

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



Longitudinal slots

✓ Simple connection

Milled slot in the external profile (version B)

✓ This enables the bracing of two parallel Multilifts

High-performance DC motor

✓ Single or synchronous control supported

with interior carriage

Version A,
without milled slot

Version B,
with milled slot in the
external profile

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 – Technical data

General information/operating conditions

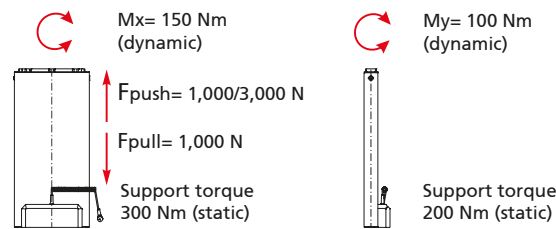
Type	Multilift	Multilift S
Design	Slim lifting column	
Guide	Quadruple bearings with POM slide bearing shells	
Installation position	Any position / suspended with drop protection provided by the customer	
Push force*	3,000 N	1,000 N
Pull force*	1,000 N (only in conjunction with factory-mounted base plate)	
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)	

*Note:

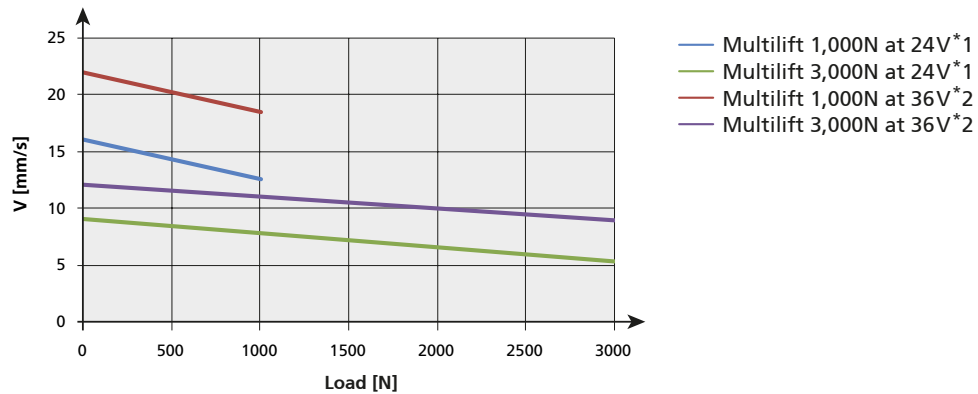
All information refers to the standard sizes. All data of push/pull forces are referring to the individual lifting column, for combined applications a safety factor of up to 0,6 has to be considered.

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 2,000 N must not be exceeded.

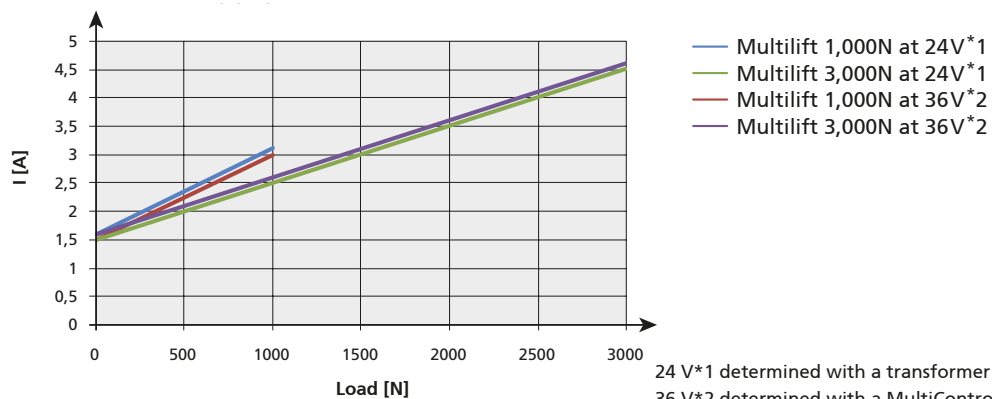
Load data



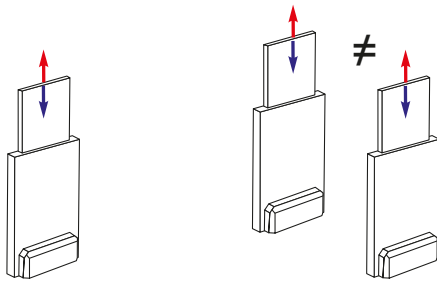
Speed/Force diagram



Current output/Force diagram



Multilift Mono

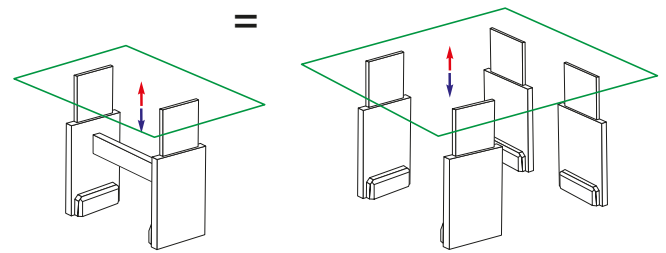


1-2 Multilifts in single or parallel operation

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.



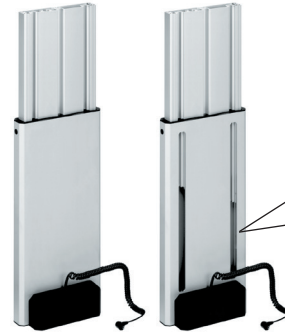
Universal Table Ironing Machine

Height-adjustable assembly workplaces

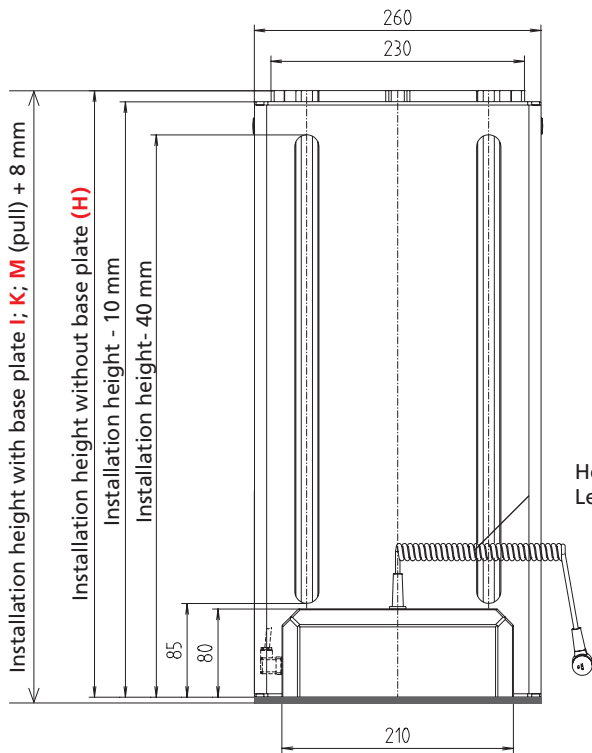


Multilift - Versions

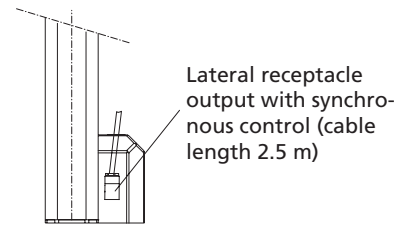
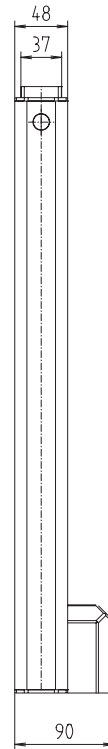
Version A
without milled
slot in the external
profile



Version B
with milled slot in
the external profile

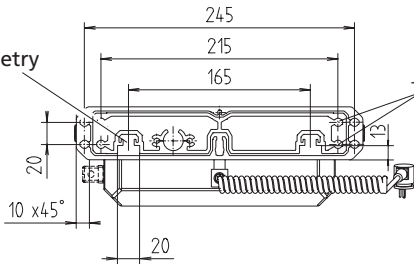


Helix cable
Length 0.5-1.2 m

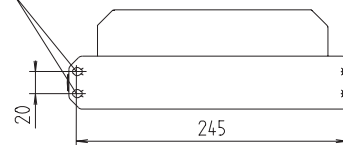


Lateral receptacle
output with synchro-
nous control (cable
length 2.5 m)

BLOCAN®-
40 slot geometry



M8 / 40 deep

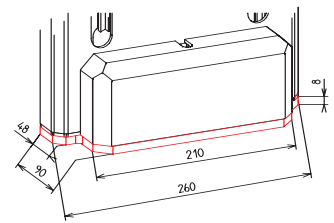
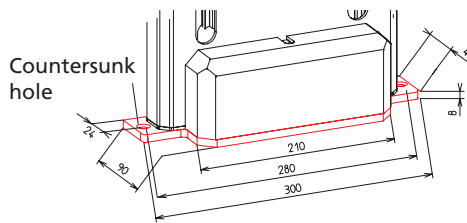
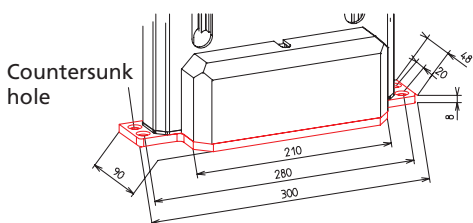


View "A"

Base plate (I) with fixing plates
(4 countersunk hole)

Base plate (K) with fixing plates
(2 countersunk hole)

Base plate (M)
flush



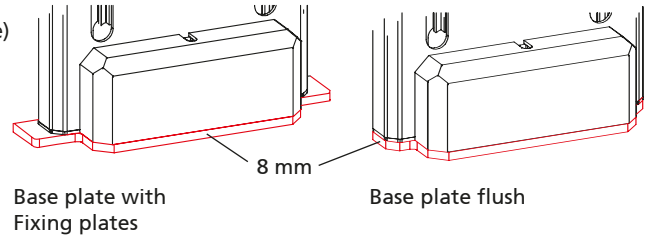
Multilift Mono



Code No.	Type	max. push force [N]	max. pull force [N]	max. lifting speed [mm/s]	Total travel [mm]	Installation height without base plate [mm]	Weight [kg]
QAB13_G0_0355	Multilift 350	3,000 / 2,000 (med.)	1,000 / 500 (med.)	8	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 / 1,000 (med.)	1,000 / 500 (med.)	16	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 countersunk hole
K = with external fixing plates 2 countersunk hole
M = base plate flush



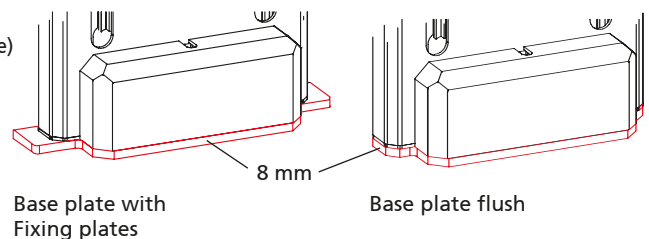
Multilift Synchro



Code No.	Type	max. push force [N]	max. pull force [N]	max. lifting speed [mm/s]	Total travel [mm]	Installation height incl. base plate [mm]	Weight [kg]
QAB13_G0_0355	Multilift 350	3,000 / 2,000 (med.)	1,000 / 500 (med.)	8	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 / 1,000 (med.)	1,000 / 500 (med.)	16	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

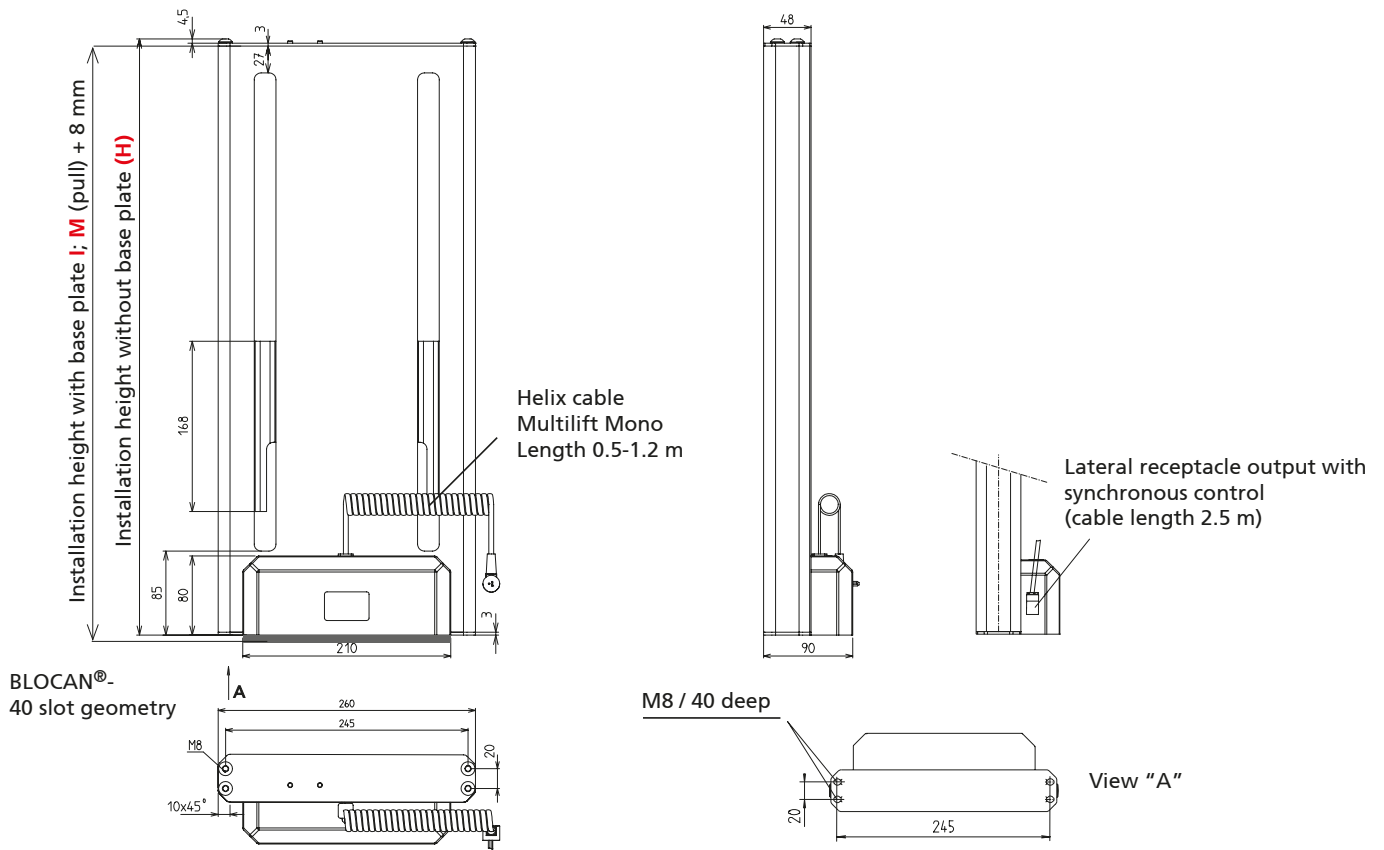
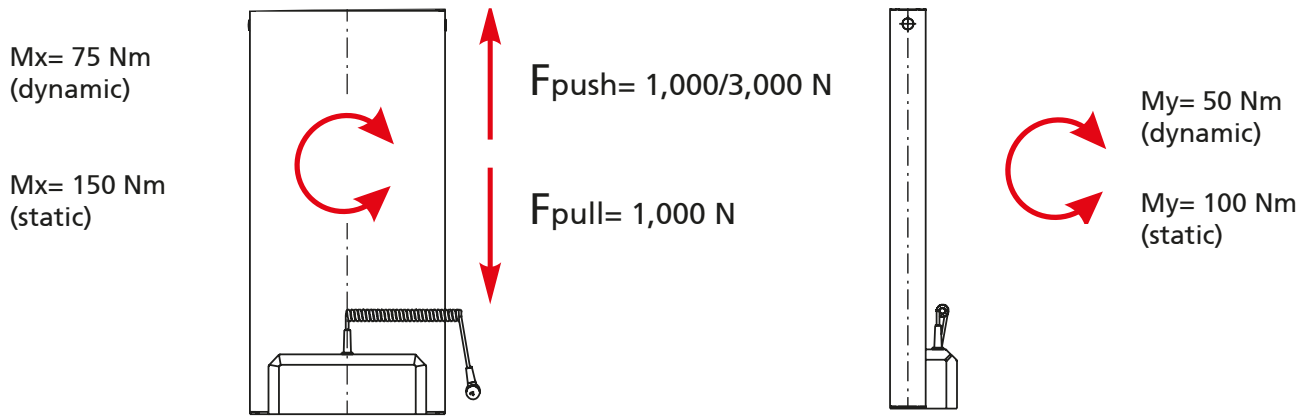
Version:
 3 = B (with milled slot in the external profile)
 4 = A (without milled slot in the external profile)

Base plate (For dimensions, see page 34):
I = with external fixing plates 4 countersunk hole
K = with external fixing plates 2 countersunk hole
M = base plate flush

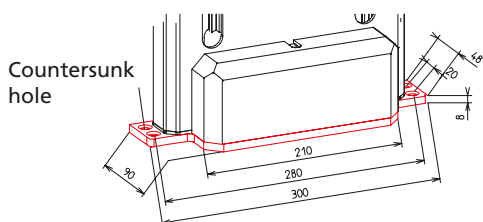


Multilift – Technical data - internal carriage

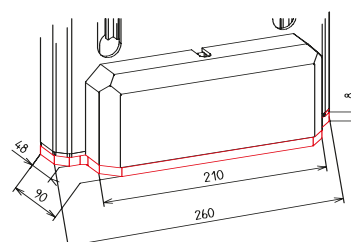
Load data with internal carriage



Base plate **(I)** with fixing plates (4 countersunk hole)



Base plate **(M)** flush

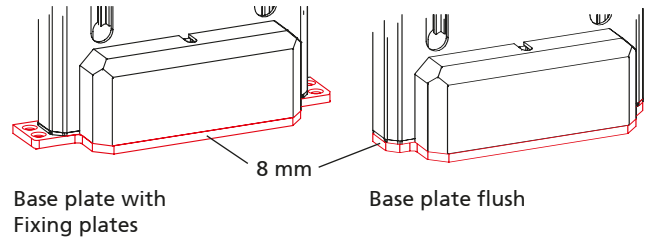


Multilift Mono



Code No.	Type	max. push force [N]	max. pull force [N]	max. lifting speed [mm/s]	Total travel [mm]	Installation height without base plate [mm]	Weight [kg]
QAB13_G070355	Multilift 350	3,000 / 2,000 (med.)	1,000 / 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 / 1,000 (med.)	1,000 / 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 countersunk hole
M = base plate flush

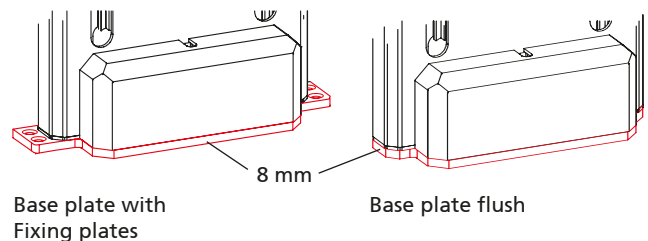


Multilift Synchro



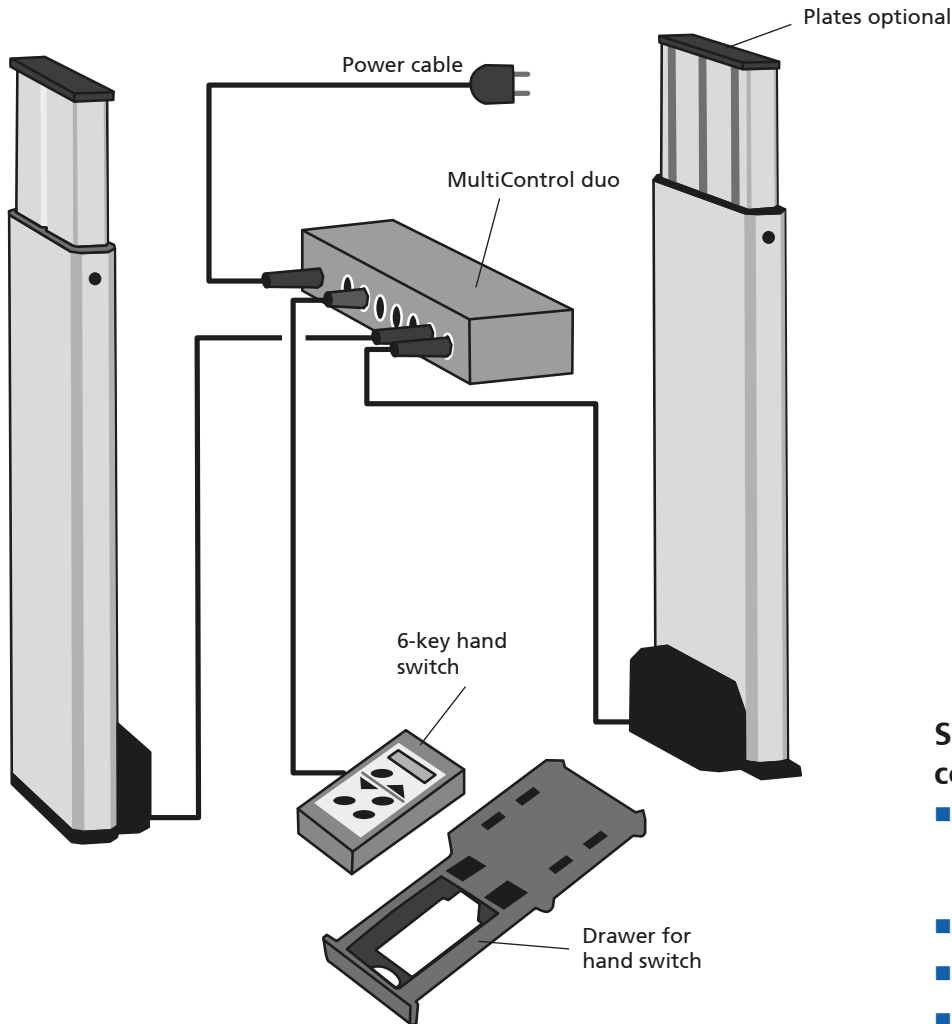
Code No.	Type	max. push force [N]	max. pull force [N]	max. lifting speed [mm/s]	Total travel [mm]	Installation height incl. base plate [mm]	Weight [kg]
QAB13_G080355	Multilift 350	3,000 / 2,000 (med.)	1,000 / 500 (med.)	8	355	565.5	6.4
QAB13_G080400	Multilift 400				400	610.5	6.7
QAB13_G080450	Multilift 450				452	665.5	7.1
QAB13_G080500	Multilift 500				498	710.5	7.4
QAB26_G080355	Multilift 350 s	1,000 / 1,000 (med.)	1,000 / 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 countersunk hole
M = base plate flush



Multilift – Synchronous package

Buying made simple – the complete plug and play system



Synchronous package comprises of:

- 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)

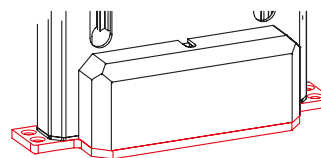
Multiliftsystem Synchro

[mm]

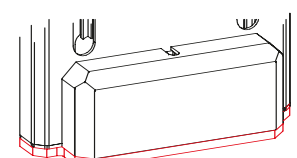
Code No.	Type	max. push force [N]	max. pull force [N]	max. lifting speed [mm/s]	Total travel	Installation height incl. base plate
QBB13_G0_0355	Multiliftsystem Synchro	3,000	1,000	8	355	558
QBB13_G0_0400	Multiliftsystem Synchro				400	603

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 countersunk hole
M = base plate flush



Base plate with fixing plates

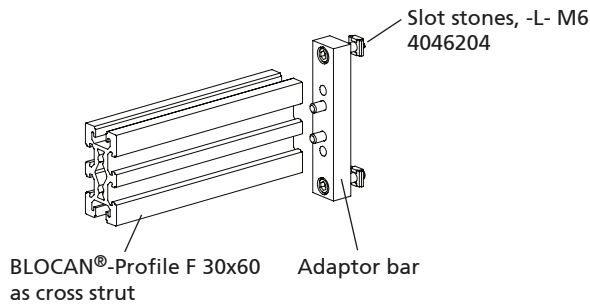
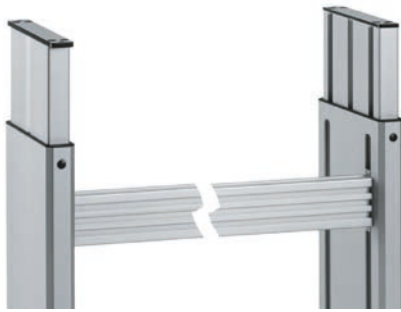


Base plate flush

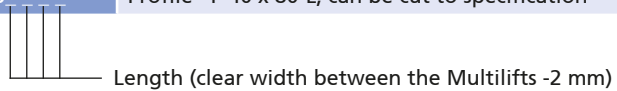
Adaptor bar

- 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, zinc plated
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 / compression plate

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

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

Material: Die-cast, black powder-coated zinc plated fixing set

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

Note:

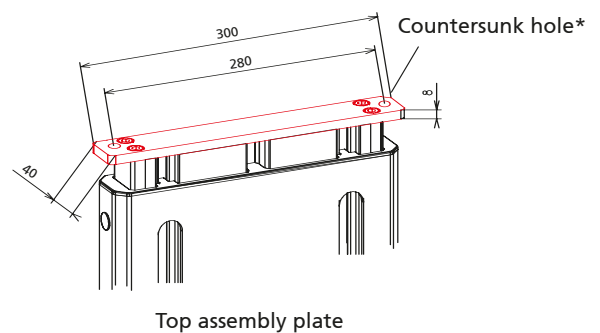
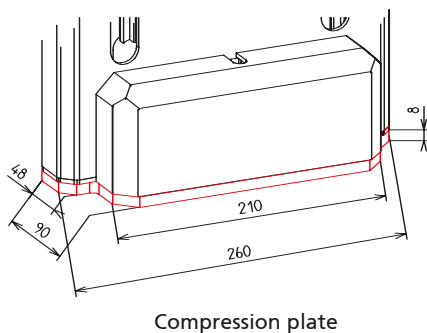
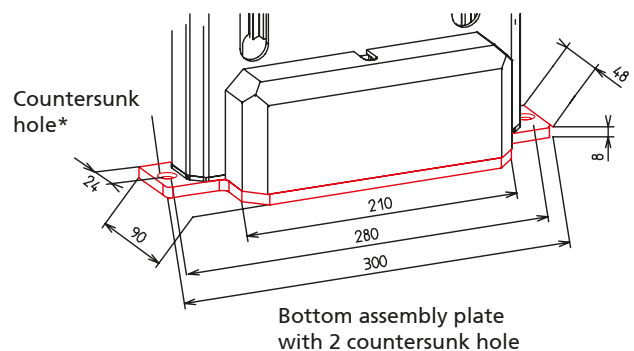
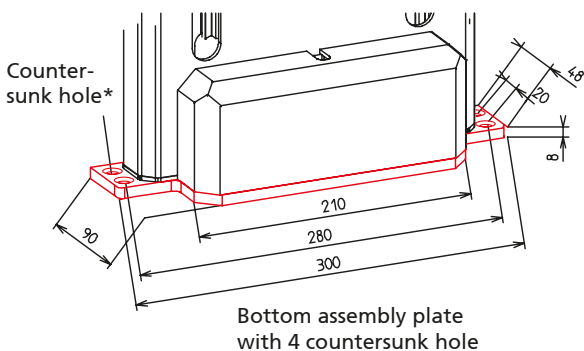
The “bottom” assembly plates listed here and the thrust compression plate are only suitable for push loads.

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 floor.

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

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



* DIN 74 - F8

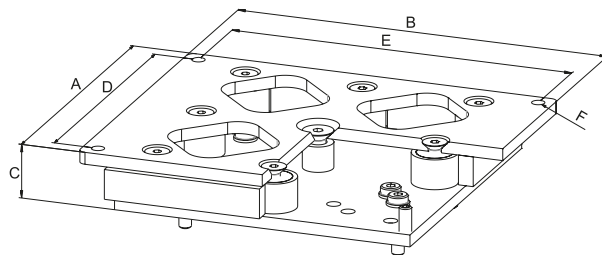
Code No.	Version
QZD020023	Bottom assembly plate with 4 countersunk hole
QZD020024	Bottom assembly plate with 2 countersunk hole
QZD020025	Compression plate
QZD020549	Top assembly plate

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	[mm]
QZD020471	MultiLift	70	280	36	40	260	M 10	

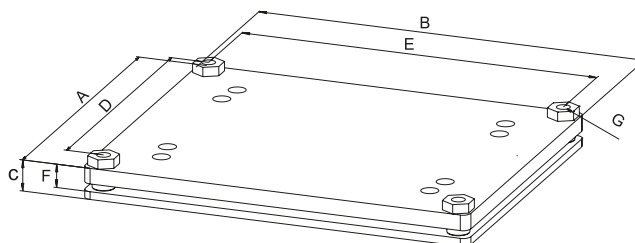
RK SyncFlex V

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.



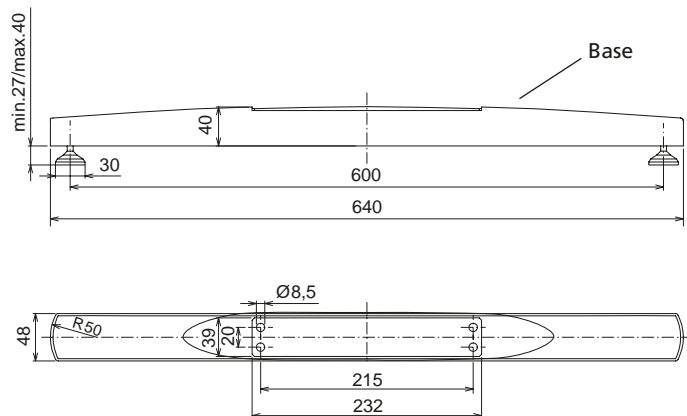
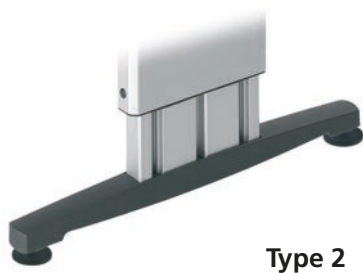
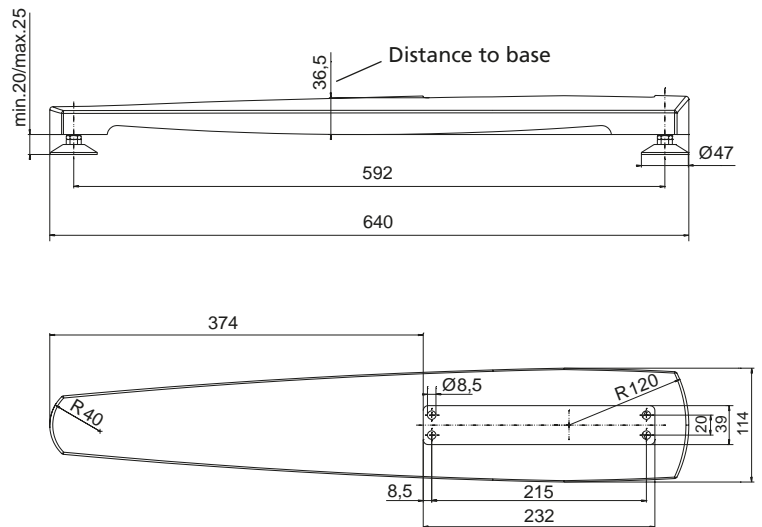
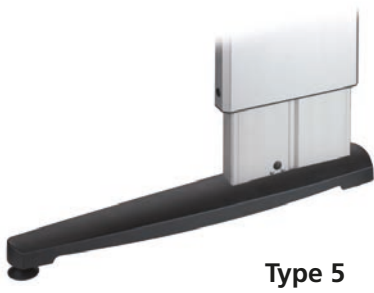
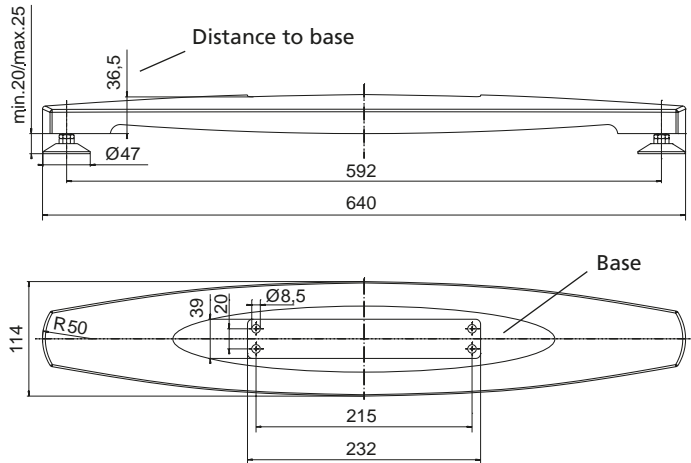
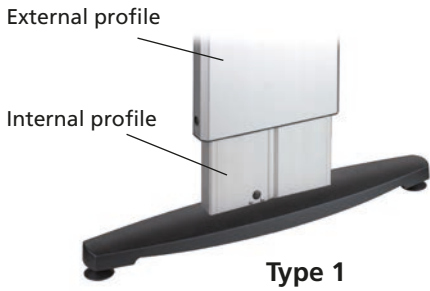
Code No.	Type	A	B	C	D	E	F	G	[mm]
Without pressure plate									
QZD020472	MultiLift	110	300	-	90	280	10-15	M 10	
With pressure plate									
QZD020462	MultiLift	110	300	15-20	90	280	10-15	M 10	

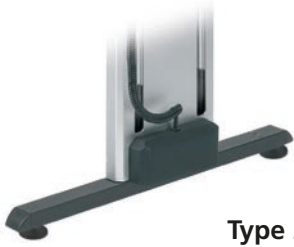
Multilift – Fixing

Foot

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

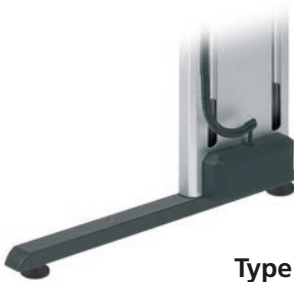
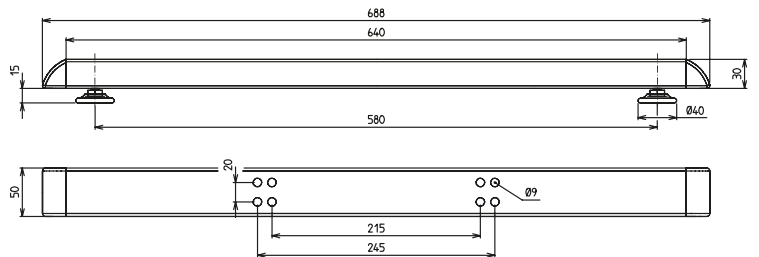
Material:
 Type 1/2/5 GK-AISI12/3.2583.02, black powder-coating
 Type 3/4 steel tube, ends capped black powder-coating
Scope of delivery:
 one foot with fixing set





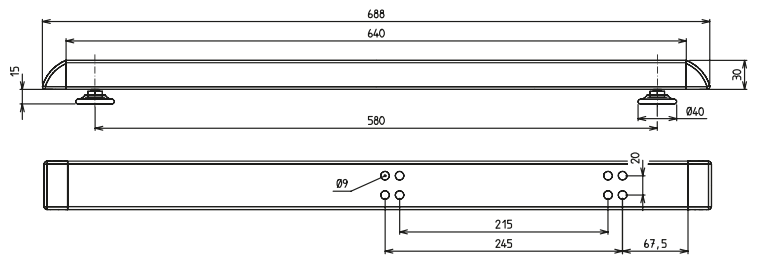
Type 3

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 output of the drives when selecting the control.

Transformer control 120 VA



approx. 24 V DC

MultiControl



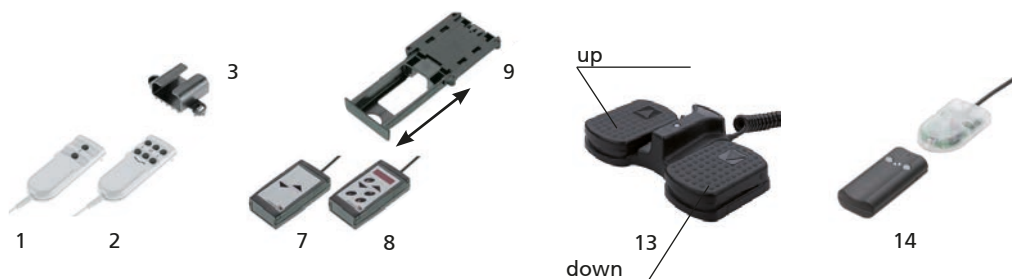
approx. 36 V DC

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 output, 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)

Hand switches/accessories



Code No.	Version	Fig.
Hand switch for transformer control		
QZB02C03AD031	Hand switch with 1 m spiral cable – 6 function keys	2
Hand switches for transformer or synchronous control		
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
Hand switch for synchronous control		
QZB00D04AD041	Hand switch with 1 m spiral cable – 6 function keys	8
Accessories for hand switches		
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 148

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



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Connecting and positioning systems

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