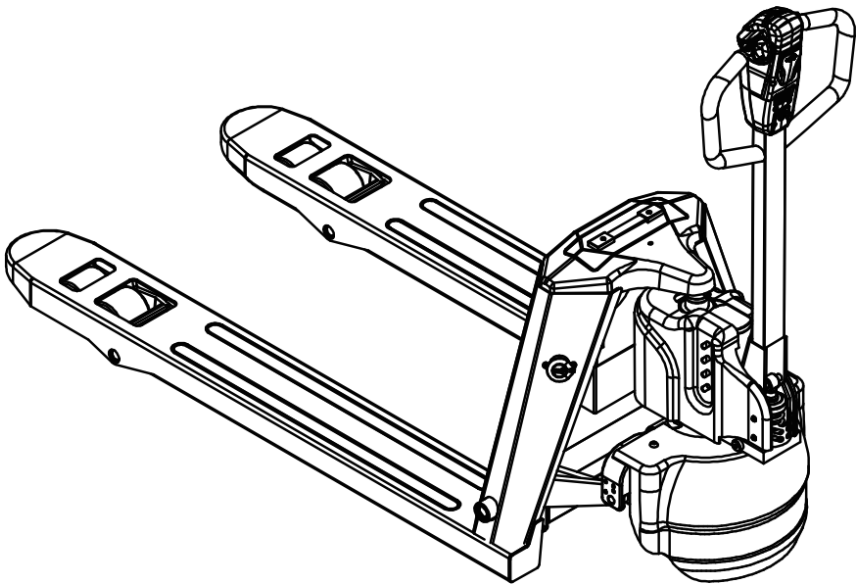
Lithium Battery Pallet Truck CBD15L/CBD20L

User Manual



WARNING

- **Please read the instructions and safety instructions in this manual carefully.**
- **The operator shall be responsible for all consequences arising from the violation.**

Foreword

Welcome to our CBD15L/CBD20L Lithium Battery electric pallet truck. For your safety and correct use of this vehicle, please read and understand this manual and various labels on the vehicle before the first operation. Help is available and this manual should be easily accessible when needed.

In this manual, you can get a relatively complete introduction to the safe operation procedures, main technical Technical parameters, maintenance methods.

Most of this product is made of recyclable steel. Waste generated during use, maintenance, cleaning and disassembly must be recycled and treated in a pollution-free manner in accordance with local regulations. Waste recycling must be completed by professionals in designated areas, such as hydraulic oil, lithium batteries and Improper disposal of waste from electronic equipment may cause harm to the environment and human health.

In order to continuously improve the product, the manufacturer reserves the right to change the design and specifications of its products. The product specifications are subject to change without prior notice. If you want to know the latest product specifications, please contact us.

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1. Vehicle Introduction

1.1. Scope of Application

Only specially trained personnel can operate this vehicle.

This pallet truck may only be used in accordance with the instructions in this manual.

The pallet truck described in this manual is a self-propelled, pedestrian-controlled pallet truck with electrically controllable lifting/lowering function. It is designed for lifting, lowering, and transporting loads. Transporting persons is strictly prohibited.

This manual provides relevant technical characteristics, structure, introduction of vehicle components, operation, and maintenance content. Operators and maintenance personnel must follow this manual for correct operation and maintenance. Our company assumes no responsibility for any accidents caused by improper use. For users not mentioned in this manual, please contact our sales company or relevant personnel.

Improper use can cause personal injury or machine damage. The operator must ensure correct use and that the truck is only operated by personnel who have been trained and authorized to use it.

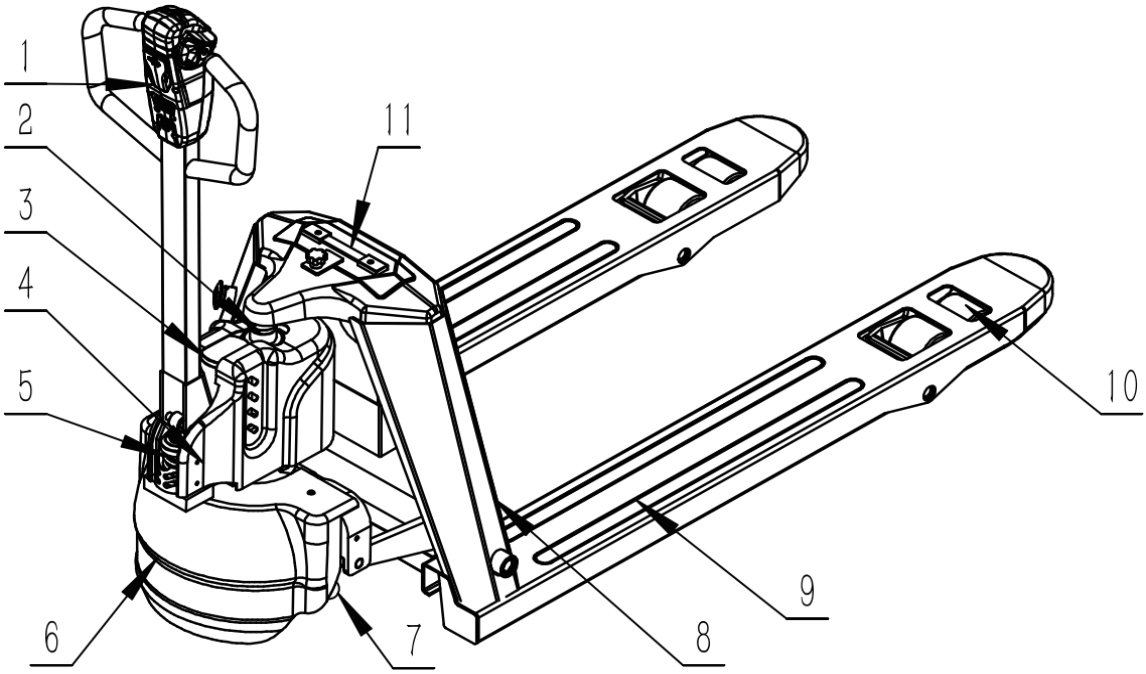
This pallet truck must be used on a solid, level, intact, flat, and appropriate surface. It is generally intended for indoor use at ambient temperatures between +5°C to +40°C.

The rated capacity is marked on the capacity plate and nameplate. The operator must heed these warning signs and safety instructions. Any modifications or alterations that could affect the truck's rated capacity, stability, or safe operation must obtain prior written approval from the vehicle's original manufacturer or its authorized manufacturer or its successor. This includes changes affecting, for example, braking, steering, visibility, and the addition of movable attachments. After the manufacturer or its successor approves the modification or alteration, the capacity plate, labels, identification marks, and operation and maintenance manuals must be updated accordingly. Damage to the vehicle resulting from failure to follow these instructions will void the warranty.

Our company's policy aims for continuous product improvement. If subsequent product parameter changes cause discrepancies between the manual and the actual product, please contact the company promptly. We will not issue separate notifications. Your understanding is appreciated.

The vehicle data and structure introduced in this manual are not to be used as the basis for product acceptance.

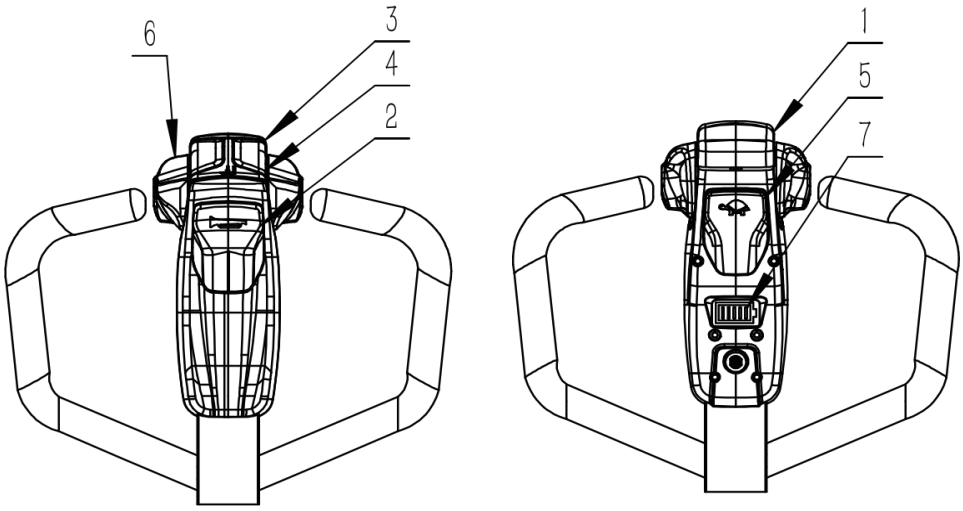
1.2. Vehicle Components



No.	Part Name	No.	Part Name
1	Control Handle	7	Drive Wheel Assembly
2	Hydraulic Cylinder	8	Chassis
3	Pump Station	9	Forks
4	Pump Station Cover	10	Load Wheel Assembly
5	Return Spring	11	Lithium Battery
6	Drive Cover	12	

1.2.1. Control Handle

No.	Control Element	Function
1	Emergency Reverse Button	In reverse, when triggered, the vehicle moves away from the operator.
2	Horn Switch	Sounds an audible alarm signal.
3	Lift Switch	Raises the load handling component.
4	Lower Switch	Lowers the load handling component.
5	Button Area	"Turtle" speed button. Press once to engage slow travel mode.
6	Speed Control Knob	Controls travel direction and travel speed.
7	Battery Gauge	Displays battery level, battery voltage, and "turtle" speed status.



1.2.2. Handle Activation Method

Plug in the battery connector, turn on the emergency stop switch, the battery gauge lights up, entering the operational state.

1.2.3. Handle Operational Status

The battery gauge is used to display the overall vehicle's battery level, voltage, and also to indicate the "turtle" speed status. The pictures below are actual photos of the handle's battery gauge.

Battery gauge display:

1. When the battery gauge shows 2 bars and starts flashing, it indicates low battery. It must be charged immediately, otherwise there is a risk of power loss.

2. Blue light. Press the "turtle" button %, red light turns on, indicating "turtle" speed mode is active. Press the "turtle" button again, red light turns off, returning to normal speed.

Turtle Speed: In the operational state, the "turtle" key can be used to switch speed modes. Press the "turtle" button once to switch the vehicle from normal speed to "turtle" speed. The % red light will stay on. Press it again to cancel "turtle" mode.

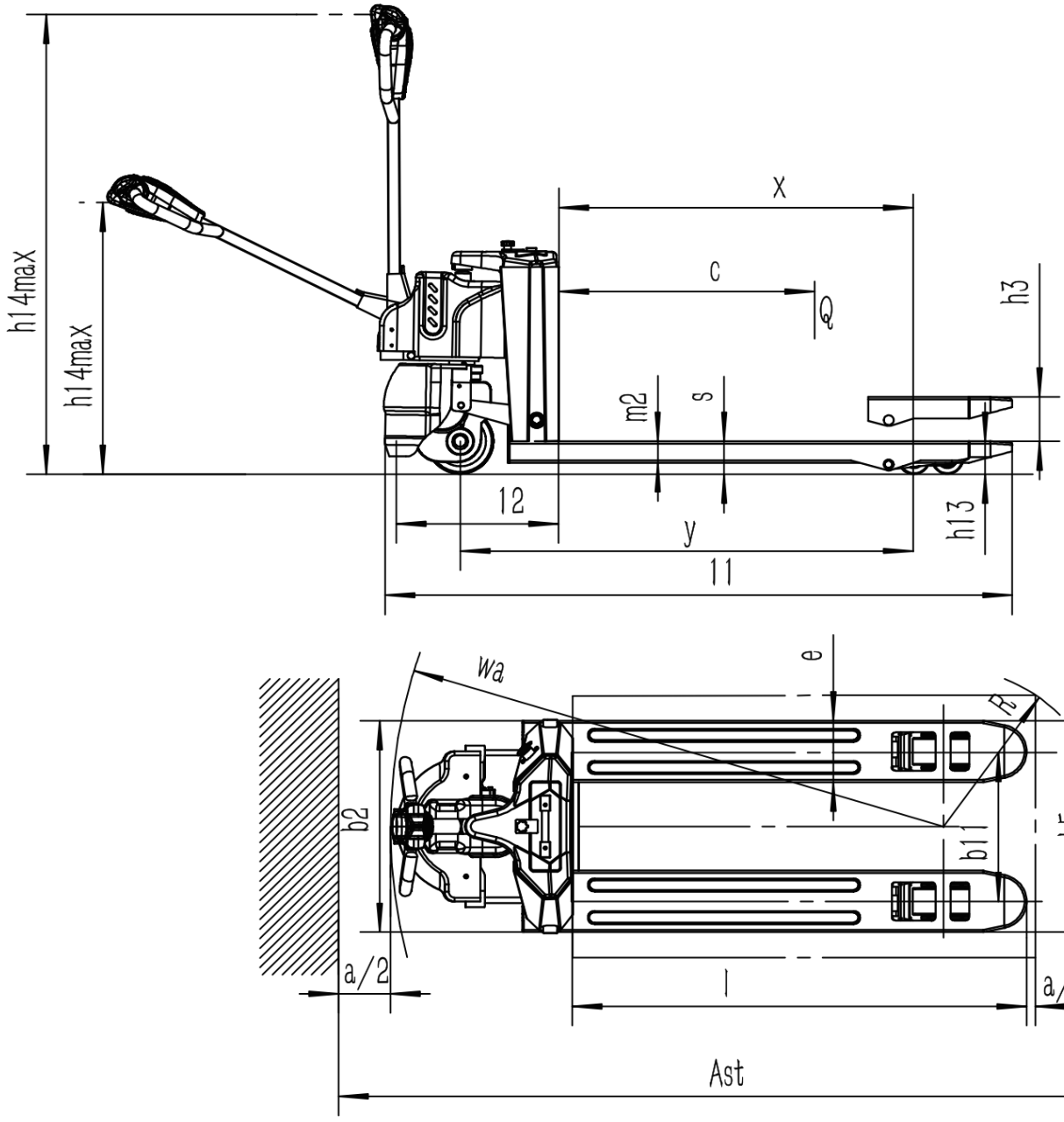
1.3. Standard Technical Data

1.3.1. Performance Parameters

Model		CBD15L/CBD20L
Rated Load Capacity	(kg)	1500/2000
Load Center Distance	(mm)	600
Max. Travel Speed, Laden/Unladen	(km/h)	4.2/4.8-4.0/4.6
Max. Lifting Speed, Laden/Unladen	(mm/s)	27/38-25/36
Max. Lowering Speed, Laden/Unladen	(mm/s)	-
Gradeability, Laden/Unladen	(%)	8/16

1.3.2. Dimensional Parameters

Model		CBD15L/CBD20L
Load Center Distance	c(mm)	600
Wheelbase	y(mm)	1170/1100
Fork Lowered Height (Ground Clearance)	h13(mm)	84
Max. Fork Lift Height	(mm)	200
Max. Lifting Travel	h3(mm)	116
Outer Fork Width (Overall)	b5(mm)	550/685
Inner Fork Width	(mm)	230/365
Fork Length	1(mm)	1150
Fork Width	e(mm)	160
Fork Thickness	s(mm)	55
Overall Length	11(mm)	1597
Vehicle Body Width	b2 (mm)	550/685
Overall Height (including handle)	h14(mm)	1205
Overall Height (excluding handle)	(mm)	600
Minimum Turning Radius	Wa (mm)	1400
Min. Right-Angle Stacking Aisle Width (Pallet 800x1200, 1200 along forks)	Ast (mm)	2110
Min. Right-Angle Stacking Aisle Width (Pallet 1000x1200, 1200 along forks)	Ast (mm)	2200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1.3.3. Weight Parameters

Model		CBD15L/CBD20L
Net Weight (excluding battery)	kg	550/111kg 685/114kg
Battery Weight (48V)	kg	10AH/4.8kg 15AH/5.5kg 20AH/6.2kg

1.3.4. Battery

Model		CBD15L/CBD20L	CBD15L/CBD20L	CBD15L/CBD20L
Battery Type	/	Lithium Manganese Oxide	Lithium Manganese Oxide	Lithium Manganese Oxide
Voltage / Capacity	V/Ah	48/10	48/15	48/20

1.3.5. Wheels

Parameter		CBD15L/CBD20L
Wheel Type (Front/Rear)	/	Polyurethane
Number of Drive/Steer/Load Wheels	/	-
Drive Wheel Size	mm	Φ170X60
Steer Wheel Size (Optional)	mm	-
Load Wheel Size	mm	Φ80x70

2. Initial Operation

The vehicle is only allowed to be powered by a battery!

To ensure proper operation after delivery or transportation, the following checks must be performed first:

- Check if the equipment is complete and in normal condition.
- If the battery is not yet installed, please install it, taking care not to damage the battery cables.
- Charge the battery.
- If the vehicle has been parked for an extended period, the tire contact surfaces may be slightly flattened. After brief operation, the flattened areas will automatically recover.

3. Lithium Battery Usage and Charging

3.1. Lithium Battery Safe Operation Regulations

Correct use and daily maintenance of the lithium battery greatly impact its performance and service life. Therefore, users must follow the specifications in this manual for battery use, maintenance, and care. To avoid unnecessary personal injury and property damage, please read this manual before using the electric pallet truck and follow the procedures or methods specified herein for normal use and operation.

If you have any questions or uncertainties, please contact our company's relevant technical department or after-sales service department.

3.1.1. Lithium Battery Safety Precautions

- Ensure the battery is kept away from hazardous materials or environments, such as conductive dust particles, corrosive chemicals, flammable/explosive materials, dangerous mechanical equipment, high-temperature environments, etc.
- Improper use of this product series may cause smoke, e.g., due to external short circuit, overcharging, excessively high ambient temperature, etc. If smoke occurs, immediately cut off the power, use sand and dry powder fire extinguishers to handle it. Throughout the process, promptly evacuate personnel and alert the authorities.
- Improper use of this product series may cause individual battery cells to swell. In severe cases, the plastic casing may rupture or crack. Immediately stop using the battery and contact our company's relevant technical department or after-sales service department for handling instructions.
- Do not disassemble, crush, pierce, expose to high temperatures, or bake the battery case. Avoid subjecting the battery to excessive vibration, external impact, or dropping from height, as this may cause personal injury or property damage.
- Do not directly short-circuit the battery's positive and negative terminals. Avoid any metal or other conductive objects other than the battery terminal tightening bolts and conductive strips from contacting the battery's positive and negative terminals, as this may cause personal injury or property damage.
- Do not expose the battery or leave it for extended periods in environments above 55°C. Do not attempt to heat the battery or throw it into a fire, as this may cause personal injury or property damage.
- Do not charge the battery without proper charging protection devices (battery protection circuit board, Battery Management System, etc.) or using charging equipment (charger, DC power supply, etc.) not approved by the battery manufacturer, as this may cause personal injury or property damage.

- Do not allow unauthorized personnel who are not designated technicians from the manufacturer to disassemble or assemble the battery, as this may cause personal injury or property damage.
- Do not immerse the battery in water or other conductive liquids, as this may cause personal injury or property damage.
- Before using this product, carefully read the product user manual. Do not allow children or other untrained personnel to use this product series.
- Do not connect this product series in series or parallel with batteries of other models or types, as this may cause personal injury or property damage.
- Do not connect the complete power system containing battery protection circuit boards or a Battery Management System in series or parallel again, as this may cause personal injury or property damage. If necessary, contact the manufacturer's relevant technical department to obtain correct technical support.

3.2. Lithium Battery and Charger Specifications

Lithium Battery				Charger		
	Standard		Optional		Standard	Optional
Rated Voltage	48V			Input	AC 220V 50Hz	
Rated Capacity	10Ah	15Ah	20Ah	Output	DC 48V/3A	DC 48V/5A

3.3. Lithium Battery Usage Precautions

- Charging temperature range: 0~40°C. Charging below 0°C in low-temperature environments will cause irreversible damage to the battery. In low-temperature environments below 0°C, charge the vehicle immediately after use.
- Discharging temperature range: -25~50°C. Discharge capacity at low temperatures (-25~0°C) may be reduced compared to normal temperature conditions; this is normal. The battery can be used at ambient temperatures of 40~50°C, but excessively high ambient temperatures, especially prolonged exposure, will accelerate the aging of internal battery materials and shorten battery life. Therefore, long-term use at these temperatures is not recommended.
- It is strictly prohibited to store or operate the battery for extended periods below -25°C or above 55°C.
- If the lithium battery will not be used for a long time, it should be charged to 40%~60% of its capacity and stored in a dry, cool environment. Perform supplementary charging according to the battery usage instructions to avoid excessive self-discharge leading to critically low charge, causing irreversible capacity loss.

- Lithium battery self-discharge is affected by ambient temperature and humidity. High temperature and humid environments accelerate self-discharge. It is recommended to store the battery in a dry environment between -10°C~45°C.
- Non-professionals must not touch, move, disassemble the battery pack, corresponding high-voltage cables, or other components marked with high-voltage warnings.
- If the vehicle suffers a strong impact during travel, stop the vehicle in a safe area and inspect the battery pack area for damage.
- If battery leakage (liquid or smoke) or damage is detected, move to a safe distance and contact the manufacturer's after-sales service personnel.
- In case of electrolyte leakage, do not touch it. If contact occurs accidentally, immediately rinse thoroughly with plenty of water. If eyes are contacted, rinse immediately with plenty of boric acid solution and seek medical attention promptly.
- If the vehicle or battery catches fire, quickly move away from the vehicle to a safe distance. Use sand and dry powder fire extinguishers to handle it. Never use water or incorrect fire extinguishers to fight the fire.
- Use the designated lithium battery charging equipment for charging. It is strictly prohibited to use inferior or other types of charging equipment to charge the battery.
- During transportation, ensure the battery is disconnected from the vehicle and charging equipment, with no form of charging or discharging occurring.

3.4. Lithium Battery Maintenance Precautions

- When the battery level falls below 20%, it should be recharged promptly. Over-discharging the battery is strictly prohibited.
- Charge the vehicle immediately after use. Charging should be complete, but overcharging is strictly prohibited.
- If the vehicle needs to be stored for a long time, store it with 40%~60% charge. Do not store it fully charged. Before use, charge it fully.
- Regularly check the lithium battery charging socket to ensure the bracket is not loose, the internal terminals are not corroded, and there is no dust, rainwater, or other foreign objects inside.
- The lithium battery surface should be kept dry and clean. Washing the lithium battery with water is strictly prohibited.
- Ensure the battery undergoes a complete charge-discharge cycle at least once a month.

3.5. Charger Usage Precautions

- Charge in a safe environment, away from dust, fire sources, corrosive environments, etc.
- The area around the charger must be equipped with necessary fire-fighting equipment such as: sand and dry powder fire extinguishers, to enable emergency firefighting in case of extreme situations.
- Before charging, confirm there are no foreign objects like dust or water inside the connectors of the lithium battery and charger. If present, clean them thoroughly before charging, otherwise poor contact may cause overheating or even fire.
- Do not modify or disassemble the charging connectors or charging equipment, as this may cause charging faults and lead to fire.
- To avoid serious personal injury, observe the following precautions when the vehicle is charging:

  a) Do not touch the metal terminals inside the charging connector.
  b) When there is lightning, do not charge the vehicle or touch it. A lightning strike may damage the charging equipment and cause personal injury.

- After charging is complete, do not disconnect the charging equipment with wet hands or while standing in water, as this may cause electric shock and personal injury.
- To avoid damaging the charging equipment, please note the following:

  a) Do not pull or twist the charging cable forcefully.
  b) Do not subject the charging equipment to impact.
  c) Do not store or use the charging equipment in environments with temperatures above 55°C.
  d) It is forbidden to directly plug/unplug the connectors while the charging equipment is outputting charging current, as this may cause electrical arcing, resulting in property damage and personal injury.
  e) Do not place the charging equipment near heaters or other heat sources.

- Insert the charger's AC input plug into a 220V mains socket. If the indicator light shows red, it means charging has started.
- If the indicator light shows red, it means charging has started. The charger first enters the constant current charging phase. During this phase, the charging current is constant, and the battery voltage gradually increases. The indicator light is red, and the cooling fan operates. When the battery voltage rises to the set value, the charger enters the constant voltage charging phase. During this phase, the battery voltage does not increase, and the charging current gradually decreases. The indicator light is red, and the cooling fan operates. When the charging current drops to the set value, it enters the trickle charging phase. The indicator light turns green, the cooling fan stops, and charging can be ended.

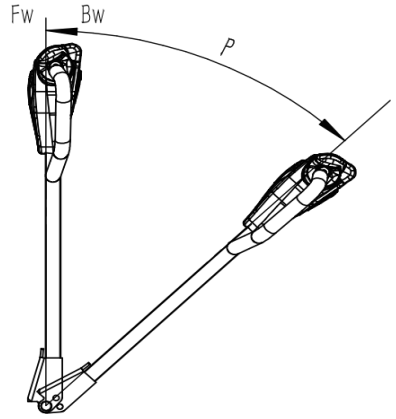
4. Operation

4.1. Travel Operation Safety Regulations

- Before each start, carefully inspect the vehicle to ensure it is in good working condition.
- Before operating the vehicle, ensure a safe operating distance is maintained between the vehicle and surrounding objects or personnel.
- When starting the vehicle, avoid sudden starts and emergency braking. Slowly rotate the speed control knob to prevent shortening the lifespan of electrical components, such as motor over current damage, excessive wear of electromagnetic brake friction pads, etc. This is especially important during the break-in period for new vehicles.
- During operation, always be aware of the surroundings, look ahead, and drive cautiously to prevent hazards in the operating area. In potentially dangerous areas such as turns, blind spots, etc., the operator must reduce speed and sound the horn to alert others.
- Do not make U-turns while traveling uphill or downhill. When traveling uphill, do not travel sideways or diagonally. When traveling uphill with a load, always travel with the forks facing forward. When traveling downhill, travel in reverse.
- If the operator detects a vehicle malfunction or a safety hazard during vehicle use, stop immediately, move the vehicle to a safe location, and mark it appropriately to prevent use by others.
- In emergency situations such as steering failure, automatic movement, etc., the operator must quickly press the emergency stop switch or unplug the battery connector to cut off the vehicle's main power. The electromagnetic brake will engage quickly, stopping the vehicle as soon as possible, effectively protecting the operator's safety.
- Except for long-term parking, do not use the emergency stop switch as a service brake. Also, avoid escalating the problem to minimize losses.
- To prevent uneven load distribution, do not carry loads with a single fork, and do not use narrow forks to carry wide loads.
- When using the vehicle, pay attention to its performance characteristics, such as the maximum load corresponding to the load center distance. Overloading the vehicle is strictly prohibited.
- When used in harsh conditions such as dust, uneven ground, or liquid-covered surfaces, to ensure operator safety and vehicle operation, remember to slow down and avoid high speeds that could lead to loss of steering and braking control. Ensure sufficient braking distance.

4.2. Traveling

Rotate the travel/speed control knob in the desired direction of travel (forward or reverse) to release the brake system. The forklift will travel in the selected direction. The greater the rotation angle, the faster the vehicle travels.



"F" Zone	Travel Zone
"Fw'	Forward Direction
"Bw"	Reverse Direction

4.3. Steering

Control steering by turning the control handle left or right.

4.4. Braking

The vehicle's braking performance depends on road conditions and load situation and must be considered during operation. There are three braking methods:

4.4.1. Service Brake (Emergency Brake)

- In an emergency, press the emergency stop switch or unplug the battery connector.
- The truck will brake electrically with maximum intensity until it comes to a stop.

4.4.2. Plugging Brake

- During travel, switch the travel/speed control knob to the opposite direction. The truck will brake through plugging current until it begins to travel in the opposite direction.

4.4.3. Regenerative Brake

- Release the travel/speed control knob; it automatically returns to the zero position. The vehicle decelerates by coasting until it stops.
- When the speed drops below 1 km/h, the electromagnetic brake engages.

4.5. Safe Parking of the Vehicle

Note: It is forbidden to park the vehicle on a slope!

- Remove the load from the forks.
- Press the emergency stop switch.
- Unplug the battery connector.

5. Maintenance and Servicing

5.1. Operational Safety and Environmental Protection

- The inspection and servicing operations described in this chapter must be performed at the intervals listed in the Service Checklist.
- Modifications to the vehicle, especially its safety devices, are prohibited. Absolutely do not alter any of the vehicle's operating speeds.
- Only genuine spare parts meet our company's quality management requirements. To ensure stable and reliable operational performance of the equipment, only use genuine spare parts produced by our company. Aged parts and replaced liquid media must be disposed of according to current environmental regulations. If an oil change is needed, you can contact our company's customer service department.
- After completing inspection and servicing operations, the steps specified in the "Re-commissioning" section must be performed.

5.2. Safety Regulations for Maintenance and Servicing

Maintenance Personnel

- Maintenance and repair of the vehicle may only be performed by our company's qualified technical personnel.
- Our company's service department has a team of field technicians. These personnel are specially trained to perform all maintenance and repair operations on the equipment. We recommend that users enter into a maintenance contract with our company's service maintenance points.

Lifting and Jacking Equipment

- When lifting the vehicle, lifting tools may only be attached to the designated fixed points.
- When jacking up the vehicle, suitable tools such as wedges, wooden blocks, etc., must be used to secure the equipment to prevent the risk of accidental rolling or tipping.
- If work needs to be performed under a raised load handling component, the forks must be securely fixed with sufficiently sturdy chains.

Cleaning Operations

- Do not clean the vehicle with flammable liquids.
- Before starting cleaning operations, all necessary safety measures must be taken, and spark generation (e.g., from short circuits) must be prevented during the operation. If the vehicle is battery-powered, the battery cables must be disconnected.
- When cleaning electrical and electronic components, use low-pressure suction gas or compressed air. Simultaneously, use a non-conductive, anti-static brush to remove dust from component surfaces.
- If using a water jet or high-pressure cleaning equipment to wash the vehicle, all electrical and electronic components must be carefully covered beforehand; otherwise, components may be affected by moisture, causing functional faults.

- Do not use steam jets to clean the equipment.
- After cleaning operations, the steps specified in the "Re-commissioning" section must be performed.

Working on the Electrical System

- Operations related to the electrical system must be performed by qualified personnel trained in electrical technology.
- Before starting work, the operator must take all necessary measures to prevent electrical accidents.
- If the vehicle is battery-powered, the lithium battery connector must also be unplugged to prevent accidental starting of the vehicle.

Specified Parameters

- When servicing and replacing hydraulic, electrical, and electronic components, attention must be paid to adhering to the specified parameters related to the vehicle.

Vehicle Tires

- Tire quality directly affects the equipment's stability and driving performance. If replacement of the factory-installed tires is necessary, genuine spare parts supplied by our company must be used.
- When replacing wheels or tires, care must be taken to ensure the vehicle's position does not become tilted (e.g., left and right wheels should be replaced simultaneously).

5.3. Servicing and Inspection

Thorough and standardized servicing is one of the most important prerequisites for ensuring stable and reliable operational performance and extended service life of the pallet truck. Neglecting regular servicing can lead to pallet truck malfunctions and failures, posing potential threats to personnel and operational safety. The wear rate of components requiring servicing depends largely on the actual operating and usage conditions of the pallet truck. If operating conditions are more demanding than normal, e.g., high dust levels, significant temperature fluctuations, or shift work systems, the service intervals must be appropriately shortened.

Specific servicing operations and their execution times are shown in the table below (Service Checklist):
W = Every 50 operating hours, but at least once a week
A = Every 500 operating hours, but at least every six months
B = Every 1000 operating hours, but at least once a year
C = Every 2000 operating hours, but at least once a year

The equipment user is responsible for performing operations with a W service interval.

During the vehicle's break-in phase (approximately after 100 operating hours), the equipment user should check the tightness of wheel nuts and bolts and re-tighten if necessary.

5.3.1. Service Checklist

Maintenance List		Time Interval (months)			
Hydraulic System		W	A	B	C
1	Check hydraulic cylinder, piston for damage, noise, and leaks		●		
2	Check hydraulic connections for damage and leaks		●		
3	Check hydraulic oil level, top up if necessary		●		
4	Refill hydraulic oil (12 months or 1500 operating hours)				●
5	Check and adjust pressure valve function (+10%)				●
Mechanical System					
6	Check platform structure for deformation and cracks		●		
7	Check chassis for deformation and cracks		●		
8	Check all screws are fully tightened		●		
9	Check gearbox for noise and leaks		●		
10	Check wheels for deformation and damage, replace if necessary		●		
11	Lubricate steering bearings				●
12	Check and lubricate pivot points		●		
13	Lubricate grease nipples	●			
14	Replace protective and/or guard plates if damaged	●			
Electrical System					
15	Check wiring for damage		●		
16	Check electrical connections and terminals		●		
17	Test emergency stop switch function		●		
18	Check electric drive motor for noise and damage		●		
19	Test battery gauge		●		
20	Check if correct fuses are used, replace if necessary		●		
21	Test buzzer/horn		●		
22	Check chassis for leaks (insulation test)		●		
23	Check accelerator function and wear		●		
24	Check electrical system of drive motor		●		
Braking System					
25	Check braking performance, replace brake disc or adjust clearance if necessary		●		
Battery					
26	Check battery voltage		●		
27	Clean and grease terminals, check for corrosion and damage		●		
28	Check battery case for damage		●		
Charger					
29	Check mains power cable for damage			●	
30	Check startup protection program during charging			●	
Functions					
31	Test buzzer/horn	●			
32	Check electromagnetic brake gap	●			
33	Test emergency brake function	●			
34	Test plugging brake and regenerative brake function	●			
35	Test belly switch function (if equipped)	●			
36	Check steering function	●			
37	Check handle lever switch functions	●			
General					
38	Check all labels for clarity and completeness	●			
39	Check protective and/or guard plates for damage	●			
40	Check casters, adjust height or replace if worn		●		
41	Perform a test run	●			

5.3.2. Lubrication

When using and handling liquid media, strictly follow the manufacturer's relevant regulations for proper operation.

Improper operation poses hazards to the operator's health and life as well as the surrounding environment. Liquid media may only be stored in designated containers. Liquid media may be flammable and therefore must not be near hot components or open flames.

When adding liquid media, use clean utensils. Mixing different liquid media is strictly prohibited (except when the operating instructions explicitly specify mixing procedures).

Prevent spillage. If liquid media are spilled, immediately cover with a suitable absorbent and dispose of the mixture of liquid media and absorbent according to regulations.

Code	Name	Applies To
A	Grease (containing MoS2)	Gearbox
B	L-HM32	Hydraulic System

5.3.3.Service Instructions

Preparation Before Maintenance Operations

To prevent accidents during maintenance, take all necessary safety measures. The following operations must be carefully completed:

- Park the vehicle according to regulations.
- Press the emergency stop switch and unplug the lithium battery connector to prevent accidental starting.
- If work needs to be performed under a raised vehicle, effective measures must be taken to prevent accidents such as tipping or sliding.

Replacing the Drive Wheel

- Drive wheels may only be replaced by authorized service personnel.
- Replacing the drive wheel requires lifting the vehicle.

Topping Up Gear Oil

- Complete preparations before maintenance operations.
- Remove the cover.
- Use a grease gun to inject the correct specification gear oil into the filler hole.
- Top up every 1000 operating hours, but at least once a year.

Attention!

Do not add gear oil containing impurities.

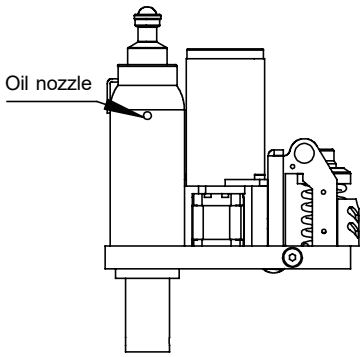
Installation is in reverse order.

Checking Hydraulic Oil Level

When a cavitation sound is heard from the oil lines during lifting, it indicates insufficient hydraulic oil, and it should be topped up promptly.

Hydraulic Oil Topping-Up Procedure

- Complete preparations before maintenance operations.
- Remove the cover.
- Top up with the correct specification hydraulic oil if necessary.
- After adding, lift again. If no cavitation sound is heard, topping up is complete. If the sound persists, continue adding oil.



Attention!

Do not add hydraulic oil containing impurities.

Re-commissioning

- After cleaning or maintenance operations, the following operations must be performed before the vehicle can be put back into operation.
- Check buzzer/horn function.
- Check emergency stop switch function.
- Check brake function.
- Lubricate the vehicle according to the lubrication diagram.

5.3.4.Decommissioning and Storage

If the vehicle will be out of service for more than 2 months, it must be stored in a dry, frost-free space. During storage, the vehicle must be supported on stands, with all wheels off the ground. Only in this way can wheels and wheel bearings be protected from damage during storage.

Precautions Before Storage

- Thoroughly clean the vehicle.
- Check the brakes.
- Apply a thin layer of oil or grease to all mechanical parts without surface coating.
- Also observe the relevant operating instructions and regulations of the lithium battery manufacturer.
- Spray appropriate contact spray on all exposed contact surfaces.

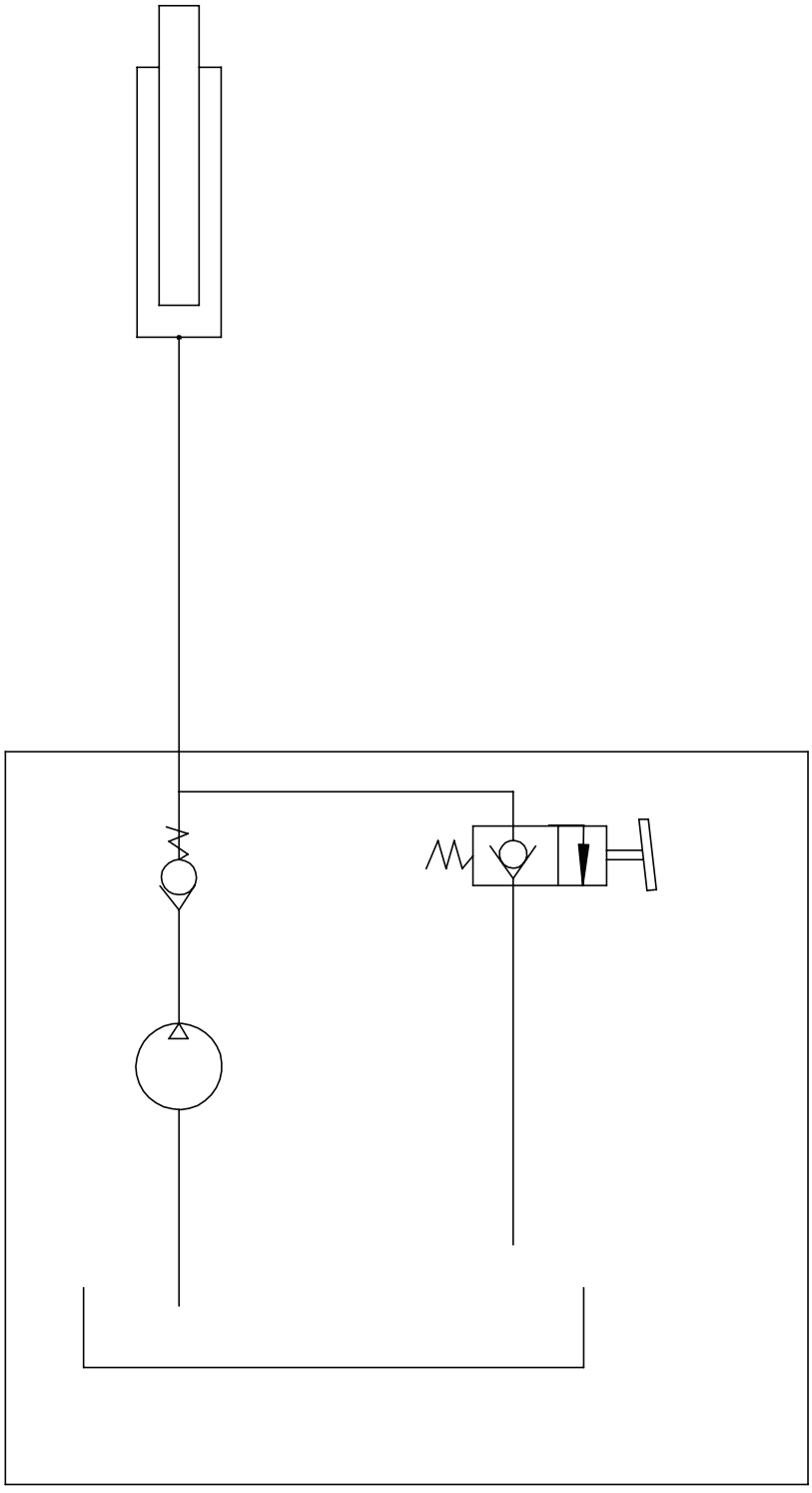
- After the vehicle is put back into operation, the operator should immediately test the braking performance repeatedly.

> **Attention!**
>
> Charge the battery monthly. Otherwise, if self-discharge reaches a certain level, it will lead to insufficient battery charge, reducing battery performance or even causing scrapping.

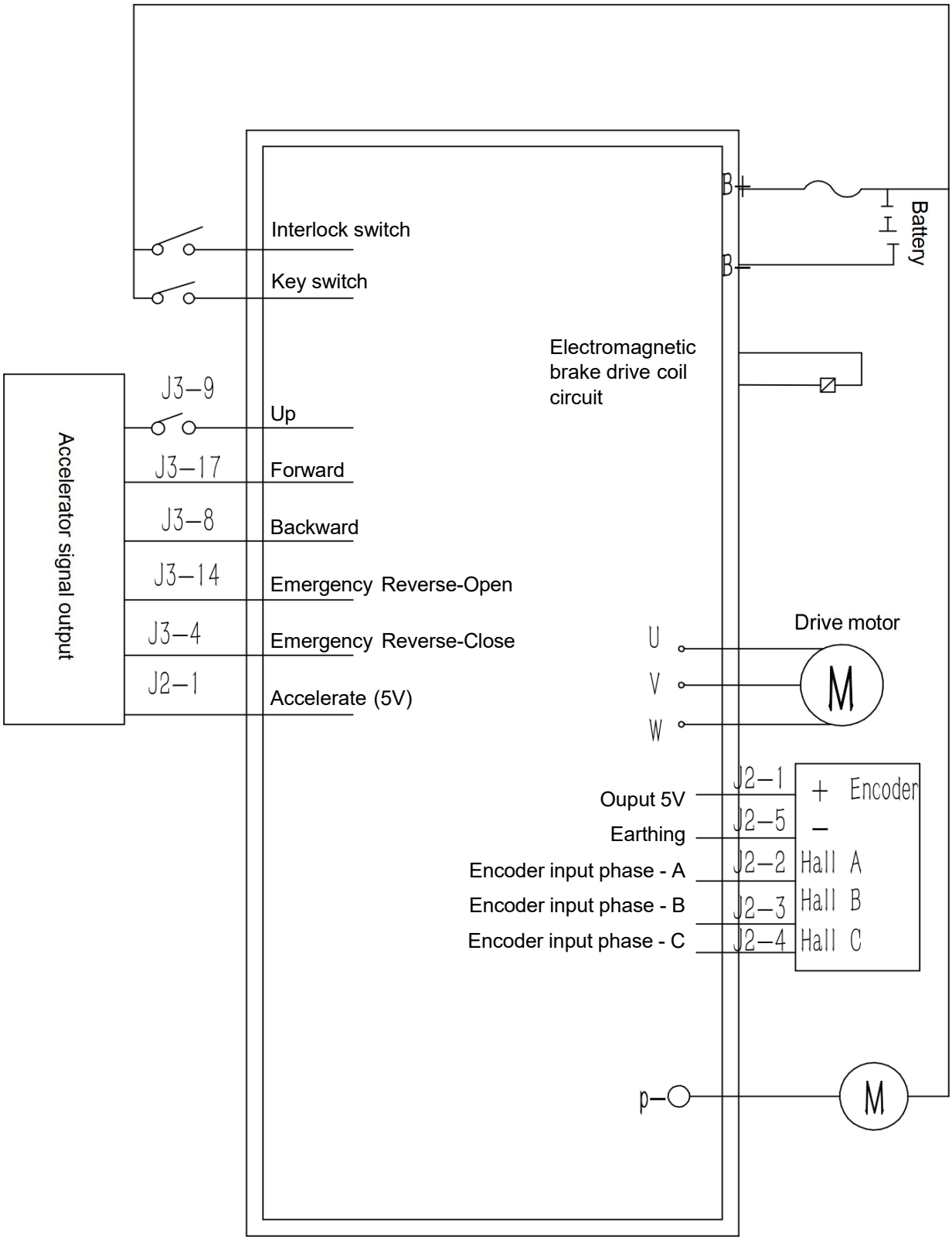
5.3.5. Safety inspections should be carried out according to the corresponding national regulations.

- Our company provides trained professionals who can offer thorough inspection services to customers. The vehicle must be inspected by qualified personnel at least once a year (note national regulations) or after any abnormal occurrence. The inspector must, from an operational safety standpoint, objectively and accurately assess the equipment's performance and condition. The inspector must possess sufficient professional knowledge and experience to be capable of judging the equipment's condition and the normal performance of protective devices based on current technical regulations and the vehicle's inspection standards. A comprehensive inspection must specifically cover the vehicle's safety technical performance in the event of an accident. Additionally, the vehicle must be thoroughly checked for any damage caused by improper use. The inspector must carefully record the inspection process and relevant data. The inspection results must be kept at least until the next inspection is performed.
- The equipment user must take necessary measures to promptly address any issues found.

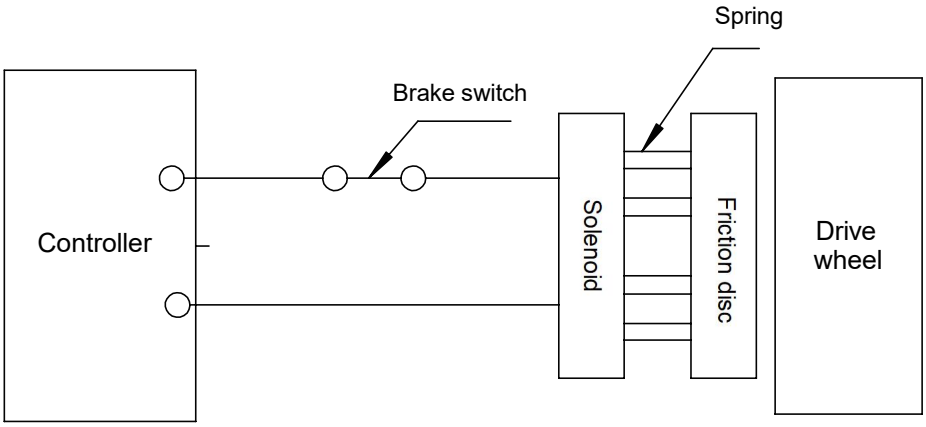
6. Hydraulic Schematic



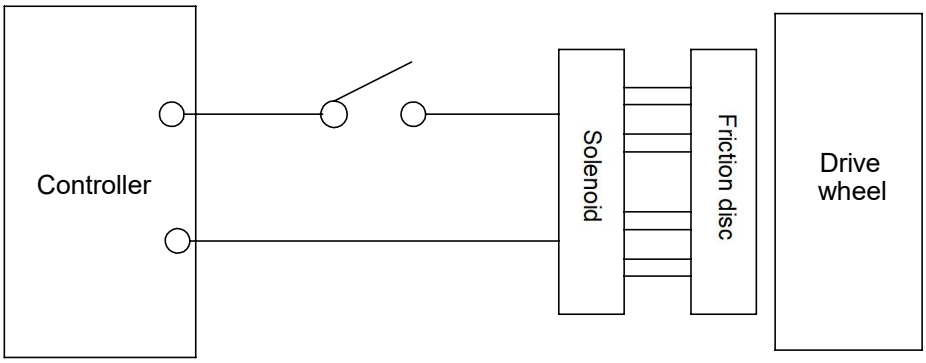
7. Electrical Schematic



8. Braking Schematic



Travel state



Brake state

DECLARATION OF CONFORMITY (valid, if sold within the EU)

[GB] CE Declaration of Conformity

The signatory hereby declares that the industrial truck described below in detail complies with the European Directive 2006/42/EC (Machinery Directive) including amendments as well as the legislative decree to incorporate the directives in national law. The signatory is individually authorized to compile the technical documents.

[D] EG-KONFORMITÄTSERKLÄRUNG

Der Unterzeichner bescheinigt hiermit, dass das im Einzelnen bezeichnete Flurförderzeug den Europäischen Richtlinien 2006/42/EG (Maschinenrichtlinie) einschließlich deren Änderungen sowie dem entsprechenden Rechtserlaß zur Umsetzung der Richtlinien in nationales Recht entspricht. Der Unterzeichner ist bevollmächtigt, die technischen Unterlagen zusammenzustellen.

[E] DECLARACIóN DE CONFORMIDAD CE

El signatario certifico por medio de la presente que la carretilla industrial descrita en esta documentación cumple con la Directiva Europea 2006/42/CE (Directiva de máquinas), incluyendo sus respectivas modificaciones, así como con los Reales Decretos de transposición de la directiva al derecho nacional. El signatario dispone de una autorización individual que le permite compilar la documentación técnica.

[F] DECLARATION DE CONFORMITE CE

Les signataires certifient par la présente que les chariots désignés individuellement satisfont aux directives européennes 2006/42/CE (directive machine), y compris leurs modifications ainsi que les décrets légaux concernant la mise en oeuvre des directives dans le droit national. Les signataires sont respectivement et individuellement autorisés à regrouper les documents techniques.

[NL] EG-CONFORMITEITSVERKLARING

De ondertekenaars verklaren hiermee, dat de hieronder genoemde interne transportmiddelen voldoen aan de Europese richtlijnen 2006/42/EG (Machinerichtlijn), inclusief de wijzigingen en wetgeving voor de omzetting van de richtlijnen in nationaal recht. Ondergetekenden zijn ieder individueel gemachtigd het technisch dossier samen te stellen.

[P] DECLARAÇÃO DE CONFORMIDADE CE

Os signatários vêm por este meio certificar que os veículos industriais descritos em pormenor cumprem as directivas europeias 2006/42/CE (directiva relativa a máquinas) incluindo as suas alterações e o respectivo documento legal com vista ao cumprimento das directivas no enquadramento legal nacional. Os signatários estão individualmente autorizados a compilar os documentos técnicos.

[I] DICHIARAZIONE DI CONFORMITÀ CE

Con la presente i firmatari attestano che il veicolo per movimentazione interna è conforme alla direttiva europea 2006/42/CE (Direttiva Macchine), comprese le relative modifiche, nonché al documento legale per la trasposizione di tali direttive nel diritto nazionale. I sottoscritti sono singolarmente autorizzati alla creazione della documentazione tecnica.

[BG] ЕВРОПЕЙСКА ОБЩНОСТ - ДЕКЛАРАЦИЯ ЗА СЪОТВЕТСТВИЕ

С настоящото подписаните удостоверяват, че специфицираното тук моторно подемно-транспортно средство отговаря на Европейските директиви 2006/42/ЕО (Директива за машините), включително на техните изменения, както и на съответното постановление за прилагане на директивите в националното право. Подписаните са съответно упълномощени поотделно да съставят техническата документация.

[CZ] EG - PROHLÁŠENÍ O SHODĚ

Níže podepsaní tímto potvrzují, že podrobný popis vozidla s motorovým pohonem odpovídá Evropským směrnicím 2006/42/EC (směrnice pro strojní zařízení) včetně jejich pozdějších úprav, jakož i příslušným právním výnosům pro uplatnění příslušné směrnice v rámci národního práva. Každý z podepsaných je jednotlivě zplnomocněn k vytvoření technických podkladů.

[DK] EF-OVERENSSTEMMELSESERKLÆRING

Undertegnede erklærer hermed, at følgende truck overholder de væsentligste krav i Rådets direktiv 2006/42/EF (Maskindirektivet) om indbyrdes tilnærmelse af medlemsstaternes lovgivning. Alle undertegnede har fuldmagt til selvstændigt at sammensætte det tekniske materiale.

[EST] EL vastavusavaldus

Настоящим лица, подписавшие документ, удостоверяют, что напольное подъёмно-транспортное средство с силовым приводом в указанной спецификации соответствует Европейским директивам 2006/42/EG (Директива по машинам), включая изменения в них, а также соответствующему правовому документу по трансформации директив в национальное право. Каждое по отдельности лицо, подписавшее документ, имеет полномочия для составления технической документации.

[FIN] EU-YHDENMUKAISUUSSELOSTUS

Allekirjoittavat todistavat täten, että yksilöity moottoriajoneuvo vastaa eurooppalaista direktiiviä 2006/42/EY (konedirektiivi) kaikkine muutoksineen sekä säädöksiä, jolla direktiivi on saatettu osaksi kansallista lainsäädäntöä. Allekirjoittajilla on kullakin erikseen valtuudet laatia teknisiä dokumentteja.

[GR] ΔΗΛΩΣΗ ΣΥΜΜΟΡΦΩΣΗΣ ΕΟΚ

Οι υπογράφοντες βεβαιώνουν διά της παρούσης ότι ο λεπτομερώς περιγραφόμενος μηχανοκίνητος φορέας διαδρόμου συμμορφώνεται προς την Κοινοτική Οδηγία 2006/42/ΕΚ («Μηχανές»), συμπεριλαμβανομένων των τροποποιήσεων, καθώς και των νομοθετικών διαταγμάτων για τη μεταφορά Οδηγιών στην εθνική νομοθεσία. Οι υπογράφοντες είναι σε κάθε περίπτωση εξουσιοδοτημένοι ατομικά να καταρτίσουν τα τεχνικά έγγραφα.

[H] EU KONFORMITÁSI NYILATKOZAT

Alulírottak ezennel igazolják, hogy a részletesen leírt, gépi meghajtású önjáró targonca megfelel a 2006/42/EK (Gép Irányelv) Európai Irányelveknek, beleértve azok módosításait, valamint az irányelvek nemzeti jogba történő átültetésére irányuló, megfelelő jogi rendelkezést. Továbbá az alulírottak mindegyike rendelkezik meghatalmazással arra nézve, hogy összeállíthatja a műszaki dokumentációt.

[LT] ES atitikimo deklaracija

Žemiau pasirašę asmenys patvirtina, kad atskirai aprašytas elektra varomas pramoninis vežimėlis atitinka Europos Sąjungos direktyvą 2006/42/EB (Mašinų direktyva), įskaitant ir jos pakeitimus bei tai atitinkantį teisės aktą dėl direktyvų įgyvendinimo nacionaliniuose teisės aktuose. Pasirašę asmenys yra atskirai atitinkamai įgalioti sudaryti techninius dokumentus.

[LV] ES atbilstības deklarācija

Ar šo zemāk parakstījušās personas apliecina, ka detalizēti aprakstītais mehāniskās piedziņas iekrāvējs atbilst Eiropas Savienības direktīvām 2006/42/EK (Mašīnu direktīva), ieskaitot to izmaiņas, kā arī atbilstošo tiesisko rīkojumu direktīvu pielāgošanai nacionālajai likumdošanai. Parakstījušās personas ir atsevišķi pilnvarotas sastādīt tehniskās dokumentācijas.dokumentācijas.

[N] EU-KONFORMITETSERKLÆRING

Undertegnede bekrefter hermed at de enkelte betegnede gaffeltruckene med kraftdrift overensstemmer med de europeiske retningslinjene 2006/42/EC (masinretningslinje) med endringer, samt den tilsvarende rettsforordning til implementering i nasjonal lovgivning. De undertegnede er hver for seg bemyndiget til å sammenstille de tekniske dokumentene.

[PL] DEKLARACJA ZGODNOŚCI Z NORMAMI UE

Sygnatariusze potwierdzają niniejszym, że wyszczególniony wózek jezdniowy z napędem odpowiada dyrektywie europejskiej 2006/42/WE (Dyrektywa maszynowa) wraz ze zmianami oraz rozporządzeniem prawnym dotyczącym wdrożenia dyrektywy do prawa krajowego. Każdy z sygnatariuszy jest upoważniony do samodzielnego zestawienia dokumentacji technicznej.

[RO] DECLARAŢIE DE CONFORMITATE CE

Subsemnaţii adeveresc prin prezenta că utilajul de transport uzinal cu motor, descris individual, corespunde directivelor europene 2006/42/CE (Directiva privind maşinile) inclusiv modificărilor lor, precum şi actului legislativ corespunzător prentru transpunerea directivelor în dreptul naţional. Semnatarii sunt împuterniciţi individual să redacteze documentaţia tehnică.

[RUS] Декларация соответствия стандартам ЕС

Настоящим лица, подписавшие документ, удостоверяют, что напольное подъёмно-транспортное средство с силовым приводом в указанной спецификации соответствует Европейским директивам 2006/42/EG (Директива по машинам), включая изменения в них, а также соответствующему правовому документу по трансформации директив в национальное право. Каждое по отдельности лицо, подписавшее документ, имеет полномочия для составления технической документации.

[S] EG-KONFORMITETSFÖRKLARING

Undertecknad intygar härmed att den specificerade trucken är tillverkad i överensstämmelse med de Europeiska direktiven 2006/42/EG (Maskindirektivet), inklusive ändringarna i dessa och motsvarande harmoniseringar i nationell rätt.Undertecknade är var och en för sig berättigad att sammanställa de tekniska dokumenten.

[SK] vyhlásenie o zhode

Podpísané osoby týmto potvrdzujú, že podrobne popísaný mechanicky poháňaný pozemný dopravník zodpovedá európskym smerniciam 2006/42/ES (smernica o strojných zariadeniach) vrátane ich zmien, ako aj príslušnému právnemu výnosu na uplatnenie smerníc v národnom práve. Podpísané osoby sú vždy jednotlivo splnomocnené na zostavovanie technickej dokumentácie.

[SLO] EU IZJAVA O SKLADNOSTI

Podpisani potrjujemo, da podrobno opisano gnano vozilo za talni transport ustreza Evropski direktivi 2006/42/ES (Direktiva o strojih), vključno z njenimi spremembami in ustrezno pravno uredbo za izvajanje direktiv v nacionalno zakonodajo. Podpisniki so posamično pooblaščeni za sestavljanje tehnične dokumentacije.

[TR] AB Uygunluk Açıklaması

İmza sahipleri bu yazı ile, belirtilen kuvvet tahrikli istif aracının Avrupa Yönetmeliklerine 2006/42/EG (Makine Yönetmeliği), bunun getirdiği değişikliklere ve yasal yönetmeliklerin ulusal yasaya göre değişmesi için olan yasal genelgeye uygun olduğunu onaylamaktadırlar. Her bir imza sahibi teknik belgeleri oluşturma konusunda yetkilidir.

(1) Type/ Typ/ Tipo/ Modello/ Tyyppi/ Tipo / ΣΤΠΟ/ Típus/ Tip/ Тип/ Tips/ Tipas/ Tüüp:
(2) Serial No./ Serien-Nr./ N°. de série/ Serienummer/ N° de serie/ Numero di serie/ Serienr./ Sarjanro/ ΑΡΙΘΜΟ ΕΙΡΑ/ Seriové číslo/ Szériaszám/ Nr.Seryjny/ Serijska številka/ Výrobné číslo/ Серийный номер/ Seri No./ Seerianr./ Sērijas Nr./ Serijos numeris:
(3) Year of constr./ Baujahr/ Année de constr./ Bouwjaar/ Año de constr./ Anno di costruzione/ Produktionsår/ Byggeår/ Tillverkningsår/ Valmistusvuosi / Ano de fabrico / ΕΣΟ ΚΑΣΑ ΚΕΤΗ/ Rok výroby/ Gyártási év/ Rokprodukcji / Letnik / Год изготовления / Üretim yılı / Väljalaskeaasta / Izgatavošanas gads / Gamybosmetai
(4) Manufacturer or his authorized representative in Community/ Hersteller oder in der Gemeinschaft ansässiger Vertreter/ Fabricant ou son mandataire établi dans la Communauté/ Fabrikant of zijn in de Gemeenschap gevestigde gemachtigde/ Fabricante o representante establecido en la Comunidad/ Construtor ou Representante estabelecido na Comunidade/ Costruttore oppure il suo rappresentante nella Comunità/ Fabrikant eller dennesi Fællesskabet etablerede befuldmægtigede/ Produsent eller agent innen felleskapet/ Tillverkare eller representant inom EU/ Valmistaja tai yhteisömaassa oleva edustaja / V˘robce nebo jeho zastoupení/ Gyártó / producent albo jego przedstawiciel w EG (Wspólnota Europejska)/ Καηαζθεπαζηήο ή όθηηνο ηνπηεθώλ αληηπξνζώπσλ/ Üretici ya da Bölgedeki Yetkili Temsilci/ Proizvajalec ali pooblaščeni zastopnik s sedežem v EU/ Výrobca alebo zástupca so stálym bydliskom v EÚ / Изготовитель или его представитель, зарегистрированный в стране Содружества/ Tootja või organisatsioonis paiknev esindaja/ Ražotājs vai vietējais uzņēmuma pārstāvis / Gamintojas arba šalyje reziduojantis atstovas:
(5) Date/ Datum/ Data/ Fecha/ datum/ Dato/ päiväys/ Kuupäev/ Datums/ / Dátum/ dátum/ tarih/
(6) Authorised signatory/ Im Auftrag/ pour ordre/ Incaricato/ Por orden de/ por procuração/ op last van/ på vegne af/ på uppdrag/ Etter oppdrag/ psta./ Ülesandel / pavedus / v.i. / По поручению / megbízásából /длъжностно лице / z pověření / z poverenia / po nalogu / na polecenie / din sarcina / adına / θαη' ελληνή

If you can read this text:

- Your truck might be sold outside the EU; this declaration is then not valid.
- Or the declaration is not complete.