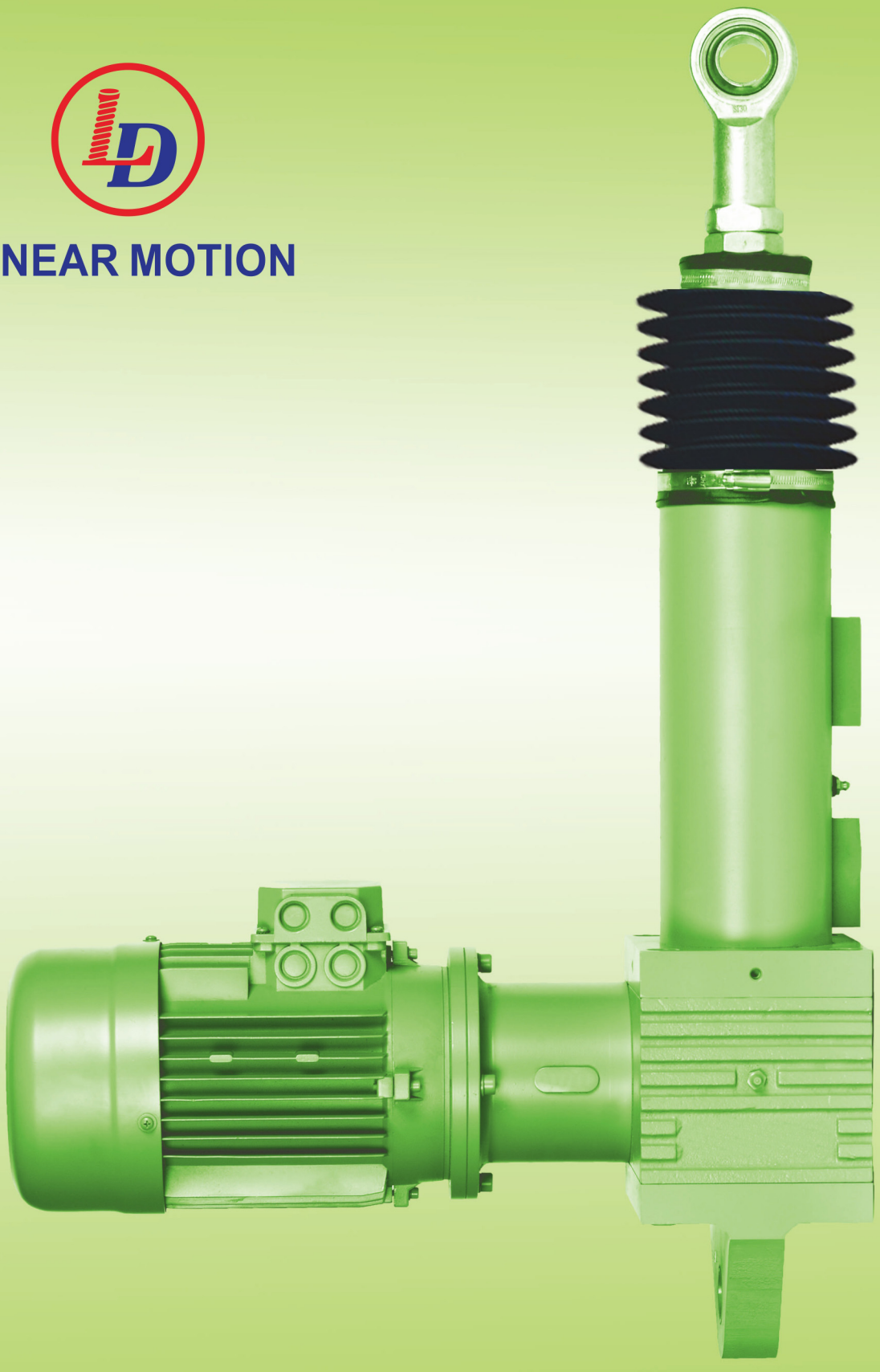
SC Series Actuator

LINEAR MOTION



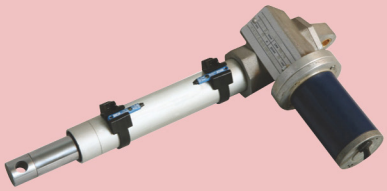
LINEAR MOTION

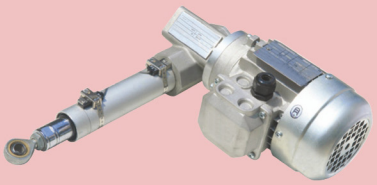
Contents

Linear Actuator

Acme screw

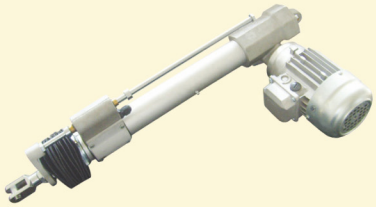
LAP Series





Ball screw

LBP Series



Screw Jack

Acme screw

SJA Series

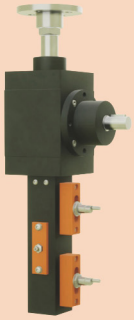
Ball screw

SJB Series

Bevel Gear Screw Jack

Ball screw

DHB Series



Screw Jack Actuator

Acme screw Ball Screw

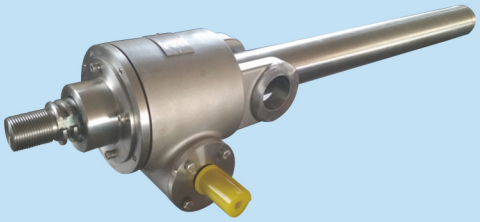
SCA Series
SCB Series

Stainless Screw Jack

Acme screw

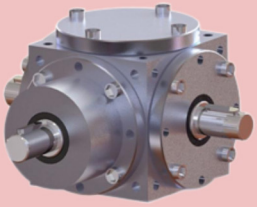
KVL Series

KVK Series

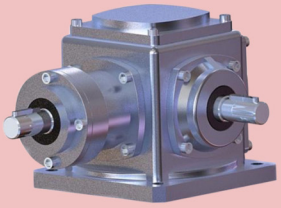


Bevel Gearbox

HD Series

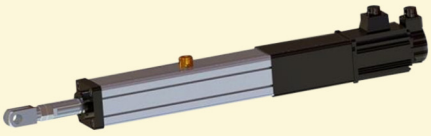


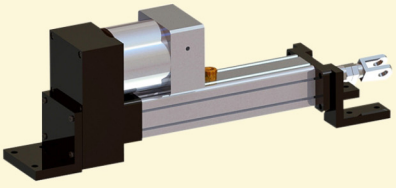
T Series



Servo motor cylinder

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.

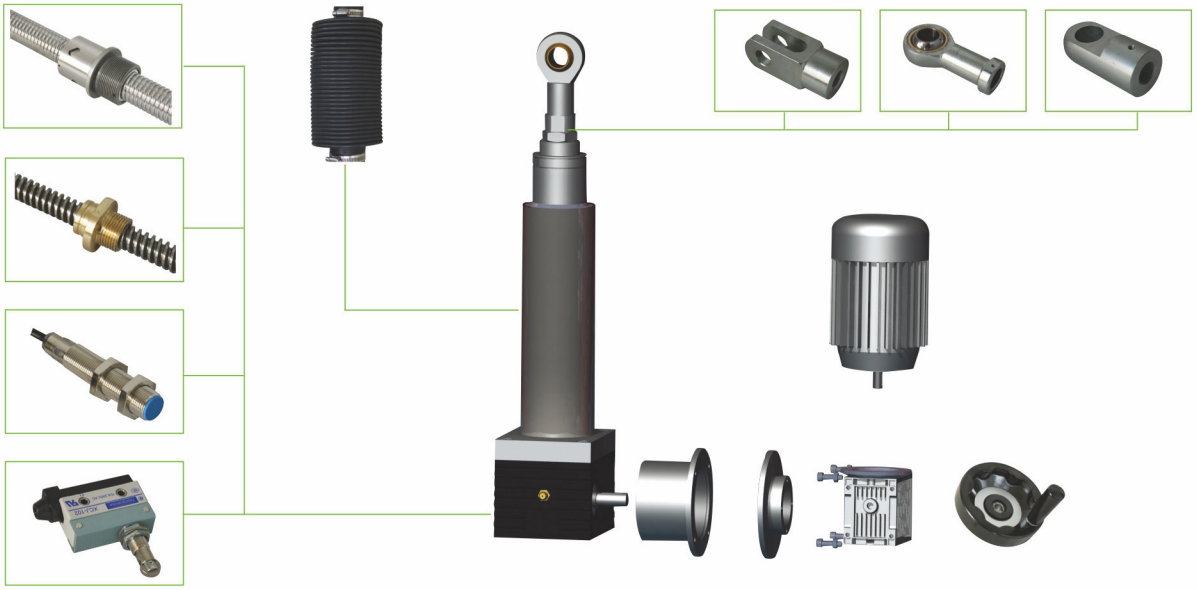
Alternative SCB ball screw actuator and SCA acme screw actuator. Load capacity from 2 ton to 20 ton , could be classified as 2 ton, 5 ton , 8 ton , 10 ton , 20 ton unit. Max. speed and stroke could reach 100mm/s and 2.5m. Duty cycle 50%.

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 30 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

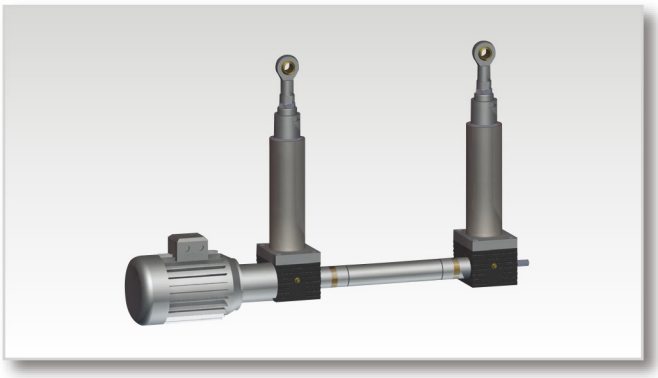
Actuator optional component system

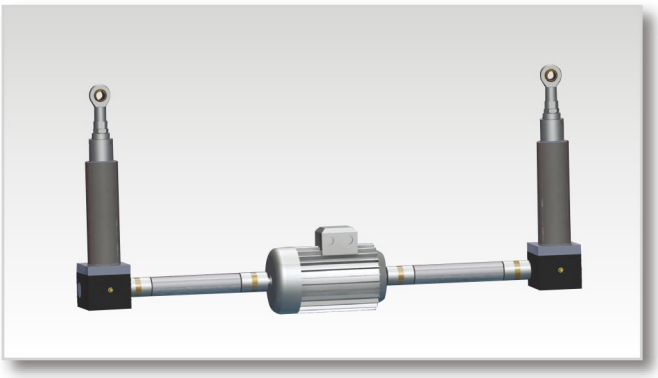


Applications of synchronized lifting

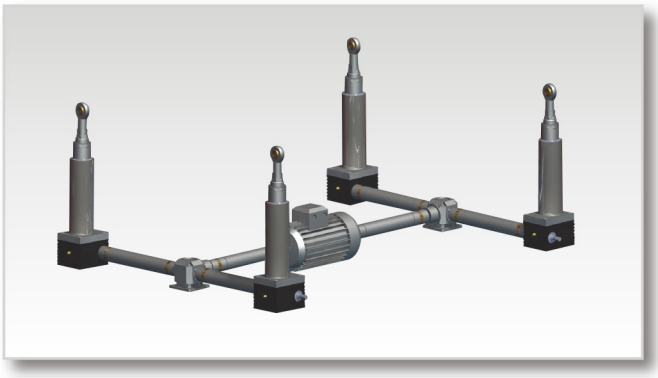
Lude Transmission provided complete system design and components, Which including Actuator, motor, gear box, shaft, coupling, brake, clutch etc. Customer just need let us know your requirement of total load capacity, speed, stroke and dimension, Lude Transmission engineering will provided you a design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

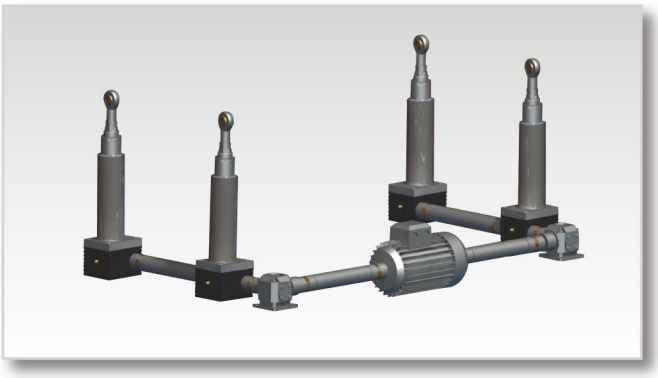
Synchronized Lifting system of Two Actuators





Synchronized Lifting system of Four Actuators





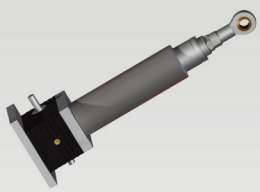
SC series Actuator

Coding

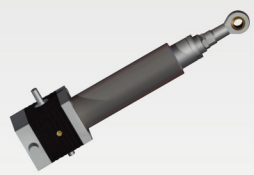
Series	Size	Ratio	Stroke	Front Attachment	Input Versions	Input Shaft	Assessories
SCA Series	20	V1	100	NF Standard male thread	P1 Single input shaft	RH Right hand	FCH Limit switch box
SCB Series	21	L1	300	TS Ball joint	P2 Double input shaft	LH Left hand	FCP Inductive proximity switches (PNP normally closed)
	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
	300						MO Motor
							FMP Foot mounting
							RC Rear mounting

EXAMPLE:

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



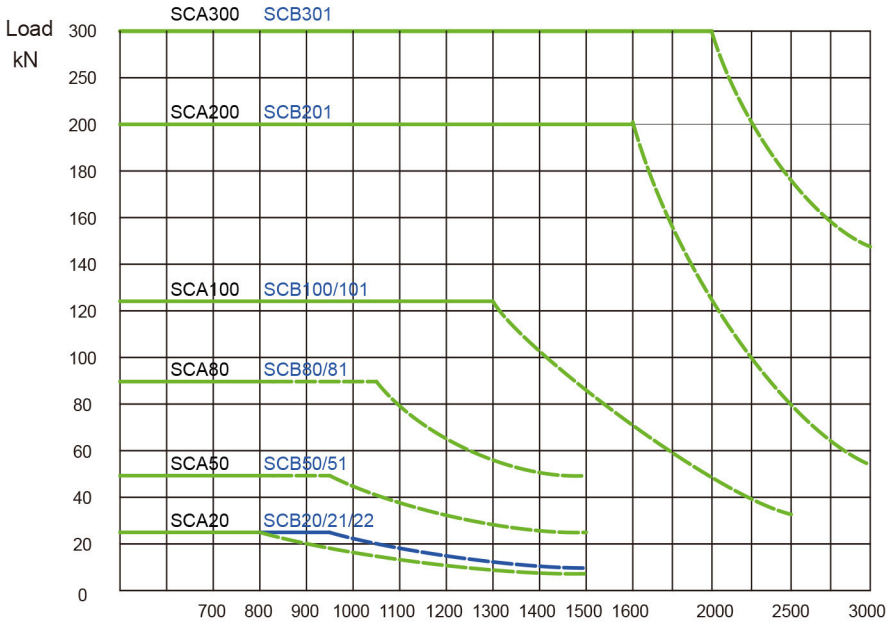
Foot Mounting f_k=0.7



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

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%

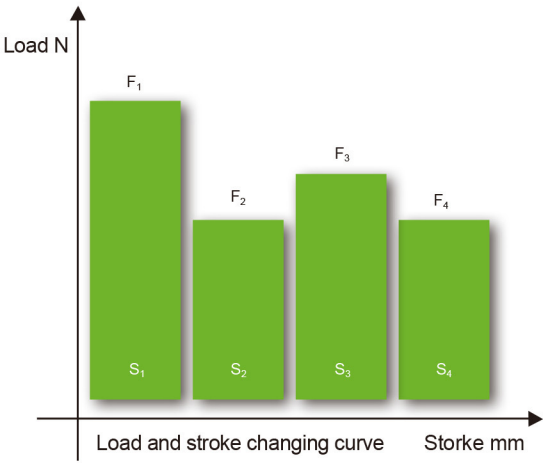
Nut lifetime calculation:

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

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

Fm mean load calcuation:

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



Rated dynamic load:

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

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

Type	Rated dynamic load KN
SCB101	71
SCB200	78
SCB201	145
SCB300	220

SC series Actuator Performance Data

Type	Rated Push KN	Speed mm/s	Stroke for input one turn mm	Max. input power kw	Self-locking	AC 3-Phase Motor Parameter
ACME screw actuator SCA20						
SCA20-V1	15	24.3	1.04	1.14	Uncertain	1.1kw 1400rpm 380/220VAC 50HZ
SCA20-V1	20	15.6	1.04	1.14	Uncertain	1.1kw 900rpm 380/220VAC 50HZ
SCA20-V1	20	12.1	1.04	1.14	Uncertain	1.1kw 700rpm 380/220VAC 50HZ
SCA20-L1	20	6.1	0.26	0.55	Certain	0.55kw 1400rpm 380/220VAC 50HZ
SCA20-L1	20	3.7	0.26	0.55	Certain	0.37kw 900rpm 380/220VAC 50HZ
SCA20-L1	20	3.0	0.26	0.55	Certain	0.37kw 700rpm 380/220VAC 50HZ
Housing Weight (including motor)	58kg					
Weight per 100mm stroke	1.9kg					
Ball screw actuator SCB20						
SCB22-V1	9	81.2	3.48	1.14	Uncertain	1.1kw 1400rpm 380/220VAC 50HZ
SCB22-V1	13	52.2	3.48	1.14	Uncertain	1.1kw 900rpm 380/220VAC 50HZ
SCB21-V1	18	40.6	1.74	1.14	Uncertain	1.1kw 1400rpm 380/220VAC 50HZ
SCB21-V1	20	25.0	1.74	1.14	Uncertain	1.1kw 900rpm 380/220VAC 50HZ
SCB20-V1	20	20.3	0.87	1.14	Uncertain	0.75kw 1400rpm 380/220VAC 50HZ
SCB20-V1	20	12.4	0.87	1.14	Uncertain	0.55kw 900rpm 380/220VAC 50HZ
SCB20-V1	20	10.2	0.87	1.14	Uncertain	0.37kw 700rpm 380/220VAC 50HZ
SCB21-L1	20	6.5	0.43	0.55	Certain	0.37kw 900rpm 380/220VAC 50HZ
SCB20-L1	20	4.8	0.22	0.55	Certain	0.25kw 1400rpm 380/220VAC 50HZ
SCB20-L1	20	3.1	0.22	0.55	Certain	0.18kw 900rpm 380/220VAC 50HZ
SCB20-L1	20	2.4	0.22	0.55	Certain	0.18kw 700rpm 380/220VAC 50HZ
Housing Weight (including motor)	60kg					
Weight per 100mm stroke	2.2kg					
ACME screw actuator SCA50						
SCA50-V1	30	24.3	1.04	2.2	Uncertain	2.2kw 1400rpm 380/220VAC 50HZ
SCA50-V1	40	15.6	1.04	2.2	Uncertain	2.2kw 900rpm 380/220VAC 50HZ
SCA50-V1	35	12.1	1.04	2.2	Uncertain	1.5kw 700rpm 380/220VAC 50HZ
SCA50-L1	40	6.1	0.26	1.1	Certain	1.1kw 1400rpm 380/220VAC 50HZ
SCA50-L1	50	3.7	0.26	1.1	Certain	1.1kw 900rpm 380/220VAC 50HZ
SCA50-L1	50	3.0	0.26	1.1	Certain	0.75kw 700rpm 380/220VAC 50HZ
Housing Weight (including motor)	97kg					
Weight per 100mm stroke	3.4kg					
Ball screw actuator SCB50						
SCB51-V1	20	69.1	2.96	2.2	Uncertain	2.2kw 1400rpm 380/220VAC 50HZ
SCB51-V1	30	44.4	2.96	2.2	Uncertain	2.2kw 900rpm 380/220VAC 50HZ
SCB50-V1	40	34.5	1.48	2.2	Uncertain	2.2kw 1400rpm 380/220VAC 50HZ
SCB50-V1	50	21.4	1.48	2.2	Uncertain	2.2kw 900rpm 380/220VAC 50HZ
SCB50-V1	50	17.3	1.48	2.2	Uncertain	1.5kw 700rpm 380/220VAC 50HZ
SCB51-L1	35	10.7	0.74	1.1	Certain	1.1kw 900rpm 380/220VAC 50HZ
SCB50-L1	50	8.3	0.37	1.1	Certain	1.1kw 1400rpm 380/220VAC 50HZ
SCB50-L1	50	5.6	0.37	1.1	Certain	0.75kw 900rpm 380/220VAC 50HZ
SCB50-L1	50	4.3	0.37	1.1	Certain	0.55kw 700rpm 380/220VAC 50HZ
Housing Weight (including motor)	99kg					
Weight per 100mm stroke	3.7kg					

Note: (Consult Lude Transmission Engineer for weight of SJB21, SJB22, SJB51)

Type	Rated Push KN	Speed mm/s	Stroke for input one turn mm	Max. input power kw	Self-locking	AC 3-Phase Motor Parameter
ACME screw actuator SCA80						
SCA80-V1	30	24.0	1.03	2.5	Uncertain	2.2kw 1400rpm 380/220VAC 50HZ
SCA80-V1	50	15.5	1.03	2.5	Uncertain	2.2kw 900rpm 380/220VAC 50HZ
SCA80-V1	40	12.0	1.03	2.5	Uncertain	1.5kw 700rpm 380/220VAC 50HZ
SCA80-L1	60	6.1	0.26	1.5	Certain	1.5kw 1400rpm 380/220VAC 50HZ
SCA80-L1	80	3.7	0.26	1.5	Certain	1.5kw 900rpm 380/220VAC 50HZ
SCA80-L1	80	3.0	0.26	1.5	Certain	1.5kw 700rpm 380/220VAC 50HZ
Housing Weight (including motor)	140kg					
Weight per 100mm stroke	4.2kg					
Ball screw actuator SCB80						
SCB81-V1	22	60.2	2.58	2.5	Uncertain	2.2kw 1400rpm 380/220VAC 50HZ
SCB81-V1	35	38.7	2.58	2.5	Uncertain	2.2kw 900rpm 380/220VAC 50HZ
SCB80-V1	45	30.1	1.29	2.5	Uncertain	2.2kw 1400rpm 380/220VAC 50HZ
SCB80-V1	60	18.7	1.29	2.5	Uncertain	2.2kw 900rpm 380/220VAC 50HZ
SCB80-V1	50	15.1	1.29	2.5	Uncertain	1.5kw 700rpm 380/220VAC 50HZ
SCB81-L1	60	9.4	0.65	1.5	Certain	1.5kw 900rpm 380/220VAC 50HZ
SCB80-L1	60	7.3	0.32	1.5	Certain	1.5kw 1400rpm 380/220VAC 50HZ
SCB80-L1	60	4.8	0.32	1.5	Certain	1.1kw 900rpm 380/220VAC 50HZ
SCB80-L1	60	3.8	0.32	1.5	Certain	0.75kw 700rpm 380/220VAC 50HZ
Housing Weight (including motor)	144kg					
Weight per 100mm stroke	4.6kg					
ACME screw actuator SCA100						
SCA100-V1	38	26.2	1.16	3	Uncertain	3kw 1400rpm 380/220VAC 50HZ
SCA100-V1	54	17.4	1.16	3	Uncertain	3kw 900rpm 380/220VAC 50HZ
SCA100-V1	65	13.5	1.16	3	Uncertain	3kw 700rpm 380/220VAC 50HZ
SCA100-L1	75	6.8	0.29	2.2	Certain	2.2kw 1400rpm 380/220VAC 50HZ
SCA100-L1	100	4.4	0.29	2.2	Certain	2.2kw 900rpm 380/220VAC 50HZ
SCA100-L1	100	3.4	0.29	2.2	Certain	2.2kw 700rpm 380/220VAC 50HZ
Housing Weight (including motor)	214kg					
Weight per 100mm stroke	6.9kg					
Ball screw actuator SCB100						
SCB101-V1	30	60.2	2.58	3	Uncertain	3kw 1400rpm 380/220VAC 50HZ
SCB101-V1	42	38.7	2.58	3	Uncertain	3kw 900rpm 380/220VAC 50HZ
SCB100-V1	60	30.1	1.29	3	Uncertain	3kw 1400rpm 380/220VAC 50HZ
SCB100-V1	80	18.7	1.29	3	Uncertain	3kw 900rpm 380/220VAC 50HZ
SCB100-V1	80	15.1	1.29	3	Uncertain	3kw 700rpm 380/220VAC 50HZ
SCB101-L1	80	9.4	0.65	2.2	Certain	2.2kw 900rpm 380/220VAC 50HZ
SCB100-L1	80	7.3	0.32	2.2	Certain	2.2kw 1400rpm 380/220VAC 50HZ
SCB100-L1	80	4.8	0.32	2.2	Certain	1.5kw 900rpm 380/220VAC 50HZ
SCB100-L1	80	3.8	0.32	2.2	Certain	1.1kw 700rpm 380/220VAC 50HZ
Housing Weight (including motor)	221kg					
Weight per 100mm stroke	7.5kg					

Note: (SJB81, SJB101 weight consult Lude Transmission engineer)

SC series Actuator Performance Data

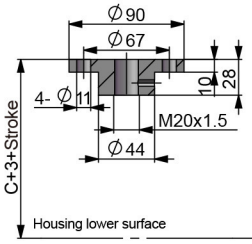
Type	Rated Push KN	Speed mm/s	Stroke for input one turn mm	Max. input power kw	Self-locking	AC 3-Phase Motor Parameter
ACME screw actuator SCA200						
SCA200-V1	44	32.0	1.37	4	Uncertain	4kw 1400rpm 380/220VAC 50HZ
SCA200-V1	60	20.6	1.37	4	Uncertain	4kw 900rpm 380/220VAC 50HZ
SCA200-V1	50	16.0	1.37	4	Uncertain	3kw 700rpm 380/220VAC 50HZ
SCA200-L1	80	8.0	0.34	3.5	Certain	3kw 1400rpm 380/220VAC 50HZ
SCA200-L1	110	5.1	0.34	3.5	Certain	3kw 900rpm 380/220VAC 50HZ
SCA200-L1	150	4.0	0.34	3.5	Certain	3kw 700rpm 380/220VAC 50HZ
Housing Weight (including motor)	295kg					
Weight per 100mm stroke	9.3kg					
Ball screw actuator SCB200						
SCB201-V1	40	53.2	2.28	4	Uncertain	4kw 1400rpm 380/220VAC 50HZ
SCB201-V1	60	34.2	2.28	4	Uncertain	4kw 900rpm 380/220VAC 50HZ
SCB200-V1	80	26.6	1.14	4	Uncertain	4kw 1400rpm 380/220VAC 50HZ
SCB200-V1	90	17.1	1.14	4	Uncertain	3kw 900rpm 380/220VAC 50HZ
SCB201-L1	75	13.3	0.58	3.5	Certain	3kw 1400rpm 380/220VAC 50HZ
SCB201-L1	120	8.5	0.58	3.5	Certain	3kw 900rpm 380/220VAC 50HZ
SCB201-L1	135	6.6	0.58	3.5	Certain	3kw 700rpm 380/220VAC 50HZ
SCB200-L1	90	4.3	0.29	3.5	Certain	1.5kw 900rpm 380/220VAC 50HZ
SCB200-L1	90	3.3	0.29	3.5	Certain	1.1kw 700rpm 380/220VAC 50HZ
Housing Weight (including motor)	305kg					
Weight per 100mm stroke	10.2kg					
ACME screw actuator SCA300						
SCA300-V1	65	37.3	1.56	7.5	Uncertain	7.5kw 1400rpm 380/220VAC 50HZ
SCA300-V1	94	24.0	1.56	7.5	Uncertain	7.5kw 900rpm 380/220VAC 50HZ
SCA300-V1	110	18.7	1.56	7.5	Uncertain	7.5kw 700rpm 380/220VAC 50HZ
SCA300-L1	130	9.3	0.39	5.5	Certain	5.5kw 1400rpm 380/220VAC 50HZ
SCA300-L1	190	6.0	0.39	5.5	Certain	5.5kw 900rpm 380/220VAC 50HZ
SCA300-L1	220	4.7	0.39	5.5	Certain	5.5kw 700rpm 380/220VAC 50HZ
Housing Weight (including motor)	509kg					
Weight per 100mm stroke	16kg					
Ball screw actuator SCB300						
SCB300-V1	85	45.5	1.95	7.5	Uncertain	7.5kw 1400rpm 380/220VAC 50HZ
SCB300-V1	130	29.2	1.95	7.5	Uncertain	7.5kw 900rpm 380/220VAC 50HZ
SCB300-V1	150	22.7	1.95	7.5	Uncertain	7.5kw 700rpm 380/220VAC 50HZ
SCB300-L1	165	11.4	0.49	5.5	Certain	5.5kw 1400rpm 380/220VAC 50HZ
SCB300-L1	180	7.3	0.49	5.5	Certain	4.0kw 900rpm 380/220VAC 50HZ
SCB300-L1	215	5.7	0.49	5.5	Certain	4.0kw 700rpm 380/220VAC 50HZ
Housing Weight (including motor)	573kg					
Weight per 100mm stroke	17kg					

Note: (Consult Lude Transmission engineers for weight of SJB201)

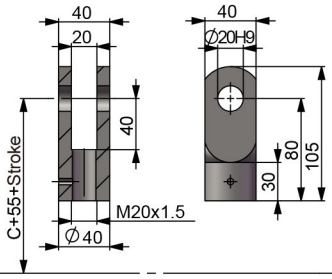
Overall Dimensions of SC Series

SCA/SCB20 Actuator

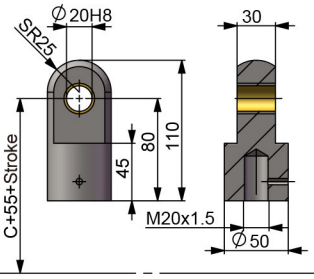
Flange end FL



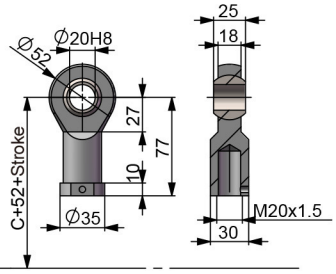
Clevis end FO



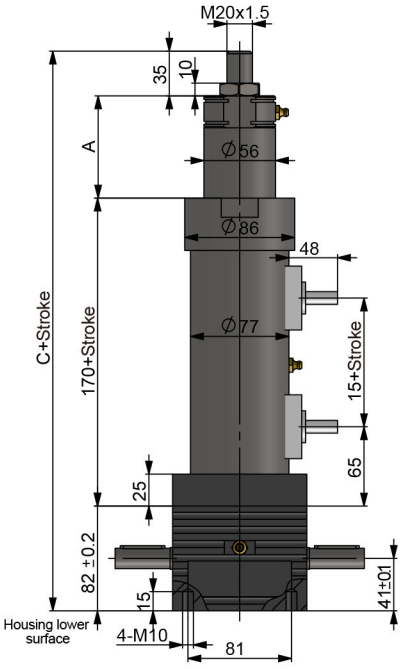
Rod end TF



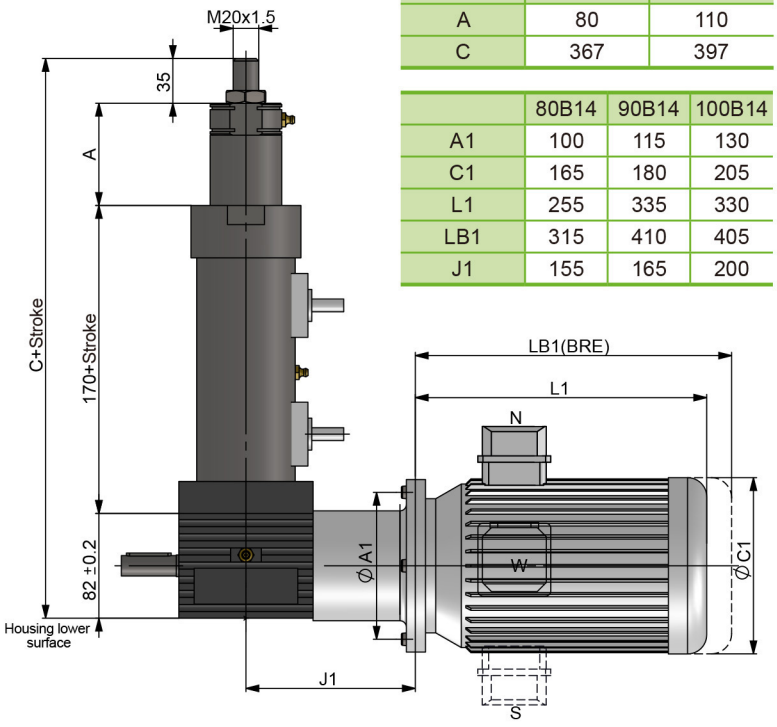
Ball joint TS



Standard actuator



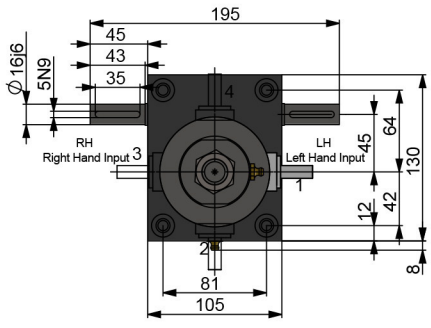
Actuator with AC motor



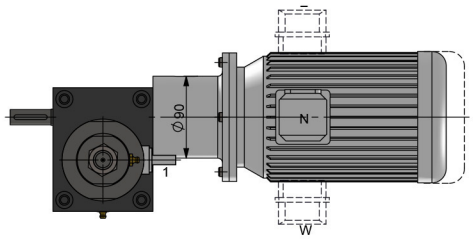
	SCA20	SCB20
A	80	110
C	367	397

	80B14	90B14	100B14
A1	100	115	130
C1	165	180	205
L1	255	335	330
LB1	315	410	405
J1	155	165	200

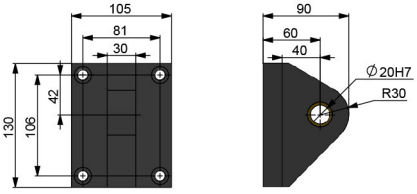
Note: Position of junction box: W is standard



Note: Position of limit switch: 1,2,3,4. Position 1 is standard.



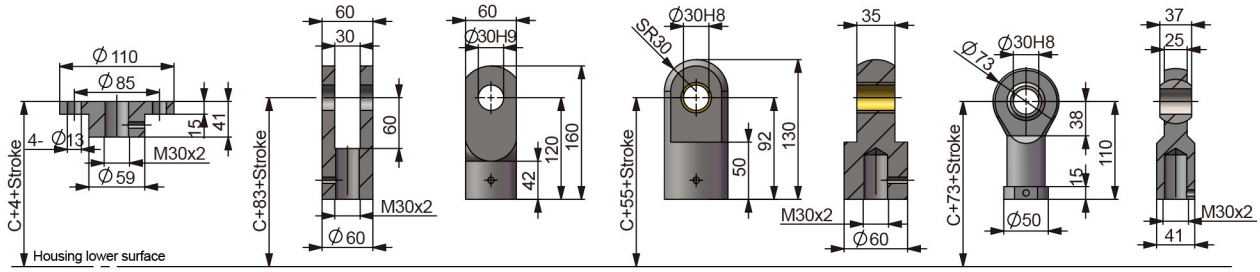
Rear mounting RC



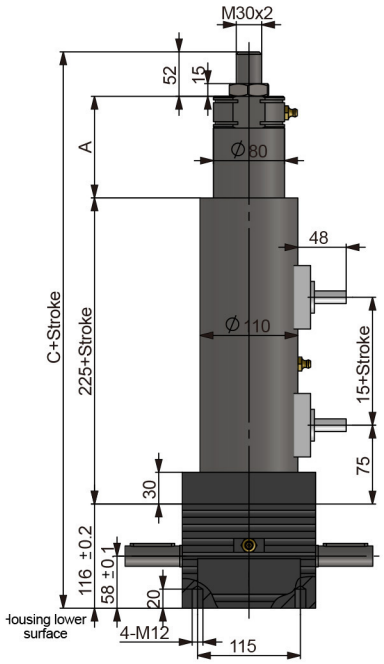
Overall Dimensions of SC Series

SCA/SCB50 Actuator

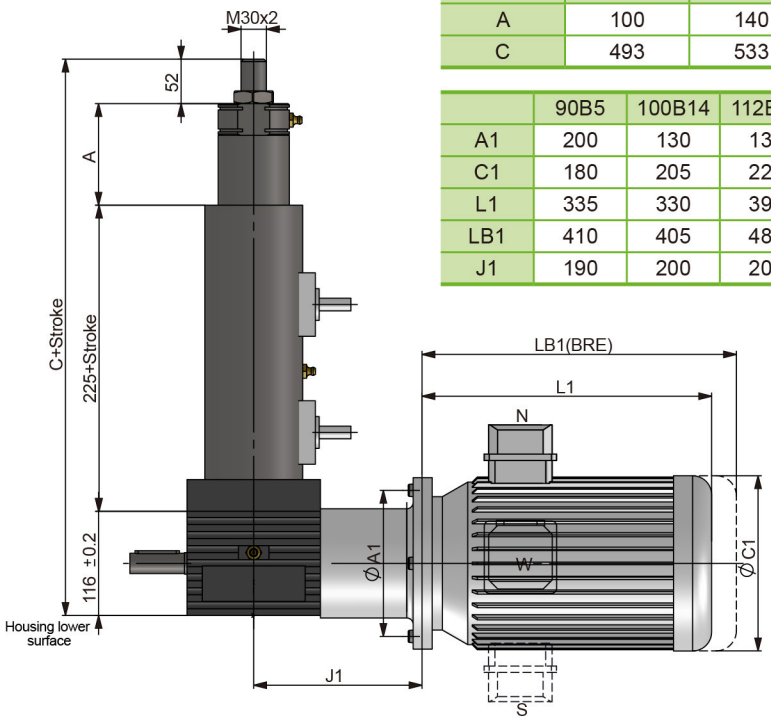
Flange end FL | Clevis end FO | Rod end TF | Ball joint TS



Standard actuator



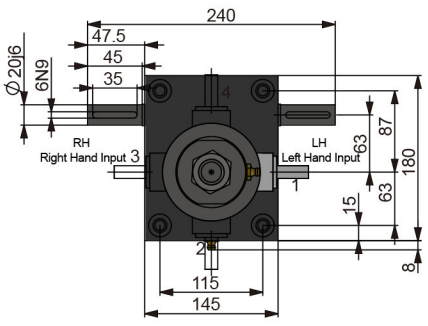
Actuator with AC motor



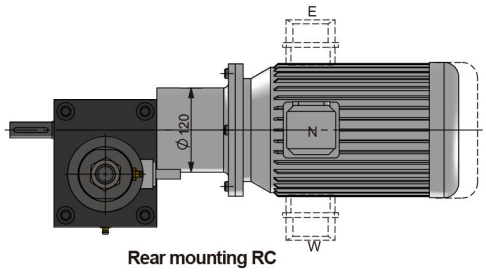
	SCA50	SCB50
A	100	140
C	493	533

	90B5	100B14	112B14
A1	200	130	130
C1	180	205	225
L1	335	330	395
LB1	410	405	485
J1	190	200	200

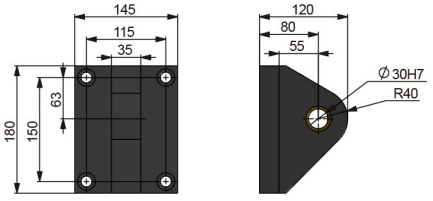
Note: Position of junction box: W is standard



Note: Position of limit switch: 1,2,3,4. Position 1 is standard.

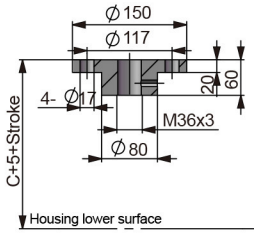


Rear mounting RC

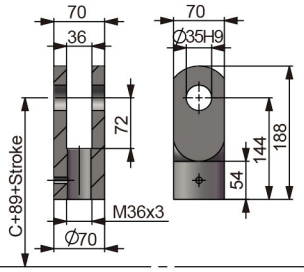


SCA/SCB80 Actuator

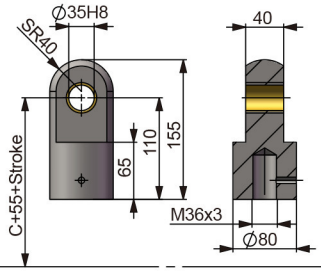
Flange end FL



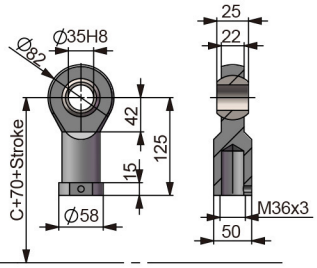
Clevis end FO



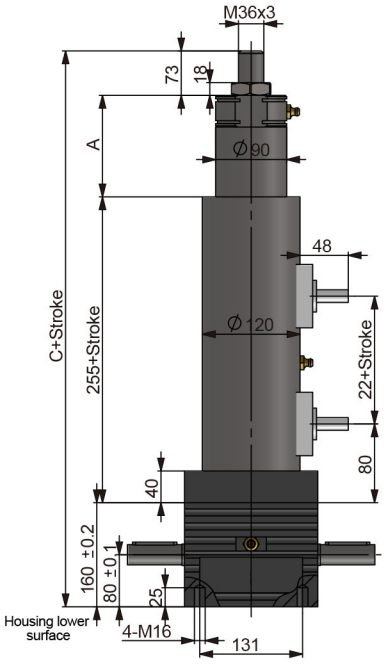
Rod end TF



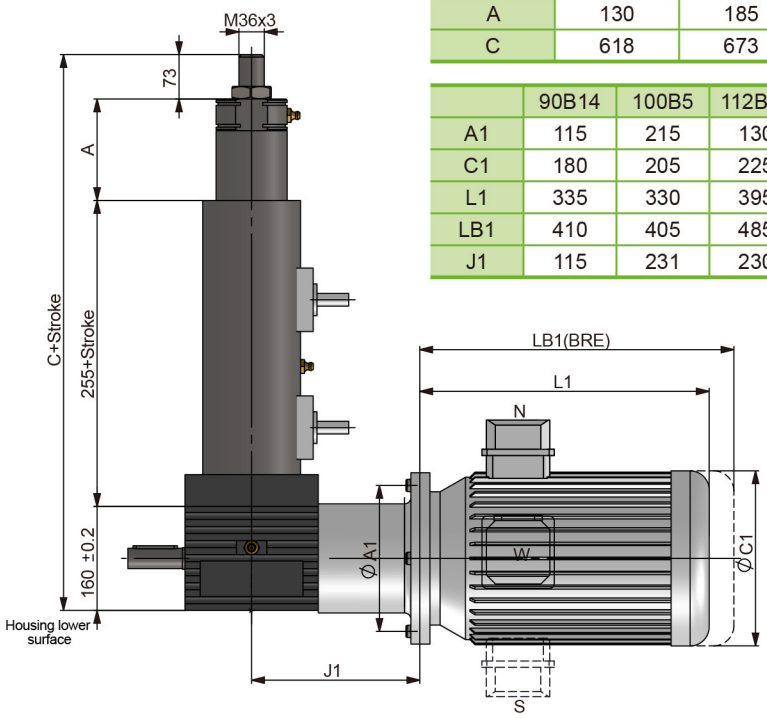
Ball joint TS



Standard actuator



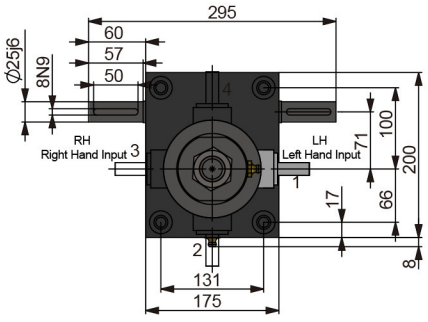
Actuator with AC motor



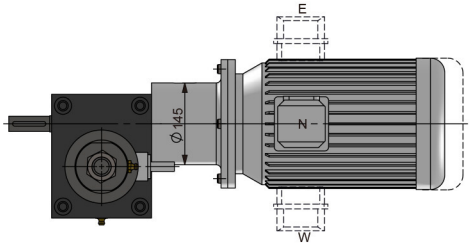
	SCA80	SCB80
A	130	185
C	618	673

	90B14	100B5	112B14
A1	115	215	130
C1	180	205	225
L1	335	330	395
LB1	410	405	485
J1	115	231	230

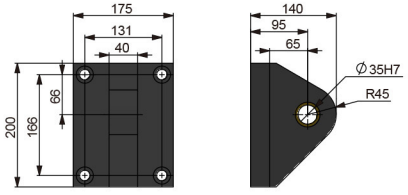
Note: Position of junction box: W is standard



Note: Position of limit switch: 1,2,3,4. Position 1 is standard.



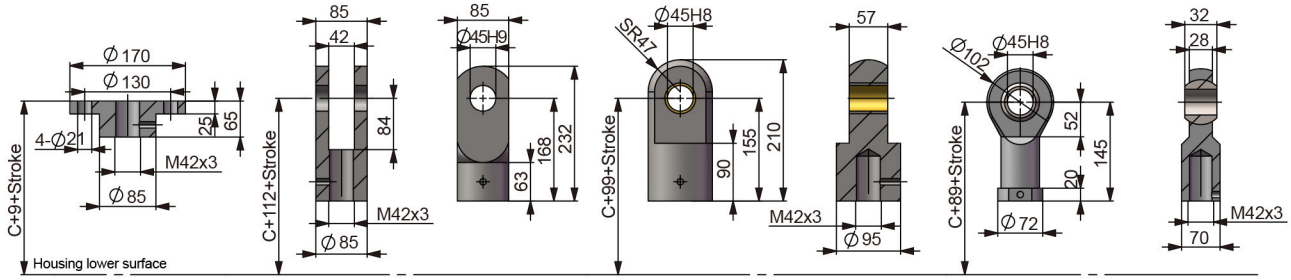
Rear mounting RC



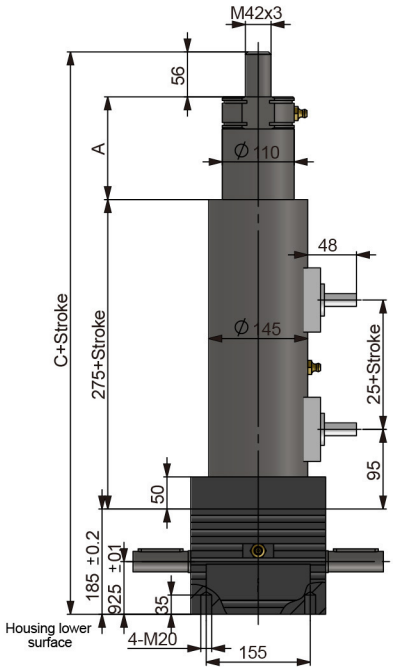
Overall Dimensions of SC Series

SCA/SCB100 Actuator

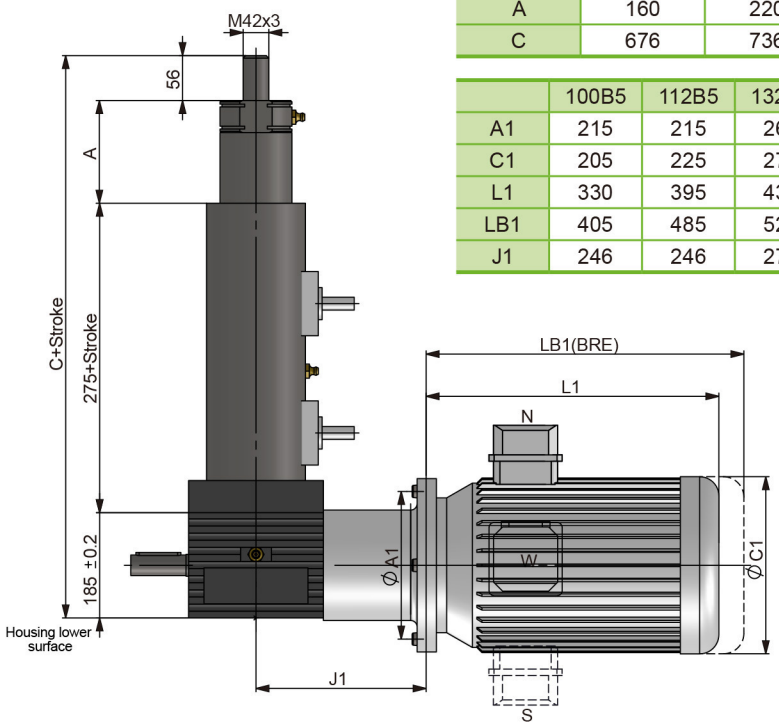
Flange end FL | Clevis end FO | Rod end TF | Ball joint TS



Standard actuator



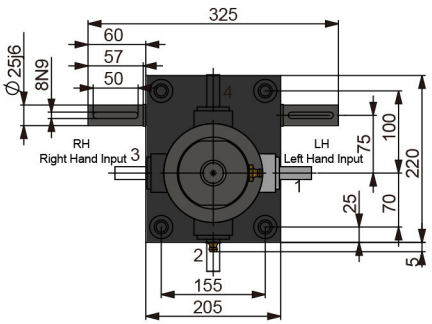
Actuator with AC motor



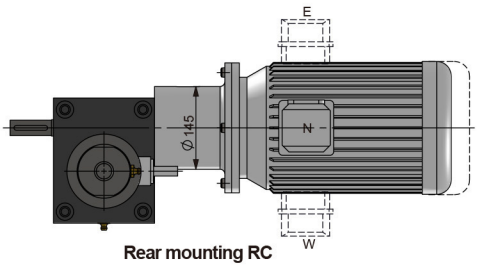
	SCA100	SCB100
A	160	220
C	676	736

	100B5	112B5	132B5
A1	215	215	265
C1	205	225	270
L1	330	395	430
LB1	405	485	525
J1	246	246	276

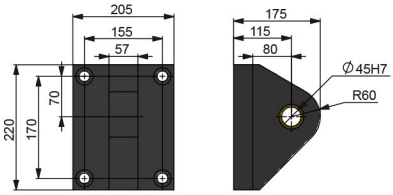
Note: Position of junction box: W is standard



Note: Position of limit switch: 1,2,3,4. Position 1 is standard.

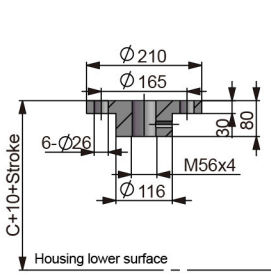


Rear mounting RC

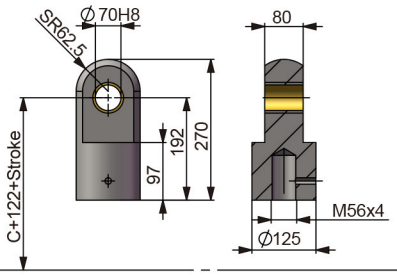


SCA/SCB200 Actuator

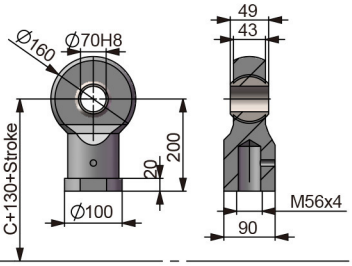
Flange end FL



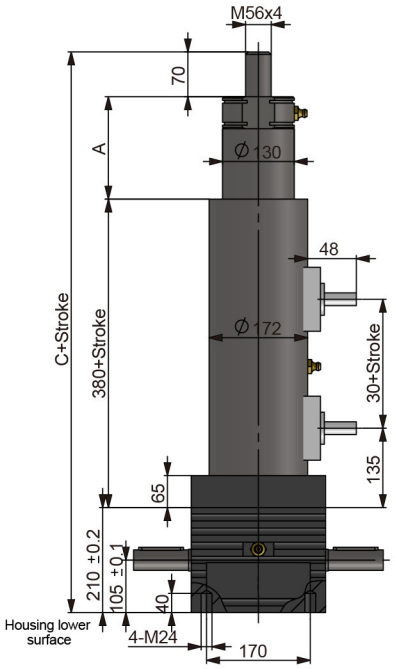
Rod end TF



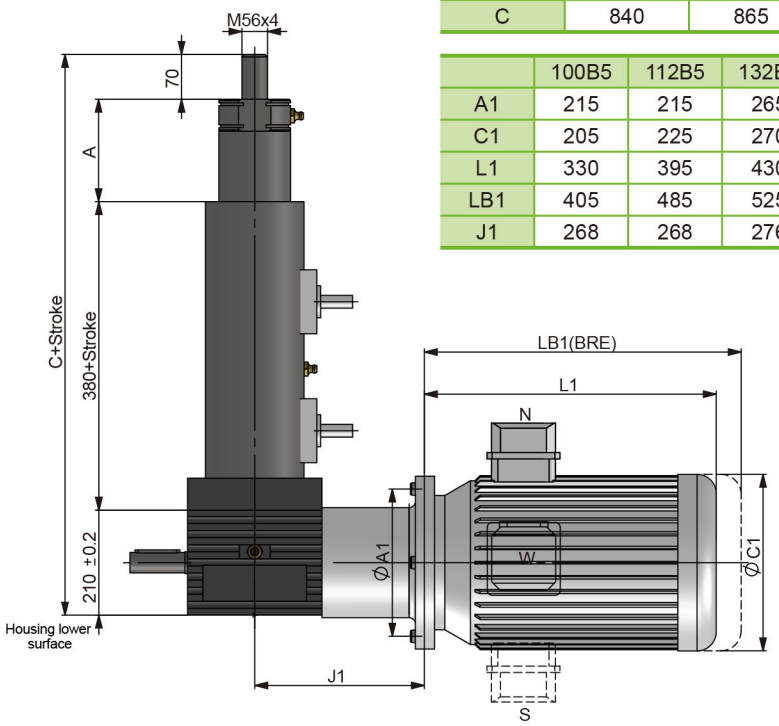
Ball joint TS



Standard actuator



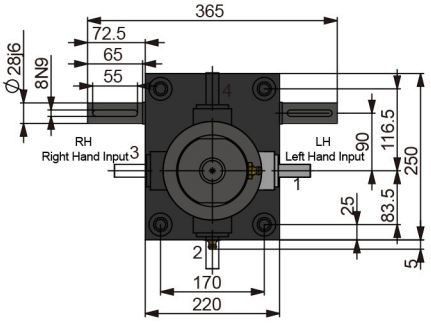
Actuator with AC motor



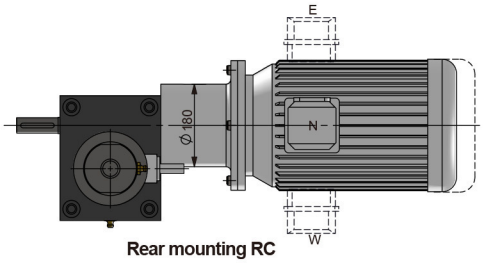
Note: Position of junction box: W is standard

	SCA200	SCB200
A	180	205
C	840	865

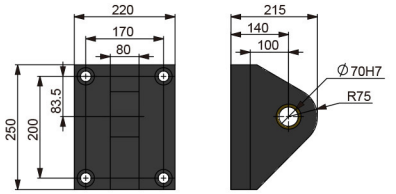
	100B5	112B5	132B5
A1	215	215	265
C1	205	225	270
L1	330	395	430
LB1	405	485	525
J1	268	268	276



Note: Position of limit switch: 1,2,3,4. Position 1 is standard.



Rear mounting RC



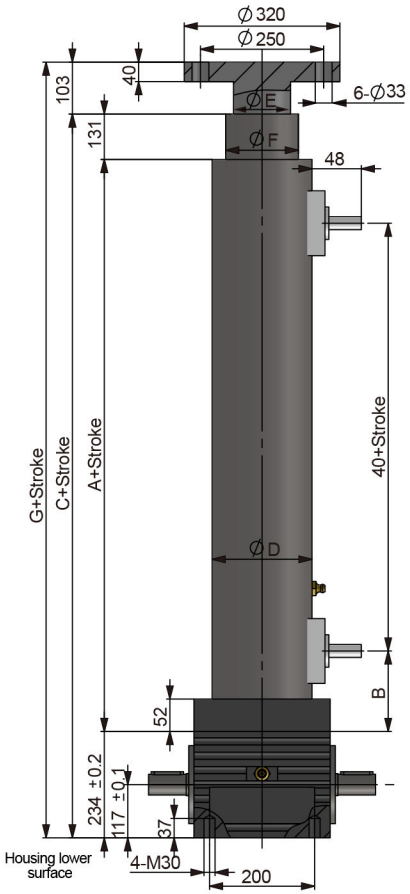
Overall Dimensions of SC Series

SCA/SCB300 Actuator

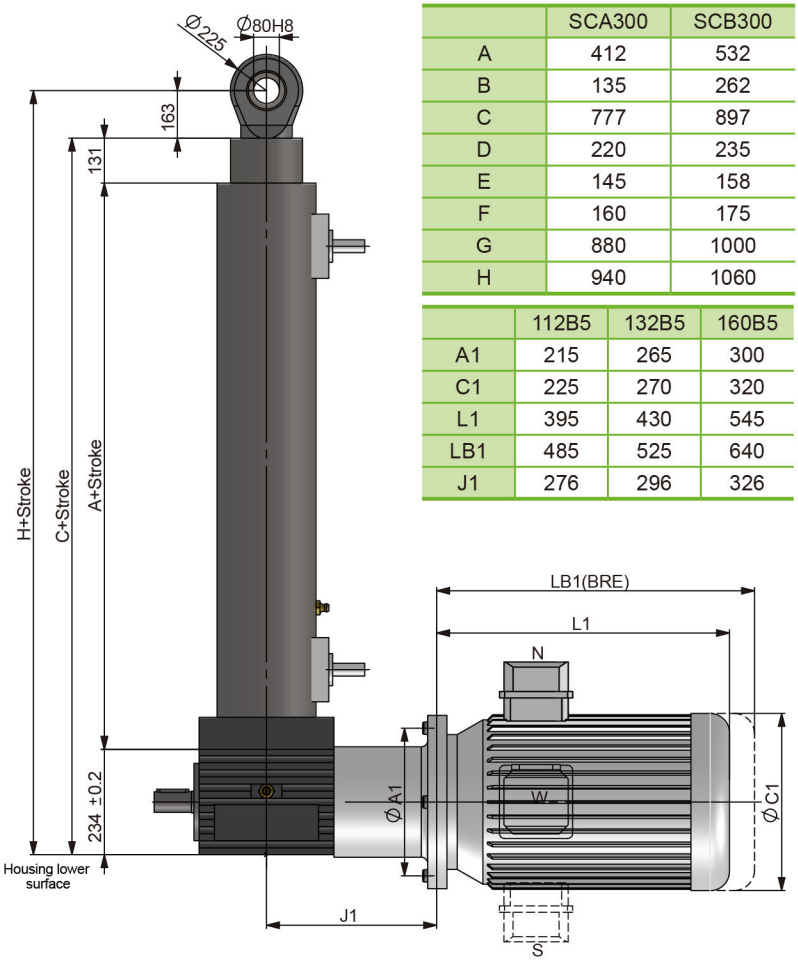
Standard actuator

Actuator with AC motor

Flange end FL

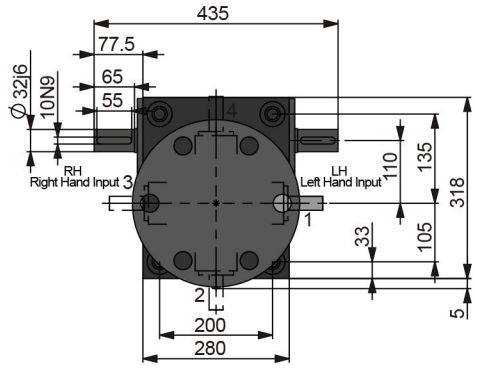


Ball joint TS



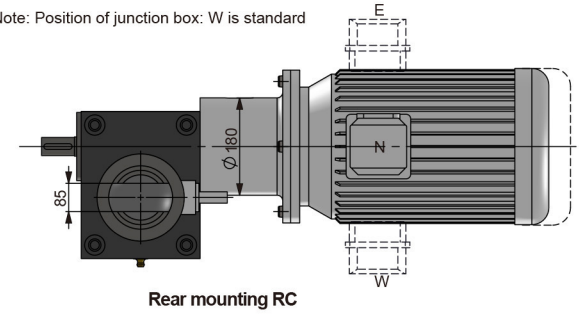
	SCA300	SCB300
A	412	532
B	135	262
C	777	897
D	220	235
E	145	158
F	160	175
G	880	1000
H	940	1060

	112B5	132B5	160B5
A1	215	265	300
C1	225	270	320
L1	395	430	545
LB1	485	525	640
J1	276	296	326

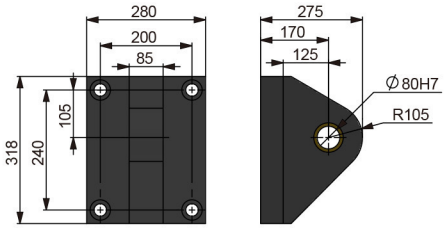


Note: Position of limit switch: 1,2,3,4. Position 1 is standard.

Note: Position of junction box: W is standard



Rear mounting RC

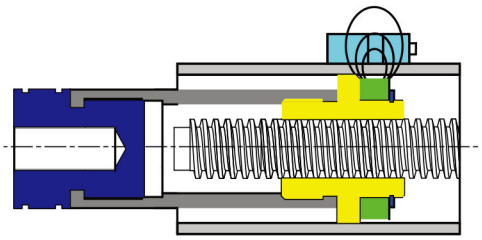


System Accessories:

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

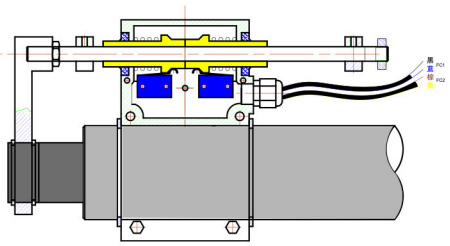
FCM limit switch



External Limit Switches FCE

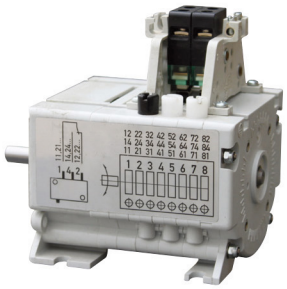
The FCE device consists of a sealed aluminum alloy box and steel rod. Adjust the position of the rings on steel rod which fixed by screw,we can get the stop position of actuator。 Cable length 1m
Control voltage：3-130VDC/AC
Current：100mA
Repetitive accuracy：0.1mm
Ambient temperature：-30℃ - 70℃
Note:The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

FCM 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

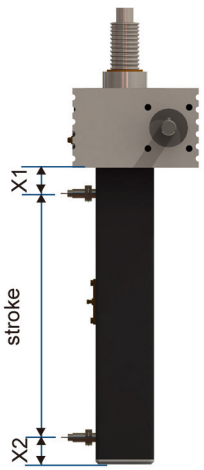


Proximity limit switch (FCP)

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

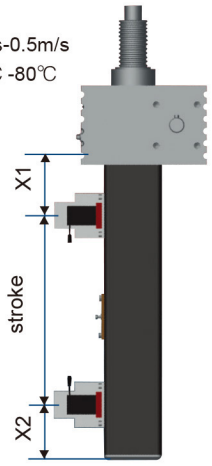


FCG limit switch

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

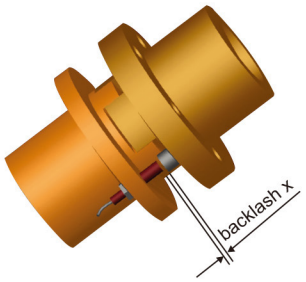
Type	X1	X2
SJA5	40	45
SJA10/SJB10	40	55
SJA20/SJB20/21/22	45	50
SJA50/SJB50/51	55	45
SJA80/SJB80/81	60	60
SJA100/SJB100/101	70	50
SJA200/SJB200/201	75	50
SJA300/SJB300	95	60

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



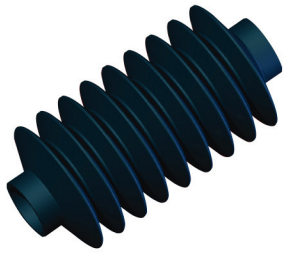
Safety nut SN

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.



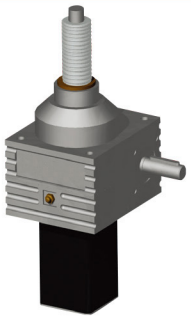
Bellow

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.

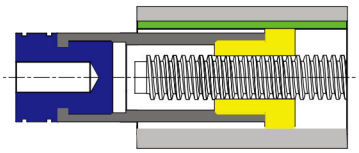


System Accessories:

Anti-turn device AR

Apply to the LAP/LBP series of actuators and SCA/SCB series 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: aution: Anti-turn device should not be used simultaneously with the magnetic limit switch FCM
AR is standard configuration for SJA/SJB-S screw Jacks and DHB-S bevel gear screw jacks.

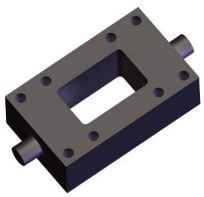


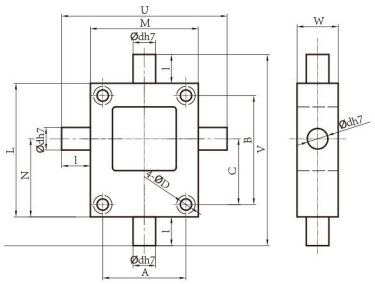
Incremental rotary encoder IRE

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

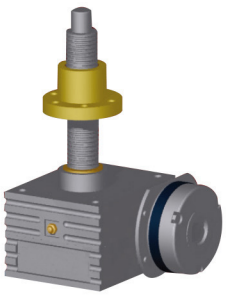
Trunnion mounting panel HBP

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

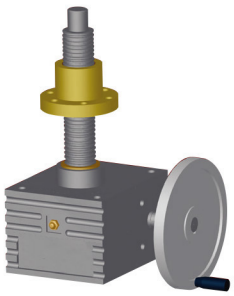




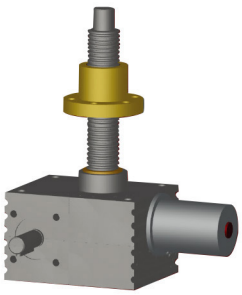
Model	Trunnion											
	A	B	C	D	L	M	N	U	V	W	d	l
SJA5-S-..-HBP	52	60	39	9	80	72	49	108	116	28	15	18
SJA10-S-..-HBP	63	78	49	9	100	85	60	127	142	30	17	21
SJA20-S-..-HBP	81	106	64	11	130	105	76	161	186	40	22	28
SJA50-S-..-HBP	115	150	87	13	180	145	102	225	260	50	32	40
SJA80-S-..-HBP	131	166	100	17	200	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

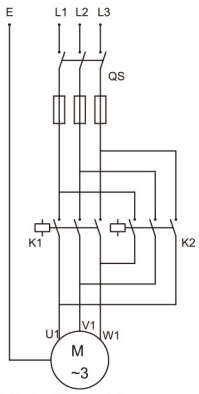


Hand Wheel

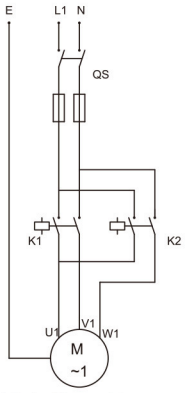


Automatic Lubricator

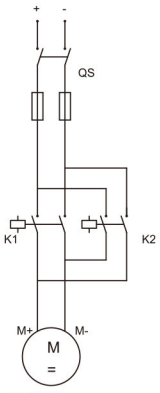
Wiring:



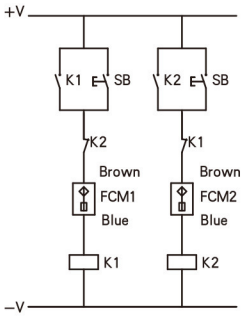
AC 3–Phase Motor



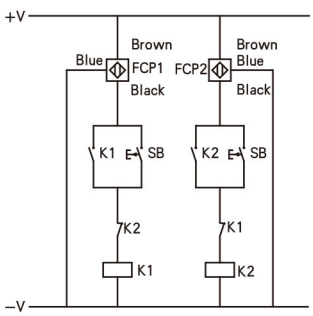
AC 1–Phase Motor



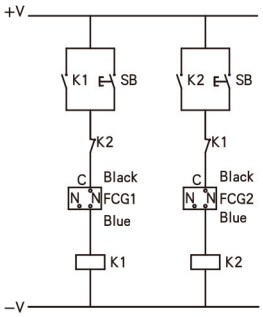
DC Motor



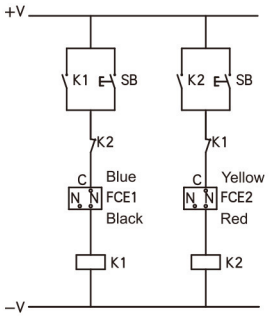
Magnetiv Reed Switches FCM



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 equivale	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/SCA/SCB300		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
LAP/LBP300		5500		2800					

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 Jack 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's requirements.

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

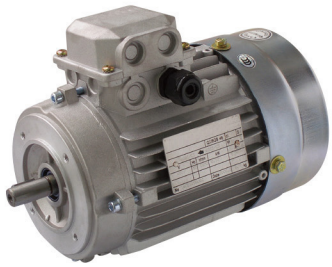
Protection Class: Standard IP54 and Optional : IP55 IP56 IP65 IP66

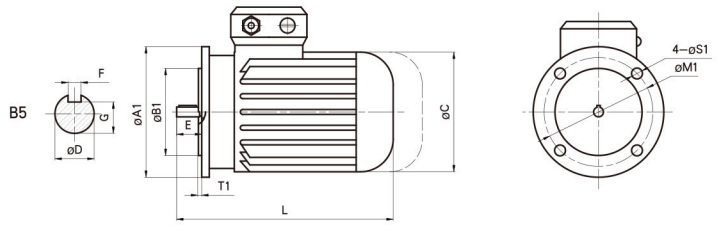
Insulation Class: F , Optional H

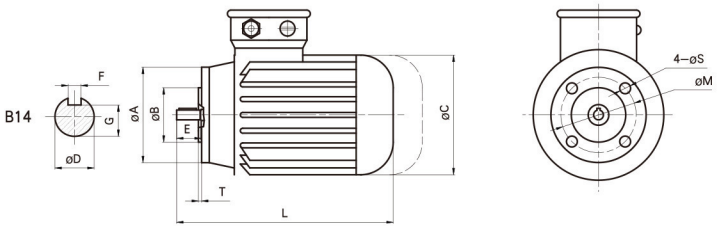
Voltage: 380/220V 50Hz, 440V/255 60Hz

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	1300	0.66	0.45	4
	0.09	2750	0.31	0.42	
	0.12	2750	0.42	0.48	
63	0.18	2780	0.86	0.68	4.5
	0.12	1330	1.29	0.85	
	0.18	1330	0.62	0.51	
	0.25	2780	0.86	0.78	
71	0.18	900	1.91	0.85	6.2
	0.25	900	2.65	1	
	0.25	1360	1.76	0.9	
	0.37	1360	2.6	1.2	
	0.37	2800	1.26	1.3	
	0.55	2800	1.88	2	
80	0.18	690	2.49	0.76	17
	0.25	690	3.46	0.97	
	0.37	925	3.82	1.22	
	0.55	925	5.68	1.63	
	0.55	1430	3.67	1.7	
	0.75	1430	5.01	2	
	0.75	2870	2.5	1.8	
	1.1	2875	3.65	2.5	
90S	0.37	695	5.08	1.3	29
	0.55	695	7.56	1.9	
	0.75	945	7.58	2.5	
	1.1	950	11.1	3.3	
	1.1	1430	7.35	3.8	
	1.5	1430	10	4.6	
	1.5	2880	4.97	3.7	
	2.2	2880	7.3	4.6	
100	0.75	705	10.2	2.3	37
	1.1	705	14.9	3.1	
	1.5	950	15.1	4.4	
	2.2	1440	14.6	7.3	
	3	1440	19.9	8.9	
	3	2880	9.95	7.2	
112	1.5	710	20.2	4.1	50
	2.2	965	21.8	7.2	
	4	1455	26.3	8.4	
132	2.2	725	29	5.7	77
	3	725	39.5	7.5	
	3	975	29.4	7.2	
	4	975	39.2	9.5	
	5.5	1465	35.9	11.2	
	7.5	1465	48.9	15	
160	4	730	52.3	9.8	146
	5.5	730	72.0	13.1	
	7.5	980	73.1	16.2	
	11	980	107	23.1	
	11	1470	71.5	21.5	
	15	1470	97.4	28.8	

Frame Size	A	A1	B	B1	C	D	E	F	G	L	M	M1	S	S1	T	T1
56M	80	120	50	80	115	9	20	3	7.2	198	65	100	M5	7	2.5	3
63M	90	140	60	95	127	11	23	4	8.5	225	75	115	M5	10	2.5	3
71M	105	160	70	110	145	14	30	5	11	255	85	130	M6	10	2.5	3.5
80M	120	200	80	130	165	19	40	6	15.5	295	100	165	M6	12	3	3.5
90S	140	200	95	130	180	24	50	8	20	345	115	165	M8	12	3	3.5
90L	140	200	95	130	180	24	50	8	20	385	115	165	M8	12	3	3.5
100L	160	250	110	180	205	28	60	8	24	390	130	215	M8	15	3.5	4
112M	160	250	110	180	225	28	60	8	24	455	130	215	M8	15	3.5	4
132S	200	300	130	230	270	38	80	10	33	475	165	265	M10	15	4	4
132M	200	300	130	230	270	38	80	10	33	510	165	265	M10	15	4	4
160M	300	350	230	250	320	42	110	12	37	610	265	300	M12	18.5	4	5
160L	300	350	230	250	320	42	110	12	37	655	265	300	M12	18.5	4	5

LINEAR
MOTION

Dezhou Lude Transmission Equipments CO.,LTD

NO.2758 Mengyin Road, Economic&Technical Development Zone, Dezhou, Shandong, China

TEL: 0086-534-2765998 2761998

E-mail: ludetransmission@gmail.com china@ludetransmission.com

Web: www.ludetransmission.com