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**YUQIU
MACHINE**

HANGZHOU YUQIU MACHINE CO.,LTD



WORM SCREW LIFT

BRIEF INTRODUCTION

Hangzhou YUQIU Machinery Co., Ltd. set worm gear, Gear Reducer R & D, production and sales in one, founded in 2000, is located in Qiantang District, Hangzhou, China, is a professional production of decelerating motor of large-scale industry and trade enterprises. Dedicated to the industry to provide professional, efficient and human-oriented overall transmission program.

The company's leading products include SWL screw elevator, RFKS four series gear reducer, NMRV series Worm Gear Reducer, KRV hyperboloid reducer, three-phase asynchronous motor and WP series worm gear reducer. The company has a number of domestic and foreign advanced transmission machinery production equipment and precision testing equipment, set up a high-tech R & D Center in Zhejiang province, according to market demand and customer feedback for continuous improvement and innovation. With years of R & D Experience and technology accumulation, our company in technology, equipment, product performance are in the leading domestic level, into the international advanced ranks. Products for food, chemical, mining, metallurgy, textiles, woodworking machinery, packaging, wind energy, electricity, lifting and other important areas.

The company has advanced production equipment and perfect production management system, modern production technology and strict quality control system to ensure that each reducer products are in line with relevant standards and customer requirements. At the same time the company is also committed to improve production efficiency and reduce costs, to provide customers with more competitive products and services.

The company has established a sound sales network, with a professional sales team and technical services team, to provide customers with a full range of sales support and after-sales service. Always adhere to customer-centric, customer-oriented needs, to provide customers with quality services and solutions.

The company has won the National high-tech Enterprises, Zhejiang manufacturing character certification, Zhejiang province, such as small and medium-sized technology-based enterprises and other honorary titles. Our products have passed ISO9001 quality system, ISO14001 environmental management system, ISO45001 occupational health management system, 3C certification, CE certification and energy efficiency certification, at present, the products are widely sold all over the country and the developed countries in the world.





YUQIU MACHINE

Technology and life are people-oriented
Passed ISO9001:2015 international system certification

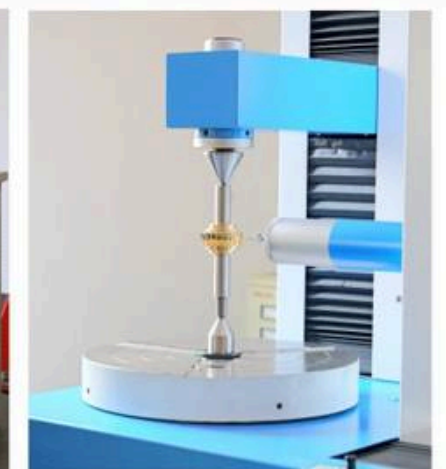
PRODUCTION & EQUIPMENT

YUQIU have advanced and perfect inspecting equipment to inspect the spare parts and whole machine precisely.



YUQIU MACHINE

Technology and life are people-oriented
Passed ISO9001:2015 international system certification



Type 1 structure



Assembly method A



Assembly method B

Type 2 structure



Assembly method A



Assembly method B



Ordinary type



D-type



01



02



03



04



R (cylindrical)



T (flange type)



S (threaded type)



H (flat head type)



R (cylindrical)



T (flange type)



S (threaded type)



H (flat head type)



R (cylindrical)



T (flange type)



S (threaded type)



H (flat head type)

1. Summary

The SWL series worm gear screw elevator has many functions such as lifting, lowering, pushing with auxiliary parts, flipping, and various height and position adjustments. Widely used in various industries such as machinery, metallurgy, construction, water conservancy, chemical industry, medical, cultural and sports.

SWL worm gear screw lift is a basic lifting component with many advantages such as compact structure, small volume, light weight, no noise, easy installation, flexible use, high reliability, wide power source, multiple supporting functions, and long service life. It can be used individually or in combination, and can accurately control and adjust the height of lifting or propulsion according to a certain program. It can be directly driven by an electric motor or other power, or manually operated.

To improve the efficiency and load-bearing capacity of the SWL series worm screw elevator, special and advanced processes have been developed to enhance the overall performance of the elevator, in order to meet the requirements of our customers.

2. Type

2.1 Structural type

Type 1- Threaded connection between screw and worm gear

Type 2- The screw is connected to the worm gear as a key, and the nut moves axially

2.2 Assembly type

Each structural type of elevator is divided into two assembly types:

Type A - The screw (or nut) moves upwards (see Figure 1 and Figure 2);

Type B - The screw (or nut) moves downward (see Figure 1 and Figure 2).

2.3 Screw head type

The screw head of Type 1 structural type is divided into four types: Type I (cylindrical type), Type II (flange type), Type III (threaded type), and Type IV (flat head type) (see Figure 1);

The screw head of the Type 2 structural type is divided into two types: Type I (cylindrical type) and Type III (threaded type) (see Figure 2).

2.4 Transmission ratio

Elevators are divided into two transmission ratios, namely normal (P) and slow (M).

2.5 Enhance carrying capacity

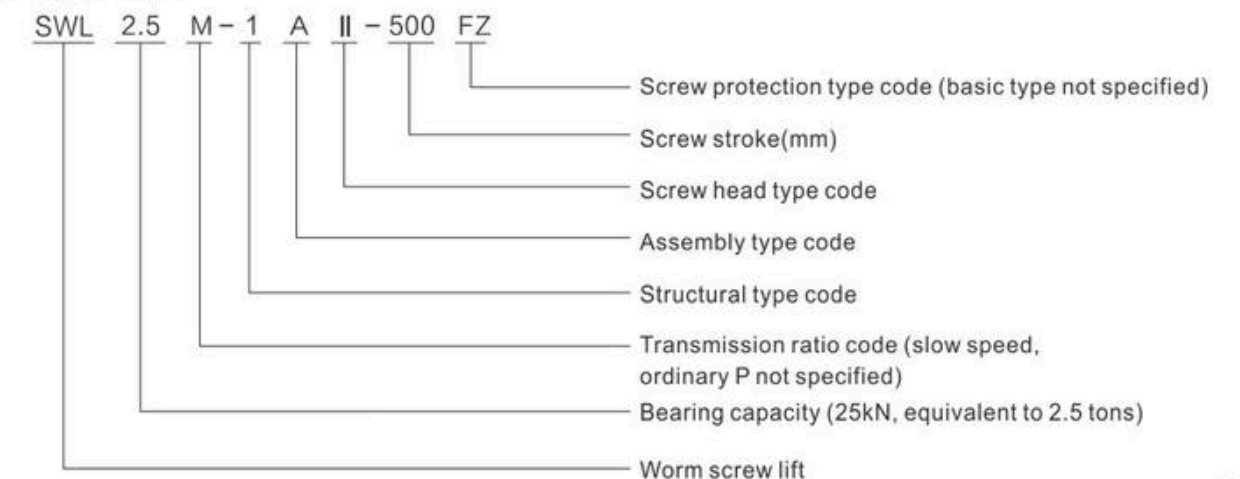
0.5, 1, 2.5, 5, 10, 15, 20, 25, 35, 50, 100 ($\times 10\text{kN}$) 11 types.

2.6 Protection of screw rod

The protection of type 1 elevator screw is divided into: basic type, anti rotation transformation (F), and protective cover type (Z);

The protection of type 2 elevator screws is divided into basic type and shielded type (Z).

2.7 Tag Example



R (cylindrical)



T (flange type)



S (threaded type)



H (flat head type)



R (cylindrical)



T (flange type)



S (threaded type)



H (flat head type)

3. Appearance and installation dimensions

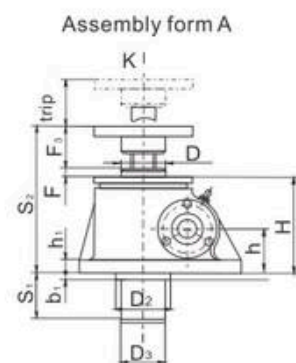
3.1 The external structural dimensions of the Type 1 elevator are shown in Figure 1 and Table 1.

Table 1

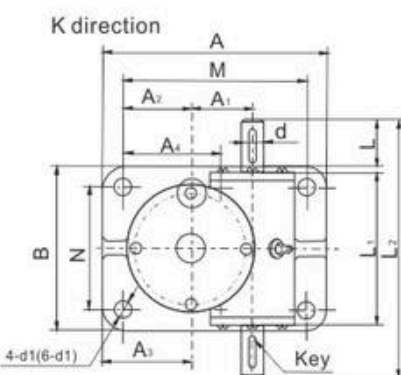
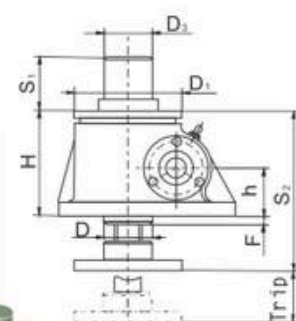
Model	SWL0.5	SWL1	SWL2.5	SWL5	SWL10 SWL15	SWL20	SWL25	SWL35	SWL50	SWL100
S ₁	Trip+20	Trip+20	Trip+20	Trip+20	Trip+20	Trip+20	Trip+20	Trip+20	Trip+250	Trip+25
S ₂	100	120	150.5	193	230	262	317	350	443	522
A	98	118	165	212	235	295	350	430	552	527.1
B	67	95	120	155	200	215	260	280	270	609
M	80	99	135	168	190	240	280	360	457	412.8
N	50	76	90	114	155	160	190	210	152	508
H	62	75	97	130	150	176	217	245	238	332
h	28	34	45	61.5	70	87	102	115	120.6	152.4
h ₁	8	9	12	14	16	20	25	30	31	38
d(k6)	10	12	16	20	25	28	32	38	38	45
d ₁	7	8.5	14	17	21	28	35	35	48	48
Key GB1096	4x4x16	4x4x20	5x5x32	6x6x40	8x7x45	8x7x45	10x8x50	10x8x70	10x8x90	14x9x90
L	20	25	35	45	48	50	55	75	105	103
L ₁	70	98	111	126	169	209	226	270	314	396
L ₂	122	156	190	228	280	322	355	430	558	610
D	30	35	48	65	80	100	130	150	148	240
D ₁	60	84	98	122	150	185	205	260	310	406
D ₂	/	/	/	/	/	/	/	180	/	/
D ₃	25	32	42	60	76	88	114	133	133	180
A ₁	25	32	45	56.2	66.8	72.5	97	120	135	190
A ₂	29	35.5	50	58	63.5	95	95	135	203	146
A ₃	37	45	65	80	86	122.5	130	170	250	203
A ₄	/	/	/	/	/	/	/	/	/	206
b ₁	/	/	/	/	/	/	/	20	/	/
F	8	10	8.5	10	8	10	10	10	20	40
d ₂ (k6)	10	12	20	25	40	50	70	80	95	130
I ₁	20	24	30	40	50	58	63	80	108	127
I ₂	30	40	45	51	73.5	80	92	105	185	170
D ₄	49	64	98	122	150	185	205	260	300	370
D ₅	38	45	75	85	105	140	155	200	225	280
D ₆	25	28	40	50	65	90	100	130	150	190
d ₃	7	11	14	17	21	26	27	33	39	48
F ₁	8	10	12	18	20	20	25	30	35	75
F ₂	20	25	30	40	50	60	63	80	108	127
F ₃	30	40	45	51	73.5	80	92	105	185	170
d ₄	M12X1.5-6g	M14X1.5-6g	M22X1.5-6g	M30X2-6g	M42X2-6g	M48X2-6g	M72X3-6g	M80X3-6g	M100X6-6g	M110X6-6g
I ₃	20	25	30	40	50	58	63	80	108	127
I ₄	30	40	45	51	73.5	80	92	105	185	170
d ₅	24	29	50	65	90	110	130	150	180	220
d ₆ (H8)	12	14	25	35	50	60	70	80	80	90
b ₂	16	20	30	42	60	75	90	105	120	160
I ₅	12.5	15	25	37.5	50	60	70	80	80	90
I ₆	25	30	50	75	100	120	140	160	160	180
I ₇	50	60	85	117	153.5	170	204	245	317	343
I ₈	40	45	70	105	130	150	175	220	240	300



Figure 1



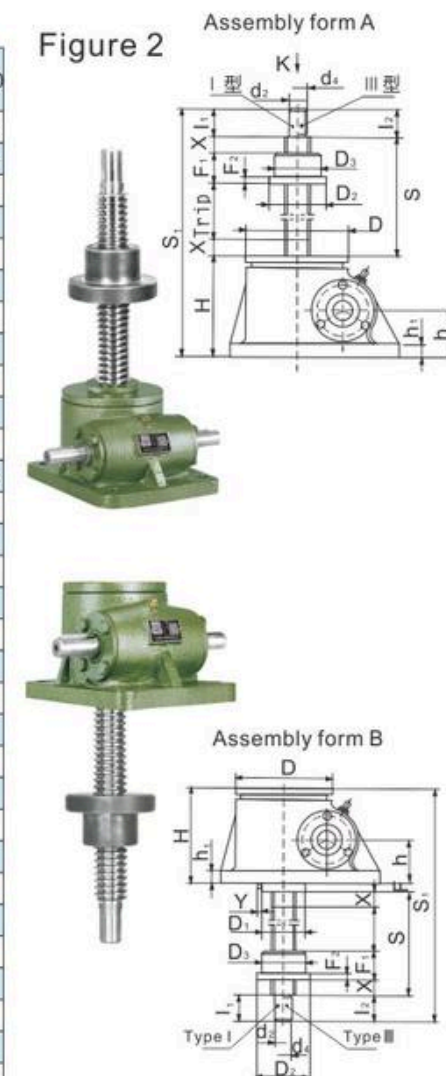
Assembly form B



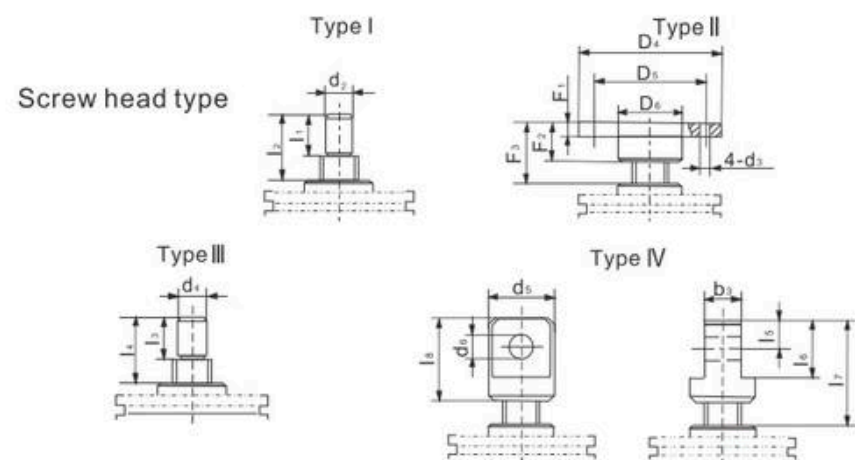
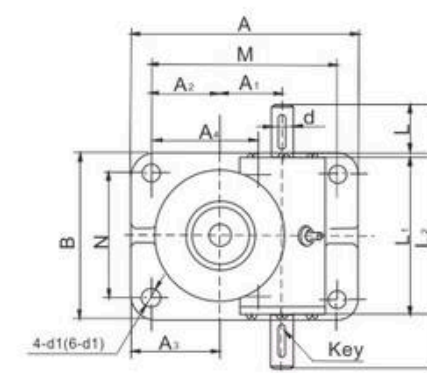
The external structural dimensions of the Type 2 elevator are shown in Figure 2 and Table 2.

Table 2

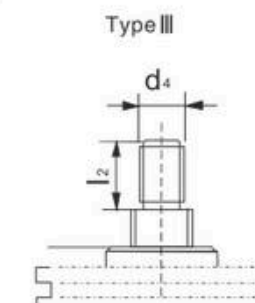
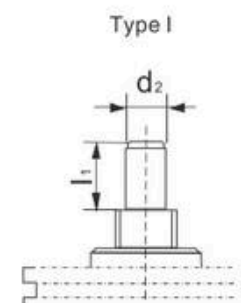
Model	SWL0.5	SWL1	SWL2.5	SWL5	SWL10 SWL15	SWL20	SWL25	SWL35	SWL50	SWL100
S	Trip+70	Trip+80	Trip+85	Trip+100	Trip+125	Trip+150	Trip+170	Trip+205	Trip+250	Trip+320
S ₁	Trip+160	Trip+190	Trip+215	Trip+270	Trip+335	Trip+400	Trip+467	Trip+530	Trip+596	Trip+779
A	98	118	165	212	235	295	350	430	552	527
B	67	95	120	155	200	215	260	280	270	609
M	80	99	135	168	190	240	280	360	457	412
N	50	76	90	114	155	160	190	210	152	508
H	62	75	103	134	156	190	210	245	238	332
h	28	34	45	61.5	70	87	102	115	120.6	152.4
h ₁	8	9	12	14	16	20	25	30	31	38
d(k6)	10	12	16	20	25	28	32	38	38	45
d ₁	7	8.5	14	17	21	28	35	35	48	48
Key GB1096	4x4x16	4x4x20	5x5x32	6x6x40	8x7x45	8x7x45	10x8x50	10x8x70	10x8x90	14x9x90
L	20	25	35	45	48	51	55	75	105	103
L ₁	70	98	111	126	169	209	226	270	314	396
L ₂	122	156	190	228	280	322	355	430	558	610
D	60	85	98	122	150	185	205	260	310	406
D ₁	30	35	48	65	80	100	130	150	148	240
A ₁	25	32	45	56.2	66.8	72.5	97	120	135	190
A ₂	29	35.5	50	58	63.5	95	95	135	203	146
A ₃	37	45	65	80	86	122.5	130	170	250	203
A ₄	/	/	/	/	/	/	/	/	/	206
F	8	10	8.5	8	8	10	10	10	20	40
Safety margin X	20	20	20	20	25	25	25	30	40	50
Y	2	2	3	3	1	3	3	4	5	6
D ₂	40	48	80	87	110	120	155	190	220	300
D ₃ (h9)	25	32	50	70	90	90	130	150	180	240
F ₁	30	40	45	60	75	100	120	145	170	220
F ₂	10	10	15	18	25	30	35	35	50	70
d ₂ (k6)	10	12	20	25	40	50	70	80	95	130
I ₁	20	20	30	40	50	60	80	80	108	127
d ₄	M12x1.5-6g	M14x1.5-6g	M22x1.5-6g	M30x2-6g	M42x2-6g	M48x2-6g	M72x3-6g	M80x3-6g	M100x6-6g	M110x6-6g
I ₂	20	20	30	39	50	60	80	80	108	127



K direction



Screw head type

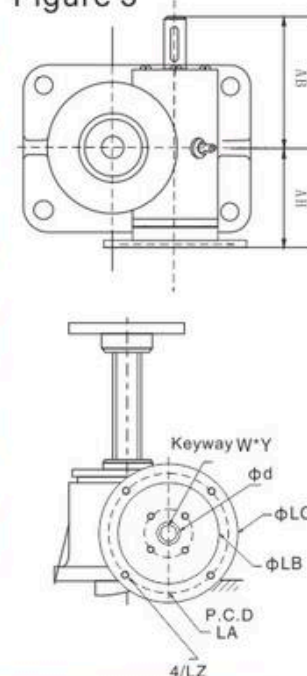


3.3 Direct connection of motor

When choosing a direct connection, caution should be exercised due to the limitations of the input motor.

Model	2.5T	5T	10T/15T	20T	25T	35T
AB	95	114	140	161	177	215
AH	87	95	125	135	157	168
LA	130	165	165	215	215	215
LB	110	130	130	180	180	180
LC	160	200	200	250	250	250
LZ	M8	M10	M10	M12	M12	M12
Direct connection power	0.25/0.37	0.75	1.1/1.5	3.0	4.0	4.0
d	14	19	24	28	28	28
WxY	5X2.3	6x2.8	8x3.3	8x3.3	8x3.3	8x3.3
Lift force KN	P	3.4	7.1	8.8	16.8	30.4
	M	8.2	12.3	18	31	52.8

Figure 3



4. Performance parameters

4.1 The main performance parameters of the elevator are shown in Table 3

Table 3

Model	SWL0.5	SWL1	SWL2.5	SWL5	SWL10/15	SWL20	SWL25	SWL35	SWL50	SWL100
Maximum lifting force kN	5	10	25	50	100/150	200	250	350	500	1000
Maximum tensile force kN	5	10	25	50	99	166	250	350	500	1000
Screw thread size	Tr16x4	Tr22x4	Tr30x6	Tr40x7	Tr58x12	Tr65x12	Tr90x16	Tr100x20	Tr120x20	Tr160x23
Worm gear ratio (P)	11:1	6:1	6:1	8:1	7 2/3:1	8:1	10 2/3:1	10 2/3:1	12.5:1	14.5:1
Worm rotates Tripmm per revolution (P)	0.364	0.8	1.0	0.875	1.565	1.5	1.5	1.5	1.6	1.586
Worm gear ratio (M)	22:1	24:1	24:1	24:1	24:1	24:1	32:1	32:1	32:1	36:1
Worm rotates in Tripmm (M) per revolution	0.182	0.21	0.250	0.292	0.5	0.5	0.5	0.56	0.625	0.638
Worm torque N.m	—	—	See Tables 5-12							
The maximum elongation of the screw rod under tensile load is mm	600	700	1500	2000	2500	3000	3500	4000	5500	6500
Maximum elongation of the screw rod under lateral force load, mm	—	—	Refer to Figures 5-11							
Maximum elongation of screw under pressure load mm	—	—	Refer to Figures 12-17							
Maximum allowable power kW	0.37	0.43	1.45	2.59	3.47	4.02	5.38	13.6	13.9	28.5
Ordinary ratio (P) total efficiency %	—	—	23	21	23	21	19	18	15	13
Slow speed ratio (M) Total efficiency %	—	—	14	12	15	13	11	11	11	10
Lubricating oil quantity kg	0.01	0.04	0.1	0.25	0.5	0.75	1.1	1.9	2.2	2.5
Mass without Trip kg	1.75	3.9	7.3	16.2	25	36	70.5	87	420	1010
The weight of the screw rod per 100mm is kg	0.15	0.17	0.45	0.82	1.67	2.15	4.15	5.20	7.45	13.6

Note: 1. The maximum allowable power is a parameter under the conditions of an ambient temperature of 20℃, a working duration of 20%/h, and a worm gear speed of 1500r/min.
 2. The overall efficiency is a parameter under grease lubrication conditions.
 3. The working environment temperature is -20~+80 ℃.
 4. It can generally self lock in a stationary state.

5. Assembly type and structural type

Type 1

Structural screw moves axially



Assembly method A
The screw moves upwards



Assembly method B
The screw moves downwards

Type 2

Structural nut for axial movement



Assembly method A
Nut moves upwards



Assembly method B
Nut moves downwards

6. Selection of Elevators

The main selection parameters for elevators are: lifting load (KN), screw trip (mm), and lifting speed (m/min). Here are two options:

6.1 Selection Method 1 (for reference only):

Figures 12 to 17 show the relationship between the length of the lead screw and the ultimate load under the allowable bending moment. Based on the screw trip and lifting load, refer to Figures 13 to 17 to determine the required elevator model. According to the identified elevator model and lifting load, refer to Table 4 (which shows the allowed lifting speeds for various models under different lifting loads). If the found lifting speed does not meet the requirements, a larger elevator model must be selected until the requirements are met.

Example:

Given that the lifting load is F=20KN, the screw trip is 200mm, and the lifting speed is V=0.45m/min, try to find the required elevator.

Select elevator: Based on F=20KN, Trip200mm, Refer to Figure 13 and select SWL2.5 elevator. Refer to Table 4 for lifting speed V=0.3m/min, which does not meet the requirements. If choosing the SWL5 elevator, refer to Table 4 for the lifting speed V=0.53m/min, which meets the requirements, the SWL5 type elevator should be selected.

6.2 Selection Method 2:

Tables 5-13 show the allowable lifting speed, torque, and power for various types of screw drives, which are applicable under conditions of an ambient temperature of 20 ℃ and a working duration of 20%/h or 30%/10min; For parameters within the range of thick lines, if the elevator generates overheating during use, it should be avoided as much as possible, otherwise effective measures must be taken. Based on the lifting load and speed of the screw, calculate the driving power of the elevator according to the following formula, and then refer to Tables 5 to 12 to find the required elevator model.

Example:

Select based on the known conditions of Example 6.1

Step 1: Calculation of Lift Drive Power:

Drive power:

$$P = \frac{F_a \times v}{60 \eta}$$

In the formula: P - driving power, kW;

F_a - lifting force (or pulling force), KN;

V - lifting speed, m/min;

η - Total efficiency of transmission (see Table 3).

Drive torque:

$$M_t = 9550 \times \frac{P}{n}$$

 In the formula: M_t - driving torque, N.m;

P - driving power, Kw;

n - rotational speed, r/rpm

$$\text{According to the formula: driving power } P = \frac{20 \times 0.45}{60 \times 0.21} = 0.714$$

Step 2: Check Table 5. When the worm gear is at 500r/min, the lifting speed is 0.56m/min, and the lifting load is 20KN, the allowable power is 0.72KW, which is not selected within the range of thick lines.

Step 3: Check Table 6. When the worm gear is at 750r/min, the lifting speed is 0.656m/min, and the lifting load is 20KN, the allowable power is 1.0KW, which meets the requirements. SWL5 type elevator should be selected.

Table 4. Boosting Force and Boosting Speed Table

Model	Boosting power (KN)	Normal speed ratio		Slow speed ratio	
		Increase speed m/min	Worm speed r/min	Increase speed m/min	Worm speed r/min
SWL2.5	25	<0.05	<50	0.0125	50
	20	0.3	300	0.15	600
	15	0.5	500	0.188	750
	10	0.75	750	0.25	1000
	5	1.5	1500	0.45	1800
SWL5	50	0.044	50	0.0146	50
	40	0.264	300	0.175	600
	30	0.264	300	0.219	750
	20	0.526	600	0.292	1000
	10	0.876	1000	0.525	1800
	5	1.575	1800	0.525	1800
SWL10	100	0.288	200	0.15	300
	75	0.432	300	0.25	500
	50	0.432	300	0.375	750
	35	0.864	600	0.90	1800
	20	1.44	1000	0.90	1800
	10	2.592	1800	0.90	1800
SWL15	150	0.072	50	0.025	1800
	100	0.288	200	0.15	50
	80	0.288	200	0.25	300
	60	0.432	300	0.30	500
	40	0.720	500	0.50	600
	20	1.44	1000	0.90	1000
SWL20	10	2.592	1800	0.90	1800
	200	0.15	100	0.10	200
	160	0.15	100	0.15	300
	120	0.30	200	0.15	300
	100	0.30	200	0.25	500
	75	0.45	300	0.375	750
	50	0.75	500	0.50	1000
	25	1.50	1000	0.90	1800

SWL25	250	0.075	50	0.025	50
	200	0.15	100	0.10	200
	160	0.15	100	0.15	300
	130	0.30	200	0.15	300
	100	0.45	300	0.25	500
	75	0.45	300	0.30	600
	50	0.90	600	0.50	1000
SWL35	350	0.094	50	0.0313	50
	300	0.104	100	0.125	200
	250	0.208	100	0.188	300
	200	0.416	200	0.188	300
	150	0.624	300	0.313	500
	100	0.624	300	0.47	750
	50	1.248	600	0.626	1000
SWL50	500	<0.08	<50	<0.03	<50
	450	0.08	50	0.03	50
	400	0.16	100	0.06	100
	300	0.24	150	0.188	300
	200	0.48	300	0.25	400
	100	0.8	500	0.625	1000
	1000	<0.08	<50	<0.032	<50
SWL100	900	0.159	50	0.032	50
	800	0.238	100	0.064	100
	600	0.317	150	0.096	150
	400	0.635	200	0.192	300
	200	0.104	400	0.639	1000

Table 5 (SWL2.5) (QWL2.5)

Worm speed n r/min	Lifting speed V m/min		Lift force KN																											
			25				20				15				10				5				2.5				1			
			P		M		P		M		P		M		P		M		P		M		P		M					
	P	M	N.m	kW	N.m	kW	N.m	kW	N.m	kW	N.m	kW	N.m	kW	N.m	kW	N.m	kW	N.m	kW	N.m	kW	N.m	kW	N.m	kW				
1500	1.500	0.375	18	2.7	7.1	1.2	14	2.2	5.7	0.89	11	1.7	4.3	0.67	6.9	1.10	2.9	0.45	3.5	0.54	1.4	0.22	1.7	0.27	0.71	0.11	0.7	0.11	0.28	0.05
1000	1.000	0.188	18	1.8	7.1	0.74	14	1.5	5.7	0.60	11	1.1	4.3	0.45	6.9	0.72	2.9	0.30	3.5	0.36	1.4	0.15	1.7	0.18	0.71	0.07	0.7	0.07	0.28	0.05
750	0.750	0.250	18	1.4	7.1	0.56	14	1.1	5.7	0.45	11	0.82	4.3	0.33	6.9	0.54	2.9	0.22	3.5	0.27	1.4	0.11	1.7	0.14	0.71	0.06	0.7	0.05	0.28	0.05
500	0.500	0.125	18	0.91	7.1	0.37	14	0.72	5.7	0.30	11	0.54	4.3	0.22	6.9	0.36	2.9	0.15	3.5	0.18	1.4	0.07	1.7	0.09	0.71	0.05	0.7	0.05	0.28	0.05
300	0.300	0.075	18	0.54	7.1	0.22	14	0.43	5.7	0.18	11	0.33	4.3	0.13	6.9	0.22	2.9	0.09	3.5	0.11	1.4	0.05	1.7	0.05	0.71	0.05	0.7	0.05	0.28	0.05
200	0.200	0.050	18	0.36	7.1	0.15	14	0.29	5.7	0.12	11	0.22	4.3	0.09	6.9	0.14	2.9	0.06	3.5	0.07	1.4	0.05	1.7	0.05	0.71	0.05	0.7	0.05	0.28	0.05
100	0.100	0.025	18	0.18	7.1	0.07	14	0.14	5.7	0.06	11	0.11	4.3	0.05	6.9	0.07	2.9	0.05	3.5	0.05	1.4	0.05	1.7	0.05	0.71	0.05	0.7	0.05	0.28	0.05
0	0.050	0.013	18	0.09	7.1	0.05	14	0.07	5.7	0.05	11	0.05	4.3	0.05	6.9	0.05	2.9	0.05	3.5	0.05	1.4	0.05	1.7	0.05	0.71	0.05	0.7	0.05	0.28	0.05

Table 6 (SWL5) (QWL5)

Worm speed n r/min	Lifting speed V m/min		Lift force KN															
			50		40		30		20		10		5		2.5			
			P	M	P	M	P	M	P	M	P	M	P	M	P	M	P	M
	P	M	N.m	kW	N.m	kW	N.m	kW	N.m	kW	N.m	kW	N.m	kW	N.m	kW	N.m	kW
1500	1.313	0.438	33.1	5.2	19.3	3.0	26.7	4.2	15.5	2.4	19.7	3.1	11.6	1.8	13.4	2.1	7.7	1.2
1000	0.875	0.292	33.1	3.5	19.3	2.0	26.7	1.8	15.5	1.6	19.7	2.1	11.6	1.2	13.4	1.4	7.7	0.8
750	0.656	0.219	33.1	2.6	19.3	1.5	26.7	2.1	15.5	1.2	19.7	1.6	11.6	0.9	13.4	1.0	7.7	0.6
500	0.437	0.146	33.1	1.7	19.3	1.0	26.7	1.4	15.5	0.8	19.7	1.0	11.6	0.6	13.4	0.69	7.7	0.4
300	0.263	0.088	33.1	1.0	19.3	0.6	26.7	0.83	15.5	0.5	19.7	0.63	11.6	0.4	13.4	0.42	7.7	0.2
200	0.175	0.058	33.1	0.7	19.3	0.4	26.7	0.55	15.5	0.3	19.7	0.41	11.6	0.2	13.4	0.27	7.7	0.2
100	0.088	0.029	33.1	0.35	19.3	0.2	26.7	0.37	15.5	0.2	19.7	0.21	11.6	0.1	13.4	0.14	7.7	0.1
50	0.044	0.015	33.1	0.17	19.3	0.1	26.7	0.14	15.5	0.1	19.7	0.10	11.6	0.1	13.4	0.1	7.7	0.1

Table 7 (SWL10/15) (QWL10/15)

Worm speed n r/min	Lifting speed V m/min		Lift force KN													
			100		80		60		40		20		10		5	
			P	M	P	M	P	M	P	M	P	M	P	M	P	M
	P	M	N.m	kW	N.m	kW	N.m	kW	N.m	kW	N.m	kW	N.m	kW	N.m	kW
1500	2.348	0.750	108	17	53	8.3	87	14	43	6.7	65	11	32	5.0	44	6.8
1000	1.565	0.500	108	12	53	5.6	87	9.1	43	4.4	65	6.8	32	3.3	44	4.5
750	1.174	0.375	108	8.5	53	4.2	87	6.8	43	3.3	65	5.1	32	2.5	44	3.4
500	0.783	0.250	108	5.7	53	2.8	87	4.5	43	2.2	65	3.4	32	1.7	44	2.3
300	0.470	0.150	108	3.4	53	1.7	87	2.7	43	1.3	65	2.0	32	1.0	44	1.4
200	0.313	0.100	108	2.3	53	1.1	87	1.8	43	0.9	65	1.4	32	0.7	44	0.9
100	0.157	0.050	108	1.1	53	0.6	87	0.9	43	0.4	65	0.7	32	0.3	44	0.5
50	0.078	0.025	108	0.6	53	0.3	87	0.5	43	0.2	65	0.3	32	0.2	44	0.2

Table 8 (SWL20) (QWL20)

Worm speed n r/min	Lifting speed V m/min		Lift force KN													
			200		160		120		100		75		50		25	
			P	M	P	M	P	M	P	M	P	M	P	M	P	M
	P	M	N.m	kW	N.m	kW	N.m	kW	N.m	kW	N.m	kW	N.m	kW	N.m	kW
1500	2.250	0.750	228	36	123	20	182	29	98	16	137	22	74	12	114	18
1000	1.500	0.500	228	24	123	13	182	19	98	11	137	15	74	7.7	114	12
750	1.125	0.375	228	18	123	9.6	182	15	98	7.7	137	11	74	5.8	114	8.9
500	0.750	0.250	228	12	123	6.4	182	9.5	98	5.1	137	7.1	74	3.8	114	6.0
300	0.450	0.150	228	7.1	123	3.8	182	5.7	98	3.1	137	4.3	74	2.3	114	3.6
200	0.300	0.100	228	4.8	123	2.6	182	3.8	98	2.1	137	2.9	74	1.5	114	2.4
100	0.150	0.050	228	2.4	123	1.3	182	1.9	98	1.0	137	1.4	74	0.8	114	1.2
50	0.075	0.025	228	1.2	123	0.6	182	1.0	98	0.5	137	0.7	74	0.4	114	0.6

Table 9 (SWL25) (QWL25)

Worm speed n r/min	Lifting speed V m/min		Lift force KN													
			250		200		160		120		100		75		50	
			P	M	P	M	P	M	P	M	P	M	P	M	P	M
	P	M	N.m	kW	N.m	kW	N.m	kW	N.m	kW	N.m	kW	N.m	kW	N.m	kW
1500	1.500	0.500	314	33	181	19	252	27	145	16	201	22	116	13	151	16
1000	1.125	0.375	314	25	181	15	252	20	145	12	201	16	116	9.1	151	12
750	0.750	0.250	314	17	181	9.5	252	14	145	7.6	201	11	116	6.1	151	7.9
500	0.600	0.200	314	14	181	7.6	252	11	145	6.1	201	8.4	116	4.8	151	6.3
300	0.450	0.150	314	9.9	181	5.7	252	7.9	145	4.5	201	6.3	116	3.6	151	4.7
200	0.300	0.100	314	6.6	181	3.8	252	5.3	145	3.0	201	4.2	116	2.4	151	3.2
100	0.150	0.050	314	3.3	181	1.9	252	2.6	145	1.5	201	2.1	116	1.2	151	1.6
50	0.075	0.025	314	1.6	181	0.9	252	1.3	145	0.8	201	1.1	116	0.6	151	0.8

Table 10 (SWL35)

Worm speed n r/min	Lifting speed V m/min		Lift force KN													
			350		300		250		200		150		100		50	
			P	M	P	M	P	M	P	M	P	M	P	M	P	M
	P	M	N.m	kW	N.m	kW	N.m	kW	N.m	kW	N.m	kW	N.m	kW	N.m	kW
1500	1.500	0.500	464	49	253	27	398	42	217	23	332	35	181	19	266	28
1000	1.125	0.375	464	37	253	20	398	32	217	17	332	26	181	15	266	21
750	0.750	0.250	464	25	253	14	398	21	217	12	332	18	181	9.5	266	14
500	0.600	0.200	464	20	253	11	398	17	217	9.1	332	14	181	7.6	266	12
300	0.450	0.150	464	15	253	8.0	398	13	217	6.8	332	11	181	5.7	266	8.3
200	0.300	0.100	464	9.8	253	5.3	398	8.4	217	4.5	332	7.0	181	3.8	266	5.6
100	0.150	0.050	464	4.9	253	2.7	398	4.2	217	2.3	332	3.5	181	1.9	266	2.8
50	0.075	0.025	464	2.5	253	1.3	398	2.1	217	1.1	332	1.8	181	0.9	266	1.4

Table 11 (SWL50)

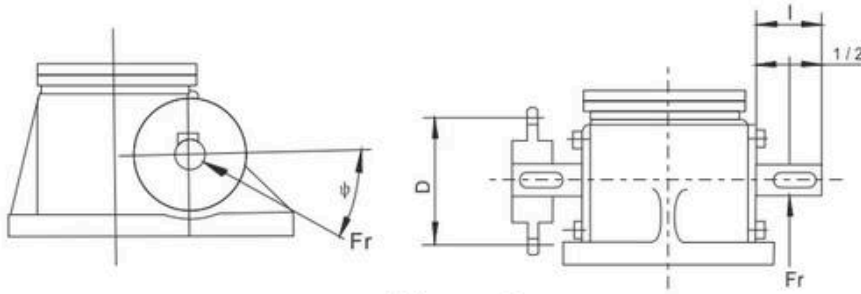
Worm speed n r/min	Lifting speed V m/min		Lift force KN													
			500		450		400		350		300		200		100	
			P	M	P	M	P	M	P	M	P	M	P	M	P	M
	P	M	N.m	kW	N.m	kW	N.m	kW	N.m	kW	N.m	kW	N.m	kW	N.m	kW
1500	1.6	0.625	848	88	448	47	764	80	401	42	679	71.1	353	37	594	62.2
1000	1.2	0.469	848	67	448	35.5	764	60	401	31	679	53.3	353	28.4	594	46.5
750	0.8	0.313	848	44	448	23.7	764	40	401	21	679	35.5	353	18.9	594	31
500	0.64	0.250	848	35	448	18.9	764	32	401	17	679	28.4	353	15.2	594	24.8
300	0.48	0.188	848	26	448	14.2	764	24	401	12.8	679	21.3	353	11.4	594	18.6
200	0.32	0.125	848	18	448	9.5	764	16	401	8.5	679	14.2	353	7.5	594	12.4
100	0.16	0.060	848	8.9	448	4.5	764	8	401	4	679	7.1	353	3.6	594	6.2
50	0.08	0.030	848	4.4	448	2.2	764	4	401	2	679	3.5	353	1.8	594	3.1

Table 12 (SWL100)

Worm speed n r/min	Lifting speed V m/min		Lift force KN																											
			1000				900				800				700				600				400				200			
	P		M		P		M		P		M		P		M		P		M		P		M		P		M			
	P	M	N.m	kW	N.m	kW	N.m	kW	N.m	kW	N.m	kW	N.m	kW	N.m	kW	N.m	kW	N.m	kW	N.m	kW	N.m	kW	N.m	kW	N.m	kW		
1500	1.586	0.639	1938	203	1012	106	1747	183	915	96	1554	162	813	85	1359	142	711	74	1165	122	611	64	776	81	406	42.6	388	40.6	203	21.3
1000	1.189	0.479	1938	152	1012	80	1747	137	915	72	1554	122	813	64	1359	106	711	55	1165	91	611	48	776	61	406	32	388	32	203	16
750	0.793	0.319	1938	102	1012	53	1747	91	915	48	1554	81	813	42	1359	71	711	37	1165	61	611	32	776	41	406	21	388	21	203	10.5
500	0.635	0.255	1938	81.4	1012	42.5	1747	73	915	38	1554	65	813	34	1359	56	711	29	1165	48	611	25.5	776	32	406	17	388	16	203	8.5
300	0.476	0.192	1938	61	1012	32	1747	55	915	28.8	1554	49	813	25	1359	42	711	22	1165	36	611	19.2	776	24	406	12.7	388	12	203	6.3
200	0.317	0.128	1938	40.6	1012	21	1747	36	915	19.2	1554	32.5	813	17	1359	28	711	15	1165	24	611	12.8	776	16	406	8.5	388	8	203	4.2
100	0.159	0.064	1938	20.3	1012	10.6	1747	18.3	915	9.6	1554	16	813	8.5	1359	14	711	7.5	1165	12	611	6.4	776	8	406	4.3	388	4	203	2.1
50	0.080	0.032	1938	10.2	1012	5.3	1747	9.1	915	4.8	1554	8	813	4.2	1359	7	711	3.8	1165	6	611	3.2	776	4	406	2.1	388	2	203	1.0

7. Allowable radial force for worm shaft extension

1. When the worm shaft extends upwards, the maximum allowable force F_r generated by the installation of gears, sprockets, or pulleys depends on the lifting force and model. The maximum allowable radial force and torque at $\frac{1}{2}$ are shown in Figure 4 and Table 13


Figure 4
Table 13

Model	F_{rmax} N	$Mt max$ N·m
SWL2.5/2.5M	350	18
SWL5/5M	750	44.2
SWL10/10M/15/15M	1000	108
SWL20/20M	1300	182
SWL25/25M	2000	314
SWL35/35M	2300	398

Note: The parameters in the table are calculated for $\psi = 30^\circ$ or 330° .

2. Minimum diameter of gear or pulley:

$$D_{min} = 19100 \times \frac{P}{F_{rmax} n} = \frac{2M_t}{F_{rmax}}$$

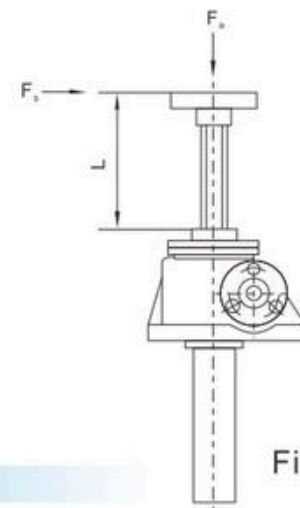
In the formula: D_{min} - the minimum diameter of the gear or pulley, m;

P - driving power, kW;

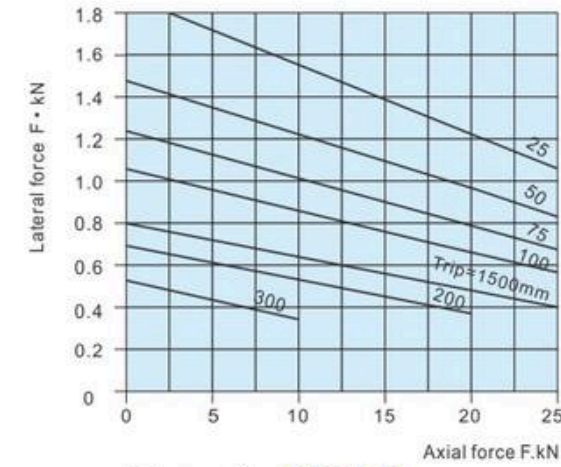
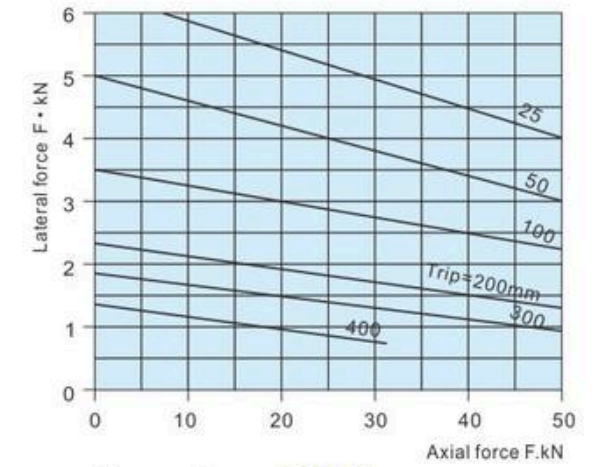
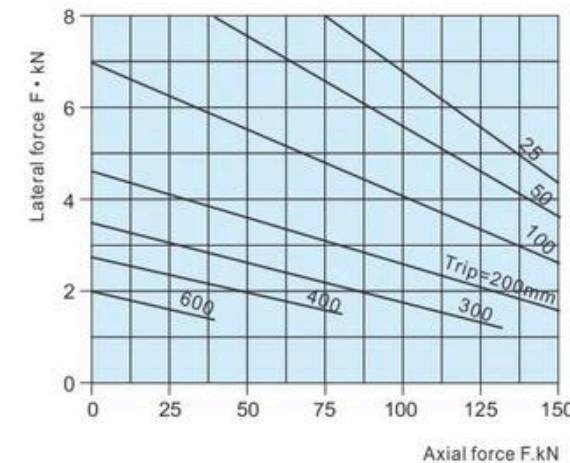
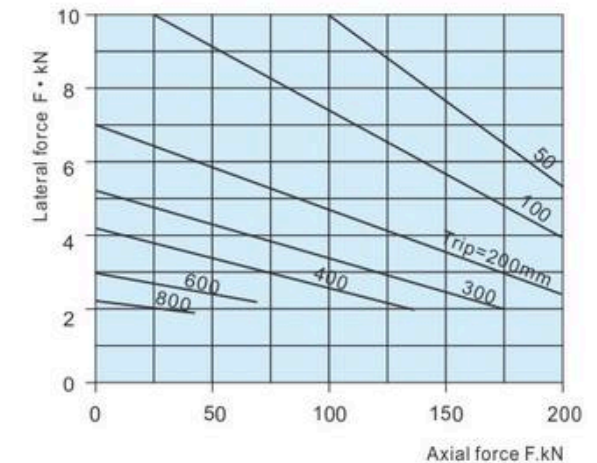
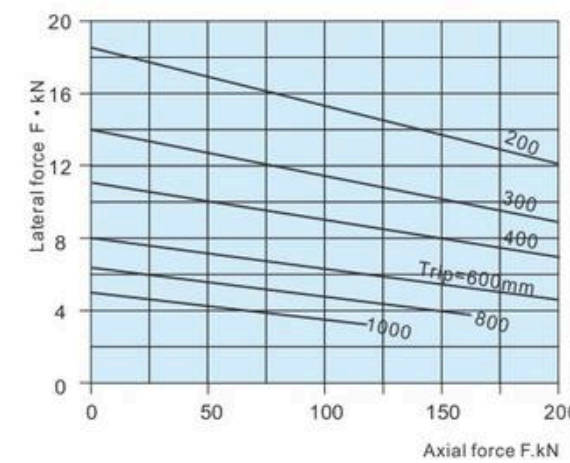
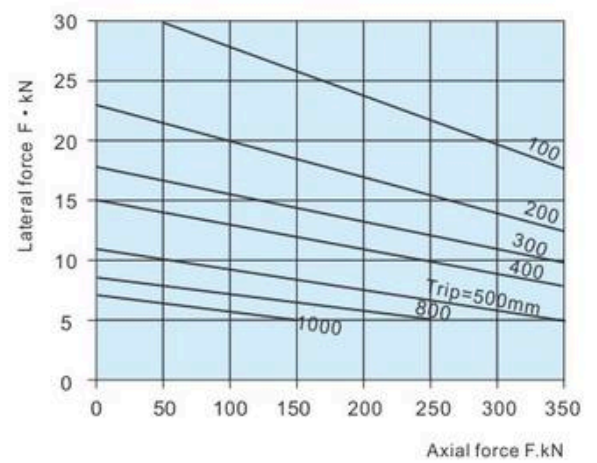
F_{rmax} - maximum radial force, N;

n - worm gear speed, r/min;

M_t - Drive torque, N·m.


Figure 5

8. The relationship between the allowable lateral force F_s and axial force F_a of the screw rod and Trip


Figure 6 SWL2.5

Figure 7 SWL5

Figure 8 SWL10/15

Figure 9 SWL20

Figure 10 SWL25

Figure 11 SWL35

9. Selection of Elevators

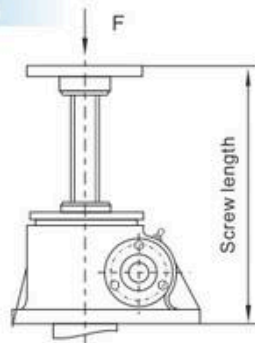
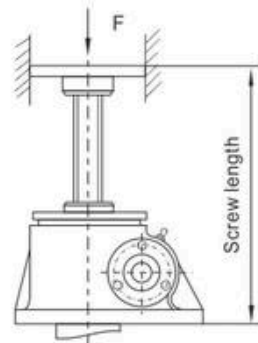


Figure 12

Euler load I



Euler load II

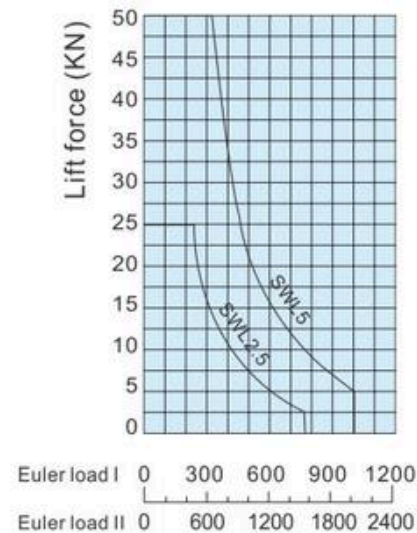


Figure 13 Screw length (mm)

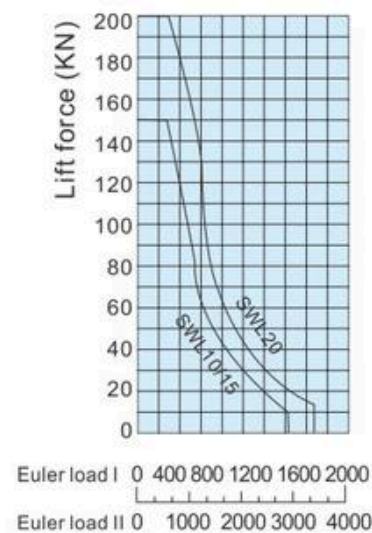


Figure 14 Screw length (mm)

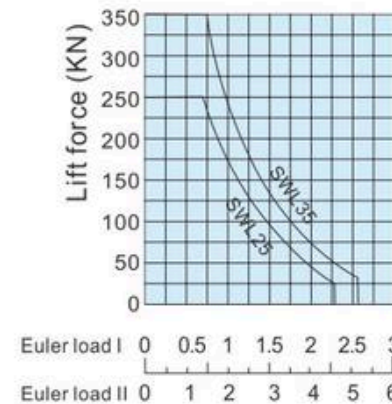


Figure 15 Screw length (mm)

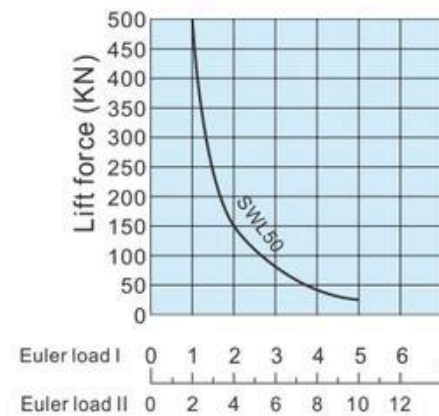


Figure 16 Screw length (mm)

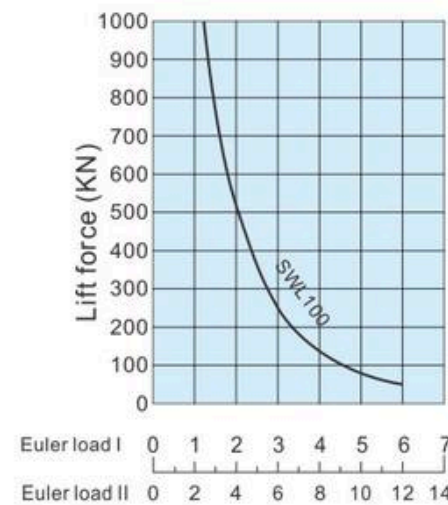


Figure 17 Screw length (mm)

- Explain:**
- (1) Using grease lubrication, replenish lubricant in a timely manner as the temperature increases.
 - (2) Lubricants should be added or replaced in a timely manner during work.
 - (3) The working environment temperature is between -20°C and +80°C.
 - (4) Special specifications can be customized.
 - (5) Any changes are subject to change without prior notice.

1. Brief

YQSS series screw elevator is the new type series product made by our factory according to international standards. Combining transmission and lift as a whole, it has the characteristic of unique in appearance, small in volume, light in weight, easy to operate and maintain, various input type and long lifespan, etc. Meanwhile they are widely used in test apparatus platform, medical operation table, extrusion of glass fiber film, adjustment of roller distance and pipe and sheet transmission position in steelworks, open and close of high temperature stove door and big door and window as well as used in other fields such as agriculture, water conservancy, culture, hygiene, chemical industry, construction, metallurgy, leather and welding equipment, etc.

2. Type, configuration and mark

2.1 Type

YQSS is normal type type, input is shaft input mode

YQSSD is motor flange type, means input is flange mode

2.2 Input mode

YQSS input mode: I type: right shaft input II type: left shaft input III type: double shaft input

YQSSD input mode: I type: right flange input II type: left flange input

III type: right monoblock double input IV type: left monoblock double input

2.3 Screw head form

Head form: R type (cylinder form) H type (flat head form) S type (thread form) T type (flange form)

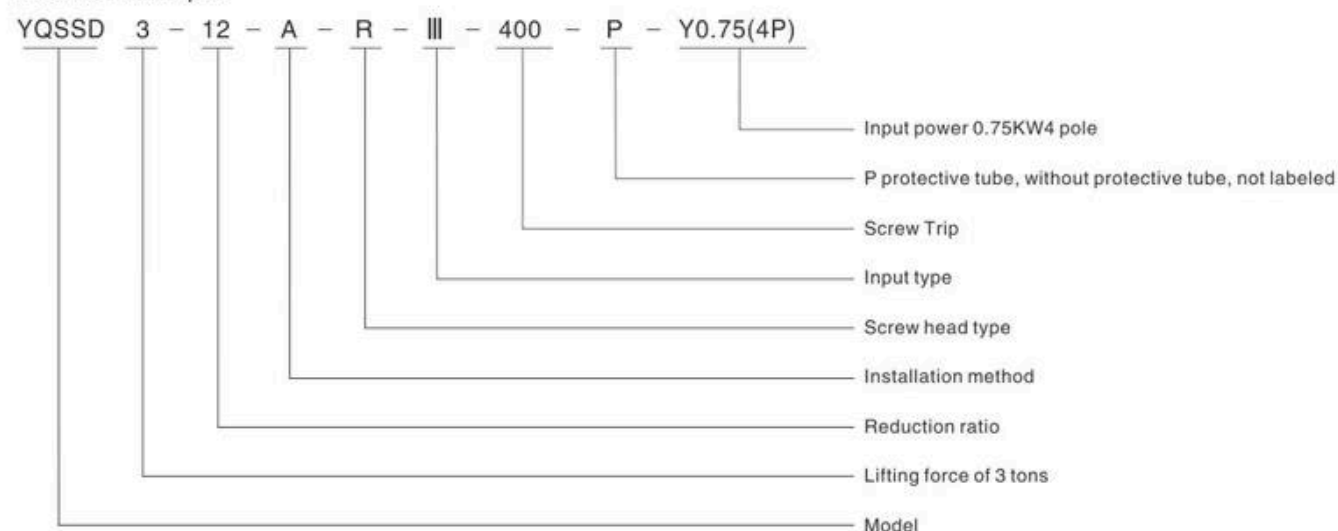
2.4 Installation type

- A type guide screw moves upwards with itself turns
- B type guide screw moves downwards with itself turns
- C type guide screw moves upwards without itself turns
- D type guide screw moves downwards without itself turns
- E type guide screw turns and nut moves upwards
- F type guide screw turns and nut moves downwards

2.5 Specification

According to lifting strength, it is: 2, 3, 5, 10, 15, 20, 30, 40, 50, 100T

2.6 Mark sample



3. The relationship between input power, load, and lifting speed

type capacity	lifting speed diameter pitch	worm gear reduction ratio	1800RPM Input shaft speed input shaft rotational speed			1500RPM Input shaft speed input shaft rotational speed			1200RPM Input shaft speed input shaft rotational speed			900RPM Input shaft speed input shaft rotational speed			600RPM Input shaft speed input shaft rotational speed			300RPM Input shaft speed input shaft rotational speed		
			Input power (KW)	Lifting load (Kg)	Lifting speed (mm/min)	Input power (KW)	Lifting load (Kg)	Lifting speed (mm/min)	Input power (KW)	Lifting load (Kg)	Lifting speed (mm/min)	Input power (KW)	Lifting load (Kg)	Lifting speed (mm/min)	Input power (KW)	Lifting load (Kg)	Lifting speed (mm/min)	Input power (KW)	Lifting load (Kg)	Lifting speed (mm/min)
YQSS 2T	φ25 P=5	1/5	0.70	500	1800	0.65	550	1500	0.65	700	1200	0.65	900	900	0.47	1000	600	0.38	100	300
		1/10	0.38	500	900	0.38	550	750	0.38	700	600	0.38	750	450	0.38	1000	300	0.19	1350	1500
		1/20	0.38	600	450	0.38	700	375	0.38	900	300	0.38	1200	225	0.19	1350	150	0.19	1350	75
YQSS 3T	φ31 P=6	1/6	0.98	700	1800	0.94	800	1500	0.89	950	1200	0.92	1300	900	0.84	1800	600	0.42	1800	300
		1/12	0.67	950	900	0.65	1100	750	0.61	1300	600	0.58	1650	450	0.47	2000	300	0.38	2000	150
		1/24	0.38	950	450	0.38	1100	375	0.38	1300	300	0.38	1650	225	0.38	2000	150	0.19	2000	75
YQSS 5T	φ38 P=6	1/6	1.40	900	1800	1.29	1000	1500	1.25	1200	1200	1.16	1500	900	0.88	1700	600	0.54	2100	300
		1/12	1.10	1350	900	1.02	1500	750	0.98	1800	600	0.88	2150	450	0.59	2150	300	0.38	2500	150
		1/24	0.78	180	450	0.72	2000	375	0.69	2400	300	0.55	2550	225	0.42	2900	150	0.38	2850	75
YQSS 10T	φ44 P=8	1/8	2.13	1300	1800	1.98	1450	1500	1.86	1700	1200	1.73	2100	900	1.67	3050	600	1.31	4800	300
		1/16	1.13	1300	900	1.05	1450	750	0.98	1700	600	0.95	2200	450	0.88	3050	300	0.69	4800	150
		1/32	0.80	1750	450	0.75	1950	375	0.69	2250	300	0.64	2800	225	0.65	4100	150	0.56	6400	75
YQSS 15T	φ50 P=8	1/8	2.02	1300	1800	1.88	1450	1500	1.76	1700	1200	1.63	2100	900	1.58	3050	600	1.25	4800	300
		1/16	1.07	1300	900	0.99	1450	750	0.93	1700	600	0.90	2200	450	0.83	3050	300	0.65	4800	150
		1/32	0.76	1750	450	0.71	1950	375	0.65	2250	300	0.61	2800	225	0.59	4100	150	0.46	6400	75
YQSS 20T	φ65 P=10	1/10	2.68	1400	1800	2.43	1850	1500	2.26	1950	1200	2.13	2450	900	1.94	3350	600	1.42	4900	300
		1/20	1.43	1600	900	1.48	1850	750	1.38	2250	600	1.29	2800	450	1.19	3850	300	0.86	5600	150
		1/40	1.15	2400	450	1.18	2800	375	1.10	3350	300	1.08	4400	225	0.94	5750	150	0.69	8400	75
YQSS 30T	φ75 P=12	1/12	3.65	1850	1800	3.53	2150	1500	3.41	2600	1200	3.20	3250	900	2.96	4500	600	2.10	6400	300
		1/18	2.67	1900	1200	2.69	2300	1000	2.58	2750	800	2.46	3500	600	2.21	4700	400	1.57	6700	200
		1/36	1.67	2200	600	1.64	2600	500	1.61	3200	400	1.18	3900	300	1.37	5400	200	1.21	9600	100
YQSS 40T	φ80 P=12	1/12	4.17	1975	1800	4.04	2300	1500	3.83	2750	1200	3.83	3625	900	3.50	4975	600	2.49	7050	300
		1/18	3.22	2125	1200	3.22	2550	1000	3.05	3025	800	3.05	4025	600	2.75	5450	400	1.95	7725	200
		1/36	2.15	2625	600	2.09	3050	500	2.00	3650	400	2.00	4875	300	1.81	6600	200	1.41	10300	100
YQSS 50T	φ90 P=14	1/7	9.53	2100	3600	9.23	2450	3000	12.10	2850	2400	8.63	4000	1800	8.25	5450	1200	5.87	7750	600
		1/14	5.79	2350	1800	5.75	2800	1500	0.83	3300	1200	5.42	4550	900	5.09	6200	600	3.59	8750	300
		1/28	4.10	3050	900	3.92	3500	750	3.93	4100	600	3.68	5850	450	3.50	7800	300	2.46	11000	150
YQSS 100T	φ100 P=16	1/8	16.35	3500	3600	16.13	4000	3000	15.90	5400	2400	15.15	7100	1800	14.93	9850	1200	9.75	12950	600
		1/16	11.76	4300	1800	11.63	5400	1500	10.58	7200	1200	11.03	9450	900	9.68	11800	600	7.13	17350	300
		1/32	8.70	5500	900	9.6	6800	750	7.40	10000	600	7.58	14300	450	7.06	1575	300	5.84	26050	150

4. Calculation of screw lift Trip and screw length

			Trip stroke	S ttype shaft end		H ttype shaft end		R ttype shaft end		T ttype shaft end	
Type	Diam-eter	Pitch	Protector tube length	Body+CE+stroke= whole screw length	Whole length-CE =tooth length	Body+B+G+stroke= whole screw length	Whole length-B-G =tooth length	Body+B+stroke= whole screw length	Whole length-D =tooth length	Body+T+stroke= whole screw length	Whole length =tooth length
YQSS-2T	25	P=5	300+55=355	110+40+300=450	450-40=410	100+55+20+300=485	485-55-20=410	110+55+300=465	465-55=410	110+25+300=435	435-25=410
YQSS-3T	31	P=6	300+60=360	130+50+300=480	480-50=430	130+65+25+300=520	520-65-25=430	130+65+30=495	495-65=430	130+30+300=460	460-30=430
YQSS-5T	38	P=6	300+60=360	130+50+300=480	480-50=430	130+65+25+300=520	520-645-25=430	130+65+300=495	495-65=430	130+30+300=460	460-30=430
YQSS-10T	44	P=8	300+65=365	160+60+300=520	520-60=460	160+95+32+300=587	587-95-32=460	160+65+300=525	525-65=460	160+40+300=500	500-40=460
YQSS-15T	50	P=8	300+65=365	160+60+300=520	520-60=460	160+95+32+300=587	587-95-312=460	160+65+300=525	525-65=460	160+50+30=510	510-50=460
YQSS-20T	65	P=10	300+75=375	180+80+300=560	560-80=480	180+114+35+300=629	629-114-35=480	180+70+300=550	550-70=480	180+55+300=535	535-55=480
YQSS-30T	75	P=12		220+80+300=600	600-80=520	220+135+44+300=699	699-135-44=520	220+75+300=595	959-75=520	220+65+300=585	585-65=520
YQSS-40T	80	P=12		260+100+300=600	660-100=560	260+150+54+300=764	764-150-54=560	260+95+300=655	655-95=560	260+70+300=630	630-70=560
YQSS-50T	90	P=14		315+120+300=735	735-120=615	315+165+64+300=844	844-165-64=615	315+114+300=729	729-114=615	315+75+300=690	690-75=615
YQSS-100T	100	P=16		345+150+300=795	795-150=645	345+200+70+300=915	915-200-70=645	345+140+300=785	785-140=645	345+100+300=745	745-100=645

5. Allowable bending load value

Various models and load modes at the shaft end can be referred to in the following table or calculation formula for the length of the screw rod and the allowable bending load

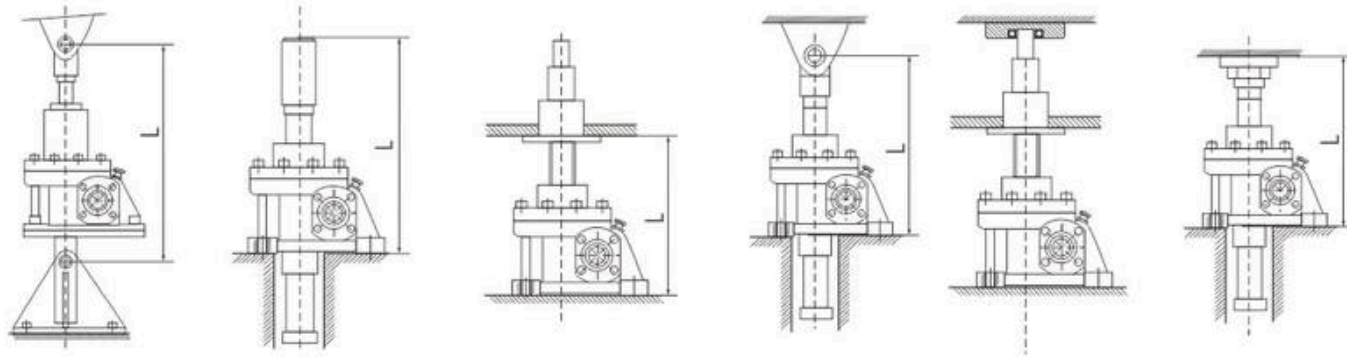
Calculation method:

$$P_{cr} = n \pi^2 E (K/L)^2 \cdot A \cdot a \quad 2.1 \times 10^2 \text{ kgf/mm}^2 \quad K = \frac{d_1}{4} \quad A = \frac{\pi (d_1)^2}{4}$$

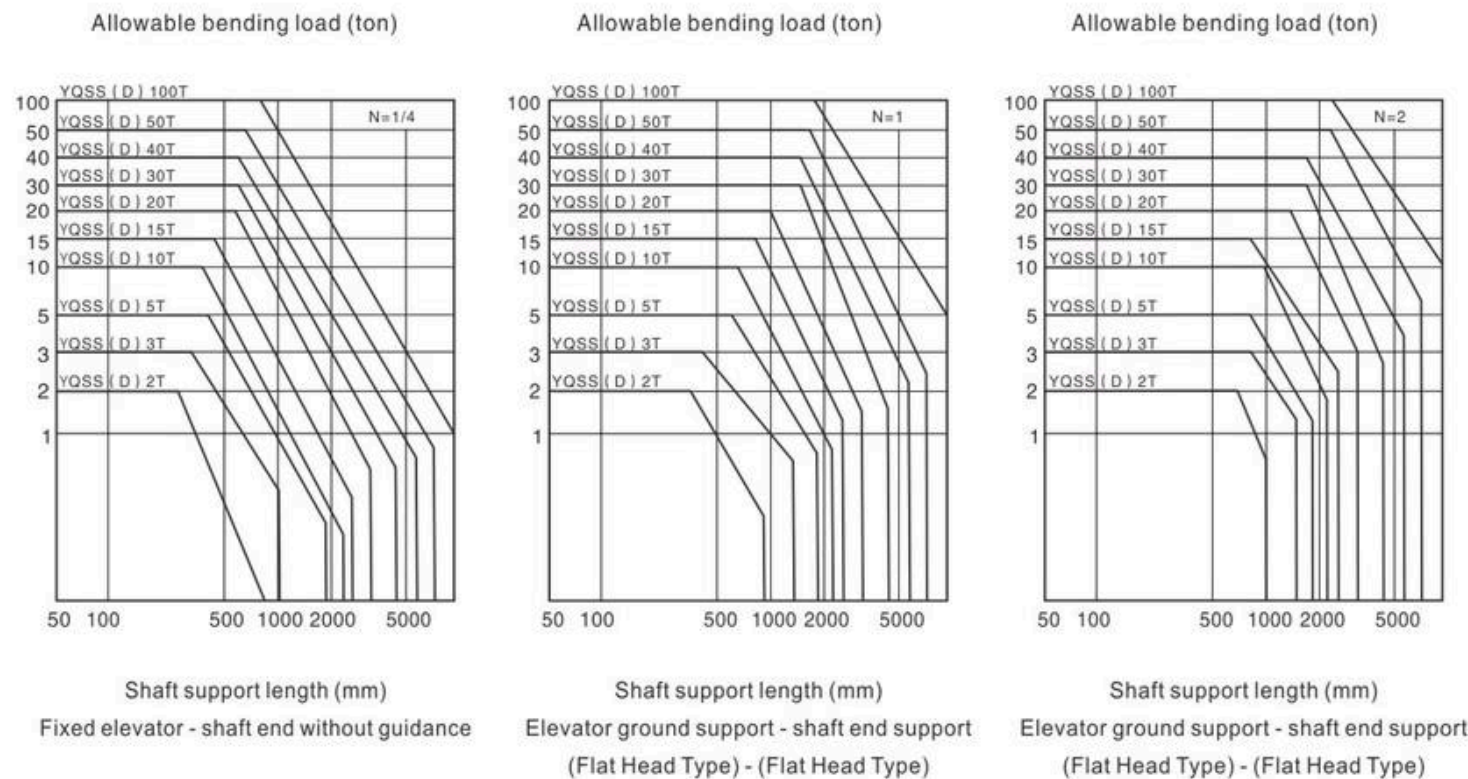
n: shaft end bearing factor
 E: longitudinal elastic modulus
 K: Min auxiliary radius
 d₁: thread root diameter
 L: shaft bearing length
 A: basal area of screw thread root diameter
 A: safety factor a=0.25
 screw root diameter(d₁)

Bottom diameter of screw (d₁)

YQSS 2 (19.8)	YQSS 3 (24.8)	YQSS 5 (31.5)	YQSS 10 (35.9)	YQSS 15 (42)
YQSS 20 (54.5)	YQSS 30 (62)	YQSS 40 (67)	YQSS 50 (74)	YQSS 100 (82)



Base bearing - shaft end bearing Base located - shaft end free Base located - shaft end located or supported



6. Installation and input methods

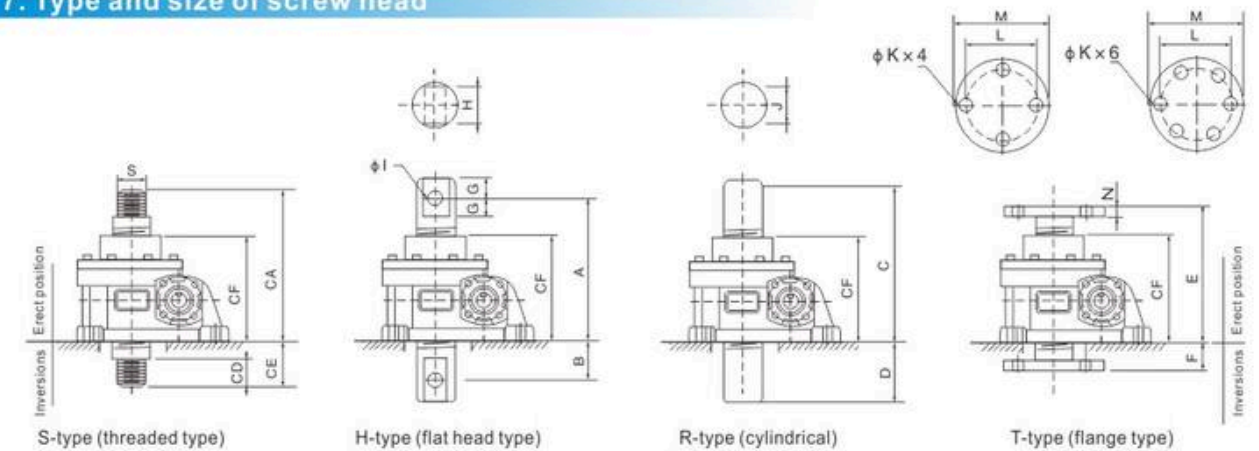
6.1 Installation type

The screw rotates up and down		The screw does not rotate up and down		The screw cannot rotate up or down, and the nut cannot rotate up or down	
A	B	C	D	E	F

6.2 Input mode

YQSS input mode			YQSSD input mode			
I right shaft input	II left shaft input	III double shaft input	I right flange input	II left flange input	III right flange monblock double input	IV left flange monblock double input

7. Type and size of screw head

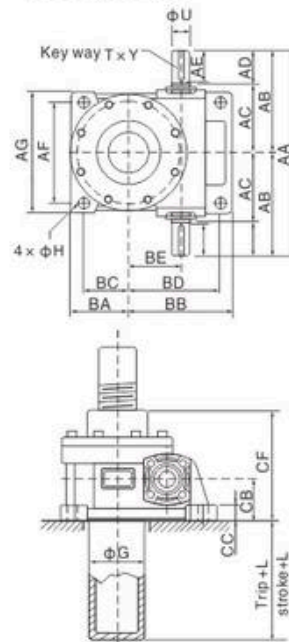


Model	CA	CD	CE	S	A	B	C	D	E	F	G	H	φI	J	φK	L	M	N
YQSS-2T	150	28	40	M16×1.5	165	55	165	55	135	25	20	16	12	25	10	70	88	10
YQSS-3T	180	32	50	M22×1.5	195	65	195	65	160	30	25	20	14	31	10	80	98	13
YQSS-5T	180	35	50	M30×1.5	195	65	195	65	160	30	25	25	16	38	12	90	114	13
YQSS-10T	220	40	60	M33×1.5	255	95	225	65	200	40	32	32	20	44	14	100	138	16
YQSS-15T	220	45	63	M39×1.5	255	95	225	65	210	50	32	36	24	50	18	110	148	20
YQSS-20T	260	55	80	M45×1.5	294	114	250	70	135	55	35	44	26	65	21	125	178	25
YQSS-30T	300	65	80	M60×2	255	135	295	75	185	65	44	56	35	75	21	140	188	28
YQSS-40T	360	70	100	M64×2	410	150	355	95	330	70	54	60	38	80	25	170	218	30
YQSS-50T	435	75	120	M76×2	480	165	429	114	390	75	64	70	45	90	27	200	248	32
YQSS-100T	495	100	150	M80×2	545	200	485	140	445	100	70	80	55	100	27	280	358	35

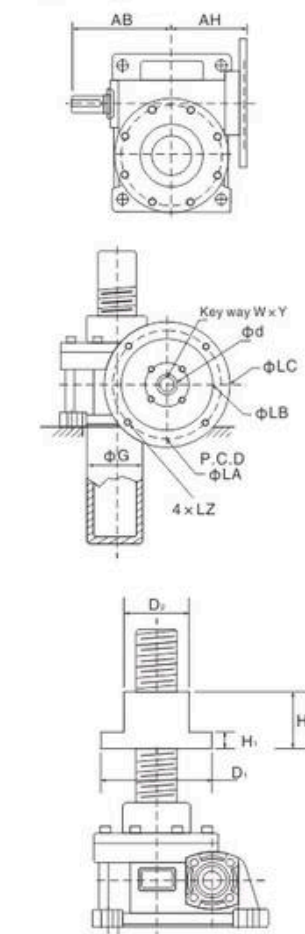
8. YQSS and YQSSD installation dimensions

Model	YQSS(D) -2t	YQSS(D) -3t	YQSS(D) -5t	YQSS(D) -10t	YQSS(D) -15t	YQSS(D) -20t	YQSS(D) -30t	YQSS(D) -40t	YQSS(D) -50t	YQSS(D) -100t
Trapezoidal thread Diameter pitch	25 P=5	31 P=6	38 P=6	44 P=8	50 P=8	65 P=10	75 P=12	80 P=12	90 P=14	100 P=16
Reduction ratio	1/5 1/10 1/20	1/6 1/12 1/24	1/6 1/12 1/24	1/8 1/16 1/32	1/8 1/16 1/32	1/10 1/20 1/40	1/12 1/18 1/36	1/12 1/18 1/36	1/7 1/14 1/28	1/8 1/16 1/32
AA	170	220	220	256	264	316	390	420	480	550
AB	85	110	110	128	132	158	195	210	240	275
AC	55	70	70	88	92	108	130	145	170	180
AD	30	40	40	40	40	50	65	65	70	95
AE	25	35	35	35	35	45	60	60	65	90
AF	66	80	90	100	110	140	190	210	240	250
AG	90	110	120	140	150	180	230	260	300	320
AH	—	74	82	96	96	120	150	165	194	218
BA	50	57	60	90	90	95	110	130	160	170
BB	85	98	110	140	140	155	200	225	255	285
BC	38	42	45	70	70	75	85	105	130	135
BD	73	83	95	120	120	135	175	200	225	250
BE	345	40	50	60	60	70	100	120	130	150
CB	40	50	50	60	60	70	85	100	120	125
CC	15	18	18	20	20	25	30	30	30	35
CF	110	130	130	160	160	180	220	260	315	345
G	38	48	60	60	76	88	—	—	—	—
U	15	18	18	25	25	28	32	35	45	50
T×V	5×3	6×3.5	6×3.5	8×4	8×4	8×4	10×5	10×5	14×5.5	14×5.5
L	+55	+60	+60	+60	+65	+75	—	—	—	—
LA	—	130	130	135	135	135	215	215	265	265
LB	—	110	110	130	130	130	180	180	230	230
LC	—	160	160	200	200	200	250	250	300	300
LZ	—	M8 P1.25	M8 P1.25	M10 P1.5	M10 P1.5	M10 P1.5	M12 P1.25	M12 P1.75	M12 P1.75	M12 P1.75
d W×Y Direct connection power	—	14 5×2.3 0.25/0.37	14 5×2.3 0.25/0.37	19 6×2.8 0.75	19 6×2.8 0.75	24 8×3.3 1.5	28 8×3.3 2.2	28 8×3.3 4	38 10×3.3 5.5	38 10×3.3 7.5
d W×Y Direct connection power	—	—	—	24 8×3.3 0.75	24 8×3.3 0.75	—	—	—	—	—
ΦH	12	12	14	18	18	18	22	22	22	27
D1	75	80	87	110	110	130	155	190	—	—
D2	45	50	55	65	70	90	110	120	—	—
H1	10	10	18	25	25	30	35	35	—	—
H2	40	40	60	65	75	100	120	140	—	—

YQSS type size



YQSSD type size


9. Visual diagrams and dimensions of YQSS (D) specifications

Model	Reduction ratio	Screw diameter	Screw pitch
YQSS-2T	1/5 1/10 1/20	Φ25	P=5
Double entry force (standard type) Rod end type and shortest distance relationship size S-type (threaded type) H-type (flat head type) R-type (cylindrical) T-shaped (Flange type)			

Model	Reduction ratio	Screw diameter	Screw pitch
YQSS-3T	1/6 1/12 1/24	Φ31	P=6
Double entry force (standard type) Rod end type and shortest distance relationship size S-type (threaded type) H-type (flat head type) R-type (cylindrical) T-shaped (Flange type)			

Note: The dimensions inside () are old dimensions.

Model	Reduction ratio	Screw diameter	Screw pitch
YQSS-5T	$\frac{1}{6} \frac{1}{12} \frac{1}{24}$	$\phi 38$	P=6

Double entry force (standard type)

Note: The dimensions inside () are old dimensions.

① Direct equation
Double entry on the right side

② Direct equation
Single entry on the right side

Rod end type and shortest distance relationship size

S-type (threaded type)

H-type (flat head type)

R-type (cylindrical)

T-shaped (Flange type)

Model	Reduction ratio	Screw diameter	Screw pitch
YQSS-15T	$\frac{1}{8} \frac{1}{16} \frac{1}{32}$	$\phi 50 \times 8$	P=8

Double entry force (standard type)

Note: The dimensions inside () are old dimensions.

① Direct equation
Double entry on the right side

② Direct equation
Single entry on the right side

Rod end type and shortest distance relationship size

S-type (threaded type)

H-type (flat head type)

R-type (cylindrical)

T-shaped (Flange type)

Model	Reduction ratio	Screw diameter	Screw pitch
YQSS-10T	$\frac{1}{8} \frac{1}{16} \frac{1}{32}$	$\phi 44$	P=8

Double entry force (standard type)

Note: The dimensions inside () are old dimensions.

① Direct equation
Double entry on the right side

② Direct equation
Single entry on the right side

Rod end type and shortest distance relationship size

S-type (threaded type)

H-type (flat head type)

R-type (cylindrical)

T-shaped (Flange type)

Model	Reduction ratio	Screw diameter	Screw pitch
YQSS-20T	$\frac{1}{10} \frac{1}{20} \frac{1}{40}$	$\phi 65$	P=10

Double entry force (standard type)

Note: The dimensions inside () are old dimensions.

① Direct equation
Double entry on the right side

② Direct equation
Single entry on the right side

Rod end type and shortest distance relationship size

S-type (threaded type)

H-type (flat head type)

R-type (cylindrical)

T-shaped (Flange type)

Model	Reduction ratio	Screw diameter	Screw pitch
YQSS-30T	$\frac{1}{12} \frac{1}{18} \frac{1}{36}$	$\phi 75^m_m$	P=12

Double entry force (standard type)

① Direct equation
Double entry on the right side

② Direct equation
Single entry on the right side

Rod end type and shortest distance relationship size

S-type (threaded type)

H-type (flat head type)

R-type (cylindrical)

T-shaped (Flange type)

Keyway 8*3.3
 $\phi 28$ (3HP)
 $\phi 250$
 $\phi 180$
P.C.D 215
M12-P1.75*4

Model	Reduction ratio	Screw diameter	Screw pitch
YQSS-40T	$\frac{1}{12} \frac{1}{18} \frac{1}{36}$	$\phi 80^m_m$	P=12

Double entry force (standard type)

① Direct equation
Double entry on the right side

② Direct equation
Single entry on the right side

Rod end type and shortest distance relationship size

S-type (threaded type)

H-type (flat head type)

R-type (cylindrical)

T-shaped (Flange type)

Keyway 8*3.3
 $\phi 28$ (5HP)
 $\phi 250$
 $\phi 180$
P.C.D 215
M12-P1.75

Model	Reduction ratio	Screw diameter	Screw pitch
YQSS-50T	$\frac{1}{7} \frac{1}{14} \frac{1}{28}$	$\phi 90^m_m$	P=14

Double entry force (standard type)

① Direct equation
Double entry on the right side

② Direct equation
Single entry on the right side

Rod end type and shortest distance relationship size

S-type (threaded type)

H-type (flat head type)

R-type (cylindrical)

T-shaped (Flange type)

Keyway 10*3.3
 $\phi 38$ (7 1/2 HP)
 $\phi 300$
 $\phi 230$
P.C.D 265
M16-P2.0

Model	Reduction ratio	Screw diameter	Screw pitch
YQSS-100T	$\frac{1}{8} \frac{1}{16} \frac{1}{32}$	$\phi 100^m_m$	P=16

Double entry force (standard type)

① Direct equation
Double entry on the right side

② Direct equation
Single entry on the right side

Rod end type and shortest distance relationship size

S-type (threaded type)

H-type (flat head type)

R-type (cylindrical)

T-shaped (Flange type)

Keyway 10*3.3
 $\phi 38$ (10HP)
 $\phi 300$
 $\phi 230$
P.C.D 265
M16-P2.0