

Screw Jack



LINEAR MOTION

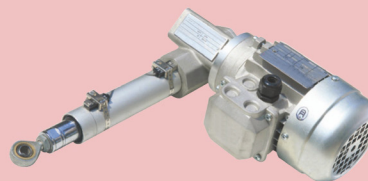
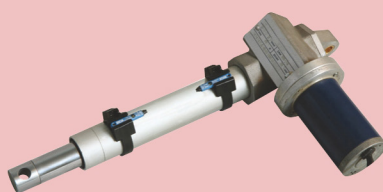




Linear Actuator

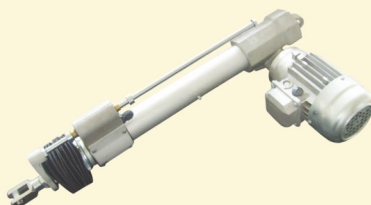
Acme screw

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

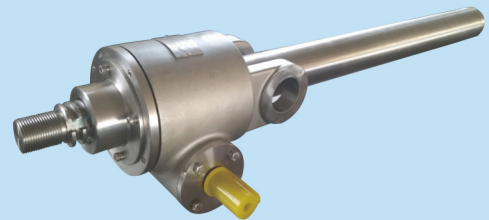


Stainless Screw Jack

Acme screw

KVL Series

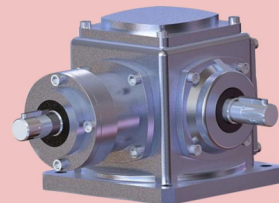
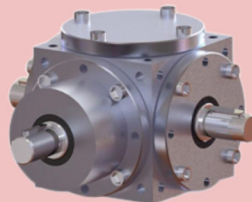
KVK Series



Bevel Gearbox

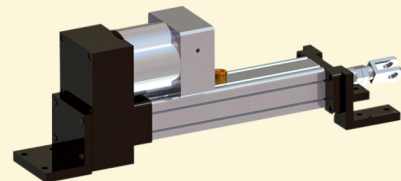
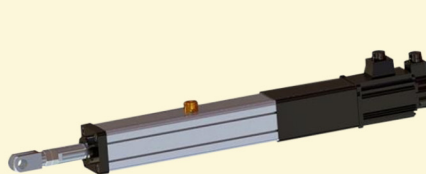
HD Series

T Series



Servo motor cylinder

DMB Series



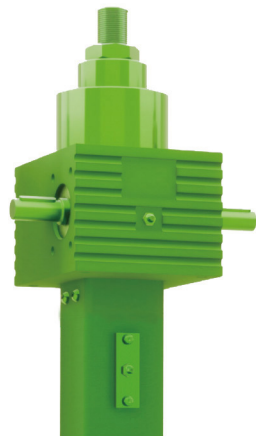
Mounting Position&Application

Model S Traveling Screw

Model S : traveling screw



acme screw



ball screw



anti-backlash screw



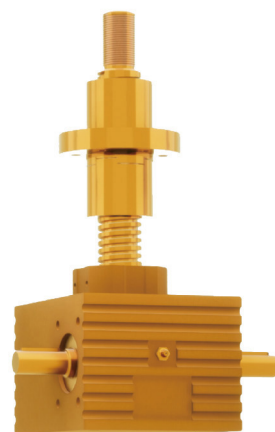
safety nut screw

High performance spheroidal cast iron grooved housing
Patented rectangle protection tube prevent screw from rotating
Synchronous-Mechanical system
Safety nut designed to monitor abrasion of product
Available for various motor and gearmotors
Load capacity range from 500kg to 100tons

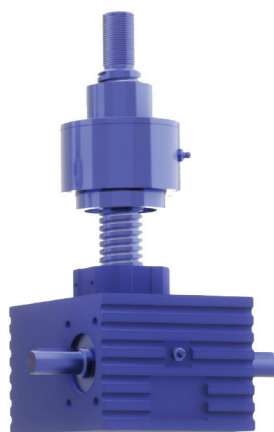
Model R : traveling nut



acme screw



ball screw



Aligning nut screw

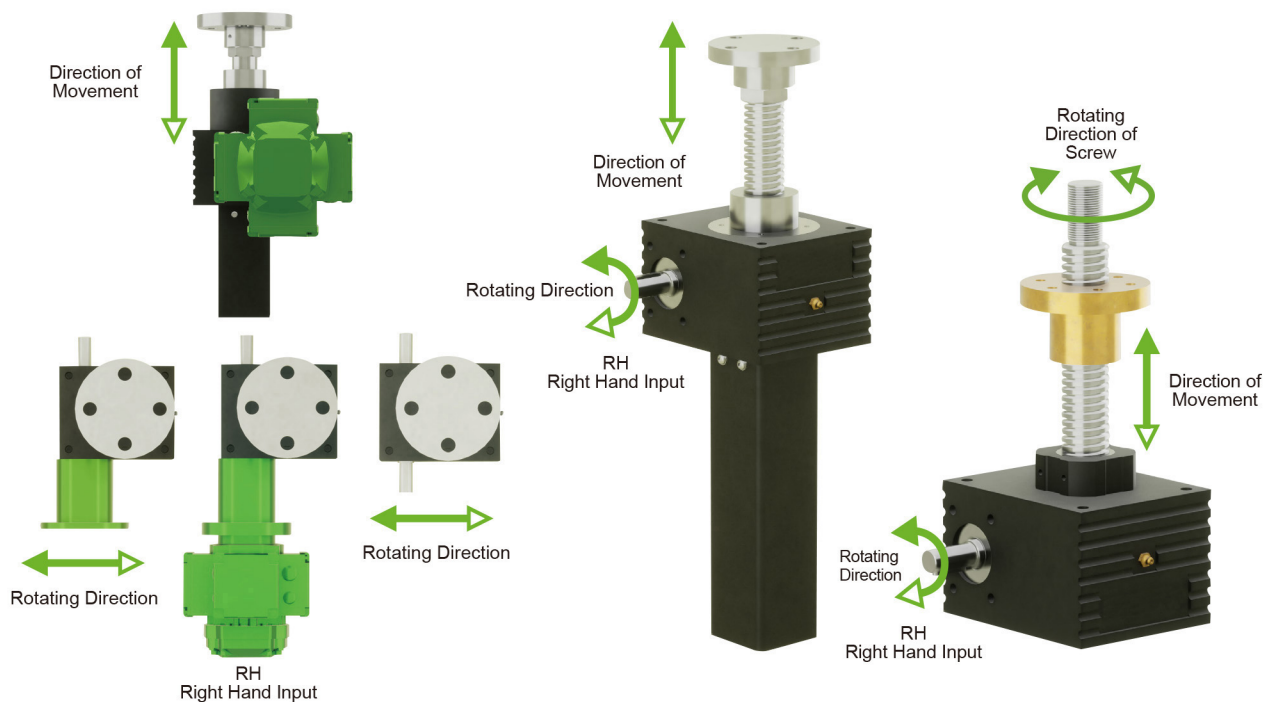


safety nut screw



Mounting Position & Application

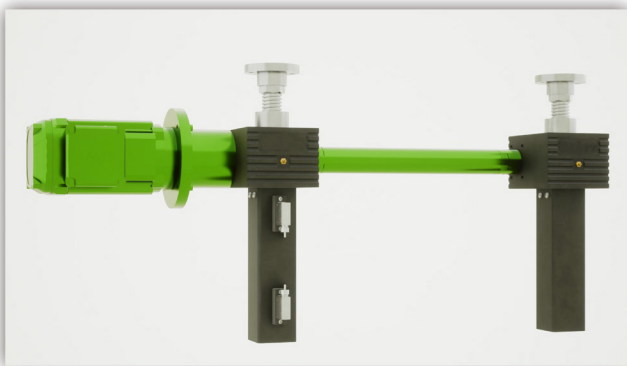
Mounting Position:



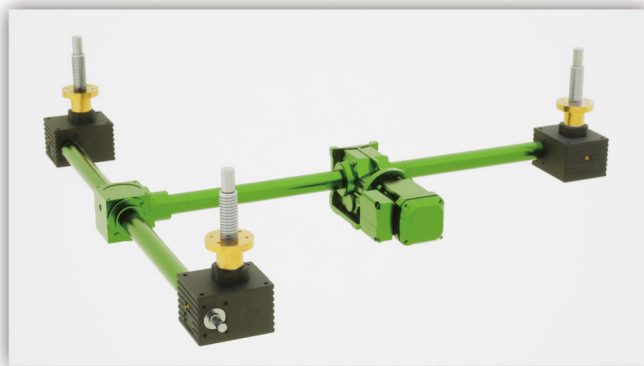
LAY-OUT AND APPLICATION OF SCREW JACK:

Lude Transmission provides complete system design and system accessories including Screw Jack, gear reducer, motor, shaft, coupling etc. System design and calculation need to know total rated load, speed, stroke and dimension requirement.

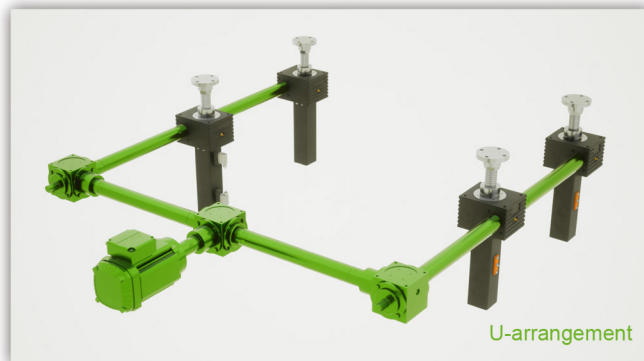
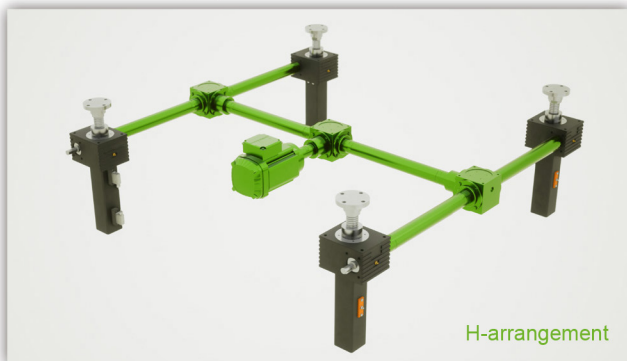
Synchronous Lifting System of Two Screw Jacks



Synchronous Lifting System of Three Screw Jacks



Synchronous Lifting System of Four Screw Jacks



Selection Table Guide

Performance Table

Size		SJA5	SJA10	SJA20	SJA50	SJA80	SJA100
Max lifting load kN		5	10	20	50	80	100
Screw dia x pitch mm		Tr18x 4	Tr20 x 4	Tr30 x 6	Tr40 x 7	Tr50x8	Tr60 x 9
Worm ratio	V1	1:4	1:4	1:6	1:7	1:8	1:8
	L1	1:16	1:16	1:24	1:28	1:32	1:32
Stroke for one input turn mm	V1	1	1	1	1	1	1.125
	L1	0.25	0.25	0.25	0.25	0.25	0.281
Max input power kW	V1	0.30	0.57	1.14	2.2	2.5	3
	L1	0.15	0.27	0.55	1.1	1.5	2.2
Max starting torque at full load Nm	V1	4.2	8	18	48.5	75	100
	L1	1.5	3.1	6.7	20	30	41
Sarting efficiency	V1	0.24	0.25	0.19	0.18	0.17	0.18
	L1	0.16	0.16	0.12	0.11	0.10	0.11
Running efficiency at 1500rpm	V1	0.34	0.35	0.33	0.32	0.31	0.33
	L1	0.25	0.25	0.24	0.23	0.22	0.23
Torque without load Nm	V1	0.11	0.29	0.40	0.84	1.85	2.1
	L1	0.09	0.18	0.29	0.59	1.12	1.4
Housing material		Spheroidal graphite iron					
Weight kg		3.2	5	8.5	21.5	36	58
Weight per 100mm screw & protective tube kg		0.36	0.50	0.75	1.52	2.44	3.02

Size		SJA200	SJA300	SJA450	SJA700	SJA1000
Max lifting load kN		200	300	450	700	1000
Screw dia x pitch mm		Tr80x 12	Tr100 x 16	Tr120 x 16	Tr140 x 20	Tr160x20
Worm ratio	V1	1:8.75	1:10.25	1:10.75	1:13.33	1:13.33
	L1	1:35	1:41	1:43	1:40	1:40
Stroke for one input turn mm	V1	1.371	1.56	1.49	1.5	1.5
	L1	0.343	0.39	0.37	0.5	0.5
Max input power kW	V1	4	7	11.5	18.5	22
	L1	3.5	5.5	5.5	7.5	9.5
Max starting torque at full load Nm	V1	265	460	675	1050	1620
	L1	106	180	275	510	820
Sarting efficiency	V1	0.17	0.18	0.16	0.16	0.15
	L1	0.11	0.12	0.10	0.11	0.10
Running efficiency at 1500rpm	V1	0.33	0.33	0.30	0.31	0.29
	L1	0.22	0.23	0.20	0.21	0.19
Torque without load Nm	V1	2.8	3.8	5.5	8.5	11
	L1	2.1	3.1	4.5	5.5	7.5
Housing material		Spheroidal graphite iron			Cast steel	
Weight kg		75	110	200	400	800
Weight per 100mm screw & protective tube kg		4.5	6.8	9.0	12.5	16.5

Note: Working temperature of SJ screw jack is -10°C - +40°C (-40°C - +70°C are available)

Acme lead screw with double or three head are available to increase the lifting speed. Consult Lude Transmission engineers for actual reduction ratio.

Selection Guide:

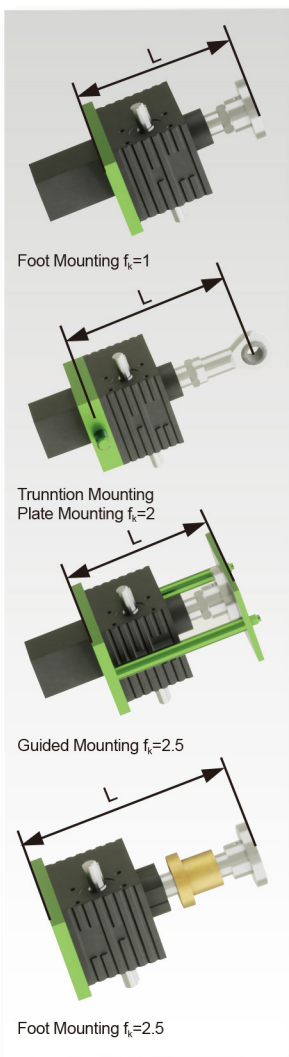
- ◆ Cautions for choosing the model type of the screw jack. The percentage of the duty cycle within 10 minutes: SJA series acme screw jack: 30%. Ball screw and satellite roller screw jack: 50%. The duty cycle can be increased if the actual load is less than the rated loads, please consult with the engineers of Lude Transmission for the specifics.
- ◆ The maximum input running speed : 1800rpm
- ◆ If the actual load is above 25% and less than 100% (inclusive) of the full load, the required input torque = load ratio × torque at full load
- ◆ For the stroke exceeding 300mm, the stability should be checked, please refer to the chart reflecting the relationship between the load and the stroke.
- ◆ 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 = (torque at full load × load ratio × input speed RPM) / 9550
- ◆ The working temperature affects the max input power. Actual max input power = rated max input power × the temperature coefficient. The temperature coefficient varies in terms of the temperature: -10°C -25°C temperature coefficient = 1, 30°C temperature coefficient = 0.85, 40°C temperature coefficient = 0.65
- ◆ 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 jack with big ratio possess the self-locking function, while that with small ratio has uncertain self-locking, the brake needs to be equipped in the safety and vibrating application (situation)
- ◆ The axial error of the acme and ball screw jack with the stroke of 300mm is 0.1 mm, while that of the screw jack equipped with anti-backlash fixings is 0.02mm.
- ◆ To avoid the lateral load, the guide device can be used to offset the lateral load.
- ◆ The catalogue only lists the parameters and dimensions of the acme screw jack, as for the parameters and dimensions of the ball screw jack, please consult with local engineer.
- ◆ For non-standard screw jack, please consult with local engineer.



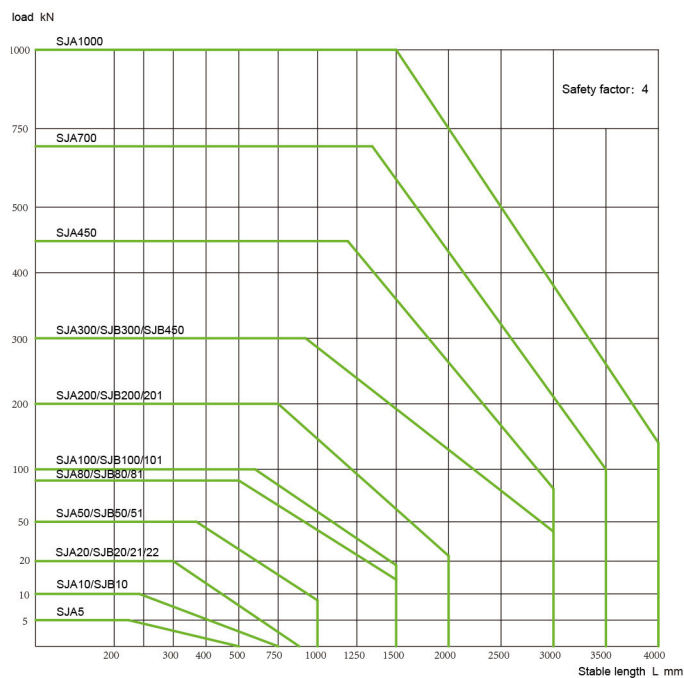
Selection Table Guide

Coding:

SJA	Type	Size	Model	Ratio	Stroke	Front Attachment	Input Version	Input Shaft	Accessories
	SJA Acme screw	3	S Traveling screw	V1	Special	NF Standard head	P1 Single input shaft	RH Right hand	BRE Brake
SJA5		5	R Traveling nut	L1		TS Ball joint	P2 Double input shaft	LH left hand	FCG Mechanical Limit switches
SJA10	SJB Ball screw	10				TF Rod end	P3 Motor flange		FCP Inductive proximity switches (PNP normally closed)
SJA20		20				FL Flange end	P4 Flange and extended shaft		B Bellows
SJA50		50				FO Clevis end			SN Safety nut
SJA80		80				FQ Spherical flange			SS Stainless steel housing
SJA100		100							SA Stainless steel screw
SJA200		200							AB Anti-backlash device
SJA300		300							HBP Hinged bearing plate
SJA450		450							IRE Encoder
SJA700		700							FS Safety clutch
SJA1000		1000							PS Potentiometer
									STR Protection tube rear clevis
									AR Anti-turn device
									FMP Foot plate mounting
									XFM Housing casting with Foot mounting
									PM Aligning nut
									GE Gear motor
									HW Hand wheel



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 for stability 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 $L = l_k \times f_k$

L_k theoretical critical bucking force

f_k correction value

Selection Table Guide



n1=input speed Nm=input torque required kW=input power required

SJA5			Lifting Load															
			5kN				4kN				3kN				1kN			
n1	Lifting speed mm/s		Ratio				Ratio				Ratio				Ratio			
			V1		L1		V1		L1		V1		L1		V1		L1	
RPM	V1	L1	Nm	kW	Nm	kW	Nm	kW	Nm	kW	Nm	kW	Nm	kW	Nm	kW	Nm	kW
1400	23.3	5.8	2.34	0.34	0.80	0.12	1.87	0.27	0.64	0.09	1.40	0.206	0.477	0.070	0.468	0.069	0.159	0.023
900	15.0	3.7	2.49	0.23	0.83	0.08	1.99	0.19	0.66	0.06	1.49	0.141	0.497	0.047	0.497	0.047	0.166	0.016
700	11.7	2.9	2.57	0.19	0.90	0.07	2.05	0.15	0.72	0.05	1.54	0.113	0.543	0.040	0.513	0.038	0.181	0.013
500	8.3	2.1	2.74	0.14	0.95	0.05	2.20	0.11	0.76	0.04	1.65	0.086	0.568	0.030	0.549	0.029	0.189	0.010
300	5.0	1.2	2.84	0.09	1.05	0.03	2.27	0.07	0.84	0.03	1.72	0.054	0.628	0.020	0.568	0.054	0.209	0.007
100	1.7	0.4	3.06	0.03	1.17	0.01	2.45	0.03	0.94	0.01	1.84	0.019	0.702	0.007	0.612	0.006	0.234	0.002
50	0.8	0.2	3.18	0.02	1.24	0.01	2.55	0.01	0.99	0.01	1.91	0.010	0.746	0.004	0.637	0.003	0.249	0.001

SJA10			Lifting Load															
			10kN				8kN				5kN				2kN			
n1	Lifting speed mm/s		Ratio				Ratio				Ratio				Ratio			
			V1		L1		V1		L1		V1		L1		V1		L1	
RPM	V1	L1	Nm	kW	Nm	kW	Nm	kW	Nm	kW	Nm	kW	Nm	kW	Nm	kW	Nm	kW
1400	23.3	5.8	4.55	0.67	1.59	0.23	3.64	0.53	1.27	0.19	2.27	0.333	0.796	0.117	0.910	0.133	0.318	0.047
900	15.0	3.7	4.82	0.45	1.66	0.16	3.86	0.36	1.33	0.12	2.41	0.227	0.829	0.078	0.965	0.091	0.332	0.031
700	11.7	2.9	4.97	0.36	1.73	0.13	3.98	0.29	1.38	0.10	2.49	0.182	0.865	0.063	0.995	0.073	0.346	0.025
500	8.3	2.1	5.13	0.27	1.89	0.10	4.11	0.22	1.52	0.08	2.57	0.134	0.947	0.050	1.027	0.054	0.379	0.020
300	5.0	1.2	5.49	0.17	1.99	0.06	4.39	0.14	1.59	0.05	2.74	0.086	0.995	0.031	1.098	0.034	0.398	0.012
100	1.7	0.4	5.90	0.06	2.21	0.02	4.72	0.05	1.77	0.02	2.95	0.031	1.105	0.012	1.179	0.012	0.442	0.005
50	0.8	0.2	6.37	0.03	2.49	0.01	5.09	0.03	1.99	0.01	3.18	0.017	1.243	0.007	1.273	0.007	0.497	0.003

SJA20			Lifting Load															
			20kN				15kN				10kN				5kN			
n1	Lifting speed mm/s		Ratio				Ratio				Ratio				Ratio			
			V1		L1		V1		L1		V1		L1		V1		L1	
RPM	V1	L1	Nm	kW	Nm	kW	Nm	kW	Nm	kW	Nm	kW	Nm	kW	Nm	kW	Nm	kW
1400	23.3	5.8	9.65	1.41	3.32	0.49	7.23	1.06	2.49	0.36	4.82	0.707	1.658	0.243	2.412	0.354	0.829	0.122
900	15.0	3.7	10.27	0.97	3.62	0.34	7.70	0.73	2.71	0.26	5.13	0.484	1.809	0.170	2.567	0.242	0.904	0.085
700	11.7	2.9	10.61	0.78	3.98	0.29	7.96	0.58	2.98	0.22	5.31	0.389	1.990	0.146	2.653	0.194	0.995	0.073
500	8.3	2.1	11.37	0.60	4.19	0.22	8.53	0.45	3.14	0.16	5.68	0.298	2.094	0.110	2.842	0.149	1.047	0.055
300	5.0	1.2	11.79	0.37	4.42	0.14	8.84	0.28	3.32	0.10	5.90	0.185	2.211	0.069	2.948	0.093	1.105	0.035
100	1.7	0.4	12.73	0.13	4.97	0.05	9.55	0.10	3.73	0.04	6.37	0.067	2.487	0.026	3.183	0.033	1.243	0.013
50	0.8	0.2	12.73	0.07	6.63	0.03	9.55	0.05	4.97	0.03	6.37	0.033	3.316	0.017	3.183	0.017	1.658	0.009

SJA50			Lifting Load															
			50kN				35kN				25kN				10kN			
n1	Lifting speed mm/s		Ratio				Ratio				Ratio				Ratio			
			V1		L1		V1		L1		V1		L1		V1		L1	
RPM	V1	L1	Nm	kW	Nm	kW	Nm	kW	Nm	kW	Nm	kW	Nm	kW	Nm	kW	Nm	kW
1400	23.3	5.8	24.87	3.65	8.65	1.27	17.41	2.55	6.06	0.89	12.43	1.823	4.325	0.634	4.974	0.729	1.730	0.254
900	15.0	3.7	27.44	2.59	9.04	0.85	19.21	1.81	6.33	0.60	13.72	1.293	4.522	0.426	5.489	0.517	1.809	0.170
700	11.7	2.9	28.42	2.08	9.47	0.69	19.90	1.46	6.63	0.49	14.21	1.042	4.737	0.347	5.685	0.417	1.895	0.139
500	8.3	2.1	29.48	1.54	10.47	0.55	20.63	1.08	7.33	0.38	14.74	0.772	5.236	0.274	5.895	0.309	2.094	0.110
300	5.0	1.2	31.83	1.00	11.70	0.37	22.28	0.70	8.19	0.26	15.92	0.500	5.852	0.184	6.367	0.200	2.341	0.074
100	1.7	0.4	34.60	0.36	13.26	0.14	24.22	0.25	9.28	0.10	17.30	0.181	6.632	0.069	6.920	0.072	2.653	0.028
50	0.8	0.2	36.17	0.19	18.09	0.09	25.32	0.13	12.66	0.07	18.09	0.095	9.044	0.047	7.235	0.038	3.617	0.019

Note: The green area in the table indicates that the selected model has exceeded the maximum allowable input power of that model. If selected, reduce working duty cycle, consult Lude Transmission engineers



Selection Table Guide

Selection Table Guide

SJA

n1=input speed Nm=input torque required kW=input power required



SJA5

SJA10

SJA20

SJA50

SJA80

SJA100

SJA200

SJA300

SJA450

SJA700

SJA1000

SJA80			Lifting Load															
			80kN				60kN				40kN				20kN			
n1	Lifting speed mm/s		Ratio				Ratio				Ratio				Ratio			
			V1		L1		V1		L1		V1		L1		V1		L1	
RPM	V1	L1	Nm	kW	Nm	kW	Nm	kW	Nm	kW	Nm	kW	Nm	kW	Nm	kW	Nm	kW
1400	23.3	5.8	41.08	6.02	14.47	2.12	30.81	4.52	10.85	1.59	20.54	3.011	7.235	1.061	10.269	1.505	3.617	0.530
900	15.0	3.7	43.91	4.14	15.16	1.43	32.93	3.10	11.37	1.07	21.95	2.069	7.579	0.714	10.977	1.034	3.790	0.357
700	11.7	2.9	45.48	3.33	15.92	1.17	34.11	2.50	11.94	0.87	22.74	1.667	7.958	0.583	11.369	0.833	3.979	0.292
500	8.3	2.1	48.97	2.56	16.75	0.88	36.73	1.92	12.57	0.66	24.49	1.282	8.377	0.439	12.244	0.641	4.189	0.219
300	5.0	1.2	53.06	1.67	17.69	0.56	39.79	1.25	13.26	0.42	26.53	0.833	8.843	0.278	13.264	0.417	4.421	0.139
100	1.7	0.4	57.88	0.61	19.90	0.21	43.41	0.45	14.92	0.16	28.94	0.303	9.948	0.104	14.470	0.152	4.974	0.052
50	0.8	0.2	60.63	0.32	21.22	0.11	45.48	0.24	15.92	0.08	30.32	0.159	10.611	0.056	15.159	0.079	5.306	0.028

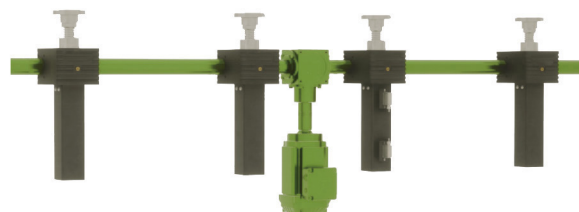
SJA100			Lifting Load															
			100kN				80kN				50kN				20kN			
n1	Lifting speed mm/s	Ratio				Ratio				Ratio				Ratio				
		V1		L1		V1		L1		V1		L1		V1		L1		
RPM	V1	L1	Nm	kW	Nm	kW	Nm	kW	Nm	kW	Nm	kW	Nm	kW	Nm	kW	Nm	kW
1400	26.2	6.6	54.26	7.95	19.46	2.85	43.41	6.36	15.57	2.28	27.13	3.977	9.732	1.427	10.852	1.591	3.893	0.571
900	16.9	4.2	57.76	5.44	21.32	2.01	46.21	4.35	17.05	1.61	28.88	2.722	10.658	1.004	11.552	1.089	4.263	0.402
700	13.1	3.3	59.69	4.37	23.56	1.73	47.75	3.50	18.85	1.38	29.84	2.187	11.780	0.863	11.937	0.875	4.712	0.345
500	9.4	2.3	63.95	3.35	24.87	1.30	51.16	2.68	19.90	1.04	31.98	1.674	12.435	0.651	12.790	0.670	4.974	0.260
300	5.6	1.4	68.87	2.16	27.98	0.88	55.10	1.73	22.38	0.70	34.44	1.082	13.989	0.439	13.774	0.433	5.596	0.176
100	1.9	0.5	74.61	0.78	31.98	0.33	59.69	0.62	25.58	0.27	37.30	0.391	15.988	0.167	14.922	0.156	6.395	0.067
50	0.9	0.2	77.85	0.41	34.44	0.18	62.28	0.33	27.55	0.14	38.93	0.204	17.218	0.090	15.571	0.082	6.887	0.036

SJA200			Lifting Load															
			200kN				150kN				100kN				50kN			
n1	Lifting speed mm/s		Ratio				Ratio				Ratio				Ratio			
			V1		L1		V1		L1		V1		L1		V1		L1	
RPM	V1	L1	Nm	kW	Nm	kW	Nm	kW	Nm	kW	Nm	kW	Nm	kW	Nm	kW	Nm	kW
1400	32.0	8.0	132.25	19.39	49.59	7.27	99.19	14.54	37.20	5.45	66.13	9.694	24.797	3.635	33.063	4.847	12.399	1.818
900	20.6	5.1	145.48	13.71	54.55	5.14	109.11	10.28	40.92	3.86	72.74	6.855	27.277	2.571	36.370	3.427	13.639	1.285
700	16.0	4.0	155.87	11.42	57.43	4.21	116.90	8.57	43.07	3.16	77.93	5.712	28.713	2.105	38.967	2.856	14.356	1.052
500	11.4	2.9	161.64	8.46	60.62	3.17	121.23	6.35	45.46	2.38	80.82	4.231	30.308	1.587	40.411	2.116	15.154	0.793
300	6.9	1.7	174.57	5.48	68.19	2.14	130.93	4.11	51.14	1.61	87.29	2.742	34.096	1.071	43.643	1.371	17.048	0.536
100	2.3	0.6	198.38	2.08	83.93	0.88	148.78	1.56	62.95	0.66	99.19	1.039	41.965	0.439	49.595	0.519	20.982	0.220
50	1.1	0.3	207.83	1.09	90.92	0.48	155.87	0.82	68.19	0.36	103.91	0.544	45.462	0.238	51.957	0.272	22.731	0.119

SJA300			Lifting Load															
			300kN				200kN				150kN				100kN			
n1	Lifting speed mm/s		Ratio				Ratio				Ratio				Ratio			
			V1		L1		V1		L1		V1		L1		V1		L1	
RPM	V1	L1	Nm	kW	Nm	kW	Nm	kW	Nm	kW	Nm	kW	Nm	kW	Nm	kW	Nm	kW
1400	37.3	9.3	231.52	33.94	83.04	12.17	154.34	22.63	55.36	8.12	115.76	16.97	41.52	6.09	77.17	11.31	27.68	4.06
900	24.0	6.0	254.67	24.00	90.95	8.57	169.78	16.00	60.63	5.71	127.33	12.00	45.48	4.29	84.89	8.00	30.32	2.86
700	18.7	4.7	272.86	20.00	100.53	7.37	181.90	13.33	67.02	4.91	136.43	10.00	50.26	3.68	90.95	6.67	33.51	2.46
500	13.3	3.3	282.96	14.81	106.11	5.56	188.64	9.88	70.74	3.70	141.48	7.41	53.06	2.78	94.32	4.94	35.37	1.85
300	8.0	2.0	305.60	9.60	119.37	3.75	203.73	6.40	79.58	2.50	152.80	4.80	59.69	1.88	101.88	3.20	39.79	1.25
100	2.7	0.7	347.27	3.64	146.92	1.54	231.52	2.42	97.95	1.03	173.64	1.82	73.46	0.77	115.76	1.21	48.97	0.51
50	1.3	0.3	363.81	1.90	159.17	0.83	242.54	1.27	106.11	0.56	181.90	0.95	79.58	0.42	121.27	0.64	53.06	0.28

Note: The green area in the table indicates that the selected model has exceeded the maximum allowable input power of that model. If selected, reduce working duty cycle, consult Lude Transmission engineers

Selection Table Guide



n1=input speed Nm=input torque required kW=input power required

SJA450			Lifting Load															
			450kN				350kN				200kN				100kN			
			Ratio		Ratio		Ratio		Ratio		Ratio		Ratio		Ratio		Ratio	
n1	Lifting speed		V1		L1		V1		L1		V1		L1		V1		L1	
RPM	V1	L1	Nm	kW	Nm	kW	Nm	kW	Nm	kW	Nm	kW	Nm	kW	Nm	kW	Nm	kW
1400	34.7	8.68	355	52.1	133	19.5	276	40.5	104	15.2	158	23.2	59.2	8.68	79	11.6	29.6	4.34
900	22.3	5.58	381	35.9	148	14	296	27.9	115	10.9	169	15.9	65.8	6.2	84.6	7.97	32.9	3.1
700	17.4	4.34	410	30.1	157	11.5	319	23.4	122	8.94	182	13.4	69.7	5.11	91.1	6.68	34.8	2.55
500	12.4	3.1	444	23.3	167	8.72	345	18.1	130	6.78	197	10.3	74	3.88	98.7	5.17	37	1.94
300	7.44	1.86	485	15.2	190	5.98	377	11.8	148	4.65	215	6.76	84.6	2.66	108	3.38	42.3	1.33
100	2.48	0.62	561	5.87	222	2.33	436	4.57	173	1.81	249	2.61	98.7	1.03	125	1.31	49.4	0.52
50	1.24	0.31	666	3.49	266	1.4	518	2.71	207	1.09	296	1.55	118	0.62	148	0.78	59.2	0.31

SJA700			Lifting Load															
			700kN				550kN				400kN				200kN			
			Ratio		Ratio		Ratio		Ratio		Ratio		Ratio		Ratio		Ratio	
n1	Lifting speed		V1		L1		V1		L1		V1		L1		V1		L1	
RPM	V1	L1	Nm	kW	Nm	kW	Nm	kW	Nm	kW	Nm	kW	Nm	kW	Nm	kW	Nm	kW
1400	35	11.7	539	79	265	38.9	424	62.1	208	30.6	308	45.2	152	22.2	154	22.6	75.8	11.1
900	22.5	7.5	576	54.3	293	27.6	453	42.7	230	21.7	329	31	168	15.8	165	15.5	83.8	7.89
700	17.5	5.83	619	45.4	309	22.7	486	35.7	243	17.8	354	25.9	177	13	177	13	88.4	6.48
500	12.5	4.17	669	35	328	17.2	525	27.5	257	13.5	382	20	187	9.8	191	10	93.6	4.9
300	7.5	2.5	760	23.9	371	11.7	597	18.8	292	9.17	434	13.6	212	6.67	217	6.82	106	3.33
100	2.5	0.83	880	9.21	428	4.49	691	7.24	337	3.53	503	5.26	245	2.56	251	2.63	122	1.28
50	1.25	0.42	1045	5.47	506	2.65	821	4.3	398	2.08	597	3.13	289	1.52	298	1.56	145	0.76

SJA1000			Lifting Load															
			1000kN				800kN				600kN				400kN			
			Ratio		Ratio		Ratio		Ratio		Ratio		Ratio		Ratio		Ratio	
n1	Lifting speed		V1		L1		V1		L1		V1		L1		V1		L1	
RPM	V1	L1	Nm	kW	Nm	kW	Nm	kW	Nm	kW	Nm	kW	Nm	kW	Nm	kW	Nm	kW
1400	35	11.7	823	121	419	61.4	659	96.6	335	49.1	494	72.4	251	36.8	329	48.3	168	24.6
900	22.5	7.5	884	83.3	442	41.7	708	66.7	354	33.3	531	50	265	25	354	33.3	177	16.7
700	17.5	5.83	955	70	468	34.3	764	56	374	27.4	573	42	281	20.6	382	28	187	13.7
500	12.5	4.17	1038	54.4	497	26	831	43.5	398	20.8	623	32.6	298	15.6	415	21.7	199	10.4
300	7.5	2.5	1137	35.7	568	17.9	910	28.6	455	14.3	682	21.4	341	10.7	455	14.3	227	7.14
100	2.5	0.83	1327	13.89	663	6.94	1061	11.1	531	5.56	796	8.34	398	4.17	531	5.56	265	2.78
50	1.25	0.42	1592	8.33	796	4.17	1274	6.67	637	3.33	955	5	477	2.5	637	3.33	318	1.67



US-STANDARD SCREW JACK



STAINLESS SCREW JACK

Note: The green area in the table indicates that the selected model has exceeded the maximum allowable input power of that model. If selected, reduce working duty cycle, consult Lude Transmission engineers



Overall Dimensions of Screw Jack

SJA5 Screw Jack

SJA

SJA5

SJA10

SJA20

SJA50

SJA80

SJA100

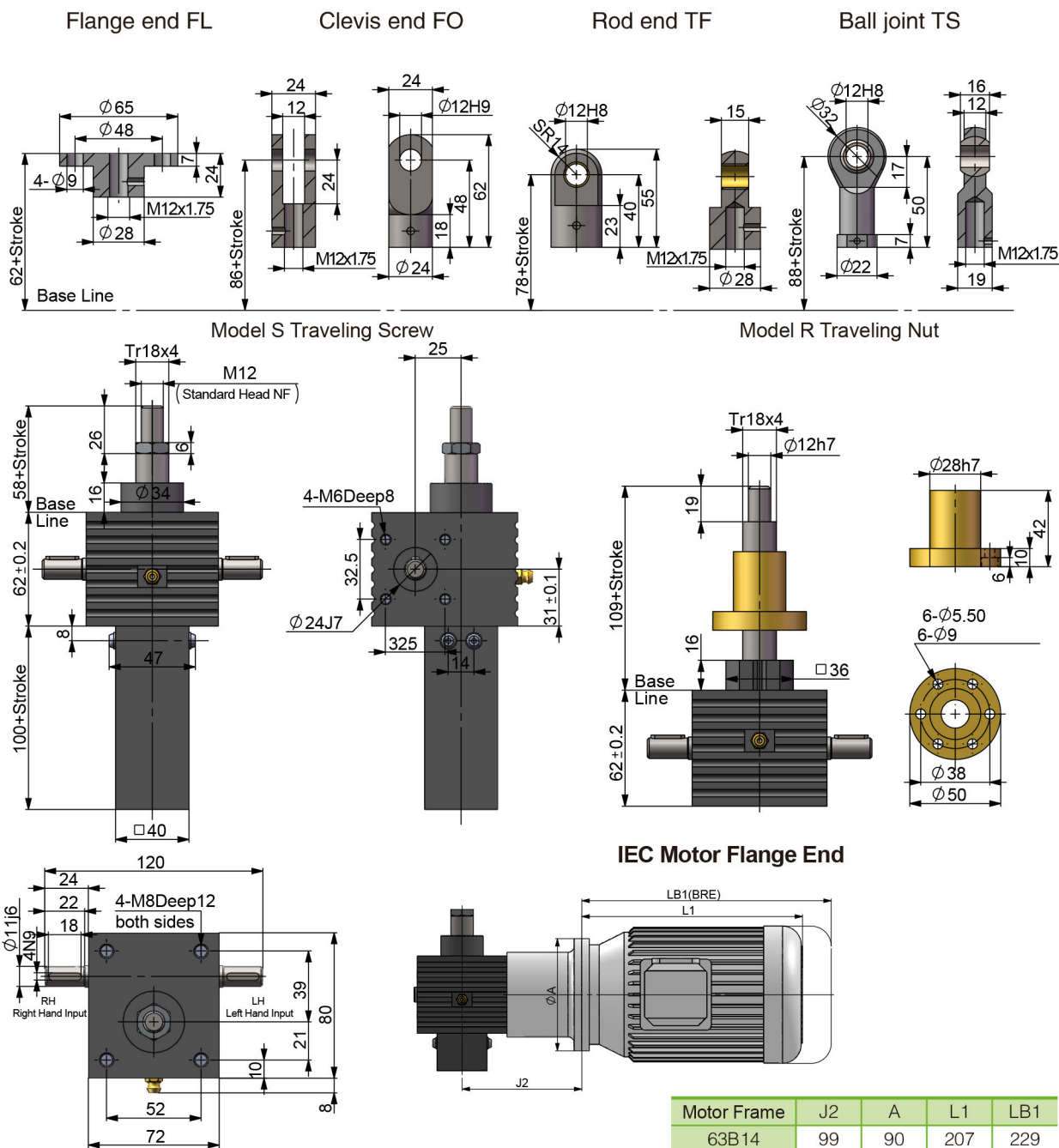
SJA200

SJA300

SJA450

SJA700

SJA1000



Note: If you need safety nut screw jack or anti-backlash screw jack, the overall dimension will be changed, please consult Lude Transmission engineers.



Acme screw



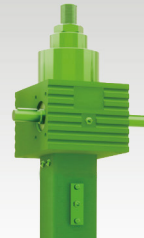
Ball screw



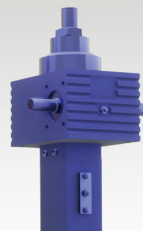
Safety nut



Acme screw

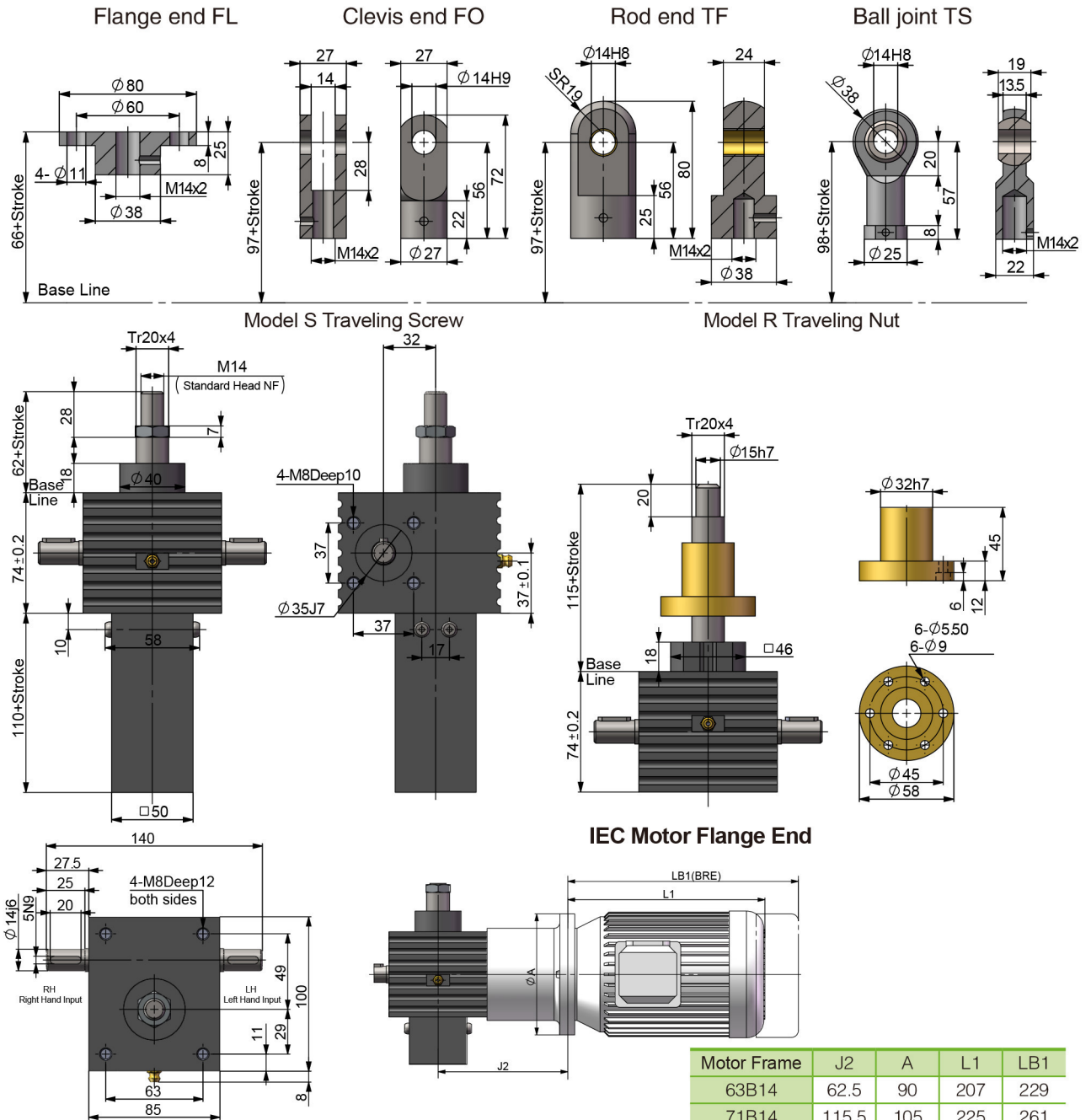


Ball screw

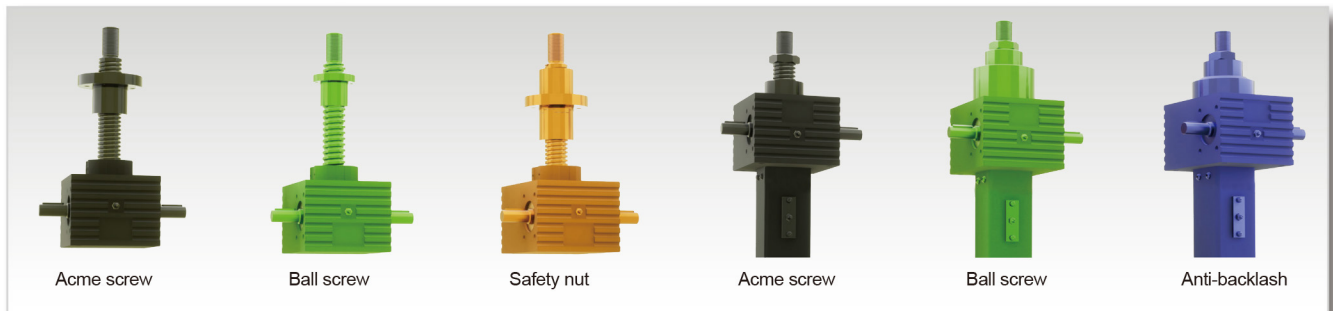


Anti-backlash

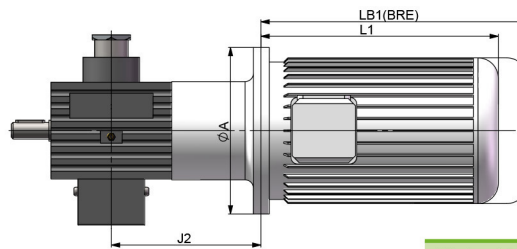
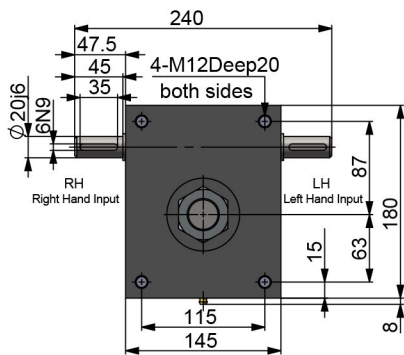
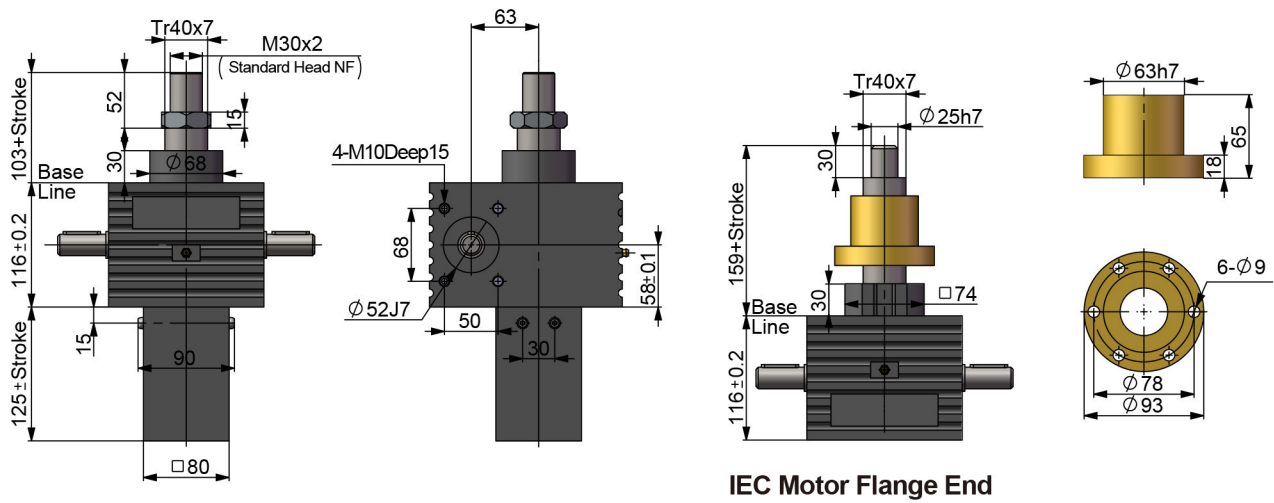
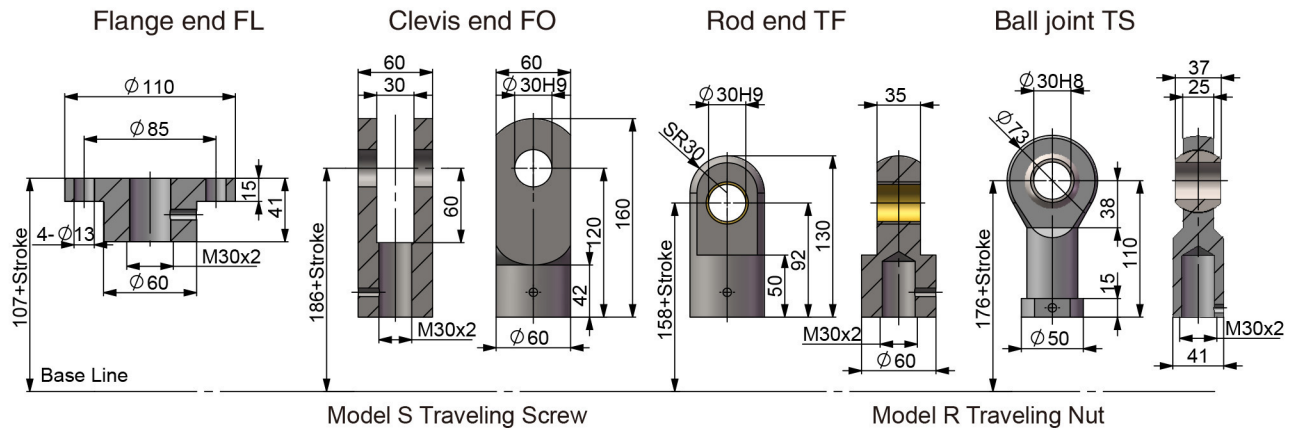
SJA10 Screw Jack



Note: If you need safety nut screw jack or anti-backlash screw jack, the overall dimension will be changed, please consult Lude Transmission engineers.

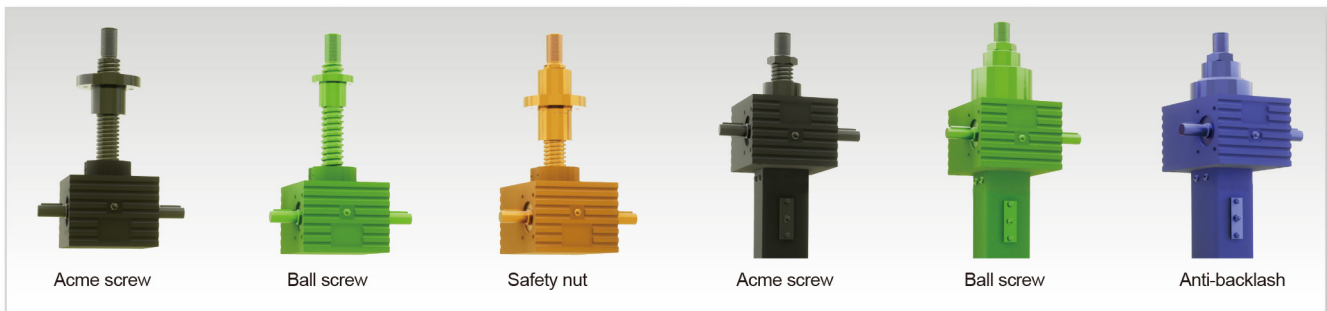


SJA50 Screw Jack



Motor Frame	J2	A	L1	LB1
80B14	98	120	255	315
90B5	104.5	200	335	410
100B14	200	160	330	405

Note: If you need safety nut screw jack or anti-backlash screw jack, the overall dimension will be changed, please consult Lude Transmission engineers.





LINEAR MOTION

Overall Dimensions of Screw Jack

SJA80 Screw Jack

SJA

SJA5

SJA10

SJA20

SJA50

SJA80

SJA100

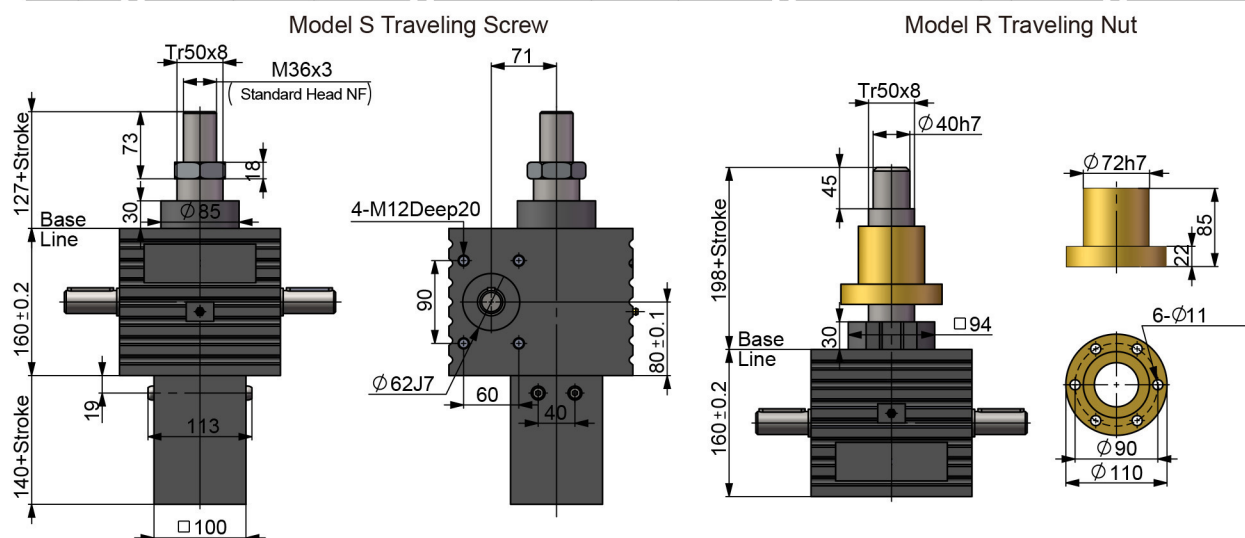
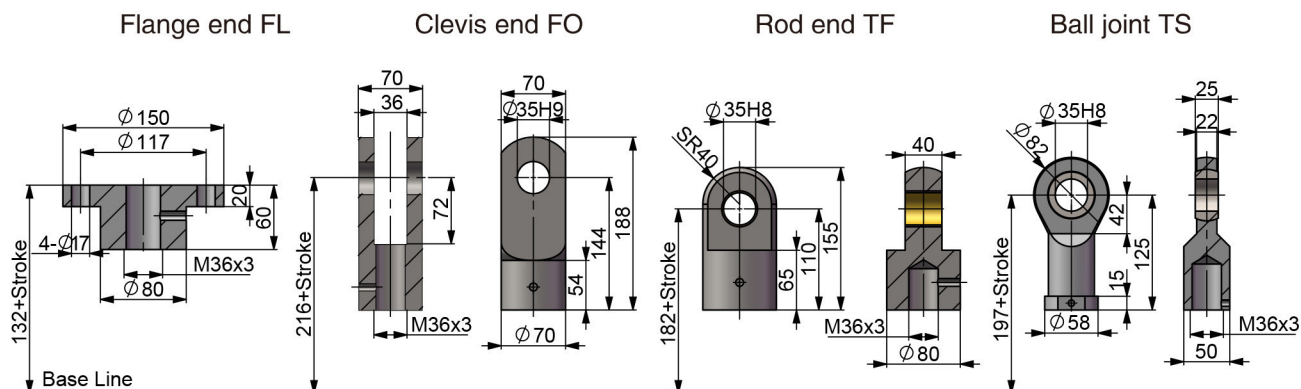
SJA200

SJA300

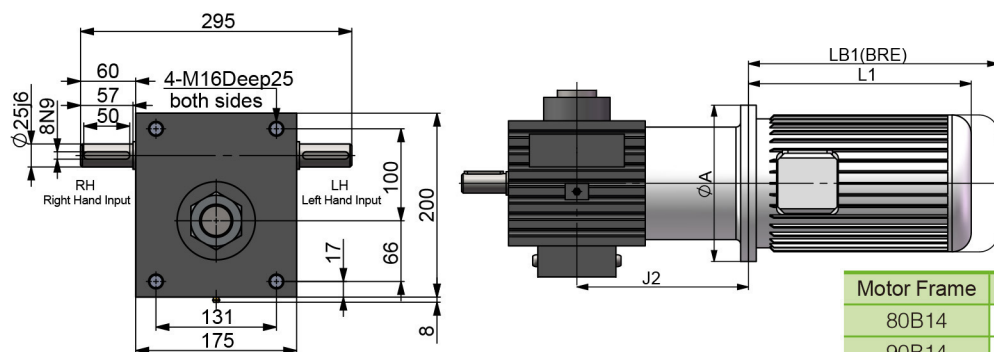
SJA450

SJA700

SJA1000

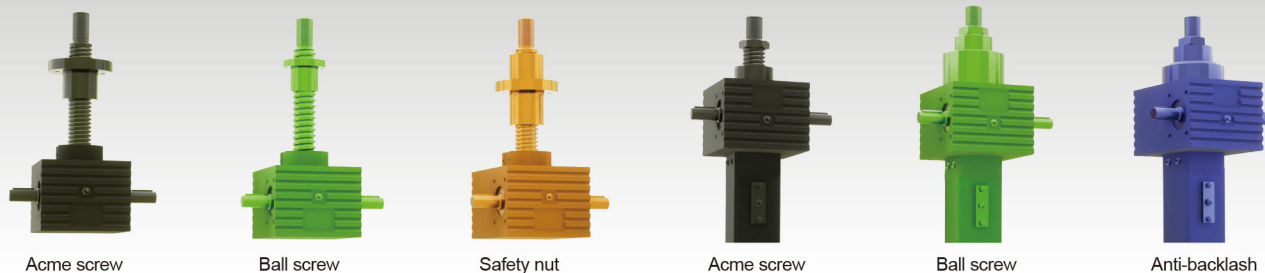


IEC Motor Flange End

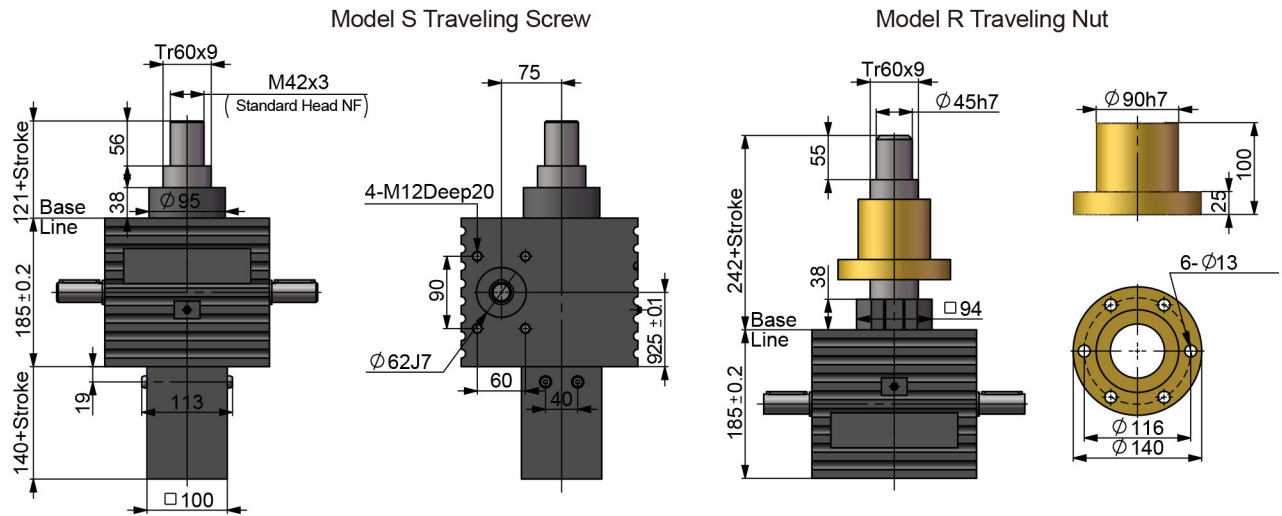
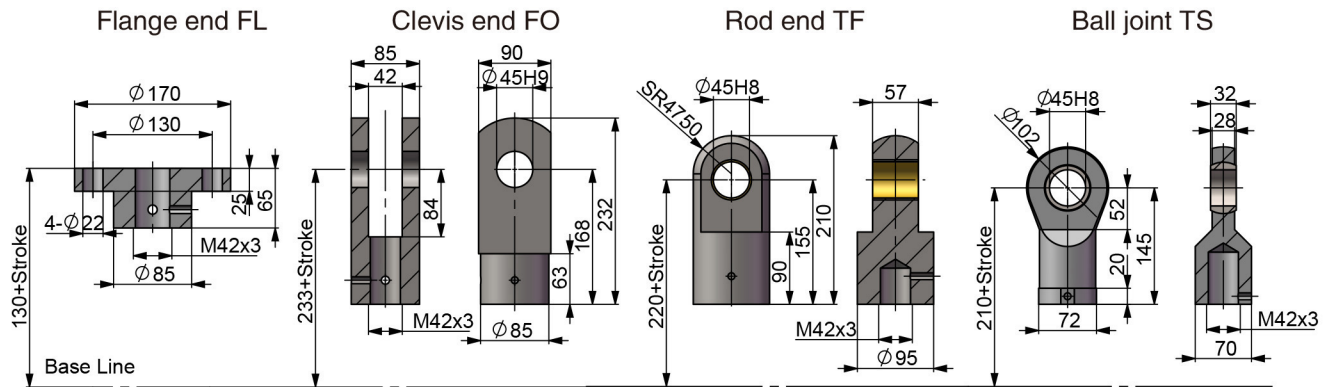


Motor Frame	J2	A	L1	LB1
80B14	115	120	255	315
90B14	115	140	335	410
100B5	231	250	330	405

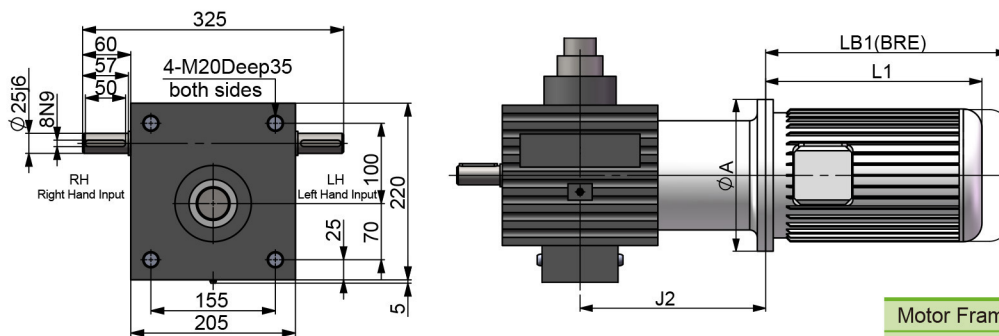
Note: If you need safety nut screw jack or anti-backlash screw jack, the overall dimension will be changed, please consult Lude Transmission engineers.



SJA100 Screw Jack

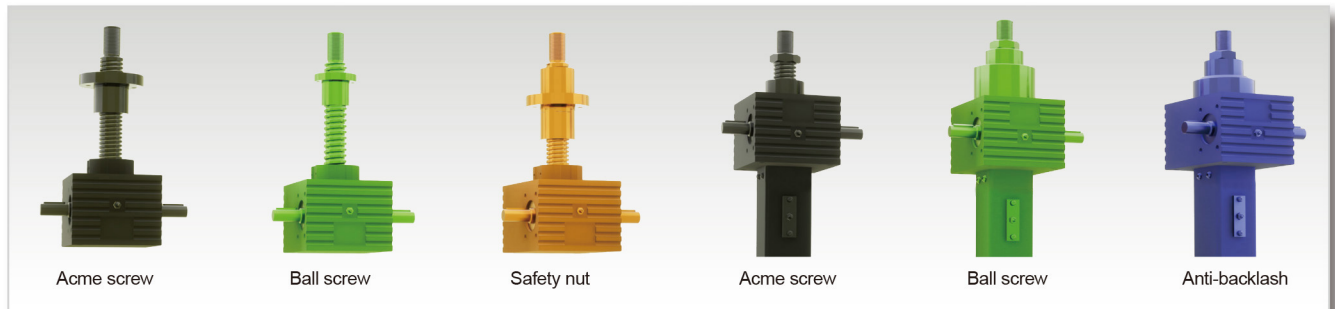


IEC Motor Flange End



Motor Frame	J2	A	L1	LB1
90B14	130	140	335	410
100B5	246	250	330	405

Note: If you need safety nut screw jack or anti-backlash screw jack, the overall dimension will be changed, please consult Lude Transmission engineers.





LINEAR MOTION

Overall Dimensions of Screw Jack

SJA200 Screw Jack

SJA

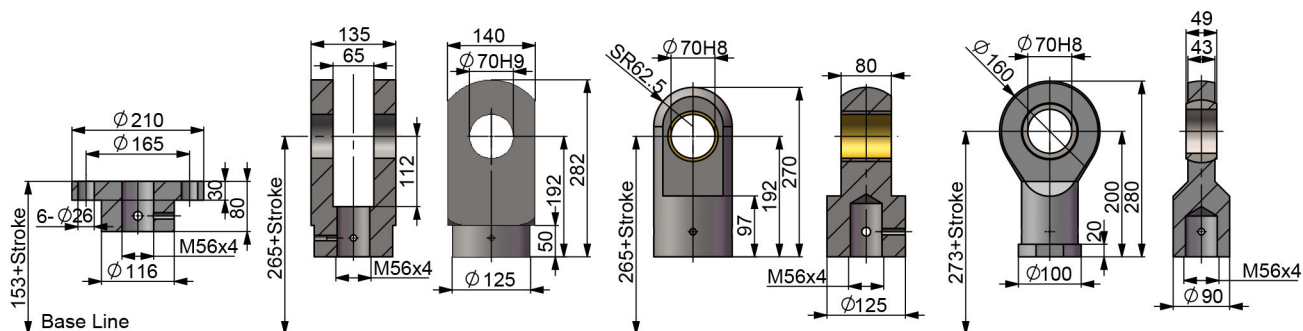
SJA5
SJA10
SJA20
SJA50
SJA80
SJA100
SJA200
SJA300
SJA450
SJA700
SJA1000

Flange end FL

Clevis end FO

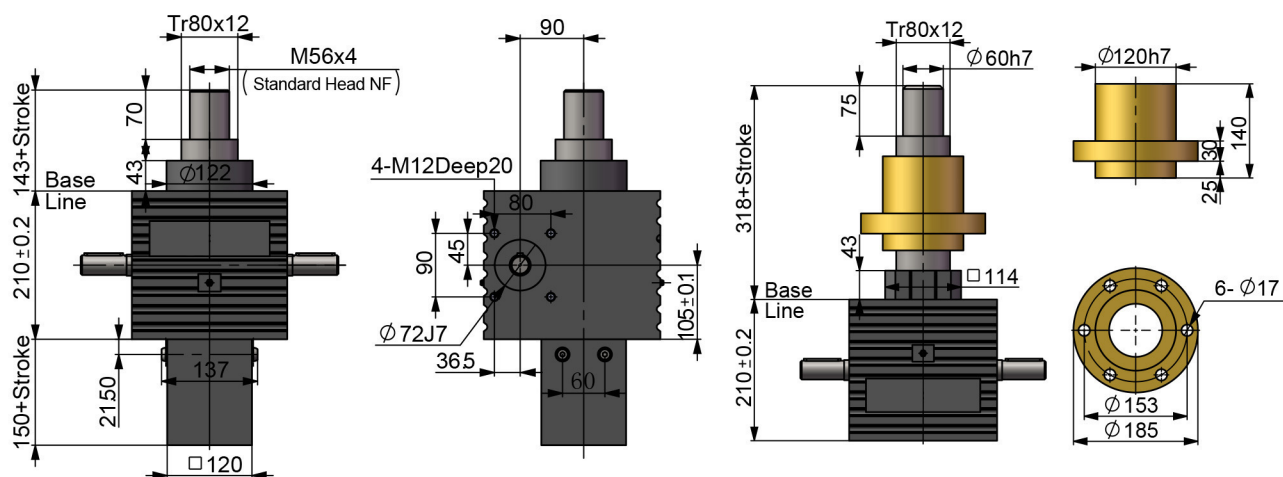
Rod end TF

Ball joint TS

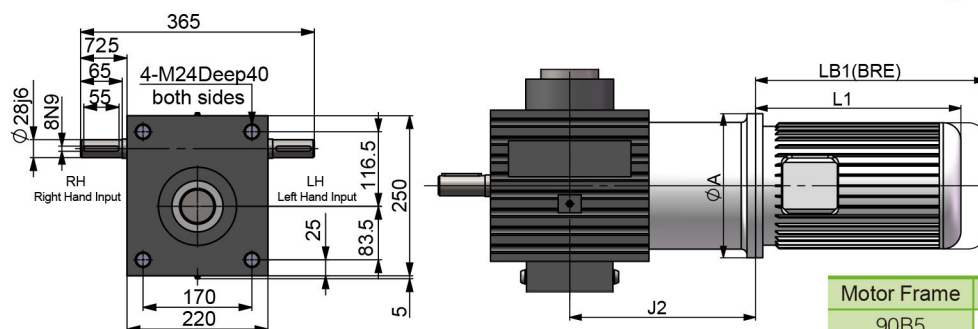


Model S Traveling Screw

Model R Traveling Nut

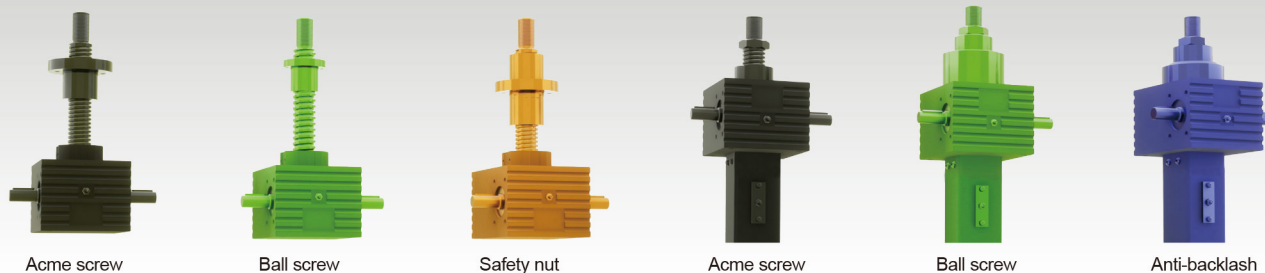


IEC Motor Flange End



Motor Frame	J2	A	L1	LB1
90B5	138	200	335	410
100B5	268	250	330	405
112B5	268	250	395	485

Note: If you need safety nut screw jack or anti-backlash screw jack, the overall dimension will be changed, please consult Lude Transmission engineers.



Acme screw

Ball screw

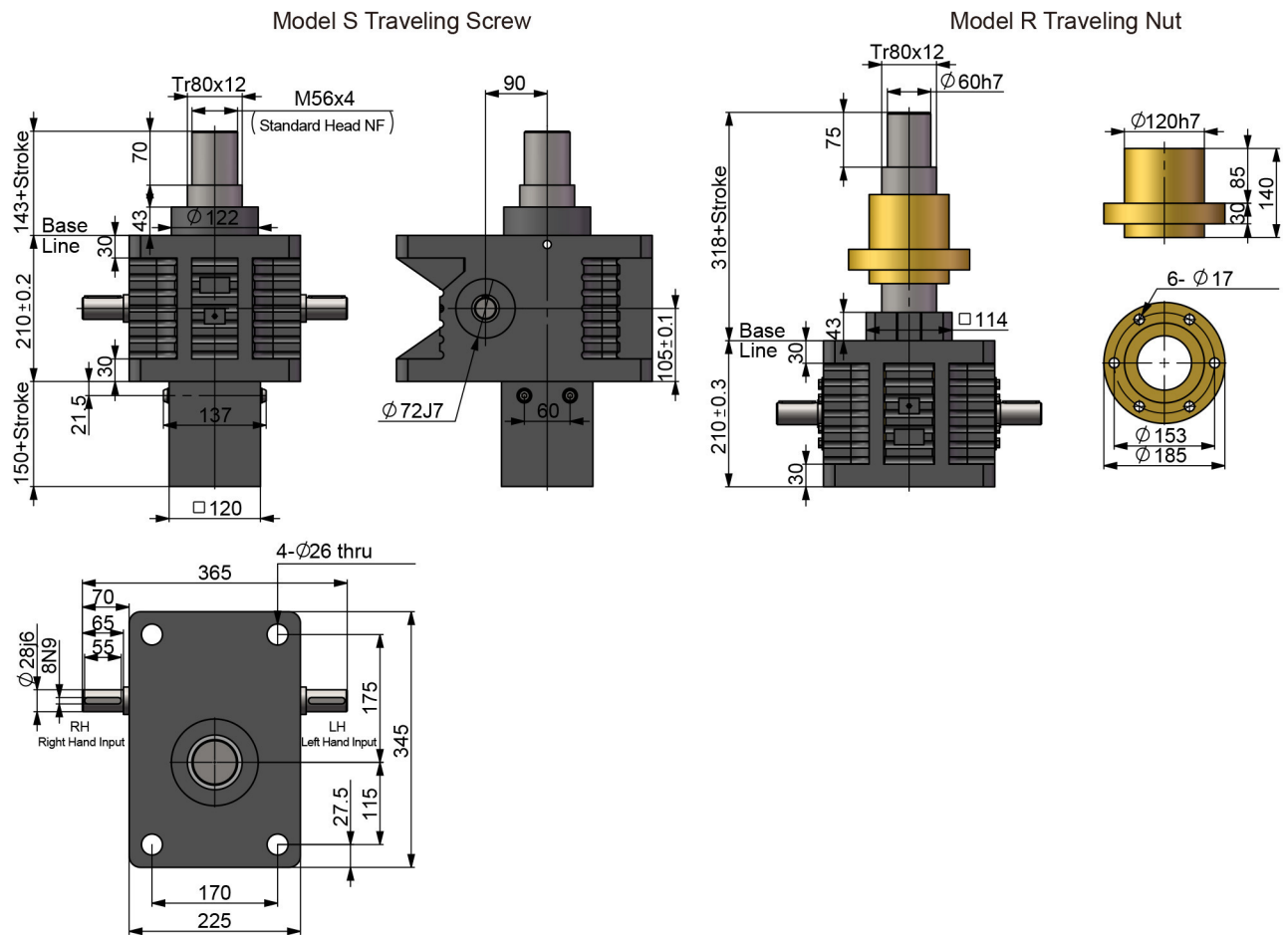
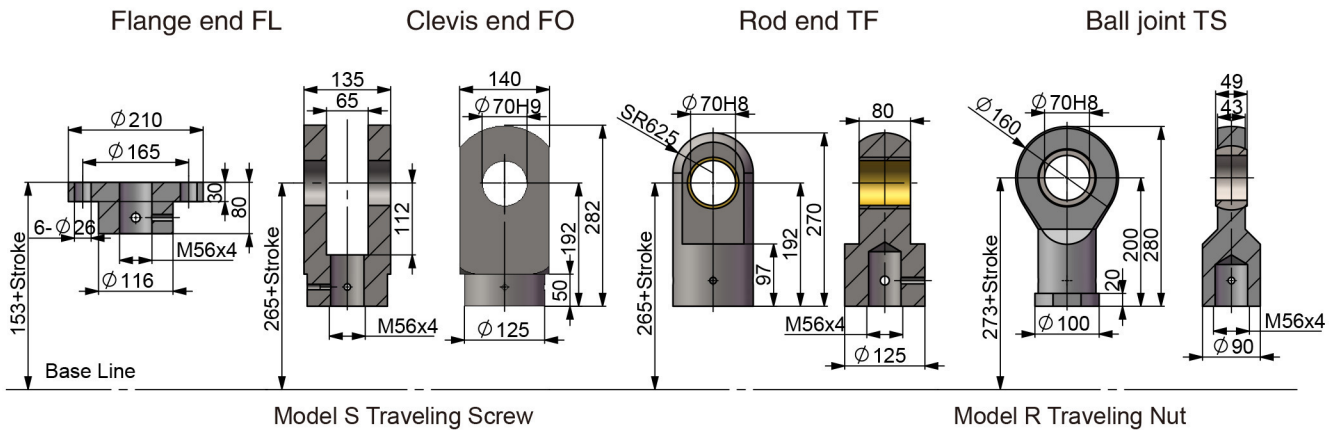
Safety nut

Acme screw

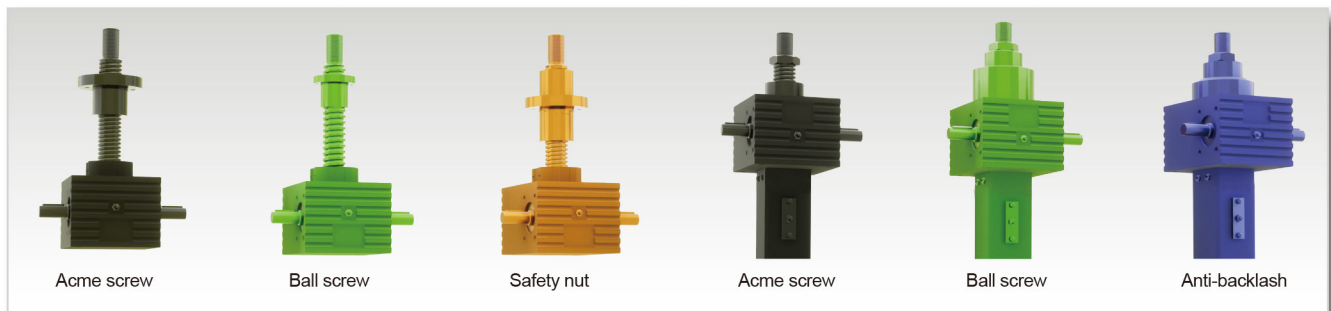
Ball screw

Anti-backlash

Foot Mounting SJA200–XFM SCREW JACK



Note: If you need safety nut screw jack or anti-backlash screw jack, the overall dimension will be changed, please consult Lude Transmission engineers.



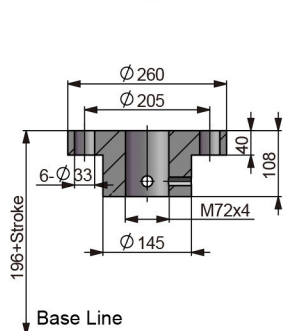


LINEAR MOTION

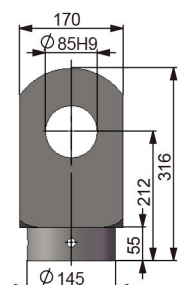
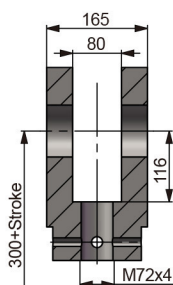
Overall Dimensions of Screw Jack

SJA300 Screw Jack

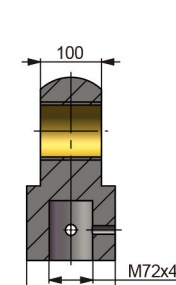
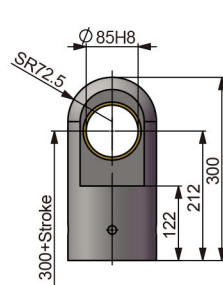
Flange end FL



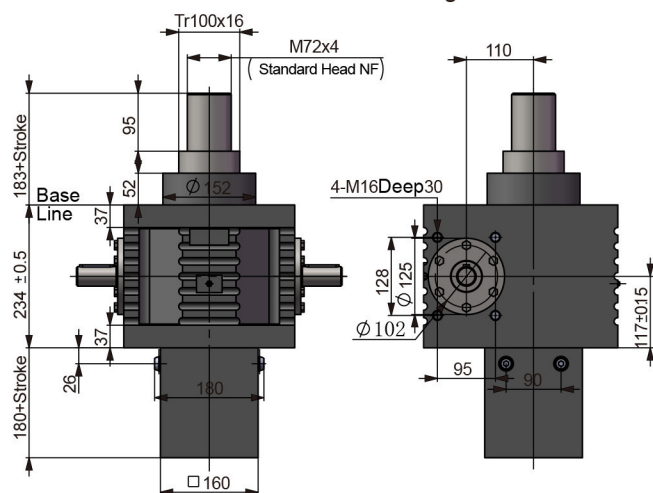
Clevis end FO



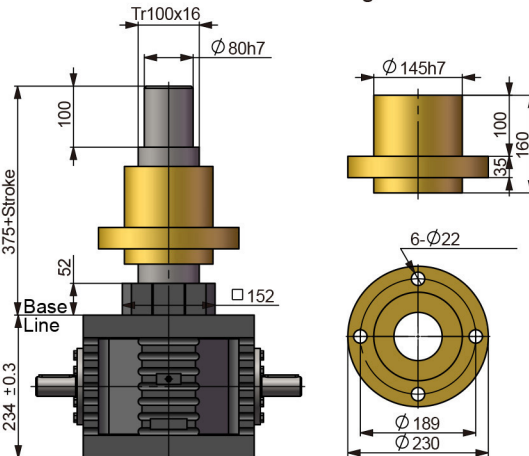
Rod end TF



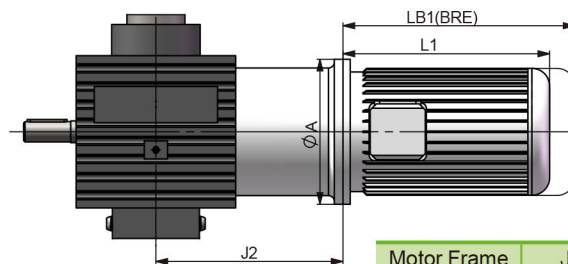
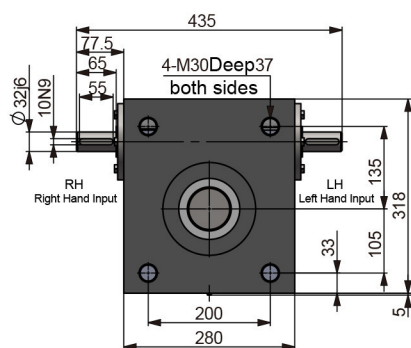
Model S Traveling Screw



Model R Traveling Nut



IEC Motor Flange End



Motor Frame	J2	A	L1	LB1
112B5	276	250	395	485
132B5	296	300	430	525
160B5	326	350	545	640

Note: If you need safety nut screw jack or anti-backlash screw jack, the overall dimension will be changed, please consult Lude Transmission engineers.



Acme screw



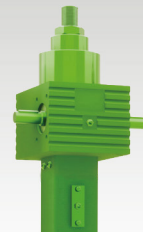
Ball screw



Safety nut



Acme screw

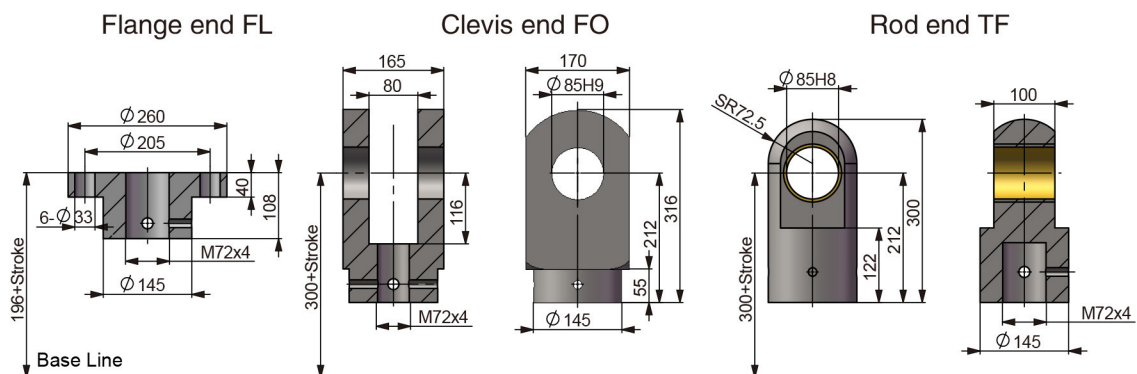


Ball screw

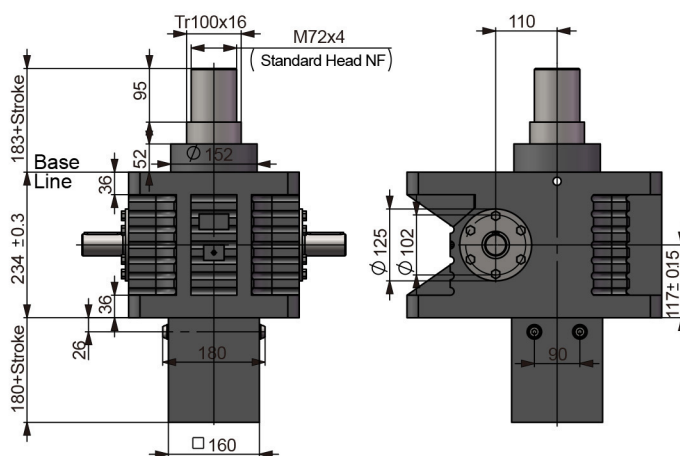


Anti-backlash

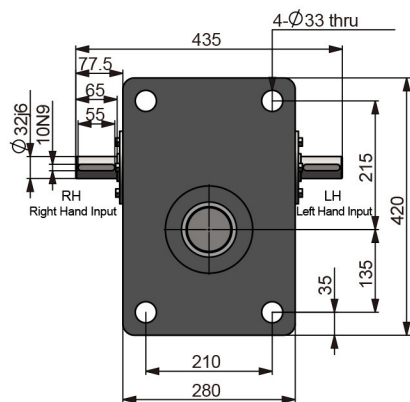
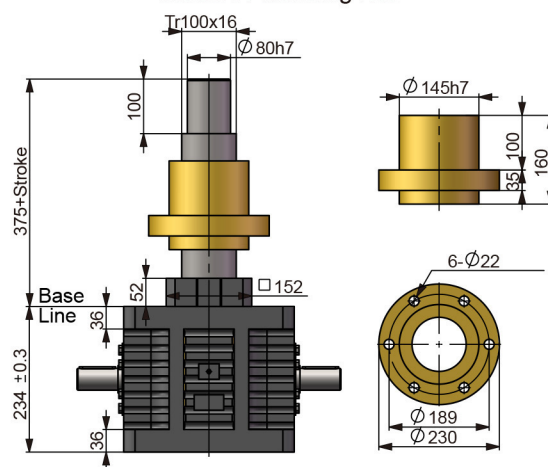
Foot Mounting SJA300-XFM SCREW JACK



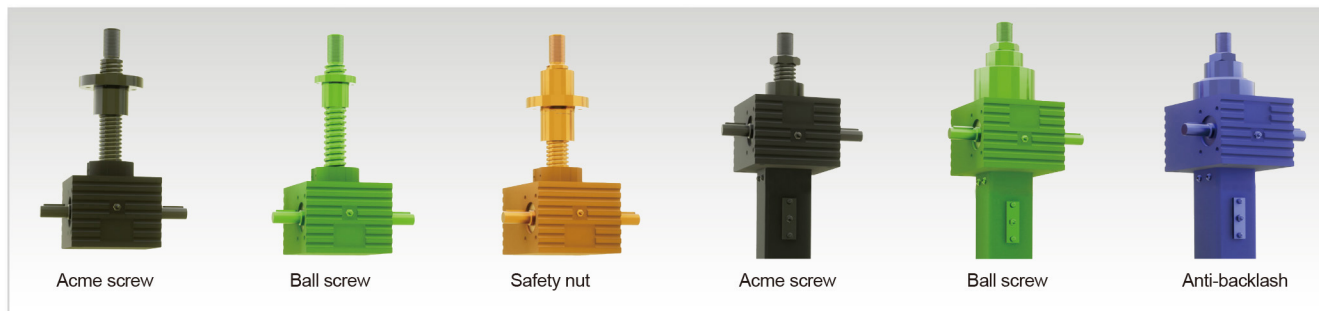
Model S Traveling Screw



Model R Traveling Nut



Note: If you need safety nut screw jack or anti-backlash screw jack, the overall dimension will be changed, please consult Lude Transmission engineers.



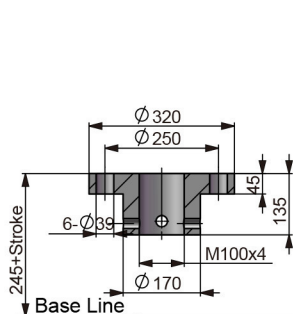


LINEAR MOTION

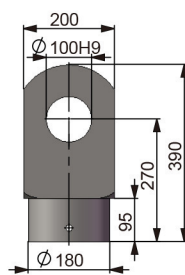
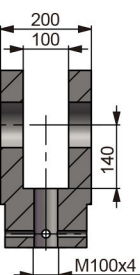
Overall Dimensions of Screw Jack

SJA450 Screw Jack

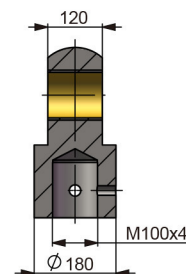
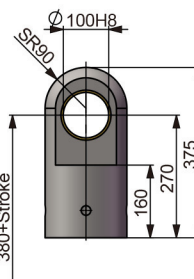
Flange end FL



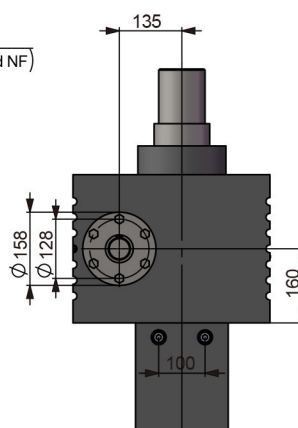
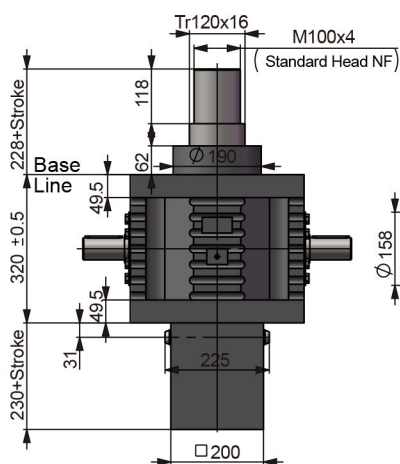
Clevis end FO



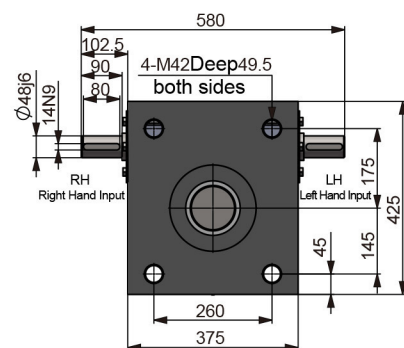
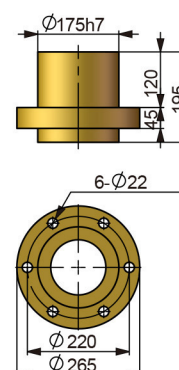
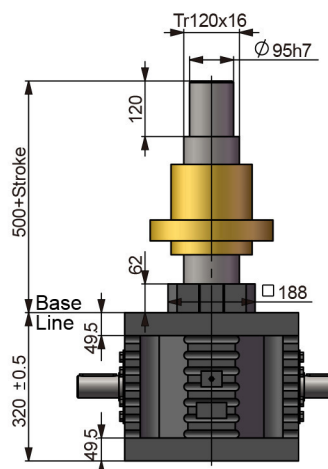
Rod end TF



Model S Traveling Screw



Model R Traveling Nut



Note: If you need safety nut screw jack or anti-backlash screw jack, the overall dimension will be changed, please consult Lude Transmission engineers.



Acme screw



Ball screw



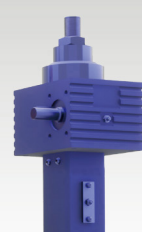
Safety nut



Acme screw

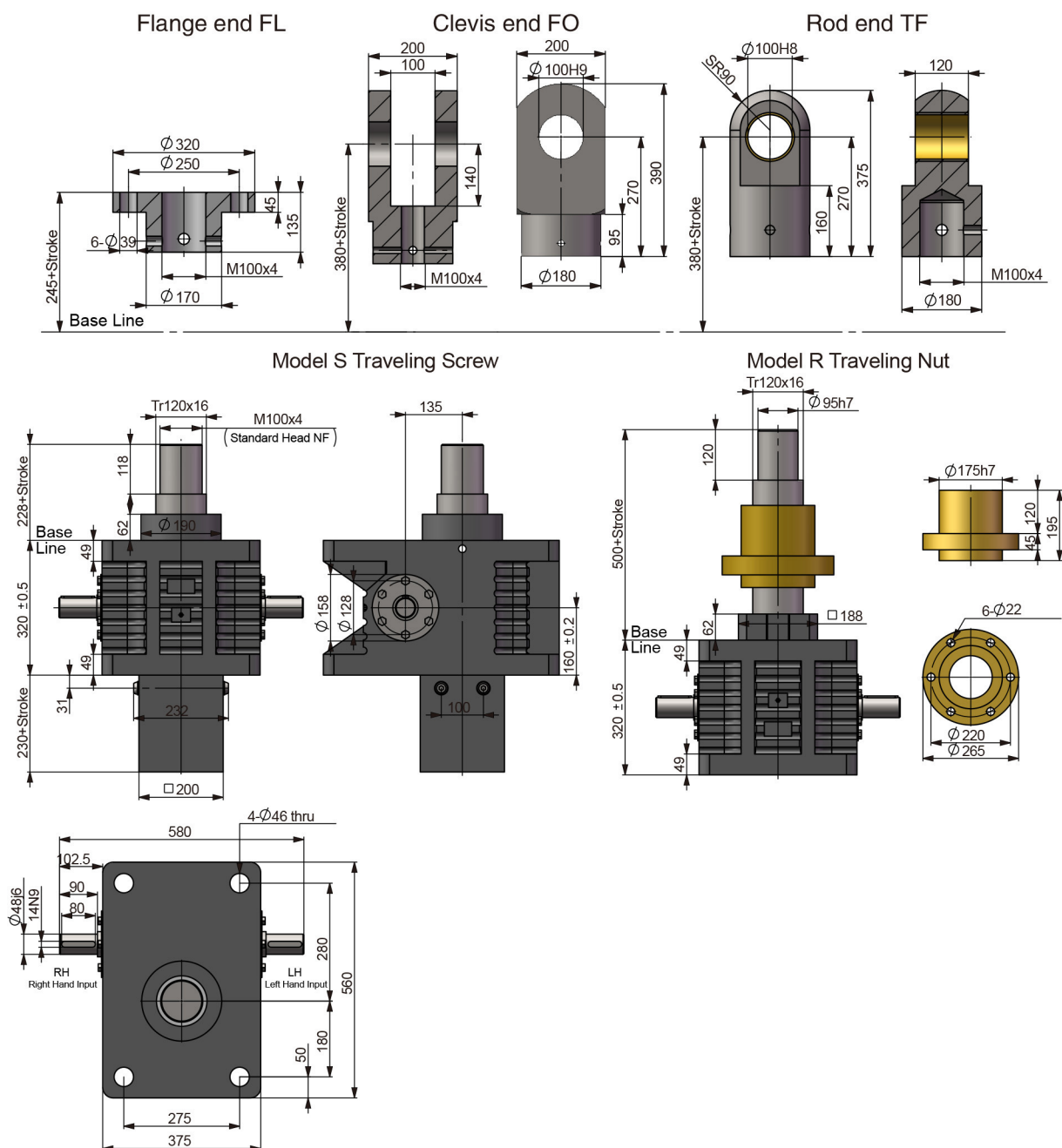


Ball screw

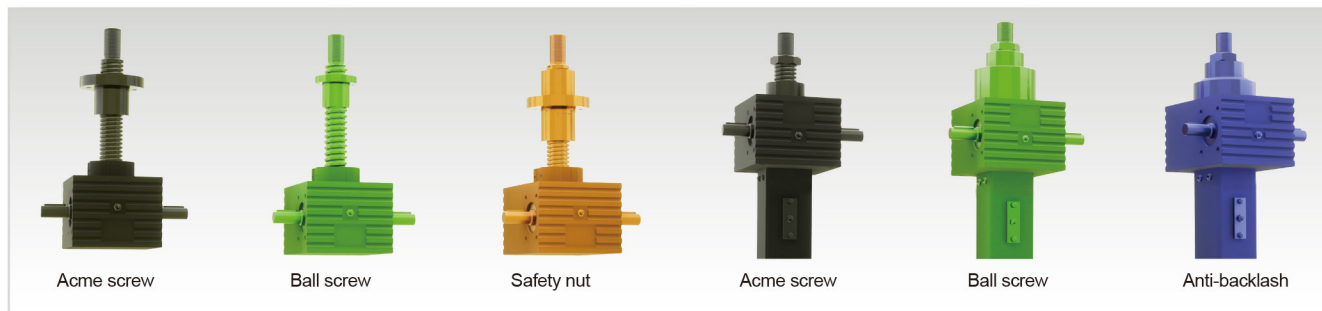


Anti-backlash

Foot Mounting SJA450-XFM SCREW JACK



Note: If you need safety nut screw jack or anti-backlash screw jack, the overall dimension will be changed, please consult Lude Transmission engineers.





LINEAR MOTION

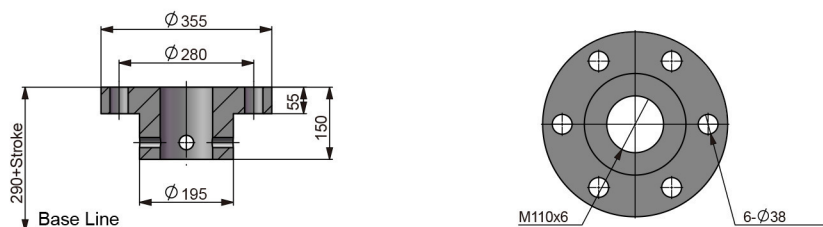
SJA

SJA5
SJA10
SJA20
SJA50
SJA80
SJA100
SJA200
SJA300
SJA450
SJA700
SJA1000

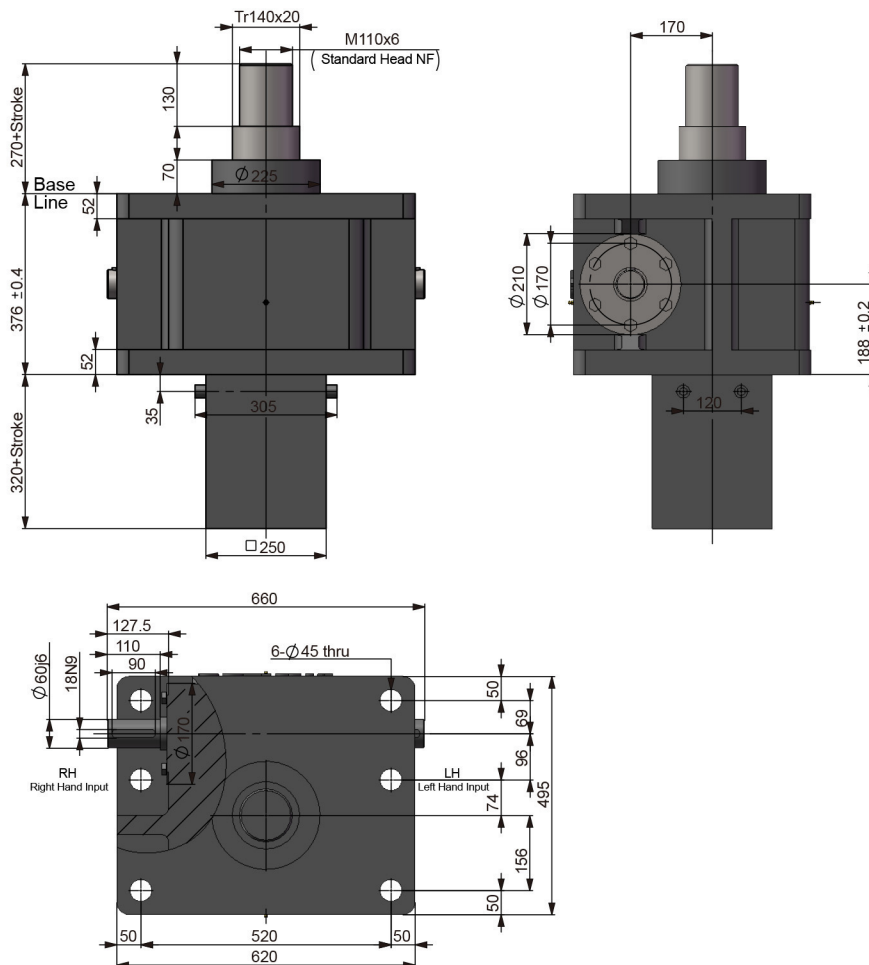
Overall Dimensions of Screw Jack

SJA700 Screw Jack

Flange end FL



Model S Traveling Screw



Note: If you need safety nut screw jack or anti-backlash screw jack, the overall dimension will be changed, please consult Lude Transmission engineers



Acme screw



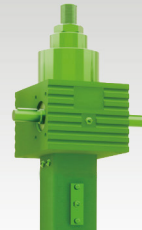
Ball screw



Safety nut



Acme screw



Ball screw



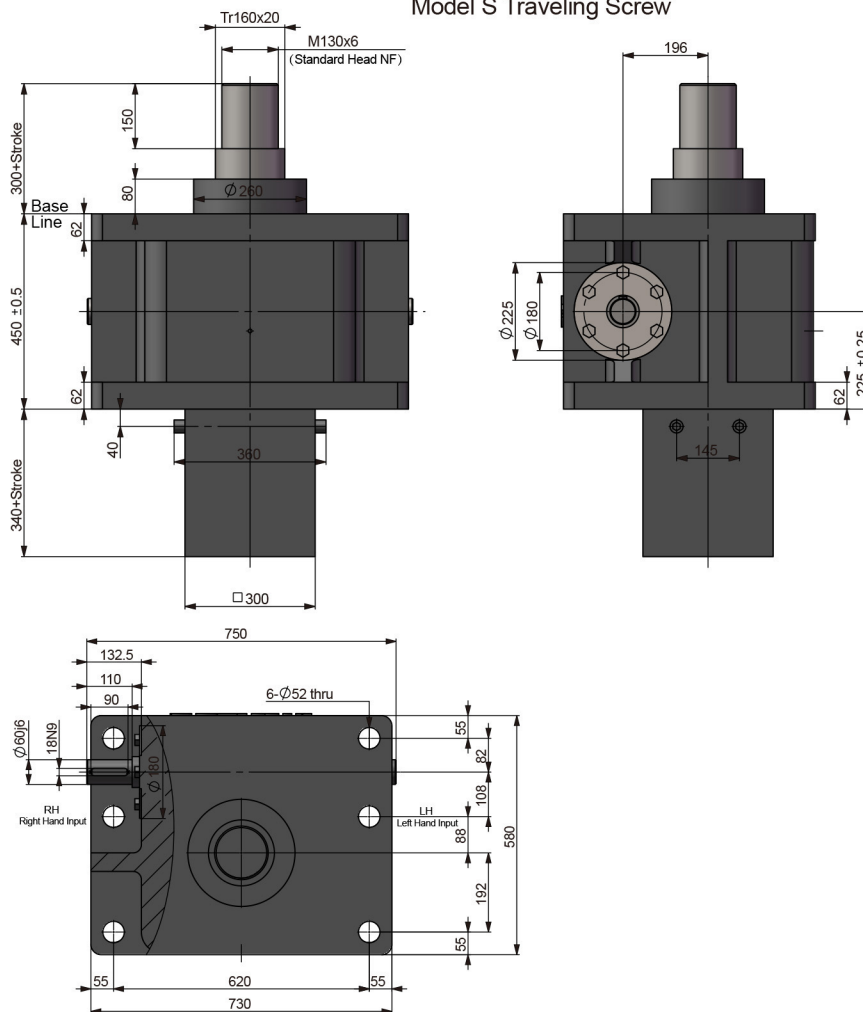
Anti-backlash

SJA1000 Screw Jack

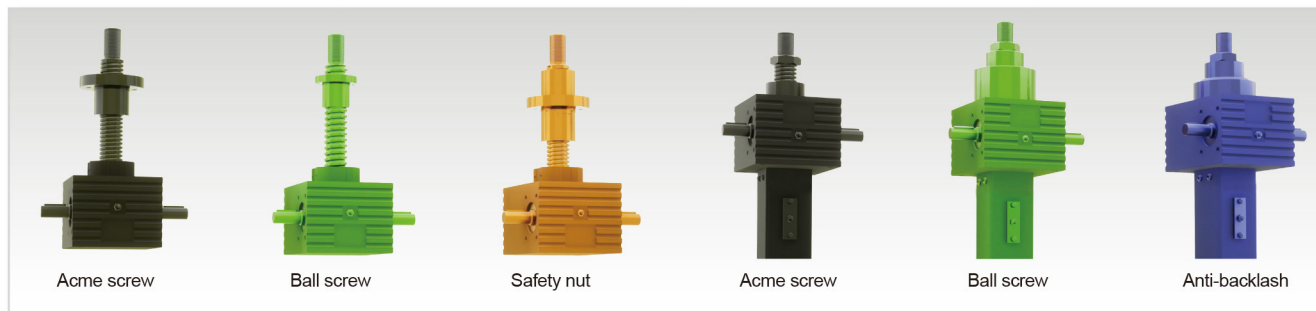
Flange end FL



Model S Traveling Screw



Note: If you need safety nut screw jack or anti-backlash screw jack, the overall dimension will be changed, please consult Lude Transmission engineers.



System Accessories:

Magnetic Reed Switch (FCM)

The magnetic reed switches have two types: normally closed reed switch (standard) and the normally open limit switch.

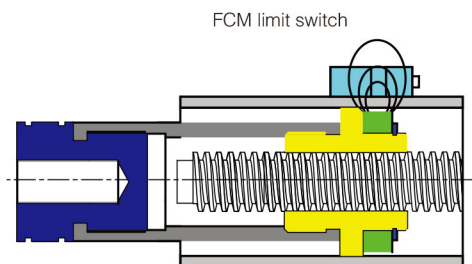
the magnetic ring at the end of the screw shaft moves along with the screw shaft, when the magnetic ring get close to the limit switch, the state of the limit switch will be changed through the magnetic field.

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°C -70°C

Anti-turn device is not available when the actuator is equipped with FCM



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

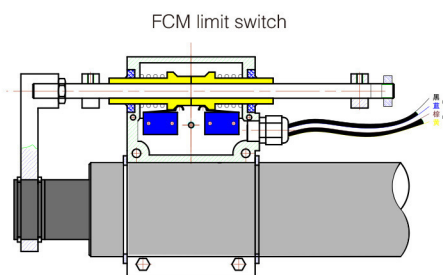
Control voltage: 3-130VDC/AC

Current: 100mA

Repetitive accuracy: 0.1mm

Ambient temperature: -30°C - 70°C

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.



Limit Switch Box FCH

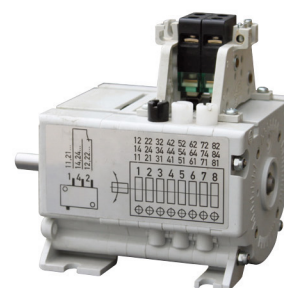
Mounting in shaft of SJ Screw Jack or SC Actuator. FCH is able to control the extreme position.

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°C - 80°C

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

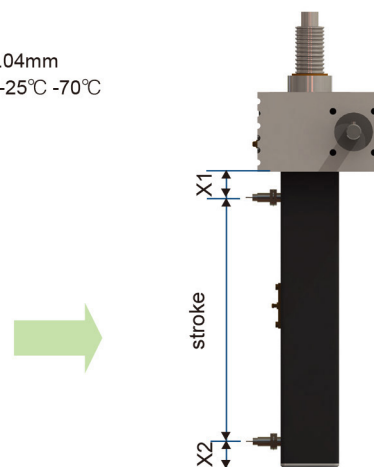
Max output current: 200mA

Repetitive accuracy: 0.04mm

Ambient temperature: -25°C -70°C

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

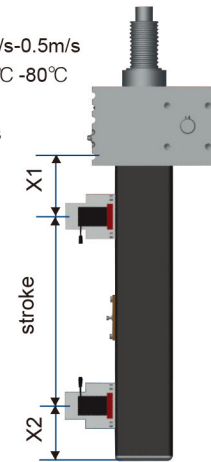


FCG limit switch

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: $80 \times 70 \times 22\text{cm}$
Control voltage: 220AC
Operation current: 10A

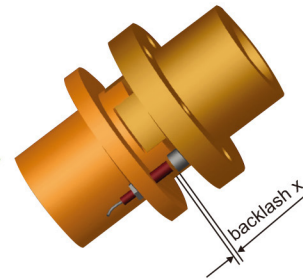
Operation speed: 0.05mm/s-0.5m/s
Ambient temperature: -10°C - 80°C
Protective class: IP67
Lifetime: 10,000,000 times
Cable length 1m

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



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 $\times$ 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.



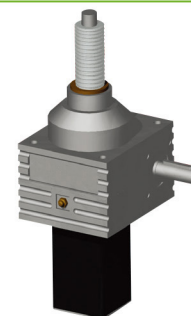
Bellow

Made of PVC polyester material with sewn construction.
Applicable temperature: -15°C - 70°C
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 $> 0.02\text{mm}$ 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:

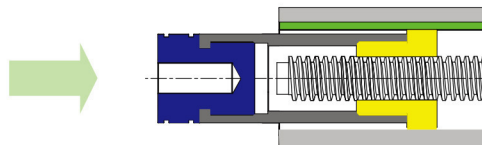
Anti-turn device AR

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°C -110°C

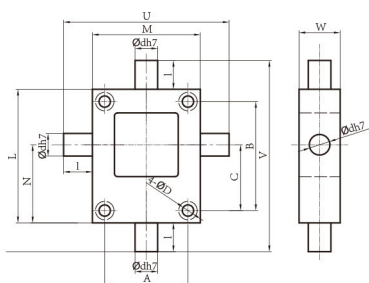
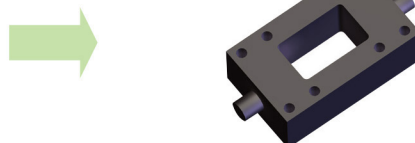
Protective class: IP65



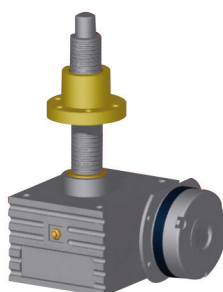
Trunnion mounting panel HBP

Fixed on the housing of the screw jack, enable the screw jack to rotate at a certain degree.

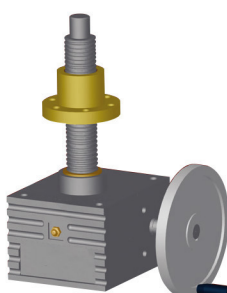
The specific dimensions is related to the model type of the screw jack



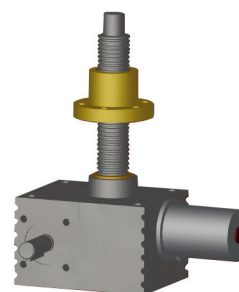
Model	Trunnion											
	A	B	C	D	L	M	N	U	V	W	d	I
SJA5-S...HBP	52	60	39	9	80	72	49	108	116	28	15	18
SJA10-S...HBP	63	78	49	9	100	85	60	127	142	30	17	21
SJA20-S...HBP	81	106	64	11	130	105	76	161	186	40	22	28
SJA50-S...HBP	115	150	87	13	180	145	102	225	260	50	32	40
SJA80-S...HBP	131	166	100	17	200	175	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

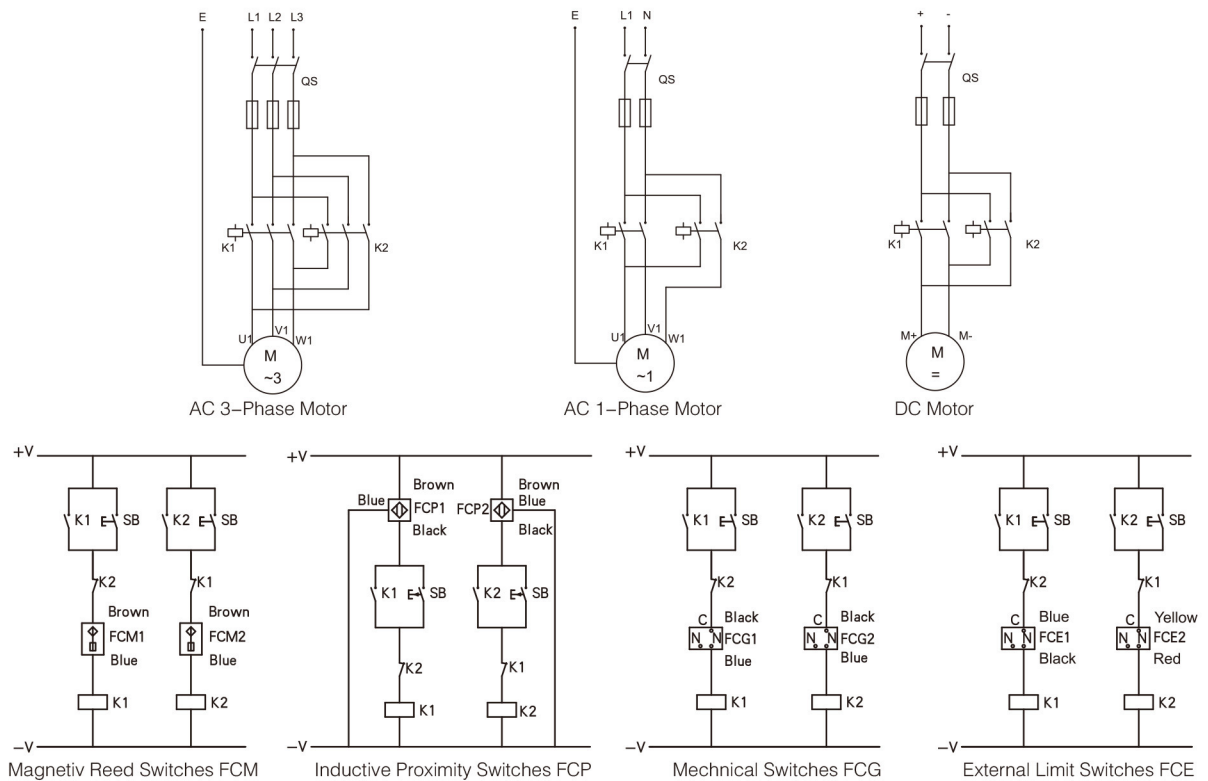


Hand Wheel



Automatic Lubricator

Wiring:



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/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 Explosion-Proof motor.

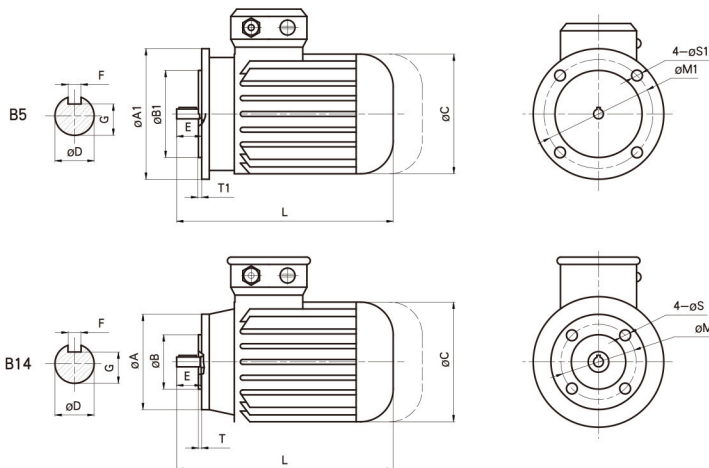
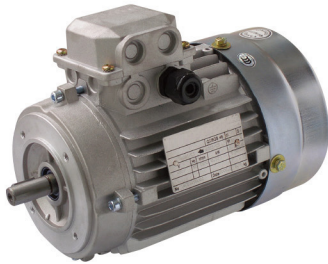
Protection Class: Standard IP54 and Optional : IP55 IP56 IP65 IP66

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	
80	0.55	2800	1.88	2	17
	0.18	690	2.49	0.76	
	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	
90S	1.1	2875	3.65	2.5	29
	0.37	695	5.08	1.3	
	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	
100	2.2	2880	7.3	4.6	37
	0.75	705	10.2	2.3	
	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	
112	3	2880	9.95	7.2	50
	1.5	710	20.2	4.1	
	2.2	965	21.8	7.2	
132	4	1455	26.3	8.4	77
	2.2	725	29	5.7	
	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	
160	7.5	1465	48.9	15	146
	4	730	52.3	9.8	
	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



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