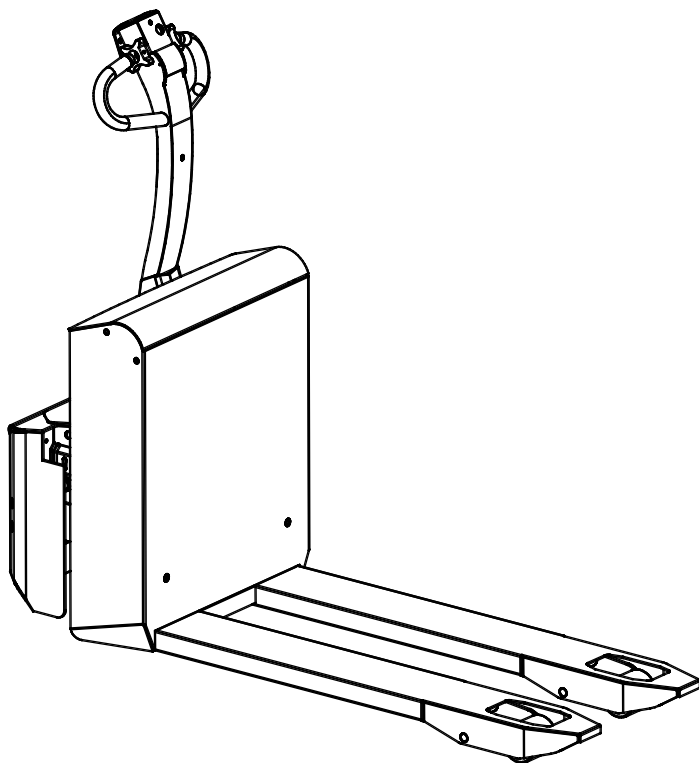


PANTHER MAXI AC / MINI



EU DECLARATION CONFORMANCE

Manufacturer: **Logitrans A/S**
Hillerupvej 35
DK-6760 Ribe
Denmark

It is hereby declared that:

Machine: Productgroup: Pallet truck with electric propulsion

 Type: Panther Maxi AC / Mini

 Year of manufacture/
 Serial No:

- a) Has been manufactured in conformance with the stipulations of the:
- **COUNCIL DIRECTIVE no. 98/37/EC**
 - **COUNCIL DIRECTIVE no. 89/336/ECC**
 - **COUNCIL DIRECTIVE no. 86/663/ECC**
including appendix no. 89/240/ECC

Name: Erling Pedersen

Position: Product manager

Company: Logitrans A/S

Signature: 

Product type declaration of:
01.09.2008



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1.0 Before the first lift...

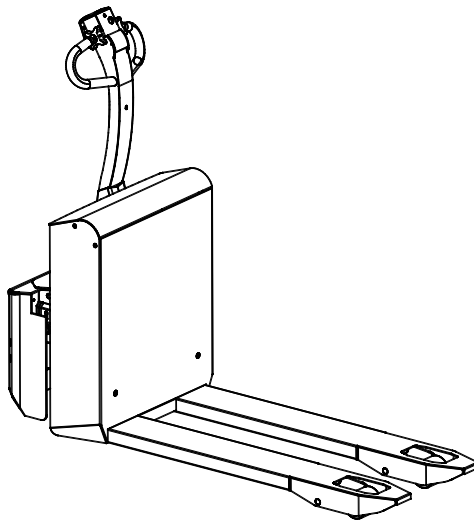
The **Logitrans** pallet truck is manufactured in accordance with safety directives.

Among the subjects dealt with in this **Instruction Manual** are:



- Proper application
- Physical limitations of the product
- Risks with improper use

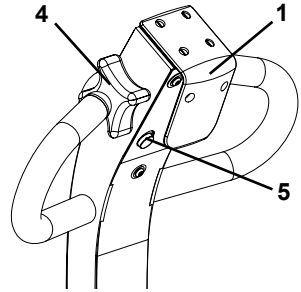
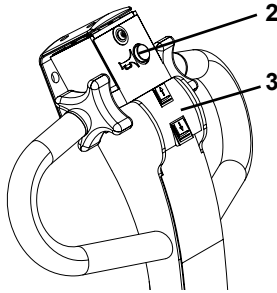
Therefore please read this Instruction Manual carefully!





2.0 Functions and identifications

1. Safety Switch
2. Horn
3. Lift/Lower
4. Forward/Reverse
5. Multiflex Function
6. Handle
7. Battery indicator / hours counter
8. Emergency Stop
9. Ignition Key
10. Charging Lamp (built-in charger)

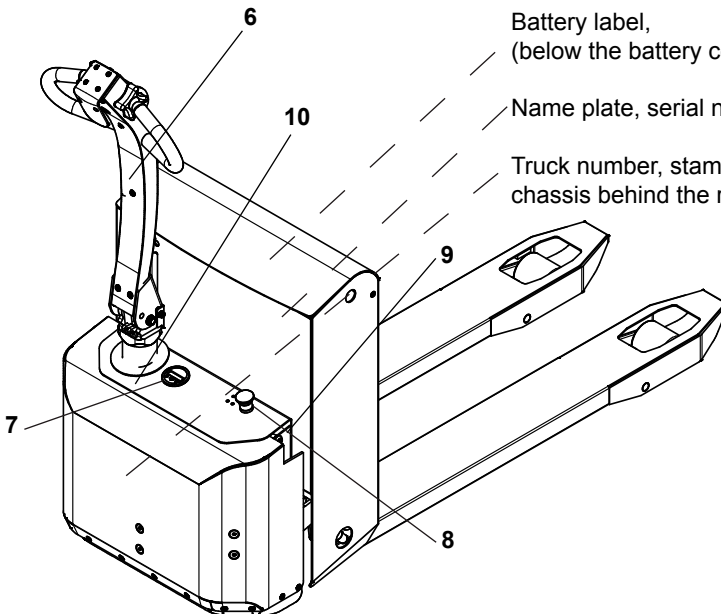


Identification

Battery label,
(below the battery cover)

Name plate, serial number

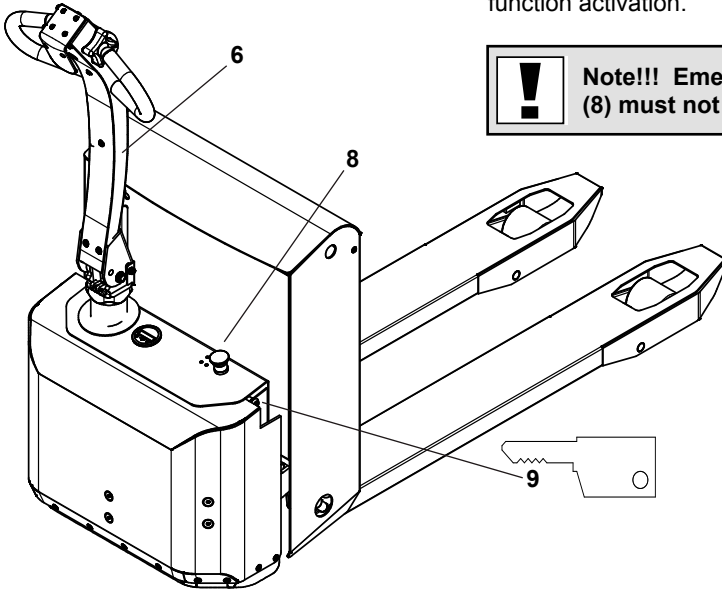
Truck number, stamped in
chassis behind the rear cover.





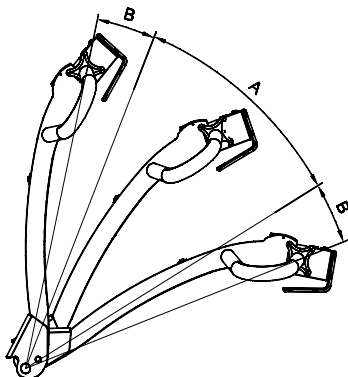
3.0 How to operate the pallet truck

Insert key (9) and turn clockwise to switch on control current ready for function activation.



! Note!!! Emergency stop (8) must not be activated.

The control functions of the pallet truck are located in the handle (6).
- **The functions are dependent on the position of the handle!**

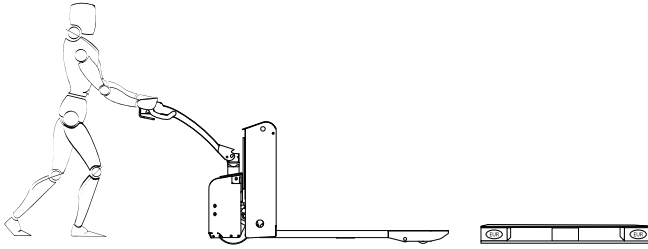


Position A: Drive position
Drive current on
Brake deactivated

**Position B: Stop/Brake/
Emergency Stop**
Drive current off
Brake activated

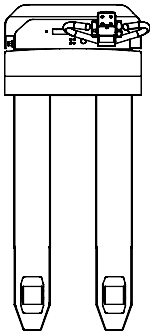
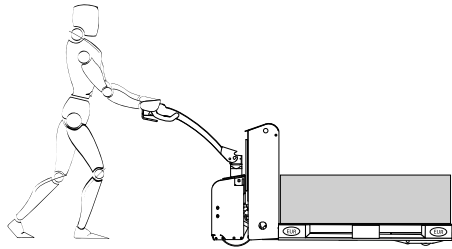
3.0 How to operate the pallet truck

3.1 Handling of pallets

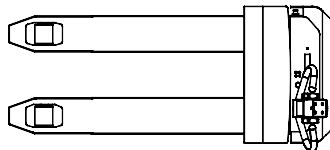
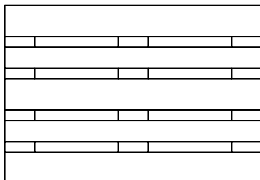


For proper operation,
stand behind the handle.

Raise/lower - forward/reverse

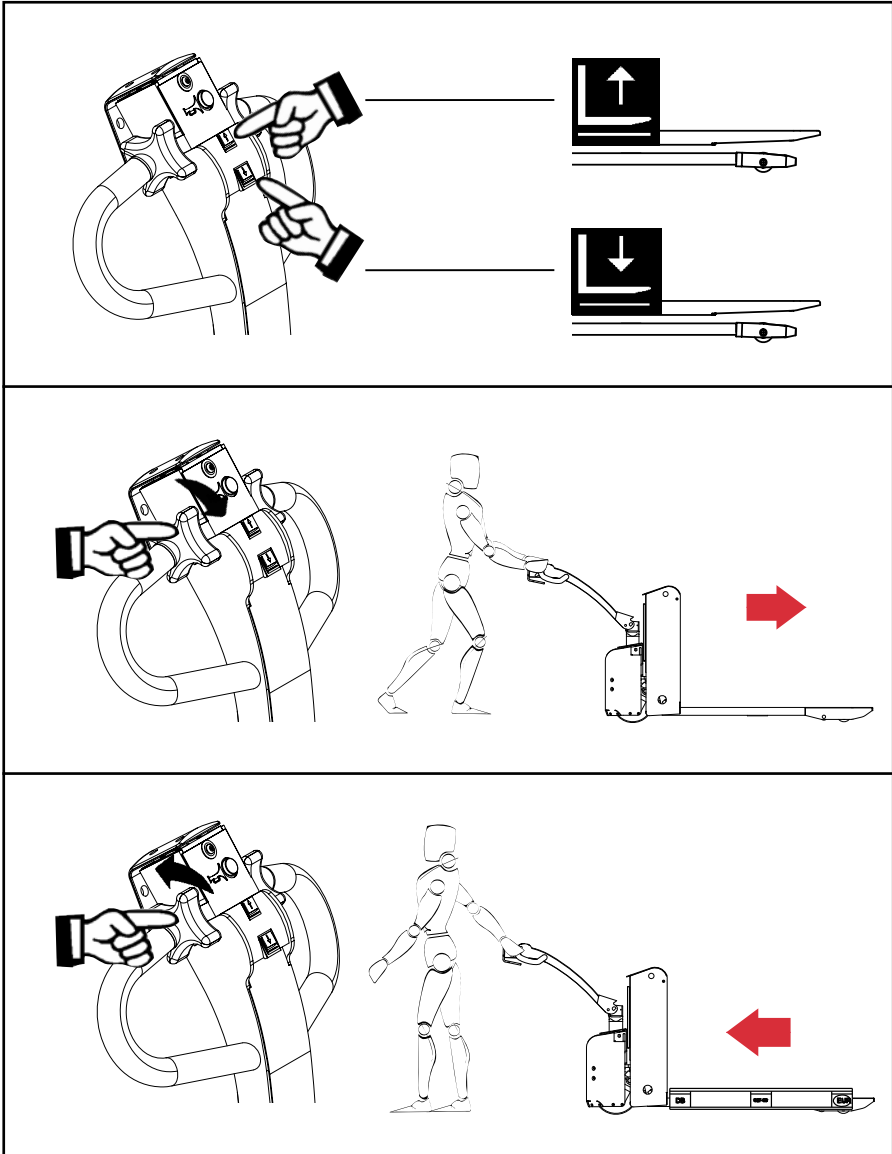


The pallet can be lifted and transported
- either lengthwise
- or crosswise

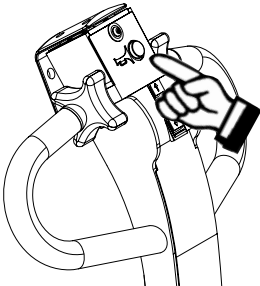

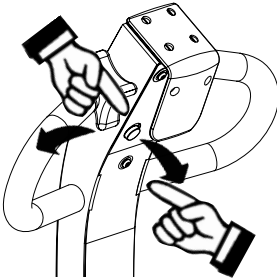
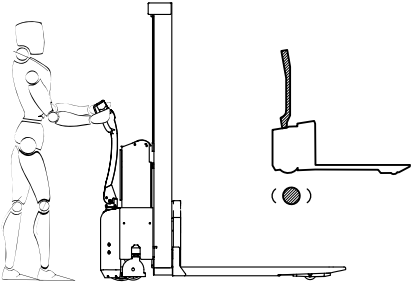


3.0 How to operate the pallet truck

3.2 Handle functions

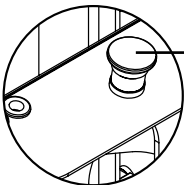


3.0 How to operate the pallet truck

	<p data-bbox="692 373 751 395">Horn</p> 
	<p data-bbox="622 715 822 737">Multiflex function</p> 

Multiflex function

- This function makes it possible to drive the pallet truck, even though the handle is in its upright, braked position
- The function requires two-handed operation, i.e. it must be performed deliberately
- The function facilitates manoeuvring in restricted areas.



3.3 Emergency stop

The product has an emergency stop. When activating the emergency stop, the main current supply is switched off.

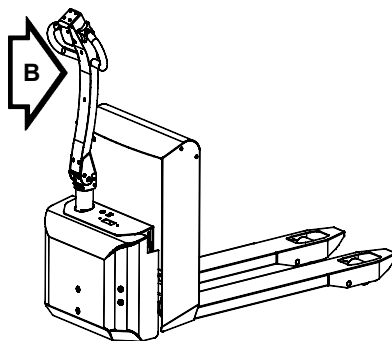
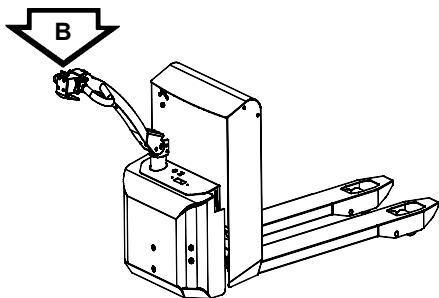
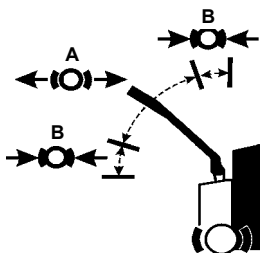
- The movement of the forks stops immediately
- Driving with the truck stops immediately.

3.0 How to operate the pallet truck

3.4 Brake function

A: Position for driving

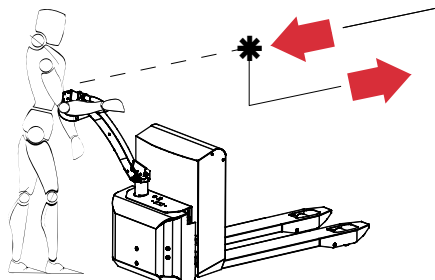
B: Position for braking
See multiflex function
for driving in B-position
(see paragraph 3.2)



3.5 Personal safety

The safety switch on the end of the handle ensures that the operator cannot be trapped when the pallet truck is reversed.

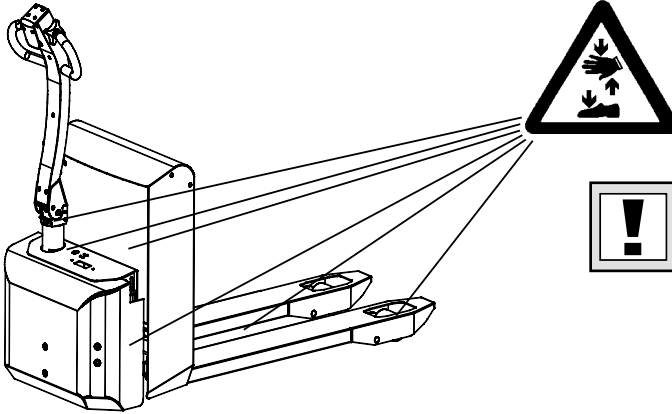
When the safety switch is activated, the pallet truck will change direction and move forwards for 5 sec.



Safety function



4.0 Optimum safety



! ATTENTION
Moving parts

4.1 Avoid overloads

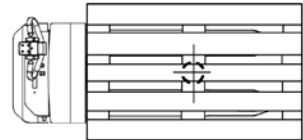
Panther Mini: Max. load 1400 kg

Panther Maxi AC: Max. load 1800 kg

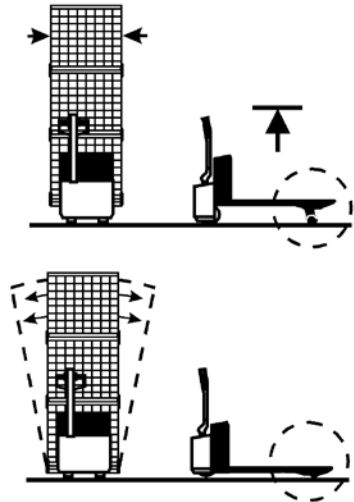
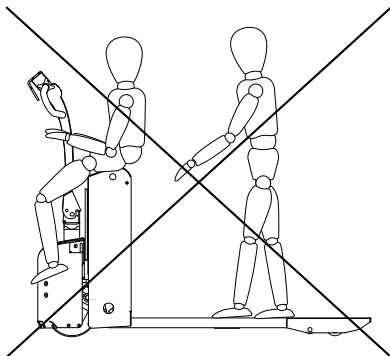
The maximum load must not be exceeded.

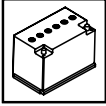
Remember, the pallet truck is designed for evenly distributed load; - goods on pallets etc.

If the forks are point-loaded on one side, there is a risk of bending.



! CAUTION! Stability is achieved when pallet truck is at the top





5.0 There must be a current supply...

5.1 Battery specifications

The manufacturer recommends the following battery type for Panther Maxi AC/Mini:

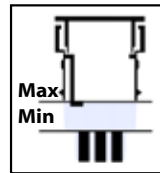
	Tubular cell 986200	Tubular cell 986201	Semi-trak 986034
Voltage	24V	24V	2x12V
Capacity	120Ah/5h	160Ah/5h	60Ah/5h
Capacity per cycle inrelation to 986200	100%	~ 125%	~ 50%
Life in cycles	Approx. 1200 - See note 1		Approx. 300 - See note 2
MAINTENANCE Liquid inspection	The liquid level has to be within the minimum and maximum level of the battery, otherwise distilled or demineralized water is to be added. - See note 3.		
MAINTENANCE Poles	Verdigris to be removed from poles regularly. Poles to be greased after cleaning.		
Charge condition to be measured with	Acidometre, voltmetre or battery condition tester		
Charging frequency	At 80% discharged, max once per day. - See note 1		When needed, max once per day. - See note 2
Charging voltage measured across poles during charging	Built-in / External 12A/29,4V		
Battery dimensions LxWxH	580x200x330	585x200x390	278x175x190
Battery weight	100 kg	120 kg	2x20 kg

5.0 There must be a current supply...

Note 1: Battery life: 1200 cycles a 80% discharge.
Longest battery life obtained, when the battery is charged on being 80% discharged. 1 charge = 1 cycle.

Note 2: Battery life: 300 cycles at 80% discharge
= approx. 600 cycles at 50% discharge.

Note 3: Please note: Only fill up to the maximum liquid level on a charged battery, otherwise the liquid will overflow. See the battery instructions or contact your dealer in case of doubts about minimum/maximum.



Dry-charged batteries must be filled with battery acid 37.5% H₂SO₄ specific gravity 1.28, before they are used for the first time.



Filling in acid solution on the battery

- The battery acid is corrosive. If it should touch skin or eyes, wash with water and contact a doctor. Filling in acid into the battery should be performed in a ventilated room.



The charging of tubular cell and semi-trak batteries gives off gases that can be explosive:

- Use of naked flames near the batteries should be avoided.
- Charging should therefore be performed in a ventilated room.
- The battery lid has to be open to ensure a good ventilation of the battery.



At temperatures around the freezing point, battery capacity is reduced by 30%.

If the acid density of the battery is 1,10 and the temperature 0° C, the battery will freeze and the capacity will be 0%.

5.0 There must be a current supply...

5.2 Checking the battery conditions

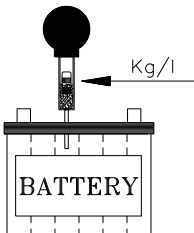
Dry-charged batteries must be filled with battery acid 37.5% H_2SO_4 specific gravity 1.28, before they are used for the first time.

- The battery is fully charged when the battery voltage and the acid density are not changed between two measurements made with an interval of two hours.
- Check at least once a week at the end of the charging that the battery has a correct acid density (1,26-1,28 kg/l at 20°C).

Please note! If the battery is discharged more than 80%, with an acid density below 1,13 kg/l, the battery life will be shortened. Discharge of maintenance-free batteries (GEL): Maximum 70%.

Method A

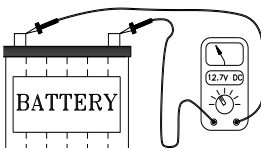
Check the acid density in the battery cells with an acidometer.
Check each cell - max. difference between each cell 0.04 kg/l.



Density:	
1,28 kg/l	Fully charged
1,22 kg/l	30% discharged
1,18 kg/l	50% discharged
1,13 kg/l	80% discharged

Method B

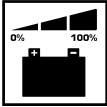
To measure the voltage, use a digital voltmeter (DC) on the battery poles. The truck must not have been in use for the previous 30 minutes.



Voltage:	
Ca. 25,40 V	Fully charged
Ca. 24,70 V	30% discharged
Ca. 24,20 V	50% discharged
Ca. 23,80 V	70% discharged
Ca. 23,50 V	80% discharged

5.0 There must be a current supply...

5.3 Battery indicator / hours counter



Panther Mini

The battery indicator shows the battery charge in %.

The most accurate reading can be obtained, after the battery has been allowed to remain idle for 5-10 minutes.



Red: **Battery capacity less than 25%**
Do not use the battery, otherwise it might become damaged.

Green: **Battery capacity: 50%-100%**
The battery is ready for use and need not be charged.

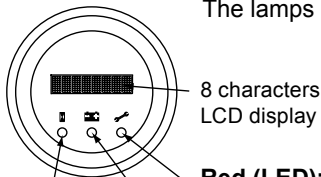
Battery capacity: 25%

The battery can still be used; charging is recommended.

Yellow: Charging lamp: Is alight during the last part of the charging.

Panther Maxi AC

The messages are shown on the LCD display.
The lamps indicate the type of message shown.



8 characters
LCD display

Red (LED): Indicates service

Green (LED):
Indicates hour meter

The hour meter shows:

1. Total number of operation hours
2. Operation time since last charging

Orange (LED): Indicates battery condition

Error codes:

In case of errors, the display can show error codes:

Error code 1.4: The forward/reverse knob is activated, when handle is in pos. A.

Error code 4.2: Battery discharged.

If the display shows other error codes, please contact your dealer

Please note: The driving speed is reduced at low battery voltage.

5.0 There must be a current supply...

5.4 Battery charging



If instructions accompany the battery / charger, these are to be followed.

- The Soneil charger is set for charging of both semi-track, tubular cell and maintenance free batteries.
- **NOTE!** If another charger is used, the charging voltage has to be set correctly for the charging of semi-track, tubular cell or maintenance free batteries.
- Charging simultaneously with truck operation is not recommended.
- Longest battery life is achieved when charging when battery is:
80% discharged (semi-trak and tubular cell)
70% discharged (maintenance-free).
- Charging of the batteries: Max. once per day
- Semi-trak and tubular cell batteries are to be filled with distilled water after max. 14 cycles. 1 charging = 1 cycle.
- During the charging, the temperature in the battery is not allowed to exceed 50° C.

Charging

1. Connect charger to battery (24 volt)
(If the charger is built in, the charger is connected)
2. Connect the charger to the mains (230 V/115 V).
NOTE! The voltage switch has to be set correctly, as wrong settings can damage the charger.
(red lamp shines when built-in charger)
3. Charging with built-in charger
 - Charging starts, red lamp (2) is on.
The charger disconnects the control circuit.
Note! All the functions of the truck are disconnected.
 - If the charger remains connected, the charging will stop after finished course of charging.
 - When fully charged, the green lamp is on (2)

5.0 There must be a current supply...

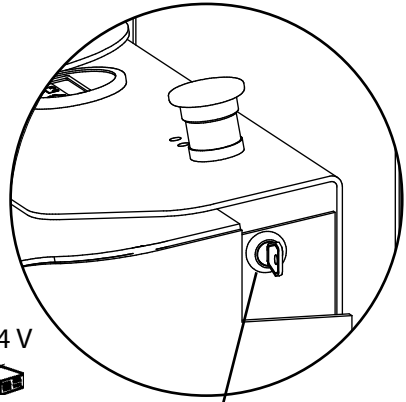
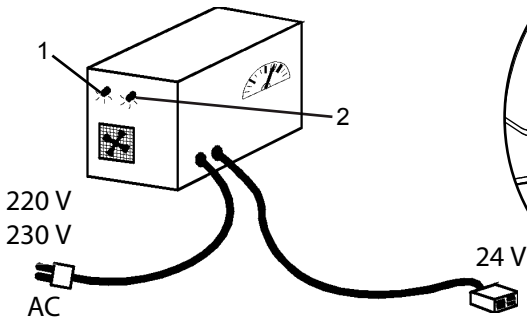


Please note! The Soneil charger is set for charging of both semi-trak, tubular cell and maintenance-free batteries!

Charging

Panther Mini 10 Amp (built-in / external)

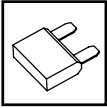
Panther Maxi AC 10 Amp (built-in / external)



During charging, the key must be removed!

5.0 There must be a current supply...

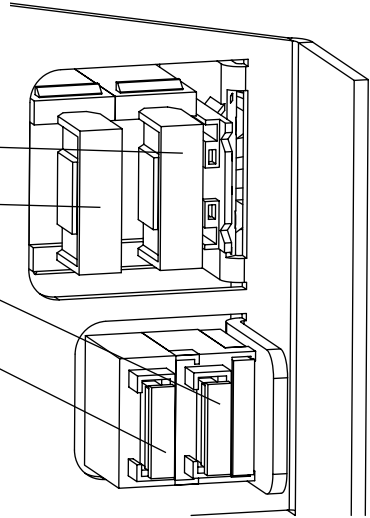
5.5 Fuses - replacement



There are 4 fuses in the electrical circuit, located behind the plate with this pictogram.



- A) 80 Amp fuse for driving motor
- B) 50 Amp fuse for lifting motor
- C) 10 Amp fuse (Soneil charger)
- D) 5 Amp fuse in the control current circuit



Replacement:

The old fuse is to be removed and replaced by a new one of the same size.

Do not insert a larger fuse; the fuse acts as a protector for the pump motor.

Find out why fuses blow!

5.6 Wiring connections

Many operational disturbances are caused by bad connections in the electrical circuit. Make sure that the connections are in order.

Check connections regularly for damage at insulating caps or bad connections at plugs etc. Verdigris must be removed from cable plugs. Keep all screw/nut connections tight.

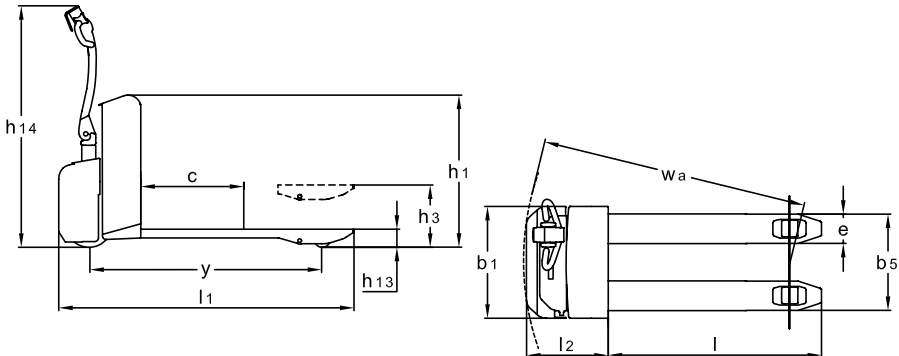


6.0 Technical data

Product (measured in mm)	Panther Mini	Panther Maxi AC
Capacity	1400 kg	1800 kg
Lifting height	195, 200	
Fork length	810, 915, 970, 1066, 1140, 1220, 1520*	
Overall height	647	817
Overall width $b_5=520/b_5=680$	600/680	
Fork span	520, 680	
Fork width	158	
Length without forks	450	
Overall length	450 + l	
Overall height	1296	
Lowered height	80, 85	
Load centre	l/2	
Wheel base (l=1140)	1256	
Gangway	1890** (pallet: 1200 x 800)	
Turning angle of the wheels	210°	
Turning radius W_a (l=1140)	1410	
Driving motor - speed control electronically variable	24 V 0,7 kW	24 V 1,2 kW
Driving speed with/without load	5,5/6 km/h	5/6 km/h
Pump motor	24V 0,8 kW	24V 1,2 kW
Lifting speed with/without load	50/55 mm/s	35/50 mm/s
Lowering speed with/without load	200/55 mm/s	115/40 mm/s
Gradient performance	10%	10%
Battery	60 Ah (2x12 V)	120 Ah (1x24 V) or 160 Ah (1x24 V)
Weight in kg with 1140 mm forks (without battery)	203	205

* Only Panther Maxi AC.

** Tests show that 1610 mm are enough.





7.0 Fault location key

When the pallet truck is used every day, adjustments and the replacement of worn parts might be necessary.

Adjustments and minor repair can easily be made on the spot. Major repairs should, however, be carried through by the dealer who has a well-trained staff and the necessary special tools.

	Before asking the dealer for assistance... ...try the fault location key!
--	--

Symptoms and observations

- A** The pallet truck does not drive when the handle is tilted and drive grip turned!
 - no click can be heard from relays when the handle is tilted _ _ _ _ _
 - no click can be heard when the multiflex button is activated _ _ _ _ _
 - the motor makes a humming noise _ _ _ _ _
- B** The pallet trucks drives slowly _ _ _ _ _
- C** The pallet trucks brakes when drive grip is released (handle tilted) _ _ _ _ _
- D** The pallet truck does not brake when handle is tilted to upper or lower position
- E** The pallet truck brakes too little/too much _ _ _ _ _
- F** Forks do not lift when "UP" is pressed _ _ _ _ _
- G** No click can be heard when "UP" is pressed _ _ _ _ _
- H** Forks lift only a little/not to max. height when "UP" is pressed _ _ _ _ _
- I** Forks do not sink when "DOWN" is pressed _ _ _ _ _
- J** Forks sink slowly _ _ _ _ _
- K** The battery is not charged (no light in charging lamp) _ _ _ _ _
- L** Error 1.4 _ _ _ _ _

Cause

Mending

	Inadequate power supply	1)
	Battery discharged (error 4.2)	2)
	Fault in on/off switch	3)
	Fault in control current circuit	4)
	Fault in main/power current circuit	5)
	Too little current on battery (error 4.2)	6)
	No current on brake	7)
	Brake needs adjusting	8)
	Insufficient oil in tank. Load too heavy, safety valve is set wrongly	9)
	No current on solenoid valve.	10)
	Oil circuit leakage	11)
	Fault in charging circuit	12)
	Forward/Reverse knob activated before handle is in pos. A	13)
	<p>If the problem cannot be solved by using the fault location key...</p> <p>...read the error code, see paragraph 5.3 and contact the dealer!</p>	

A

- — ● — ● — ● — ● — ● —

- — ● — ● — ● — ● —

- — ● — — — — — ● — ● —

B — ● — — — — — ● — ● —

C — — — — — — — — ● — ● —

D — — — — — ● — — — — — ● —

E — — — — — — — — — — — ● —

F — ● — — — — — ● — — — — ● —

G — ● — ● — — — — ● — — — — ● —

H — ● — — — — — ● — — — — ● —

I — — — — — ● — — — — — ● —

J — — — — — — — — — — — ● —

K — — — — — — — — — — — ● —

L — — — — — — — — — — — ● —

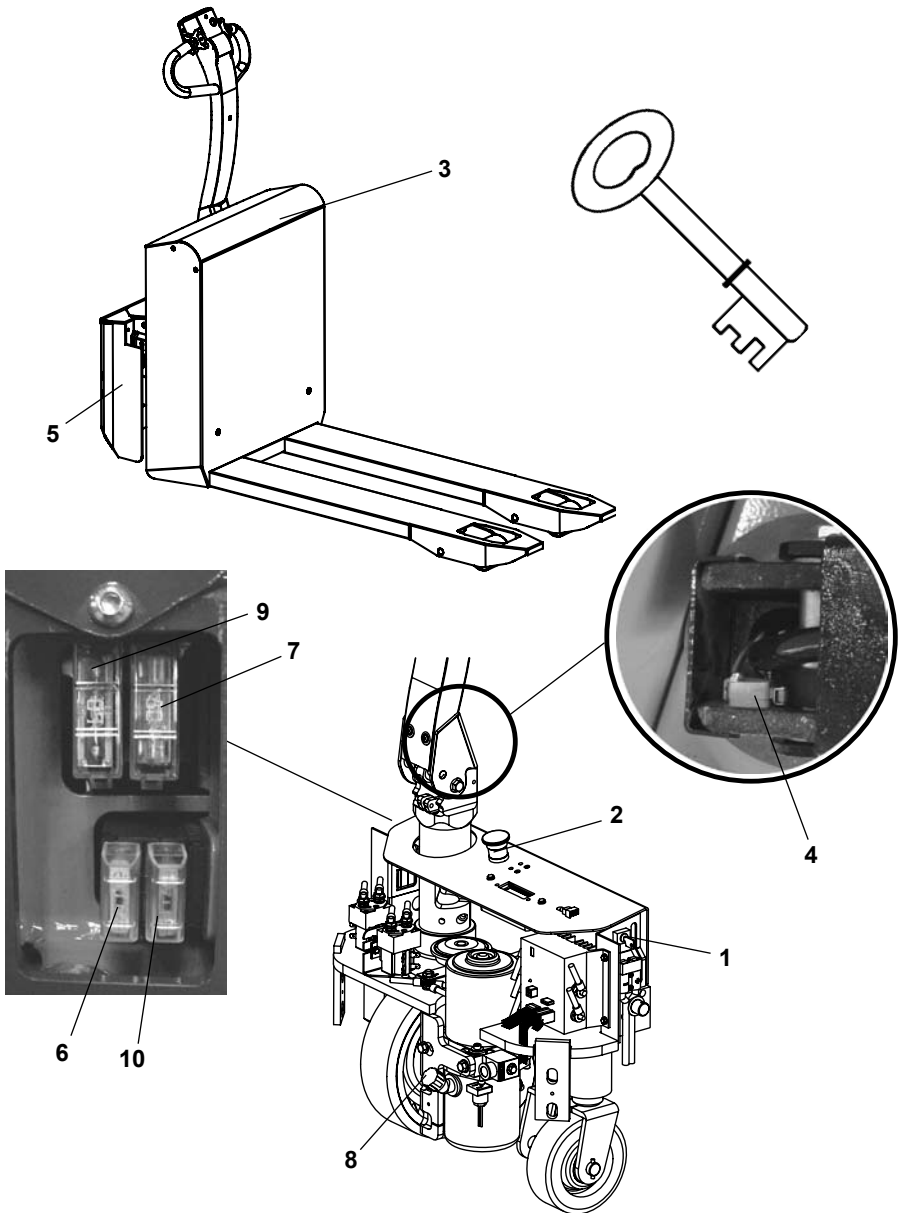


7.0 Fault location key

7.1 Remedy

- 1) Check that the key (1) is turned clockwise and that emergency stop (2) is not activated.
- 2) Charge battery - for charging see instructions in paragraph 5.4.
Access to the battery is achieved by tipping the cover (3).
 - If necessary, check the liquid level in battery cells.
 - The remaining capacity of the battery can be checked with an acidometer (see 5.1).
- 3) Check switch (4). Check cable connections on switch.
- 4) Check control current fuse: 5 A (6).
If the fuse is intact and the truck does not drive, contact the dealer.
- 5) Check main fuse for driving motor: 80 A (7).
Check cable connections on drive motor and pump motor.
If no fault can be found and the truck does not drive, contact the dealer.
- 6) Check the wire connections between the battery cells, and to the battery. In case of verdigris on the connections, these are to be cleaned.
Check that all cable connections are fixed.
- 7) Check the wiring loom on the side of the wheel motor. Check that the brake is activated when the handle is activated. Check that the brake is adjusted correctly.
If no fault can be found and the truck still brakes, please contact the dealer.
- 8) Brake needs adjustment.
Lift the forks and turn the adjusting screw on the brake side of the wheel motor. Turn clockwise to tighten the brake.
- 9) Fill in oil through filler (8). The oil level must reach the underside of the filling plug.
Oil type:
Hydraulic oil ISO VG 15 (factory-filled with Texaco Rando HD 15).
Max. load given on name plate. If the truck can not lift the load, given on the name plate, contact the dealer.
- 10) Check the fuse for the pump motor: 50 A (9).
If the fuse is intact and the truck does not lift, contact the dealer.
- 11) Locate the oil leak and contact the dealer.
To localise the leak it is necessary to remove the rear cover (5).
- 12) Check the fuse for the charger.
- 13) Place the handle in drive position before turning the forward/reverse knob.

7.0 Fault location key



8.0 Good service after purchase

8.1 Ordering spare parts

The correct spare parts are obtainable from your dealer.

When ordering, please state:

- Serial number of the product
- Type and width/length of the product
- Spare part no. Please find spare part no. on **www. logitrans.com**.

8.2 Warranty/Compensation

Spare parts delivered during the warranty period will be invoiced. A credit note will be sent immediately after we have received and tested the defective parts and found that the warranty conditions have been met.

8.3 Service and repair

You should be able to make adjustments and perform minor repairs on the spot. However, major repairs should be left to the dealer who has well-trained personnel and the necessary special tools. The manufacturer has an exchange system for pumps/cylinders. These are renovated and delivered with warranty.

8.4 Warranty

The warranty covers material and assembly defects which, subject to inspection by us or our representative, are deemed to be faults or deficiencies that prevent normal use of the parts concerned. Such affected parts shall be sent to your Logitrans dealer carriage paid within the warranty period in force at the time in question, together with a copy of the documentation for the service performed (B284 - see the back page). The warranty does not cover normal wear and adjustments. The warranty period is based on singleshift working.

The warranty shall no longer apply if

- the product has been used incorrectly,
- the product is used in environments for which it was not designed,
- the product has been overloaded,
- replacements of parts have been made incorrectly or original parts have not been used and consequential damages have arisen,
- if the product is changed or accessories, not being approved by Logitrans, are used.
- it can not be proved that a qualified technician has performed the service check according to the requirements stated in the instruction manual (see the back page).

8.5 Liability exemption

The manufacturer accepts no responsibility for personal injury or material damage arising from deficiencies, defects or improper usage. The manufacturer accepts no responsibility for lost earnings, operating losses, lost time, lost profits or similar indirect losses incurred by the purchaser or a third party.

Periodic service check

Service check is required once each year, or at least for every 250 hours of operation

The service check is to be performed on the basis of form no. B280 and proved on form no. B284. Forms and instructions for the service check are available at your dealer.

Periodic safety inspection

Safety inspection should be performed by the dealer or other qualified persons at least once each year, unless local regulations state otherwise.

The safety inspection to be performed on the basis of form no. B278 and proved on form no. B284. Forms and instructions for the safety inspection are available at your dealer.

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