

**R** RENOWNED  
KNOW-HOW

Automation Technology



**RK ROSE+KRIEGER**

A Phoenix Mecano Company

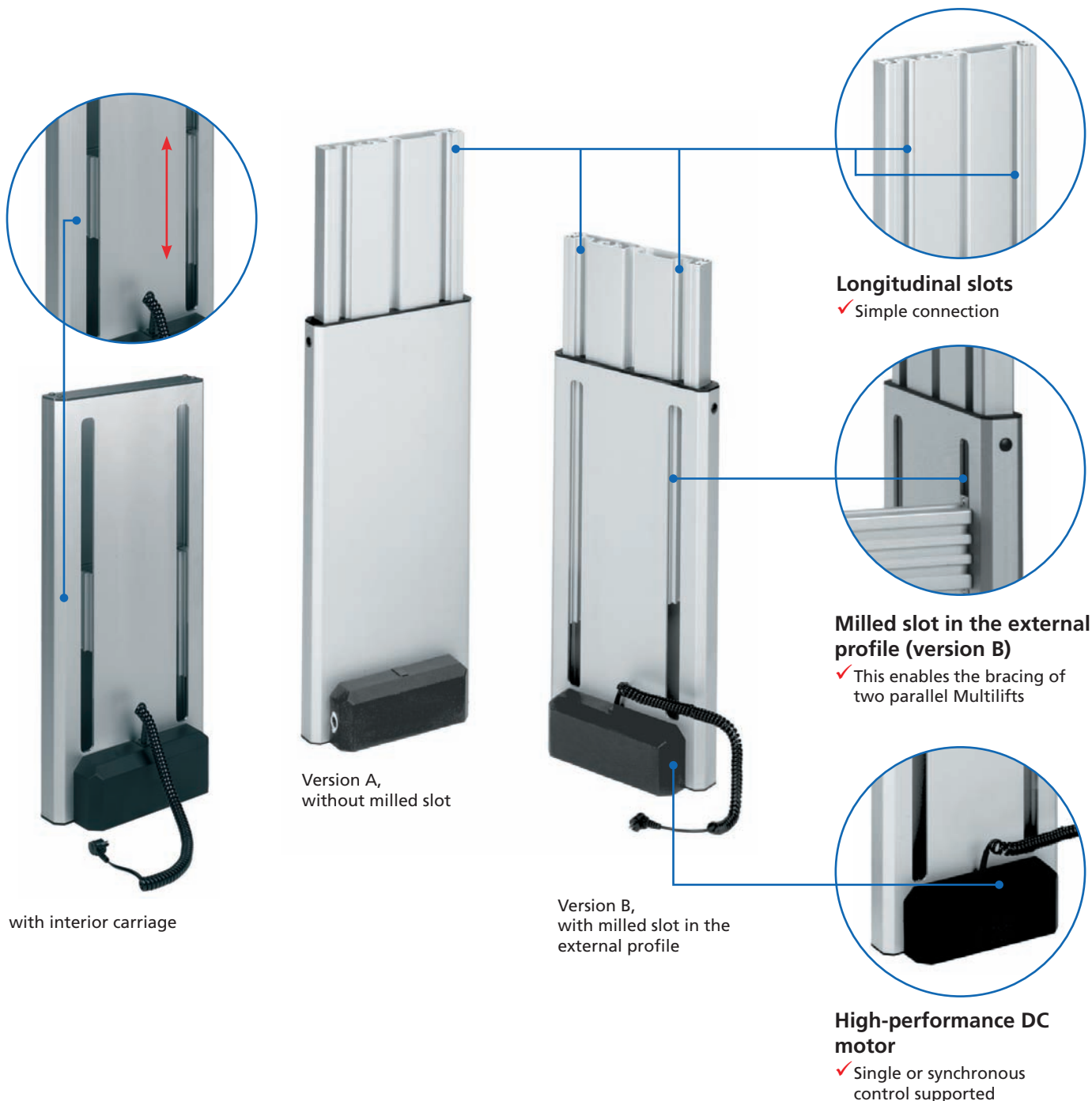


***Multilift***  
Two-stage lifting column

# Two-stage lifting column - Multilift



Slimline design and an unbeatable price/performance ratio



## Features:

- Quadruple bearings with POM slide bearing shells
- High-performance DC motor
- Integrated limit switches
- Self-locking, even under max. load

## Options:

- Version with manual drive via crank handle
- Special stroke lengths
- Quadro control enables control of up to 32 columns synchron
- Tested to EN 60601-1 (3E)

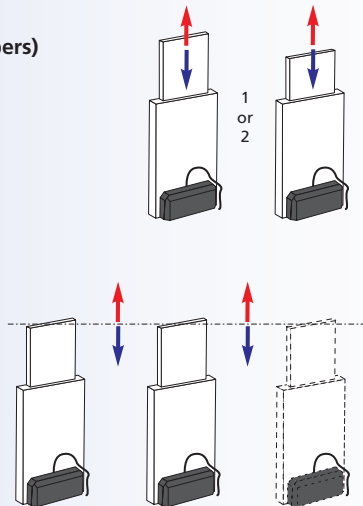
## Multilift - Table of contents

### Properties / Technical data

- General information/operating conditions Page 32
- Power diagram..... Page 32
- Load data..... Page 32

### Versions

(Dimensions, order numbers)



- Multilift Mono und Synchro..... Page 34
- Multilift with internal carriage  
Mono und Synchro..... Page 36
- Multilift Synchronous package ..... Page 38

### Accessories

#### Fixing

- Adaptor bar..... Page 39
- Assembly plate ..... Page 40
- RK SyncFlex..... Page 41
- Foot..... Page 42

#### Position determination

- Controls ..... Page 44
- PLC/PC data interface..... Page 45
- Hand switches ..... Page 45

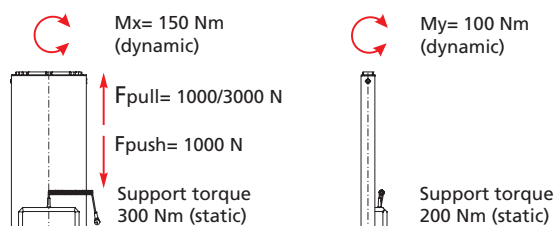
# Multilift – Technical data

## General information/operating conditions

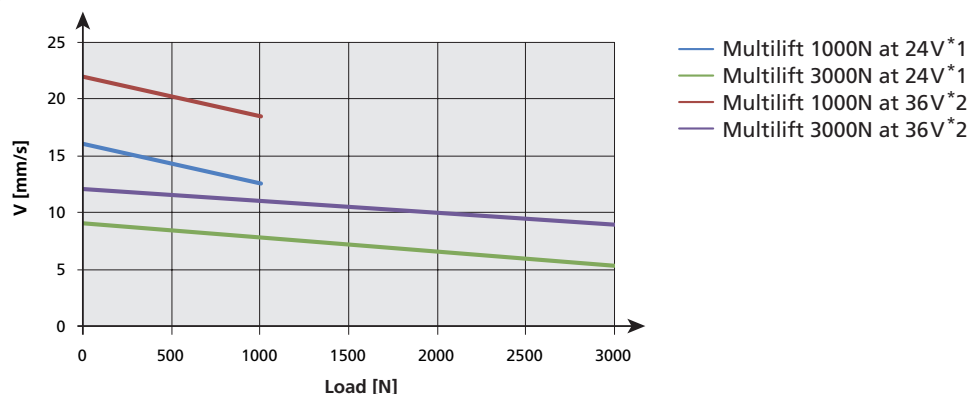
| Type                                      | Multilift                                                              | Multilift S |
|-------------------------------------------|------------------------------------------------------------------------|-------------|
| Design                                    | Slim lifting column                                                    |             |
| Guide                                     | Quadruple bearings with POM slide bearing shells                       |             |
| Installation position                     | Any position / suspended with drop protection provided by the customer |             |
| Push force*                               | 3.000 N                                                                | 1.000 N     |
| Pull force*                               | 1000 N (only in conjunction with factory-mounted base plate)           |             |
| Max. speed                                | 8 mm/s                                                                 | 16 mm/s     |
| Voltage                                   | 24 V DC                                                                |             |
| Power input                               | 120 W                                                                  |             |
| Protection class                          | IP 20 / IP10 for version B (with milled slot)                          |             |
| Self-locking                              | 3.000 N                                                                | 1.000 N     |
| Ambient temperature                       | +5°C to +40°C                                                          |             |
| Displacement during synchronous operation | 0-2 mm                                                                 | 0-4 mm      |
| Duty cycle                                | At nominal load, 10% (max. 2 mins operating time, 18 mins rest time)   |             |

\* In medical applications, the maximum pull force of 500 N and, in the case of the version with a travel speed of 8 mm/s, the maximum push force of 2000 N must not be exceeded.

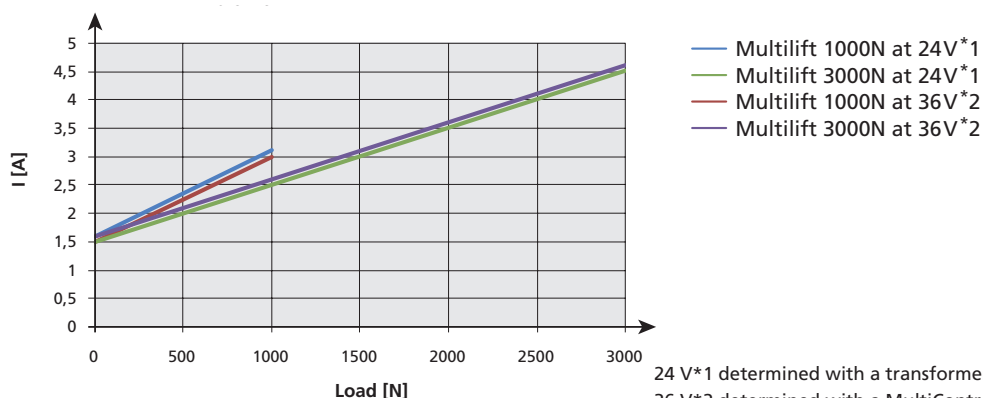
## Load data



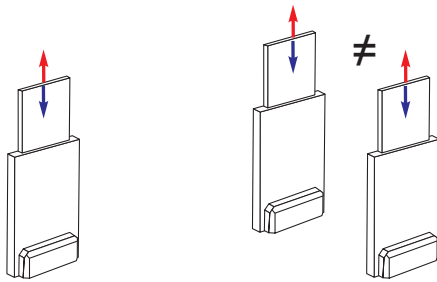
## Speed/Force diagram



## Current consumption/Force diagram



## Multilift Mono

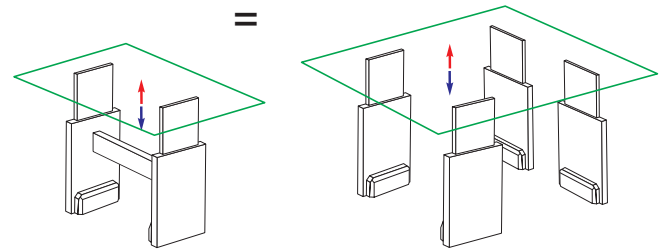


1-2 Multilifts in single or parallel operation

## Parallel operation

The standard version also supports parallel operation of two Multilifts (no synchronisation). This may produce different lifting positions during operation, which can be levelled out by moving to the end positions.

## Multilift Synchro



2-4 Multilifts in synchronous operation

## Synchronous operation

Synchronous operation of two or more columns. In conjunction with the integrated sensors, the control (see page 44) ensures synchronisation, and thus constant alignment of all the columns in both directions of travel, even if subject to different loads. The synchronous operation tolerance depends on the lifting speed and is max 2 mm on the 8 mm/s version and max 4 mm on the 16 mm/s version. A memory function is also available.



Universal Table Ironing Machine

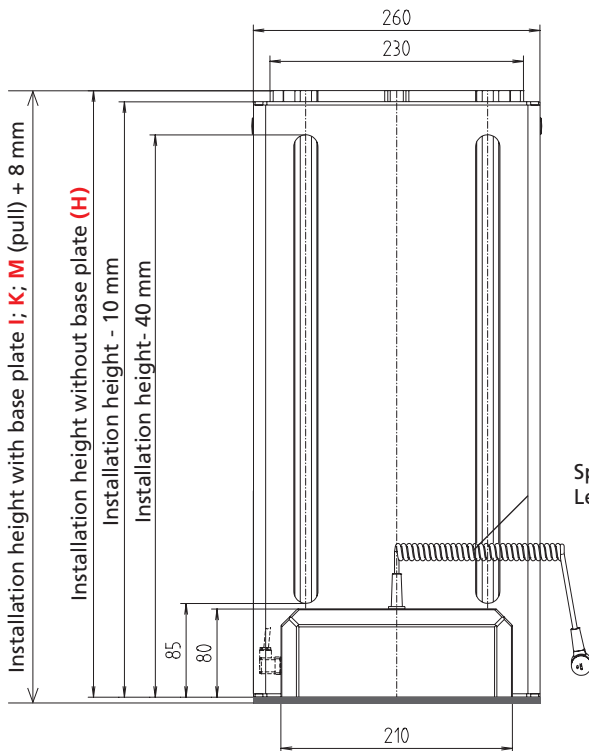
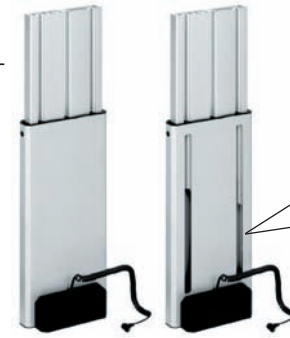
## Height-adjustable assembly workplaces



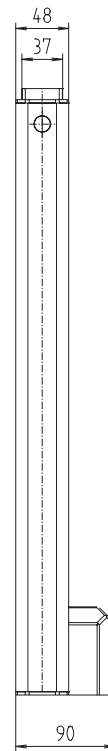
# Multilift - Versions

**Version A**  
without milled  
slot in the external  
profile

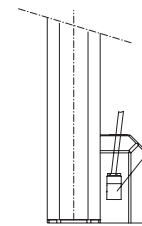
**Version B**  
with milled slot in  
the external profile



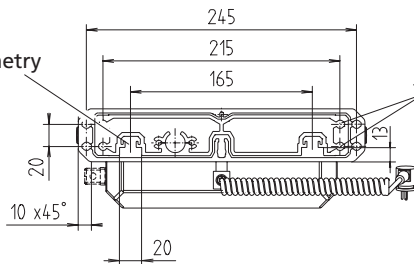
Spiral cable  
Length 0.5-1.2 m



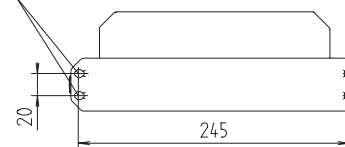
Lateral receptacle  
output with synchro-  
nous control (cable  
length 2.5 m)



BLOCAN®-  
40 slot geometry

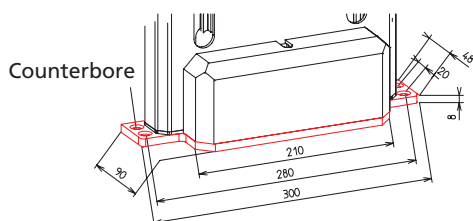


M8 / 40 deep

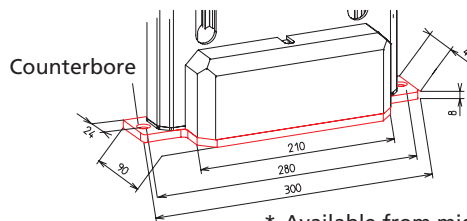


View "A"

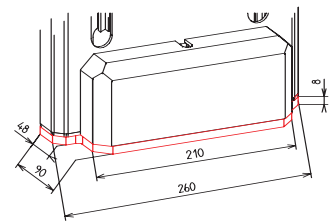
Base plate (I) with  
fixing plates  
(4 counterbores)



Base plate (K) with  
fixing plates  
(2 counterbores\*)



Base plate (M)  
flush



\* Available from mid 2014

## Multilift Mono



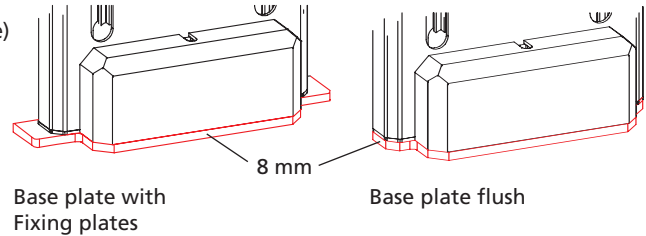
| Code No.      | Type            | max.<br>push force [N]  | max.<br>pull force [N] | Total travel<br>[mm] | Installation<br>height without<br>base plate [mm] | Weight [kg] |
|---------------|-----------------|-------------------------|------------------------|----------------------|---------------------------------------------------|-------------|
| QAB13_G0_0355 | Multilift 350   | 3.000 /<br>2.000 (med.) | 1.000 /<br>500 (med.)  | 355                  | 550                                               | 9,1         |
| QAB13_G0_0400 | Multilift 400   |                         |                        | 400                  | 595                                               | 10,0        |
| QAB13_G0_0450 | Multilift 450   |                         |                        | 452                  | 650                                               | 10,8        |
| QAB13_G0_0500 | Multilift 500   |                         |                        | 498                  | 695                                               | 11,5        |
| QAB26_G0_0355 | Multilift 350 s | 1.000 /<br>1.000 (med.) | 1.000 /<br>500 (med.)  | 355                  | 550                                               | 9,1         |
| QAB26_G0_0400 | Multilift 400 s |                         |                        | 400                  | 595                                               | 10,0        |
| QAB26_G0_0450 | Multilift 450 s |                         |                        | 452                  | 650                                               | 10,8        |
| QAB26_G0_0500 | Multilift 500 s |                         |                        | 498                  | 695                                               | 11,5        |

### Version:

- 1 = B (with milled slot in the external profile)
- 2 = A (without milled slot in the external profile)

### Base plate (For dimensions, see page 34):

- H** = without base plate  
(not suitable for pull forces)
- I** = with external fixing plates  
4 counterbores
- K** = with external fixing plates  
2 counterbores\*
- M** = base plate flush



## Multilift Synchro



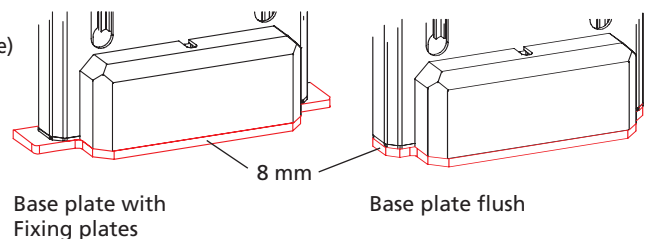
| Code No.      | Type            | max.<br>push force [N]  | max.<br>pull force [N] | Total travel<br>[mm] | Installation<br>height incl. base<br>plate [mm] | Weight [kg] |
|---------------|-----------------|-------------------------|------------------------|----------------------|-------------------------------------------------|-------------|
| QAB13_G0_0355 | Multilift 350   | 3.000 /<br>2.000 (med.) | 1.000 /<br>500 (med.)  | 355                  | 558                                             | 10,1        |
| QAB13_G0_0400 | Multilift 400   |                         |                        | 400                  | 603                                             | 11,0        |
| QAB13_G0_0450 | Multilift 450   |                         |                        | 452                  | 658                                             | 11,8        |
| QAB13_G0_0500 | Multilift 500   |                         |                        | 498                  | 703                                             | 12,5        |
| QAB26_G0_0355 | Multilift 350 s | 1.000 /<br>1.000 (med.) | 1.000 /<br>500 (med.)  | 355                  | 558                                             | 10,1        |
| QAB26_G0_0400 | Multilift 400 s |                         |                        | 400                  | 603                                             | 11,0        |
| QAB26_G0_0450 | Multilift 450 s |                         |                        | 452                  | 658                                             | 11,8        |
| QAB26_G0_0500 | Multilift 500 s |                         |                        | 498                  | 703                                             | 12,5        |

### Version:

- 3 = B (with milled slot in the external profile)
- 4 = A (without milled slot in the external profile)

### Base plate (For dimensions, see page 34):

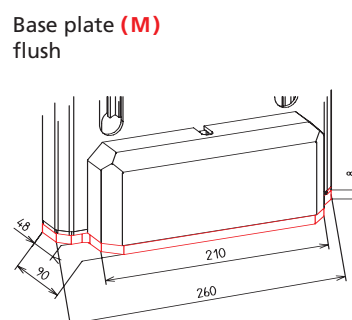
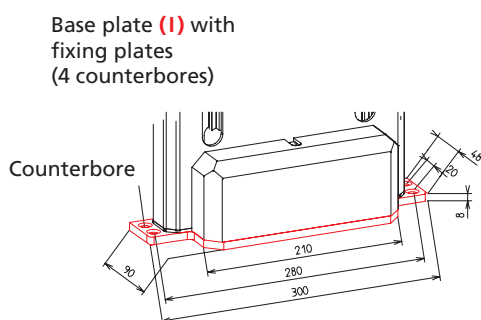
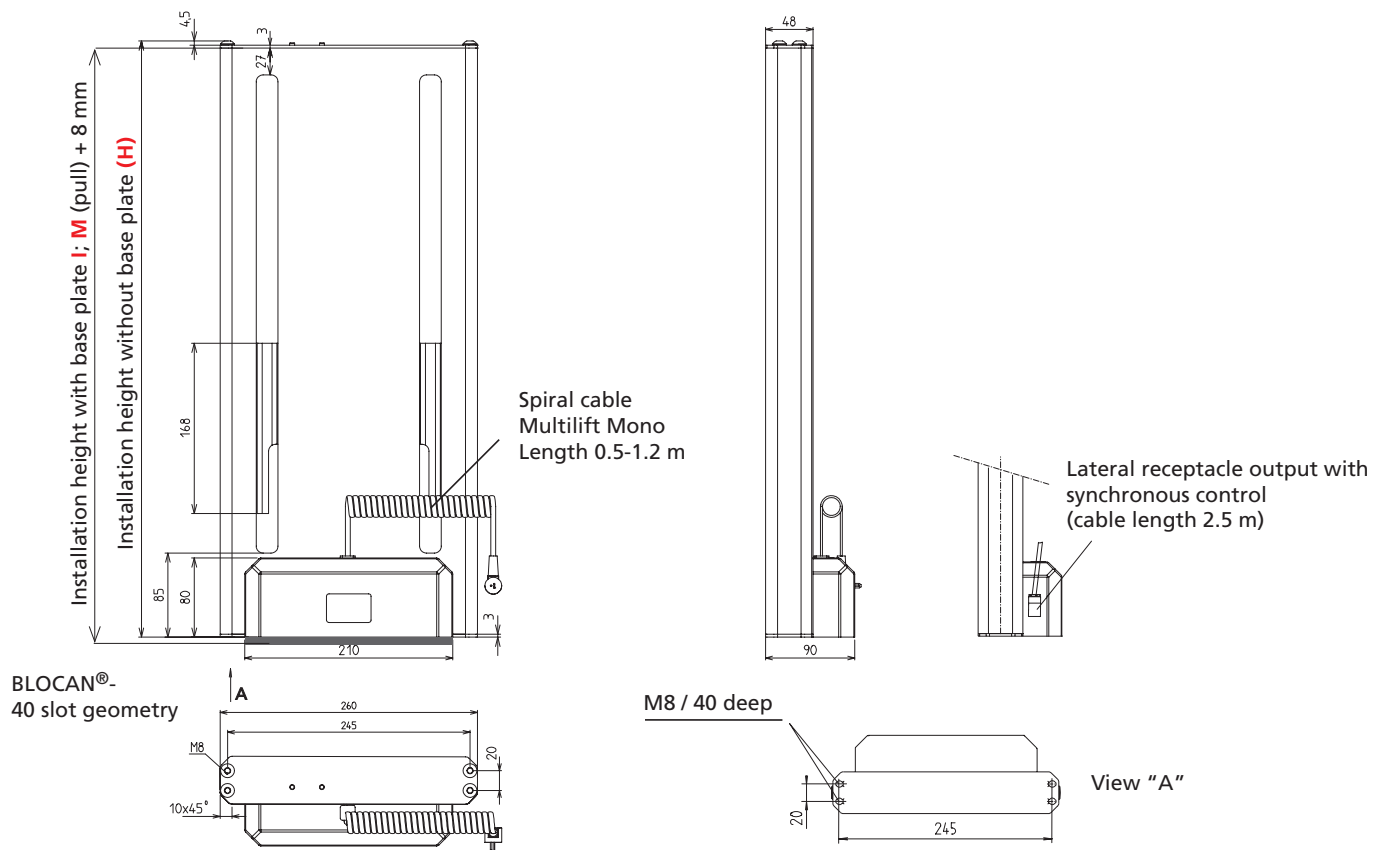
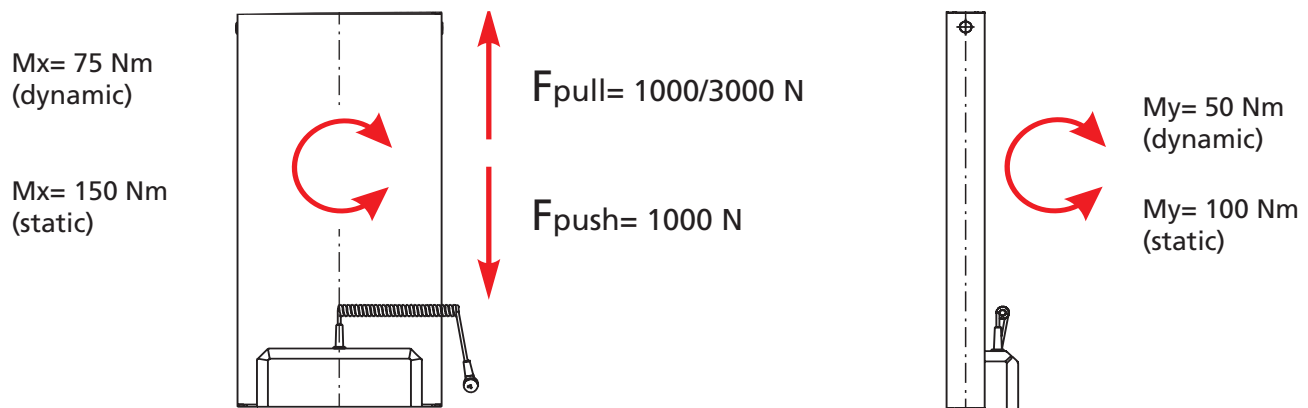
- I** = with external fixing plates  
4 counterbores
- K** = with external fixing plates  
2 counterbores\*
- M** = base plate flush



\* Available from mid 2014

# Multilift – Technical data - internal carriage

## Load data with internal carriage



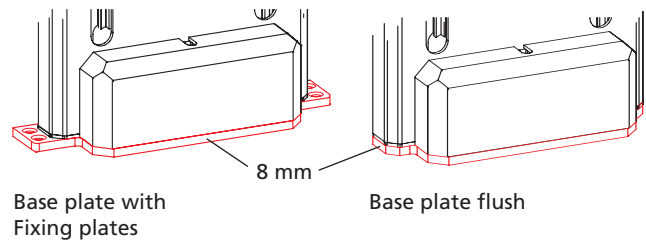
## Multilift Mono



| Code No.      | Type            | max.<br>push force [N]  | max.<br>pull force [N] | max.<br>Hubgeschw.<br>[mm/s] | Total travel<br>[mm] | Installation<br>height without<br>base plate [mm] | Weight<br>[kg] |
|---------------|-----------------|-------------------------|------------------------|------------------------------|----------------------|---------------------------------------------------|----------------|
| QAB13_G070355 | Multilift 350   | 3.000 /<br>2.000 (med.) | 1.000 /<br>500 (med.)  | 8                            | 355                  | 557,5                                             | 6,4            |
| QAB13_G070400 | Multilift 400   |                         |                        |                              | 400                  | 602,5                                             | 6,7            |
| QAB13_G070450 | Multilift 450   |                         |                        |                              | 452                  | 657,5                                             | 7,1            |
| QAB13_G070500 | Multilift 500   |                         |                        |                              | 498                  | 702,5                                             | 7,4            |
| QAB26_G070355 | Multilift 350 s | 1.000 /<br>1.000 (med.) | 1.000 /<br>500 (med.)  | 16                           | 355                  | 557,5                                             | 6,4            |
| QAB26_G070400 | Multilift 400 s |                         |                        |                              | 400                  | 602,5                                             | 6,7            |
| QAB26_G070450 | Multilift 450 s |                         |                        |                              | 452                  | 657,5                                             | 7,1            |
| QAB26_G070500 | Multilift 500 s |                         |                        |                              | 498                  | 702,5                                             | 7,4            |

**Base plate (For dimensions, see page 36):**

- H** = without base plate  
(not suitable for pull forces)  
**I** = with external fixing plates  
4 counterbores  
**M** = base plate flush



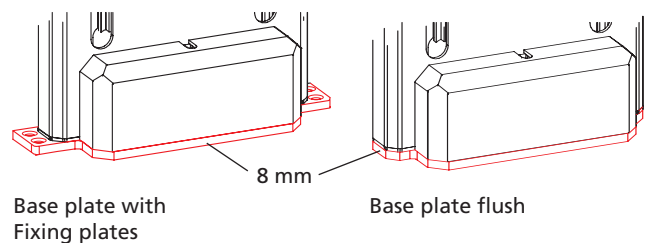
## Multilift Synchro



| Code No.      | Type            | max.<br>push force [N]  | max.<br>pull force [N] | max.<br>Hubgeschw.<br>[mm/s] | Total travel<br>[mm] | Installation height<br>incl. base plate<br>[mm] | Weight<br>[kg] |
|---------------|-----------------|-------------------------|------------------------|------------------------------|----------------------|-------------------------------------------------|----------------|
| QAB13_G080355 | Multilift 350   | 3.000 /<br>2.000 (med.) | 1.000 /<br>500 (med.)  | 8                            | 355                  | 565,5                                           | 6,4            |
| QAB13_G080400 | Multilift 400   |                         |                        |                              | 400                  | 610,5                                           | 6,7            |
| QAB13_G080450 | Multilift 450   |                         |                        |                              | 452                  | 665,5                                           | 7,1            |
| QAB13_G080500 | Multilift 500   |                         |                        |                              | 498                  | 710,5                                           | 7,4            |
| QAB26_G080355 | Multilift 350 s | 1.000 /<br>1.000 (med.) | 1.000 /<br>500 (med.)  | 16                           | 355                  | 565,5                                           | 6,4            |
| QAB26_G080400 | Multilift 400 s |                         |                        |                              | 400                  | 610,5                                           | 6,7            |
| QAB26_G080450 | Multilift 450 s |                         |                        |                              | 452                  | 665,5                                           | 7,1            |
| QAB26_G080500 | Multilift 500 s |                         |                        |                              | 498                  | 710,5                                           | 7,4            |

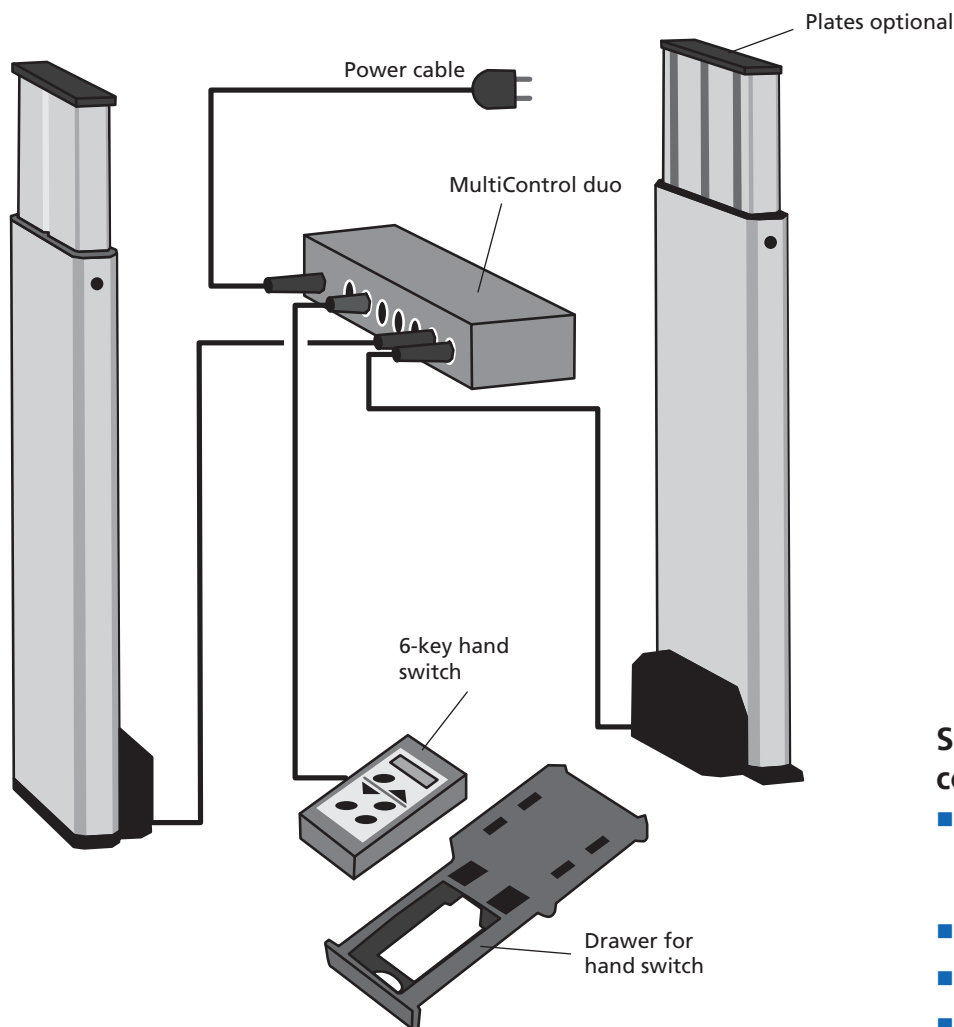
**Base plate (For dimensions, see page 36):**

- I** = with external fixing plates  
4 counterbores  
**M** = base plate flush



# Multilift – Synchronous package

Buying made simple – the complete plug and play system



## Synchronous package comprises:

- Two Multilifts  
(without milled slot – version A/  
with milled slot – version B)
- MultiControl duo
- 6-key hand switch (memory)
- Drawer for hand switch
- Plug & play  
(factory-initialised)

## Multiliftsystem Synchro

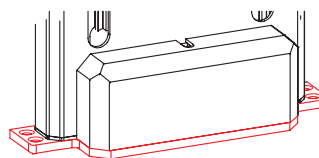
| [mm]          |                         |                           |                        |                              |              |                                         |
|---------------|-------------------------|---------------------------|------------------------|------------------------------|--------------|-----------------------------------------|
| Code No.      | Type                    | max.<br>push force<br>[N] | max.<br>pull force [N] | max.<br>Hubgeschw.<br>[mm/s] | Total travel | Installation height<br>incl. base plate |
| QBB13_G0_0355 | Multiliftsystem Synchro | 3.000                     | 1.000                  | 8                            | 355          | 558                                     |
| QBB13_G0_0400 | Multiliftsystem Synchro |                           |                        |                              | 400          | 603                                     |

### Version:

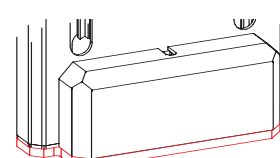
- 3 = B (with milled slot in the external profile)
- 4 = A (without milled slot in the external profile)

### Base plate:

- I** = with external fixing plates  
4 counterbores
- M** = base plate flush



Base plate with fixing plates

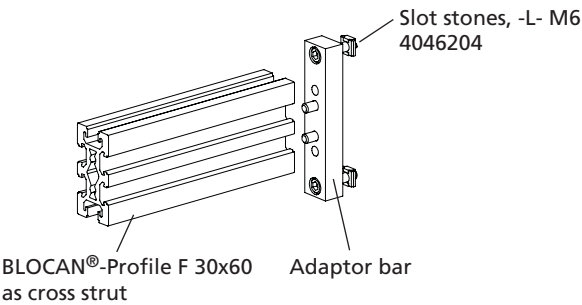
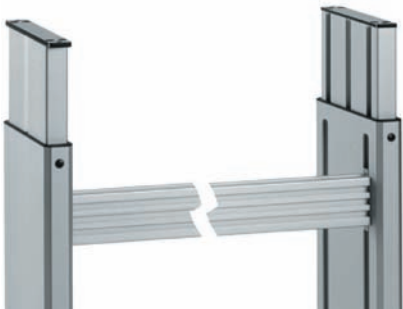


Base plate flush

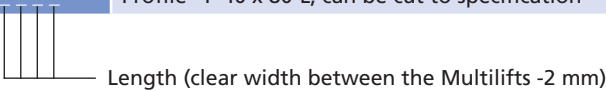
### Adaptor bar

- Cross struts from the BLOCAN® Profile Assembly System are used to increase the stability of two version B Multilifts (see page 34). The adaptor bar is suitable for F profile 40 x 80 L and F 30x60.

**Material:** AlMgSi 0.5  
 Fixing set, galvanised  
**Scope of delivery:**  
 2x adaptor bars, fixing set



| Code No.  | Version                                           |
|-----------|---------------------------------------------------|
| QZD020020 | Adaptor bar for BLOCAN® profiles                  |
| 4285000   | Profile* F-40 x 80-L, can be cut to specification |



\* For dimensions of the profiles, please refer to the catalogue BLOCAN PROFILE TECHNOLOGY

# Multilift – Fixing

## Multilift assembly plates / thrust compression plate

The “top” and “bottom” assembly plates facilitate the installation of the Multilift in the customer application (no pull force).

The thrust compression plate (or bottom assembly plate) is required if the substrate cannot absorb the push forces (no pull force).

**Material:** Die-cast, black powder-coated galvanised fixing set

**Scope of delivery:** 1x assembly or thrust compression plate fixing set

### Note:

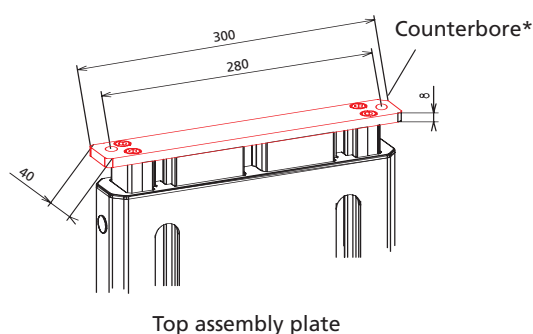
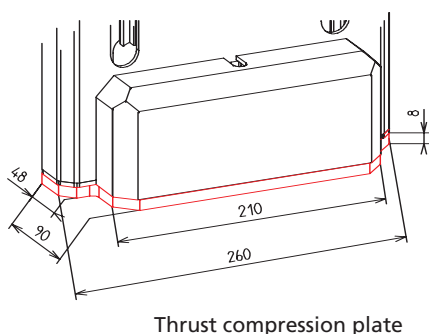
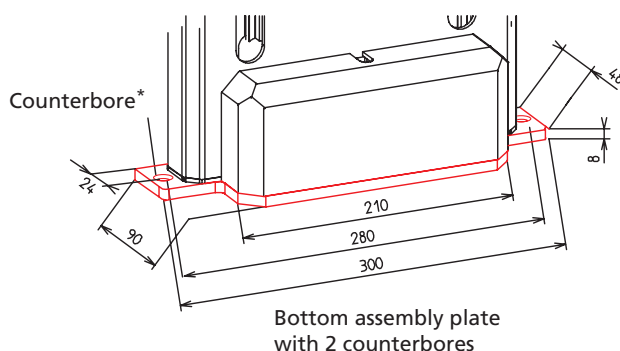
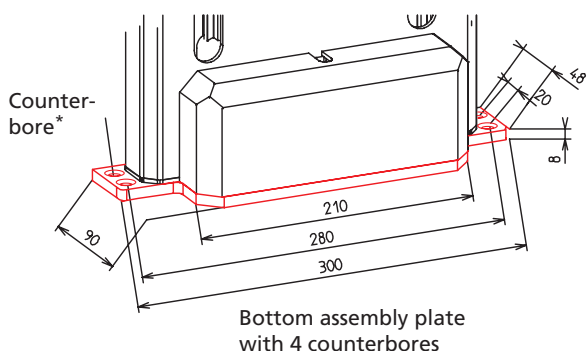
The “bottom” assembly plates listed here and the thrust compression plate are only suitable for push loads.

For applications involving pull force and in synchronised groups, a base plate – factory-mounted on the Multilift – must be used. These versions are defined by the Code No. (Page 35/37)

The supporting surfaces for fixing the internal and external profile must be flat. Since the drive motor is supported by the plastic housing, the entire surface of the Multilift must rest on a stable substructure. This can be achieved by using the “top” and “bottom” assembly plates, which are specially designed for this purpose, or by full-surface fixing to a solid substrate.

The M8 fixing screws are screwed into the screw channels. A minimum depth of penetration of 20 mm in the internal and external profile must be ensured.

In the case of repeated installation, a minimum depth of penetration of approx. 40 mm is recommended!



\* DIN 74 - F8

| Code No.  | Version                                    |
|-----------|--------------------------------------------|
| QZD020023 | Bottom assembly plate with 4 counterbores  |
| QZD020024 | Bottom assembly plate with 2 counterbores* |
| QZD020025 | Thrust compression plate                   |
| QZD020549 | Top assembly plate*                        |

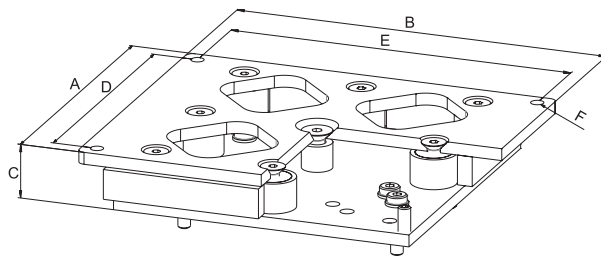
\* Available from mid 2014

## RK SyncFlex H

**Scope of delivery:**  
Adjuster plate, incl. fixing material

### Horizontal alignment

- To prevent locked-up stress in mechanically overdefined bearing systems (more than one fixed bearing) around the horizontal axis.  
With RK SyncFlex H defined loose bearings supplement the application.
- The horizontal compensation in the Z-axis enables the freedom of movement required when moving the lifting columns.



| Code No.  | Type      | A  | B   | C  | D  | E   | F    |
|-----------|-----------|----|-----|----|----|-----|------|
| QZD020471 | MultiLift | 70 | 280 | 36 | 40 | 260 | M 10 |

[mm]

## RK SyncFlex V

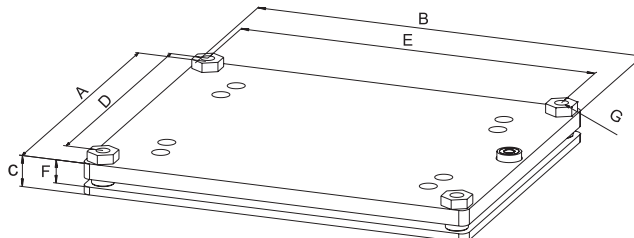
**Scope of delivery:**  
Adjuster plate, incl. fixing material

**Option:**  
Optionally available with or without pressure plate (see table)

### Vertical alignment

- If the lifting columns are not parallel, the distance between the two upper fixing points will change during the movement. However, a rigid connection keeps this distance constant, and this means that the lifting columns are subject to very strong forces.
- The lifting columns can be aligned via the vertical adjustment around the X-Y axes.

RK SyncFlex V enables the compensation of unevenness in the mounting environment.



| Code No.               | Type      | A   | B   | C     | D  | E   | F     | G    |
|------------------------|-----------|-----|-----|-------|----|-----|-------|------|
| Without pressure plate |           |     |     |       |    |     |       |      |
| QZD020472              | MultiLift | 110 | 300 | -     | 90 | 280 | 10-15 | M 10 |
| With pressure plate    |           |     |     |       |    |     |       |      |
| QZD020462              | MultiLift | 110 | 300 | 15-20 | 90 | 280 | 10-15 | M 10 |

[mm]

# Multilift – Fixing

## Foot

- Different foot versions for the Multilift
- No modifications to the Multilift required
- Max. load 1,000 N

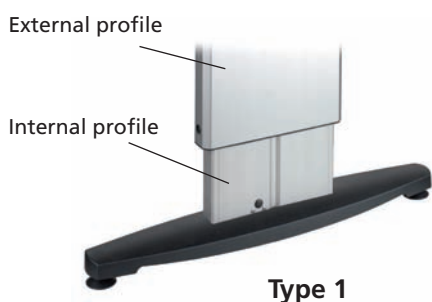
### Material:

Type 1/2/5 GK-ALSi12/3.2583.02, black powder-coating

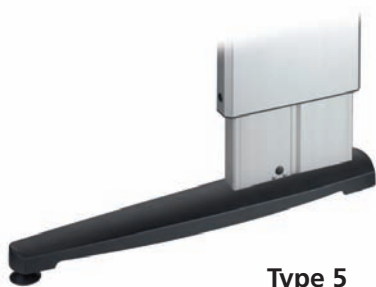
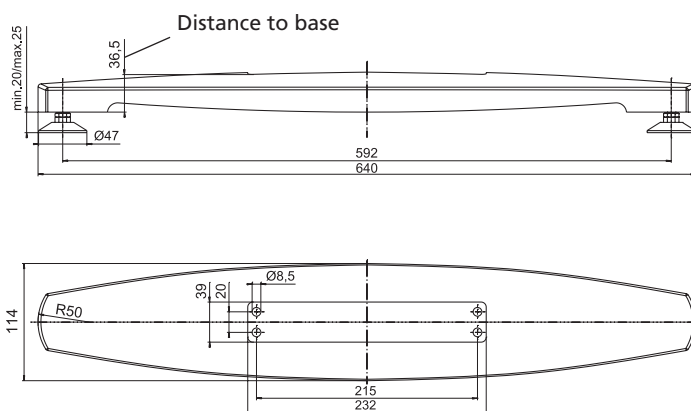
Type 3/4 steel tube, ends capped black powder-coating

### Scope of delivery:

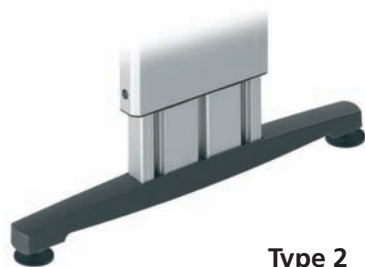
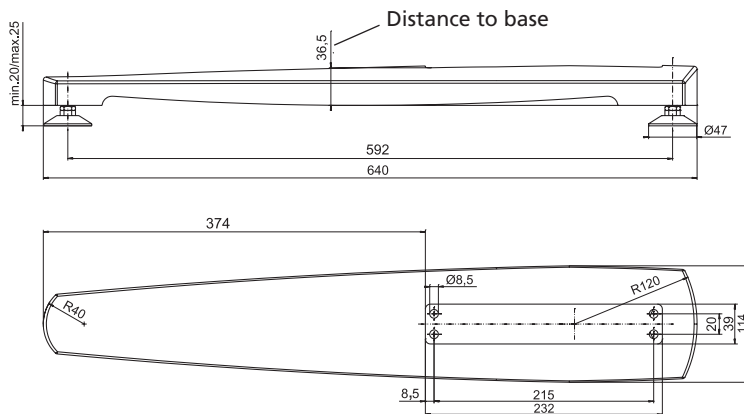
one foot with fixing set



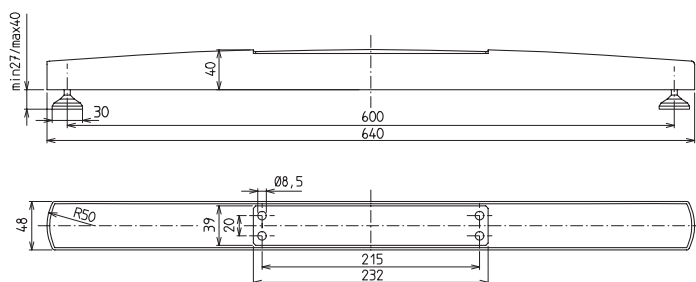
Type 1

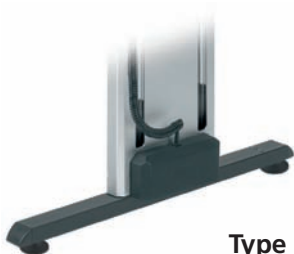


Type 5



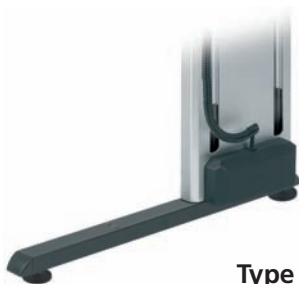
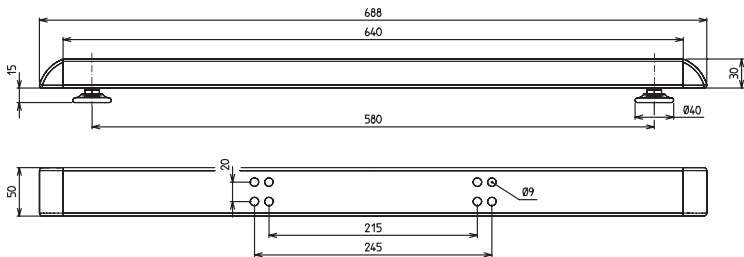
Type 2





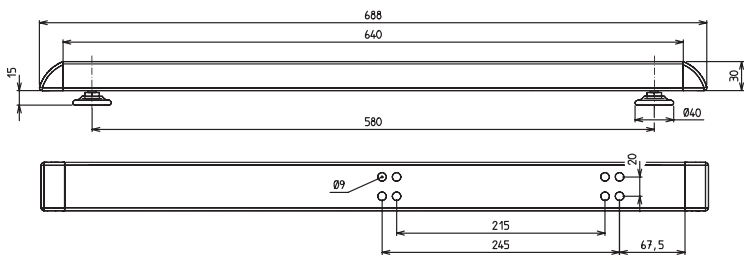
Type 3

Multilift centrally mounted  
(choice of internal or external  
profile)



Type 4

Multilift mounted off-centre  
(choice of internal or external  
profile)



| Code No.  | Type |
|-----------|------|
| QZD020252 | 1    |
| QZD020253 | 2    |
| QZD020254 | 3    |
| QZD020255 | 4    |
| QZD020343 | 5    |

# Multilift – Drive / Accessories

## Controls

- Input voltage 230 V AC
- Output voltage 24/36 V DC
- For battery operated controls

### Order information:

Observe the current consumption of the drives when selecting the control.

Transformer control 120 VA



approx. 24 V DC

MultiControl



approx. 36 V DC

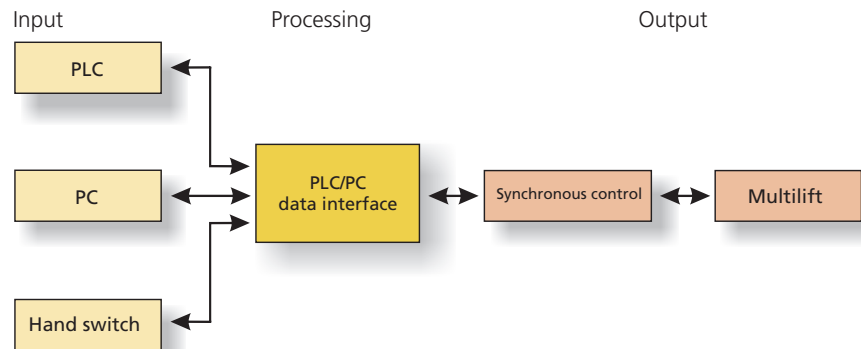
For dimensions and other technical data, please refer to the chapter „Motors and controls“

| Code No.                       | Version                                                                         |                                     |
|--------------------------------|---------------------------------------------------------------------------------|-------------------------------------|
| Controls for Multilift mono    |                                                                                 |                                     |
| QZA07C13AX021                  | Transformer control 120 VA connection A, up to max. 3 A current output, 24 V DC | Controls up to 2 drives             |
| QSTAACA1AA000                  | MultiControl mono connection A, up to max. I= 10 A current consumption, 24 V DC | Controls up to 2 drives             |
| Controls for Multilift synchro |                                                                                 |                                     |
| QST10C02AA000                  | MultiControl duo connection C, up to max. 12 A current output, 36 V DC          | Controls up to 2 drives synchronous |
| QST10C04AA000                  | MultiControl quadro connection C, up to max. 12 A current output, 36 V DC       | Controls up to 4 drives synchronous |
| Accessories                    |                                                                                 |                                     |
| QZD020083                      | Fixing plate 120 VA, control is pushed onto the plate                           |                                     |
| QZD100093                      | 6 m bus cable for the networking of up to 8 synchronous controls                |                                     |
| QZD0702844000*                 | Straight connecting cable (4 m) with 5-pin connector and open cable end         |                                     |
| QZD070525                      | Extension cable 2,5 m drive for connector A/2-pin DIN socket                    |                                     |
| QZD070526                      | Extension cable 2,5 m drive for connector C/8-pin DIN socket                    |                                     |

\*for the connection of a parallel hand switch or an external potentiometer (in the case of the MultiControl mono)

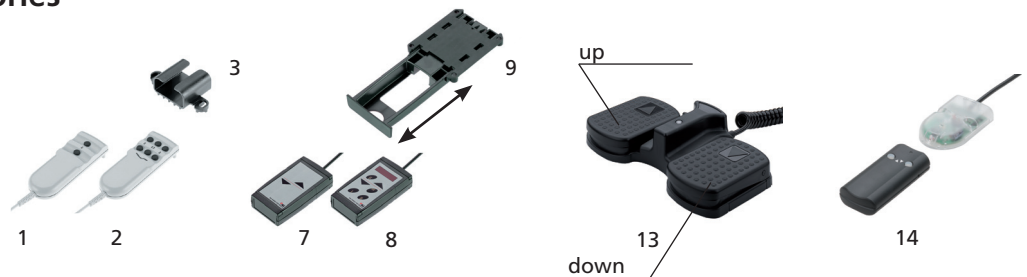
## PLC/PCdata interface

- This interface enables actuation of the synchronous control system via different input devices (PLC, PC and hand switch)
- You will find further product information on page 182



| Code No.  | Type                                         |
|-----------|----------------------------------------------|
| QZD100108 | PLC/PC data interface                        |
| QZD100110 | Wall strap for mounting in a control cabinet |

## Hand switches/accessories



| Code No.                                                    | Version                                             | Fig. |
|-------------------------------------------------------------|-----------------------------------------------------|------|
| <b>Hand switch for transformer control</b>                  |                                                     |      |
| QZB02C03AD031                                               | Hand switch with 1 m spiral cable – 6 function keys | 2    |
| <b>Hand switches for transformer or synchronous control</b> |                                                     |      |
| QZB02C03AB031                                               | Hand switch with 1 m spiral cable – 2 function keys | 1    |
| QZB00D04AB041                                               | Hand switch with 1 m spiral cable – 2 function keys | 7    |
| QZB02C01AE114                                               | Foot switch – 2 function keys                       | 13   |
| QZB00D07BK141                                               | Wireless hand switch – 2 function keys              | 14   |
| <b>Hand switch for synchronous control</b>                  |                                                     |      |
| QZB00D04AD041                                               | Hand switch with 1 m spiral cable – 6 function keys | 8    |
| <b>Accessories for hand switches</b>                        |                                                     |      |
| QZD000072                                                   | Bracket for hand switch: Fig. 1 + 2                 | 3    |
| QZD000074                                                   | Hand switch drawer: Fig. 7 + 8                      | 9    |

**Note:**  
For further hand switch versions, please refer to the chapter "Controls" on page 146

We say what we do - and do what we say!  
We also say what we can't do - and don't do it!



**RK ROSE+KRIEGER**

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