

### Advantages of roller guide

**High maximum moments**  
due to optimum force transmission to the profile

**Long stroke lengths**  
can be achieved with no problems

**Life-time lubricated rollers**  
for easy maintenance use

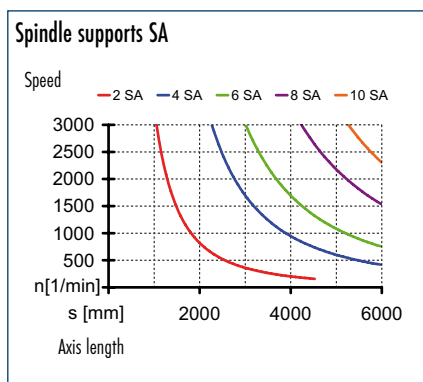
**Smooth, low-noise running**

### Advantages of profiled rail guide

**High load bearing capacity**

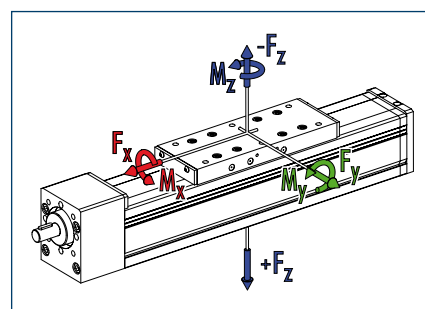
**Long lifetime**

**High precision**



① SRS version: Max. 8 SA

### Loads and load torques



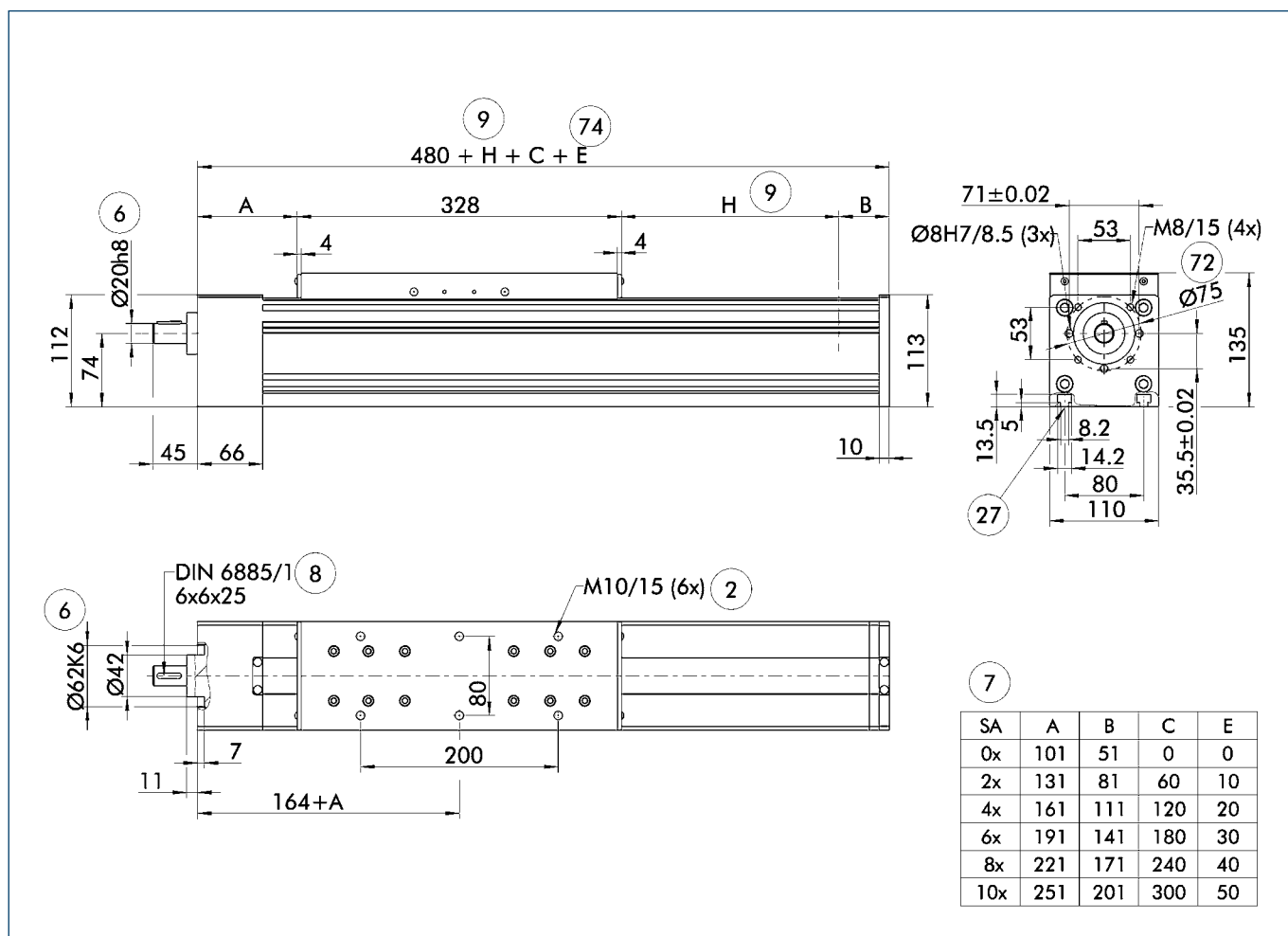
Load	SRS dynamic	SSS dynamic
$F_x^{**}$ [N]	6000	6000
$F_y$ [N]	2000	3000
$F_z$ [N]	5000	8000
$-F_z$ [N]	2500	4000
Load torques	SRS dynamic	SSS dynamic
$M_x$ [Nm]	300	400
$M_y$ [Nm]	600 (800)	800 (1200)
$M_z$ [Nm]	450 (550)	600 (800)
$M_{Amax}$ [Nm]	5.8 (p=5)	6.3 (p=5)
	10.5 (p=10)	11.0 (p=10)
	24.9 (p=25)	25.4 (p=25)
	48.7 (p=50)	49.2 (p=50)

\*\* Depends on speed and pitch  $n_{max}$   
KGT = 3000 rpm; TGT = 1500 rpm  
① Values in brackets relate to the long slide.

## Technical data

Designation	B 110-SRS	B 110-SSS
Max. travel speed	[m/s] 2.5	2.5
Repeat accuracy	[mm] ± 0.03	± 0.03
Max. acceleration	[m/s <sup>2</sup> ] 20	20
Idle torque	[Nm] 1.0	1.5
Maximum stroke	[mm] 4920	4920
Max. total length	[mm] 5400	5400
Moment of inertia	[kgm <sup>2</sup> ] 0.000225	0.000225
<b>Drive element</b>	<b>Ball screw spindle drive</b>	<b>Ball screw spindle drive</b>
Max. spindle speed	[rpm] 3000	3000
Diameter	[mm] 25	25
Pitch	[mm] 5 / 10 / 25 / 50	5 / 10 / 25 / 50
<b>Drive element</b>	<b>Trapezoidal threaded drive</b>	<b>Trapezoidal threaded drive</b>
Max. spindle speed	[rpm] 1500	1500
Diameter	[mm] 24	24
Pitch	[mm] 5 / 10	5 / 10
<b>Weights</b>		
Basic without travel	[kg] 12.5	13.5
Travel per 100 mm	[kg] 1.4	1.7
Slide plate 320 mm	[kg] 5.8	5.3
Slide plate 500 mm	[kg] 9.1	8.3

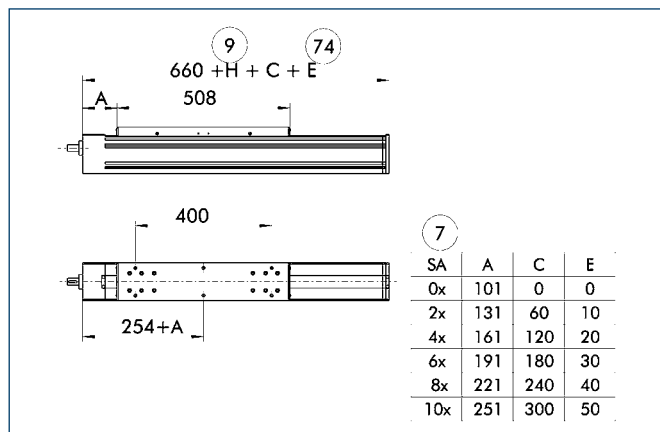
### Main views



- ② Assembly connection
- ⑥ Drive connection
- ⑦ Number of spindle supports
- ⑧ Feather key DIN 6885
- ⑨ Useful stroke
- ⑳ Mounting groove for T-nuts
- ㉑ Bolt pitch circle

- ㉒ E for spindle supports with insulated noise emissions

### Long slide



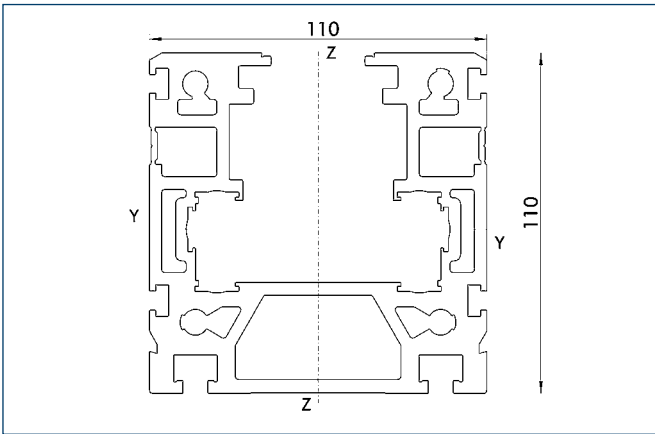
- ⑦ Number of spindle supports
- ⑨ Useful stroke

- ㉒ E for spindle supports with insulated noise emissions

# B 110-SRS/-SSS

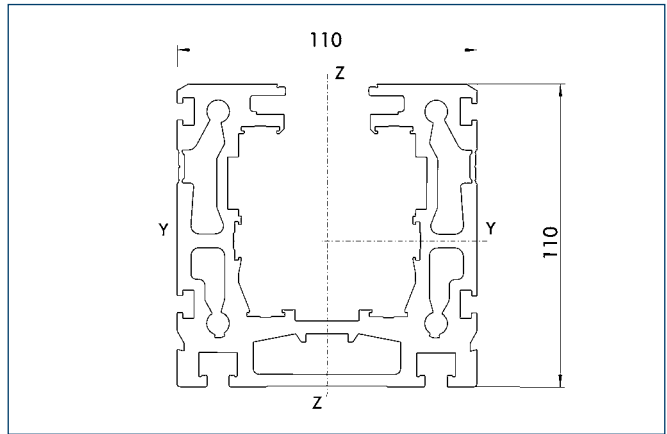
Linear Axes • Ball Screw Drive

## Profile SRS



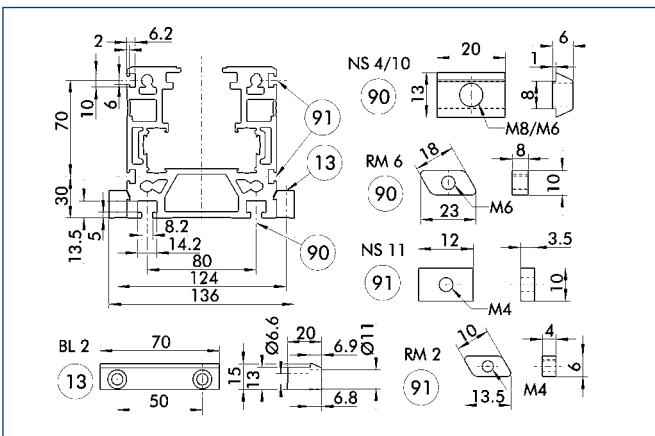
Specific mass	[kg/m]	10.69
Planar dimension	[mm <sup>2</sup> ]	3961
Planar moment of inertia I <sub>y</sub>	[mm <sup>4</sup> ]	5114812
Planar moment of inertia I <sub>z</sub>	[mm <sup>4</sup> ]	6177042
Load torque W <sub>y</sub>	[mm <sup>3</sup> ]	87307
Load torque W <sub>z</sub>	[mm <sup>3</sup> ]	111528

## Profile SSS



Specific mass	[kg/m]	10.54
Planar dimension	[mm <sup>2</sup> ]	3902
Planar moment of inertia I <sub>y</sub>	[mm <sup>4</sup> ]	4974348
Planar moment of inertia I <sub>z</sub>	[mm <sup>4</sup> ]	5898662
Load torque W <sub>y</sub>	[mm <sup>3</sup> ]	79469
Load torque W <sub>z</sub>	[mm <sup>3</sup> ]	106973

## Mounting

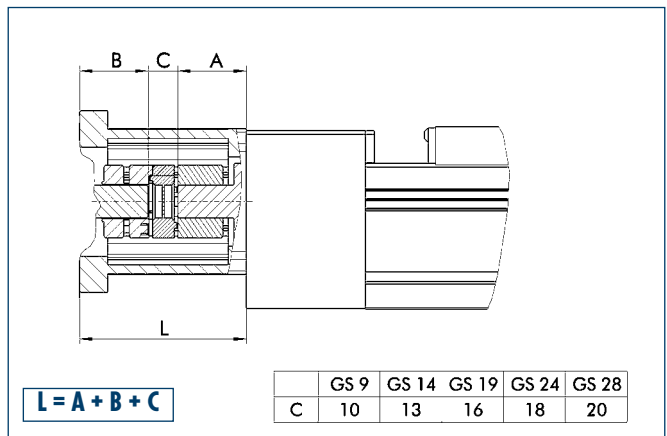


- 13 Mounting strip
- 90 T-nut on base side
- 91 Side T-nut

The profile can be secured either using T-nuts or mounting strips.

Designation	Order designation	ID no.
T-nut	NS4	0331407
T-nut	NS10	0331422
T-nut	NS11	0331429
T-nut	RM2	0331425
T-nut	RM6	0331427
Mounting strip	BL2	0331401

## Motor flange schematic diagram



The table shows the relevant dimension C of the standard couplings.

For dimension A refer to drive journal connection dimensions, for dimension B refer to corresponding motor dimension sheet, dimension L may differ in individual cases.

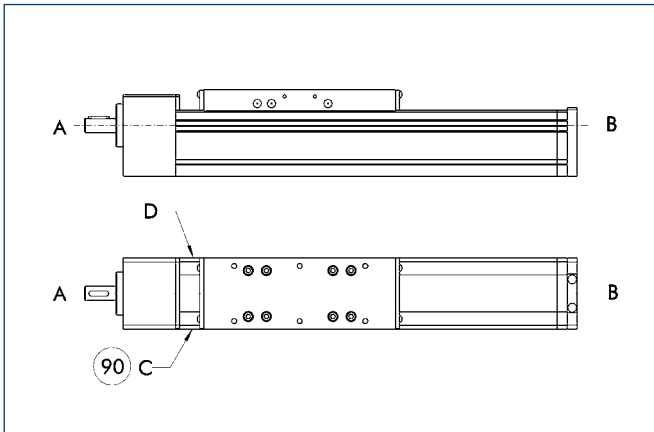
Different drive solutions can be attached to our axes.

SCHUNK can supply you with the right motor flange and coupling for your drive.

- ① Because of the different thermal behavior of motors, we recommend that the drive solution is tested by the motor manufacturer.

More detailed information on pedestal bearings, connection shafts and bevel gears can be found in the "OPTIONS for System HSB" section of the catalog.

### Limit switch position



90 Limit switch standard position

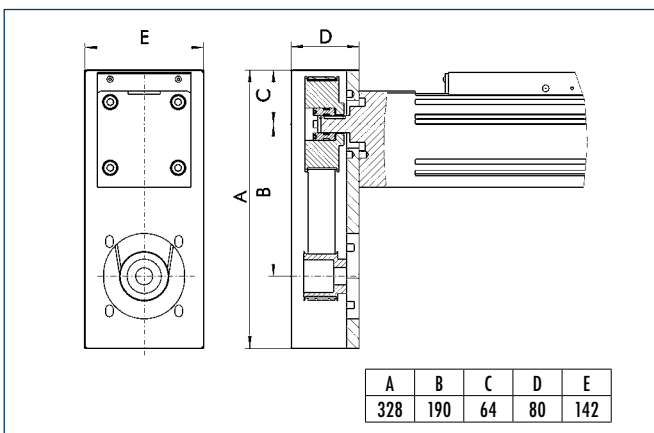
Two E02 switches are used as limit switches and an RS2 as the reference switch as standard.

ⓘ The positions and dimensions of limit switches, switching lugs, and mounting components may vary depending on the application and the selected limit switches. Please contact us for assistance.

### Limit switch selection

Designation	Order designation	ID no.
Inductive limit switch, opener, 2 m cable	E02	0331410
Inductive limit switch, opener, 10 m cable	E010	0331412
Inductive limit switch, closer, 2 m cable	ES2	0331411
Inductive limit switch, closer, 10 m cable	ES10	0331413
Mechanical limit switch (Siemens), opener	EMS	0331414
Mechanical limit switch (Balluff), opener	EMB	0331415

### Angle gear schematic diagram



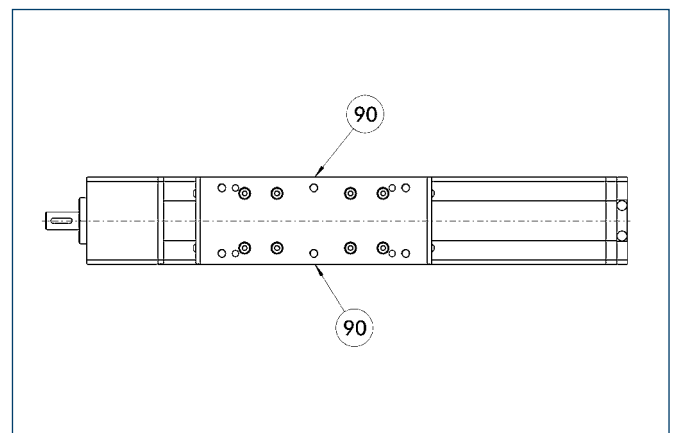
Possible transmission ratios:  $i = 1 : 1$ ,  $i = 2 : 1$ ,  $i = 3 : 1$

Caution: Dimension C can change at  $i \neq 1:1$  or with smooth motor shafts (without feather key).

Even in tight conditions, different drive solutions can be attached. SCHUNK can provide you with the right angle gear for your drive.

ⓘ Because of the different thermal behavior of motors, we recommend that the drive solution is tested by the motor manufacturer.

### Lubrication connections



90 Standard lubrication connection

#### Standard connection

Lubrication nipple M8x1

If the lubrication connection has a different seat, this must be defined in the order text.

More detailed information on pedestal bearings, connection shafts and bevel gears can be found in the "OPTIONS for System HSB" section of the catalog.