Electric spindle actuators type SG

- stroke up to 1,500 mm
- push/pull force up to 5,660N
- speed up to 25 mm/s (no-load)
- maintenance free

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PUSHING AHEAD

SERAPID is the specialist for horizontal and vertical motion through the use of our Rigid Chain Technology. Our products are best used with long strokes, heavy loads and in harsh environments.

SERAPID introduces its new mechanical actuator manufactured in Austria. The spindle actuator is a mechanical actuator adapted to small load capacities and low cycles (11,000 cycles lifetime). It is best suited for lifting or pulling a load in environments with no space-constraints.

The spindle actuator (type SG) housing is made of anodized aluminum and the pushrod is made of either aluminum or steel. It is electronically driven and answers to safety regulations.

We are able to offer you various spindle actuators depending on the motor size, the stroke, the transmission ratios, the spindle diameters and the control current you need.

The spindle actuator comes complete with drive and electronics.

Mechanical linear actuators for no space-constraints environments.

Characteristics of the spindle actuator Type SG:

- 24V DC actuator
- Current input 0.8/ 1.0/ 1.3/ 1.6/ 2.0/ 2.6/ 4.0/ 6.0/ 8.0/ 10.0/ 12.0 A
- Stroke up to 1,500 mm
- Push/ Pull force of 5,660 N
- Speed up to 25 mm/s [1]
- Cut-off at either end position [2]
- Electronically controlled emergency stop on overload
- Heat resistant silicon connecting cable (standard length 2.5 m*, plug-in type)
- Ambient temperature range -20°C to +60°C, up to +110° for two hours use according VdS 2580 safety regulation
- Protection IP54 (optional IP65) - against dust, liquids and debris according DIN EN60529
- Shapely aluminum enclosure, anodized. Continuous adjustability in mounting ensured by sliding blocks and bearing pins
- Pushrod of high quality steel or anodized aluminum
- Mechanical stability 3,200/ 6,400 N**
- Enclosure dimensions 61 mm x 47 mm x (length - depending on type)

General technical data

Types	SG08X to SG80X
sealing	standard
rated voltage	24VDC
no load current	0.8A
permissible ambient temperature	-20° to +60°C
max. permissible temperature***	300°C (30 min)
protection type according to DIN EN60529	IP54

1 speed with no load
2 by integrated limit switches - additional potential-free limit switches
* other lengths on request
** depending on the type and mounting
*** according to EN 12101-2

Technical information for SG spindle actuators

0.8 Amps actuator

	SG08A	SG08B	SG08C	SG08D	SG08E	SG08F	SG08G	SG08H	SG08J	SG08K
pushing and pulling force [N] (full load)	820	530	380	300	210	550	360	260	200	150
speed [mm/s] (no load)	5.5	10.0	14.0	17.9	24.8	8.3	15.1	20.9	26.9	37.2
speed [mm/s] (full load)	4.1	7.5	10.4	13.4	18.5	6.2	11.2	15.6	20.0	27.7
max. stroke [mm] (full load)	1120	1391	1500*	1500*	1500*	1500*	1500*	1500*	1500*	1500*
possible torque tube versions [mm]	ø25A, ø25, ø25S					ø25, ø25S				

	SG08L	SG08M	SG08N	SG08P	SG08R
pushing and pulling force [N] (full load)	1080	700	510	390	280
speed [mm/s] (no load)	4.1	7.5	10.5	13.5	18,6
speed [mm/s] (full load)	3.1	5.6	7.8	10.0	13.9
max. stroke [mm] (full load)	690	857	1010	1145	1347
possible torque tube versions [mm]	ø25A, ø25, ø25S				

1.0 Amps actuator

	SG10A	SG10B	SG10C	SG10D	SG10E	SG10F	SG10G	SG10H	SG10J	SG10K
pushing and pulling force [N] (full load)	1090	710	510	400	290	740	480	340	270	190
speed [mm/s] (no load)	5.5	10.1	14.0	18.0	24.8	8.3	15.1	21.0	26.9	37.2
speed [mm/s] (full load)	3.7	6.8	9.4	12.1	16.7	5.6	10.1	14.1	18.1	25.0
max. stroke [mm] (full load)	981	1219	1436	1500*	1500*	1500*	1500*	1500*	1500*	1500*
possible torque tube versions [mm]	ø25A, ø25, ø25S					ø25, ø25S				

	SG10L	SG10M	SG10N	SG10P	SG10R
pushing and pulling force [N] (full load)	1440	940	670	520	380
speed [mm/s] (no load)	4.1	7.5	10.5	13.5	18.6
speed [mm/s] (full load)	2.8	5.1	7.0	9.1	12.5
max. stroke [mm] (full load)	604	751	885	1003	1180
possible torque tube versions [mm]	ø25A, ø25, ø25S				

1.3 Amps actuator

	SG13A	SG13B	SG13C	SG13D	SG13E	SG13F	SG13G	SG13H	SG13J	SG13K
pushing and pulling force [N] (full load)	1500	970	700	540	390	1020	660	470	370	270
speed [mm/s] (no load)	5.5	10.1	14.0	18.0	24.8	8.3	15.1	21.0	27.0	37.3
speed [mm/s] (full load)	3.1	5.7	7.9	10.1	14.0	4.7	8.5	11.8	15.2	21.0
max. stroke [mm] (full load)	845	1049	1237	1402	1500*	1500*	1500*	1500*	1500*	1500*
possible torque tube versions [mm]	ø25A, ø25, ø25S					ø25, ø25S				

	SG13L	SG13M	SG13N	SG13P	SG13R
pushing and pulling force [N] (full load)	1990	1290	930	720	520
speed [mm/s] (no load)	4.1	7.5	10.5	13.5	18.6
speed [mm/s] (full load)	2.3	4.2	5.9	7.6	10.5
max. stroke [mm] (full load)	520	647	762	864	1016
possible torque tube versions [mm]	ø25A, ø25, ø25S				

* The maximum stroke at full load is the stroke which the drive is able to extend with full load without articulating spindle. For greater strokes the pushing force must be reduced · please consult us.

Technical information for SG spindle actuators

1.6 Amps actuator

	SG16A	SG16B	SG16C	SG16D	SG16E	SG16F	SG16G	SG16H	SH16J
pushing and pulling force [N] (full load)	1530	990	710	560	400	1040	670	480	380
speed [mm/s] (no load)	6.2	11.2	15.6	20.0	27.7	9.2	16.8	23.4	30.0
speed [mm/s] (full load)	5.1	9.3	12.9	16.6	23.0	7.7	14.0	19.4	24.9
max. stroke [m] (full load)	842	1046	1232	1397	1500*	1500*	1500*	1500*	1500*
possible torque tube versions [mm]	ø25A, ø25, ø25S					ø25, ø25S			

	SG16L	SG16M	SG16N	SG16P	SG16R
pushing and pulling force [N] (full load)	2030	1320	950	740	530
speed [mm/s] (no load)	4.6	8.4	11.7	15.0	20.8
speed [mm/s] (full load)	3.8	7.0	9.7	12.5	17.2
max. stroke [mm] (full load)	518	644	759	861	1012
possible torque tube versions [mm]	ø25A, ø25, ø25S				

2.0 Amps actuator

	SG20A	SG20B	SG20C	SG20D	SG20E	SG20F	SG20G	SG20H	SG20J
pushing and pulling force [N] (full load)	2000	1300	930	730	530	1360	880	630	490
speed [mm/s] (no load)	6.2	11.2	15.6	20.0	27.7	9.2	16.8	23.4	30.1
speed [mm/s] (full load)	4.8	8.8	12.2	15.7	21.7	7.2	13.2	18.3	23.6
max. stroke [m] (full load)	739	918	1082	1227	1443	1500*	1500*	1500*	1500*
possible torque tube versions [mm]	ø25A, ø25, ø25S					ø25, ø25S			

	SG20L	SG20M	SG20N	SG20P	SG20R
pushing and pulling force [N] (full load)	2660	1720	1240	960	700
speed [mm/s] (no load)	4.6	8.4	11.7	15.0	20.8
speed [mm/s] (full load)	3.6	6.6	9.2	11.8	16.3
max. stroke [mm] (full load)	455	566	667	756	889
possible torque tube versions [mm]	ø25A, ø25, ø25S				

2.6 Amps actuator

	SG26A	SG26B	SG26C	SG26D	SG26E	SG26F	SG26G	SG26H	SG26J
pushing and pulling force [N] (full load)	2710	1760	1260	980	710	1840	1190	860	670
speed [mm/s] (no load)	6.2	11.2	15.6	20.1	27.7	9.2	16.8	23.4	30.1
speed [mm/s] (full load)	4.4	8.1	11.2	14.4	19.9	6.6	12.1	16.8	21.6
max. stroke [m] (full load)	638	793	934	1059	1245	1342	1500*	1500*	1500*
possible torque tube versions [mm]	ø25A, ø25, ø25S					ø25, ø25S			

	SG26M	SG26N	SG26P	SG26R
pushing and pulling force [N] (full load)	2330	1680	1300	940
speed [mm/s] (no load)	8.4	11.7	15.0	20.8
speed [mm/s] (full load)	6.1	8.4	10.8	14.9
max. stroke [m] (full load)	488	575	659	767
possible torque tube versions [mm]	ø25A, ø25, ø25S			

* The maximum stroke at full load is the stroke which the drive is able to extend with full load without articulating spindle. For greater strokes the pushing force must be reduced - please consult us.

Technical information for SG spindle actuators

4.0 Amps actuator

	SG40A	SG40B	SG40C	SG40D	SG40E	SG40F	SG40G	SG40H	SG40J
pushing and pulling force [N] (full load)	3850	2490	1800	1400	1010	2610	1690	1220	950
speed [mm/s] (no load)	6.7	12.2	17.0	21.9	30.2	10.1	18.4	25.5	32.8
speed [mm/s] (full load)	5.3	9.7	13.5	17.4	24.1	8.0	14.6	20.3	26.1
max. stroke [m] (full load)	529	657	774	878	1032	1112	1382	1500*	1500*
possible torque tube versions [mm]	ø25, ø25, ø25S					ø25, ø25S			

	SG40L	SG40M	SG40N	SG40P	SG40R	SG40S	SG40T	SG40U	SG40V	SG40W
pushing and pulling force [N] (full load)	4850	3330	2600	1660	1300	3290	2250	1760	1130	880
speed [mm/s] (no load)	6.1	9.6	12.2	19.1	24.5	9.2	14.3	18.4	28.7	36.7
speed [mm/s] (full load)	4.9	7.6	9.7	15.2	19.5	7.3	11.4	14.6	22.8	29.2
max. stroke [m] (full load)	471	569	644	805	910	991	1197	1354	1500*	1500*
possible torque tube versions [mm]	ø25, ø25, ø25S					ø25, ø25S				

6.0 Amps actuator

	SG60D	SG60E	SG60F	SG60J	SG60M	SG60N	SG60P	SG60R
pushing and pulling force [N] (full load)	2220	1600	4140	1500	5280	4130	2640	2060
speed [mm/s] (no load)	21.9	30.3	10.1	32.8	9.6	12.3	19.2	24.5
speed [mm/s] (full load)	15.2	21.0	7.0	22.8	6.7	8.5	13.3	17.0
max. stroke [m] (full load)	702	826	890	1478	455	515	644	728
possible torque tube versions [mm]	ø25, ø25, ø25S		ø25, ø25S		ø25, ø25, ø25S			

	SG60S	SG60T	SG60U	SG60V	SG60W
pushing and pulling force [N] (full load)	5220	3580	2800	1790	1400
speed [mm/s] (no load)	9.2	14.4	18.4	28.7	36.8
speed [mm/s] (full load)	6.4	10.0	12.8	20.0	25.6
max. stroke [m] (full load)	793	958	1083	1354	1500*
possible torque tube versions [mm]	ø25A, ø25, ø25S				

8.0 Amps actuator

	SG80E	SG80N	SG80P	SG80R	SG80T	SG80U	SG80V	SG80W
pushing and pulling force [N] (full load)	2200	5660	3620	2830	4900	3830	2450	1920
speed [mm/s] (no load)	30.3	12.3	19.2	24.5	14.4	18.4	28.7	36.8
speed [mm/s] (full load)	18.1	7.3	11.5	14.7	8.6	11.0	17.2	22.0
max. stroke [m] (full load)	708	442	552	625	821	929	1161	1314
possible torque tube versions [mm]	ø25A, ø25, ø25S				ø25, ø25S			

* The maximum stroke at full load is the stroke which the drive is able to extend with full load without articulating spindle. For greater strokes the pushing force must be reduced · please consult us.

Options

Various floor versions (for motors)
Various pushrod suspensions (motor with clevis)
Option RAL (on request): possibility to paint the actuator enclosure in a RAL shade or color
Option E: Internal potential free switches for both end positions
Option IP65

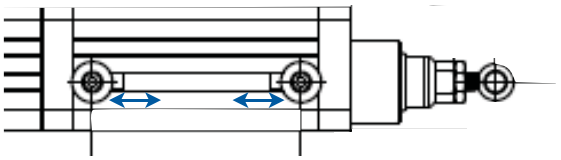
In order to choose correctly your actuator, you need these information:

- Force range between 150N and 5,660N
- Stroke range between 442 mm and 1,500 mm
- Current range: 0.8/ 1.0/ 1.3/ 1.6/ 2.0/ 2.6/ 4.0/ 6.0/ 8.0A

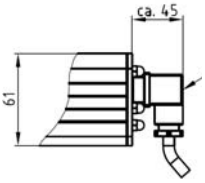
* Each standard actuator unit has one couple of bearing pins enclosed. Standard diameter of the bearing pins: 12 mm until 2.6A and 18 mm from 4.0A

Mounting options

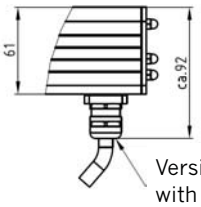
Continuous adjustability in mounting by sliding blocks and bearing pins.



1 or 2 couples of bearing pins*



Version (option KU)
with connector on housing bottom



Version (option PG)
with PG screw connection

How to order

To order your specific spindle actuator, summarize your choices in the following manner:
SGtype/torque tube - stroke - torque tube mounting - cable length - options

SGtype: type of drive selected in the drive list
torque tube: available in aluminum (ø25A), stainless steel 1.4301 (ø25) or St52 zinc-plated (ø25S)
stroke: stroke in [mm]
torque tube attachment:
- eye bolt (standard): bore hole of eye bolt in [mm]
- clevis: bore hole and length of clevis' slot in [mm]

cable length: length of connection cable in [m]
options: list of all desired options (see page 2), protection class according DIN EN60 529

Example:
SG40P/25 - 750 - 8 - 2.5 - RAL 3000
This example is for ordering a spindle actuator type SG40P with stainless steel torque tube, a stroke of 750 mm, bore hole of 8 mm, 2.50 m cable and RAL 3000 painting.

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