

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

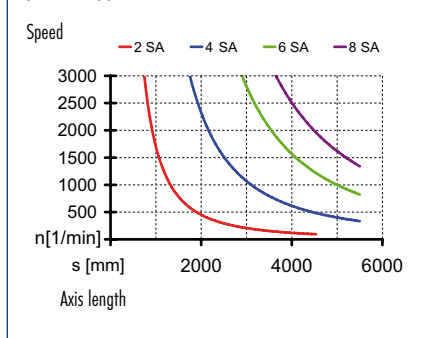
Advantages of profiled rail guide

High load bearing capacity

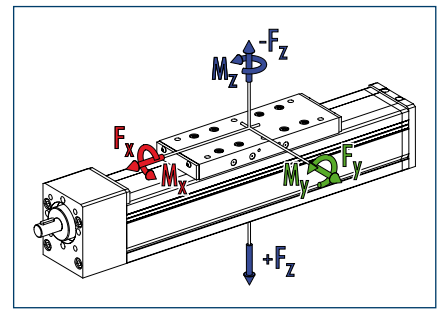
Long lifetime

High precision

Spindle supports SA



Loads and load torques



Load	SRS dynamic	SSS dynamic
F_x^{**} [N]	4000	4000
F_y [N]	500	800
F_z [N]	1500	3000
$-F_z$ [N]	800	2000
Load torques	SRS dynamic	SSS dynamic
M_x [Nm]	50	100
M_y [Nm]	180 (270)	250 (300)
M_z [Nm]	100 (130)	250 (300)
M_{Amax} [Nm]	3.8 (p=5)	4.0 (p=5)
	13.3 (p=20)	13.5 (p=20)
	32.4 (p=50)	32.6 (p=50)

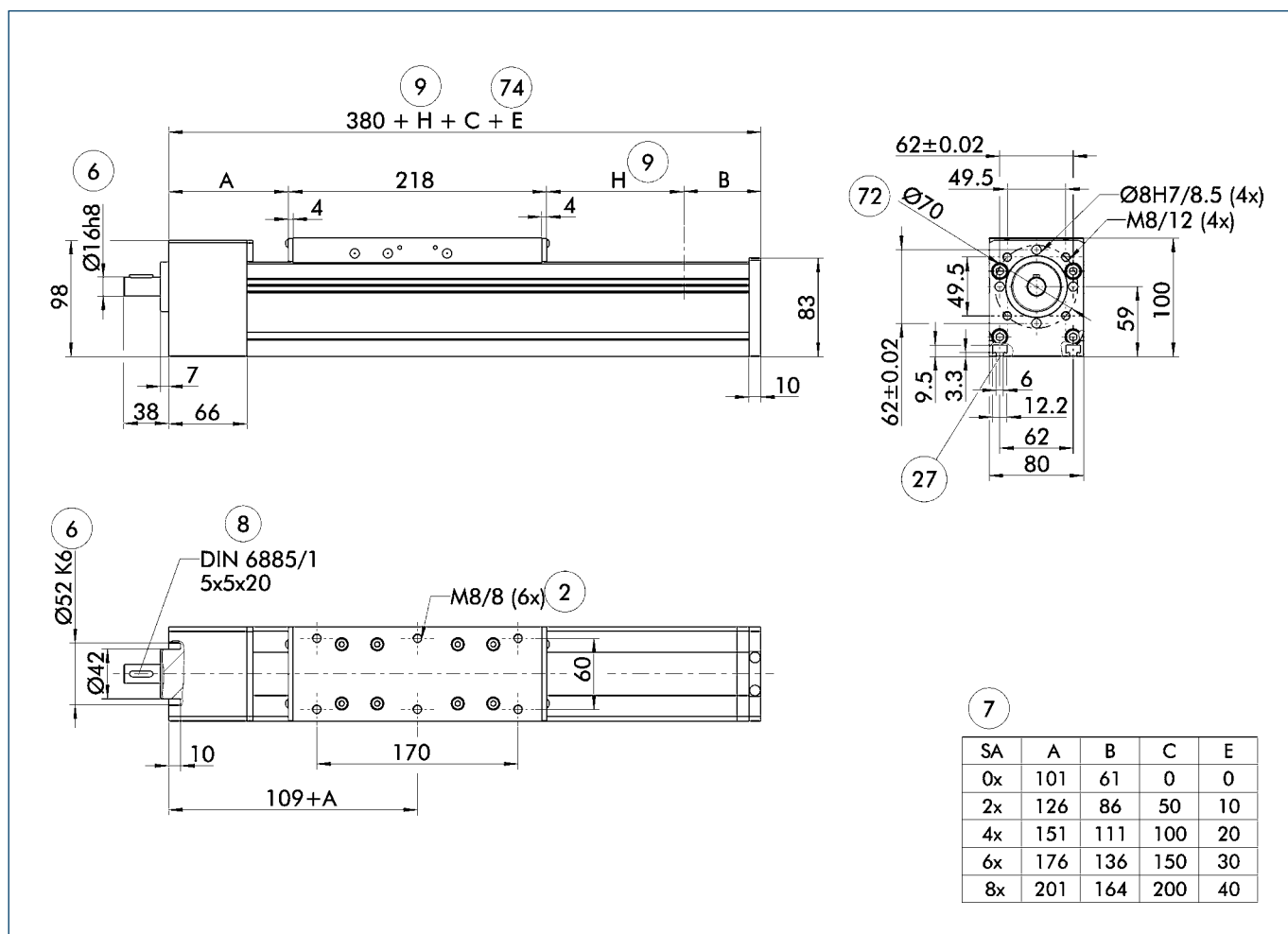
** Depends on speed and pitch n_{max}
KGT = 3000 rpm; TGT = 1500 rpm

① Values in brackets relate to the long slide.

Technical data

Designation		B 80-SRS	B 80-SSS
Max. travel speed	[m/s]	2.5	2.5
Repeat accuracy	[mm]	± 0.03	± 0.03
Max. acceleration	[m/s ²]	20	20
Idle torque	[Nm]	0.6	0.8
Maximum stroke	[mm]	5020	5020
Max. total length	[mm]	5400	5400
Moment of inertia	[kgm ²]	0.000085	0.000085
Drive element		Ball screw spindle drive	Ball screw spindle drive
Max. spindle speed	[rpm]	3000	3000
Diameter	[mm]	20	20
Pitch	[mm]	5 / 20 / 50	5 / 20 / 50
Drive element		Trapezoidal threaded drive	Trapezoidal threaded drive
Max. spindle speed	[rpm]	1500	1500
Diameter	[mm]	20	20
Pitch	[mm]	4 / 8 / 16	4 / 8 / 16
Weights			
Basic without travel	[kg]	5.4	6.2
Travel per 100 mm	[kg]	0.7	1.1
Slide plate 210 mm	[kg]	2.2	1.9
Slide plate 270 mm	[kg]	2.8	2.4

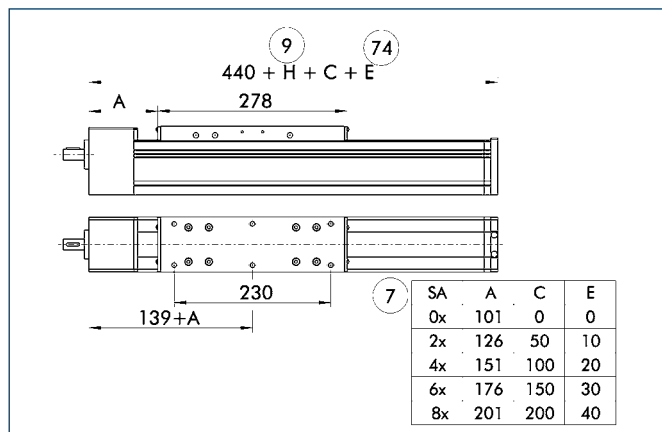
Main views



- 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

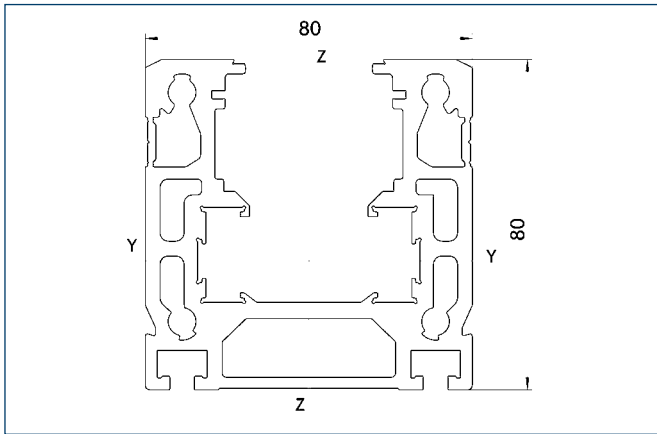
Long slide



- ⑦ Number of spindle supports
- ⑨ Useful stroke

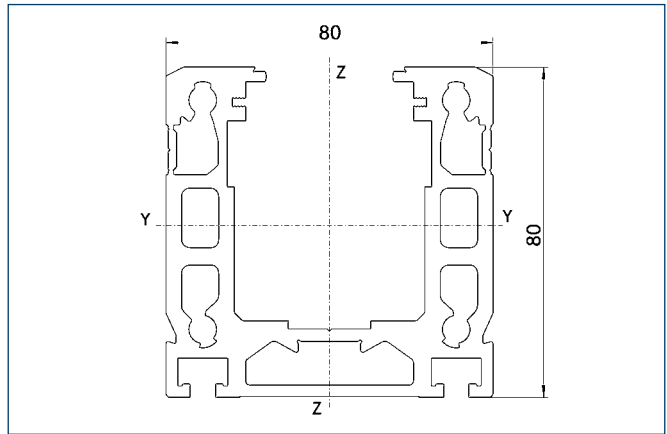
- ㉒ E for spindle supports with insulated noise emissions

Profile SRS



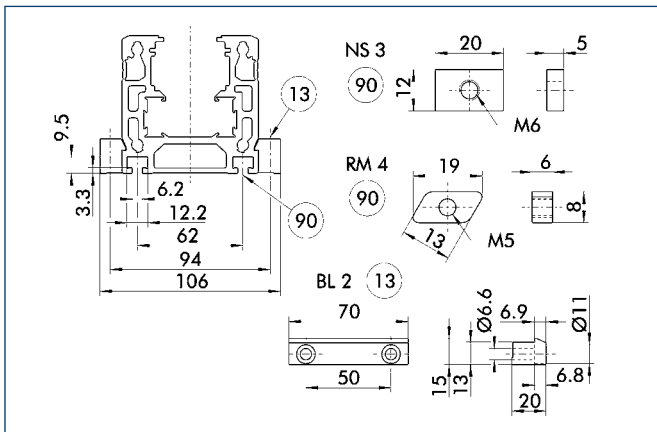
Specific mass	[kg/m]	5.64
Planar dimension	[mm ²]	2090
Planar moment of inertia I _y	[mm ⁴]	1294343
Planar moment of inertia I _z	[mm ⁴]	1732340
Load torque W _y	[mm ³]	30263
Load torque W _z	[mm ³]	43258

Profile SSS



Specific mass	[kg/m]	5.6
Planar dimension	[mm ²]	2057
Planar moment of inertia I _y	[mm ⁴]	1372019
Planar moment of inertia I _z	[mm ⁴]	1677956
Load torque W _y	[mm ³]	30572
Load torque W _z	[mm ³]	41846

Mounting



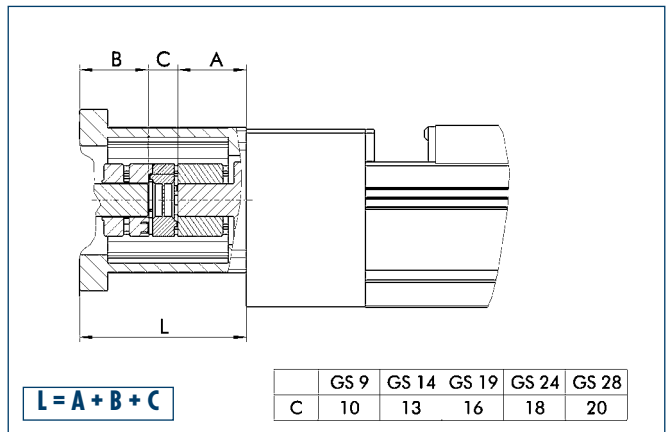
13 Mounting strip

90 Base side T-nut

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

Designation	Order designation	ID no.
T-nut	NS3	0331406
T-nut	RM4	0331426
Mounting strip	BL2	0331401

Motor flange schematic diagram



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

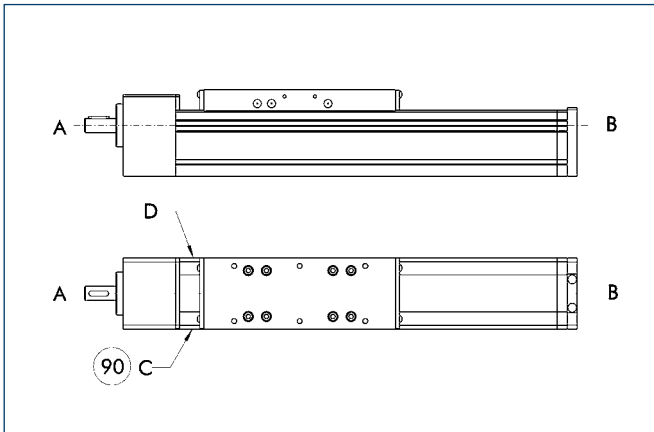
For dimension **A** refer to drive journal connection dimensions, for dimension **B** refer to corresponding motor dimension sheet, dimension **L** may differ in individual cases.

Different drive solutions can be attached to our axes.

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

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

Limit switch position



90 Limit switch standard position

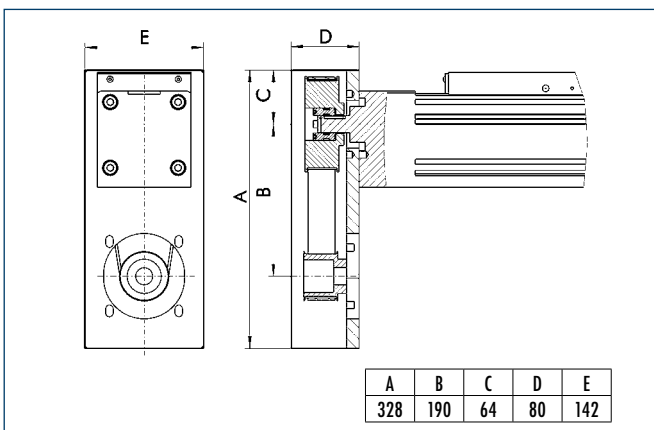
Two E02 switches are used as limit switches and an RS2 as the reference switch as standard.

① 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



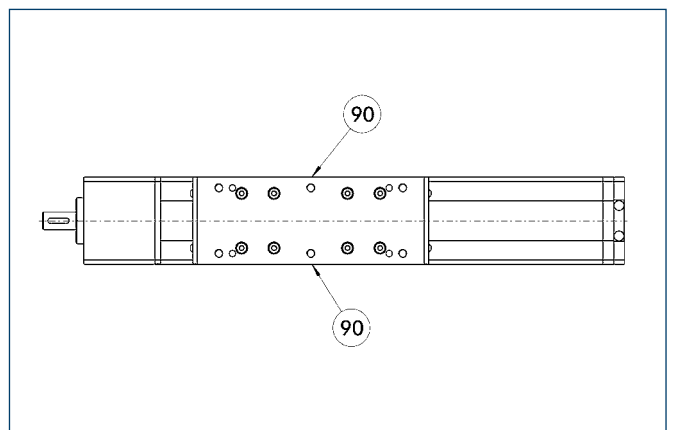
Possible transmission ratios: $i = 1 : 1$, $i = 2 : 1$, $i = 3 : 1$

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.

① 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.