

*The proof is
in the product.*

**POWEO® 150
PATIENT LIFTER
MAXIMUM LOAD : 150 KG**



User Manual






GENERAL INFORMATION AND SAFETY WARNINGS

This user manual contains important safety instructions and information concerning the use of the lifter.




Carefully read the manual before using the lifter in order to be familiar with its use and operating functions.

This user manual is relating to the following devices:

- Standard POWEO® 150 without SCALIS® weighing system ref: S17 001
- Low base POWEO® 150 without SCALIS® weighing system ref: S17 002
- Standard POWEO® 150 with SCALIS® weighing system ref: S17 003
- Low base POWEO® 150 with SCALIS® weighing system ref: S17 004

-  *The POWEO® 150 should be installed, used and serviced by trained personnel only*
-  *The POWEO® 150 must be maintained only by qualified personnel and maintained only with original spare parts.*
-  *The POWEO® 150 is designed and manufactured in order to safely transfer patients up to 150kg. Beyond this weight, do not use the POWEO® 150: call SCALEO Medical, which will offer you the hoist that best suits your needs*
-  *The POWEO® 150 is not intended to be equipped with a rigid stretcher: the installation of such a device instead of a flexible strap would adversely affect the stability of the lift and may cause the patient to fall*
-  *In order to use the POWEO® 150 accessories: SCALIS weighing system, transfer slings.. please refer to their user manuals.*

Explanation of symbols used in this manual:

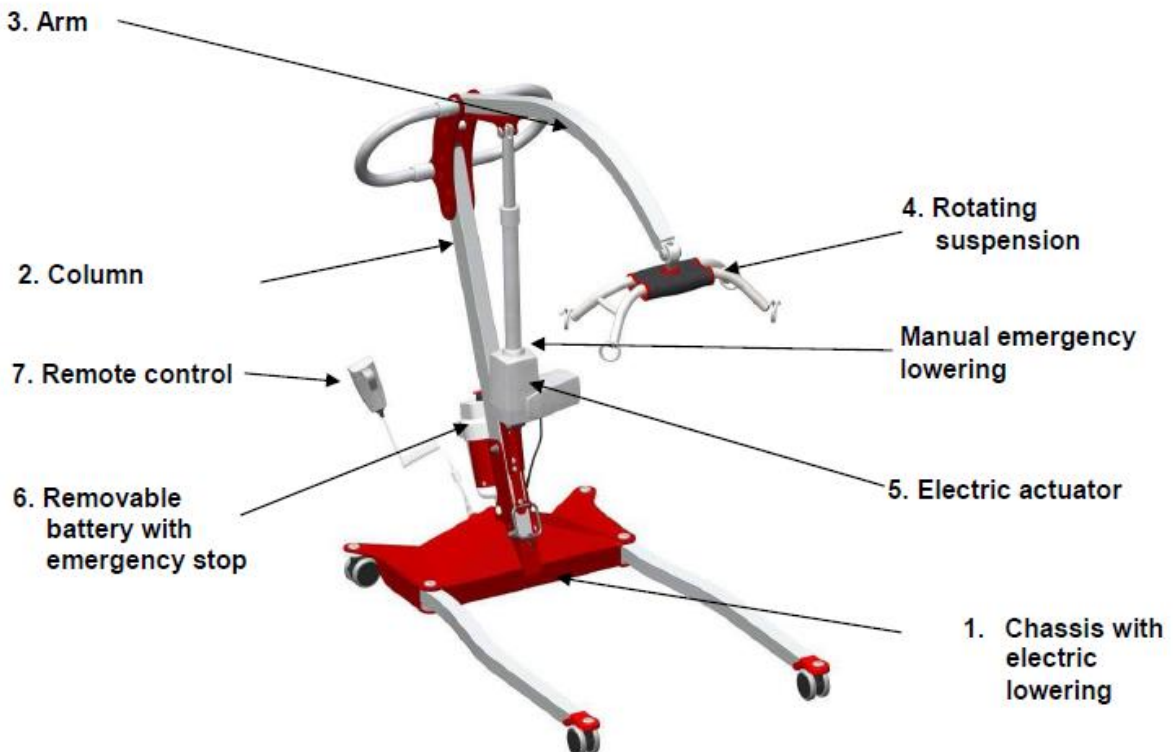
-  *This symbol is used to point out instructions and information related to work place safety where injury may occur if the information is disregarded or ignored. Follow these instructions and be careful and attentive at all times.*
-  *This symbol indicates important information regarding the use of the equipment. If not taken into consideration, it may lead to damage or functional defects to the lifter or other equipment.*
-  *This symbol indicates important and useful information. If taken into consideration, it will help the operator of the lifter to work efficiently. It may help simplify routines and to explain complicated facts.*

ABOUT THE POWEO® 150

You have recently purchased a POWEO® 150 patient lifter. We would like to thank you for the trust you have placed in our company.

The patient lifter is delivered in a carton box containing:

1. a chassis with electrical leg opening
2. a column
3. the arm
4. a rotating suspension and its protection
5. the electrical lifting actuator with manual emergency down function
6. removable battery with emergency stop button
7. remote control (4 or 6 buttons depending on the equipment)
8. User manual (*not present in the picture below*).
9. One or more slings, depending on your order (*not present in the picture below*).
10. One battery charger (*not present in the picture below*).
11. Special tools (*not present in the picture below*).
12. SCALIS(r) Scale (*optional*)
13. Service tool software and cable (*optional*)



The POWEO® 150 hoist is the perfect patient lifter for home care or hospital use.

ASSEMBLY

Before assembling the patient lifter, please ensure no damage to the packaging can be observed before unpacking. If that is the case, remember to immediately provide written reserves to the forwarder and contact SCALEO Medical



Packaging elements (plastic, polystyrene wrappings etc.) must not be left within reach of children as they can be potentially harmful.



*In order to assemble properly the patient lifter, follow these instructions.
You can also contact SCALEO Medical for further information*

Using the POWEO® 150 patient lifter require a good understanding of transfer systems, assembly and disassembly procedures.



SCALEO Medical tests and charges all batteries before packing, however, the batteries must be recharged completely before first use.

Our lifters and batteries are delivered with the emergency stop button in ON position, so think about putting the emergency stop button OFF before operating or charging the unit.

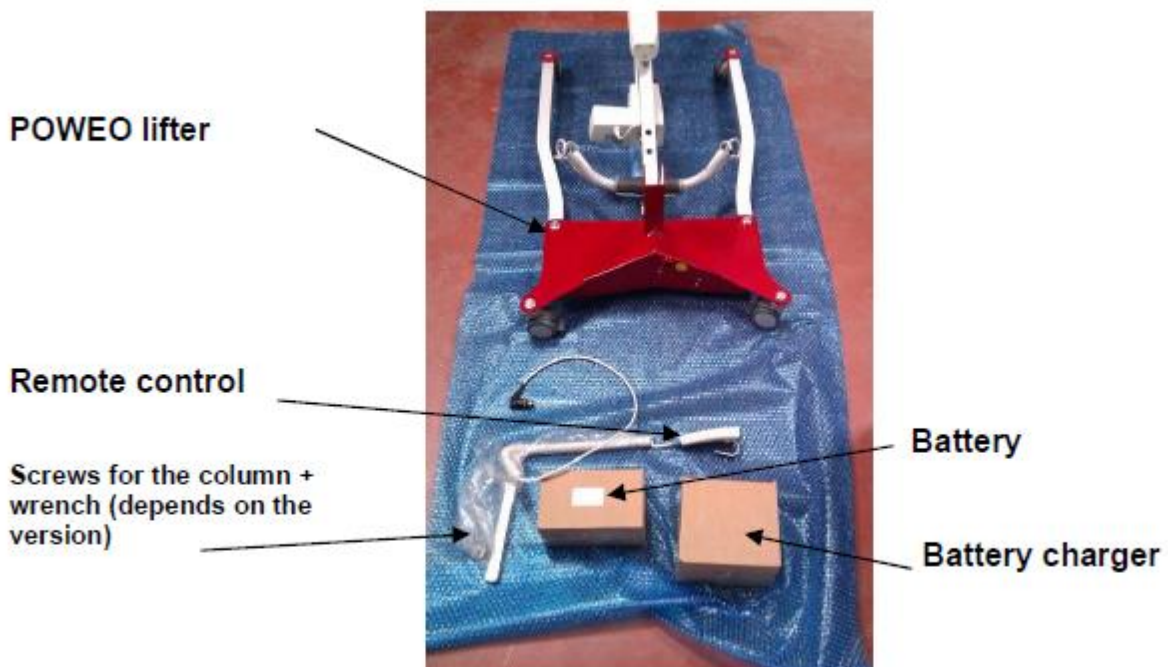
1. Instructions for assembly

Unpack the lifter by removing all links and protections



Unpacking and installing the POWEO® lifter requires two people

1.1 Insure yourself that all the required parts are present



1.2 Pull off the column fixing pin found pre positioned on the column :version without a SCALIS scale.
For the version WITH the SCALIS(r) scale, the security pin is provided in a separate plastic bag.



Security pin with pre-positioned screw

1.3 Raise the column, and then insert the axis to fix the column and secure it by blocking the screw tightly using the special wrenches. If needed, ask the second operator to help you by moving slightly the column so you can introduce the pin more easily.

Depending on the version, the pin is secured by a special screw (the special wrench is provided) or a hexagonal allen screw (hexagonal wrench is not provided).



Special screws version



Hexagonal screws version





1.4 The column is then secured by inserting and tightening the second screw: The blue material found on the provided screw is dry Loctite, intended to secure the mounting and protecting the fixing against vibrations. Tighten the screws with two identical wrenches (see picture above). It is useless to tighten with excessive force, the screws are used only to secure the pin. A excessive force could damage the screw. In the case of a POWEO® delivered with special wrenches, keep them for the future: they may be useful for later servicing of the POWEO® .

***This operation is very important for the security of the patient and caregivers.
Without the security pin, the column may fall and provoke serious injuries.
Insure that this pin is properly secured, and perform regular inspection of it: screws must ALWAYS be present and in good condition.***



A label near the pin allows a quick identification:




or



1.5 Free the suspension from the rubber band, connect the remote controller: visual and mechanical references help to insert the connector properly. The connector must be inserted properly to insure the sealing: water will not be able to go to the electronics.



1.6 . Put the battery in its compartment and insure before using the POWEO® that the emergency button is on “OFF” position. Turn the button clockwise to release it.

 **Position the battery on the support, and guide it for the best electrical contact between the battery and battery support contacts.**



On position of the emergency button : the lifter is not powered



OFF position of the emergency button : the lifter is powered

- 1.7 With the remote, try a few operations: lift up and down the arm, open and close the legs.
1.8 Put out the battery and recharge it (see “battery charge” section)

Your lifter will be usable as soon as the battery is charged


Whenever possible, keep the carton bow and packing accessories for later transportations.

2. Instructions for storing and transportation

For foldable version follow the assembly instructions in the opposite way:

1. Move the arm completely down
2. Take off the battery from the support, and press the emergency button
3. Block the suspension to the arm using the elastic belt
4. Remove the axis in order to free the column.

The Loctite should prevent an easy removing of the axis: the screw must then be heated before unscrewed.

 **When mounting the securities pins again later, adding Loctite is mandatory to insure protection against vibration**

5. Move the column down and insert back the axis.
6. In the case of a POWEO® with a SCALIS® scale, the security pin must be packed separately.

3. Start up



SCALEO Medical provides universal power supply adapted to any voltage/frequency value. Before charging the battery you will just have to check that the plug provided fits to your local AC outlet.

3.1 For the first use, the battery must **imperatively** be 100% charged.

3.2 **Before each use check** for correct installation of the lift and its accessories, and verify proper operation before use with a patient.

The few controls below only take a few minutes and allow you to ensure safe use of your POWEO®

- **Make sure no parts are damaged** or shows signs of wear.
- **Check the tightness of the security screws securing the column**, which must be made when installing the hoist with the hardware and the supplied thread lock.
- **Inspect** accessible screws and make sure none are loose.
- **Check the lights on the remote control**: battery indicator should be solid green, maintenance indicator should be off.
- **Check the features**: raise and down the arm, leg opening, emergency stop.



In case of malfunction, or doubt about the proper operation, do not use the POWEO: inform your technical service, your distributor, or contact us at the address on the back of this manual.

3.3. Practise by lifting a colleague, and by being lifted by others. It is important to experience how the patient will feel while being lifted by putting yourself in his position. Try out and practise using all the relevant slings for the different types of lifts and movements you may encounter. It is also a good idea to inform the patient of the procedure he/she is about to go through to comfort him.



It is very important to use accessories and slings adapted to:

- *user ability*
- *body shape of user*
- *weight of user*
- *specific type of transfer*



The POWEO® 150 lifter is designed for use in room temperature, +10 to +40°C. This should be taken into consideration when transporting the lifter; and therefore keeping it in a temperate part of the vehicle. Alternatively, the lifter must rest in a temperate room until the equipment has achieved proper working temperature.

USING THE POWEO® 150

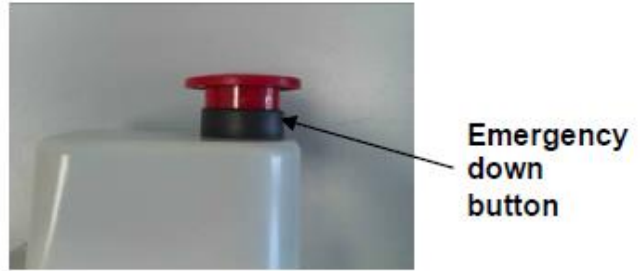
Security devices

Emergency stop :

The POWEO® 150 is equipped with an emergency stop button that will power off the lifter when pressed.

The emergency stop button is located on the battery top.

Once pressed It must be turned clockwise or counter clockwise in order to reset it

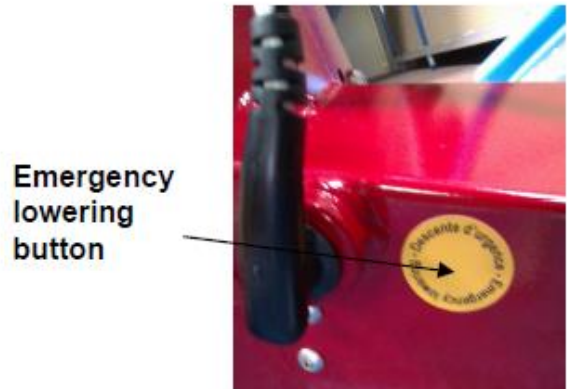


Emergency lowering devices :

If the battery goes flat during a lift, there is at least enough power to lower the patient down again.

In case of non-operation of the remote control, an emergency electric lowering is still possible by operating the hidden button located behind the yellow label of the base.

Perforate the centre of the yellow sticker and press the hidden button with a small screwdriver: the lifter will perform a emergency lowering. Maintain the pressure on the button to obtain the wanted height.



In case of a complete failure of electronics, a MANUAL emergency lowering is available.

Activate the RED lever/trigger on the actuator, by pulling it upward, and maintain the position until the actuator reaches the desired height.

Lowering speed will depend on the charge and the pressure on the trigger.



According to the EN 10535 standard, the POWEO® 150 will not function with a patient weighing more than the maximum load of the lifter.

The value is set to 160kg +/- 10kg.

For the SCALIS equipped version, and because the Max of the scale is set also to 150kg the scale will display a "> MAX !" message to indicate that the lifter is overloaded.




The opening of the legs is also secured : in the case of a contact between a leg and an obstacle, the legs will automatically stop moving.


The leg opening movement stop is therefore a warning for the user: it means that the security device is operating, so the transfer of the patient is not secured..



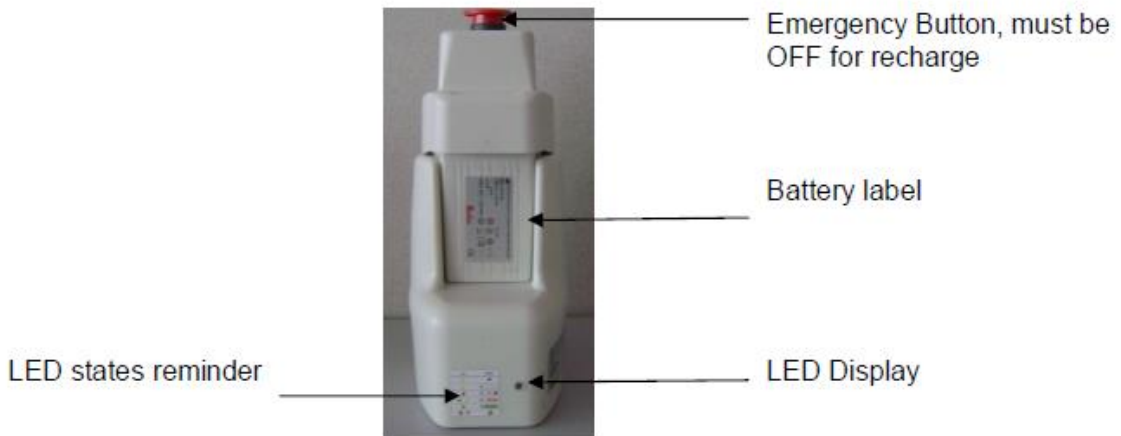
BATTERY MANAGEMENT

The remote control has a three states battery LED : green, red, flashing red.
Red LED means that the battery needs to be recharged.

 When the LED goes RED, there is still enough energy to perform at least a patient lowering.

 The charger used for the POWEO® 150 includes advanced security functions: during the charge overvoltage, over current, over temperature are monitored and the charge is stopped if some value goes out of programmed security values. The NiMh battery also contains electronic protections against short circuits, over voltages and over temperature. If one of this parameters goes beyond specified value, the battery will stop functioning, preventing the user from overheat and fire hazards. Therefore the use of SCALEO Medical batteries and chargers is perfectly secure.

In order to recharge the batteries: connect the charger to the AC outlet, and then just put the battery on the battery charger. A 4 hours recharge will recharge 100% empty batteries. For intensive daily use a daily recharge will be necessary.



The charger LED lights up and displays the state of the recharge. Depending on the colour of the LED the user can monitor the different states.

CHARGER LED COLOR	MODE
Yellow - ●	The battery is not connected to the charger
Yellow - ●	Reset and battery analysis
Orange - ●	Fast recharge
Alternately Green and yellow - ● / ●	Compensation charge
Green - ●	Slow charge/end of recharge
Alternately Green and orange - ● / ●	Error or battery overheat

BATTERY CAPACITY AND MAINTENANCE



Use only the charger provided to recharge the batteries of POWEO® 150, to the exclusion of any other battery charger

Using an unsuitable battery charger may cause damage to the batteries or overheating with a risk of fires starting.



Do not recharge your batteries in a place of extreme temperature or high humidity. In the case of high temperatures, the charger may go to an "error" state. In this case, stop charging the battery, and allow the battery to cool down before attempting a recharge again.



If you do not use your POWEO® for a long period of time, proceed as follows to keep your batteries in perfect shape:

- Fully charge your battery*
- Depress the emergency stop button*
- Keep your battery charged in cool, dry, well ventilated.*
- Check periodically (every three months) the state of charge of the batteries: even disconnected batteries may self-discharge.*

Compliance with these few precautions will help you to keep your batteries longer and use your equipment in better conditions.

Non compliance to these precautions may lead to dead batteries, and will void the warranty.



The overcharging is impossible. However to ensure optimum performance, and better battery life, we recommend waiting a few minutes before using the lift after a battery charge.



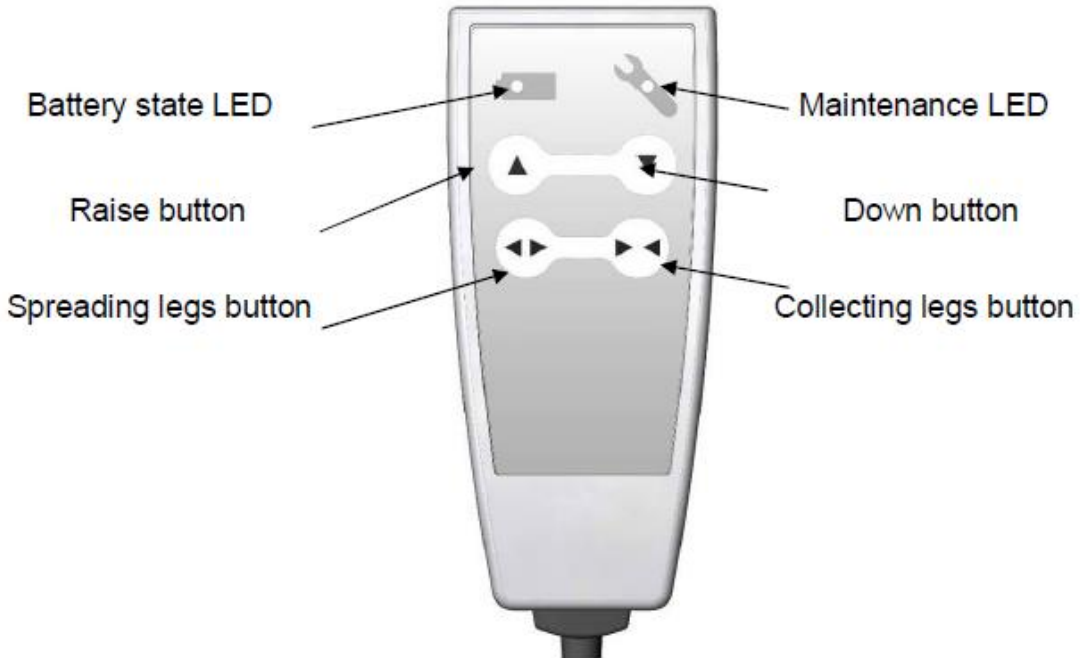
In case of intensive use fail to meet the duty cycle of the lifter (2/10), the "battery empty" alarm may appear on your remote.

In this case:


- Remove the battery from its socket*
- Wait # 10 seconds*
- Replace the battery in the socket*


This operation will allow the electronic main board to perform a "reset".

HAND CONTROL




Battery LED	Maintenance LED
– Solid green = more than 10 cycles are still possible	– Solid orange : default Use the service tool software or call us for maintenance.
– Solid red : = less than 10 cycles left before battery empty state	– Flashing orange: periodic inspection must be performed within 2 months.
– Flashing red : battery alarm (only one cycle left before battery empty)	– Flashing red: periodic inspection has not been performed in time.

 **Note on the maintenance LED: this indicator is used to indicate a possible malfunction AND the periodic inspection state. Therefore it can display multiple consecutive states.**
Example: in case of default AND periodical inspection date exceeded, the LED display alternately flashing RED and solid ORANGE.

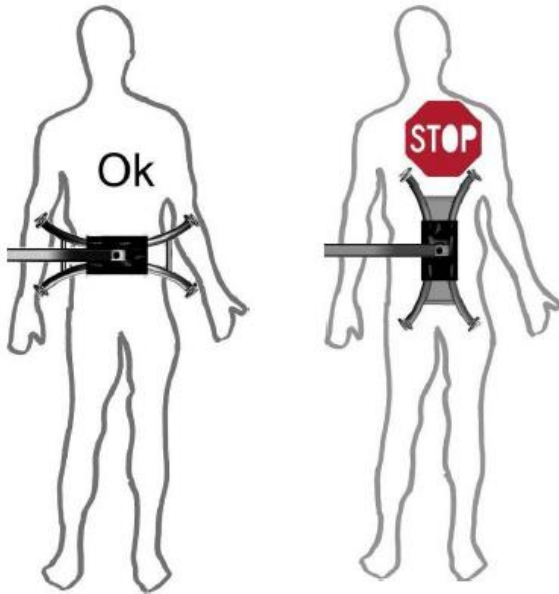
 **Managing the maintenance LED states is easy:**
Continuous solid light = default.
The light is continuous and the hoist is not operating = main fuse replacement is necessary
Flashing light = periodical inspection management
According to the EN 10535 standard the time period between periodical inspection default value is 12 months.
The periodical inspection time value can be changed using the POWEO® service tool software.

LIFTING AND TRANSFER

The maximum lifting capacity for the POWEO® 150 is **150kg**.


 *The maximum load can be lifted while using the engine non-stop for roughly one minute. The delay between 2 lifts of maximum capacity should be roughly 10 minutes in order to allow the engine to cool down.*

The suspension should be positioned across the patient as below.




Position the patient as low as possible (if possible while putting the foot on the chassis) during the transfer, so as to lower the centre of gravity and ensure maximum stability.


Use the lifter carefully so as to minimise swinging, especially if the lifter and patient are close to furniture.

 *Use slings developed especially for the 4 points suspension of SCALEO Medical patient lifters. It is NOT recommended to use others slings from others manufacturers than the ones recommended for SCALEO Medical patient lifters. SCALEO Medical refuses any liability in the case of an incident while using slings other than those made especially for their lifters. Rigid stretchers and weighing systems are not compatible with the Poweo ® 150*

Avoid transferring patients on thick carpeted floors. Ragged surfaces and any obstacles may block the wheels. If the force is too important, the lifter could be destabilised and can tip over, especially if the lifter is being used with maximum weight capacity.

In these cases, we recommend that you open the legs (if needed) before the transfer.

 *The Poweo ® 150 must NEVER be used to transfer, lift or transport people over slopes.*

 *Just like all patient lifters, the Poweo ® 150 is not a transport device. It must be used only for short distance transfers and is not intended to replace wheelchairs or other types of transport.*

USING LIFTING SLINGS

SCALEO Medical patient lifters use the PRAXIS Healthcare slings which are perfectly adapted for the 4 points suspension and very easy to use.

It is strongly recommended to use appropriate type of sling and accessories depending on patient's pathology, height and weight.

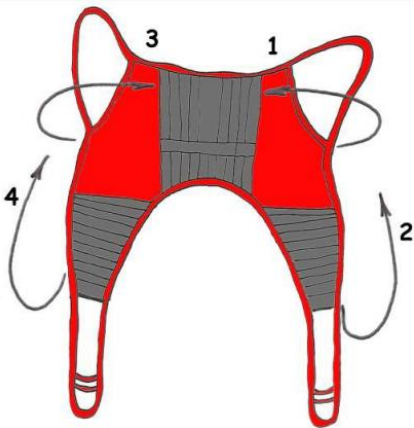
It is also important to choose the appropriate slings considering the type of transfer and the environment of the room.

With or without head support, the PRAXIS Healthcare slings are in a U shape.



Slings should never be bleached.

The washing conditions and temperatures are showed on the label.

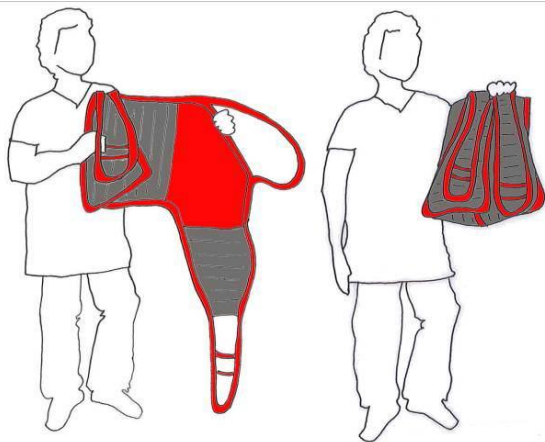


Fold the sling as indicated above before use.

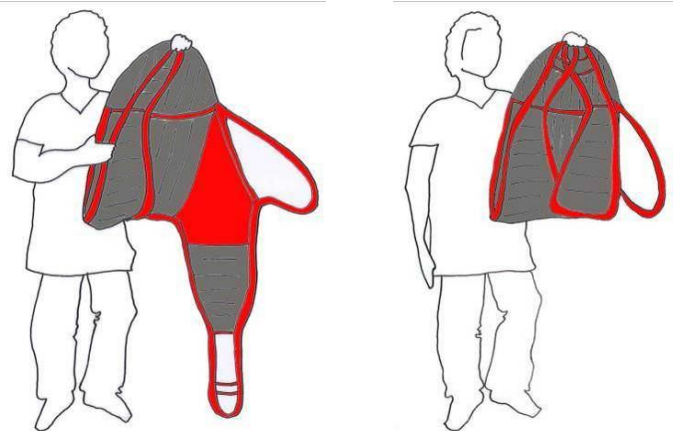
The grey side should be facing away from the user when putting the sling in place. The sling should be held with one hand, leaving the other free to move and support the user.



Torn, cut, frayed or broken slings can fail, resulting in serious injury to the patient and/or to the user. Only use slings in good condition.



Sling without head support

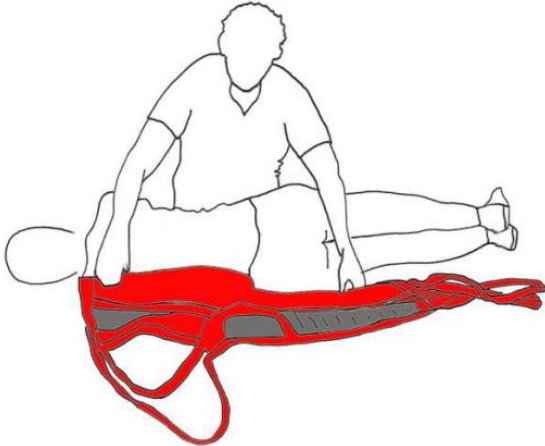


Sling with head support

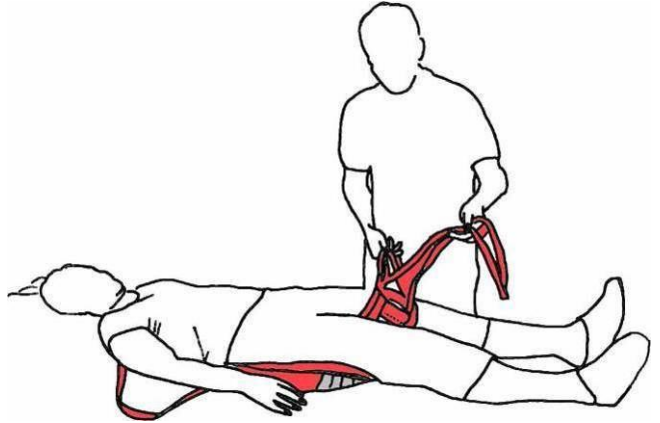
TRANSFER FROM THE BED

Lifting from bed

Roll the patient onto his side. Put the folded sling behind his back. The centre of the sling should be parallel with the user's spine, and then roll him then onto his back.

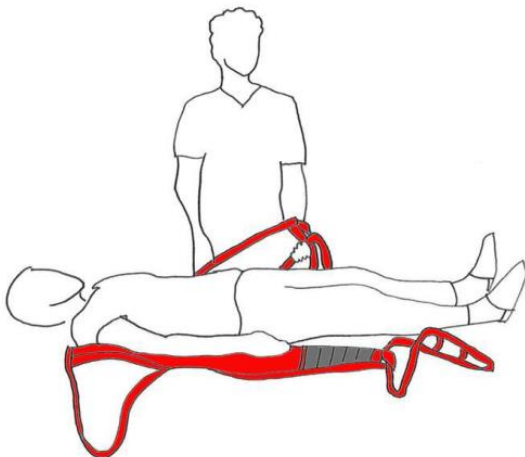


Cross the loops one through the other.

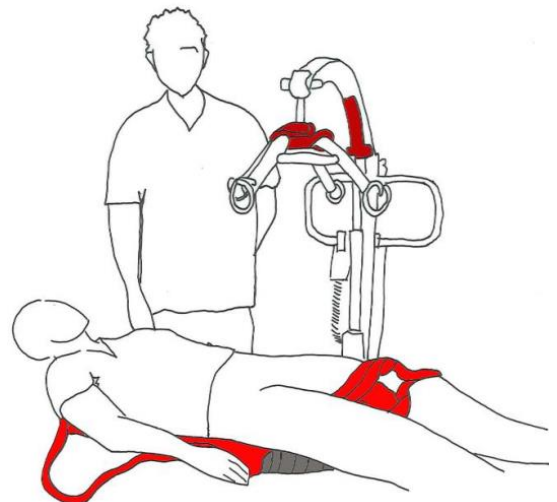


NB : If the patient's bed can be lowered, it should be lowered as much as possible before the lifting starts

Pull the leg loops forward and under the thighs as shown.



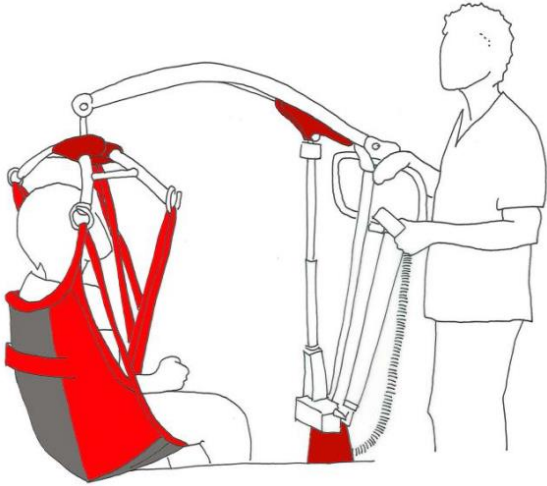
Position the legs under the bed with the suspension over the user. Be careful not to lower the suspension onto the patient. Centre the suspension over the patient before you start lifting. Remember that the wheels should not be locked.



When all four loops are hooked onto the suspension, raise the patient carefully. If the user is in a hospital bed, raising the head will help, so will lowering the bed before actually lifting the patient.

Repositioning the patient may be needed to ensure that a safe and comfortable sitting position is attained as the user is raised, for this, you can use the handle on the back of the sling.

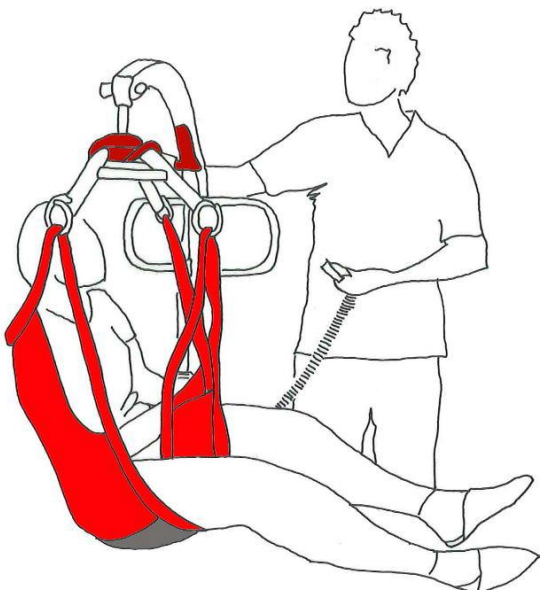
Raise the patient until his buttocks are just above the mattress. Lift the user's legs and turn him so he faces the lifting column. Once away from the bed, and if possible, lower the patient so that his feet rest on the chassis.



Setting the patient down onto the bed

Lift the patient until his sacrum is just above the bed. Approach with the lifter while being careful of the patient's feet.

Centre the patient over the bed and turn him so that his feet point to the foot end of the bed. Lower the patient carefully, it may be necessary to hold his head.



TRANSFER FROM AND TO A (WHEEL) CHAIR

Fold the sling as described before.

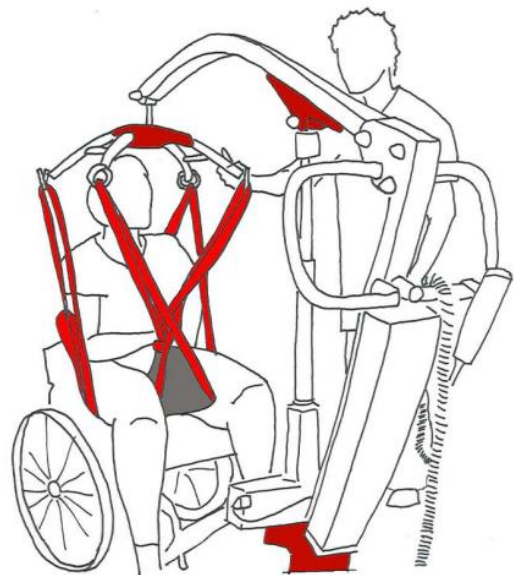
NB : If the patient's physique and ability allows, he should be encouraged to take an active part in placing the sling. He can lean forward, lift his thighs and help place the leg section.

Lean the patient forward ensuring that you support him with an arm round his shoulders. Place the folded sling behind his back and push it down until it touches the seat of the chair.



Position the lifter close to the chair while setting the patient's feet onto the chassis. If it is a wheel chair, lock the wheels of the chair. Raise the patient gently just above the chair's level and proceed to do the transfer. It is not necessary that the patient be raised too high.

The leg sections of the sling are pulled forward and beneath the user's thighs by the loops. The loops are then crossed, one through the other as shown.



LOWERING THE PATIENT ONTO THE CHAIR

Be sure that the brakes (if the patient is sit in a wheel chair) are on.

Set the lifter in such a way that the patient's back is in contact with the back of the chair.

In order to correctly position the patient into the chair, use the following method :

- gently push on the knees,
- pull the handle at the back of the sling,
- Slightly tilt the chair backwards.

Lower the patient into the chair, unhook the sling and remove the lifter..

Removing the sling :

Gently pull the leg section to the side, out from the patient's thighs. Standing by his side, lean him forward (while supporting him with one hand) and pull the sling up from behind his back.

NB: Pulling sharply on the sling may cause the patient to fall forward which is also why the patient must be supported by one arm as shown below.



BATHING

The procedure for lifting to and from the bath is in principle the same as for the bed. A special bathing sling is used for this purpose. It is a net made of polyester and dries quickly.



The Poweo ® 150 hoist is not a water proof device: avoid exposure to water as the internal electronic boards may be deteriorated by water or moisture.

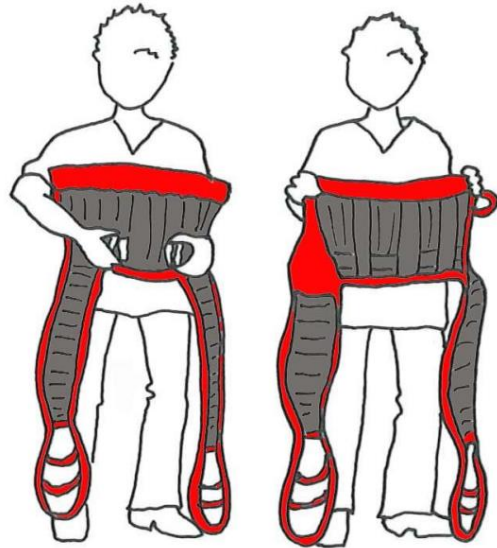
Toileting

Toilet slings

It is positioned in the following way :

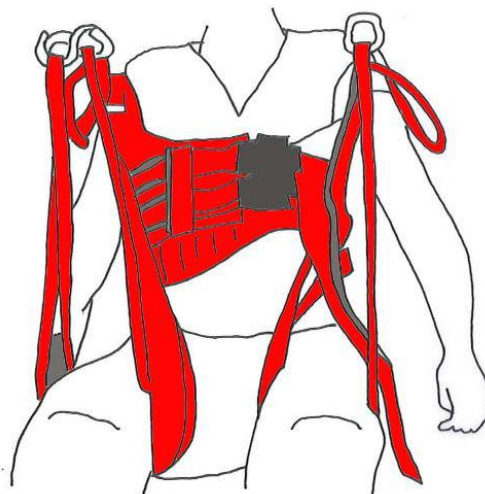
1. Insert the sling behind the patient's back with the grey side away from him.
2. Fasten the belt firmly around the patient's waist.
3. Place the leg section over and down between the thighs. Pull outwards from the inner part of the thighs. Attach the 4 loops to the 4 points on the suspension, in the same way as with the other slings.

Set the lifter close to the toilet and lower the patient gently. The sling may be used during the entire operation.



The inside leg section of the toilet slings are made so that the legs of the patient may be spread, they thus must not be crossed in the same way as other slings.

The leg sections of the toilet sling are fitted to separate the legs




SLINGS RANGE

SCALEO Medical uses only slings designed and manufactured by SCALEO Medical / PRAXIS Healthcare Group.

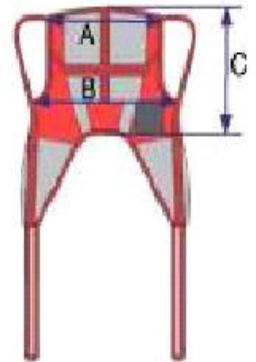
SCALEO Medical slings are easy to use. It is strongly recommended to use appropriate slings and accessories depending on patient's pathology, height and weight.


It is also important to choose the appropriate slings considering the type of transfer and the environment of the room.


 **The SCALEO Medical slings are specially adapted for the 4 points suspension. It is strongly advised NOT to use straps from other manufacturers. If that were the case, SCALEO Medical disclaims any responsibility for any incident or accident..**


Slings dimensions


	Color code	Poids patient conseillé en kg	Without Head support			With Head support
			(A)	(B)	(C)	(C)
XXL	White	200-300	86	130	68	60
XL	Blue	125-210	76	115	66	60
L	Green	80-130	66	100	64	70
M	Yellow	45-85	56	85	62	80
S	Red	25-50	51	75	60	83
XS	Light blue	17-25	46	65	58	85
XXS	Pink	12-17	41	55	56	90



 *The dimensions given are approximate as they relate to materials specific to each strap. In the case of a sling with "comfort" head support, add 10 cm to the height "C"*

 **The slings and the hoist have to be used to lift and transfer people. Never use the patient lifters to lift or to carry objects.**

 **Maximum loads of SCALEO Medical slings are:
200kg for XXS to L sizes,
300 kg for XL and XXL sizes.**

 *SCALEO Medical slings are Class I medical devices (93/42/CEE Directive) and compliant to the ISO EN 10535 European standard.*

SLINGS REFERENCES

100% polyester slings

	Without head support	Without head support, Comfort pad	Soft head support	With Comfort head support	Soft head support, Comfort pad	Half-circle head support, Comfort pad
XS	S 86 10 000	S 85 11 000	S 86 12 000	S 85 13 000	S 86 14 000	S 85 18 000
S	S 86 10 100	S 85 11 100	S 86 12 100	S 85 13 100	S 86 14 100	S 85 18 100
M	S 86 10 200	S 85 11 200	S 86 12 200	S 85 13 200	S 86 14 200	S 85 18 200
L	S 86 10 300	S 85 11 300	S 86 12 300	S 85 13 300	S 86 14 300	S 85 18 300
XL	S 86 10 400	S 85 11 400	S 86 12 400	S 85 13 400	S 86 14 400	S 85 18 400
XXL	S 86 10 500	S 85 11 500	S 86 12 500	S 85 13 500	S 86 14 500	S 85 18 500

Bath slings

Special slings

	Without head support	Soft head support	With Stiffened head support	Hammock slings	Amputee sling -Post operative sling
XS	S 85 20 000	S 86 23 000	S 85 25 000		
S	S 85 20 100	S 86 23 100	S 85 25 100	S 85 21 100	
M	S 85 20 200	S 86 23 200	S 85 25 200	S 85 21 200	S 85 80 200
L	S 85 20 300	S 86 23 300	S 85 25 300	S 85 21 300	S 85 80 300
XL	S 85 20 400	S 86 23 400	S 85 25 400		
XXL	S 85 20 500	S 86 23 500	S 85 25 500		

Toilet slings

	Polyester without head support	Vinyl without head support	Polyurethane without head support	Removable head support in polyurethane
XS	S 85 40 000	S 85 41 000	S 85 42 000	S 85 49 000
S	S 85 40 100	S 85 41 100	S 85 42 100	S 85 49 100
M	S 85 40 200	S 85 41 200	S 85 42 200	S 85 49 200
L	S 85 40 300	S 85 41 300	S 85 42 300	S 85 49 300
XL	S 85 40 400	S 85 41 400	S 85 42 400	S 85 49 400
XXL	S 85 40 500	S 85 41 500	S 85 42 500	S 85 49 500

Vinyl slings

	Comfort with Soft head support	Comfort pad with Stiffened head support
XS	S 85 33 000	S 85 35 000
S	S 85 33 100	S 85 35 100
M	S 85 33 200	S 85 35 200
L	S 85 33 300	S 85 35 300
XL	S 85 33 400	S 85 35 400
XXL	S 85 33 500	S 85 35 500

POWEO® 150 TECHNICAL SPECIFICATIONS



The lifetime of the POWEO ® is 10 years or 30,000 cycles, provided that the periodic inspections and preventive maintenance recommended are properly made.



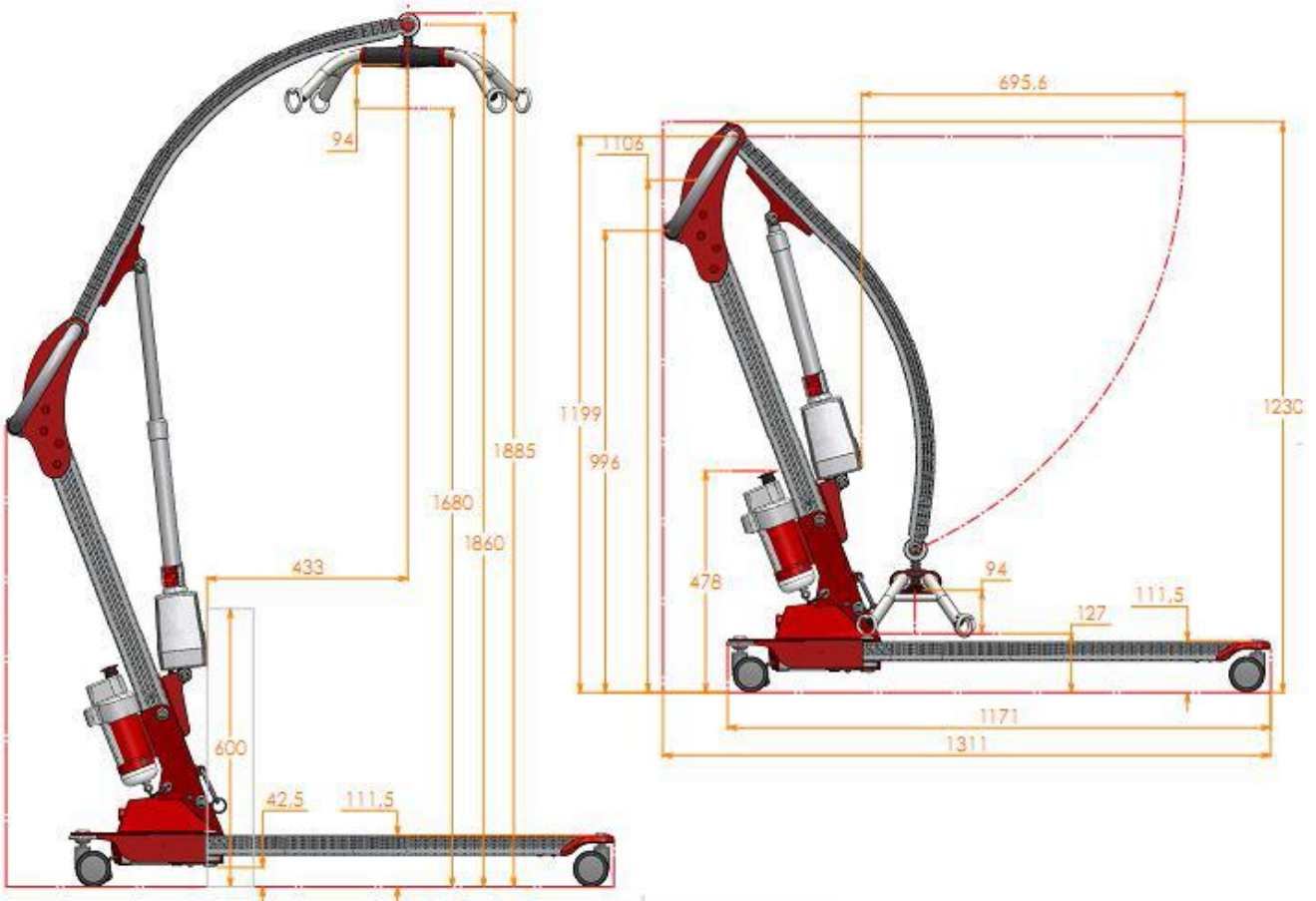
SCALEO Medical hoists are compliant with the European 2011/65/EU directive relating to reduction of hazardous substances.

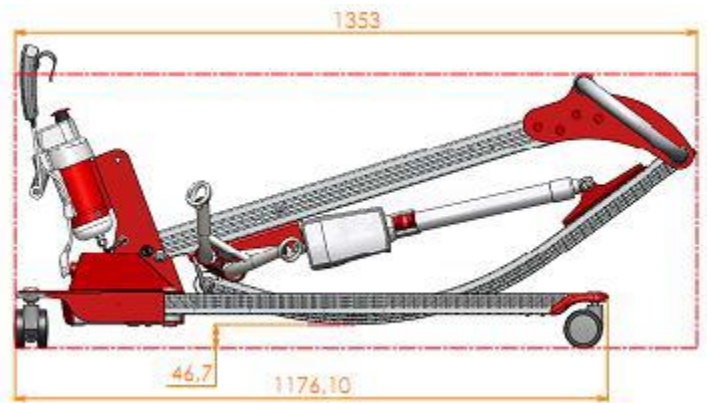
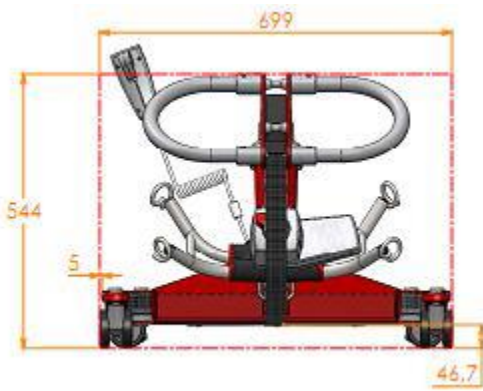
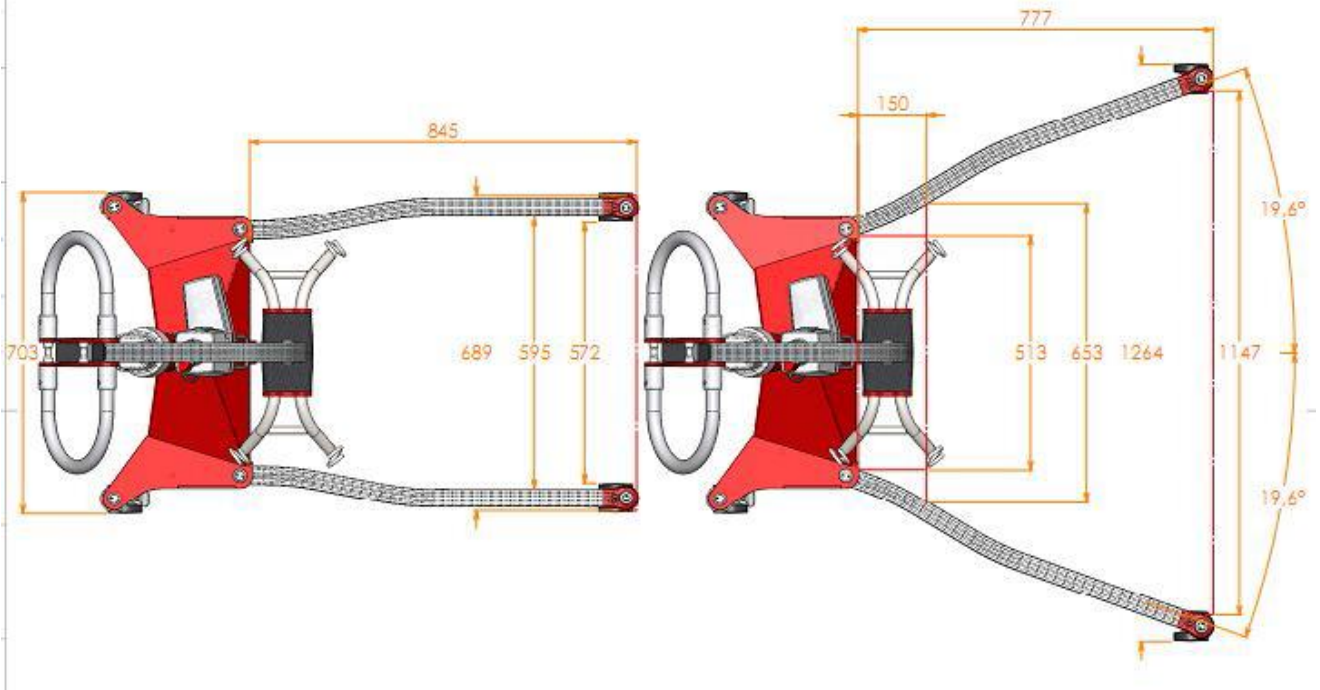
A EU declaration of conformity can be provided on demand.

The Poweo ® 150 and Poweo ® 150 “Low” lifters are entirely foldable and have a locking system to keep all parts secure.

Poweo ® 150 and Poweo ® 150 « low » features are identical, except the legs :

- the Poweo ® 150 model is equipped with aluminium legs, so the patient lifter is really a lightweight device.
- the Poweo ® 150 « low » model is equipped with legs made of steel in order to get a ultra low chassis height.

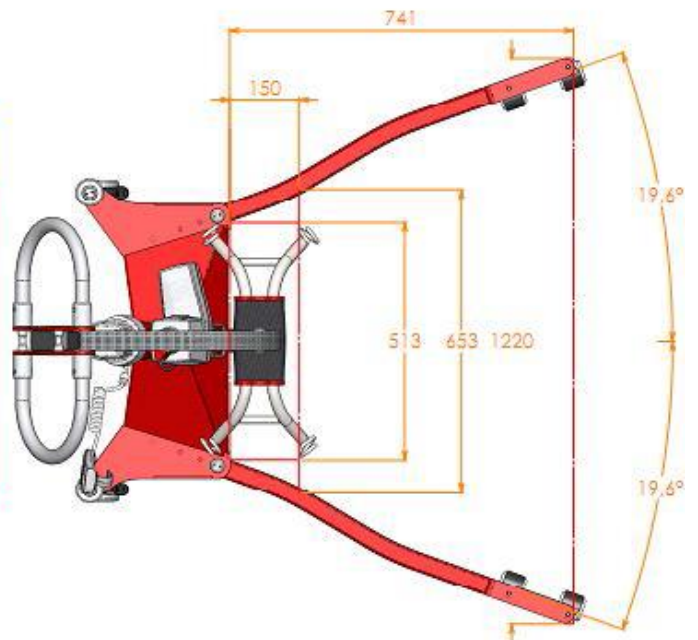
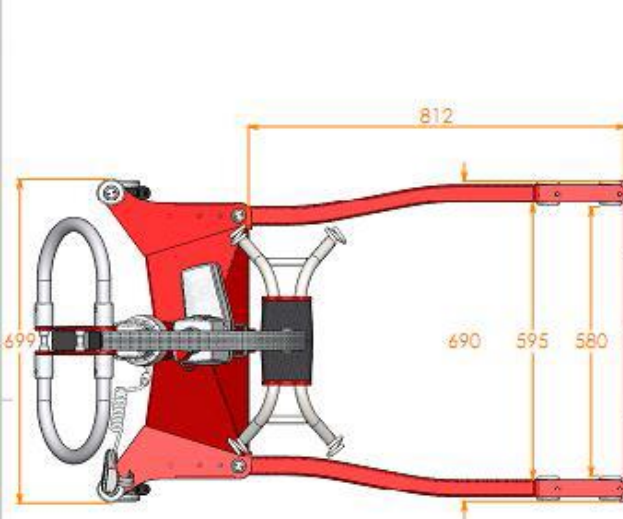
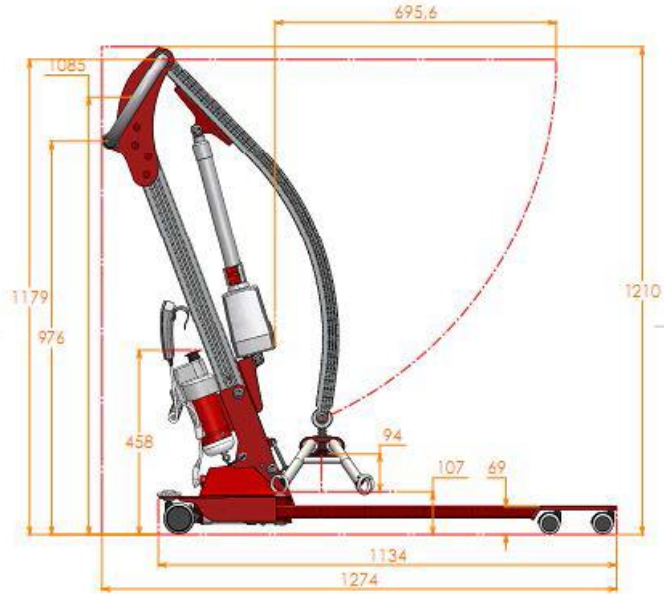
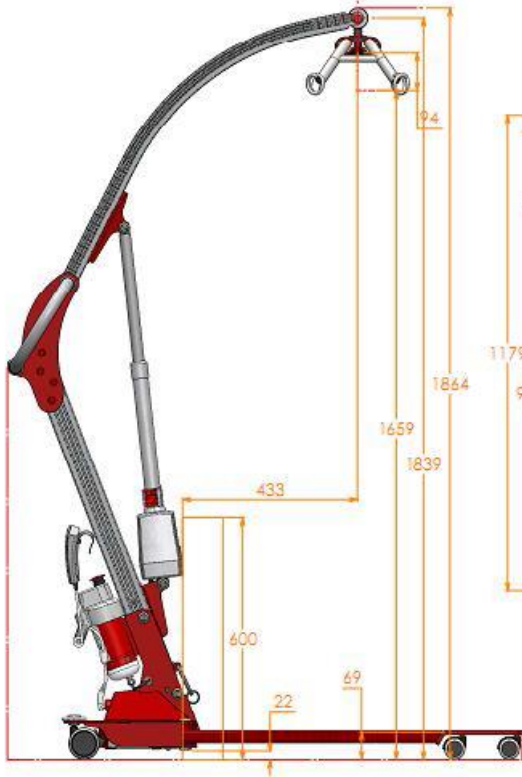


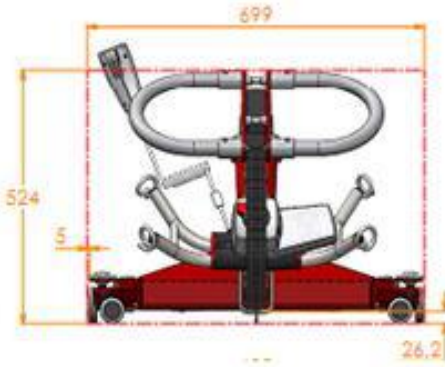


SUMMARY OF THE TECHNICAL SPECIFICATION (STANDARD S17 001 MODEL)

Classification	Class I medical devices (93/42/EEC Directive)
Weighing capacity	150 kg
Material	Steel and aluminium
Lifting actuator	24V – 10A
Battery	24 V- 3,3 Ah (NiMH)
Front castors	2 x 75 mm
Rear castors	2 x 75 mm with brakes
Folded legs width outside	68.9 cm
Outspread legs width outside	125.5 cm
Overall length	130.2 cm
Maximum height while unfolded	188.5 cm
Chassis' height	10.3 cm
Minimum space under unit	3.3 cm
Hoisting range	155 cm
Maximum reach at 600 mm	69.6 cm
Maximum reach from base	148 cm
Diameter for giration	65 cm
Total weight	40 kg
Condition of use	Indoor use only
IP classes	IPX4 in use, IPXX in charge
Service factor	2/10
Compliance with standards	EN ISO 10535:2007
Temperature of use	+10°C / +40°C
Sound power level	L wa = 49 dB

POWEO® 150 LOW BASE TECHNICAL SPECIFICATIONS

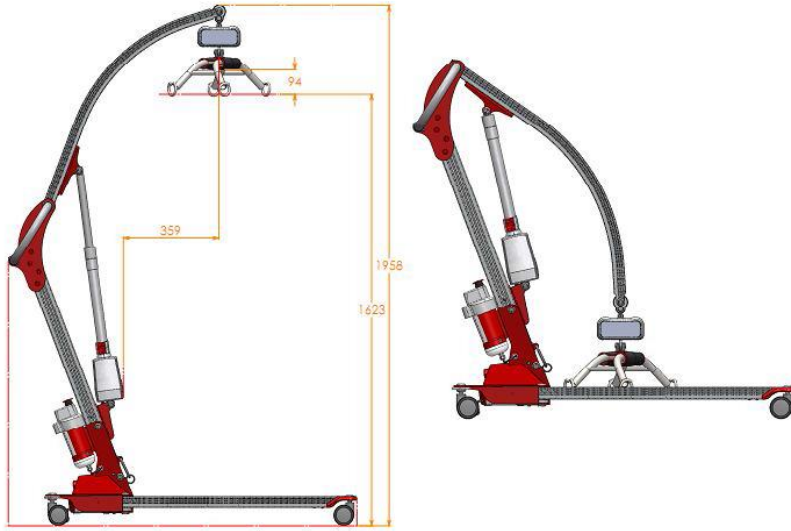




Summary of the technical specification (low base S17 002 model)

Classification	Class I medical devices (93/42/EEC Directive)
Weighing capacity	150 kg
Material	Steel and aluminium
Lifting actuator	24V – 10A
Battery	24 V- 3,3 Ah (NiMH)
Front castors	4 x 50 mm
Rear castors	2 x 75 mm with brakes
Folded legs width outside	68.9 cm
Outspread legs width outside	125.5 cm
Overall length	130.2 cm
Maximum height while unfolded	188.5 cm
Chassis' height	6.9 cm
Minimum space under unit	2.1 cm
Hoisting range	155 cm
Maximum reach at 600 mm	69.6 cm
Maximum reach from base	148 cm
Diameter for giration	65 cm
Total weight	42 kg
Condition of use	Indoor use only
IP classes	IPX4 in use, IPXX in charge
Service factor	2/10
Compliance with standards	EN ISO 10535:2007
Temperature of use	+10°C / +40°C
Sound power level	L _{wa} = 49 dB

POWEO® 150 STANDARD WITH SCALIS® MEDICAL SCALE



Classification	Class I medical devices (93/42/EEC Directive)
Weighing capacity	150 kg
Material	Steel and aluminium
Lifting actuator	24V – 10A
Battery	24 V- 3,3 Ah (NiMH)
Front castors	2 x 75 mm
Rear castors	2 x 100 mm with brakes
Folded legs width outside	68.9 cm
Outspread legs width outside	125.5 cm
Overall length	130.2 cm
Maximum height while unfolded	194.9 cm
Chassis' height	10.3 cm
Minimum space under unit	3.3 cm
Hoisting range	155 cm
Maximum reach at 600 mm	69.6 cm
Maximum reach from base	148 cm
Diameter for giration	65 cm
Total weight	41 kg
Condition of use	Indoor use only
IP classes	IPX4 in use, IPXX in charge
Service factor	2/10
Compliance with standards	EN ISO 10535:2007
Temperature of use	+10°C / +40°C
Sound power level	L wa = 49 dB

Technical specification of the provided accessories (battery, charger)

Technical specification of the S16 30 200 battery:

Technology	NiMh
Plastic case	ABS PC
Voltage	24V
Capacity	2.6, 3, ou 3,3 Ah
IP class	IPX4 in use, IPXX in charge
Compliance with standards	EN ISO 60601-1
Temperature range of use	+10°C / +40°C
Condition of use	Indoor use only
Security devices	<ul style="list-style-type: none"> - Protection against explosion risks: the casel is vented for removal of exhaust gas - Built-in electronic protection against surges on intensity, short-circuit ... - Built-in electronic protection against overheating during charging

Technical specifications of the S17 50 001 battery charger

The charger provided is able to work with any AC power value : voltage from 100V to 240V, frequency 50Hz or 60Hz.

The only adaptation needed is the AC cord.

Before ordering, please inform our services of the place of use: SCALEO Medical will provide the good model of the AC cord.

Input AC voltage	100-240VAC
Input AC frequency	50-60Hz
Output DC voltage and current	N.A. depends on the charge cycle (1)
Charging capacity	NiMh batteries, 10 to 20 cells
Maximum output current	0.9A
Compliance with standards	EN ISO 60601-1 , EN ISO 60601-1-2
Temperature range of use	-10°C / +40°C
Condition of use	Indoor use only
Security devices	<ul style="list-style-type: none"> - Operating voltage LED - Modulation of the charging current according to the state of charge of the battery - Automatic load sotp with visual alarm in case of overheating of the battery during charging
Usage	As a « table » charger or attached to the wall (pins and screws provided)

(1) The charge of NiMh batteries is a smart charge : a complete charge consists in a fast charge period, then a slow charge period, then a compensation charge.

ELECTRO MAGNETIC COMPATIBILITY (E.M.C)

- The POWEO® 150 requires special care regarding the E.M.C. it must be installed and commissioned by the EMC information provided in this handout.
- The RF communication devices and portable phones may affect the lift POWEO® 150
- The use of accessories, transducers and cables other than those specified, except transducers and cables sold by the manufacturer as replacement parts for internal components, can result in increased emissions or decreased immunity of the device.
- It is appropriate that the patient lifter POWEO® 150 is not used next to other devices or stacked with them, if it is not possible to do otherwise, the POWEO® 150 have to be monitored to verify normal operation in the configuration in which it is used.
- In terms of the standard NF EN 60601-1-2: 2007, essential performance of the POWEO® 150 is to never perform unwanted movements.

Directives and manufacturer's declaration - electromagnetic emissions		
The POWEO 150 is designed to be used in the electromagnetic environment specified below. Should the client or user of the POWEO 150 ensures it is used in such an environment		
Emission test	Conformity	Electromagnetic environment - Guidelines
RF Emissions CISPR 11	Group 1	The POWEO 150 uses RF energy only for its internal functions. Therefore, its RF emissions are very low and are not likely to cause interference in nearby electronic devices.
RF Emissions CISPR 11	Class B	The POWEO 150 is suitable for use in all premises, including domestic premises and those directly connected to the public power network supplying domestic premises.
Harmonic Emissions IEC 61000-3-2	Not applicable	
Voltage fluctuations / Flicker IEC 61000-3-3	Not applicable	

Directives and manufacturer's declaration - electromagnetic immunity

The POWEO 150 is designed to be used in the electromagnetic environment specified below. Should the client or user of the POWEO 150 ensures it is used in such an environment

INMUNITY test	Test Level IEC 60601	Level of compliance	Electromagnetic Environment Guidelines
Electrostatic discharges (E.S.D.) IEC 61000-4-2	± 6 kV contact ± 8 kV air	± 6 kV contact ± 8 kV air	Floor materials should be wood, concrete or ceramic tile. If floors are covered with synthetic material, should the relative humidity is at least 30%.
Transitional burst IEC 61000-4-4	± 2 kV for power supply lines ± 1 kV for input/output lines	Not applicable	Not applicable
Transitional surge IEC 61000-4-5	± 1 kV between phases ± 2 kV line to ground	Not applicable	Not applicable
Voltage dips, short interruptions and voltage variations on the input lines Power IEC 61000-4-11	<5% UT (> 95% dip in UT) for 0.5 cycle 40% UT (60% dip in UT) for 5 cycles 70% UT (30% dip in UT) for 25 cycles <5% UT (> 95% dip in UT) 5 s	Not applicable	Not applicable
Magnetic field @ 50/60 Hz IEC 61000-4-8	3 A/m	3 A/m	Quality of power supply network should be of a typical commercial or hospital environment. If the user of POWEO 150 requires continued operation during network outages of power, it is recommended to feed the POWEO 150 from an uninterruptible power supply or battery.

NOTE U_T is the AC mains voltage prior to application of the test level.


Recommended separation distances between portable and mobile RF communications equipment and the POWEO 150

The POWEO 150 is designed to be used in an electromagnetic environment in which radiated RF disturbances are controlled. The customer or user of the POWEO 150 can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the POWEO 150, as recommended below, according the maximum transmission power of the communication device.

Maximum rated output power of the transmitter W	Separation distance depending on the frequency of the transmitter m		
	from 150 kHz to 80 MHz	80MHz to 800MHz	de 800MHz to 2,5GHz
	Non applicable	$d = 0,35\sqrt{P}$	$d = 0,7\sqrt{P}$
0,01	Non applicable	0,04	0,07
0,1	Non applicable	0,11	0,22
1	Non applicable	0,35	0,7
10	Non applicable	1,1	2,2
100	Non applicable	3,5	7

Directives and manufacturer's declaration - electromagnetic immunity

The POWEO 150 is designed to be used in the electromagnetic environment specified below.
Should the customer or user of the POWEO 150 ensures it is used in such an environment

<p>Conducted RF disturbances IEC 61000-4-6</p>	<p>3 Vrmsf 150 kHz to 80 MHz</p>	<p>Non applicable</p>	<p>Portable and mobile RF communications should not be used closer to any part of the POWEO 150, including cables, than the recommended separation distance calculated from the equation applicable to the frequency of transmitter. Recommended separation distance</p>
<p>Radiated RF disturbances IEC 61000-4-3</p>	<p>10 V/m 80 MHz to 2,5 GHz</p>	<p>10 V/m</p>	<p>Non applicable</p> <p>$d = 0,35\sqrt{P}$ 80MHz à 800MHz $d = 0,7\sqrt{P}$ de 800MHz à 2,5GHz</p> <p>Where P is the maximum power output of the transmitter in watts (W), according to the transmitter manufacturer and d is the separation distance in meters (m). The field strengths from fixed RF transmitters, as determined by an electromagnetic investigation (a) should be below the level of compliance in each frequency range. (b) Interference may occur in the vicinity of the equipment marked with the following symbol:</p> 

NOTE 1 At 80 MHz and 800 MHz frequency range applicable is the highest.

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

a: Field strengths from fixed transmitters, such as base stations for radio (cellular / cordless) telephones and mobile radios, amateur radio, broadcasting AM and FM and TV broadcast, cannot be predicted theoretically with accuracy. To assess the electromagnetic environment due to fixed RF transmitters should be considered an electromagnetic site investigation. If the field intensity measured at the location where the POWEO 150 is used exceeds the applicable RF compliance level above, the POWEO 150 should be observed to verify that operation is normal. If abnormal performance is observed, additional measures may be needed, such as redirect or reposition the POWEO 150.

b: In the frequency range 150 kHz to 80 MHz, it is appropriate that the field strengths are less than 3 V / m.

CLEANING AND DISINFECTION PROTOCOL



THE FOLLOWING PROGRAM FOR CLEANING AND DISINFECTION HAS BEEN
ESTABLISHED IN
COMPLIANCE WITH THE
“GUIDE TO GOOD PRACTICES FOR DISINFECTION OF MEDICAL DEVICES” EDITED
BY THE FRENCH
COUNCIL OF PUBLIC HEALTH .
DEVICE CLASSIFICATION : NOT CRITICAL
INFECTUOUS HAZARD: LOW RISK
LEVEL OF TREATMENT REQUIRED: LOW-LEVEL DISINFECTION

General recommendations:

- Discard after use any equipment or disposable medical device
- Observe the general hygiene and safety precautions (gloves, goggles, protective apron and mask if necessary) when handling equipment contaminated with body fluids and before contact with disinfectants.
- Disinfect your hands after removing gloves
- Always perform the cleaning and disinfecting from top to bottom.
- Respect the expiry dates of products used
- Follow the recommended dilutions
- Never mix multiple products
- In case of contact with eyes, swallowed ... refer to safety data sheet of the manufacturer of the product and notify a physician or poison control centre.

Recommended frequency for the cleaning and disinfection:

- The multiple-use devices should be thoroughly cleaned and / or disinfected at least once a month if they are used by one patient.
- The multiple-use devices should be systematically and thoroughly cleaned and disinfected between patients if they are used by many patients to avoid cross infection.

Prepare the equipment for disinfection

Purpose: Facilitate cleaning, lower the level of contamination, protect staff and environment.

- Remove the slings, sheets, all the bed covers, cushion and mattress
- Place the hoist in the highest position and lift the head section up
- Always unplug the power cord from the AC outlet/ eventually remove the battery before cleaning

Cleaning:

Purpose: Eliminate dirt

- Use gloves for this operation
- Use preferably a non-abrasive type accessory: a soft cloth or soft bristle brush if necessary. Do not use aggressive accessory that may damage the surfaces of the structure and facilitate the onset of corrosion
- Use non-abrasive cleaning products
- Perform the dilution of detergent in warm water in the proportions given by the detergent manufacturer
- After cleaning, rinse with

Disinfection:

Purpose: To destroy or inactivate micro-organisms

- Use gloves for this operation
- Apply a disinfectant with a carrier moistened with a disinfectant solution
- Rinse thoroughly with water and a sponge

Drying:

Purpose: Protect equipment from contamination once disinfected

- Wipe the equipment with a dry, lint-free clean

Storage:

Objective: To maintain the cleanliness of the clean and disinfected devices

- Store equipment and medical devices, once retired, in clean places, raised above ground and protected from dust, moisture, heat, sunlight and risk of deterioration of packagings (tears, staples, ...)

Product should be avoided for cleaning and disinfecting:

- peracetic acid at concentrations > 10%
- organic solvents like halogenated hydrocarbons / aromatic or acetone
- products with a pH > 8 and < 5
- products containing corrosive or caustic substances

Recommended products for cleaning and disinfecting:

- Argos spray 750 ml Argos 1861
- Neodisher® Dekonta, Neoform MED AF, Neoform MED FF, Neoform MED Spray
- SEPTOTAL S-911
- Surfanios
- Axiol



In the case of use of a specialized product, we strongly advise to adhere to the protocol recommended by the manufacturer.

PERIODIC INSPECTION AND PREVENTIVE MAINTENANCE

The aim of the periodic control visit is to control safety and maintenance issues on equipment that is being used. This control, as well as a preventive maintenance on the equipment, must be done regularly every year so as to prevent malfunctions that could harm the patients or users – according to annexe B of the EN ISO 10535 standard.

PERIODIC CONTROL / PREVENTIVE MAINTENANCE CHECKLIST

PI : Periodic Inspection PM: preventive Maintenance

PI	PM	Maintenance operations	OK	Remarks
<input type="checkbox"/>	<input type="checkbox"/>	Cleaning and decontamination	<input type="checkbox"/>	
Verifying the base :				
<input type="checkbox"/>	<input type="checkbox"/>	Geometry/flatness of the base	<input type="checkbox"/>	
<input type="checkbox"/>	<input type="checkbox"/>	Inferior column fitting	<input type="checkbox"/>	
	<input type="checkbox"/>	Cleaning and oiling of the front and back wheels (if the wheels can be dismantled)	<input type="checkbox"/>	
	<input type="checkbox"/>	Opening of the legs	<input type="checkbox"/>	
	<input type="checkbox"/>	Battery case	<input type="checkbox"/>	
	<input type="checkbox"/>	Electronic box	<input type="checkbox"/>	
	<input type="checkbox"/>	Main actuator number of cycles	<input type="checkbox"/>	
	<input type="checkbox"/>	Emergency lowering	<input type="checkbox"/>	
Verifying the column :				
<input type="checkbox"/>	<input type="checkbox"/>	Checking the level of wear and tear of the joints	<input type="checkbox"/>	
<input type="checkbox"/>	<input type="checkbox"/>	Actuator fixing check	<input type="checkbox"/>	
<input type="checkbox"/>	<input type="checkbox"/>	Emergency stop	<input type="checkbox"/>	
<input type="checkbox"/>	<input type="checkbox"/>	Emergency mechanical lowering (actuator)		
Verifying the suspension :				
	<input type="checkbox"/>	Checking the general state of the suspension	<input type="checkbox"/>	
<input type="checkbox"/>	<input type="checkbox"/>	Checking the hooks with the lifting arm	<input type="checkbox"/>	
	<input type="checkbox"/>	Checking the rotational axis	<input type="checkbox"/>	
<input type="checkbox"/>	<input type="checkbox"/>	Checking the security pins	<input type="checkbox"/>	
Electrical verification :				
	<input type="checkbox"/>	Checking the connections	<input type="checkbox"/>	
	<input type="checkbox"/>	Checking the actuators (main and opening leg)	<input type="checkbox"/>	
Verifying the accessories :				
<input type="checkbox"/>	<input type="checkbox"/>	Mobile push bar	<input type="checkbox"/>	
<input type="checkbox"/>	<input type="checkbox"/>	Charger	<input type="checkbox"/>	
<input type="checkbox"/>	<input type="checkbox"/>	Remote control	<input type="checkbox"/>	
<input type="checkbox"/>	<input type="checkbox"/>	Battery	<input type="checkbox"/>	
<input type="checkbox"/>	<input type="checkbox"/>	Slings Number of slings :	<input type="checkbox"/>	
<input type="checkbox"/>	<input type="checkbox"/>	Other accessories	<input type="checkbox"/>	
Functional verification :				
<input type="checkbox"/>	<input type="checkbox"/>	Rolling	<input type="checkbox"/>	
<input type="checkbox"/>	<input type="checkbox"/>	Lifting / lowering functioning with no load	<input type="checkbox"/>	
<input type="checkbox"/>	<input type="checkbox"/>	Lifting / lowering functioning with maximum load	<input type="checkbox"/>	
<input type="checkbox"/>	<input type="checkbox"/>	Opening / closing of the legs	<input type="checkbox"/>	
Labelling :				
<input type="checkbox"/>	<input type="checkbox"/>	Control label	<input type="checkbox"/>	
	<input type="checkbox"/>	Identification/CE label	<input type="checkbox"/>	



Optional accessories (SCALIS® scale, motorized suspension, slings) are delivered with their own user manuals including complete inspection check lists

POWEO® SERVICE TOOL

In order to help the customers to manage the maintenance and inspections of their hoists SCALEO Medical has equipped all the POWEO® range (except the POWEO® 130 home care model) with a very smart embedded software.

The electronic board has the following main functions:

Driving the hoist

- 3 actuators driving capability (one at a time), electrical emergency lowering , main actuator software safety : the hoist stops if the load is over loaded (max value + 10kg), Legs opening safety : the legs won't be opened or closed if an obstacle is met
- Battery monitoring
- Alarms. The user will be warned by a visual alarm on the remote if
- Periodical inspection date is within two months or periodical inspection date has expired
- The main fuse it out of order, real time clock out of order or not right
- The main actuator is 97% worn and must be changed

Storage capabilities

- Date of first use : first power on of the hoist. This date is used to calculate the date of first periodical inspection.
- History of : transfers per weight range: [10-30kg] 30kg-60kg] 60kg-110kg] 110kg 170kg-] CFS-170kg],
- actuators (main and legs opening) alarms, of use of the emergency lowering device, main actuator use, changes of the period of periodical inspection, changes of the value of CFS, main actuator replacements, battery recharges, battery alarms

Hoist parameters memorization

- Hoist model , maximum safety load of the hoist , frequency of periodic inspection, consumption of the actuators
- Serial number of the hoist

Most of the functions can be driven by the technician, using a user friendly software : the POWEO®

Service tool:

Function	Light version		Full version	
	PC software	Embedded interface	PC software	Embedded interface
Test of the main electronic board			X	
Main actuator change			X	
Main fuse test		X		X
Real time clock repair	X (1)	X	X (1)	X
Main actuator monitoring	X (1)	X	X (1)	X
Weight measurement setting			X	X
Setting the maximum capacity of the hoist			X	X
Periodical inspection period setting	X	X (2)	X	X (2)
Setting the date of periodical inspection at current date	X	X	X	X
Disable the periodical inspection alarm	X	X	X	X
Real time setting of the hoist	X		X	X
Driving of the hoist without the remote	X		X	
Reading all the parameters of a POWEO hoist	X		X	
Data saving	X		X	
Writing hoist parameters in a ASCII text file	X		X	
Writing hoist history in a ASCII text file	X		X	

(1) Performed by reading hoist parameters

(2) Limited to 6 months or 12 months with the embedded interface. 1 to 98 months with the software interface

SAFETY MEASURES



*The patient lifters can tip over if the lifter is not used correctly. Not conforming to the following safety measures could lead to serious bodily harm to the patient or the carer.
So please read the following instructions carefully.*

1. Before executing any maintenance, cleaning, or transport procedure, be sure to unplug the lifter.
2. If the lifter breaks down or has a malfunction, do not try to repair it yourself. You should seek the help of a qualified technician, an authorised distributor, or the customer service department of SCALEO Medical.
3. Always demand original authorised spare parts.
4. The proper use of this device, just like the use of any electrical and mechanical device requires the abidance to certain fundamental and common rules, such as not pulling the electrical power cables in order to unplug the current card after the battery has been recharged.
5. Apply the brakes when the patient lifter needs to be still. Check that it is properly immobilised.
6. For cleaning the equipment and the accessories, use standard and approved products.
7. Recharge the battery every evening.
8. Abnormal use :
 - Using the lifter while battery alarm is on.
 - Using functions without explanation.
 - Use of the lifter or its accessories by children.
 - Using the patient lifter with a higher than 150 kg load
 - Outdoor use.
 - Use, with or without a patient, on a slope.
 - Moving the patient lifter over non cleared floors, or thick carpets.
 - Plugging the lifter's charger onto incorrect voltage may cause the charger or the battery destruction and/or malfunctions of the battery charging function.
 - Plugging in electrical appliances other than originally intended
 - Cleaning the lifter with excessive water, or with a pressurised hose
 - Guiding the lifter by using the suspension or other non intended parts
 - Using damaged, torn, or worn slings

Injury or damage to the equipment may occur if the Poweo ® 150 is not properly used, more precisely if :

- a. the protective covers of the chassis are taken off by non qualified personnel.
- b. a regular maintenance is not set up,
- c. maximum load capacity is exceeded,
- d. repairs or electrical modifications are made by non qualified personnel.



If you experience any problems with the equipment, observe any faulty or damaged parts or electrical malfunctions, contact our customer services which will either take care of your problem directly, or communicate the contact details of a qualified authorised dealer close to you. In all case, you must require that original and new spare parts be used.

LIMITED WARRANTY

This warranty is extended only to original consumer purchases of the Poweo ® 150 either from the authorised retailers or representatives.

We warrant the products manufactured by them to be free from defects in materials and workmanship for a period of 1 year from the date of purchase for business use. If, within such warrant period, any such products shall be proven to our satisfaction to be defective, such product shall be repaired or replaced, at our option. This warranty does not include any shipping charges incurred in replacement part installation or repair of such product. Our sole obligation and your exclusive remedy under this warranty shall be limited to such repair and/or replacement

DISPOSAL

SCALEO Medical hoists and accessories are at least 90% recyclable.

















The end of life disposal of the device must be done respecting the recycling circuit and local relevant regulation.

This particularly concerns the electrical and electronic equipment (WEEE) and the lead battery (BA).

For waste management that respects the environment, please kindly contact the sales manager in your area.

PICTOGRAMS USED ON THE LABELS

The labels on the lift and accessories using standardized pictograms.
Some are informative, but others are intended to warn you of dangers.
You will find below what they mean.

	Meaning
	Manufacturer
	Date of manufacturing
	Device reference
	Device serial number
	Temperature range
	Do not burn
	Security pin : do not remove this pins. Periodically inspect this pins.
	Warning : read user manual for instruction
	Recyclable device
	Indoor use only
	Do not open or unmount
	Contains potential wastes of electrical or electronic equipment
	Read user manual for instruction
	Direct current power source
	CE mark : the POWEO is compliant to European regulation concerning medical devices
	Maximum load



*The proof is
in the product.*



Contact Information



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