LIFTING XPERTS

pewag levo

INSTRUCTION MANUAL
LOAD BALANCER

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01 GENERAL INSTRUCTIONS

General instructions

For the safe use of lifting tools, the topics covered in this chapter are of great importance:
- instructions for first use;
- instructions for each use;
- instructions for lifting loads;
- general instructions;

Directions for first use

Before first use, it must be checked that:
- the lifting tool meets the order specification;
- the CE declaration/certificate is present;
- the WLL and marks correspond to the CE marking/certificate data;
- all specifications of the lifting tool have been entered in a central register;
- the user manual has been read and observed before commissioning.

Directions for each use

Before each use, it must be checked that the lifting equipment:
- has a WLL that is suitable for the intended application;
- shows no damage or other signs of rejection;
- is used within the test intervals laid down for this purpose;
- is only used by authorized and informed persons.

Instructions for lifting of load Before lifting the load, it must be checked that: · the lifting equipment is not overloaded; · the lifting tool is not twisted or knotted; · the lifting hook is loaded in the bearing point and not on the tip; · the lifting hook is freely movable and rotatable; · all lifting hooks are equipped with safety latch; · the top shank of the lifting tool is freely movable and fully load-bearing in the lifting hook; · the load is freely movable; · only suitable lifting points are used and not attached to binders of the packaging; · the lifting tool that comes into contact with the load is protected, especially at sharp corners; · the use of lifting tools under chemical influences, e.g. acids, alkalis and gases, restricted or prohibited.

01 GENERAL INSTRUCTIONS

General instructions

There is also a series of general instructions to give:
• If the load is ready to be lifted, the lifting tools should be carefully tensioned. After the load is just detached from the surface, it must be checked that the lifting tools have been properly and safely connected and that the load hangs horizontally.
• If the load threatens to tip over, it must be put down and the lifting tools must be connected in a better way.
• With strong accelerations or decelerations of the load, large dynamic forces can be exerted in the
lifting tools (impact or shock load).
• To prevent injuries to hands and other parts of the body, keep a safe distance from the load and lifting equipment when lifting.

Lifting tools can be struck to the load in different ways:
•Direct strike at lifting eyes: the hooks must fit snugly so that the bearing point or plane is in the throat of the hook. Taxing a hook on the tip is prohibited.
•When used in a noosed way, the noose or ling is wrapped around the load and one end is inserted through the eye of the other end. In the case of slings, the WLL should be reduced by 20%.
•When several lifting tools are poached for one load, care should be taken not to create torsion on the load as a result of slinging. So there has to be parallel poaching. It should also be checked whether the opening of each noose can adjust to an outer angle of 60°.
• In case of double use, 'in the trousers' or 'in the basket', the lifting tool is passed under the load and hung in the lifting hook with both ends. In general, this method of striking with two slings is carried out in pairs. This method is unsuitable for loose bundles. • In the case of multiple slings/chains, it is assumed that all parts are used. In practice, there are also situations where this is not the case, for example, only two parts of a quadrilateral are used. The WLL should be reduced in those cases. The wedges that are not used should not linger loose, as this causes the danger of accidental hooking. By hanging the unsused hooks in the top scale, this danger can be prevented. • When hitting multiple slings/chains, the hooks must always point outwards with the tip. • When using multiple slings/chains (in whole or in part), the symmetry of the load plays an important role. This depends on the length per part in combination with the centre of gravity of the load. • If, in multi-slings/chains, the individual parts are under different outer corners, the greatest load occurs in the part with the smallest outer angle. If the outer angle of a part is 0°, the entire load hangs in that one perpendicular part. • If, in the case of multiple slings/chains, the load is less than 80% of the WLL of the lifting tool and the outer angle is less than 15° at three and four-slings/chains and the inner corners do not differ by more than 15°, then the load can be considered symmetrical. If one or more of these conditions are not met, the load can be considered asymmetrical and the WLL must be reduced by 50%.

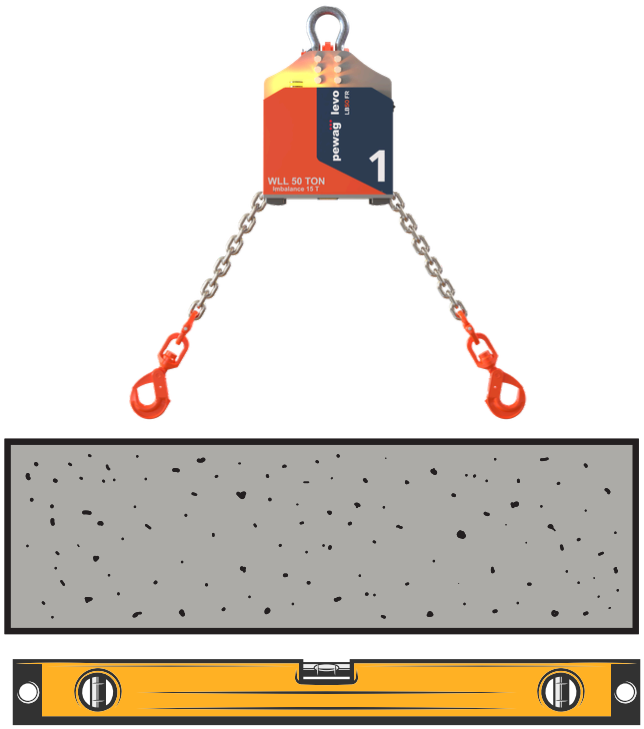
02 DESCRIPTION LIFTING EQUIPMENT

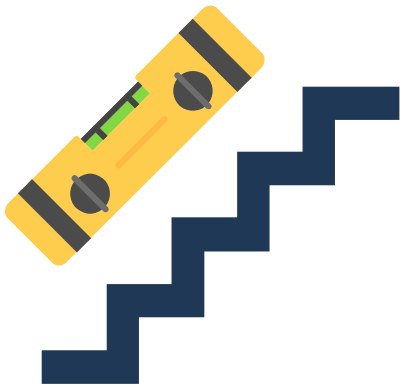
Description lifting equipment

The lifting equipment is calculated and designed according to the most recent standard NEN EN 13155:2020 and the ASME BTH-1 – 2020 so that it can be used safely.
This applies to the use, conditions and regulations described in this manual .

The levo load balancer is suitable for various applications where the object to be hoisted has to be lifted horizontally or at a certain angle.

With the leveller you can easily install walls or stairs for example. With the radio control, you can hang the object to be lifted horizontally or at a slight angle to simplify installation.





03 USAGE LIFTING EQUIPMENT

Usage lifting equipment

The lifting tool may only be used to lift objects for which it is designed.
It is forbidden to exceed the maximum workload.
It is forbidden to transport people with this lifting equipment.
It is forbidden at all times to be under the lifting load during lifting work.
It is forbidden to strap around the lifting equipment.
Straps may only me placed inside the shackles/lifting eyes.




If there is an overload or deformation, please contact the manufacturer of the lifting equipment.
If there is overload or deformation, the work is prohibited from working with the lifting equipment.

Auxiliary materials such as harp fasteners, chain work, etc. must meet the legal requirements and must be inspected.
Stop the lifting work in case of a strong wind of wind force 7 or above.
Make clear arm movements that are clearly visible to the crane operator, or use a walkie-talkie.

Only 1 person gives the directions.
Make sure that the lifting equipment has been inspected and the certificate is present or digitally available.

Note :
People near the work must use the appropriate protective equipment.

If the chain is attached at height, it must be ensured that there is no danger of a fall and that the person is secured against a fall from a height of more than 2.5 metres.

A safety helmet and safety shoes must also be worn while working.
Never walk under the object to be hoisted.




03 USAGE LIFTING EQUIPMENT

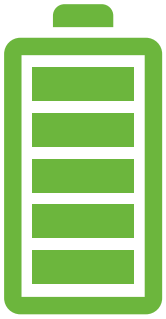
Usage lifting equipment

Every user of the leveller must have read the manual and be aware of how the leveller works.

Before lifting with the leveller, carry out daily checks before starting work.

If the voltage is below the 11 Volt in rest mode then you have to charge the battery first.

If the visual checks are approved, switch on the leveller with the battery switch behind the flap on the leveller.
The minium working voltage of the leveller is 11 Volt , this is indicated on the voltage meter.



Attach the load to be lifted to the safety lifting hooks of the leveller with approved lifting equipment in accordance with the guidelines in your country.

It is prohibited to hang the load on one lifting hook, always use both lifting hooks to lift the load.

Slowly apply tension to the chains so that the object to be hoisted hangs clear of the ground and see which angle or side needs to be levelled. Press the button to operate the desired direction and hang the object level or in the desired angle.

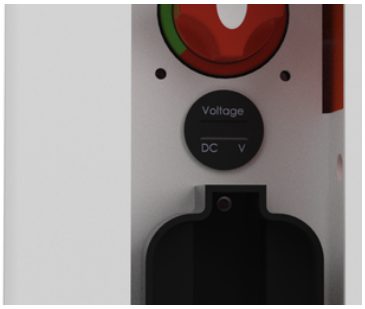
03 USAGE LIFTING EQUIPMENT

Operation of the leveller

Behind the flap is the control panel.
It is equipped with :

- **On**/**off** switch
- Voltage indicator
- Charging cable for the battery charger
- Holder for radio control

Turn the on/off switch to green/on and the leveller is ready for use when the daily inspection points have been completed before use.



Visual indication direction

With the indication stickers **1** and **2** on the leveller, you can see from a long distance whether the chainwheel is going left or right.
When pressing button **1** up on the radio control, then the chain on side **1** starts lifting.
When button **2** up is pressed, side **2** will obviously hoist

As a result, the operator is always aware of the action being remotely controlled.

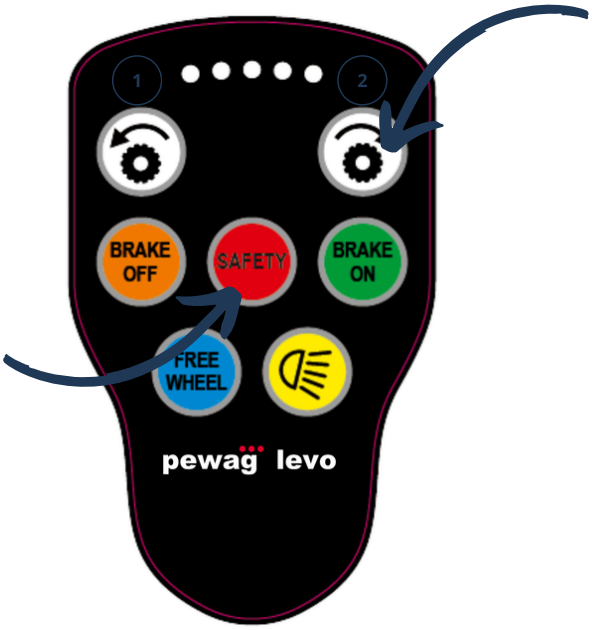
Operation of the leveller

To operate the sprocket you must first press the safety button at all times. Only then can the desired direction be selected.
These two buttons must be pressed simultaneously.
This safety button is there to prevent unwanted turning/operation of the leveller.

See example on the image below

Radio control leveller

Free release version



Radio control leveller

Standard version

Working lights

All the levellers are equipped with 2 working lights on the underside of the leveller.
These can easily be switched on and off using the yellow button on the radio control.
This facilitates installation in dark conditions, such as in a stairwell or at night.

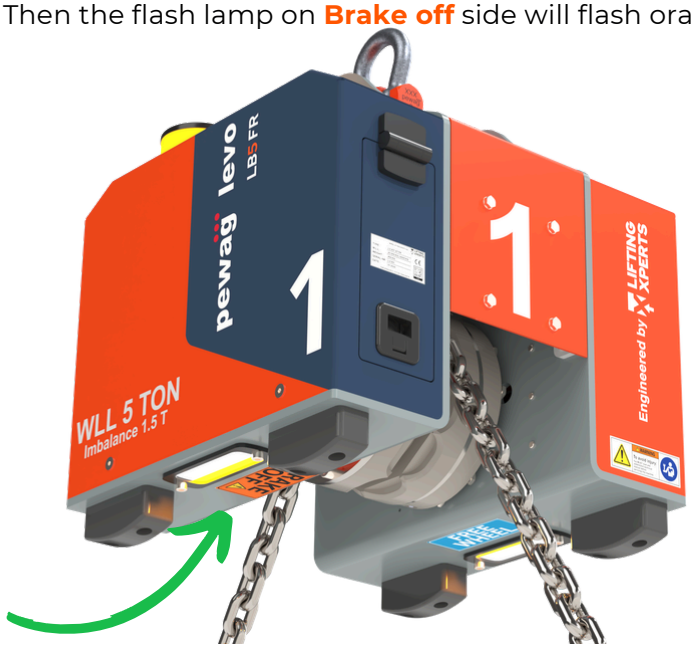
Operation of the free wheel function

FR levellers are equipped with a freewheeling function.
In this mode, the brake is released by remote control.
In freewheel mode, lying walls on a trailer, for example, can be lifted from horizontal to vertical more quickly.
As soon as the wall hangs in balance, the freewheel function can be switched off and the wall can be hung level or at an angle by turning the chain wheel in the desired direction.

It is forbidden to release the brake with an uneven load during lifting operations !

First press the **safety button** and then the **brake off** button.
This will release the brake.
Then press the **safety button** and the **free wheel** button simultaneously.
This opens the ports to allow the oil to flow freely through the hydraulic system.

Step 1
Press and hold the **Safety button** and **Brake off** simultaneously for 1 second.
Then the flash lamp on **Brake off** side will flash orange.

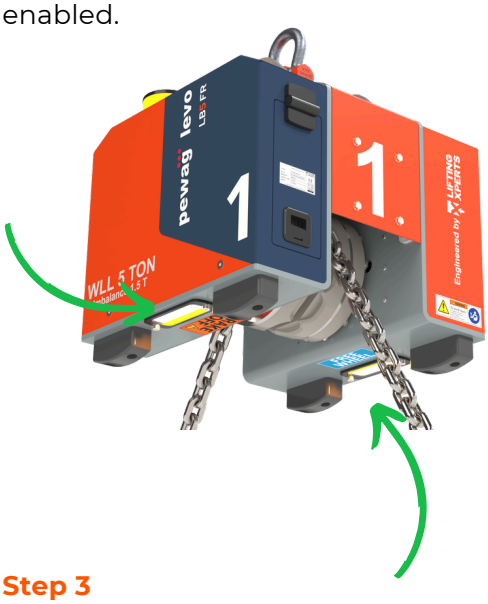


03 USAGE LIFTING EQUIPMENT

Step 2

Press and hold the **Safety button** and **Free wheel** simultaneously for 1 second.
Then the flash lamp on **Free wheel** side will flash orange.

If the lights flash on both sides and top side **orange**, the freewheel is enabled.



Step 3

To reactivate the brake, press the **safety button** and **brake on**.
Then the **safety button** and **free wheel** button to close the gates again.When the flash lights are off, the system is closed again and the load can be hung level or at an angle by turning the sprocket clockwise or anti-clockwise.

04 MAINTENANCE

Maintenance

The lifting equipment must be inspected visually before each use. Pay attention to bolts and nuts, locking pins and the normality of the whole.
The moving parts must be lubricated once a month or daily with intensive use.
Checkpoints:
·Presence and proper functioning of locking pins and locking levers.
·Check harp closures and securing.
·Check any split pins and locking clips.
·Lubricate and control moving and sliding parts.
·Checking nuts counterweight
·Bolts and nuts lifting hook
·Possible distortion
·Wear lifting eyes (max 10 %)
Carry out maintenance work only if it is completely detached from the load.
Have the lifting equipment visually inspected 1 x per year by a certified person or company.

Examples of checkpoints:

Lifting eyes on compensator and cylinders maximum wear 10 %

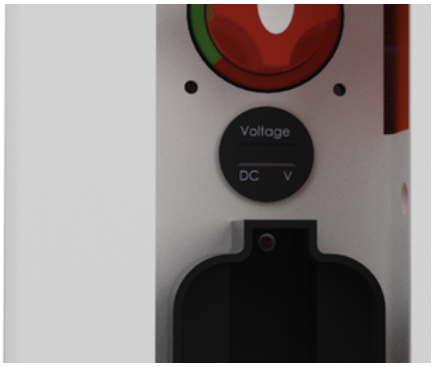
Hinge and shackle pins always fitted with nut and cotter pin or locking clip

04 MAINTENANCE

Battery

The leveller is equipped with 1 hydraulic power packs with 2 AGM 12V -35Ah battery.
These can be easily charged with the built-in C-tek battery charger mounted directly on the battery poles.

Our advice is to charge the leveller daily after working hours so that it can be used all day in normal operation. For frequent compensation work, we also recommend charging during breaks. This ensures continuous operation.
Never discharge the battery beyond 9.60V, the voltage can be read on the built-in voltage meter in the compensator.



If the battery is defective, replace it with a battery with the same values as the original and return the defective battery to an authorised battery collection point. Originally, a 12 V - 35Ah AGM battery is used.

04 MAINTENANCE

Battery information

Build in battery is 12 V - 35 Ah AGM
Never discharge the battery beyond 9.60V, the voltage can be read on the built-in voltage meter in the compensator.

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