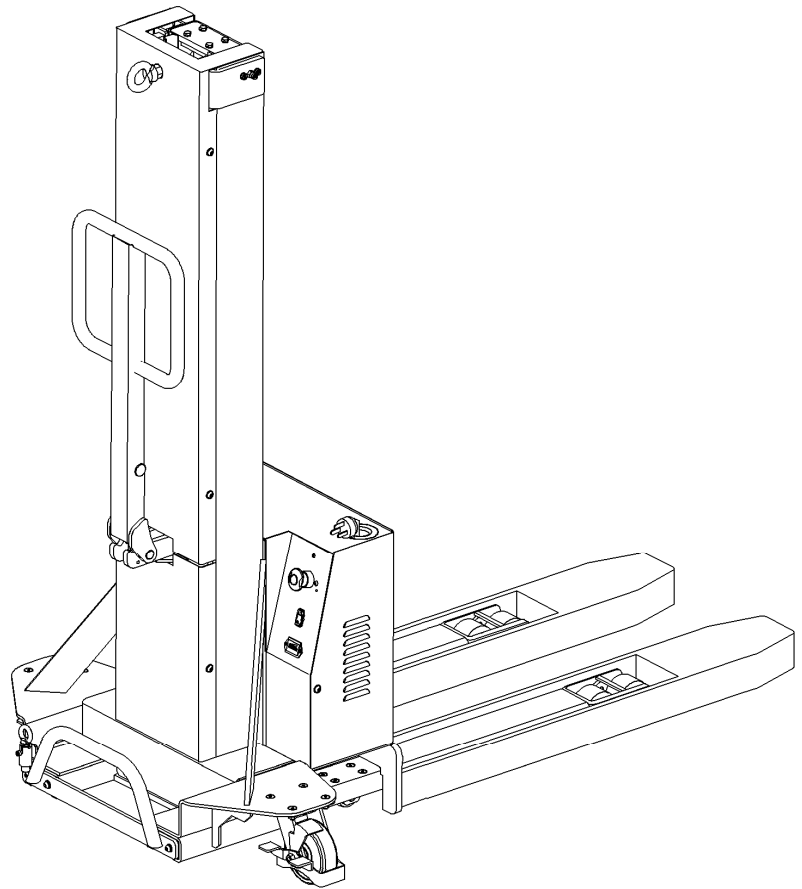


INSTRUCTION HANDBOOK

Self Lift Stacker



WARNING

Do not use the electric 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 01/2015

PS05F -SMS-001-EN

FOREWORD

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

This handbook describes the usage of self lift stackers. When operating and servicing the truck, make sure, that it applies to your type.



Chapter 11 describes specialized stipulations and regulations for the American market. Follow these instructions and stipulations if you operate the truck within the American market!

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

This truck complies with the requirements according to EN 3691-1 (Industrial trucks- safety requirements and verification, part 1), EN 12895 (Industrial trucks- electromagnetic compatibility), EN 12053 (Safety of industrial trucks- test methods for measuring noise emissions), EN 1175 (Industrial truck safety – electrical requirements), assumed the truck is used according to the described purpose.

The noise level for this machine is 70 dB(A) according to EN 12053.

The vibration is 0.85 m/s² (if equipped with a platform) according to EN 13059.

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 handbook is only for the purpose of operating /servicing the self lift stacker, therefore please have understanding, that there is no guarantee out of particular features out of this handbook.



NOTE: On this manual, the left sign means warning and danger, which can 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.

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1. CORRECT APPLICATION

It is only allowed to use this self lift stacker according to this instruction handbook.

The trucks described in this handbook are self propelled pedestrian self lift stacker, with electrically powered low height lifting function. The trucks are designed for lifting, lowering and transporting the palletized load.

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 truck is used only by staff, which is trained and authorized to use this truck.

The 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 intensive operations without crossing permanent obstacles or potholes. Operating on ramps is not allowed. While operating, the load must be placed approximately on the longitudinal centre plane of the stacker.

Lifting or transporting people is forbidden.

It is not allowed to use this truck on lifting tail-board or loading ramps.

The capacity is marked on the load curve 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 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 load curve, decals, tags and operation and maintenance handbooks.

By not observing these instructions, the warranty becomes void.

2. DESCRIPTION OF THE STACKER

a. Overview of the main components

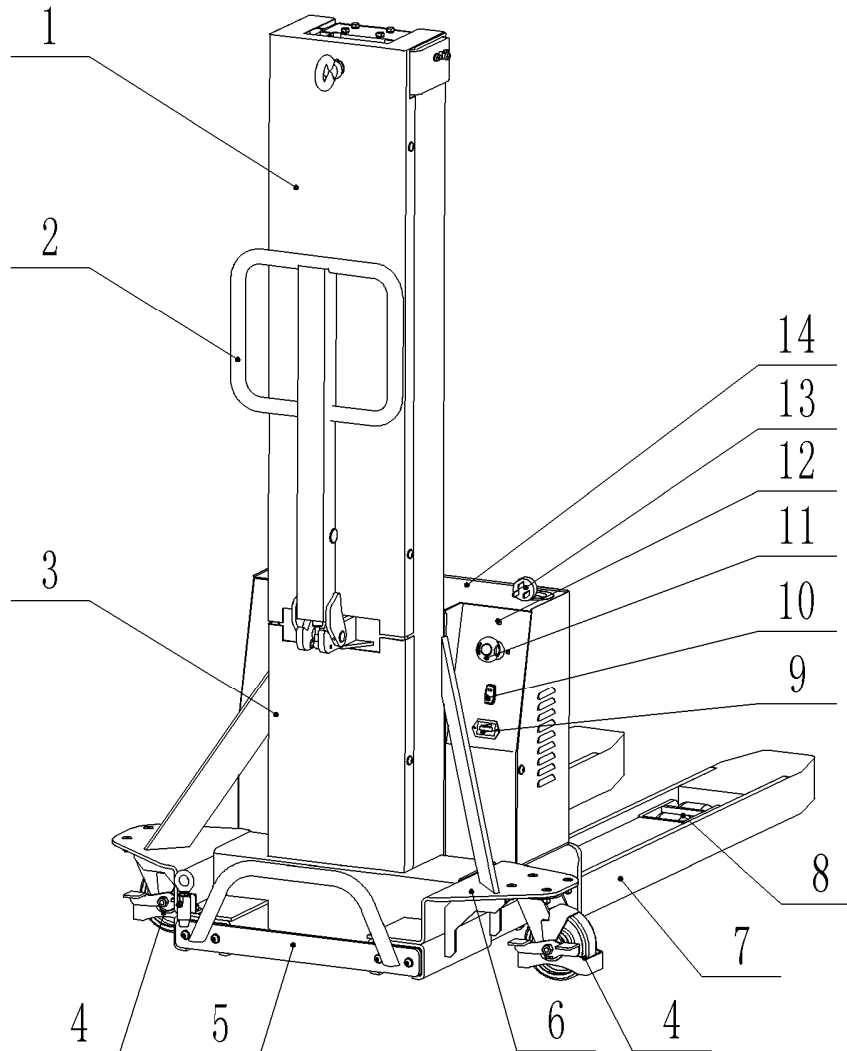


Fig. 1: Overview main components

- | | |
|---------------------|-----------------------------|
| 1. Mast cover 1 | 8. Load wheels |
| 2. Tiller assembly | 9. Discharge indicator |
| 3. Mast cover 2 | 10. Rocker switch |
| 4. Steering wheels | 11. Emergency button |
| 5. Chassis assembly | 12. Charging indicating LED |
| 6. Mast assembly | 13. Charger plug |
| 7. Pallet assembly | 14. Main cover |

b. Main technical data

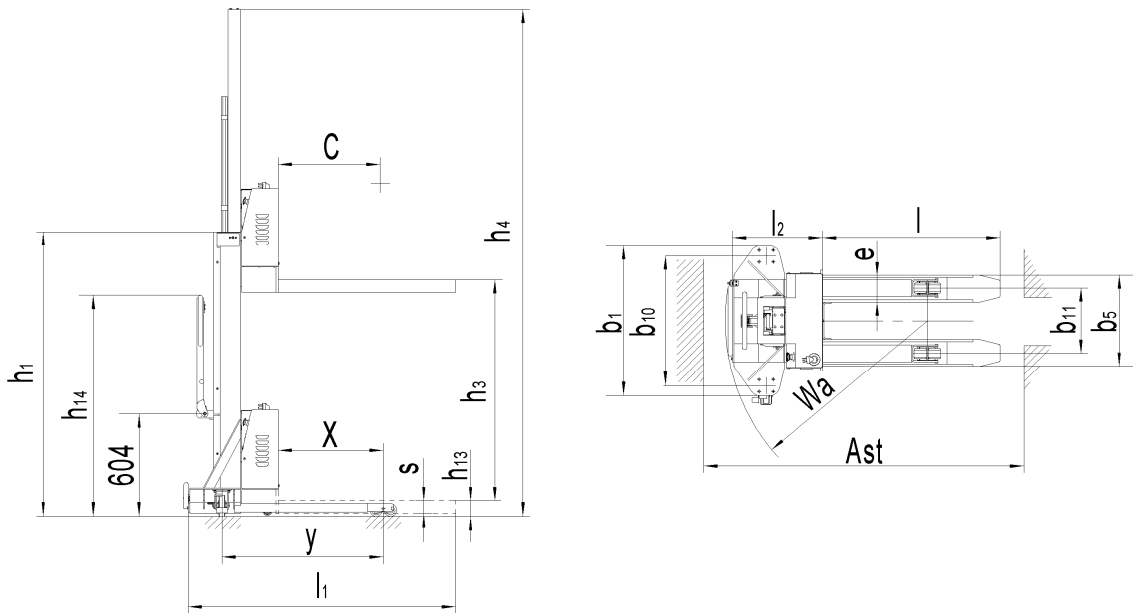


Fig. 2: Technical data

Table1: Main technical data for standard version

Type sheet for industrial truck acc. to VDI 2198					
Distinguishing mark	1.2	Manufacturer's type designation		PS05F-1300	PS05F-800
	1.3	Power (battery,diesel, petrol, gas, manual)		Manual	
	1.4	Operator type		Pedestrian	
	1.5	Load Capacity / rated load	Q(t)	0.5	
	1.6	Load centre distance	C(mm)	500	
	1.8	Load distance ,centre of drive axle to fork	X(mm)	618	
	1.9	Wheelbase	Y(mm)	951	
Weight	2.1	Service weight	kg	303	277
	2.2	Axle loading, laden front/rear	kg	237/566	225/552
	2.3	Axle loading, unladen front/rear	kg	175/128	163/114
Tires, chassis	3.1	Tires		Nylon/ Polyurethane (PU)	
	3.2	Tire size, front	Ø x w (mm)	Ø128 × 40	
	3.3	Tire size, rear	Ø x w (mm)	Ø74 × 60	
	3.5	Wheels, number front/rear(x=driven wheels)		2/4	
	3.6	Track, front	b ₁₀ (mm)	768	
	3.7	Track, rear	b ₁₁ (mm)	386	
Dimensions	4.2	Lowered mast height	h ₁ (mm)	1681	1181
	4.4	Lift height	h ₃ (mm)	1300	800
	4.5	Extended mast height	h ₄ (mm)	3000	1990
	4.9	Height of tiller in drive position min./ max.	h ₁₄ mm	950/1300	
	4.15	Height, lowered	h ₁₃ mm	80	

	4.19	Overall length	l_1 (mm)	1608
	4.20	Length to face of forks	l_2 (mm)	558
	4.21	Overall width	b_1 (mm)	888
	4.22	Fork dimensions	$s/ e/ l$ (mm)	75/160/1050
	4.25	Distance between fork-arms	b_5 (mm)	540
	4.33	Aisle width for pallets 1000X1200 crossways	A_{st} (mm)	2481
	4.34	Aisle width for pallets 800X1200 lengthways	A_{st} (mm)	2181
	4.35	Turning radius	W_a (mm)	1200
T O R m a n u a l	5.2	Lift speed, laden/ unladen	m/s	0.047/0.060
	5.3	Lowering speed, laden/ unladen	m/s	0.144/0.103
E l e c t r i c - e n g i n e	6.2	Lift motor rating at S3 4.5%	kW	0.8
	6.3	Battery acc. to DIN 43531/35/36 A, B, C, no		Maintenance free
	6.4	Battery voltage, nominal capacity K5	V/Ah	12/42
	6.5	Battery weight	kg	14

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



For the USA –market, the description of the safety and warning labels is mentioned in chapter 11.

- A Warning decal: Do not step under or on the forks
- B Residual lift capacity sticker
- C Filling sticker
- D Sticker to read and follow these instructions
- E CE label
- J Warning label

The truck has an emergency button (11) which can stop all lifting-, lowering-functions. By pulling this button, the truck can be operated after the controller checked the functions. Before operating, insert the key and turn the switch (11) clockwise. To prevent against unauthorized access, turn the key anti-clockwise and remove it, if you not operate this truck. Replace the decals if they are damaged or missing.

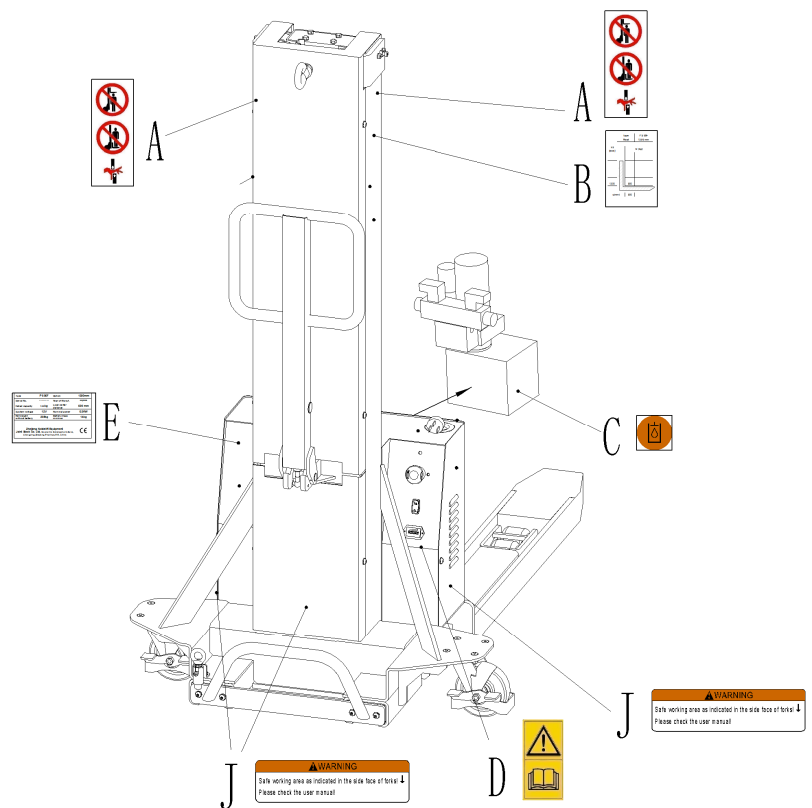


Fig.3: Safety and warning labels

d. Identification plate

- | | | | |
|---|--|----|-----------------------------------|
| 1 | Designation, type | 6 | Name and address of manufacturer) |
| 2 | Serial number | 7 | Battery weight minimum/ maximum |
| 3 | Rated capacity in kg | 8 | Nominal power in kW |
| 4 | Supply voltage in V | 9 | Load center distance |
| 5 | Own mass (self weight) in kg without battery | 10 | Manufacturing data |
| | | 11 | Option |

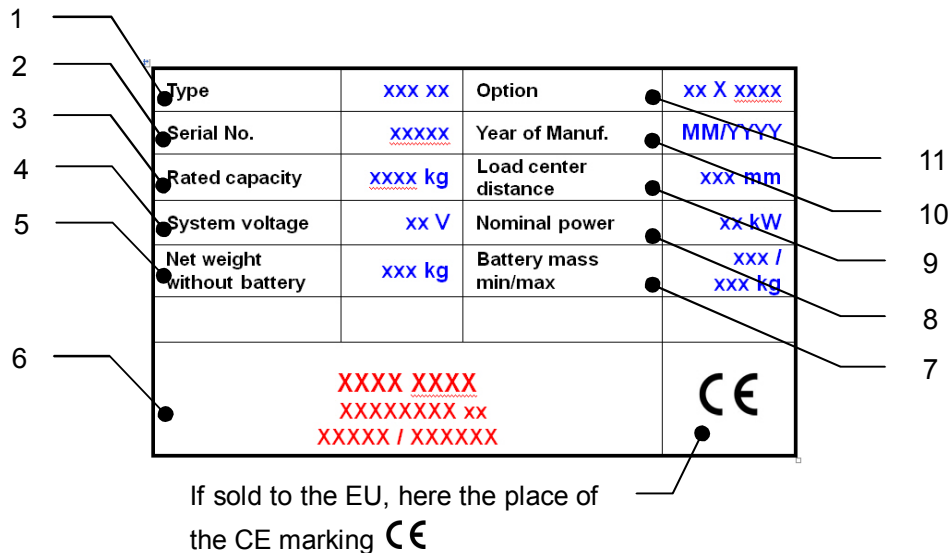


Fig. 4: CE label

3. WARNINGS, RESIDUAL RISK AND SAFETY INSTRUCTIONS



DO NOT

- Drive outside the stacking operation with a lifted load higher than the lifting point.
- 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.
- Use this truck on ramps.
- Side or end load. Load must be distributed evenly on the forks.
- Use the truck with unstable, unbalanced not stable load.
- Use truck without manufacturer's written consent.
- Provide a AC voltage for the charger except 220V.
- 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 button (11) by pushing when sliding load on or off the truck. If the self lift stacker has any malfunctions, follow chapter 9.

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 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.
- It is not allowed to use the truck on ramps.
- To prevent unintended sudden movements when not operating the truck (i.e. from another person, etc.), switch off the truck and pull out the emergency button(11).

4. COMMISSIONING, TRANSPORTING, DECOMMISSIONING

a. Commissioning

Table 2: Commissioning data

Type	PS 05F
Commissioning weight [kg]	303
Version/ Lift [mm]	1300

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

- Check if are all parts included and not damaged
- Eventually installation and charging the batteries (follow chapter 7)
- Do the work according to the daily inspections as well as functional checks.

b. Transportation

For transporting, remove the load, the self up stacker can travel into the container without load (follow chapter 6). When the height of transport equipment is higher than the Max. lifting height, use dedicated lifting equipment to lift the truck. When the truck enter the container, please fix the truck follow Fig. 5.

For transporting, remove the load, lower the forks to the lowest position and fix the truck safe with dedicated lifting gear according to the following figures.

Lifting



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

Park the truck securely and lash the truck according to the points identified in fig. 5
Lift the truck to its destination and place the truck securely before removing the lifting gear.

Transportation



DURING TRANSPORTATION ON A LORRY OR TRUCK ALWAYS FASTEN THE TRUCK SECURELY

Lower the forks and park the truck securely with the parking brake.
Fasten the truck according to fig.6 by fixing dedicated lashing belts to the settled point of the truck and fasten the other side at the transporting truck before removing.

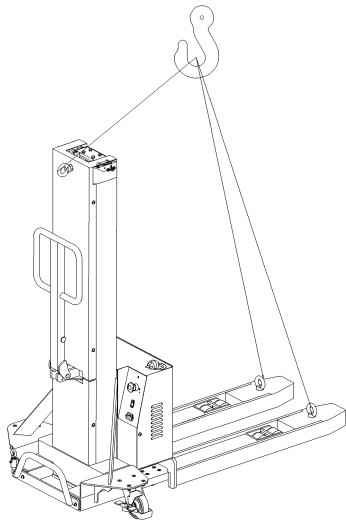


Fig. 5: Lifting

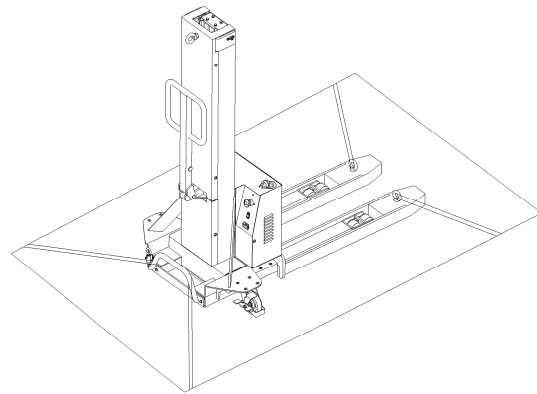


Fig. 6: Transportation

c. Decommissioning

For storage, remove the load, lower the truck to the lowest position, grease all in this handbook mentioned greasing points (regular inspection), eventual 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 vertical creep of the truck.
- Check the chain and rollers for damages or corrosion.
- Check the smooth movement of the wheels.
- Check the function of the emergency brake by activating the emergency button.
- 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 hoses or broken electric wires.
- If supplied with a backrest extension, check it for damages and correct assembling.

6. OPERATING INSTRUCTIONS



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

BEFORE OPERATING THIS TRUCK, ENSURE THAT THE LOAD OR OTHER EQUIPMENT NOT CAUSES INSUFFICIENT VISIBILITY!

Make sure, that the load is palletized and stable and that the daily inspection is carried out. The emergency button (11) should be pulled firstly.

a. Parking



DO NOT PARK THE TRUCK ON INCLINED SURFACES

Always lower the forks fully and drive the truck to a safe area. Turn the key anti- clockwise to the “Off” – position and pull the emergency button (11).

b. Residual lift diagram

The residual lift diagram 6 indicates the maximum capacity Q [kg] for a given load centre c [mm] and the corresponding lift height H [mm] for the truck with horizontal load.

The white markings on the mast indicate if the specific lifting limits reached.

For instance with a load centre of gravity distance c of 500 mm and a maximum lift height H of 1300 mm, the max. capacity Q is 500 kg.

c. Loading



DO NOT OVERLOAD THE TRUCK! THE MAXIMUM CAPACITY IS 500 kg.

LIFT ONLY CAPACITIES ACCORDING TO THE RESIDUAL LIFT DIAGRAM.

Lifting or lowering loads by the lifting/lowering button(10) on indicator or handle (as Fig. 8).

Type	PS 05F
Mast	1300 mm

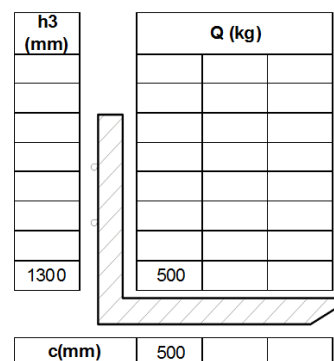


Fig. 7: Residual lift diagram

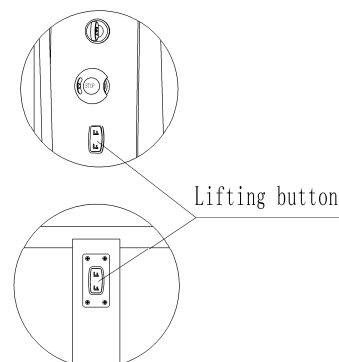
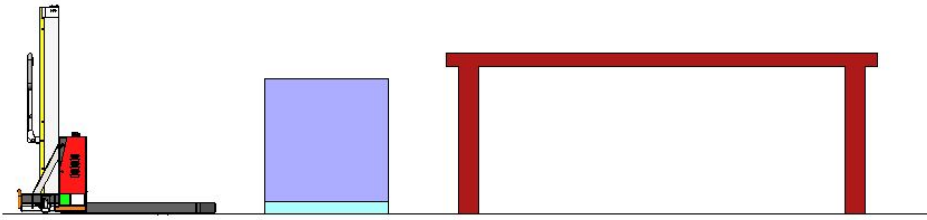


Fig. 8: Lifting/lowering button

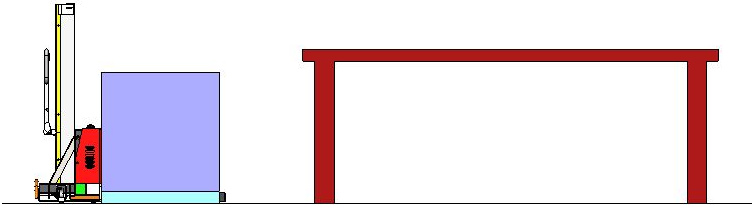
Operating steps:

The steps of loading self lift as follow:

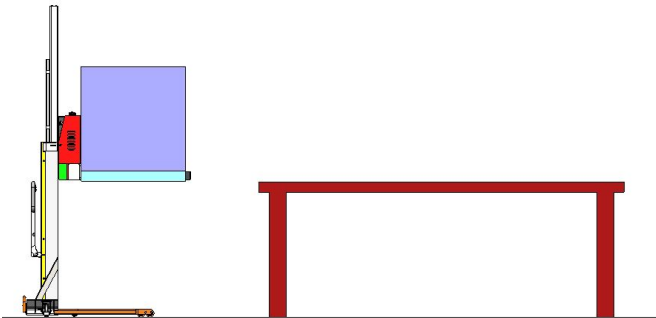
The first step: prepare to load



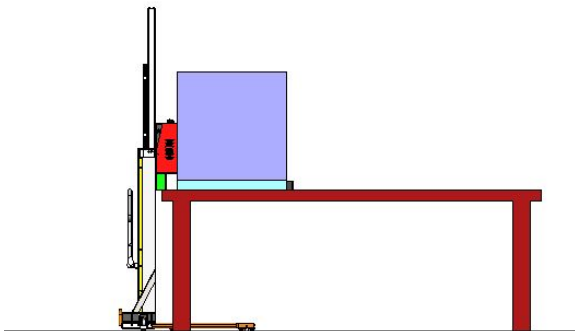
The second step: pick up goods (make the loads close to the truck as possible)



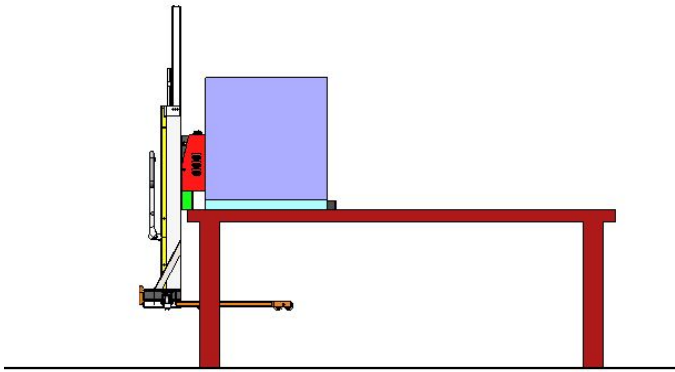
The third step: lift goods (the bottom of forks should exceed the platform)



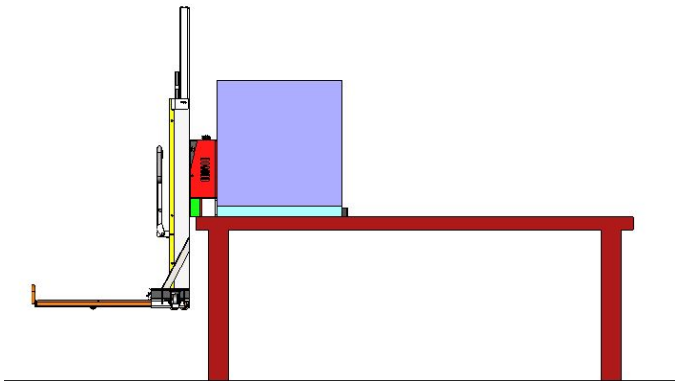
The fourth step: adjust the distance(edge of the platform should on the green area under the pallet), then lay down the forks to the platform



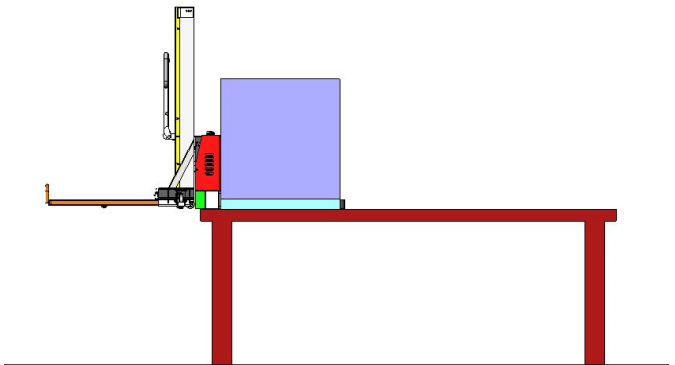
The fifth step: go on lowering the forks slightly (relatively, the truck body goes up and hang in the air)



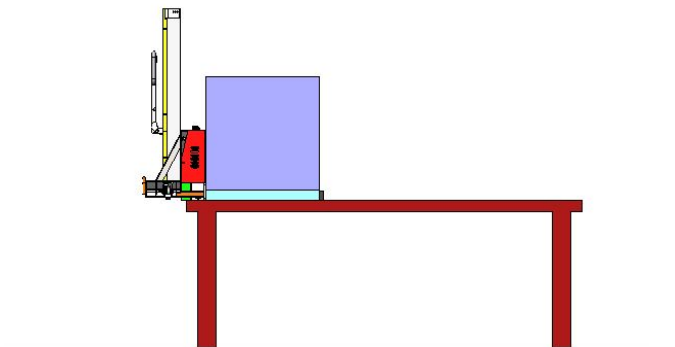
The sixth step: pull out the latch, and draw the legs to the bottom



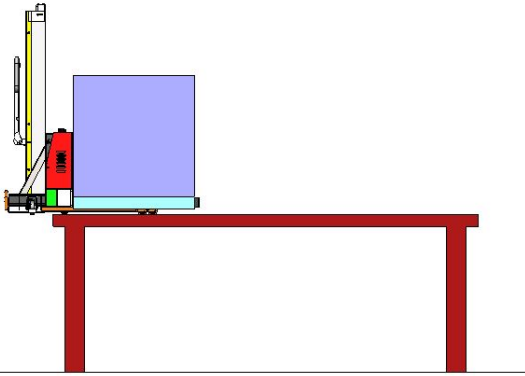
The seventh step: go on pushing the lowering button to lift truck body



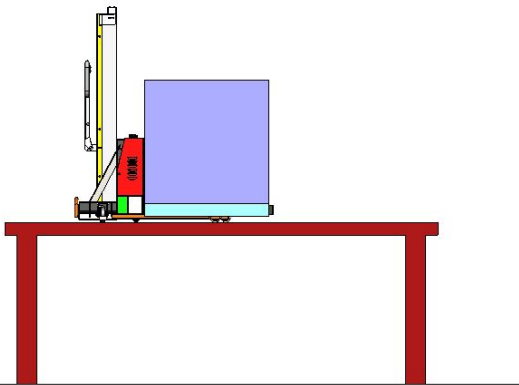
The eighth step: insert the legs back, and lay down the location pin



The ninth step: press the lifting button, lifting forks slightly and make the middle transition wheel touch the platform



The tenth step: when the truck body is pushed in the goal platform, loading finished



Unloading is in the reverse order of loading.

When traveling with load, please keep the height of forks under 300mm.

NOTE:

1. This self up stacker, in step 4, must keep the edge of platform in green area (safe operation area) under the pallet frame. The red is the limitation area, as shown in fig.9. It's not allowed to operate truck on other areas except the green and red areas.

2. Before lifting/lowering the stacker to a different base height, the delivered safety belt must be used.

Thread the belt through the lifting bolt at the top of the mast and fix the two ends of the belt to dedicated lashing points on the higher level. Adjust the belt length and tighten the belt. Pay attention that the belt is not disturbing the normal operating zone when the truck is lifted/lowered to the different platform height.

After reaching the higher level, before removing the belt, move the truck completely onto the platform, park the truck securely with the parking brake and then remove the belt.

When reaching the lower level, park the truck securely by the parking brake and then remove the belt.

Pay attention that for transportation, the truck needs to be fixed securely.

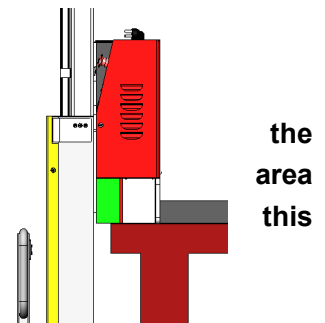


Fig. 9: Platform position

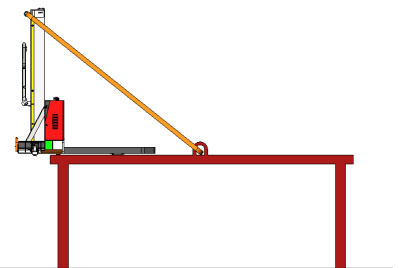


Fig.10: Safety belt

d. Travelling /Steering

DO NOT TRAVEL ON GROUND WITH GRADIENT.

All the traveling-, steering-operation are achieved by the operator manual manipulating the handle(2).

e. Malfunctions

If there are any malfunctions or the truck is inoperative, please stop using the truck and activate the emergency button (11) by pushing it. If possible, park the truck on a safe area, pull out the emergency button (11). Inform immediately the manager and, or call your service. If necessary, tow the truck out of the operating area by using dedicated towing/ lifting equipment.

f. Emergency

In emergencies or in the event of tip over (or off dock), keep safe distance immediately. If possible, push the emergency button (11). All electrical functions will be stopped.

7. BATTERY CHARGING AND REPLACEMENT



- Only qualified personnel are allowed to service or charge the batteries. The instructions of this handbook and from the battery- manufacturer must be observed.
- The batteries are lead-acid batteries.
- Recycling of batteries undergoes national regulations. Please follow these regulations.
- By handling batteries, open fire is prohibited, gases could cause explosion!
- 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 there are no disturbing towards other components of the truck.

Depending on the version, the truck is equipped with following liquid acid traction battery- type:

1 pc 6-EVF-42 12V/42Ah (C5); lead-acid battery



IT IS ONLY ALLOWED TO USE LIQUID ACID TRACTION BATTERIES.

THE WEIGHT OF THE BATTERIES HAS AN INFLUENCE TO THE TRUCKS OPERATING BEHAVIOR.

PLEASE CONSIDER THE MAXIMUM OPERATING TEMPERATURE OF THE BATTERIES.

a. Replacement

As fig. 9 shown, park the truck securely and activate the emergency button (11). Open the main cover (14). Twist the wiring screw of battery, and fixing screws on the battery baffle, battery snap-gauge, remove the wires,

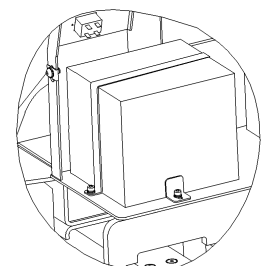


Fig.11: Charger replacement

battery baffle and snap-gauge, take the battery out.

The installation is in the reverse order of the removal. Please connect the positive terminals firstly. Otherwise the tuck could be damaged.

b. Battery Indicator

The discharge status is indicated by ten red LED segments.

Only when the battery is fully charged, the most right LED lit. As the battery's state-of-charge decreases, successive LEDs light up, only one on at a time.

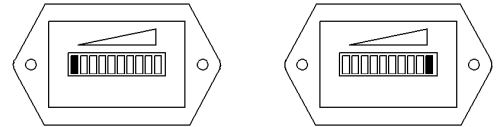


Fig.12: Indicator

c. Charging



- Before charging ensure that you are using a dedicated built-in charger for charging the installed battery!
- 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 charging indicator light turn into green means the battery is fully charged .

Park the truck at a secured area with a deidcated power supply. Lower the forks and remove the load. Switch the truck off and connect the charging plug(13) to the outlet plug. The charger starts charging the battery. Disconnect the charging plug from the outlet plug after the charging finished, place it to the original position.

8. REGULAR MAINTENANCE



- Only qualified and trained personnel are allowed to do maintenance on this truck.
- Before maintaining, remove the load and lower the forks to the lowest position.
- 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 change the wheels, please follow the instructions above. The castors must be round and they should have no abnormal abrasion.

Check the items emphasized maintenance checklist.

a. Maintenance checklist

Table 3: Maintenance checklist		Interval (Month)			
		1	3	6	12
Hydraulic					
1	Check the hydraulic cylinder, piston for damage noise and leakage		•		
2	Check the hydraulic joints and hose for damage and leakage		•		
3	Inspect the hydraulic oil level, refill if necessary		•		
4	Refill the hydraulic oil (12 month or 1500 working hours)				•
5	Check and adjust the pressure valve. (1000 kg +0/ +10%)				•
Mechanical system					
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 mast and chain for corrosion, deformation or damages, replace if necessary	•			
10	Check the gearbox for noise and leakage		•		
11	Check the wheels for deformation and damages, replace if necessary		•		
12	Lubricate the steering bearing				•
13	Inspect and lubricate the pivot points		•		
14	Lubricate the grease nipples	•			
15	Replace the guarding and/or protective screen if it is damaged	•			
Electric system					
16	Inspect the electric wiring for damage		•		
17	Check the electric connections and terminals		•		
18	Test the Emergency switch function		•		
19	Check the electric drive motor for noise and damages		•		
20	Test the display		•		
21	Check if correct fuses are used, if necessary replace.		•		
22	Check the contactors		•		
23	Check the frame leakage (insulation test)		•		
Battery					
24	Check the battery voltage		•		
25	Clean and grease the terminals and check for corrosion and damage		•		
26	Check the battery housing for damages		•		
Charger					
27	Check the main power cable for damages				•
28	Check the start-up protection during charging				•
Function					
29	Test the emergency braking	•			
30	Check the steering function	•			
31	Check the lifting and lowering function	•			
32	Check the tiller arm switch function	•			
33	Test the emergency switch of damages and function	•			
General					
34	Check if all decals are legible and complete	•			

35	Check if the protective screen and or guarding is not damaged	•			
36	Inspect the castor, adjust the height or replace it, if worn out		•		
37	Carry out a test run	•			

b. Lubricating points

Lubricate the marked points (as fig.13 shown) according to the maintenance checklist.

The required grease specification is: DIN 51825, standard grease.

- 1 Side roller
- 2 Bearings in load wheels
- 3 Bearings in transition wheels
- 4 Bearings in pallet frame
- 5 Bearings in steering wheels with protection
- 6 Hydraulic system

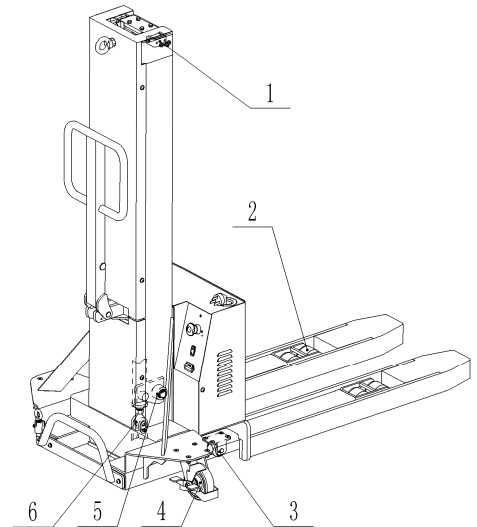


Fig. 13: Lubricate points

c. Check and refill hydraulic oil

The required hydraulic fluid- type is:

- H-LP 46, DIN 51524
- Viscosity is 41.4 – 47
- Depending on the type the amount is 3L

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

The oil level height shall reach at least the position that can lift load.

If necessary add oil at the filling point.

d. Checking electrical fuses

Remove the main cover, fuse 1 is located in the place as fig.

14 shown. Fuse 2 is in the electric circuit. the size is according to table 4.

Table 4: Size of the fuses

	Rate
FU1	100A
FU2	5A

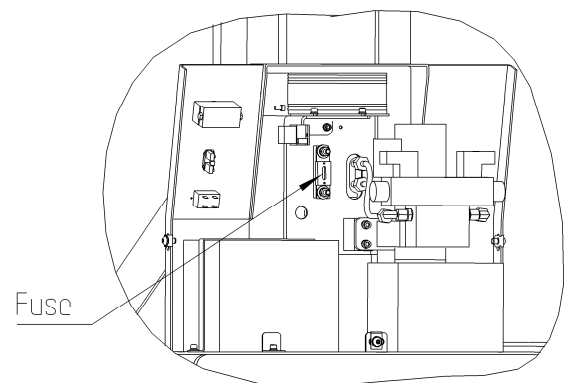


Fig. 14: Fuse position

9. TROUBLE SHOOTING



- If the truck has malfunctions follow the instructions, mentioned in chapter 6.

Table 5: Trouble shooting

TROUBLE	CAUSE	REPAIR
Forks can't be lifted to the mix. height	Hydraulic oil is not enough	Add hydraulic oil
Forks can't be lifted	Have no hydraulic oil Hydraulic oil is not pure	Add hydraulic oil Change hydraulic oil
Pump motor can't work	The emergency switch doesn't open Battery voltage is too low Power line joint is loose Motor contactor is damaged	Turn the emergency switch clockwise Charging Screw down Change for new
Forks can't be lowered	Goods bias to one side or overload, make distortion in the big piston rod or cylinder Forks remain in a high position for a long time, make the piston rod exposed and rust, which obstructs the movement of piston rod. Selector valve of the pump can't be opened for worn or damaged	Change the big piston rod or cylinder Lower the forks to the lowest position when not used, lubricate the piston rod in time Change selector valve of the pump
Leak oil	Seal elements are ageing or damaged Some parts are broken	Change for new Change for new
Forks lower by itself	Hydraulic oil is not pure, which make the selector valve hard to be closed tightly. Sea elements are ageing or damaged Release valve is damaged	Change hydraulic oil Change for new Change for new
Battery can't charging	Battery is damaged Charging plug is loose	Change for new Insert tight

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 the truck out of the aisle.

10. WIRING/ CIRCUIT DIAGRAM

a. Electrical circuit diagram

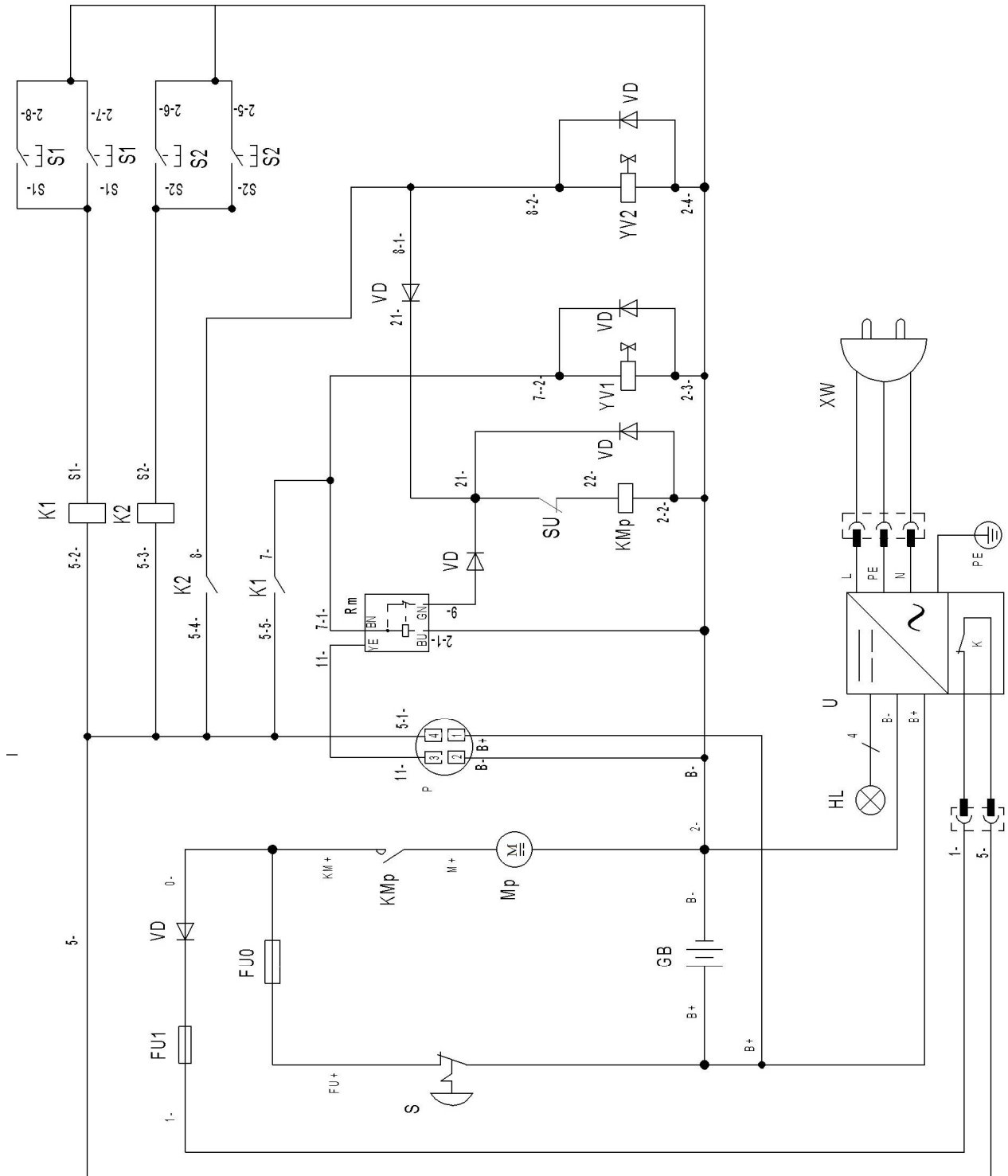


Fig. 15: Electric diagram

b. Hydraulic principle diagram

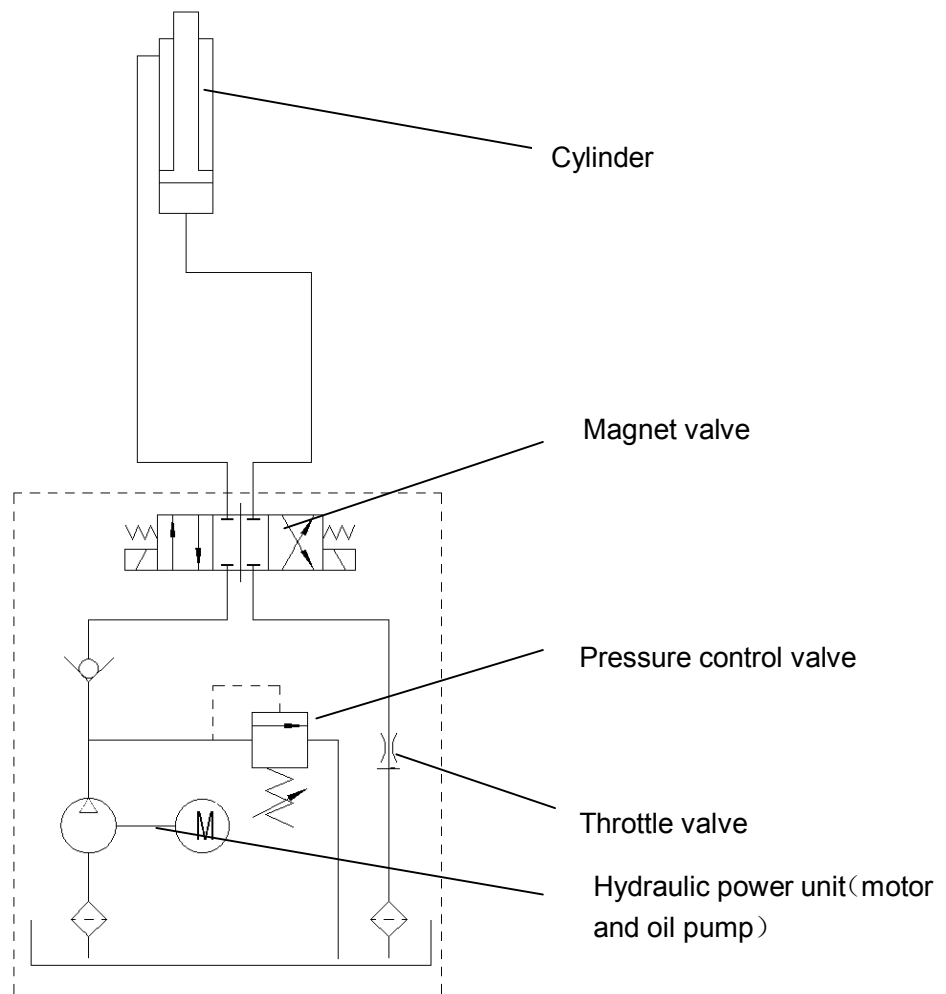


Fig. 16: Hydraulic principle diagram

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 ASME B56.1 concerning the operator. In this standard, it is defined that the safe operation is the responsibility of the operator (ASME B56.1-2003, 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:

- ASME B56.1 (American Society of Mechanical Engineers)
- OSHA §1910.178 (Occupational Safety and Health Act)
- UL 583 (Underwriters Laboratory)
- ANSI Z535.4 (American National Standards Institute)

⚠ 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. Description warning labels (only for US-market)

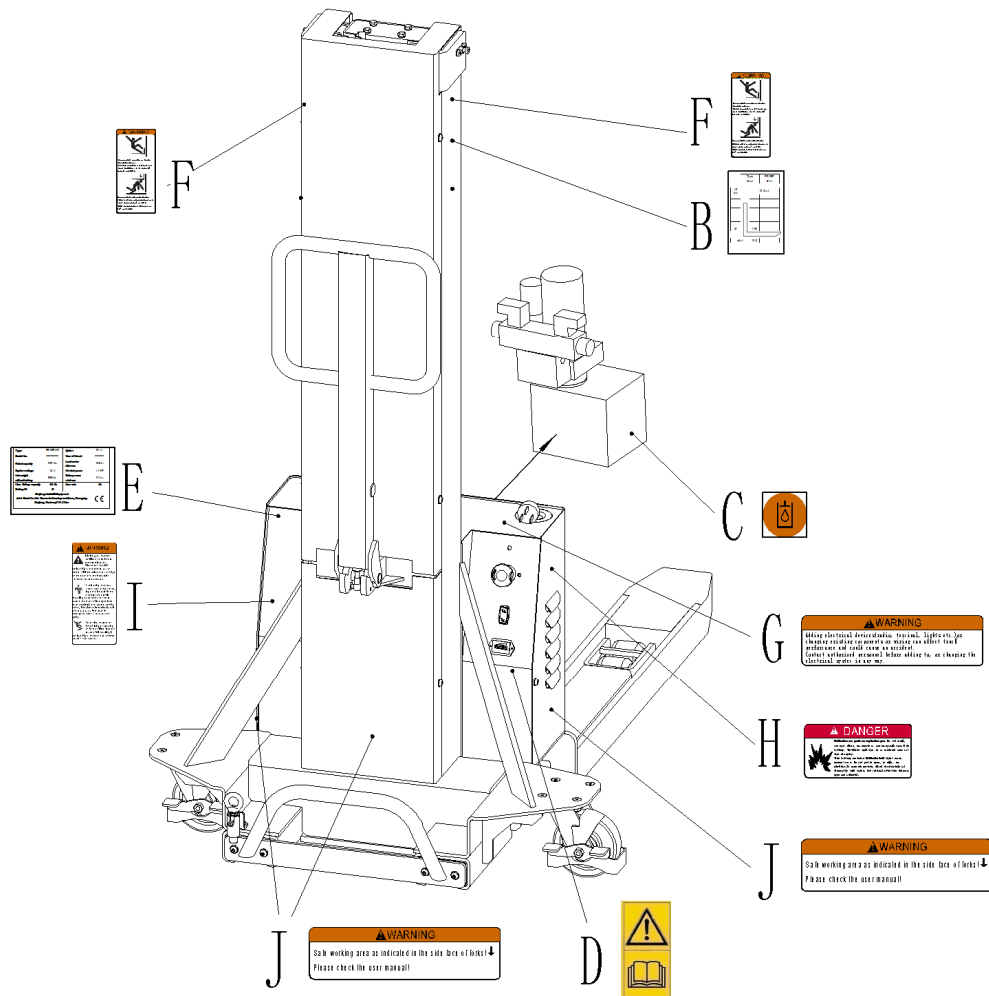


Fig. 17: Warning labels and safety devices (only USA)

- | | | | |
|---|---|---|------------------------------------|
| B | Residual lift capacity sticker | G | Sign warning electrical devices |
| C | Sign oil filling point | H | Sign danger battery |
| D | Sticker to read and follow these instructions | I | Sign warning stay clear stop truck |
| E | CE label | J | Warning label |
| F | Sign not under, on forks | | |

The self lift stacker is equipped with an emergency button (11) which stops all lifting-, lowering-, driving- functions and engages the failsafe of 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 oil filling point (C)




Sign read and follow this instruction (D)




Sign not under, on forks (F)

WARNING



Never stand or ride on forks for any reason. Standing or riding on the forks can cause a fall. You can be seriously injured or killed.



Never stand under the forks. Falling objects or lowering forks can cause serious injury or death. While servicing, block the forks so they won't fall.

Sign warning electrical devices (G)

WARNING

Adding electrical devices (radio, terminal, lights etc.) or changing existing components or wiring can affect truck performance and could cause an accident. Contact authorized personnel before adding to, or changing the electrical system in any way.

Sign danger battery (H)


DANGER




Batteries can produce explosive gas. Do not smoke, use open flame, or create an arc or sparks near this battery. Ventilate well when in an enclosed area and when charging. This battery contains Sulfuric Acid which cause severe burns. Do not get in eyes, on skin, or clothing. In case of contact, flush immediately and thoroughly with water. Get medical attention if your eyes are affected.

Sign warning stay clear stop truck (I)


WARNING



It is law, you must be certified and trained to operate this truck. Misuse can result in serious injury or death to you or others. All instructions and warnings on the truck and the instruction handbook must be obeyed.



Avoid being crushed. Keep head, arms, hands, legs and feet within the operator area. While travelling be careful when parts extend the truck or its edges. Stop truck completely and set the parking brake, if equipped. Immediately exit and move away from truck in emergency. Look where you are going.



Never ride or stand on forks. Riding or standing on forks or lifted load can cause a fall resulting in serious injury or death. Use extreme caution near docks.

Warning label (J)

WARNING

Safe working area as indicated in the side face of forks! ↓
Please check the user manual!

c. Technical data for US market

Drawing see page 6

Table 6: 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		PS05F-1300	PS05F-800
	1.3	Power (battery,diesel, petrol, gas, manual)		Manual	
	1.4	Operator type		Pedestrian	
	1.5	Load Capacity / rated load	Q (lbs)	1.1	
	1.6	Load centre distance	C (in)	19.7	
	1.8	Load distance ,centre of drive axle to fork	X (in)	24.3	
	1.9	Wheelbase	Y(in)	37.4	
Weight	2.1	Service weight	lbs	666.6	lbs
	2.2	Axle loading, laden front/rear	lbs	521.4/1245.2	lbs
	2.3	Axle loading, unladen front/rear	lbs	385/1281.6	lbs
Tires, chassis	3.1	Tires		Nylon/ Polyurethane (PU)	
	3.2	Tire size, front	Ø x w (in)	Ø5 × 1.6	
	3.3	Tire size, rear	Ø x w (in)	Ø2.9 × 2.4	
	3.5	Wheels, number front/rear(x=driven wheels)		2/4	
	3.6	Track, front	b ₁₀ (in)	30.2	
	3.7	Track, rear	b ₁₁ (in)	15.2	
Dimensions	4.2	Lowered mast height	h ₁ (in)	66.2	h ₁ (in)
	4.4	Lift height	h ₃ (in)	51.2	h ₃ (in)
	4.5	Extended mast height	h ₄ (in)	118.1	h ₄ (in)
	4.9	Height of tiller in drive position min./ max.	h ₁₄ (in)	37.4/51.2	
	4.15	Height, lowered	h ₁₃ (in)	3.1	
	4.19	Overall length	l ₁ (in)	63.3	
	4.20	Length to face of forks	l ₂ (in)	22	
	4.21	Overall width	b ₁ (in)	35	
	4.22	Fork dimensions	s/ e/ l(in)	3/6.3/41.3	
	4.25	Distance between fork-arms	b ₅ (in)	21.3	
	4.33	Aisle width for pallets 1000X1200 crossways	Ast (in)	97.7	
	4.34	Aisle width for pallets 800X1200 lengthways	Ast (in)	85.9	
4.35	Turning radius	Wa (in)	47.2		
Performance data	5.2	Lift speed, laden/ unladen	fpm	9.259/11.82	
	5.3	Lowering speed, laden/ unladen	fpm	28.368/20.291	
Electric-engine	6.2	Lift motor rating at S3 4.5%	HP	1.1	
	6.3	Battery acc. to DIN 43531/35/36 A, B, C, no		Maintenance free	
	6.4	Battery voltage, nominal capacity K5	V/Ah	12/42	
	6.5	Battery weight	lbs	30.8	

12. DECLARATION OF CONFORMITY (valid, if sold within the 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 2004/108/EEC (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 2004/108/EG (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 2004/108/CE (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 2004/108/CEE (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-KONFORMITEITSVERKLARING

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 2004/108/EEC). 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 2004/108/CEE („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

I sottoscritti dichiarano che il veicolo per trasporti interni a macchina specificato soddisfa le Direttive Europee 2006/42/EC (Direttiva Macchine) e 2004/108/EEC (Compatibilità elettromagnetica - EMV) comprese le relative modifiche, come pure il rispettivo decreto legislativo per la conversione delle direttive in diritto nazionale. I sottoscritti sono singolarmente autorizzati alla creazione della documentazione tecnica.

[BG] ЕВРОПЕЙСКА ОБЩНОСТ - ДЕКЛАРАЦИЯ ЗА СЪОТВЕТСТВИЕ

Подписаните удостоверяват с настоящето, че подробно описаното машина средство отговаря на европейския норматив 2006/42/EG (норматив за машини) и на 2004/108/EG (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 O SHODĚ

Níže podepsaný tímto potvrzuje, že podrobný popis uvedené stroje odpovídá Evropským směrnicím 2006/42/EC (směrnice pro stroje) a 2004/108/EEC (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 způsobilí 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 2004/108/EØF (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

Allakirjutatud tõendavad käesolevaga, et üksikasjaliselt kirjeldatud täpsustatud masin vastab Euroopa direktiividele 2006/42/EÜ (Direktiiv masinate kohta) ja 2004/108/EMÜ (Elektromagnetiline sobivus - EMS) kaasa arvatud nende muudatused ja nende vastavatele õigustmäärustele direktiivide muutmiseks siseriiklikuks õiguseks. Iga allakirjutanu üksikult on volitatud koostama tehnilist dokumentatsiooni.

[FIN] EU-YHDENMUKAISUUSLUSTUS

Allekirjoittaneet todistavat täten, että kukin erikseen mainittu omalla voimallaan varustettu tehdaskone vastaa EU-direktiivien 2006/42/EC (koneenrakennusdirektiivi) ja 2004/108/EEC (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 ΕΟΚ

Οι υπογράφωντες βεβαιώνουν διά της παρούσης ότι το συγκεκριμένο μηχάνημα συμμορφώνεται προς την Κοινοτική Οδηγία 2006/42/ΕΚ («Μηχανήματα») και 2004/108/ΕΟΚ (Ηλεκτρομαγνητικής Συμβατότητας, ΗΜΣ), καθώς και οι τροποποιήσεις τους, όπως μεταφράστηκε στην εθνική νομοθεσία των χωρών μελών. Οι υπογράφωντες είναι σε κάθε περίπτωση εξουσιοδοτημένοι ατομικά να καταρτίσουν τα τεχνικά έγγραφα.

[H] EU KONFORMITÁSI NYILATKOZAT

Alulírottak ezennel igazolják, hogy a részletesen leírt a megadott gép megfelel a 2006/42/EC (Gép-Irányelv) és a 2004/108/EEC (Elektromágneses összeférhetőség - EMV) 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 nurodyta mašina atitinka Europos Sąjungos direktyvas 2006/42/EB (Mašinų direktyva) ir 2004/108/EEB (Elektromagnetinis suderinamumas – EMS) įskaitant jų pakeitimus, o taip pat ir atitinkamą teisės aktą dėl direktyvų įgyvendinimo nacionalinėje teisėje. Kiekvienas iš pasirašusių asmenų turi teisę ruošti techninę dokumentaciją.

[LV] ES atbilstības deklarācija

Ar zemāk redzamajiem parakstiem tiek apliecināts, ka norādīts mašina atbilst Eiropas Savienības normatīvām 2006/42/EG (Mašīnu normatīvas) un 2004/108/EEG (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-KONFORMITETSEKTLÆRING

Undertegnede bekræfter hermed at de enkelte betegnede maskin med kraftdrift tilsvare de europeiske retningslinjene 2006/42/EC (maskinretningslinje) og 2004/108/EEC (elektromagnetisk fordraglighed - 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 deklaruja, że poniżej opisana maszyna spełnia wymagania określone w dyrektywach Europejskich 2006/42/EC (Dyrektywa Maszynowa) i 2004/108/EEC (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] DECLARATIE DE CONFORMITATE CE

Subsemnații adevăresc prin prezenta că vehiculul de specificat mașină descris individual corespunde directivelor europene 2006/42/CE (Directiva privind mașinile) și 2004/108/CEE (Compatibilitatea electromagnetă - CEM) inclusiv modificărilor lor precum și actului legislativ corespunzător pentru transpunerea directivelor în drept național. Subsemnații sunt fiecare în parte împuterniciți să întocmească documentația tehnică.

[RU] Декларация соответствия стандартам ЕС

Настоящим лица, подписавшие документ, удостоверяют, что машина с указанной спецификацией соответствует европейским стандартам 2006/42/EG (Транспортная директива) и 2004/108/ЕWG (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

Undertecknarna intygar härmed att det i detalj betecknade maskin uppfyller de Europeiska direktiven 2006/42/EG (Maskindirektiv) och 2004/108/EEG (Elektromagnetisk tålighet - EMV), inklusive ändringarna i detta och den motsvarande rättsförordningen för att omsätta direktiven i nationell rätt. Undertecknarna har var för sig fullmakt att sammanställa den tekniska dokumentationen.

[SK] vyhlásenie o zhode

Dolu podpísaní týmto potvrdzujeme, že podrobný popis uvedené stroje zodpovedá Európskym smerniciam 2006/42/EC (ernica pre stroje) a 2004/108/EGW (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 2004/108/EEC (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 2004/108/EEC (Elektromanyetik Uyumluluk – EMC) no'lu Avrupa Yönergelerine ve bunların değişiklik sonucu oluşan metinlerine ve yönergelerin milli hukuk hükümlerine dönüştürülmesine dair ilgili hukuk kararına uygun olduğunu tasdik ederler. İmza sahibi şahıslar teknik dosyaları bir araya getirmek için münferiden vekil tayin edildi.

- (1) Type/ Typ/ Tipo/ Modello/ Тууып/ Tipo / ΤΥΠΟΣ/ Τίπος/ Τίρ/ Тип/ Tips/ Tipas/ Tüüp:
- (2) Serial No./ Serien-Nr./ N°. de série/ Seriennummer/ N° de serie/ Numero di serie/ Serienr./ Sarjanro/ αυξάνων 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/ Rokprodukcji / Letnik / Год изготовления / Üretim yılı / Väljallaskeasta / 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/ Producent 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)/ Κατασκευαστής ή όκνηνο ηνπηθώλ αληηηπζνζώπσλ/ Üretici ya da Bölgedeki Yetkili Temsilci/ Proizvajalec ali pooblašteni zastopnik s sedežem v EU/ V'robca 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/дaгa / Dátum/ 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. / По поручению / megbízásából / длъжностно лице / z pověření / z poverenia / po nalogu / na polecenie / din sarcina / адина / θαη' ελληνιή

- If you can read this text, your declaration is not complete. In this case please ask for a copy*
- (1) Type: **XX XX – Self-propelled industrial truck**
 - (2) Serial No: **XXXXXXXX**
 - (3) Year of constr.: **YYYY**
 - (4) Manufacturer or his authorized representative in Community:
Company name/ Street / Postal code Town/ Country
 - (5) Date: **YYYY.MM.DD**
 - (6) Authorized signatory: **Mr. Sample**