RENOWNED KNOW-HOW
Automation Technology

RK ROSE+KRIEGER
A Phoenix Mecano Company

Linear Technology

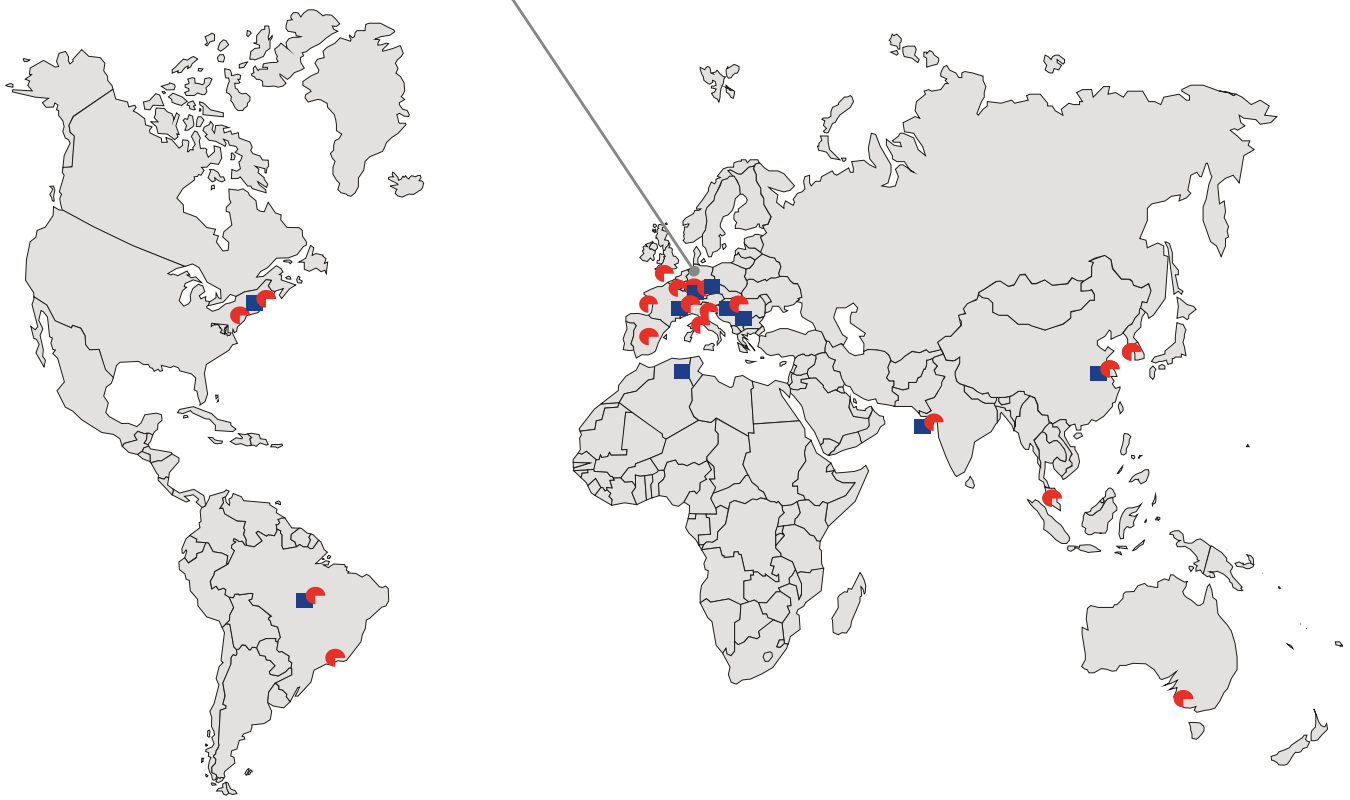
Lifting columns and electric cylinders

About Us

As a subsidiary of the global Phoenix Mecano AG, we offer an unrivalled range of products in the fields of linear, profile, connecting and module technology. With decades of experience and expertise in a huge range of industrial applications, you need look no further for a highly competent partner. From the first point of contact through to delivery, we focus entirely on your requirements. Individual advice and short delivery periods are two central priorities in our customer-focused corporate philosophy. Our aim is your success, and we look forward to being your strategic partner.

Head Office: Germany, Minden/Westph.

✓ Company sales representatives
✓ Distributors and system partners



Available around the globe.

✓ Profit Centre within Phoenix Mecano
✓ Sales and system partners

■ = Production facilities

◔ = Distribution companies

RK Rose+Krieger GmbH • Connecting and positioning systems • www.rk-rose-krieger.com

Our product range

RK ROSE+KRIEGER

LINEAR TECHNOLOGY

- ✓ Linear actuators
- ✓ Manual guide units
- ✓ Electric cylinders
- ✓ Lifting columns
- ✓ We can move loads for you of up to 3 t and up to 12 m dynamically, reliably and with great precision

Movement and positioning

CONNECTING TECHNOLOGY

- ✓ Fittings for the secure clamp connection of round and square profiles
- ✓ Elements made of aluminium, stainless steel and plastic
- ✓ Sizes from 8 mm to 80 mm

Clamp and release solutions

PROFILE TECHNOLOGY

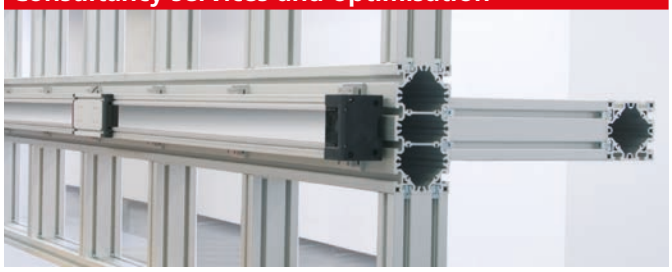
- ✓ The proven and tested BLOCAN® aluminium assembly system, with profiles offering cross-sections from 20 mm to 320 mm, for a broad spectrum of applications
- ✓ Connection techniques with an unsurpassed combination of flexibility and reliability

Mix'n'match

MODULE TECHNOLOGY

- ✓ We develop, manufacture and assemble
- ✓ Machine frames
- ✓ Workstations
- ✓ Machine guards
- ✓ Multidimensional linear actuator modules
- ✓ Complete drive solutions

Consultancy services and optimisation



How to use this catalogue

Depending on your level of experience, we suggest you proceed as follows

If you are new to linear technology

Please use our selection guide from page 9 onwards.
We will guide you to the right product for your particular application.

If you know all about linear technology

You know exactly what you require and can go straight to the right product category, where you will find a product overview on the first pages.

Specific search

...if you are looking for a specific product, we suggest you start in our index on the last pages of this catalogue.

If you have any questions, do not hesitate to contact one of our product consultants.

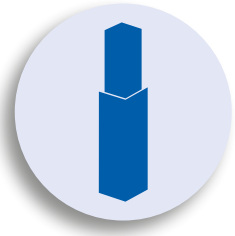
RK ROSE+KRIEGER

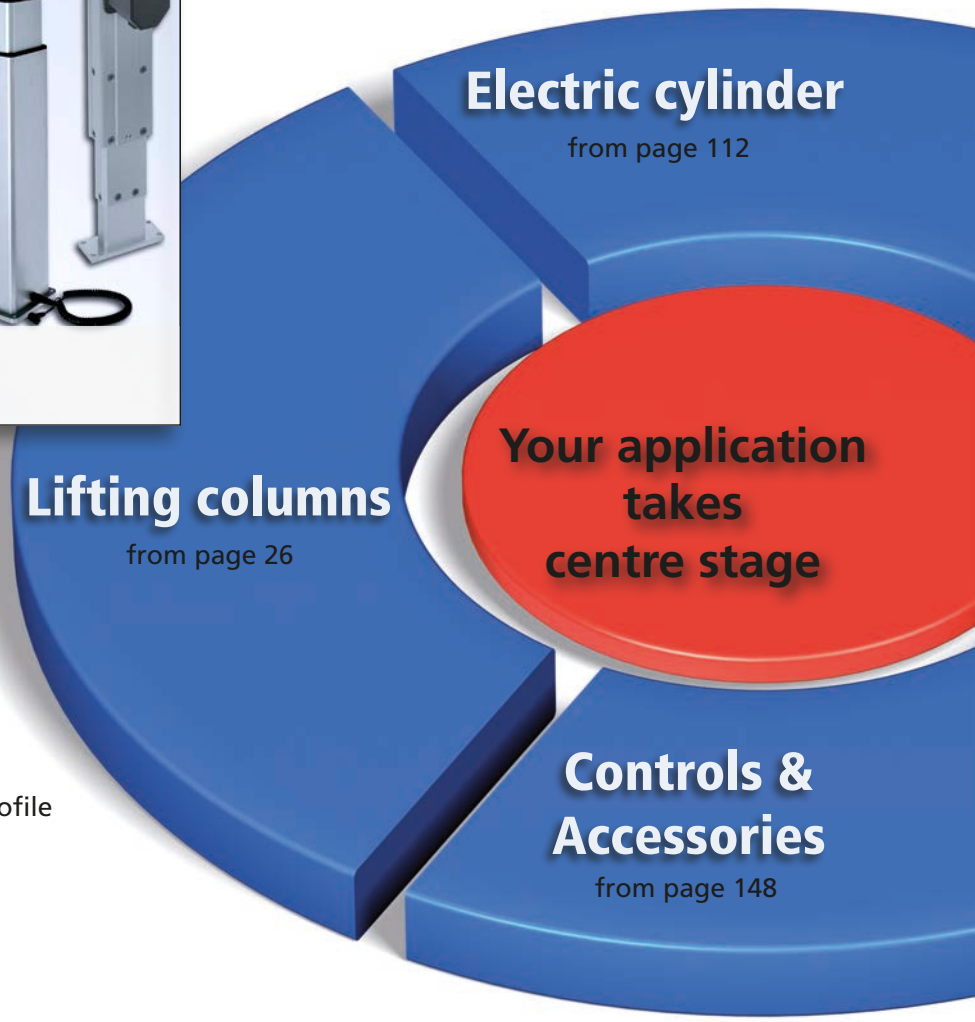
The RK linear circle

Lifting columns

Features:

- ✓ Fully integrated technology / maintenance-free
- ✓ Self-locking, even under max. load
- ✓ Withstands torsional and bending moments
- ✓ Clear anodised aluminium profile surface
- ✓ Special versions available on request

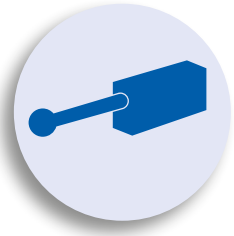




Electric cylinder

Features:

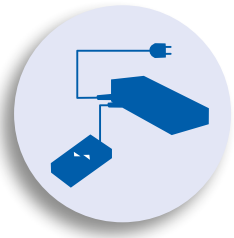
- ✓ Fully integrated technology / maintenance-free
- ✓ Self-locking, even under max. load
- ✓ Can be installed in any position
- ✓ Various stroke lengths and speeds
- ✓ Special versions available on request



Controls & Accessories

Features:

- ✓ Connection for up to 32 drives (bus system)
- ✓ Duty cycle monitoring as overload protection (can be activated as standard)
- ✓ Memory function
- ✓ Mains-independent battery mode
- ✓ Wide-range input



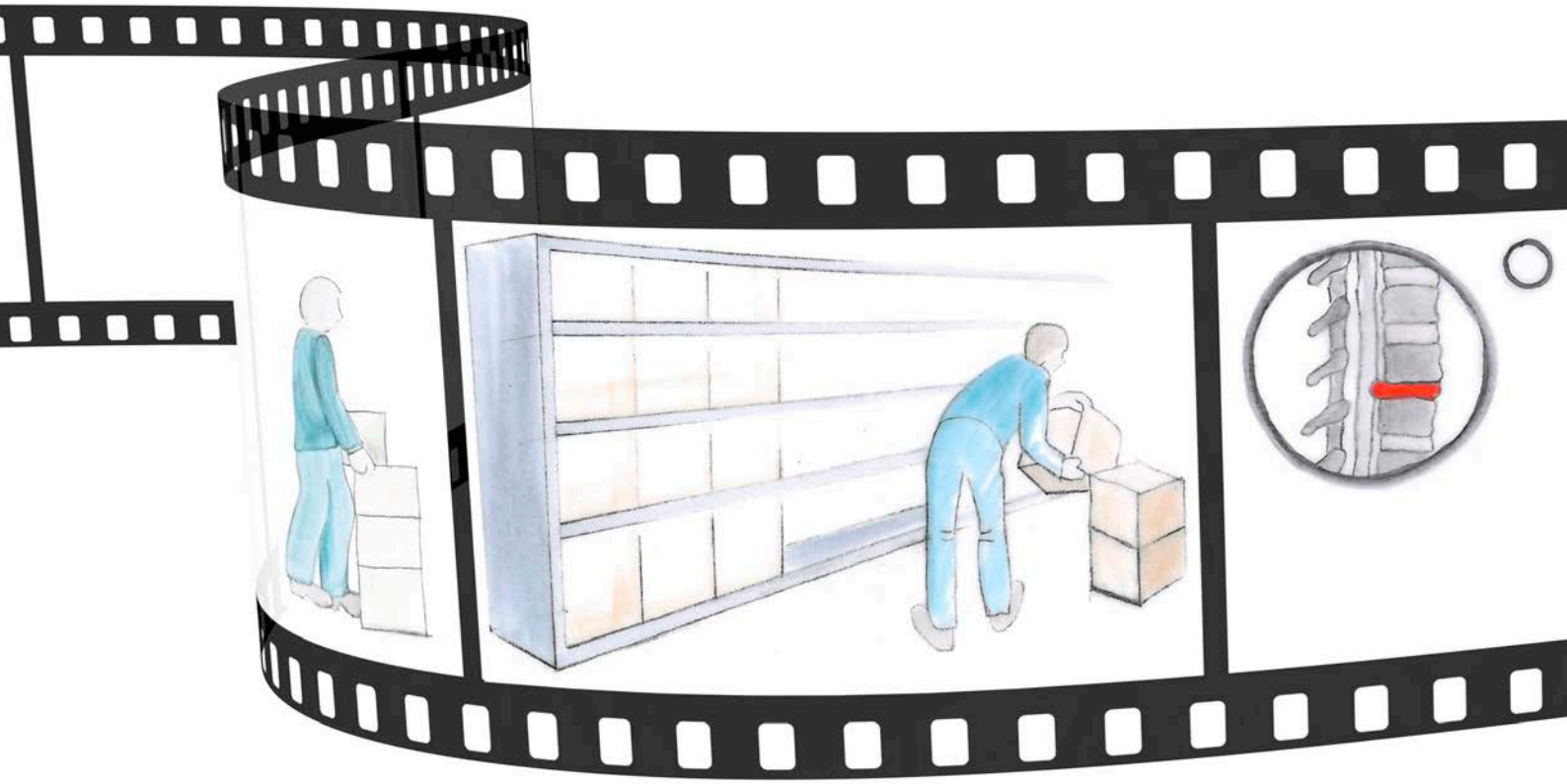
Preface

Electromotive modules for height adjustment are both contemporary and efficient.

Technology that adapts to your needs

- ✓ As assembly aids that assist with heavy loads
- ✓ As height adjustable standing or sitting workstations
- ✓ As an effective support that enables greater independence for the physically challenged
- ✓ Application options in the field of medical technology
- ✓ For the adjustment of audio/video devices in the business and luxury segment for the sophisticated demands of your customers

Reliable technology and easy installation in your application are essential. In the pages that follow, we would like to inspire you and introduce you to the individual lifting column modules. Entrust your individual and unique applications to our experienced specialists.



Overview / fields of application

RK ROSE+KRIEGER

The applications on the following pages show a selection of customer applications which were achieved with our products.

Compliance with applicable standards and safety requirements for the end product were ensured by our customers.

Workplace ergonomics

from page 11

- ✓ Control rooms (power plant, police, fire service, radio, locks)
- ✓ Assembly workstations
- ✓ Laboratory workstations
- ✓ Control cabinet installation
- ✓ RK *LEAN* assembly workstation systems
- ✓ Office workstations

Industrial technology

from page 15

- ✓ Table press machine
- ✓ Polishing machines
- ✓ Equipment carrier systems
- ✓ Scissor lift adjustment
- ✓ Conveyor adjustment
- ✓ Mobile transfer system
- ✓ Industrial scanner

Medical technology

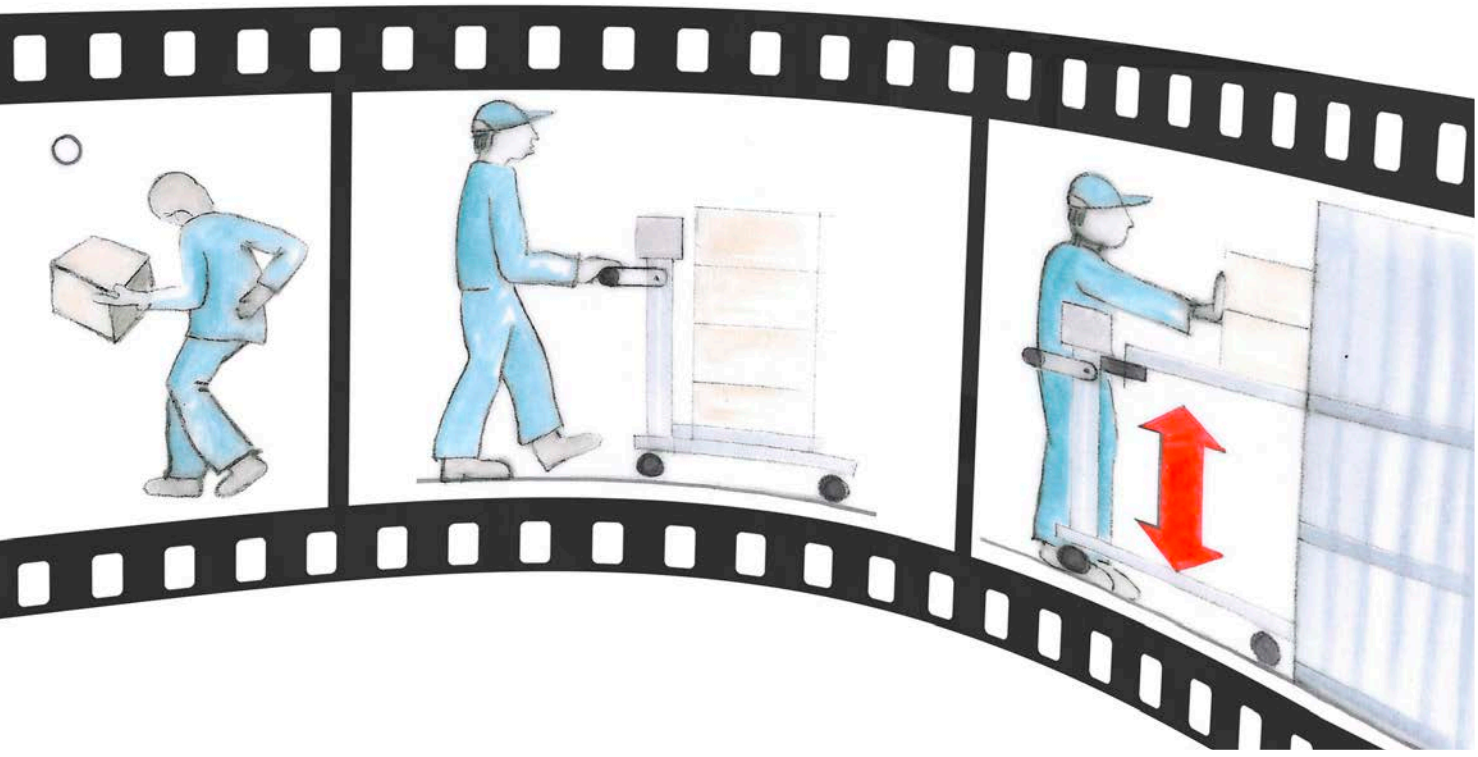
from page 19

- ✓ Wellness couches
- ✓ Incubators
- ✓ X-ray couches
- ✓ Rehabilitation technology
- ✓ Mammography
- ✓ Chair applications
- ✓ Instrument tables

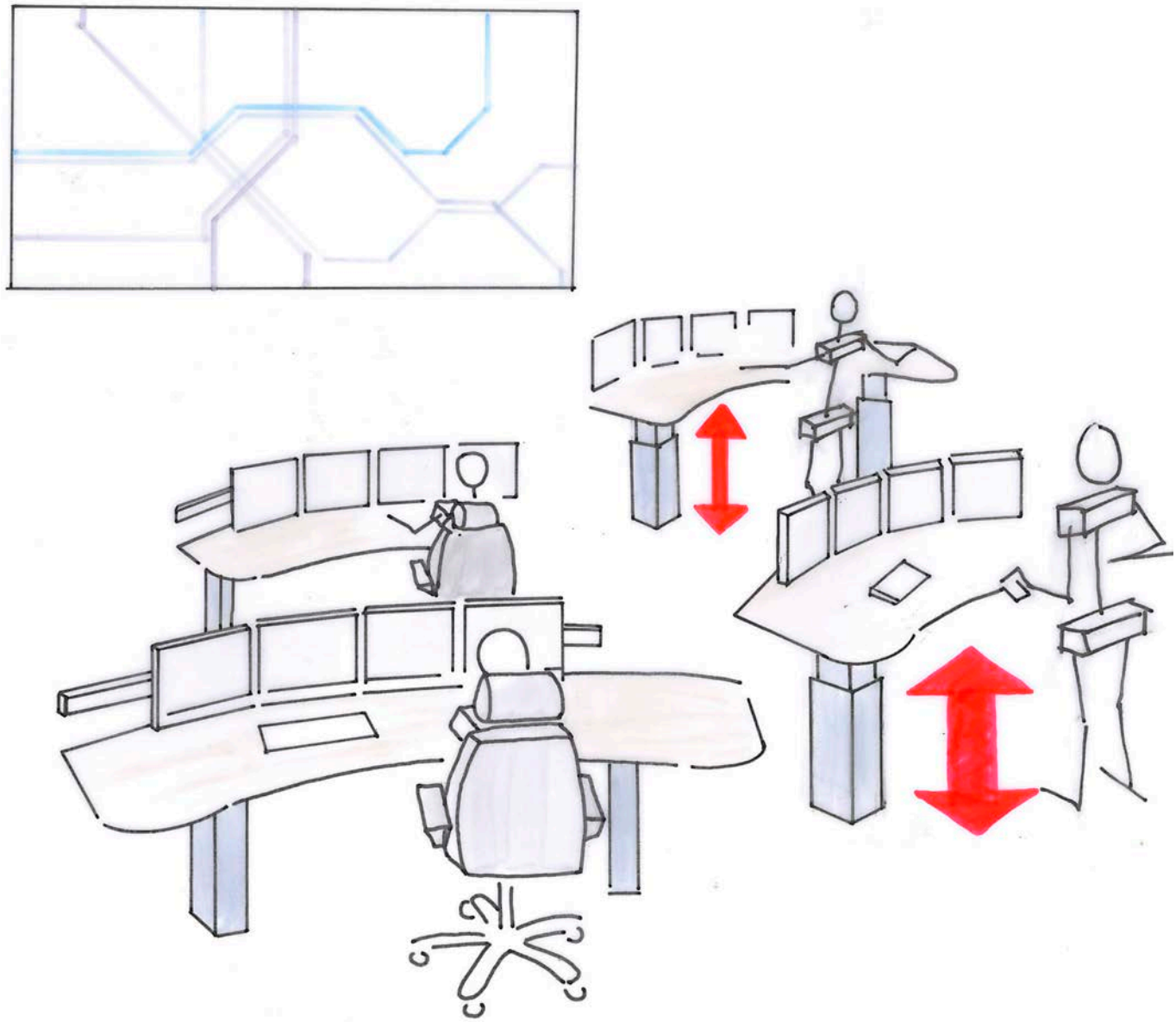
Media technology

from page 23

- ✓ Media screen
- ✓ TV height adjustment
- ✓ Presentation technology
- ✓ Projector adjustment
- ✓ Information board
- ✓ Lectern



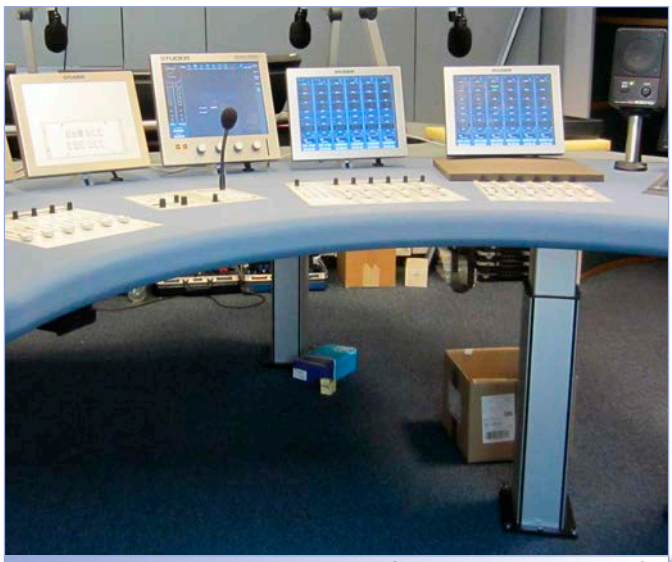
Areas of application



Advantages

- ✓ Fewer absences due to illness
- ✓ Mobilises the locomotor system
- ✓ Increases concentration
- ✓ Dynamic working helps prevent work fatigue

Control system (radio)



Lifting column: RK Powerlift

Alternating between standing and sitting

When asked which is the best working posture, orthopaedists generally answer: "The one you're about to switch to." Cardiologists constantly criticise the sedentary nature of most people's working days, stating we need to move more. Varying the burden on the locomotor and cardiovascular system and increasing activity has proven to be extremely effective.

Our modular lifting columns are extremely convenient and easy to use. Depending on the application, they can be implemented as single-column or two-leg table concepts. Extremely quiet operation and fast movement characterise the high quality of our lifting columns. The simple operation via manual push-button encourages frequent use of the functions.

Assembly workstations

Lifting column: RK Multilift

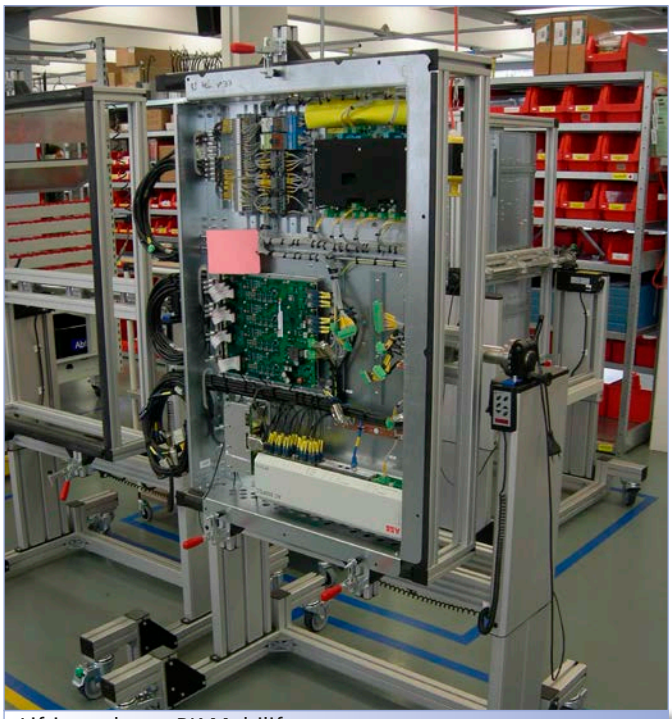
Areas of application

Multi-shift operation in particular calls for great adaptabiility and durability.

Laboratory workstation

Lifting column: RK Powerlift

Control cabinet installation



Lifting column: RK Multilift

Production processes are arranged section by section in so-called islands. Where the operator changes frequently (e.g. in shift operation), individual adjustment of the working height makes good ergonomic sense and increases productivity.

LEAN assembly workstation systems

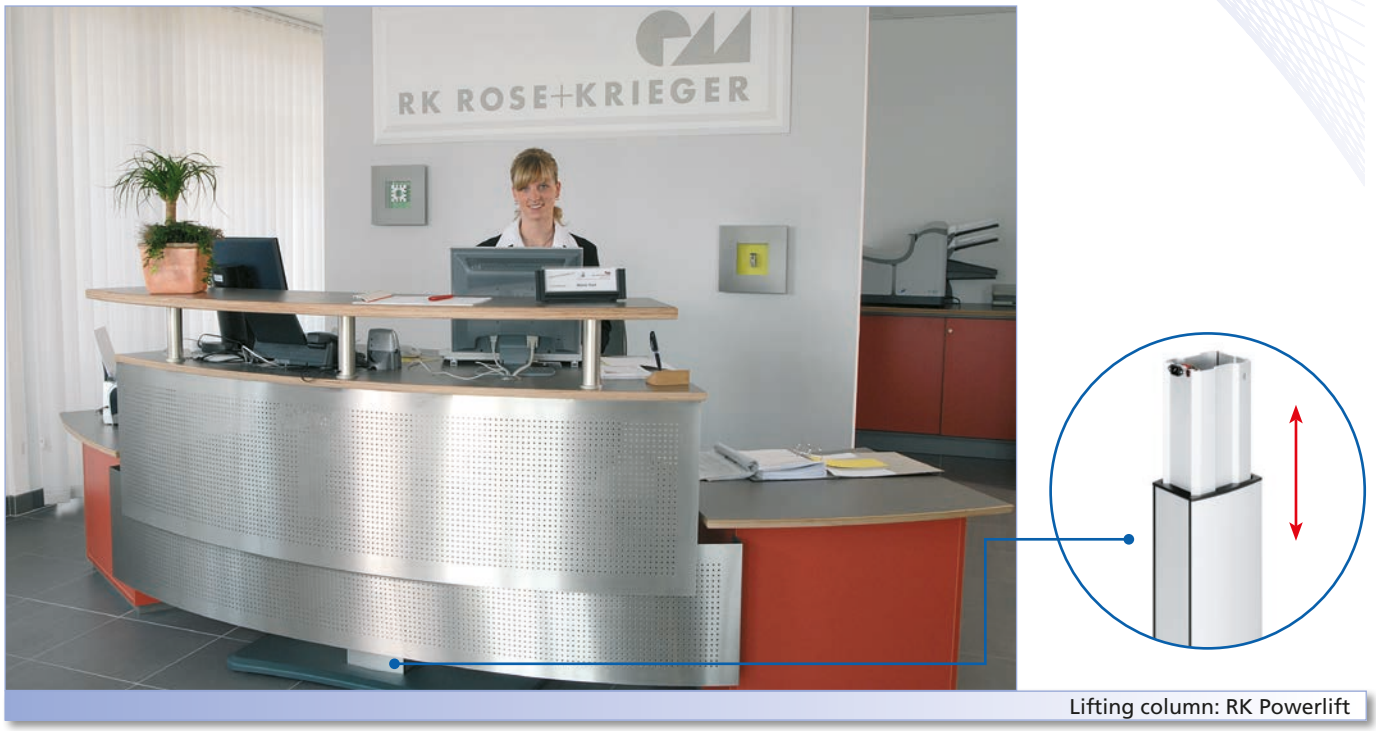
Lifting column: RK Powerlift

With the RK modular system, almost any workstation design can be realised and subsequent extensions or modifications can be easily implemented.

Laboratory workstation

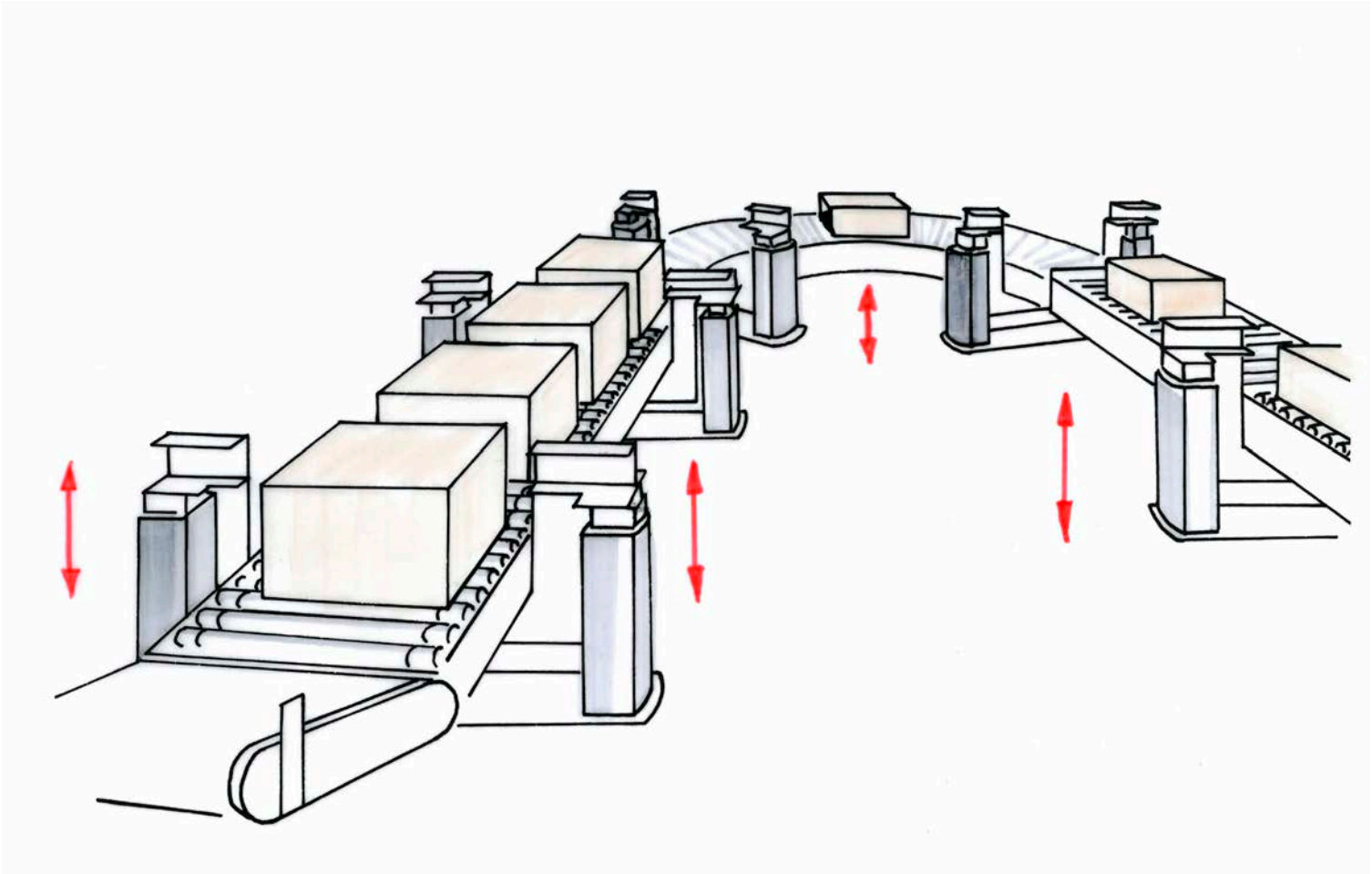
Lifting column: RK Multilift

Office workstation



Lifting column: RK Powerlift

Areas of application



Advantages

- ✓ Stable guidance
- ✓ Integrated technology
- ✓ Guided start-up
- ✓ Multiple synchronisation possible
- ✓ Simple process connection

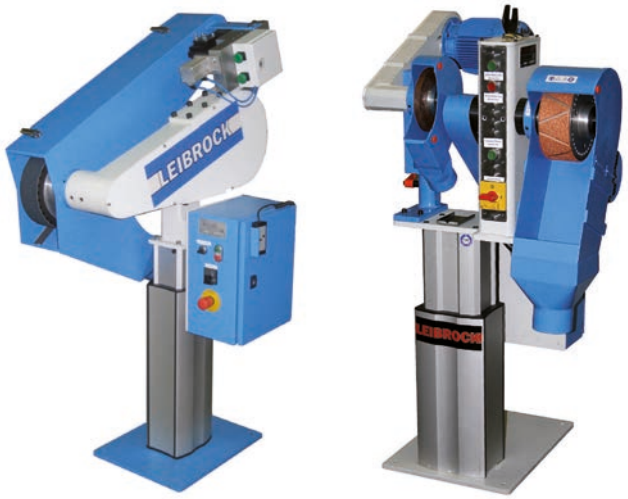
Table press machine

Lifting column: RK Multilift

Technical power packs

RK Rose+Krieger has been operating in the field of industrial automation technology for more than 40 years. Lifting columns and electric cylinders are a speciality.
The lifting columns are ideal for the linear adjustment of mounting devices, conveyors, equipment carriers and handling equipment, enabling working platforms and assembly aids to be positioned ergonomically.
The electric cylinders are a very good alternative to pneumatic cylinders.

Polishing machines



Lifting column: RK Powerlift

Areas of application

The lifting columns can also be fitted with support arm and equipment carrier systems from the RK Connecting Technology range.

Equipment carrier systems

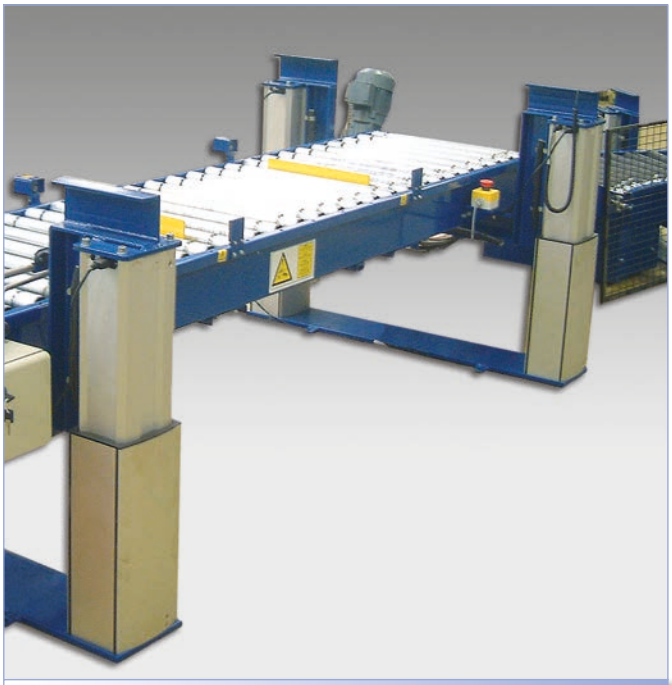
Lifting columns: RK Powerlift / RK Multilift

Scissor lift adjustment

Electric cylinder: LZ 60P

The electric cylinders are a very good alternative to pneumatic cylinders. Motor arrangement in parallel (LZ 60 P) or rod-shaped (LZ 60 S) means space requirements are variable and optimum integration is possible.

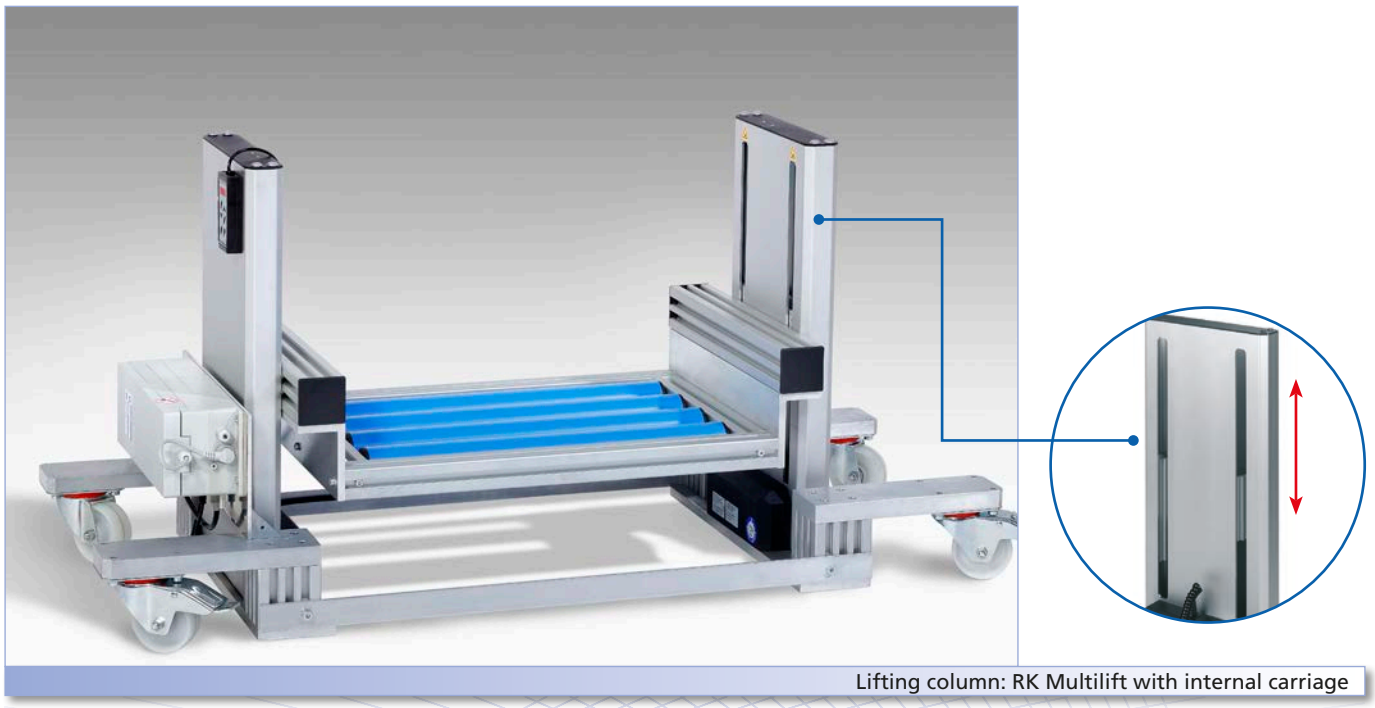
Conveyor adjustment



Lifting column: RK Powerlift

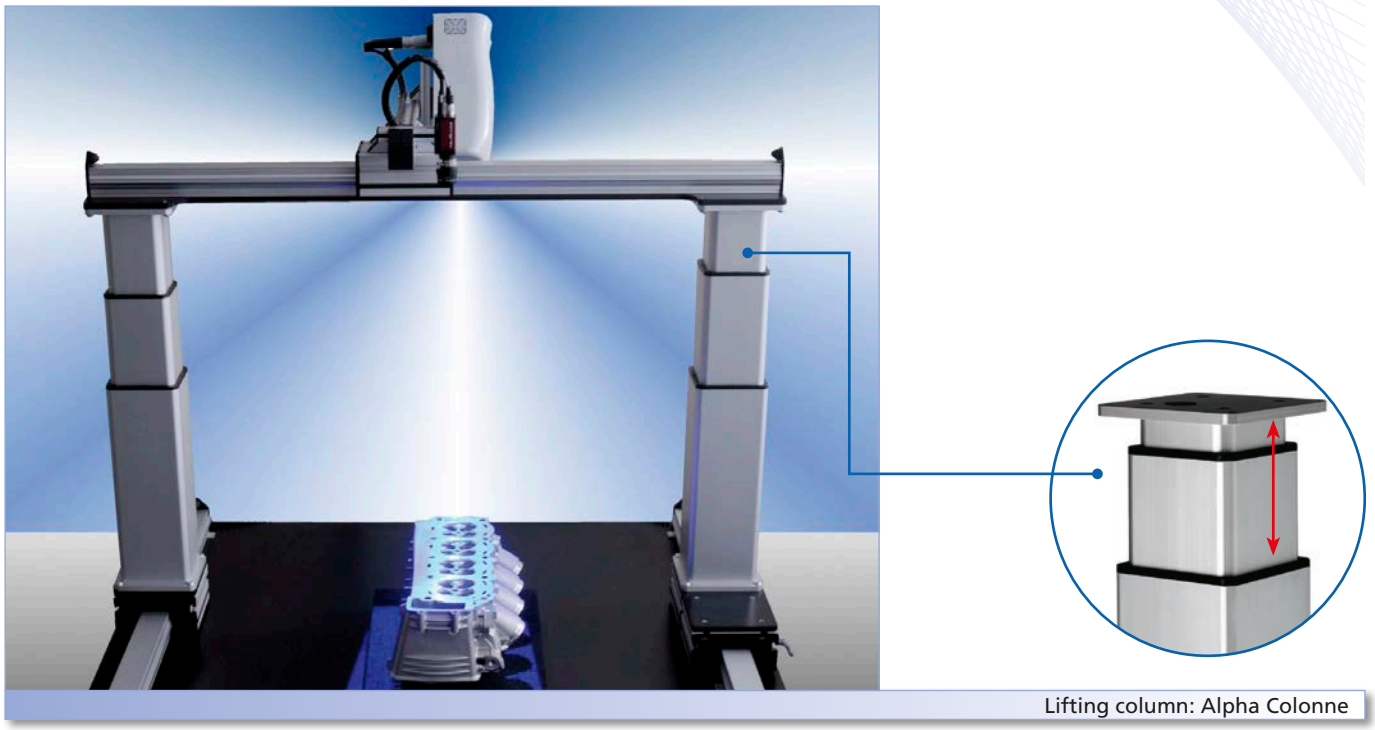
A complete system consisting of electrically powered Powerlift columns and MultiControl controls ensures even height adjustment in the printer logistics system.

Mobile transfer system



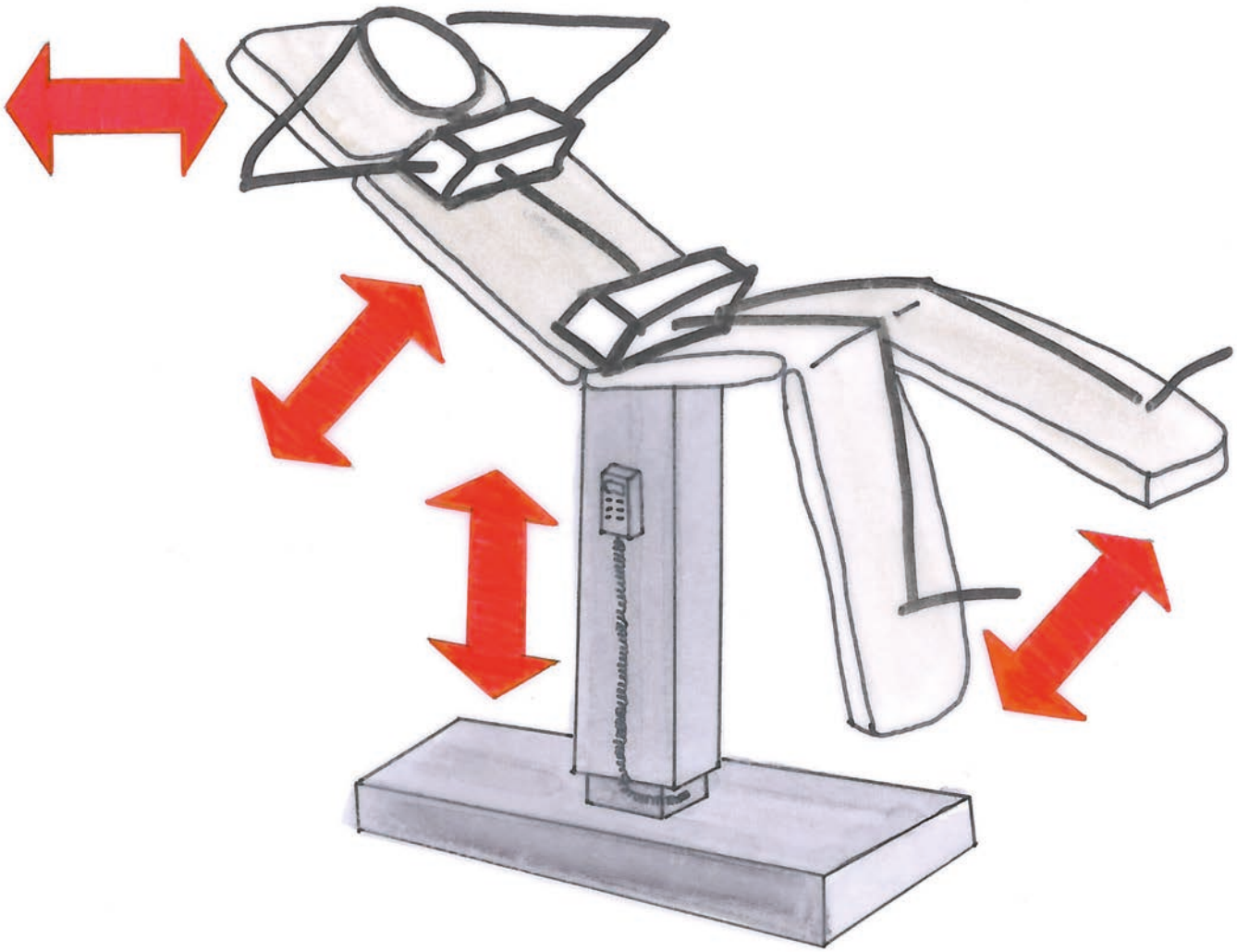
Lifting column: RK Multilift with internal carriage

Industrial scanner



Lifting column: Alpha Colonne

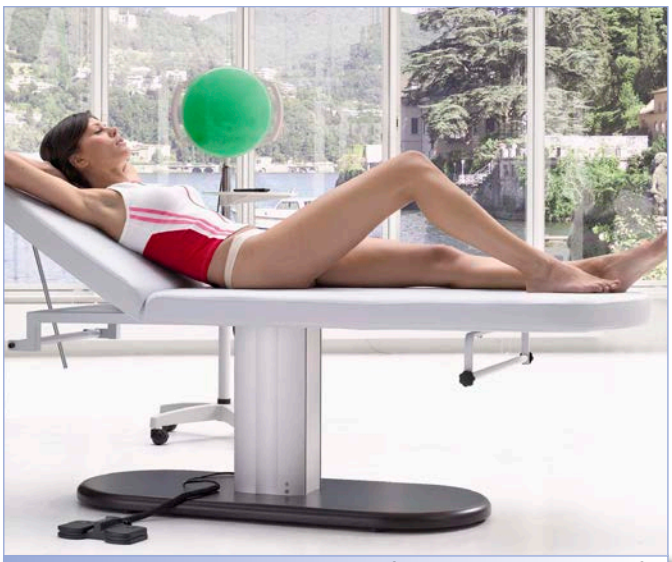
Areas of application



Advantages

- ✓ Approved acc. to standards for medical technical equipment
- ✓ Quiet operation and smooth mechanics
- ✓ Smooth surfaces - easy to clean
- ✓ Resistant to disinfectants

Wellness couch



Lifting column: RK Powerlift

Silent helper

In the field of diagnostics, therapy and for general set-ups, lifting columns are often an integral part of medical systems. In the fields of human and veterinary medicine, it is essential to be able to adjust and adapt devices to specific situations. Height adjustable examination couches, adjustable optics in eye exams and the precise adjustment of x-ray devices are just some examples of the huge range of application options.

Many of our lifting columns are approved for medical applications in compliance with EN60601. The sleek design, reliability, stability and long service life all combine to provide maximum cost-effectiveness and create a feeling of safety. The areas of application for RK lifting columns are almost as exciting and diverse as the world of medicine itself.

Tell us what you want to achieve.

Incubators

Lifting column: RK Powerlift

Areas of application

X-ray couch

The “floating” carbon-fibre table tops allow for outstanding stability and durability coupled with optimum translucency. **Advantage:** X-rays with less impact on patient and tubes.

The attractive design not only offers personalised table height and adjustability, but is also specially designed for universal use with a swivel arm system e.g. the PROTEC PEDS 600 for digital or classic X-rays.

Lifting column: RK Multilift

Rehabilitation technology

Lifting column: RK Powerlift

The eXcio Pelvic Trainer is the world’s first ergonomically adaptive trainer that measures pelvic floor function and exercises it in a simple and comfortable way.

Mammography

Lifting column: RK Powerlift

The Akrus patient chair for the transport and accommodation of patients for mammography examination and stereotactic interventions is based on a RK Powerlift M

Chair application

Akrus GmbH & Co. KG

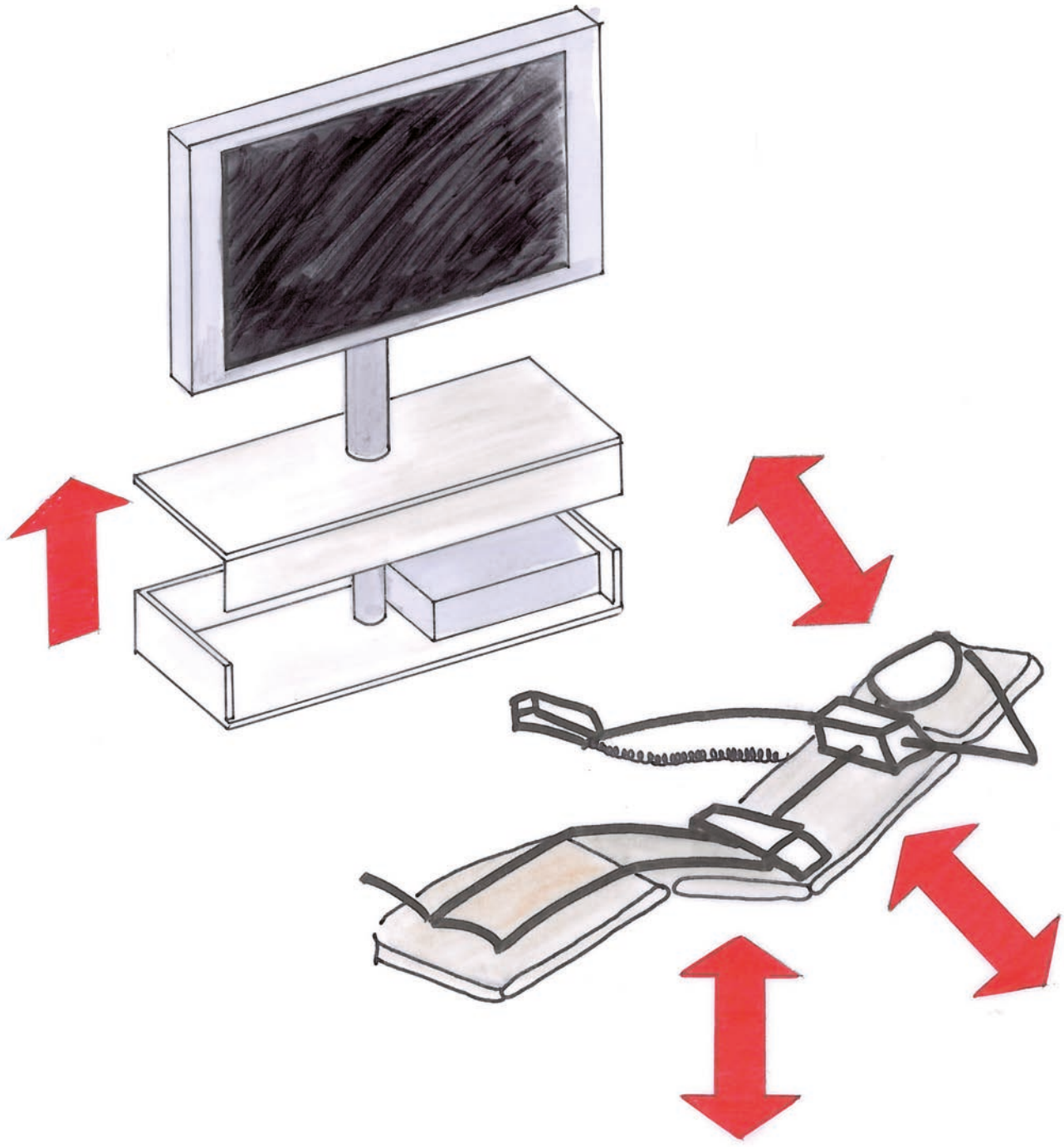
Lifting column: RK Powerlift

Instrument table

Photo: Carl Zeiss

Lifting column: RK Powerlift

Areas of application



Advantages

✓Precise and safe
✓Easy-to-assemble
✓Simple and intuitive operation
✓Visually attractive integration

Media screen

PeTa Bearbeitungstechnik GmbH

Lifting column: RK Multilift

Luxury that's worthwhile

The expensive media technology is cleverly concealed and only activated as and when required. This protects projectors, plasma screens and hi-fi systems against dust and keeps the high-quality equipment securely hidden from view. The sleek appearance of the stylish furnishings is not impaired by obtrusive entertainment technology.

Seminar rooms are transformed into interactive training centres. Private rooms are transformed into luxurious oases teeming with individuality. One could almost say, the sky's the limit – all you require is the support of an experienced and reliable partner from the drive technology sector. Our experience is our key asset – tell us all about your requirements and we will find a solution.

TV height adjustment

Lifting column: RK Powerlift

Areas of application

The design and function are to the fore.
The technology is hidden in the background.

TV height adjustment

Lifting column: RK Multilift

Presentation technology

Lifting column: RK Multilift

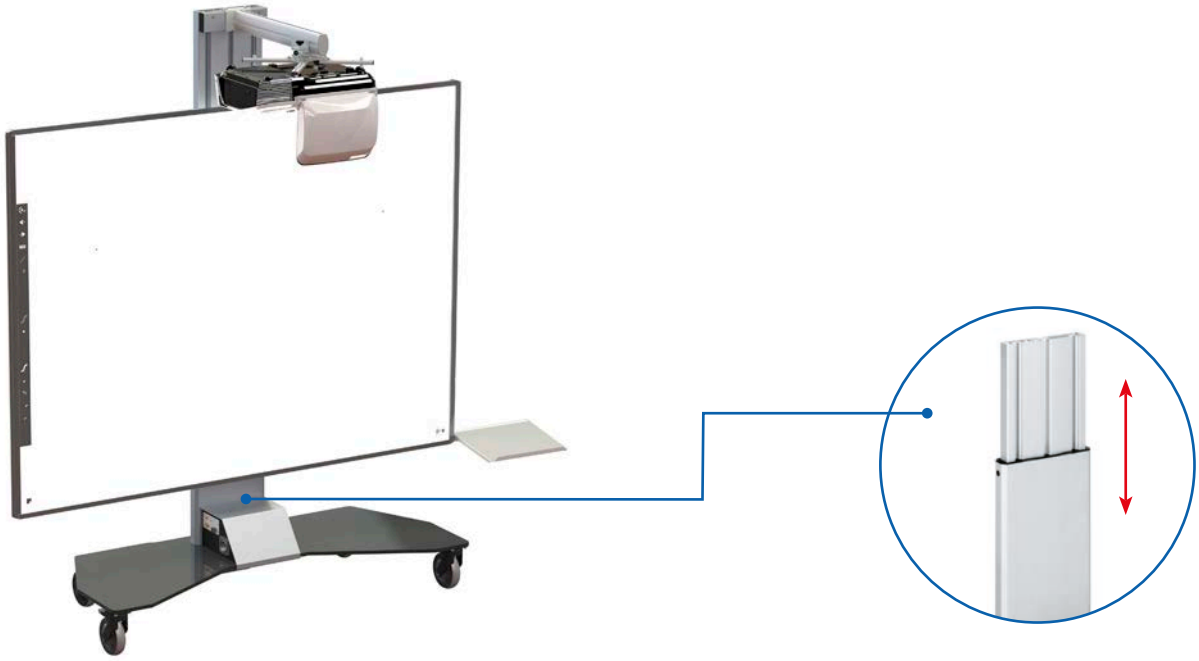
The height-adjustable mobile video wall lift system is so versatile it leaves almost nothing to be desired.

Projector adjustment

Lifting column: RK Slimlift

Modern entertainment requires peripherals that enhance the overall experience.

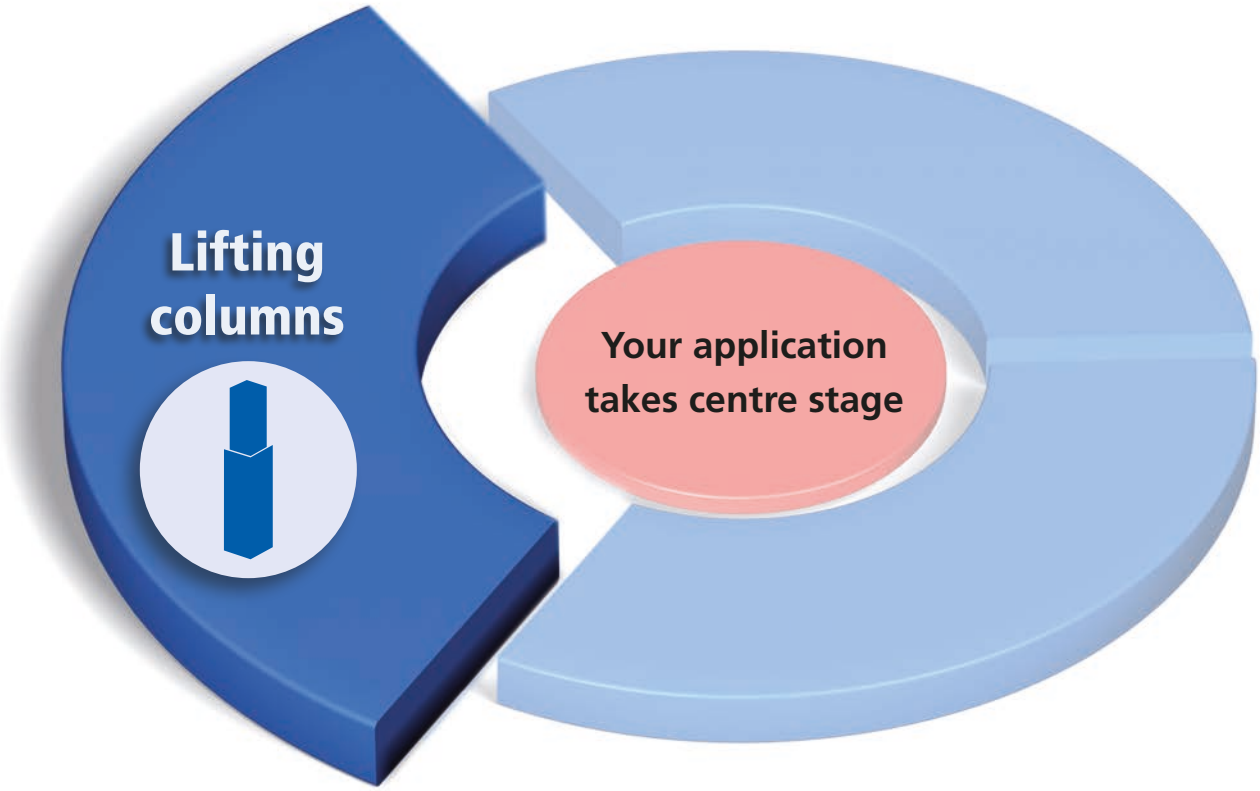
Information board



Lifting column: RK Multilift

Lectern

Lifting column: RK Powerlift



Lifting columns
are the ideal drive elements when stable guidance is required in addition to motorised adjustment. Electrotechnical knowledge is not generally necessary for putting them into operation. Combinations forming multiple synchronisations open up an impressive range of applications.

RK ROSE+KRIEGER

Contents

Lifting columns

Lifting columns - Product selection

Finding the right lifting column

Depending on technical and optical requirements, it takes just 2 steps to find the lifting column that matches your needs.
Step 1 - Determine the type of lifting column.
Step 2 - Choose the appropriate version.

Step 1

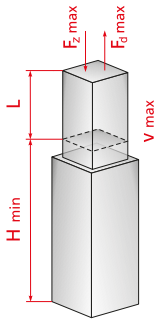
Select the lifting column on the right that meets your requirements.

Step 2

For step 2, please refer to the relevant catalogue page.

Lifting columns - Product selection

Rodstyle | Drive + Guide

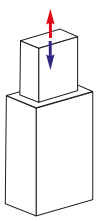


L = Travel
H = Installation dimension
F_d = Push force
F_z = Pull force
V = Travel speed

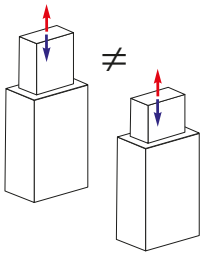
The data refer to the standard size	Two-stage lifting columns (up to 500 mm travel)			Multi-stage lifting columns (more than 500 mm travel)		
						
Features	**RK Multilift from page 30**	**RK Slimlift from page 46**	**RK Powerlift / RK Powerlift M from page 58**	**RK Powerlift telescope from page 86**	**Alpha Colonne from page 98**	**LAMBDA Colonne from page 106**
Max. travel	498 mm	500 mm	500 mm	650 mm	700 mm	600 mm
Max. push force	3,000 N	4,000 N	3,000 N	1,600 N	3,000 N	4,500 N
Max. pull force	1,000 N	2,000 N	3,000 N	800 N	3,000 N	4,500 N
Max. travel speed	8/16 mm/s	8-32 mm/s	10-50 mm/s	15-30 mm/s	8-18 mm/s	8-20 mm/s
Protection rating	IP 20	IP 30	IP 30	IP 30	IP 30	IP 54 | IP 40
Integrated limit switch	●	●	●	●	●	●
Can be synchronised by means of control system	●	●	●	●	●	●
Integr. control			●	●	●	
Manual version optional	●	●	●			
Features	✓ Quadruple bearings with POM slide bearing shells	✓ Rod-shaped design, extremely quiet operation	✓ Enables high bending moments	✓ Optimum stroke/ installation height ratio	✓ Suitable for push and pull forces	✓ Wide range of connection methods

Preferred field of application:

Single columns
(can be moved individually or simultaneously)

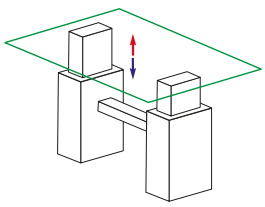


Single operation/ Mono operation

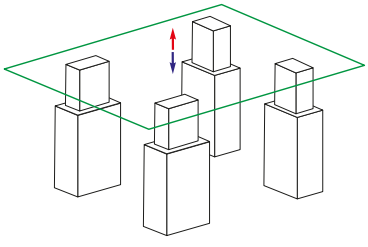


Parallel operation

Synchronised columns (2– 32 units)
(can be moved synchronously)



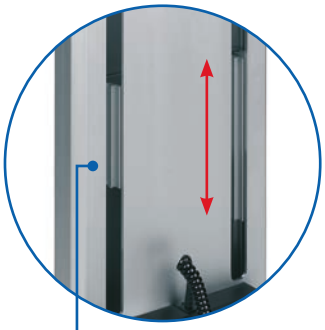
Synchronised operation



Multiple column system

Two-stage lifting column - Multilift

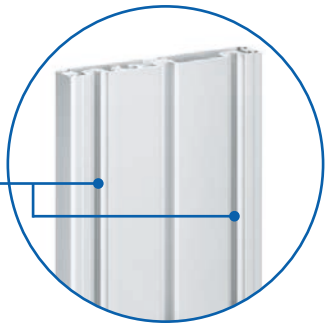
Slimline design and and an unbeatable price/performance ratio



with interior carriage

Version A,
without milled slot

Version B,
with milled slot in the
external profile



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

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

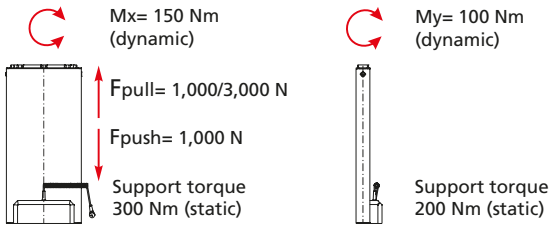
Multilift – Technical data

General information/operating conditions

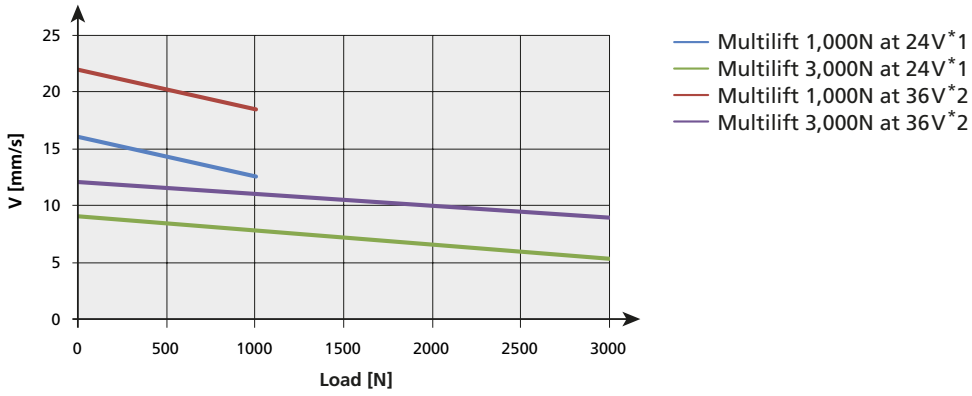
Type	Multilift	Multilift S
Design	Slim lifting column	
Guide	Quadruple bearings with POM slide bearing shells	
Installation position	Any position / suspended with drop protection provided by the customer	
Push force*	3,000 N	1,000 N
Pull force*	1,000 N (only in conjunction with factory-mounted base plate)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

*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.

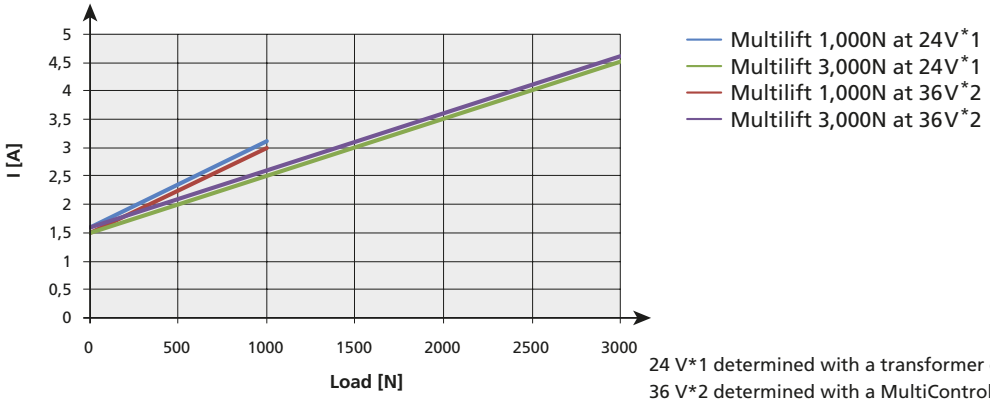
Load data



Speed/Force diagram

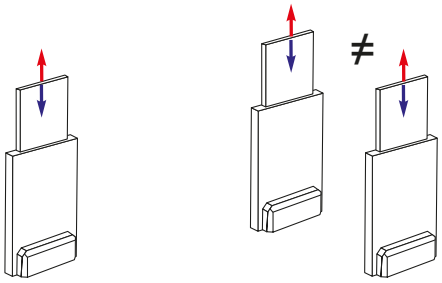


Current output/Force diagram



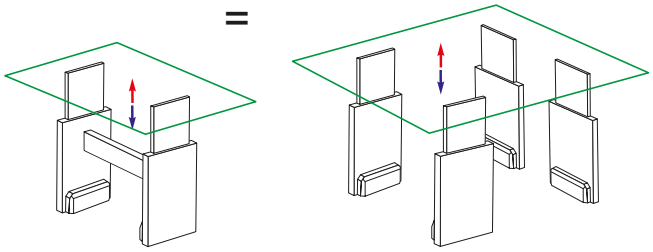
24 V*1 determined with a transformer control 120 VA
36 V*2 determined with a MultiControl duo

Multilift Mono



1-2 Multilifts in single or parallel operation

Multilift Synchro



2-4 Multilifts in synchronous 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.

Synchronous operation

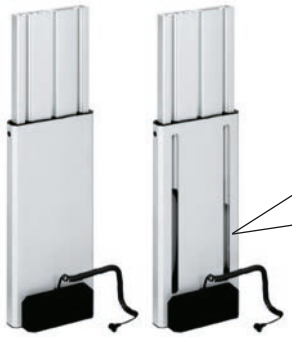
Synchronous operation of two or more columns. In conjunction with the integrated sensors, the control (see page 44) ensures synchronisation, and thus constant alignment of all the columns in both directions of travel, even if subject to different loads. The synchronous operation tolerance depends on 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

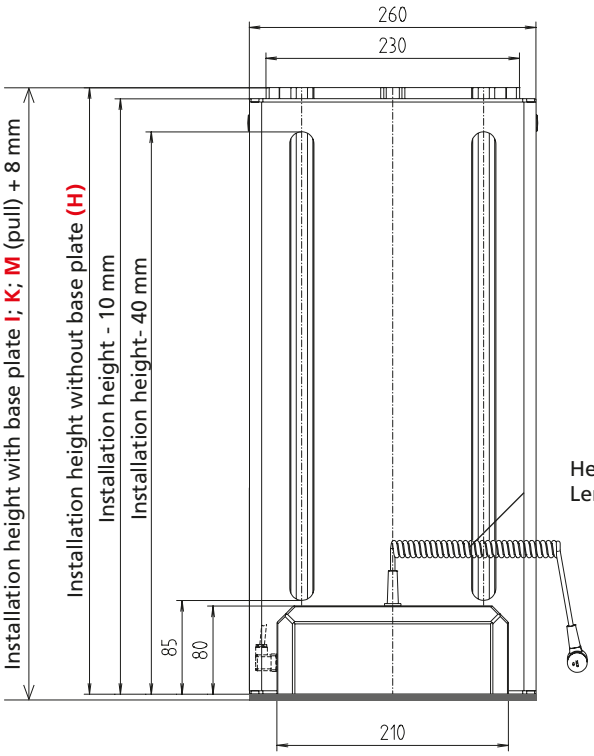
Height-adjustable assembly workplaces

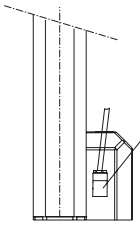
Multilift - Versions

Version A
without milled slot in the external profile



Version B
with milled slot in the external profile

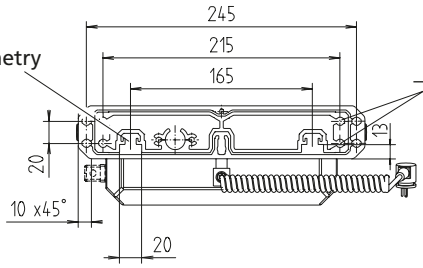




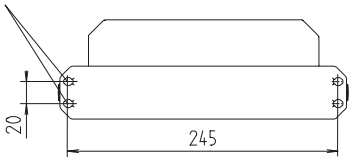
Lateral receptacle output with synchronous control (cable length 2.5 m)

A

BLOCAN®-
40 slot geometry



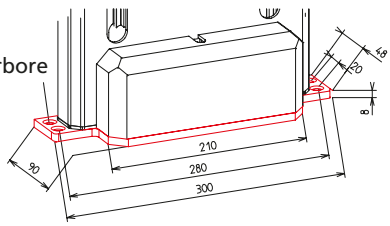
M8 / 40 deep



View "A"

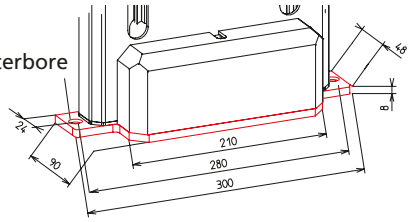
Base plate **(I)** with fixing plates (4 counterbores)

Counterbore

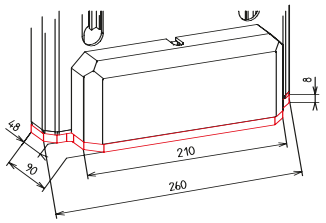


Base plate **(K)** with fixing plates (2 counterbores)

Counterbore



Base plate **(M)** flush

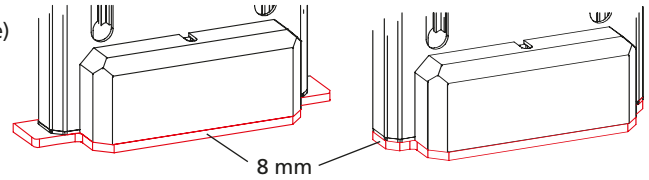


Multilift Mono

Code No.	Type	max. push force [N]	max. pull force [N]	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.)	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.)	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



Base plate with Fixing plates

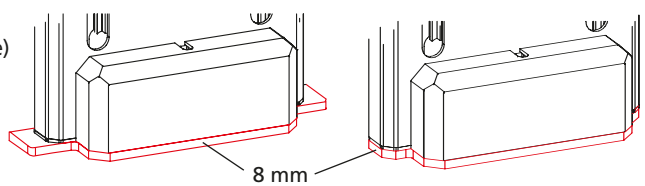
Base plate flush

Multilift Synchro

Code No.	Type	max. push force [N]	max. pull force [N]	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.)	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.)	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



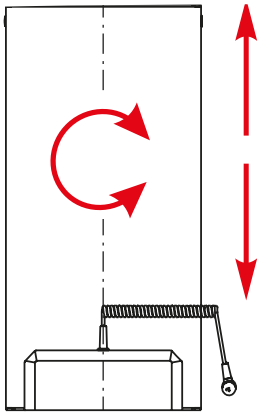
Base plate with Fixing plates

Base plate flush

Load data
with internal carriage

Mx= 75 Nm
(dynamic)

Mx= 150 Nm
(static)

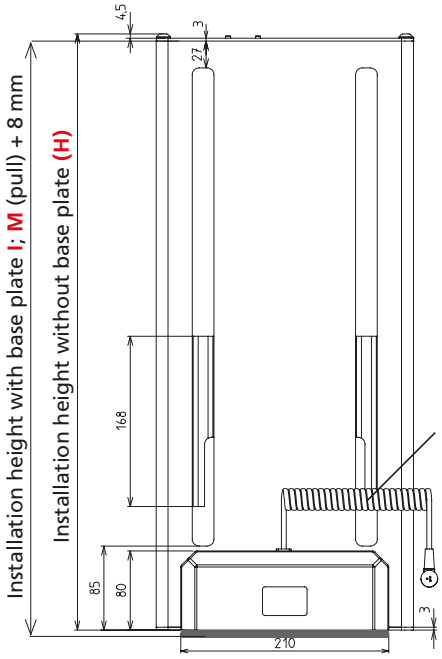


Fpull= 1,000/3,000 N

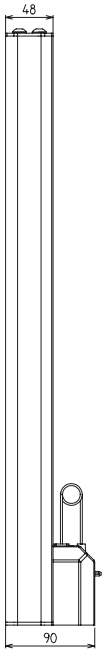
Fpush= 1,000 N

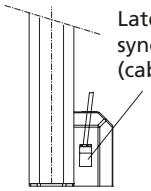
My= 50 Nm
(dynamic)

My= 100 Nm
(static)



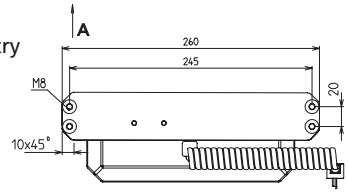
Helix cable
Multilift Mono
Length 0.5-1.2 m



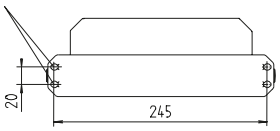


Lateral receptacle output with
synchronous control
(cable length 2.5 m)

BLOCAN®-
40 slot geometry



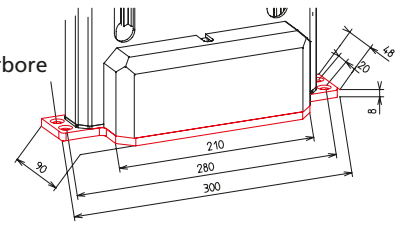
M8 / 40 deep



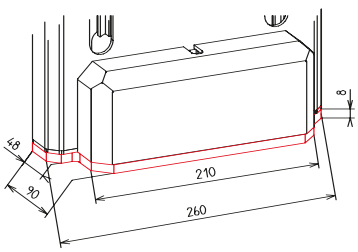
View "A"

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

Counterbore



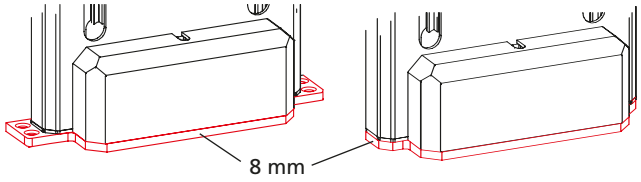
Base plate **(M)**
flush



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 counterbores
M = base plate flush



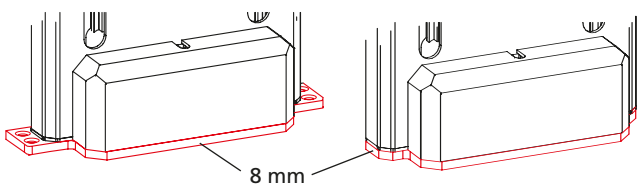
Base plate with Fixing plates

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 counterbores
M = base plate flush

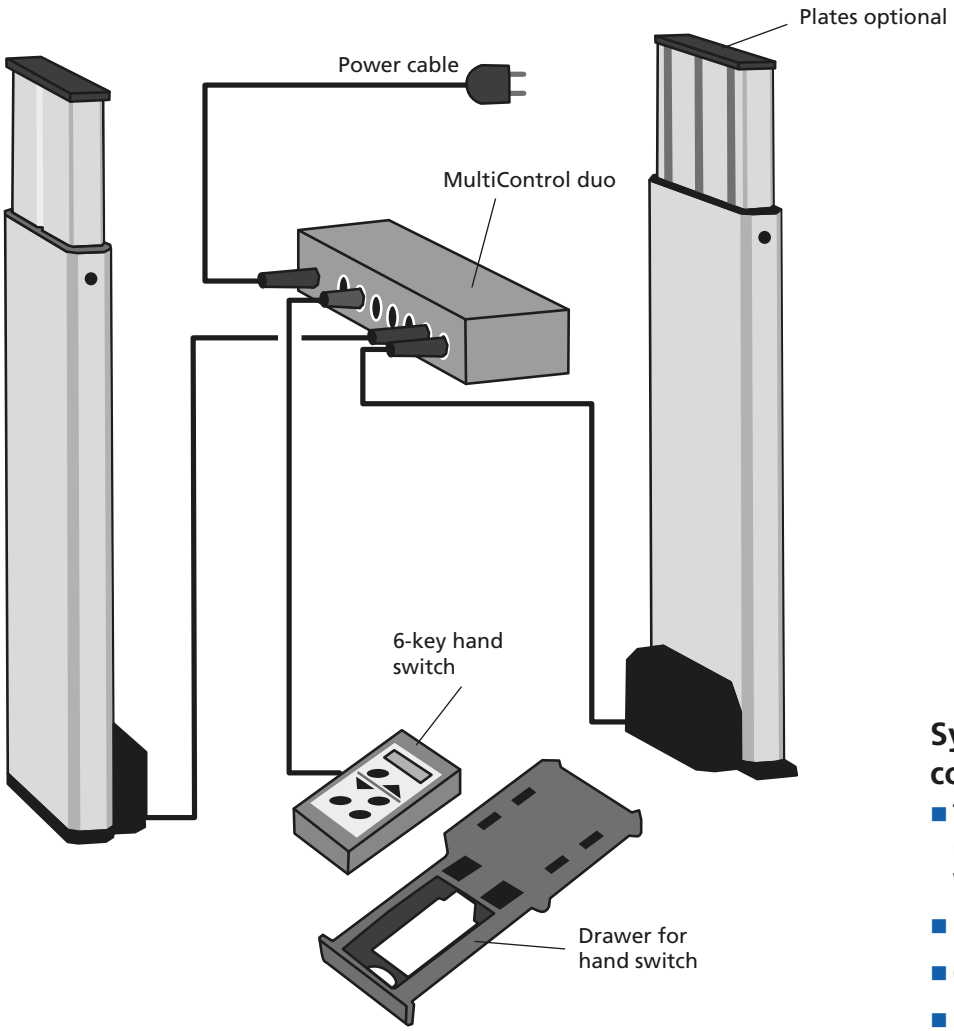


Base plate with Fixing plates

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)

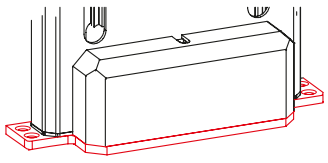
Multiliftsystem Synchro

[mm]

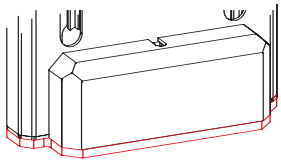
Code No.	Type	max. push force [N]	max. pull force [N]	max. lifting speed [mm/s]	Total travel	Installation height incl. base plate
QBB13_G0_0355	Multiliftsystem Synchro	3,000	1,000	8	355	558
QBB13_G0_0400	Multiliftsystem Synchro				400	603

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 counterbores
M = base plate flush



Base plate with fixing plates



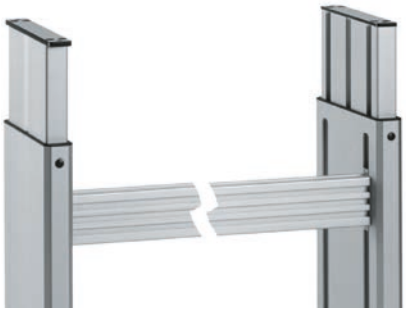
Base plate flush

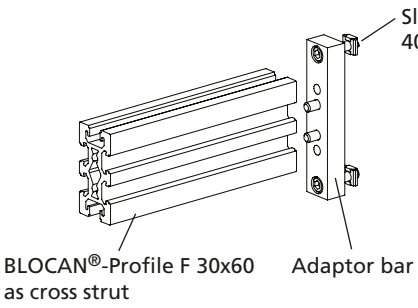
RK ROSE+KRIEGER

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

Length (clear width between the Multilifts -2 mm)

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

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 galvanised fixing set

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

Note:

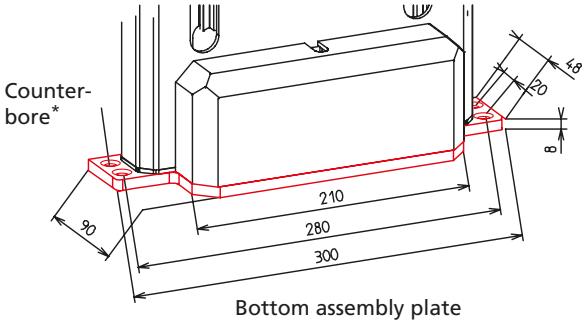
The "bottom" assembly plates listed here and the thrust compression plate are only suitable for push loads.

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)

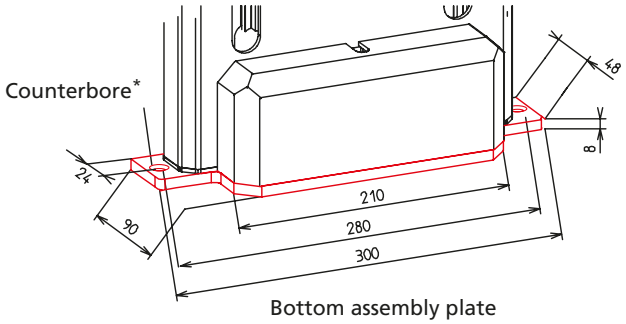
The supporting surfaces for fixing the internal and external profile must be flat. Since the drive motor is supported by the plastic housing, the entire surface of the Multilift must rest on a stable substructure. This can be achieved by using the "top" and "bottom" assembly plates, which are specially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

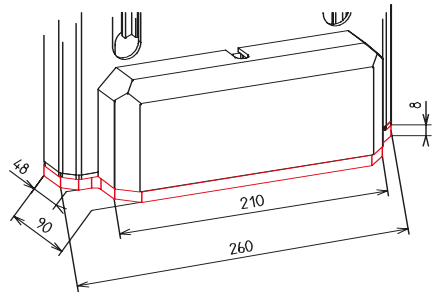
In the case of repeated installation, a minimum depth of approx. 40 mm is recommended!



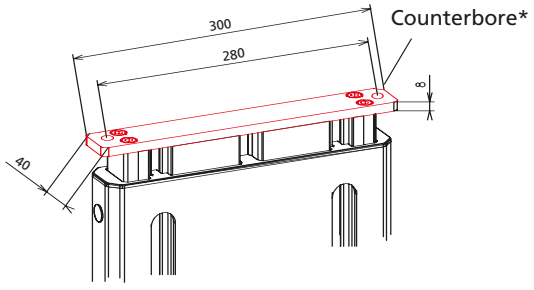
Bottom assembly plate
with 4 counterbores



Bottom assembly plate
with 2 counterbores



Compression plate



Top assembly plate

*DIN 74 - F8

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

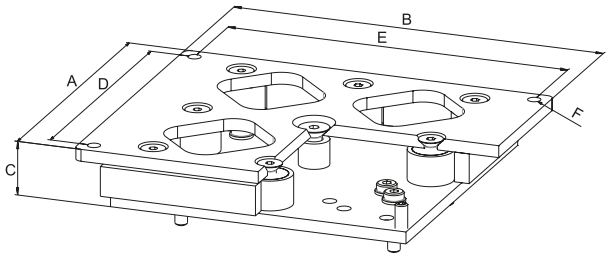
RK ROSE+KRIEGER

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.



[mm]

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

RK SyncFlex V

Scope of delivery:
Adjuster plate, incl. fixing material

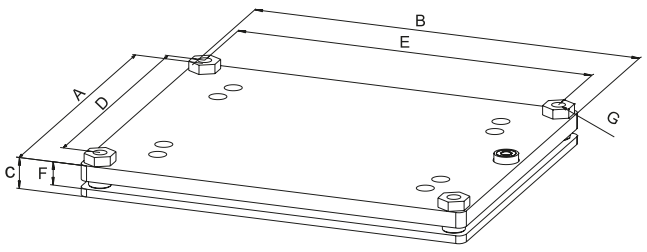
Option:
Optionally available with or without pressure plate (see table)

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.

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

- The lifting columns can be aligned via the vertical adjustment around the X-Y axes.



[mm]

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

Multilift – Fixing

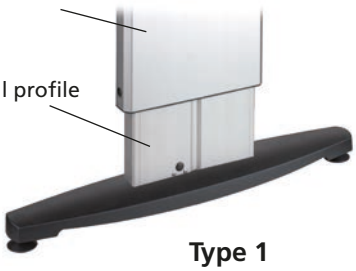
Foot

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

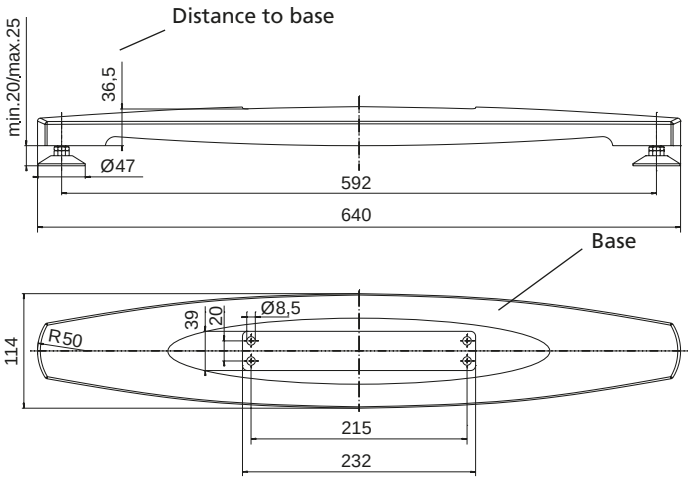
Material:
Type 1/2/5 GK-AlSi12/3.2583.02, black powder-coating

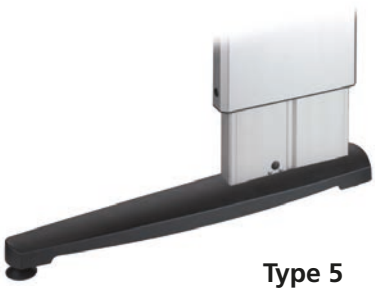
Type 3/4 steel tube, ends capped black powder-coating

Scope of delivery:
one foot with fixing set

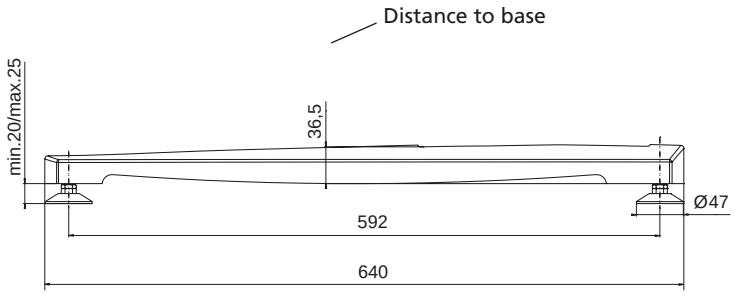


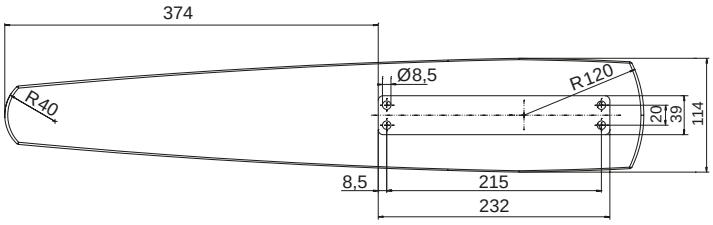
Type 1

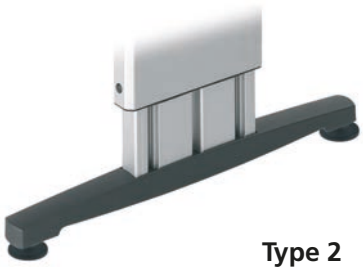




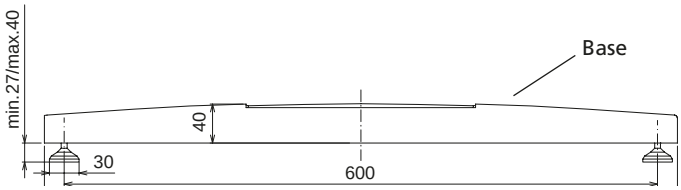
Type 5

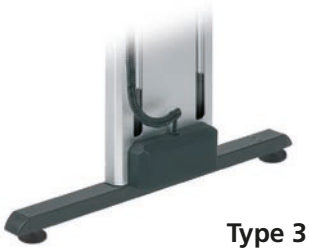






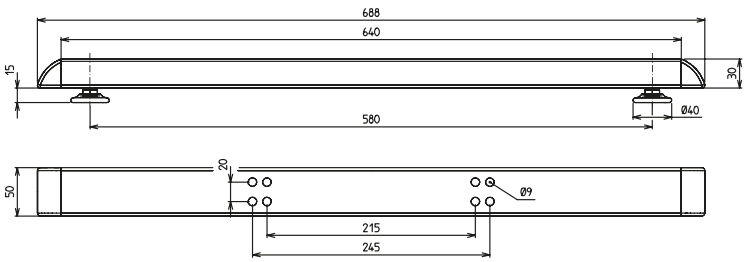
Type 2

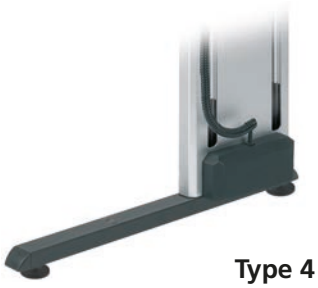




Type 3

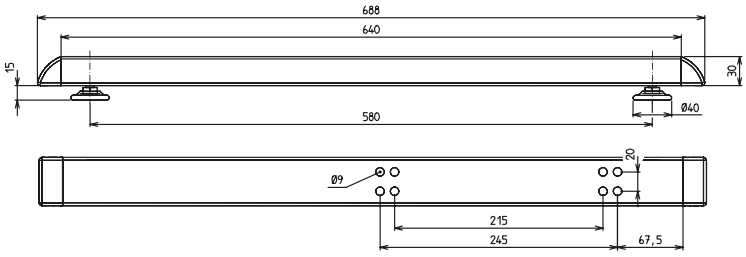
Multilift centrally mounted (choice of internal or external profile)





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 output of the drives when selecting the control.

Transformer control 120 VA

approx. 24 V DC

MultiControl

approx. 36 V DC

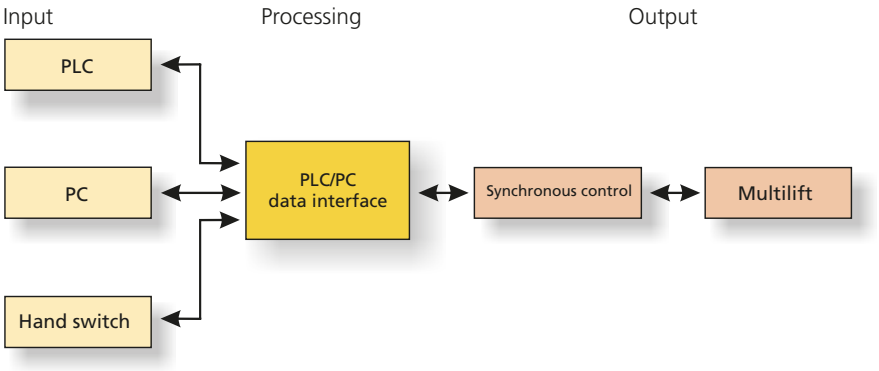
For dimensions and other technical data, please refer to the chapter „Motors and controls“

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)

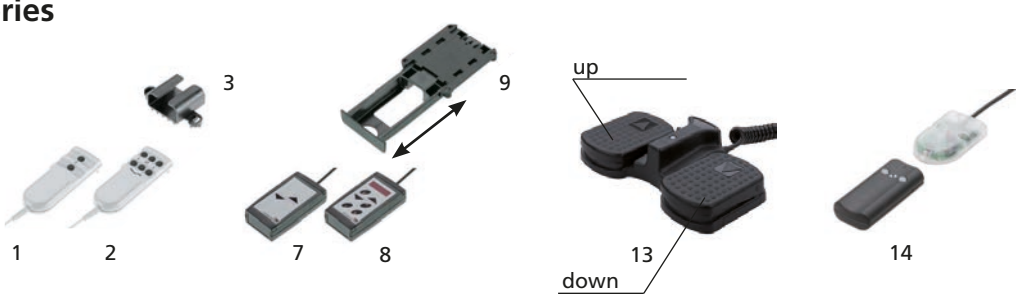
PLC/PCdata interface

- 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 184



Code No.	Type
QZD100108	PLC/PC data interface
QZD100110	Fixing plate for mounting in a control cabinet

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

Two-stage lifting column - *RKSlimlift / EM*

Rod-shaped design and extremely quiet operation

4 fixing threads
✓ Simple connection

Drive above the internal profile
✓ Large assembly surface
✓ Supports variable stroke lengths (optional)

Integrated drive
✓ Slim design

Attractive design
✓ Slender rod shape in the design versions Eclipse and Basic

Features:

General

- Excellent installation height/ stroke length ratio
- Self-locking, even at max. load
- Fixing slots in external profile

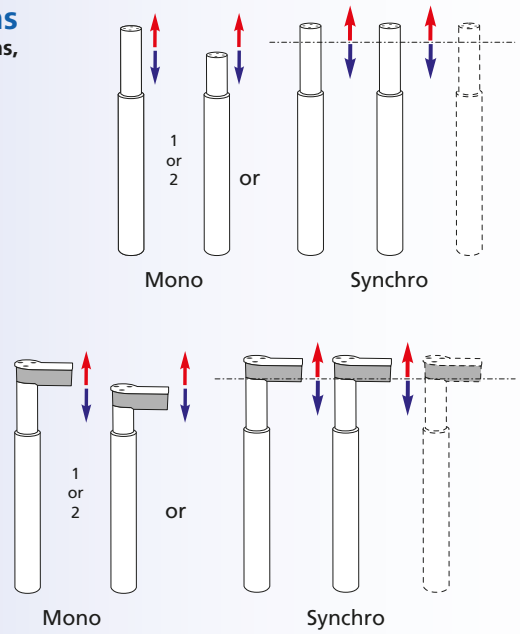
Options:

- Version with manual drive via crank handle
- Further stroke lengths available on request
- Quadro control enables control of up to 32 columns synchron

Table of contents - *RKSlimlift*

Properties/Technical data

Versions
(dimensions, order no.)



Accessories

Fixing

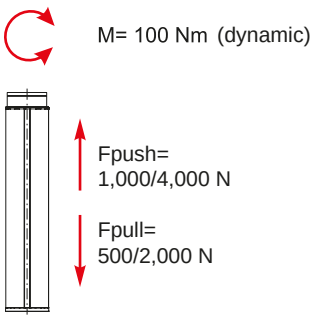
Position determination

General information / operating conditions

Design	Rod-shaped lifting column, optionally available with external drive motor (*RK**Slim**lift EM*)
Guide	Preset sliding elements made of plastic
Installation position	Any position/suspended with drop protection provided by the customer
Push force	Choice of 1,000 N/4,000 N
Pull force	Choice of 500 N/1,000 N/2,000 N
Voltage	36 V DC
Power input	144 W = Slimlift/108 W = Slimlift EM
Protection class	IP 30
Self-locking	Yes
Ambient temperature	+5°C to +40°C
Max. displacement with synchronous operation	0-3 mm/0-1.5 mm
Duty cycle	At nominal load, 15% (max. 1.5 mins operating time, 8.5 mins rest time)

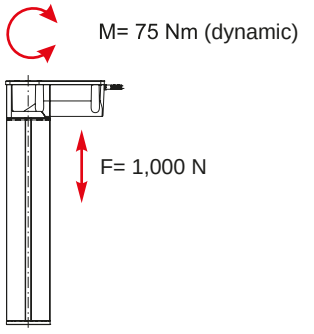
Load data

RK Slimlift



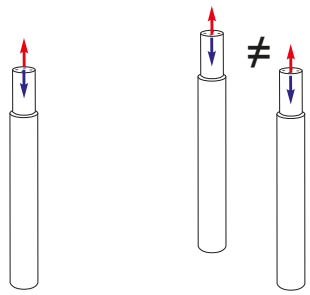
Support torque
200 Nm (static)

RK Slimlift EM



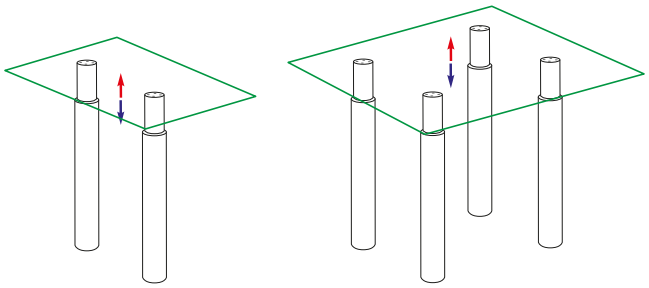
Support torque
150 Nm (static)

Slimlift Mono



1-2 Slimlifts in single or parallel operation

Slimlift Synchro



2-4 Slimlifts in synchronous operation

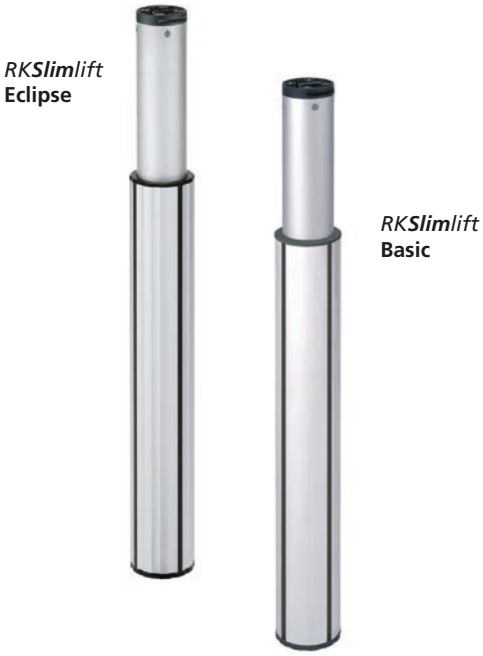
Parallel operation

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

Synchronous operation

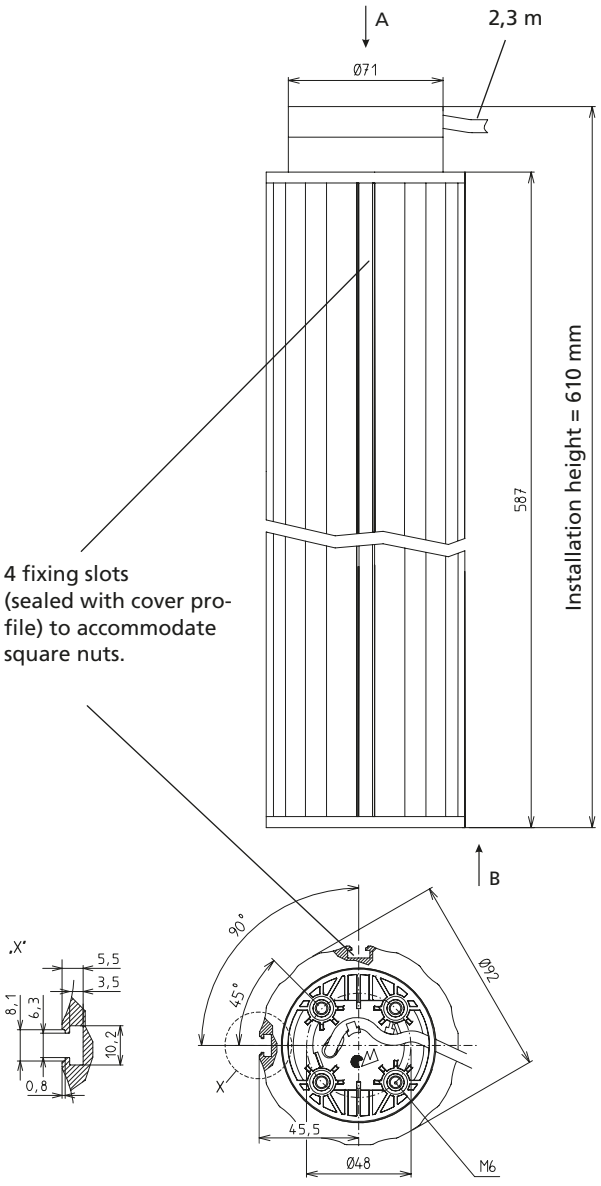
Synchronous operation of two or more columns. In conjunction with the integrated sensors, the control (see page 148) ensures synchronisation, and thus constant alignment of all the columns in both directions of travel, even if subject to different loads. The synchronous operation tolerance depends on the lifting speed and is max. 1.5 mm for the 8 mm/s version and max. 3 mm for the 25/32 mm version.
A memory function is also available.

RKSlimlift



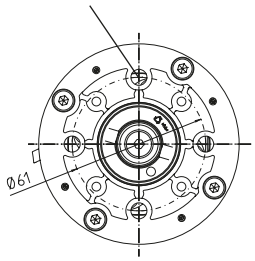
*RK**Slim**lift*
Eclipse

*RK**Slim**lift*
Basic



View "A"
Fixing thread, top

4x M8
max. 10 mm deep

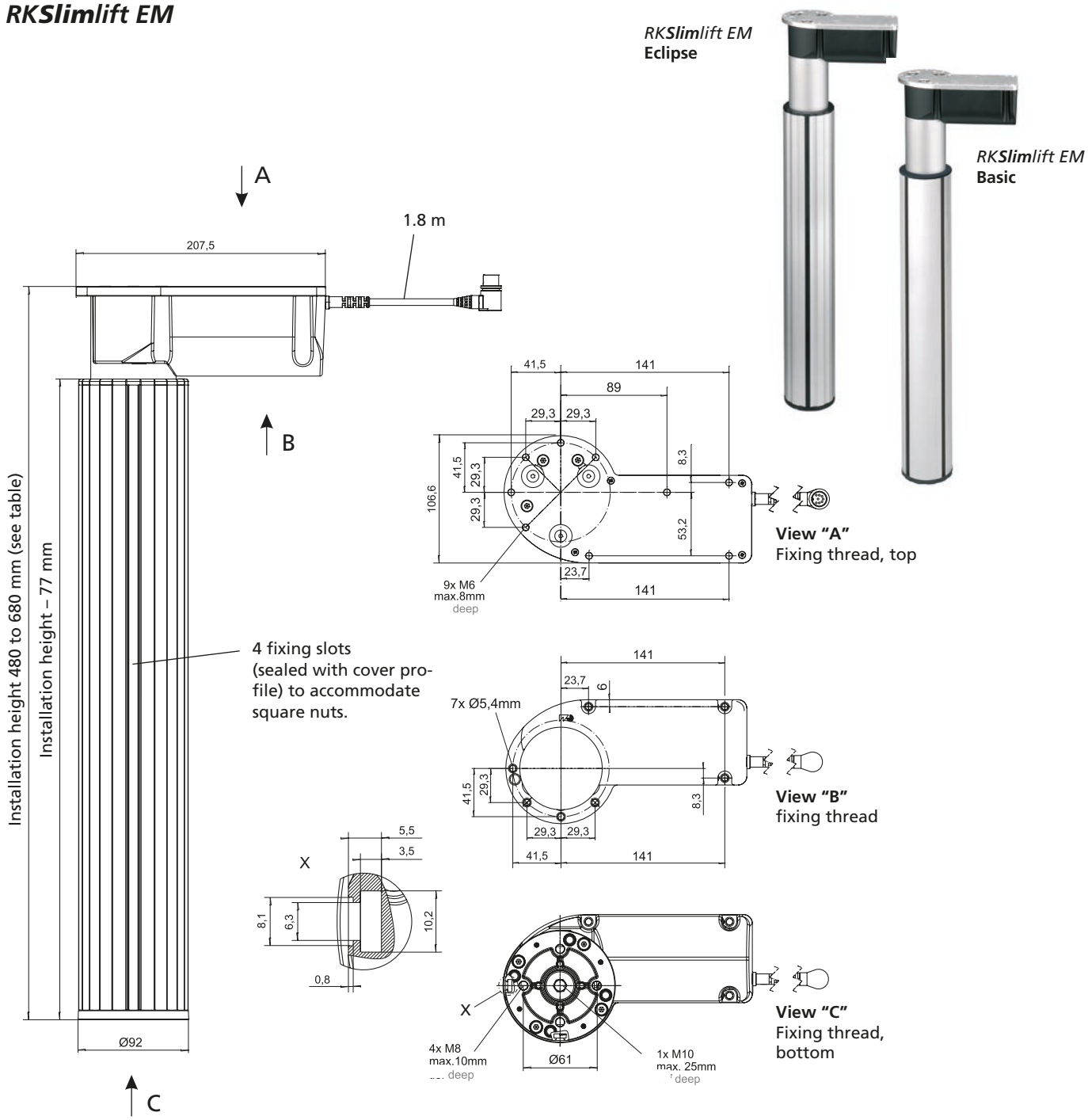


View "B"
Fixing thread, bottom

Mono and synchro

Code No.	Type	Push force [N]	Pull force [N]	Lifting speed [mm/s]	Stroke length [mm]	Installation height [mm]	Weight [kg]
QSL32BA130460	*RKSlimlift* Eclipse	1,000	500	32	460	610	6.0
QSL32BA330460	*RKSlimlift* Basic	1,000	500	32	460	610	6.0
QSL10BD200285	*RKSlimlift* Basic	4,000	2,000	8	285	610	7.0

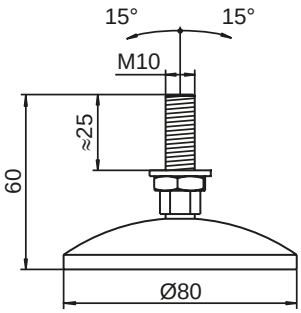
RKSlimlift EM



Mono and synchro

Code No.	Type	Push force [N]	Pull force [N]	Lifting speed [mm/s]	Stroke length [mm]	Installation height [mm]	Weight [kg]
QSL25BA270300	*RKSlimlift EM* Basic	1,000	1,000	25	300	480	~4.5
QSL25BA170300	*RKSlimlift EM* Eclipse	1,000	1,000	25	300	480	~4.5
QSL25BA270400	*RKSlimlift EM* Basic	1,000	1,000	25	400	580	~5.3
QSL25BA170400	*RKSlimlift EM* Eclipse	1,000	1,000	25	400	580	~5.3
QSL25BA270430	*RKSlimlift EM* Basic	1,000	1,000	25	430	610	~5.5
QSL25BA170430	*RKSlimlift EM* Eclipse	1,000	1,000	25	430	610	~5.5
QSL25BA270500	*RKSlimlift EM* Basic	1,000	1,000	25	500	680	~6.0
QSL25BA170500	*RKSlimlift EM* Eclipse	1,000	1,000	25	500	680	~6.0

Levelling foot (for Type EM)



- The foot can be bolted centrally into the base plate of the RK Slimlift EM.
- Max. screw-in depth 25 mm

Material: steel parts galvanised
Pivot plate PA, black

Code No.	Type
QZD120340	Levelling foot

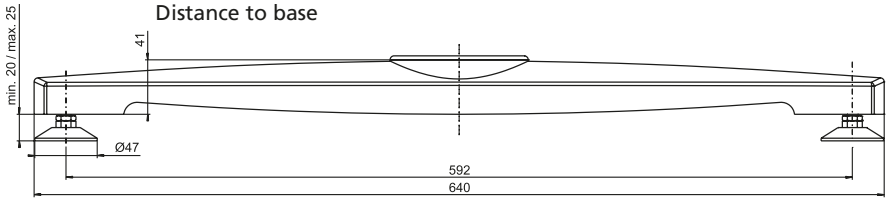
Foot

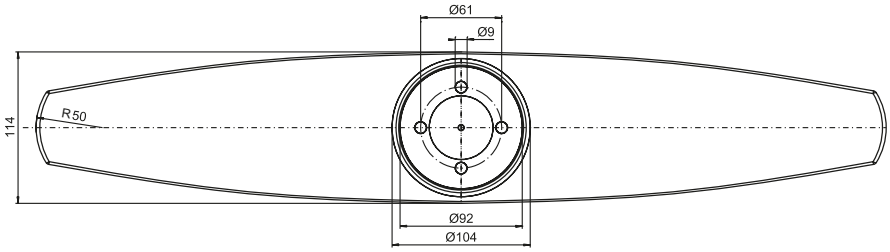
- Both foot versions can be bolted to the external profile without the need for any further modifications

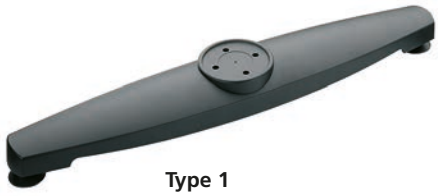
Material: GK-AlSi12/3.2583.02, black powder-coating

Max. load 1,000 N

Type 1

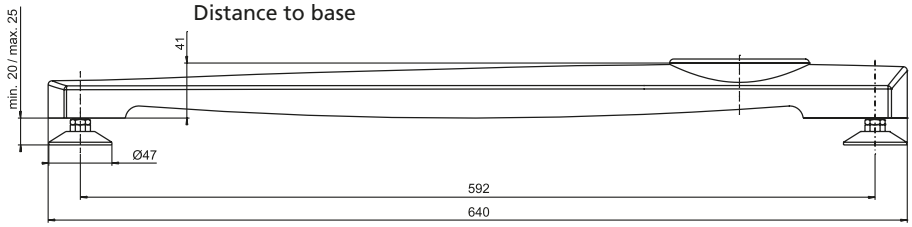


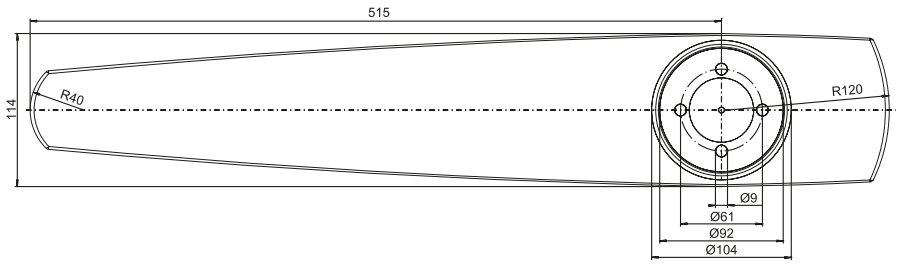


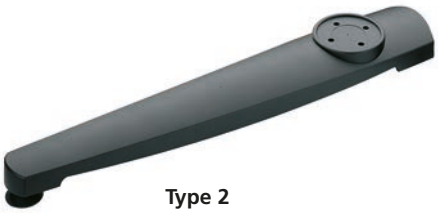


Type 1

Type 2







Type 2

Code No.	Type
QZD120341	1
QZD120342	2

Order instruction square nut:

- **Purchase only in lot sizes and a multiple of that, see product table below**

- For connecting accessories to the external profile

Material: galvanised steel

Square nut

Code No.	lot sizes	Type
qzd0505971	10, 20, 30... pcs	Square nut M6, DIN 562

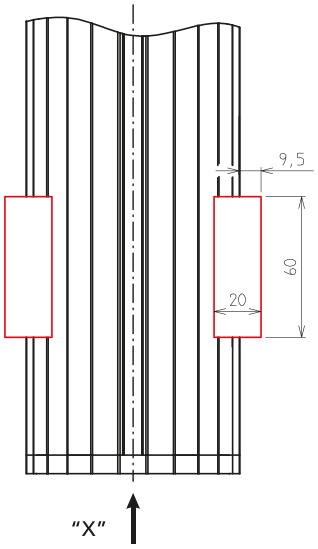
Profile adaptor

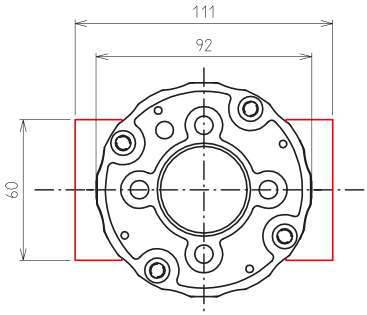
Fixed build

- The profile adaptor allows several lifting columns to be together to form a stable combination. In this way, and with minimum effort, four columns can be connected to form lifting tables and operated via a synchronous control (MultiControl quadro). The aluminium profiles F-60/1, F-60-L, F-G 60, F-2G 60 from the BLOCAN® Profile Assembly System are suitable as struts for this purpose.

Material: AlMgSi, clear anodised
Galvanised fastenings

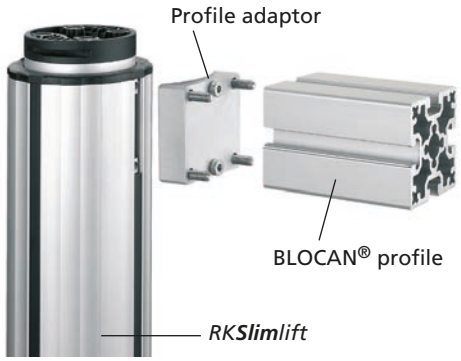
Scope of delivery: one profile adaptor with fastenings for attachment to one end of the profile





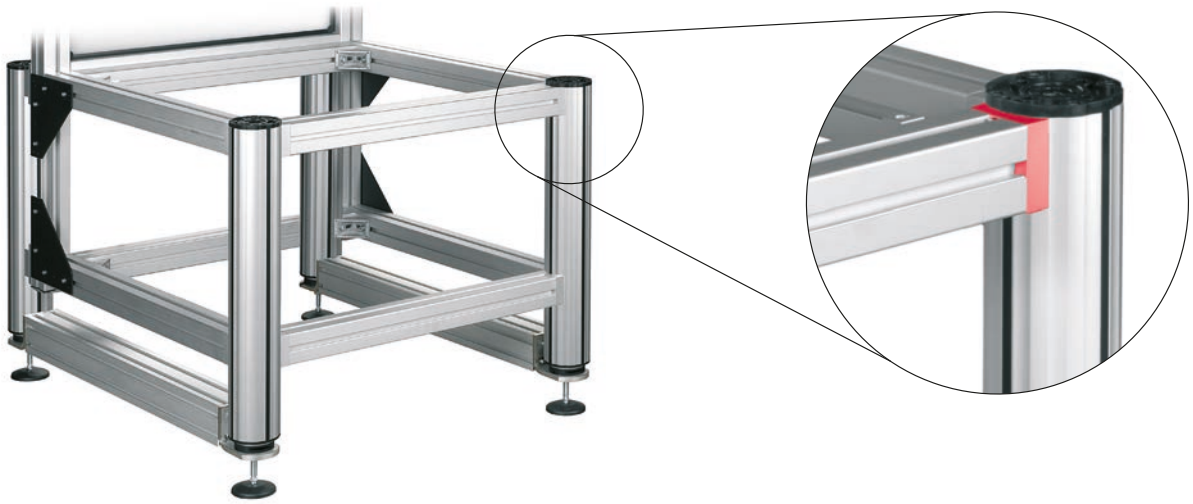
View "X"

Connection example



Code No.	Type
QZD120256	Complete profile adaptor

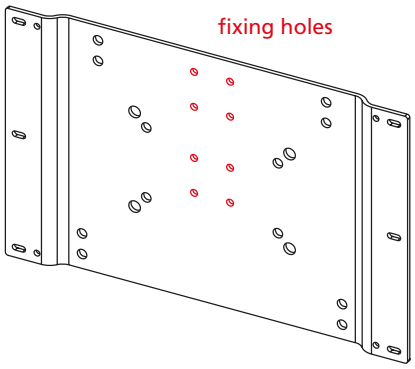
Application example:

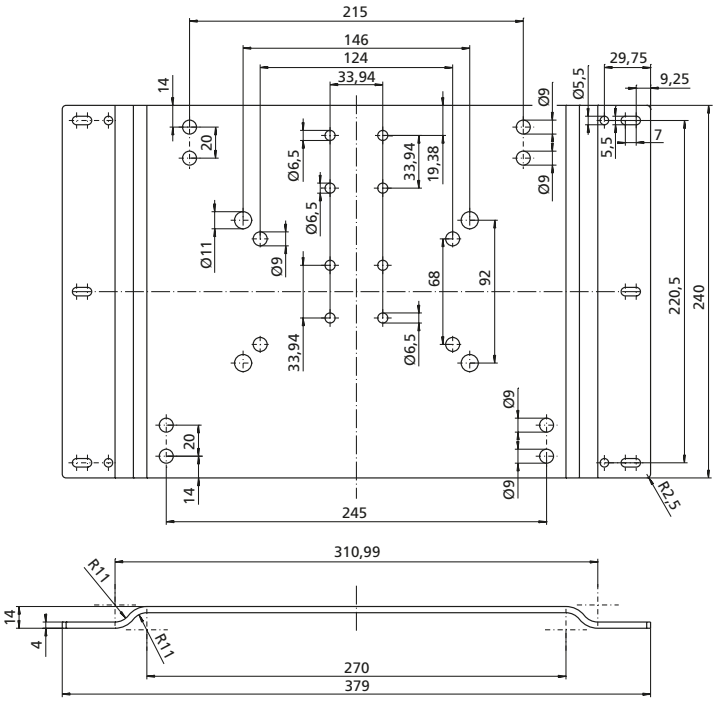


Fixing plate (not for EM)

- This universal plate can be bolted directly into the screw channel of the lifting column using a fixing set. The numerous pre-drilled holes in the metal make it easy to attach table tops, brackets, etc.

Material: steel, black powder-coated (RAL 9005), galvanised fastenings





Code No.	Version
QZD100313	Fixing plate
QZD120336	Fixing set, 4x M6 x 14, DIN 7984


Presto
Julabo

Controls

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

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"

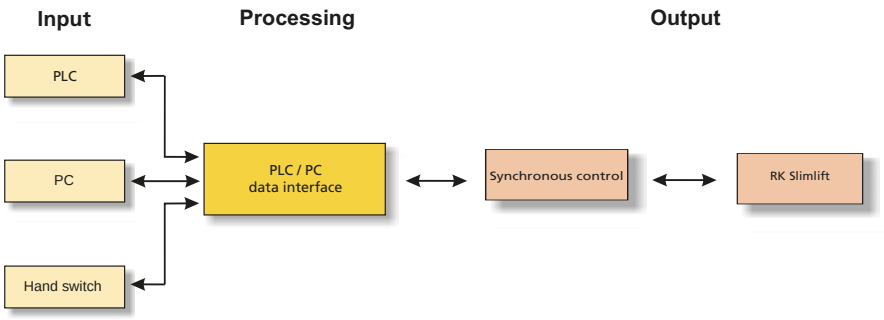
Code No.	Version	
Controls for *RKSlimlift* mono		
QZA09C13BH031	Transformer control 120 VA connection C	Controls up to 1 drive
QSTACCA1AA000	MultiControl mono connection C, up to max. I= 12 A current output, 36 V DC	Controls up to 2 drives
Controls for *RKSlimlift* synchro		
QST20C02AA000	MultiControl duo connection C, 12 A current output at 20% duty cycle	1-2 drives synchronised
QST21C02AA000	MultiControl duo connection C for RK Slimlift EM, 12 A current output at 20% duty cycle	1-2 drives synchronised
QST20C04AA000	MultiControl quadro connection C, 12 A current output at 20% duty cycle	3-4 drives synchronised
QST21C04AA000	MultiControl quadro connection C for Slimlift EM, 12 A current output at 20% duty cycle	3-4 drives synchronised
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	
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/PC data interface

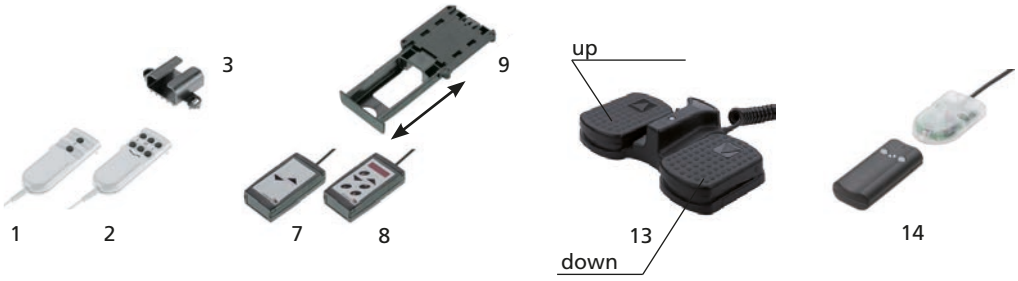
- This interface enables actuation of the synchronous control system via different input devices (PLC, PC and hand switch)

You will find further product-information on page 184



Code No.	Type
QZD100108	PLC/PC data interface
QZD100110	Fixing plate for mounting in a control cabinet

Hand switches/accessories

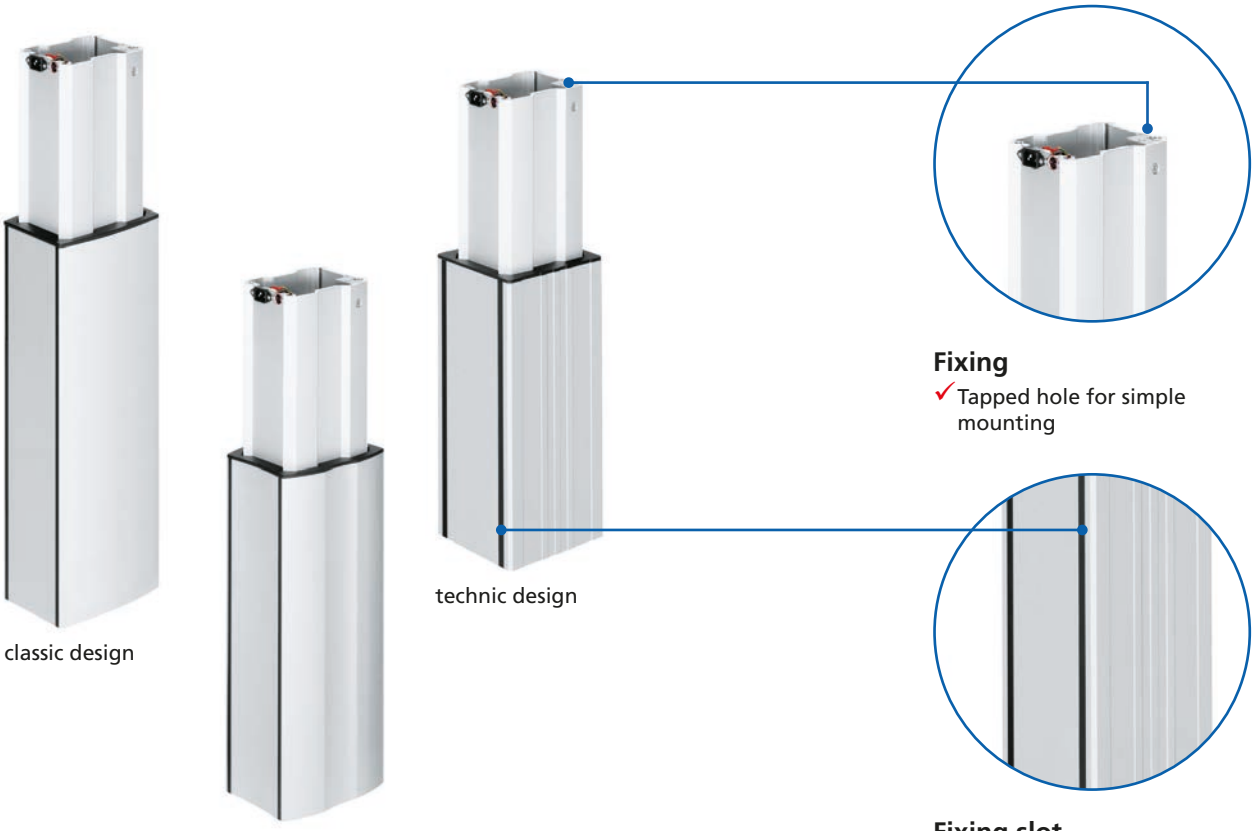


Code No.	Version	Fig.
Hand switch for transformer control		
QZB02C03AD031	Hand switch with 1 m spiral cable – 6 function keys	2
Hand switches for transformer or synchronous control		
QZB02C03AB031	Hand switch with 1 m spiral cable – 2 function keys	1
QZB00D04AB041	Hand switch with 1 m spiral cable – 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

Two-stage lifting column - *RKPowerlift*

The power pack for high bending moments



RKPowerlift version *Z:*

- For push force
- High moment capacity
- High lifting speed

RKPowerlift version *S:*

- For push/pull forces
- Medium moment capacity
- Medium lifting speed

Features:

- Three design versions available
- Withstands high torsional and bending moments
- Integrated motor
- Choice of internal or external control
- Four fixing slots in external profile
- Adjustable stroke length
- Optimum installation height/ stroke length ratio
- Extremely quiet operation

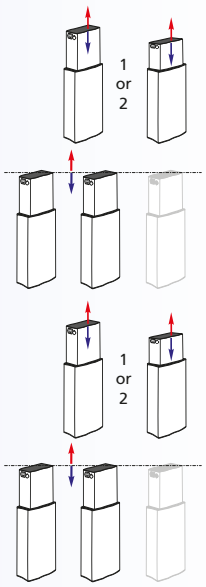
Options:

- Special stroke lengths (screw drive)
- Quadro control enables synchronisation of up to 32 columns
- Version with manual drive via crank handle on request

RKPowerlift - Table of contents

Properties/Technical data

Versions
(Dimensions, order numbers)



Accessories

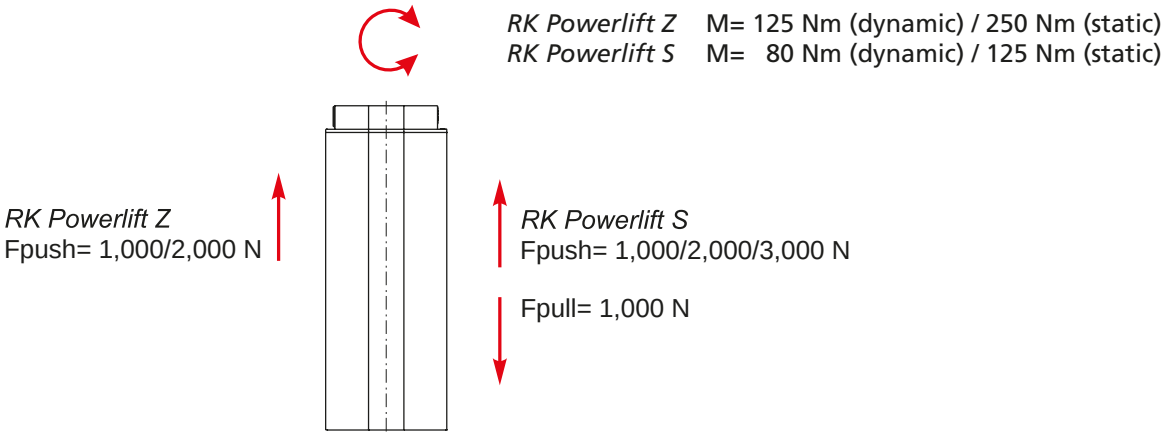
Fixing

Position determination

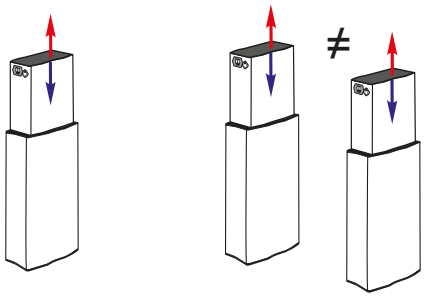
General information/operating conditions

Design	Rectangular lifting column in compact design
Guide	Multiple roller/slide bearings
Installation position	Defined (any version s)/suspended with drop protection provided by the customer
Push force	Choice of 1,000 N, 2,000 N, 3,000 N
Pull force (Version S)	max. 1,000 N
Voltage	36 V DC
Power input	120 W / 210 W
Protection class	IP 30
Self-locking	Yes
Ambient temperature	+5°C to +40°C
Max. displacement with synchronous operation	0-3 mm rack drive/0-1.5 mm screw drive
Duty cycle	At nominal load, 15% (max. 1.5 mins operating time, 10 mins rest time)

Load data

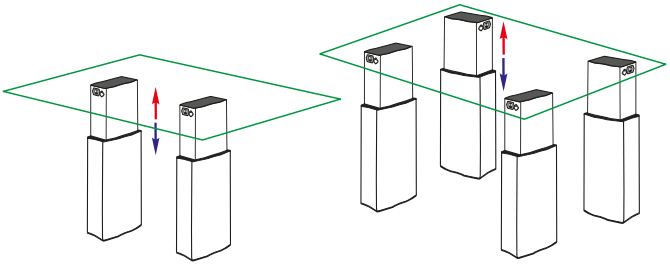


RKPowerlift Mono



1-2 ***RKPowerlifts*** in single or parallel operation

RKPowerlift Synchro



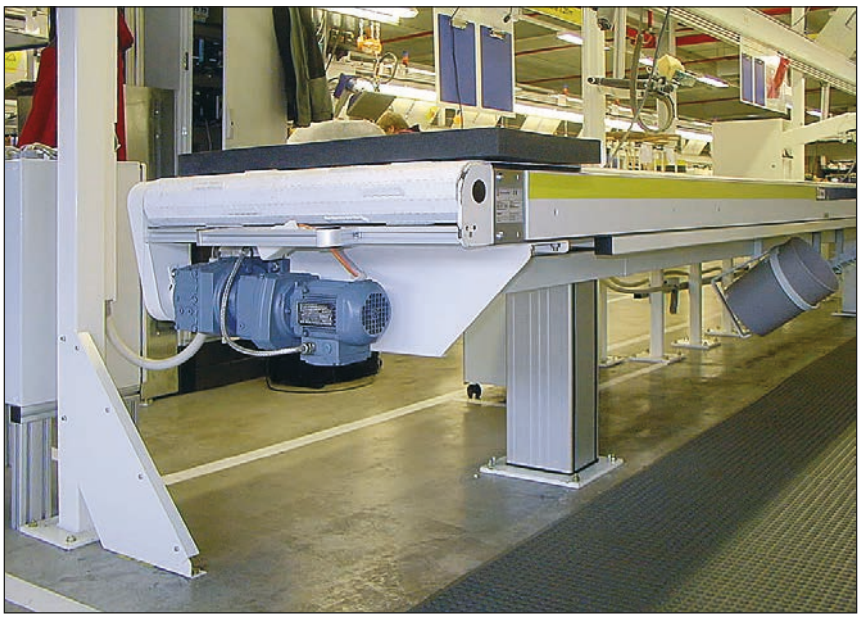
2-4 ***RKPowerlifts*** in synchronous operation

Parallel operation

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

Synchronous operation

Synchronous operation of two or more columns. In conjunction with the integrated sensors, the control (see page 148) 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. 3 mm for the version with rack drive or max. 1.5 mm for the version with screw drive. A memory function is also available.



Conveyer adjustment

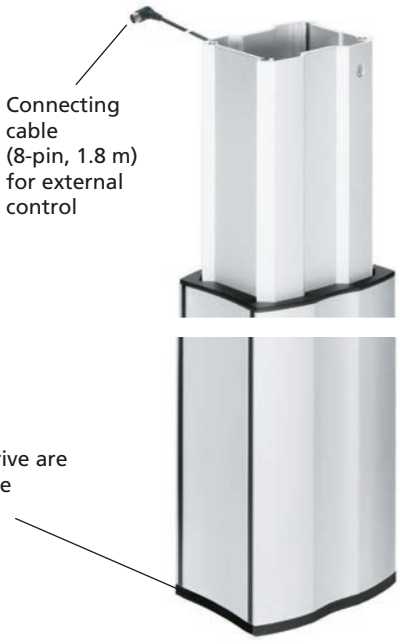
RKPowerlift Z
(for push force)

■ **with internal control**

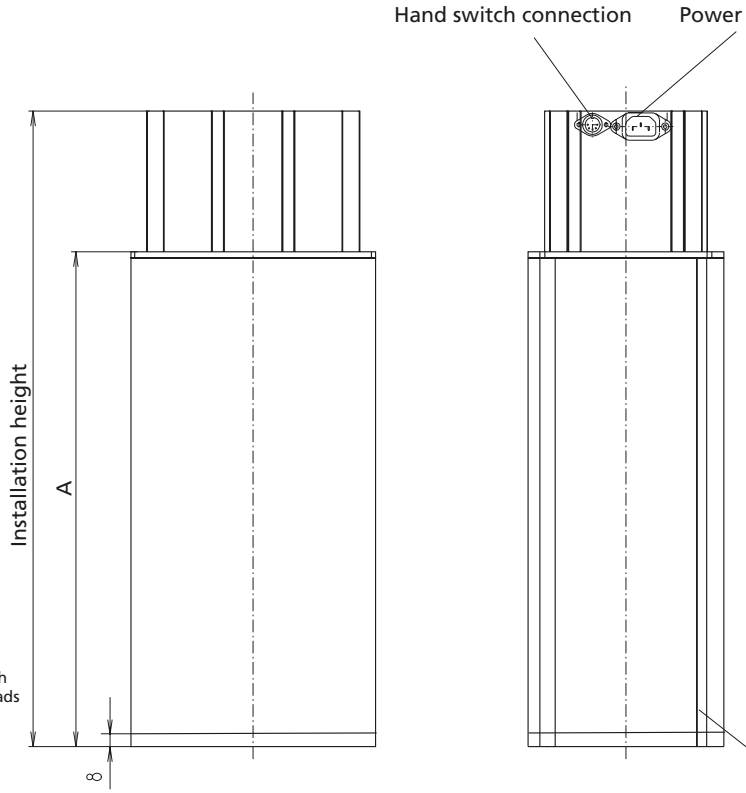
RKPowerlift S
(for push and pull forces)

■ **with internal control**

■ **for external control**



Versions with screw drive are fitted with a base plate (steel 8 mm).



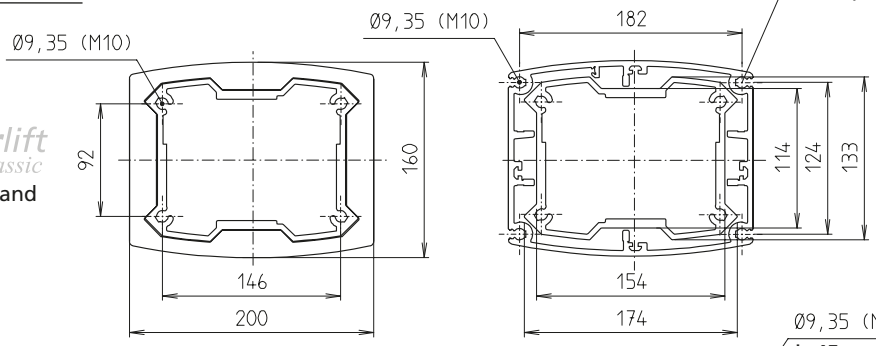
[mm]

Type	Installation height	A
Manual, stroke 200	610	515
Stroke 350	490	465
Stroke 490	610	585
Stroke 500	648	623

Only for version s:
steel base plate with
4 x M10 fixing threads
(hole spacing
93 x 180 mm)

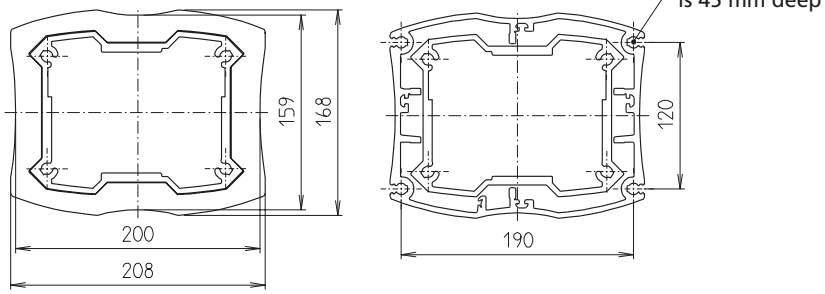
Fixing slot (sealed with cover profile) to accommodate clamping bars.

Dimensions of internal profile identical for all 3 versions



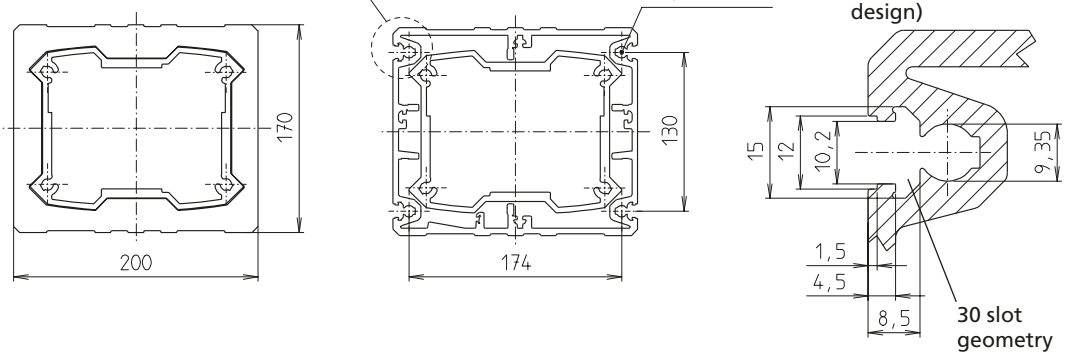
RKPowerlift classic

Top view with and without cap



RKPowerlift wave

Top view with and without cap

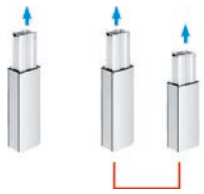


RKPowerlift technic

Top view with and without cap

For order table, see next page

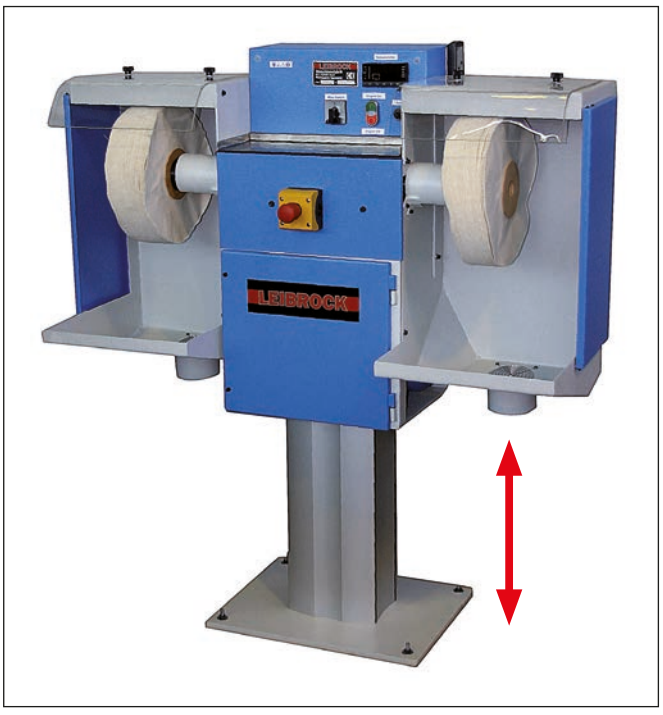
RKPowerlift Z (for push load)



RKPowerlift mono

Code No.	Type	Push force [N]	Lifting speed [mm/s]	Stroke length [mm]	Installation height [mm]	Weight [kg]
With internal control/standard (start and stop)						
QPL35BA_20350	*RKPowerlift* 35	1,000	35	350	490	~18
QPL35BA_20490	*RKPowerlift* 35	1,000	35	490	610	~21
With internal control/soft-control (soft start and braking)						
QPL28BB_40490	*RKPowerlift* 28	2,000	28	490	610	~21
QPL35BA_40350	*RKPowerlift* 35	1,000	35	350	490	~18
QPL35BA_40490	*RKPowerlift* 35	1,000	35	490	610	~21
QPL50BA_40350	*RKPowerlift* 50	1,000	50	350	490	~18
QPL50BA_40490	*RKPowerlift* 50	1,000	50	490	610	~21
With internal control/memory (9 positions can be stored)						
QPL28BB_60490	*RKPowerlift* 28	2,000	28	490	610	~21
QPL50BA_60350	*RKPowerlift* 50	1,000	50	350	490	~18
QPL50BA_60490	*RKPowerlift* 50	1,000	50	490	610	~21

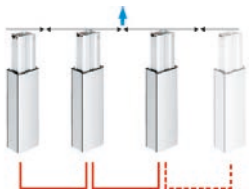
Design:
3 = classic
4 = wave
5 = technic



Polishing machine

RK ROSE+KRIEGER

RKPowerlift Z (for push load)



RKPowerlift synchro

Code No.	Type	Push force [N]	Lifting speed [mm/s]	Stroke length [mm]	Installation height [mm]	Weight [kg]
With internal control / synchro memory (9 positions can be stored)						
QPL28BB_30490	*RKPowerlift* 28	2,000	28	490	610	~21
QPL50BA_30350	*RKPowerlift* 50	1,000	50	350	490	~18
QPL50BA_30490	*RKPowerlift* 50	1,000	50	490	610	~21

Design:
3 = classic
4 = wave
5 = technic

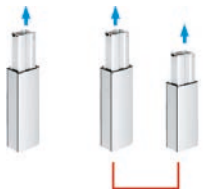
Code No.	Connecting cable (bus cable)
QZD100093	For synchronisation up to 8 *RKPowerlifts*, 6 m

RKPowerlift
internal control

Note
Preferred installation orientation: External profile vertical to the floor stand surface, internal profile extending.

Other installation orientations are available on request.

RKPowerlift S (for push and pull force)



RKPowerlift mono

Code No.	Type	Push force [N]	Pull force [N]	Lifting speed [mm/s]	Stroke length [mm]	Installation height [mm]	Weight [kg]
With internal control/standard (start and stop)							
QPL25BA_S0500	*RKPowerlift* 25	1,000	1,000	25	500	648	~19
QPL18BB_S0500	*RKPowerlift* 18	2,000	1,000	18	500	648	~19
QPL10BC_S0500	*RKPowerlift* 10	3,000	1,000	10	500	648	~19
With internal control/memory (9 positions can be stored)							
QPL25BA_T0500	*RKPowerlift* 25	1,000	1,000	25	500	648	~19
QPL18BB_T0500	*RKPowerlift* 18	2,000	1,000	18	500	648	~19
QPL10BC_T0500	*RKPowerlift* 10	3,000	1,000	10	500	648	~19

Design:
3 = classic
4 = wave
5 = technic

Code No.	Type	Push force [N]	Pull force [N]	Lifting speed [mm/s]	Stroke length [mm]	Installation height [mm]	Weight [kg]
For external control							
QPL25EA_V0500	*RKPowerlift* 25	1,000	1,000	25	500	648	~17
QPL18EB_V0500	*RKPowerlift* 18	2,000	1,000	18	500	648	~17
QPL10EC_V0500	*RKPowerlift* 10	3,000	1,000	10	500	648	~17

Design:
3 = classic
4 = wave
5 = technic

Transformer control 120 VA

approx. 24 V DC

MultiControl mono

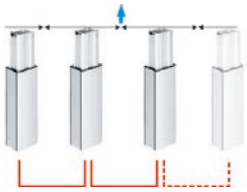
approx. 36 V DC

Code No.	External control	
QZA09C13BH031	Transformer control 120 VA connection C	Controls 1 drive
QSTACCA1AA000	MultiControl mono connection C, up to max. I= 12 A current output, 36 V DC	Controls up to 2 drives
Accessories		
QZD0702844000*	Straight connecting cable (4 m) with 5-pin connector and open cable end	
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)

RKPowerlift S (for push and pull loads)

RKPowerlift Synchro



Code No.	Type	Pushe force [N]	Pull force [N]	Lifting speed [mm/s]	Stroke length [mm]	Installation height [mm]	Weight [kg]
With internal control/ synchro memory (9 positions can be stored)							
QPL25BA_U0500	*RKPowerlift* 25	1,000	1,000	25	500	648	~19
QPL18BB_U0500	*RKPowerlift* 18	2,000	1,000	18	500	648	~19
QPL10BC_U0500	*RKPowerlift* 10	3,000	1,000	10	500	648	~19

Design:
3 = classic
4 = wave
5 = technic

Code No.	Connecting cable (bus cable)
QZD100093	6 m bus cable for the networking of up to 8 synchronous controls

Code No.	Type	Push force [N]	Pull force [N]	Lifting speed [mm/s]	Stroke length [mm]	Installation height [mm]	Weight [kg]
For external control							
QPL25EA_V0500	*RKPowerlift* 25	1,000	1,000	25	500	648	~17
QPL18EB_V0500	*RKPowerlift* 18	2,000	1,000	18	500	648	~17
QPL10EC_V0500	*RKPowerlift* 10	3,000	1,000	10	500	648	~17

Design:
3 = classic
4 = wave
5 = technic

MultiControl duo

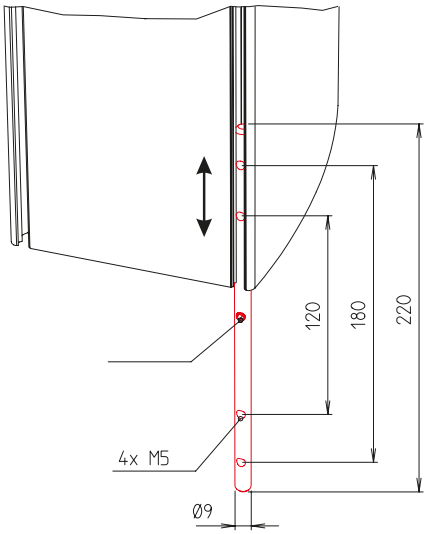
approx. 36 V DC

MultiControl quadro

approx. 36 V DC

Code No.	External control	
QST42C02AA000	MultiControl duo connection C, up to max. I= 12 A current output	For synchronous control of 1-2 drives
QST42C04AA000	MultiControl quadro connection C, up to max. I= 12 A current output	For synchronous control of 1-4 drives
Accessories		
QZD070526	Extension cable 2,5 m drive for connector C/8-pin DIN socket	

Clamping bar



- The clamping bar enables the fitting of attachments to the RKPowerlift. The bar is inserted in the fixing slot and fixed by means of a clamping screw. The tapped holes enable the screw connection of attachments.

- In the case of the "technic" design version, attachments can also be secured using accessories (slot stones, etc.) from the catalogue BLOCAN® Profile Systems.

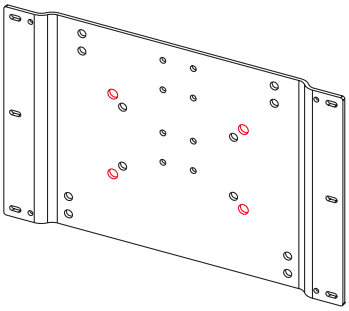
Material:
St37-2 k, galvanised

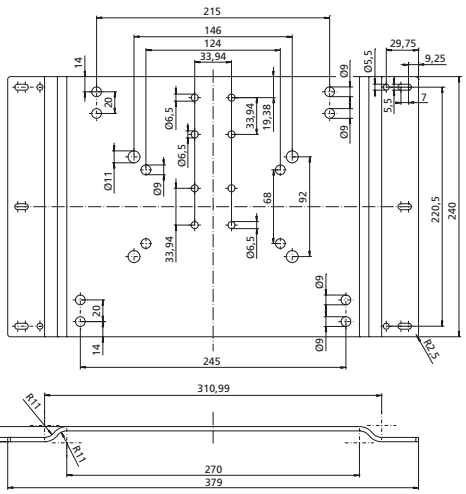
Code No.	Type
QZD000075	Clamping bar

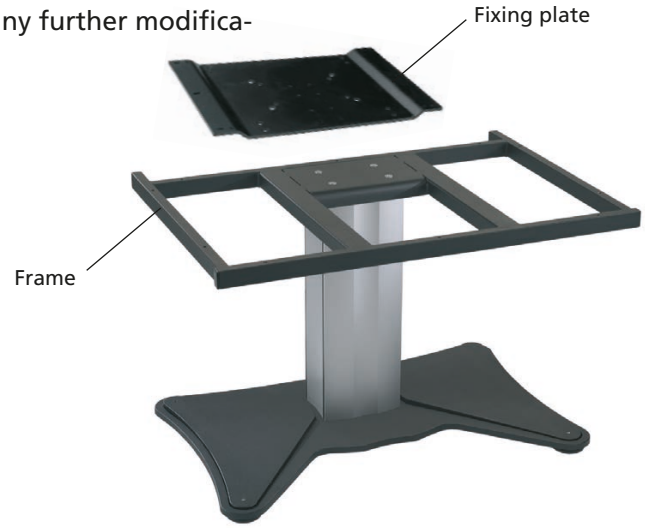
Frame/fixing plate for table top

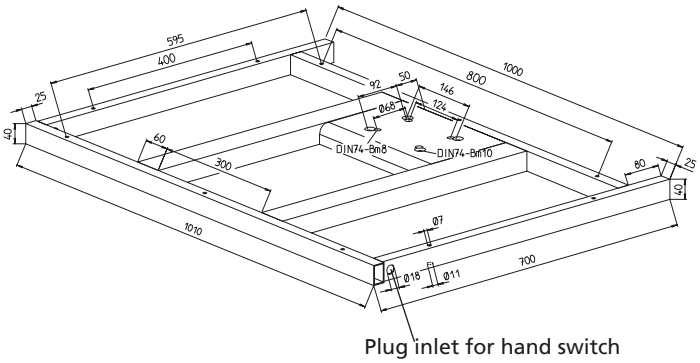
- Our universal fixing plate and table frame provide two standard solutions for the attachment of table tops, brackets etc. to the lifting column without the need for any further modifications.

Material: steel,
black powder-coated (RAL 9005),
galvanised fastenings







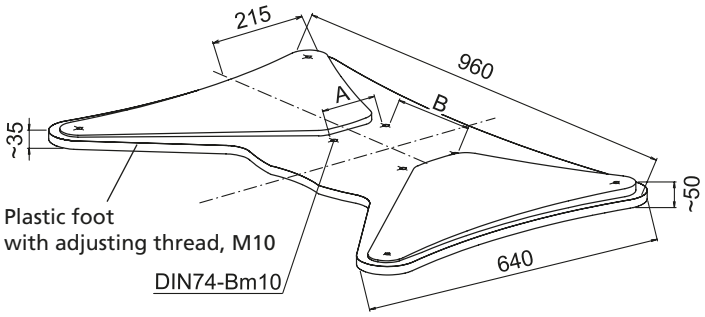


Code No.	Type
QZD100085	Frame for *RKPowerlift*, incl. fastenings
QZD100313	Fixing plate
QZD100337	Fixing set for fixing plate *RKPowerlift*, M10 x 30 DIN 7984

Base plate

Material: steel,
black powder-coated RAL 9005,
Galvanised fastenings

Scope of delivery: complete with fastenings



[mm]

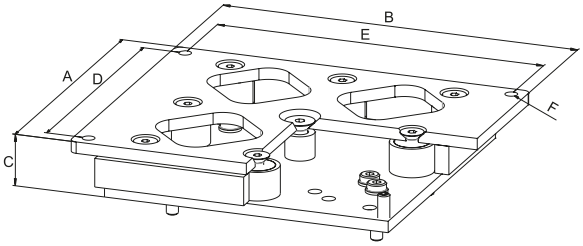
Code No.	Type	A	B
for *RKPowerlift* Z			
QZD100092	Base plate for ***RKPowerlift*** classic	124	182
QZD100084	Base plate for ***RKPowerlift*** wave	120	190
QZD100090	Base plate for ***RKPowerlift*** technic	130	174
for *RKPowerlift* S			
QZD100257	Base plate for ***RKPowerlift***	93	180

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.



[mm]

Code No.	Type	A	B	C	D	E	F
QZD100455	Powerlift S / Z	200	250	36	180	230	M 10

RK SyncFlex V

Scope of delivery:
Adjuster plate, incl. fixing material

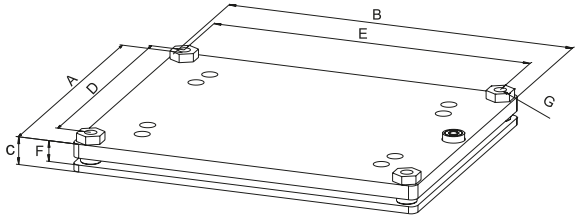
Option:
Optionally available with or without pressure plate (see table)

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.

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

- The lifting columns can be aligned via the vertical adjustment around the X-Y axes.



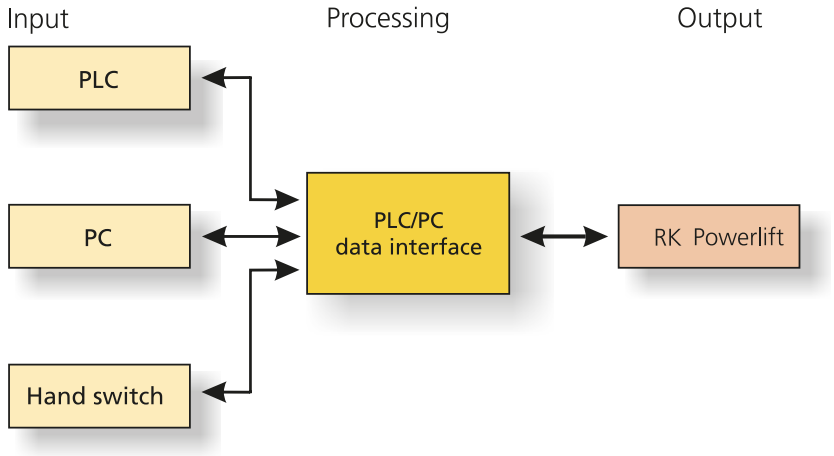
[mm]

Code No.	Type	A	B	C	D	E	F	G
Without pressure plate								
QZD100447	Powerlift S	200	250	-	180	230	10-15	M 10
QZD100449	Powerlift Z-classic	200	250	-	180	230	10-15	M 10
QZD100450	Powerlift Z-wave	200	250	-	180	230	10-15	M 10
With pressure plate								
QZD100464	Powerlift S	200	250	15-20	180	230	10-15	M 10
QZD100465	Powerlift Z-classic	200	250	15-20	180	230	10-15	M 10
QZD100466	Powerlift Z-wave	200	250	15-20	180	230	10-15	M 10

PLC/PCdata interface

- This interface enables actuation of the synchronous control system via different input devices (PLC, PC and hand switch)

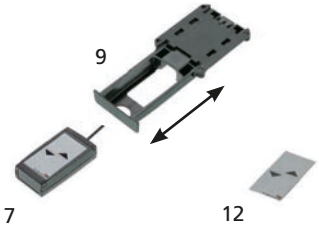
You will find further product information on page 184



Code No.	Type
QZD100108	PLC/PC data interface
QZD100110	Fixing plate for mounting in a control cabinet

Hand switches/accessories

RKPowerlift mono



Code No.	Version	Fig.
Hand switch for *RKPowerlift* mono		
QZB00A00BC011	Membrane keyboard with 1 m spiral cable – 2 function keys	12
QZB02C01AE114GS	Foot switch – 2 function keys	13
QZB00D04AB041	Hand switch with 1 m spiral cable – 2 function keys	7
Hand switch for *RKPowerlift* Standard (Start and Stop)		
QZB00D07BK141	Wireless hand switch – 2 function keys	14
Accessories for hand switches		
QZD000074	Hand switch drawer: Fig. 7 + 8	9

RKPowerlift synchro

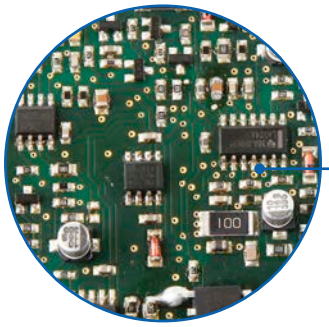
Code No.	Version	Fig.
Hand switch for *RKPowerlift* synchro		
QZB00D04AD041	Hand switch with 1 m spiral cable – 6 function keys	8

Two-stage lifting column - *RKPowerlift M*

The mini version of the *RKPower*lift – the *RKPower*lift M

Standard

✓ Hand switch receptacle, power receptacle with integrated fuse



Soft control versions are available with SMPS technology
(**S**witched-**M**oded **P**ower **S**upply technology)

- ✓ Wide range input (100 - 240 V~ 50 / 60 Hz)
- ✓ Soft start and stop process
- ✓ Overcurrent-monitoring
- ✓ Temperature-monitoring
- ✓ Single-fault protection
- ✓ Energy-efficient
- ✓ Weight-optimised

Optional

✓ Power supply/output versions

RKPowerlift M

- Compressive forces to 3,000 N
- Tensile forces 1,500 N
- Lifting speed 13 mm/s

Features:

- Withstands high torsional and bending moments
- Integrated motor
- Extremely quiet operation
- Choice of internal or external control
- Four fixing slots in external profile
- Power receptacle at top or bottom, as preferred
- Testet to:
  IEC 60601-1 (ed.3)
  EN 60601-1:2006/A1:2013

Options:

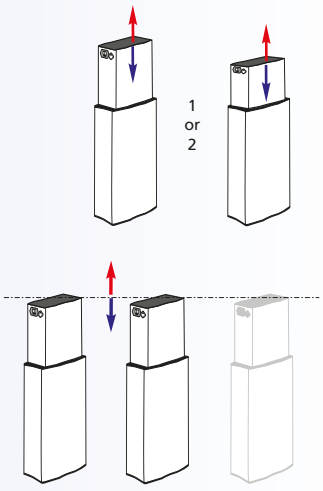
- Special stroke lengths available on request
- Special installation lengths available on request

RKPowerlift M - Table of contents

Properties/Technical data

Versions

(Dimensions, order numbers)



Accessories

Fixing

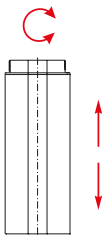
Position determination

General information/operating conditions

Type	*RKPowerlift M* for external control	*RKPowerlift M* for internal control
Design	Rectangular lifting column in compact design	
Guide	16 POM slide bearings	
Installation position	Any position/suspended with drop protection provided by the customer	
Push force	3,000 N	
Pull force*	1,500 N	
Max. speed	13 mm/s	
Voltage	24 V DC	230 V AC / 100 - 240 V AC
Power input	120 W	150 W
Protection class	IP 30	
Self-locking	Yes	
Ambient temperature	+5°C to +40°C	
Max. displacement with synchronous operation	0-2 mm	
Duty cycle	At nominal load, 15% (max. 1.5 mins operating time, 8.5 mins rest time)	

*In medical applications, the maximum pull force of 750 N must not be exceeded.

Load data



M= 200 Nm (dynamic)

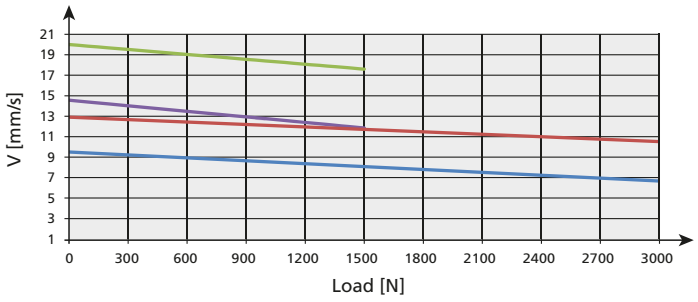
Fpush= 1,500 N / 3000 N

Fpull= 1,500 N

Support torque 400 Nm (static)

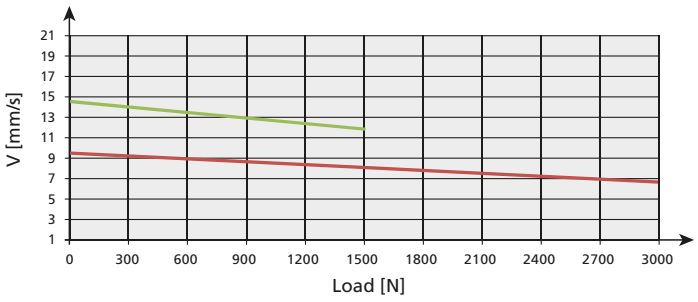
Speed/Force diagram

RKPowerlift M for external control



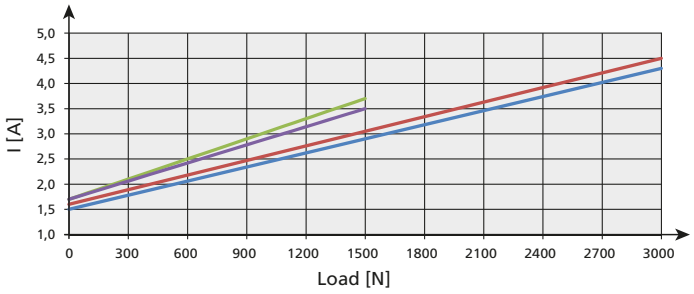
Speed/Force diagram

RKPowerlift M, with internal control



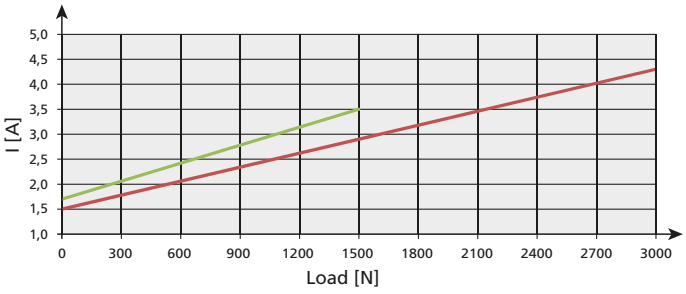
Current output/Force diagram

RKPowerlift M, for external control



Current output/Force diagram

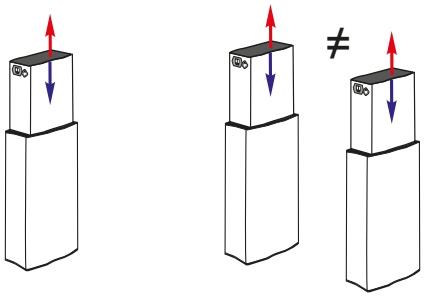
RKPowerlift M, with internal control



Powerlift M 3,000N at 36V*2
Powerlift M 3,000N at 24V*1
Powerlift M 1,500N at 36V*2
Powerlift M 1,500N at 24V*1
Powerlift M 3,000N internal control
Powerlift M 1,500N internal control

24 V*1 determined with a transformer control 120 VA — 36 V*2 determined with a MultiControl duo

RKPowerlift M Mono

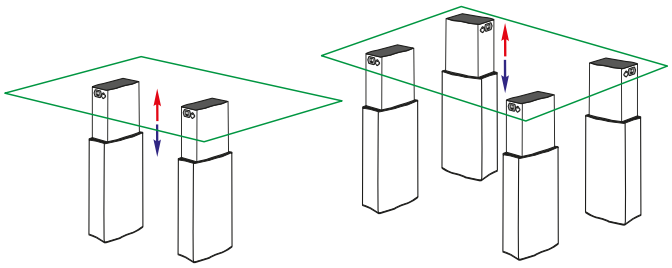


1-2 ***RKPowerlifts*** in single or parallel operation

Parallel operation

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

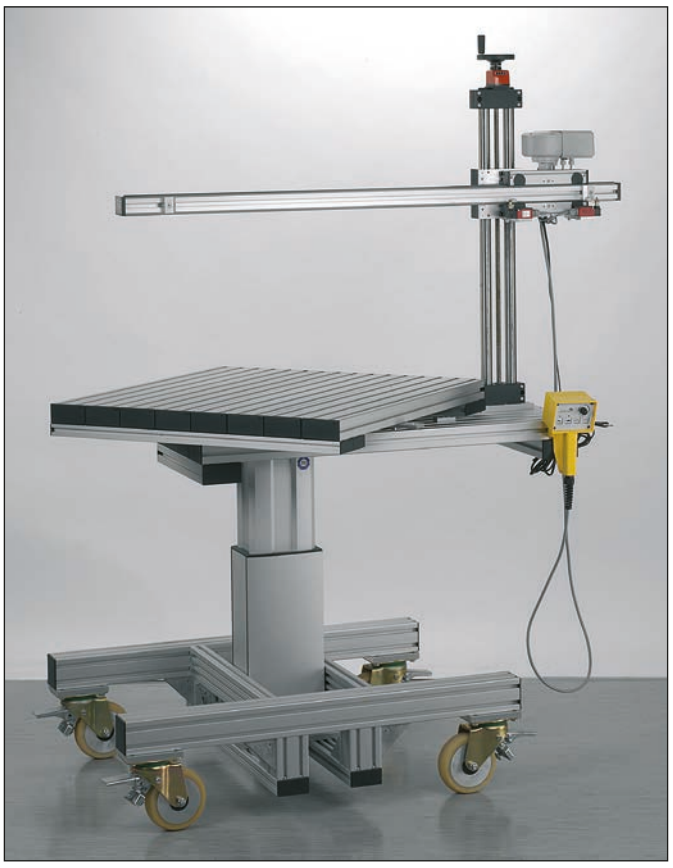
RKPowerlift M Synchro



2-4 ***RKPowerlifts*** in synchronous operation

Synchronous operation

Synchronous operation of two or more columns. In conjunction with the integrated sensors, the control (page 148) ensures synchronisation, and this constant alignment of all the columns in both directions of travel, even if subject to different loads. The synchronous operation tolerance is max. 2 mm.
A memory function is also available.

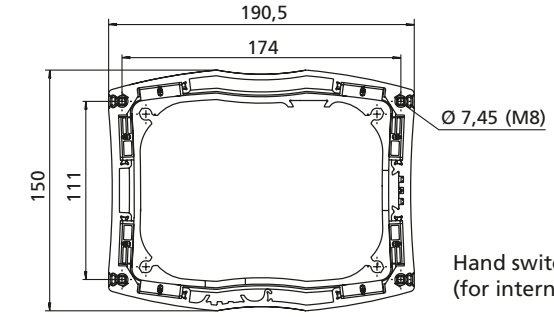


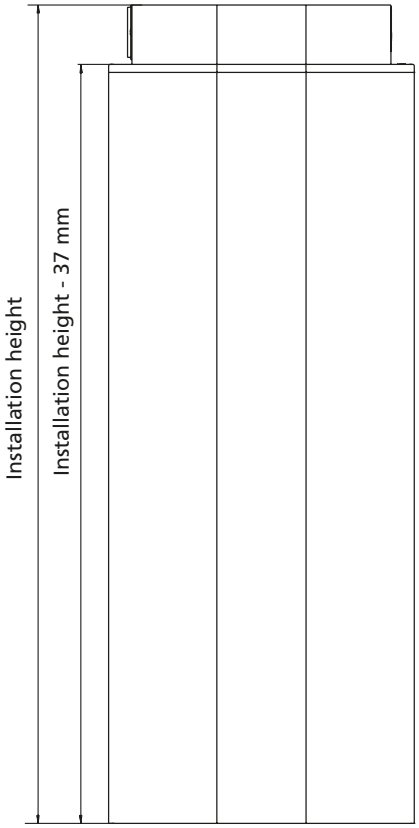
Movable measuring table, table adjustment via RK Powerlift, adjustment of measuring equipment via EPX/PL linear actuator

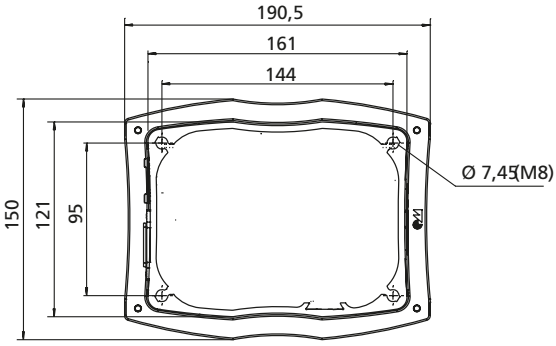
Versions

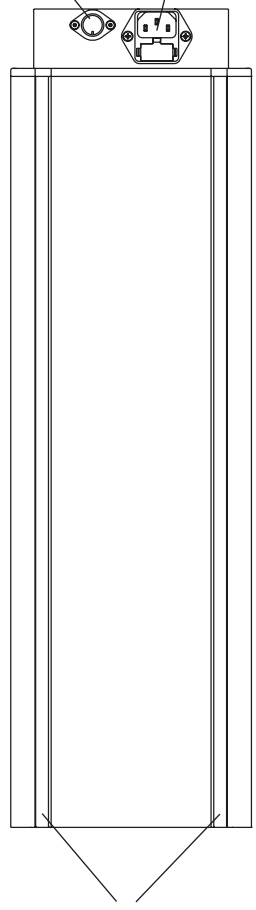
■ **with internal control**

■ **for external control**



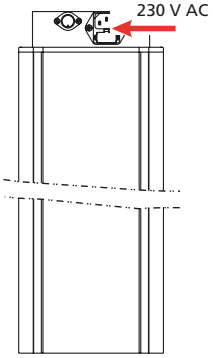




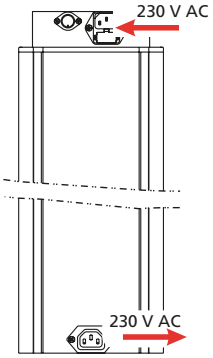


Power supply - versions:

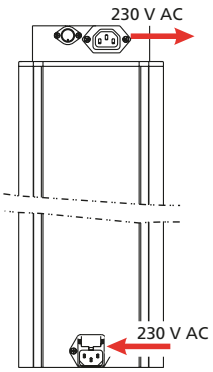
Type 0:
Standard,
Power supply, top



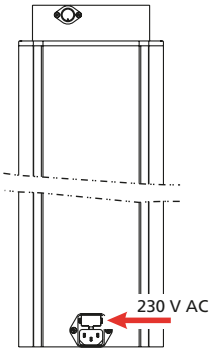
Type 1
(cable feedthrough):
Power supply, top/
power output, bottom



Type 3
(cable feedthrough):
Power supply, bottom/
power output, top

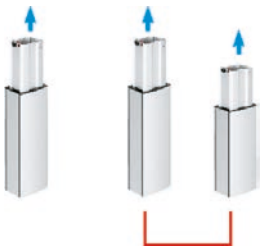


Type 4:
Power supply, bottom



RKPowerlift M - Versions

RKPowerlift M mono



1-2 single or parallel operation

*** Order information:**
Soft control versions are now available with SMPS technology.

Only for Soft-Control-Versions please select IEC cable separately (page 85).

Code No.	Type	Push force [N]	Pull force [N]	Lifting speed [mm/s]	Stroke length [mm]	Installation height [mm]	Weight [kg]
With internal control / SNT mono – Soft Control*							
QPM08DE42_300	*RKPowerlift M*	3000 / 3000 (med.)	1500 / 750 (med.)	9	300	510	~11,0
QPM08DE42_400					400	610	~12,5
QPM13DC42_300		1500 / 1500 (med.)	1500 / 750 (med.)	13	300	510	~11,0
QPM13DC42_400					400	610	~12,5
QPM13DC42_500					500	710	~14,0
With internal control/memory (9 positions can be stored)							
QPM13BC46_300	*RKPowerlift M*	1500	1500	13	300	510	~12,0
QPM13BC46_400					400	610	~13,5
QPM13BC46_500					500	710	~15,0

For mains supply versions see page 77
0 = Standard
1 = Type 1
3 = Type 3
4 = Type 4

Code No.	Type	Push force [N]	Pull force [N]	Lifting speed [mm/s]	Stroke length [mm]	Installation height [mm]	Weight [kg]
For external control							
QPM08EE480300	*RKPowerlift M*	3000 / 3000 (med.)	1500 / 750 (med.)	9	300	510	~12,0
QPM08EE480400					400	610	~13,5
QPM13EC480300		1500 / 1500 (med.)	1500 / 750 (med.)	13	300	510	~12,0
QPM13EC480400					400	610	~13,5
QPM13EC480500					500	710	~15,0

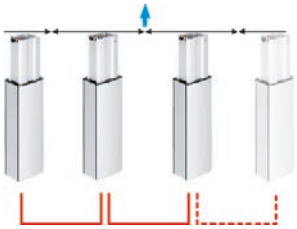
Transformer control 120 VA
approx. 24 V DC

MultiControl mono
approx. 36 V DC

Order information:
Observe the current output of the drives when selecting the control.

Code No.	External control mono	
QZA09C13BH031	Transformer control 120 VA connection C, up to max. I= 3 A, 24 V DC	Controls up to 1 drives
QSTACCA1AA000	MultiControl mono connection C, up to max. I= 12 A current output, 36 V DC	Controls up to 2 drives

RKPowerlift M synchro



2-4 in synchronous operation

Code No.	Type	Push force [N]	Pull force [N]	Lifting speed [mm/s]	Stroke length mm]	Installation height [mm]	Weight [kg]
With internal control / synchro memory (9 positions can be stored)							
QPM13BC47_300	*RKPowerlift M*	1500	1500	13	300	510	~12,0
QPM13BC47_400					400	610	~13,5
QPM13BC47_500					500	710	~15,0

For mains supply versions see page 77
0 = Standard
1 = Type 1
3 = Type 3
4 = Type 4

Code No.	Type	Push force [N]	Pull force [N]	Lifting speed [mm/s]	Stroke length mm]	Installation height [mm]	Weight [kg]
For external control							
QPM08EE480300	*RKPowerlift M*	3000 / 3000 (med.)	1500 / 750 (med.)	9	300	510	~12,0
QPM08EE480400					400	610	~13,5
QPM13EC480300		1500 / 1500 (med.)	1500 / 750 (med.)	13	300	510	~12,0
QPM13EC480400					400	610	~13,5
QPM13EC480500					500	710	~15,0

MultiControl duo
approx. 36 V DC

MultiControl quadro
approx. 36 V DC

Order information:
Observe the current output of the drives when selecting the control.

Code No.	External control synchro	
QST44C02AA000	MultiControl duo connection C, up to max. I = 12 A current output, 36 V DC	for synchronous control up to 2 drives
QST44C04AA000	MultiControl quadro connection C, up to max. I = 12 A current output, 36 V DC	for synchronous control up to 4 drives

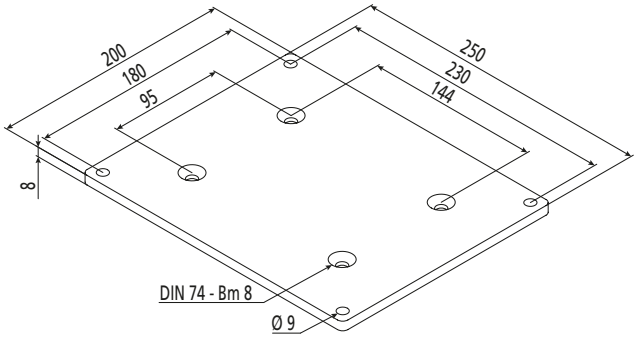
Assembly plate

- These mounting plates are fitted using the mounting kits supplied and fixed directly into the screw channels in the Powerlift „M“. A further 4 holes, in the mounting plate, allow easy connection, to brackets or corresponding fixture assembly work etc.

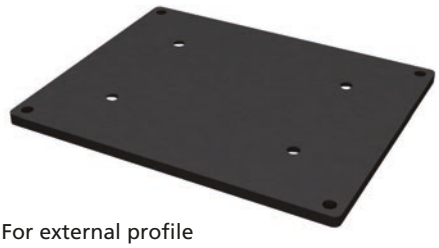
Material: S 235 JR, black powder-coated, galvanised fixing set

Scope of delivery:
Plate, incl. fixing set

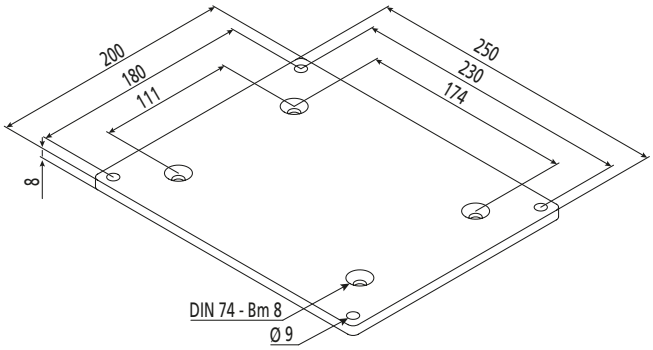
For internal profile



Code No.	Type
QZD100541	Top assembly plate



For external profile



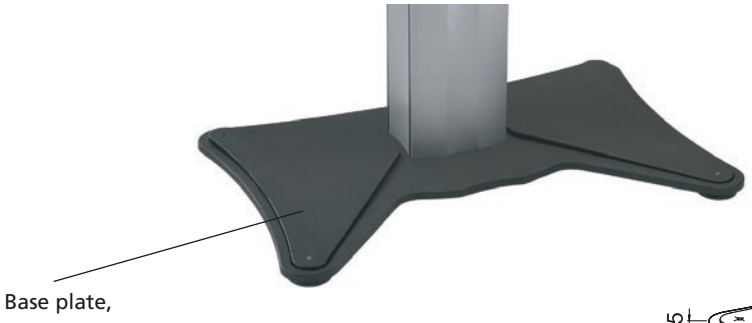
Code No.	Type
QZD100542	Bottom assembly plate

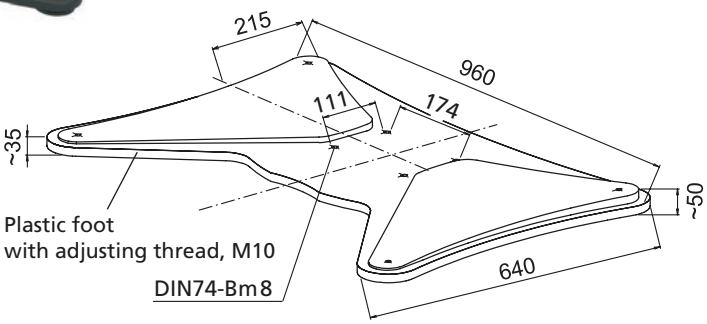
Base plate

Material: steel,
black powder-coated (RAL 9005),
Galvanised fastenings.

Scope of delivery:
complete with
fastenings

Order information:
Base plate only in combination
with "Type 0" possible
(see page 77)





Code No.	Type
QZD100546	Base plate for *RKPowerlift M*

Order instruction square nut:

- **Purchase only in lot sizes and a multiple of that, see product table below**

- For connecting accessories to the external profile

Square nut

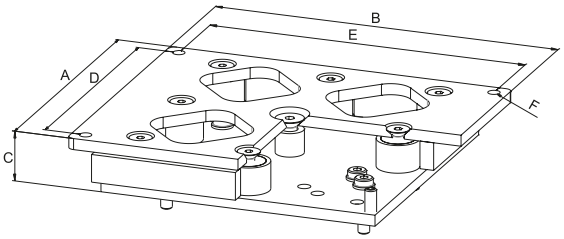
Code No.	lot sizes	Type
qzd1003261	10, 20, 30... pcs	Square nut M4, DIN 562

RK SyncFlex H

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.

Scope of delivery:
Adjuster plate,
incl. fixing material



[mm]

Code No.	Type	A	B	C	D	E	F
QZD100453	*RKPowerlift M*	200	250	36	180	230	M 10

RK SyncFlex V

Vertikale Ausrichtung

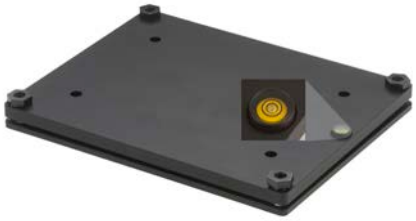
- If the lifting columns are not parallel, the distance between the two upper fixing points will change during the movement. However, a rigid connection keeps this distance constant, and this means that the lifting columns are subject to very strong forces.

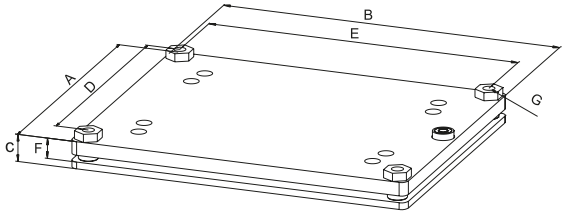
RK SyncFlex V enables the compensation of unevenness in the mounting environment.

- The lifting columns can be aligned via the vertical adjustment around the X-Y axes.

Scope of delivery:
Adjuster plate,
incl. fixing material

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

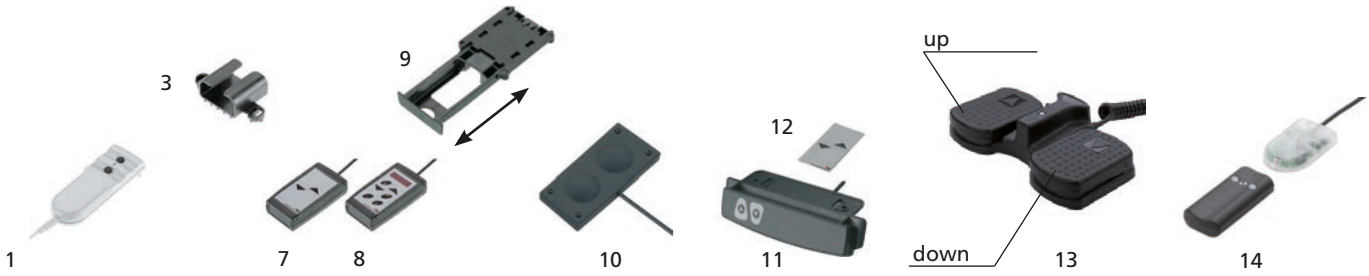




[mm]

Code No.	Type	A	B	C	D	E	F	G
Without pressure plate								
QZD100446	*RKPowerlift M*	200	250	-	180	230	10-15	M 10
With pressure plate								
QZD100463	*RKPowerlift M*	200	250	15-20	180	230	10-15	M 10

Hand switches/accessories



Code No.	Version	For internal control			For external control		Fig.
		SNT mono - Soft Control	Memory	Synchro Memory	Mono	Synchro	
QZB02C03AB031	Hand switch 2 function keys – 1 m spiral cable –				●	●	1
QZB00D04AB041	Hand switch 2 function keys – 1 m spiral cable –	●			●	●	7
QZB00D04AD041	Hand switch 6 function keys / display – 1 m spiral cable –		●	●		●	8
QZB02A03AB041	Hand switch 2 function keys – 1 m cable –				●	●	10
QZB00A00AB051	Table hand switch 2 function keys – 1 m spiral cable –				●	●	11
QZB00A00BC011	Membrane keyboard 2 function keys – 1 m spiral cable –	●			●	●	12
QZB02C01AE114GS	Foot switch – 2 function keys – 2 m cable –	●			●	●	13
QZB00D07BK141	Wireless hand switch – 2 function keys – 1 m spiral cable –	●			●	●	14
Accessories							
QZD000072	Bracket for hand switch						3
QZD000074	Drawer for hand switch						9

Optional accessories

Code No.	Versions	For internal control			For external control		Fig.
		SNT mono - Soft Control	Memory	Synchro Memory	Mono	Synchro	
QZD100093	Bus cable for networking of up to 8 synchronous control with 6 m cable			●		●	
QZD070308*	Hand switch cabel / open cable end with helix cable 1m	●			●	●	
QZD0702844000*	Connecting cable with 5- pin connector and open cable end with 4 m cable				●	●	3
QZD070526	Extension cable drive for connector C / 8 - pin DIN - socket with cabel 2,5m				●	●	4

*for the connection of customer´s hand switch or an external potentiometer (in the case of the MultiControl mono)

IEC cable

- Only for Soft-Control-Versions please select IEC cable separately

F
(Europe)

J
(Switzerland)

G
(Great Britain)

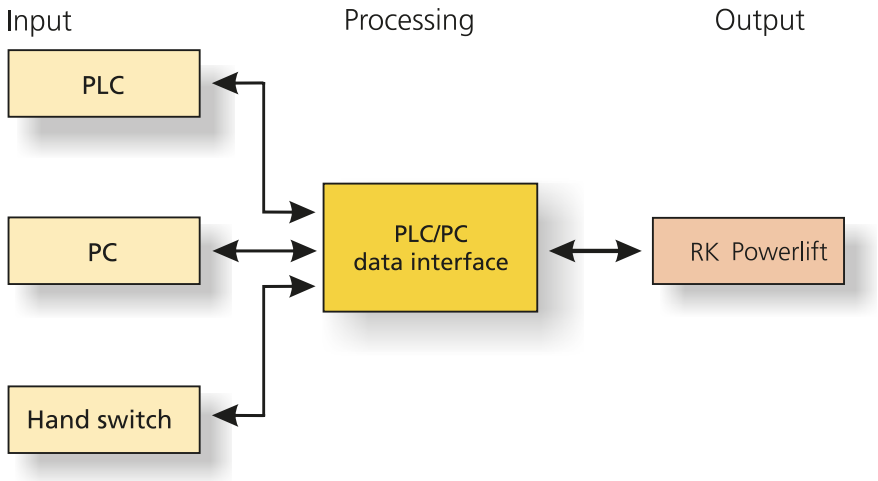
B
(Japan, USA)

Code No	Version	Typ	Cable lenth
QZD070618	IEC cable (Europe version, earthed plug)	F	1.80 m
QZD020159	IEC cable (Switzerland version, earthed plug)	J	1.80 m
QZD070619	IEC cable (Great Britain version, earthed plug)	G	1.80 m
QZD070631	IEC cable (Japan version, earthed plug)	B	1.80 m
QZD070622	IEC cable (USA version, earthed plug)	B	2.00 m

PLC/PC data interface

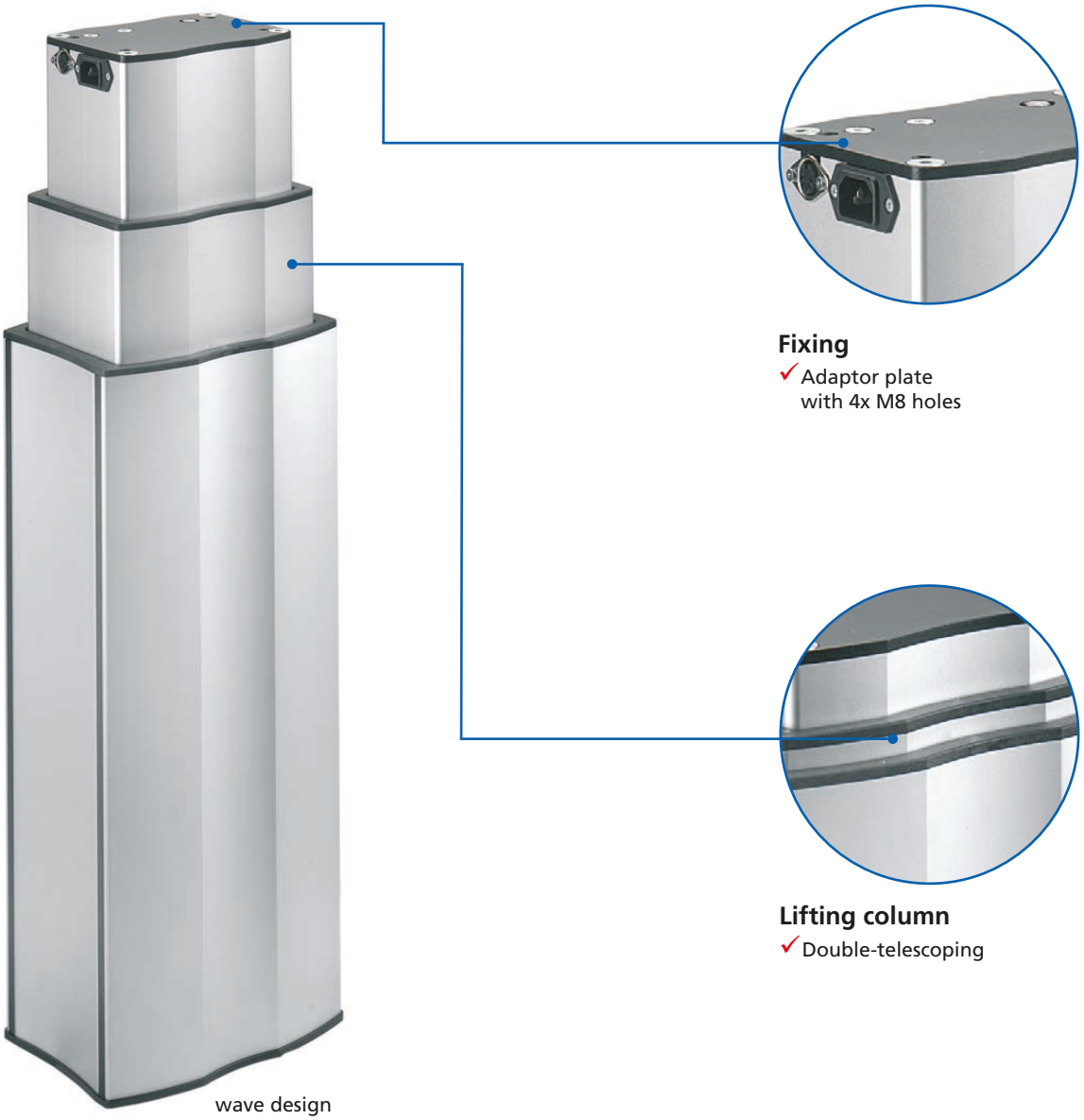
- This interface enables actuation of the synchronous control system via different input devices (PLC, PC and hand switch)

For detailed information, please look in our catalogue, "Linear Technology **Lifting columns and electric cylinders**" (page 182)



Code No.	Type
QZD100108	PLC/PC data interface
QZD100110	Fixing plate for mounting in a control cabinet

The *RKPowerlift* with optimised installation height/stroke ratio



wave design

Fixing

✓ Adaptor plate with 4x M8 holes

Lifting column

✓ Double-telescoping

RKPowerlift telescope:

- Push forces 800 N / 1,600 N
  Pull force 800 N
- Lifting speed
  15 mm/s, 30 mm/s

Features:

- Withstands high bending moments in both static and dynamic range
- Integrated motor
- Adjustable stroke length
- Choice of internal or external control
- Four fixing slots in external profile

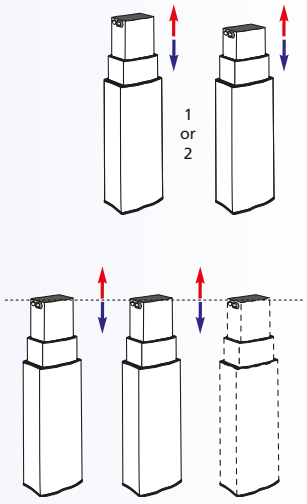
Options:

- Special stroke lengths available on request
- Quadro control enables synchronisation of up to 32 columns

RKPowerlift telescope - Table of content

Properties/Technical data

Versions
(Dimensions, order numbers)



Accessories

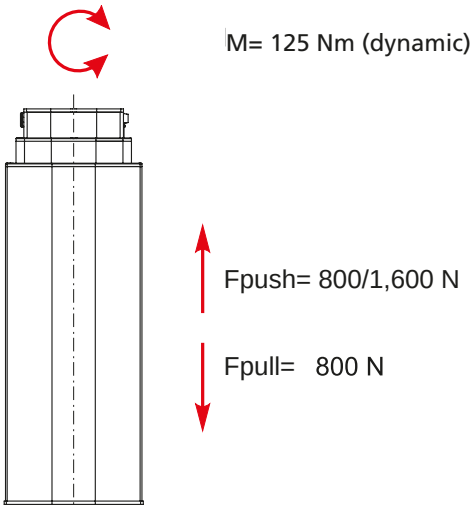
Fixing

Position determination

General information/operating conditions

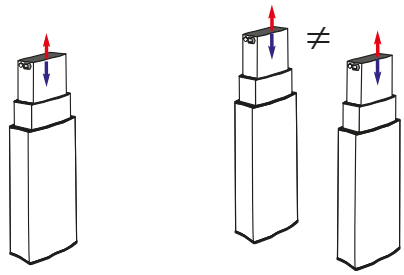
Design	Rectangular lifting column in compact design
Guide	Multiple roller/slide bearings
Installation position	Any position/ suspended with drop protection provided by the customer
Push force	Choice of 800/1,600 N
Pull force	Max. 800 N
Voltage	36 V DC
Power input	180 W/210 W
Protection class	IP 30
Self-locking	Yes
Ambient temperature	+5°C to +40°C
Max. displacement with synchronous operation	0-2 mm/0-1.5 mm
Duty cycle	At nominal load, 15% (max. 1.5 mins operating time, 8.5 mins rest time)

Load data



Support torque 200 Nm (static)

RKPowerlift telescope Mono

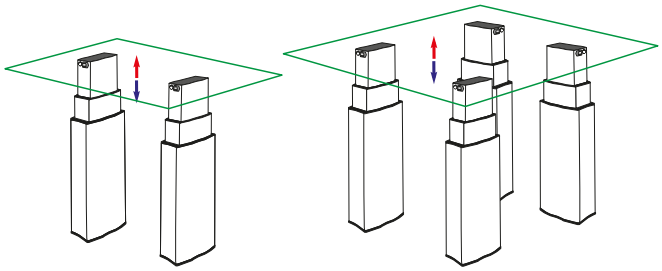


1-2 *RKPowerlifts* in single or parallel operation

Parallel operation

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

RKPowerlift telescope Synchro



2-4 *RKPowerlifts* in synchronous operation

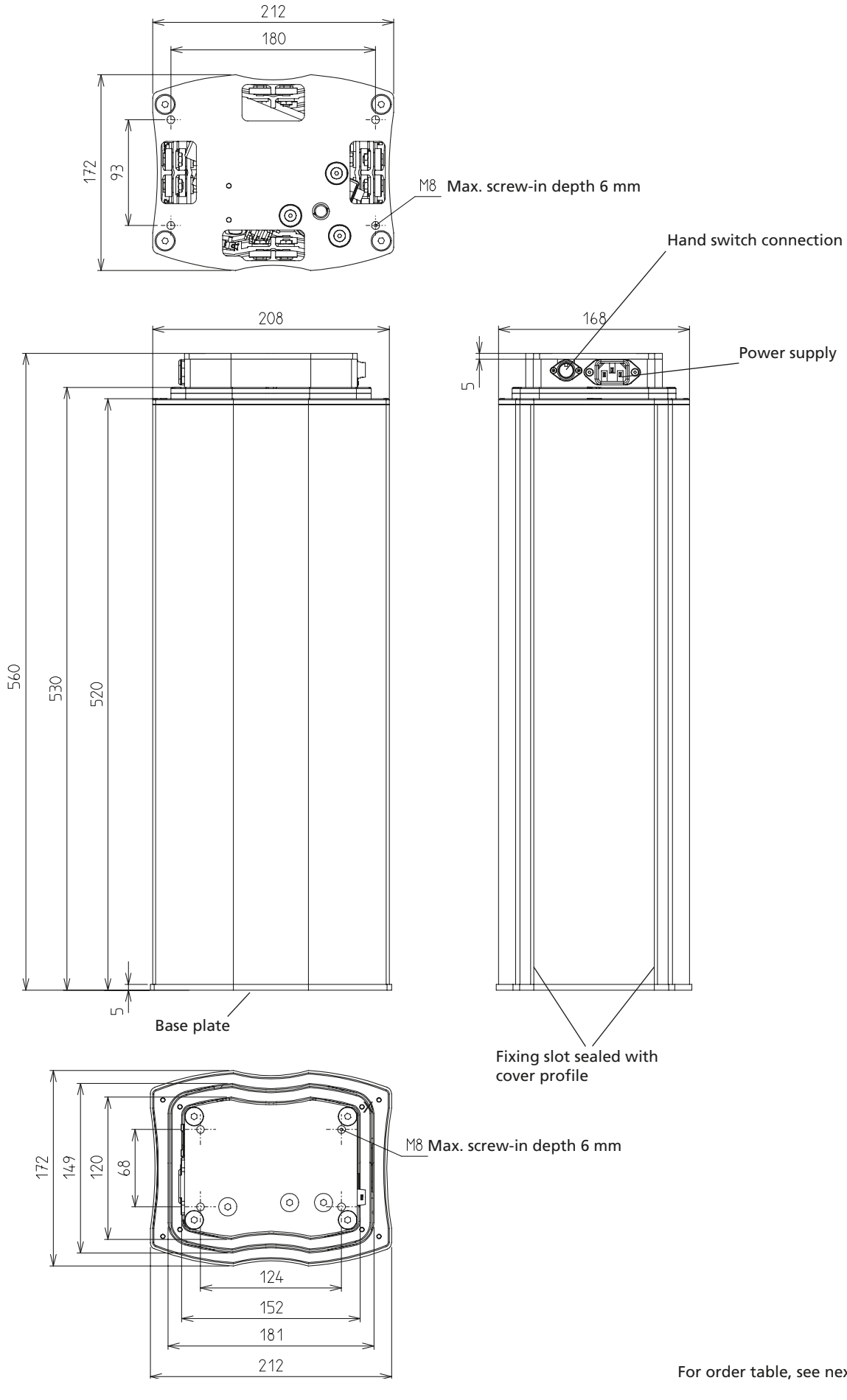
Synchronous operation

Synchronous operation of two or more columns. In conjunction with the integrated sensors, the control (see page 148) 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.1.5 mm for the 15 mm/s version and max. 2 mm for the 30 mm/s version.
A memory function is also available.

Versions

■ with internal control

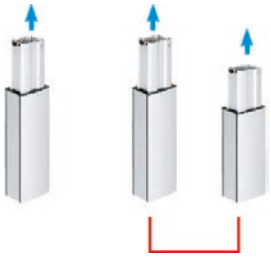
■ for external control



For order table, see next page

RKPowerlift telescope - Versions

RKPowerlift telescope mono



1-2 single or parallel operation

Code No.	Type	Push force [N]	Pull force [N]	Lifting speed [mm/s]	Stroke length [mm]	Installation height [mm]	Weight [kg]
With internal control/standard (start and stop)							
QPT30BC420650	*RKPowerlift telescope 30*	800	800	30	650	560	~18
QPT15BE420650	*RKPowerlift telescope 15*	1,600	800	15	650	560	~18
With internal control/memory (9 positions can be stored)							
QPT30BC460650	*RKPowerlift telescope 30*	800	800	30	650	560	~18
QPT15BE460650	*RKPowerlift telescope 15*	1,600	800	15	650	560	~18

Code No.	Type	Push force [N]	Pull force [N]	Lifting speed [mm/s]	Stroke length [mm]	Installation height [mm]	Weight [kg]
For external control							
QPT30EC480650	*RKPowerlift telescope 30*	800	800	30	650	560	~17
QPT15EE480650	*RKPowerlift telescope 15*	1,600	800	15	650	560	~17

Transformer control 120 VA

approx. 24 V DC

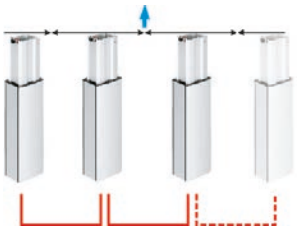
MultiControl mono

approx. 36 V DC

Code No.	External control for telescopic screw drive	
QZA09C13BH031	Transformer control 120 VA connection C	Controls 1 drive
QSTACCA1AA000	MultiControl mono connection C, up to max. I= 12 A current output, 36 V DC	Controls up to 2 drives
Accessories		
QZD0702844000*	Straight connecting cable (4 m) with 5-pin connector and open cable end	
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)

RKPowerlift telescope synchro



2-4 in synchronous operation

Code No.	Type	Push force [N]	Pull force [N]	Lifting speed [mm/s]	Stroke length [mm]	Installation height [mm]	Weight [kg]
With internal control / synchro memory (9 positions can be stored)							
QPT30BC470650	*RKPowerlift telescope 30*	800	800	30	650	560	~18
QPT15BE470650	*RKPowerlift telescope 15*	1,600	800	15	650	560	~18

Code No.	Connecting cable (bus cable)
QZD100093	6 m bus cable for the networking of up to 8 synchronous controls

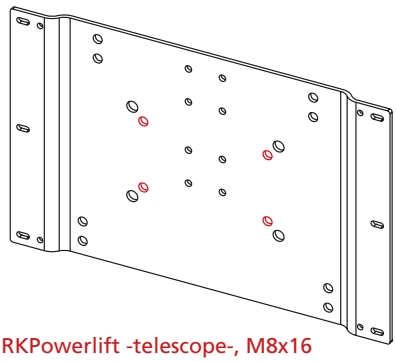
Code No.	Type	Push force [N]	Pull force [N]	Lifting speed [mm/s]	Stroke length [mm]	Installation height [mm]	Weight [kg]
For external control							
QPT30EC480650	*RKPowerlift telescope 30*	800	800	30	650	560	~17
QPT15EE480650	*RKPowerlift telescope 15*	1,600	800	15	650	560	~17

MultiControl (duo und quadro)

approx. 36 V DC

Code No.	External control for telescopic screw drive	
QST43C02AA000	MultiControl duo connection C, up to max. I = 12 A current output	for synchronous control of 1-2 drives
QST43C04AA000	MultiControl quadro connection C, up to max. I = 12 A current output	for synchronous control of 1-4 drives
Accessories		
QZD070526	Extension cable 2,5 m drive for connector C/8-pin DIN socket	

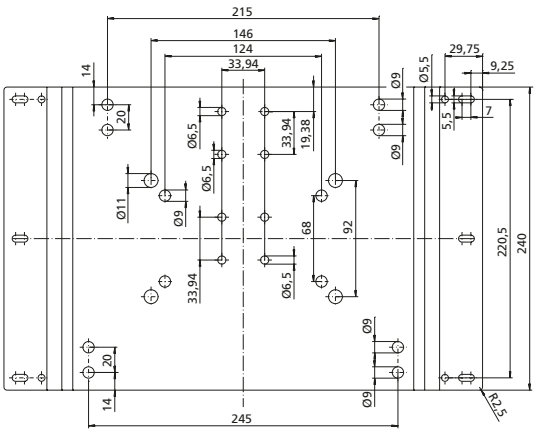
Frame/fixing plate for table top

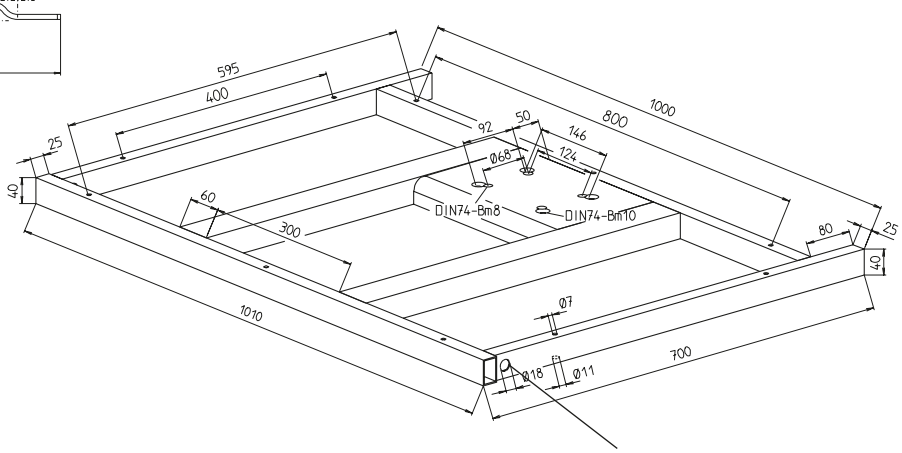


RKPowerlift -telescope-, M8x16

- Our universal fixing plate and table frame provide two standard solutions for the attachment of table tops, brackets etc. to the lifting column without the need for any further modifications.

Material: steel,
black powder-coated (RAL 9005)
Galvanised fastenings





Plug inlet for hand switch

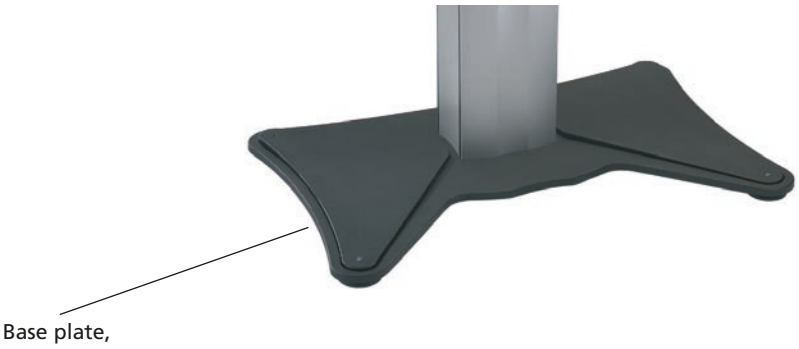
Code No.	Type
QZD100085	Frame for *RKPowerlift telescope*, incl. fastenings
QZD100313	Fixing plate
QZD100338	Fixing set for fixing plate *RKPowerlift telescope*, M8 x 16 DIN 7984

Base plate

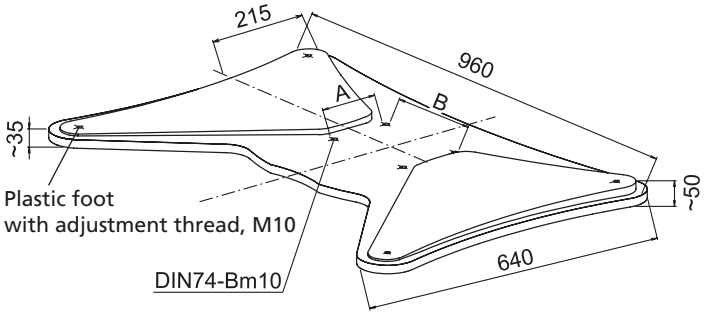
Material: steel,
black powder-coated (RAL 9005)
Galvanised fastenings

Scope of delivery:
complete with fastenings

Order information:
Base plate only in combination with “Type 0” possible
(see page 77)



Base plate,



[mm]

Code No.	Type	A	B
QZD100257	Base plate for *RKPowerlift telescope*	93	180

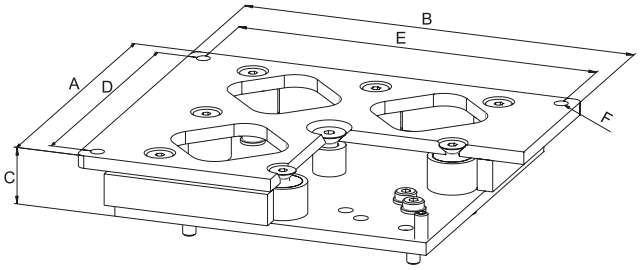
RKPowerlift telescope – Fixing

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.



[mm]

Code No.	Type	A	B	C	D	E	F
QZD100453	Powerlift telescope	200	250	36	180	230	M 10

RK SyncFlex V

Scope of delivery:
Adjuster plate, incl. fixing material

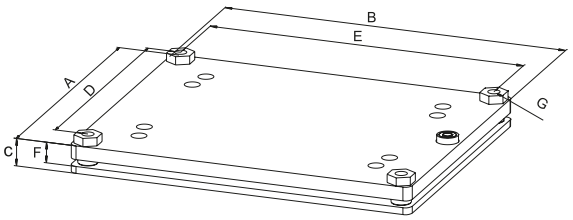
Option:
Optionally available with or without pressure plate (see table)

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.

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

- The lifting columns can be aligned via the vertical adjustment around the X-Y axes.



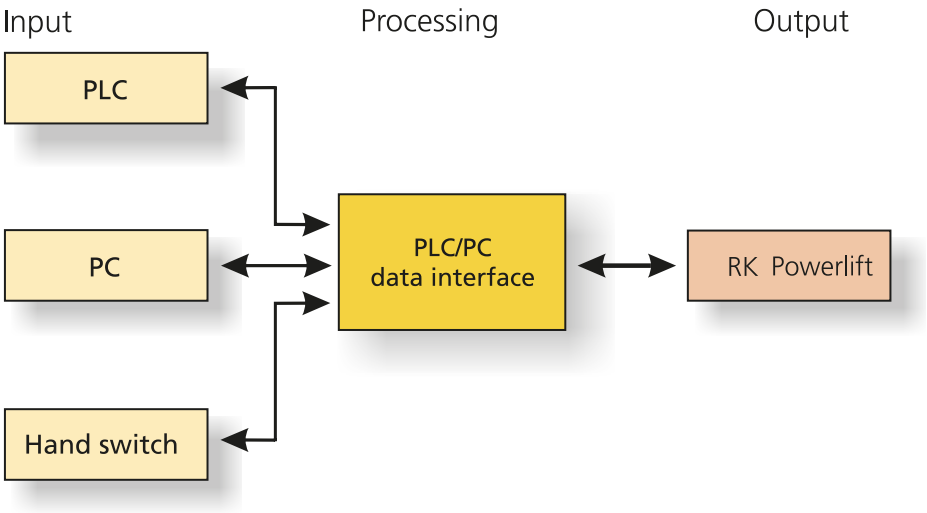
[mm]

Code No.	Type	A	B	C	D	E	F	G
Without pressure plate								
QZD100447	Powerlift telescope	200	250	-	180	230	10-15	M 10
With pressure plate								
QZD100464	Powerlift telescope	200	250	15-20	180	230	10-15	M 10

PLC / PCdata interface

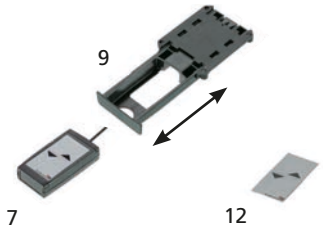
- This interface enables actuation of the synchronous control system via different input devices (PLC, PC and hand switch)

You will find further product information on page 184



Code No.	Type
QZD100108	PLC/PC data interface
QZD100110	Fixing plate for mounting in a control cabinet

Hand switches / accessories
(internal control
*RK**Power**lift telescope* mono)



Code No.	Version	Fig.
Hand switch for *RKPowerlift telescope* mono		
QZB00A00BC011	Membrane keyboard with 1 m spiral cable – 2 function keys	12
QZB02C01AE114GS	Foot switch – 2 function keys	13
QZB00D04AB041	Hand switch with 1 m spiral cable – 2 function keys	7
Hand switch for *RKPowerlift telescope mono* (Start and Stop)		
QZB00D07BK141	Wireless hand switch – 2 function keys	14
Accessories for hand switches		
QZD000074	Drawer for hand switch	9

Hand switches/accessories
(external control
*RK**Power**lift telescope* synchro)

Code No.	Version	Fig.
Hand switch for *RKPowerlift telescope* synchro		
QZB00D04AD041	Hand switch with 1 m spiral cable – 6 function keys	8

Multi-stage lifting columns - Alpha Colonne

Square column in two sizes, optionally available with internal control

Connecting plate to adjust installation dimension

- ✓ Fine adjustment of installation dimension + 3 mm
- ✓ Simple fixing options

Multi-stage column

- ✓ Withstands eccentric loads

Features:

- Two sizes available: “medium” and “large”
- Suitable for both tensile and compressive loads push/pull forces
- Self-locking, even at max. load
- Pre-set slider units ensure zero play, even after many years of operation
- Integrated limit switches
- Optional internal control

Options:

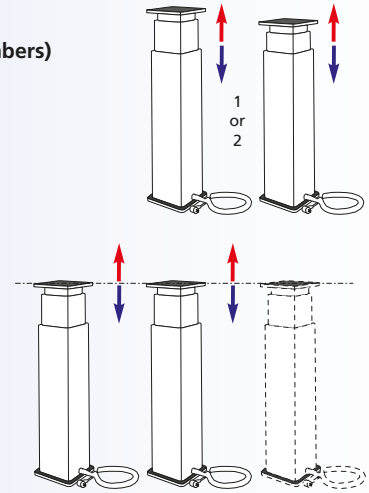
- Special lengths

Alpha Colonne - Table of contents

Properties/Technical data

Versions

(Dimensions, order numbers)



Accessories

Fixing

Position determination

Alpha Colonne – Technical data

General information/operating conditions

Type	Alpha Colonne for external control	Alpha Colonne with internal control
Design	Lifting column with integrated DC motor	
Guide	Slide guides made of POM	
Installation position	Any position/suspended with drop protection provided by the customer	
Push force/pull force	Up to 3,000 N	
Self-locking	Up to 3,000 N	
Ambient temperature	-20°C to +60°C	
Duty cycle (at max. load)	20% at nominal load (max. 2 mins operating time, 8 mins rest time)	
Displacement during synchronous operation	2-4 mm	
Voltage	24 V DC	230 V AC
Current output	Max. 5.5 A	according to drive
Power input	Max. 130 W	according to drive
Protection class	IP 30	IP 30

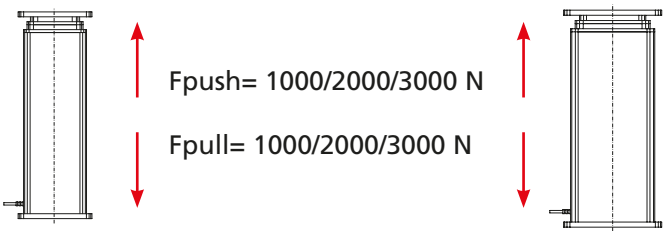
Load data

Alpha Colonne „Medium“

M= 200 Nm
static, dynamic

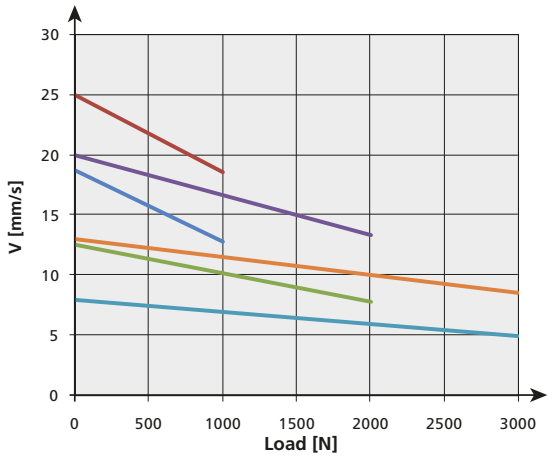
Alpha Colonne „Large“

M= 450 Nm
static, dynamic



Speed/Force diagram

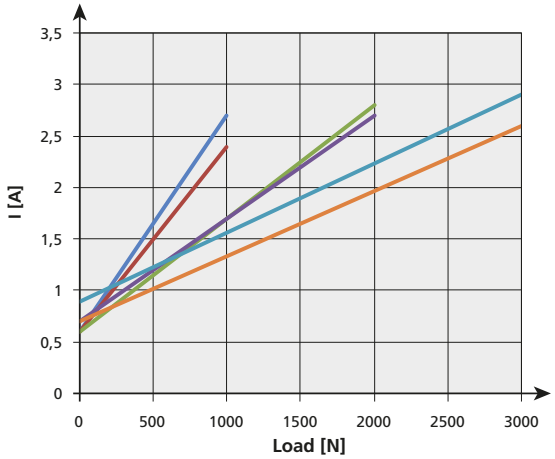
Alpha Colonne for external control



- Alpha Colonne 1,000N at 24V*1
- Alpha Colonne 1,000N at 36V*2
- Alpha Colonne 2,000N at 24V*1
- Alpha Colonne 2,000N at 36V*2
- Alpha Colonne 3,000N at 24V*1
- Alpha Colonne 3,000N at 36V*2

Current output/Force diagram

Alpha Colonne with external control

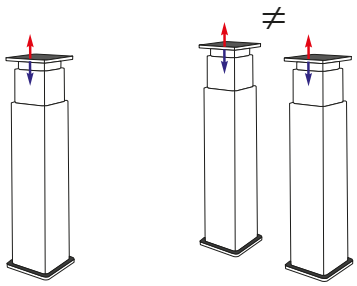


- Alpha Colonne 1,000N at 24V*1
- Alpha Colonne 1,000N at 36V*2
- Alpha Colonne 2,000N at 24V*1
- Alpha Colonne 2,000N at 36V*2
- Alpha Colonne 3,000N at 24V*1
- Alpha Colonne 3,000N at 36V*2

24 V*1 determined with a transformer control 120 VA

36 V*2 determined with a MultiControl duo

Alpha Colonne mono

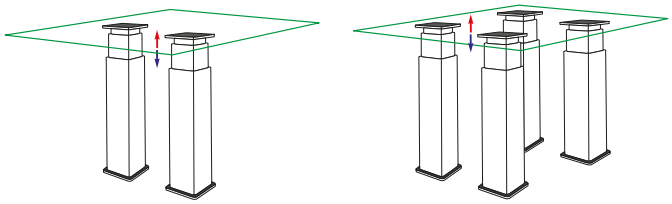


1-2 Alpha Colonnes in single or parallel operation

Parallel operation

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

Alpha Colonne synchro



2-4 Alpha Colonnes in synchronous operation

Synchronous operation

Synchronous operation of two or more columns. In conjunction with the integrated sensors, the control (see page 148) 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 is max. 4 mm. A memory function is also available.

Alpha Colonne - Versions

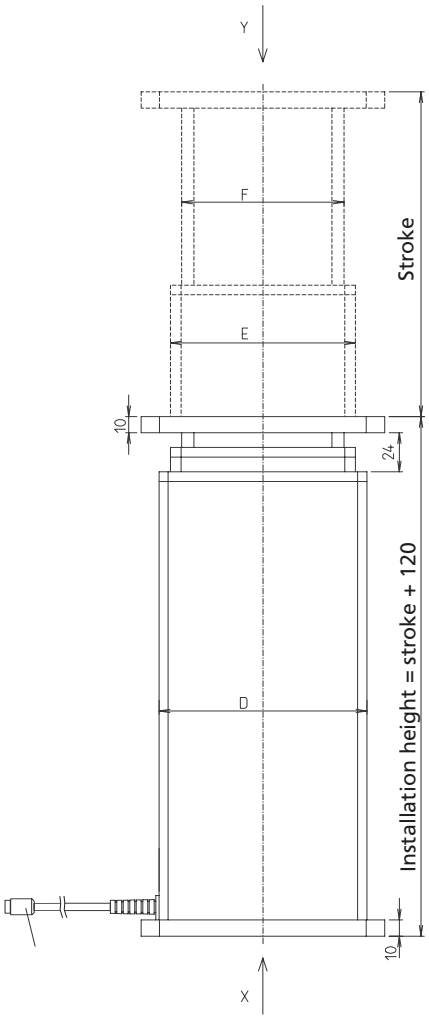
Dimensions

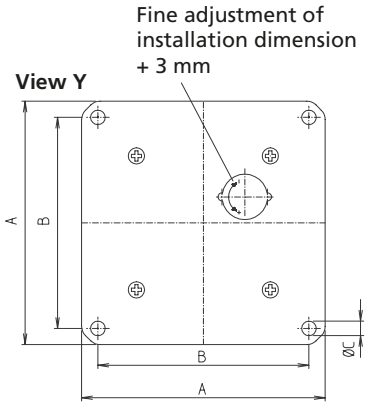
Dimension	ACM "Medium"	ACL "Large"
A	150	190
B	130	170
C	9	11
D	128	163
E	114	145
F	100	128

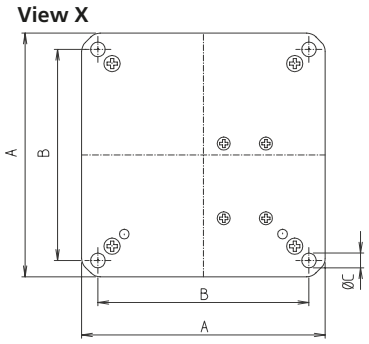
Weight

Standard [mm]	Alpha Colonne Medium	Alpha Colonne Large
Stroke 200	6.5	10.0
Stroke 300	8.0	12.5
Stroke 400	9.5	15.0
Stroke 500	11.0	17.5
Stroke 600	12.5	20.0
Stroke 700	14.0	22.5

In the case of the version with internal control; additional weight = 1kg







Connecting cable

- Mono column 1.2m helix cable
- Synchro column 2.5m cable

RK ROSE+KRIEGER

Alpha Colonne version

Code No.	Type	Max. force F [N]	Max. speed [mm/s]
QL_08BC010_ _ _	Alpha Colonne mono	3,000	8
QL_08BC030_ _ _	Alpha Colonne Synchronous	3,000	8
QK_08BC040_ _ _	Alpha Colonne Internal transformer control	3,000	8
QL_12BB010_ _ _	Alpha Colonne mono	2,000	12
QL_12BB030_ _ _	Alpha Colonne Synchronous	2,000	12
QK_12BB040_ _ _	Alpha Colonne Internal transformer control	2,000	12
QL_18BA010_ _ _	Alpha Colonne mono	1,000	18
QL_18BA030_ _ _	Alpha Colonne Synchronous	1,000	18
QK_18BA040_ _ _	Alpha Colonne Internal transformer control	1,000	18

Profile
T = Medium: ACM
V = Large: ACL

Stroke [mm]	Installation height [mm]	Weight [kg]	
		ACMedium	ACLarge
200	320	6.5	10.0
300	420	8.0	12.5
400	520	9.5	15.0
500	620	11.0	17.5
600	720	12.5	20.0
700	820	14.0	22.5

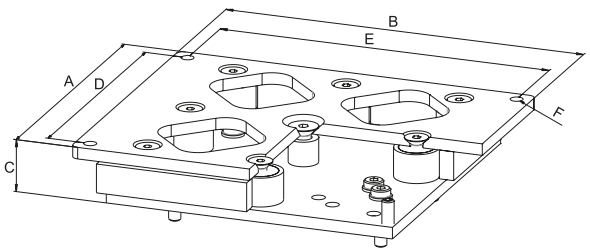
Alpha Colonne – Fixing

RK SyncFlex H

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.

Scope of delivery:
Adjuster plate, incl. fixing material



[mm]

Code No.	Type	A	B	C	D	E	F
QZD140470	Alpha Colonne II large	195	245	36	175	225	M 10
QZD140469	Alpha Colonne II medium	155	195	36	135	175	M 10

Alpha Colonne – Fixing / Position determination

RK SyncFlex V

Vertical alignment

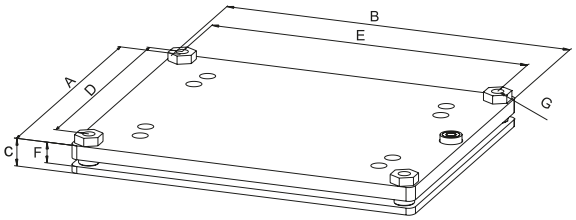
Option:
Optionally available with or without pressure plate (see table)

- 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.

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

- The lifting columns can be aligned via the vertical adjustment around the X-Y axes.

Scope of delivery:
Adjuster plate, incl. fixing material



[mm]

Code No.	Type	A	B	C	D	E	F	G
Without pressure plate								
QZD140467	Alpha Colonne II large	195	245	-	175	225	10-15	M 10
QZD140468	Alpha Colonne II medium	155	195	-	135	175	10-15	M 10
With pressure plate								
QZD140461	Alpha Colonne II large	195	245	15-20	175	225	10-15	M 10
QZD140460	Alpha Colonne II medium	155	195	15-20	135	175	10-15	M 10

Controls

Transformer control 120 VA

approx. 24 V DC

MultiControl mono

24/36 V DC

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

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

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

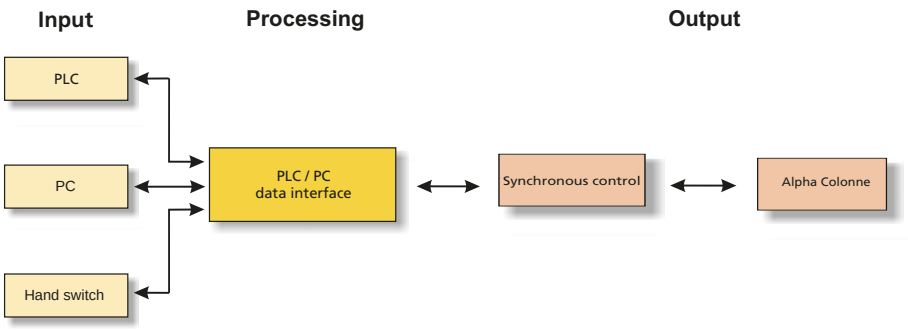
Code No.	Version	
Controls for Alpha Colonne mono		
QZA07C13AX021	Transformer control 120 VA connection A, up to max. 3 A current output, 24 V DC	Controls up to 2 drives
QSTAACA1AA000	MultiControl mono connection A, up to max. I= 10 A current output, 24 V DC	Controls up to 2 drives
Controls for Alpha Colonne synchro		
QSTACCA1AA000	MultiControl mono connection C, up to max. I= 12 A current output, 36 V DC	Controls up to 2 drives
QST61C02AA000	MultiControl duo connection C, up to max. 12 A current output, 36 V DC	Controls up to 2 drives
QST61C04AA000	MultiControl quadro connection C, up to max. 12 A current output, 36 V DC	Controls up to 4 drives
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/PC data interface

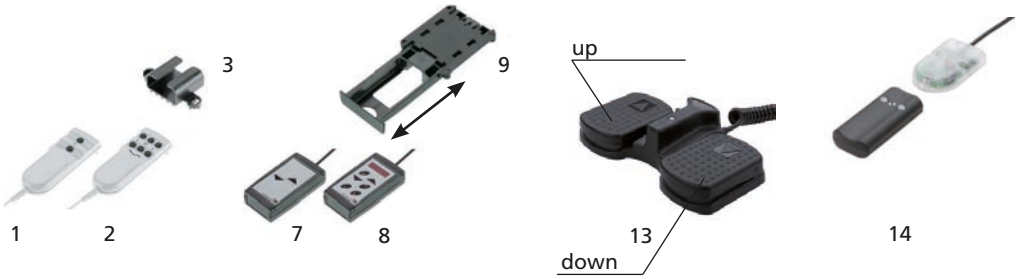
- This interface enables actuation of the synchronous control system via different input devices (PLC, PC and hand switch)

You will find further product information on page 184



Code No.	Type
QZD100108	PLC/PC data interface
QZD100110	Fixing plate for mounting in a control cabinet

Hand switches/accessories

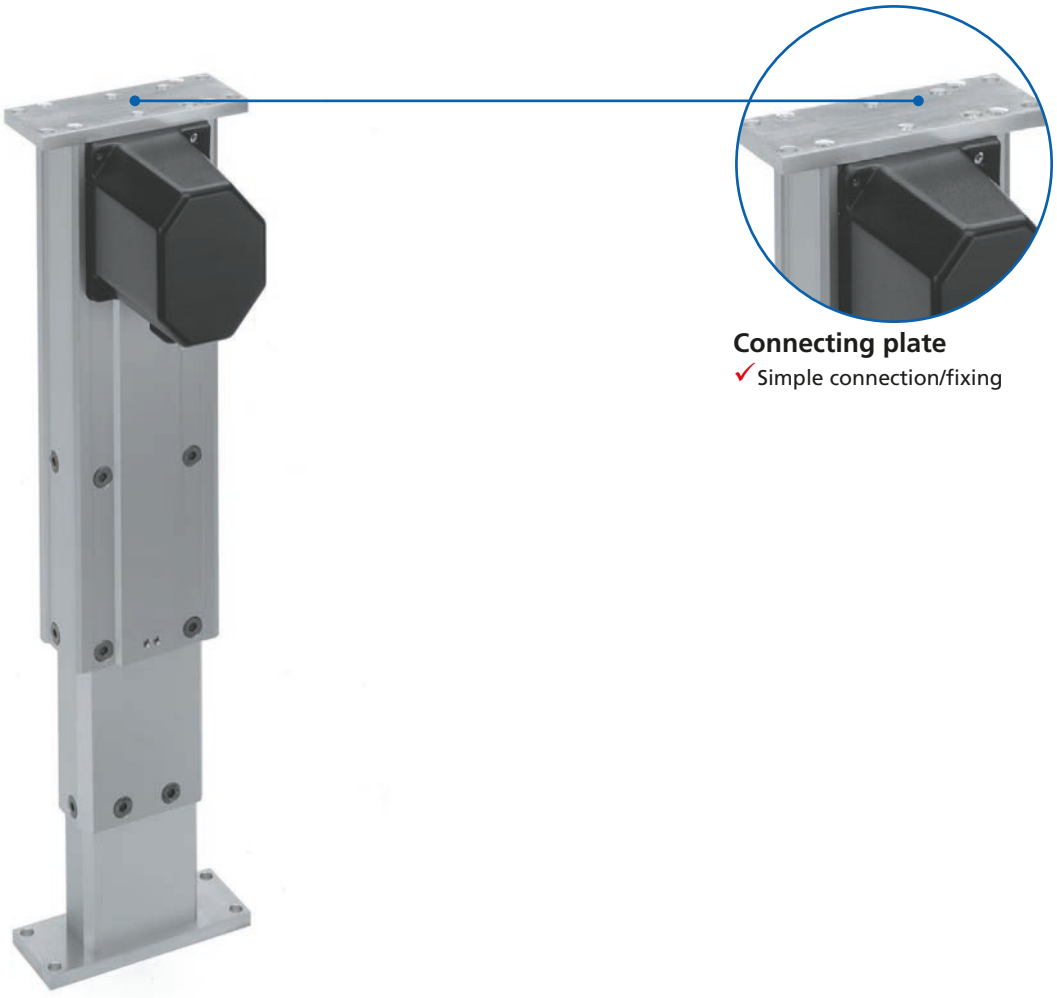


Code No.	Version	Fig.
Hand switch for transformer control/internal control		
QZB02C03AD031	Hand switch with 1 m spiral cable – 6 function keys	2
Hand switch for transformer or synchronous control		
QZB02C03AB031	Hand switch with 1 m spiral cable – 2 function keys	1
QZB00D04AB041	Hand switch with 1 m 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

Multi-stage lifting columns - LAMBDA Colonne

Powerful drive for height lifting forces



Connecting plate

✓ Simple connection/fixing

Features:

- High lifting force
- Can be installed in any position
- Guides set to minimum play
- Integrated limit switches
- Self-locking, even at max. load
- With thermal motor protection
- Supports mono and synchronous applications
- Integrated potentiometer for synchron operation

Options:

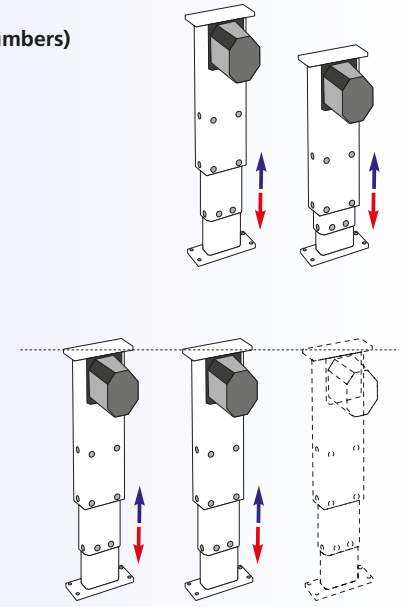
- Special stroke lengths
- Longer duty cycle

LAMBDA Colonne - Table of contents

Properties/Technical data

Versions

(Dimensions, order numbers)



Accessories

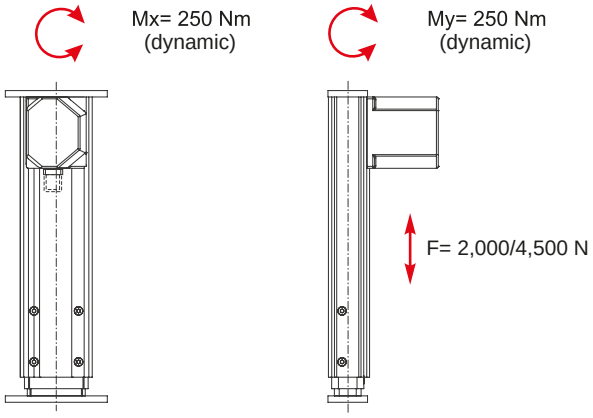
Position determination

LAMBDA Colonne – Technical data

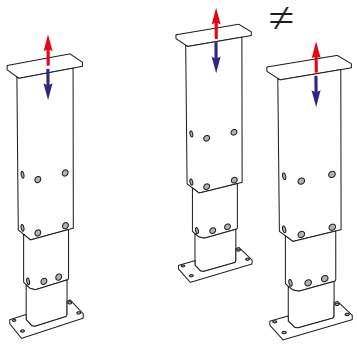
General information/operating conditions

	Column	External control
Design	Lifting column with integrated DC motor	
Guide	Slide guides made of POM	
Installation position	Any position/suspended with drop protection provided by the customer	
Push force/pull force	Up to 4,500 N	
Self-locking	Up to 8,000 N	
Ambient temperature	-20°C to +60°C	
Duty cycle (at max. load)	10% at nominal load (max. 2 mins operating time, 18 mins rest time)	
Voltage	24 V DC	230 V AC
Current output	Max. 7 A	according to drive
Power input	Max. 180 W	according to drive
Protection class	IP 40 (IP 54)	IP 54

Load data

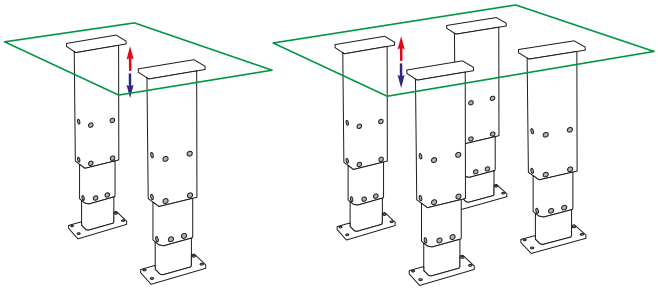


LAMBDA Colonne mono



1-2 LAMBDA Colonnes in single or parallel operation

LAMBDA Colonne synchro



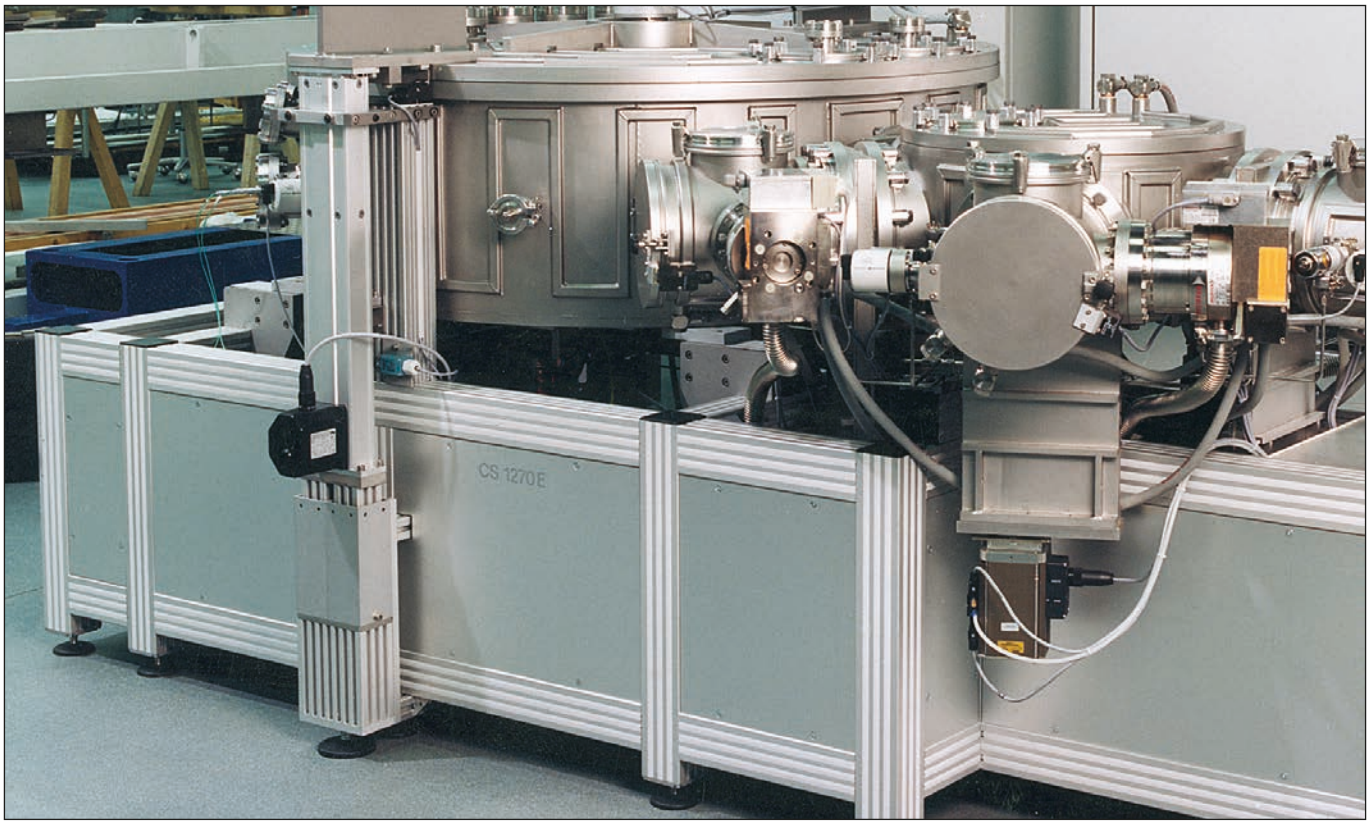
2-4 LAMBDA Colonnes in synchronous operation

Parallel operation

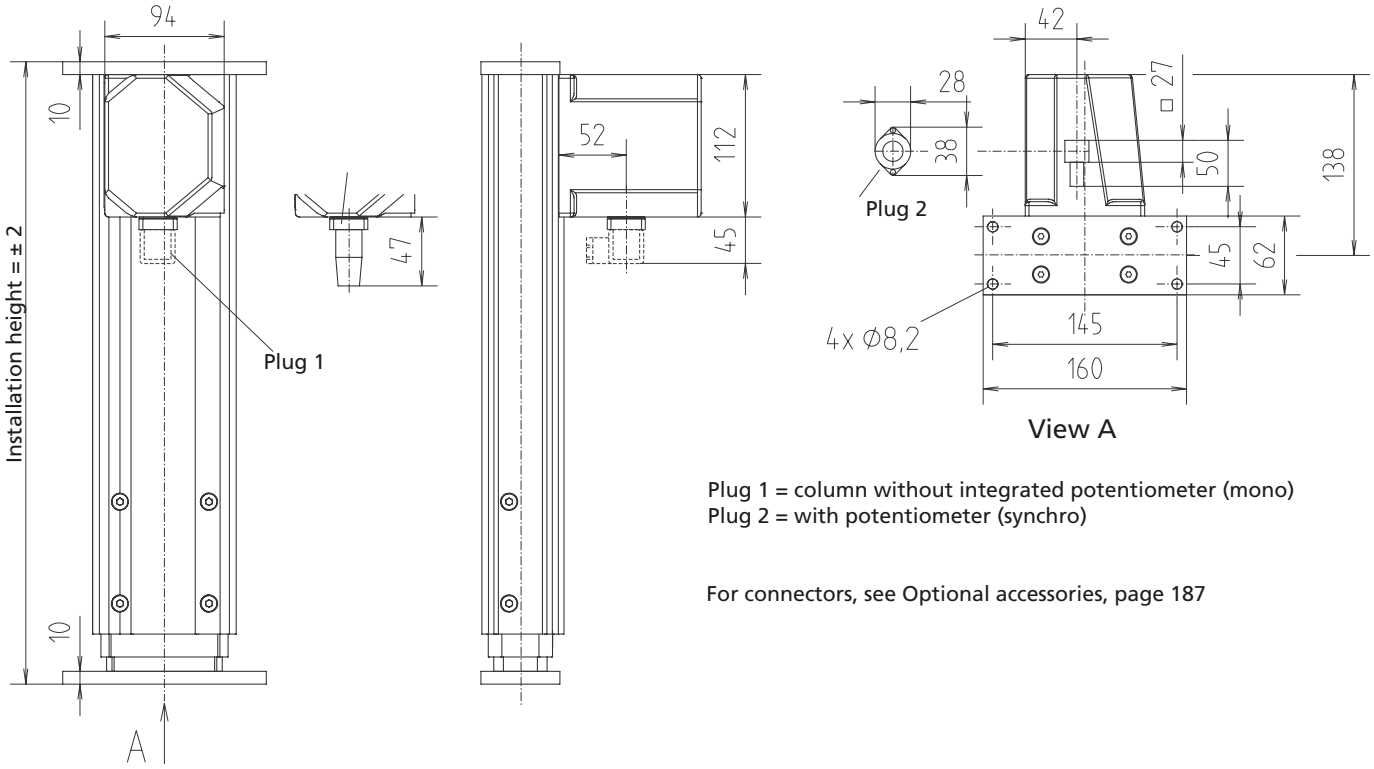
The standard version also supports parallel operation of two LAMBDA Colonnes (no synchronisation). This may produce different lifting positions during operation, which can be levelled out by moving to the end positions.

Synchronous operation

Synchronous operation of two or more columns. In conjunction with the integrated sensors, the control (see page 148) 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. 6 mm.



LAMBDA Colonne - Versions



Plug 1 = column without integrated potentiometer (mono)
Plug 2 = with potentiometer (synchro)

For connectors, see Optional accessories, page 187

LAMBDA Colonne mono

Code No.	Type	Push force/pull force [N]	Lifting speed [mm/s]	Stroke length [mm]	Installation height [mm]	Weight [kg]
LAMBDA mono without potentiometer, plug 1						
QKL20BA020200	LBC 12	2,000	20	200	410	~5.2
QKL20BA020300	LBC 13	2,000	20	300	460	~5.6
QKL20BA020400	LBC 14	2,000	20	400	510	~6.0
QKL20BA020500	LBC 15	2,000	20	500	610	~7.0
QKL20BA020600	LBC 16	2,000	20	600	710	~8.0
QKL10BB020200	LBC 112	4,500	8	200	410	~5.2
QKL10BB020300	LBC 113	4,500	8	300	460	~5.6
QKL10BB020400	LBC 114	4,500	8	400	510	~6.0
QKL10BB020500	LBC 115	4,500	8	500	610	~7.0
QKL10BB020600	LBC 116	4,500	8	600	710	~8.0

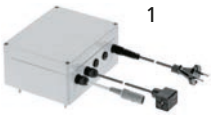
LAMBDA Colonne synchro

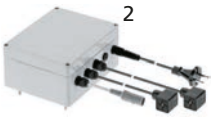
Code No.	Type	Push force/pull force [N]	Lifting speed [mm/s]	Stroke length [mm]	Installation height [mm]	Weight [kg]
LAMBDA synchro with potentiometer, plug 2						
QKL20BA010200	LBC 22	2,000	20	200	410	~5.2
QKL20BA010300	LBC 23	2,000	20	300	460	~5.6
QKL20BA010400	LBC 24	2,000	20	400	510	~6.0
QKL20BA010500	LBC 25	2,000	20	500	610	~7.0
QKL20BA010600	LBC 26	2,000	20	600	710	~8.0
QKL10BB010200	LBC 122	4,500	8	200	410	~5.2
QKL10BB010300	LBC 123	4,500	8	300	460	~5.6
QKL10BB010400	LBC 124	4,500	8	400	510	~6.0
QKL10BB010500	LBC 125	4,500	8	500	610	~7.0
QKL10BB010600	LBC 126	4,500	8	600	710	~8.0

Controls

- Input voltage 230 V AC
- Output voltage 24 V DC

Transformer control


1


2


3

Synchronous control


4


5

Code No.	Version		Fig.
Controls for Lambda Colonne mono			
QZA01C04AD011	LBG 1 transformer control	Controls up to 1 drive	1
QZA01C04AE011	LBG 2 transformer control	Controls up to 2 drives	2
QZA01C04AF011	LBG 3 transformer control	Controls up to 3 drives	3
Controls for Lambda Colonne synchro			
QZA10C01AG011	LBS 2 synchronous control	2 drives, synchronous	4
QZA10C01AH011	LBS 2+1 synchronous control	Controls up to 3 drives, 2 x synchronous + 1 additional drive	5

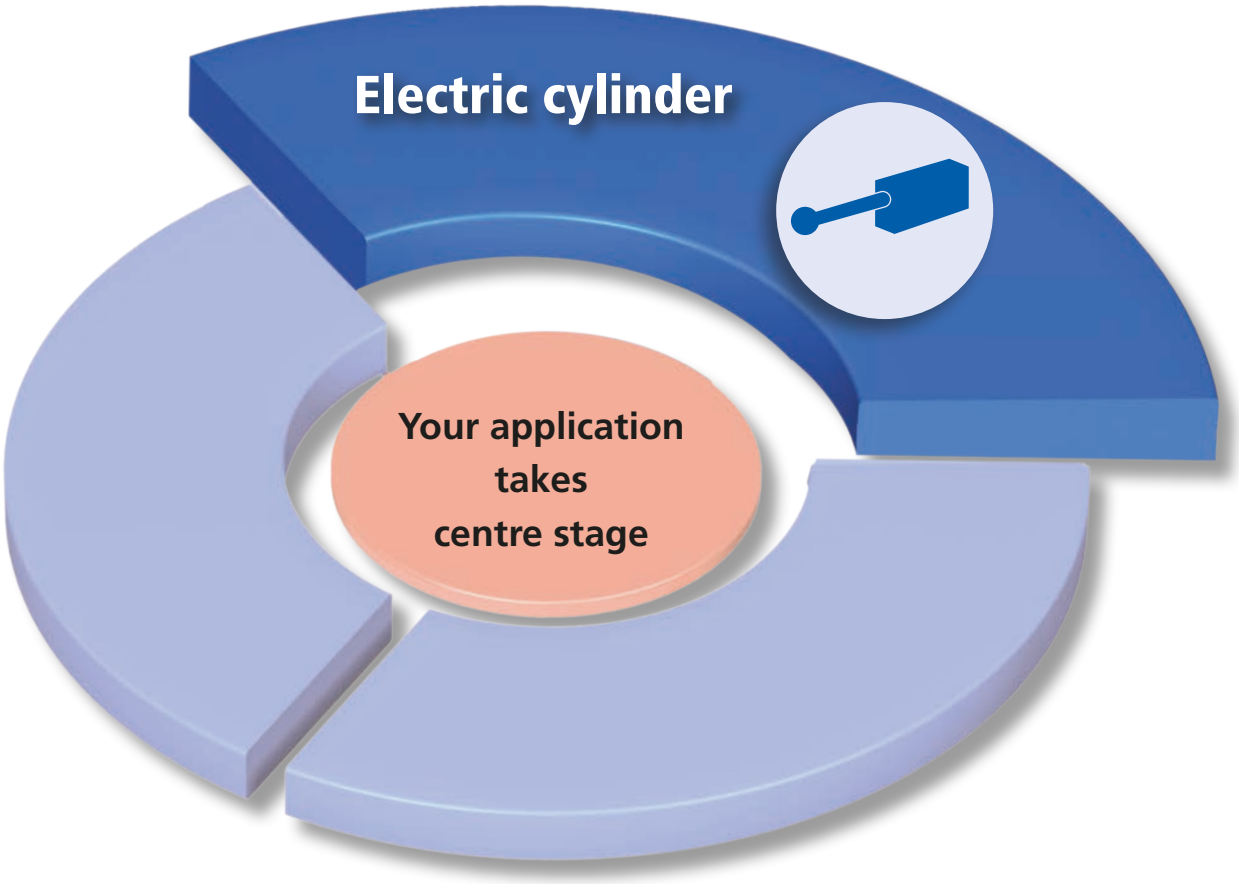
For dimensions and additional technical data, please refer to the chapter “Controls” on page 148 ff.

Hand switches / Accessories


3


2

Code No.	Version		Fig.
QZB03C02AD031	LAMBDA-hand switch with fixing clip, 6 function keys	control of up to 3 drives	2
QZD000072	Bracket for hand switch		3



Electric cylinders

are self-locking, which means that no power is supplied when at a standstill. This makes electric cylinders an interesting alternative to pneumatic and hydraulic actuators. Powerful DC motors, signal lines, potentiometers and Hall ICs for position sensing, and integrated limit switches thus respond to the most common requirements.

RK ROSE+KRIEGER

Contents

Electric cylinder

Electric cylinder - Product selection

Finding the right electric cylinder

Depending on technical and optical requirements, it takes just 2 steps to find the electric cylinder that matches your needs.
Step 1 - Determine the type of electric cylinder.
Step 2 - Choose the appropriate version.

Step 1

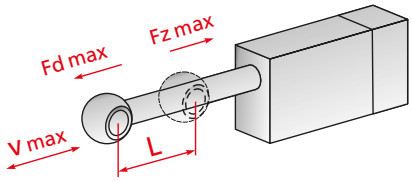
Select the electric cylinder on the right that meets your requirements.

Step 2

For step 2, please refer to the relevant catalogue page.

Electric cylinder - Product selection

Rodstyle | Drive + Guide

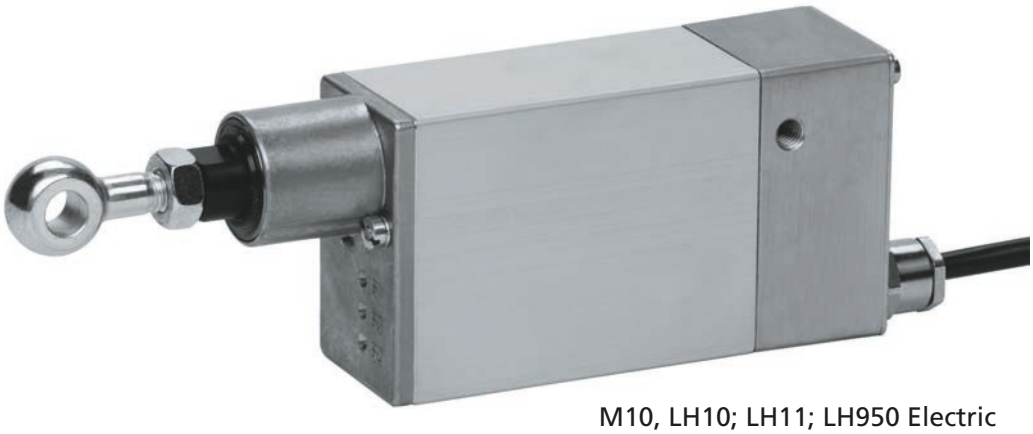


L = Travel
F_d = Push force
F_z = Pull force
V = Travel speed

All data refer to standard sizes	Cylinders performance class 1		Cylinders performance class 2		
					
Features	**M9 page 118**	**010 page 120**	**015 page 126**	**LAMBDA page 130**	**LZ 60 P/S page 134**
Max. travel	50 mm	40–100 mm	300 mm	600 mm	600 mm
Max. push force	300 N	500 N	1,000 N	6,000 N	4,000 N
Max. pull force	300 N	500 N	1,000 N	4,000 N	4,000 N
Max. travel speed	14 mm/s	22 mm/s	100 mm/s	21 mm/s	85 mm/s
Protection class	IP 30	IP 40 | IP 54	IP54	IP 66	IP 54
Integrated limit switch	●	+ (adjustable)	+ (adjustable)	●	●
Can be synchronised by means of control system				●	●
Fitted with signal contact	●	●	●	●	●
Integr. control					●
Potentiometer	●	●	●	●	
Features	✓ Lightweight ✓ Bellows	✓ Range of lifting speeds	✓ Rugged design ✓ Adjustable travel	✓ Clamping protection optional	✓ Various connections for industrial applications

Cylinders - performance class 1

M9 Electric cylinder



M10, LH10; LH11; LH950 Electric cylinder

Features:

- M9, M10, LH10; LH11 and LH950 are maintenance-free – due to permanent lubrication
- Integrated limit switches
- M9 is fitted with bellows as standard

Options:

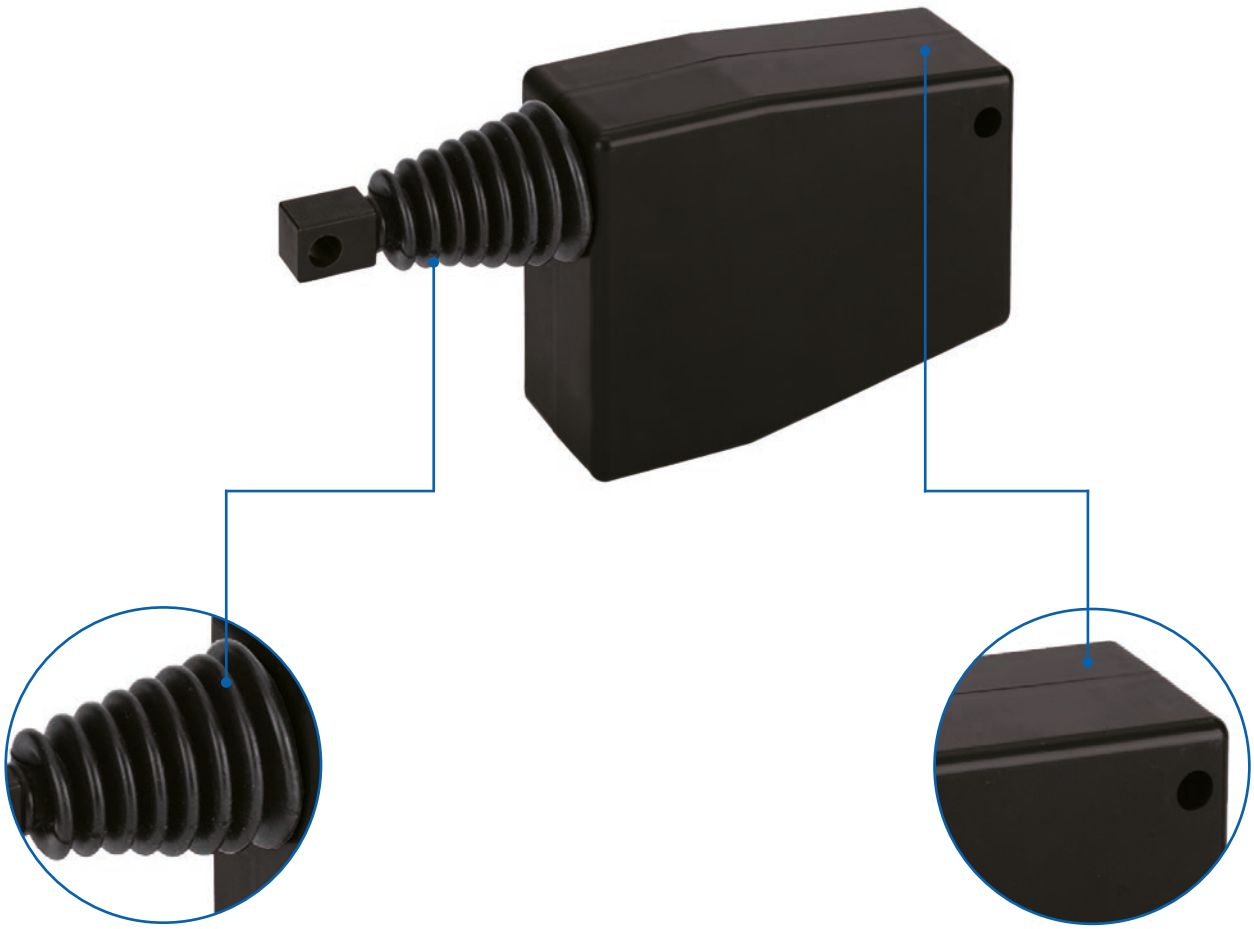
- M10, LH10; LH11; LH950 can be fitted with bellows

Cylinders - performance class 1 - Table of contents

M9 Electric cylinder

M10, LH10; LH11; LH950 Electric cylinder

M9 Electric cylinder



Bellows fitted as standard
- ✓ Protected push rod
- ✓ IP 30

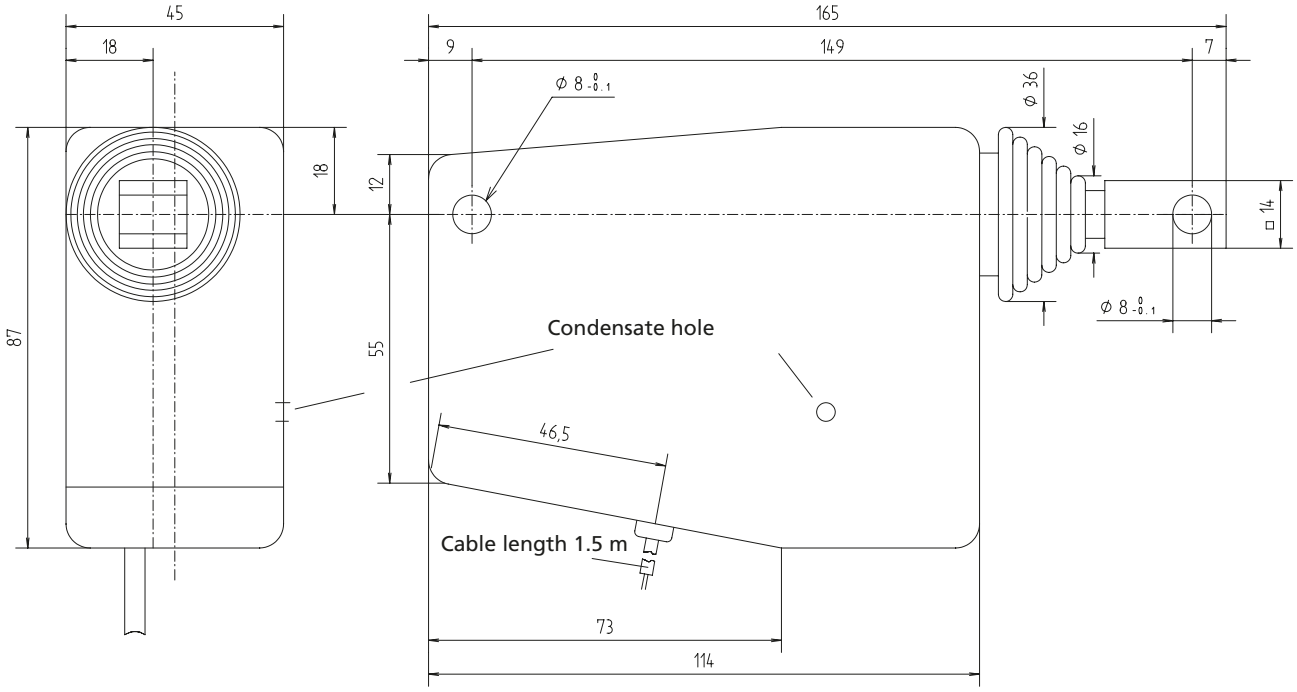
Plastic housing
- ✓ Lightweight
- ✓ Greater durability

Features:
- Plastic housing reduces weight
- Integrated limit switches
- Integrated overcurrent protection
- Maintenance-free (permanent lubrication)
- Self-locking
- M9 is fitted with bellows as standard

Options:
- Special stroke lengths
- Adjustable overall length
- Potentiometer
- Signal contacts
- Diode braking circuit to limit coasting
- Different temperature range

General information/operating conditions

Design	Linear cylinder with integrated DC motor
Guide	Slide bearing
Installation position	Any position, without shear forces, condensate hole must be taken into account
Push force / Pull force	Up to 300 N
Self-locking	Up to 500 N
Ambient temperature	-10°C to +60°C
Repeatability	0.5 mm
Duty cycle (at max. load)	10% at nominal load (max. 2 mins operating time, 18 mins rest time)
Voltage	24 (12) V DC
Current output	Max. 0.7 (1.4) A
Power input	Max. 18 W
Protection class	IP 30

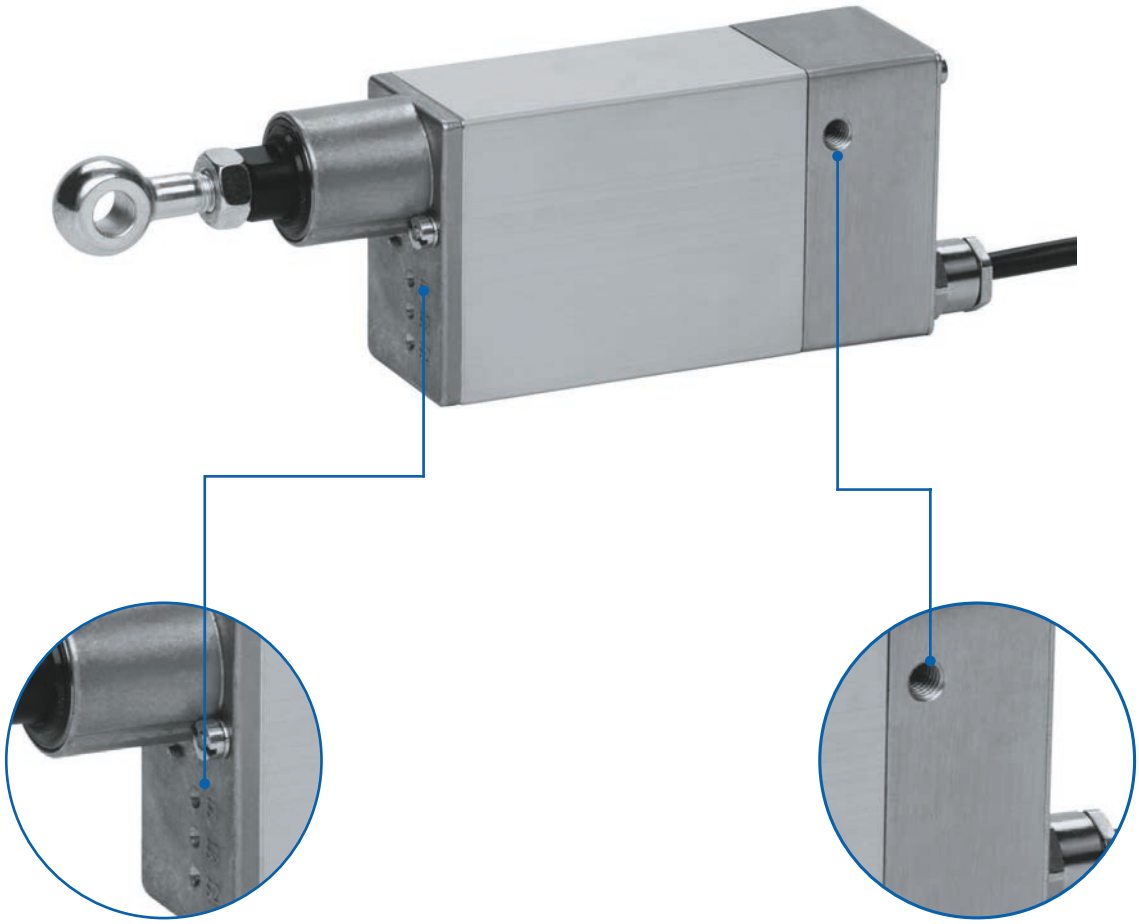


Version

Code No.	Type	Max. force F [N]	Max . speed [mm/s]	Stroke length [mm]	Weight [kg]	Operating cycles Double strokes/hour
QKA05_C010050	M 999	300	5	50	0.4	18
QKA15_A010050	M 999.1	125	14			50
QKA02_C010050	M 999.2	300	2			7

Voltage:
B = 24 V DC
C = 12 V DC

M10, LH10, LH11, LH950 Electric cylinder



Adjustable stroke lengths (not available with M10)
✓ Precise adjustment

Tapped holes
✓ Thread for trunnion mounting

Features:

- Integrated limit switch
- Maintenance-free (permanent lubrication)
- Iron free high-performance motors
- Various travel speeds
- Can be installed in any position

Options:

- Other travel speeds, special stroke lengths
- Potentiometer (only available with LH10, LH11, LH 950)
- 3rd limit switch enables centre position (only available with LH10, LH11, LH 950)
- Corrosion protected screw and push rod

General information/operating conditions

	M 10	LH 10	LH 11	LH 950
Design	Linear cylinder with integrated DC motor			
Guide				Slide bush
Installation position	Any position, without shear forces			
Push force/ Pull force	Up to 300 N	Up to 300 N	Up to 300 N	Up to 500 N
Self-locking	Up to 500 N	Up to 500 N	Up to 500 N	Up to 1,250 N
Ambient temperature	-20°C to +40°C	-20°C to +40°C	-20°C to +85°C	-20°C to +85°C
Repeatability	0.5 mm			
Duty cycle (at max. load)	at 20°C 40% at nominal load (max. 8 mins operating time, 12 mins rest time)			
Voltage	24 (12) V DC			
Current output	Max. 1.1 A			
Power input	Max. 27 W			
Protection class	IP 40	IP 54	IP 54	IP 54

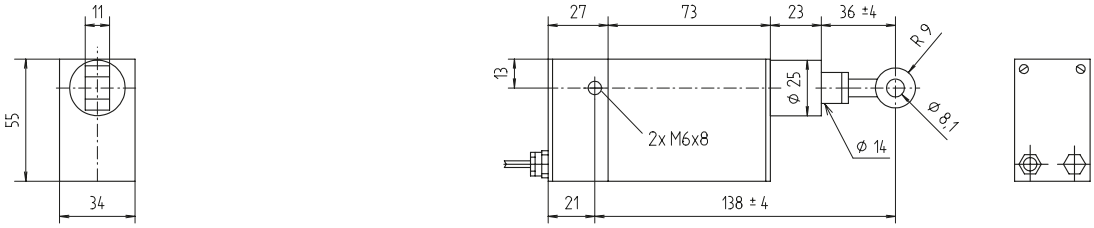
Version

Code No.	Type	Max. force F [N]	Max. speed [mm/s]	Stroke length [mm]	Weight [kg]
QKB01_C010040	M 10	300	0.25	40	0.45
QKB02_C010040		300	1.9		
QKB04_B010040		200	4		
QKB10_A010040		50	10		
QKM01_C010090	LH 10	300	0.25	90	0.55
QKM02_C010100		300	1.9	100	0.55
QKM04_B010100		200	4		
QKM10_A010100		50	10		
QKN07_C010100	LH 11	300	7	100	0.75
QKN22_A010100		100	22		
QKR04_E010100	LH950	500	4	100	1.15

Voltage:
B = 24 V DC
c = 12 V DC

M10, LH10, LH11, LH950 - Versions

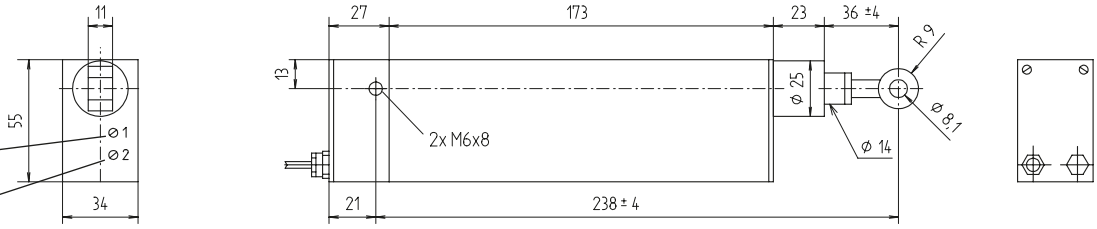
M 10



LH 10

Adjustment of stroke length

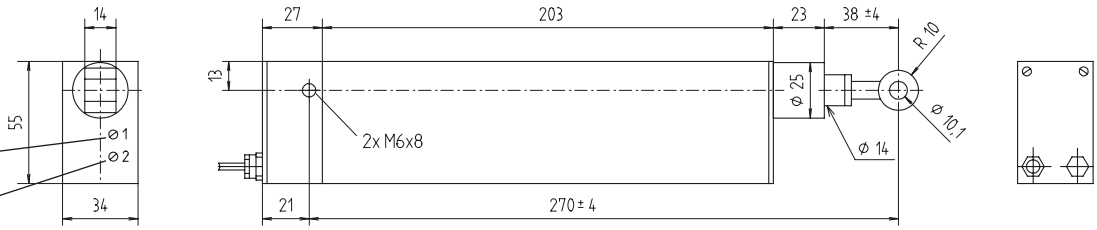
Adjustment of installation dimension



LH 11

Adjustment of stroke length

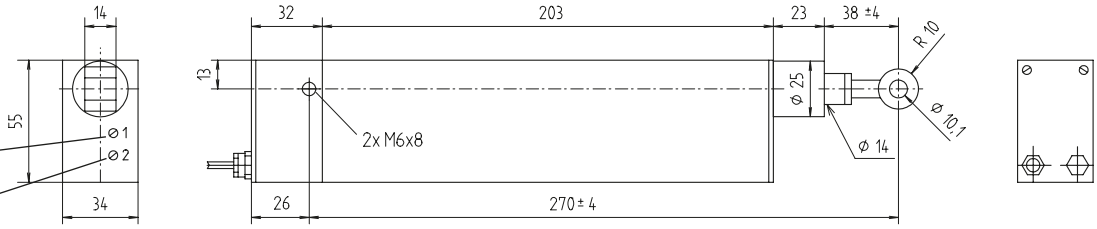
Adjustment of installation dimension



LH 950

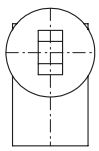
Adjustment of stroke length

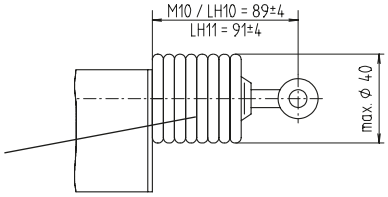
Adjustment of installation dimension



Options:

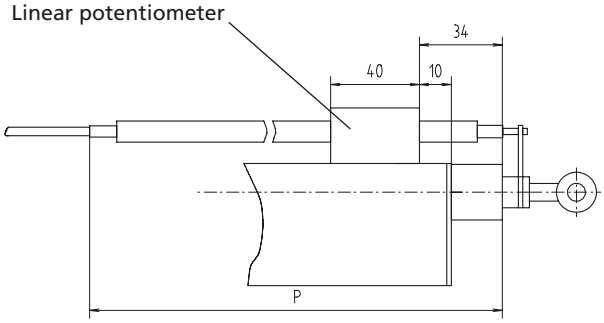
Bellows



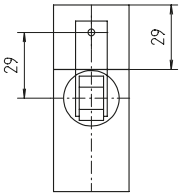


Bellows

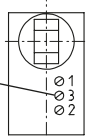
Linear potentiometer



External potentiometer



3rd limit switch
(for intermediate positions)

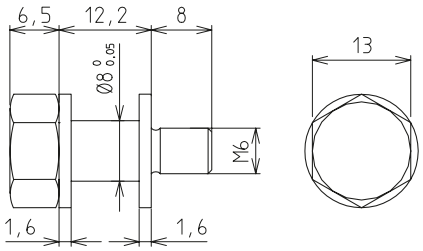


[mm]

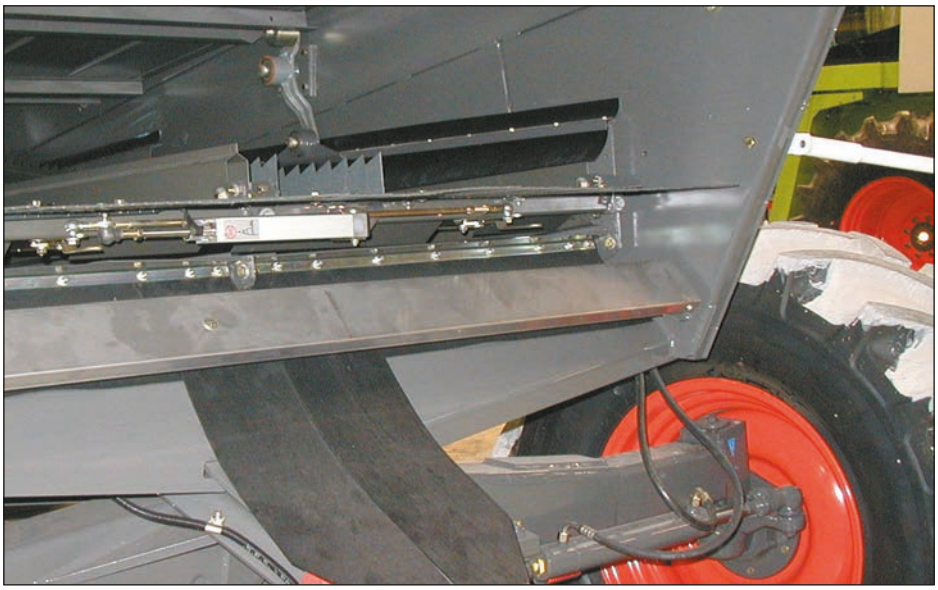
Stroke length	15	40	90	100
Dimension P	105	130	180	205

Trunnion kit

- The trunnion is bolted into the thread in the side of the electric cylinder
  - Each kit comprises two trunnions
- **Material:** Galvanised steel

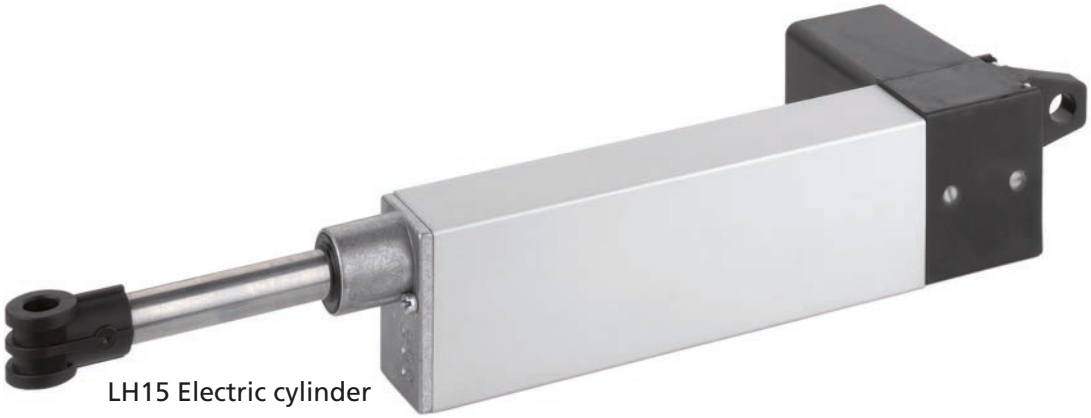


Code No.	Type
QZD050003	Trunnion kit

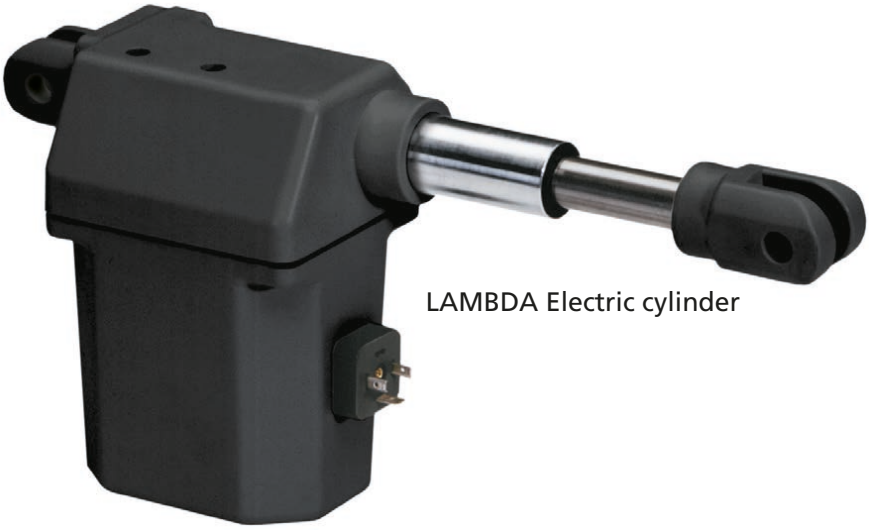


Adjustment of combine harvester sieve via series 010 electric cylinder.
Ideal for use in harsh conditions (heat, dust and vibrations).

Cylinders - performance class 2



LH15 Electric cylinder



LAMBDA Electric cylinder

LZ60 Electric cylinder
(here with motor
fitted in parallel)

Features:

- Wide range of application and fixing options
- Limit switch integrated on all models
- Maintenance-free – due to permanent lubrication
- Rugged design
- Corrosion-protected by means of durable materials, such as aluminium, stainless steel and plastic

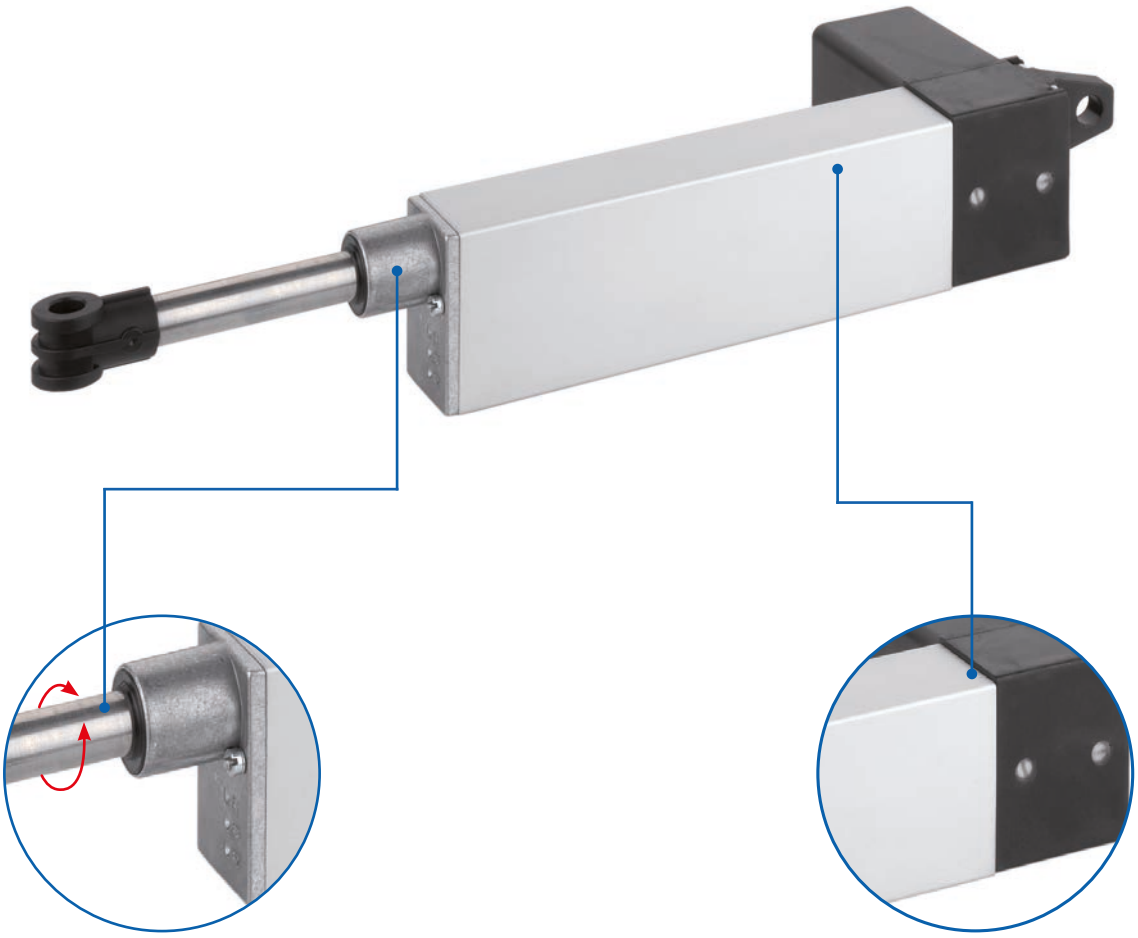
Cylinders - performance class 2 - Table of contents

LH15 electric cylinder

LAMBDA electric cylinder

LZ60 electric cylinder

LH15 Electric cylinder



Adjustable stroke lengths
✓ Precise adjustment

Corrosion-protected
✓ Stainless-steel spindle
✓ Housing made of aluminium and plastic

Features:

- Outstanding for industrial applications
- High max. lifting speed
- Integrated overcurrent protection
- Maintenance-free (permanent lubrication)
- Corrosion-protected, thanks to stainless-steel spindle and push rod; housing made of aluminium and plastic
- Rugged design
- Integrated limit switches
- Adjustable travel

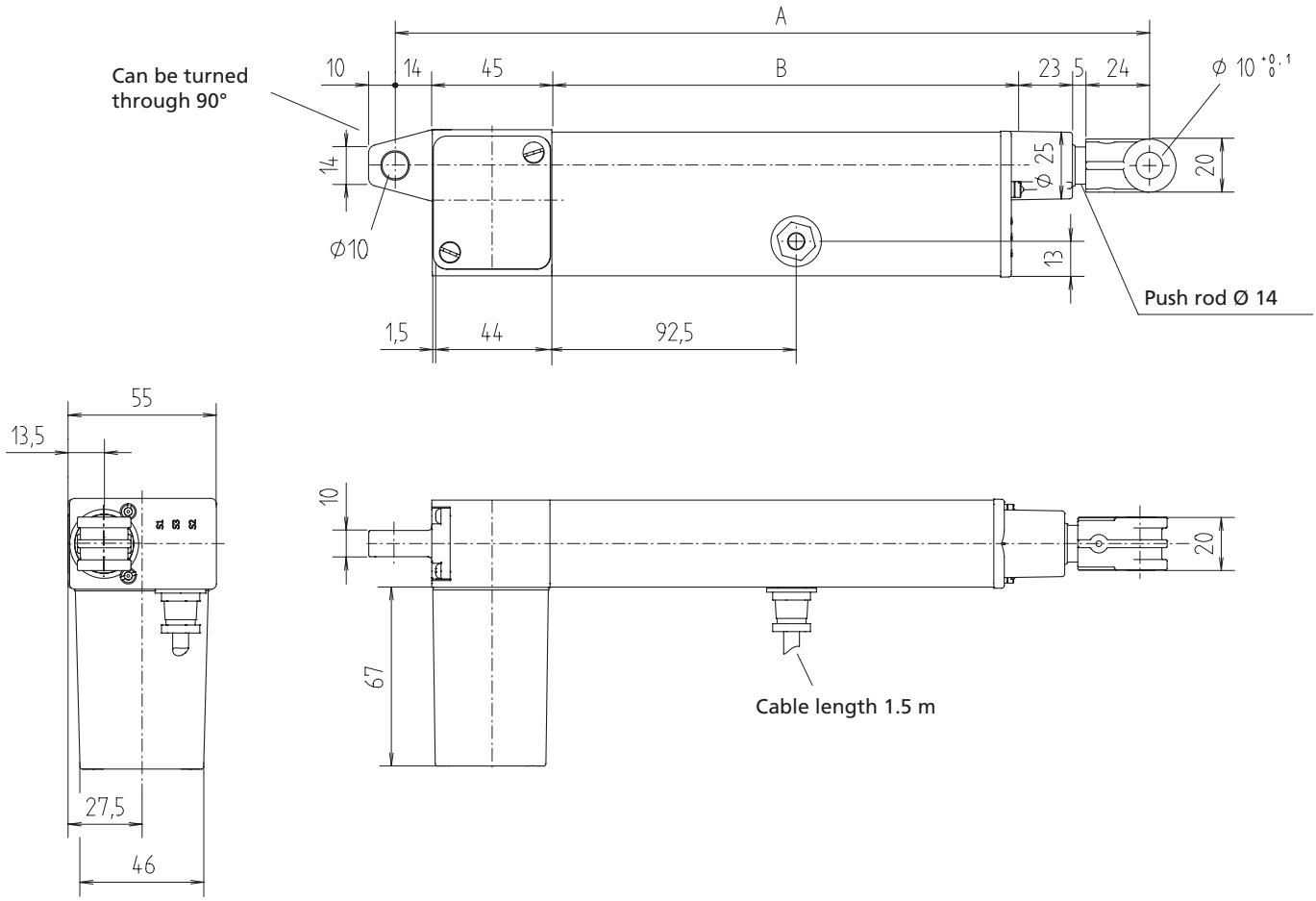
Options:

- Special stroke lengths
- Potentiometer
- Signal contacts
- Higher protection class with bellows

General information/operating conditions

	Drive
Design	Linear cylinder with integrated DC motor
Guide	Slide bush
Installation position	Any position, without shear forces
Push force/Pull force	Up to 1,000 N
Self-locking	Up to 2,000 N
Ambient temperature	-20°C to +80°C
Repeatability	0.5 mm
Duty cycle (at max. load)	10% at nominal load (max. 2 mins operating time, 18 mins rest time)
Voltage	24 (12) V DC
Current output	Max. 2.2 (4.5) A
Power input	Max. 50 W
Protection class	IP 54

LH15 Electric cylinder - Versions



Code No.	Type	Max. force F [N]	Max . speed [mm/s]
QKD05_F010_ _ _	LH15	1,000	5
QKD10_E010_ _ _		600	10
QKD22_C010_ _ _		300	22
QKD25_D010_ _ _		450	25
QKD60_B010_ _ _		200	60
QKD01_A010_ _ _		60	100

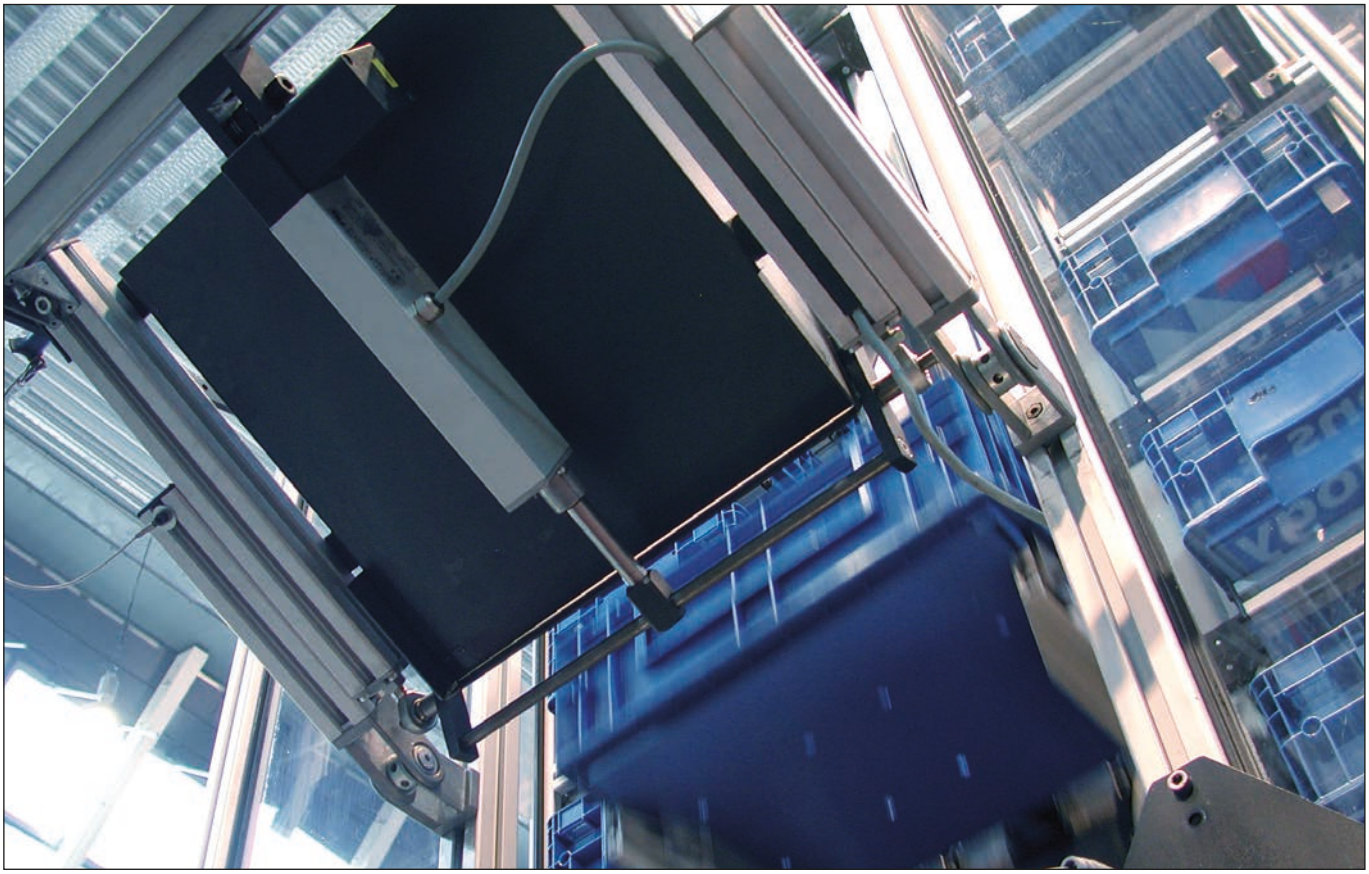
B = 24 V DC
C = 12 V DC

Standard stroke lengths

Stroke [mm]	Stroke can be externally adjusted	Dimen-sion A [mm]	Dimen-sion B [mm]	Weight [kg]
100	Yes	284	173	1.2
140	No	284	173	

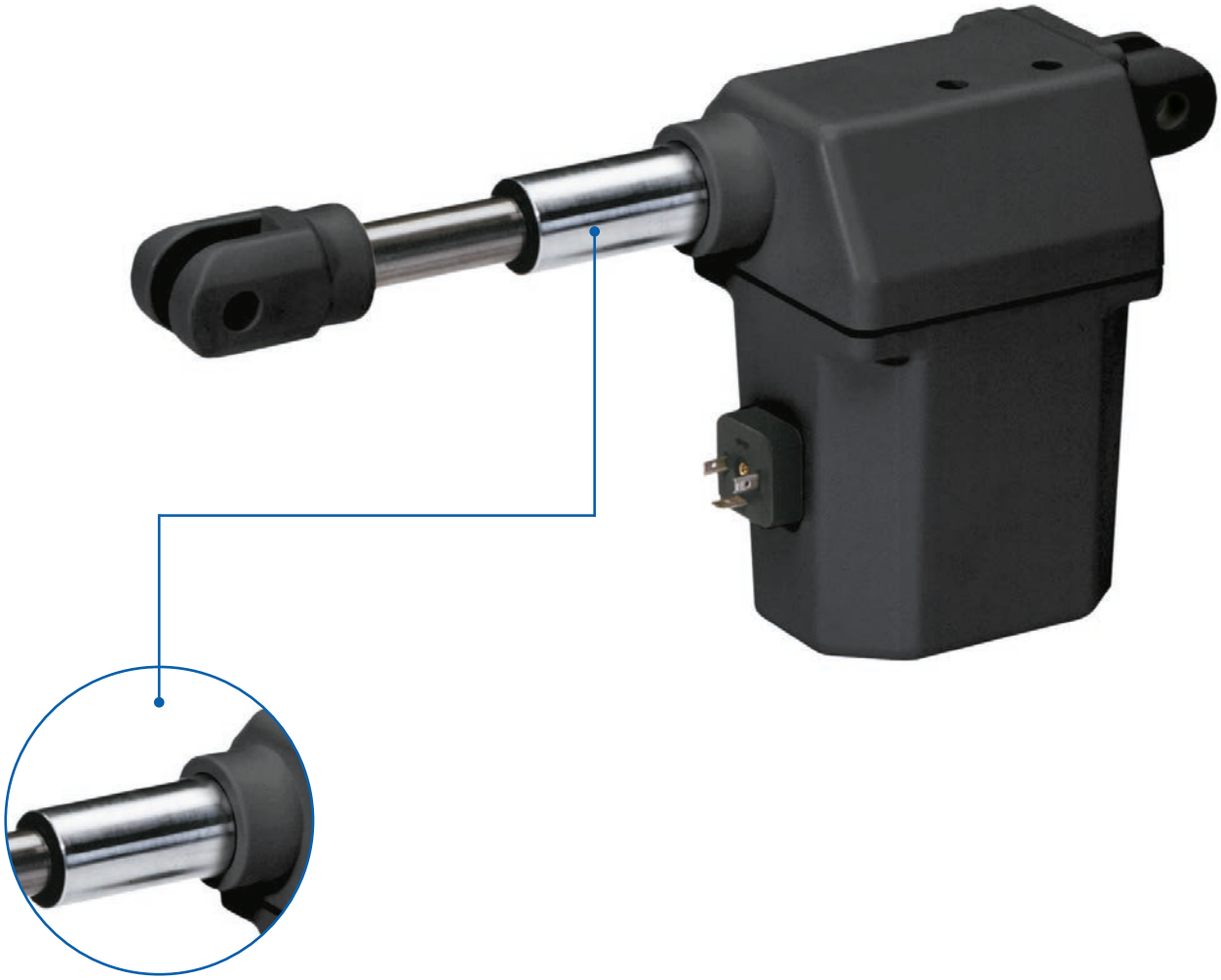
Special stroke lengths available on request

Stroke [mm]	Stroke can be externally adjusted	Dimen-sion A [mm]	Dimen-sion B [mm]	Weight [kg]
140	Yes	324	213	1.2
260		444	333	
180	No	324	213	
300		444	333	



Feeding device for an automated small parts warehouse

LAMBDA Electric cylinder



✓ Precise adjustment
✓ Stainless steel push rod

Features:

- Integrated limit switches
- Corrosion protected: push rod made of stainless steel; housing made of plastic
- Self-locking, even under max. lifting force
- With thermal motor protection
- Fixing via clevises Potentiometer
- Jam protection in pull direction

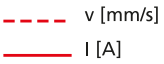
Options:

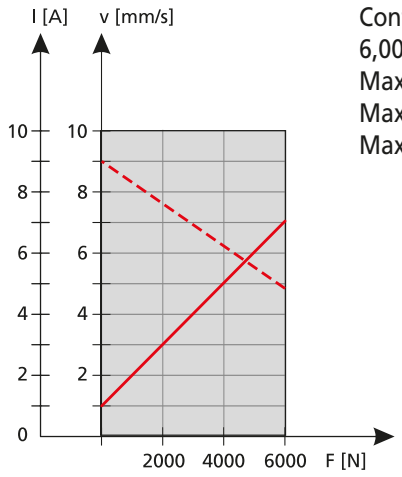
- Special stroke lengths
- Faster travel speeds
- Adjustable even in the event of power failure (can be mechanically disengaged)
- Signal contacts
- Jam protection in push direction

General information/operating conditions

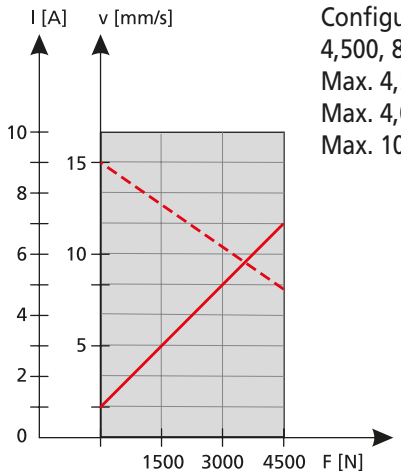
	Cylinder	External control
Design	Linear cylinder with integrated DC motor	
Guide	Slide bush	
Installation position	Any position, without shear forces	
Push force/Pull force	Up to 6,000 N push /4,000 N pull	
Self-locking	Up to 6,000 N	
Ambient temperature	-20°C to +60°C	
Repeatability	0.5 mm	
Duty cycle (at max. load)	10% at nominal load (max. 2 mins operating time, 18 mins rest time)	
Voltage	24 V DC	230 V AC
Current output	Max. 7 A	As for drive
Power input	Max. 180 W	As for drive
Protection class	IP 66	IP 54

Power diagram

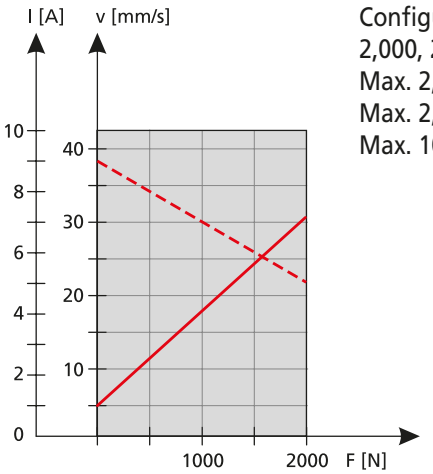




Configuration I
6,000, 5 mm/s
Max. 6,000 N push
Max. 4,000 N pull
Max. 100-400 mm stroke

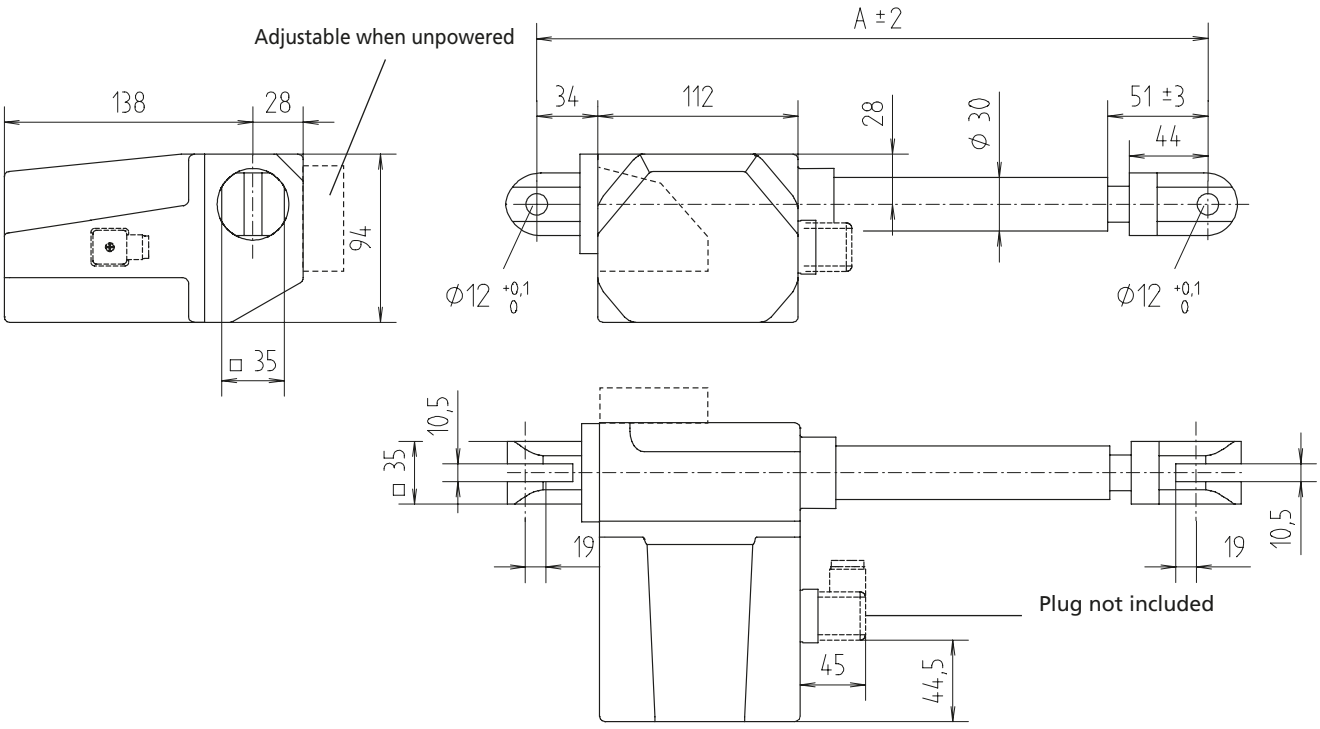


Configuration II
4,500, 8 mm/s
Max. 4,500 N push
Max. 4,000 N pull
Max. 100-600 mm stroke



Configuration III
2,000, 21 mm/s
Max. 2,000 N push
Max. 2,000 N pull
Max. 100-600 mm stroke

LAMBDA - Versions



For connectors, see Optional accessories, page 187

[mm]

Stroke	100	150	200	250	300	400	500	600
Installation dimension A	Stroke + 175					Stroke + 225		

LAMBDA versions

Code No.	Type	Max. force F [N]		Max. speed [mm/s]
		Push	Pull	
QKK05BC0_0_ _ _	LBM	6,000	4,000	5
QKK08BB0_0_ _ _	LBM	4,500	4,000	8
QKK21BA0_0_ _ _	LBM	2,000	2,000	21

e.g. stroke [mm] = 1 5 0

Stroke [mm]	Weight [kg]	
100	2.3	
150	2.5	
200	2.7	
250	2.9	
300	3.1	
400	3.5	
500	3.9	Not for 6000 N
600	4.3	

0 = Twin for synchronous controls/without clamping protection
1 = Without potentiometer/without clamping protection
2 = With potentiometer 10 KΩ/without clamping protection
3 = Without potentiometer/with clamping protection during pull force

Note:
The clamping protection takes effect at approx. 2% of the nominal force

Controls

- Input voltage 230 V AC
- Output voltage 24 V DC

Transformer control


1


2


3

Synchronous control


4


5

Code No.	Version		Fig.
Transformer control			
QZA01C04AD011	LBG 1 transformer control	Controls up to 1 drive	1
QZA01C04AE011	LBG 2 transformer control	Controls up to 2 drives	2
QZA01C04AF011	LBG 3 transformer control	Controls up to 3 drives	3
Synchronous control			
QZA10C01AG011	LBS 2 synchronous control	2 electric cylinders, synchronous	4
QZA10C01AH011	LBS 2+1 synchronous control	Controls up to 3 electric cylinders, 2x synchronous + 1 additional electric cylinder	5

Note: For dimensions and other technical data, please refer to page 148

Hand switches/accessories


3


2

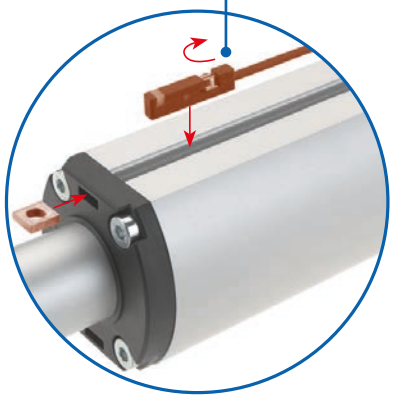
Code No.	Version		Fig.
QZB03C02AD031	LAMBDA hand switch with fixing clip – 6 function keys	Controls up to 3 drives	2
QZD000072	Bracket for hand switch		3

LZ 60 Electric cylinder

The industrial design complete system with push/pull forces up to 4000 N.

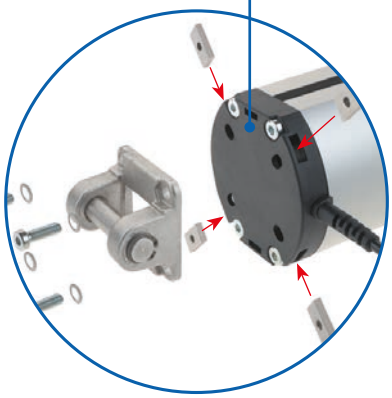
External control

- ✓ Range of connecting options:
  - Up/down mono operation
  - PLC
  - synchronous control
  - integrated control



Adjustable external magnetic switch

- ✓ Covered in slot geometry
- ✓ Stroke can be adjusted
- ✓ Accessories can be retrofitted
- ✓ Pre-fitted with internal magnets for external magnetic switch



Range of fitting dimensions

- ✓ Slide-in clasp nuts enable fitting dimensions of 37.5 to 40.5 mm.
- ✓ Compatible with a wide range of fixing elements from the pneumatic industry.

Features:

- Integrated DC drive
- Flexible use of space due to different motor installation options: parallel (LZ 60 P) or rod shaped (LZ 60 S)
- Coverable slot geometry on both sides supports a range of fixing options
- Push rod with rotation locking
- Maintenance-free for up to 10,000 double strokes
- IP 54
- Self-locking
- Optionally available with integrated control/230 V (IP 30) LZ 60 S on request

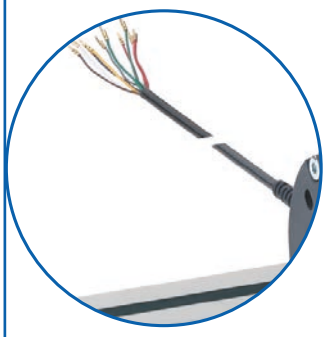
Options:

- Special stroke lengths available on request

External control

Elec. connection “a”

- ✓ Connection (2.5 m) to RK transformer control or to external fixed voltage source. Only connecting cable is fed out of unit. Limit switch is hard-wired internally.
- ✓ Mono operating modes Up/down optional parallel operation
- ✓ Internal limit switches for stroke limitation wired internally
- ✓ Connection to RK transformer control or equivalent control 24 V/36 V



Elec. connection “b”

- ✓ All connecting cables (approx. 1 m) is fed out of the unit (limit switches, motor, 2-channel Hall sensor) e.g for connection to a PLC
- ✓ Synchronous operating modes can be freely ositioned/industrial version
- ✓ Internal limit switch and incremental displacement pick-up lead directly out of the unit
- ✓ Connection to PLC or equivalent control 24 V/36 V

Elec. connection “c”

- ✓ Connection (2.5 m) to RK synchronous control
- ✓ Synchronous operating modes/DIN plug, 8-pin
- ✓ Internal limit switches and incremental displacement pick-up fed out of the unit
- ✓ Connection to RK Multicontrol

Integrated control

Elec. connection “d”

- ✓ The mains cable and the 2-key hand switch are directly connected to the motor housing.
- ✓ Mono operating modes Up/down
- ✓ Internal limit switch for stroke limitation wired internally
- ✓ Connection to power supply unit, 230 V

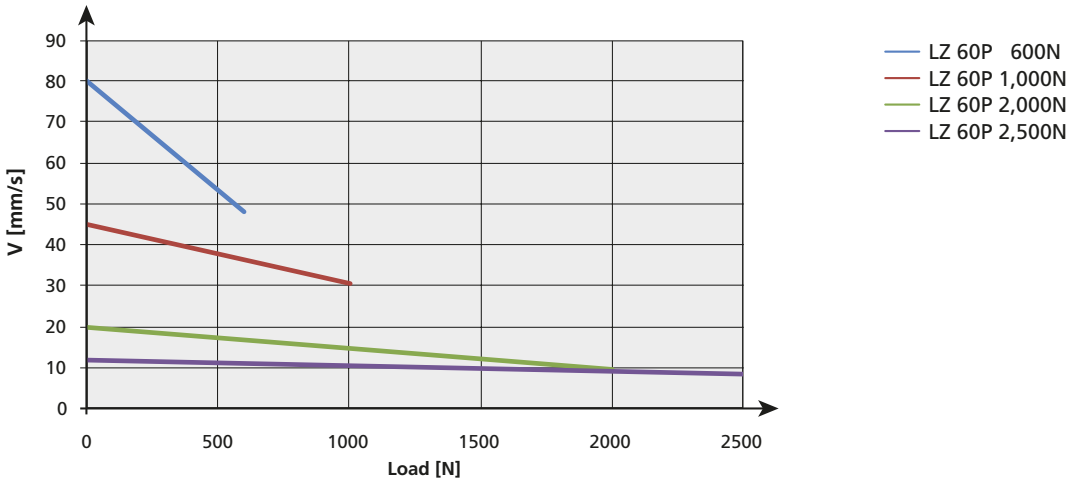
LZ 60 – Technical data

General information/operating conditions

Type	LZ 60 external control	LZ 60 internal control
Design	Linear cylinder with integrated DC motor	
Guide	Double bearing via POM bushes	
Installation position	Any position, without shear forces	
Push force/Pull force	Up to 4,000 N	
Self-locking	Up to 5,000 N	
Ambient temperature	+5°C to +40°C	
stroke tolerances	+0.5 mm / -2.5 mm	
Repeatability	0.5 mm	
Duty cycle (at max. load)	15% (max. 1.5 mins operating time, 8.5 mins rest time)	
Voltage	24/36 V DC	230 V AC
Current output	Max. 5.5 A	Max. 1.25 A
Power input	Max. 180 W	115 W
Protection class	IP 54	IP 30
Speed	Max. 85 mm/s	Max. 80 mm/s

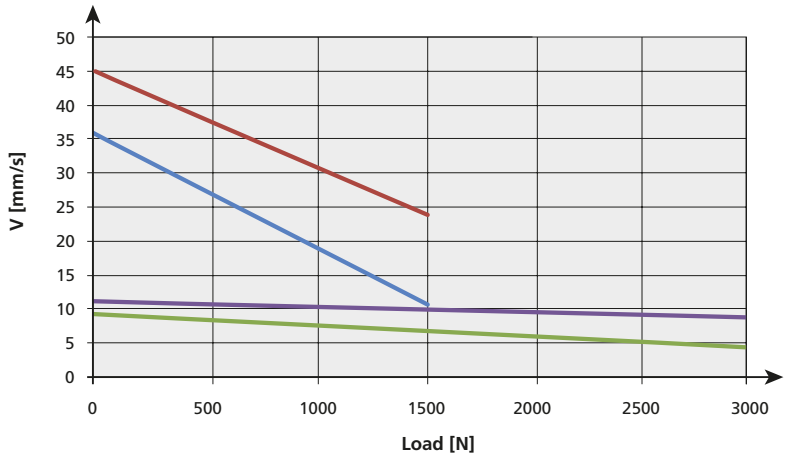
Speed/Force diagram

LZ 60P, with internal control



Speed/Force diagram

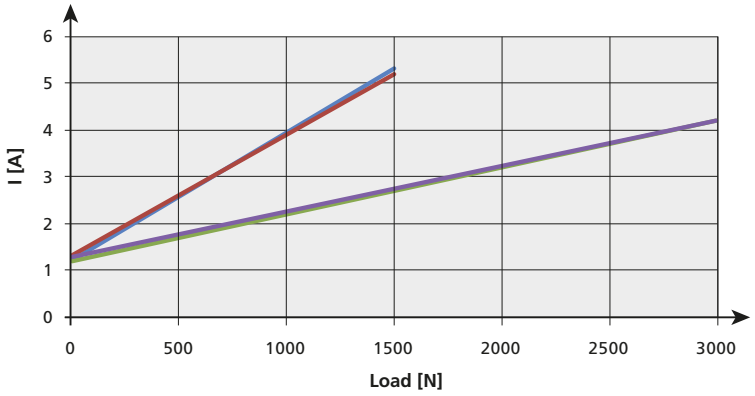
LZ 60S, for external control



- LZ 60S 1,500N at 24V*1
- LZ 60S 3,000N at 24V*1
- LZ 60S 1,500N at 36V*2
- LZ 60S 3,000N at 36V*2

Current output/Force diagram

LZ 60S, for external control



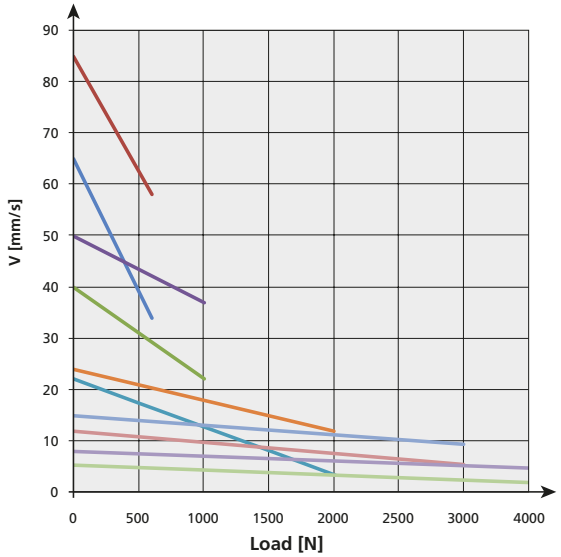
- LZ 60S 1,500N at 24V*1
- LZ 60S 3,000N at 24V*1
- LZ 60S 1,500N at 36V*2
- LZ 60S 3,000N at 36V*2

24 V*1 determined with a transformer control 120 VA

36 V*2 determined with a MultiControl duo

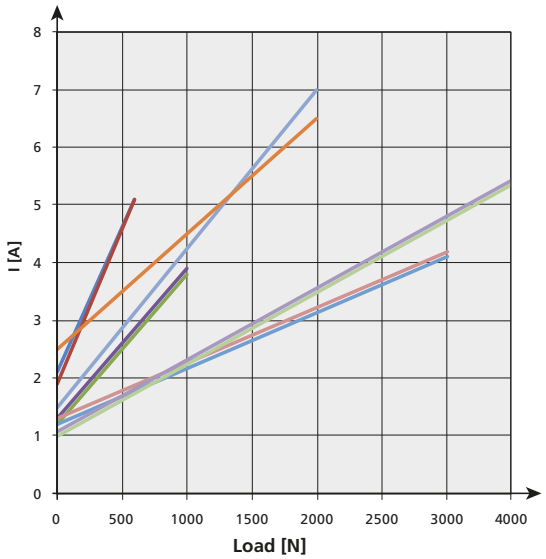
Scissor lift with combination of several LZ 60 P electric cylinders

Current output/Force diagram
LZ 60P, for external control



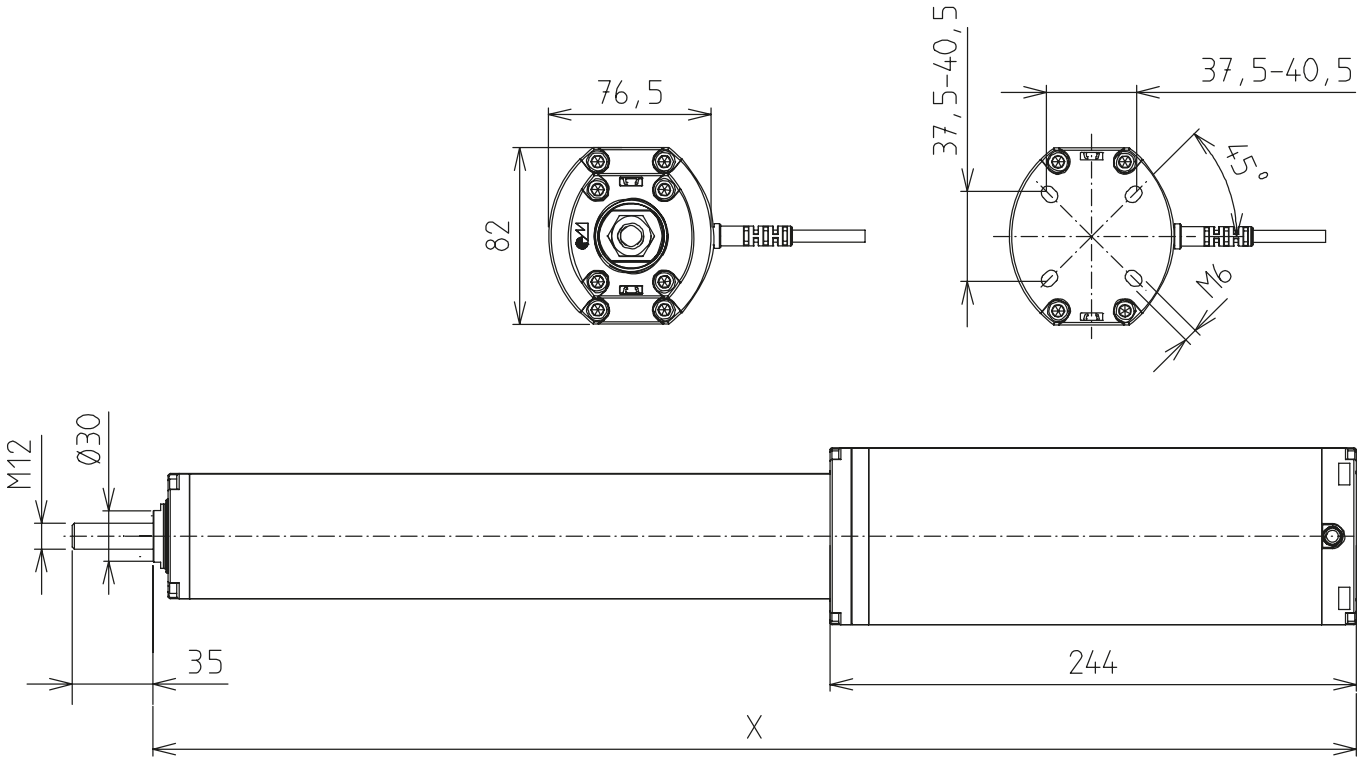
- LZ 60P 600N at 24V*1
- LZ 60P 600N at 36V*2
- LZ 60P 1,000N at 24V*1
- LZ 60P 1,000N at 36V*2
- LZ 60P 2,000N at 24V*1
- LZ 60P 2,000N at 36V*2
- LZ 60P 3,000N at 24V*1
- LZ 60P 3,000N at 36V*2
- LZ 60P 4,000N at 24V*1
- LZ 60P 4,000N at 36V*2

Current output/Force diagram
LZ 60P, for external control



- LZ 60P 600N at 24V*1
- LZ 60P 600N at 36V*2
- LZ 60P 1,000N at 24V*1
- LZ 60P 1,000N at 36V*2
- LZ 60P 2,000N at 24V*1
- LZ 60P 2,000N at 36V*2
- LZ 60P 3,000N at 24V*1
- LZ 60P 3,000N at 36V*2
- LZ 60P 4,000N at 24V*1
- LZ 60P 4,000N at 36V*2

24 V*1 determined with a transformer control 120 VA
36 V*2 determined with a MultiControl duo



Version for external control 24 V/36 V

Code No.	Type	Max. force F [N]	Max. speed [mm/s]	
			24 V DC	36 V DC
QKI00AA0_0_ _ _	LZ 60 S	1,500	36	45
QKI00AB0_0_ _ _	LZ 60 S	3,000	9	12

e.g. stroke [mm] = 2 0 2

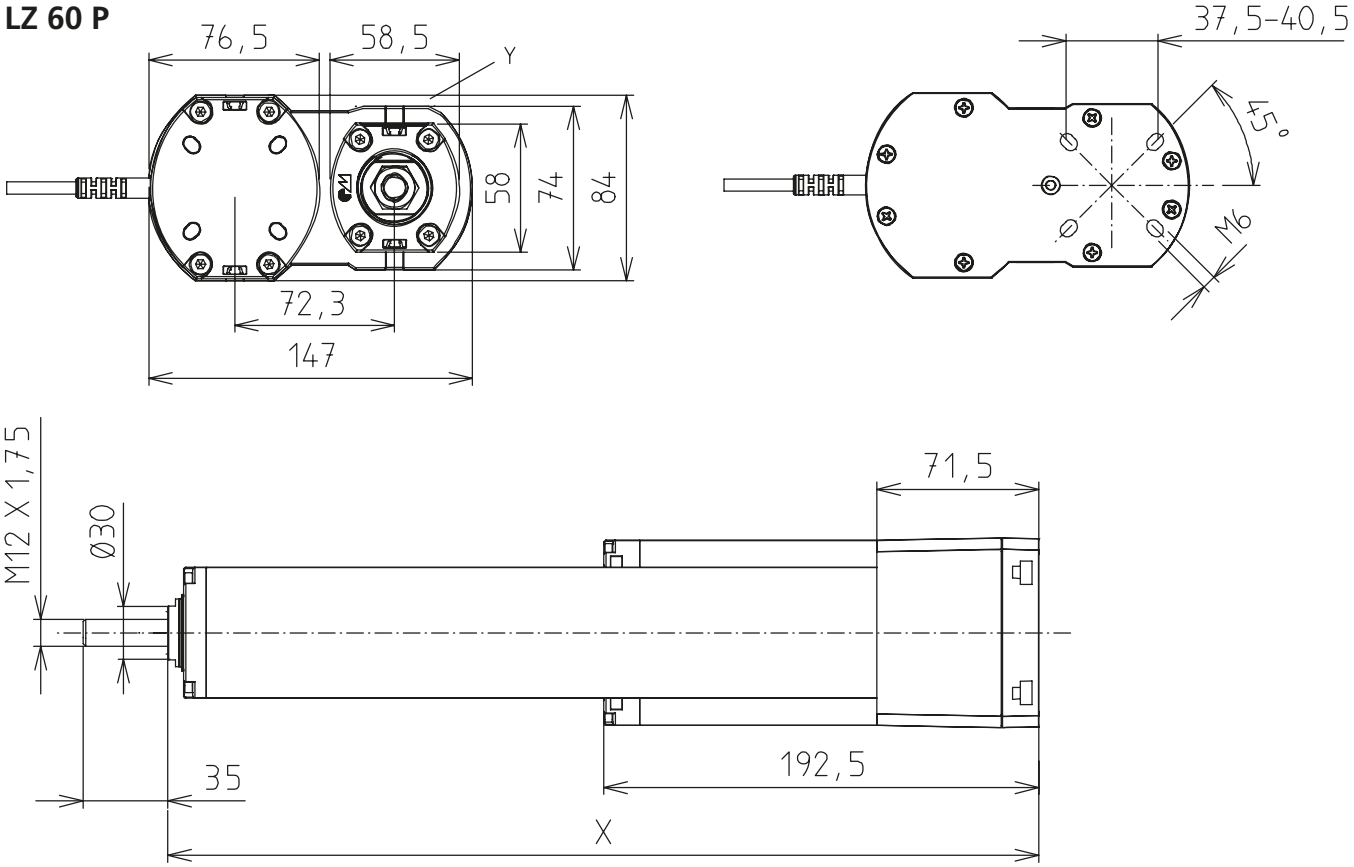
Stroke* [mm]	Installation dimension X [mm]	Weight [kg]
105	446.0	2.9
150	491.0	3.0
202	543.5	3.2
255	596.0	3.4
300	641.0	3.6
352	708.5	3.7
405	761.0	3.9
450	806.0	4.1
502	858.5	4.3
555	911.0	4.4
600	956.0	4.6

***Tolerance:** +0.5mm / -2.5mm

A = connection to RK transformer control
B = connecting cable with open lead-through for PLC/ incremental displacement pick-up/limit switches
C = connection to RK synchronous control

LZ 60 P - Versions

LZ 60 P



Version for external control 24 V/36 V

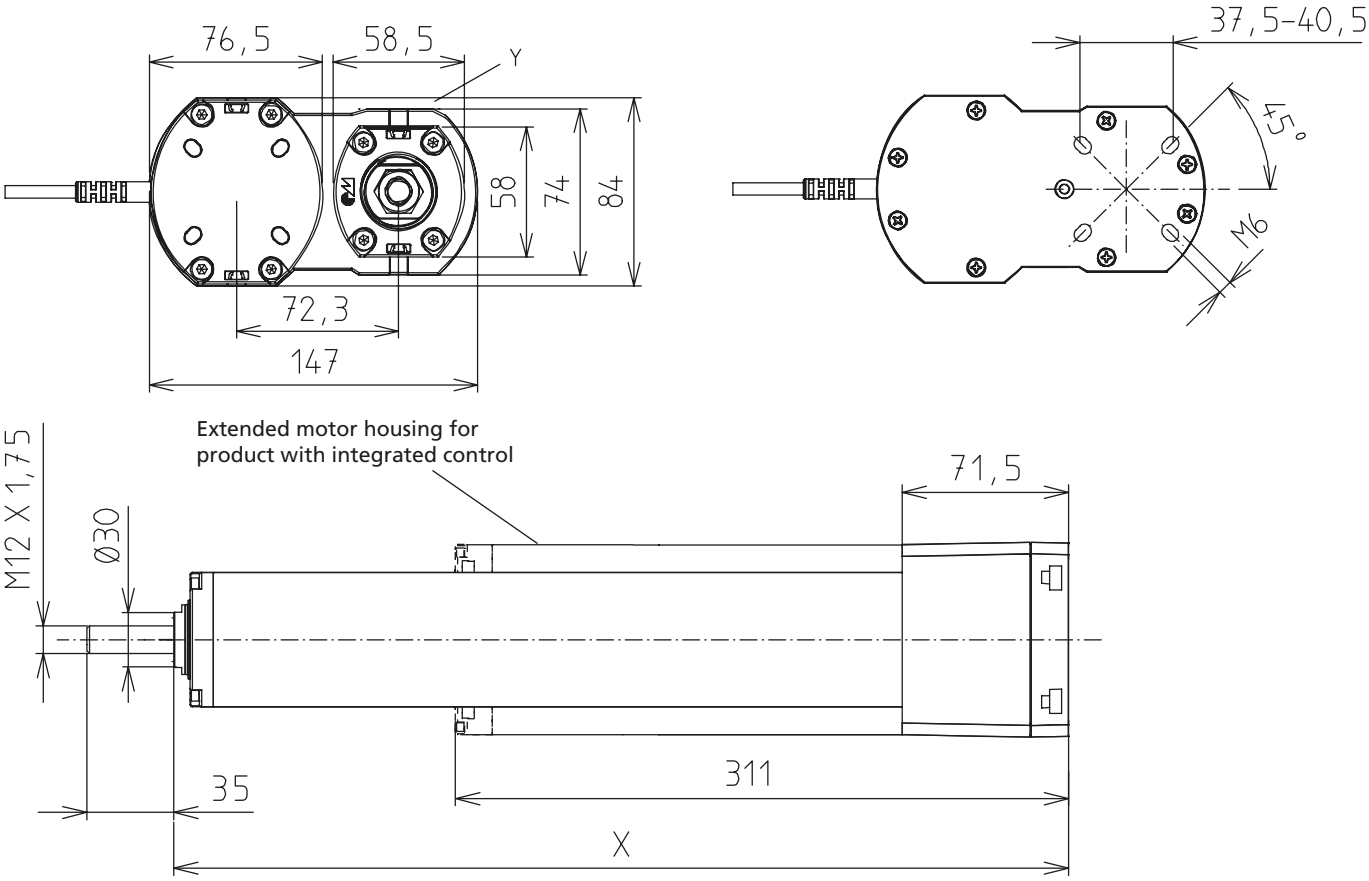
Code No.	Type	Max. force F [N]	Max. speed [mm/s]	
			24 V DC	36 V DC
QKX00AA0_0_ _ _	LZ 60 P	600	65	85
QKX00AC0_0_ _ _	LZ 60 P	1,000	40	50
QKX00AB0_0_ _ _	LZ 60 P	2,000	22	28
QKX00AE0_0_ _ _	LZ 60 P	3,000	12	15
QKX00AF0_0_ _ _	LZ 60 P	4,000	6	9

e.g. stroke [mm] = 2 0 2

Stroke* [mm]	Installation dimension X [mm]	Weight [kg]
105	273.5	3.7
150	318.5	3.8
202	371.0	4.0
255	423.5	4.2
300	468.5	4.4
352	536.0	4.5
405	588.5	4.7
450	633.5	4.9
502	686.0	5.1
555	738.5	5.2
600	783.5	5.4

***Tolerance:** +0.5mm / -2.5mm

A = connection to RK transformer control
B = connecting cable with open lead-through for PLC/incremental displacement pick-up/limit switches
C = connection to RK synchronous control



Version with internal control 230 V

Code No.	Type	Max. force F [N]	Max. speed [mm/s]	Electrical connection
QKX00AA0D0_ _ _	LZ 60 P	600	80	230 V AC
QKX00AC0D0_ _ _	LZ 60 P	1,000	45	230 V AC
QKX00AB0D0_ _ _	LZ 60 P	2,000	20	230 V AC
QKX00AE0D0_ _ _	LZ 60 P	2,500	13	230 V AC

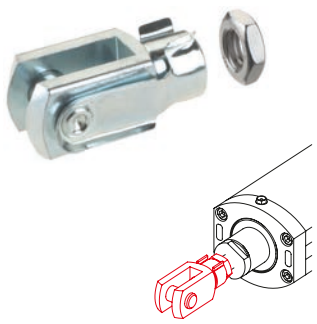
e.g. stroke [mm] = 2 0 2

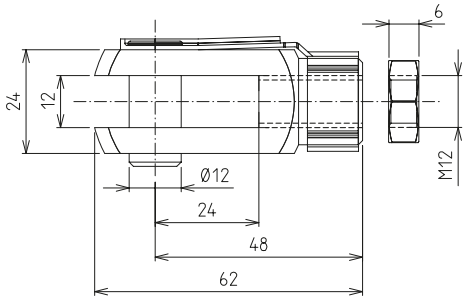
Stroke* [mm]	Installation dimension X [mm]	Weight [kg]
105	273.5	4.7
150	318.5	4.8
202	371.0	5.0
255	423.5	5.2
300	468.5	5.4
352	536.0	5.5
405	588.5	5.7
450	633.5	5.9
502	686.0	6.1
555	738.5	6.2
600	783.5	6.4

***Tolerance:** +0.5mm / -2.5mm

LZ 60 – Fixing

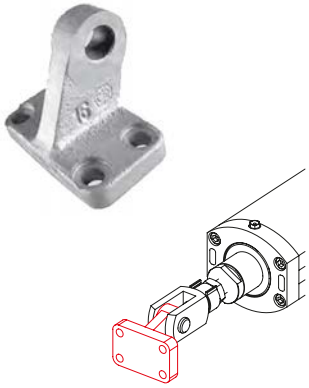
Clevis

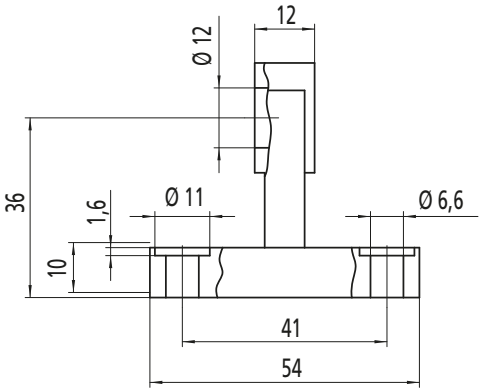


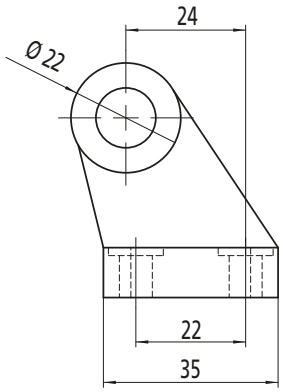


Code No.	Type
QZD050570	Clevis M12

Bearing block for clevis

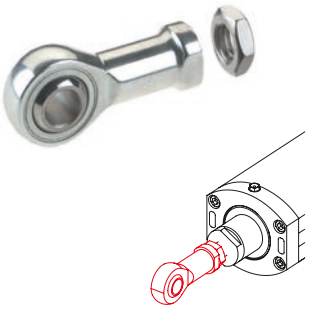


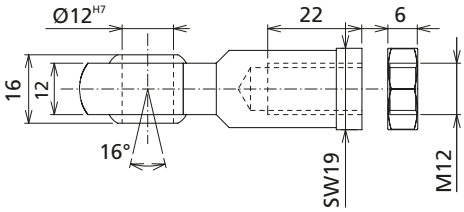


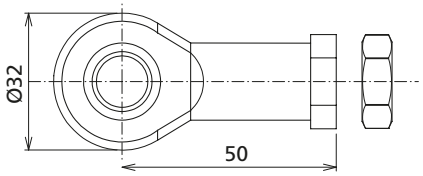


Code No.	Type	
QZD050572	LZ 60	Bearing block Ø12

Swivel head

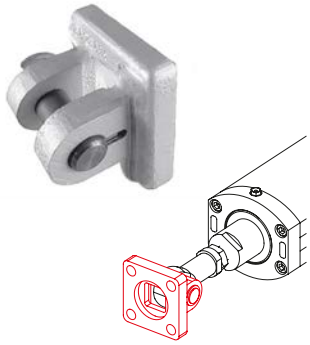


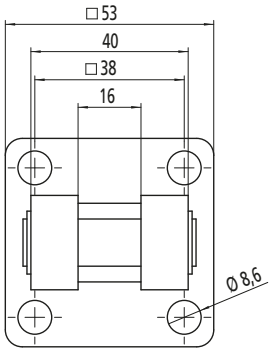


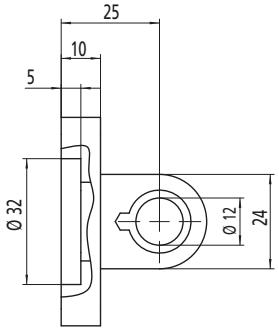


Code No.	Type
QZD050574	Swivel head M12

Clevis mounting for swivel head

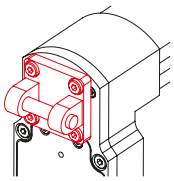


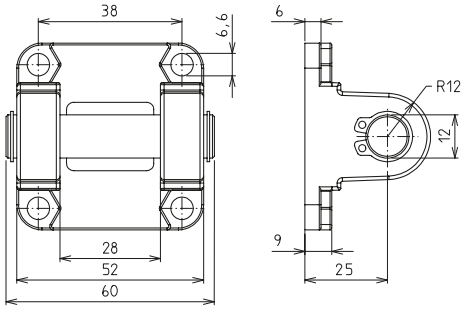




Code No.	Type	
QZD050576	LZ 60	Clevis mounting Ø 12

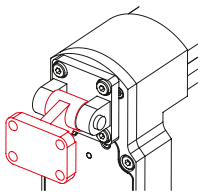
Swivel flange

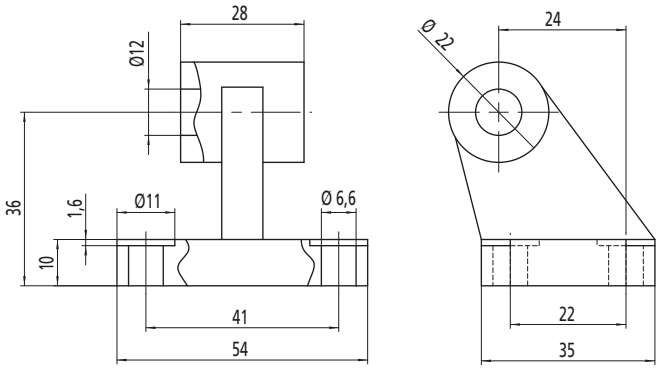




Code No.	Type
QZD050578	Swivel flange Ø 12

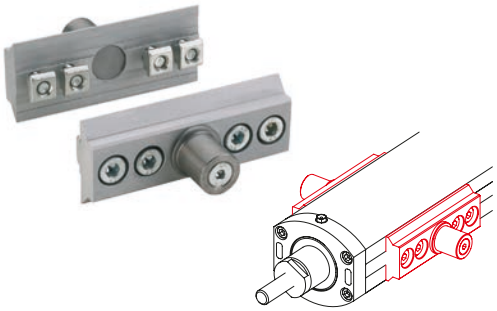
Bearing block for swivel flange

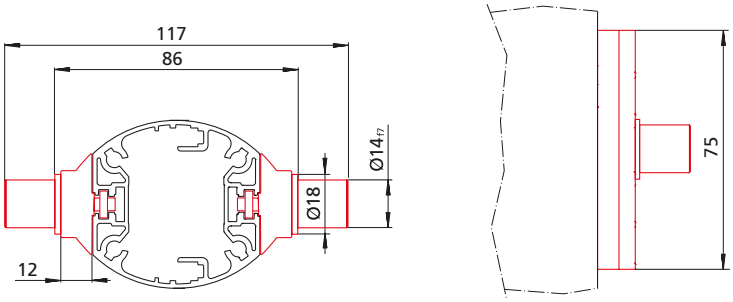




Code No.	Type	
QZD050583	LZ 60	Bearing block Ø 12

Trunnion support blocks

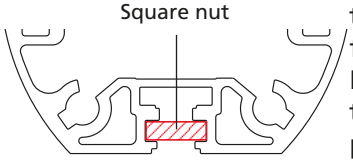




Code No.	Type
QZD050586	Trunnion support blocks LZ 60

Order instruction square nut:

- **Purchase only in lot sizes and a multiple of that, see product table below**



- The square nut enables the the attachment of fittings to the cylinder. Nuts can be slid into the lateral slots for this purpose.

Square nut

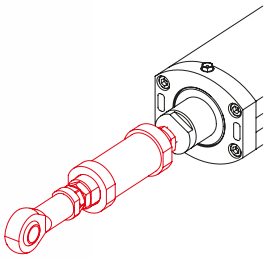
Code No.	lot sizes	Type
qzd0505971	10, 20, 30... pcs	Square nut M6, DIN562

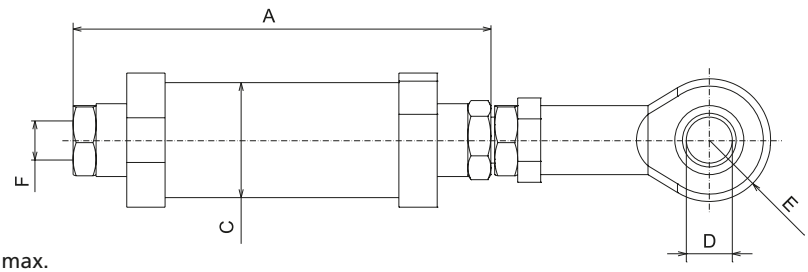
Axial adjustment

Axial adjustment

- ✓ Compensates manufacturing tolerances
- ✓ Compensates installation tolerances
- ✓ Length compensation -2 mm
- ✓ Reduces commissioning times

Scope of delivery:
Axial adjustment, incl. swivel head as depicted





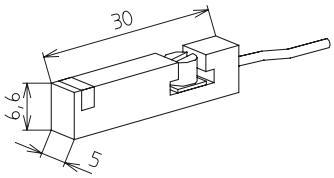
Note:
Screw depth 15 mm max.

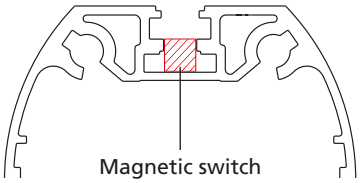
[mm]

Code No.	Load	A	C	D	E	F
QZD050590	600 N	102	Ø30	Ø12	R16	M12
QZD050591	1,000 N	102				
QZD050592	2,000 N	103.5				
QZD050593	2,500 N	109				
QZD050594	3,000 N	107.5				
QZD050595	4,000 N	139.5				

Magnetic switch

- Signals from the magnetic switch can be collected and evaluated by a customer-provided control unit (such as a PLC).
- The switch can be retrofitted in the lateral slot (protected by a cover profile as standard)
- Magnets are already integrated in the cylinder as standard.





Code No.	Type
QZD050598	Magnetic switch, NO contact, cable length 6 m
QZD050599	Magnetic switch, NC contact, cable length 5.3 m

Magnetic switch – Technical data

	NC contact	NO contact
Voltage	10-30 V DC	5-30 V DC
Current output	< 10 mA	< 10 mA
Output current	Max. 100 mA	Max. 50 mA
Output type	PNP	PNP
Function indication	LED	LED
Ambient temperature	-25°C to +85°C	-20°C to +70°C
Protection class	IP 67	IP 68

Controls

- Input voltage 230 V AC
- Output voltage 24 V DC, 36 V DC

Order information:
Observe the current output of the drives when selecting the control.

Transformer control 120 VA

approx. 24 V DC

MultiControl

24/36 V DC

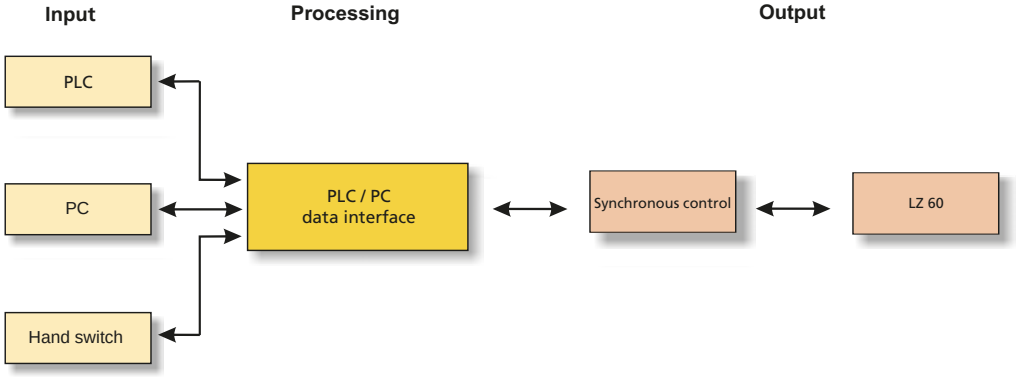
Code No.	Version	
Controls for LZ 60 connection A		
QZA07C13AX021	Transformer control 120 VA, up to max. I= 3 A current output	Controls up to 2 drives
QSTAACA1AA000	MultiControl mono connection A, up to max. I= 10 A current output, 24 V DC	Controls up to 2 drives
Controls for LZ 60 connection C		
QSTACCA1AA000	MultiControl mono connection C, up to max. I= 12 A current output, 36 V DC	Controls up to 2 drives
QST30C02AA000	MultiControl duo connection C, up to max. I= 12 A current output, 36 V DC	Up to 2 drives synchronised
QST30C04AA000	MultiControl quadro connection C, up to max. I= 12 A current output, 36 V DC	Up to 4 drives synchronised
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 / PC data interface

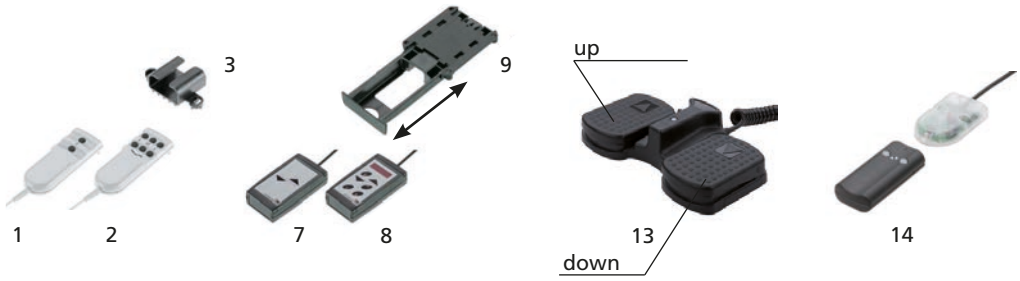
- This interface enables actuation of the LZ 60 with synchronous control via different input devices (PLC, PC and hand switch).

You will find further product-information on page 184

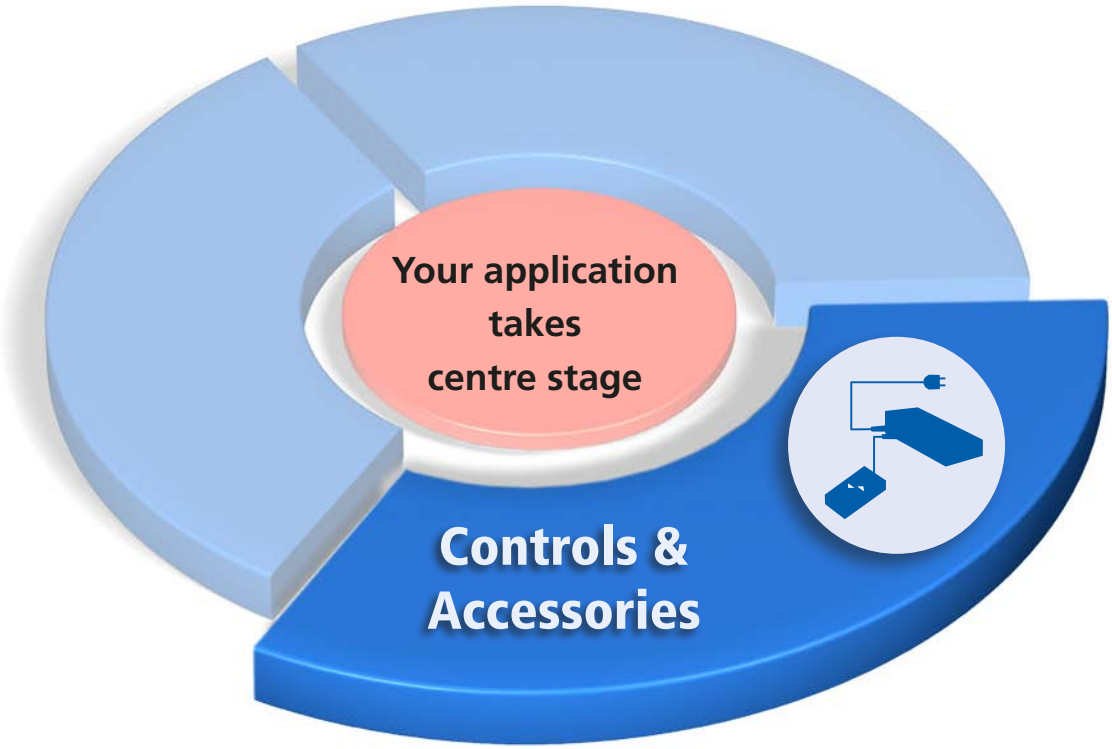


Code No.	Type
QZD100108	PLC/PC data interface
QZD100110	Fixing plate for mounting in a control cabinet

Hand switches/Feet



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
Accessories for integrated control		
QZD050210	IEC power cable (3 m) with right-angle connector	–



Controls & Accessories

The mono and multiple synchronous controls are the powerhouses for lifting columns and electric cylinders. The MultiControl control family makes it easier to choose while increasing the level of diversity. Both convenient manual push-button operation and integration in master control systems are possible via PLC module.

RK ROSE+KRIEGER

Contents

Controls & Accessories

Controls - Product selection

Finding the right control

Depending on technical and optical requirements, it takes just 2 steps to find the controls that matches your needs.
Step 1 - Determine the type of control.
Step 2 - Choose the appropriate version.

Step 1

Select the control on the right that meets your requirements.

Step 1

For step 2, please refer to the relevant catalogue page.

Controls - Product selection

Mono

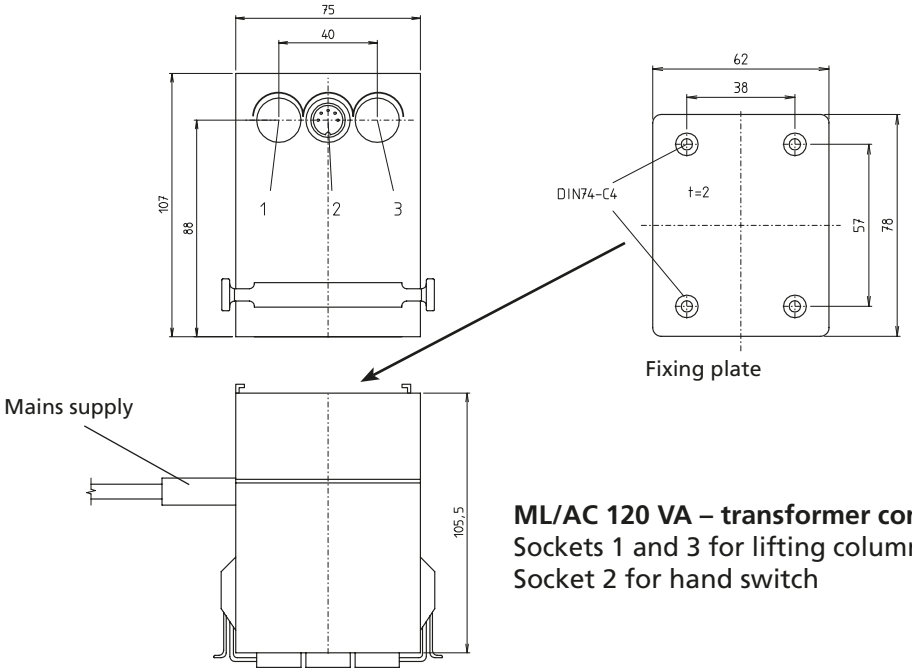
Features	 Transformer control page 152	 MultiControl mono page 154	 MultiControl Care Mono page 156	 LAMBDA-actuators page 162	 MultiControl mono accu page 178
No. of drives	1 – 2	1 – 2	1 – 4	1 – 3	1 – 2
Individual operation	●	●	●	●	●
Parallel operation	●	●	●	●	●
Mains-independent battery mode					●
Variable speed control		●			●
Wide-range input			●		

Synchro

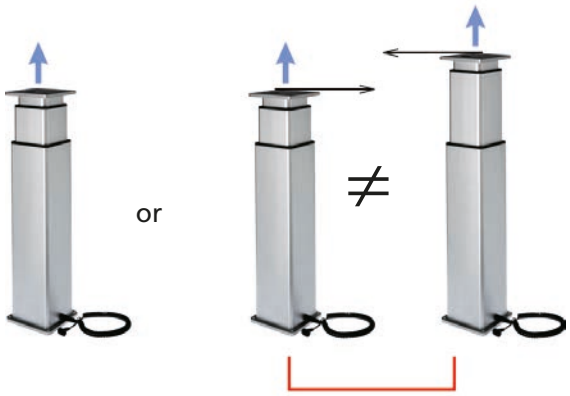
Features	 MultiControl duo page 164	 MultiControl duo silent page 166	 MultiControl quadro page 168	 MultiControl Care Synchro page 170	 LAMBDA-Antriebe page 176	 MultiControl duo accu page 178
No. of drives	1 – 2	1 – 2	1 – 4	2 – 4	2	1 – 2
Individual operation	●	●	●	●		●
Parallel operation				●		
Synchronised operation	●	●	●	●	●	●
Duty cycle monitoring	●	●	●			●
Memory function*	●	●	●			●
Networking of multiple controls	●	●	●			
PLC/PC data interface link	●	●	●			●
Safety shutdown function*			●			
Wide-range input				●		

*only in conjunction with hand switch (6 function keys & display)

Transformer control 120 VA



ML/AC 120 VA – transformer control 120 VA
Sockets 1 and 3 for lifting column/drive
Socket 2 for hand switch



Single operation Single/parallel operation

* in the case of RKSlimlift and Powerlift M only one lifting column can be controlled

Features:

- Connection for one or two drives
- Parallel movement when operating two drives (not synchronised)
- Used together with a hand switch (6 function keys) this unit supports joint/individual operation of two drives

General information/operating conditions

Max. duty cycle	20% (at 18 mins cycle time)
Input voltage	230 V AC (115 V AC available on request)
Output voltage	24 V DC
Output	120 VA
Current output	Max. 3 A
Protection class	IP 20
Length of mains cable	4 m

Controls

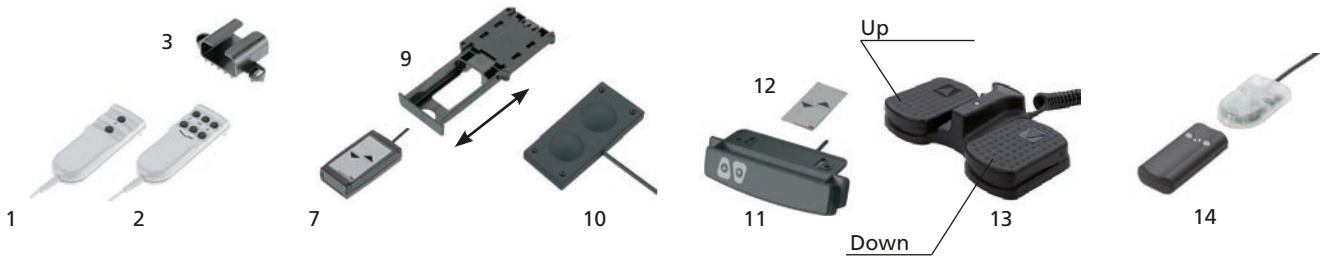
Order information:
Observe the current output of the drives when selecting the control.

Code No.	for drive
QZA07C13AX021	Alpha Colonne connection A
QZA07C13AX021	Multilift connection A
QZA09C13BH031	RK Slimlift / RK Powerlift M – only single operation connection C
QZA07C13AX021	Electric cylinder LZ 60 connection A
QZA07C13AX021	Drive unit LZ S/P connection A

Fixing plate for transformer control 120 VA

Code No.	Type
QZD020083	Fixing plate, control is pushed onto the fixing plate

Hand switches/accessories



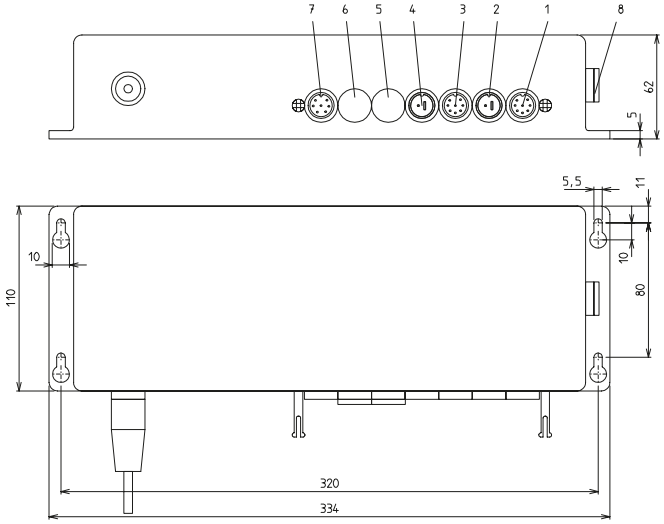
Code No.	Version	Mono operation	Parallel operation	2 drives with individual control	Fig.
QZB02C03AB031	Hand switch with 1 m spiral cable – 2 function keys	X	(X)		1
QZB02C03AD031	Hand switch with 1 m spiral cable – 6 function keys	X	X	X	2
QZB00D04AB041	Hand switch with 1 m spiral cable – 2 function keys	X	(X)		7
QZB02A03AB041	Undercover hand switch with "angled" plug	X			10
QZB00A00AB051	Table hand switch with 1 m spiral cable – 2 function keys	X			11
QZB00A00BC011	Membrane keyboard with 1 m spiral cable – 2 function keys	X	(X)		12
QZB02C01AE114	Foot switch – 2 function keys	X	(X)		13
QZB00D07BK141	Wireless hand switch – 2 function keys	X	(X)		14
Accessories					
QZD000072	Bracket for hand switch				3
QZD000074	Drawer for hand switch				9
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				

(X) = limited use

MultiControl mono

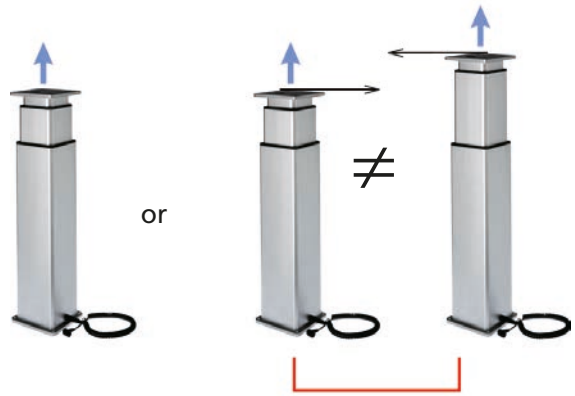
Control - MultiControl mono, connection A

Socket 1 not assigned
Socket 2 2-pin DIN socket for drive 1
Socket 3 not assigned
Socket 4 2-pin DIN socket for drive 2
Socket 5 not assigned
Socket 6 2- to -10- volt- input or potentiometerinput
Socket 7 5-pin DIN socket for parallel hand switch with 2 or 6 function keys
Socket 8 not assigned



Control - MultiControl mono connection C

Socket 1 8-pin DIN socket for drive 1
Socket 2 not assigned
Socket 3 8-pin DIN socket for drive 2
Socket 4 not assigned
Socket 5 not assigned
Socket 6 2- to -10- volt- input or potentiometerinput
Socket 7 5-pin DIN socket for parallel hand switch with 2 or 6 function keys
Socket 8 not assigned



Single operation Single/parallel operation

Features:

- Single or parallel operation of up to two lifting columns or electric cylinders (not synchronised)
- External potentiometer (customer-supplied) for setting an infinitely variable motor speed
- Temperature and duty cycle monitoring as overload protection (standard)
- Used together with a hand switch (6 function keys) this unit supports joint/individual movement of two drives

General information/operating conditions

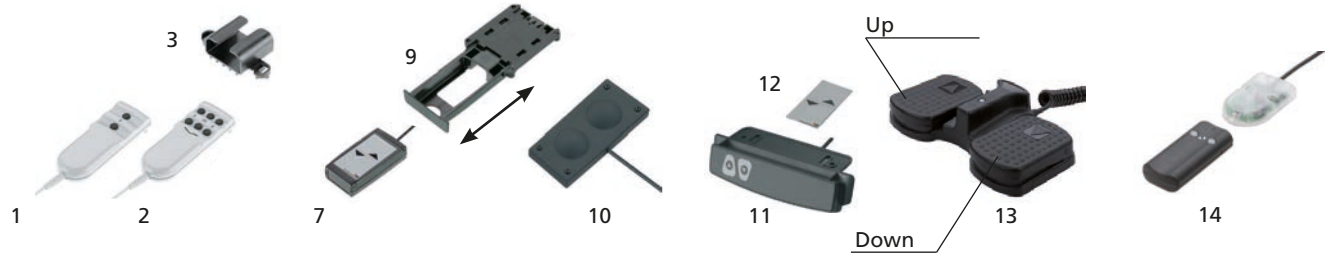
	Connection A	Connection C
The following can be connected:	Multilift, LZ 60, Drive units LZ, Alpha Colonne	Alpha Colonne, RKPowerlift (external control), RK Slimlift, Linear cylinder LZ 60, Drive units LZ
Max. duty cycle	10% 10 A, 15% 7 A	20%
Input voltage	230 V AC (115 V AC available on request)	
Output voltage	24 V DC	36 V DC
Power	250 VA	300 VA
Current output	Max. 10 A	Max. 12 A
Protection class	IP 30	
Length of mains cable	1,8 m	

Controls

Order information:
Observe the current output of the drives when selecting the control.

Code No.	for drive
QSTAACA1AA000	mono, 2- pin DIN- Connector
QSTACCA1AA000	parallel, 8- pin DIN- Connector

Hand switches/accessories



Code No.	Version	Mono operation	Parallel operation	2 drives with individual control	Fig.
QZB02C03AB031	Hand switch with 1 m spiral cable – 2 function keys	X	(X)		1
QZB02C03AD031	Hand switch with 1 m spiral cable – 6 function keys	X	X	X	2
QZB00D04AB041	Hand switch with 1 m spiral cable – 2 function keys	X	(X)		7
QZB02A03AB041	Undercover hand switch with “angled” plug	X			10
QZB00A00AB051	Table hand switch with 1 m spiral cable – 2 function keys	X			11
QZB00A00BC011	Membrane keyboard with 1 m spiral cable – 2 function keys	X	(X)		12
QZB02C01AE114	Foot switch – 2 function keys	X	(X)		13
QZB00D07BK141	Wireless hand switch – 2 function keys	X	(X)		14
Accessories					
QZD000072	Bracket for hand switch				3
QZD000074	Drawer for hand switch				9
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)

(X) = limited use

MultiControl Care mono

International connecting options

Multilift mono
Tested to EN 60601-1 3E

MultiControl Care
Tested to EN 60601-1 3E

Features:

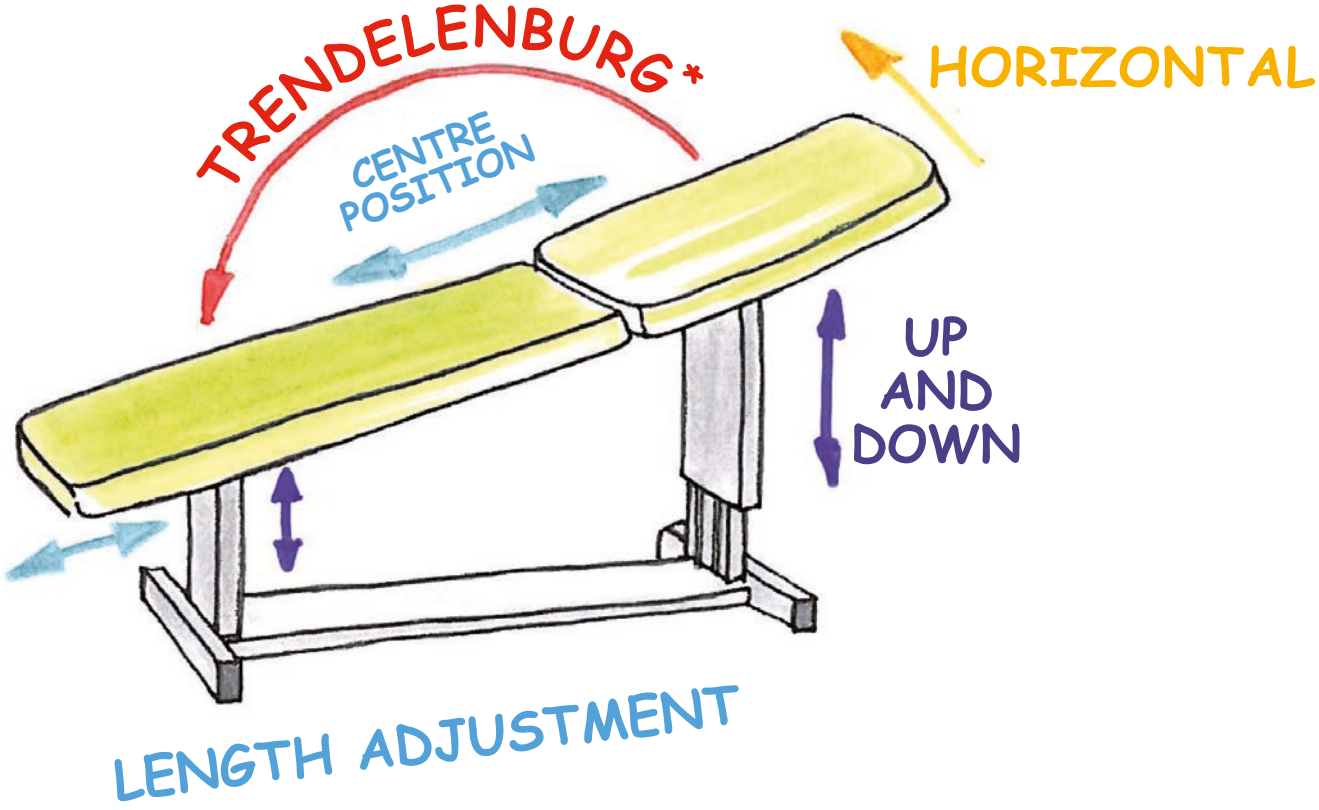
- 4 drives
- Single-fault protection
- Switching power supply with wide-range input
- Conforms to the Ecodesign Directive (standby electricity output <0.5 W)
- Locking function
- Trendelenburg position
- Anti-Trendelenburg position
- International connecting options

MultiControl Care - Table of contents

General information / operating conditions

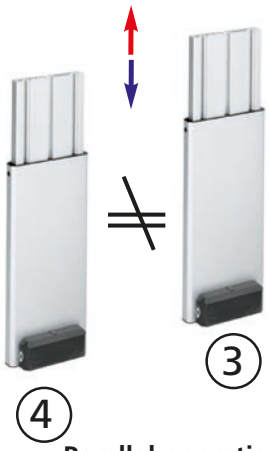
The following can be connected:	Multilift mono
Max. duty cycle	At nominal load, 10% (max. 2 mins operating time, 18 mins rest time)
Input voltage	100–240 V AC, 50/60 Hz, switching power supply with wide-range input ± 10%
Number of drives[1)]	Max. 4 drives
Power	Conforms to the Ecodesign Directive (standby electricity output <0.5 W)
Current output	Current output at nominal load max. 3.0 A (depending on input voltage)
Degree of protection	IP20, IPX6
Length of mains cable	3,000 mm–4,000 mm (depending on version, PVC)

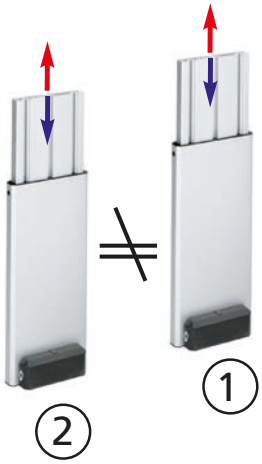
1) No more than two drives may be operated at nominal load at the same time!



*For ***anti-/Trendelenburg adjustment***, the customer must observe the permissible inclination in the relevant application.

MultiControl Care Mono





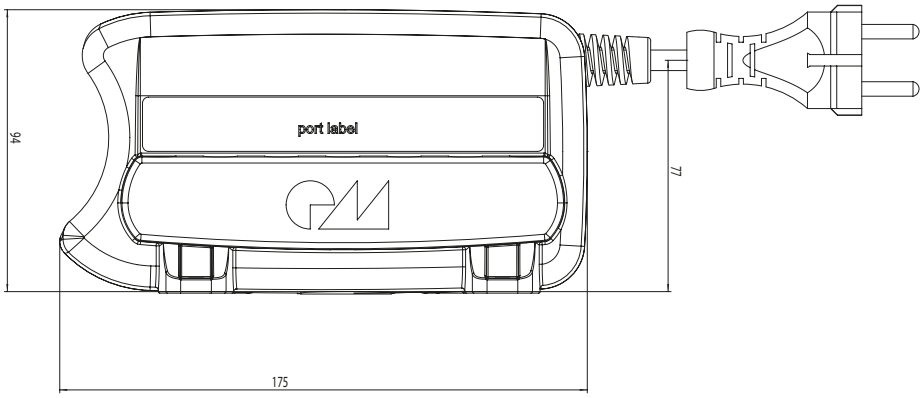
Single or parallel operation

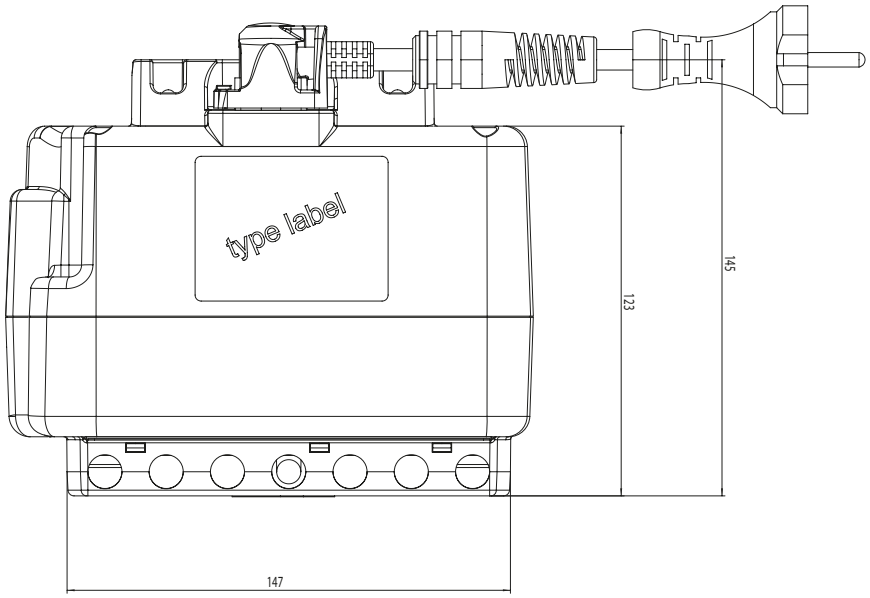
Parallel operation
or
*Trendelenburg
*Anti-Trendelenburg
operation

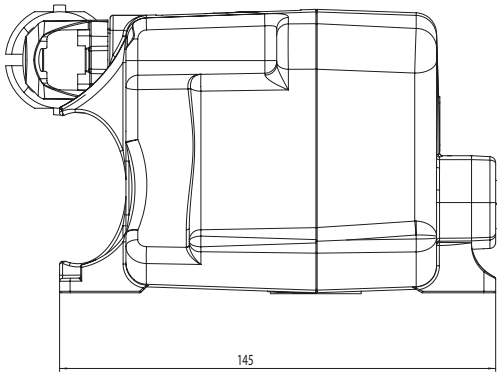
Parallel operation

With the MultiControl Care Mono up to 4 drives can be operated in parallel (not synchronised). Drives 1 and 2 may be operated singly or in parallel. Drives 3 + 4 operate in parallel. The 8- or 10-key hand switch has a magnetic switch locking function. With drives 3 + 4 Trendelenburg* and anti-Trendelenburg* applications are possible.

MultiControl Care – Technical data







Controls - MultiControl Care

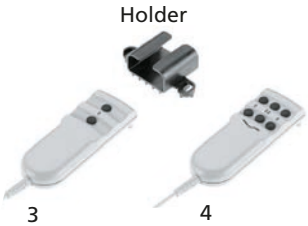
Code No	for drive
QST10H20AC300	MultiControl Care Mono*

*Please order power cable separately; see below.

Hand switches / accessories

1

2



3 4

5

6

Code No.	Version	Mono mode	Parallel operation	2 drives with individual control	Trendelenburg / anti-Trendelenburg function	Locking function with magnetic key*	Fig.
QZB20A06BL136	10 keys with locking function (13-pin)	●	●	●	●	●	1
QZB20A06BE136	8 keys with locking function (13-pin)	●	●	●		●	2
QZB20A06BF136	2 keys (13-pin)	●	●				3
QZB20A06BG136	6 keys (13-pin)	●	●	●			4
QZB20A06BH136	Foot switch, 2 keys (13-pin)	●	●				5
QZD170505	Magnetic key*						6
QZD000072	Holder for hand switch (3 + 4)						

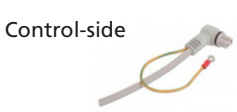
Power cable with protective ground wire (PE)

1

2

3

4

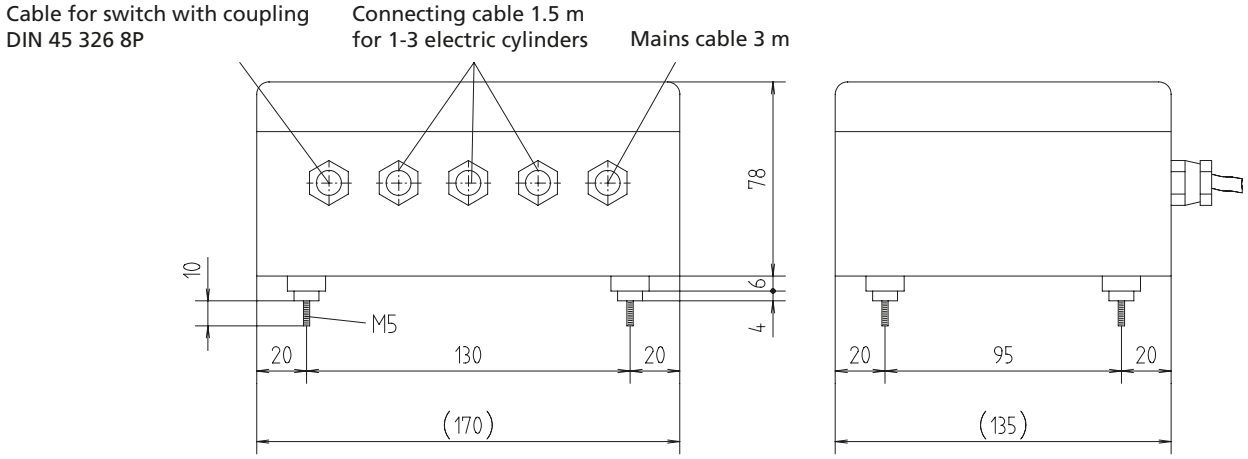


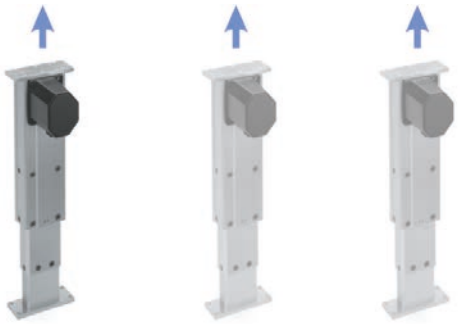
*

Code No	Version	Length	Fig.
QZD170501	Power cable* (USA version), plug-in, straight	4 m	1
QZD170500	Power cable* (Europe version,), plug-in, straight	3 m	2
QZD170503	Power cable* (UK version), plug-in, helix	2 m	3
QZD170502	Power cable* (Japan version), plug-in, straight	4 m	4

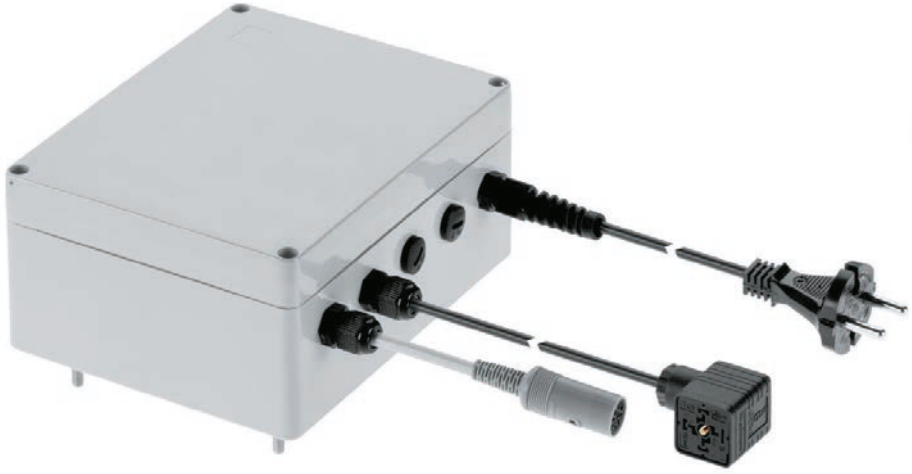
Transformer control for LAMBDA actuators

LAMBDA Colonne LBC/LAMBDA LBG electric cylinder





1-3 single operation



Features:

- Integrated thermal monitoring
- Low magnetic leakage toroidal transformer with extremely low power output
- Movement of loads up to a total of 8,000 N

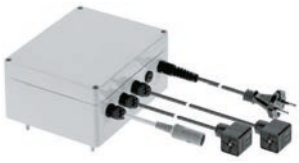
Options:

- Depending on the version, this unit can operate up to three individual LAMBDA actuators
- Operation with a hand switch (accessories)

General information/operating conditions

Transformer control	LBM/LBC 1 (for 1 drive) LBM/LBC 2 (for 2 drives) LBM/LBC 3 (for 3 drives)
Duty cycle	Max. 30%
Input voltage	230 V AC/50Hz (standard) or 110 V AC/50-60Hz (on request)
Supply voltage (retraction/extension)	24 V DC
Power	192 VA
Protection class	IP 54
Length of mains cable	3 m

Controls



Code No.	Version	
QZA01C04AD011	LBM/LBC 1 transformer control	Controls up to 1 electric cylinder
QZA01C04AE011	LBM/LBC 2 transformer control	Controls up to 2 electric cylinders
QZA01C04AF011	LBM/LBC 3 transformer control	Controls up to 3 electric cylinders

Hand switches/accessories

3

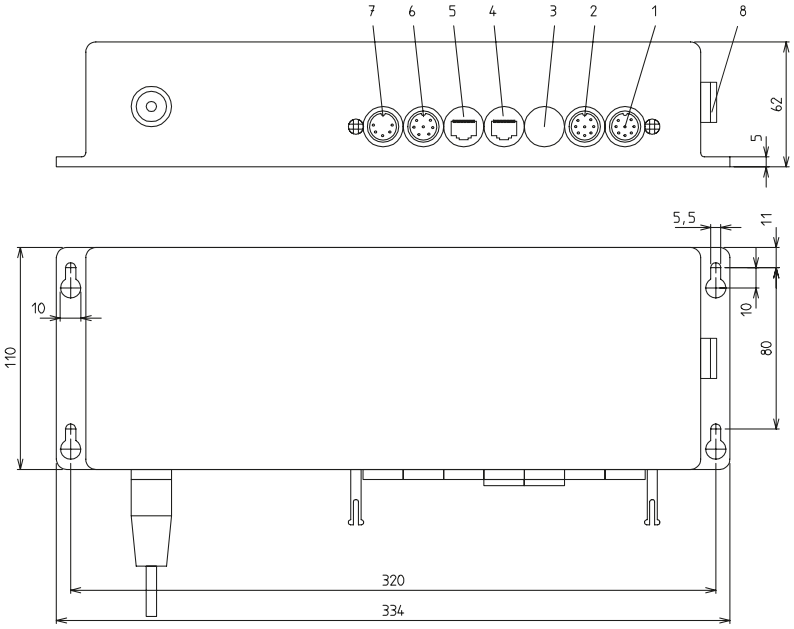
2

Code No.	Version		Fig.
QZB03C02AD031	LAMBDA hand switch with fixing clip – 6 function keys	Controls up to 3 drives	2
QZD000072	Bracket for hand switch		3

MultiControl duo

Control - MultiControl duo

Socket 1	8-pin DIN socket for drive 1
Socket 2	8-pin DIN socket for drive 2
Socket 3	not assigned
Socket 4	Bus
Socket 5	Bus
Socket 6	6-pin DIN socket for serial hand switch
Socket 7	5-pin DIN socket for parallel hand switch with 2 function keys
Socket 8	not assigned



2 drives synchronised

Features:

- Synchronous control of up to two drives
- Duty cycle monitoring as overload protection (can be activated as standard)
- Current height display with 6-key hand switch
- The hand switch with six function keys supports storage of nine different intermediate positions (memory) which can be called up at the touch of a button
- For simple synchronous operation, we recommend the 2-key hand switch
- Supports connection to a PLC/PC data interface
- Bus cable enables the networking of up to 8 controls

General information/operating conditions

The following can be connected:	Multilift, Alpha Colonne, RKPowerlift (external control), RK Slimlift, Linear cylinder LZ 60, drive unit LZ
Max. duty cycle	20% (at 10 mins cycle time)
Input voltage	230 V AC (115 V AC available on request)
Output voltage	36 V DC
Power	300 VA
Current output	Max. 12 A
Protection class	IP 30
Length of mains cable	1.8 m

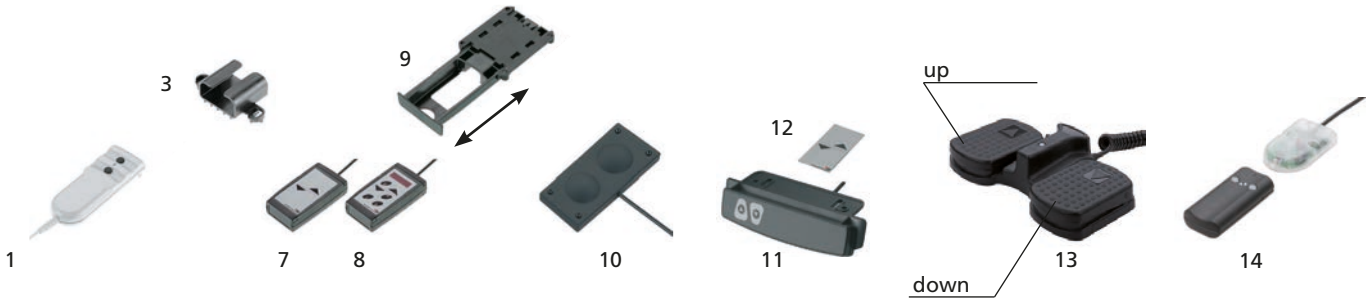
Controls

Order information:
Observe the current output of the drives when selecting the control.

Code No.	for drive
QST35C02AA000	Drive unit LZ S/P, 230 V AC
QST61C02AA000	Alpha Colonne, 230 V AC
QST10C02AA000	Multilift , 230 V AC
QST42C02AA000	RKPowerlift Spindle, 230 V AC
QST43C02AA000	RKPowerlift telescope, 230 V AC
QST44C02AA000	RKPowerlift M, 230 V AC

Code No.	for drive
QST20C02AA000	RKSlimlift, 230 V AC
QST21C02AA000	RKSlimlift EM, 230 V AC
QST30C02AA000	Electric cylinder LZ 60, 230 V AC

Hand switches/accessories



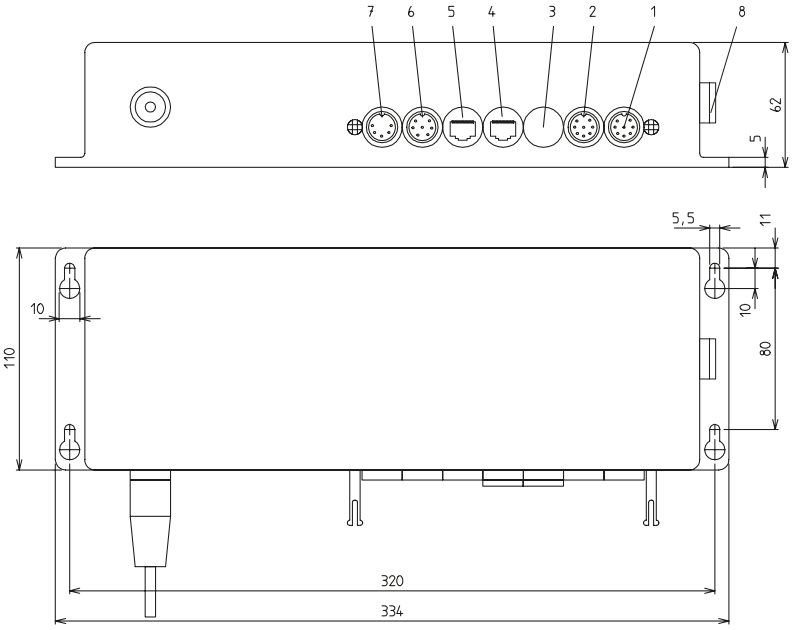
Code No.	Version	Synchro-nous operation	Commissioning bus system	Memory function	Fig.
QZB02C03AB031	Hand switch with 1 m spiral cable – 2 function keys	X			1
QZB00D04AB041	Hand switch with 1 m spiral cable – 2 function keys	X			7
QZB00D04AD041	Hand switch with 1 m spiral cable – 6 function keys/display	X	X	X	8
QZB02A03AB041	Undercover hand switch with “angled” plug	X			10
QZB00A00AB051	Table hand switch with 1 m spiral cable – 2 function keys	X			11
QZB00A00BC011	Membrane keyboard with 1 m spiral cable – 2 function keys	X			12
QZB02C01AE114	Foot switch – 2 function keys	X			13
QZB00D07BK141	Wireless hand switch – 2 function keys	X			14
Accessories					
QZD000072	Bracket for hand switch				3
QZD000074	Drawer for hand switch				9
QZD100093	Bus cable 6 m for networking synchronous control				
QZD070526	Extension cable 2,5 m drive for connector C/8-pin DIN socket				

MultiControl duo silent

Low-noise control for sensitive areas

Control - MultiControl duo

Socket 1 8-pin DIN socket for drive 1
Socket 2 8-pin DIN socket for drive 2
Socket 3 not assigned
Socket 4 Bus
Socket 5 Bus
Socket 6 6-pin DIN socket for serial hand switch
Socket 7 5-pin DIN socket for parallel hand switch with 2 function keys
Socket 8 not assigned



2 drives synchronised

Features:

- Synchronous control of up to two drives
- Duty cycle monitoring as overload protection (can be activated as standard)
- Current height display with 6-key hand switch
- The hand switch with six function keys supports storage of nine different intermediate positions (memory) which can be called up at the touch of a button
- Significant noise reduction due to a 30% reduction in speed compared to the Multi-Control duo
- Supports connection to a PLC/PC data interface
- Bus cable enables the networking of up to 8 controls

General information/operating conditions

The following can be connected:	Multilift, Alpha Colonne, RKPowerlift (external control), RK Slimlift, Linear cylinder LZ 60, drive unit LZ
Max. duty cycle	10% (at 10 mins cycle time)
Input voltage	230 V AC (115 V AC available on request)
Output voltage	24 V DC
Power	250 VA
Current output	Max. 10 A
Protection class	IP 30
Length of mains cable	1.8 m

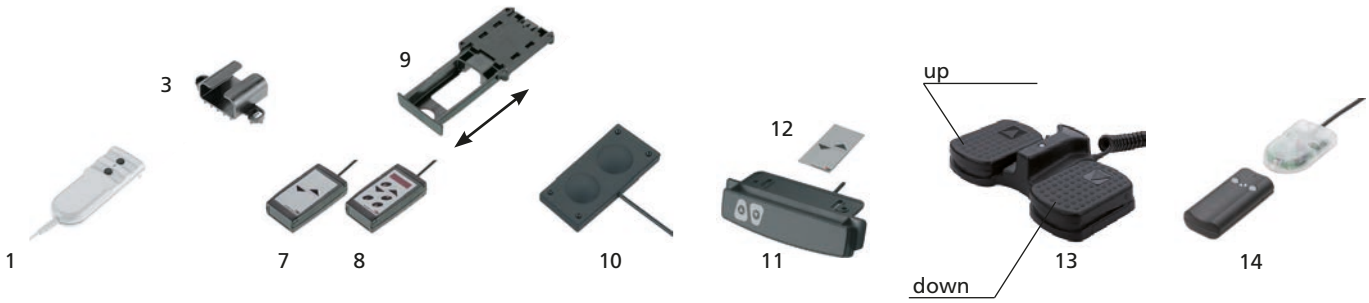
Controls

Order information:
Observe the current output of the drives when selecting the control.

Code No.	for drive
QST61C02AD000	Alpha Colonne, 230 V AC
QST10C02AD000	Multilift , 230 V AC
QST42C02AD000	RKPowerlift Spindle, 230 V AC

Code No.	for drive
QST20C02AD000	RKSlimlift, 230 V AC
QST21C02AD000	RKSlimlift EM, 230 V AC
QST30C02AD000	Electric cylinder LZ 60, 230 V AC

Hand switches/accessories

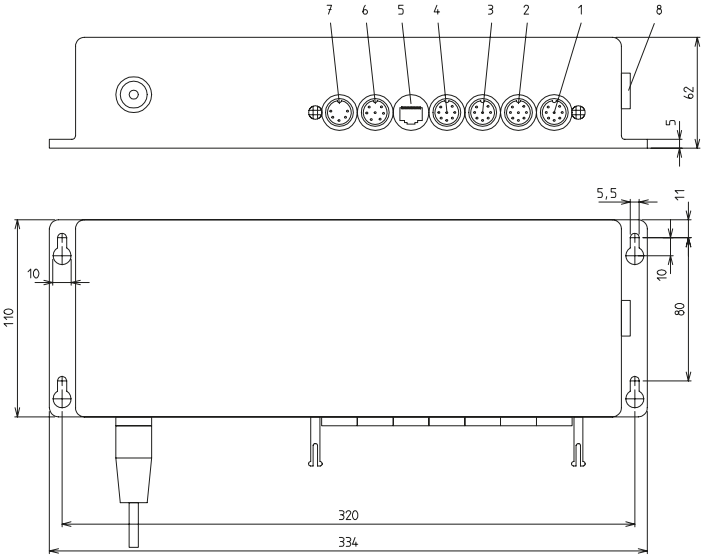


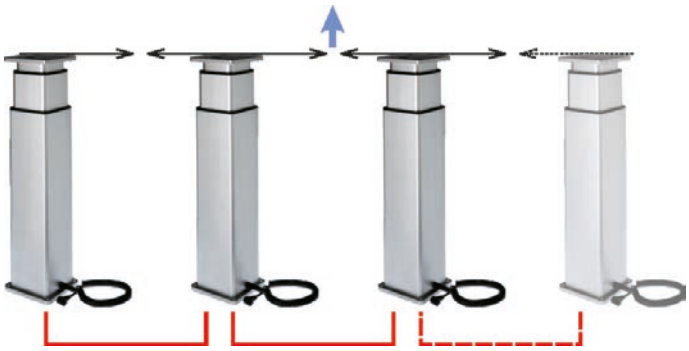
Code No.	Version	Synchro-nous operation	Commissioning bus system	Memory function	Fig.
QZB02C03AB031	Hand switch with 1 m spiral cable – 2 function keys	X			1
QZB00D04AB041	Hand switch with 1 m spiral cable – 2 function keys	X			7
QZB00D04AD041	Hand switch with 1 m spiral cable – 6 function keys/display	X	X	X	8
QZB02A03AB041	Undercover hand switch with “angled” plug	X			10
QZB00A00AB051	Table hand switch with 1 m spiral cable – 2 function keys	X			11
QZB00A00BC011	Membrane keyboard with 1 m spiral cable – 2 function keys	X			12
QZB02C01AE114	Foot switch – 2 function keys	X			13
QZB00D07BK141	Wireless hand switch – 2 function keys	X			14
Accessories					
QZD000072	Bracket for hand switch				3
QZD000074	Drawer for hand switch				9
QZD100093	Bus cable 6 m for networking synchronous control				
QZD070526	Extension cable 2,5 m drive for connector C/8-pin DIN socket				

MultiControl quadro

Control - MultiControl quadro

Socket 1 8-pin DIN socket for drive 1
Socket 2 8-pin DIN socket for drive 2
Socket 3 8-pin DIN socket for drive 3
Socket 4 8-pin DIN socket for drive 4
Socket 5 Bus
Socket 6 6-pin DIN socket for serial hand switch
Socket 7 5-pin DIN socket for parallel hand switch with 2 function keys
Socket 8 6-pin DIN socket for connecting a protective shutdown e.g. a safety edge switch





2-4 drives synchronised

Features:

- The synchronous control can operate up to four drives
- Duty cycle monitoring protects the system against overload (can be activated as standard)
- The hand switch with 6 function keys supports storage of nine different intermediate positions (memory) which can be called up at the touch of a button
- 2-key hand switch for simple synchronous operation
- Supports connection to a PLC/PC data interface
- Bus cable enables the networking of up to 8 controls

General information/operating conditions

The following can be connected:	Multilift, Alpha Colonne, RKPowerlift (external control), RK Slimlift, Linear cylinder LZ 60, drive unit LZ
Max. duty cycle	20% (at 10 mins cycle time)
Input voltage	230 V AC (115 V AC available on request)
Output voltage	36 V DC
Power	300 VA
Current output	Max. 12 A
Protection class	IP 30
Length of mains cable	1.8 m

Controls

Order information:

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

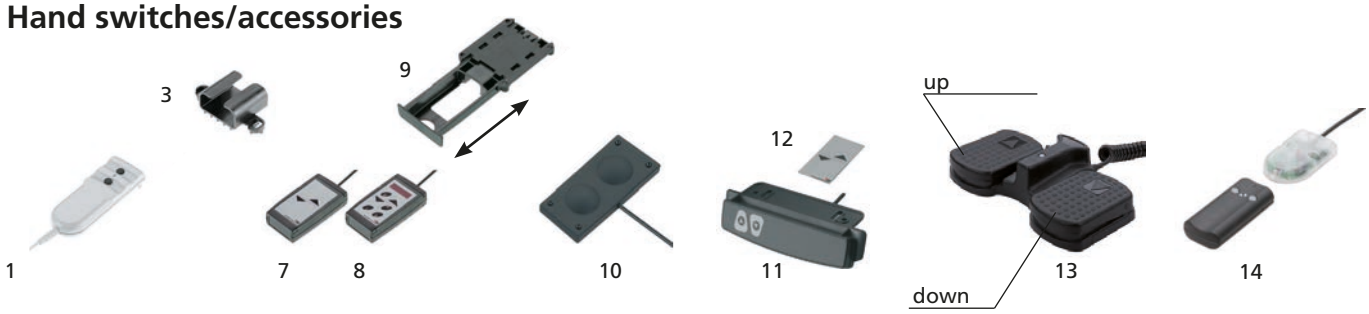
When connecting a switch-strip or other protective cut-out device, please consider control of the single impulses, regarding over travel.

For this function, please ensure that a 6-Button handset, with display is used. (as Example. 8).

Code No.	for drive
QST35C04AA000	Drive unit LZ S/P, 230 V AC
QST61C04AA000	Alpha Colonne, 230 V AC
QST10C04AA000	Multilift, 230 V AC
QST42C04AA000	RKPowerlift Spindle, 230 V AC
QST43C04AA000	RKPowerlift telescope, 230 V AC
QST44C04AA000	RKPowerlift M, 230 V AC

Code No.	for drive
QST20C04AA000	RKSlimlift, 230 V AC
QST21C04AA000	RKSlimlift EM, 230 V AC
QST30C04AA000	Electric cylinder LZ 60, 230 V AC

Hand switches/accessories



Code No.	Version	Synchro-nous operation	Commissioning bus system	Memory function	Fig.
QZB02C03AB031	Hand switch with 1 m spiral cable – 2 function keys	X			1
QZB00D04AB041	Hand switch with 1 m spiral cable – 2 function keys	X			7
QZB00D04AD041	Hand switch with 1 m spiral cable – 6 function keys/display	X	X	X	8
QZB02A03AB041	Undercover hand switch with "angled" plug	X			10
QZB00A00AB051	Table hand switch with 1 m spiral cable – 2 function keys	X			11
QZB00A00BC011	Membrane keyboard with 1 m spiral cable – 2 function keys	X			12
QZB02C01AE114	Foot switch – 2 function keys	X			13
QZB00D07BK141	Wireless hand switch – 2 function keys	X			14
Accessories					
QZD000072	Bracket for hand switch				3
QZD000074	Drawer for hand switch				9
QZD070526	Extension cable 2,5 m drive for connector C/8-pin DIN socket				

MultiControl Care synchro

International
connecting options

MultiControl Care
Tested to EN 60601-1 3E

Multilift synchro
Tested to EN 60601-1 3E

Features:

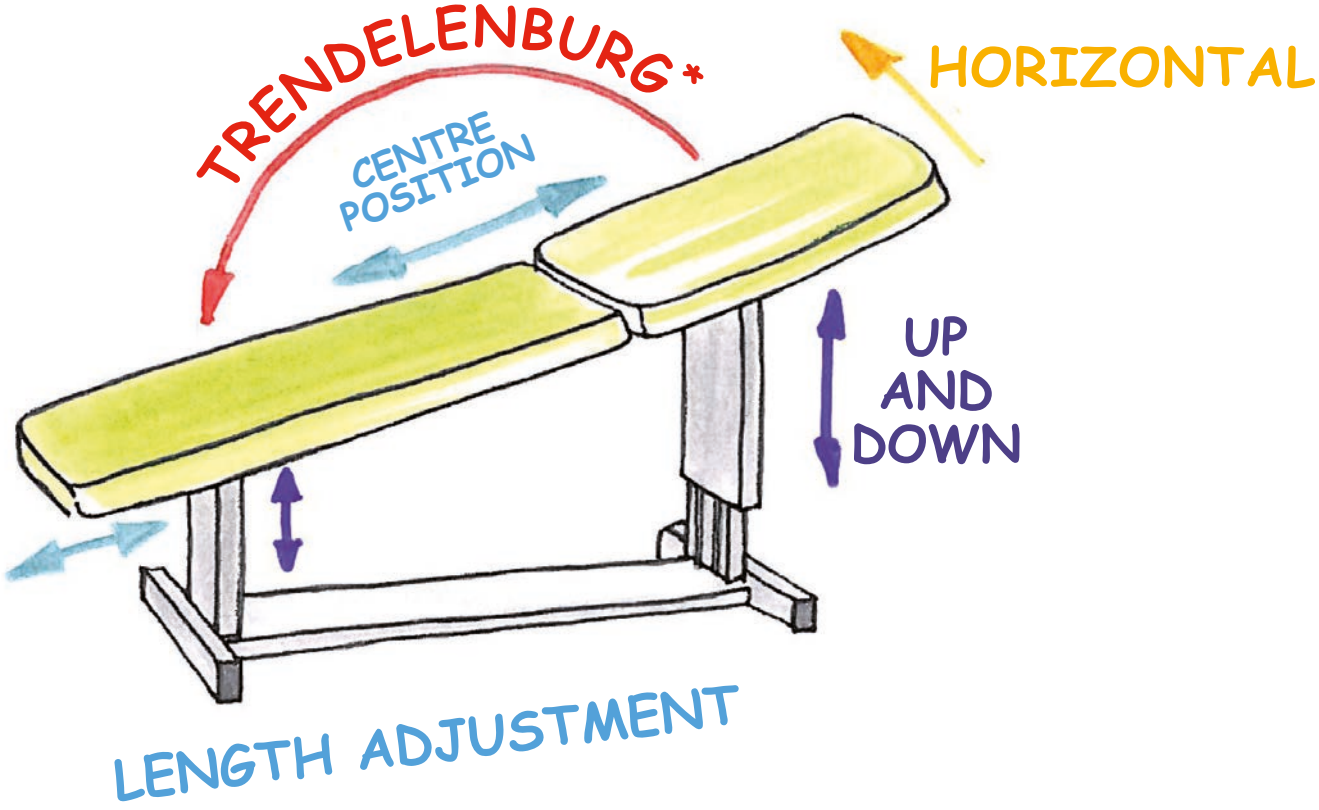
- 4 drives
- Single-fault protection
- Switching power supply with wide-range input
- Conforms to the Ecodesign Directive (standby electricity output <0.5 W)
- Locking function
- Trendelenburg position
- Anti-Trendelenburg position
- International connecting options

MultiControl Care - Table of contents

General information / operating conditions

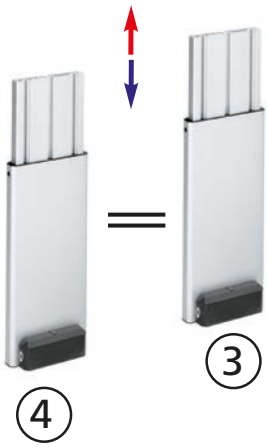
The following can be connected:	Multilift synchro
Max. duty cycle	At nominal load, 10% (max. 2 mins operating time, 18 mins rest time)
Input voltage	100–240 V AC, 50/60 Hz, switching power supply with wide-range input ± 10%
Number of drives[1)]	Max. 4 drives
Power	Conforms to the Ecodesign Directive (standby electricity output <0.5 W)
Current output	Current output at nominal load max. 3.0 A (depending on input voltage)
Degree of protection	IP20, IPX6
Length of mains cable	3,000 mm–4,000 mm (depending on version, PVC)

1) No more than two drives may be operated at nominal load at the same time!

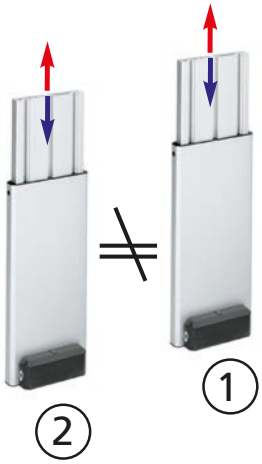


*For ***anti-/Trendelenburg adjustment***, the customer must observe the permissible inclination in the relevant application.

MultiControl Care Synchro



Synchronised operation
or
*Trendelenburg
*Anti-Trendelenburg
operation

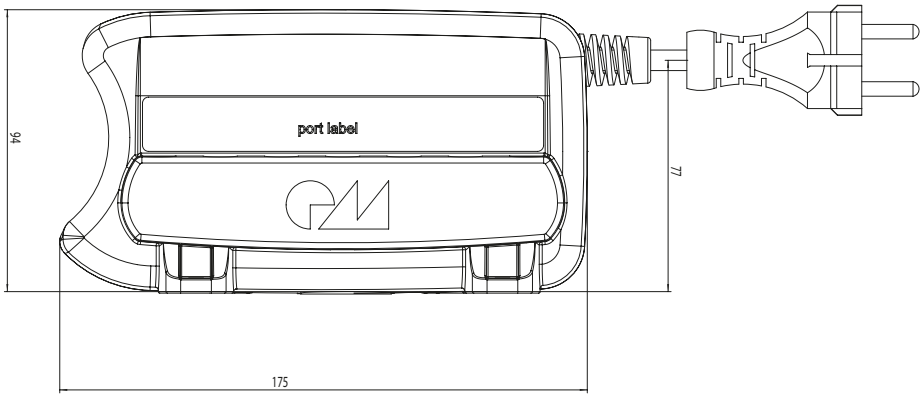


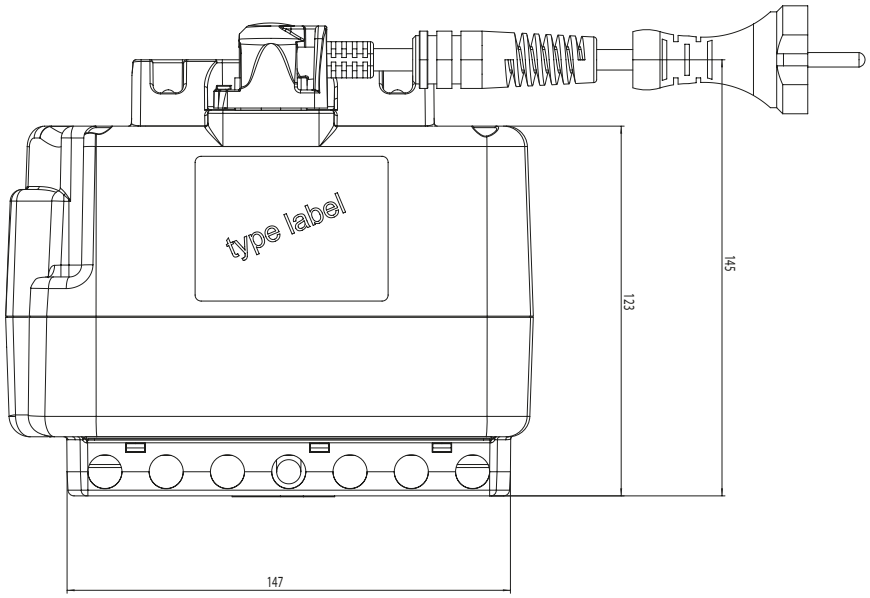
Single or parallel operation

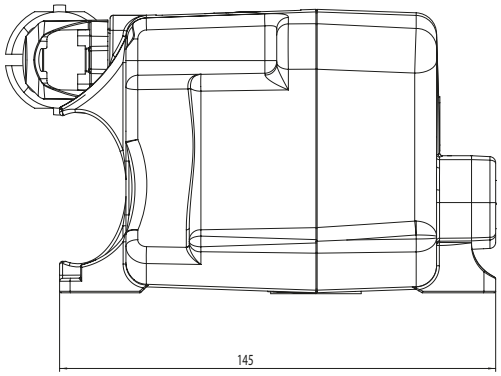
Parallel operation

With the MultiControl Care Synchro up to 4 drives can be operated in parallel (not synchronised). Drives 1 and 2 may be operated singly or in parallel. Drives 3 + 4 operate in parallel. The 8- or 10-key hand switch has a magnetic switch locking function. With drives 3 + 4 Trendelenburg* and anti-Trendelenburg* applications are possible.

MultiControl Care – Technische Daten







Steuerungen - MultiControl Care

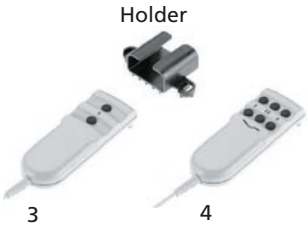
Code No	for drive
QST10H21AC300	MultiControl Care Synchro*

*Please order power cable separately; see below.

Hand switches / accessories

1

2



3 4

5

6

Code No.	Version	Mono mode	Parallel operation	2 drives with individual control	Trendelenburg / anti-Trendelenburg function	Locking function with magnetic key*	Fig.
QZB20A06BL136	10 keys with locking function (13-pin)	●	●	●	●	●	1
QZB20A06BE136	8 keys with locking function (13-pin)	●	●	●		●	2
QZB20A06BF136	2 keys (13-pin)	●	●				3
QZB20A06BG136	6 keys (13-pin)	●	●	●			4
QZB20A06BH136	Foot switch, 2 keys (13-pin)	●	●				5
QZD170505	Magnetic key*						6
QZD000072	Holder for hand switch (3 + 4)						

Power cable with protective ground wire (PE)

1

2

3

4

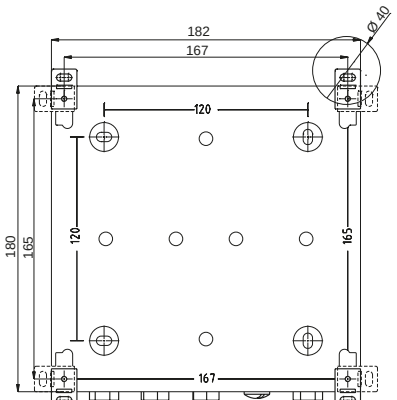
Control-side

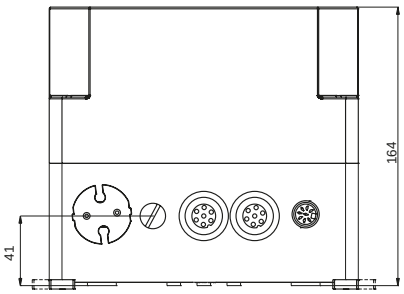
*

Code No	Version	Length	Fig.
QZD170501	Power cable* (USA version), plug-in, straight	4 m	1
QZD170500	Power cable* (Europe version,), plug-in, straight	3 m	2
QZD170503	Power cable* (UK version), plug-in, helix	2 m	3
QZD170502	Power cable* (Japan version), plug-in, straight	4 m	4

Synchronous control for LAMBDA actuators

LAMBDA Colonne LAMBDA LBS electric cylinder

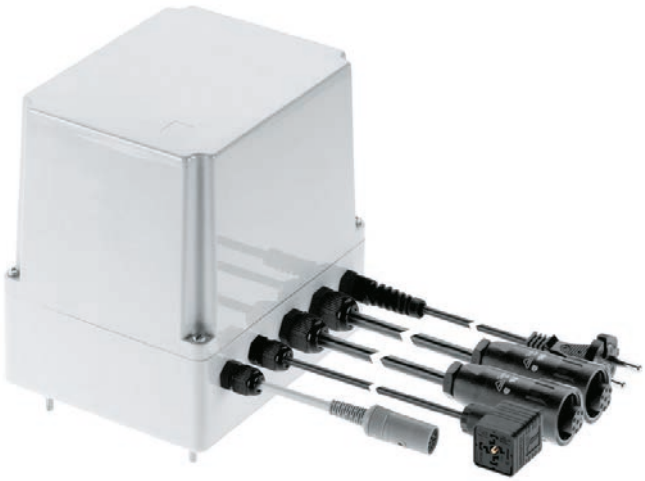


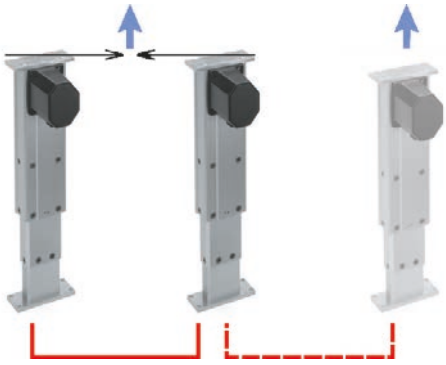


Cable for switch with coupling DIN 45 326 8P

Power cable 3 m

Connecting cable 1.5 m for 2 electric cylinders





2 drives synchronised
or 2 drives synchronised
+ 1 additional drive

Features:

- Integrated thermal monitoring
- Two low magnetic leakage toroidal transformers with extremely low power output
- Movement of loads up to a total of 8,000 N
- Synchronised and load-independent operation of two LAMBDA actuators with integrated potentiometers

Options:

- A third LAMBDA actuator can also be connected, which does not support synchronised movement

General information/operating conditions

Transformer control	LBS 2 (for 2 drives) LBS 2+1 (2 drives synchronised, plus 1 additional drive)
Duty cycle	Max. 30%
Input voltage	230 V AC/50Hz (standard) or 110 V AC/50-60Hz (optional)
Supply voltage (retraction/extension)	24 V DC (standard)
Power	382 VA
Degree of protection	IP 54
Length of mains cable	3 m

Controls

Code No.	Version	
QZA10C01AG011	LBS 2 synchronous control	2 electric cylinders, synchronous
QZA10C01AH011	LBS 2+1 synchronous control	Control of up to 3 electric cylinders, 2 x synchronised + 1 additional electric cylinder

Hand switches/accessories

3

2

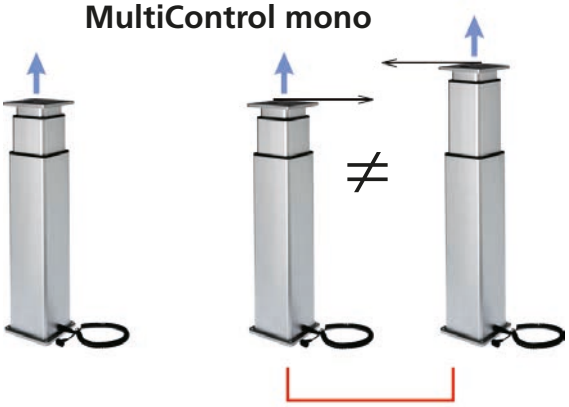
Code No.	Version		Fig.
QZB03C02AD031	LAMBDA hand switch with fixing clip – 6 function keys	Controls up to 3 drives	2
QZD000072	Bracket for hand switch		3

MultiControl accu

Battery 1.2 Ah

Battery 7.2 Ah

MultiControl mono



Single operation

Single/parallel operation

MultiControl duo

2 drives synchronised

Features:

- For mobile devices
- Depending on the drive and task, applications can be run independent of a mains power supply for more than 40 hours
- Memory function for storing preferred positions with MultiControl duo
- Mains-independent battery mode
- Processor-assisted charging: deep discharge protection, overload protection, trickle charging, audible undervoltage indicator

Options:

- Choice of two battery versions (1.2 Ah or 7.2 Ah)
- Choice of mono or duo version for parallel or synchronous operation
- External potentiometer for setting an infinitely variable motor speed
- Storage of 9 different positions (duo)

General information/operating conditions

The following can be connected:	Multilift, Alpha Colonne, RKPowerlift (external control), RK Slimlift, Linear cylinder LZ 60
Max. duty cycle	20% (at 10 mins cycle time)
Input voltage	230 V AC (115 V AC available on request)
Input power	250 VA (at 1.2 Ah)/300 VA (at 7.2 Ah)
Nominal voltage (battery)	24 V DC
Max. discharge current	5 A (at 1.2 Ah)/10 A (at 7.2 Ah)
Max. charging time	approx. 14 hours
Protection class	II
Protection class	IP 30
Operating temperature	10°C to 35°C
Storage temperature	10°C to 40°C
Charge cycles	at 30% discharge approx. 1,000
Weight	Control 3.5 kg/battery 1.5 kg (1.2 Ah)/battery 5.6 kg (7.2 Ah)
Battery cable length	0.15 m (at 1.2 Ah)/0.45 m (at 7.2 Ah)
Length of mains cable	1.8 m

Controls

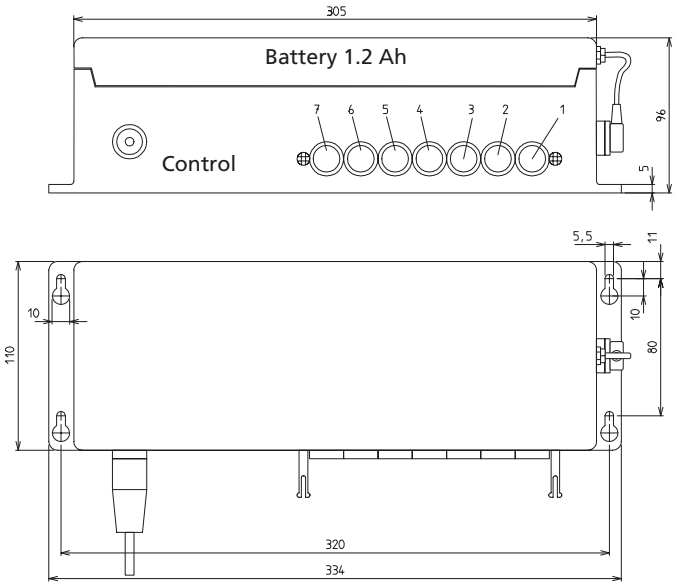
Code No.	for drive
MultiControl mono accu 1.2 Ah	
QSTAACA1AE100	mono, 2- pin DIN- Connector
QSTACCA1AE100	parallel, 8- pin DIN- Connector
MultiControl duo accu 1.2 Ah connection C	
QST20C02AE100	RKSlimlift
QST21C02AE100	RKSlimlift EM
QST61C02AE100	Alpha Colonne II
QST10C02AE100	Multilift
QST44C02AE100	RKPowerlift M
QST42C02AE100	RKPowerlift Spindle
QST43C02AE100	RKPowerlift telescope
QST40C02AE100	RKPowerlift Rack
QST30C02AE100	LZ60

Code No.	for drive
MultiControl mono accu 7.2 Ah	
QSTAACA1AF100	mono, 2- pin DIN- Connector
QSTACCA1AF100	parallel, 8- pin DIN- Connector
MultiControl duo accu 7.2 Ah connection C	
QST20C02AF100	RKSlimlift
QST21C02AF100	RKSlimlift EM
QST61C02AF100	Alpha Colonne II
QST10C02AF100	Multilift
QST44C02AF100	RKPowerlift M
QST42C02AF100	RKPowerlift Spindle
QST43C02AF100	RKPowerlift telescope
QST40C02AF100	RKPowerlift Rack
QST30C02AF100	LZ 60

Accessories	
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

MultiControl accu

MultiControl mono/duo accu 1,2 Ah



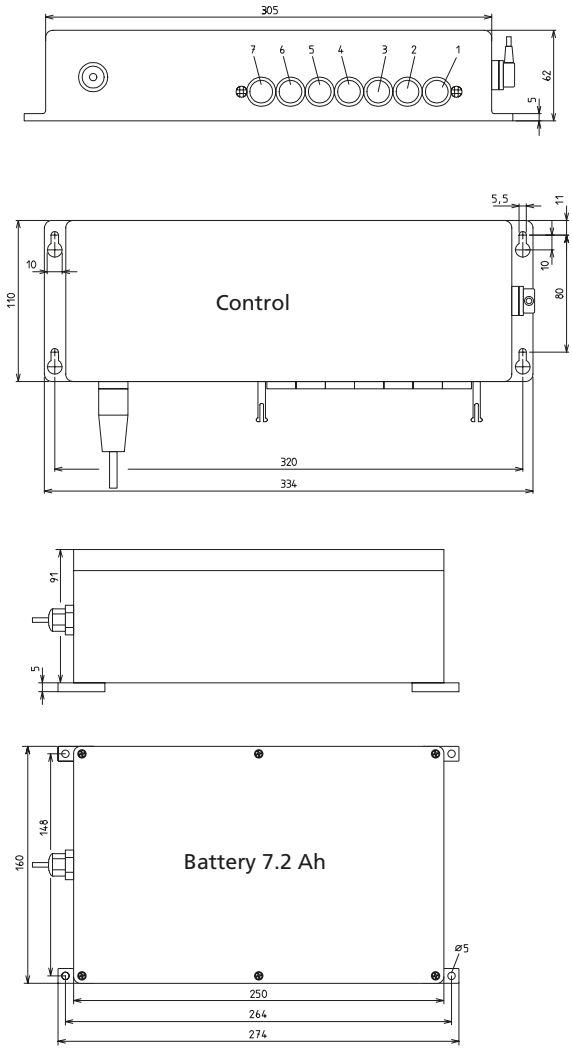
Control - MultiControl mono accu, connection A

Socket 1	not assigned
Socket 2	2-pin DIN socket for drive 1
Socket 3	not assigned
Socket 4	2-pin DIN socket for drive 2
Socket 5	not assigned
Socket 6	2- to -10- volt- input or potentiometerinput
Socket 7	7-pin DIN socket for parallel hand switch with 2 or 6 function keys
Socket 8	connection accu

Control - MultiControl mono accu connection C

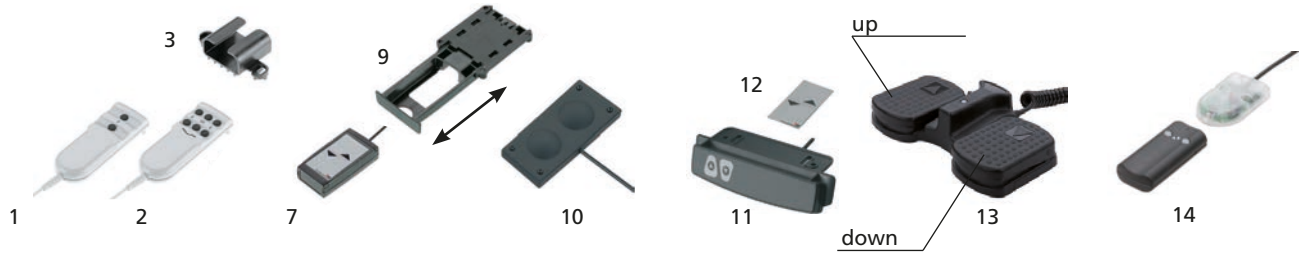
Socket 1	8-pin DIN socket for drive 1
Socket 2	not assigned
Socket 3	8-pin DIN socket for drive 2
Socket 4	not assigned
Socket 5	not assigned
Socket 6	2- to -10- volt- input or potentiometerinput
Socket 7	7-pin DIN socket for parallel hand switch with 2 or 6 function keys
Socket 8	connection accu

MultiControl mono/duo accu 7,2 Ah



Height-adjustable lectern

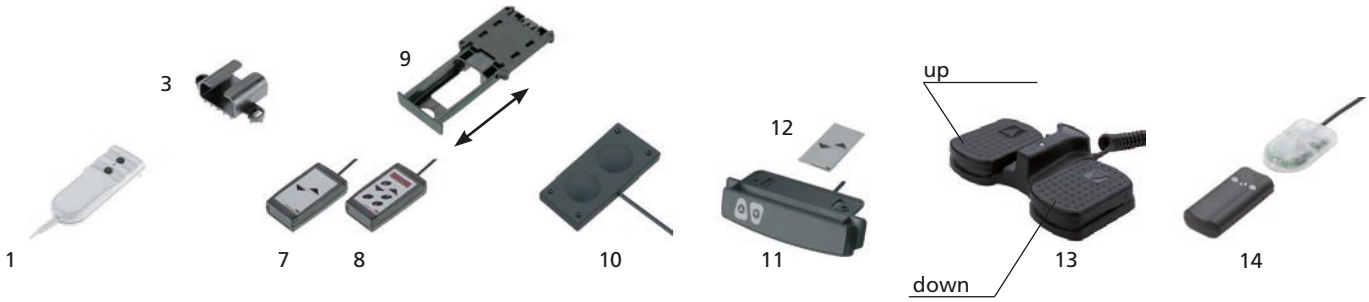
Hand switches/accessories (MultiControl mono accu)



Code No.	Version	Mono operation	Parallel operation	2 drives with individual control	Fig.
QZB02C03AB031	Hand switch with 1 m spiral cable – 2 function keys	X	(X)		1
QZB02C03AD031	Hand switch with 1 m spiral cable – 6 function keys	X	X	X	2
QZB00D04AB041	Hand switch with 1 m spiral cable – 2 function keys	X	(X)		7
QZB02A03AB041	Undercover hand switch with "angled" plug	X			10
QZB00A00AB051	Table hand switch with 1 m spiral cable – 2 function keys	X			11
QZB00A00BC011	Membrane keyboard with 1 m spiral cable – 2 function keys	X	(X)		12
QZB02C01AE114	Foot switch – 2 function keys	X	(X)		13
QZB00D07BK141	Wireless hand switch – 2 function keys	X	(X)		14
Accessories					
QZD000072	Bracket for hand switch				3
QZD000074	Drawer for hand switch				9

(X) = limited use

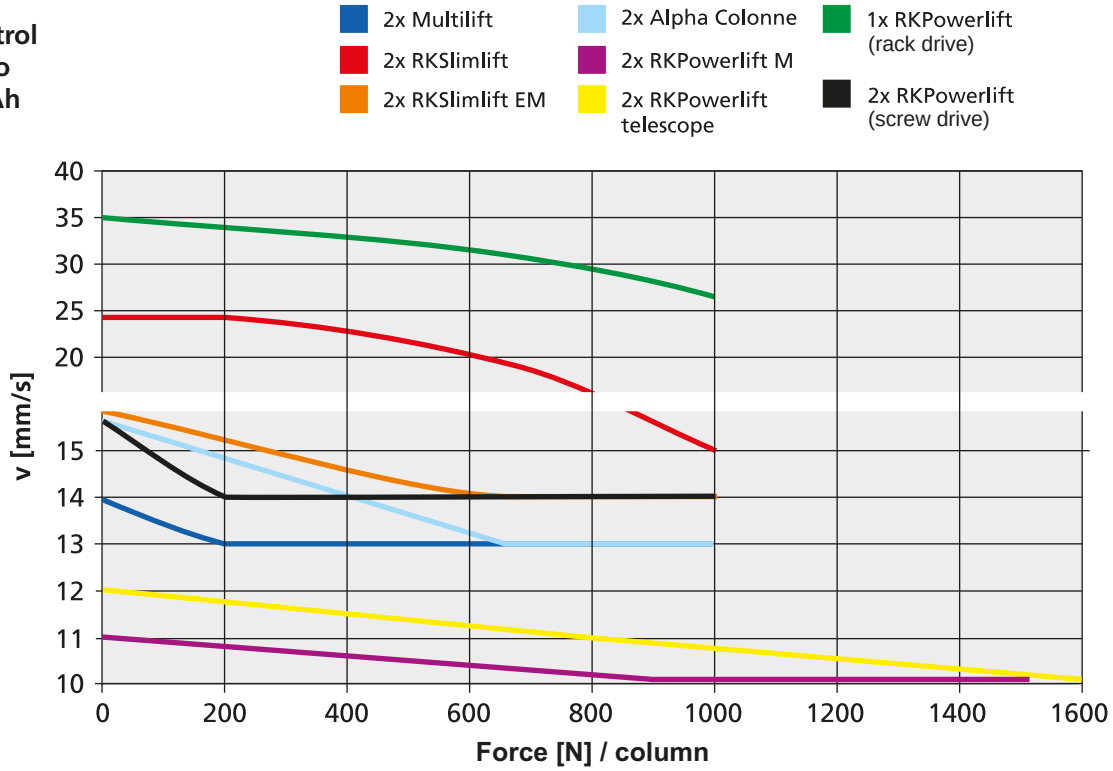
Hand switches/accessories (MultiControl duo accu)



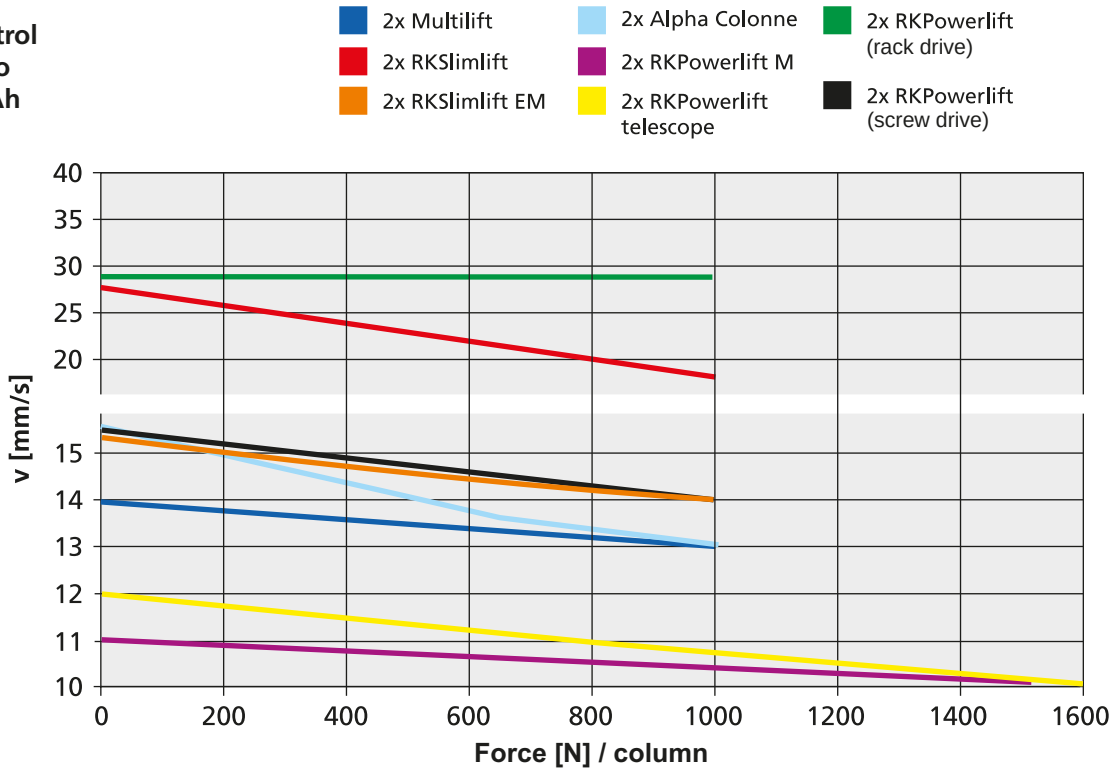
Code No.	Version	Synchro-nous operation	Commissioning bus system	Memory function	Fig.
QZB02C03AB031	Hand switch with 1 m spiral cable – 2 function keys	X			1
QZB00D04AB041	Hand switch with 1 m spiral cable – 2 function keys	X			7
QZB00D04AD041	Hand switch with 1 m spiral cable – 6 function keys/display	X	X	X	8
QZB02A03AB041	Undercover hand switch with "angled" plug	X			10
QZB00A00AB051	Table hand switch with 1 m spiral cable – 2 function keys	X			11
QZB00A00BC011	Membrane keyboard with 1 m spiral cable – 2 function keys	X			12
QZB02C01AE114	Foot switch – 2 function keys	X			13
QZB00D07BK141	Wireless hand switch – 2 function keys	X			14
Accessories					
QZD000072	Bracket for hand switch				3
QZD000074	Drawer for hand switch				9

Speed achievable in battery mode

MultiControl mono/duo accu 1.2 Ah

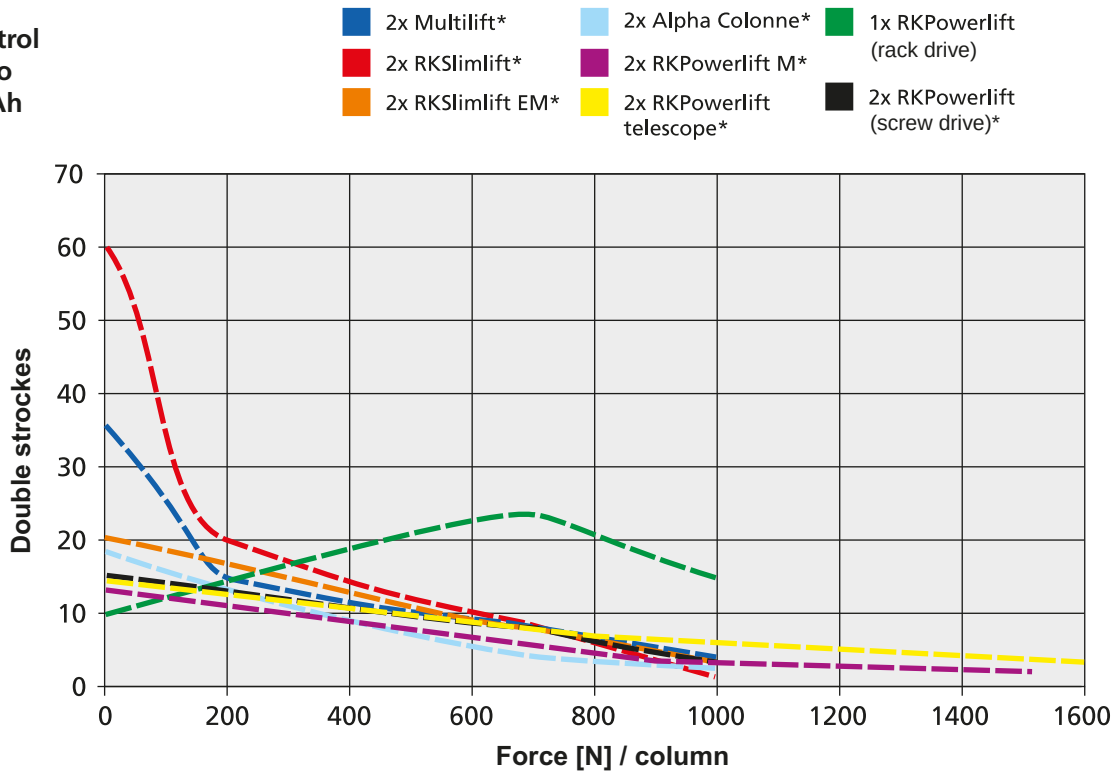


MultiControl mono/duo accu 7.2 Ah

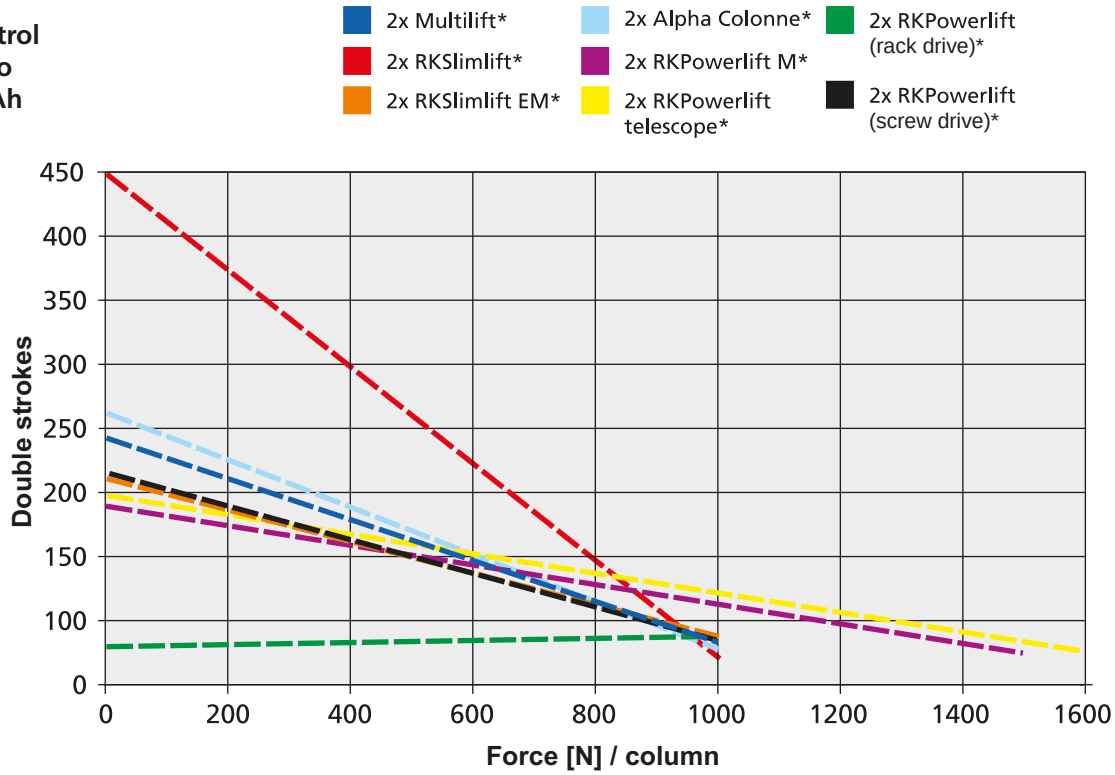


Double strokes achievable in battery mode

MultiControl mono/duo accu 1.2 Ah



MultiControl mono/duo accu 7.2 Ah

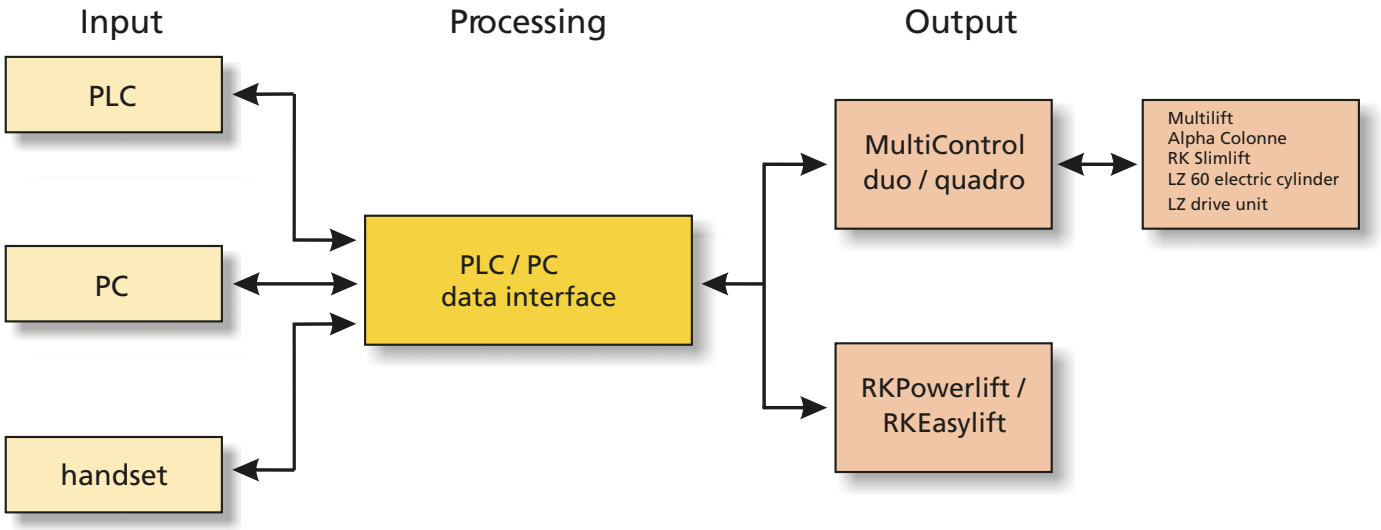


*Values with 2 drives in parallel/synchronous operation (with a stroke of 500 mm).
These values increase by a factor of 2.5 if a single drive is used.

PLC/PC data interface

The RK Rose+Krieger lifting column range supports a wide range of workflows in a wide range of assembly and manufacturing processes.

A special data interface has now been developed in order to further optimise these workflows and increase the level of automation. This interface supports the control of lifting columns from various input devices, such as a hand switch, which enables user-friendly and intuitive setting up of lifting columns. Further production processes are then controlled via a PC or PLC.



Features:

- Interface for a range of input devices (hand switch, PC and PLC)
- Quick and easy plug-in assembly
- Simple operation
- Software for Windows XP / Vista / Win 7

Options:

- Three different options for electrical connection
- Various adaptors available on request

PC operation with *RKLift-Control software*

The PC software allows all the functions of the hand switch to be reproduced via the data interface. Once the program is started, an intuitive input mask appears, which can be operated via the PC keyboard or mouse. The arrow keys enable smooth movement of the lifting column. A user selection lets you call up 5 different names, each with its own memory position.

Connection of a PLC

The data interface is connected to a PLC via a screw terminal. The control requires floating contacts that switch 12-24 V DC to the inputs of the data interface. The movement of the lifting column is achieved by assigning a specific pattern to the inputs. On delivery, the unit is assigned an 8 bit pattern as default setting. To save the outputs of the controlling PLC, a 4 bit pattern can also be assigned. The control enables precise movement to all memory positions. A binary pattern is output via 3 outputs to indicate when the position has been reached, thus enabling evaluation by the PLC.

General information/operating conditions

System requirements	PC with WINDOWS XP / Vista / Win 7 Free disk space, at least 6.3 MB
Supply voltage	5 VDC, is automatically made available on connection to the MultiControl control system and RKPowerlift
Degree of protection	IP 30
Operating temperature	+5°C to +60°C
Suitable for controls	RKPowerlift “Memory” and “Synchro”/MultiControl duo/quadro
Dimensions	W x H x L: 84 x 35 x 123 mm

Scope of delivery

- Data interface with housing
- Connecting cable to column 2.5 m
- Connecting cable to PC, 2.5 m
- Screw terminal for PLC connection
- Software RKLiftControl
- Documentation

Code No.	Type	Version
QZD100108	PLC/PC data interface	for RKPowerlift “Synchro” and “Memory”, MultiControl duo/quadro
QZD100110	Fixing plate	for mounting in a control cabinet

Accessories

Mobile Powerlift-Table

Highlights in brief

- ✓ Comprehensive accessories
- ✓ Range of different feet
- ✓ Table top frames & fixing plates
- ✓ Assembly plates, adaptor bars and levelling elements for a wide range of applications

Optional accessories


1


2


3

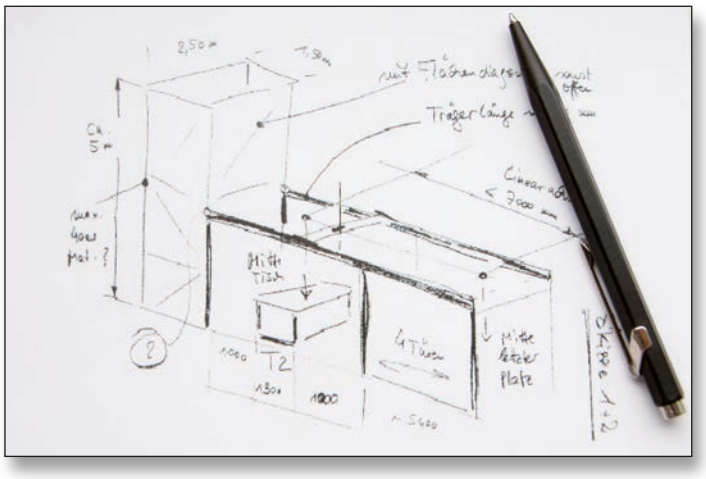

4

Code No.	Versions	Description / information	Fig.
QZD050013	Amphenol coupling "straight version" without cable	For Lambda electric cylinder or Lambda Colonne lifting column with potentiometer for customer-provided control	1
QZD050004	Amphenol coupling "straight version" with 5 m cable		1
QZD050010	Device coupling "right-angle version" without cable (EN 175301-803 -A)		2
QZD050009	Device coupling "right-angle version" with 5 m cable (EN 175301-803 -A)		2
QZD0702844000	4 m connecting cable with right-angle connector DIN 41524 5-pin / open cable end	For connecting a parallel hand switch or an external potentiometer (MultiControl mono)	3
QZD070525	2.5 m extension cable drive for connection A / 2-pin DIN connector	Max. 1 extension per drive	
QZD070526	2.5 m extension cable drive for connection C / 8-pin DIN connector	Max. 1 extension per drive	4
QZD0201335000	5 m connecting cable for Multilift synchro 8-pin DIN connector straight/right-angle	Connecting cable between Multicontrol synchro and Multilift (Note that a 2.5 m cable is included in the scope of delivery of the Multilift)	

What we can do for you

Do you need to focus your resources on other tasks and are you looking for a competent partner you can rely on? Working in close collaboration with you, our specialists will develop solutions tailor-made to meet your needs. If you wish, we can also assemble and commission the units on site.

- Just make a sketch of your requirements



- Our product specialists will devise a solution for yo

- We deliver the optimum product for your requirements.

RK ROSE+KRIEGER

Contents

Appendix

Enquiry form Lifting columns

Fax: +49 (0)571 9335-119

Telephone: +49 (0)571 9335-0
e-mail: anfrage.vertrieb@rk-online.de

Company ..... **Cust. No.** .....

Street ..... **City** .....

Telephone ..... **Fax** .....

Contact ..... **Dept.** .....

Remarks .....

.....

❍ **Lifting column**

1.) Where is the lifting column to be positioned? .....

.....

2.) Lifting force [N] ..... Load on during 2.1 pushing ❍ and/or 2.2 pulling ❍

3.) Travel [mm] ..... **Lifting speed** desired ..... mm/s

4.) Lifetime [DH] .....

5.) Operating cycles = No. of double strokes (forwards and backwards movement)

per ❍ minute ❍ hour ❍ day average...../max. .....

6.) Voltage ..... volt direct-current (DC)

7.) Position indication

7.1 in the limit positions ❍ yes ❍ no

7.2 continuously by potentiometers ❍ yes ❍ no

8.) Parallel connection

8.1 Do you wish to operate two or more systems with a single switch/protection device? ❍ yes ❍ no

8.2 Do you require synchronous operation of two or more systems? ❍ yes, quantity .....❍ no

9.) Environment

9.1 ❍ dry ❍ dusty ❍ damp

9.2 IP protection class...../temperature ..... °C

10.) Endlagerbegrenzung
Limit positions

10.1 Do you require in-built limit switches? ❍ yes ❍ no

10.2 Do you want to limit the travel by means of external limit switches? ❍ yes ❍ no

10.3 Do you want the limit switch(es) to be adjustable? ❍ yes ❍ no

10.4 Do you require additional switches for intermediate positions? ❍ yes ❍ no

11.) Limited installation dimensions?

If yes, please enclose sketch showing installation situation. ❍ yes ❍ no

12.) No. of units required .....

13.) Are you already using similar systems? ❍ yes ❍ no

Submission of offer/date: .....

Remarks: .....

.....

RK Rose+Krieger GmbH • Connecting and positioning systems • Postfach 1564 • 32375 Minden

RK ROSE+KRIEGER

Fax: +49 (0)571 9335-119

Telephone: +49 (0)571 9335-0
e-mail: anfrage.vertrieb@rk-online.de

Company ..... **Cust. No.** .....

Street ..... **City** .....

Telephone ..... **Fax** .....

Contact ..... **Dept.** .....

Remarks .....

.....

❍ **E-cylinders**

1.) Where is the e-cylinders to be positioned? .....

.....

2.) Lifting force [N] ..... Load on during 2.1 pushing ❍ and/or 2.2 pulling ❍

3.) Travel [mm] ..... **Lifting speed** desired ..... mm/s

4.) Lifetime [DH] .....

5.) Operating cycles = No. of double strokes (forwards and backwards movement)

per ❍ minute ❍ hour ❍ day average...../max. .....

6.) Voltage ..... volt direct-current (DC)

7.) Position indication

7.1 in the limit positions ❍ yes ❍ no

7.2 continuously by potentiometers ❍ yes ❍ no

8.) Parallel connection

8.1 Do you wish to operate two or more systems with a single switch/protection device? ❍ yes ❍ no

8.2 Do you require synchronous operation of two or more systems? ❍ yes, quantity .....❍ no

9.) Environment

9.1 ❍ dry ❍ dusty ❍ damp

9.2 IP protection class...../temperature ..... °C

10.) Endlagerbegrenzung
Limit positions

10.1 Do you require in-built limit switches?	❍ yes	❍ no
10.2 Do you want to limit the travel by means of external limit switches?	❍ yes	❍ no
10.3 Do you want the limit switch(es) to be adjustable?	❍ yes	❍ no
10.4 Do you require additional switches for intermediate positions?	❍ yes	❍ no
10.5 Do you require closing pressure?	❍ yes	❍ no

11.) Limited installation dimensions?
If yes, please enclose sketch showing installation situation. ❍ yes ❍ no

12.) No. of units required .....

13.) Are you already using similar systems? ❍ yes ❍ no

Submission of offer/date: .....

Remarks: .....

.....

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Glossary

Adjustment load: Each drive type has a different, structurally-dependent, adjustment load. This variable defines the maximum push and tractive force that a drive can handle (for linear drives). The adjustment load is always a so-called dynamic load. The drive still performs reliable adjusting movements under the specified maximum load. The adjustment load is defined in terms of Newtons (N), whereby the following applies: 1kg » 10 N.

BLOCAN: Product name of the RK Rose+Krieger aluminium profile system with patented connection system, which permits the quick and easy assembly of very different structures. These profiles are available in a wide range of cross-sections and sizes.

Checkback signal: A technical means for the detection of the current position and speed of the drive. A distinction is made between the relative (incremental) and absolute (analogue) method.

Incremental (relative):
A so-called Hall sensor generates a fixed number of electrical impulses for each distance travelled. The control then calculates up-to-date information on the current position and speed relative to a defined reference point. In order to ensure the reliable operation of the drive, it is essential that a correct reference value is always available. However, if this reference value is lost, such as in the unlikely event of a power failure or a malfunction, it is essential to specify a new reference point.

Analogue (absolute):
In this case, the position/speed is detected using a so-called potentiometer. This electronic component is permanently coupled to the drive movement and adjusts its resistance value according to the current position. The control uses this information to calculate the current position and speed. This type of position determination does not require a reference point as all potentiometer values are constantly available.

Control: The control combines the various functions required to operate the drive. The switching signals of a hand switch are converted to control functions for the connected drives. At the same time, the control contains facilities for power supply and various protection devices to protect against overloads and short-circuits.
Transformer control:
The hand switch controls electromechanical relays, which, in turn, control the drive currents (the most common control technology).

Customer applications: The responsibility for RK Rose+Krieger products (in the specific application) and compliance with the applicable directives, standards and laws lies with the manufacturer of the complete system in which the RK Rose+Krieger products are installed.

Duty cycle (max): This technical variable defines the maximum time period that a drive can be operated continuously. This maximum period must be followed by a specified idle time. Both values are defined in the specified duty cycle (DC) in relation to one another. In the case of drive systems, 2/18 min has become standard in the field of drive technology, i.e. 2 minutes of continuous operation must be followed by 18 minutes idle time. It therefore follows that if the unit is operated for a shorter period, the idle time can also be shortened respectively. It is essential to ensure adherence to these specifications for periodic duty; failure to do so may cause the unit to overload and trigger protection equipment.

Earthing conductor cable: The Multicontrol Care power cable with earth connection on the control side is for connecting the application to the earthing conductor. Install the control-side earthing conductor cable in your application in accordance with the applicable standards and current practice.

Hand switch: The operator can use this operating device to control the full range of drive functions. A press of the button generates switching signals, which are converted to corresponding control signals in the control system.
Standard:
The hand switch is directly connected to the control system via a connecting cable; transmission of the switching signals is hard-wired.
Radio:
Instead of the standard hand switch, a radio receiver is connected to the control interface. The switching signals sent by the radio remote control are picked up by the receiver and relayed on to the control.

Installation dimension: This dimension specifies the installation length of the respective drive. Installation length = basic length + travel.

Installation position: Observe operating manual: www.rk-rose-krieger.com/english/service/download-documents/technical-manuals/linear-technology

Lifting column: Single actuator with a special, often design-oriented linear guide. This actuator is able to reliably withstand lateral forces and ensure the necessary stability even in a fully extended position while taking the maximum torques into account.

Memory synchronous drive: This kind of actuator is equipped with a position and stroke detection system. Information on the current position of the drive is continuously transmitted back to a synchronised control system. This memory drive is generally used in applications where the stored positions can be retrieved with the simple press of a button. They are also required in applications with synchronous/memory controls.

Power cable feedthrough: Additional voltage tap for the supply of external devices.

Protection class: The impermeability of electronic devices against the penetration of foreign bodies and liquids is defined by means of a two-digit IP code. The first number refers to the level of ingress protection against solid materials, such as dust, and the second to ingress protection against liquids. The most common protection classes are IP 20 (touch protection); IP 44 (water spray protection); IP 66 (water jet protection).

Repeatability: Repeatability is the ability of the linear unit drive to return to a once reached position within the given tolerance limits under identical conditions. Factors that influence repeatability (and positioning accuracy) include: load, speed, delay, direction of movement and temperature.

Stroke: In the case of lifting columns and electric cylinders, the maximum travel is referred to as stroke.

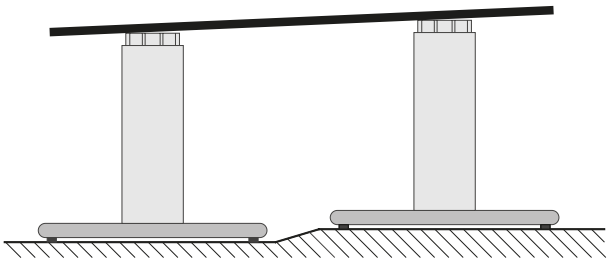
Service life of drives: The lifetime depends on the drives used and the application. Depending on the system, there is a considerable difference between the lifetime of ball screw drives and acme screw drives. The lifetime of the drives is also affected by the control systems used and the associated duty cycles. As a guideline for acme screw drives, a stroke of 500 mm, with adherence to the permitted loads and duty cycles, we estimate a lifetime of 10,000 double strokes. Any changes of application will effect a corresponding change in the expected lifetime of the drive. Ball screw drives are expected to have a considerably longer lifetime. Please contact us if you require any further advice and we will be happy to assist.

Synchronous control:
The synchronous operation of several drives at the same speed is possible even in the case of widely ranging loads. This technology is always used if a single adjusting movement is implemented via more than one drive (such as the height adjustment of workstations).

Synchronous operation: Synchronised drives are used for the simultaneous movement of several mechanically connected columns. "Standard" single drives are generally not able to meet the requirements of such applications.
The following section contains some brief information on the best way to set up a synchronous system. More detailed information on this subject can be found in the respective technical instructions on our website **www.rk-rose-krieger.com/english/service/download-documents/technical-manuals/linear-technology**.

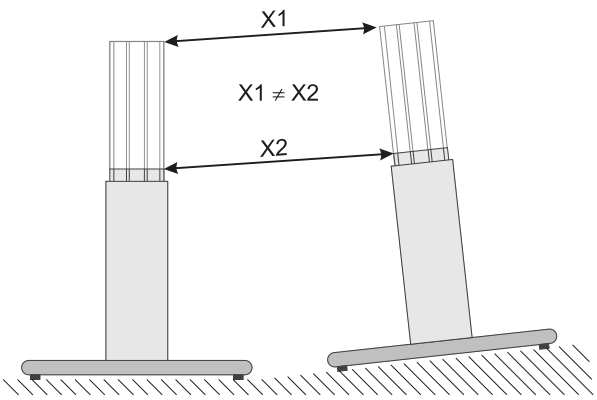
The following errors can occur during set-up:

Different heights:



A rigid connection between the lifting columns aligns them at the same height. Fixing the table frame in place may cause the lifting columns to distort.

Parallel 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.

Distorted table frame:

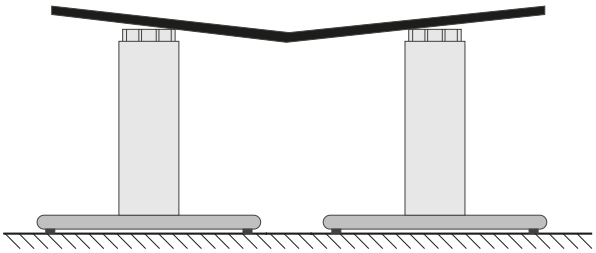
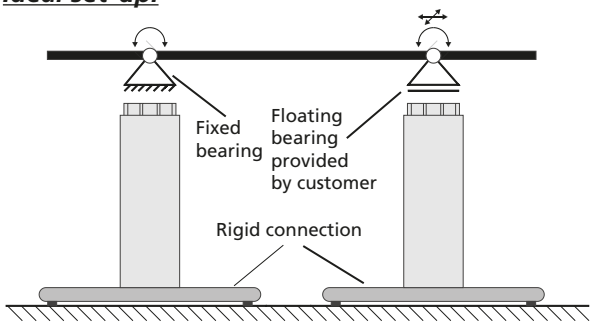
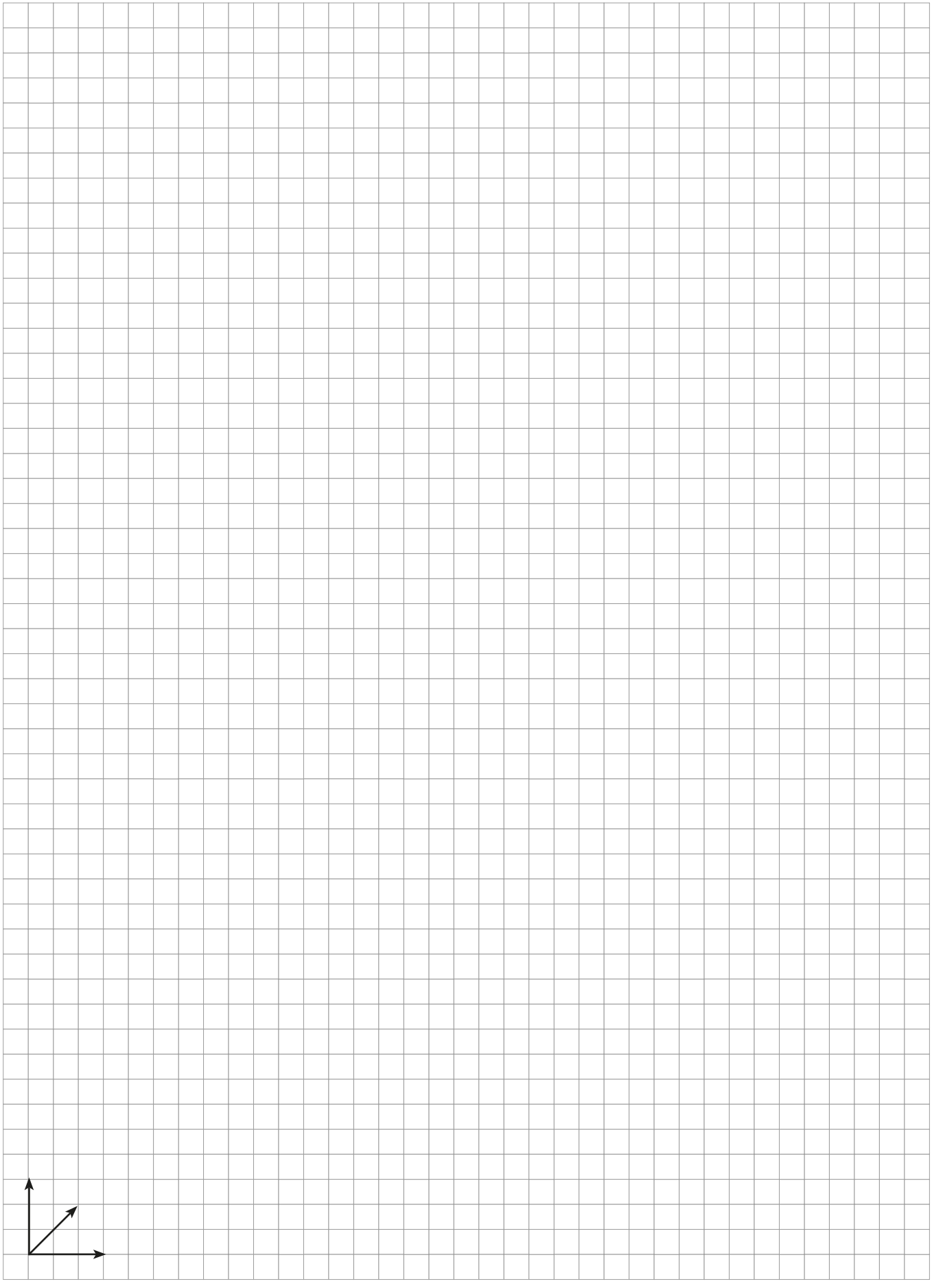


Table frames are generally made of welded steel tubes and connecting plates that connect to the lifting columns. If the connecting plates are not lying flat on the lifting column, the synchronous system will distort during screw attachment.
Failure to address these mechanical errors may impair the running properties of the drive, shorten lifetime or damage the lifting column. If using an electronic control system, this may cause the output of error messages and render the system inoperable.

Ideal set-up:



Surfaces at the foot and top of the columns must be at the same height, parallel to one another and as flat and even as possible, the columns themselves must also be aligned so that they are completely parallel. Existing tolerances and height differences due to control deviations are offset by means of a customer-provided floating bearing.



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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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Connecting and positioning systems

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