

TUOHY

DESKLINE®  
IMPROVING ERGONOMICS



# DL17 system with CBD6S User manual

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**Detailed Linak Troubleshooting Info Starts After Page 65**

# 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-user 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 contact. LINAK subsidiaries and some distributors situated all over the world have authorised service centres, which are always ready to help you.

LINAK provides a limited warranty on its products. This warranty is, however, 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. You can review the full terms of the LINAK warranty on the LINAK website [www.linak.com/warranty](http://www.linak.com/warranty).

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**

**Valid for:**

This User Manual is valid for the following products:  
(See the first 3 - 5 characters on the label)

Columns:	DL12, DL14, DL17
Built-in actuators:	DB14
Control boxes:	CBD6S 200W, CBD6S 300W
Controls:	DP1U/DPF1M (if memory function is required) DP1C/DPT/DPF1C (if memory function and display is required) or DPA/DPB/DPH/DP1K/DP1V/DPF1K/DPG1K (if only up/down is required) or DPF1D (if display is required), or DPG1M/DPG1B (if reminder, Bluetooth® and memory is required) or DPG1C ("If reminder, Bluetooth®, memory and display is required)



## 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 instructions



### 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 – there is a 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 to the product, do not install it.



Please 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 directions to avoid blockades.

## **Before installation, reinstallation, or troubleshooting**

- Stop the DB/DL
- Pull out the mains plug.
- Relieve the DB/DL 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 of the control box is correct before connecting the system to the mains.
- System connection. The individual parts must be connected before connecting the control box to the mains. See the User Manual for LINAK actuators, if necessary.

## **During operation:**

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

## **Misc.**

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

Updated manuals and declarations can always be found here:

[www.linak.com/deskline](http://www.linak.com/deskline)

### **Only for EU markets**



This appliance can be used by children aged from aged 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 actuator system for lifting persons. Do not sit or stand on a table while operating – risk of personal injury.



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

## Repairs

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

Further information on the LINAK warranty can be found on the LINAK website [www.linak.com/warranty](http://www.linak.com/warranty).



### Warning!

If any of the DESKLINE® products are opened, there will be a risk of subsequent malfunction.



### Warning!

The DESKLINE® systems do not withstand cutting oil.

## DECLARATION OF INCORPORATION OF PARTLY COMPLETED MACHINERY

**LINAK A/S**  
Smedevænget 8  
DK - 6430 Nordborg

Herewith declares that LINAK DESKLINE® products as characterized by the following models and types:

Control Boxes	CBD6S
Linear Actuators	DB5, DB6, DB7, DB9, DB12, DB14, DB16, LA23, LA31
Lifting Columns	DL1A, DL2, DL4S, DL5, DL6, DL7, DL8, DL9, DL10, DL11, DL12, DL14, DL15, DL16, DL17, DL19, BASE1
Desk Panels	DPA, DPB, DPH, DPF, DPG1K, DPG1M, DPG1B, DPG1C, DPT, DP1, DP1CS, DP1K, DP1V, DP1U
RF Controls	HB10RF, HB20RF, RFT, RFRL
Accessories	BA001, SLS, Kick & Click

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

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 the Machinery Directive 2006/42/EC where appropriate.**

Nordborg, 2017-12-08

**LINAK A/S**  
John Kling, B.Sc.E.E.  
Certification and Regulatory Affairs  
Authorized to compile the relevant technical documentation

## DECLARATION OF CONFORMITY

LINAK A/S  
Smedevænget 8  
DK - 6430 Nordborg

hereby declares that LINAK Actuator System composed of:

Control Box(s)                      CBD6SP00020A-009  
    CBD6S\*000\*0A-709

(The "\*" in the product description can either be a character or a number, thereby defining the variation of the product)

And  
Linear Actuator(s)                DB4, DB5, DB6, DB7, DB9, DB12, DB14, DB16, LA23, LA31 series      and / or  
Lifting Column(s)                DL1A, DL2, DL4, DL5, DL6, DL7, DL8, DL9, DL10, DL11, DL12, DL12W, DL14,  
    DL15, DL16, DL17, DL19, BASE1 series

And  
Desk Panel(s)                      DP\*(C,K,L,U,V), WDPL1

(The "\*" in the product description can either be 1, 2, 3, A, B, H, T; thereby defining the variation of the product)

complies with EMC Directive: 2014/30/EU according to following standards:  
EN 61000-6-1:2007, EN 61000-6-3:2007+A1:2011+AC:2012

complies with Low Voltage Directive 2014/35/EU according to the standard:  
EN 60335-1:2012+A11:2014

complies with RoHS2 Directive 2011/65/EU according to the standard:  
EN 50581:2012

Additional information:

The system does also comply with the standard: EN 13849-1:2015 SRP/CS Cat. B, PL = b and SRESW PL = b  
Note 1: Exempted CBD6S with SW03003007 printed on the label.

Nordborg, 2019-06-07

**LINAK A/S**  
John Kling, B.Sc.E.E.  
Certification and Regulatory Affairs  
Authorized to compile the relevant technical documentation

Original Declaration

# Misc. on the DESKLINE® system

This system is a DESKLINE system developed for desks and for indoor use in offices. Do not use it in industrial kitchens or in other enviroments that have to be cleaned with aggressive detergents.  
Do not bolt the legs to the floor so that free movement is prevented. This could cause serious damage to the legs in fault situations.

## Warranty

This DESKLINE product is subject to warranty pursuant to the terms of LINAK DESKLINE Warranty Paper, available on the LINAK website [www.linak.com/warranty](http://www.linak.com/warranty).

## 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.

## Service of double insulated products:



### Class II

A Class II or **double insulated** electrical appliance is one which has been designed in such a way that it does not require a safety electric earth connection (US: ground).  
The basic requirement is that no single failure can result in dangerous voltage becoming exposed so that it might cause an electric shock and that this is achieved without relying on an earthed metal casing. This is usually achieved at least in part by having two layers of insulating material surrounding live parts or by using reinforced insulation.  
There is no earthing/grounding means provided on the product, and no earthing/grounding means is to be added to the product.  
In Europe, a double insulated appliance must be labelled "Class II", "double insulated" or bear the double insulation symbol (a square inside another square).  
Servicing a double-insulated product requires extreme care and knowledge of the system, and is to be done only by qualified service personnel. Replacement parts for a double-insulated product must be identical to the parts they replace.



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

# ETL-marking

Due to space limitations, the complete ETL-marking demands are not represented on the marking plates.  
The full ETL Recognized Component markings are shown here.



C/N 120690  
Conforms to UL962  
Cert. to CSA Std. C22.2 No. 68-09  
ETL Recognized Component mark for Canada and United States



C/N 9901916  
Conforms to UL962  
Cert. to CSA Std. C22.2 No. 68-09  
ETL Recognized Component mark for Canada and United States



C/N 4008003  
Conforms to UL962  
Cert. to CSA Std. C22.2 No. 68-09  
ETL Recognized Component mark for Canada and United States



C/N 4008004  
Conforms to UL962  
Cert. to CSA Std. C22.2 No. 68-09  
ETL Recognized Component mark for Canada and United States



C/N 4008005  
Conforms to UL962  
Cert. to CSA Std. C22.2 No. 68-09  
ETL Recognized Component mark for Canada and United States



C/N 4008671  
Conforms to UL962  
Cert. to CSA Std. C22.2 No. 68-09  
ETL Recognized Component mark for Canada and United States



C/N 4009507  
Conforms to UL962  
Cert. to CSA Std. C22.2 No. 68-09  
ETL Recognized Component mark for Canada and United States

## Description of the DESKLINE® system

Each DESKLINE® actuator/column is equipped with a motor and parallel/memory drive is ensured by means of software in the CBD6S (SMPS) that also takes account of an oblique load on the desk. Soft start and stop are also part of this software, which ensures a soft start and stop when adjusting the desk.

### Application of the DESKLINE® system:

Irrespective of the load, the **duty cycle 10% ~ 6 min./ hour or max. 2 min. at continuous use** stated in the data sheets, must **NOT** be exceeded as this will result in a superheating of the motor and the control box. Exceeding the duty cycle will result in a dramatic reduction of the life of the system.

The DB/DL system range contains following products:

- 1 control box CBD6S 200W or CBD6S 300W (SMPS - Switch Mode Power Supply)
- DL12, DL14, DB14 or DL17 (1 - 4)
- 1 exchangeable mains cable
- Motor cables (1 - 4)
- DP1U/DPF1M (if memory function is required)  
DP1C/DPT/DPF1C (if memory function and display is required)  
or DPA/DPB/DPH/DP1K/DP1V/DPF1K/DPG1K (if only up/down is required)  
or DPF1D (if display is required),  
or DPG1M/DPG1B (if reminder, Bluetooth® and memory is required)  
or DPG1C ("If reminder, Bluetooth®, memory and display is required)



# Installation of the DL17 system

## Mounting the top

The DL17 top is supplied with four M6 threaded holes for mounting onto the top frame.

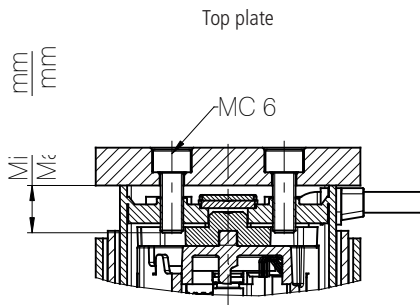
1. Mount the column top on the top frame using four M6 screws with the following specifications:

Quality: Min. grade 8.8

Length: Min. 10 mm (plus top frame thickness);

Max. 14 mm (plus top frame thickness)

2. Fasten the screws thoroughly (torque: max. 10 Nm).



## Mounting the foot

The DL17 bottom plate is supplied with four M6 and two M8 threaded holes.

1. Mount the column bottom on the desk feet using four M6 screws or two M8 screws with the following specifications:

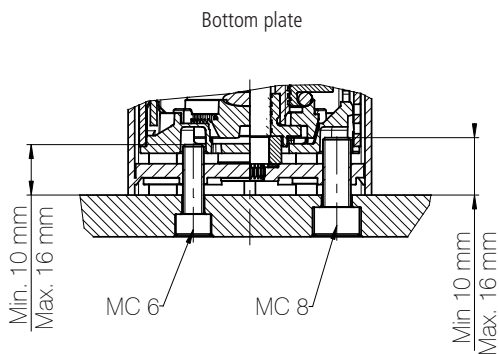
Quality: Min. grade 8.8

Length: Min. 10 mm (plus desk feet thickness);

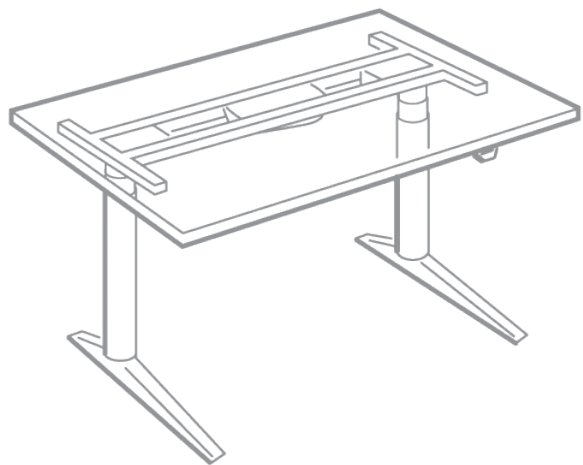
Max. 16 mm (plus desk feet thickness)

2. Fasten the screws thoroughly (torque: max. 10 Nm).

The holes in the foot must be sufficiently larger than  $\varnothing 6$  to enable levelling of the assembled desk.

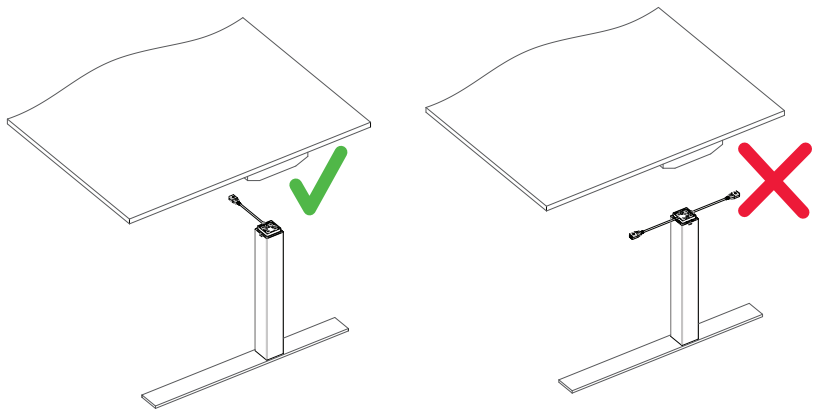


As the desktop amplifies the sound, we advise you to place a vibration/shock absorbing material between the desktop and the desk frame.



(Example of how to mount the DESKLINE® system)

When the DL17 is mounted on the tabletop and feet, we recommend orienting the column so that the cable is pointing towards the centre of the desk.



## Mounting guidelines for the CBD6S (SMPS)

The control box is to be fastened with 2 screws with a head diameter between  $\varnothing 8$  and  $\varnothing 10$  mm. With regard to the tension surface  $\varnothing 10$  mm is preferable due to a lower surface tension. See drawing appendix for placing of mounting holes and the space the CBD takes up.

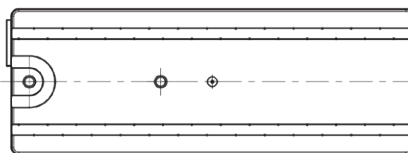
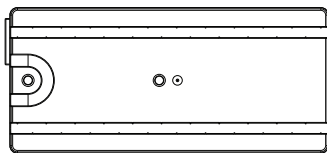


CBD6S 200W and CBD6S 300W

The CBD must not be packed in heat insulating material, but must be placed so that it can emit waste heat into the surroundings. There are no ventilation holes to consider, the CBD emits heat through the surface. The plug must be visible when the CBD is mounted so that the supply to the CBD can be disconnected at replacement, if any. The mounting screws on the control box must be fastened with a max. torque of 1 Nm. The mounting surface to which the control box is attached should have a surface evenness of better than  $\pm 0.5$  mm.

### Bottom with cable grooves

The bottom of the CBD6S (SMPS) is equipped with two cable grooves improving the cable management when mounting. The grooves can be used to bypass the CBD for both motor cables and the mains cable (EU version only) from one side to the other, giving a cleaner design.



Remember to lead the cables through the grooves before mounting the control box.

**For mounting and operation of the desk panel, please see the separate user manual for desk panels.**

# Electric connection of the DB/DL system

The DB/DL system is to be connected as shown on figure 7. The DB/DL is to be connected to the sockets on the control box by means of the motor cables, which have a 6-pin plug in each end.



Finally, the mains cable is to be mounted and power switched on. Please note that the control box must only be connected to the voltage stated on the label.

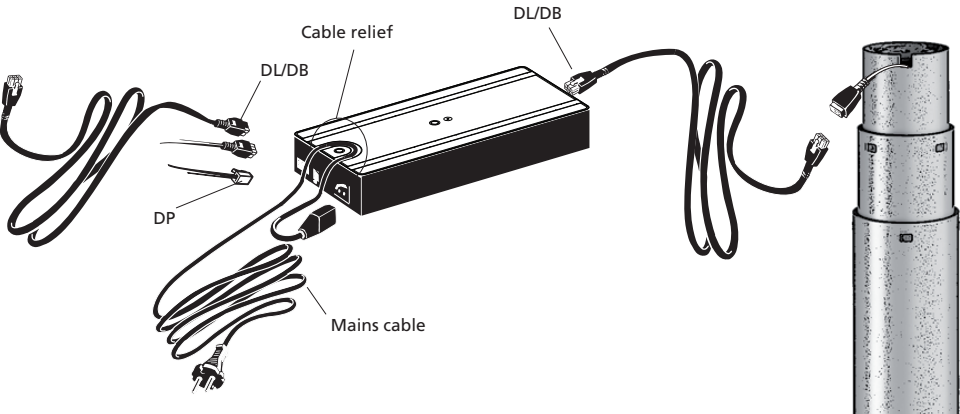


Figure 7

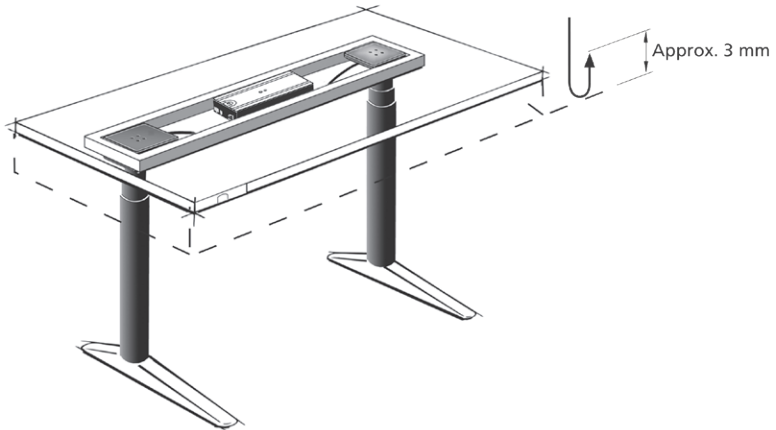
## Initialisation of the DESKLINE® parallel system

The DESKLINE system is initialised by pressing the down button once or twice and holding it down until the DB/DL runs into end stop. It will then automatically run approx. 3 mm out again and hereafter slowly run in again. Only release the down button when the movement has stopped completely.



If the button is released before the sequence is completed, the initialisation is interrupted and must be started again from the beginning.

The first two times the system runs into the outward end-stop, it will automatically run approx. 3 mm back in inward direction.



The CBD6S (SMPS) can control the DB/DL in 2-parallel, 3-parallel, 4-parallel or even multi-parallel.

**PIEZO™ description (optional)**

For optimised safety against squeezing and blocking on a desk, LINAK has developed the DESKLIFT columns with an integrated sensor, called PIEZO. The option minimises the risk of damage to a desk caused by squeezing or blocking of obstacles in up and down direction. Examples could be driving down into an office chair or into a container or up into a windowsill. To a certain extent, the system also increases the personal safety, but it does not comply with legislation describing personal safety.

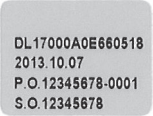
PIEZO allows the DBs or columns to have the standard built-in dimension and the standard stroke length. There are no visible changes to the column.



Examples where PIEZO avoids squeezing situations.

Labels

Label for DL17



Label for CBD6S 200W (SMPS)



Label for CBD6S 300W (SMPS)  
up to 4 channels





# Desk Panels DPG and Desk Control™ App User manual



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## Preface

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We are sure that your LINAK product 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 systems, 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 limited warranty on its products. This warranty is, however, 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. You can review the full terms of the LINAK warranty on the LINAK website [www.linak.com/warranty](http://www.linak.com/warranty).

The User Manual has been written based on of 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**

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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 the squeezing of fingers or arms.



Assure free space for movement of application in both directions 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 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, 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 contains licence-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's licence-exempt RSS(s). Operation is subject to the following two conditions:

- (1) This device may not cause interference.
- (2) This device must accept any interference, including interference that may cause undesired operation of the device.

L'émetteur/récepteur exempt de licence contenu dans le présent appareil est conforme aux CNR d'Innovation, Sciences et Développement économique Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes:

- (1) L'appareil ne doit pas produire de brouillage;
  - (2) L'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.
- 

### **Labeling Requirements:**

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

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

---

### **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 given supervision or instruction concerning the 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.

### **Misuse**



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



Do not use the actuator system for lifting persons. Do not sit or stand on a table while operating – risk of personal injury.



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

## Informations importantes

Les informations importantes sur les produits LINAK® peuvent être trouvées dans les rubriques suivantes:



### Attention!

Le non respect de ces instructions peut entraîner des accidents impliquant des blessures graves.



Ne pas suivre ces instructions peut entraîner l'endommagement ou destruction du produit.

---

## Consignes de sécurité



### Général

Le non respect de ces instructions peut entraîner des accidents impliquant des blessures graves.

Ne pas suivre ces instructions peut entraîner l'endommagement ou destruction du produit.

L'utilisation en toute sécurité du système n'est possible que si l'intégralité des instructions ont été lues et ont été strictement suivies.



Le non respect de se conformer aux instructions marquées du symbole "note" peut entraîner de graves dommages au système ou à un de ses composants.

Il est important pour tout individu qui connecte, installe, ou utilise le système d'avoir les informations nécessaires et l'accès à ce manuel d'utilisation.

Suivez les instructions pour le montage – risque de blessure si ces instructions ne sont pas suivies.



L'appareil n'est pas destiné à être utilisé par des enfants ou des personnes handicapées sans surveillance.



S'il y a des dommages visibles sur le produit, l'installation ne doit pas être effectuée.



Prendre en compte lors de la construction du matériel, dans lequel l'actionneur est incorporé, qu'il ne doit y avoir aucune possibilité de blessures corporelles, telles que la compression des doigts ou des bras.



Assurez un espace libre autour du matériel pour éviter tout blocage.

### **Seulement pour les marchés au sein de l'UE:**



Cet appareil peut-être utilisé par des enfants âgés de 8 ans et plus, ainsi que les personnes dont les capacités physiques, sensorielles ou mentales sont réduites ou ayant un manque d'expérience et de connaissance si elles ont bénéficié d'une surveillance ou d'instructions concernant l'utilisation de l'appareil en toute sécurité et compris les risques encourus.



Les enfants ne doivent pas jouer avec l'appareil. Le nettoyage et l'entretien ne doivent pas être réalisés par des enfants sans surveillance.

### **Seulement pour les marchés hors UE:**



Les personnes qui n'ont pas l'expérience ou les connaissances nécessaires sur le ou les produit(s) ne doivent pas le ou les utiliser. Par ailleurs, les personnes ayant des capacités physiques, sensorielles ou mentales réduites ne doivent pas utiliser le ou les produit(s), sauf si elles sont sous surveillance ou ont suivi une formation approfondie de l'utilisation de l'appareil par l'individu responsable de la sécurité de ces personnes.



De plus, les enfants doivent-être sous surveillance afin de s'assurer qu'ils ne jouent pas avec le produit.

### **Utilisation abusive:**



Ne surchargez pas les actionneurs – cela peut engendrer un risque de blessures corporelles et endommager le système.



Ne pas utiliser les actionneurs pour soulever des personnes. Ne pas s'asseoir ou se tenir debout sur une table en fonctionnement – risque de blessures.



Ne pas utiliser le système dans des environnements autres que l'utilisation intérieure prévue.



## Repairs

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

Further information on DESKLINE warranty can be found on the LINAK website [www.linak.com/warranty](http://www.linak.com/warranty).



### Warning!

If any of the DESKLINE® products are opened, there will be a risk of subsequent malfunction.



### Warning!

The DESKLINE® systems are not resistant to cutting oil.

---

## Manufacturer's declaration

### DECLARATION OF INCORPORATION OF PARTLY COMPLETED MACHINERY

**LINAK A/S**  
Smedevænget 8  
DK - 6430 Nordborg

Herewith declares that LINAK DESKLINE® products as characterized by the following models and types:

Control Boxes	CBD6S
Linear Actuators	DB5, DB6, DB14, LA23, LA31
Lifting Columns	DL1A, DL2, DL4S, DL5, DL5IC, DL6, DL6IC, DL7, DL8, DL8IC, DL9, DL9IC, DL10, DL10IC, DL11, DL11IC, DL12, DL14, DL15, DL16, DL16IC, DL17, DL19, DL19IC, BASE1
Desk Panels	DPA, DPB, DPH, DPF, DPG, DPT, DP, DP1CS
RF Controls	HB10RF, HB20RF, RFRL
Accessories	BA001, BLE2LIN, DS1, DF2, Kick & Click, SLS, SMPS001, SMPS002, SMPS006

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

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 the Machinery Directive 2006/42/EC where appropriate.**

Nordborg, 2019-05-27

**LINAK A/S**  
John Kling, B.Sc.E.E.  
Certification and Regulatory Affairs  
Authorized to compile the relevant technical documentation

# Declaration of conformity

## DECLARATION OF CONFORMITY

LINAK A/S  
Smedevænget 8  
DK - 6430 Nordborg

hereby declares that LINAK Actuator System composed of:

Control Box(s)                      CBD6SP00020A-009  
   CBD6S\*000\*0A-709

(The "\*" in the product description can either be a character or a number, thereby defining the variation of the product)

And  
Linear Actuator(s)                      DB4, DB5, DB6, DB7, DB9, DB12, DB14, DB16, LA23, LA31 series                      and / or  
Lifting Column(s)                      DL1A, DL2, DL4, DL5, DL6, DL7, DL8, DL9, DL10, DL11, DL12, DL12W, DL14,  
   DL15, DL16, DL17, DL19, BASE1 series

And  
Desk Panel(s)                              DP\*(C,K,L,U,V), WDPL1

(The "\*" in the product description can either be 1, 2, 3, A, B, H, T; thereby defining the variation of the product)

complies with EMC Directive: 2014/30/EU according to following standards:  
EN 61000-6-1:2007, EN 61000-6-3:2007+A1:2011+AC:2012

complies with Low Voltage Directive 2014/35/EU according to the standard:  
EN 60335-1:2012+A11:2014

complies with RoHS2 Directive 2011/65/EU according to the standard:  
EN 50581:2012

Additional information:

The system does also comply with the standard: EN 13849-1:2015 SRP/CS Cat. B, PL = b and SRESW PL = b  
Note 1: Exempted CBD6S with SW03003007 printed on the label.

Nordborg, 2019-06-07

**LINAK A/S**  
John Kling, B.Sc.E.E.  
Certification and Regulatory Affairs  
Authorized to compile the relevant technical documentation

Original Declaration

# Misc. on the DESKLINE® system

## Warranty

This DESKLINE product is subject to warranty pursuant to the terms of LINAK DESKLINE Warranty Paper, available on the LINAK website [www.linak.com/warranty](http://www.linak.com/warranty).

## Maintenance

Clean dust and dirt on the outside of the system at appropriate intervals and inspect 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).**

## ETL-marking

Due to space limitations, the complete ETL-marking demands are not represented on the marking plates. The full ETL Recognized Component markings are shown here.



C/N 120690

Conforms to ANSI/AAMI Std. ES60601-1  
Cert. to CSA Std. C22.2 No. 60601-1

ETL Recognized Component mark for Canada and United States



C/N 4008003

Conforms to ANSI/AAMI Std. ES60601-1  
Cert. to CSA Std. C22.2 No. 60601-1

ETL Recognized Component mark for Canada and United States



C/N 4008004

Conforms to ANSI/AAMI Std. ES60601-1  
Cert. to CSA Std. C22.2 No. 60601-1

ETL Recognized Component mark for Canada and United States



C/N 9901916

Conforms to UL962  
Cert. to CSA Std. C22.2 No. 60601-1

ETL Recognized Component mark for Canada and United States



C/N 4008671

Conforms to UL962  
Cert. to CSA Std. C22.2 No. 68-09

ETL Recognized Component mark for Canada and United States

# Products



### DPG1K

- Up/down drive

### DPG1M

- Up/down drive
- 2 memory positions
- LED diode reminder
- Bluetooth®

### DPG1B

- Up/down drive
- 2 memory positions
- Light strip reminder
- Bluetooth®

### DPG1C

- Up/down drive
- Four favourite positions
- Light strip reminder
- Bluetooth®
- Display



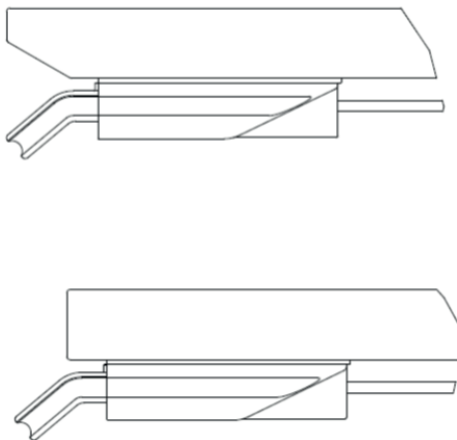
- Statistics of your daily achievements (standing time and burned calories)
- Automatic connection to desk
- Up and down drive (if supported by the connected product)
- Displays actual height
- Displays error codes and links to LINAK website support
- Up to four favourite positions
- Reminder notifications when to stand up
- Possibility to enable automatic drive on memory positions (if supported by the connected product)
- Works via Bluetooth® Low Energy Technology
- Available in English, German, French, Spanish, Italian, Korean, Chinese and Japanese

## Installation

### Placing the DPG

The drawings below are side view examples on how to position the DPG proportionally to the edge of the tabletop.

1. Place DPG so it is easy to operate and LED is in a visible position (DPG1K does not have an LED).



*Figure 1: Alignment in proportion to tabletop edge*

### Front label

The DPG (SW 1.29 and later from factory) is delivered with the removable product label attached to the display.

1. Peel the label off and place it on a visible spot, so the information is easily available.



*Figure 2: Removable product label*

**Mounting the DPG**

The DPG series consists of four different desk panels in two different sizes. The DPG1K and the DPG1M are the same size and the DPG1B and the DPG1C are the same size.

We recommend predrilling the holes for the DPG to ensure the same aligned position for all desks.

The two sizes share one hole in the hole pattern, which means three predrilled holes in the tabletop will make it possible to mount both sizes of the DPG and all 4 versions.

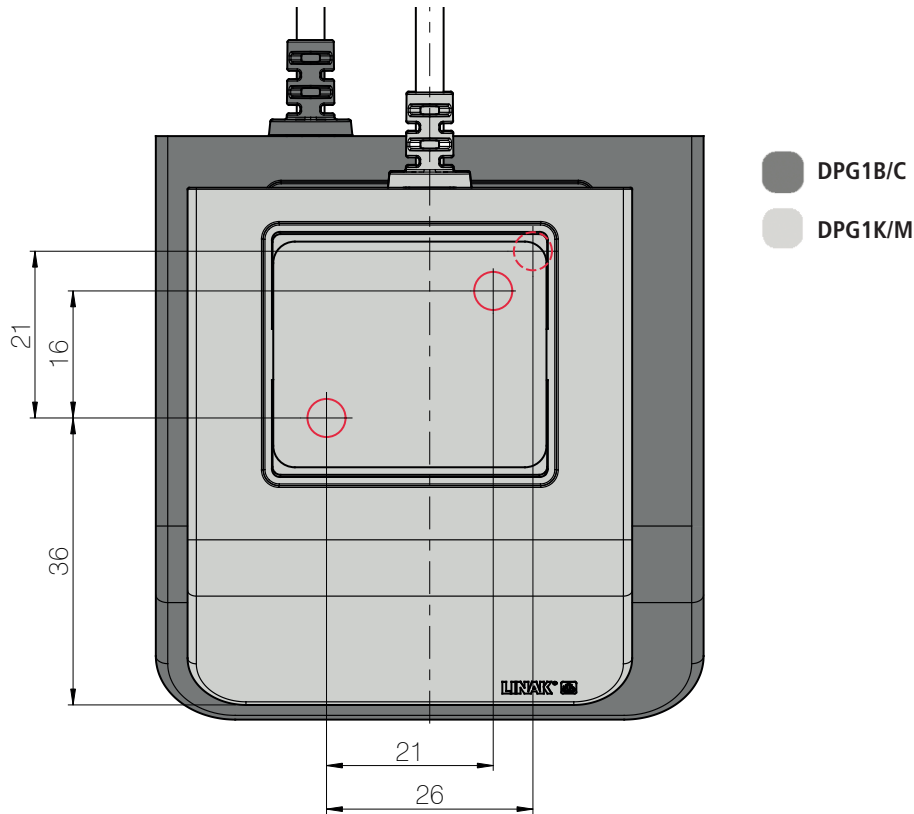


Figure 3: Hole pattern of the DPG sizes. The dashed line is the second hole of the DPG1B/C

All four DPG variants share the front hole indicated by the green line.  
The DPG1K and the DPG1M are the same size and share the hole indicated by the red line.  
The DPG1B and the DPG1C are the same size and share the hole indicated by the black line.

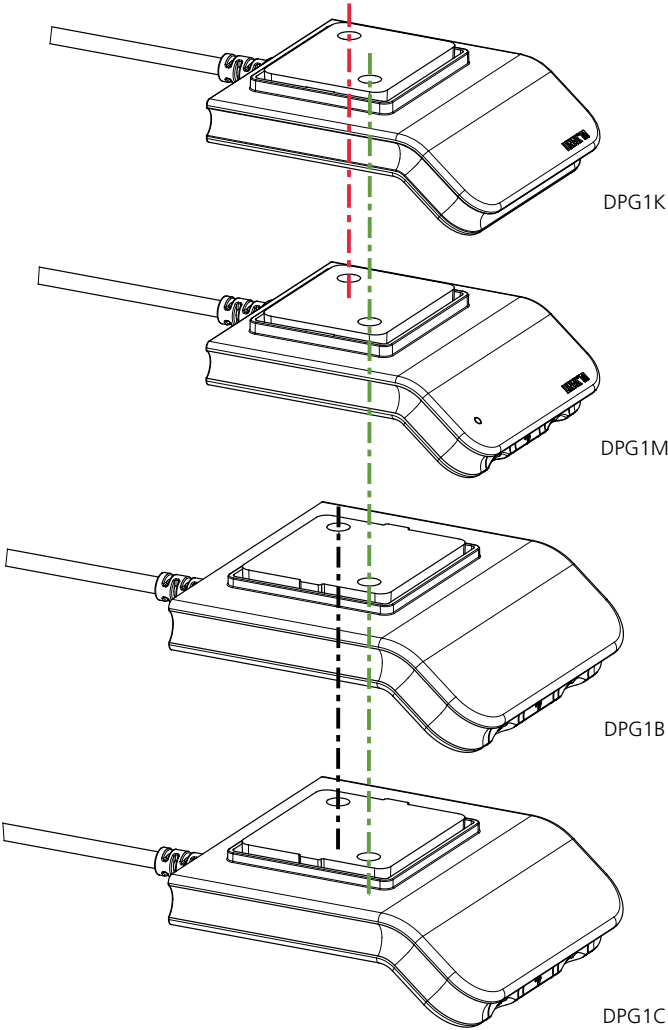
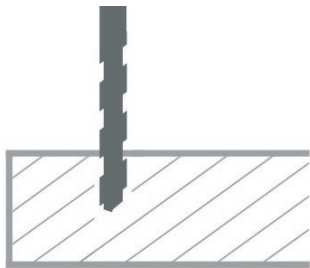
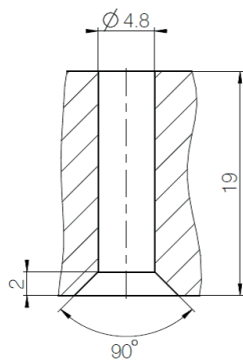


Figure 4: Holes shared by the various DPGs

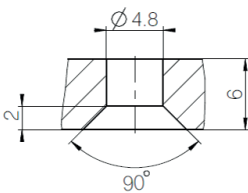
1. Predrill holes.



If no holes are predrilled, a bulge of wood might occur between the tabletop and the DPG – which causes the DPG not to be tightened sufficiently to the tabletop. This might lead to incorrect functionality of the DPG.



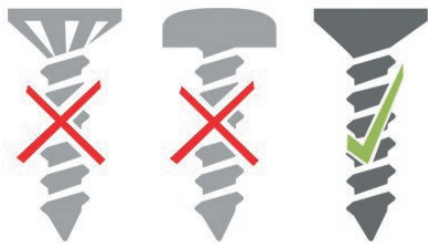
DPG with cover  
Max. screw length:  
19 mm + thickness of the tabletop



DPG without cover  
Max. screw length:  
6 mm + thickness of the tabletop



## 2. Use correct screws



Mount the DPG to the tabletop using screws with the following specifications:

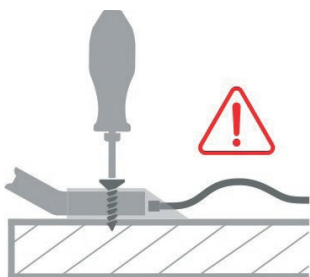
- Ø4.5 mm
- 90° countersink screw



Do not use screws with a milling head as they will cut into the housing of the DPG.

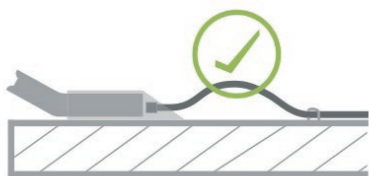
The screws must be fastened sufficiently without being overtightened. It is not possible to mention a specific torque as this depends on the type of screw, the material of tabletop and whether there are predrilled holes or not.

## 3. Do not overtighten screws.



The screws must be fastened sufficiently, but without damaging the plastic.

## 4. Mount DPG and make sure that cable is not tightened too much.



When mounting the DPG, it is important to ensure that the cable is not tightened but has free mobility in the first centimetres from the housing. We recommend attaching the cable to the tabletop with a clip as shown on the drawing above.

Find more information about how to use the DPG in this short film: [\(link\)](#)

The above-mentioned link is directly accessible via the label on the cover of the DPG. Use either the QR code or type in the web address.

DPG1C

The DPG1C has three operation buttons.

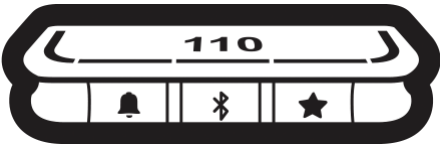


Figure 32: DPG1C operation buttons

Each button has a specific function:

Symbol	Description	Function
🔔	Reminder	Setting reminders
📶	Bluetooth®	Connecting the Desk Control™ App via Bluetooth® wireless technology
★	Favourite	Saving favourite positions

Display

The DPG1C has an OLED display, which shows the height during drive of the desk and many other texts to guide the users.

Adjusting the displayed height of the desk

If the height shown in the display is not correct, it can be adjusted.

1. Press 🔔 the and the 📶 buttons on the DPG1C at the same time for five seconds and the height in the display starts to flash.
2. Tilt the DPG1C to change the displayed height without moving the desk. Tilt up to increase the displayed height, tilt down to decrease the displayed height.
3. Press any button to confirm the height or wait for 10 seconds for automatic confirmation.

Changing the measurement unit

The measurement unit shown in the display can be set to either cm or inch.

1. Press ★ and 📶 buttons on DPG1C at the same time for five seconds and the current measurement unit flashes in display.
2. When e.g. "CM" flashes in display, tilt DPG1C once to change measurement unit to inch. "INCH" now flashes in display.
3. Press any button to confirm measurement unit or wait for 10 seconds for automatic confirmation.

### Operate the desk panel by tilting it.

1. Tilt and hold up DPG1C to drive desk up, press and hold down DPG1C to drive desk down.
2. Release DPG1C when you have reached your requested position.

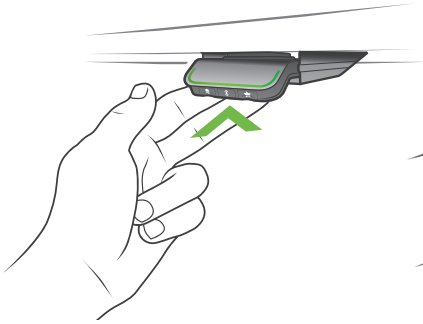


Figure 33: Tilt and hold the DPG1C to drive the desk up

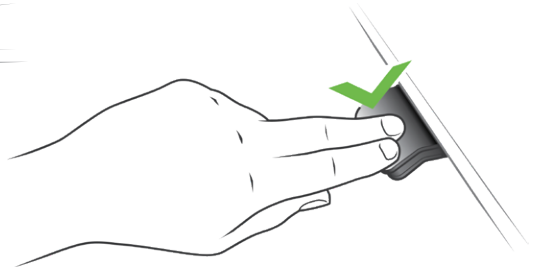


Figure 34: Press and hold the DPG1C to drive the desk down



### Desk height limits

In case the desk cannot be operated in its entire span (e.g. a shelf is blocking the upwards movement or a filing cabinet is placed under the desk and blocking the downwards movement), it is possible to set an upper limit and a lower limit for the desk height.



#### Note:

It must always be possible to drive the desk to its minimum height in case initialisation is required. During initialisation items placed under the desk must be removed.

#### Setting upper limit



1. Adjust desk to maximum allowable height.
2. Press  and tilt DPG1C up at the same time for 8 seconds until light flashes.
3. Release  and DPG1C.

#### Setting lower limit

1. Adjust desk to minimum allowable height.
2. Press  and press DPG1C down at the same time for 8 seconds until light flashes.
3. Release  and DPG1C.

### TO REMOVE UPPER OR LOWER LIMIT. SEE PAGE 47 FOR FACTORY RESET

#### Factory reset (only DPG1M, DPG1B and DPG1C)

Press and hold the  and  buttons for eight seconds to set the DPG to factory default. The LED/light strip flashes red three times to indicate the reset is done. If a factory reset is performed, it sets the DPG back to the configured state, i.e. all configurations made in the DPG configurator will not be reset – only the settings changed directly on the DPG or in the app by the end users will be reset.

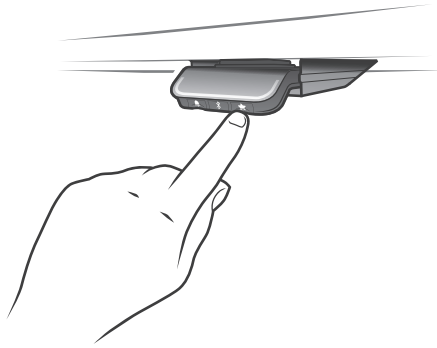
#### DPG1C only

During reset, the display lights up after five seconds, showing an arrow with a countdown [seconds] and RESET

## Favourite positions

Saving favourite positions 1 and 2

1. Adjust desk to a preferred position.
2. Press ★ button for two seconds.



*Figure 35: Saving favourite positions*

The light strip flashes white two times to indicate that saving the position is in progress. Not until the light strip becomes static white, has the position been saved. The display indicates the saved position with a ★ and a position number. The number next to the ★ indicates the order in which the positions are saved.

- First position saved: "1" is displayed next to the ★.
- Second position saved: "2" is displayed next to the ★.

If the user adjusts the desk to another position and saves this position, it will overwrite the favourite position (1 or 2) closest to the current position.

Saving favourite positions 3 and 4

1. Press ★ button shortly to make display toggle through the four favourite positions ( with position ★ number next to it).
2. Toggle through these four favourite positions in display and choose which one to save current position as.

E.g. a user wants to save the current position as favourite position 3:

3. Press the ★ button and toggle to the ★ with "3" next to it.
4. Press ★ button for two seconds and favourite position is saved.

**Note:**

Favourite positions 3 and 4 can be disabled via the DPG configurator (from DPG SW ver. 1.29).

**Driving to favourite positions**

After saving the favourite positions, the user can reach the positions simply by tilting/pressing the DPG1C.

1. Tilt/press and hold - when a saved position has been reached, the desk stops.
2. Release DPG1C within one second.

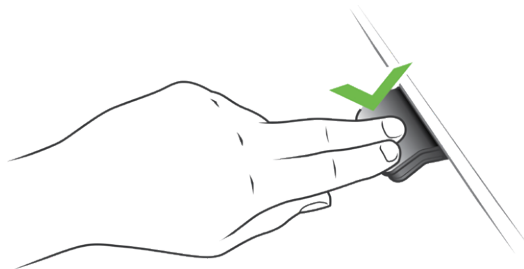
This way the user can easily change between sitting and standing height without looking at the DPG1C in the meantime. During desk driving, the display will show the height of the desk. When a favourite position has been reached, the display shows a ★ and the position number.

The DPG1C stops at all saved favourite positions, which means up to four different positions during the stroke length of the desk.

When the desk stops at a favourite position, the user can

- keep tilting/pressing the DPG1C for more than one second  
or
- release the DPG1C and immediately tilt/press it again.

The desk will move past the favourite position and continue its movement.



*Figure 36: Tilt/press to drive desk*

### Automatic driving to favourite positions

(only possible for "Full version" with "Automatic drive" enabled in the Desk Control™ App)

1. Double-tap DPG1C to let desk adjust automatically to first position in direction of double-tap.
2. To stop driving of desk between two favourite positions, simply tap DPG1C once.



*Figure 37: Double-tap to automatically adjust the desk to a favourite position*

### Erasing favourite positions

1. Press the ★ button for eight seconds to erase all saved favourite positions.

After five seconds, the display shows a countdown, and the light strip flashes red when all the favourite positions are erased.




*Figure 38: Erase favourite positions*

## Bluetooth®

### Connecting Bluetooth®

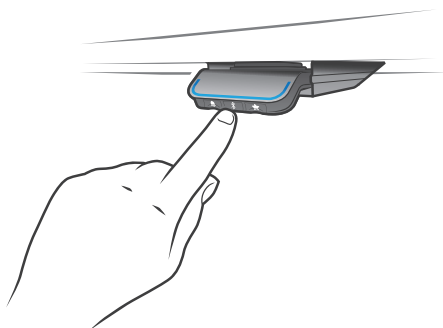
1. The apps are called "Desk Control™" and they have the following app logo in iTunes and Apple App store, Google Play store, and Microsoft Store::



2. Press  button in the middle for two seconds to enable pairing mode.

The display on the DPG1C will inform about the Bluetooth® ID of the desk, which is "DESK" followed by a four-digit number – look for this ID in the list of "Desks nearby" in the Desk Control™ App.

The light strip flashes blue while the desk panel is in pairing mode.



*Figure 39: Connect Bluetooth®*

## Reminder

The reminder LED lights through the surface of the DPG1C. The light is intended to indicate the position of the desk (sitting or standing height). The indication depends on the reminder interval chosen.

### Heartbeat (light strip)

The heartbeat reminder is shown as a thin LED light strip. While the user is sitting for an appropriate amount of time according to the set interval, the light strip calmly pulsates green symbolising a heartbeat. When the sitting interval runs out, the calm pulsating green turns into fast pulsating orange for one minute hereafter into static orange to indicate that the user should adjust the desk to standing height. In standing height, the light strip pulsates green until a potential timeout (standard timeout is four hours). When the desk is adjusted back to sitting height, the light strip pulsates green until the reminder goes off again.

### Reminder restart

The reminder automatically restarts when the desk is adjusted to sitting height.

### Reminder timeout

After four hours without action, the light strip will time out. When the DPG1C is tilted, the green light turns back on.



When the light (strip or blocks) is enabled for reminders, the DPG1C is no longer in ZERO™ mode as long as the light is on/active.






## Reminder intervals

The number of white blocks (one, two or three) each representing an interval. The three standard intervals are:

- Interval 1: Reminder after 55 minutes sitting
- Interval 2: Reminder after 50 minutes sitting
- Interval 3: Reminder after 45 minutes sitting

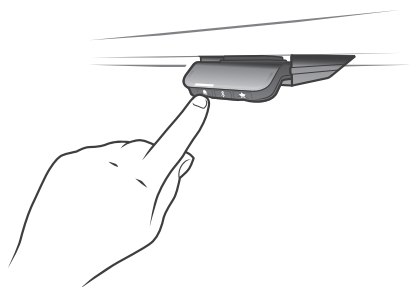
The default interval is reminding after 55 minutes, which means one white block lights up.

## Adjusting the reminder interval

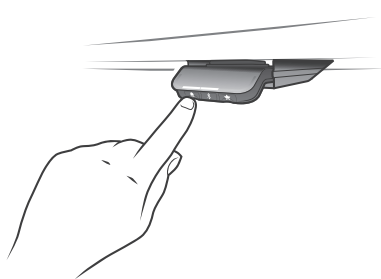
1. Press  button to adjust interval of getting reminded to change position.
2. Toggle through intervals by pressing  button.
3. Release  button when desired interval is indicated.

When no white blocks are lit up, the reminder is turned off.

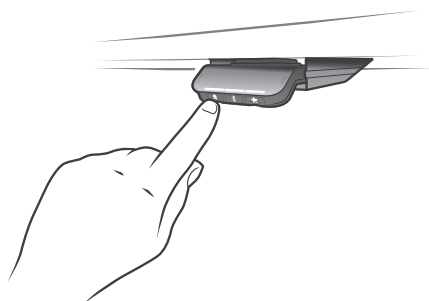
Through the app, it is possible to personalise the three intervals to custom values.



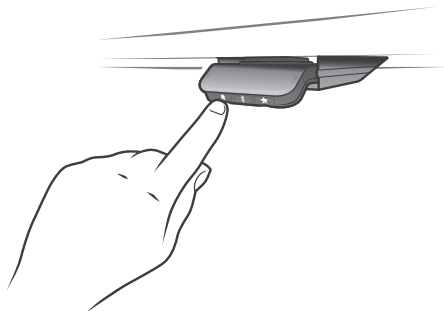
Interval 1: Reminder after 55 minutes sitting



Interval 2: Reminder after 50 minutes sitting



Interval 3: Reminder after 45 minutes sitting



Reminder off

*Figure 40: Set the reminder*

## Resetting the reminder

1. Press 🛎 symbol for eight seconds to reset reminder to default values.

After five seconds the display shows a countdown and the light strip flashes red when the reminder is reset.

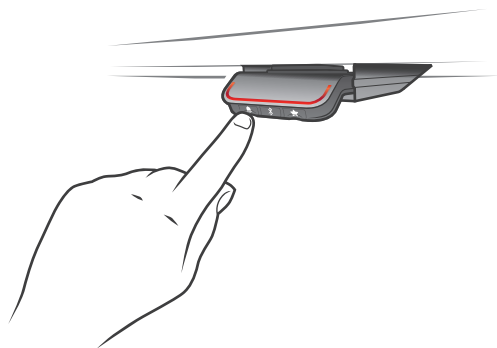


Figure 41: Reset reminder

## Key lock

The operation of DPG1C can be locked to prevent unintended driving of the desk. As default the key lock is disabled. If enabled, it automatically locks the DPG1C after a configured amount of time. The key lock function can also be configured to indicate attempt to operate the locked DPG1C by showing a red light and a 🔒.

## Unlocking DPG1C

1. Press 🛎, ⚡ and ★ in sequence (max. one second between each button press).

# Troubleshooting/FAQs

## Error codes (only DPG1C)



The DPG1C shows error codes generated in the CBD6S in case of errors in the system. The most common errors loop between the error code (EXX) and the error text, check the codes below:

Error codes	Cause
E53-E64	COLLISION
E41-E52	OVERLOAD
E01	INITIALISATION



Software versions before SW 1.13 only show error E01.

## Factory reset (only DPG1M, DPG1B and DPG1C)

Press and hold the  and  buttons for eight seconds to set the DPG to factory default. The LED/light strip flashes red three times to indicate the reset is done. If a factory reset is performed, it sets the DPG back to the configured state, i.e. all configurations made in the DPG configurator will not be reset – only the settings changed directly on the DPG or in the app by the end users will be reset.

### DPG1C only

During reset, the display lights up after five seconds, showing an arrow with a countdown [seconds] and RESET

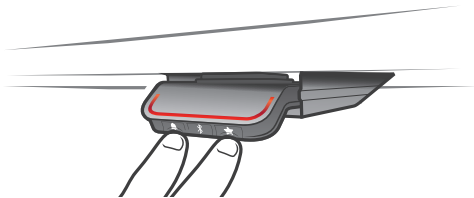


Figure 42: Reset to factory default (DPG1B and DPG1C)



Figure 43: Reset to factory default (DPG1M)

## Desk Control™ App

The Desk Control™ App is developed for users of sit-stand desks, who want to come one step closer to changing the prolonged sitting behaviour. Friendly reminders urge you to change position and extensive statistics show you your daily achievements - all to help you build a healthy routine during the workday. Via the app the desk can also be adjusted, and the user can drive to pre-stored memory positions.

The app is available for three different platforms: iOS for iPhones and iPads, Android for Android smartphones and tablets, and a desktop version for Windows 10. The Desk Control™ app comes in multiple languages, which can be selected in the app.



The app is connected to the desk via Bluetooth® wireless technology integrated in either of the LINAK® Desk Panels DPG1M, DPG1B, or DPG1C (all app versions), or with the BLE2LIN Bluetooth® adapter (only iOS and Android versions).

## Downloading apps

The apps are called "Desk Control™" and they have the following app logo in iTunes and Apple App store, Google Play store, and Microsoft Store:



## How to download the App for iOS:

- Step 1:** Use your iPhone or iPad to log into Apple App store
- Step 2:** Type "Desk Control" in the search column
- Step 3:** Select the "Desk Control" app
- Step 4:** Click install to download the app to your device

You can also scan this QR code to reach the Apple App Store:



## How to download the App for Android:

- Step 1:** Use your Android device to log into Google Play Store
- Step 2:** Type "Desk Control" in the search column
- Step 3:** Select the "Desk Control" app
- Step 4:** Click install to download the app to your device

You can also scan this QR code to reach the Google Play Store:

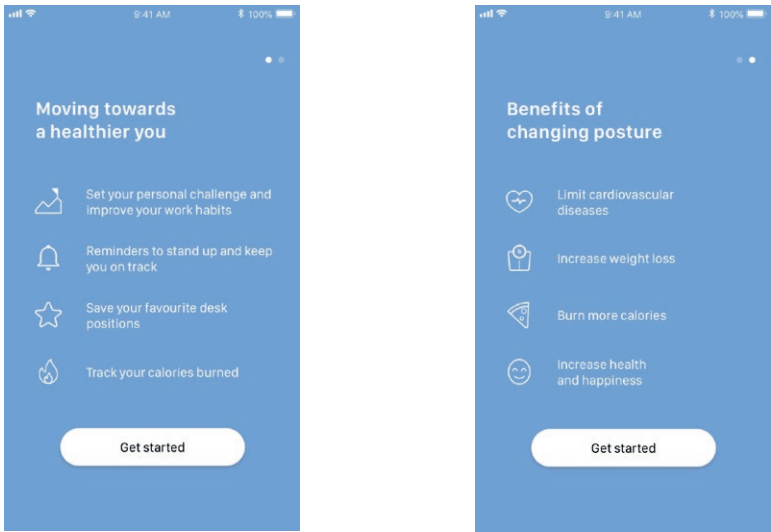


## How to download the app for Windows:

- Step 1:** Click on the Windows icon on your computer and go to Microsoft Store
- Step 2:** Type "Desk Control" in the search field
- Step 3:** Select the "Desk Control" app
- Step 4:** Click "Get" to download the app to your computer

# Getting started

When you open the app, a list of options available in the app is displayed. If you swipe to the left on your smart device or click on the white dot with your mouse, a list of benefits of changing posture during the day displays.



Press/click “Get started” on either screen.

For Android only:  
Enable GPS location to allow the app to scan for Bluetooth® devices. If not done, the app will not be able to detect desks nearby in pairing mode and thus not work.

**Onboarding flow**

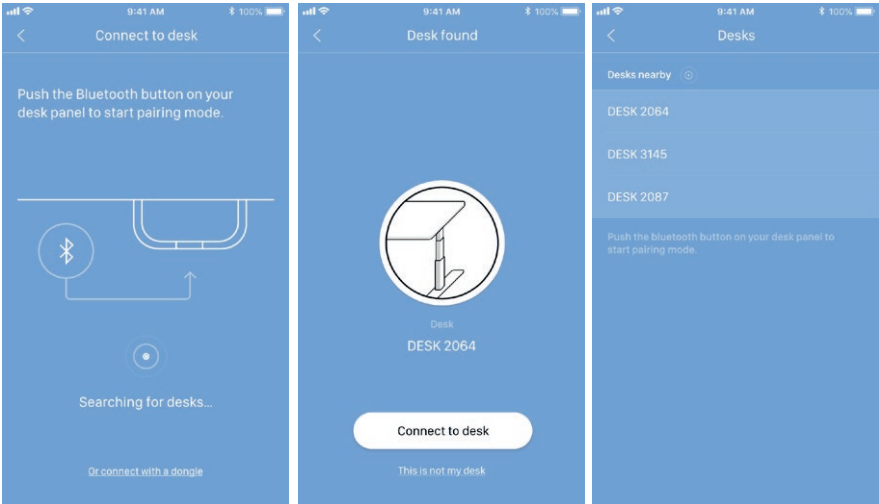
The app now automatically starts searching for desks in pairing mode nearby in and the ID of the first desk found is displayed. If this is the desk you want to use, press/click *“Connect to desk”*. If not, press/click *“This is not my desk”* to view a list of desks nearby. If the desk is not on the list, set the desk panel in pairing mode to get the desk added to the list.

Press the Bluetooth® button on the front of the desk panel (DPG1M, DPG1B or DPG1C) for two seconds. The LED light or LED light strip flashes blue to indicate that the desk panel is in pairing mode.

All Bluetooth® adapters have IDs named “BLE2LIN” followed by a four-digit number.

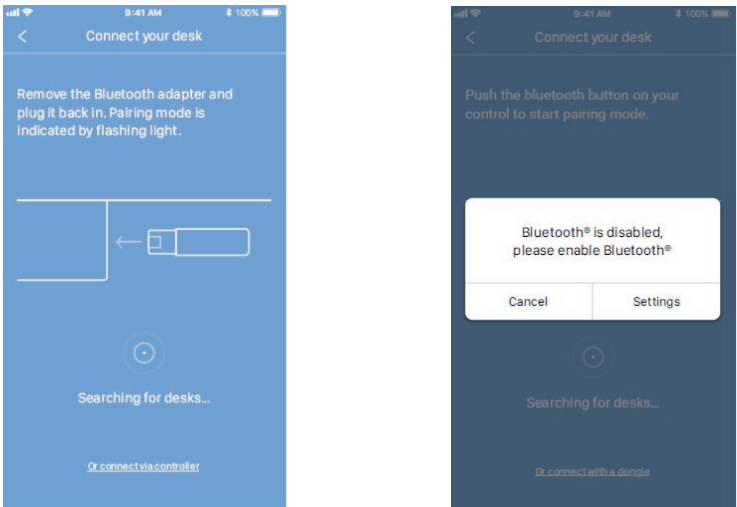
All Desk Panels DPG have IDs named “DESK” followed by a four-digit number.

Press/click on any desk ID to connect to that desk.

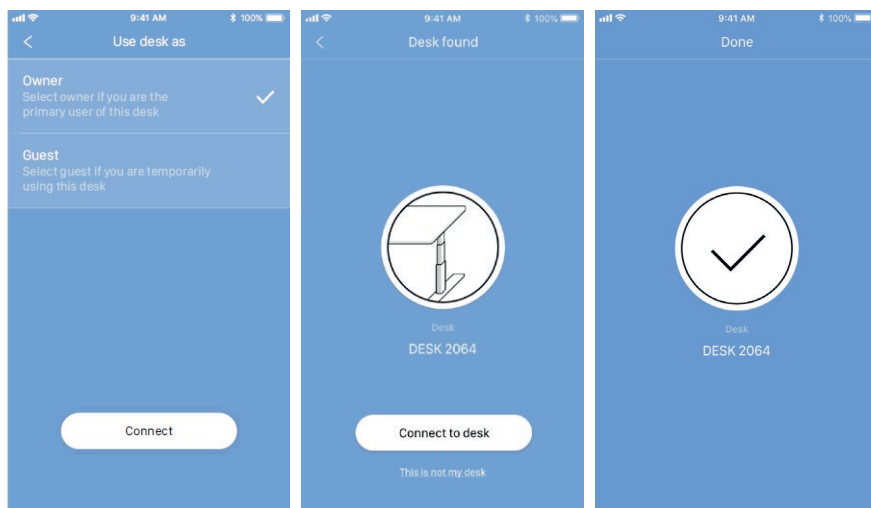


In case the desk panel does not have integrated Bluetooth®, press/click *“Or connect with a dongle”* to use a Bluetooth® adapter for pairing. Please remember to enable Bluetooth® on your smart device.

Plug the Bluetooth® adapter into the DESKLINE® control box. The adapter flashes blue and will be in pairing mode for three minutes.



Before the app is connected to the desk selected, you must select whether this is your primary desk (select "Owner") or if you use this desk temporarily (select "Guest"). Press/click "Connect" to connect the app to the desk.



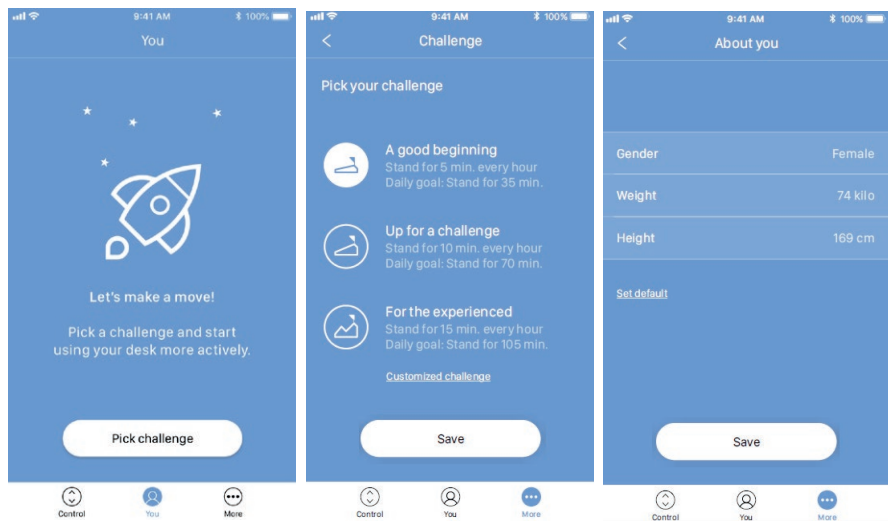
You can connect to several desks, either as "Owner" or as "Guest".

- If you connect as "Owner", your reminder and favourite settings are stored in the DPG on the desk and your app will automatically connect to this desk when you arrive at it and track the statistic stand data throughout the day.  
If you use the Bluetooth® adapter, your reminder and favourite settings are stored in the control box/dongle.
- If you connect as "Guest", your reminder and favourite settings are stored on your smart device/computer and when you connect to a desk, these settings will reflect in the DPG. You need to pair the app on your smart device/computer with the desk every morning. When the app has been disconnected from the desk for two hours, the DPG will go back to the settings it had before you connected, however, the rest of the day the app will automatically connect to this desk and send standing notification and keep track of stand data.



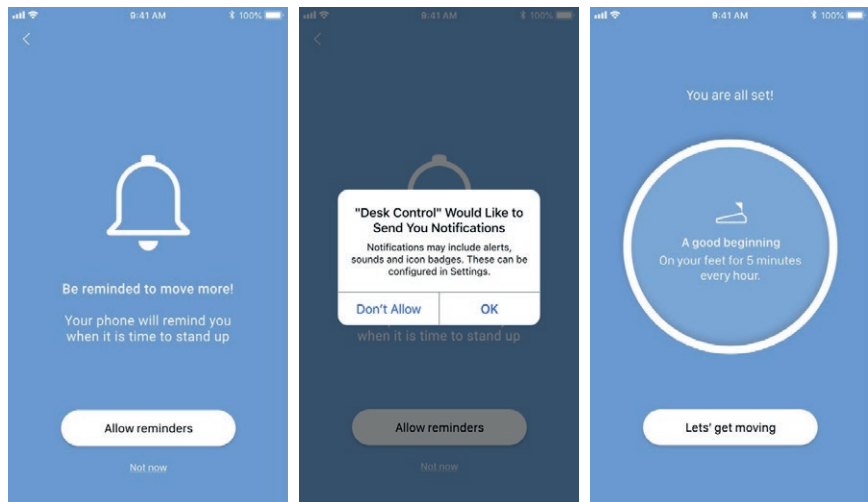
Setting your challenges

When the app on your smart device/computer is connected to the desk, you are prompted to pick a challenge and start using your desk more actively. You can choose between three standard challenges. Select one and press/click "Next". If desired, you can enter your gender, weight and height and find out how many calories you burn while standing during the day. If you choose the default settings, you will still see the calories burned, however, they will be based on the default gender, weight and height.



Please note that if an interval for standing/sitting has already been chosen via the DPG, these settings will be shown in the app. Either keep these or select a new challenge.

Once you have set your challenge, you can choose to get reminders when it is time to stand up. To receive reminders on iOS and Android devices, you need to allow the Desk Control app to send notifications.



(Only iOS and Android)

Now you are ready to become a healthier you.

# Operation

How to use the app

The Desk Control App consists of three different tabs to navigate between: "You", "Control" and "More".



Control

Adjustment of the desk (if supported by connected the device)



You

Your goal and the statistics of your daily achievements

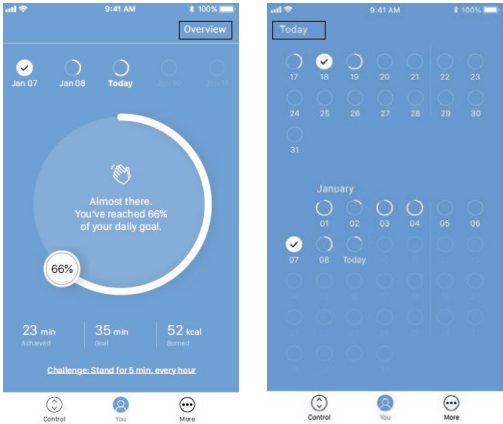


More

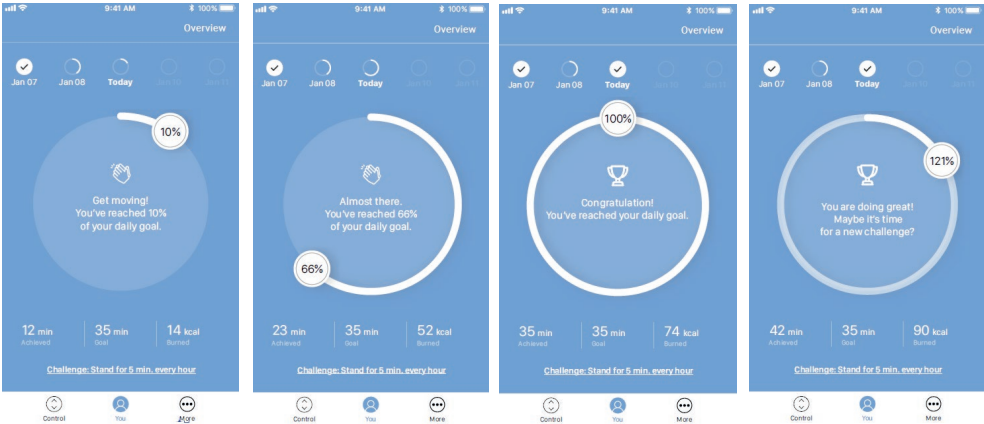
All settings

## You

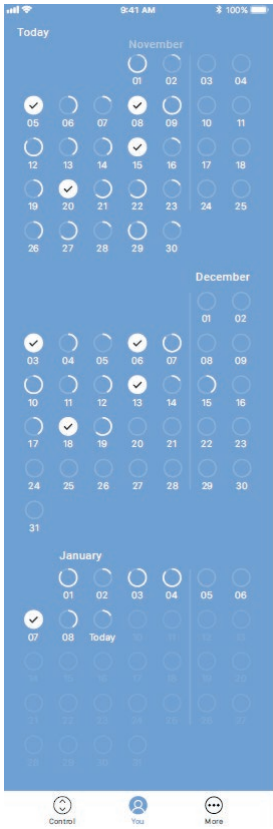
When your settings are done, you will see the main page, "You", giving you a fast overview of today's statistics together with a motivating text and icon to keep you going. Press/click "Overview" to get a calendar overview of your daily achievements. Press/click "Today" to get back to the main page.



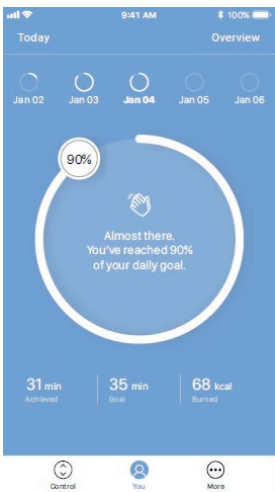
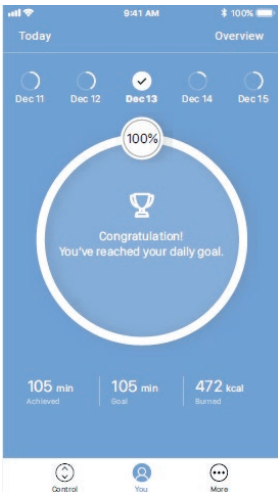
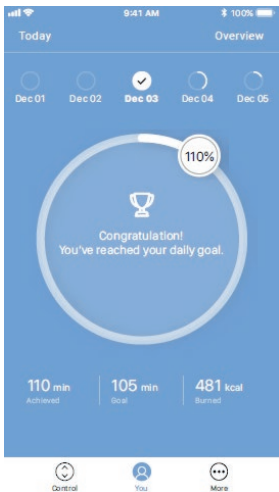
"You" is the page where you can view how close you are to reaching your daily goal. The progress is shown in percentage of your set goal and you will also see an incentive text and an icon. Should you stand more than your set goal, you will see an encouragement to pick a new challenge.



If you press/click "Overview", you will see your daily achievements in a calendar overview. You can scroll to see older data.



Press/click any of the dates to see your achievement for that day.

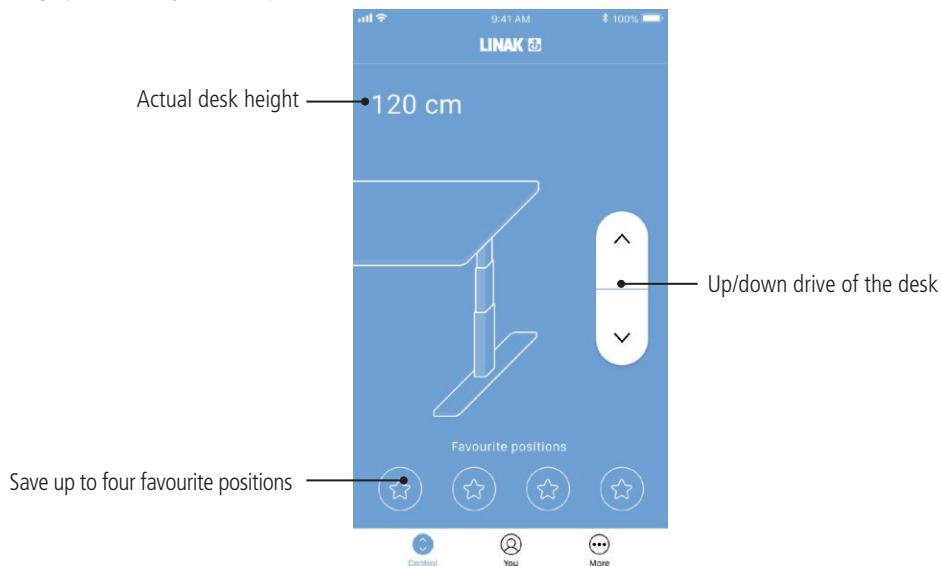


## Control

The screen below shows when the app is connected to a “full version” of a DPG or Bluetooth® Adapter. With a “Limited version” of the DPG or Bluetooth® Adapter the following is **not** possible:

- desk height adjustment via the app
- automatic drive to favourite positions
- saving favourite positions.

The graphics will adjust to the possibilities.



## Height

Actual desk height. In case an error occurs, the error code will be displayed instead of the height (does not apply to the Windows app).

## Up/down drive

Press/click and hold the button to move the desk up/down.

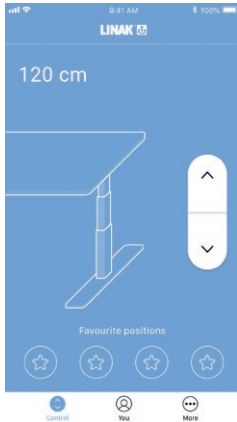
## Favourite positions

The stars symbolise the favourite positions.

## Setting a favourite position

1. Drive the desk to preferred position.
2. Press/click one of the circles with a star inside.  
A pop-up notification asks if the position should be saved as a favourite position, press/click "Yes, please" to save the position. The circle now shows the height of the favourite position.
3. Drive the desk to a favourite position by pressing/clicking and holding the button.

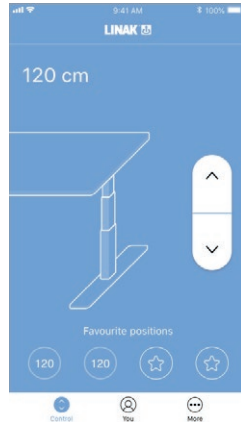
The DPG will reflect the favourite positions saved through the app, so you can change desk height via the desk panel instead of using the app.



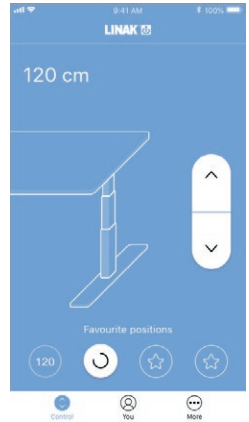
*Press/click star to save*



*Confirm choice*



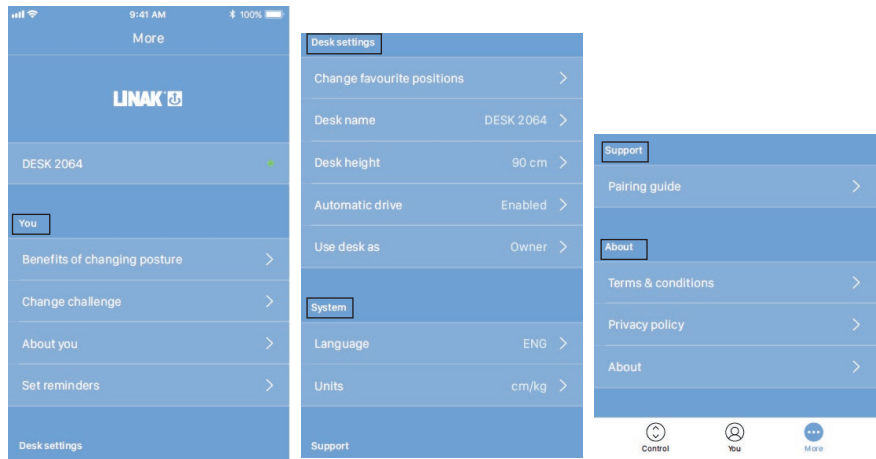
*Two saved positions*



*Driving to a favourite position*

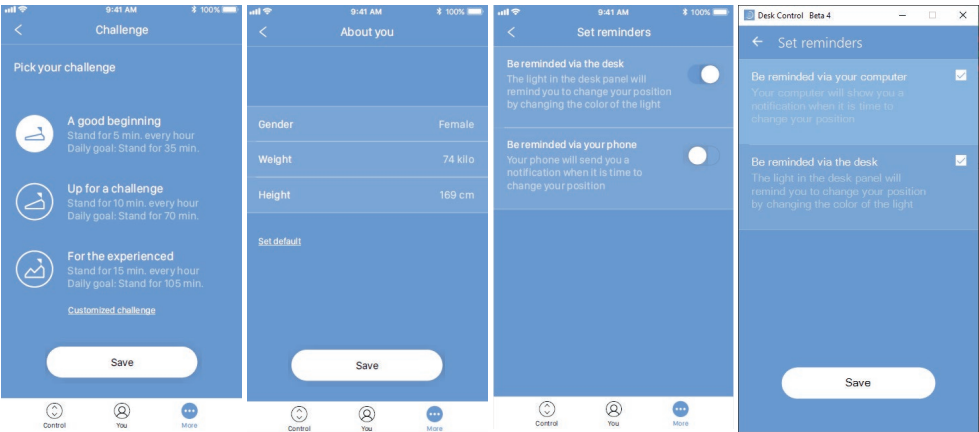
More

Press/click "More" to get access to a list of setting options and information arranged in five groups (the graphics below show a split view).



You

In the "You" section you can learn more about the benefits of changing position during the workday, or you can pick a new challenge. You also have the possibility of changing your personal information or your reminder settings.

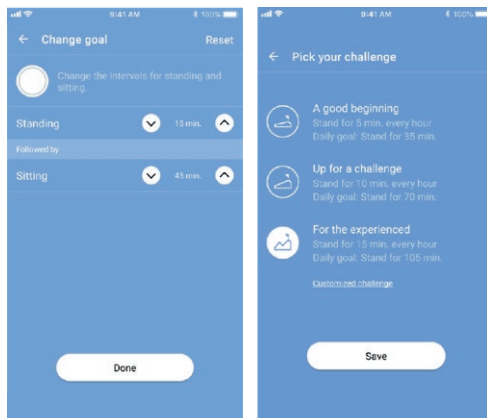


iOS/Android

Windows

## Change challenge

Here you can select between the three standard challenges, or you can define a personal challenge. Press/click "*Customized challenge*" and set your goals for standing/sitting by pressing/clicking the up/down arrows. When finished, press/click "*Done*" and then "*Save*".



## About you

Here you can set/change your gender, weight and height. The default settings are Male, 83 kg, and 181 cm.

## Set reminders

Enable or disable reminders as pop-up notifications.

If it is supported by the connected product, e.g. the DPG1B, you can enable or disable the light strip as a reminder function.

See also "[Reminder notifications](#)".

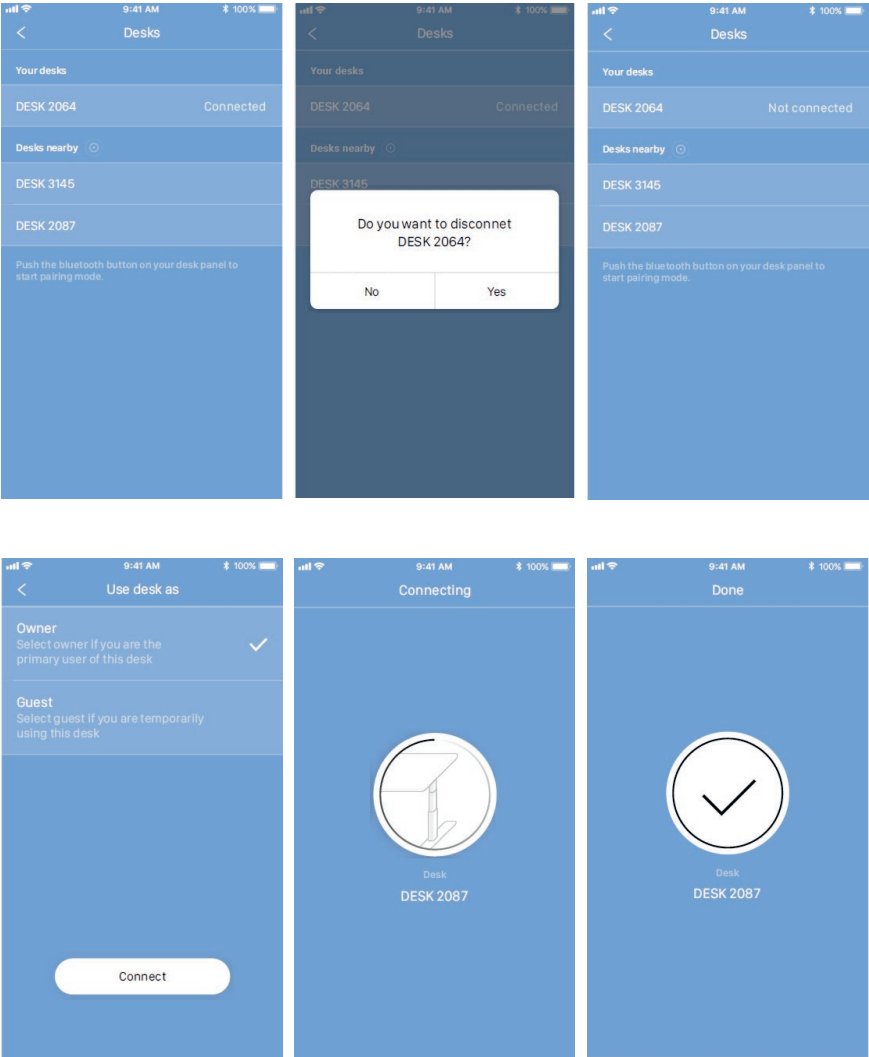
**Desk settings**

In the “Desk settings” section you can change your favourite positions, change the desk name, connect to another desk, set the actual desk height, enable/disable “Automatic drive”, and switch between “Owner” and “Guest”.

Connecting to another desk

Steps 1 and 2 are only to be performed if the app is already connected to a desk.

- 1. Press/click on the connected desk to disconnect.
- 2. Confirm that you want to disconnect.
- 3. Press/click on a new desk to connect.
- 4. Choose between “Owner” and “Guest”.
- 5. Wait until the app is connected to the desk.





## **Set desk name**

Change the name of the connected product to personalise the user experience of the app. Changing the desk name in the app will affect the Bluetooth® ID so the new name will be shown on the smart device and in the DPG1C display.

## **Set desk height**

Set the actual height of the desk. An illustration guides you on how to measure. Choose height units (cm or inches).

## **Automatic drive**

If "Automatic drive" is enabled, you can make the desk adjust non-stop to any favourite position by just pressing/clicking the relevant button once. This function is called "one-click-drive". It is only possible to enable "Automatic drive" if the app is connected to the "full" versions of the DPG1M/B/C and BLE2LIN, not the "limited" versions. An animation shows you how this feature works.

If you use the app to adjust the desk height, the desk will not stop at any intermediate favourite positions as it does if you use the DPG for desk height adjustment.

You have to accept the terms, i.e. accept the responsibility of any danger that can occur under these circumstances, in the pop-up notification before this feature can be enabled.

If you press/click any button, close the app or tilt the DPG during this automatic drive, you will interrupt the drive of the desk.

## **System**

In the "System" section you can switch language. The language is default set to the language of the operating system of your smart device/computer. Choose between eight different languages in the app. The available languages are: English, Korean, Japanese, Chinese, French, Italian, German, and Spanish.

This change does not affect the language in the display of a DPG1C.

You also have the possibility of changing the units. Switch between "cm" and "inch" for height and "kg" and "lbs" for weight.

## **Support**

In the "Support" section you can find a pairing guide which helps you pair the app to a desk.

## **About**

The "About" section contains the terms and conditions for using the Desk Control™ app as well as the LINAK privacy policy.

According to the privacy policy, LINAK respects your privacy and does not access or use any data entered in the app (such as favourite positions, gender, height and weight) or collected by the app (statistics). The information is stored only on your device and can therefore only be accessed in your device.

About

## **Use your desk**

[Link](#) to the "Made to Move" site where you can get guidance on how to use a sit/stand desk correctly.

## **Product information**

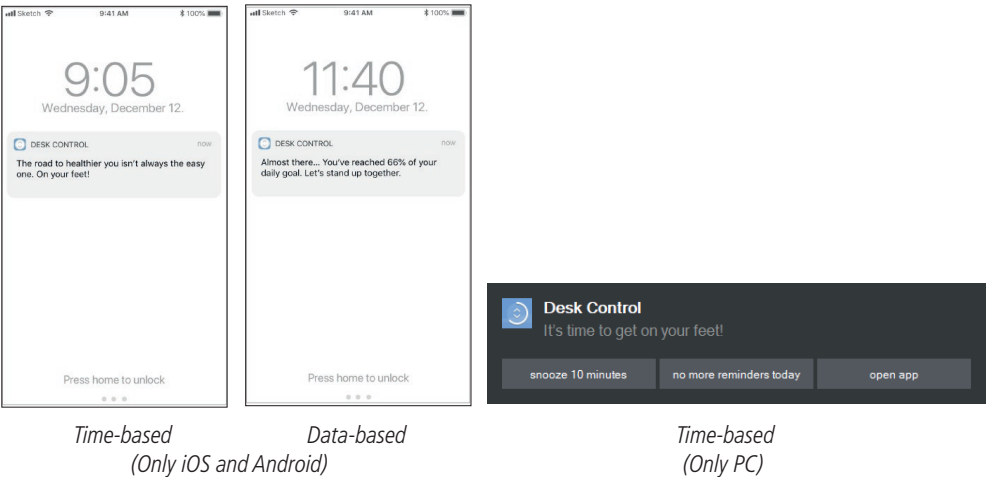
[Link](#) to the LINAK website with information about this app.

## **Support**

[Link](#) to the LINAK website with troubleshooting videos on the DPG products.

Reminder notifications

When reminder notifications are enabled, notifications will pop up to remind you when you need to change position. The reminders will appear based on your settings. On your smart device they will show on a locked or unlocked screen; on your computer they will show in the lower right corner of your monitor. On your computer the reminders are not saved in the notifications overview. The notifications depend on two types of data. They pop up as a result of either time-based data or data-based data.



The time-based notifications are available for all and pop up based on the time the desk has been in sitting position. Press/click on the notification to open the app, or slide to the left on your smart device to see the three options:

- Snooze for 10 minutes (press/click to be reminded again in ten minutes)
- No more reminders today (press/click and neither your smart device/computer nor the DPG will show any reminders for the rest of the day)
- Open app (press/click to adjust the desk height - or use the DPG)

The data-based notifications are personalised and pop up based on your set challenge.

Achievement	Notification
0 %	Let’s get started. On your feet and move it a bit.
1 to 66 %	Get moving! You’ve reached X% of your daily goal.
67 to 99 %	Almost there. You’ve reached X% of your daily goal.
100 to 115 %	Congratulation! You’ve reached your daily goal.
>115 %	You are doing great! Maybe it’s time for a new challenge?

The notifications are based on your challenge set under 'You'. If the challenge is set to 10 minutes standing and 50 minutes sitting, the notification will be sent after your desk has been in sitting position for 50 minutes. If you have saved two favourite positions, these will count as sitting and standing heights. If you have saved no favourite positions, the trigger point is the desk minimum height plus 30 cm (adds up to approximately 95 cm). When the desk is moved above the trigger point, the DPG and the app see the desk in standing position until it is moved down again. When the desk reaching sitting position (below the trigger point), the notification is being reset and a new notification will appear after 50 min.



Notifications ONLY appear, when you are sitting – not when you are standing.

## Timer reset

The notification timer will automatically be reset when:

- the desk is driven from standing to sitting position
- the app connects to the desk in the morning
- you reconnect to the desk after having been away from the desk for more than one hour
- you start a new challenge
- you adjust a challenge
- you have been connected as "Guest" (the reset will take place at midnight)

## Statistics

The Desk Control App collects data in the background while connected to your desk. Each time you enter the app, the data is updated within 30 seconds.

As long as the app is connected to your desk, it registers the desk height even though you are not at your desk. This means that the statistical data is not always exact.

## Recommendations on how to use Desk Control™

Overriding a learned sedentary behaviour is a true behavioural challenge. We have put together a guide to learn how to break up with your chair during your workday.

If you are not used to standing up and work, start with short intervals focusing on learning and getting into a habit. When this behaviour is starting to become a habit, continue to stand for longer periods e.g. using the guide below or simply testing what feels comfortable for you.

## How to vary between standing and sitting while you work

The most important thing is to vary your position and to move around, preferably three times an hour. Instead of sitting for too long at a time, you can switch between standing and sitting positions. Remember good posture and to stand with your body weight evenly distributed on both legs.

- Start by raising your desk and stand for 5 minutes each hour before you go to lunch.
- Raise your desk just before your lunch break. Then your desk will be in the right position when you get back from lunch.
- Just after lunch, stand for 5 minutes before lowering your desk to sit for 55 minutes.
- Raise your desk again every hour so that you stand up working for 5 minutes each hour for the rest of the day.
- Raise your desk before you leave for the day – then it is ready for the next day.

## Important reservations when varying between standing and sitting position:



If you are pregnant, have varicose veins or have a health condition that may prevent you from standing for 5 to 15 minutes at a time every hour, you should contact your doctor to make sure that this will not be detrimental to your health.



If you are not used to standing, start with a few minutes at a time and extend this standing period as you get used to work standing up.

## Disposal of LINAK products

As our 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 that our products be disassembled as much as possible and divided into different waste groups for recycling or combustion.

For example, waste can be sorted into metals, plastics, cable scrap, combustible material and recoverable resources.

Some of these main groups can be further divided into subgroups; e.g. metal can be divided into steel/aluminium/copper and plastic can be divided into ABS/PA/PE/PP.

As an example, the table below breaks down the different components in LINAK products to various recycling groups:

Product	Components	Recycling group
Handset/Control:	Plastic housing Cable PCB board	Plastic recycling or combustion Cable scrap or combustion Electronics scrap

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	Metal scrap	Cable scrap	Electronics scrap	Plastic recycling or combustion	Comments
Bluetooth® Adapter			X	X	
DPG		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 local recycling system. Please do not throw used or leaking batteries in normal household waste or in nature. This will cause damage to the environment.

### 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 becomes 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."

## 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 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.

Made for



iPod



iPhone



iPad

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*"Made for iPod touch", "Made for iPhone," and "Made for iPad" mean that an electronic accessory has been designed to connect specifically to iPod touch, iPhone, or iPad, respectively, and has been certified by the developer to meet Apple performance standards. Apple is not responsible for the operation of this device or its compliance with safety and regulatory standards. Please note that the use of this accessory with iPod touch, iPhone or iPad may affect wireless performance.*

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## LINAK DESKLINE Troubleshooting

### Glossary of Common Terms

- **Components**

- **Desk leg (DL)** – The lifting columns, typically with powder coated steel profiles, responsible for lifting the working load of the application.
- **Control box (CBD6S)** – Both the computer and power supply of the system.
- **Desk panel (DP)** – The user interface. Depending on the model, it is used to activate the application, set memory positions, display the height, display error codes, connect to mobile apps, and give reminders to the user.
- **Motor cable** – Transmits low voltage power (18-39 VDC) from the control box to the desk legs, and also transmits Piezo signals when available from the desk leg.
- **Mains cable** – Transmits high voltage power (120 VAC in US and Canada) to the control box.

- **Other**

- **Initialize** – Procedure to reset all desk legs to the fully retracted position so that the control box knows where they are.
- **Reference** – Any group of desk legs that run in parallel when an Up or Down command is sent to the control box. It is possible to have a custom control box configuration that allows for more than one Reference. *[Example: Two (2) desk legs on Reference #1 (Channels #1 and #2) to lift a work surface, and one (1) LA31 on Reference #2 (Channel 3) to adjust a monitor array.]*

### Standard Troubleshooting Procedures

#### **P1 - Initialize the control box (“reset”)**

*Note: This is commonly the solution when a complaint is that a desk will move down but not up. When a control box requires initialization, this is how the system is programmed to behave.*

1. Hold Down button on desk panel to ensure the desk is retracted to its lower limit (whether it's the fully retracted hard stop, or a configured lower limit).
2. Briefly release Down
3. Press and hold Down for 5 seconds, wait until all desk movement has stopped, then release
  - a. If initialization is successful, you should see a slight up/down “handshake” movement of the desk legs
  - b. If you have a desk panel with display, you should also see **E01** during this part of the procedure.

#### **P2 - Check all cable connections**

1. Mains cable, connected to both the control box and power outlet.
2. All motor cables, connected to both the control box and desk leg.
  - a. Assuming a standard control box configuration, these must be connected in channels 1 and 2, or channels 1, 2 and 3 for a 3-leg table. They can't be connected in channels 1 and 3 or 2 and 3 unless there is a configuration on the control box specifying this arrangement.
3. Desk panel cable, connected to the control box in either port A1 or A2 (doesn't matter which)

#### **P3 - Check for obstructions**

1. Check under, above and on the sides of the desk for any obstructions that could prevent movement in either direction.

- ❖ Ideally, for each of the following two troubleshooting procedures (**P4** and **P5**), one would have an extra, known good version of the components listed in the Components Glossary at the beginning of this document. It's not necessary to have the exact same item numbers as those that are being evaluated, unless one is replacing a single desk leg. However, it's possible to do some troubleshooting with a different type of desk leg.

#### **P4 - Check for faulty component(s) WITH error codes (digital display on Desk Panel, or on app via Bluetooth)**

Notes:

- ❖ Check the error code list in the appendix of this troubleshooting guide for assistance. The code should read **E##**. Some error codes are channel-specific which can help pinpoint the problem.

Symptom	Procedure
System will move down but not up	1. Initialize ( <b>P1</b> )
System unresponsive (no power to display with any button is pressed). If any of these steps activates the digital display, initialize the system ( <b>P1</b> ).	<ol style="list-style-type: none"><li>1. Check mains cable connection</li><li>2. Test power outlet using another device (lamp, phone charger, etc.)</li><li>3. Plug in a new switch and test</li><li>4. Connect all existing cables to a new control box and test</li></ol>
System is powered, but will not initialize	<ol style="list-style-type: none"><li>1. Try pressing and releasing the down button a few times before pressing and holding for 5 seconds.</li><li>2. Also, be aware if the control box has a special configuration: If the desk is programmed with a lower stroke limit, so as to avoid a collision with something like a file cabinet, it is possible that it also has a custom, longer Forced Initialization Time. This is the time required to hold Down before initialization begins. Sometimes this is 10 seconds or longer.</li><li>3. If you have a standard control box without a special configuration (i.e. "Plug &amp; Play"), try to initialize each leg in Channel 1 by itself, with nothing else plugged into the motor channels on the control box. Also, swap the motor cables so that a different motor cable is used to initialize Channel 1 by itself. The problem could be a faulty desk leg or a faulty motor cable.</li></ol>

Symptom	Procedure
Channel-specific error (Ex: E41 – Channel 1 overload) – <i>Everything except Piezo errors (E59-E63)</i>	<ol style="list-style-type: none"><li>1. Swap the motor cable connections at the control box (Motor cable #1 from channel 1 to 2, motor cable #2 from channel 2 to 1). If It remains E41, there could be a problem with the application (load or obstruction on one side) or a bad control box. If the error changes to E42, go to step P4-3-b.</li><li>2. Swap the motor cable connections at the desk legs, so that the leg that was originally connected to Channel 1 is back in Channel 1, but with the motor cable that was originally connected to Channel 2. If it remains E42, it is most likely a bad motor cable, now connected to Channel 2. If it goes back to E41, it is most likely a bad desk leg, now connected to Channel 1.</li></ol>
Desk is uneven	<ol style="list-style-type: none"><li>1. Initialize the desk. If both legs begin to run down, complete the initialization. If only one leg moves, stop and move to Step 2.</li><li>2. Check motor cable connections. Check to ensure motor cables are not pulled during movement. With a standard, Plug &amp; Play control box, it's possible that only one leg is connected, and connected to Channel 1. In this case, it will initialize and run Channel 1 only. If there is only one leg but it's connected to Channel 2, it will not initialize.</li><li>3. If a motor cable was disconnected, try initializing again.</li><li>4. If unsuccessful, connect the desk leg from Channel 2 into Channel 1, with nothing in Channel 2, and initialize.</li><li>5. Try initializing the same leg that's in Channel 1, but with a different motor cable. If it still won't initialize, replace the desk leg.</li></ol>



**P5 – Check for faulty component WITHOUT error codes (no digital display on Desk Panel, no Bluetooth)**

Symptom	Procedure
System will move down but not up	<ol style="list-style-type: none"> <li>1. Initialize (<b>P1</b>)</li> </ol>
<p>System will not initialize. OR System won't complete the full range of motion.</p> <p><i>– After each of these steps, attempt to initialize (<b>P1</b>).</i></p>	<ol style="list-style-type: none"> <li>1. Check mains cable connection. Test power outlet using another device (lamp, phone charger, etc.)</li> <li>2. Plug in a new switch.</li> <li>3. Connect all existing cables to a new control box.</li> <li>4. Try pressing and releasing the down button a few times before pressing and holding for 5 seconds.</li> <li>5. Also, be aware if the control box has a special configuration: If the desk is programmed with a lower stroke limit, so as to avoid a collision with something like a file cabinet, it is possible that it also has a custom, longer Forced Initialization Time. This is the time required to hold Down before initialization begins. Sometimes this is 10 seconds or longer.</li> <li>6. If you have a standard control box without a special configuration (i.e. "Plug &amp; Play"), try to initialize each leg in Channel 1 by itself, with nothing else plugged into the motor channels on the control box. Also, swap the motor cables so that a different motor cable is used to initialize Channel 1 by itself. The problem could be a faulty desk leg or a faulty motor cable.</li> </ol>
Desk is uneven	<ol style="list-style-type: none"> <li>1. Initialize the desk. If both legs begin to run down, complete the initialization. If only one leg moves, stop and move to Step 2.</li> <li>2. Check motor cable connections. Check to ensure motor cables are not pulled during movement. With a standard, Plug &amp; Play control box, it's possible that only one leg is connected, and connected to Channel 1. In this case, it will initialize and run Channel 1 only. If there is only one leg but it's connected to Channel 2, it will not initialize.</li> <li>3. If a motor cable was disconnected, try initializing again.</li> <li>4. If unsuccessful, connect the desk leg from Channel 2 into Channel 1, with nothing in Channel 2, and initialize.</li> <li>5. Try initializing the same leg that's in Channel 1, but with a different motor cable. If it still won't initialize, replace the desk leg.</li> </ol>

## Appendix

### What is the Control Box Thinking?

There are many clever procedures, checks and measurements performed in the control box. Here is a brief description of what the control box is trying to accomplish while it is activating an application:

- **Safe activation of the application**
  - Parallel, even movement of all desk legs in the application is critical.
    - The control box does not directly know the position of each desk leg. Instead, the position of each leg is constantly calculated via Hall pulses from each motor. The legs on a single reference are not allowed to be more than +/- 5 Hall pulses out of sync. For a standard DL, this amounts to +/- 0.55 mm.
    - Motor cable disconnections are also detected as errors.
  - If Piezo technology is present in the desk leg, the control box monitors for Piezo “collision” signals from each channel. When a Piezo signal is sensed, movement is immediately stopped and, if there is room, the system is ran in the opposite direction a small distance.
  - Anytime the control sees an incomplete signal, or more than one signal (multiple keys pressed, multiple desk panels activated at the same time), an error is determined and no movement is allowed at that moment. This is to prevent an action of movement that is not intended by the user.
- **Protection from equipment damage**
  - Internal temperature of the control box is monitored.
  - Maximum current draw for each motor channel, as well as the system as a whole, is measured. When the current exceeds an allowable limit, an error is presented.

### Error Codes

ERROR CODE	NAME	DESCRIPTION	POTENTIAL CAUSE	TROUBLESHOOTING
E01	Position Lost	The desk has an unknown position and needs to be initialized	* Position error * New Desk Leg added	>Initialize the system
E02	General Overload Up	Overload in upward direction has occurred		
E03	General Overload Down	Overload in downward direction has occurred		
E08	Watchdog	Indicate that software failed to kick watchdog	* Program fault	>Unplug mains cable for 15 sec >Initialize the system >Replace Control Box
E09	LIN collision	Collisions detected on the LIN bus	*Key pressed on two or more connected handset simultaneously *Multiple LINBUS devices activated simultaneously	>Check if another desk panel is connected and being activated >Unplug all but one desk panel and test system
E10	Power fail	Power fail happened, or power regulator adjusted below 10%	* Mains cable pulled during driving * Internal fault * Only 1 battery for a 3- or 4-channel system * "E10 is a power fail, voltage on power supply	> Check mains cable is not caught, and is allowed to freely travel > Use strain-relief loop built into control box > Use a 2nd battery; charge batteries

ERROR CODE	NAME	DESCRIPTION	POTENTIAL CAUSE	TROUBLESHOOTING
			drops below a certain limit, power removed"	
E11	Channel mismatch	Change in number of actuators since initialization	* Disconnection * Desk Leg added	>Check Motor cable connections and Integrity >Change Motor cable or Desk Leg >Initialize the system
E12	Position error	One channel have position different than others	* Too much back drive occurred	>Move table to fully retracted position >Initialize system
E13	Short circuit	Short circuit detected during operation	* Squeezed Motor Cable * Short in motor	>Check motor cable connections >Isolate and replace Motor Cable >Isolate and replace Desk Leg
E15	Power limit	System has reached its power limitation	* Mains cable pulled during driving * Internal fault * Many times will see this alongside E10 * "E15 is when power regulator has adjusted speed down on actuators without any significant current draw, usually caused by power supply dropping."	> Check mains cable is not caught, and is allowed to freely travel > Use strain-relief loop built into control box
E16	Key Error	Illegal keys pressed (handled internally in DP1C).	* Hitting multiple buttons simultaneously	>Check switch
E17	Safety missing	LIN bus unit does not support safety feature	* DP1C/DPF1C does not have up-to-date software	>Try DP with more recent software version (version printed on label)
E18	Missing Initialization plug	A special service tool is required to change number of channels to the system	[BASELIFT Only] * Service tool missing from BASELIFT system when initializing	>Add service tool
E23	Ch1 missing	Channel 1 is detected missing	* Disconnection * Faulty motor cable * Faulty motor in leg	>Check Motor cable connections and Integrity >Change Motor cable or Desk Leg >Initialize the system
E24	Ch2 missing	Channel 2 is detected missing	* Disconnection * Faulty motor cable * Faulty motor in leg	>Check Motor cable connections and Integrity >Change Motor cable or Desk Leg >Initialize the system
E25	Ch3 missing	Channel 3 is detected missing	* Disconnection * Faulty motor cable * Faulty motor in leg	>Check Motor cable connections and Integrity >Change Motor cable or Desk Leg >Initialize the system
E26	Ch4 missing	Channel 4 is detected missing	* Disconnection * Faulty motor cable * Faulty motor in leg	>Check Motor cable connections and Integrity >Change Motor cable or Desk Leg >Initialize the system

ERROR CODE	NAME	DESCRIPTION	POTENTIAL CAUSE	TROUBLESHOOTING
E29	Ch1 type	Channel 1 is not same type as when initialized	* Change in Desk Leg type * Loose wire inside motor	>Check Desk Leg type >Change Desk Leg >Initialize the system
E30	Ch2 type	Channel 2 is not same type as when initialized or not same type as channel 1	* Change in Desk Leg type * Loose wire inside motor	>Check Desk Leg type >Change Desk Leg >Initialize the system
E31	Ch3 type	Channel 3 is not same type as when initialized or not same type as channel 1	* Change in Desk Leg type * Loose wire inside motor	>Check Desk Leg type>Change Desk Leg>Initialize the system
E32	Ch4 type	Channel 4 is not same type as when initialized or not same type as channel 1	* Change in Desk Leg type * Loose wire inside motor	>Check Desk Leg type >Change Desk Leg >Initialize the system
E35	Ch1 pulse fail	Channel 1 had too many pulse errors	* Loose/faulty cable * Hall sensor PCB	>Check motor cable connections and integrity >Initialize the system >Change Desk Leg
E36	Ch2 pulse fail	Channel 2 had too many pulse errors	* Loose/faulty cable * Hall sensor PCB	>Check motor cable connections and integrity >Initialize the system >Change Desk Leg
E37	Ch3 pulse fail	Channel 3 had too many pulse errors	* Loose/faulty cable * Hall sensor PCB	>Check motor cable connections and integrity >Initialize the system >Change Desk Leg
E38	Ch4 pulse fail	Channel 4 had too many pulse errors	* Loose/faulty cable * Hall sensor PCB	>Check motor cable connections and integrity >Initialize the system >Change Desk Leg
E41	Ch1 overload up	Overload up occurred on channel 1	* Leg is overloaded * Hit obstruction * Reached end stop (before initialization at upper end-stop occurs)	>Remove obstruction >Remove load >Initialize if necessary
E42	Ch2 overload up	Overload up occurred on channel 2	* Leg is overloaded * Hit obstruction * Reached end stop (before initialization at upper end-stop occurs)	>Remove obstruction >Remove load >Initialize if necessary
E43	Ch3 overload up	Overload up occurred on channel 3	* Leg is overloaded * Hit obstruction * Reached end stop (before initialization at upper end-stop occurs)	>Remove obstruction >Remove load >Initialize if necessary
E44	Ch4 overload up	Overload up occurred on channel 4	* Leg is overloaded * Hit obstruction * Reached end stop (before initialization at upper end-stop occurs)	>Remove obstruction >Remove load >Initialize if necessary
E47	Ch1 overload down	Overload down occurred on channel 1	* Hit obstruction	>Remove obstruction >Initialize if necessary
E48	Ch2 overload down	Overload down occurred on channel 2	* Hit obstruction	>Remove obstruction >Initialize if necessary

ERROR CODE	NAME	DESCRIPTION	POTENTIAL CAUSE	TROUBLESHOOTING
E49	Ch3 overload down	Overload down occurred on channel 3	* Hit obstruction	>Remove obstruction >Initialize if necessary
E50	Ch4 overload down	Overload down occurred on channel 4	* Hit obstruction	>Remove obstruction >Initialize if necessary
E53	Ch1 anti-col	Anti-collision triggered on channel 1	* Hit Obstruction	>Remove obstruction >Initialize if necessary
E54	Ch2 anti-col	Anti-collision triggered on channel 2	* Hit Obstruction	>Remove obstruction >Initialize if necessary
E55	Ch3 anti-col	Anti-collision triggered on channel 3	* Hit Obstruction	>Remove obstruction >Initialize if necessary
E56	Ch4 anti-col	Anti-collision triggered on channel 4	* Hit Obstruction	>Remove obstruction >Initialize if necessary
E59	Ch1 SLS/PIEZO	Safety limit switch activated on channel 1	* Hit Obstruction	>Remove obstruction >Initialize if necessary
E60	Ch2 SLS/PIEZO	Safety limit switch activated on channel 2	* Hit Obstruction	>Remove obstruction >Initialize if necessary
E61	Ch3 SLS/PIEZO	Safety limit switch activated on channel 3	* Hit Obstruction	>Remove obstruction >Initialize if necessary
E62	Ch4 SLS/PIEZO	Safety limit switch activated on channel 4	* Hit Obstruction	>Remove obstruction >Initialize if necessary
E65	Ch1 pulse dir	Pulses counted wrong direction in channel 1	* Motor poles are crossed * Hall sensor Cables are crossed	>Check motor cable connections and integrity >Initialize the system >Exchange Desk Leg
E66	Ch2 pulse dir	Pulses counted wrong direction in channel 2	* Motor poles are crossed * Hall sensor Cables are crossed	>Check motor cable connections and integrity >Initialize the system >Exchange Desk Leg
E67	Ch3 pulse dir	Pulses counted wrong direction in channel 3	* Motor poles are crossed * Hall sensor Cables are crossed	>Check motor cable connections and integrity >Initialize the system >Exchange Desk Leg
E68	Ch4 pulse dir	Pulses counted wrong direction in channel 4	* Motor poles are crossed * Hall sensor Cables are crossed	>Check motor cable connections and integrity >Initialize the system >Exchange Desk Leg
E71	Ch1A short	Short circuit on channel 1 [If T-splitter is used, short circuit on 1A]	* Damage to motor cable * Damage to cable exiting leg (if applicable)	>Inspect motor cable for damage, replace if damaged >Inspect cable exiting leg (if applicable), replace if damaged.
E72	Ch1B short	Short circuit on channel 1 [If T-splitter is used, short circuit on 1B]	* Damage to motor cable * Damage to cable exiting leg (if applicable)	>Inspect motor cable for damage, replace if damaged >Inspect cable exiting leg (if applicable), replace if damaged.
E73	Ch2A short	Short circuit on channel 2 [If T-splitter is used, short circuit on 2A]	* Damage to motor cable * Damage to cable exiting leg (if applicable)	>Inspect motor cable for damage, replace if damaged >Inspect cable exiting leg (if applicable), replace if damaged.
E74	Ch2B short	Short circuit on channel 2 [If T-splitter is used, short circuit on 2B]	* Damage to motor cable * Damage to cable exiting leg (if applicable)	>Inspect motor cable for damage, replace if damaged >Inspect cable exiting leg (if applicable), replace if damaged.

ERROR CODE	NAME	DESCRIPTION	POTENTIAL CAUSE	TROUBLESHOOTING
E75	Ch3A short	Short circuit on channel 3 [If T-splitter is used, short circuit on 3A]	* Damage to motor cable * Damage to cable exiting leg (if applicable)	>Inspect motor cable for damage, replace if damaged >Inspect cable exiting leg (if applicable), replace if damaged.
E76	Ch3B short	Short circuit on channel 3 [If T-splitter is used, short circuit on 3B]	* Damage to motor cable * Damage to cable exiting leg (if applicable)	>Inspect motor cable for damage, replace if damaged >Inspect cable exiting leg (if applicable), replace if damaged.
E77	Ch4A short	Short circuit on channel 4 [If T-splitter is used, short circuit on 4A]	* Damage to motor cable * Damage to cable exiting leg (if applicable)	>Inspect motor cable for damage, replace if damaged >Inspect cable exiting leg (if applicable), replace if damaged.
E78	Ch4B short	Short circuit on channel 4 [If T-splitter is used, short circuit on 4B]	* Damage to motor cable * Damage to cable exiting leg (if applicable)	>Inspect motor cable for damage, replace if damaged >Inspect cable exiting leg (if applicable), replace if damaged.
E84	DC-out	DC unit has been disconnected or failed	[Reserved for future development]	[Reserved for future development]
E86	Master	Connection to master lost OR following messages are from master	[Only used in multiparallel system] *Poor cable connection to master box *If followed by another error code, then codes being communicated from master box	>Check connection to master box, check cable integrity >If communicating other error codes, see above
E87	Slave 1	Connection to 1st slave lost OR following messages are from 1st slave	[Only used in multiparallel system] *Poor cable connection to slave box *If followed by another error code, then codes being communicated from slave box	>Check connection to master box, check cable integrity >If communicating other error codes, see above
E88	Slave 2	Connection to 2nd slave lost OR following messages are from 2nd slave	[Only used in multiparallel system] *Poor cable connection to slave box *If followed by another error code, then codes being communicated from slave box	>Check connection to master box, check cable integrity >If communicating other error codes, see above
E89	Slave 3	Connection to 3rd slave lost OR following messages are from 3rd slave	* Damage to motor cable * Damage to cable exiting leg (if applicable)	>Inspect motor cable for damage, replace if damaged >Inspect cable exiting leg (if applicable), replace if damaged.
100	Forced initialization Reference 1	Forced initialization was initiated on this reference.  Note: This code is not transmitted in LINBUS, therefore it is not displayed on the desk		

ERROR CODE	NAME	DESCRIPTION	POTENTIAL CAUSE	TROUBLESHOOTING
101	Forced initialization Reference 2	panel. It is only viewable in the CBD6S configurator list of most recent 10 error codes.		
102	Forced initialization Reference 3			
103	Forced initialization Reference 4			