

Original instructions

Pallet truck

CiTi One



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1

Introduction

Your truck

gives you the very best in terms of performance, safety and driving comfort. It is now up to you to maintain these qualities for a long time to come and to appreciate how to make the very best of them.

During production:

- all of the safety requirements of relevant EEC directives have been met
- all of the conformity analysis procedures, as laid out in the relevant directives, have been carried out.

This is certified by the CE mark on the factory plate.

These operating instructions tell you everything you need to know about starting and driving this truck.

Please follow the operating instructions for the truck delivered to you.

This information must be recorded in a maintenance booklet. Maintenance must be performed correctly to validate the guarantee.

Maintenance must only be performed by qualified personnel (specialists) approved by the manufacturer.

The designations in the text: front, rear, right and left, refer to the assembly position of the components in relation to the forward travel of the truck.

Impermissible use

The operating company or driver, and not the manufacturer, is liable if the truck is used in a manner that is not permitted.

It is not permitted to use the truck:

- for taking passengers
- in areas where there is a risk of fire of explosion
- if the maximum load capacity is exceeded.

Correct use of the equipment

The forklift truck is used for carrying loads.

We ask that you pay attention to the VDMA booklet: "Rules for use of industrial trucks in compliance with specifications and regulations" and industrial safety regulations.

The rules for use of industrial trucks must be observed by both maintenance personnel and the user.

If these rules are not observed, the user becomes responsible and the manufacturer is relieved of responsibility.

If you wish to use the truck for purposes other than those indicated in the user instructions, please contact your dealer.

Any modification of your truck, such as the fitting of equipment or conversion of the truck, is prohibited without the agreement of the manufacturer.

Symbols used

DANGER

Means that failure to comply can risk the lives of others and/or cause major damage to equipment.

WARNING

Means that failure to comply can result in the risk of serious physical injury and/or major damage to equipment.

CAUTION

Means that failure to comply can result in the risk of major damage to equipment or destruction.

NOTE

This means that particular attention must be paid to the specific technical meaning because this may not be obvious, even to a specialist.

ENVIRONMENT NOTE

The instructions listed here must be complied with otherwise environmental damage may result.

Technical description

CiTi One electric pallet truck

CiTi One : 500 kg capacity

The CiTi One pallet truck is designed for pallet load handling applications on hard-coated, uneven and sloped surfaces, and can even drive over steps.

Applications :

- Parcel and freight deliveries
- Stores, small businesses and local enterprises

Location:

- Parcel and freight delivery companies: warehouse, street, various businesses
- Small businesses: warehouse, workshop, work yard
- All stores: warehouse, shop, workshop, street
- Local enterprises: warehouse, workshop, backyard

Traction speed:

- from 0.3 to 6 km/h in both directions of travel depending on load
- 6 km/h maximum in both directions of travel unladen

Traction motor power:

- 0,3 kW (BLDC technology).

Lift motor power:

- 0.35 kW (DC technology)

Braking:

- counter-current, upon accelerator release
- counter-current by switching the drive direction,
- counter-current controlled by safety inverter (emergency brake),
- safety brake controlled by the upper or lower position of the tiller,
- parking brake applied when the supply is cut off by the emergency stop.

Battery equipment:

- Ni/Cd (5 Ah type)
- Ni/Mh* (9 Ah and 15 Ah types)

Option*

Legal requirements for placing on the market

Déclaration

Name of manufacturer

Address of manufacturer

We declare that the machine

Industrial truck

according to these operating instructions

Model

according to these operating instructions

complies with the most recent version of machinery directive 2006/42/EC.

Personnel authorised to compile the technical documents:

see EC declaration of conformity

Name of manufacturer

EC declaration of conformity

The manufacturer declares that the truck complies with the requirements of the EC machinery directive and any other EC directives, if applicable, that are valid at the time of placing on the market. This is confirmed by the

EC declaration of conformity and by the CE labelling on the nameplate.

The EC declaration of conformity document is delivered with the truck. The declaration shown explains the conformity with the requirements of the EC machinery directive.

An independent structural change or addition to the truck can compromise safety, thus invalidating the EC declaration of conformity.

The EC declaration of conformity must be carefully stored and made available to the responsible authorities if applicable. It must also be handed over to the new owner if the truck is sold on.

1 Introduction

Legal requirements for placing on the market

2

Safety

Safety regulations

These operating instructions and the VDMA booklet, "Directives concerning the use of industrial trucks in compliance with the specifications and regulations", come with the truck and must be communicated to all those concerned and in particular to personnel responsible for maintenance and driving. The employer must make sure that the forklift operator has properly understood all the safety information.

Please observe the directives and safety regulations attached, in particular:

- Information concerning the use of materials handling trucks
- Regulations concerning traffic lanes and working areas
- Appropriate behaviour, rights and responsibilities of the driver
- Use in particular areas
- Information concerning starting, driving and braking
- Information for maintenance and repair
- Regular checks and technical inspections
- Residual risks.

Care is recommended both for the user and the person in charge (employer) with regard to adhering to all safety rules concerning the use of material-handling trucks.

When instructing operators, specific points to be emphasised include:

- The features of the truck
- The special accessories
- The specific features of the working environment.

Train the user in driving and manoeuvres, until the truck is under proper control.

Forklift truck stability is guaranteed when the unit is used correctly.

WARNING

The working areas of the truck should be sufficiently lit.

⚠ CAUTION

Welding can damage the electrics.

Therefore, it is imperative to unplug the battery beforehand and disconnect all connections to printed circuit boards.

⚠ CAUTION

- The truck operator must wear safety footwear.
 - Appropriate protective gloves must be worn at all times when changing the battery.
-

Competent person

A competent person is a specialist in the field of industrial trucks who has:

- Successfully completed training, as at least a service engineer for industrial trucks
- Many years of professional experience with industrial trucks

- Knowledge of the accident prevention regulations
- Knowledge of the relevant national technical regulations

The competent person is able to assess the condition of industrial trucks in terms of health and safety.

2 Safety

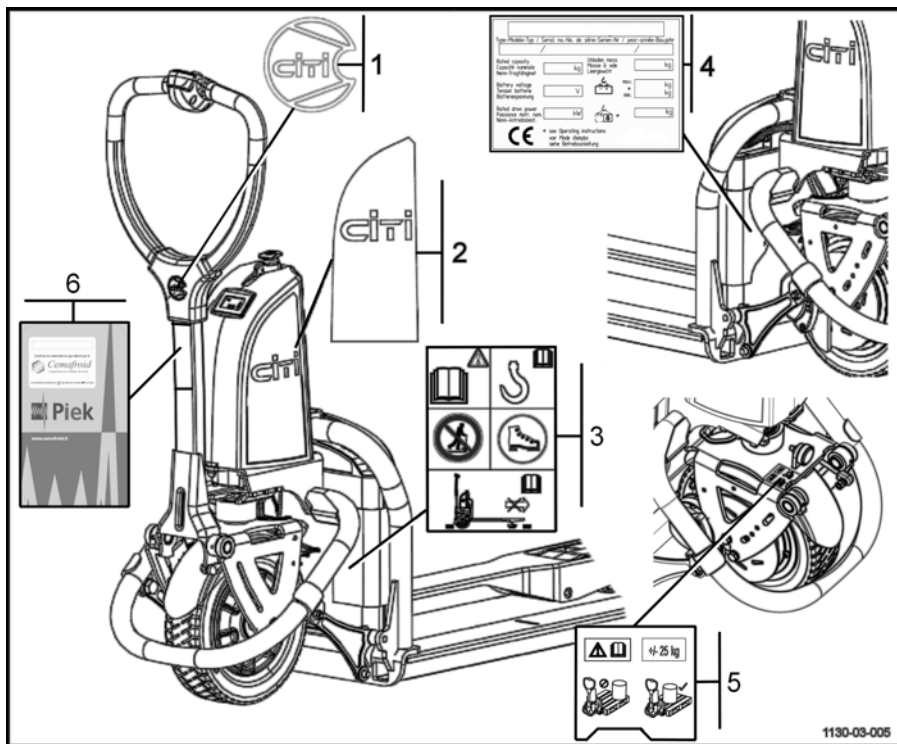
Competent person

General views

3 General views

Labels

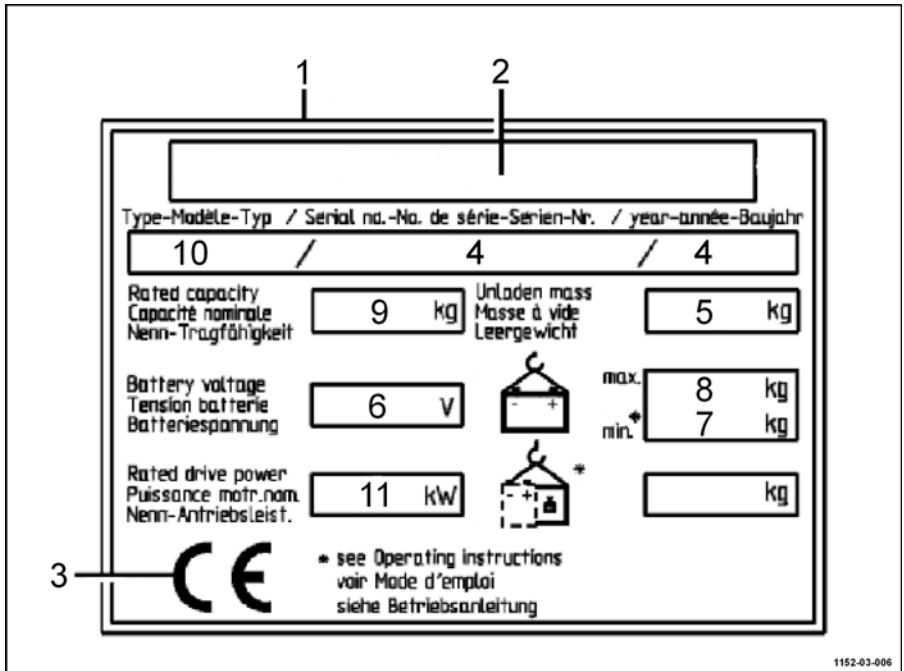
Labels



- 1 Citi (tiller) label
- 2 Company label (bonnet)
- 3 Safety label

- 4 Company label (see next page)
- 5 Weighing system label
- 6 Label PIEK

Identification label

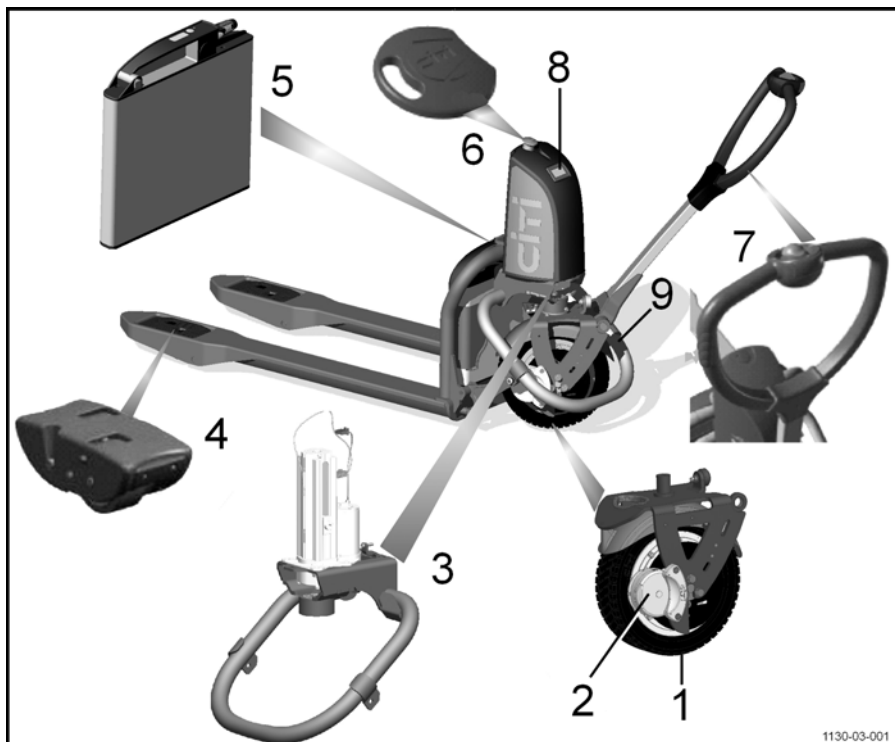


- | | | | |
|---|--|----|-------------------------------|
| 1 | Identification label | 6 | Battery voltage |
| 2 | Manufacturer | 7 | Minimum battery weight |
| 3 | CE symbol (this symbol certifies that the machine complies with European regulations on industrial trucks) | 8 | Maximum battery weight |
| 4 | Serial number / year | 9 | Nominal capacity of the truck |
| 5 | Tare weight | 10 | Model |
| | | 11 | Motor rated power |

3 General views

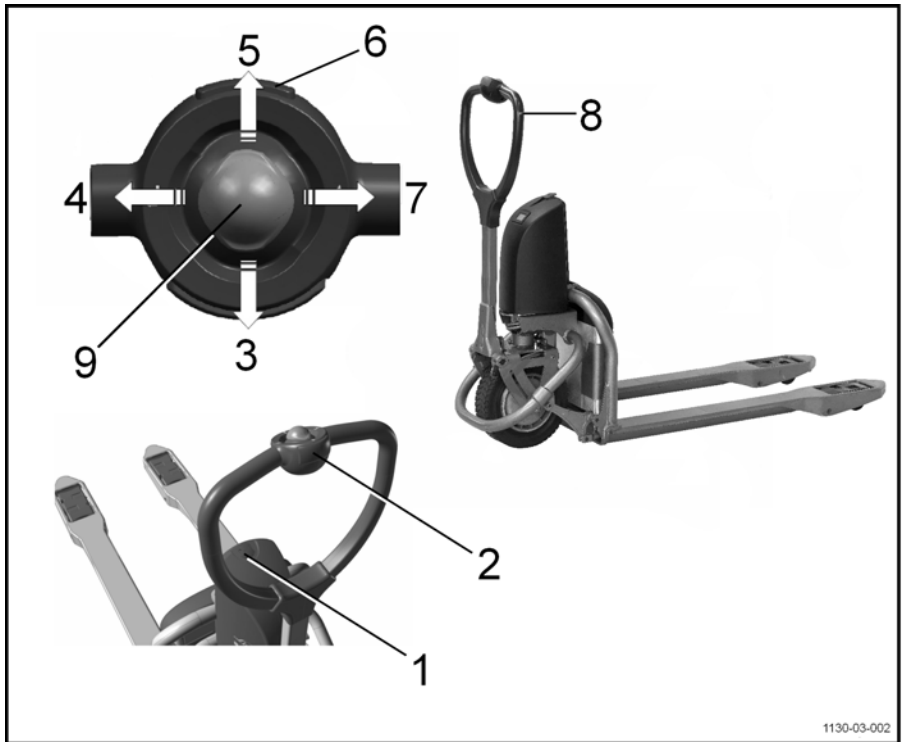
Truck modules

Truck modules



- 1 Drive wheel
- 2 Brake
- 3 Lifting system
- 4 Load wheels
- 5 Battery

- 6 On/off button (emergency stop)
- 7 Tiller
- 8 Display
- 9 Chassis

Controls

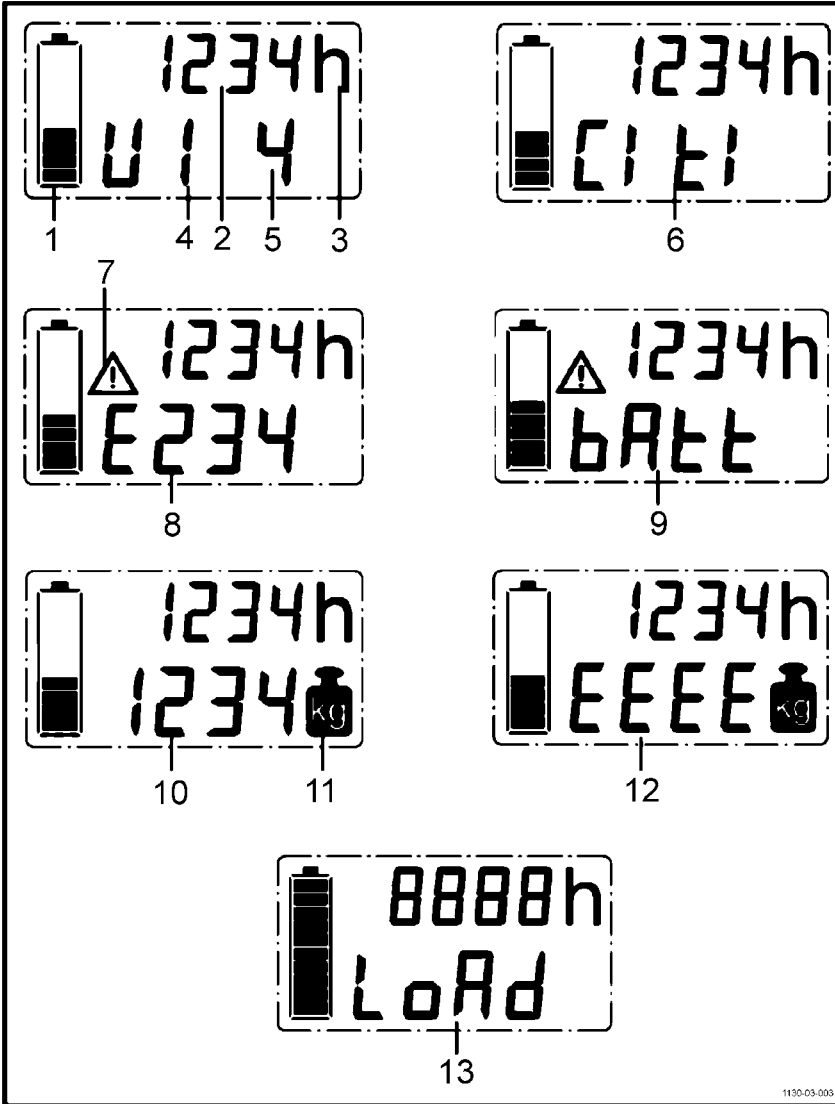
- 1 Emergency stop button or contact
- 2 Safety reverser (belly)
- 3 Reverse travel
- 4 Fork lower control
- 5 Forward travel

- 6 Horn control
- 7 Fork lift control
- 8 Tiller
- 9 Joystick

3 General views

Display

Display



	Designation	Comment	Message on the display
1	Battery level	100% = full charge 10% = the battery must be charged 0% = battery empty, traction off	100% = battery ok 20% = flashing + symbol (7): speed = 50% 10% = flashing + symbol (7): speed = 50% 10% = flashing = the battery must be recharged 0% = traction stop, only lower to set down the load Empty = Urgent, the battery must be recharged
2	Hour meter	Operating time of truck	The hour meter counts the time from the moment the joystick was activated
3	Hour meter	Flashes when the joystick is activated	Flashing "h" symbol
4	Software version	Reserved for service centre	Number of software version
5	Software index		Software index number
6	CiTl logo	No errors reported	"CiTi" is displayed
7	Danger	Danger or error displayed	Flashing "Danger" symbol
8	Error	Error number displayed	A maximum of 4 errors is displayed Flashing "Danger" symbol
9	Battery	Battery safety	Time before the battery safety cuts out Flashing "Danger" symbol
10	Weight	Weight value	The weight value is displayed
11	Weight	Weight function activated	The weight symbol is displayed
12	Weight	Excessive weight	"EEEE" is displayed Flashing weight symbol
13	Load	Software update, for the service centre	"LoAd" is displayed

3 General views

Battery charge level

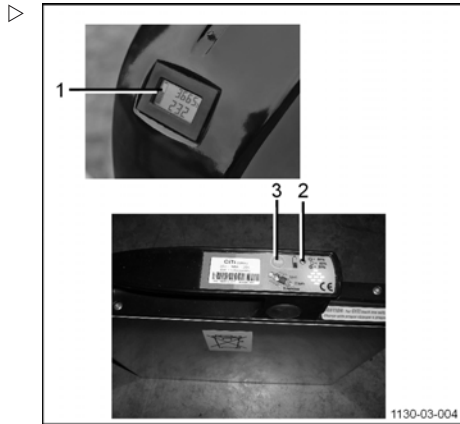
Battery charge level

Battery charge level (1) is shown on the display.

The charge status is displayed on the battery itself by means of a diode (2).

To view it, open the battery hood and check the colour of the diode by pressing the push-button (3) continuously for 10 seconds:

Battery charge status	Diode colour
Charge \geq 80%	Solid green
$80\% \leq$ Charge \leq 20%	Solid yellow
Charge \leq 20%	Solid red



Battery status

- Connect the battery
- Start the application and use the battery until the indicator light flashes red

Depending on the application, the following indicator lights may be displayed:

White	Discharge or Park: Battery discharged No voltage on the operating connector.
Yellow	Regeneration charge: The application feeds a current back to the battery (descending or decelerating).
Flashing red in quick succession	Fault: Fault noted during use The battery cannot be used

The battery may switch to energy-saving mode following a long period of inactivity.

To reactivate the battery:

- Press the push button to find out the battery charge status
- OR charge the battery
- OR connect the battery to the application and start the application.

4

Use

4 Use

Checks before first use

Checks before first use

	Carried out	
	✓	✗
Forward and reverse travel control		
Lifting and lowering control		
Emergency stop button		
Brake operation		
Operating the alarm horn		
Operating the safety reversing gear		
Steering		
Wheel fastenings		
Tiller in raised position (neutral)		

Operating instructions

The CiTi One is designed for indoor and outdoor use in non-hazardous environments where the air humidity is less than 95%.

- Normal conditions: from 0°C to 40°C
- Extreme conditions: from –15°C to 50°C (can potentially affect performance)

Complies with the standard **EN 12895** relating to electromagnetic compatibility. Correct operation of the trucks can no longer be guaranteed if they are used in areas where the electromagnetic fields could exceed the thresholds specified by the standard.

The CiTi One can operate on all types of surfaces: asphalt, concrete, slabs and paving stones.

The maximum negotiable slope recommended over a short distance is limited to 10% for braking and stability reasons.

The truck can only handle pallets with a maximum weight of 500 kg, evenly distributed over the whole length of the load arms. The loads must be uniform, with a maximum recommended height of 2 m. For uses other than those specified above, please contact our service engineers.

CAUTION

It is not possible to use the lift and traction at the same time.

CAUTION

Risk of the load tilting

The pallets to be used must be in good condition.

WARNING

- Always adapt your driving to the ground conditions (uneven surfaces etc.), particularly hazardous working areas and the load.

CAUTION

- To prevent the bottom of the lifting system from scraping the ground, always raise the load arms halfway up before setting off.
- Always switch off the ignition with the on/off button before leaving the truck.
- For effective protection, the wearing of safety footwear is compulsory.

WARNING

- Before setting off in forward or reverse travel, look carefully in the direction of travel to ensure that the manoeuvre can be carried out safely.

CAUTION

Deterioration or destruction of the equipment.

- Driving the truck while seated is prohibited.

WARNING

Driving safety instructions

- The driver must drive slowly around corners and when entering narrow passageways.
- The driver must always maintain a safe braking distance from vehicles or persons moving in front of him.
- The driver must avoid stopping suddenly, making U-turns too quickly and overtaking in areas with poor visibility.

4 Use

Start-up

Start-up

- Pull the button (A) to start the truck.
- The display starts up (B).



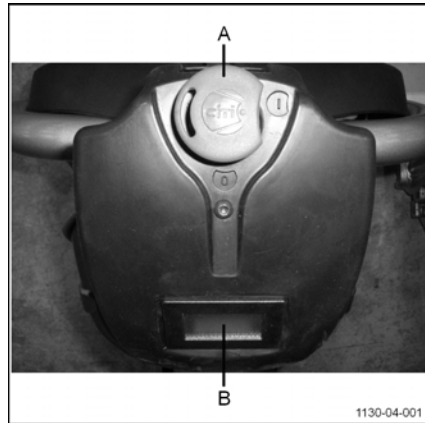
NOTE

If the truck has not been used for some time, position the button in the holding fixture, then turn to the right.

Standby

If the joystick has not been activated for 10 minutes, the truck switches to standby mode.

To start it up again, press the button (A) and then reset it.



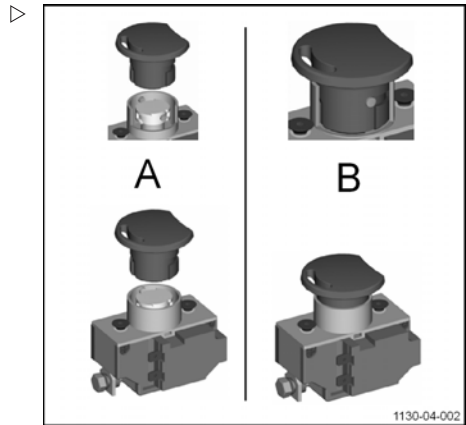
Functions of the on/off button (emergency stop)

A Removing or inserting the button

Position the button correctly (holding fixture).

B Removing the button (safety)

Remove the button when the truck is no longer in use.



C Releasing the button

▷ Turn the button 90° to the right.

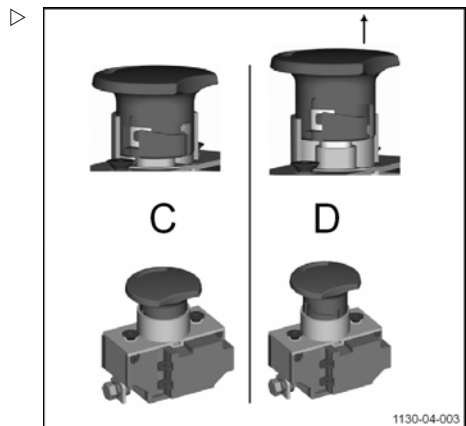
The button is locked and cannot be removed.

D Starting the truck up again

▷ Pull the emergency stop button.

The truck is in operation.

The button cannot be removed.



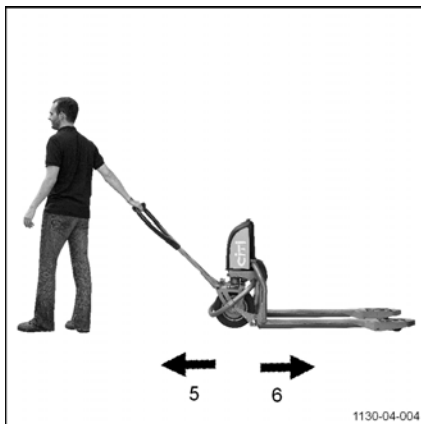
4 Use

Forward travel/reverse travel

Forward travel/reverse travel ▷

On a pallet truck, the conventional controls for the drive direction are:

- Forward gear: (5) - Tiller direction
- Reverse gear: (6) - Fork arm direction



Forward gear (tiller direction) ▷

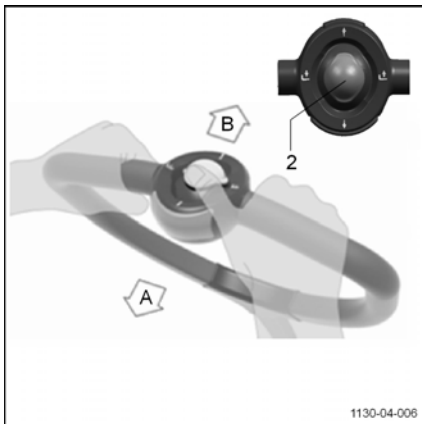
- Tilt the tiller (1)



- Pull the joystick (2) towards you (A) with your thumb.

Reverse gear (fork arm direction)

- Tilt the tiller (1)
- Push the joystick (2) towards the fork arms (B) with your thumb.



4 Use

Safety devices

Safety devices

Emergency stop button

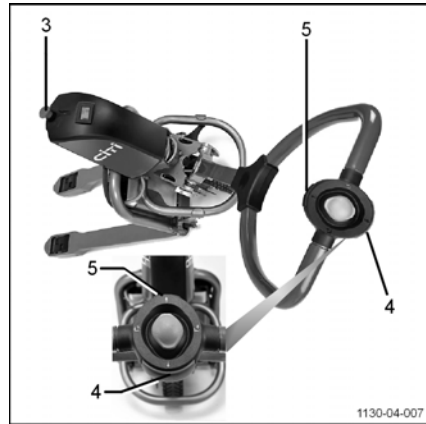
- Press button (3).

Safety reverser

- Press button (4).

Horn

- Press button (5).



Use on a slope

NOTE

Incorrect use of the truck on a slope is not recommended. It places particular stress on the traction motor, brakes and battery.

Slopes must always be approached with great caution:

- Never attempt a slope whose gradient is greater than that specified in the truck's datasheet.

Ascending slopes

Travel up slopes must always be in reverse, with the load uphill.

Without a load, we recommend that you go up a slope forwards.



Descending slopes

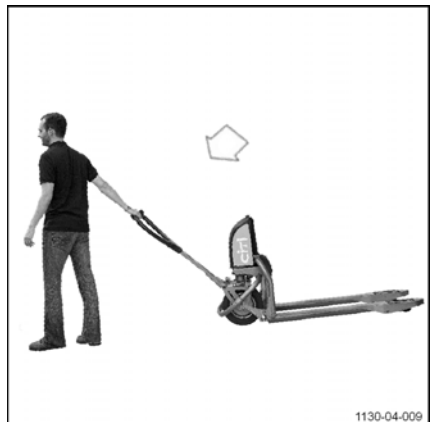
Travel down slopes must always be forwards, with the load uphill.

Without a load, we recommend that you descend a slope forwards.

In all cases, you must travel at a very low speed and brake gradually.

CAUTION

Never park the truck on a slope. Never make a U-turn or take shortcuts on a slope. On a slope, the operator must drive more slowly.



Starting on a slope

- Move the joystick in the required direction.

4 Use

Use on a slope

- Tilt the tiller into the driving position.
- Release the joystick to apply the parking brake.

Characteristics:

Percentage	Load
8% maximum	500 kg

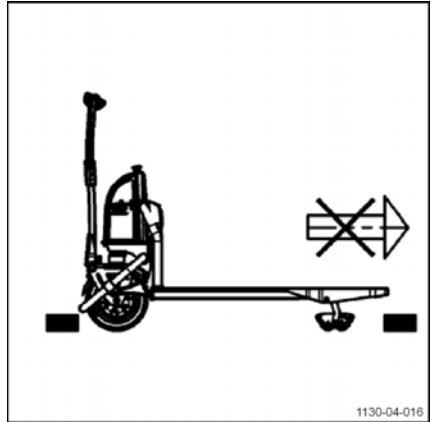
Recommended maximum obstacle clearance

⚠ CAUTION

Do not travel with excessive speed when overriding kerbs and other obstacles. Reduce your speed accordingly.

When climbing a kerb always travel with the forks trailing.

Recommended maximum obstacle clearance with a speed of less than 2 km/h	
Load in kg	Direction: tiller
	height in mm
150	70
300	50
500	45



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4 Use

Braking system

Braking system

Braking by reversing the direction of travel

Braking can be achieved by reversing the direction of travel:

- Move the joystick in the opposite direction until the truck comes to a stop.
- Then release the joystick.

Automatic braking

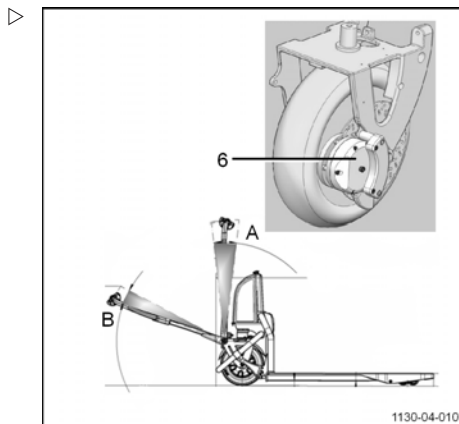
- Release the joystick.
- Counter-current braking is engaged automatically until the truck comes to a stop.

Disc brake

The disc brake (6) is activated by the tiller

- in upper position (A)
- in lower position (B)

In both cases, the truck is immobilised.



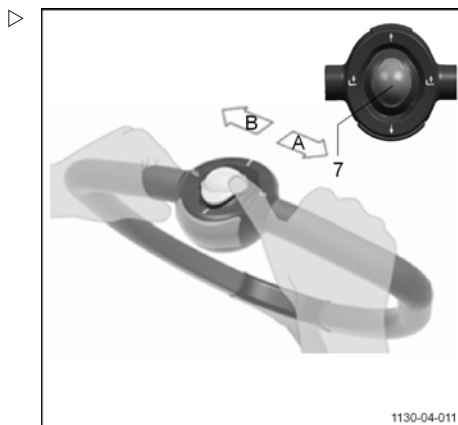
Raising

Fork arms lifting

- Move the joystick (7) to the right (A)

Fork arms lowering

- Move the joystick (7) to the left (B)



4 Use

Working with loads

Working with loads

DANGER

Safety footwear must be worn.

CAUTION

Transporting people is strictly prohibited.

CAUTION

Be careful not to touch adjacent loads or loads positioned at the side or in front of the load being handled.

Loads must be arranged so that they are aligned with a narrow space between them to prevent them from catching.

Before picking up a load

Ensure that its weight does not exceed the truck's capacity.

- You must also make sure that the load is stable, well-balanced and centred between the load arms in order to avoid dropping any part of the load.
- Check that the width of the load is compatible with the width of the load arms.

CAUTION

Load too heavy!

If the load exceeds the maximum permissible load, it will not be lifted smoothly (EEEE message).

Picking up a load

- Approach the load carefully.
- Lower the load arms so that they can easily be inserted into the pallet.
- Insert the load arms under the load.
- If the load is shorter than the load arms, position it so that the end of the load overhangs the end of the load arms by a few centimetres, in order to avoid hooking the load in front.
- Raise the load a few centimetres from its support.
- Move the load out slowly and in a straight line.



Transporting a load

- Always drive forwards for optimum visibility.
- When carrying a load on a slope, always climb and descend with the load uphill; never travel across the slope or make a U-turn.
- Reverse travel must only be used for depositing a load; since visibility in this direction is restricted, you should only travel at very low speed.
- To facilitate movement over obstacles, increase the ground clearance.

4 Use

Working with loads

Setting a load down on the ground

- Carefully drive the machine to the required location.
- Carefully move the load into the unloading area.
- Lower the load until the load arms are free.
- Withdraw the machine in a straight line.
- Raise the load arms again several centimetres.

⚠ CAUTION

Be careful to keep clear of other loads at the side of or behind the truck.

Before leaving the machine

⚠ CAUTION

Always stop the machine on level ground away from traffic routes.

- Ensure the load arms are in the lower position.
- Stop the truck and remove the emergency stop switch.
- In the event of prolonged stoppage, disconnect the battery connector.



Assessing the load

The truck is fitted with **a system for weighing pallets** (or other containers with the same dimensions). The system has a tolerance of ± 25 kg for loads up to 400 kg, provided the load is correctly positioned (see below).

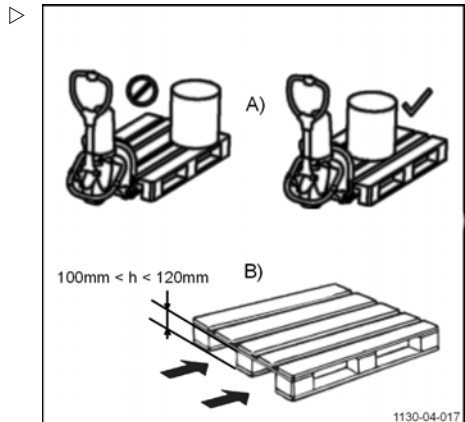
1.1 Load positioning

A) The load measured must be correctly positioned on the pallet (centre of gravity in the middle)

The pallet must be centred on the forks, in line with the axis of the truck **and positioned against the battery compartment**.

B) The height of the pallet must be between 100 and 120 mm.

We do not recommend that you weigh the load when the pallet is crosswise.



1.2 Use

A) In order to be able to estimate the weight of the load, the forks must be imperatively in the lower position.

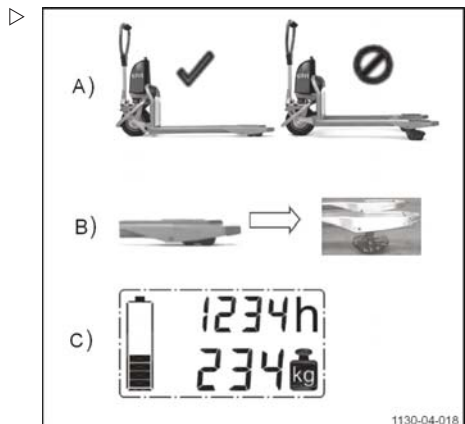
The CiTi logo appears on the display.

B) To assess the weight of the load, you must raise the forks without stopping.

C) Once in the upper position, the weight of the load is automatically displayed in kg.

As long as the forks are not in the lower position, the weight of the load remains displayed.

To perform a new measure, restart the above procedure.



4 Use

Assessing the load

1.3 Checking the load assessment system

This check must be carried out regularly during the truck's first hours of operation and after any use that may have resulted in exceptional mechanical stress (e.g. a fall from a rear flap or movement over obstacles with heavy loads)

To carry out this operation:

➤ Weigh three known loads: x, y and z.

The weights displayed for each load should correspond to the actual measured weight of the pallet + load (± 25 kg).

This system gives an indication of the weight being transported. If the value indicated by the truck seems incorrect, retake the measurement.

If the problem persists:

- 1) Check the weight of the pallet with calibrated scales.
- 2) Repeat calibration using the "Resetting to zero" function (see chapter 1.4).
- 3) If this is unsuccessful, please contact our after sales service.

1.4 Resetting to zero function

This function allows you to reset to zero.

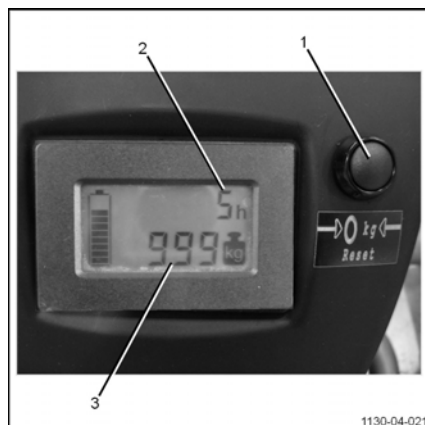
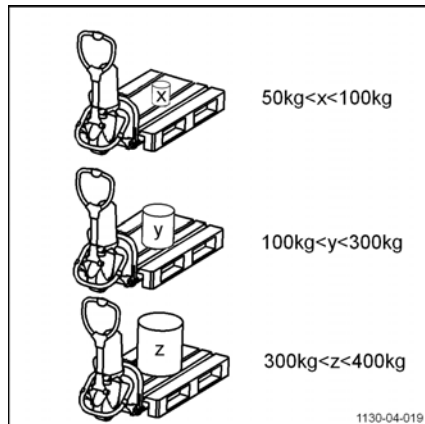
NOTE

Several rules must be observed when resetting to zero:

- There should be no load on the forks
- The ground should be flat
- The lifting motor should be warm (perform a few lifts first if necessary)

Operation:

- Press the (1) button for 2 seconds
- Perform 5 full lifting cycles (from lowered forks to lifted forks). The screen will then indicate successive lift numbers (2) from 1 to 5 as well as symbols "h" and "kg" indicators.



- Once it has been reset to zero, 999 will be shown on the screen (3).

NOTE

The "Resetting to zero" menu is automatically deactivated:

- If the operator waits too long after pressing the button to perform the first lift
- If the operator waits too long between two lifts

1.5 Display

Message	Description
A) EEEE	Load weighed >500 kg or not centred.
B) Warning + weight symbol + message "batt"	Battery too weak, too old or unbalanced.

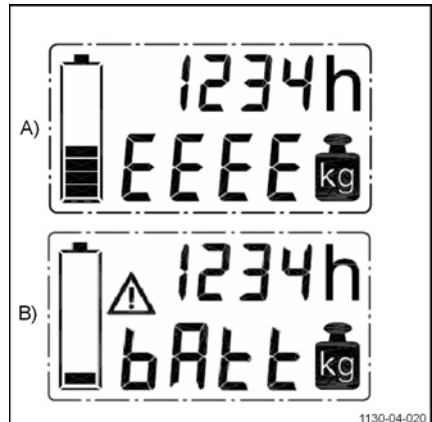
CAUTION

Risk of incorrect weight

In order to ensure accurate measures, the installation of accessories on the moving parts of the truck is forbidden.

The truck should be used within the temperature range indicated in the truck's operating instructions.

The use of the lifting motor must only be in accordance with the truck's datasheet (S3: 5% utilisation).



4 Use

Using the battery

Using the battery

Installation and first use

- Use the power supply with a constant current.
- Check that the voltage printed on the label is the same as the nominal voltage of the battery (36 V) and ensure the input voltage is the same as that of your mains supply (240 V – 50 Hz).
- Install the battery ensuring that the power cable is accessible for connection.
- Connect the power supply to the battery.
- Connect the power supply to the mains. The battery indicator is yellow.
- Charge the battery until the indicator turns green. When charging the battery for the first time, you will need to leave it charging for at least 48 hours (the end of automatic charging) to ensure a full charge.
- Disconnect the mains supply and the battery. Check the battery gauge indicator. When the button is pressed, the indicator turns green.
- Connect the battery connector to your application (the current consumption must be less than the maximum 25 A). The battery supplies the current required by the application

CAUTION

NEVER:

Immerse the battery.

Use a power supply that is not suitable for charging the battery.

Connect the battery in reverse polarity.

Open the battery outside the authorised networks, dismantle the battery blocks or the cells (Please note that the alkaline electrolyte is inside and that exposure to this electrolyte can be dangerous).

Short circuit the battery (for example by placing a metal cell in the connector).

Discharge the battery in abnormal conditions.

Expose the battery to high temperatures (This could result in the cell and battery protectors being activated).

Expose the battery to fire.

WARNING

If an electrolyte leak occurs, stop using the battery immediately. The electrolyte is a corrosive product.

If the electrolyte comes into contact with the skin or with clothing, wash immediately with soap and water.

If the electrolyte comes into contact with the eyes, wash thoroughly with water and seek medical assistance immediately.

CAUTION

Electrical risks

With a battery connection at 36 V, the poles for operation of the battery and the poles for charging can function at over 50 volts during charging. Contact with the body at 50 - 60 volts can cause a minor electric shock.

The batteries can generate short circuit currents of more than 100 amperes.

CAUTION

Do not wear rings, watches or bracelets when working on batteries.

Short circuits through these objects could cause severe burns and injuries.

Only use tools with insulated handles.

Relative battery charge status and periodic discharge

The relative battery charge status indicates the battery capacity as a percentage.

The percentage is calculated in comparison to the remaining capacity during the last discharge.

The type of indication used for the charge status takes into account the battery variation when operating in cycles. The battery's total capacity decreases over the course of its life.

NOTE

The last battery discharge value measured is updated if a complete cycle is initiated (full charge + full discharge).

It is important to fully discharge the battery on a regular basis (once a month, for example) in order to obtain the most accurate relative value possible for the battery charge status.

The battery must be charged immediately after the full discharge in order to maintain storage and ensure correct utilisation.

4 Use

Storing the battery

Storing the battery

It is recommended that the battery is stored connected to a charging current, in order to maintain the battery charge status via a maintenance charge.

If the battery cannot be stored connected to a charging current, it must be disconnected and stored in a dry place at a constant temperature.

The battery can be stored for up to six months in a location with an ambient temperature of 25-35°C and a relative humidity of 65%.

Slings

⚠ WARNING

Risk of serious injury and/or serious damage to equipment.

Use hooks and a hoist of sufficient capacity and protect all parts coming into contact with the lifting device.

Weight of machine (with battery): see technical specifications.

- Remove the load before slinging the truck.
- Disconnect the battery connector.
- Attach the lifting device.

⚠ DANGER

Danger to life!

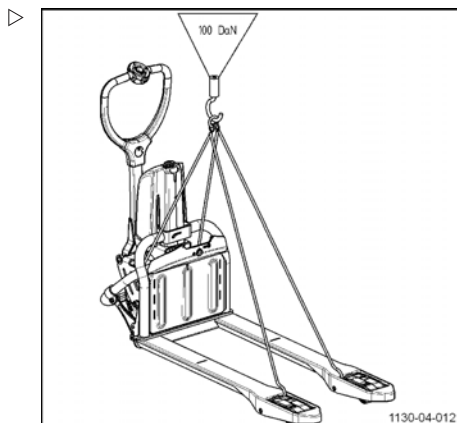
Personnel must not stand under or near the truck when it is being lifted.

Check that the battery is locked in position.

⚠ CAUTION

Deterioration or destruction of the equipment

Do not sling the truck by the control unit (tiller).



Towing

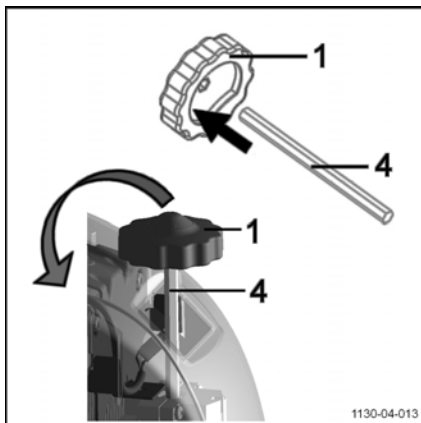
⚠ CAUTION

Deterioration or destruction of the equipment.
Do not tow the truck by the control unit (tiller).

Setting the load down in the event of a breakdown

If the truck breaks down with the load in the raised position, use the following procedure:

- Open the battery cover.
- Use the handle (1) and the adjustment rod (4).
- Remove the display.
- Position the handle and rod assembly at the same height as the lifting system.
- Turn the assembly to the left to lower the load.



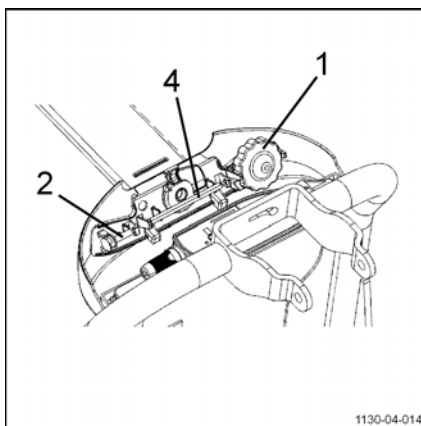
Releasing the brake



NOTE

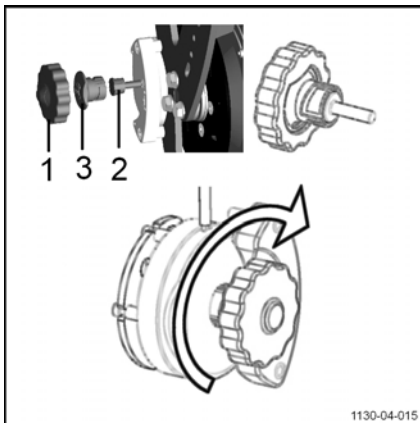
The brake is applied if the truck is not supplied by the battery.

- Open the battery cover.
- Take hold of the handle (1) and the screw (2).



- Assemble the screw (2) and button (3) assembly and place the entire object inside the handle (1) as shown

The brake can then be released by turning the assembly in the direction shown



Transporting the machine

If the truck has to be transported, make sure that it is properly chocked and protected against bad weather.

Storage

If the machine is to be taken out of service for an extended period, it will be necessary to:

- remove the battery and recharge it at least once a month
- lower the fork arms
- Raise the truck on chocks to avoid the tyres becoming flat.

4 Use

Towing

5

Maintenance

5 Maintenance

Specified use (CiTi application)

Specified use (CiTi application)

	Value	Maximum load (Kg)
Lift motor capacity	S3: 5%	500
Traction motor capacity	S2: 20 minutes	500
Maximum obstacle clearance speed (km/h)	2	500
Recommended obstacle clearance height (mm)	70	150
Recommended obstacle clearance height (mm)	50	300
Recommended obstacle clearance height (mm)	45	500

The batteries, wheels and tires are wearing parts. These components must be checked regularly.

Opening the battery hood

- Position the button (1) in the holding fixture (2) then turn to the right (a quarter-turn).

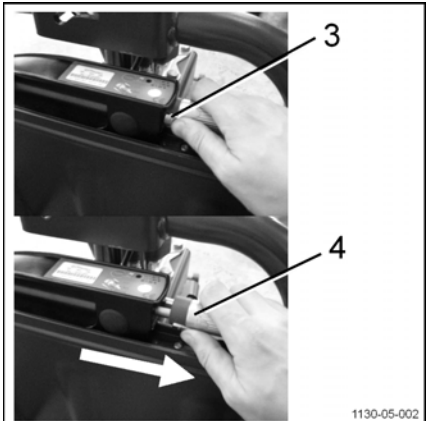
i NOTE

Observe the direction of the button.



Disconnecting the battery connector

- Open the battery cover.
- Pull the unlock button (3) towards you
- Turn the battery connector (4) a quarter-turn towards the left
- Disconnect the battery connector (4) by pulling it towards you.



5 Maintenance

Recharging the battery with the charger

Recharging the battery with the charger

- Open the battery cover.
 - Unplug the battery connector
 - Remove the battery using the handle.
 - Place the battery near a power socket.
-
- Connect the charger cord to the battery and connect the charger power plug to the power socket.



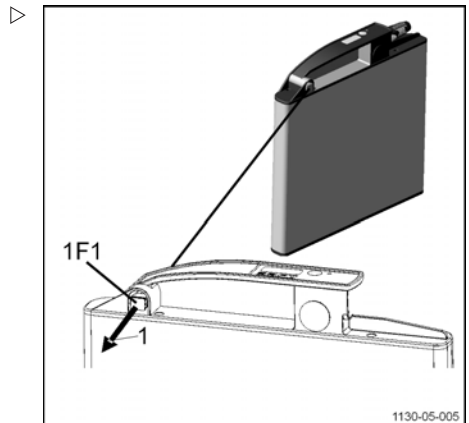
Diode colour	Battery status	Comment
Yellow	Initialisation / rapid charging	Check that the voltage is sufficient for charging and that the temperature is within the specified range [-10°C - +40°C] Charging may take longer if the temperature exceeds 50°C. The charging time varies depending on the battery charge status

Yellow then green alternately	Equalisation charging	The battery is operational; the charge status is greater than 95% The current is reduced during this stage in order to continue charging the different elements equally.
Green	Maintenance charging	Equalisation charging is complete; the battery can supply 100% of its capacity It is recommended that the battery be left in this condition until the next time it is used.
Flashing red in quick succession	Fault	Fault detected during charging The battery cannot be used.

Main fuse

The 25 A main fuse (1F1) protects the control circuit.

In the event of a problem, change the fuse by pulling it in the direction shown (1).



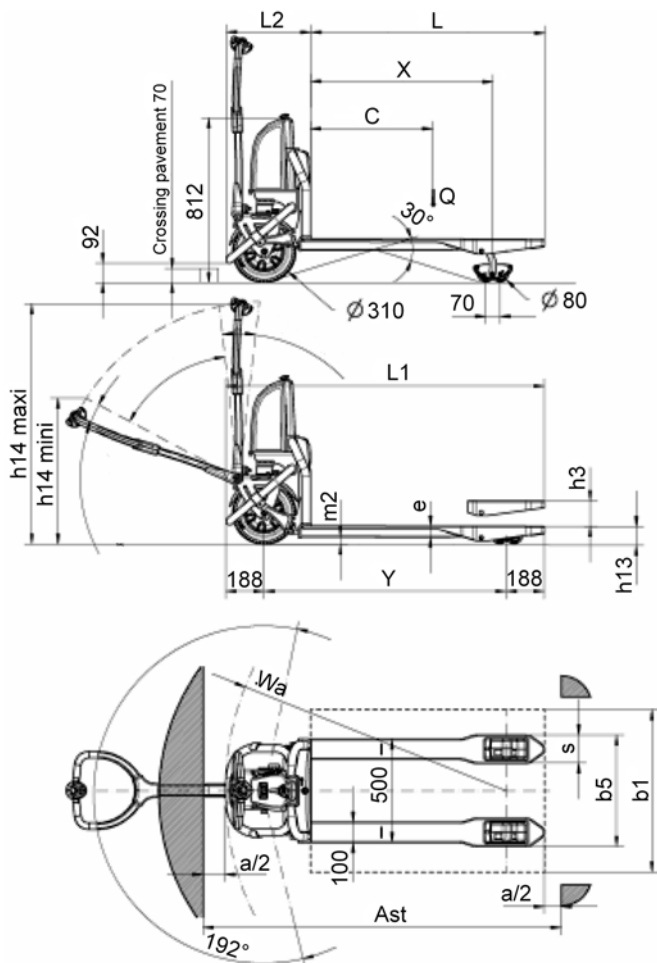
5 Maintenance

Main fuse

6

Technical specification

Technical datasheet



1130-06-001

DESIGNATION				
1.2	Model type		CiTi One 1150	CiTi One 950
1.3	Method of propulsion: battery, diesel, petrol, LPG, mains power		battery	
1.4	Driving: manual, pedestrian, standing, seated, order picking		Pedestrian	
1.5	Nominal capacity	Q (kg)	500	
1.6	Centre of gravity	C (mm)	600	
1.8	Distance from the load wheel axle to the front of the forks (± 5 mm), lowered / raised forks	X (mm)	972 / 906	772 / 706
1.9	Wheelbase (± 5 mm)	Y (mm)	1185	985
	Length of the forks	L [mm]	1150	950

WEIGHT		CiTi One		
2.11	Kerb weight ($\pm 10\%$)	kg	5 Ah	98
2.12	Kerb weight ($\pm 10\%$)	kg	9 Ah	99
2.13	Kerb weight ($\pm 10\%$)	kg	15 Ah	102
2.2	Load per laden axle, operator side / load side ($\pm 10\%$)	kg	Load for 5 Ah for the fork arms / drive wheel	224 / 374
2.3	Load per unladen axle, operator side / load side ($\pm 10\%$)	kg	for wheels / drive wheel	71 / 27

WHEELS		CiTi One		
3.1	Wheels: rubber (wheels / drive wheel)			rubber
3.2	Drive wheel sizes	$\varnothing \times l$ (mm)		$\varnothing 310 / 85$
3.3	Dimensions of load wheels / load side	$\varnothing \times l$ (mm)		bogies = 80 X 37
3.4	Additional wheels (dimensions)	$\varnothing \times l$ (mm)	Stabilisers	without
3.5	Number of front / rear wheels (x = drive wheel)			1
3.6	Track width, operator side (± 5 mm)	mm		0
3.7	Track width, load side (± 5 mm)	mm	Mobile chassis	410

6 Technical specification

Technical datasheet

DIMENSIONS			CiTi One 1150	CiTi One 950
4.4	Lift (± 5 mm)	H3 (mm)	125	
4.9	Height of the operating device in driving position, min / max.	H14 (mm)	650 / 1170	
4.15	Height of the forks in the lower position (± 5 mm)	H13 (mm)	85	
4.19	Total length (± 5 mm)	L1 (mm)	1560	1360
4.20	Length to front of forks (± 5 mm)	L2 (mm)	410	
4.21	Total width (± 5 mm)	b1 (mm)	550	
4.22	Fork dimensions	s/e/l (mm)	100 / 55 / 1150	100 / 55 / 950
4.25	Outside fork spread (± 5 mm)	B5 (mm)	550	
4.32	Ground clearance, at centre of wheelbase (min.)	m2 (mm)	30 / 155	
4.34	Aisle width with an 800 x 1200 pallet lengthwise	Ast (mm)	1815	1615
4.35	Turning radius (min.)	Wa (mm)	1387 / 1321	1187 / 1121

PERFORMANCE DATA			CiTi One	
5.1	Driving speed; laden (min.) / unladen (max.)	km/h	4.5 / 6	
5.2	Lifting speed; laden (min.) / unladen (max.) ($\pm 10\%$)	cm/s	3.7 / 5.4	
5.3	Lowering speed; laden (min.) / unladen (max.) ($\pm 10\%$)	cm/s	4.9 / 5.8	
5.7	Capacity on a slope; laden, 5 minutes	%	8%	
5.81	Clearing obstacles, (see chapter 4: Authorised clearing of obstacles)	%	—	
5.82	Authorised speed of clearing obstacles	km/h	<2	
5.9	Acceleration time, laden / unladen (d = 10 m)	s	7 / 6	
5.10	Service brake		Electromagnetic, disc brake	

DRIVE				CiTi One
6.1	Traction motor, (S2: 20 minutes)	kW	BLDC	0.3
6.2	Lift motor (S3: 5 % utilisation)	kW	DC	0.35
6.3	Battery type in accordance with DIN 43 531/35/36 A, B, C, not			NiCd / NiMh
6.41	Battery voltage and capacity (discharge in 5 h)	V/Ah		36 / 5 Ah
6.42	Battery voltage and capacity (discharge in 5 h)	V/Ah		36 / 9 Ah

DRIVE				CiTi One
6.43	Battery voltage and capacity (discharge in 5 h)	V/Ah		36 / 15 Ah
6.5	Battery weight 5 Ah / 9 Ah / 15 Ah	kg		6.4 / 7 / 10.5
6.6	Energy consumption according to standardised VDI 2198 cycle	kWh		0.06

MISCELLANEOUS				CiTi One
8.1	Electronic traction	controller		
8.4	Noise level at operator's ear	dB (A)		<60

7

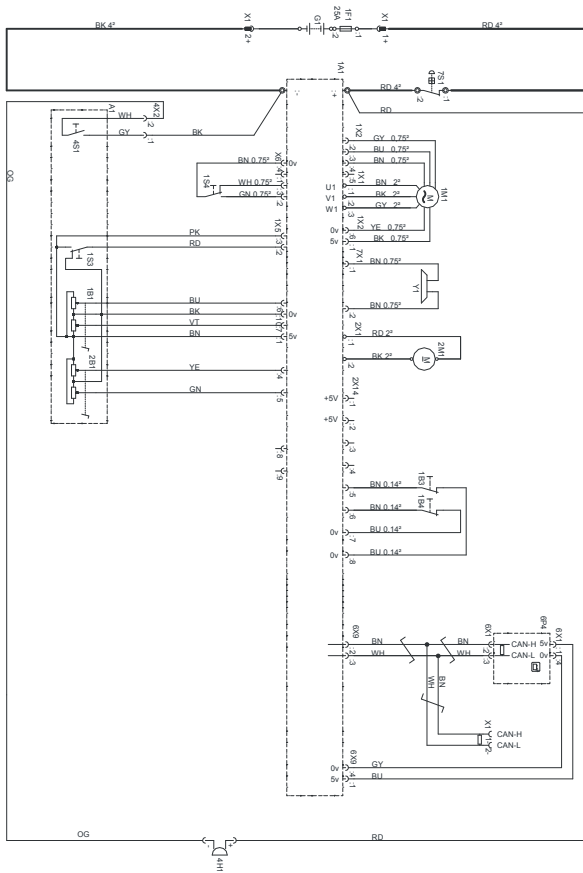
Diagrams

7 Diagrams

Circuit diagram

Circuit diagram

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100



A1	Control module (travel, lift, horn) (19-47)	1X2	Traction motor connector (26, 27, 28)
1A1	Traction and lift controller (LAC) (17-80)	1X3	Setting connector for controller control (22-31)
1B1	Accelerator potentiometer (36-40)	1X4	Tiller foot connector (24-28)
1B3	Lower fork sensor (53)	1X5	Control module connector (30-52)
1B4	Upper fork sensor (55)	2X1	Lift controller connector (40-42)
2B1	Lift potentiometer (42-46)	2X14	Upper/lower cut-off connector (45-60)
1F1	Power circuit fuse 25 A (12)	4X1	Tiller foot connector (20-22)
G1	Battery (12)	6X1	Indicator system connector (67, 68)
4H1	Warning horn (85)	6X9	Connector CAN (67, 68, 78, 79)
1M1	Traction motor (26-28)	7X1	Brake connector (33, 37)
2M1	Lift motor (40-42)	Y1	Brake (35)
6P4	Indicator system, battery management (66-70)	Legend for electric wire codes:	
1S3	Tiller rear safety switch (32)	Code	Colour
1S4	Tiller foot switch (25-27)	BK	Black
4S1	Warning horn switch (21)	WH	White
7S1	Emergency stop ignition lock (17)	BU	Blue
X1	Battery male connector (12, 75, 77)	OG	Orange
		BN	Brown
		GN	Green
		VT	Violet
		RD	Red
		YE	Yellow
		GY	Grey

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