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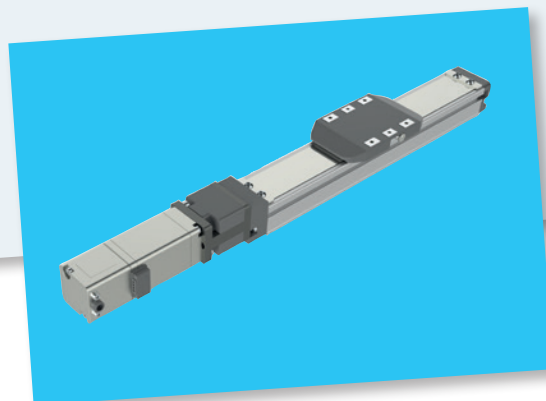
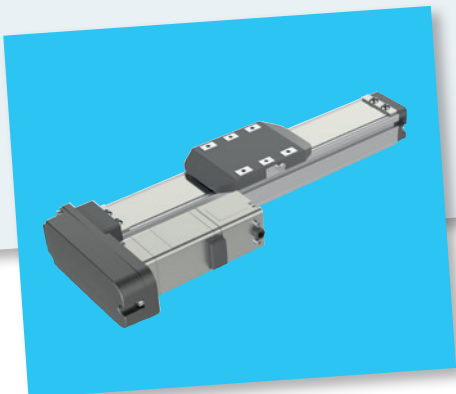
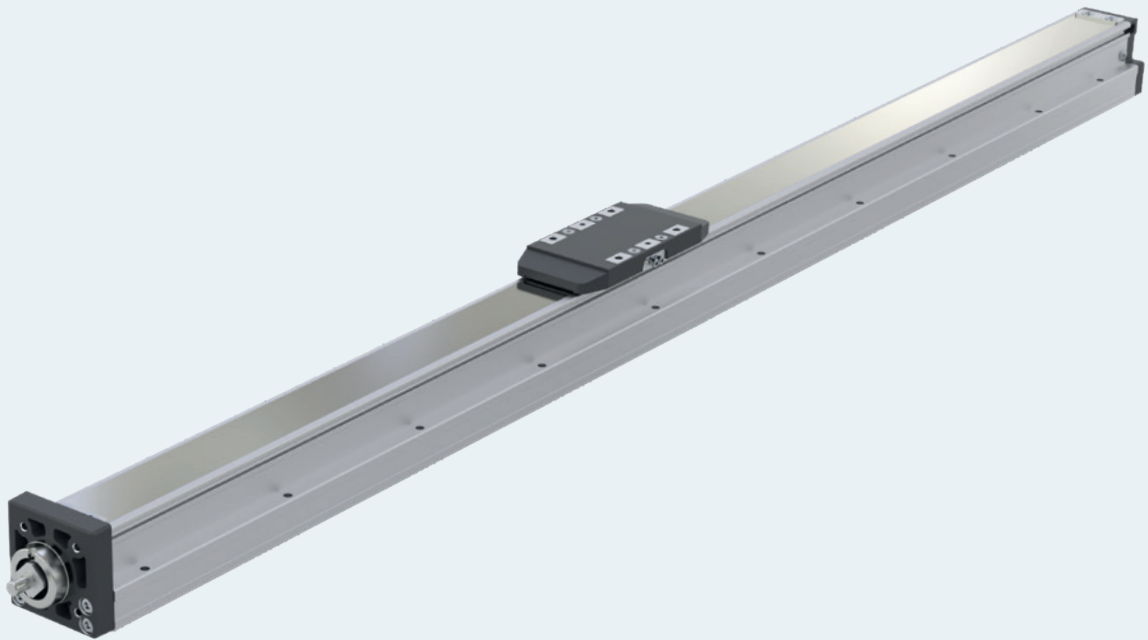


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**rexroth**  
A Bosch Company

# Small Modules Screw driven – SMS



## Identification system for short product names

<b>Example</b>		<b>SM</b>	<b>S</b>	<b>040</b>	<b>P12</b>	<b>100</b>
<b>System</b>	= <b>S</b> mall <b>M</b> odules					
<b>Drive</b>	= <b>S</b> crew drive (ball screw assembly)					
<b>Size</b>	= <b>030 / 040 / 050 / 080 / 120</b>					
<b>Lead</b>	= <b>P</b> (lead <b>12</b> mm)					
<b>Maximum travel range</b>	= $s_{max}$ (maximum travel range <b>100</b> mm)					

### Changes/additions at a glance

- ▶ Chapter "Structure": frame structure added
- ▶ Adaptation of technical data
- ▶ Dimensional drawings/sectional view of the frame
- ▶ Motor attachment tables
- ▶ Chapter "Additional information" : mounting, switch mounting

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# Product description

## Characteristic features

Rexroth SMS systems meet the precision and load-bearing capacity requirements of numerous popular applications and complement the tried-and-tested portfolio of high-performance linear axes.

## Structural design

- ▶ Ready-to-install module configurations in predefined lengths available ex stock
- ▶ Five matched sizes based on an ultra-compact aluminum profile with integrated guideways
- ▶ Carriage driven via ball screw assembly
- ▶ Protection of the installation elements by magnetically fixed sealing strip made of stainless steel
- ▶ In usual Rexroth quality and precision with a repeatability up to  $\pm 0.005$  mm

## Attachments (range of accessories)

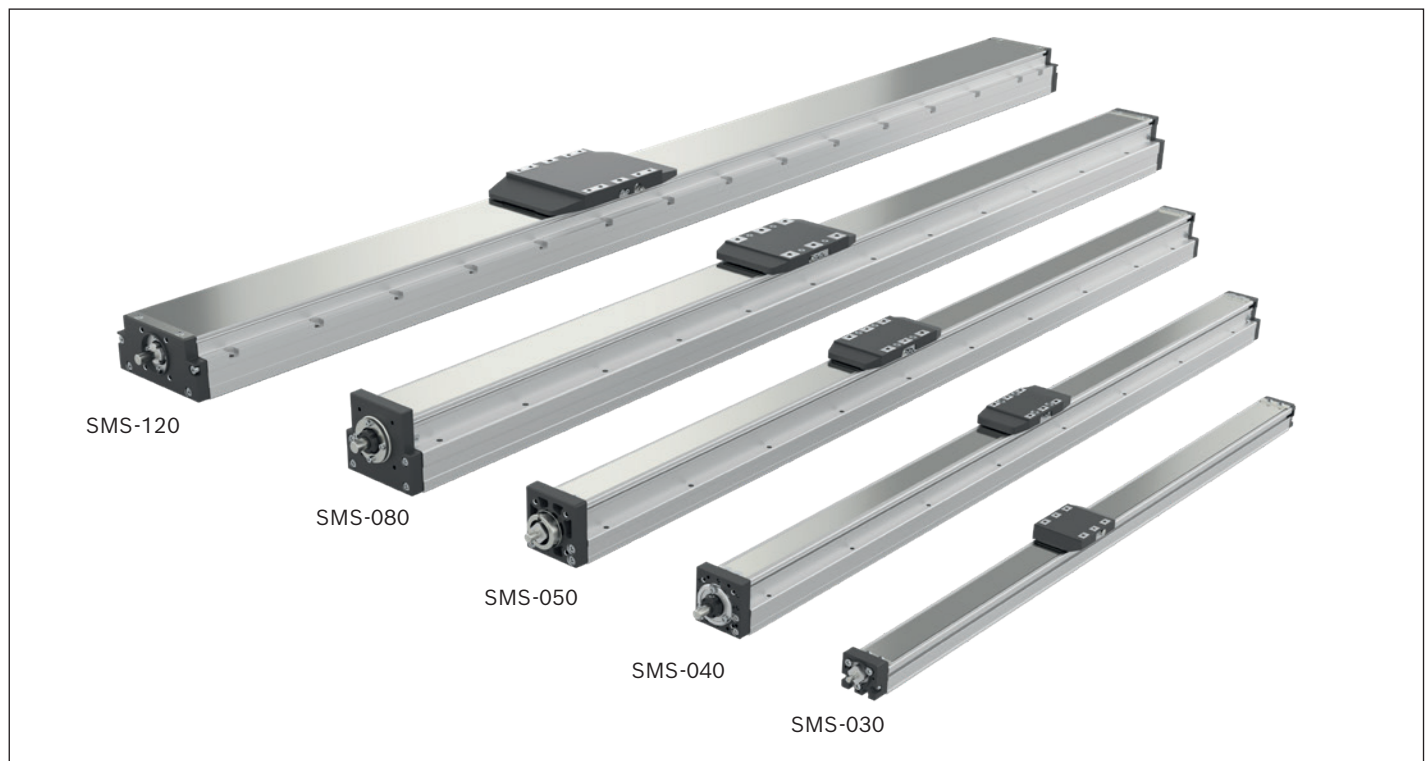
- ▶ Motor attachment either with flange and coupling or with belt side drive
- ▶ Optionally with Rexroth servo motor MSM

## Further highlights

- ▶ Simple product selection with fewer application parameters
- ▶ Online ordering via Rexroth Store and other digital marketplaces
- ▶ Exact handling with very good positioning accuracy
- ▶ Economical solution of simple positioning tasks with excellent price/performance ratio

## Application areas

- ▶ Pick and place
- ▶ Handling
- ▶ Placement systems, palletizers
- ▶ Feed units
- ▶ Motion units



**Installation position**

The installation position is basically variable.

For overhead mounting, please also note:

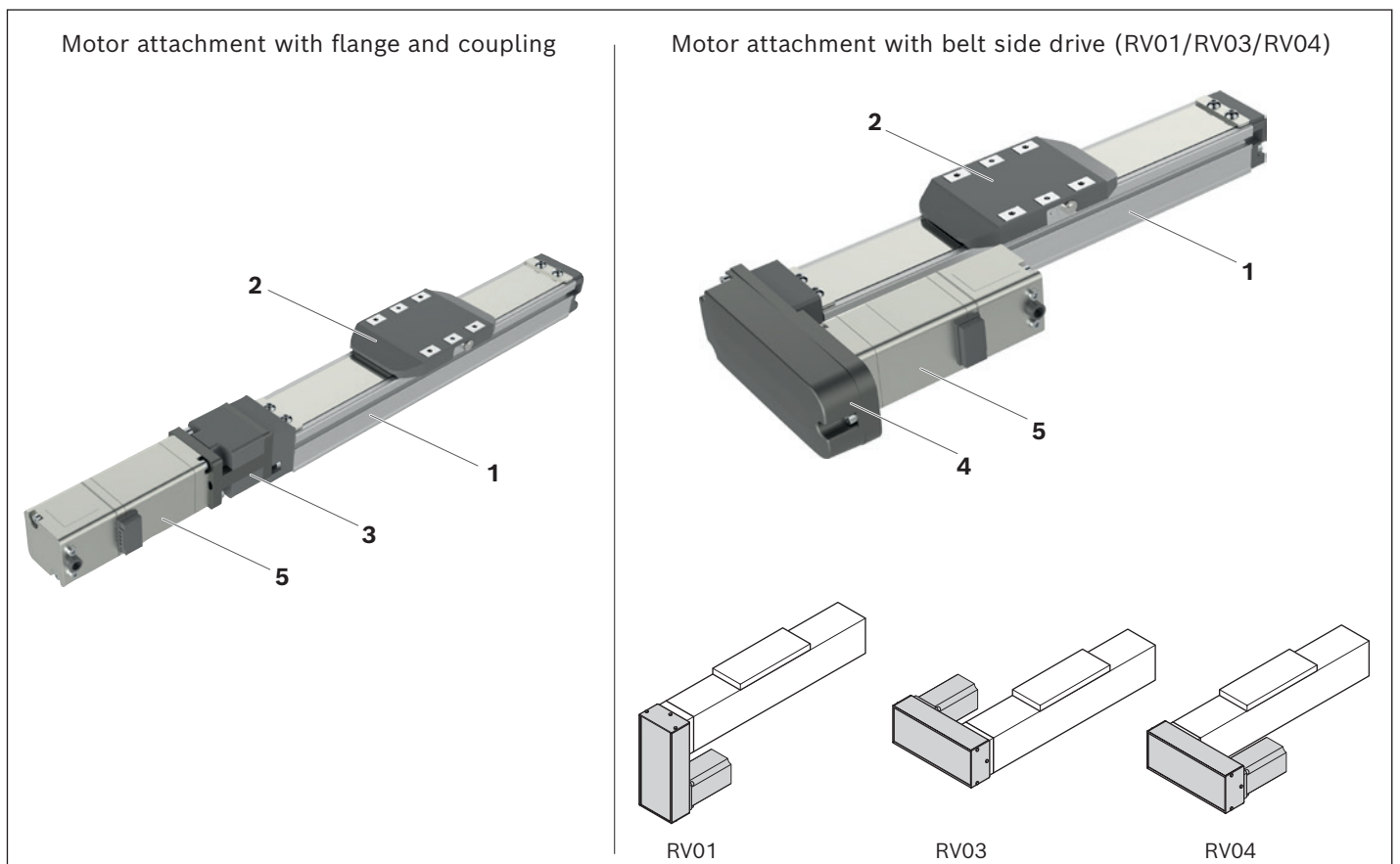
- All available fastening bores must be used.
- The maximum moved external load must not exceed 50% of the horizontal application (see chapter "Technical data").

**Form of delivery**

SMS systems come fully assembled.

**Range of accessories**

Structure of flange and coupling or with belt side drive (RV01/RV03/RV04) are available in the range of accessories.



- 1 Frame SMS
- 2 Carriage
- 3 Flange and coupling
- 4 Belt side drive
- 5 Motor

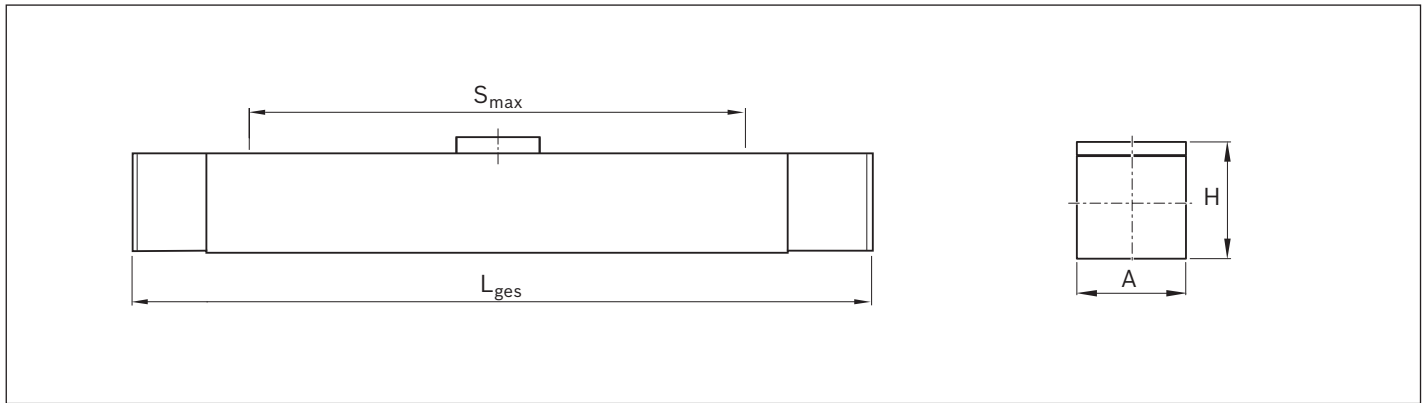
**Lubrication**

SMS systems are delivered with initial greasing.

**Documentation**

Each SMS system is supplied with the accompanying documentation.

## Product overview



SMS	A	H	Dimensions (mm)								
			S <sub>max</sub>	L <sub>total</sub>							
-030	30	30	S <sub>max</sub>	50	100	150	200	300	400	500	–
			L <sub>total</sub>	165	215	265	315	415	515	615	–
-040	44	52	S <sub>max</sub>	100	200	300	400	500	600	800	1 000
			L <sub>total</sub>	261	361	461	561	661	761	961	1 161
-050	54	60	S <sub>max</sub>	100	200	300	400	500	600	800	1 000
			L <sub>total</sub>	263	363	463	563	663	763	963	1 163
-080	82	78	S <sub>max</sub>	100	200	400	600	800	1 000	1 200	–
			L <sub>total</sub>	318	418	618	818	1 018	1 218	1 418	–
-120	120	76	S <sub>max</sub>	100	200	400	600	800	1 000	1 200	–
			L <sub>total</sub>	339	439	639	839	1 039	1 239	1 439	–



## Structural design

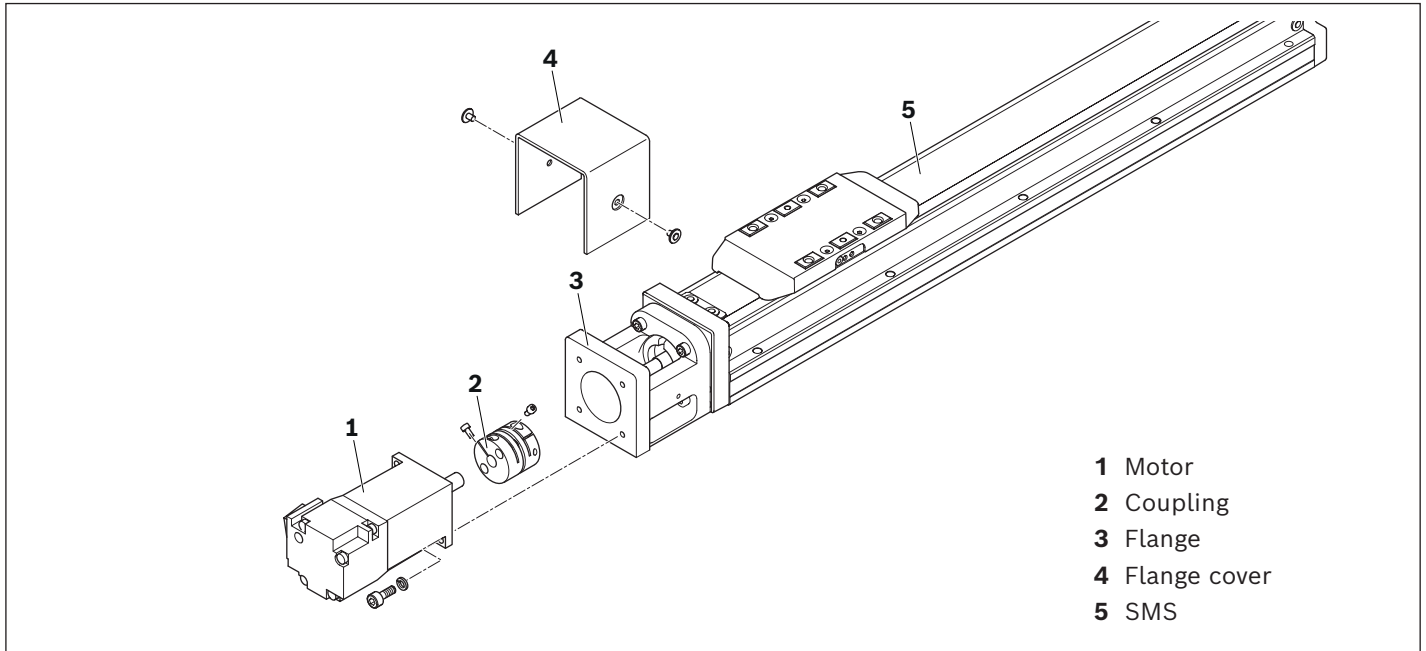
### Structure of flange and coupling

A motor with flange and coupling can be attached to all SMS systems with ball screw assembly.

The flange serves to fasten the motor to the SMS system and acts as a closed housing for the coupling.

The coupling transmits the motor drive torque free of distortive stresses to the drive shaft of the SMS system.

Standard couplings compensate for the system's thermal expansion.

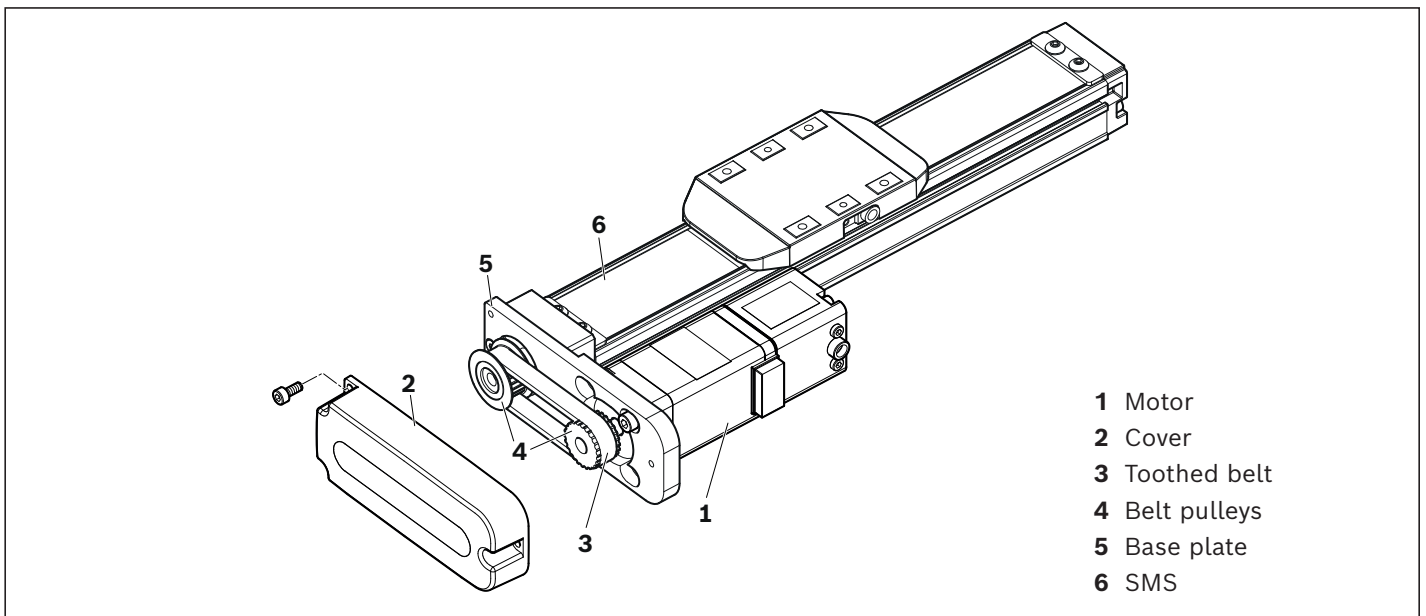


### Structure of belt side drive

A motor can be attached using a belt side drive to all SMS systems with ball screw assembly.

This makes the overall system length shorter than the motor attachment with flange and coupling.

The belt side drive serves as protection for the belt and as a motor bracket. Gear ratio  $i = 1$ .



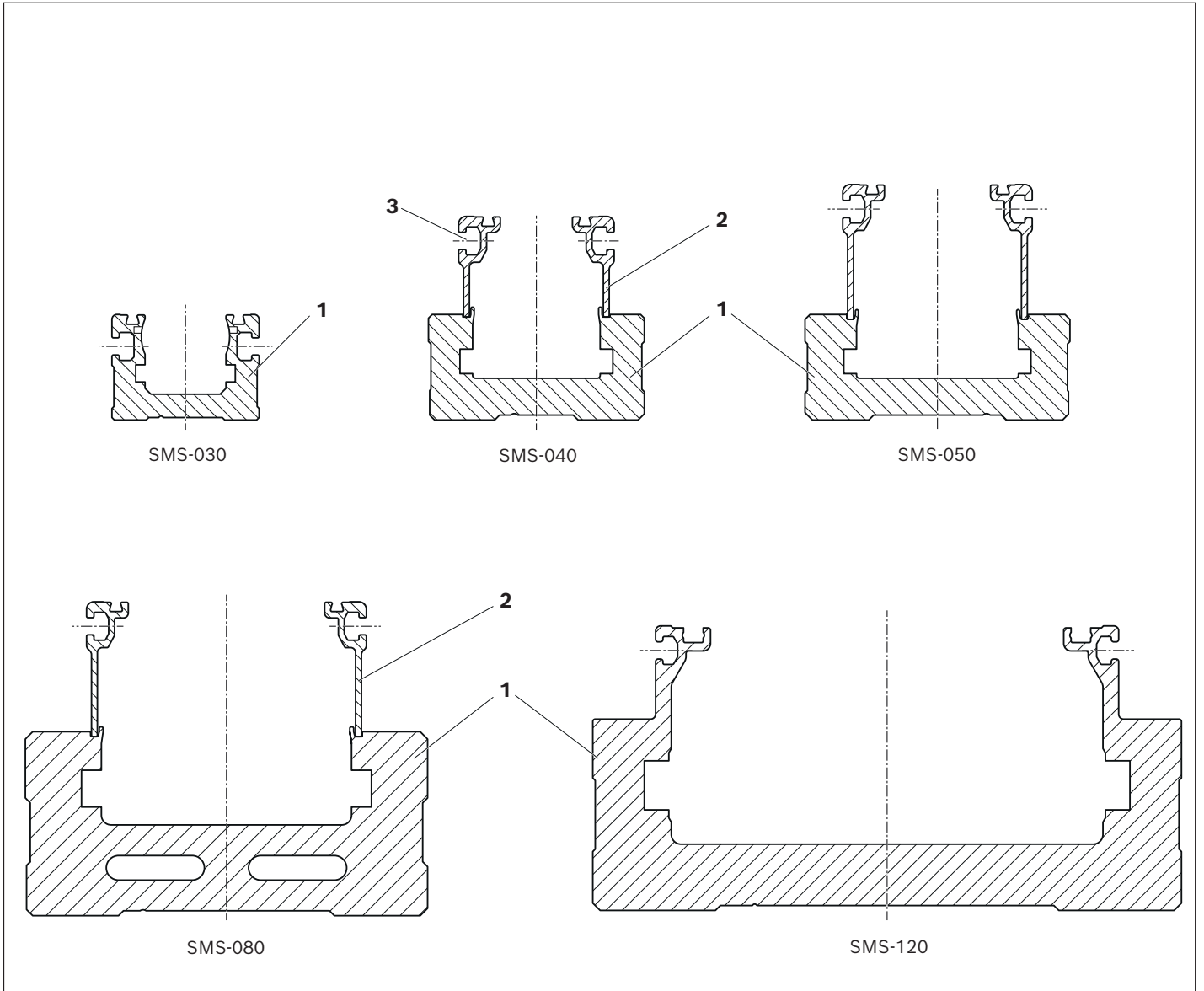


**Frame**

SMS -030 and 120: Frame (1) made of aluminum profile

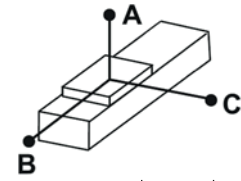
SMS -040 until 080: Frame (1) and side cover(2) made of aluminum profile

SMS all sizes: slot (3) for switch attachment on both sides

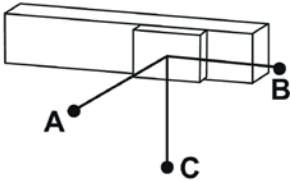
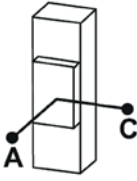


## Technical data

Size	Max. travel range	Max. speed	Weight	Max. acceleration	BASA	Horizontal application <sup>4)</sup>										
	$s_{\max}$ (mm)	$v_{\max}$ (m/s)	(kg)			$a_{\max}$ (m/s <sup>2</sup> )	$\varnothing d_0 \times P$ (mm)	Motor Power <sup>1)</sup>	Moved external load <sup>2)</sup>	Max. permissible overhang <sup>3)</sup> (mm)						
						W	$m_{\text{ex max}}$ (kg)	A	B	C						
<b>-030</b>	50	0,48	0,220	1,5	6 x 8	30	6	117	17	18						
	100	0,48	0,270					8	84	12	12					
	150	0,48	0,330					10	64	9	9					
	200	0,43	0,370													
	300	0,32	0,480													
	400	0,24	0,600													
500	0,16	0,719														
<b>-040</b>	100	0,72	1,000	3,6	10 x 12	50 / 100	8	250	58	71						
	200	0,72	1,350					12	160	36	44					
	300	0,72	1,710					100	14	134	29	36				
	400	0,72	2,070			20	87		18	23						
	500	0,66	2,430													
	600	0,54	2,790													
	800	0,30	3,510													
1 000	0,20	4,240														
<b>-050</b>	100	0,60	1,570	3,0	12 x 10	100	10	404	78	95						
	200	0,60	1,890					18	209	39	47					
	300	0,60	2,280						24	148	26	32				
	400	0,60	2,530							40	312	58	82			
	500	0,60	2,730								65	174	30	43		
	600	0,50	3,060								80	132	22	31		
	800	0,30	3,870								88	115	19	27		
1 000	0,18	5,390														
<b>-080</b>	100	0,60	3,860	3,0	16 x 10	200 / 400	20	247	95	110						
	200	0,60	4,570					30	157	58	68					
	400	0,60	5,920						40	112	40	47				
	600	0,60	7,280							200 / 400	30	157	58	68		
	800	0,45	8,530								40	112	40	47		
	1 000	0,26	9,850													
	1 200	0,18	11,530	6,0	16 x 20	200 / 400	30	2 321	459	591						
	100	1,20	3,860					50	1 358	265	342					
	200	1,20	4,570						88	736	140	180				
	400	1,20	5,920							400	15	708	448	397		
	600	1,20	7,280								25	415	259	230		
	800	0,90	8,530								30	341	211	189		
	1 000	0,53	9,850													
1 200	0,36	11,530														
<b>-120</b>	100	0,60	4,820	3,0	16 x 10	400	15	708	448	397						
	200	0,60	5,520					25	415	259	230					
	400	0,60	6,920						30	341	211	189				
	600	0,60	8,320							9,6	16 x 32	15	708	448	397	
	800	0,50	9,720										25	415	259	230
	1 000	0,33	11,120										30	341	211	189
	1 200	0,25	12,520													
	100	1,92	4,820	9,6	16 x 32	400	15	708	448	397						
	200	1,92	5,520					25	415	259	230					
	400	1,92	6,920						30	341	211	189				
	600	1,92	8,320							9,6	16 x 32	15	708	448	397	
	800	1,60	9,720										25	415	259	230
	1 000	1,06	11,120										30	341	211	189
1 200	0,80	12,520														



The service life of the SMS axes is 10 000 km if the product is used under the specified conditions.

Wall mounting					Vertical application					Max. drive torque
Moved external load <sup>2)</sup>		Max. permissible overhang <sup>3)</sup> (mm)			Motor-Power <sup>1)</sup>	Moved external load <sup>2)</sup>		Max. permissible overhang <sup>3)</sup> (mm)		
										
$m_{ex \max}$ (kg)	A	B	C	W	$m_{ex \max}$ (kg)	A	C	$M_{mech}$ (Nm)		
6	18	17	117	30	1	120	120	1,1		
8	12	12	84		2	60	60			
10	9	9	64		-	-	-			
8	71	58	250	50 / 100	2	253	253	1,1		
12	44	36	160	100	3,5	144	144			
14	36	29	134							
20	23	18	87	-	-	-	-			
10	95	78	404	100	1	859	859	1,1		
18	47	39	209		3	286	286			
24	32	26	148		5	171	171			
40	82	58	312	200 / 400	8	351	351	2,2		
65	43	30	174	400	15	187	187			
80	31	22	132		21	133	133			
88	27	19	115							
20	110	95	247	200 / 400	3	660	660	1,1		
30	68	58	157	400	5	396	396			
40	47	40	112		8	247	247			
30	634	478	2 321	400	10	1 546	1 546	3,1		
50	367	277	1 358		14	1 107	1 107			
88	194	146	736		22	702	702			
15	508	527	847		3	2 220	2 220			
25	296	306	496		5	1 332	1 332			
30	243	251	408		8	832	832			

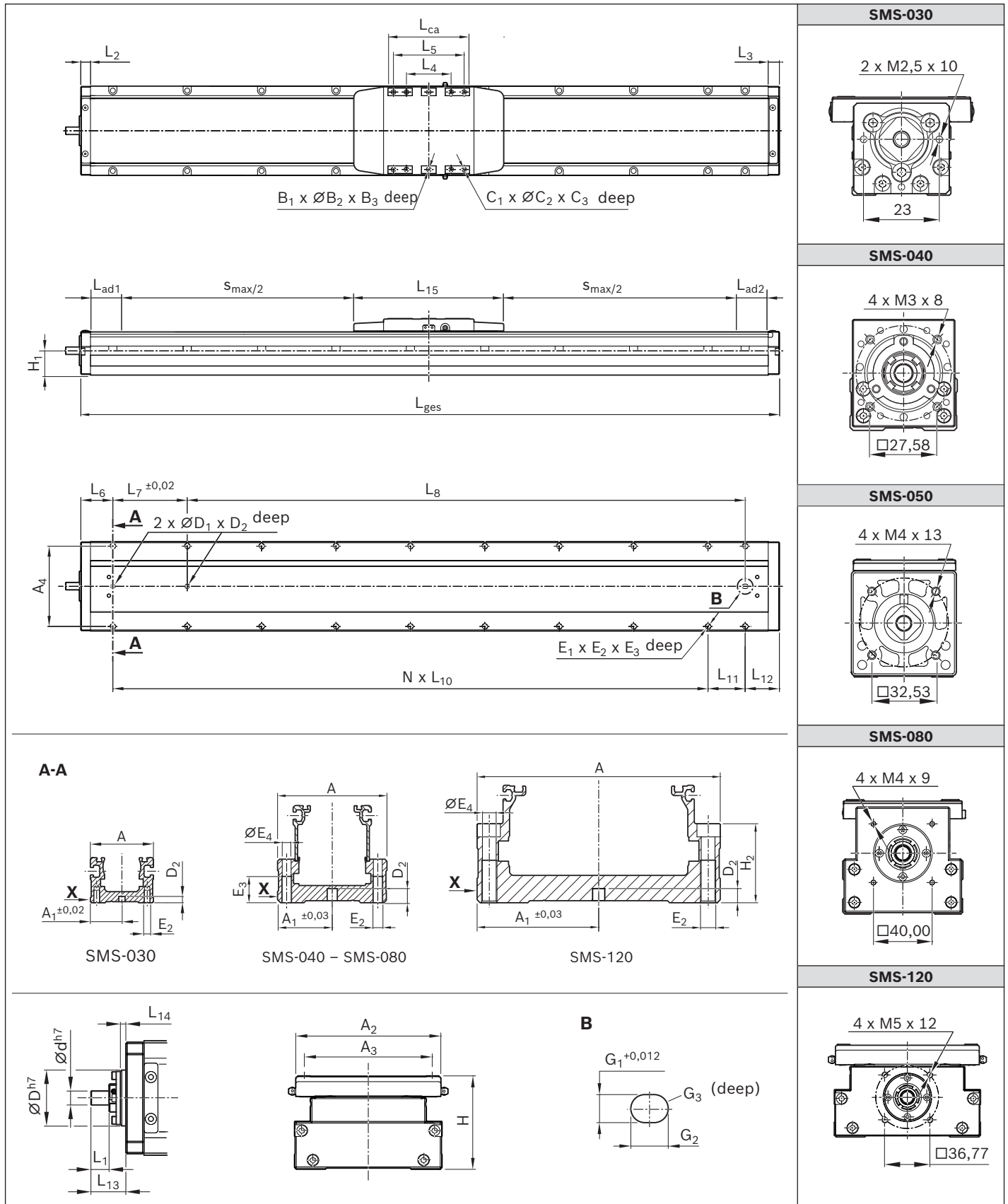
<sup>1)</sup> Motor power for horizontal application and wall mounting

<sup>2)</sup> Max. permissible payload

<sup>3)</sup> In the case of a combined overhang, observe the chapter „material numbers/ordering examples“

<sup>4)</sup> Observe the information on the installation provided in chapter "Product description".

# Dimension drawings



X = reference edge

SMS	A	A <sub>1</sub>	A <sub>2</sub>	A <sub>3</sub>	A <sub>4</sub>	B <sub>1</sub>	B <sub>2</sub> <sup>H7</sup>	B <sub>3</sub>	C <sub>1</sub>	C <sub>2</sub>	C <sub>3</sub>	D <sub>h7</sub>	d <sub>h7</sub>	D <sub>1</sub> <sup>H7</sup>	D <sub>2</sub>	E <sub>2</sub>	E <sub>3</sub>	E <sub>4</sub>	G <sub>1</sub>	G <sub>2</sub>	G <sub>3</sub>
-030	30	15.0	42.3	33.5	24	2	2	3.0	4	M3	7.0	19	4	3	3	M3	6	-	3	4	3
-040	44	21.7	42.6	35.0	36	2	3	4.5	4	M4	9.5	32	7	4	5	M4	10	3.4	4	5	5
-050	54	26.7	52.5	42.0	45	2	3	6.0	4	M5	11.0	30	7	5	7	M5	13	4.4	5	7	7
-080	82	40.7	81.0	65.0	68	2	5	8.0	4	M6	13.0	40	10	5	9	M6	15	5.4	5	7	9
-120	120	60.0	118.0	104.0	108	2	6	10.0	8	M6	17.0	40	10	6	7	M8	16	6.8	6	8	7

SMS	H	H <sub>1</sub>	H <sub>2</sub>	L <sub>1</sub>	L <sub>2</sub>	L <sub>3</sub>	L <sub>4</sub>	L <sub>5</sub>	L <sub>6</sub>	L <sub>7</sub>	L <sub>10</sub>	L <sub>12</sub>	L <sub>13</sub>	L <sub>14</sub>	L <sub>15</sub> TT total	L <sub>ca</sub>	L <sub>ad1</sub>	L <sub>ad2</sub>
-030	30	17.0	-	8.0	13	8	31	-	23	100	100	18	13.0	1.5	70.2	40	11.9	11.9
-040	52	23.5	21.5	14.0	11	10	40	-	36	100	100	50	24.1	5.0	90.0	50	25.0	25.0
-050	60	27.7	21.5	11.3	13	10	52	-	38	100	100	50	26.3	1.5	116.0	65	12.5	11.5
-080	78	41.5	37.5	13.0	13	15	75	-	38	100	100	80	25.0	3.9	135.0	90	26.5	28.5
-120	76	32.5	39.0	17.9	13	15	60	95	43	100	100	46	19.9	2.0	201.5	110	5.75	3.75

-030	S <sub>max</sub>	50	100	150	200	300	400	500	-
	L <sub>total</sub>	165	215	265	315	415	515	615	-
	L <sub>8</sub>	24	74	124	174	274	374	474	-
	L <sub>11</sub>	24	74	24	74	74	74	74	-
	N	1	1	2	2	3	4	5	-
	E <sub>1</sub>	6	6	8	8	10	12	14	-

-040	S <sub>max</sub>	100	200	300	400	500	600	800	1 000
	L <sub>total</sub>	261	361	461	561	661	761	961	1 161
	L <sub>8</sub>	75	175	275	375	475	575	775	975
	L <sub>11</sub>	75	75	75	75	75	75	75	75
	N	1	2	3	4	5	6	8	10
	E <sub>1</sub>	6	8	10	12	14	16	20	24

-050	S <sub>max</sub>	100	200	300	400	500	600	800	1 000
	L <sub>total</sub>	263	363	463	563	663	763	963	1 163
	L <sub>8</sub>	75	175	275	375	475	575	775	975
	L <sub>11</sub>	75	75	75	75	75	75	75	75
	N	1	2	3	4	5	6	8	10
	E <sub>1</sub>	6	8	10	12	14	16	20	24

-080	S <sub>max</sub>	100	200	400	600	800	1 000	1 200	-
	L <sub>total</sub>	318	418	618	818	1 018	1 218	1 418	-
	L <sub>8</sub>	100	200	400	600	800	1 000	1 200	-
	L <sub>11</sub>	100	100	100	100	100	100	100	-
	N	1	2	4	6	8	10	12	-
	E <sub>1</sub>	6	8	12	16	20	24	27	-

-120	S <sub>max</sub>	100	200	400	600	800	1 000	1 200	-
	L <sub>total</sub>	339	439	639	839	1 039	1 239	1 439	-
	L <sub>8</sub>	150	250	450	650	850	1 050	1 250	-
	L <sub>11</sub>	50	50	50	50	50	50	50	-
	N	2	3	5	7	9	11	13	-
	E <sub>1</sub>	8	10	14	18	22	26	30	-

Notes: Dimensions in mm. Diagrams are in different scales.  
Exact contours and dimensions can be found in the CAD model.

# Material numbers/ordering examples

SMS	Description	Material number
<b>-030</b>	SMS-030-P8-50	R02681C001
	SMS-030-P8-100	R02681C002
	SMS-030-P8-150	R02681C003
	SMS-030-P8-200	R02681C004
	SMS-030-P8-300	R02681C006
	SMS-030-P8-400	R02681C008
	SMS-030-P8-500	R02681C010
<b>-040</b>	SMS-040-P12-100	R02681D002
	SMS-040-P12-200	R02681D004
	SMS-040-P12-300	R02681D006
	SMS-040-P12-400	R02681D008
	SMS-040-P12-500	R02681D010
	SMS-040-P12-600	R02681D012
	SMS-040-P12-800	R02681D016
SMS-040-P12-1000	R02681D020	
<b>-050</b>	SMS-050-P10-100	R02681E002
	SMS-050-P10-200	R02681E004
	SMS-050-P10-300	R02681E006
	SMS-050-P10-400	R02681E008
	SMS-050-P10-500	R02681E010
	SMS-050-P10-600	R02681E012
	SMS-050-P10-800	R02681E016
SMS-050-P10-1000	R02681E020	
<b>-080</b>	SMS-080-P10-100	R02681H002
	SMS-080-P10-200	R02681H004
	SMS-080-P10-400	R02681H008
	SMS-080-P10-600	R02681H012
	SMS-080-P10-800	R02681H016
	SMS-080-P10-1000	R02681H020
	SMS-080-P10-1200	R02681H024
	SMS-080-P20-100	R02681H052
	SMS-080-P20-200	R02681H054
	SMS-080-P20-400	R02681H058
	SMS-080-P20-600	R02681H062
	SMS-080-P20-800	R02681H066
	SMS-080-P20-1000	R02681H070
SMS-080-P20-1200	R02681H074	
<b>-120</b>	SMS-120-P10-100	R02681L002
	SMS-120-P10-200	R02681L004
	SMS-120-P10-400	R02681L008
	SMS-120-P10-600	R02681L012
	SMS-120-P10-800	R02681L016
	SMS-120-P10-1000	R02681L020
	SMS-120-P10-1200	R02681L024
	SMS-120-P32-100	R02681L052
	SMS-120-P32-200	R02681L054
	SMS-120-P32-400	R02681L058
	SMS-120-P32-600	R02681L062
	SMS-120-P32-800	R02681L066
	SMS-120-P32-1000	R02681L070
	SMS-120-P32-1200	R02681L074

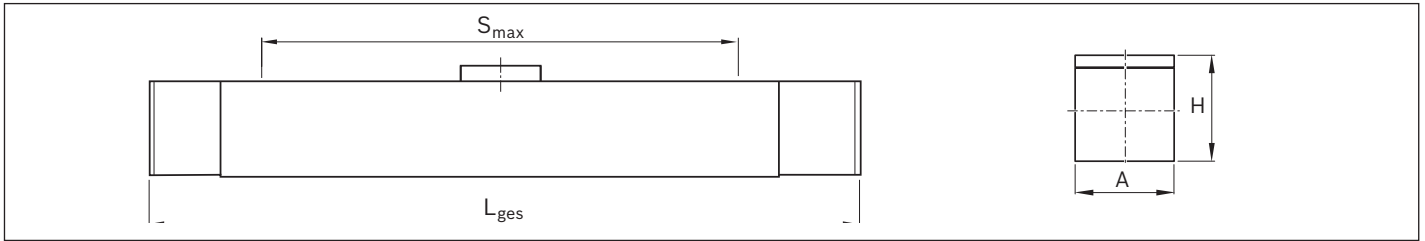
<b>Ordering example (freely selected)</b>	<b>SM</b>   <b>S</b>   <b>- 080</b>   <b>- P10</b>   <b>- 1200</b>
<b>System</b>	= Small Modules
<b>Drive</b>	= Screw drive (ball screw assembly)
<b>Size</b>	= <b>080</b>
<b>Lead</b>	= <b>P</b> (lead <b>10</b> mm)
<b>Maximum travel range</b>	= $s_{max}$ (maximum travel range <b>1 200</b> mm)

➡ **SMS-080-P10-1200** with material number: R02681H024

**Selection example via installation space; given data:**

**A:** up to 50 mm; **H:** up to 55 mm; **L<sub>total</sub>** < 1000 mm; travel range **S<sub>max</sub>** from 650 to 700 mm.

On the basis of the given data, the chapter "Product overview" results in the SMS-040 with the description **SMS-040-P12-800** and material number **R02681D016**.



SMS	A	H	Dimensions (mm)								
			$S_{max}$	50	100	150	200	300	400	500	-
-030	30	30	$S_{max}$	50	100	150	200	300	400	500	-
			$L_{total}$	165	215	265	315	415	515	615	-
-040	44	52	$S_{max}$	100	200	300	400	500	600	800	1 000
			$L_{total}$	261	361	461	561	661	761	961	1 161
-050	54	60	$S_{max}$	100	200	300	400	500	600	800	1 000
			$L_{total}$	263	363	463	563	663	763	963	1 163
-080	82	78	$S_{max}$	100	200	400	600	800	1 000	1 200	-
			$L_{total}$	318	418	618	818	1 018	1 218	1 418	-
-120	120	76	$S_{max}$	100	200	400	600	800	1 000	1 200	-
			$L_{total}$	339	439	639	839	1 039	1 239	1 439	-

**Selection example via dynamic specifications; given data:**

Horizontal application; payload **m<sub>ex</sub>** = 14 kg (fastened at the carriage);

Load center of gravity **A** = 60 mm, **B** = 15 mm, **C** = 0 mm; travel range **s<sub>max</sub>** = 500 mm;

On the basis of the given data, the chapter "Technical Data" results in the SMS-040 with the description **SMS-040-P12-500** and material number **R02681D010**.

Size	Max. travel range	Max. speed	Weight	Max. acceleration	BASA lead	Horizontal application				
						Moved external load <sup>1)</sup>	Max. permissible overhang (mm)			
	$s_{max}$ (mm)	$v_{max}$ (m/s)	(kg)	$a_{max}$ (m/s <sup>2</sup> )	P (mm)	$m_{ex,max}$ (kg)	A	B	C	
-030	50	0.48	0.220	1,5	8	6	117	17	18	
	100	0.48	0.270				8	84	12	12
	150	0.48	0.330				10	64	9	9
	200	0.43	0.370							
	300	0.32	0.480							
	400	0.24	0.600							
-040	500	0.16	0.719	3,6	12	8	250	58	71	
	100	0.72	1.000				14	134	29	36
	200	0.72	1.350				20	87	18	23
	300	0.72	1.710							
	400	0.72	2.070							
	500	0.66	2.430							
	600	0.54	2.790							
	800	0.30	3.510							
	1 000	0.20	4.240							

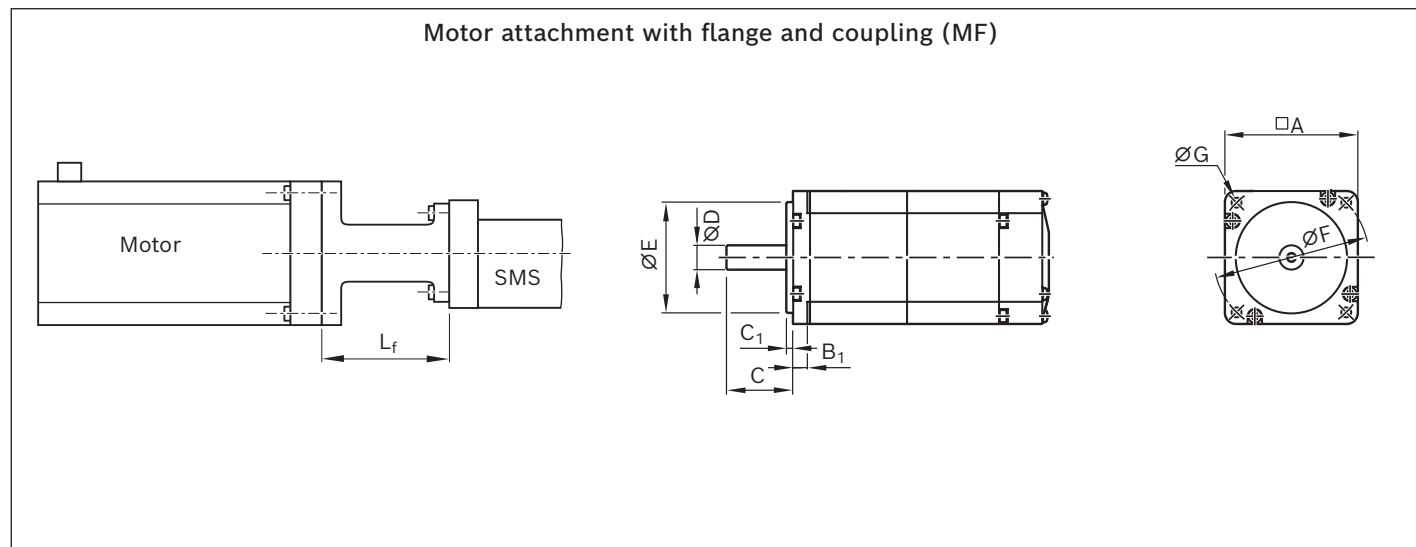
**Verifying the given speed data with the catalog data:**

$$\frac{A_{actual}}{A_{Catalog}} + \frac{B_{actual}}{B_{Catalog}} + \frac{C_{actual}}{C_{Catalog}} \leq 1 \quad \frac{60}{134} + \frac{15}{29} + \frac{0}{36} = 0.97 \leq 1$$

The check results in a sum value of less than 1. So the overhang from the application is possible.

# Accessories

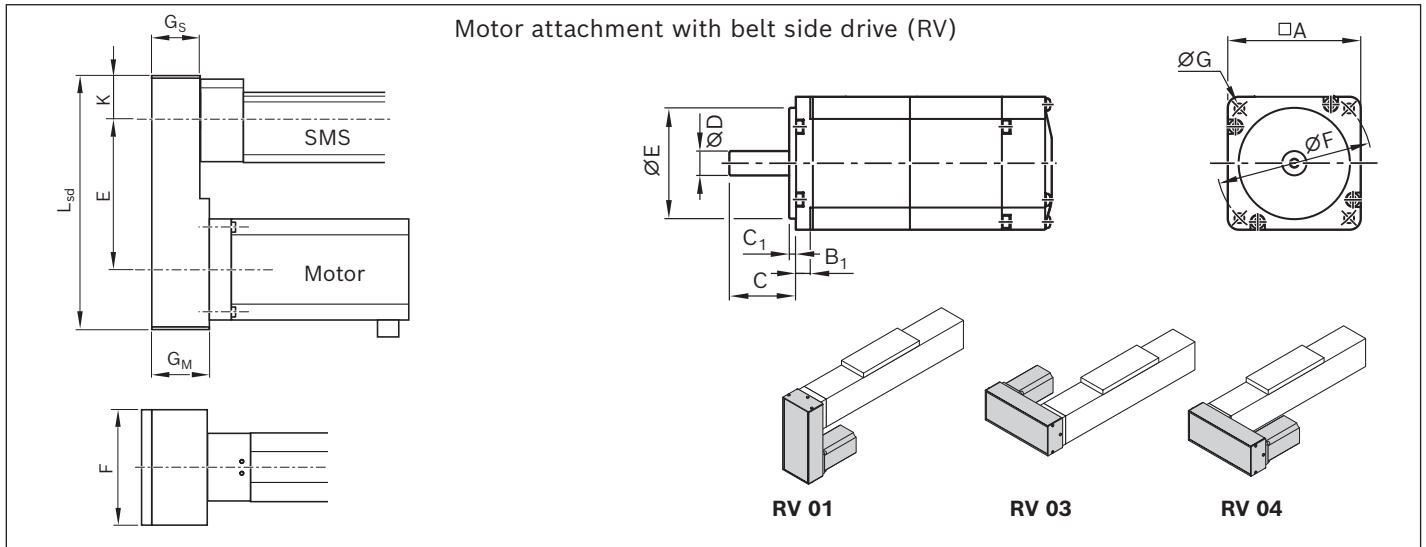
## Motor attachment dimension drawings



SMS	$L_f$ (mm)
-030	33.0
-040	53.0
-050	57.5
-080	60.0
-120	55.0

SMS	Motor attachment		Weight (kg)	Motor Rexroth	Suitable third-party motor	Dimensions (mm)							
	Material number					$\square A$	$B_1$	$C$	$C_1$	$\varnothing D$	$\varnothing E$	$\varnothing F$	$\varnothing G$
-030	MF	R02680A001	0.026	-	Mitsubishi HG-AK0336 (30W) Yaskawa SGMMV-A3A2A2(1/C) (30W)	25	5.4	16	2.5	5	20	28	M3
-040	MF	R02680A002	0.129	-	Mitsubishi HG-KR053(B) (50W) Yaskawa SGMJV-A5AAA2(1/C) (50W) Delta ECMA-C1040F(E/F)S (50W) Mitsubishi HG-KR13(B) (100W) Yaskawa SGMJV-01AAA2(1/C) (100W) Delta ECMA-C20401(E/F) (100W)	40	5.0	25	2.5	8	30	46	4.5
-040	MF	R02680A006		MSM 019 A/B	Panasonic MSMD5A2G1U/V (50W) Panasonic MSMD012G1U/V (100W)	38	6.0	25	3.0	8	30	45	3.4
-050	MF	R02680A003	0.224	-	Mitsubishi HG-KR13(B) (100W) Yaskawa SGMJV-01AAA2(1/C) (100W) Delta ECMA-C20401(E/F) (100W)	40	5.0	25	2.5	8	30	46	4.5
-050	MF	R02680A007		MSM 019 A/B	Panasonic MSMD012G1U/V (100W)	38	6.0	25	3.0	8	30	45	3.4
-080	MF	R02680A004	0.418	-	Mitsubishi HG-KR23(B) (200W) Yaskawa SGMJV-02AAA2(1/C) (200W) Delta ECMA-C20602F(E/F)S (200W) Mitsubishi HR-KR43(B) (400W) Yaskawa SGMJV-04AAA2(1/C) (400W) Delta ECMA-C20604F(E/F)S (400W)	60	7.0	30	3.0	14	50	70	5.8
-080	MF	R02680A008		MSM 031B	Panasonic MHMD022G1U/V (200W)	60	6.5	30	3.0	11	50	70	4.5
-080	MF	R02680A009		MSM 031C	Panasonic MHMD042G1U/V (400W)	60	6.5	30	3.0	14	50	70	4.5
-120	MF	R02680A005	0.384	-	Mitsubishi HR-KR43(B) (400W) Yaskawa SGMJV-04AAA2(1/C) (400W) Delta ECMA-C20604F(E/F)S (400W)	60	7.0	30	3.0	14	50	70	5.8
-120	MF	R02680A010		MSM 031C	Panasonic MHMD042G1U/V (400W)	60	6.5	30	3.0	14	50	70	4.5



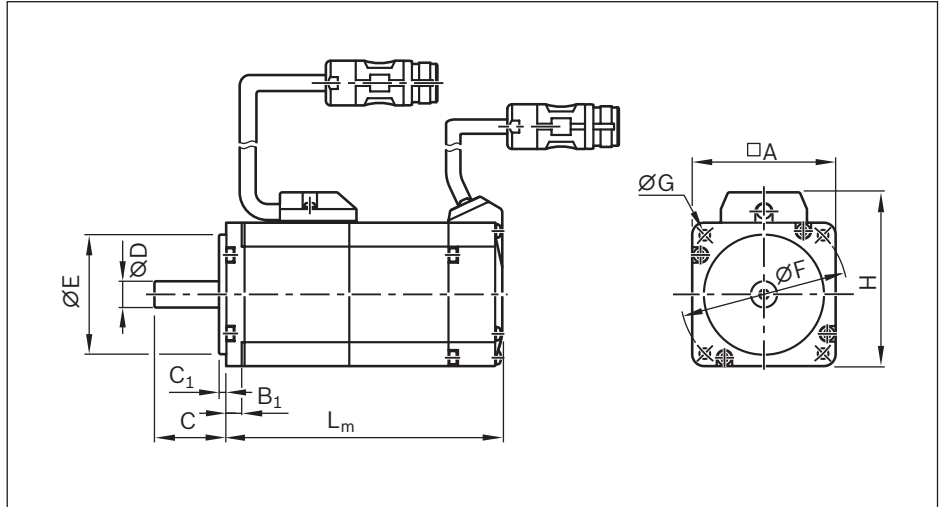


SMS	RV	Dimensions (mm)						
		E	F	G <sub>S</sub>	G <sub>M</sub>	K	L <sub>sd</sub>	
-030	RV01/03/04	40	30	18.0	20.0	14.50	79.50	
-040	RV01/03/04	53	43	35.0	35.0	21.50	98.50	
-050	RV01/03/04	58	52	37.0	35.0	25.00	105.00	
-080	RV01/03/04	80	62	46.5	46.5	31.00	146.00	
-120	RV01	80	62	41.5	47.0	31.00	146.00	
	RV03/04	100	62	31.5	37.0	46.75	181.75	

SMS	Motor attachment <sup>1)</sup>		Weight (kg)	Motor		Dimensions (mm)							
	Material number			Rexroth	Suitable third-party motor	□A	B <sub>1</sub>	C	C <sub>1</sub>	ØD	ØE	ØF	ØG
-030	RV01	R02680B002	0.056	-	Mitsubishi HG-AK0336 (30W) Yaskawa SGMJV-A3A2A2(1/C) (30W)	25	5.4	16	2.5	5	20	28	M3
-030	RV03/04	R02680B001		-	Mitsubishi HG-AK0336 (30W) Yaskawa SGMJV-A3A2A2(1/C) (30W)	25	5.4	16	2.5	5	20	28	M3
-040	RV01/03/04	R02680B003	0.216	-	Mitsubishi HG-KR053(B) (50W) Yaskawa SGMJV-A5AAA2(1/C) (50W) Delta ECMA-C1040F(E/F)S (50W) Mitsubishi HG-KR13(B) (100W) Yaskawa SGMJV-01AAA2(1/C) (100W) Delta ECMA-C20401(E/F) (100W)	40	5	25	2.5	8	30	46	4.5
-040	RV01/03/04	R02680B008		MSM 019 A/B	Panasonic MSMD5A2G1U/V (50W) Panasonic MSMD012G1U/V (100W)	38	6.0	25	3.0	8	30	45	3.4
-050	RV01/03/04	R02680B004	0.269	-	Mitsubishi HG-KR13(B) (100W) Yaskawa SGMJV-01AAA2(1/C) (100W) Delta ECMA-C20401(E/F) (100W)	40	5.0	25	2.5	8	30	46	4.5
-050	RV01/03/04	R02680B009		MSM 019 A/B	Panasonic MSMD012G1U/V (100W)	38	6.0	25	3.0	8	30	45	3.4
-080	RV01/03/04	R02680B005	0.600	-	Mitsubishi HG-KR23(B) (200W) Yaskawa SGMJV-02AAA2(1/C) (200W) Delta ECMA-C20602F(E/F)S (200W) Mitsubishi HR-KR43(B) (400W) Yaskawa SGMJV-04AAA2(1/C) (400W) Delta ECMA-C20604F(E/F)S (400W)	60	7.0	30	3.0	14	50	70	5.8
-080	RV01/03/04	R02680B010		MSM 031B	Panasonic MHMD022G1U/V (200W)	60	6.5	30	3.0	11	50	70	4.5
-080	RV01/03/04	R02680B011		MSM 031C	Panasonic MHMD042G1U/V (400W)	60	6.5	30	3.0	14	50	70	4.5
-120	RV01	R02680B007	0.635	-	Mitsubishi HR-KR43(B) (400W) Yaskawa SGMJV-04AAA2(1/C) (400W) Delta ECMA-C20604F(E/F)S (400W)	60	7.0	30	3.0	14	50	70	5.8
-120	RV03/04	R02680B006	0.662	-	Mitsubishi HR-KR43(B) (400W) Yaskawa SGMJV-04AAA2(1/C) (400W) Delta ECMA-C20604F(E/F)S (400W)	60	7.0	30	3.0	14	50	70	5.8
-120	RV01	R02680B013	0.635	MSM 031C	Panasonic MHMD042G1U/V (400W)	60	6.5	30	3.0	14	50	70	4.5
-120	RV03/04	R02680B012	0.662	MSM 031C	Panasonic MHMD042G1U/V (400W)	60	6.5	30	3.0	14	50	70	4.5

1) gear ratio i = 1

IndraDyn S - Servo motors MSM



Motor code	Dimensions (mm)											
	□ A	B <sub>1</sub>	C	C <sub>1</sub>	Ø D	Ø E	Ø F	Ø G	H	Brake		L <sub>m</sub>
					h6	h7	without	with				
<b>MSM 019A-0 300</b>	38	6.0	25	3	8	30	45	3.4	51	72.0	102.0	
<b>MSM 019B-0 300</b>	38	6.0	25	3	8	30	45	3.4	51	92.0	122.0	
<b>MSM 031B-0 300</b>	60	6.5	30	3	11	50	70	4.5	73	79.0	115.5	
<b>MSM 031C-0 300</b>	60	6.5	30	3	14	50	70	4.5	73	98.5	135.0	

**Version**

- ▶ Plain shaft without shaft seal
- ▶ M5 multi-turn absolute encoder (20-bit, absolute encoder function only available with backup battery)
- ▶ Cooling system: natural convection
- ▶ IP54 protection class (shaft IP40)
- ▶ With or without holding brake
- ▶ M17 metal round connector

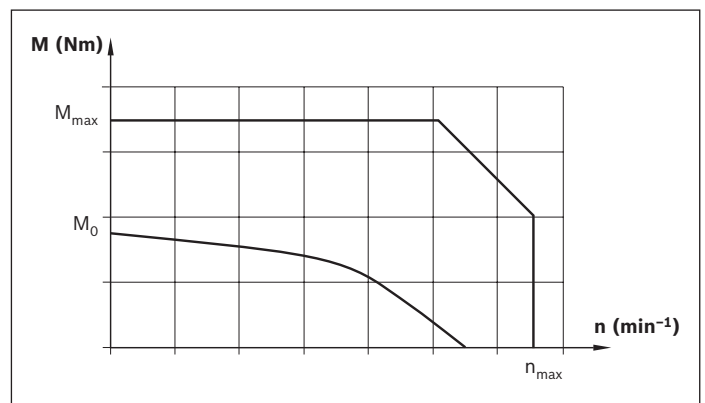
**Note**

Motors are available with control units and controllers. For more information on motors, controllers and control systems, please refer to the following Rexroth catalogs:

- ▶ Drive system Rexroth IndraDrive R999000018
- ▶ Automation Systems and Control Components, R999000026

Motor data									Motor connection Cables	Holding brake	Type code	Material number
$n_{max}$ ( $min^{-1}$ )	$M_0$ (Nm)	$M_{max}$ (Nm)	$M_{br}$ (Nm)	$J_m$ ( $kgm^2$ )	$J_{br}$ ( $kgm^2$ )	$m_m$ (kg)	$m_{br}$ (kg)					
5 000	0.16	0.48	0.29	0.0000025	0.0000002	0.32	0.21	2	N	MSM 019A-0 300-NN-M5-MH0	R911344209	
									Y	MSM 019A-0 300-NN-M5-MH1	R911344210	
5 000	0.32	0.95	0.29	0.0000051	0.0000002	0.47	0.21	2	N	MSM 019B-0 300-NN-M5-MH0	R911344211	
									Y	MSM 019B-0 300-NN-M5-MH1	R911344212	
5 000	0.64	1.91	1.27	0.0000140	0.0000018	0.82	0.48	2	N	MSM 031B-0 300-NN-M5-MH0	R911344213	
									Y	MSM 031B-0 300-NN-M5-MH1	R911344214	
5 000	1.30	3.80	1.27	0.0000260	0.0000018	1.20	0.50	2	N	MSM 031C-0 300-NN-M5-MH0	R911344215	
									Y	MSM 031C-0 300-NN-M5-MH1	R911344216	

**Motor characteristic**  
(Schematic)



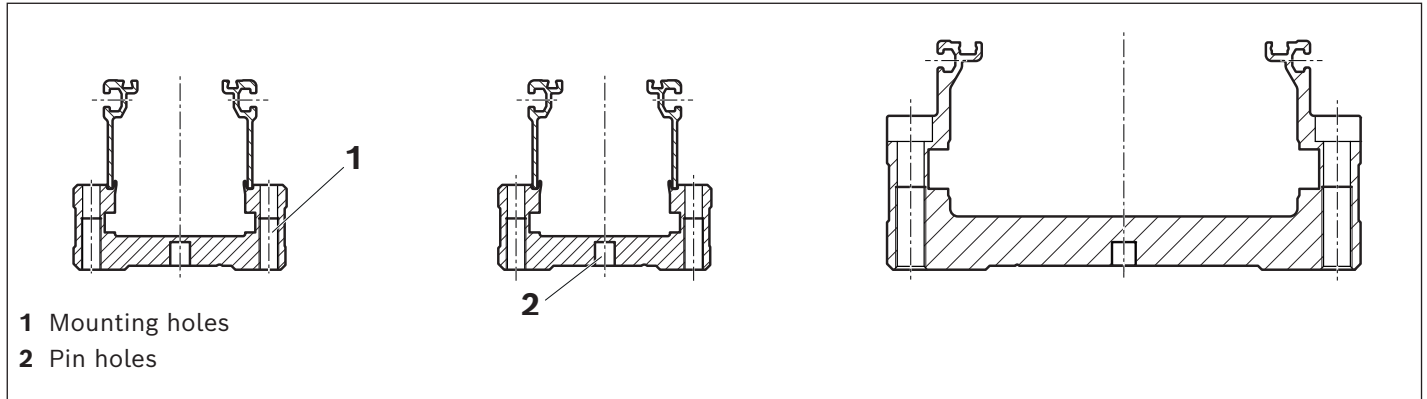
## Additional information

Mounting / switch mounting / operating conditions / lubrication / online information

### Mounting

- SMS-030 from below
- SMS-040 to SMS-120 either from above or below

For further information, please refer to dimension drawings

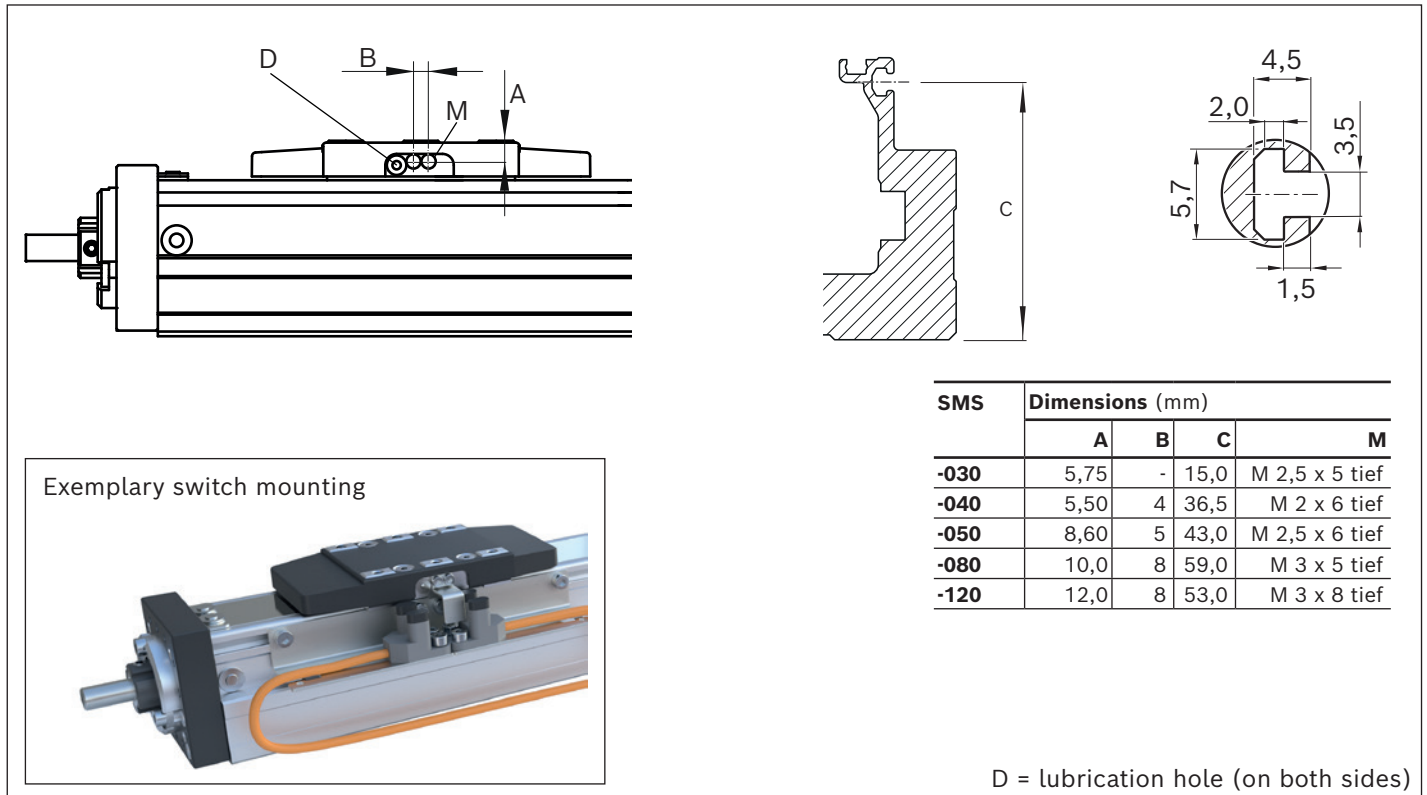


### Switch mounting

At SMS axes, it is possible to add a switching system.

There are threaded holes on both sides of the carriage for attaching a switching bracket.

There are T-slots on both sides of the main frame for mounting the switch, suitable for square nuts DIN 562-M3.



## Operating conditions

### Normal operating conditions

Ambient temperature	0 °C ... 40 °C
Soiling	Not permissible

### Required and supplementary documentation

For further instructions and information, please refer to the documentation for this product.

PDF files of these documents can be found on the Internet.

If you are unsure about using this product, please contact Bosch Rexroth.

## Lubrication


### Note on lubrication

SMS systems come with initial Tribol GR 100-2 PD greasing and are only designed for grease lubrication using a manual grease gun.

Maintenance is limited to relubrication of the integrated guideway and the ball screw drive.

**⚠ Do not use lubricants with solid particles (e.g. graphite or MoS<sub>2</sub> additives).**

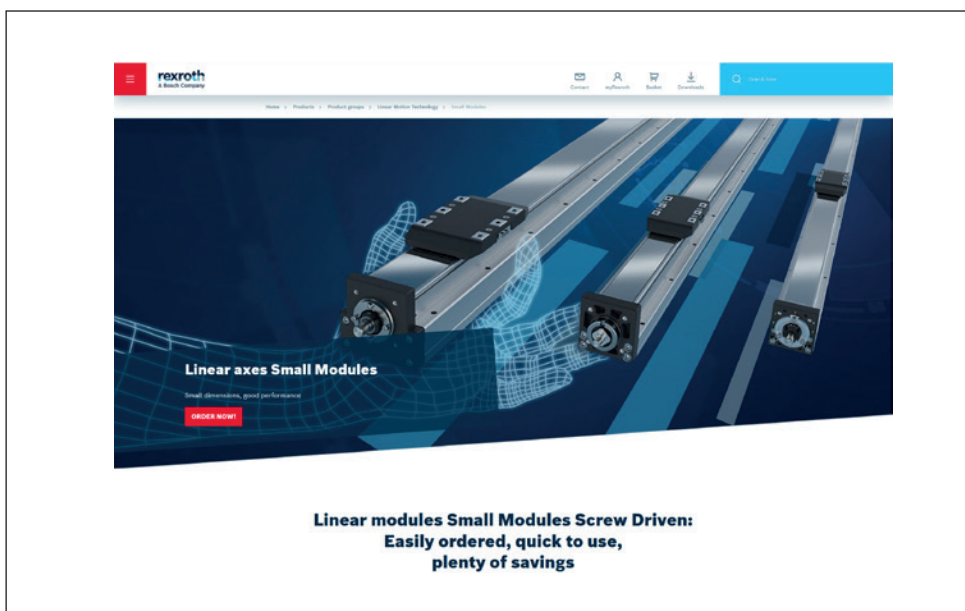
► Recommended lubricant: Tribol GR 100-2 PD

Relubrication intervals/relubrication quantities  "Instructions SMS" R320103227

## Online information

### Homepage SMS

[www.boschrexroth.com/small-modules](http://www.boschrexroth.com/small-modules)



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