item

Table Column Set 2 E HD ESD
Table Column Set 4 E HD ESD
Installation guide

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Symbols, safety



Important information



Observe directions for disposal



Observe packaging instructions



Caution: Risk of cable break, failure to observe this safety instruction can result in serious injury or death



Caution: Risk of crushing, failure to observe this safety instruction can result in serious injury or death



Maintenance



Note! Failure to observe this safety instruction can result in material damage



Warning! Failure to observe this safety instruction can result in material damage, serious injury or death



Caution! Failure to observe this safety instruction can result in material damage, serious injury or death



Caution! Failure to observe this safety instruction can result in material damage or injury

General safety information

The details and information in this installation guide are provided for the purposes of describing the product and its assembly only. This information does not discharge users from the obligation to conduct their own assessments and checks. It is also important to bear in mind that our products are subject to a natural process of wear and ageing.

This guide contains important information that will enable you to use the product safely and appropriately. When sold, rented out or otherwise passed on to another party, this product must be handed over with the installation guide.

When installing, operating and maintaining the electrically height-adjustable table columns HD ESD, it is important to ensure all moving elements are secured so they cannot be switched on and moved unintentionally. Moving parts can cause serious injury! You must therefore read and follow the safety instructions set out below.

- All work on and with the electrically height-adjustable table columns must be performed with “safety first” in mind.
- Switch off the power to the table columns before carrying out any work on the electrically height-adjustable work bench.
- Ensure the table columns cannot be switched on unintentionally, e.g. by affixing warning notices at the activation point or by removing the fuse from the power supply.
- Do not place your hand within the operating range of moving parts on the electrically height-adjustable table columns when they are still switched on.
- Fit guards and covers to the moving parts of the electrically height-adjustable table columns to ensure they are not touched unintentionally.
- Observe the regulations pertaining to accident prevention and environmental protection that apply in the country and workplace where the product is being used.

- Use only item products that are in perfect working order.
- Failure to use original spare parts will invalidate the product warranty!
- Check the product for obvious defects.
- Use the product only within the performance range described in the technical data.
- Ensure all the safety equipment associated with the product is present, properly installed and in full working order.
- Do not alter the position of safety equipment, circumvent it or render it ineffective.

The electrically height-adjustable Table Column Set HD ESD described here corresponds to the state of the art and takes into account the general principles of safety applicable at the time this guide was published. Nevertheless, failure to observe the safety instructions and warning notices in this guide may result in personal injury and damage to property.
We will assume no liability for any resulting damage or injury. We reserve the right to make changes that represent technical advances. Keep this guide in a place where it can be accessed by all users at any time. Observe the directions contained in the overarching user guide for a system.

The general safety information applies to the entire lifecycle of the electrically height-adjustable table columns.

1. During transportation

Observe the handling instructions on the packaging. The table columns are normally to be retracted for transportation. Until it is installed, the product must be stored in its original packaging, protected from moisture and damage. Ensure moving parts are secured when in transit and cannot cause any damage. Suspended loads can fall during transportation if load-bearing equipment is inadequately dimensioned or is incorrectly secured, thus leading to serious injuries (including fatalities).

- Keep clear of suspended loads.
- Use lifting gear with sufficient load-bearing capacity (see delivery paperwork for product weight).
- Carefully secure lifting gear.
- Attach lifting gear to the product only at sufficiently stable points.
- Observe environmental regulations.
- Always perform a test run on the uninstalled product before installing it in a completed system.

2. During installation

Always ensure the relevant section of your overall system is not live before installing the product and/or plugging it in or unplugging it. Ensure the system cannot be switched back on. Lay cables and lines in such a way that they cannot be damaged and do not represent a trip hazard. Avoid areas that pose slip, trip and fall hazards.

3. During start-up

Allow the product to acclimatise for a few hours before starting it up.
Ensure that the partly completed machine is securely and safely integrated into the completed machine. Only start up a product that has been installed in full.

4. During operation

Ensure that only persons who have been
authorised by the operator have access to the immediate operating area of the height-adjustable table columns. This also applies when the system is not in operation. It must not be possible to actuate moving parts unintentionally. In the event of emergencies, malfunctions or other irregularities, deactivate the height-adjustable table columns and ensure they cannot be switched back on. Ensure that nobody can step below suspended loads and prevent access below the working surface of the height-adjustable Table Column Set. The height-adjustable table columns are not suitable for lifting people.

5. During cleaning

Close all openings with suitable protective equipment to ensure that cleaning agents cannot penetrate the system. Do not use aggressive cleaning substances. Do not use a high-pressure cleaner for cleaning.

6. During maintenance and servicing work

Carry out the described work at the intervals stipulated in the user guide. Ensure that no cables, connections or components are detached or removed while the system is live. Also ensure that the height-adjustable table columns cannot be switched back on.

7. During disposal

Dispose of the product in accordance with the national and international regulations that apply in your country.

Correct use

The Table Column Set is a partly completed machine as defined in the Machinery Directive (2006/42/EC). The electrically height-adjustable Table Column Set HD ESD must be used only in accordance with the technical data and safety requirements set out in this document. The height-adjustable Table Column Set HD ESD is a technical piece of work equipment and is not intended for private use.

If major alterations are made to the electrically height-adjustable Table Column Set, the documentation will need to be renewed and supplemented in accordance with the Machinery Directive.

The Table Column Set is a lifting device for the raising and lowering of a working surface and accessories.

Internal company requirements and the regulations that apply in the country where the product is being used must be observed. You must not make any design modifications to the electrically height-adjustable table columns yourself. We will assume no liability for any resulting damage or injury.

The declaration of incorporation pursuant to Machinery Directive 2006/42/EC Annex II 1. B for partly completed machinery can be found on the relevant product page in our Online Shop.

You may only install, operate and maintain the Table Column Set if:

- The Table Column Set is used only in a fixed, stationary location.
- The Table Column Set is integrated into its surroundings in a proper and safe manner. The operator is responsible for ensuring proper and safe installation.
- You have carefully read and understood the installation guide.
- You are appropriately qualified.
- You are mentally and physically capable of doing so.
- You are authorised to do so by your company.
- You are using only original equipment from the manufacturer.

Unsafe or inappropriate use of the electrically height-adjustable table columns runs a risk of serious injury through crushing and cuts.

Improper use

Improper use is defined as any use of the product for purposes other than those authorised in the installation guide and under the definition of correct use. We will assume no liability for any resulting damage or injury.

The following reasonably foreseeable types of misuse are expressly classed as improper:

- The attachment or installation of third-party products must trigger a new risk assessment.
- The table columns must not be subjected to tensile loads.
- Using the table columns as a clamping mechanism.
- The table columns are not suitable for repeated, highly frequent operation (duty cycle: 5%).
- The table columns are not suitable for transporting people.
- The table columns are not suitable for lifting people.
- The table columns are not suitable for private use.
- The table columns are not suitable for use as a press or a counter support for a press.
- The table columns are not suitable for use as a safety component.
- Replacement of the intended fastening elements on the preconfigured components is not permitted.
- Any modification made to the preassembled and preconfigured components shall invalidate the warranty.
- Usage on pallets or tool tables in primary forming and reforming machines
- When physical/chemical effects (vibration, welding currents and similar) could damage the product or its electronics.
- Usage on pallets or tool tables that are used to change material properties (magnetisation, radiation, photochemical processes, etc.).

Take note of working areas where separate guidelines apply, particularly with regard to equipment and machinery:

- In the event of use at funfairs and amusement parks.
- In food preparation or where special hygiene stipulations apply.
- For military purposes.
- In mining.
- In potentially explosive and aggressive environments (e.g. ATEX).
- In medical technology.
- In aerospace applications.
- For transporting people.

Personnel qualifications

Installation, commissioning, operation, disassembly and maintenance work (including servicing and care) require an adequate knowledge of electrical and mechanical engineering and an understanding of the relevant technical terminology. To ensure operational safety, these activities must therefore be carried out only by a qualified person or by trained personnel under the direction of a qualified person.

Qualified persons are individuals who – by virtue of their specialist training, know-how, experience and knowledge of pertinent provisions – are able to assess the work that is assigned to them, identify potential hazards and put in place appropriate safety measures. Such qualified persons must comply with the applicable specialist regulations.

Product description

The item Table Column Set HD ESD is the basis for customised, electrically height-adjustable work benches. The stable table columns support varying working positions with a maximum travel distance of 400 mm. Three different working heights can be saved to introduce ergonomics into day-to-day work by ensuring tables can be adapted to suit different people working different shifts.
The Line 8 grooves on the outer telescope profile can be used to attach load-bearing and connecting structures.
The columns are designed exclusively for the occasional adjustment of tables and fixtures and are not intended for use in automation processes.

Each table column comprises two natural anodized aluminium profiles that are guided by plastic sliders. The inner profile is moved by an internal spindle drive. Two or four spindle lifting columns can be connected to a corresponding control unit and operated synchronously.

The high-performance control system features either two or four motor channels that are synchronised based on encoder processing. For optimised comfort, the table columns travel through a low-speed zone as they approach their terminal positions, thus bringing them to a gentle stop.

The wired remote manual controls can be used to operate the spindle lifting system conveniently at the touch of a button, thereby moving the corresponding working level steplessly to the desired height. The wired remote control continuously displays the current height of the working level.

Table Column Set 2 E HD ESD 230V– 0.0.701.52

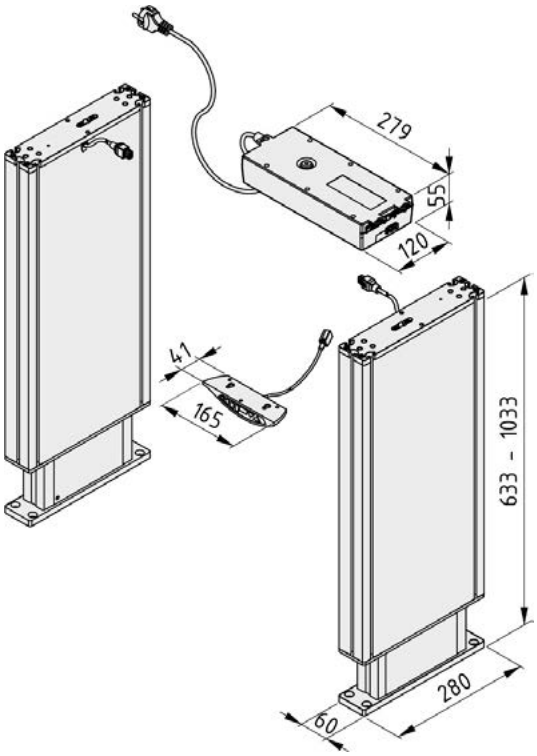
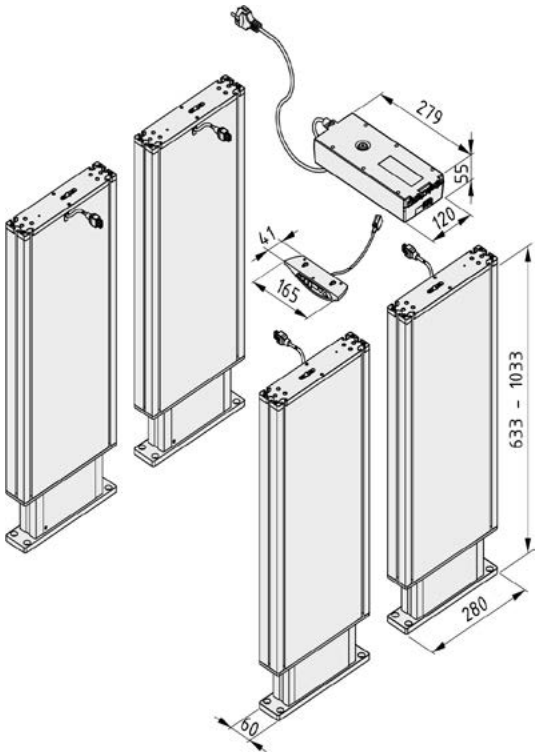
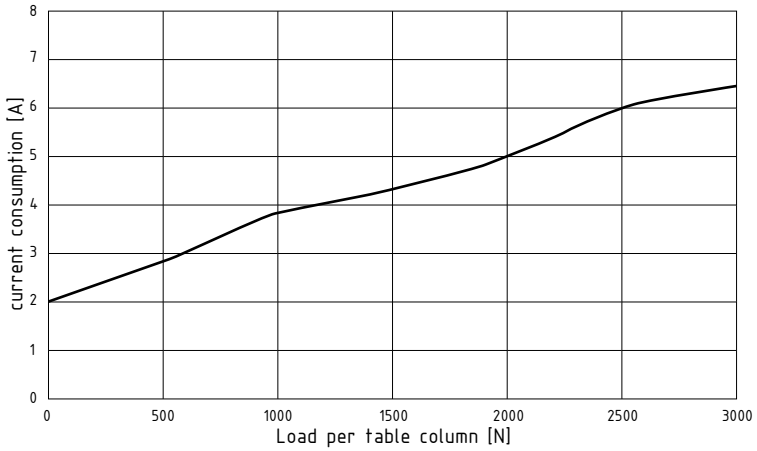


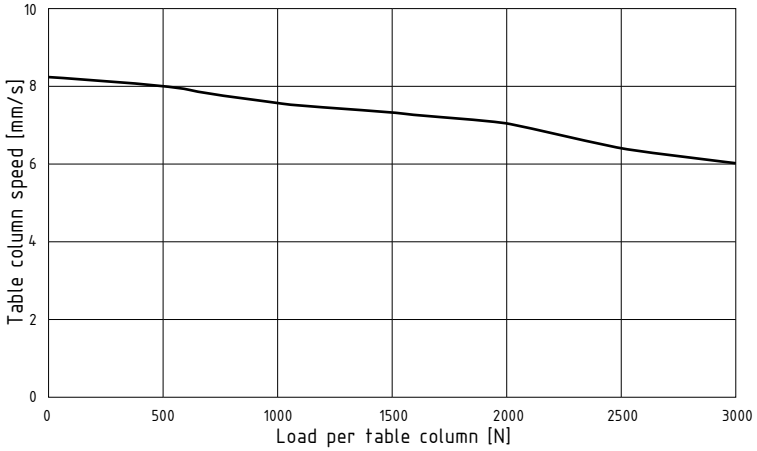
Table Column Set 4 E HD ESD 230V– 0.0.701.53



Operating data

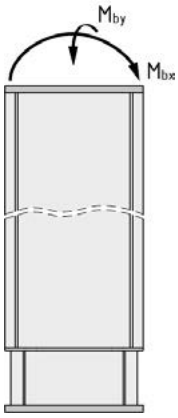
Max. load, Table Column Set 2 E HD ESD	6000 N
Max. load, Table Column Set 4 E HD ESD	10000 N
Max. speed	9 mm/s
Noise emissions	< 60 dB(A)
Travel range of Table Column Set E HD ESD	400 mm
Minimum installation height	633 mm
Working temperature range:	-5°C to +40°C
Storage temperature	-25°C to +70°C
Relative humidity	5% to 85%
Protection class Table Column	IP 30
Protection class Manual Control	IP 30
Protection class Control Unit	IP 20





If the load increases, the maximum possible speed is reduced and the current consumption increases.
The control unit limits the maximum load, for the Table Column Set 4 E HD ESD, to 10000N.
Avoid uneven loading.
Air pressure Air pressure > 84 kPa, equivalent to altitude of < 1400 m above sea level
At altitudes > 1400 m, the load values are reduced by 15%.

Appropriate components can be selected and installed to ensure the Table Column Set is suitable for use in areas where electrostatic charges pose hazards. We recommend you consult your item representative.



M_{bx} stat.: 1200 Nm
M_{by} stat.: 450 Nm
M_{bx} dyn.: 550 Nm *
M_{by} dyn.: 200 Nm *

* dynamic during lifting movement

The Table Column Set is not designed for continuous operation. The ratio of travel time to rest time must not exceed 2/40. Operation that exceeds performance data (max. tensile, compressive and bending moment loads) is not permitted.

Tested service life: 5000 double strokes with 400 mm of travel, 3000 N of compressive load and a duty cycle of 2/40.

Setting up the height-adjustable table columns – environmental considerations

The height-adjustable table columns are intended as a permanent fixture in an area that is protected from the weather.

- The area should be free from mould and fungus and show no traces of rodents or other pests.
- Do not install or use in close proximity to industrial plants that produce chemical emissions.
- Do not install or use near sources of sand or dust or a potentially explosive environment.
- Do not install or use in an area that is regularly exposed to high-energy surges such as those caused by presses or heavy machinery, for example.
- Do not install or use near strong electromagnetic fields.
- The table columns are resistant to many of the substances usually encountered in the production area, such as water, mineral oil, grease and detergents. In case of doubt regarding resistance to certain chemicals such as test oil, alloyed oils, aggressive cleaning substances, solvents or brake fluid, we advise that you consult your specialist representative.
- Avoid long periods of contact with highly acidic or alkaline substances.
- Consult the manufacturer if using in very salty air.

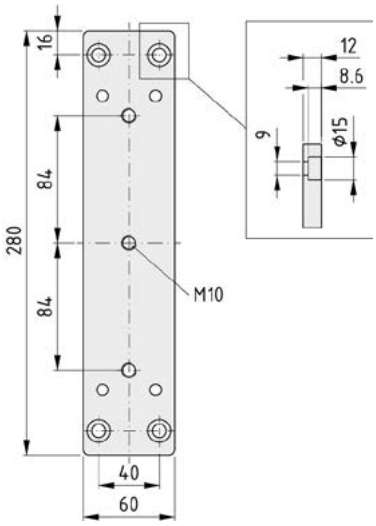
Levelling

To align the table columns, you will need a spirit level.

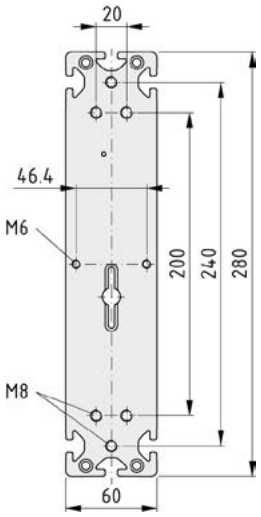
Incorrect set-up and start-up cause faults. The height-adjustable construction may be damaged and its service life may be shortened.

- When setting up the table columns on uneven ground, use the spirit level to ensure they are square and axially parallel.
- Do not subject the table columns to bending loads.
- Do not use the table columns in combination with other guides (forced guidance).

- The distance between the columns should be limited in line with the anticipated loads. Observe the permissible static and dynamic bending moments on the table columns.
- The table columns must not be fastened to the floor (avoid force guidance).
- Initialise (reset) the table columns before they are mechanically fixed together.



The base plate features stepped bores designed to accommodate M8 Hexagon Socket Head Cap Screws and can therefore be installed into frames. The M10 threaded bores in the base plate can be used to connect any M10 Knuckle Feet.



The M6 threaded bores in the mounting plate can be used in combination with Automatic-Fastening Sets 8 to connect the columns to Line 8 profiles. There are also M8 threads on the outside for connecting to Line 8 profiles.

The slot in the centre can be used to adjust the table columns. The screws are preset and must not be adjusted.

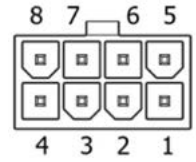
Electrical connections for height-adjustable table columns

Control units

The control units are used to control and synchronise height-adjustable table systems with 2 or 4 table columns. Each variant has its own control unit.

Control unit SCT2 iSMPS and SCT4 iSMPS

Dimensions (L, W, H)	309 x 120 x 55 mm
Weight	1.1 kg
Supply voltage	EU: 207-254.4 V / 50 Hz / 4.5 A US: 1□1
Standby power, primary	< 0.6 W
Power	580 VA
Protection class (DIN EN 60529)	IP 20
Performance level (DIN EN 13849-1)	PL b
Electrical connection	8-pin Molex MiniFit plug, cable length: 1800 mm



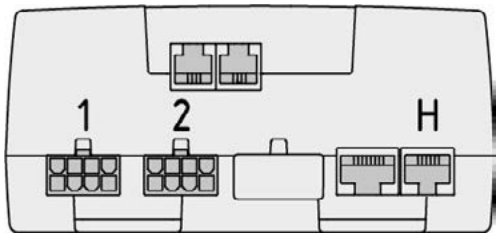
1	Motor +	5	Pulse 2
2	ES	6	SYN
3	5V Hall Sensor	7	GND Hall Sensor
4	Pulse 1	8	Motor -

Control set 4E HD	0.0.699.91
Control unit 4E HD	0.0.699.94
Control set 2E HD	0.0.699.90
Control unit 2E HD	0.0.699.93

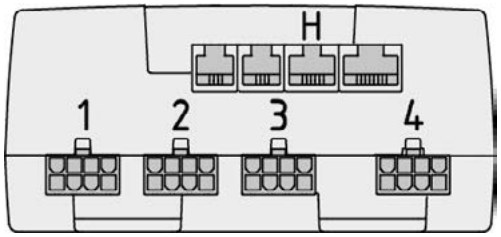
Observe the following points when installing and operating the control system:

- Check the seating of all plug connections.
- Use a power cord to connect to the mains.
- The control unit and manual controls must be positioned and secured as appropriate to local conditions. If necessary, alter their position.
- The installation site should be dry, free of dust and away from direct sunlight.

Control unit for two table columns:
EU; 230 VAC



Control unit for four table columns:
EU; 230 VAC

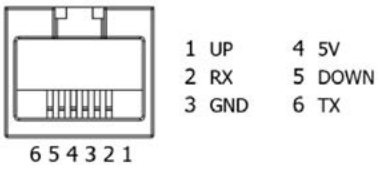


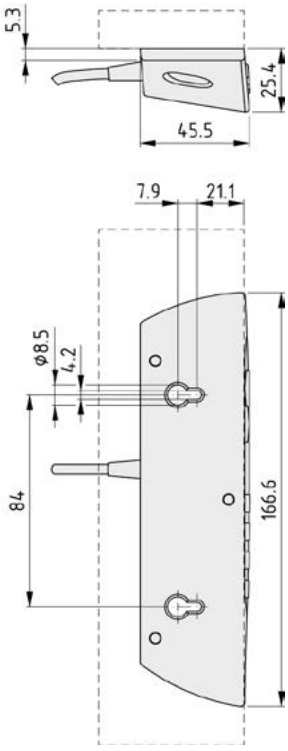
The side view of all control units shows the 8-pole connections of the table columns. A maximum of four table columns can be connected in a specific sequence. The 6-pin RJ-12 socket [H] on all table column control systems is reserved for the manual controls. The connection sockets that cannot be used are equipped with dummy plugs. The number of table columns used must match the control system. For example, a control system for four table columns cannot be used to control a work bench with just two columns.

- The control system can be operated in a temperature range of between 0°C and +35°C.
- Consequently, you should not install the control system:
  - above or in front of heat sources (e.g. radiators)
  - in locations that are exposed to direct sunlight
  - in small, unventilated, damp rooms
  - on or near highly flammable materials
  - near high-frequency devices
  (e.g. transmitters, radiation-emitting devices or similar equipment).
- It is advisable to install surge protection to protect against the types of electrical surges that can occur during thunderstorms. Consult an electrical engineer.

- Never open the control system's housing or the power pack! Unauthorised opening of the housing and inappropriate repairs can cause hazards for users and shall invalidate the warranty.
  Only the manufacturer's personnel are authorised to open or repair the electrical systems.
- Do not allow any liquids to penetrate inside the control system or the power pack, as this could result in an electric shock or short circuit.
- Use only a dry or slightly damp cloth to clean the control system and the manual controls.
- Stop using the device immediately if it begins to emit smoke or an odour, operates in an unexpected way, makes unusual noises or shows visible signs of damage. Disconnect the system from the mains by removing the plug.
- The control system may only be used with item table columns.

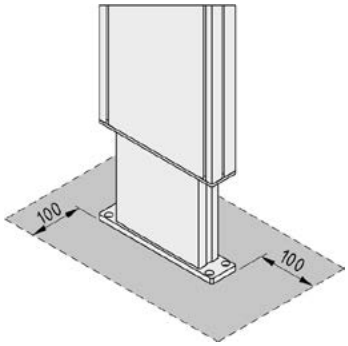
Manual controls

Electrical connection	6-pin RJ-12 plug Cable length: 2000 mm Location on control unit: H 
Protection class (DIN EN 60529)	IP 30



Note! Install the manual controls flush with the edge of the table to avoid creating an awkward area that can cause knocks or catch.

Start-up



Ensure that connecting cables and electrical lines are not bent, pulled or subjected to mechanical loads. Lines, cables, etc. must not be laid in the foot area of the table columns in particular (safety area of approx. 100 mm around the table column feet). Furthermore, no attachments are to be mounted at the lower end of the Table Column Set's outer profile if the table column is inserted into a knuckle foot. A safety clearance of over 50 mm from the lower end of the table column's outer profile is to be maintained. When designing the frame and when installing additional components, avoid any cutting or crushing points that may arise.

NOTE! The lifting system can be loaded unevenly, provided that:

- The maximum permissible loading of the lifting columns (3000 N) is not exceeded.
- The maximum permissible bending moment values of the lifting columns are not exceeded.
- The system as a whole is standing on sufficiently stable ground.
- The system as a whole has been designed in line with physical conditions that ensure equilibrium and stability. Factor this into your risk assessment.

The basic function of the control system is to raise or lower the table columns. Both these functions can be performed using the table's manual controls (before changing the manual controls, disconnect the power supply; it may be necessary to reset the system).

Caution: High impulse, collision and impact forces caused by setting down loads are not permitted (e.g. setting down loads with a crane or forklift while moving backwards or forwards)

NOTE! The lifting system must be installed in such a way that the lifting columns can be fully retracted at any time. If they are not, it will not be possible to commission or reset the system.

When starting up the table columns:

- When running the drive, please ensure no objects (e.g. furniture) or body parts become trapped.
- To prevent crushing and cuts, nearby objects should be kept at a minimum distance of 50 mm from the table columns.
- Load values must not be exceeded.
- Safety instructions must be followed.
- Inappropriate use of the system can pose hazards to people and equipment.
- The product warranty is valid only when the product is used as intended.
- Table columns must not be subjected to tensile loading.

The height-adjustable construction can be damaged if it comes into contact with obstacles, and its service life may be shortened.
Keep the travel area beneath the table top and in the safety area around the table column feet clear.

Table design:
Table tops or attachments must be rigidly connected to the drive system. For this reason, it is not permitted to connect the adjustable feet rigidly to the floor. The resulting over-rigid guidance damages the table columns.

Initialising the table columns when commissioning the system (RESET)

Caution: The system must not be fully loaded until commissioning has been completed. The lifting element must not be loaded with any more than 150 kg during commissioning

NOTE! The lifting element travels at half speed during commissioning

If the table columns are being started up for the first time, or if a corresponding error message is displayed, the system needs to be RESET before the construction can be used as normal.

During initialisation (RESET), all the columns that are connected and ready for use will retract fully, as far as the mechanical limit stop.

During initialisation (RESET), do not restrict the movement of the table columns by means of any mechanical connection or obstacles.

The connected table columns need to be initialised (RESET):

- When a faulty table column has been replaced.
- When an error message has been issued (requiring a reset), e.g. after a power cut that has occurred while the table columns were moving.

When moving during a reset (initialisation), the columns travel at a reduced speed.

RESET (initialisation)

Hold down the “DOWN” and “UP” buttons together. After a brief pause, the lift modules travel downwards to the mechanical stop and switch off. The system travels down at half speed. Upward travel is locked. Once all the table columns have reached their limit stop, release the buttons. The RESET is confirmed by an audible signal. The system now extends a little and confirms this with two further audible signals. The system is now ready for use.

Commissioning is complete. The lowest and highest positions have been automatically saved.

(The lowest position is 4 mm above the stop position. The highest position is determined by the type of lifting element and/or the control system software.)

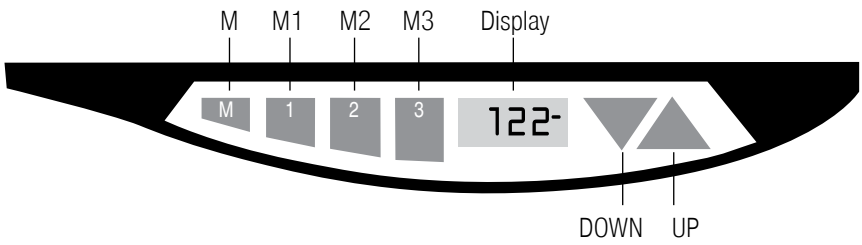
It is essential to ensure all connected columns are moving during the initialisation run. No synchronisation takes place during this process. Columns that are not ready to use represent an acute safety risk. In the event of an error, take the construction out of operation. Disconnect the system from the power supply and avoid any risks.

RESET following a power failure

If there is a power cut while the table columns are moving, the system will need to be RESET before the construction can be used again as normal.

Caution: As far as possible, the table columns must not be under load when performing a RESET and any superstructure must be removed.

Operation



Manually adjusting the table column height (UP/DOWN)

Use the “DOWN” button to move down and the “UP” button to move up.

The display shows the working height in centimetres for guidance. The exact value depends on the thickness of the table top, the height setting of the adjustable feet and the configuration of the base height.

The table column travels up or down at normal speed for as long as the relevant button is held down. The table columns are automatically stopped before they reach the mechanical stop positions.

If the table columns are travelling downwards, the lift module stops automatically a few centimetres before they reach the stop position. Pressing the “DOWN” button again causes the table columns to travel downwards at a reduced speed until they reach the stop position (safety feature to prevent e.g. body parts being caught).

If the table columns are already within the safety range and are to be lowered further, but were previously being moved upwards, press the “DOWN” button twice.

On-time limiter

The electronic system monitors how long the table columns have been active. If the maximum permissible time is exceeded, the electronics will not permit any further movement of the table columns. This protects the power pack, control system and drives against overload. The duty cycle (DC) is designed for a maximum operating time of two minutes and a subsequent pause of 40 minutes. (Error EC-09)

Tilt sensor

The control system has an integrated tilt sensor. The control system stops the lifting motion if a certain level of tilt is exceeded.

Safety range

A certain section of the table column (a few centimetres before the lower stop position) is referred to as the safety range. When table columns reach this point, they stop. When the “DOWN” button is pressed again, they continue moving down, but at a reduced speed. If table columns are to be lowered when they are already within the safety range, and they were previously being moved upwards, the “DOWN” button will need to be pressed twice.

Overload detection

The control system detects an excessive (weight) load on the construction and switches off. After they are started/before they are stopped, the table columns briefly operate at reduced speed.

Soft start/soft stop

After they are started/before they are stopped, the drives briefly move at reduced speed to ensure smooth, jerk-free operation.

Movement lock

When the movement lock (child lock) is engaged, the table columns cannot be moved, thereby preventing uncontrolled movement of the construction.

Activating the movement lock

- Press and hold down the “M1”, “M2” and “M3” buttons at the same time for 5 seconds.
- There is an audible signal.
- The lifting system is locked and does not respond to travel commands. The message E65 is displayed.

Deactivating the movement lock

- Press and hold down the “M1”, “M2” and “M3” buttons at the same time for 5 seconds.
- There is an audible signal.
- The lifting system is unlocked and will respond to travel commands again.

Memory function

Additional memory function for storing height settings and moving the table to these heights.
1. Manually adjusting the table height
2. Storing a height setting (memory)

The control system can store three standard positions.

Press the “M” button three times to access memory mode.
Within 5 seconds, press one of the three buttons – M1, M2 or M3 – to store the height position currently set.
The control system emits an audible signal to confirm that the setting has been stored in the memory.

To move the system to the saved position, hold down one of the three buttons – M1, M2 or M3 – until the corresponding position is reached.

Setting the upper and lower travel limits

The travel distance can be electronically limited to prevent collision with any potential obstacles in the travel range. For reference purposes, the lower mechanical limit switch must stay within range.

Set an upper travel limit:

- To enter setting mode, press and hold down the “M1”, “M2” and “UP” buttons at the same time for 4 seconds.
- The display shows S01, with the S flashing.
- Press the “UP” or “DOWN” button until the display shows S04.
- Press the “M” button to confirm and the S will stop flashing.
- Use the “UP” or “DOWN” button to move the system to the desired upper travel limit.
- Press the “M” button to confirm the position that has been reached and the display will show S04 again.
- Now press the “M1” or “M2” or “M3” button to quit this mode.

To delete an upper travel limit that has been set, follow the same procedure as you would to set a new upper travel limit.

Set a lower travel limit:

- To enter setting mode, press and hold down the “M1”, “M2” and “UP” buttons at the same time for 4 seconds.
- The display shows S01, with the S flashing.
- Press the “UP” or “DOWN” button until the display shows S05.
- Press the “M” button to confirm and the S will stop flashing.
- Use the “UP” or “DOWN” button to move the system to the lower travel limit.
- Press the “M” button to confirm the position that has been reached and the display will show S05 again.
- Now press the “M1” or “M2” or “M3” button to quit this mode.

To delete a new lower travel limit, follow the same procedure as you would to set a new lower travel limit.



Caution: Collisions with obstacles in the travel range can cause serious damage and injuries. It is the operator’s responsibility to ensure the travel range is clear of any obstacles.

Switching between cm/inch

- To enter setting mode, press and hold down the “M1”, “M2” and “UP” buttons at the same time for 4 seconds.
- The display shows S01, with the S flashing.
- Press the “UP” or “DOWN” button until the display shows S07.
- Press the “M” button to confirm and the message “cm” or “inch” will flash on the display.
- Press the “UP” or “DOWN” button to select the desired unit of measurement.
- Press the “M” button to confirm your choice.
- Now press the “M1” or “M2” or “M3” button to quit this mode.

Setting the display height

- To enter setting mode, press and hold down the “M1”, “M2” and “UP” buttons at the same time for 4 seconds.
- The display shows S01, with the S flashing.
- Press the “UP” or “DOWN” button until the display shows S06.
- Press the “M” button to confirm and the display will show the current height, with the unit of measurement “cm” flashing.
- Now use a measuring stick to measure the corresponding height.
- Press the “UP” or “DOWN” button to enter the desired height.
- Press the “M” button to confirm your choice.
- Now press the “M1” or “M2” or “M3” button to quit this mode.

Factory settings

CAUTION: Before restoring factory settings, ensure that:
- All table columns can retract fully.
- Each lifting element is loaded with less than 150 kg.

NOTE! When restoring factory settings, the entire system is set up as new. All settings, such as stored positions and travel limits, will be lost.

- To enter setting mode, press and hold down the “M1”, “M2” and “UP” buttons at the same time for 4 seconds.
- The display shows S01, with the S flashing.
- Press the “UP” or “DOWN” button until the display shows S00.
- Press the “M” button to confirm and an audible signal sounds.
- Now press the “M1” or “M2” or “M3” button to quit this mode. The message E DC appears on the display.
- Now unplug the power cord from the power supply.
- If required, the system can now be rewired.
- Plug the power cord back into the power supply. Perform commissioning as set out in Section 4, page 15.

CAUTION: If required, the system can now be rewired. When doing do, ensure the power cord is removed first. If the power cord is not removed, the control system may not recognise the cables that are plugged in.

Error messages

	Cause	Solution
E 60	Motor power supply voltage below the permissible minimum	Insert the power cord
E 61	Total power has exceeded the programmed limit value	
E 63	Inconsistent or damaged motor control parameters identified	
E 64	Tilt sensor has been triggered (excessive tilt)	1) Move in opposite direction 2) Restore control system to factory settings
E 65	Movement locked	Movement locked. The system must be unlocked before it can be moved.
E 66	A safety strip has been actuated	
E 69	Safety strip missing	The safety strip has not been connected or is faulty. Connect the safety strip correctly or replace it.
E 6F	Travel monitoring	System overloaded → Alleviate the load on the system System jammed → Remove jammed object Motor incorrectly connected → Connect the motor cable correctly Move the system briefly in the opposite direction
E 71	Hall sensor → Incorrect direction on motor	
E 73	Motor missing → No power	Check whether all motor cables are correctly plugged in
E 74	Connecting cable or slave control device not recognised	Check that the connection cable is inserted and then restore the control system to its factory settings
E 78	Overcurrent on a motor	
E 79	Synchronisation error (connection error)	Check that the connection cable is inserted and then restore the control system to its factory settings
E 7A	Positional difference between motors	Perform a reset
E 7C	The control system has adopted the slave role. Motor setting commands are not permitted.	Restore to factory settings
E C9	Lock → Duty cycle	The drives have been run for longer than is permissible. To protect against overheating, the system's operation has been locked for a few minutes. Wait for a few minutes. Once the drive has cooled, the system will become operational again.
E CC	Motor turning faster than the control system anticipated	
E D7	Short circuit on one or more motor channels	

	Cause	Solution
E D9	Motor current sensor or driver faulty	
E DB	User has set limit values incorrectly	
E DC	Control system must be restored to factory settings	
E DD	Control system must be reset	

Error	Cause	Solution
Drive non functional	Control system not connected	Insert the power cord
	Motor not plugged in	Plug in the motor cable
	Motor faulty	Contact your item branch or distribution partner
	Control system faulty	Contact your item branch or distribution partner
	Wired remote control faulty	Replace wired remote control
	Poor plug contact	Insert all plugs correctly
Drive only running in one direction	Control system faulty	Contact your item branch or distribution partner
	Wired remote control faulty	Replace wired remote control
Drive only running downwards	System overload	Reduce the weight on the system

If the manual controls display an error code that is not shown in the table, please contact your item branch or distribution partner

Maintenance and cleaning



When operated under normal conditions and used for its intended purposes, the lifting system is maintenance-free for its entire service life. Consequently, there is no need for a service.



CAUTION: Use only a dry or slightly damp cloth to clean the control system and the wired remote control. The power cord must be unplugged from the power supply before cleaning!

CAUTION: Liquids must not be allowed to penetrate the plug connections.

Repairs must be carried out by specialist personnel only. Use only original spare parts. When carrying out any repair work on the system, always ensure the system is unloaded and disconnected from its power source first.

CAUTION: The control system must not be opened under any circumstances! There is a risk of electric shock.

Disassembly and replacement of parts



Touching live parts can lead to an electric shock, causing serious injuries or death.

- Before carrying out maintenance work, switch off the power supply.
- Put in place suitable measures to prevent the power supply from being switched back on unintentionally.
- Use only original spare parts.

When the lifting system is taken out of service and sent for disposal, the electronic components must be disposed of separately. The system comprises components that are fully reusable and are therefore non-hazardous from an environmental perspective. The electronic components comply with the RoHS Directive.

Disposal



The materials used are environmentally friendly.
The product can be recycled or re-used (after any necessary refurbishment and replacement of parts). The use of appropriate materials and easy dismantling ensure the product can be recycled.



Improper disposal of height-adjustable table columns can pollute the environment.

You should therefore dispose of them in accordance with the national regulations that apply in your country.

item

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