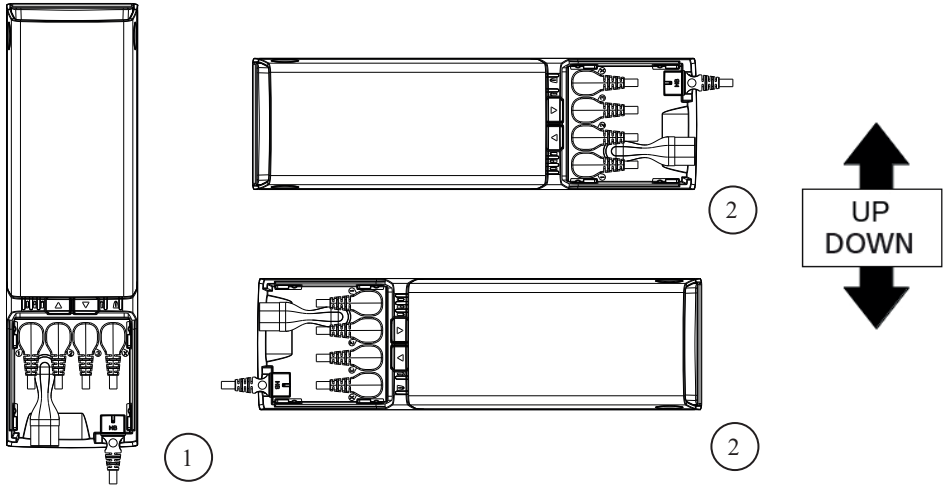


LIFT50 mounting



Drawing no. 1039w4000



Recommendations - positioning

LIFT50 only comply with IPX6 when the control box is mounted correctly (see illustration 1 and 2).

LIFT50 can be mounted as shown on the pictures above:

- Battery upwards, cable outlets downwards (see illustration 1)
- Control box lying on either side, seen from the front (see illustrations 2)

Cables and blind plugs must be inserted correctly in the control box to maintain the IP degree in washing or cleaning situations.

Mounting information:

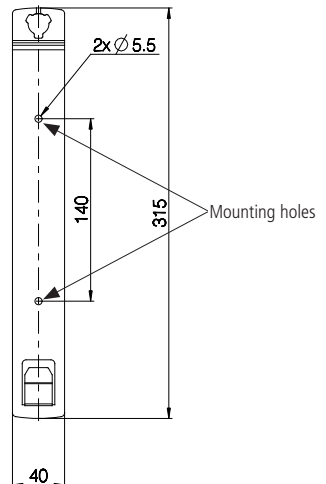
LIFT50 is mounted by means of 2 screws (not supplied by LINAK).

Screw type: ISO7380-1 / M5 and L = 20 mm or 25 mm

Washer type: ISO7089 / M5, d1 = 5,3 mm / d2 = 10 mm / s = 1mm

The LIFT50 control box must be mounted with two screws (see drawing).

The mounting screws for the control box and the charger must be tightened with a maximum torque of 1 Nm.



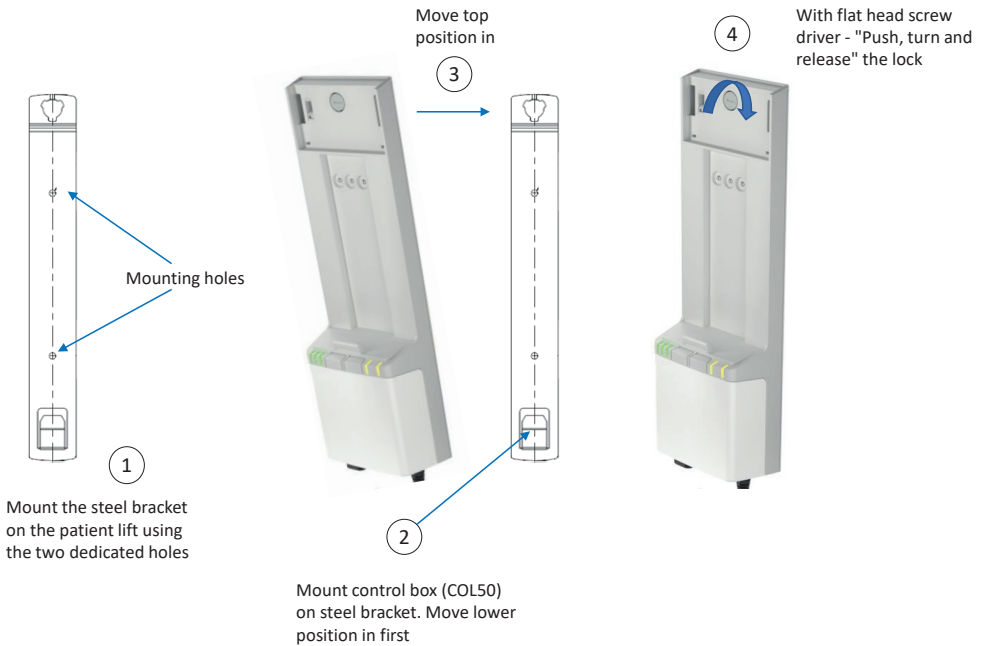


Recommendations - mounting

If COL50 is mounted incorrectly, water will gather in the plug holes resulting in possible non-compliance with IPX6.

COL50 can be mounted as shown on the pictures below:

- 1) Batteries up, cable outlets downwards
- 2) COL50 lying on the side, no difference if mains cable is up or down



Cable hanger:

COL50 comes with a cable hanger for parking mains cable or hand control when not in use.

The cable hanger can be located on either the left or right side of the control box.

Place hanger in designated grooves on the back before mounting the control box on the steel bracket on the patient lift.

When mounted, the hanger is locked in place.





Recommendations:

- The control buttons of redundant hand controls for lifting and lowering work as normal hand control buttons.
- The service counter is only active in COL50 when a sufficiently charged BAL50 is mounted.
- When using a control box with emergency stop, the stop button must be activated in cleaning situations in order to comply with IPX6.
- Only use original LINAK mains cables to ensure a proper connection to the internal charger.
- When charging, LIFT50 will not be able to operate any actuators.
- Only use correct LINAK charger (CHL50 or integrated charger in LIFT50).
- To avoid cables from being damaged by pulling, LINAK recommends to make safe cabling.
- Push mains cable fully into correct sockets and make sure that the plugs are completely inserted.

Motor cable

Always use 6-wire cables. Please note that angled motor cable plugs are required for connection to the control box.

Hot Plugging

Removing or adding any OpenBus cables is not allowed when the control box is on power via mains supply or battery!
If necessary anyway, follow the below procedure:




1. Remove mains or battery and wait 5 sec.
2. Mount or dismount the required cables

If this procedure is NOT followed, it may result in a damaged OpenBus driver circuit.
The risk of a damaged circuit increases if the accessory has a high start current (in rush current).



Warnings

- Always check correct assembly after mounting and service to ensure that the cable lock is mounted.
(Connectors are usually removed during cleaning)
- Always use approved chemicals with the housing as the plastic may show corrosion caused by some chemicals.
As a result water may accumulate/gather in housing.
- Take special precautions concerning 3rd party interfacing. Please contact LINAK for further information.
- Make a review of all product specifications before system set-up if the current cut-off limit is higher than the maximum allowed current cut-off for the actuator.
- To avoid cable interruption and actuator defects make a proper cable installation and inspect regularly for wear and damage.
Defective parts must be replaced.
- After service inspection, the application must be tested for correct functionality before it is put into operation to avoid actuator plugs being mixed during service.
Operators must not be inside entrapment area.
- To avoid electrical failure or system disturbance inspect regularly for wear and damage. Defective parts must be replaced.
- Make a proper cable installation to avoid short-circuit cables for handset/controls.
Regular inspection must be made for wear and damage. Defective parts must be replaced.
- To avoid injury, the battery should not be mounted in (all) transport situations.
Use LINAK original packaging to store battery during transportation.
- Wireless: A hand control can run an application that is out of sight.

 Designed in Denmark DK - 6430 Nordborg Item : BAL50D6B260S000 Date : 2020.11.30 W/O # 12345678-0001 MADE IN GERMANY	U In : Charge Max. 29.4V=	
	I In : Max. 1.0A	IPX6
	Li-Ion Battery	25.2V 2.6Ah 65.52Wh
	S.W. : 00999503 Ver. 1.1	
		
	 7INR19/66	

The BAL50 Li-Ion battery pack is a part of the LIFT50 product series specially developed for patient lifts.

LIFT50 is a complete system consisting of the control box COL50, a battery BAL50 and an external charger CHL50 in a flexible solution.

Usage:

- Compatibility: COL50 and CHL50
- Duty cycle: Max. 10% (or 2 min. continuous use followed by 18 min. without use) at max. discharge current (10 A)
- Charging: Via external wall charger CHL50 or via COL50 with integrated charger
- Charging state: Maximum 30% when shipped from LINAK
- Recharging during storage: First recharge of the battery must be no later than 12 months after production date stated on the label. Hereafter the battery must be recharged at least every 12 months.
- Operating temperature: +5 °C to +40 °C
- Charging temperature: +5 °C to +40 °C
Charging at elevated temperatures can impact the charging time
- Charging time: Approx. 5 h
- Storage temperature: +10 °C to +40 °C (+10 °C to +25 °C recommended)
The batteries must be stored in an applicable storage room without direct sunlight.
- Relative humidity: 20% - 80% – non-condensing
- Atmospheric pressure: 700 to 1060 hPa
- Meters above sea level: Max. 3000 meters
- Approvals (pending): IEC 60601-1
ANSI/AAMI ES60601-1
CSA CAN/CSA-C22.2 NO. 60601-1
IEC 60601-2
IEC62133-2

Mounting

Mounting of the BAL50 battery will follow the placement of the COL50 and CHL50.

See user manual for further information in the respective product sections.

Deep discharge protection

The BAL50 has a deep discharge protection to extend the battery life. The deep discharge protection is activated when the battery is discharged.

If the battery is completely discharged, the charging will be started at a very small rate to protect the battery. Depending on the battery state, it may take several hours to get to the normal charging state.

For long-term storage, remove the battery from the application and store separately.

Transportation

The lithium ion batteries must be packed and transported according to applicable regulations. Always ask your local transportation provider how to handle the transportation of lithium ion batteries.



Recommendations:

- Charge the battery fully before first use.
- Adhere to the battery storage temperature or else the product life and performance will be reduced.
- Allow the battery to settle to room temperature before use or charging.
- Only use correct LINAK® charger (CHL50 or integrated charger in COL50).
- Do not exceed the duty cycle as it will shorten the product life and reduce performance.
- BAL50 is intended for use in indoor applications, however not in indoor pool environments.
- Recharge the battery before storage if it has been completely discharged.



Warnings

ALL LI-ION BATTERY USERS MUST READ THESE IMPORTANT BATTERY SAFETY INSTRUCTIONS AND WARNINGS BEFORE USING LI-ION BATTERIES.

Failure to read and follow these safety instructions and warnings may result in fire, personal injury, and equipment damage if the batteries are charged and/or used improperly.

Lithium ion batteries differ from the lead acid technology as they have a built-in deep discharge protection.

- In case of continuous use despite warnings, a power loss might occur due to the battery deep discharge protection. In this event, there may be no warning and the application may not be able to move when expected.
- If product caution is not clearly visible at low light intensity, read the product label instructions symbol. A warning must be included in the application manufacturer's manual for the medical device.
- The application manufacturer must test the application and ensure that intentional and unintended operations do not exceed the battery specification limits. The risk analysis for the final application must allow for the ensurance of alternative means to make movement, for instance quick release or manual lowering.
- Do not open, disassemble or modify the battery housing as cell or circuitry damage may develop excessive heat.
- Discontinue the battery use immediately if the battery emits an unusual smell, feels hot, changes colour or shape, shows signs of damage or corrosion or appears abnormal in any other way.
- In case the battery turns hot, disconnect and remove the battery from the room. If not possible to remove the battery, then evacuate the room.
- Defective or damaged lithium ion batteries or batteries that produce excessive heat or fire are not allowed for transportation.
- For safety reasons, please adhere to the indicated charging, storage, and operation temperature as extreme temperatures (low or high) might ignite the batteries and cause fire.
- The mounting instructions must be followed in order to avoid exposing batteries to water.
- The customer is responsible for determining that charger and host device work properly.
- Recharge batteries every 12 months at a minimum.
- Dispose of batteries in accordance with local regulations.

DO NOT:

- heat, burn or short circuit the batteries
- expose the batteries to high impact
- crush or puncture the batteries
- charge or store the batteries near combustible material
- charge the batteries without supervision
- expose the batteries to water or other liquids
- use the batteries in pool areas

Any of the above mentioned can cause fire or injury.

LINAK® will remedy defective Li-Ion batteries built into LINAK products in accordance with the terms stipulated in the LINAK Li-Ion battery disclaimer available on the LINAK website. LINAK explicitly disclaims all other remedies and liability.


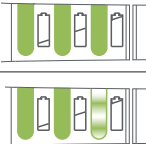


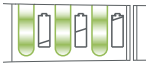



The CHL50 charger is an important part of the LIFT50 family. It functions as a wall charger when mounted on the wall, but also as a more mobile charger simply placed horizontally on its back on any surface.

Usage:

- Usage temperature: +5 °C to 40 °C
- Storage temperature: -10 °C to 50 °C
- Relative humidity: 20% to 80% - non-condensing
- Atmospheric pressure: 700 to 1060 hPa
- Height above sea level: Max. 3000 meters
- Nominal current draw: Max. 350 mA
- Power consumption (standby): < 0.5 W
- Power consumption (charging): Max. 25 W
- Approvals: (pending) IEC 60601-1
ANSI/AAMI ES60601-1
CAN/CSA-22.2 No. 60601-1
IEC 60601-1-2
PSE

LED indicators

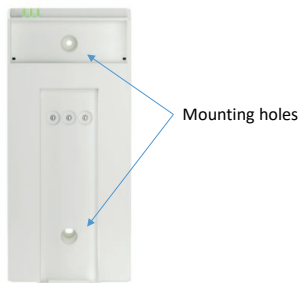
LED 1 - LED 2 - LED 3	LED state (Not listed = off)	States while charging
	LED 1 - 3 constantly on	With battery or if no battery mounted on charger: 90 - 100%
	LED 1 + 2 constantly on LED 3 flashes slowly	65 - 90%
	LED 1 constantly on LED 2 flashes slowly	40 - 65%
	LED 1 flashes slowly	0 - 40%
	LED 1 + 2 + 3 flash slowly	Charging stopped due to low battery temperature, high battery temperature or other error conditions
	No light in LEDs	Charging stopped due to lost communication to battery



Charger mounting

When mounting CHL50 on wall, please use the two dedicated mounting holes placed in the charger body.

Front View



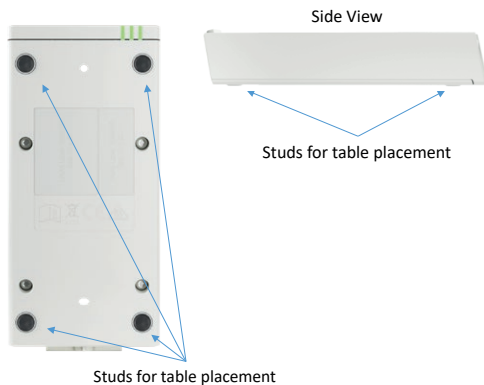
CHL50 must be mounted by means of 2 screws (not supplied by LINAK):

Screw type: Diameter 4 mm/style: pan head or truss head.
Length and thread type depend on wall material.

Washer type: Optional 4 mm washer with max. 10 mm outer diameter.

The mounting screws for the control box and the charger must be tightened with a maximum torque of 1 Nm.

When placing CHL50 on table or shelf, 4 rubber studs on the back add stability and friction to the charger/battery combination.



Recommendations - mounting

As long as the charger is mounted correctly, then the CHL50 complies to IPX4.

If the CHL50 is mounted incorrectly, then water will gather in the plug holes resulting in possible non-compliance with IPX4.

CHL50 can be mounted as shown on the pictures:

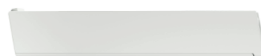
- 1) Batteries up, cable outlets downwards
- 2) CHL50 lying on the back, no difference if mains cable is up or down
- 3) IPX4 only if hanging upright



Hanging on wall - Vertical



Hanging on wall - Horizontal



Laying flat on any surface



Recommendations:

- The charger CHL50 is specifically designed to charge the BAL50 type battery.
- Special care should be taken when mounting the CHL50.
- If the CHL50 is mounted correctly, the CHL50 complies to IPX4.
- If the CHL50 is mounted incorrectly, then water may enter the screw holes resulting in IPX4 non-compliance and cause malfunction and hazardous situations.
- In cleaning situations, the charger must be disconnected from mains.



Warnings

- Make a proper cable installation to avoid short-circuit of cables. Regular inspection must be made for wear and damage. Defective parts must be replaced.
- Ensure that mains cable plug is fully inserted into mains socket.

10. Repair and disposal

Repair

Only an authorised LINAK® service centre should repair the LINAK actuator systems. Systems to be repaired under warranty must be sent to an authorised LINAK service centre.

In order to avoid the risk of malfunction, all actuator repairs must only be carried out by an authorised LINAK Service shop or repairers, as special tools and parts must be used.

If a system is opened by unauthorised personnel there is a risk that it may malfunction at a later date.

Disposal of LINAK systems or components

LINAK systems or components may be disposed of, possibly by dividing them into different waste groups for recycling or combustion.

We recommend that our product is disassembled as much as possible at the disposal and that you try to recycle it. LINAK systems or components should be disposed of in accordance with the environmental regulations applicable in the respective country.

FACTORIES

China

LINAK (Shenzhen) Actuator Systems, Ltd.
Phone: +86 755 8610 6656
Phone: +86 755 8610 6990
www.linak.cn

Denmark - Headquarters

LINAK A/S - Group Headquarters

Phone: +45 73 15 15 15
Fax: +45 74 45 80 48
Fax (Sales): +45 73 15 16 13
www.linak.com

USA

LINAK U.S. Inc.

North and South American Headquarters
Phone: +1 502 253 5595
Fax: +1 502 253 5596
www.linak-us.com
www.linak-latinamerica.com

SUBSIDIARIES

Australia

LINAK Australia Pty. Ltd
Phone: +61 3 8796 9777
Fax: +61 3 8796 9778
www.linak.com.au

Austria

LINAK Repräsentanz - Österreich (Wien)
Phone: +43 (1) 890 7446
Fax: +43 (1) 890 744615
www.linak.at - www.linak.hu

Belgium

LINAK Actuator-Systems NV/SA
(Belgium & Luxembourg)
Phone: +32 (0)9 230 01 09
www.linak.be - www.fr.linak.be

Brazil

LINAK Do Brasil Comércio De Atuadores Ltda.
Phone: +55 (11) 2832 7070
Fax: +55 (11) 2832 7060
www.linak.com.br

Canada

LINAK Canada Inc.
Phone: +1 502 253 5595
Fax: +1 416 255 7720
www.linak-us.com

Czech Republic

LINAK C&S s.r.o.
Phone: +42 058 174 1814
Fax: +42 058 170 2452
www.linak.cz - www.linak.sk

Denmark - International

LINAK International
Phone: +45 73 15 15 15
www.linak.com

Denmark - Sales

LINAK DANMARK A/S
Phone: +45 86 80 36 11
Fax: +45 86 82 90 51
www.linak.dk

Finland

LINAK OY
Phone: +358 10 841 8700
www.linak.fi

France

LINAK FRANCE E.U.R.L
Phone: +33 (0) 2 41 36 34 34
Fax: +33 (0) 2 41 36 35 00
www.linak.fr

Germany

LINAK GmbH
Phone: +49 6043 9655 0
Fax: +49 6043 9655 60
www.linak.de

India

LINAK A/S India Liaison Office
Phone: +91 120 4531797
Fax: +91 120 4786428
www.linak.in

Ireland

LINAK UK Limited (Ireland)
Phone: +44 (0)121 544 2211
Fax: +44 (0)121 544 2552
+44 (0)796 855 1606 (UK Mobile)
+35 387 634 6554
(Republic of Ireland Mobile)
www.linak.co.uk

Italy

LINAK ITALIA S.r.l
Phone: +39 02 48 46 33 66
Fax: +39 02 48 46 82 52
www.linak.it

Japan

LINAK K.K.
Phone: 81-45-533-0802
Fax: 81-45-533-0803
www.linak.jp

Malaysia

LINAK Actuators Sdn. Bhd.
Phone: +60 4 210 6500
Fax: +60 4 226 8901
www.linak.my

Netherlands

LINAK Actuator-Systems B.V.
Phone: +31 76 5 42 44 40
www.linak.nl

New Zealand

LINAK New Zealand Ltd
Phone: +64 9580 2071
Fax: +64 9580 2072
www.linak.com.au

Norway

LINAK Norge AS
Phone: +47 32 82 90 90
www.linak.no

Poland

LINAK Polska
LINAK Danmark A/S (Spółka Akcyjna)
Phone: +48 22 295 09 70 /
+48 22 295 09 71
www.linak.pl

Republic of Korea

LINAK Korea Ltd.
Phone: +82 2 6231 1515
Fax: +82 2 6231 1516
www.linak.kr

Russia

LINAK LLC
Phone: +7 495 780 3161
Fax: +7 495 687 1426
www.linak.ru

Slovakia

LINAK Slovakia s.r.o.
Phone: +42 51 7563 444
www.linak.sk

Spain

LINAK Actuadores, S.L.u
Phone: +34 93 588 27 77
Fax: +34 93 588 27 85
www.linak.es

Sweden

LINAK Scandinavia AB
Phone: +46 8 732 20 00
Fax: +46 8 732 20 50
www.linak.se

Switzerland

LINAK AG
Phone: +41 43 388 31 88
Fax: +41 43 388 31 87
www.linak.ch - www.fr.linak.ch
www.it.linak.ch

Taiwan

LINAK (Shenzhen) Actuator systems Ltd.
Taiwan Representative office
Phone: +886 2 272 90068
Fax: +886 2 272 90096
www.linak.tw

Turkey

LINAK İth. İhr. San. ve Tic. A.Ş.
Phone: +90 312 4726338
Fax: +90 312 4726635
www.linak.com.tr

United Kingdom

LINAK UK Limited
Phone: +44 (0)121 544 2211
Fax: +44 (0)121 544 2552
www.linak.co.uk

DISTRIBUTORS

Argentina

NOVOTEC ARGENTINA SRL
Phone: 011-4303-8989/8900
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Phone: +[57] (1) 334-7666
Fax: +[57] (1) 282-1684
www.mem.net.co

India

Mechatronics Control Equipments
India Pvt Ltd
Phone: +91-44-28558484, 85
www.mechatronicscontrol.com

Indonesia

PT. HIMALAYA EVEREST JAYA
Phone: +6 221 544 8956,
+6 221 544 8965
Fax: +6 221 619 1925
Fax (Sales): +6 221 619 4658
www.hej.co.id

Iraq

Scan Medical Tech
Phone: +964 770 470 2202

Israel

NetivTech LTD
Phone: +972 55-2266-535
Fax: +972 2-9900-560
www.netivtech.com

Kingdom of Bahrain

Mechatronics Industrial Equipments
Phone: +973 17280059
Fax: +973 17910045
www.mechatronicsbh.com

Qatar

Mechatronics Industrial Equipments
Phone: +974 44581155
Fax: +974 44689135
www.mechatronicsqatar.com

Russia

OOO FAM
Phone: +7 812 3319333
Fax: +7 812 3271454
www.fam-drive.ru

Singapore

Servo Dynamics Pte Ltd
Phone: +65 6844 0288
Fax (Sales): +65 6844 0070

South Africa

Industrial Specialised Applications CC
LINAK: +27 011 466 0346
www.isaza.co.za

United Arab Emirates

Mechatronics Industrial Equipments LLC
Phone: +971 4 267 4311
Fax: +971 4 267 4312
www.mechatronics.ae

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