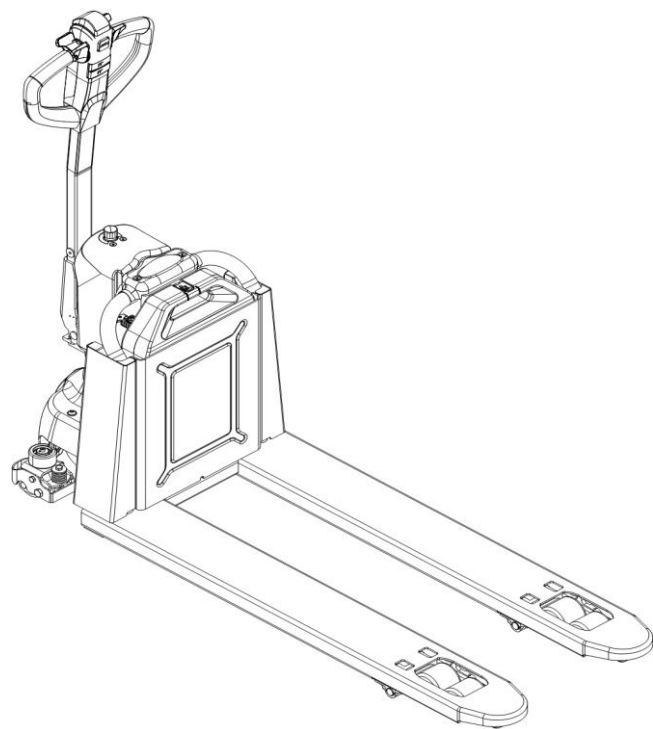


# INSTRUCTION MANUAL

## Electric Pallet Truck

**PTE15/20Q-B**



### **WARNING**

**Do not use the pallet truck before reading and understanding these operating instructions.**

### **NOTE:**

- Please check the designation of your present type at the last page of this document as well as on the ID-plate.
- Keep for future reference.

Version **1/2022**

**PTE15/20Q -B-SMS-002-EN**

## FOREWORD

Before operating the truck, read this ORIGINAL INSTRUCTION MANUAL carefully and understand the usage of the truck completely. Improper operation could create danger.

This manual describes the usage of different electric pallet trucks. When operating and servicing the truck, make sure, that it applies to your type.

Keep this manual for future reference. If this or the warning/ caution labels are damaged or get lost, please contact your local dealer for replacement.

This truck complies with the requirements according to EN 12895 (Industrial trucks- electromagnetic compatibility), EN 12053 (Safety of industrial trucks- test methods for measuring noise emissions), assumed the truck is used according to the described purpose.

### ATTENTION:

- Environmentally hazardous waste, such as batteries, oil and electronics, will have a negative effect on the environment, or health, if handled incorrectly.
- The waste packages should be sorted and put into solid dustbins according to the materials and be collected disposal by local special environment protection bureau. To avoid pollution, it's forbidden to throw away the wastes randomly.
- To avoid leaking during the use of the products, the user should prepare some absorbable materials (scraps of wooden or dry duster cloth) to absorb the leaking oil in time. To avoid second pollution to the environment, the used absorbable materials should be handed in to special departments in terms of local authorities.
- Our products are subject to ongoing developments. Because this manual is only for the purpose of operating/servicing the pallet truck, therefore please have understanding, that there is no guarantee out of particular features out of this manual.



NOTE: In this manual, the left symbol indicates warning and danger, which may lead to death or serious injury if not followed.

### Copyright

The copyright remains with the company, mentioned on the CE- certificate at the end of this document or, if sold within the USA, with the company, mentioned on the company sticker.

# TABLE OF CONTENTS

|                                                                                                |    |
|------------------------------------------------------------------------------------------------|----|
| 1. CORRECT APPLICATION .....                                                                   | 3  |
| 2. DESCRIPTION OF THE PALLET TRUCK.....                                                        | 4  |
| a. Overview of the main components .....                                                       | 4  |
| b. Technical data.....                                                                         | 5  |
| c. Description of the safety devices and warning labels (Europe and other, excepting USA)..... | 6  |
| d. Identification plate.....                                                                   | 7  |
| 3. WARNINGS, RESIDUAL RISK AND SAFETY INSTRUCTIONS .....                                       | 8  |
| 4. COMMISSIONING, TRANSPORTING, DECOMMISSIONING .....                                          | 9  |
| a. Commissioning .....                                                                         | 9  |
| b. Hoisting/ transportation.....                                                               | 9  |
| c. Decommissioning.....                                                                        | 10 |
| 5. DAILY INSPECTION .....                                                                      | 10 |
| 6. OPERATING INSTRUCTIONS .....                                                                | 11 |
| a. Parking .....                                                                               | 11 |
| b. Lifting .....                                                                               | 11 |
| c. Lowering.....                                                                               | 11 |
| d. Travelling.....                                                                             | 11 |
| e. Steering .....                                                                              | 12 |
| f. Braking.....                                                                                | 12 |
| g. Malfunctions.....                                                                           | 13 |
| h. Emergency.....                                                                              | 13 |
| 7. BATTERY SAFETY, CHARGING AND REPLACEMENT .....                                              | 13 |
| a. Safety Instructions .....                                                                   | 14 |
| b. Matters requiring attention.....                                                            | 15 |
| c. Replacement.....                                                                            | 15 |
| d. Tiller panel.....                                                                           | 16 |
| e. Charging .....                                                                              | 16 |
| 8. REGULAR MAINTENANCE.....                                                                    | 18 |
| a. Maintenance checklist .....                                                                 | 18 |
| b. Lubricating points.....                                                                     | 20 |
| c. Check and refill hydraulic oil .....                                                        | 20 |
| d. Checking electrical fuses .....                                                             | 21 |
| 9. TROUBLE SHOOTING .....                                                                      | 21 |
| 10. WIRING/ CIRCUIT DIAGRAM .....                                                              | 23 |
| a. Electrical circuit diagram.....                                                             | 23 |
| b. Hydraulic circuit diagram .....                                                             | 26 |
| 11. SPECIALIZED STIPULATIONS FOR THE US- AMERICAN MARKET .....                                 | 27 |
| a. Foreword/ Compliance .....                                                                  | 27 |
| b. Identification plate.....                                                                   | 28 |
| c. Description warning labels (only US- market) .....                                          | 29 |
| d. Technical data for US market .....                                                          | 31 |
| 12. DECLARATION OF CONFORMITY (valid, if sold within EU).....                                  | 33 |

# 1. CORRECT APPLICATION

It is only allowed to use this electric pallet truck according to this instruction handbook.

The trucks described in this handbook are self-propelled electric power pallet trucks. The trucks are designed to lift, lower and transport palletized loads.

A wrong usage can cause human injuries or can damage equipment.

The operator/ the operating company has to ensure the correct usage and has to ensure, that this pallet truck is used only by staff, which is trained and authorized to use this truck.

The pallet truck has to be used on substantially firm, smooth, prepared, level and adequate surfaces. The truck is intended to be used for indoor applications with ambient temperatures between +5°C and +40°C and for various transportation applications without crossing permanent obstacles or potholes. The work on ramps is allowed if ramp is not exceeding the allowed angle. While operating, the load must be placed approximately on the longitudinal center plane of the truck.

Lifting or transporting people is forbidden.

If used on tail lifts or loading ramps, please ensure that these are used correctly according to the operating instructions.

The capacity is marked on capacity sticker as well on the Identification plate. The operator has to consider the warnings and safety instructions.

Operating lighting must be minimum 50 Lux.

## Modification

No modifications or alterations to this pallet truck which may affect, for example, capacity, stability or safety requirements of the truck, shall be made without the prior written approval of the original truck manufacturer, its authorized representative, or a successor thereof. This includes changes affecting, for example braking, steering, visibility and the addition of removable attachments. When the manufacturer or its successor approve a modification or alteration, they shall also make and approve appropriate changes to capacity plate, decals, tags and operation and maintenance handbooks.

By not observing these instructions, the warranty becomes void.

## 2. DESCRIPTION OF THE PALLET TRUCK

### a. Overview of the main components

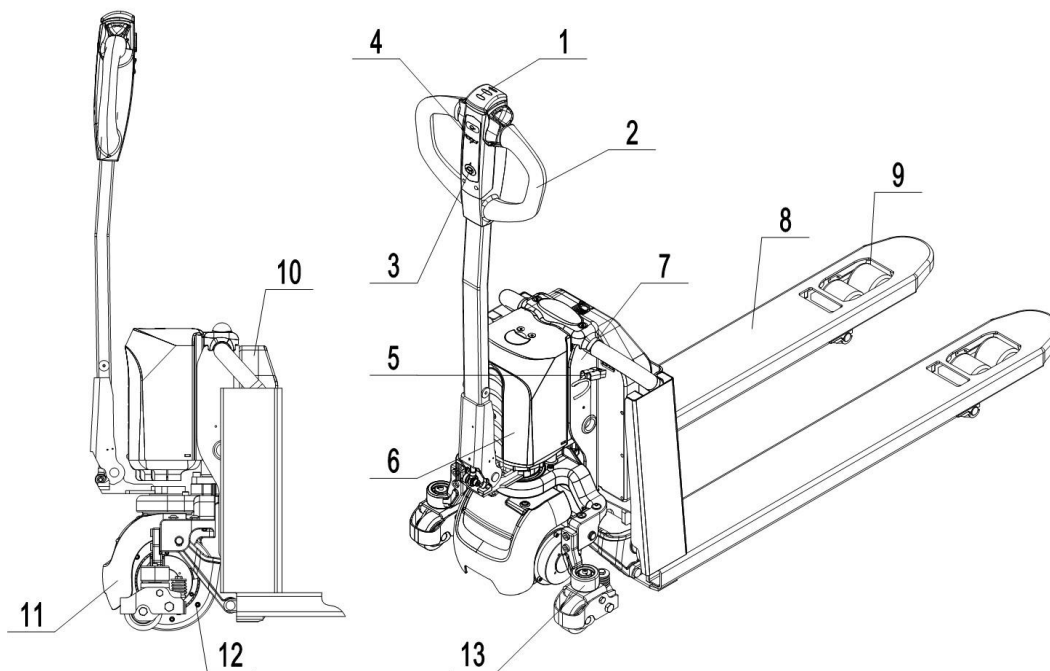


Fig. 1: Overview of the main components

- |                                  |                           |
|----------------------------------|---------------------------|
| 1. Safety (belly) button         | 8. Fork                   |
| 2. Tiller                        | 9. Load roller            |
| 3. Key                           | 10. Battery               |
| 4. Battery discharging indicator | 11. Apron                 |
| 5. Emergency button              | 12. Drive unit            |
| 6. Plastic cover                 | 13. Side wheel (optional) |
| 7. Chassis                       |                           |

**b. Technical data**

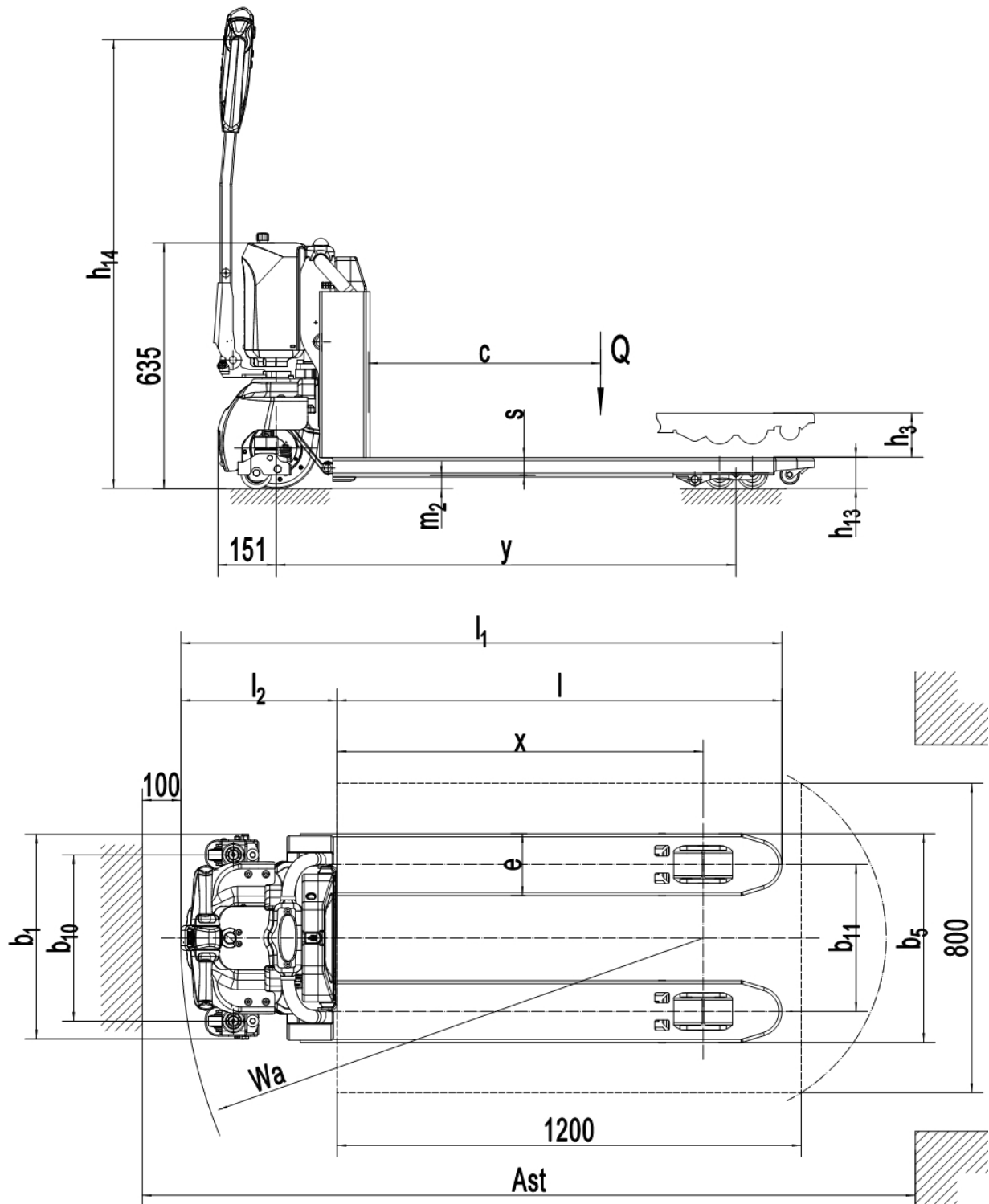


Fig. 2: Technical data

Table 1: Main technical data for standard version

| Type sheet for industrial truck acc. to VDI 2198 |      |                                                                      |                      |                                    |           |              |           |
|--------------------------------------------------|------|----------------------------------------------------------------------|----------------------|------------------------------------|-----------|--------------|-----------|
| Distinguishing mark                              | 1.2  | Manufacturer's type designation                                      |                      | PTE15Q-B                           |           | PTE20Q-B     |           |
|                                                  | 1.3  | Drive: electric (battery type, mains, ...), diesel, petrol, fuel gas |                      | Battery                            |           |              |           |
|                                                  | 1.4  | Operator type: hand, pedestrian, standing, seated, order-picker      |                      | Pedestrian                         |           |              |           |
|                                                  | 1.5  | Rated capacity/ rated load                                           | Q (t)                | 1.5                                |           | 2.0          |           |
|                                                  | 1.6  | Load centre distance                                                 | c (mm)               | 600                                |           |              |           |
|                                                  | 1.8  | Load distance, centre of drive axle to fork                          | x (mm)               | 947                                |           |              |           |
|                                                  | 1.9  | Wheelbase                                                            | y (mm)               | 1189                               |           |              |           |
| Weight                                           | 2.1  | Service weight                                                       | kg                   | 117                                | 122       | 130          | 135       |
|                                                  | 2.2  | Axle loading, laden front/ rear                                      | kg                   | 485/ 1132                          | 488/ 1134 | 481/ 1649    | 485/ 1650 |
|                                                  | 2.3  | Axle loading, unladen front/ rear                                    | kg                   | 97/ 20                             | 98/ 24    | 100/ 30      | 100/ 30   |
| Tyres, chassis                                   | 3.1  | Tires                                                                |                      | Polyurethane (PU)                  |           |              |           |
|                                                  | 3.2  | Tire size, front                                                     | Ø x w (mm)           | Ø 220×70                           |           |              |           |
|                                                  | 3.3  | Tire size, rear                                                      | Ø x w (mm)           | Ø 80×70 (Ø 80×93)                  |           |              |           |
|                                                  | 3.4  | Additional wheels (dimensions)                                       | Ø x w (mm)           | -/ Ø 80×30                         |           |              |           |
|                                                  | 3.5  | Wheels, number front/ rear(x=driven wheels)                          |                      | 1x/ 2(1x/ 4) or 1x +2/ 2(1x +2/ 4) |           |              |           |
|                                                  | 3.6  | Tread, front                                                         | b <sub>10</sub> (mm) | -/ 430                             |           |              |           |
|                                                  | 3.7  | Tread, rear                                                          | b <sub>11</sub> (mm) | 380                                | 525       | 380          | 525       |
| Dimensions                                       | 4.4  | Lift                                                                 | h <sub>3</sub> (mm)  | 115                                |           |              |           |
|                                                  | 4.9  | Height drawbar in driving position min./ max.                        | h <sub>14</sub> (mm) | 745/ 1160                          |           |              |           |
|                                                  | 4.15 | Height, lowered                                                      | h <sub>13</sub> (mm) | 80                                 |           |              |           |
|                                                  | 4.19 | Overall length                                                       | l <sub>1</sub> (mm)  | 1543                               |           |              |           |
|                                                  | 4.20 | Length to face of forks                                              | l <sub>2</sub> (mm)  | 393                                |           |              |           |
|                                                  | 4.21 | Overall width                                                        | b <sub>1</sub> (mm)  | 540                                | 685       | 540          | 685       |
|                                                  | 4.22 | Fork dimensions DIN ISO 2331                                         | s/ e/ l (mm)         | 50/ 160/ 1150                      |           |              |           |
|                                                  | 4.25 | Fork spread                                                          | b <sub>5</sub> (mm)  | 540                                | 685       | 540          | 685       |
|                                                  | 4.32 | Ground clearance, centre of wheelbase                                | m <sub>2</sub> (mm)  | 30                                 |           |              |           |
|                                                  | 4.34 | Aisle width predetermined load dimensions                            | A <sub>st</sub> (mm) | 2013                               |           |              |           |
|                                                  | 4.35 | Turning radius                                                       | W <sub>a</sub> (mm)  | 1340                               |           |              |           |
| Performance                                      | 5.1  | Travel speed, laden/ unladen                                         | km/h                 | 4.3/ 4.9                           |           | 4.9/ 4.9     |           |
|                                                  | 5.2  | Lift speed, laden/ unladen                                           | m/s                  | 0.015/ 0.022                       |           | 0.016/ 0.019 |           |
|                                                  | 5.3  | Lowering speed, laden/ unladen                                       | m/s                  | 0.05/ 0.026                        |           | 0.052/ 0.023 |           |
|                                                  | 5.8  | Max. gradeability, laden/ unladen                                    | %                    | 6/ 16                              |           | 7/ 16        |           |

|                  |      |                                                  |          |                 |        |
|------------------|------|--------------------------------------------------|----------|-----------------|--------|
|                  | 5.10 | Service brake                                    |          | Electromagnetic |        |
| Electric- engine | 6.1  | Drive motor rating S2 60min                      | kW       | 0.75            | 1.0    |
|                  | 6.2  | Lift motor rating at S3 10%                      | kW       | 0.50            | 0.8    |
|                  | 6.3  | Battery acc. to DIN 43531/35/36 A, B, C, no      |          | No              |        |
|                  | 6.4  | Battery voltage/ nominal capacity K <sub>5</sub> | (V)/(Ah) | 24/ 20 (24/ 40) | 48/ 20 |
|                  | 6.5  | Battery weight                                   | kg       | 5.8             | 8.1    |
|                  | 6.6  | Energy consumption acc. to DIN EN 16796          | kWh/h    | 0.25            | 0.17   |
| Addition data    | 8.1  | Type of drive unit                               |          | DC              |        |
|                  | 8.4  | Sound pressure level at driver's seat            | dB (A)   | <70             |        |

### c. Description of the safety devices and warning labels (Europe and other, excepting USA)

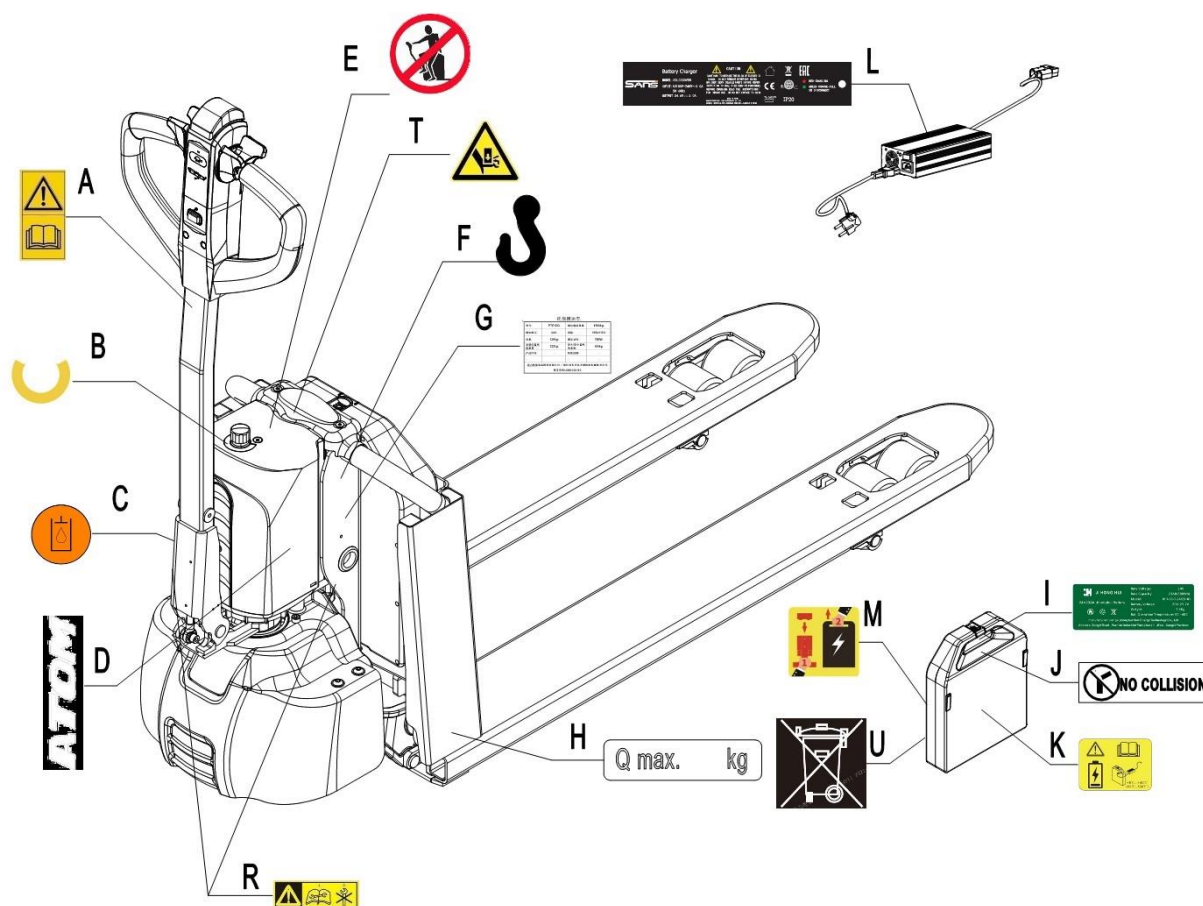


Fig. 3: Safety and warning labels

- A Sticker to read and follow this instruction
- B Emergency button sticker
- C Oil filling decal
- D Model sticker (ATOM)
- E “No passengers” decal
- F Crane hook label
- G Identification plate (ID-plate)
- H Capacity label
- I Battery ID plate
- J No collision sticker
- K Battery warning sticker
- L Charger ID plate
- M Warning sticker (operation steps)
- R Sticker to read and follow maintenance manual
- T Warning sticker (hands pinching)
- U Sticker (do not discard the label)

The truck is equipped with an emergency switch (5) which stops all lifting-, lowering-, driving- functions and engages the fail-safe electromagnetic brake when it is pressed. By turning this button clockwise, the truck can be operated after the controller checked the functions. Before operating, insert the key (3) to start the truck. To prevent unauthorized access, press emergency switch (5) or remove the key (3).

The truck is equipped with a safety (belly) button (1) which switches the driving function away from the operator, if the truck travels towards the operator and the tiller is activated in the tillers operating zone. Follow also the instructions given on the labels and decals. Replace the label and decals in time if they are damaged or missing.

## d. Identification plate

| Pallet Truck                                                                          |            |                                |            |
|---------------------------------------------------------------------------------------|------------|--------------------------------|------------|
| Type                                                                                  | xxxx       | Rated capacity                 | xxxx kg    |
| Rated voltage                                                                         | xx V       | Service weight without battery | xxxx kg    |
| Battery weight maximum                                                                | xxx kg     | Battery weight minimum         | xxx kg     |
| Net weight (without load and battery)                                                 | xxx kg     | Lift height maximum            | xxxx mm    |
| Serial number                                                                         | XXXXXXXXXX | Equipment code                 | XXXXXXXXXX |
| Manufacturing Name XXXXXXXXXXXXXXXXXXXX<br>Manufacturing Address XXXXXXXXXXXXXXXXXXXX |            |                                |            |

**Fig. 4:** Identification plate

Check the ID plate taped on the truck for contents and type.

### 3. WARNINGS, RESIDUAL RISK AND SAFETY INSTRUCTIONS



#### **DO NOT**

- Put foot or hand under or into the lifting mechanism.
- Allow other person than the operator to stand in front of or behind the truck when it is moving or lifting/lowering.
- Overload the truck.
- Put foot in front of the wheels, injury could result.
- Lift people. People could fall down and suffer severe injury.
- Push or pull loads
- Side or end load. Load must be distributed evenly on the forks.
- Use the truck with unstable or unbalanced load.
- Use truck without manufacturer's instructions manual.
- Lifted loads could become unstable at wind forces. In the case of wind forces do not lift the load if there is any influence to the stability.

Watch difference in floor levels when driving. Load could fall down or the truck could get uncontrollable.

Keep watching the condition of load. Stop operating the truck if load becomes unstable.

Brake the truck and activate the emergency switch (5) by pushing when sliding load on or off the truck. If the truck has any malfunctions, follow chapter 10.

Practice maintenance work according to regular inspection. This truck is not designed to be water resistant. Use the truck under dry condition. Prolonged continuous operation might cause damage of the power pack. Stop operation if temperature of hydraulic oil is too high.



- When operating the electric pallet truck, the operator has to wear safety shoes.
- The truck is intended to be used for indoor applications with ambient temperatures between +5°C and + 40°C.
- The operating lighting must be minimum 50 Lux.
- To prevent unintended sudden movements when not operating the truck (i.e. from another person, etc.), press emergency switch (5) or remove the key (3).

## 4. COMMISSIONING, TRANSPORTING, DECOMMISSIONING

### a. Commissioning

Table 2: Commissioning data

| Type                      | PTE15Q-B<br>(540X1150) | PTE15Q-B<br>(685X1150) | PTE20Q-B<br>(540X1150) | PTE20Q-B<br>(685X1150) |
|---------------------------|------------------------|------------------------|------------------------|------------------------|
| Commissioning weight [kg] | 136kg                  | 139kg                  | 141kg                  | 144kg                  |
| Dimensions [mm]           | 1554x540x1245          | 1554x685x1245          | 1554x540x1245          | 1554x685x1245          |

After receiving our new pallet truck or for re-commissioning you have to do the following before (firstly) operating the truck:

- Check if are all parts included and not damaged
- Make sure the tiller is assembled correctly (electrical socket is connected and fixed with two plastic clamps, circlip of the axle is installed)
- Check that battery is charged (follow chapter 8)
- Do the work according to the daily inspections as well as functional checks.

### b. Hoisting/ transportation

For transporting, remove the load, lower the forks to the lowest position and fix the truck safely with dedicated hoisting equipment according to the following figures.

#### Hoisting



USE DEDICATED CRANE AND HOISTING EQUIPMENT  
DO NOT STAND UNDER THE SWAYING LOAD  
DO NOT WALK INTO THE HAZARDOUS AREA DURING HOISTING

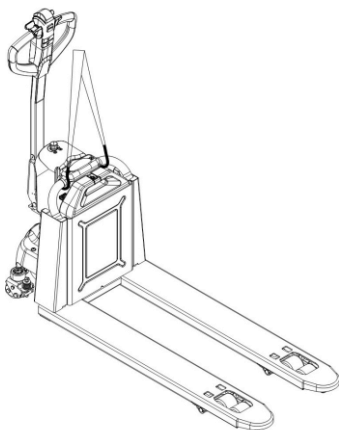


Fig. 5: Hoisting with a crane

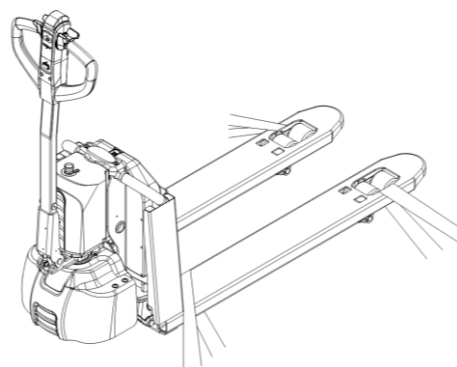


Fig. 6: Fixing points

## Transportation



**ALWAYS FASTEN THE TRUCK SECURELY DURING TRANSPORTATION ON A TRANSPORT VEHICLE**

Lower the forks and park the truck securely.

Fasten the truck according to Fig. 6 by fixing dedicated lashing belts to each side of the trucks crane hook holes and fasten the other side at the transporting truck.

### c. Decommissioning

For storage, remove the load, lower the truck to the lowest position, grease all in this handbook mentioned greasing points (regular inspection), and eventually protect the truck against corrosion and dust. Remove the batteries and jack the truck safely, so that there will be no flattening after storage.

For final decommissioning hand the truck to a designated recycling company. Oil, batteries and electric components must be recycled due to legal regulations.

## 5. DAILY INSPECTION

This chapter describes pre-shift checks before putting the truck into operation.

Daily inspection is effective to find the malfunction or fault on this truck. Check the truck on the following points before operation.

Remove load from truck and lower the forks.



**DO NOT USE THE TRUCK IF ANY MALFUNCTION IS FOUND.**

- Check for scratches, deformation or cracks.
- Check if there is any oil leakage from the cylinder.
- Check the smooth movement of the wheels.
- Check the function of driving with tiller in its vertical position.
- Check the function of the emergency brake by activating the emergency switch.
- Check the braking function of the proximity switch of the tiller.
- Check the lifting and lowering functions by operating the buttons.
- Check if all bolts and nuts are tightened firmly.
- Visual check if there are any broken electric wires.

## 6. OPERATING INSTRUCTIONS



BEFORE OPERATING THIS TRUCK, PLEASE FOLLOW THE WARNINGS AND SAFETY INSTRUCTIONS (CHAPTER 3).

Make sure, that the load is palletized and stable and that the daily inspection is carried out.

Start the truck by the key (3).

Press the horn button (Fig.7, 15) to activate the audible warning signal.

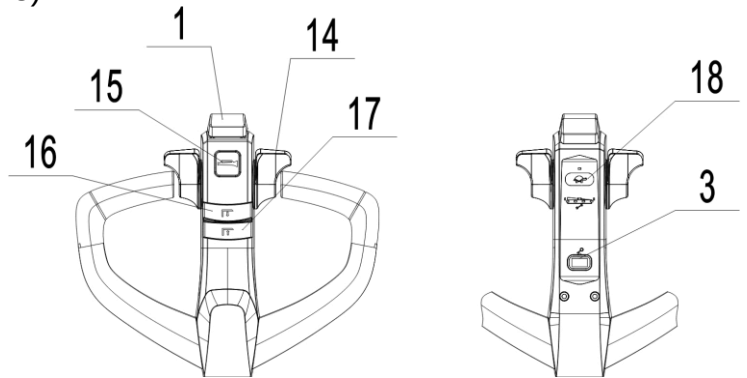


Fig.7: Tiller control buttons

### a. Parking



DO NOT PARK THE TRUCK ON INCLINED SURFACES

The truck is equipped with an electromagnetic fail-safe stopping and parking brake. Always lower the forks fully and press the emergency switch (5) for parking.

### b. Lifting



DO NOT OVERLOAD THE TRUCK!  
MAXIMUM CAPACITY OF PTE15Q IS 1500KG.  
MAXIMUM CAPACITY OF PTE20Q IS 2000KG.

Travel with the lowered forks fully underneath the pallet and press the lifting button (Fig. 7, 16) until you reach the desired lifting height.

### c. Lowering

Press the lowering button (17) carefully.

Lower the load until the forks are clear of the pallet, then drive the truck carefully out of the load unit.

### d. Travelling

TRAVEL ON INCLINES ONLY WITH THE LOAD FACING UPHILL.  
DO NOT TRAVEL ON INCLINES MORE THAN SPECIFIED WITH THE TECHNICAL DATA.

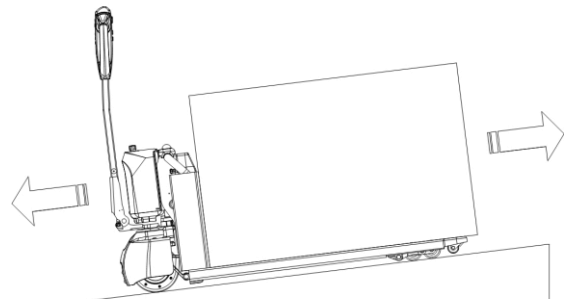
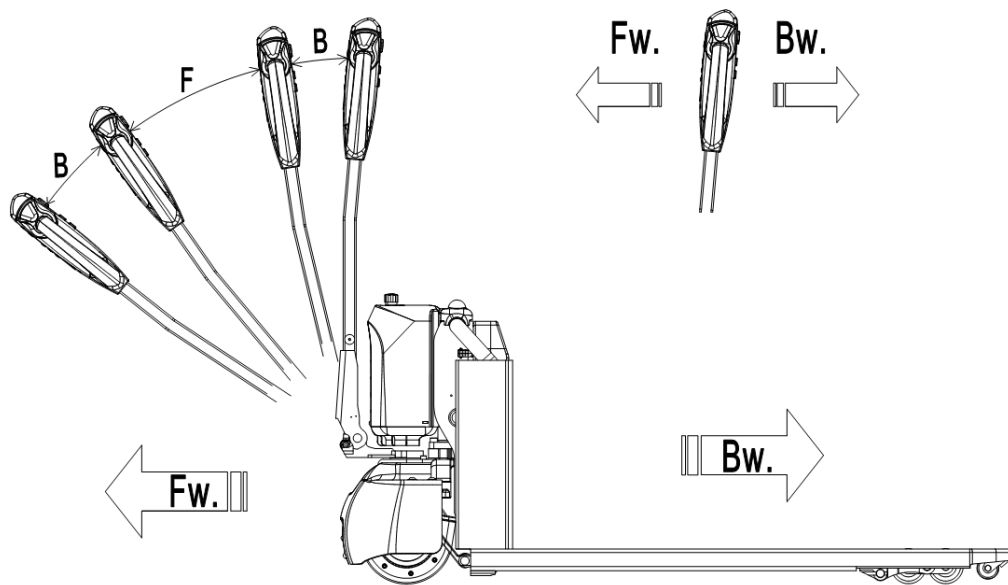


Fig. 8: Load facing uphill

After starting the truck by the magnetic lock, move the tiller to the operating zone ('F', Fig.9).



**Fig. 9:** Operating direction

Turn the accelerator knob to the desired direction forward 'Fw.' or backwards Bw.'(Fig. 9).

Control the travelling speed by operating the accelerator knob (Fig.7,13) carefully until you reach the desired speed.

If you move the accelerator knob back to the neutral position, the controller will decelerates the truck until the truck stops. If the truck stops, the parking brake will be engaged.

Drive the truck to the destination carefully. Watch the route conditions and adjust the travelling speed by operating the accelerator.

Press turtle button (Fig.7,18) to enter into slow speed mode, travel slowly by operating the accelerator knob (Fig.7,14), press turtle button again to switch to regular speed mode.

Press the turtle button and hold it for 2 seconds to activate driving function with tiller in vertical position when operating in confined areas.

### e. Steering



Steer the truck by moving the tiller to the left or right side.

### f. Braking



PLEASE CHECK THE BRAKING DISTANCE WITH TRUCK BEFORE OPERATION  
THE BRAKING PERFORMANCE DEPENDS ON THE TRACK CONDITIONS AND  
THE LOAD CONDITIONS OF THE TRUCK

The braking function can be activated in several ways:

- By moving the accelerator knob (14) to the initial '0' position or by releasing the knob, the regenerative braking is activated. The truck brakes until it stops.

- By moving the accelerator knob (14) from one driving direction directly to the opposite direction, the regenerative braking is activated until the truck starts traveling into the opposite direction.
- The truck brakes, if the tiller is located in the braking zones ('B'). If the tiller is released, the tiller moves automatically to the upper braking zone ('B'). The truck brakes until it stops.

The safety (belly) button (1) prevents the operator from crush. If this button is activated, the truck decelerates and/or starts traveling into backwards direction ('Bw.') for a short distance and stops then. Please consider that this button still works if the truck is not traveling with tiller in operating zone.

## g. Malfunctions

If there are any malfunctions or the truck is inoperative, please stop using the truck and activate the emergency button (5) by pushing it. If possible, park the truck in a safe area and remove the key (3). Inform immediately the manager or call your service. If necessary, move the truck out of the operating area by using dedicated towing/ hoisting equipment.

## h. Emergency

In emergencies or in the event of tipping over (or fall off a dock), keep a safe distance immediately. If possible, push the emergency button (5) and all electrical functions will be stopped.

## 7. BATTERY SAFETY, CHARGING AND REPLACEMENT



- Only qualified personnel are allowed to service or charge the batteries. The instructions of this handbook must be observed.
- The batteries are lithium batteries.
- Recycling of batteries undergoes national regulations. Please follow these regulations.
- By handling batteries, open fire is prohibited!
- In the area of battery charging neither burning materials nor burning liquids are allowed. Smoking is prohibited and the area must be ventilated.
- Park the truck securely before starting charging or installing/changing the batteries
- Before finishing the maintenance work, make sure, that all cables are connected correctly and that they are no disturbing towards other components of the truck.

Table 3: Available batteries

| Model  | Battery specification          |
|--------|--------------------------------|
| PTE15Q | 24V20Ah lithium battery, 5.1kg |
| PTE20Q | 48V20Ah lithium battery, 6.5kg |



IT IS ONLY ALLOWED TO USE LITHIUM BATTERIES.  
PLEASE CONSIDER THE MAXIMUM OPERATING TEMPERATURE OF THE BATTERIES AND REFER TO SAFETY INSTRUCTIONS BELOW

## **a. Safety Instructions**

Failure to follow the below requirements may cause damage to your property, cause injuries or death.

### **Measures to prevent ignition**

- It is forbidden to work at temperatures over 60 °C.
- It is forbidden to place it beside heat sources, such as stoves, fireplaces, etc.
- Direct sunlight must be avoided.
- It is forbidden to place batteries near inflammable and explosive substances.

### **Measures to prevent explosion**

- Do not hit the battery, no impacts are allowed.
- Exclude penetration of objects through battery case or damages to battery case
- DO not throw products into the fire or water.

### **Measures to prevent electric leakage**

- Do not disassemble.
- Do not contact by wet hands.
- Do not expose it to moisture or liquids.
- Do not place batteries in a place of easy access by children or animals.

### **Measures to preventing damage to battery systems**

- It is forbidden to contact liquids or corrosive chemicals.
- Do not expose batteries to high temperature and/or high pressure.
- No trampling, disassembly or smashing.
- Do not attempt charging from discharge terminals and discharging from charging terminals.

### **Installation environment**

In order to ensure the best operating performance, the battery need to be kept under normal working conditions: between 0 and 40 degrees Celsius and normal humidity. Avoid excessive temperature difference on both sides of the battery (more than 5°C).

### **Emergency management**

Below are examples of several ways to deal with possible emergencies:

- In case of Smoke or Ignition: stop to use equipment immediately, take appropriate actions according to working instructions and stay away from the scene.
- In case battery is immersed in water: stop to use equipment immediately, take appropriate actions according to working instructions and stay away from the scene.
- Products produce smell: stop to use equipment immediately, remove the battery and take appropriate actions according to working instructions and stay away from the scene. Avoid contact with any leaking liquids or gases out of the battery (in case of contact clean immediately).

### **Necessary safety equipment**

- Self-contained breathing apparatus and personal protective equipment.
- Sevofluoropropane fire extinguishing system.

## b. Matters requiring attention

- The charging function of batteries may be blocked by Battery Management System if temperature of cells inside the battery case is lower than +5°C. Make sure the own temperature of battery is above this value and the temperature of the battery is even.
- Batteries are forbidden to charge at low temperatures, but they can be used in occasional low temperature environment (please refer to normal working conditions allowed for the truck), but their efficient capacity will be lower, which is a normal phenomenon.

| Ambient temperature | Remaining discharge capacity of battery pack |
|---------------------|----------------------------------------------|
| 25°C                | 100%                                         |
| 0°C                 | 90%                                          |
| -20°C               | 70%                                          |
| -30°C               | 40%                                          |



**Note:** Although the battery can be discharged at very low temperature, it is easy to generate condensate during the charging process, which will damage the internal electronic devices of the battery and create unpredictable hidden dangers. Batteries cannot be charged until they are slowly warmed up to minimum allowed temperature for activation of charging function (may take up to 4 hours in normal temperature conditions). Forced warming up (e.g., using of heaters, vents etc.) is forbidden.

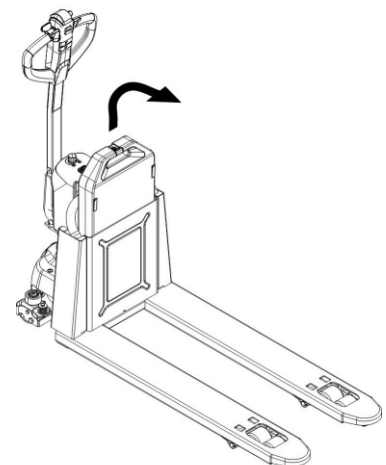
The dependence of actual capacity from environmental temperature is shown for reference only and can not be used as a commitment/allowance for low temperature operation, please refer to the Chapter 1 for correct application conditions.

- The battery protection level is IP40, so please do not wash the battery directly with water.
- When the lithium battery pack is not in use for a long time store it with 30-50% level of charge to extend its life-time.
- When the vehicle is prohibited to run, that is, when the handle power indicator is blinking red, please charge in time; otherwise, there may be the risk of battery power loss; It is recommended that charging be carried out within 7 days when driving is prohibited.

## c. Replacement

Park the truck securely and press the emergency button (5) to power off the truck. Remove the battery connector, hold the battery grip and then take out the battery vertically.

The installation is in the reverse order.



**Fig. 10:** Battery replacement

## d. Tiller panel

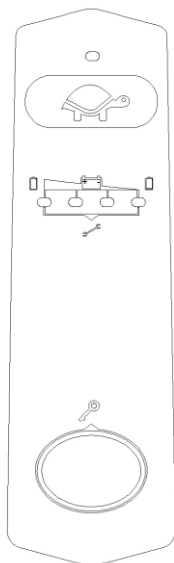


Fig. 11: Tiller panel

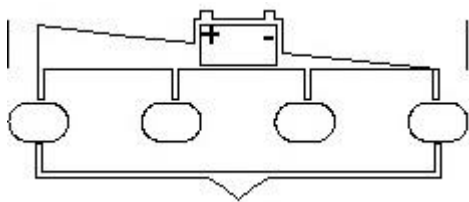
### Turtle Symbol

Press the Turtle Symbol button, the green indicator above the button is on, it shows activation of the “soft” mode of the truck, in which maximum speed and acceleration are reduced.

### Fault Code

When a fault code is generated, firstly all four battery indicator lights are on, then the first (most left) battery indicator flashes and counts, then multiply this number by ten for the first number; then the fourth (most right) battery indicator flashes and counts the times for the second number; Plus these two numbers you will get the fault code.

### Battery state of charge (SOC)



The state of charge (SOC) of the battery is represented by 4 LED indicator lights. As the battery discharges, the four indicator lights will be on in turn, and the yellow LED is defined as a warning light, indicating that SOC is insufficient. When the red LED is on, please charge the battery immediately.

## e. Charging



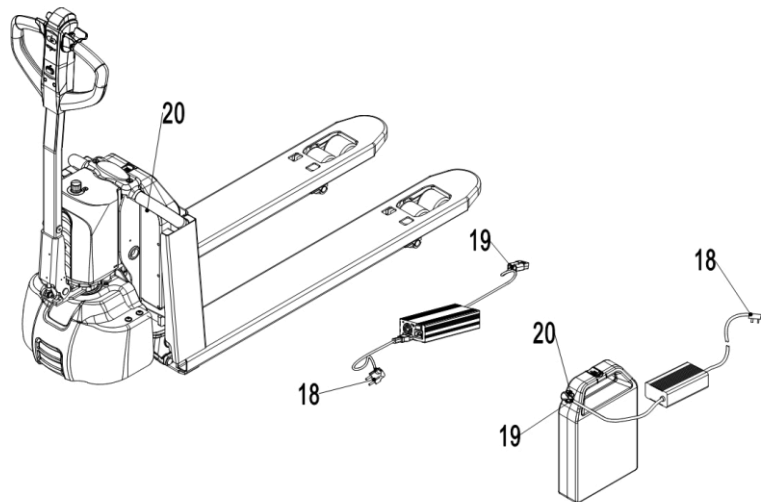
- Before charging ensure that you are using an appropriate charger for charging the installed battery and that all safety measures are taken into consideration.

- Before using the charger, please fully understand the instructions of the charger instructions.
- Always follow these instructions
- The room, where you are charging must be ventilated.
- The exactly charge status can be only checked from the discharge indicator. To control the status, the charging must be interrupted and the truck must be started.
- Do not make attempts to charge the battery if it is impacted and the battery case is damaged.

Park the truck at a dedicated secured area with a dedicated power supply.

Lower the forks and remove the load;  
Switch the truck off and connect the charger power cord (18) to the socket of power supply, and connect the charger plug (19) to the charging socket (20) of the battery. The charger starts charging the battery.

If charging is completed, disconnect the charger from the battery and the power supply, then put the charger in the designated pocket.



**Fig.12: Battery charging**

It's also allowed to remove the battery out and charge in dedicated area.

If there is an optional second battery, the truck can continue to work after replacing the battery, and charge the battery that needs to be charged separately.

**Table 4: LED-Status**

| LED - Signal | Function      |
|--------------|---------------|
| Red          | Charging      |
| Green        | Fully charged |

**Table 5: Charger**

|        | Model      | Specification | Input                    | Output      |
|--------|------------|---------------|--------------------------|-------------|
| PTE15Q | DZL300SS02 | 24V8A (EN)    | 180Vac -240Vac~3.0A MAX  | 29.4V 8.0A  |
|        | SSLC300V29 | 24V8A (EU)    | 180Vac -240Vac~3.0A MAX  | 29.4V 8.0A  |
|        | SSLC300V29 | 24V8A (US)    | 120Vac~3.0A MAX          | 29.4V 8.0A  |
|        | WTL2412PMF | 24V12A        | 100Vac -240Vac~6.0A MAX  | 29.4V 12.0A |
| PTE20Q | DZL500SS02 | 48V9A         | 180Vac -240Vac ~5.0A MAX | 54.6V 9.0A  |
|        | SSLC500V48 | 48V9A         | 100Vac -132Vac ~6.3A MAX | 54.6V 9.0A  |
|        | SSLC500V48 | 48V9A         | 200Vac -240Vac ~5.0A MAX | 54.6V 9.0A  |

## 8. REGULAR MAINTENANCE



- Only qualified and trained personnel are allowed to do maintenance on this truck.
- Before maintaining, remove the load from the forks and lower the forks to the lowest position.
- If you need to lift the truck, follow chapter 4b by using designated lashing or jacking equipment. Before working, put safety devices (for instance designated lift jacks, wedges or wooden blocks) under the truck to protect against accidental lowering, movement or slipping.
- Please pay attention by maintain the tiller arm. The gas pressure spring is pre-loaded by compression, carelessness can cause injury.
- Use approved and from your dealer released original spare parts.
- Please consider that oil leakage of hydraulic fluid can cause failures and accidents.
- It is allowed to adjust the pressure valve only from trained service technicians.

If you need to replace the wheels, please follow the instructions above. The casters must be round and free of abnormal wear.

Check the items emphasized in maintenance checklist.

### a. Maintenance checklist

Table 7: Maintenance checklist

|                          |                                                                                                                            | Interval (Monthly) |   |   |    |
|--------------------------|----------------------------------------------------------------------------------------------------------------------------|--------------------|---|---|----|
|                          |                                                                                                                            | 1                  | 3 | 6 | 12 |
| <b>Hydraulic</b>         |                                                                                                                            |                    |   |   |    |
| 1                        | Check the hydraulic cylinder for damage noise and leakage                                                                  |                    | • |   |    |
| 2                        | Check the hydraulic joints for damage and leakage                                                                          |                    | • |   |    |
| 3                        | Inspect the hydraulic oil level, refill if necessary                                                                       |                    | • |   |    |
| 4                        | Replace the hydraulic oil ( 12 month or 1500 working hours )                                                               |                    |   |   | •  |
| 5                        | Check and adjust the pressure valve (1500kg (PTE15Q)+0/+10%<br>Check and adjust the pressure valve (2000kg (PTE20Q)+0/+10% |                    |   |   | •  |
| <b>Mechanical system</b> |                                                                                                                            |                    |   |   |    |
| 6                        | Inspect the forks for deformation and cracks                                                                               |                    | • |   |    |
| 7                        | Check the chassis for deformation and cracks                                                                               |                    | • |   |    |
| 8                        | Check if all screws are fixed                                                                                              |                    | • |   |    |
| 9                        | Check the push rods for deformation and damages                                                                            |                    | • |   |    |
| 10                       | Check the gearbox for abnormal sound and noise                                                                             |                    | • |   |    |
| 11                       | Inspect the wheels for deformation and damages                                                                             |                    | • |   |    |
| 12                       | Inspect and lubricate the steering bearing                                                                                 |                    |   |   | •  |

|                   |                                                                |   |   |   |  |
|-------------------|----------------------------------------------------------------|---|---|---|--|
| 13                | Inspect and lubricate the pivot points if necessary            |   | • |   |  |
| 14                | Lubricate the grease nipples                                   | • |   |   |  |
| Electrical system |                                                                |   |   |   |  |
| 15                | Inspect the electric wiring for damage                         |   | • |   |  |
| 16                | Check the electric connections and terminals                   |   | • |   |  |
| 17                | Test the Emergency switch function                             |   | • |   |  |
| 18                | Check the electric drive motor for noise and damages           |   | • |   |  |
| 19                | Test the display                                               |   | • |   |  |
| 20                | Check, if correct fuses are used                               |   | • |   |  |
| 21                | Test the warning signal                                        |   | • |   |  |
| 22                | Check the contactor(s)                                         |   | • |   |  |
| 23                | Check the frame leakage (insulation test)                      |   | • |   |  |
| 24                | Check function and mechanical wear of the accelerator          |   | • |   |  |
| 25                | Check the electrical system of the drive motor                 |   | • |   |  |
| Braking system    |                                                                |   |   |   |  |
| 26                | Check brake performance, if necessary, replace the brake disc  |   | • |   |  |
| Battery           |                                                                |   |   |   |  |
| 27                | Check the battery voltage                                      |   | • |   |  |
| 28                | Clean the terminals for corrosion and damages                  |   | • |   |  |
| 29                | Check the battery housing for damages                          |   | • |   |  |
| Charger           |                                                                |   |   |   |  |
| 30                | Check the main power cable for damages                         |   |   | • |  |
| 31                | Check the start-up protection during charging                  |   |   | • |  |
| Function          |                                                                |   |   |   |  |
| 32                | Check the horn function                                        | • |   |   |  |
| 33                | Check the air gap of the electromagnetic brake                 | • |   |   |  |
| 34                | Test the emergency braking                                     | • |   |   |  |
| 35                | Test the reverse and regenerative braking                      | • |   |   |  |
| 36                | Test the safety (belly) button function                        | • |   |   |  |
| 37                | Check the steering function                                    | • |   |   |  |
| 38                | Check the lifting and lowering function                        | • |   |   |  |
| 39                | Check the tiller arm switch function                           | • |   |   |  |
| General           |                                                                |   |   |   |  |
| 40                | Check if all decals are legible and complete                   | • |   |   |  |
| 41                | Inspect the castors, adjust the height or replace if worn out. |   | • |   |  |
| 42                | Carry out a test run                                           | • |   |   |  |

## b. Lubricating points

Lubricate the marked points according to the maintenance checklist. The required grease specification is: DIN 51825, standard grease.

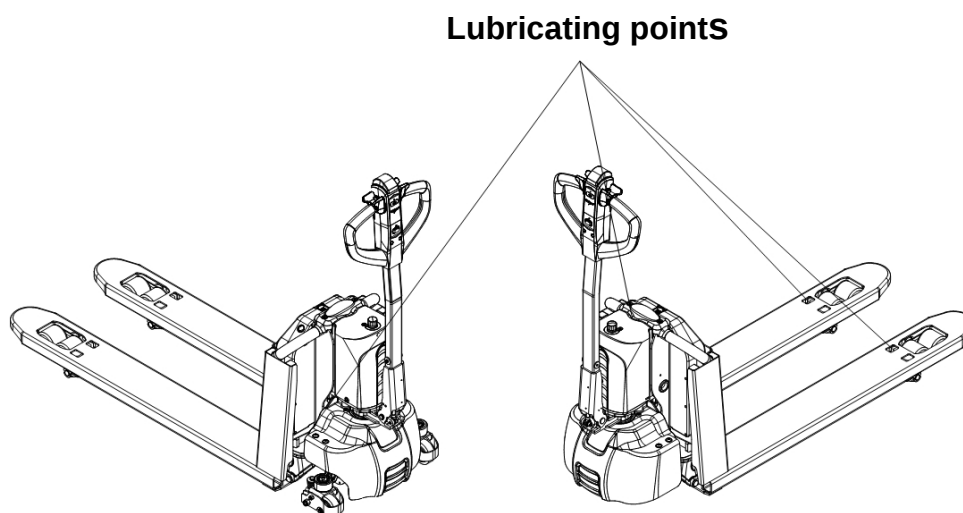


Fig. 13: Lubricating points

## c. Check and refill hydraulic oil

It is recommended to use hydraulic oil in accordance with average temperature:

| Environment temperature | -5°C~25°C             | >25°C                |
|-------------------------|-----------------------|----------------------|
| Type                    | HVLP 32,<br>DIN 51524 | HLP 46,<br>DIN 51524 |
| Viscosity               | 28.8-35.2             | 41.4 - 47            |
| Amount                  | 0.4 L                 |                      |

Waste material like oil, used batteries or other must be properly disposed and recycled according to the national regulations and if necessary brought to a recycling company.

The oil level in the oil tank should be between min and max marks with fully lowered forks.

If necessary add oil at the filling point.

## d. Checking electrical fuses

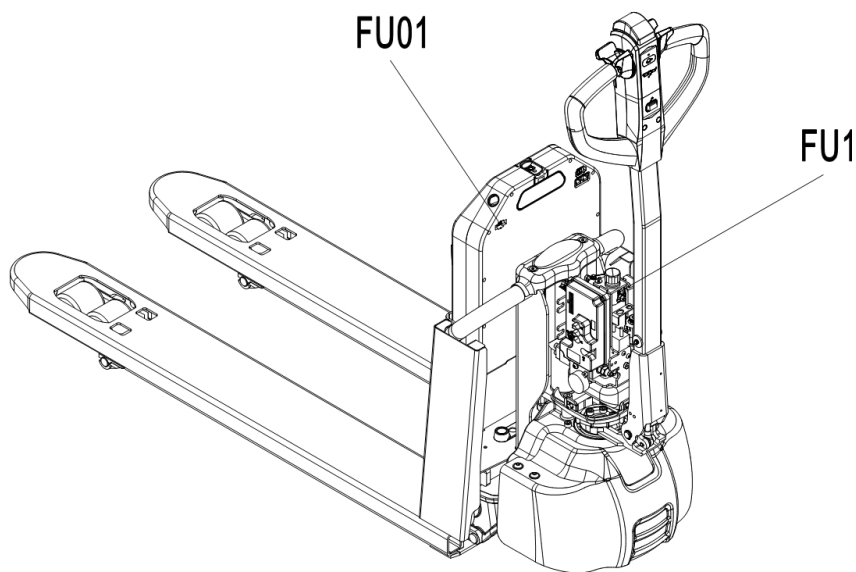


Fig. 14 Location of fuses

Table 8: Fuse

|       | Specification |
|-------|---------------|
| FU 1  | 10A           |
| FU 01 | 70A           |

## 9. TROUBLE SHOOTING



- IF TRUCK HAS MALFUNCTIONS, FOLLOW THE INSTRUCTIONS IN CHAPTER 6.

Table 9: Trouble shooting

| TROUBLE              | CAUSE                       | REPAIR                                                              |
|----------------------|-----------------------------|---------------------------------------------------------------------|
| Load can't be lifted | Load weight too high        | Lift only the max. capacity, mentioned on the ID-plate              |
|                      | Battery low power           | Charge the battery                                                  |
|                      | Lifting contactor failure   | Check and contact with service support for replacement if necessary |
|                      | Hydraulic oil level too low | Check and eventually refill hydraulic oil                           |
|                      | Oil leakage                 | Repair the sealing of the cylinder                                  |

|                                |                               |                                                                                               |
|--------------------------------|-------------------------------|-----------------------------------------------------------------------------------------------|
| Oil leakage from air breathing | Excessive quantity of oil.    | Reduce oil quantity.                                                                          |
| Truck not starts operating     | Battery is charging           | Charge the battery completely and then remove the main power plug from the electrical socket. |
|                                | Battery not connected         | Connect the battery correctly                                                                 |
|                                | Fuse faulty                   | Check and eventually replace fuses                                                            |
|                                | Low battery                   | Charge the battery                                                                            |
|                                | Emergency switch is activated | Turn the emergency switch clockwise                                                           |
|                                | Tiller in the operating zone  | Move the tiller firstly to the braking zone.                                                  |

If the truck has malfunctions and can't be operated out of the working zone, jack the truck up and go with a load handler under the truck and safe the truck securely. Then move truck out of the aisle.

## 10. WIRING/ CIRCUIT DIAGRAM

### a. Electrical circuit diagram

PTE15Q

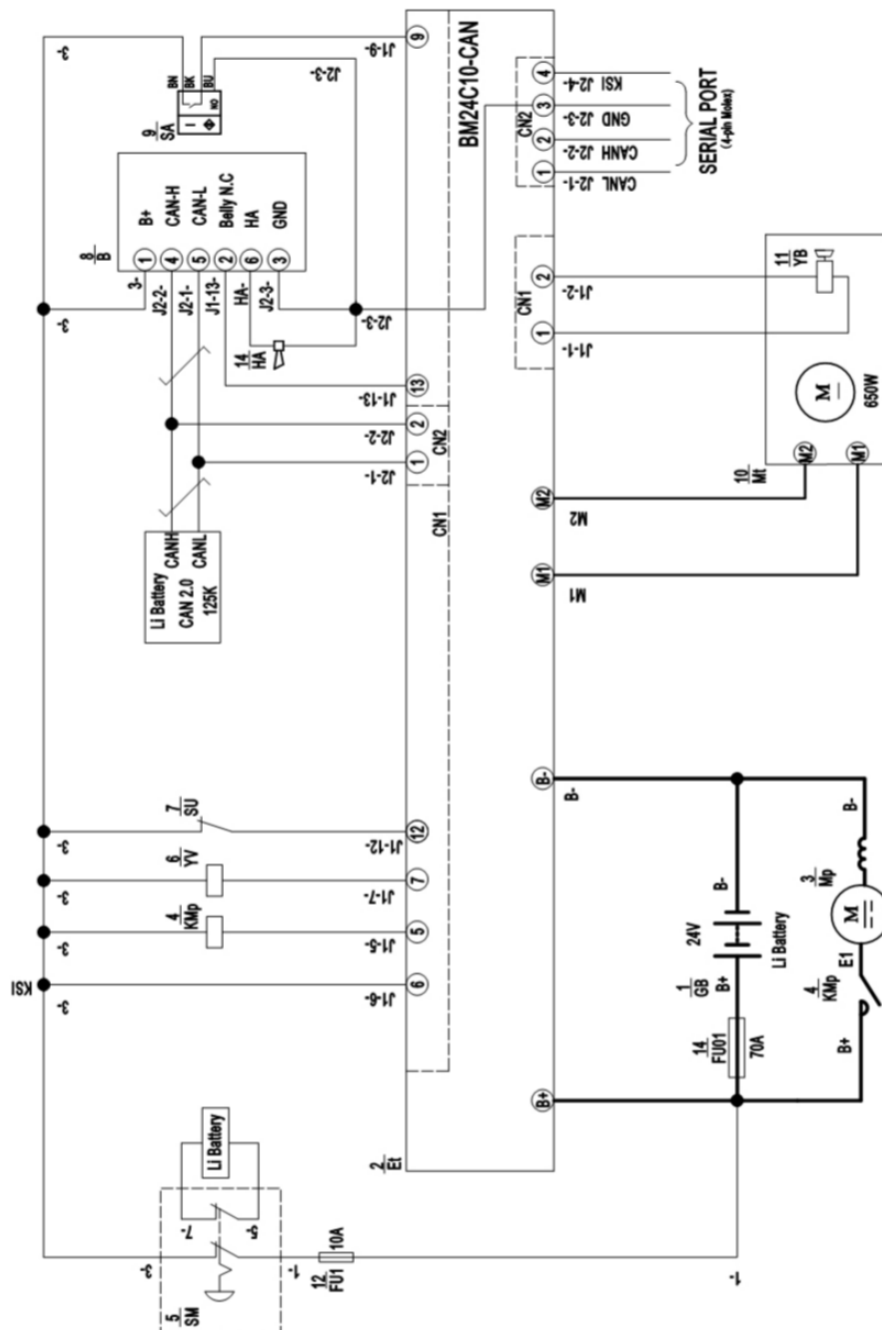


Fig.15: Electric diagram of PTE15Q

Fuse 1: 10A  
Fuse 01: 70A

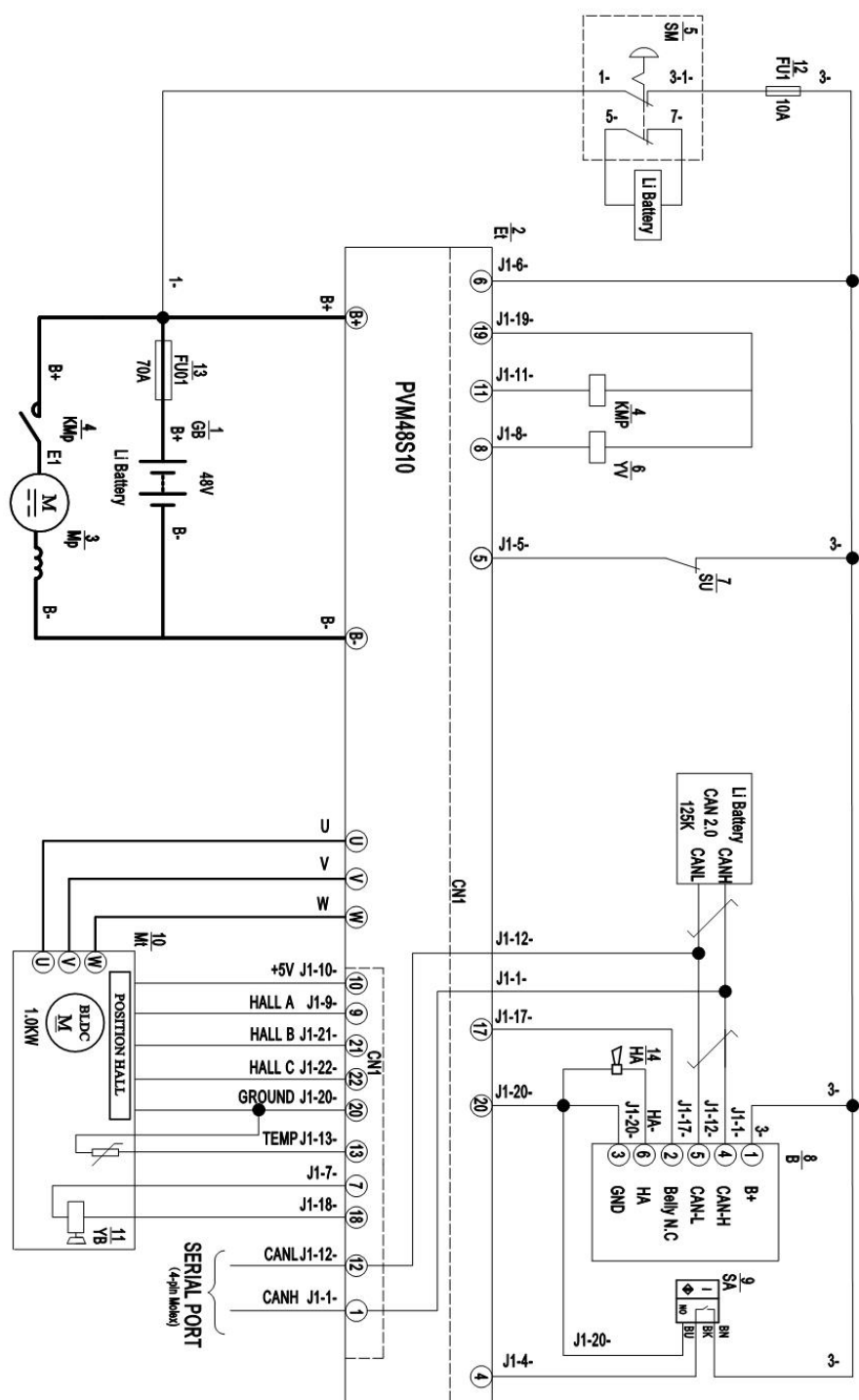


Fig.16: Electric diagram of PTE20Q

Table 10: Description of electrical diagram

| Code | Item                  | Code | Item                  |
|------|-----------------------|------|-----------------------|
| GB   | Battery               | B    | CAN tiller            |
| Et   | Controller            | SA   | Proximity switch      |
| Mp   | Pump motor            | Mt   | Traction motor        |
| KMp  | Pump contactor        | YB   | Electromagnetic brake |
| SM   | Emergency switch      | FU1  | 10A fuse              |
| YV   | Electromagnetic valve | FU01 | 70A fuse              |
| SU   | Micro switch          |      |                       |

## b. Hydraulic circuit diagram

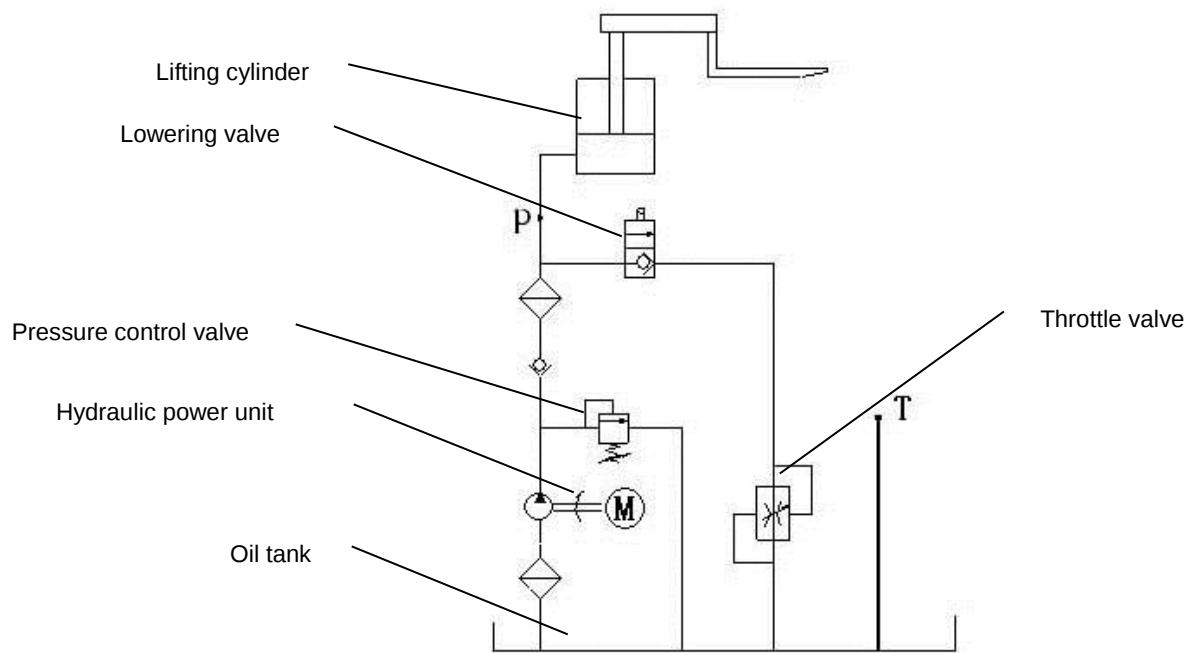


Fig. 17: Hydraulic c

# 11. SPECIALIZED STIPULATIONS FOR THE US- AMERICAN MARKET

The content in this chapter is specialized for the US-American market.

## a. Foreword/ Compliance

Operating this truck requires knowledge which can be acquired from this instruction handbook. This handbook must be kept available throughout the entire period of use of the industrial truck.

**IT IS LAW; YOU MUST BE TRAINED AND CERTIFIED TO OPERATE THIS TRUCK! READ AND OBEY ALL WARNINGS AND INSTRUCTIONS IN THIS MANUAL AND ON THE TRUCK!**

Only properly trained operators are allowed to operate a powered industrial truck. Your employer must train you and certify, that you are qualified to operate this truck (required by OSHA § 1910.178). The training must satisfy OSHA requirements and as minimum the topics mentioned in this handbook. Depending on the context in this operating manual, the user can refer to several people, including the owner of the truck, anyone who leases or borrows this truck, and the operator as defined in ASME B56.1. Please pay attention to the section in ANSI/ITSDF B56.1 concerning the operator. In this standard, it is defined that the safe operation is the responsibility of the operator (ANSI/ITSDF B56.1, Part II, section 5.1.1). You and others can be seriously injured or even killed if you don't use this truck correctly. Before operating your truck, inspect your truck and ensure that it is in correct working order. This truck was designed and built to current industry and government standards. For more information see following:

- ANSI/ITSDF B56.1
- OSHA §1910.178 (Occupational Safety and Health Act)

**⚠ DANGER** This sign indicates hazard situations, if not avoided, will result in serious injury or death. The instructions or precautions to this message must be observed to avoid the potential risk of injury or death.

**⚠ WARNING** If not followed, warning indicates hazard situations which may lead to moderate injury. The instructions or precautions to this message must be observed to avoid the potential risk of injury or death.

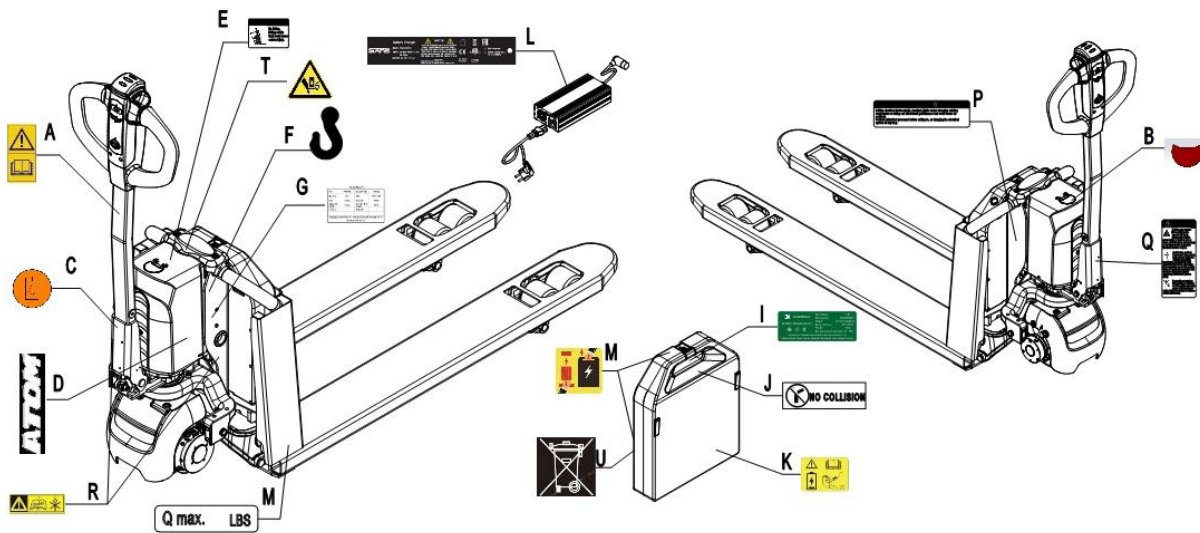
**⚠ CAUTION** If not followed, caution indicated situations which may lead to minor injury. Instructions or precautions must be observed to avoid minor injury.

## b. Identification plate

- |   |                                          |    |                                               |
|---|------------------------------------------|----|-----------------------------------------------|
| 1 | Truck Model                              | 9  | Option                                        |
| 2 | Serial Number                            | 10 | Maximum Battery Capacity (Ah)                 |
| 3 | Supply Voltage (Volts)                   | 11 | Battery Weight Min/Max lbs. (kg)              |
| 4 | Truck Weight with Max. Battery, lbs (Kg) | 12 | Battery Manufacturer Information              |
| 5 | Truck Weight without Battery, lbs. (Kg)  | 13 | Battery Model Number                          |
| 6 | Manufacturing Date (MM/YYYY)             | 14 | Battery Amp Hour Rate                         |
| 7 | Load Center Distance (mm)                | 15 | Maximum Capacity (Uniformly Distributed load) |
| 8 | B56.1 Standard Statement                 | 16 | Truck Manufacturer Information                |

|                                 |                                                                                                                                                                                        |  |                                                                |    |
|---------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|----------------------------------------------------------------|----|
| 1                               | ●MODEL                                                                                                                                                                                 |  | OPTION                                                         | 9  |
| 2                               | ●SERIAL NO.                                                                                                                                                                            |  | MAX. BATTERY CAPACITY                                          | 10 |
| 3                               | ●SYSTEM VOLTAGE                                                                                                                                                                        |  | BATTERY WEIGHT MIN/MAX LBS (KG)                                | 11 |
| 4                               | ●TRUCK WEIGHT +/- 5% WITH MAX. BATTERY, LBS (KG)                                                                                                                                       |  | BATTERY MANUFACTURER                                           | 12 |
| 5                               | ●TRUCK WEIGHT +/- 5% WITHOUT BATTERY, LBS (KG)                                                                                                                                         |  | BATTERY MODEL NUMBER                                           | 13 |
| 6                               | ●YEAR OF MANUF.                                                                                                                                                                        |  | BATTERY HOUR RATE                                              | 14 |
| 7                               | ●LOAD CENTER DISTANCE                                                                                                                                                                  |  |                                                                | 15 |
| 8                               | THIS FORKLIFT MEETS OR EXCEEDS DESIGN SPECIFICATIONS OF ANSI/ITSDF B56.1 IN EFFECT ON THE DATE OF MANUFACTURE FOR TYPE <b>E</b> INDUSTRIAL TRUCKS WHEN EQUIPPED WITH <b>E</b> BATTERY. |  | MAX. CAPACITY (UNIFORMLY DISTRIBUTED LOAD)<br>XXX LBS XXXX KGS | 16 |
| XXXXX<br>XXXXXXXXX<br>XXXXXXXXX |                                                                                                                                                                                        |  |                                                                |    |
|                                 |                                                                                                                                                                                        |  |                                                                |    |

### c. Description warning labels (only US- market)



**Fig. 18: Warning labels and safety devices (only USA)**

- |                                                  |                                                 |
|--------------------------------------------------|-------------------------------------------------|
| A Sticker to observe and follow this instruction | J No collision sticker                          |
| B Decal on motor cover                           | K Battery warning sticker                       |
| C Oil filling decal                              | L Charger ID plate                              |
| D Model sticker (ATOM)                           | M Warning sticker (operation steps)             |
| E "No passengers" decal                          | P Sign warning electrical device                |
| F Crane hook label                               | Q Sign warning stay clear stop truck            |
| G Identification plate (ID-plate)                | R Sticker to read and follow maintenance manual |
| H Capacity label                                 | T Warning sticker (hands pinching)              |
| I Battery ID plate                               | U Sticker (do not discard the label)            |

The truck is equipped with an emergency switch (5) which stops all lifting-, lowering-, driving- functions and engages the failsafe electromagnetic brake when it is pushed. The function is described in chapter 2c. Follow the instructions given on the decals. Replace the decals if they are damaged or missing.

Sign read and follow this instruction (A)



Sign oil filling decal (C)



Sign warning stay clear stop truck (Q)



Sign warning electrical devices (K)



Sign no collision (J)



Decal on motor cover (B)



Warning sticker (K)



d. Technical data for US market

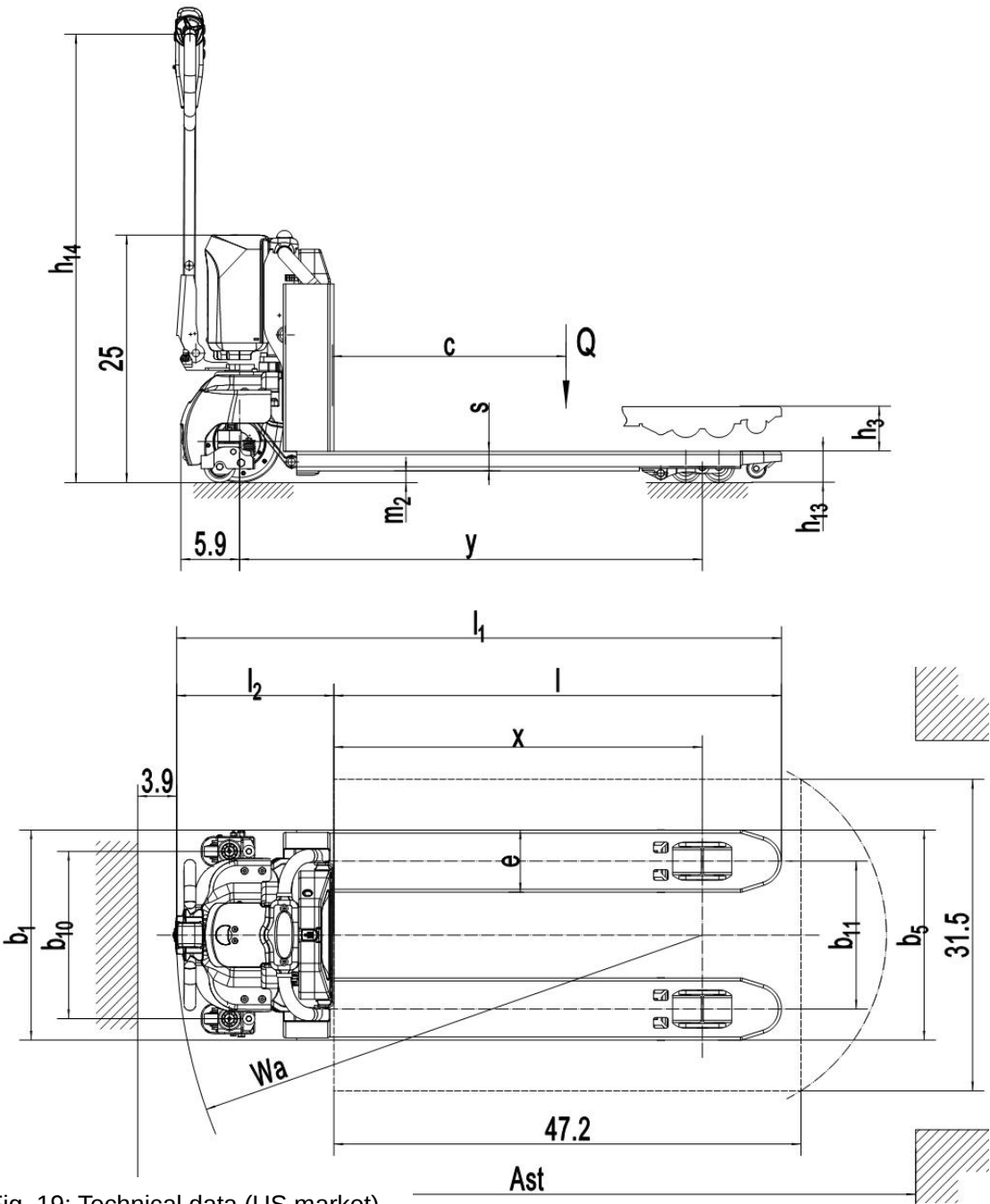


Fig. 19: Technical data (US market)

Table 14: Main technical data for standard version (US market)

|  |                                                  |
|--|--------------------------------------------------|
|  | Type sheet for industrial truck acc. to VDI 2198 |
|--|--------------------------------------------------|

|                     |      |                                                                      |                      |                   |          |            |          |
|---------------------|------|----------------------------------------------------------------------|----------------------|-------------------|----------|------------|----------|
| Distinguishing mark | 1.2  | Manufacturer's type designation                                      |                      | PTE28Q            |          | PTE40Q     |          |
|                     | 1.3  | Drive: electric (battery type, mains, ...), diesel, petrol, fuel gas |                      | Battery           |          |            |          |
|                     | 1.4  | Operator type: hand, pedestrian, standing, seated, order-picker      |                      | Pedestrian        |          |            |          |
|                     | 1.5  | Rated capacity/ rated load                                           | Q (t)                | 2800              |          | 4000       |          |
|                     | 1.6  | Load centre distance                                                 | c (mm)               | 23.6              |          |            |          |
|                     | 1.8  | Load distance, centre of drive axle to fork                          | x (mm)               | 37.3              |          |            |          |
|                     | 1.9  | Wheelbase                                                            | y (mm)               | 46.8              |          |            |          |
| Weight              | 2.1  | Service weight                                                       | kg                   | 253               | 264      | 290        | 301      |
|                     | 2.2  | Axle loading, laden front/ rear                                      | kg                   | 763/2290          | 767/2297 | 867/3423   | 871/3430 |
|                     | 2.3  | Axle loading, unladen front/ rear                                    | kg                   | 205/ 48           | 211/ 53  | 224/66     | 229/72   |
| Tyres, chassis      | 3.1  | Tires                                                                |                      | Polyurethane (PU) |          |            |          |
|                     | 3.2  | Tire size, front                                                     | Ø x w (mm)           | Ø 8.66×2.76       |          |            |          |
|                     | 3.3  | Tire size, rear                                                      | Ø x w (mm)           | Ø 3.15×3.66       |          |            |          |
|                     | 3.4  | Additional wheels (dimensions)                                       | Ø x w (mm)           | -/Ø 3.15×1.18     |          |            |          |
|                     | 3.5  | Wheels, number front/ rear(x=driven wheels)                          |                      | 1x/ 2 or 1x +2/ 2 |          |            |          |
|                     | 3.6  | Tread, front                                                         | b <sub>10</sub> (mm) | -/ 16.93          |          |            |          |
|                     | 3.7  | Tread, rear                                                          | b <sub>11</sub> (mm) | 14.96             | 20.67    | 14.96      | 20.67    |
| Dimensions          | 4.4  | Lift                                                                 | h <sub>3</sub> (mm)  | 4.53              |          |            |          |
|                     | 4.9  | Height drawbar in driving position min./ max.                        | h <sub>14</sub> (mm) | 29.33/ 45.67      |          |            |          |
|                     | 4.15 | Height, lowered                                                      | h <sub>13</sub> (mm) | 3.15              |          |            |          |
|                     | 4.19 | Overall length                                                       | l <sub>1</sub> (mm)  | 61.18             |          |            |          |
|                     | 4.20 | Length to face of forks                                              | l <sub>2</sub> (mm)  | 15.47             |          |            |          |
|                     | 4.21 | Overall width                                                        | b <sub>1</sub> (mm)  | 21                | 27       | 21         | 27       |
|                     | 4.22 | Fork dimensions DIN ISO 2331                                         | s/ e/ l (mm)         | 1.97/ 6.3/ 45.28  |          |            |          |
|                     | 4.25 | Fork spread                                                          | b <sub>5</sub> (mm)  | 21                | 27       | 21         | 27       |
|                     | 4.32 | Ground clearance, centre of wheelbase                                | m <sub>2</sub> (mm)  | 1.18              |          |            |          |
|                     | 4.34 | Aisle width predetermined load dimensions                            | A <sub>st</sub> (mm) | 79.25             |          |            |          |
|                     | 4.35 | Turning radius                                                       | W <sub>a</sub> (mm)  | 52.76             |          |            |          |
| Performance         | 5.1  | Travel speed, laden/ unladen                                         | km/h                 | 2.67/ 3.04        |          | 3.04/ 3.04 |          |
|                     | 5.2  | Lift speed, laden/ unladen                                           | m/s                  | 2.95/4.33         |          | 3.15/3.74  |          |
|                     | 5.3  | Lowering speed, laden/ unladen                                       | m/s                  | 9.8 / 5.07        |          | 10.19/4.51 |          |
|                     | 5.8  | Max. gradeability, laden/ unladen                                    | %                    | 6/ 16             |          | 7/ 16      |          |
|                     | 5.10 | Service brake                                                        |                      | Electromagnetic   |          |            |          |
| Electric- engine    | 6.1  | Drive motor rating S2 60min                                          | kW                   | 1.02              |          | 1.36       |          |
|                     | 6.2  | Lift motor rating at S3 10%                                          | kW                   | 0.68              |          | 1.1        |          |
|                     | 6.3  | Battery acc. to DIN 43531/35/36 A, B, C, no                          |                      | No                |          |            |          |
|                     | 6.4  | Battery voltage/ nominal capacity K <sub>5</sub>                     | (V)/(Ah)             | 24/ 20            |          | 48/ 20     |          |
|                     | 6.5  | Battery weight                                                       | kg                   | 14.3              |          | 19.8       |          |
|                     | 6.6  | Energy consumption acc. to DIN EN 16796                              | kWh/h                | 0.25              |          | 0.17       |          |
| Additional data     | 8.1  | Type of drive unit                                                   |                      | DC                |          |            |          |
|                     |      |                                                                      |                      |                   |          |            |          |

## 12. DECLARATION OF CONFORMITY (valid, if sold within EU)

### **[GB] CE Declaration of Conformity**

The signatory hereby declares that the specified machine conforms to the EU Directive 2006/42/EC (Machine Directive) and 2014/30/EU (Electro-Magnetic Compatibility, EMC) including their amendments as translated into national legislation of the member countries. The signatory is individually authorized to compile the technical documents.

### **[D] EG-KONFORMITÄTSEKTLÄRUNG**

Der Unterzeichner bescheinigt hiermit, dass die im Einzelnen bezeichnete Maschine den Europäischen Richtlinien 2006/42/EG (Maschinenrichtlinie) und 2014/30/EU (Elektromagnetische Verträglichkeit - EMV) 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 certifica por medio de la presente que la máquina especificada cumple con las Normas Europeas 2006/42/CE (Normativa para maquinarias) y 2014/30/EU (Compatibilidad electromagnética), incluyendo sus respectivas modificaciones, así como con el decreto-ley para la adaptación de las normas al derecho nacional. El signatario dispone de una autorización individual que le permite compilar la documentación técnica.

### **[F] DECLARATION DE CONFORMITE CE**

Par la présente déclaration, les soussignés certifient que le machines spécifié ci-dessus est conforme à la loi et aux directives européennes 2006/42/CE (directive sur les machines) et 2014/30/EU (compatibilité électromagnétique - CEM), y compris aux modifications qui y sont apportées et à l'arrêté autorisant sa transposition en droit national. Chaque signataire est habilité à établir individuellement la documentation technique.

### **[NL] EG-CONFORMITEITSVERKLARING**

Ondergetekenden verklaren hierbij dat - volgens de nationale wetgeving van de Lidstaten - de hierboven vermelde opgegeven machina beantwoordt aan de bepalingen qua veiligheid bij machines (EG richtlijn 2006/42/EC) en electro-magnetische compatibiliteit (EG richtlijn 2014/30/EU).

Ondergetekenden zijn ieder individueel gemachtigd het technisch dossier samen te stellen.

### **[P] DECLARAÇÃO DE CONFORMIDADE CE**

Pela presente, os signatários certificam que o máquina especificado está conforme às Directivas Europeias 2006/42/CE („Máquinas“) e 2014/30/EU („Inocuidade Electromagnética - IEM“), incluindo as alterações das mesmas e o respectivo decreto-lei para a transposição em lei nacional. Cada um dos signatários está autorizado a proceder à elaboração da documentação técnica.

### **[I] DICHIARAZIONE DI CONFORMITÀ CE**

Il sottoscrittodichiara che il veicolo per trasporto internamachinaspecificatosoddisfa le DirettiveEuropee 2006/42/EC (DirettivaMacchine) e 2014/30/EU (Compatibilità elettromagnetica - EMV) comprese le relative modifiche, come pure il rispettivodecretolegislativo per la conversionedelledirettive in diritto nazionale. Il sottoscrittisono singolarmente autorizzati allacreazione delladocumentazione tecnica.

### **[BG] ЕВРОПЕЙСКА ОБЩНОСТ - ДЕКЛАРАЦИЯ ЗА СЪОТВЕТСТВИЕ**

Подписаните удостоверяват с настоящето, че подробноописанотомашина средствоотговаря на европейския норматив 2006/42/EG (норматив за машини) и на2014/30/EU (електро-магнетична съвместимост), включително с техните промени, както и на съответния указ за прилагане на нормативите в националното право. Подписаните при това са упълномощени поотделно да съставят техническата документация.

### **[CZ] EG - PROHLÁŠENÍ OSHODĚ**

Níže podepsaný tím potvrdzuje, že podrobný popis uvedeně stroje odpovídá Evropským směrnicím 2006/42/EC (směrnice pro stroje) a 2014/30/EU (elektromagnetická interference - EMV) včetně jejich pozdějších úprav, jakož i příslušným právním výnosům pro uplatnění příslušné směrnice v rámci národního práva. Každý z podepsaných jsou jednotlivě zplnomocněni k vytvoření technických podkladů.

### **[DK] EF-OVERENSSTEMMELSESEKTLÆRING**

Undertegnede attesterer hermed, at det specificerede maskine stemmer overens med de Europæiske Direktiver 2006/42/EU (maskindirektiv) og 2014/30/EU (elektromagnetisk kompatibilitet - EMC) samt med den modsvarende lovgivning til implementering af direktiver i den nationale lovgivning. De undertegnede er hver for sig beføjede til at sammenstille de tekniske dokumenter.

### **[EST] EL vastavusavaldus**

Allakirjutanud tõendavad käesolevaga, et üksikasjaliselt kirjeldatud täpsustatud masin vastab Euroopa direktiividele 2006/42/EÜ (Direktiiv masinate kohta) ja 2014/30/EU (Elektromagnetiline sobivus - EMS) kaasa arvatud nende muudatused ja nende vastavatele õigusmäärustele direktiivide muutmiseks siseriiklikuks õiguseks. Iga allakirjutanu üksikult on volitatud koostama tehnilist dokumentatsiooni.

### **[FIN] EU-YHDENMUKAISUUSSELÖSTUS**

Allekirjoittaneet todistavat täten, että kukin erikseen mainittu omalla voimalla lahteella varustettutehdaskone vastaa EU-direktiivien 2006/42/EC (koneen rakennusdirektiivi) ja 2014/30/EU (sähkömagneettinen yhteensopivuus – EMC) määräyksiä sekä niiden muutoksia ja niiden kansalliseen lainsäädäntöön soveltamista koskevaa oikeussäätöä. Jokaisella allekirjoittaneista on oikeus itsenäisesti laatia asiaankuuluvia teknisiä asiakirjoja.

### **[GR] ΔΗΛΩΣΗ ΣΥΜΜΟΡΦΩΣΗΣ ΕΚ**

Οι υπογράφωντες βεβαιώνουν ότι η παρούσα δήλωση που συγκεριμένη μηχανήμα συμμορφώνεται προς την Κοινοτική Οδηγία 2006/42/ΕΚ («Μηχανήματα») και 2014/30/ΕΥ (Ηλεκτρομαγνητική Συμβατότητα, ΗΜΣ), καθώς και οι τροποποιήσεις τους, όπως μεταφράστηκαν στην εθνική νομοθεσία των χωρών μελών. Οι υπογράφωντες είναι σε κάθε περίπτωση εξουσιοδοτημένοι να τοποκάνουν τα τεχνικά έγγραφα.

### **[H] EU KONFORMITÁSI NYILATKOZAT**

Alulírottak ezenel igazolják, hogy a részletesen leírt a megadott gép megfelel a 2006/42/EC (Gép-Írányelv) és a 2014/30/EU (Elektromágneses összeférhetőség - EMV) Európai Írányelveknek, 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 atitikimø deklaracija**

Žemiau pasirašę asmenys patvirtina, kad atskirai aprašytas nurodyta mašina atitinka Europos Sąjungos direktyvas 2006/42/EB (Mašinų direktyva) ir 2014/30/EU (Elektromagnetinis suderinamumas – EMS) įskaitant jų pakeitimus, o taip pat ir atitinkamą teisės aktą dėl direktyvų įgyvendinimo nacionalinėje teisėje. Kiekvienas iš pasirašiusių asmenų turi teisę ruošti techninę dokumentaciją.

### **[LV] ES atbilstības deklarācija**

Ar zemāk redzamajiem parakstiem tiek apliecināts, kanorādīts mašina atbilst Eiropas Savienības normatīvām 2006/42/EG (Mašīnu normatīvas) un 2014/30/EU (Elektromagnētiskā atbilstība – EMV), ieskaitot to izmaiņas, kā arī atbilstošos tiesiskos rīkojumus normatīvu pielāgošanai nacionālajai likumdošanai. Parakstu īpašnieki ir atsevišķi pilnvaroti sastādīt tehniskās dokumentācijas.

#### **[N] EU-KONFORMITETSERKLÆRING**

Undertegnede bekrefter hermed at de enkelte betegnede maskin med kraftdrift tilsvarer de europeiske retningslinjene 2006/42/EC (maskinretningslinje) og 2014/30/EU (elektromagnetisk fordraglighet - EMV) inklusiv disses endringer og den tilsvarende rettsforordning til omsetning av nasjonal rett. Hver undertegnede er fullmektig til å sette sammen de tekniske dokumentene.

#### **[PL] DEKLARACJA ZGODNOŚCI WE**

Niżej podpisani deklarują, że poniżej opisana maszyna spełnia wymagania określone w dyrektywach Europejskich 2006/42/EC (Dyrektywa Maszynowa) i 2014/30/EU (Kompatybilności elektromagnetycznej - EMC) wraz z ich późniejszymi zmianami oraz odpowiednimi rozporządzeniami mającymi na celu przeniesienie tych dyrektyw do prawa krajów członkowskich. Sygnatariusz jest indywidualnie upoważniony do zestawiania dokumentacji technicznej.

#### **[RO] DECLARAȚIE DE CONFORMITATE CE**

Subsemnatii adeveresc prin prezenta că vehiculul despecificat mașină descrie individual corespunde directivelor europene 2006/42/CE (Directivă privind mașinile) și 2014/30/EU (Compatibilitate electromagnetică - CEM) inclusiv modificărilor lor precum și actului legislativ corespunzător pentru transpunerea directivelor în drept național. Subsemnatii sunt fiecare în parte împuterniciți să întocmească documentația tehnică.

#### **[RUS] Декларация соответствия стандартам ЕС**

Настоящим лица, подписавшие документ, удостоверяют, что машина с указанной спецификацией соответствует европейским стандартам 2006/42/EG (Транспортная директива) и 2014/30/EU (Электромагнитная совместимость - EMC), включая изменения в них, а также соответствующим национальным стандартам и нормам. Каждое по отдельности лицо, подписавшее документ, имеет полномочия для составления технической документации.

#### **[S] EG-KONFORMITETSFÖRKLARING**

Underteckarna intygar härmed att det i detalj betecknade maskin uppfyller de Europeiska direktiven 2006/42/EG (Maskindirektiv) och 2014/30/EU (Elektromagnetisk tålighet - EMV), inklusive ändringarna i detta och den motsvarande rättsförordningen för att omsätta direktiven i nationell rätt. Underteckarna har var för sig fullmakt att sammanställa den tekniska dokumentationen.

#### **[SK] vyhlásenie o zhode**

Dolu podpísaní týmto potvrdzujeme, že podrobný popis uvedeného stroje zodpovedá Európskym smerniciam 2006/42/EC (ernica pre stroje) a 2014/30/EU (elektromagnetická tolerancia – EMV) vrátane jeho neskorších úprav, rovnako zodpovedá aj príslušným právnym nariadeniam na uplatnenie smerníc v rámci národného práva. Každý z podpísaných je jednotlivo splnomocnený na vytvorenie technických podkladov.

#### **[SLO] EU IZJAVA O SKLADNOSTI**

Podpisani s tem potrjujemo, da posamično označeno določeno stroj vozilo odgovarja Evropski direktivi 2006/42/EC (Direktiva o strojih) in 2014/30/EU (Elektromagnetna skladnost - EMV) vključno z njihovimi spremembami ter ustrezno pravno uredbo o prevzemu smernic v nacionalno pravo. Podpisniki so vsakokrat posamezno pooblašteni za izdajanje tehnične dokumentacije.

#### **[TR] AB Uygunluk Açıklaması**

İmza sahibi şahıslar, ayrıntıları belirtilen makine aracının, 2006/42/EC (Makine Yönergesi) ve 2014/30/EU (Elektromanyetik Uyumluluk – EMC) no'lu Avrupa Yönergelerine ve bunların değişiklik sonucu oluşan metinlerine ve yönergelerin milli hukuk hükümlerine dönüştürülmesine dair ilgili hukuk karamamesine uygun olduğunu tasdik ederler. İmza sahibi şahıslar teknik dosyaları bir araya getirmek için münferiden vekil tayin edildi.

- (1) Type/ Typ/ Tipo/ Modello/ Түппі/ Tipo / Τύπος/ Τίπος/ Тип/ Тип/ Tips/ Tipas/ Tüüp:
- (2) Serial No./ Serien-Nr./ N°. de série/ Seriennummer/ N° de serie/ Numero di serie/ Serienr./ Sarjanro/ αριθμός/ 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 / έτος κατασκευής/ Rok výroby/ Gyártási év/ Rok produkcji / Letnik / Год изготовления / Üretim yılı / Väljålskeasta / Izgatavošanas gads / Gamybos metai
- (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 dennes Fællesskabet eller dets befuldmægtigede/ Producent eller agent innen felleskapet/ Tillverkare eller representant inom EU/ Valmistaja tai yhteisömaassaoiva edustaja / V'robcenebojehozastoupeni/ Gyártó / producent albo jego przedstawiciel w EG (Wspólnota Europejska)/ Κατασκευαστής ή οκνηονηπηθώλ αληηπξζώπσλ/ Üretici ya da Bölgedeki Yetkili Temsilci/ Proizvajalec ali pooblaščenizastopnik s sedežem v EU/ Výrobca alebo zástupca so stálym bydliskom v EÚ / Изготовитель или его представитель, зарегистрированный в стране Содружества/ Tootjavõõorganisatsioonipaiknevesindaja/ Ražotājs vai ietējaisuzņēmumapārstāvis / Gamintojas arba šalyje reziduojantis atstovas:
- (5) Date/ Datum/ Data/ Fecha/ datum/ Dato/ päiväys/ Kuupäev/ Datums/ дата/ Datum/ dátum/ tarih/ ημερομηνία
- (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. / Попоручению / megbízásból / длъжностно лице / z pověřením / z poverenia / po nalogu / napolecenie / din sarcina / adına / θανή ελην

