item

Table Column Set D40/D30 K

Notes on Use and Installation

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Symbols, safety



Important information



Observe directions for disposal



Observe packaging instructions



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 is likely to 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 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 the product is sold, rented out or otherwise passed on to another party, this guide must be handed over with it.

When installing, operating and maintaining the height-adjustable table columns, it is important to ensure that all moving elements are secured to prevent unintentional movement. Moving parts can cause serious injury! You must therefore read and follow the safety instructions set out below.

- All work on and with the height-adjustable table columns must be performed with “safety first” in mind.
- Do not place your hand within the operating range of moving parts on the height-adjustable table columns when they are still being operated.
- Fit guards and covers to the moving parts of the 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 height-adjustable Table Column Set 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 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 assembled, 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.
- Always perform a test run on the uninstalled product before installing it in a completed system.

2. During assembly
Avoid areas that pose slip, trip and fall hazards.

3. During commissioning
Allow the product to acclimatise for a few hours before taking it into service.
Ensure the Table Column Set is stable and secure or is incorporated into an overarching system. Only take into service 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 a system is not in operation. It must not be possible to actuate moving parts unintentionally. 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 Column Set is 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.

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 with cranked handle adjustment is a component as defined in Machinery Directive 2006/42/EC. Height-adjustable Table Column Set K must be used only in accordance with the technical data and safety requirements set out in this document. Height-adjustable Table Column Set K is a technical piece of work equipment and is not intended for private use.

If major alterations are made to the height-adjustable Table Column Set, the documentation will need to be renewed and supplemented.

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 height-adjustable table columns yourself. We will assume no liability for any resulting damage or injury.

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

- 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 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 height-adjustable table columns poses 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 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 integration of third-party products must trigger a new risk assessment.
- The table columns must not be subjected to tensile, torsional or bending loads.
- To prevent strain in the system, there must be no additional connections between the table columns.
- The table columns must not be used as a clamping mechanism.
- The table columns are not suitable for repeated, highly frequent operation.
- 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.
- The intended fastening elements on the preconfigured components must not be replaced.
- 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 is not permitted.

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

- For 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

Assembly, commissioning, operation, disassembly and maintenance work (including servicing and care) require an adequate knowledge of 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

Purely mechanical height adjustment: The four columns of Table Column Set K are extended in sync by up to 300 mm using a cranked handle. This is ideal for mobile work benches and robust workstations benefiting from minimum material usage and ergonomic height adjustment without the need for any electrical power.

Table Column Sets K create work benches with customised dimensions of up to 1800 mm x 1800 mm.

Table Column Set D40/D30 K - 0.0.707.59

The solution for lightweight, robust height-adjustable work benches! Table Column Set D40/D30 K is compatible with Profile Tube System D30. The synchroniser tube transfers the cranked handle's torque to the table columns to adjust their height in sync. This creates ergonomic work benches using the minimum of materials. Based on lean production principles, solutions can thus be adapted precisely to your processes – from a width of 1800 mm down to the smallest of dimensions.



Operating data

Max. load, Table Column Set D40/D30 K	1200 N (with four table legs)
Pitch	6 mm per cranked handle revolution
Travel range of Table Column Set K	300 mm
Min. installation height, Table Column Set D40/D30 K	788 mm
Temperature operating range	-5°C to +40°C
Storage temperature	-25°C to +70°C
Relative humidity	5% to 85%
Protection class	IP 30

CAUTION! It is essential to avoid uneven loading and uneven moment loads on the table legs. A loss of stability can result in serious injuries.

CAUTION! The table columns must not be subjected to tensile loads or loads that exceed performance data.

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 set up 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.
- The system is resistant to many of the substances usually encountered in the production area, such as water, mineral oil, grease and detergents. If you are in any 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.

Preparing for assembly

General

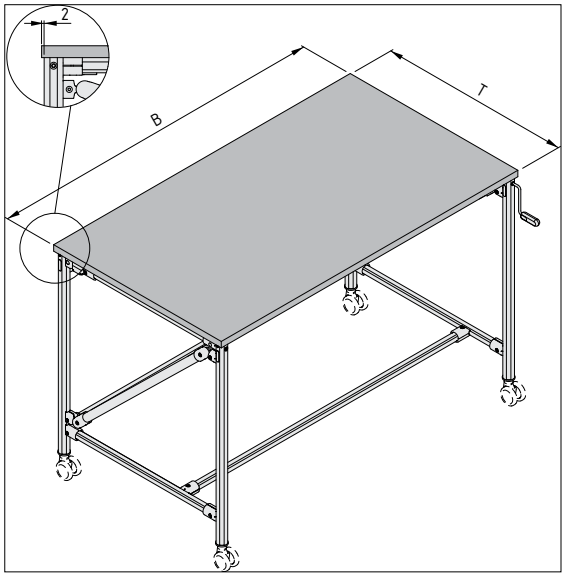
CAUTION! Ensure all legs are fully retracted prior to assembly. Work on a flat surface, an assembly bench, that is appropriate for the size of the table.

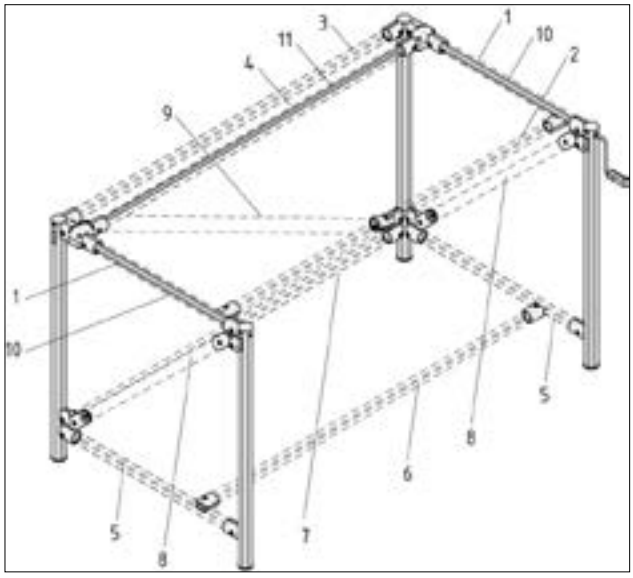
NOTE! It is advisable to assemble the table on an ergonomic, level surface. It is also advisable to build the Table Frame upside down and work from the rear to the front, towards what will be the working area of the table.

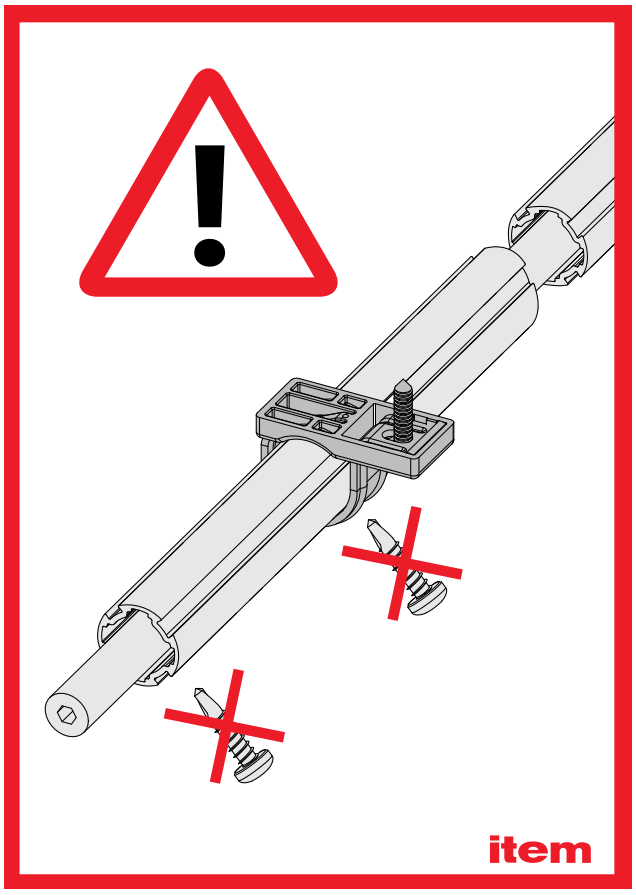
NOTE! The right-angle gearboxes have one black and one red seal around the hexagon pins and also a specification plate. The table legs have a red plastic bushing. These features are used to indicate the installation positions and the assembly sequence.

Calculation of cut-off lengths for Table Column Set D40/D30 K:

Table Frame D40/D30 K for a table top B x T (width x depth)			
No.	Quantity	Profile (cut-off)	Cut-off calculation [mm]
1	2	Profile D30 (0.0.628.28)	T - 206
2	3	Profile D30 heavy duty (0.0.642.34)	B - 114
3	1	Profile D30 heavy duty (0.0.642.34)	B - 124
4	1	Profile D30 (0.0.660.44)	B - 176
5	2	Profile D30 (0.0.628.28)	T - 124
6	1	Profile D30 (0.0.628.28)	B - 114
7	1	Profile D30 (0.0.628.28)	B - 124
8	2	Tube D30 (0.0.628.56)	$\sqrt{((T-174)^2+563^2)} - 50$
9	1	Tube D30 (0.0.628.56)	$\sqrt{((B-174)^2+563^2)} - 50$
10	2	Profile D16 SW6 (0.0.699.98)	T - 213
11	1	Profile D16 SW6 (0.0.699.98)	B - 182







Do not use the self-drilling screws on the frame profiles with the synchronous shafts on the inside.

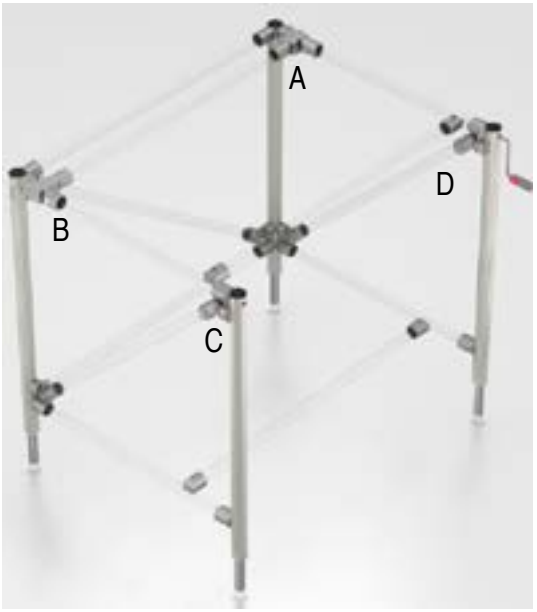
Levelling

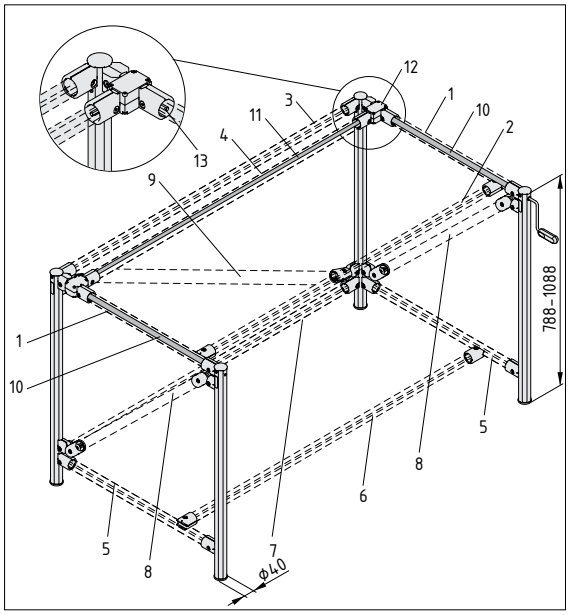
To align the table columns ready for use, you will need a spirit level.

Setting up and/or commissioning incorrectly causes malfunctions. 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 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 loadings on the table columns, and avoid bending and torsional loads.
- The table columns must not be fastened to the floor (avoid forced guidance).

Assembling Table Frame Economy D40/D30 K





Fitting table leg right-angle gearbox (A)

Arrange all the table legs so that the red plastic bushings are always facing towards the front. The red bushing must be connected to the red seal on the right-angle gearbox. The right-angle gearbox specification plate should be facing upwards, as shown. The half of the Parallel Fastener with the centring fastening must be fitted over the hexagon pin of the right-angle gearbox before fitting the gearbox to the table leg. After doing so, screw the second half of the Fastener in place. The hexagon pins protruding from the gearbox should be pointing towards the adjoining table legs.







Caution! The Parallel Fastener must be touching the Cap and be flush with the lug on the right-angle gearbox.

Tightening torque: M_T = 10 Nm

Fitting table leg right-angle gearbox (B)

Arrange all the table legs so that the red plastic bushings are always facing towards the front. Given that the right-angle gearboxes are identical, this gearbox must be positioned so that the black seal is now facing the leg and the specification plate is facing upwards. The hexagon pins protruding from the gearbox should be pointing towards the adjoining table legs.





Next, use the Parallel Fastener to fasten the right-angle gearbox to the table leg.

CAUTION! The Parallel Fastener must be touching the Cap and be flush with the lug on the right-angle gearbox.

Tightening torque: M_T = 10 Nm

Fitting table leg (A) and table leg (B) with synchronisation, profiles (4) and (11)



Start by inserting the synchroniser tube into the centre of Tube D40.

CAUTION! Before fitting the synchroniser tube, it is important for both gearbox hexagon pins to be fitted with a PA washer so that the tube is not damaged in Fastener D30 K.



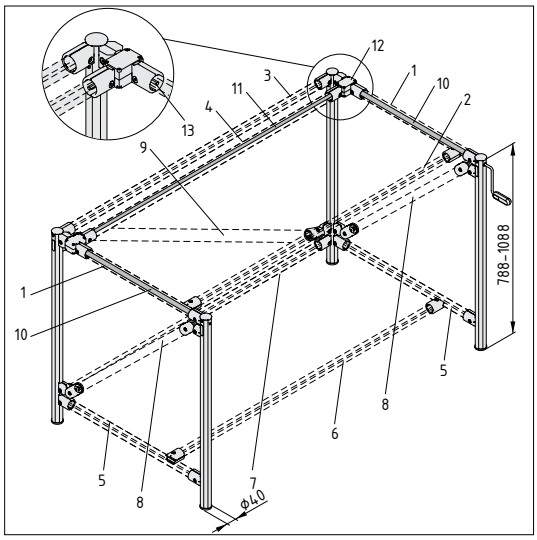



Start by pushing the first half of Fastener D30 K onto the hexagon pin, then slide the plastic (PA) washer onto the pin inside the Fastener. Thread the synchroniser tube onto the pin as far as it will go. Also push outer Tube D30 into Fastener D30 K as far as it will go. Place the second half of Fastener D30 K onto the first half, twist the Fastener around and fasten it to the right-angle gearbox.

Align the gearbox flush with and perpendicular to the Table Column Set.
Tightening torque: M_T = 10 Nm

Fitting the stabilising bracing strut, profile (3)

CAUTION! Risk of a mix-up! This profile (3) is 10 mm shorter than profile (2)

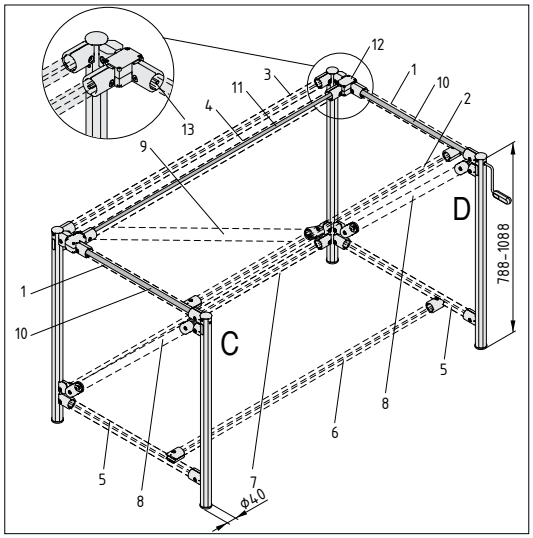






Tightening torque: M_T = 10 Nm

Fitting the cross profiles with synchronisation, profiles (1) and (10), linking the front and rear table legs



Start by inserting the synchroniser tube into the centre of Tube D40.

CAUTION! Before fitting the synchroniser tube, it is important for both gearbox hexagon pins to be fitted with a PA washer so that the tube is not damaged in Fastener D30 K.







Start by pushing the Fastener onto the hexagon pin, then slide the plastic (PA) washer onto the pin inside the fastener. Thread the synchroniser tube onto the pin as far as it will go. Also push outer Tube D30 into Fastener D30 K as far as it will go. Place the second half of Fastener D30 K onto the first half, twist the Fastener around and fasten it to the right-angle gearbox.



Insert the shorter end of the hexagon pin into the synchronising tube as far as the circlip, then slide the plastic (PA) washer onto the hexagon pin.







CAUTION! Before fitting the synchroniser tube, it is important for both gearbox hexagon pins to be fitted with a PA washer so that the tube does not scrape against the right-angle gearbox.

Assemble the front table legs on each side in the same way.

Fitting the bracing strut that runs under the table top, profile (2)



Spacers (15 mm) can be used when fastening the long bracing strut that runs under the table top. Using Fastener D30 K, screw the bracing strut in place 15 mm from the edge of the Fastener.

For reinforcement purposes, it is important to select Profile Tube D30 heavy duty, profile (2).



Tightening torque: M_T = 10 Nm

Fitting the lower bracing struts, profiles (5), (6) and (7)



CAUTION! Risk of a mix-up! Profile (6) is 10 mm shorter than profile (7)

Tightly screw the lower bracing struts into position with a recommended gap of 77 mm, as measured from the cut edge of the profile to the outer surface of Fastener D30 K.

Tightening torque: M_T = 10 Nm

Next, tightly screw the lower bracing strut into position with a recommended gap of 95 mm, as measured from the inside edge of the Fastener D30 K that connects the bracing strut to the front table leg.



Tightening torque: M_T = 10 Nm

Fitting the diagonal bracing strut, profile (4)



To ensure sufficient work bench stability, the three sides that are not in the working area are reinforced with diagonal bracing struts.





Each of these struts is first fastened below what will be the table top at a distance of approximately 15 mm from the Fasteners D30 K. The position of the opposite end on the other table leg is determined automatically.



CAUTION! Check the table legs are perpendicular and parallel, and then tighten the struts securely.

CAUTION! Lastly, turn the table upright, set it on its feet, check all fastenings and test everything is working properly.

Commissioning

Lines, cables, etc. must not be laid in the foot area of the table columns (safety area of approx. 100 mm around the table column feet). 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.



CAUTION!

- The lifting system must not be subjected to uneven loads.
- The maximum permissible loading of the table columns (1200 N) must not be exceeded.
- The system as a whole must be standing on sufficiently stable ground.
- The system as a whole must be designed in line with physical conditions that ensure equilibrium and stability. Factor this into your risk assessment.

The basic function of the system is to raise or lower the table columns. Both these functions can be performed using the table's cranked handle.



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).

When commissioning the table columns:

- When turning the cranked handle, 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. It is essential to 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.

Manual adjustment of the table column height (UP/DOWN)

The cranked handle can be used to raise and lower the table column frame.

The gearboxes and spindle used ensure self-locking and prevent sinking.

One revolution of the cranked handle increases or decreases the height by 6 mm.

Accessories

A wide range of elements from the MB Building Kit System and Work Bench System are compatible. It is also up to the customer whether the work bench stands on Knuckle Feet or Castors, as long as the floor elements have an M10 thread.



Recommendation for Knuckle Feet:

- 0.0.640.57 Knuckle Foot D40, M10x80, stainless
- 0.0.439.29 Knuckle Foot D60, M10x75, black
- 0.0.439.30 Knuckle Foot D60, M10x120, black
- 0.0.265.74 Knuckle Foot D40, M10x80, black
- 0.0.432.84 Knuckle Foot D80, M10x80, black
- 0.0.658.04 Knuckle Foot D47, M10x30, black
- 0.0.635.49 Knuckle Foot D60, M10x75, similar to RAL 9006
- 0.0.635.51 Knuckle Foot D60, M10x120, similar to RAL 9006
- 0.0.637.01 Knuckle Foot D40, M10x80, grey similar to RAL 7042
- 0.0.635.24 Knuckle Foot D80, M10x80, similar to RAL 9006
- 0.0.496.02 Knuckle Foot X D40, M10x80, grey similar to RAL 7042

Recommendation for Castors:

- 0.0.444.94 Castor D65 swivel
- 0.0.444.95 Castor D65 swivel brake
- 0.0.605.45 Castor D75 PA swivel
- 0.0.605.46 Castor D75 PA swivel double-brake
- 0.0.420.14 Castor D75 swivel
- 0.0.420.15 Castor D75 swivel ESD
- 0.0.420.16 Castor D75 swivel with double-brake
- 0.0.420.17 Castor D75 swivel with double-brake ESD

CAUTION! The nut for fastening Castors and Knuckle Feet needs to be countered on the tube of the table leg's height-adjustment mechanism. A machined surface for pliers or a 23 A/F spanner is provided for this purpose. Fastening without countering will damage the table leg's height-adjustment mechanism.

Maintenance and cleaning

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

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 it is not subject to any loads or stresses.

Disassembly and replacement of parts

Use only original spare parts.



The system comprises components that are fully reusable and are therefore non-hazardous from an environmental perspective.

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.

Product development and documentation

A process of continuous product development ensures that products from item Industrietechnik GmbH always exhibit a high standard of innovation. Consequently, there could be inconsistencies between this guide and the product you have acquired. item Industrietechnik GmbH can also not exclude the possibility of errors.

We therefore ask for your understanding that the information, illustrations and descriptions provided here cannot constitute an entitlement to any claims. You can find the latest version of this document at www.item24.com.

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