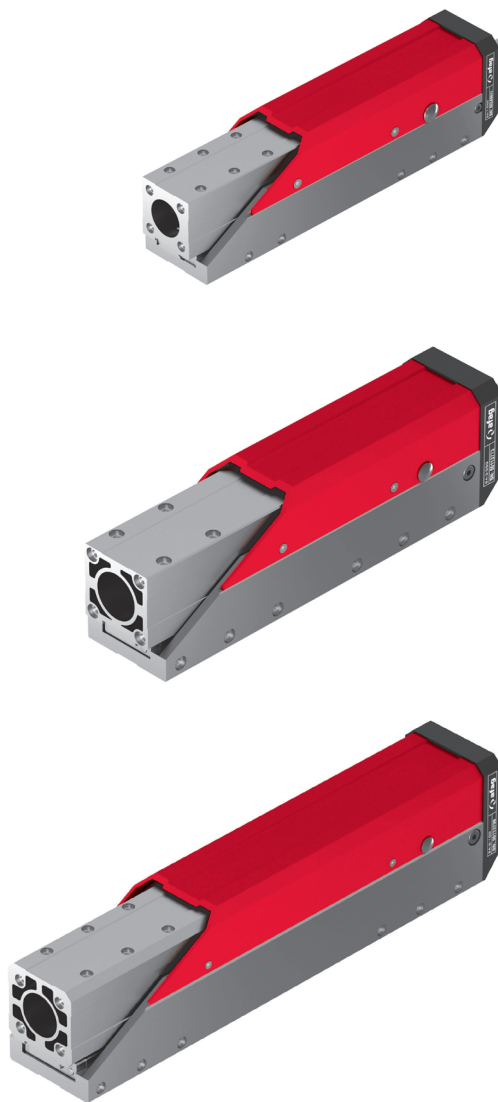


# Telescope spindle axis SA

SA-1 - SA-6



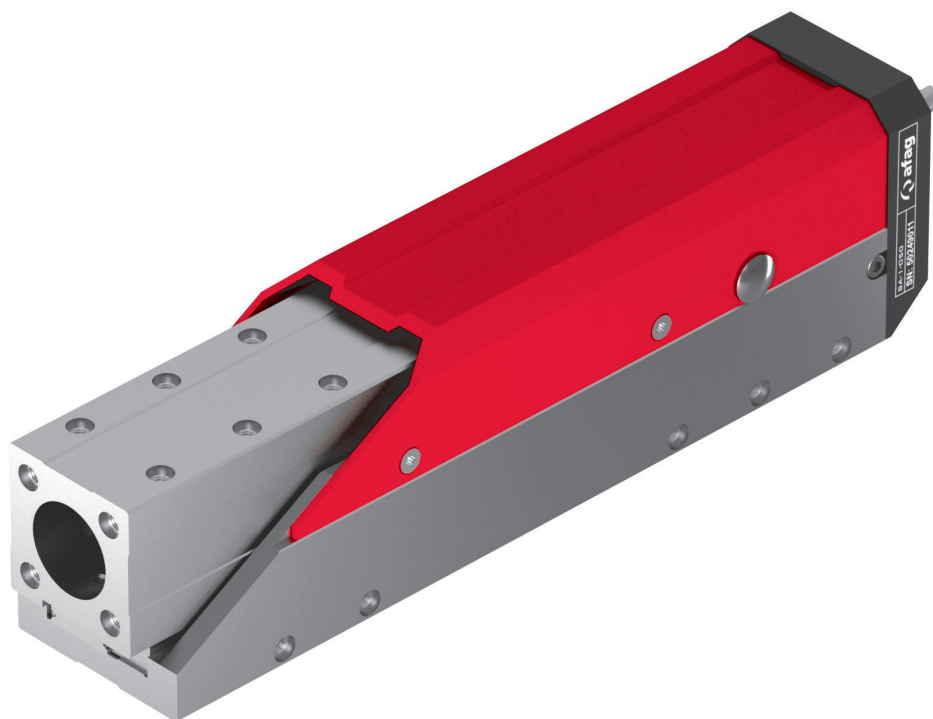
## Table of contents: SA

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SA-3	221
SA-6	231
Accessories SA	240



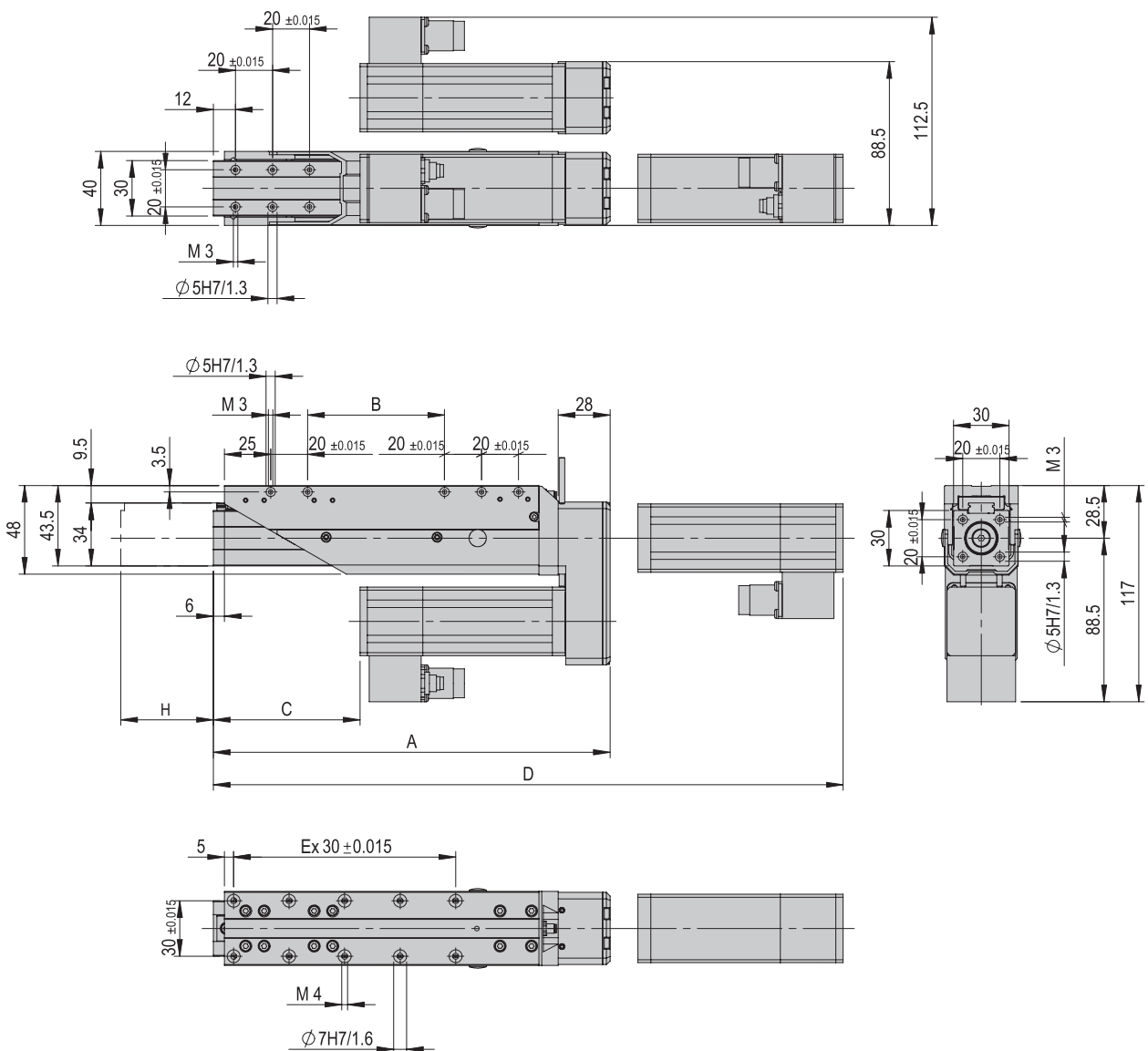
# Telescope spindle axis SA

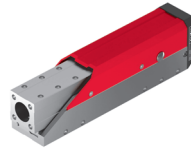
SA-1 & SA-1-FL



- Extremely compact and higher power density for -FL variety
- Flexible motor mounting
- Precise spindle drive

Type	SA-1-050/-FL	SA-1-100/-FL	SA-1-150/-FL
A	213.5 mm	263.5 mm	313.5 mm
B	74 mm	124 mm	174 mm
C	***79.3 mm ****109.3 mm	***129.3 mm ****159.3 mm	***179.3 mm ****209.3 mm
D	***306 mm ****336 mm	***356 mm ****386 mm	***410 mm ****440 mm
E	4 x	6 x	7 x
H	50 mm	100 mm	150 mm





Type	SA-1-xxx	SA-1-xxx-FL
Spindle Ø	8 mm	8 mm
Spindle pitch (mm/1 turn)	12 mm	4 mm
Drive shaft Ø	5 mm	5 mm
Operating temperature	10 - 40 °C	10 - 40 °C
Storage temperature	0 - 50 °C	0 - 50 °C
Humidity	< 90 %	< 90 %

Type	SA-1-050	SA-1-050-FL	SA-1-100	SA-1-100-FL	SA-1-150	SA-1-150-FL
<b>Order number</b>	<b>50249011</b>	<b>50471882</b>	<b>50249013</b>	<b>50471883</b>	<b>50249014</b>	<b>50471884</b>
Stroke H	50 mm	50 mm	100 mm	100 mm	150 mm	150 mm
Net weight	0.8 kg	0.8 kg	1.0 kg	1.0 kg	1.2 kg	1.2 kg
Moving weight	**0.45 kg	**0.45 kg	**0.55 kg	**0.55 kg	**0.65 kg	**0.65 kg
Weight, gear	**0.15 kg	**0.15 kg	**0.15 kg	**0.15 kg	**0.15 kg	**0.15 kg
Weight, motor	**0.45 kg	**0.45 kg	**0.45 kg	**0.45 kg	**0.45 kg	**0.45 kg
Noise level	65 dB (A)	65 dB (A)	65 dB (A)	65 dB (A)	65 dB (A)	65 dB (A)
Max. drive torque	0.07 Nm	0.07 Nm	0.07 Nm	0.07 Nm	0.07 Nm	0.07 Nm
Inertia, spindle	3.08 gcm <sup>2</sup>	3.08 gcm <sup>2</sup>	4.65 gcm <sup>2</sup>	4.65 gcm <sup>2</sup>	6.22 gcm <sup>2</sup>	6.22 gcm <sup>2</sup>
Drive	AC Servo	AC Servo	AC Servo	AC Servo	AC Servo	AC Servo
Protection type	IP 30	IP 30	IP 30	IP 30	IP 30	IP 30
Max. speed v	*1.2 m/s	*0.3 m/s	*1.2 m/s	*0.3 m/s	*1.2 m/s	*0.3 m/s
Max. acceleration a	*25 m/s <sup>2</sup>	*25 m/s <sup>2</sup>	*25 m/s <sup>2</sup>	*25 m/s <sup>2</sup>	*25 m/s <sup>2</sup>	*25 m/s <sup>2</sup>
Peak force Fx	50 N	150 N	50 N	150 N	50 N	150 N
Measuring system	Resolver	Resolver	Resolver	Resolver	Resolver	Resolver
Repeat accuracy	+/- 0.01 mm	+/- 0.01 mm	+/- 0.01 mm	+/- 0.01 mm	+/- 0.01 mm	+/- 0.01 mm
Mounting position	✚	✚	✚	✚	✚	✚

The technical data pertains to Afag standard test conditions.  
 Note: The inductive reference sensor is integrated within the SA axis.  
 Cleanroom class ISO 14644-1, class ISO 7

\*The maximum values listed above depend on the application and must not be combined. In case of doubt, please contact your Afag partner.

\*\*Total weight = gross weight + slide + gear + motor

\*\*\*Without brakes

\*\*\*\*With brakes

### Included in the delivery

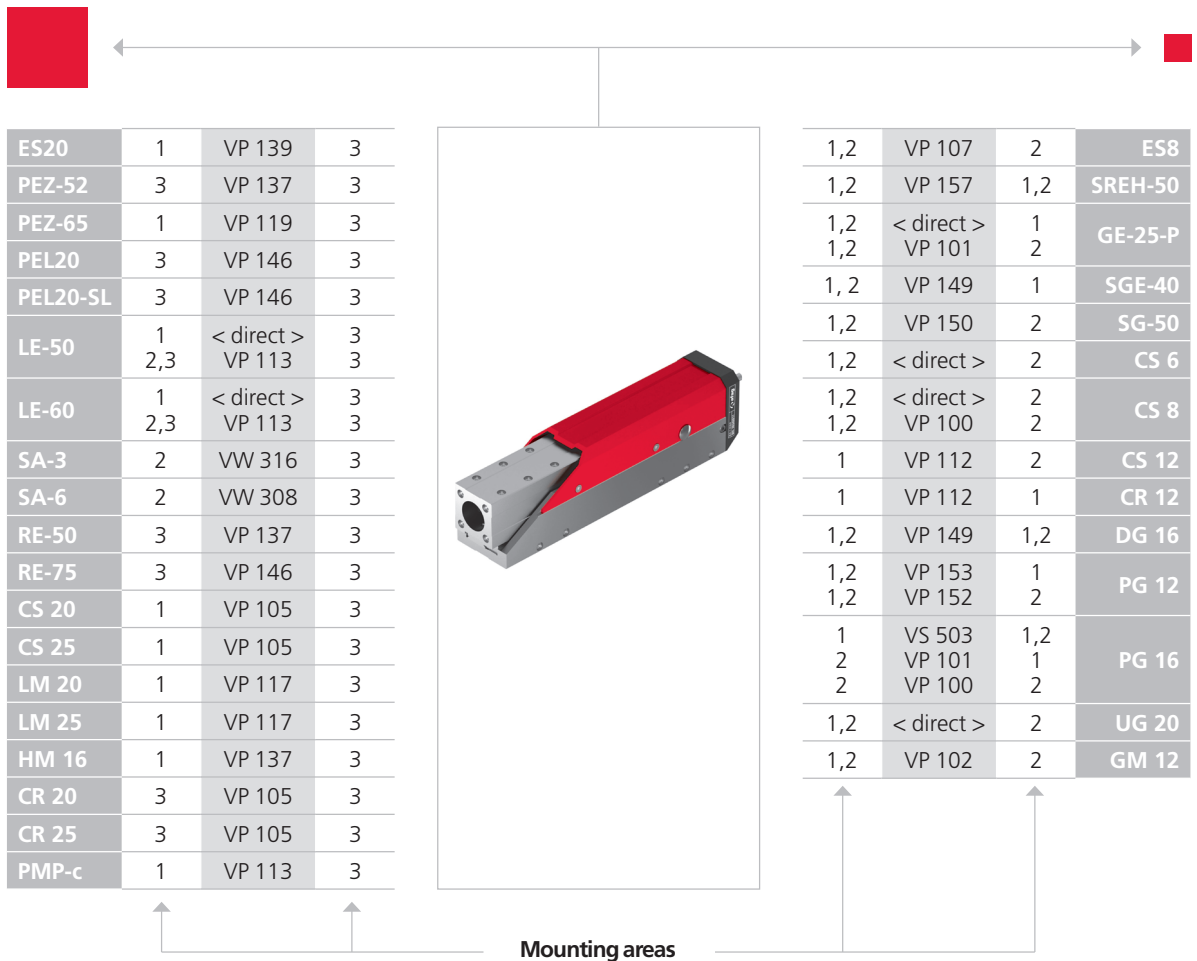
(Catalogue HT accessories)

- 2x Centering bushing Ø5x2.5
- 2x Centering bushing Ø7x3

### Accessories

- Toothed belt drive SA-1
  - Coupling flange SA-1
  - Coupling flange SA-1 without motor
  - Grease press attachment SA
- (Catalogue HT accessories)
- Servo motor-11-72VDC-060W
  - Servo controller-11-320VDC-060W
  - Servo controller C1xxx-1S
  - Servo controller E12xx
  - Servo controller SE-Power

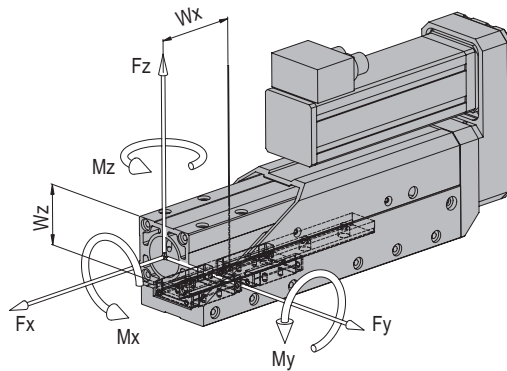
Warranty: 24 months following commissioning, but a maximum of 27 months following delivery



CS, ES	LM	HM	SA	UG, GM, SG, DG, PG, GE, SGE
PMP, PMP-c	PEZ, PDZ	PEL, PDL	RM, RE	CR, RM 32, RE, SREH, RA

Note that there might be different mounting positions from one module to another one.  
The required connection elements and the range of support columns are depicted in the catalogue HT accessories.

Type	SA-1-050	SA-1-050-FL	SA-1-100	SA-1-100-FL	SA-1-150	SA-1-150-FL
Max. torque Mx	6 Nm	6 Nm	6 Nm	6 Nm	6 Nm	6 Nm
Max. torque My	15 Nm	15 Nm	15 Nm	15 Nm	15 Nm	15 Nm
Max. torque Mz	15 Nm	15 Nm	15 Nm	15 Nm	15 Nm	15 Nm
Effective distance Wx	41 mm	41 mm	41 mm	41 mm	41 mm	41 mm
Effective distance Wy	0 mm	0 mm	0 mm	0 mm	0 mm	0 mm
Effective distance Wz	32 mm	32 mm	32 mm	32 mm	32 mm	32 mm
Peak force Fx	50 N	150 N	50 N	150 N	50 N	150 N

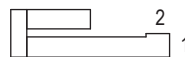


$$\frac{M_x}{M_{x \max}} + \frac{M_y}{M_{y \max}} + \frac{M_z}{M_{z \max}} < 1$$

Maximum payload/type	SA-1-050	SA-1-050-FL	SA-1-100	SA-1-100-FL	SA-1-150	SA-1-150-FL
Installation position (horizontal) for mounting side 1/2	4 kg	4 kg	4 kg	4 kg	4 kg	4 kg
Installation position (vertical) for mounting side 1/2	4 kg	4 kg	4 kg	4 kg	4 kg	4 kg

Assembly sides module mounting

horizontal:



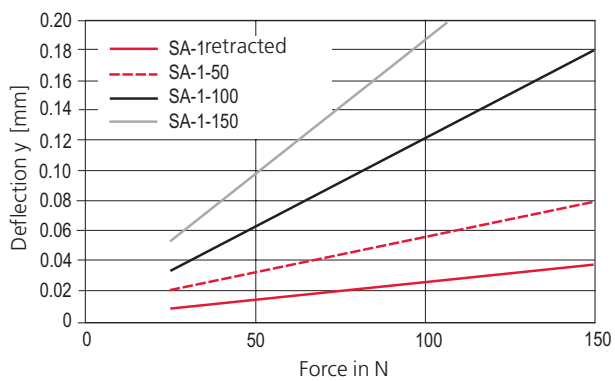
vertical:



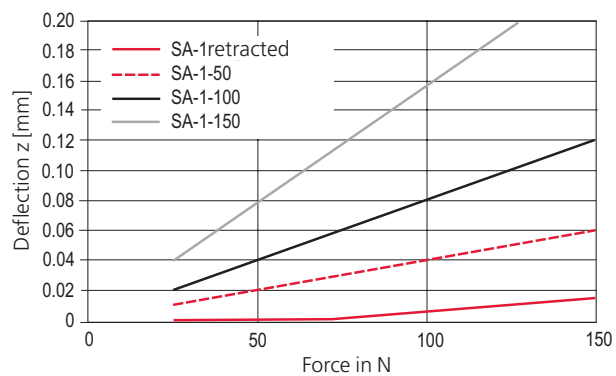


## Load diagrams

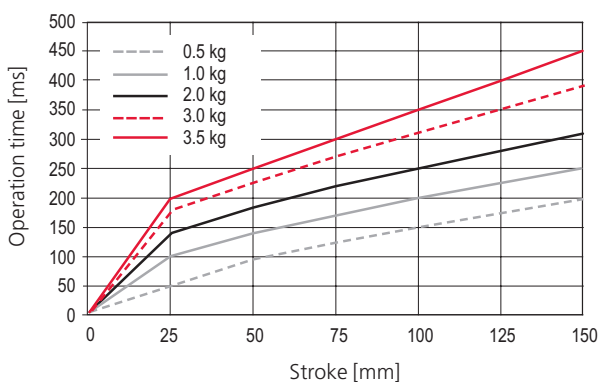
Deflection in Y direction



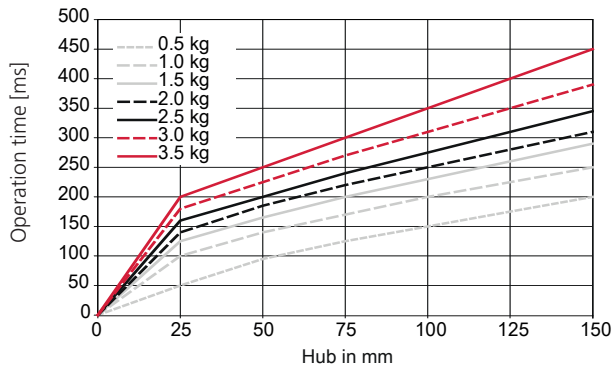
Deflection in Z direction



Operation time SA-1



Operation time SA-1-FL



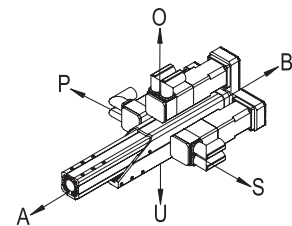


Order form	SA-1 / -FL	XXXXXXXX	XXXXXXXX	XXXXXXXX	X	X
		Stroke	Gear	Motor	Position gear	Position motor plug.

### Coordinate system

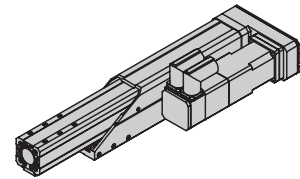
The coordinate system allows you to define the position of the gear as well as that of the motor plug.

- A = before
- B = base
- O = top
- P = left
- S = right
- U = downside



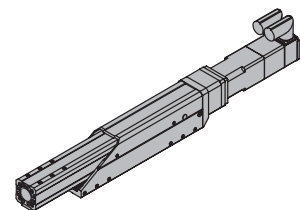
### Ordering example 1

SA-1	50249013	50249015	50495879	S	O
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### Ordering example 2

SA-1	50249013	50249016	50485876	B	O
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### Ordering process

- Select the desired stroke length, gear and motor from the order key.
- Enter the corresponding red order numbers in the order form in the place of the cross.
- Determine the desired position of the gear and the motor plug.
- Enter the corresponding letters from the coordinate system in the order form in the place of the cross.

### Third-party motors

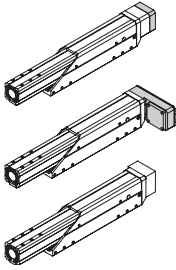



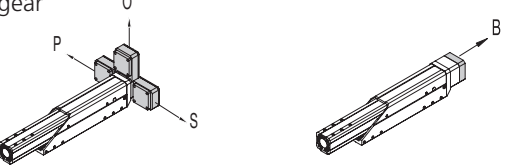
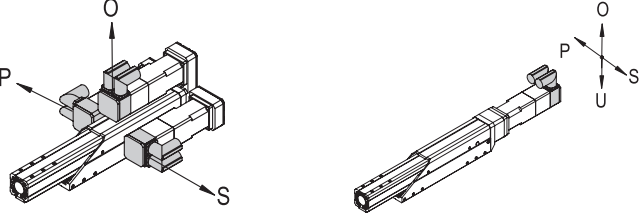
- If motors from other suppliers are to be attached to Afag modules, an adapter plate will be required. This adapter plate can be provided by Afag, if desired.

### External controller

- Mechanical limiting values of the module must be observed (v max., a max.,...).
- The controller parametrisation is carried out by the customer.

# Order key

## SA-1/SE-Power/C1xxx/E12xx

Telescope spindle axis	SA-1	xxxxxxxx	xxxxxxxx	xxxxxxxx	x	x	
		Stroke		Gear	Motor	Position gear	Position motor plug
	SA-1-050	50249011					
	SA-1-050-FL	50471882					
	SA-1-100	50249013					
	SA-1-100-FL	50471883					
	SA-1-150	50249014					
SA-1-150-FL	50471884						
Gear			50249016	 BG1			
			50249015				
			50261931	 M0	B	X	
Motor/controller	Without motor M0			X			
	 BG1	Servomotor-11-72VDC-060W-60-B-I-x-x	B	50485433			
		Servomotor-11-72VDC-060W-60-x-I-x-x			50495876		
		Servomotor-11-320VDC-060W-60-B-R-x-x	B	50495879			
		Servomotor-11-320VDC-060W-60-x-R-x-x			50495878		
Position gear					B O P S		
	Position motor plug						
Assembly						O P S U	
	<p>The plug can be turned 180°. You can find further information in the operating manual.</p>						

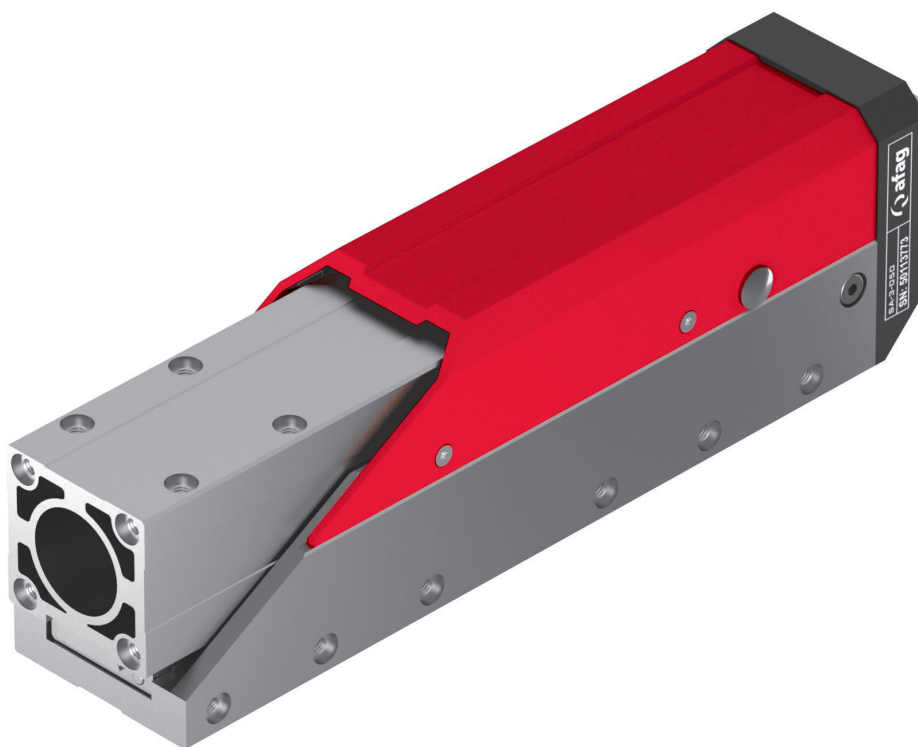
SE-Power C1xxx  
1 kVA E12xx

B: Motor with brakes  
BG: Motor size



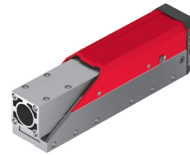
# Telescope spindle axis SA

SA-3 & SA-3-FL



- Extremely compact and higher power density for -FL variety
- Flexible motor mounting
- Precise spindle drive





Type	SA-3-xxx	SA-3-xxx-FL
Spindle Ø	10 mm	10 mm
Spindle pitch (mm/1 turn)	10 mm	5 mm
Drive shaft Ø	6 mm	6 mm
Operating temperature	10 - 40 °C	10 - 40 °C
Storage temperature	0 - 50 °C	0 - 50 °C
Humidity	< 90 %	< 90 %

Type	SA-3-050	SA-3-050-FL	SA-3-100	SA-3-100-FL	SA-3-150	SA-3-150-FL
<b>Order number</b>	<b>50113773</b>	<b>50471885</b>	<b>50113781</b>	<b>50471886</b>	<b>50251726</b>	<b>50471887</b>
Stroke H	50 mm	50 mm	100 mm	100 mm	150 mm	150 mm
Net weight	1.35 kg	1.35 kg	1.65 kg	1.65 kg	1.95 kg	1.95 kg
Moving weight	**0.6 kg	**0.6 kg	**0.75 kg	**0.75 kg	**0.9 kg	**0.9 kg
Weight, gear	**0.25 kg	**0.25 kg	**0.25 kg	**0.25 kg	**0.25 kg	**0.25 kg
Weight, motor	**0.6 kg	**0.6 kg	**0.6 kg	**0.6 kg	**0.6 kg	**0.6 kg
Noise level	65 dB (A)	65 dB (A)	65 dB (A)	65 dB (A)	65 dB (A)	65 dB (A)
Max. drive torque	0.17 Nm	0.17 Nm	0.17 Nm	0.17 Nm	0.17 Nm	0.17 Nm
Inertia, spindle	9.58 gcm <sup>2</sup>	9.58 gcm <sup>2</sup>	13.41 gcm <sup>2</sup>	13.41 gcm <sup>2</sup>	17.24 gcm <sup>2</sup>	17.24 gcm <sup>2</sup>
Drive	AC Servo	AC Servo	AC Servo	AC Servo	AC Servo	AC Servo
Protection type	IP 30	IP 30	IP 30	IP 30	IP 30	IP 30
Max. speed v	*1.0 m/s	*0.5 m/s	*1.0 m/s	*0.5 m/s	*1.0 m/s	*0.5 m/s
Max. acceleration a	*25 m/s <sup>2</sup>	*25 m/s <sup>2</sup>	*25 m/s <sup>2</sup>	*25 m/s <sup>2</sup>	*25 m/s <sup>2</sup>	*25 m/s <sup>2</sup>
Peak force Fx	100 N	300 N	100 N	300 N	100 N	300 N
Measuring system	Resolver	Resolver	Resolver	Resolver	Resolver	Resolver
Repeat accuracy	+/- 0.01 mm	+/- 0.01 mm	+/- 0.01 mm	+/- 0.01 mm	+/- 0.01 mm	+/- 0.01 mm
Mounting position	✦	✦	✦	✦	✦	✦

The technical data pertains to Afag standard test conditions.  
 Note: The inductive reference sensor is integrated within the SA axis.  
 Cleanroom class ISO 14644-1, class ISO 7

\*The maximum values listed above depend on the application and must not be combined. In case of doubt, please contact your Afag partner.  
 \*\*Total weight = gross weight + slide + gear + motor  
 \*\*\*Without brakes  
 \*\*\*\*With brakes

**Included in the delivery**  
 (Catalogue HT accessories)  
 ■ 4x Centering bushing Ø7x3

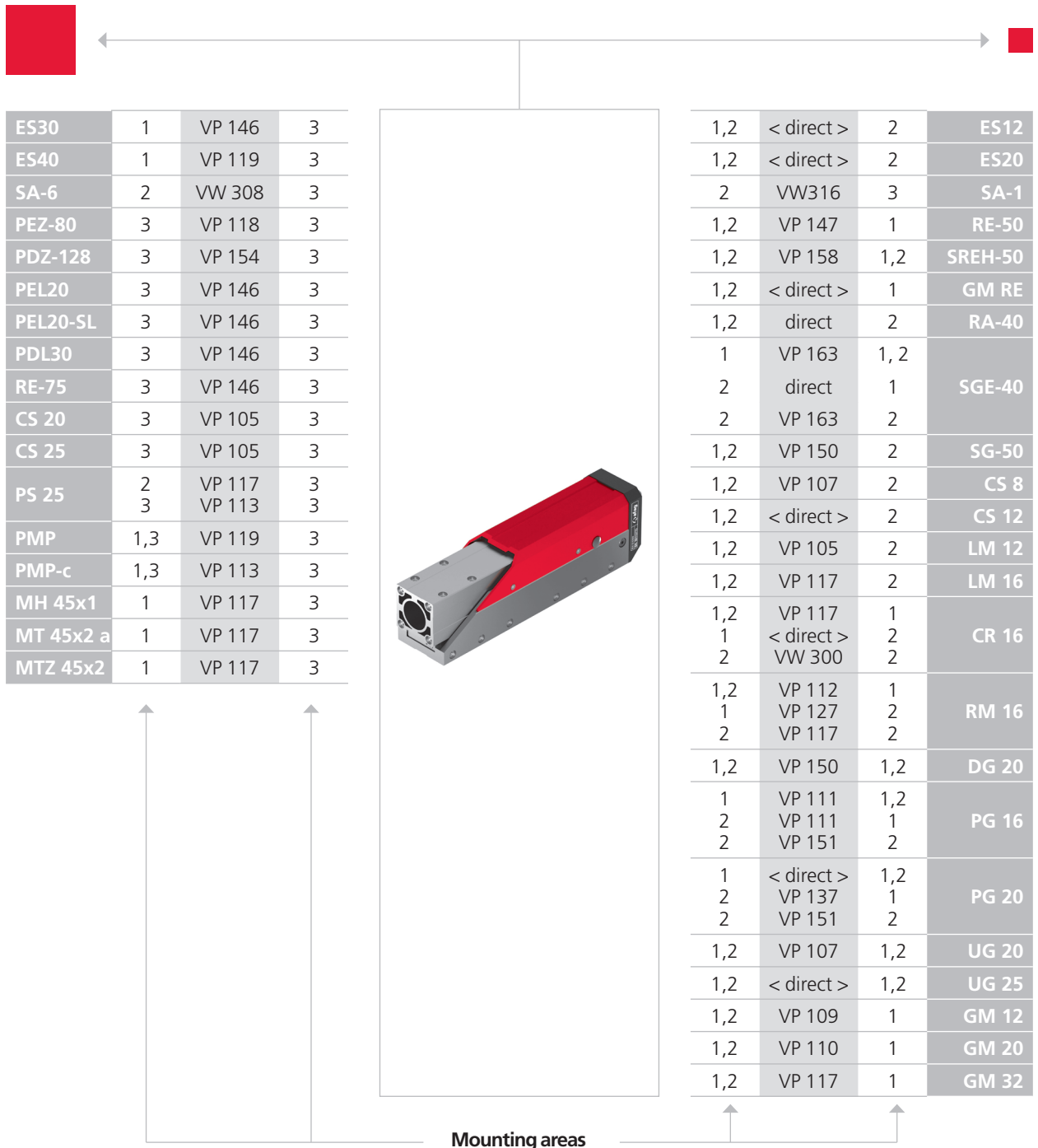
- Accessories**
- Coupling flange SA-3
  - Toothed belt drive SA-3
  - Coupling flange SA-3 without motor]
  - Grease press attachment SA
- (Catalogue HT accessories)
- Servomotor-11-72VDC-120W
  - Servo motor- 11-320VDC-120W
  - Servo controller C1xxx -1S
  - Servo controller E12xx
  - Servo controller SE-Power

Warranty: 24 months following commissioning, but a maximum of 27 months following delivery



# Preferred combinations

SA-3 / SA-3-FL

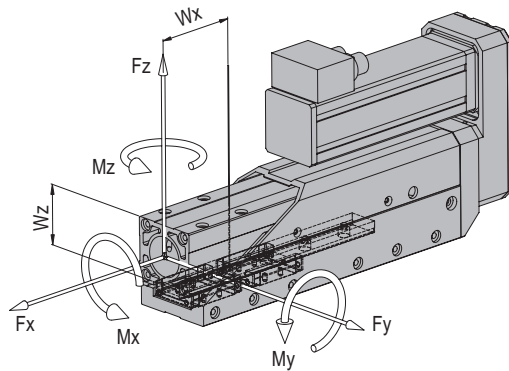


Mounting areas

CS, ES 	LM 	HM 	SA 	UG, GM, SG, DG, PG, GE, SGE 
PMP, PMP-c 	PEZ, PDZ 	PEL, PDL 	RM, RE 	CR, RM 32, RE, SREH, RA 

Note that there might be different mounting positions from one module to another one.  
The required connection elements and the range of support columns are depicted in the catalogue HT accessories.

Type	SA-3-050	SA-3-050-FL	SA-3-100	SA-3-100-FL	SA-3-150	SA-3-150-FL
Max. torque Mx	10 Nm	10 Nm	10 Nm	10 Nm	10 Nm	10 Nm
Max. torque My	25 Nm	25 Nm	25 Nm	25 Nm	25 Nm	25 Nm
Max. torque Mz	25 Nm	25 Nm	25 Nm	25 Nm	25 Nm	25 Nm
Effective distance Wx	50 mm	50 mm	50 mm	50 mm	50 mm	50 mm
Effective distance Wy	0 mm	0 mm	0 mm	0 mm	0 mm	0 mm
Effective distance Wz	41 mm	41 mm	41 mm	41 mm	41 mm	41 mm
Peak force Fx	100 N	300 N	100 N	300 N	100 N	300 N



$$\frac{M_x}{M_{x \max}} + \frac{M_y}{M_{y \max}} + \frac{M_z}{M_{z \max}} < 1$$

Maximum payload/type	SA-3-050	SA-3-050-FL	SA-3-100	SA-3-100-FL	SA-3-150	SA-3-150-FL
Installation position (horizontal) for mounting side 1/2	8 kg	8 kg	8 kg	8 kg	8 kg	8 kg
Installation position (vertical) for mounting side 1/2	8 kg	8 kg	8 kg	8 kg	8 kg	8 kg

Assembly sides module mounting

horizontal:

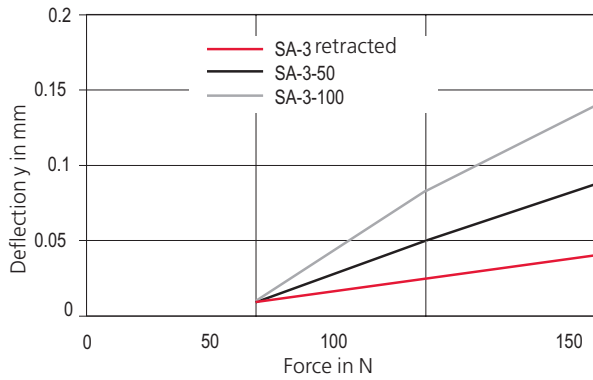


vertical:

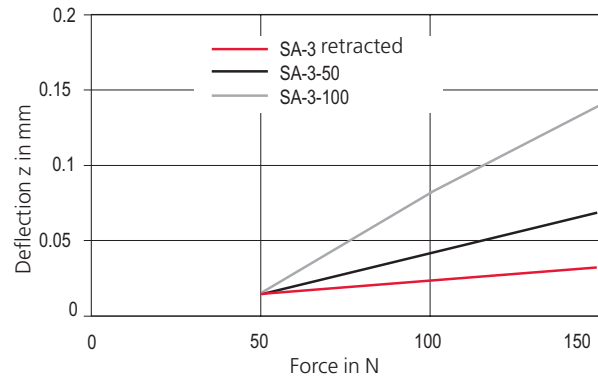


## Load diagrams

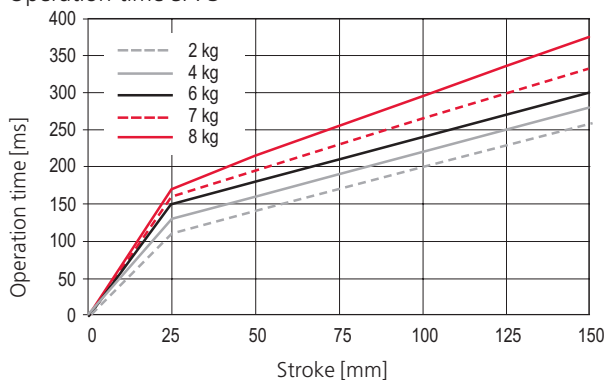
Deflection in Y direction



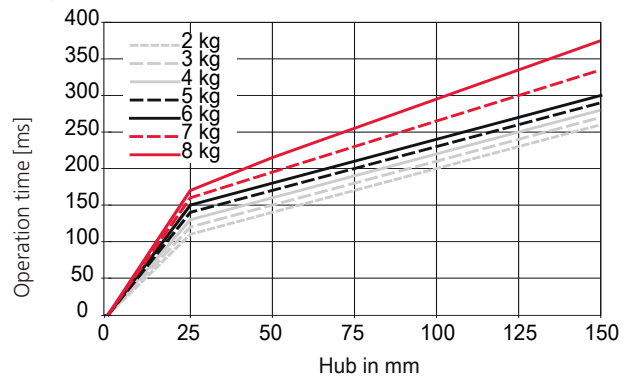
Deflection in Z direction



Operation time SA-3



Operation time SA-3-FL



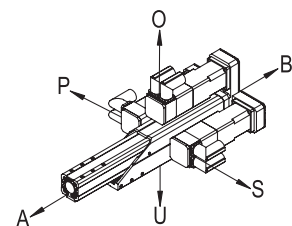


Order form	SA-3 / -FL	XXXXXXXX	XXXXXXXX	XXXXXXXX	X	X
		Stroke	Gear	Motor	Position gear	Position motor plug.

### Coordinate system

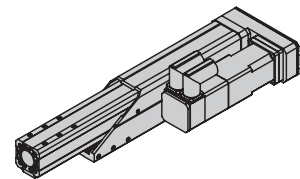
The coordinate system allows you to define the position of the gear as well as that of the motor plug.

- A = before
- B = base
- O = top
- P = left
- S = right
- U = downside



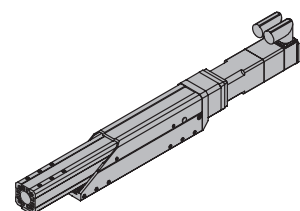
### Ordering example 1

SA-3	50113773	50113764	50495881	S	O
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### Ordering example 2

SA-3	50113773	50113754	50495877	B	O
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### Ordering process

- Select the desired stroke length, gear and motor from the order key.
- Enter the corresponding red order numbers in the order form in the place of the cross.
- Determine the desired position of the gear and the motor plug.
- Enter the corresponding letters from the coordinate system in the order form in the place of the cross.

### Third-party motors

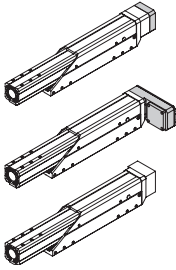



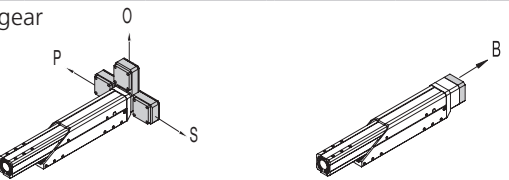
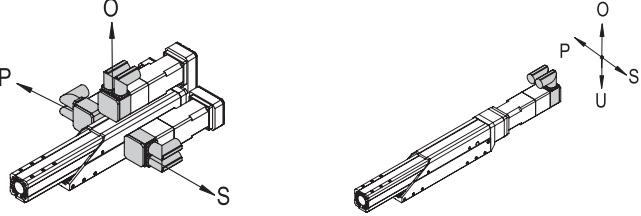
- If motors from other suppliers are to be attached to Afag modules, an adapter plate will be required. This adapter plate can be provided by Afag, if desired.

### External controller

- Mechanical limiting values of the module must be observed (v max., a max.,...).
- The controller parametrisation is carried out by the customer.

# Order key

## SA-3/SE-Power/C1xxx/E12xx

Telescope spindle axis	SA-3	xxxxxxxx	xxxxxxxx	xxxxxxxx	x	x	
		Stroke		Gear	Motor	Position gear	Position motor plug
	SA-3-050	50113773					
	SA-3-050-FL	50471885					
	SA-3-100	50113781					
	SA-3-100-FL	50471886					
	SA-3-150	50251726					
	SA-3-150-FL	50471887					
Gear			50113754	 BG1			
			50113764				
				50164698	 M0	B	X
Motor/controller	Without motor M0			X	B	X	
	 BG1	Servomotor-11-72VDC-120W-60-B-I-x-x	B	50485434			
		Servomotor-11-72VDC-120W-60-x-I-x-x		50495877			
		Servomotor-11-320VDC-120W-60-B-R-x-x	B	50495881			
		Servomotor-11-320VDC-120W-60-x-R-x-x		50495880			
Position gear					B O P S		
	Position motor plug						
Assembly						O P S U	
	<p>The plug can be turned 180°. You can find further information in the operating manual.</p>						

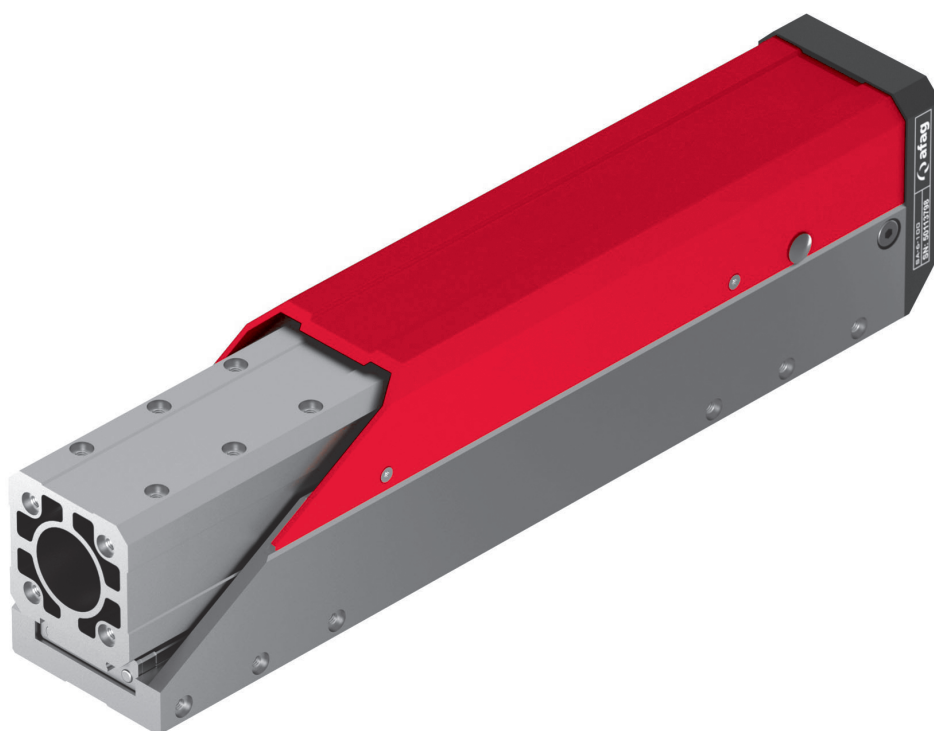
SE-Power C1xxx  
1 kVA E12xx

B: Motor with brakes  
BG: Motor size



# Telescope spindle axis SA

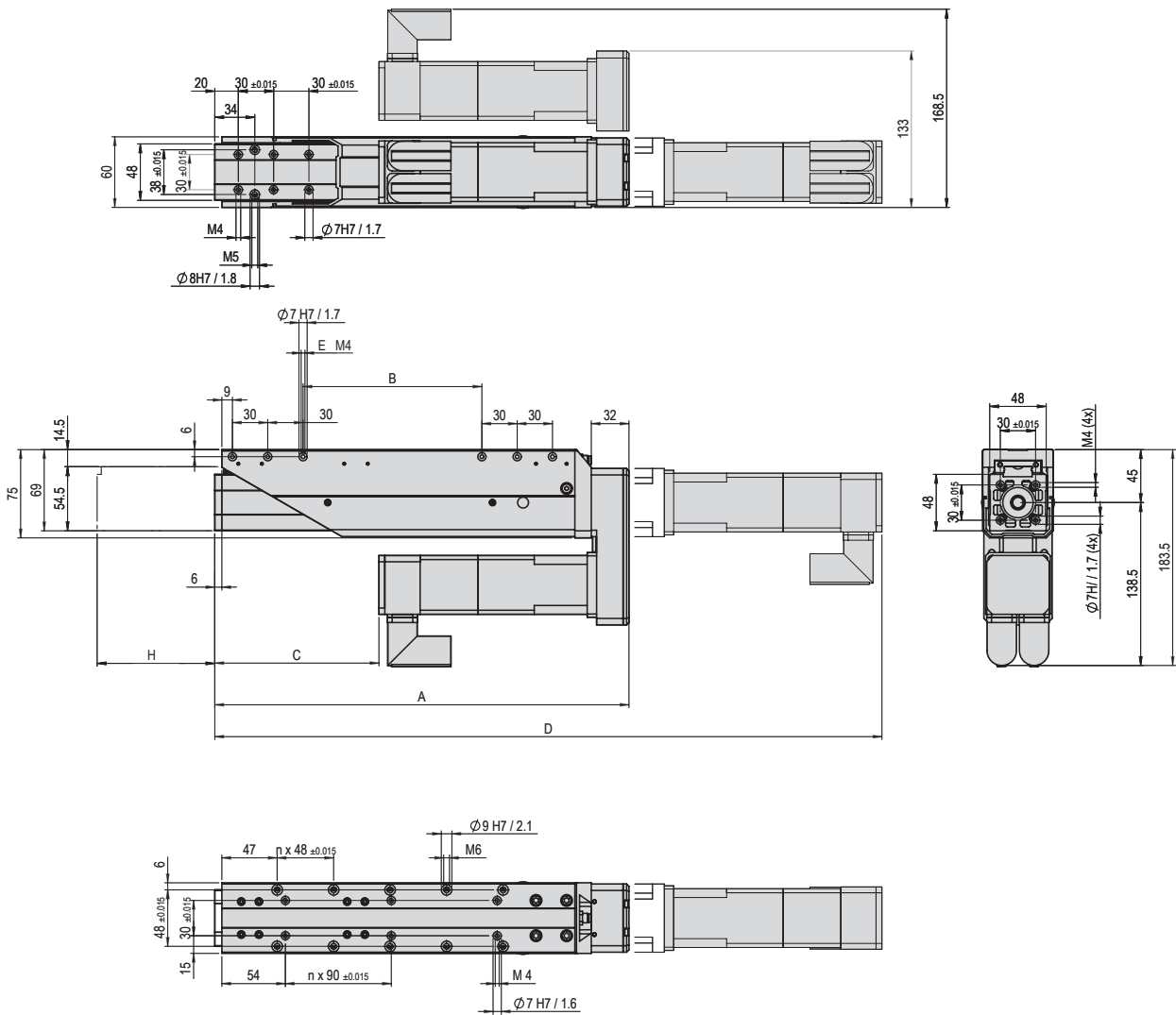
SA-6 & SA-6-FL

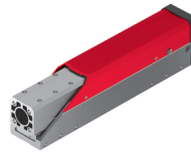


- Extremely compact and higher power density for -FL variety
- Flexible motor mounting
- Precise spindle drive



Type	SA-6-100/-FL	SA-6-200/-FL	SA-6-300/-FL
A	352 mm	452 mm	552 mm
B	152 mm	252 mm	352 mm
C	***139 mm ****174 mm	***239 mm ****274 mm	***339 mm ****374 mm
D	***532 mm ****567 mm	***632 mm ****667 mm	***732 mm ****767 mm
E	6 x both sides	6 x both sides	6 x both sides
F	4	6	8
H	100 mm	200 mm	300 mm





Type	SA-6-xxx	SA-6-xxx-FL
Spindle Ø	12.7 mm	12 mm
Spindle pitch (mm/1 turn)	25.4 mm	10 mm
Drive shaft Ø	8 mm	8 mm
Operating temperature	10 - 40 °C	10 - 40 °C
Storage temperature	0 - 50 °C	0 - 50 °C
Humidity	< 90 %	< 90 %

Type	SA-6-100	SA-6-100-FL	SA-6-200	SA-6-200-FL	SA-6-300	SA-6-300-FL
<b>Order number</b>	<b>50113798</b>	<b>50471888</b>	<b>50113800</b>	<b>50471889</b>	<b>50113804</b>	<b>50471890</b>
Stroke H	100 mm	100 mm	200 mm	200 mm	300 mm	300 mm
Net weight	2.80 kg	2.80 kg	3.65 kg	3.65 kg	4.50 kg	4.50 kg
Moving weight	**1.32 kg	**1.32 kg	**1.32 kg	**1.32 kg	**1.32 kg	**1.32 kg
Weight, gear	**0.44 kg	**0.44 kg	**0.44 kg	**0.44 kg	**0.44 kg	**0.44 kg
Weight, motor	**1.57 kg	**1.57 kg	**1.57 kg	**1.57 kg	**1.57 kg	**1.57 kg
Noise level	65 dB (A)	65 dB (A)	65 dB (A)	65 dB (A)	65 dB (A)	65 dB (A)
Max. drive torque	0.85 Nm	0.85 Nm	0.85 Nm	0.85 Nm	0.85 Nm	0.85 Nm
Inertia, spindle	33.5 gcm <sup>2</sup>	33.5 gcm <sup>2</sup>	52.19 gcm <sup>2</sup>	52.19 gcm <sup>2</sup>	70.89 gcm <sup>2</sup>	70.89 gcm <sup>2</sup>
Drive	AC Servo	AC Servo	AC Servo	AC Servo	AC Servo	AC Servo
Protection type	IP 30	IP 30	IP 30	IP 30	IP 30	IP 30
Max. speed v	*1.5 m/s	*0.6 m/s	*1.5 m/s	*0.6 m/s	*1 m/s	*0.6 m/s
Max. acceleration a	*25 m/s <sup>2</sup>	*25 m/s <sup>2</sup>	*25 m/s <sup>2</sup>	*25 m/s <sup>2</sup>	*25 m/s <sup>2</sup>	*25 m/s <sup>2</sup>
Peak force Fx	200 N	600 N	200 N	600 N	200 N	600 N
Measuring system	Resolver	Resolver	Resolver	Resolver	Resolver	Resolver
Repeat accuracy	+/- 0.01 mm	+/- 0.01 mm	+/- 0.01 mm	+/- 0.01 mm	+/- 0.01 mm	+/- 0.01 mm
Mounting position	✦	✦	✦	✦	✦	✦

The technical data pertains to Afag standard test conditions.  
 Note: The inductive reference sensor is integrated within the SA axis.  
 Cleanroom class ISO 14644-1, class ISO 7

\*The maximum values listed above depend on the application and must not be combined. In case of doubt, please contact your Afag partner.

\*\*Total weight = gross weight + slide + gear + motor + controller SE-48 (0.9 kg)

\*\*\*Without brakes

\*\*\*\*With brakes

### Included in the delivery

(Catalogue HT accessories)

- 2x Centering bushing Ø7x3
- 2x Centering bushing Ø9x4

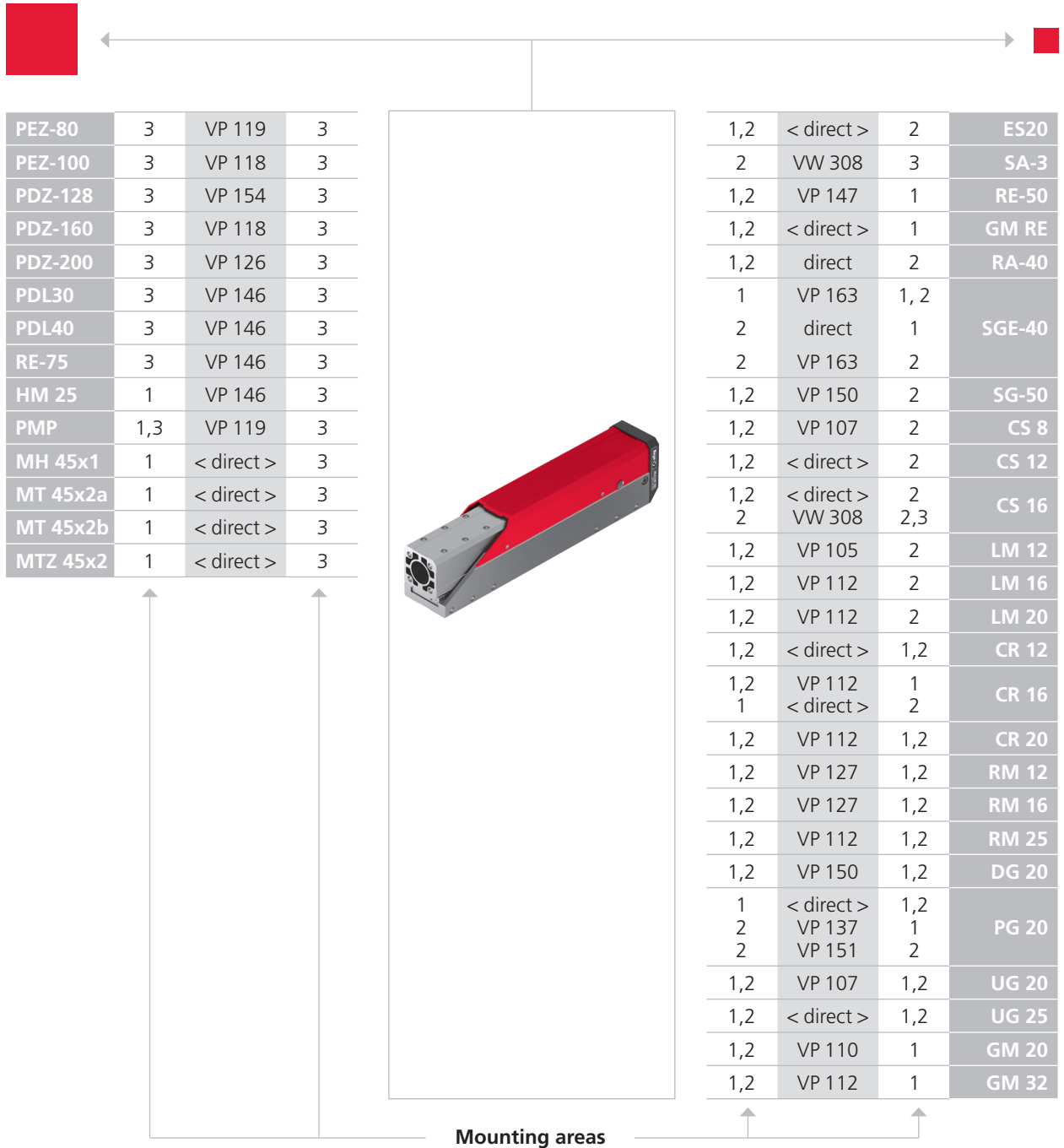
### Accessories

- Toothed belt drive SA-6
  - Coupling flange SA-6
  - Coupling flange SA-6 without motor
  - Grease press attachment SA
- (Catalogue HT accessories)
- Servo motor-21-72VDC-400W
  - Servo motor 21-320VDC-400W
  - Servo controller SE-Power
  - Servo controller C1xxx -1S
  - Servo controller E12-xx

Warranty: 24 months following commissioning, but a maximum of 27 months following delivery

# Preferred combinations

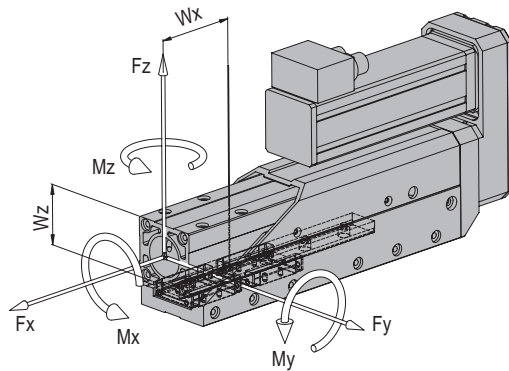
## SA-6 / SA-6-FL



CS, ES	LM	HM	SA	UG, GM, SG, DG, PG, GE, SGE
PMP, PMP-c	PEZ, PDZ	PEL, PDL	RM, RE	CR, RM 32, RE, SREH, RA

Note that there might be different mounting positions from one module to another one.  
The required connection elements and the range of support columns are depicted in the catalogue HT accessories.

Type	SA-6-100	SA-6-100-FL	SA-6-200	SA-6-200-FL	SA-6-300	SA-6-300-FL
Max. torque Mx	25 Nm	25 Nm	25 Nm	25 Nm	25 Nm	25 Nm
Max. torque My	70 Nm	70 Nm	70 Nm	70 Nm	70 Nm	70 Nm
Max. torque Mz	70 Nm	70 Nm	70 Nm	70 Nm	70 Nm	70 Nm
Effective distance Wx	75 mm	75 mm	75 mm	75 mm	75 mm	75 mm
Effective distance Wy	0 mm	0 mm	0 mm	0 mm	0 mm	0 mm
Effective distance Wz	52 mm	52 mm	52 mm	52 mm	52 mm	52 mm
Peak force Fx	200 N	600 N	200 N	600 N	200 N	600 N

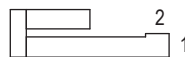


$$\frac{M_x}{M_{x \max}} + \frac{M_y}{M_{y \max}} + \frac{M_z}{M_{z \max}} < 1$$

Maximum payload/type	SA-6-100	SA-6-100-FL	SA-6-200	SA-6-200-FL	SA-6-300	SA-6-300-FL
Installation position (horizontal) for mounting side 1/2	16 kg	16 kg	16 kg	16 kg	16 kg	16 kg
Installation position (vertical) for mounting side 1/2	16 kg	16 kg	16 kg	16 kg	16 kg	16 kg

Assembly sides module mounting

horizontal:

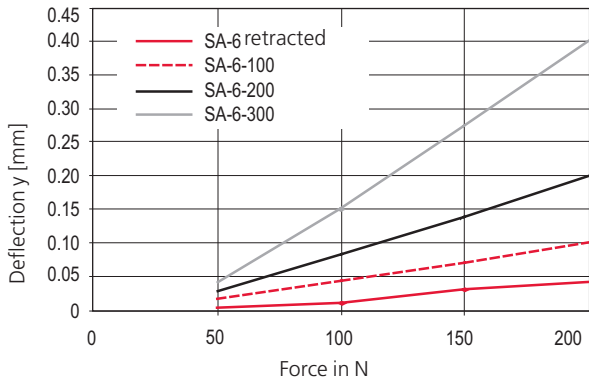


vertical:

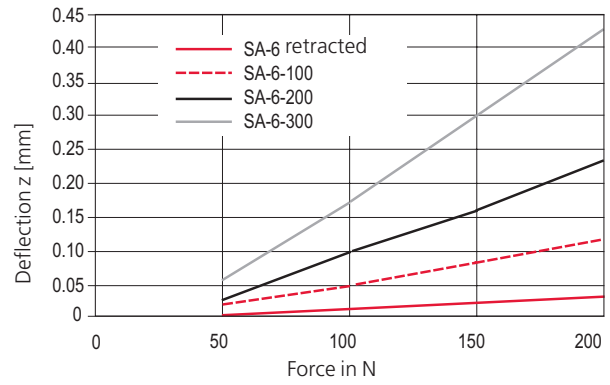


## Load diagrams

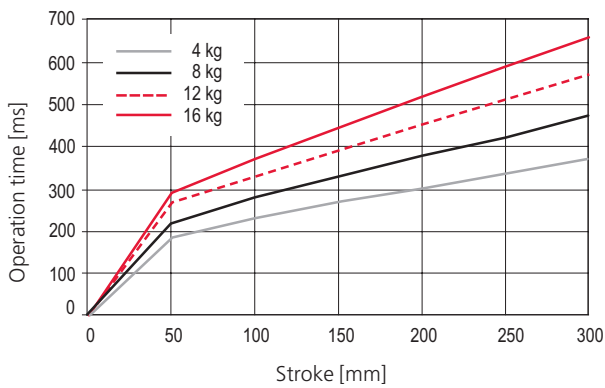
Deflection in Y direction



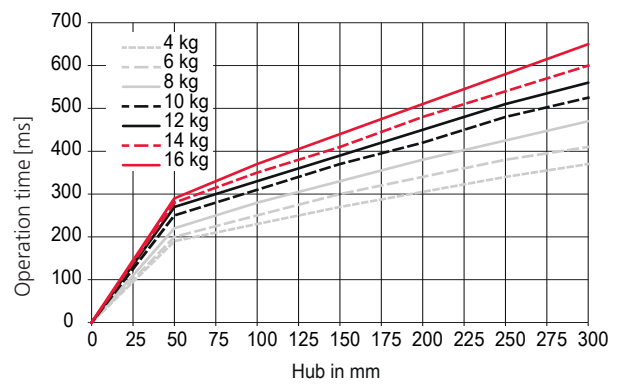
Deflection in Z direction



Operation time SA-6



Operation time SA-6-FL



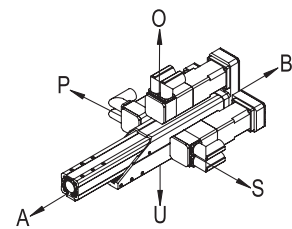


Order form	SA-6 /-FL	XXXXXXXX	XXXXXXXX	XXXXXXXX	X	X	X
		Stroke	Gear	Motor	Position gear	Position control	Position motor plug

### Coordinate system

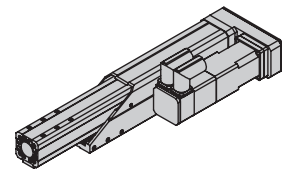
The coordinate system allows you to define the position of the gear, control as well as that of the motor plug.

- A = before
- B = base
- O = top
- P = left
- S = right
- U = downside



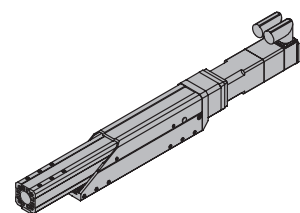
### Ordering example 1

SA-6	50113798	50164846	50495884	S	O	A
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### Ordering example 2

SA-6	50113798	50164846	50495883	B	X	A
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### Ordering process

- Select the desired stroke length, gear and motor from the order key.
- Enter the corresponding red order numbers in the order form in the place of the cross.
- Determine the desired position of the gear and the motor plug.
- Enter the corresponding letters from the coordinate system in the order form in the place of the cross.

### Third-party motors

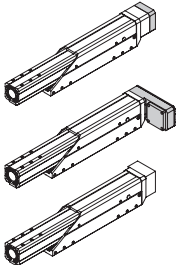


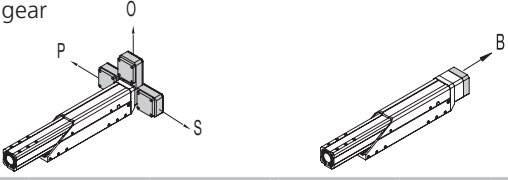
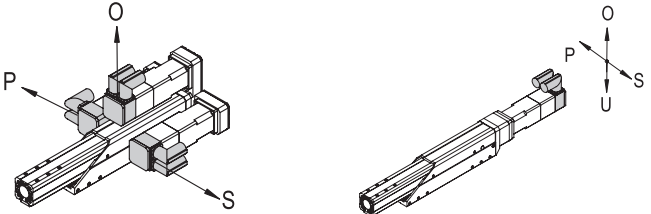
- If motors from other suppliers are to be attached to Afag modules, an adapter plate will be required. This adapter plate can be provided by Afag, if desired.

### External controller

- Mechanical limiting values of the module must be observed (v max., a max.,...).
- The controller parametrisation is carried out by the customer.

# Order key

## SA-6/SE-Power/C1xxx/E12xx

Telescope spindle axis	SA-6	xxxxxxxx	xxxxxxxx	xxxxxxxx	x	x	
		Stroke		Gear	Motor	Position gear	Position motor plug
	SA-6-100	50113798					
	SA-6-100-FL	50471888					
	SA-6-200	50113800					
	SA-6-200-FL	50471889					
	SA-6-300	50113804					
	SA-6-300-FL	50471890					
Gear			50164846	 BG2	B	X	
			50113795				
			50164873	M0			
Motor/controller	Without motor M0			X			
	 BG2	Servomotor-21-72VDC-400W-45-B-I-x-x	B	50485435	B	O	
		Servomotor-21-72VDC-400W-45-x-I-x-x		50495882			
		Servomotor-21-320VDC-400W-45-B-R-x-x	B	50495884			
		Servomotor-21-320VDC-400W-45-x-R-x-x		50495883			
Assembly	Position gear 				B	O	
	Position motor plug 						
		The plug can be turned 180°. You can find further information in the operating manual.					
							SE-Power C1xxx E12xx 1 kVA

B: Motor with brakes  
BG: Motor size



# Accessories SA

## Toothed belt drive SA-1

**Order number** 50249015

Net weight 0.185 kg

## Coupling flange SA-1

**Order number** 50249016

Net weight 0.127 kg

## Coupling flange SA-1 without motor

**Order number** 50261931

Net weight 0.091 kg

## Toothed belt drive SA-3

**Order number** 50113764

Net weight 0.236 kg

## Coupling flange SA-3

**Order number** 50113754

Net weight 0.236 kg

## Coupling flange SA-3 without motor

**Order number** 50164698

Net weight 0.178 kg

## Toothed belt drive SA-6

**Order number** 50113795

Net weight 0.397 kg

## Coupling flange SA-6

**Order number** 50164846

Net weight 0.448 kg

## Coupling flange SA-6 without motor

**Order number** 50164873

Net weight 0.299 kg

## Grease press attachment SA

**Order number** 11012190

Net weight 0.01 kg

