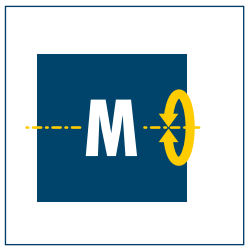
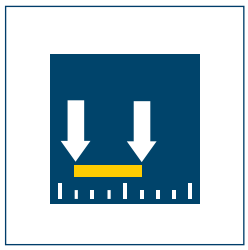
System HSB Ball Screw Drive

Range of stroke
up to 5,120 mm

Driving force
up to 18,000 N



Moment load
up to 12,000 Nm



Repeat accuracy
± 0.03 mm

Max. speed
Up to 2.5 m/s

Application example

Positioning system for sinter blank processing

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 ball screw drive

The range includes 17 sizes. Depending on use, it is possible to choose between roller guide and profiled rail guide.

Area of application

Axis applications with high demands for precision and driving force.

Your advantages and benefits

Complete modular system
with standard components for maximum availability

Closed system
for maximum dirt resistance

Ball screw supports
allow higher moving speeds with longer stroke lengths

Profiled rail or roller guide
for optimum adaptation to the application

Economical system
due to low maintenance and optimum size - performance ratio

General information about the series

Drive
Ball screw spindle drives with one-piece nut with clearance and large spindle pin for maximum force transmission. Optionally available with limited clearance, pre-loaded with no clearance by ball sorting or double nut pre-loaded without clearance and also trapezoidal threaded spindles

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

Material
Natural anodized aluminum parts

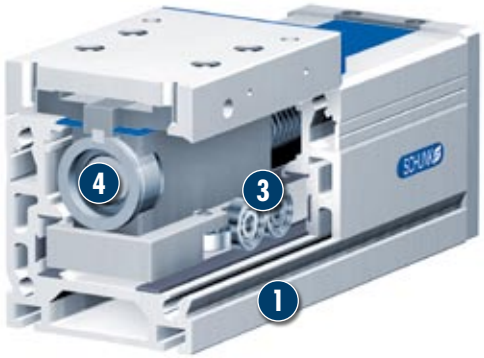
Operating temperature
From 10°C to 80°C

Warranty
24 months

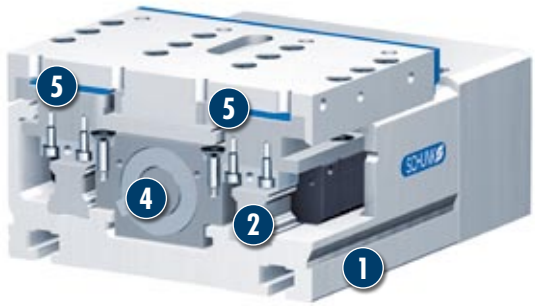
For production reasons, the colors may vary from those shown in the catalog.

Sectional functional diagrams

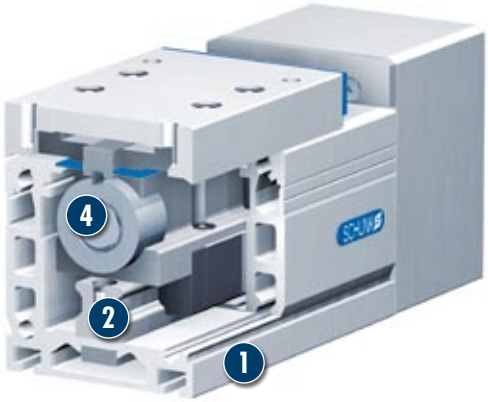
HSB beta® system
SRS



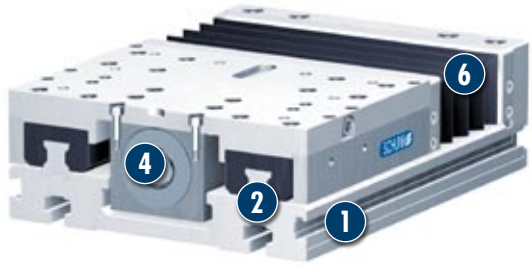
HSB delta® system
SSS



HSB beta® system
SSS



HSB alpha® system



1 **Axis body as the support profile**

2 **Profiled rail guide**

3 **Roller guide**

4 **Ball screw spindle/ Trapezoidal threaded spindle**

5 **Covering tape made of plastic**

6 **Bellow cover, plastic**

Description of function

The axis carriage is driven by a ball screw spindle 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 motor flange and a coupling.

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

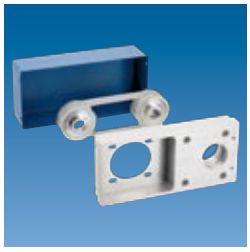
Accessories

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

Motor flanges

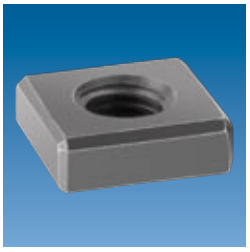
Motors

Angle belt drive



Bevel gear

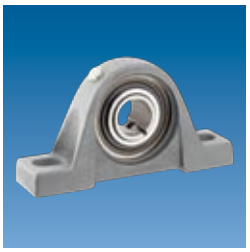
T-nut



Connection shafts

Mounting strips

Pedestal bearing

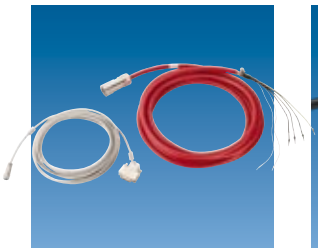


Inductive proximity switch

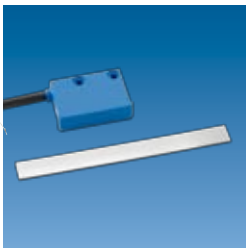
Mechanical roller switches

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

An overview of the static and dynamic basic load ratings for the systems can be found in the "Technical data for installed guides" tables in the introduction to this chapter.

How to order - Ball screw spindle drive

B	80	-	S R S	-	M	-	2020	-	1000	-	1430	-	2SA	-	2ES2	-	0

Product series B = Beta, D = Delta

Size

Drive
S = Spindle

Guidance system
R = Roller guide: type B
S = Rail guide
G = (Auxiliary) sliding guide: type B

Design version
S = Standard

Drive type
M = Single nut (ball screw)
MM = Double nut (ball screw)
TM = Trapezium nut; TR = Gunmetal nut

Drive version
Diameter and pitch (ball screw)
Diameter x pitch (trapezoidal thread)

Distance traveled

Overall length

Spindle supports (SA)
(Number)

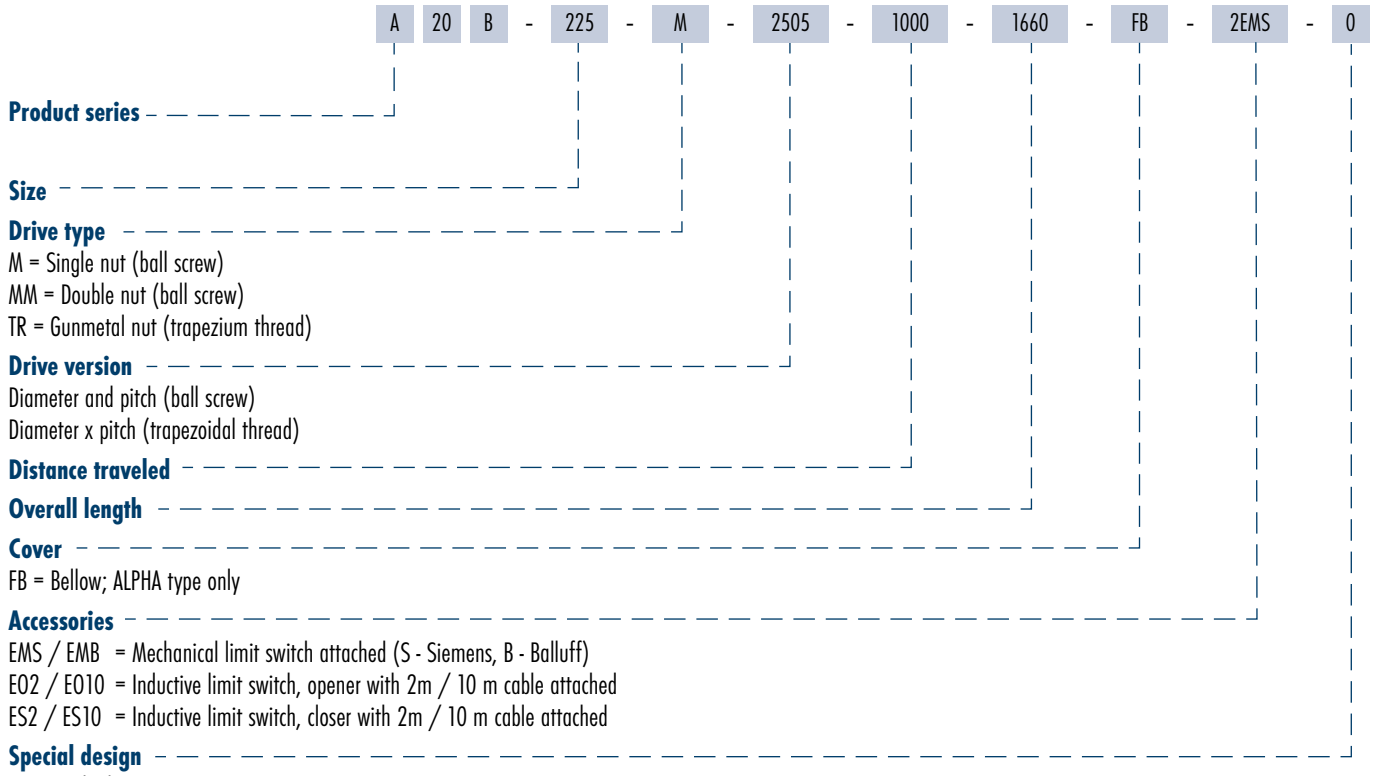
Accessories
BL3 = Mounting strip
EMS / EMB = Mechanical limit switch attached (S - Siemens, B - Balluff)
E02 / E010 = Inductive limit switch, opener with 2m / 10 m cable attached
ES2 / ES10 = Inductive limit switch, closer with 2m / 10 m cable attached
NS ③ = T-nut M6
NS ⑥ = T-nut M10
RM 2 = T-nut M4
RM 6 = T-nut M10
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)
KRG = Directly attached bevel gears

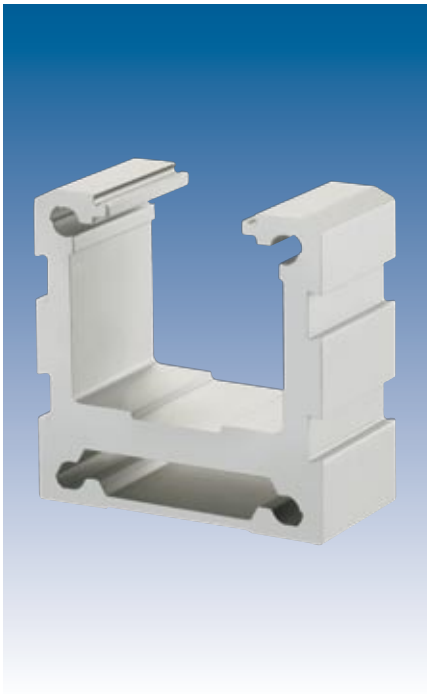
Cover tape is standard for ball screw spindle drive.

How to order - Linear table with ball screw spindle drive



MGK = Motor flange and coupling (from dimension sheet)
URT = Angle belt drive (from dimension sheet)

B 40-SSS

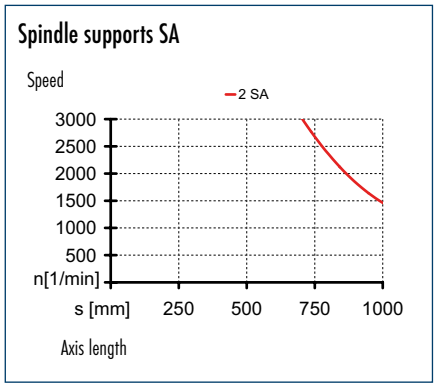


Advantages of profiled rail guide

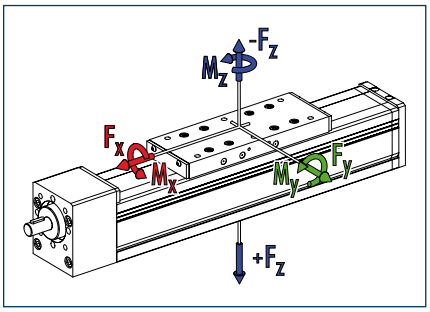
High load bearing capacity

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]	0.9 (p=4); 1.1 (p=5)

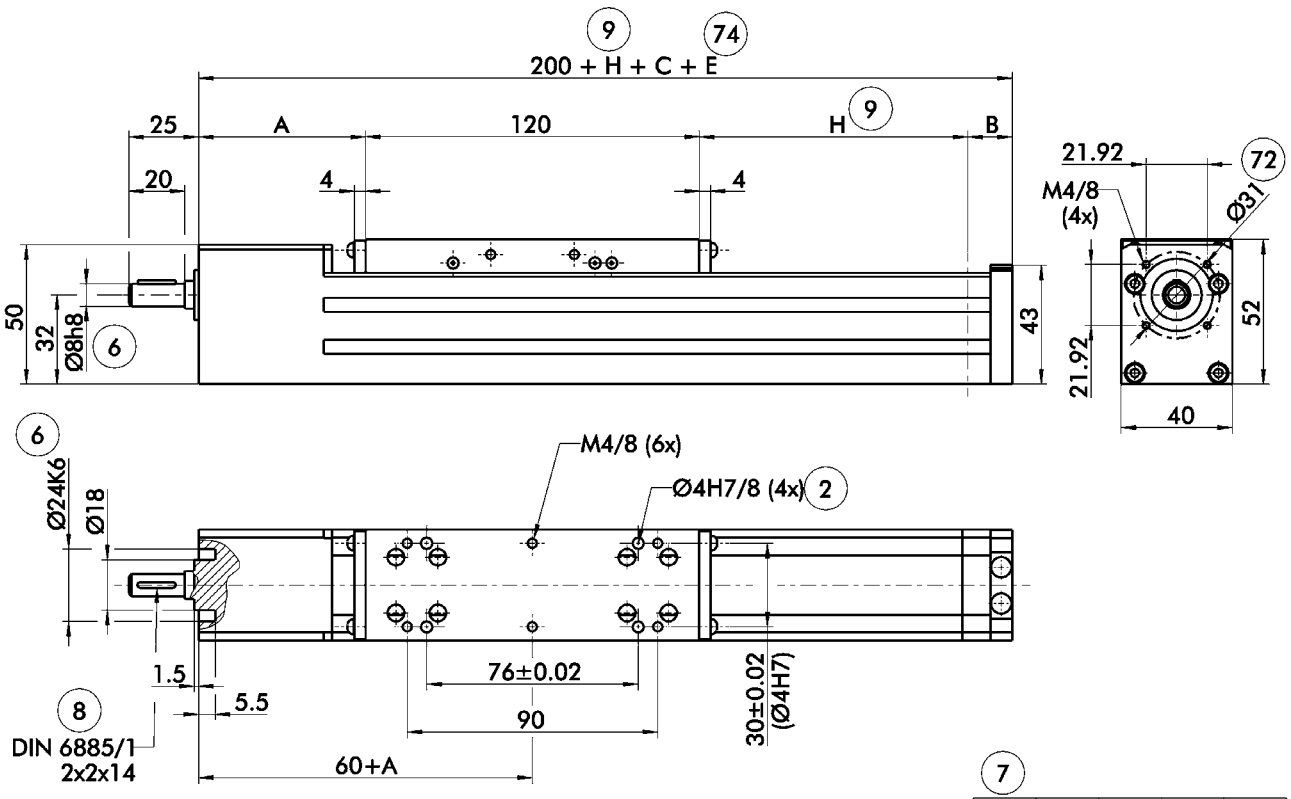
** Depends on speed and pitch n_{max}
KGT = 3000 rpm; TGT = 1500 rpm

ⓘ Values in brackets relate to the long slide.

Technical data

Designation		B 40-SSS
Max. travel speed	[m/s]	0.25
Repeat accuracy	[mm]	**± 0.03**
Max. acceleration	[m/s²]	20
Idle torque	[Nm]	0.4
Maximum stroke	[mm]	890
Max. total length	[mm]	1090
Moment of inertia	[kgm²]	0.000012
Drive element		**Ball screw spindle drive**
Max. spindle speed	[rpm]	3000
Diameter	[mm]	12
Pitch	[mm]	4 / 5
Drive element		**Trapezoidal threaded drive**
Max. spindle speed	[rpm]	1500
Diameter	[mm]	12
Pitch	[mm]	3
Weights		
Basic without travel	[kg]	1.7
Travel per 100 mm	[kg]	0.4
Slide plate 120 mm	[kg]	0.4
Slide plate 200 mm	[kg]	0.65

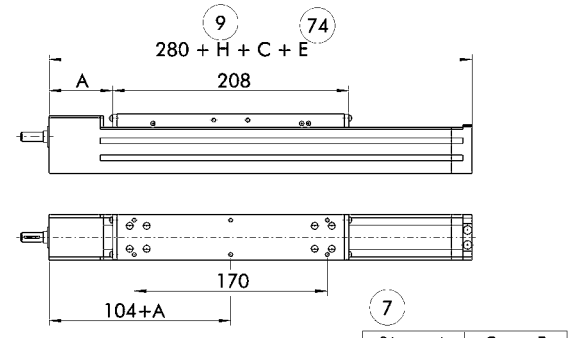
Main views



SA	A	B	C	E
0x	60	20	0	0
2x	80	40	40	10

(2) Assembly connection
(6) Drive connection
(7) Number of spindle supports
(8) Feather key DIN 6885
(9) Useful stroke
(72) Bolt pitch circle
(74) E for spindle supports with insulated noise emissions

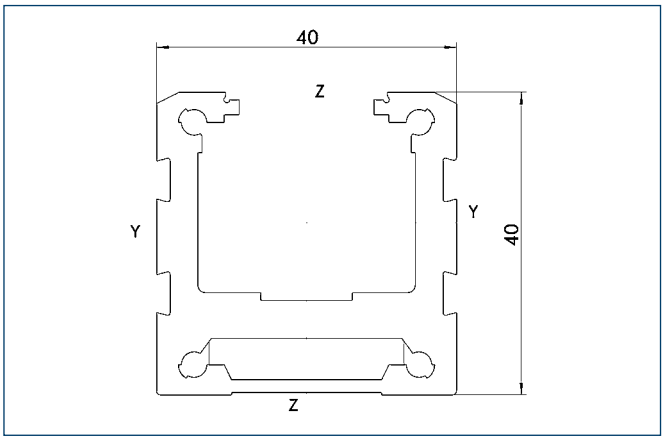
Long slide



SA	A	C	E
0x	56	0	0
2x	76	40	10

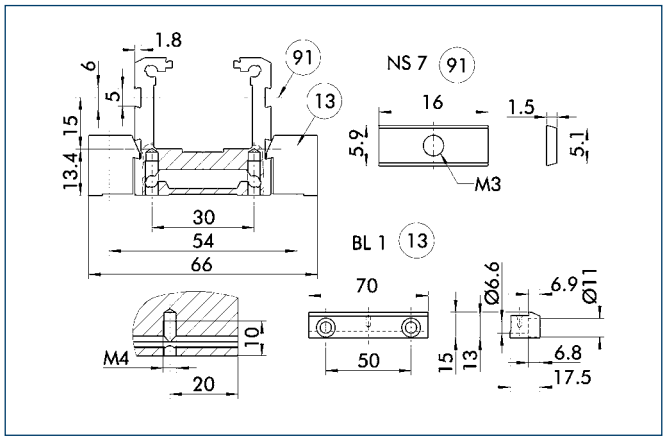
(7) Number of spindle supports
(9) Useful stroke
(74) E for spindle supports with insulated noise emissions

Profile SSS



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

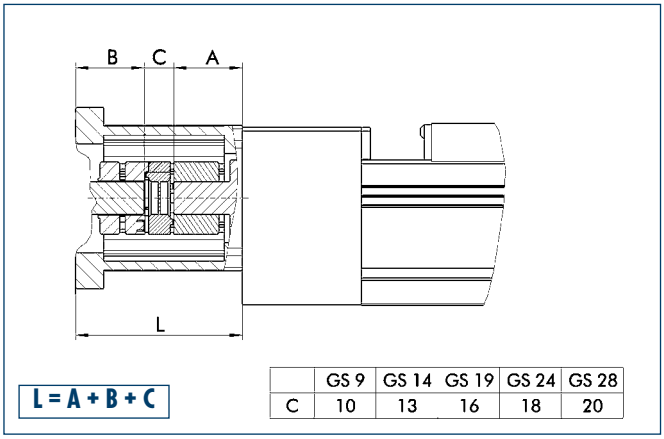


(13) Mounting strip (91) Side T-nut

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



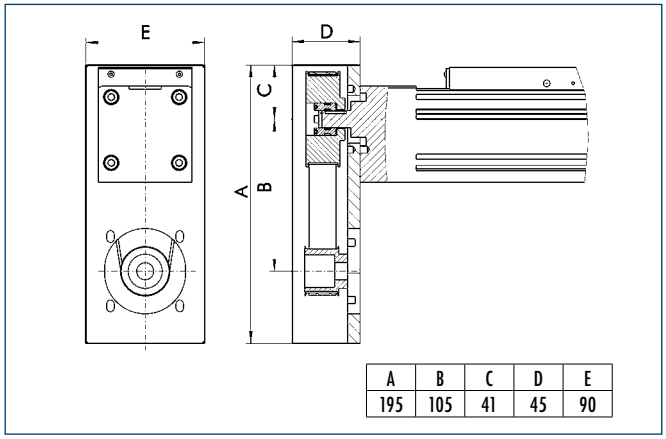
L = A + B + C

	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.

Angle gear schematic diagram



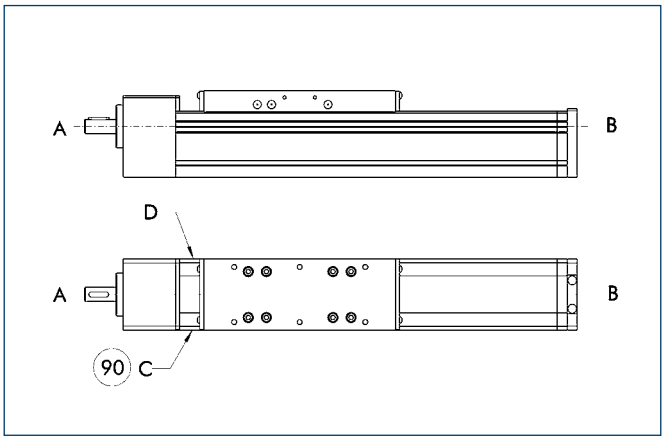
A	B	C	D	E
195	105	41	45	90

Possible transmission ratios: i = 1 : 1, i = 2 : 1, i = 3 : 1
Caution: Dimension C can change at i ≠ 1:1 or with smooth motor shafts (without feather key).
Even in tight conditions, different drive solutions can be attached. SCHUNK can provide you with the right angle gear for your drive.

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

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

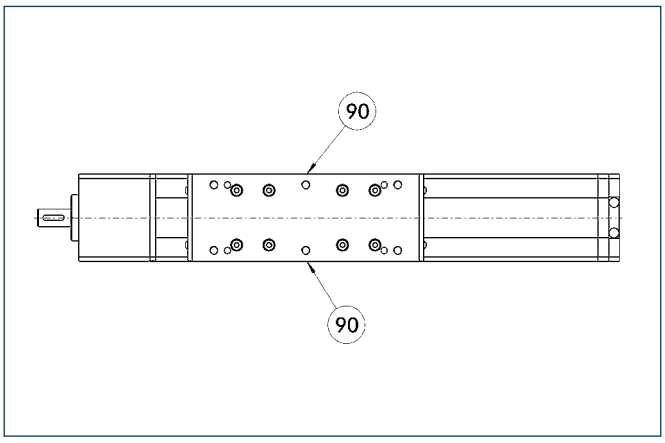
Two EO2 switches are used as limit switches and an RS2 as the reference switch as standard.

ⓘ 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



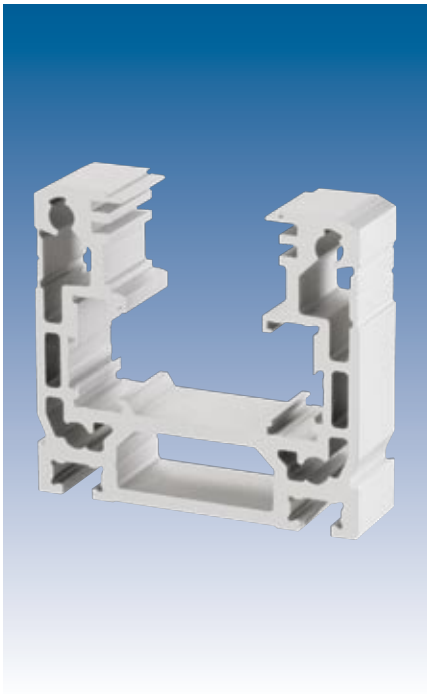
90 Standard lubrication connection

Standard connection
Lubrication nipple M8x1

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

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-SRS



Advantages of roller guide

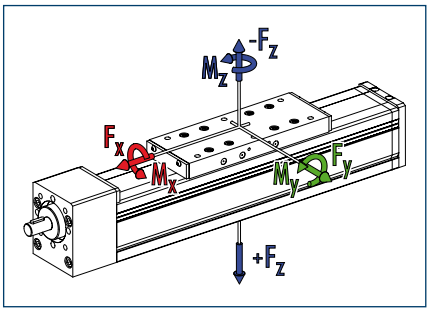
High maximum moments
due to optimum force transmission to the profile

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



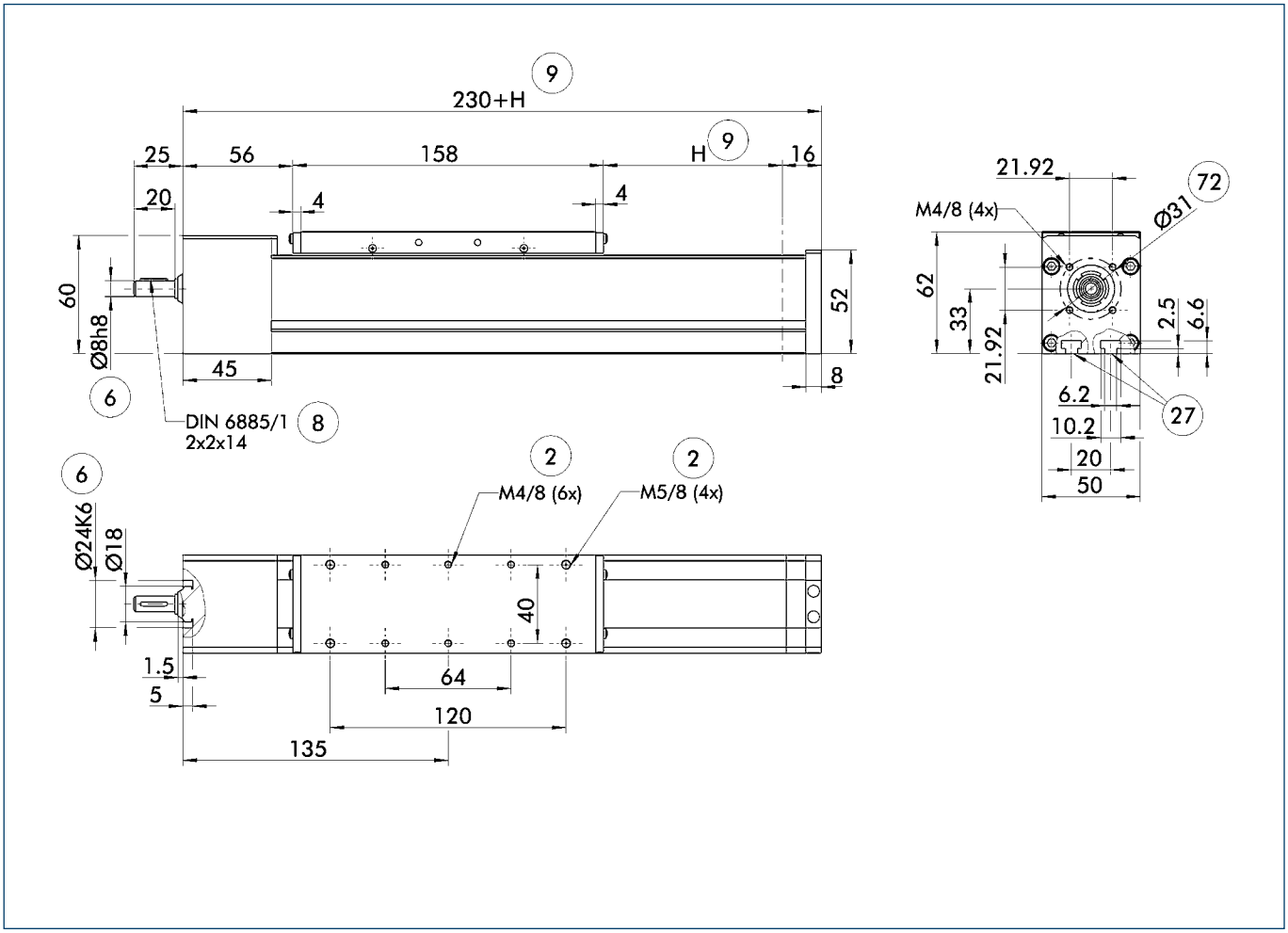
Load		Dynamic
F_x **	[N]	1000
F_y	[N]	300
F_z	[N]	600
$-F_z$	[N]	400
Load torques		**Dynamic**
M_x	[Nm]	30
M_y	[Nm]	50 (65)
M_z	[Nm]	50 (65)
M_{Amax}	[Nm]	0.9 (p=4); 1.1 (p=5)

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

Technical data

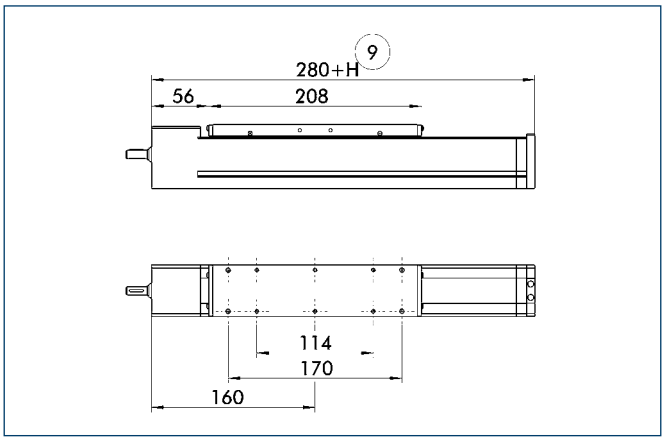
Designation		B 50C-SRS
Max. travel speed	[m/s]	0.25
Repeat accuracy	[mm]	0.03
Max. acceleration	[m/s²]	20
Idle torque	[Nm]	0.3
Maximum stroke	[mm]	860
Max. total length	[mm]	1090
Moment of inertia	[kgm²]	0.000012
Drive element		**Ball screw spindle drive**
Max. spindle speed	[rpm]	3000
Diameter	[mm]	12
Pitch	[mm]	4 / 5
Drive element		**Trapezoidal threaded drive**
Max. spindle speed	[rpm]	1500
Diameter	[mm]	12
Pitch	[mm]	3
Weights		
Basic without travel	[kg]	1.5
Travel per 100 mm	[kg]	0.4
Slide plate 150 mm	[kg]	0.45
Slide plate 200 mm	[kg]	0.6

Main views



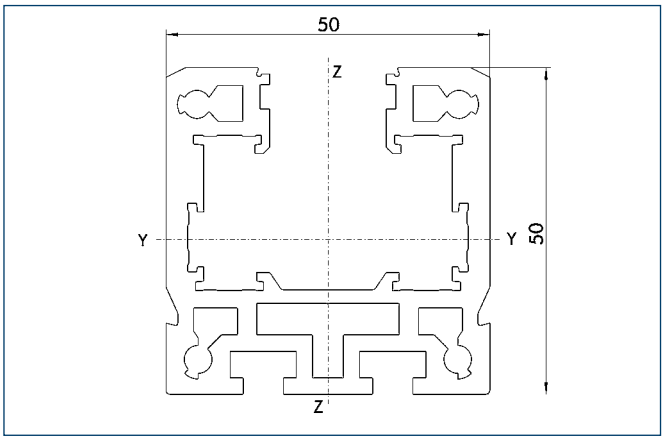
(2) Assembly connection
(6) Drive connection
(8) Feather key DIN 6885
(9) Useful stroke
(27) Mounting groove for T-nuts
(72) Bolt pitch circle

Long slide



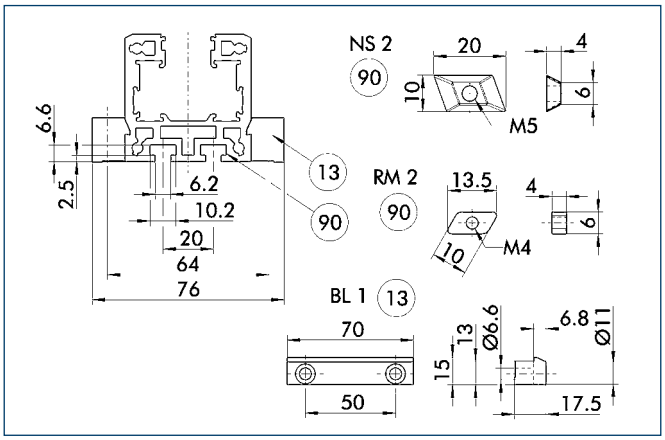
(9) Useful stroke

Profile SRS



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

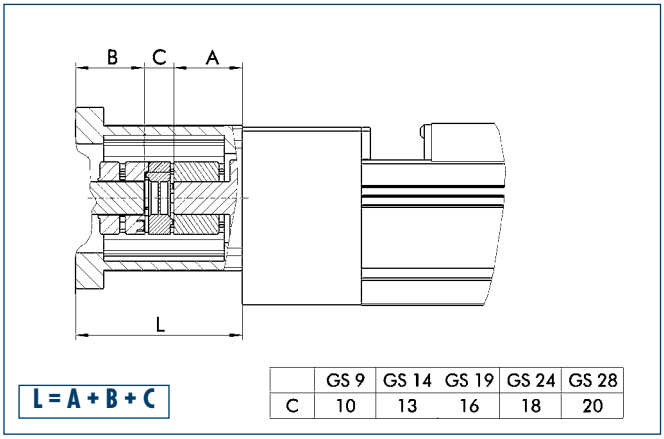


(13) Mounting strip (90) Base side T-nut

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



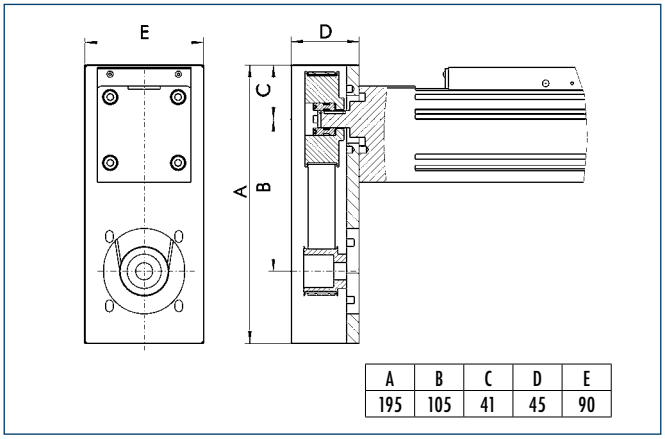
L = A + B + C

	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.

Angle gear schematic diagram



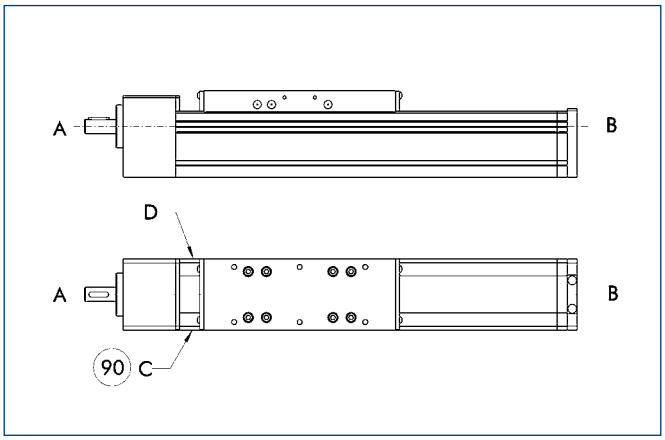
A	B	C	D	E
195	105	41	45	90

Possible transmission ratios: i = 1 : 1, i = 2 : 1, i = 3 : 1
Caution: Dimension C can change at i ≠ 1:1 or with smooth motor shafts (without feather key).
Even in tight conditions, different drive solutions can be attached. SCHUNK can provide you with the right angle gear for your drive.

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

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

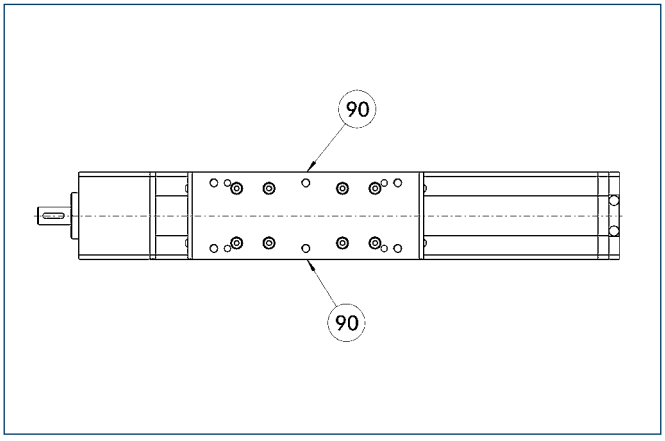
Two EO2 switches are used as limit switches and an RS2 as the reference switch as standard.

ⓘ 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



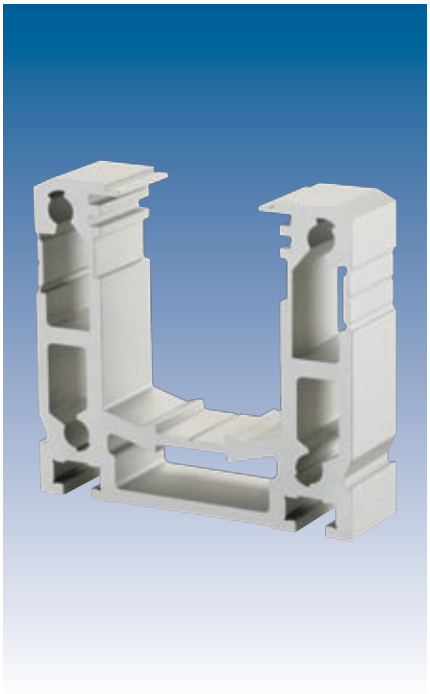
90 Standard lubrication connection

Standard connection
Lubrication nipple M8x1

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

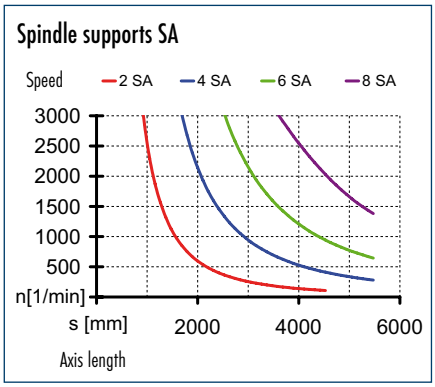
More detailed information on pedestal bearings, connection shafts and bevel gears can be found in the "OPTIONS for System HSB" section of the catalog.

B 60-SSS

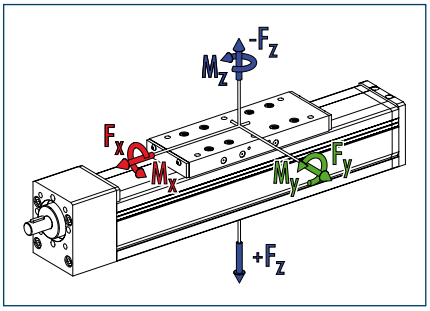


Advantages of profiled rail guide

- High load bearing capacity
- Long lifetime
- High precision



Loads and load torques



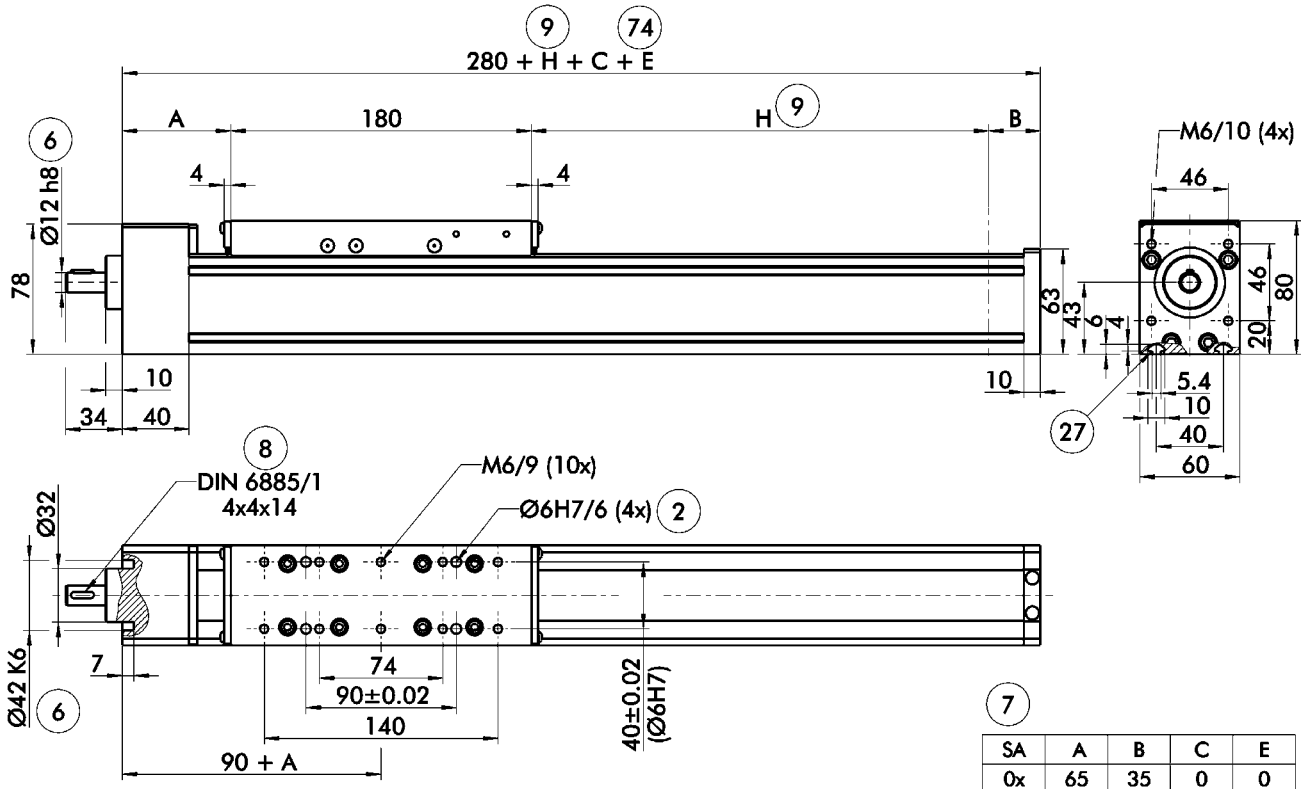
Load			Dynamic
F_x **	[N]		4000
F_y	[N]		600
F_z	[N]		1800
$-F_z$	[N]		1200
Load torques			**Dynamic**
M_x	[Nm]		60
M_y	[Nm]		180 (220)
M_z	[Nm]		120 (150)
M_{Amax}	[Nm]	3.9 (p=5); 13.4 (p=20); 32.5 (p=50)	

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

Technical data

Designation		B 60-SSS
Max. travel speed	[m/s]	2.5
Repeat accuracy	[mm]	**± 0.03**
Max. acceleration	[m/s²]	20
Idle torque	[Nm]	0.7
Maximum stroke	[mm]	5120
Max. total length	[mm]	5400
Moment of inertia	[kgm²]	0.000085
Drive element		**Ball screw spindle drive**
Max. spindle speed	[rpm]	3000
Diameter	[mm]	20
Pitch	[mm]	5 / 20 / 50
Drive element		**Trapezoidal threaded drive**
Max. spindle speed	[rpm]	1500
Diameter	[mm]	20
Pitch	[mm]	4 / 8 / 16
Weights		
Basic without travel	[kg]	4.3
Travel per 100 mm	[kg]	0.8
Slide plate 180 mm	[kg]	1.5
Slide plate 230 mm	[kg]	1.8

Main views

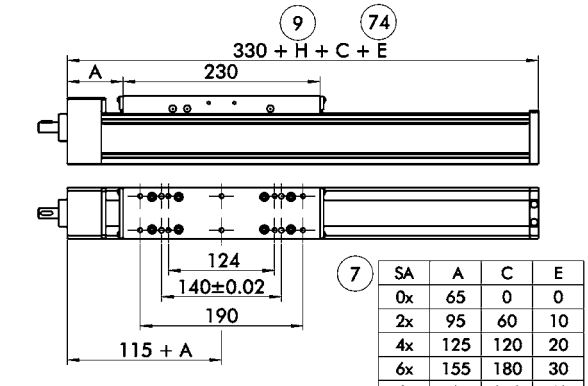


7

SA	A	B	C	E
0x	65	35	0	0
2x	95	65	60	10
4x	125	95	120	20
6x	155	125	180	30
8x	185	155	240	40

(2) Assembly connection
(6) Drive connection
(7) Number of spindle supports
(8) Feather key DIN 6885
(9) Useful stroke
(27) Mounting groove for T-nuts
(74) Additional E for spindle supports with insulated noise emissions

Long slide

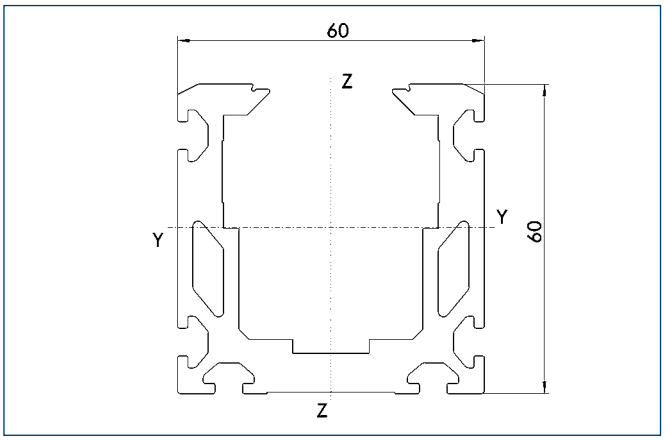


7

SA	A	C	E
0x	65	0	0
2x	95	60	10
4x	125	120	20
6x	155	180	30
8x	185	240	40

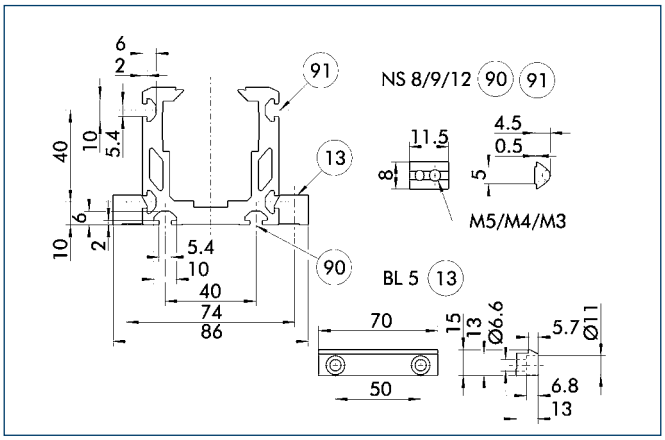
(7) Number of spindle supports
(9) Useful stroke
(74) E for spindle supports with insulated noise emissions

Profile SSS



Specific mass	[kg/m]	3.35
Planar dimension	[mm²]	1242
Planar moment of inertia I_y	[mm⁴]	473055
Planar moment of inertia I_z	[mm⁴]	577258
Load torque W_y	[mm³]	13624
Load torque W_z	[mm³]	19236

Mounting

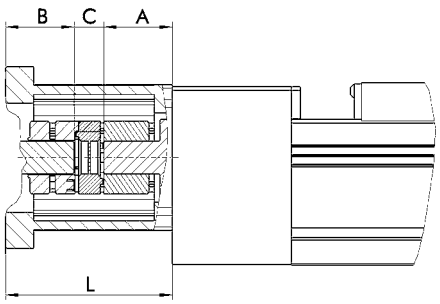


(13) Mounting strip
(90) Base side T-nut
(91) Side T-nut

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



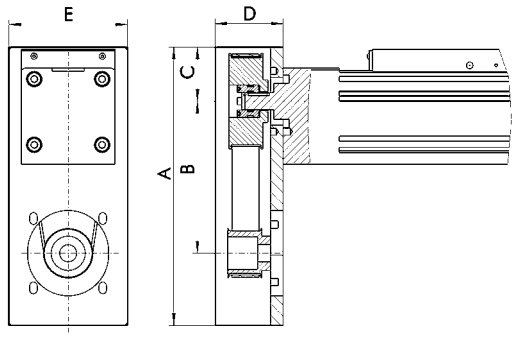
L = A + B + C

	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.

Angle gear schematic diagram



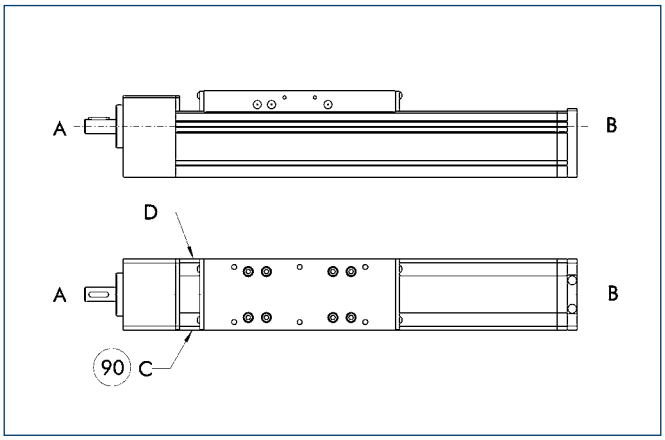
A	B	C	D	E
238	120	46	52	102

Possible transmission ratios: i = 1 : 1, i = 2 : 1, i = 3 : 1
Caution: Dimension C can change at i ≠ 1:1 or with smooth motor shafts (without feather key).
Even in tight conditions, different drive solutions can be attached. SCHUNK can provide you with the right angle gear for your drive.

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

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

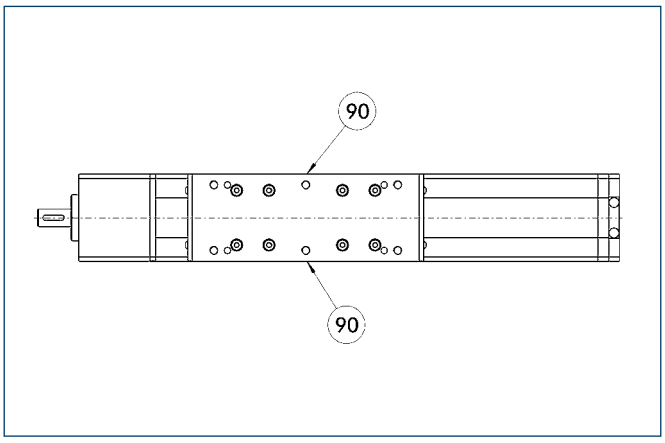
Two EO2 switches are used as limit switches and an RS2 as the reference switch as standard.

ⓘ 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



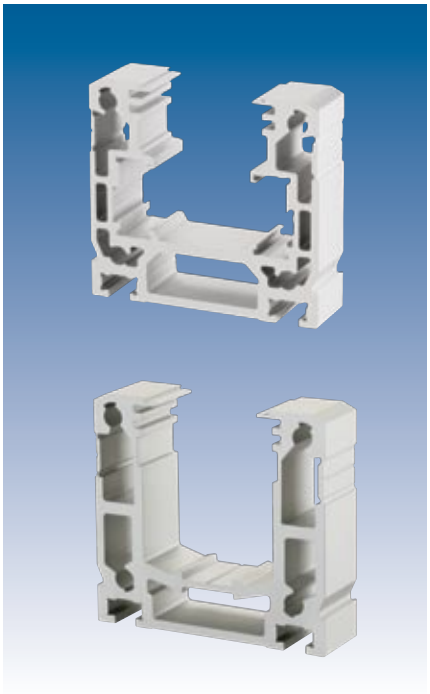
(90) Standard lubrication connection

Standard connection
Lubrication nipple M8x1

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

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-SRS/-SSS



Advantages of roller guide

High maximum moments
due to optimum force transmission to the profile

Long stroke lengths
can be achieved with no problems

Life-time lubricated rollers
for easy maintenance use

Smooth, low-noise running

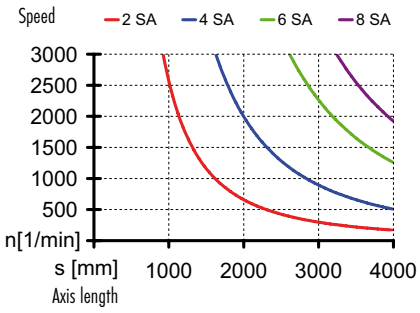
Advantages of profiled rail guide

High load bearing capacity

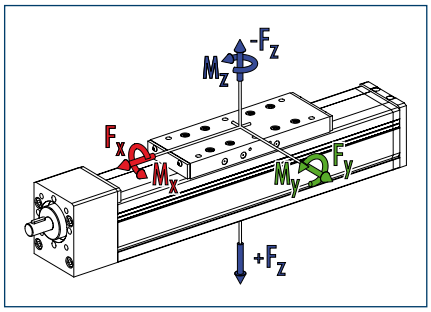
Long lifetime

High precision

Spindle supports SA



Loads and load torques



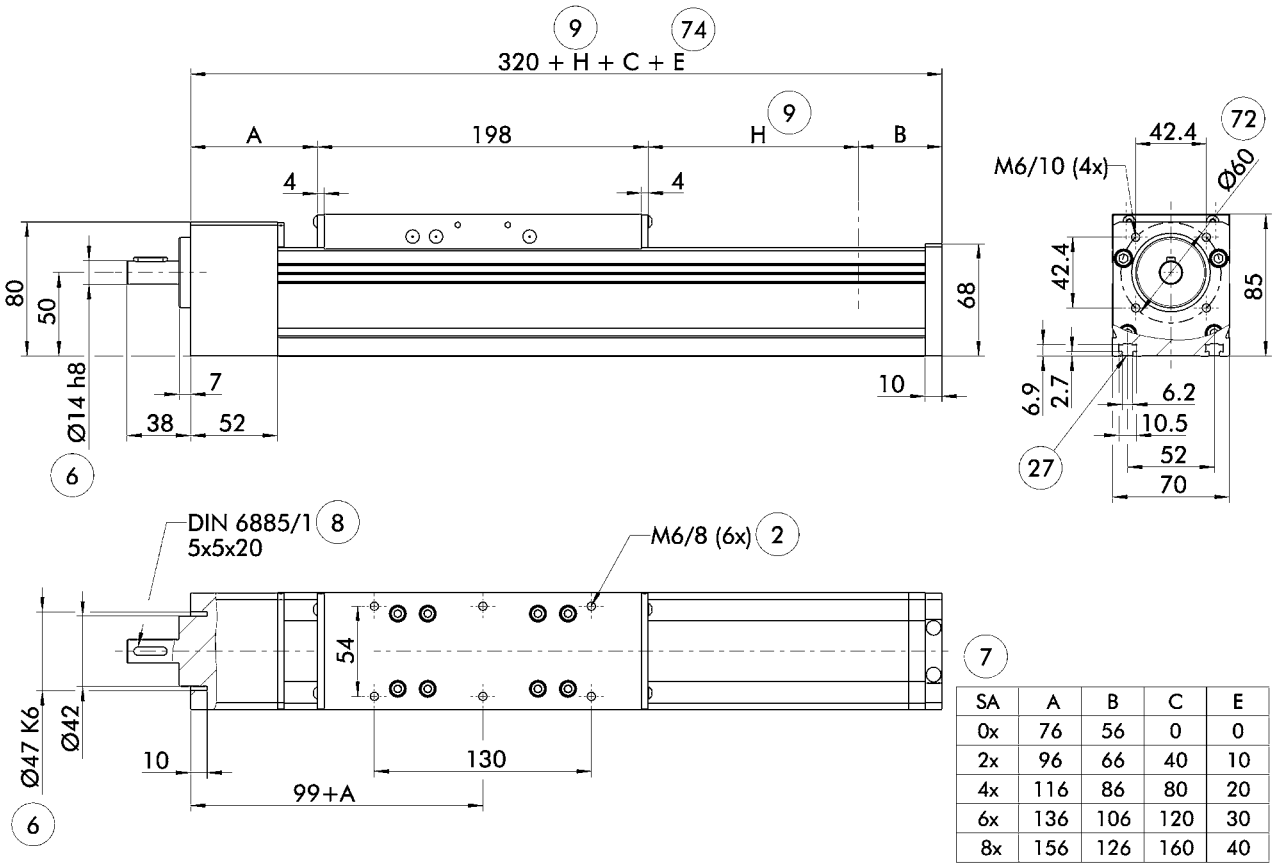
Load		SRS dynamic	SSS dynamic
F_x **	[N]	2000	2000
F_y	[N]	300	600
F_z	[N]	1000	1800
$-F_z$	[N]	400	1200
Load torques		**SRS dynamic**	**SSS dynamic**
M_x	[Nm]	35	60
M_y	[Nm]	120 (150)	180 (220)
M_z	[Nm]	60 (70)	120 (150)
M_{Amax}	[Nm]	1.9 (p=5)	2.0 (p=5)
		3.5 (p=10)	3.6 (p=10)
		6.7 (p=20)	6.8 (p=20)

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

Technical data

Designation		B 70C-SRS	B 70C-SSS
Max. travel speed	[m/s]	1.0	1.0
Repeat accuracy	[mm]	**± 0.03**	**± 0.03**
Max. acceleration	[m/s²]	20	20
Idle torque	[Nm]	0.35	0.4
Maximum stroke	[mm]	2730	2730
Max. total length	[mm]	3050	3050
Moment of inertia	[kgm²]	0.0000325	0.0000325
Drive element		**Ball screw spindle drive**	**Ball screw spindle drive**
Max. spindle speed	[rpm]	3000	3000
Diameter	[mm]	16	16
Pitch	[mm]	5 / 10 / 20	5 / 10 / 20
Drive element		**Trapezoidal threaded drive**	**Trapezoidal threaded drive**
Max. spindle speed	[rpm]	1500	1500
Diameter	[mm]	16	16
Pitch	[mm]	4 / 8	4 / 8
Weights			
Basic without travel	[kg]	3.65	3.5
Travel per 100 mm	[kg]	0.45	0.6
Slide plate 190 mm	[kg]	1.6	1.25
Slide plate 240 mm	[kg]	2.02	1.6

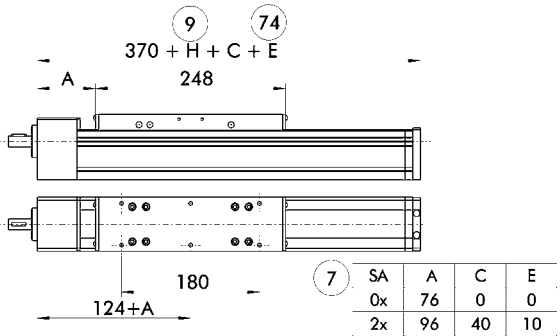
Main views



SA	A	B	C	E
0x	76	56	0	0
2x	96	66	40	10
4x	116	86	80	20
6x	136	106	120	30
8x	156	126	160	40

(2) Assembly connection
(6) Drive connection
(7) Number of spindle supports
(8) Feather key DIN 6885
(9) Useful stroke
(27) Mounting groove for T-nuts
(72) Bolt pitch circle
(74) E for spindle supports with insulated noise emissions

Long slide

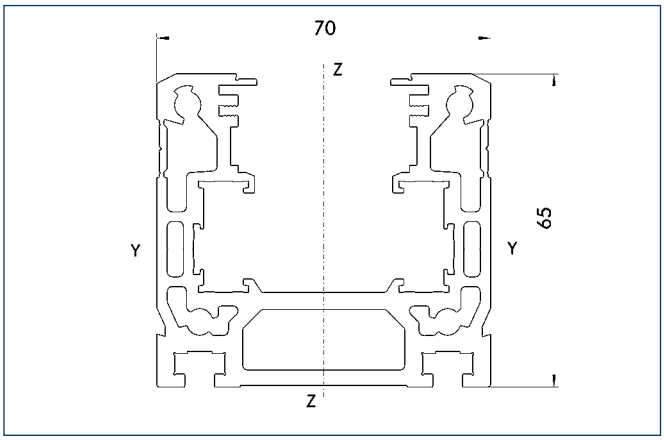


SA	A	C	E
0x	76	0	0
2x	96	40	10
4x	116	80	20
6x	136	120	30
8x	156	160	40

(7) Number of spindle supports
(9) Useful stroke
(74) E for spindle supports with insulated noise emissions

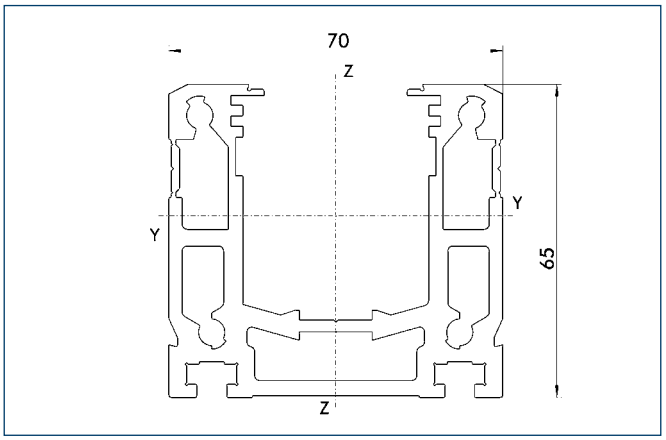
B 70C-SRS/-SSS

Profile SRS



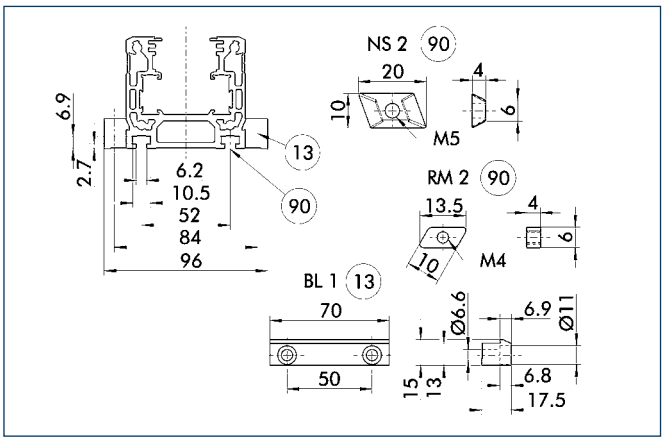
Specific mass	[kg/m]	3.7
Planar dimension	[mm²]	1370
Planar moment of inertia I_y	[mm⁴]	585283
Planar moment of inertia I_z	[mm⁴]	854713
Load torque W_y	[mm³]	15835
Load torque W_z	[mm³]	24410

Profile SSS



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

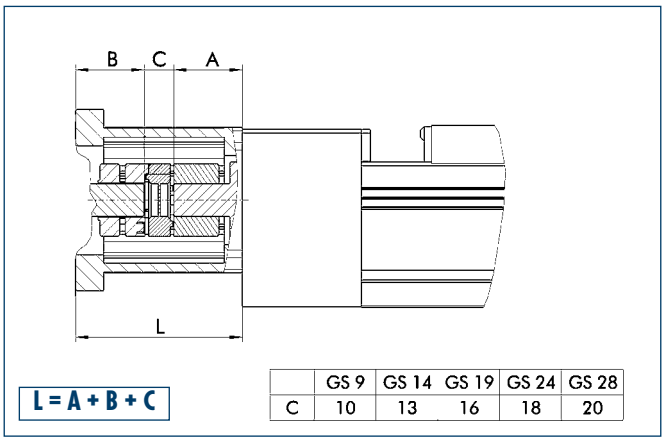


(13) Mounting strip (90) Base side T-nut

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



L = A + B + C

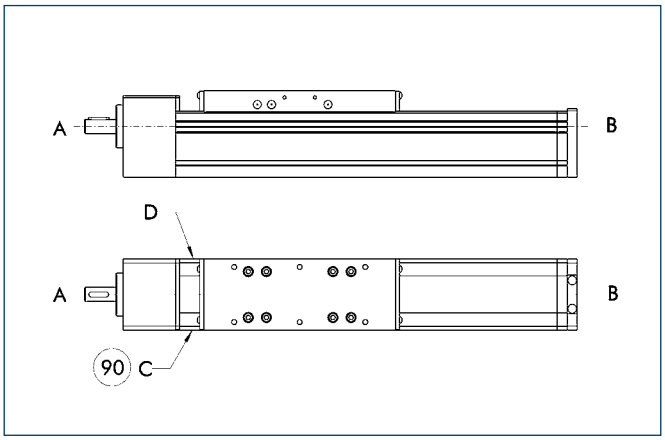
	GS 9	GS 14	GS 19	GS 24	GS 28
C	10	13	16	18	20

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

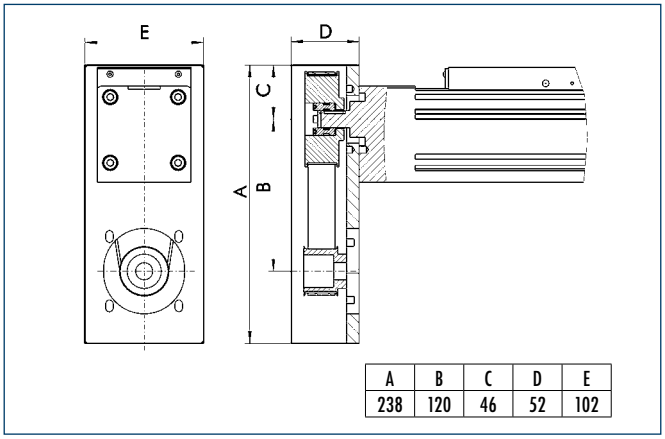
Two EO2 switches are used as limit switches and an RS2 as the reference switch as standard.

ⓘ 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

Angle gear schematic diagram

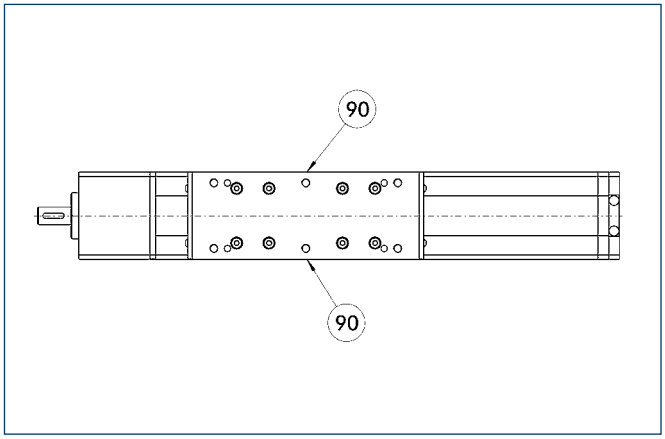


A	B	C	D	E
238	120	46	52	102

Possible transmission ratios: i = 1 : 1, i = 2 : 1, i = 3 : 1
Caution: Dimension C can change at i ≠ 1:1 or with smooth motor shafts (without feather key).
Even in tight conditions, different drive solutions can be attached. SCHUNK can provide you with the right angle gear for your drive.

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

Lubrication connections



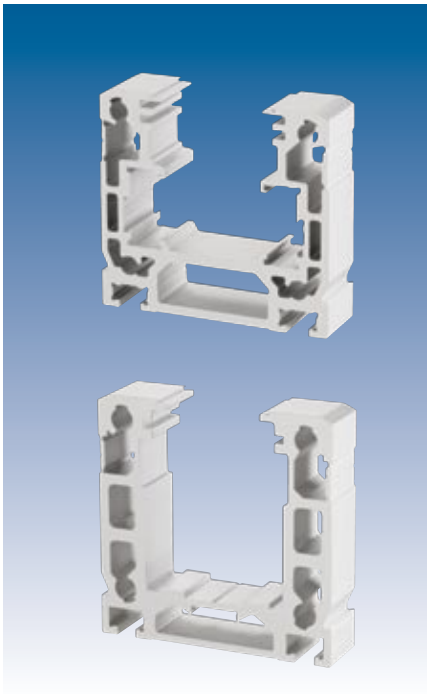
90 Standard lubrication connection

Standard connection
Lubrication nipple M8x1

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

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

B 70C-SRS-RL/-SSS-RL



Advantages of roller guide

High maximum moments
due to optimum force transmission to the profile

Long stroke lengths
can be achieved with no problems

Life-time lubricated rollers
for easy maintenance use

Smooth, low-noise running

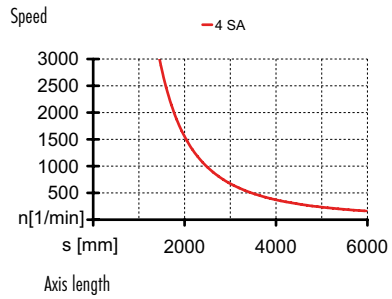
Advantages of profiled rail guide

High load bearing capacity

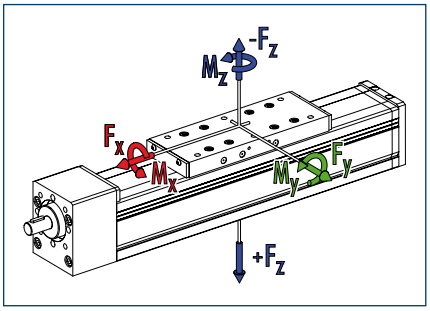
Long lifetime

High precision

Spindle supports SA



Loads and load torques



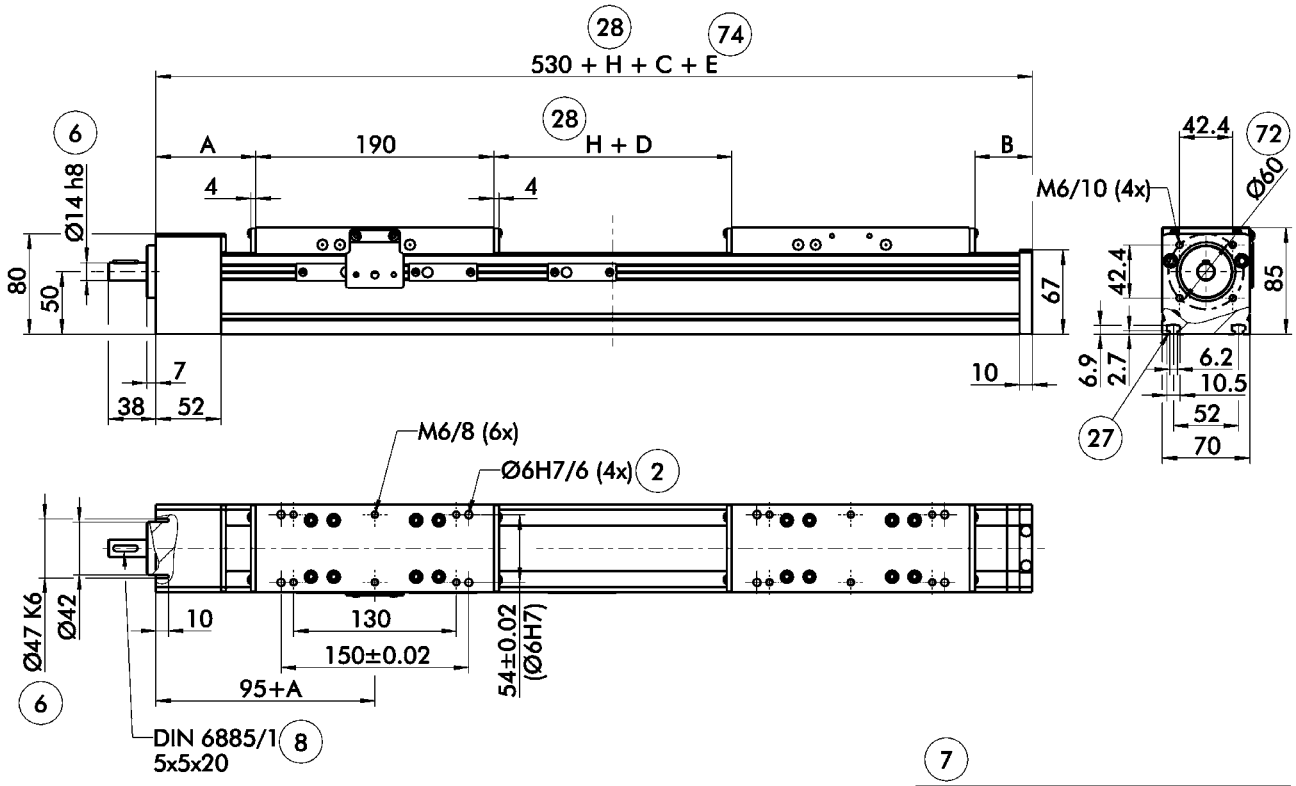
Load		SRS-RL dynamic	SSS-RL dynamic
F_x **	[N]	2000	2000
F_y	[N]	300	600
F_z	[N]	1000	1800
$-F_z$	[N]	400	1200
Load torques		**SRS-RL dynamic**	**SSS-RL dynamic**
M_x	[Nm]	35	60
M_y	[Nm]	120 (150)	180 (220)
M_z	[Nm]	60 (70)	120 (150)
M_{Amax}	[Nm]	On request	On request

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

Technical data

Designation		B 70C-SRS-RL	B 70C-SSS-RL
Max. travel speed	[m/s]	0.1	1.0
Repeat accuracy	[mm]	**± 0.03**	**± 0.03**
Max. acceleration	[m/s²]	20	20
Idle torque	[Nm]	0.35	0.4
Maximum stroke	[mm]	1255 per slide	1255 per slide
Max. total length	[mm]	3050	3050
Moment of inertia	[kgm²]	0.0000325	0.0000325
Drive element		**Trapezoidal threaded drive**	**Trapezoidal threaded drive**
Max. spindle speed	[rpm]	1500	1500
Diameter	[mm]	16	16
Pitch	[mm]	4 right/left	4 right/left
Weights			
Basic without travel	[kg]	3.65	3.5
Travel per 100 mm	[kg]	0.45	0.6
Slide plate 190 mm	[kg]	1.6	1.25
Slide plate 240 mm	[kg]	2.02	1.6

Main views

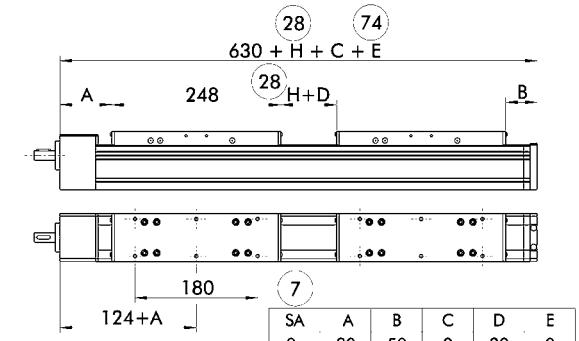


7

SA	A	B	C	D	E
0x	80	50	0	20	0
4x	100	70	80	60	20
8x	120	90	160	120	40

(2) Assembly connection
(6) Drive connection
(7) Number of spindle supports
(8) Feather key DIN 6885
(27) Mounting groove for T-nuts
(28) Total stroke = 2 x stroke per slide
(72) Bolt pitch circle
(74) E for spindle supports with insulated noise emissions

Long slide

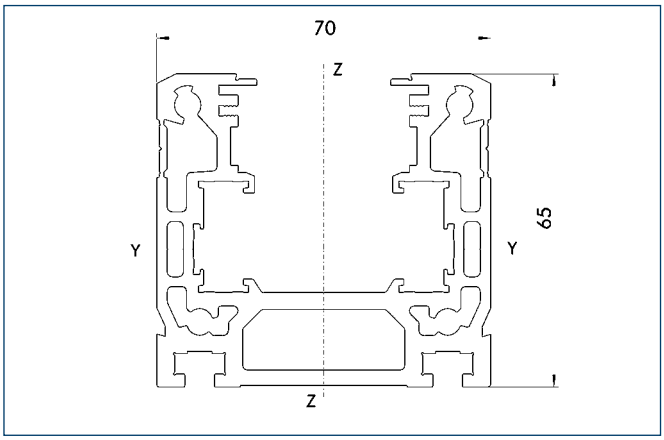


SA	A	B	C	D	E
0x	80	50	0	20	0
4x	100	70	80	60	20
8x	120	90	160	120	40

(7) Number of spindle supports
(28) Total stroke = 2 x stroke per slide
(74) E for spindle supports with insulated noise emissions

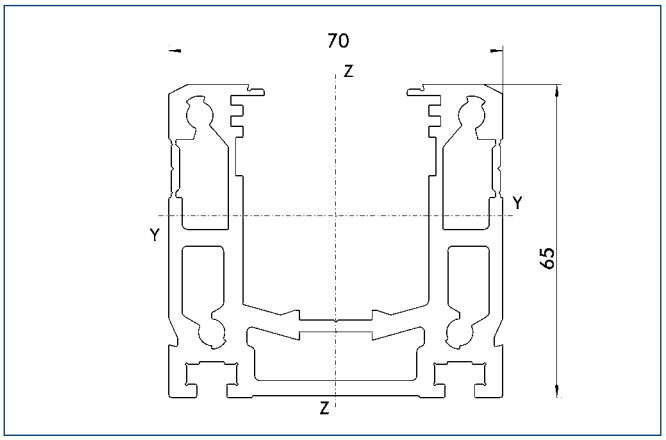
B 70C-SRS-RL/-SSS-RL

Profile SRS



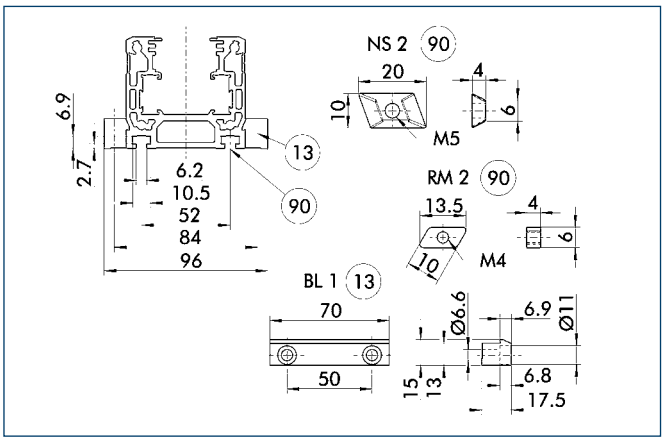
Specific mass	[kg/m]	3.7
Planar dimension	[mm²]	1370
Planar moment of inertia I_y	[mm⁴]	585283
Planar moment of inertia I_z	[mm⁴]	854713
Load torque W_y	[mm³]	15835
Load torque W_z	[mm³]	24410

Profile SSS



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

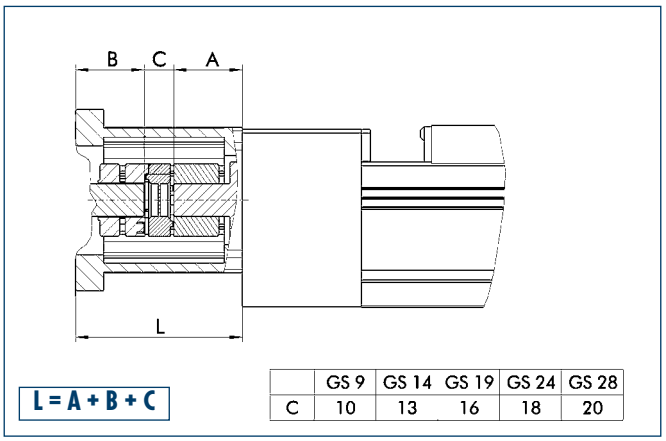


(13) Mounting strip (90) Base side T-nut

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



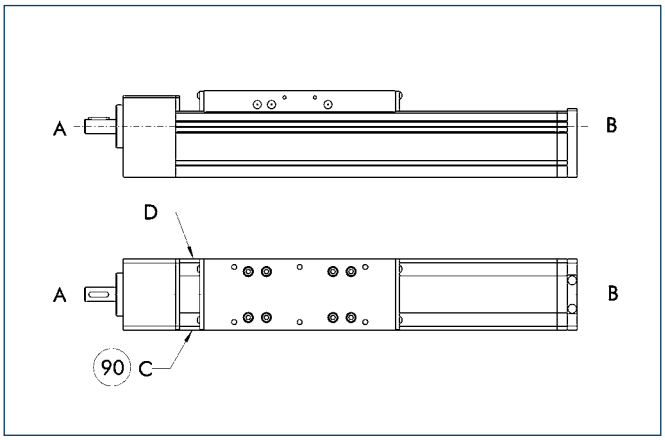
	GS 9	GS 14	GS 19	GS 24	GS 28
C	10	13	16	18	20

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

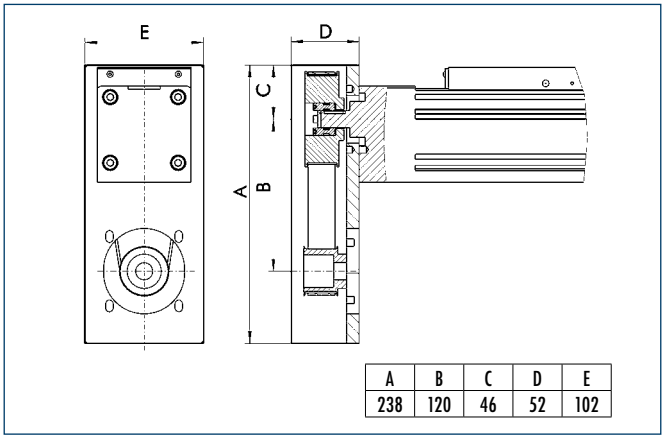
Two EO2 switches are used as limit switches and an RS2 as the reference switch as standard.

ⓘ 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

Angle gear schematic diagram

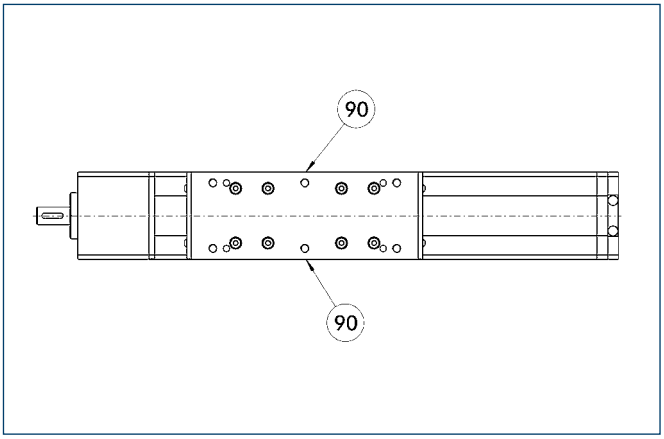


A	B	C	D	E
238	120	46	52	102

Possible transmission ratios: i = 1 : 1, i = 2 : 1, i = 3 : 1
Caution: Dimension C can change at i ≠ 1:1 or with smooth motor shafts (without feather key).
Even in tight conditions, different drive solutions can be attached. SCHUNK can provide you with the right angle gear for your drive.

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

Lubrication connections



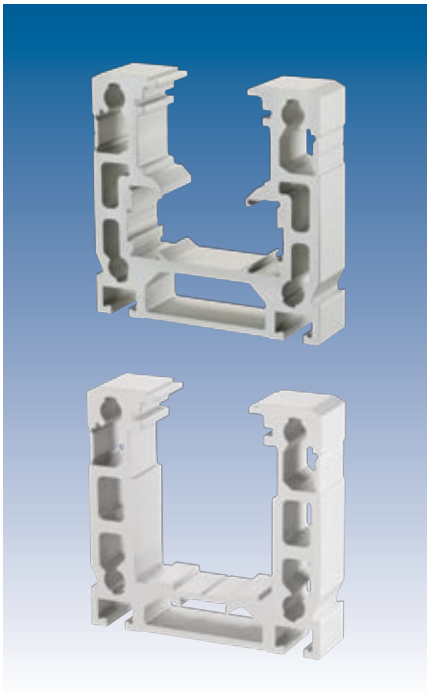
90 Standard lubrication connection

Standard connection
Lubrication nipple M8x1

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

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

B 80-SRS/-SSS



Advantages of roller guide

High maximum moments
due to optimum force transmission to the profile

Long stroke lengths
can be achieved with no problems

Life-time lubricated rollers
for easy maintenance use

Smooth, low-noise running

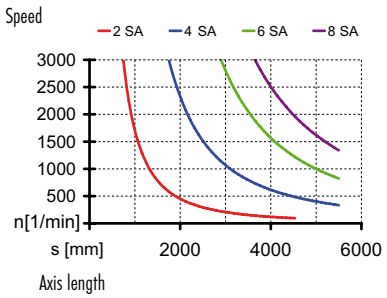
Advantages of profiled rail guide

High load bearing capacity

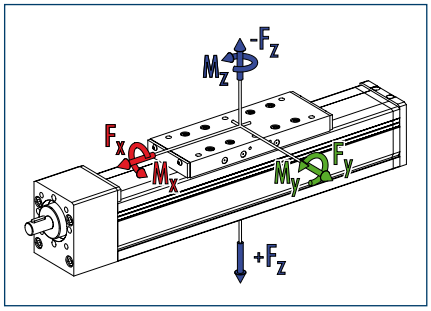
Long lifetime

High precision

Spindle supports SA



Loads and load torques



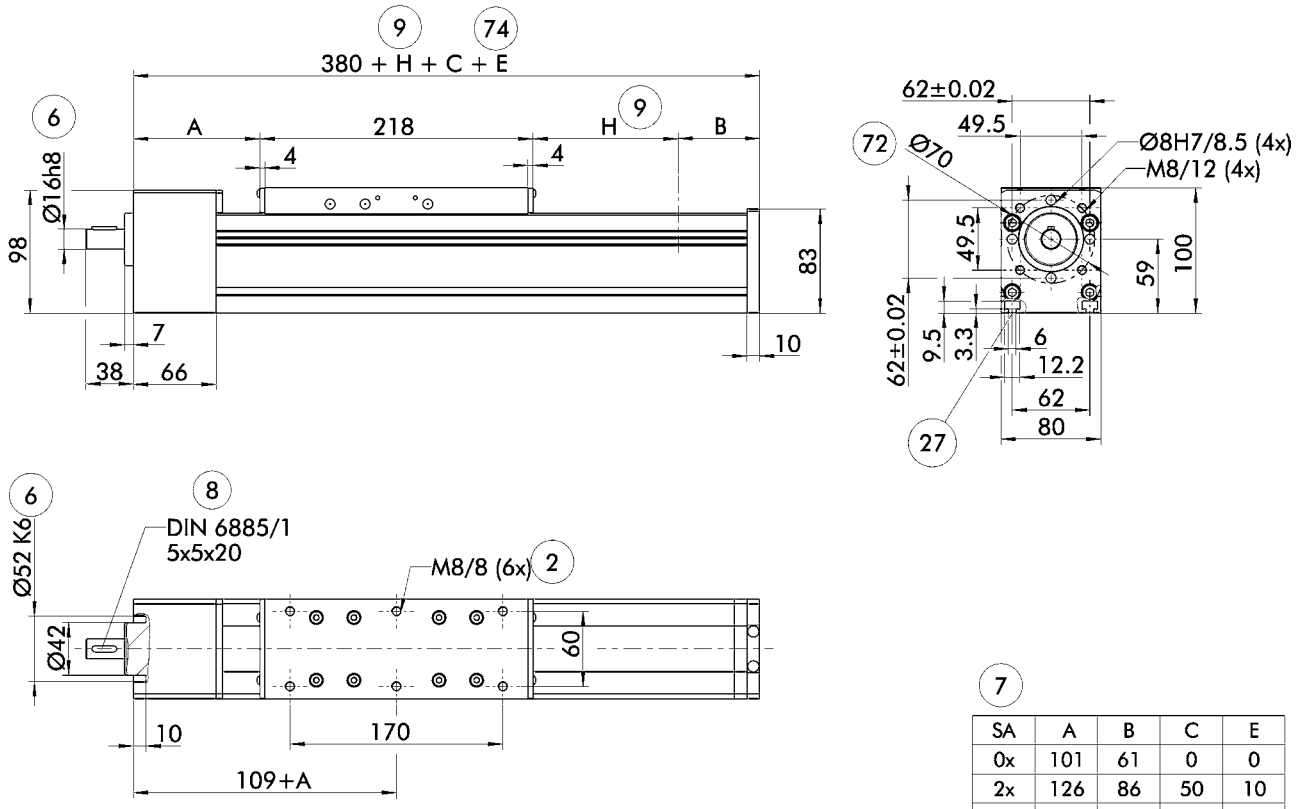
Load		SRS dynamic	SSS dynamic
F_x**	[N]	4000	4000
F_y	[N]	500	800
F_z	[N]	1500	3000
$-F_z$	[N]	800	2000
Load torques		**SRS dynamic**	**SSS dynamic**
M_x	[Nm]	50	100
M_y	[Nm]	180 (270)	250 (300)
M_z	[Nm]	100 (130)	250 (300)
M_{Amax}	[Nm]	3.8 (p=5)	4.0 (p=5)
		13.3 (p=20)	13.5 (p=20)
		32.4 (p=50)	32.6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

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

Technical data

Designation		B 80-SRS	B 80-SSS
Max. travel speed	[m/s]	2.5	2.5
Repeat accuracy	[mm]	**± 0.03**	**± 0.03**
Max. acceleration	[m/s²]	20	20
Idle torque	[Nm]	0.6	0.8
Maximum stroke	[mm]	5020	5020
Max. total length	[mm]	5400	5400
Moment of inertia	[kgm²]	0.000085	0.000085
Drive element		**Ball screw spindle drive**	**Ball screw spindle drive**
Max. spindle speed	[rpm]	3000	3000
Diameter	[mm]	20	20
Pitch	[mm]	5 / 20 / 50	5 / 20 / 50
Drive element		**Trapezoidal threaded drive**	**Trapezoidal threaded drive**
Max. spindle speed	[rpm]	1500	1500
Diameter	[mm]	20	20
Pitch	[mm]	4 / 8 / 16	4 / 8 / 16
Weights			
Basic without travel	[kg]	5.4	6.2
Travel per 100 mm	[kg]	0.7	1.1
Slide plate 210 mm	[kg]	2.2	1.9
Slide plate 270 mm	[kg]	2.8	2.4

Main views

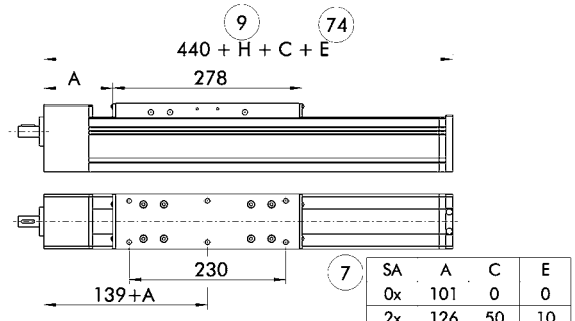


7

SA	A	B	C	E
0x	101	61	0	0
2x	126	86	50	10
4x	151	111	100	20
6x	176	136	150	30
8x	201	164	200	40

(2) Assembly connection
(6) Drive connection
(7) Number of spindle supports
(8) Feather key DIN 6885
(9) Useful stroke
(27) Mounting groove for T-nuts
(72) Bolt pitch circle
(74) E for spindle supports with insulated noise emissions

Long slide

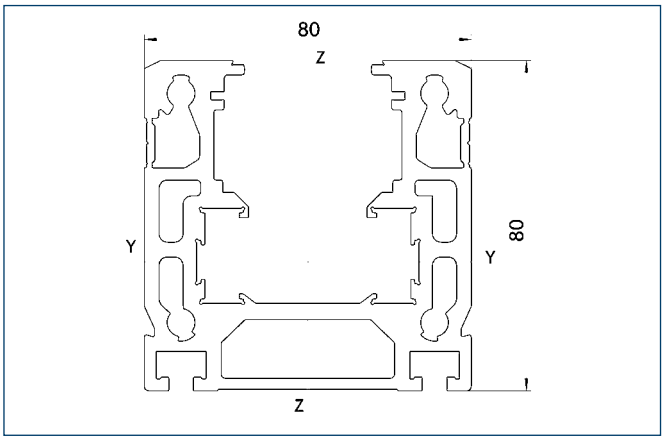


7

SA	A	C	E
0x	101	0	0
2x	126	50	10
4x	151	100	20
6x	176	150	30
8x	201	200	40

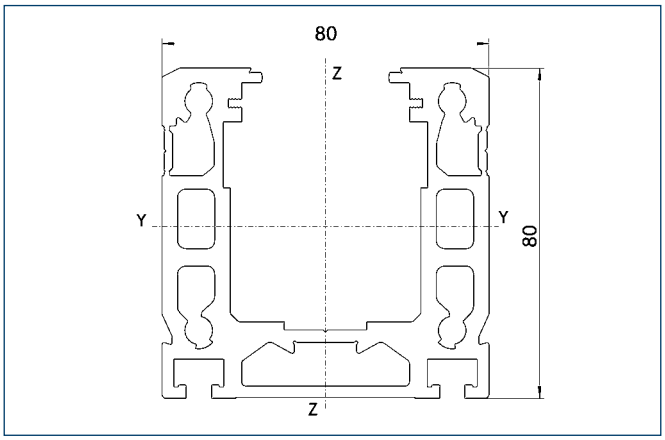
(7) Number of spindle supports
(9) Useful stroke
(74) E for spindle supports with insulated noise emissions

Profile SRS



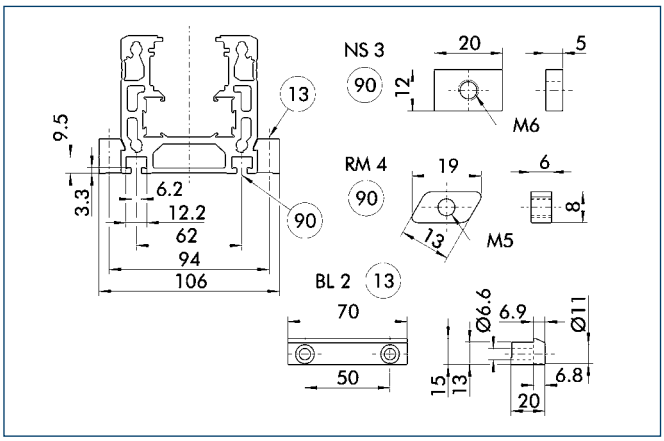
Specific mass	[kg/m]	5.64
Planar dimension	[mm²]	2090
Planar moment of inertia I_y	[mm⁴]	1294343
Planar moment of inertia I_z	[mm⁴]	1732340
Load torque W_y	[mm³]	30263
Load torque W_z	[mm³]	43258

Profile SSS



Specific mass	[kg/m]	5.6
Planar dimension	[mm²]	2057
Planar moment of inertia I_y	[mm⁴]	1372019
Planar moment of inertia I_z	[mm⁴]	1677956
Load torque W_y	[mm³]	30572
Load torque W_z	[mm³]	41846

Mounting

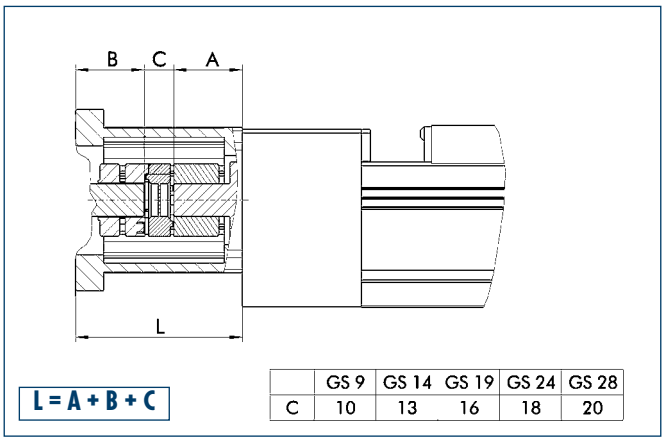


(13) Mounting strip (90) Base side T-nut

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

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

Motor flange schematic diagram



L = A + B + C

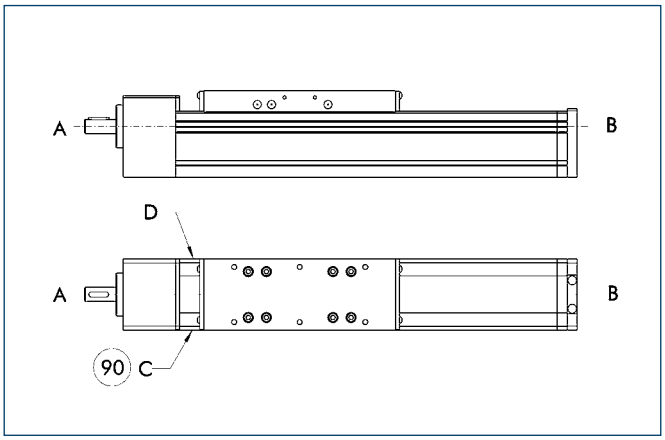
	GS 9	GS 14	GS 19	GS 24	GS 28
C	10	13	16	18	20

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

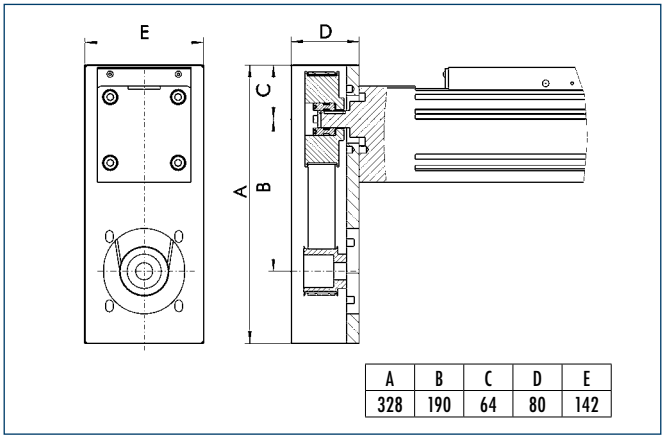
Two EO2 switches are used as limit switches and an RS2 as the reference switch as standard.

ⓘ 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

Angle gear schematic diagram

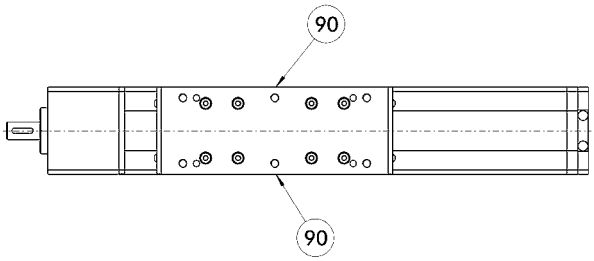


A	B	C	D	E
328	190	64	80	142

Possible transmission ratios: i = 1 : 1, i = 2 : 1, i = 3 : 1
Caution: Dimension C can change at i ≠ 1:1 or with smooth motor shafts (without feather key).
Even in tight conditions, different drive solutions can be attached. SCHUNK can provide you with the right angle gear for your drive.

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

Lubrication connections



90 Standard lubrication connection

Standard connection
Lubrication nipple M8x1

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

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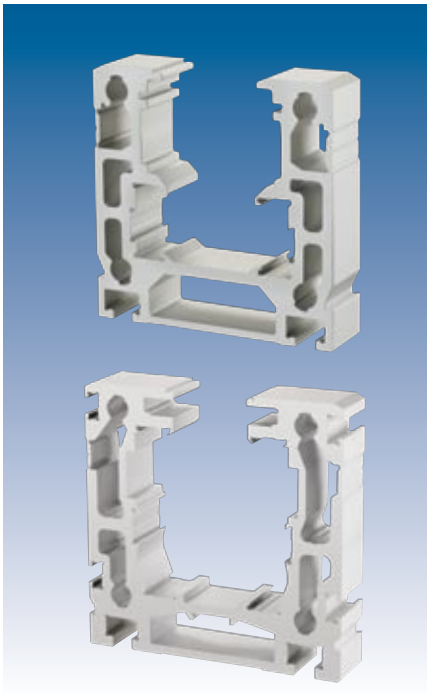
B 80-SRS-RL/-SSS-RL



Advantages of roller guide

High maximum moments
due to optimum force transmission to the profile

Long stroke lengths
can be achieved with no problems

Life-time lubricated rollers
for easy maintenance use

Smooth, low-noise running

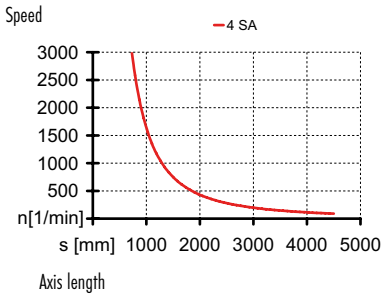
Advantages of profiled rail guide

High load bearing capacity

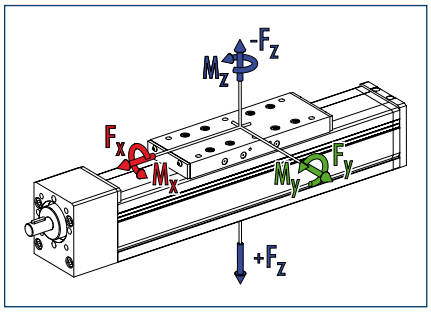
Long lifetime

High precision

Spindle supports SA



Loads and load torques



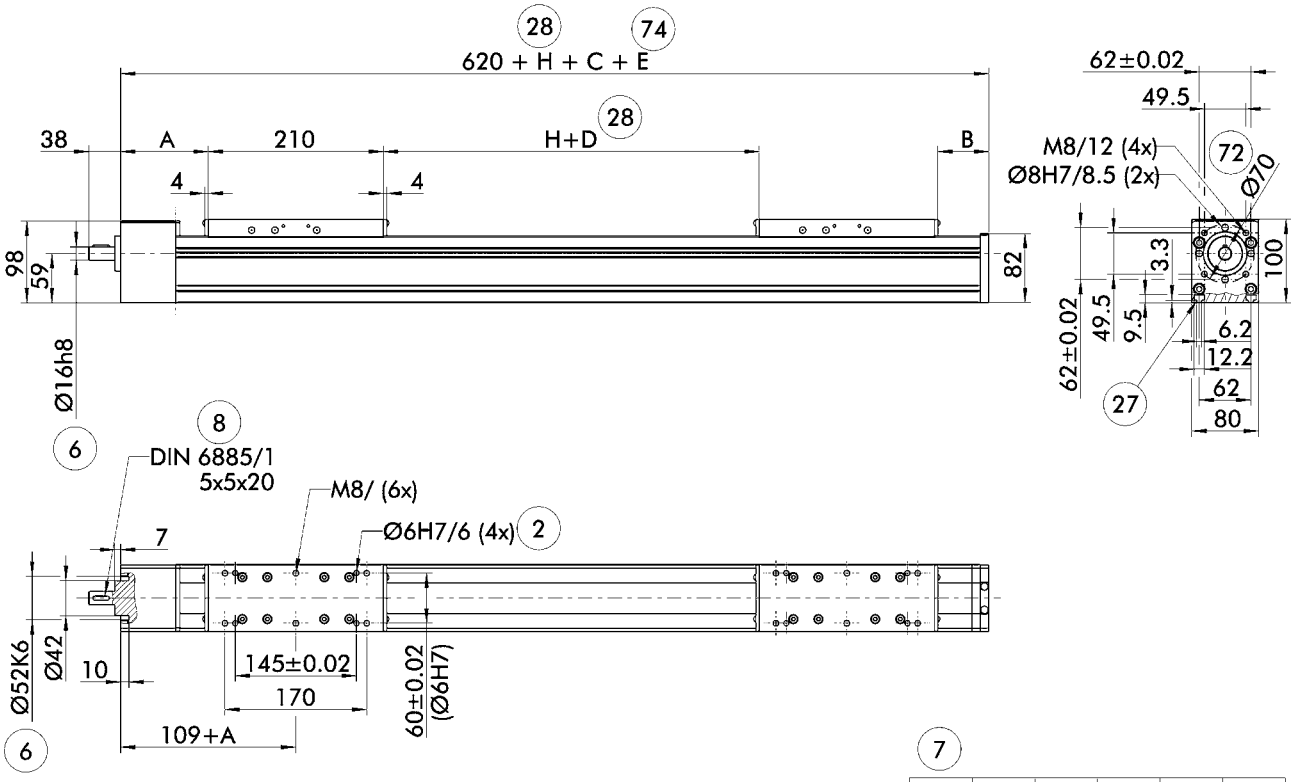
Load		SRS dynamic	SSS dynamic
F_x **	[N]	4000	4000
F_y	[N]	500	800
F_z	[N]	1500	3000
$-F_z$	[N]	800	2000
Load torques		**SRS dynamic**	**SSS dynamic**
M_x	[Nm]	50	100
M_y	[Nm]	180 (270)	250 (300)
M_z	[Nm]	100 (130)	250 (300)
M_{Amax}	[Nm]	On request	On request

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

Technical data

Designation		B 80-SRS-RL	B 80-SSS-RL
Max. travel speed	[m/s]	0.25	0.25
Repeat accuracy	[mm]	**± 0.03**	**± 0.03**
Max. acceleration	[m/s²]	20	20
Idle torque	[Nm]	0.6	0.8
Maximum stroke	[mm]	2390 per slide	2390 per slide
Max. total length	[mm]	5400	5400
Moment of inertia	[kgm²]	0.000085	0.000085
Drive element		**Ball screw spindle drive**	**Ball screw spindle drive**
Max. spindle speed	[rpm]	3000	3000
Diameter	[mm]	20	20
Pitch	[mm]	5 right/left	5 right/left
Drive element		**Trapezoidal threaded drive**	**Trapezoidal threaded drive**
Max. spindle speed	[rpm]	1500	1500
Diameter	[mm]	20	20
Pitch	[mm]	4 right/left	4 right/left
Weights			
Basic without travel	[kg]	5.4	6.2
Travel per 100 mm	[kg]	0.7	1.1
Slide plate 210 mm	[kg]	2.2	1.9
Slide plate 270 mm	[kg]	2.8	2.4

Main views

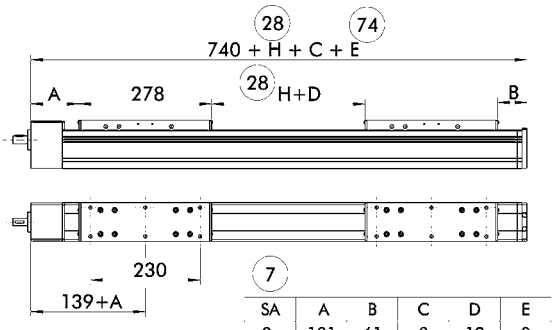


7

SA	A	B	C	D	E
0x	101	61	0	12	0
4x	126	86	100	62	20
8x	151	111	200	112	40

(2) Assembly connection
(6) Drive connection
(7) Number of spindle supports
(8) Feather key DIN 6885
(27) Mounting groove for T-nuts
(28) Total stroke = 2 x stroke per slide
(72) Bolt pitch circle
(74) E for spindle supports with insulated noise emissions

Long slide

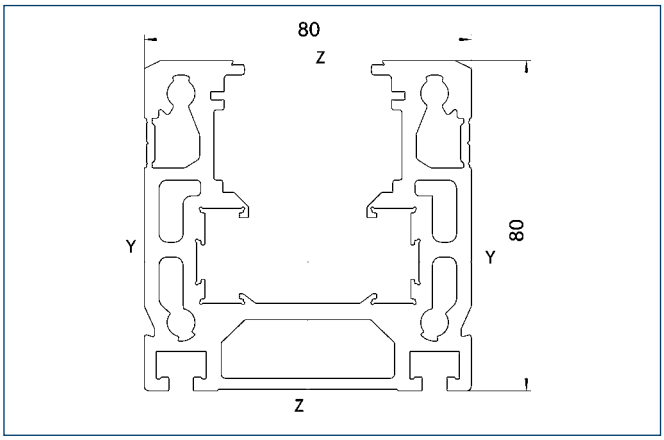


7

SA	A	B	C	D	E
0x	101	61	0	12	0
4x	126	86	100	62	20
8x	151	111	200	112	40

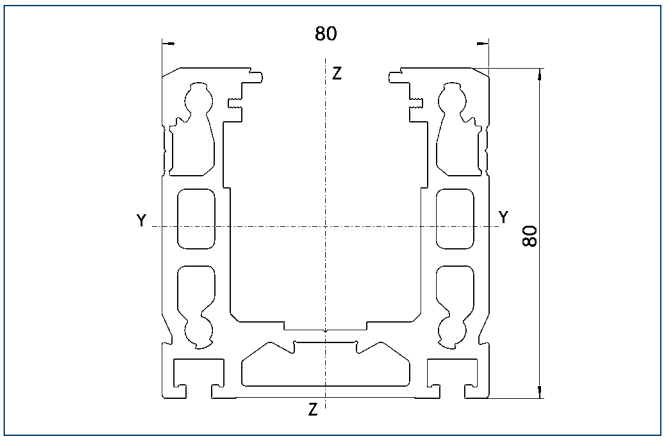
(7) Number of spindle supports
(28) Total stroke = 2 x stroke per slide
(74) E for spindle supports with insulated noise emissions

Profile SRS



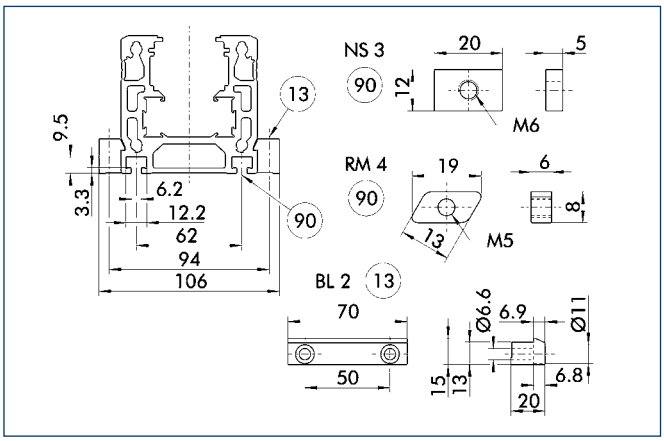
Specific mass	[kg/m]	5.64
Planar dimension	[mm²]	2090
Planar moment of inertia I_y	[mm⁴]	1294343
Planar moment of inertia I_z	[mm⁴]	1732340
Load torque W_y	[mm³]	30263
Load torque W_z	[mm³]	43258

Profile SSS



Specific mass	[kg/m]	5.6
Planar dimension	[mm²]	2057
Planar moment of inertia I_y	[mm⁴]	1372019
Planar moment of inertia I_z	[mm⁴]	1677956
Load torque W_y	[mm³]	30572
Load torque W_z	[mm³]	41846

Mounting

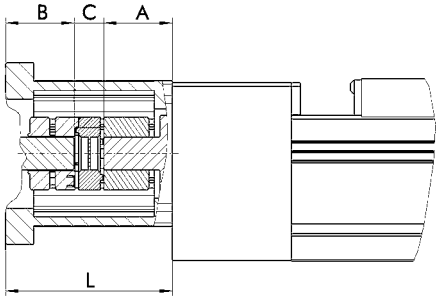


(13) Mounting strip (90) Base side T-nut

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

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

Motor flange schematic diagram



L = A + B + C

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

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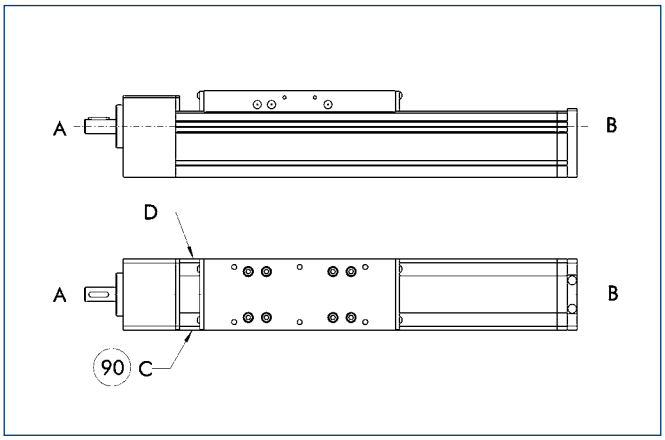
Limit switch position



90 Limit switch standard position

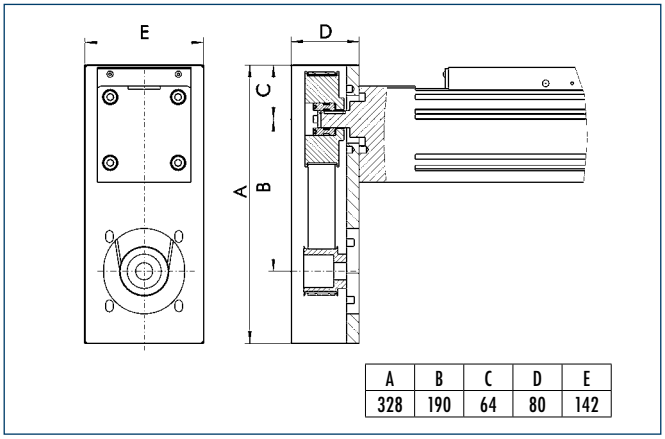
Two EO2 switches are used as limit switches and an RS2 as the reference switch as standard.

ⓘ 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

Angle gear schematic diagram

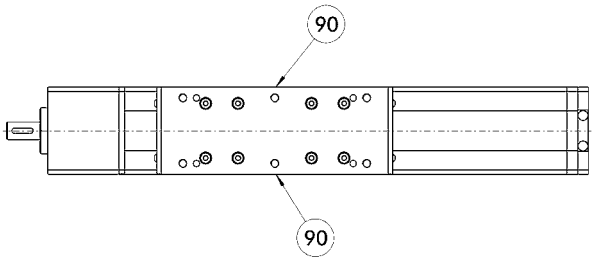


A	B	C	D	E
328	190	64	80	142

Possible transmission ratios: i = 1 : 1, i = 2 : 1, i = 3 : 1
Caution: Dimension C can change at i ≠ 1:1 or with smooth motor shafts (without feather key).
Even in tight conditions, different drive solutions can be attached. SCHUNK can provide you with the right angle gear for your drive.

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

Lubrication connections



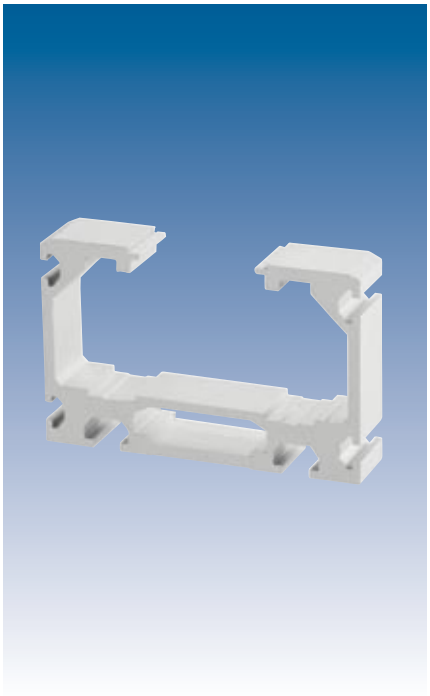
90 Standard lubrication connection

Standard connection
Lubrication nipple M8x1

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

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

B 100D-SSS

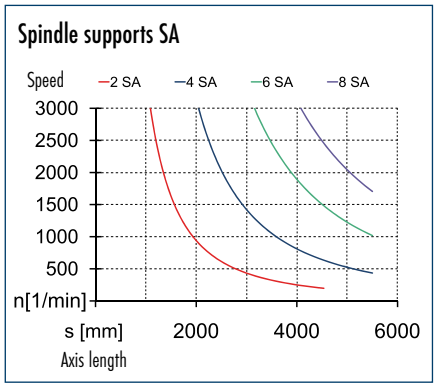


Advantages of profiled rail guide

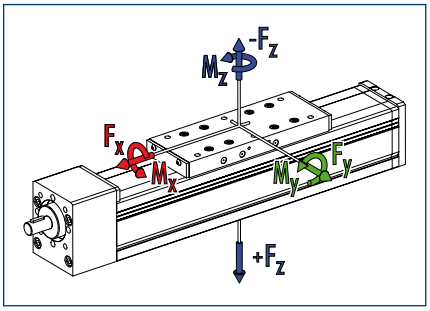
High load bearing capacity

Long lifetime

High precision



Loads and load torques



Load		Dynamic
F_x **	[N]	4000
F_y	[N]	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]	4.5 (p=5)
		14.0 (p=20)
		33.1 (p=50)

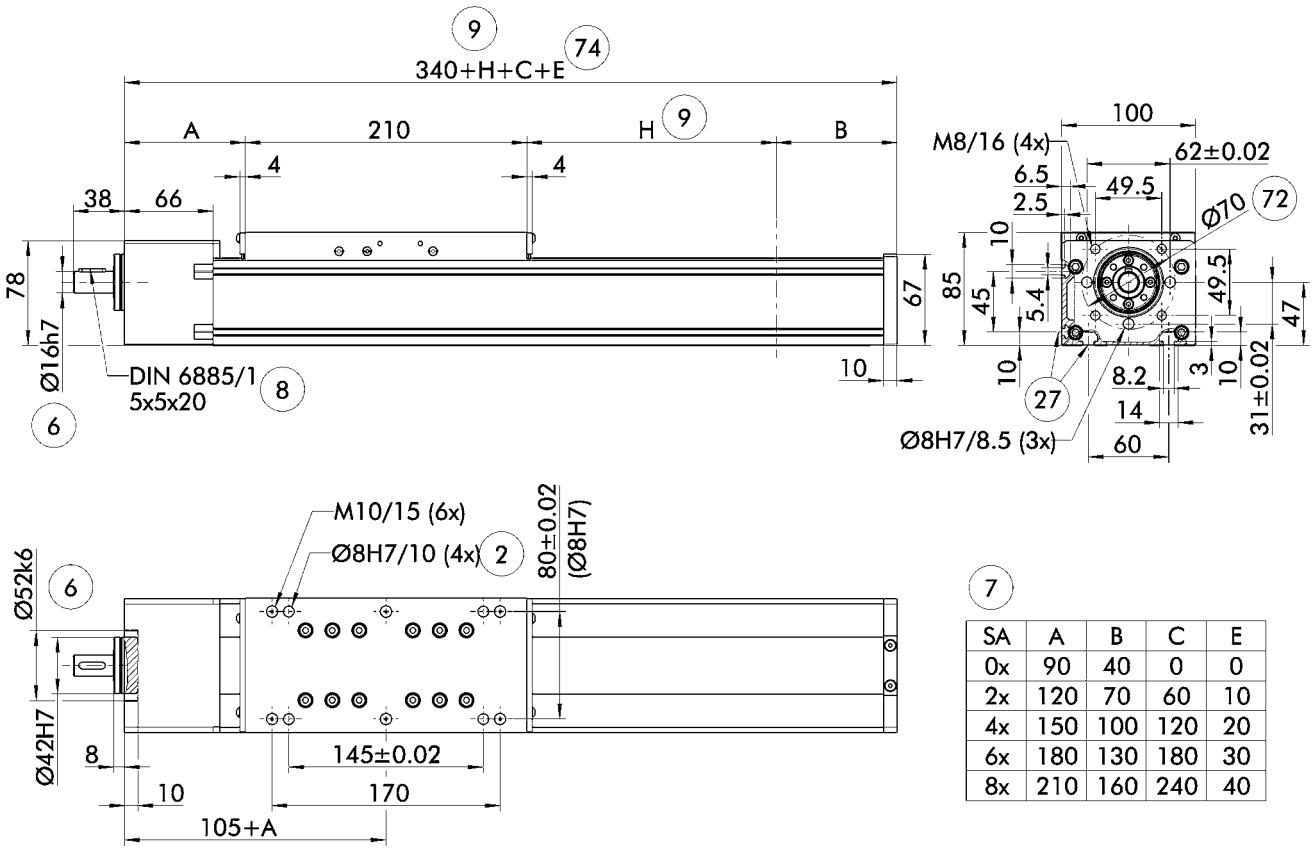
** Depends on speed and pitch n_{max}
KGT = 3000 rpm; TGT = 1500 rpm

ⓘ Values in brackets relate to the long slide.

Technical data

Designation		B 100D-SSS
Max. travel speed	[m/s]	2.5
Repeat accuracy	[mm]	**± 0.03**
Max. acceleration	[m/s²]	20
Idle torque	[Nm]	1.3
Maximum stroke	[mm]	5060
Max. total length	[mm]	5400
Moment of inertia	[kgm²]	0.000085
Drive element		**Ball screw spindle drive**
Max. spindle speed	[rpm]	3000
Diameter	[mm]	20
Pitch	[mm]	5 / 20 / 50
Drive element		**Trapezoidal threaded drive**
Max. spindle speed	[rpm]	1500
Diameter	[mm]	20
Pitch	[mm]	4 / 8
Weights		
Basic without travel	[kg]	6.2
Travel per 100 mm	[kg]	0.75
Slide plate 210 mm	[kg]	3.4
Slide plate 270 mm	[kg]	4.0

Main views

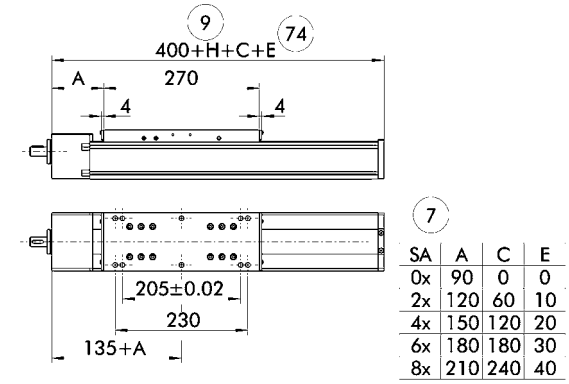


7

SA	A	B	C	E
0x	90	40	0	0
2x	120	70	60	10
4x	150	100	120	20
6x	180	130	180	30
8x	210	160	240	40

(2) Assembly connection
(6) Drive connection
(7) Number of spindle supports
(8) Feather key DIN 6885
(9) Useful stroke
(27) Mounting groove for T-nuts
(72) Bolt pitch circle
(74) Additional E for spindle supports with insulated noise emissions

Long slide



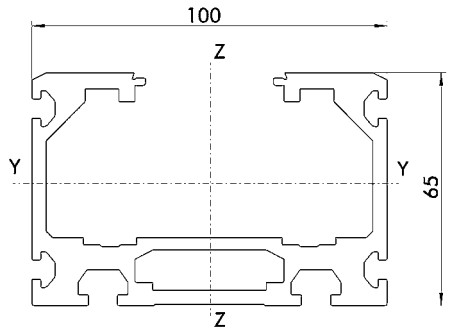
7

SA	A	C	E
0x	90	0	0
2x	120	60	10
4x	150	120	20
6x	180	180	30
8x	210	240	40

(7) Number of spindle supports
(9) Useful stroke
(74) E for spindle supports with insulated noise emissions

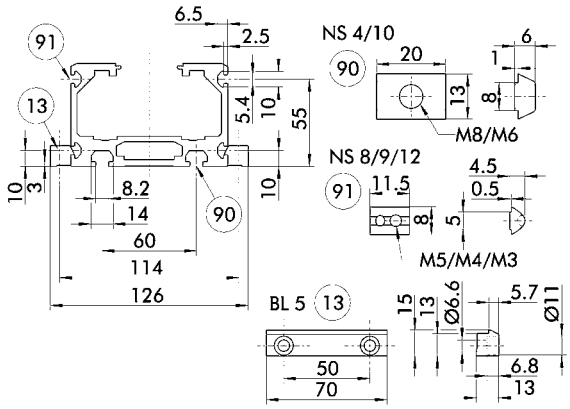
B 100D-SSS

Profile SSS



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

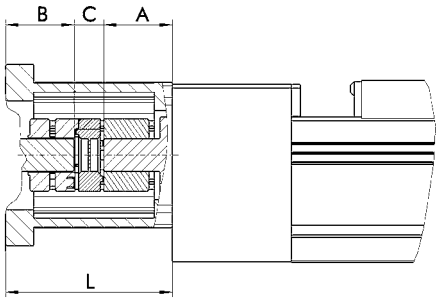


(13) Mounting strip
(90) T-nut on base side
(91) Side T-nut

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



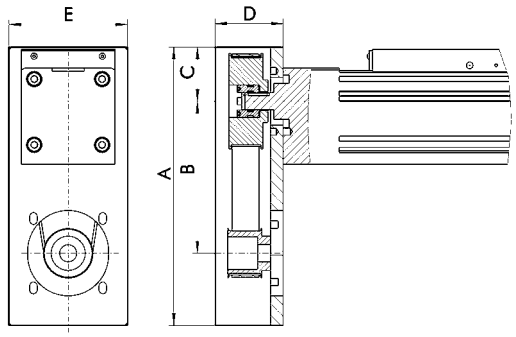
L = A + B + C

	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.

Angle gear schematic diagram



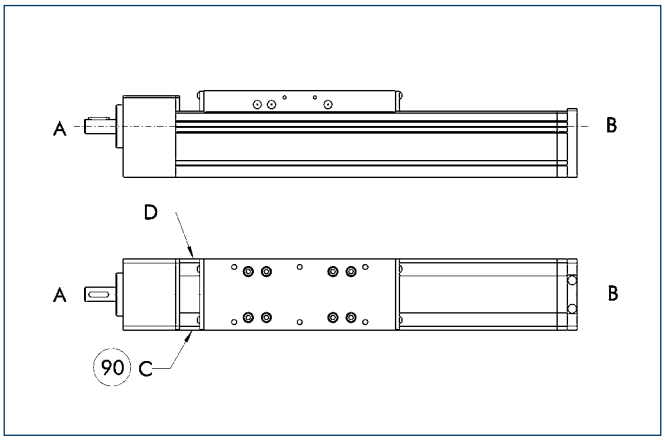
A	B	C	D	E
238	120	46	52	102

Possible transmission ratios: i = 1 : 1, i = 2 : 1, i = 3 : 1
Caution: Dimension C can change at i ≠ 1:1 or with smooth motor shafts (without feather key).
Even in tight conditions, different drive solutions can be attached. SCHUNK can provide you with the right angle gear for your drive.

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

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

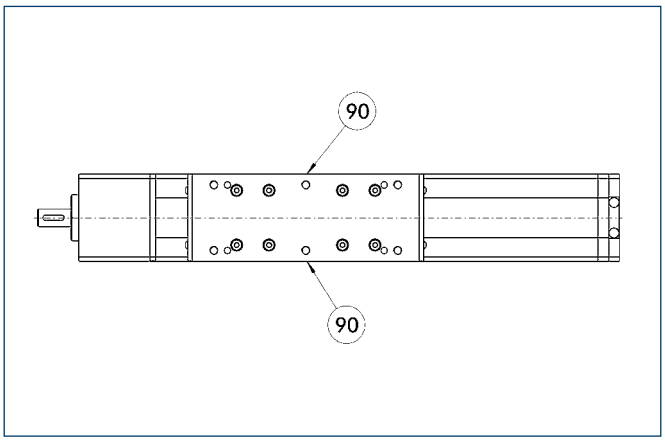
Two EO2 switches are used as limit switches and an RS2 as the reference switch as standard.

ⓘ 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



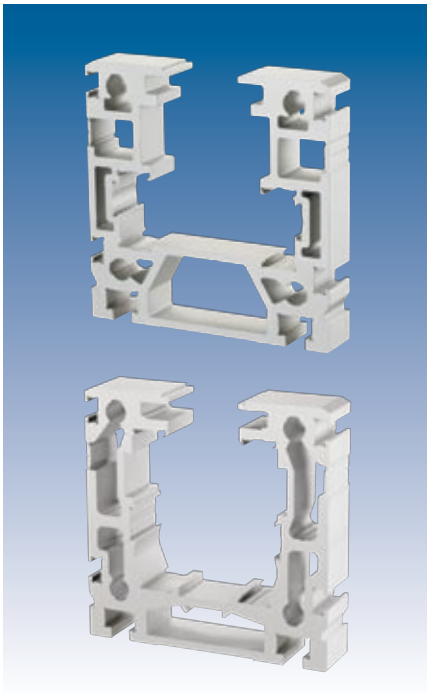
90 Standard lubrication connection

Standard connection
Lubrication nipple M8x1

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

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-SRS/-SSS



Advantages of roller guide

High maximum moments
due to optimum force transmission to the profile

Long stroke lengths
can be achieved with no problems

Life-time lubricated rollers
for easy maintenance use

Smooth, low-noise running

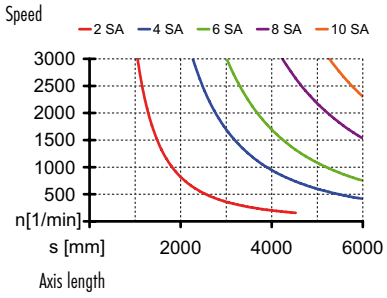
Advantages of profiled rail guide

High load bearing capacity

Long lifetime

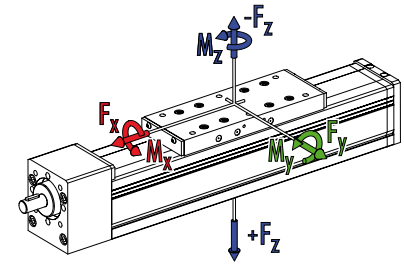
High precision

Spindle supports SA



ⓘ SRS version: Max. 8 SA

Loads and load torques



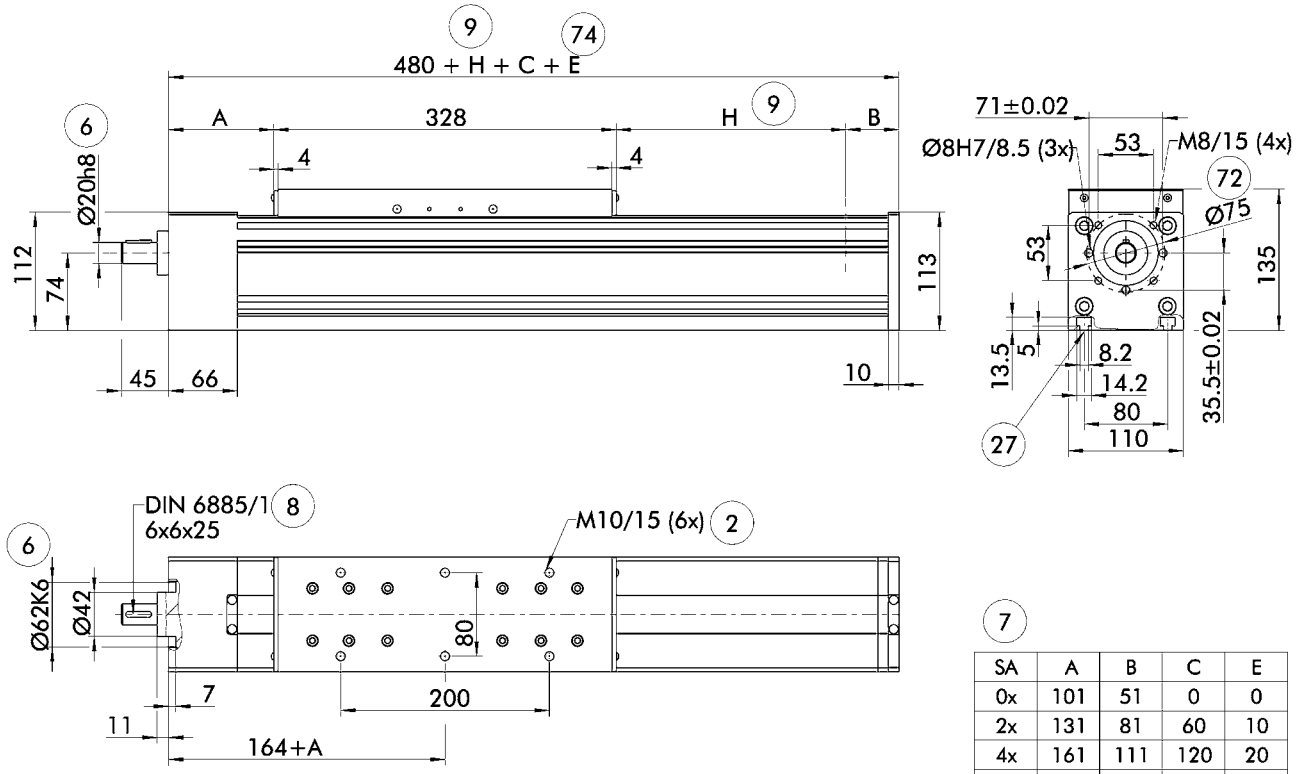
Load		SRS dynamic	SSS dynamic
F_x**	[N]	6000	6000
F_y	[N]	2000	3000
F_z	[N]	5000	8000
$-F_z$	[N]	2500	4000
Load torques		**SRS dynamic**	**SSS dynamic**
M_x	[Nm]	300	400
M_y	[Nm]	600 (800)	800 (1200)
M_z	[Nm]	450 (550)	600 (800)
M_{Amax}	[Nm]	5.8 (p=5)	6.3 (p=5)
		10.5 (p=10)	11.0 (p=10)
		24.9 (p=25)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

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

Technical data

Designation		B 110-SRS	B 110-SSS
Max. travel speed	[m/s]	2.5	2.5
Repeat accuracy	[mm]	**± 0.03**	**± 0.03**
Max. acceleration	[m/s²]	20	20
Idle torque	[Nm]	1.0	1.5
Maximum stroke	[mm]	4920	4920
Max. total length	[mm]	5400	5400
Moment of inertia	[kgm²]	0.000225	0.000225
Drive element		**Ball screw spindle drive**	**Ball screw spindle drive**
Max. spindle speed	[rpm]	3000	3000
Diameter	[mm]	25	25
Pitch	[mm]	5/ 10 / 25 / 50	5/ 10 / 25 / 50
Drive element		**Trapezoidal threaded drive**	**Trapezoidal threaded drive**
Max. spindle speed	[rpm]	1500	1500
Diameter	[mm]	24	24
Pitch	[mm]	5 / 10	5 / 10
Weights			
Basic without travel	[kg]	12.5	13.5
Travel per 100 mm	[kg]	1.4	1.7
Slide plate 320 mm	[kg]	5.8	5.3
Slide plate 500 mm	[kg]	9.1	8.3

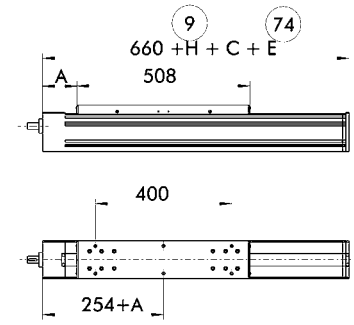
Main views



7				
SA	A	B	C	E
0x	101	51	0	0
2x	131	81	60	10
4x	161	111	120	20
6x	191	141	180	30
8x	221	171	240	40
10x	251	201	300	50

(2) Assembly connection
(6) Drive connection
(7) Number of spindle supports
(8) Feather key DIN 6885
(9) Useful stroke
(27) Mounting groove for T-nuts
(72) Bolt pitch circle
(74) E for spindle supports with insulated noise emissions

Long slide

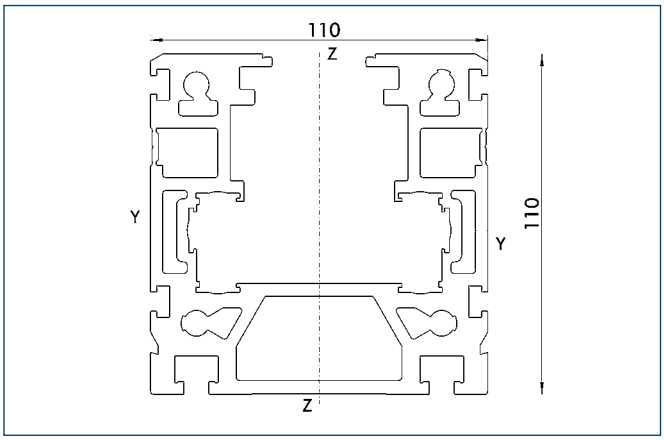


7			
SA	A	C	E
0x	101	0	0
2x	131	60	10
4x	161	120	20
6x	191	180	30
8x	221	240	40
10x	251	300	50

(7) Number of spindle supports
(9) Useful stroke
(74) E for spindle supports with insulated noise emissions

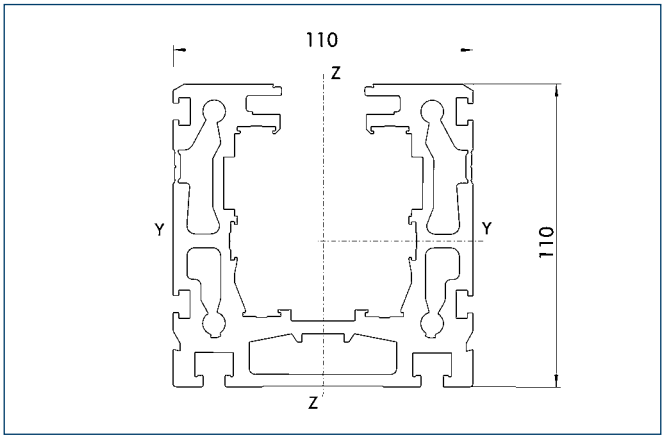
B 110-SRS/-SSS

Profile SRS



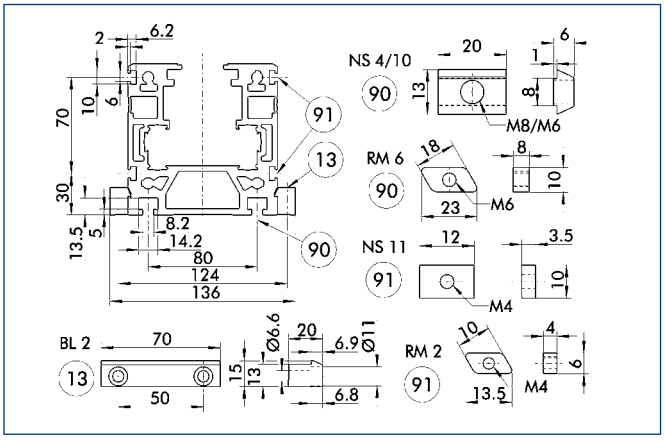
Specific mass	[kg/m]	10.69
Planar dimension	[mm²]	3961
Planar moment of inertia I_y	[mm⁴]	5114812
Planar moment of inertia I_z	[mm⁴]	6177042
Load torque W_y	[mm³]	87307
Load torque W_z	[mm³]	111528

Profile SSS



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

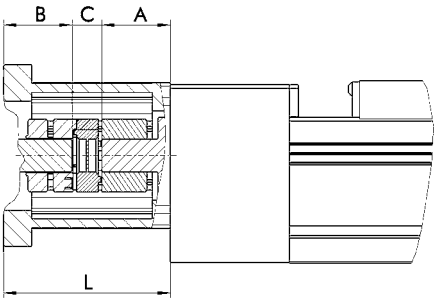


(13) Mounting strip
(91) Side T-nut
(90) T-nut on base side

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	NS11	0331429
T-nut	RM2	0331425
T-nut	RM6	0331427
Mounting strip	BL2	0331401

Motor flange schematic diagram



L = A + B + C

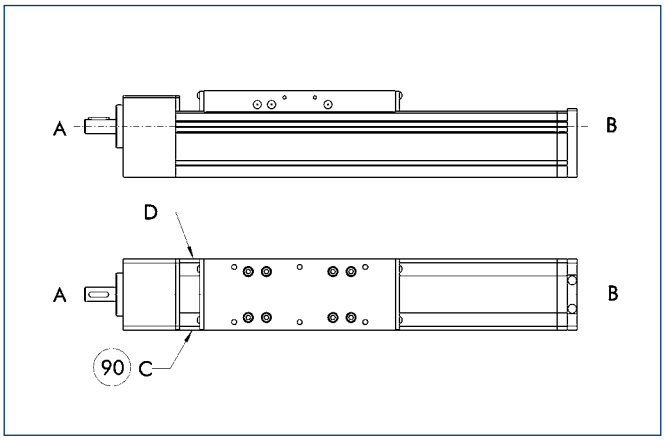
	GS 9	GS 14	GS 19	GS 24	GS 28
C	10	13	16	18	20

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

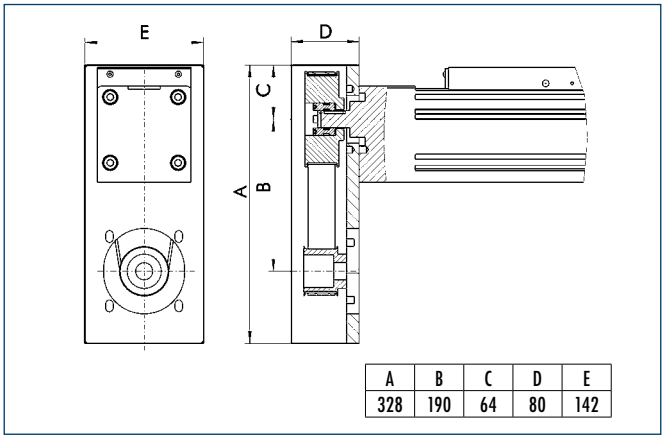
Two EO2 switches are used as limit switches and an RS2 as the reference switch as standard.

ⓘ 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

Angle gear schematic diagram

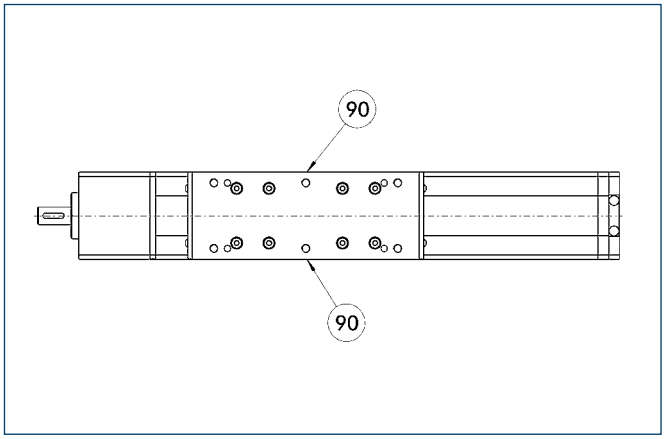


A	B	C	D	E
328	190	64	80	142

Possible transmission ratios: i = 1 : 1, i = 2 : 1, i = 3 : 1
Caution: Dimension C can change at i ≠ 1:1 or with smooth motor shafts (without feather key).
Even in tight conditions, different drive solutions can be attached. SCHUNK can provide you with the right angle gear for your drive.

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

Lubrication connections



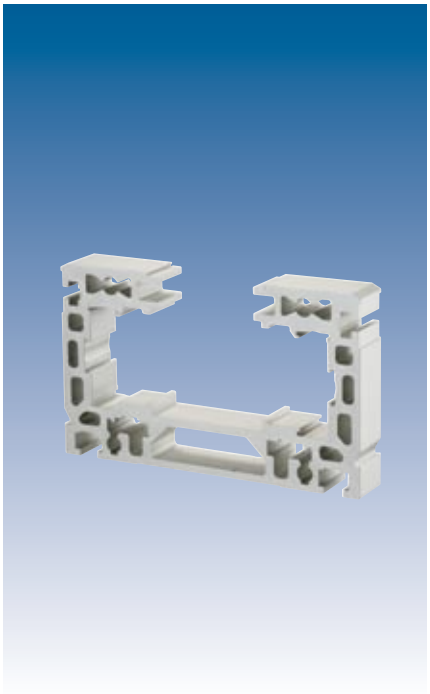
90 Standard lubrication connection

Standard connection
Lubrication nipple M8x1

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

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

B 140-SRS/-SSS



Advantages of roller guide

High maximum moments
due to optimum force transmission to the profile

Long stroke lengths
can be achieved with no problems

Life-time lubricated rollers
for easy maintenance use

Smooth, low-noise running

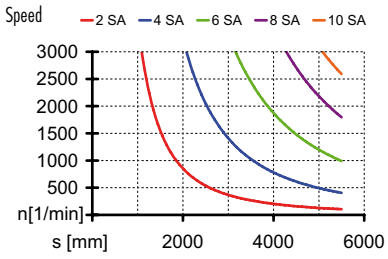
Advantages of profiled rail guide

High load bearing capacity

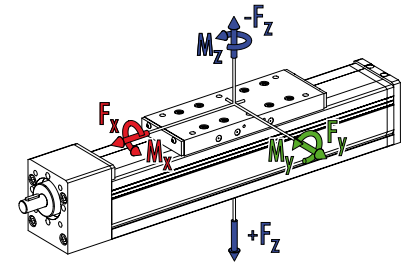
Long lifetime

High precision

Spindle supports SA



Loads and load torques



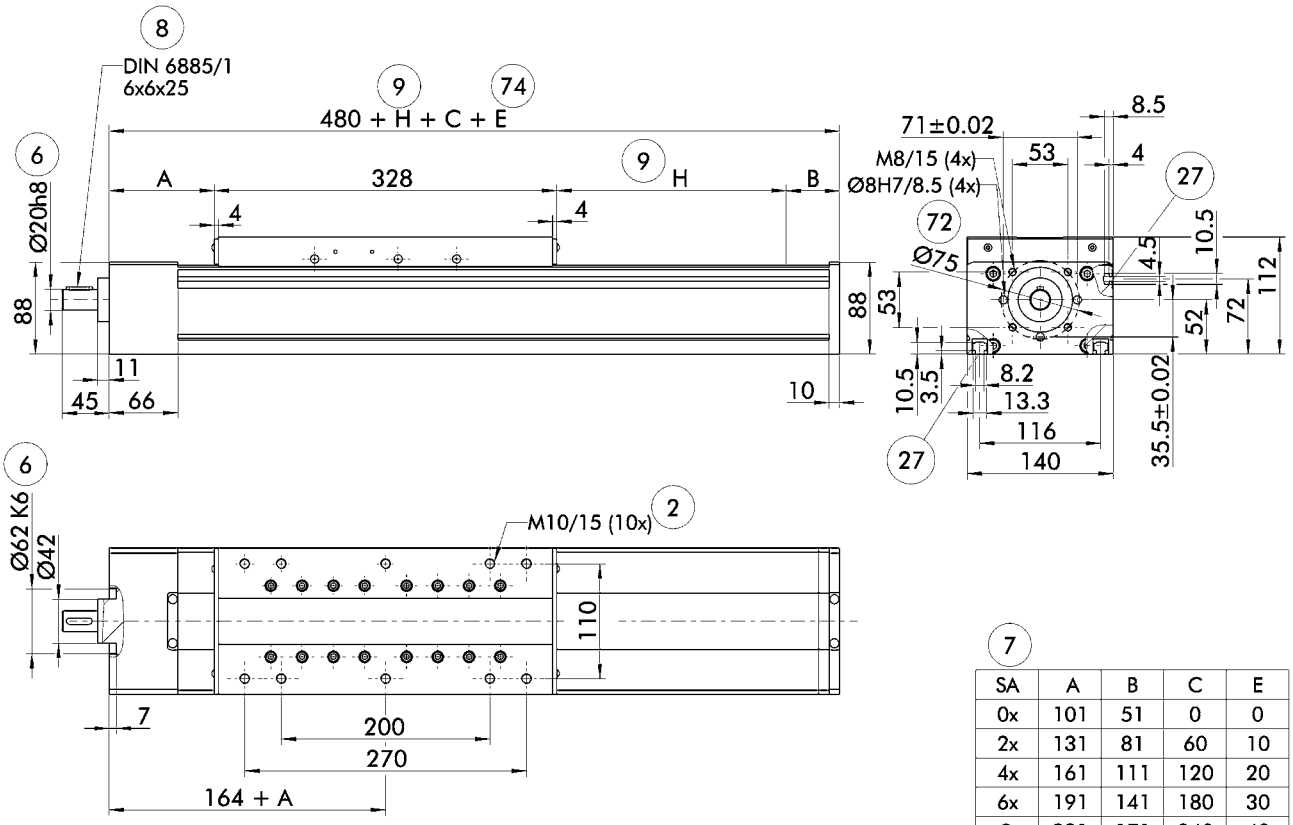
Load		SRS dynamic	SSS dynamic
F_x**	[N]	6000	6000
F_y	[N]	2500	2500
F_z	[N]	5000	6000
$-F_z$	[N]	3000	4000
Load torques		**SRS dynamic**	**SSS dynamic**
M_x	[Nm]	350	500
M_y	[Nm]	700 (900)	1000 (1400)
M_z	[Nm]	700 (900)	1000 (1400)
M_{Amax}	[Nm]	5.8 (p=5)	6.3 (p=5)
		10.5 (p=10)	11.0 (p=10)
		24.9 (p=25)	25.4 (p=25)
		48.7 (p=50)	49.2 (p=50)

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

Technical data

Designation		B 140-SRS	B 140-SSS
Max. travel speed	[m/s]	2.5	2.5
Repeat accuracy	[mm]	**± 0.03**	**± 0.03**
Max. acceleration	[m/s²]	20	20
Idle torque	[Nm]	1.0	1.5
Maximum stroke	[mm]	4920	4920
Max. total length	[mm]	5400	5400
Moment of inertia	[kgm²]	0.000225	0.000225
Drive element		**Ball screw spindle drive**	**Ball screw spindle drive**
Max. spindle speed	[rpm]	3000	3000
Diameter	[mm]	25	25
Pitch	[mm]	5/ 10 / 25 / 50	5/ 10 / 25 / 50
Drive element		**Trapezoidal threaded drive**	**Trapezoidal threaded drive**
Max. spindle speed	[rpm]	1500	1500
Diameter	[mm]	24	24
Pitch	[mm]	5 / 10	5 / 10
Weights			
Basic without travel	[kg]	14.0	15.0
Travel per 100 mm	[kg]	1.4	1.9
Slide plate 320 mm	[kg]	6.2	7.0
Slide plate 500 mm	[kg]	9.7	10.9

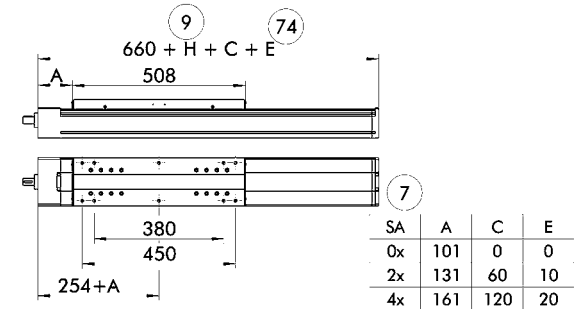
Main views



7				
SA	A	B	C	E
0x	101	51	0	0
2x	131	81	60	10
4x	161	111	120	20
6x	191	141	180	30
8x	221	171	240	40
10x	251	201	300	50
12x	281	231	360	60

(2) Assembly connection
(6) Drive connection
(7) Number of spindle supports
(8) Feather key DIN 6885
(9) Useful stroke
(27) Mounting groove for T-nuts
(72) Bolt pitch circle
(74) E for spindle supports with insulated noise emissions

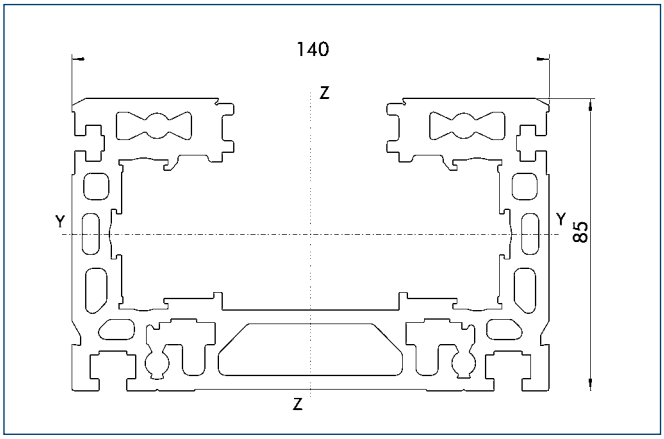
Long slide



7			
SA	A	C	E
0x	101	0	0
2x	131	60	10
4x	161	120	20
6x	191	180	30
8x	221	240	40
10x	251	300	50
12x	281	360	60

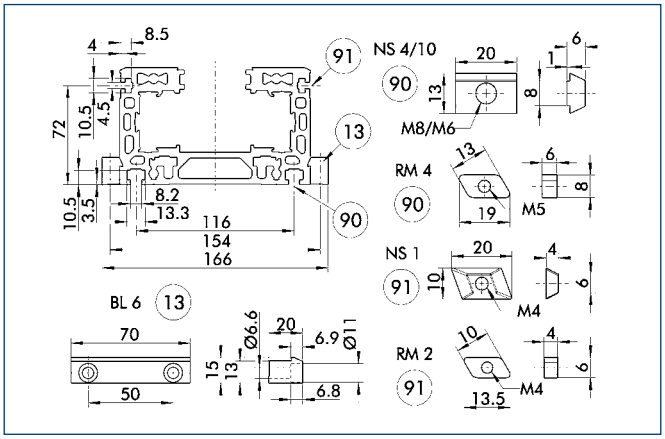
(7) Number of spindle supports
(9) Useful stroke
(74) E for spindle supports with insulated noise emissions

Profile SRS/SSS



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

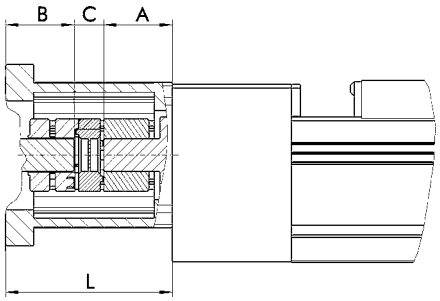


(13) Mounting strip
(90) T-nut on base side
(91) Side T-nut

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



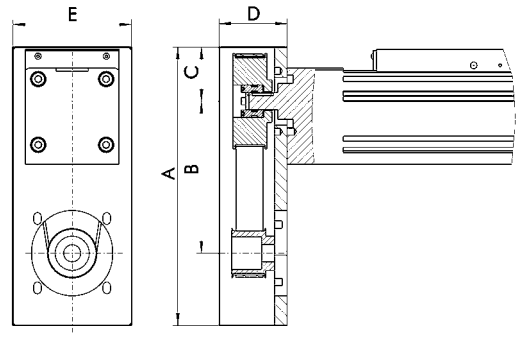
L = A + B + C

	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.

Angle gear schematic diagram



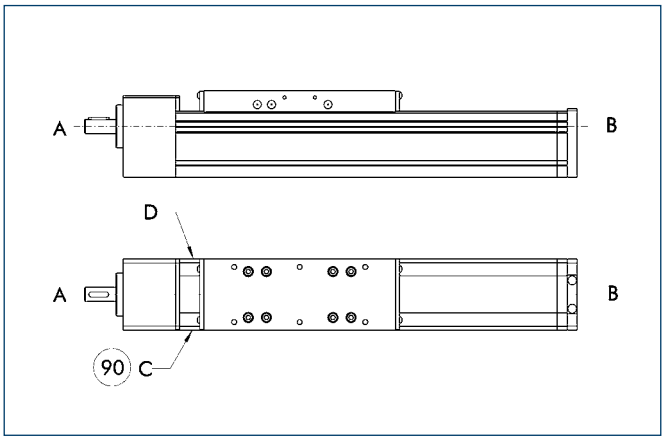
A	B	C	D	E
328	190	64	80	142

Possible transmission ratios: i = 1 : 1, i = 2 : 1, i = 3 : 1
Caution: Dimension C can change at i ≠ 1:1 or with smooth motor shafts (without feather key).
Even in tight conditions, different drive solutions can be attached. SCHUNK can provide you with the right angle gear for your drive.

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

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

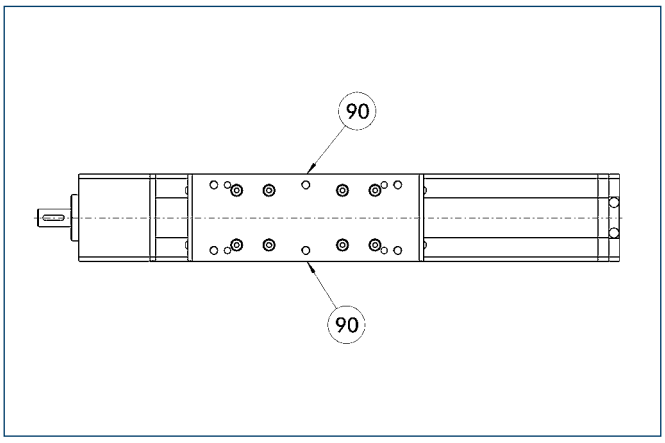
Two EO2 switches are used as limit switches and an RS2 as the reference switch as standard.

ⓘ 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



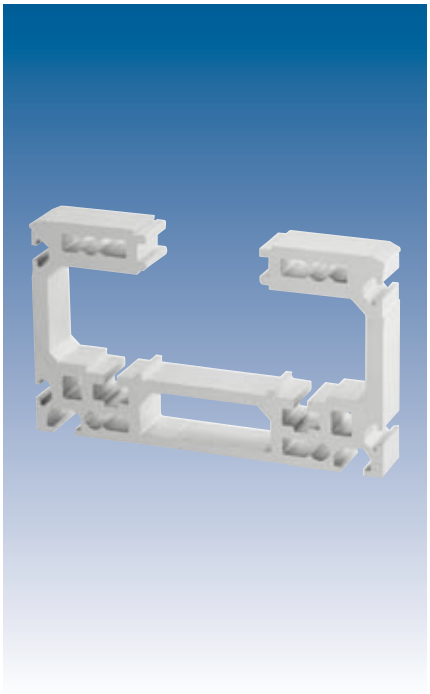
90 Standard lubrication connection

Standard connection
Lubrication nipple M8x1

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

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-SSS

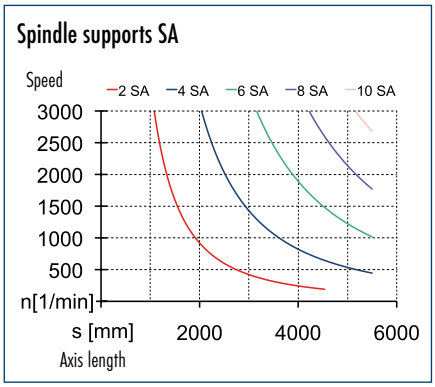


Advantages of profiled rail guide

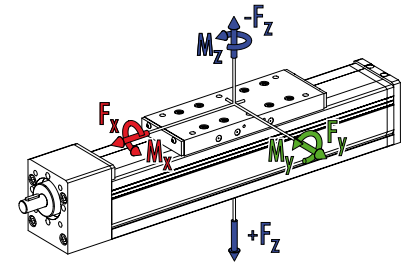
High load bearing capacity

Long lifetime

High precision



Loads and load torques



Load		Dynamic
F_x **	[N]	6000
F_y	[N]	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]	6.3 (p=5)
		11.0 (p=10)
		25.4 (p=25)
		49.2 (p=50)

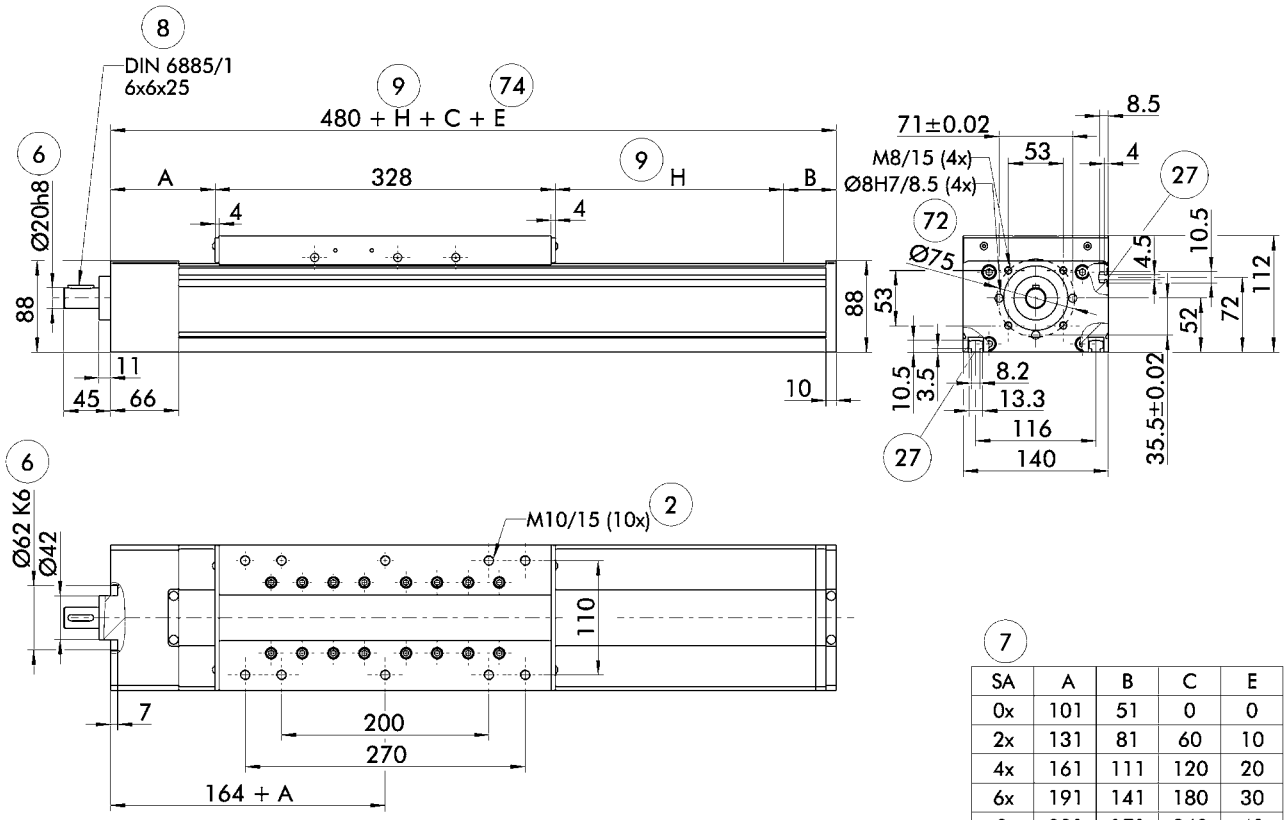
** Depends on speed and pitch n_{max}
KGT = 3000 rpm; TGT = 1500 rpm

ⓘ Values in brackets relate to the long slide.

Technical data

Designation		B 140C-SSS
Max. travel speed	[m/s]	2.5
Repeat accuracy	[mm]	**± 0.03**
Max. acceleration	[m/s²]	20
Idle torque	[Nm]	1.5
Maximum stroke	[mm]	4920
Max. total length	[mm]	5400
Moment of inertia	[kgm²]	0.000225
Drive element		**Ball screw spindle drive**
Max. spindle speed	[rpm]	3000
Diameter	[mm]	25
Pitch	[mm]	5/ 10 / 25 / 50
Drive element		**Trapezoidal threaded drive**
Max. spindle speed	[rpm]	1500
Diameter	[mm]	24
Pitch	[mm]	5 / 10
Weights		
Basic without travel	[kg]	15.0
Travel per 100 mm	[kg]	1.9
Slide plate 320 mm	[kg]	7.0
Slide plate 500 mm	[kg]	10.9

Main views

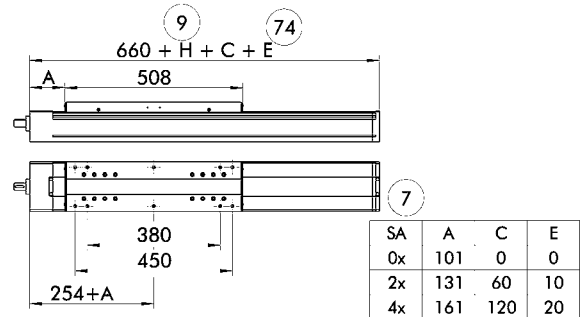


7

SA	A	B	C	E
0x	101	51	0	0
2x	131	81	60	10
4x	161	111	120	20
6x	191	141	180	30
8x	221	171	240	40
10x	251	201	300	50
12x	281	231	360	60

(2) Assembly connection
(6) Drive connection
(7) Number of spindle supports
(8) Feather key DIN 6885
(9) Useful stroke
(27) Mounting groove for T-nuts
(72) Bolt pitch circle
(74) Additional E for spindle supports with insulated noise emissions

Long slide



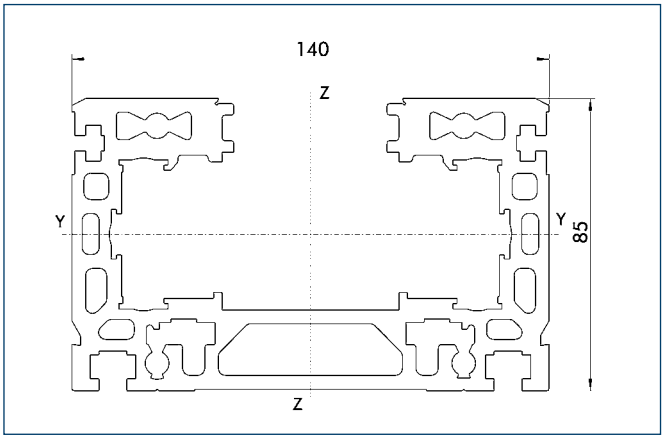
7

SA	A	C	E
0x	101	0	0
2x	131	60	10
4x	161	120	20
6x	191	180	30
8x	221	240	40
10x	251	300	50
12x	281	360	60

(7) Number of spindle supports
(9) Useful stroke
(74) E for spindle supports with insulated noise emissions

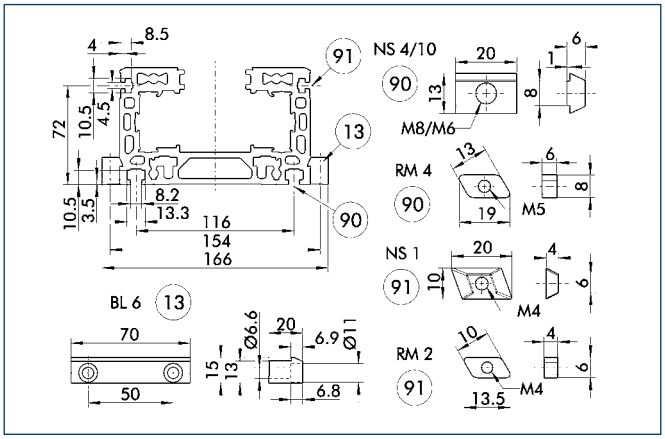
B 140C-SSS

Profile SSS



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

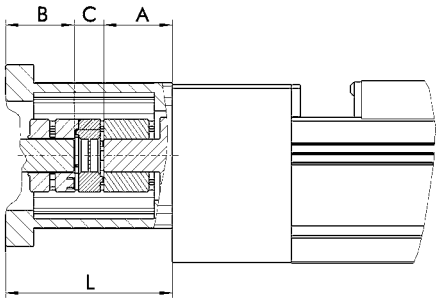


(13) Mounting strip
(90) T-nut on base side
(91) Side T-nut

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

Designation	Order designation	ID no.
T-nut	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



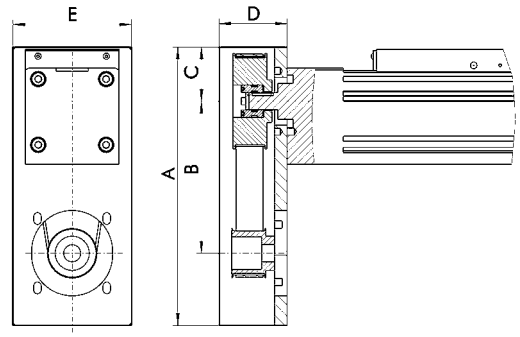
L = A + B + C

	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.

Angle gear schematic diagram



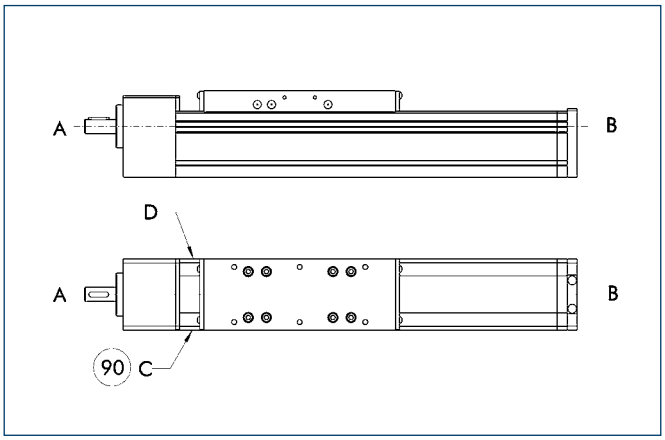
A	B	C	D	E
328	190	64	80	1142

Possible transmission ratios: i = 1 : 1, i = 2 : 1, i = 3 : 1
Caution: Dimension C can change at i ≠ 1:1 or with smooth motor shafts (without feather key).
Even in tight conditions, different drive solutions can be attached. SCHUNK can provide you with the right angle gear for your drive.

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

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

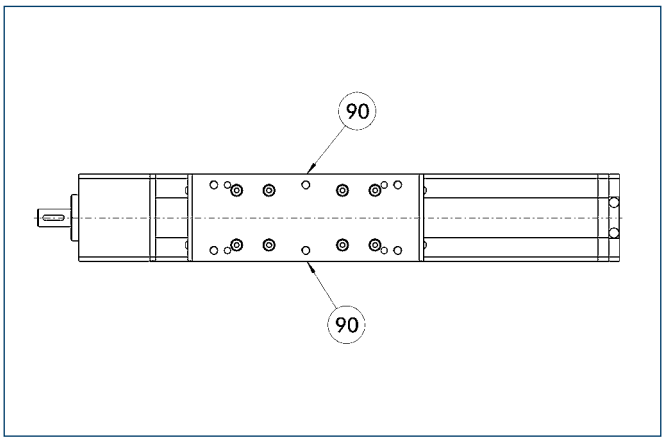
Two EO2 switches are used as limit switches and an RS2 as the reference switch as standard.

ⓘ 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



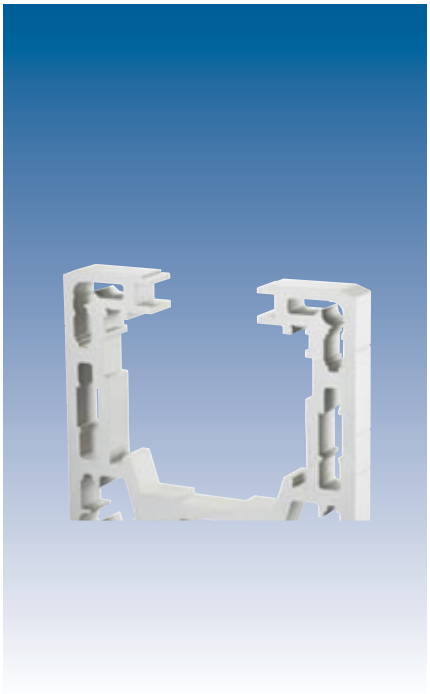
90 Standard lubrication connection

Standard connection
Lubrication nipple M8x1

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

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-SSS



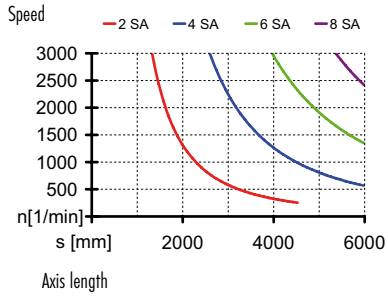
Advantages of profiled rail guide

High load bearing capacity

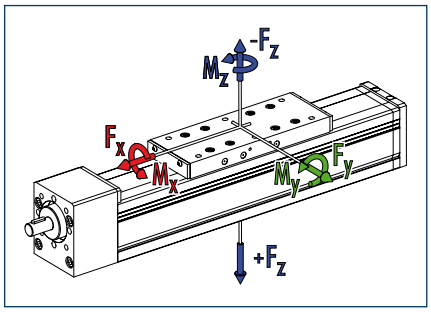
Long lifetime

High precision

Spindle supports SA



Loads and load torques



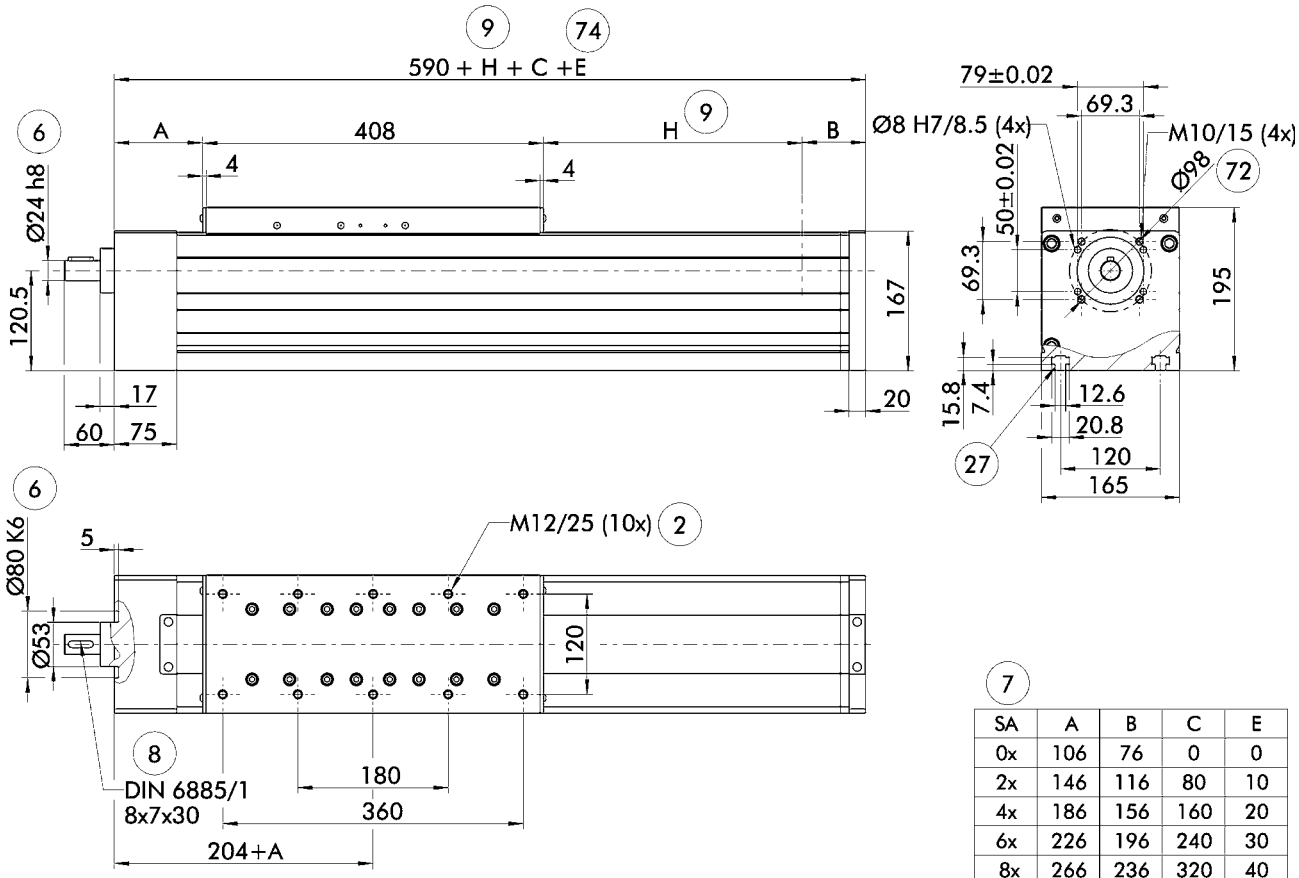
Load		Dynamic
F_x **	[N]	18000
F_y	[N]	5000
F_z	[N]	15000
$-F_z$	[N]	8000
Load torques		**Dynamic**
M_x	[Nm]	700
M_y	[Nm]	1400 (2000)
M_z	[Nm]	1100 (1500)
M_{Amax}	[Nm]	17.3 (p=5)
		31.6 (p=10)
		60.3 (p=20)
		117.6 (p=40)

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

Technical data

Designation		B 165-SSS
Max. travel speed	[m/s]	2.0
Repeat accuracy	[mm]	**± 0.03**
Max. acceleration	[m/s²]	20
Idle torque	[Nm]	3.0
Maximum stroke	[mm]	4910
Max. total length	[mm]	5500
Moment of inertia	[kgm²]	0.00165
Drive element		**Ball screw spindle drive**
Max. spindle speed	[rpm]	3000
Diameter	[mm]	40
Pitch	[mm]	5 / 10 / 20 / 40
Drive element		**Trapezoidal threaded drive**
Max. spindle speed	[rpm]	1500
Diameter	[mm]	40
Pitch	[mm]	7
Weights		
Basic without travel	[kg]	37.9
Travel per 100 mm	[kg]	4.2
Slide plate 400 mm	[kg]	11.5
Slide plate 600 mm	[kg]	17.25

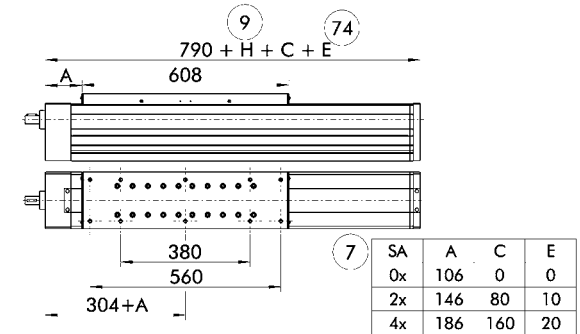
Main views



7	SA	A	B	C	E
	0x	106	76	0	0
	2x	146	116	80	10
	4x	186	156	160	20
	6x	226	196	240	30
	8x	266	236	320	40
	10x	306	276	400	50

(2) Assembly connection
(6) Drive connection
(7) Number of spindle supports
(8) Feather key DIN 6885
(9) Useful stroke
(27) Mounting groove for T-nuts
(72) Bolt pitch circle
(74) E for spindle supports with insulated noise emissions

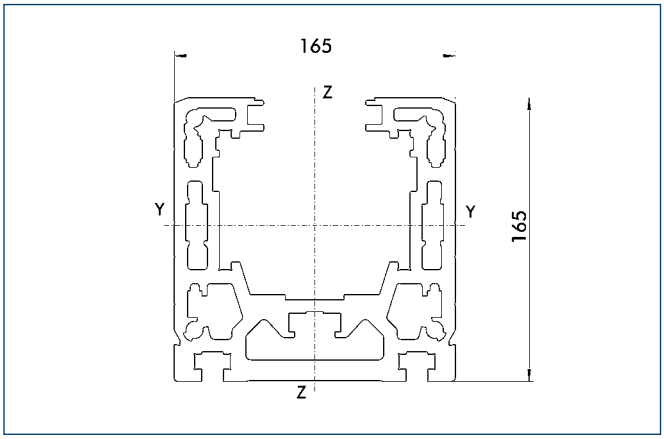
Long slide



7	SA	A	C	E
	0x	106	0	0
	2x	146	80	10
	4x	186	160	20
	6x	226	240	30
	8x	266	320	40
	10x	306	400	50

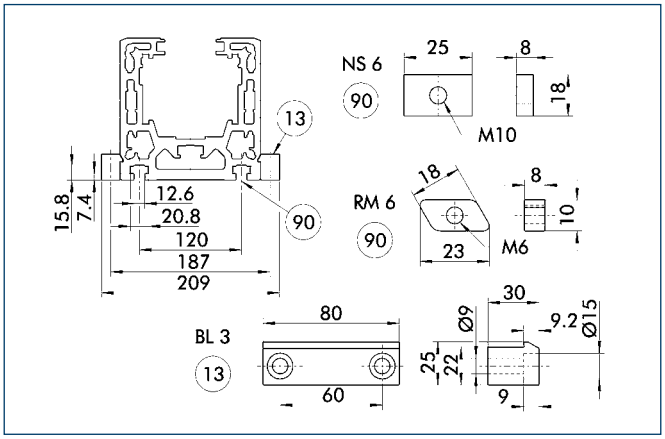
(7) Number of spindle supports
(9) Useful stroke
(74) E for spindle supports with insulated noise emissions

Profile SSS



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

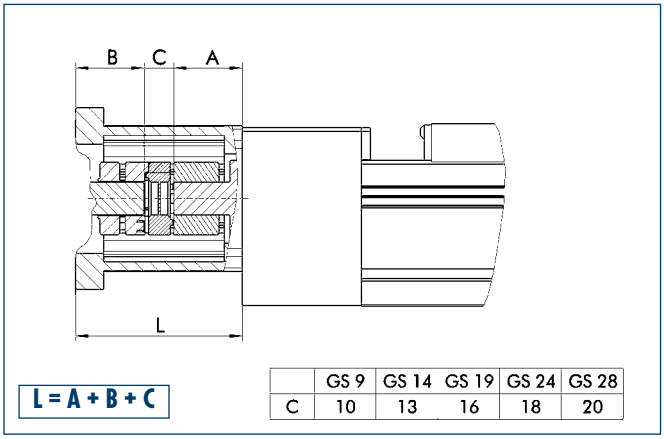


(13) Mounting strip (90) T-nut on base side

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



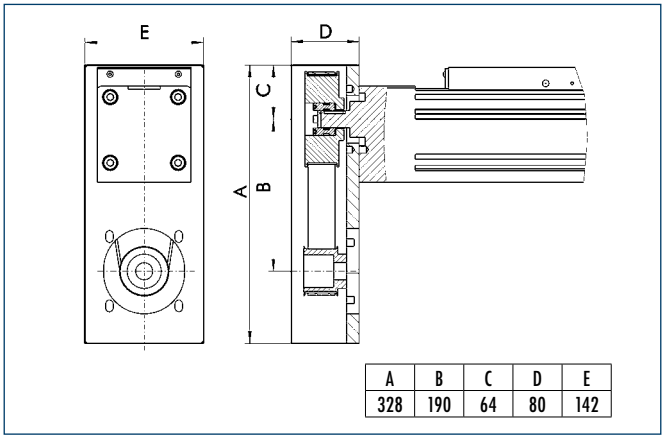
L = A + B + C

	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.

Angle gear schematic diagram



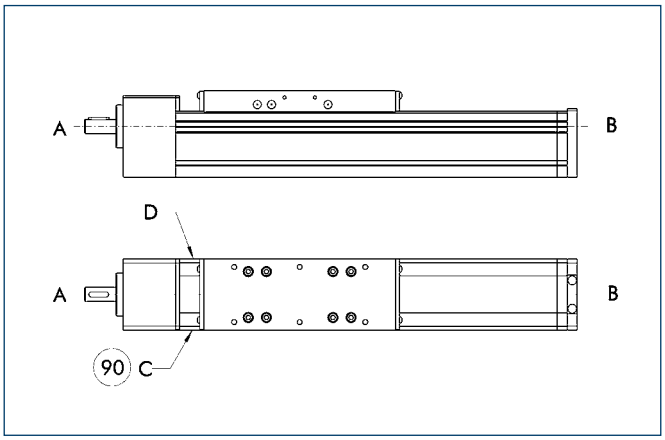
A	B	C	D	E
328	190	64	80	142

Possible transmission ratios: i = 1 : 1, i = 2 : 1, i = 3 : 1
Caution: Dimension C can change at i ≠ 1:1 or with smooth motor shafts (without feather key).
Even in tight conditions, different drive solutions can be attached. SCHUNK can provide you with the right angle gear for your drive.

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

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

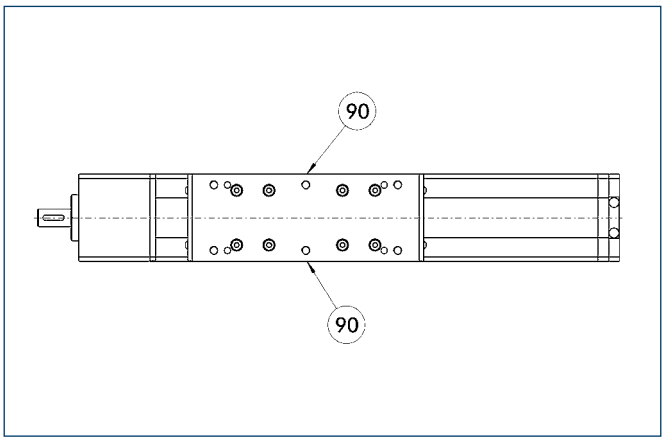
Two EO2 switches are used as limit switches and an RS2 as the reference switch as standard.

ⓘ 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



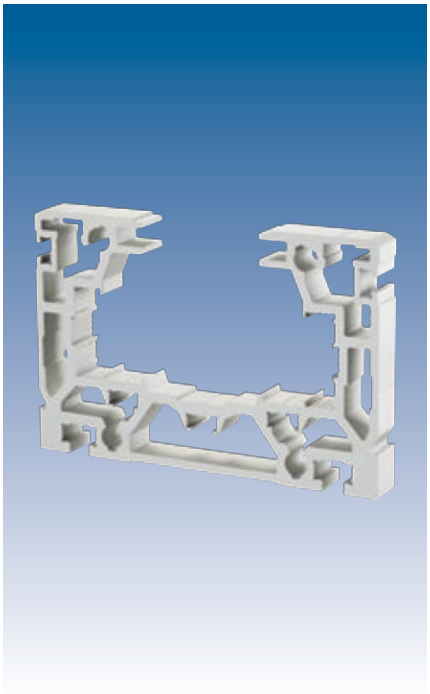
(90) Standard lubrication connection

Standard connection
Lubrication nipple M8x1

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

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-SSS

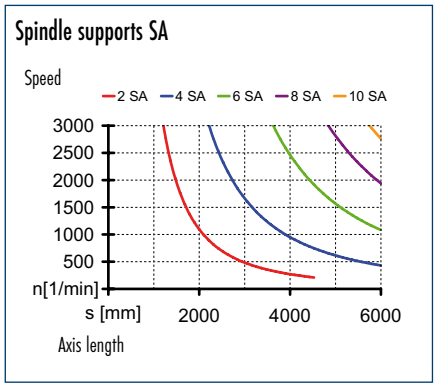


Advantages of profiled rail guide

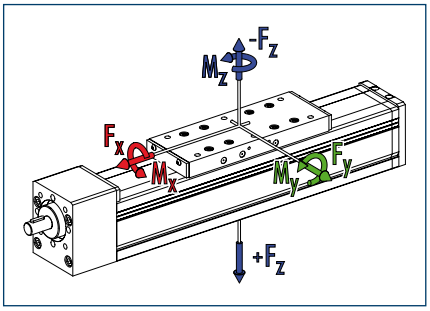
High load bearing capacity

Long lifetime

High precision



Loads and load torques



Load		Dynamic
F_x **	[N]	12000
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]	12.0 (p=5)
		21.6 (p=10)
		40.7 (p=20)
		78.9 (p=40)

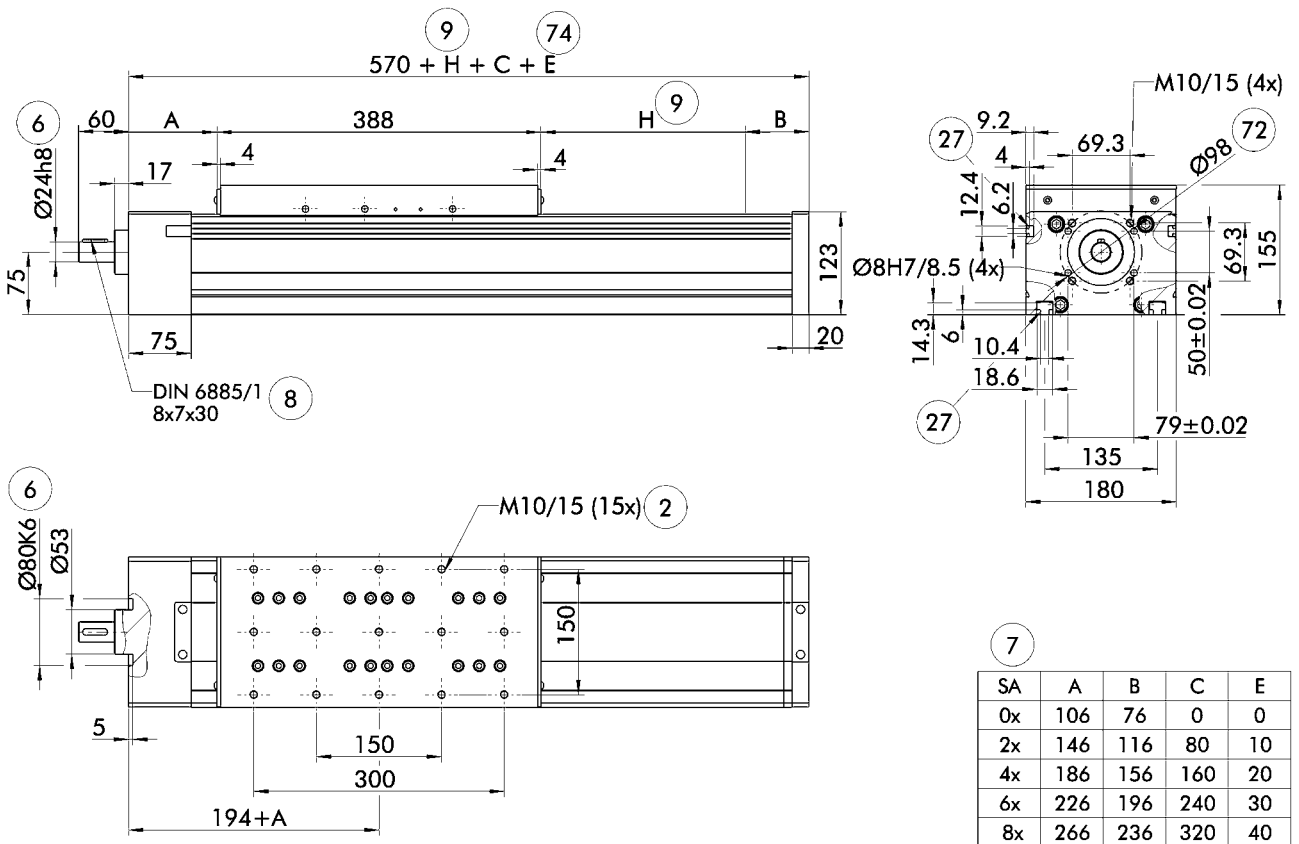
** Depends on speed and pitch n_{max}
KGT = 3000 rpm; TGT = 1500 rpm

ⓘ Values in brackets relate to the long slide.

Technical data

Designation		B 180-SSS
Max. travel speed	[m/s]	2.0
Repeat accuracy	[mm]	**± 0.03**
Max. acceleration	[m/s²]	20
Idle torque	[Nm]	2.5
Maximum stroke	[mm]	4930
Max. total length	[mm]	5500
Moment of inertia	[kgm²]	0.000645
Drive element		**Ball screw spindle drive**
Max. spindle speed	[rpm]	3000
Diameter	[mm]	32
Pitch	[mm]	5 / 10 / 20 / 40
Drive element		**Trapezoidal threaded drive**
Max. spindle speed	[rpm]	1500
Diameter	[mm]	32
Pitch	[mm]	6
Weights		
Basic without travel	[kg]	33.5
Travel per 100 mm	[kg]	2.8
Slide plate 380 mm	[kg]	10.8
Slide plate 600 mm	[kg]	15.5

Main views

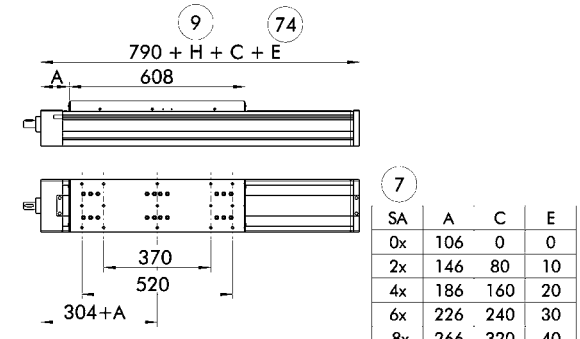


7

SA	A	B	C	E
0x	106	76	0	0
2x	146	116	80	10
4x	186	156	160	20
6x	226	196	240	30
8x	266	236	320	40
10x	306	276	400	50
12x	346	316	480	60

(2) Assembly connection
(6) Drive connection
(7) Number of spindle supports
(8) Feather key DIN 6885
(9) Useful stroke
(27) Mounting groove for T-nuts
(72) Bolt pitch circle
(74) E for spindle supports with insulated noise emissions

Long slide

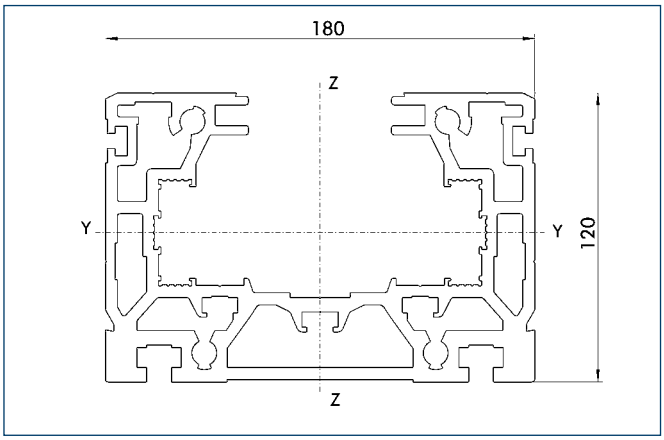


7

SA	A	C	E
0x	106	0	0
2x	146	80	10
4x	186	160	20
6x	226	240	30
8x	266	320	40
10x	306	400	50
12x	346	480	60

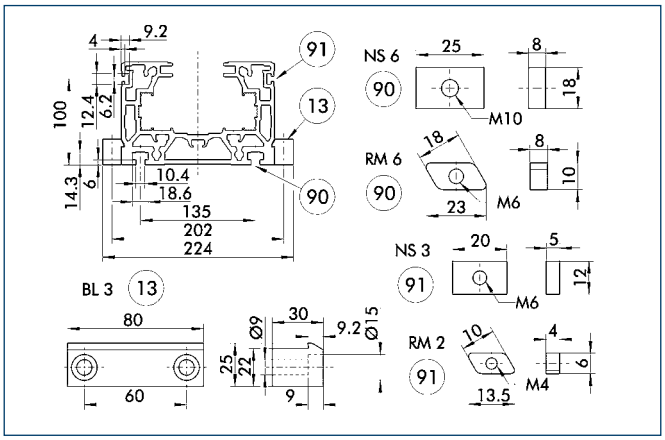
(7) Number of spindle supports
(9) Useful stroke
(74) E for spindle supports with insulated noise emissions

Profile SSS



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

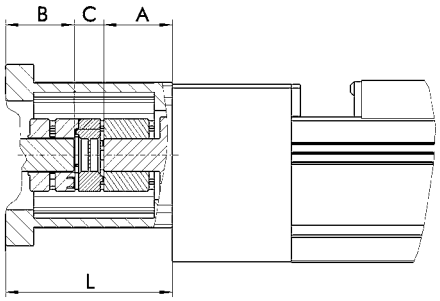


(13) Mounting strip
(90) T-nut on base side
(91) Side T-nut

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



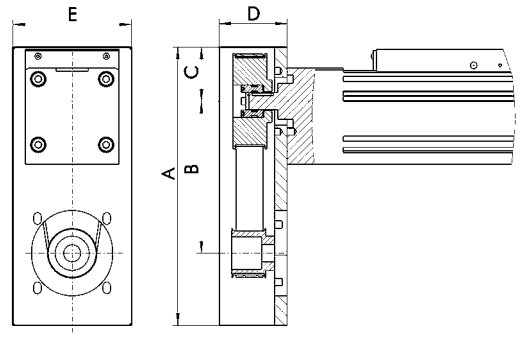
L = A + B + C

	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.

Angle gear schematic diagram



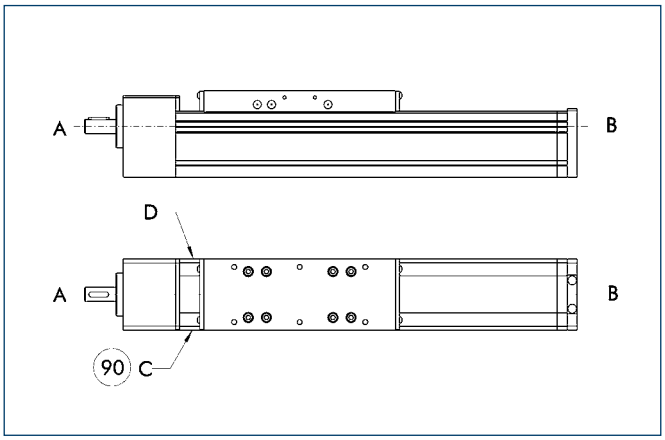
A	B	C	D	E
328	190	64	80	142

Possible transmission ratios: i = 1 : 1, i = 2 : 1, i = 3 : 1
Caution: Dimension C can change at i ≠ 1:1 or with smooth motor shafts (without feather key).
Even in tight conditions, different drive solutions can be attached. SCHUNK can provide you with the right angle gear for your drive.

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

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

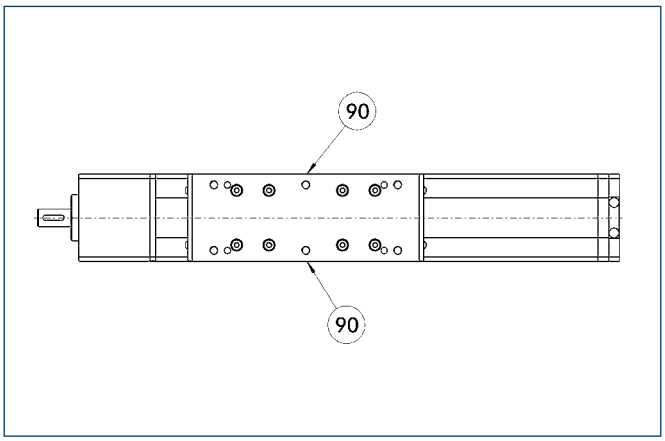
Two EO2 switches are used as limit switches and an RS2 as the reference switch as standard.

ⓘ 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



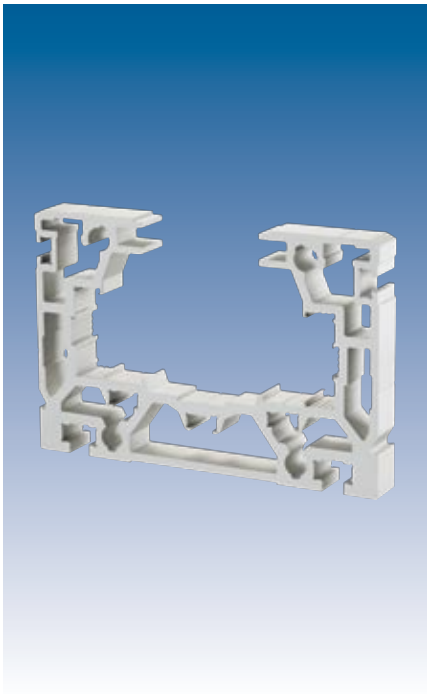
90 Standard lubrication connection

Standard connection
Lubrication nipple M8x1

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

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-SRS/-SSS



Advantages of roller guide

High maximum moments
due to optimum force transmission to the profile

Long stroke lengths
can be achieved with no problems

Life-time lubricated rollers
for easy maintenance use

Smooth, low-noise running

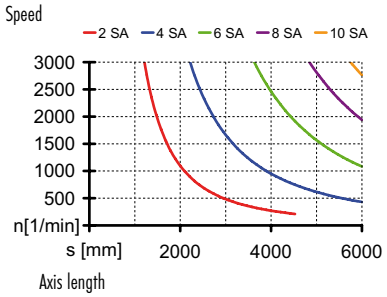
Advantages of profiled rail guide

High load bearing capacity

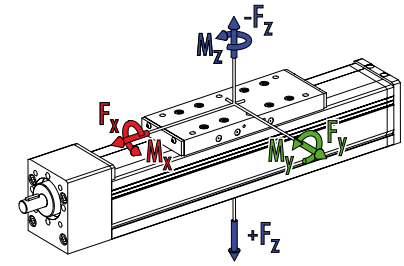
Long lifetime

High precision

Spindle supports SA



Loads and load torques



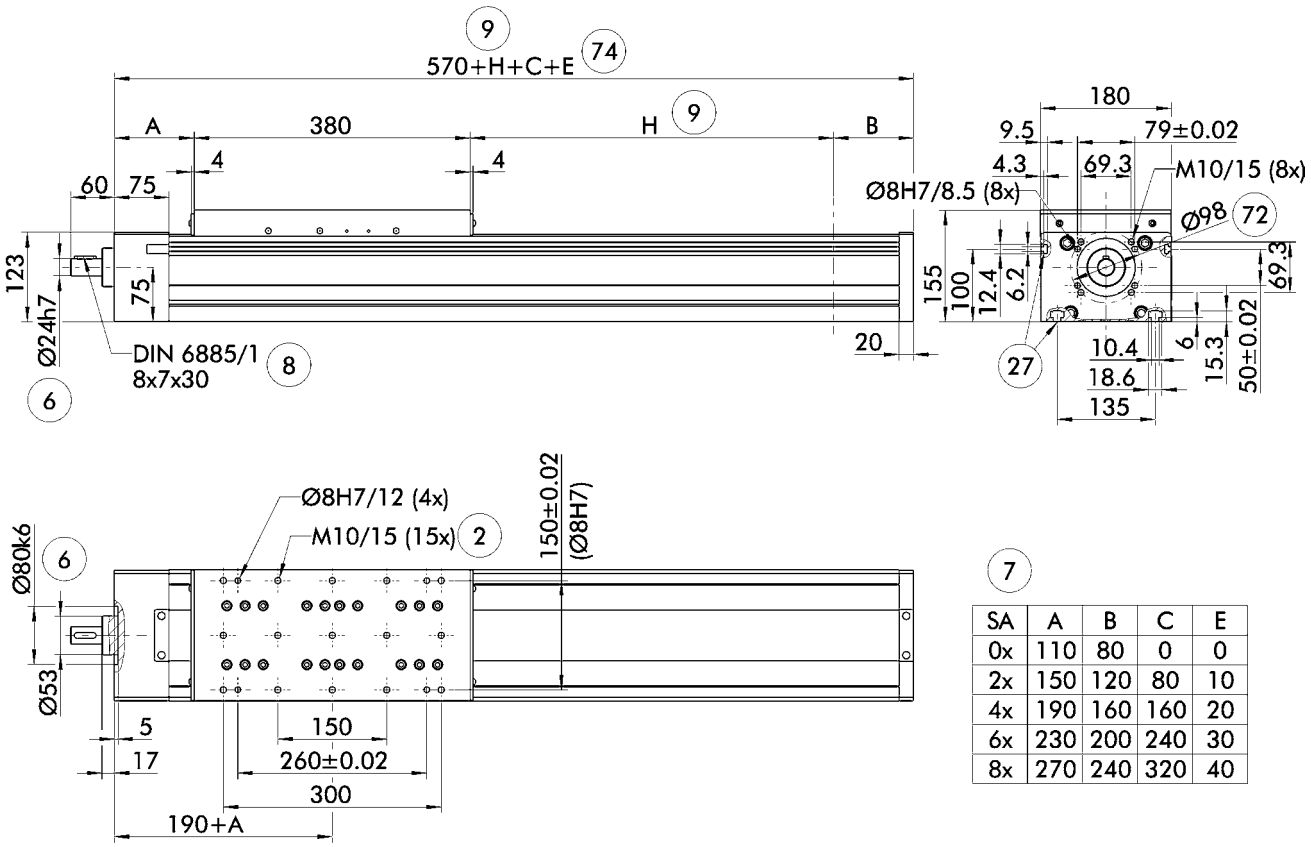
Load		SRS dynamic	SSS dynamic
F_x**	[N]	12000	12000
F_y	[N]	6000	8000
F_z	[N]	10000	15000
$-F_z$	[N]	6000	8000
Load torques		**SRS dynamic**	**SSS dynamic**
M_x	[Nm]	1200	1800
M_y	[Nm]	2000 (3000)	3600 (4800)
M_z	[Nm]	1200 (1800)	1800 (2400)
M_{Amax}	[Nm]	6.6 (p=5)	7.3 (p=5)
		11.3 (p=10)	12.0 (p=10)
		20.9 (p=20)	21.6 (p=20)
		40.0 (p=40)	40.7 (p=40)

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

Technical data

Designation		B 180C-SRS	B 180C-SSS
Max. travel speed	[m/s]	2.0	2.0
Repeat accuracy	[mm]	**± 0.03**	**± 0.03**
Max. acceleration	[m/s²]	20	20
Idle torque	[Nm]	1.8	2.5
Maximum stroke	[mm]	4930	4930
Max. total length	[mm]	5500	5500
Moment of inertia	[kgm²]	0.000645	0.000645
Drive element		**Ball screw spindle drive**	**Ball screw spindle drive**
Max. spindle speed	[rpm]	3000	3000
Diameter	[mm]	32	32
Pitch	[mm]	5 / 10 / 20 / 40	5 / 10 / 20 / 40
Drive element		**Trapezoidal threaded drive**	**Trapezoidal threaded drive**
Max. spindle speed	[rpm]	1500	1500
Diameter	[mm]	32	32
Pitch	[mm]	6	6
Weights			
Basic without travel	[kg]	35.0	37.0
Travel per 100 mm	[kg]	2.5	3.0
Slide plate 380 mm	[kg]	13.2	14.3
Slide plate 600 mm	[kg]	14.3	15.4

Main views

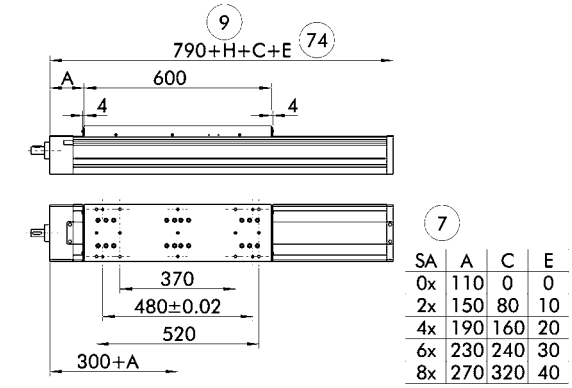


7

SA	A	B	C	E
0x	110	80	0	0
2x	150	120	80	10
4x	190	160	160	20
6x	230	200	240	30
8x	270	240	320	40

(2) Assembly connection
(6) Drive connection
(7) Number of spindle supports
(8) Feather key DIN 6885
(9) Useful stroke
(27) Mounting groove for T-nuts
(72) Bolt pitch circle
(74) E for spindle supports with insulated noise emissions

Long slide



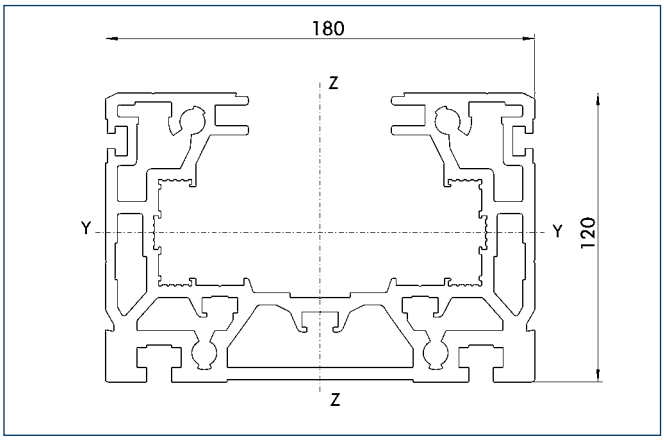
7

SA	A	C	E
0x	110	0	0
2x	150	80	10
4x	190	160	20
6x	230	240	30
8x	270	320	40

(7) Number of spindle supports
(9) Useful stroke
(74) E for spindle supports with insulated noise emissions

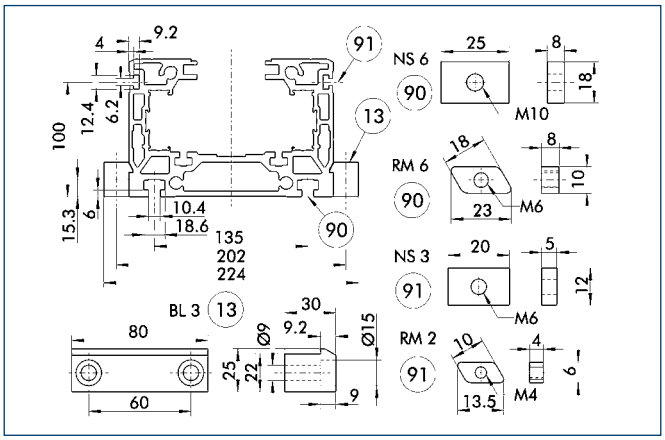
B 180C-SRS/-SSS

Profile SRS/SSS



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

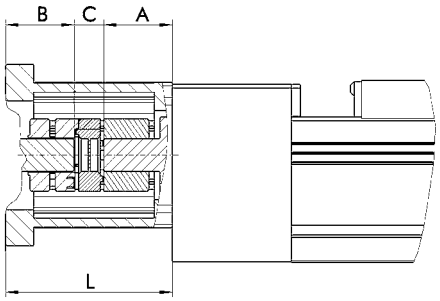


(13) Mounting strip
(90) T-nut on base side
(91) Side T-nut

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



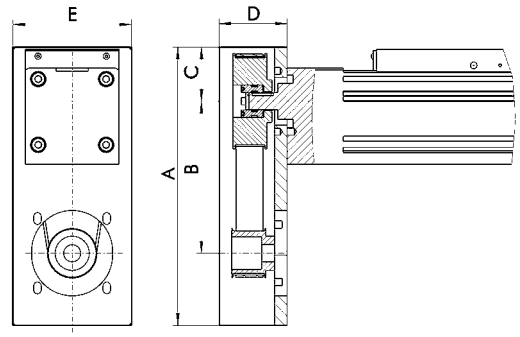
L = A + B + C

	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.

Angle gear schematic diagram



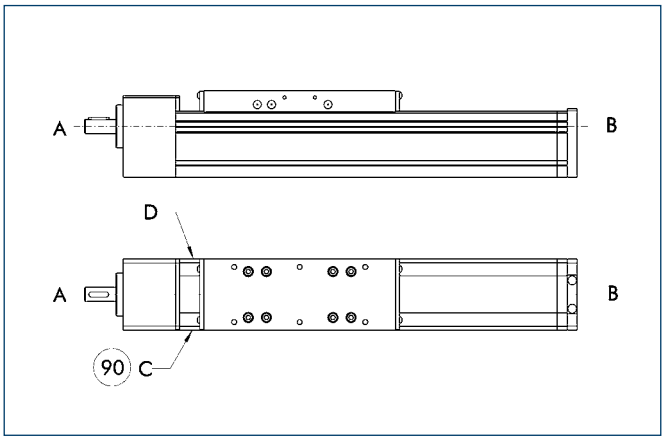
A	B	C	D	E
328	190	64	80	142

Possible transmission ratios: i = 1 : 1, i = 2 : 1, i = 3 : 1
Caution: Dimension C can change at i ≠ 1:1 or with smooth motor shafts (without feather key).
Even in tight conditions, different drive solutions can be attached. SCHUNK can provide you with the right angle gear for your drive.

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

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

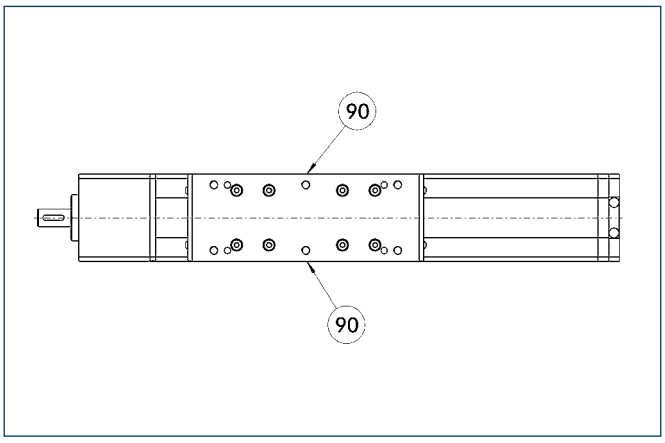
Two EO2 switches are used as limit switches and an RS2 as the reference switch as standard.

ⓘ 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



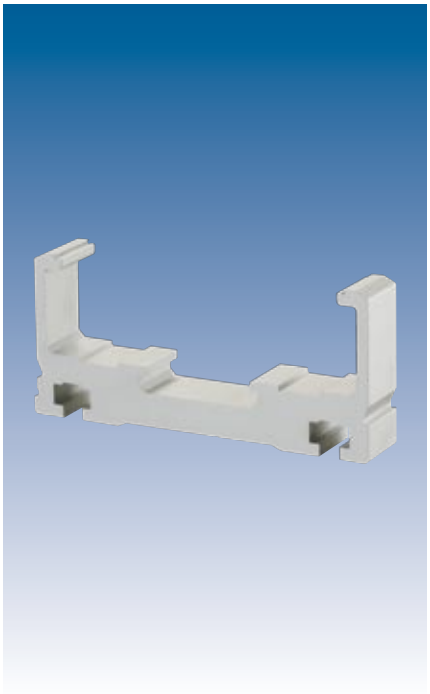
90 Standard lubrication connection

Standard connection
Lubrication nipple M8x1

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

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-SSS

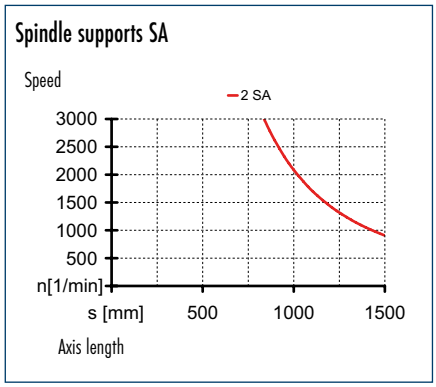


Advantages of profiled rail guide

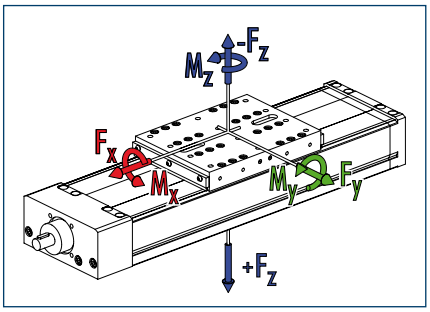
High load bearing capacity

Long lifetime

High precision



Loads and load torques



Load		Dynamic
F_x **	[N]	2000
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]	2.5 (p=5)
		4.1 (p=10)
		7.3 (p=20)

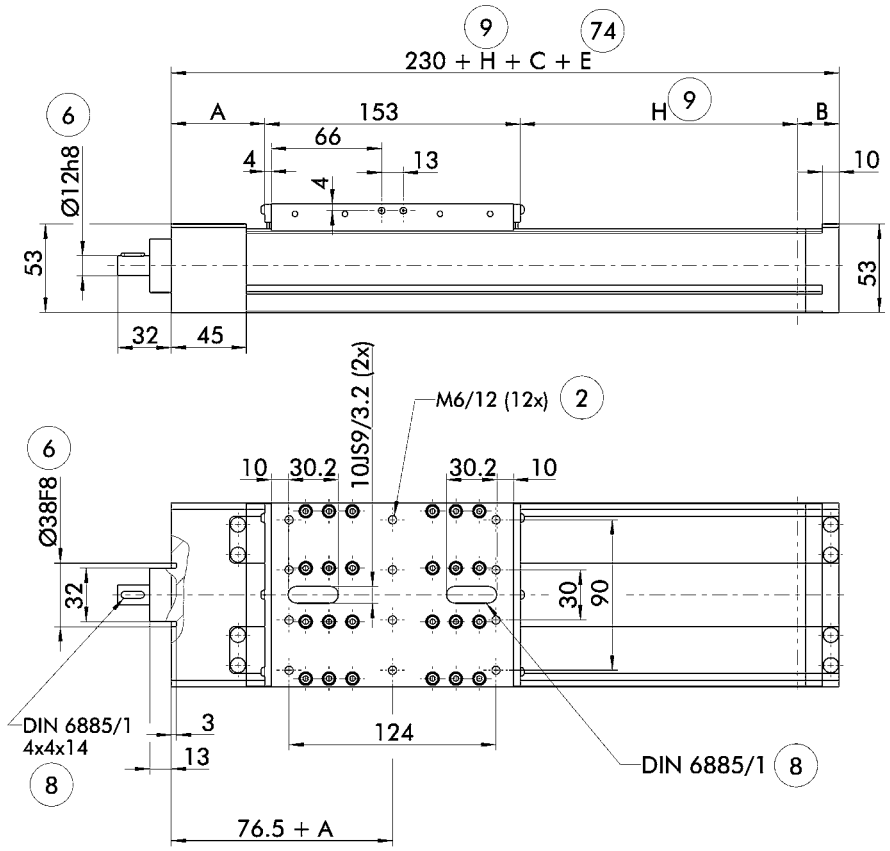
** Depends on speed and pitch n_{max}
KGT = 3000 rpm; TGT = 1500 rpm

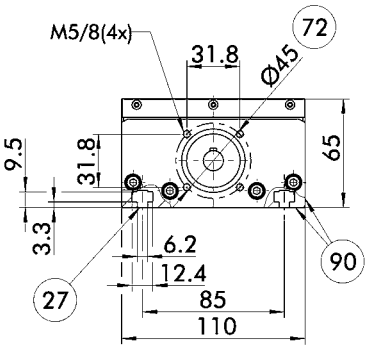
ⓘ Values in brackets relate to the long slide.

Technical data

Designation		D 110-SSS
Max. travel speed	[m/s]	1.0
Repeat accuracy	[mm]	**± 0.03**
Max. acceleration	[m/s²]	20
Idle torque	[Nm]	0.9
Maximum stroke	[mm]	1270
Max. total length	[mm]	1500
Moment of inertia	[kgm²]	0.0000325
Drive element		**Ball screw spindle drive**
Max. spindle speed	[rpm]	3000
Diameter	[mm]	16
Pitch	[mm]	5 / 10 / 20
Drive element		**Trapezoidal threaded drive**
Max. spindle speed	[rpm]	1500
Diameter	[mm]	16
Pitch	[mm]	4 / 8
Weights		
Basic without travel	[kg]	6.2
Travel per 100 mm	[kg]	0.75
Slide plate 145 mm	[kg]	3.2
Slide plate 265 mm	[kg]	5.85

Main views



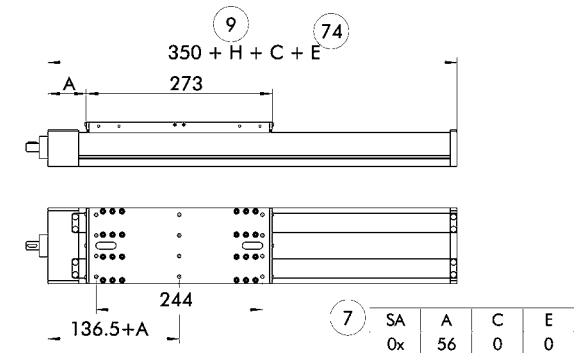


7

SA	A	B	C	E
0x	56	21	0	0
2x	86	51	60	10
4x	116	81	120	20

(2) Assembly connection
(6) Drive connection
(7) Number of spindle supports
(8) Feather key DIN 6885
(9) Useful stroke
(27) Mounting groove for T-nuts
(72) Bolt pitch circle
(74) E for spindle supports with insulated noise emissions
(90) Stop angle for alignment of axis

Long slide

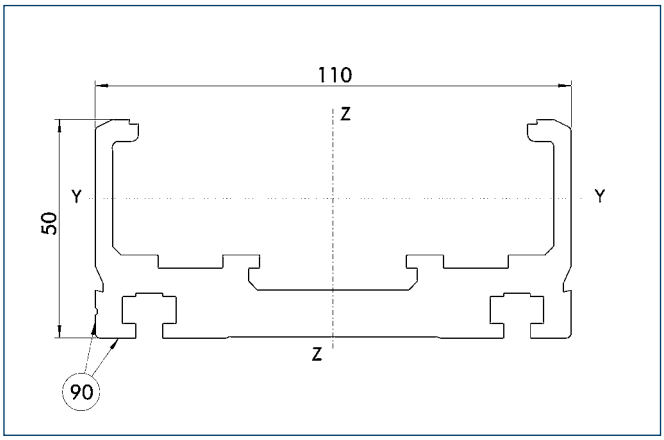


7

SA	A	C	E
0x	56	0	0
2x	86	60	10
4x	116	120	20

(7) Number of spindle supports
(9) Useful stroke
(74) E for spindle supports with insulated noise emissions

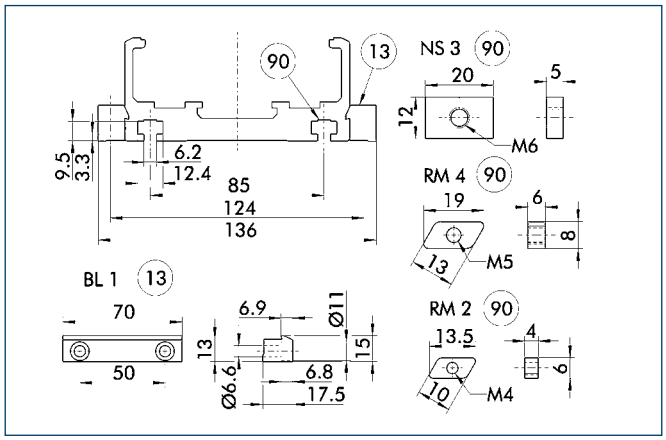
Profile SSS



(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

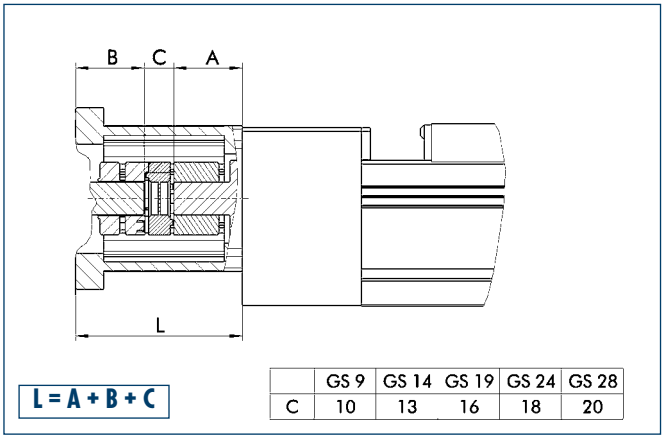


(13) Mounting strip (90) T-nut on base side

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



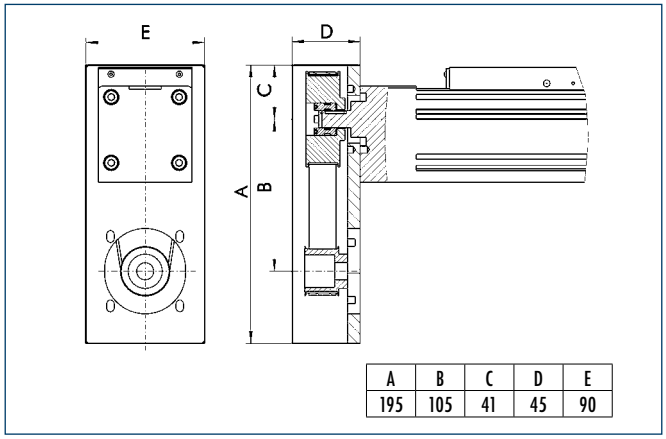
L = A + B + C

	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.

Angle gear schematic diagram



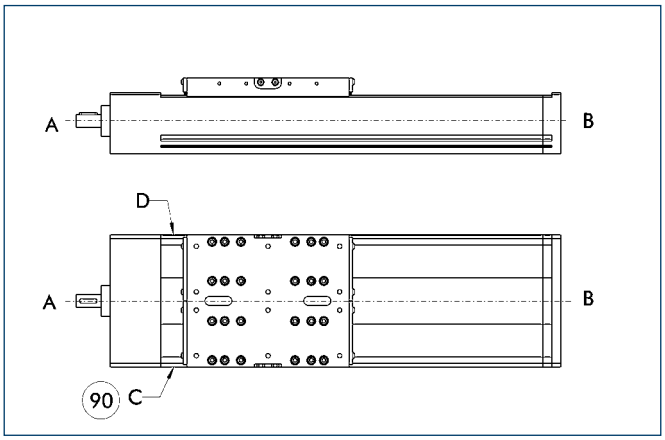
A	B	C	D	E
195	105	41	45	90

Possible transmission ratios: i = 1 : 1, i = 2 : 1, i = 3 : 1
Caution: Dimension C can change at i ≠ 1:1 or with smooth motor shafts (without feather key).
Even in tight conditions, different drive solutions can be attached. SCHUNK can provide you with the right angle gear for your drive.

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

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

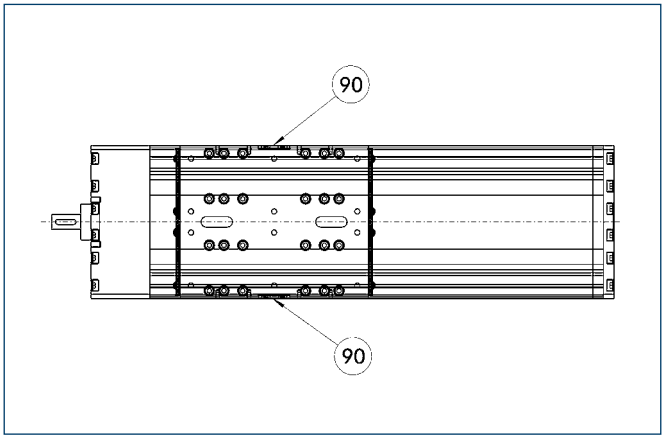
Two EO2 switches are used as limit switches and an RS2 as the reference switch as standard.

ⓘ 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



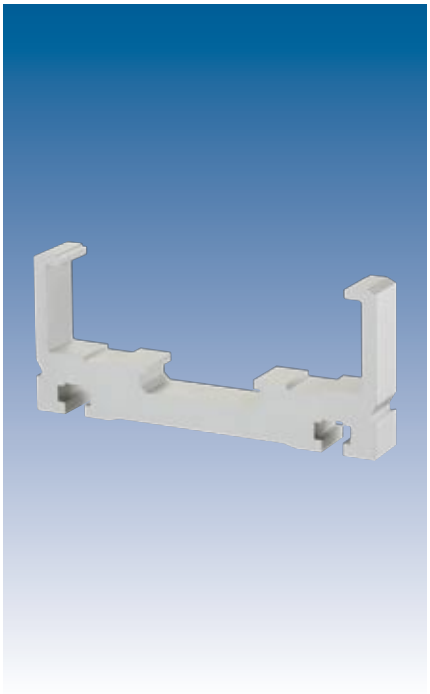
(90) Standard lubrication connection

Standard connection
Lubrication nipple M8x1

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

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-SSS

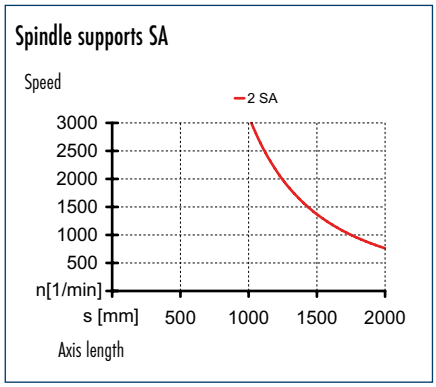


Advantages of profiled rail guide

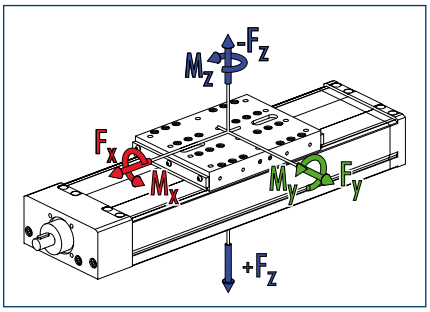
High load bearing capacity

Long lifetime

High precision



Loads and load torques



Load		Dynamic
F_x **	[N]	6000
F_y	[N]	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]	5.9 (p=5)
		10.6 (p=10)
		25.0 (p=25)
		48.8 (p=50)

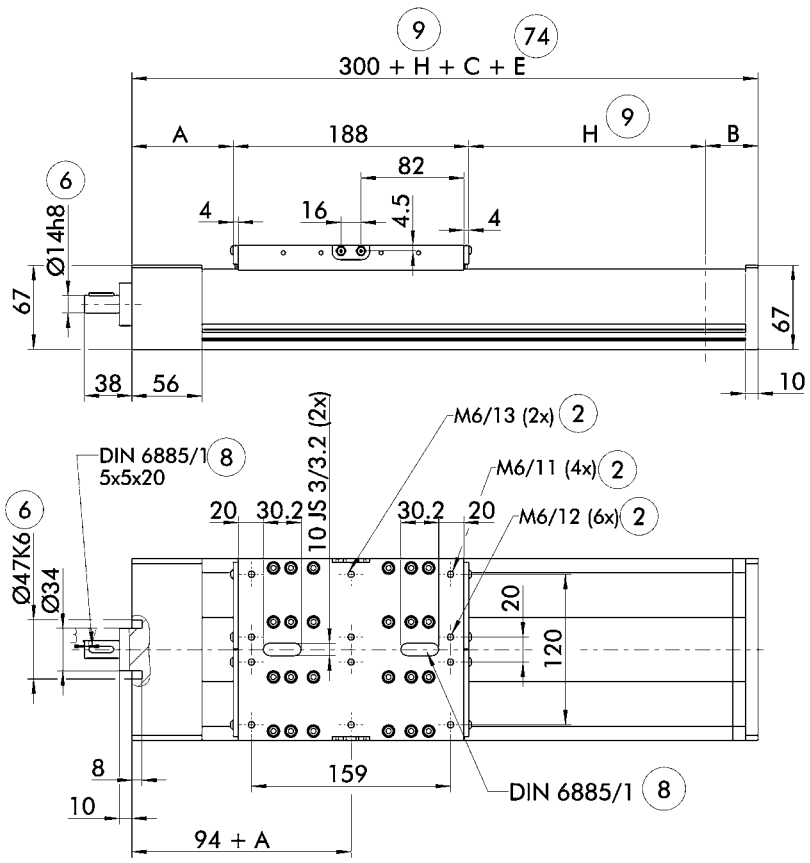
** Depends on speed and pitch n_{max}
KGT = 3000 rpm; TGT = 1500 rpm

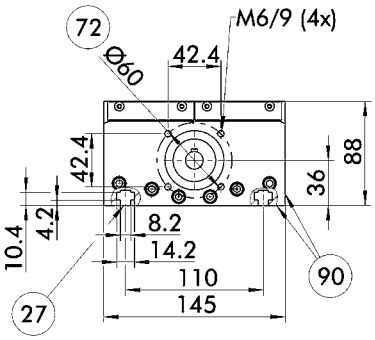
ⓘ Values in brackets relate to the long slide.

Technical data

Designation		D 145-SSS
Max. travel speed	[m/s]	2.5
Repeat accuracy	[mm]	**± 0.03**
Max. acceleration	[m/s²]	20
Idle torque	[Nm]	1.1
Maximum stroke	[mm]	1700
Max. total length	[mm]	2000
Moment of inertia	[kgm²]	0.000225
Drive element		**Ball screw spindle drive**
Max. spindle speed	[rpm]	3000
Diameter	[mm]	25
Pitch	[mm]	5 / 10 / 25 / 50
Drive element		**Trapezoidal threaded drive**
Max. spindle speed	[rpm]	1500
Diameter	[mm]	24
Pitch	[mm]	5 / 10
Weights		
Basic without travel	[kg]	13.5
Travel per 100 mm	[kg]	1.5
Slide plate 180 mm	[kg]	5.8
Slide plate 300 mm	[kg]	9.7

Main views



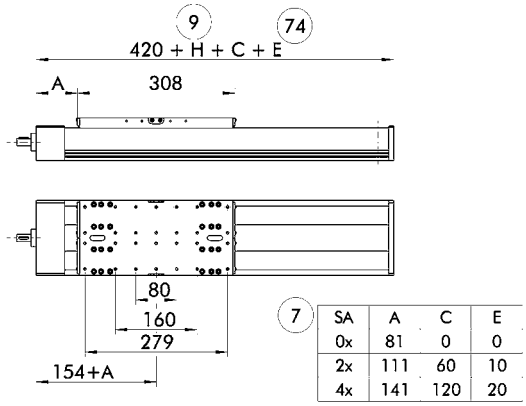


7

SA	A	B	C	E
0x	81	31	0	0
2x	111	61	60	10
4x	141	91	120	20

(2) Assembly connection
(6) Drive connection
(7) Number of spindle supports
(8) Feather key DIN 6885
(9) Useful stroke
(27) Mounting groove for T-nuts
(72) Bolt pitch circle
(74) E for spindle supports with insulated noise emissions
(90) Stop angle for alignment of axis

Long slide

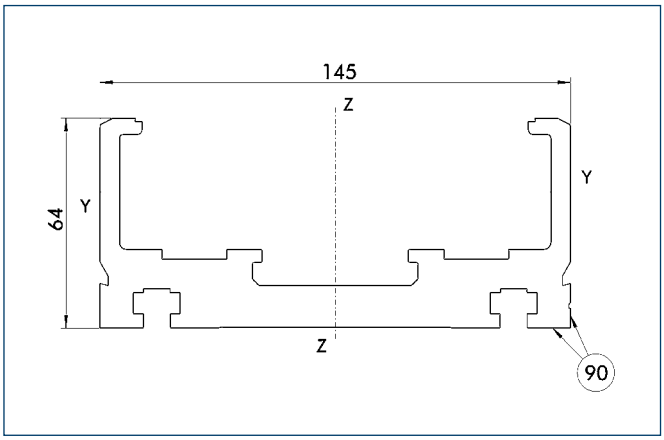


7

SA	A	C	E
0x	81	0	0
2x	111	60	10
4x	141	120	20

(7) Number of spindle supports
(9) Useful stroke
(74) E for spindle supports with insulated noise emissions

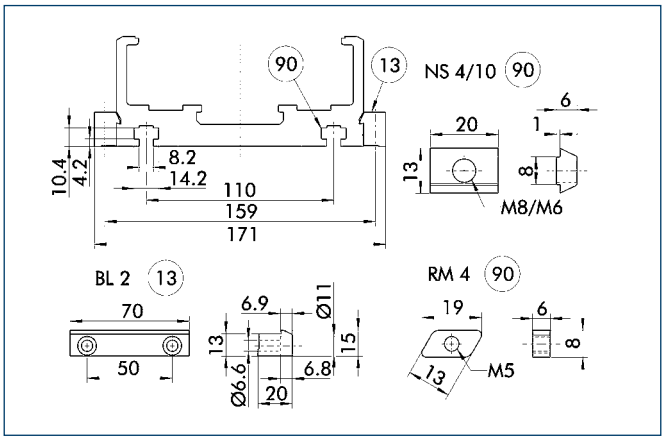
Profile SSS



(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

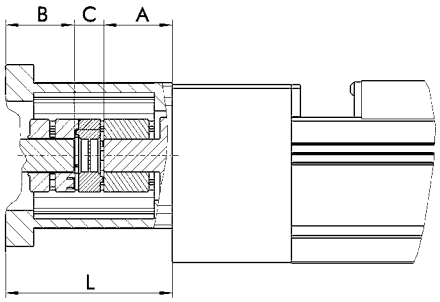


(13) Mounting strip (90) T-nut on base side

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



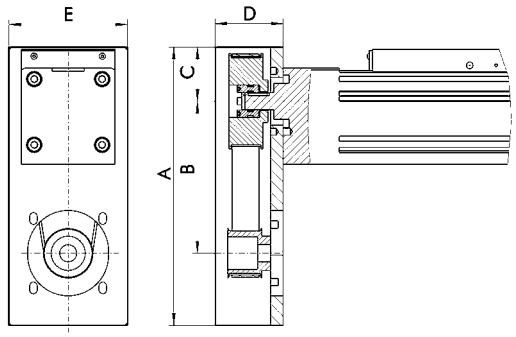
L = A + B + C

	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.

Angle gear schematic diagram



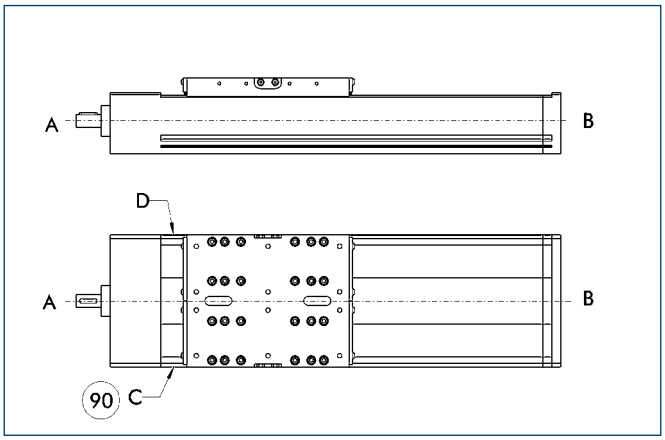
A	B	C	D	E
238	120	46	52	102

Possible transmission ratios: i = 1 : 1, i = 2 : 1, i = 3 : 1
Caution: Dimension C can change at i ≠ 1:1 or with smooth motor shafts (without feather key).
Even in tight conditions, different drive solutions can be attached. SCHUNK can provide you with the right angle gear for your drive.

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

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

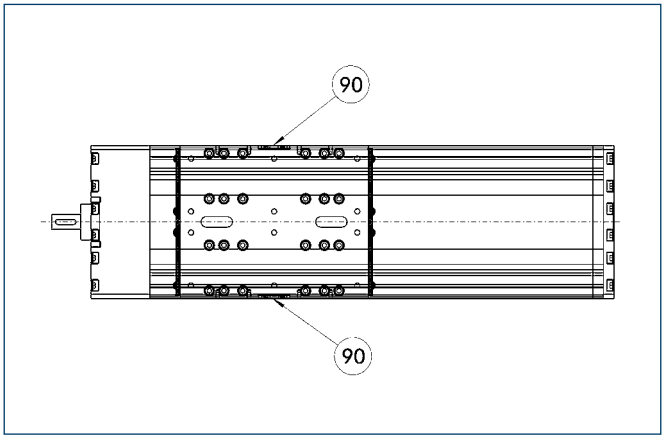
Two EO2 switches are used as limit switches and an RS2 as the reference switch as standard.

ⓘ 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



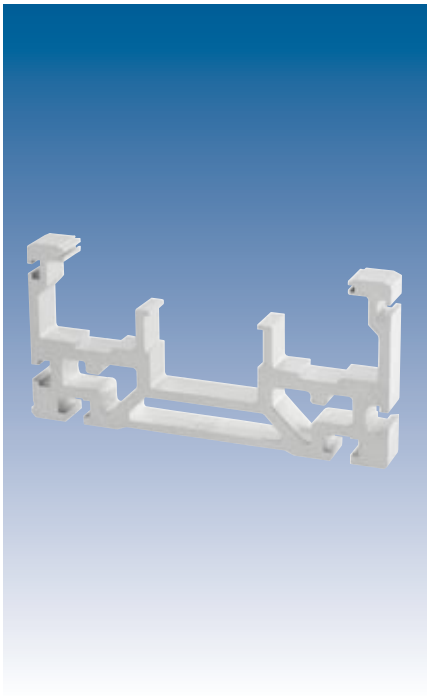
90 Standard lubrication connection

Standard connection
Lubrication nipple M8x1

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

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-SSS

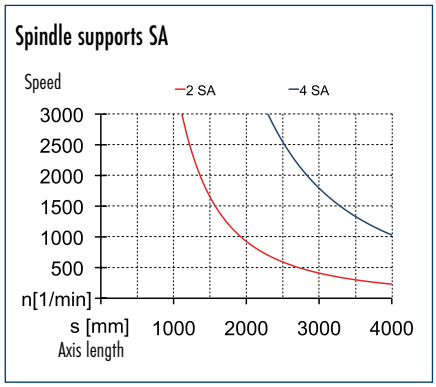


Advantages of profiled rail guide

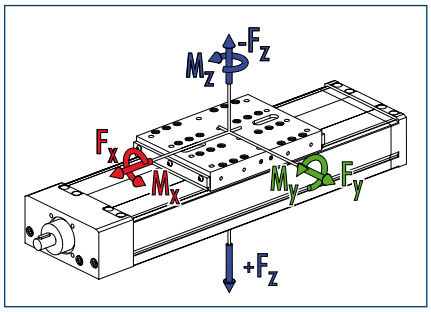
High load bearing capacity

Long lifetime

High precision



Loads and load torques



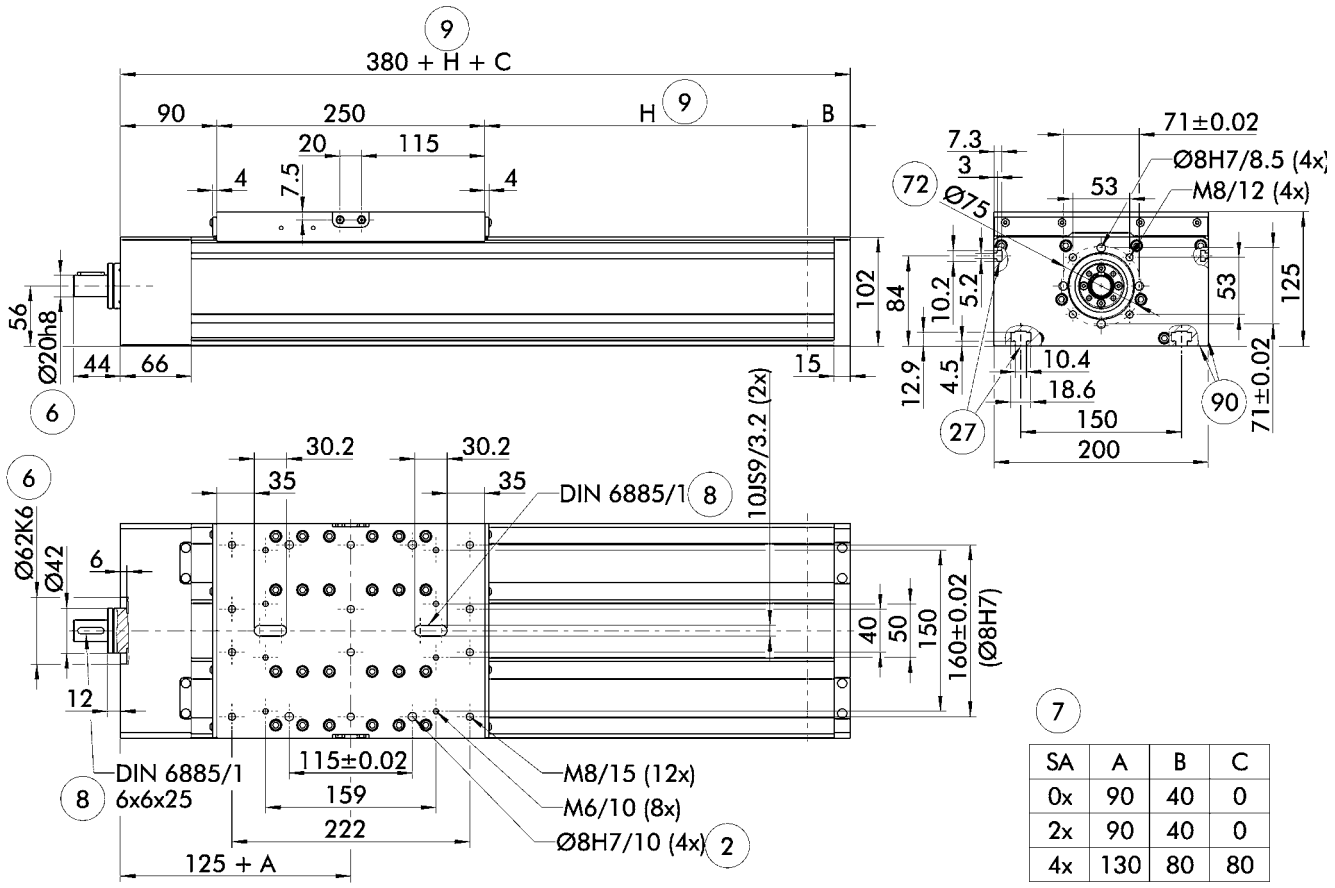
Load		Dynamic
F_x **	[N]	10000
F_y	[N]	5000
F_z	[N]	8000
$-F_z$	[N]	5000
Load torques		**Dynamic**
M_x	[Nm]	3500
M_y	[Nm]	4300 (6000)
M_z	[Nm]	3200 (4500)
M_{Amax}	[Nm]	10.8 (p=5)
		18.7 (p=10)
		34.6 (p=20)
		66.5 (p=40)

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

Technical data

Designation		D 200-SSS
Max. travel speed	[m/s]	2.0
Repeat accuracy	[mm]	**± 0.03**
Max. acceleration	[m/s²]	20
Idle torque	[Nm]	2.8
Maximum stroke	[mm]	3620
Max. total length	[mm]	4000
Moment of inertia	[kgm²]	0.000645
Drive element		**Ball screw spindle drive**
Max. spindle speed	[rpm]	3000
Diameter	[mm]	32
Pitch	[mm]	5 / 10 / 20 / 40
Drive element		**Trapezoidal threaded drive**
Max. spindle speed	[rpm]	1500
Diameter	[mm]	32
Pitch	[mm]	6
Weights		
Basic without travel	[kg]	22.0
Travel per 100 mm	[kg]	2.6
Slide plate 250 mm	[kg]	8.4
Slide plate 400 mm	[kg]	11.0

Main views

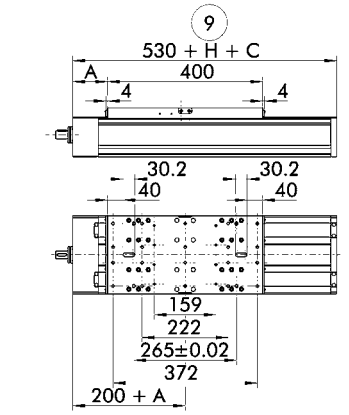


7

SA	A	B	C
0x	90	40	0
2x	90	40	0
4x	130	80	80

(2) Assembly connection
(6) Drive connection
(7) Number of spindle supports
(8) Feather key DIN 6885
(9) Useful stroke
(27) Mounting groove for T-nuts
(72) Bolt pitch circle
(74) E for spindle supports with insulated noise emissions
(90) Stop angle for alignment of axis

Long slide

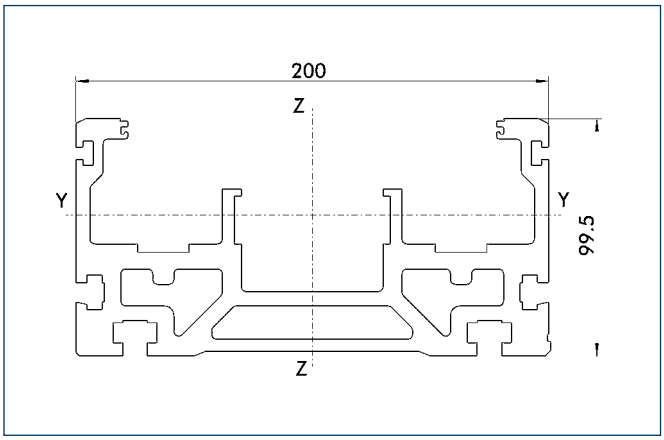


7

SA	A	B	C
0x	90	40	0
2x	90	40	0
4x	130	80	80

(7) Number of spindle supports
(9) Useful stroke
(74) E for spindle supports with insulated noise emissions

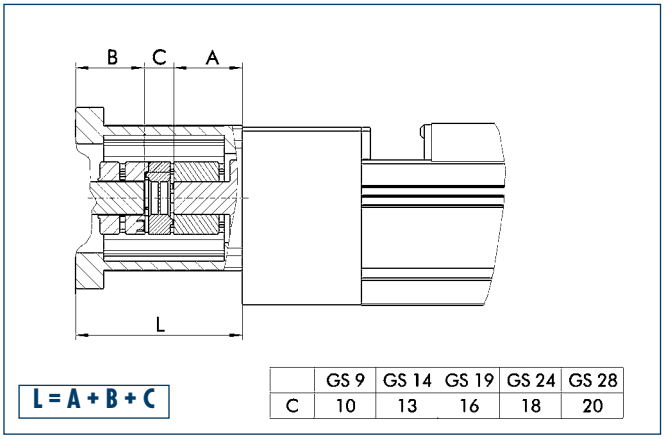
Profile SSS



(90) Stop angle standard side

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



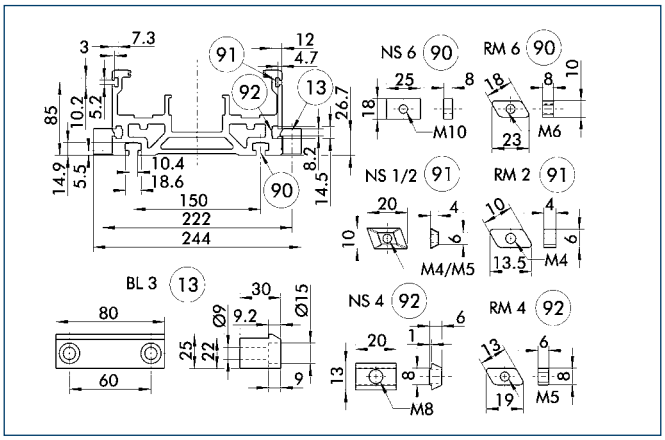
L = A + B + C

	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



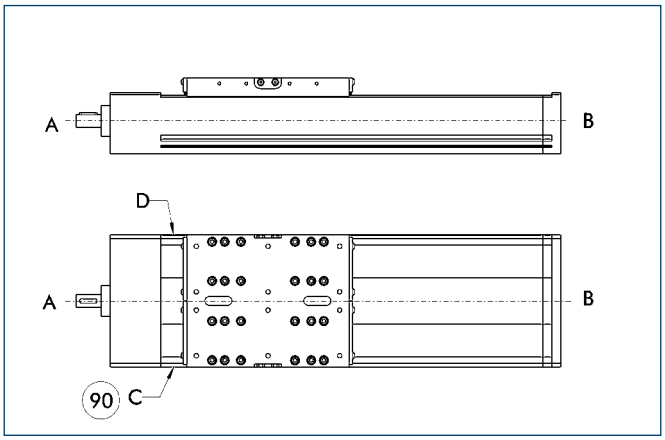
(13) Mounting strip
(90) T-nut on base side
(91) T-nut, side upper
(92) T-nut, side lower

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

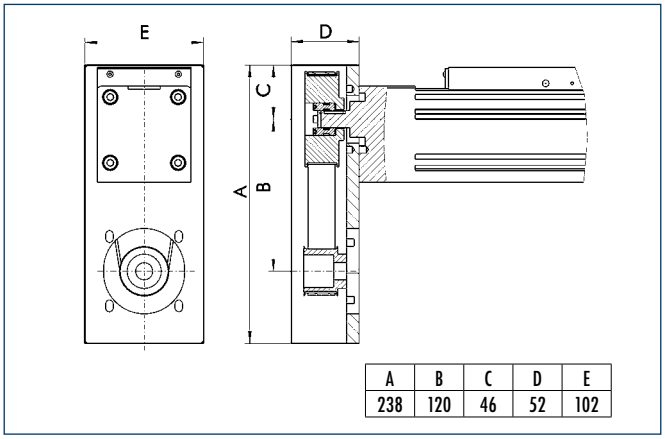
Two EO2 switches are used as limit switches and an RS2 as the reference switch as standard.

ⓘ 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

Angle gear schematic diagram

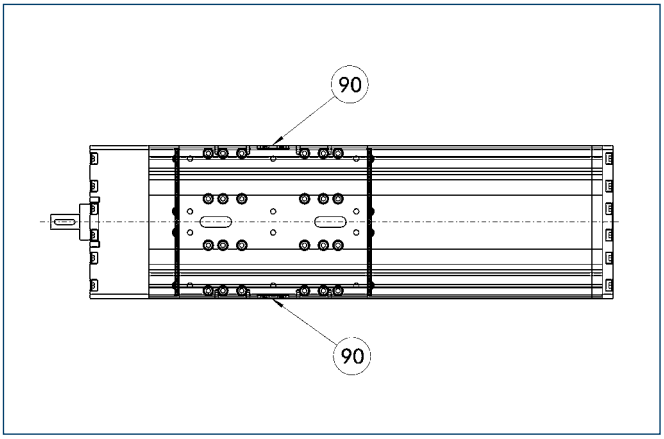


A	B	C	D	E
238	120	46	52	102

Possible transmission ratios: i = 1 : 1, i = 2 : 1, i = 3 : 1
Caution: Dimension C can change at i ≠ 1:1 or with smooth motor shafts (without feather key).
Even in tight conditions, different drive solutions can be attached. SCHUNK can provide you with the right angle gear for your drive.

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

Lubrication connections



90 Standard lubrication connection

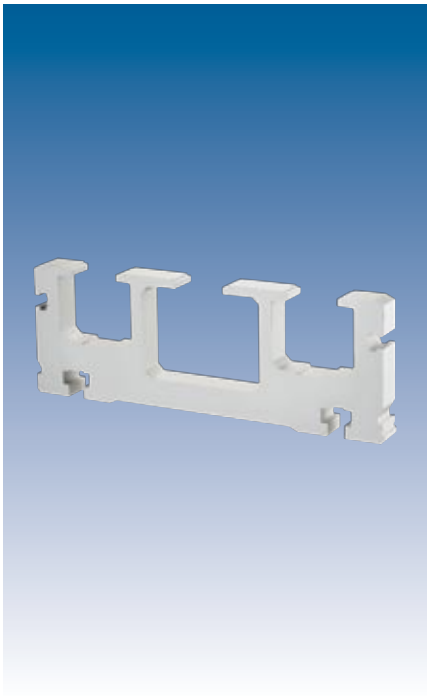
Standard connection
Lubrication nipple M8x1

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

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

D 240-SSS

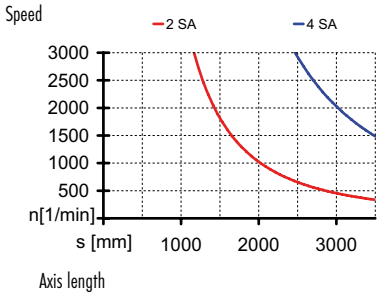
Linear Axes · Ball Screw Drive



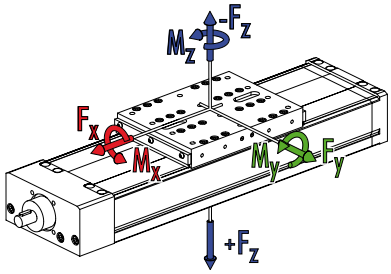
Advantages of profiled rail guide

- High load bearing capacity
- Long lifetime
- High precision

Spindle supports SA



Loads and load torques



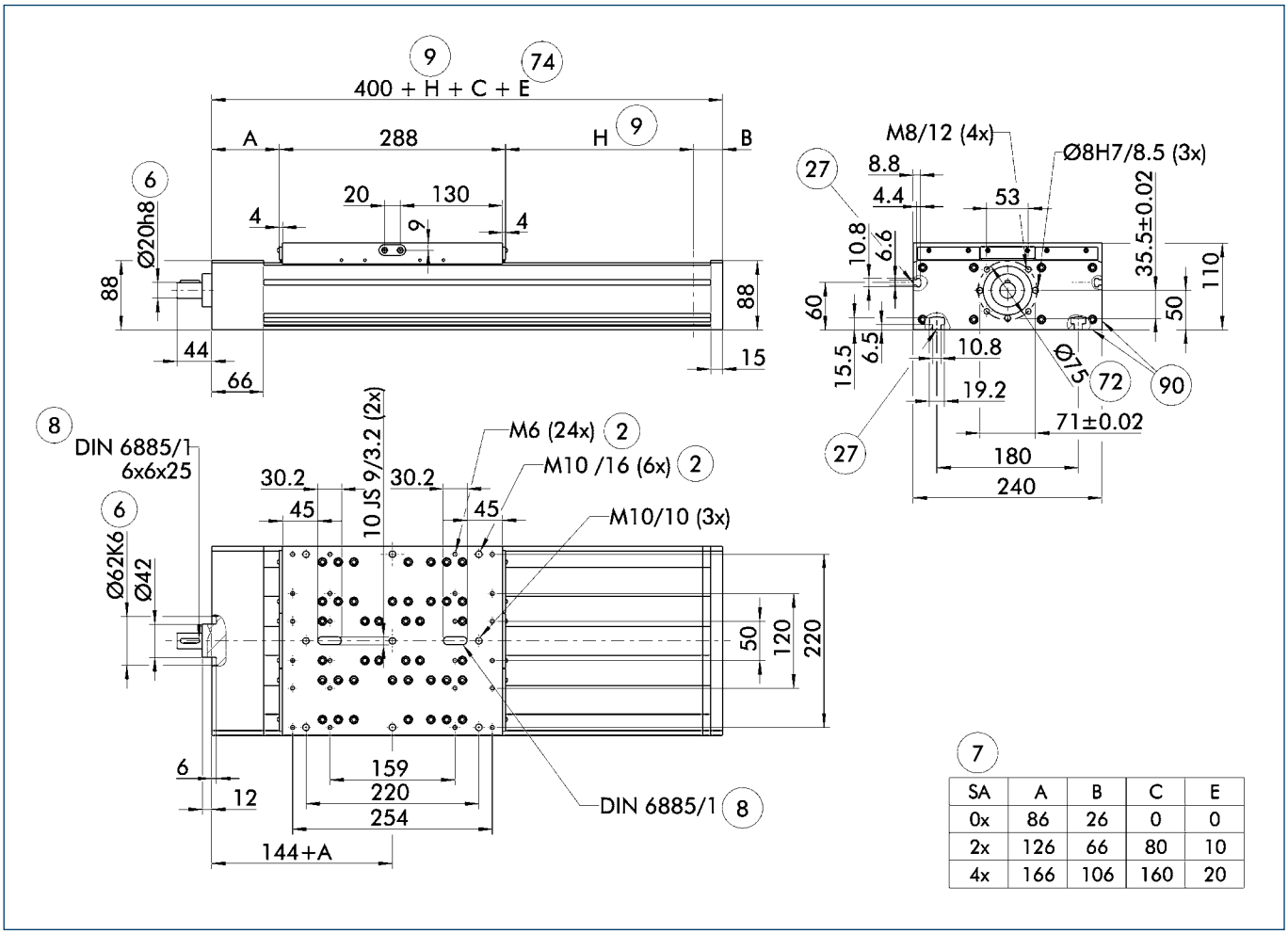
Load		Dynamic
F_x **	[N]	12000
F_y	[N]	6000
F_z	[N]	12000
$-F_z$	[N]	8000
Load torques		**Dynamic**
M_x	[Nm]	4500
M_y	[Nm]	6000 (8500)
M_z	[Nm]	1500 (6400)
M_{Amax}	[Nm]	12.3 (p=5)
		21.9 (p=10)
		41.0 (p=20)
		79.2 (p=40)

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

Technical data

Designation		D 240-SSS
Max. travel speed	[m/s]	2.0
Repeat accuracy	[mm]	**± 0.03**
Max. acceleration	[m/s²]	20
Idle torque	[Nm]	2.8
Maximum stroke	[mm]	2600
Max. total length	[mm]	3000
Moment of inertia	[kgm²]	0.000645
Drive element		**Ball screw spindle drive**
Max. spindle speed	[rpm]	3000
Diameter	[mm]	32
Pitch	[mm]	5 / 10 / 20 / 40
Drive element		**Trapezoidal threaded drive**
Max. spindle speed	[rpm]	1500
Diameter	[mm]	32
Pitch	[mm]	6
Weights		
Basic without travel	[kg]	26.0
Travel per 100 mm	[kg]	3.4
Slide plate 280 mm	[kg]	10.2
Slide plate 400 mm	[kg]	14.6

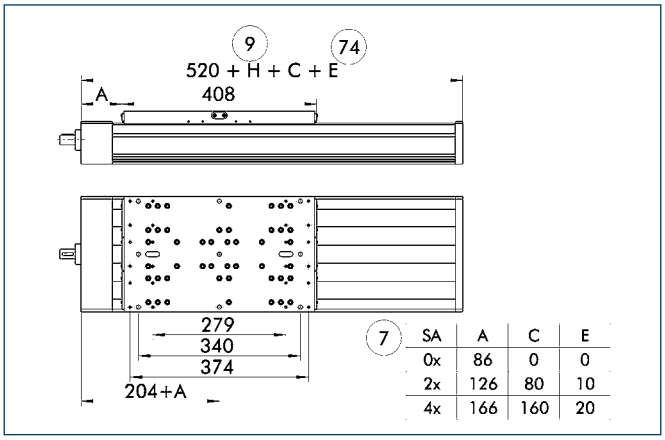
Main views



7				
SA	A	B	C	E
0x	86	26	0	0
2x	126	66	80	10
4x	166	106	160	20

(2) Assembly connection
(6) Drive connection
(7) Number of spindle supports
(8) Feather key DIN 6885
(9) Useful stroke
(27) Mounting groove for T-nuts
(72) Bolt pitch circle
(74) E for spindle supports with insulated noise emissions
(90) Stop angle for alignment of axis

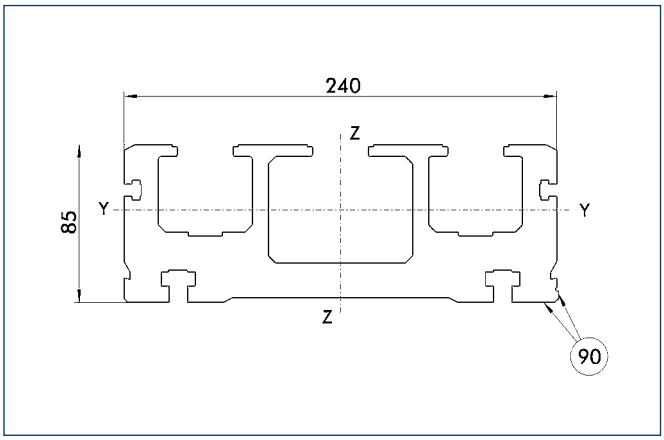
Long slide



7				
SA	A	C	E	
0x	86	0	0	
2x	126	80	10	
4x	166	160	20	

(7) Number of spindle supports
(9) Useful stroke
(74) E for spindle supports with insulated noise emissions

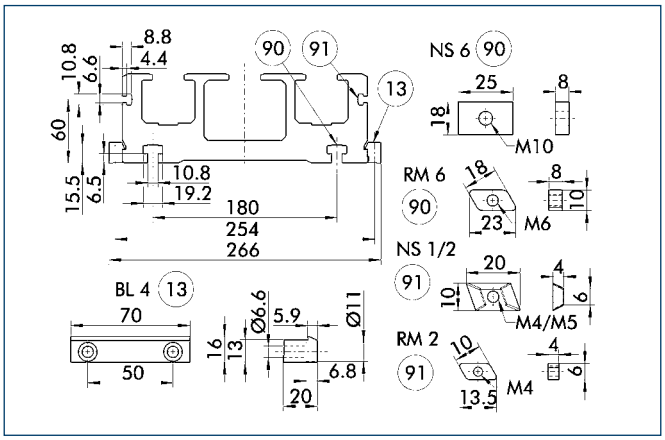
Profile SSS



(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

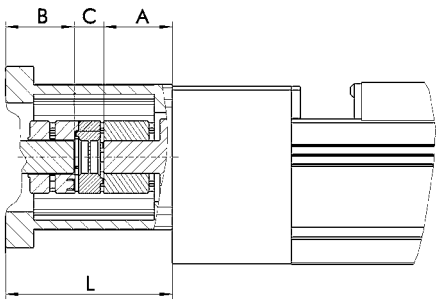


(13) Mounting strip
(90) T-nut on base side
(91) Side T-nut

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



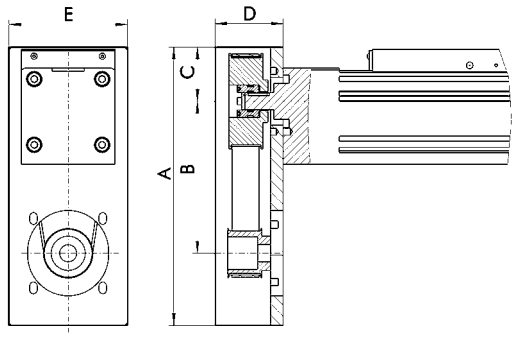
L = A + B + C

	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.

Angle gear schematic diagram



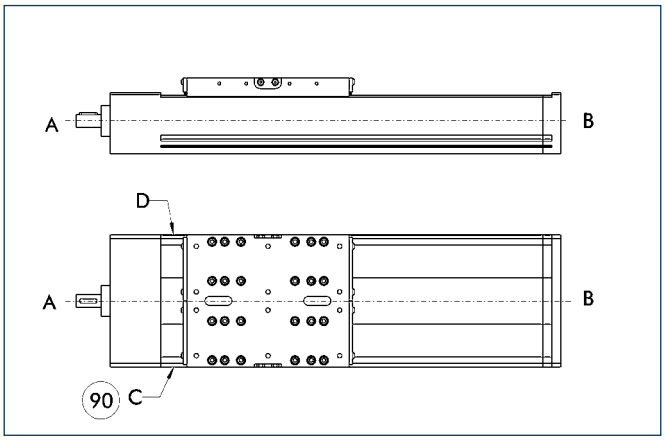
A	B	C	D	E
328	190	64	80	142

Possible transmission ratios: i = 1 : 1, i = 2 : 1, i = 3 : 1
Caution: Dimension C can change at i ≠ 1:1 or with smooth motor shafts (without feather key).
Even in tight conditions, different drive solutions can be attached. SCHUNK can provide you with the right angle gear for your drive.

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

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

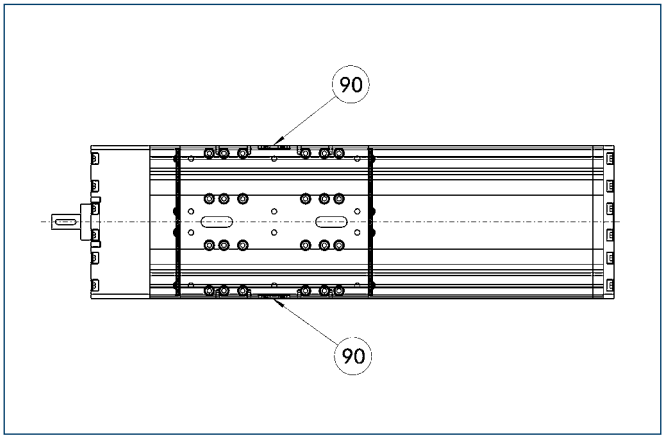
Two EO2 switches are used as limit switches and an RS2 as the reference switch as standard.

ⓘ 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



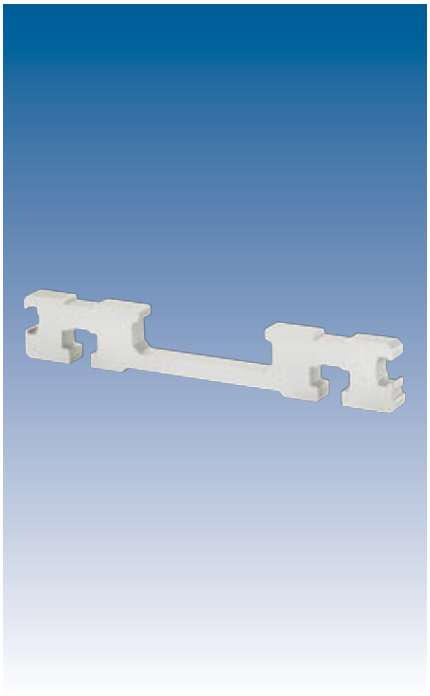
(90) Standard lubrication connection

Standard connection
Lubrication nipple M8x1

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

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

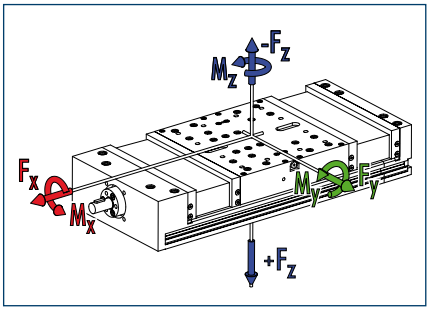
A 15B-155



Advantages of profiled rail guide

- High load bearing capacity
- Long lifetime
- High precision

Loads and load torques



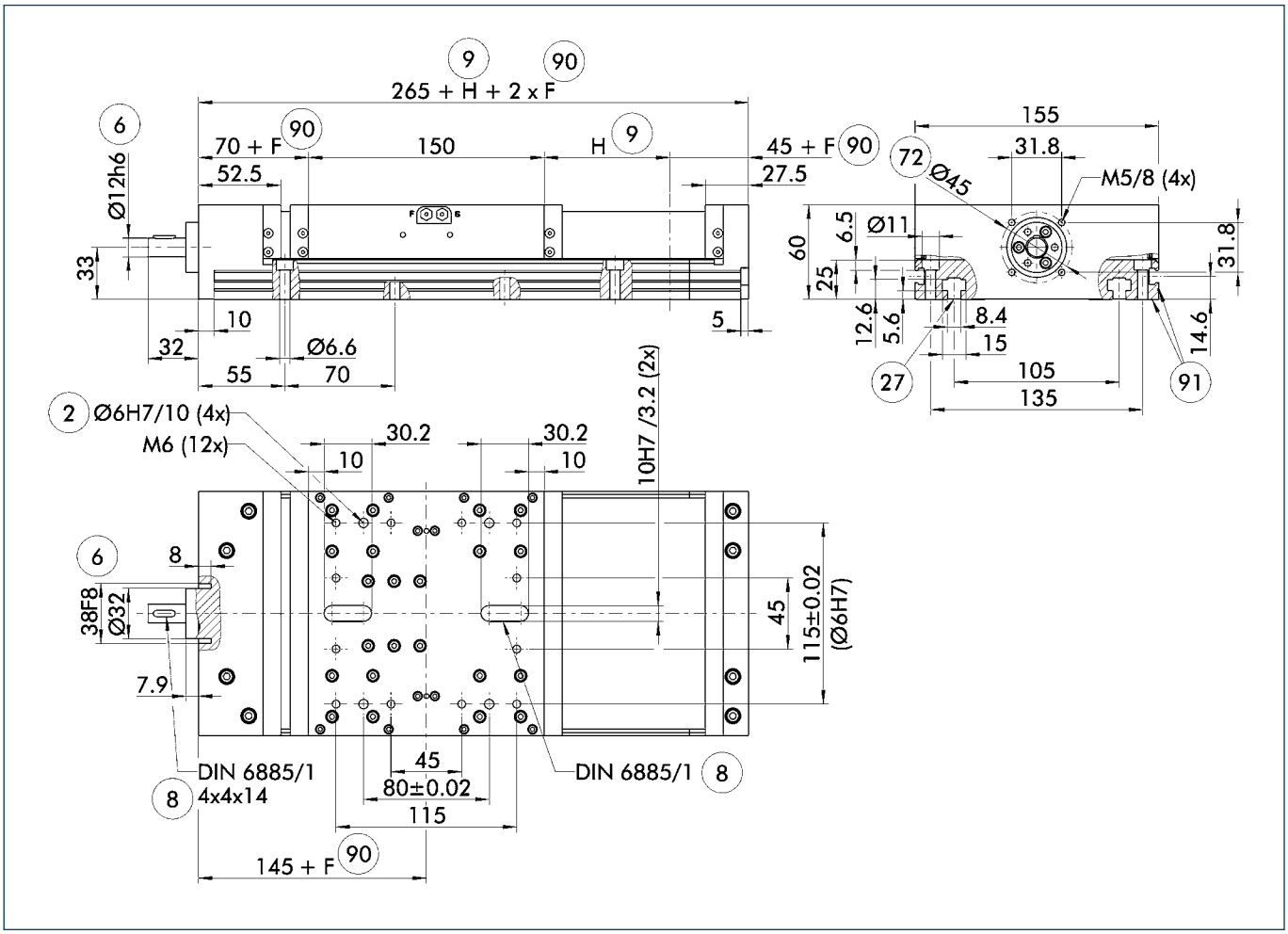
Load		Dynamic
F_x**	[N]	4000
F_y	[N]	2000
F_z	[N]	20000
$-F_z$	[N]	15000
Load torques		**Dynamic**
M_x	[Nm]	1000
M_y	[Nm]	900 (1300)
M_z	[Nm]	400 (580)
M_{Amax}	[Nm]	3.5 (p=5)
		13.1 (p=20)

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

Technical data

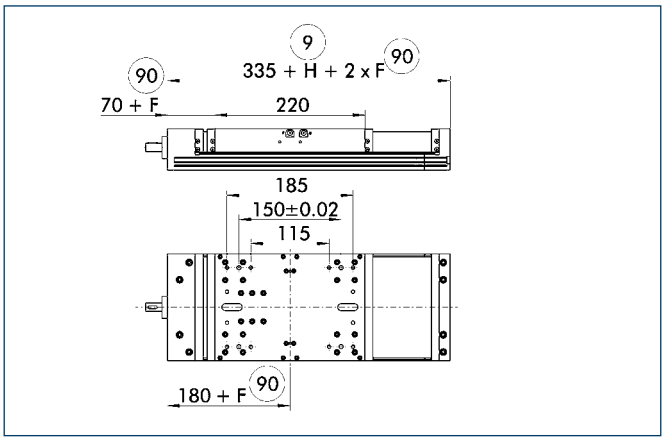
Designation		A 15B-155
Max. travel speed	[m/s]	1.0
Repeat accuracy	[mm]	**± 0.03**
Max. acceleration	[m/s²]	20
Idle torque	[Nm]	0.35
Maximum stroke	[mm]	1235
Max. total length	[mm]	1500
Moment of inertia	[kgm²]	0.000085
Drive element		**Ball screw spindle drive**
Max. spindle speed	[rpm]	3000
Diameter	[mm]	20
Pitch	[mm]	5 / 20
Drive element		**Trapezoidal threaded drive**
Max. spindle speed	[rpm]	1500
Diameter	[mm]	20
Pitch	[mm]	4 / 8 / 16
Weights		
Basic without travel	[kg]	7.8
Travel per 100 mm	[kg]	0.95
Slide plate 150 mm	[kg]	2.8
Slide plate 220 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
(90) Bellow block length
(91) Stop angle for alignment of axis

Long slide



(9) Useful stroke
(90) Bellow block length

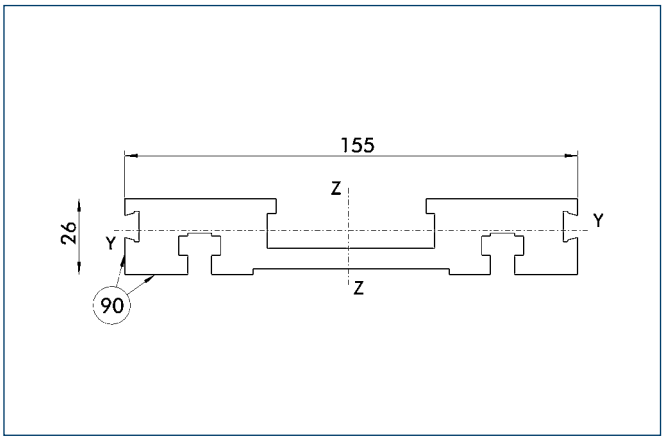
Bellow calculation

[(Travel + 17) / 19]	= Number of folds
[(Number of folds x 3.8) - 17]	= Bellow block length

Calculation example:

Distance traveled	**= 550 mm**
[(550 mm + 17) / 19]	= 29.84 Round up! (30 folds)
[(30 x 3.8) - 17]	= 97 mm (1x bellow block length)

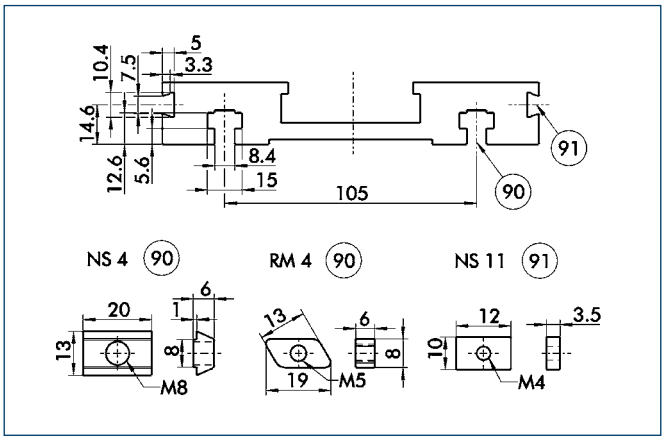
Profile



(90) Stop angle standard side

Specific mass	[kg/m]	6.6
Planar dimension	[mm²]	2446
Planar moment of inertia I_y	[mm⁴]	143666
Planar moment of inertia I_z	[mm⁴]	60433952
Load torque W_y	[mm³]	10413
Load torque W_z	[mm³]	77156

Mounting

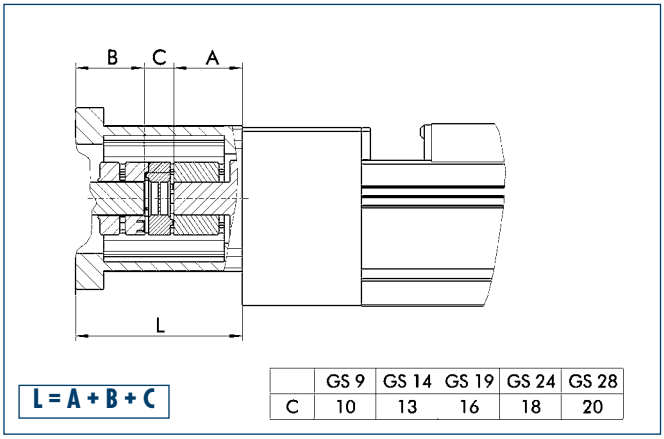


(90) T-nut on base side (91) Side T-nut

The profile can be secured using T-nuts.

Designation	Order designation	ID no.
T-nut	NS4	0331407
T-nut	NS11	0331429
T-nut	RM4	0331426

Motor flange schematic diagram



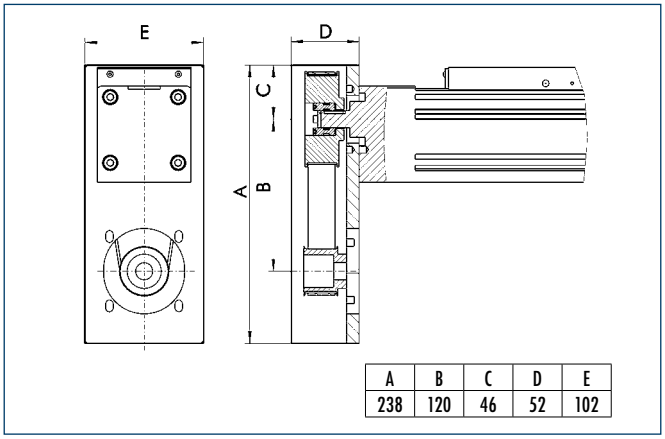
L = A + B + C

	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.

Angle gear schematic diagram



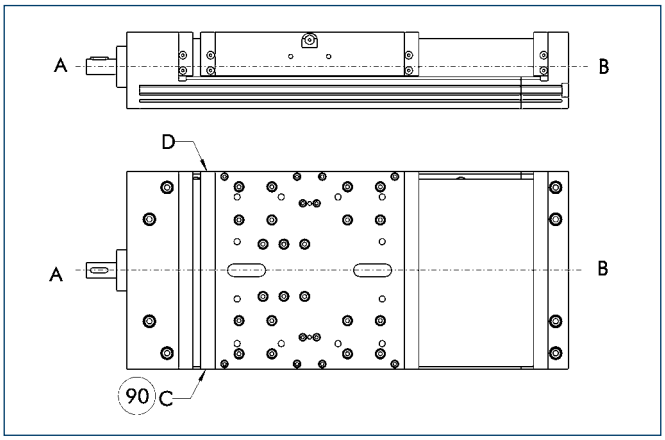
A	B	C	D	E
238	120	46	52	102

Possible transmission ratios: i = 1 : 1, i = 2 : 1, i = 3 : 1
Caution: Dimension C can change at i ≠ 1:1 or with smooth motor shafts (without feather key).
Even in tight conditions, different drive solutions can be attached. SCHUNK can provide you with the right angle gear for your drive.

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

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

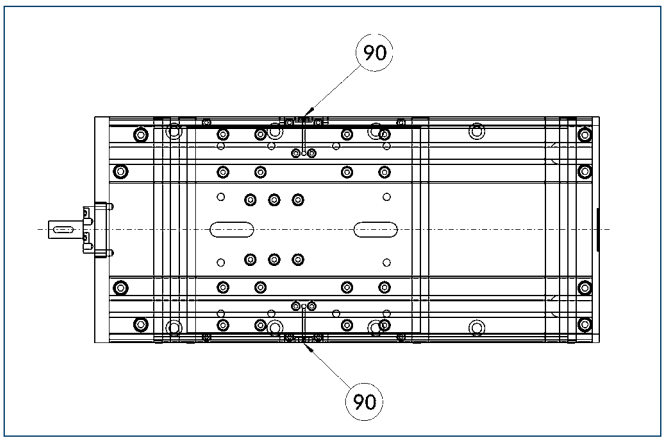
Two EO2 switches are used as limit switches and an RS2 as the reference switch as standard.

ⓘ 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



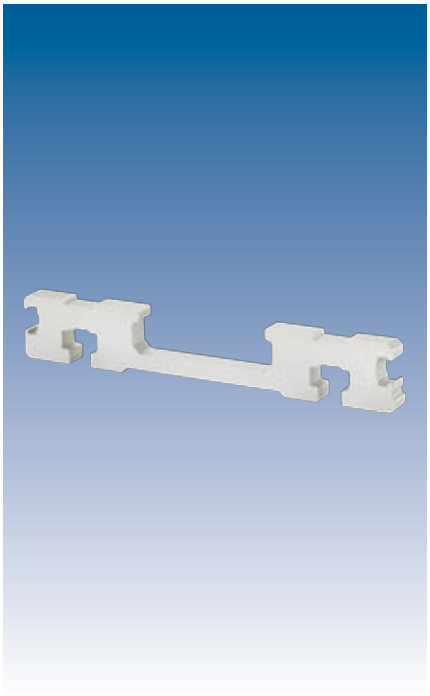
(90) Standard lubrication connection

Standard connection
Lubrication nipple M8x1

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

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

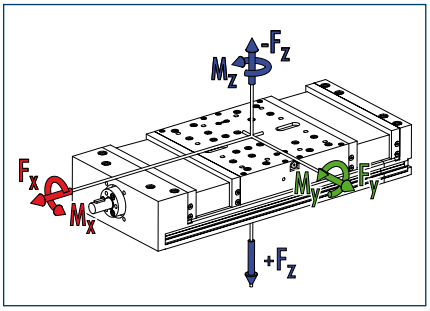
A 20B-225



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]	58000
$-F_z$	[N]	40000
Load torques		**Dynamic**
M_x	[Nm]	4000
M_y	[Nm]	3000 (4000)
M_z	[Nm]	1200 (1700)
M_{Amax}	[Nm]	6.0 (p=5)
		10.7 (p=10)
		25.1 (p=25)

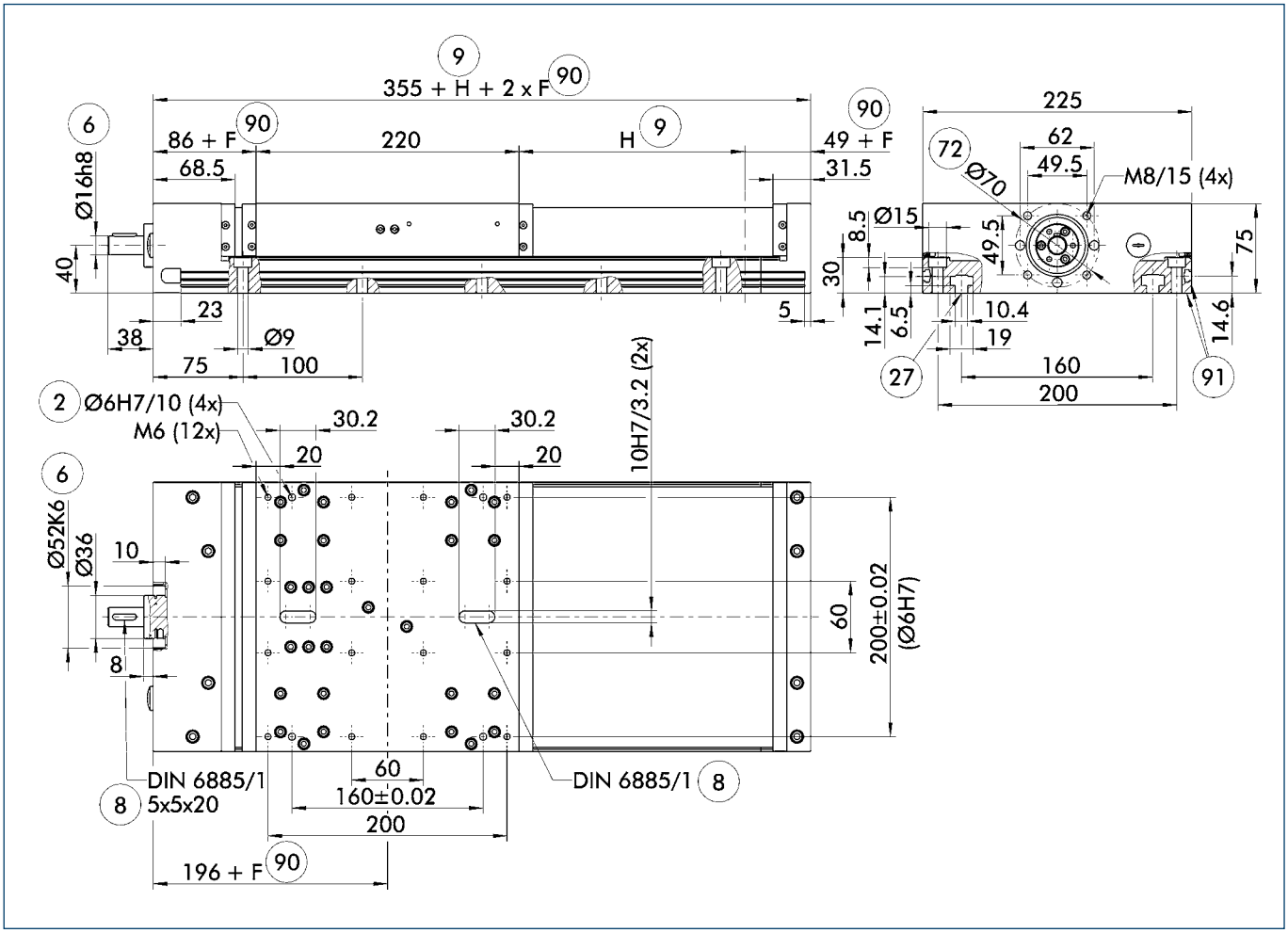
** Depends on speed and pitch n_{max}
KGT = 3000 rpm; TGT = 1500 rpm

ⓘ Values in brackets relate to the long slide.

Technical data

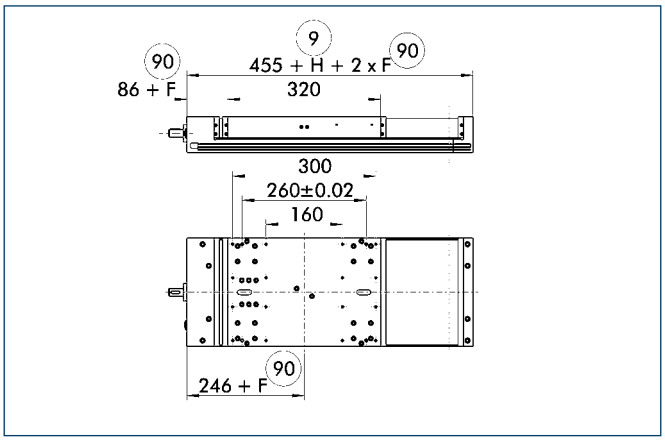
Designation		A 20B-225
Max. travel speed	[m/s]	2.0
Repeat accuracy	[mm]	**± 0.03**
Max. acceleration	[m/s²]	20
Idle torque	[Nm]	1.2
Maximum stroke	[mm]	1645
Max. total length	[mm]	2000
Moment of inertia	[kgm²]	0.000225
Drive element		**Ball screw spindle drive**
Max. spindle speed	[rpm]	3000
Diameter	[mm]	25
Pitch	[mm]	5 / 10 / 25
Drive element		**Trapezoidal threaded drive**
Max. spindle speed	[rpm]	1500
Diameter	[mm]	24
Pitch	[mm]	5 / 10
Weights		
Basic without travel	[kg]	17.6
Travel per 100 mm	[kg]	2.7
Slide plate 220 mm	[kg]	6.2
Slide plate 320 mm	[kg]	9.0

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) Bellow block length
(91) Stop angle for alignment of axis

Long slide



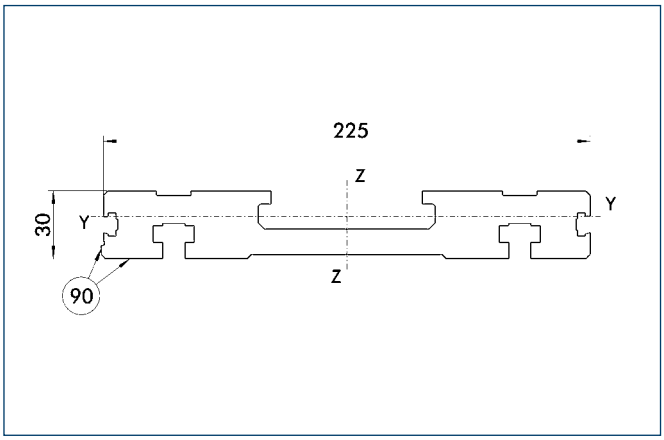
(9) Useful stroke
(90) Bellow block length

Bellow calculation

[(Travel + 17) / 28]	= Number of folds
For stroke > 250 mm:	
[(Number of folds x 4) - 17]	= 1x Bellow block length
For stroke < 250 mm:	
[(Number of folds x 4) - 10]	= 1x Bellow block length
Calculation example:	
Distance traveled	**= 500 mm**
[(500 mm + 17) / 28]	= 18.46 Round up! (19 folds)
[(19 x 4) - 17]	= 59 mm (1x bellow block length)

A 20B-225

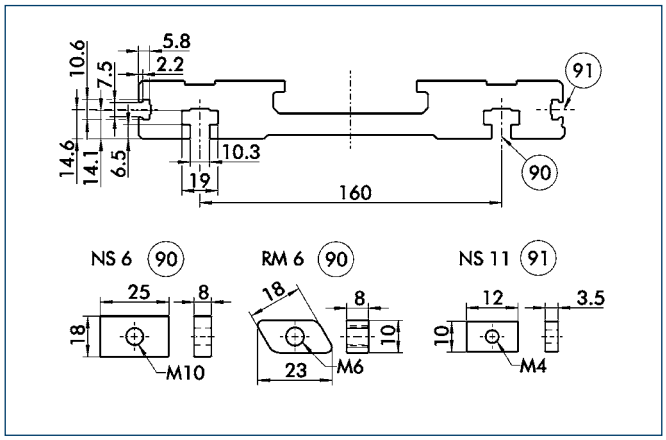
Profile



(90) Stop angle standard side

Specific mass	[kg/m]	12.84
Planar dimension	[mm²]	4756
Planar moment of inertia I_y	[mm⁴]	382465
Planar moment of inertia I_z	[mm⁴]	23549293
Load torque W_y	[mm³]	23316
Load torque W_z	[mm³]	207803

Mounting

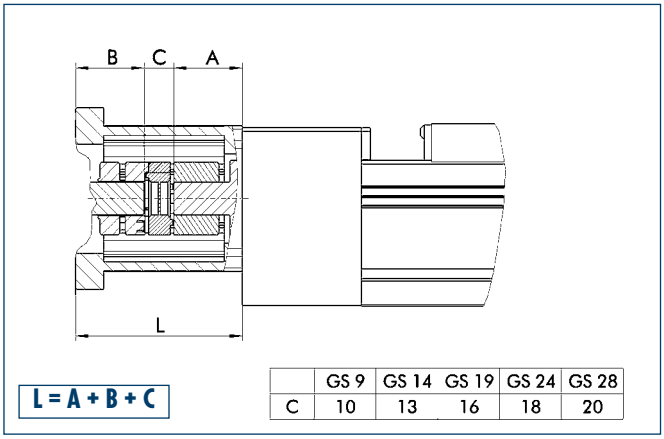


(90) T-nut on base side (91) Side T-nut

The profile can be secured using T-nuts.

Designation	Order designation	ID no.
T-nut	NS6	0331409
T-nut	NS11	0331429
T-nut	RM6	0331427

Motor flange schematic diagram



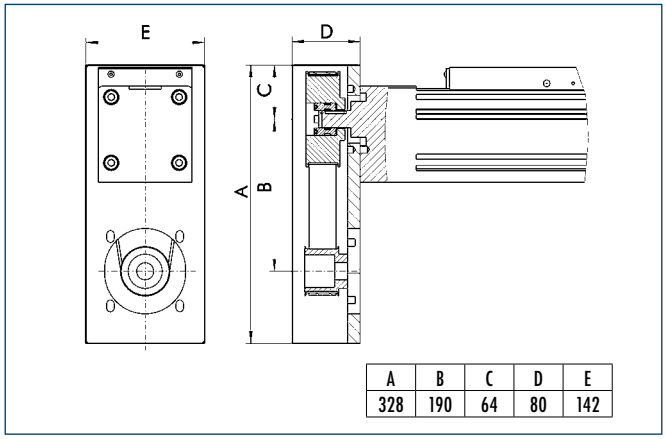
L = A + B + C

	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.

Angle gear schematic diagram



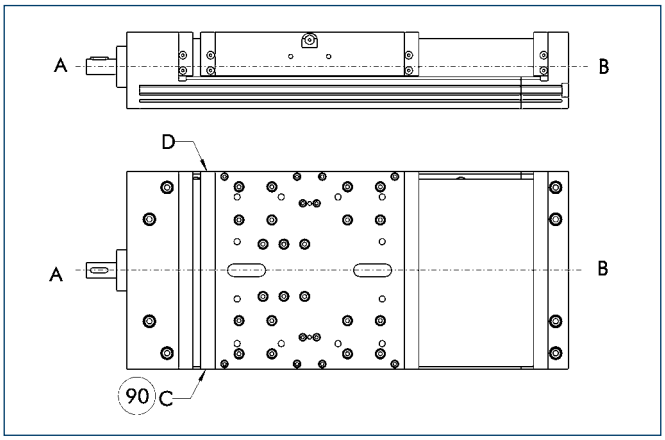
A	B	C	D	E
328	190	64	80	142

Possible transmission ratios: i = 1 : 1, i = 2 : 1, i = 3 : 1
Caution: Dimension C can change at i ≠ 1:1 or with smooth motor shafts (without feather key).
Even in tight conditions, different drive solutions can be attached. SCHUNK can provide you with the right angle gear for your drive.

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

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

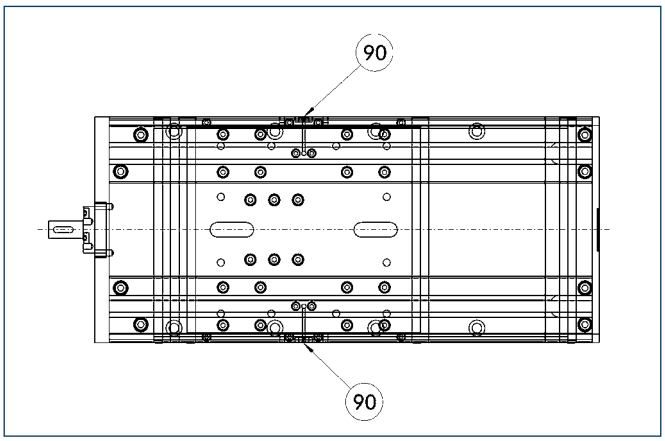
Two EO2 switches are used as limit switches and an RS2 as the reference switch as standard.

ⓘ 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



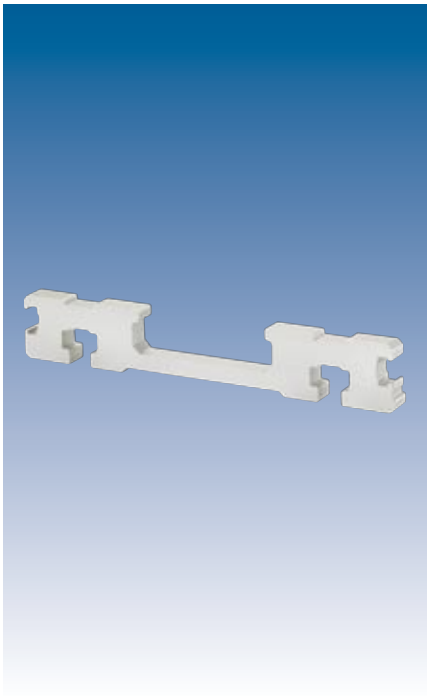
(90) Standard lubrication connection

Standard connection
Lubrication nipple M8x1

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

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

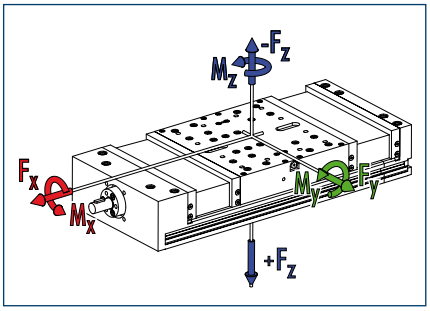
A 30B-325



Advantages of profiled rail guide

- High load bearing capacity
- Long lifetime
- High precision

Loads and load torques



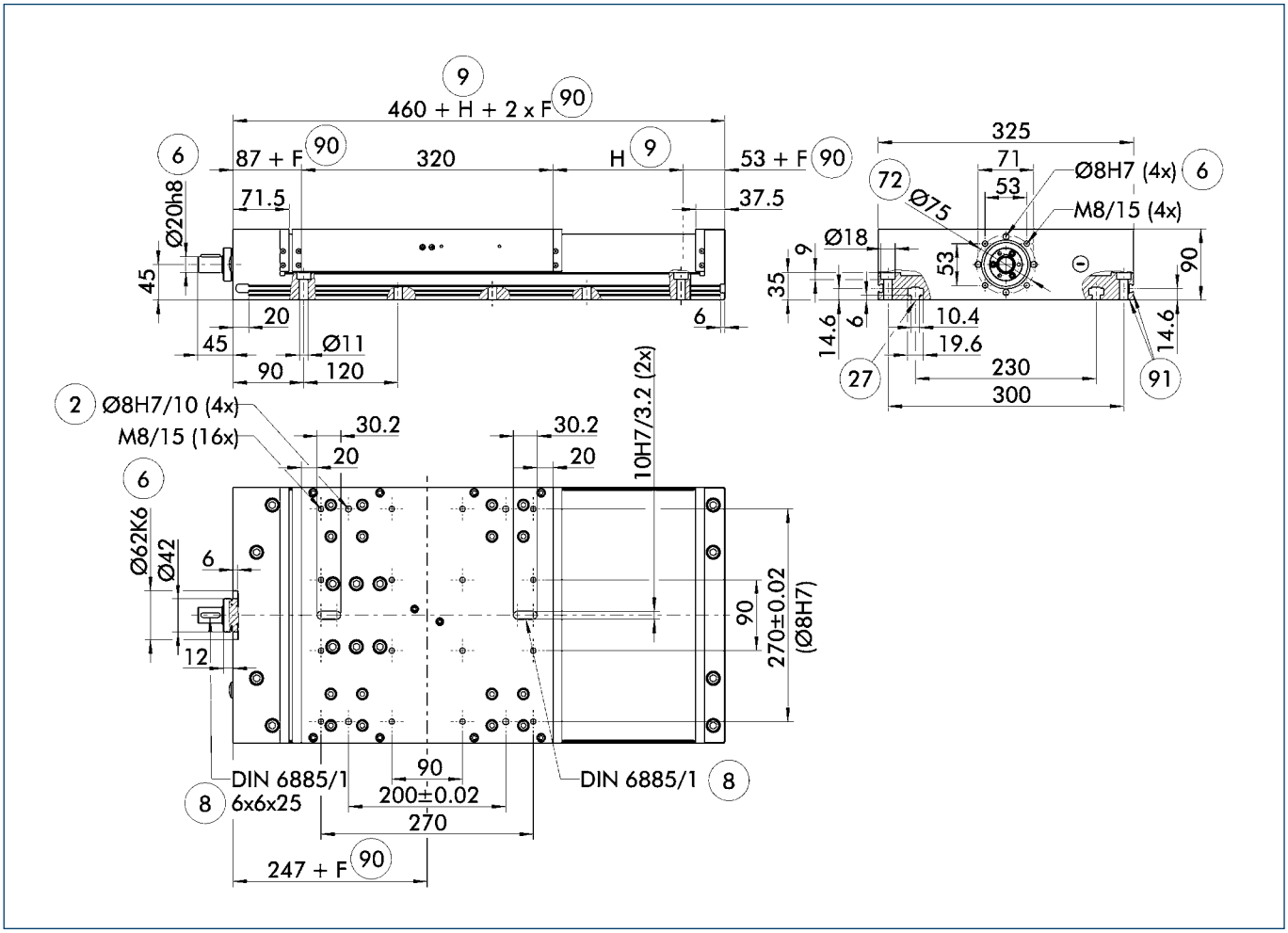
Load		Dynamic
F_x**	[N]	12000
F_y	[N]	11000
F_z	[N]	95000
$-F_z$	[N]	63000
Load torques		**Dynamic**
M_x	[Nm]	6300
M_y	[Nm]	7500 (9500)
M_z	[Nm]	3750 (5000)
M_{Amax}	[Nm]	11.1 (p=5)
		20.7 (p=10)
		39.8 (p=20)
		62.7 (p=32)

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

Technical data

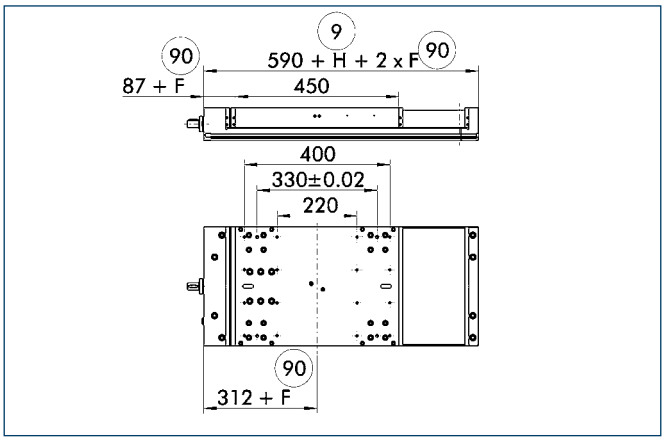
Designation		A 30B-325
Max. travel speed	[m/s]	2.0
Repeat accuracy	[mm]	**± 0.03**
Max. acceleration	[m/s²]	20
Idle torque	[Nm]	1.6
Maximum stroke	[mm]	2540
Max. total length	[mm]	3000
Moment of inertia	[kgm²]	0.000645
Drive element		**Ball-screw spindle drive**
Max. spindle speed	[rpm]	3000
Diameter	[mm]	32
Pitch	[mm]	5 / 10 / 20 / 32
Drive element		**Trapezoidal threaded drive**
Max. spindle speed	[rpm]	1500
Diameter	[mm]	32
Pitch	[mm]	6
Weights		
Basic without travel	[kg]	37.0
Travel per 100 mm	[kg]	3.8
Slide plate 320 mm	[kg]	13.4
Slide plate 450 mm	[kg]	18.8

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 Bellow block length
91 Stop angle for alignment of axis

Long slide



9 Useful stroke
90 Bellow block length

Bellow calculation

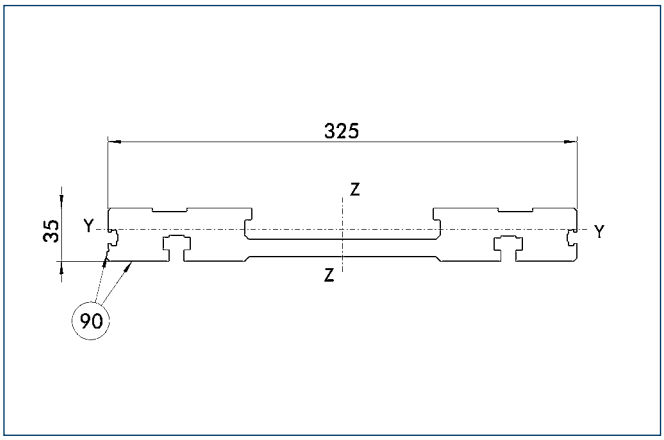
[(Travel + 15) / 33]	= Number of folds
[(Number of folds x 4.8) - 15]	= 1x Bellow block length

Calculation example:

Distance traveled	**= 550 mm**
[(550 mm + 15) / 33]	= 17.12 Round up! (18 folds)
[(18 x 4.8) - 15]	= 72 mm (1x bellow block length)

A 30B-325

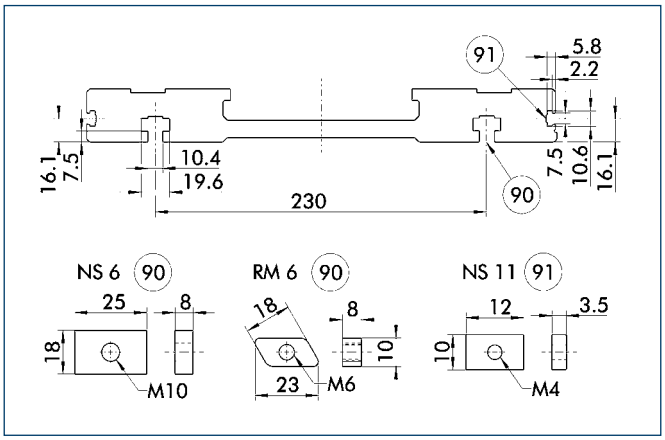
Profile



(90) Stop angle standard side

Specific mass	[kg/m]	21.24
Planar dimension	[mm²]	7868
Planar moment of inertia I_y	[mm⁴]	841240
Planar moment of inertia I_z	[mm⁴]	88022524
Load torque W_y	[mm³]	42594
Load torque W_z	[mm³]	538754

Mounting

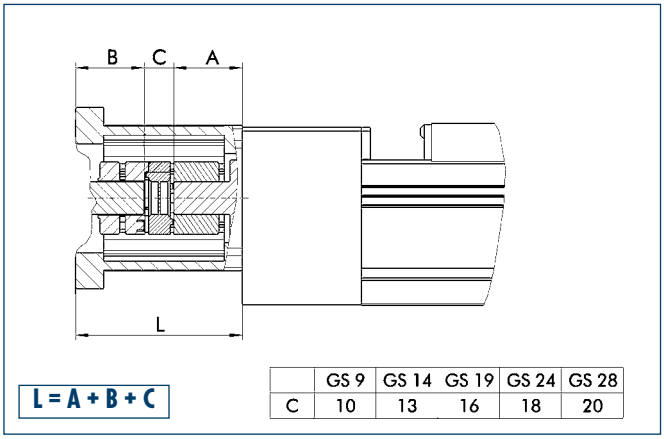


(90) T-nut on base side (91) Side T-nut

The profile can be secured using T-nuts.

Designation	Order designation	ID no.
T-nut	NS6	0331409
T-nut	NS11	0331429
T-nut	RM6	0331427

Motor flange schematic diagram



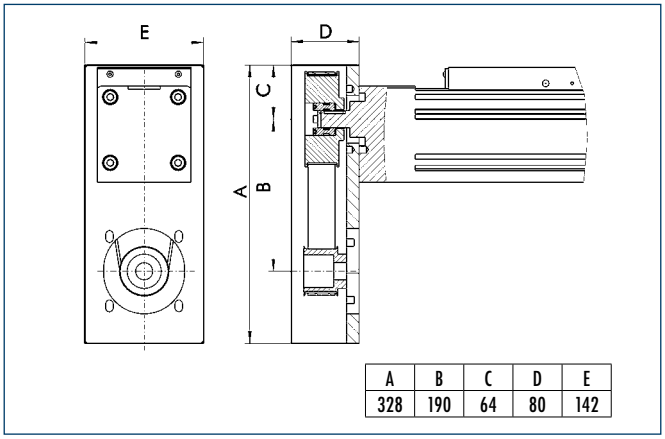
L = A + B + C

	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.

Angle gear schematic diagram



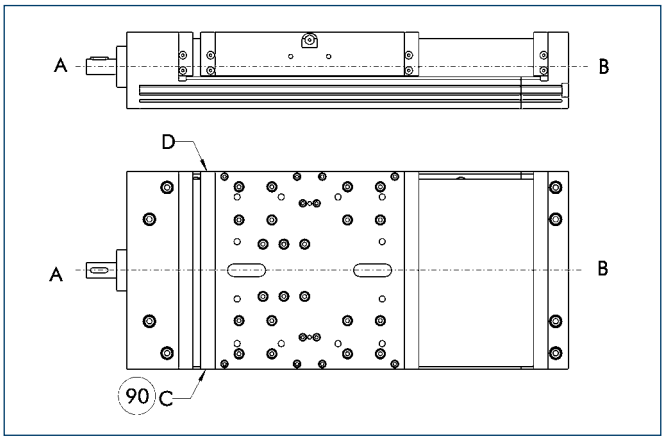
A	B	C	D	E
328	190	64	80	142

Possible transmission ratios: i = 1 : 1, i = 2 : 1, i = 3 : 1
Caution: Dimension C can change at i ≠ 1:1 or with smooth motor shafts (without feather key).
Even in tight conditions, different drive solutions can be attached. SCHUNK can provide you with the right angle gear for your drive.

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

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

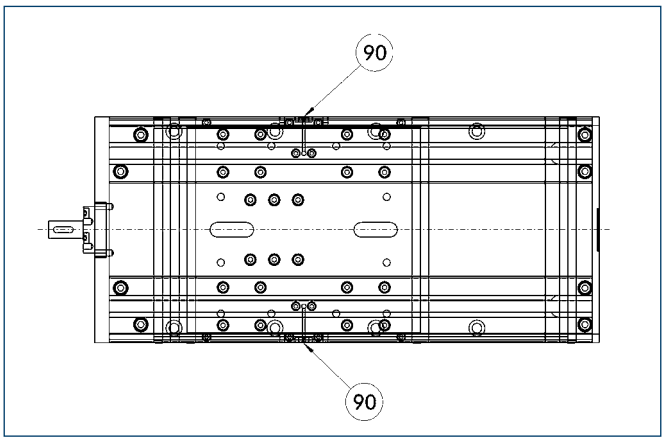
Two EO2 switches are used as limit switches and an RS2 as the reference switch as standard.

ⓘ 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



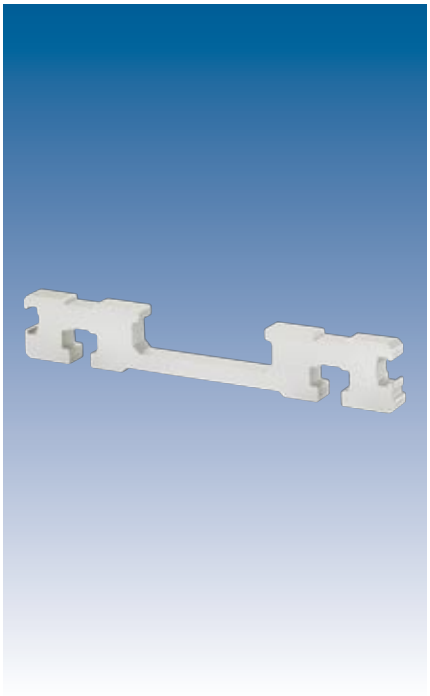
90 Standard lubrication connection

Standard connection
Lubrication nipple M8x1

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

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

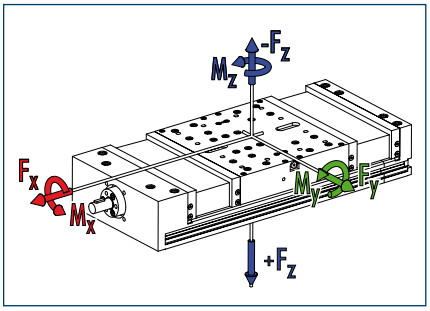
A 35B-455



Advantages of profiled rail guide

- High load bearing capacity
- Long lifetime
- High precision

Loads and load torques



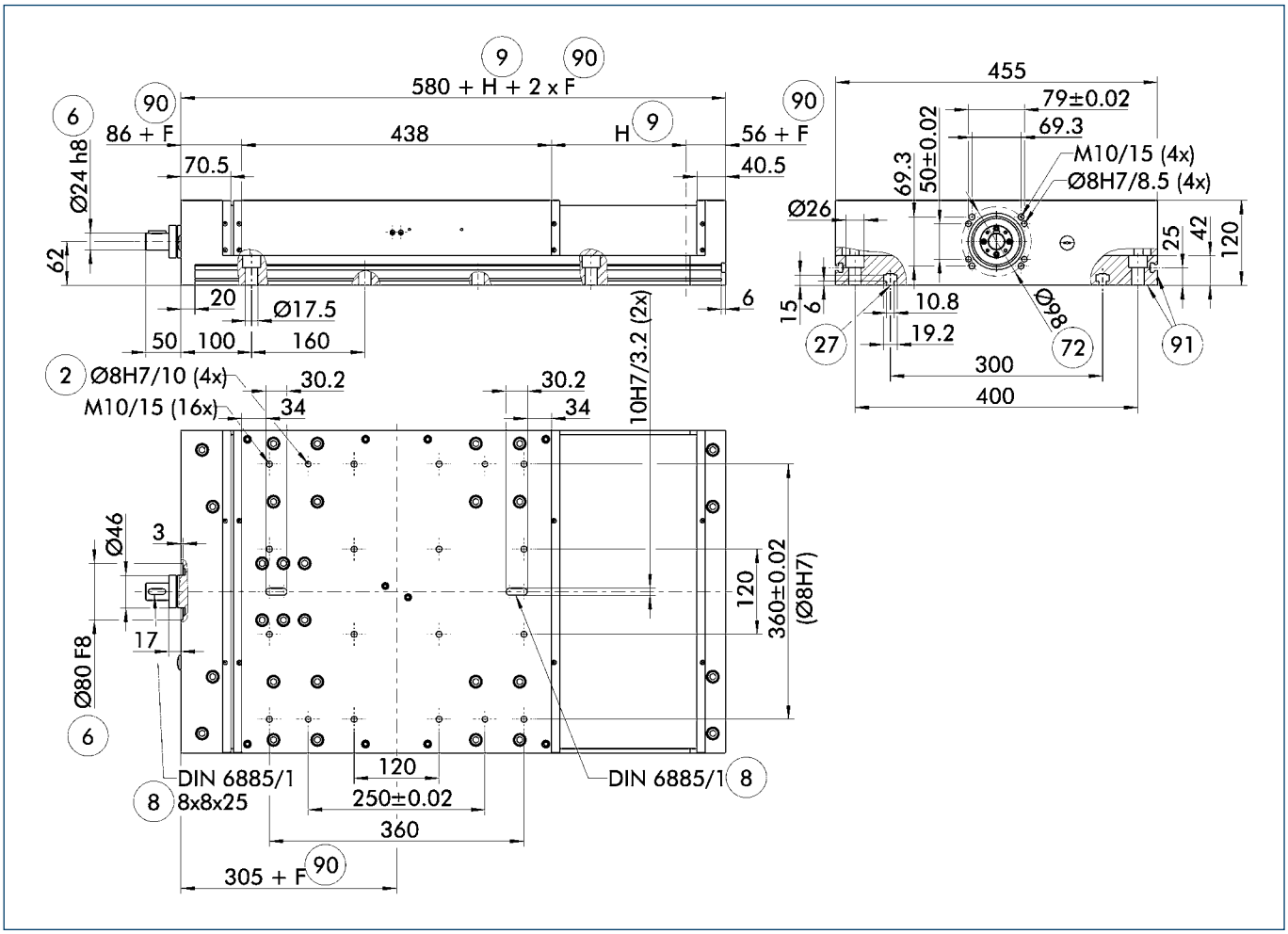
Load		Dynamic
F_x **	[N]	18000
F_y	[N]	14000
F_z	[N]	120000
$-F_z$	[N]	80000
Load torques		**Dynamic**
M_x	[Nm]	12000
M_y	[Nm]	10000 (13000)
M_z	[Nm]	5000 (6000)
M_{Amax}	[Nm]	16.8 (p=5)
		31.1 (p=10)
		59.8 (p=20)
		117.1 (p=40)

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

Technical data

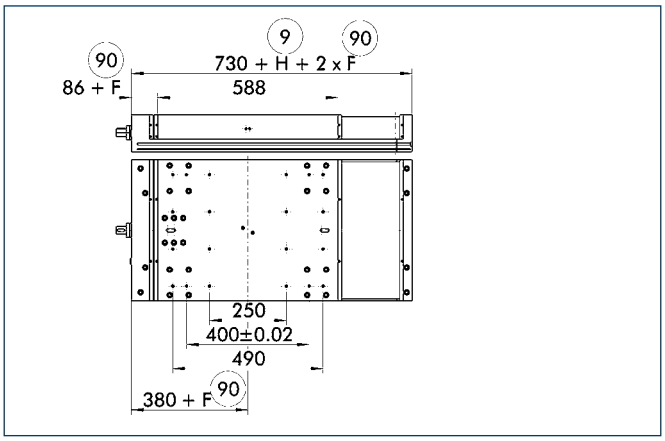
Designation		A 35B-455
Max. travel speed	[m/s]	2.0
Repeat accuracy	[mm]	**± 0.03**
Max. acceleration	[m/s²]	20
Idle torque	[Nm]	2.5
Maximum stroke	[mm]	2420
Max. total length	[mm]	3000
Moment of inertia	[kgm²]	0.00165
Drive element		**Ball-screw spindle drive**
Max. spindle speed	[rpm]	3000
Diameter	[mm]	40
Pitch	[mm]	5 / 10 / 20 / 40
Drive element		**Trapezoidal threaded drive**
Max. spindle speed	[rpm]	1500
Diameter	[mm]	40
Pitch	[mm]	7
Weights		
Basic without travel	[kg]	65.2
Travel per 100 mm	[kg]	5.2
Slide plate 450 mm	[kg]	26.2
Slide plate 600 mm	[kg]	33.8

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) Bellow block length
(91) Stop angle for alignment of axis

Long slide



(9) Useful stroke
(90) Bellow block length

Bellow calculation

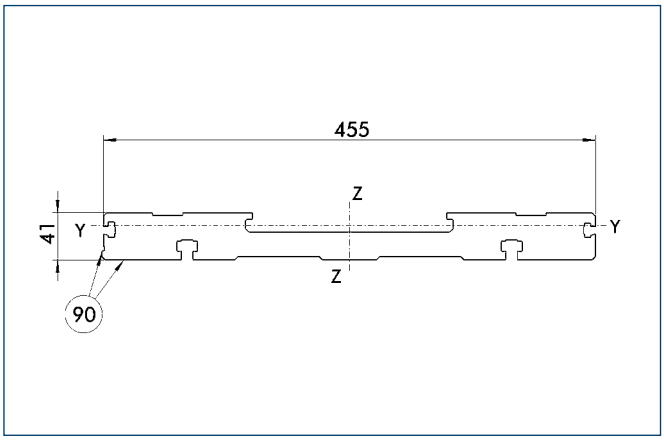
[(Travel + 15) / 47]	= Number of folds
[(Number of folds x 5.5) - 15]	= 1x Bellow block length

Calculation example:

Distance traveled	**= 500 mm**
[(500 mm + 15) / 47]	= 10.95 Round up! (11 folds)
[(11 x 5.5) - 15]	= 46 mm (1x bellow block length)

A 35B-455

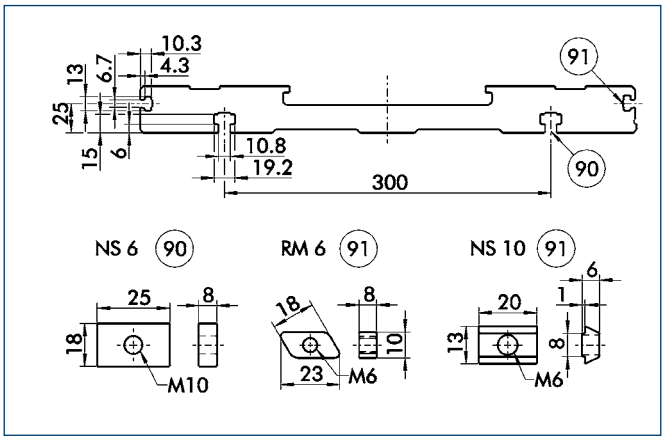
Profile



(90) Stop angle standard side

Specific mass	[kg/m]	40.21
Planar dimension	[mm²]	14892
Planar moment of inertia I_y	[mm⁴]	2003907
Planar moment of inertia I_z	[mm⁴]	297691553
Load torque W_y	[mm³]	85106
Load torque W_z	[mm³]	1300745

Mounting



(90) T-nut on base side (91) Side T-nut

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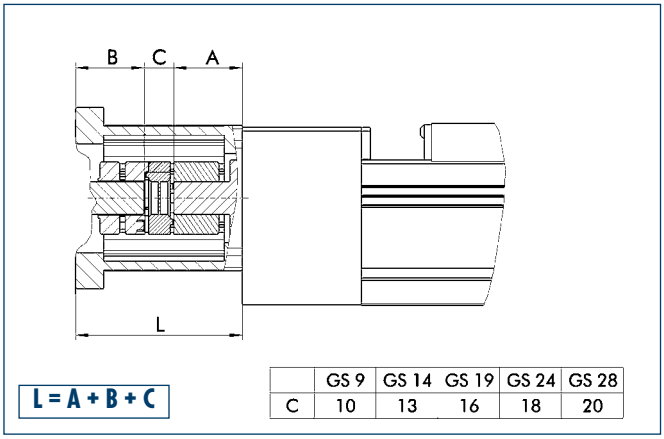
T-nut	NS6	0331409
T-nut	NS10	0331422
T-nut	RM6	0331427

Motor flange schematic diagram



L = A + B + C

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

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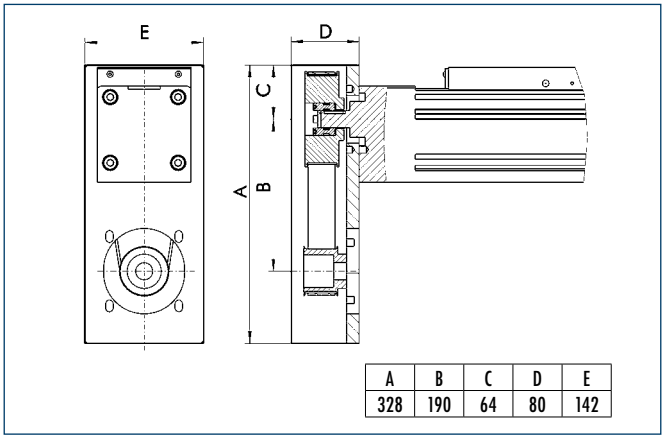
Angle gear schematic diagram



A	B	C	D	E
328	190	64	80	142

Possible transmission ratios: i = 1 : 1, i = 2 : 1, i = 3 : 1
Caution: Dimension C can change at i ≠ 1:1 or with smooth motor shafts (without feather key).
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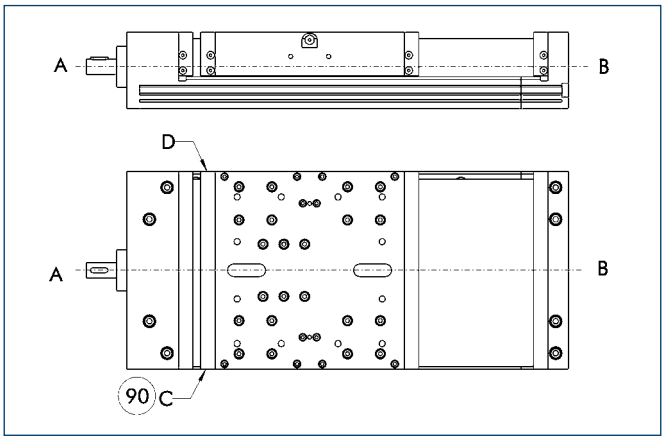
Limit switch position



(90) Limit switch standard position

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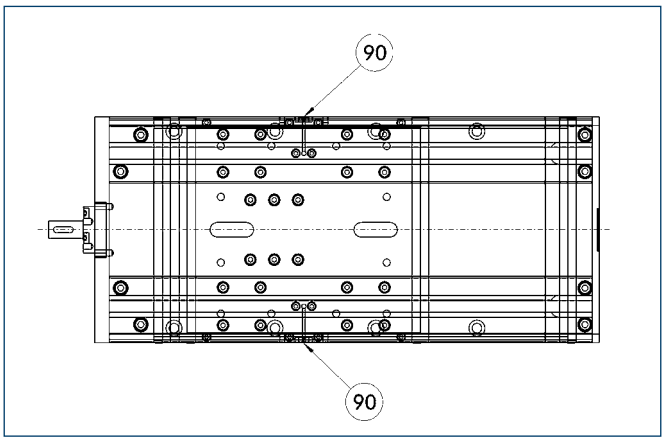
Mechanical limit switch (Siemens), opener	EMS	0331414
Mechanical limit switch (Balluff), opener	EMB	0331415

Lubrication connections



(90) Standard lubrication connection

Standard connection
Lubrication nipple M8x1

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