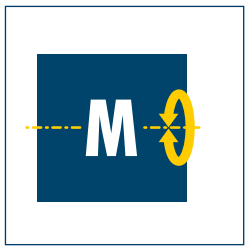
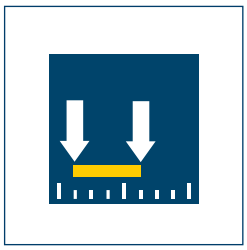
System HSB Toothed-belt Drive

Range of stroke
up to 7,720 mm

Driving force
up to 10,000 N



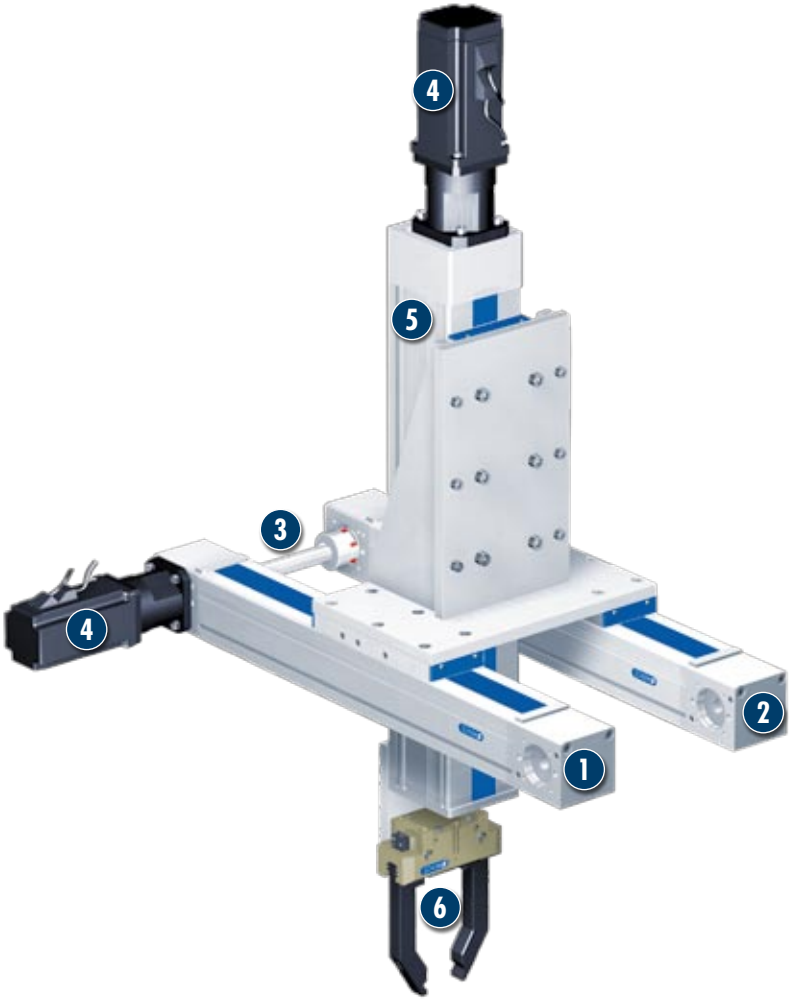
Moment load
up to 3,600 Nm



Repeat accuracy
+/- 0.08 mm

Max. speed
Up to 8 m/s

Application example



Loading gantry for automatic tool loading

1. Toothed belt axis B 80-ZRS driving
2. Toothed belt axis B 80-ZRS synchronized
3. Connection shaft with claw coupling for synchronization
4. Servo motors with flange connection
5. Vertical axis with ball screw spindle B 110-SSS
6. 2-finger parallel gripper, PGN plus 80

Linear axis with toothed belt drive

The range includes 15 sizes. Depending on use, it is possible to choose between roller guide and profiled rail guide.

Area of application

Economical axis applications with high demands for dynamics and smooth running. Even long stroke lengths can be realized with this drive system.

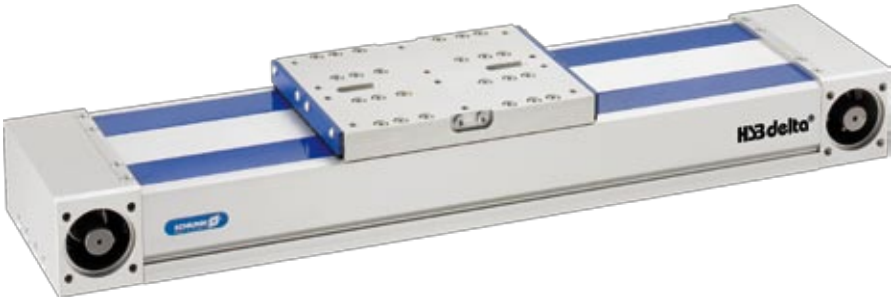
Your advantages and benefits

Complete modular system
with standard components for maximum availability

Closed system
for maximum dirt resistance

Profiled rail or roller guide
for optimum adaptation to the application

Economical system
due to ease of maintenance and optimum size - performance ratio



General information about the series

Drive
free from play, robust toothed belt drive, adjustable toothed belt tension

Profile guide
Aluminum press-drawn section with plastic tape cover, choice of profile rail or roller guide

Material
Natural anodized aluminum parts

Operating temperature
From 10°C to 80°C

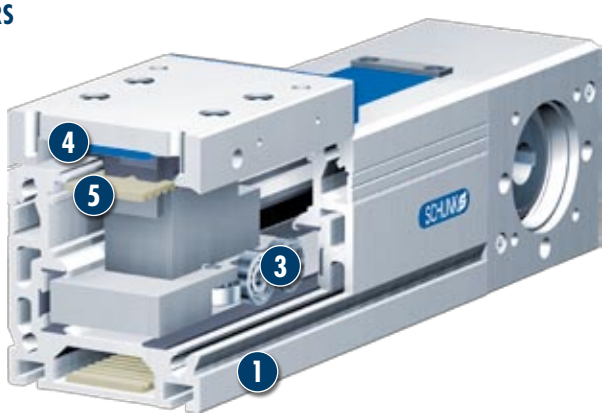
Warranty
24 months

For production reasons, the colors may vary from those shown in the catalog.

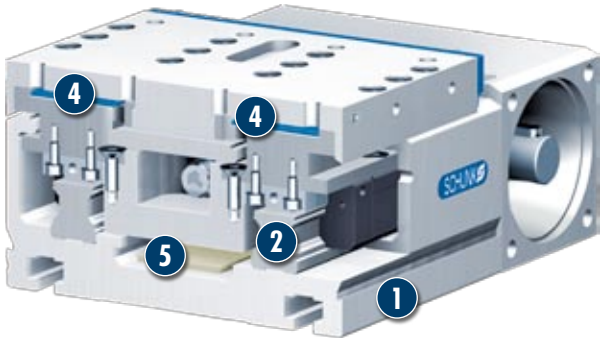
System HSB Toothed-belt Drive

Sectional diagram of the functions

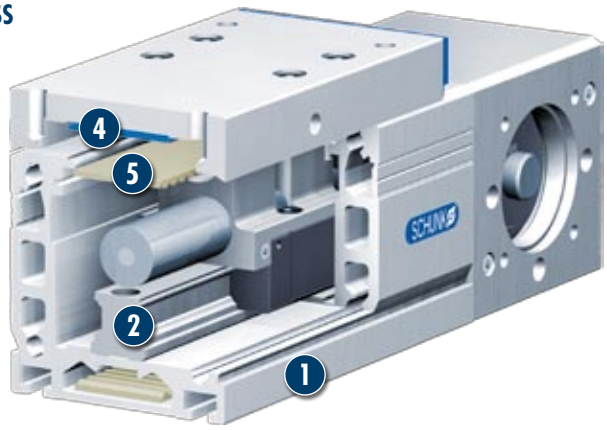
HSB beta® system
ZRS



HSB delta® system
ZSS



HSB beta® system
ZSS



1 Axis body as the support profile

2 Profiled rail guide

3 Roller guide

4 Covering tape made of plastic

5 Toothed drive belt

Description of function

The axis carriage is driven by a toothed belt and precisely guided by a roller or profiled rail guide. The covering tape runs through the axis carriage.

Options and special information

The servo motor can be connected to the pinion shaft by a flange and a coupling.

ⓘ On request, SCHUNK can supply complete drive solutions including motor, gears, controller, and cables.

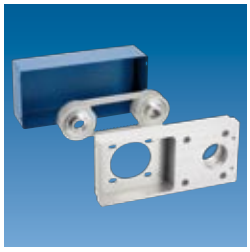
Accessories

Accessories from SCHUNK – the suitable companion for the best functionality, reliability, and controlled production for all automation components.

Motor flanges

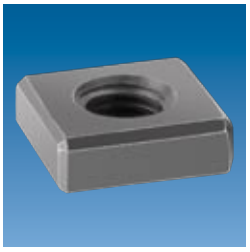
Motors

Angle belt drive



Bevel gear

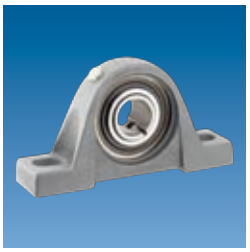
T-nut



Connection shafts

Mounting strips

Pedestal bearing



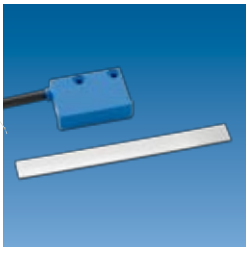
Inductive proximity switch

Mechanical roller switches

Drive controller

Cable set

Stroke measuring system



ⓘ Please see the side views at the end of the respective size for information concerning specific sizes, availability, designation, and ID numbers. Further information on pedestal bearings, connection shafts and bevel gears can be found in the "OPTIONS for System HSB" section of the catalog.

General information about the series

Static load / basic load ratings

For linear units with roller guides, with static loads the static basic load rating (C_{stat}) must be taken into account.
An overview of the static and dynamic basic load ratings for the systems can be found in the "Technical data for installed guides" tables

How to order - Toothed belt drive

Product series B = Beta, D = Delta

Size (version)

Drive
Z = Toothed belt drive
A = Driven slide (type B)

Guidance system
R = Roller guide (type B)
S = Rail guide
G = Sliding guide (type B)

Design version
S = Standard

Drive version
Toothed belt width and tooth pitch

Stroke per revolution

Distance traveled

Overall length

Cover
AK= Cover tape

Accessories
BL 1,2,3,5 and 6 = Mounting strip
EMS / EMB = Mechanical limit switch attached (S - Siemens, B - Balluff)
E02 / E010 = Inductive limit switch, opener with 2m / 10 m cable attached
ES2 / ES10 = Inductive limit switch, closer with 2m / 10 m cable attached
NS ① = T-nut M4
NS ② = T-nut M5
NS ③ = T-nut M6
NS ④ = T-nut M8, 6 thick
NS ⑤ = T-nut M8, 8 thick
NS ⑥ = T-nut M10
NS ⑦ = T-nut M3
NS ⑧ = T-nut M5
NS ⑨ = T-nut M4, 4.5 thick
NS ⑩ = T-nut M6, 6 thick
NS ⑪ = T-nut M4, 3.5 thick
NS ⑫ = T-nut M3, 4.5 thick
RM 2 = T-nut M4
RM 4 = T-nut M5
RM 6 = T-nut M6
AZ 1 = Short drive shaft, attachment side C
AZ 2 = Short drive shaft, attachment side D
AZ 6 = Long drive shaft, attachment side C and D

Special design
0 = Standard
1 = Special (specification in plain text)

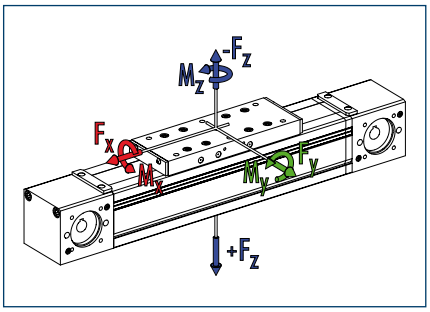
Additional accessories (separate item)
MGK = Motor flange and coupling (from dimension sheet)
URT = Angle belt drive (from dimension sheet)

B 40-ZSS

Advantages of profiled rail guide

- High load bearing capacity
- Long lifetime
- High precision

Loads and load torques



Load		Dynamic
F_x **	[N]	500
F_y	[N]	500
F_z	[N]	600
$-F_z$	[N]	300
Load torques		**Dynamic**
M_x	[Nm]	12
M_y	[Nm]	30 (50)
M_z	[Nm]	30 (50)
M_{Amax}	[Nm]	8.3

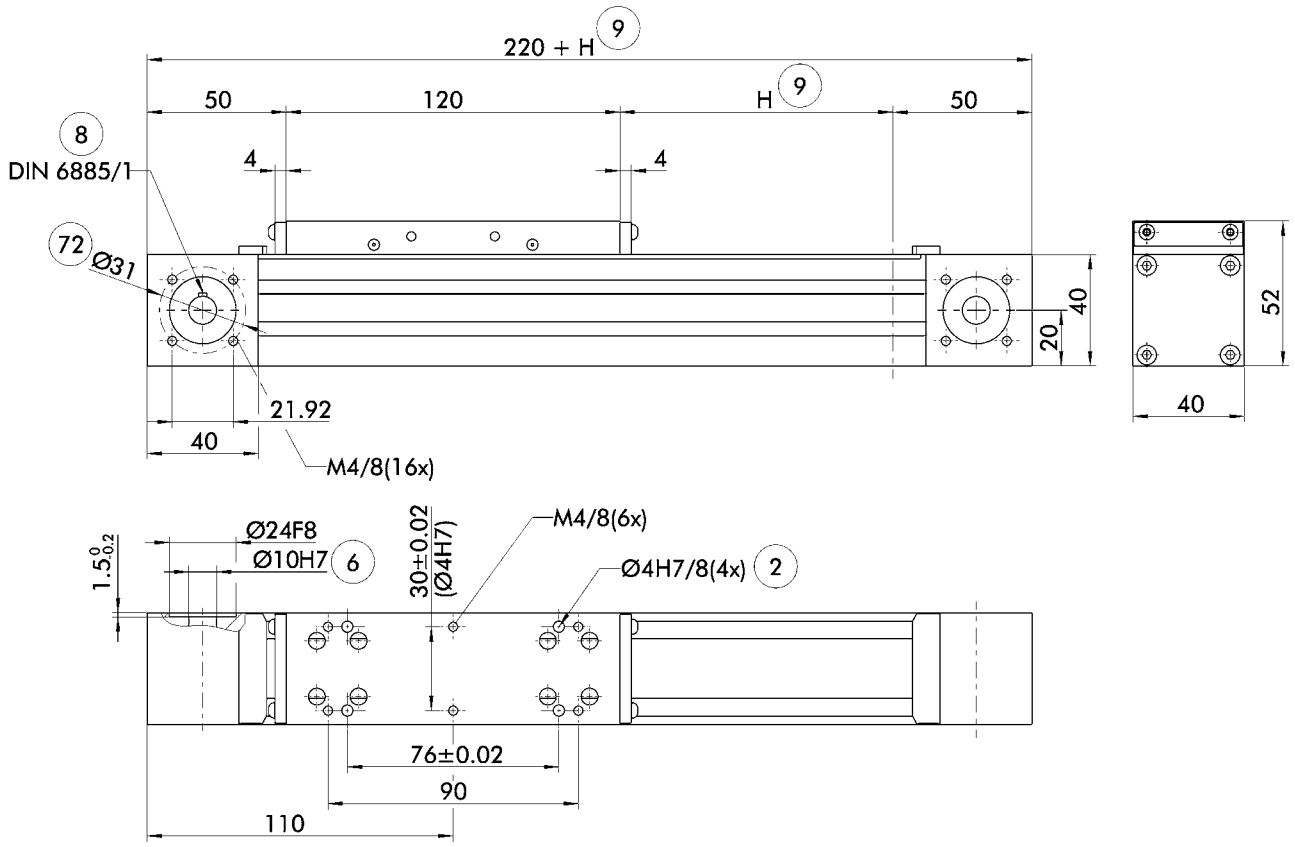
** Maximum value = Depending on speed

ⓘ Values in brackets relate to the long slide.

Technical data

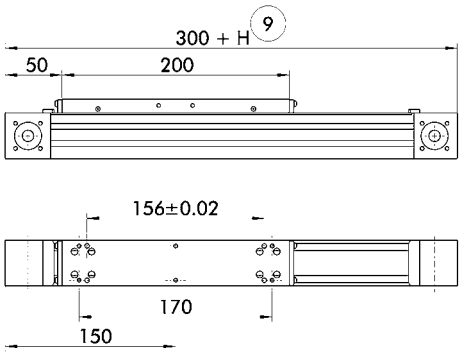
Designation		B 40-ZSS
Max. travel speed	[m/s]	3
Repeat accuracy	[mm]	± 0.08
Max. acceleration	[m/s²]	30
Idle torque	[Nm]	0.3
Drive		
Drive element	Toothed belt	16 AT 5-E
Travel per revolution	[mm]	100
Maximum stroke	[mm]	850
Max. total length	[mm]	1070
Moment of inertia	[kgm²]	0.0002
Weights		
Basic without travel	[kg]	1.7
Travel per 100 mm	[kg]	0.3
Slide plate 120 mm	[kg]	0.3
Slide plate 200 mm	[kg]	0.5

Main views



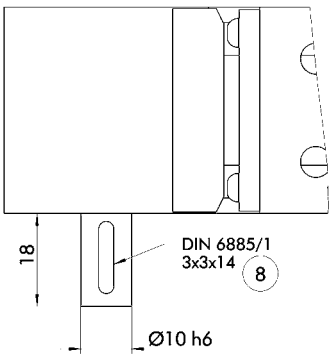
(2) Assembly connection
(6) Drive connection
(8) Feather key DIN 6885
(9) Useful stroke
(72) Bolt pitch circle

Long slide



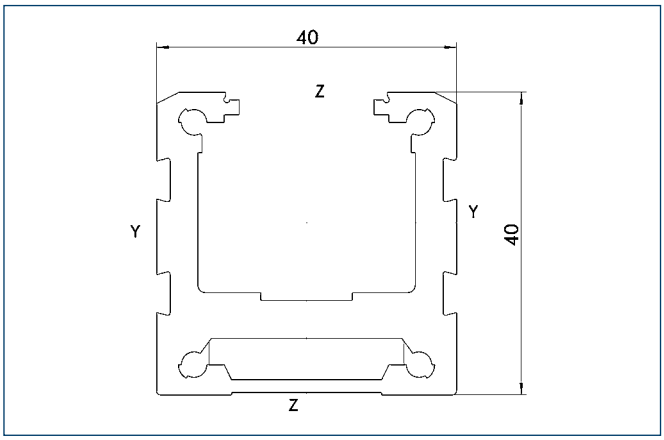
(9) Useful stroke

Drive journal connection dimensions



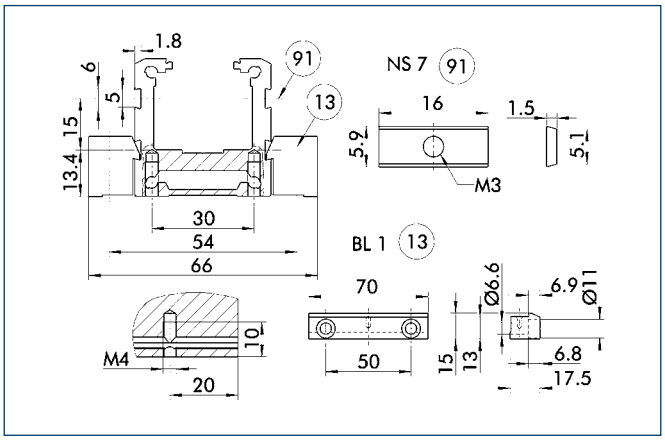
(8) Feather key
Caution: No plug-in drive shaft - AZ - Define position (see order designation)!

Profile ZSS



Specific mass	[kg/m]	1.71
Planar dimension	[mm²]	635
Planar moment of inertia I_y	[mm⁴]	88917
Planar moment of inertia I_z	[mm⁴]	133350
Load torque W_y	[mm³]	3757
Load torque W_z	[mm³]	6665

Mounting

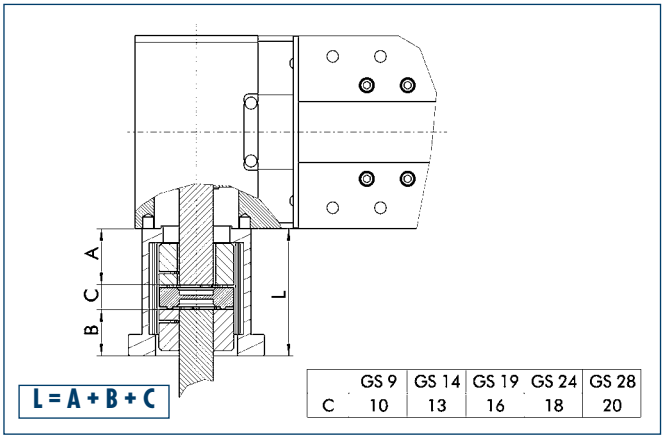


(13) Mounting strip (91) Side T-nut

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

Designation	Order designation	ID no.
T-nut	NS7	0331423
Mounting strip	BL1	0331400

Motor flange schematic diagram



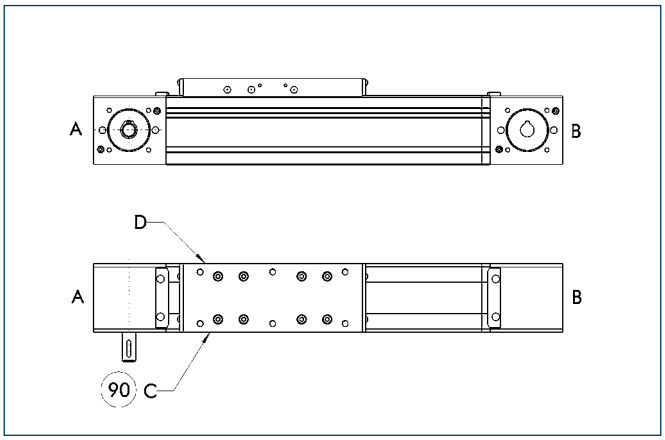
	GS 9	GS 14	GS 19	GS 24	GS 28
C	10	13	16	18	20

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

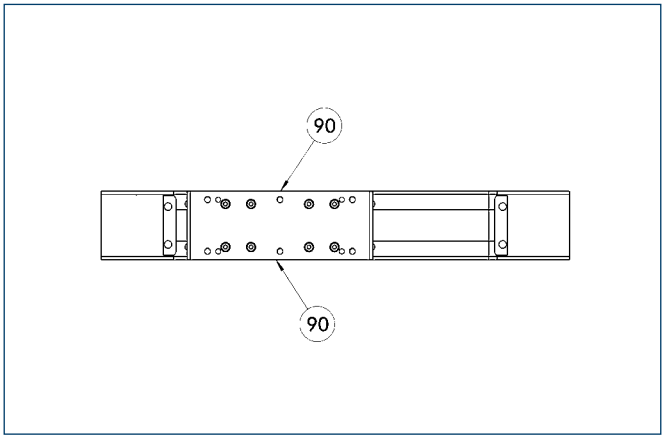
Two EO2 switches are used as limit switches and an RS2 as the reference switch as standard.

ⓘ 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	EO2	0331410
Inductive limit switch, opener, 10 m cable	EO10	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

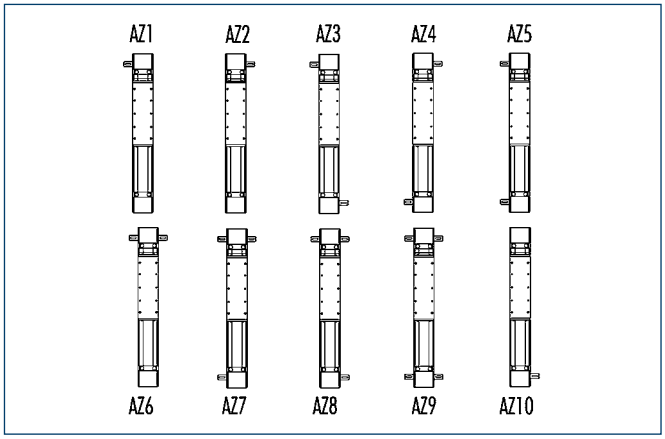


90 Standard lubrication connection

Standard connection
Lubrication nipple M8x1

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

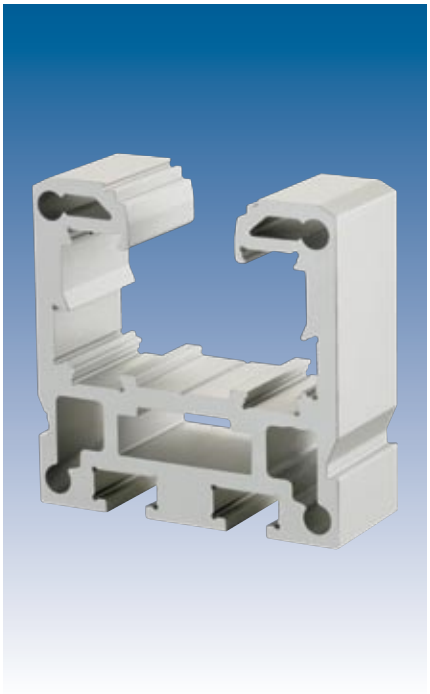
Drive shafts



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.

B 50C-ZRS



Advantages of roller guide

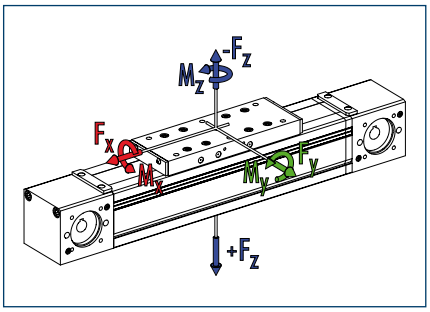
High maximum moments
due to optimum force transmission to the profile

Long stroke lengths
can be achieved with no problems

Life-time lubricated rollers
for easy maintenance use

Smooth, low-noise running

Loads and load torques



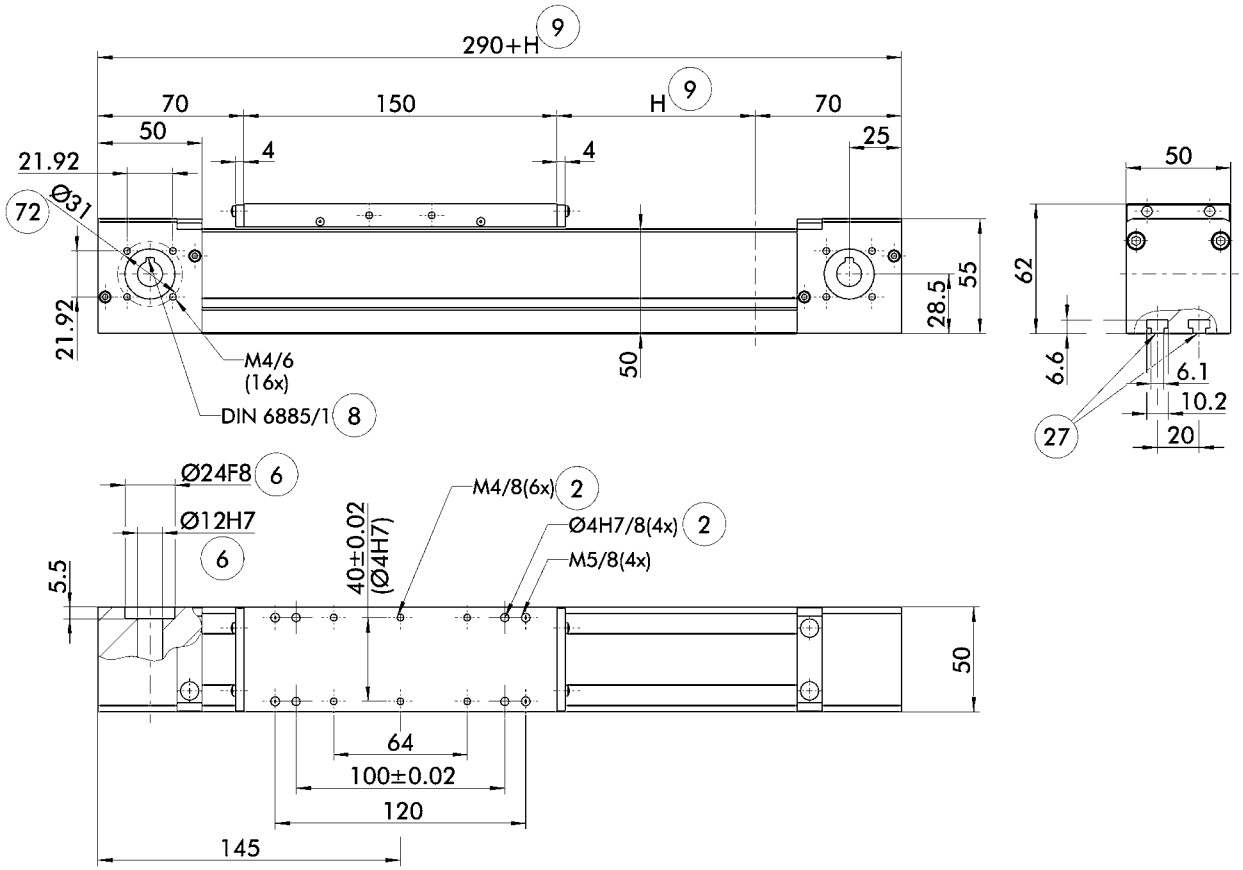
Load		Dynamic
F_x **	[N]	700
F_y	[N]	300
F_z	[N]	600
$-F_z$	[N]	400
Load torques		**Dynamic**
M_x	[Nm]	30
M_y	[Nm]	50 (65)
M_z	[Nm]	50 (65)
M_{Amax}	[Nm]	12.7

** Maximum value = Depending on speed
ⓘ Values in brackets relate to the long slide.

Technical data

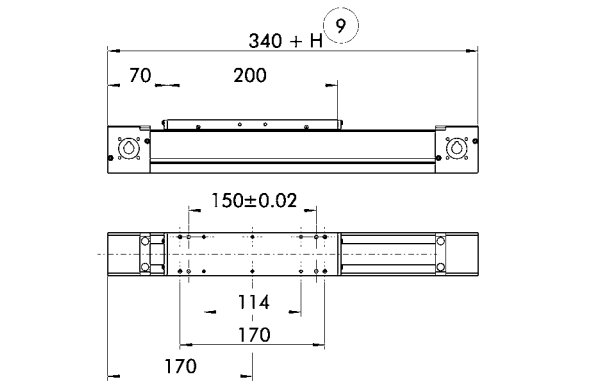
Designation		B 50C-ZRS
Max. travel speed	[m/s]	3
Repeat accuracy	[mm]	± 0.08
Max. acceleration	[m/s²]	30
Idle torque	[Nm]	0.4
Drive		
Drive element	Toothed belt	20 AT 5-E
Travel per revolution	[mm]	110
Maximum stroke	[mm]	7710
Max. total length	[mm]	8000
Moment of inertia	[kgm²]	0.0003
Weights		
Basic without travel	[kg]	1.45
Travel per 100 mm	[kg]	0.35
Slide plate 150 mm	[kg]	0.45
Slide plate 200 mm	[kg]	0.6

Main views



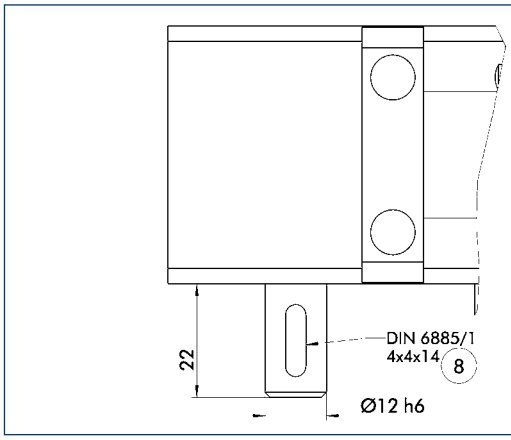
(2) Assembly connection
(6) Drive connection
(8) Feather key DIN 6885
(9) Useful stroke
(27) Mounting groove for T-nuts
(72) Bolt pitch circle

Long slide



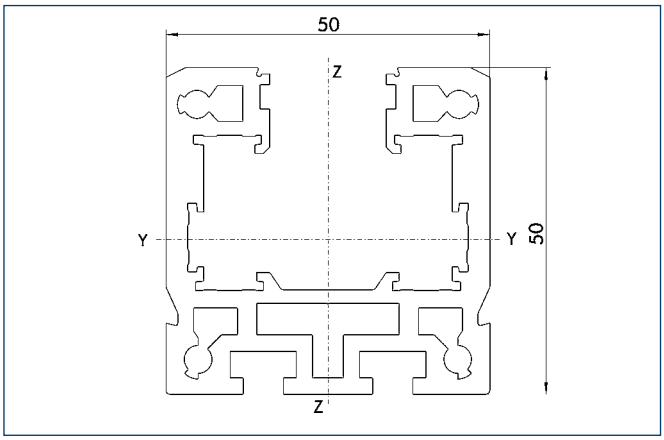
(9) Useful stroke

Drive journal connection dimensions



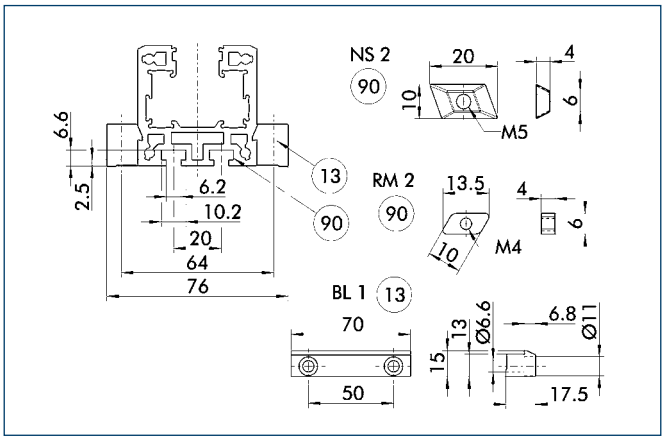
(8) Feather key

Profile ZRS



Specific mass	[kg/m]	2.45
Planar dimension	[mm²]	908
Planar moment of inertia I_y	[mm⁴]	236683
Planar moment of inertia I_z	[mm⁴]	295187
Load torque W_y	[mm³]	8622
Load torque W_z	[mm³]	11804

Mounting

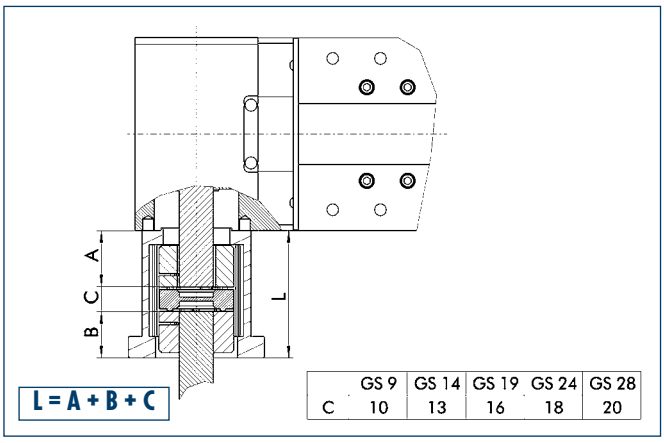


(13) Mounting strip (90) T-nut on base side

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

Designation	Order designation	ID no.
T-nut	NS2	0331405
T-nut	RM2	0331425
Mounting strip	BL1	0331400

Motor flange schematic diagram



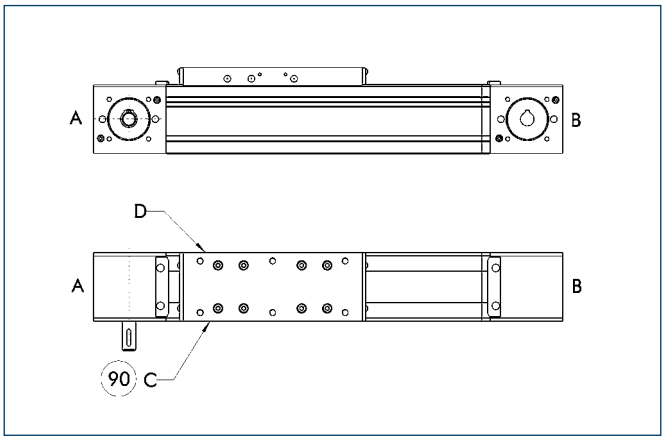
	GS 9	GS 14	GS 19	GS 24	GS 28
C	10	13	16	18	20

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

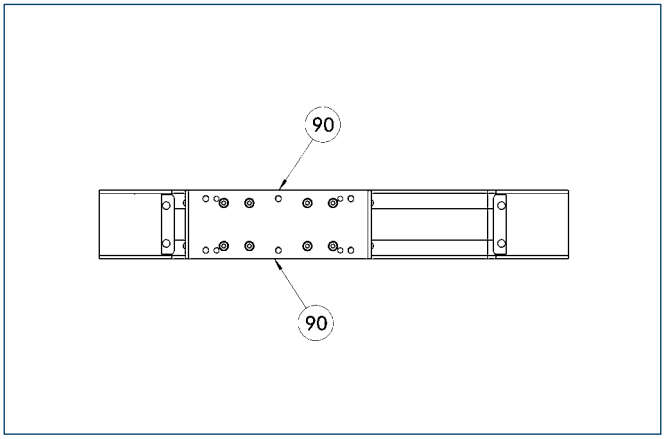
Two EO2 switches are used as limit switches and an RS2 as the reference switch as standard.

ⓘ 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	EO2	0331410
Inductive limit switch, opener, 10 m cable	EO10	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

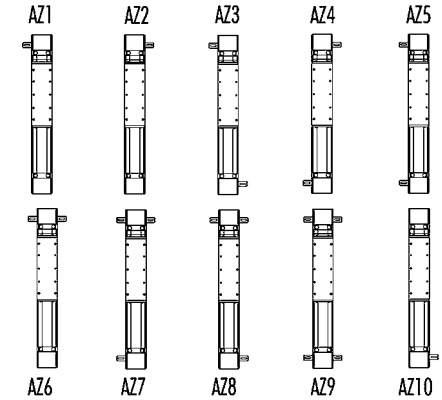


(90) Standard lubrication connection

Standard connection
Lubrication nipple M8x1

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

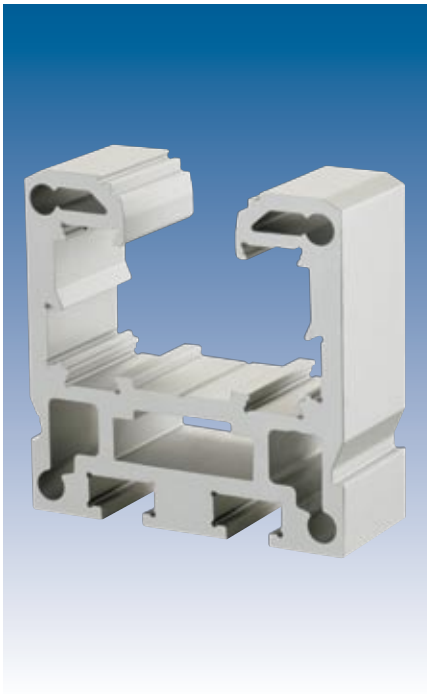
Drive shafts



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.

B 50C-ARS



Advantages of roller guide

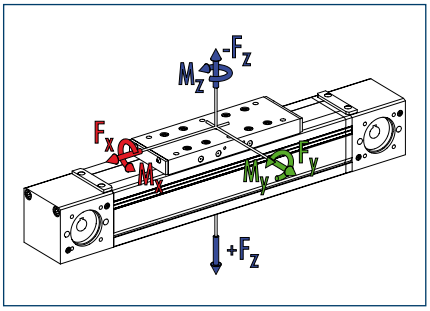
High maximum moments
due to optimum force transmission to the profile

Long stroke lengths
can be achieved with no problems

Life-time lubricated rollers
for easy maintenance use

Smooth, low-noise running

Loads and load torques



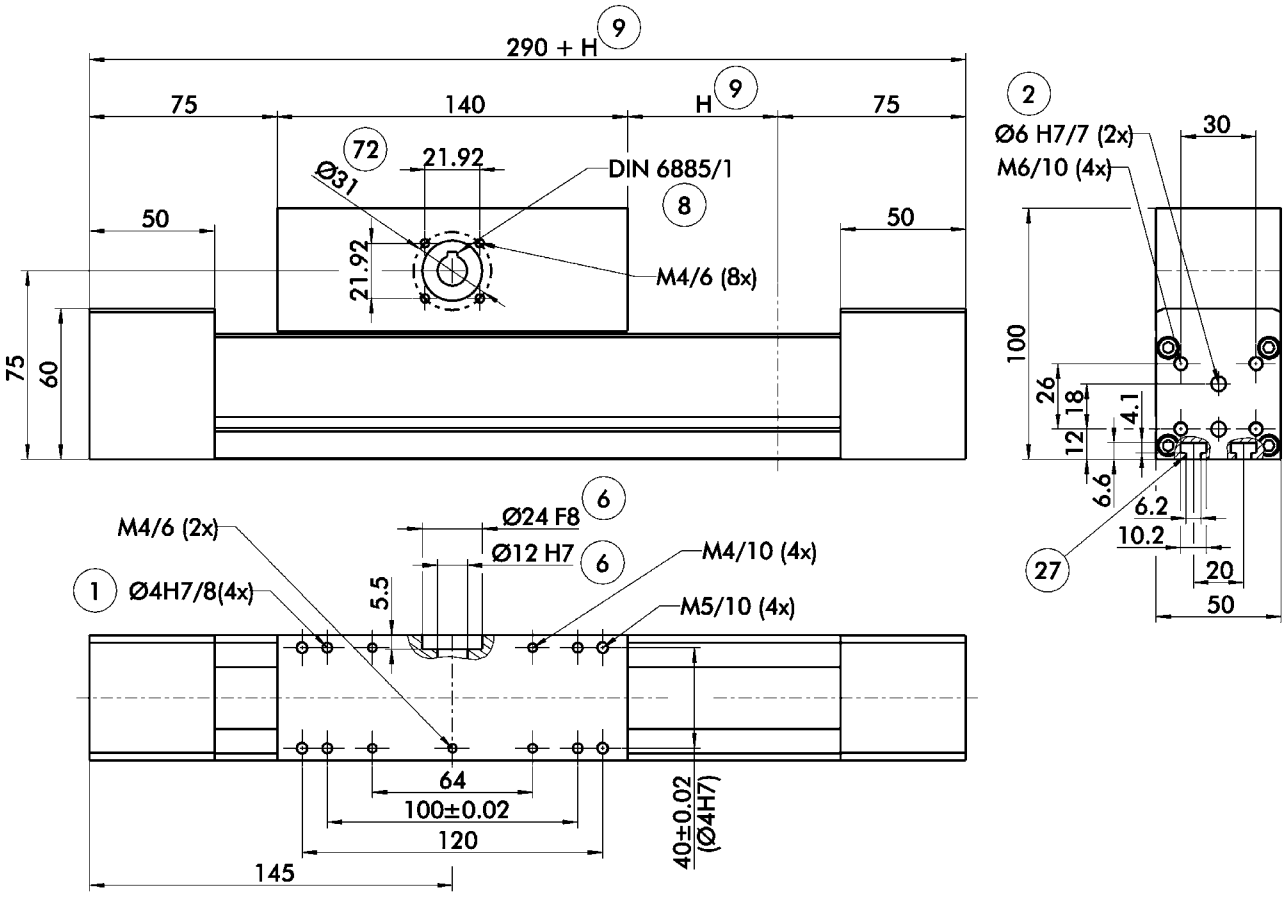
Load		Dynamic
F_x **	[N]	700
F_y	[N]	300
F_z	[N]	600
$-F_z$	[N]	400
Load torques		**Dynamic**
M_x	[Nm]	30
M_y	[Nm]	50
M_z	[Nm]	50
M_{Amax}	[Nm]	13.8

** Maximum value = Depending on speed
ⓘ Values in brackets relate to the long slide.

Technical data

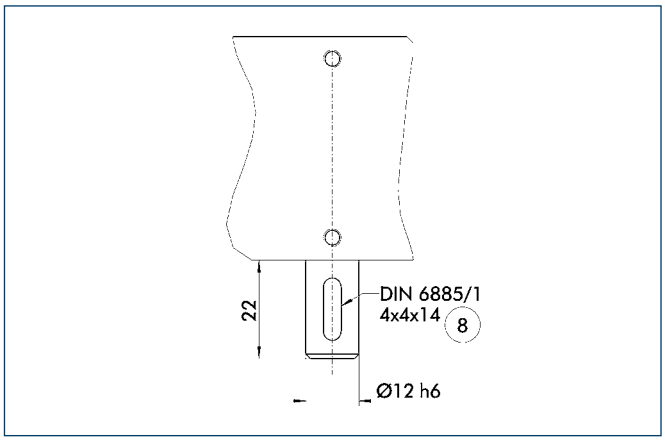
Designation		B 50C-ARS
Max. travel speed	[m/s]	3
Repeat accuracy	[mm]	± 0.08
Max. acceleration	[m/s²]	30
Idle torque	[Nm]	1.5
Drive		
Drive element	Toothed belt	20 AT 5-E
Travel per revolution	[mm]	110
Maximum stroke	[mm]	7710
Max. total length	[mm]	8000
Moment of inertia	[kgm²]	0.0003
Weights		
Basic without travel	[kg]	2.5
Travel per 100 mm	[kg]	0.3
Slide drive 140 mm	[kg]	1.25

Main views



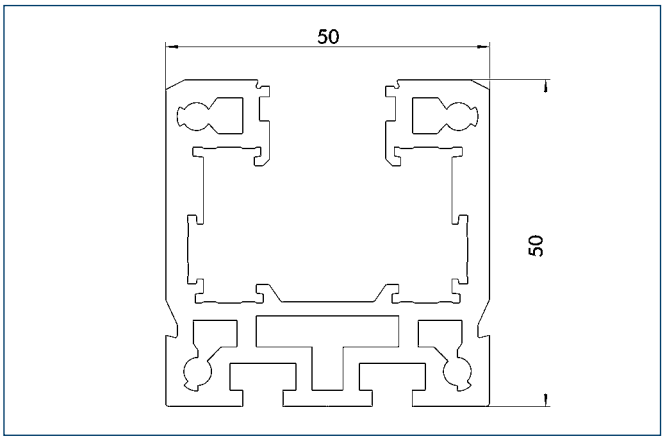
1 Linear unit connection
2 Assembly connection
6 Drive connection
8 Feather key DIN 6885
9 Useful stroke
27 Mounting groove for T-nuts
72 Bolt pitch circle

Drive journal connection dimensions



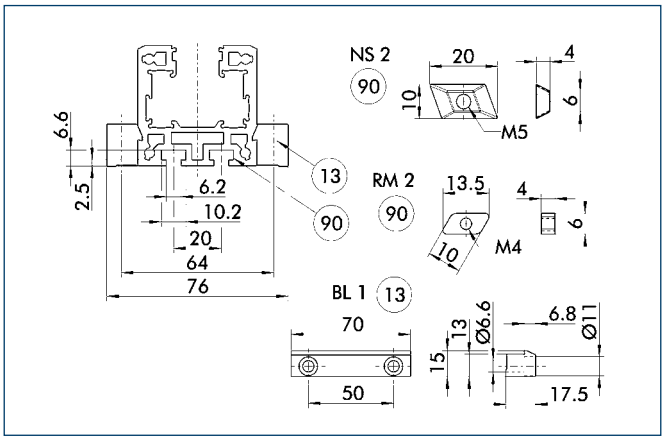
8 Feather key

Profile ARS



Specific mass	[kg/m]	2.45
Planar dimension	[mm²]	908
Planar moment of inertia I_y	[mm⁴]	236683
Planar moment of inertia I_z	[mm⁴]	295187
Load torque W_y	[mm³]	8622
Load torque W_z	[mm³]	11804

Mounting

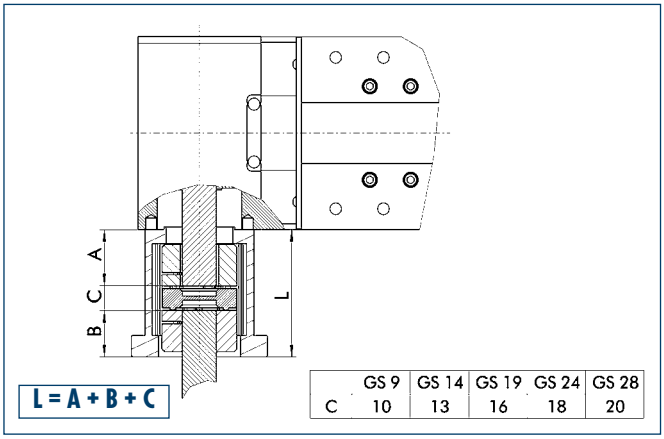


(13) Mounting strip (90) T-nut on base side

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

Designation	Order designation	ID no.
T-nut	NS2	0331405
T-nut	RM2	0331425
Mounting strip	BL1	0331400

Motor flange schematic diagram



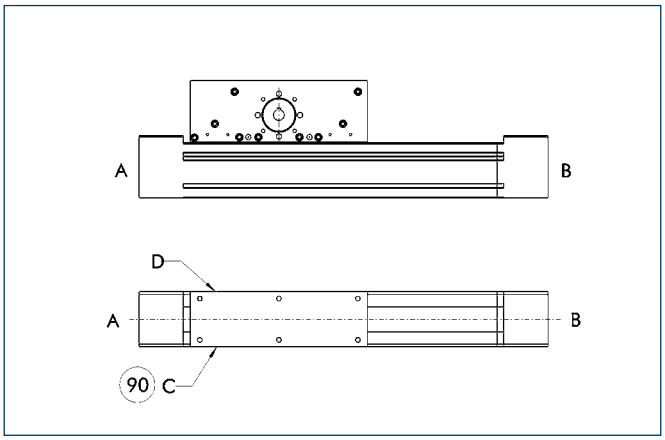
	GS 9	GS 14	GS 19	GS 24	GS 28
C	10	13	16	18	20

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

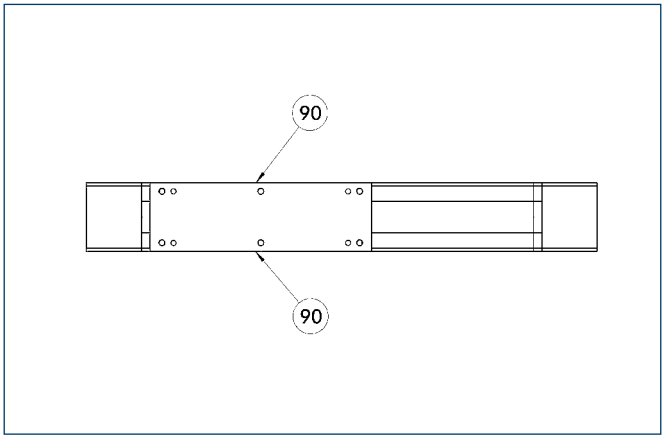
Two E02 switches are used as limit switches and an RS2 as the reference switch as standard.

ⓘ 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

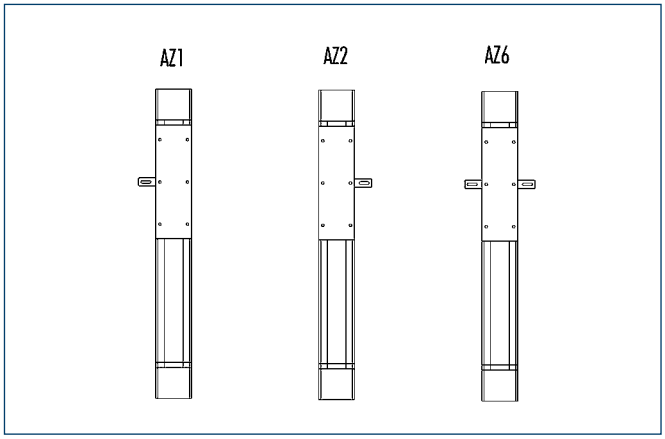


90 Standard lubrication connection

Standard connection
Lubrication nipple M8x1

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

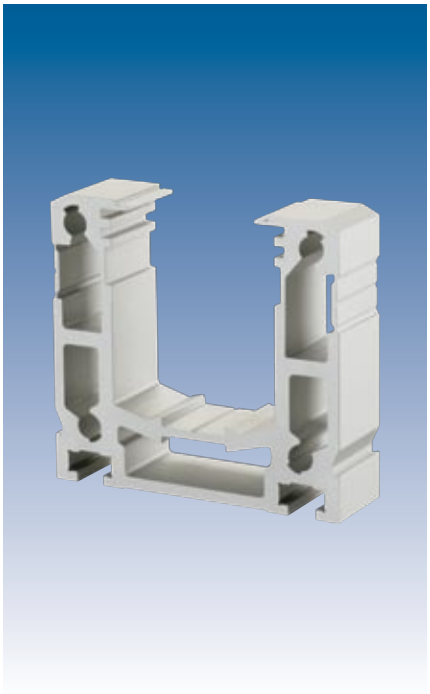
Drive shafts



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.

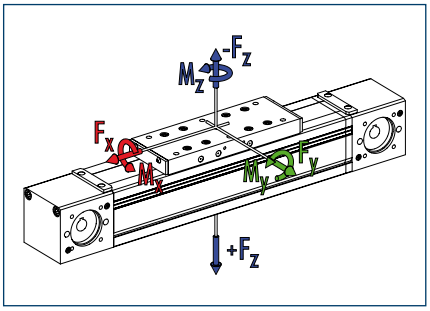
B 60-ZSS



Advantages of profiled rail guide

- High load bearing capacity
- Long lifetime
- High precision

Loads and load torques



Load		Dynamic
F_x **	[N]	850
F_y	[N]	500
F_z	[N]	1400
$-F_z$	[N]	800
Load torques		**Dynamic**
M_x	[Nm]	50
M_y	[Nm]	160 (200)
M_z	[Nm]	160 (200)
M_{Amax}	[Nm]	22.7

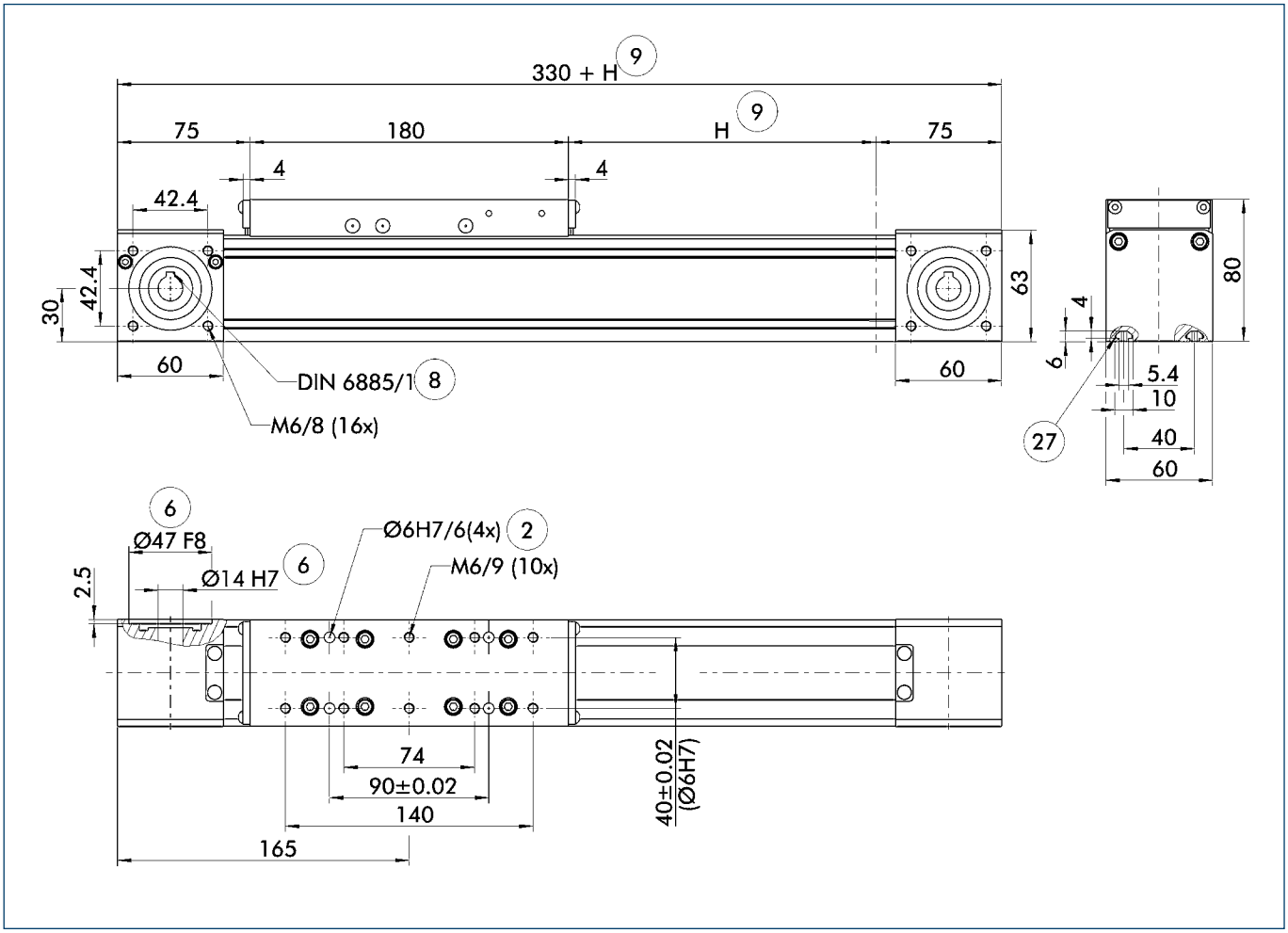
** Maximum value = Depending on speed

ⓘ Values in brackets relate to the long slide.

Technical data

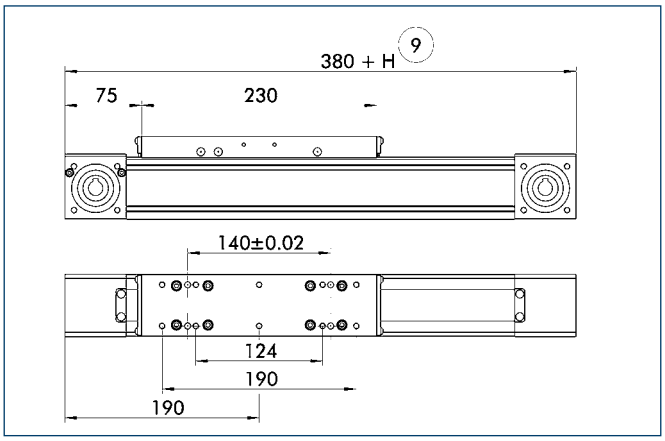
Designation		B 60-ZSS
Max. travel speed	[m/s]	5
Repeat accuracy	[mm]	± 0.08
Max. acceleration	[m/s²]	30
Idle torque	[Nm]	1.1
Drive		
Drive element	Toothed belt	25 AT 5-E
Travel per revolution	[mm]	160
Maximum stroke	[mm]	7620
Max. total length	[mm]	8000
Moment of inertia	[kgm²]	0.0002
Weights		
Basic without travel	[kg]	4.55
Travel per 100 mm	[kg]	0.59
Slide plate 190 mm	[kg]	1.22
Slide plate 230 mm	[kg]	1.72

Main views



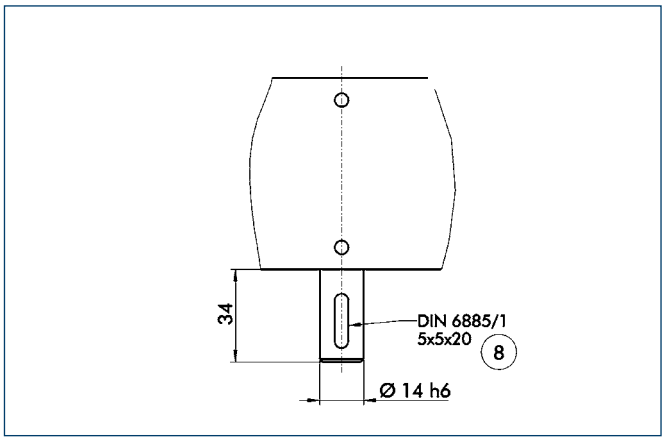
(2) Assembly connection
(6) Drive connection
(8) Feather key DIN 6885
(9) Useful stroke
(27) Mounting groove for T-nuts

Long slide



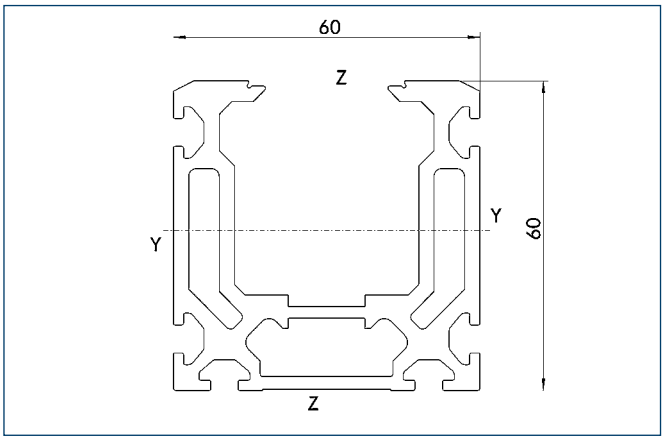
(9) Useful stroke

Drive journal connection dimensions



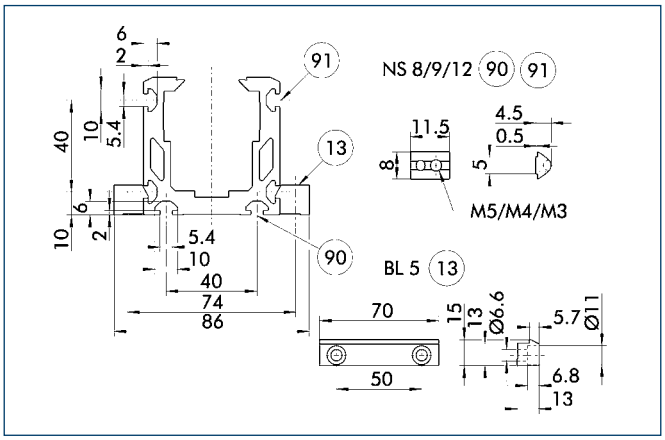
(8) Feather key

Profile ZSS



Specific mass	[kg/m]	3.02
Planar dimension	[mm²]	1117
Planar moment of inertia I_y	[mm⁴]	400283
Planar moment of inertia I_z	[mm⁴]	521983
Load torque W_y	[mm³]	11929
Load torque W_z	[mm³]	17380

Mounting

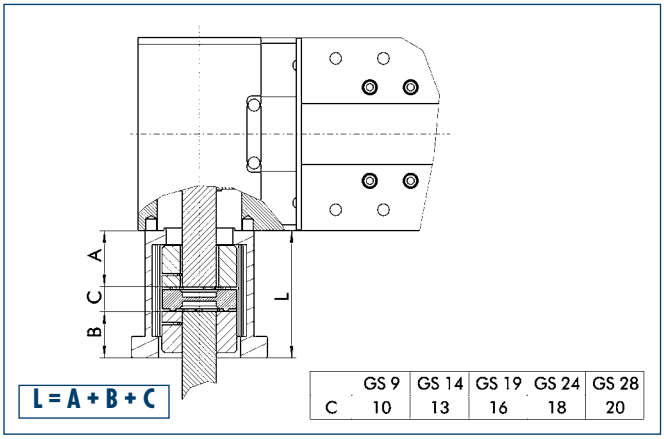


(13) Mounting strip
(90) T-nut on base side
(91) Side T-nut

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

Designation	Order designation	ID no.
T-nut	NS8	0331420
T-nut	NS9	0331421
T-nut	NS12	0331424
Mounting strip	BL5	0331419

Motor flange schematic diagram



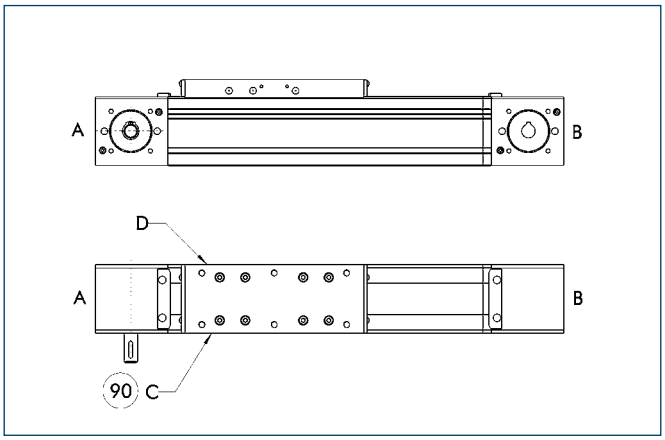
	GS 9	GS 14	GS 19	GS 24	GS 28
C	10	13	16	18	20

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

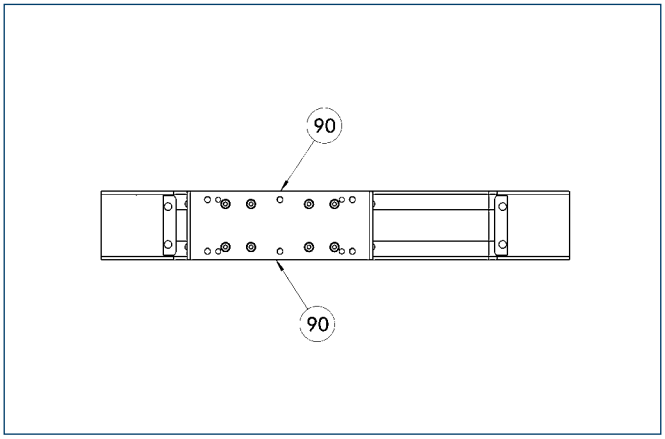
Two EO2 switches are used as limit switches and an RS2 as the reference switch as standard.

ⓘ 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	EO2	0331410
Inductive limit switch, opener, 10 m cable	EO10	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

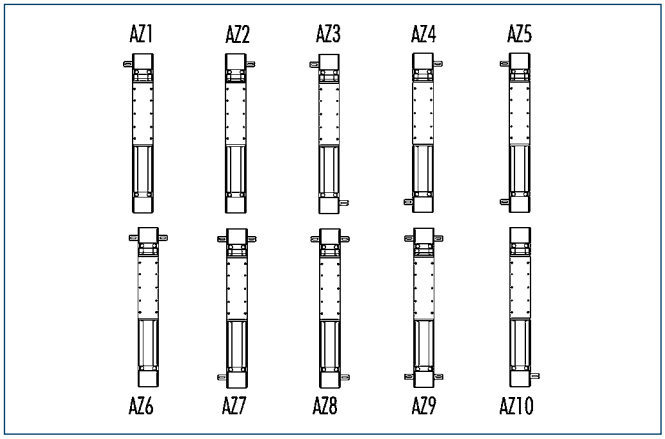


90 Standard lubrication connection

Standard connection
Lubrication nipple M8x1

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

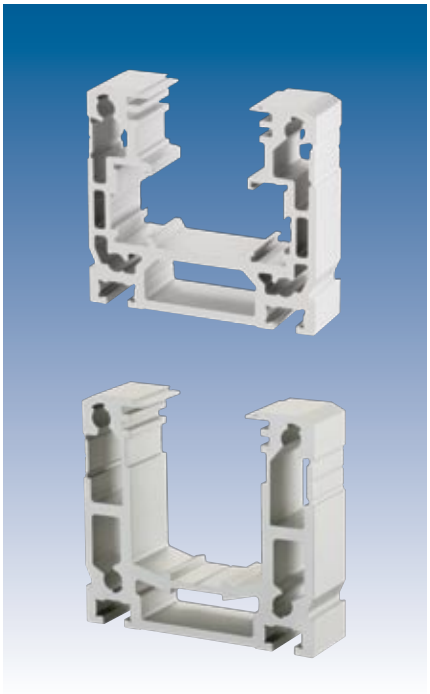
Drive shafts



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.

B 70C-ZRS/-ZSS



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

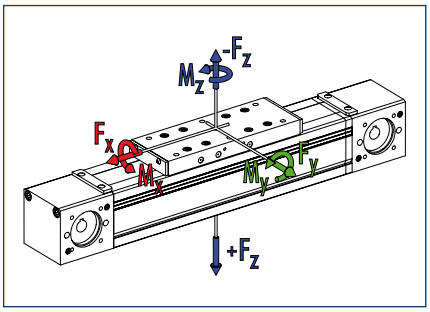
Advantages of profiled rail guide

High load bearing capacity

Long lifetime

High precision

Loads and load torques



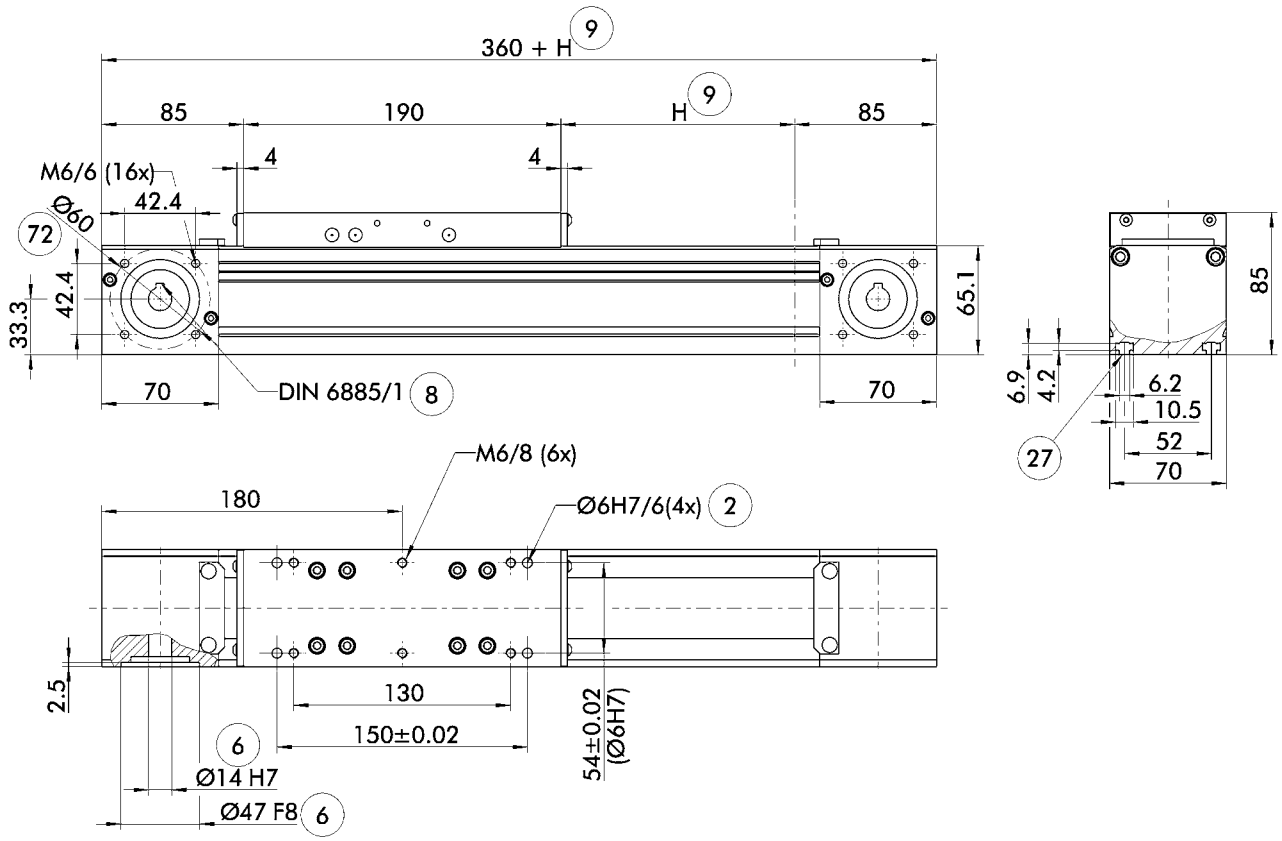
Load		ZRS dynamic	ZSS dynamic
F_x **	[N]	1100	1100
F_y	[N]	300	600
F_z	[N]	1000	1800
$-F_z$	[N]	400	1200
Load torques		**ZRS dynamic**	**ZSS dynamic**
M_x	[Nm]	35	60
M_y	[Nm]	120 (150)	180 (230)
M_z	[Nm]	50 (60)	120 (150)
M_{Amax}	[Nm]	31.8	31.8

** Maximum value = Depending on speed
ⓘ Values in brackets relate to the long slide.

Technical data

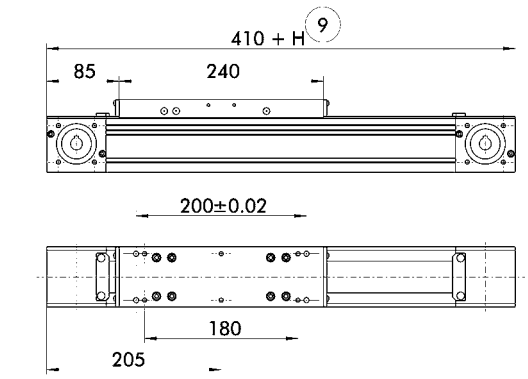
Designation		B 70C-ZRS	B 70C-ZSS
Max. travel speed	[m/s]	8	5
Repeat accuracy	[mm]	**± 0.08**	**± 0.08**
Max. acceleration	[m/s²]	30	30
Idle torque	[Nm]	1.2	1.2
Drive			
Drive element	Toothed belt	32 AT 5-E	32 AT 5-E
Travel per revolution	[mm]	175	175
Maximum stroke	[mm]	7640	6840
Max. total length	[mm]	8000	7200
Moment of inertia	[kgm²]	0.0004	0.0002
Weights			
Basic without travel	[kg]	3.1	3.4
Travel per 100 mm	[kg]	0.59	0.38
Slide plate 190 mm	[kg]	1.3	1.65
Slide plate 240 mm	[kg]	1.65	2.1

Main views



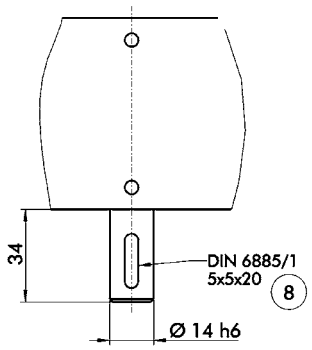
② Assembly connection
⑥ Drive connection
⑧ Feather key DIN 6885
⑨ Useful stroke
㉗ Mounting groove for T-nuts
㉒ Bolt pitch circle

Long slide



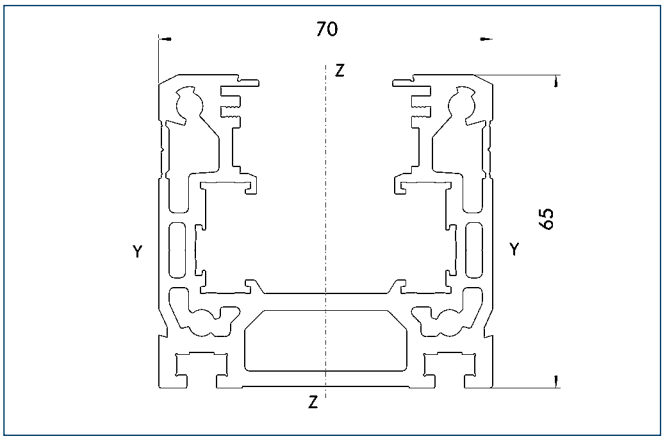
⑨ Useful stroke

Drive journal connection dimensions



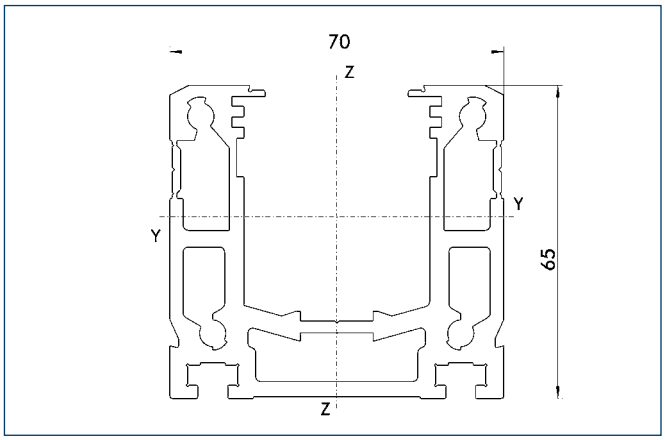
⑧ Feather key

Profile ZRS



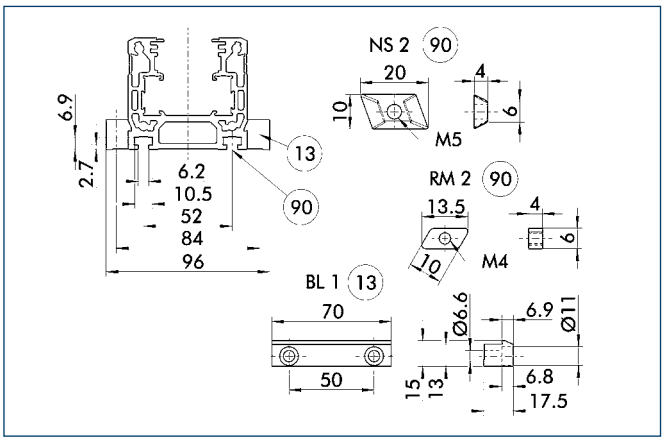
Specific mass	[kg/m]	3.7
Planar dimension	[mm²]	1370
Planar moment of inertia I_y	[mm⁴]	585283
Planar moment of inertia I_z	[mm⁴]	854713
Load torque W_y	[mm³]	15835
Load torque W_z	[mm³]	24410

Profile ZSS



Specific mass	[kg/m]	3.7
Planar dimension	[mm²]	1370
Planar moment of inertia I_y	[mm⁴]	563059
Planar moment of inertia I_z	[mm⁴]	852507
Load torque W_y	[mm³]	14743
Load torque W_z	[mm³]	24335

Mounting



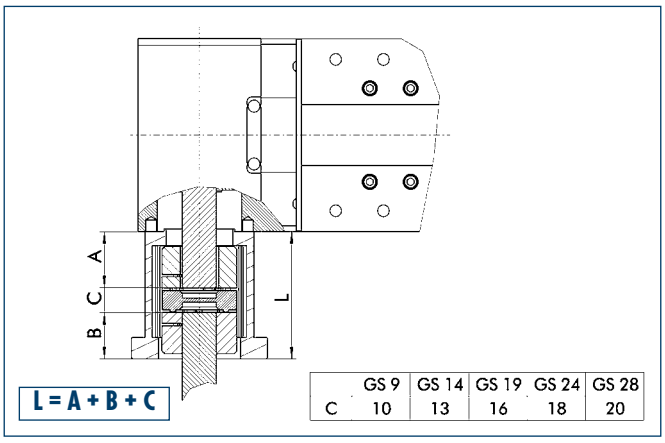
13 Mounting strip

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	NS2	0331405
T-nut	RM2	0331425
Mounting strip	BL1	0331400

Motor flange schematic diagram



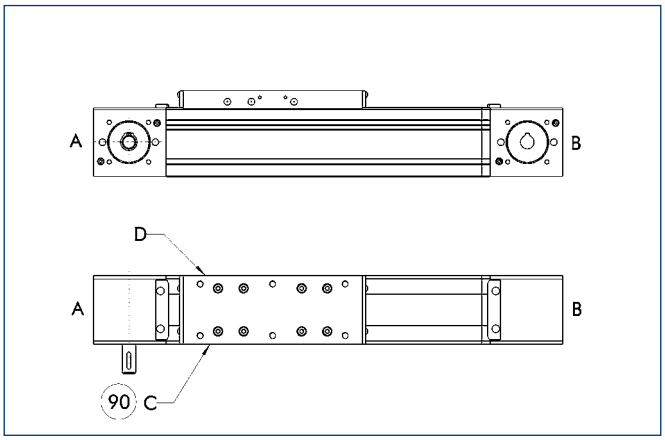
C	GS 9	GS 14	GS 19	GS 24	GS 28
	10	13	16	18	20

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

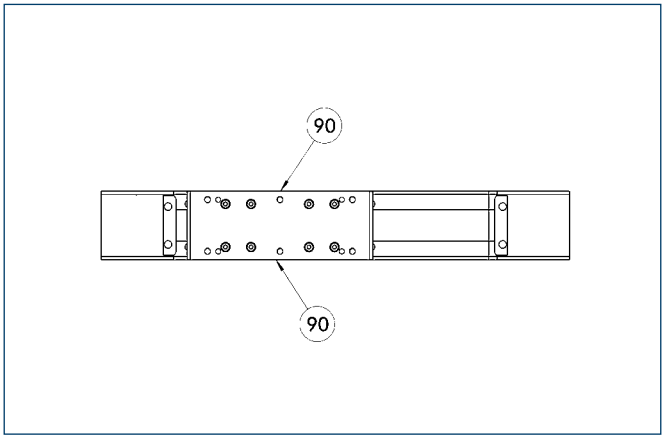
Two E02 switches are used as limit switches and an RS2 as the reference switch as standard.

ⓘ 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

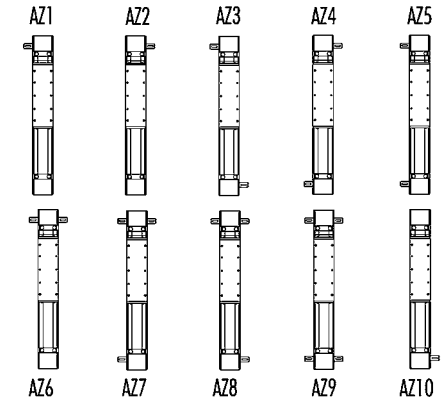


90 Standard lubrication connection

Standard connection
Lubrication nipple M8x1

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

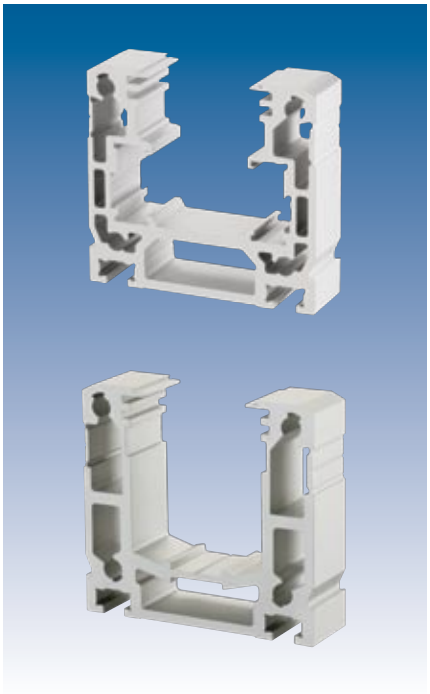
Drive shafts



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.

B 70C-ARS/-ASS



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

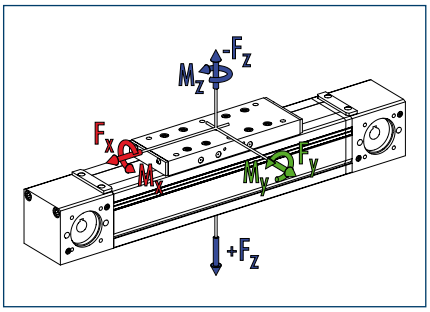
Advantages of profiled rail guide

High load bearing capacity

Long lifetime

High precision

Loads and load torques



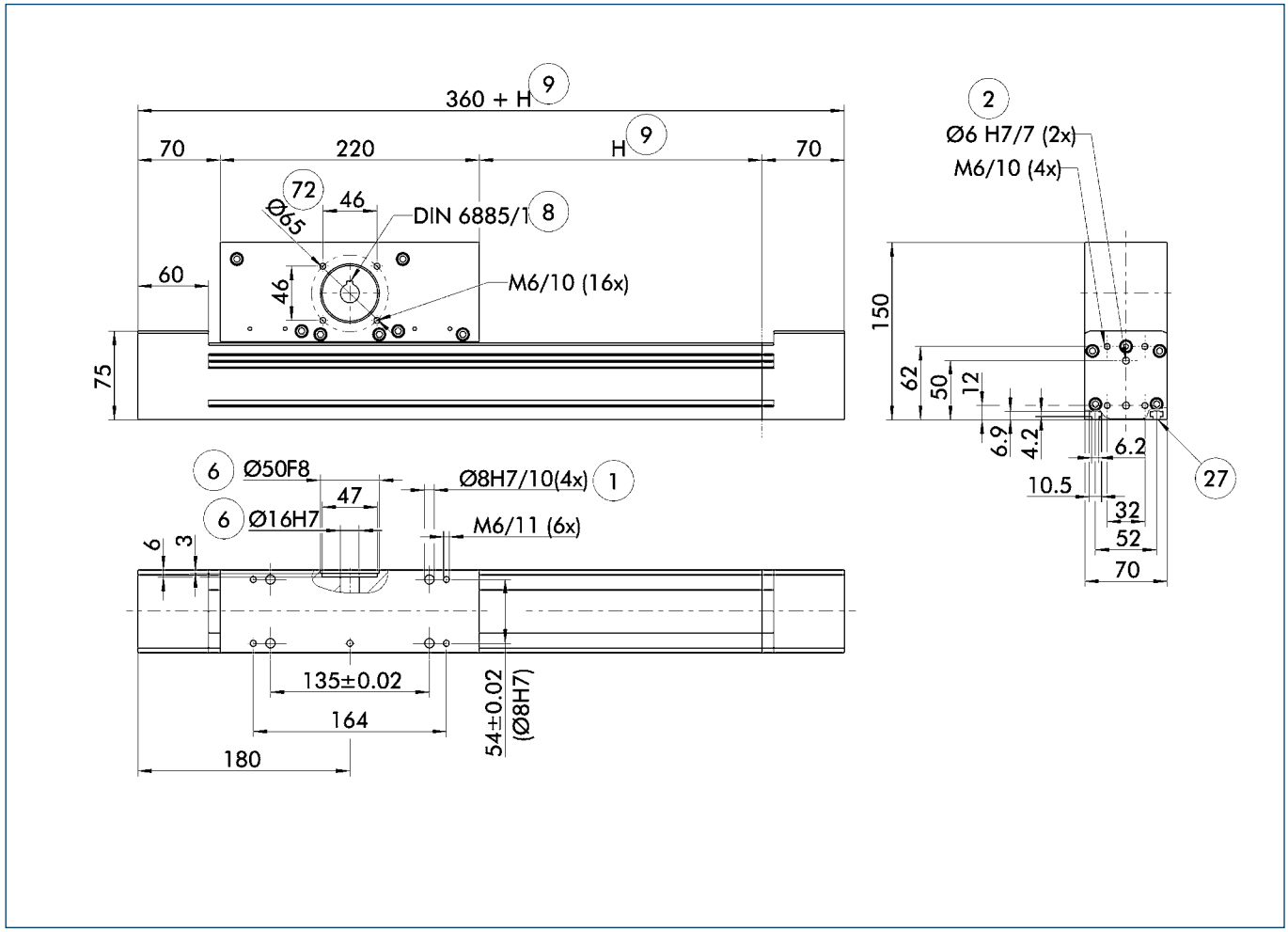
Load		ARS dynamic	ASS dynamic
F_x **	[N]	900	900
F_y	[N]	300	600
F_z	[N]	1000	1800
$-F_z$	[N]	400	1200
Load torques		**ARS dynamic**	**ASS dynamic**
M_x	[Nm]	35	60
M_y	[Nm]	120	180
M_z	[Nm]	50	120
M_{Amax}	[Nm]	32.5	32.5

** Maximum value = Depending on speed
ⓘ Values in brackets relate to the long slide.

Technical data

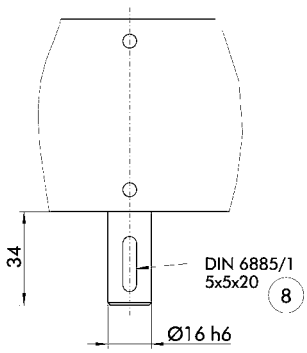
Designation		B 70C-ARS	B 70C-ASS
Max. travel speed	[m/s]	5	5
Repeat accuracy	[mm]	**± 0.08**	**± 0.08**
Max. acceleration	[m/s²]	30	30
Idle torque	[Nm]	1	1
Drive			
Drive element	Toothed belt	32 AT 5-E	32 AT 5-E
Travel per revolution	[mm]	220	220
Maximum stroke	[mm]	7640	7640
Max. total length	[mm]	8000	8000
Moment of inertia	[kgm²]	0.0061	0.0061
Weights			
Basic without travel	[kg]	7.5	7.9
Travel per 100 mm	[kg]	0.38	0.60
Slide drive 220 mm	[kg]	5.0	5.5

Main views



1 Linear unit connection
2 Assembly connection
6 Drive connection
8 Feather key DIN 6885
9 Useful stroke
27 Mounting groove for T-nuts
72 Bolt pitch circle

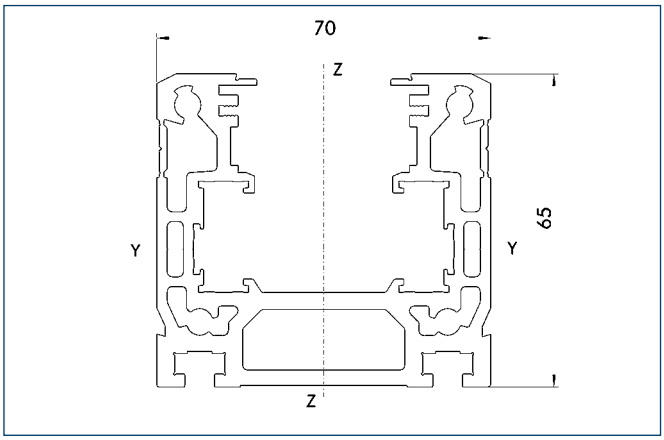
Drive journal connection dimensions



8 Feather key

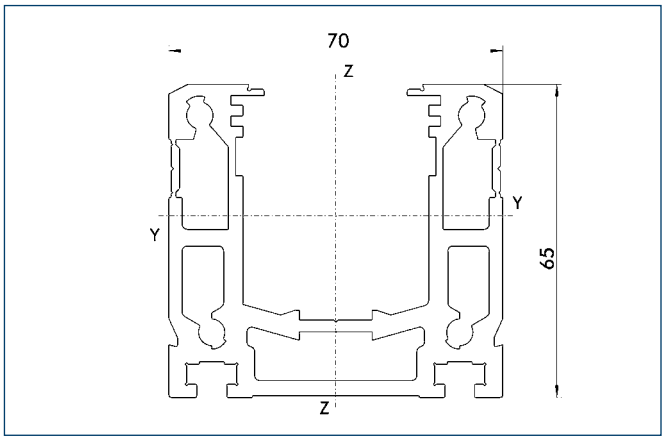
B 70C-ARS/-ASS

Profile ARS



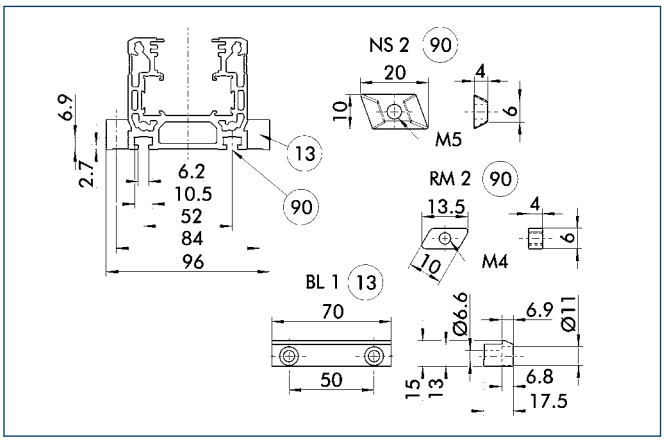
Specific mass	[kg/m]	3.7
Planar dimension	[mm²]	1370
Planar moment of inertia I_y	[mm⁴]	585283
Planar moment of inertia I_z	[mm⁴]	854713
Load torque W_y	[mm³]	15835
Load torque W_z	[mm³]	24410

Profile ASS



Specific mass	[kg/m]	3.7
Planar dimension	[mm²]	1370
Planar moment of inertia I_y	[mm⁴]	563059
Planar moment of inertia I_z	[mm⁴]	852507
Load torque W_y	[mm³]	14743
Load torque W_z	[mm³]	24335

Mounting

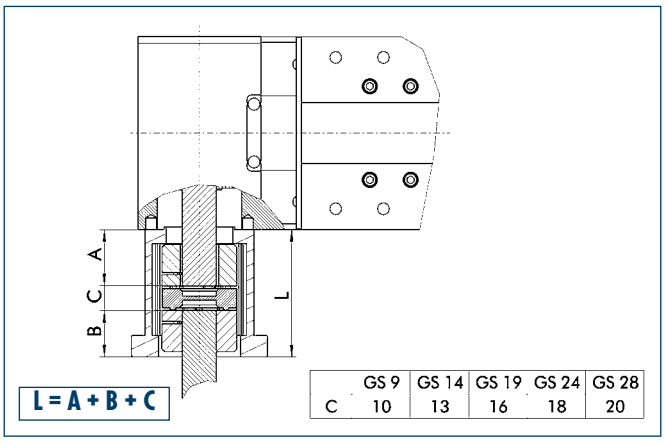


(13) Mounting strip (90) T-nut on base side

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

Designation	Order designation	ID no.
T-nut	NS2	0331405
T-nut	RM2	0331425
Mounting strip	BL1	0331400

Motor flange schematic diagram



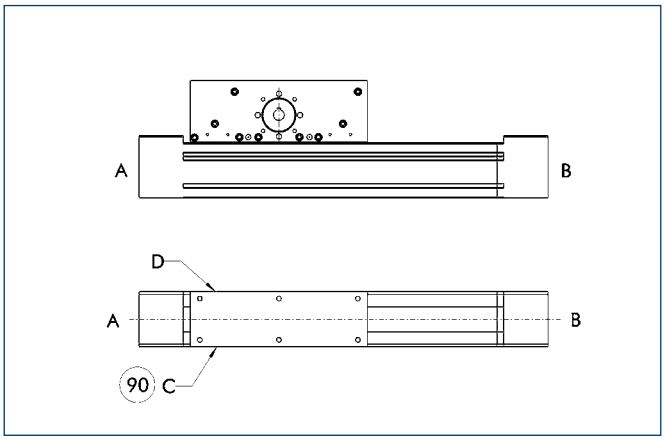
C	GS 9	GS 14	GS 19	GS 24	GS 28
	10	13	16	18	20

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

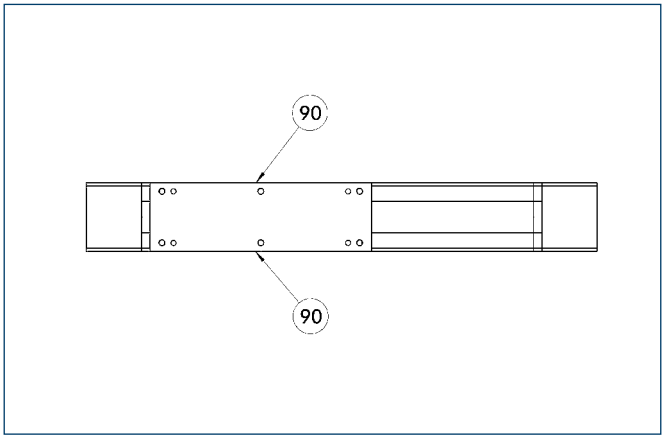
Two E02 switches are used as limit switches and an RS2 as the reference switch as standard.

ⓘ 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

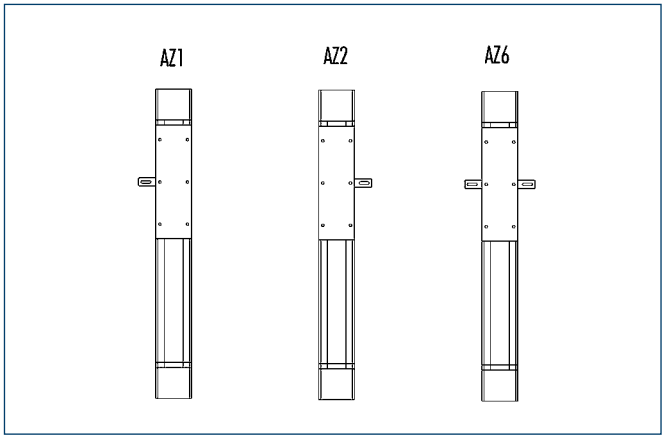


90 Standard lubrication connection

Standard connection
Lubrication nipple M8x1

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

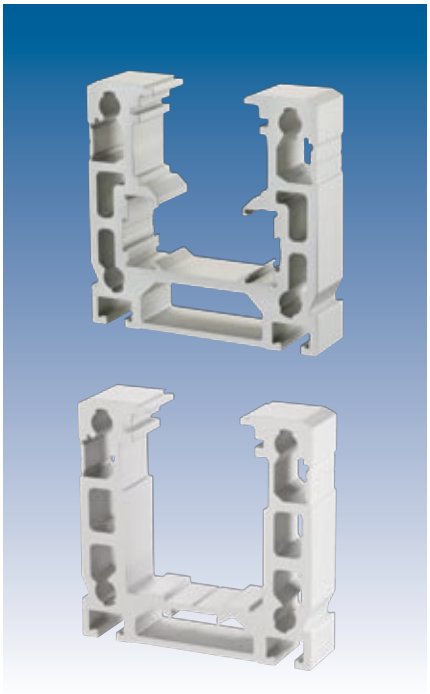
Drive shafts



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.

B 80-ZRS/-ZSS



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

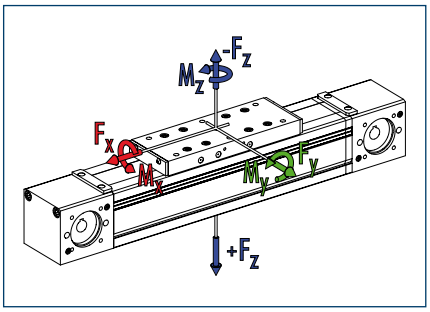
Advantages of profiled rail guide

High load bearing capacity

Long lifetime

High precision

Loads and load torques



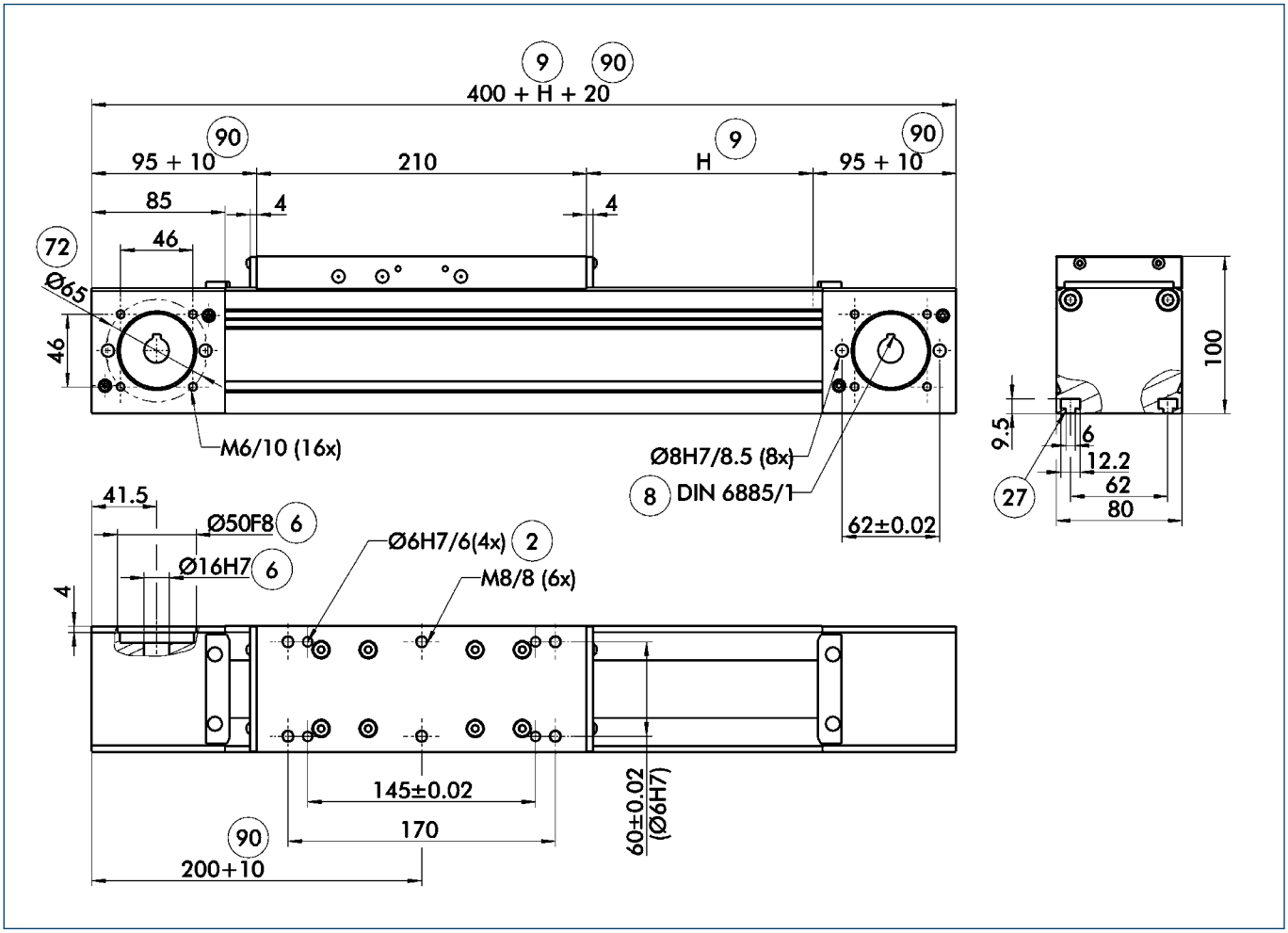
Load		ZRS dynamic	ZSS dynamic
F_x **	[N]	1350	1350
F_y	[N]	500	800
F_z	[N]	1500	3000
$-F_z$	[N]	800	2000
Load torques		**ZRS dynamic**	**ZSS dynamic**
M_x	[Nm]	50	100
M_y	[Nm]	180 (220)	250 (300)
M_z	[Nm]	100 (130)	250 (300)
M_{Amax}	[Nm]	48.8	48.8

** Maximum value = Depending on speed
ⓘ Values in brackets relate to the long slide.

Technical data

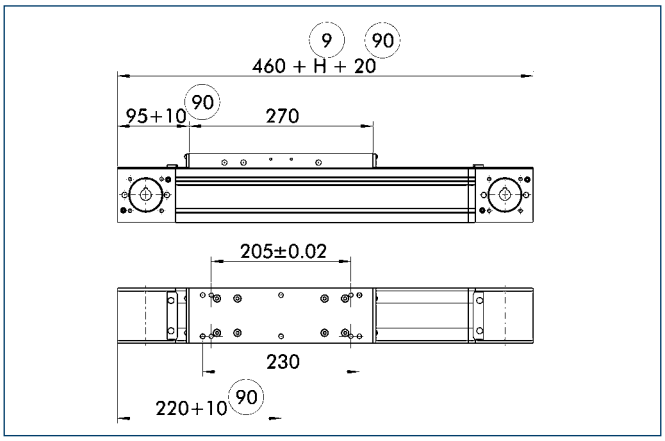
Designation		B 80-ZRS	B 80-ZSS
Max. travel speed	[m/s]	8	5
Repeat accuracy	[mm]	0.08	0.08
Max. acceleration	[m/s²]	40	40
Idle torque	[Nm]	1.5	1.5
Drive			
Drive element	Toothed belt	32 AT 5-E	32 AT 5-E
Travel per revolution	[mm]	220	220
Maximum stroke	[mm]	7600	7600
Max. total length	[mm]	8000	8000
Moment of inertia	[kgm²]	0.0033	0.003
Weights			
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



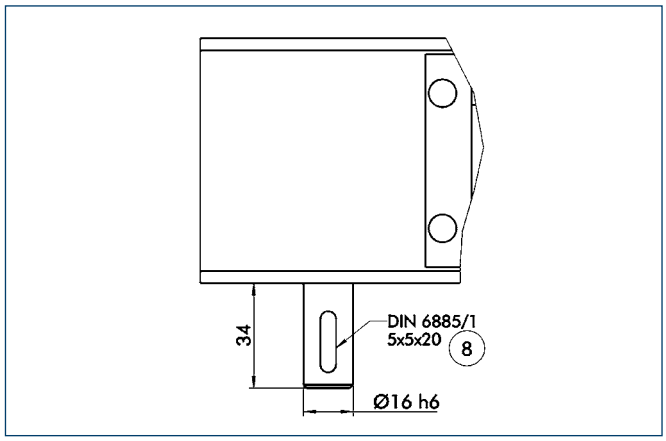
2 Assembly connection
6 Drive connection
8 Feather key DIN 6885
9 Useful stroke
27 Mounting groove for T-nuts
72 Bolt pitch circle
90 Change of dimension with optional cover tape

Long slide



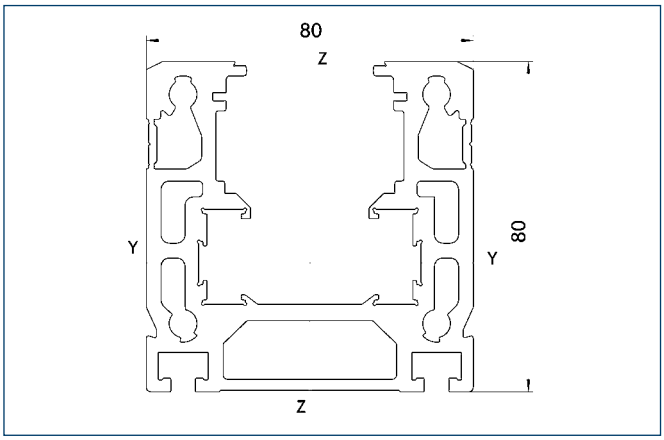
9 Useful stroke

Drive journal connection dimensions



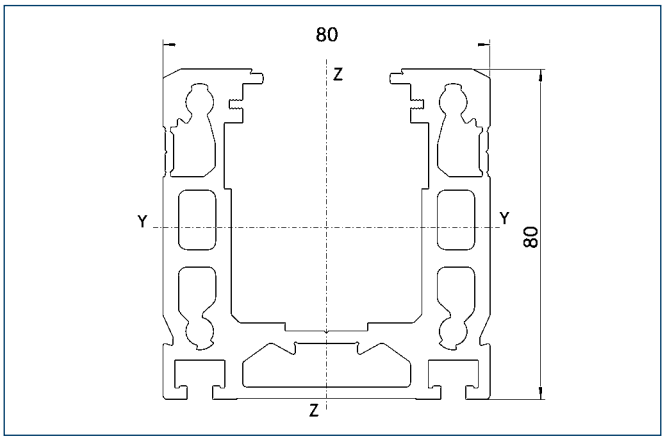
8 Feather key

Profile ZRS



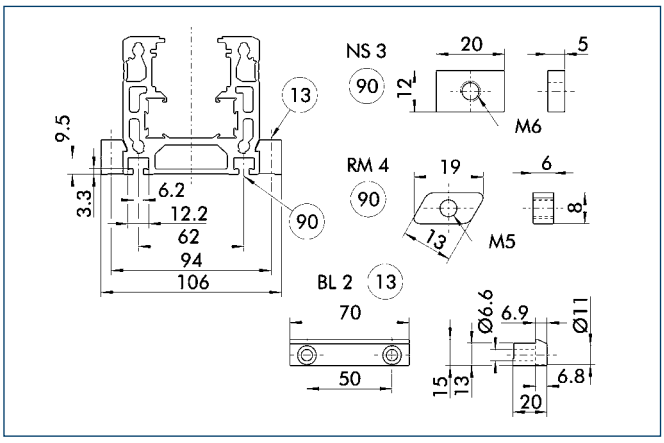
Specific mass	[kg/m]	5.64
Planar dimension	[mm²]	2090
Planar moment of inertia I_y	[mm⁴]	1294343
Planar moment of inertia I_z	[mm⁴]	1732340
Load torque W_y	[mm³]	30263
Load torque W_z	[mm³]	43258

Profile ZSS



Specific mass	[kg/m]	5.4
Planar dimension	[mm²]	2000
Planar moment of inertia I_y	[mm⁴]	1303940
Planar moment of inertia I_z	[mm⁴]	1680598
Load torque W_y	[mm³]	29397
Load torque W_z	[mm³]	41895

Mounting

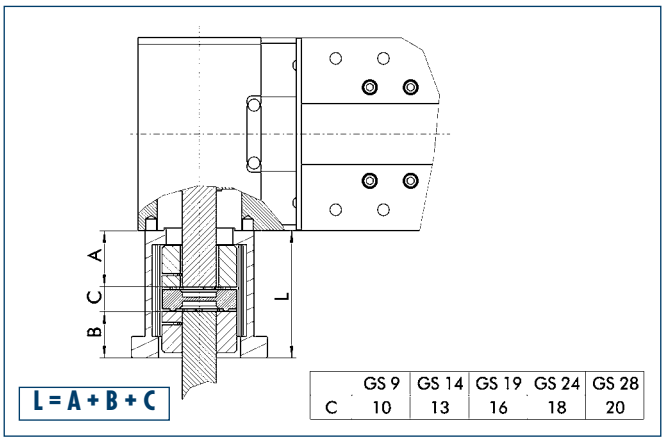


(13) Mounting strip (90) T-nut on base side

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



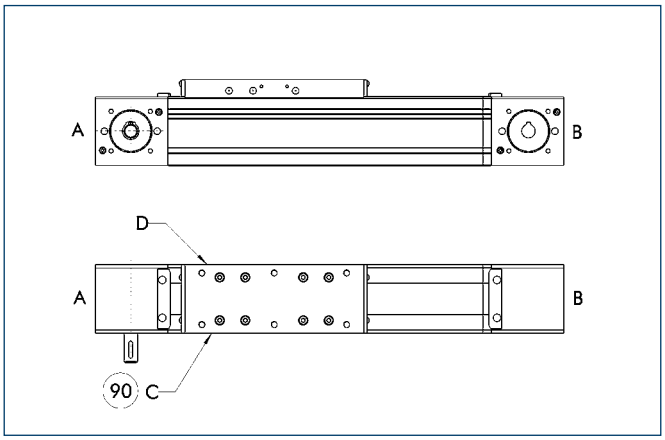
C	GS 9	GS 14	GS 19	GS 24	GS 28
	10	13	16	18	20

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

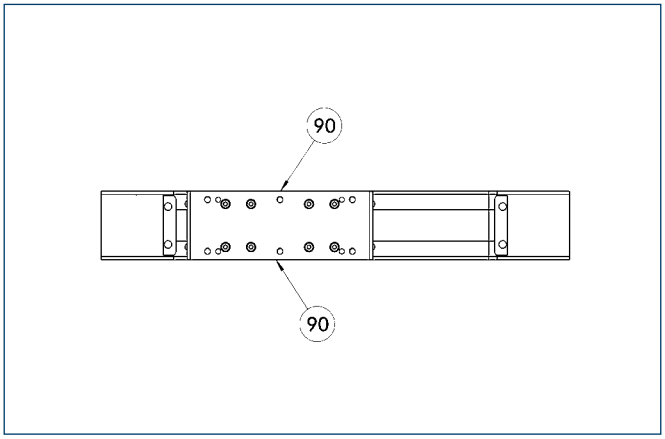
Two E02 switches are used as limit switches and an RS2 as the reference switch as standard.

ⓘ 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

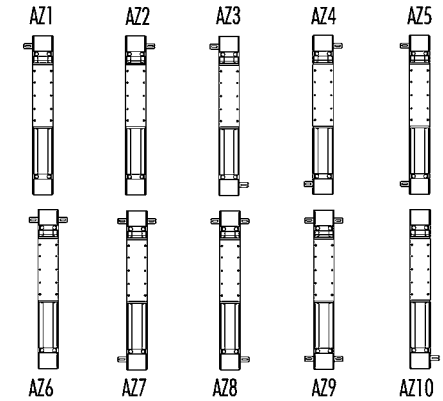


90 Standard lubrication connection

Standard connection
Lubrication nipple M8x1

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

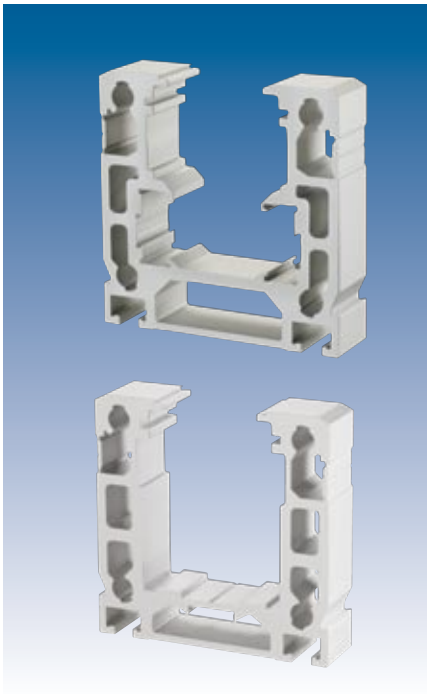
Drive shafts



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.

B 80-ARS/-ASS



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

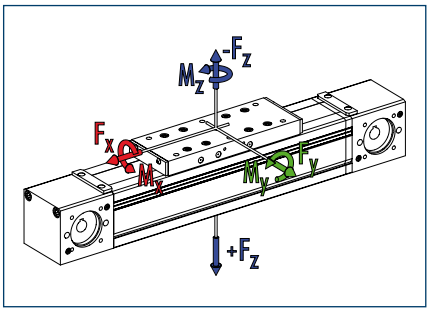
Advantages of profiled rail guide

High load bearing capacity

Long lifetime

High precision

Loads and load torques



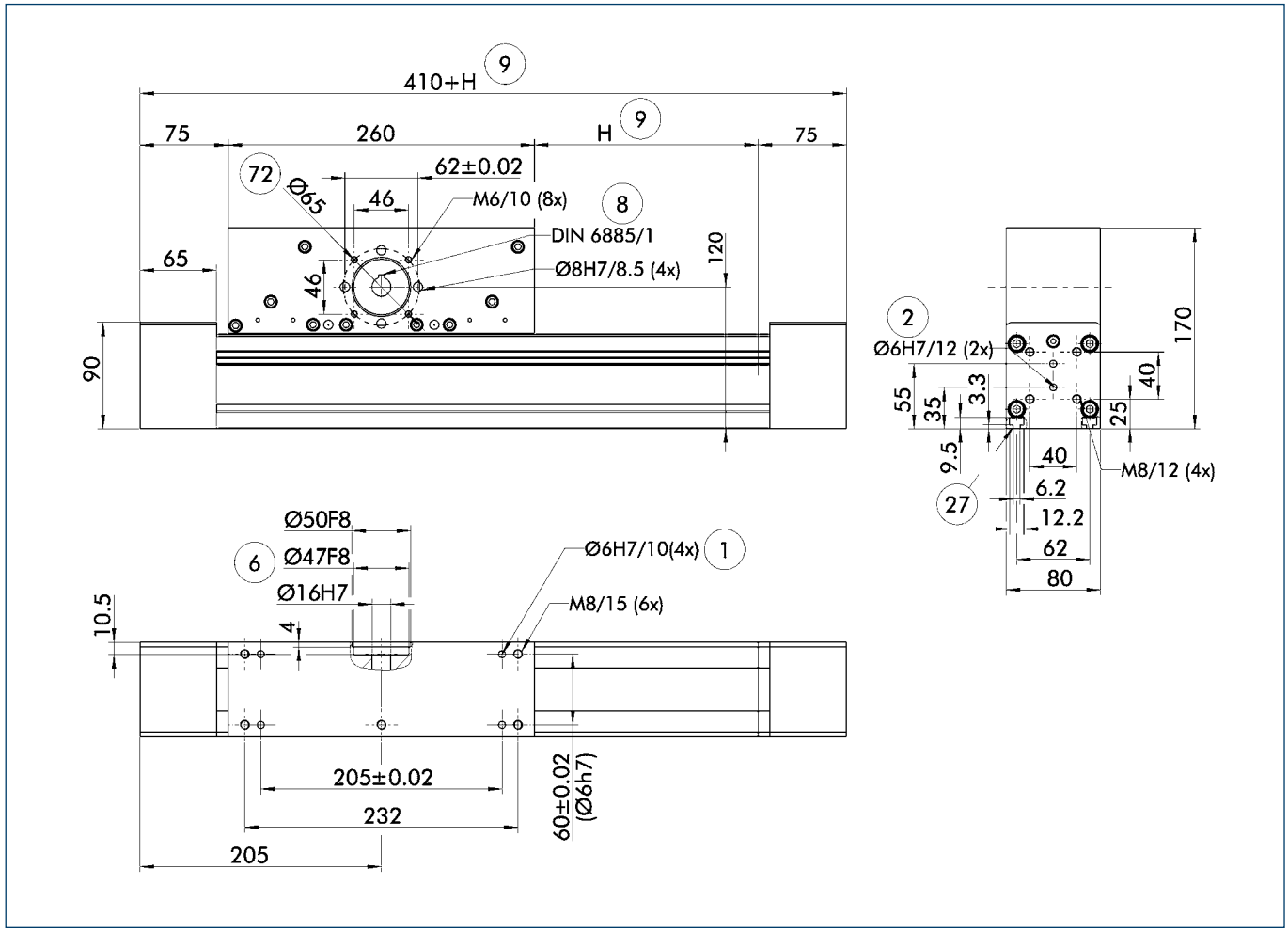
Load		ARS dynamic	ASS dynamic
F_x **	[N]	1000	1000
F_y	[N]	500	800
F_z	[N]	1500	3000
$-F_z$	[N]	800	2000
Load torques		**ARS dynamic**	**ASS dynamic**
M_x	[Nm]	50	100
M_y	[Nm]	180	250
M_z	[Nm]	100	250
M_{Amax}	[Nm]	36.5	36.5

** Maximum value = Depending on speed
ⓘ Values in brackets relate to the long slide.

Technical data

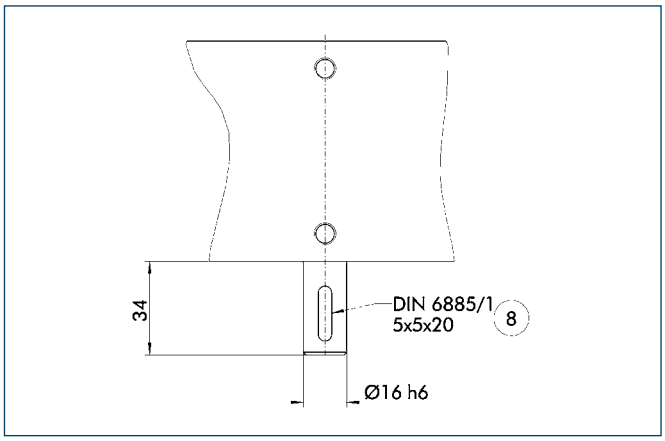
Designation		B 80-ARS	B 80-ASS
Max. travel speed	[m/s]	8	5
Repeat accuracy	[mm]	**± 0.08**	**± 0.08**
Max. acceleration	[m/s²]	40	40
Idle torque	[Nm]	1.5	1.5
Drive			
Drive element	Toothed belt	32 AT 10	32 AT 10
Travel per revolution	[mm]	220	220
Maximum stroke	[mm]	7590	7590
Max. total length	[mm]	8000	8000
Moment of inertia	[kgm²]	0.0092	0.0086
Weights			
Basic without travel	[kg]	10.5	11.5
Travel per 100 mm	[kg]	0.6	0.85
Slide drive 260 mm	[kg]	7.5	7.0

Main views



① Linear unit connection
② Assembly connection
⑥ Drive connection
⑧ Feather key DIN 6885
⑨ Useful stroke
㉗ Mounting groove for T-nuts
㉜ Bolt pitch circle

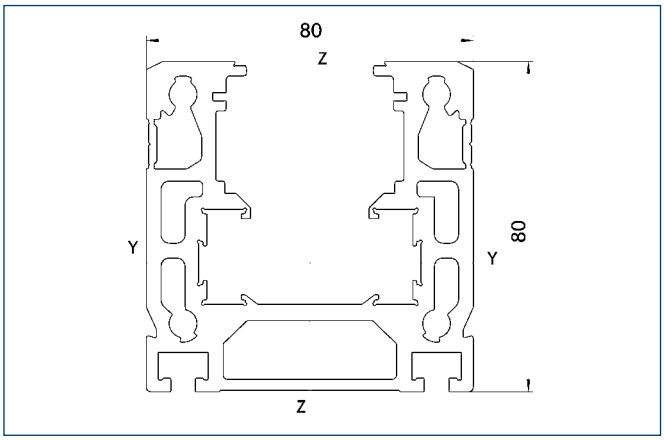
Drive journal connection dimensions



⑧ Feather key

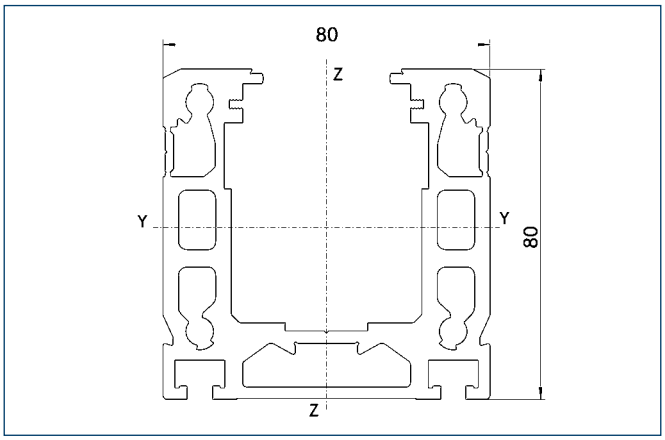
B 80-ARS/-ASS

Profile ARS



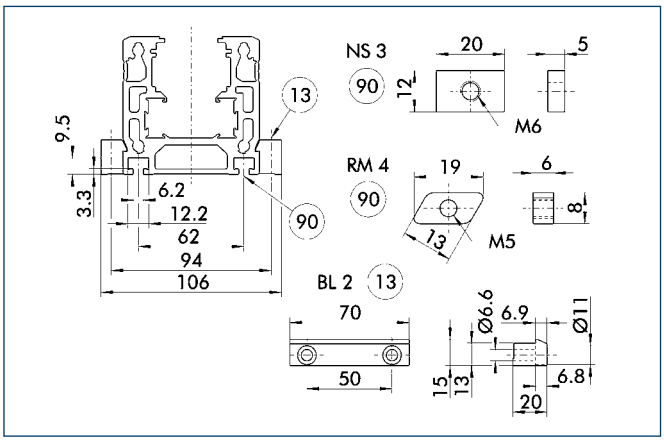
Specific mass	[kg/m]	5.64
Planar dimension	[mm²]	2090
Planar moment of inertia I_y	[mm⁴]	1294343
Planar moment of inertia I_z	[mm⁴]	1732340
Load torque W_y	[mm³]	30263
Load torque W_z	[mm³]	43258

Profile ASS



Specific mass	[kg/m]	5.4
Planar dimension	[mm²]	2000
Planar moment of inertia I_y	[mm⁴]	1303940
Planar moment of inertia I_z	[mm⁴]	1680598
Load torque W_y	[mm³]	29397
Load torque W_z	[mm³]	41895

Mounting

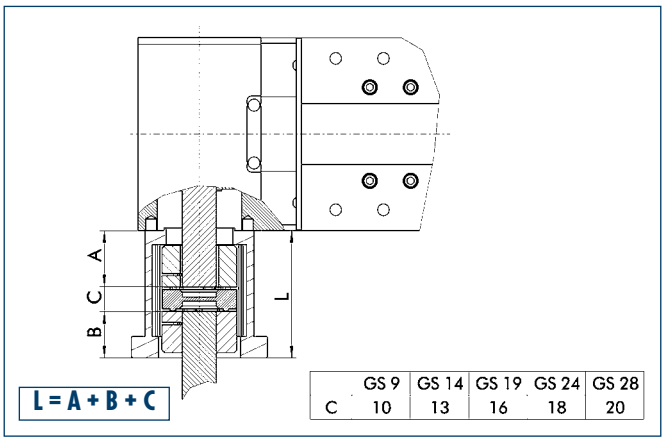


(13) Mounting strip (90) T-nut on base side

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



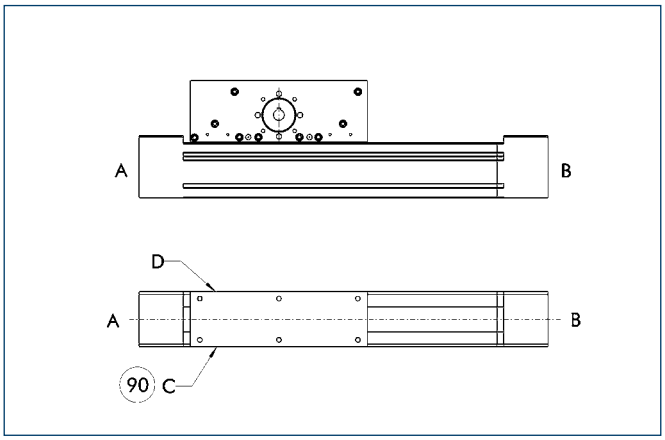
C	GS 9	GS 14	GS 19	GS 24	GS 28
	10	13	16	18	20

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

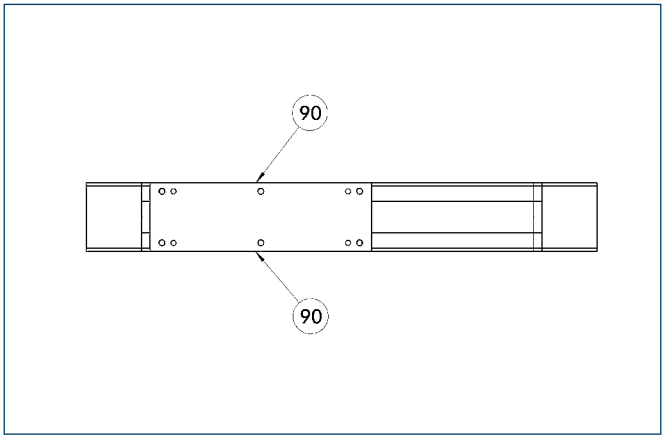
Two EO2 switches are used as limit switches and an RS2 as the reference switch as standard.

ⓘ 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	EO2	0331410
Inductive limit switch, opener, 10 m cable	EO10	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

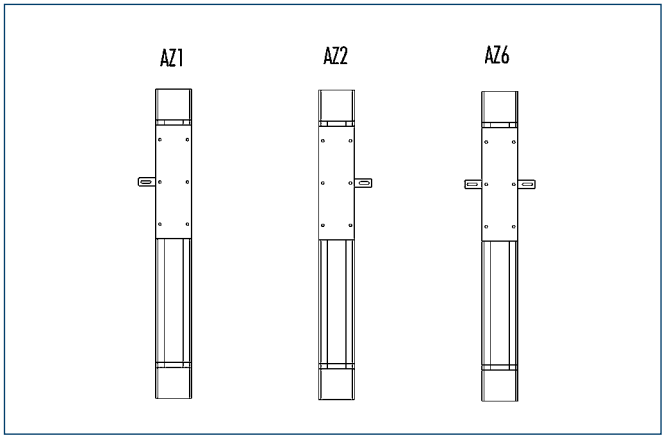


90 Standard lubrication connection

Standard connection
Lubrication nipple M8x1

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

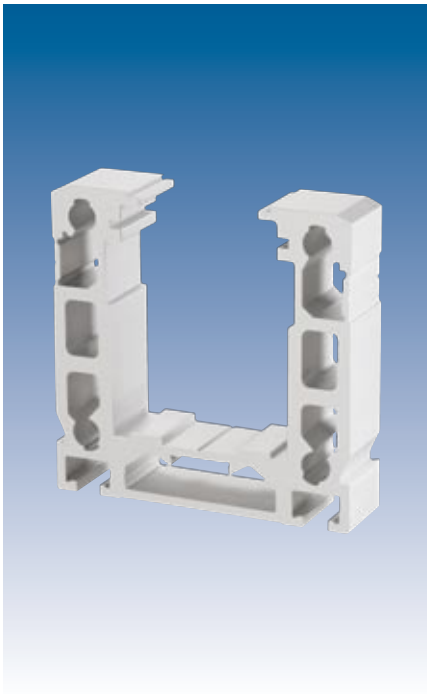
Drive shafts



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.

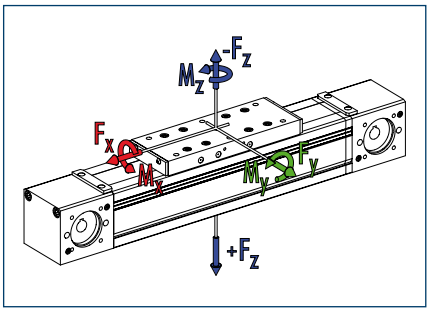
B 80C-ZSS



Advantages of profiled rail guide

- High load bearing capacity
- Long lifetime
- High precision

Loads and load torques



Load		Dynamic
F_x **	[N]	2200
F_y	[N]	1600
F_z	[N]	4000
$-F_z$	[N]	3000
Load torques		**Dynamic**
M_x	[Nm]	300
M_y	[Nm]	500 (640)
M_z	[Nm]	500 (640)
M_{Amax}	[Nm]	75.3

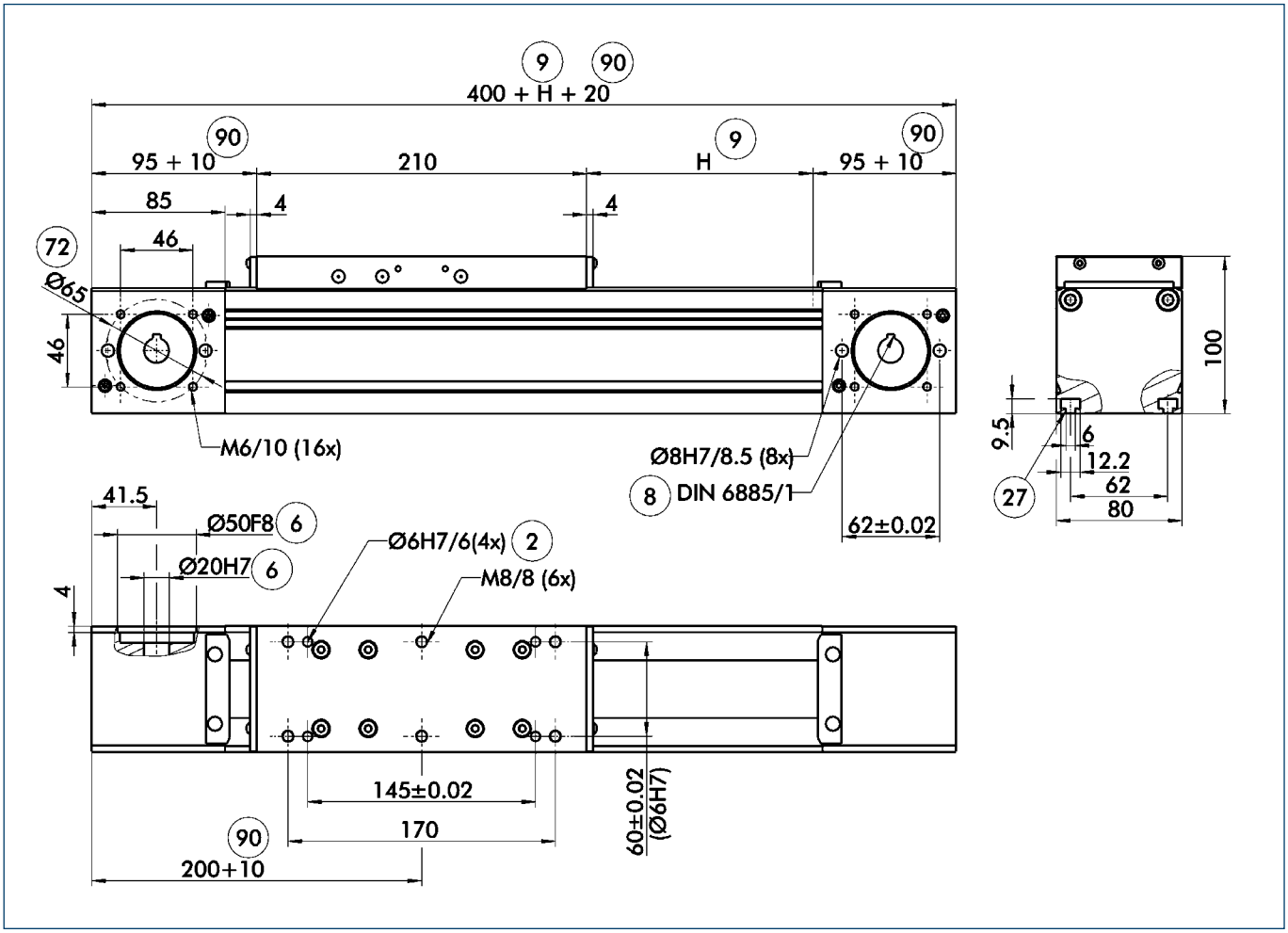
** Maximum value = Depending on speed

ⓘ Values in brackets relate to the long slide.

Technical data

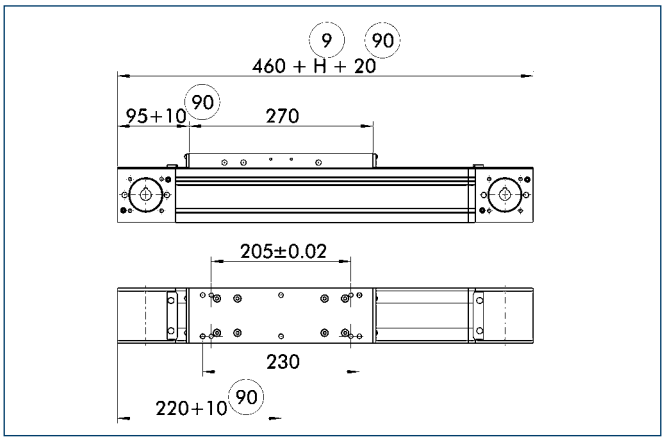
Designation		B 80C-ZSS
Max. travel speed	[m/s]	5
Repeat accuracy	[mm]	**± 0.08**
Max. acceleration	[m/s²]	40
Idle torque	[Nm]	1.8
Drive		
Drive element	Toothed belt	32 AT 10
Travel per revolution	[mm]	210
Maximum stroke	[mm]	7600
Max. total length	[mm]	8000
Moment of inertia	[kgm²]	0.004
Weights		
Basic without travel	[kg]	7.8
Travel per 100 mm	[kg]	0.98
Slide plate 210 mm	[kg]	2.75
Slide plate 270 mm	[kg]	3.25

Main views



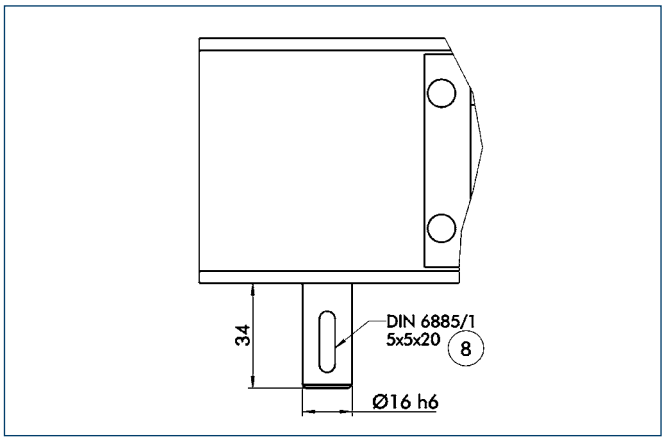
(2) Assembly connection
(6) Drive connection
(8) Feather key DIN 6885
(9) Useful stroke
(27) Mounting groove for T-nuts
(72) Bolt pitch circle
(90) Change of dimension with optional cover tape

Long slide



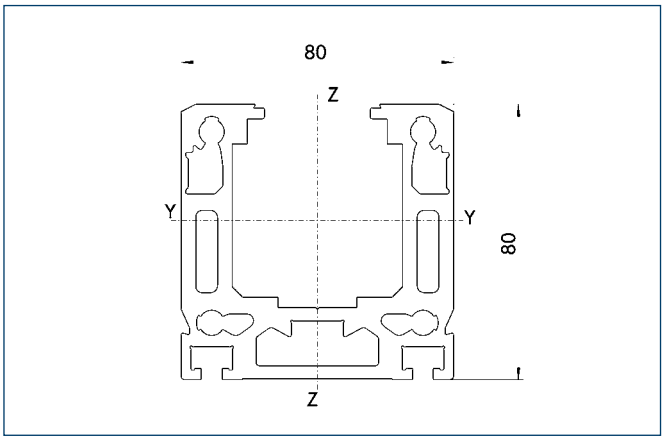
(9) Useful stroke
(90) Change of dimension with optional cover tape

Drive journal connection dimensions



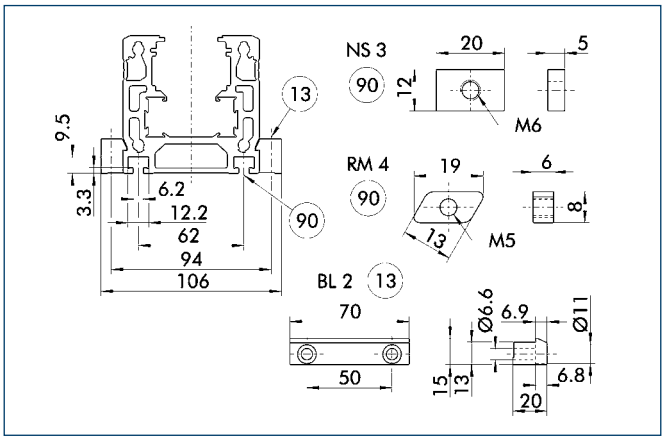
(8) Feather key

Profile ZSS



Specific mass	[kg/m]	5.92
Planar dimension	[mm²]	2191
Planar moment of inertia I_y	[mm⁴]	1376276
Planar moment of inertia I_z	[mm⁴]	1772609
Load torque W_y	[mm³]	30375
Load torque W_z	[mm³]	44315

Mounting

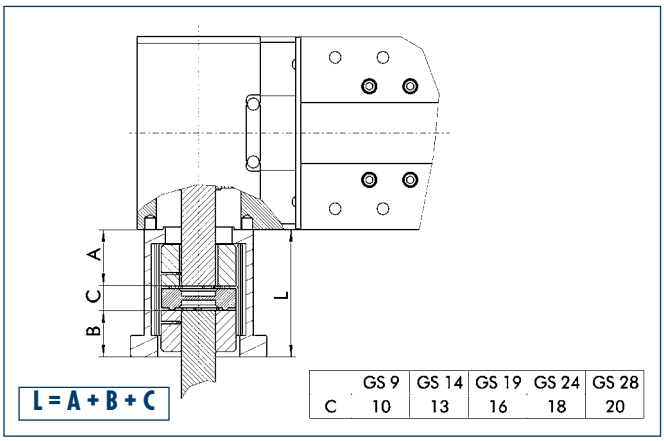


(13) Mounting strip (90) T-nut on base side

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



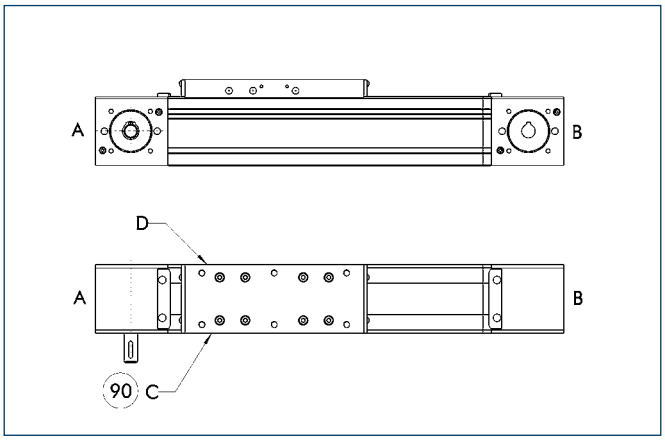
	GS 9	GS 14	GS 19	GS 24	GS 28
C	10	13	16	18	20

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

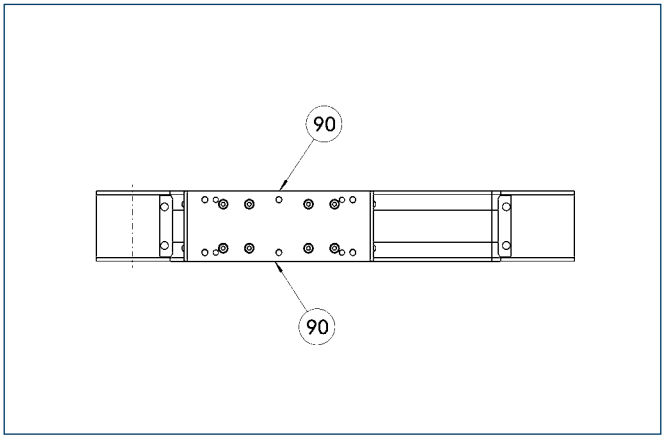
Two EO2 switches are used as limit switches and an RS2 as the reference switch as standard.

ⓘ 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	EO2	0331410
Inductive limit switch, opener, 10 m cable	EO10	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

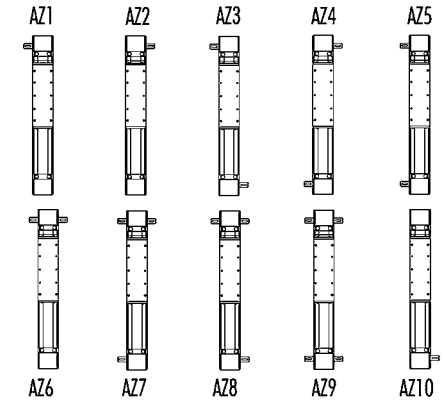


90 Standard lubrication connection

Standard connection
Lubrication nipple M8x1

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

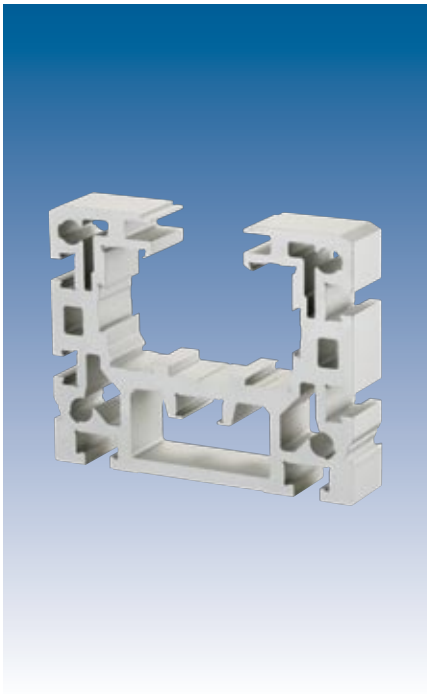
Drive shafts



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.

B 100-ZRS/-ZSS



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

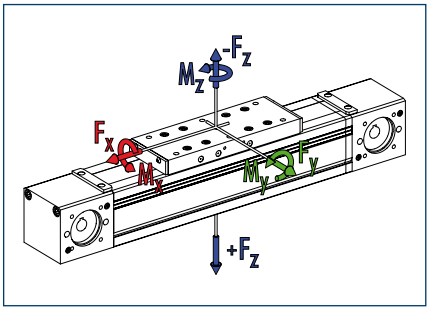
Advantages of profiled rail guide

High load bearing capacity

Long lifetime

High precision

Loads and load torques



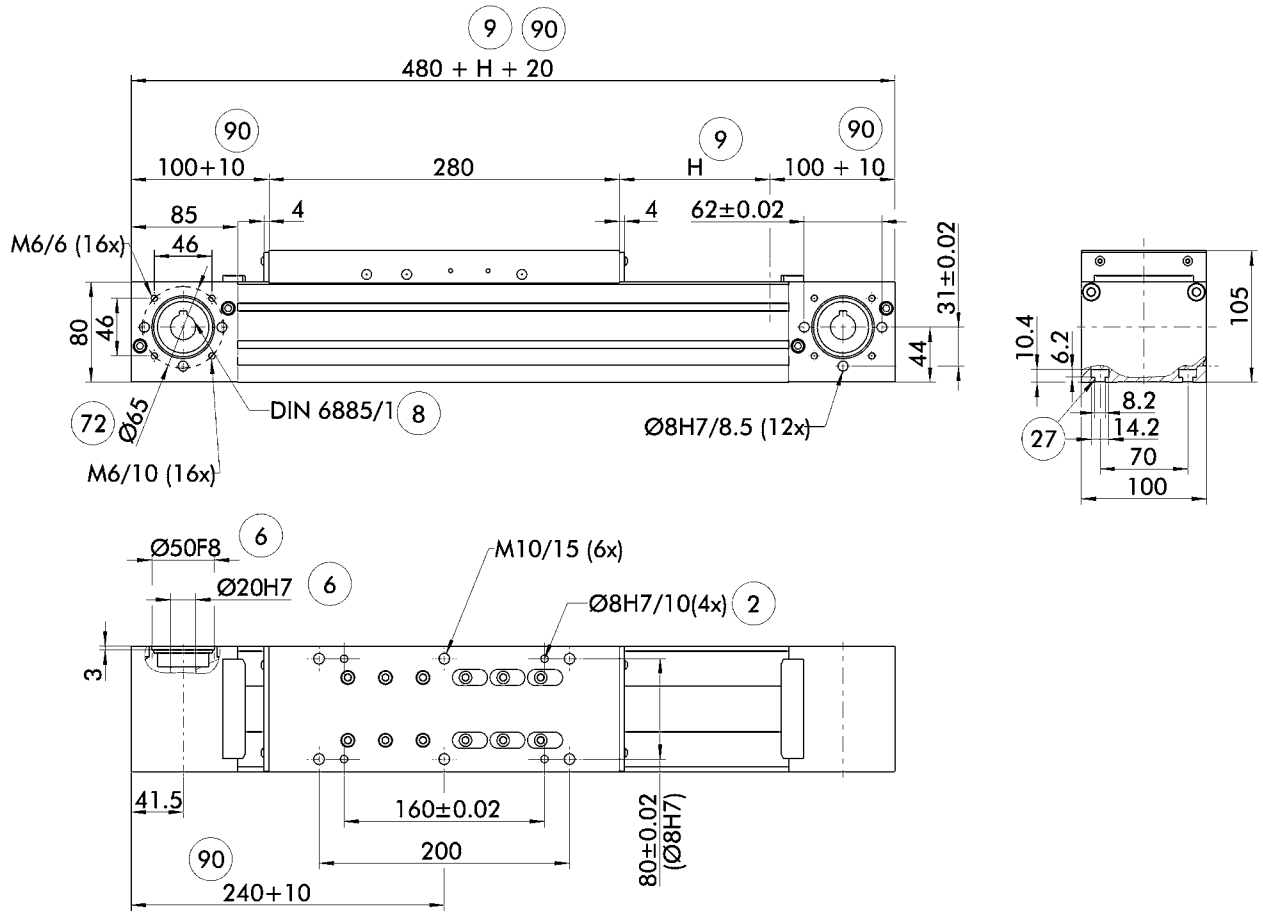
Load		ZRS dynamic	ZSS dynamic
F_x **	[N]	2800	2800
F_y	[N]	1000	1000
F_z	[N]	2500	3000
$-F_z$	[N]	1200	2000
Load torques		**ZRS dynamic**	**ZSS dynamic**
M_x	[Nm]	200	200
M_y	[Nm]	250 (350)	300 (420)
M_z	[Nm]	200 (280)	300 (420)
M_{Amax}	[Nm]	91.6	91.6

** Maximum value = Depending on speed
ⓘ Values in brackets relate to the long slide.

Technical data

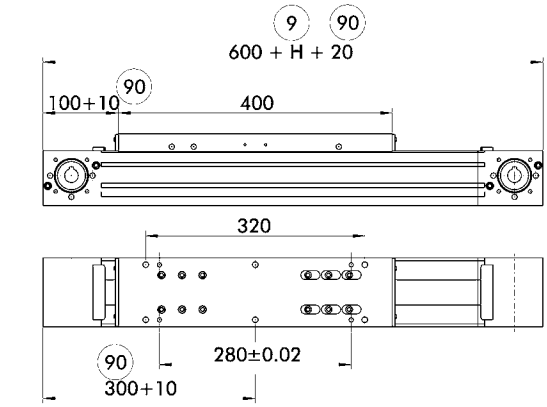
Designation		B 100-ZRS	B 100-ZSS
Max. travel speed	[m/s]	8	5
Repeat accuracy	[mm]	**± 0.08**	**± 0.08**
Max. acceleration	[m/s²]	40	40
Idle torque	[Nm]	2.5	2.5
Drive			
Drive element	Toothed belt	40 AT 10	40 AT 10
Travel per revolution	[mm]	200	200
Maximum stroke	[mm]	7420	7420
Max. total length	[mm]	7900	7900
Moment of inertia	[kgm²]	0.013	0.0126
Weights			
Basic without travel	[kg]	9.5	9.1
Travel per 100 mm	[kg]	1.1	1.45
Slide plate 280 mm	[kg]	4.1	3.8
Slide plate 400 mm	[kg]	5.85	5.43

Main views



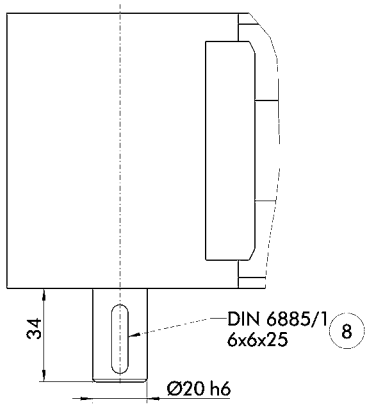
(2) Assembly connection
(6) Drive connection
(8) Feather key DIN 6885
(9) Useful stroke
(27) Mounting groove for T-nuts
(72) Bolt pitch circle
(90) Change of dimension with optional cover tape

Long slide



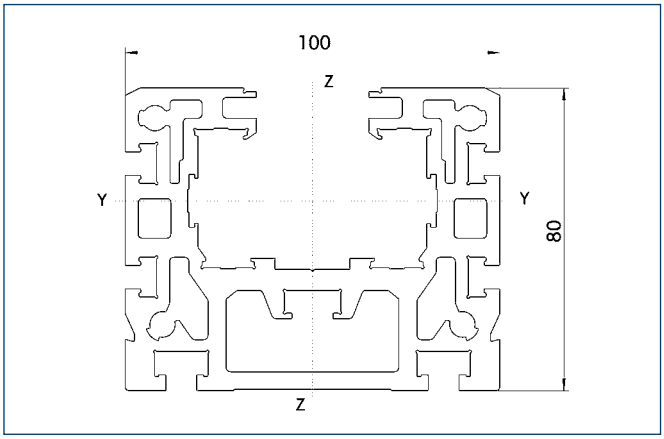
(9) Useful stroke
(90) Change of dimension with optional cover tape

Drive journal connection dimensions



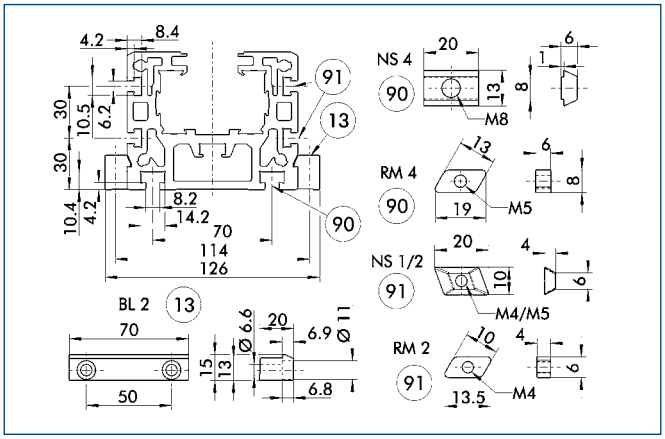
(8) Feather key

Profile ZRS/ZSS



Specific mass	[kg/m]	7.97
Planar dimension	[mm²]	2950
Planar moment of inertia I_y	[mm⁴]	1782959
Planar moment of inertia I_z	[mm⁴]	3507213
Load torque W_y	[mm³]	40598
Load torque W_z	[mm³]	70137

Mounting

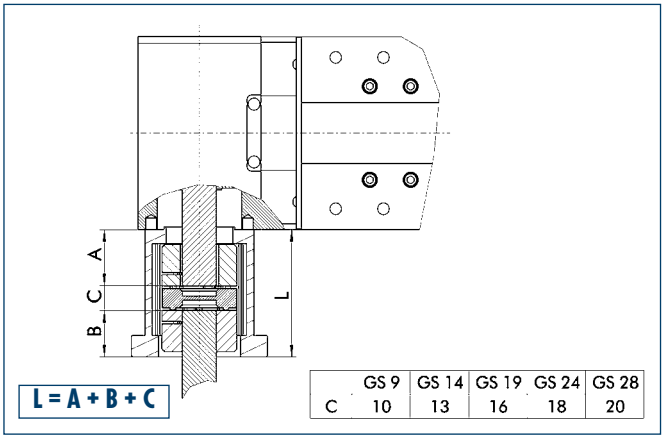


(13) Mounting strip
(90) T-nut on base side
(91) Side T-nut

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

Designation	Order designation	ID no.
T-nut	NS1	0331404
T-nut	NS2	0331405
T-nut	NS4	0331407
T-nut	RM2	0331425
T-nut	RM4	0331426
Mounting strip	BL2	0331401

Motor flange schematic diagram



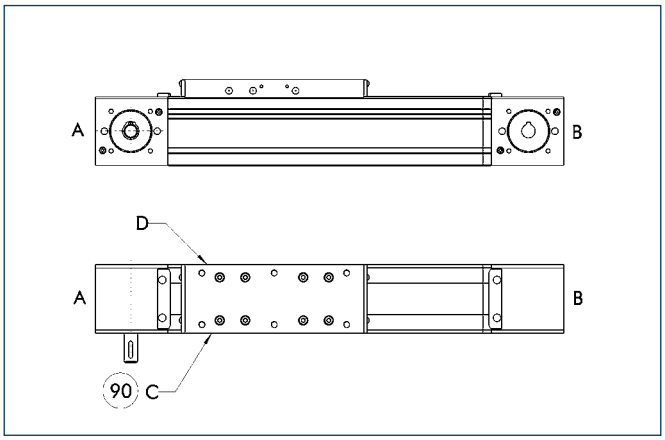
	GS 9	GS 14	GS 19	GS 24	GS 28
C	10	13	16	18	20

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

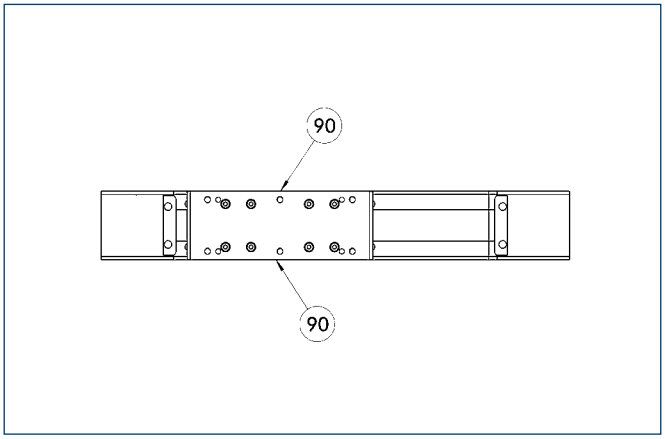
Two EO2 switches are used as limit switches and an RS2 as the reference switch as standard.

ⓘ 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	EO2	0331410
Inductive limit switch, opener, 10 m cable	EO10	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

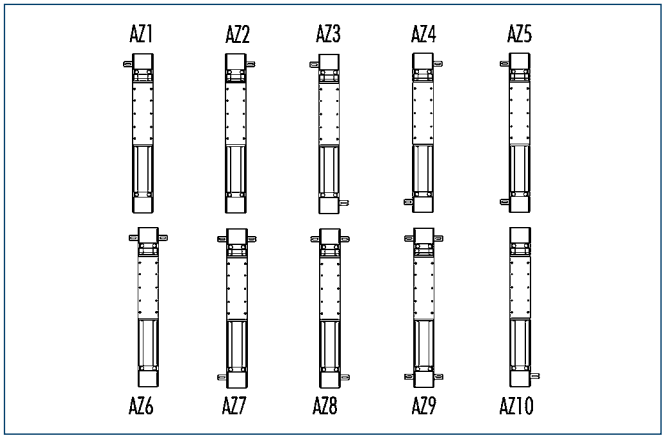


90 Standard lubrication connection

Standard connection
Lubrication nipple M8x1

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

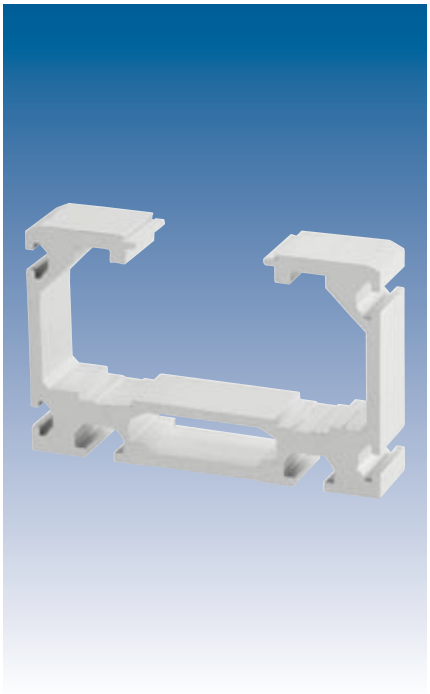
Drive shafts



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.

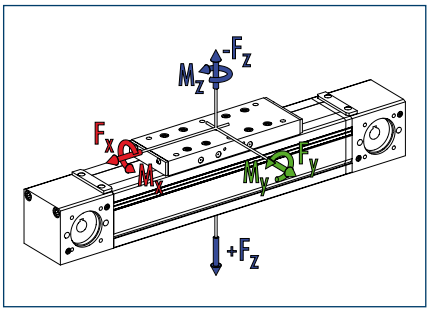
B 100D-ZSS



Advantages of profiled rail guide

- High load bearing capacity
- Long lifetime
- High precision

Loads and load torques



Load		Dynamic
F_x **	[N]	1500
F_y	[N]	1800
F_z	[N]	4000
$-F_z$	[N]	3000
Load torques		**Dynamic**
M_x	[Nm]	350
M_y	[Nm]	750 (1000)
M_z	[Nm]	750 (1000)
M_{Amax}	[Nm]	40.7

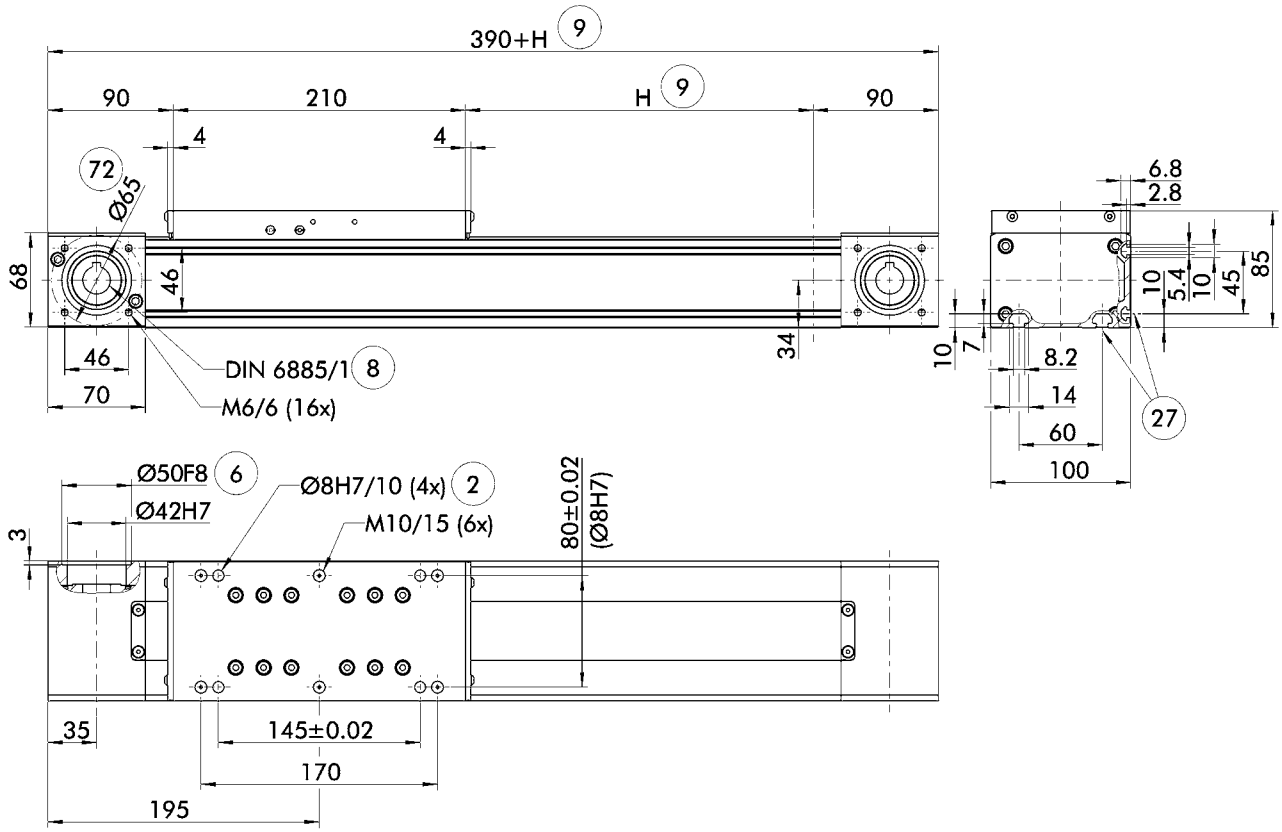
** Maximum value = Depending on speed

ⓘ Values in brackets relate to the long slide.

Technical data

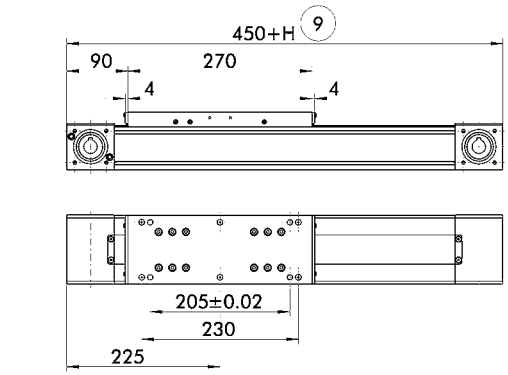
Designation		B 100D-ZSS
Max. travel speed	[m/s]	5
Repeat accuracy	[mm]	**± 0.08**
Max. acceleration	[m/s²]	60
Idle torque	[Nm]	2.5
Drive		
Drive element	Toothed belt	40 AT 10-E
Travel per revolution	[mm]	160
Maximum stroke	[mm]	7720
Max. total length	[mm]	8100
Moment of inertia	[kgm²]	0.0028
Weights		
Basic without travel	[kg]	6.8
Travel per 100 mm	[kg]	0.75
Slide plate 210 mm	[kg]	3.5
Slide plate 270 mm	[kg]	4.1

Main views



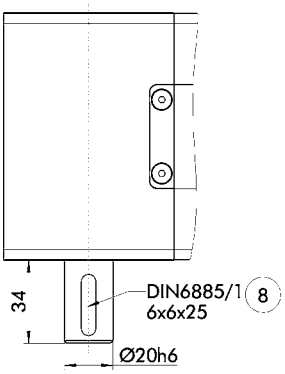
(2) Assembly connection
(6) Drive connection
(8) Feather key DIN 6885
(9) Useful stroke
(27) Mounting groove for T-nuts
(72) Bolt pitch circle

Long slide



(9) Useful stroke

Drive journal connection dimensions

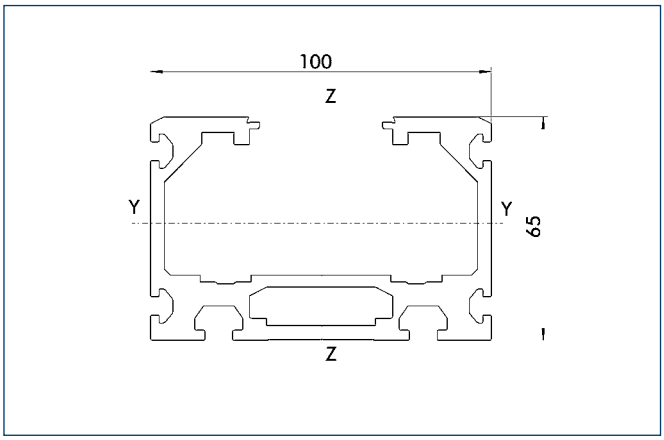


(8) Feather key

B 100D-ZSS

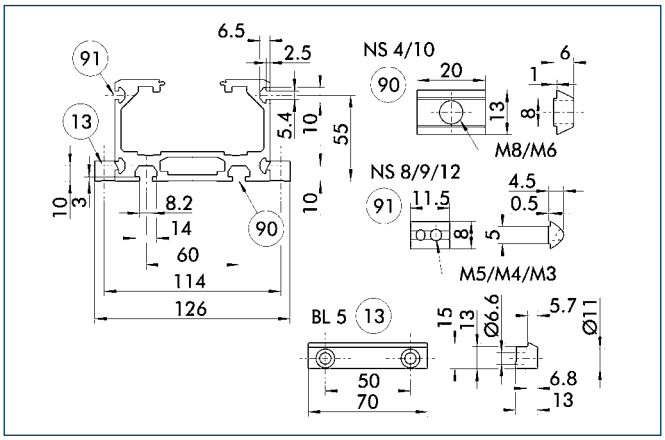
Linear Axes · Toothed-belt Drive

Profile ZSS



Specific mass	[kg/m]	4.87
Planar dimension	[mm²]	1804
Planar moment of inertia I_y	[mm⁴]	917779
Planar moment of inertia I_z	[mm⁴]	2328911
Load torque W_y	[mm³]	23869
Load torque W_z	[mm³]	46578

Mounting

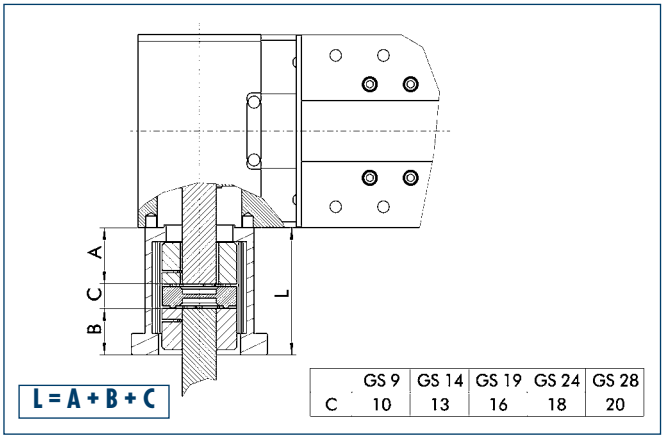


(13) Mounting strip
(90) T-nut on base side
(91) Side T-nut

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

Designation	Order designation	ID no.
T-nut	NS4	0331407
T-nut	NS8	0331420
T-nut	NS9	0331421
T-nut	NS10	0331422
T-nut	NS12	0331424
Mounting strip	BL5	0331419

Motor flange schematic diagram



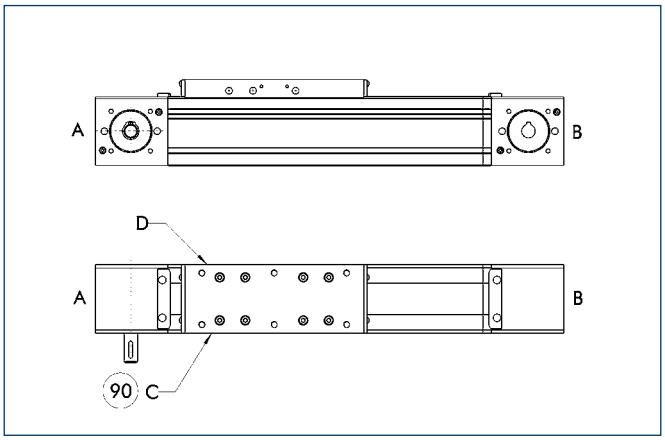
	GS 9	GS 14	GS 19	GS 24	GS 28
C	10	13	16	18	20

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

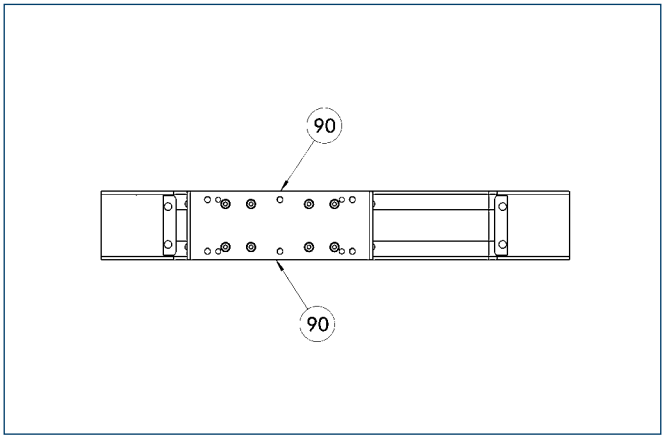
Two EO2 switches are used as limit switches and an RS2 as the reference switch as standard.

ⓘ 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	EO2	0331410
Inductive limit switch, opener, 10 m cable	EO10	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

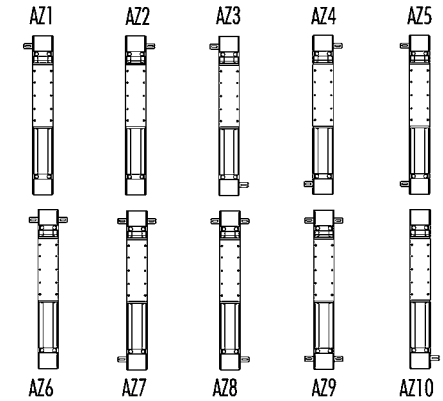


(90) Standard lubrication connection

Standard connection
Lubrication nipple M8x1

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

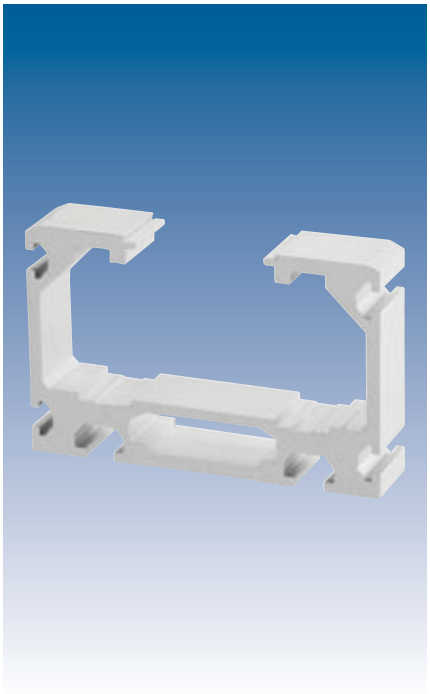
Drive shafts



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.

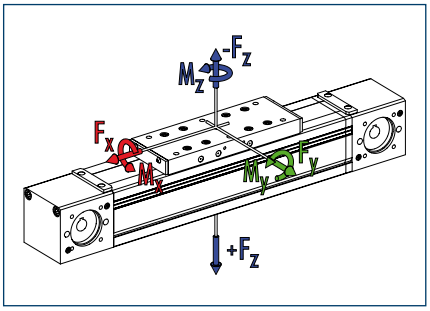
B 100D-ASS



Advantages of profiled rail guide

- High load bearing capacity
- Long lifetime
- High precision

Loads and load torques



Load		Dynamic
F_x **	[N]	2200
F_y	[N]	1800
F_z	[N]	4000
$-F_z$	[N]	3000
Load torques		**Dynamic**
M_x	[Nm]	350
M_y	[Nm]	950
M_z	[Nm]	950
M_{Amax}	[Nm]	86.5

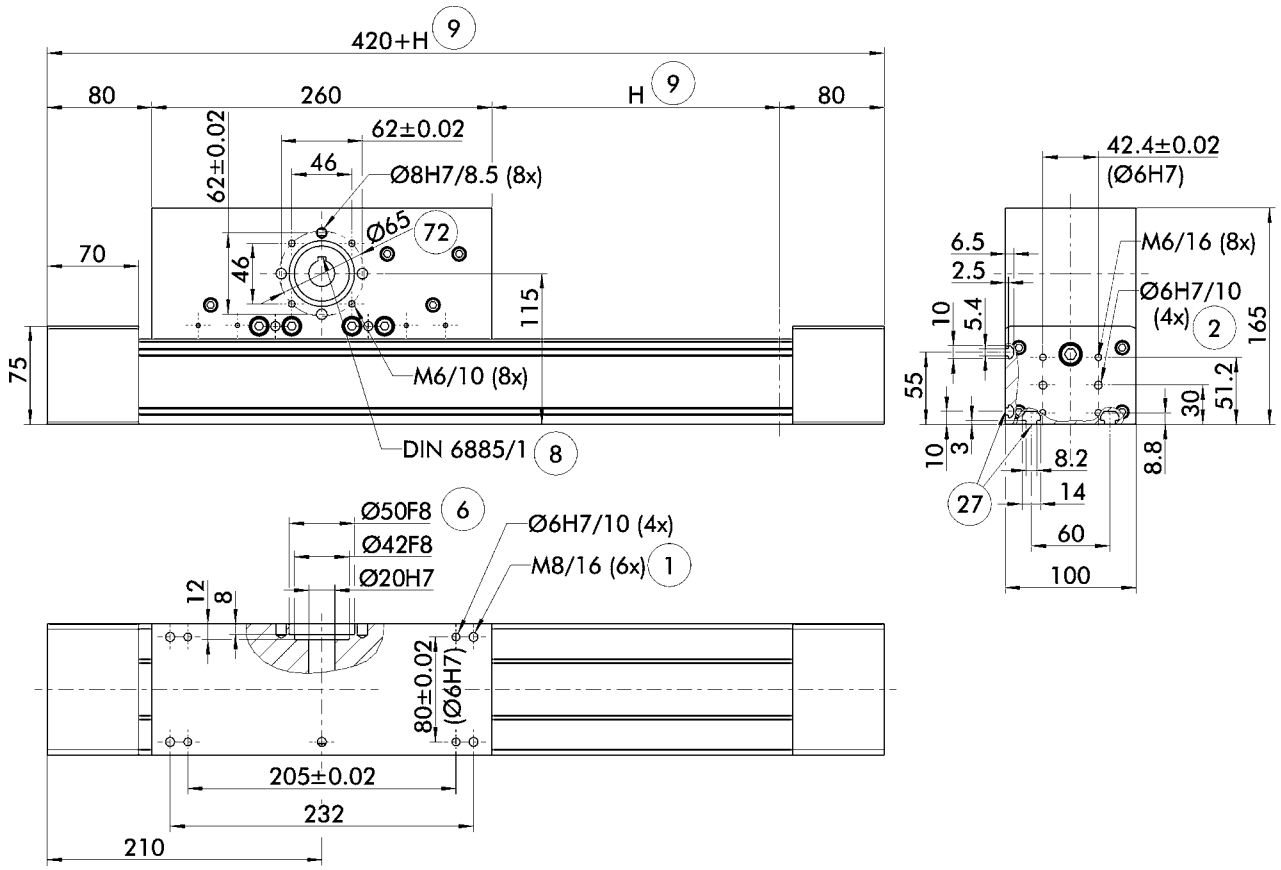
** Maximum value = Depending on speed

ⓘ Values in brackets relate to the long slide.

Technical data

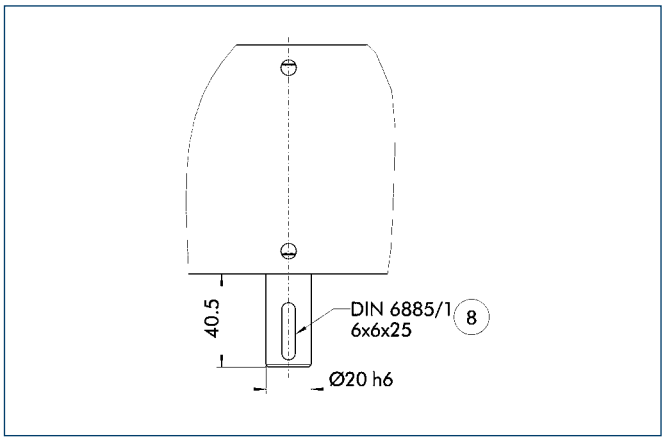
Designation		B 100D-ASS
Max. travel speed	[m/s]	5
Repeat accuracy	[mm]	**± 0.08**
Max. acceleration	[m/s²]	60
Idle torque	[Nm]	2.5
Drive		
Drive element	Toothed belt	40 AT 10-E
Travel per revolution	[mm]	240
Maximum stroke	[mm]	7680
Max. total length	[mm]	8100
Moment of inertia	[kgm²]	0.012
Weights		
Basic without travel	[kg]	14.0
Travel per 100 mm	[kg]	0.9
Slide drive 400 mm	[kg]	8.6

Main views



① Linear unit connection
② Assembly connection
⑥ Drive connection
⑧ Feather key DIN 6885
⑨ Useful stroke
㉗ Mounting groove for T-nuts
㉜ Bolt pitch circle

Drive journal connection dimensions

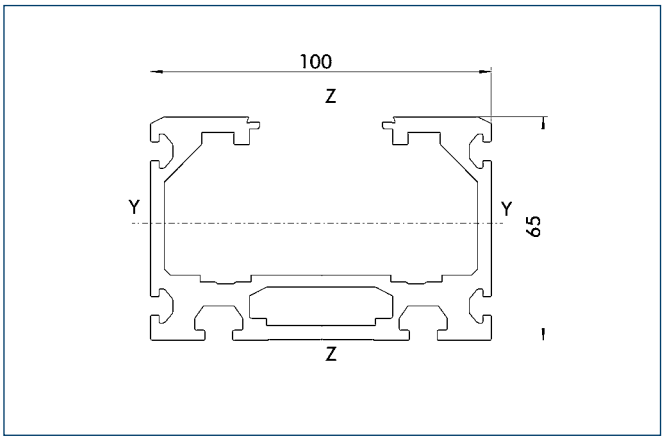


⑧ Feather key

B 100D-ASS

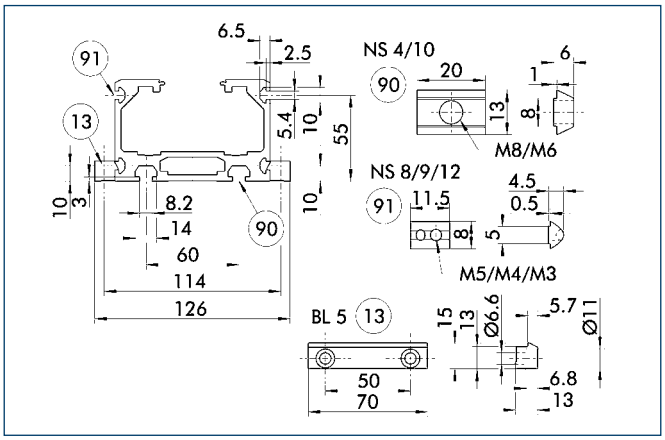
Linear Axes · Toothed-belt Drive

Profile ASS



Specific mass	[kg/m]	4.87
Planar dimension	[mm²]	1804
Planar moment of inertia I_y	[mm⁴]	917779
Planar moment of inertia I_z	[mm⁴]	2328911
Load torque W_y	[mm³]	23869
Load torque W_z	[mm³]	46578

Mounting

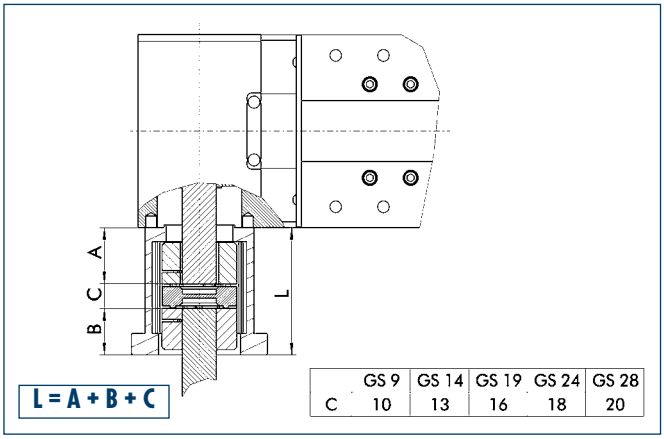


(13) Mounting strip
(90) T-nut on base side
(91) Side T-nut

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

Designation	Order designation	ID no.
T-nut	NS4	0331407
T-nut	NS8	0331420
T-nut	NS9	0331421
T-nut	NS10	0331422
T-nut	NS12	0331424
Mounting strip	BL5	0331419

Motor flange schematic diagram



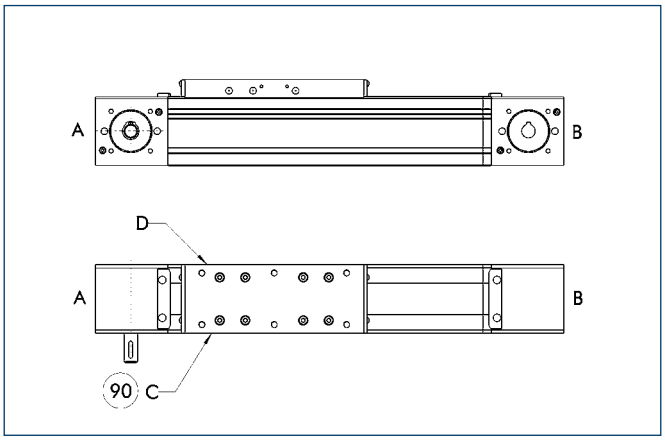
	GS 9	GS 14	GS 19	GS 24	GS 28
C	10	13	16	18	20

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

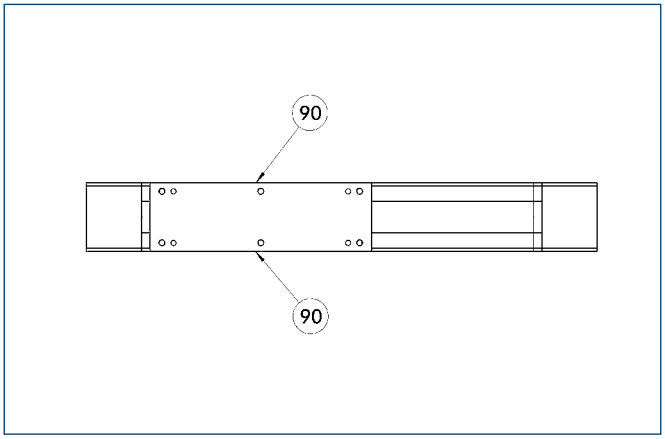
Two EO2 switches are used as limit switches and an RS2 as the reference switch as standard.

ⓘ 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	EO2	0331410
Inductive limit switch, opener, 10 m cable	EO10	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

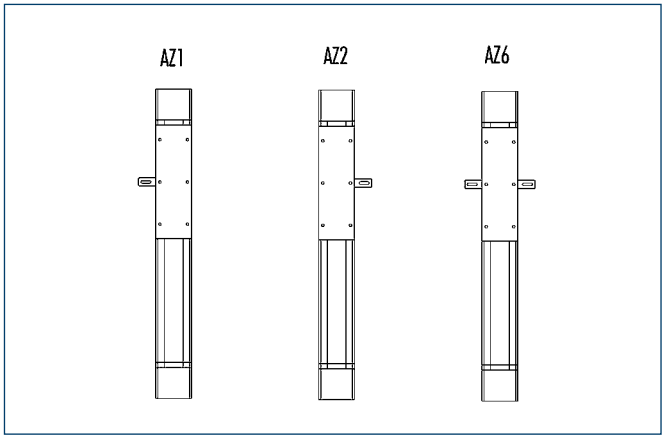


90 Standard lubrication connection

Standard connection
Lubrication nipple M8x1

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

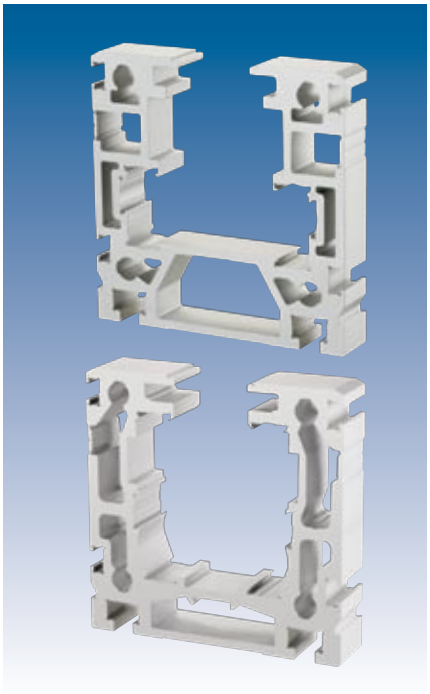
Drive shafts



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.

B 110-ZRS/-ZSS



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

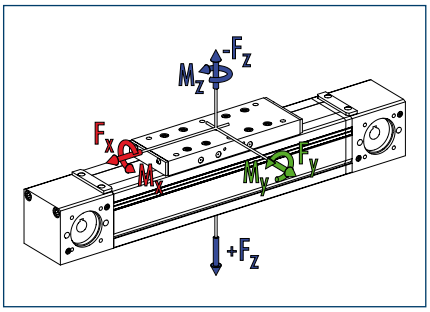
Advantages of profiled rail guide

High load bearing capacity

Long lifetime

High precision

Loads and load torques



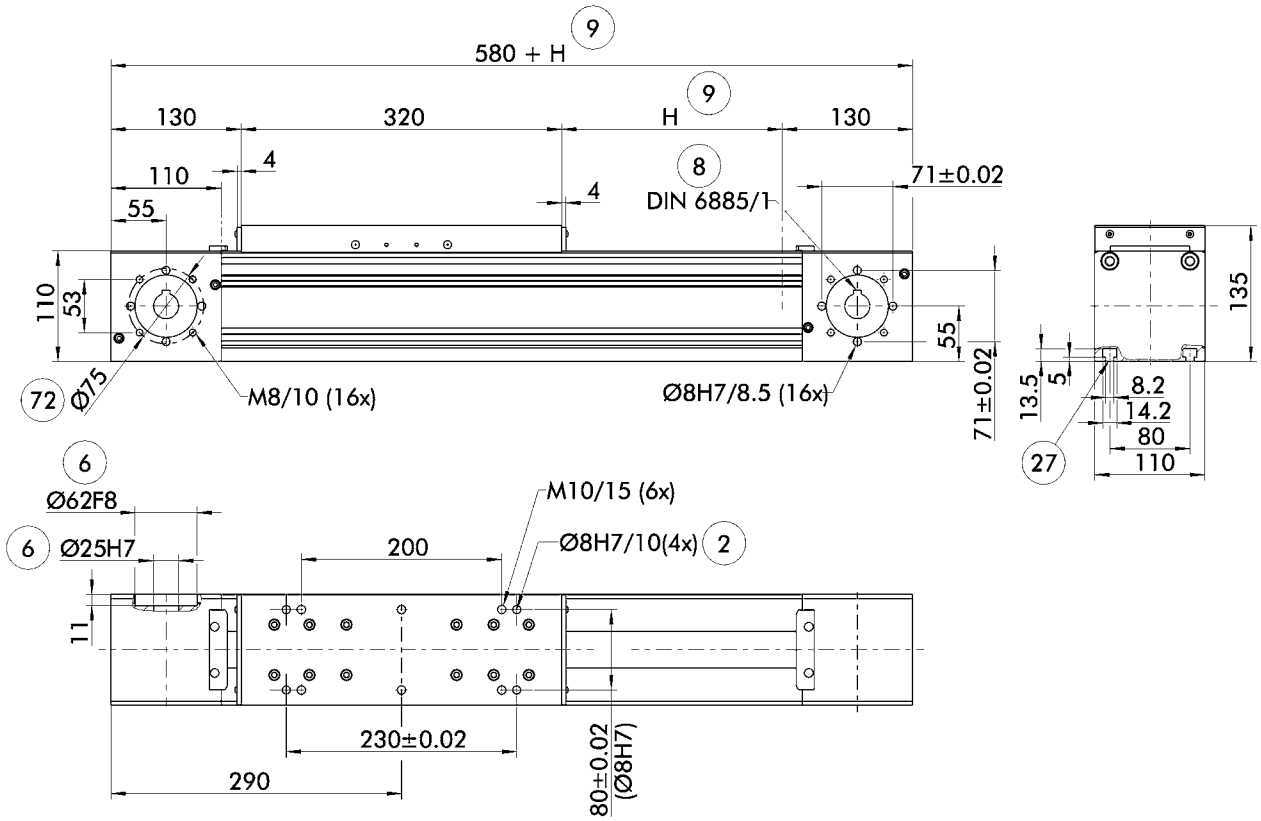
Load		ZRS dynamic	ZSS dynamic
F_x **	[N]	4000	4000
F_y	[N]	2000	3000
F_z	[N]	5000	8000
$-F_z$	[N]	2500	4000
Load torques		**ZRS dynamic**	**ZSS dynamic**
M_x	[Nm]	300	400
M_y	[Nm]	600 (800)	800 (1200)
M_z	[Nm]	450 (550)	600 (800)
M_{Amax}	[Nm]	194.5	194.5

** Maximum value = Depending on speed
ⓘ Values in brackets relate to the long slide.

Technical data

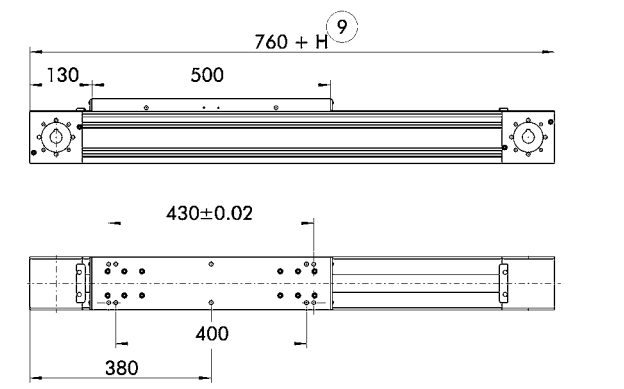
Designation		B 110-ZRS	B 110-ZSS
Max. travel speed	[m/s]	8	5
Repeat accuracy	[mm]	**± 0.08**	**± 0.08**
Max. acceleration	[m/s²]	60	60
Idle torque	[Nm]	3.5	3.5
Drive			
Drive element	Toothed belt	50 ATL 10	50 ATL 10
Travel per revolution	[mm]	300	300
Maximum stroke	[mm]	7520	7520
Max. total length	[mm]	8100	8100
Moment of inertia	[kgm²]	0.0180	0.0160
Weights			
Basic without travel	[kg]	15.7	18.0
Travel per 100 mm	[kg]	1.5	2.1
Slide plate 320 mm	[kg]	4.8	5.2
Slide plate 500 mm	[kg]	7.5	8.2

Main views



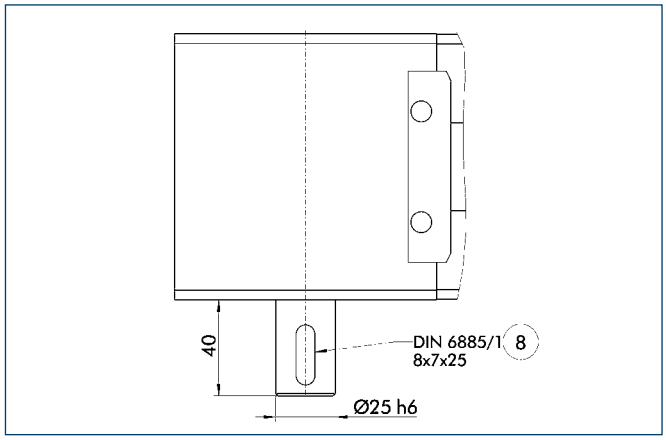
(2) Assembly connection
(6) Drive connection
(8) Feather key DIN 6885
(9) Useful stroke
(27) Mounting groove for T-nuts
(72) Bolt pitch circle

Long slide



(9) Useful stroke

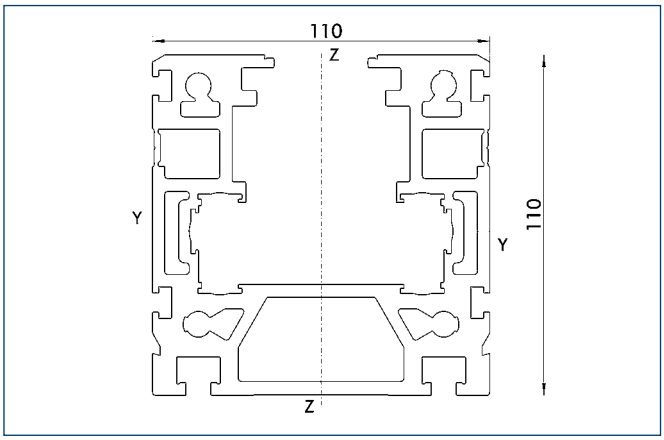
Drive journal connection dimensions



(8) Feather key

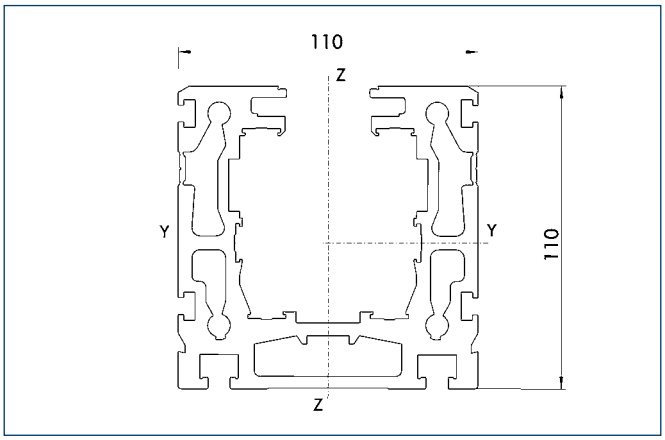
B 110-ZRS/-ZSS

Profile ZRS



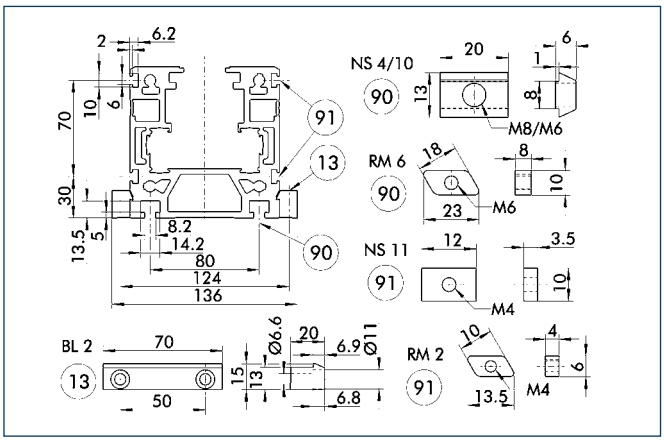
Specific mass	[kg/m]	10.69
Planar dimension	[mm²]	3961
Planar moment of inertia I_y	[mm⁴]	5114812
Planar moment of inertia I_z	[mm⁴]	6177042
Load torque W_y	[mm³]	87307
Load torque W_z	[mm³]	111528

Profile ZSS



Specific mass	[kg/m]	10.54
Planar dimension	[mm²]	3902
Planar moment of inertia I_y	[mm⁴]	4974348
Planar moment of inertia I_z	[mm⁴]	5898662
Load torque W_y	[mm³]	79469
Load torque W_z	[mm³]	106973

Mounting



(13) Mounting strip

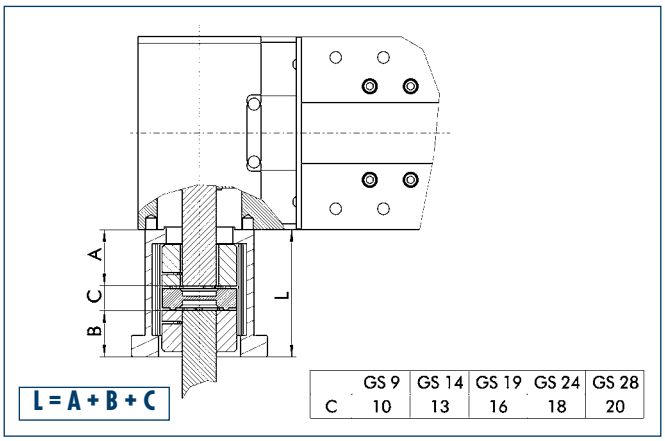
(90) T-nut on base side

(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



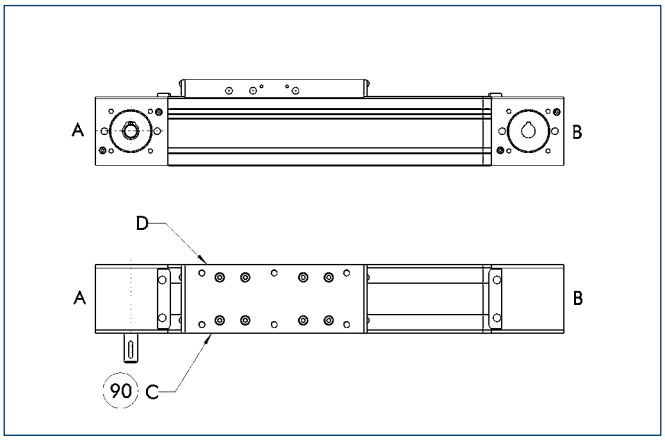
C	GS 9	GS 14	GS 19	GS 24	GS 28
	10	13	16	18	20

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

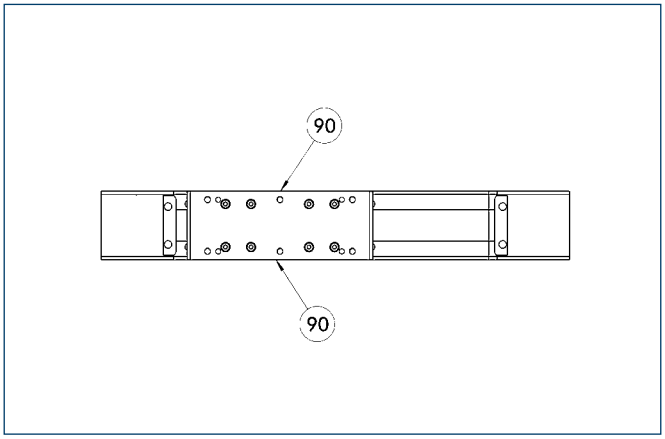
Two EO2 switches are used as limit switches and an RS2 as the reference switch as standard.

ⓘ 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	EO2	0331410
Inductive limit switch, opener, 10 m cable	EO10	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

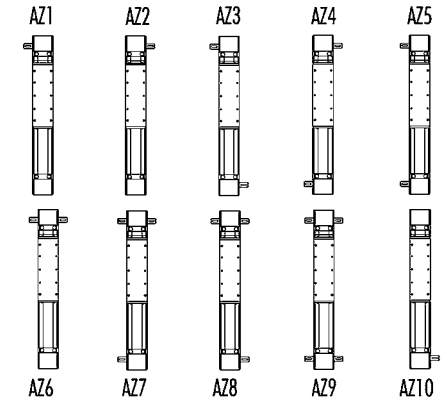


(90) Standard lubrication connection

Standard connection
Lubrication nipple M8x1

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

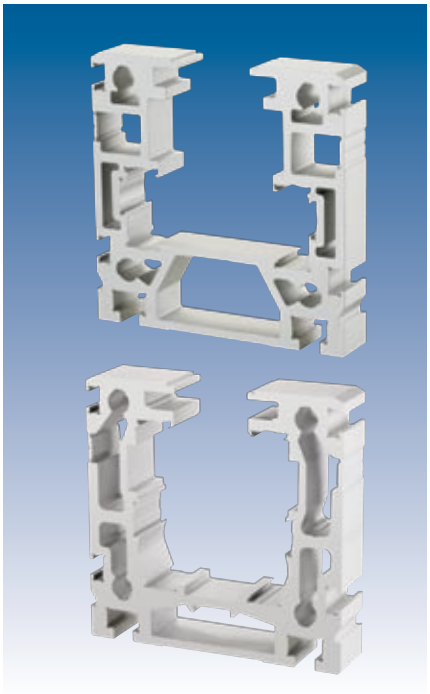
Drive shafts



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.

B 110-ARS/-ASS



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

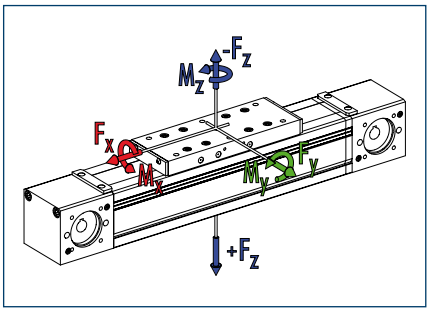
Advantages of profiled rail guide

High load bearing capacity

Long lifetime

High precision

Loads and load torques



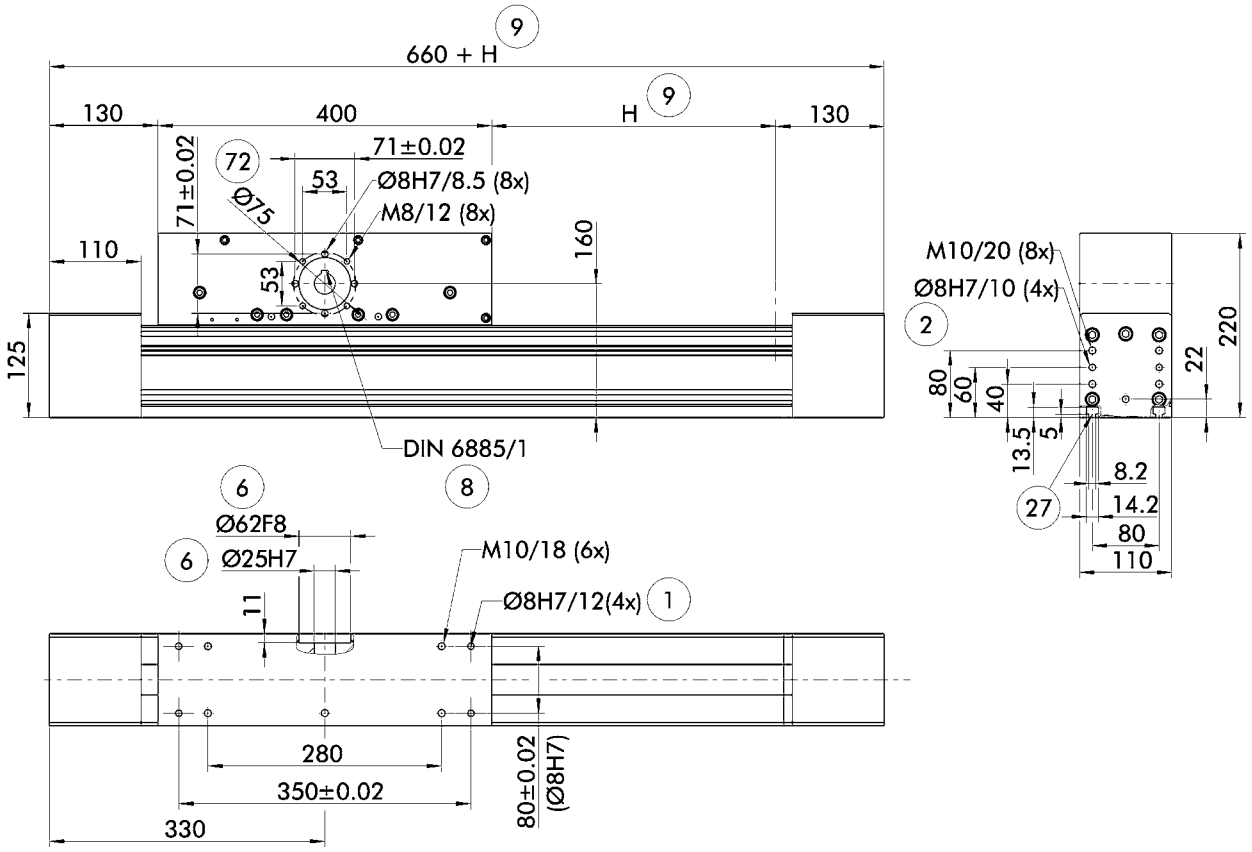
Load		ARS dynamic	ASS dynamic
F_x **	[N]	2000	2000
F_y	[N]	2000	3000
F_z	[N]	5000	8000
$-F_z$	[N]	2500	4000
Load torques		**ARS dynamic**	**ASS dynamic**
M_x	[Nm]	300	400
M_y	[Nm]	600	800
M_z	[Nm]	450	600
M_{Amax}	[Nm]	99.0	99.0

** Maximum value = Depending on speed
ⓘ Values in brackets relate to the long slide.

Technical data

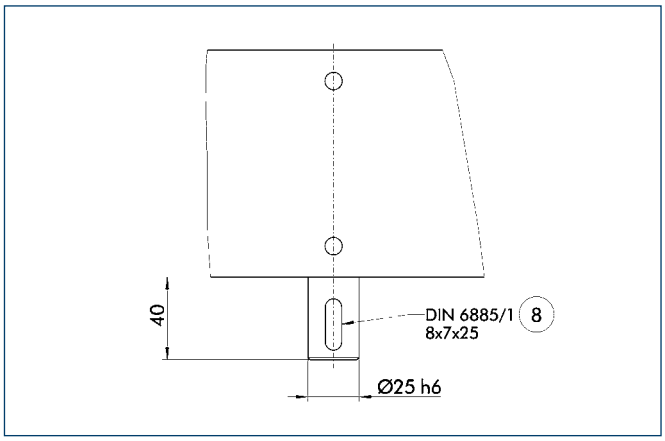
Designation		B 110-ARS	B 110-ASS
Max. travel speed	[m/s]	8	5
Repeat accuracy	[mm]	**± 0.08**	**± 0.08**
Max. acceleration	[m/s²]	60	60
Idle torque	[Nm]	3.5	3.5
Drive			
Drive element	Toothed belt	50 ATL 10	50 ATL 10
Travel per revolution	[mm]	300	300
Maximum stroke	[mm]	7440	7440
Max. total length	[mm]	8100	8100
Moment of inertia	[kgm²]	0.035	0.037
Weights			
Basic without travel	[kg]	27.00	29.0
Travel per 100 mm	[kg]	1.2	1.4
Slide drive 400 mm	[kg]	15.00	16.00

Main views



① Linear unit connection
② Assembly connection
⑥ Drive connection
⑧ Feather key DIN 6885
⑨ Useful stroke
㉗ Mounting groove for T-nuts
㉜ Bolt pitch circle

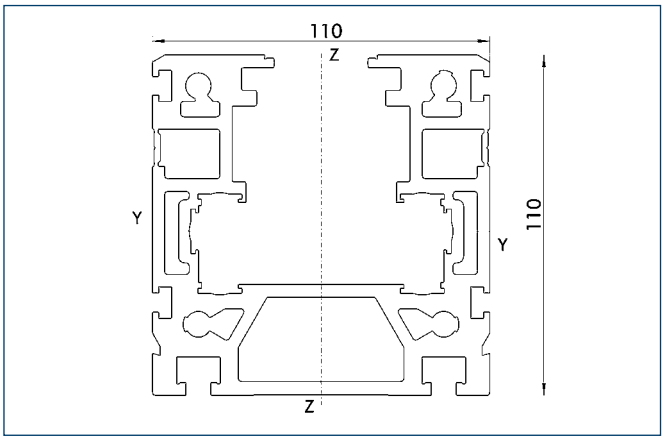
Drive journal connection dimensions



⑧ Feather key

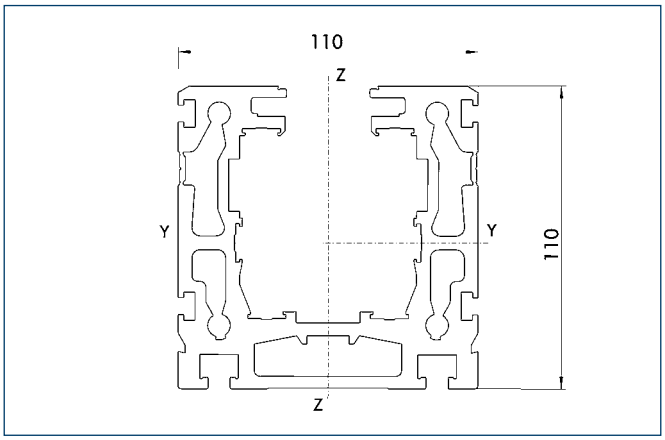
B 110-ARS/-ASS

Profile ARS



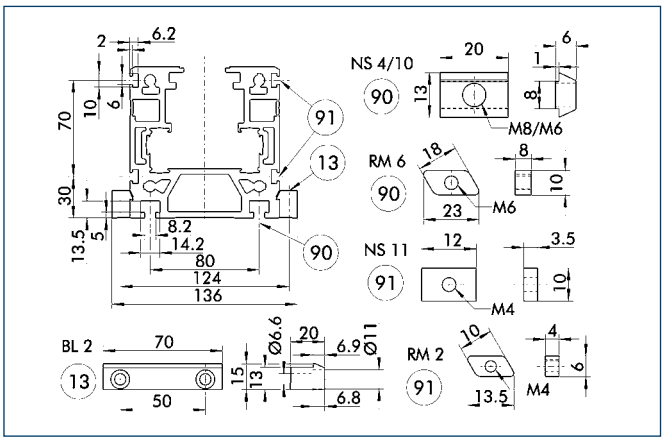
Specific mass	[kg/m]	10.69
Planar dimension	[mm²]	3961
Planar moment of inertia I_y	[mm⁴]	5114812
Planar moment of inertia I_z	[mm⁴]	6177042
Load torque W_y	[mm³]	87307
Load torque W_z	[mm³]	111528

Profile ASS



Specific mass	[kg/m]	10.54
Planar dimension	[mm²]	3902
Planar moment of inertia I_y	[mm⁴]	4974348
Planar moment of inertia I_z	[mm⁴]	5898662
Load torque W_y	[mm³]	79469
Load torque W_z	[mm³]	106973

Mounting



(13) Mounting strip

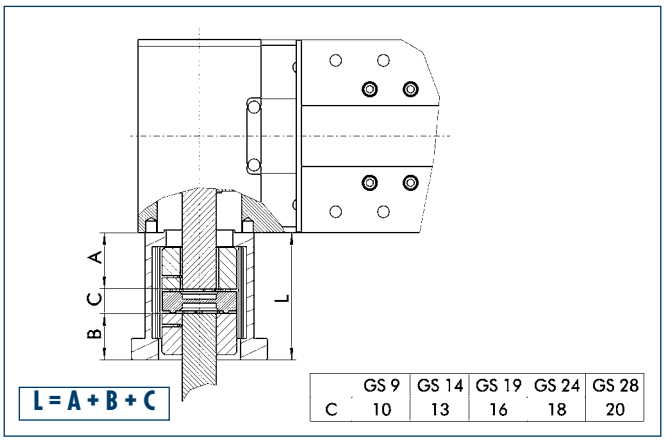
(90) T-nut on base side

(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

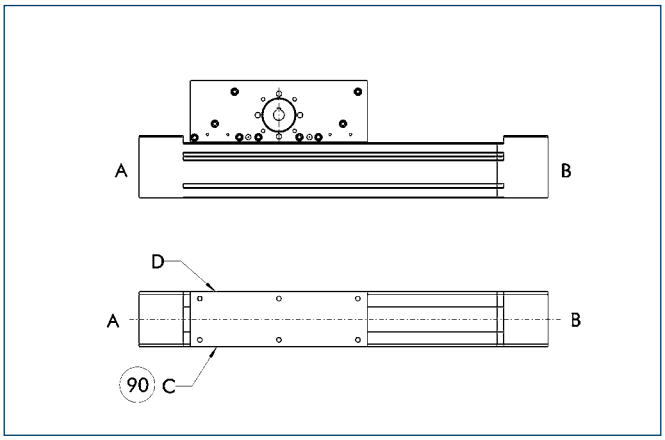


The table shows the relevant dimension **C of the standard couplings.**
For dimension A refer to drive journal connection dimensions, for dimension B refer to corresponding motor dimension sheet, dimension L may differ in individual cases.
Different drive solutions can be attached to our axes.
SCHUNK can supply you with the right motor flange and coupling for your drive.

ⓘ 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

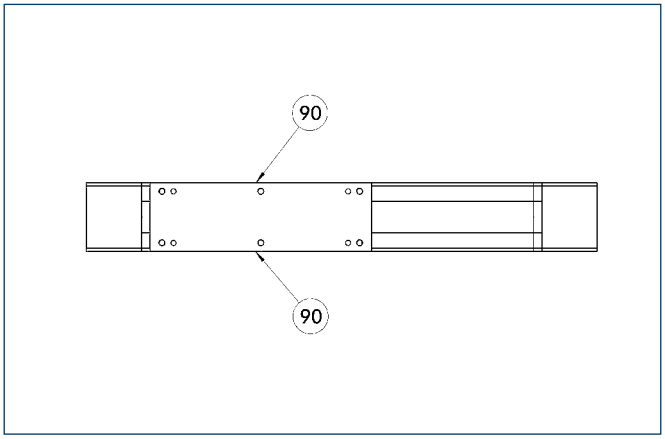
Two E02 switches are used as limit switches and an RS2 as the reference switch as standard.

ⓘ 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

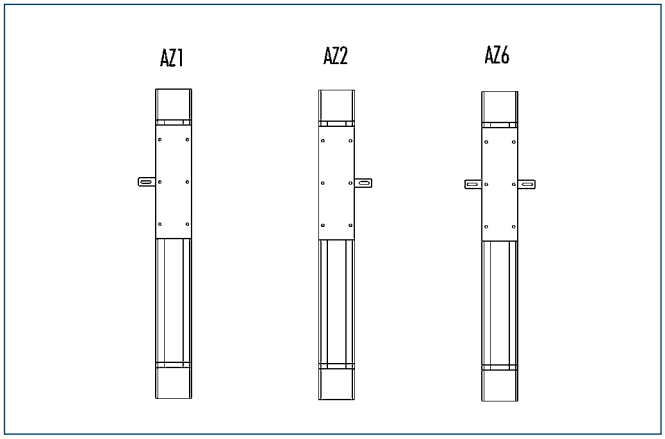


90 Standard lubrication connection

Standard connection
Lubrication nipple M8x1

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

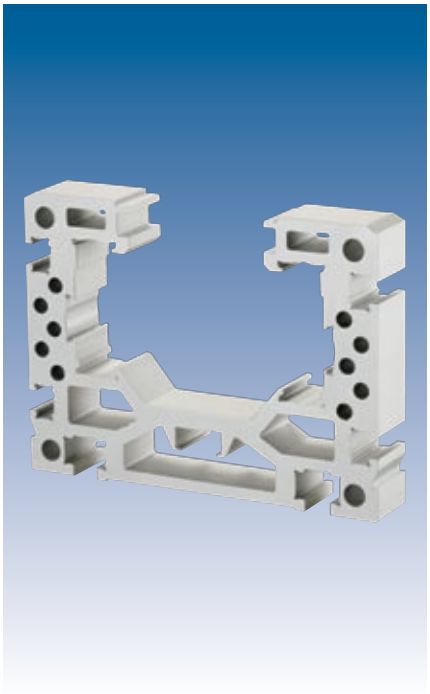
Drive shafts



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.

B 120-ZRS/-ZSS



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

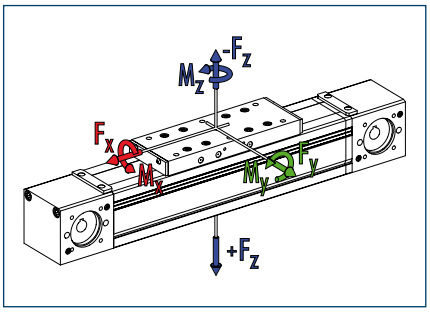
Advantages of profiled rail guide

High load bearing capacity

Long lifetime

High precision

Loads and load torques



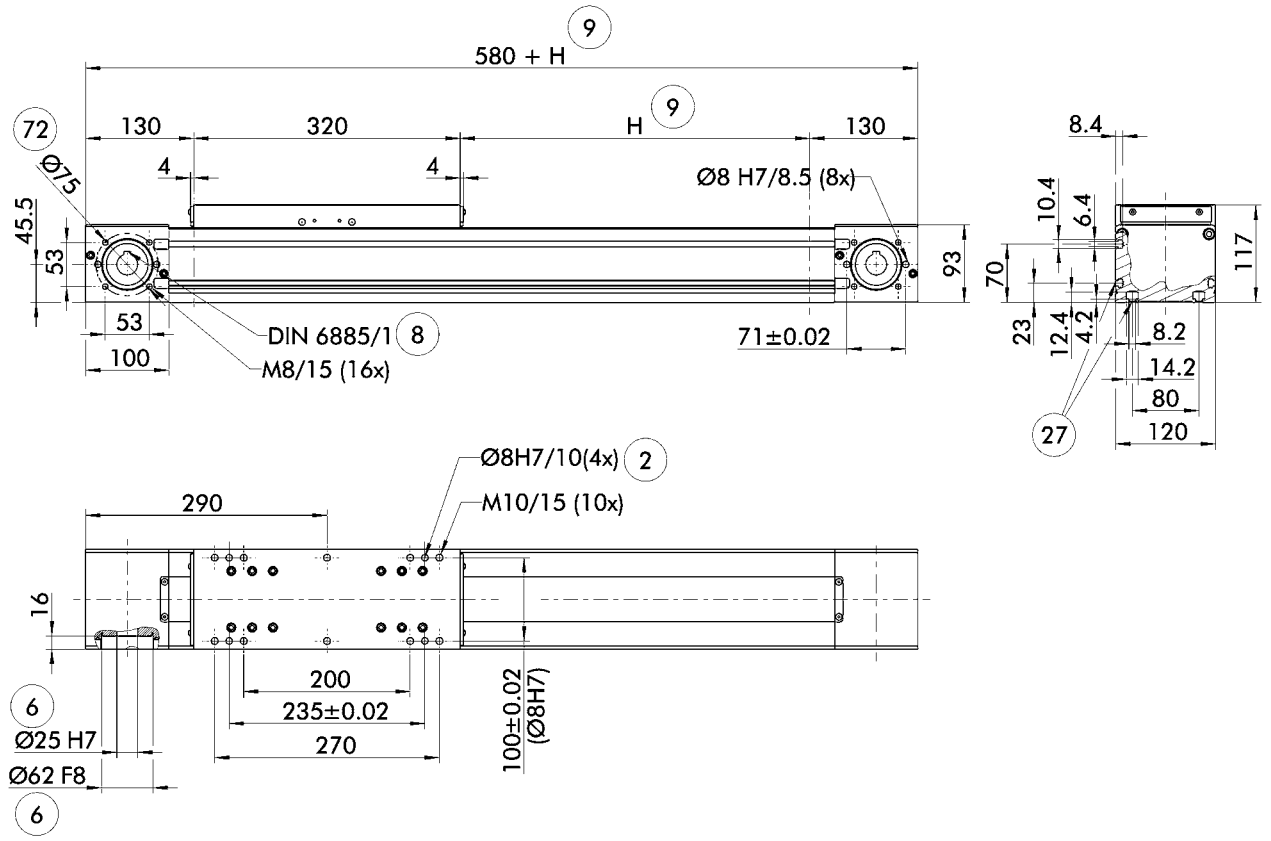
Load		ZRS dynamic	ZSS dynamic
F_x **	[N]	4000	4000
F_y	[N]	2500	3000
F_z	[N]	6000	8000
$-F_z$	[N]	3000	4000
Load torques		**ZRS dynamic**	**ZSS dynamic**
M_x	[Nm]	350	400
M_y	[Nm]	700 (1000)	1200 (1500)
M_z	[Nm]	700 (1000)	600 (800)
M_{Amax}	[Nm]	156.0	156.0

** Maximum value = Depending on speed
ⓘ Values in brackets relate to the long slide.

Technical data

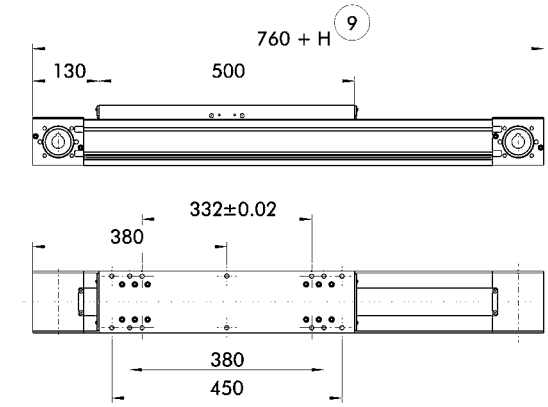
Designation		B 120-ZRS	B 120-ZSS
Max. travel speed	[m/s]	8	5
Repeat accuracy	[mm]	**± 0.08**	**± 0.08**
Max. acceleration	[m/s²]	60	60
Idle torque	[Nm]	3.2	3.2
Drive			
Drive element	Toothed belt	50 ATL 10	50 ATL 10
Travel per revolution	[mm]	240	240
Maximum stroke	[mm]	7520	7520
Max. total length	[mm]	8100	8100
Moment of inertia	[kgm²]	0.015	0.016
Weights			
Basic without travel	[kg]	12.5	13.0
Travel per 100 mm	[kg]	1.3	1.7
Slide plate 320 mm	[kg]	6.0	6.5
Slide plate 500 mm	[kg]	9.4	10.2

Main views



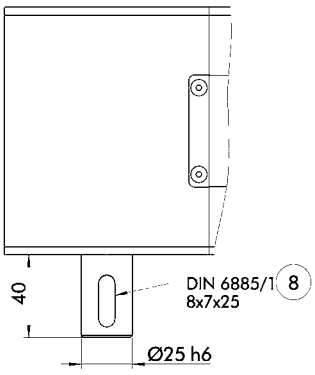
(2) Assembly connection
(6) Drive connection
(8) Feather key DIN 6885
(9) Useful stroke
(27) Mounting groove for T-nuts
(72) Bolt pitch circle

Long slide



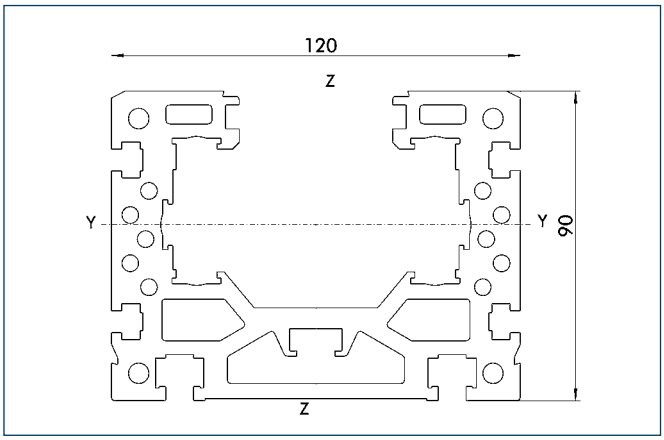
(9) Useful stroke

Drive journal connection dimensions



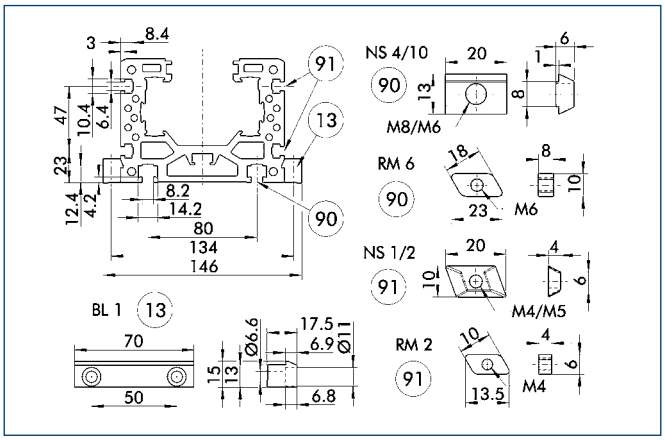
(8) Feather key

Profile ZRS/ZSS



Specific mass	[kg/m]	10.47
Planar dimension	[mm²]	3876
Planar moment of inertia I_y	[mm⁴]	3095671
Planar moment of inertia I_z	[mm⁴]	7114115
Load torque W_y	[mm³]	62753
Load torque W_z	[mm³]	118478

Mounting

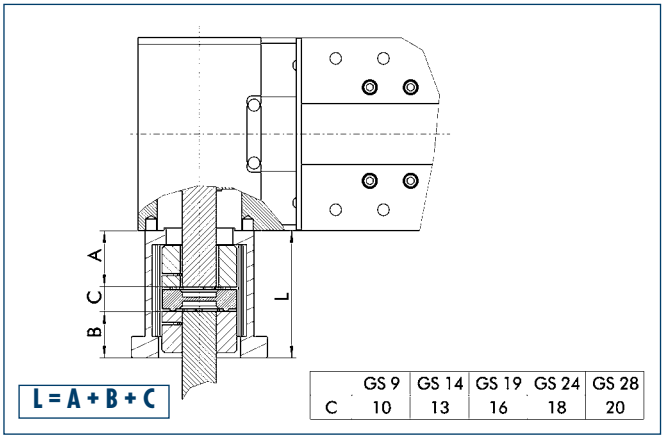


(13) Mounting strip
(90) T-nut on base side
(91) Side T-nut

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

Designation	Order designation	ID no.
T-nut	NS1	0331404
T-nut	NS2	0331405
T-nut	NS4	0331407
T-nut	NS10	0331422
T-nut	RM2	0331425
T-nut	RM6	0331427
Mounting strip	BL1	0331400

Motor flange schematic diagram



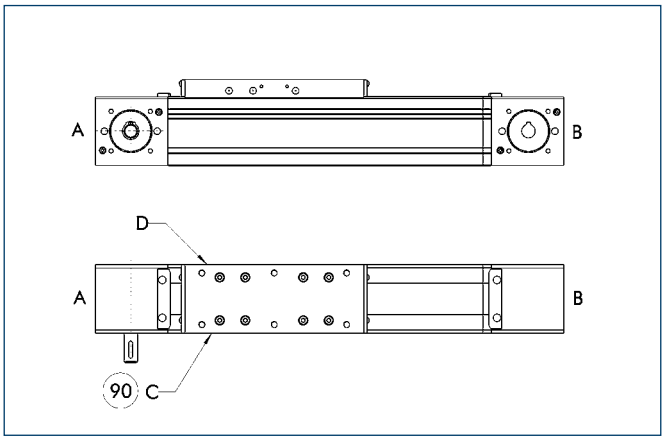
C	GS 9	GS 14	GS 19	GS 24	GS 28
	10	13	16	18	20

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

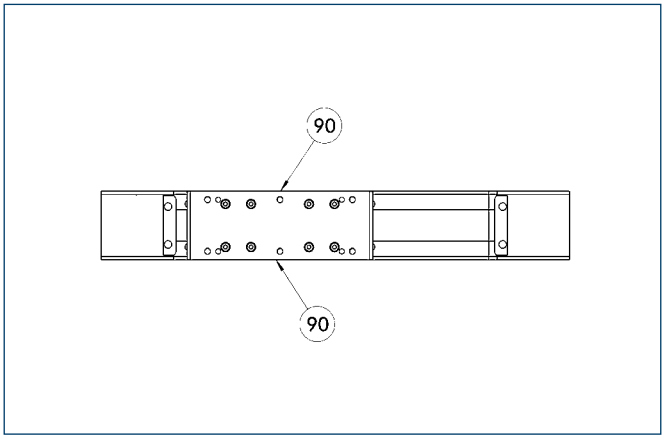
Two EO2 switches are used as limit switches and an RS2 as the reference switch as standard.

ⓘ 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	EO2	0331410
Inductive limit switch, opener, 10 m cable	EO10	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

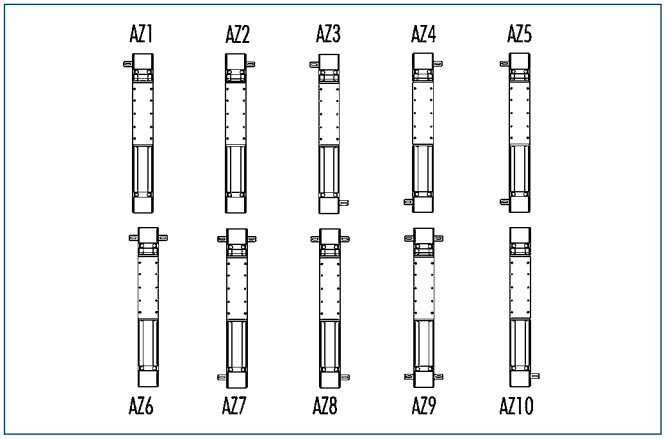


90 Standard lubrication connection

Standard connection
Lubrication nipple M8x1

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

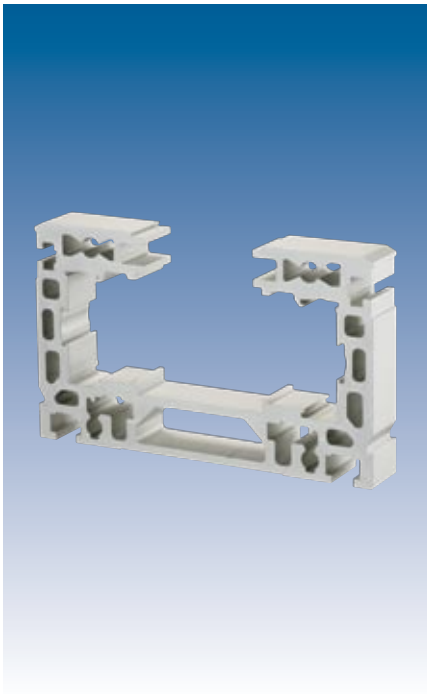
Drive shafts



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.

B 140-ZRS/-ZSS



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

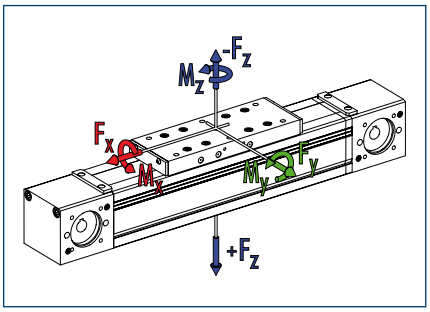
Advantages of profiled rail guide

High load bearing capacity

Long lifetime

High precision

Loads and load torques



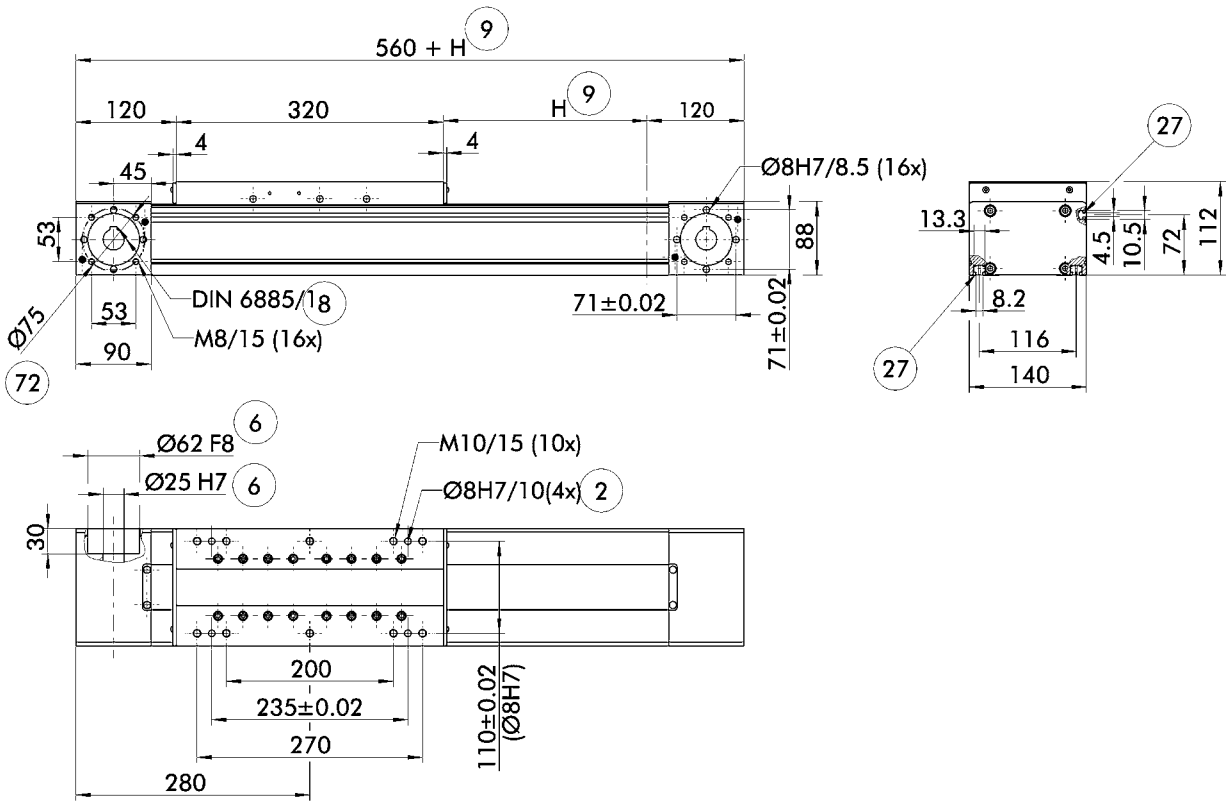
Load		ZRS dynamic	ZSS dynamic
F_x **	[N]	4000	4000
F_y	[N]	2500	2500
F_z	[N]	5000	6000
$-F_z$	[N]	3000	4000
Load torques		**ZRS dynamic**	**ZSS dynamic**
M_x	[Nm]	350	500
M_y	[Nm]	700 (900)	1000 (1300)
M_z	[Nm]	700 (900)	1000 1300)
M_{Amax}	[Nm]	143.6	143.6

** Maximum value = Depending on speed
ⓘ Values in brackets relate to the long slide.

Technical data

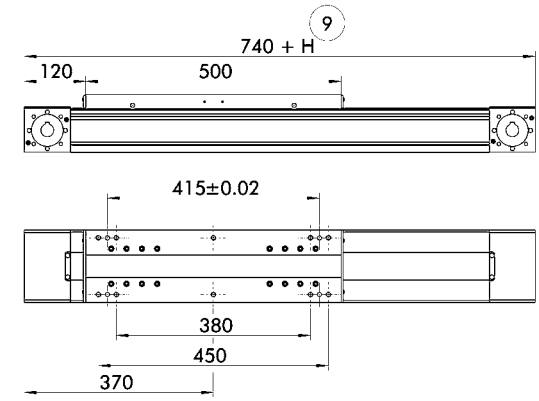
Designation		B 140-ZRS	B 140-ZSS
Max. travel speed	[m/s]	8	5
Repeat accuracy	[mm]	**± 0.08**	**± 0.08**
Max. acceleration	[m/s²]	60	60
Idle torque	[Nm]	3.5	3.5
Drive			
Drive element	Toothed belt	50 AT 10-E	50 AT 10-E
Travel per revolution	[mm]	220	220
Maximum stroke	[mm]	7540	7540
Max. total length	[mm]	8100	8100
Moment of inertia	[kgm²]	0.019	0.020
Weights			
Basic without travel	[kg]	13.5	15.0
Travel per 100 mm	[kg]	1.3	1.7
Slide plate 320 mm	[kg]	7.0	7.5
Slide plate 500 mm	[kg]	11.0	11.7

Main views



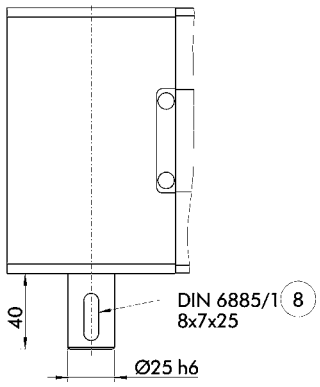
② Assembly connection
⑥ Drive connection
⑧ Feather key DIN 6885
⑨ Useful stroke
㉗ Mounting groove for T-nuts
㉜ Bolt pitch circle

Long slide



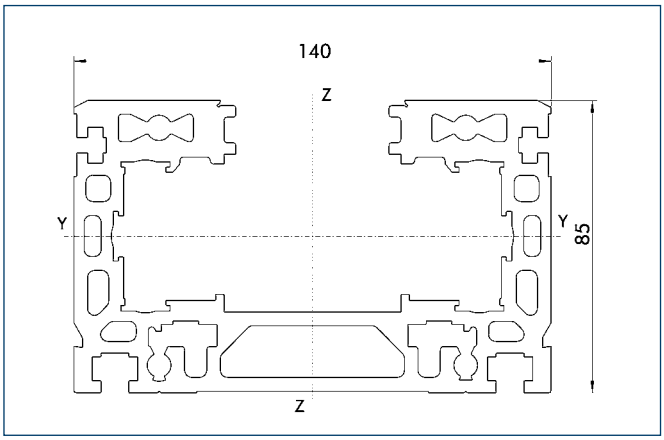
⑨ Useful stroke

Drive journal connection dimensions



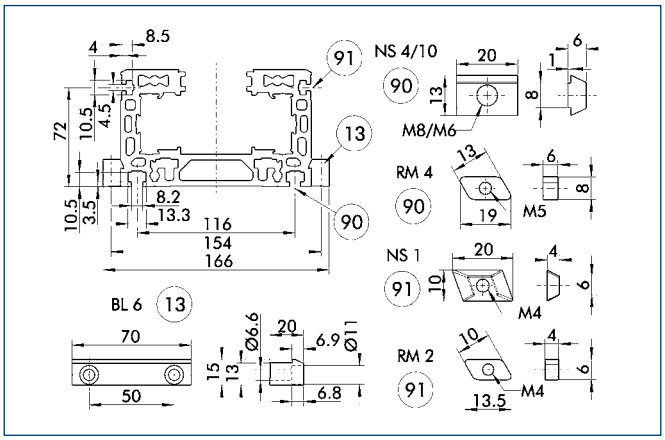
⑧ Feather key

Profile ZRS/ZSS



Specific mass	[kg/m]	10.68
Planar dimension	[mm²]	3955
Planar moment of inertia I_y	[mm⁴]	3159202
Planar moment of inertia I_z	[mm⁴]	9975915
Load torque W_y	[mm³]	69334
Load torque W_z	[mm³]	184852

Mounting

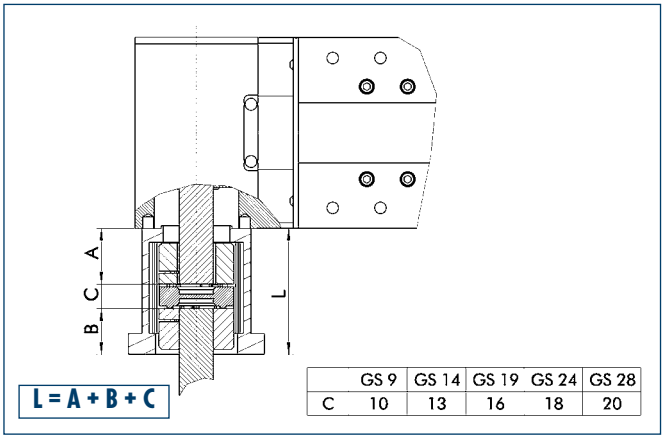


(13) Mounting strip
(90) T-nut on base side
(91) Side T-nut

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

Designation	Order designation	ID no.
T-nut	NS1	0331404
T-nut	NS4	0331407
T-nut	NS10	0331422
T-nut	RM2	0331425
T-nut	RM4	0331426
Mounting strip	BL6	0331428

Motor flange schematic diagram



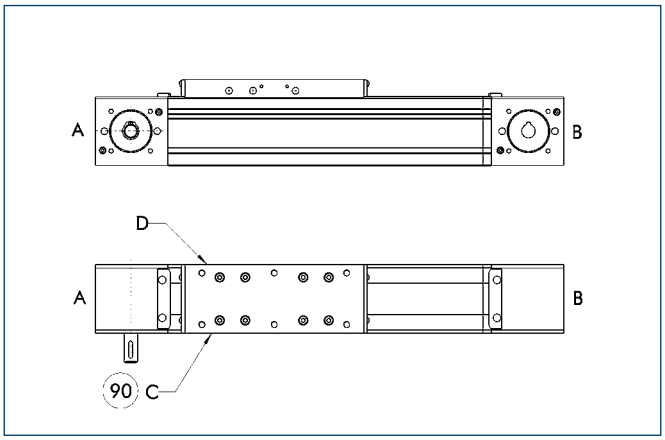
	GS 9	GS 14	GS 19	GS 24	GS 28
C	10	13	16	18	20

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

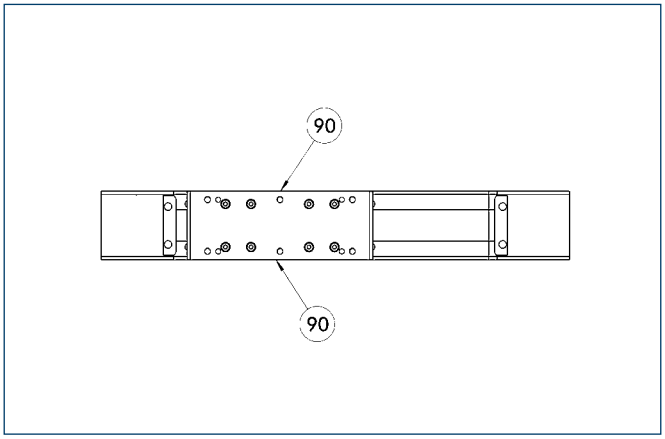
Two E02 switches are used as limit switches and an RS2 as the reference switch as standard.

ⓘ 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

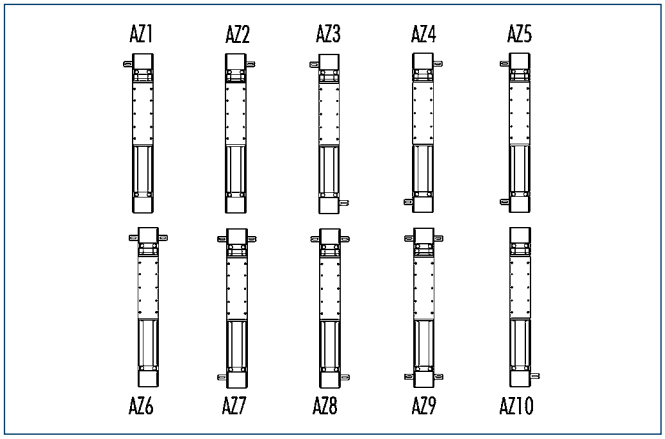


90 Standard lubrication connection

Standard connection
Lubrication nipple M8x1

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

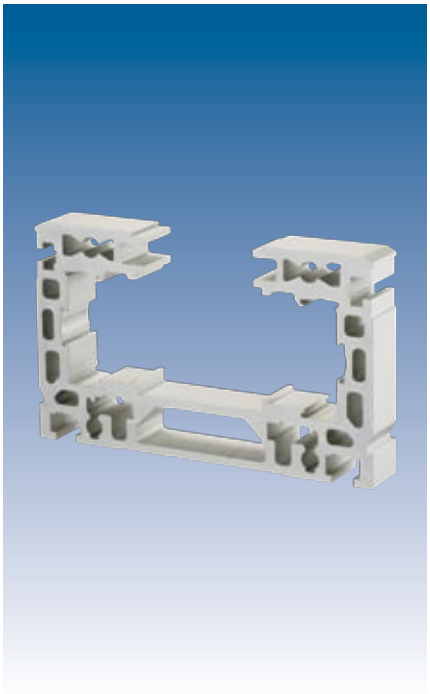
Drive shafts



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.

B 140-ARS/-ASS



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

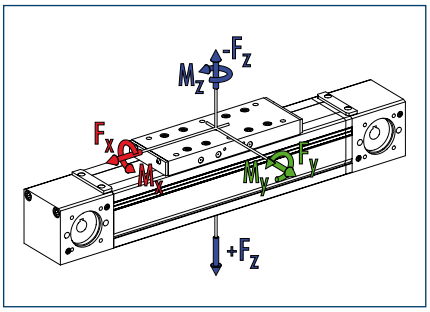
Advantages of profiled rail guide

High load bearing capacity

Long lifetime

High precision

Loads and load torques



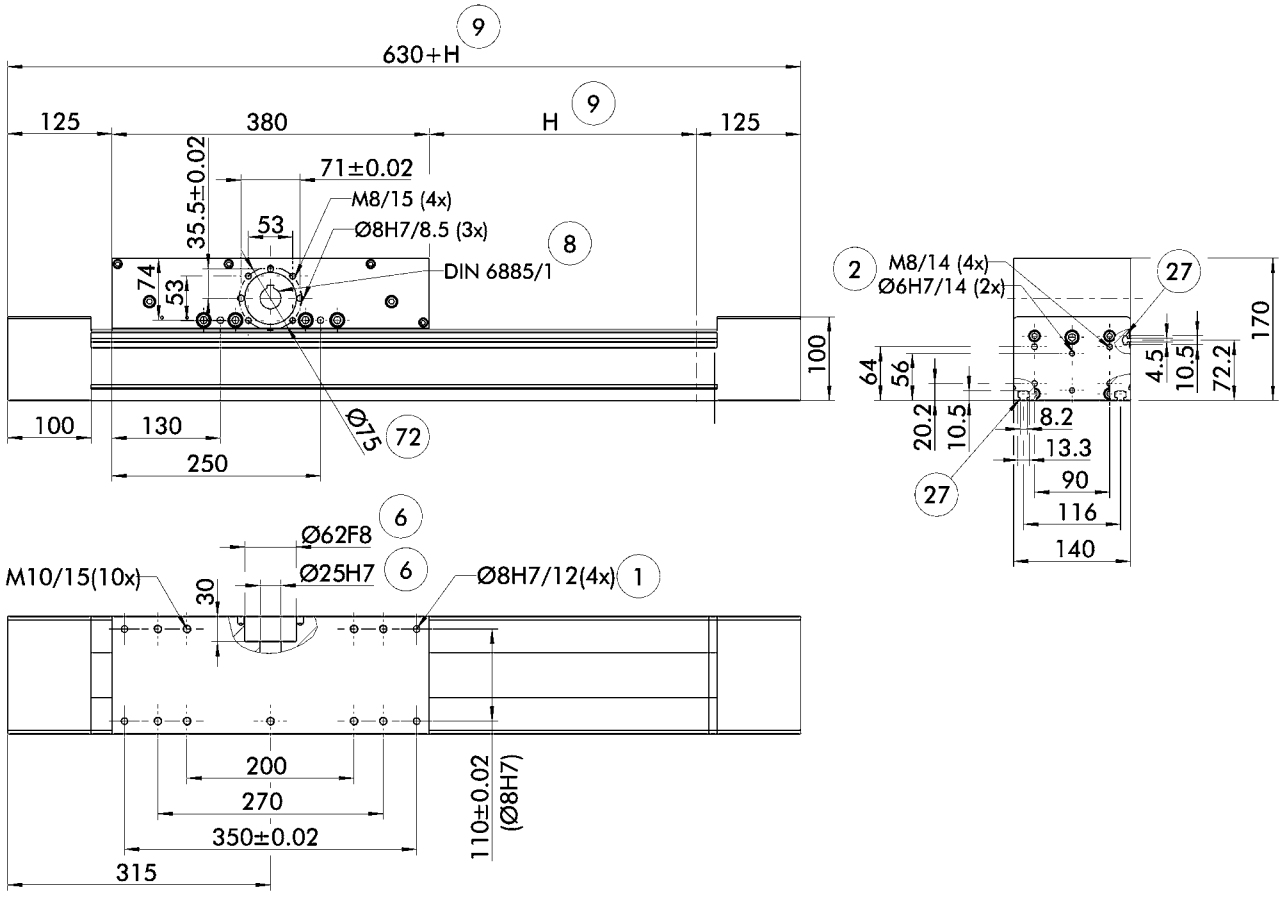
Load		ARS dynamic	ASS dynamic
F_x **	[N]	1800	1800
F_y	[N]	2500	2500
F_z	[N]	5000	6000
$-F_z$	[N]	3000	4000
Load torques		**ARS dynamic**	**ASS dynamic**
M_x	[Nm]	1800	1800
M_y	[Nm]	2500	2500
M_z	[Nm]	5000	6000
M_{Amax}	[Nm]	3000	4000

** Maximum value = Depending on speed
ⓘ Values in brackets relate to the long slide.

Technical data

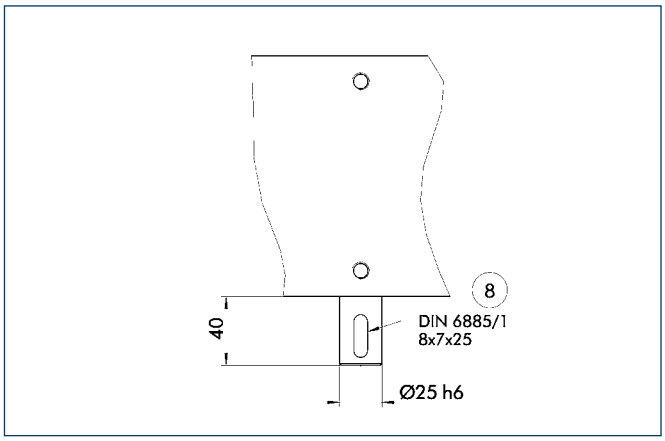
Designation		B 140-ARS	B 140-ASS
Max. travel speed	[m/s]	8	5
Repeat accuracy	[mm]	**± 0.08**	**± 0.08**
Max. acceleration	[m/s²]	60	60
Idle torque	[Nm]	3.5	3.5
Drive			
Drive element	Toothed belt	50 AT 10-E	50 AT 10-E
Travel per revolution	[mm]	220	220
Maximum stroke	[mm]	7470	7470
Max. total length	[mm]	8100	8100
Moment of inertia	[kgm²]	0.035	0.037
Weights			
Basic without travel	[kg]	28.0	30.0
Travel per 100 mm	[kg]	1.2	1.5
Slide drive 380 mm	[kg]	13.0	14.0

Main views



1 Linear unit connection
2 Assembly connection
6 Drive connection
8 Feather key DIN 6885
9 Useful stroke
27 Mounting groove for T-nuts
72 Bolt pitch circle

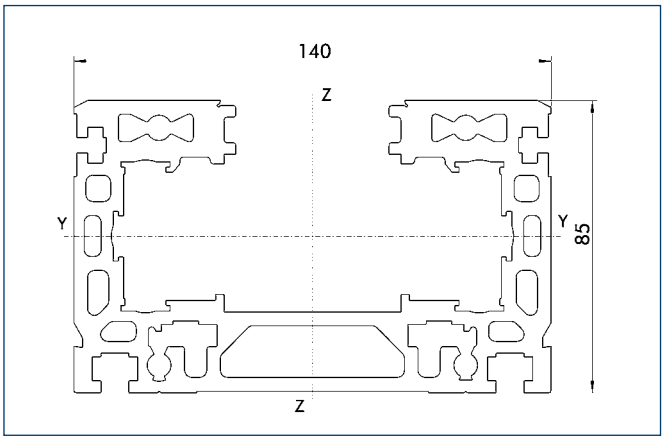
Drive journal connection dimensions



8 Feather key

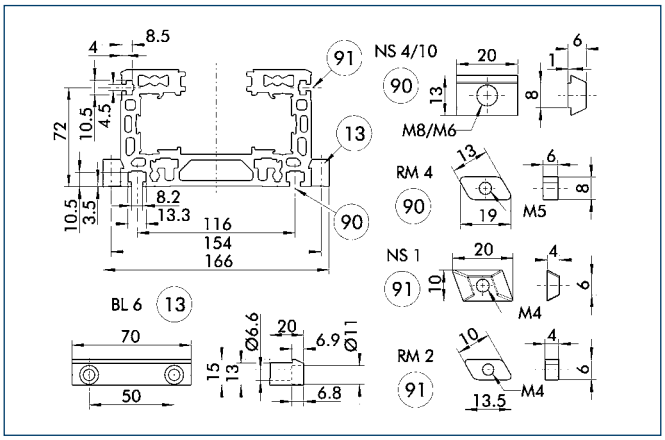
B 140-ARS/-ASS

Profile ARS/ASS



Specific mass	[kg/m]	10.68
Planar dimension	[mm²]	3955
Planar moment of inertia I_y	[mm⁴]	3159202
Planar moment of inertia I_z	[mm⁴]	9975915
Load torque W_y	[mm³]	69334
Load torque W_z	[mm³]	184852

Mounting

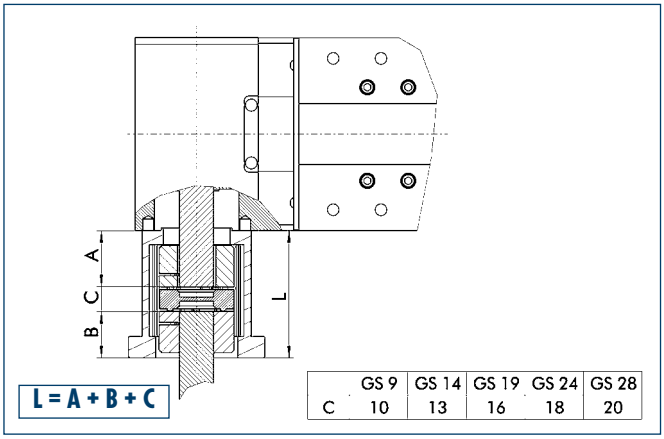


(13) Mounting strip
(90) T-nut on base side
(91) Side T-nut

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

Designation	Order designation	ID no.
T-nut	NS1	0331404
T-nut	NS4	0331407
T-nut	NS10	0331422
T-nut	RM2	0331425
T-nut	RM4	0331426
Mounting strip	BL6	0331428

Motor flange schematic diagram



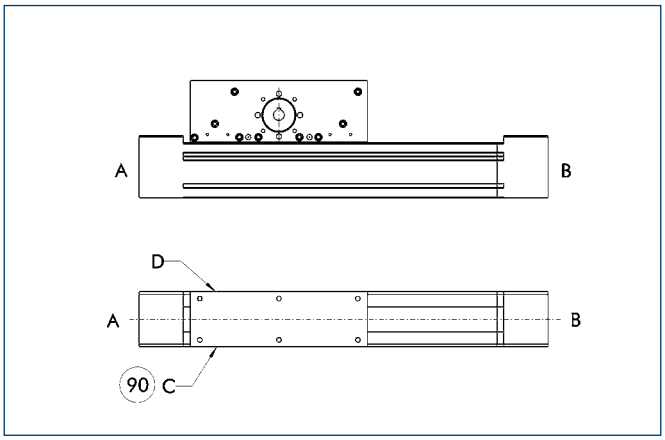
	GS 9	GS 14	GS 19	GS 24	GS 28
C	10	13	16	18	20

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

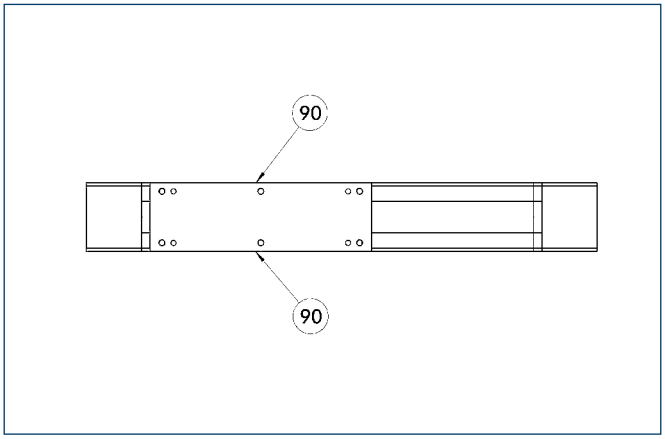
Two E02 switches are used as limit switches and an RS2 as the reference switch as standard.

ⓘ 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

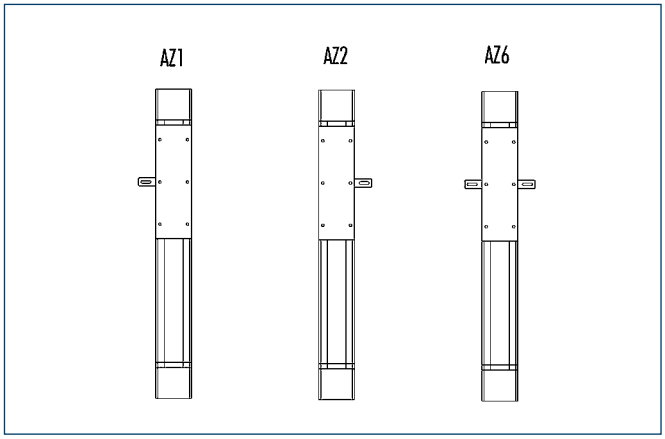


90 Standard lubrication connection

Standard connection
Lubrication nipple M8x1

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

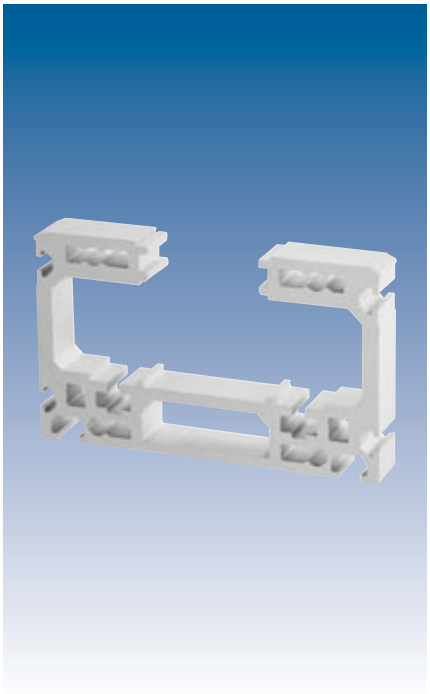
Drive shafts



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.

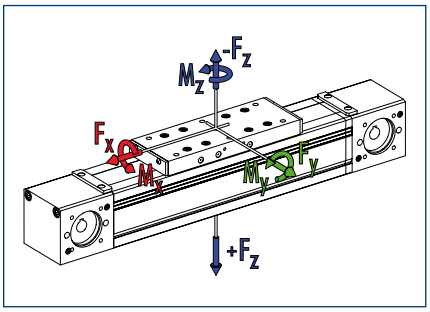
B 140C-ZSS



Advantages of profiled rail guide

- High load bearing capacity
- Long lifetime
- High precision

Loads and load torques



Load		Dynamic
F_x **	[N]	4000
F_y	[N]	3200
F_z	[N]	7500
$-F_z$	[N]	5000
Load torques		**Dynamic**
M_x	[Nm]	600
M_y	[Nm]	1200 (1700)
M_z	[Nm]	1200 (1700)
M_{Amax}	[Nm]	143.6

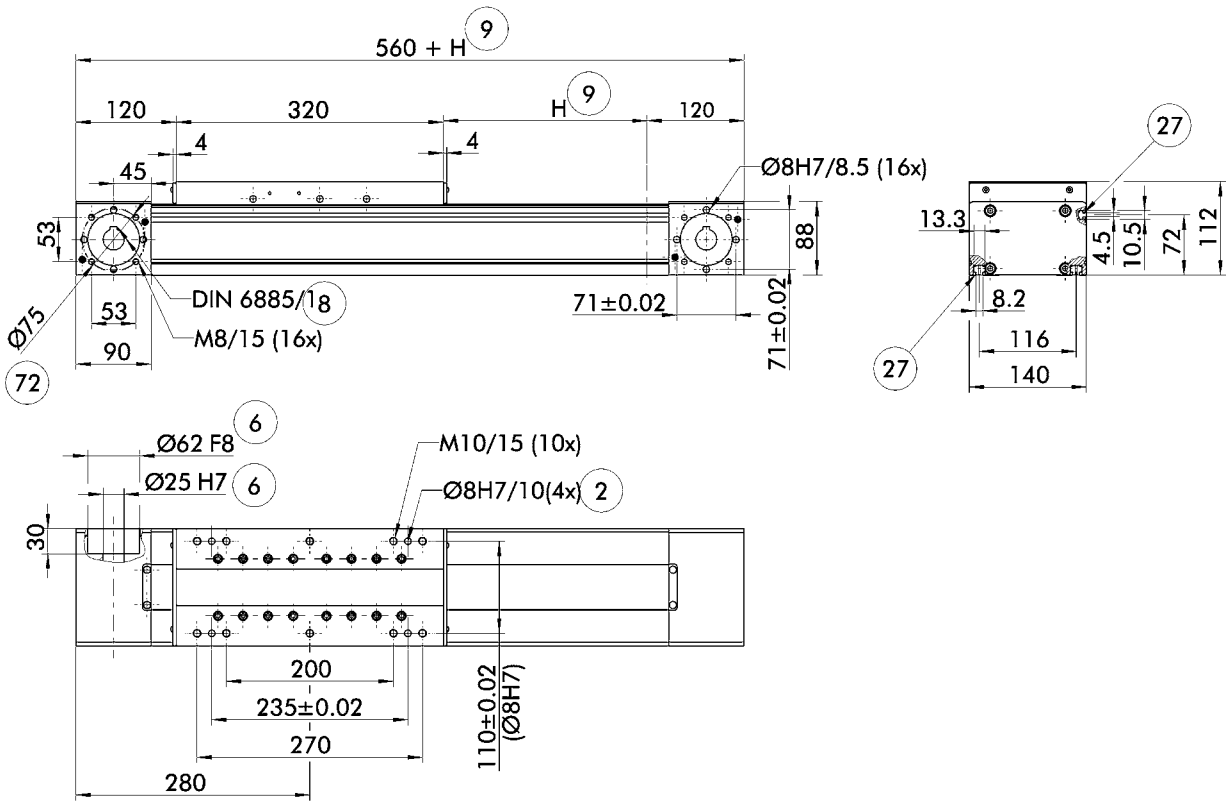
** Maximum value = Depending on speed

ⓘ Values in brackets relate to the long slide.

Technical data

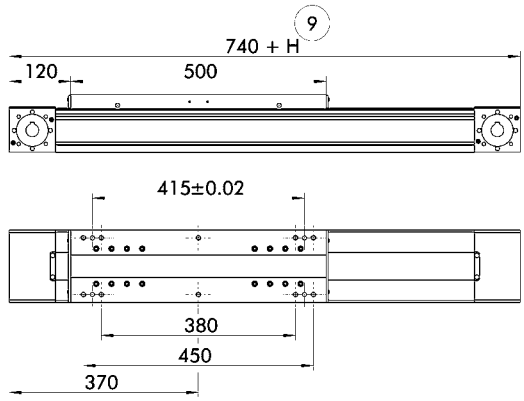
Designation		B 140C-ZSS
Max. travel speed	[m/s]	5
Repeat accuracy	[mm]	**± 0.08**
Max. acceleration	[m/s²]	60
Idle torque	[Nm]	3.5
Drive		
Drive element	Toothed belt	50 AT 10-E
Travel per revolution	[mm]	220
Maximum stroke	[mm]	7470
Max. total length	[mm]	8100
Moment of inertia	[kgm²]	0.02
Weights		
Basic without travel	[kg]	15.0
Travel per 100 mm	[kg]	1.7
Slide plate 320 mm	[kg]	7.5
Slide plate 500 mm	[kg]	11.7

Main views



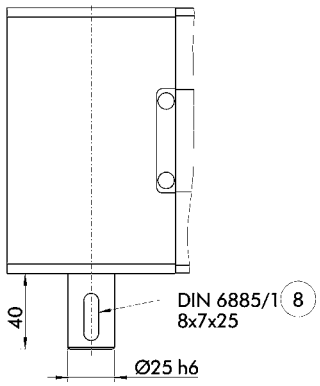
② Assembly connection
⑥ Drive connection
⑧ Feather key DIN 6885
⑨ Useful stroke
㉗ Mounting groove for T-nuts
㉜ Bolt pitch circle

Long slide



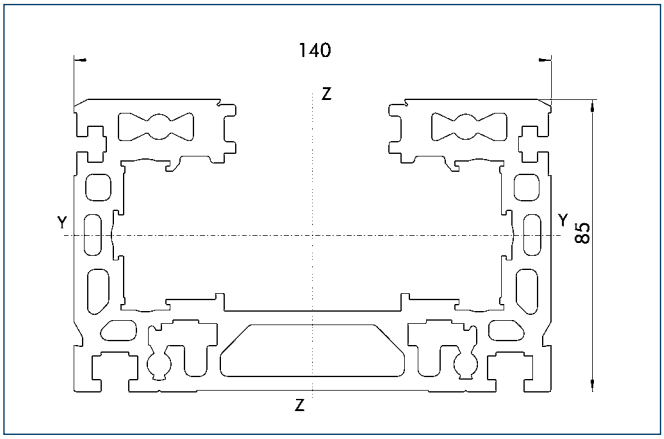
⑨ Useful stroke

Drive journal connection dimensions



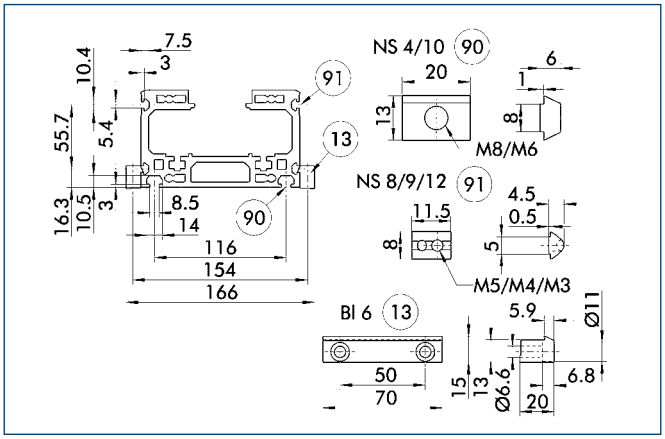
⑧ Feather key

Profile ZSS



Specific mass	[kg/m]	10.11
Planar dimension	[mm²]	3743
Planar moment of inertia I_y	[mm⁴]	3127894
Planar moment of inertia I_z	[mm⁴]	9071334
Load torque W_y	[mm³]	67067
Load torque W_z	[mm³]	129589

Mounting



(13) Mounting strip

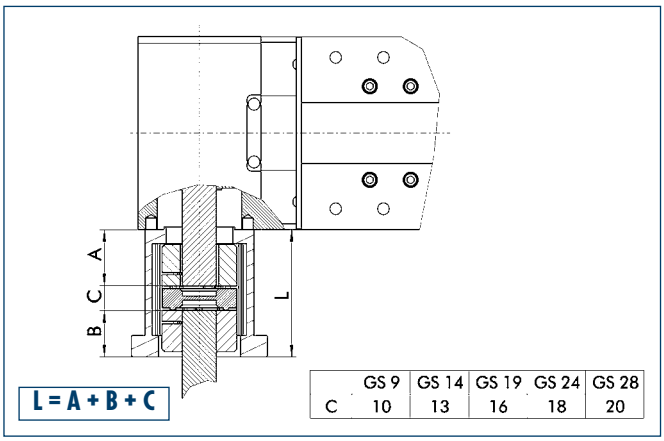
(90) T-nut on base side

(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	NS8	0331420
T-nut	NS9	0331421
T-nut	NS10	0331422
T-nut	NS12	0331424
Mounting strip	BL6	0331428

Motor flange schematic diagram



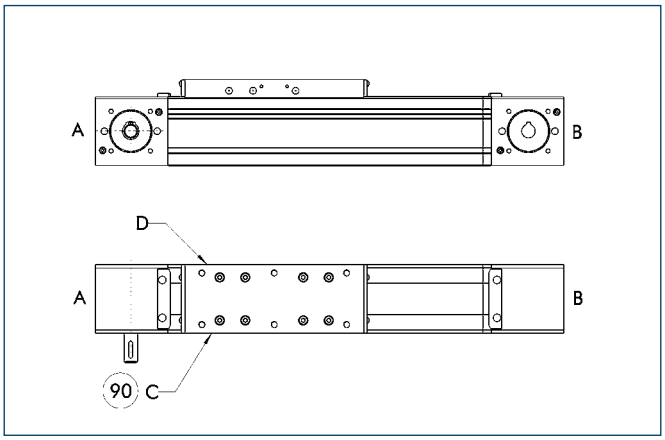
	GS 9	GS 14	GS 19	GS 24	GS 28
C	10	13	16	18	20

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

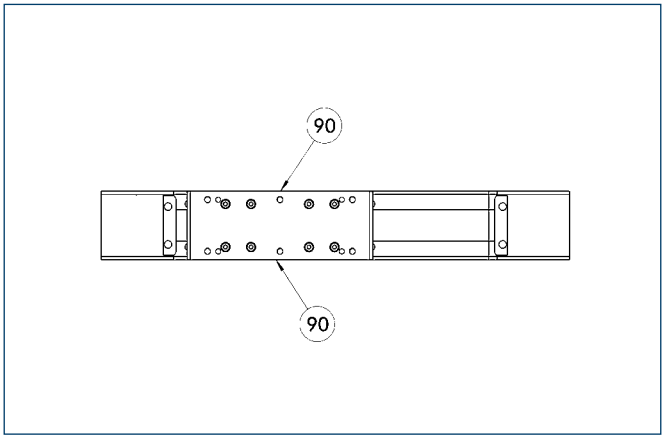
Two EO2 switches are used as limit switches and an RS2 as the reference switch as standard.

ⓘ 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	EO2	0331410
Inductive limit switch, opener, 10 m cable	EO10	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

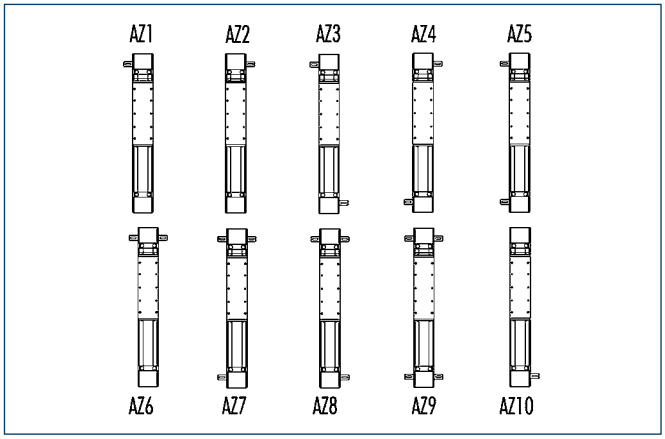


(90) Standard lubrication connection

Standard connection
Lubrication nipple M8x1

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

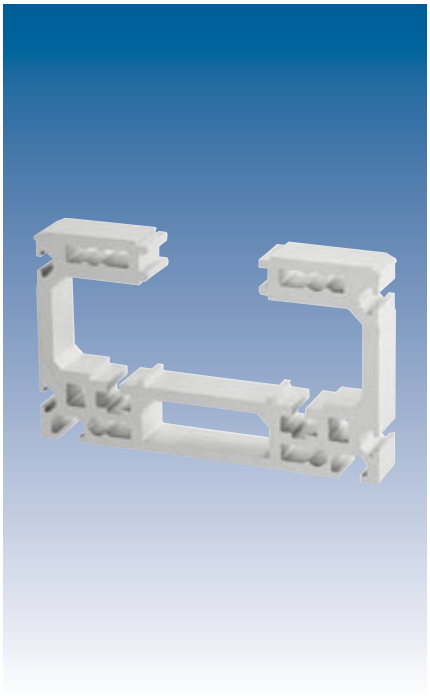
Drive shafts



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.

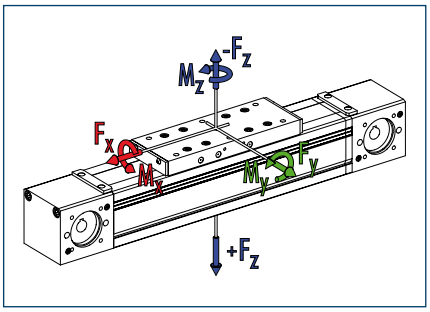
B 140C-ASS



Advantages of profiled rail guide

- High load bearing capacity
- Long lifetime
- High precision

Loads and load torques



Load		Dynamic
F_x **	[N]	1800
F_y	[N]	3200
F_z	[N]	7500
$-F_z$	[N]	5000
Load torques		**Dynamic**
M_x	[Nm]	600
M_y	[Nm]	1200
M_z	[Nm]	1200
M_{Amax}	[Nm]	99.0

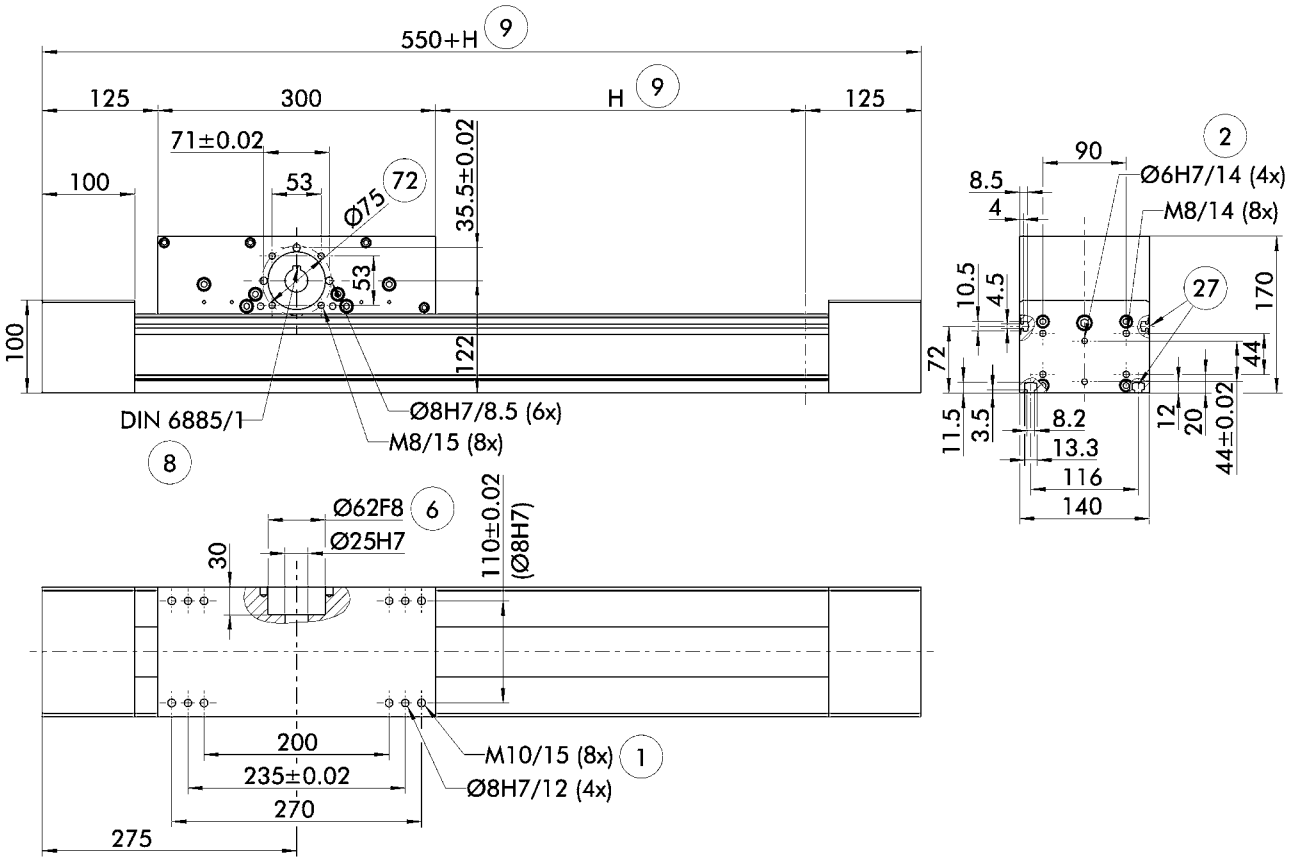
** Maximum value = Depending on speed

ⓘ Values in brackets relate to the long slide.

Technical data

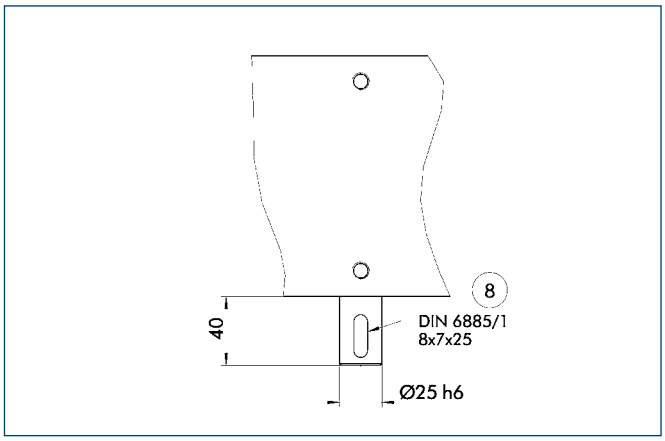
Designation		B 140C-ASS
Max. travel speed	[m/s]	5
Repeat accuracy	[mm]	**± 0.08**
Max. acceleration	[m/s²]	60
Idle torque	[Nm]	3.5
Drive		
Drive element	Toothed belt	50 AT 10-E
Travel per revolution	[mm]	220
Maximum stroke	[mm]	7470
Max. total length	[mm]	8100
Moment of inertia	[kgm²]	0.037
Weights		
Basic without travel	[kg]	30.0
Travel per 100 mm	[kg]	1.5
Slide drive 380 mm	[kg]	14.0

Main views



① Linear unit connection
② Assembly connection
⑥ Drive connection
⑧ Feather key DIN 6885
⑨ Useful stroke
㉗ Mounting groove for T-nuts
㉜ Bolt pitch circle

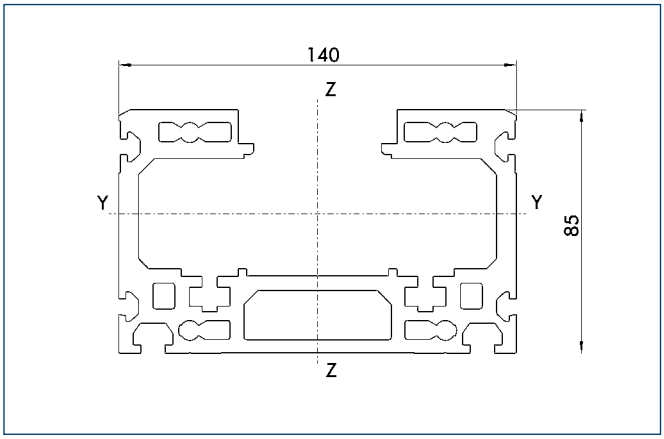
Drive journal connection dimensions



⑧ Feather key

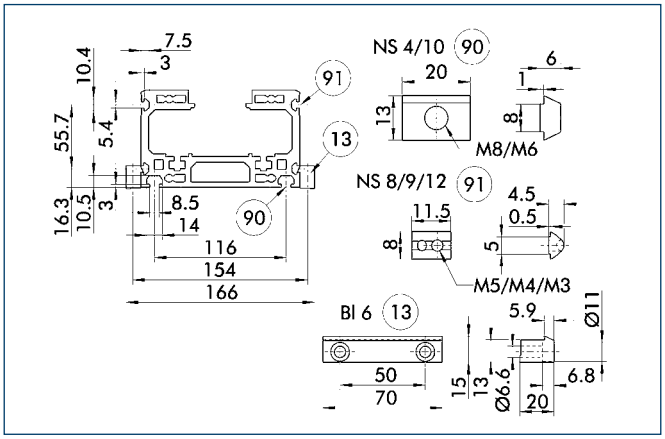
B 140C-ASS

Profile ASS



Specific mass	[kg/m]	10.11
Planar dimension	[mm²]	3743
Planar moment of inertia I_y	[mm⁴]	3127894
Planar moment of inertia I_z	[mm⁴]	9071334
Load torque W_y	[mm³]	67067
Load torque W_z	[mm³]	129589

Mounting



13 Mounting strip

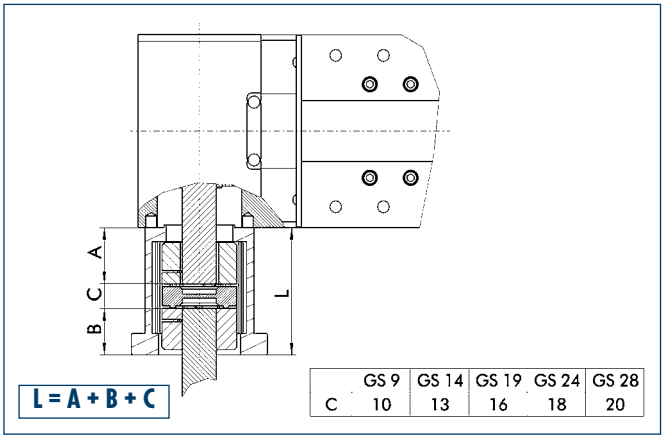
90 T-nut on base side

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	NS8	0331420
T-nut	NS9	0331421
T-nut	NS10	0331422
T-nut	NS12	0331424
Mounting strip	BL6	0331428

Motor flange schematic diagram



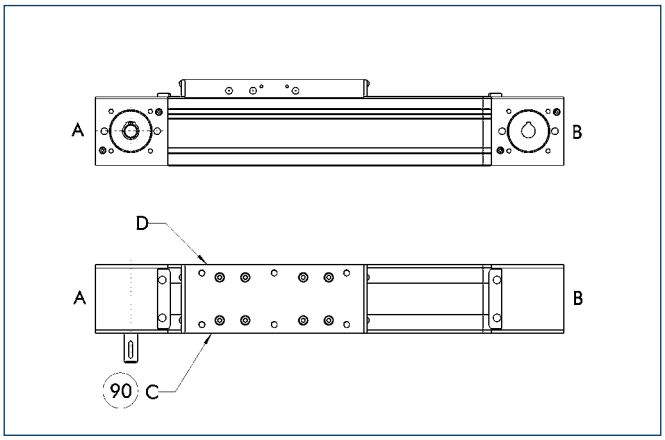
	GS 9	GS 14	GS 19	GS 24	GS 28
C	10	13	16	18	20

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

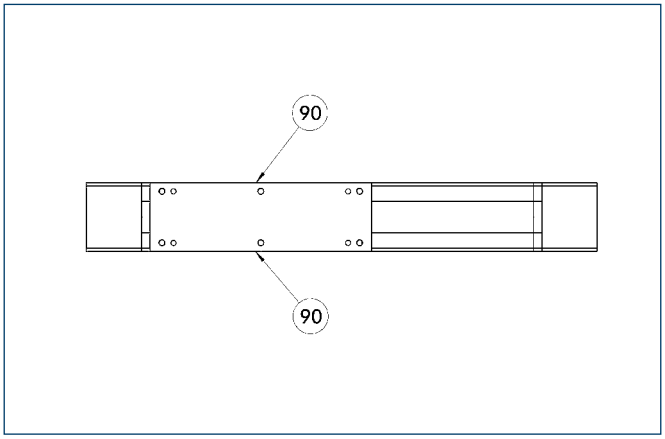
Two EO2 switches are used as limit switches and an RS2 as the reference switch as standard.

ⓘ 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	EO2	0331410
Inductive limit switch, opener, 10 m cable	EO10	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

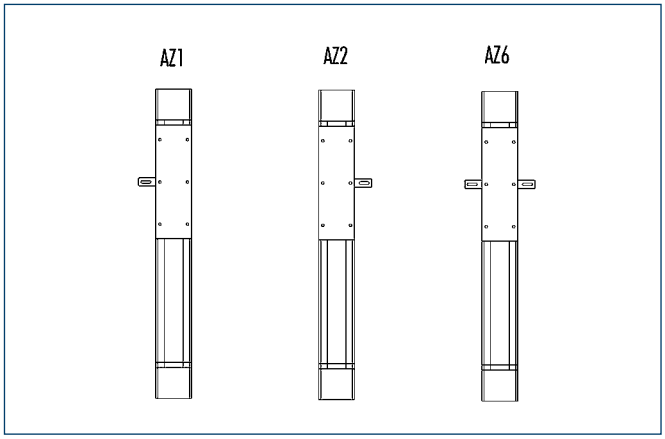


90 Standard lubrication connection

Standard connection
Lubrication nipple M8x1

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

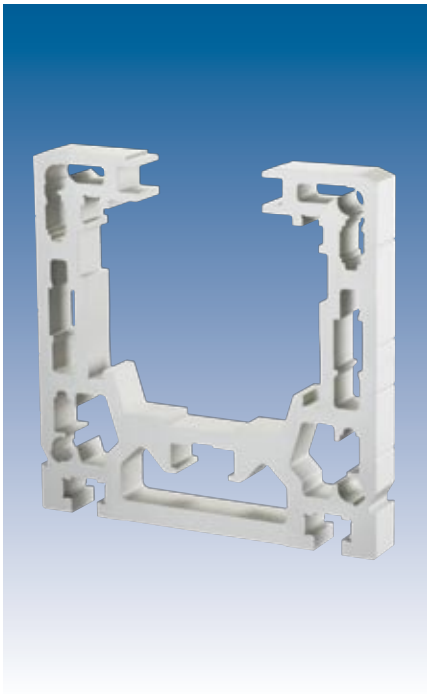
Drive shafts



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.

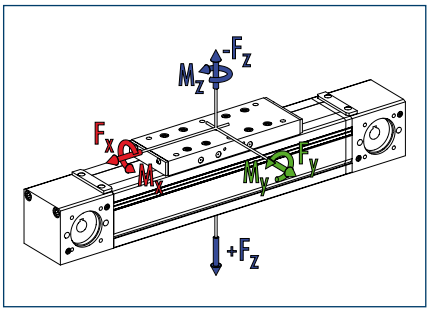
B 165-ZSS



Advantages of profiled rail guide

- High load bearing capacity
- Long lifetime
- High precision

Loads and load torques



Load		Dynamic
F_x **	[N]	10000
F_y	[N]	5000
F_z	[N]	15000
$-F_z$	[N]	8000
Load torques		**Dynamic**
M_x	[Nm]	700
M_y	[Nm]	1400 (2000)
M_z	[Nm]	1100 (1500)
M_{Amax}	[Nm]	712.3

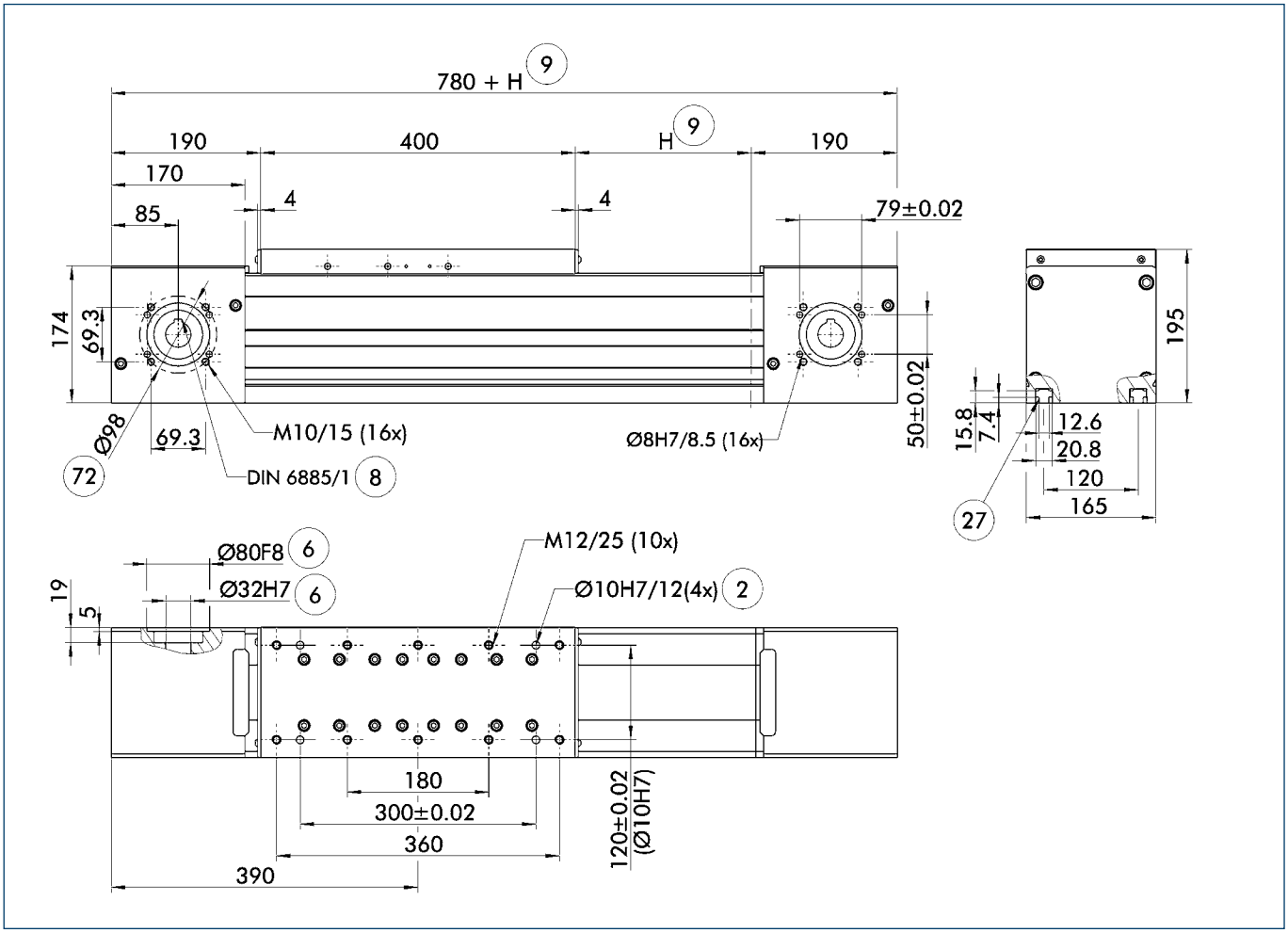
** Maximum value = Depending on speed

ⓘ Values in brackets relate to the long slide.

Technical data

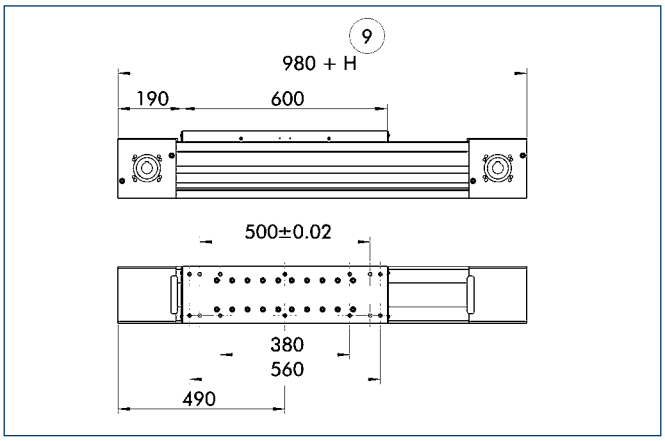
Designation		B 165-ZSS
Max. travel speed	[m/s]	5
Repeat accuracy	[mm]	**± 0.08**
Max. acceleration	[m/s²]	60
Idle torque	[Nm]	12.0
Drive		
Drive element	Toothed belt	75 AT 20
Travel per revolution	[mm]	440
Maximum stroke	[mm]	6920
Max. total length	[mm]	7700
Moment of inertia	[kgm²]	0.085
Weights		
Basic without travel	[kg]	42.4
Travel per 100 mm	[kg]	3.5
Slide plate 400 mm	[kg]	11.9
Slide plate 600 mm	[kg]	17.9

Main views



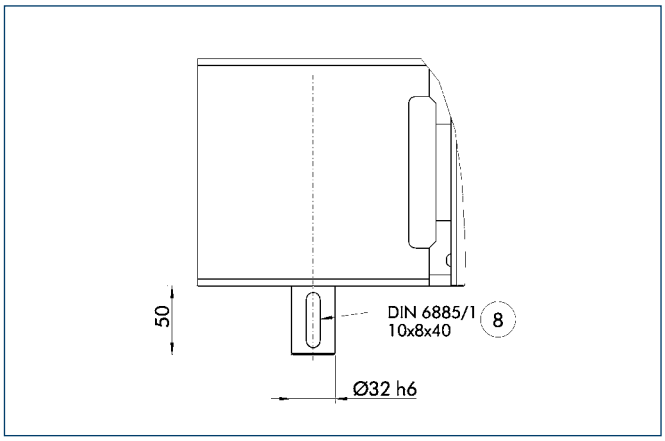
(2) Assembly connection
(6) Drive connection
(8) Feather key DIN 6885
(9) Useful stroke
(27) Mounting groove for T-nuts
(72) Bolt pitch circle

Long slide



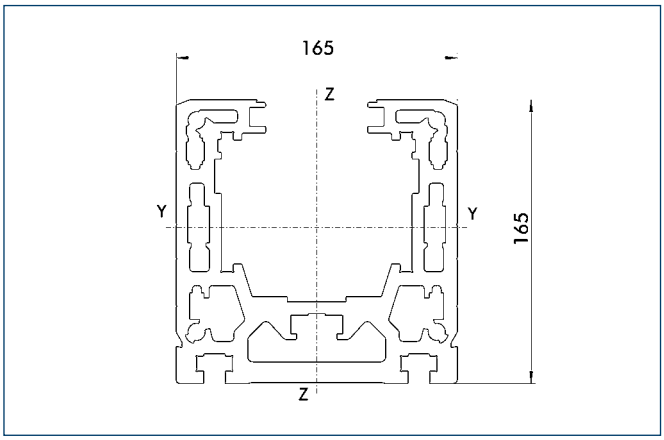
(9) Useful stroke

Drive journal connection dimensions



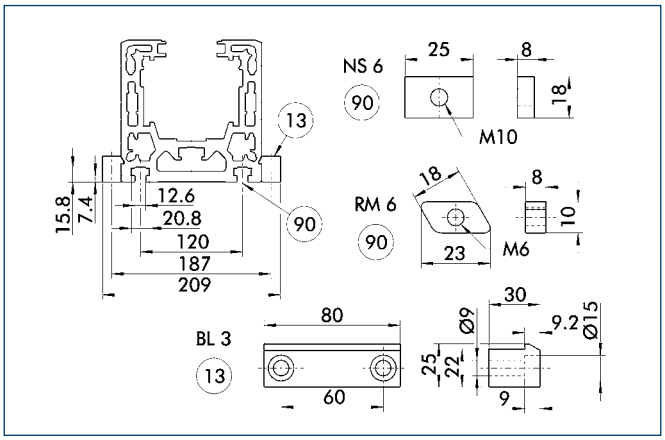
(8) Feather key

Profile ZSS



Specific mass	[kg/m]	25.13
Planar dimension	[mm²]	9308
Planar moment of inertia I_y	[mm⁴]	25391136
Planar moment of inertia I_z	[mm⁴]	31673479
Load torque W_y	[mm³]	264686
Load torque W_z	[mm³]	383919

Mounting

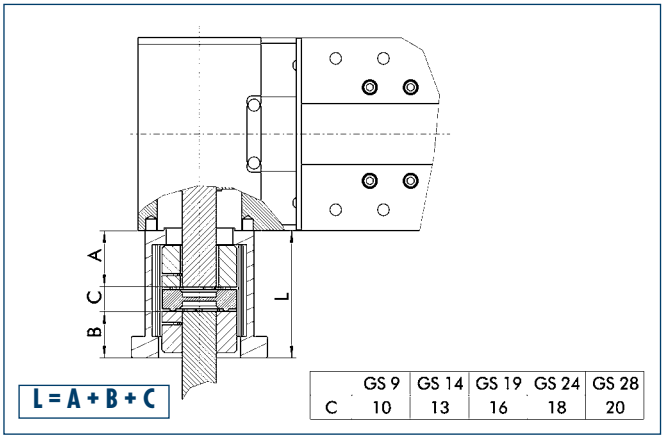


(13) Mounting strip (90) T-nut on base side

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

Designation	Order designation	ID no.
T-nut	NS6	0331409
T-nut	RM6	0331427
Mounting strip	BL3	0331402

Motor flange schematic diagram



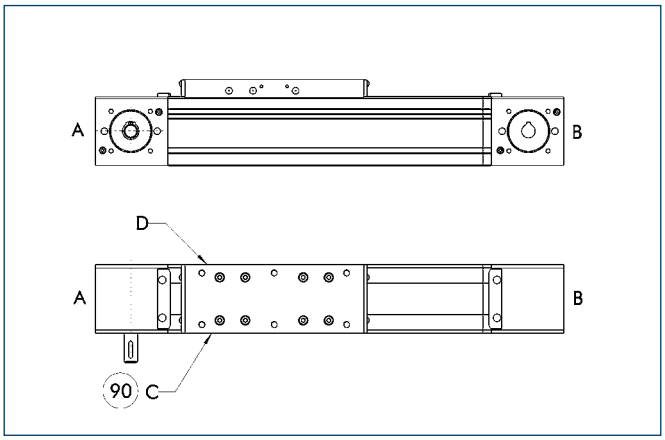
	GS 9	GS 14	GS 19	GS 24	GS 28
C	10	13	16	18	20

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

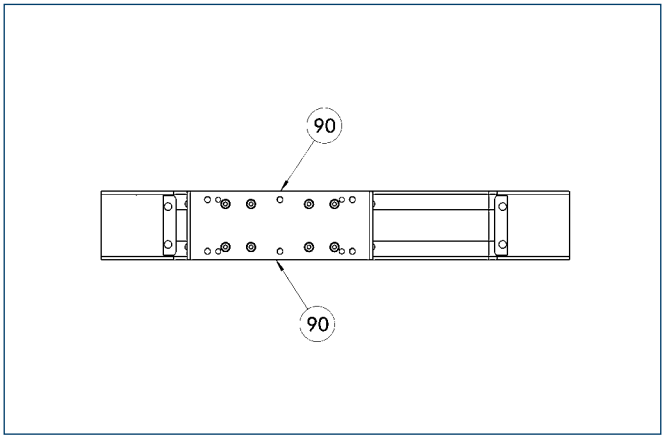
Two EO2 switches are used as limit switches and an RS2 as the reference switch as standard.

ⓘ 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	EO2	0331410
Inductive limit switch, opener, 10 m cable	EO10	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

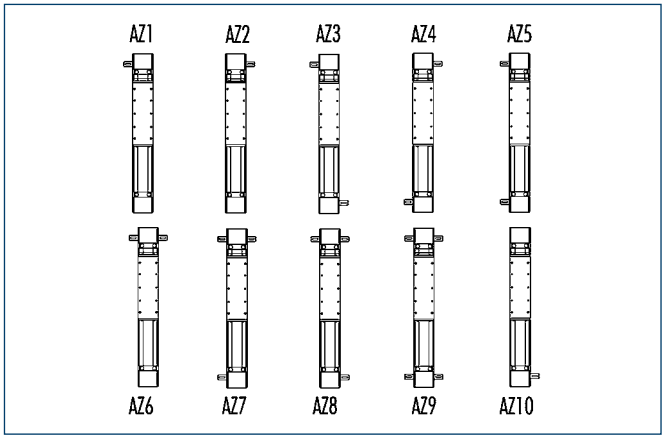


(90) Standard lubrication connection

Standard connection
Lubrication nipple M8x1

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

Drive shafts

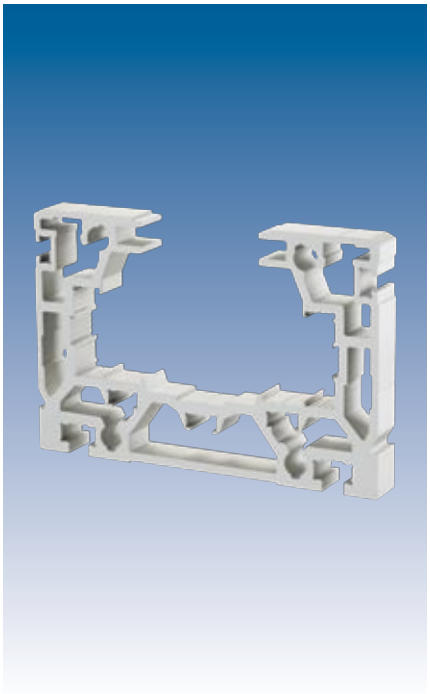


Depending on the axis application, the drive shaft seat may need to be defined in the order text. Particularly with axis combinations and mechanical synchronization, multiple drive shafts - some of them continuous shafts - are required.

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

B 180-ZSS

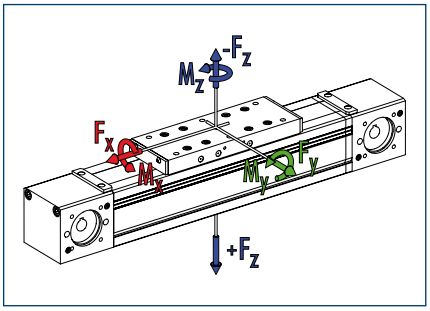
Linear Axes · Toothed-belt Drive



Advantages of profiled rail guide

- High load bearing capacity
- Long lifetime
- High precision

Loads and load torques



Load		Dynamic
F_x **	[N]	6000
F_y	[N]	6000
F_z	[N]	12000
$-F_z$	[N]	6000
Load torques		**Dynamic**
M_x	[Nm]	1500
M_y	[Nm]	3000 (4000)
M_z	[Nm]	1500 (2000)
M_{Amax}	[Nm]	313.6

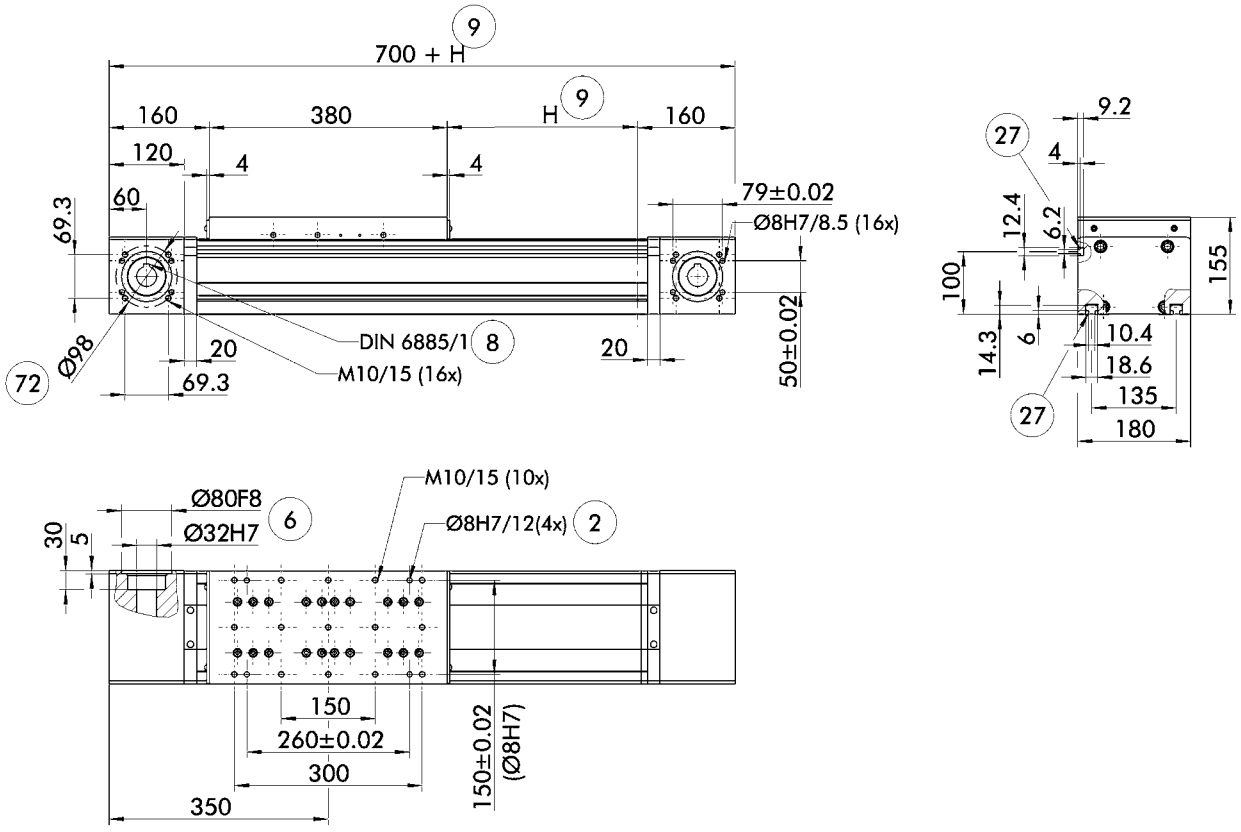
** Maximum value = Depending on speed

ⓘ Values in brackets relate to the long slide.

Technical data

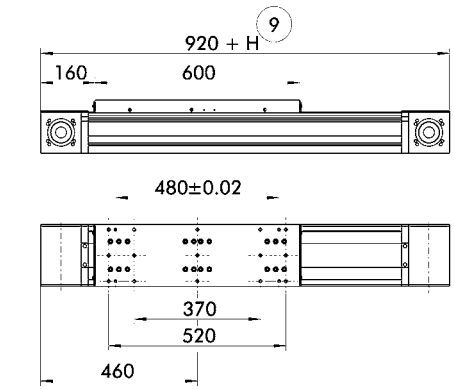
Designation		B 180-ZSS
Max. travel speed	[m/s]	5
Repeat accuracy	[mm]	**± 0.08**
Max. acceleration	[m/s²]	60
Idle torque	[Nm]	8.0
Drive		
Drive element	Toothed belt	75 AT 10
Travel per revolution	[mm]	320
Maximum stroke	[mm]	5500
Max. total length	[mm]	6200
Moment of inertia	[kgm²]	0.056
Weights		
Basic without travel	[kg]	37.7
Travel per 100 mm	[kg]	2.4
Slide plate 380 mm	[kg]	11.2
Slide plate 600 mm	[kg]	15.7

Main views



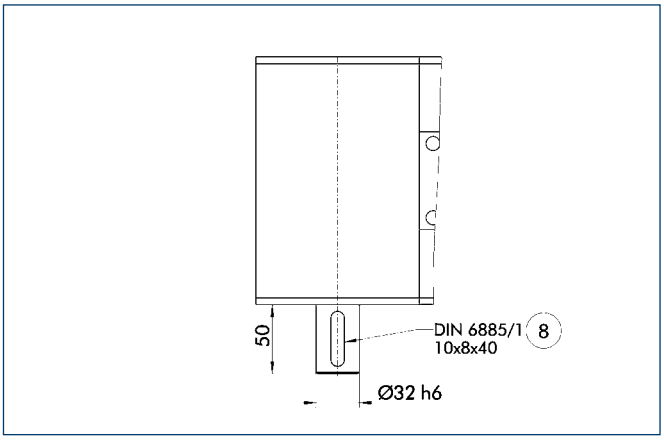
(2) Assembly connection
(6) Drive connection
(8) Feather key DIN 6885
(9) Useful stroke
(27) Mounting groove for T-nuts
(72) Bolt pitch circle

Long slide



(9) Useful stroke

Drive journal connection dimensions

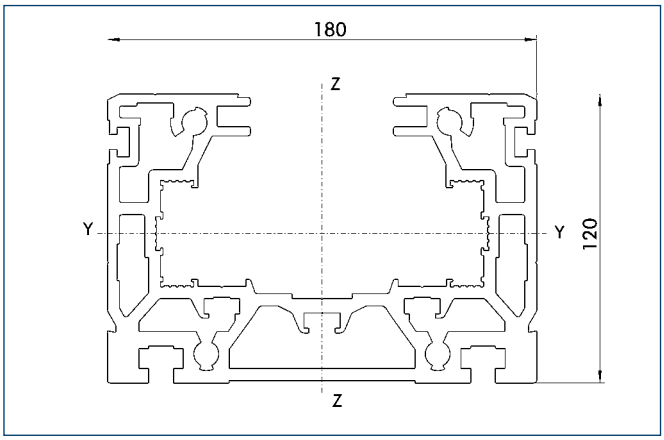


(8) Feather key

B 180-ZSS

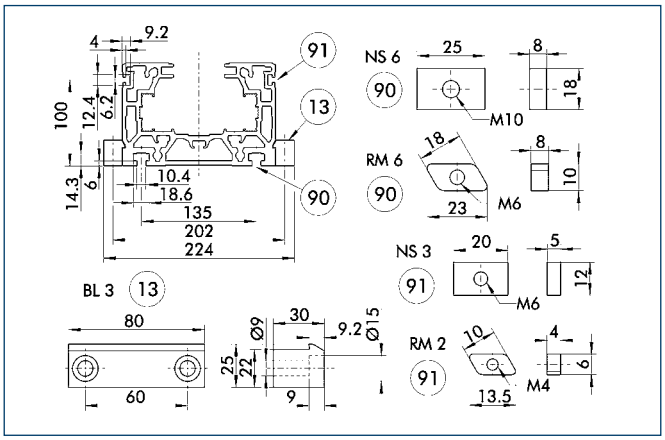
Linear Axes · Toothed-belt Drive

Profile ZSS



Specific mass	[kg/m]	15.49
Planar dimension	[mm²]	5736
Planar moment of inertia I_y	[mm⁴]	9236448
Planar moment of inertia I_z	[mm⁴]	23586987
Load torque W_y	[mm³]	134968
Load torque W_z	[mm³]	261545

Mounting

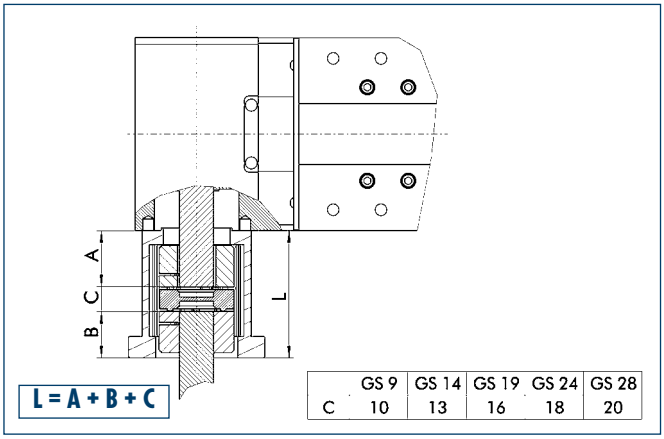


(13) Mounting strip
(90) T-nut on base side
(91) Side T-nut

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

Designation	Order designation	ID no.
T-nut	NS3	0331406
T-nut	NS6	0331409
T-nut	RM2	0331425
T-nut	RM6	0331427
Mounting strip	BL3	0331402

Motor flange schematic diagram



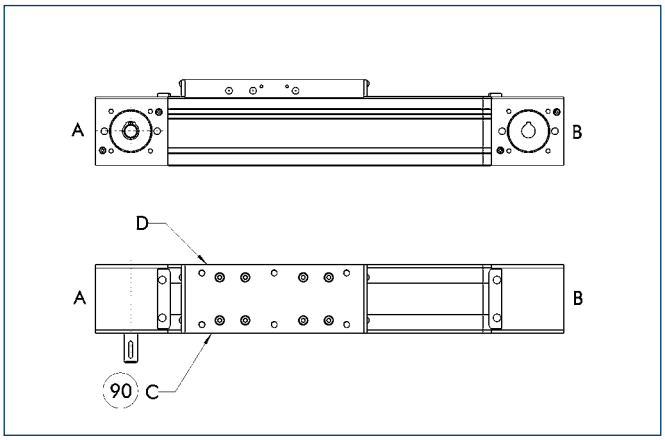
	GS 9	GS 14	GS 19	GS 24	GS 28
C	10	13	16	18	20

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

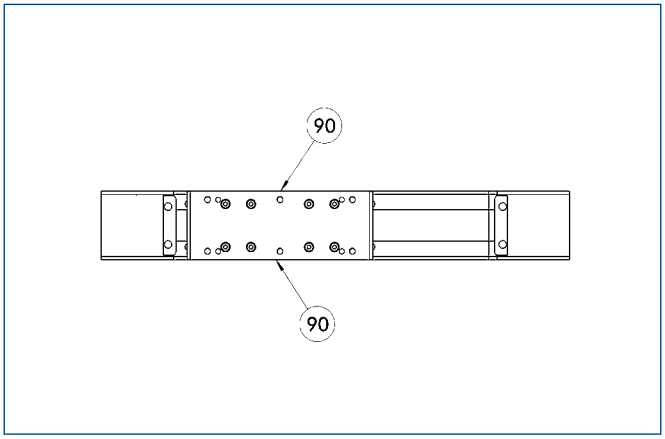
Two EO2 switches are used as limit switches and an RS2 as the reference switch as standard.

ⓘ 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	EO2	0331410
Inductive limit switch, opener, 10 m cable	EO10	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

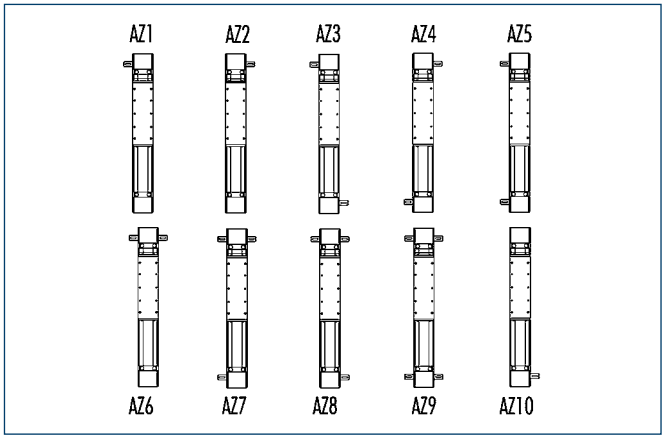


90 Standard lubrication connection

Standard connection
Lubrication nipple M8x1

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

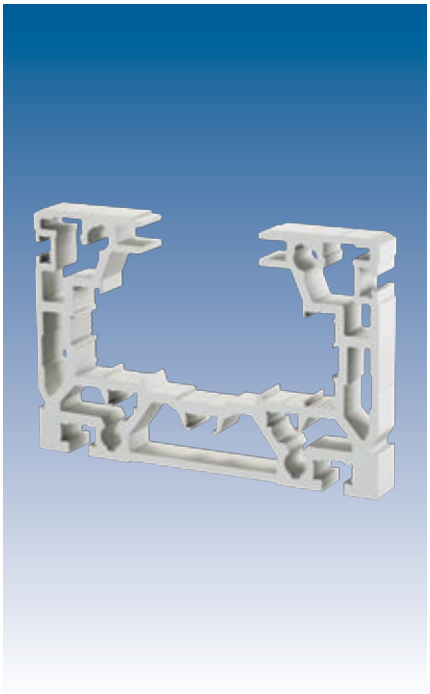
Drive shafts



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.

B 180-ASS



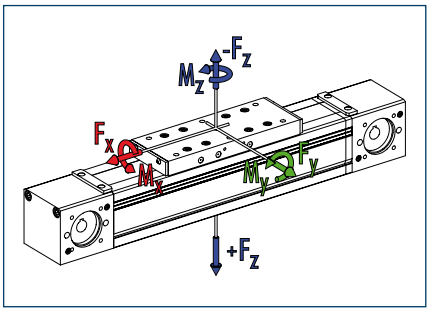
Advantages of profiled rail guide

High load bearing capacity

Long lifetime

High precision

Loads and load torques



Load		Dynamic
F_x **	[N]	3500
F_y	[N]	6000
F_z	[N]	12000
$-F_z$	[N]	6000
Load torques		**Dynamic**
M_x	[Nm]	1500
M_y	[Nm]	3000
M_z	[Nm]	1500
M_{Amax}	[Nm]	186.3

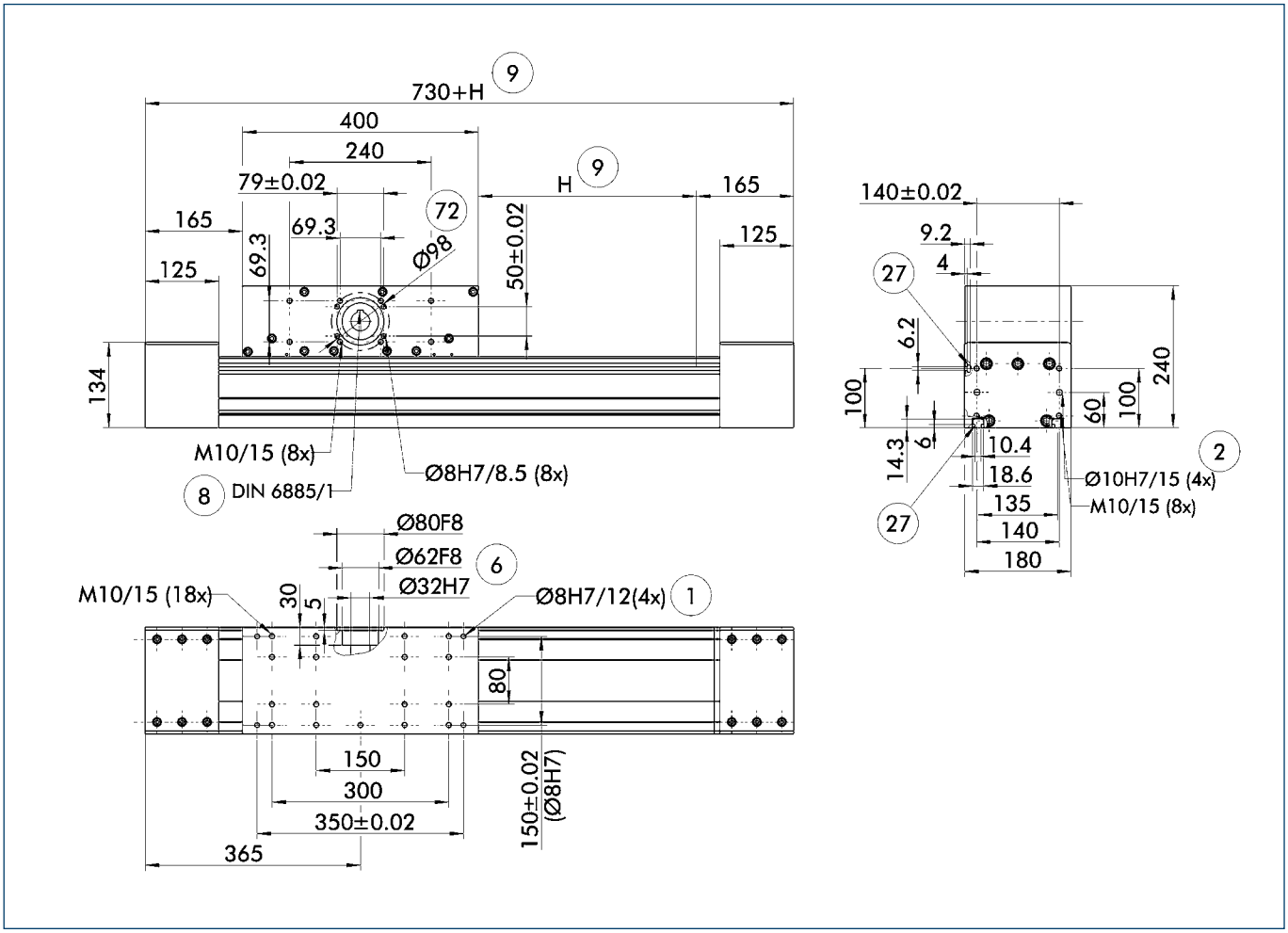
** Maximum value = Depending on speed

ⓘ Values in brackets relate to the long slide.

Technical data

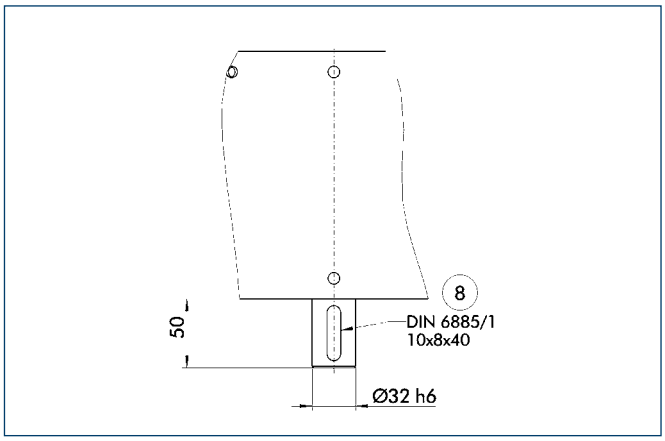
Designation		B 180-ASS
Max. travel speed	[m/s]	5
Repeat accuracy	[mm]	**± 0.08**
Max. acceleration	[m/s²]	60
Idle torque	[Nm]	8.0
Drive		
Drive element	Toothed belt	75 AT 10
Travel per revolution	[mm]	320
Maximum stroke	[mm]	5470
Max. total length	[mm]	6200
Moment of inertia	[kgm²]	0.062
Weights		
Basic without travel	[kg]	48.9
Travel per 100 mm	[kg]	2.8
Slide drive 400 mm	[kg]	25.6

Main views



① Linear unit connection
② Assembly connection
⑥ Drive connection
⑧ Feather key DIN 6885
⑨ Useful stroke
㉗ Mounting groove for T-nuts
㉜ Bolt pitch circle

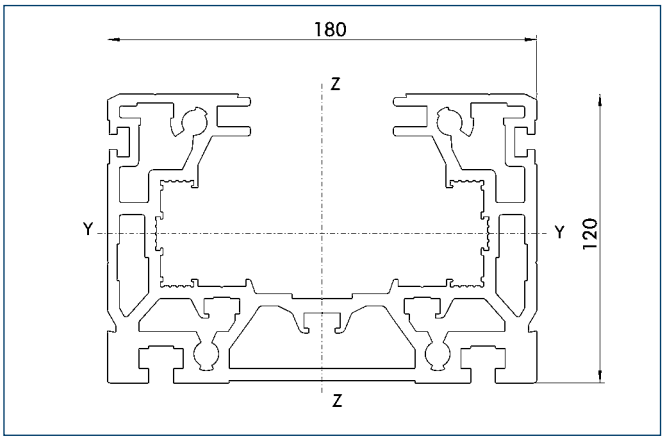
Drive journal connection dimensions



⑧ Feather key

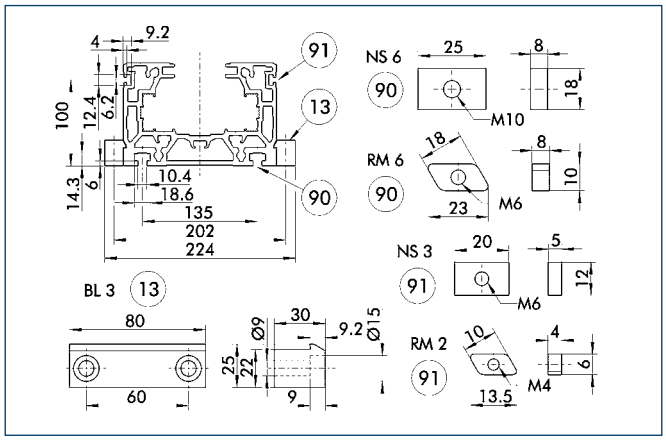
B 180-ASS

Profile ASS



Specific mass	[kg/m]	15.49
Planar dimension	[mm²]	5736
Planar moment of inertia I_y	[mm⁴]	9236448
Planar moment of inertia I_z	[mm⁴]	23586987
Load torque W_y	[mm³]	134968
Load torque W_z	[mm³]	261545

Mounting

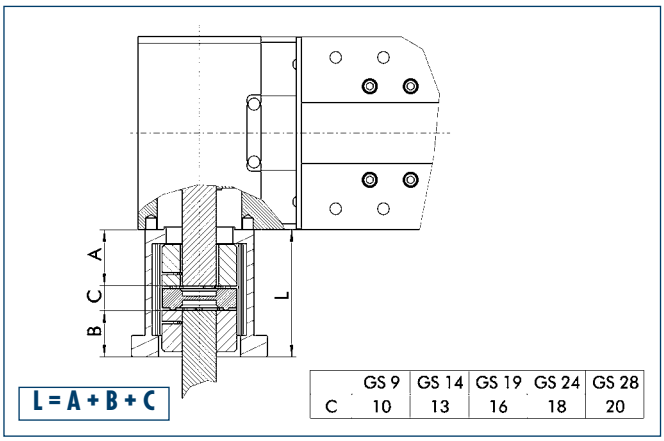


(13) Mounting strip
(90) T-nut on base side
(91) Side T-nut

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

Designation	Order designation	ID no.
T-nut	NS3	0331406
T-nut	NS6	0331409
T-nut	RM2	0331425
T-nut	RM6	0331427
Mounting strip	BL3	0331402

Motor flange schematic diagram



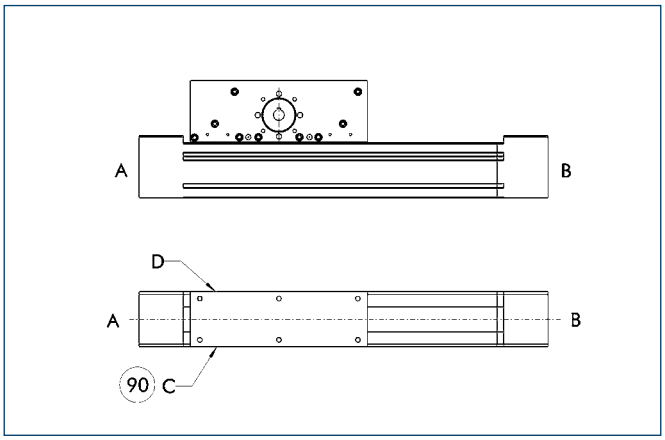
	GS 9	GS 14	GS 19	GS 24	GS 28
C	10	13	16	18	20

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

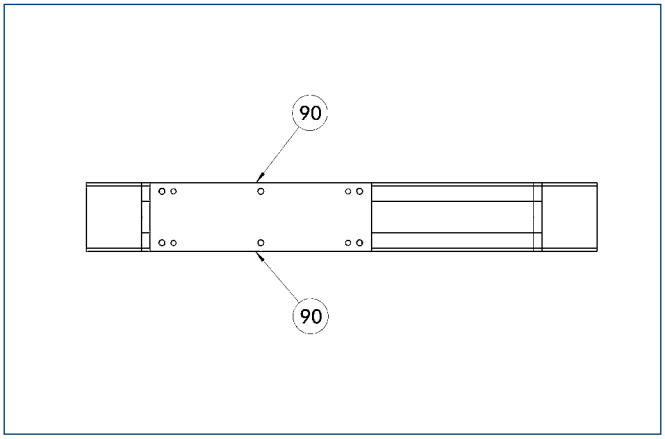
Two E02 switches are used as limit switches and an RS2 as the reference switch as standard.

ⓘ 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

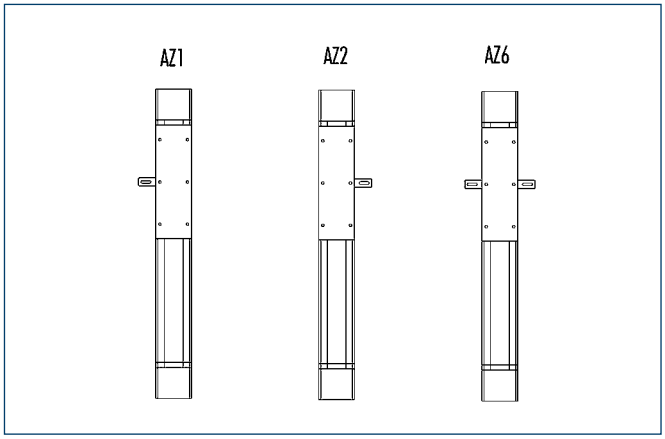


90 Standard lubrication connection

Standard connection
Lubrication nipple M8x1

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

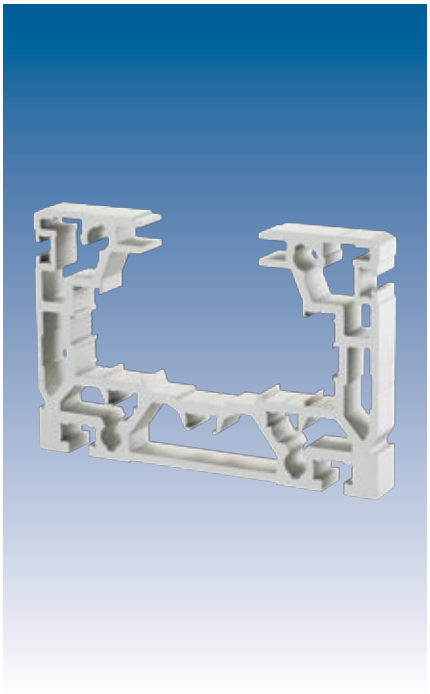
Drive shafts



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.

B 180C-ZRS/-ZSS



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

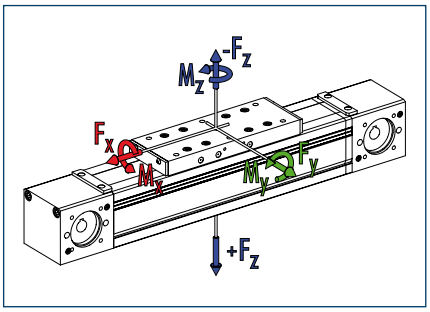
Advantages of profiled rail guide

High load bearing capacity

Long lifetime

High precision

Loads and load torques



Load		ZRS dynamic	ZSS dynamic
F_x **	[N]	6000	6000
F_y	[N]	6000	8000
F_z	[N]	10000	15000
$-F_z$	[N]	6000	8000
Load torques		**ZRS dynamic**	**ZSS dynamic**
M_x	[Nm]	1200	1800
M_y	[Nm]	2000 (3000)	3600 (4800)
M_z	[Nm]	1200 (1800)	1800 (2400)
M_{Amax}	[Nm]	313.6	313.6

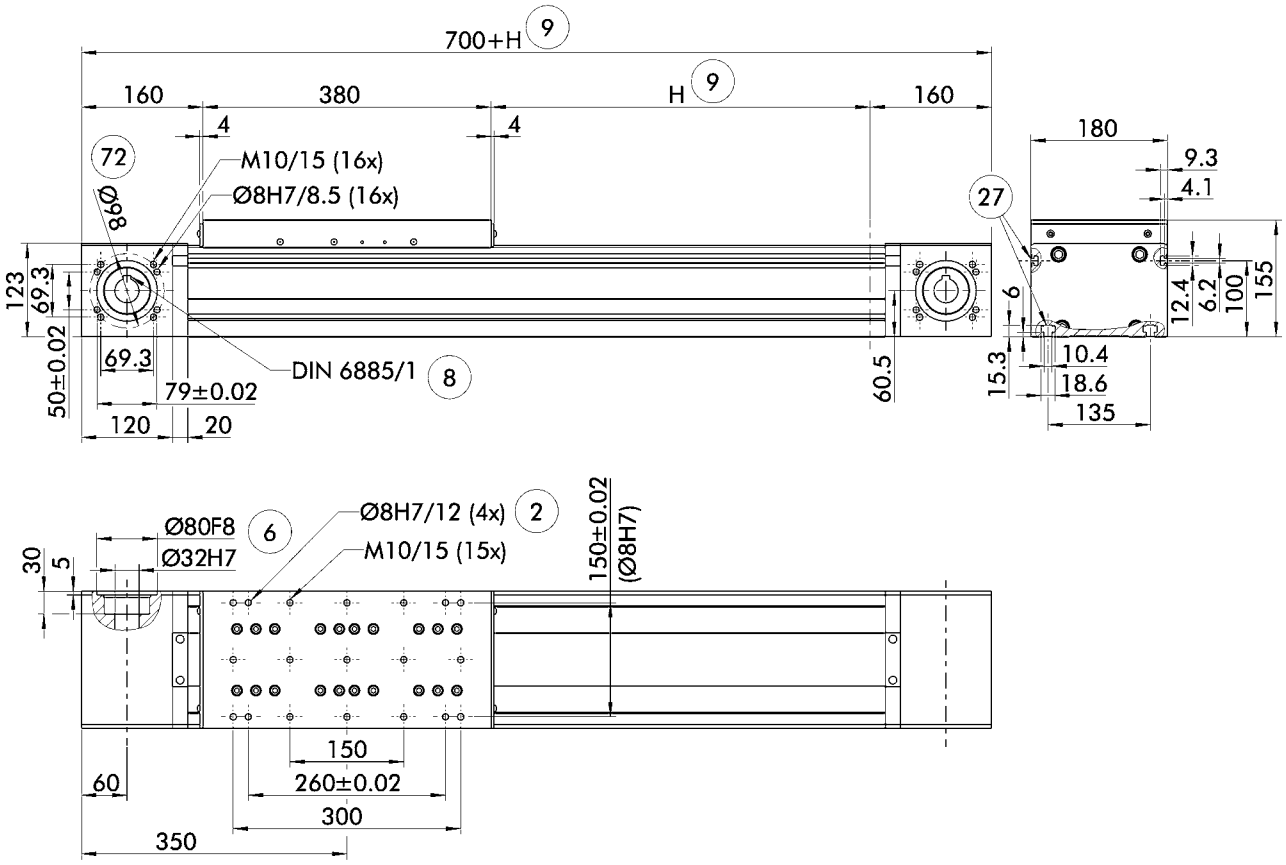
** Maximum value = Depending on speed

ⓘ Values in brackets relate to the long slide.

Technical data

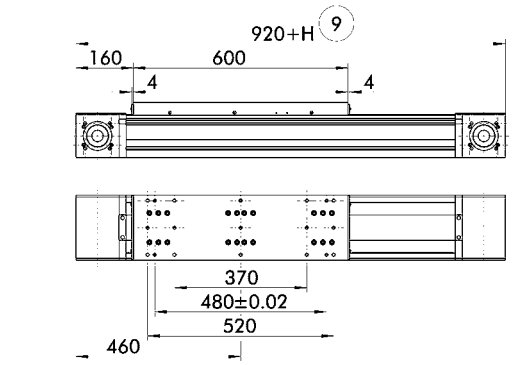
Designation		B 180C-ZRS	B 180C-ZSS
Max. travel speed	[m/s]	8	5
Repeat accuracy	[mm]	**± 0.08**	**± 0.08**
Max. acceleration	[m/s²]	60	60
Idle torque	[Nm]	8.0	8.0
Drive			
Drive element	Toothed belt	75 AT 10	75 AT 10
Travel per revolution	[mm]	320	320
Maximum stroke	[mm]	5500	5500
Max. total length	[mm]	6200	6200
Moment of inertia	[kgm²]	0.0425	0.0465
Weights			
Basic without travel	[kg]	37.7	39.7
Travel per 100 mm	[kg]	1.9	2.6
Slide plate 380 mm	[kg]	13.5	14.65
Slide plate 600 mm	[kg]	14.6	15.75

Main views



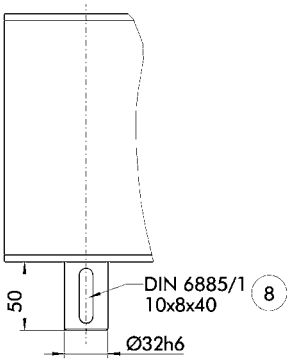
② Assembly connection
⑥ Drive connection
⑧ Feather key DIN 6885
⑨ Useful stroke
㉗ Mounting groove for T-nuts
㉜ Bolt pitch circle

Long slide



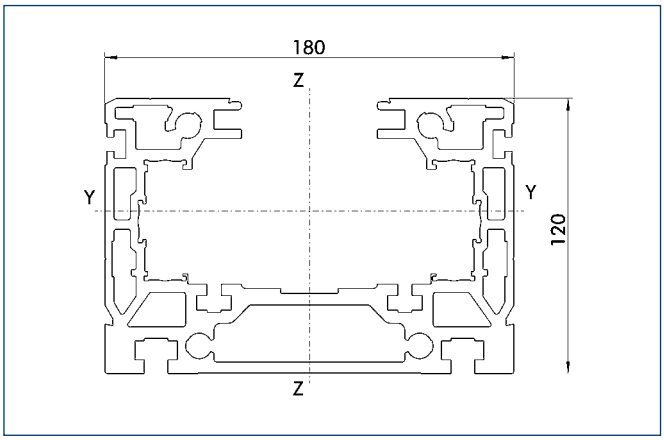
⑨ Useful stroke

Drive journal connection dimensions



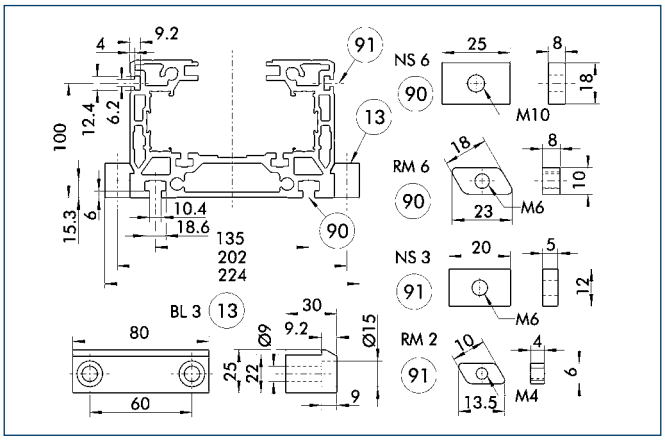
⑧ Feather key

Profile ZRS/ZSS



Specific mass	[kg/m]	15.49
Planar dimension	[mm²]	5736
Planar moment of inertia I_y	[mm⁴]	9236448
Planar moment of inertia I_z	[mm⁴]	23586987
Load torque W_y	[mm³]	134968
Load torque W_z	[mm³]	261545

Mounting

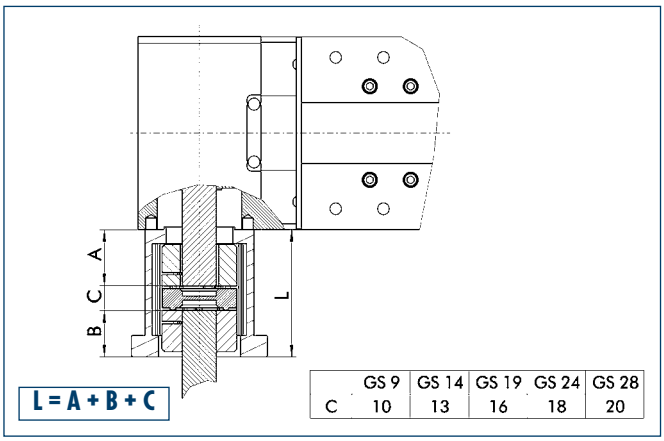


(13) Mounting strip
(90) T-nut on base side
(91) Side T-nut

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

Designation	Order designation	ID no.
T-nut	NS3	0331406
T-nut	NS6	0331409
T-nut	RM2	0331425
T-nut	RM6	0331427
Mounting strip	BL3	0331402

Motor flange schematic diagram



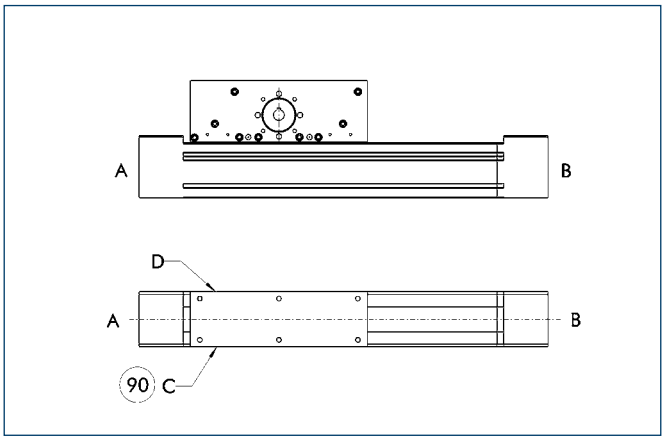
	GS 9	GS 14	GS 19	GS 24	GS 28
C	10	13	16	18	20

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

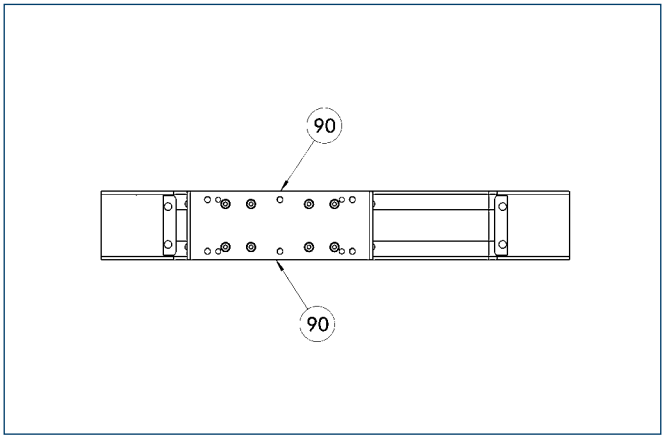
Two EO2 switches are used as limit switches and an RS2 as the reference switch as standard.

ⓘ 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	EO2	0331410
Inductive limit switch, opener, 10 m cable	EO10	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

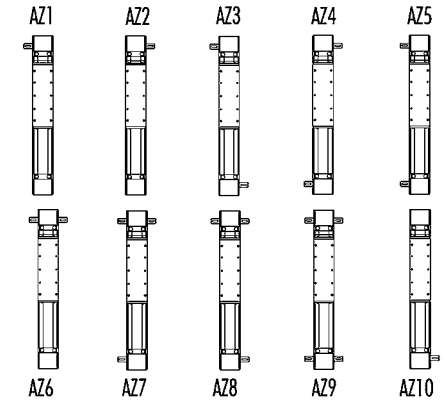


90 Standard lubrication connection

Standard connection
Lubrication nipple M8x1

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

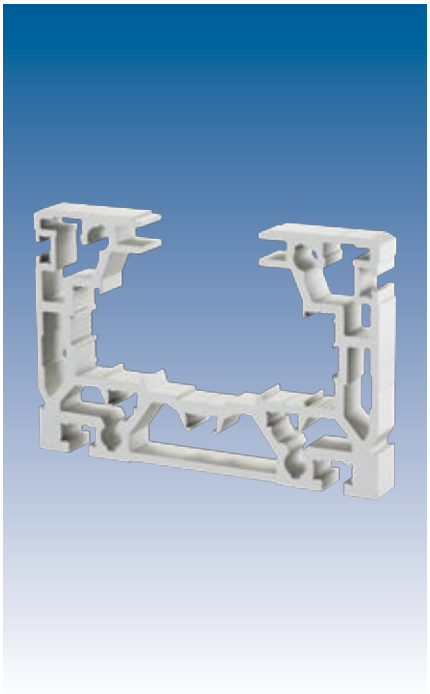
Drive shafts



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.

B 180C-ARS/-ASS



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

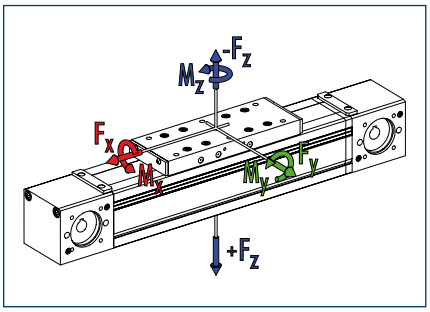
Advantages of profiled rail guide

High load bearing capacity

Long lifetime

High precision

Loads and load torques



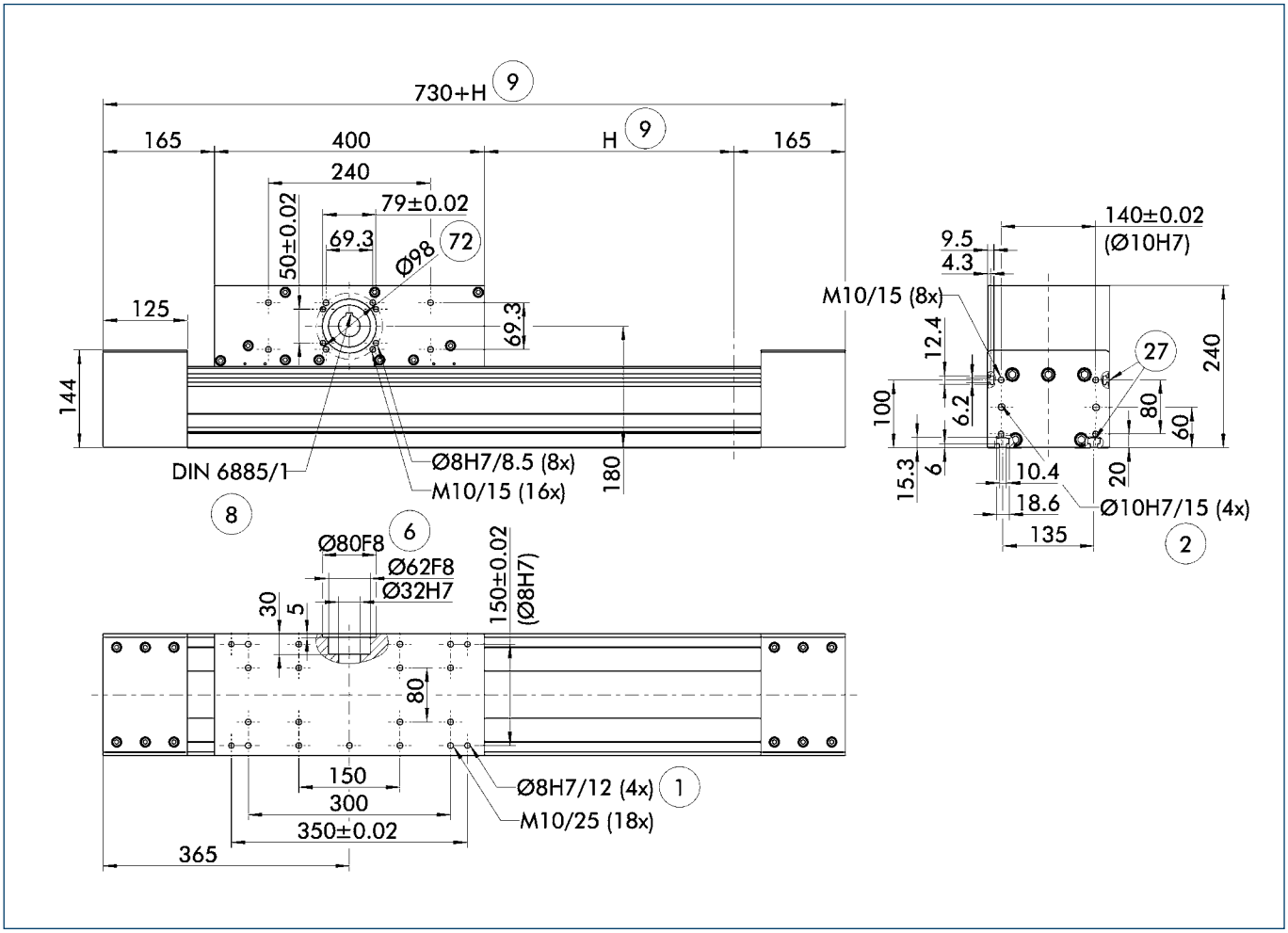
Load		ARS dynamic	ASS dynamic
F_x **	[N]	3500	3500
F_y	[N]	6000	8000
F_z	[N]	10000	15000
$-F_z$	[N]	6000	8000
Load torques		**ARS dynamic**	**ASS dynamic**
M_x	[Nm]	1200	1800
M_y	[Nm]	2000 (3000)	3600 (4800)
M_z	[Nm]	1200 (1800)	1800 (2400)
M_{Amax}	[Nm]	186.3	186.3

** Maximum value = Depending on speed
ⓘ Values in brackets relate to the long slide.

Technical data

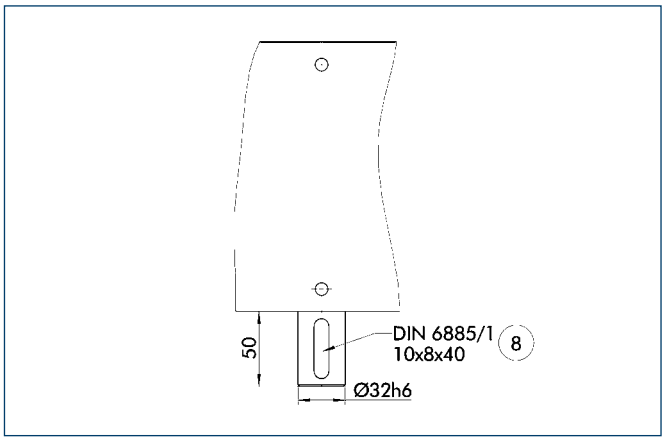
Designation		B 180C-ARS	B 180C-ASS
Max. travel speed	[m/s]	8	5
Repeat accuracy	[mm]	**± 0.08**	**± 0.08**
Max. acceleration	[m/s²]	60	60
Idle torque	[Nm]	8.0	8.0
Drive			
Drive element	Toothed belt	75 AT 10	75 AT 10
Travel per revolution	[mm]	320	320
Maximum stroke	[mm]	5470	5470
Max. total length	[mm]	6200	6200
Moment of inertia	[kgm²]	0.0715	0.0775
Weights			
Basic without travel	[kg]	49.5	51.5
Travel per 100 mm	[kg]	2.8	3.6
Slide drive 400 mm	[kg]	26.2	27.35

Main views



1 Linear unit connection
2 Assembly connection
6 Drive connection
8 Feather key DIN 6885
9 Useful stroke
27 Mounting groove for T-nuts
72 Bolt pitch circle

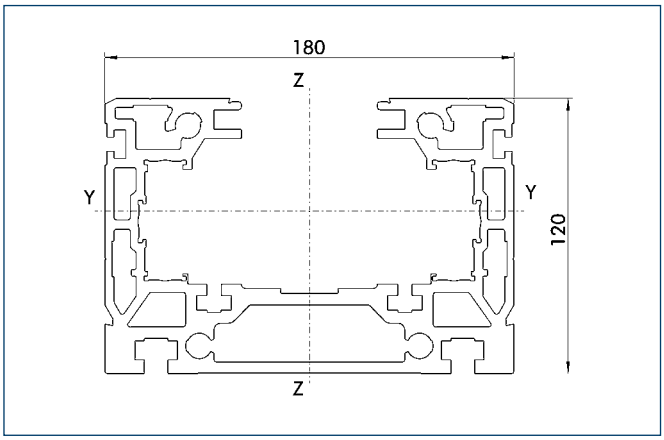
Drive journal connection dimensions



8 Feather key

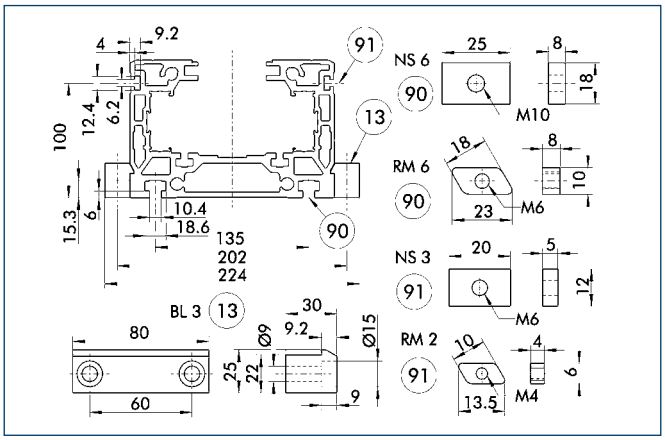
B 180C-ARS/-ASS

Profile ARS/ASS



Specific mass	[kg/m]	15.49
Planar dimension	[mm²]	5736
Planar moment of inertia I_y	[mm⁴]	9236448
Planar moment of inertia I_z	[mm⁴]	23586987
Load torque W_y	[mm³]	134968
Load torque W_z	[mm³]	261545

Mounting



(13) Mounting strip

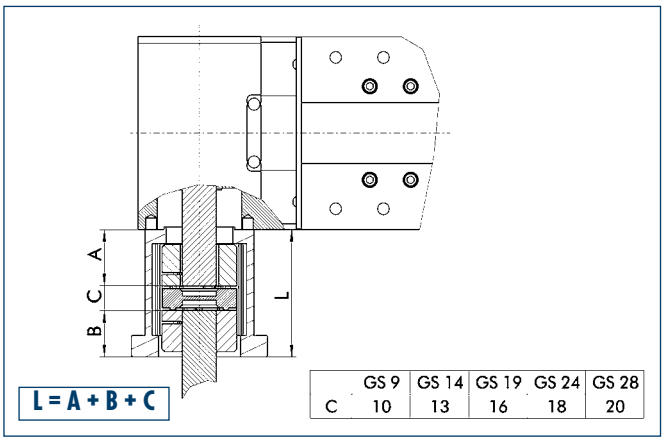
(90) T-nut on base side

(91) Side T-nut

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

Designation	Order designation	ID no.
T-nut	NS3	0331406
T-nut	NS6	0331409
T-nut	RM2	0331425
T-nut	RM6	0331427
Mounting strip	BL3	0331402

Motor flange schematic diagram



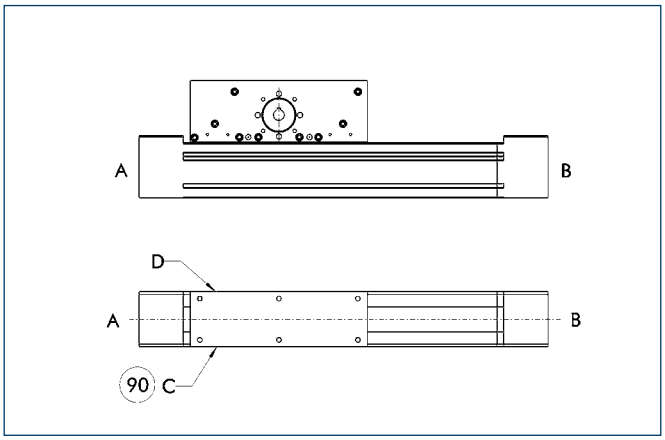
	GS 9	GS 14	GS 19	GS 24	GS 28
C	10	13	16	18	20

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

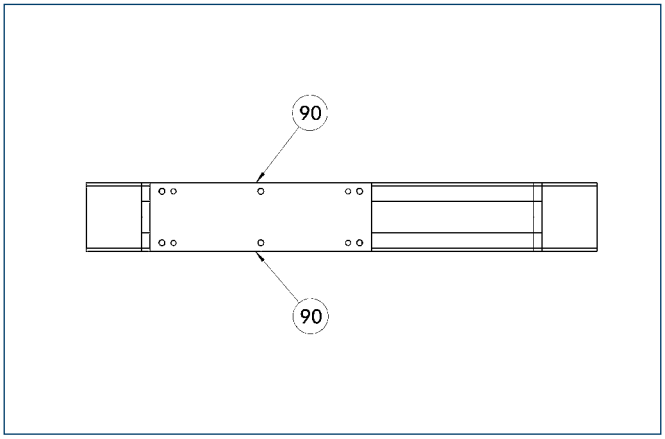
Two E02 switches are used as limit switches and an RS2 as the reference switch as standard.

ⓘ 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

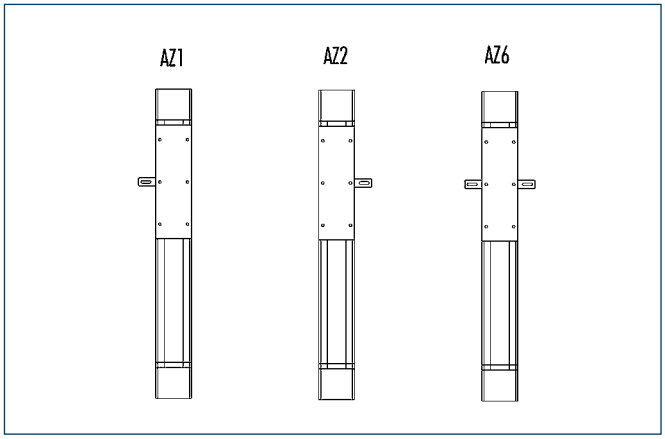


90 Standard lubrication connection

Standard connection
Lubrication nipple M8x1

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

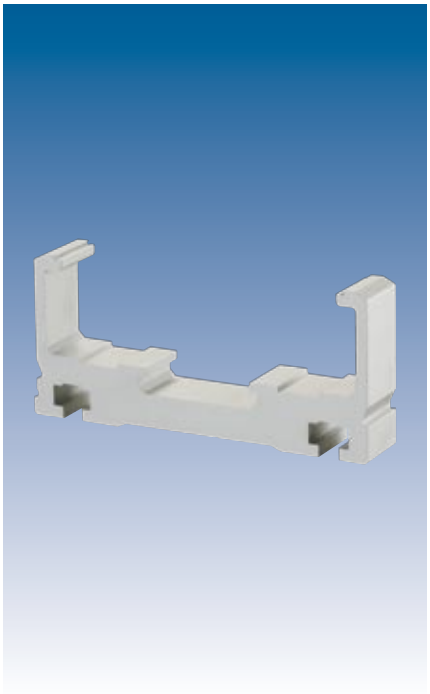
Drive shafts



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.

D 110-ZSS



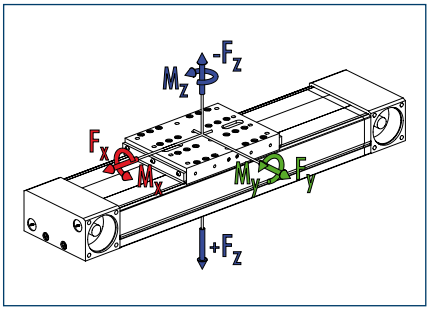
Advantages of profiled rail guide

High load bearing capacity

Long lifetime

High precision

Loads and load torques



Load		Dynamic
F_x **	[N]	750
F_y	[N]	1200
F_z	[N]	3000
$-F_z$	[N]	1500
Load torques		**Dynamic**
M_x	[Nm]	500
M_y	[Nm]	650 (1100)
M_z	[Nm]	650 (1100)
M_{Amax}	[Nm]	12.3

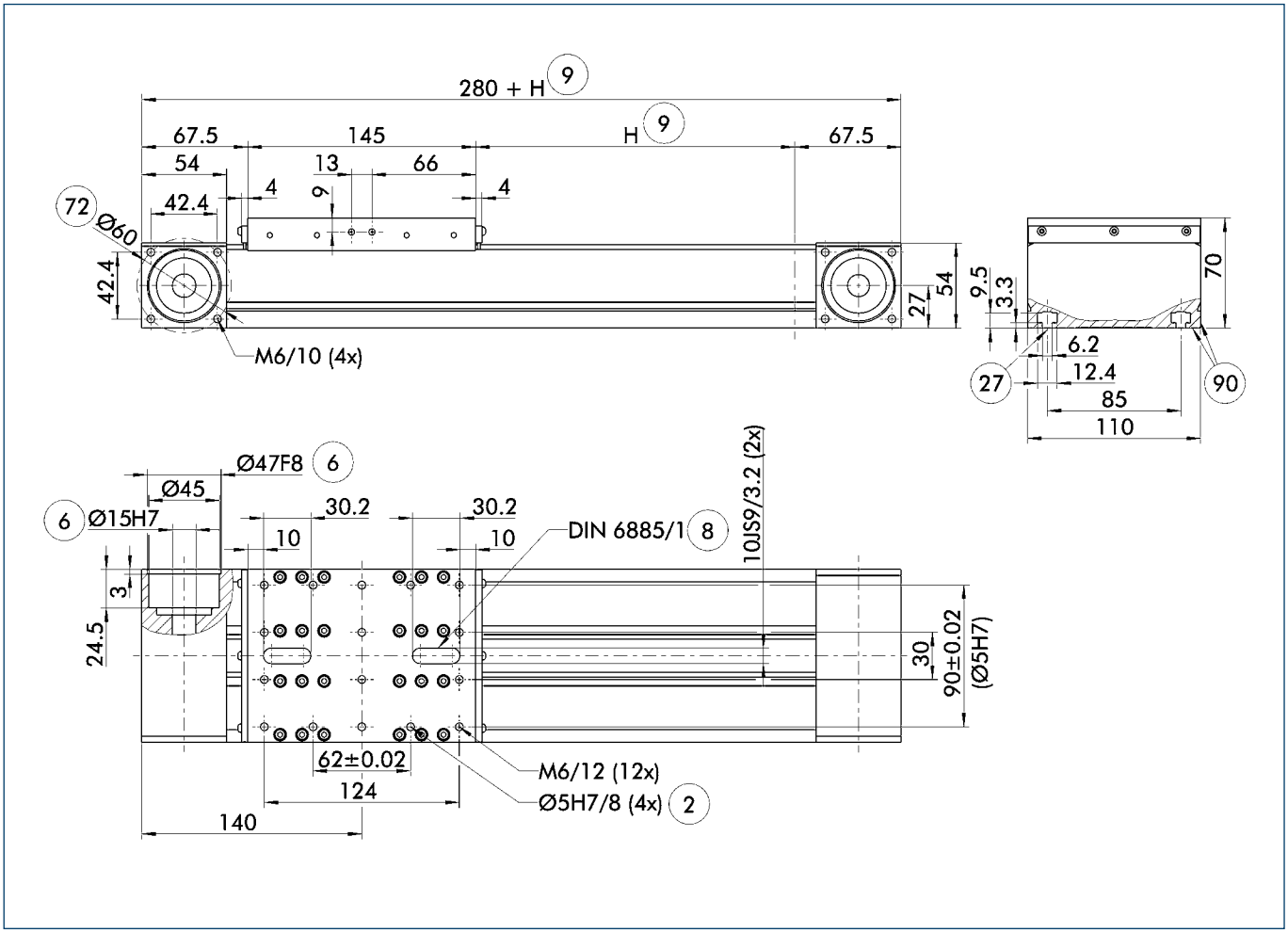
** Maximum value = Depending on speed

ⓘ Values in brackets relate to the long slide.

Technical data

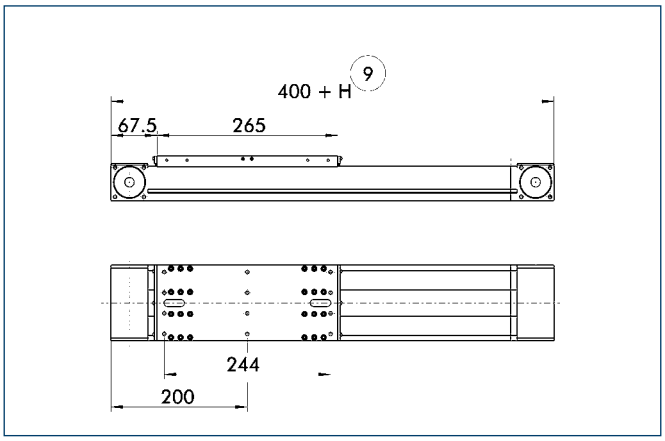
Designation		D 110-ZSS
Max. travel speed	[m/s]	5
Repeat accuracy	[mm]	**± 0.08**
Max. acceleration	[m/s²]	40
Idle torque	[Nm]	1.6
Drive		
Drive element	Toothed belt	25 AT 5-E
Travel per revolution	[mm]	90
Maximum stroke	[mm]	1220
Max. total length	[mm]	1500
Moment of inertia	[kgm²]	0.0003
Weights		
Basic without travel	[kg]	6.8
Travel per 100 mm	[kg]	1.0
Slide plate 145 mm	[kg]	2.8
Slide plate 265 mm	[kg]	5.1

Main views



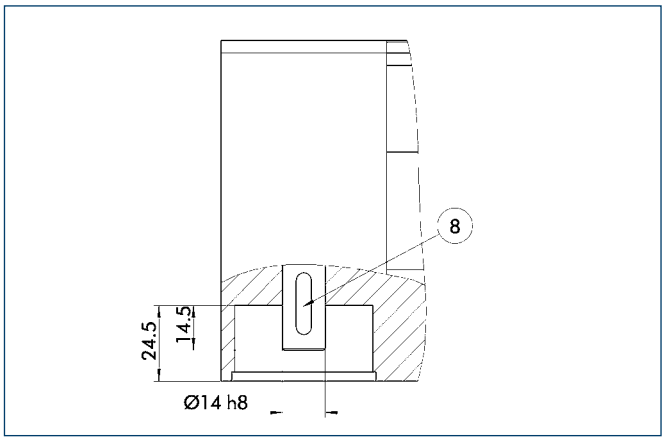
(2) Assembly connection
(6) Drive connection
(8) Feather key DIN 6885
(9) Useful stroke
(27) Mounting groove for T-nuts
(72) Bolt pitch circle
(90) Stop angle for alignment of axis

Long slide



(9) Useful stroke

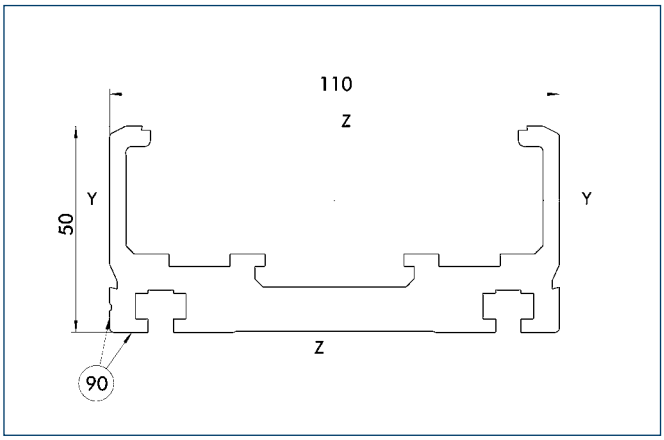
Drive journal connection dimensions



(8) Feather key

D 110-ZSS

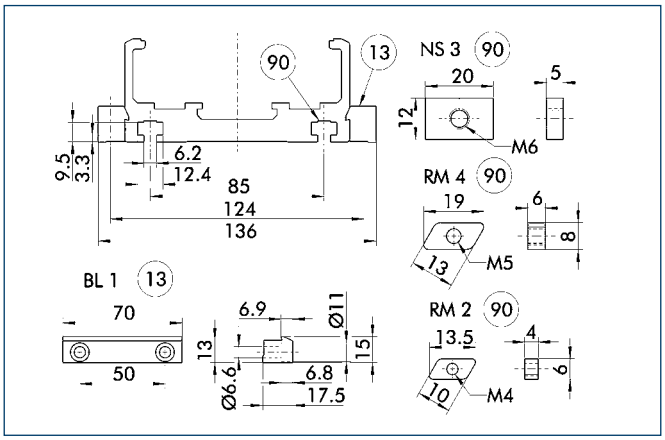
Profile ZSS



(90) Stop angle standard side

Specific mass	[kg/m]	5.06
Planar dimension	[mm²]	1875
Planar moment of inertia I_y	[mm⁴]	267967
Planar moment of inertia I_z	[mm⁴]	2519555
Load torque W_y	[mm³]	7219
Load torque W_z	[mm³]	45110

Mounting

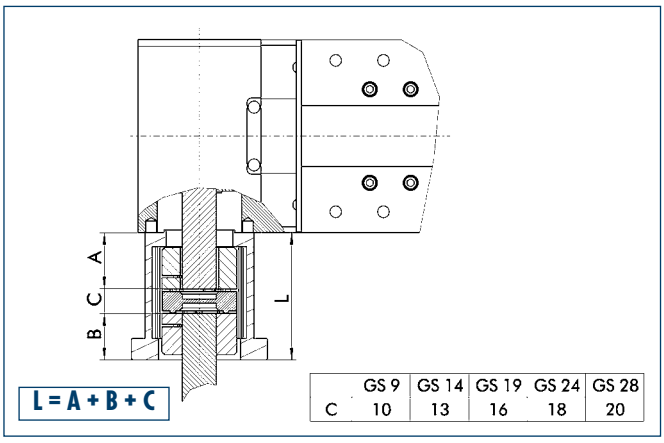


(13) Mounting strip (90) T-nut on base side

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

Designation	Order designation	ID no.
T-nut	NS3	0331406
T-nut	RM2	0331425
T-nut	RM4	0331426
Mounting strip	BL1	0331400

Motor flange schematic diagram



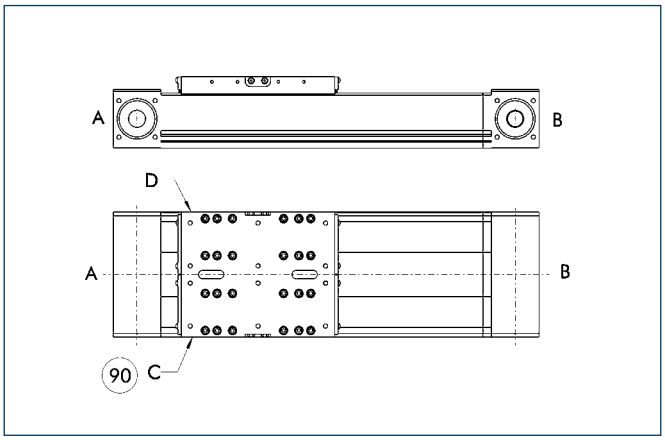
C	GS 9	GS 14	GS 19	GS 24	GS 28
	10	13	16	18	20

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

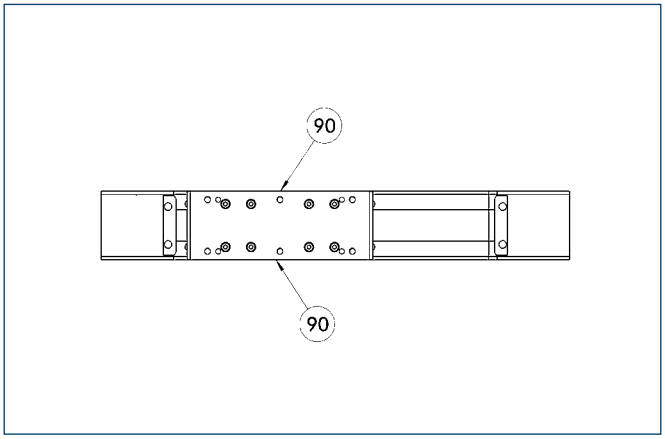
Two EO2 switches are used as limit switches and an RS2 as the reference switch as standard.

ⓘ 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	EO2	0331410
Inductive limit switch, opener, 10 m cable	EO10	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

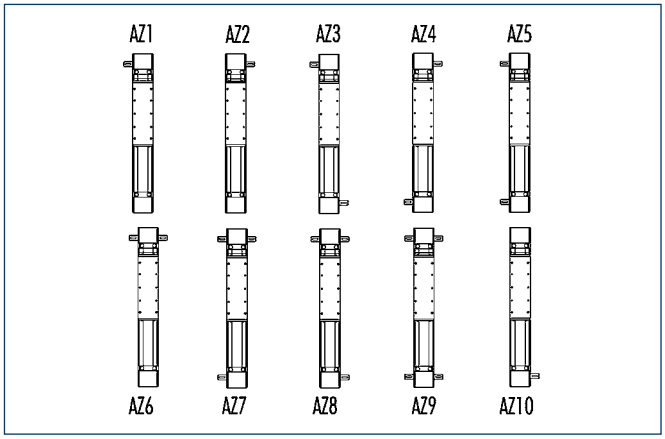


90 Standard lubrication connection

Standard connection
Lubrication nipple M8x1

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

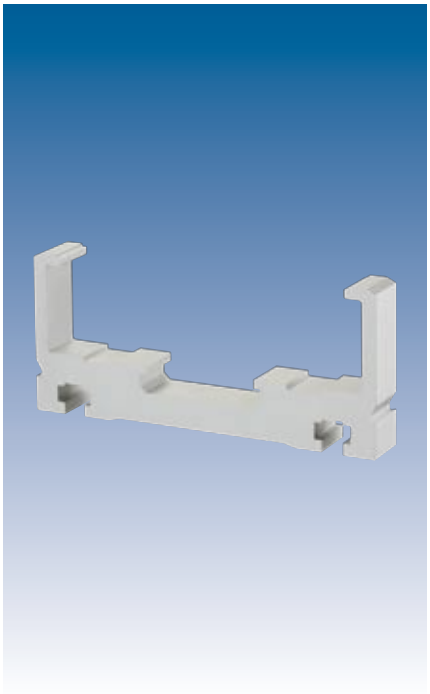
Drive shafts



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.

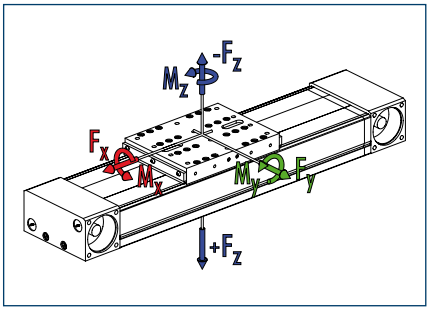
D 145-ZSS



Advantages of profiled rail guide

- High load bearing capacity
- Long lifetime
- High precision

Loads and load torques



Load		Dynamic
F_x **	[N]	1900
F_y	[N]	2500
F_z	[N]	5000
$-F_z$	[N]	3000
Load torques		**Dynamic**
M_x	[Nm]	800
M_y	[Nm]	1000 (1600)
M_z	[Nm]	1000 (1600)
M_{Amax}	[Nm]	35.5

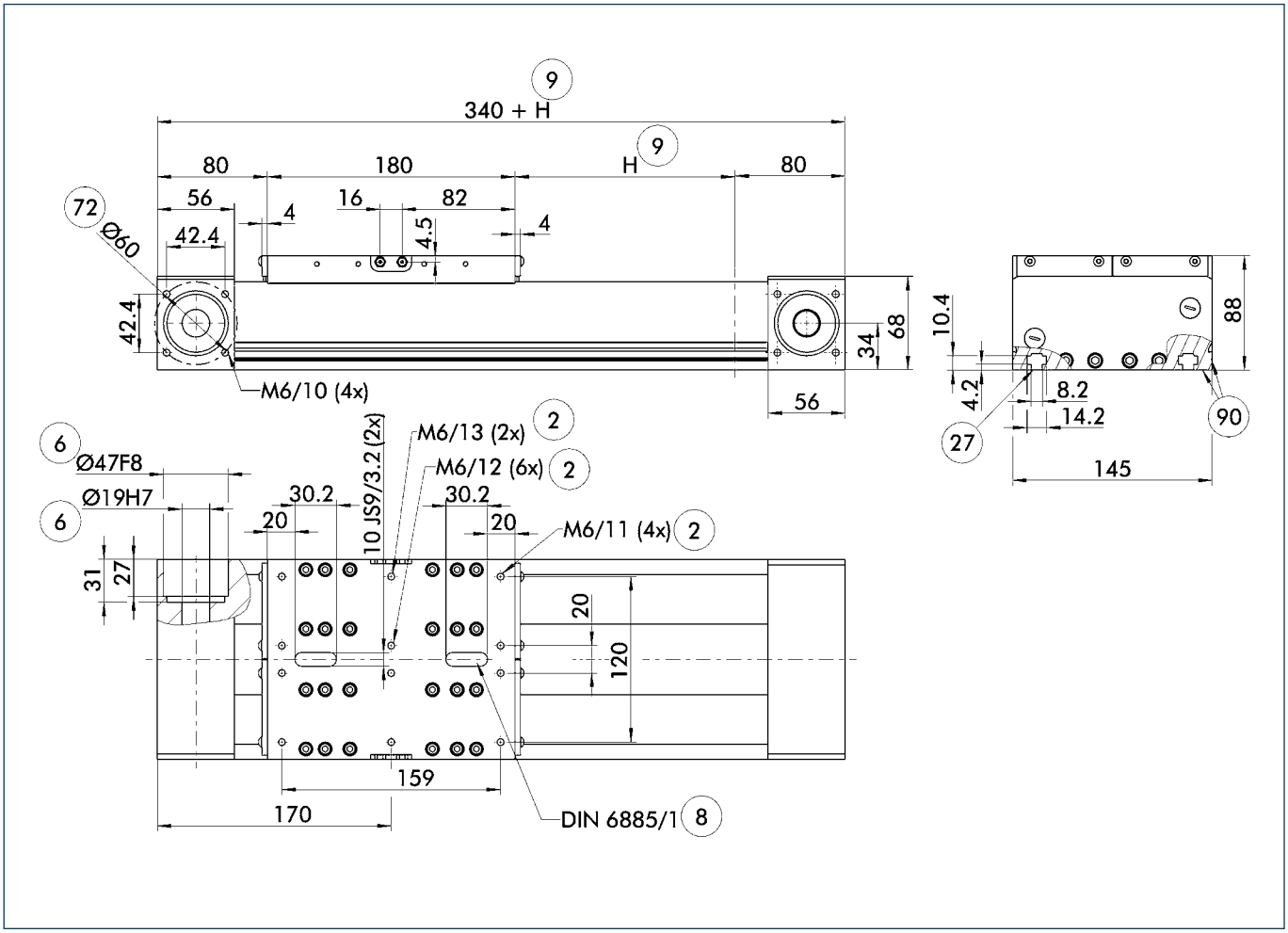
** Maximum value = Depending on speed

ⓘ Values in brackets relate to the long slide.

Technical data

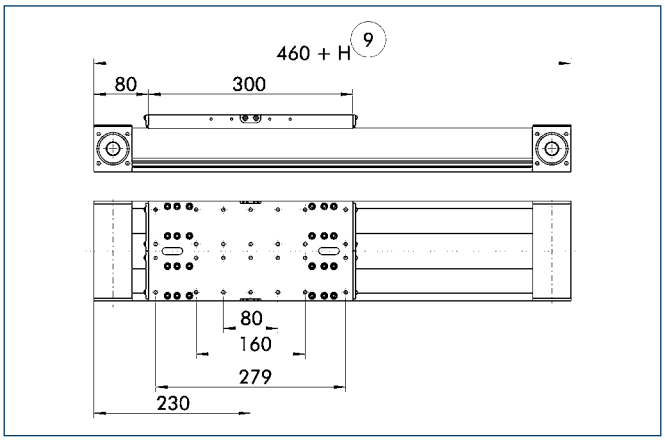
Designation		D 145-ZSS
Max. travel speed	[m/s]	5
Repeat accuracy	[mm]	**± 0.08**
Max. acceleration	[m/s²]	40
Idle torque	[Nm]	2.2
Drive		
Drive element	Toothed belt	50 AT 5-E
Travel per revolution	[mm]	110
Maximum stroke	[mm]	1660
Max. total length	[mm]	2000
Moment of inertia	[kgm²]	0.0003
Weights		
Basic without travel	[kg]	13.2
Travel per 100 mm	[kg]	1.4
Slide plate 180 mm	[kg]	4.9
Slide plate 300 mm	[kg]	8.2

Main views



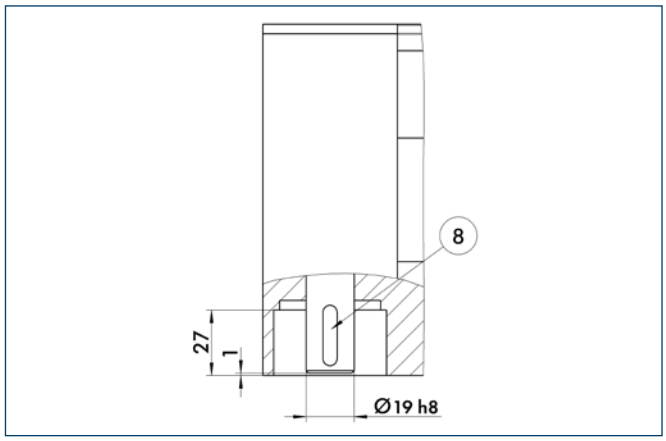
(2) Assembly connection
(6) Drive connection
(8) Feather key DIN 6885
(9) Useful stroke
(27) Mounting groove for T-nuts
(72) Bolt pitch circle
(90) Stop angle for alignment of axis

Long slide



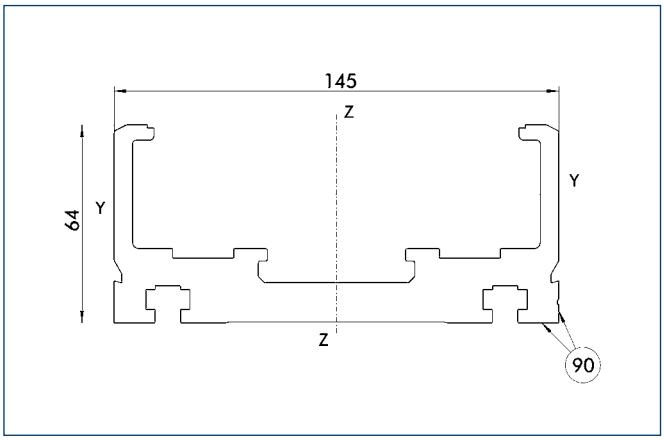
(9) Useful stroke

Drive journal connection dimensions



(8) Feather key

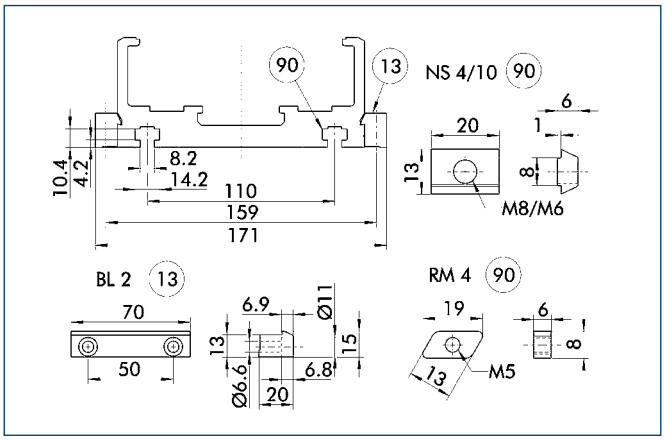
Profile ZSS



(90) Stop angle standard side

Specific mass	[kg/m]	8.54
Planar dimension	[mm²]	3163
Planar moment of inertia I_y	[mm⁴]	747431
Planar moment of inertia I_z	[mm⁴]	7649112
Load torque W_y	[mm³]	15814
Load torque W_z	[mm³]	104251

Mounting

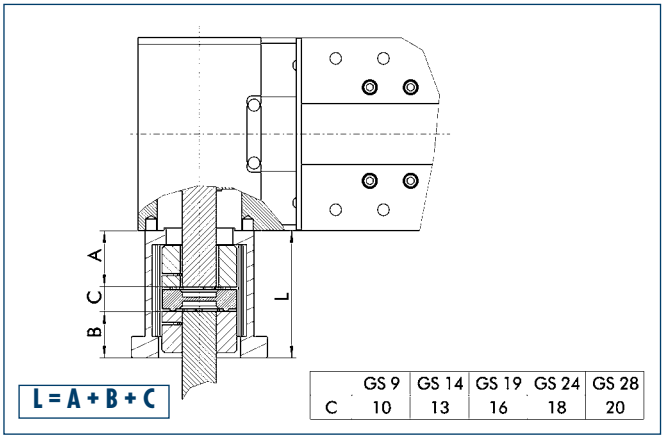


(13) Mounting strip (90) T-nut on base side

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

Designation	Order designation	ID no.
T-nut	NS4	0331407
T-nut	NS10	0331422
T-nut	RM4	0331426
Mounting strip	BL2	0331401

Motor flange schematic diagram



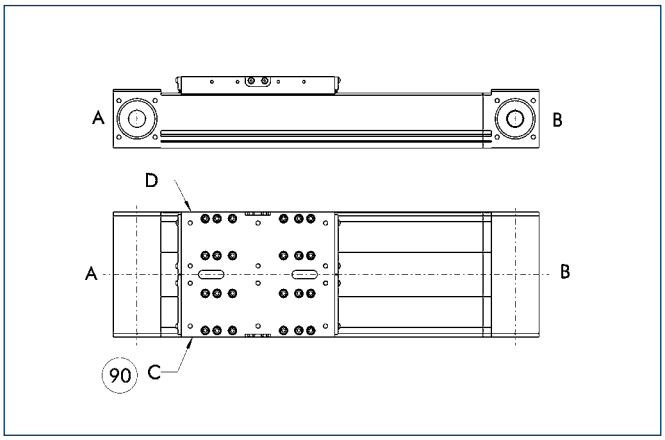
	GS 9	GS 14	GS 19	GS 24	GS 28
C	10	13	16	18	20

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

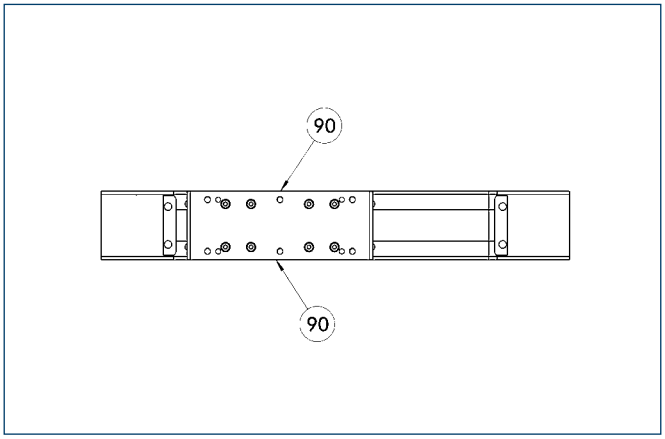
Two EO2 switches are used as limit switches and an RS2 as the reference switch as standard.

ⓘ 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	EO2	0331410
Inductive limit switch, opener, 10 m cable	EO10	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

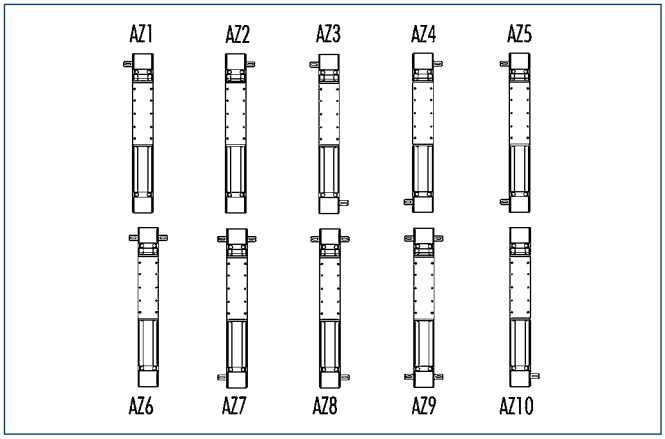


90 Standard lubrication connection

Standard connection
Lubrication nipple M8x1

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

Drive shafts

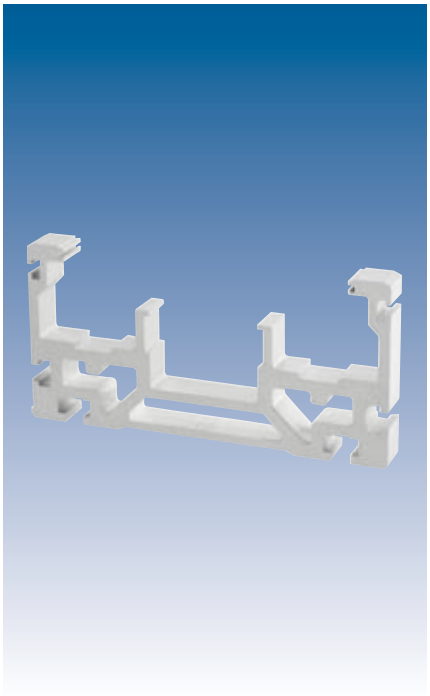


Depending on the axis application, the drive shaft seat may need to be defined in the order text. Particularly with axis combinations and mechanical synchronization, multiple drive shafts - some of them continuous shafts - are required.

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

D 200-ZSS

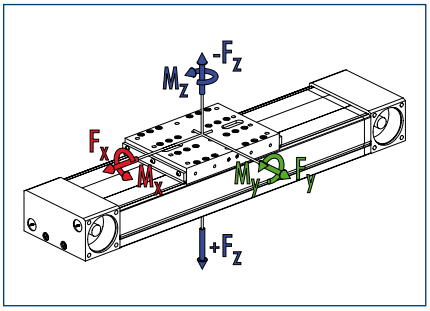
Linear Axes · Toothed-belt Drive



Advantages of profiled rail guide

- High load bearing capacity
- Long lifetime
- High precision

Loads and load torques



Load		Dynamic
F_x **	[N]	6000
F_y	[N]	5000
F_z	[N]	8000
$-F_z$	[N]	5000
Load torques		**Dynamic**
M_x	[Nm]	3500
M_y	[Nm]	4300 (6000)
M_z	[Nm]	3200 (4500)
M_{Amax}	[Nm]	143.9

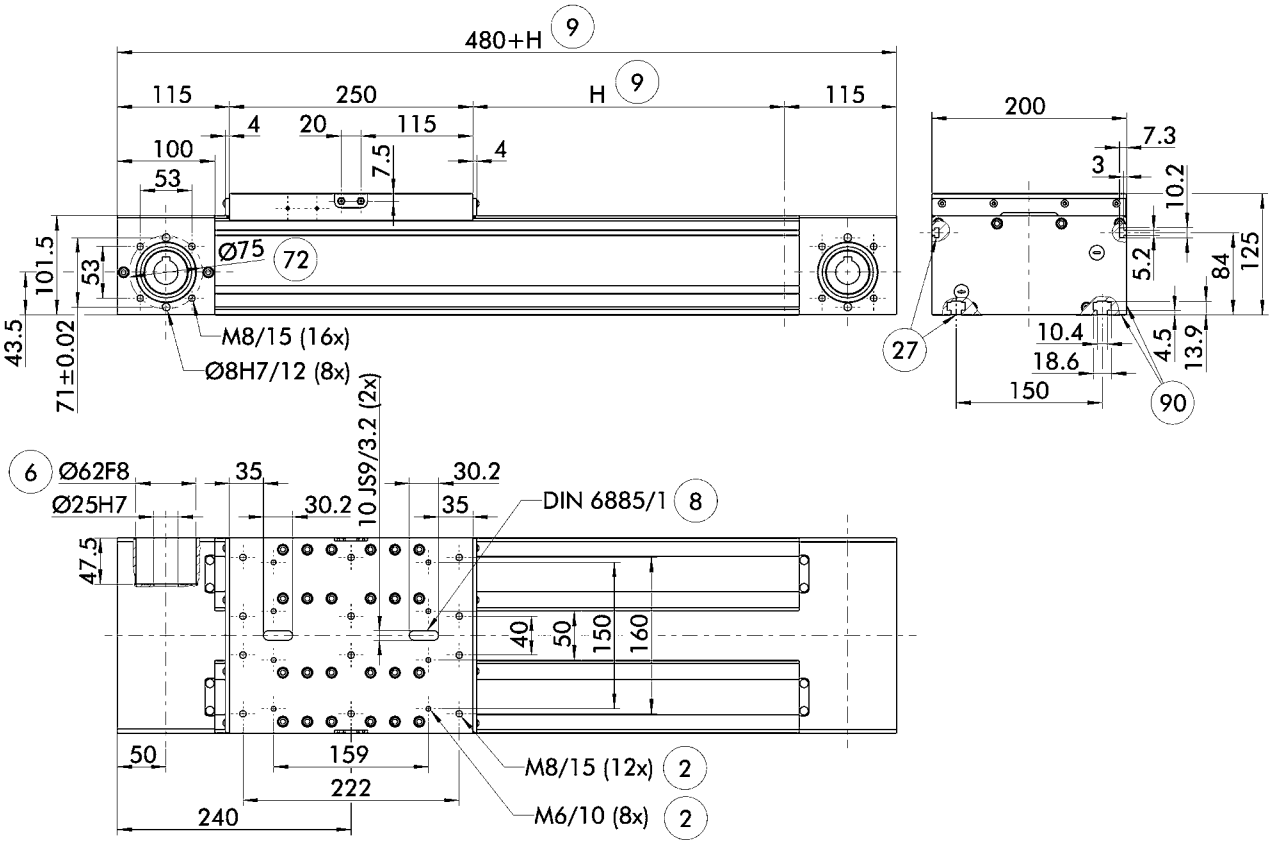
** Maximum value = Depending on speed

ⓘ Values in brackets relate to the long slide.

Technical data

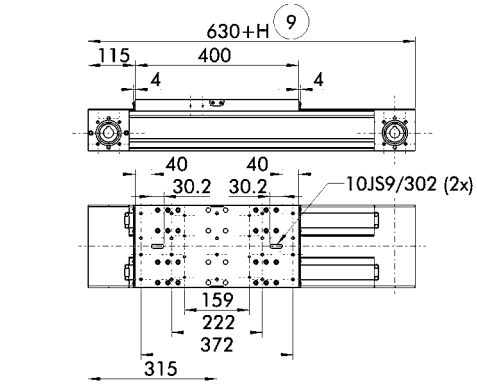
Designation		D 200-ZSS
Max. travel speed	[m/s]	5
Repeat accuracy	[mm]	± 0.08
Max. acceleration	[m/s²]	60
Idle torque	[Nm]	3.8
Drive		
Drive element	Toothed belt	75 AT 10-E
Travel per revolution	[mm]	220
Maximum stroke	[mm]	3520
Max. total length	[mm]	4000
Moment of inertia	[kgm²]	0.012
Weights		
Basic without travel	[kg]	25.0
Travel per 100 mm	[kg]	2.0
Slide plate 250 mm	[kg]	8.2
Slide plate 400 mm	[kg]	10.5

Main views



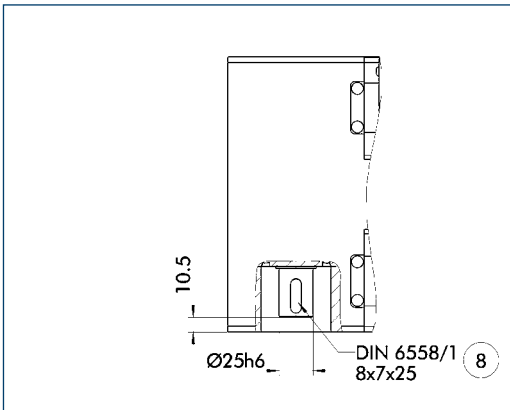
(2) Assembly connection
(6) Drive connection
(8) Feather key DIN 6885
(9) Useful stroke
(27) Mounting groove for T-nuts
(72) Bolt pitch circle
(90) Stop angle for alignment of axis

Long slide



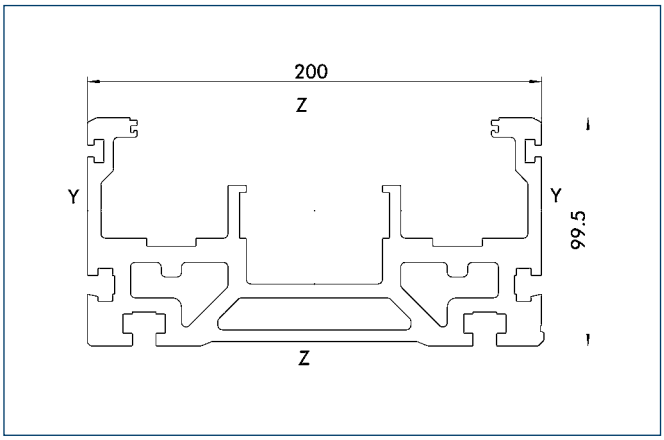
(9) Useful stroke

Drive journal connection dimensions



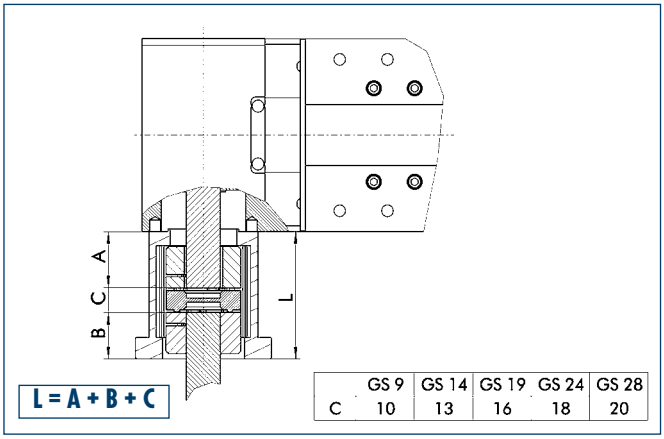
(8) Feather key

Profile ZSS



Specific mass	[kg/m]	15.64
Planar dimension	[mm²]	5791
Planar moment of inertia I_y	[mm⁴]	3868726
Planar moment of inertia I_z	[mm⁴]	28046412
Load torque W_y	[mm³]	58520
Load torque W_z	[mm³]	277190

Motor flange schematic diagram

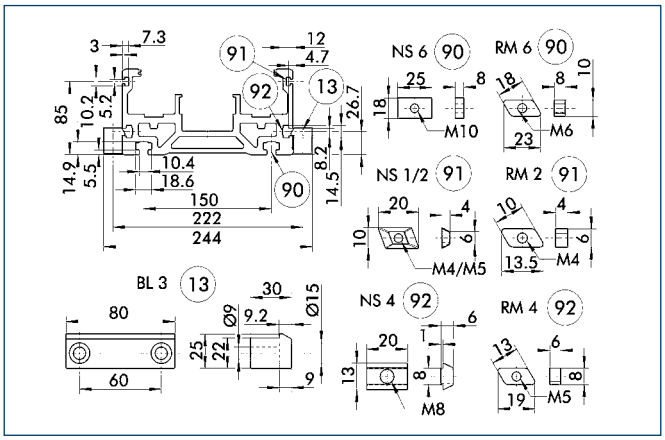


	GS 9	GS 14	GS 19	GS 24	GS 28
C	10	13	16	18	20

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.

Mounting



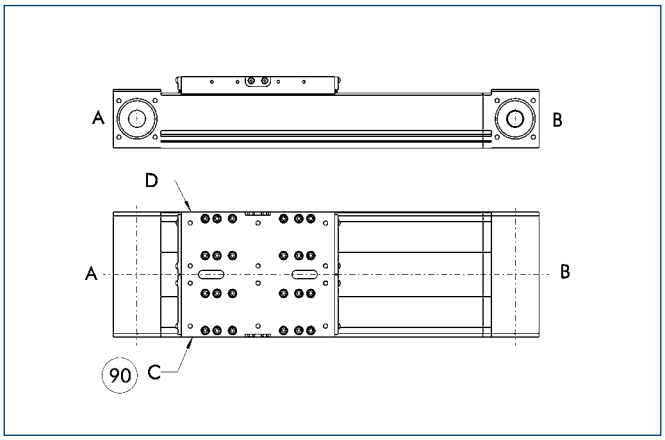
⑬ Mounting strip
⑨⓪ T-nut on base side
⑨① T-nut, side upper
⑨① T-nut, side lower

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

Designation	Order designation	ID no.
T-nut	NS1	0331404
T-nut	NS2	0331405
T-nut	NS4	0331407
T-nut	NS6	0331409
T-nut	RM2	0331425
T-nut	RM4	0331426
T-nut	RM6	0331427
Mounting strip	BL3	0331402

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

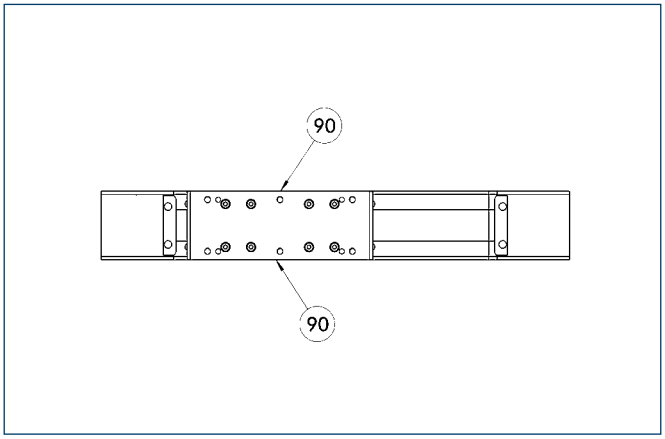
Two EO2 switches are used as limit switches and an RS2 as the reference switch as standard.

ⓘ 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	EO2	0331410
Inductive limit switch, opener, 10 m cable	EO10	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

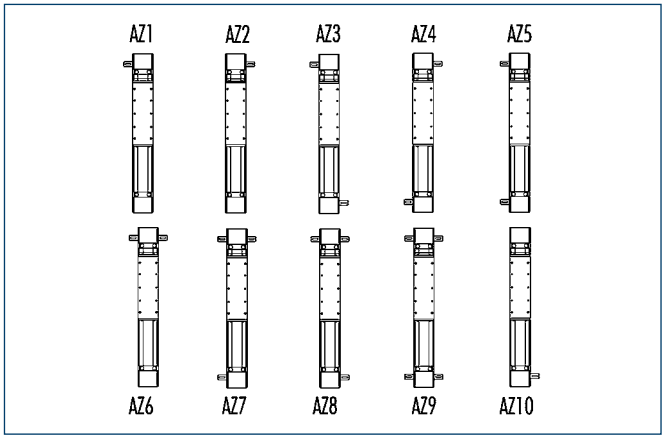


90 Standard lubrication connection

Standard connection
Lubrication nipple M8x1

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

Drive shafts

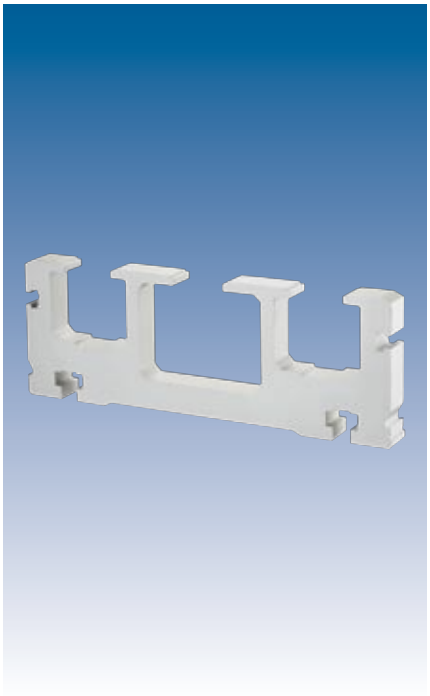


Depending on the axis application, the drive shaft seat may need to be defined in the order text. Particularly with axis combinations and mechanical synchronization, multiple drive shafts - some of them continuous shafts - are required.

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

D 240-ZSS

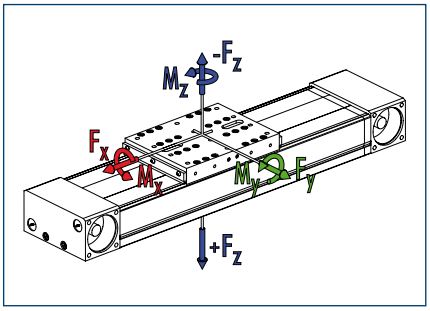
Linear Axes · Toothed-belt Drive



Advantages of profiled rail guide

- High load bearing capacity
- Long lifetime
- High precision

Loads and load torques



Load		Dynamic
F_x **	[N]	2500
F_y	[N]	6000
F_z	[N]	12000
$-F_z$	[N]	8000
Load torques		**Dynamic**
M_x	[Nm]	4500
M_y	[Nm]	6000 (8500)
M_z	[Nm]	4500 (6400)
M_{Amax}	[Nm]	63.2

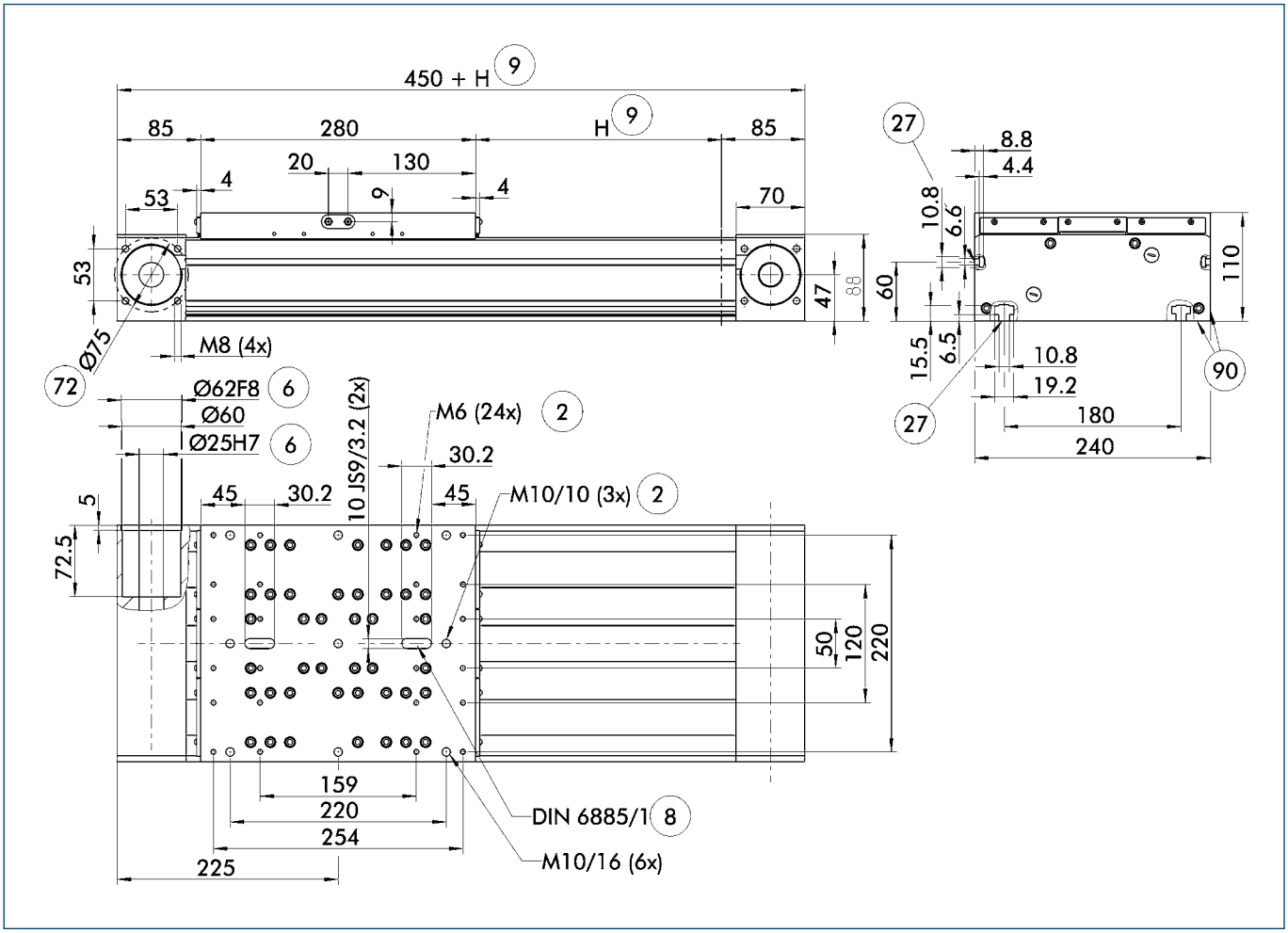
** Maximum value = Depending on speed

ⓘ Values in brackets relate to the long slide.

Technical data

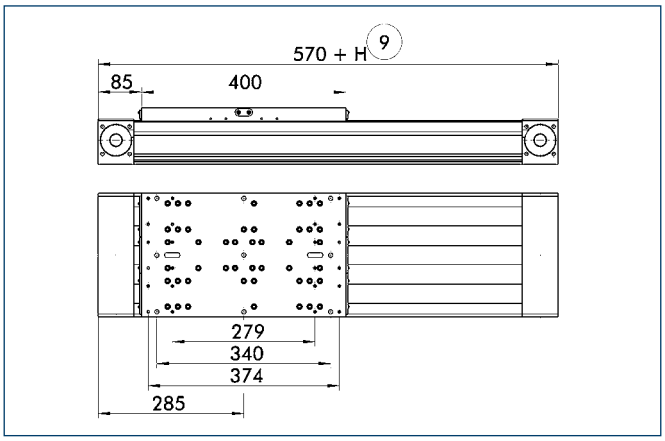
Designation		D 240-ZSS
Max. travel speed	[m/s]	5
Repeat accuracy	[mm]	**± 0.08**
Max. acceleration	[m/s²]	60
Idle torque	[Nm]	3.5
Drive		
Drive element	Toothed belt	50 AT 10-E
Travel per revolution	[mm]	150
Maximum stroke	[mm]	2550
Max. total length	[mm]	3000
Moment of inertia	[kgm²]	0.02
Weights		
Basic without travel	[kg]	27.0
Travel per 100 mm	[kg]	3.2
Slide plate 280 mm	[kg]	9.8
Slide plate 400 mm	[kg]	14.0

Main views



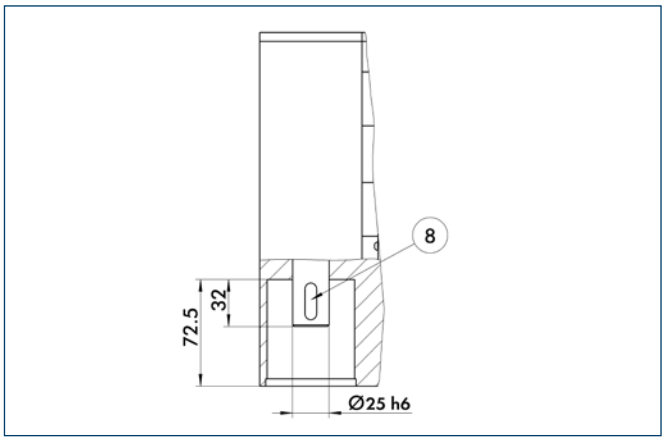
(2) Assembly connection
(6) Drive connection
(8) Feather key DIN 6885
(9) Useful stroke
(27) Mounting groove for T-nuts
(72) Bolt pitch circle
(90) Stop angle for alignment of axis

Long slide



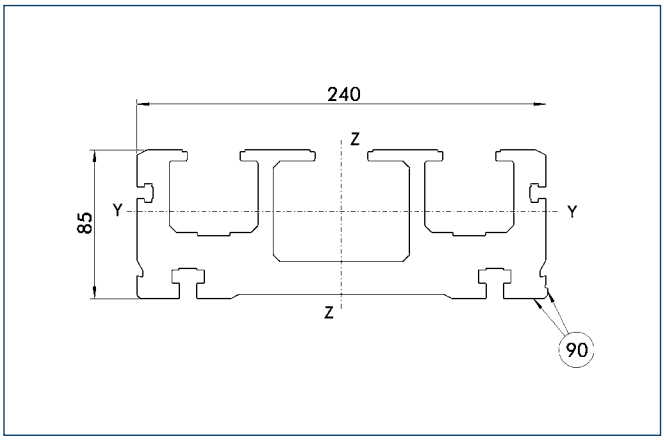
(9) Useful stroke

Drive journal connection dimensions



(8) Feather key

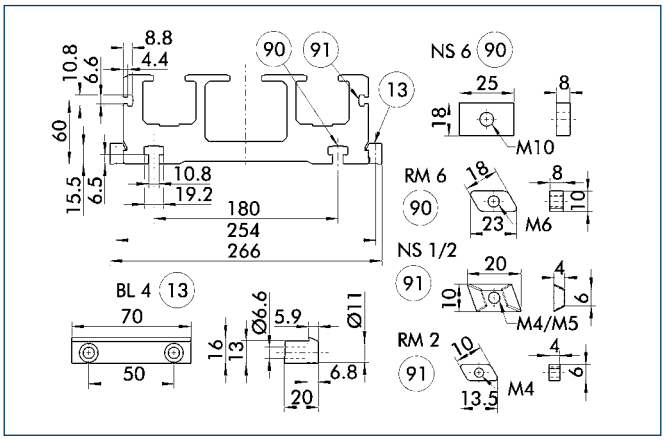
Profile ZSS



(90) Stop angle standard side

Specific mass	[kg/m]	27.2
Planar dimension	[mm²]	10074
Planar moment of inertia I_y	[mm⁴]	6382473
Planar moment of inertia I_z	[mm⁴]	61720897
Load torque W_y	[mm³]	119554
Load torque W_z	[mm³]	511233

Mounting



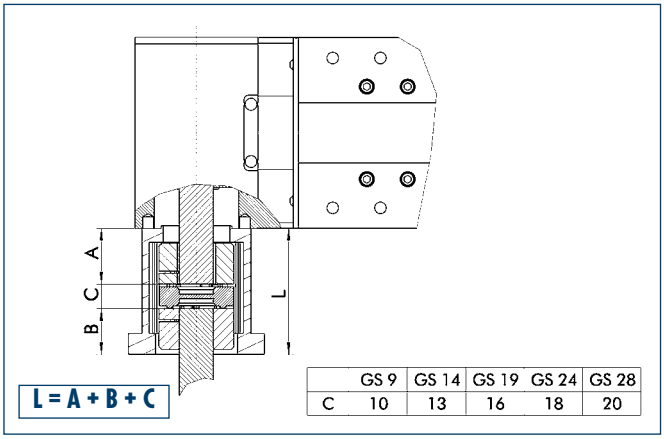
(13) Mounting strip

(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	NS1	0331404
T-nut	NS2	0331405
T-nut	NS6	0331409
T-nut	RM2	0331425
T-nut	RM6	0331427
Mounting strip	BL4	0331403

Motor flange schematic diagram



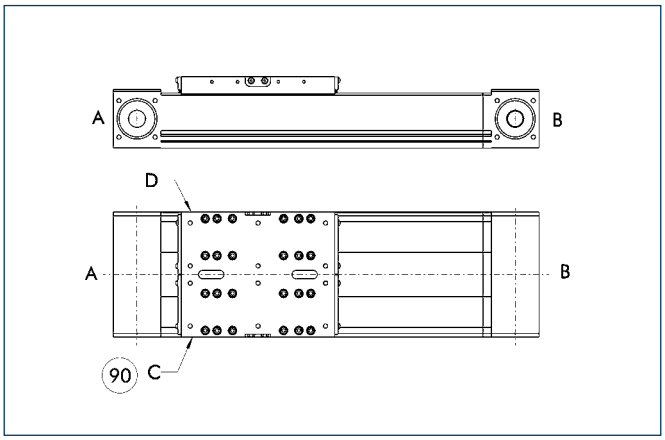
	GS 9	GS 14	GS 19	GS 24	GS 28
C	10	13	16	18	20

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

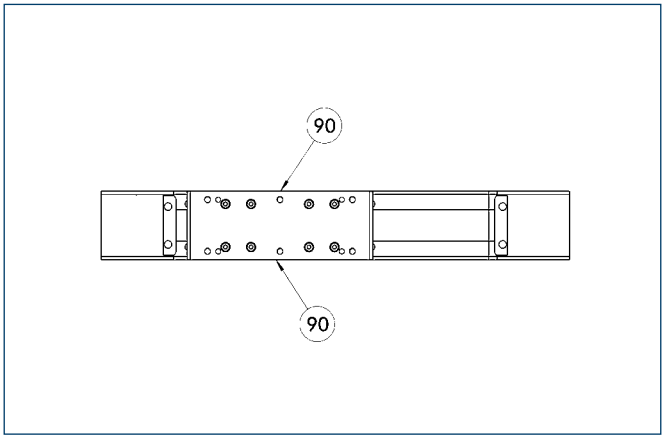
Two EO2 switches are used as limit switches and an RS2 as the reference switch as standard.

ⓘ 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	EO2	0331410
Inductive limit switch, opener, 10 m cable	EO10	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

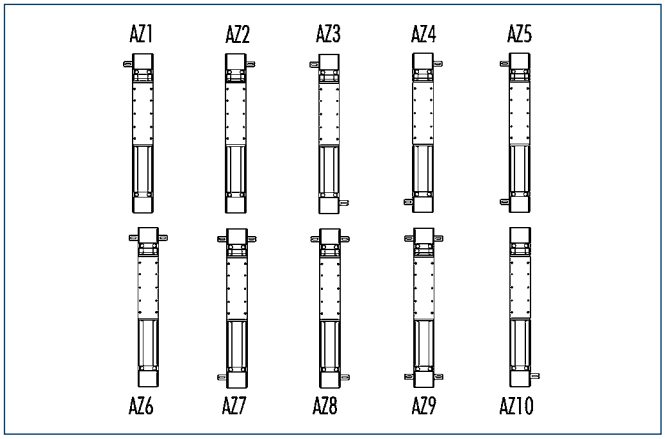


90 Standard lubrication connection

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.