



optimizing human  
well-being employee proper  
healthy human factors  
activity industrial design well being  
stress stretching human body  
posture engineering workplace  
product office functional chair  
design business anatomy  
ergonomics  
headache position working injury  
health designing neck  
factor pain  
spinal performance ergonomic industrial design shoulder

ERGONOMICS  
FOR GENERATIONS

safety comfort body tension  
sitting anthropometry mechanics  
glaucoma strain people accident  
biomechanics ergonomics seated  
work back profession  
physiology study insurance  
professional job corporate spine  
comfort design fatigue  
designing products function stressed  
straight wrong productivity  
syndrome safety sick ergonomic  
industrial psychology products  
medical functional design  
interaction backache bone

INSTALLATION MANUAL

**MOVETEC**

Thank you for choosing Movetec Lift Column. Movetec is one of the leading brands in Scandinavia for ergonomic workplace equipment. With our extensive product range, we can provide complete workstations for most environments with an emphasis on industry. With Movetec products, you are guaranteed high-quality equipment with optimized function and a long service life.

## Description

### Areas of application

Movetec lift columns are supposed to be built in and used to adjust the working position of workstations, fixtures or other machines. Other areas of application can be dangerous, so instructions from Movetec must be carefully studied and followed.

- Lift columns should not be used during hot work such as welding without specific precautions being taken
- Lift columns must not be suspended from a ceiling or walls
- Lift columns must not be used to lift people



### Warning!

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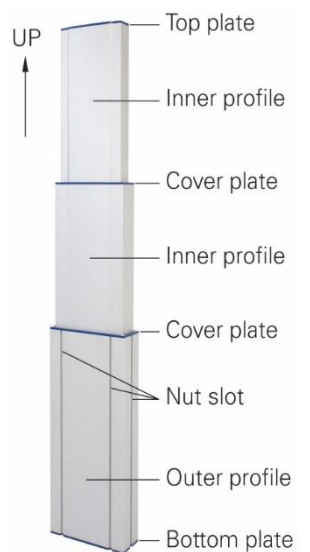
## Design

The image to the right shows the lift columns various components.

### Function

The lift function of the lift column is driven by an electric actuator housed inside the telescopic element. The actuator is powered by a low voltage transmitted via an external power source/control unit and regulated by a controller. Integrated limit switches stop the column at its top and bottom positions.

An integrated Hall effect sensor (all lift columns with an 8-pin connector) measures and compares pulses between two lift columns in order to synchronize them and achieve precise parallel operation.



### Accessories

Examples of accessories from the Movetec range:

- Control unit for single or synchronized operation with one or more motor groups
- Controllers, such as table or hand control, foot pedal
- Reinforced base for floor installation

## Installation instructions

Inaccurate handling can cause malfunction. Please make sure that all the steps in this assembly instruction always are implemented in order to ensure correct and safe function of the product.

- Compare the specifications of the product with your current application. Only when your specifications are within the products specified range can the product be used.
- Follow local laws and regulations
- Use the product in its original design without any changes.



### Warning!

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#### Transport damage

Inspect the goods as soon as they arrive and report any transport damage direct to the forwarder.

#### Transport/action

Storage: time in original packaging should be kept short. Keep in a cool dry place, protected from light and dust.

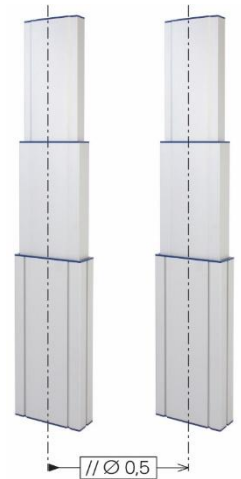
Transport: Depending on design, the lift columns can weigh 30kg or more. Crush hazard: should the product tip over it can cause crush injuries. Suitable lifting equipment should be used to ensure safe handling of the product during transport and assembly.



## Risk of crushing!

### Assembly

- Movetec lift columns must be installed in doors in well-lit premises that are at room temperature.
- Ensure that the lift column is level by assembling it on a stable surface. For freestanding applications, base frames are available as an accessory. Control units and controllers must be positioned to avoid damage during operation.
- Movetec lift columns must be positioned at least 120 mm from walls or surrounding objects to avoid the risk of crushing. Ensure that there is no contact with surrounding objects and no risk of crushing as the lift column is raised and lowered.
- When installing mechanically linked lift columns for parallel operation, the columns must be assembled so that any deviation in parallelism is less than 0.5 mm per 1,000 mm. If this is not possible, one or more attachments must be flexible enough to absorb deviations.
- All Movetec lifting columns can be mounted both up and down, but it is advisable to mount it as orderly.



## Risk of crushing!

### Safety instructions

Ensure that the distance between the lifting mechanism and adjacent objects is such that there is no risk of crushing. Do not place objects within the lift columns' range of movement, neither above nor below. The force produced by the lift columns can cause serious personal injury and damage if used incorrectly.



## Risk of crushing!

Do not expose the lift column to heavy blows or impacts.

Ensure that the lift column and any equipment on top of it is properly secured.

Do not attach equipment to the lift column using anything other than nut slots and bolt holes.

Never dismantle a lift column yourself, as internal components can spring out and cause personal injury if handled incorrectly. When welding close to the lift column, the control unit and cabling must be shielded and kept at a suitable distance from the welding transformer and its cables. Otherwise, there is a risk of permanent damage to the lift column's electronics. In the event of a warranty claim, any dismantling work must be performed by Movetec or authorized personnel.



**Any dismantling work and servicing must be performed by Movetec or authorized personnel!**

### Inspections and maintenance

The lift column structure does not normally require anything more than normal cleaning. Keep equipment clean using a mild and environmentally friendly detergent.

Inspect the lift column regularly for any damage to the cabling and other electrical equipment.

### Specification of materials

Telescope:	Natural anodized aluminum
Plates:	Galvanized steel
Actuator:	Plastic/aluminum/copper
Cable:	Plastic/copper
Cable gland:	Rubber

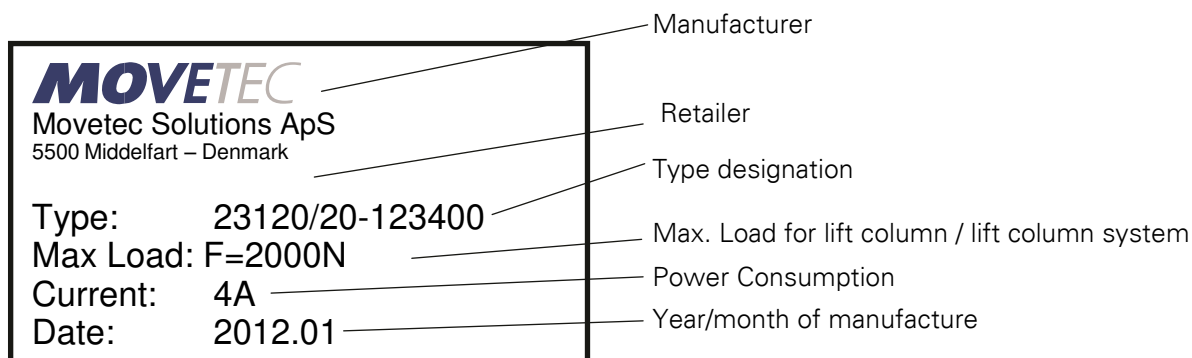
Packaging: Plastic/wood/corrugated paper (to be recycled according to current regulations)

### Technical data

Lifting power: See the type plate  
Bending moments: See product sheet for each lift column model  
Voltage: 24V DC  
Power consumption: See the type plate  
Duty Cycle: 10-20%, max. 2 min. continuous or 5 cycles  
Sound level: <70 dB  
For dimensions and other data, see the Movetec datasheet for each model.

### Certificate/Type plate

The Movetec lift column are supplied with a certificate for built-in of a partially incomplete machine according to the EU directive on machinery 2006/42/EC, appendix II 1B.



## Troubleshooting

Symptom	Checks	Action
Lift column does not move.	<p>Are the control unit powered?</p> <p>Are all plugs correctly connected?</p> <p>Are the motor cable's plug properly inserted into the control unit?</p> <p>Are any of the cables damaged?</p> <p>For synchronized systems, check whether the lift columns are at the same height.</p> <p>Are the control unit or lift column damaged/not functioning?</p>	<p>Check the power supply.</p> <p>Check connections.</p> <p>The sealing ring on the motor cable plug can be removed in normal environments to aid connection.</p> <p>Contact Movetec or your retailer.</p> <p>Perform a reset as per the instructions.</p> <p>If you do not hear a click or it lights up when the control unit is connected to the mains, the unit may be defective and must be replaced.</p> <p>Try another control unit.</p>
Lift column can only move downwards.	<p>Has the system been overloaded?</p> <p>Is the lift column in contact with other objects?</p>	<p>Reduce the load to the specified max. load, see type plate.</p> <p>Make some space or move the system.</p>
Lift column can only move downwards at slow speed.	<p>Are the lift columns at different heights?</p>	<p>The system is in reset mode. Complete a full reset as per the instructions.</p>
Lift column stops and can only move in opposite direction.	<p>Has the lift column reached its top or bottom position?</p> <p>Does the lift column always stop in the same place?</p>	<p>Perform a reset as per the instructions.</p> <p>A virtual limit may have been programmed by mistake. Contact Movetec or your retailer.</p>
Lift column does not achieve full stroke length.	<p>Is the lift column in contact with other objects?</p>	<p>Make some space or move the system.</p> <p>A virtual limit may have been programmed by mistake. Contact Movetec or your retailer</p>
One lift column is lower than the others in the system.	<p>Has the lift column hit anything?</p> <p>Has the system been moved?</p> <p>Has the system's point load been exceeded?</p>	<p>Perform a reset as per the instructions.</p> <p>NB! It may be necessary to press and hold the down button for longer until the system starts, up to 30 seconds.</p>

## Declaration of Conformity

### Document representative

#### Manufacturer

Movetec Solutions ApS  
Lollandsvej 1  
DK-5500 Middelfart  
Tel. +45 64 89 28 05

Michael Østergaard Nielsen  
Lollandsvej 1  
DK-5500 Middelfart  
Tel. +45 64 89 28 05

#### Product

Lifting column:  
Type:

MAC-Series  
MAC192, MAC210, MAC2/2U,  
MAC4/4U, MAC5/5U, MAC7/7U,  
MAC10/10U, MAC11/11U, MAC12/12U,  
MAC14/14U, MAC15/15U,  
MAC16/16U, MAC17/17U  
MAC18/18U

This affects all products produced since 01/02/2016

#### Declaration

The product is developed, engineered and manufactured according to the following directives and harmonized norms (or part of them).

#### Valid directives

2006/42/EG:2006	Machine directive
2014/30/EG:2014	EMC directive

#### Realized harmonized norms (or parts of them):

DINENISO12100:2011	Safety of machinery – basic concepts, general principles for design.
EN 61000-6-2(2006-03)	Electromagnetic compatibility (EMC) – Part 6-2: Generic standards- Immunity for industrial environments
EN 61000-6-3(2011-09)	Electromagnetic compatibility (EMC) – Part 6-3: Generic standards- Emission standard for residential, commercial and light-industrial environments

This partly complete machinery must not be put into operation before it is found that the completed machinery in which the partly complete machinery shall be installed complies to this directive.

<b>Name:</b>	Michael Østergaard Nielsen
<b>Position:</b>	Managing Director

Middelfart, 01/01/2020  
Place and date

  
\_\_\_\_\_  
Signature



## **Declaration of incorporation of partly completed machinery**

**Movetec Solutions ApS  
Lollandsvej1, DK-5500 Middelfart  
Danmark**

Name and address of the person authorized to compile the relevant technical documentation:

Technical director Michael Østergaard, Movetec solutions ApS, DK-5500 Middelfart. Email: [michael@movetec.dk](mailto:michael@movetec.dk)

Herewith declares that Movetec Solutions products as characterized by the following models and types:

Control Boxes: MCB-COMPACT serien, TC – serien and LC- serien

Lifting Columns: MAC-serien

Linear Actuators: MLA- serien

Controls: MCP- serien

Accessories: MC-serien, MN1, 2 and 3, all mounting plates

Herewith declares that Movetec, and Movetec brand, lifting columns, complete table frames, actuators and actuator systems, control boxes and battery boxes, accessories, security equipment, comply with the following parts of the Machinery Directive 2006/42/EC, ANNEX I, Essential health and safety requirements relating to the design and construction of machinery: 1.5.1 Electricity supply: Directive 2006/95/EC on the harmonization of the laws of Member States relating to electrical equipment designed for use within certain voltage limits.

1.5.10 Radiation, 1.5.11 External radiation: Directive 2004/108/EC on the approximation of the laws of the Member States relating to electromagnetic compatibility.

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

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

Middelfart, 01.01.2020

Place and date

  
Signature

Michael Østergaard Nielsen  
Technical Director, Certification  
& Regulatory Affairs

Further information ➔ [www.movetec.dk](http://www.movetec.dk)



# MOVETEC

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*True Innovative Moving Technology*