LINEAR MOTION

LUDE TRANSMISSION

SC Series Electric Cylinder

Product category

Linear motion idea

The compact integrations of the motor and gear reducer with the acme screw, ball screw and the satellite roller screw, unique advantages in terms of the price and the performance provide much more space to the engineer for designing. The new idea dispensed with the consideration of the hydraulic and pneumatic leakage as well as the pipes and valves.

Self-locking: The majority of the products possess the self-locking function, thus increasing the performance security.
Positioning: the positioning accuracy can reach 0.1mm, and the positioning accuracy of servo actuator can reach 6um.
Precise control: equipped with encoder/potentiometer/ rotary transformator, the closed loop positioning can also be realized through the inverter, PLC controller and the servo controller.
Synchronousness: the synchronous lifting can be achieved through the mechanical connection of multiple screw actuators and screw jacks
Overload protection: can be equipped with the safety clutch, and the over-load sensor.
High load capacity: wide range of load capacity from 5kg to 250 ton, with the stroke 6 meters to the maximum.
High speed: the speed of the of the roller screw actuator can reach 2m/s, the continuous traveling life is 15 times than that of the ball screw actuators.
Others: Easy maintenance, low noise, can work normally under the harsh environment of high/low temperature, corrosive and explosive-prone environment.

Product category

Linear actuator

LAP Series

LBP Series

Screw Jack

SJA Series

SJB Series

SC Screw Jack

SCA Series

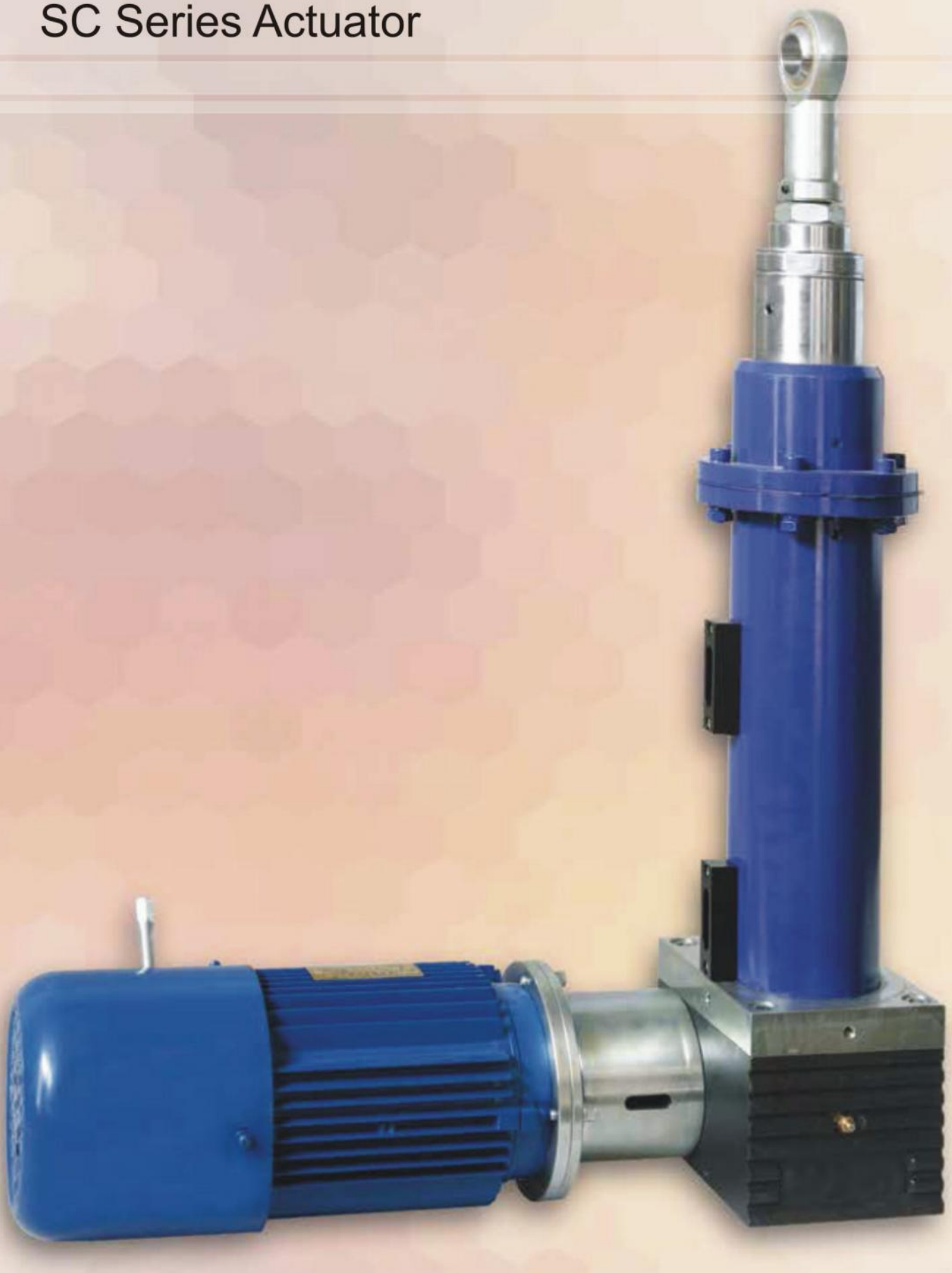
SCB Series

Servo Actuator

DMB Series

DMB Series

SC Series Actuator



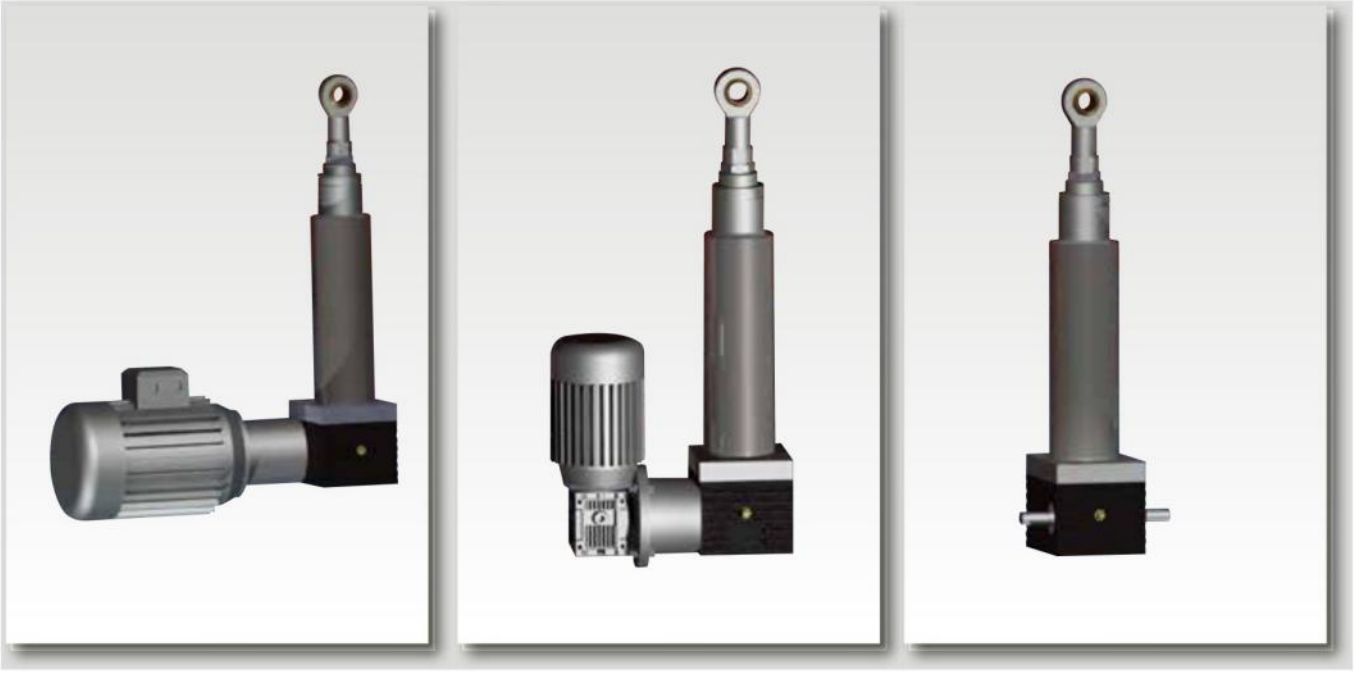
SCB/SCA Series Actuator

Lude Transmission presented a new range of SCB/SCA series Actuator for high load linear motion solutions.
Combined the advantages of Linear actuator and Screw Jack to achieve the high load lifting in industry application.The sealed and high protection class allow the actuator work even in harsh environments. Which is a good solution for Hydraulic and Pneumatic replacement to reduce cost and pollution.

Synchronized Lifting, 2-18 pieces Actuator could be driven by one motor for Synchronized lifting with 0.1mm accuracy. Simple operation but reliable. Please contact Lude Transmission engineering for synchronized lifting system design.

Alternative SCB ball screw actuator and SCA acme screw actuator. Load capacity from 2 ton to 20 ton , could be classified as 2 ton, 5 ton , 8 ton , 10 ton , 20 ton unit. Max. speed and stroke could reach 100mm/s and 2.5m. Duty cycle 50%.

The SC series Actuator can be ordered to accept the motor type of your choice, whether gear motor,or AC motor etc. The SC series offers flexibility in order to accept any type to meet your requirement.



Features of SC series actuator

- Load capacity range from 2ton to 20 ton
- The unique spheroidal graphite iron casting rectangle fluted housing improved the mechanical performance.
- Special design of guided bearing increase the stability and side loading capacity.
- Anti-rotate device
- Self-locking , provided equipment security.
- Double seal to prevent abrasive particles and contaminants from entering the actuator critical mechanisms, and assures trouble-free operation even in most severe environments.
- Protection class IP55, Optional IP56
- Precise positioning control , control accuracy reach 0.1mm
- High stiffness to resist shock load.
- Long life time , low noise , simple maintenance
- Synchronized lifting

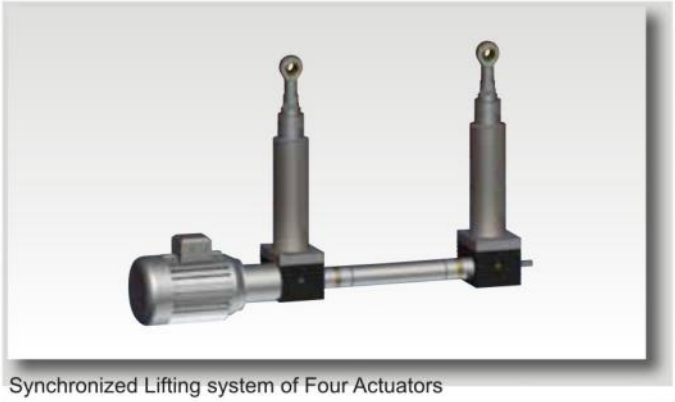
SC series Actuator

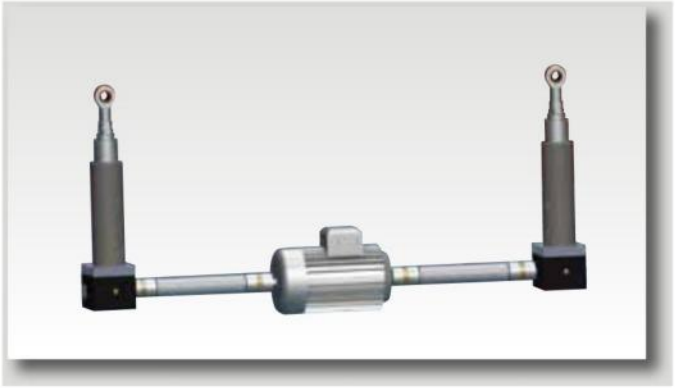
Actuator optional component system

Applications of synchronized lifting

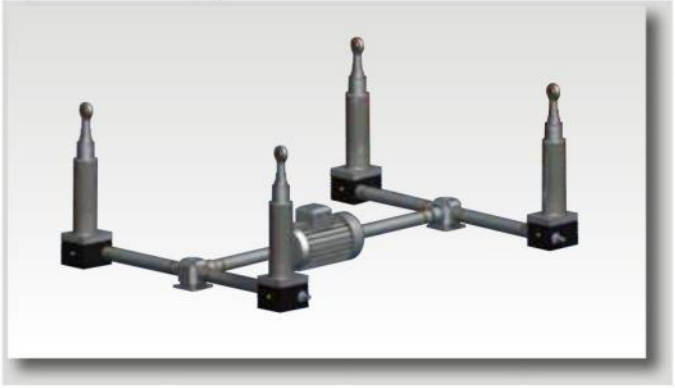
Lude Transmission provided complete system design and components, Which including Actuator , motor, gear box, shaft, coupling , brake , clutch etc.Customer just need let us know your requirement of total load capacity, speed, stroke and dimension, Lude Transmission engineering will provided you a design scheme with calculation process and components selection, CAD drawing is also available.

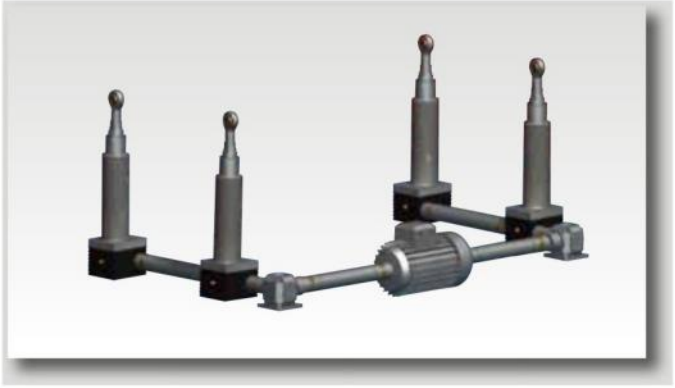
Synchronized Lifting system of Two Actuators





Synchronized Lifting system of Four Actuators





Coding

Series	Size	Ratio	Stroke	Front Attachment	Input Versions	Input Shaft	Assessories
SCA Series	20	V1	100	NF Standard male thread	P1 Single input shaft	RH Right hand	FCH Limit switch box
SCB Series	21	L1	300	TS Ball joint	P2 Double input shaft	LH Left hand	FCP Inductive proximity switches (PNP normally closed)
	22		500	TF Rod end	P3 Motor flange		FCG Cam limit switch
	50		800	FL Flange end	P4 Flange and extend shaft		B Bellows
	51		1000	FO Clevis end			SZ Stainless out tube
	80		1500	FQ Spherical flange			SA Stainless steel screw
	81		Special				SW Stainless steel protective tube
	100						HBP Hinged bearing plate
	101						IRE Encoder
	200						GE Gear motor
	201						Power RPM Mounting direction
							MO Motor
							FMP Foot mounting

EXAMPLE:

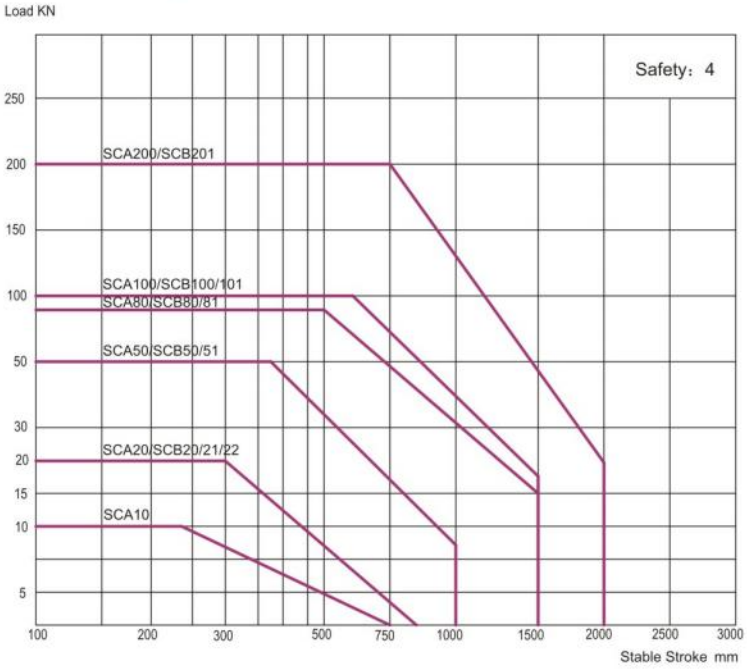
SCB	50	V1	300	FO	P3	RH	FCP/B/IRE/MO:1.1KW 1400RPM B14

Foot Mounting f_k=0.7

Rear Clevis Mounting f_k=1

Guided Mounting f_k=1.25

Critical Bucking Force Graphs



The rated static load of Screw jack is 1.5 time of the rated Dynamic Load. The extreme wreck load is 2.5-4 time of rated Dynamic load, and screw length ect. will affect that. Screw Jack working in tension load are not need forstability checking.

The primary screw jack size selection factor is the bucking resistance of screw,Also know as Euler cures,the graphs above give safety operating atate for each size of screw jack

Buckling limits are relevant for compressive load only.

Max allowed axial load L=lk × fk

LK theoretical critical bucking force

fk correction value

SC series Actuator

Model selection guide

◆ Duty cycle is working percentage in 10 min.
SCB series duty cycle 50%
SCA series duty cycle 30%
◆ Max. Input revolution 1800RPM
◆ Please check the stability curve when stroke exceed 500mm
◆ Adjust the safety coefficient according to the load, 1.0-1.2 for the even load; 1.3-1.5 for the moderate load; 1.6-2.5 for the heavy load.
◆ For the normal performance, the input power should not exceed the max input power, input power
◆ Working temperature : -20℃ - + 40℃ (Special for -40℃ - +100℃)
◆ For the application of synchronous lifting platform, the combination coefficient should be considered, the losing of combination should also be reckoned in calculating the total power. The combination coefficient varies according to the quantity of screw jacks in the synchronous platform:
For 2 PCS screw jack in a platform, the combination coefficient is 0.95
For 3 PCS screw jack in a platform, the combination coefficient is 0.9
For 4 PCS screw jack in a platform, the combination coefficient is 0.85
For 6-8 PCs screw jack in a platform, the combination coefficient is 0.8
It is recommended to increase the combination coefficients appropriately if the double clevis mounting of the screw jack is adopted
◆ The acme screw actuator with ratio L1 possess the self-locking function, while that with ratio V1 has uncertain self-locking, the brake needs to be equipped in the safety and vibrating application.The axial error of the acme screw SCA series are 0.1 mm within 300mm stroke, Ball screw SCB series are 0.05-0.02mm within 300mm stroke

Lifetime calculation

Life time of ACME Screw actuator SCA series base on the wear of worm and nut, and the working condition, side load etc. Please contact local office for support.
The lifetime of Ball screw actuator SCB series depends on the lifetime of ball screw and worm gear and shaft, we just need to calculate the lifetime of screw, worm gear and shaft will wear but normally lifetime is longer than screw.
Theoretically Ball screw lifetime L10 is 90% of stroke ability that screw could reach before metal fatigue, Unit is million millimeter. Theoretically lifetime is not guarantee lifetime. In order to reach max. Lifetime the screw need been appropriate maintainece and lubricate.

If the theoretically lifetime need higher than 90%, need multiply follow coefficient

95%: L10x62% 96%: L10x53% 97%: L10x44%
98%: L10x33% 99%: L10x21%

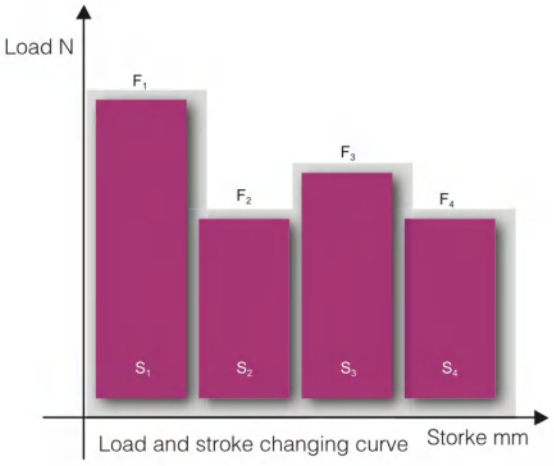
Nut lifetime calculation:

$L10=(C / Fm)^3 xS$

L10: theoretic lifetime km Fm: mean load N
C: Rated dynamic load N S: Ball screw lead mm

Fm mean load calcuation:

$$Fm=3\sqrt{\frac{F_1^3S_1+F_2^3S_2+F_3^3S_3+F_4^3S_4}{S_1+S_2+S_3+S_4}}$$



Rated dynamic load:

	Rated dynamic load KN
SCB20	17
SCB21	25
SCB22	25
SCB50	46

	Rated dynamic load KN
SCB51	30
SCB80	53
SCB81	56
SCB100	71

	Rated dynamic load KN
SCB101	62
SCB200	78
SCB201	97
SCB300	111

SC20 Performance Data

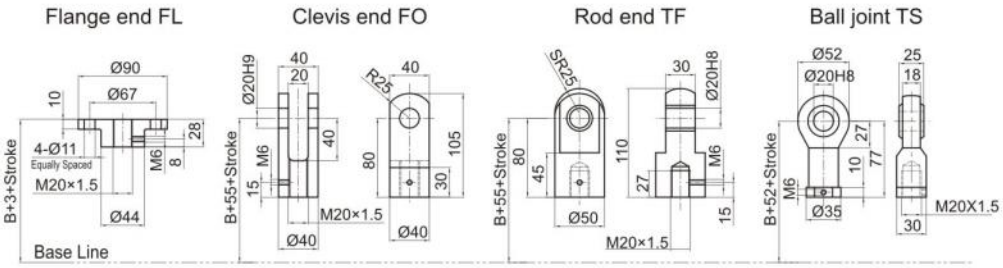
Type	Rated Push KN	Speed mm/s	Stroke for input turn mm	Max. input power kw	Drive	Self-locking	Motor or reducer model
ACME screw actuator SCA20							
SCA20-V1	15	23	1.04	1.14	MOTOR	Uncertain	1.1kw 1400rpm
SCA20-V1	20	15	1.04	1.14	MOTOR	Uncertain	1.1kw 900rpm
SCA20-V1	20	12	1.04	1.14	Helical geared motor	Uncertain	RXF57DT90S4 1.1kw 729rpm
SCA20-V1	20	9	1.04	1.14	Helical geared motor	Uncertain	RXF57DT80N4 0.75kw 582rpm
SCA20-L1	20	6	0.25	0.55	MOTOR	Certain	0.55kw 1400rpm
SCA20-V1	20	5	1.04	1.14	Worm gear motor	Uncertain	NMRV040 71B4 0.37kw 280rpm
SCA20-L1	20	4	0.25	0.55	MOTOR	Certain	0.37kw 900rpm
SCA20-L1	20	3	0.25	0.55	Helical geared motor	Certain	RXF57DT71D4 0.37kw 719rpm
SCA20-V1	20	2.5	1.04	1.14	Worm gear motor	Uncertain	NMRV040 71A4 0.25kw 140rpm
SCA20-L1	20	2	0.25	0.55	Helical geared motor	Certain	RXF57DR63L4 0.25kw 446rpm
SCA20-V1	20	1.2	1.04	1.14	Worm gear motor	Uncertain	NMRV030 63A4 0.12kw 70rpm
SCA20-L1	20	1.2	0.25	0.55	Worm gear motor	Certain	NMRV030 63B4 0.18kw 280rpm
SCA20-V1	20	0.8	1.04	1.14	Worm gear motor	Uncertain	NMRV030 63A4 0.12kw 46rpm
SCA20-L1	20	0.6	0.25	0.55	Worm gear motor	Certain	NMRV030 63A4 0.12kw 140rpm
SCA20-L1	20	0.3	0.25	0.55	Worm gear motor	Certain	NMRV030 63A4 0.12kw 70rpm
SCA20-L1	20	0.2	0.25	0.55	Worm gear motor	Certain	NMRV030 63A4 0.12kw 46rpm

Type	Rated Push KN	Speed mm/s	Stroke for input turn mm	Max. input power kw	Drive	Self-locking	Motor or reducer model
Ball screw actuator SCB20							
SCB22-V1	9	76	3.48	1.14	MOTOR	Uncertain	1.1kw 1400rpm
SCB22-V1	13	50	3.48	1.14	MOTOR	Uncertain	1.1kw 900rpm
SCB21-V1	18	38.3	1.74	1.14	MOTOR	Uncertain	1.1kw 1400rpm
SCB21-V1	20	25	1.74	1.14	MOTOR	Uncertain	1.1kw 900rpm
SCB21-V1	20	20	1.74	1.14	Helical geared motor	Uncertain	RXF57DT80N4 0.75kw 719rpm
SCB20-V1	20	19	0.87	1.14	MOTOR	Uncertain	0.75kw 1400rpm
SCB21-V1	20	15	1.74	1.14	Helical geared motor	Uncertain	RXF57DT80K4 0.55kw 574rpm
SCB20-V1	20	12	0.87	1.14	MOTOR	Uncertain	0.55kw 900rpm
SCB21-L1	20	10	0.42	0.55	MOTOR	Certain	0.55kw 1400rpm
SCB21-V1	20	8.3	1.74	1.14	Worm gear motor	Uncertain	NMRV040 71B4 0.37kw 280rpm
SCB21-L1	20	6.7	0.42	0.55	MOTOR	Certain	0.37kw 900rpm
SCB21-L1	20	5	0.42	0.55	Helical geared motor	Certain	RXF57DT71D4 0.37kw 719rpm
SCB21-V1	20	4.2	1.74	1.14	Worm gear motor	Uncertain	NMRV040 71A4 0.25kw 140rpm
SCB21-L1	20	3.3	0.42	0.55	Helical geared motor	Certain	RXF57DR63L4 0.25kw 446rpm
SCB21-V1	20	2	1.74	1.14	Worm gear motor	Uncertain	NMRV030 63A4 0.12kw 70rpm
SCB21-L1	20	2	0.42	0.55	Worm gear motor	Certain	NMRV030 63B4 0.18kw 280rpm
SCB21-V1	20	1.3	1.74	1.14	Worm gear motor	Uncertain	NMRV030 63A4 0.12kw 46rpm
SCB21-L1	20	1	0.42	0.55	Worm gear motor	Certain	NMRV030 63A4 0.12kw 140rpm
SCB21-L1	20	0.5	0.42	0.55	Worm gear motor	Certain	NMRV030 63A4 0.12kw 70rpm
SCB21-L1	20	0.3	0.42	0.55	Worm gear motor	Certain	NMRV030 63A4 0.12kw 46rpm
Weight		8.5kg					
Weight per 100mm stroke		1.9kg					

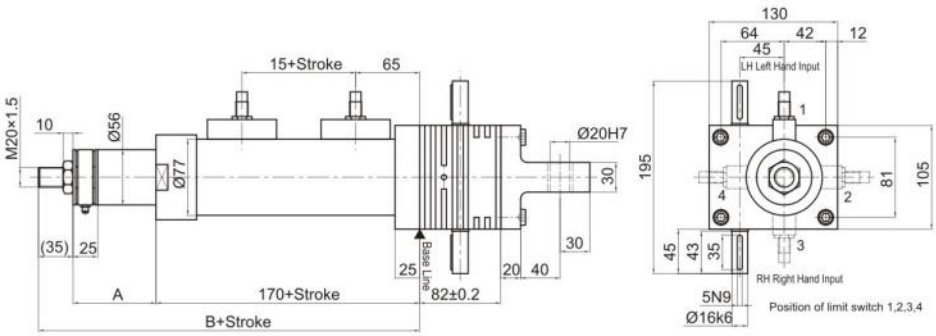
Note:The motor power can be reduced if actual load less than rated load.
Uncertain Actuator are recommended match brake motor

Overall Dimensions of SC Series

SCA/SCB20 Actuator



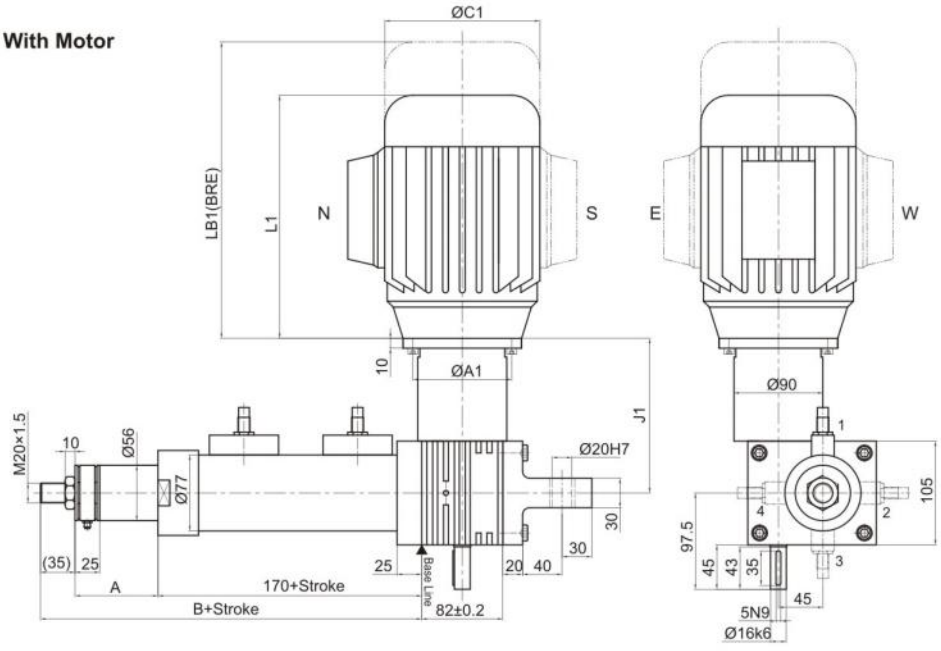
Standard actuator



	SCA20	SCB20
A	80	110
B	285	315

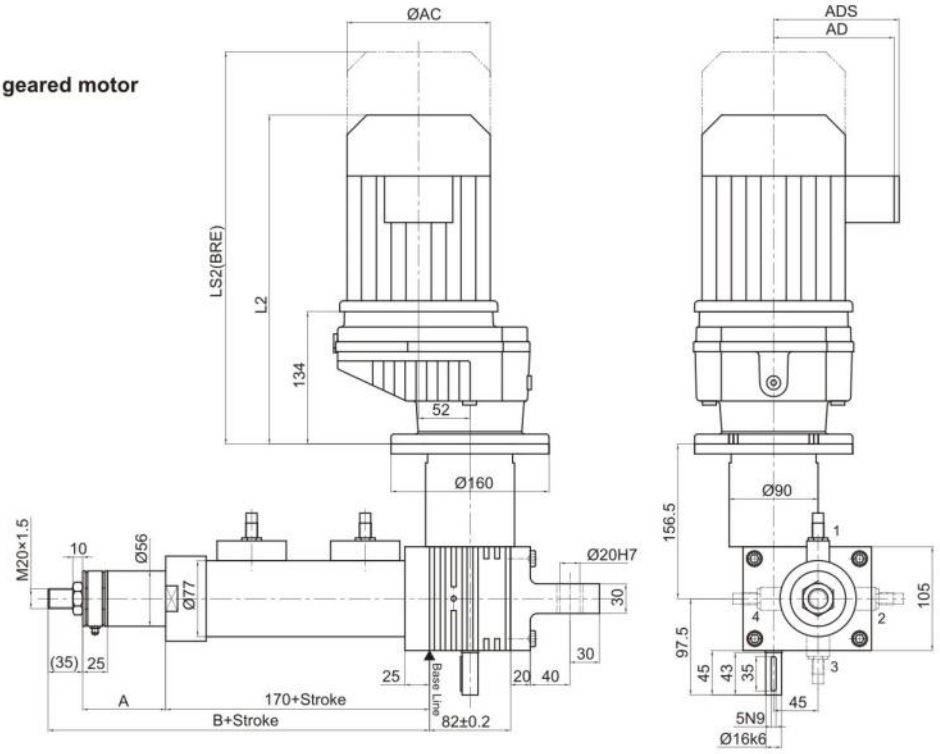
	80B14	90B14
A1	100	115
C1	157	175
L1	246	270
LB1	300	334
J1	155	165

With Motor



SCA/SCB20 Actuator

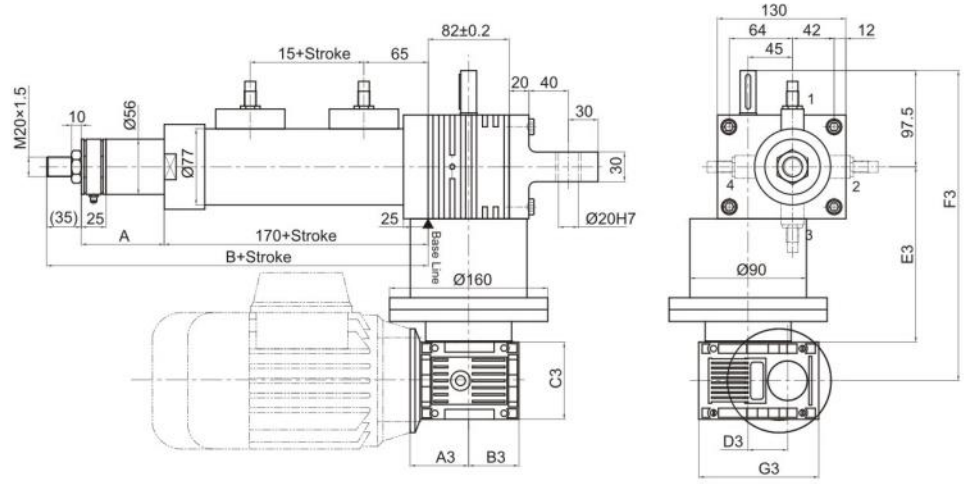
With helical geared motor



	DR63	DT71D	DT80	DT90
AC	132	145	145	197
AD	105	122	122	154
ADS	105	127	127	161
L2	319	333	383	403
LS2	374	397	447	488

	NMRV030	NMRV040
A3	55	70
B3	40	50
C3	63	78
D3	30	40
E3	156.5	169.5
F3	285.5	306
G3	97	121.5

with worm gear motor



Overall Dimensions of SC Series

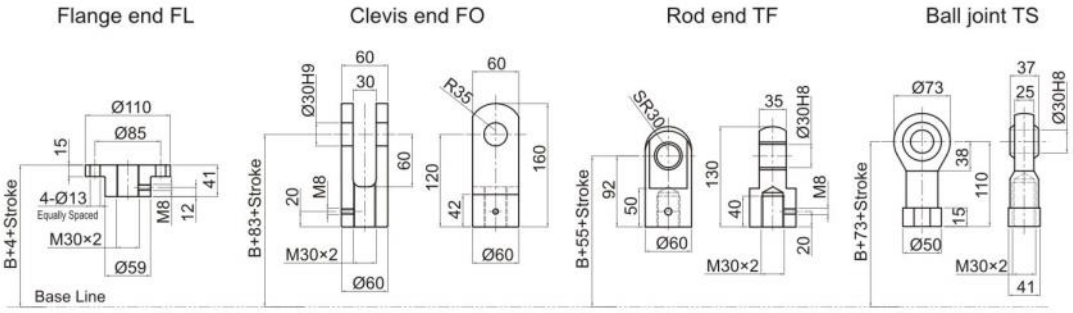
SC50 Performance date

Type	Rated Push KN	Speed mm/s	Stroke for input turn mm	Max. input power kw	Drive	Self-locking	Motor or reducer model
ACME screw actuator SCA50							
SCA50-V1	30	23	1.04	2.2	MOTOR	Uncertain	2.2kw 1400rpm
SCA50-V1	40	15	1.04	2.2	MOTOR	Uncertain	2.2kw 900rpm
SCA50-V1	50	12	1.04	2.2	Helical geared motor	Uncertain	RXF57DT100M4 2.2kw 734rpm
SCA50-V1	50	9	1.04	2.2	Helical geared motor	Uncertain	RXF57DT90L4 1.5kw 534rpm
SCA50-L1	40	6	0.25	1.1	MOTOR	Certain	1.1kw 1400rpm
SCA50-V1	50	5	1.04	2.2	Worm gear motor	Uncertain	NMRV050 80B2 1.1kw 280rpm
SCA50-L1	50	4	0.25	1.1	MOTOR	Certain	1.1kw 900rpm
SCA50-L1	50	3	0.25	1.1	Helical geared motor	Certain	RXF57DT80N4 0.75kw 719rpm
SCA50-V1	50	2.5	1.04	2.2	Worm gear motor	Uncertain	NMRV050 80A4 0.55kw 140rpm
SCA50-L1	50	2	0.25	1.1	Helical geared motor	Certain	RXF57DT80K4 0.55kw 447rpm
SCA50-V1	50	1.2	1.04	2.2	Worm gear motor	Uncertain	NMRV040 71B4 0.37kw 70rpm
SCA50-L1	50	1.2	0.25	1.1	Worm gear motor	Certain	NMRV040 71B4 0.37kw 280rpm
SCA50-V1	50	0.8	1.04	2.2	Worm gear motor	Uncertain	NMRV040 71A4 0.25kw 46rpm
SCA50-L1	50	0.6	0.25	1.1	Worm gear motor	Certain	NMRV040 71A4 0.25kw 140rpm
SCA50-L1	50	0.3	0.25	1.1	Worm gear motor	Certain	NMRV030 63B4 0.18kw 70rpm
SCA50-L1	50	0.2	0.25	1.1	Worm gear motor	Certain	NMRV030 63C6 0.15kw 45rpm

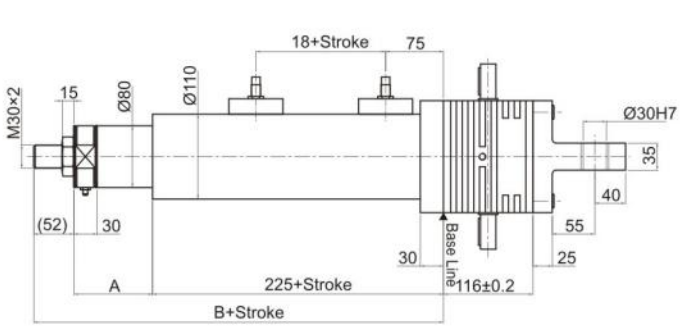
Type	Rated Push KN	Speed mm/s	Stroke for input turn mm	Max. input power kw	Drive	Self-locking	Motor or reducer model
Ball screw actuator SCB50							
SCB51-V1	20	66	2.96	2.2	MOTOR	Uncertain	2.2kw 1400rpm
SCB51-V1	30	42	2.96	2.2	MOTOR	Uncertain	2.2kw 900rpm
SCB50-V1	40	33	1.48	2.2	MOTOR	Uncertain	2.2kw 1400rpm
SCB50-V1	50	21	1.48	2.2	MOTOR	Uncertain	2.2kw 900rpm
SCB50-V1	50	17	1.48	2.2	Helical geared motor	Uncertain	RXF57DT90L4 1.5kw 691rpm
SCB50-V1	50	13	1.48	2.2	Helical geared motor	Uncertain	RXF57DT90L4 1.5kw 534rpm
SCB50-L1	50	8.6	0.36	1.1	MOTOR	Certain	1.1kw 1400rpm
SCB50-V1	50	7	1.48	2.2	Worm gear motor	Uncertain	NMRV050 80B2 1.1kw 280rpm
SCB50-L1	50	5.7	0.36	1.1	MOTOR	Certain	0.75kw 900rpm
SCB50-L1	50	4.3	0.36	1.1	Helical geared motor	Certain	RXF57DT80N4 0.75kw 719rpm
SCB50-V1	50	3.6	1.48	2.2	Worm gear motor	Uncertain	NMRV050 80A4 0.55kw 140rpm
SCB50-L1	50	2.9	0.36	1.1	Helical geared motor	Certain	RXF57DT80K4 0.55kw 447rpm
SCB50-V1	50	1.7	1.48	2.2	Worm gear motor	Uncertain	NMRV040 71B4 0.37kw 70rpm
SCB50-L1	50	1.7	0.36	1.1	Worm gear motor	Certain	NMRV040 71B4 0.37kw 280rpm
SCB50-V1	50	1.1	1.48	2.2	Worm gear motor	Uncertain	NMRV040 71A4 0.25kw 46rpm
SCB50-L1	50	0.9	0.36	1.1	Worm gear motor	Certain	NMRV040 71A4 0.25kw 140rpm
SCB50-L1	50	0.4	0.36	1.1	Worm gear motor	Certain	NMRV030 63B4 0.18kw 70rpm
SCB50-L1	50	0.3	0.36	1.1	Worm gear motor	Certain	NMRV030 63C6 0.15kw 45rpm
Weight		22kg					
Weight per 100mm stroke		3.4kg					

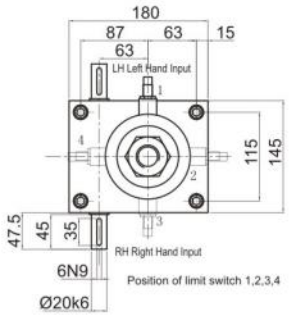
Note:The motor power can be reduced if actual load less than rated load.
Uncertain Actuator are recommended match brake motor

SCA/SCB50 Actuator



Standard actuator

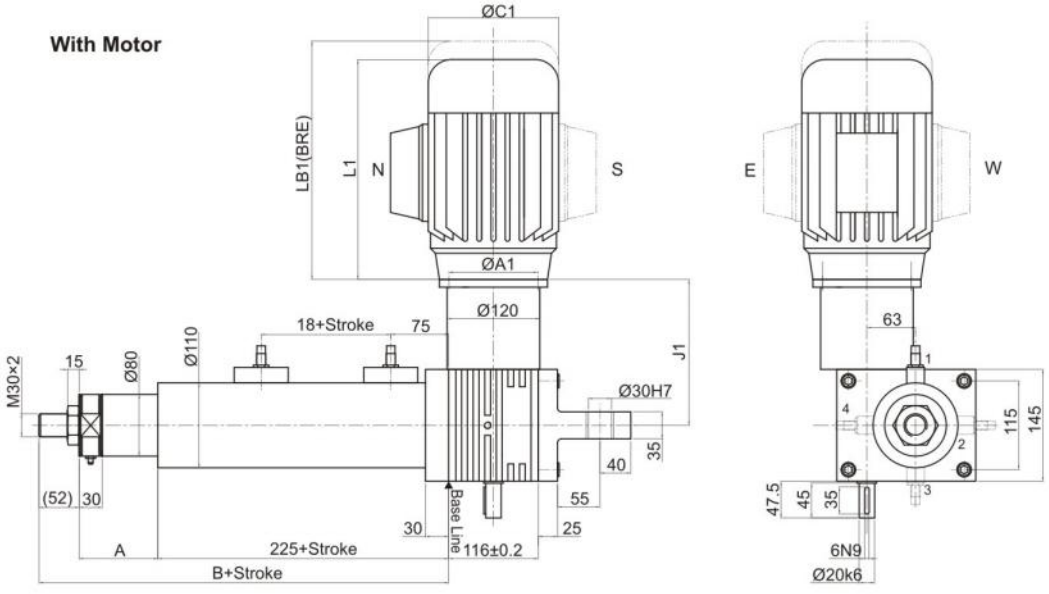




	SCA50	SCB50
A	100	140
B	377	417

	90B14	100B14	112B14
A1	115	130	130
C1	175	196	220
L1	310	317	335
LB1	334	384	393
J1	190	200	200

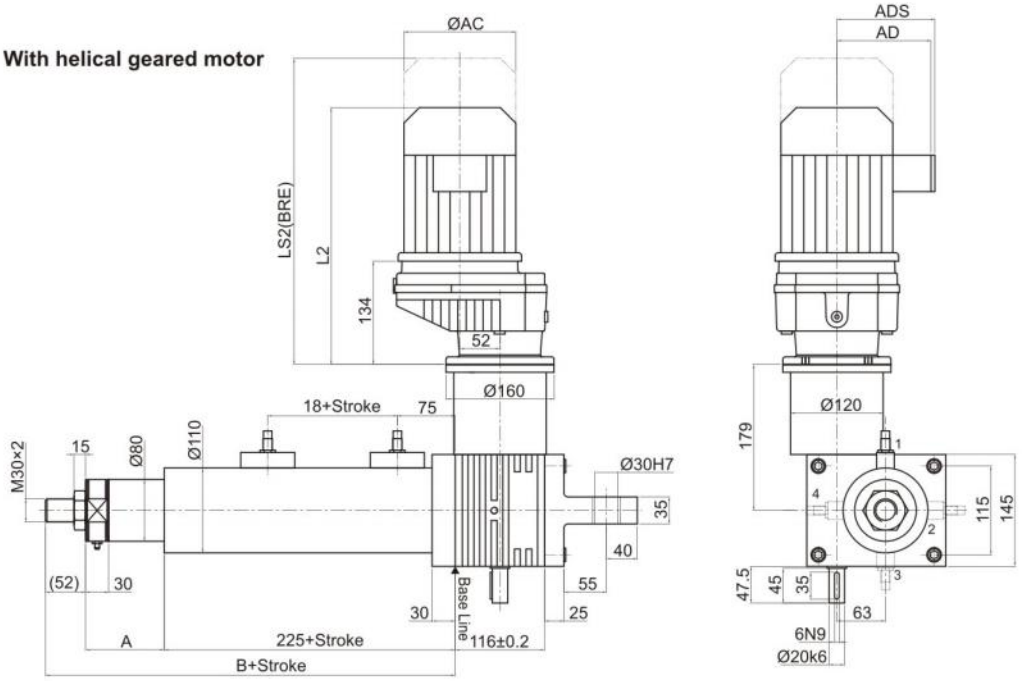
With Motor



Overall Dimensions of SC Series

SCA/SCB50 Actuator

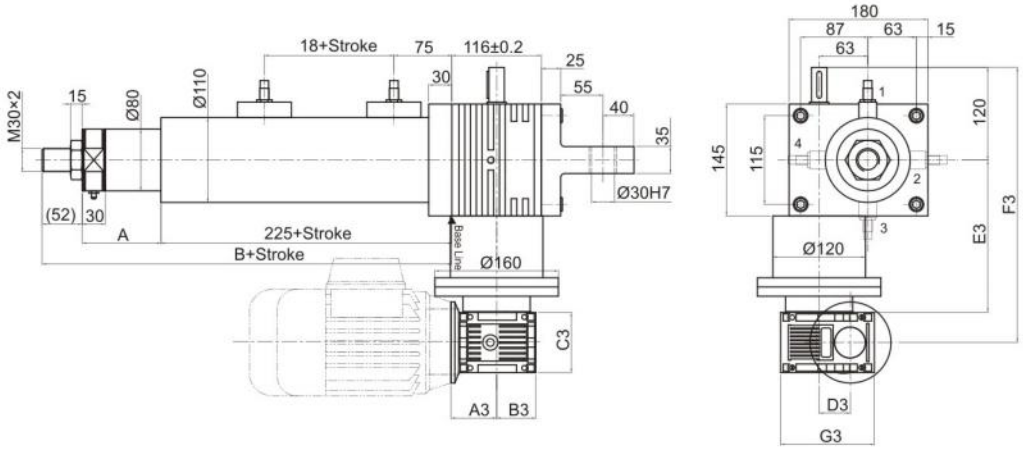
With helical geared motor



	DT80	DT90	DV100M	DV100L
AC	145	197	197	197
AD	122	154	166	166
ADS	127	161	166	166
L2	383	403	453	483
LS2	447	488	538	568

	NMRV030	NMRV040	NMRV050
A3	55	70	80
B3	40	50	60
C3	63	78	92
D3	30	40	50
E3	189	199	199
F3	340.5	358	365
G3	97	121.5	144

with worm gear motor



SC80 Performance date

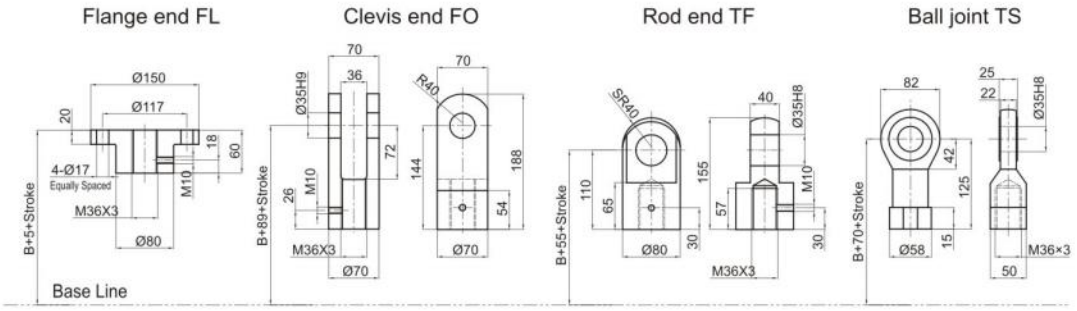
Type	Rated Push KN	Speed mm/s	Stroke for input turn mm	Max. input power kw	Drive	Self-locking	Motor or reducer model
ACME screw actuator SCA80							
SCA80-V1	30	23	1.03	2.5	MOTOR	Uncertain	2.2kw 1400rpm
SCA80-V1	50	15	1.03	2.5	MOTOR	Uncertain	2.2kw 900rpm
SCA80-V1	60	12	1.03	2.5	Helical geared motor	Uncertain	RXF57DT100M4 2.2kw 734rpm
SCA80-V1	75	9	1.03	2.5	Helical geared motor	Uncertain	RXF57DT100M4 2.2kw 534rpm
SCA80-L1	60	6	0.25	1.5	MOTOR	Certain	1.5kw 1400rpm
SCA80-V1	80	5	1.03	2.5	Worm gear motor	Uncertain	NMRV063 90L2 2.2kw 280rpm
SCA80-L1	80	4	0.25	1.5	MOTOR	Certain	1.5kw 900rpm
SCA80-L1	80	3	0.25	1.5	Helical geared motor	Certain	RXF57DT90L4 1.5kw 734rpm
SCA80-V1	80	2.5	1.03	2.5	Worm gear motor	Uncertain	NMRV063 90S4 1.1kw 140rpm
SCA80-L1	80	2	0.25	1.5	Helical geared motor	Certain	RXF57DT90S4 1.1kw 481rpm
SCA80-V1	80	1.2	1.03	2.5	Worm gear motor	Uncertain	NMRV050 80B4 0.75kw 70rpm
SCA80-L1	80	1.2	0.25	1.5	Worm gear motor	Certain	NMRV050 80B4 0.75kw 280rpm
SCA80-V1	80	0.8	1.03	2.5	Worm gear motor	Uncertain	NMRV050 80A4 0.55kw 46rpm
SCA80-L1	80	0.6	0.25	1.5	Worm gear motor	Certain	NMRV040 71B4 0.37kw 140rpm
SCA80-L1	80	0.3	0.25	1.5	Worm gear motor	Certain	NMRV040 71A4 0.25kw 70rpm
SCA80-L1	80	0.2	0.25	1.5	Worm gear motor	Certain	NMRV030 63C6 0.15kw 45rpm

Type	Rated Push KN	Speed mm/s	Stroke for input turn mm	Max. input power kw	Drive	Self-locking	Motor or reducer model
Ball screw actuator SCB80							
SCB81-V1	22	58	2.58	2.5	MOTOR	Uncertain	2.2kw 1400rpm
SCB81-V1	35	38	2.58	2.5	MOTOR	Uncertain	2.2kw 900rpm
SCB80-V1	45	29	1.29	2.5	MOTOR	Uncertain	2.2kw 1400rpm
SCB80-V1	60	19	1.29	2.5	MOTOR	Uncertain	2.2kw 900rpm
SCB80-V1	60	15	1.29	2.5	Helical geared motor	Uncertain	RXF57DT100M4 2.2kw 734rpm
SCB80-V1	60	11	1.29	2.5	Helical geared motor	Uncertain	RXF57DT90L4 1.5kw 534rpm
SCB80-L1	60	7.5	0.31	1.5	MOTOR	Certain	1.5kw 1400rpm
SCB80-V1	60	6.3	1.29	2.5	Worm gear motor	Uncertain	NMRV050 80B2 1.1kw 280rpm
SCB80-L1	60	5	0.31	1.5	MOTOR	Certain	1.1kw 900rpm
SCB80-L1	60	3.6	0.31	1.5	Helical geared motor	Certain	RXF57DT80N4 0.75kw 719rpm
SCB80-V1	60	3.1	1.29	2.5	Worm gear motor	Uncertain	NMRV040 80K4 0.55kw 140rpm
SCB80-L1	60	2.5	0.31	1.5	Helical geared motor	Certain	RXF57DT80K4 0.55kw 467rpm
SCB80-V1	60	1.5	1.29	2.5	Worm gear motor	Uncertain	NMRV040 71B4 0.37kw 70rpm
SCB80-L1	60	1.5	0.31	1.5	Worm gear motor	Certain	NMRV040 71A2 0.37kw 280rpm
SCB80-V1	60	1	1.29	2.5	Worm gear motor	Uncertain	NMRV040 71A4 0.25kw 46rpm
SCB80-L1	60	0.8	0.31	1.5	Worm gear motor	Certain	NMRV040 71A4 0.25kw 140rpm
SCB80-L1	60	0.4	0.31	1.5	Worm gear motor	Certain	NMRV030 63B4 0.18kw 70rpm
SCB80-L1	60	0.3	0.31	1.5	Worm gear motor	Certain	NMRV030 63A4 0.12kw 45rpm
Weight		36kg					
Weight per 100mm stroke		4.2kg					

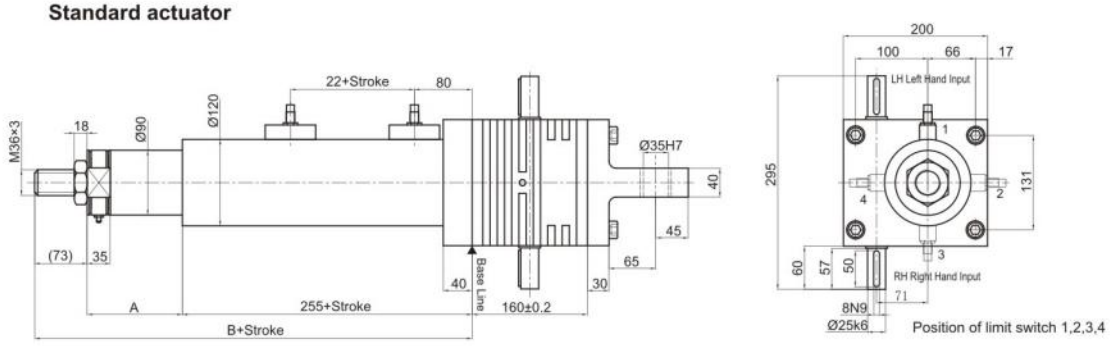
Note:The motor power can be reduced if actual load less than rated load.
Uncertain Actuator are recommended match brake motor

Overall Dimensions of SC Series

SCA/SCB80 Actuator



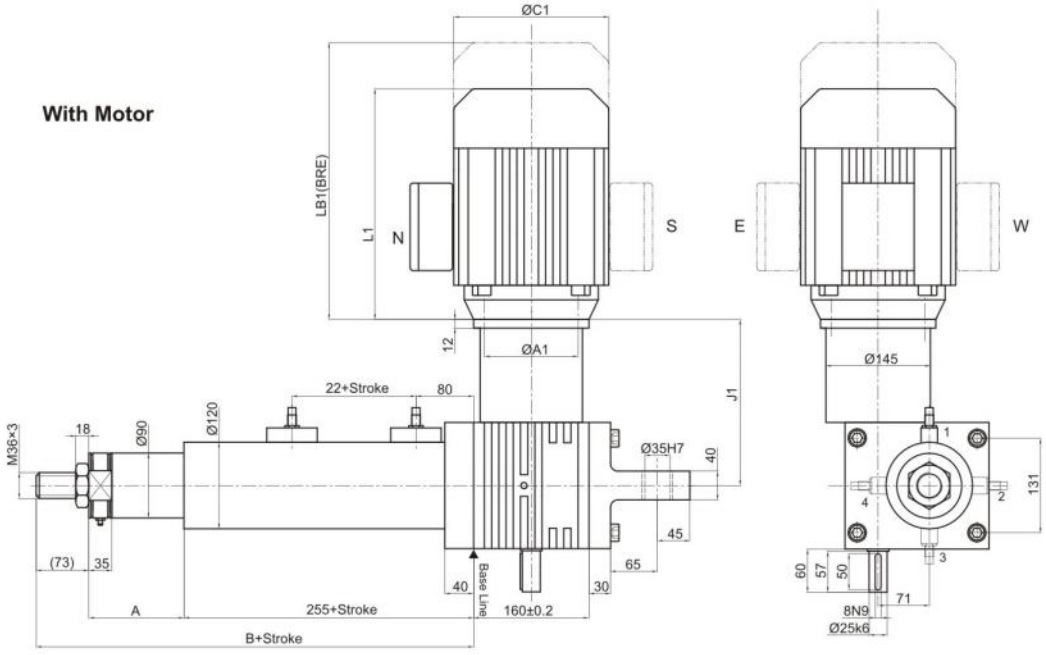
Standard actuator



	SCA80	SCB80
A	130	185
B	458	513

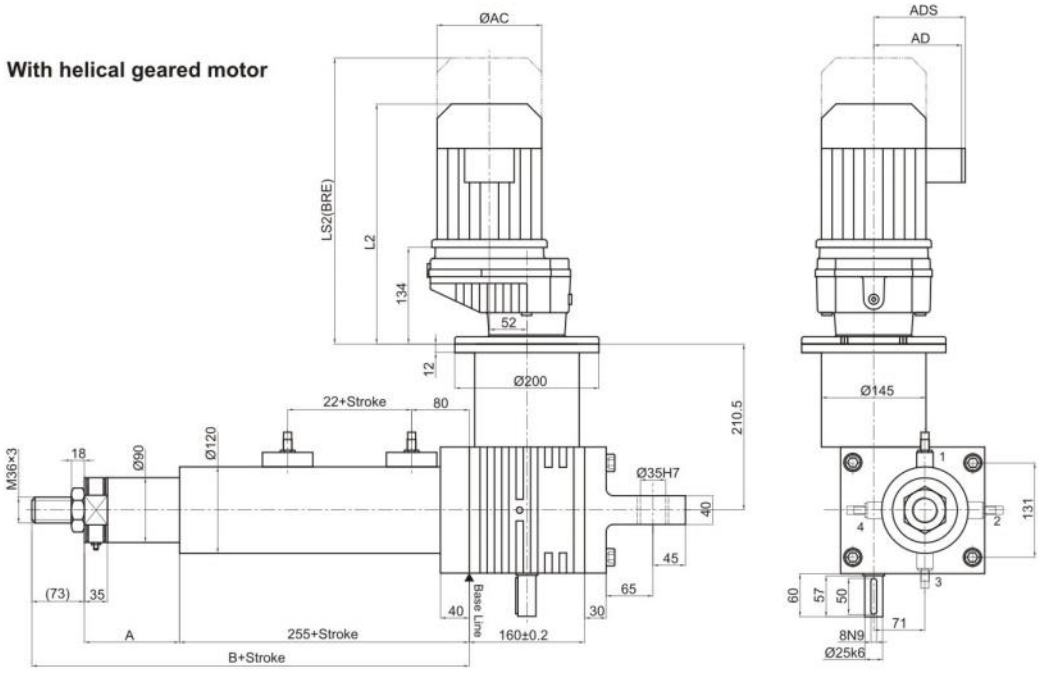
	90B14	100B14	112B14
A1	115	130	130
C1	175	196	220
L1	310	317	335
LB1	334	384	393
J1	221	231	231

With Motor



SCA/SCB80 Actuator

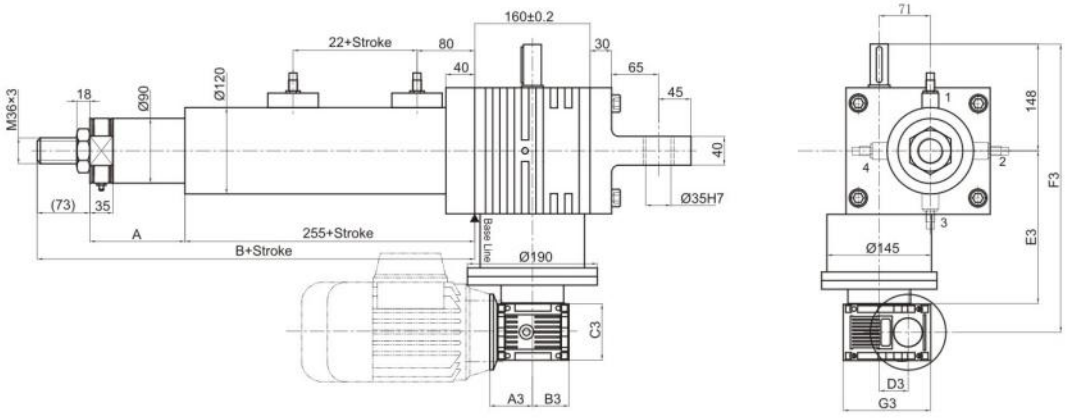
With helical geared motor



	DT90	DV100M	DV100L
AC	197	197	197
AD	154	166	166
ADS	161	166	166
L2	403	453	483
LS2	488	538	568

	NMRV030	NMRV040	NMRV050	NMRV063
A3	55	70	80	95
B3	40	50	60	72
C3	63	78	92	112
D3	30	40	50	63
E3	206.5	219.5	230.5	230.5
F3	335.5	356	364	374
G3	97	121.5	144	174

with worm gear motor



Overall Dimensions of SC Series

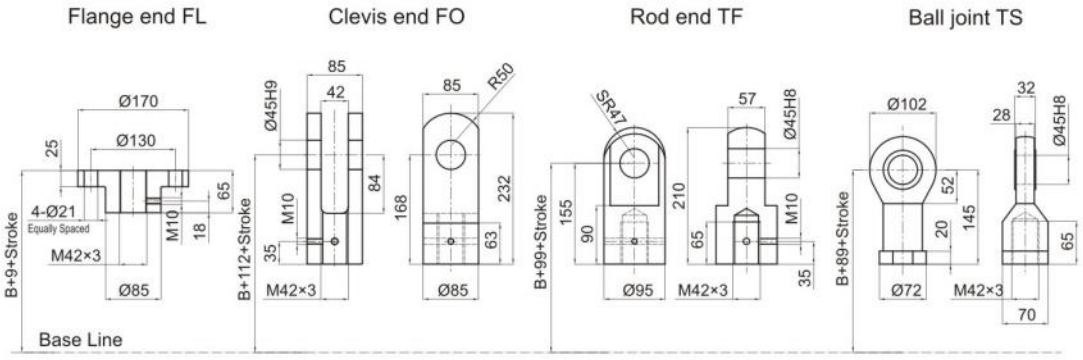
SCA100 Performance date

Type	Rated Push KN	Speed mm/s	Stroke for input turn mm	Max. input power kw	Drive	Self-locking	Motor or reducer model
ACME screw actuator SCA100							
SCA100-V1	38	26	1.16	3	MOTOR	Uncertain	3kw 1400rpm
SCA100-V1	54	17	1.16	3	MOTOR	Uncertain	3kw 900rpm
SCA100-V1	65	13	1.16	3	Helical geared motor	Uncertain	RXF57DV100L4 3kw 729rpm
SCA100-V1	80	9	1.16	3	Helical geared motor	Uncertain	RXF57DT100L4 3kw 530rpm
SCA100-L1	75	6.6	0.28	2.2	MOTOR	Certain	2.2kw 1400rpm
SCA100-V1	100	5.4	1.16	3	Worm gear motor	Uncertain	NMRV075 100LA2 3kw 280rpm
SCA100-L1	100	4.2	0.28	2.2	MOTOR	Certain	2.2kw 900rpm
SCA100-L1	100	3.3	0.28	2.2	Helical geared motor	Certain	RXF57DV100M4 2.2kw 734rpm
SCA100-V1	100	2.7	1.16	3	Worm gear motor	Uncertain	NMRV063 90L4 1.5kw 140rpm
SCA100-L1	100	2.5	0.28	2.2	Helical geared motor	Certain	RXF57DT90L4 1.5kw 484rpm
SCA100-V1	100	1.3	1.16	3	Worm gear motor	Uncertain	NMRV050 80B4 0.75kw 70rpm
SCA100-L1	100	1.2	0.28	2.2	Worm gear motor	Certain	NMRV050 80B2 1.1kw 280rpm
SCA100-V1	100	0.9	1.16	3	Worm gear motor	Uncertain	NMRV050 80A4 0.55kw 46rpm
SCA100-L1	100	0.6	0.28	2.2	Worm gear motor	Certain	NMRV040 71B2 0.55kw 140rpm
SCA100-L1	100	0.3	0.28	2.2	Worm gear motor	Certain	NMRV040 71B4 0.37kw 70rpm
SCA100-L1	100	0.2	0.28	2.2	Worm gear motor	Certain	NMRV040 71A4 0.25kw 46rpm

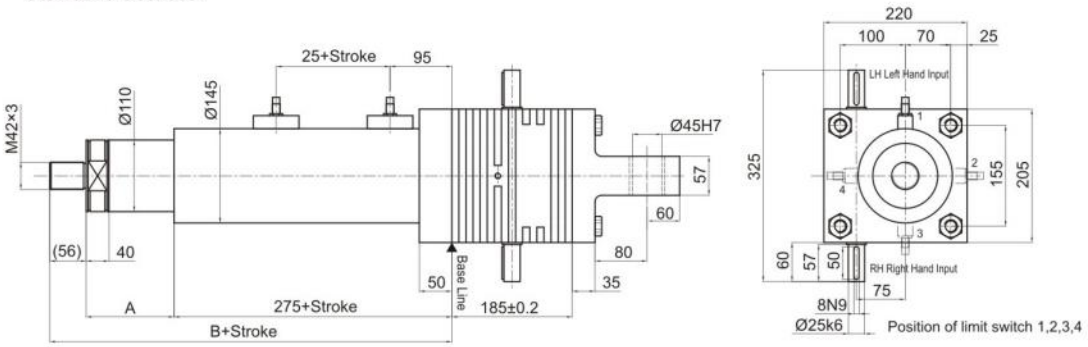
Type	Rated Push KN	Speed mm/s	Stroke for input turn mm	Max. input power kw	Drive	Self-locking	Motor or reducer model
Ball screw actuator SCB100							
SCB101-V1	30	58	2.58	3	MOTOR	Uncertain	3kw 1400rpm
SCB101-V1	42	38	2.58	3	MOTOR	Uncertain	3kw 900rpm
SCB100-V1	60	29	1.29	3	MOTOR	Uncertain	3kw 1400rpm
SCB100-V1	80	19	1.29	3	MOTOR	Uncertain	3kw 900rpm
SCB100-V1	80	14.4	1.29	3	Helical geared motor	Uncertain	RXF57DV100L4 3kw 729rpm
SCB100-V1	80	11	1.29	3	Helical geared motor	Uncertain	RXF57DT100M4 2.2kw 534rpm
SCB100-L1	80	7.3	0.31	2.2	MOTOR	Certain	2.2kw 1400rpm
SCB100-V1	80	6	1.29	3	Worm gear motor	Uncertain	NMRV050 90S2 1.5kw 280rpm
SCB100-L1	80	4.7	0.31	2.2	MOTOR	Certain	1.5kw 900rpm
SCB100-L1	80	3.7	0.31	2.2	Helical geared motor	Certain	RXF57DT90S4 1.1kw 729rpm
SCB100-V1	80	3	1.29	3	Worm gear motor	Uncertain	NMRV050 80B4 0.75kw 140rpm
SCB100-L1	80	2.8	0.31	2.2	Helical geared motor	Certain	RXF57DT80N4 0.75kw 474rpm
SCB100-V1	80	1.4	1.29	3	Worm gear motor	Uncertain	NMRV050 71B4 0.37kw 70rpm
SCB100-L1	80	1.3	0.31	2.2	Worm gear motor	Certain	NMRV04071B2 0.55kw 280rpm
SCB100-V1	80	1	1.29	3	Worm gear motor	Uncertain	NMRV050 71B4 0.37kw 46rpm
SCB100-L1	80	0.7	0.31	2.2	Worm gear motor	Certain	NMRV040 71B4 0.37kw 140rpm
SCB100-L1	80	0.3	0.31	2.2	Worm gear motor	Certain	NMRV040 71A4 0.25kw 70rpm
SCB100-L1	80	0.2	0.31	2.2	Worm gear motor	Certain	NMRV040 63B4 0.18kw 46rpm
Weight		58kg					
Weight per 100mm stroke		6.9kg					

Note:The motor power can be reduced if actual load less than rated load.
Uncertain Actuator are recommended match brake motor

SCA/SCB100 Actuator



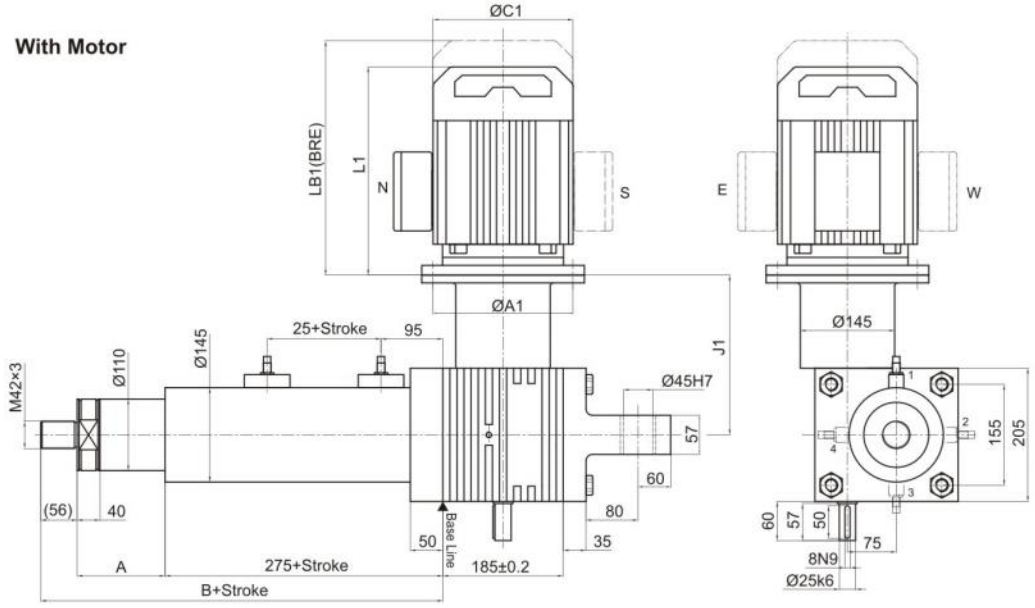
Standard actuator



	SCA100	SCB100
A	160	220
B	491	551

	100B5	112B5	132B5
A1	215	215	265
C1	215	240	275
L1	317	335	395
LB1	384	393	496
J1	246	246	275.5

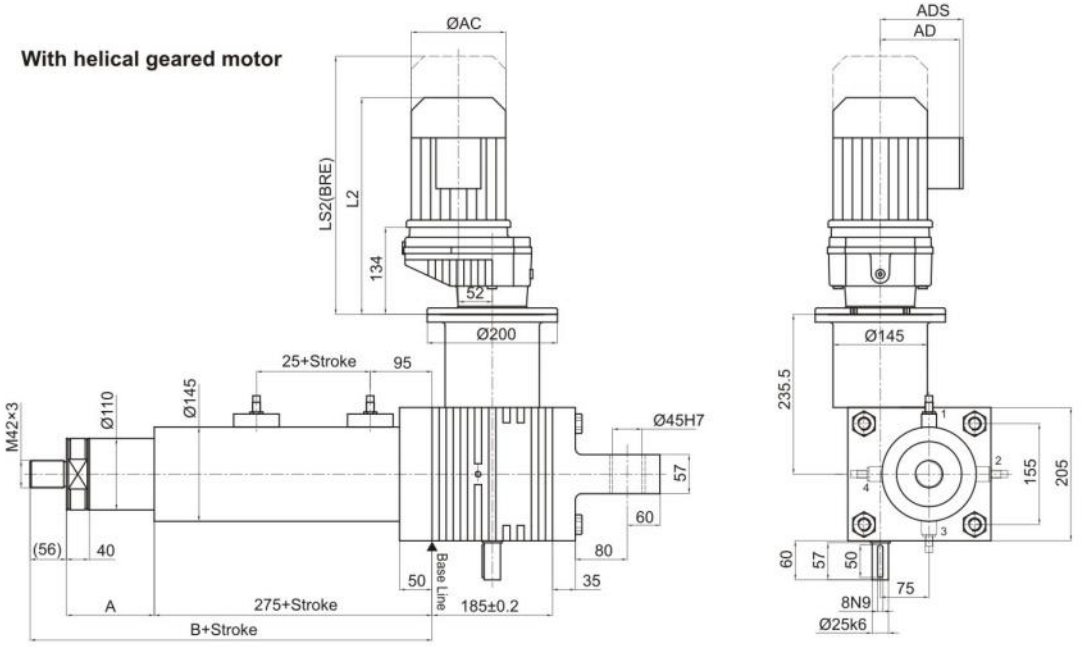
With Motor



Overall Dimensions of SC Series

SCA/SCB100 Actuator

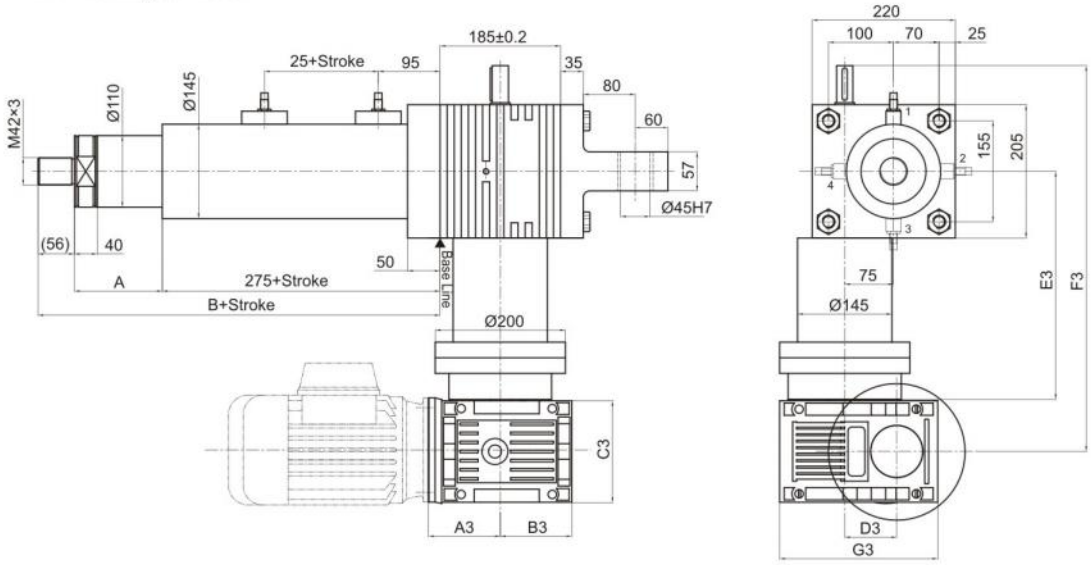
With helical geared motor



	DT80	DT90	DV100M	DV100L
AC	145	197	197	197
AD	122	154	166	166
ADS	127	161	166	166
L2	383	403	453	483
LS2	447	488	538	568

	NMRV040	NMRV050	NMRV063	NMRV075
A3	70	80	95	112.5
B3	50	60	72	86
C3	78	92	112	120
D3	40	50	63	75
E3	255.5	255.5	275.5	275.5
F3	457	464	494	498
G3	121.5	144	174	205

with worm gear motor



SCA200 Performance date

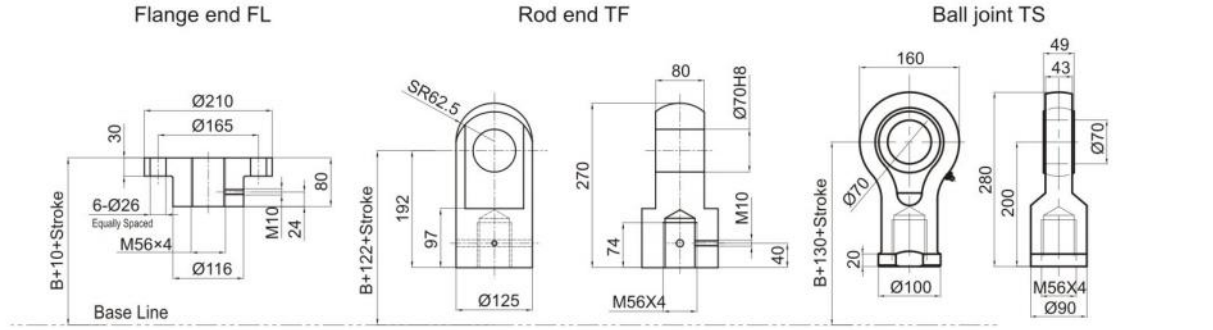
Type	Rated Push KN	Speed mm/s	Stroke for input turn mm	Max. input power kw	Drive	Self-locking	Motor or reducer model
ACME screw actuator SCA200							
SCA200-V1	44	32	1.37	4	MOTOR	Uncertain	4kw 1400rpm
SCA200-V1	60	21	1.37	4	MOTOR	Uncertain	4kw 900rpm
SCA200-V1	70	16	1.37	4	Helical geared motor	Uncertain	RXF57DV112M4 4kw 740rpm
SCA200-V1	85	12	1.37	4	Helical geared motor	Uncertain	RXF57DT112M4 4kw 538rpm
SCA200-L1	80	8	0.34	3.5	MOTOR	Certain	3kw 1400rpm
SCA200-V1	130	6.5	1.37	4	Worm gear motor	Uncertain	NMRV075 112M2 4kw 280rpm
SCA200-L1	110	5	0.34	3.5	MOTOR	Certain	3kw 900rpm
SCA200-L1	130	4	0.34	3.5	Helical geared motor	Certain	RXF57DV100L4 3kw 729rpm
SCA200-V1	200	3.3	1.37	4	Worm gear motor	Uncertain	NMRV075 112M4 4kw 140rpm
SCA200-L1	200	2.6	0.34	3.5	Helical geared motor	Certain	RXF57DV100L4 3kw 446rpm
SCA200-V1	200	1.6	1.37	4	Worm gear motor	Uncertain	NMRV090 100LA4 2.2kw 70rpm
SCA200-L1	200	1.5	0.34	3.5	Worm gear motor	Certain	NMRV063 90L2 2.2kw 280rpm
SCA200-V1	200	1	1.37	4	Worm gear motor	Uncertain	NMRV075 90L4 1.5kw 46rpm
SCA200-L1	200	0.8	0.34	3.5	Worm gear motor	Certain	NMRV063 90L4 1.5kw 140rpm
SCA200-L1	200	0.4	0.34	3.5	Worm gear motor	Certain	NMRV063 90L4 1.1kw 70rpm
SCA200-L1	200	0.3	0.34	3.5	Worm gear motor	Certain	NMRV063 80B4 0.75kw 46rpm

Type	Rated Push KN	Speed mm/s	Stroke for input turn mm	Max. input power kw	Drive	Self-locking	Motor or reducer model
Ball screw actuator SCB201							
SCB201-V1	40	53	2.29	4	MOTOR	Uncertain	4kw 1400rpm
SCB201-V1	60	35	2.29	4	MOTOR	Uncertain	4kw 900rpm
SCB201-V1	75	27	2.29	4	Helical geared motor	Uncertain	RXF57DV112M4 4kw 740rpm
SCB201-V1	90	20	2.29	4	Helical geared motor	Uncertain	RXF57DT112M4 4kw 538rpm
SCB201-L1	75	13	0.57	3.5	MOTOR	Certain	3kw 1400rpm
SCB201-V1	100	11	2.29	4	Worm gear motor	Uncertain	NMRV075 100LA2 3kw 280rpm
SCB201-L1	100	8.3	0.57	3.5	MOTOR	Certain	3kw 900rpm
SCB201-L1	100	6.7	0.57	3.5	Helical geared motor	Certain	RXF57DV100L4 3kw 729rpm
SCB201-V1	100	5.5	2.29	4	Worm gear motor	Uncertain	NMRV063 90L4 1.5kw 140rpm
SCB201-L1	100	4.3	0.57	3.5	Helical geared motor	Certain	RXF57DV100M4 2.2kw 450rpm
SCB201-V1	100	2.7	2.29	4	Worm gear motor	Uncertain	NMRV063 80B4 0.75kw 70rpm
SCB201-L1	100	2.5	0.57	3.5	Worm gear motor	Certain	NMRV050 90S2 1.5kw 280rpm
SCB201-V1	100	1.7	2.29	4	Worm gear motor	Uncertain	NMRV050 80A4 0.55kw 46rpm
SCB201-L1	100	1.3	0.57	3.5	Worm gear motor	Certain	NMRV050 80B4 0.75kw 140rpm
SCB201-L1	100	0.7	0.57	3.5	Worm gear motor	Certain	NMRV050 71B4 0.37kw 70rpm
SCB201-L1	100	0.5	0.57	3.5	Worm gear motor	Certain	NMRV050 71A4 0.25kw 46rpm
Weight		75kg					
Weight per 100mm stroke		9.3kg					

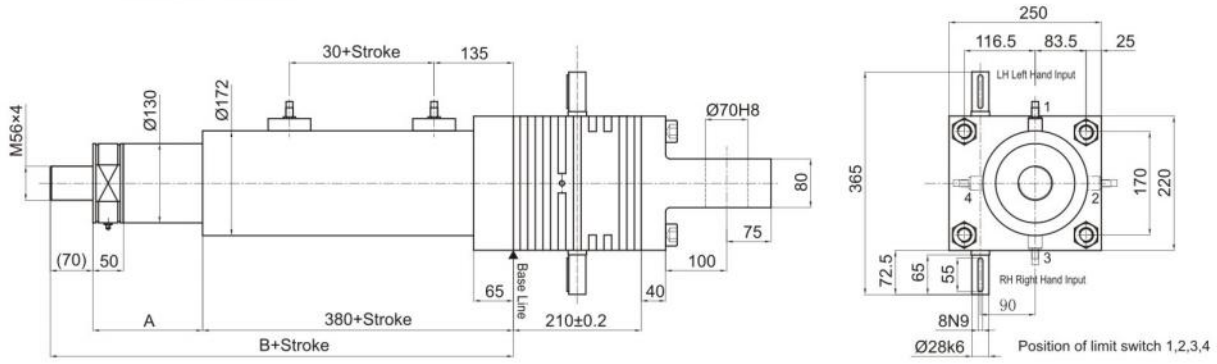
Note:The motor power can be reduced if actual load less than rated load.
Uncertain Actuator are recommended match brake motor

Overall Dimensions of SC Series

SCA200/SCB201 Actuator



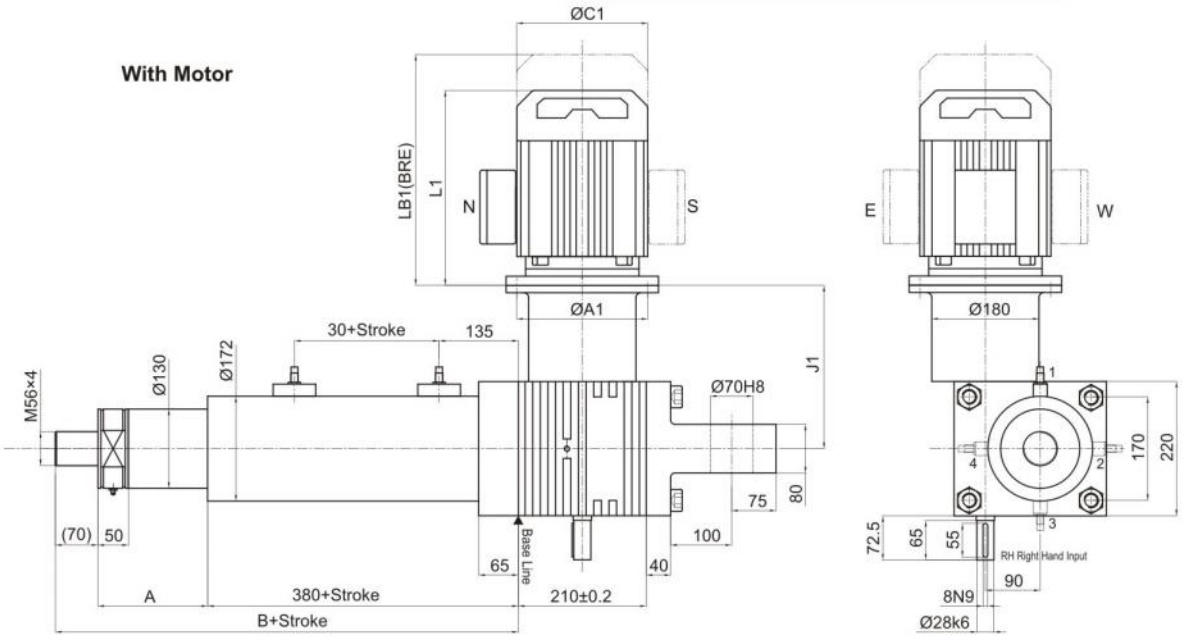
Standard actuator



	SCA200	SCB200
A	180	205
B	630	655

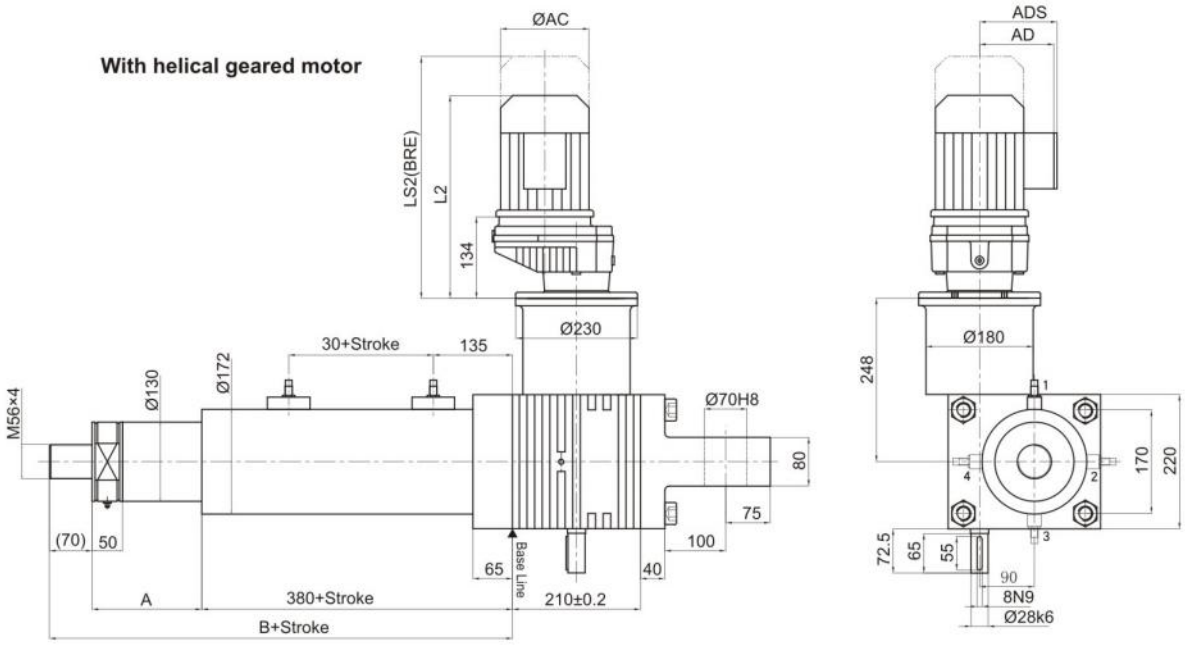
	100B5	112B5	132B5
A1	215	215	265
C1	215	240	275
L1	317	335	395
LB1	384	393	496
J1	268	268	288

With Motor



SCA200/SCB201 Actuator

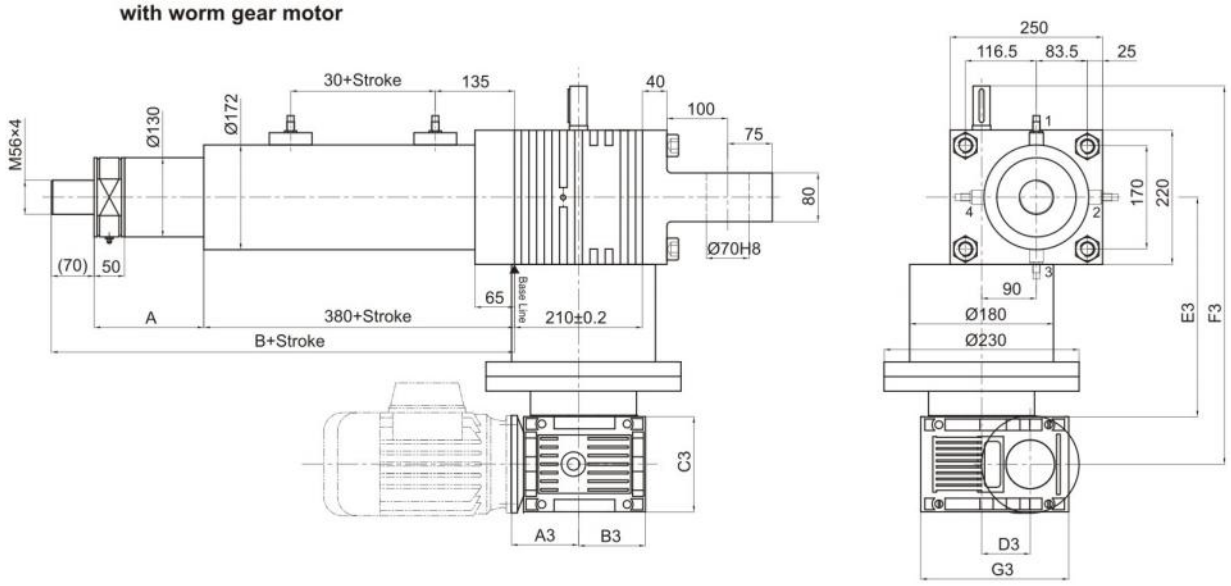
With helical geared motor



	DV100M	DV100L	DV112M
AC	197	197	221
AD	166	166	179
ADS	166	166	182
L2	453	483	488
LS2	538	568	568

	NMRV050	NMRV063	NMRV075	NMRV090
A3	80	95	112.5	129.5
B3	60	72	86	103
C3	92	112	120	140
D3	50	63	75	90
E3	257.5	267.5	267.5	288
F3	486	506	510	540.5
G3	144	174	205	238

with worm gear motor

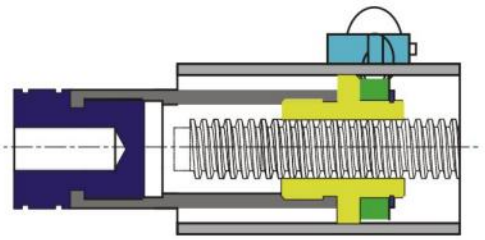


System Accessories:

Magnetic Reed Switch (FCM)

The magnetic reed switches have two types: normally closed reed switch (standard) and the normally open limit switch.
the magnetic ring at the end of the screw shaft moves along with the screw shaft, when the magnetic ring get close to the limit switch, the state of the limit switch will be changed through the magnetic field.
More reed switch can be placed along the stroke length, while the minimal distance between the two switches is 10mm and the magnetic limit switch must be connected to the control circuit. Cable length 1m
Control voltage: 3-130VDC/AC Current: 100mA
Repetitive accuracy: 0.1mm Ambient temperature: -10℃ -70℃
Anti-turn device is not available when the actuator is equipped with FCM

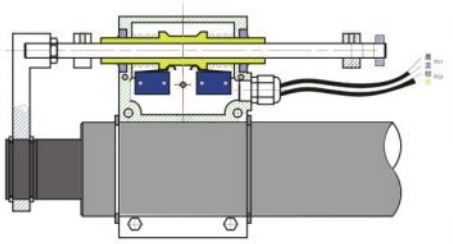
FCM limit switch



External Limit Switches FCE

The FCE device consists of a sealed aluminum alloy box and steel rod. Adjust the position of the rings on steel rod which fixed by screw,we can get the stop position of actuator。 Cable length 1m
Control voltage：3-130VDC/AC
Current：100mA
Repetitive accuracy：0.1mm
Ambient temperature：-30℃ - 70℃
Note:The FCE device is recommended for linear speed lower than 30mm/s，for higher speed it is better to use FCM or use brake.

FCE limit switch



Limit Switch Box FCH

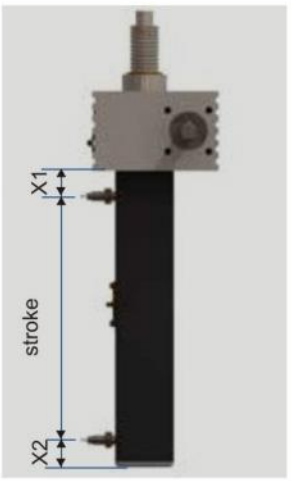
Mounting in shaft of SJ Screw Jack or SC Actuator.FCH is able to control the extreme position.
Structure with planet gear reducer + cam limit switch + potentiometer. Numbers of control position depends on number of cam switch, Max. 4 position control. Potentiometer is optional, could monitor the position of actuator to achieve close loop control.
Ambient Temperature -40℃ - 80℃
Volt: 380V/220V
Protection: IP55, IP67

Proximity limit switch (FCP)

The thread is fixed on the required position outside the protective tube, and can not be adjusted; the normally closed limit switch is the standard.
Control voltage: 10-30VDC
Max output current: 200mA

Repetitive accuracy: 0.04mm
Ambient temperature: -25℃ -70℃
Cable length 1m

Type	X1	X2
SJA5	40	45
SJA10/SJB10	40	55
SJA20/SJB20/21/22	45	50
SJA50/SJB50/51	55	45
SJA80/SJB80/81	60	60
SJA100/SJB100/101	70	50
SJA200/SJB200/201	75	50
SJA300/SJB300	95	60



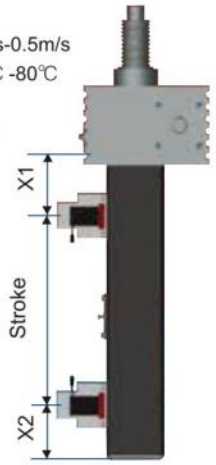
System Accessories

FCG limit switch

Fixed on the rear tube of the screw jack to control the extreme position of the screw shaft. Can be adjusted +5mm up and down when mounted.
The configuration dimension of the limit switch: 80 × 70 × 22cm
Control voltage: 220AC
Operation current: 10A

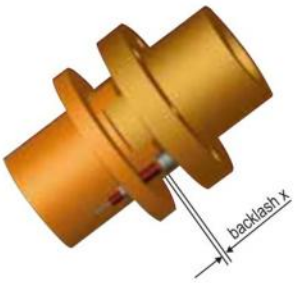
Type	X1	X2
SJA5	40	45
SJA10/SJB10	40	55
SJA20/SJB20/21/22	45	50
SJA50/SJB50/51	55	45
SJA80/SJB80/81	60	60
SJA100/SJB100/101	70	50
SJA200/SJB200/201	75	50
SJA300/SJB300	95	60

Operation speed: 0.05mm/s-0.5m/s
Ambient temperature: -10℃ -80℃
Protective class: IP67
Lifetime: 10,000,000 times
Cable length 1m



Safety nut SN

SN-S safety nut is used in the screw jack with the traveling screw model
SN-R safety nut is used in the screw jack with the traveling nut movement style.
The safety nut is mounted below / above the main nut and normally will not withstand the axial load and only works against the lateral load. The safety nut will hold the whole load if the nut screw does not function. Replacement for the nut is imperative if the wear of the screw exceeds 20% of the pitch (clearance × changing volume=wear volume). The wear degree can be checked either with eyes or through connecting the sensor to the control circuit, which can sound the alarm timely. Mounting the safety nut will increase the length of the nut, therefore change the configuration of the screw jack, for the specific dimensions please contact the sales engineer.



Bellow

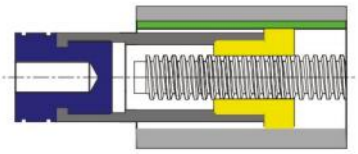
Made of PVC polyester material with sewn construction.
Applicable temperature: -15℃ -70℃
The minimum compressed length of the bellow should be taken into account when mounting the bellow. The compress ratio of the bellow is 10:1
Bellow is preferred for the acme and ball screw jack to prevent the dust and contaminants from damaging the screw.
Both ends of the bellows need to be fixed with the clamps, the position of the bellows need to be confirmed when the order is issued. The BS bellow is also a choice to protect the screw in the harsh environment.

Anti-backlash device AB

Used to adjust the opposite clearance of the acme thread nut. The preload will eliminate the teeth clearance of the screw nut, the smaller the clearance; the higher the position accuracy, but the appropriate clearance > 0.02mm must be guaranteed. Mounting the anti-backlash will decrease the transmission efficiency therefore changing the mechanical parameters of the screw jack. It is advised to lower the duty cycle accordingly.

Anti-turn device AR

Apply to the LAP series of actuators.
It is recommended that the anti-turn device be used in the application, which requires that actuator will not self-rotate in the process of movement. A key groove is made on the nut, which ensures the nut and the actuator move in the direction of the key thus prevent the rotating of the actuator.
Caution: due to the mounting interference, anti-turn device should not be used simultaneously in conjunction with the magnetic limit switch FCM.

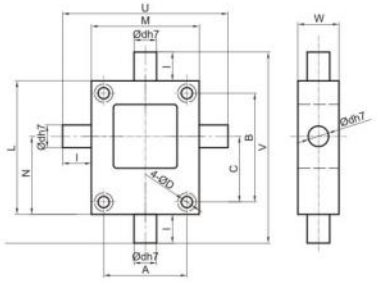


Incremental rotary encoder IRE

Mounted on the input shaft of the screw jack or the screw actuator, the feedback signal forms the closed loop to control the movement of the actuator
Impulse value: 100/500 impulse per running
Voltage: 5VDC
Power supply voltage:5-30VDC
Ambient temperature: -20℃ -110℃
Protective class: IP65

Trunnion mounting panel HBP

Fixed on the housing of the screw jack, enable the screw jack to rotate at a certain degree.
The specific dimensions is related to the model type of the screw jack



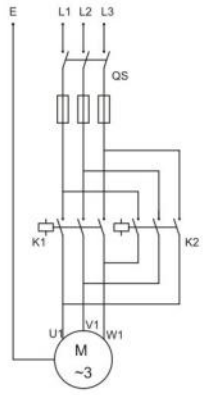
Model	Trunnion											
	A	B	C	D	L	M	N	U	V	W	d	l
SJA5-S-..-HBP	52	60	39	9	80	72	49	108	116	28	15	18
SJA10-S-..-HBP	63	78	49	9	100	85	60	127	142	30	17	21
SJA20-S-..-HBP	81	106	64	11	130	105	76	161	186	40	22	28
SJA50-S-..-HBP	115	150	87	13	180	145	102	225	260	50	32	40
SJA80-S-..-HBP	131	166	100	17	200	175	117	277	302	70	42	51
SJA100-S-..-HBP	155	170	100	21	220	205	125	321	336	75	48	58
SJA200-S-..-HBP	170	200	116.5	26	250	220	141.5	360	390	105	63	70
SJA300-S-..-HBP	200	235	135	30	295	270	165	420	445	115	68	75

Disk brake

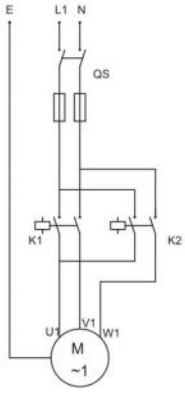
Hand Wheel

Automatic Lubricator

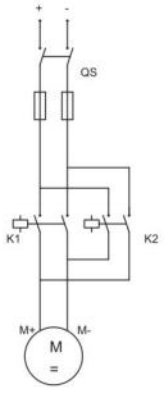
Wiring



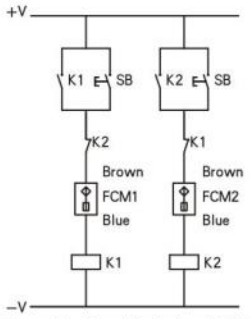
AC 3–Phase Motor



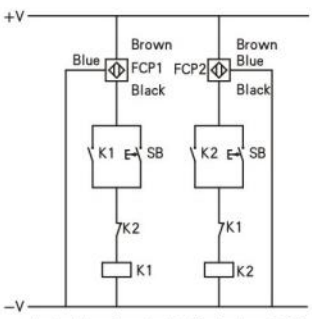
AC 1–Phase Motor



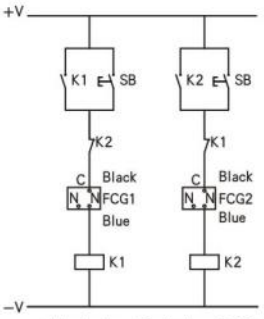
DC Motor



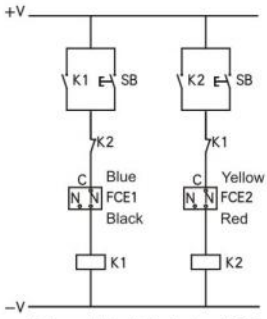
Magnetiv Reed Switches FCM



Inductive Proximity Switches FCP



Mechnical Switches FCG



External Limit Switches FCE

Lubrication and Maintenance

LAP/LBP series of actuator

Long life lubricated, free from maintenance.
The worm gear, worm shaft, bearing and the screw has been well lubricated in the factory, unless there is some leakage of oil or damage, please lubricate the actuators according to the following table.

SJA/SJB/SCA/SCB series of screw jack

The worm gear, worm shaft, bearing and the screw has been well lubricated at the factory, the lubricating volume exceeding the volume stated in the table will impinge the mechanical efficiency of the screw jack meantime increase the possibility of the oil leakage.

Actuator	Worm gearbox		Actuating parts		Screw Jack	Worm gearbox		Actuating parts	
	Lubricant	Quantity[g]	Lubricant	Quantity Per 1m[g]		Lubricant	Quantity[g]	Lubricant	Quantity Per 1m[g]
LAP/LBP22	MOBILEP3 or equivalent	30	MOBIL XHP222 or equivalent	100	SJA5	MOBILEP3 or equivalent	80	MOBIL XHP222 or equivalent	300
LAP/LBP25		45		150	SJA/SJB10		130		400
LAP/LBP28		60		200	SJA/SJB/SCA/SCB20/21/22		170		550
LAP/LBP32		60		300	SJA/SJB/SCA/SCB50/51		430		650
LAP/LBP35		90		400	SJA/SJB/SCA/SCB80/81		850		750
LAP/LBP40		130		500	SJA/SJB/SCA/SCB100/101		1100		850
LAP/LBP56		350		700	SJA/SJB/SCA/SCB200/201		1700		1000
LAP/LBP63		700		950	SJA/SJB300		2550		1500
LAP/LBP80		1500		1200	SJA/SJB450		3570		2000
LAP/LBP120		2500		1500	SJA/SJB700		5100		2600
LAP/LBP200		3600		2000	SJA/SJB1000		7200		3300

Choose different types of grease according to different working environments (high or low temperature environment)
Special grease for the food industry is also available
For the high duty cycle screw jack, the grease will lose its lubricating function; entry of granule contaminants might deteriorate the working performance. It is advised to do a thorough cleaning and re-lubricating the screw jack.
It is recommend to use the grease can which is able to supply the continuous lubrication to the inside surface of the housing automatically.
Appropriate lubrication to the lubricating board inside the rear tube should be carried out periodically.
The nut and the screw should be lubricated appropriately every 200 working hours or according to the specific environment.

AC MOTOR

Actuator and Screw Jace are configured with IEC standard AC 3 Phase motor

Depends Motor RPM we supply 2 Poles , 4 Poles and 6 Poles motor for Linear Actuator

Standard Motor Flange diemsnion are IEC B14 or B5, we also supply non standard flange to meet customer requirement.

Customer can also choose AC single phase motor, DC motor , Step Motor , Servo motor or Expplosion-Proof motor.

Protection Class: Standard IP54 and Optional : IP55 IP56 IP65 IP66

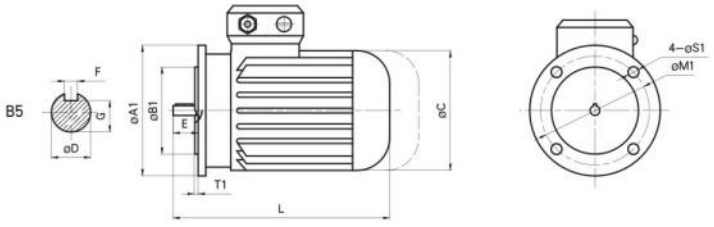
Insulation Class: F , Optional H

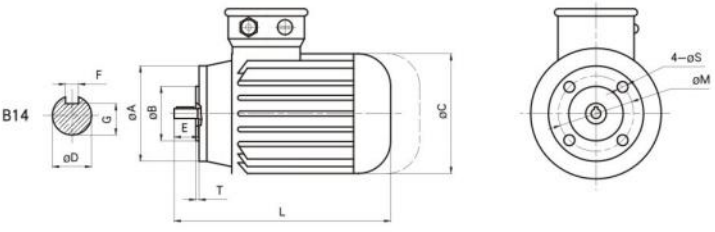
Voltage: 380/220V 50Hz, 440V/255 60Hz

Frequency range: 10-60Hz

Accessories: Brake, Temperature pretection device, Encoder

Frame Size	Power kw	Speed RPM	Rated Torque Nm	Current A/400V	Weight kg
56	0.09	1380	0.65	0.45	3.2
	0.09	2830	0.31	0.42	
	0.12	2710	0.48	0.48	
63	0.09	800	1.0	0.5	4.4
	0.12	880	1.3	0.7	
	0.18	2800	0.61	0.51	
	0.12	1370	0.92	0.68	
	0.18	1370	1.3	0.85	
	0.25	2800	0.9	0.78	
71	0.18	890	1.9	0.85	7.5
	0.25	900	2.7	1.0	
	0.25	1400	1.7	0.9	
	0.37	1380	2.5	1.2	
	0.37	2880	1.1	1.3	
	0.55	2860	1.8	2.0	
80	0.37	900	3.9	1.22	12.2
	0.55	1400	3.8	1.7	
	0.75	1410	5.0	2.0	
	0.75	2870	2.56	1.8	
90S	0.75	920	7.8	2.5	15.4
	1.1	1390	10.7	3.8	
	1.5	2800	5.2	3.7	
	1.5	1400	12.8	4.6	
	2.2	2800	7.37	4.53	
100	1.5	940	15.4	4.4	26.5
	2.2	1425	14.8	7.3	
	3.0	1430	20.2	8.9	
	3.0	2860	10.8	7.2	
112	2.2	950	22.0	7.0	36
	4.0	1440	27.0	8.9	





Frame Size	A	A1	B	B1	C	D	E	F	G	L	M	M1	S	S1	T	T1
56	80	120	50	80	110	9	20	3	7.2	189	65	100	M5	7	3.0	3.0
63	90	140	60	95	122	11	23	4	8.5	225	75	115	M5	9	3.0	3.0
71	105	160	70	110	138	14	30	5	11.0	251	85	130	M6	9	3.5	3.5
80	120	200	80	130	157	19	40	6	15.5	286	100	165	M6	12	3.5	3.5
90S	140	200	95	130	175	24	50	8	20.0	320	115	165	M8	12	3.5	3.5
90L	140	200	95	130	175	24	50	8	20.0	335	115	165	M8	12	3.5	3.5
100	160	250	110	180	196	28	60	8	24.0	377	130	215	M8	15	4.0	4.0
112	160	250	110	180	220	28	60	8	24.0	395	130	215	M8	15	4.0	4.0

LINEAR MOTION

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