USER MANUAL

HOMELINE®
IMPROVING COMFORT

TWINDRIVE®
TD4

To learn more about LINAK, please visit:

www.linak.com

LINAK®
WE IMPROVE YOUR LIFE

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Preface

Dear User,

We are delighted that you have chosen a product from LINAK®.
LINAK systems are high-tech products based on many years of experience in the manufacture and development of actuators, electric control boxes, controls and chargers.

This User Manual does not address the end-user. It is intended as a source of information for the manufacturer of the equipment or system only, and it will tell you how to install, use and maintain your LINAK electronics. It is the responsibility of the manufacturer of the end-use product to provide a User Manual where relevant safety information from this manual is passed on to the end-user.

We are sure that your LINAK product/system will give you many years of problem-free operation.
Before our products leave the factory they undergo full function and quality testing. Should you nevertheless experience problems with your LINAK product/system, you are always welcome to contact your local dealer.
LINAK subsidiaries and some distributors situated all over the world have authorised service centres, which are always ready to help you.

LINAK provides a warranty on all its products. This warranty, however, is subject to correct use in accordance with the specifications, maintenance being done correctly and any repairs being carried out at a service centre, which is authorised to repair LINAK products.
Changes in installation and use of LINAK products/systems can affect their operation and durability. The products are not to be opened by unauthorised personnel.

The User Manual has been written based on our present technical knowledge. We are constantly working on updating the information and we therefore reserve the right to carry out technical modifications.

LINAK A/S

Important information

Important information on LINAK® products can be found under the following headings:

Warning!
Failure to comply with these instructions may result in accidents involving serious personal injury.

Failing to follow these instructions can result in the product being damaged or being destroyed.

Safety instruction

General

Safe use of the system is possible only when the operating instructions are read completely and the instructions contained are strictly observed.

Failure to comply with instructions marked with the "NOTE" symbol may result in serious damage to the system or one of its components.

It is important for everyone who is to connect, install, or use the systems to have the necessary information and access to this User Manual. Follow the instructions for mounting – risk of injury if these instructions are not followed.

The appliance is not intended for use by young children or infirm persons without supervision.

If there is visible damage on the product it must not be installed.

Note that during construction of applications, in which the actuator is to be fitted, there must be no possibility of personal injury, for example squeezing of fingers or arms.

Assure free space for movement of the application in both direc-tions to avoid blockade.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) This device may not cause harmful interference, and

(2) This device must accept any interference received, including interference that may cause undesired operation

- **Statement – for all intentional and unintentional radiators:**
  Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

- **Statement for digital devices for Class B:**
  NOTE: This equipment has been tested and found to comply with the limits for a Class B diwgital 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 it 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 the receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/ TV technician for help.

This device complies with Industry Canada licence-exempt RSS standard(s).

Operation is subject to the following two conditions:
(1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Labeling Requirements:

This Class B digital apparatus complies with Canadian ICES-003.

Before installation, de-installation or troubleshooting:

- Stop the TD4.
- Switch off the power supply and pull out the mains plug.
- Relieve the TD4 of any loads, which may be released during the work.

Before start-up:

- Make sure that the system has been installed as instructed in this User Manual.
- Make sure that the voltage is correct before the system is connected to the mains. (See TD4 label in the appendix).
- System connection. The individual parts must be connected before connecting to the mains.

During operation

- If the control box makes unusual noise or smells, switch off the mains voltage immediately.
- Take care that the cables are not damaged.
- Unplug the mains cable on mobile equipment before it is moved.
- The products must only be used in an environment, that corresponds to their IP protection.

Misc:

The actuator system has a sound level below 55dB(A) in typical applications.

Updated manuals and declarations can always be found here:
www.linak.com/HOMELINE

Electromagnetic fields (EMF):
This LINAK appliance complies will all standards regarding electromagnetic fields (EMF). If handled properly and according to instructions in this user manual, the appliance is safe to use based on scientific evidence available today.

Only for EU markets

⚠ This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved.

⚠ Children shall not play with the appliance. Cleaning and user maintenance shall not be made by children without supervision.

Only for Non EU markets

⚠ Persons who do not have the necessary experience or knowledge of the product/products must not use the product/products. Besides, persons with reduced physical, sensory or mental abilities must not use the product/ products, unless they are under surveillance or they have been thoroughly instructed in the use of the apparatus by a person who is responsible for the safety of these persons.

⚠ Moreover, children must be under surveillance to ensure that they do not play with the product.

⚠ It is the operator's responsibility to ensure that there is free space for the application to move without risk for the operator or bystanders before operating the application.

Misuse

⚠ Do not overload the actuators – this can cause danger of personal injury and damage to the system.

⚠ Do not use the system in environments other than the intended indoor use

Repairs

In order to avoid the risk of malfunction, all TWINDRIVE® repairs must only be carried out by authorised LINAK workshops or repairers, as special tools must be used and special gaskets must be fitted. TWINDRIVE under warranty must also be returned to authorised LINAK workshops.

DECLARATION OF INCORPORATION OF PARTLY COMPLETED MACHINERY

LINAK A/S
Smedevænget 8
DK - 6430 Nordborg

Name and address of the person authorized to compile the relevant technical documentation:
John Kling, Group Headquarters, Guderup, DK-6430 Nordborg, email jkl@linak.com

Herewith declares that LINAK Actuators and Actuator Systems comply with the following parts of the Machinery Directive 2006/42/EC, ANNEX I, *Essential health and safety requirements relating to the design and construction of machinery*:
1.5.1 Electricity supply: *Directive 2006/95/EC on the harmonization of the laws of Member States relating to electrical equipment designed for use within certain voltage limits.*
1.5.10 Radiation, 1.5.11 External radiation: *Directive 2004/108/EC on the approximation of the laws of the Member States relating to electromagnetic compatibility.*

The relevant technical documentation is compiled in accordance with part B of Annex VII and that this documentation or part hereof will be transmitted by post or electronically to a reasoned request by the national authorities.

This partly completed machinery must not be put into service until the final machinery into which it is to be incorporated has been declared in conformity with the provisions of this Directive, where appropriate.

Date: 2010-01-01

Signature:

John Kling
Certification and Regulatory Affairs

Misc. on the TD4 TWINDRIVE® system

This system is a TWINDRIVE system developed for leisure beds and for indoor use in private homes.

Warranty
There is 36 months' warranty on the TWINDRIVE® products against manufacturing faults calculated from the production date of the individual products (see label). LINAK A/S' warranty is only valid in so far as the equipment has been used and maintained correctly and has not been tampered with. Furthermore, the system must not be exposed to violent treatment. In the event of this, the warranty will be ineffective/invalid. For further details, please see standard terms of sale and delivery for LINAK A/S.

Maintenance
Clean dust and dirt on the outside of the system at appropriate intervals and inspect them for damage and breaks.
Inspect the connections, cables and plugs and check for correct functioning as well as fixing points.

The cleaners and disinfectants must not be highly alkaline or acidic (pH value 6-8).

It is not allowed to use solvents for cleaning up.

Max. load running head and foot end motors at the same time in upward direction is 280 Nm on Head motor, and 200 Nm on Foot end motor.

For customers in the US/Canada:
The mains cable for this product has a polarised plug (one blade is wider than the other). It will only fit in a polarised outlet one way. If it does not fit fully in the outlet, reverse the plug. If it still does not fit, contact a qualified electrician to install a proper outlet. Do not change the plug in any way.

Description of the TWINDRIVE® TD4 system

Each TWINDRIVE® TD4 unit consists of 2 internal motors and a built-in control, which makes it a very compact unit. The mains cable is exchangeable. Only the handset must be paired.

Application of the TWINDRIVE® TD4 system:
Irrespective of the load the **Duty cycle: 10% ~ 3 min./ hour or max. 2 min. at continous use followed by 18 min. not in use.**

Do not turn on the system if it is not mounted in a bed.

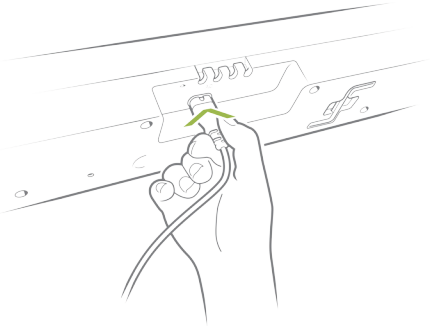
Start-up (How to pair Bluetooth connection)

It is possible to pair multiple devices to the TD4 via Bluetooth SMART. See following instructions:

1. **Pairing your control**
   Connect the TD4 to the mains via the mains cable. Now the TD4 will be in pairing mode in 3 minutes and the Under Bed Light will blink to indicate this.

   Take you hand control and press the "Back" "Up" and "Down" buttons at the same time. Now the control and the TD4 paired up. The TD4 will stay in pairing mode and it is possible to connect more controls using the same procedure as above. To get the system out of pairing mode – simply press any button on an already paired device.

1



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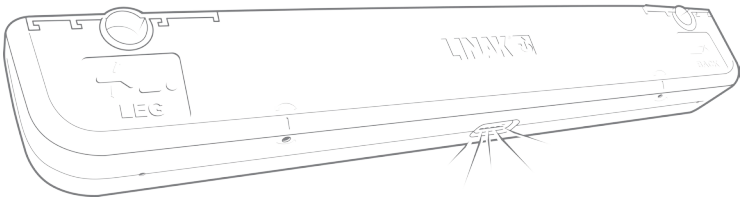


3

Functional description

Hand Control HB10RF:

Up – down head motor
Up – down foot motor
Simultaneous up/down

Hand Control HC05:

Up – down head motor
Up – down foot motor
up to 3 extra channels

common operation up/down (option)

Light Button

How to store

- Drive to the desired position
- Push "S"
- Immediately afterwards the desired memory position must be pushed (1, 2 or 3)
- The position is now stored

Drive to stored memory position

Push (1, 2 or 3) keep the button down until the position has been reached.

Hand Control HC20RF:

Up – down head motor

Up – down foot motor
up to 3 extra channels

common operation up/down (option)

Memory positions (3 positions)

Store Button

Light Button

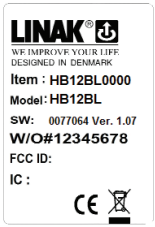
Torch - Light Button

Label for TD4 Advanced

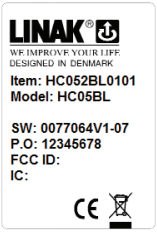
Label for TD4 Standard

Label for HB10RF

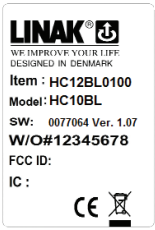
Label for HB12



Label for HC05



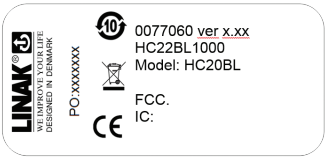
Label for HC10



Label for HC10RF

Label for HC20RF

Label for HC22



Disposal of LINAK products

As LINAK customers often ask us how our products can be disposed of or scrapped we have prepared this guidance that enables a classification to different waste fractions for recycling or combustion.

Guidance

We recommend to disassemble our product into as many fractions as possible at the disposal and try to make it recycable. As examples of main groups within waste fractions we can mention:

Metal, plastic, cable shoe, combustible waste and collection for recovery.

Some of these main groups can be subdivided, e.g. metal can be divided into iron, stainless steel and aluminium and alloy steel. Plastic can e.g. be divided into ABS, PA, PE and PP.

As an example of sorting, please find below a list stating in which recycling groups the different components of LINAK products ought to be placed:

Product	Components	Recycling group
Actuator:	Spindle and motor Plastic housing Cable	Scrap Plastic recycling or combustion Cable scrap or combustion
Massage motor:	Plastic housing Cable	Plastic recycling or combustion Cable scrap or combustion
TWINDRIVE:	PCB Plastic housing Cable Transformer Scrap Batteries Spindle and motor	Electronics scrap Plastic recycling or combustion Cable scrap Recovery Scrap
Handset/Control: LED/DC/USB	Plasic housing Cable PCB Batteries	Plastic recycling or combustion Cable scrap Electronics scrap Recovery

By now almost all our casted plastic parts are supplied with an interior code for plastic type and fibre contents, if any.

Main groups of disposal

Product main groups	Scrap	Cable scrap	Electronics scrap	Plastic recycling or combustin	Comments
TD4	X	X	X		
HB10RF		X	X	X	
HC05					
HC10RF		X	X	X	
HC20RF		X	X	X	

Disposal of batteries

Details regarding safe disposal of used and leaking batteries:
Batteries should be disposed in accordance with appropriate federal, state and local regulations. LINAK recommends that used or leaking batteries are disposed through the local recycling system. Please do not throw used or leaking batteries in normal household waste or in nature. This will cause damage to the enviroment.

How to deal with leaking batteries

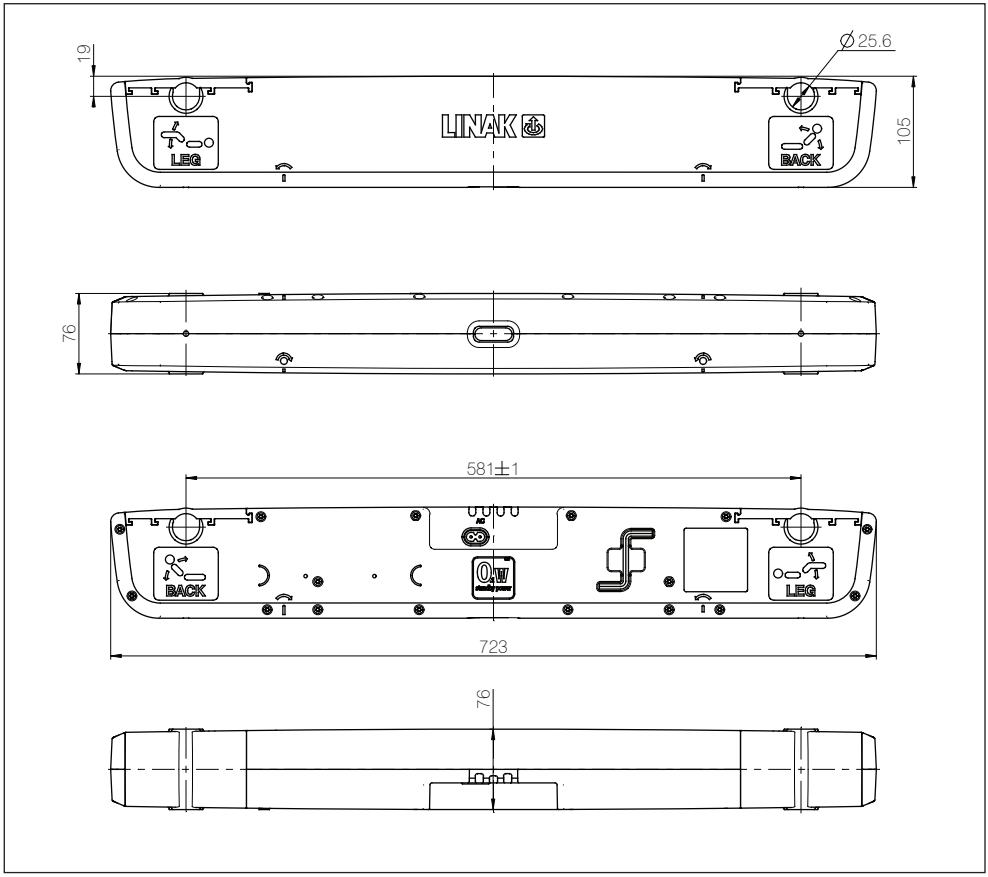
Leaking batteries should be disposed as described above.
If leaking batteries are discovered in the product the batteries must be removed at once to minimise damage to the product. If leaking batteries are left in the product, it may become defective.

It is recommended to use plastic gloves when handling leaking batteries. The contents of leaking batteries can cause chemical burns and respiratory irritation.

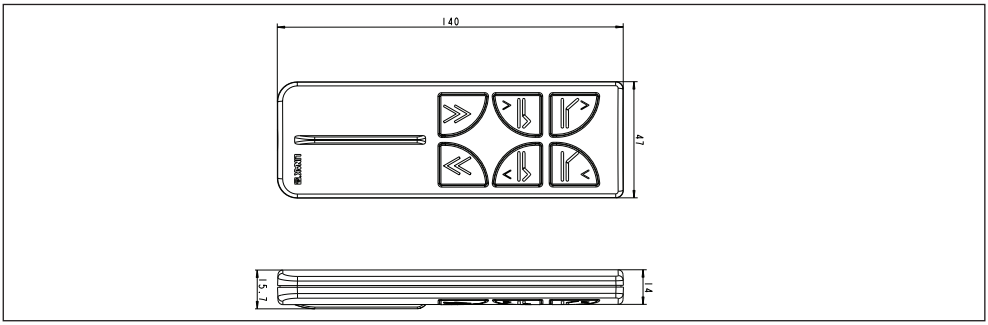
If exposed to the contents of a leaking battery, please wash with soap and water. If irritation persists, please seek medical attention. In case of eye contact, please flush eyes thoroughly with water for 15 minutes and seek medical attention.

DRAWING APPENDIX

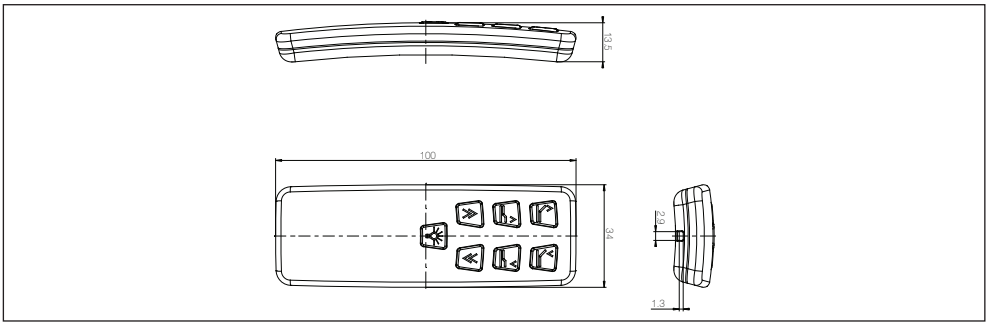
TWINDRIVE® TD4 System



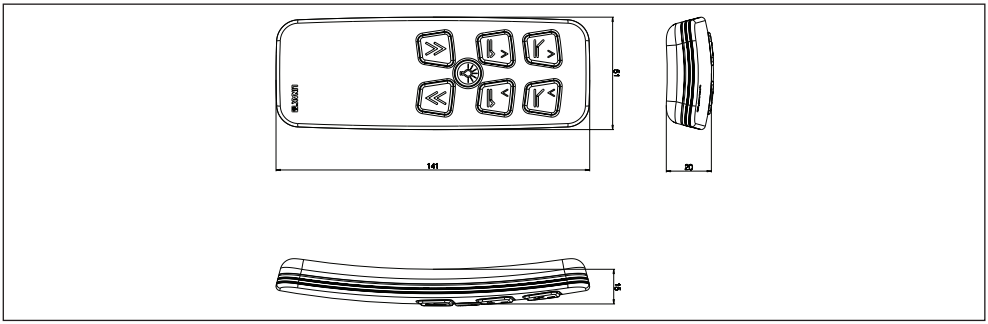
HB10BL Hand Control



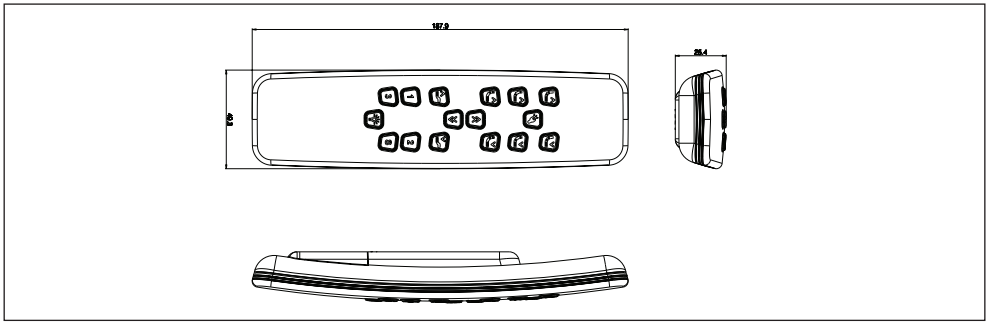
HC05 Hand Control



HC10



HC20 Hand Control



LINAK APPLICATION POLICY

The purpose of the application policy is to define areas of responsibilities in relation to applying a LINAK product defined as hardware, software, technical advice, etc. related to an existing or a new customer application.

LINAK products as defined above are applicable for a wide range of applications within the Medical, Furniture, Desk, and Industry areas. Yet, LINAK cannot know all the conditions under which LINAK products will be installed, used, and operated, as each individual application is unique.

The suitability and functionality of the LINAK product and its performance under varying conditions (application, vibration, load, humidity, temperature, frequency, etc.) can only be verified by testing, and shall ultimately be the responsibility of the LINAK customer using any LINAK product.

LINAK shall be responsible solely that the LINAK products comply with the specifications set out by LINAK and it shall be the responsibility of the LINAK customer to ensure that the specific LINAK product can be used for the application in question.

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