

Ropox Vario




User manual

This manual should always be in close proximity of the product.

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1. Symbols used in this manual

Warning Symbol Indication of potentially hazardous situation. If not avoided it can result in serious injury or death.	
Caution Symbol Indication of potentially hazardous situation which may result in minor or moderate injury. It may also be used to alert against unsafe practices.	
Notification Symbol This symbol is used to notify correct use and handling of the product.	

2. General safety



This manual must be read and understood before use.
Always keep this manual in close proximity of the product.

The use, installation and service of this product must be in compliance with this manual to avoid accidents and serious personal injury.

Never use or handle this product in other ways specified in this manual as it can result in personal safety hazards and/or cause damage to the product.

Persons installing and/or are using this product either as operator or patient should have the necessary safety information and access to this manual.



Always comply with instructions in this manual to avoid damaging or destroying the product. Not doing so can cause the safety of this product to be compromised.

Do not perform repairs, disassembly or assembly operations, add-ons, re-adjustments or modification of the product beyond what is described in this manual. These must be carried out by Ropox or Ropox authorized personnel. Do not perform service while in use with a patient.

Do not allow children to operate this product unless they are under supervision from an adult that has read and understood this manual. The product is not intended to play with.

Do not use the product if it has defects or have become damaged before being repaired or replaced

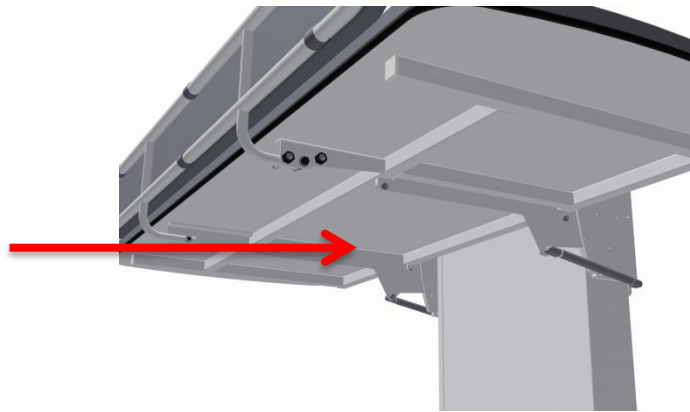
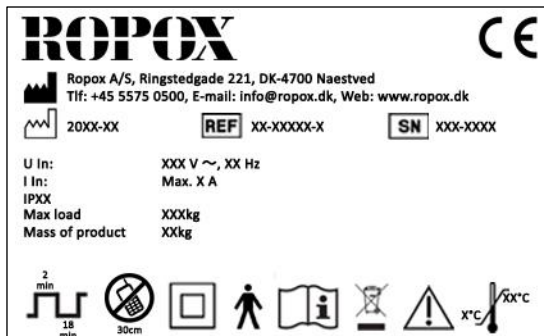


The information in this manual is based on correct installation in accordance with installation instructions for this product.

Ropox cannot be held liable if the product is used in any way that differs from stated in this manual and/or installation instruction.

Ropox reserve the right to amend this manual and reference documents without prior notice.

2.1 Product label



	This product is CE-marked in accordance with the European Medical Device Directive 93/42/EEC, including amendments incorporated in Directive 2007/47/EEC. It also complies with all relevant requirements in the Council Directive 2006/42/EC on machinery
	Manufacturer name and address
	Date of production
	Stock number
	Serial number
	Consult manual before use
	Operating interval of electrically operated equipment. The use of electrical height adjustable equipment can run at maximum 2 minutes, followed by an 18-minute break.
	Type B applied part. The product complies with IEC 60601-1 requirements to provide protection against electric shock.
	Consult manual for important safety related information, warnings and safety precautions.
	Class II, double isolated electrical components.
	Do not dispose as unsorted municipal waste. Product must be returned to a designated recycling station.
	Mobile phones or other portable RF emitting equipment should be no closer to the product than 30cm.
	Operating and storing temperatures may not exceed 5-40°C°

3. General requirements

3.1 Product information

Manufacturer:	Ropox A/S Ringstedgade 221, DK-4700 Naestved +45 55 75 05 00 Info@ropox.com		
Product models	Part number	Model	Configuration
	40-30604-3	Vario 120x70cm	
	40-30606-3	Vario 140x70cm	
	40-30608-3	Vario 160x70cm	
	40-30610-3	Vario 180x70cm	
40-30611-3	Vario 190x70cm		
MDD Class 93/68/EEC	Class I		
Applied part classification 60601-1	Type B applied part		
MEE Class 60601-1	Class II		
Height adjustment	30-100cm		
Speed of actuation	≈ 26mm/s		
Maximum user weight according to EN12182:2012	200kg		
Power supply	230V ~50Hz		
I in	Max 8A		
Intermittence	2min on / 18min off		
IP rating	IPX6		
Ambient temperature	5-40C° Operation and storage		
Materials in contact with patient	Table top surface	Compact laminate surface.	
	Mattress (accessories)	Dahlia fabric Backing: 100% polyester Coating: 100% Polyurethane ISO 10993-10 Non Allergic	
	Bed guards (accessories)	St37 tube construction with powder coating.	
	Lifting unit	St37 tube construction with powder coating. Aluminium anodiseret with powder coating.	
Intended environments	This product is to be used only in: Professional Healthcare Environment Homecare Environment		
	The device is not intended for use in special environments as defined by IEC 60601-1-2		
Accessories	Mattresses 40-25760-1 40-25795-1 40-25796-1 40-25764-1 40-25765-1	For L= 120cm For L= 140cm For L= 160cm For L= 180cm For L= 190cm	
	Bed guards 40-30196-1 40-30197-1	For L=120cm, 140cm For L=160cm, 180cm, 190cm	
	Cushion for bed guard 40-25782-1 40-25783-1	For L=120cm, 140cm For L=160cm, 180cm, 190cm	

3.2 Intended use

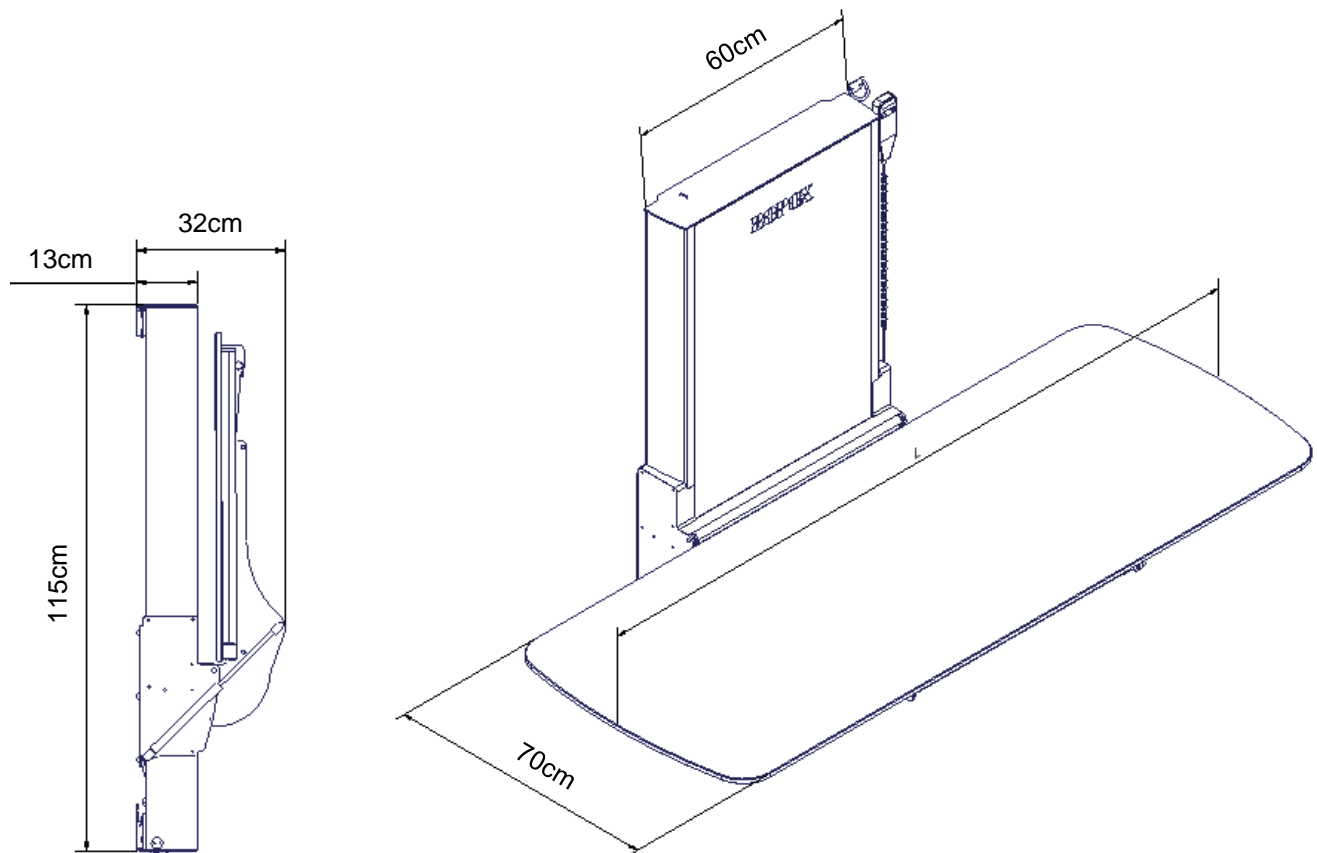
Vario is a fixed, height adjustable & foldable changing bed that can be used for care of children and adults up to 200 kg. The changing bed is intended for use in private homes, institutions, day care centers and similar institutions and for people with physical or mental disabilities. The product is designed to provide optimum working conditions for caregivers. The changing bed can be used in both dry and wet rooms (conditions), but must not be used as a shower bed.

The height of tabletop (changing bed) can be adjusted infinitely from 30-100 cm using the hand control and can be folded up for space saving when not in use.

3.3 Intended operator

Reading and understanding this manual will be sufficient training for an intended operator. Children and patients are not considered intended operators.

3.4 Dimension sketch



Model	Length (L)
40-30604-3	120cm
40-30606-3	140cm
40-30608-3	160cm
40-30610-3	180cm
40-30611-3	190cm



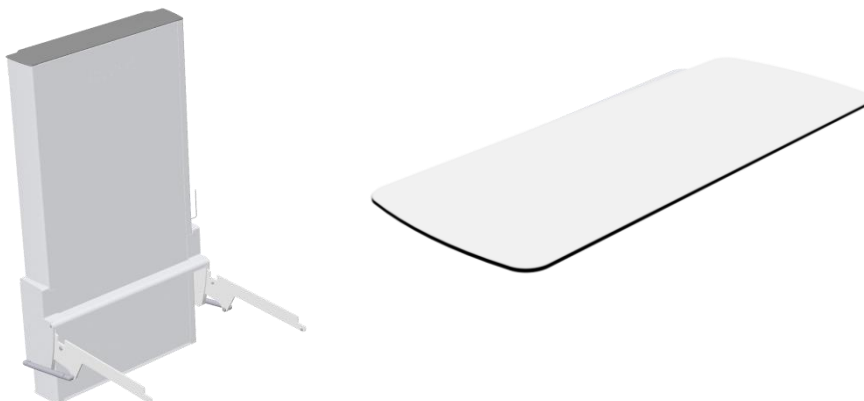
The ceiling height must be at least 2,35m

4. Instructions for use

4.1 Receiving the Vario changing bed

Vario is a wall fixed changing bed. It is delivered partly assembled. Connecting the product to mains will make it operational.

Vario will come in two packages. One for the “Lifting unit” and one for the “tabletop”.



4.2 Placering af el-udtag

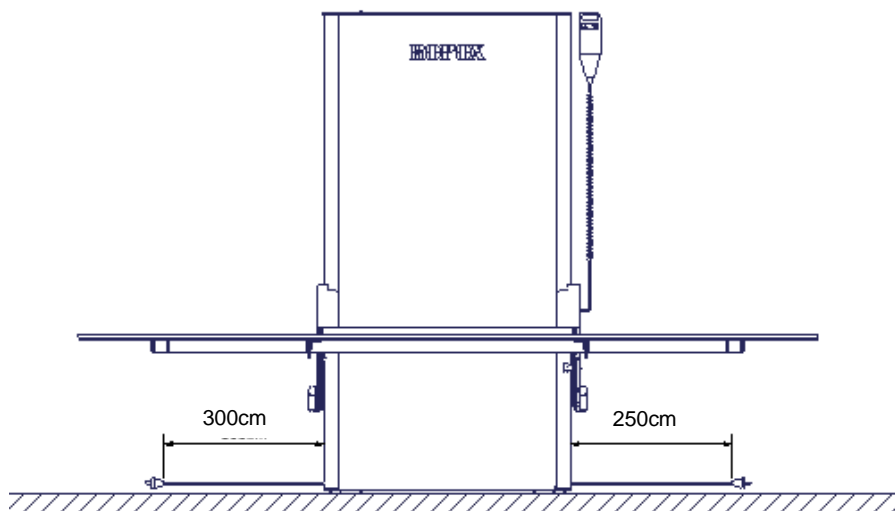
Make sure that you allow free space on all sides of the changing bed.

The main power cable (230V) has a total length of approx. 320 cm of which 250 cm is outside the lifting unit. The cable can be pulled out in either left or right side. The outlet for main power cannot be placed behind the lifting unit.



Warning!

Make sure that the Main 230 V socket is placed according to the national requirements for such installations.

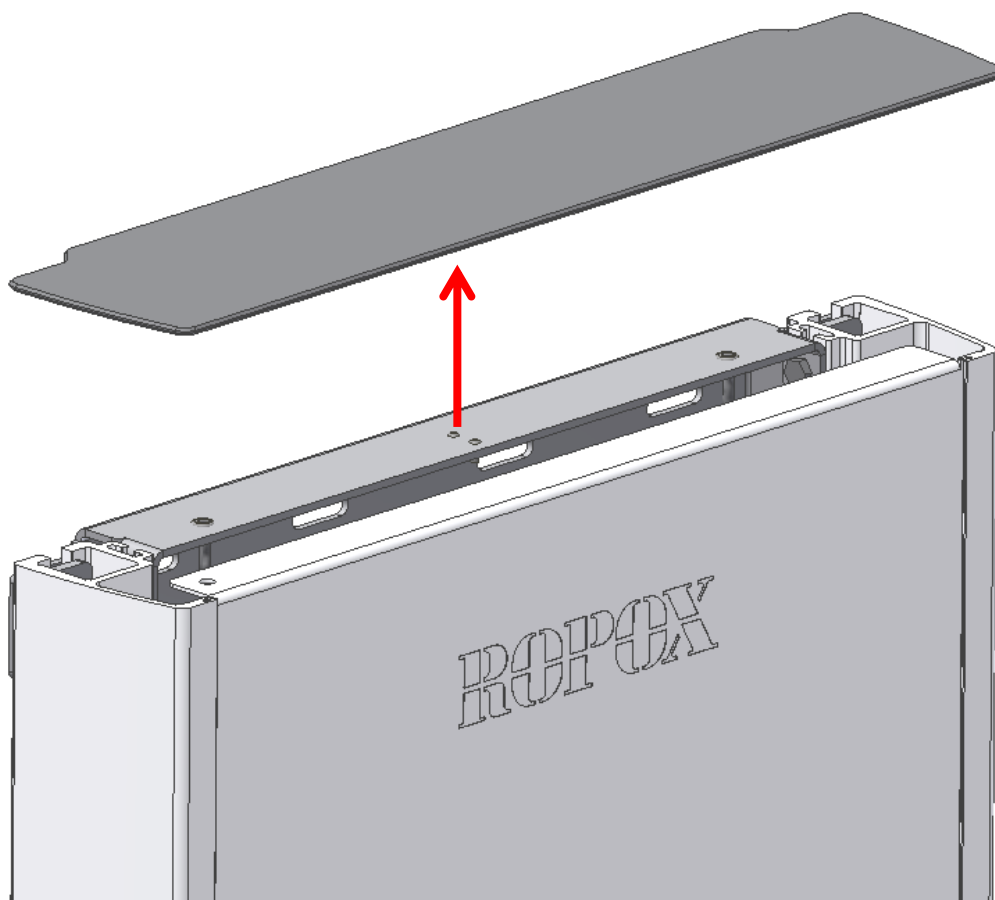


Caution!

When connected to the mains the product must be placed in a manner according to power outlets so that the operator will be able to disconnect the product during use in case of an emergency.

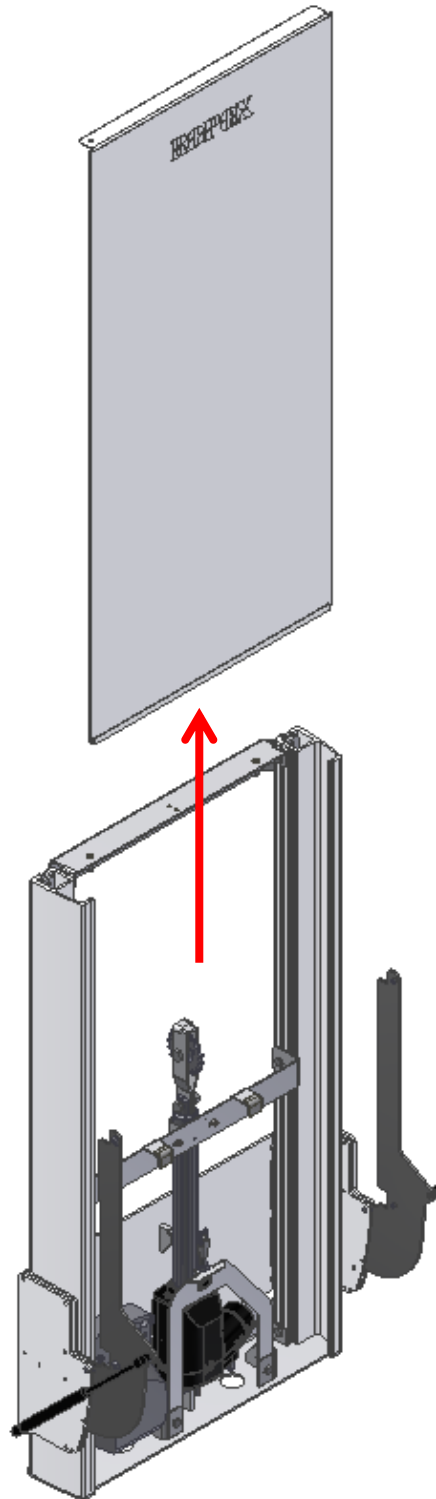
4.3 Prepare the mounting

Dismount the top cover plate



Slide the front plate out of the Lifting unit to get access to the wall mounting holes in the unit.

!! Be aware not to bend or scratch the front plate in the process !!



4.4 Mounting to the wall

The attachment holes can be marked up on the wall, four possibilities in the top, and four in the bottom of the frame. Place the frame against the wall and make sure it is horizontal. The frame is standing on two adjustable feet. The holes in the frame are all Ø 10 mm. Remove the frame and drill the holes.

Attach the frame securely to the wall by using adequate bolts and rawlplugs suitable for the type of wall construction / material on site. The Shower bed is being supplied with a set (8 pcs) of screws and rawlplugs, which is ONLY used to mount the unit in a concrete wall. If the unit must be mounted on another kind of wall, other kinds of plugs and screws must be used.

Changing bed has a max user weight of 200 kg.

Maximum load in the top screws are 31kg for each screw.



If you have other objects mounted right next to this changing bed, you have to consider the risk of trapping, and therefore consider a safe distance to the other objects.

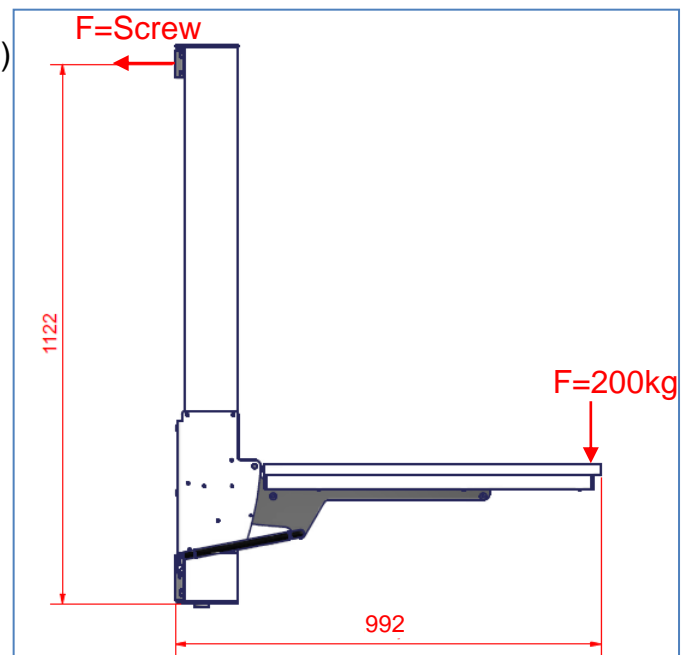


Make sure that no dust or other obstacles are interfering with the rollers, chain, sprocket or gas springs. This can cause malfunction and damage the system.

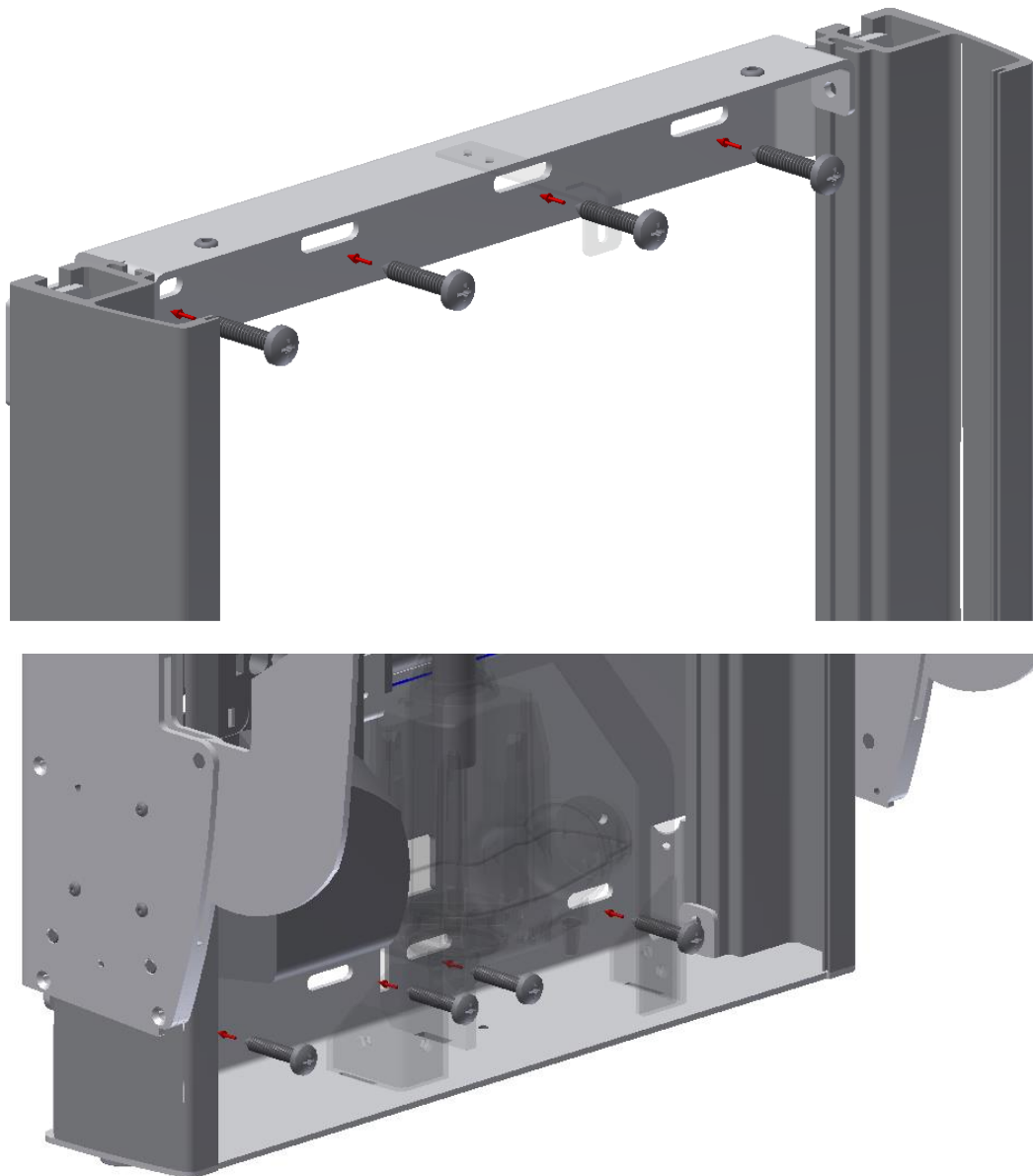
Force for each of the four screws in top of the unit::

$$K_{\text{screw}} = (200\text{kg} * 992\text{mm}) / (1122\text{mm} * 4 \text{ screws})$$

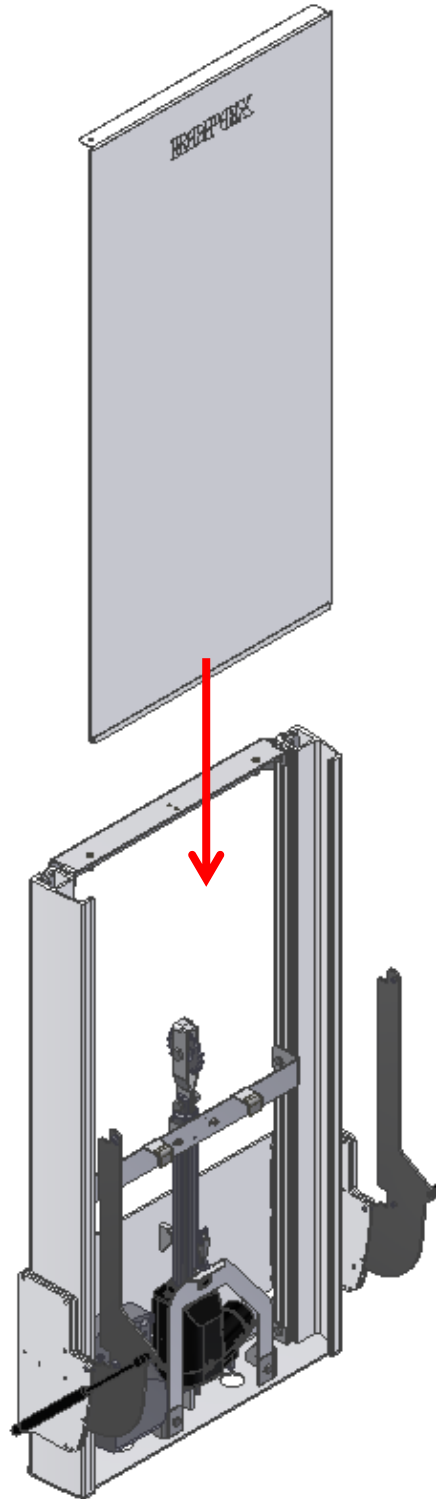
$$K_{\text{screw}} = 44\text{kg for each screw}$$



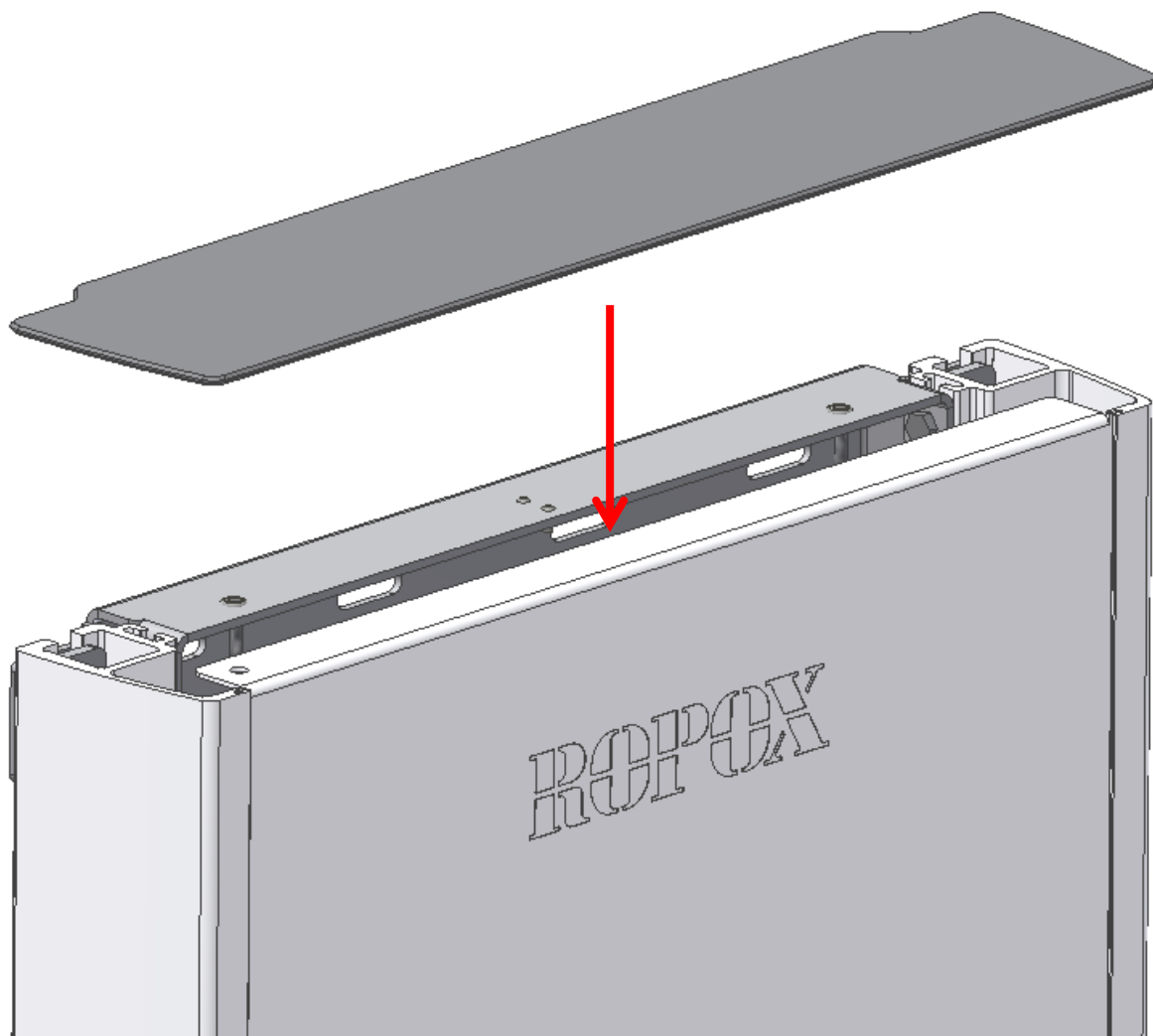
Mount the lifting unit to the wall with screws at the top and bottom.



Slide the front plate back into the lifting unit.



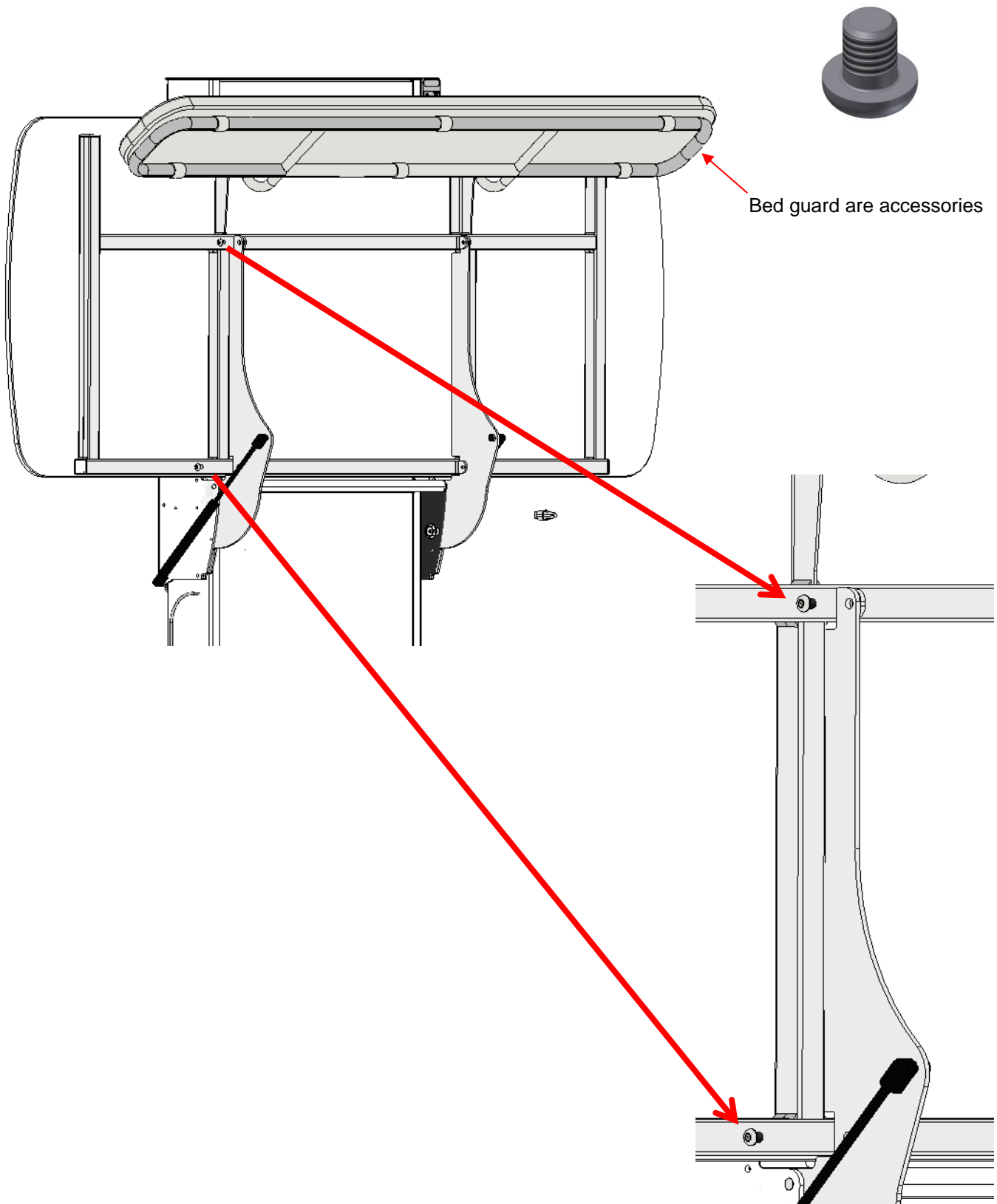
Mount the cover plate on the top of the lifting.



4.5 Mount the tabletop on the lifting unit

Slide the tabletop in between the Lifting unit and the support arms on the Lifting unit.

Fasten the tabletop to the Lifting unit with 4 pcs. Screws (M8x12) through the bushings in the support arms.



5.

4.6 Wire diagram

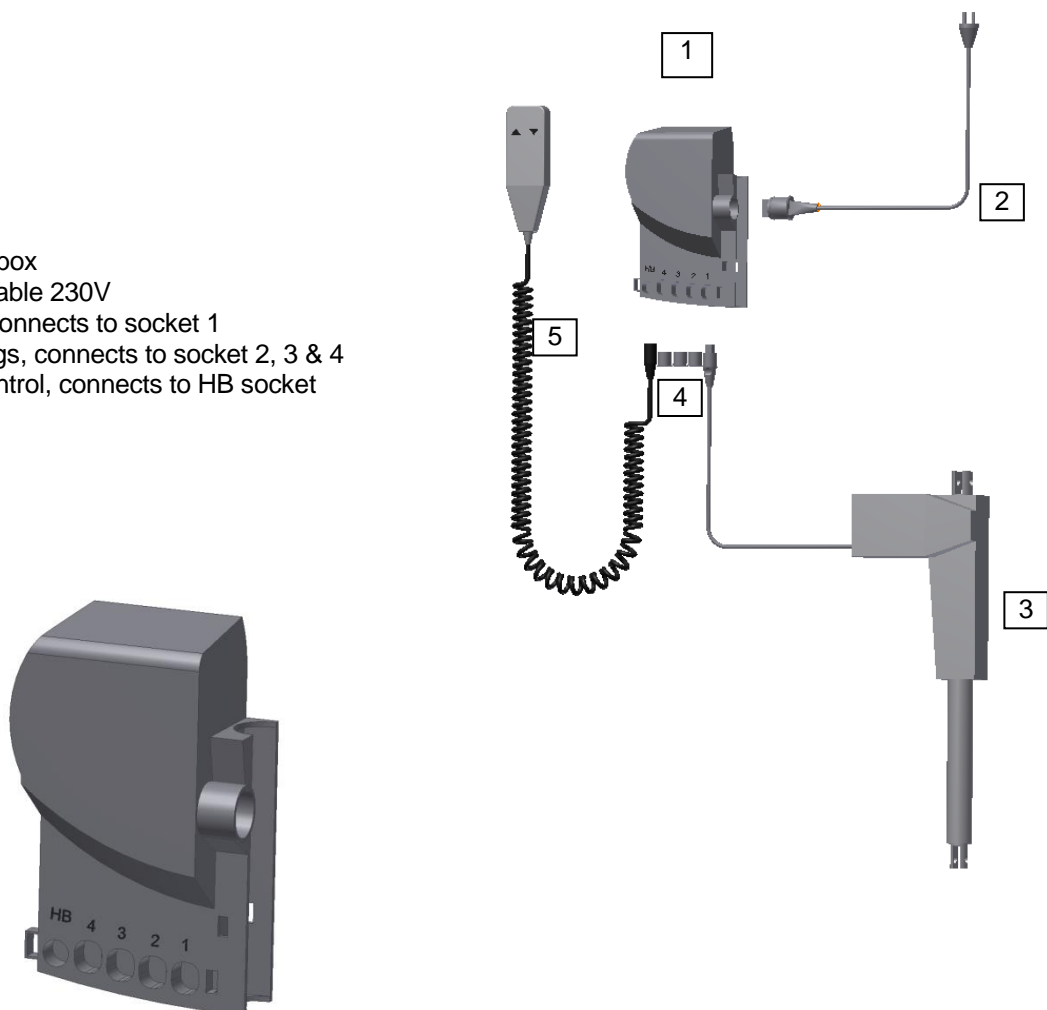
The changing bed is delivered with the control box already mounted on the frame. The diagram shows how the cables are connected to the control box.

All the plugs are water tight, and therefore they can be a little tricky to connect / disconnect. Make sure that the plugs are positioned correctly before they are pushed into the sockets at the control box. The plugs must be pushed into the sockets until the “O-ring” is no longer visible.

Motor, control box and control switch apply to IPX6. This means that they are dustproof and water resistant.

The electronic system is designed for periodical use only, this means a max. duty cycle of 10%; 2min on /18min off.

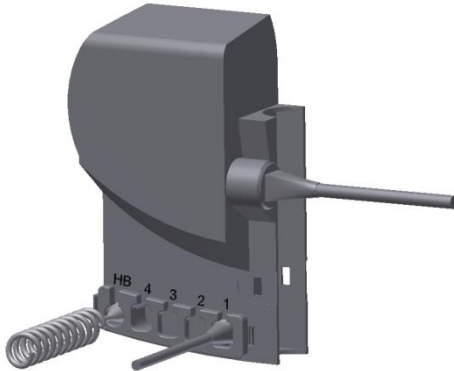
1. Control box
2. Mains cable 230V
3. Motor, connects to socket 1
4. End plugs, connects to socket 2, 3 & 4
5. Handcontrol, connects to HB socket



4.7 Connecting cables

The changing bed is delivered with the control box already mounted on the frame.

Control switch connects to "HB".



When all cables have been connected, use the safe locking bracket. Pushed in until you hear a "click".
Mains cable connects to the socket at the side of the box.

Disconnecting cables

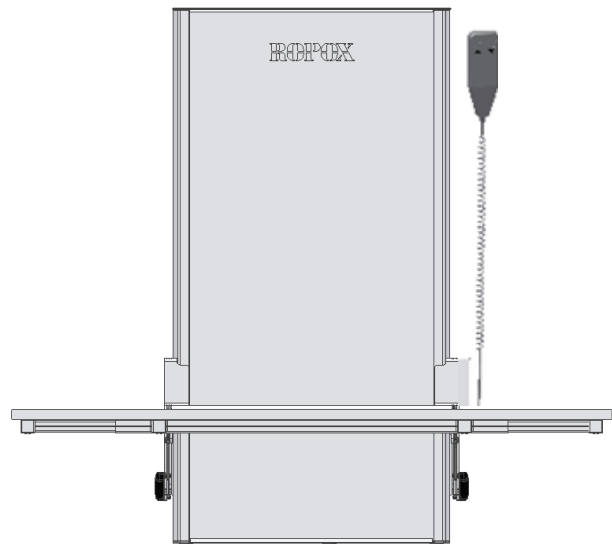
Mains cable can be pulled out (no safe locking bracket).
Before the other cables can be disconnected, the safe locking bracket needs to be released / removed (use a screwdriver to remove). Locking clips at each end of the safe locking bracket have to be released before the bracket can be removed, and the cables can be disconnected.



To obtain the full IPX6 value, it is very important that all the plugs have been pressed firmly into the sockets and the safe locking bracket is mounted.

Placement of the handcontrol

Bracket for hand control can be placed at the wall as shown. To be mounted with the two screws which are delivered with the bracket.



Hand control should be placed out of reach of children.

Hand control can be placed in either right or left side.

5. Instructions for use



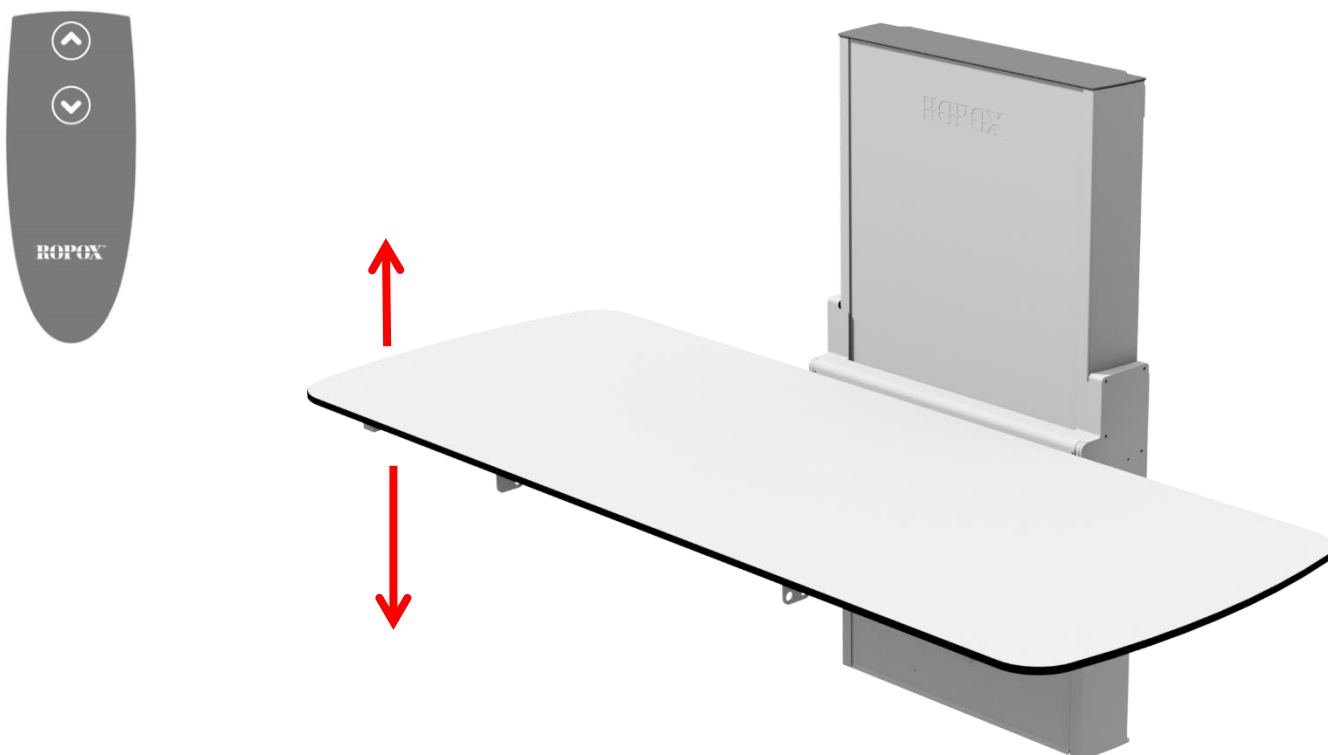
Warning!

Before use always make sure that mains cable and hand control cable will be able to travel freely without the risk of squeezing or disconnecting the product as result of the movement.

5.1 Operating the product

5.1.1 Actuation of the product

The product is operated with the spiral cord hand control. Arrow up will move the product upwards and arrow down will move the product downwards.



Warning!

The product should always be able to travel the full range of actuation without colliding with objects. Failing to do so will compromise the product stability. Special care should be taken in ensuring that no children or adults are sited under the product as severer injury from entrapment may occur.

Indstil KUN skiftelejet i højden når bordpladen er nedslået i vandret position. Only adjust the product in height position, when the table top are in horizontal



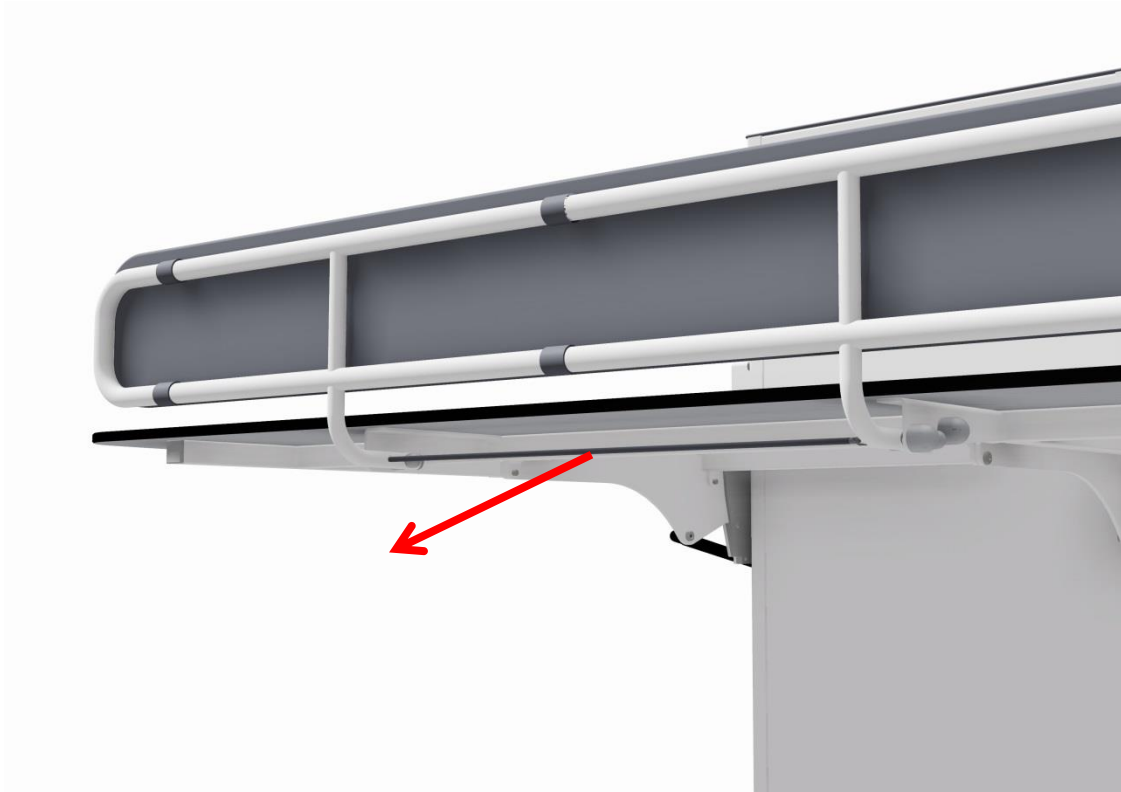
Note!

The control buttons are «push and hold». Height adjustment stops as soon as the button is released. This is an important safety measure.

5.1.2 Operation of the bed guards

Vario is not supplied with bed guard as standard. This can be ordered as an accessory.

To operate the bed guards pull the rubber tubing placed under the table top to release the locking mechanism. The bed guard can then be pivoted to the desired mode.



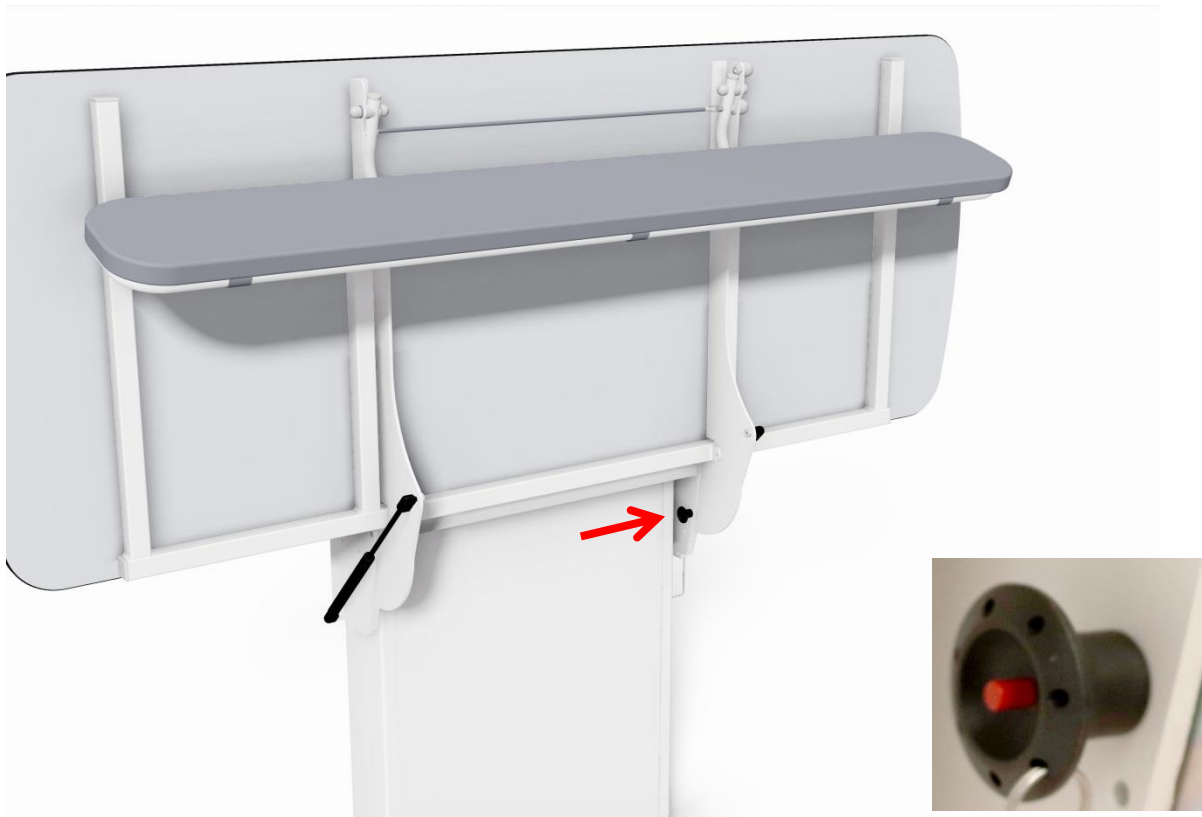
Warning!

Make sure that the bed guard is locked securely in place when in use. Locking is checked by shaking the bed guard back and forth ensuring that the locking pin is fully engaged.

5.1.3 How to fold changing bed up and down

The worktop can be secured against inadvertent folding in upright position by locking the table with the locking pin.

For folding the worktop in downwards position, remove locking pin and lower top by hand.



Notification!

Prior to folding worktop in upright position, bed guard must be turned underneath worktop.



Warning!

Always make sure worktop is securely locked in upright position with locking pin. when left in this position. Check shower bed is locked by pulling the worktop to ensure locking pin is fully engaged and worktop cannot be lowered.

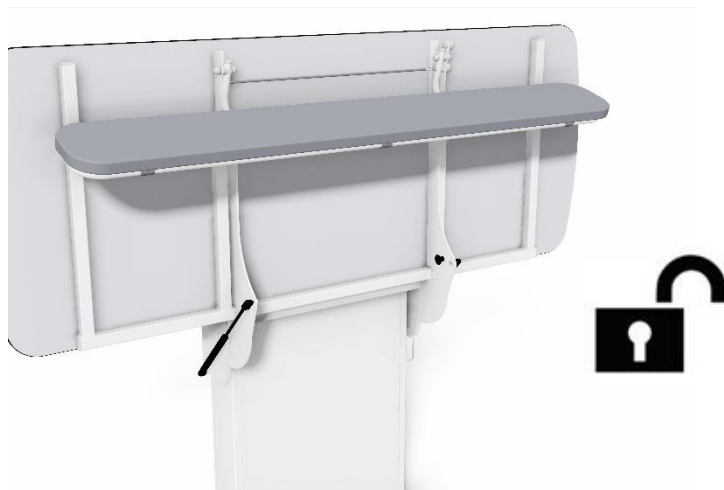
Locking of shower bed

When worktop is folded up, insert locking pin as indicated. Press and hold the red button while inserting the split. The shower bed is now locked against folding down.




Unlocking of shower bed

For unlocking & folding worktop in downwards position, remove pin. Pin is placed in second hole for storage when shower bed is being used and folded down. The worktop can now easily be folded up and down.



5.2 Recommendations in use

	<p>Warning! NEVER leave a person on the changing bed unattended - not even for a very short period. --- If two changing beds are mounted next to each other, we recommend to mount a side cover between, to avoid the trapping risk.</p>
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6. Cleaning

Cleaning can be done with lukewarm water and a suitable all purpose cleaning agent. Use a cloth or soft sponge to wash the product. Dry the product of with a wrung cloth.


Mattresses and cushions

Cover:


Recommended cleaning detergent: Normal soap or alcohol. The alcohol can be used undiluted. The cover can be removed and machine washed separately at max 95°.

Skum:

Cannot be washed

	<p>Notification! Do not use cleaning agents containing abrasive e.g. scouring powder, steel wool, scouring sponge. This product is not designed to be sterilized, autoclaving and sterilization beyond normal cleaning is may possibly change the product safety and function.</p>
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7. Maintenance

	<p>Notification! Failing to comply with periodic maintenance may result of degrading of product function and safety.</p>
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7.1 Periodic maintenance of bed guards

If the product is used humid or dry atmosphere the locking pin may be prone to seizing from lubricants drying. Besides checking the function of the locking mechanism before every use, a periodic lubrication of the locking pin every 6 month is recommended.

7.2 Fejlsøgning

Problem:	Check:
Vario does not move up or down when the hand-control switch is pressed	<ol style="list-style-type: none"> 1. Main power connected 230v 2. Motor cable is connected to control box 3. Hand control is connected to control box 4. Motor is overloaded
Hand control defect	<ol style="list-style-type: none"> 1. The product works with another hand control
By pressing the up or down button, no movement is achieved, only clicking sounds is are heard from control box	<ol style="list-style-type: none"> 1. Plugs are not connected correctly. Dismount all cables and re-connect. 2. "Reset" Press and hold UP (▲) and DOWN (▼) buttons. Keep the buttons depressed until the control unit has beeped approx. ten times. After that, the bathtub may be adjusted to the bottom position for resetting.

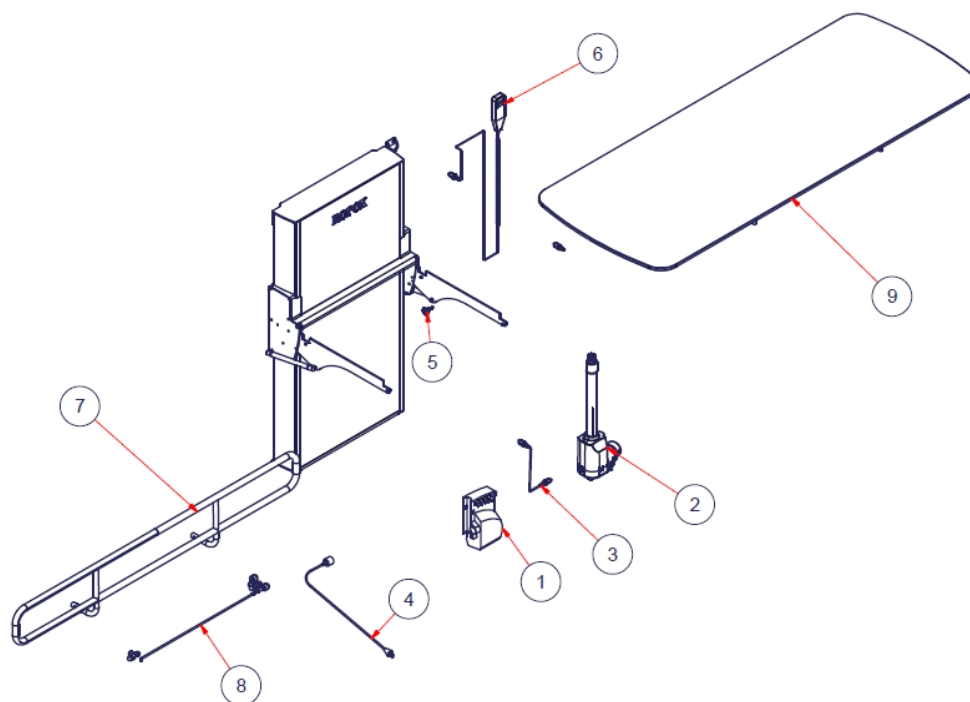
8. Environmental protection

The product is not intended to be disposed as municipal waste. Proper disassembly, sorting and disposal of components must be done by waste disposal professionals.



Part	Disposal recommendation
Table top	Hard plastic or phenolic composites
Bed guards	Steel waste
Lifting unit	Steel and aluminum
Controlbox	Electronics
Actuator	Electronics
Hand control	Electronics

8. Spare parts



#	Name	Part number
1	Control box CB6096-03	97000434
2	Actuator LA34.5	97000431
3	Motor cable L=300mm	97000423
4	230V cable	97000427
5	Ganter Pallet lock with axial protection	95170115
6	Hand control	97001655

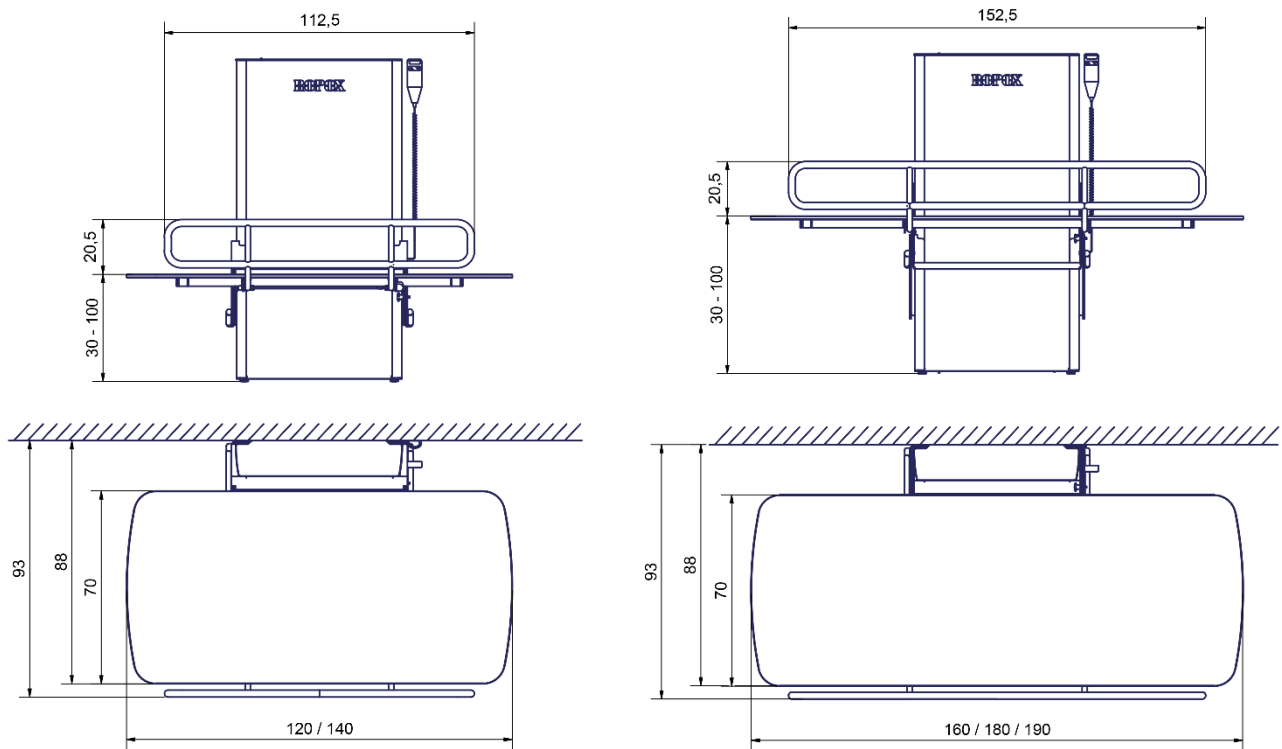
#	Name	40-30604-1	40-30606-1	40-30608-1	40-30610-1	40-30611-1
7	Bed guard complete *	40-30196-1	40-30196-1	40-30197-1	40-30197-1	40-30197-1
8	Parts for bed guards	40-30198-1	40-30198-1	40-30199-1	40-30199-1	40-30199-1
9	Table top Vario	40-30891-1	40-30892-1	40-30893-1	40-30894-1	40-30895-1

*Bed guards complete contains necessary parts for mounting.

*Bed guards are accessories

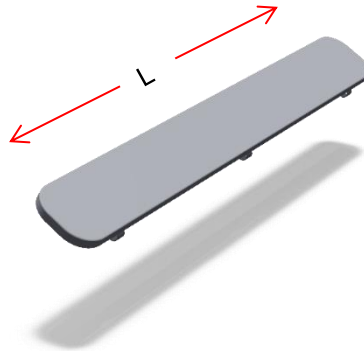
9. Accessories

9.1 *Bed guard*



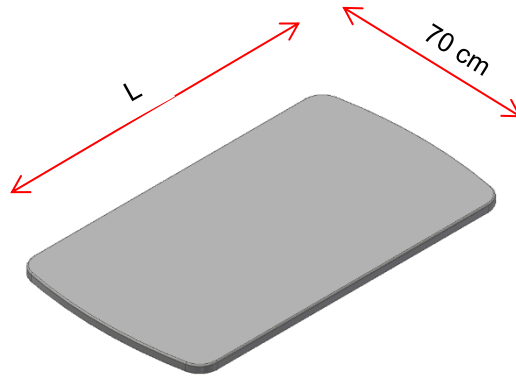
Part number	Size	Pcs.
40-30196-1	L= 120cm, 140cm	1
40-30197-1	L= 160cm, 180cm, 190cm	1

9.2 Cushion for bed guard



Part number	Size	Pcs.
40-25782-1	L= 120cm, 140cm	1
40-25783-1	L= 160cm, 180cm, 190cm	1

9.3 Mattress



Item number	Size	Thickness
40-25760-1	Madras L=120 cm m/underlag	3 cm
40-25795-1	Madras L=140 cm m/underlag	3 cm
40-25796-1	Madras L=160 cm m/underlag	3 cm
40-25764-1	Madras L=180 cm m/underlag	3 cm
40-25765-1	Madras L=190 cm m/underlag	3 cm

10. Electro magnetic compability


10.1 Suitable Environments

The device is suitable for use at home, at daycare centres, at day centres for persons with physical or mental disabilities or at hospitals except near active HF surgical equipment and the RF shielded room of an medical electrical system for magnetic resonance imaging, where the intensity of electromagnetic disturbances is high.

10.2 Basic safety and Essential performance


The device does not have any function related to basic safety or essential performance. In case of loss or degradation of performance, the user can get on and off the product.

10.3 Adjacent and stacked use


	<p>Warning! Use of this equipment adjacent to or stacked with other equipment should be voided because it could result in improper operation. If such use is necessary, this equipment and the other equipment should be observed to verify that they are operating normally</p>
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10.4 Cables

Cable component	Lenght
Power cable	2,5m
Hand control spiral cable	Approx. 5 m extended

	<p>Warning! Use of accessories, transducers and cables other than those specified or provided by the manufacturer of this could result in increased electromagnetic emissions or decreased electromagnetic immunity of this equipment and result in improper operation.</p>
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10.5 RF portable equipment

	<p>Warning! 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, degradation of the performance of this equipment could result.</p>
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11. CE – Declaration of conformity



I, the undersigned, hereby declare that the following products:

Ropox Mobilio

Part number	Model
40-30604-1	Vario 120x70
40-30606-1	Vario 140x70
40-30608-1	Vario 160x70
40-30610-1	Vario 180x70
40-30611-1	Vario 190x70

and all accessories belong to risk class I and conform to the following Directives and Standards:

DIRECTIVES

European Medical Device Directive 93/42/EEC, including amendments incorporated in Directive 2007/47/EEC.

Council Directive 2006/42/EC on machinery

STANDARDS

DS/EN 12182:2012

Assistive devices for persons with functional disabilities - General requirements and test methods.

DS/EN 14971:2012

Medical devices – The use of risk management in connection with medical devices

DS/EN 9999:2016

Assistive devices for persons with functional disabilities - Classification and terminology


DS/EN 60601-1-2:2007
+Corr (Mar2010)

Elektromedicinsk udstyr - Del 1-2: Generelle krav til grundliggende sikkerhed og væsentlige funktionsegenskaber - Sideordnet standard: Elektromagnetiske forstyrrelser - Krav og prøvninger

DS/EN 60601-1:2006

Medical electrical equipment – Part 1: General requirements for basic safety and essential performance

Næstved, Dato 01-07-2018


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