

## Type SEK

Linear ball guide

Design sizes

10/16/20

25/32/40



For machines frequently requiring adjustments, size changes, positioning, etc. (e.g. packaging machines), TOSS – Pneumatic produces special manually-controlled linear adjustment units. These adjustment units are supplied with a clamping plate.

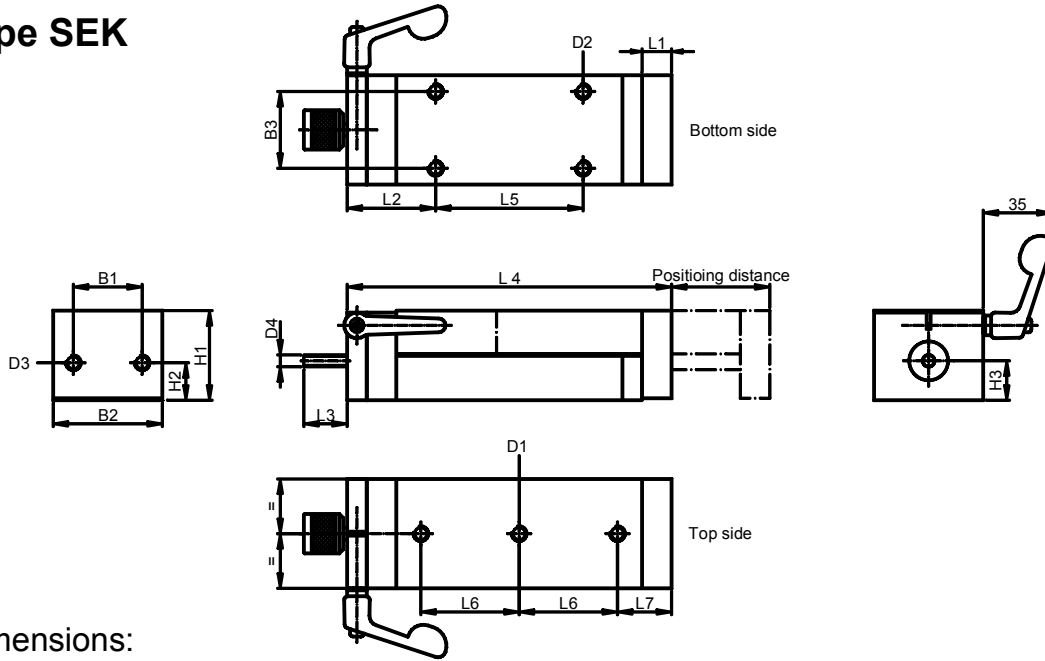
### Technical Data:

Type	10 - SEK	16 - SEK	20 - SEK	25 - SEK	32 - SEK	40 - SEK
Design type	Linear ball guide					
Positioning distance [mm]	10, 25, 50, 80, 100, 125					
Pitch of threaded spindle	1.0			1.5		
Spindle dimensions	M6 - LH			M10 - LH		
Adm. temperature range [°C]	-10 to +70					
Mounting position	Any					
Materials	Base body, upper part, cover, plate: Al Protecting tube: Ms 63, tube nut, spindle nut: Ms 58 Threaded spindle: VA					

# Adjustment units

# TOSS®

## Type SEK



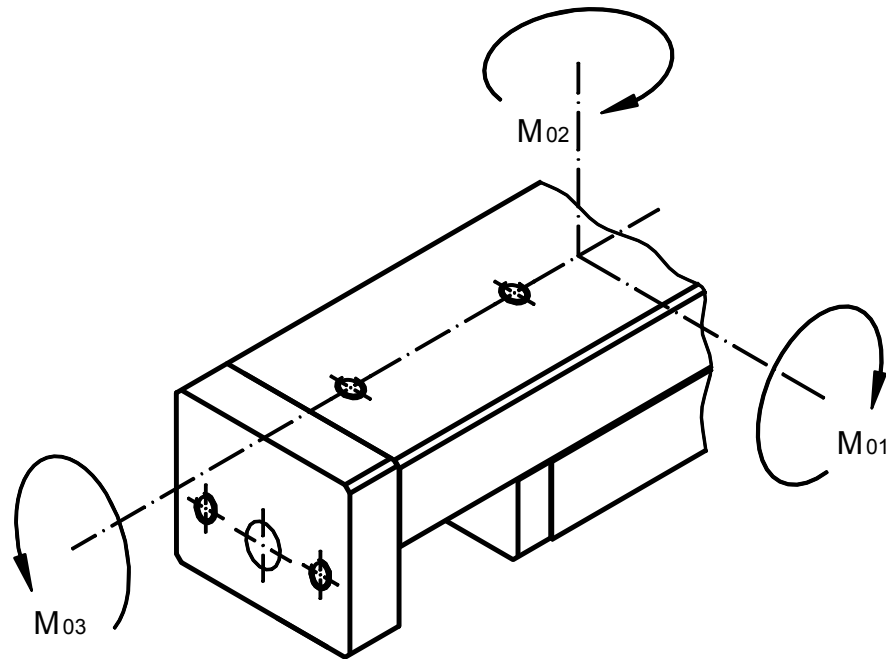
Dimensions:

Size	Pitch spindle [mm]	B1 [mm]	B2 [mm]	B3 [mm]	D1/depth [mm]	D2/depth [mm]	D3/depth [mm]	D4 [mm]	H1 [mm]	H2 [mm]	H3 [mm]	L1 [mm]	L2 at positioning 10 25-125 [mm]	
10	1,0	20	30,5	20	M6/5,5	M6/7	M6/11,5	∅ 4	25	10,0	10	12	37	37
16	1,5	30	40,5	30	M6/5,5	M6/11	M6/11,5	∅ 6	30	12,0	12	12	37	37
20		30	40,5	30	M6/8,0	M6/14	M6/11,5		39,5	17,5	17,5	12	32	37
25		35	55,5	39	M8/7,5	M8/16	M8/10,5		45,5	19,5	19	15	45	45
32		45	65,5	49	M8/7,5	M8/18	M8/10,5		50,7	20,7	20	15	45	45
40		50	70,5	54	M8/10,5	M8/18	M8/10,5		65	27,0	27	20	50	50

Size		Positioning distance [mm]					
		10	25	50	80	100	125
10/16	L3	24/22	24/22	24/22	24/22	24/22	24/22
	L4	89	104	144	184	209	254
	L5	15	30	70	2 x 55	2 x 67,5	2 x 90
	L6	31	2 x 23	2 x 43	3 x 42	3 x 50	3 x 65
	L7	24,0	24,0	24,0	24,0	24,5	24,5
20	L3	22	22	22	22	22	22
	L4	89	104	144	184	209	254
	L5	25	30	70	2 x 55	2 x 67,5	2 x 90
	L6	31	2 x 23	2 x 43	3 x 42	3 x 50	3 x 65
	L7	24,0	24,0	24,0	24,0	24,5	24,5
25/32	L3	22	22	22	22	22	22
	L4	110	130	165	220	255	295
	L5	20	40	75	130	2 x 82,5	2 x 102,5
	L6	45	65	2 x 50	2 x 78	2 x 95	3 x 77
	L7	27,5	27,5	27,5	27,0	27,5	27,0
40	L3	17	17	17	17	17	17
	L4	120	140	175	230	265	305
	L5	20	40	75	130	2 x 82,5	2 x 102,5
	L6	45	65	2 x 50	2 x 78	2 x 95	3 x 77
	L7	32,5	32,5	32,5	32,0	32,5	32,0

# Adjustment units

## Admissible stress



Longitudinal torque	Lateral torque	Transverse torque
$F_{01} \leq \frac{M_{01} \text{ zul.}}{L_1 + A}$	$F_{02} \leq \frac{M_{02} \text{ zul.}}{L_2 + A}$	$F_{03} \leq \frac{M_{03} \text{ zul.}}{L_3 + B}$
$F_{01} \leq \frac{M_{01} \text{ zul.}}{L_1 + C}$	$F_{02} \leq \frac{M_{02} \text{ zul.}}{L_2 + B}$	$F_{03} \leq \frac{M_{03} \text{ zul.}}{L_3 + C}$

# Adjustment units

## Admissible stress

**TOSS**<sup>®</sup>

Stroke [mm]	10		25		50		80		100		125	
∅ / Type	M1/M2 Nm	M3 Nm	M1/M2 Nm	M3 Nm	M1/M2 Nm	M3 Nm	M1/M2 Nm	M3 Nm	M1/M2 Nm	M3 Nm	M1/M2 Nm	M3 Nm
<b>10 - SEK</b>	1,10	0,63	1,13	0,63	1,69	0,87	2,08	1,06	2,58	1,31	3,14	1,31
<b>16 - SEK</b>	1,21	0,92	1,26	0,92	1,88	1,28	2,30	1,56	2,87	1,93	3,49	1,93
<b>20 - SEK</b>	1,33	1,01	1,39	1,01	2,06	1,41	2,53	1,72	3,16	2,13	3,84	2,13
<b>25 - SEK</b>	2,65	2,12	3,06	2,12	3,88	3,32	5,36	4,54	6,45	5,45	10,40	5,45
<b>32 - SEK</b>	3,68	3,1	3,82	3,64	5,08	4,70	7,44	6,78	8,67	7,80	10,45	7,80
<b>40 - SEK</b>	4,04	3,53	4,20	4,13	5,60	5,33	8,19	7,67	9,53	8,83	11,50	8,83

Correction factors:

∅ / Type	Stroke length	A	B	C
<b>10-SEK</b>	[mm]	[mm]	[mm]	[mm]
	10	40,6	15,25	10,25
	25	48,1		
	50	66,9		
	80	86,1		
	100	98,4		
	125	121,2		
	160	151,3		
	200	178,1		

∅ / Type	Stroke length	A	B	C
<b>16-SEK</b>	[mm]	[mm]	[mm]	[mm]
	10	40,6	20,25	10,25
	25	48,1		
	50	66,9		
	80	86,1		
	100	98,4		
	125	121,2		
	160	151,3		
	200	178,1		

∅ / Type	Stroke length	A	B	C
<b>20-SEK</b>	[mm]	[mm]	[mm]	[mm]
	10	40,6	20,25	12,25
	25	48,1		
	50	66,9		
	80	86,1		
	100	98,4		
	125	121,2		
	160	151,3		
	200	178,1		

∅ / Type	Stroke length	A	B	C
<b>25-SEK</b>	[mm]	[mm]	[mm]	[mm]
	10	49,2	27,75	15,75
	25	56,7		
	50	77,0		
	80	102,4		
	100	120,2		
	125	140,5		
	160	168,4		
	200	201,4		

# Adjustment units

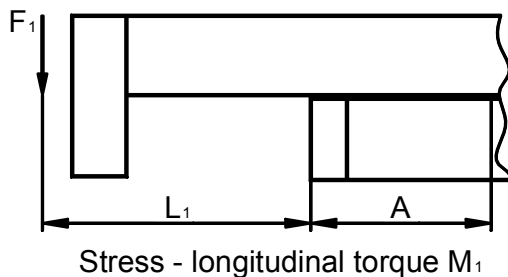
## Admissible stress

Correction factors:

∅ / Type	Stroke length	A	B	C
	[mm]	[mm]	[mm]	[mm]
32-SEK	10	49,7	32,75	18,1
	25	57,2		
	50	75,8		
	80	103,2		
	100	119,4		
	125	141,2		
	160	164,9		
	200	200,4		

∅ / Type	Stroke length	A	B	C
	[mm]	[mm]	[mm]	[mm]
40-SEK	10	49,7	35,25	20,75
	25	57,2		
	50	75,8		
	80	103,2		
	100	119,4		
	125	141,2		
	160	164,9		
	200	200,4		

Example of calculation:



Given qty: 32 - SEK with a stroke length of 80 mm  
 Lever arm  $L_1 = 40 \text{ mm} = 0,04 \text{ m}$   
 Longitudinal torque  $M_1 = 7,44 \text{ Nm}$   
 Correction factor  $A = 103,2 \text{ mm} = 0,1032 \text{ m}$

$$\text{Required qty: } F_1 \leq \frac{M_1}{L_1 + A} = \frac{7,44 \text{ Nm}}{0,04 \text{ m} + 0,1032 \text{ m}} = 52 \text{ N}$$

All data based on tests conducted by TOSS.