elebia®

smart lifting solutions

EN

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This user's manual covers the Application, Operation, Use and Maintenance of the elebia NEO50 & NEO60 lifting hook.

⚠ NOTE: Disconnect power sources prior to handling.

Warning

Prior to operation and/or maintenance of elebia products, read and understand the information provided in this user's manual.
Failure to review and utilize recommended applications, operation and maintenance instructions may result in serious injury to operator and others.
It is the sole responsibility of the operator to ensure the correct manipulation and handling of any load while using any of the elebia products. Automated processes in any lifting operation, whether attaching and/or releasing any load, or other, must always be submitted to visual inspection of the operator.
elebia designs and produces automated lifting solutions which enhance safety and productivity but can never replace the responsible and provident handling of all lifting processes.

General Information regarding the NEO50 & NEO60 lifting hook

Users must be aware of all operating conditions. Please contact our technical service in case of doubts and/or questions.

- The NEO50 & NEO60 lifting hook has specifically been designed for the vertical lifting and transporting/moving of loads.
- The NEO50 lifting hook has a Working Load Limit of 50.000 kg. / 110.231 lb.
- The NEO50 lifting hook has a safety factor of 4:1.
- The NEO60 lifting hook has a Working Load Limit of 60.000 kg. / 132.277 lb.
- The NEO60 lifting hook has a safety factor of 3:1.
- IMPORTANT: The life span of the NEO60 lifting hook is limited to 20.000 lifts.

General Precautions

Inappropriate use of the NEO50 & NEO60 lifting hook may give place to potentially dangerous situations and, if not prevented, these could lead to death or serious injury. To avoid such situations we encourage to meet the following instructions:

1. Always read the user's manual instructions before using the NEO lifting hook.
2. Any operator must be familiarised with the NEO lifting hook's operation controls, procedures and warnings.
3. DO NOT operate the NEO lifting hook before having completely read and understood the manufacturer's user manual and instructions.
4. DO NOT operate the NEO lifting hook if it has been altered without the manufacturer's approval.
5. DO NOT operate the NEO lifting hook if it is not working properly or if working unusually.
6. DO NOT operate the NEO lifting hook nor repair it if it is damaged or lacks components.

7. DO NOT lift more than the Working Load Limit indicated per NEO lifting hook and in the CE stamp.
8. DO NOT use the NEO lifting hook to lift, sustain or transport people.
9. DO NOT lift loads over people and ensure that people remain at a distance from the load.
10. DO NOT operate the NEO lifting hook unless all people are, and remain outside, the area of the sustained load.
11. DO NOT operate the NEO lifting hook if there are people touching or manipulating it.
12. DO NOT lift loads unless the load slings, chain slings or other accessories are of the correct size and suitably fastened to the NEO lifting hook.
13. DO NOT operate the NEO lifting hook with twisted, tangled, damaged or worn load slings, chain slings or other means and/or lifting accessories.
14. DO NOT lift the load until the closure system of the NEO lifting hook is confirmed locked.
15. DO NOT operate the NEO lifting hook if it does not meet the lifting procedure specified in this user manual.
16. DO NOT leave the weight sustained on the NEO lifting hook unattended unless specific precautions have been taken.
17. DO NOT allow the use of the NEO lifting hook to make electrical or earth contact in welding operations.
18. DO NOT allow the NEO lifting hook or lifting chains to be touched by a live welding electrode.
19. DO NOT withdraw nor cover the warning signs (i.e. LED Status Indicator, Laser Pointer) of the NEO lifting hook.
20. DO NOT operate the NEO lifting hook if it lacks the safety signs or if they are illegible.
21. DO NOT modify the NEO lifting hook (by welding, grinding, etc.), as this can adversely affect its operation and safety.
22. Provide notification of any malfunction or abnormal performance of the NEO lifting hook after it has been disconnected for its repair.
23. The NEO lifting hook must be stored clean and in a non-humid area to protect against corrosion.
24. DO NOT store the NEO lifting hook with the battery inserted.
25. The NEO lifting hook carries a laser pointer. Avoid exposure and do not stare into beam. Always be aware of the beam location. Keep it away from people's eyes and head. Watch out for reflected beams from glass and shiny surfaces.

Restrictions

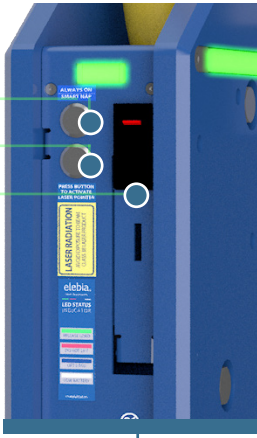
· Influences resulting from temperature

The elebia NEO lifting hook has been designed to be used in normal atmospheric conditions and in a temperature range from -20 ºC to 60 ºC */ -4 ºF to 140 ºF.* The NEO lifting hook must not be used if these conditions are not met.

· Influences from acids/alkalines and chemicals

The elebia NEO lifting hook must not be exposed to acids/alkalines or their vapours, as certain production methods may release acids and/or vapours.

Main Features of the NEO50/NEO60 Lifting Hook



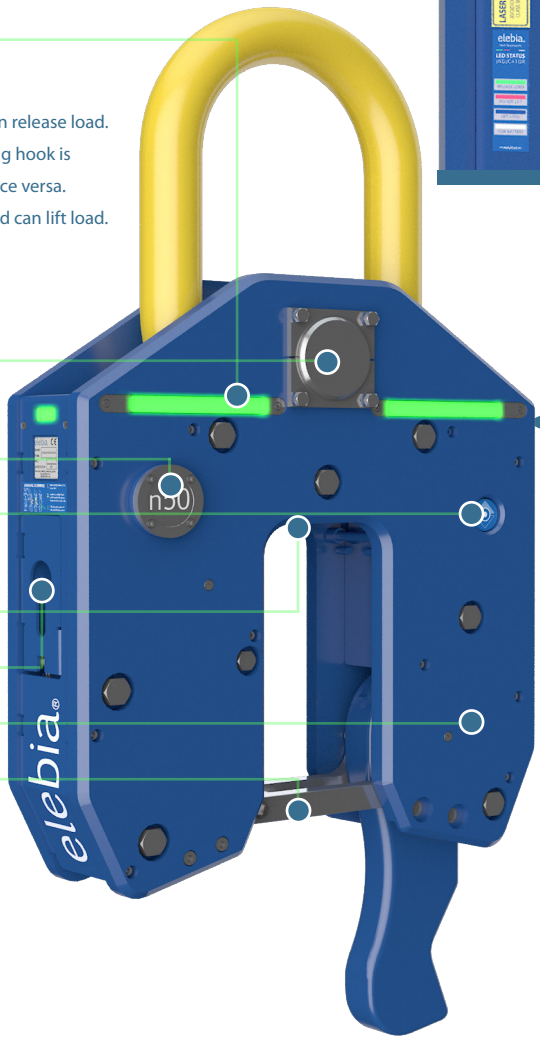
Always On/Smart Nap Button

Laser Pointer Button

High Capacity Battery

High Brightness
LED Status Indicator

Green: The lifting hook is unlocked and can release load.
Red: Intermediate status. Do Not Lift! Lifting hook is transitioning from unlocked to locked or vice versa.
Blue: The lifting hook is securely locked and can lift load.
White: Low battery indicator.



Load Cell*

Position Encoder

Manual
Operation Button

Laser Pointer*

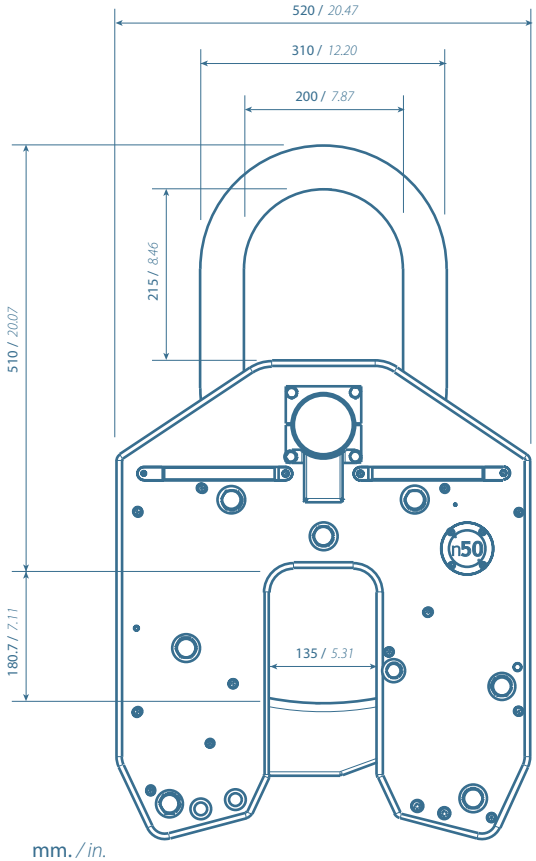
Manual Override

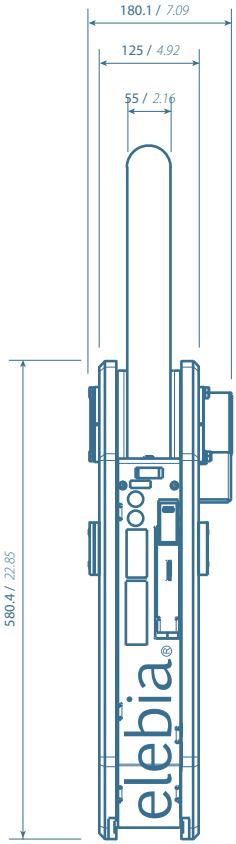
Autoclose Sensor

Trigger

* This feature is optional

Specifications





mm. / *in.*

135 kg. / *297.60 lb.*

Regulatory Standards

The NEO50 & NEO60 lifting hooks certify with the following regulatory standards

NEO50:
EN 10204 3.1.B., ETSI EN 300 220-1 V3.1.1., ETSI EN 300 220-2 V3.1.1., ETSI EN 303 446-1 V1.1.0., ETSI EN 303 446-2 V1.1.0., UNE-EN 1050, UNE-EN 13135:2013, UNE-EN 60730-1:2013

NEO50 & NEO60:
UNE-EN60204-1:2007, UNE-EN 61000-6-4:2007, UNE-EN 61000-6-2:2006, UNE-EN ISO12100:2012

NEO60:
UNE-EN 13155:2004+A2

Directive on Machine Safety (D2006/42/EC).
EMC Directive (2014/30/EU).
Low Voltage Directive (2014/35/EU).
Radio Equipment Directive (2014/53/EU).
Assurance of Production Quality in accordance with ISO9001.
ARIB Construction Design Certification Number 203-JN0689.

FCC Identifier 2ACLHEVO for Equipment Class: Digital Transmission System.
Each mechanism is delivered with the CE stamp and a declaration of CE conformity.
elebia is a member of F.E.M. (European Federation of Materials Handling).

Remote Control

The NEO50 & NEO60 lifting hook can be paired to the eMAX remote control, the eMINI remote control and/ or the eINST installable remote control.

eMINI

The eMINI is a small and compact remote control. With the eMINI remote control, the operator can open and close the NEO lifting hook and control its battery level. The eMINI also displays sensor information and maintenance messages.

For more information on the eMINI remote control, please refer to the eMINI remote control user manual (downloadable from https://elebia.com/downloads/)

Working Modes

The remote can work in 2 different modes:

> **'One button' mode:**
'elebia' button: locks and unlocks the NEO lifting hook.
> **'Two buttons' mode:**
'elebia' button: locks the NEO lifting hook
'mode' button: unlocks the NEO lifting hook

To switch between modes, press and hold the 'elebia' button for 10 seconds.

Display Information

0 to 9:	Battery level of the NEO lifting hook
A:	Low battery level of the eMINI remote control
C:	Maintenance review of the NEO lifting hook
1b:	One button mode
2b:	Two buttons mode
b:	The eMINI remote control does not detect the NEO lifting hook - battery is not inserted - battery is off - battery is discharged

Power Supply	1 3V lithium battery (CR2032)
Available Code Combinations	65.536 different combinations
Detection of Errors in Transmission	2 CRC bytes + Forward Error Correction
Buttons	2
Frequency Selection	1
Frequencies	868 MHz / 924.1 MHz
Communication	Bi-directional return of receiver battery status
Radiated Power	under 5 dBm
Antenna	Printed circuit
Range	100 metres */ 330 Feet*
Working Temperature	-20 ºC to 85 ºC */ -4 ºF to 185 ºF*
Dimensions	Minitel box (68 x 52 x 17 mm. */ 2.68 x 2.05 x 0.67 in.)*

eINST

The NEO lifting hook can also be controlled using a free channel of the crane's master control. The eINST remote control has to be placed in the crane relay cabinet, where only simple wiring is needed. It may be used by pairing to a free channel of the crane's master control. It is compatible with all cranes.
The eINST remote control can block the upward movement of the crane when the NEO lifting hook is in intermediate position.

Available as 24 V DC or 48 V DC
Dimensions: 80 x 140 x 45 mm. / *3.15 x 5.51 x 1.77 in.*

For more information on the eINST remote control, please refer to the eINST remote control user manual
(downloadable from https://elebia.com/downloads/)

eMAX

The eMAX is our most advanced remote control. It displays all the info in a big high-resolution screen and a high-profile keypad, yet remains handy and lightweight.

For more information on the eMAX remote control, please refer to the eMAX remote control user manual
(downloadable from https://elebia.com/downloads/)

FCC, IC, CE & ARIB

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter, except in accordance with FCC multi-transmitter product procedures.

Any changes or modifications not expressly approved by the warranty of this device could void the user's authority to operate the equipment.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures: Reorient or relocate the receiving antenna; Increase the separation between the equipment and receiver.

Battery

The battery status is indicated by a 14 segment Eink display. The battery is fully charged when the 14 Eink segments are black, and as the battery discharges the segments turn white. The battery is completely discharged when all 14 Eink segments are white.

High capacity: 3 hour charge – 5.000 cycles / 250 hours in standby mode.

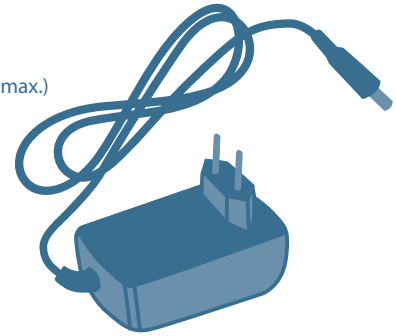
For more information about the battery,
please refer to the evo2 battery user manual
(downloadable from https://elebia.com/downloads/)

Technology	Rechargeable Li-Ion
Maximum Voltage	12.4 V DC
Nominal Voltage	10.95 V DC
Nominal Capacity	3.2 Ah DC
Protection Circuit	Charge, Discharge, Overvoltage
Maximum Discharge Current	6.4 A
Charge Indicator	Eink 14 Segment Display
Temperature (Charge)	0 ºC to 45 ºC / *32 ºF to 113 ºF*
Temperature (Discharge)	-20 ºC to 50 ºC / *-4 ºF to 122 ºF*
Temperature (Idle)	-20 ºC to 60 ºC / *-4 ºF to 140 ºF*
Weight	150 g. / *5.29 oz.*

100-240V Charger

Technical Specifications:

Input Voltage	100-240 V AC / 50-60Hz. 1.0A (max.)
Output	12.6 V DC / 1.2A
Charge Indicator	No
Charge Complete Indicator	No



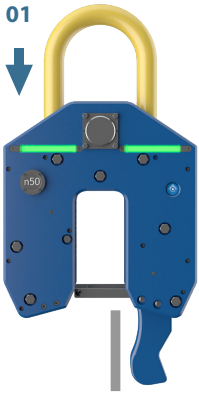
For more information about the charger,
please refer evo2 battery charger user manual
(downloadable from https://elebia.com/downloads/)

* Recommendation:
Use chargers supplied by the manufacturer to charge the batteries to ensure their correct performance.
The use of chargers other than those supplied by the manufacturer may damage the battery. .

Lifting Procedure

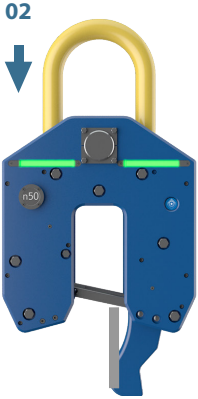
Engage

01



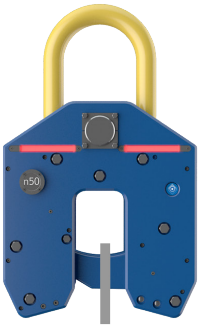
NEO approaches the lifting point, orients and positions itself once the hook contacts the lifting point.

02



The trigger makes contact with the lifting point and the closing operation begins.

03



NEO's sensor recognizes the hook is in the closed position and latches automatically.

(visual confirmation with the LED's status changing from green (open) to red (do not lift) and finally to blue (closed).

04

The load is ready to be lifted and transported.

Release

01

Once load is safely on the ground.

02

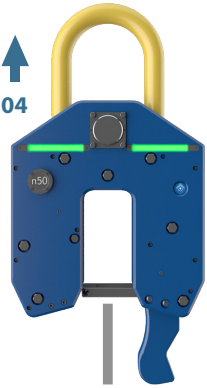
The release order can be given.

03

The NEO lifting hook unlocks and opens.

(red colour in LED status indicator. Do not lift.)

04



Load is released.

(green colour in LED status indicator.)

Always On / Smart Nap

Always On

With the "Always On" mode, the colour code scheme of the LED status indicator will always be visible. Blue – for closed – and green – for open – are continuous for 10 seconds and then take an intermittent pattern in order to save battery. Activate this mode by pushing the top button beside the battery.
Battery Duration:
5.000 cycles / 250 hours in standby mode

Smart Nap

The "Smart Nap" mode reduces battery consumption by activating the LED's colour code scheme when the NEO's hook commences its closing motion. Up until that moment, the lifting hook is in sleeper mode and its electronics and battery are not active.

Battery Duration:
5.000 cycles / up to 2 months in standby mode

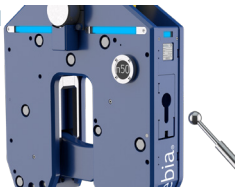
Laser Pointer

The NEO lifting hook carries a laser pointer as an optional feature. In lifting operations, and from a certain distance, the sense of depth can be misjudged.
The laser pointer acts as a guide in order to perfectly place and set the NEO lifting hook in the correct position when approaching the lifting point.
It can be manually activated by pressing the button that is beside the battery slot.

Manual Override

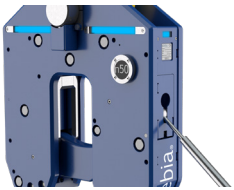
If there is ever the need to manually override NEO's electronics, the process is very simple.

01



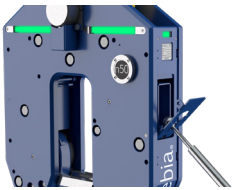
Insert the end/tip of pole in the cover's slot.

02



Lower the end/tip of pole until it reaches the narrow lower end of the cover's slot.

03



Pull until cover opens and wait until LEDs turn green.

Conformity Declaration and Manufacturer's Certificate

ELEBIA AUTOHOOKS, S.L.U., with registered office at Plaça Pere Llauger Prim, naus 10-11, Polígon Industrial Can Misser, 08360, Canet de Mar, (Barcelona), Spain, Tax Identification Certificate B65770265, and ISO 9001 Certificate No. 9000041

DECLARES:
Under its sole responsibility, that the following _____ Lifting Hook, with serial number _____, with a maximum operating load of _____ kgs., complies with the EC Machinery Directive 2006/42/EC of the European Parliament and of the Council, of 22 June 1998, on the approximation of the laws of the Member States relating to machinery, and 2004/108/EC, on the approximation of the laws of the Member States relating to electromagnetic compatibility, and has been manufactured in accordance with the following harmonised standards:

NEO50: EN 10204 3.1.B., ETSI EN 300 220-1 V3.1.1., ETSI EN 300 220-2 V3.1.1., ETSI EN 303 446-1 V1.1.0., ETSI EN 303 446-2 V1.1.0., UNE-EN 1050, UNE-EN 13135:2013, UNE-EN 60730-1:2013
NEO50 & NEO60: UNE-EN60204-1:2007, UNE-EN 61000-6-4:2007, UNE-EN 61000-6-2:2006, UNE-EN ISO12100:2012
NEO60: UNE-EN 13155:2004+A2

As stipulated by Directive on Machine Safety D2006/42/EC

- CE symbol fixed to the lifting hook.
- Technical documentation filed in manufacturer's site.

Authorised signatory:
Oscar Fillol Vidal
Person authorised to compile the technical file.
CEO of ELEBIA AUTOHOOKS

Barcelona, 15 May 2019

Date: Observations:	Date: Observations:

Warranty

The warranty of the NEO lifting hook is for 2 years and covers parts and labour for the use envisaged and recommended in the user manual. Batteries and maintenance operations, and the materials and labour involved therein, are exempt from the warranty. Non-performance of checks and maintenance may lead to cancellation of the warranty.

Distributor / Service:
Date:

This warranty is limited to the original end user of the lifting equipment and is subject to the equipment being inspected, controlled and maintained according to the producer and dealer instructions throughout the warranty period. The warranty period is 2 years from the purchase date and is subject to the conditions and measures given here.

Warranty will not be valid when any of the following measures are met:

- Overload.
- Wrong and/or carelessly use.
- Damages by not following procedures and measures.
- Damages by hoisting differing material other then indicated on the NEO lifting hook or stated in the user manual.
- Adapting and/or modifying the NEO lifting hook.
- The injudicious use of the NEO lifting hook, and not succeeding all indications which are stated in the user manual.
- When maintenance inspections have not been carried out by the authorised elebia Technical Service.

The manufacturer is not responsible for incidental damage or damage due to wrong use of the lifting tools as well as from violation of this manual.

Inspection & Maintenance

At least once a year, or in case of any damage to the NEO lifting hook, the hook should be inspected, tested and if necessary returned to Elebia Autohooks SLU Technical Service for review. The frequency of inspections and tests may vary according to the intensity and type of use.

Proper maintenance of the NEO lifting hook will lengthen its useful life. It is the user's responsibility to respect the General Precautions, Warnings and Restrictions included in this user's manual, to undertake the corresponding inspections, and to withdraw the product in the event of deterioration or malfunction.

Frequent visual inspection to detect cracks and deformations, and inspection of crucial parts is recommended. In the event of cracks or deformations of over 1%, the mechanism must be withdrawn.

Maintenance Check

Date: Observations:	Date: Observations:
Date: Observations:	Date: Observations:
Date: Observations:	Date: Observations:
Date: Observations:	Date: Observations:
Date: Observations:	Date: Observations:

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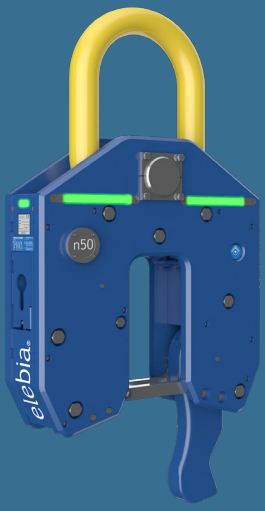

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