



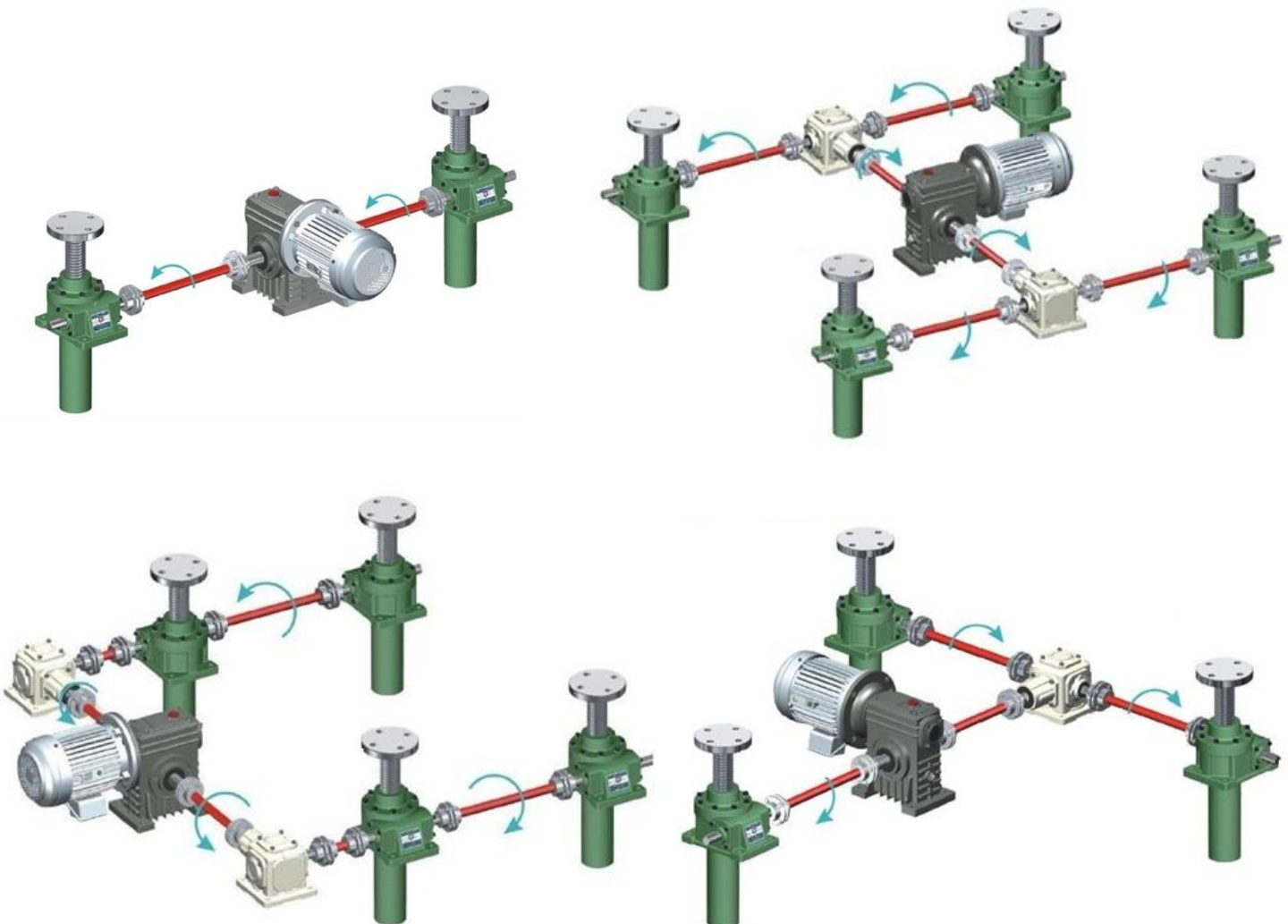
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*Company

COMPANY HISTORY:

In 2003, established Yuanxin Mechanical&Electrical Accessory Shop, Located In Houjie town, Dongguan city, Guangdong Province.

In 2005, named NOSEN Mechanical&Electrical Factory, located in Chang'an town, Dongguan city, Guangdong province.

In 2006, established Shanghai NOSEN Mechanical&Electrical Equipment Co., Ltd.

In 2007, named Dongguan Mechanical&Electrical Equipment Co., Ltd.

In 2007, founded International Sales Department.

In 2008, established NOSEN International Industry(HK) Limited.

In 2008, Dongguan Mechanical&Electrical Equipment Co., Ltd moves to Houjie town, Dongguan city.

In 2009, NOSEN passed SGS international Certification.

In 2010, NOSEN passed ISO9001:2008 quality management systems certifications. Certificate No.104679.

In 2011, NOSEN named NOSEN M&E TECHNOLOGY CO., LTD

PRODUCTS HISTORY:

In 2003 R&D, Production and Sale 12 models Worm Gear Screw Jack RN-Series Trapezoidal Screw Jacks and Sale Taiwan, Japan Power Transmission Products.

In 2005, R&D, Production and Sale 7 models Worm Gear Screw Jack RNK-Series Ball Screw Jacks and 10 models Spiral Bevel Gearboxes.

In 2006, R&D, Production and Sale 8 models RNE Series Stainless Steel Vertical Agitator.

In 2009, R&D, Production and Sale Worm Gear Screw Jack RNS-Series, Patent Right No. 201020105770.X.

In 2010, R&D, Production and Sale Worm Gear Screw Jack RNF-Series. Patent Right No. 20102546844.3.

In 2011, R&D, Production and Sale Spiral Bevel Gearbox RNV-Series.

NOSEN ADVANTAGES:

Professional technicians teams

Competitive Price

Professiona

High Quality

The shorted lead time

Small order acceptable

The best before-sale, while-sale and after-sale service

1 years quality warrenty

SALES REGIONS:

European: BE, BG, DK, EG, FI, DE, GR, NL, PL, ES, SE, UK

America: USA, CA

Asia: IN, ID, MY, PH, QA, RU, SG, TH, VN

*Introduction

Worm Gear Screw Jack RN-Series, Trapezoidal Screw Jacks.

Models

RN-0.5T,1T,2T,3T,5T,10T,15T,20T,30T,40T,50T,100T

Components

worm gear, worm shaft, bearings, oil sealing, case iron gearbox, shaft cover, top cover, self-locking trapezoidal screw etc.

Speed of Travel

* Fast Speed

1 turn 1 mm travel

1500 mm/min

* Mid Speed

1 turn 0.5 mm travel

750 mm/min

* Low Speed L

1 turn 0.25 mm travel

375 mm/min

Lateral Force

Usually, screw jack only loads lift screw axial loading, don't permit to load any lateral force. Any lateral force will reduce screw jack working life, even damage screw jack. We suggest, lateral forces that may occur should be taken by an external guide rail.

Self-locking Function

RN-Series trapezoidal type screw is of self-locking. The self-locking function depends on a variety of parameters: large pitches, different gear ratios, lubrication, friction parameters, Ambient influences(such as high or low temperatures) , vibrations and mounting position.

Anti-rotation Devices

Single screw jack application, isn't guided and without any guide rails, lifting screw does not do linear motions, only rotation, especially light loading. If that is the case, need to extra add anti-rotation devices. NOSEN keyed screw jack solves this problem.

Stop Collar

Prevents the screw from being removed from the jack gearbox. Following clients requirement, we fit stop collar for screw jacks. The stop collar cannot be used as a fixed stop.

Accessory:

spiral bevel gearbox, hand wheel, electric motor, protective tube, rubber bellows, limited switches, coupling, flex link shaft, swivel mounting bases, pillow block bearing, counters etc.

Application Industries:

Precision lift table, Roll forming machines, Press machines, Tunnel Freezer, Surface-Grinding machines, Satellite dish antenna, Solar tracking system, Sluice gate, Theatre stage, Slitting line, Precision leveler, Powered straightener, Paper machines, Food processing machines, Textiles machines etc.



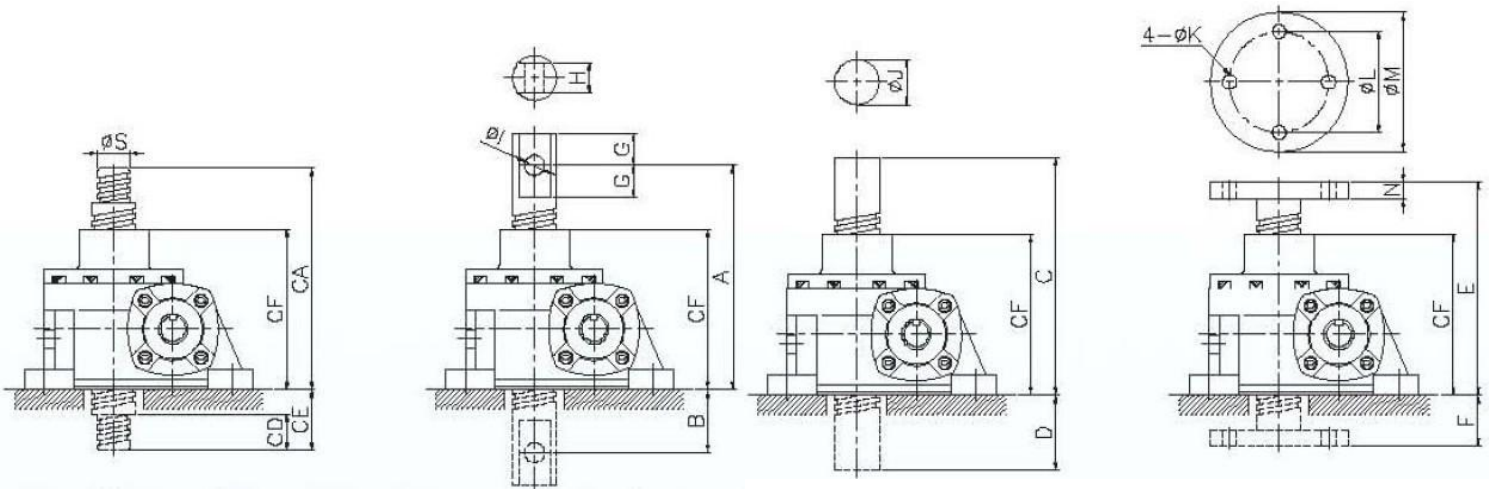
***Technical Datas Sheet**

Input Horsepower and Lifting Load,Lifting Speed Connections

S.D=Screw Diameter(mm)	S.R=Speed Ration	S.L=Static Load (ton)	L.S=Lifting Speed(mm/min)
S.P=Screw Pitch(mm)	I.H=Input Horsepower	W.L=Working Load (kgs)	
T.S=1 Turn Shaft,Travel Stroke (mm)			

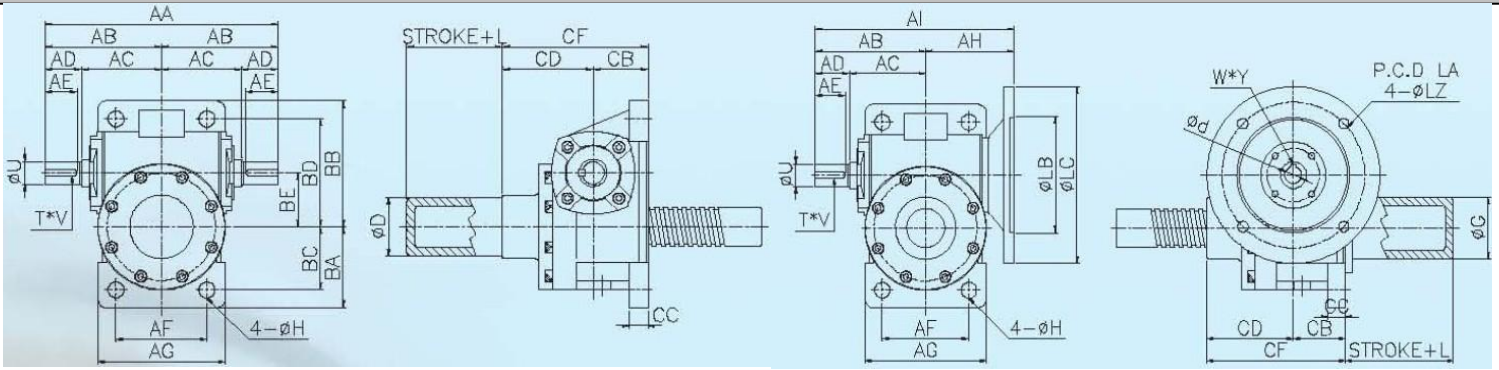
Model	S.D	S.L	S.R	T.S	1800RPM			1500RPM			1200RPM			900RPM			600RPM			300RPM		
					I.H	W.L	L.S	I.H	W.L	L.S	I.H	W.L	L.S	I.H	W.L	L.S	I.H	W.L	L.S	I.H	W.L	L.S
RN-05T	20mm P=5	0.5	1/5	1	0.2	100	1800	0.2	120	1500	0.2	160	1200	0.18	180	900	0.13	200	600	0.08	250	300
			1/10	0.5	0.1	100	900	0.19	160	750	0.13	190	600	0.1	200	450	0.08	230	300	0.05	280	150
			1/20	0.25	0.07	120	450	0.09	180	375	0.09	210	300	0.08	250	225	0.05	250	150	0.03	300	75
RN-1T	24mm P=5	1	1/5	1	0.5	250	1800	0.5	300	1500	0.5	360	1200	0.4	400	900	0.3	500	600	0.18	550	300
			1/10	0.5	0.2	250	900	0.25	300	750	0.3	450	600	0.25	500	450	0.2	550	300	0.1	600	150
			1/20	0.25	0.2	300	450	0.16	360	375	0.18	500	300	0.15	550	225	0.1	600	150	0.05	600	75
RN-2T	25mm P=5	2	1/5	1	0.93	500	1800	0.86	550	1500	0.87	700	1200	0.84	900	900	0.62	1000	600	0.5	1000	300
			1/10	0.5	0.5	500	900	0.5	550	750	0.5	700	600	0.5	1000	450	0.5	1000	300	0.25	1350	150
			1/20	0.25	0.5	600	450	0.5	700	375	0.5	900	300	0.5	1200	225	0.25	1350	150	0.25	1350	75
RN-3T	32mm P=6	3	1/6	1	1.31	700	1800	1.25	800	1500	1.18	950	1200	1.22	1300	900	1.12	1800	600	0.56	1800	300
			1/12	0.5	0.89	950	900	0.86	1100	750	0.81	1300	600	0.77	1650	450	0.62	2000	300	0.5	2000	150
			1/24	0.25	0.5	950	450	0.5	1100	375	0.5	1300	300	0.5	1650	225	0.5	2000	150	0.25	2000	75
RN-5T	38mm P=6	5	1/6	1	1.86	900	1800	1.72	1000	1500	1.66	1200	1200	1.55	1500	900	1.17	1700	600	0.72	2100	300
			1/12	0.5	1.47	1350	900	1.36	1500	750	1.31	1800	600	1.17	2150	450	0.78	2150	300	0.5	2500	150
			1/24	0.25	1.04	1800	450	0.96	2000	375	0.92	2400	300	0.73	2550	225	0.56	2900	150	0.5	2850	75
RN-10T	45mm P=8	10	1/8	1	2.84	1300	1800	2.64	1450	1500	2.48	1700	1200	2.3	2100	900	2.22	3050	600	1.75	4800	300
			1/16	0.5	1.5	1300	900	1.4	1450	750	1.31	1700	600	1.27	2200	450	1.17	3050	300	0.92	4800	150
			1/32	0.25	1.07	1750	450	1	1950	375	0.92	2250	300	0.86	2800	225	0.84	4100	150	0.65	6400	75
RN-15T	50mm P=8	15	1/8	1	2.69	1300	1800	2.5	1450	1500	2.35	1700	1200	2.17	2100	900	2.11	3050	600	1.66	4800	300
			1/16	0.5	1.42	1300	900	1.32	1450	750	1.24	1700	600	1.2	2200	450	1.11	3050	300	0.87	4800	150
			1/32	0.25	1.01	1750	450	0.94	1950	375	0.87	2250	300	0.81	2800	225	0.79	4100	150	0.61	6400	75
RN-20T	64mm P=10	20	1/8	1.25	3.57	1400	2250	3.24	1850	1875	3.01	1950	1500	2.84	2450	1125	2.59	3350	750	1.89	4900	375
			1/16	5/8	1.9	1600	1125	1.97	1850	937	1.84	2250	750	1.72	2800	562	1.58	3850	375	1.15	5600	187
			1/32	5/16	1.53	2400	562	1.57	2800	468	1.46	3350	375	1.44	4400	281	1.25	5750	187	0.92	8400	93
RN-30T	75mm P=12	30	1/12	1	4.86	1850	1800	4.71	2150	1500	4.55	2600	1200	4.27	3250	900	3.94	4500	600	2.8	6400	300
			1/18	2/3	3.56	1900	1200	3.59	2300	1000	3.44	2750	800	3.28	3500	600	2.94	4700	400	2.09	6700	200
			1/36	1/3	2.22	2200	600	2.19	2600	500	2.15	3200	400	1.97	3900	300	1.82	5400	200	1.61	9600	100
RN-40T	80mm P=12	40	1/12	1	5.56	1975	1800	5.39	2300	1500	5.11	2725	1200	5.1	3625	900	4.67	4975	600	3.32	7050	300
			1/18	2/3	4.29	2125	1200	4.29	2550	1000	4.07	3025	800	4.07	4025	600	3.67	5450	400	2.6	7725	200
			1/36	1/3	2.87	2625	600	2.78	3050	500	2.66	3650	400	2.67	4875	300	2.41	6600	200	1.88	10300	100
RN-50T	90mm P=14	50	1/7	2	12.7	2100	3600	12.3	2450	3000	12.1	2850	2400	11.5	4000	1800	11	5450	1200	7.83	7750	600
			1/14	1	7.72	2350	1800	7.66	2800	1500	7.47	3300	1200	7.23	4550	900	6.79	6200	600	4.79	8750	300
			1/28	0.5	5.46	3050	900	5.22	3500	750	5.24	4100	600	4.9	5850	450	4.66	7800	300	3.28	11000	150
RN-100T	100mm P=16	100	1/8	2	21.8	3500	3600	21.5	4000	3000	21.2	5400	2400	20.2	7100	1800	19.9	9850	1200	13	12950	600
			1/16	1	15.7	4300	1800	15.5	5400	1500	14.1	7200	1200	14.7	9450	900	12.9	11800	600	9.5	17350	300
			1/32	0.5	11.6	5500	900	12.8	6800	750	9.86	10000	600	10.1	14300	450	9.41	15750	300	7.78	26050	150

*Screw Top Ends Types Dimensions



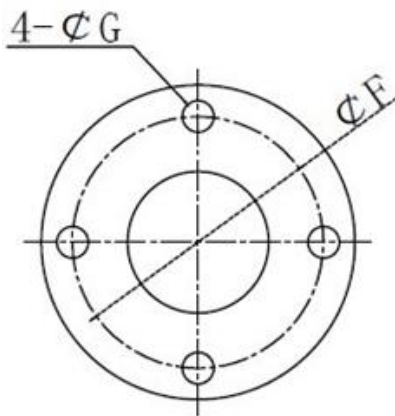
Model	A	B	C	CA	CD	CE	CF	D	E	F	G	H	I	J	K	L	M	N	S
RN-05T	135	35	155	130	25	30	100	55	130	25	15	16	8	20	8	55	70	10	M12*1.5
RN-1T	140	35	160	135	25	30	105	55	130	25	15	16	8	24	8	55	70	10	M16*1.5
RN-2T	165	55	165	150	28	40	110	55	135	25	20	16	12	25	10	70	88	10	M20*1.5
RN-3T	195	65	195	180	32	50	130	65	160	30	25	20	14	32	10	80	98	13	M22*2
RN-5T	195	65	195	180	35	50	130	65	160	30	25	25	16	38	12	90	114	13	M28*2
RN-10T	255	65	225	220	40	60	160	65	200	40	32	32	20	45	14	100	138	16	M32*2
RN-15T	255	95	225	220	45	60	160	65	210	50	32	36	24	50	18	110	148	20	M36*2
RN-20T	294	114	250	260	55	80	180	70	235	55	35	44	26	64	21	125	178	25	M42*2
RN-30T	355	135	295	300	65	80	220	75	285	65	44	56	35	75	21	140	188	28	M56*2
RN-40T	410	150	355	360	70	100	260	95	330	70	54	60	38	80	25	170	218	30	M64*2
RN-50T	480	165	429	435	75	120	315	114	390	75	64	70	45	90	27	200	248	32	M76*2
RN-100T	545	200	485	495	100	150	345	140	445	100	70	80	55	100	27	280	358	35	M80*2

* RN-05T~RN-100T Dimensions

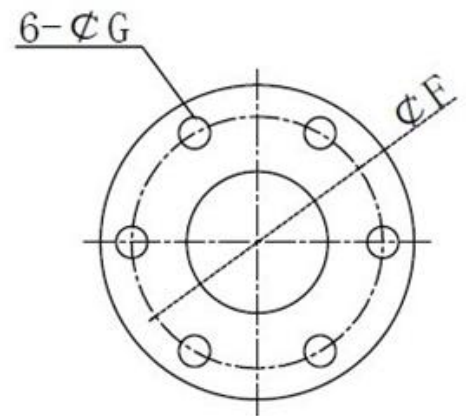
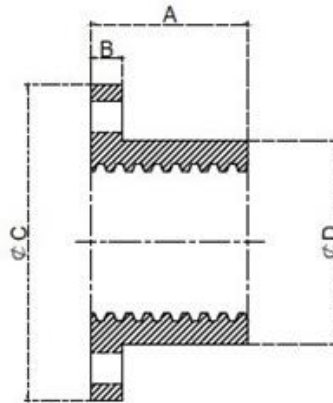


No.	RN-05T	RN-1T	RN-2T	RN-3T	RN-5T	RN-10T	RN-15T	RN-20T	RN-30T	RN-40T	RN-50T	100T
AA	150	150	170	220	220	256	264	316	390	420	480	550
AB	75	75	85	110	110	128	132	158	195	210	240	275
AC	45	45	55	70	70	88	92	108	130	145	170	180
AD	30	30	30	40	40	40	40	50	65	65	70	95
AE	25	25	25	35	35	35	35	45	60	60	65	90
AF	60	66	66	80	90	100	110	140	190	210	240	250
AG	82	84	90	110	120	140	150	180	230	260	300	320
AH	56	60	55	70	80	100	100	120	150	165	194	218
AI	131	135	140	180	190	228	232	278	345	375	434	493
BA	41.5	43	50	57	60	90	90	95	110	130	160	170
BB	77.5	79	85	98	110	140	140	155	200	225	255	285
BC	30	35	38	42	45	70	70	75	85	105	130	135
BD	66	65	73	83	95	120	120	135	175	200	225	250
BE	31	30	35	40	50	60	60	70	100	120	130	150
CB	38	36	40	50	50	60	60	70	85	100	120	125
CC	13	13	15	18	18	20	20	25	30	30	30	35
CD	62	69	70	80	80	100	100	110	135	135	195	220
CF	100	105	110	130	130	160	160	180	220	260	315	345
H	9	9	12	12	14	18	18	18	22	22	22	27
U	13	15	15	18	18	25	25	28	32	35	45	50
T*V	3*2	5*2.5	5*3	6*3.5	6*3.5	8*4	8*4	8*4	10*5	10*5	14*5.5	14*5.5
T*V	(3*2)	(5*2.5)	(5*3)	(5*3)	(5*3)	(7*4)	(7*4)	(7*4)	(10*5)	(10*5)	(14*5.5)	(14*5.5)
LA	104	104	130	130	130	165	165	165	215	215	265	265
LB	83	83	110	110	110	130	130	130	180	180	230	230
LZ	M6-P1*4		M8-P1.25*4			M10-P1.5*4			M12-P1.75*4		M16-P2*4	
WY	3*1.5	3*1.5	4*2	5*2.3	5*2.3	6*2.8	6*2.8	8*3.3	8*3.3	8*3.3	10*3.3	10*3.3
HP	60/90W	60/90W	1/4HP	1/2HP	1/2HP	1HP	1HP	2HP	3HP	5HP	7.5HP	10HP
WY	3*1.5	3*1.5	4*2	5*2.3	5*2.3	8*3.3	8*3.3	8*3.3	8*3.3	8*3.3	10*3.3	10*3.3
HP	60/90W	60/90W	1/4HP	1/2HP	1/2HP	2HP	2HP	2HP	3HP	5HP	7.5HP	10HP
d	10	10	11	14	14	19	19	24	28	28	38	38

*Traveling Nut Dimensions



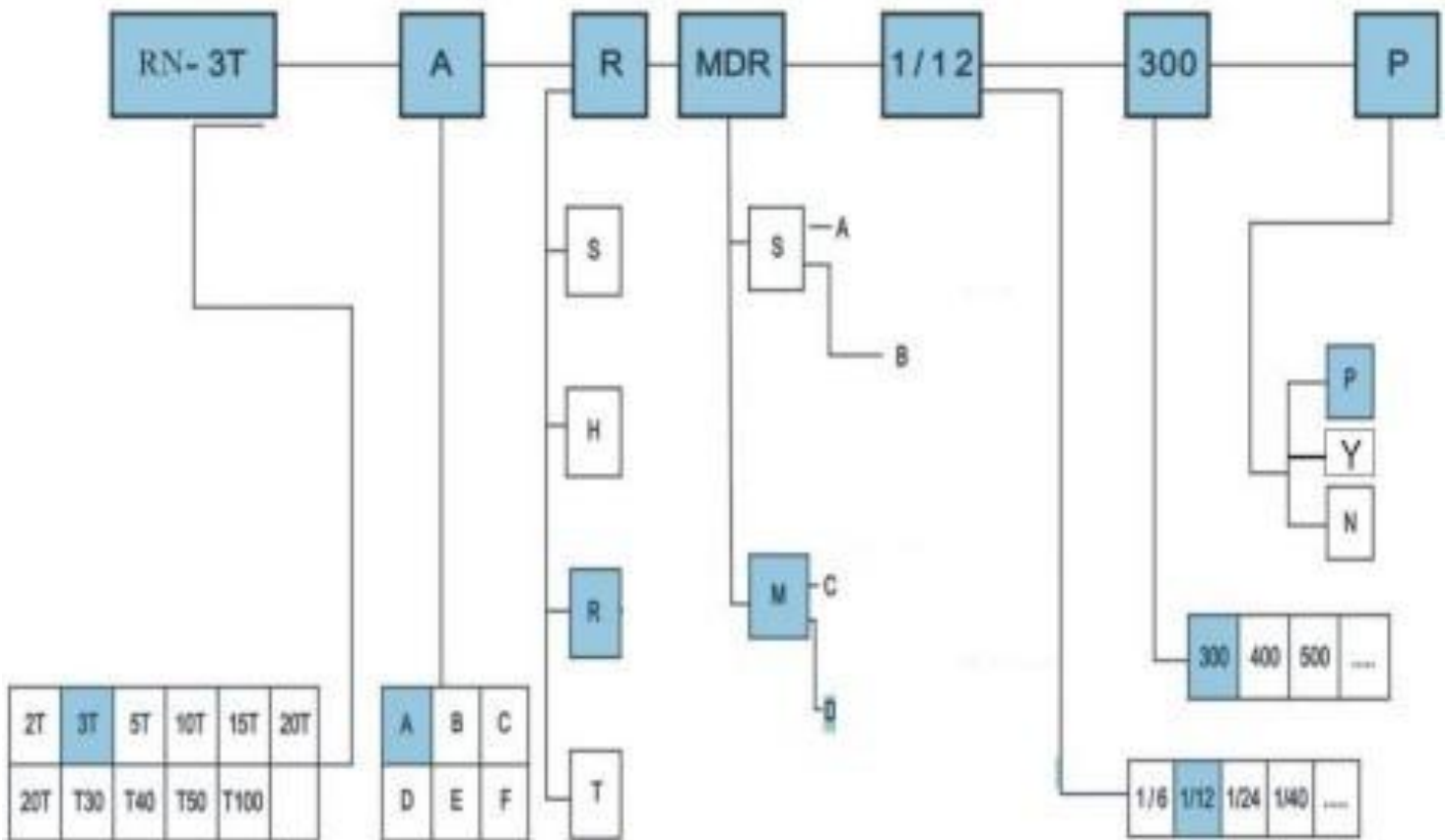
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②

Model	RN-05T	RN-1T	RN-2T	RN-3T	RN-5T	RN-10T	RN-15T	RN-20T	RN-30T	RN-40T	RN-50T	RN-100T
Diam.	20mm	24mm	25mm	32mm	38mm	45mm	50mm	64mm	75mm	80mm	90mm	100mm
Pitch	P=5	P=5	P=5	P=6	P=6	P=8	P=8	P=10	P=12	P=12	P=14	P=16
No.	<1>	<1>	<1>	<1>	<1>	<1>	<1>	<2>	<2>	<2>	<2>	<2>
A (mm)	30	38	38	44	50	75	80	100	140	150	190	190
B (mm)	12	16	16	18	20	32	36	38	45	50	60	60
C (mm)	70	78	78	94	114	134	160	190	220	250	280	280
D (mm)	30	38	38	48	58	68	78	95	114	130	150	150
E (mm)	51	57	57	72	86	100	120	140	160	190	210	210
F (mm)	9	11	11	14	14	18	18	24	27	27	27	27

***Selection Guide**



Full Models Explanation

Model: **RN-3T**

Installation: **A**

Screw top ends type: **R**

Input forms: **MDR**

Gear ratio: **1/12**

Travel stroke: **300 mm**

Accessory: **P (steel tube)**



*Selection Guide

1. Model RN-___T

It depends on max static load,max dynamic load,travel stroke,lifting speed etc.

For example, 200 kgs platform with full guides,platform sizes 2*2 meters lifting speed 750 mm/min, lift 200 mm stroke, one motor driven.

First, Each jack load $200 / 4 = 50$ kgs.

Second, 2*2 meter platform, engineers suggest, 4 jacks for it with top plates (T).

Then we check RN-Series technical datas, find input 1500 rpm,gear ratio 1:10,lifting speed 750 mm/min, and load 160 kgs each jack, $160 \text{ kgs} > 50 \text{ kgs}$, so RN-05T is available.

Input 0.19HP each, 4 jacks total $4 * 0.19 = 0.76$ HP electric motor. In China, no 0.76HP motor, so horsepower needs to larger than 0.76HP, so the suitable is 1HP.

Now we can select the complete models:

Screw Jack: RN-05TATSB1/10-200N 4 pcs

Electric motor: 1HP-4Poles-1500RPM 1 pc

About others components, clients do it self or purchase from us.

Input Horsepower and Lifting Load,Lifting Speed Connections																						
S.D=Screw Diameter(mm)			S.R=Speed Ration			S.L=Static Load (ton)						L.S=Lifting Speed(mm/min)										
S.P=Screw Pitch(mm)			I.H=Input Horsepower			W.L=Working Load (kgs)																
T.S=1 Turn Shaft,Travel Stroke (mm)																						
Model	S.D	S.L	S.R	T.S	1800RPM			1500RPM			1200RPM			900RPM			600RPM			300RPM		
	S.P				I.H	W.L	L.S	I.H	W.L	L.S	I.H	W.L	L.S	I.H	W.L	L.S	I.H	W.L	L.S	I.H	W.L	L.S
RN-05T	20mm P=5	0.5	1/5	1	0.2	100	1800	0.2	120	1500	0.2	160	1200	0.18	180	900	0.13	200	600	0.08	250	300
			1/10	0.5	0.1	100	900	0.19	160	750	0.13	190	600	0.1	200	450	0.08	230	300	0.05	280	150
			1/20	0.25	0.07	120	450	0.09	180	375	0.09	210	300	0.08	250	225	0.05	250	150	0.03	300	75




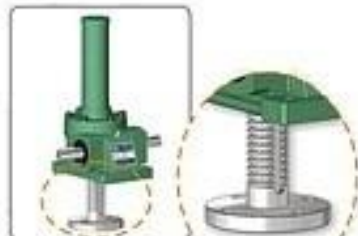


***Selection Guide**

2. Installations

Translating screw jack: A & B

Keyed screw jack: C & D

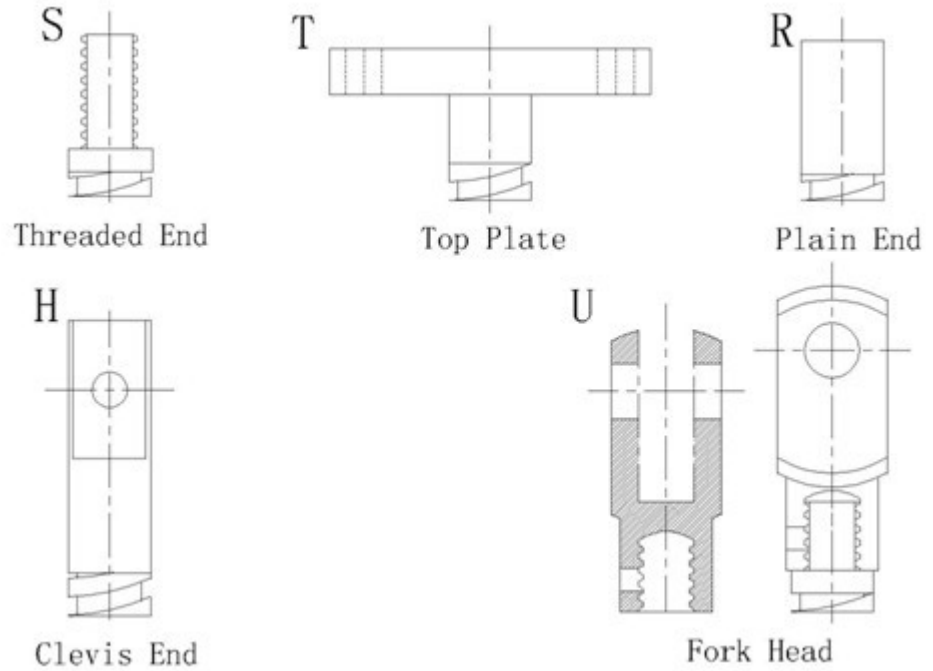
Rotating screw jack: E & F

<p>A</p>  <p>Upright</p>	<p>B</p>  <p>Inverted</p>
<p>Translating Screw: lift screw rotation and do linear motion</p>	
<p>C</p>  <p>Upright</p>	<p>D</p>  <p>Inverted</p>
<p>Keyed Screw: lift screw anti-rotation and do linear motion</p>	
<p>E</p>  <p>Upright</p>	<p>F</p>  <p>Inverted</p>
<p>Rotating Screw: lift screw fixed rotation, nut do linear motion</p>	

*Selection Guide

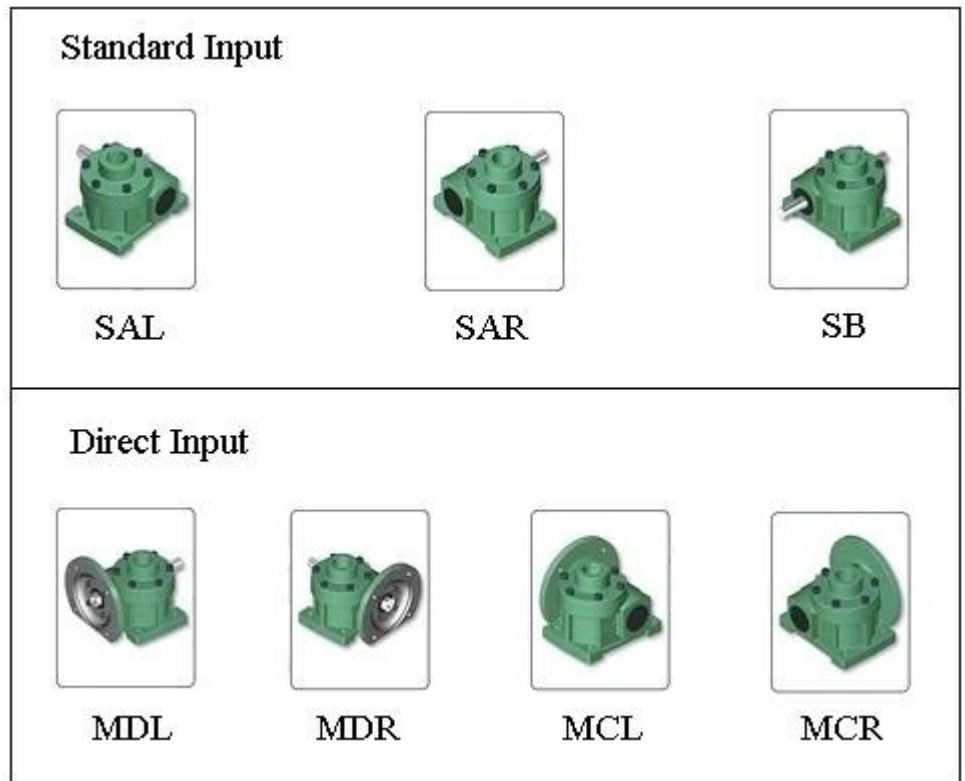
3. Screw Top Ends Type

- Top Plate
- Clevis End
- Threaded End
- Plain End
- Forked Head



4. Input Forms

- SAL: single input, left shaft
- SAR: single input, right shaft
- SB: double input shaft
- MCR: single input, right side flange
- MCL: single input, left side flange
- MDR: double input, right side flange & left shaft
- MDL: double input, left side flange & right shaft



*Selection Guide

5. Gear Ratio

Manual Operated

Fast speed : 1 full turn 1 mm travel

Mid speed : 1 full turn 0.5 mm travel

Low speed : 1 full turn 0.25 mm travel

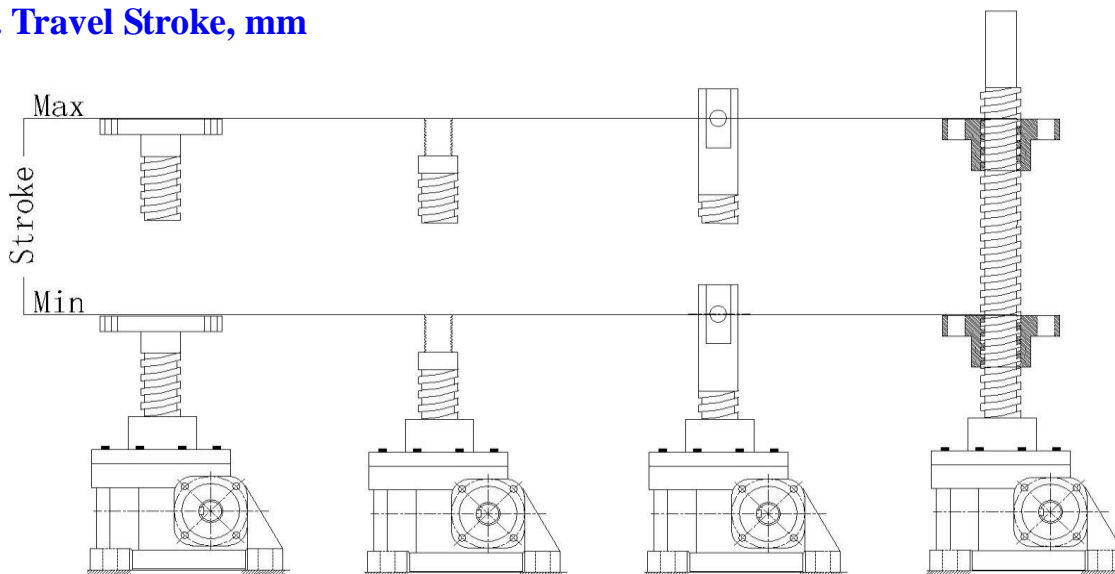
Electric Driven

Fast speed : 1500 mm/min

Mid speed : 750 mm/min

Low speed : 375 mm/min

6. Travel Stroke, mm



*Selection Guide

7. Accessories



Steel Cover



Rubber Bellows



Hand Wheel



Bevel Gearbox



Vertical Motor



Horizontal Motor



Swivel Mounting Bases



Swivel Plates



Pillow Block Bearing



Inverter

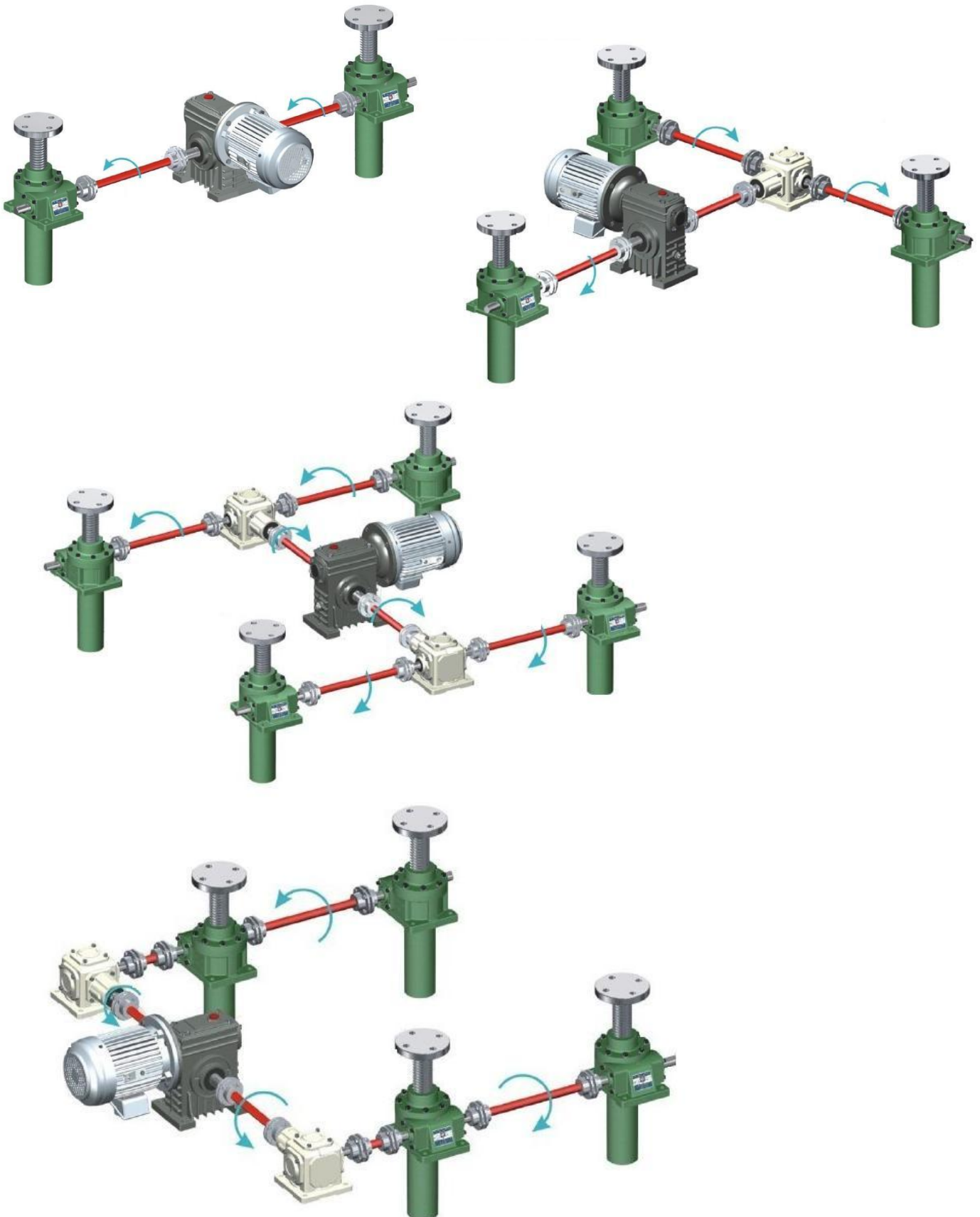


Limit Switches



Counter

* Screw Jack Systems



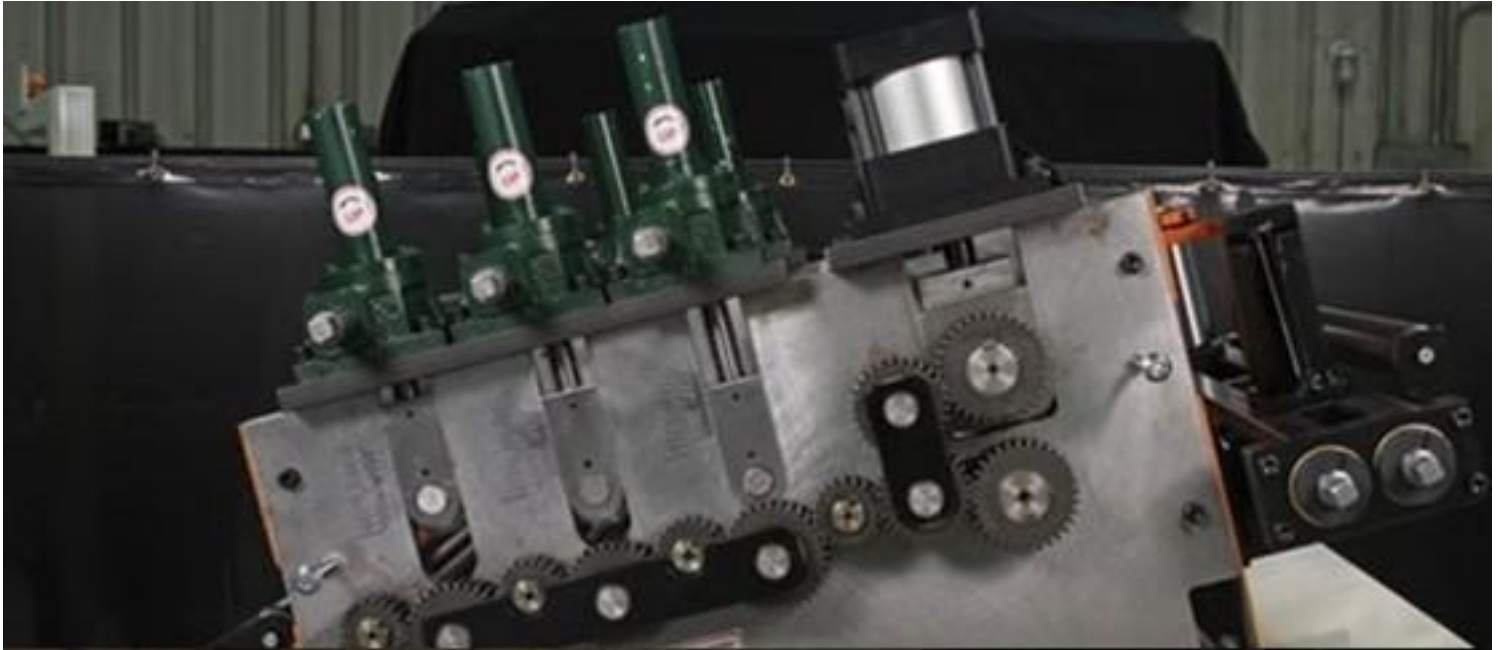
* Application Pictures



*** Application Pictures**



*** Application Pictures**



*** Application Pictures**



* Installation

Direction of rotation: Before starting installation work, the direction of rotation of all worm gear screw jacks, spiral bevel gear boxes and the drive motor must be checked with regard to the feed direction of each individual worm gear screw jack.

Alignment errors: All components must be carefully aligned during installation. Alignment errors and stresses increase power consumption and lead to overheating and premature wear. Before a drive unit is attached, each worm gear screw jack should be turned through its entire length by hand without load. Variations in the amount of force required and/or axial marks on the outside diameter of the screw indicate alignment errors between the worm gear screw jack and its additional guides. In this case, the relevant mounting bolts must be loosened and the worm gear screw jack turned through by hand again. If the amount of force required is now constant throughout, the appropriate components must be aligned. If not, the alignment error must be localized by loosening additional mounting bolts.

Test run: The direction of rotation of the complete system and correct operation of the limit switches must be checked again before attaching the drive motor. In the case of translating screw jack, check that the screw is lubricated with grease from the interior of the gear box and relubricate if necessary. In the case of rotating screw jack, the jack screw should be coated with suitable grease to provide lubrication for lifting operation. The first test runs can then be carried out without load. A maximum operating time of 30% can not be exceeded at trial runs under loading for worm gear screw jacks with trapezoidal screws.

Operation: The loads, speeds and operating conditions specified for the worm gear screw jacks and transmission components must not be exceeded even briefly. Failure to observe this condition will invalidate all claims under guarantee.

Notes:

1. The jack must not be overloaded.
2. Max rpm should not exceed 1800.
3. Jacks are designed primarily to raise and lower loads and any side thrust should be avoided. These units will withstand some side thrust, depending on diameter of the screw and the extended length of the screw. Where side thrusts are present, the loads should be guided and the guides, meanwhile consult our engineers.
4. The base, on which the jacks are mounted, should be strong enough to carry the max. load and should be rigid enough to prevent swings or turns on the supporting beam of the jack.

* Maintenance

Safety: All mounting bolts must be retightened after a short period of operation. Under extreme operating conditions, the wear on the screw nut (worm gear) must be checked at shorter intervals, depending on the power-on time, by inspecting the play in the thread. The screw nut (worm gear) must be replaced if the axial backlash with a singlestart thread is more than one-quarter of the thread pitch.

Lubrication: The worm gear screw jacks are lubricated by the manufacturer and are ready for operation on delivery. Screw jacks must be lubricated via their grease nipples with one of the greases specified below at intervals of 300 operating hours. The screw should be cleaned and greased at the same time. We recommend that the gear box be cleaned to remove old grease and refilled with fresh grease after approx. 700 operating hours or 18 months. The worm gear screw jacks can be dismantled relatively easily:

- Unscrew the two threaded pins securing the bearing cover.
- Unscrew the screw and remove the screw protection if necessary.
- Unscrew the bearing cover with the aid of a face spanner.

Please proceed as follows to refit the bearing cover:

Mount the bearing cover with face spanner and check the operation performance of the worm wheel gear set. Too big force influences the easy movement for smaller screw jack sizes. When necessary the securing holes at the bearing cover have to be drilled again.

Standard grease: NLGI grade #2

* FAQ

Q: What is the difference between a trapezoidal screw jack and a ball screw jack?

A: The trapezoidal screw jack uses an acme threaded screw that is typically self-locking, meaning it will hold its position without a brake. Ball screw jacks use ball screws to convert rotary motion to linear movement, and require 1/3 the horsepower compared to a trapezoidal screw jacks. Due to the efficiency of the ball screw,brakes must be used to stop and hold the load screw in position. Brakes are also recommended for use on any jacks if vibration is present.

Trapezoidal screw jack is of low efficiency,low speed,heavy duty,infrequently use

Ball screw jack is of high efficiency,high speed,low loading,frequently use,high accuracy,long life

Q: What is translating screw jack?

A: A driven worm shaft acts on an internal worm gear, which in turn drives a lifting screw to extend or retract. As the lifting screw translates through cast iron housing,then worm gear and lifting screw rotate together.When the lifting screw is held to prevent rotation,the lifting screw will move linearly through the cast iron housing to move the load.

Q: What is keyed screw jack?

A: Some loads don't prevent lifting screw rotation. These applications require a keyed screw jack. A key, fixed to the jack housing and inserted into a keyway milled into the lifting screw, forces the lifting screw to translate without rotating.

Q: What is rotating screw jack?

A: A lifting screw keyed to the worm gear as a single unit, forcing the lifting screw to rotate,but not translate. A travelling nut, attached to the load, is driven by the rotation of the lifting screw. This type jack is ideal for applications that can not accommodate a screw protection tube and save enough mounting space.

Q: What is anti-backlash screw jack?

A: Anti-backlash screw jack is used wherever reversible load coditions require precision positioning control. Adjustable backlash screw jack models are available to reduce backlash. But should not be used to completely eliminate backlash. While it may be desirable to totally eliminate backlash, the result would be a lock-up of lifting screw and drive sleeve.

Q: What kind of machine needs to use anti-backlash screw jack?

A: At present, it is used to precision leveler and roll forming auto pro mill machine etc.

For reduced axial lifting screw backlash,need to select the model with anti-backlash devices. This is typically used when the load direction changes from tension to compression and mini axial lifting screw backlash is required. This design in only available for translation screw jacks. It can be combined with anti-rotation devices as well.

* FAQ

Q: Can the lifting screw be keyed to prevent rotation?

A: Yes, Keyed screw jack. We also recommend the following methods for preventing rotation. For single screw jack applications, no any guides, it needs to use keyed screw jack.

Below applications conditions, don't need keyed screw jacks.

1. For multiple screw jacks arrangement.
2. Single screw jack with full guides.

Q: Should the load being positioned be guided?

A: It is highly recommended that the load be guided, however, it is not necessary. A guided system will provide more column stability and allow longer lifting screw travel. Column length is greatly reduced on unguided systems. External load forces common with unguided systems are detrimental to the life and operation.

Q: Is the screw jack self-locking?

A: NOSEN RN-Series & RNF-Series screw jacks are self-locking in most case. All ball screw jacks are not self-locking, it will require a brake or other control device. If vibration conditions exist, please consult our engineers.

Q: Can the screw jack be operated in multiple units?

A: Perhaps the greatest single advantage of screw jacks is that they can be tied together mechanically, to lift and lower in unison. Typical arrangements involving screw jacks, bevel gearboxes, motors, reducers, flex shaft and coupling etc.

Q: What is the efficiency of multiple screw jacks arrangement?

A: In addition to the efficiencies of screw jacks and bevel gearboxes, the efficiency of the multiple screw jacks arrangement must be taken into consideration. The arrangement efficiency allows for misalignment due to slight deformation of the structure under load, for the losses in couplings and bearings, and for a normal amount of misalignment in positioning the jacks and bevel gearboxes. We use the following efficiencies (all standard units):

- Two Jacks Arrangement - 95%
- Three Jacks Arrangement - 90%
- Four Jacks Arrangement - 85%
- Six or Eight Jacks Arrangement - 80%

Q: Can the screw jack be operated at high speeds?

A: The input KW to these screw jacks should not exceed the KW rating shown in the technical datas sheet. Maximum RPM should not exceed 1800. We cannot accept responsibility for the overheating and rapid wear that may occur should these limits be exceeded. Kilowatts increases in direct proportion to the speed.

Q: Will the screw jack withstand a side thrust?

A: Screw jacks are designed primarily to raise and lower axial loads and any side thrust should be avoided. These jacks will withstand some side thrust, depending on diameter of the screw and the extended length of the screw. Where side thrusts are present, the loads should be guided and the guides, rather than the jack units, should take the side thrust – particularly when long raises are involved. Even a small side thrust can exert great force on the housings and bearings and increase the operating torque.

* FAQ

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Q: How is the lifting screw protected?

A: For translating screw jacks are fitted with a screw protective tube that stores the screw when the jack is in the closed position. Rubber bellows are available and recommended to protect the screw in the extended position. Two rubber bellows may be required for rotating screw jacks with travelling nuts.

Q: What do i need to consider when order a rubber bellows to protect the jack lifting screw?

A: When a rubber bellows is ordered for a jack, the closed height dimensions may change. When ordering a rubber bellows for an inverted jack, need to consider the closed height of the rubber bellows and structure thickness. Usually, under fully retracted, the rubber bellows closed height = 0.13 * traveling strokes. For example, upright mounting, request 1000 mm stroke, plus rubber bellows closed height 0.13*1000=130 mm. So need to order 1130 mm stroke with rubber bellows.

Q: Can the screw jack be used where vibration is present?

A: Yes, but vibration can cause the lifting screw to creep or inch down under load. For applications involving slight vibration, select the higher of the worm gear ratios. Should considerable vibration be present, use a drive motor equipped with a magnetic brake which will prevent the screw jack model from self-lowering.

Q: Will the screw jack drift after motor switched off?

A: Yes, unless a brake of sufficient capacity is used to prevent it. The amount of drift will depend upon the load on the screw jack and the inertia of the rotor in the motor.

Q: If screw jack suitable for high/low temperature operation?

A: Using standard greases and oil seals, the screw jack is normally suitable for operation at ambient temperatures range: -20°C to +80°C. At present, we have clients use screw jacks at +300°C high temperatures with special grease and seals in Glass Industry. Any special working temperature, please contact NOSEN sales or engineers.

Q: How to calculate lifting speed with a given worm shaft speed?

A: When the worm shaft speed is known, the distance the load can be raised per minute can be determined with this formula:

Lifting speed = rpm of worm shaft * lifting screw pitch / worm gear ratios

Lifting speed = travel per worm shaft turn (mm) x rpm of worm shaft

For example:

RN-5T, Pitch=6mm, worm gear ratio 1:24, with 1500 rpm, 4 poles electric motor, lifting speed=1500 rpm * 6 mm / 24(ratio) = 375 mm/min, or lifting speed=stroke 0.25mm per turn * 1500 rpm=375 mm/min.

* FAQ

Q: What is the difference between upright and inverted jack configurations?

A: The difference between an upright and inverted jack is the location at which the jack screw exits the jack relative to the jack base. For example, an upright jack's lifting screw exits the jack opposite the base. An inverted jack's lifting screw exits the jack on the same side as the base. The choice between an inverted or upright jack is totally dependent upon your application. Upright and inverted jacks can be viewed on any of the jack drawings.

Note: An upright jack mounted upside down is still referred to as an upright jack.

Q: Are NOSEN screw jacks lubricated prior to shipment?

A: All NOSEN screw jacks are lubricated for normal operation before leaving the factory and are ready for use. The standard lubrication is NLGI grade #2.

Q: After how many hours, i need to lubricate the screw jack units?

A: Normal working conditions, after 300 work hours, first time to inject grease. After that, each time per 1000 work hours.

Q: Can I buy a screw jack with a clevis on both ends?

A: Yes, when freedom of movement in two axes is required, a double clevis jack may be specified. This design incorporates a clevis machined or pinned on the screw end and a clevis welded to the protection tube. Double clevis jacks are useful in applications that require actuating a hinged platform or door.

Q: How do I stop screw jack at the travel limits?

A: Limited switches or other controls must be used to shut off the motor when the jack has reached its full extended or retracted position. Solid stops are not recommended. Their continued use can cause severe damage to the jack.

Q: What is the life of trapezoidal screw jack?

A: Under normal conditions, 300 mm stroke, it can lift 10000 times. Total travel stroke 3000000 mm. For example, RN-5T jack with 100 mm stroke, lift 5 time per day, how many years for it?
 $3000000 \text{ mm} / (100 * 5) = 6000 \text{ days} = 16.5 \text{ years}.$

Q: How much backlash is there in the screw jacks?

A: Trapezoidal screw, Anti-backlash and Ball screw models must be considered separately, as the normal backlash will vary due to different constructions.

Trapezoidal screw endplay 0.1 mm, radial play 0.1 mm

Anti-backlash screw endplay 0.01 mm, radial play 0.01 mm

Ball screw endplay 0.01 mm, radial play 0.01 mm



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