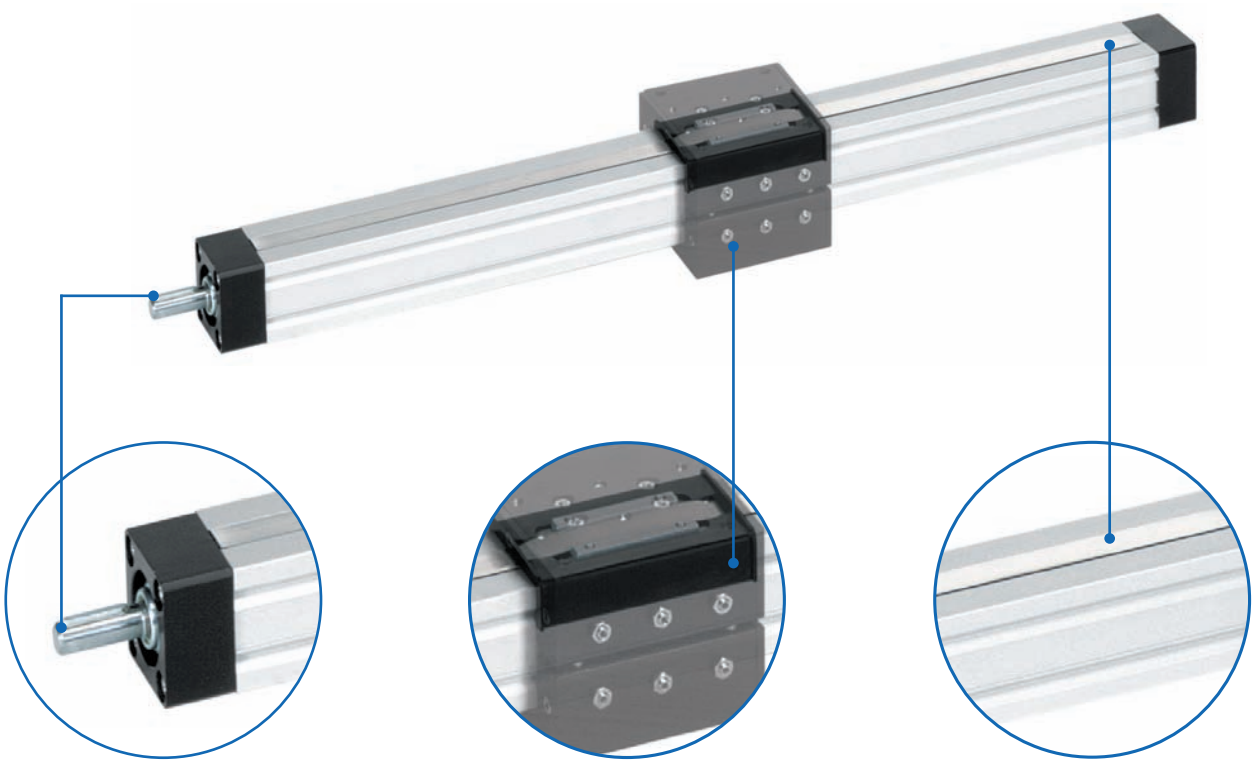
# Profile actuator - quad® EV

**Compact and versatile linear actuator**
**for motor-driven and manual adjustment of medium loads**



**Shafts**
- ✓ Choice of 1 or 2 ball-bearing shafts

**Choice of carriages**
- ✓ Wide range of models supports optimum integration in existing designs
- ✓ Adjustable slide guide

**Cover strip**
- ✓ The drive screw is protected against contamination

## Features:

- Screw covered by steel band
- Wide range of carriage and fixing elements
- Comprehensive range of accessories

## Options:

- Second free-running carriage
- Longer stroke lengths

# Quad® EV profile actuator - Table of contents

## General information/operating conditions

| | |
|---|---|
| Design | Linear actuator with extruded guide profile, choice of carriage models |
| Guide | Adjustable slide guide |
| Installation position | Any position |
| Lead accuracy | ± 0.15 mm/300 mm travel |
| Self-locking | Yes |
| Ambient temperature | 0°C to +60°C |

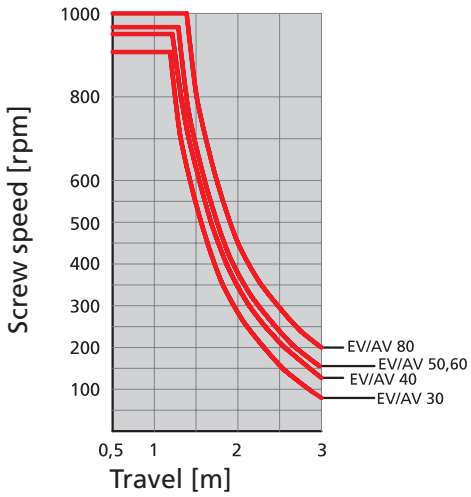
## Screw lead

[mm]

| Type | Screw lead |
|---|---|
| EV 30 | 3 |
| EV 40 | 4 |
| EV 50 | 4 |
| EV 60 | 4 |
| EV 80 | 5 |

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

## Critical screw speed




## No-load torque

[Nm]

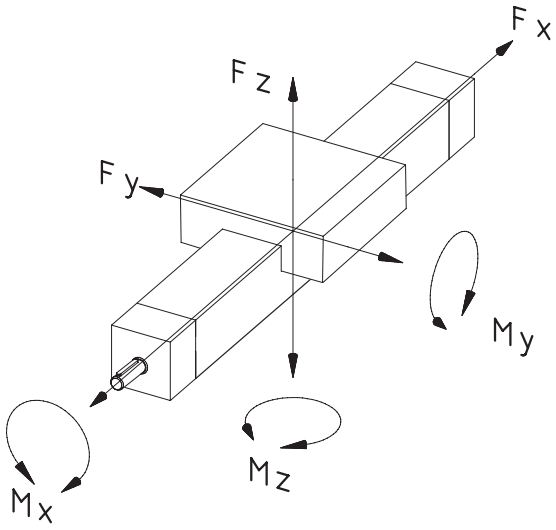
| Type | "Open" carriage | "Closed" carriage |
|---|---|---|
| EV 30 | 0.30 | 0.45 |
| EV 40 | 0.45 | 0.55 |
| EV 50 | 0.50 | 0.60 |
| EV 60 | 0.65 | 0.75 |
| EV 80 | 0.80 | 0.90 |

## Load data*

F Force [N]

M Moment [Nm]

I Geometric moment of inertia [cm$^4$]



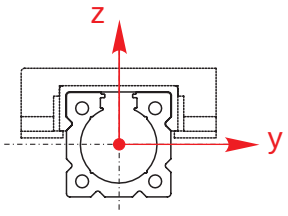

* With reference to carriage (static values, guide element resting on full surface)

| Total length [mm] | Fx | Fy | | | Fz | | | Mx | My | Mz |
|---|---|---|---|---|---|---|---|---|---|---|
| | 500 | 500 | 1000 | 1500 | 500 | 1000 | 1500 | | | |
| Type | | | | | | | | | | |
| EV 30 | 800 | 600 | 70 | – | 600 | 70 | – | 6 | 11 | 8 |
| EV 40 | 1200 | 1500 | 110 | 35 | 1480 | 110 | 33 | 25 | 45 | 30 |
| EV 50 | 1800 | 2220 | 550 | 140 | 2300 | 550 | 135 | 55 | 74 | 50 |
| EV 60 | 2100 | 4070 | 1350 | 400 | 4090 | 1350 | 390 | 65 | 100 | 60 |
| EV 80 | 2500 | 6000 | 2300 | 720 | 6000 | 2300 | 715 | 80 | 140 | 85 |

## Geometric moment of inertia

[cm$^4$]

| Type | Iy | Iz |
|---|---|---|
| EV 30 | 4.13 | 4.71 |
| EV 40 | 13.33 | 13.79 |
| EV 50 | 33.72 | 34.31 |
| EV 60 | 64.22 | 60.33 |
| EV 80 | 200.00 | 192.72 |

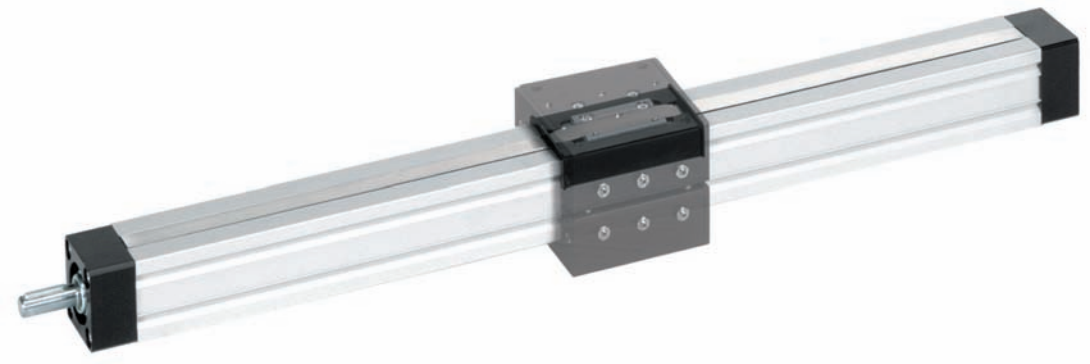


# quad® EV - Versions

**Order information:**

- Choice of carriage - this must be ordered separately
- Second free-running carriage available on request

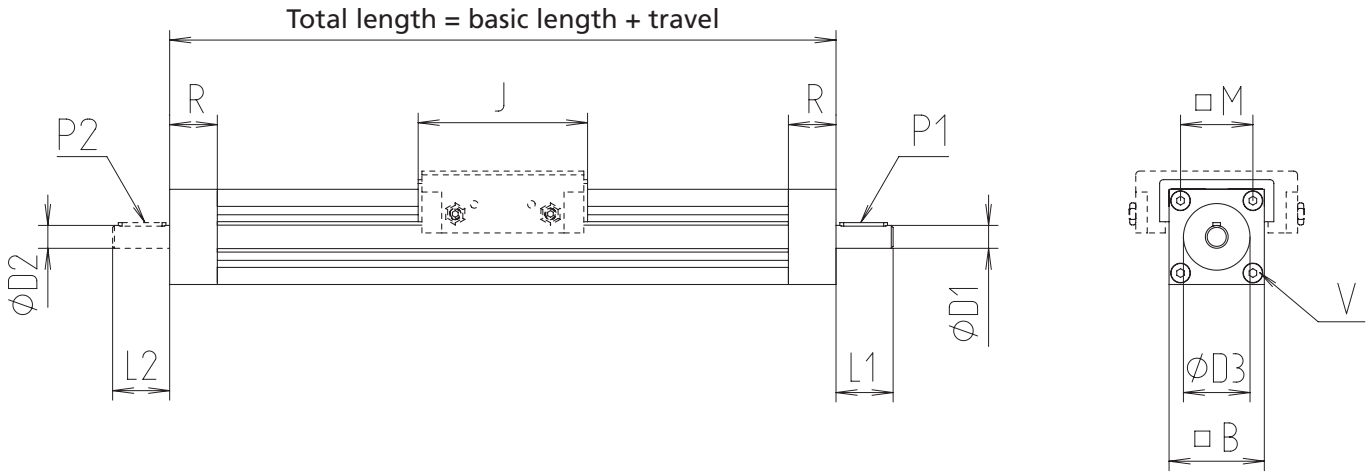
**Version** ■ Right *or* lefthand thread



| Code No. | Type | Spindle | Basic length | B | D 1 | D 2 | D 3 | J |
|---|---|---|---|---|---|---|---|---|
| 30_3000 | 30 | 14 x 3 | 96 | 30 | 8 | – | 22 $^{H7}$ | 60 |
| 30_3002 | 30 | 14 x 3 | 96 | 30 | 8 | 8 | 22 $^{H7}$ | 60 |
| 30_4000 | 40 | 18 x 4 | 115 | 40 | 10 | – | 28 $^{J6}$ | 71 |
| 30_4002 | 40 | 18 x 4 | 115 | 40 | 10 | 10 | 28 $^{J6}$ | 71 |
| 30_5000 | 50 | 20 x 4 | 140 | 50 | 12 | – | 35 $^{J6}$ | 90 |
| 30_5002 | 50 | 20 x 4 | 140 | 50 | 12 | 12 | 35 $^{J6}$ | 90 |
| 30_6000 | 60 | 20 x 4 | 199 | 60 | 12 | – | 35 $^{J6}$ | 115 |
| 30_6002 | 60 | 20 x 4 | 199 | 60 | 12 | 12 | 35 $^{J6}$ | 115 |
| 30_8000 | 80 | 24 x 5 | 218 | 80 | 14 | – | 50 $^{H7}$ | 136 |
| 30_8002 | 80 | 24 x 5 | 218 | 80 | 14 | 14 | 50 $^{H7}$ | 136 |

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

**Version:**
1 = righthand thread
2 = lefthand thread



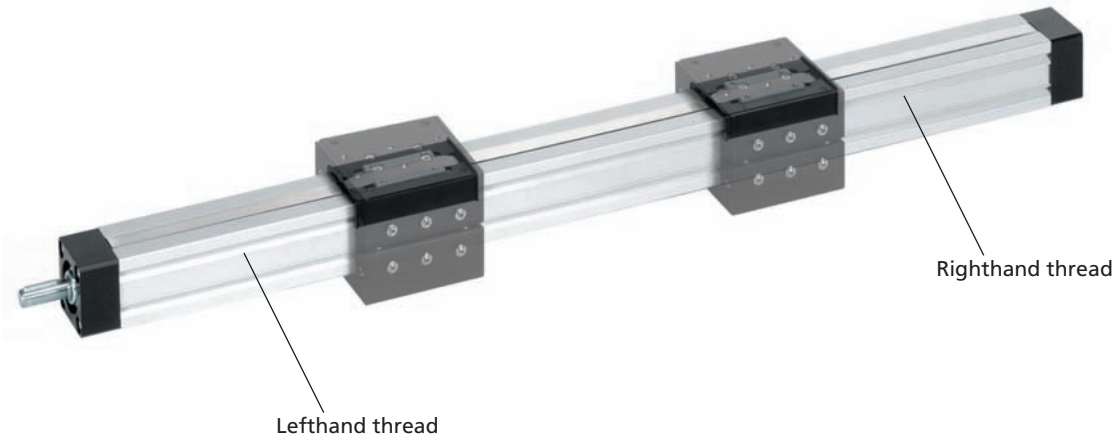

[mm]

| L 1 | L 2 | M | P 1 | P 2 | R | V | Max. travel | Mass [kg] | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Basic length | per 100 mm travel |
| 25 | – | 21 | 2 x 2 x 20 | – | 18 | M4 x 25 | 1375 | 0.300 | 0.220 |
| 25 | 25 | 21 | 2 x 2 x 20 | 2 x 2 x 20 | 18 | M4 x 25 | 1350 | 0.310 | 0.220 |
| 28 | – | 29 | 3 x 3 x 20 | – | 22 | M5 x 30 | 2850 | 0.690 | 0.400 |
| 28 | 28 | 29 | 3 x 3 x 20 | 3 x 3 x 20 | 22 | M5 x 30 | 2825 | 0.705 | 0.400 |
| 30 | – | 38 | 4 x 4 x 25 | – | 25 | M6 x 30 | 2830 | 1.410 | 0.530 |
| 30 | 30 | 38 | 4 x 4 x 25 | 4 x 4 x 25 | 25 | M6 x 30 | 2800 | 1.445 | 0.530 |
| 30 | – | 43 | 4 x 4 x 25 | – | 42 | M6 x 55 | 2805 | 2.023 | 0.605 |
| 30 | 30 | 43 | 4 x 4 x 25 | 4 x 4 x 25 | 42 | M6 x 55 | 2775 | 2.083 | 0.605 |
| 38 | – | 64 | 5 x 5 x 32 | – | 41 | M8 x 60 | 2745 | 4.250 | 1.000 |
| 38 | 38 | 64 | 5 x 5 x 32 | 5 x 5 x 32 | 41 | M8 x 60 | 2705 | 4.300 | 1.000 |

**Order information:**

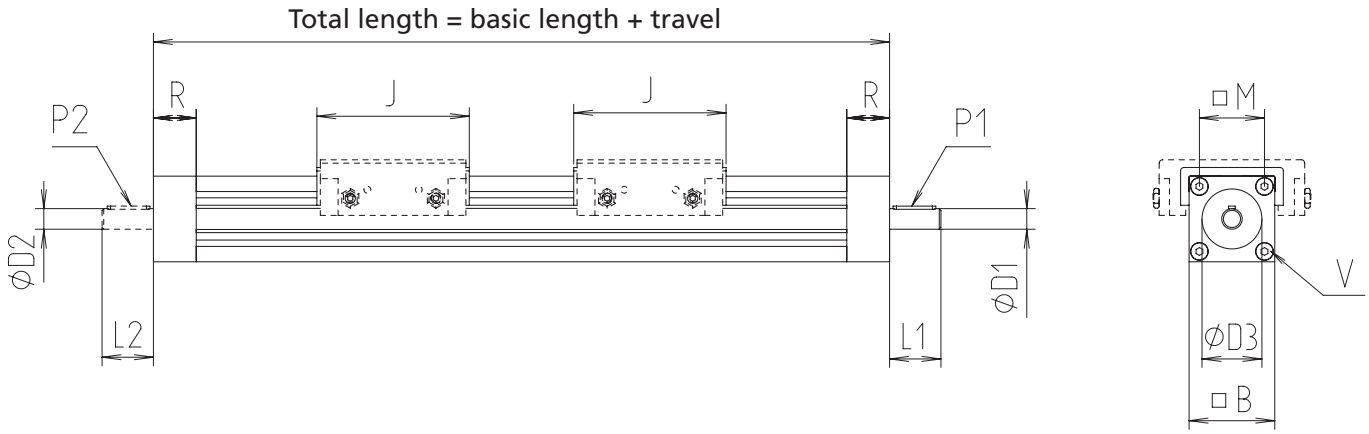
- Choice of carriage - this must be ordered separately

**Version** ■ **Right *and* lefthand thread**




| Code No. | Type | Spindle | Basic length | B | D 1 | D 2 | D 3 | J |
|---|---|---|---|---|---|---|---|---|
| 3033000 | 30 | 14 x 3 | 156 | 30 | 8 | – | 22 $^{H7}$ | 60 |
| 3033001 | 30 | 14 x 3 | 156 | 30 | – | 8 | 22 $^{H7}$ | 60 |
| 3033002 | 30 | 14 x 3 | 156 | 30 | 8 | 8 | 22 $^{H7}$ | 60 |
| 3034000 | 40 | 18 x 4 | 186 | 40 | 10 | – | 28 $^{J6}$ | 71 |
| 3034001 | 40 | 18 x 4 | 186 | 40 | – | 10 | 28 $^{J6}$ | 71 |
| 3034002 | 40 | 18 x 4 | 186 | 40 | 10 | 10 | 28 $^{J6}$ | 71 |
| 3035000 | 50 | 20 x 4 | 230 | 50 | 12 | – | 35 $^{J6}$ | 90 |
| 3035001 | 50 | 20 x 4 | 230 | 50 | – | 12 | 35 $^{J6}$ | 90 |
| 3035002 | 50 | 20 x 4 | 230 | 50 | 12 | 12 | 35 $^{J6}$ | 90 |
| 3036000 | 60 | 20 x 4 | 314 | 60 | 12 | – | 35 $^{J6}$ | 115 |
| 3036001 | 60 | 20 x 4 | 314 | 60 | – | 12 | 35 $^{J6}$ | 115 |
| 3036002 | 60 | 20 x 4 | 314 | 60 | 12 | 12 | 35 $^{J6}$ | 115 |
| 3038000 | 80 | 24 x 5 | 354 | 80 | 14 | – | 50 $^{H7}$ | 136 |
| 3038001 | 80 | 24 x 5 | 354 | 80 | – | 14 | 50 $^{H7}$ | 136 |
| 3038002 | 80 | 24 x 5 | 354 | 80 | 14 | 14 | 50 $^{H7}$ | 136 |

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

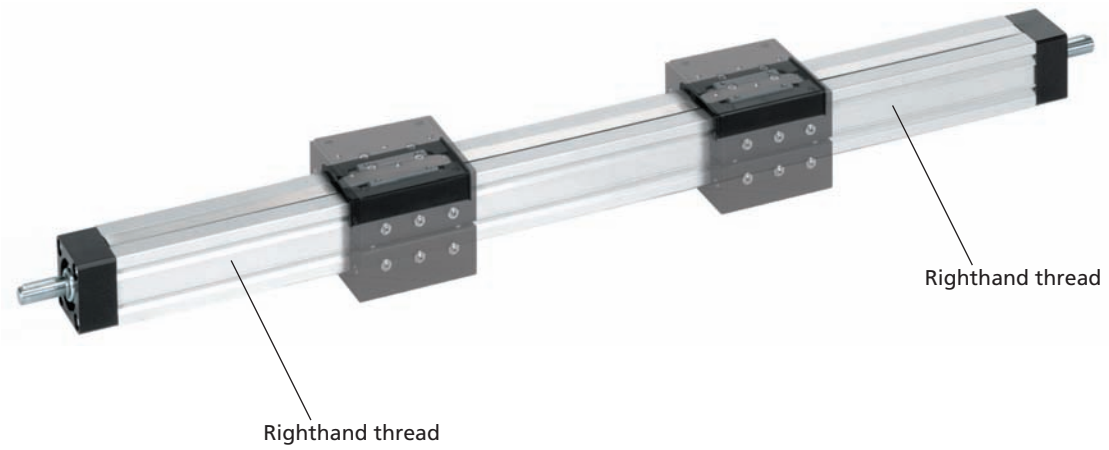



| L 1 | L 2 | M | P 1 | P 2 | R | V | Max. travel | Mass [kg] | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Basic length | per 100 mm travel |
| 25 | – | 21 | 2 x 2 x 20 | – | 18 | M4 x 25 | 1320 | 0.330 | 0.220 |
| – | 25 | 21 | – | 2 x 2 x 20 | 18 | M4 x 25 | 1320 | 0.330 | 0.220 |
| 25 | 25 | 21 | 2 x 2 x 20 | 2 x 2 x 20 | 18 | M4 x 25 | 1295 | 0.330 | 0.220 |
| 28 | – | 29 | 3 x 3 x 20 | – | 22 | M5 x 30 | 2730 | 0.740 | 0.400 |
| – | 28 | 29 | – | 3 x 3 x 20 | 22 | M5 x 30 | 2730 | 0.740 | 0.400 |
| 28 | 28 | 29 | 3 x 3 x 20 | 3 x 3 x 20 | 22 | M5 x 30 | 2700 | 0.755 | 0.400 |
| 30 | – | 38 | 4 x 4 x 25 | – | 25 | M6 x 30 | 2740 | 1.460 | 0.530 |
| – | 30 | 38 | – | 4 x 4 x 25 | 25 | M6 x 30 | 2740 | 1.460 | 0.530 |
| 30 | 30 | 38 | 4 x 4 x 25 | 4 x 4 x 25 | 25 | M6 x 30 | 2710 | 1.495 | 0.530 |
| 30 | – | 43 | 4 x 4 x 25 | – | 42 | M6 x 55 | 2805 | 2.856 | 0.605 |
| – | 30 | 43 | – | 4 x 4 x 25 | 42 | M6 x 55 | 2805 | 2.856 | 0.605 |
| 30 | 30 | 43 | 4 x 4 x 25 | 4 x 4 x 25 | 42 | M6 x 55 | 2775 | 2.916 | 0.605 |
| 38 | – | 64 | 5 x 5 x 32 | – | 41 | M8 x 60 | 2610 | 4.320 | 1.000 |
| – | 38 | 64 | – | 5 x 5 x 32 | 41 | M8 x 60 | 2610 | 4.320 | 1.000 |
| 38 | 38 | 64 | 5 x 5 x 32 | 5 x 5 x 32 | 41 | M8 x 60 | 2572 | 4.370 | 1.000 |

**Order information:**

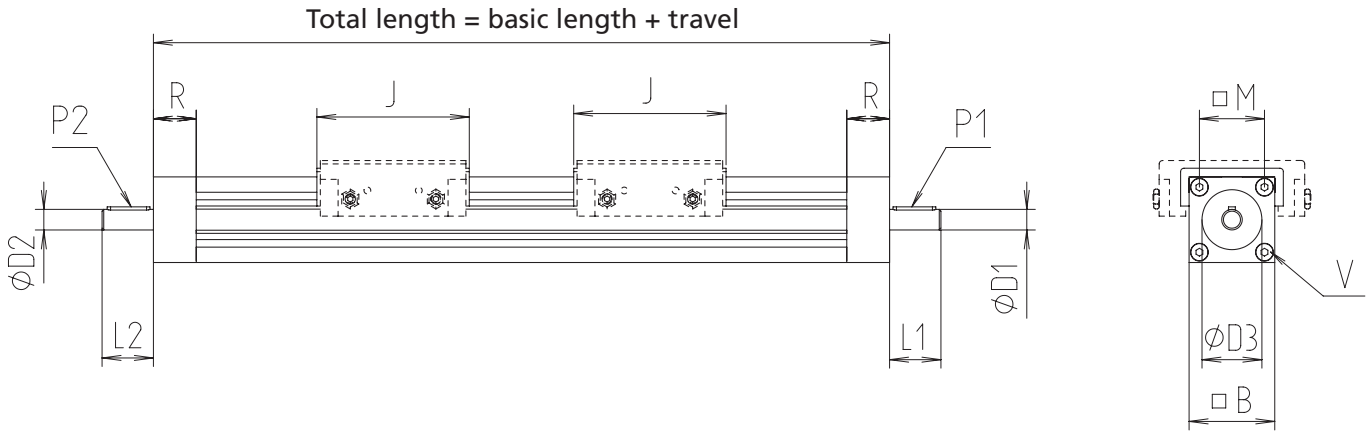
- Choice of carriage - this must be ordered separately

**Version** ■ **Split screw**




| Code No. | Type | Spindle | Basic length | B | D 1 | D 2 | D 3 | J |
|---|---|---|---|---|---|---|---|---|
| 3043002 | 30 | 14 x 3 | 156 | 30 | 8 | 8 | 22 H7 | 60 |
| 3044002 | 40 | 18 x 4 | 186 | 40 | 10 | 10 | 28 J6 | 71 |
| 3045002 | 50 | 20 x 4 | 230 | 50 | 12 | 12 | 35 J6 | 90 |
| 3046002 | 60 | 20 x 4 | 314 | 60 | 12 | 12 | 35 J6 | 115 |
| 3048002 | 80 | 24 x 5 | 354 | 80 | 14 | 14 | 50 H7 | 136 |

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




[mm]

| L 1 | L 2 | M | P 1 | P 2 | R | V | Max. travel/end | Mass [kg] | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Basic length | per 100 mm travel |
| 25 | 25 | 21 | 2 x 2 x 20 | 2 x 2 x 20 | 18 | M4 x 25 | 1390 | 0.380 | 0.220 |
| 28 | 28 | 29 | 3 x 3 x 20 | 3 x 3 x 20 | 22 | M5 x 30 | 2870 | 0.820 | 0.400 |
| 30 | 30 | 38 | 4 x 4 x 25 | 4 x 4 x 25 | 25 | M6 x 30 | 2850 | 1.560 | 0.530 |
| 30 | 30 | 43 | 4 x 4 x 25 | 4 x 4 x 25 | 42 | M6 x 55 | 2775 | 3.096 | 0.605 |
| 38 | 38 | 64 | 5 x 5 x 32 | 5 x 5 x 32 | 41 | M8 x 60 | 2780 | 4.655 | 1.000 |

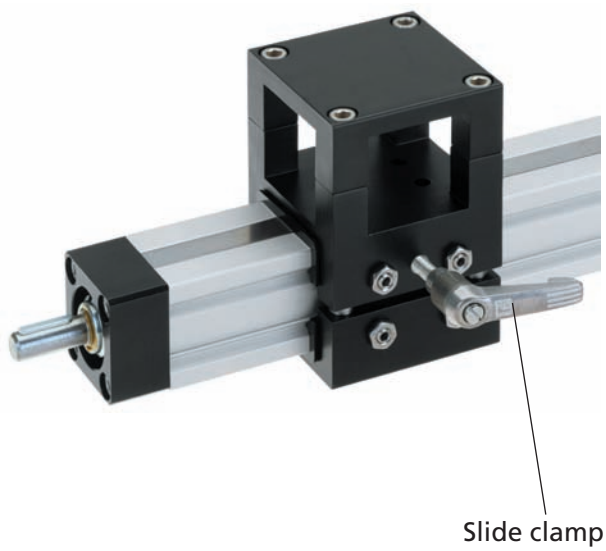
## Carriage

- A range of different versions facilitate mounting

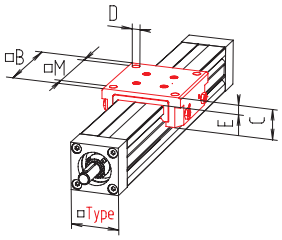
**Material:** Al Mg Si, black anodised

**Order information:**

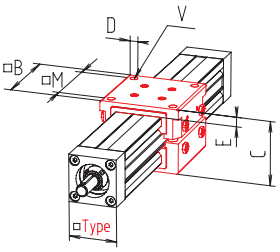
- Choice of carriage - this must be ordered separately
- Second free-running carriage available on request




### V-O




### V-G



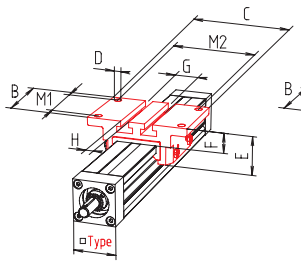

[mm]

| Code No. | Version | Type | B | C | D | E | M | V |
|---|---|---|---|---|---|---|---|---|
| 5301_0 | V-O | 30 | 56 | 20 | M 6 | 7 | 42 | – |
| 5302_0 | V-G | 30 | 56 | 44 | M 6 | 7 | 42 | M6 x 30 |
| 5401_0 | V-O | 40 | 68 | 26 | M 6 | 8 | 54 | – |
| 5402_0 | V-G | 40 | 68 | 56 | M 6 | 8 | 54 | M6 x 35 |
| 5501_0 | V-O | 50 | 85 | 33 | M 8 | 10 | 67 | – |
| 5502_0 | V-G | 50 | 85 | 70 | M 8 | 10 | 67 | M8 x 45 |
| 5601_0 | V-O | 60 | 105 | 45 | M 8 | 17.3 | 85 | – |
| 5602_0 | V-G | 60 | 105 | 94.5 | M 8 | 17.3 | 85 | M8 x 60 |
| 5801_0 | V-O | 80 | 136 | 52 | M10 | 16 | 105 | – |
| 5802_0 | V-G | 80 | 136 | 112 | M10 | 16 | 105 | M10 x 70 |

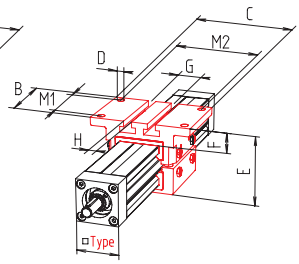
**Slide clamp**
**Equipment:**
0 = screws
1 = 1 lever
2 = 2 levers

## Carriage

### FKV-O



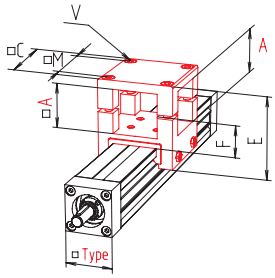

### FKV-G



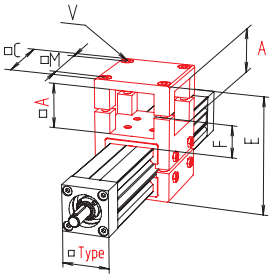

[mm]

| Code No. | Ver-sion | Type | B | C | D | E | F | G | H | K | M1 | M2 | R | S | V |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5303_0 | FKV-O | 30 | 56 | 84 | 7 | 29 | 16 | 20 | 6 | 10 | 40 | 70 | 4.5 | 9 | – |
| 5304_0 | FKV-G | 30 | 56 | 84 | 7 | 51 | 16 | 20 | 6 | 10 | 40 | 70 | 4.5 | 9 | M6 x 30 |
| 5403_0 | FKV-O | 40 | 68 | 97 | 7 | 38 | 20 | 28 | 10 | 15 | 54 | 83 | 6.5 | 13 | – |
| 5404_0 | FKV-G | 40 | 68 | 97 | 7 | 68 | 20 | 28 | 10 | 15 | 54 | 83 | 6.5 | 13 | M6 x 35 |
| 5503_0 | FKV-O | 50 | 85 | 125 | 9 | 48 | 25 | 30 | 10 | 20 | 65 | 105 | 7 | 14 | – |
| 5504_0 | FKV-G | 50 | 85 | 125 | 9 | 85 | 25 | 30 | 10 | 20 | 65 | 105 | 7 | 14 | M8 x 45 |
| 5603_0 | FKV-O | 60 | 105 | 145 | 9 | 59 | 31.3 | 65 | 10 | 20 | 80 | 120 | 7 | 14 | – |
| 5604_0 | FKV-G | 60 | 105 | 145 | 9 | 108.5 | 31.3 | 65 | 10 | 20 | 80 | 120 | 7 | 14 | M8 x 60 |
| 5803_0 | FKV-O | 80 | 136 | 170 | 11 | 68 | 31 | – | – | 19 | 100 | 148 | 8 | 20 | – |
| 5804_0 | FKV-G | 80 | 136 | 170 | 11 | 127 | 31 | – | – | 19 | 100 | 148 | 8 | 20 | M10 x 70 |

### KV-O



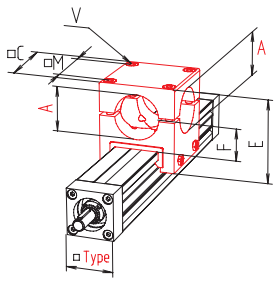

### KV-G



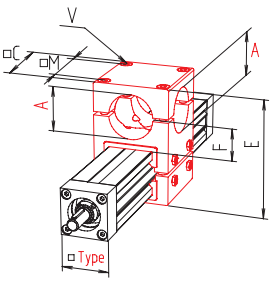

[mm]

| Code No. | Version | Type | A | C | E | F | M | V |
|---|---|---|---|---|---|---|---|---|
| 5305_0 | KV-O | 30 | 30.2 | 56 | 56 | 22 | 42 | M6 x 30 |
| 5306_0 | KV-G | 30 | 30.2 | 56 | 78 | 22 | 42 | M6 x 30 |
| 5405_0 | KV-O | 40 | 40.4 | 68 | 75 | 28 | 54 | M6 x 35 |
| 5406_0 | KV-G | 40 | 40.4 | 68 | 104 | 28 | 54 | M6 x 35 |
| 5505_0 | KV-O | 50 | 50.4 | 85 | 94 | 35 | 67 | M8 x 45 |
| 5506_0 | KV-G | 50 | 50.4 | 85 | 130 | 35 | 67 | M8 x 45 |
| 5605_0 | KV-O | 60 | 60.4 | 105 | 117.5 | 48.3 | 85 | M8 x 60 |
| 5606_0 | KV-G | 60 | 60.4 | 105 | 174 | 48.3 | 85 | M8 x 60 |
| 5805_0 | KV-O | 80 | 80.4 | 136 | 165 | 72 | 100 | M10 x 70 |
| 5806_0 | KV-G | 80 | 80.4 | 136 | 224 | 72 | 100 | M10 x 70 |

### KVR-O




### KVR-G




[mm]

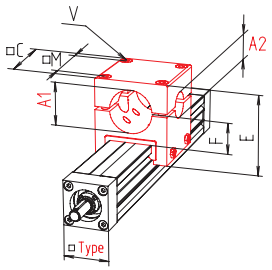
| Code No. | Version | Type | A | C | E | F | M | V |
|---|---|---|---|---|---|---|---|---|
| 5307_0 | KVR-O | 30 | 30.1 | 56 | 56 | 22 | 42 | M6 x 30 |
| 5308_0 | KVR-G | 30 | 30.1 | 56 | 78 | 22 | 42 | M6 x 30 |
| 5407_0 | KVR-O | 40 | 40.2 | 68 | 75 | 28 | 54 | M6 x 35 |
| 5408_0 | KVR-G | 40 | 40.2 | 68 | 104 | 28 | 54 | M6 x 35 |
| 5507_0 | KVR-O | 50 | 50.3 | 85 | 94 | 35 | 67 | M8 x 45 |
| 5508_0 | KVR-G | 50 | 50.3 | 85 | 130 | 35 | 67 | M8 x 45 |
| 5607_0 | KVR-O | 60 | 60.3 | 105 | 117.5 | 48.3 | 85 | M8 x 60 |
| 5608_0 | KVR-G | 60 | 60.3 | 105 | 174 | 48.3 | 85 | M8 x 60 |
| 5807_0 | KVR-O | 80 | 80.6 | 136 | 165 | 72 | 100 | M10 x 70 |
| 5808_0 | KVR-G | 80 | 80.6 | 136 | 224 | 72 | 100 | M10 x 70 |

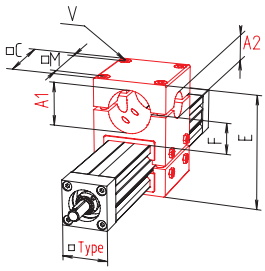
**Slide clamp**
**Equipment:**
0 = screws
1 = 1 lever
2 = 2 levers

## Carriage

### KRD-O

### KRD-G

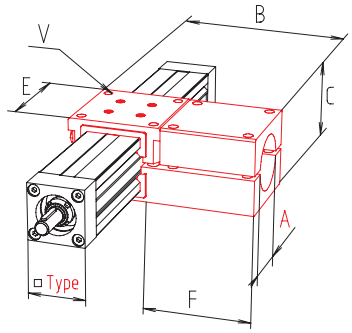



[mm]

| Code No. | Version | Type | A1 | A2 | C | E | F | M | V |
|---|---|---|---|---|---|---|---|---|---|
| 5409_0 | KRD-O | 40 x 30 | 40 | 30.1 | 68 | 74.4 | 28 | 54 | M6 x 35 |
| 5410_0 | KRD-G | 40 x 30 | 40 | 30.1 | 68 | 104 | 28 | 54 | M6 x 35 |
| 5509_0 | KRD-O | 50 x 30 | 50 | 30.1 | 85 | 93 | 35 | 67 | M6 x 35 |
| 5510_0 | KRD-G | 50 x 30 | 50 | 30.1 | 85 | 130 | 35 | 67 | M6 x 35 |
| 5609_0 | KRD-O | 60 x 30 | 60 | 30.1 | 105 | 118 | 42 | 85 | M8 x 60 |
| 5610_0 | KRD-G | 60 x 30 | 60 | 30.1 | 105 | 196 | 42 | 85 | M8 x 60 |

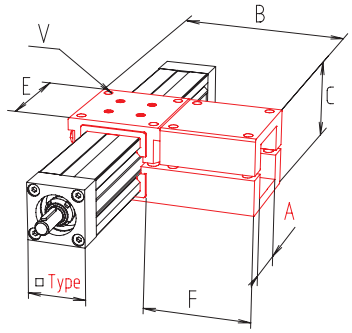
## WVR-G




[mm]

| Code No. | Version | Type | A | B | C | E | F | V |
|---|---|---|---|---|---|---|---|---|
| 5311_0 | WVR-G | 30 | 30.1 | 112 | 44 | 56 | 67 | M6 x 25 |
| 5411_0 | WVR-G | 40 | 40.2 | 136 | 56 | 68 | 82 | M6 x 35 |
| 5511_0 | WVR-G | 50 | 50.1 | 170 | 70 | 85 | 100 | M8 x 45 |
| 5611_0 | WVR-G | 60 | 60.3 | 220 | 95.8 | 105 | 137.5 | M8 x 60 |

## WV-G



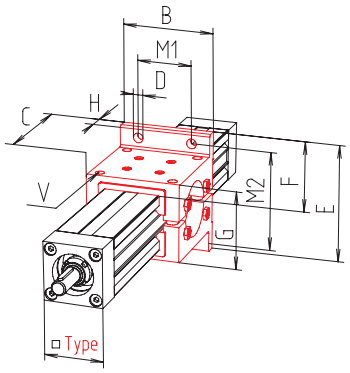

[mm]

| Code No. | Version | Type | A | B | C | E | F | V |
|---|---|---|---|---|---|---|---|---|
| 5312_0 | WV-G | 30 | 30.2 | 112 | 44 | 56 | 67 | M6 x 30 |
| 5412_0 | WV-G | 40 | 40.2 | 136 | 56 | 68 | 82 | M6 x 35 |
| 5512_0 | WV-G | 50 | 50.4 | 170 | 70 | 85 | 100 | M8 x 45 |
| 5612_0 | WV-G | 60 | 60.4 | 220 | 95.8 | 105 | 137.5 | M8 x 60 |

**Slide clamp**
**Equipment:**
0 = screws
1 = 1 lever
2 = 2 levers

## Carriage

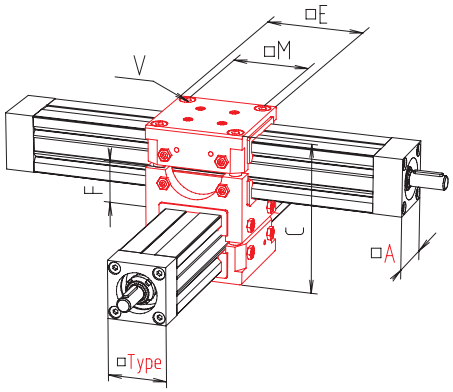
### FV-G




[mm]

| Code No. | Version | Type | B | C | D | E | F | G | H | M1 | M2 | V |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 531300 | FV-G | 30 | 56 | 58 | 7 | 70 | 18 | 42 | 6 | 28 | 56 | M4 x 40 |
| 541300 | FV-G | 40 | 68 | 74 | 7 | 85 | 23 | 56 | 8 | 40 | 70 | M6 x 35 |
| 551300 | FV-G | 50 | 84 | 92 | 9 | 110 | 30 | 70 | 10 | 50 | 90 | M8 x 45 |
| 561300 | FV-G | 60 | 105 | 112 | 9 | 135.5 | 37.8 | 95.5 | 11.5 | 80 | 120 | M8 x 60 |
| 581300 | FV-G | 80 | 126 | 142 | 11 | 156 | 73.8 | 112 | 16 | 80 | 135 | M10 x 70 |

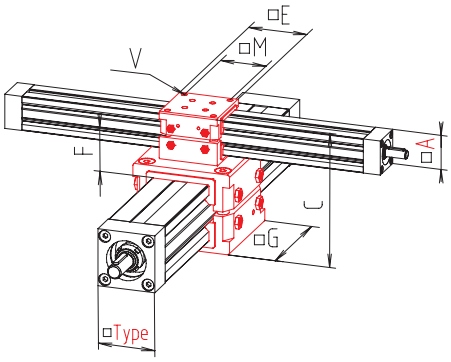
### EK-G




[mm]

| Code No. | Version | Type | A | C | E | F | M | V |
|---|---|---|---|---|---|---|---|---|
| 5314_0 | EK-G | 30 | 30 | 81 | 56 | 22 | 42 | M6 x 30 |
| 5414_0 | EK-G | 40 | 40 | 104 | 68 | 26.5 | 54 | M6 x 40 |
| 5514_0 | EK-G | 50 | 50 | 130 | 85 | 35 | 67 | M8 x 45 |
| 5614_0 | EK-G | 60 | 60 | 179 | 105 | 54.5 | 85 | M8 x 60 |
| 5814_0 | EK-G | 80 | 80 | 224 | 136 | 72 | 105 | M10 x 70 |

### EKD-G




[mm]

| Code No. | Version | Type | A | C | E | F | G | M | V |
|---|---|---|---|---|---|---|---|---|---|
| 5515_0 | EKD-G50/30 | 50 | 30 | 114 | 56 | 33 | 85 | 42 | M6 x 25 |
| 5815_0 | EKD-G80/40 | 80 | 40 | 168 | 68 | 84 | 136 | 54 | M6 x 35 |

**Slide clamp**
**Equipment:**
0 = screws
1 = 1 lever
2 = 2 levers

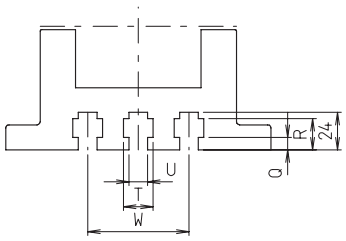
## Fixing elements

- Clamping elements for the simple fixing of EV units
- For further elements, please refer to the catalogue “Connecting Technology”

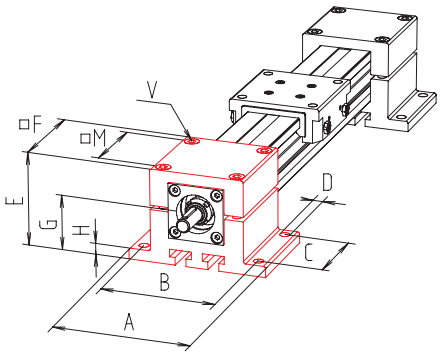
**Material:** Al Mg Si 0,5 F25, clear anodised
DIN 912 screws

For further dimensions, please refer to the catalogue “Connecting Technology”

## FKV



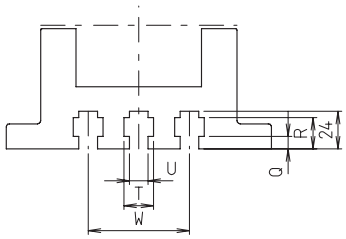

Centre slot only on types 60 and 80



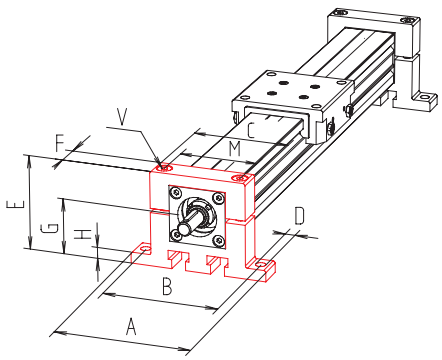

[mm]

| Code No. | Version | Type | A | B | C | D | E | F | G | H | M | Q | R | T | U | W | V |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 52300005030 | FKV | 30 | 84 | 70 | 40 | 7 | 51 | 56 | 30 | 6 | 42 | 4.5 | 9 | 10 | 6 | 20 | M6 x 25 |
| 52400005030 | FKV | 40 | 97 | 83 | 54 | 7 | 68 | 68 | 40 | 8 | 54 | 6.5 | 13 | 15 | 10 | 28 | M6 x 35 |
| 52500005030 | FKV | 50 | 125 | 105 | 65 | 9 | 85 | 85 | 50 | 10 | 67 | 7 | 14 | 20 | 10 | 30 | M8 x 45 |
| 52600005030 | FKV | 60 | 145 | 120 | 80 | 9 | 111 | 105 | 62.5 | 12 | 80 | 7 | 14 | 20 | 10 | 65 | M8 x 60 |
| 52800005030 | FKV | 80 | 170 | 148 | 100 | 11 | 136 | 126 | 80 | 16 | 100 | 8 | 20 | 19 | 12 | 65 | M10 x 70 |

## FKVH




Centre slot only on types 60 and 80

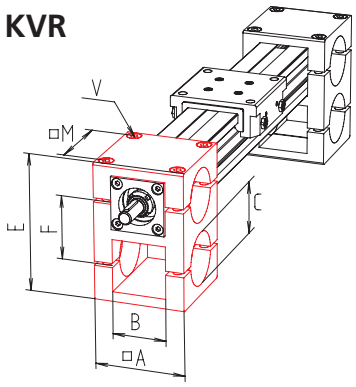



[mm]

| Code No. | Version | Type | A | B | C | D | E | F | G | H | M | Q | R | T | U | W | V |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 52300010030 | FKVH | 30 | 84 | 70 | 56 | 7 | 51 | 16 | 30 | 6 | 42 | 4.5 | 9 | 10 | 6 | 20 | M6 x 25 |
| 52400010030 | FKVH | 40 | 97 | 83 | 68 | 7 | 68 | 18 | 40 | 8 | 54 | 6.5 | 13 | 15 | 10 | 28 | M6 x 35 |
| 52500010030 | FKVH | 50 | 125 | 105 | 85 | 9 | 85 | 20 | 50 | 10 | 67 | 7 | 14 | 20 | 10 | 30 | M8 x 45 |
| 52600010030 | FKVH | 60 | 145 | 120 | 105 | 9 | 111 | 22 | 62.5 | 12 | 80 | 7 | 14 | 20 | 10 | 65 | M8 x 60 |
| 52800010030 | FKVH | 80 | 170 | 148 | 126 | 11 | 136 | 24 | 80 | 16 | 100 | 8 | 20 | 19 | 12 | 65 | M10 x 70 |

## Fixing elements

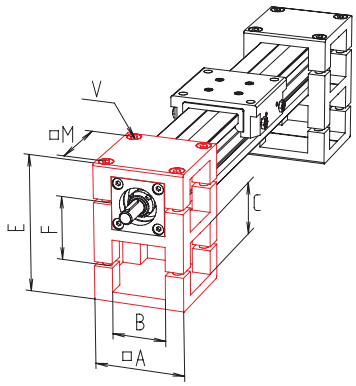
### KVR




[mm]

| Code No. | Version | Type | A | B | C | E | F | M | V |
|---|---|---|---|---|---|---|---|---|---|
| 503000040300 | KVR | 30 | 56 | 30.1 | 30.1 | 78 | 36 | 42 | M6 x 25 |
| 504000040300 | KVR | 40 | 68 | 40.2 | 40.2 | 104 | 48 | 54 | M6 x 35 |
| 505000040300 | KVR | 50 | 85 | 50.3 | 50.3 | 130 | 60 | 67 | M8 x 45 |
| 506000040300 | KVR | 60 | 105 | 60.4 | 60.3 | 169 | 72 | 85 | M8 x 60 |

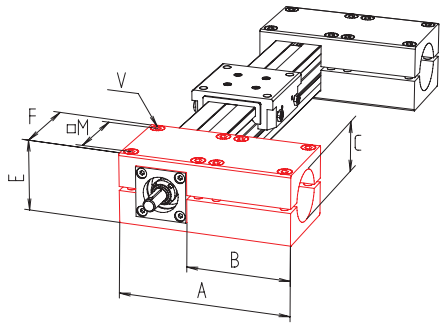
### KV




[mm]

| Code No. | Version | Type | A | B | C | E | F | M | V |
|---|---|---|---|---|---|---|---|---|---|
| 503000050300 | KV | 30 | 56 | 30.2 | 30.2 | 78 | 36 | 42 | M6 x 25 |
| 504000050300 | KV | 40 | 68 | 40.4 | 40.4 | 104 | 48 | 54 | M6 x 35 |
| 505000050300 | KV | 50 | 85 | 50.4 | 50.4 | 130 | 60 | 67 | M8 x 45 |
| 506000050300 | KV | 60 | 105 | 60.4 | 60.4 | 169 | 72 | 85 | M8 x 60 |

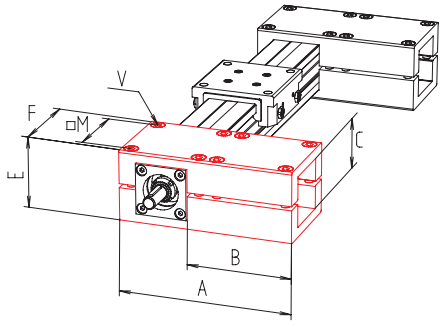
### WVR




[mm]

| Code No. | Version | Type | A | B | C | E | F | M | V |
|---|---|---|---|---|---|---|---|---|---|
| 513000150300 | WVR | 30 | 112 | 69 | 30.2 | 42 | 56 | 42 | M6 x 25 |
| 514000150300 | WVR | 40 | 136 | 82 | 40.2 | 56 | 68 | 54 | M6 x 35 |
| 515000150300 | WVR | 50 | 170 | 102 | 50.4 | 70 | 85 | 67 | M6 x 35 |
| 516000150300 | WVR | 60 | 210 | 127 | 60.3 | 97 | 105 | 85 | M8 x 60 |

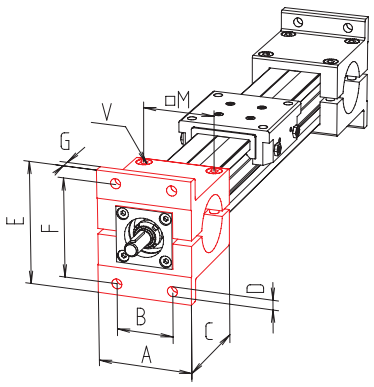
### WV




[mm]

| Code No. | Version | Type | A | B | C | E | F | M | V |
|---|---|---|---|---|---|---|---|---|---|
| 513000050300 | WV | 30 | 112 | 69 | 30.2 | 42 | 56 | 42 | M6 x 25 |
| 514000050300 | WV | 40 | 136 | 82 | 40.4 | 56 | 68 | 54 | M6 x 35 |
| 515000050300 | WV | 50 | 170 | 102 | 50.4 | 70 | 85 | 67 | M8 x 45 |
| 516000050300 | WV | 60 | 210 | 127 | 60.4 | 97 | 105 | 85 | M8 x 60 |

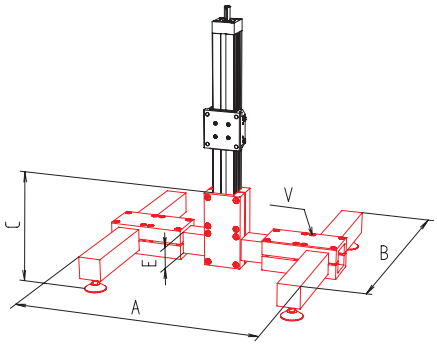
## FV




[mm]

| Code No. | Version | Type | A | B | C | D | E | F | G | M | V |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 53300005030 | Z | 30 | 56 | 28 | 58 | 7 | 70 | 56 | 6 | 42 | M6 x 25 |
| 53400005030 | Z | 40 | 68 | 40 | 74 | 7 | 85 | 70 | 8 | 54 | M6 x 35 |
| 53500005030 | Z | 50 | 84 | 50 | 92 | 9 | 110 | 90 | 10 | 64 | M8 x 45 |
| 53600005030 | Z | 60 | 105 | 80 | 112.5 | 9 | 137 | 120 | 12 | 85 | M8 x 60 |
| 53800005030 | Z | 80 | 126 | 80 | 142 | 11 | 156 | 135 | 16 | 100 | M10 x 70 |

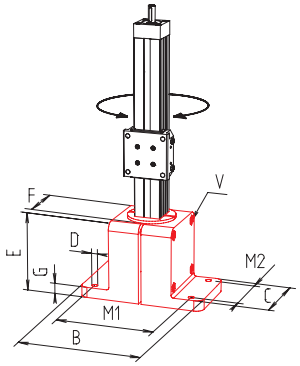
## FHV




[mm]

| Code No. | Version | Type | A | B | C | E | V |
|---|---|---|---|---|---|---|---|
| 53300008030 | FHV | 30 | 350 | 350 | 114 | 30 | M6 x 25 |
| 53400008030 | FHV | 40 | 400 | 400 | 137 | 40 | M6 x 35 |
| 53500008030 | FHV | 50 | 500 | 500 | 127 | 50 | M8 x 45 |
| 53600008030 | FHV | 60 | 600 | 600 | 220 | 60 | M8 x 60 |

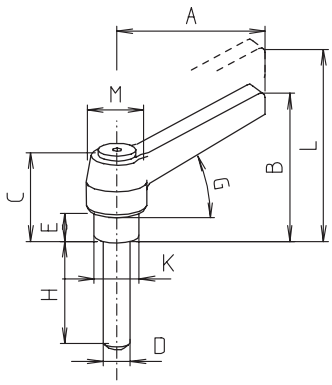
## FRS

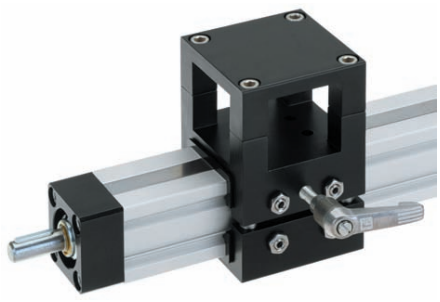



[mm]

| Code No. | Version | Type | B | C | D | E | F | G | M1 | M2 | V |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 53300018030 | FRS | 30 | 110 | 84 | 9 | 92 | 70 | 10 | 90 | 50 | M8 x 45 |
| 53500018030 | FRS | 50 | 156 | 126 | 11 | 142 | 126 | 16 | 135 | 80 | M10 x 70 |

## Clamping levers



For slide clamp

For component clamp

[mm]

| Code No. galvanised | Code No. VA | Type | A | B | C | D | E | G | H | K | L | M |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| For slide clamp | | | | | | | | | | | | |
| 90248 | 93020 | 30 | 40 | 33.5 | 27 | M5 | 5.5 | 20° | 15 | 8.5 | 37.5 | 13.5 |
| 90212 | 93001 | 40/50 | 40 | 33.5 | 27 | M6 | 6.5 | 20° | 25 | 10 | 37.5 | 13.5 |
| 90249 | 93019 | 60 | 45 | 35 | 22 | M6 | 4 | 25° | 20 | 10 | 38 | 13 |
| 90222 | 93012 | 80 | 65 | 45 | 31 | M8 | 8.5 | 20° | 25 | 13 | 48 | 18 |
| For component clamp | | | | | | | | | | | | |
| 90247 | 93018 | 30 | 40 | 27 | 27 | M6 | 6.5 | 20° | 30 | 10 | 31 | 13.5 |
| 90213 | 93014 | 40 | 40 | 33.4 | 27 | M6 | 6.5 | 20° | 35 | 10 | 37.5 | 13.5 |
| 90225 | 93004 | 50 | 65 | 45 | 31 | M8 | 8.5 | 20° | 45 | 13 | 49 | 18 |
| 90228 | 93011 | 60 | 65 | 45 | 31 | M8 | 8.5 | 20° | 60 | 13 | 49 | 18 |
| 90245 | 93008 | 80 | 92 | 62 | 42 | M10 | 10 | 20° | 70 | 16 | 66 | – |

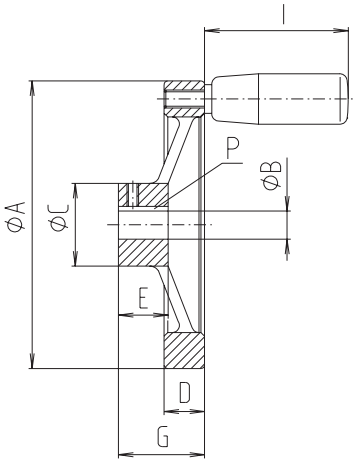
## Handwheel

- Rotating cylindrical grip
- Fully turned wheel rim
- Machined hub

**Material:** Aluminium die cast, black powder-coated

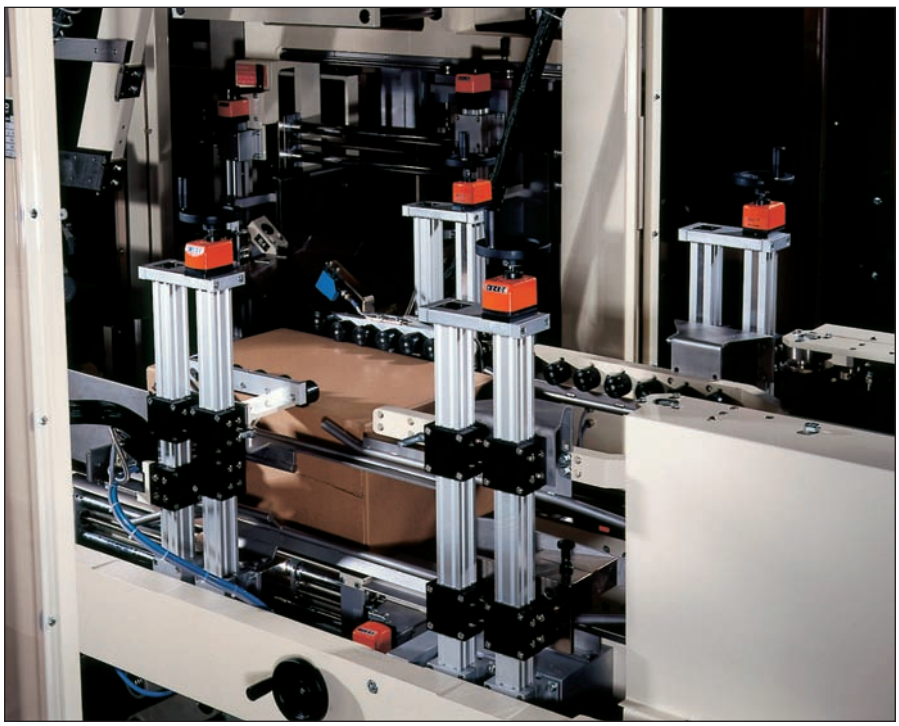
Ø 80-100

Ø 140-200




[mm]

| Code No. | Type | A | B | C | D | E | G | P | I |
|---|---|---|---|---|---|---|---|---|---|
| 90903 | 30 | 80 | 8 | 23 | 11 | 17 | 35 | 2 x 2 | 42 |
| 90904 | 40 | 100 | 10 | 28 | 14 | 17 | 30 | 3 x 3 | 52 |
| 90915 | 50/60 | 100 | 12 | 28 | 14 | 17 | 30 | 4 x 4 | 52 |
| 90905 | 50/60 | 140 | 12 | 36 | 16.5 | 19 | 36 | 4 x 4 | 66 |
| 90906 | 80 | 140 | 14 | 36 | 16.5 | 19 | 36 | 5 x 5 | 66 |
| 90918 | 80 | 160 | 14 | 36 | 18 | 20 | 39 | 5 x 5 | 80 |
| 90928 | 80 | 200 | 14 | 43 | 20 | 24 | 44 | 5 x 5 | 80 |

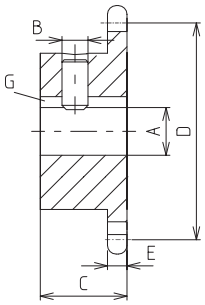


Format adjustment of a packaging system by means of quad EV linear unit

## Chain wheel

- Other sizes on request

**Material:** Steel, 500 N/mm² min.



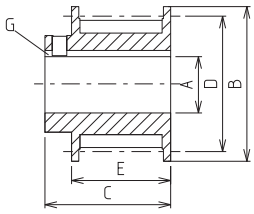

[mm]

| Code No. | Type | A | B | C | D | E | G | No. of teeth | Size |
|---|---|---|---|---|---|---|---|---|---|
| 91703 | 30 | 8 | M6 | 18 | 41.1 | 4.5 | 2 x 2 | 10 | 1/2 x 3/16" |
| on request | 40 | 10 | M6 | 20 | 53 | 4.5 | 4 x 4 | 13 | 1/2 x 3/16" |
| 91705 | 50/60 | 12 | M6 | 20 | 61 | 4.5 | 4 x 4 | 15 | 1/2 x 3/16" |
| 91706 | 60 | 14 | M6 | 25 | 85 | 4.5 | 5 x 5 | 21 | 1/2 x 3/16" |

## HTD timing-belt pulley

- Suitable for maintenance-free continuous operation
- Excellent accuracy and zero backlash during change of direction
- Can be clamped on feather key

**Material:** Steel



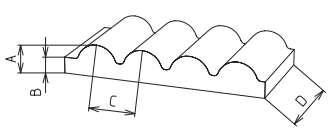

[mm]

| Code No. | Type | A | B | C | D | E | G | Pull force | Pitch |
|---|---|---|---|---|---|---|---|---|---|
| 92103 | 30 | 8 | 23 | 20 | 19.09 | 14.5 | 2 x 2 | 220 N | 5 |
| 92105 | 40/50 | 12 | 32 | 26 | 28.65 | 20.5 | 4 x 4 | 330 N | 5 |
| 92106 | 60 | 14 | 32 | 26 | 28.65 | 20.5 | 5 x 5 | 330 N | 5 |

## Timing-belt (endless)

- HTD timing-belt with steel insert

For pull force, see lock pulley. Other lengths available on request.



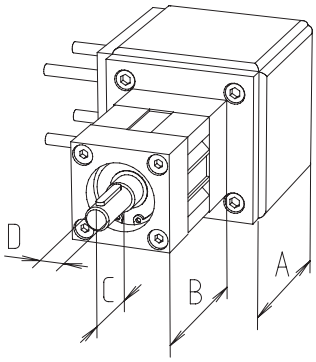

[mm]

| Code No. | Type | A | B | C | D | Timing-belt length | | | |
|---|---|---|---|---|---|---|---|---|---|
| 92204 _ _ _ _ | 30 | 3.81 | 1.75 | 5 | 9 | 305 | 550 | 750 | 1000 |
| 92205 _ _ _ _ | 40/50/60 | 3.81 | 1.75 | 5 | 15 | 305 | 565 | 800 | 900 |

Timing-belt length [mm]

## Angular drive

- Simple assembly
- Self-centring



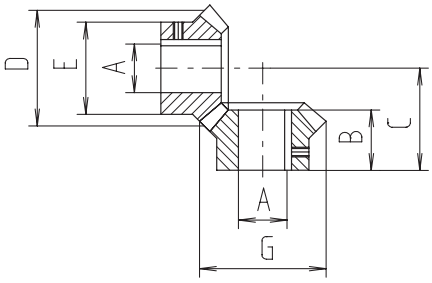

[mm]

| Code No. | Type | A | B | C | D | Ratio | Module | No. of teeth | Max. torque | Max. speed |
|---|---|---|---|---|---|---|---|---|---|---|
| 91503 | 30 | 50 | 60 | 25 | 8 | 1:1 | 1.5 | 16 | 5.5 Nm | 560 rpm |
| 91513 | 30 | 50 | 60 | 25 | 8 | 1:1.5 | 1.5 | 16/24 | 5 Nm | 373/560 rpm |
| 91534 | 40 | 60 | 80 | 28 | 10 | 1:1 | 1.5 | 16 | 5.5 Nm | 560 rpm |
| 91524 | 40 | 60 | 80 | 28 | 10 | 1:1.5 | 1.5 | 16/24 | 5 Nm | 373/560 rpm |
| 91505 | 50 | 78 | 80 | 30 | 12 | 1:1 | 2.5 | 16 | 16 Nm | 560 rpm |
| 91515 | 50 | 78 | 80 | 30 | 12 | 1:1.5 | 2 | 16/24 | 10 Nm | 373/560 rpm |
| 91507 | 60 | 88 | 125 | 30 | 12 | 1:1 | 2.5 | 16 | 16 Nm | 560 rpm |
| 91517 | 60 | 88 | 125 | 30 | 12 | 1:1.5 | 2 | 16/24 | 10 Nm | 373/560 rpm |
| 91508 | 80 | 108 | 140 | 38 | 14 | 1:1 | 2.5 | 22 | 28 Nm | 560 rpm |
| 91518 | 80 | 108 | 140 | 38 | 14 | 1:1.5 | 2.5 | 16/24 | 23 Nm | 373/560 rpm |

## Bevel gear set

- Straight toothed
- Pressure angle 20°
- Shaft angle 90°
- Crowned tooth faces
- Can be clamped on feather key

**Material:** Steel C45



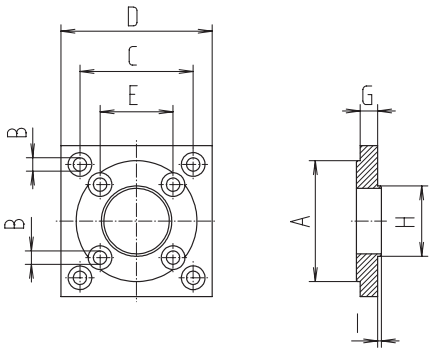

[mm]

| Code No. | Type | A | B | C | D | E | G | Ratio | No. of teeth | Module |
|---|---|---|---|---|---|---|---|---|---|---|
| 91603 | Set 30 | 8 | 15 | 24 | 24 | 18 | 26.11 | 1:1 | 16 | 1.5 |
| 91613 | Set 30 | 8 | 17/17.5 | 30/27 | 24/36 | 18/18 | 26.49/37.67 | 1:1.5 | 16/24 | 1.5 |
| 91623 | Single component 30 | 8 | 15 | 24 | 24 | 18 | 26.11 | 1:1 | 16 | 1.5 |
| 91663 | Single component 30 | 8 | 17 | 30 | 24 | 18 | 26.49 | 1:1.5 | 16 | 1.5 |
| 91673 | Single component 30 | 8 | 17.5 | 27 | 36 | 18 | 37.67 | 1:1.5 | 24 | 1.5 |
| 91614 | Set 40 | 10 | 16 | 27 | 28.5 | 24 | 30.62 | 1:1 | 19 | 1.5 |
| 91624 | Set 40 | 10 | 17/17.5 | 30/27 | 24/36 | 20/26 | 26.49/37.67 | 1:1.5 | 16/24 | 1.5 |
| 91674 | Single component 40 | 10 | 16 | 27 | 28.5 | 24 | 30.62 | 1:1 | 19 | 1.5 |
| 91684 | Single component 40 | 10 | 17 | 30 | 24 | 20 | 26.49 | 1:1.5 | 16 | 1.5 |
| 91694 | Single component 40 | 10 | 17.5 | 27 | 36 | 26 | 37.67 | 1:1.5 | 24 | 1.5 |
| 91605 | Set 50 | 12 | 22 | 37 | 40 | 32 | 43.5 | 1:1 | 16 | 2.5 |
| 91615 | Set 50 | 12 | 21/23 | 38/35 | 32/48 | 26/35 | 35.3/50.2 | 1:1.5 | 16/24 | 2 |
| 91625 | Single component 50 | 12 | 22 | 37 | 40 | 32 | 43.5 | 1:1 | 16 | 2.5 |
| 91665 | Single component 50 | 12 | 21 | 38 | 32 | 26 | 35.3 | 1:1.5 | 16 | 2 |
| 91645 | Single component 50 | 12 | 23 | 35 | 48 | 35 | 50.2 | 1:1.5 | 24 | 2 |
| 91605 | Set 60 | 12 | 22 | 37 | 40 | 32 | 43.5 | 1:1 | 16 | 2.5 |
| 91615 | Set 60 | 12 | 21/23 | 38/35 | 32/48 | 26/35 | 35.3/50.2 | 1:1.5 | 16/24 | 2 |
| 91625 | Single component 60 | 12 | 22 | 37 | 40 | 32 | 43.5 | 1:1 | 16 | 2.5 |
| 91665 | Single component 60 | 12 | 21 | 38 | 32 | 26 | 35.3 | 1:1.5 | 16 | 2 |
| 91645 | Single component 60 | 12 | 23 | 35 | 48 | 35 | 50.2 | 1:1.5 | 24 | 2 |
| 91608 | Set 80 | 14 | 28 | 48 | 55 | 40 | 58.53 | 1:1 | 22 | 2.5 |
| 91618 | Set 80 | 14 | 25/27 | 46/42 | 40/60 | 32/42 | 44.16/62.77 | 1:1.5 | 16/24 | 2.5 |
| 91648 | Single component 80 | 14 | 28 | 48 | 55 | 40 | 58.53 | 1:1 | 22 | 2.5 |
| 91678 | Single component 80 | 14 | 25 | 46 | 40 | 32 | 44.16 | 1:1.5 | 16 | 2.5 |
| 91668 | Single component 80 | 14 | 27 | 42 | 60 | 42 | 62.77 | 1:1.5 | 24 | 2.5 |

## Combination flange

- Simple assembly with linear units and combination cubes
- Exact fit due to centering shoulders

**Material:** AlMgSi, black anodised



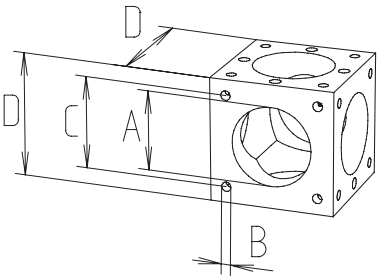

[mm]

| Code No. | Type | A | B | C | D | E | G | H | I |
|---|---|---|---|---|---|---|---|---|---|
| 92303 | 30 | $38_{f7}$ | 4.3 | 36 | 50 | 21 | 6 | $22_{f7}$ | 2 |
| 92304 | 40 | $48_{f7}$ | 5.3 | 45 | 60 | 29 | 7 | $28_{f7}$ | 1.5 |
| 92305 | 50 | $50_{f7}$ | 6.6 | 58 | 78 | 38 | 8 | $35_{f7}$ | 2 |
| 92307 | 60 | $60_{f7}$ | 6.4 | 68 | 88 | 43 | 8 | $35_{f7}$ | 2 |
| 92308 | 80 | $80_{f7}$ | 9 | 88 | 108 | 46 | 9 | $50_{f7}$ | 3 |

## Combination cube

- Connecting or transmission module
- Machined all-round

**Material:** AlMgSi, black anodised




[mm]

| Code No. | Type | A | B | C | D |
|---|---|---|---|---|---|
| 92403 | 30 | $38^{H7}$ | M 4 | 36 | 50 |
| 92404 | 40 | $48^{H7}$ | M 5 | 45 | 60 |
| 92405 | 50 | $50^{H7}$ | M 6 | 58 | 78 |
| 92407 | 60 | $60^{H7}$ | M6 | 68 | 88 |
| 92408 | 80 | $80^{H7}$ | M 8 | 88 | 108 |

## Cap for combination cube

- For contact-free mounting surfaces

**Material:** PE, black

[mm]

| Code No. | Type | Cap thickness |
|---|---|---|
| 92413 | 30 | 2 |
| 92414 | 40 | 3 |
| 92415 | 50 | 3 |
| 92417 | 60 | 3 |
| 92418 | 80 | 4 |

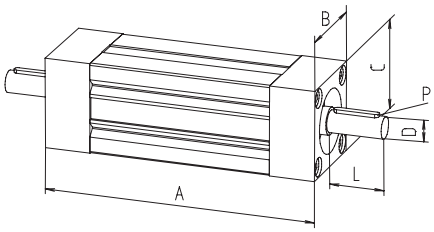
## Connecting and transmission unit

- For the transmission of torques with shaft or as a connecting unit without shaft for parallel linear units

**Material:** End elements, AlMgSi, black anodised
Profile, AlMgSi, clear anodised

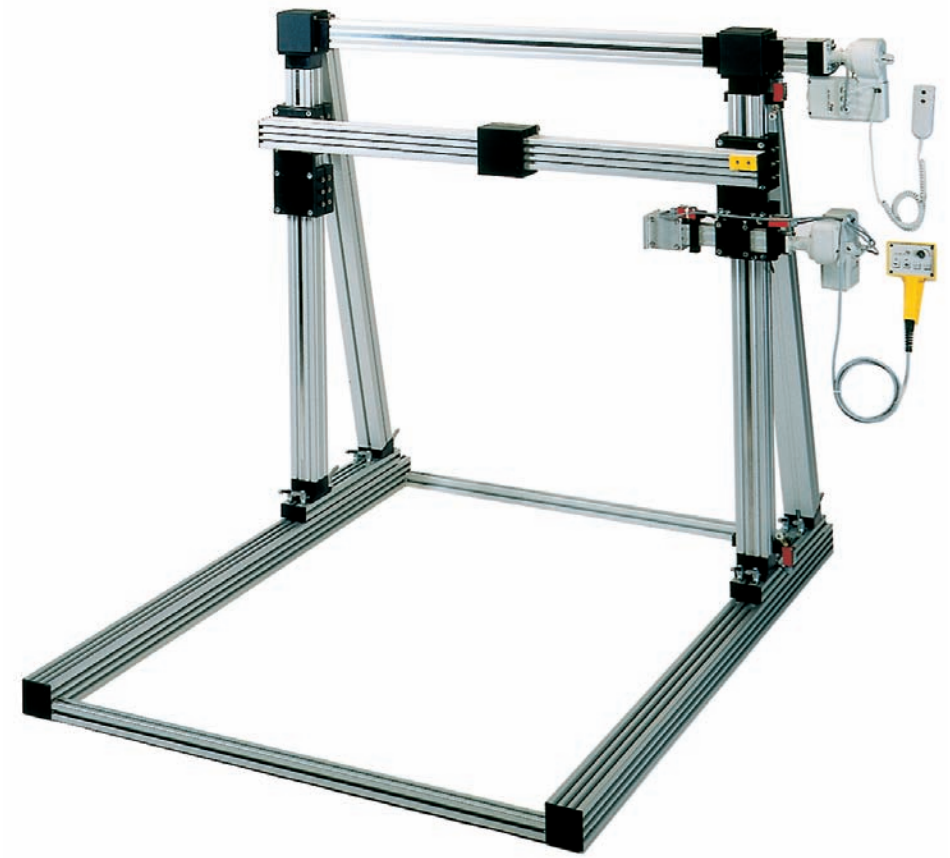
Transmission unit

Connecting unit




[mm]

| Code No. | Type | Version | A (basic length) | B | C | D | L | P |
|---|---|---|---|---|---|---|---|---|
| 92503_ _ _ _ | 30 | with shaft | 60 | 30 | 30 | 8 | 25 | 2 x 2 x 20 |
| 92513_ _ _ _ | 30 | without shaft | 60 | 30 | 30 | – | – | – |
| 92504_ _ _ _ | 40 | with shaft | 80 | 40 | 40 | 10 | 28 | 3 x 3 x 20 |
| 92514_ _ _ _ | 40 | without shaft | 80 | 40 | 40 | – | – | – |
| 92505_ _ _ _ | 50 | with shaft | 80 | 50 | 50 | 12 | 30 | 4 x 4 x 25 |
| 92515_ _ _ _ | 50 | without shaft | 80 | 50 | 50 | – | – | – |
| 92507_ _ _ _ | 60 | with shaft | 125 | 60 | 60 | 12 | 30 | 4 x 4 x 25 |
| 92517_ _ _ _ | 60 | without shaft | 125 | 60 | 60 | – | – | – |
| 92508_ _ _ _ | 80 | with shaft | 140 | 80 | 80 | 14 | 38 | 5 x 5 x 32 |
| 92518_ _ _ _ | 80 | without shaft | 140 | 80 | 80 | – | – | – |



## Selection table
## Motor adaptor/EV coupling

| Type | Servomotor | | | | | | Three-phase motor | |
|---|---|---|---|---|---|---|---|---|
| | RK-AC 118 | | RK-AC 240 | | RK-AC 210/470 | | | |
| | | with gear unit | | with gear unit | | with gear unit | 90/120 W | 180/250 W |
| EV 30 | 949204 | 949279 | – | – | – | – | 949603 | |
| | 911430 0811 | 911430 0816 | – | – | – | – | 910920 0812 | |
| EV 40 | 949205 | 949224 | 949280 | 949299 | – | – | 94937 | 94916 |
| | 911430 1011 | 9114301016 | 911430 1014 | 911940 1020 | – | – | 911430 1012 | 911430 1014 |
| EV 50 | 949206 | 949281 | 949225 | 949300 | – | – | 949605 | 94935 |
| | 911430 1112 | 911430 1216 | 911430 1214 | 911940 1220 | – | – | 911940 1212 | 911430 1214 |
| EV 60 | 949052 | 949086 | 949087 | 949081 | 949080 | 949079 | 94976 | 949077 |
| | 911430 1112 | 911430 1216 | 911940 1214 | 911940 1220 | 911940 1219 | 912855 1225 | 911940 1212 | 911430 1214 |
| EV 80 | 949401 | 949331 | 949226 | 949301 | 949240 | 949314 | 94958 | 94940 |
| | 911430 1114 | 911940 1416 | 911940 1414 | 911940 1420 | 911940 1419 | 912855 1425 | 911940 1214 | 911940 1414 |

Code No. Motor adaptor:
**949226**

Code No. Coupling with specification of shaft diameter
1st end = 14 mm
2nd end = 14 mm:
**911940 1414**

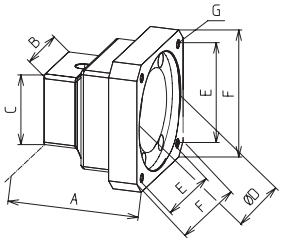
**Note:**
For further details on motor versions, please refer to the chapter “Motors and controls”

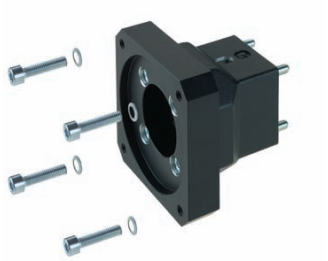
For dimensions and order data for motor adaptor and coupling, please refer to next page

## Motor adaptor

- Simple assembly
- Exact fit due to centering shoulders

**Material:** Aluminium, black anodised



[mm]

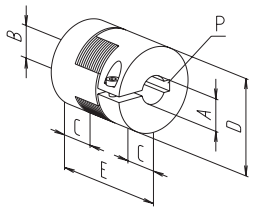
| Code No. | Type | A | B | C | D | E | F | G |
|---|---|---|---|---|---|---|---|---|
| 949204 | 30 | 63 | 40 | 40 | 60 | 53 | 70 | M5 |
| 949279 | 30 | 70 | 40 | 40 | 60 | 53 | 70 | M5 |
| 949402 | 30 | 65 | 40 | 40 | 73 | 70 | 90 | M6 |
| 949603 | 30 | 65 | 40 | 40 | 50 | 46 | 80 | M5 |
| 949205 | 40 | 65 | 50 | 50 | 60 | 53 | 70 | M5 |
| 949224 | 40 | 73 | 50 | 50 | 60 | 53 | 70 | M5 |
| 949280 | 40 | 73 | 50 | 50 | 80 | 70.7 | 90 | M6 |
| 949299 | 40 | 100 | 50 | 50 | 80 | 70.7 | 90 | M6 |
| 949403 | 40 | 73 | 50 | 50 | 73 | 70 | 90 | M6 |
| 94937 | 40 | 73 | 50 | 50 | 50 | 46 | 80 | M5 |
| 94916 | 40 | 73 | 50 | 50 | 80 | 100 | Ø 120 | Ø 6.6 |
| 949206 | 50 | 66 | 52 | 52 | 60 | 53 | 70 | M5 |
| 949281 | 50 | 75 | 52 | 52 | 60 | 53 | 70 | M5 |
| 949225 | 50 | 73 | 52 | 52 | 80 | 70.7 | 90 | M6 |
| 949300 | 50 | 97 | 52 | 52 | 80 | 70.7 | 90 | M6 |
| 949330 | 50 | 73 | 52 | 52 | 73 | 70 | 90 | M6 |
| 949605 | 50 | 73 | 52 | 52 | 50 | 65 | 80 | M5 |
| 94935 | 50 | 73 | 52 | 52 | 80 | 100 | Ø 120 | Ø 6.6 |
| 949052 | 60 | 66 | 60 | 60 | 60 | 53 | 70 | M5 |
| 949086 | 60 | 75 | 60 | 60 | 60 | 53 | 70 | M5 |
| 949087 | 60 | 81 | 60 | 60 | 80 | 70.7 | 90 | M6 |
| 949081 | 60 | 97 | 60 | 60 | 80 | 70.7 | 90 | M6 |
| 949080 | 60 | 91 | 60 | 60 | 95 | 81.3 | 115 | M8 |
| 949079 | 60 | 120 | 60 | 60 | 110 | 91.9 | 115 | M8 |
| 949078 | 60 | 75 | 60 | 60 | 73 | 70 | 90 | M6 |
| 94976 | 60 | 85 | 60 | 60 | 50 | 65 | 80 | M5 |
| 949077 | 60 | 75 | 60 | 60 | 80 | 100 | Ø 120 | Ø 6.6 |
| 949401 | 80 | 74 | 80 | 80 | 60 | 53 | 70 | M5 |
| 949331 | 80 | 86 | 80 | 80 | 60 | 53 | 70 | M5 |
| 949226 | 80 | 86 | 80 | 80 | 80 | 70.7 | 90 | M6 |
| 949301 | 80 | 102 | 80 | 80 | 80 | 70.7 | 90 | M6 |
| 949240 | 80 | 96 | 80 | 80 | 95 | 81.3 | 115 | M8 |
| 949314 | 80 | 112.5 | 80 | 80 | 110 | 91.9 | 115 | M8 |
| 949326 | 80 | 86 | 80 | 80 | 73 | 70 | 90 | M6 |
| 94958 | 80 | 86 | 80 | 80 | 50 | 46 | 80 | M5 |
| 94940 | 80 | 86 | 80 | 80 | 80 | 100 | Ø 120 | Ø 6.6 |

## Coupling

- Small size
- Shaft connection without backlash
- Maintenance-free
- Easy plug-in assembly

**Material:** Hub – aluminium
Spider ring – polyurethane

To ensure the smooth running of the coupling, a clearance of **D + 3 mm** is required.




[mm]

| Code No. | A | B | C | D | E | P | Torque [Nm] | |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | with feather key | without feather key |
| 9109200808 | 8 | 8 | 10 | 20 | 30 | 2 x 2/2 x 2 | 5 | 3 |
| 9109200895 | 8 | 9.5 | 10 | 20 | 30 | 2 x 2/– | 5 | 3 |
| 9109200810 | 8 | 10 | 10 | 20 | 30 | 2 x 2/3 x 3 | 5 | 3 |
| 9109200812 | 8 | 12 | 10 | 22 | 30 | 2 x 2/4 x 4 | 5 | 3 |
| 9109200816 | 8 | 16 | 10 | 22 | 30 | 2 x 2/5 x 5 | 5 | 3 |
| 9114300811 | 8 | 11 | 11 | 30 | 35 | 2 x 2/4 x 4 | 12 | 6 |
| 9114300816 | 8 | 16 | 11 | 30 | 35 | 2 x 2/5 x 5 | 12 | 6 |
| 9114309510 | 9.5 | 10 | 11 | 30 | 35 | –/3 x 3 | 12 | 6 |
| 9114309512 | 9.5 | 12 | 11 | 30 | 35 | –/4 x 4 | 12 | 6 |
| 9114301010 | 10 | 10 | 11 | 30 | 35 | 3 x 3/3 x 3 | 12 | 6 |
| 9114301011 | 10 | 11 | 11 | 30 | 35 | 3 x 3/4 x 4 | 12 | 6 |
| 9114301012 | 10 | 12 | 11 | 30 | 35 | 3 x 3/4 x 4 | 12 | 6 |
| 9114301014 | 10 | 14 | 11 | 30 | 35 | 3 x 3/5 x 5 | 12 | 6 |
| 9114301016 | 10 | 16 | 11 | 30 | 35 | 3 x 3/5 x 5 | 12 | 6 |
| 9114301112 | 11 | 12 | 11 | 30 | 35 | 4 x 4/4 x 4 | 12 | 6 |
| 9114301114 | 11 | 14 | 11 | 30 | 35 | 4 x 4/5 x 5 | 12 | 6 |
| 9114301212 | 12 | 12 | 11 | 30 | 35 | 4 x 4/4 x 4 | 12 | 6 |
| 9114301214 | 12 | 14 | 11 | 30 | 35 | 4 x 4/5 x 5 | 12 | 6 |
| 9114301216 | 12 | 16 | 11 | 30 | 35 | 4 x 4/5 x 5 | 12 | 6 |
| 9114301219 | 12 | 19 | 11 | 30 | 35 | 4 x 4/6 x 6 | 12 | 6 |
| 9114301220 | 12 | 20 | 11 | 30 | 35 | 4 x 4/6 x 6 | 12 | 6 |
| 9119409514 | 9.5 | 14 | 25 | 40 | 65 | –/5 x 5 | 17 | 10 |
| 9119401020 | 10 | 20 | 25 | 40 | 65 | 3 x 3/6 x 6 | 17 | 10 |
| 9119401212 | 12 | 12 | 25 | 40 | 65 | 4 x 4/4 x 4 | 17 | 10 |
| 9119401214 | 12 | 14 | 25 | 40 | 65 | 4 x 4/5 x 5 | 17 | 10 |
| 9119401220 | 12 | 20 | 25 | 40 | 65 | 4 x 4/6 x 6 | 17 | 10 |
| 9119401414 | 14 | 14 | 25 | 40 | 65 | 5 x 5/5 x 5 | 17 | 10 |
| 9119401416 | 14 | 16 | 25 | 40 | 65 | 5 x 5/5 x 5 | 17 | 10 |
| 9119401419 | 14 | 19 | 25 | 40 | 65 | 5 x 5/6 x 6 | 17 | 10 |
| 9119401420 | 14 | 20 | 25 | 40 | 65 | 5 x 5/6 x 6 | 17 | 10 |
| 9128551225 | 12 | 25 | 30 | 55 | 78 | 4 x 4/8 x 7 | 60 | 35 |
| 9128551425 | 14 | 25 | 30 | 55 | 78 | 5 x 5/8 x 7 | 60 | 35 |

## Scale

- Self-adhesive
- Can be retrofitted
- 4 mm font size

**Material:** Steel band, plastic-coated

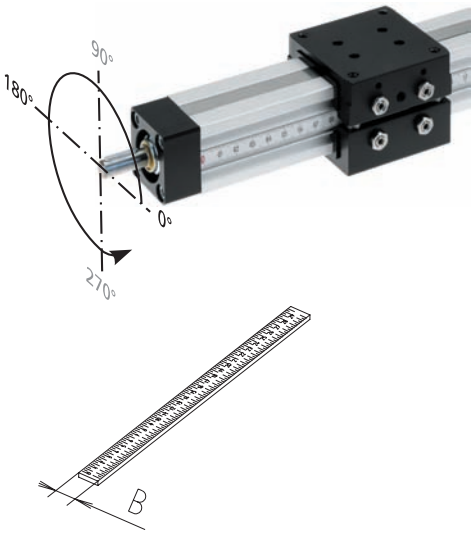



Image shows scale - to be read from left to right. Standard installation at 0° (90° and 270° not technically possible)

[mm]

| Code No. | Type | Can be read from | Length | B | Version |
|---|---|---|---|---|---|
| 92005 | 30 | left to right | 0-1000 | 8 | fitted |
| 92015 | | left to right | 0-1000 | 8 | not fitted |
| 92001 | 40-80 | right to left | 0-1000 | 10 | fitted |
| 92021 | | right to left | 0-1000 | 10 | not fitted |
| 92011 | | left to right | 0-1000 | 10 | fitted |
| 92031 | | left to right | 0-1000 | 10 | not fitted |
| 92003 | | left to right | 0-2000 | 10 | fitted |
| 92013 | | left to right | 0-2000 | 10 | not fitted |
| 92023 | | right to left | 0-2000 | 10 | fitted |
| 92033 | | right to left | 0-2000 | 10 | not fitted |

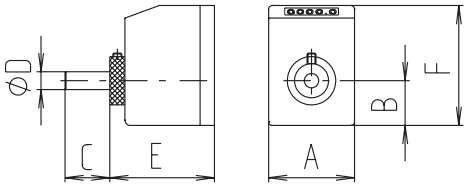
## Positioning indicator

- Permitted ambient temperature +80°C
- Figure height 6 mm
- Reading accuracy ± 0.1 mm
- Simple assembly

**Material:** Housing made of polyamide 6,
Orange RAL 2004
Steel parts galvanised

**Scope of delivery:** Positioning indicator, clamping ring, shaft extension and fastenings

Installation position: horizontal

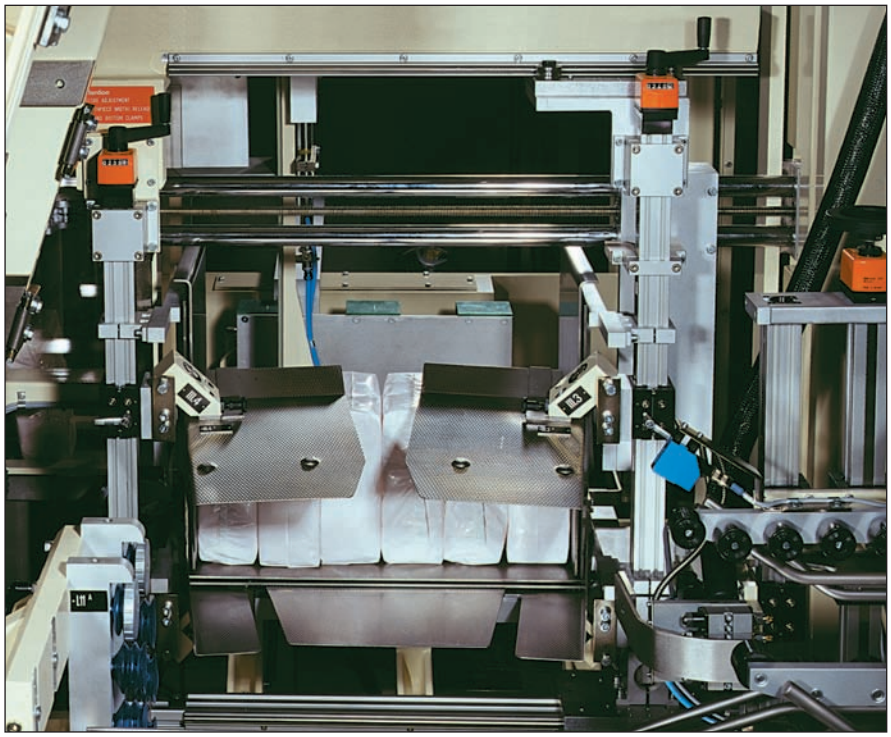


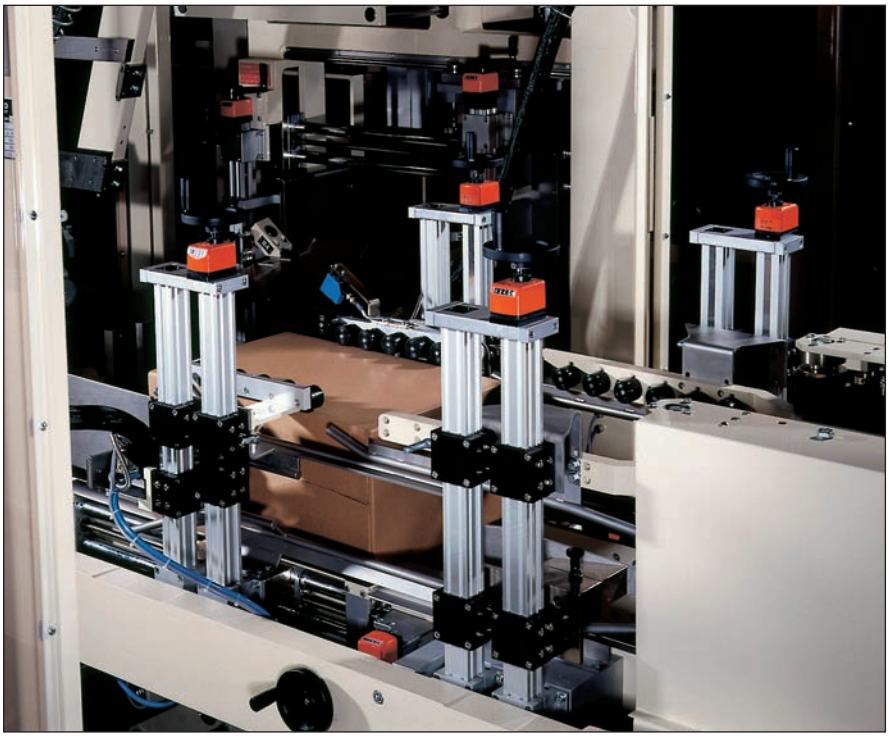

[mm]

| Type | Installation position | Code No. | Version | Code No. | Version* | A | B | C | D | E | F |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 30 | Horizontal | 91003 | 3 mm rising | 91086 | 6 mm rising | 48 | 25 | 25 | 8 | 59 | 67 |
| 30 | Horizontal | 91013 | 3 mm falling | 91087 | 6 mm falling | 48 | 25 | 25 | 8 | 59 | 67 |
| 30 | Vertical | 91023 | 3 mm rising | 91088 | 6 mm rising | 48 | 25 | 25 | 8 | 59 | 67 |
| 30 | Vertical | 91033 | 3 mm falling | 91089 | 6 mm falling | 48 | 25 | 25 | 8 | 59 | 67 |
| 40 | Horizontal | 91054 | 4 mm rising | 91069 | 8 mm rising | 48 | 25 | 28 | 10 | 59 | 67 |
| 40 | Horizontal | 91064 | 4 mm falling | 91066 | 8 mm falling | 48 | 25 | 28 | 10 | 59 | 67 |
| 40 | Vertical | 91044 | 4 mm rising | 91067 | 8 mm rising | 48 | 25 | 28 | 10 | 59 | 67 |
| 40 | Vertical | 91074 | 4 mm falling | 91068 | 8 mm falling | 48 | 25 | 28 | 10 | 59 | 67 |
| 50/60 | Horizontal | 91005 | 4 mm rising | 91076 | 8 mm rising | 48 | 25 | 38 | 12 | 59 | 67 |
| 50/60 | Horizontal | 91015 | 4 mm falling | 91077 | 8 mm falling | 48 | 25 | 38 | 12 | 59 | 67 |
| 50/60 | Vertical | 91025 | 4 mm rising | 91078 | 8 mm rising | 48 | 25 | 38 | 12 | 59 | 67 |
| 50/60 | Vertical | 91035 | 4 mm falling | 91079 | 8 mm falling | 48 | 25 | 38 | 12 | 59 | 67 |
| 80 | Horizontal | 91008 | 5 mm rising | 91082 | 10 mm rising | 48 | 25 | 38 | 14 | 59 | 67 |
| 80 | Horizontal | 91018 | 5 mm falling | 91083 | 10 mm falling | 48 | 25 | 38 | 14 | 59 | 67 |
| 80 | Vertical | 91028 | 5 mm rising | 91084 | 10 mm rising | 48 | 25 | 38 | 14 | 59 | 67 |
| 80 | Vertical | 91038 | 5 mm falling | 91085 | 10 mm falling | 48 | 25 | 38 | 14 | 59 | 67 |

Installation position: vertical

* Version with double lead e.g. for installation on righthand/lefthand thread screws



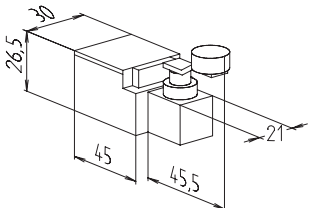


EV units enable simple format adjustment of a packaging machine

## Mechanical limit switch

- Limit switch with angle lever
- Compact design

**Material:** Thermoplastic, fully insulated




| | |
|---|---|
| Max. voltage | 250 V AC |
| Max. switching current | 6 A |
| Max. starting current | 16 A |
| Operating frequency | Max. 6000/h |
| Mechanical lifetime | 1 x 107 switching cycles |
| Axis lever adjustment | locking by 360° |
| Protection class | IP 65 |
| Ambient temperature | -30°C to +80°C |

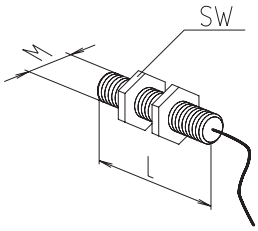
| Code No. | Type | Switching function |
|---|---|---|
| 91905 | 30-80 | NC/NO |

## Inductive limit switch

- Maintenance-free

**Material:** Housing - brass, chrome-plated

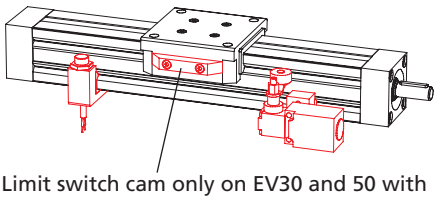
| | |
|---|---|
| Voltage | 10-30 V DC |
| Max. switching current | 200 mA |
| Max. starting current | 200 mA |
| Operating frequency | 700 Hz acc. to DIN EN 50010 |
| Mechanical lifetime | independent of operating cycles |
| Operating distance | M8 x 1 = 2 mm, M12 x 1 = 4 mm |
| Protection class | IP 67 |
| Ambient temperature | -25°C to +80°C |




[mm]

| Code No. | Type | Switching function | L | M | A/F |
|---|---|---|---|---|---|
| 92803 | 30/40 | Normally closed contact | 37 | 8 x 1 | 13 |
| 92813 | 30/40 | Normally open contact | 37 | 8 x 1 | 13 |
| 92805 | 50/80 | Normally closed contact | 37 | 12 x 1 | 17 |
| 92815 | 50/80 | Normally open contact | 37 | 12 x 1 | 17 |

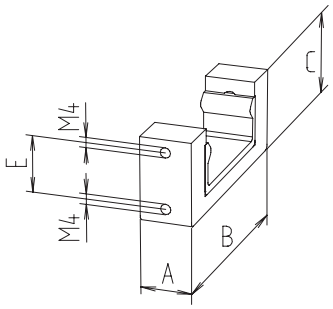
## Holder for limit switch mechanical and inductive



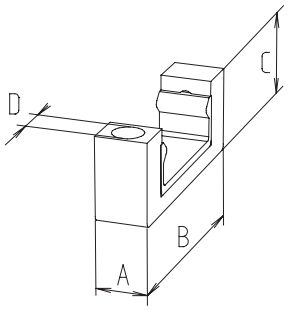
Limit switch cam only on EV30 and 50 with closed carriage

- Can be moved in the V-slots of the guide profile and fixed using a set screw
- Using a limit switch reduces the stroke by 25 mm (open elements) or 50 mm (closed elements)
- The limit switch holder cannot be used in conjunction with closed carriages. This version is available on request.

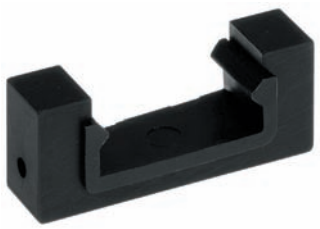
**Material:** AlMgSi, clear anodised




for limit switch




for limit switch



* with flange plate
** limit switch cam included in delivery

[mm]

| Code No. | Type | A | B | C | D | E |
|---|---|---|---|---|---|---|
| **Holder for mechanical limit switch** | | | | | | |
| 92703 | 30* | 16 | 56 | 20 | – | 22 |
| 92704 | 40* | 16 | 76 | 26.5 | – | 22 |
| 92705 | 50 | 20 | 85 | 33 | – | 22 |
| 92736 | 60 | 26 | 105 | 40 | M12 x 1 | 22 |
| 92708 | 80 | 26 | 126 | 53 | M12 x 1 | 22 |
| 92713 | 30 | Holder with limit switch | | | | |
| 92793 | 30 | Holder with limit switch, closed carriage** | | | | |
| 92714 | 40 | Holder with limit switch | | | | |
| 92715 | 50 | Holder with limit switch | | | | |
| 92795 | 50 | Holder with limit switch, closed carriage** | | | | |
| 92746 | 60 | Holder with limit switch | | | | |
| 92718 | 80 | Holder with limit switch | | | | |
| **Holder for inductive limit switch** | | | | | | |
| 92903 | 30 | 16 | 56 | 20 | M8 x 1 | – |
| 92904 | 40 | 16 | 68 | 26.5 | M8 x 1 | – |
| 92905 | 50 | 20 | 85 | 33 | M12 x 1 | – |
| 92736 | 60 | 26 | 105 | 40 | M12 x 1 | 22 |
| 92908 | 80 | 26 | 126 | 53 | M12 x 1 | 22 |
| 92913 | 30 | Holder with limit switch NC contact | | | | |
| 92923 | 30 | Holder with limit switch NO contact | | | | |
| 92924 | 40 | Holder with limit switch NC contact | | | | |
| 92934 | 40 | Holder with limit switch NO contact | | | | |
| 92915 | 50 | Holder with limit switch NC contact | | | | |
| 92925 | 50 | Holder with limit switch NO contact | | | | |
| 92956 | 60 | Holder with limit switch NC contact | | | | |
| 92966 | 60 | Holder with limit switch NO contact | | | | |
| 92918 | 80 | Holder with limit switch NC contact | | | | |
| 92928 | 80 | Holder with limit switch NO contact | | | | |