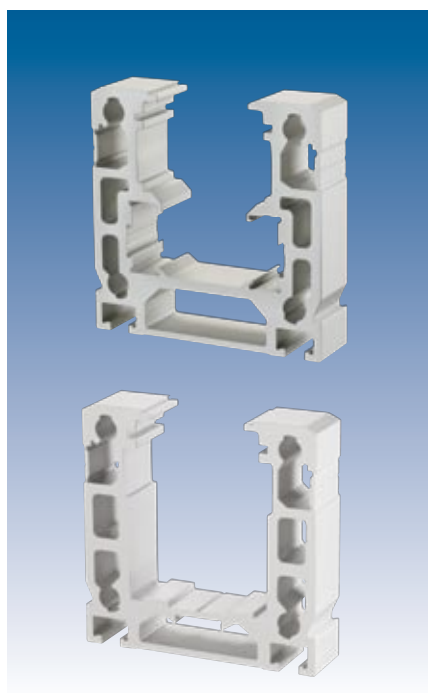


# B 80-ZRS/-ZSS

Linear Axes • Toothed-belt Drive



## 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**

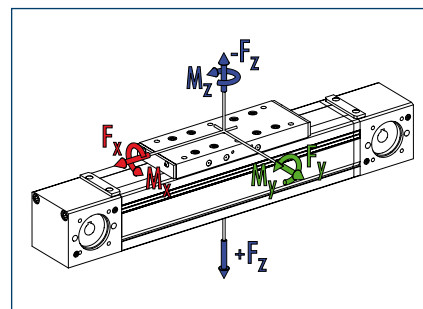
## Advantages of profiled rail guide

**High load bearing capacity**

**Long lifetime**

**High precision**

## Loads and load torques



Load		ZRS dynamic	ZSS dynamic
<span style="color:red">■</span> $F_x^{**}$	[N]	1350	1350
<span style="color:green">■</span> $F_y$	[N]	500	800
<span style="color:blue">■</span> $F_z$	[N]	1500	3000
<span style="color:blue">■</span> $-F_z$	[N]	800	2000
Load torques		ZRS dynamic	ZSS dynamic
<span style="color:red">■</span> $M_x$	[Nm]	50	100
<span style="color:green">■</span> $M_y$	[Nm]	180 (220)	250 (300)
<span style="color:blue">■</span> $M_z$	[Nm]	100 (130)	250 (300)
<span style="color:blue">■</span> $M_{zmax}$	[Nm]	48.8	48.8

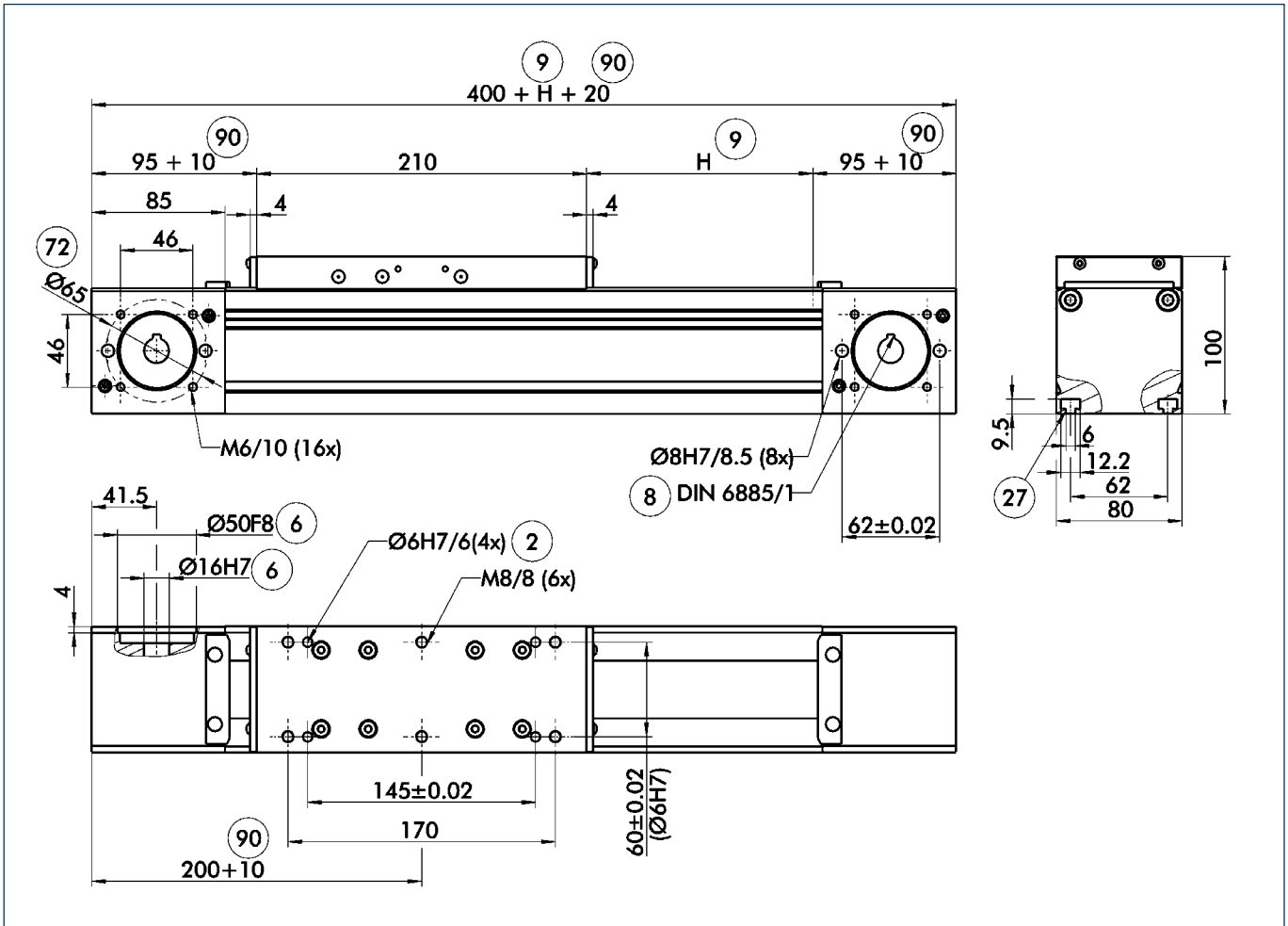
\*\* Maximum value = Depending on speed

① Values in brackets relate to the long slide.

## Technical data

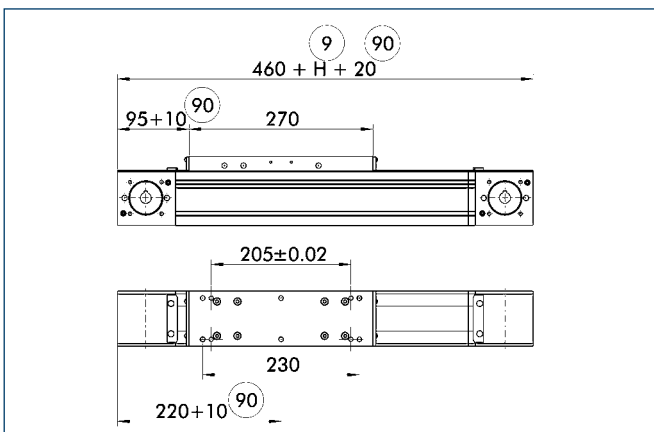
Designation		B 80-ZRS	B 80-ZSS
Max. travel speed	[m/s]	8	5
Repeat accuracy	[mm]	0.08	0.08
Max. acceleration	[m/s <sup>2</sup> ]	40	40
Idle torque	[Nm]	1.5	1.5
<b>Drive</b>			
Drive element	Toothed belt	32 AT 5-E	32 AT 5-E
Travel per revolution	[mm]	220	220
Maximum stroke	[mm]	7600	7600
Max. total length	[mm]	8000	8000
Moment of inertia	[kgm <sup>2</sup> ]	0.0033	0.003
<b>Weights</b>			
Basic without travel	[kg]	5.5	6.1
Travel per 100 mm	[kg]	0.6	0.85
Slide plate 210 mm	[kg]	2.1	1.8
Slide plate 270 mm	[kg]	2.7	2.3

### Main views



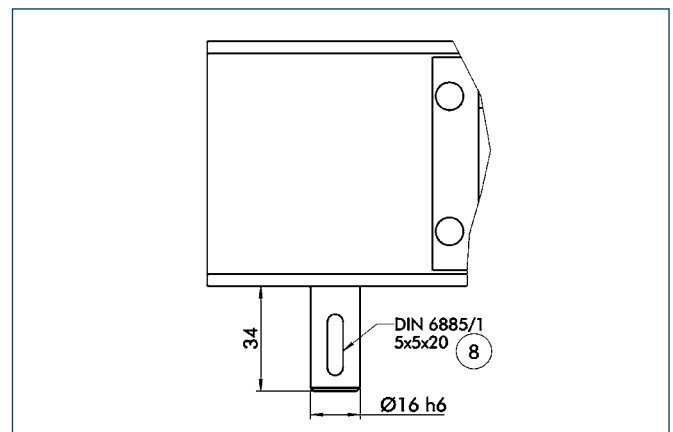
- ② Assembly connection
- ⑥ Drive connection
- ⑧ Feather key DIN 6885
- ⑨ Useful stroke
- ⑦ Mounting groove for T-nuts
- ⑦ Bolt pitch circle
- ⑨ Change of dimension with optional cover tape

### Long slide



- ⑨ Useful stroke

### Drive journal connection dimensions

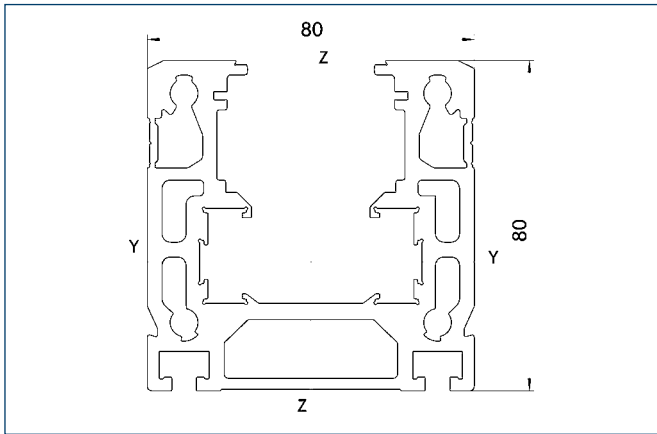


- ⑧ Feather key

# B 80-ZRS / -ZSS

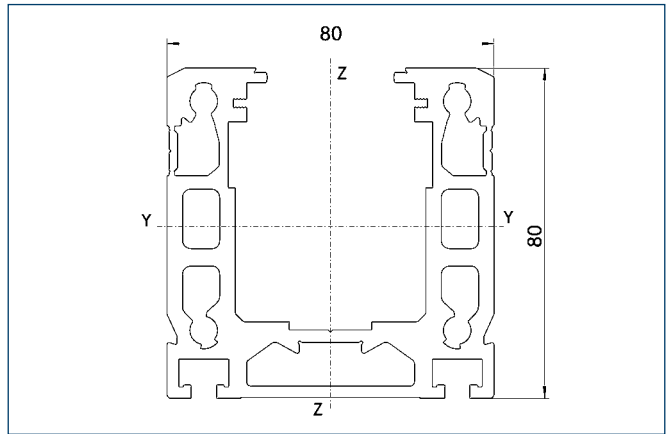
Linear Axes • Toothed-belt Drive

## Profile ZRS



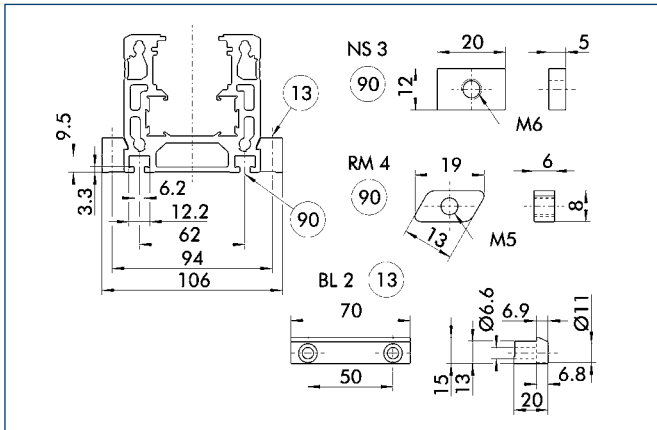
Specific mass	[kg/m]	5.64
Planar dimension	[mm <sup>2</sup> ]	2090
Planar moment of inertia I <sub>y</sub>	[mm <sup>4</sup> ]	1294343
Planar moment of inertia I <sub>z</sub>	[mm <sup>4</sup> ]	1732340
Load torque W <sub>y</sub>	[mm <sup>3</sup> ]	30263
Load torque W <sub>z</sub>	[mm <sup>3</sup> ]	43258

## Profile ZSS



Specific mass	[kg/m]	5.4
Planar dimension	[mm <sup>2</sup> ]	2000
Planar moment of inertia I <sub>y</sub>	[mm <sup>4</sup> ]	1303940
Planar moment of inertia I <sub>z</sub>	[mm <sup>4</sup> ]	1680598
Load torque W <sub>y</sub>	[mm <sup>3</sup> ]	29397
Load torque W <sub>z</sub>	[mm <sup>3</sup> ]	41895

## Mounting



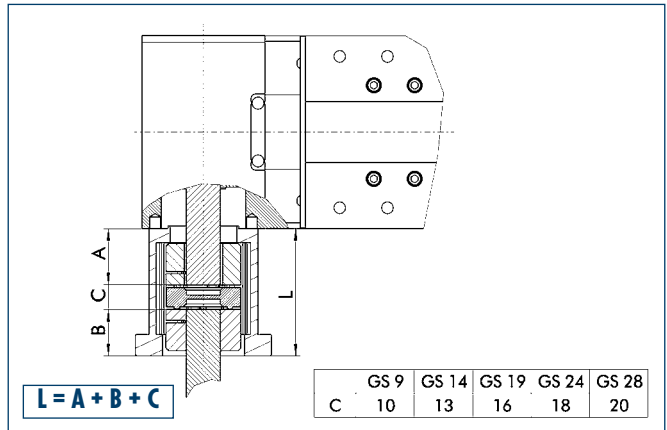
13 Mounting strip

90 T-nut on base side

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.

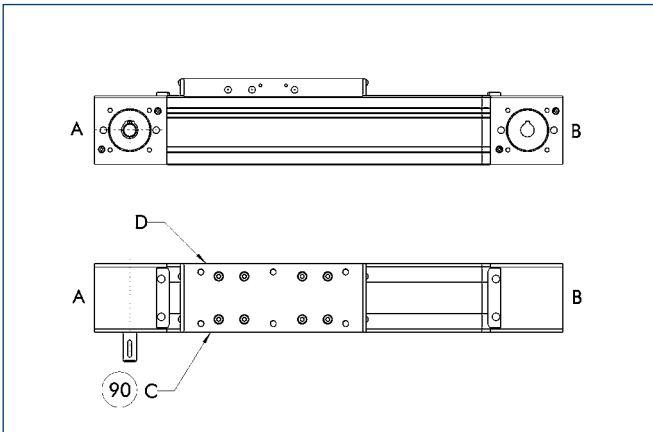
Different drive solutions can be attached to our axes.

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.

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

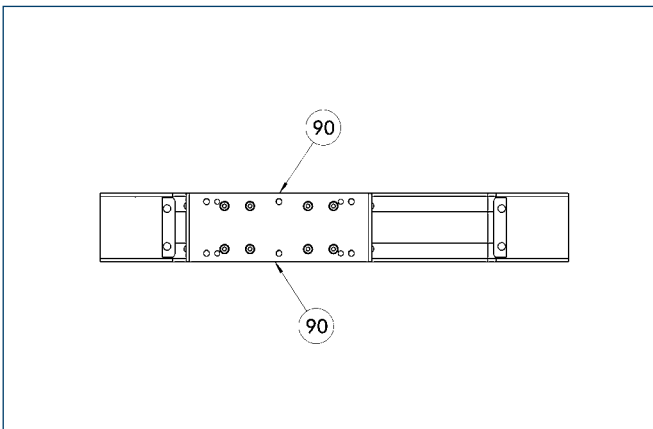
Two E02 switches are used as limit switches and an RS2 as the reference switch as standard.

ⓘ 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

### Lubrication connections



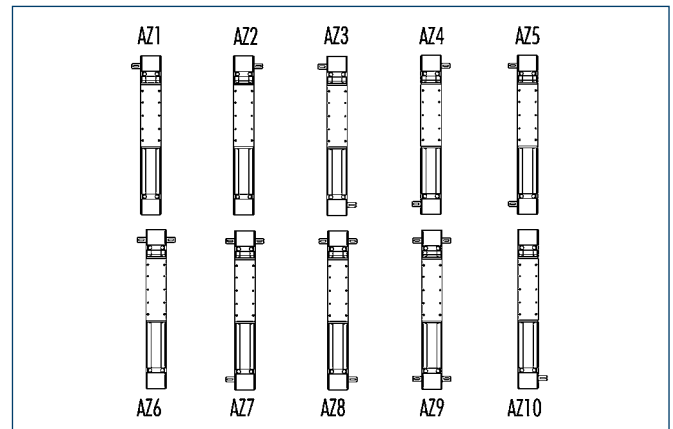
90 Standard lubrication connection

#### Standard connection

Lubrication nipple M8x1

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

### Drive shafts



Depending on the axis application, the drive shaft seat may need to be defined in the order text. Particularly with axis combinations and mechanical synchronization, multiple drive shafts - some of them continuous shafts - are required.



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