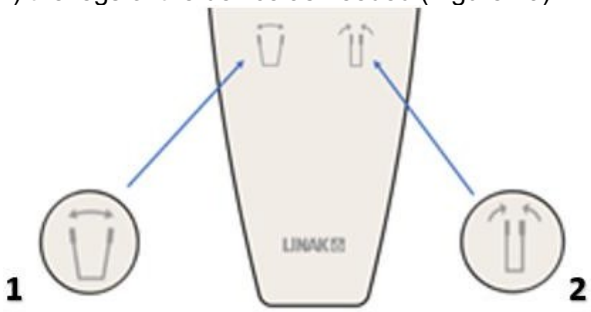


Figure 19 – Control button spreading range of the device's legs of the base

6.3. Using the stop lever

CAUTION!

Always use both brakes.

The brakes, located on the rear castors, are crucial in the device to prevent movement during operation. Use your foot to engage the stop lever and halt the patient lift. To disengage the brakes, lift the lever.

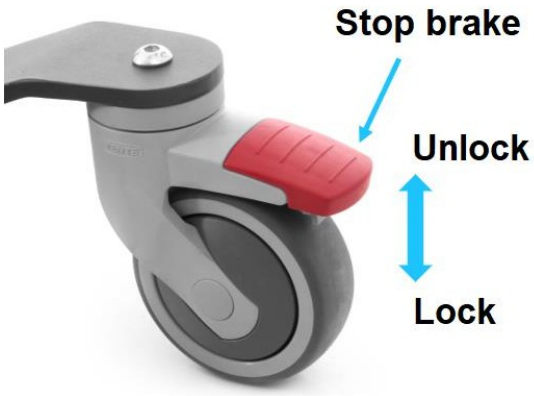


Figure 20 – Stop lever

6.4. Hand control

The Elevand FoldSmart ELS patient lift has a hand control panel designed to operate its functions. Depending on the version, three types of hand controls are available (refer to Figures 21a, 21b, and 21c).

1. Battery charge level
2. Service diode
3. Overload
4. Raising
5. Lovering
6. Adjusting legs outside
7. Adjusting legs inside

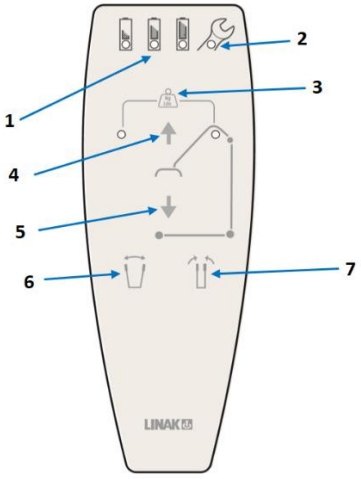


Figure 21a – Buttons on the hand control Elevand FoldSmart ELS patient lift

1. Battery charge level
2. Service diode
3. Overload
4. Raising
5. Lovering

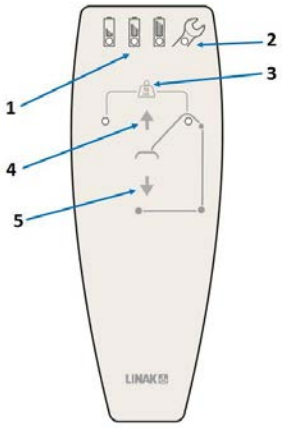


Figure 21b – Buttons on the hand control Elevand FoldSmart ELS patient lift

1. Battery charge level
2. Service diode
3. Overload
4. Raising
5. Lovering
6. Forward tilt (sling)
7. Backward tilt (sling)
8. Adjusting legs outside
9. Adjusting legs insideFigure

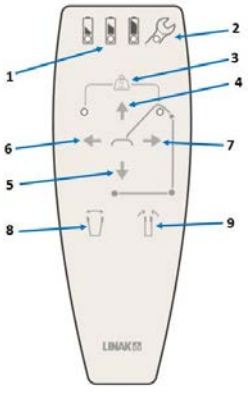
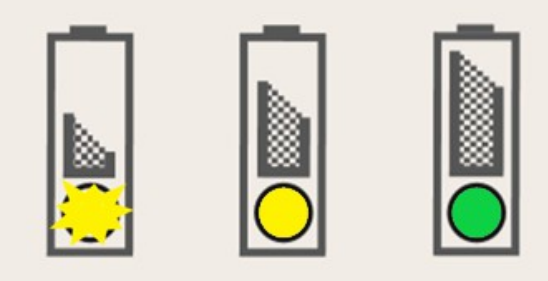


Figure 21c – Buttons on the hand control Elevand FoldSmart ELS patient lift with hanger bar 4ESB-S

The diodes positioned on the unit display battery status, service alerts, and overload warnings (refer to Figure 22).

Battery Indication

The battery status is indicated by three stages of discharge. The diodes for battery status are yellow or green until power-off (2 minutes after use).

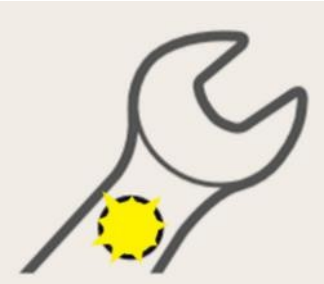


Battery status

For full description go to section 6.8

Service Indication

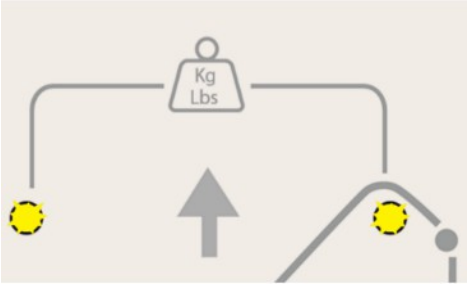
The service indicator (yellow diode) flashes when service is required. The standard interval is every 12 months or 8000 cycles (following EN10535 norms), whichever comes first.



When service is due, the service indicator remains lit for 2 minutes after use, after which it powers down to conserve battery.

The system remains operational when the service indicator is illuminated.

Overload Indication



During an overload exceeding the preset current cutoff limit, both LEDs will blink for 10 seconds.

Figure 22 - Hand control functionality with diodes

6.5. Hanger Bar Adjustment

This feature is beneficial for tilting the hanger bar, such as when transferring a patient from a lying position on the bed. Adjusting the sling to the correct position enhances the person's lifted comfort.

4ESB-S Hanger Bar

Equipped with an integrated actuator, the 4ESB-C hanger bar allows smooth adjustment of the sling tilt during patient transport. The sling angle can be modified using the designated buttons on the hand control (refer to Figure 23).

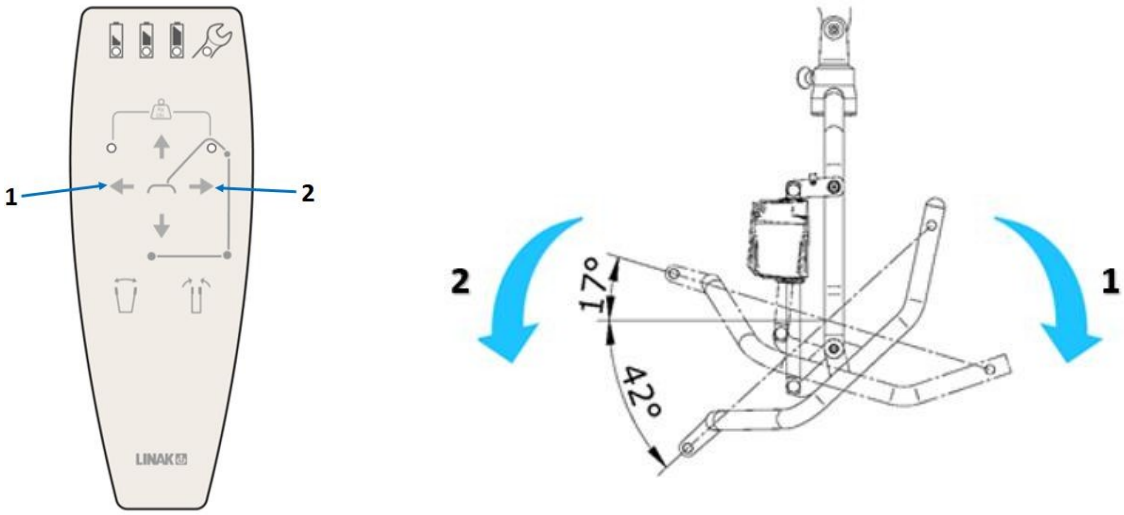


Figure 23 – Sling tilt adjustment

1 – forward tilt, 2 – backward tilt

The 4ESB-S hanger bar features a rotation lock (1) with four positions spaced 90˚ apart, providing a maximum rotation diameter of approximately 640 mm (refer to Figure 24).

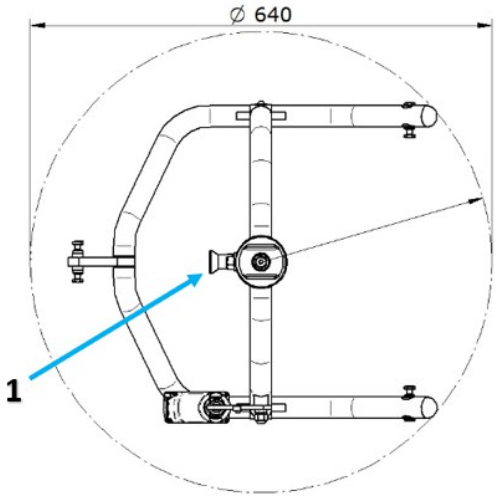
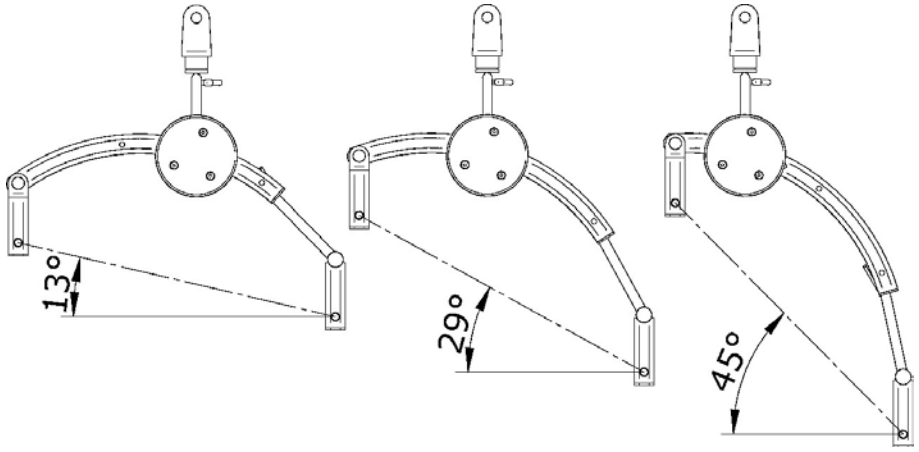


Figure 24 – Rotation diameter of the hanger bar 4ESB-S

4MSB hanger bar

For the 4MSB hanger bar, the adjustable bar allows for three sling positions to be set accordingly (see Figures 25 and 26).



(Figures 25 and 26).

Figure 25 – Hanger bar 4MSB angle

Figure 26 – Adjustment of hanger bar 4MSB

The maximum rotation diameter of the 4MSB hanger bar is approximately 780 mm (Figure 27).

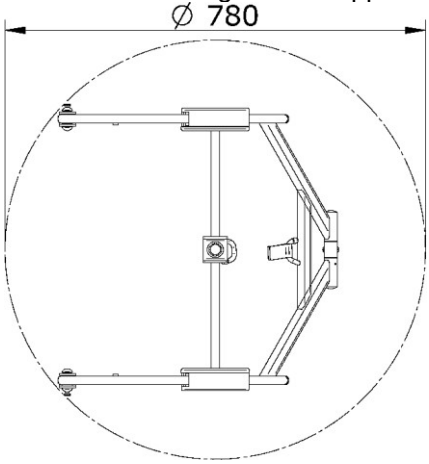


Figure 27 – Rotation diameter of the hanger bar 4MSB

4PSB hanger bar

The Elevand FoldSmart ELS patient lift with the 4PSB hanger bar offers a four-point design with loop hooks and a rotation lock (1) in four positions at 90˚ intervals (Figure 28).

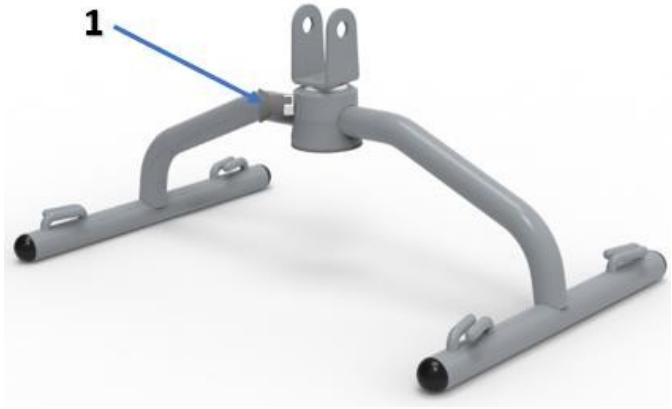


Figure 28 – Adjustment of hanger bar 4PSB

The maximum rotation diameter of the 4PSB hanger bar is approximately 660 mm (Figure 29).

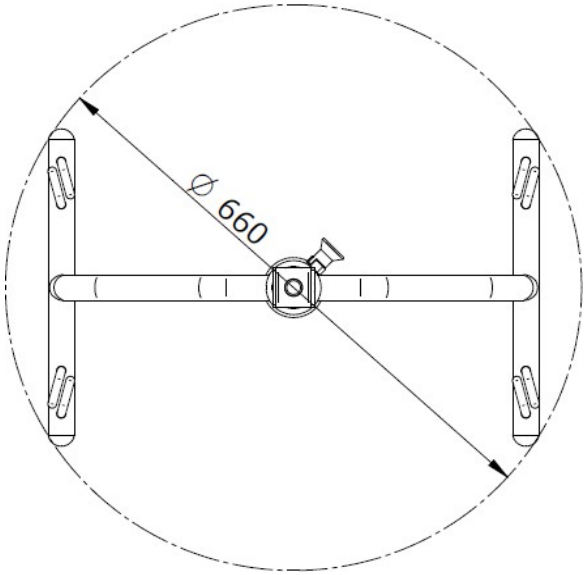


Figure 29 – Rotation diameter of the hanger bar 4PSB

6.5. Emergency stop

In case of an emergency, immediately press the emergency stop button (Figure 30). To unlock the button, rotate it clockwise.

Figure 30 – Emergency stop

6.6. Patient Emergency Lowering

If there is no response when pressing the lowering or lifting buttons on the hand control, emergency lowering or lifting can be performed by pressing a small button on the control box using a pen or similar tool (Figure 31). If the electric control box's lowering function does not work, manual lowering can be activated using a lever located at the bottom of the main actuator cylinder bar (Figure 32). To activate manual lowering, grip the red part and gently pull upwards.

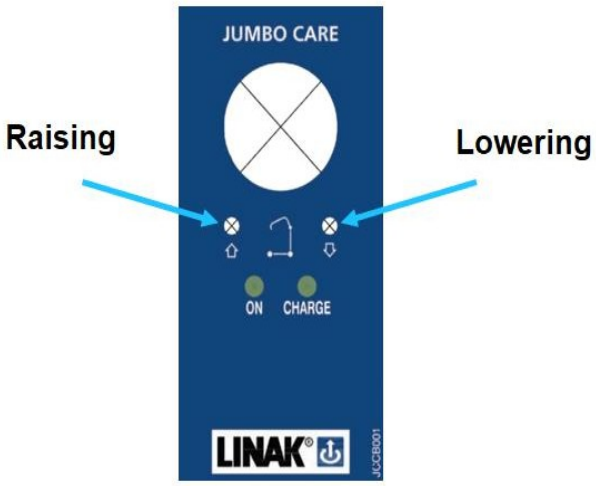


Figure 31 - Elevation of the controller- emergency patient raising/lowering

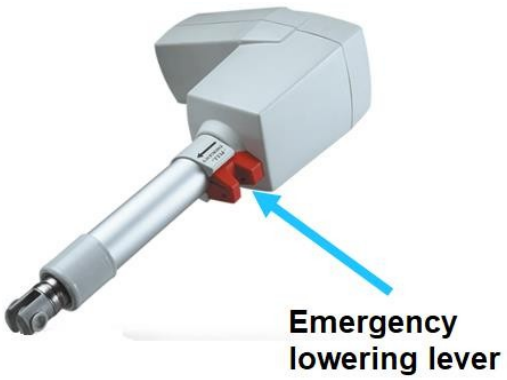


Figure 32 - Main actuator – emergency patient lowering

6.7. Installation and removing the battery

To install the battery in the device, follow these steps:

- Align the bottom of the battery with the top of the controller (Figure 33a).
- Push the battery's top forward until you hear a click indicating that it is securely attached (Figure 33b).
- Gently push the top of the battery forward to ensure it is properly secured on the rail.

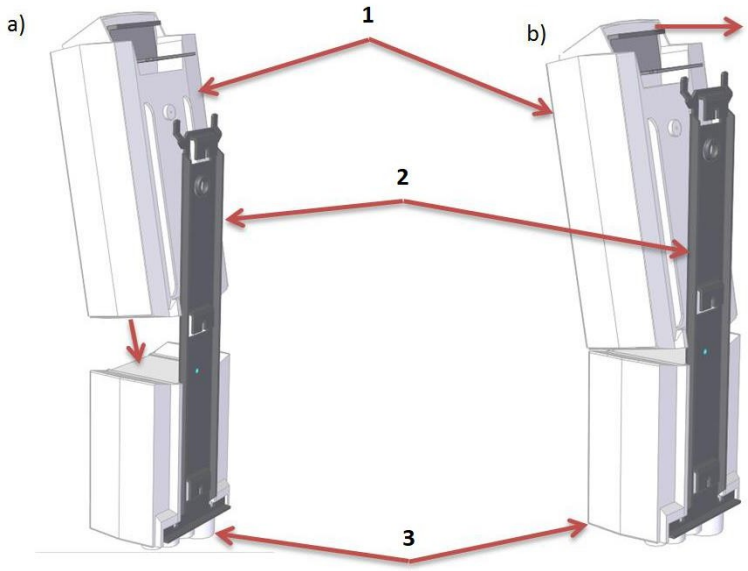


Figure 33 – Battery mounting (1 – battery, 2 – mounting rail, 3 – control box)

To remove the battery, follow these steps:

- Position the lift in the starting position.
- Activate the emergency stop button (refer to point 6.6).
- Grasp the battery by the handle (1) and depress the release lever (Figure 34a)
- Fold back the battery (Fig 34b) and pull it out (Fig 34c).

Figure 34 – Battery removing (1 – release lever)

6.8. Battery level status and charging

CAUTION!

The device cannot be used while charging.

CAUTION!

During charging, the lifting function is blocked.

CAUTION!

After fully charging, do not use the device for 1 hour, this will extend the life of the battery

CAUTION!

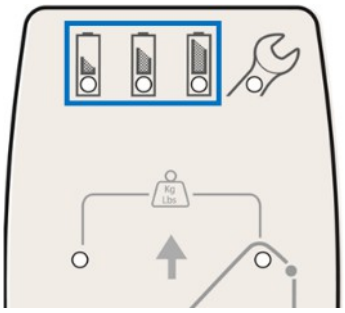
The battery should be charged continuously for at least 24 hours in the following cases:

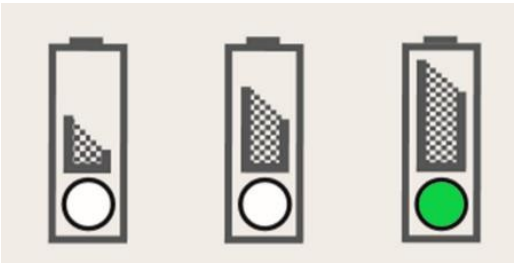
- Before using the lift for the first time,
- Before storage period (up to 3 months) without power supply connected,
- As the first activity after the storage period.

The battery charge level is indicated on the hand control (Figure 35).

Battery Indication

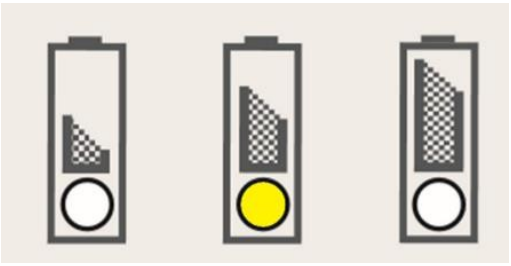
The battery level is indicated in three stages. The LEDs for the battery will display either yellow or green until the device enters standby mode, typically 2 minutes after it has ceased operation.





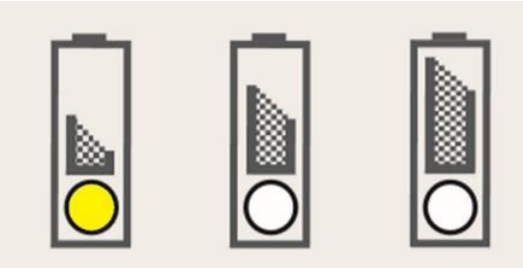
Battery state 1:

The battery is in good condition and does not require charging (100-50% capacity); indicated by the third green LED.



Battery state 2:

The battery requires charging (50-25% capacity); indicated by the second yellow LED.



Battery state 3:

The battery requires charging (less than 25%); indicated by the first yellow LED and a buzzer sound when a button is pressed.

Battery state 4:

The battery urgently needs charging. Some functions of the lift are disabled, allowing only the lowering of the lifting arm.

The LED blinks continuously and emits an audible signal due to prolonged use.

Figure 35 – Indication of the battery charge level on the hand control

- To recharge the battery, follow these steps:
    - Activate the emergency stop.
    - Connect the power cord to the control box (Figure 36).
    - Plug the power cord into the electrical outlet.

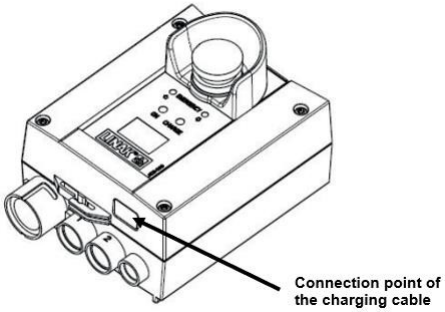


Figure 36 – Connecting the charging cable

When the battery is charging, the control box's LEDs illuminate (Figure 37). The green LED confirms the battery charger's connection to the mains, while the yellow LED indicates the ongoing charging process. A full charge typically takes around 5 hours.

Figure 37 – LED – location on the control box

6.9. Sling

Another additional part of the lift is the sling, which is designed to position the patient securely during transfer. The sling should be applied according to the patient's instructions.

In patient lifts featuring a Manual four-point hanger bar (4MSB) or an electrical four-point hanger bar (4ESB-S), the sling is secured by attaching the e-clips to the hanger bar's sling attachment hooks (Figure 38).

Figure 38 – Attaching the e-clip to the sling attachment hooks on the hanger bar

When removing the sling, push in the levers and lift the e-clip (Figure 39).

Figure 39 – Detaching the sling from the hanger bar

The 4ESB-S hanger bar facilitates convenient adjustment of the suspension attachment pin, allowing it to be positioned either outside or inside the sling (Figure 40).

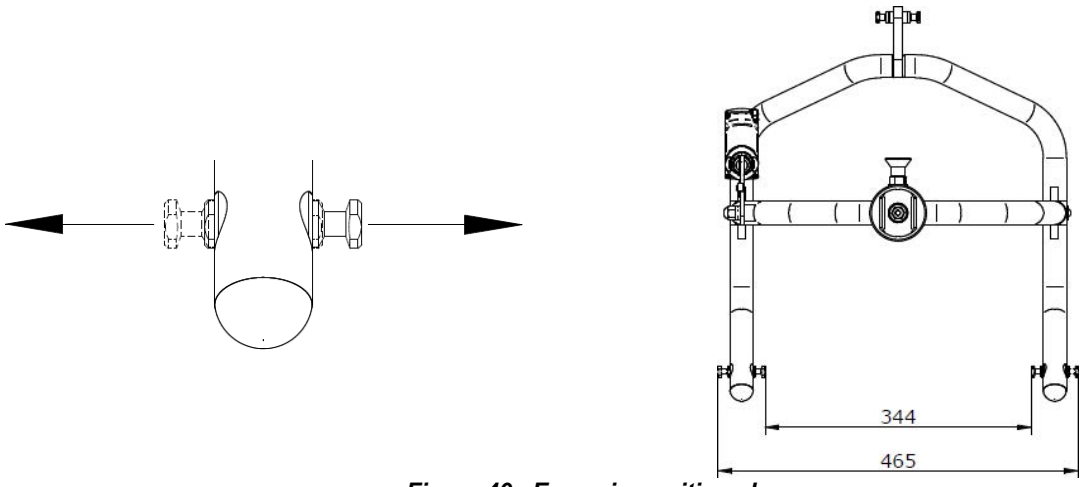


Figure 40 –Easy pin position change

Hanger bar 2P35, 2P45, 2P60 and 4PSB

For the Elevand FoldSmart ELS patient lift with hanger bars 2P35, 2P45, 2P60, and 4PSB, the sling is secured by placing an appropriate loop onto the hanger bar hook (Figure 41).

	Correct sling loop mounting	Incorrect sling loop mounting
The sling 2P35, 2P45, 2P60		
The sling 4PSB		

Figure 41 – Attaching the sling loop

7. CLEANING AND DISINFECTION

CAUTION !

Each time the patient changes, the device must be cleaned and disinfected before being used again.

CAUTION !

Before cleaning, make sure that:

- All plugs are properly connected.
- The battery is mounted on the controller.
- No electrical components indicate external damage. Failure to do so may result in the ingress of water or cleaning agents and cause interference with the device or damage to electrical components.
- Electrical parts must not be washed with a water jet or pressure washers, etc. They can only be cleaned with a damp cloth.
- If there is a suspicion that water or liquid agents flew into the electrical parts, stop the lift and immediately report the event to the service centre.

If the above rules are not observed, serious damage to the device and further unforeseen consequences may occur.

Cleaning is essential for effective chemical disinfection. Routine cleaning suffices when the lift is used consistently by the same patient. Disinfection becomes necessary only when the material is visibly contaminated or exposed to potentially infectious substances (such as blood, stool, and pus) or when caring for infected patients, as a doctor advises.

7.1.Cleaning Patient Contact Surfaces

1. Clean the handle surfaces:

- Remove all straps and detach any non-lift components

- Clean the surfaces using mild and environmentally friendly cleaning agents (e.g., Icodin Foam). This also applies to cleaning the manual switch.

- Follow the manufacturer's instructions for cleaning the ING strap.

2. Avoid wetting the patient’s lifting strap.
3. Use Icodin Foam to disinfect accessible areas of handles and construction components.
4. Disinfect casters only if they come into visible contact with infected or potentially infected material.
5. Do not use:

- Pastes, waxes, or sprays.

- Strong detergents, solvents, or cleaning agents containing solvents, alcohol, or leather cleaners.

Using such agents may lead to stiffness, materials cracking, or surface gloss changes, which are not covered under warranty.

8. MAINTENANCE

CAUTION !

If the device is not used for a longer period, it is recommended that all electrical and mechanical parts be checked once a month by performing a test lift without the patient. In addition, the charger cables after each mechanical load or after changing the location of the lift should be manually checked for possible damage.

8.1. Maintenance of support structure mechanism

1. Clean metal parts of the structure using a soft, damp cloth, ensuring surfaces are dried thoroughly afterwards. Avoid using cleaning products containing alcohol.
2. Lubricate all movable components every six months or when loud noises occur during operation. These components include casters, actuators, bearing sleeves, and joints of the base legs and lifting arm. Recommended lubricants include commercially available penetrating and lubricating preparations (e.g., Wurth HHS 2000). Any excess lubricant should be promptly removed with a dry cloth.
3. Periodically inspect threaded connections every six months. Address any detected looseness promptly. Report unresolved issues of unavoidable looseness to the manufacturer's Service and discontinue device use until resolved. Notify the manufacturer's service department of any irremovable backlash on connections and cease device operation until the issue is resolved.

8.2. Periodic inspection

The lift requires inspection annually as per EN 10535:2012 recommendations or after 8000 cycles, whichever comes first (refer to section 6.3), and after any failure or repair. The inspection must be conducted by authorised service personnel and should include at least the following:

- Visual inspection focuses on the structure of the load-supporting device, the primary actuator and its mounting, the brakes, and the control devices.
- Verify the proper functioning of all device control functions.
- Maintenance of the support structure mechanism (refer to section 8.1).
- Test the load capacity with the maximum load for one lifting cycle.

Maintain a detailed repair register documenting all repair actions, defects, damages, remarks, and safety-related observations, along with the inspection date. Ensure slings are inspected according to the manufacturer's recommendations at least every six months.

8.3. Manufacturer's Liability

CAUTION !

The expected service life, in normal use and under normal circumstances, apart from slings and batteries, is 7 years when serviced according to the instructions.

After seven years from the date of production of the device and its accessories, the manufacturer bears no responsibility for defects in the device and its accessories, nor for any resulting consequences. The manufacturer also disclaims responsibility for any consequences arising from incorrect installation, incorrect diagnosis, improper use of the device and its accessories, misinterpretation of instructions, or repairs performed by unauthorised persons.

9. TROUBLESHOOTING

Symptoms of malfunction	Description of the procedure
The unit does not respond to the hand control function activated	1. Check if the emergency stop is activated 2. Check the status of the battery 3. Check if the hand control cable is connected 4. Check if the battery is properly connected 5. Check if the charging cable is connected 6. Check the connection of the other wires 7. Check if the service led flashes 8. Check if the device reacts to the activation of the raise/lower function on the controller 9. Contact service
The device does not react to the controller function activated	1. Check if the emergency stop is activated 2. Check the status of the battery 3. Check if the battery is properly connected 4. Check if the charging cable is connected 5. Check the connection of the other wires 6. Check if the service led flashes 7. Contact service
The device is not charging	1. Check if the emergency stop is activated 2. Check the status of the battery 3. Check if the battery is properly connected 4. Check if the charging cable is connected 5. Check if the service led flashes 6. Contact service
Interruption of the device during patient lifting	1. Check if the overload indicator flashes 2. Check the status of the battery 3. Check if the service led flashes 4. Check if the device reacts to the activation of the raise/lower function on the controller 5. Lower the lift manually 6. Contact service
The device produces abnormal noises (cracking, cross-over, etc.).	1. Contact service
The device cannot be moved	1. Check if the brakes on the rear wheels are applied 2. Contact service

If the fault symptoms persist, cease using the lift immediately and contact the dealer for further instructions.

10. RECYCLING INFORMATION

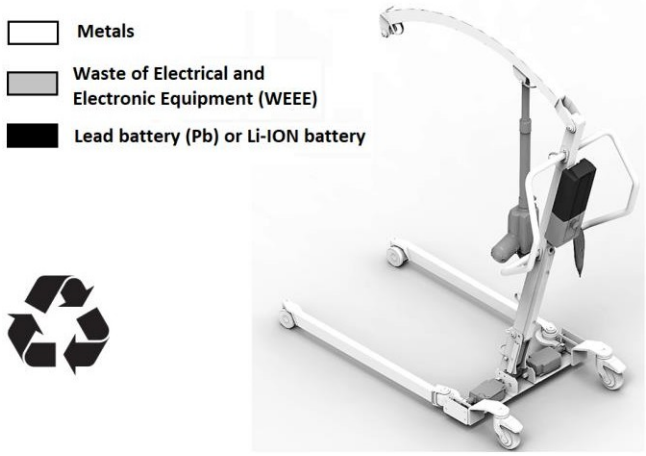


Figure 42 – Elevand FoldSmart ELS patient lift recycling

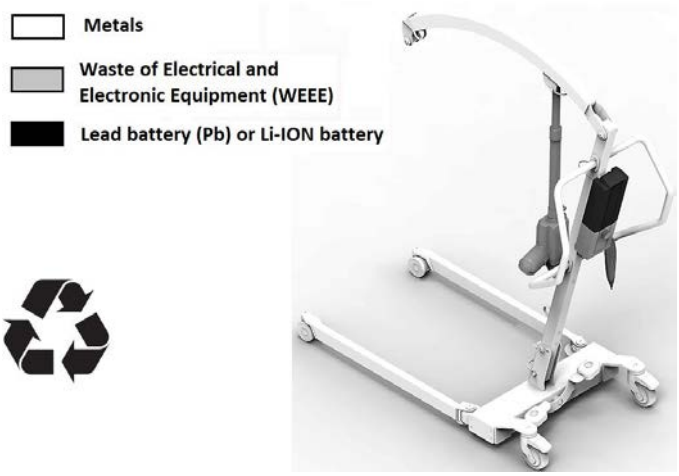


Figure 43 – Elevand FoldSmart ELS patient lift recycling

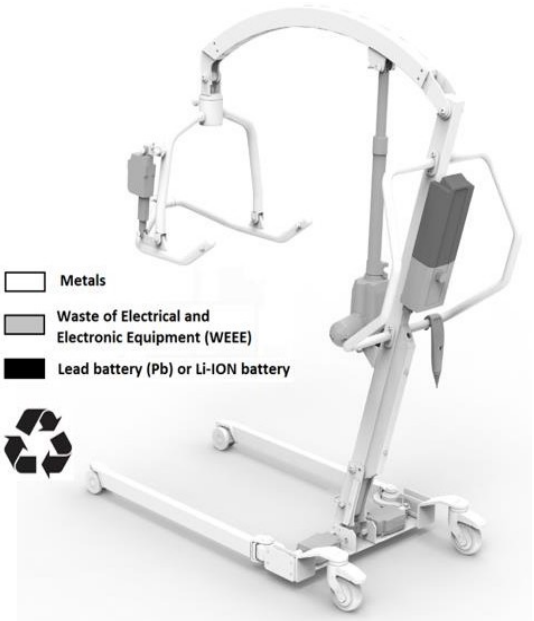


Figure 44 – Recycling of the Elevand FoldSmart ELS patient lift with hanger bar 4ESB-S

11. ELECTROMAGNETIC COMPATIBILITY - GUIDANCE AND MANUFACTURER'S DECLARATION

CAUTION!

Do not use the lift in the environment where other devices that emit radio frequency energy are used. The device control system, like other electronic devices, generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to other devices in the vicinity. The device manufacturer cannot guarantee that interference will not occur even when the device is placed properly. To check if the lift causes interference to other devices, change its position or disconnect its battery. An user is encouraged to try to eliminate interference by reorienting or relocating the device, increasing separation distance between devices or consulting a service technician.

WARNING: To prevent potential operational issues, avoid placing this equipment adjacent to or stacked with other devices. If necessary, monitor it closely to ensure proper functionality.

WARNING: Keep portable RF communications equipment, including antenna cables and external antennas, at least 30 cm (12 inches) away from any part of the device*, including manufacturer-specified wires, to avoid potential degradation of device performance.

WARNING: Using accessories, transducers, or cables not specified or provided by the manufacturer of this equipment may increase electromagnetic emissions or reduce electromagnetic immunity, leading to improper operation

WARNING: The device may be susceptible to electromagnetic disturbances, but such disturbances do not affect its essential performance and safety, ensuring no unintended movement of any lift component.

Essential performance and safety – no unintended movement of any lift component

* Elevand FoldSmart ELS Patient lift

Guidance and manufacturer's declaration – electromagnetic emissions		
The device* is intended for use in electromagnetic environment specified below. The customer or the user of the device * should assure that it is used in such environment.		
Emissions test	**Compliance**	**Electromagnetic environment – guidance**
RF emissions CISPR 11	Group 1	The device* 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 device* 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	Class A	
Voltage fluctuations/ flicker emissions IEC 61000-3-3	Complies	
Guidance and manufacturer's declaration – electromagnetic immunity		

The device* is intended for use in electromagnetic environment specified below. The customer or the user of the device * should assure that it is used in such environment.			
IMMUNITY test	**IEC 60601 test level**	**Compliance level**	**Electromagnetic environment – guidance**
Electrostatic discharge (ESD) IEC 61000-4-2	± 8 kV (contact) ± 2/4/8/15 kV (air)	± 8 kV (contact) ± 2/4/8/15 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 100 kHz	±2 kV for power supply lines 100 kHz	Mains power quality should be that of a typical commercial or hospital environment.
Surge IEC 61000-4-5	± 1 kV line(s) to line(s) ± 2 kV line(s) to earth	± 1 kV line(s) to line(s) ± 2 kV line(s) to earth	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; 0,5 cycle at 0°, 45°, 90°, 135°, 180°, 225°, 270° and 315° 0 % U_T; 1 cycle and 70 % U_T; 25/30 cycles (50/60Hz) 1 phase: at 0° 0 % U_T; 250/300 cycles (50/60Hz)	0 % U_T; 0,5 cycle at 0°, 45°, 90°, 135°, 180°, 225°, 270° and 315° 0 % U_T; 1 cycle and 70 % U_T; 25/30 cycles (50/60Hz) 1 phase: at 0° 0 % U_T; 250/300 cycles (50/60Hz)	Mains power quality should be that of a typical commercial or hospital environment. If the user of the device* requires continued operation during power mains interruptions, it is recommended that the equipment* be powered from an uninterruptible power supply or a 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.
NOTE U_T is the ac mains voltage prior to application of the test level.			

Guidance and manufacturer's declaration – electromagnetic immunity			
The device* is intended for use in electromagnetic environment specified below. The customer or the user of the device * should assure that it is used in such environment.			
IMMUNITY test	**IEC 60601 TEST LEVEL**	**Compliance level**	**Electromagnetic environment – guidance**
Conducted RF IEC 61000-4-6	3 V 0,15 MHz – 80 MHz 6 V in ISM bands between 0,15 MHz and 80 MHz 80 % AM at 1 kHz	3 V 0,15 MHz – 80 MHz 6 V in ISM bands between 0,15 MHz and 80 MHz 80 % AM at 1 kHz	Portable RF communications equipment (including peripherals such as antenna cables and external antennas) should be used no closer than 30 cm (12 inches) to any part of the device*, including cables specified by the manufacturer. Otherwise, device performance may deteriorate. These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.
Radiated RF IEC 61000-4-3	10 V/m 80MHz to 2,7GHz	10 V/m 80MHz to 2,7GHz	
Proximity fields from RF wireless communications equipment IEC 61000-4-3	EN 60601-1-2:2015, Table 9 *(see below)*	Complies	

Proximity fields from RF wireless communications equipment						
Test frequency (MHz)	**Band [a] (MHz)**	**Service [a]**	**Modulation [b]**	**Maximum power (W)**	**Distance (m)**	**Immunity test level (V/m)**
385	380 –390	TETRA 400	Pulse modulation [b] 18 Hz	1,8	0,3	27
450	430 – 470	GMRS 460, FRS 460	FM [c] ± 5 kHz deviation 1 kHz sine	2	0,3	28
710	704 – 787	LTE Band 13, 17	Pulse modulation [b] 217 Hz	0,2	0,3	9
745						
780						
810	800 – 960	GSM 800/900, TETRA 800, iDEN 820, CDMA 850, LTE Band 5	Pulse modulation [b] 18 Hz	2	0,3	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	2	0,3	28
1845						
1970						
2450	2400 – 2570	Bluetooth, WLAN 802.11 b/g/n, RFID 2450, LTE Band 7	Pulse modulation [b] 217 Hz	2	0,3	28
5240	5100 – 5800	WLAN 802.11 a/n	Pulse modulation [b] 217 Hz	0,2	0,3	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, 50 % pulse modulation at 18 Hz may be used because while it does not represent actual modulation, it would be worst case.						

12. WARRANTY CARD

1. The seller (authorised representative, distributor) provides a 24-month warranty from the equipment purchase date, as evidenced by the proof of purchase.
2. The seller (authorised representative, distributor) assumes responsibility for any defects, whether in quality or quantity, detected immediately after unpacking the product from its original shipment packaging, provided they are reported in writing within two working days of delivery.
3. Warranty service will only be performed by the seller's authorised service team (authorised representative, distributor) or other manufacturer-authorised technicians.
4. If the repair takes more than three days, the warranty period will be extended by a duration equal to the device's total downtime.
5. If a faulty subassembly requires repair three times, the manufacturer must replace it with a new one.
6. To maintain warranty coverage, the user must ensure all maintenance services described in the manual.
7. Failure to observe installation and operation instructions releases the manufacturer from responsibility for user or patient safety during device use.
8. The warranty excludes parts and material faults resulting from natural wear and tear, distinct from material or workmanship defects, and issues arising from inadequate maintenance (e.g., valves, bearings, guides, fans, etc.).
9. The seller (authorised representative, distributor) is not liable for consequential or incidental losses, including loss of profits or costs incurred due to failure to follow installation and user manual instructions.
10. The seller (authorised representative, distributor) assumes no liability under this warranty for any consequential or incidental losses, including loss of profits or costs incurred due to equipment failure.
11. Faults occurring within the warranty period but not reported to authorised service are not covered.
12. Costs resulting from an unjustified claim are the responsibility of the user.
13. The warranty does not cover equipment:

- Damaged by fire, lightning, or force majeure
- With removed or damaged nameplates, serial numbers, or factory seals
- Damaged due to use outside the defined operation manual specifications
- Repaired or modified by unauthorised personnel
- Mechanically damaged due to improper handling or transportation

14. No new documentation will be issued if warranty-covered equipment is resold.
15. The warrantor will not provide a duplicate of the Warranty Card.
16. This warranty does not waive, restrict, or suspend your statutory rights as a consumer.

	Elevand FoldSmart ELS patient lift										***Date, signature and stamp Guarantee:***
SN:						***-***	***2***	***0***			

Repair registry	User comments