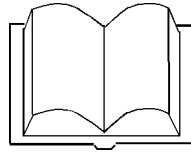


OPERATING AND MAINTENANCE MANUAL



CLEVER

FOR SPECIAL VERSIONS
Carefully read the
recommendations given in the
appendix



ORIGINAL INSTRUCTIONS

For your safety and correct operations, please read carefully this manual before using it

Rev. 20161104



Congratulations on your purchase of a new lifter. Carefully read this manual containing the information necessary for personal safety, for forklift operation, its use, maintenance and driving.

Always keep the Operating and maintenance booklet handy. If parts of this booklet are not understandable, contact our assistance service LEVANTE SRL SERVICE Tel. 0039 0386 801814 – Fax 0039 0386 801955.






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DICHIARAZIONE DI CONFORMITA' – DECLARATION OF CONFORMITY
RICAMBI – SPARE PARTS
SPECIAL ICA



1. Main information and safety regulations

The manual is structured to be easily read and understood, using the symbols in the table, to support the operator and maintenance technician.

	HAZARD / ATTENTION
	INDICATION
	CAUTION / WARNING

4

The instructions manual is a document issued by **LEVANTE S.r.l.** and it is an integral part of the machine. It is unambiguously identified to allow traceability and any subsequent references. This document must be kept and used through its operational life, even in the case of sale to third parties.

1.1 Purpose of the document

The main purpose of the instructions manual is to provide customers and personnel interacting with the machine the information necessary for its proper use and maintenance in optimal conditions, with particular regard for this to happen in maximum safety conditions. It is recommended to scrupulously observe the safety precautions throughout operation, service, repair and dismantling of the machine.

Make sure that this operating and maintenance manual is read and understood by all personnel in charge of machine operation or intervention on the machine..

1.2 Responsibilities and duties

The machine was built using resistant and durable materials, in full compliance with the construction standards applicable in the European Union.

LEVANTE S.r.l. is the machine importer on the market by the European Union and, as such, undertakes the burden to certify conformity with the legal provisions in force.

LEVANTE S.r.l. will not take any responsibility for non-compliance with the operating instructions provided in this manual and for use outside the machine's use limits.

Pursuant to Italian Legislative Decree 81/2008, it is mandatory for the employer to ensure the safety of workers by appropriately training them on the correct use of the work equipment and informing them of the risks associated with misuse. Operators must be informed and trained by the employer of the proper use and maintenance of the forklift.

Operators and maintenance technicians must comply with the general accident-prevention standards prescribed by EU Directives and legislation in the country of destination (Legislative Decree 81/2008 in Italy).

1.3 Maintenance/technical assistance of the machine

In the case of need for intervention, please contact **LEVANTE S.r.l.**

If the user fails to comply with this publication, we are not liable for problems or anomalies on the proper operation of the supply and on the validity of the warranty stipulated in the contractual phase.

1.4 Machine identification data

The identification of the company **LEVANTE S.r.l.** as the importer of the machine for the initial placement on the market, takes place in compliance with current legislation by means of the documents listed below:

- Declaration of conformity according to Annex II-Directive 2006/42/EC
- Marking plate
- Instructions manual



LEVANTE SRL I - 46035 Ostiglia MN Tel 0386 801814 Fax 0386 801955		CE	
Modello Model Modèle Modell	1	Tensione Voltage Voltage Spannung	5
Serie/Anno Serial/Year Serie/Année Serie/Jahr	2	Portata Capacity Charge Tragkraft	6
Peso carrello Truck weight Poid chariot Stapler Gewicht	3	Sollevamento Lifting Levée Hub	7
Peso batteria Battery weight Poid batterie Batterie Gewicht	4	Baricentro Load centre Centre gravité Schwerpunkt	8

Identification plate

- | | |
|-----------------------|--------------------|
| (1) Model | (5) Voltage |
| (2) Serial No./Year | (6) Capacity |
| (3) Truck weight | (7) Lifting |
| (4) Battery weight | (8) Load centre* |

For no reason whatsoever must the data on the plate be altered.

An exact description of the lifter model and the serial number, will facilitate a quick and effective response by our technical assistance service.

* "Load centre" is the distance of the load centre from the fixing plane of the lifting mean to the mast.

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The lifter capacity depends on the load and the load centre distance from the heel of the fork.

The rated capacities refer to loads with a load centre distance from the mast not greater than 300 mm.



For no reason whatsoever must the data on the plate be altered.

An exact description of the lift model and the serial number, will facilitate a quick and effective response by our technical assistance service.

If the plate is illegible, contact your dealer and request a replacement plate.

1.5 Warranty

The descriptions and illustrations contained in this publication are non-binding. Without prejudice to the essential features of the described forklift, LEVANTE SRL reserves the right to change the parts, details and accessories as it deems appropriate to improve the product or for manufacturing or commercial needs, at any moment and without notice.

- The lift must only be operated by qualified personnel.
- During the time that the lift is entrusted to you, you must use it properly to avoid injury to people or damage to property.

The warranty period is set at 12 (twelve) months.

1. LEVANTE SRL commits to replace all those components which are defective due to an unequivocal manufacturing defect, excluding the battery, charger and electrical parts.

2. During the warranty period, the purchaser will be entitled to the sole replacement of the elements which, at the indisputable judgement of LEVANTE SRL are acknowledged as faulty.

3. This warranty does not cover:

- Damage caused by incorrect or improper use of the product by the user.
- Damage to property or people caused by tampering by unauthorised personnel.
- Damage deriving from atmospheric agents, fires and transport.
- All those parts that, due to their nature or destination, are subject to normal wear and tear.

Also excluded: wheels and rollers, batteries, indicators, battery charger and electrical components.

4. Also excluded from this warranty are the transport or delivery expenses in general and the intervention costs for replacement or repair of the electrical or electronic faulty elements: these costs will only be reimbursed if LEVANTE SRL indisputably acknowledges, in writing, an effective and real fault at the origin.



5. Requests for technical assistance must be sent directly to LEVANTE SRL, always specifying the type of machine and the serial number.

6. Any assistance and repair must be authorised in advance by written approval and agreed by the LEVANTE SRL assistance centre. Any intervention carried out without authorisation, or not complying with the above, automatically voids the validity of the warranty.

7. Defective parts replaced under warranty must always be returned to LEVANTE SRL within and no later than 60 days from shipment of the spare parts, for the due inspections. The non-receipt of the defective parts automatically voids the validity of the warranty with consequent immediate invoicing of the shipped replacement parts.

8. LEVANTE SRL assumes no liability for direct or indirect damages, however incurred by the purchaser or by third parties, for the employment and use of the products covered by this publication.

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1.6 Accident prevention and forbidden uses

The Levante stackers are entirely made in compliance with the legal provisions in force regarding safety of machinery and, in particular, in compliance with the essential safety requirements of Machinery Directive 2006/42/EC and harmonised standards applicable to the product (UNI EN ISO 3691-5:2010).



It is compulsory for operators and for personnel in charge of operating and servicing the forklift, to comply with the accident prevention standards in force. It is also recommended to pay particular attention to the following safety warnings:

- None of the operating personnel must be under the influence of sedatives, drugs or alcohol and must be perfectly aware of the operating characteristics and hazards associated with use;
- The lift does not provide for passengers on board and should not be used to lift/transport people
- Pay attention to the warning pictograms placed on the machine;
- Observe the rules for corporate traffic;
- Prohibition to use the fork jib cranes as levers for lifting loads.
- Prohibition to lift loads beyond the capacity limit indicated on the marking plate.
- Prohibition to lift suspended loads or loads able to swing freely.
- Prohibition to handle the forklift with the forks lifted, except for goods loading and unloading operations.
- Prohibition to place the forklift in direct contact with food.
- Prohibition to place hands or feet under the forks
- The weight of the load must always be placed in the centre of the forks, it is forbidden to load one fork only
- Use suitable clothing and footwear.
- DO NOT stand near the lift or in an area that can be reached by load falling or by lifting or lowering system. The operator is responsible for compliance with this provision.
- **DO NOT ALTER OR MODIFY THE FORKLIFT. It is forbidden to remove or modify the guards or the safety devices. If necessary, only contact qualified personnel, authorised by the manufacturer.**
- **If the guards are damaged, or any part thereof, immediately replace them. Use only original spare parts supplied by the manufacturer.**

Perform maintenance after having discharged any residual energy from the electric circuits;

Subject the lift to the preventive maintenance interventions provided by the manufacturer. All maintenance, repair, adjustment and inspection must be performed by authorised personnel only;

Immediately inform management of any damage or failure that has arisen during your work shift. This applies to all incidents;



Do not use the lift in the case of damage or defects such as to compromise the safety and working features. Not even if the lift has been repaired without the supervision or approval of authorised personnel.

Always use original spare parts or commercial parts fully compatible with those assembled on the machine (ref. sections 3, 4, 5 and spare parts);

Clean machine coatings with soft and dry cloths or slightly moistened with a light detergent. Do not use any type of solvent such as alcohol, benzene or thinner, as the treated surfaces may be damaged;

Recharge machines in adequately ventilated areas and with an appropriate air exchange, in a dry place and away from heat sources.

DO NOT open the battery covers near heat sources, naked flames or cigarettes, vapours of flammable substances.

DO NOT tilt or overturn the battery as the corrosive liquids may leak and create a source of potential contact with the operator.

1.7 Notes on residual risks

OPERATORS MUST BE INFORMED AND TRAINED BY THE EMPLOYER ON THE RUNNING AND THE PROPER WORK PROCEDURES CONCERNING USE AND MAINTENANCE OF THE MACHINE.

The machine was built in compliance with the rules of good practice, performing the necessary tests to verify the correct construction.

For its nature, the machine has risks due to the safety conditions during use, due to the stability and risk of tipping.

In detail there are:

- risks during the handling of heavy loads, both pertaining to lifting forces (in case of manual operation) and pushing/pulling power and rotation;
- risk of crushing feet under the load, for which it is mandatory to wear safety shoes;
- risk of tipping onto one side, in particular when transiting on a slope, moving with the load lifted, transporting swinging loads or with the load centre substantially offset with respect to the longitudinal median surface of the forklift, covering irregular floors, when colliding with fixed and/or mobile structures, the load centre is incorrectly evaluated;
- risk of tipping backwards, in particular when the fork jib cranes or the platform is stationary on an obstruction;
- crushing, shearing and entanglement with lifting parts, in the chains or due to the fall or tipping of the machine towards the operator's working position.



The flat batteries and storage batteries contain solid waste and liquids that are toxic to human health and for the environment. Take the due precautions during removal and disposal against the risk of contact with corrosive products. Absorb any waste liquid generated when handling the battery or during dismantling of the hydraulic lifting system, using suitable absorbing material. Dispose of storage batteries and batteries in compliance with the environmental legislation in force: store the components, awaiting withdrawal, in airtight containers that do not leak and do not expose them to atmospheric agents (rain), and entrust their disposal to a company associated with COBAT (Consorzio Obbligatorio Batterie Esauste (Exhaust Batteries Mandatory Consortium)).

Dispose of waste oil in compliance with the environmental legislation in force, entrusting withdrawal and disposal to a company associated with the Consorzio Obbligatorio degli Oli Usati (Mandatory Consortium of Waste Oils).

THE FORKLIFT MUST ONLY BE USED BY AUTHORISED PERSONNEL, PROPERLY TRAINED ON THE CORRECT METHOD OF USE AND ON ITS RELATED RISKS.

LEVANTE TAKES NO LIABILITY FOR ACCIDENTS OR DAMAGE DIRECTLY OR INDIRECTLY CAUSED BY IMPROPER, RECKLESS OR NEGLIGENT USE OF THE EQUIPMENT, DUE TO FAILURE TO COMPLY WITH THE ACCIDENT PREVENTION REGULATIONS PROVIDED BY THE CURRENT LEGISLATION OR THE REQUIREMENTS CONTAINED IN THIS MANUAL.





• **DO NOT MAKE REPAIRS. IF THESE INTERVENTIONS ARE PERFORMED BY INEXPERIENCED PERSONNEL, THEY MAY ALTER THE MACHINE'S SAFETY LEVEL.**



Perform all work and maintenance in compliance with current health and safety at work regulations, carefully observing the recommendations contained in this manual.

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ATTENTION! Crushing hazard between forks and spokes

When handling the load IT IS FORBIDDEN TO PUT YOUR FEET ON THE FORKLIFT'S SPOKES.

A manoeuvring error or inattention may cause crushing between the forks and the spokes, with possible injury to the operator.

Proof of the hazard, and its predictability, the slow descent speed of the forks and the maintained type control, considerably reduce the probabilities of damage due to this type of situation.

FOR THE SPECIAL VERSIONS CAREFULLY READ THE WARNINGS GIVEN IN THE APPENDIX

1.8 Limits of use

The semi-electric stackers are designed to work within a normal working environment, to move loads by pulling/pushing and lift loads by means of lifting devices powered by human strength (manual lifting) or by electric force (lifting with battery operated hydraulic piston).



It is forbidden to use the semi-electric stacker as supplied, in areas classified at risk of explosion under ATEX Directive 99/92/EC and, in Italy, under Legislative Decree 81/2008.



The machine must be used on a non-slip, hard floor without holes or obstacles. It is forbidden to use the forklift on sloping floors or on ramps, except when the forklift is empty.

The work environment must have a lighting of at least 50 lux.



The machine is not suitable for use or to be parked outdoors, exposed to atmospheric agents.



the machine is not suitable for intensive or continuous use.

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2. Technical features

2.1 General specifications

The Clever mini lifter is a manual lifter with electric device for lifting forks or accessories fitted on it. The forklift is designed to work within a normal work environment, to lift loads by means of lifting devices powered by electric motor.

As a result of the wheels on the mast, the Clever mini lifter can be easily moved horizontally and loaded on the platform of a vehicle.

It is provided with an aluminium ladder equipped with hooks in order to be secured to the lifter in total safety.

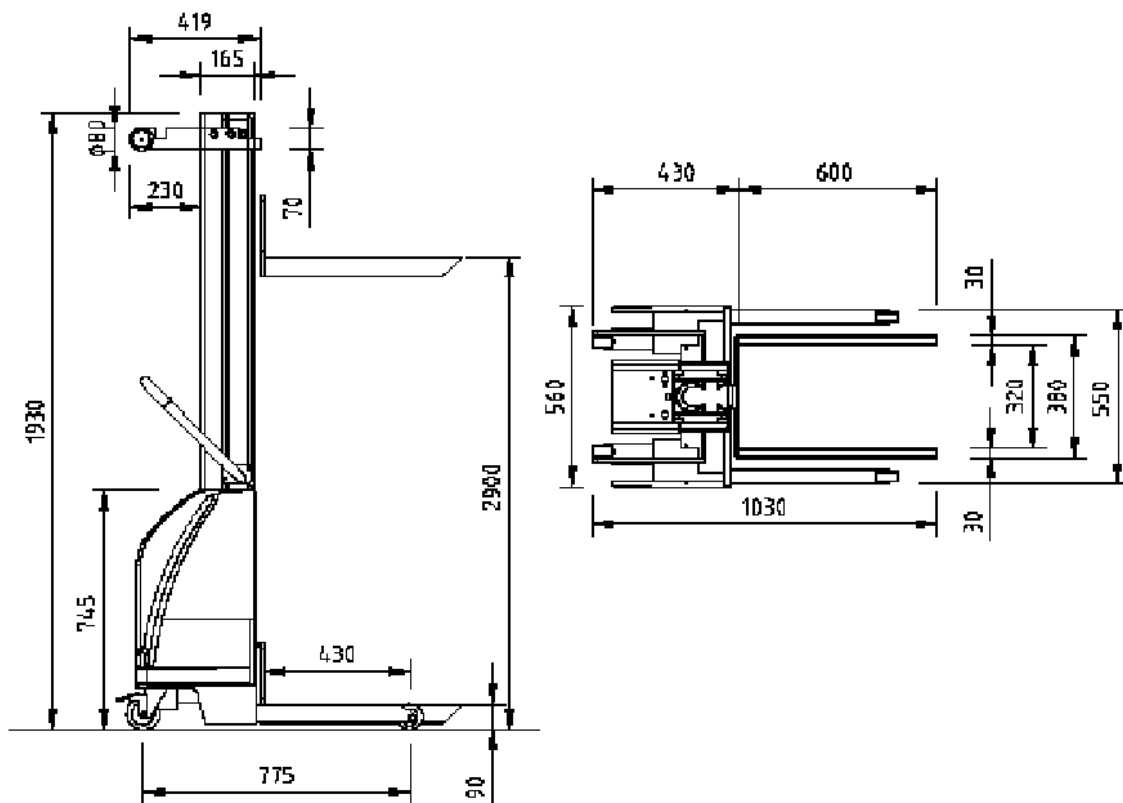
Technical features:

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Model		CLEVER
Capacity*	kg	120
Lifting min /max	mm	90-2900
Open mast height	mm	3330
Closed mast height	mm	1930
Rollers	N/ø mm	2/60x20
Wheels	N/ø mm	2/200x50
Mast rollers	N/ø mm	2/80x30
Lifting motor	V/W	24/370
Lifting speed	cm/sec	6.0/4.8
Battery	Nx V/Ah	4x12/18
Weight	kg	120

* Always check the actual capacity of the truck with the table tools

2.2 Overall dimensions



2.3 Fittings and accessories

The forklift is equipped with standard forks. On request, it can be equipped with special lifting accessories. For special versions, refer to the appendix in this manual.

For details and limits of use of standing lifting accessories, see chapter 4.

2.4 Rated capacity

The maximum capacity of your lifter is indicated on the data plate and depends on the load height and the load centre distance from the heel of the fork.

The rated capacities refer to loads with a 300 mm load centre from the fixing plane of the lifting mean. When the load centre distance exceeds this value, additional precautions must be taken and the capacity must be proportionally downgraded.

DO NOT FOR ANY REASON OVERLOAD THE FORKLIFT BEYOND THE INDICATED RATED CAPACITY

2.5 Storage

Store the machine in a covered, dry place and not subject to high moisture, at a temperature between 5°C and 40°C.

2.6 Transporting

The Clever lifter can be transported horizontally by using the rear support wheels.



2.7 Control and command devices



ON/OFF key - Emergency stop

It consists of a red key to be turned anti-clockwise in the event that the machine does not respond to the operator's command.

If the weight to be lifted exceeds the maximum capacity allowed, the forks do not rise and the overload relay blocks. Reset the key to restore proper operation.

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Fuse (see chapter 4)

Component placed inside the machine to protect the electrical and electronic part against short-circuits or over-ampereage. Component subject to wear. We recommend immediately reordering when the spare part is used.



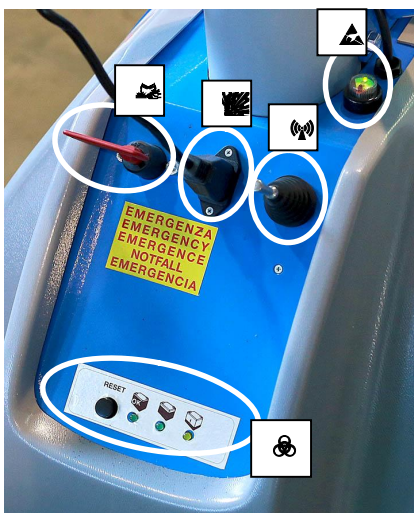
Charger indicator

Inhibits lifting of the forks before the batteries are excessively discharged; as soon as the red LED turns on, RECHARGE.



Parking brakes

To stop the forklift on a ramp, with your foot, press the brake pedal located on the two rear wheels. To release, lift the pedal by applying pressure from underneath with your toe (see section 5).



Commands and instruments

- (A) Forks ascent/descent command lever
- (B) Battery charge indicator
- (C) ON/OFF Key (Safety stop)
- (D) Battery recharge cycle control board
- (E) Socket for charger cable



3. Operating procedures

The stacker must be used in compliance with the current safety regulations and accident prevention regulations in chapter 2.

Before using the forklift, perform the preliminary checks described in par. 6.1.

3.1 Preliminary checks

Before using the stacker, check the points listed in the table.

OPERATION	FREQUENCY	PROCEDURES
Check the status of belts, wheels, mast, side handles	Daily	Visual inspection
Check the correct rolling of the wheels	Daily	Move the forklift forward/backward and right/left
Check the locking of the wheel stop	Daily	Activate the wheel stop and ensure that the forklift does not move by trying to move it
Check the operation of the loads ascent/descent lever	Daily	Move the lever up and ensure the forks lift Move the lever down and ensure the forks lower
Check the operation of the emergency stop device	Daily	During ascent, switch the emergency key ensuring it locks the forks movement

3.2 Use of the ladder to carry out operations from heights

Clever can reach lifting heights of 2900 mm.

The supplied ladder can be hooked onto the forklift to enable operations next to the suspended load.

THE SUPPLIED LADDER MUST ALWAYS BE HOOKED ONTO THE SPECIAL COUPLINGS SITUATED ON THE FRONT AND SIDES OF THE COLUMN.

ATTENTION: BEFORE GOING ON, THE OPERATOR MUST BE EQUIPPED WITH A SAFETY BELT AND MUST NEVER GO BEYOND THE LAST ACCESSIBLE RUNG. BEFORE GOING ON THE LADDER, THE OPERATOR MUST LOCK THE WHEELS FROM THE PROVIDED LOCKS (SEE 3.7) AND DISCONNECT THE IGNITION KEY FROM CLEVER.

WHILE THE OPERATOR IS ON THE LADDER, NOBODY MUST APPROACH AND ENABLE CONTROLS OF THE CONSOLE.



3.3 Loading

Balance the load adequately so that the load centre is inside the forks of the machine. Do not overload the forklift beyond the rated capacity and never place the load on a single fork.

Only use pallets in good condition and avoid the load from protruding beyond the pallet itself.

Do not use the forklift to lift suspended loads or loads able to freely swing, nor to lift or transport people. Always check the load condition during use of the forklift. If the load becomes unstable, stop use and restore stability before continuing.



3.4 Forklift handling

The forks are lifted via electric command located on the operator console. The forklift is manually handled, by pushing or pulling, by acting on the appropriate handles. Move the forklift slowly and steadily, keeping the load lowered. During loading, the command circuits of the forks are disabled.

The forks lowering function is inactive with the key in the OFF position.



THE ELECTRIC MOTOR OF THE ACTUATOR IS NOT DESIGNED FOR CONTINUOUS USE. IT CAN BE STRESSED FOR A MAX TIME OF 10 MINUTES, EQUAL TO ABOUT 5 CONSECUTIVE ASCENT AND DESCENT OPERATIONS. AFTER CONTINUOUS USE, THE MOTOR NEEDS TO COOL FOR A TIME EQUAL TO THAT DURING WHICH IT WAS STRESSED. FAILURE TO OBSERVE THIS WARNING CAN SERIOUSLY COMPROMISE

THE STATE OF THE MOTOR AND WILL VOID THE WARRANTY.



During the handling operations keep your hands, feet or other body parts away from the lifting mechanisms.

3.5 Precautions of use during handling

The load lifting/lowering operations must be carried out with the forklift blocked by the wheel stop.

During the load lifting and lowering, warn the other operators and prevent them from standing or passing under the forks.

Prevent personnel nearing the machine during forklift handling and avoid contact with any obstacles; maintain a safe distance of at least 100 cm from people.

Remember that it is forbidden to travel on slopes, except with the forklift empty. Slightly sloping surfaces are allowed (short ramps >2%) and, however, with the operator facing away from the load placed at the lowest level.

3.6 Forklift parking

When the work is completed, unload the forks and place the forklift with forks lowered in a suitable place and only accessible by authorised personnel. Remove the ignition key from the housing and park the forklift by activating the wheel stop.

3.7 Parking brakes

To stop the forklift, with your foot, press the brake pedal located on the two rear wheels (Fig. on the side). To release, lift the pedal by applying pressure from underneath with your toe.

3.8 Precautions in the case of failure and emergency situations

In the case of a hazard, you can activate the emergency device on the operator console. Switching the key to OFF stops any electric movement of the forklift.

A fault in the command system can prevent the regular descent of the forks: **Pay the utmost attention in the case of electric failure or control circuits fault when the forks are lifted and the load suspended.**

Do not carry out any troubleshooting under the suspended and potentially unstable load, without having first taken the necessary measures to ensure the safety of the operations!

If necessary contact an authorised assistance centre.

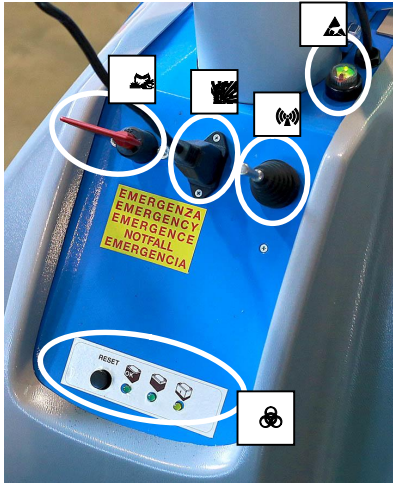
3.9 Battery charging procedure

The electric forks lift system is entrusted to a worm screw geared motor powered by two 12V 38Ah batteries with on-board battery charger. The indicator (B) informs the user on the charge status of the batteries, which must be periodically recharged.



**⚠ Recharge the batteries completely when the yellow light on the charge level indicator turns on!
If the forklift is not used, the batteries must still be recharged at least once a week.**

To recharge the batteries, proceed as follows.



- Insert the spiro cable in the socket (E) and connect the other end to the 230V mains.
- Leave the key (C) at ON
- The signal board (D) contains 3 LEDs that indicate (from right to left): initial charge - final charge - recharge cycle end. At the end of the cycle, the system automatically disconnects. Press RESET only to repeat the cycle or restart it if it was stopped.

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To recharge the batteries, make sure that the environment is adequately ventilated (for further information, see chapter 10).

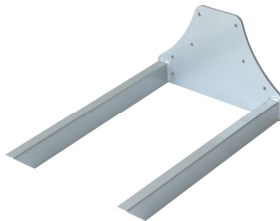
Upon reactivation after a temporary suspension of the charge cycle, the battery charger detects the battery charge status and automatically starts a new charge cycle.

⚠ DO NOT activate the forks (A) command lever during recharging.

The supplied batteries do not require maintenance. Replace the batteries when exhausted.

4. Lifting accessories

4.1 STANDARD FORKS



It is the standard supplied accessory.

It can be made in special versions (rotated, shortened or narrow forks).

The maximum load capacity is always specified in the forklift's data plate.

LEVANTE handling ideas	
Lifting system	
Type Tipo Modèle	Forche
Peso Weight Poid	-
Portata Capacity Charge	See lifter max load
Sollevamento Max Lifting Levée	See lifter max lifting



4.2 FORKS WITH PLATFORM

The platform, 600x500mm and 15 mm thick, is made of polyethylene and is fixed to the below sheet metal with M6 countersunk screws.



The capacity is that of the forklift.

Pay attention not to load objects exceeding the recommended dimensions.

Periodically check the clamping and seal of the screws.

Periodically clean with non-abrasive cloths. Avoid using chemically aggressive detergents or solvents.

LEVANTE handling ideas	
Lifting system	
Tipo Type, Modèle	Forche con pianale
Peso Weight, Poids	--
Portata Capacity, Charge	See lifter max load
Sollevarmento Max Lifting, Levée	See lifter max lifting
	L max = 450mm
	H max = 500mm

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If the platform is worn, deformed or cracked, immediately repair it with an original spare part.

Maximum capacity and limits of use are stated on the data plate.

4.3 Responsibilities of the employer

The employer is responsible to ensure that all loading and handling operations are carried out in compliance with the instructions provided by the manufacturer and in total safety for operators involved in the handling operations.

The employer is duty bound to duly instruct personnel on how to use the forklift, informing them of the intended use and residual risks associated with every reasonably foreseeable use.

LEVANTE DECLINES ANY RESPONSIBILITY FOR DAMAGE TO PROPERTY OR INJURY TO PEOPLE CAUSED BY IMPROPER USE OR THE USE EXPRESSLY SPECIFIED FOR THE FORKLIFT.



5. Routine maintenance

A daily check can prevent any damage to your forklift. Particular attention must be dedicated to wheels, rollers, etc, which may be blocked or damaged by residues on the ground during use.

A three-month inspection is recommended of the parts most subject to wear, such as belt, rollers, wheels, bearings and pulleys.

In the case of need for intervention, please contact **LEVANTE S.r.l.**

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If the user fails to comply with this publication, we are not liable for problems or anomalies on the proper operation of the supply and on the validity of the warranty stipulated in the contractual phase.

Daily inspection and maintenance

It is necessary to inspect the device daily, in particular to check rollers, axes, so that dust, wires or similar do not block the rollers during use.

Lubrication

Use motor oil or grease to lubricate all moving parts.



DO NOT USE THE FORKLIFT IF MALFUNCTIONS ARE DETECTED.

DO NOT ATTEMPT TO REPAIR THE DEVICE WITHOUT HAVING BEEN PROPERLY TRAINED AND AUTHORISED .

Below is a list of the inspections and periodic maintenance recommended by LEVANTE.



Always follow the general warnings in par. 1.6, 1.7 and 1.8.

OPERATION	FREQUENCY	PROCEDURES	RIMEDIO
Check fork thickness is greater than 90% of the original thickness at the heel	Monthly	Use a gauge	In case of non-compliance, replace the forks
Check surface cracks of the fork jib cranes	Monthly	Visual inspection	In case of non-compliance, replace the forks
Check the height difference between the tips of the fork jib cranes and the horizontal length of the fork jib crane. Value must be less than 3%.	Monthly	Measure the height difference between the tips and divide by the length of the fork jib crane.	In case of non-compliance, replace the forks
Check the wear of the support belts of the lifting unit	Quarterly	Visual inspection for: 1. signs of cracks 2. wear of fixing 3. fixing, completeness and good condition of the anchoring device	In case of non-compliance, replace the forks
Lubricate the moving parts (mast, guides)	Quarterly	Visual inspection	Grease with motor oil or grease suitable for mechanical parts

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 CLEVER-use&maintenance+spare v.EN201703.08



6. Extraordinary maintenance

The machine extraordinary maintenance (e.g. replacement of actuator, electrical parts, rollers, wheels, belts, bearings, ...) must be carried out by qualified personnel.

It is recommended that extraordinary maintenance, that falls outside the provisions of chapter 4, is carried out by personnel authorised by Levante. It is forbidden to carry out any extraordinary maintenance, repair or replacement, without the direct consent of the manufacturer. If necessary, contact your distributor.

Parts subject to wear and, therefore, potentially subject to extraordinary maintenance are:

- Lifting belt: regularly check the tension and mechanical consistency of the belt.
- Teflon sliding rollers inside the aluminium mast: check the status and wear and keep the sliding channels lubricated.
- Front and pivoting wheels: replace when worn
- Worm screw pinion: it wears over time and it must be replaced at an assistance centre.
- Forks: periodically check the thickness of the forks, if it reduces by 0.5 mm compared to the initial 60 mm, replace the forks unit.
- Parking brake: periodically check the efficiency of the parking brake. If the efficiency showed it was unable to stop the forklift on a gradient of at least 5%, replace the wheels complete with brake.

Use only original spare parts supplied by the manufacturer (see section "SPARE PARTS").

7. Troubleshooting

These cases fall within the competence of maintenance personnel.

NUMBER	FAULT	CAUSE	RIMEDIO
1	The machine will not turn on	1. Power supply problem	1. Check the internal protection fuse 2. Check the state of the batteries
2	The forks do not stop at the maximum and minimum height	1. Incorrect position of the limit switches	1. Check the limit switch micros located in the top and bottom parts of the mast
3	The forks are not lifted	1. The load exceeds the maximum capacity allowed	1. Check the load weight and reduce it if necessary
4	The lifting motor does not start	1. Emergency stop engaged, power supply suspended 2. Voltage too low 3. Disconnected electric cable connectors 4. Faulty motor contactor	1. Turn clockwise to restore power supply 2. Charge 3. Fix them 4. Replace it
5	The batteries do not recharge.	1. The current socket is disconnected 2. Fault on charging circuit 3. Old batteries	1. Reconnect it 2. check the fuse on the charger board; 3. check efficiency of the batteries and replace them, if necessary
6	Forks lifting or lowering stops	1. Inadequate lubrication	1. Grease, inside the aluminium mast, the sliding channels of the forklift to which the forks are applied
7	The actuator becomes noisy after a certain period of use	1. Actuator damaged	2. Contact customer service to service the actuator



8. Ventilation of the forklift loading premises and explosion hazard

During recharging, the batteries emit gases including hydrogen. If the concentration of hydrogen in the air reaches 4%, the hydrogen-air mixture may explode.

The forklift user must take all necessary measures to prevent recharging from generating explosion hazards. The following guidelines do not exempt the user from verifying and adopting the most opportune and recent safety provisions on work environments.

Standards EN 50272-2 and EN 50272-3 require that the hydrogen concentration is kept significantly below the hazard threshold of 4% by properly ventilating the premises where recharging takes place.

The necessary flow of ventilation air, according to the above standards, is calculated with the following:

$$Q = 0,05 * n * I_{gas} * C_{rt} / 1000$$

where:

Q = air flow rate [m³/h]

n = number of battery elements

I_{gas} = current producing gas [mA / Ah]¹

C_{rt} = rated capacity of battery [Ah]

In order to ensure the above air flowrate through natural ventilation, overall section A openings must be present in the battery premises, equal to:

where:

A = section of the ventilation openings (cm²),

¹ In the absence of instructions from the manufacturer, the I_{gas} current value can be obtained from table A for the drive batteries and from table B for the stationary batteries.

When more than one battery is present in the same room, the ventilation flowrate must be calculated as the sum of the individual ventilation air flowrates.

Surface A of the openings must be intended as "free", meaning net of any obstacles to the airflow (grids)

Note: immediately near a battery charging, even in the presence of the above ventilation, Standards EN 50272-2 and EN 50272-3 provide the existence of a hazardous area which, due to its features, must be classified, according to Standard EN 60079-10, as area 1 (place where it is possible, during normal operation, that an explosive atmosphere forms due to the presence of gas).

According to Standard EN 50272-3, distance d for drive batteries is equal to 0.5m.

The distance varies depending on the battery features and, therefore, in the presence of more types of batteries, it must be identified for each of them.

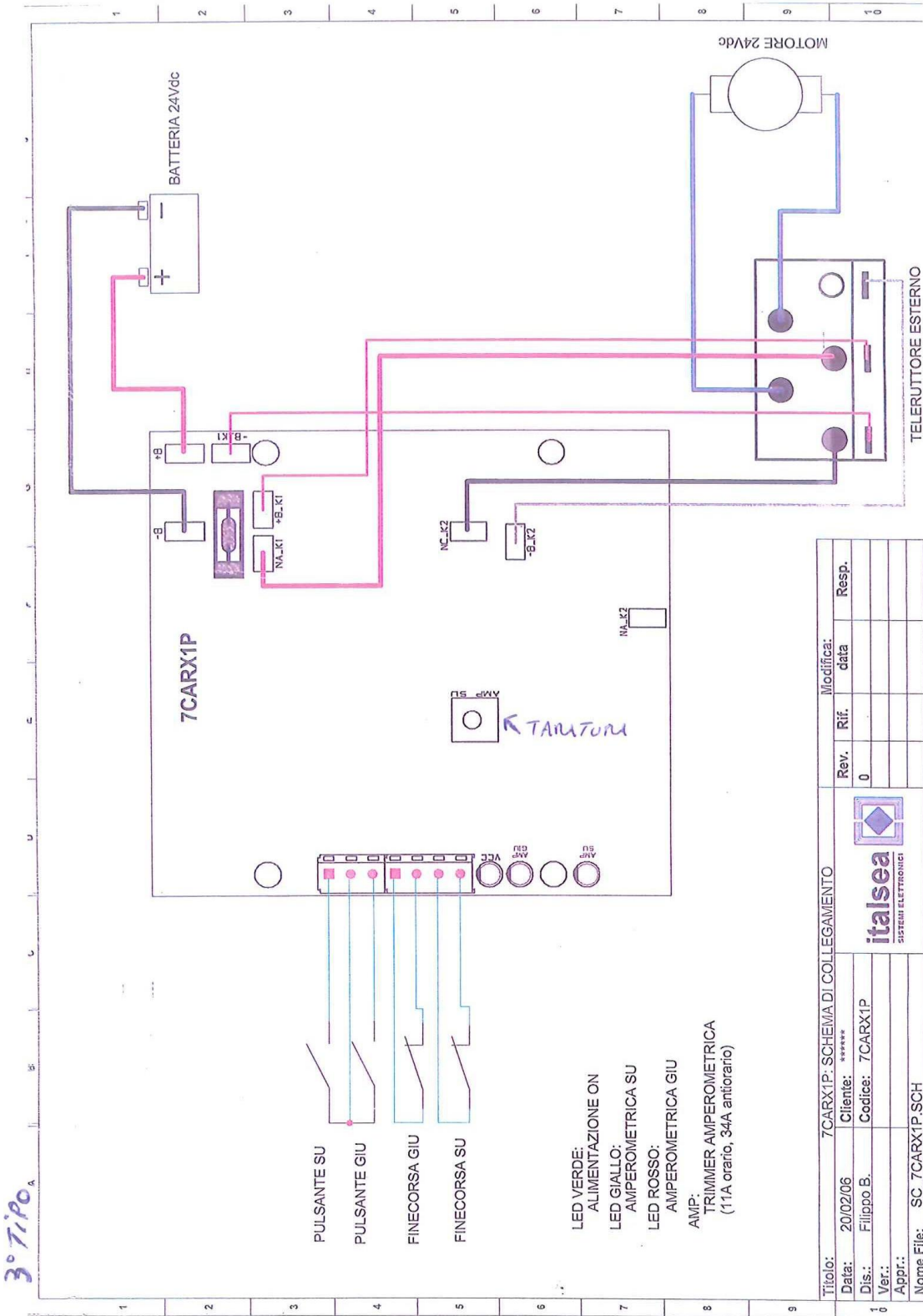
According to Standard EN50272-2, distance d for stationary batteries is identified by the following

formula:
$$d = 28,8 \sqrt[3]{I_{gas}} \sqrt[3]{C_{rt}}$$

With natural and/or artificial ventilation with adequate availability, we can consider, for the purposes of safety, providing around area 1, a boundary area 2.

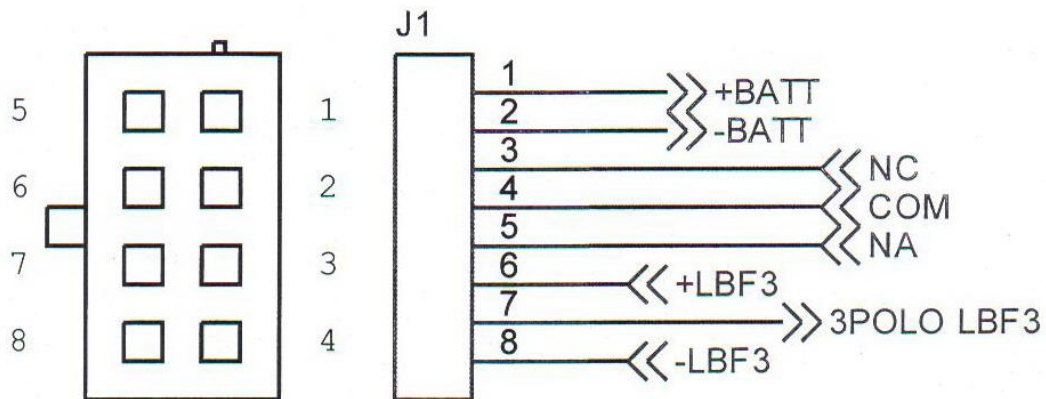


Wiring Diagram



FORKS LOCK

connettore RL3



MOLEX Mini Fit Jr

MOLEX Header 5566 Mini Fit, Jr 8 vie Vertical, Dual Row, Without Pegs

WARNINGS

THE ELECTRIC MOTOR OF THE ACTUATOR IS NOT DESIGNED FOR CONTINUOUS USE. IT CAN BE STRESSED FOR A MAX TIME OF 10 MINUTES, EQUAL TO ABOUT 5 CONSECUTIVE ASCENT AND DESCENT OPERATIONS. AFTER CONTINUOUS USE, THE MOTOR NEEDS TO COOL FOR A TIME EQUAL TO THAT DURING WHICH IT WAS STRESSED. FAILURE TO OBSERVE THIS WARNING CAN SERIOUSLY COMPROMISE THE STATE OF THE MOTOR AND WILL VOID THE WARRANTY.

MAKE SURE THAT THE FORKLIFT IS ON A SOLID AND LEVEL SURFACE BEFORE ACTIVATING THE LIFTING OF THE FORKS.



DICHIARAZIONE DI CONFORMITA' – DECLARATION OF CONFORMITY

DECLARATION DE CONFORMITE' – KONFORMITAETSERKLAERUNG
DECLARACION DE CONFORMIDAD – VERKLARING VAN OVEREENKOMST



21

- IT** Si attesta che la macchina qui di seguito descritta è del tutto conforme ai requisiti della Direttiva Macchine 2006/42/CE e della Direttiva EMC 2004/108/CE.
EN We hereby certify that the machine specified hereunder is in compliance with all respects to the requirements of the Machinery Directive 2006/42/EC and the EMC Directive 2004/108/EC.
FR On atteste que la machine spécifiée ci-après est en tout conforme aux exigences de la Directive Machines 2006/42/CE et de la Directive EMC 2004/108/CE.
DE Wir bescheinigen dass die Maschine, unten weiter spezifiziert, mit den Eigenschaften der Maschinen Richtlinie 2006/42/EG und der EMC Richtlinie 2004/108/EG.
ES Se certifica que la maquina aquí abajo especificada está conforme a los requisitos de la Directiva Maquinas 2006/42/CE y de la Directiva EMC 2004/108/CE.
NL Hierbij verklaren wij, dat de hieronder gespecificeerde machine voldoet aan alle Machine Richtlijn 2006/42/EG en de EMC Richtlijn 2004/108/EG.

1. Categoria - Category - Catégorie - Kategorie - Categoria - Categorie:

transpallets manuali - hand pallet trucks - transpalettes - Gabelhubwagen - Transpaletas

2. Costruttore - Manufacturer - Constructeur - Hersteller - Constructor - Fabrikant:

LEVANTE SRL

3. Tipo - Type - Type - Typ - Modelo - Type

CLEVER

4. Matricola - Serial number - Matricule - Seriennummer - Numero de Serie - Serie nummer:

5. Anno di costruzione - Year of manufacture - Année de construction - Baujahr - Ano de construcçion - Bouwjaar:

Data - Date - Datum:

Firma – Signature – Unterschrift – Handtekening
Lino Pelloni
(Legale Rappresentante)

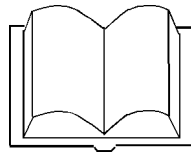
persona autorizzata a costituire il fascicolo tecnico
person authorised to compile the technical file
personne autorisée à constituer le dossier technique
Person, die bevollmächtigt ist, die technischen Unterlagen zusammenzustellen
persona facultada para elaborar el expediente técnico
degene die gemachtigd is het technisch dossier samen te stellen

Lino Pelloni
Via del Lavoro 9/11 – 46035 Ostiglia MN



RICAMBI – SPARE PARTS – ERSATZTEILE – REPUESTOS – PIECES

22



CLEVER

The replacement and assembly of spare parts is the task of personnel specialising in maintenance and, therefore, also on the devices and standards regulating the operator's safety.



RICAMBI – SPARE PARTS

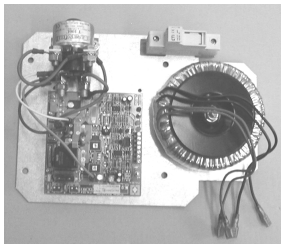
23



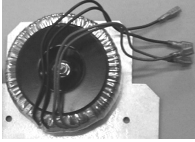
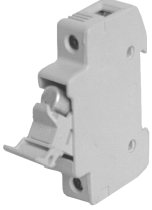

	<p>30111N = 02.0013.0018 Cavo Rete 3x0,75 Mm² Spiralato Con Spina Schuko (L = 2,5 Mt.) Spiral Mains Cable 3x0.75 Mm² With Schuko Plug (2.5 M Long) Les Forces En spirale Câblent 3x0.75 Mm² Avec La Prise De Schuko (2.5M) 3x0,75 Mm² Spiralförmige Kabel Mit Schuko Stecker (L = 2,5 Mt.) cable spiral de red 3x0,75 Mm² Schuko (L = 2,5 Mt.)</p>
	<p>30111BN = 02.0013.0017 Presa per cavo spiralato Plug for Spiral Mains Cable Prise pour le câble en spirale Stecker für Spirale Enchufe para el cable espiral</p>
	<p>30067N = 06.0069.0056 Interruttore A Chiave Key Switch Commutateur Principal Schlüssel Schalter Interruptor Dominante</p>
	<p>30107N = 04.0017.0493 Manipolatore 800 Em-Jr2 Completo Di Contatto N.A. 800 E-3x10 Manipulator 800 Em-Jr2 Complete With N.A. Contact 800 E-3x10 Le Manipulateur 800 Em-Jr2 Accomplissent N.A. Contact 800 E-3x10 Manipulator 800 Em-Jr2 Komplet Mit Kontakte N.A. 800 E-3x10 Manipulador completo</p>
	<p>99101N = 06.0040.0010 Indicatore dell'autonomia della batteria Battery autonomy indicator Batterie anzeiger Indicatur batterie Indicador bateria</p>
	<p>18131N = 06.0043.0024 Pannello In Poliestere (Pulsante + 3 Led) Polyester Panel (Button + 3 Leds) Panneau De Polyester (Bouton + 3 LED) Poly Panel (Taste + 3 Leds) Panel adesivo</p>
	<p>62046N = 06.0069.0136 Caricabatteria Switching 24v/6 A 24v/6a Battery Charger 24v/6a Chargeur De Batterie Ladegeraet Karte 24v/6 A Cargador</p>



Any repairs must be carried out by authorised personnel only



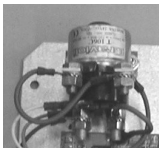


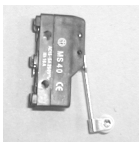
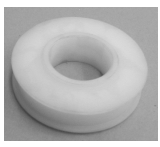




	<p>06.0032.0029 Batteria Ermetica 12v/18ah (3ds12/40) Sealed Battery 12v/18ah (3ds12/40) Batterie Scellée 12v/18ah (3ds12/40) 12v/40ah (3ds12/18) Dichtbatterie- bateria sellada 12v/18ah (3ds12/40)</p>
	<p>06.0048.0208 Cofano Posteriore In Abs Back Cover In Abs Couverture Arrière En ABS Abs Haube Cofre ABS</p>
	<p>90103N = 06.0069.0085 Trasformatore toroidale Toroidal transformer Transformateur de toroidal Toroidal Transformator Transformador de Toroidal</p>
	<p>30108N = 06.0069.0106 Portafusibile Sezionabile 10x38 PS 10-1 Polo 32A Fuse Holder 10x38 PS 10-1 Pole 32A Support 10x38 Picoseconde De Fusible Polonais 10-1 32A Versicherungshalter 10x38 PS 10-1 Polo 32A sostenedor del fusible</p>
	<p>30109N = 06.0069.0107 Fusibile 10,3x38 Chgg 25A Fuse 10.3x38 Chgg 25 A Fusible 10.3x38 Chgg 25 A Versicherung 10,3x38 Chgg 25° Fusible</p>



Any repairs must be carried out by authorised personnel only



	<p>90104N = ALBRIGHT 06.0069.0002 Teleruttore incluso in 40121N Included in 40121N Inklusiert. 40121N Compris en 40121N Encluido en40121N</p>
	<p>40121N = 06.0069.0145 new Scheda Elettronica 7carx Per Controllo Attuatore + teleruttore 7carx Electronic Card For Actuator Control + switch Carte 7carx Électronique Pour La Commande De Déclencheur + commutat. Elektr. Karte 7carx Fuer Aktuator Kontrolle + Schalter Carta electronica + contactor</p>
	<p>06.0085.0151 H 2900 Attuatore SIR A0-2/C 24 VDC Actuator SIR A0-2/C 24 VDC Déclencheur SIR A0-2/C 24 VDC SIR A0-2/C 24 VDC Aktuator Actuator</p>
	<p>99106N = 06.0069.0089 Micro fine corsa Limit switch Commutateur de limite Begrenzungsschalter Interruptor de límite</p>
	<p>09025N = 06.0054.0021 Puleggia Pulley Poulie Riemenscheibe Polea</p>
	<p>10000N = 06.0050.0028 Cuscinetto Per Puleggia Bearing For Pulley Soutenir Pour La Poulie Pulley Lager Cojinete pole</p>
	<p>02082N = 04.0015.0283.Z Perno Per Puleggia Pulley Pin goupille de poulie Pulley Stift Perno polea</p>



	<p>04.0017.1186 Cinghia Completa Di Attacchi Belt Equipped With Connectors Ceinture Équipée Des Connecteurs Gurt Komplett Mit Attachments</p>	
	<p>99107N = 11.0020.0263.V Carrello porta accessori Trolley for fittings Ceinture Équipée Des Connecteurs Correa Equipada De los Conectores Riemen Ausgerüstet Mit Steckern</p>	
	<p>99108N = 06.0054.0022 Rullo carrello porta accessori Trolley roller rouleau de chariot Laufkatzerolle rodillo de la carretilla</p>	
	<p>12454N = 11.0005.0137.V Forca Di Sollevamento Doppia Double Lifting Fork Double Fourchette De Levage Gabeln Horquillas</p>	
	<p>06.0083.0130.V Timone Tiller Deichsel Timon Timon</p>	



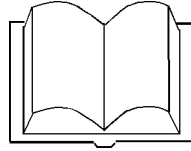
Any repairs must be carried out by authorised personnel only



	<p>310GC Ruota Posteriore alluminio più gomma Rear rubber Wheel Roue Arrière Rueda Listino/Pice list/Liste de Prix/Preisliste/Lista de Precios: € 32,15</p>
	<p>06.0084.0085 Ruota Anteriore Superelan Completa pivottante Front Wheel Superelan Complete Roue Avant Superelan Complet Komplett Vorne Rad Superelan Rueda Listino/Pice list/Liste de Prix/Preisliste/Lista de Precios: € 13.90</p>
	<p>04.0015.0433 Perno Per Ruota Posteriore Front Wheel Hub Moyeu Avant De Roue Vorne Rad Stift Perno Listino/Pice list/Liste de Prix/Preisliste/Lista de Precios: € 15,50</p>



APPENDIX



SPECIAL VERSIONS



SPECIAL ICA



Clever with push-button panel and hooking equipment, lifting and handling of coffee dosing machines (forming tube).

TECHNICAL SPECIFICATIONS AND LIMITS OF USE

MAX. LIFTING HEIGHT: 2900mm

MAX CAPACITY: 80Kg

It is strictly prohibited to use it for activities other than those specified.

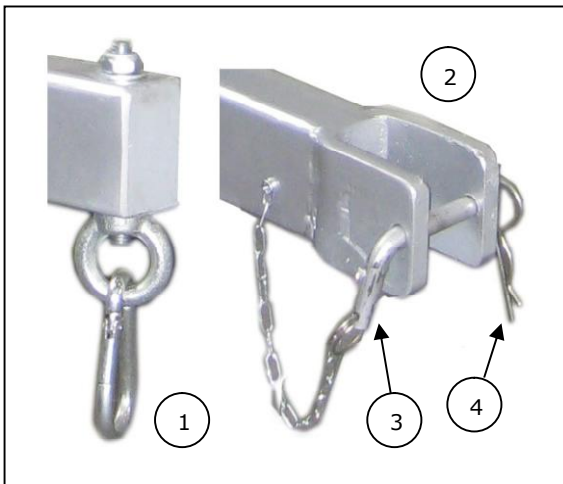
LOAD HANDLING

Make sure the load complies with the dimensions and weight indicated on the data plate. Load the dosing machine by hooking it onto the special carabiners (1) provided on the upper eyebolts and lower forks (2) of the lifting device.

After hooking on the load to the forks and positioning the pin (3), insert the safety

cotter pins (4);

Use the crank to tilt the device in order to enable correct positioning of the load in the machine.



FIXED SCAFFOLD VERSION AND WIDENED SPOKES



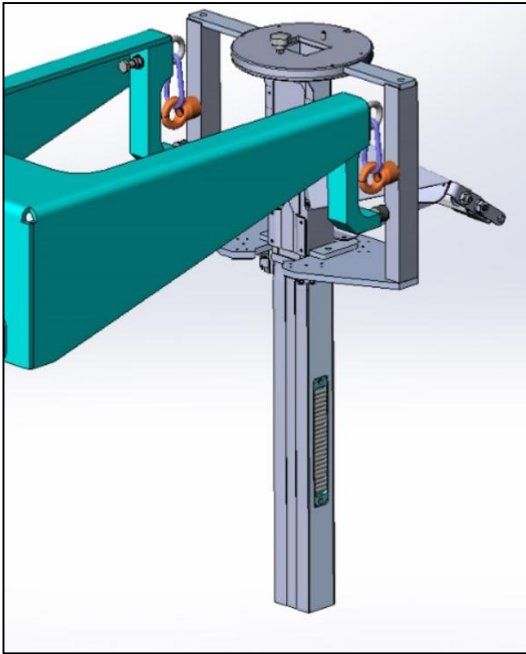
MAX CAPACITY: 50Kg

Hook the dosing machine to the carabiners using the supplied eyebolts.

Make sure the load is stably anchored and coupled to rubber supports.

All operations carried out must be performed with the utmost caution, avoiding excessive speed, harsh braking and sudden changes of direction. Always proceed drive at low speed and with the load as low as possible. Before going ahead with handling, always make sure there is no one right near the forklift and that the manoeuvring area is clear from obstacles.





Position the load as shown in the figure.

Be careful not to oscillate or knock the load during handling. Any impacts may move the forming tube from the L-shaped stabilising brackets equipped with rubber washers, thus resulting in the risk of unbalancing the load.

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OPTIONAL REMOTE PUSH-BUTTON PANEL



Load control (ascent and descent) can be carried out through a specific remote push-button panel connected to the lifter via an extendible cable (Max L=5m).

The controls are hold-to-run: pressing the ascent and descent buttons moves the loading platform; releasing the buttons stops the platform in a fixed, stable position.

The red emergency button disables start-ups and can be used in case of danger or a fault (for example, in case of a control system failure).

STACKER HANDLING AND PUSH-BUTTON PANEL CONTROL MUST BE CARRIED OUT BY THE SAME PERSON, WHO MUST BE DULY TRAINED FOR THE PURPOSE.

IT IS STRICTLY FORBIDDEN TO TAKE CONTROL OF THE PUSH-BUTTON PANEL OR CONSOLE WHILE AN OPERATOR IS CARRYING OUT OPERATIONS ON THE LADDER! DURING LOADING AND UNLOADING OPERATIONS, PLACE THE PUSH-BUTTON PANEL IN A VISIBLE POSITION!

Before going ahead with handling, always make sure there is no one right near the forklift and that the manoeuvring area is clear from obstacles.

LEVANTE DECLINES ANY RESPONSIBILITY FOR DAMAGE TO PROPERTY OR INJURY TO PEOPLE CAUSED BY IMPROPER USE OR THE USE EXPRESSLY SPECIFIED FOR THE FORKLIFT.

