



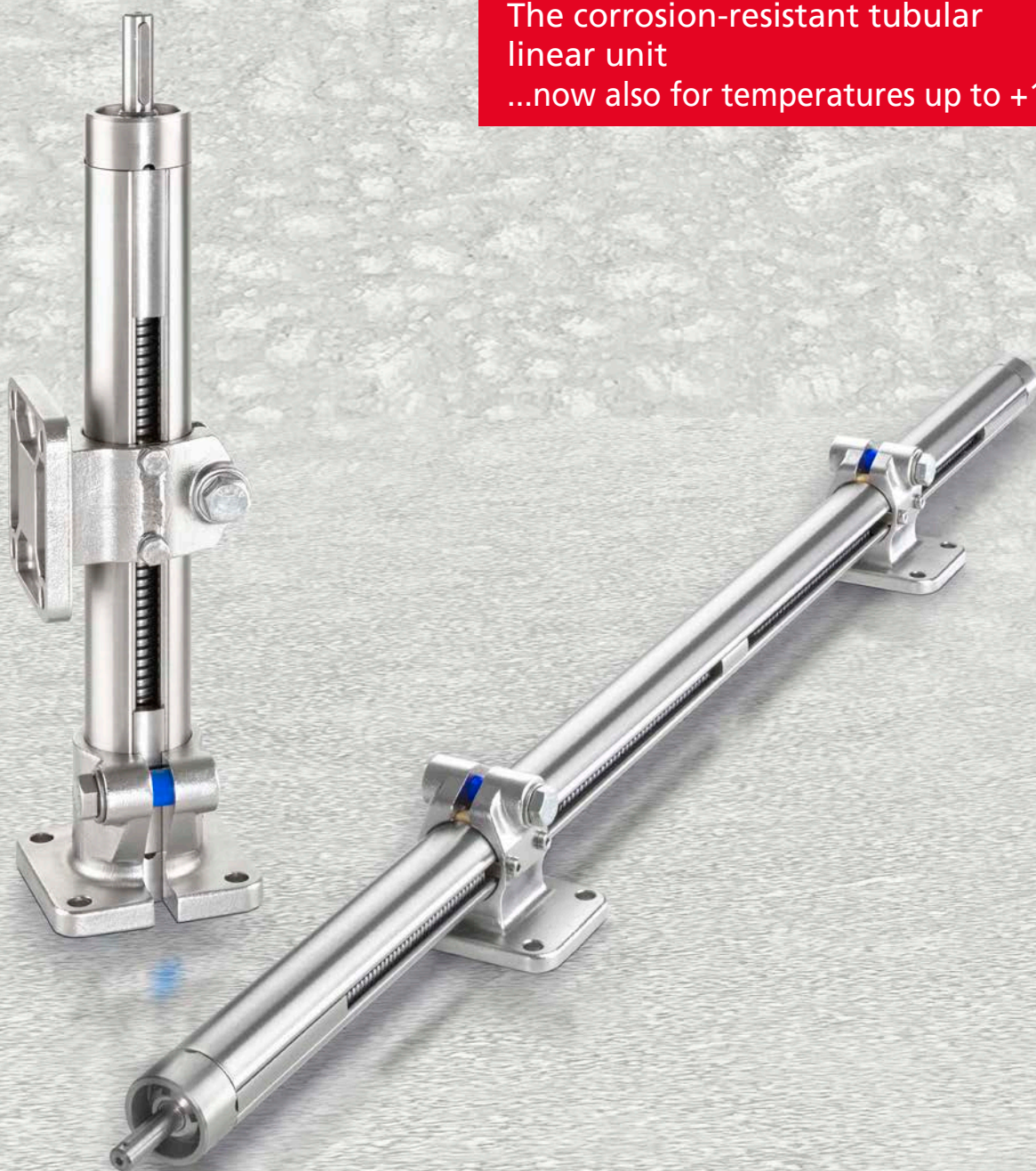
**RK ROSE+KRIEGER**

A Phoenix Mecano Company

## Linear unit E-II-stainless

The corrosion-resistant tubular  
linear unit

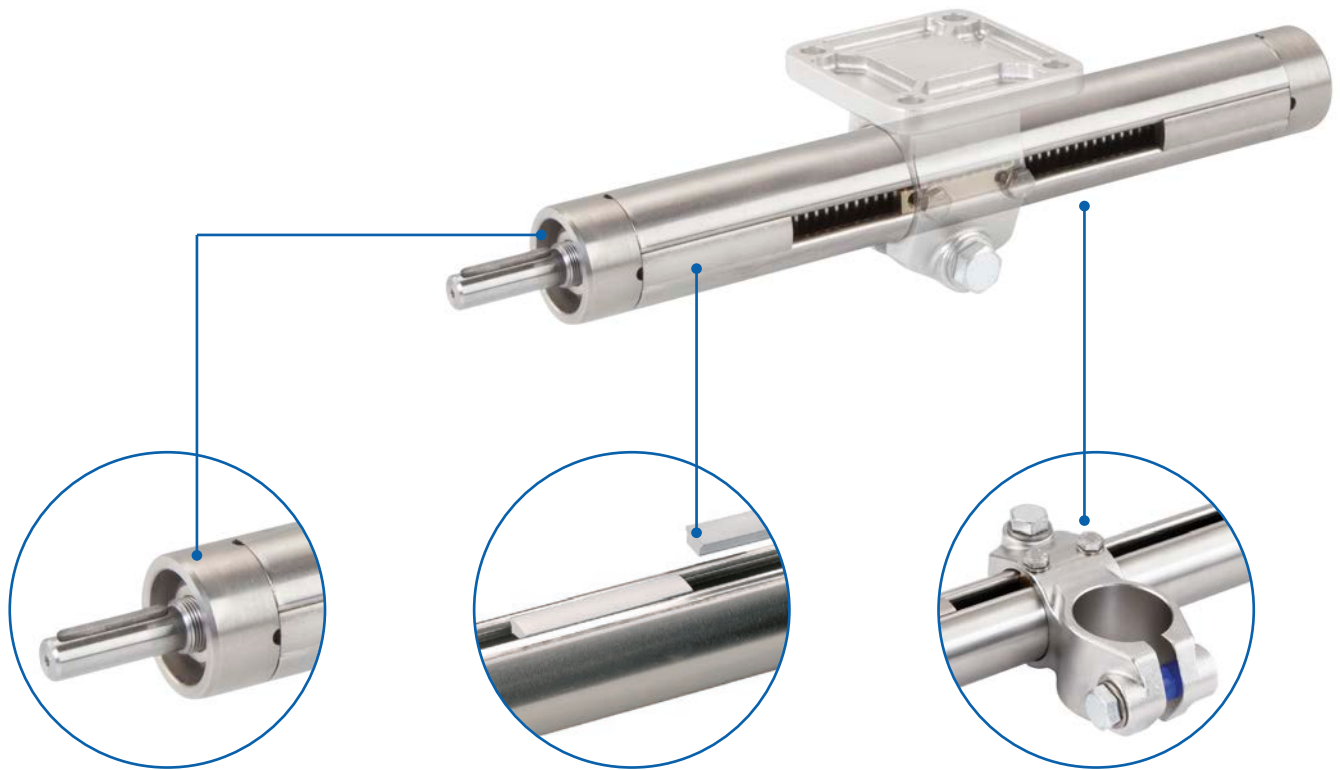
...now also for temperatures up to +150°C



## Linear unit E-II-stainless

# Flexible all-rounder – now also corrosion-resistant

Single tube actuator – Linear unit E-II-stainless



### End element

- Stainless steel ball bearing as screw bearing
- With drain hole as standard

### Covers

- Slot cover as dust protection or stroke limitation

### Guide carriage/fixing elements

- Range of variants facilitates connection to your design
- Made from stainless steel, guide carriages with slide bush as standard

### Features:

- Units for light to heavy movement applications
- Corrosion-resistant to media, e.g. water
- Suitable for washing down
- FDA-approved lubricants

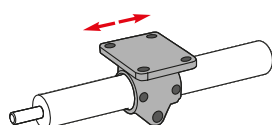
### Options:

- Second free-running guide carriage
- Higher temperature range up to 150°C

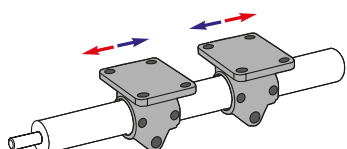
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## Versions

(Dimensions, order numbers)



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# Technical data

## General information/operating conditions

Design	Adjustment unit with trapezoidal screw in rolled stainless steel profile
Guide Guide	carriage with slide bushing
Installation position	Any position
Positioning accuracy	± 0.2 mm / 300 mm stroke
Self-locking	Yes
Ambient temperature	-30°C to +80°C or -30°C to +150°C

## Screw lead

	DIN EN ISO	AISI
Ball bearing	1.4301	304
Trapezoidal screw (-30°C to +80°C)	1.4104	430
Trapezoidal screw (-30°C to +150°C)	1.4301	304
Guide tube		
Bearing		
Screws		
Sealing profile		
End element	1.4305	303
Lead nut	Brass alloy	
Driver key		

## Screw lead

Type	Screw lead [mm]	Speed with ball bearing 250 rpm [mm/s]
E-II 30-stainless	3	12.5
E-II 40-stainless	4	16.7

Required screw speed\* n [rpm] =  $\frac{\text{speed [m/min]} \times 1000}{\text{screw lead [mm]}}$

\* max. screw speed with ball bearing 250 rpm

## No-load torque

[Nm]

Type	Screw with ball bearing
E-II 30-stainless	0.35
E-II 40-stainless	0.50

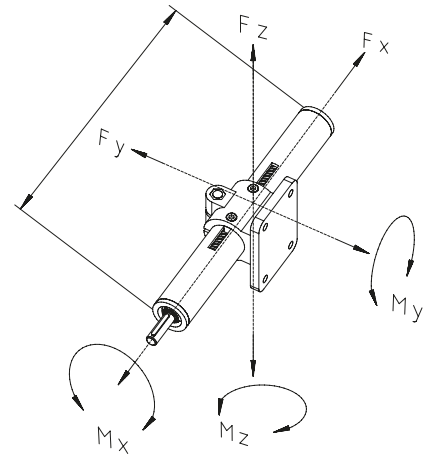
## Load data\*

F Force [N]

M Moment [Nm]

I Geometric moment of inertia [cm<sup>4</sup>]

\* with reference to carriage (deflection of guide element  $f = 0.5$  mm, static, end elements supported)

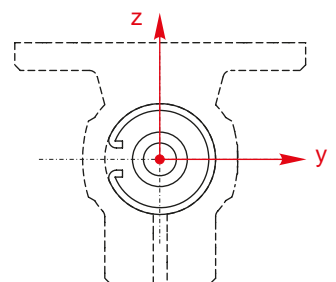


	$F_x$	$F_y^*$			$F_z^*$			$M_x$	$M_y$	$M_z$
Total length [mm]		500	1000	1500	500	1000	1500			
Type										
E-II 30-stainless	800	500	60	10	500	50	9	6	15	15
E-II 40-stainless	1000	2100	250	60	1900	140	50	14	40	40

## Geometric moment of inertia

Type	$I_y$	$I_z$
E-II 30-stainless	1.34	1.56
E-II 40-stainless	4.58	5.24

[cm<sup>4</sup>]



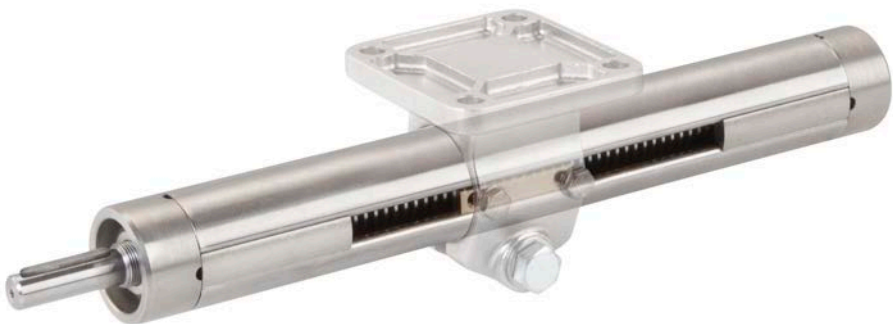
# Versions

## Dimensions / ordering data

Order instructions:

- Choice of guide carriage, this must be ordered separately
- Different “R” dimensions available on request
- Higher temperature range available on request

Version:   ● Right- or lefthand thread



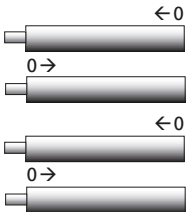
Code No.	Type	Screw	Basic length	B	D 1	D 2	J
78 _ 304 _	30	Tr 14x3	191	30	8	–	31
78 _ 306 _	30					8	
78 _ 404 _	40	Tr 20x4	193	40	12	–	39
78 _ 406 _	40					12	

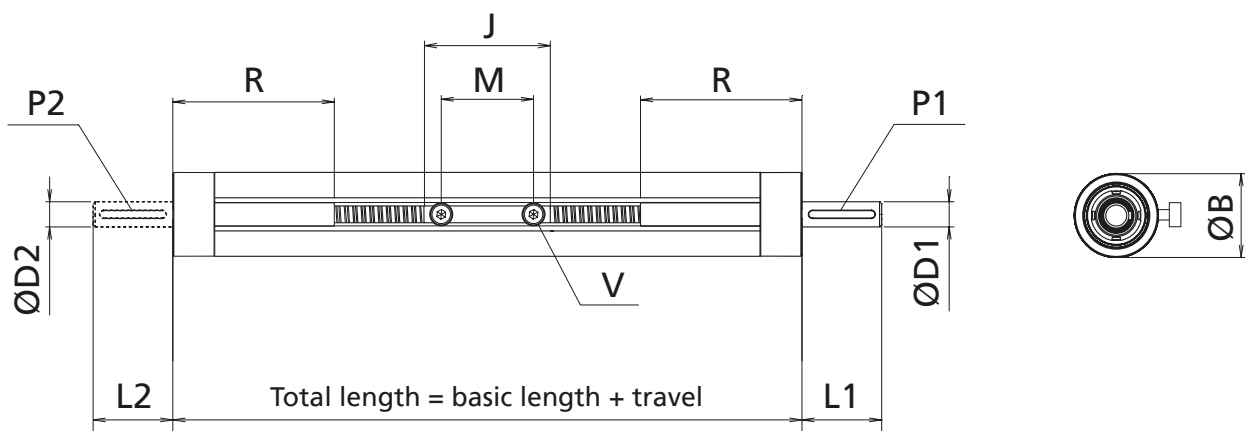
----- Total length = basic length + travel [mm]

V = Temperature range (-30°C to +80°C)  
H = Temperature range (-30°C to +150°C)

Version:

- 1 = righthand thread
- 2 = lefthand thread
- A = righthand thread with scale at 270° \*
- B = righthand thread with scale at 270° \*
- C = lefthand thread with scale at 270° \*
- D = lefthand thread with scale at 270° \*





[mm]

L 1	L 2	M	P 1	P 2	R	V	Max. travel	Mass [kg]	
								Basic length	per 100 mm travel
26	–	22	2x2x20	–	80	M4x8	1283	0.610	0.212
	26			2x2x20			1257	0.620	0.212
38	–	28	4x4x32	–	77	M6x10	2769	1.305	0.432
	38			4x4x32			2731	1.336	0.432

# Versions

## Dimensions / ordering data

### Order instructions:

- Choice of guide carriage, this must be ordered separately
- The total length (total travel + basic length) in millimetres has to be specified when ordering
- Different "R" dimensions available on request
- Higher temperature range available on request

Version: • Right- and lefthand thread



Code No.	Type	Screw	Basic length	B	D 1	D 2	J
78_30__	30	TR 14x3	247	30	8	8	31
78_40	40	TR 20x4	255	40	12	12	39

----- Total length = basic length + total travel [mm]

V = Temperature range (-30°C to +80°C)  
H = Temperature range (-30°C to +150°C)

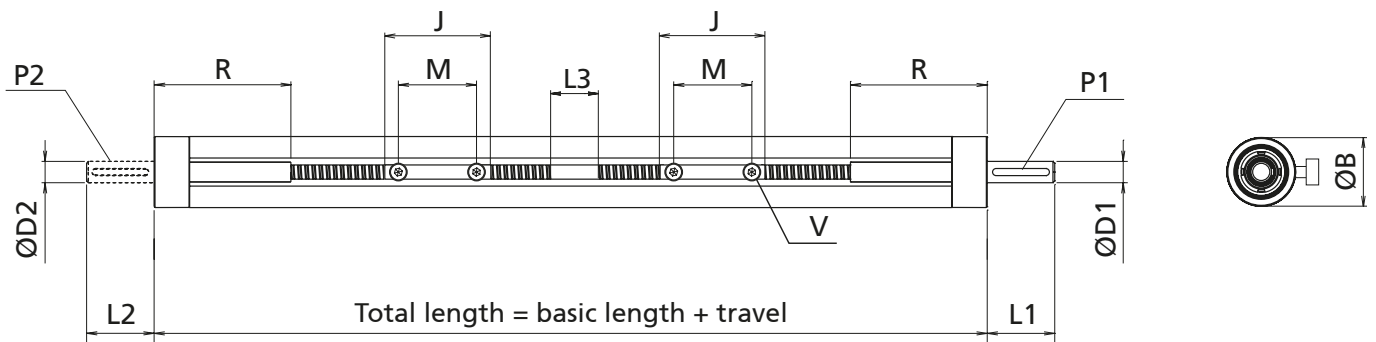
### Version:

4 = 1 drive shaft at lefthand thread end  
5 = 1 drive shaft at righthand thread end  
6 = 2 drive shafts

### Version:

3 = right and lefthand thread (RH/LH)  
N = RH/LH with scale at 270° \*





[mm]

L 1	L 2	L 3	M	P 1	P 2	R	V	Max. travel	Mass [kg]	
									Basic length	per 100 mm travel
26	26	25	22	2x2x20	2x2x20	80	M4x8	1753	0.798	0.212
38	38	23	28	4x4x32	4x4x32	77	M6x10	2745	1.742	0.432

## Linear unit E-II-stainless

# Fixing

## Guide carriage

### Order instructions:

- A rotation locking device (drive key) is included in the scope of delivery of the linear unit. Additional drive keys (e.g. for free-running guide carriages) can also be ordered as an optional extra
- For further dimensions, please refer to the catalogue "Connecting Technology"

- A range of different versions facilitate simple system mounting

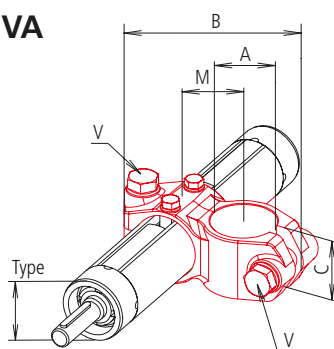
### Material:

Precision cast stainless steel 1.4308 (AISI CF-8), electropolished finish

### Scope of delivery:

Guide carriage with screws, loosely enclosed

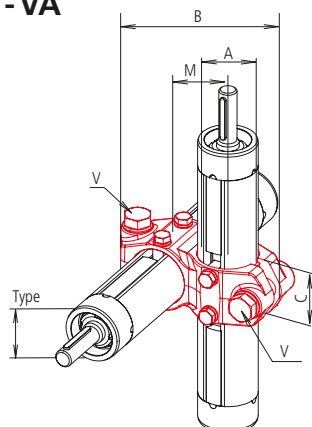
### K-VA



[mm]

Code No.	Type	A	B	C	M	V	Clamping levers V Code No.
13001_0_	30	30	92	32.4	33	M8x30	93027
14001_0_	40	40	118	40	42	M10x35	93026

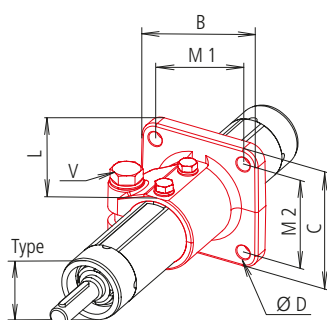
### EK-VA



[mm]

Code No.	Type	A	B	C	M	V	Clamping levers V Code No.
13019_00	30	30	92	32.4	33	M8x30	93027
14019_00	40	40	118	40	42	M10x35	93026

### FS-VA



[mm]

Code No.	Type	B	C	D	L	M1	M2	V	Clamping levers V Code No.
13011_0_	30	60	60	7	50	40	40	M8x30	93027
14011_0	40	80	80	9	60	60	60	M10x35	93026

0 = without scale

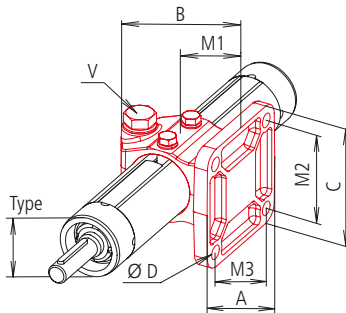
A = scale at 270°

3 = Temperature range (-30°C to +80°C)

A = Temperature range (-30°C to +150°C)

## Guide carriage

### FK-VA



[mm]

Code No.	Type	A	B	C	D	M1	M2	M3	V	Clamping levers V Code No.
13023_0_	30	55	59	78	7	30	60	40	M8x30	93027
14009_0	40	80	80	80	9	42	60	60	M10x35	93026

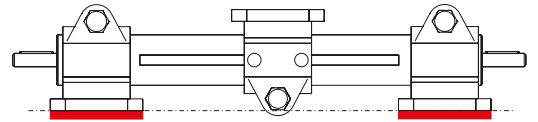
0 = without scale

A = scale at 270°

3 = Temperature range (-30°C to +80°C)

A = Temperature range (-30°C to +150°C)

If using FK elements as guide carriages and fixing elements, spacers provide the necessary clearance.



[mm]

Code No.	Type	Spacer
96733	30	5 mm panel thickness, stainless steel 1.4301 (AISI 304)
96734	40	

## Drive key for carriages

- Rotation locking for additional free-running carriages

### Note:

The order number of the linear unit includes a drive key.

### Material:

Brass alloy



[mm]

Code No.	Type	Installation length
95986	30	31
95985	40	39

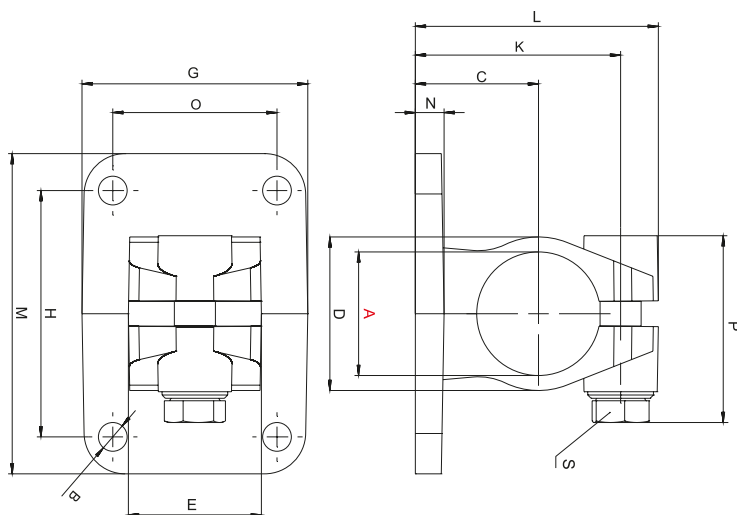
# Fixing

## Fixing element

- Clamping elements for the simple fixing of Linear units E-II-stainless

**Material:**  
Precision cast  
stainless steel 1.4308  
(AISI CF-8), electropolished finish

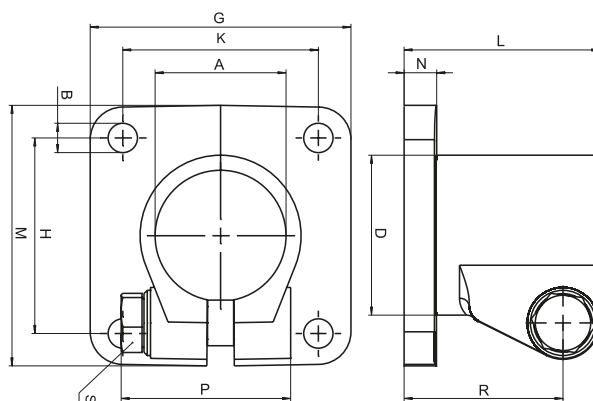
## FK - VA



[mm]

Code No.	Type	A	B	C	D	E	G	H	K	L	M	N	O	P	m [g]	Clamping levers S Code No.
12300000390	FK-VA 30	30.1	7	30	37,4	32.4	55	60	50	59.2	78	7	40	45.5	370	93027
12400000390	FK-VA 40	40.17	9	42	49.4	46.4	80	60	69	80	80	10	60	52	849	93026

## FS - VA

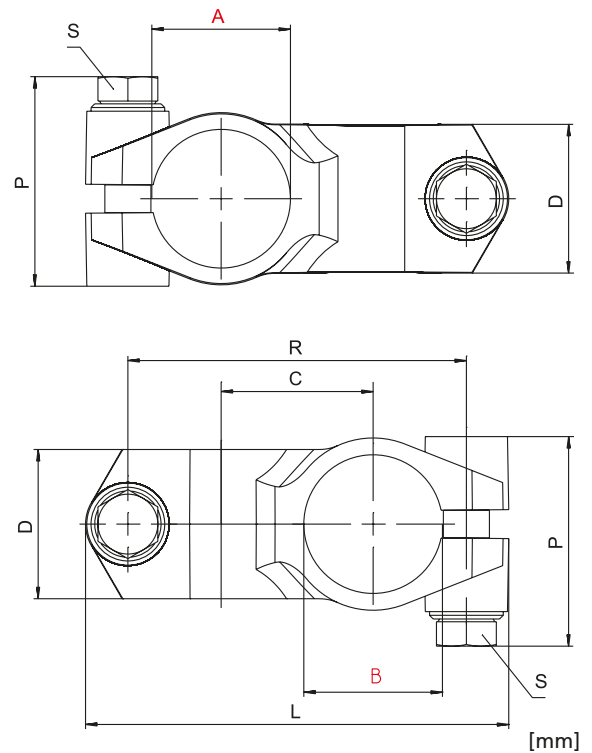


[mm]

Code No.	Type	A	B	D	G	H	K	L	M	N	P	R	m [g]	Clamping levers S Code No.
13300000390	FS-VA 30	30.1	7	37.4	60	40	40	50	60	7	45.5	41	316	93027
13400000390	FS-VA 40	40.17	9	49.4	80	60	60	60	80	10	52	90	629	93026

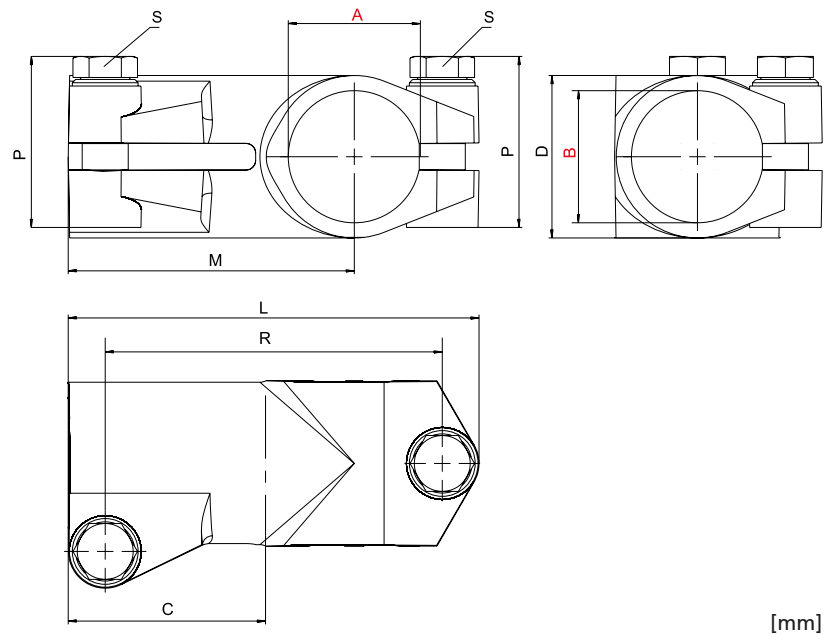
## Fixing element

### K-VA



Code No.	Type	A	B	C	D	L	P	R	m [g]	Clamping levers S Code No.
103000003900	K-VA 30	30.1	30.1	33	32.4	92	45.5	73.5	348	93027
104000003900	K-VA 40	40.17	40.17	42	40.4	118	52	95.5	647	93026

### W-VA 30, 40



Code No.	Type	A	B	C	D	L	M	P	R	m [g]	Clamping levers S Code No.
113000003900	W-VA 30	30.1	30.1	40	38.4	87	58	45.5	69	403	9300201
114000003900	W-VA 40	40.17	40.17	60	50.4	124.9	87	54	102.5	875	93023

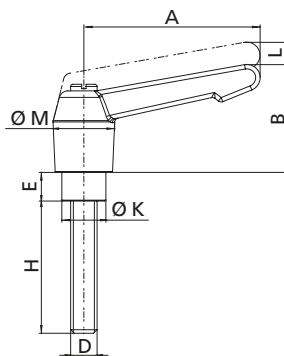
## Fixing/Drive

### Clamping lever



(Symbolic representation)

- Accessory for fixing elements and guide carriages



#### Material:

Handle – precision cast stainless steel 1.4308 (AISI CF-8), electropolished finish.  
Other parts – stainless steel 1.4305 (AISI 303)

#### Note:

A washer (delivery scope of clamp) must be used if lever M10x40 shall be assembled

[mm]

Code No.	Type	A	B	D	E	H	K	L	M
93027	M8x30	65	36	M8	6,5	30	13.5	3	19
93026	M10x40	65	36	M10	6,5	40	13.5	3	19

### Covers

- Slot covers, can be used as dust protection or stroke limitation
- Can be shortened or lengthened if required

#### Material:

Stainless steel 1.4301 (AISI 304)

#### Scope of delivery:

Pack of 2 cover strips or as bar material



The covers are available as a pack of two, or as bar material.



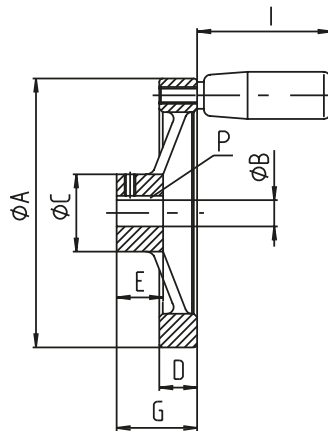
The linear unit comes with two covers for the bearing seats.



Additional covers can be inserted in the guide slot.

Code No.	Type	Length [mm]
Covers, pack of 2		
90440	30	63
90441	40	57
Cover, bar material		
90445	30	3010
90446	40	3010

### Handwheel (to +80°C)

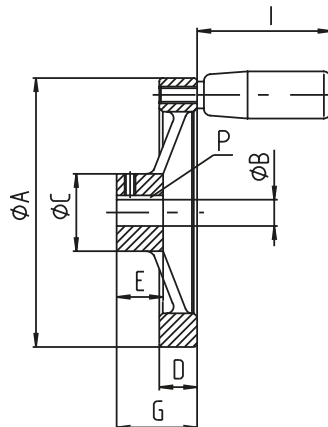


**Material:**  
 Duroplast PF31 black,  
 hub made of stainless steel 1.4305  
 (AISI 303)  
 Handle (rotating), stainless steel  
 1.4305 (AISI 303)

[mm]

Code No.	Type	ØA	B	C	D	E	G	P	I
90971	30	100	8	22	19	29.5	39	2x2	54.7
90972	40	100	12	22	19	29.5	39	4x4	54.7

### Handwheel (to +150°C)



**Material:**  
 Stainless steel 1.4301 (AISI 304)

[mm]

Code No.	Type	ØA	B	C	D	E	G	P	I
90990	30	101.6	8	25.9	7.87	18.03	31.7	2x2	39.88
90991	40	101.6	12	25.9	7.87	18.03	31.7	4x4	39.88

## Position determination

### Order instruction:

- Position of scale on 0° or 180° as option

### Scale

- Self-adhesive
- Width: 10 mm
- 4 mm high figures

### Material:

High-performance film,  
transparent – (-30°C to +80°C)  
weiß – (-30°C to +150°C)

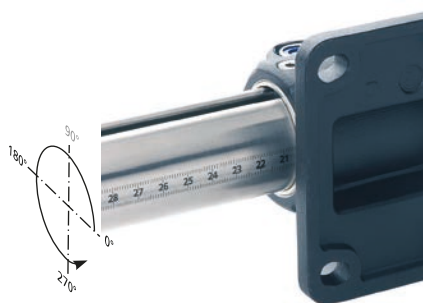


Image shows scale mounted at 0°, to be read from right to left. Standard mounting at 270° (90° not technically possible)

[mm]

Type	Can be read from	Length	Version
30-40	left to right	0-2000	fitted
	right to left	0-2000	fitted

### Positioning indicator

- You will find the corresponding positioning indicator in the "Linear technology" general catalogue

Installation position: horizontal



(Symbolic representation)

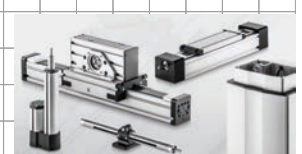
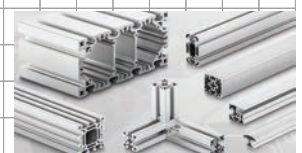
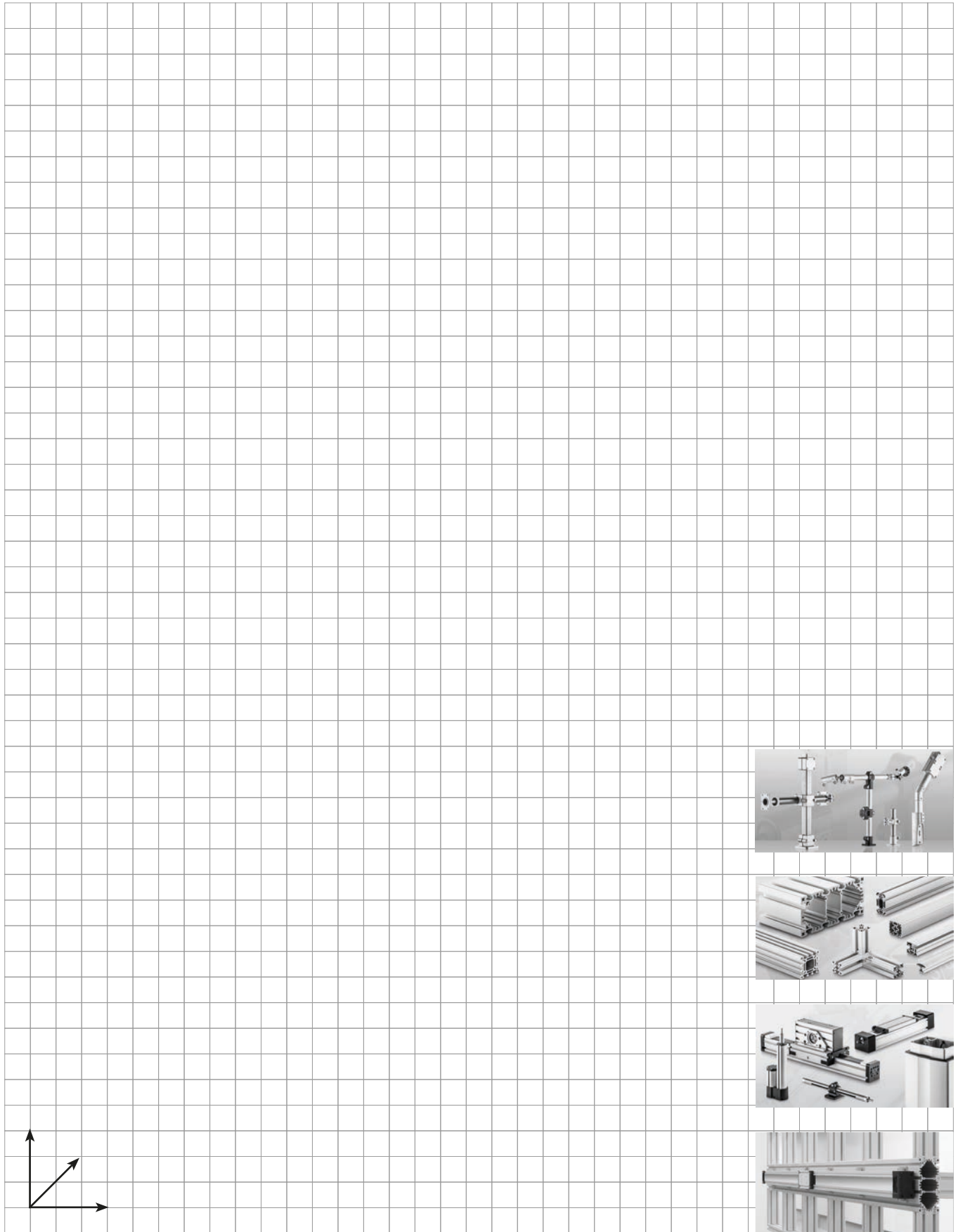
Installation position: vertical



(Symbolic representation)



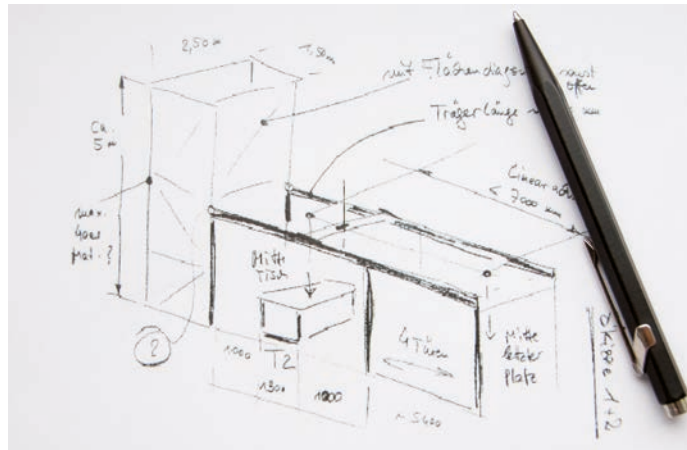
## Sketches/Notes



## Our service

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 you



- We can deliver your turnkey solution or assemble and commission it for you on site



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