

All-in-One Hoist User Manual

25-20010, 25-20020, 25-20030
25-20040, 25-20050



General about the hoist

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In case of inquiries concerning spare parts and service, please state the following information:

Customer: _____

Hoist model: _____

Serial number: _____

Year and month: _____

Max. load: _____

Producer

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Distributor

General about the hoist

Note! It is important that the user is familiar with the operation of the hoist and its facilities and that the hoist performs properly. In order to obtain optimum safety, all persons operating the hoist must read these instructions carefully prior to use.

All-in-One lifts have a life expectancy of 10 years, subject to the electronics and moving parts that depend on the daily use and maintenance according to this manual.

Ropox A/S is only responsible for the safety of the hoist, its reliability and performance subject to the following conditions:

- The hoist must be assembled and connected according to our instructions.
- The hoist must be used and cleaned as described in these instructions.
- The hoist must be used indoor.
- The hoist must be inspected at least once a year according to the procedures of the "Service Manual".

The hoists are intended for lifting persons, e.g. **from floor, chair and bed**. The special leg-spreading facility also makes it possible to lift the person **from toilet and bath**.

NOTE! UNDER NO CIRCUMSTANCES should the hoist be used for lifting objects other than persons – and only persons, whose weight, including the lifting sling, does not exceed the maximum load stated.
In the event of loads exceeding the maximum value prescribed or lifting of objects other than persons Ropox A/S shall disclaim any responsibility in connection with insurance, right to complain and service.

Users should always make sure that the mechanical and electrical systems of the hoist work satisfactorily. In case of malfunction the hoist must be stopped immediately and inspected or repaired, as required. Malfunction may be a symptom of defects that may get worse and jeopardise the safety in critical situations

The battery should be charged at regular intervals to ensure that the hoist is always operational (e.g. every night).

Warning! or Note! means that the text contains important safety and operating instructions, which must be observed in order to avoid accidents.



The All-in-One hoist has CE-marking and thus meets the functional and safety requirements of the Directives for Medical Devices, Low Voltage and EMC. Declaration of Conformity can be delivered on request.
The product is in risk group 1.

It has been tested by the Danish Centre for Assistive Technology according to the rules of Standard DS / EN ISO 10535, „Hoists for the transfer of disabled persons – requirements and test methods“. All electrical components meet current electrical standards.

Operation

Note! It is important to have read this User Manual prior to operation in order to be familiar with the use of the hoist and its facilities. This will ensure optimum safety for all users.

For the All-in-One you can use any of Ropox Domino slings

Operating instructions

1. Check that the emergency stop has been released. If not, turn the button clockwise until release.
2. The hoist is operated by means of the hand control unit. The two upper buttons control the lifting/lowering movement, whereas the two lower buttons control the leg spreading facility. It is not possible to use two functions simultaneously.

Note! In case of erroneous operation of the hand control unit (e.g. too quick change of direction) the hoist does not react. Let go of the push button – wait a few seconds and press again.

3. Check that the sling provided is correct for the lifting operation to be performed. This applies to size as well as shape. Further information about the choice of slings will be found in "Domino Slings User manual".
4. The battery should be recharged regularly, to ensure that the hoist is always available (e.g. every night).

Emergency situation

Emergency stop and emergency lowering (electrical and mechanical) should be used in emergencies only. Should it be necessary to activate the emergency functions, contact the distributor before using the hoist again.

Recharging the battery

- The battery **must** be recharged after approx. 60 lifting operations – i.e. at 50% battery capacity. In case of continued use you will hear an acoustic signal. The battery can still be used, but it will affect its recharging capability.
- We recommend charging as soon as the hoist is not being used for a longer period of time, e.g. every night. The battery cannot be over-charged and it is only "healthy" for the battery to be recharged often as it increases the battery life.
- Charging is made directly in the control unit by means of the mains cable provided. Insert the cable into the wall outlet and the control unit, see drawing page 12, and switch on power. The hoist cannot be used when connected to mains voltage.
- A green light on the control unit indicates connection to mains voltage. A yellow light indicates that the battery is being recharged.
- When the battery has been fully charged, the yellow light will be out.
- Full recharging takes 4-5 hours.
- If charging is made via a wall-mounted charging station (optional) a battery may be constantly charged in the station. The batteries may be easily switched by means of the snap system on top of the battery box.

Note! Make sure that the plug from the battery is correctly inserted in the control box, if the plug have been pulled out, before using the lift again.



Operation

Safety function, liftingmotor

The lifting motor is provided with a safety function, splejn, against jamming. If the lifting arm meets with resistance during lowering, the movement of the arm will stop automatically. Thus, a person cannot get jammed between the lifting arm and the bed.

WARNING!!

Owing to the safety function on the motor the lifting arm and spreader bar may fall freely to the spindle of the motor. Therefore make sure that the lifting arm does not "hang", that is has always been pressed down to ensure that it rests on the spindle of the motor before and after all lifting operations. This is important as otherwise an injury may result if the lifting arm "falls" down.

Emergency stop

If the hoist is to be stopped owing to an emergency – press the red button on the control unit. When the button has been depressed the electrical functions of the hoist cannot be activated and the battery indicator has been switched off.

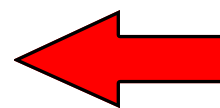
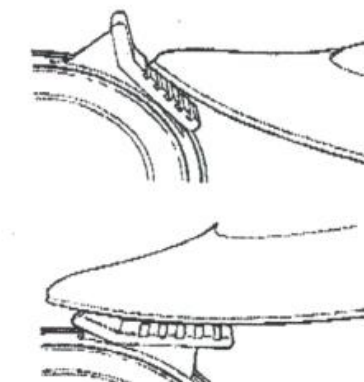
Emergency lowering

If the hoist is to be lowered and the hand control unit does not work, there are two possible solutions:

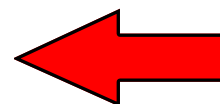
- The electrical emergency lowering of the control unit (marked emergency), see drawing page 12. Press with a ball pencil or the like and the person will be lowered slowly.
- The mechanical emergency lowering of the lifting motor. Pull up the red handle, see drawing page 11.

Brakes

The hoist may be braked on the two large rear wheels. Press down the rear part of the brake with the foot to brake the hoist. Release the brake by pressing the front part of the brake with the foot.



Brake



Release

Note! Never brake the hoist during lifting except when used in stand-up mode.

Transfer- person lifting

General

- It is important that the user is familiar with the hoist and that it works satisfactorily before lifting a person.
- It is important to choose the correct type of sling for the lifting operation to be performed. This applies to size as well as shape. Further information about the choice of sling will be found in "Instructions for the Use of Domino Slings".
- With a person in the hoist always move slowly in order to avoid swaying.
- Only use the hoist on surfaces with less than 5° gradient.
- Only brake the hoist when it is parked or standing on a sloping surface, e.g. in bathrooms.
- Never lift a person higher than necessary.
- Be aware of the maximum load of the hoist.

**Before lifting a client, try the hoist yourself.
Risk assessment shall be carried out to ensure that the
correct size, type and shape of slings is being used for
the patient**

Lifting from wheelchair

- Mount the sling.
- Increase the width between the legs of the hoist and move it to the chair.
- Place the spreader bar above the person in the chair.
- Lower the lifting arm and place the straps of the sling correctly in the hooks of the spreader bar. Make sure that all straps have been fitted correctly.
- Lift the person a few centimetres above the seat of the chair - STOP – and make sure that the sling has been fitted correctly.
- When the person is comfortable in the sling, lift him/her clear of the chair.
- Pull the hoist away from the chair - STOP – adjust the legs of the hoist to parallel position before proceeding with the transfer.

Placing in wheelchair

To place a person in a wheelchair proceed in reverse order:

- Increase the width between the legs of the hoist and move it to the chair.
- Make sure that the person has been placed correctly in relation to the chair and lower the hoist slowly.
- Check that the person is in the proper position during the entire operation.
- When assisting a person in getting back into the chair, lower the person to just touch the chair.
- If the chair can be tilted a little backward it is easier to place the person correctly. Also pull the straps on the back of the sling.
- If two helpers are available, one may press gently on the knees of the person.

Note! The wheelchair must be braked during transfer to and from the chair.

Transfer – person lifting

Lifting to and from bed

- If the bed has an adjustable headrest and the client is capable of being raised a little, a raised headrest will facilitate application of the sling.
- Place the lower edge of the sling so that it just covers the base of the spine.
- If the client is to be transferred from wheelchair to bed, a raised headrest will also facilitate the operation. It will be easier to place the client correctly in the bed and to remove the sling straps.
- As an alternative roll the client to a lateral position. Unfold the sling and place it so that the lower edge just covers the base of the spine.
- Place the spreader bar above the bed and lower it to approx. 25 cm above the waist.
- Fix the straps of the sling in the spreader bar.
- Lift the client slowly approx. 2 cm above the bed and make sure that the sling is positioned correctly and that the client is comfortable and properly supported.
- Lift the client clear of the bed and transfer him/her to the required position.

Note! Always adjust the sling before lifting the client completely clear of the bed.

Lifting from floor

Make sure that the general condition of the client allows him/her to be lifted.

- Follow the same procedures as when lifting from bed when placing the sling under the client.
- Lift the client to a half seated position and use a chair or a similar stable back support with a cushion.
- Move the open end of the hoist towards the client and lift the legs of the client over one leg of the hoist. Do not brake the hoist.
- The hoist may be placed in the opposite position, i.e. with the head of the client towards the control unit of the hoist.
- Lower the lifting arm and fix the straps of the sling in the spreader bar.
- Lift the client slowly while checking that the sling is placed correctly and that the client is comfortable and properly supported.

Note! When operating the hoist use the wheels opposite to the push handles as a pivot point. This will facilitate manoeuvring.

Transfer – Stand-up hoist

General

- It is important that the user is familiar with the operation of the hoist and that it performs properly prior to lifting.
- It is important to choose the correct type of sling for the lifting operation to be performed. This applies to size as well as shape. Further information about the choice of slings will be found in "Instructions for the Use of Domino Slings".
- Transfer of a person in a stand-up hoist must only be made to and from seated position.
- The stand-up hoist must be braked during lifting.
- The client must not wear slippery clothes or underwear.
- Be aware of the maximum load of the hoist.

Lifting from chair

- Apply the Thorax standing sling with the lower edge right above the waistband.
- Increase the width between the legs of the hoist and move it to the chair.
- Approach the client and place his/her legs on the base plate.
- Push the hoist as closely to the client as possible – brake the hoist.

WARNING! MAKE SURE THAT THE FEET OF THE CLIENT DO NOT GET JAMMED BETWEEN BASE PLATE AND FLOOR.

- Adjust the knee support so that it provides support right under the knees of the client.
- Lower the lifting arm.
- Place the lifting straps of the sling in the hooks of the fork-shaped lifting bar.
- If the client can hold on to the lifting bar with his/her arms during lifting, use the middle step of the suspension strap.
- If the client has but little stability and strength in the upper part of the body, use the outermost step of the suspension strap.
- Tell the client to lean back in the sling and look up.
- Now lifting may be commenced. If required, support the client during lifting.
- Lift the client to standing position.

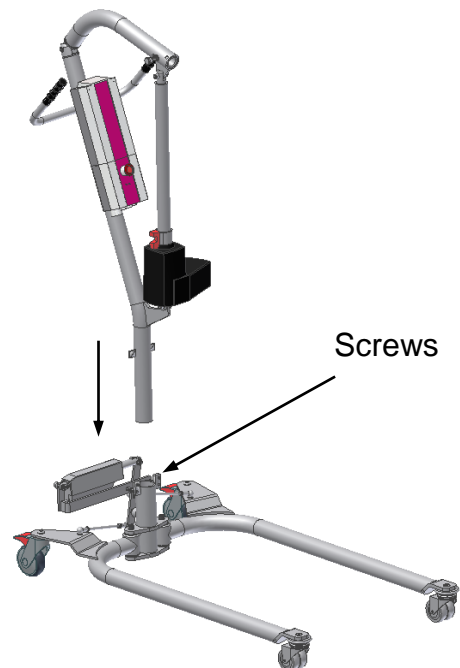
Note! We recommend lifting the client approx. $\frac{3}{4}$, so that the knees are slightly bent. Be aware of the pressure on the knees/lower part of the leg.

- To prevent the sling from sliding upward, place the straps in a loop.

Assembly instructions

Assembly instructions for All-in-One : 25-20010, 25-20020 and 25-20030

- Place the lifting mast in the mast holder of the frame. Tighten the two screws with the 5mm Insex wrench provided.
- Connect the cable from the leg spreading motor to the control unit in output terminal 2, see "Technical information" .



Mounting and dismounting of arm with spreader bar and stand-up hoist module

Mounting

- Brake the rear wheels.
- Hold the lifting module (turn it through 90°) so that the locking pin may be pushed into the corresponding slide rail of the lifting mast.
- Be aware that the bar may swing. We recommend holding on to it.
- Push in the lifting module.
- Then turn it 90° clockwise until you hear a click.
- Make sure that the arm has been properly locked.
- If the hoist is going to be used as a stand-up hoist, hook on the knee support with base plate.

Now the hoist is ready for use.



Assembly instructions

Dismounting

- Brake the rear wheels.
- If the hoist has been used as a stand-up hoist, lift off the knee support.
- Pull the locking pin while turning the lifting module 90° counter-clockwise.
- Be aware that the bar may swing. We recommend holding on to it.
- Now the lifting module may be pulled out.

Note! Be aware of the weight of the lifting module.



Assembly instructions for All in One 25-20040 and 25-20050

- Place the lifting mast in the mast holder of the frame. Tighten the two screws with the 5mm Insex wrench provided.
- Connect the cable from the leg spreading motor to the control unit in output terminal 2, see "Technical information" .

Now the hoist is ready for use.



Technical information

Frame

Material: St.37

Surface: Powder-coated in the colours RAL 4006 traficpurple, RAL 4007 purpleviolet and PHM 7812/CWS black. .

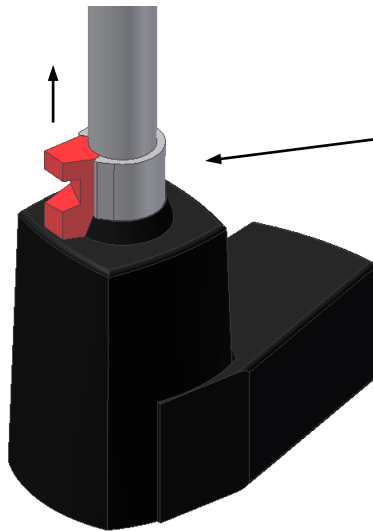
Wheels

Front: Diameter 75mm double wheels

Rear: Diameter 100mm with brake

Motors

	Lifting motor	Leg spreading motor
Type designation	LA34.4	LA12.1
Power consumption, max.	10A	3.2A
Pressure	7500 N	750 N
Speed	unloaded 15 mm/s Loaded 9 mm/s	14 mm/s 6 mm/s
Protection	IP66	IP65
Sound power level (ISO 3746)	≤42dBA	≤58dBA



The lifting motor has a mechanical emergency lowering facility. To release it, pull the red handle.

Hand control unit

Type designation HB52B

The hand control unit has two functions.

The two upper buttons control the lifting/lowering movement.

The two lower buttons control the leg spreading facility.

At the bottom of hand control a LED indicator lights up when battery needs recharging.



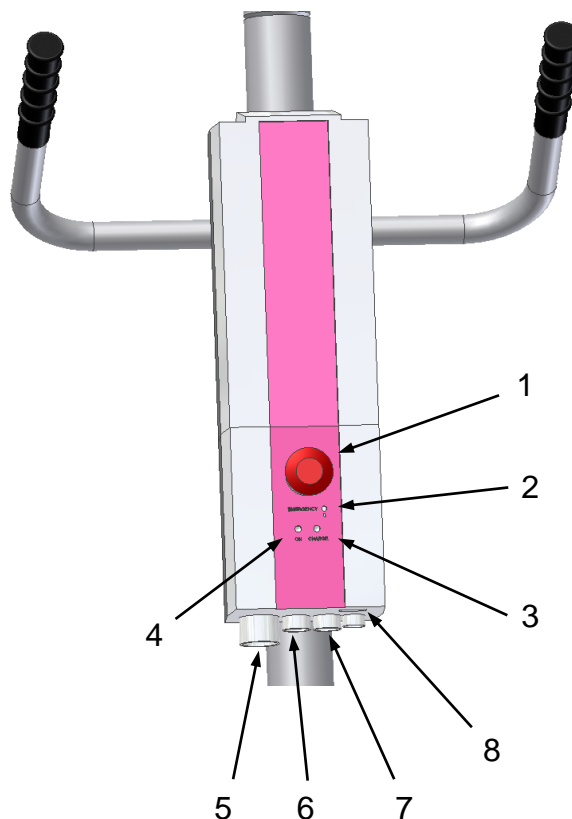
Technical information

Control unit

Type designation	CBJ2
Mains voltage	100-240V
Output voltage	24V DC
Max. output current	10.8A
Protection	IP65

The electrical system is intended for periodical use with a duty circle of max. 10%,
1 min. operation / 9 min. pause.

1. Emergency stop
2. Emergency lowering
3. Charging indicator
4. Connected to mains voltage
5. Plug for remote control
6. Plug for lifting motor, outlet terminal 1
7. Plug for leg spreading motor, outlet terminal 2
8. Plug for charging, mains cable



The control unit is equipped with:

- protective motor switch for lifting and leg spreading, protecting against overloading
- short-circuit protection
- acoustic signal sounding when the batteries need charging
- electrical emergency lowering if the hand control unit does not work
- built-in charger

Battery

Type designation	BAJ1
Outlet voltage	24V DC, 2.7 amps
Protection	IP65

The battery is fitted directly on the control unit. When the battery capacity is approx. 50% the control unit will beep during operation, and the battery must be charged. Charging takes 4-5 hours.

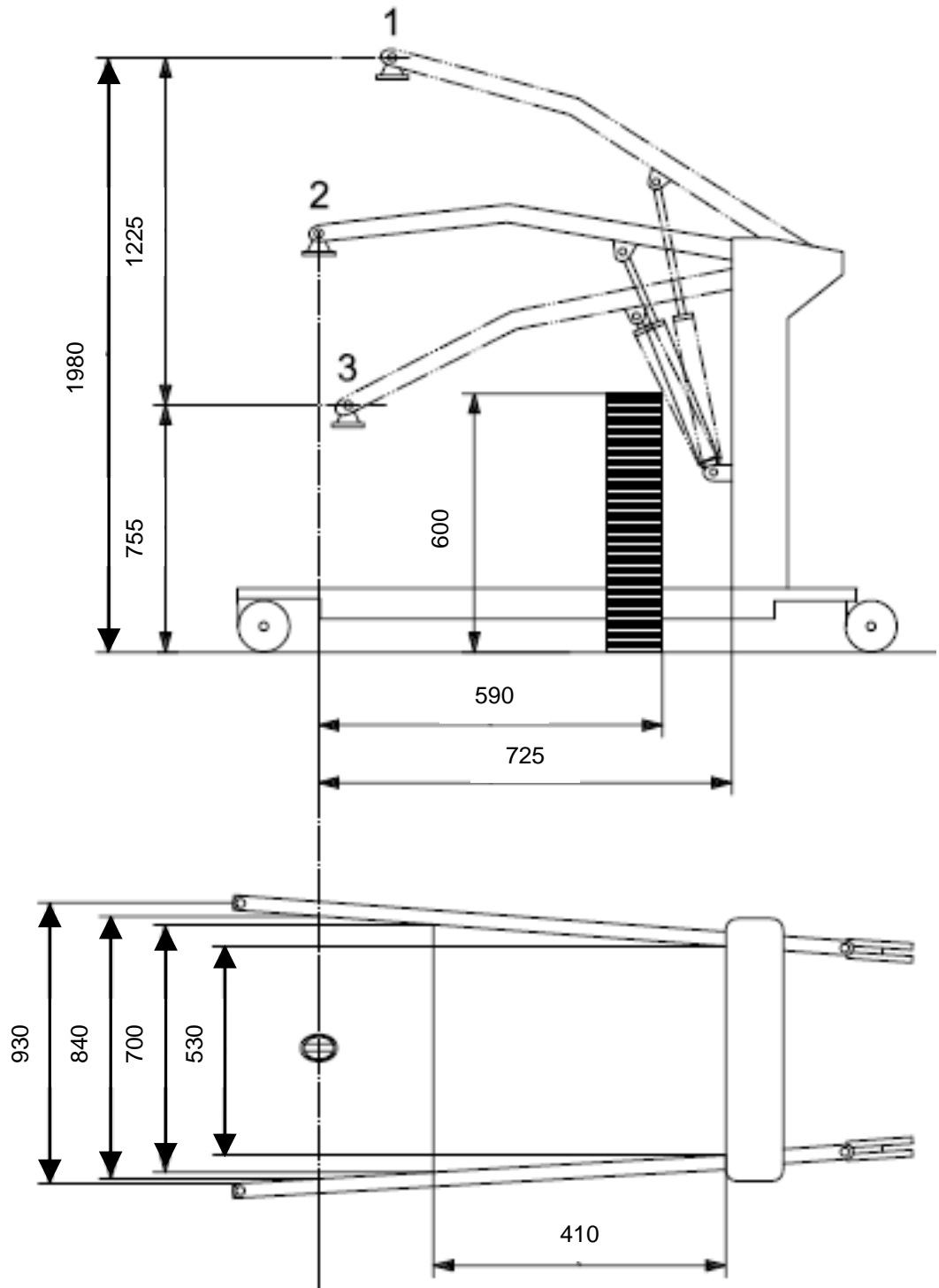
Note! The hoist does not work during charging.

Technical information

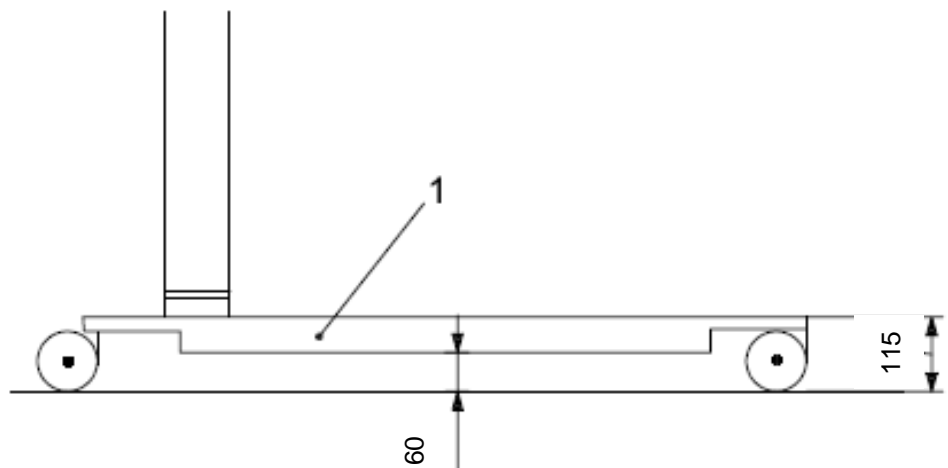
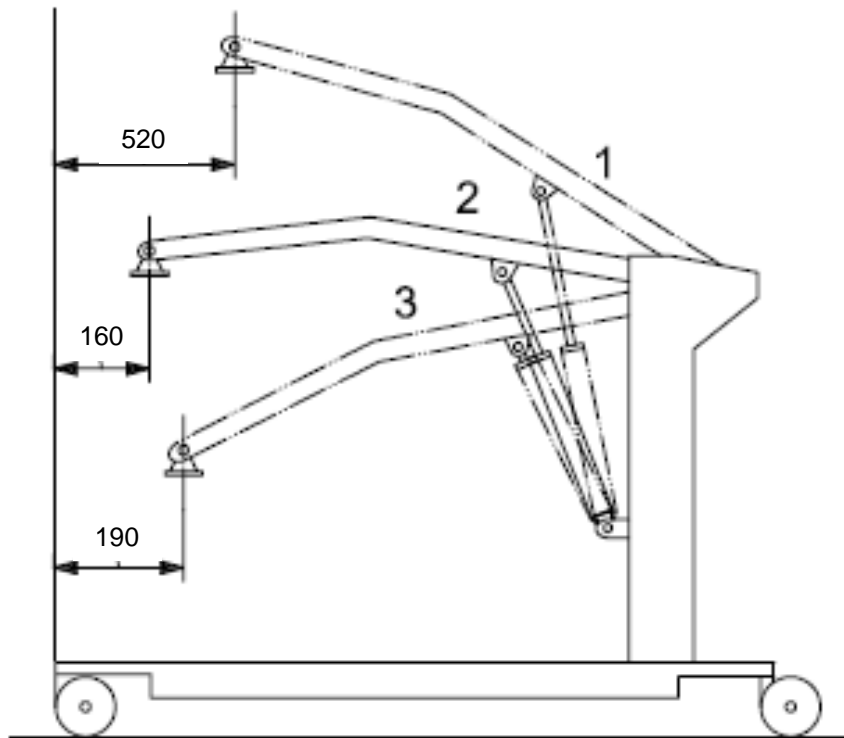
<u>Dimensions</u>	25-20010	25-20020
	25-20020	25-20030
	25-20040	25-20050
	Person hoist	Stand-up
Lifting capacity	150 kg	150 kg
Min. lifting height, lifting hook	55 cm	95 cm
Max. lifting height, lifting hook	180 cm	191 cm
Lifting travel	125 cm	96 cm
Length chassis frame	117 cm	117 cm
Length legs	97 cm	97 cm
Min. inside distance between legs	50 cm	50 cm
Max. inside distance between legs	94 cm	94 cm
Min. outside distance between legs	65 cm	65 cm
Max. outside distance between legs	109 cm	109 cm
Height of chassis frame	12 cm	12 cm
Free height under legs	7 cm	7 cm
Wheel diameter	100/75 cm	100/75 cm
Turning circle	125 cm	125 cm
Weight of arm with spreader bar	6.5 kg	
Weight of fork-shaped bar		5.5 kg
Weight of knee support with base plate		8.5 kg
Weight of battery	3.0 kg	3.,0 kg
Total weight	51.0 kg	58.5 kg
Approximate number of lifting operations per charging	60	60

Technical information

Dimensions All-in-One 150Kg: 25-20010, 25-20020, 25-20040



Technical information



Maintenance

Always make sure that the mechanical and electrical systems of the hoist operate satisfactorily. In case of malfunction stop the hoist and check or repair it, as required. Malfunction may be a symptom of a defect, which may become worse and present a safety risk in critical situations. It is therefore important to check the hoist as described below.

Daily check

- Sling
1. Check that the slings are clean, If not, send them to the wash.
 2. Check for wear and that the seams are intact and not frayed. A worn sling must be replaced.
- Hoist
3. Check that the hand control unit works satisfactorily and is mounted correctly.
 4. Check that cables have been correctly inserted into the control unit.
 5. Check visually that shaft and bolted joints run smoothly and silently.
 6. Keep the hoist clean. A clean hoist is safer and has a longer life.

Cleaning

Clean the hoist with a damp cloth wrung in warm water with a mild detergent. Electrical components may be dried with a firmly wrung cloth. Do not use water directly on these components.
Never use solvents.

Monthly maintenance

- Sling
1. Inspect the slings carefully and replace them in case of visible defects or wear.
- Hoist
2. Check that hand control unit, control unit and battery have no visible defects.
 3. Check that cables have been inserted correctly and are undamaged.
 4. Check that the lifting motor is not bent and is undamaged.
 5. Check that all shaft and bolts joints are undamaged and stable. Worn parts should be replaced
 6. Check that the wheels run smoothly. Clean them once a month

Yearly inspection

Preventive service **must** be made once a year. Follow the procedures described in the "Service Manual".

Trouble shooting

If the hoist does not work, check and test the following procedures before contacting an authorised distributor.

1. Has the battery been charged?
2. Has the emergency stop been released?
3. Have all plugs been inserted correctly?
4. Does the hand control unit work properly and has it been mounted correctly?
5. Try with another hand control unit or charger.
6. If the lifting arm cannot be lowered by means of the hand control unit, use mechanical or electrical emergency lowering, and the lifting arm will come down.

<u>Symptom</u>	<u>Possible cause</u>	<u>Action</u>
Indicator for mains voltage does not light up	<ul style="list-style-type: none"> - Mains voltage not connected - Control unit defective 	<ul style="list-style-type: none"> - Connect mains voltage - Send control unit to repair shop
The motors do not start. A click is heard from the relays of the control unit	<ul style="list-style-type: none"> - The plug has not been correctly inserted into the control unit - Motor defective - Control unit defective 	<ul style="list-style-type: none"> - Insert the motor plug correctly into the control unit - Replace the motor - Replace the control unit
The motors do not start. No click is heard from the relays of the control unit	<ul style="list-style-type: none"> - Control unit defective - Hand control unit defective 	<ul style="list-style-type: none"> - Send control unit to repair shop - Send hand control unit to repair shop
The control unit is completely dead. No click is heard from the relays of the control unit	<ul style="list-style-type: none"> - Battery completely discharged - Battery defective 	<ul style="list-style-type: none"> - Charge the battery - Replace the battery
The control unit is in order except for one direction of one channel	<ul style="list-style-type: none"> - Hand control unit defective - Control unit defective 	<ul style="list-style-type: none"> - Send hand control unit to repair shop - Send control unit to repair shop

Claims deadline and service

Claims deadline

See General Terms of Sale and Delivery on www.ropox.dk

Service

Always make sure that the mechanical and electrical systems of the walking trainer operate satisfactorily. In case of malfunction, stop using the product and inspect or repair it, as required. Malfunction may be a symptom of defects that may get worse and jeopardise the safety in critical situations.

Preventive service **must** be carried out once a year, following the procedures of the "Service Manual".

Service and repairs must always be carried out by trained and competent personnel.

We recommend registration in a log book for each walking trainer in connection with service visits to be used as documentation in case of complaints.

Only use original spare parts and accessories.

Modifications of the walking trainer must be carried out by authorised Ropox personnel.



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