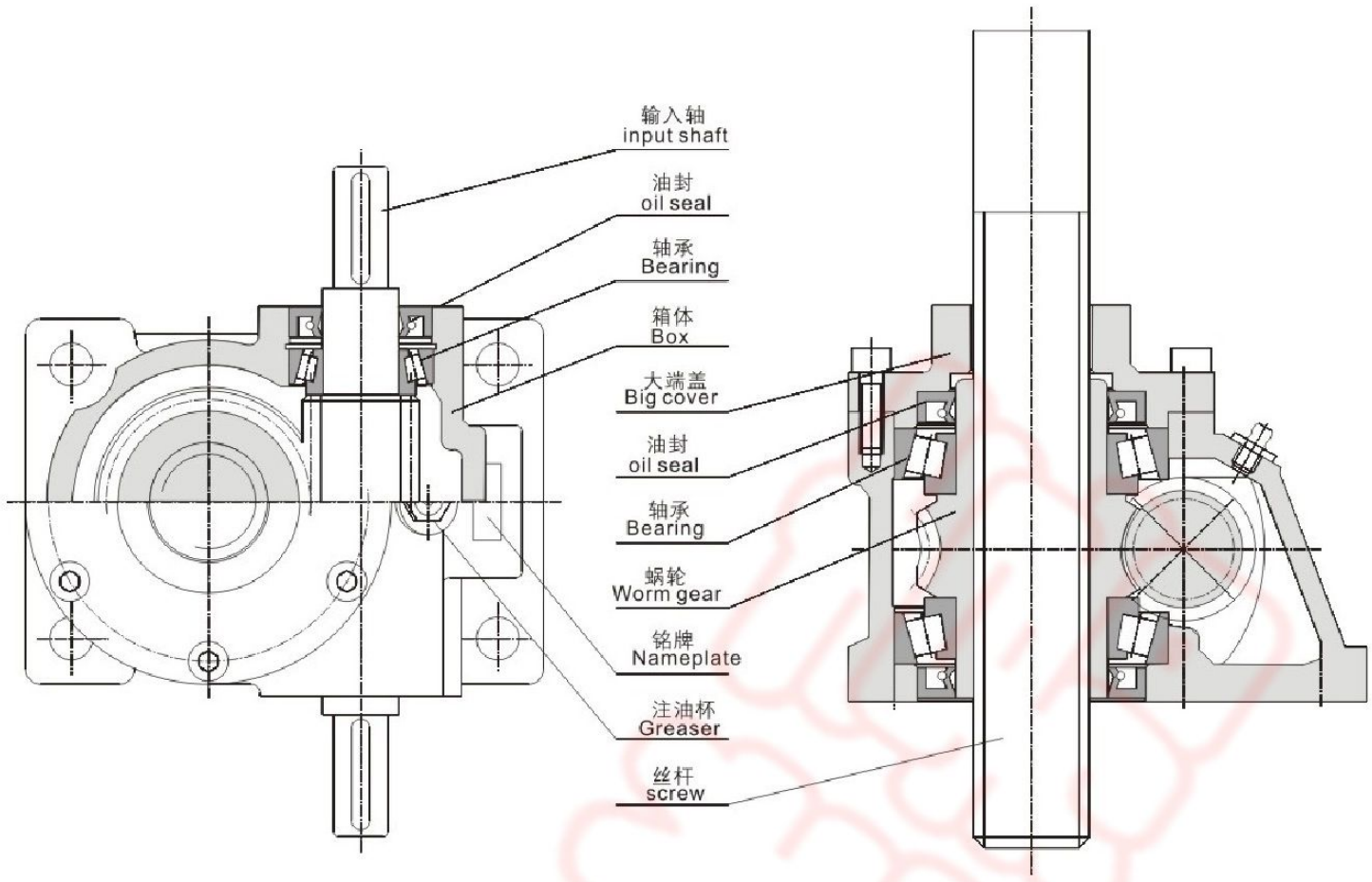
天津祥嘉

减速机选型手册

XIANGJIA

1.产品结构
1.Product structure



2.型号说明
2.Model Introduction

J	RSS	D	100	-	12	-	A	R	-	300	-	B	-	P
1	2	3	4		5		6	7		8		9		10

1
企业代码
J-- 杰牌控股
Enterprise code
J--JIE HOLDING GROUP

2
产品代码
RSS-- 蜗轮丝杆升降机
Products code
RSS -- worm gear linear actuator

3
输入轴联接方式
D-- 带电机法兰
无代码 -- 基本型
Connector of input shaft
D-with motor flange
Non-code-basic

4
规格用蜗轮副中心距表示100
Specification
Expressed by the center distance of a pair of Worm gear 100

5
传动比
12
Ratio
12

6
安装方式代码
Mounting Option code
A、B—基本型
C、D—止旋构造型
E、F—活动螺母构造型
详见“4.3安装方式”
A.B-- Basic Model
C.D-- Screw fluctuate without rotation
E.F-- Screw rotate without fluctuation
more information from 4.3 Mounting option

7
丝杆头部型式代码
Code of screw head
R 型 (圆柱式) R-Column type
H 型 (栓孔式) H-Bolt hole type
S 型 (螺纹式) S-Screw type
T 型 (顶板式) T-Coping type
详见“ 产品图片”
注：安装方式E、F时无此代码
Notes: Non-code-E.F mounting option

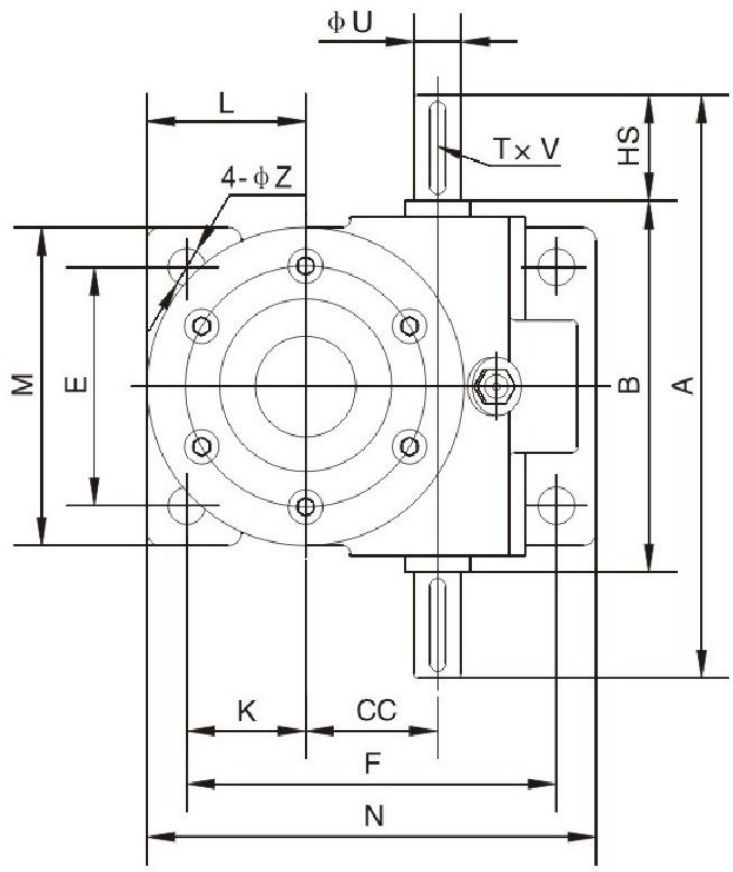
8
丝杆行程
300mm
Stroke of screw 300mm
共有100、200、300、400、500、600、800、1000mm 8种规格，根据使用情况选择，如需要其它长度行程，也可定做EF结构为TL尺寸
Total 8 species model:100.200.300.400.500.600.700.800.1000mm.choose according to using situation. If other model needed, canbe made to order The size of EF structure is TL

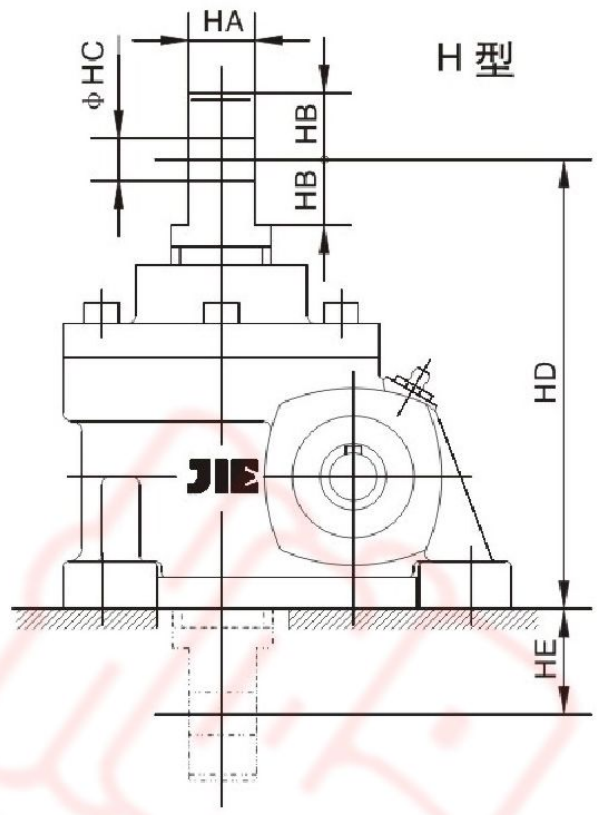
9
轴指向
shaft direction
JRSS系列共有A、B、C三种
JRSSD系列共有A、B、C、D四种
详见“轴指向表示”
JRSS series have A.B and C three species
JRSSD series have A. B. C and D four species

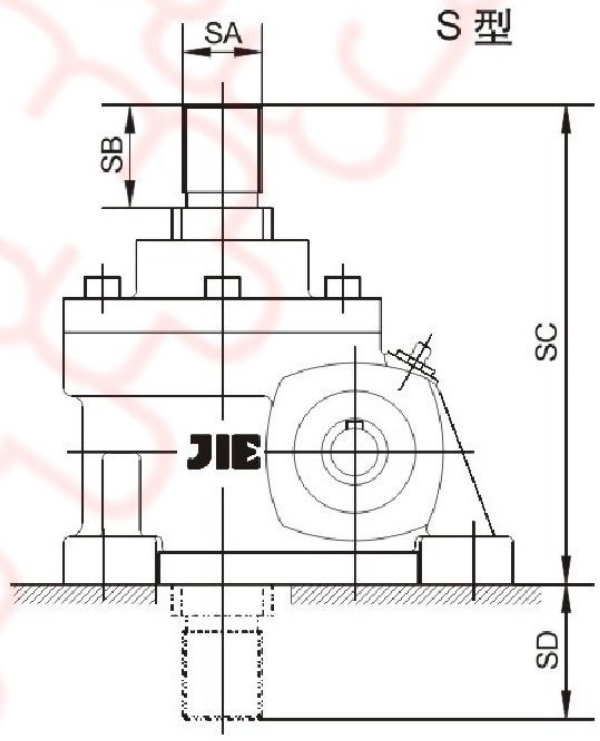
10
护管
safeguard pipe
P—带护管
P—With safeguard pipe
无代码—不带护管
Non-code-without safeguard pipe
注：安装方式E、F时无此代码
Notes: Non-code-E.F mounting option

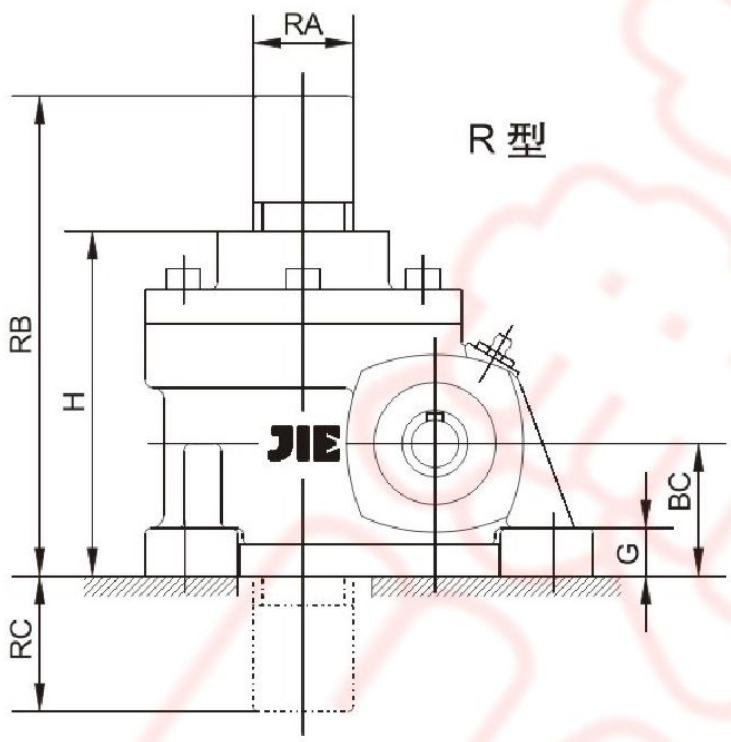
3. 安装尺寸
3. Installation Dimensions

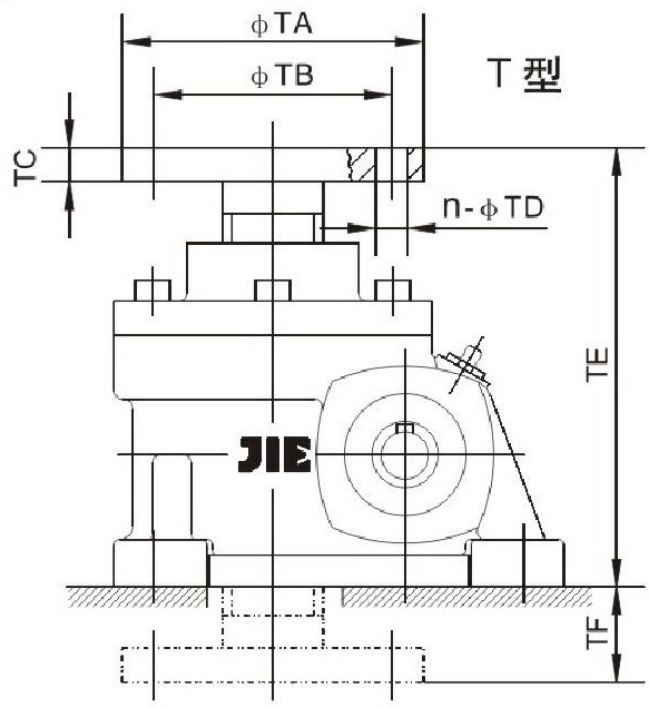
3.1 JRSS 安装尺寸
3.1 Installation Dimensions of JRSS



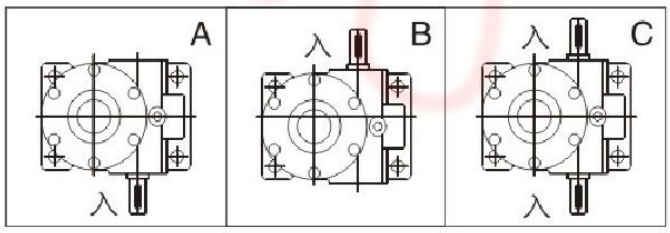






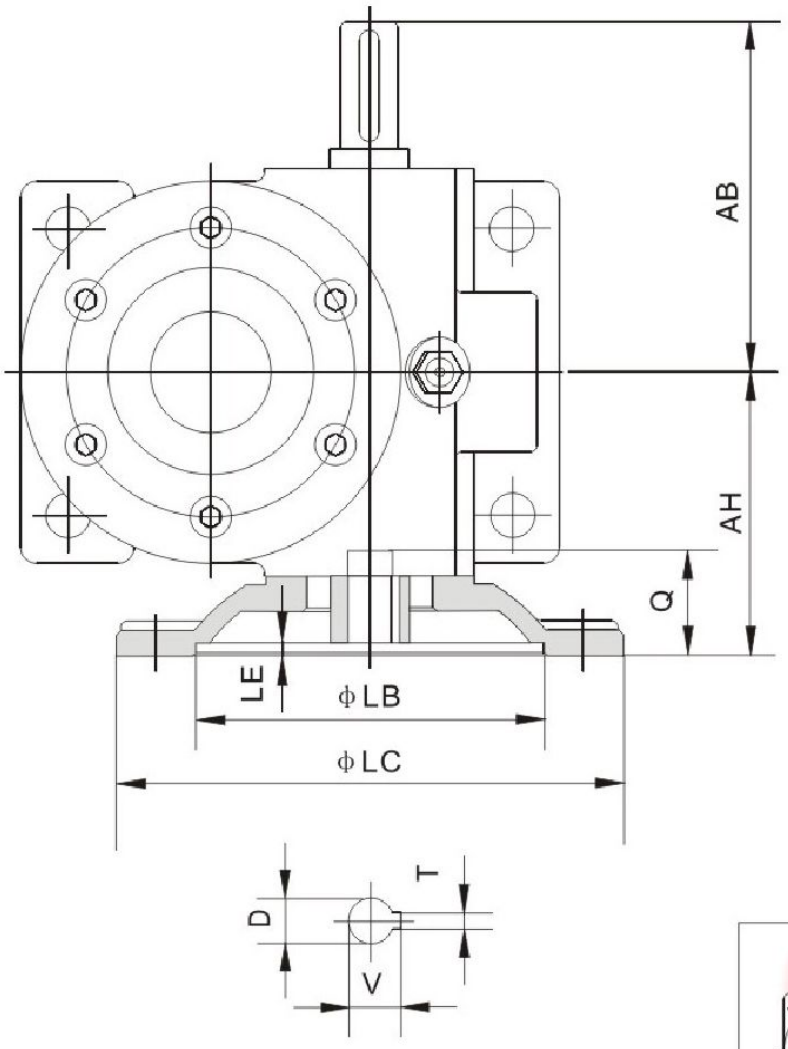


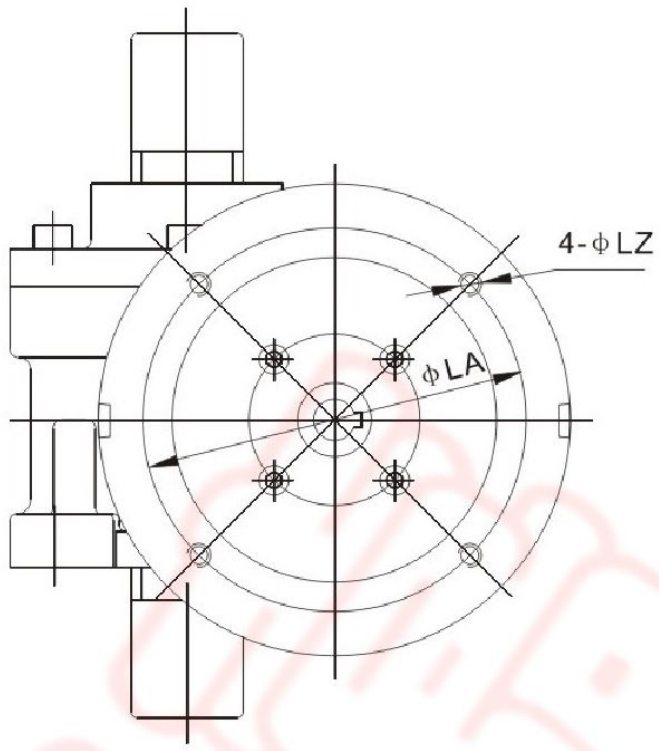
轴指向表示 SHAFT DIRECTION



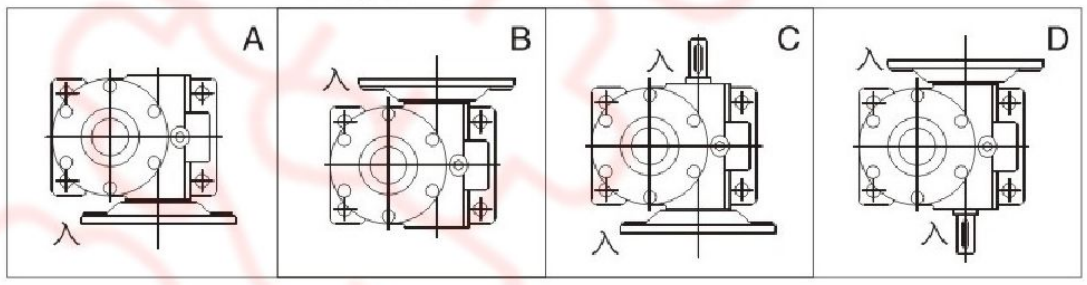
型号 规格 Model size	A B HS	E F Z	BC G H	CC K	Tr	L M N	U T×V	丝杆头部型式 Type of screw head						
								R 型	H 型		S 型		T 型	
								RA RB RC	HA HB HC	HD HE	SA	SB SC SD	TA TB TC	n-TD TE TF
JRSS35	170 110 30	66 111 12	40 15 110	35 38	Tr26×5	50 90 135	15 5×3	26 165 55	16 20 12	165 55	M16×1.5	28 150 40	88 70 10	4-Φ10 135 25
JRSS40	220 140 40	80 125 12	50 18 130	40 42	Tr32×6	57 110 155	18 6×3.5	32 195 65	20 25 14	195 65	M22×1.5	32 180 50	98 80 13	4-Φ10 160 30
JRSS50	220 140 40	90 140 14	50 18 130	50 45	Tr38×6	60 120 170	18 6 x 3.5	38 195 65	25 25 16	195 65	M30×1.5	35 180 50	114 90 13	4-Φ12 160 30
JRSS60	256 176 40	100 190 18	60 20 160	60 70	Tr46×8	90 140 230	25 8×4	46 225 65	32 32 20	255 95	M33×1.5	40 220 60	138 100 16	4-Φ14 200 40
JRSS60B	264 184 40	110 190 18	60 20 160	60 70	Tr52×8	90 150 230	25 8×4	52 225 65	36 32 24	255 95	M39×1.5	45 220 60	148 110 20	4-Φ18 210 50
JRSS70	316 216 50	140 210 18	70 25 180	70 75	Tr65×10	95 180 250	28 8×4	65 250 70	44 35 26	295 115	M45×1.5	55 260 80	178 125 25	4-Φ21 235 55
JRSS100	390 260 65	190 260 22	85 30 220	100 85	Tr75×12	110 230 310	32 10×5	75 295 75	56 44 35	355 135	M60×2	65 300 80	188 140 28	4-Φ21 285 65
JRSS120	420 290 65	210 305 22	100 30 260	120 105	Tr80×12	130 260 355	35 10×5	80 355 95	60 54 38	410 150	M64×2	70 360 100	218 170 30	4-Φ25 330 70
JRSS130	480 340 70	240 355 22	120 30 315	130 130	Tr90×14	160 300 415	45 14×5.5	90 430 115	70 64 45	480 165	M76×2	75 435 120	248 200 32	4-Φ27 390 75
JRSS150	550 360 95	250 385 27	125 35 345	150 135	Tr100×16	170 320 455	50 14×5.5	100 485 140	80 70 55	545 200	M90×2	100 495 150	358 280 35	6-Φ27 445 100

3.2 JRSSD 安装尺寸
3.2 Installation Dimensions of JRSSD



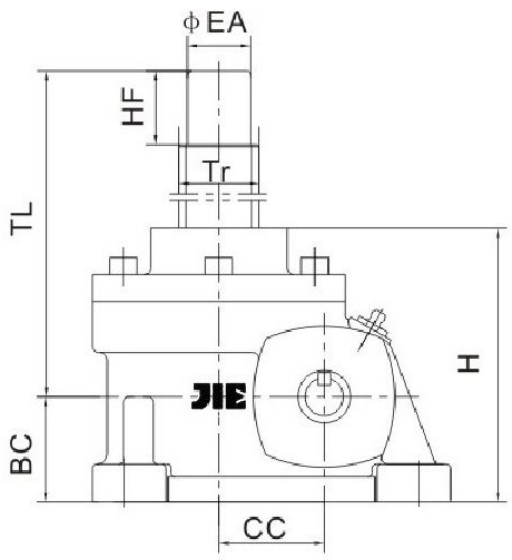


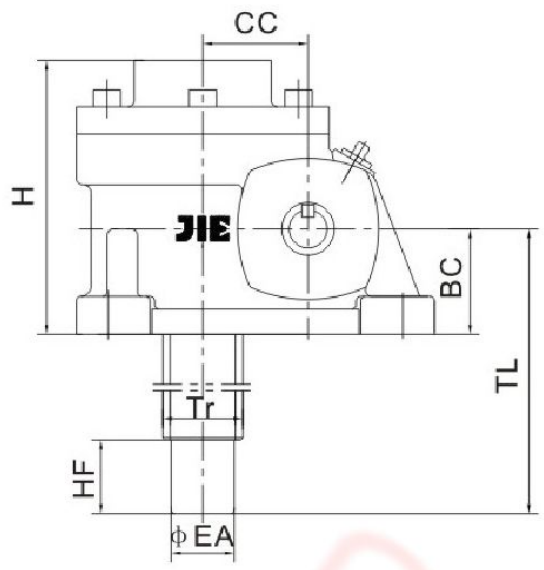
轴指向表示 SHAFT DIRECTION



型号规格 Model size	法兰规格 Flange size	AB	AH	LA	LB	LC	LE	LZ	D	Q	T×V
JRSSD40	71B5	110	72	130	110	160	4	M8	ϕ14	34	5×16.3
JRSSD50	71B5	110	80	130	110	160	4	M8	ϕ14	34	5×16.3
JRSSD60	80B5	128	100	165	130	200	4.5	M10	ϕ19	43	6×21.8
JRSSD60B	80B5	132	100	165	130	200	4.5	M10	ϕ19	43	6×21.8
JRSSD70	90B5	158	118	165	130	200	4.5	M10	ϕ24	52	8×27.3
JRSSD100	100/112B5	195	150	215	180	250	5	M12	ϕ28	63	8×31.3
JRSSD120	100/112B5	210	165	215	180	250	5	M12	ϕ28	63	8×31.3
JRSSD130	132B5	240	194	265	230	300	5	M12	ϕ38	83	10×41.3
JRSSD150	132B5	275	218	265	230	300	5	M12	ϕ38	83	10×41.3

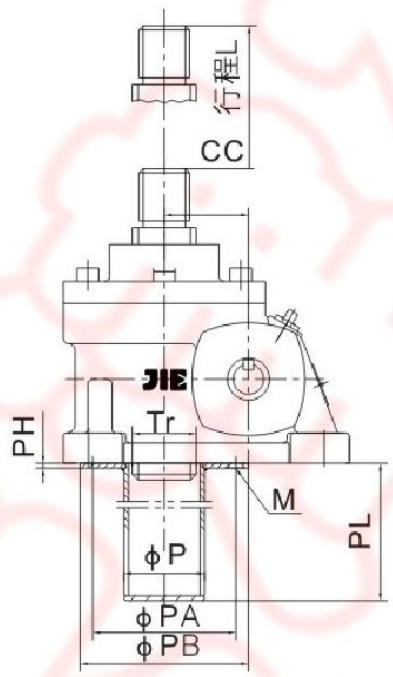
3.3 JRSS-EF安装尺寸
3.3 JRSS-EF installation size

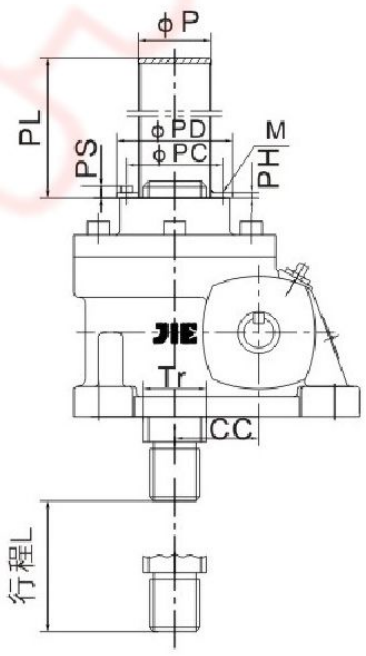




规格型号 Model size \ 尺寸size	CC	Tr	H	BC	HF	EA	丝杆总长 screw length	螺纹有效长度 effective thread length
JRSS35	35	Tr26x5	110	40	28	20	TL+21	TL-98
JRSS40	40	Tr32x6	130	50	32	25	TL+30	TL-112
JRSS50	50	Tr38x6	130	50	35	30	TL+26	TL-115
JRSS60	60	Tr46x8	160	60	40	35	TL+30	TL-140
JRSS60B	60	Tr52x8	160	60	45	40	TL+30	TL-145
JRSS70	70	Tr65x10	180	70	55	50	TL+33	TL-165
JRSS100	100	Tr75x12	220	85	65	60	TL+45	TL-200
JRSS120	120	Tr80x12	260	100	70	65	TL+49	TL-230
JRSS130	130	Tr90x14	315	120	75	70	TL+63.5	TL-270
JRSS150	150	Tr100x16	345	125	100	80	TL+61	TL-320

3.4 护管安装尺寸
3.4 protect pipe installation size





规格型号 Model size \ 尺寸size	CC	Tr	ϕP	ϕPA	ϕPB	ϕPC	ϕPD	PH	PS	PL	M
JRSS35	35	Tr26x5	30	62	74	38.5	48	3	7	L+55	M4
JRSS40	40	Tr32x6	36	80	92	47	58	3	8	L+60	M5
JRSS50	50	Tr38x6	48	85	100	55	67	3	8	L+60	M5
JRSS60	60	Tr46x8	52.5	104	120	63.5	77	3	9	L+65	M6
JRSS60B	60	Tr52x8	60	115	130	72	86	3	9	L+65	M6
JRSS70	70	Tr65x10	72.5	132	148	83	96	3	9	L+75	M6
JRSS100	100	Tr75x12	86	160	180	98	112	3	9	L+85	M6
JRSS120	120	Tr80x12	96	160	180	116	130	4	9	L+85	M6
JRSS130	130	Tr90x14	102	160	180	120	142	6	14	L+110	M8
JRSS150	150	Tr100x16	115	180	200	135	160	6	14	L+130	M8

4. 选型方法

4.1 选型要素

4.1.1 总当量载荷计算

$W_s=W_{max}\times f_s$

W_s--当量载荷　W_{max}--最大载荷　f_s--使用系数（详见附表1）

表1 使用系数f_s Table 1 using coefficient(f_s)

使用工况 using situation	平稳载荷，负荷惯性小 Smooth load;light load inertia	轻微冲击载荷，负荷惯性中等 light shock load; mid load inertia	强冲击负荷，负荷惯性大 strong shock load; heavy load inertia
使用系数 using coefficient	1.0~1.3	1.3~1.5	1.5~3.0

4.1.2 单台升降机当量载荷的计算

$W=W_s/(S\times f_d)$

W--单台当量载荷　W_s--当量载荷　S--联动台数　f_d--联动系数（详见附表2）

表2 联动系数f_d Table 2 linkage coefficient(f_d)

联动台数 Linkage quantity	1	2	3	4	5-8
使用系数 Using coefficient	1	0.9	0.9	0.8	0.7

4.1.3 暂定升降机型号

根据载重、升降速度、行程、驱动源后暂时选定升降机型号(详情可参考“5、选型参数”)。

4.1.4 丝杆行程选定

在充分考虑丝杆运动惯性、各种顶端输出部件等各种情况下，选择有充分余量的丝杆行程。

丝杆计算（详见表3，丝杆行程用L表示，单位(unit)：mm)

表3 丝杆计算 Table 3 screw calculate

型号	丝杆直径	护管长	丝杆头部S型 "S"type screw end		丝杆头部H型 "H"type screw end		丝杆头部R型 "R"type screw end		丝杆头部T型 "T"type screw end	
Model	Screw dia	length of protect pipe	总长=L+SC	牙长=总长-SD	总长=L+HB+HD	牙长=总长-HB-HE	总长=L+RB	牙长=总长-RC	总长=L+TE	牙长=总长-TF
JRSS35	Tr26×5	L+55	L+150	总长-40	L+20+165	总长-20-55	L+165	总长-55	L+135	总长-25
JRSS40	Tr32×6	L+60	L+180	总长-50	L+25+195	总长-25-65	L+195	总长-65	L+160	总长-30
JRSS50	Tr38×6	L+60	L+180	总长-50	L+25+195	总长-25-65	L+195	总长-65	L+160	总长-30
JRSS60	Tr46×8	L+65	L+220	总长-60	L+32+255	总长-32-95	L+225	总长-65	L+200	总长-40
JRSS60B	Tr52×8	L+65	L+220	总长-60	L+32+255	总长-32-95	L+225	总长-65	L+210	总长-50
JRSS70	Tr65×10	L+75	L+260	总长-80	L+35+295	总长-35-115	L+250	总长-70	L+235	总长-55
JRSS100	Tr75×12	L+85	L+300	总长-80	L+44+355	总长-44-135	L+295	总长-75	L+285	总长-65
JRSS120	Tr80×12	L+85	L+360	总长-100	L+54+410	总长-54-150	L+355	总长-95	L+330	总长-70
JRSS130	Tr90×14	L+110	L+435	总长-120	L+64+480	总长-64-165	L+430	总长-115	L+390	总长-75
JRSS150	Tr100×16	L+130	L+495	总长-150	L+70+545	总长-70-200	L+485	总长-140	L+445	总长-100

4.1.5 丝杆稳定性校核

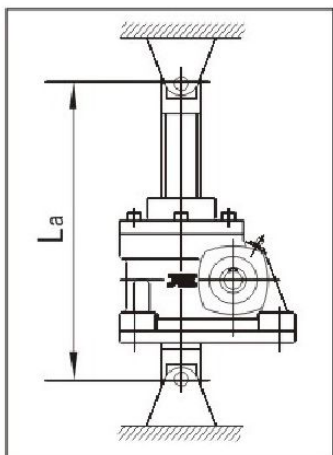
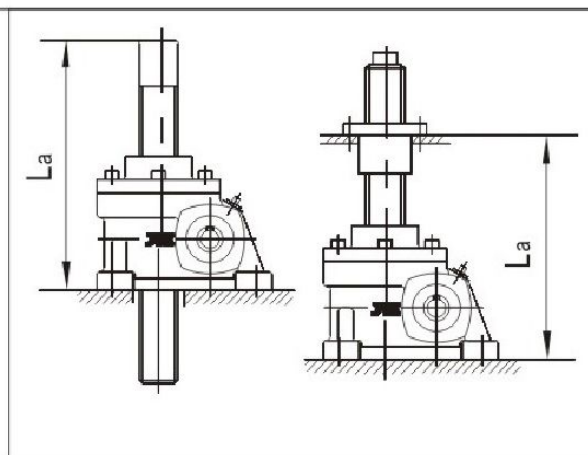
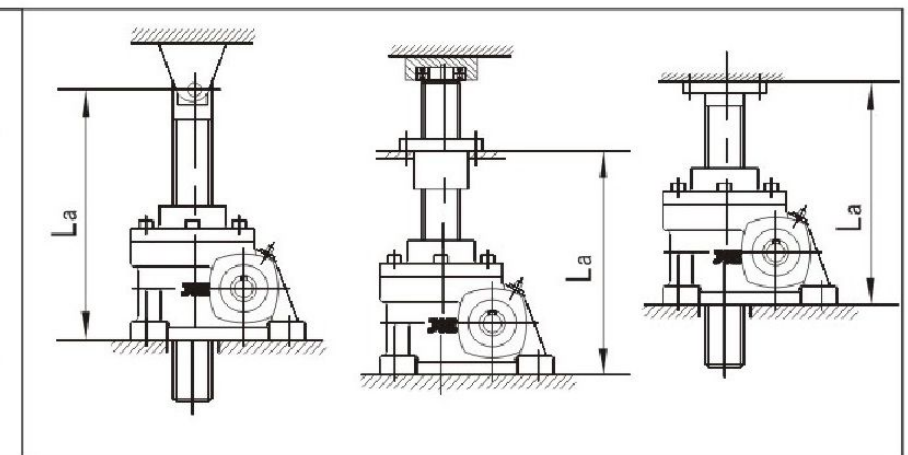
$P_{cr}=f_m\times(d^2/L_a)^2$

应确保$P_{cr}>W\times S_f$(一般$S_f=4$)

P_{cr}--丝杆临界载荷(N)　f_m--长度系数(详见附表4)　d--丝杆底径(mm)(详见附表5)

L_a--作用点间距离(mm)　W--单台升降机当量载荷(N)　S_f--安全系数(一般取4)

表4 长度系数(f_m)　Table 4　Length coefficient

		
两端支撑 $fm=10\times10^4$ Two ends sustained	底座固定,轴端自由 $fm=2.5\times10^4$ Baseplate fixed,shaft end free	底座固定,轴端支撑或固定 $fm=20\times10^4$ Baseplate fixed,shaft end sustained or fixed

4.1.6 丝杆转速校核

$n_c=96\times10^6\times f_n\times d/L_b^2$

应确保$n_c>n_1/i$

n_c--丝杆临界转速(r/min)　f_n--支撑系数(详见附表6)　d--丝杆底径(mm) (详见附表5)

L_b--支撑间距离(mm)　n_1--输入转速(r/min)　i--减速比

4.1.7 输入功率校核

$p=n_1\times p_1\times w/(9549\times2\pi\times i\times\eta)$

应确保P<P额

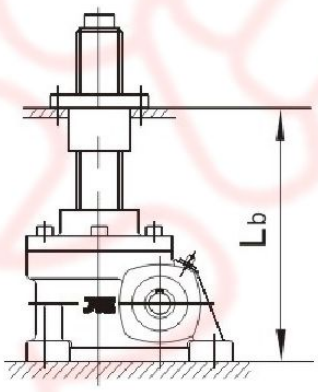
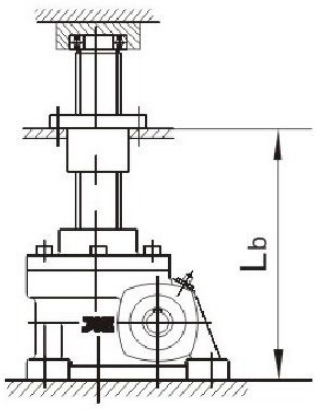
p--所需输入功率(kW)　n_1--输入转速(r/min)　p_1--丝杆螺距(mm)

W--单台升降机当量载荷(kN)　π--圆周率　i--减速比　η--综合效率

表5 丝杆底径d　Table 5 Diameter of screw bottom

型　号 Model	JRSS35	JRSS40	JRSS50	JRSS60	JRSS60B	JRSS70	JRSS100	JRSS120	JRSS130	JRSS150
丝 杆 底 径 Diameter of screwing bottom	20.5	25	31	37	43	54	62	67	74	82

表6 支撑系数 fn　Table 6 Sustain coefficient(fn)

	
轴端自由fn=0.36 Shaft end free	轴端支撑fn=1.56 Shaft end fixed

4 Methods for model chosen

4.1 Selection points

4.1.1 Calculate total current load

$W_s = W_{max} \times f_s$

W_s--current load W_{max}--max load f_s--using coefficient (more information from table1)

4.1.2 Calculate current load of unit screw lifter

$W = W_s/(S \times f_d)$

W--unit current load Ws--current load S --linkage quantity

f_d--linkage coefficient(more information from table 2)

4.1.3 Choose screw model

Choose screw model according to capacity, lifting speed, stroke and drive fountainhead.

4.1.4 Option stroke of screw

Choose adequate stroke of screw with concerning enough screw movement inertia.

Calculate screw (more information from table 3)

4.1.5 Check screw stability

$P_{cr} = f_m \times (d^2/L_a)^2$ Should insure $P_{cr} > W \times S_f$(usual S_f=4)

P_{cr}--Screw critical loading(N) f_m-- Length coefficient(more information from table 4)

d--diameter of screw bottom(mm)(more information from table 5) L_a--working length(mm)

W--Current load of unit screw lifter(N) S_f--security coefficient(usual S_f=4)

4.1.6 Check screw speed

$n_c = 96 \times 10^6 \times f_n \times d/L_b^2$

should insure $n_c > n_1/i$

n_c--Permissible rotation speed of screw (r/min) ; f_n--Sustain coefficient (more information from table 6);

d--diameter of screw bottom(mm)(more infor mation from table 5);

L_b--the distance between sustain(mm). n_1--input speed(r/min); i--ratio;

4.1.7 Check input power

$p = n_1 \times p_1 \times w/(9549 \times 2\pi \times i \times \eta)$

should insure $p < p_{rated}$

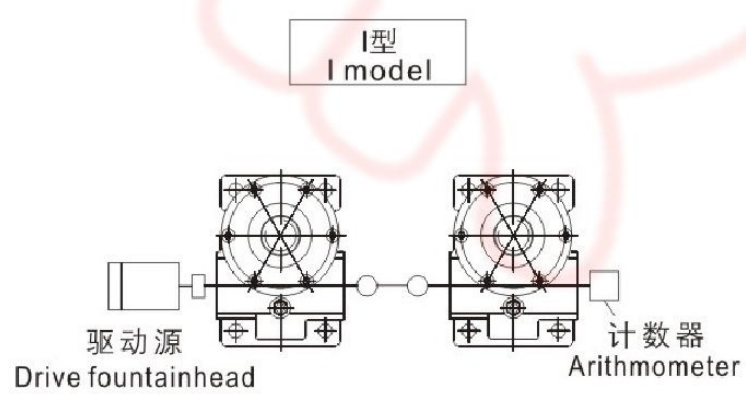
P--needed input power(kW); n_1--input shaft screwing speed(r/min); p_1--axial pitch distance(mm)

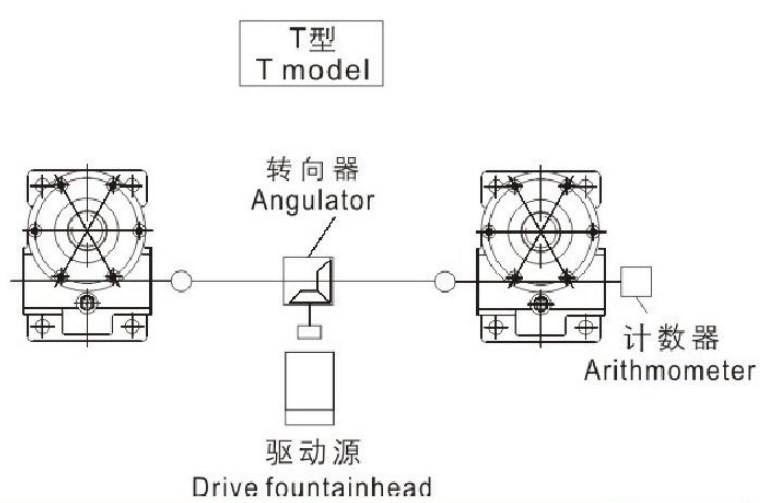
w--current load(kN); π--pi i--ratio η--general efficiency

4.2 选型示例

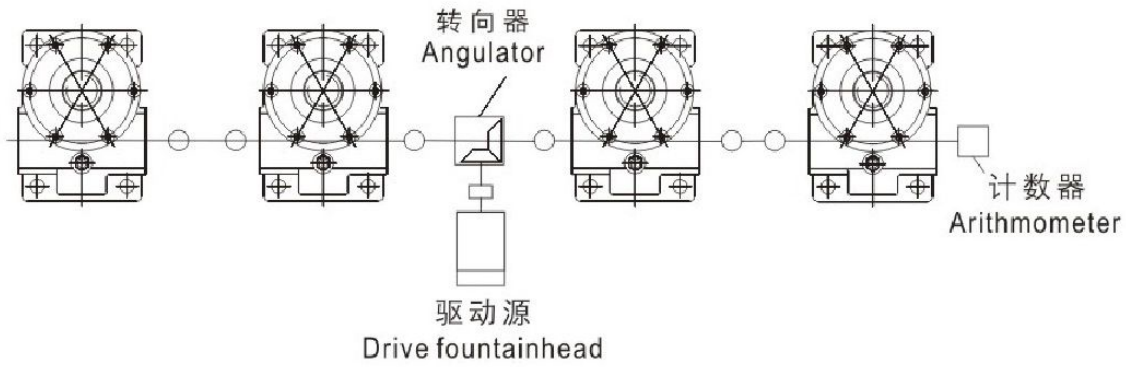
4.2 Selection example

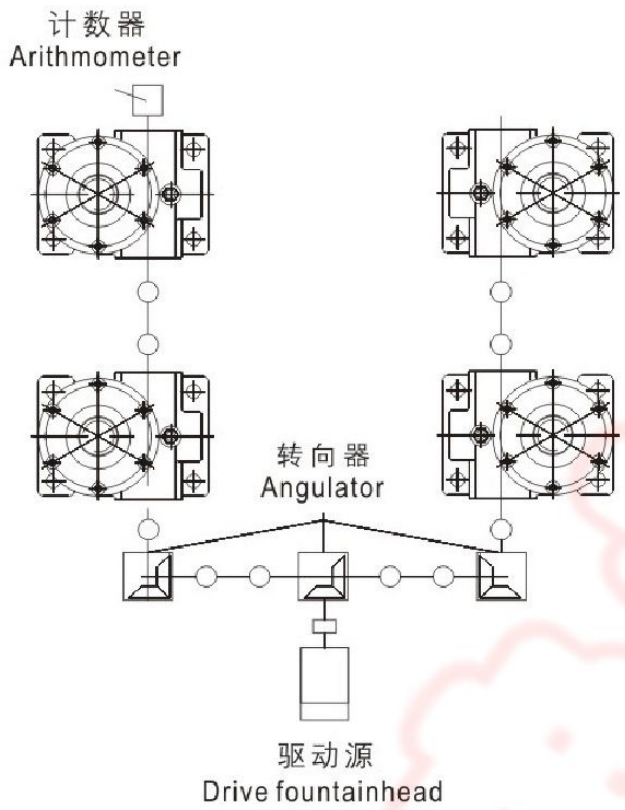
4.2.1 两台联动 Two sets linkage

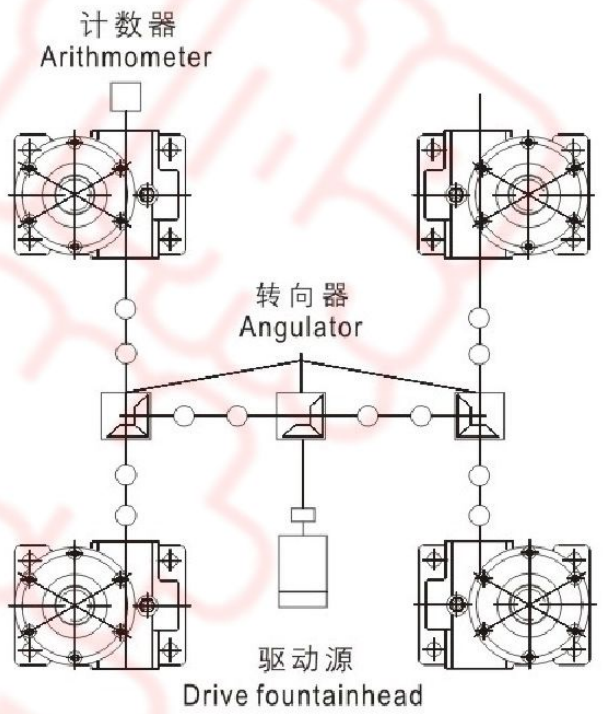




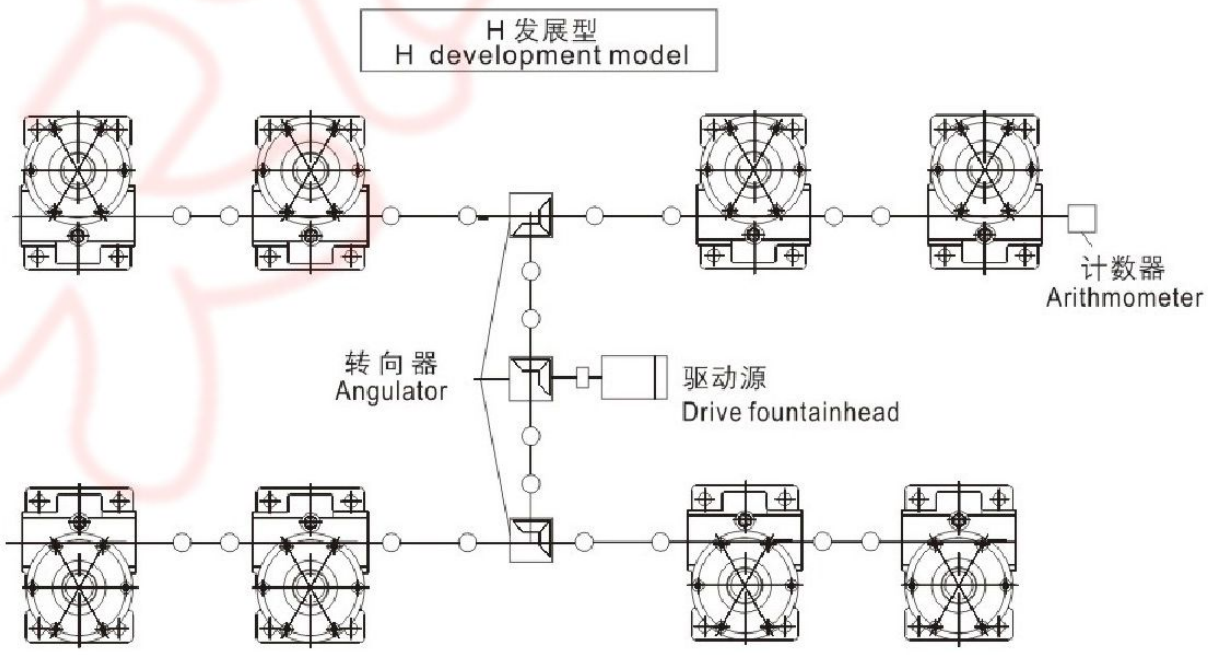
4.2.2 四台联动 four sets linkage

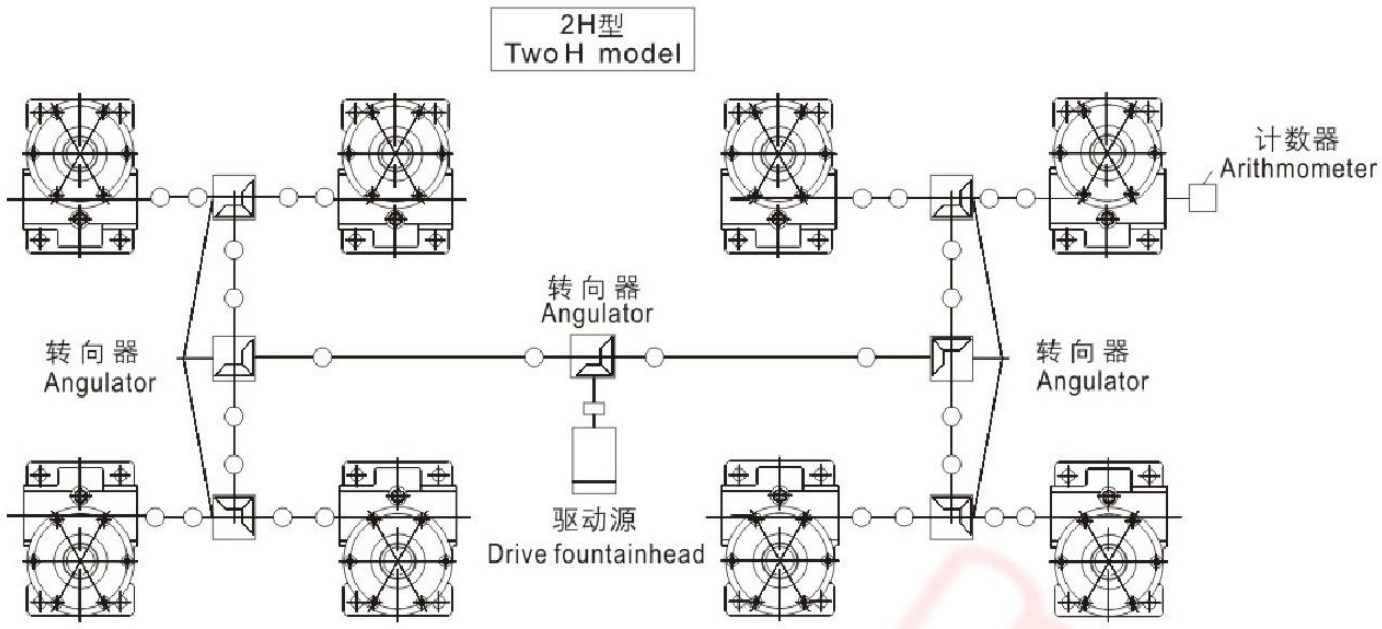






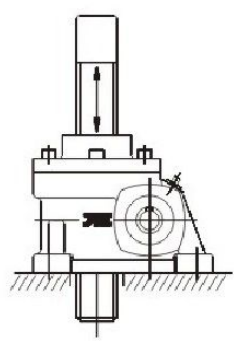
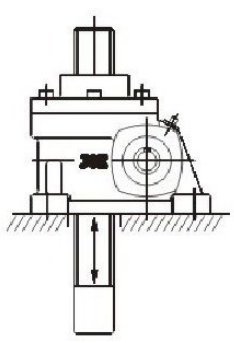
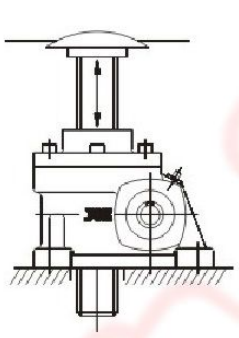
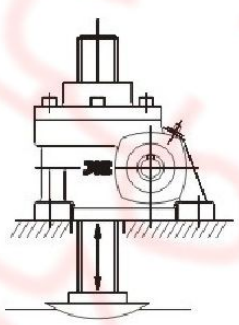
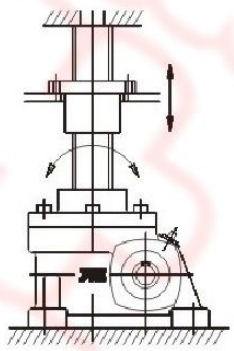
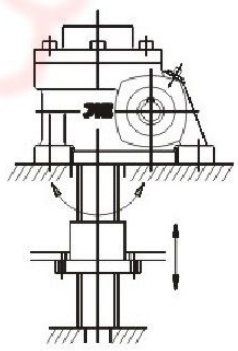
4.2.3 八台联动 Eight sets linkage





4.3 安 装 方 式

4.3.Mounting Option

基本型 Basic Model		止旋构造型 Screw fluctuate without rotation		活动螺母构造型 Screw rotate without fluctuation	
A	B	C	D	E	F
					

说明：

1、基本形式：螺母(蜗轮)转动丝杆上下移动，此为普通型升降机安装方式。
※注意：丝杆在升降时，会产生旋转力，所以必须做好防止旋转的措施。
2、止旋构造型：适用于顶端无连接下运转等各种不能实现防止旋转的场合。
3、若想在有限的空间增长行程，可选用活动螺母(由用户自行设计制造配丝杆)构造型。此构造为丝杆旋转，活动螺母移动。若行程较长时，轴端应采用支撑方式，可得到很好的传动效果。

Explanation:

1、 Basic Model: Screw fluctuate with rotation. This is the installation for basic screw lifter.
※ Notice: There will be rotation force when screw is ascending and decending. So it's need to prevent rotation.
2、 Screw fluctuate without rotation:work under the situation (without connection on the top, etc.) Which can't prevent from rotating.
3、Screw rotate with travelling nut : This type is suitable for narrow space . If it has long stroke , shaft end should be supported for better transmission .

5. 选型参数

5.Capacity and Model Selection

型号 规格 Model size	传动比 Ratio	入力轴转速 1800r/min Input shaft revolution speed 1800r/min			入力轴转速 1500r/min Input shaft revolution speed 1500r/min			入力轴转速 1200r/min Input shaft revolution speed 1200r/min			入力轴转速 900r/min Input shaft revolution speed 900r/min			入力轴转速 600r/min Input shaft revolution speed 600r/min			入力轴转速 300r/min Input shaft revolution speed 300r/min		
		入功率 (kW) Input power (kW)	起升力 (kg) Lifter force (kg)	起升速度 (m/min) Hoist speed (m/min)	入功率 (kW) Input power (kW)	起升力 (kg) Lifter force (kg)	起升速度 (m/min) Hoist speed (m/min)	入功率 (kW) Input power (kW)	起升力 (kg) Lifter force (kg)	起升速度 (m/min) Hoist speed (m/min)	入功率 (kW) Input power (kW)	起升力 (kg) Lifter force (kg)	起升速度 (m/min) Hoist speed (m/min)	入功率 (kW) Input power (kW)	起升力 (kg) Lifter force (kg)	起升速度 (m/min) Hoist speed (m/min)	入功率 (kW) Input power (kW)	起升力 (kg) Lifter force (kg)	起升速度 (m/min) Hoist speed (m/min)
JRSS35	1/5	0.69	500	1.80	0.64	550	1.50	0.65	700	1.20	0.63	900	0.90	0.46	1000	0.60	0.37	1000	0.30
	1/10	0.37	500	0.90	0.37	550	0.75	0.37	700	0.60	0.37	950	0.45	0.37	1000	0.30	0.19	1350	0.15
	1/20	0.37	600	0.45	0.37	700	0.38	0.37	900	0.30	0.37	1200	0.23	0.19	1350	0.15	0.19	1350	0.08
JRSS40	1/6	0.98	700	1.80	0.93	800	1.50	0.88	950	1.20	0.91	1300	0.90	0.84	1800	0.60	0.42	1800	0.30
	1/12	0.66	950	0.90	0.64	1100	0.75	0.61	1300	0.60	0.57	1650	0.45	0.46	2000	0.30	0.37	2000	0.15
	1/24	0.37	950	0.45	0.37	1100	0.38	0.37	1300	0.30	0.37	1650	0.23	0.37	2000	0.15	0.19	2000	0.08
JRSS50	1/6	1.39	900	1.80	1.28	1000	1.50	1.24	1200	1.20	1.16	1500	0.90	0.87	1700	0.60	0.54	2100	0.30
	1/12	1.10	1350	0.90	1.01	1500	0.75	0.98	1800	0.60	0.87	2150	0.45	0.58	2150	0.30	0.37	2500	0.15
	1/24	0.78	1800	0.45	0.72	2000	0.38	0.69	2400	0.30	0.55	2550	0.23	0.42	2900	0.15	0.37	2850	0.08
JRSS60	1/8	2.12	1300	1.80	1.97	1450	1.50	1.85	1700	1.20	1.72	2100	0.90	1.66	3050	0.60	1.31	4800	0.30
	1/16	1.12	1300	0.90	1.04	1450	0.75	0.98	1700	0.60	0.95	2200	0.45	0.87	3050	0.30	0.69	4800	0.15
	1/32	0.80	1750	0.45	0.75	1950	0.38	0.69	2250	0.30	0.64	2800	0.23	0.63	4100	0.15	0.48	6400	0.08
JRSS60B	1/8	2.00	1300	1.80	1.86	1450	1.50	1.75	1700	1.20	1.62	2100	0.90	1.57	3050	0.60	1.24	4800	0.30
	1/16	1.06	1300	0.90	0.98	1450	0.75	0.93	1700	0.60	0.89	2200	0.45	0.83	3050	0.30	0.65	4800	0.15
	1/32	0.75	1750	0.45	0.70	1950	0.38	0.65	2250	0.30	0.61	2800	0.23	0.59	4100	0.15	0.46	6400	0.08
JRSS70	1/10	2.66	1400	1.80	2.42	1850	1.50	2.25	1950	1.20	2.12	2450	0.90	1.93	3350	0.60	1.41	4900	0.30
	1/20	1.42	1600	0.90	1.47	1850	0.75	1.37	2250	0.60	1.28	2800	0.45	1.18	3850	0.30	0.86	5600	0.15
	1/40	1.14	2400	0.45	1.17	2800	0.38	1.09	3350	0.30	1.07	4400	0.23	0.93	5750	0.15	0.69	8400	0.08
JRSS100	1/12	3.62	1850	1.80	3.51	2150	1.50	3.39	2600	1.20	3.18	3250	0.90	2.94	4500	0.60	2.09	6400	0.30
	1/18	2.65	1900	1.20	2.68	2300	1.00	2.57	2750	0.80	2.45	3500	0.60	2.19	4700	0.40	1.56	6700	0.20
	1/36	1.66	2200	0.60	1.63	2600	0.50	1.60	3200	0.40	1.47	3900	0.30	1.36	5400	0.20	1.20	9600	0.10
JRSS120	1/12	4.15	1975	1.80	4.02	2300	1.50	3.81	2725	1.20	3.80	3625	0.90	3.48	4975	0.60	2.48	7050	0.30
	1/18	3.20	2125	1.20	3.20	2550	1.00	3.04	3025	0.80	3.03	4025	0.60	2.74	5450	0.40	1.94	7725	0.20
	1/36	2.14	2625	0.60	2.07	3050	0.50	1.98	3650	0.40	1.99	4875	0.30	1.80	6600	0.20	1.40	10300	0.10
JRSS130	1/7	9.47	2100	3.60	9.17	2450	3.00	9.02	2850	2.40	8.58	4000	1.80	8.20	5450	1.20	5.84	7750	0.60
	1/14	5.76	2350	1.80	5.71	2800	1.50	5.57	3300	1.20	5.39	4550	0.90	5.06	6200	0.60	3.57	8750	0.30
	1/28	4.07	3050	0.90	3.89	3500	0.75	3.91	4100	0.60	3.65	5850	0.45	3.48	7800	0.30	2.45	11000	0.15
JRSS150	1/8	16.3	3500	3.60	16.1	4000	3.00	15.8	5400	2.40	15.1	7100	1.80	14.8	9850	1.20	9.70	12950	0.60
	1/16	11.7	4300	1.80	11.6	5400	1.50	10.5	7200	1.20	11.00	9450	0.90	9.62	11800	0.60	7.08	17350	0.30
	1/32	8.65	5500	0.90	9.55	6800	0.75	7.35	10000	0.60	7.53	14300	0.45	7.02	15750	0.30	5.80	26050	0.15

6. 使用说明

6.1 产品说明

6.1.1 JRSS系列蜗轮丝杆升降机（又名千斤顶）；
6.1.2 具有结构紧凑、体积小的特点;
6.1.3 安装方便、形式多；
6.1.4 可靠性高、寿命长；
6.1.5 具有起升、下降及借助辅件推进、翻转等多种功能；
6.1.6 可单台使用，也可多台组成使用；
6.1.7 动力源广泛，可用电动机或其它动力直接带动，也可以用手动；
6.1.8 通常用于低速重载的场合。广泛应用于冶金、机械、建筑、水利、医疗、化工等各个行业。

6.2 使用注意事项

6.2.1 请严格按承载能力表选择合适的速比和与之对应的具有充分裕度的载荷的升降机；
6.2.2 升降机工作时应控制减速机表面和升降螺母表面温度在-15℃~80℃；
6.2.3 升降机不得连续运转，单台升降机的负荷时间率(T%)以30分钟为单位计算，不得超过20%；

$$\text{负荷时间率 } T\% = \frac{\text{1动作周期的工作时间}}{\text{1动作周期的工作时间+1动作周期的停歇时间}} \times 100\%$$

6.2.4 必须保证有充足的驱动源动力；
6.2.5 升降机理论上有自锁功能，但在振动冲击较大的场合会造成自锁功能失灵，请务必加制动装置；
6.2.6 升降机使用环境：

使用环境 Using situation	室内无雨水侵入的场所 No rain and water
周围空气 Ambient air	灰尘为一般工厂状况 Dust: usual condition for mill
环境湿度 Ambient temperature	-15℃~40℃
相对湿度 Comparative humidity	85%以下 Below 85%

6.2.7 升降机工作时一般不允许有横向载荷，若有横向载荷时，请加导向装置。

6. Operating instructions

6.1 Product Introduction

6.1.1 JRSS series worm gear screw lifter (other name is Jack);
6.1.2 Compact structure, small size;
6.1.3 Easy mounting, varied types;
6.1.4 High reliability. Long service life;
6.1.5 With the function of ascending, descending, thrusting, overturning;
6.1.6 Can be applied in one unit or multiple units;
6.1.7 Wide motivity. It can be drived by electrical motor and manual force;
6.1.8 It is usually used in low speed situation, widely used in the fields of metallurgy, mechanical, construction,c hemical, irrigation works,medical treatment.

6.2 Notices of usage

6.2.1 Select the model with proper ratio and load.

6.2.2 The surface temperature of speed reducer and nut should be controlled in -15℃~80℃ when the scr -ew lifter is working.

6.2.3 The screw lifter cannot work all the time. The unit is thirty mins for duty ratio of unit one and can not exceed 20%.

$$\text{Duty ratio (T\%)} = \frac{\text{Time under working/cycle}}{\text{Time under working/cycle + interval/cycle}} \times 100\%$$

6.2.4 Insure adequate drive fountainhead.

6.2.5 Theoretically screw has self-lock function, but the self-lock function may not work in heavy shock condition;

6.2.6 Using situation for screw lifter.

6.2.7 Transverse load is not allowed when screw lifter is working . If transverse load occured, please add direction setting.

7. 油品润滑
7. Lubricant

7.1 润滑油（脂）选用表

Lubricants for reducer used in can be chosen as the table below

蜗杆转速(r/min) Worm shaft speed(r/min)	润滑油（脂）类型 Lubricant
1500~1800	ISO VG680
300~1500	NLGI 1或NLGI 2

注：合成锂基润滑脂温度范围-20℃ ~ 100℃

Note: The temperature range of synthetic lime-sode basic lubricant grease ZNLGI 1 or NLGI 2 is -20℃~100℃

7.2 润滑油（脂）注油量(l)
Lubricants capacity(l)

型号 Type / 规格 Size	JRSS35	JRSS40	JRSS50	JRSS60	JRSS60B	JRSS70	JRSS100	JRSS120	JRSS130	JRSS150
注油量 Lubricant capacity	0.06	0.1	0.2	0.35	0.4	0.5	1.5	2.2	3.5	4.0

8. 故障分析

故障情况	故障原因	解决办法
振 动	原动机与升降机连接不当	调整至适当位置，重新正确固紧
	蜗轮副齿部磨耗或损伤	更换蜗轮副 (需要时本公司配合)
	轴承磨损	更换轴承
	螺栓松脱	固紧螺栓
杂 音	轴承损伤或间隙过大	更换轴承
	蜗轮副啮合不良	修整齿面或更换蜗轮副 (请与本公司联系)
	润滑油（脂）过少	补加润滑油(脂)
漏 油	油封唇口磨损	更换油封
	油封档轴颈磨损	更换输入轴或蜗轮
蜗轮副齿面磨损过快	超负荷运转	调整至适当负荷
	润滑油（脂）不符合要求	按油品润滑更换润滑油（脂）
	润滑油（脂）过少	补加润滑油（脂）
	未按规定适时换油，润滑油劣化	按规定要求适时换油
	运转温度过高	采取合适措施，降低环境温度
丝杆副齿面磨损过快	超负荷运转	调整至适当负荷
	润滑脂干枯或变质	去污擦净，重新加润滑脂
	有横向载荷	加导向装置

注：如果发生其他故障无法解决时，请随时与我们联系，以便提供咨询服务。

8. Malfunctions Analysis

Fault Description	Reasons	Solutions
Vibration	Improper connection among prime mover and lifter	Adjust to proper position
	Tooth surface of worm gear sets worn-out or damaged	Replace worm gear sets (We will cooperate with you when necessary)
	Bearing worn-out	Replace bearing
	Bolt loose	Tighten screw
Noise	Bearing damaged or too large clearance	Replace bearing
	Worm gear sets mesh badly	Mend tooth surface or replace worm gear sets (please contact to us)
	Lubricant shortage	Fill in adequate oil as indication
Oil leakage	Oil seal lip worn-out	Replace oil seal
	Shaft of oil seal area worn-out	Replace input or worm gear
Tooth surface of worm gear set abrade extra-quickly	Over load	Adjust to proper loading
	Lubricant oil not according with requirement	Replace proper lubricant oil
	Lubricant shortage	Fill adequate oil as indication
	Not replacing lubricant oil in time accor-ding to requirement,oil deteriorates	Replacing oil in time according to requirement
	Overheating while running	Adopting proper measures to make environment temperature fall
Screw surface of worm gear sets abrade extra-quickly	Over loading	Adjust to proper loading
	Lubricant shortage or gone bad	Washover dirty oil and refill proper lubricant
	There is transverse load	Add direction setting

Note: If other faults not listed above occur ,please contact to us at any moment .We will supply thorough consultation and service.

2017版

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有关本公司产品目录的内容，随着技术进步等，将会有变更，望谅解！

Along with the technology advanced etc., the product of the manual of DONGKING will be changed, please forgive.