



# Pallas/150

## Stand-aid lifter

### User instruction

#### **Important - information**

This user instruction must be read before the Pallas 150 is used.

This user instruction is intended for technicians, installers, therapists and other personnel, in connection with the use, servicing and maintenance of the Ergolet Pallas 150 lifter.





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# 1. Aim and use

## 1.1 Purpose

Pallas 150 is a mobile stand-aid lifter designed to transfer clients in institutions such as nursing homes, hospitals, care centres and in home care. Transfer situations include short transfers from a bed to a chair/wheelchair, from wheelchair to another chair and from chair to a toilet.

Never use the Pallas 150 lifter for other purpose than originally intended.

Pallas 150 is approved to transfer with a maximum load on 150 kg.

### Using Pallas 150 preconditions the following:

- Personnel have received qualified instruction in using the Pallas 150 lifter.
- The lifter has been assembled correctly and according to these instructions.
- Persons who transferred must not be squeezed or trapped in the lifting situation.
- The Pallas 150 lifter has been developed for use with Ergolet lifting slings and other sling products authorized by Ergolet. See Ergolet's sling leaflet for specific information about authorized models.
- Pallas 150 is intended for indoor use under normal temperatures (+2 – +40 C°) and relative humidity (40-90%).

## 1.2 Safety instructions



**Important – warning!**

This user instruction must be read thoroughly before the Pallas 150 is taken into use.

- All parts must be mounted correctly according to this guide.
- There must be no indication of wear on the Pallas 150 or the lifting sling.
- NEVER begin lifting if there is suspicion of any defect (abnormal sound, loose brackets etc.) In such cases the lift must be taken out of service immediately and your dealer or Ergolet contacted.
- The Pallas 150 capacity is 150 kg and must never be exceeded. When using Pallas 150 in connection with other components e.g. slings it is always the component with the LOWEST weight capacity that decides the maximum lifting capacity.
- Ensure that neither carers/helpers nor clients/users can be hurt during the lifting.
- Never lift higher than necessary in the actual lifting situation.
- See section 5.1 (annual check) for further information.

## 1.3 Daily check

The carer/helper is responsible in ensuring that a daily check is carried out BEFORE Pallas 150 and accessories are used, including the following:

- 1) Check that the Pallas 150 is complete and no parts are missing.
- 2) Check that there are no signs of rust, surface damage or other defects. If there is any sign of a defect the Pallas 150 must be taken out of use.
- 3) If any abnormal sound is heard from Pallas 150, the lifter must not be used before personnel authorised by Ergolet have carried out a safety check on the unit.
- 4) Check the lifting slings for any damages especially as regards to the lifting straps for tears in the material. The slings must not be used if defects are detected.
- 5) If in any doubt concerning the use of Pallas or lifting slings contact Ergolet for advice and guidance.

## 1.4 Terminology

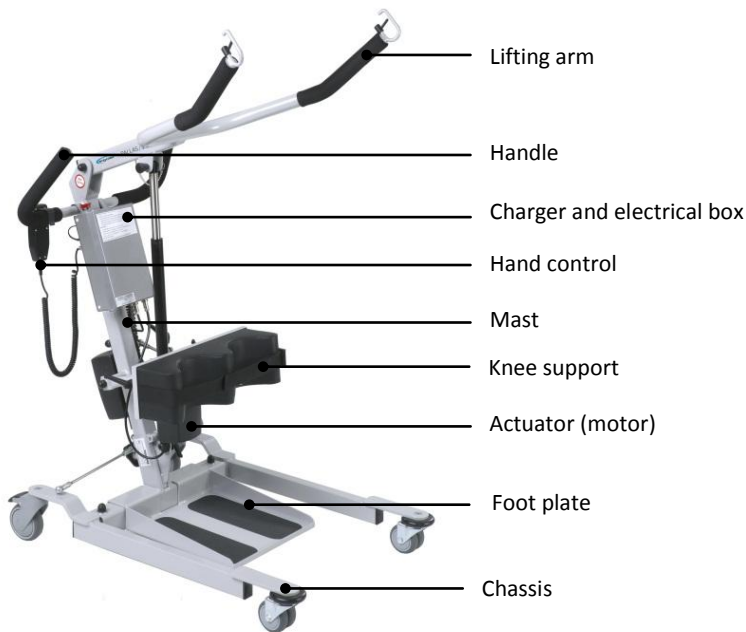


Fig. 1.4

## 1.5 Unpacking

Check that all the parts are present and undamaged. Any suspicion of damage or shortage should be reported to your dealer or Ergolet. We recommend that the box packaging is kept if Pallas 150 is to be used on other sites or for return shipment in case of repair or annual check.

### Content of the box:

- 1 Chassis
- 1 Mast
- 1 Lifting arm
- 1 Knee support
- 1 Foot plate
- 1 Charger
- 1 Actuator
- 1 Electrical box
- 1 Control device
- User instructions



## 1.6 Assembly instruction

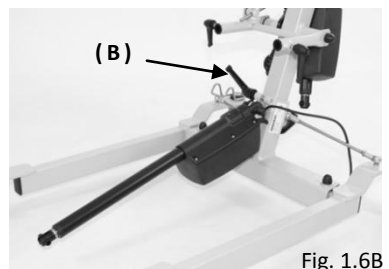
Following step by step the assembling guidance of the Pallas 150:

For assembling the lift you need two 17 mm spanners, a 13 mm spanner and a NV5 hex key.

- 1) Place the chassis on the floor and brake both wheels (A). (Fig. 1.6A)



- 2) Place the mast into the chassis and ensure that the mast is inserted completely in the chassis before the locking screw (B) can be tightening. (Fig. 1.6B)



- 3a) Place the electrical box on the inner side of the mast (C). At this time ensure that the charging cable (short cable) with DC plug is placed between the mast and electrical box and fitted to the corresponding socket on the box. (Fig. 1.6C)

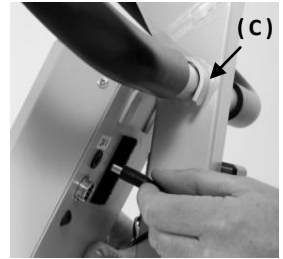


Fig. 1.6C

- 3b) Connect the hand control to the back of the electrical box. (Fig. 1.6D)



Fig. 1.6D

- 3c) Connect the lifting arm (actuator) and the leg spreading (electric) underneath the electrical box. (Fig. 1.6E)

**Note:** Press the red emergency button on the electrical box before connecting motor and box. The emergency button disconnects all electrical contacts.



Fig. 1.6E

- 4) Adjust the leg spreading in or out with the hand control, until the bolt can engage and tightening the bolts and nuts with the spanners and hex key. (Fig. 1.6F)



Fig. 1.6F

- 5) Mount the knee support, ensure that the two locking screw (D) are tightening and mount the foot plate. (Fig. 1.6G)

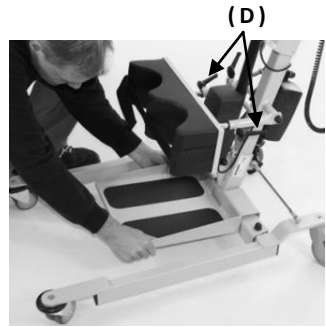


Fig. 1.6G

- 6) Mount the lifting arm on the mast by tightening the bolts and nuts with the spanners. Tighten, but do not over tighten since the arm must move freely. (Fig. 1.6H)



Fig. 1.6H

- 7) Lift the arm and connect the upper end of the actuator spindle in the provided bracket with the bolt and secure with the safety ring. (Fig. 1.6I)
- 8) Release the emergency button and try to test.



Fig. 1.6I



## 1.7 Lifting slings

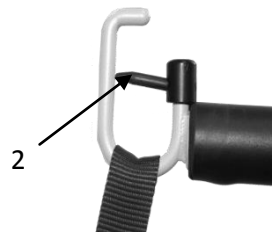
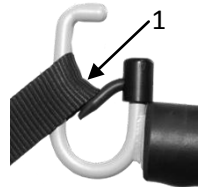
Pallas 150 is equipped with a lifting arm designed for use with Ergolet lifting slings. Pallas 150 has two hooks which fit to the lifting slings. If using non-authorized slings Ergolet will have no responsibility for faults and accidents.

Ergolet can assist in choosing slings and are also offer training sessions in transfer techniques and the correct use of slings.

### Hanging slings on the Pallas 150

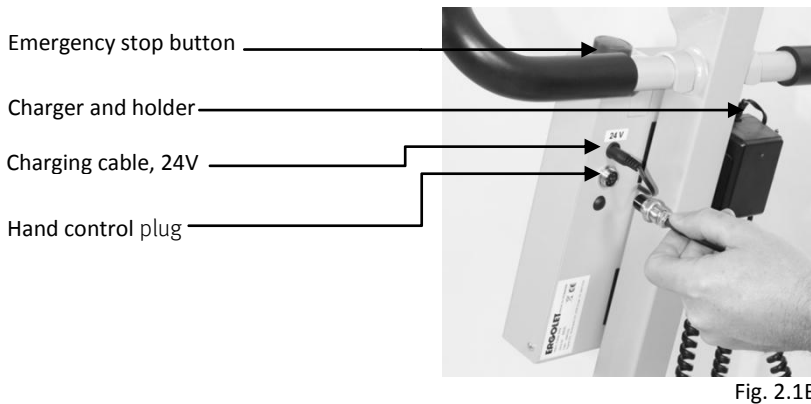
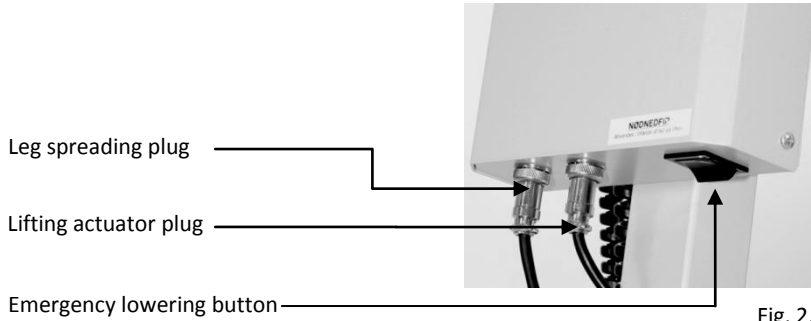
Ergolet accepts no responsibility if slings are placed incorrectly, it is always the onus of the carer/helper to ensure that the sling is correct for the situation needs and is correctly mounted.

- 1) The sling strap is placed in the hook hole and pulls down the strap.
- 2) Ensure that the strap is past safety pin.



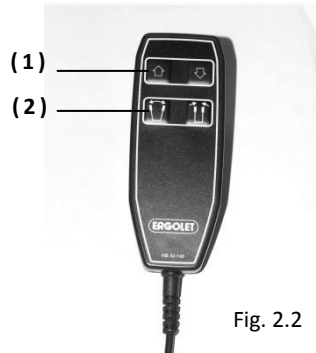
## 2. Functions

### 2.1 Pictograms and functions – control-box



### 2.2 Pictograms and functions – hand control

- (1) This function lifts the lifter up/down.
- (2) This function spread the leg spreading in/out.



## 2.3 Operation and technical

Place the hand control in the socket (see section 1.6) on Pallas 150 which is now ready for use.

**Note:** Ensure that the emergency stop button is in the “out” position.

### Adjusting the lifter:

- **Directional guide**

Can be used for controlling the forward and backward direction during transportation



- **Foot pedal for leg spreading**

The pedal is to be used for opening and closing the legs



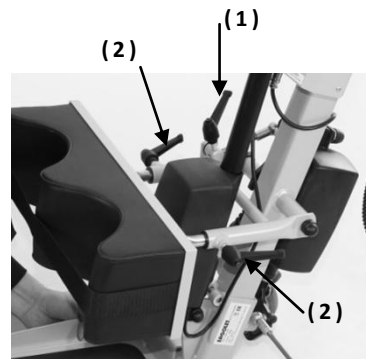
- **Knee support**

The knee support can be adjusted individually to the user.

(1) The angle of the knee support can be adjusted by loosening the locking screw (1). When the screw is released it is possible to place the knee support as desired. Tighten the screw again.

(2) The depth of the knee support can be adjusted by loosening the two locking screw (2). Pull the knee support in or out and adjust it to the patient. Tighten the screw again.

The top edge of knee support must be below the kneecap and support should never push the knee. It is an option to apply the leg-belt. The Knee support must never press on the knee-caps.



## 2.4 Safety functions

### Electrical emergency lowering button:

This function lowers the patient. It can be used if hand control is out of order. This function is only available if the emergency button is not activated.



### Emergency stop:

This function is only to be used in an emergency.eg. if the lifter does not react or does not stop after releasing the hand control operation. If the emergency button has been activated all functions immediately stops.



**Note:** If the emergency button or the emergency lowering handle has been activated due to an emergency the Pallas 150 must not be used again before a check has been made and any defect repaired.

In any doubt, please contact Ergolet.

## 2.5 Charging

Pallas 150 is fitted with batteries that require regular charging. Ergolet recommends that the Pallas 150 is charged when it is not in use or every night. Pallas 150 is fitted with a diode which gives the following information concerning battery condition during use.

The charger is connected to 220V and the charger plug to the electrical box to the socket marked 24V on the back of the control box.



**Note:** The Pallas 150 cannot be overcharged.

- |              |   |
|--------------|---|
| Green = 100% | When the batteries are fully charged the diode shines green.  |
| Yellow = 50% | When the batteries are approx. 50% the diode shines yellow – at this point it is recommended that Pallas 150 is put on charge.  |
| Red = 20%    | If the batteries reach a critical point the diode will shine red and at the same time an acoustic ( "beep, beep" signal) will be heard. Pallas 150 must IMMEDIATELY be put on charge in this situation. |

## 2.6 Transport

The Pallas stand-aid lifter is most safely transported using the original packing.

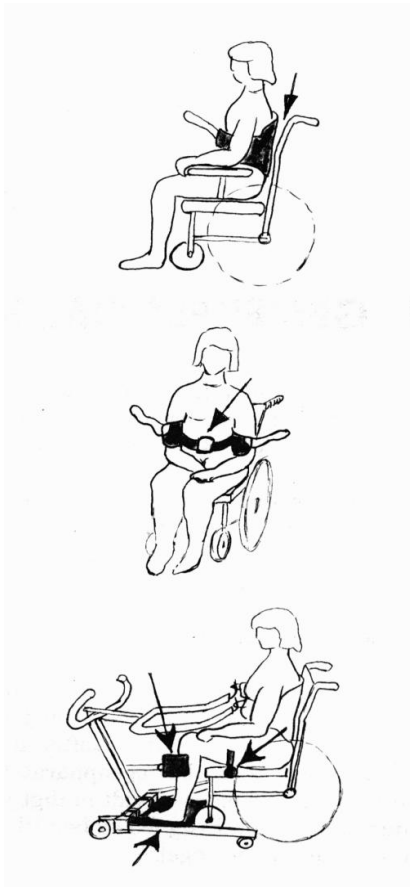
Symbols are printed on the packaging to ensure the best information to carrier companies.

### 3. Using the lifter

#### 3.1 Using Pallas 150

Pallas 150 is ready for use if all the assembly instructions have been followed.

#### 3.2 Tips for using slings



#### **Lifting from sitting position:**

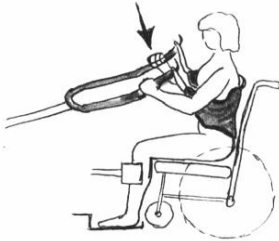
Place the sling behind the patient by pushing the back support all the way down to the small of the back.

Close the safety belt – over the waist, approx. at the navel and tighten it. The safety belt should sit tightly above the waist.

Brake the wheel chair and move the hoist/lift to the user. Lift the user's feet onto the foot plate; bring the hoist/lift forwards until the knee support is very close to the users' knees.



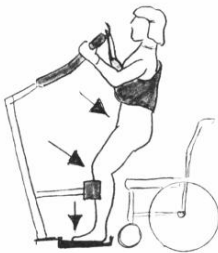
Fasten the chest sling onto the hooks on the Stand-aid arm. The user may keep his arms inside or outside the sling. If the user is semi-paralyzed, it may be necessary to keep the paralyzed arm inside the sling.



Start lifting until the sling sits tightly around the back. Then tighten the sling belt tighter around the waist.

Ensure that the client feels no discomfort.

The user may hold the foam padded part of the arm and is asked to take part (help) the lifting action. The user should then try to hold himself as upright as possible and look forwards.



Ask the user to press down onto the plate and to stretch both knee-and hip-joints.

The carer may help by placing a hand on to the knee and press the knee lightly downwards.

Continue the lifting process according to the users' ability, until he stands as upright as possible.



### **From standing to sitting position:**

Take Pallas 150 to the secured (braked) wheel chair, so the hollow of the knee rests against the front edge of the seat-cushion.

### **Do not brake the stand-aid lifter:**

The user is lowered so that his bottom is placed on the bottom half of the chair's back-rest. That way the chair may tilt backwards and the user glides into the back of the chair. This movement demands utmost care and attention from the carer.





### Lifting with the universal sling:

When using the universal sling, the foot plate must be removed from the chassis.

Place the universal sling far down so the bottom edge of the back-support reaches the small of the back.



Pull the sling leg support forward on the outer side of the thighs. Then place them under the thighs and cross the sling straps in front.



The user may be raised in a more or less reclining position, e.g. a relatively short back strap and a relatively long leg strap can be used. The straps are color coded in order to simplify an individual adjustment of the sling.



The universal sling can also be used with a head/neck support.



### **3.3 Use as a walking aid**

Since the walking-aid merely has a supporting effect, it is important that the carer carefully evaluates the user in this situation.

- 1) Remove the knee support and the foot plate.
- 2) The user keeps his arms outside the sling straps. Place the chest sling on the user down to the small of the back and waist.
- 3) Secure the belt with the click-locks and tighten until the sling is securely fastened around the waist.
- 4) Allow the user to hold onto the lifting arms.
- 5) Fasten the chest sling onto the hooks on the Pallas 150 lifting arms.
- 6) Start lifting until the sling tightens around the back.
- 7) Stop lifting and tighten the sling straps again.
- 8) Continue lifting until the user is in an upright position.

The carer can now pull the user slowly forward in order to do some walking exercise.

## **4. Maintenance**

### **4.1 Cleaning**

The actuator (motor), electrical box and hand control may be cleaned using a slightly damp cloth with a small quantity standard household cleaning agent. Chemicals and other strong/abrasive agents must not be used. The rest of the lifter may be cleaned with detergent or disinfectant.

### **4.2 Storage**

Pallas 150 must be stored in a dry environment with relative humidity under 90%.

If the Pallas 150 is not to be used over a longer period of time it is best to fully charge the unit and activate the emergency button to save battery before putting in storage.

## 5. Check and trouble shooting

### 5.1 Annual check

Pallas 150 must always be maintained by qualified and authorised personnel who have been approved by Ergolet.

**Maintained involves:** Replacing batteries, charger, lifting straps and other components.

The manufacturer Ergolet stipulates that this hoist **MUST** be checked by a qualified and authorised person at least once a year. This annual check is also recommended in the relevant European Standard (EN ISO 10535) for patient lifters/hoists. More frequent checks may be required by national laws.

It is the onus of the buyer to ensure that this annual check is carried out.

If it is necessary to replace any parts due to wear or damage these must be obtained/purchased from Ergolet.

## 5.2 Trouble-shooting

### Fault:

The lifter does not react when the hand control buttons UP/DOWN are used	Possible cause:	The lifter is not on or emergency stop is activated.
	Solution:	Deactivate emergency stop (see section 2.4)
	Possible cause:	Defect hand control.
	Solution:	Try using another hand control. Alternative is to get a new hand control from the dealer.
	Possible cause:	Flat battery.
	Solution:	Charge battery (see section 2.5).

### Fault:

The lifting arm can travel up or down not both.	Possible cause:	Fault in the electrical control box or control device.
	Solution:	Replace the control box or control device.

### Fault:

Actuator is noisy or vibrates abnormally	Possible cause:	Actuator cannot move freely in the mountings.
	Solution:	Remount the actuator and ensure that it can move freely.
	Possible cause:	Actuator is defect or faulty assembly.
	Solution:	Replace the actuator.

### Fault:

The lifting movement or leg spreading movement is slow	Possible cause:	Power shortage - Flat battery.
	Solution:	Charge batteries (see section 2.5).
	Possible cause:	Defect battery.
	Solution:	Replace battery.
	Possible cause:	Connection between the charger and the hand control are defect.
	Solution:	Try using another hand control. Alternative is to get a new hand control from the dealer

**Fault:**

Does not charge	Possible cause:	Charger is not connected to the main supply.
	Solution:	Connect charger.
	Possible cause:	Defect charger.
	Solution:	Try another charger or order a new from Ergolet or the dealer.
	Possible cause:	Connecting to the hand control is defect.
	Solution:	Try another hand control or order a new from Ergolet or the dealer.

## 6. Technical data and dimensions

### 6.1 Technical specifications

**Lifting:**

Load capacity:	150 kg
Number of lift movements:	100 with 80 kg (Refer to Ergolet for definition)
Intermittens:	10%, max, 2 min/18 min
Electronically emergency lowering:	Yes

**Electrical details:**

Power supply (Input):	100-240 VAC 50/60 Hz, max 0,35 A
Power supply (Output):	16W (30VDC, 530 mA)
Output voltage:	24V $\overline{\text{---}}$
Control box (Output):	192 VA
Battery capacity:	2,9Ah
Internal charger (output):	27,5V $\overline{\text{---}}$
Internal charger (max current):	400mA

IP-class:	Charger:	IPX4
	Hand control:	IPX5

**Noise:**

Noise level:	45dB(A)
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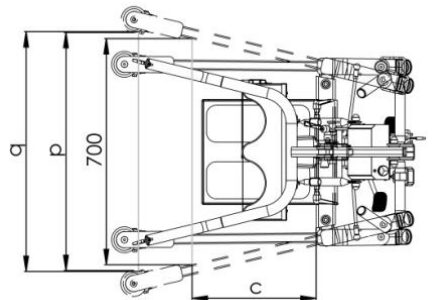
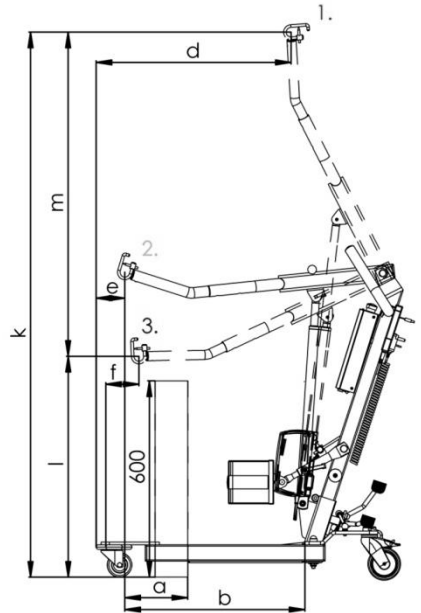
More test results may be available by contacting Ergolet.

## 6.2 Dimension

1.	Highest point	
2.	Maximum reach point	
3.	Lowest position	
a)	Maxi. reach at 600 mm (reference height):	192 mm
b)	Maxi. reach from base:	550 mm
c)	Reach from base with legs spread to 700 mm:	387 mm
d)	Min. dist. from wall to CSP * at maxi. height (legs spread):	586 mm
e)	Min. Dist. from wall to CSP * at maxi. reach (legs spread):	87 mm
f)	Min. dist. from wall to CSP * at min. height (legs spread):	102 mm
k)	Maxi. height of CSP *:	1666 mm
l)	Min. height of CSP *:	675 mm
m)	Hoisting range:	991 mm
p)	Maxi. internal width:	735 mm
q)	Internal width at maximum reach:	740 mm

### **Weight:**

Weight in total:	45 kg
Heaviest component:	15 kg



## 7. Environment and quality

Pallas 150 has an expected life time of minimum 10 years under the assumption that all recommended service checks have been carried out and that the normal maintenance and care instructions have been followed.

### 7.1 Disposal

Disposal of this mobile stand-aid can be made through Ergolet. After useful lifetime Ergolet will receive the unit back and split the individual fractions in an environmentally friendly way either through reuse or recycling.

Fractions that contain halogens, aluminium, lead acid batteries, ABS plastic, steel may damage the environment if not handled in an environmentally responsible way.

### 7.2 Battery

Pallas 150 is equipped with 2x12V batteries which may be returned either to the local recycling station or to Ergolet at the end of their lifetime.

### 7.3 Quality

Ergolet is certified according to the quality standard ISO 9001 and ISO 13485.

These certifications mean that the products and the company comply with the international standards for quality management, environmental management and standards for traceability of medical products.

Pallas 150 mobile hoist is classified as a Medical device class 1 product.



## 7.4 Symbols and abbreviations



Direct current



Double insulated



The patient is not separated from the ground and the chassis



The product should be reused where possible



Refer to user's instruction

**SWL** Safe working load (User + sling)

## 8. Accessories

### Products:

Item number	Description
011-01505	Pallas 150, manual leg spreading
011-01506	Pallas 150, electrical leg spreading

### Accessories:

Item number	Description
017-00001	T-grip
750-33010	Foot platform 50 mm
750-33015	Foot platform 100 mm

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**Manufacturer:**

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