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# **USER GUIDE**

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## **Pallas 2000 & 5000**



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## Congratulations!

We thank you for choosing this Ergolet Pallas 2000 Hoist/Lift. Please use a few moments to read this guide and familiarize yourself with the many advantages and features.

The **user** in this manual is the person being lifted.

The **carer** is the person handling the hoist/lift.

Legend:



Attention - special care



Note the intervals and information at the time indicated



Guidance concerning the technical handling



Guidance for use with the user

### 1. SAFETY INSTRUCTIONS FOR THE PALLAS 2000 + PALLAS 5000

Before lifting an user please check all necessary controls and actions concerning the safety instructions mentioned in the user guide. The Pallas 2000 + Pallas 5000 must only be used according to this user guide. Persons handling this Pallas 2000 + Pallas 5000 must have read and understood this user guide.

The Pallas hoist/lift should be stored at normal indoor temperatures (+2 - +40 degrees C) and relative humidity (40 – 90%).

The lift load must **not exceed 150 kg**.

Before use ensure that the hoist/lift has been assembled correctly and according to these instructions.

Use only slings mentioned in this user guide.

The hoist/lift must only be used by authorized personnel who have been properly instructed.

Before and during lifting ensure that there is no danger of any person being trapped by the hoist/lift (patients, carers etc.).

Never lift an user before making a daily check or if there is any suspicion of a defect.

**Never lift an user higher than necessary!**

**Daily check -** the carer is responsible for the visual check of visible defects before use and for informing the dealer/manufacturer of any defects. This daily check comprises the following:

**Lifter:**

- check that no parts are missing.
- check for any abnormal movement of the chassis, mast, arm.
- check that there are no abnormal or unusual sound from the actuator or electrical controls
- check for any signs of rust or surface damage to the lifter
- ensure that there are no signs of any breakage on the lifter

**Slings:**

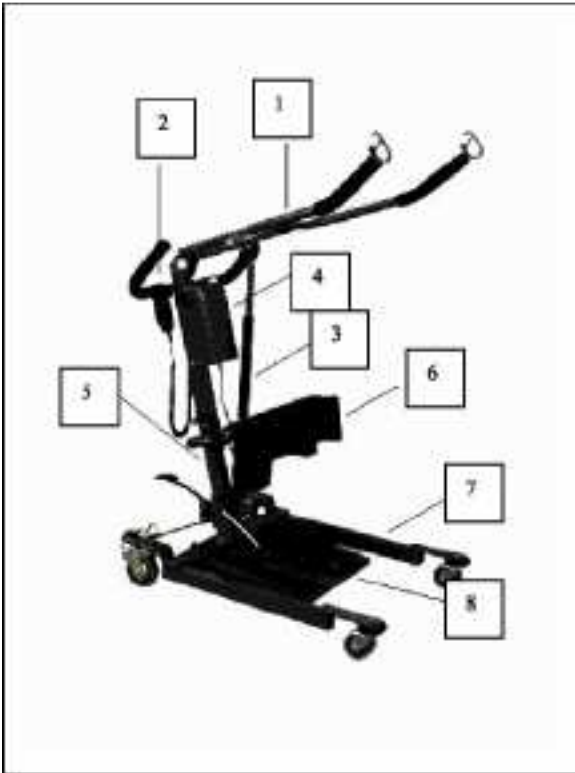
- check the slings for any tears in the material and especially check the lifting straps for wear/damage

**General:**

see section 7 concerning the annual inspection for the lifter.



## **1.1 Description of parts**



### **Item No.**

1	Lift Arm
2	Control device
3	Actuator
4	Electrical box
5	Mast
6	Knee support
7	Chassis
8	Foot plate

## **1.2 Unpacking**

Unpack the hoist/lift carefully. Ensure that no accessories remain in the carton.

Examine the hoist/lift for possible transport damages. Please contact your dealer immediately in case the hoist/lift is damaged or does not function properly.

We recommend to keep the carton and the packaging material for possible transport of the hoist/lift in the future.

Please read the user guide carefully in order to avoid incorrect handling.

Check the delivery quantities according to the delivery note. The contents for the Pallas stand-aid hoist/Lift without slings should be the following:

1 chassis, 1 mast, 1 lift arm, 1 knee support, 1 foot plate, 1 actuator, 1 electrical box, 1 control device, 1 charger.

## **1.3 Assembly**

For assembling the hoist/lift you need two 17 mm spanners included. Please follow the advice in the order mentioned:

1. Place the mast with the guide pointing forward into the chassis mount . The guide and mast must be inserted completely in the chassis before the locking screw can engage on both sides before tightening.
2. Now the arm can be fastened on the mast by fastening the bolts and nuts with the spanners. Tighten, but do not overtighten since the arm must move freely, but without play.
3. Lift the arm, connect the upper end of the actuator spindle in the provided bracket with the bolt and secure with the ring.
4. Mount the knee support and the foot plate. The knee support can be mounted and secured.

- 5) Hang the electrical box-system on the inner side of the handle.
- 6) Please press the red emergency button on the electrical box before connecting motor and box. The emergency button disconnects all electrical contact. You then can connect the motor's connection cable to the 2 pin plug on the underside of the electrical box. The control device is connected to the plug on the back of the electrical box using the 3 pin plug. Release the emergency button. Leg spreading (electric) – connect the 8 pin plug to the corresponding socket underneath the electrical box.
- 8) Ensure that the emergency button is in the extended position. If not, give the button a quarter turn clockwise until it reaches the extended position.

#### **1.4 Purpose**

The Pallas 2000 + Pallas 5000 is designed to lift persons in nursing care and with at least one instructed carer or supervisor. The load capacity is 150 kg. **Never ever** use the hoist/lift for other purposes than originally intended.



#### **1.5 Use**

The hoist/lift should mainly be used in the following situations:










1. Lifting the user from a bed to a wheel chair/chair situated immediately beside the bed.
2. Lifting from a wheel chair to toilet/toilet seat situated in the immediate proximity.
3. Lifting from a wheel chair to a chair situated in the immediate proximity.

Use only the slings exclusively recommended.

#### **1.6 General remarks concerning use**

The hoist/lift is easy to operate. However, before use, please read the following instructions carefully:

1. The legs of the chassis can be spread with the foot pedal or alternatively with the control device for electrical leg spreading models. 
2. The control device enables easy handling. Just press gently on the button “up” or “down”. Electrical leg spreading model – Press gently on the corresponding buttons. 
3. Always ensure that the user feels safe and is not frightened. Wherever possible ensure close contact with the user. 
4. Pressing the **red emergency button** immediately stops the hoist's/lift's function. By turning a 1/4-turn clockwise the button extends and the hoist/lift is again ready for use. 
5. The hoist/lift does not exert downward pressure other than the weight of the user and arm combined. This safety feature fitted to the spindle is called “spline” and reduces the danger of accidental squeezing. In very extreme circumstances the spline system may have been activated and can result in the lifting arm falling into place. Whilst this does not compromise safety it can be disturbing if a client is being lifted and then suddenly falls into place. We recommend that the lift/hoist is operated for a short distance before using with a client, to ensure that the spline system is in place. 
6. The Pallas 2000 has an **electronic button** placed underneath the electrical box making an emergency lowering possible, in case the control device is defect. The Pallas 5000 has clearly marked emergency points (lowering/raising) on the electrical box. 
7. Please charge batteries regularly - we recommend every night - and ensure that the emergency button is in the extended position. Do not wait between two charging processes until the light diode (lamp) shows 50% discharge. The batteries do not have any “memory effect”. Their lifetime can be critically reduced if allowed to go flat before recharging. 

## 1.7 General remarks for the carer

To turn the Pallas 2000 + Pallas 5000, stand to the side of the hoist/lift and rotate it. Pull the handle of the hoist/lift with one hand and push the arm for the slings with the other. Working from the side can alleviate the back strain on the carer thus ensuring a healthy working environment. In order to move the Pallas 2000 + Pallas 5000 use the entire body, e.g. do not turn the upper part of the body or the shoulder to turn the hoist/lift. Ensure at all times that the lifter is safe during this movement and that no tipping can occur

Preparing the lifting - example: the wheel chair is pushed to the hoist/lift - not the other way around.

The Pallas 2000 + Pallas 5000 must not be braked e.g. during a transfer from/to a wheel chair, bed or chair. Always allow the Pallas 2000 + Pallas 5000 to adapt itself to the user - not the other way around.

When moving an user do not push/pull the lifter too fast, not only can this be unpleasant for the user but any sudden stop may compromise safety. If the lifter has to be moved over eg. a door step then it must be pulled from the back – this makes the movement easier and also ensures that safety is best ensured. We recommend that two carers are present during this manouvere. The door step must not exceed 3cm. in height.

Never attempt to lift the hoist/lift thus creating an imbalance, this may compromise safety for both user and carer.

### **Never lift the user higher than necessary. The Pallas 2000 + Pallas 5000 are not means of transport.**

It is the responsibility of the carer to ensure that this product is suitable for the individual client. The utmost care must be exercised at all times to ensure client safety. If using this equipment with a client who has a tendency to lean or hang to one side (eg. Clients with semi paralysis) especial care must be taken to ensure stability. In these situations do not exaggerate any sideways movement by pulling the sling from the same side. Opening the lifter/hoist legs will increase its ability in this situation. Be particularly aware when using slings together with a long strap length, this will exaggerate any sideways movement.

## 2. SLING TYPES

### **The below mentioned sling types are for use with the 2-point arms**

**All sling types:** For further information see the label on the respective slings – see also symbol explanation appendix 13.

We advise that these slings are to be exclusively used with the Ergolet hoists/lifts.

The method of lifting is explained in this User guide, in addition the slings have colour coded lifting straps – these help the carer to choose the correct lifting mode for the user. It is the onus of the carer to ensure that the sling and positioning are suitable for the individual user. This must be the qualified evaluation of competent staff who alone are aware of the needs of the individual user.

### Chest sling (TL)

Small	003-03564
Medium	003-03563
Large	003-03561
X-Large	%

### Chest sling (SU)

Small	003-03601
Meduum	003-03602
Large X-	003-03603
Large	003-03604

### Lamb chest sling (SL)

Small	% 008-
Medium	03602 008-
Large	03603 008-
X-Large	03604



## **2.SLING TYPES**

The below mentioned sling types are for use with 2-point spreader bars.

**All sling Types:** For further information see the label on the respective sling and also the appendix here in.

### **Standard Sling (TL)**

Small	000-03514
Medium	000-03513
Large	000-03511
L- Large	000-03512



### **Head/Neck support (TL)**

One size	007-03530
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### **Universal sling (TL)**

Small	001-03554
Medium	001-03553
Large	001-03551
X-Large	%



### **Universal sling (SU)**

Small	001-03601
Medium	001-03602
Large	001-03603
X-Large	001-03604



### **Bath sling (TL)**

Small	002-04106
Medium	002-04104
Large	002-04104
X-Large	002-04117



### **Head/Neck support for bath sling (TL)**

One size	007-04110
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### 3. TIPS FOR USE OF SLINGS

#### 3.1 Lifting with chest sling or with lamb chest sling

##### Lifting from sitting position:



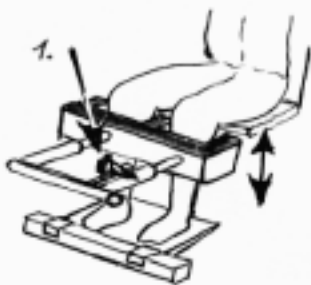
Place the sling behind the patient by pushing the back support all the way down to the small of the back and waist.



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



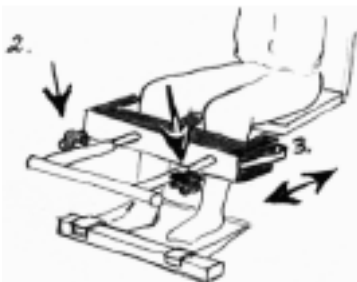
Brake the wheel chair and move the hoist/lift to the user. Lift the user's feet onto the foot plate, bring the hoist/lift forwards until the knee support is very close to the user's knees.



The height of the knee support can be adjusted with the hand screw (1).

The upper edge of the knee support should be under the knee-cap.

The knee support must never press on the knee-caps.



The knee support's angle can be adjusted in 3 positions using the click lock (2).

The angle of the knee support is individual - depending on how much the user can stretch his knees whilst standing. If required a calf belt (3) can be used.



Fasten the chest sling onto the hooks on the Toilet Hoist's/Lift's arm.

The user may keep his arms inside or outside the "ends" of the sling.

If the user is semi-paralysed, it may be necessary to keep the paralysed 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 firmly onto the foot plate and to stretch both knee- and hip-joints.

The carer may help by placing a hand on the knee and press the knee lightly down-wards.

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

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

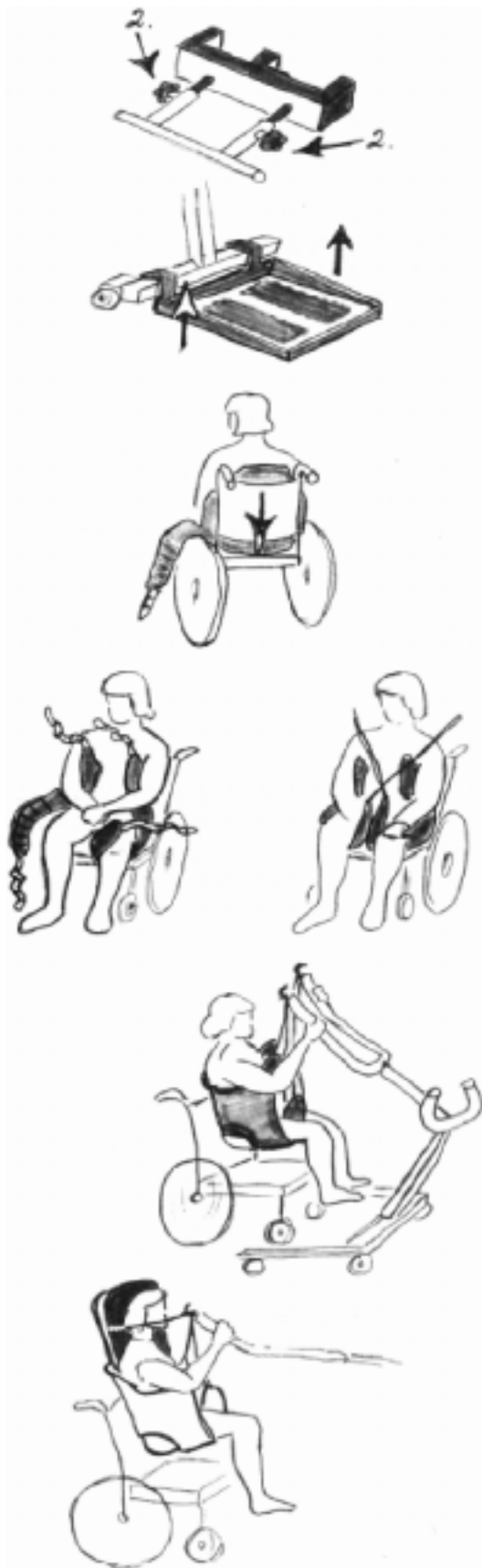


Take the Pallas to the secured (braked) wheel chair, so the hollow of the knee rests against the front edge of the seat-cushion.

### **Do not brake the hoist/lift.**

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.





### **3.2 Lifting with the universal sling**

Remove the knee support by loosening the hand screw on the column.

Lift the foot plate 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's 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 colour 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 Pillow sling**

The pillow sling merely has a supporting function for mobile users and is not a transfer aid.

### 3.4 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.



Remove the knee support and the foot plate according to the description in paragraph 3.2.

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. Secure the belt with the click-locks and tighten until the sling is securely fastened around the waist.

Allow the user to hold onto the lifting arms.

Fasten the chest sling onto the hooks on the Pallas 2000 + Pallas 5000 lifting arms.

Start lifting until the sling tightens around the back.

Stop lifting and tighten the sling straps again.

Continue lifting until the user is in an upright position.

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

## 4. SERVICE

In case your hoist/lift has any failure/damage please contact your dealer/Anolet A/S For questions concerning a service contract (annual service prescribed by law).



## 5. TECHNICAL FUNCTIONS

### 5.1 Charging of the batteries

Please charge the batteries regularly - we recommend every night - and ensure that the red emergency button is in the extended position. Do not wait between two charging processes until the light diode (lamp) shows 50% discharge. The batteries do not have any "memory effect". Their lifetime can be critically reduced if allowed to go flat before recharging.



The charger is connected to 220 Volt and the charger plug to the electrical box to the socket marked 24 V on the back of the box. (only for the Pallas 2000). After connecting do not remove again.

The Pallas 5000 has 2 options – a charger connected to the underside of the box or alternatively a table/wall charger.

The lamp on the charger has to light, it indicates the charging procedure. Ensure that there are no life saving electrical / electromechanical equipment nearby when charging.



**The charger plug must not be removed under normal use of the hoist and NEVER during the charging process.**

**During battery charging the hoist/lift must not be used! Never charge the batteries under damp conditions ie in the bathroom!**

If the lamp does not light during the charging procedure, please contact your dealer/Anolet A/S.

### 5.2 Electrical box

If the Pallas 2000 + Pallas 5000 does not react as usual, although the batteries are fully charged it might be that the batteries have come to the end of their useful life and must be replaced.

The replacement must only be carried out by competent persons. We recommend to exclusively use original spare parts.

### **5.3 Emergency stop**

Check regularly that the emergency stop functions as prescribed by using the Pallas 2000 + Pallas 5000 (without any user) and press the red emergency button (big red emergency button on top of the electrical box for Pallas 2000 and on the back of the control box for Pallas 5000). The hoist/lift must stop instantly.



If the emergency button is defect the Pallas 2000 + Pallas 5000 must not be used until a repair is made.

**The emergency button is not an on/off switch. It always has to be “on”, meaning it must not be pressed in!**



### **5.4 Emergency lowering**

If the Pallas 2000 + Pallas 5000 (with a defect control device) does not react whilst in use, the user can be lowered safely by using the emergency lowering. The contact is underneath the electrical box(Pallas 2000) or on the back of the electrical control box (Pallas 5000). If the hoist/lift is lowered to it's end position a fuse may blow. This is a safety procedure to ensure that the unit is checked before use.



The Pallas 5000 has clearly marked emergency points on the electrical box.

### **5.5 Cleaning**

The actuator and the electrical box may be cleaned with a damp cloth in order to avoid the electronic components being damaged.

The rest of the Pallas 2000 + Pallas 5000 may be cleaned with detergent or disinfectant.

## **6. GUARANTEE**

The Pallas 2000 + Pallas 5000 is delivered with a 12 month guarantee. The guarantee does **not** cover damage caused by:

- Excessive loading
- Excessive force
- Operating error
- Faulty maintenance

## **7. ANNUAL SERVICE**

The manufacturer stipulates that this hoist/lift must be serviced by a qualified and authorised person annually. This is also prescribed by the relevant standard EN ISO 10535. It is the customer's responsibility to see that this is carried out. A qualified service technician will then fill out a check list /data sheet for the hoist/lift.



All remarks in connection with the annual service or repairs of damages must be written by the service technician into the check list /data sheet and signed by the customer's representative.



The responsible service technician has the right and obligation to take the Pallas 2000 + Pallas 5000 out of service if he concludes that an existing fault may compromise safety.

All services and/or repairs carried out between the annual services must likewise be listed in the check list/data sheet.

All supplementary works must be noted in the check list/data sheet as well. 12

## 8. TECHNICAL DATA AND SKETCH

### PALLAS 2000 and 5000

#### Lifting

Load capacity	150 kg
A) Lifting interval	66 - 168 cm
B) Width of lifting hooks	57 cm
Number of lift movements with 80 kg	min. 100

#### Chassis

C) Width of chassis	60 - 90 cm
D) Height of chassis	11 cm
E) Length of chassis	86 cm
F) Distance between the upper edge of the knee support and the foot plate	23 - 55 cm
Diameter of wheels	75/100 mm
Clearance under chassis	5 cm
Chassis min. Internal width	45 cm
Chassis max internal width	72,5 cm
Hoist reach max	80 cm

#### Height to lower edge sling Hooks at max reach 101 cm

Turning radius	118cm
G) Tightening torque for bolt connection arm/mast	42-46Nm

#### Weight

Weight in total	45kg
Heaviest component	15kg
The hoist can be dismantled into 4 parts	

#### Material

Powder coated steel	5021	9010
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### PALLAS 2000

#### Lifting

Lifting speed at 80 kg weight	6 cm/sec.
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#### Electrical details

Power supply on lift	24V DC
Maximum current	10-11 A
Protection class for electrical components	IP 20

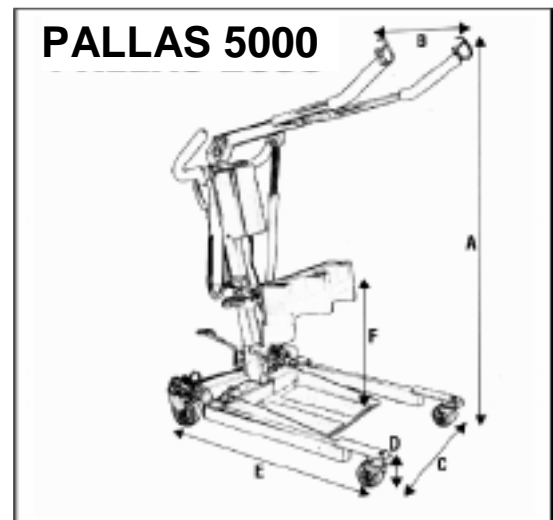
### PALLAS 5000

#### Lifting

Lifting speed at 80 kg weight	3 - 5 cm/sec.
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#### Electrical details

Power supply on lift	24V DC
Maximum current	10 A
Protection class for electrical components	IP 41



<b>PALLAS 2000 + PALLAS SPARE PARTS SETS</b>	
<b>Item no.</b>	<b>Description</b>
<b>LARGER SPARE PARTS</b>	
018-00205	Actuator, electrical box and control device, SMD print
018-00206	Actuator, electrical box and control device, Linak print
018-00207	Actuator, electrical box and control device for Jumbo elect. leg spreading
018-04702	Actuator LA 32 SKSM 300
018-04704	Actuator for Jumbo LA 32 JKSM 300
018-04800	Actuator LA 28-100-xx for leg spreading
019-00400	Electrical box for Mini Toilet, Linak print
019-00419	Electrical box for Jumbo without battery module
019-00500	Electrical box for Mini Toilet, SMD print
019-00600	Control device with 3 pole plug, HB 41
019-00601	Control device for electrical leg spreading with 8 pole plug, HB 42
019-00815	Linak-Print CS 16-14-24
019-00840	Lo-bat Print
019-00855	Print for one actuator - SMD1
250-01200	Lead acid battery - 12V/2,9Ah
250-02000	Battery module, Jumbo with 2 batteries inside
017-00200	Wall or table charger for 011-01502
252-00203	Charger with spiral cable - 30V/0,5A
253-00100	Charger, regulated, 24 VDC/1,0 Ah., LG 624
253-00201	Charger Jumbo
750-63021	Foot pedal, with mounting parts
018-03192	Tente wheel with brake, 100 mm - 2 pcs.
018-03200	Wheel 75/100 mm, complete with mounting set - 4 pcs.
018-00405	Knee support with back plate, complete
018-00406	Knee support without back plate
<b>OTHER SPARE PARTS</b>	
018-02401	Straps with with buckles and pop rivets
018-02402	Straps with velcro and pop rivets
018-00105	Bolts, nuts, nuts caps etc. - complete
263-00302	Control cable inside electrical box, Linak model 3 pole
263-00203	Cable for charging with plug for charger, SMD model, round plug
263-00202	Cable for charging with plug for charger, Linak model, Texas plug
263-00348	Control cable in electrical box, 3 pole, SMD model
263-00351	Control cable in electrical box, 8 pole, SMD model
260-00100	Emergency stop, red, complete
263-00301	Charger plug cable with electrical box, Linak model
263-00346	Charger plug - with cable in electrical box, SMD model
264-00300	2 pole multi-plug, female
264-00301	3 pole multi-plug, female
264-00302	8 pole multi-plug, female
018-00602	Bracket and safety rubber, set, 6 Ø for 8 Ø M/T

<b>018-00603</b>	<b>Safety rubber, set s crew without plastic cap</b>
<b>018-00500</b>	<b>Foam for arm, long, old model</b>
<b>018-00501</b>	<b>Foam for h andle (long)</b>
<b>018-00502</b>	<b>Foam for arm, short model</b>
<b>0 18-00503</b>	<b>Foam for arm, divided in two</b>

Faultfinding chart for Pallas with manual or electrical leg spreading

Pos	Fault	Possible cause	Faultfinding	Solution
1	Electrical functions do not work	No power	Emergency stop is active Batteries are low or defect Fuse is blown  Cables to or between batteries are disconnected or broken	Release emergency stop Charge or replace batteries Replace fuse (seek qualified assistance if the fuse blows again. Reconnect or replace cables
2	Lifting arm can only travel up or down (not both).	Fault in the electrical control box	Defect control device Defect print card	Replace control device Replace print card
3	Electrical leg spreading can only move in or out (not both).	Fault in the electrical control box	Defect control device Defect print card	Replace control device Replace print card
4	Periodical fault: The lifter travels either up or down (not both) or spreads legs either in or out (not both).	Power shortage or fault in the electrical control	Batteries are low or defect Loose connection in the control device Charger is connected	Charge or replace batteries Replace control device  Disconnect charger
5	Actuator is noisy or vibrates abnormally	Defect actuator or faulty assembly	Actuator cannot move freely in the brackets Defect actuator	Mount the actuator and ensure that it can travel freely Replace actuator
6	The lifting movement or leg movement is slow. The 50% indicator is active.	Power shortage	Batteries are low or defect Charger or charging connections are defect	Charge or replace batteries Replace complete charger

**Important: All repairs must be carried out by competent personnel from the authorised dealer or by Anolet A/S, Denmark**

Appendix: Concerning Pallas 2000 with speed control

### **Speed control**

This feature is used when the carer/user is of the opinion that the lifting movement is either too slow or too fast.

The speed can be regulated during use over the interval 50 – 100% of the lifting speed.

This is done by turning the speed control button which is placed on the back of the electrical box (see photo). Turning the control clockwise will increase the speed.

### **Charging**

- Beeps when the charger is connected
- The diode which is placed adjacent to the emergency stop will blink green during the charging process.
- The same diode will show a constant green when the batteries are fully charged.
- The lifter/hoist cannot and must not be used during the charging process.

### **Battery indication during use (the same light diode)**

- Constant green: Fully charged
- Constant yellow: Half discharged
- Constant red: Fully discharged
- The batteries should be put on charge when the lifter/hoist is not in use and if the yellow light diode is lit.