USER MANUAL

Series EE - ECS+

Work 1 & Colab



DECLARATION OF CONFORMITY

Manufacturer: ROL Ergo AB

Flygplatsvägen 1 555 93 Jönköping

SWEDEN

www.rolergo.com

Hereby assure that sit and stand desk, electrical adjustment "EPI - The professional series" Type:

EPI 1-COLUMN 2-STAGE (470)

EPI 2-COLUMN 2-STAGE (470)

EPI 2-COLUMN 3-STAGE (650)

EPI 3-COLUMN 3-STAGE (650)

EPI BENCH 4-COLUMN 2-STAGE (470)

EPI BENCH 4-COLUMN 3-STAGE (650)

Are manufactured in conformity with:

Machine Directive 2006/42/EG, partly completed Machine EMC. Electromagnetic Compatibility Directive 2014/30/EU and in applicable sections, harmonized standard EN527 has been considered. The Low Voltage Directive (LVD) 2014/35/EU.

The accompanying documentation is kept in the Development department of ROL Ergo, represented by Fredrik Ekvall.

Jönköping, 2017-04-06

Robert Lindström

Head of Research and Development

SAFETY FIRST

Your safety and the safety of others is very important. Please familiarize yourself with all instructions and safety warnings before operating the desk. Please keep this manual for future reference.

The vendor is not liable for damage to people, animals or objects caused by improper or unauthorised use. This also applies for damage caused through disregard or insufficient consideration of the safety criteria contained in this user manual, or through alteration of the product or use of unsuitable spare parts.

To help you make informed decisions about safety, we have provided operating procedures and other information on labels and in this user manual. This information alerts you to potential hazards that could hurt you or others. To avoid these situations further please use your own good judgment. You will find important safety information in a variety of forms. Safety messages are preceded by a safety alert symbol and one of three signal words: **DANGER**, **WARNING** or **CAUTION**. These safety messages are listed in order of severity, identify the general risks and actions to avoid these risks. The signal words used in this manual are listed below:



DANGER

Indicates an imminent hazardous with a high risk of serious injury or death.



WARNING

Indicates a potentially hazardous situation that if not avoided may result in serious injury or death.



CAUTION

Indicates a potential hazardous situation which may result in minor or moderate injury. It may also be used to alert against unsafe practices.



NOTICE

Indicates an alert to call attention to proper instructions or operation procedures to assure correct equipment function and to avoid equipment damage or wear.

Note that the information and specifications included in this manual may have changed since the time of approval for printing. No revision service is applied. Please contact your vendor for any updated manual revisions.

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1. IMPORTANT SAFETY INSTRUCTIONS

SAVE THESE INSTRUCTIONS

Your safety and the safety of others is very important. Please read all instructions before using the table.



DANGER - To reduce the risk of electric shock

- Improper usage, abuse, or misuse of the ECS box, handset, motors and other electrical components may result in an electrical shock injury or possible death.
- Do not open the ECS box or handset under any circumstances. The ECS box and handset contain no serviceable parts.
- Do not modify or make any changes to the ECS box, handset or other electrical devices.
- During installation, repair, cleaning, or maintenance work, the power cable must be disconnected from the outlet.
- Connect this desk to a proper outlet only.
- The ECS box unit may only be operated with voltage as specified on the label.
- Only use the power cord supplied with the power supply. Make sure that the cord is not damaged before usage. Do not operate the stand if the power cord is damaged. A damaged cord shall only be changed by authorised personnel.
- Do not expose the ECS box, handset or other electrical device to water or other liquids including moisture, drips, splashes or spills.
- Do not operate the ECS box, handset or other electrical device in a potentially explosive atmosphere. Do not operate where aerosol spray products are being used or where oxygen is being administered.
- Do not use the product if it has been dropped or damaged. Contact the manufacturer for examination or repair.
- The desk must not be structurally or technically altered or modified in any way.



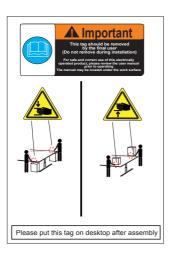
WARNING - To reduce the risk of burns, fire, electric shock, or injury to persons

- This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved. Children shall not play with the appliance. Cleaning and user maintenance shall not be made by children unless they are supervised by a person responsible for their safety.
- Use this desk only for its intended use as described in these instructions. Do not use attachments not recommended by the manufacturer.
- Keep the cords away from heated surfaces.
- Never drop or insert any object into any opening.
- Do not use outdoors.
- Do not exceed the maximum intended load.
- To minimize the risk of squeezing or pinching ensure that there is at least 2,5 cm (one inch) safety margin between the desk top and items above or below the desk top. As a safety margin for body or head use a minimum of 40 cm (16 inch) between static objects and moving surfaces.
- During the lowering or rising of the desktop, the operator must ensure that no person or object risk being harmed by the operation.
- The desk must only be operated while in an upright position.
- Keep children away from moving parts and underneath the desk.
- Children must be supervised at all times.
- The desk may not be used to lift people. Do not sit or stand on a desk while it
 is raised or lowered.

CAUTION

• The motors control unit is not designed for continuous operation. Changing the desktop position without interruption must not exceed the intended duty cycle, see 1.2 Product Specifications. The unit is thermally protected and will temporarily shut down if use exceeds the duty cycle.

This tag should be placed on the table during the initial installation.



2. GENERAL INFORMATION

2.1 Designated Use

This stand is intended for use for electrical height adjustment of a sit-stand workstation commercially or in home environments. Any other uses are viewed as improper. The stand shall only be operated indoors in dry, enclosed environments. For maximum intended load and additional specifications see 1.2 Product Specifications.

2.2 Product Specifications

	EPI EE stand 470	EPI EE stand 650
Maximum load*	120 kg	120 kg
Stroke	470 mm	650 mm
Speed**	<40 mm/s	<40 mm/s
Noise	<48 dB	<48 dB
Electrical rating		
Input	100-240VAC, 50-60Hz, 3,2A	100-240VAC, 50-60Hz, 3,2A
Output	29V/35V	29V/35V
Duty cycle	1:9	1:9

2.3 Standards & Certificates

The complete stand/base is developed to harmonize with standard requirements:

EN 527-2:2016 Office furniture - Work tables - Part 2: Safety, strength and durability requirements

EN 1730 Furniture - Tables - Test methods for the determination of stability, strength and durability.

ANSI/BIFMA X5.5-2014 - Desk products - applicable paragraphs

The electronics are certified according to: RoHs, Reach, EMC directive, UL962, CHINA RoHS

^{*}Load shall be evenly distributed

^{**}Speed may vary with load

2.4 User Information

When customer support is required the operator may ask for information stated on the product label. The product label is located on the house of the motor on top of each column.

Example of product label



Example of power supply labels



2.5 Before You Start

Check for and remove obstacles in path of the desk top. Before first use, the control unit must register the lowest point of elevation. Do reset as section 4.2. Under normal conditions the system communicates internally and knows the position of each column. If there are differences in column height, please do a manual reset as listed in section 4.2.

3. ASSEMBLY & ADJUSTMENT

3.1 Assembly Instruction

The steps which to follow to assemble the desk is illustrated in this section. Make sure to ask your desk vendor for an approved combination of desktop and frame.





NOTICE

Note that this assembly instruction is illustrated using generic parts. Thus, the visual impression of the parts can vary but the basic configuration is the same. Different versions of fixing kits may also be presented. Please follow the instruction corresponding to your order.



NOTICE

Make sure that the desk is leveled, using the adjusters, and placed on flat ground before usage.

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Fixed table top - 2 columns

Standard table top



5,0×55 ×4 (Crossbar-Tabletop)



4,5×20 ×8 (Sidebar-Tabletop)



M8×25 ×8 (Crossbar-Column)



M8x16 x4 (Sidebar-Column)



M8x16 x4 (Feet-Column)



Plastic plug ×12 (Crossbar)



Cover for screw x4 (Sidebar)

Silent table top



5,0×55 ×4 (Crossbar-Tabletop)



4,5×20 ×8 (Sidebar-Tabletop)



M8×25 ×8 (Crossbar-Column)



M8x16 x4 (Sidebar-Column)



M8x16 x4 (Feet-Column)



Plastic plug ×12 (Crossbar)



Cover for screw x4 (Sidebar)

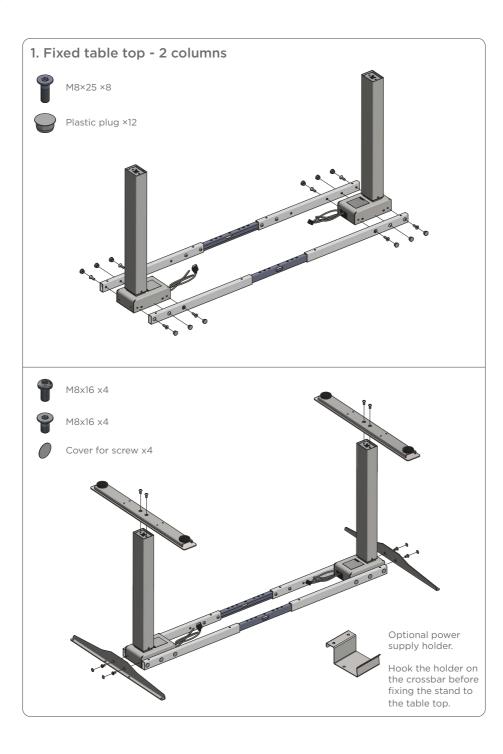


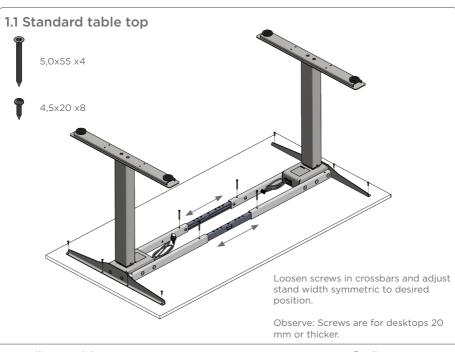
Washer ×4

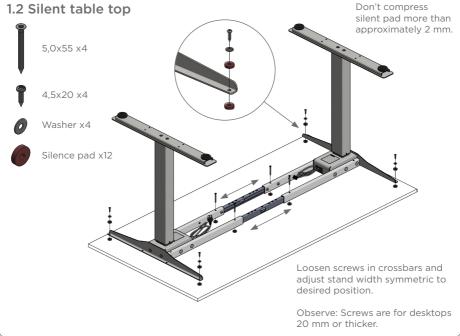


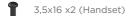
Silence pad ×12

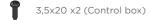


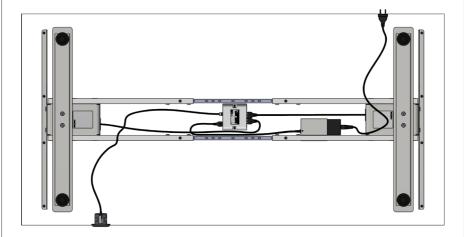






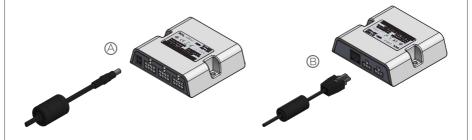






Structure excess cabling under the table top.

Note that the power supply cable end may vary (A or B). Connect the provided power supply to the corresponding outlet.



Observe: Make sure every screw is tightened before use. Turn the table around to standing position and plug the cable in.

Ready to use!

Sliding table top - 2 columns



5,0×55 ×4 (Crossbar-Tabletop)



4,5×20 ×8 (Sidebar-Tabletop)



M8×25 ×8 (Crossbar-Column)



M8x16 x4 (Sidebar-Column)



M8x16 x4 (Feet-Column)



Plastic plug ×12 (Crossbar)



Cover for screw x4 (Sidebar)



Plastic knob M6 Ø22 x1



Distance x7



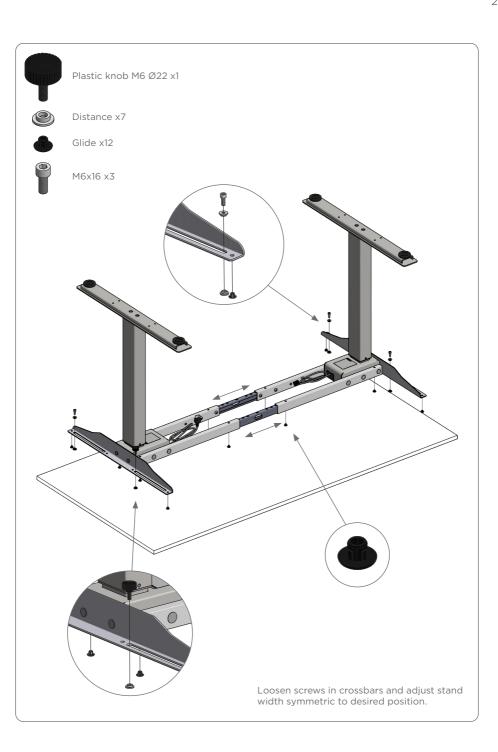
Glide x12

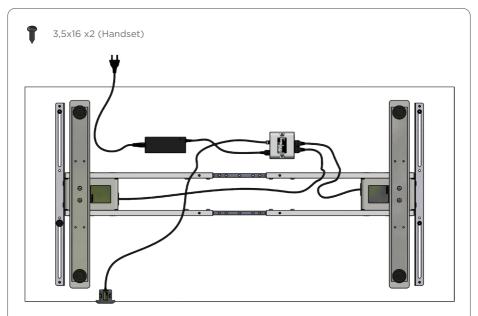


M6x16 x3

Use these screws when assembling the desk with sliding table top

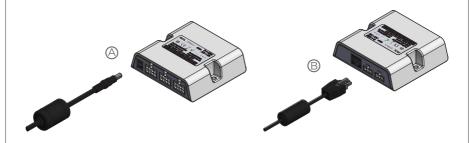






Place the control box in the cable tray along with excess cabling.

Note that the power supply cable end may vary (A or B). Connect the provided power supply to the corresponding outlet.



Observe: Make sure every screw is tightened before use. Turn the table around to standing position and plug the cable in.

Ready to use!

Standard table top

Standard table top

5,0×55 ×10 (Crossbar-Tabletop)



M8×35 ×1 (For attaching 90° connection)

7

4,5×20 ×8 (Sidebar-Tabletop)



Connection ×1



M8×25 ×11 (Crossbar-Column)



M8x16 x6 (Sidebar-Column)



M8x16 x8 (Feet-Column, Crossbar-Connection)



Plastic plug ×21 (Crossbar)



Cover for screw x4 (Sidebar)

Silent table top



5,0×55 ×10 (Crossbar-Tabletop)



Silence pad ×20



4,5×20 ×4 (Sidebar-Tabletop)



M8×35 ×1 (For attaching 90° connection)



M8×25 ×11 (Crossbar-Column)



Connection ×1



M8x16 x4 (Sidebar-Column)



M8x16 x8 (Feet-Column, Crossbar-Connection)



Plastic plug ×21 (Crossbar)



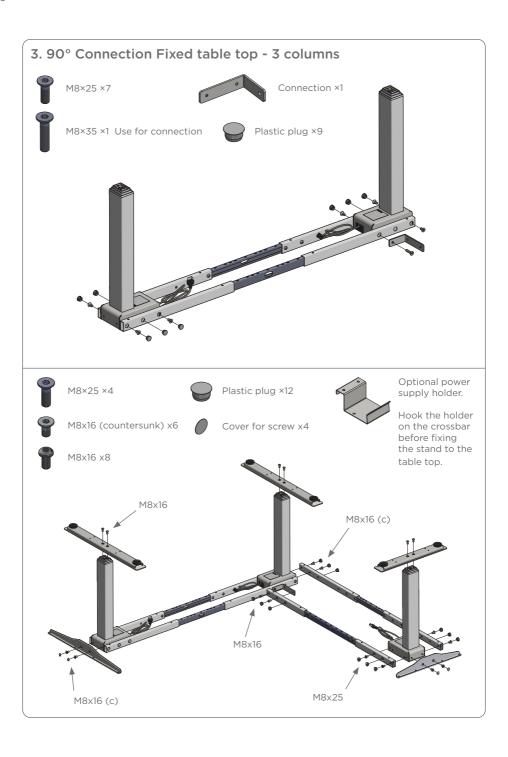
Cover for screw x4 (Sidebar)

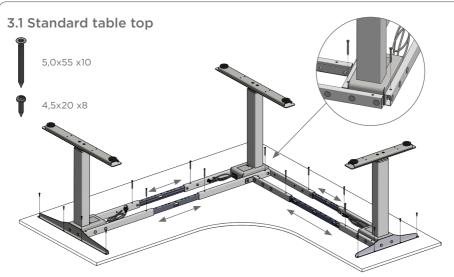


Washer ×6



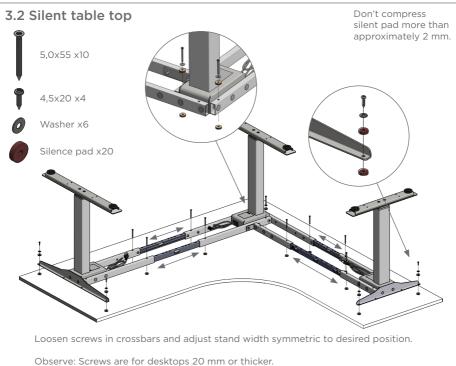
68009018 © ROL Ergo

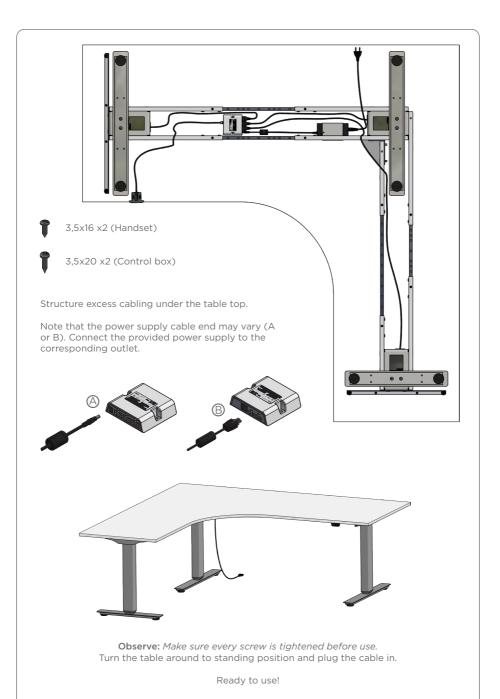




Loosen screws in crossbars and adjust stand width symmetric to desired position.

Observe: Screws are for desktops 20 mm or thicker.





Standard table top



5,0×55 ×8 (Crossbar-Tabletop)



Connection ×1



4,5×20 ×12 (Sidebar-Tabletop)



M8×25 ×16 (Crossbar-Column)



M8x16 x6 (Sidebar-Column, Crossbar-Connection)



M8x16 x8 (Feet-Column)



Plastic plug ×21 (Crossbar)



Cover for screw x4 (Sidebar)

Silent table top



5,0×55 ×8 (Crossbar-Tabletop)



Silence pad ×20



4,5×20 ×6 (Sidebar-Tabletop)



Connection ×1



M8×25 ×16 (Crossbar-Column)



M8x16 x6 (Sidebar-Column, Crossbar-Connection)



M8x16 x6 (Feet-Column)



Plastic plug ×24v (Crossbar)

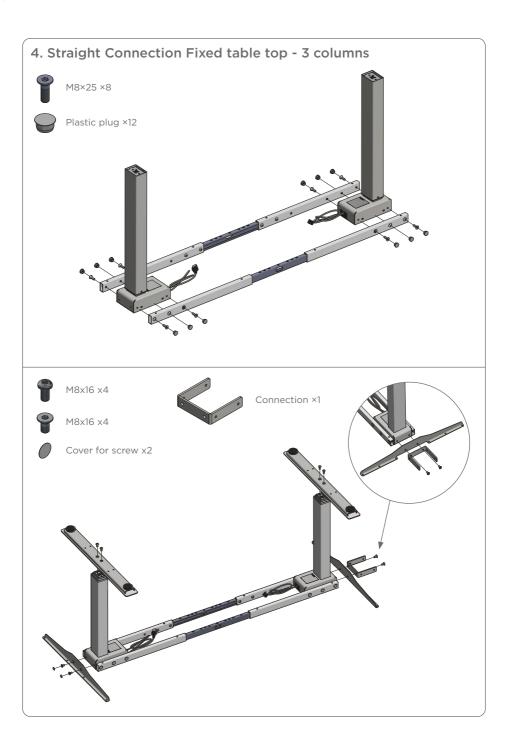


Cover for screw x4 (Sidebar)

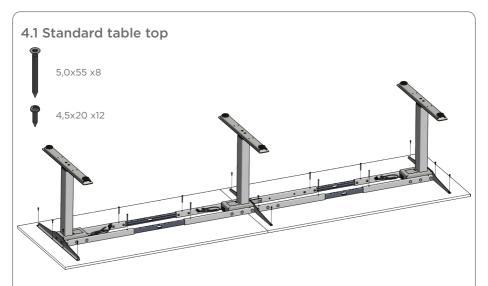


Washer ×6





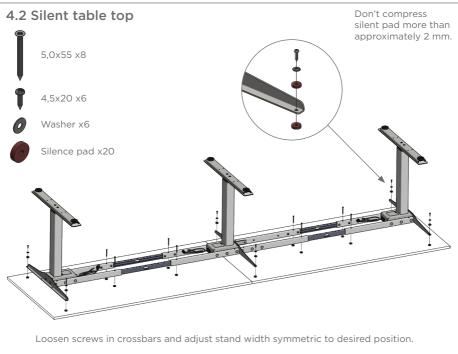


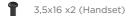


Loosen screws in crossbars and adjust stand width symmetric to desired position.

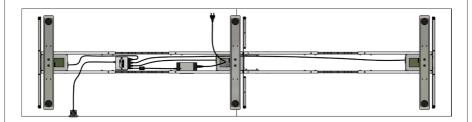
Observe: Screws are for desktops 20 mm or thicker.

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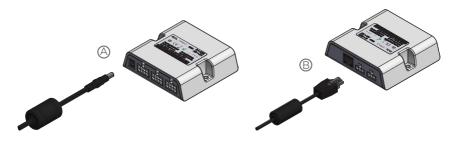






Structure excess cabling under the table top.

Note that the power supply cable end may vary (A or B). Connect the provided power supply to the corresponding outlet.





Observe: Make sure every screw is tightened before use. Turn the table around to standing position and plug the cable in.

Ready to use!

Bench Fixed table top - 4 columns



5,0×55 ×8 (Crossbar-Tabletop)



4,5×20 ×16 (Sidebar-Tabletop)



M8×25 ×16 (Crossbar-Column)



M8x16 x8 (Sidebar-Column)



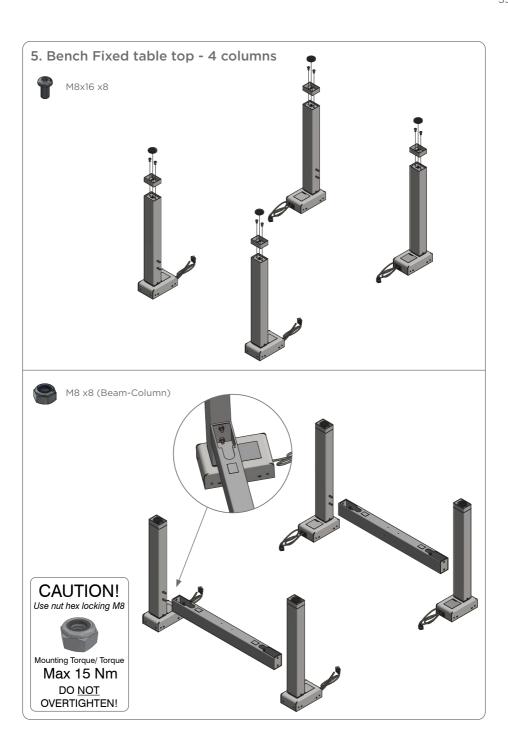
M8x16 x8 (Feet-Column)



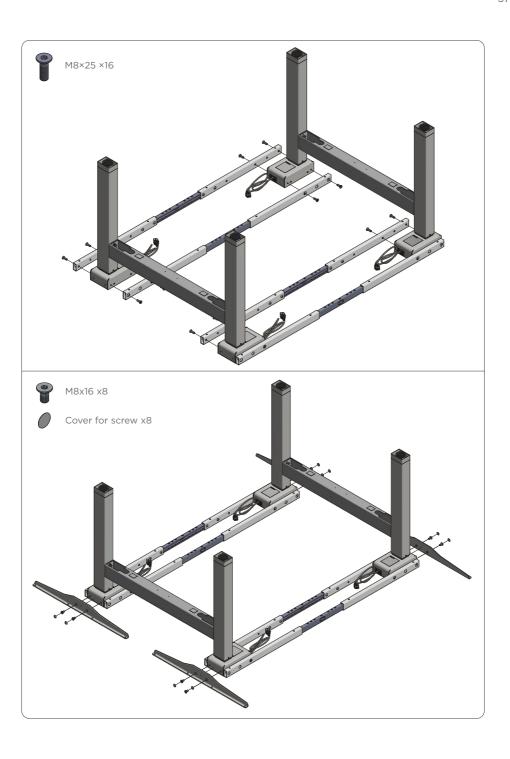
Plastic plug ×24 (Crossbar)

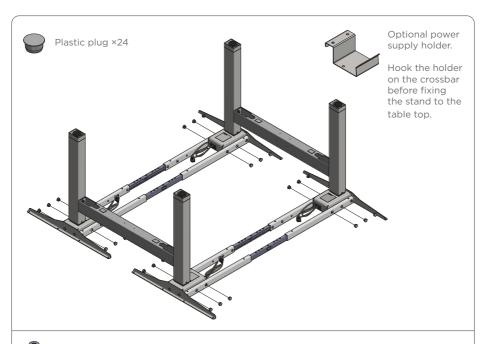


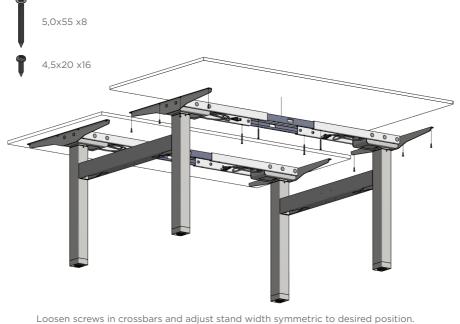
Cover for screw x8 (Sidebar)









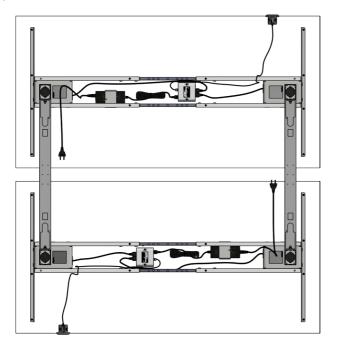


Observe: Screws are for desktops 20 mm or thicker.

3,5x16 x4 (Handset)



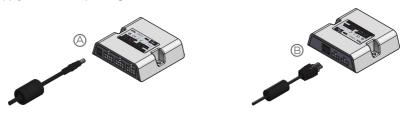
3,5x20 x4 (Control box)



Structure excess cabling under the table top.

Make sure that the connecting brackets are perpendicular to the crossbars. If the assembled desk looses its diagonal it should be adjusted manually.

Note that the power supply cable end may vary (A or B). Connect the provided power supply to the corresponding outlet.



Observe: Make sure every screw is tightened before use. Turn the table around to standing position and plug the cable in.

Ready to use!

3.2 System Procedure

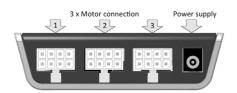


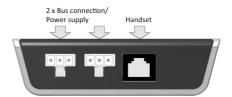
WARNING

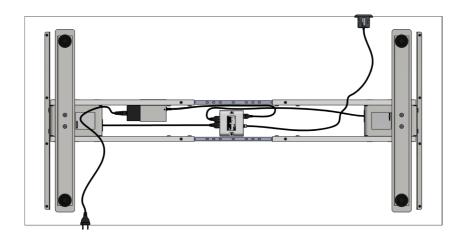
The main power cord must be unplugged during the setup.

To set up the desk:

- 1. Connect the motor cables to the control unit 8-pin motor connections.
- 2. Connect the handset to the relevant socket at the control unit/ECS+.
- 3. Connect the power supply to the control unit/ECS+.
- 4. The desk is ready for use, connect the power cord to the outlet.









DANGER

Improper power connection of the equipment can result in a risk of electric shock. Check with a qualified electrician for any concerns.

This product does NOT require grounding to earth. This product is double insulated and equipped with a non-polarized plug and 2-conductor cord. The plug must be plugged into an appropriate building outlet that is properly installed in accordance with all local codes and ordinances. Please read section 5.4 as well.



CAUTION

When the power cord is plugged in, the electrical control devices are operational.



NOTICE

When disconnecting components such as the control box, bus cable or the handset, the strain relieve hook must be pressed before removing the connector. When inserting the connector, an audible "click" indicates that the strain relieve hook has correctly re-engaged.

In case of a power failure or if the power cord is unplugged during the movement of the drives, a manual reset may be necessary. See section 4.2.

The control unit can be damaged by power surges. Unplug the power cord during a thunderstorm or if you do not intend to use the desk for a longer period.

4. OPERATION INSTRUCTIONS

4.1 Basic Functions



NOTICE

Read the user manual carefully before installing or operating the control unit. If chosen handset is not covered in this user manual, please see separate user manual supplied with the handset.

4.1.1 Upward Desktop Movement

This function enables the upward adjustment of the work surface. To change its position, proceed as follows:



Press the handset up button and continue to hold until desired desktop height is reached.

4.1.2 Downward Desktop Movement

This function enables the downward adjustment of the work surface. To change its position, proceed as follows:



Press the handset down button and continue to hold until desired desktop height is reached.



NOTICE

The desktop will continue moving upwards or downwards until you release the button or the maximum or minimum height is reached.



NOTICE

This system is equipped with an extra safety stop. To avoid the risk of pinching the desk will stop 10 mm above the lowest position. To reach the lowest position press and hold the down button for 5 seconds.

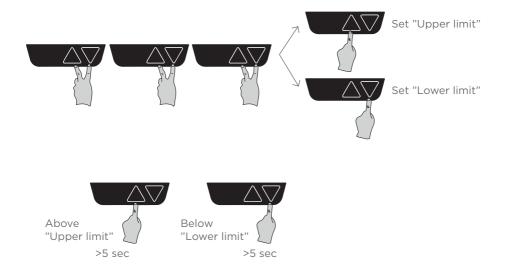
4.1.3 Simple memory

This handset has an editable memory for high and low (stand and sit) position. It could also be used to avoid collision with i.e. a cabinet or pedestal. When a memory position is set the desk will stop when the memory position is reached. To drive the desk outside the memory position press the up or down button for a minimum of 5 seconds.

How to set memory/end positions:

- 1. Drive your desk to the level you want to store.
- 2. Press both buttons 3 times (0,5-1 second between each pressing).
- 3. Then press "up" or "down" to set the position (0,5-1 second).
- 4. Do the same procedure for your second store.

To clear memory positions perform a reset as described in section 4.2.





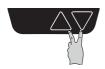
CAUTION

Setting lower simple memory will replace the preset safety stop at 10 mm. To restore preform a reset.

4.2 Manual Reset

If a motor or other electronic has been disconnected from the column, during or after the assembly, a reset (homing) cycle MUST be performed. A reset cycle should be made with an evenly distributed weight of approx. 45 kg (100 lbs) applied on the desk.

Perform a reset by:



Simultaneously pressing the up and down buttons for minimum of 8 seconds.



Press and hold the down button and the desk will slowly move the lowest point possible.



The desk/stand is ready for normal use.

5. MAINTENANCE & REPAIRS

5.1 Cleaning, Inspection & Storage

Clean the desk stand by wiping it down with a dry microfiber cloth. Never use solvent, abrasive or corrosive compounds.

Products must be cleaned at regular intervals to remove dust and dirt and inspected for mechanical damage and normal wear and tear. Worn-out parts must be replaced.

Unplug the power cord if you do not intend to use the desk for a longer period.

Do not store desk or cables in direct sunlight.

5.2 User Maintenance

Products are closed units and require no internal maintenance. Columns must be inspected at attachment points, wires, cabinet, and plugs, check that columns function correctly.

- Inspect columns for loose connections and damaged plugs/wires.
- Inspect control box for loose connections and damaged plugs/wires.
- The power supply and the handset is sealed and maintenance free.

5.3 Repairs

Check all screws and bolts after the first week of use and tighten screws and bolts where necessary to ensure safe operation of the desk. If the desk cannot be raised or lowered, check the cable connection between:

- The power supply and the motor/motor house (column system).
- The handset and the motor/motor house.
- The columns/motors.

If the desk still does not operate, the control system may have triggered the overheating or duty cycle protection. Please wait for at least 9 minutes and try again before proceeding.

If a control unit is replaced, a manual reset is required. Follow the steps as shown in section 4.2.

See Appendix for troubleshooting. If the desk is still not operational, please contact your vendor for further assistance.

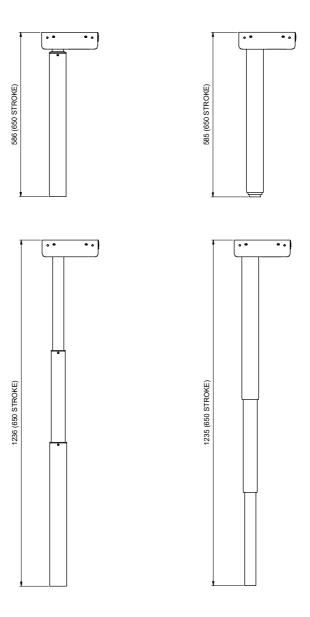
- Duty cycle function The duty cycle factor of the desk 1:9 meaning 1 minute of
 operation must be followed by 9 minutes of inactivity. If this limitation is exceeded,
 the desk will become inoperable until the control box resets automatically.
- Overheating protection The desk will become inoperable if the overheating protection is triggered and will return to operation automatically once the heat has dissipated sufficiently.
- Memory function The control system (each column) will retain information
 regarding the elevation of the desk at all times. This information will remain stored
 even in case of power failure or if the power cable is disconnected from the power
 outlet.

5.4 Servicing of Double-Insulated Products

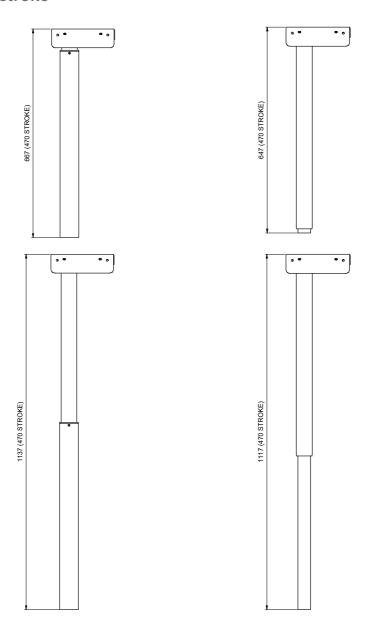
In a double-insulated product, two systems of insulation are provided instead of grounding. No grounding means is provided on a double-insulated product, nor is a means for grounding to be added to the product. Servicing a double-insulated product requires extreme care and knowledge of the system, and is to be done only by qualified service personnel. Replacement parts for a double-insulated product must be identical to the parts they replace. A double-insulated product is marked with the words "DOUBLE INSULATION" or "DOUBLE INSULATED". The symbol (square within a square) is also able to be marked on the product.

6. APPENDIX

6.1 Dimensions leg system: Series EE - ECS+ with 650 stroke



6.2 Dimensions leg system: Series EE - ECS+ with 470 stroke



Problem	Suggested correction

The desk is not able to move. Make sure that all cabels are connected. Unplug the desk from the wall socket for roughly one minute and reconnect. Only one column is moving. Doth columns are moving but at different speeds. It is possible to move the slower column by pulling/pushing. It is not possible to move than the other. It is not possible to move than the other. The desk only moves short distances. The desk stops and reverse during operation. The desk is not able to drive all the way up or all the way down. The desk can only drive in one direction (up or down). The desk is not horizontal. During reset, only one column that is not moving. Make sure that the disk is not mover than the obstacle. If the problem remains replace the whole underframe. Motor or actuator damaged. Change the column that is not moving.			
moving. Both columns are moving but at different speeds. It is possible to move the slower column by pulling/pushing. It is not possible to move than the other. It is not possible to move than the other. It is not possible to move than the other. It is not possible to move than the other. It is not possible to move than the other. It is not possible to move than the other. It is not possible to move than the other. It is not possible to move than the other. Replace the column that is moving faster told the other. The desk only moves short distances. Make sure that the desk is not overloaded. The desk stops and reverse during operation. Make sure that nothing is blocking if the problem remains replace the whole underframe. The desk is not able to drive all the way up or all the way down. The desk can only drive in one direction (up or down). The desk is not horizontal. During reset, only one column is moving downwards. Motor or actuator damaged. Change the column that is not		cabels are connected. Unplug the desk from the wall socket for roughly one minute	Follow install instructions and
moving but at different speeds. The desk only moves short distances. The desk stops and reverse during operation. The desk is not able to drive all the way up or all the way down. The desk is not horizontal.	-		there's still only one column moving, replace the column
move the slower column by pulling/ pushing. The desk only moves short distances. Make sure that the desk is not overloaded. The desk stops and reverse during operation. The desk is not able to drive all the way up or all the way down. The desk can only drive in one direction (up or down). The desk is not horizontal. During reset, only one column is moving downwards. move the slower that the problem the problem remains replace the whole underframe. Remove the obstacle. If the problem remains replace the whole underframe. Peform a reset.	moving but at	the slower column by	that is moving slower
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and reverse during operation. nothing is blocking the table movement. If the problem remains replace the whole underframe. Peform a reset. Peform a reset. The desk is not able to drive all the way up or all the way down. The desk can only drive in one direction (up or down). The desk is not horizontal. During reset, only one column is moving downwards. Motor or actuator damaged. Change the column that is not		the desk is not	the problem remains
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one column is moving damaged. Change downwards. the column that is not			
	one column is moving		damaged. Change the column that is not