

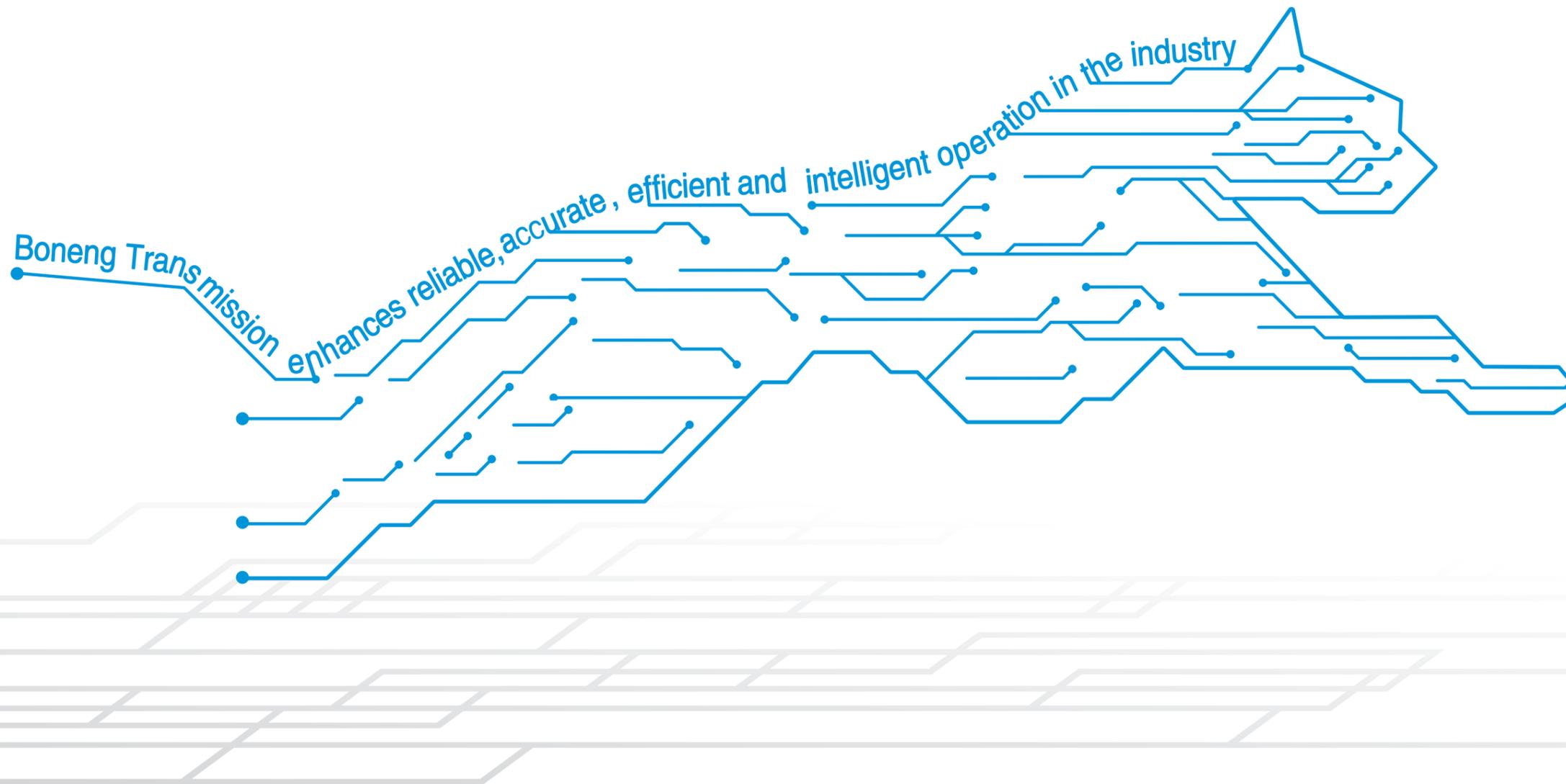
JB Ball Screw Jack JB滚珠丝杆升降机



JB 滚珠丝杆
升降机

JB Ball Screw
Jack

Modified date 01/2026
Selection Sample C05.0035-CN



控制器/驱动器/马达/
齿轮马达/齿轮箱

Controller/ Drive/ Motor/
Gearmotor/ Gearbox

滚珠丝杆升降机 Ball Screw Jack



博能公司在总结二十余年滚珠丝杆升降机设计制造经验,分析和吸收国际上滚珠丝杆升降机设计制造先进技术的基础上,创新发展,推出新型JB滚珠丝杆升降机,以更好满足客户要求。

同国际上先进的滚珠丝杆升降机和博能公司原有JWB滚珠丝杆升降机相比,博能公司新型JB滚珠丝杆升降机具有以下特点:

On the basis of ball screw jack design and manufacturing experiences in the past twenty years, analyzing and absorbing advanced technology of international ball screw jack production, Boneng Transmission makes innovative development, pushing forward new type JB ball screw jack to better satisfy customer requirements. Compared with internationally advanced ball screw jack and the original JWB ball screw jack of Boneng, the new type JB ball screw jack has the following characteristics:



在钢铁、舞台设备、医疗器械等各种各样的领域,博能公司结合各应用情况,竭诚为您制造满意的产品。

In the iron and steel, stage equipment, medical equipment and other various fields, Boneng combines various kinds of applications, dedicates to manufacture satisfying products for you.

- ◆ 独创拟生态的外观结构设计,赋予产品运动与力量的天性内涵,进而形成了令博能公司具有世界级知识产权的卓越设计理念;
- ◆ 采用独创的模块化设计,零部件种类规格集中;标准零部件均有库存、有互换性,从而使蜗轮箱的交货期短,且获得备件容易;(国际化生产,交货快,更适合库存,生产及时);
- ◆ 采用球墨铸铁铸造的箱体,刚度高,可切削性好,箱体内部结构设计合理,抗冲击性能优越;
- ◆ 德国进口蜗轮滚刀加工蜗轮,优化接触区,保证了强度;精密磨削加工的硬齿面传动蜗杆,效率高,输出扭矩大;
- ◆ 采用高精度滚珠丝杆,效率高,升降速度快,使用寿命长。
- ◆ 输入方式可采用电机直联输入、减速机直联输入;
- ◆ 输出类型多样化:丝杆顶部螺纹、顶端法兰、型销接头、圆柱接头及活动螺母等,另外还可以配备安装支架和支座来满足不同方位升降需求;
- ◆ 产品类型多元化,每种型号中有各种行程,各种提升载荷范围的产品可供选择;
- ◆ Unique outline structure design, thus forming excellent design concept with world-level intellectual property rights for Boneng;
- ◆ Unique modular design, components are categorized to different types; standard components are stored in large amount, which are changeable, so delivery period of worm gear unit is short, and it's easy to get spare parts; (international production, fast delivery, more appropriate for storage, in-time production);
- ◆ It applies cabinet with nodular cast iron, good rigidity, easy to cut, inner structure design is reasonable, impact-proof performance is good;
- ◆ Germany imported worm wheel hob is used to process turbine, which optimizes contact area, ensures intensity; hand finishing transmission worm processed by fine grinding has high efficiency, large output torque;
- ◆ Using high-precision ball screw, high efficiency, high speed, long service life;
- ◆ Output mode: motor direct-linking output, gear unit direct-linking input;
- ◆ Various kinds of output type screw rod top thread, top flange, type pin joint, column joint and flexible nut, etc, it can be equipped with frame and foundation to satisfy lifting requirements on different directions;
- ◆ Various kinds of products, each type has various kinds of strokes and various kinds of lifting load range.

**注意事项！ 必须严格
遵守以下各项！**

- ◆ 样本中的结构示意图、外形图及其他附图只属范例。无严格比例要求。(未注尺寸单位均为mm)。
- ◆ 所注重量仅为平均值，并不具有约束力。
- ◆ 为防止意外事故发生，所有旋转部件均按照使用者所在国家和地区的安全规范由购置方加罩保护。
- ◆ 试车之前必须认真阅读使用说明书。
- ◆ 升降机在供货时已处于准运行状态，运行前需加注润滑油。
- ◆ 本样本中注油量只作为参考值，实际注油量应以油尺上的标记为准。
- ◆ 润滑油粘度应按升降机使用工况及使用环境温度选取。
- ◆ 只能采用国际知名品牌的润滑油。

产品功能标识

-  油 镜
-  通气帽
-  进油孔
-  放油孔

**Note: You must conform
to the following
instructions**

- ◆ The structure scheme,appearance diagram and other attached diagrams in sample are examples,there is no strict proportion requirement.(The unmarked dimension units are mm).
- ◆ We can only refer to the marked weight in the manual.
- ◆ To prevent accidents,all the rotation parts should be added with protective covers according to local safety regulations and laws.
- ◆ Before testing,users should read instruction manual carefully.
- ◆ Jack has been tested before delivered,users should add lubrication oil before running.
- ◆ We can only refer to the marked oil in the manual.Actual oil filling level should be the same with the mark on oil immersion lens.
- ◆ Lubrication oil viscosity should be selected according to working conditions and the temperature of local environment.
- ◆ Users can only use high quality lubrication oil.

Product Function Mark

-  Oil glass
-  Breather
-  Oil filler
-  Oil drain

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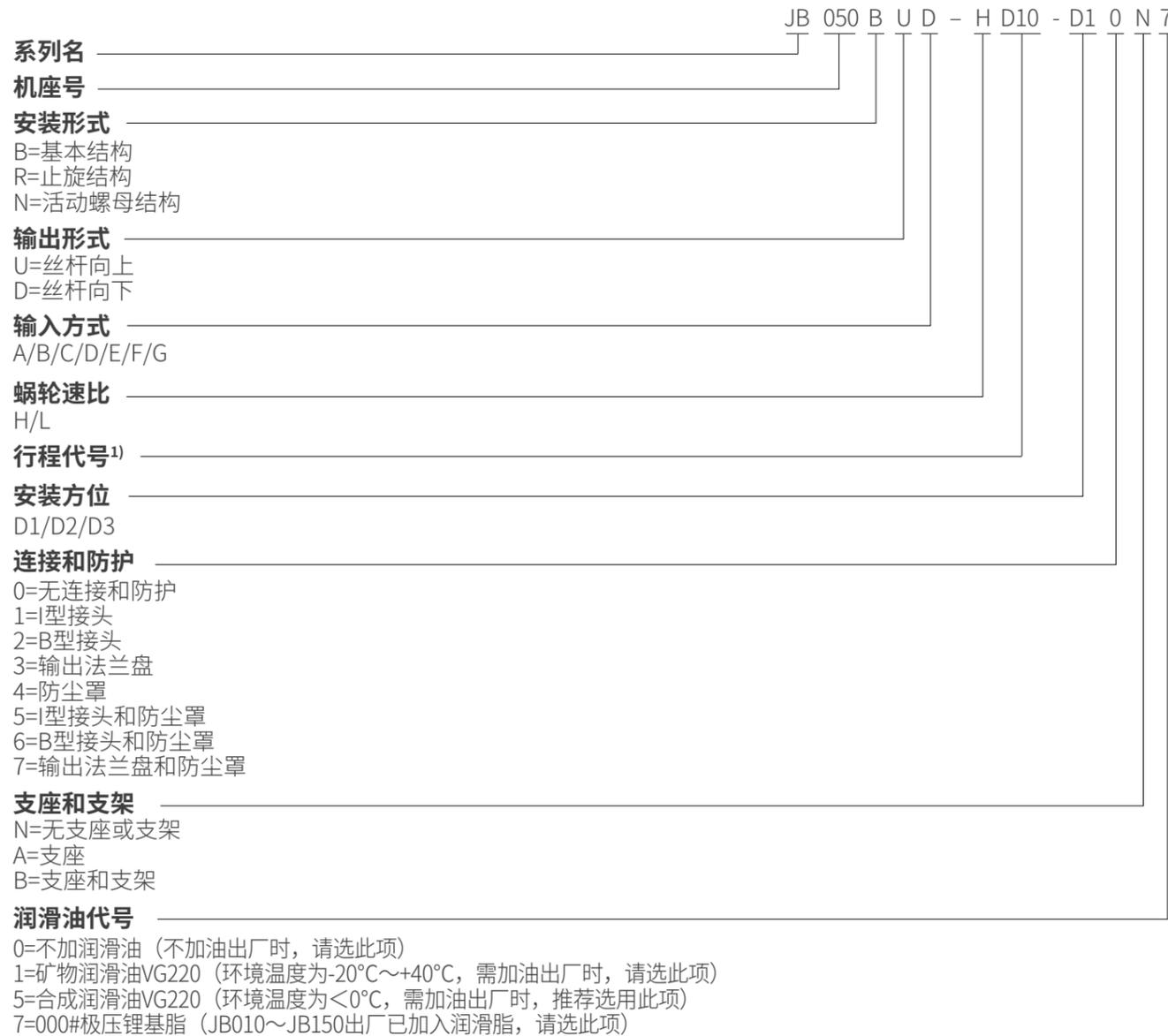
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1 型号表示方法



注¹⁾丝杆行程代号

代号	行程(mm)	代号	行程(mm)	代号	行程(mm)	代号	行程(mm)
D03	25	D25	250	D50	500	D80	800
D05	50	D30	300	D55	550	E10	1000
D10	100	D35	350	D60	600	E12	1200
D15	150	D40	400	D65	650	E15	1500
D20	200	D45	450	D70	700	E20	2000

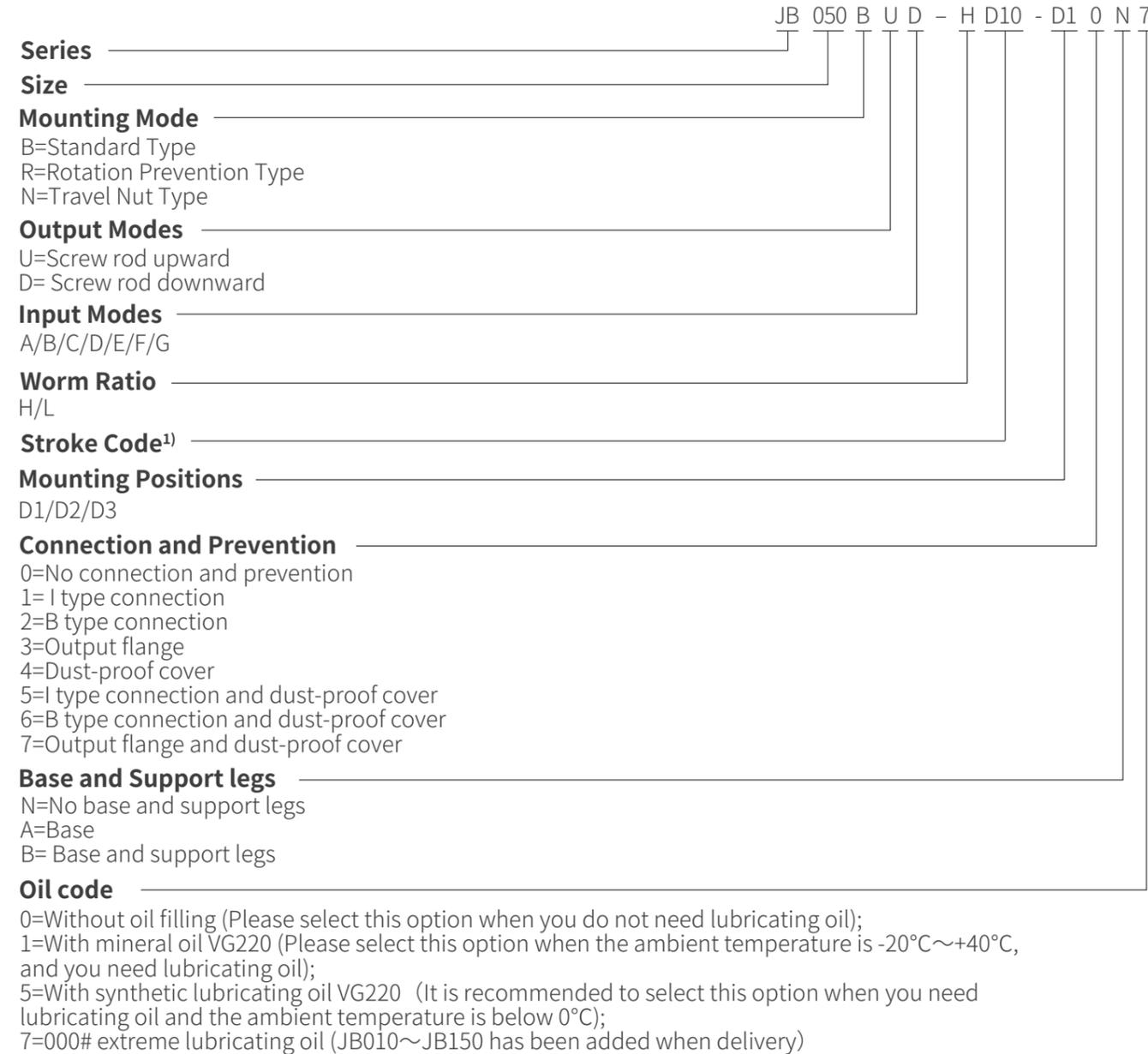


◆配输入法兰型号示例:JB050BUD-HD10-D10N7-AF71

◆配输入轴型号示例:JB050BUA-HD10-D10N7-S

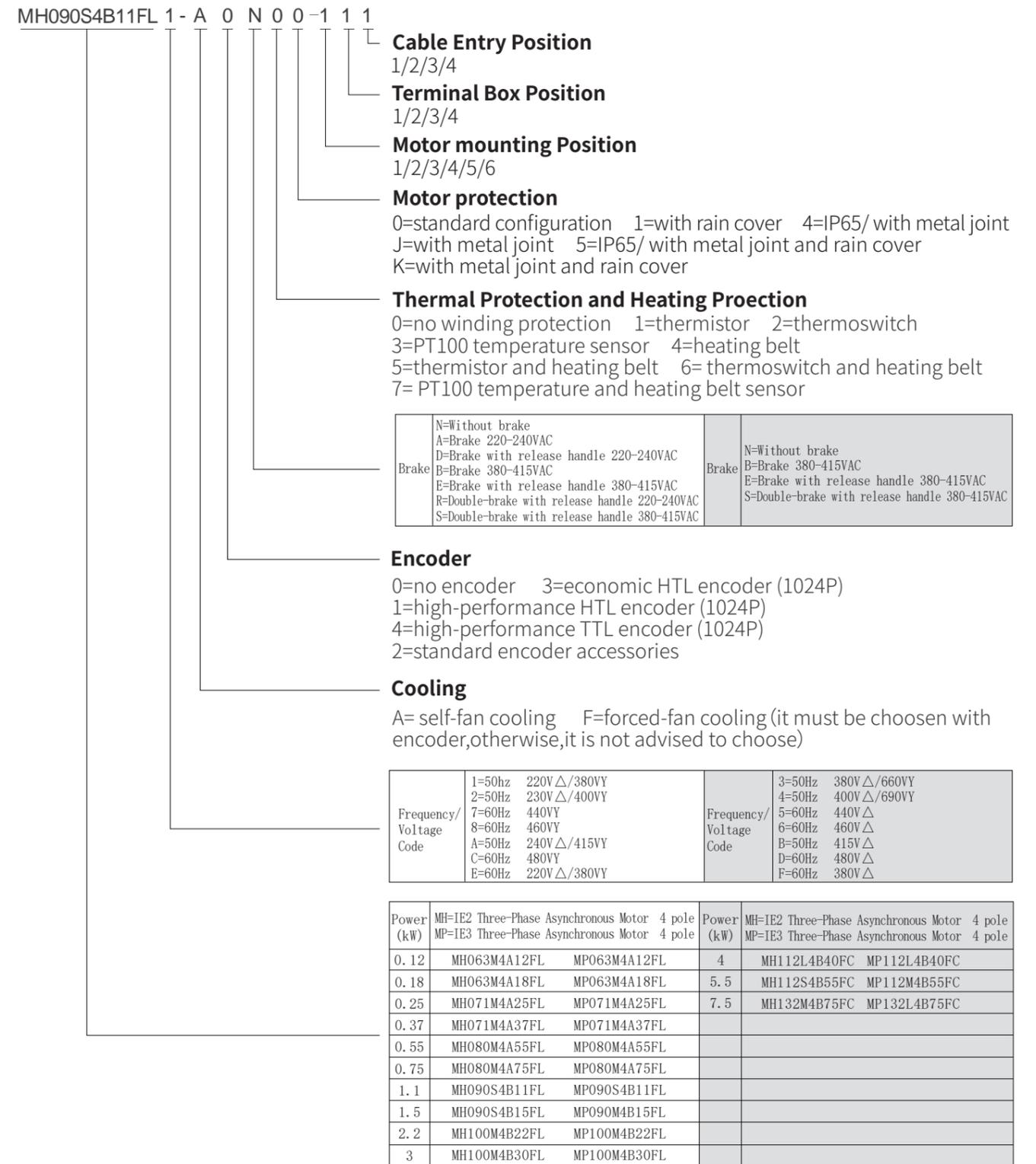
◆组合形式举例:JB050BUD-HD10-D10N7-C303FA-C18-D101-MH080M4A75AL1-A0N00-011

1 Type Designation



Note¹⁾Stroke Code

Code	Stroke (mm)						
D03	25	D25	250	D50	500	D80	800
D05	50	D30	300	D55	550	E10	1000
D10	100	D35	350	D60	600	E12	1200
D15	150	D40	400	D65	650	E15	1500
D20	200	D45	450	D70	700	E20	2000



- ◆Example of product type with input flange:JB050BUD-HD10-D10N7-AF71
- ◆Example of product type with input shaft:JB050BUA-HD10-D10N7-S
- ◆Example of combined type:JB050BUD-HD10-D10N7-C303FA-C18-D101-MH080M4A75AL1-A0N00-011

2 结构示意图:

2 Structure Scheme:

结构形式 Structure Mode	输出形式 Output Mode	结构图 Structure Drawing	说明 Explanation
基本 Plain 结构 mode	JB ..BU		丝杆在升降时,会产生旋转力,所以必须做好防止旋转措施。 The screw may produce rotary force when lifting, so anti-rotation measures should be adopted.
	JB ..BD		
With 止旋 Antirotation 结构 device	JB ..RU		止旋结构,丝杆只上下移动并不产生旋转力。 With anti-rotation device, the screw travels up and down only and produces no rotary force.
	JB ..RD		
活动螺母 Structure Travelling 螺母 nut	JB ..NU		活动螺母构造,丝杆轴旋转,活动螺母移动。丝杆轴顶端为圆柱形,所以在长行程时,在轴端采用支撑方式,可以得到很好的传动效果。 For travelling nut type, the screw rotates to drive the nut move. Due to its cylindrical structure, supporting mode is often used at the screw end to ensure good transmission of long stroke. 注:活动螺母构造形式供货时不配防尘罩,如需请另咨询。 Note: Bellows are not supplied with the travelling nut type screw jack. Consult us if required.
	JB ..ND		

3 安装方位:

3 Mounting Positions:

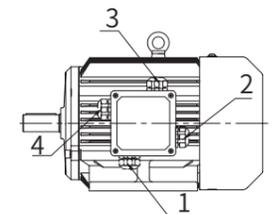
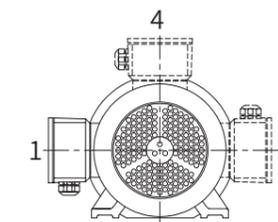
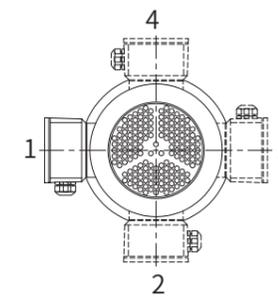
D1	
D2	
D3	

⚠ 注:采用D3型安装方位时,底脚安装螺栓的性能等级须为10.9级以上。

⚠ Note: When applying D3 mounting position, performance level of foot-mounting bolts should be above 10.9.

电机接线盒和进线孔位置:

Motor terminal box and cable entry position:



视角:电机尾部
整机标配颜色 JB010-JB500
(RAL5015)

View: Motor afterbody
Assembly colour of jack JB010-JB500
(RAL5015)

4 基本参数表:

4 Basic Parameters:

型号	Type	JB010	JB025	JB050	JB100	JB200	JB300	JB500	
最大载荷 (KN)	Maximum loading(KN)	9.8	24.5	49	98	196	294	490	
丝杆外径 (mm)	Screw rod external diameter(mm)	20	25	40	50	63	80	100	
丝杆底径 (mm)	Screw rod bottom diameter(mm)	16.2	19.3	32.4	41.4	54.4	68.6	88	
丝杆螺距 (mm)	Screw rod bolt distance L1(mm)	5	8	10	12	12	16	20	
减速比	Ratioi	H 速比 H Speed	5	5.6	5.2	10.667	9.667	10.667	10.333
		L 速比 L Speed	20	26	26	24	29	32	31
综合效率 %η	Compre-henswe efficiency %η	H 速比 H Speed	61	62	64	63	62	56	60
		L 速比 L Speed	34	35	39	43	41	34	38
最大容许输入功率 (KW)	Allowable input maximum Power (KW)	H 速比 H Speed	0.54	1.3	2.21	2.97	4.87	8.49	12.78
		L 速比 L Speed	0.27	0.61	0.95	1.87	2.59	3.70	6.37
空载扭矩 (N·m)	Empty-loading torque T0(N·m)	0.29	0.62	1.37	1.96	3.92	9.81	19.6	
保持扭矩 (N·m)	Holding torque (N·m)	H 速比 H Speed	1.27	4.31	10.78	19.6	51.0	68.6	140.1
		L 速比 L Speed	0.26	0.91	2.4	5.8	15.0	19.5	41.2
容许输入轴扭矩*	Allowable input shaft torque*(N·m)	20	49	126	247	247	620	973	
最大载荷时所需**输入轴扭矩 (N·m)	Input shaft torque for** Maximum load-ing (N·m)	H 速比 H Speed	2.85	9.60	24.80	29.81	66.38	135.1	271.2
		L 速比 L Speed	1.44	4.05	9.06	20.1	35.4	78.6	152.0
输入轴每回一圈丝杆(活动螺母)轴向位移量 (mm)	Screw move-ment per revolution of input shaft (mm)	H 速比 H Speed	1.0	1.43	1.92	1.12	1.24	1.50	1.94
		L 速比 L Speed	0.25	0.31	0.38	0.50	0.41	0.50	0.65
最大载荷时容许的输入轴转速 (rpm)	Allowable input shaft rotation speed(rpm) for maximum loading	H 速比 H Speed	1500	1300	850	950	700	600	450
		L 速比 L Speed	1500	1450	1000	890	700	450	400
最大载荷时丝杆回转扭矩	Screw rod rotation torque during maximum loading (N·m)	8.7	34.3	87.9	211.9	438.5	867.2	1806.7	
套管材质	Pipe material/	不锈钢材质 (止旋套管为普通钢管材质)			Stainless steel (rotation stop pipe applies common steel pipe)				
润滑方式	Lubrication mode/	丝杆: 涂抹润滑脂 蜗轮蜗杆: 一般采用飞溅式润滑			Screw:Grease Worm gesr:Worm gear oil				
冷却方式	Cooling method/	自然冷却			Natural cooling				
一般环境条件	Common ambient condition	环境温度:-10℃~40℃, 空旷场地通风良好,海拔高度1000米以下,一般工厂灰尘。			Ambient temperature:-10℃~40℃, open site has good ventilation, altitude is under 1000 meters, common plant dust.				
特殊环境条件	Specied ambient condition	高温、低温、灰尘多, 化学作用(酸、碱等), 露天(直接日照、冰、水淋等), 请咨询。			High temperature, low temperature, much dust, chemical effect(acid, alkali, etc), oper-air (direct sunshine, ice, water spray, etc), please consult.				

“*” 升降机输入轴的容许扭矩。
“**” 包括无负荷空载扭矩的数值。

“*” Allowable torque of input shaft of the gear unit.
“**” Include non-loading torque value.

5 选型方法:

5.1 升降机型号确定:

(1) 计算总机的当量载荷Ws(N)
Ws=最大载荷Wmax×使用系数f1(N)

被驱动设备系数表:

载荷性质	使用举例	被驱动设备系数
Load Characteristic	Example	Facator for driven machine
无冲击载荷, 负荷惯性小 Uniform load, small inertia	开关、阀门传送带切换装置 Shifting device for switches, valves and conveyors	1.0 < f1 ≤ 1.3
轻微冲击载荷, 负荷惯性中等 Moderate shock load, medium inertia	各种移动装置, 升降用各种升降机 Moving devices and elevators	1.3 < f1 ≤ 1.5
大冲击振动载、荷, 负荷惯性大 Heavy shock load, large inertia	用台车搬运东西; 保持压延滚轮的位置 Transport goods with trolley; keep the positions of calendering roller	1.5 < f1 ≤ 3.0

(2) 计算单台升降机的当量载荷W:

$$W = \frac{W_s}{\text{联动台数} \times \text{联动系数 } fd}$$

联动系数(fd):

联动台数	Number of jacks in arrangement	1	2	3	4	5~8
联动系数	Arrangement factor	1	0.95	0.9	0.85	0.8

(3) 确定升降机型号:

充分考虑载重, 速度、行程、效率, 驱动源后暂时选定型号。

(4) 根据使用行程、环境条件、输出顶端的联接方式, 确定升降机的整体型号。

5 Type Selection:

5.1 Determination of screw jack type

(1) Calculation of total equivalent load Ws (N) Ws=Wmax · f1(N)

Driven Machine Factor :

(2) Calculation of equivalent load of single jac kW(N):

$$W = \frac{W_s}{\text{Arrangement factor} \cdot \text{Number of jacks in arrangement } fd}$$

Arrangement factor(fd)

(3) Initial selection of jack type

Make an initial selection of jack type by fully considering load,

(4) Make final determination of screw jack type in view of stroke, ambient environment and top end fittings.

5.2 输入功率校核:

负载所需输入功率与许容最大输入功率相比较, 如果超过请提高型号或降低丝杆轴转速再计算。

负载所需输入功率计算:

5.2 Verification of input power:

If the input power required is greater than the permissible input power, increase the size of the screw jack or decrease the speed of the screw.

Calculation of input power required:

所需输入轴转速 n(r/min) Input speed required n(r/min)	$n = \frac{V}{L1} \times i$
所需输入轴扭矩 T(N·m) Input torque required T(N·m)	$T = \frac{W \times L1}{2\pi \times i \times \eta} + T0$
所需输入功率 P(kW) Input power required P(kW)	$P = \frac{T \times n}{9550}$

V: 升降机丝杆轴(活动螺母)
升降速度 (m/min)
L1: 丝杆螺距 (m)
i: 减速比
w: 单台升降机当量载荷 (N)
л: 圆周率
η: 升降机的综合效率
T0: 空载扭矩(N·m)
(L1、i、η、T0参照基本参数表)

V: Elevator screw shaft (flexible nut)
lifting speed (m/min)
L1: Screw rod pitch (m)
i: Ratio
w: Equivalent load of single elevator (N)
л: Circular constant
η: Comprehensive efficiency of elevator
T0: Empty loading torque (N·m)
(L1、i、η、T0 Refer to basic foundation table)

5.3 丝杆稳定性校核

当丝杆承受轴向压缩载荷时, 请对其进行稳定性校验, 如超过其临界载荷值请提高型号后再计算。

升降机丝杆临界稳定载荷通过以下公式计算:

5.3 Verification of the screw stability

Verify the screw stability when the axial compression load exists. If the load is greater than the critical load, increase the sizes before calculation.

The critical load is calculated with the following formula:

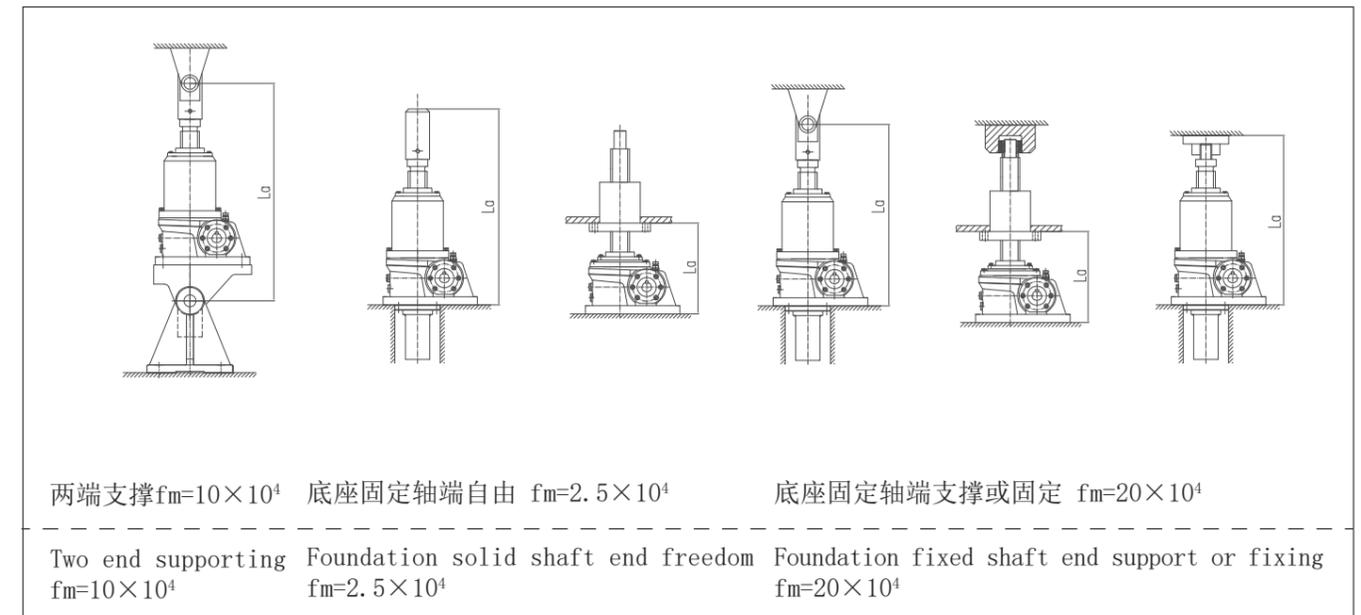
$P_{CR} = f_m \times \left(\frac{d^2}{La}\right)^2$	确保 ensure	$P_{CR} > W \times S_f (S_f=4)$
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PCR: 临界载荷 (N)
d: 丝杆底径mm(参照基本参数表)
fm: 支撑系数
La: 作用点间距离, mm
W: 单台升降机当量载荷 (N)
SF: 安全系数 (一般SF=4)

PCR: critical load
d: screw root diameter mm(see the table of technical data)
fm: support factor
La: distance between action points, mm
W: equivalent load of single jack(N)
SF: safety factor(generally SF=4)

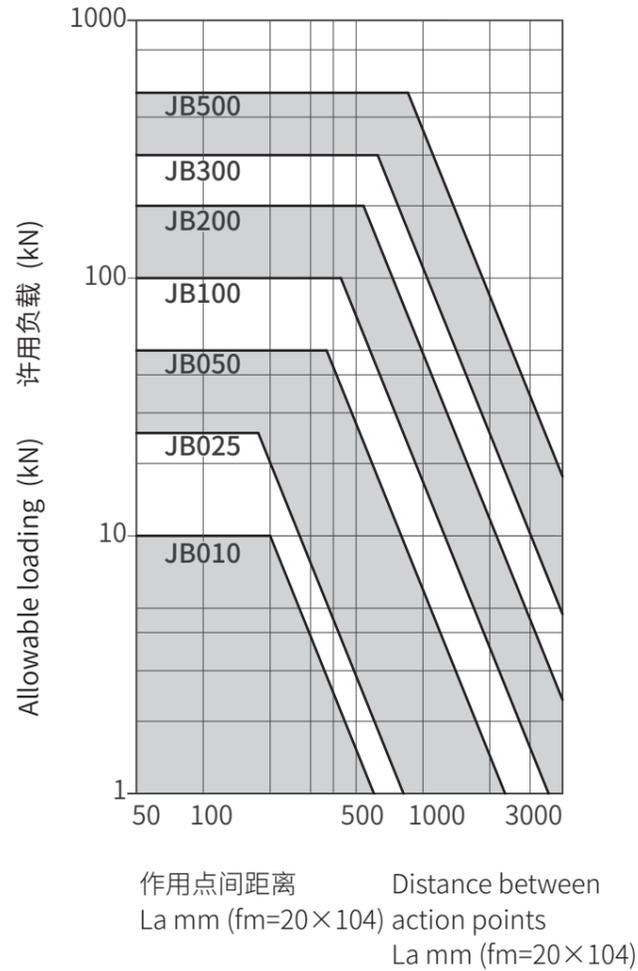
丝杆轴稳定性校验时, La (La值计算根据各型号尺寸) 与fm (支撑系数) 选取如下:

For verification of the screw stability, choose La(based on the sizes) and fm (support factor) as follows

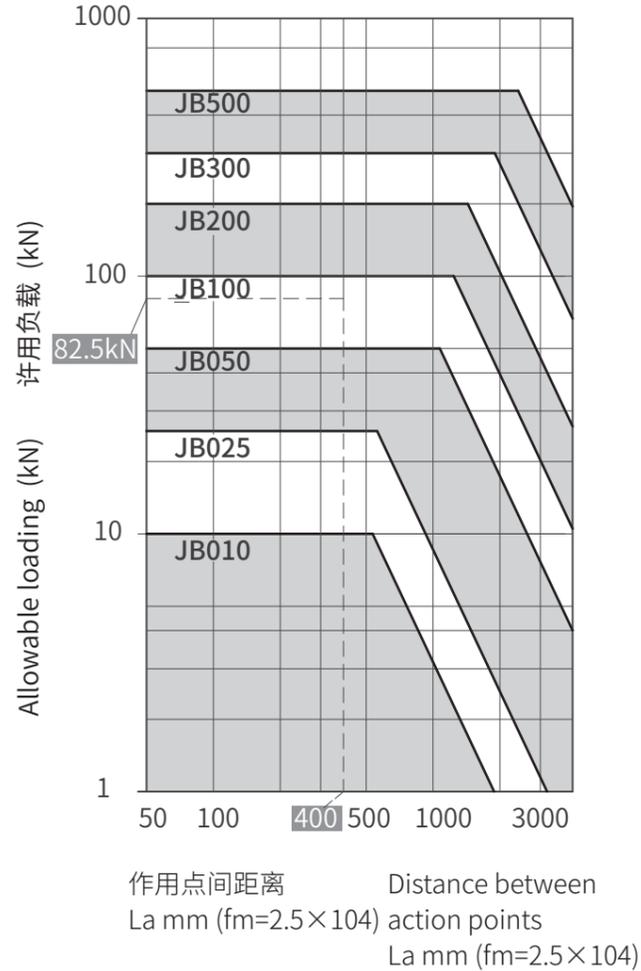


作用点距离许用负载关联图表:

Associated diagram of allowed loading of point distance :



“---”表示以负荷W=82.5kN, (安全系数SF=4)作用点距离La=400mm (底座固定轴端支撑式固定fm=20×104)为例;此时可选定满足纵轴、横轴交点的梯形螺纹丝杆升降机JB100



“---”means loading W=82.5kN, (safety coefficient SF=4) point distance La=400mm (foundation fixed shaft end supporting fixing fm=20×104) as an example; at this time, you can select ladder screw elevator JB100 witch can satisfy crossing point of vertical and horizontal axis.

5.4 临界转速校核

如为活动螺母选型时,请务必将丝杆轴转速控制在临界转速以下(nc>ns),若超出临界转速,请提高型号再计算。

5.4 Verification of critical speed:

If select travelling nut type, the rotary speed of the screw must be lower than the critical speed; if vice versa, increase the size before calculation.

$$n_c = \frac{96 \times f_n \times d \times 10^6}{L_b^2} \quad n_s = \frac{n_1}{i}$$

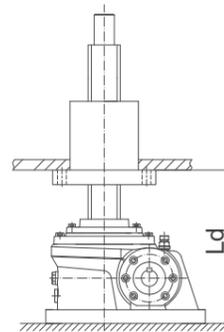
nc: 临界转速 r/min
d: 丝杆底径 mm(参照基本参数表)
fn: 长度系数
Lb: 支撑间距离 mm
ns: 丝杆转速 r/min
n1: 输入速度 r/min
i: 减速比(参照基本参数表)

nc: critical speed r/min
d: screw root diameter mm(see the table of basic parameters)
fn: length factor
Lb: distance between supports, mm
ns: screw speed
n1: input speed r/min
i: ratio(see the table of basic parameters)

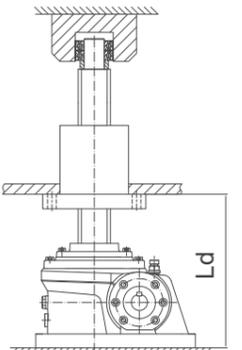
丝杆轴转速校核时, Lb (Lb值计算根据各型号尺寸) 与 fn (长度系数) 选取如下:

Lb (as per the sizes) and fn (length factor) are as follows in verifying the rotary speed of screw.

轴端支撑 Supporting shaft end
fn=1.56
fn=1.56



轴端自由 Movable shaft end
fn=0.36
fn=0.36



计算举例: JB200NUA-HE12-D10N0-S Calculation example:

在输入转速为1200r/min, 轴端支撑下运行,根据外形尺寸与传动能力表查得: i=9.667 d=54.4 Lb=1419 E12:1200行程

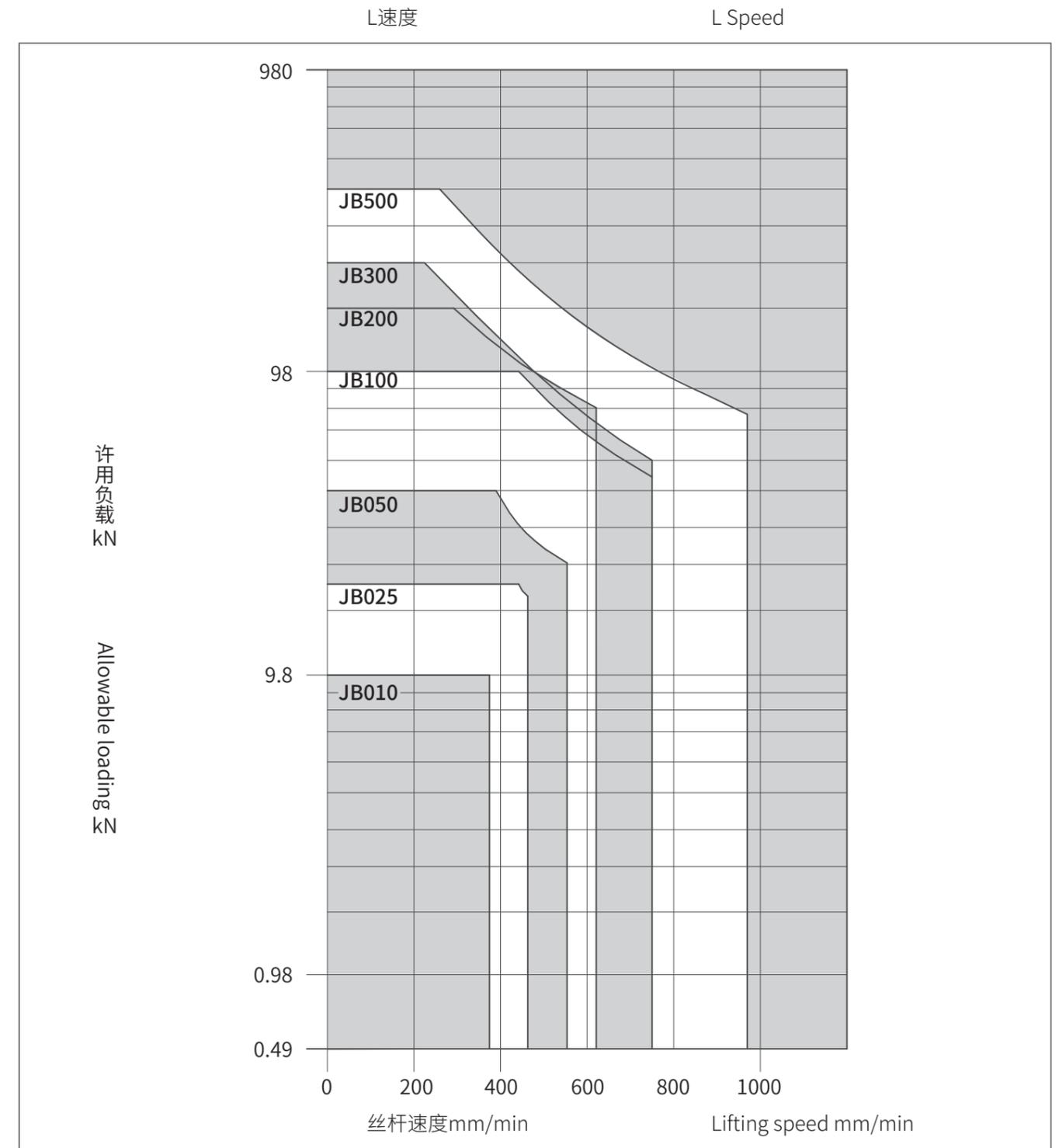
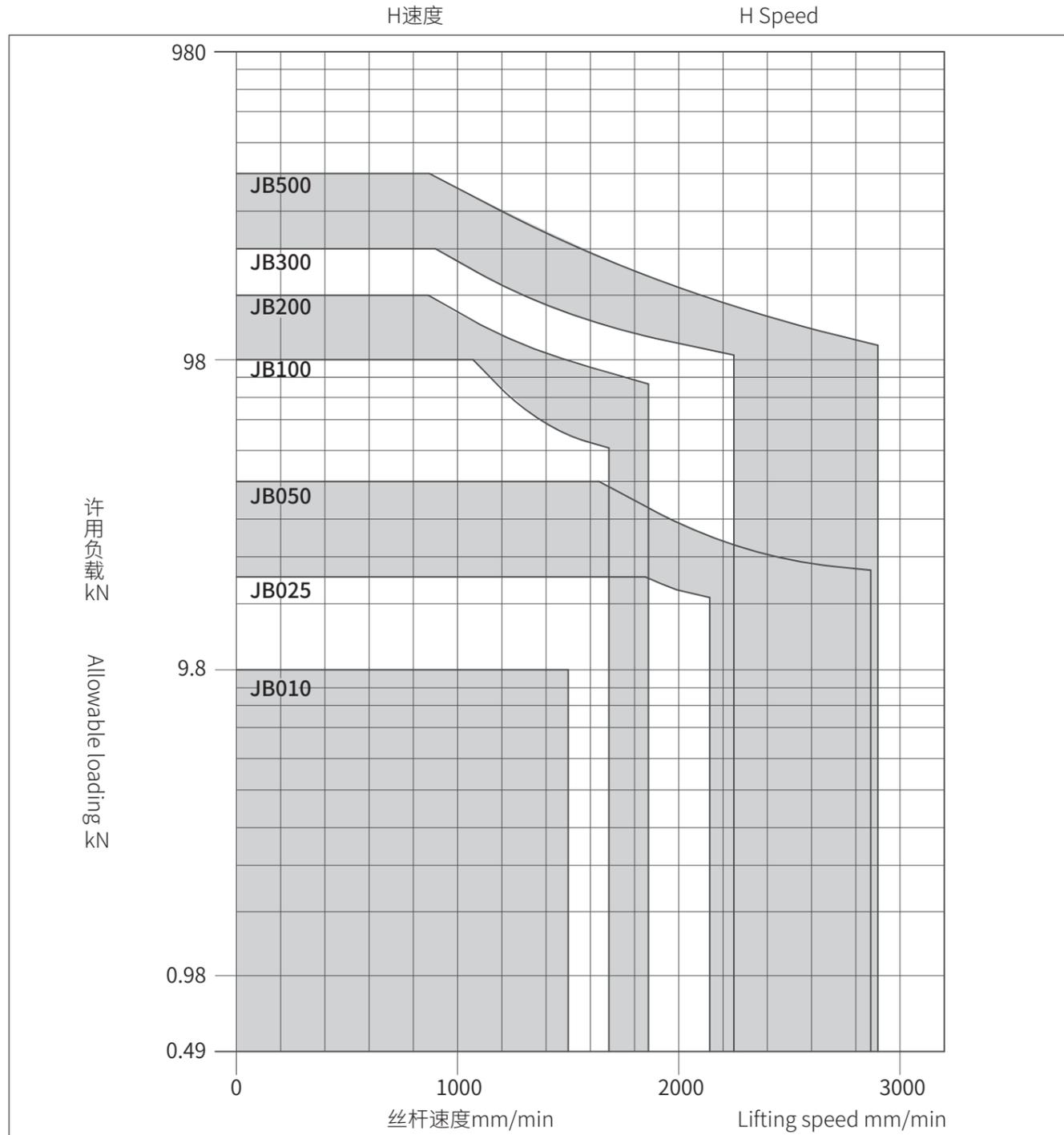
JB200NUA-HE12-D10N0-S Input speed is 1200r/min, run under shaft end support, check according to outline dimension and transmission capacity: i=9.667 d=54.4 Lb=1419 E12:1200stroke

$$n_s = \frac{n_1}{i} = \frac{1200}{9.667} = 124 \text{ r/min}$$

$$n_c = \frac{96 \times f_n \times d \times 10^6}{L_b^2} = \frac{96 \times 1.56 \times 54.4 \times 10^6}{(1419)^2} = 4046 \text{ r/min}$$

nc=4046 r/min > 124 r/min ok

丝杆升降速度与许用负载关联图表: Association diagram of screw rod lifting speed and allowable loading:
 此图表是考虑丝杆的最大允许输入容量而创建的图表, 请通过此图表检查允许负载决定升降机型号。需要详细造型时, 请通过计算确认。
 The picture is established according to maximum allowable input capacity of screw rod, please check allowable loading according to this picture, determine elevator type. When detailed type is needed, confirm by calculation.



5.5 驱动源的选择

求出联动驱动源所需容量Pt, 选定驱动源

1. 求出每台升降机驱动源侧所需扭矩T1~4, 合计求出驱动源所需总扭矩

(1) 每台升降机驱动源侧所需扭矩:

$$T_{1-4} = \frac{T}{\text{转向箱效率} \times \text{转向箱台数}}$$

(2) 驱动源所需总扭矩:

$$T_t = T_1 + T_2 + T_3 + T_4$$

T1~4: 各升降机驱动源侧所需扭矩 N.m

T: 升降机所需输入扭矩 N.m

Tt: 驱动源所需总扭矩

转向箱综合效率: 一般为0.9

4台联动(图1)时

$$T_{1-4} = \frac{T}{0.9^2}$$

5.5 Drive source options

Determine the required drive unit capacity for synchronous drive Pt

1. Add the torque required for each jack T1~4 on the drive unit side to determine the overall torque Tt

(1) Required torque per jack:

$$T_{1-4} = \frac{T}{\text{Gearbox efficiency} \times \text{No. of gearbox}}$$

(2) Required torque for the drive unit: Tt=T1+T2+T3+T4

T1~4: Required torque for each jack on the drive unit side N.m

T: Required input torque per jack N.m

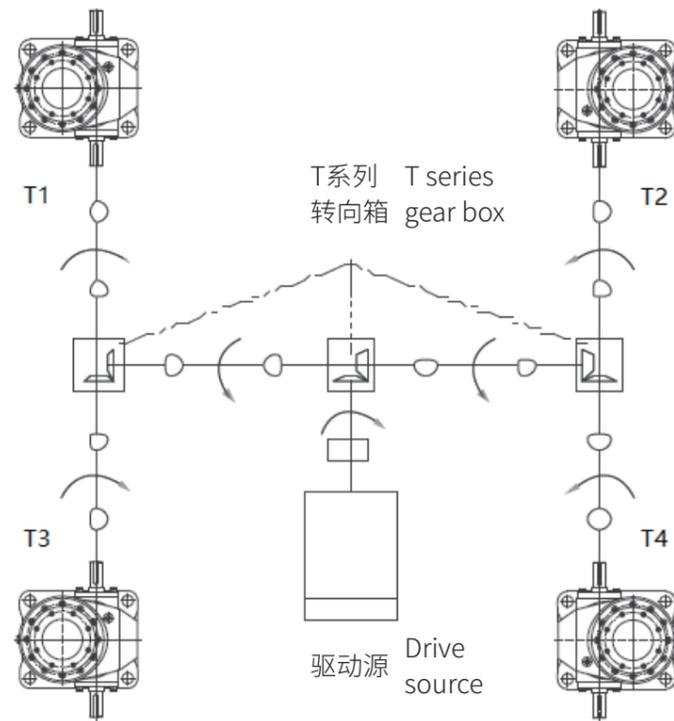
Tt: Required torque for the drive unit N.m

Gearbox efficiency: Assume 0.9

For a four unit system (fig.1),

$$T_{1-4} = \frac{T}{0.9^2}$$

fig.1/图1



计数器 Counter

2. 根据输入轴转速n和1.中求出的驱动源所需总扭矩, 计算出驱动源所需功率Pt。

$$P_t = \frac{T_t \times n}{9550}$$

2. Determine the required drive unit capacity Pt with input n and overall Tt determined in 1.

$$P_t = \frac{T_t \times n}{9550}$$

5.6 输入轴允许径向力Fr1

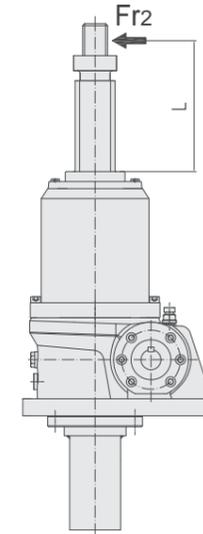
在输入轴安装链轮、齿轮、皮带时, 请确认作用在输入轴上的径向力在允许径向力以下。

5.6 Allowable radial force of input shaft Fr1

When installing chain wheel, gear, belt on input shaft, please confirm radial force exerted on input shaft is under allowable radial force.

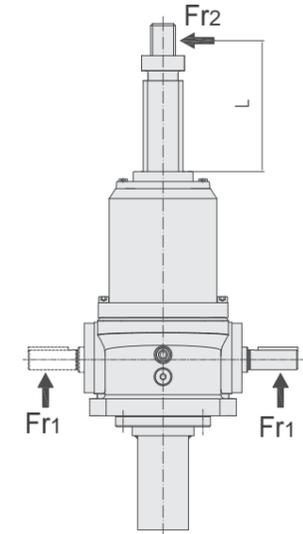
速比类型 Ratio	允许径向力 Allowable radial force Fr1						单位 (N) Unit (N)
	JB010	JB025	JB050	JB100	JB200	JB300	JB500
H 速度 H Speed	380	710	1500	2270	4320	6110	10100
L 速度 L Speed	220	420	820	1430	2800	4400	6650

5.7 丝杆输出端允许径向力Fr2



在丝杆输出端施加外力时, 请确认作用在丝杆输出端的径向力, 在允许径向力以下

5.7 Allowable radial force of screw rod output end Fr2

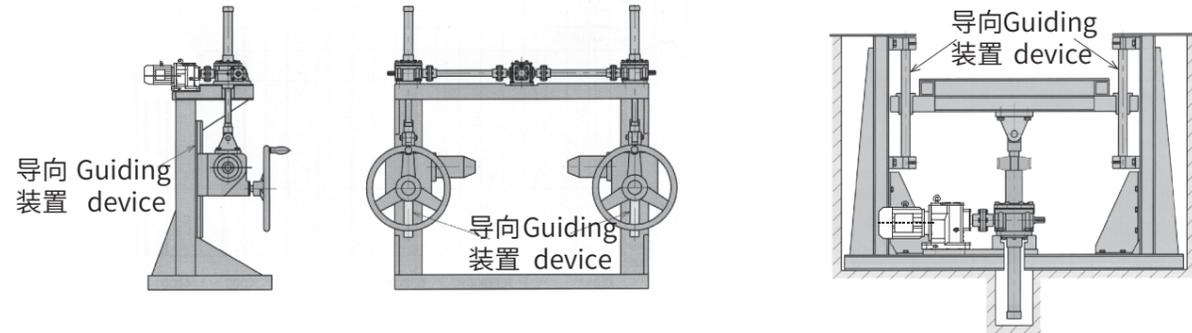


When exerting force on screw rod output end, please confirm radial force exerted on screw rod output end, under allowable radial force

丝杆突出量 L(mm) Highlighted quantity of screw rod (mm)	型号 Type	允许径向力 Allowable radial force Fr2						单位 (N) Unit (N)
		JB010	JB025	JB050	JB100	JB200	JB300	JB500
100		318	570	2500	4010	8210	38200	85300
200		159	290	1250	2010	4110	23000	50400
300		106	190	830	1340	2740	15300	33600
400		79	140	620	1000	2050	11400	25200
500		64	110	500	800	1640	9100	20200
600		53	100	420	670	1370	7600	16800
700		51	90	360	570	1170	6500	14400
800		48	90	310	500	1030	5700	12600
900		45	90	280	450	910	5000	11200
1000		42	90	250	400	820	4500	10100

若外径向力超过丝杆允许径向力时, 请外加导向装置, 举例如下:

If external diameter force exceeds allowable radial force of screw rod, please add guide device, For example:

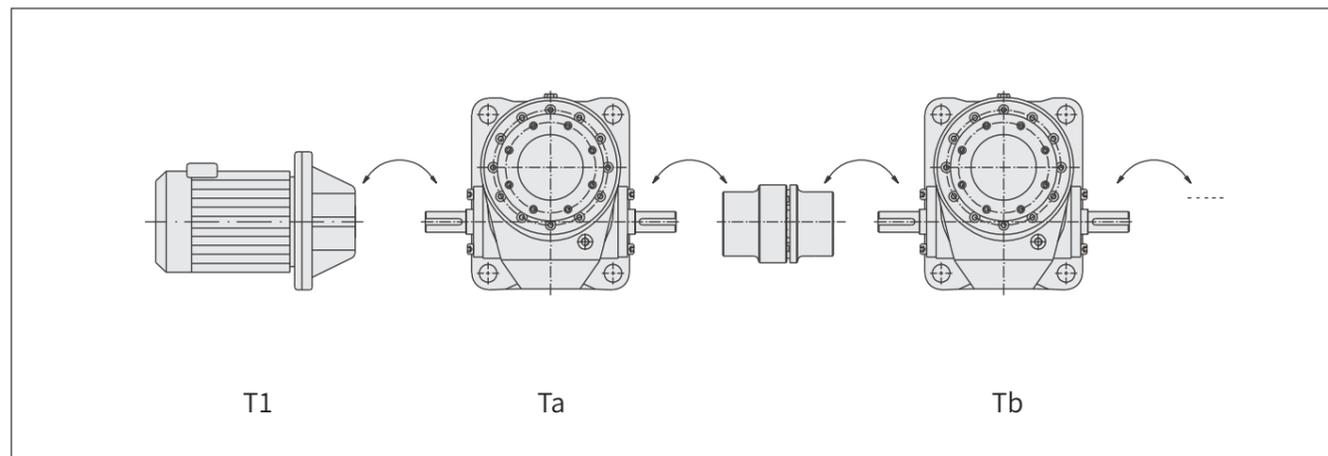


5.8 当升降机传动配置为串联时(即同一轴线配置了两个或以上数量的升降机)

5.8 When elevator transmission is in series (that means the same axial line is equipped with two or more elevators)

如图须对各升降机输入轴端进行强度校核;

Make strenght examination to input shaft end of each elevator:

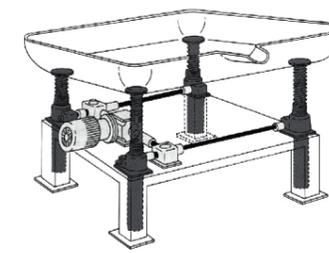


Ta:为升降机 a 的所需输入扭矩
Tb:为升降机 b 的所需输入扭矩
电机必需的扭矩 $T1=T_a+T_b <$ 升降机 a 的容许输入轴扭矩

Ta: Input torque needed by elevator a
Tb: Input torque needed by elevator b
Torque needed by motor $T1=T_a+T_b <$ Allowable input shaft torque of elevator a

6 应用举例:

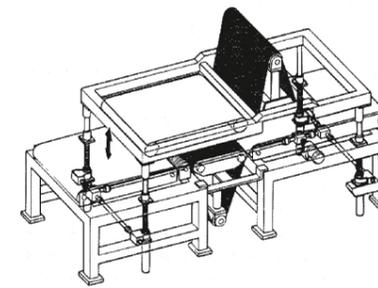
6 Examples:



平台升降

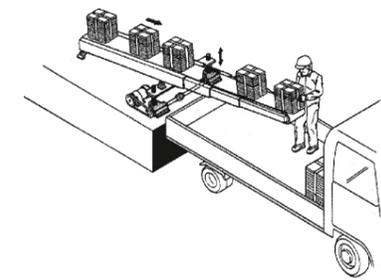


Lifting platform



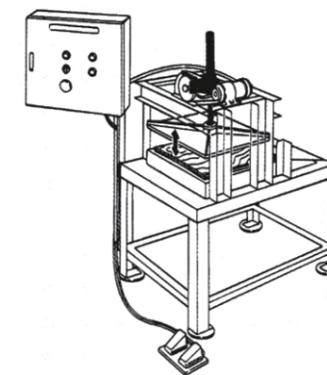
调整表面加工机的工作高度

Height adjustment of surface machining tool



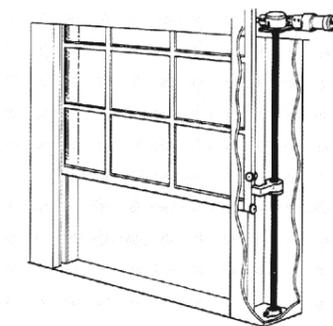
调整滑动传送带的倾斜程度

Inclination adjustment of the sliding belt



更改校正器的作业高

Height adjustment of straightening machine



大型窗户(门)自动开关

Auto opening of large windows or doors

7 布置型式举例:

7 Arrangement Type Examples:

7.1 两台联动		7.1 Two sets interlock	
直线型 Linear		T型 Layout T	T系列转向箱 T series gear box
驱动源 Drive source	计数器 Counter	计数器 Counter	驱动源 Drive source
7.2 四台联动		7.2 Four sets interlock	
T型 Layout T		T系列转向箱 T series gear box	驱动源 Drive source
计数器 Counter	驱动源 Drive source	计数器 Counter	驱动源 Drive source
U型 Layout U		H型 Layout H	
计数器 Counter	T系列转向箱 T series gear box	T系列转向箱 T series gear box	驱动源 Drive source
驱动源 Drive source	驱动源 Drive source	计数器 Counter	驱动源 Drive source
7.3 八台联动		7.3 Eight sets interlock	
H发展型 Layout H			
计数器 Counter	驱动源 Drive source		
2H型 Layout 2H			
计数器 Counter	驱动源 Drive source		

8 选型举例:

8 Examples Of Type Selection:

已知条件:	Known Criteria:
<p>1、升降平台轴向载荷: 88KN, 平台升降速度: 1200 mm/min, 升降行程: 260mm;</p> <p>2、普通电机: 4极, 转速n1=1450r/min;</p> <p>3、负荷性质: 一般冲击, 工作16小时/天, 启动频率10次/小时;</p> <p>4、安装输出形式: 4台连动押上, H型布置(见14页), 采用底座固定轴端支撑, 带防尘罩、输出法兰盘附件;</p> <p>5、有横向负载, 在升降机侧面设置了导向器。</p>	<p>1. The axial load of the lifting platform: 88KN, lifting speed: 1200mm/min, stroke: 260mm</p> <p>2. Normal motor: 4 pole, speed n1=1450r/min</p> <p>3. Load characteristic: moderate, operating 16h/d, starts per hour:10</p> <p>4. Mounting mode: 4 jacks, Layout H (See 14), foot-mounted with fixed shaft end, accessories with dust-proof cover and output flange.</p> <p>5. Lateral load, guiding device on one side of the jack.</p>
选型步骤:	Selection steps:
<p>1. 计算总机当量载荷Ws (取被驱动设备系数f1=1.3)</p> $W_s = W_{max} \cdot f_1 = 88000 \times 1.3 = 114400N$	<p>1. Calculation of total equivalent load Ws (driven machine factor f1=1.3)</p> $W_s = W_{max} \cdot f_1 = 88000 \times 1.3 = 114400N$
<p>2. 计算单台当量载荷W (取连动系数fd=0.85)</p> $W = \frac{114400}{4 \times 0.85} = 33647N$	<p>2. Calculation of equivalent load of single jack W (arrangement factor fd=0.85)</p> $W = 114400 / (4 \times 0.85) = 33647N$
<p>3. 暂定型号: 考虑速度、效率、驱动源、载重以及行程的余量后暂定选择 JB050BUA-HD30-D17N7-S【见基本参数表(03页)及丝杆升降速度与许用负载关联表(09页)确定可暂选H速比】</p>	<p>3. Initial selection of jack type: JB050BUA-HD30-D17N7-S selected after considering speed, efficiency, drive source, load and stroke allowance (In reference to the table of technical data, permissible load and distance between action points. If H/L ratio is difficult to determine, use H ratio temporarily)</p>

选型步骤:	Selection steps:
<p>4. 单台输入功率校核:</p> <p>(1)单台所需输入功率计算:</p> $\textcircled{1} n = \frac{v_1}{L_1} \times i = \frac{1.2}{0.01} \times 5.2 = 624 \text{r/min}$ $\textcircled{2} T = \frac{W \times L_1}{2\pi \times i \times \eta} + T_0 = \frac{33647 \times 0.01}{2 \times 3.14 \times 5.2 \times 0.64} + 1.37 = 17.46 \text{N} \cdot \text{m}$ $\textcircled{3} P = \frac{T \times n}{9550} = \frac{17.46 \times 624}{9550} = 1.14 \text{kW}$ <p>(2)参照基本参数表, $P_{\max} = 2.21 \text{kW} > P$,OK.</p> <p>5. 丝杆稳定性校核:</p> <p>根据基本参数表(03页),作用点距离许用负载关联表(05~06页)及尺寸图表(23~24页)而得:</p> $d = 32.4, L_a = (604 + 33) = 637, f_m = 20 \times 10^4, S_f = 4$ $P_{CR} = f_m \times \left(\frac{d^2}{L_a}\right)^2 = 20 \times 10^4 \times \left(\frac{32.4^2}{637}\right) = 473073 \text{N}$ $P_{CR} = 473073 \text{N} > W \times S_f = 33647 \times 4 = 134456 \text{N}, \text{.....OK.}$ <p>6. 临界转速校核:</p> <p>此型号为非活动螺母式,且转速较低,可不必校核临界转速。</p> <p>7. 驱动源的选型:</p> <p>(1)单台升降机驱动源侧所需扭矩计算:</p> $T_{1-4} = \frac{T}{\text{转向箱效率} \times \text{转向箱台数}} = \frac{17.46}{0.9^2} = 21.56 \text{N} \cdot \text{m}$ <p>(2)驱动源所需总扭矩:</p> $T_t = T_1 + T_2 + T_3 + T_4 = 86.24 \text{N} \cdot \text{m}$ <p>(3)驱动源所需功率:</p> $P_t = \frac{T_t \times n}{9550} = \frac{86.64 \times 624}{9550} = 5.63 \text{Kw}$ <p>(4)驱动源功率=驱动源所需功率×驱动源系数=5.63×1.3=7.32KW 由上可得:应选7.5KW电机</p> <p>注:若以上校核未通过,需向上选稍大机座号的升降机; T系列转向箱选型请参考T系列样本。</p>	<p>4.Verification of input power of single jack:</p> <p>(1)Input power required by single jack:</p> $\textcircled{1} n = \frac{v_1}{L_1} \times i = \frac{1.2}{0.01} \times 5.2 = 624 \text{r/min}$ $\textcircled{2} T = \frac{W \times L_1}{2\pi \times i \times \eta} + T_0 = \frac{33647 \times 0.01}{2 \times 3.14 \times 5.2 \times 0.64} + 1.37 = 17.46 \text{N} \cdot \text{m}$ $\textcircled{3} P = \frac{T \times n}{9550} = \frac{17.46 \times 624}{9550} = 1.14 \text{kW}$ <p>(2) According to the table of technical data, $P_{\max} = 2.05 \text{kW} > P$ is OK.</p> <p>5.Verification of screw stability:</p> <p>According to the table of technical data (page 03), associated diagram of allowed loading of point distance (page 05~06) and dimension diagram (page 23~24).</p> $d = 32.4, L_a = (604 + 33) = 637, f_m = 20 \times 10^4, S_f = 4$ $P_{CR} = f_m \times \left(\frac{d^2}{L_a}\right)^2 = 20 \times 10^4 \times \left(\frac{32.4^2}{637}\right) = 473073 \text{N}$ $P_{CR} = 473073 \text{N} > W \times S_f = 33647 \times 4 = 134456 \text{N}, \text{.....OK.}$ <p>6.Verification of critical speed:</p> <p>Because of none travelling nut type and low rotary speed, the verification of critical speed can be ignored.</p> <p>7.Drive source options</p> <p>(1)Required torque per jack:</p> $T_{1-4} = \frac{T}{\text{Gearbox efficiency} \times \text{No.of gearbox}} = \frac{17.46}{0.9^2} = 21.56 \text{N} \cdot \text{m}$ <p>(2)Required torque for the drive unit:</p> $T_t = T_1 + T_2 + T_3 + T_4 = 86.24 \text{N} \cdot \text{m}$ <p>(3)required drive unit capacity:</p> $P_t = \frac{T_t \times n}{9550} = \frac{86.64 \times 624}{9550} = 5.63 \text{Kw}$ <p>(4)Drive source = required drive unit capacity × drive unit factor = 5.63 × 1.3 = 7.32KW Based on above data, we select 7.5KW motor.</p> <p>Note: If the above verifications fail, select the larger size jack. For selection of T series gear units, refer to T series brochures.</p>

9 注意事项:

选择升降机时不论静载、动载、冲击载荷均不得超过其允许承受的最大载荷,根据安全系数、使用行程、校对丝杆的稳定性选择具有充分容量的升降机。一定要注意丝杆轴转速与承受的载荷进行搭配,对于升降机的容许最大载荷、容许外加负载、容许丝杆轴的旋转速度等项目进行校验,如果超过产品的数据将会造成升降机设备整体的重大损伤。

升降机在工作时其减速部表面温度应控制在-15°C~80°C的范围以内,确保活动螺母的表面温度也在上述范围以内。输入轴容许转速为1500r/min,输入轴不得超过此转速。

JB系列升降机不可连续运转:
单台升降机的负荷时间率(%ED)以30分为单位计算,JB列升降机(滚珠丝杆类型)的负荷时间内不得超过30%ED。

负荷时间率%ED=

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

对于在同一轴线上连接数台升降机时,请务必对输入轴强度进行校核,使每台升降机所承担的扭矩都应在其容许输入轴扭矩以内。驱动源的启动扭矩应确保在使用扭矩的200%以上。

在零摄氏度以下工作时因受润滑油粘性变化的影响使得整机效率下降,所以必须选有充足的驱动源。

JB型升降机本身不具有自锁功能,为了防止由于轴向载荷和丝杆自重而产生的逆转,必须外加制动装置或选择带有制动的驱动源。

升降机使用的一般环境条件,环境温度:-10~40°C,空旷场地通风良好,海拔高度1000米以下,一般工厂灰尘。当升降机工作在多灰尘的场所中时请务必选择防尘罩伸缩套附件来保护丝杆,在室外使用时请务必考虑使用罩壳等装置,使机器不直接受到风吹雨打。

在升降机工作时,不得进行人为的强行停机,否则将使升降机受到严重破损。

JB系列升降机效率较高,保持时需要高于保持扭矩的制动装置。

9 Notes:

None of static, dynamic or shock loads should exceed the max permissible load. Selection of a jack with sufficient capacity must be based on safety factor, stroke and screw stability. Make sure that the speed matches the load. Verify the max permissible load, external permissible load and permitted rotary speed of the screw. In case these figures exceed those of the product, severe damage may occur in the machine.

The surface temperature of the reduction part and the travelling nut should be within -15~80°C.

Permissible speed of the input shaft is 1500r/min. Higher speed are not allowed. JB screw jacks are not designed for continuous duty circle.

The unit of %ED for single screw jack is 30min JB (Ball screw screw) duty circle must be less than 30%ED

ED=

$$\frac{\text{work time in one load circle}}{\text{work time in one load circle} + \text{rest time in one load circle}} \times 100\%$$

If several screw jacks are arranged in an axial line, verify the strength of the input shaft and make sure the torque of each jack stay within the permissible input torque.

Make sure the starting torque of the drive source is greater than 200% of the service torque.

When working under below 0°C, the screw jack must be guaranteed by sufficient drive source, for its efficiency decreases as a result of the viscosity change in the grease.

JB Ball screw Jack does not have a self-locking device, therefore, a brake mechanism is required.

The normal ambient environment: ambient temperature -10 to 40°C, ample space, good ventilation, altitude not exceeding 1000m and normal plant dust. When working in places with volume of dust, bellows should be supplied to guard the screw. In the open air, use the covers to protect the machine against rains and sunlight.

Do not halt the screw jack intentionally during its operation, for it may cause severe damage to the product.

Since JB Ball screw Jack is highly efficient, sufficient brake that over powers the "holding torque" is required to sustain its shaft.

JB010

10 外形尺寸:

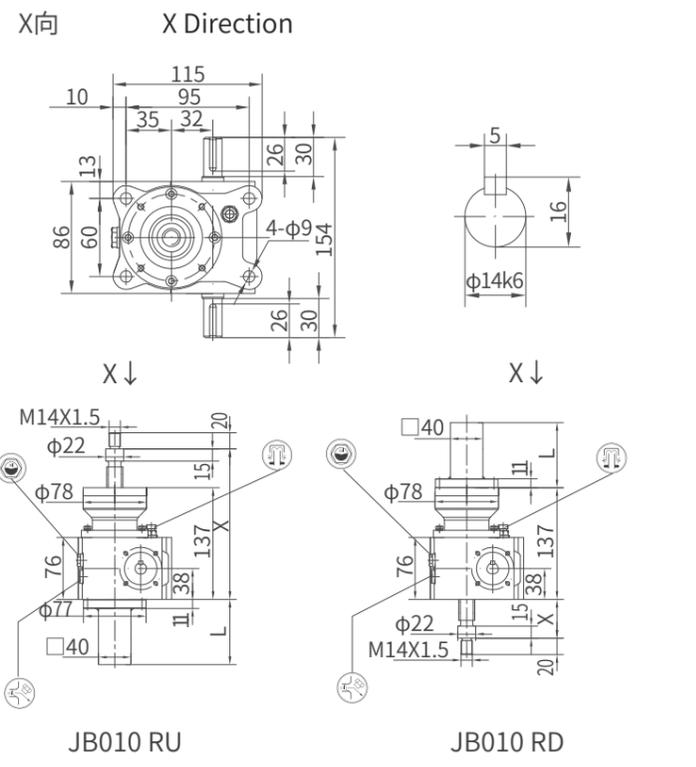
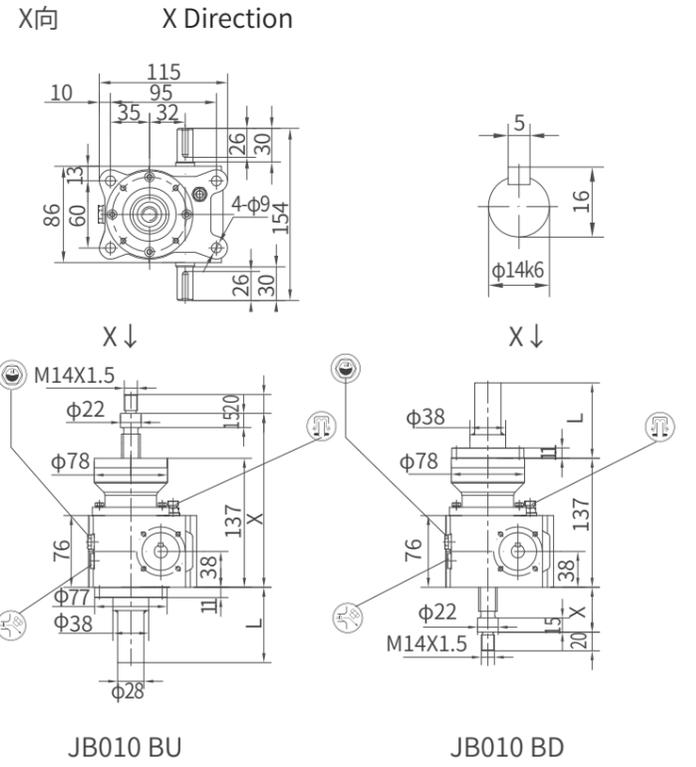
10 Outline Dimension:

行程Stroke (mm) (mm)	BU				L	m(kg)
	X		X ⁽¹⁾			
	MIN	MAX	MIN	MAX		
25	162	187	212	237	119	6.5
50	162	212	212	262	144	6.6
100	162	262	212	312	194	6.7
150	162	312	212	362	244	6.8
200	162	362	212	412	294	7
250	162	412	252	502	384	7.2
300	162	462	252	552	434	7.4
350	162	512	252	602	484	7.5
400	162	562	252	652	534	7.6
500	162	662	287	787	669	8
600	162	762	287	887	769	8.2
800	162	962	322	1122	1004	8.7
1000	162	1162	352	1352	1234	9.2

行程Stroke (mm) (mm)	BD				L	m(kg)
	X		X ⁽¹⁾			
	MIN	MAX	MIN	MAX		
25	25	50	75	100	119	6.5
50	25	75	75	125	144	6.6
100	25	125	75	175	194	6.7
150	25	175	75	225	244	6.8
200	25	225	75	275	294	7
250	25	275	115	365	384	7.2
300	25	325	115	415	434	7.4
350	25	375	115	465	484	7.5
400	25	425	115	515	534	7.6
500	25	525	150	650	669	8
600	25	625	150	750	769	8.2
800	25	825	185	985	1004	8.7
1000	25	1025	215	1215	1234	9.2

行程Stroke (mm) (mm)	RU				L	m(kg)
	X		X ⁽¹⁾			
	MIN	MAX	MIN	MAX		
25	162	187	212	237	119	6.8
50	162	212	212	262	144	7.1
100	162	262	212	312	194	7.5
150	162	312	212	362	244	7.9
200	162	362	212	412	294	8.2
250	162	412	252	502	384	8.7
300	162	462	252	552	434	9.1
350	162	512	252	602	484	9.5
400	162	562	252	652	534	9.8
500	162	662	287	787	669	11
600	162	762	287	887	769	12
800	162	962	322	1122	1004	13.5
1000	162	1162	352	1352	1234	15

行程Stroke (mm) (mm)	RD				L	m(kg)
	X		X ⁽¹⁾			
	MIN	MAX	MIN	MAX		
25	25	50	75	100	119	6.8
50	25	75	75	125	144	7.1
100	25	125	75	175	194	7.5
150	25	175	75	225	244	7.9
200	25	225	75	275	294	8.2
250	25	275	115	365	384	8.7
300	25	325	115	415	434	9.1
350	25	375	115	465	484	9.5
400	25	425	115	515	534	9.8
500	25	525	150	650	669	11
600	25	625	150	750	769	12
800	25	825	185	985	1004	13.5
1000	25	1025	215	1215	1234	15



注: X⁽¹⁾ 加防尘罩尺寸。

Note: X⁽¹⁾ dimension with dust-proof cover.

行程 Stroke (mm) (mm)	NU			m(kg)
	X		Y	
	MIN	MAX		
25	107	132	193	5.7
50	107	157	218	5.8
100	107	207	268	5.9
150	107	257	318	6
200	107	307	368	6.1
250	107	357	418	6.2
300	107	407	468	6.4
350	107	457	518	6.5
400	107	507	568	6.6
500	107	607	668	6.8
600	107	707	768	7
800	107	907	968	7.4
1000	107	1107	1168	7.8

行程 Stroke (mm) (mm)	ND			m(kg)
	X		Y	
	MIN	MAX		
25	82	107	117	5.7
50	82	132	142	5.8
100	82	182	192	5.9
150	82	232	242	6
200	82	282	292	6.1
250	82	332	342	6.2
300	82	382	392	6.4
350	82	432	442	6.5
400	82	482	492	6.6
500	82	582	592	6.8
600	82	682	692	7
800	82	882	892	7.4
1000	82	1082	1092	7.8

附件 Accessories

I型接头 I type connection B型接头 B type connection 输出法兰盘 Output flange 防尘罩 Dust-proof cover

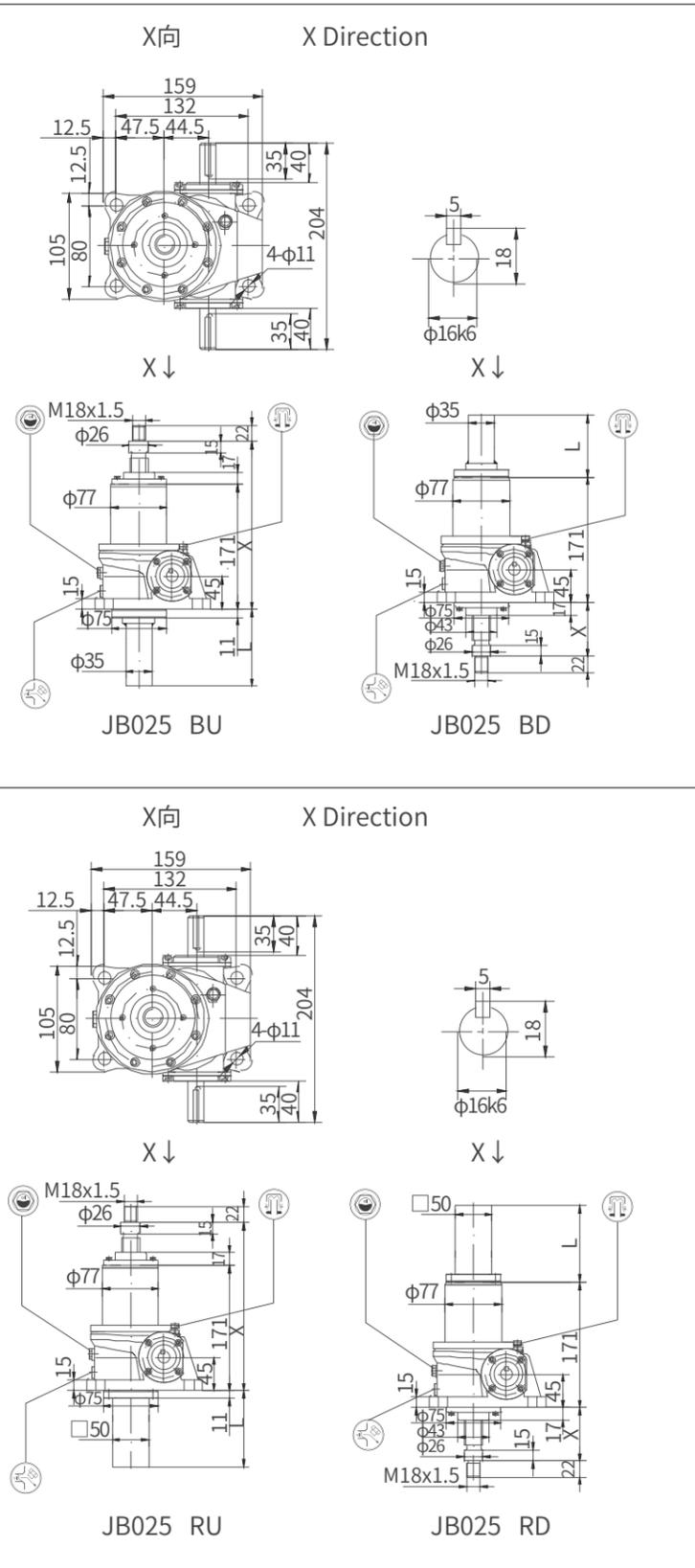
JB025

行程 Stroke (mm) (mm)	BU				L	m(kg)
	X		X ⁽¹⁾			
	MIN	MAX	MIN	MAX		
50	213	263	228	278	99	10.9
100	213	313	228	328	149	11
150	213	363	228	378	199	11.1
200	213	413	228	428	249	11.3
250	213	463	248	498	319	11.5
300	213	513	248	548	369	11.6
350	213	563	248	598	419	11.8
400	213	613	248	648	469	12
500	213	713	268	768	589	12.5
600	213	813	268	868	689	13
800	213	1013	288	1088	909	14
1000	213	1213	308	1308	1129	15
1200	213	1413	323	1523	1334	16

行程 Stroke (mm) (mm)	BD				L	m(kg)
	X		X ⁽¹⁾			
	MIN	MAX	MIN	MAX		
50	42	92	57	107	99	10.9
100	42	142	57	157	149	11
150	42	192	57	207	199	11.1
200	42	242	57	257	249	11.3
250	42	292	77	327	319	11.5
300	42	342	77	377	369	11.6
350	42	392	77	427	419	11.8
400	42	442	77	477	469	12
500	42	542	97	597	589	12.5
600	42	642	97	697	689	13
800	42	842	117	917	909	14
1000	42	1042	137	1137	1129	15
1200	42	1242	152	1352	1334	16

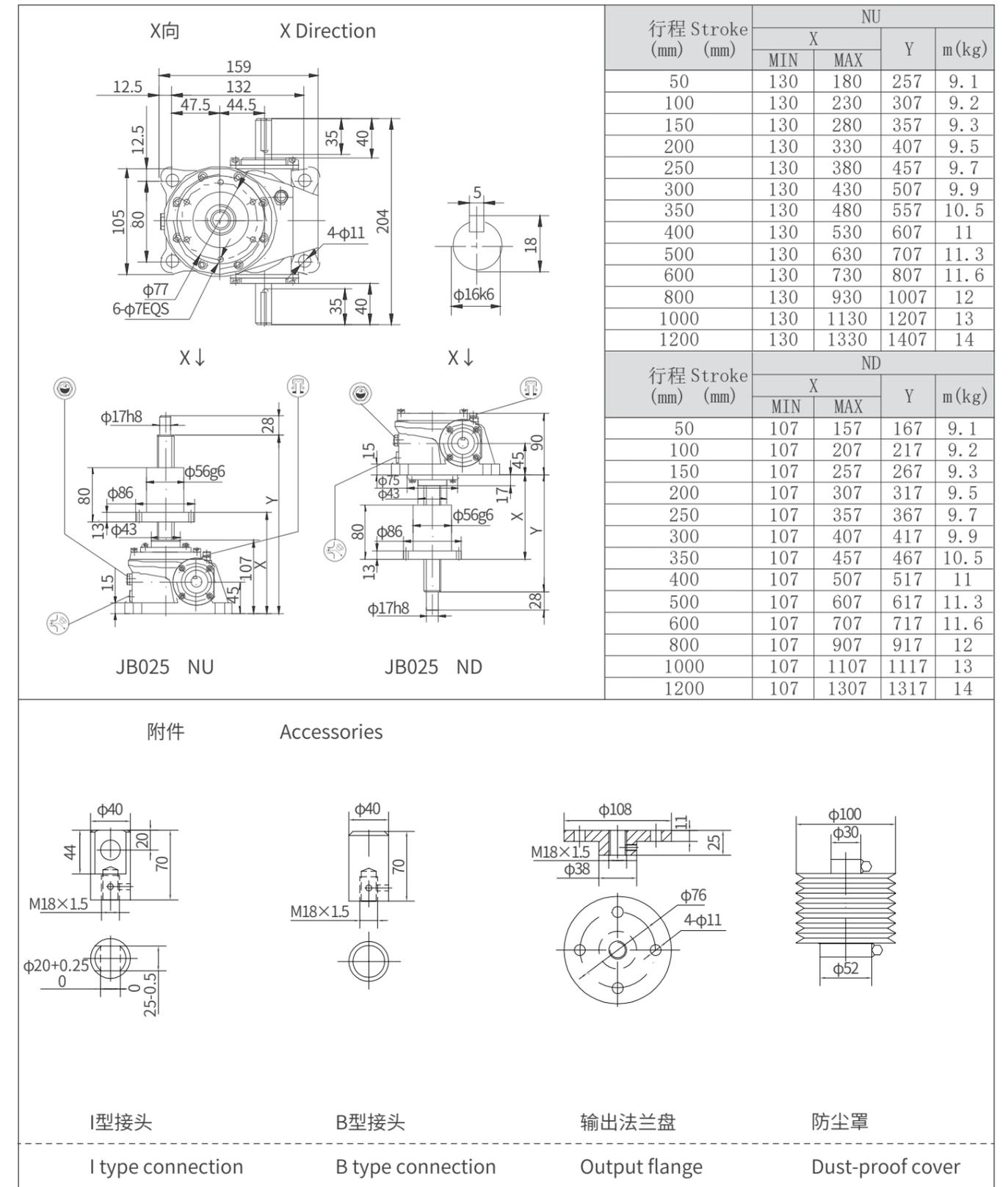
行程 Stroke (mm) (mm)	RU				L	m(kg)
	X		X ⁽¹⁾			
	MIN	MAX	MIN	MAX		
50	213	263	228	278	125	11.5
100	213	313	228	328	175	12
150	213	363	228	378	225	12.5
200	213	413	228	428	275	13
250	213	463	248	498	345	14
300	213	513	248	548	395	15
350	213	563	248	598	445	15.5
400	213	613	248	648	495	16
500	213	713	268	768	615	17
600	213	813	268	868	715	18
800	213	1013	288	1088	935	21
1000	213	1213	308	1308	1155	24
1200	213	1413	323	1523	1370	27

行程 Stroke (mm) (mm)	RD				L	m(kg)
	X		X ⁽¹⁾			
	MIN	MAX	MIN	MAX		
50	42	92	57	107	125	11.5
100	42	142	57	157	175	12
150	42	192	57	207	225	12.5
200	42	242	57	257	275	13
250	42	292	77	327	345	14
300	42	342	77	377	395	15
350	42	392	77	427	445	15.5
400	42	442	77	477	495	16
500	42	542	97	597	615	17
600	42	642	97	697	715	18
800	42	842	117	917	935	21
1000	42	1042	137	1137	1155	24
1200	42	1242	152	1352	1370	27



注: X⁽¹⁾ 加防尘罩尺寸。

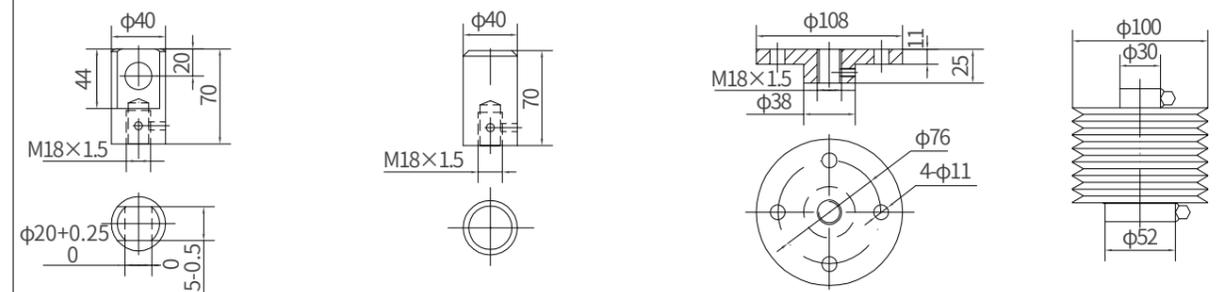
Note: X⁽¹⁾ dimension with dust-proof cover.



行程 Stroke (mm) (mm)	NU			
	X		Y	m(kg)
	MIN	MAX		
50	130	180	257	9.1
100	130	230	307	9.2
150	130	280	357	9.3
200	130	330	407	9.5
250	130	380	457	9.7
300	130	430	507	9.9
350	130	480	557	10.5
400	130	530	607	11
500	130	630	707	11.3
600	130	730	807	11.6
1000	130	1130	1207	13
1200	130	1330	1407	14

行程 Stroke (mm) (mm)	ND			
	X		Y	m(kg)
	MIN	MAX		
50	107	157	167	9.1
100	107	207	217	9.2
150	107	257	267	9.3
200	107	307	317	9.5
250	107	357	367	9.7
300	107	407	417	9.9
350	107	457	467	10.5
400	107	507	517	11
500	107	607	617	11.3
600	107	707	717	11.6
800	107	907	917	12
1000	107	1107	1117	13
1200	107	1307	1317	14

附件 Accessories



I型接头

B型接头

输出法兰盘

防尘罩

I type connection

B type connection

Output flange

Dust-proof cover

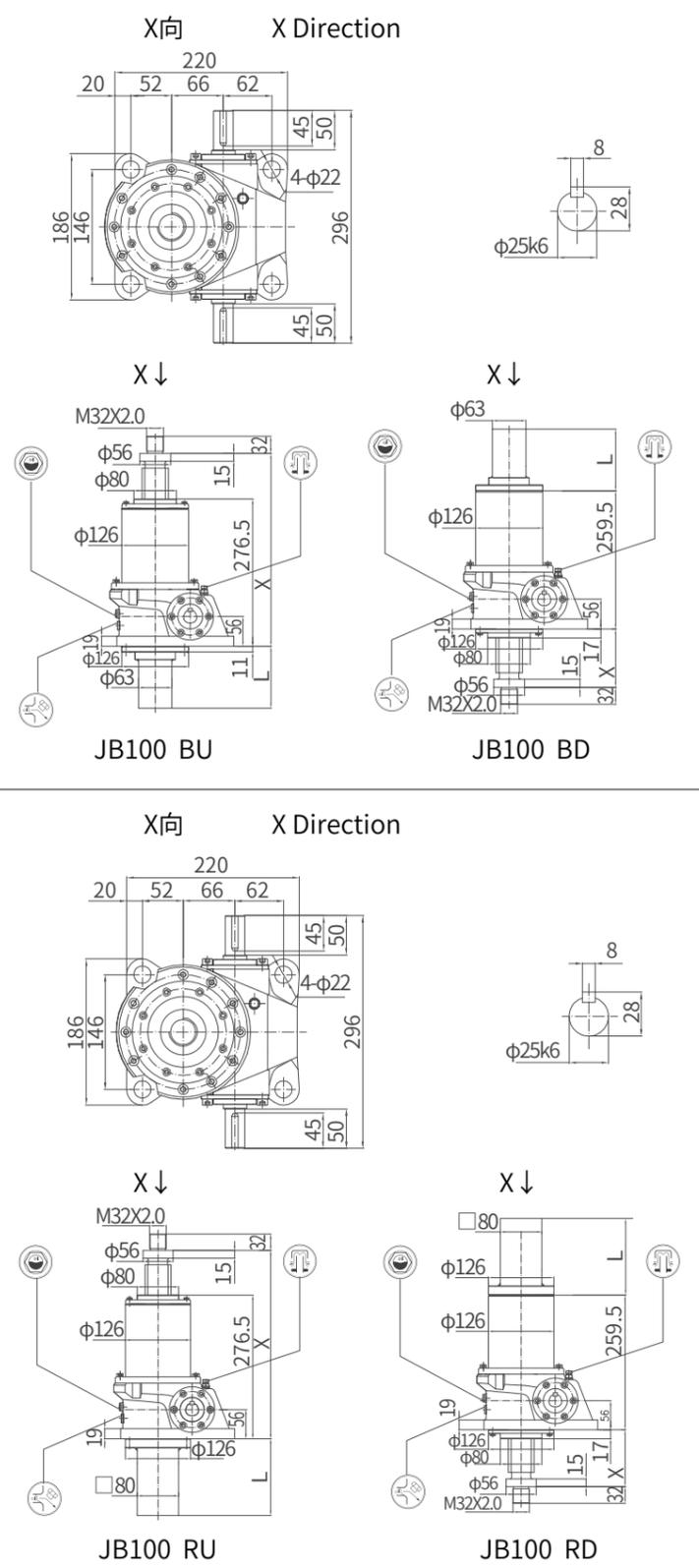
JB100

行程 Stroke (mm) (mm)	BU					
	X		X ⁽¹⁾		L	m (kg)
50	302	352	312	362		
100	302	402	312	412	151	36
150	302	452	312	462	202	37
200	302	502	312	512	252	38
250	302	552	327	577	316	40
300	302	602	327	627	366	41
350	302	652	327	677	416	42
400	302	702	327	727	466	43
450	302	752	352	802	541	45
500	302	802	352	852	591	46
550	302	852	352	902	641	47
600	302	902	352	952	691	48
650	302	952	367	1017	756	49
700	302	1002	367	1067	806	51
800	302	1102	367	1167	906	53
1000	302	1302	377	1377	1116	58
1200	302	1502	402	1602	1341	63
1500	302	1802	427	1927	1666	71

行程 Stroke (mm) (mm)	BD					
	X		X ⁽¹⁾		L	m (kg)
50	42	92	52	102		
100	42	142	52	152	151	36
150	42	192	52	202	202	37
200	42	242	52	252	252	38
250	42	292	67	317	316	40
300	42	342	67	367	366	41
350	42	392	67	417	416	42
400	42	442	67	467	466	43
450	42	492	92	542	541	45
500	42	542	92	592	591	46
550	42	592	92	642	641	47
600	42	642	92	692	691	48
650	42	692	107	757	756	49
700	42	742	107	807	806	51
800	42	842	107	907	906	53
1000	42	1042	117	1117	1116	58
1200	42	1242	142	1342	1341	63
1500	42	1542	167	1667	1666	71

行程 Stroke (mm) (mm)	RU					
	X		X ⁽¹⁾		L	m (kg)
50	302	352	312	362		
100	302	402	312	412	180	39
150	302	452	312	462	232	41
200	302	502	312	512	282	42
250	302	552	327	577	346	43
300	302	602	327	627	396	45
350	302	652	327	677	446	46
400	302	702	327	727	496	48
450	302	752	352	802	571	50
500	302	802	352	852	621	52
550	302	852	352	902	671	53
600	302	902	352	952	721	55
650	302	952	367	1017	786	57
700	302	1002	367	1067	836	59
800	302	1102	367	1167	936	61
1000	302	1302	377	1377	1146	67
1200	302	1502	402	1602	1371	74
1500	302	1802	427	1927	1707	84

行程 Stroke (mm) (mm)	RD					
	X		X ⁽¹⁾		L	m (kg)
50	42	92	52	102		
100	42	142	52	152	180	39
150	42	192	52	202	232	41
200	42	242	52	252	282	42
250	42	292	67	317	346	43
300	42	342	67	367	396	45
350	42	392	67	417	446	46
400	42	442	67	467	496	48
450	42	492	92	542	571	50
500	42	542	92	592	621	52
550	42	592	92	642	671	53
600	42	642	92	692	721	55
650	42	692	107	757	786	57
700	42	742	107	807	836	59
800	42	842	107	907	936	61
1000	42	1042	117	1117	1146	67
1200	42	1242	142	1342	1371	74
1500	42	1542	167	1667	1707	84

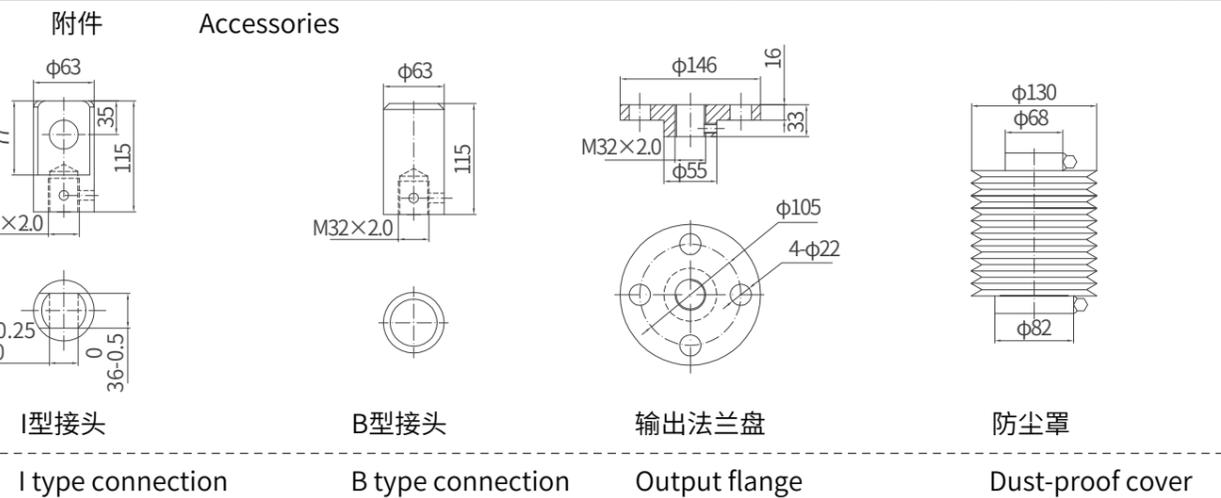


注: X⁽¹⁾ 加防尘罩尺寸。

Note: X⁽¹⁾ dimension with dust-proof cover.

行程 Stroke (mm) (mm)	NU			
	X		Y	m (kg)
50	169	219		
100	169	269	380	31
150	169	319	430	31.5
200	169	369	480	32
250	169	419	530	32.5
300	169	469	580	33
350	169	519	630	33.5
400	169	569	680	34
450	169	619	730	34.5
500	169	669	780	35
550	169	719	830	35.5
600	169	769	880	36
650	169	819	930	37
700	169	869	980	38
800	169	969	1080	39
1000	169	1169	1280	41
1200	169	1369	1480	43
1500	169	1669	1780	45

行程 Stroke (mm) (mm)	ND			
	X		Y	m (kg)
50	158	208		
100	158	258	268	31
150	158	308	318	31.5
200	158	358	368	32
250	158	408	418	32.5
300	158	458	468	33
350	158	508	518	33.5
400	158	558	568	34
450	158	608	618	34.5
500	158	658	668	35
550	158	708	718	35.5
600	158	758	768	36
650	158	808	818	37
700	158	858	868	38
800	158	958	968	39
1000	158	1158	1168	41
1200	158	1358	1368	43
1500	158	1658	1668	45



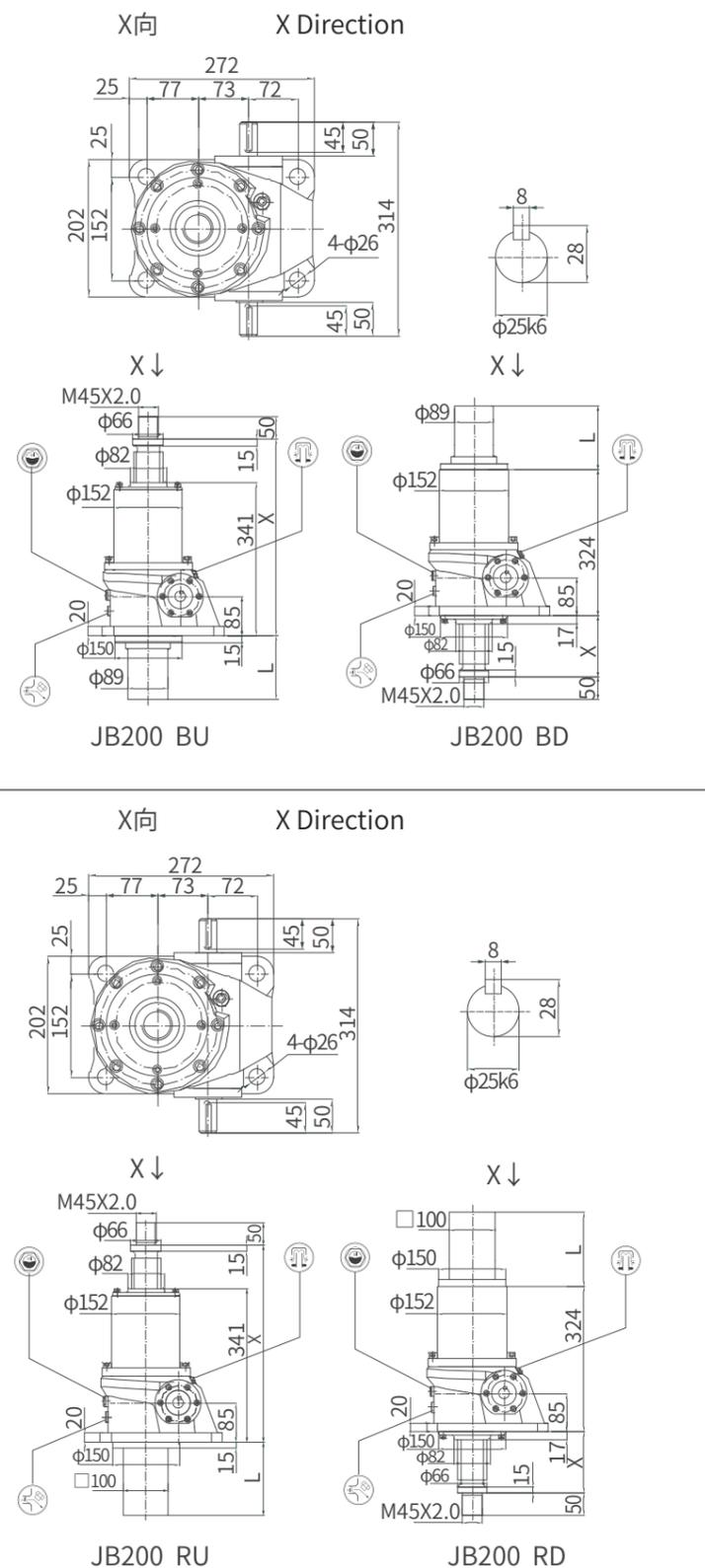
JB200

行程 Stroke (mm) (mm)	BU				L	m (kg)
	X		X ⁽¹⁾			
	MIN	MAX	MIN	MAX		
100	366	466	376	476	151	65
150	366	516	376	526	202	67
200	366	566	376	576	252	68
250	366	616	391	641	316	70
300	366	666	391	691	366	72
350	366	716	391	741	416	74
400	366	766	391	791	466	76
450	366	816	416	866	541	78
500	366	866	416	916	591	80
550	366	916	416	966	641	82
600	366	966	416	1016	691	83
650	366	1016	431	1081	756	85
700	366	1066	431	1131	806	87
800	366	1166	431	1231	906	90
1000	366	1366	441	1441	1116	97
1200	366	1566	466	1666	1341	105
1500	366	1866	491	1991	1666	118
2000	366	2366	536	2536	2211	141

行程 Stroke (mm) (mm)	BD				L	m (kg)
	X		X ⁽¹⁾			
	MIN	MAX	MIN	MAX		
100	42	142	52	152	151	65
150	42	192	52	202	202	67
200	42	242	52	252	252	68
250	42	292	67	317	316	70
300	42	342	67	367	366	72
350	42	392	67	417	416	74
400	42	442	67	467	466	76
450	42	492	92	542	541	78
500	42	542	92	592	591	80
550	42	592	92	642	641	82
600	42	642	92	692	691	83
650	42	692	107	757	756	85
700	42	742	107	807	806	87
800	42	842	107	907	906	90
1000	42	1042	117	1117	1116	97
1200	42	1242	142	1342	1341	105
1500	42	1542	167	1667	1666	118
2000	42	2042	212	2212	2211	141

行程 Stroke (mm) (mm)	RU				L	m (kg)
	X		X ⁽¹⁾			
	MIN	MAX	MIN	MAX		
100	366	466	376	476	170	72
150	366	516	376	526	220	74
200	366	566	376	576	270	76
250	366	616	391	641	335	78
300	366	666	391	691	385	80
350	366	716	391	741	435	82
400	366	766	391	791	485	84
450	366	816	416	866	560	87
500	366	866	416	916	610	89
550	366	916	416	966	660	91
600	366	966	416	1016	710	93
650	366	1016	431	1081	775	96
700	366	1066	431	1131	825	99
800	366	1166	431	1231	925	102
1000	366	1366	441	1441	1135	110
1200	366	1566	466	1666	1360	119
1500	366	1866	491	1991	1686	133
2000	366	2366	536	2536	2231	158

行程 Stroke (mm) (mm)	RD				L	m (kg)
	X		X ⁽¹⁾			
	MIN	MAX	MIN	MAX		
100	42	142	52	152	170	72
150	42	192	52	202	220	74
200	42	242	52	252	270	76
250	42	292	67	317	335	78
300	42	342	67	367	385	80
350	42	392	67	417	435	82
400	42	442	67	467	485	84
450	42	492	92	542	560	87
500	42	542	92	592	610	89
550	42	592	92	642	660	91
600	42	642	92	692	710	93
650	42	692	107	757	775	96
700	42	742	107	807	825	99
800	42	842	107	907	925	102
1000	42	1042	117	1117	1135	110
1200	42	1242	142	1342	1360	119
1500	42	1542	167	1667	1686	133
2000	42	2042	212	2212	2231	158



注：X⁽¹⁾ 加防尘罩尺寸。

Note: X⁽¹⁾ dimension with dust-proof cover.

行程 Stroke (mm) (mm)	NU			
	X		Y	m (kg)
	MIN	MAX		
100	219	319	430	56
150	219	369	480	57
200	219	419	530	58
250	219	469	580	59
300	219	519	630	60
350	219	569	680	61
400	219	619	730	62
450	219	669	780	63
500	219	719	830	65
550	219	769	880	66
600	219	819	930	67
650	219	869	980	68
700	219	919	1030	70
800	219	1019	1130	71
1000	219	1219	1330	76
1200	219	1419	1530	80
1500	219	1719	1830	88
2000	219	2219	2330	101

行程 Stroke (mm) (mm)	ND			
	X		Y	m (kg)
	MIN	MAX		
100	150	250	260	56
150	150	300	310	57
200	150	350	360	58
250	150	400	410	59
300	150	450	460	60
350	150	500	510	61
400	150	550	560	62
450	150	600	610	63
500	150	650	660	65
550	150	700	710	66
600	150	750	760	67
650	150	800	810	68
700	150	850	860	70
800	150	950	960	71
1000	150	1150	1160	76
1200	150	1350	1360	80
1500	150	1650	1660	88
2000	150	2150	2160	101

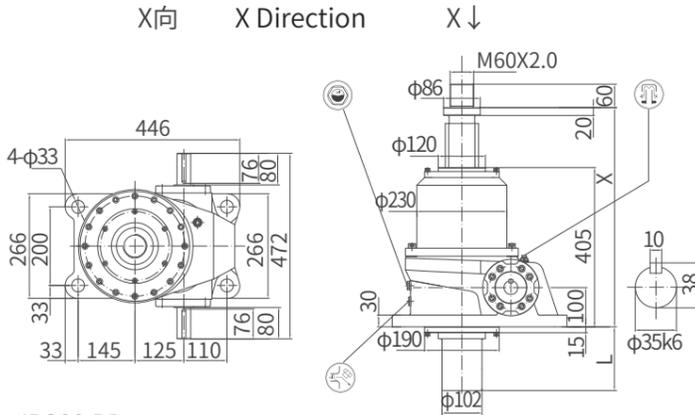
附件 Accessories	
<p>I型接头 I type connection</p>	<p>B型接头 B type connection</p>
<p>输出法兰盘 Output flange</p>	<p>防尘罩 Dust-proof cover</p>

JB300

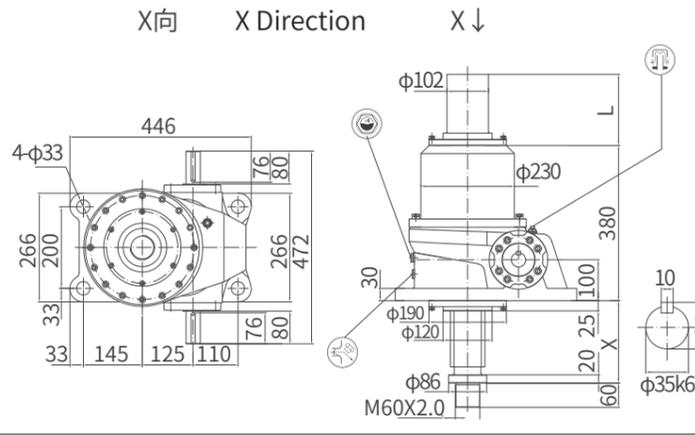
行程 Stroke (mm) (mm)	BU					
	X		X ⁽¹⁾		L	m (kg)
	MIN	MAX	MIN	MAX		
100	435	535	445	545	160	153
150	435	585	445	595	210	157
200	435	635	445	645	260	159
250	435	685	460	710	325	163
300	435	735	460	760	375	166
350	435	785	460	810	425	169
400	435	835	460	860	475	172
450	435	885	475	925	540	175
500	435	935	475	975	590	178
550	435	985	475	1025	640	182
600	435	1035	475	1075	690	184
650	435	1085	490	1140	755	188
700	435	1135	490	1190	805	192
800	435	1235	490	1290	905	197
1000	435	1435	510	1510	1125	210
1200	435	1635	520	1720	1335	223
1500	435	1935	545	2045	1660	242
2000	435	2435	580	2580	2195	276

行程 Stroke (mm) (mm)	BD					
	X		X ⁽¹⁾		L	m (kg)
	MIN	MAX	MIN	MAX		
100	55	155	65	165	160	153
150	55	205	65	215	210	157
200	55	255	65	265	260	159
250	55	305	80	330	325	163
300	55	355	80	380	375	166
350	55	405	80	430	425	169
400	55	455	80	480	475	172
450	55	505	95	545	540	175
500	55	555	95	595	590	178
550	55	605	95	645	640	182
600	55	655	95	695	690	184
650	55	705	110	760	755	188
700	55	755	110	810	805	192
800	55	855	110	910	905	197
1000	55	1055	130	1130	1125	210
1200	55	1255	140	1340	1335	223
1500	55	1555	165	1665	1660	242
2000	55	2055	200	2200	2195	276

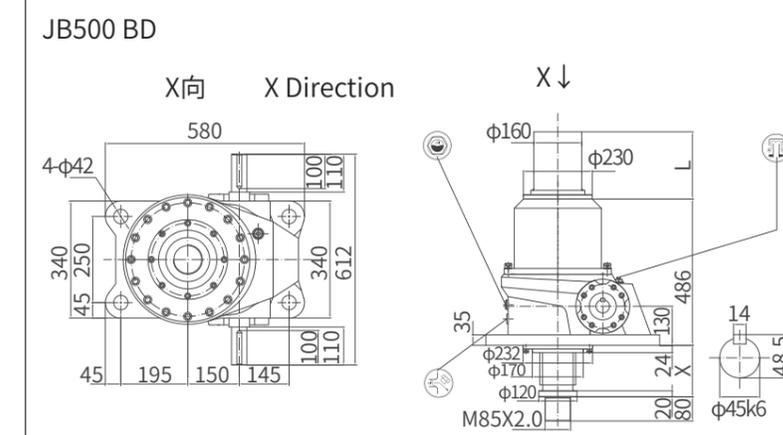
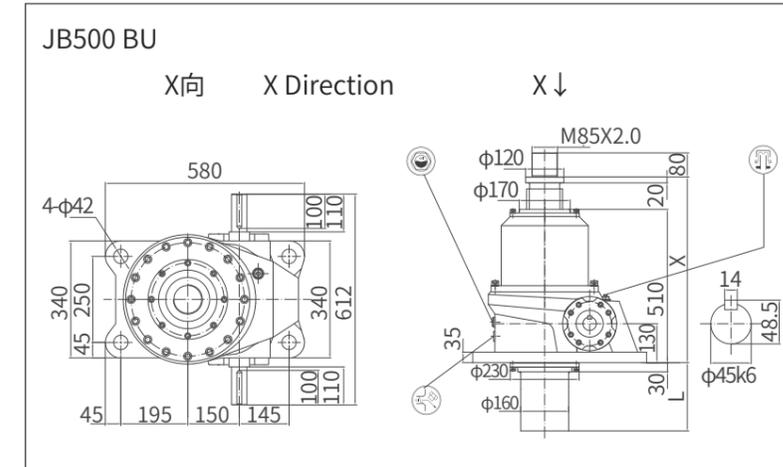
JB300 BU



JB300 BD



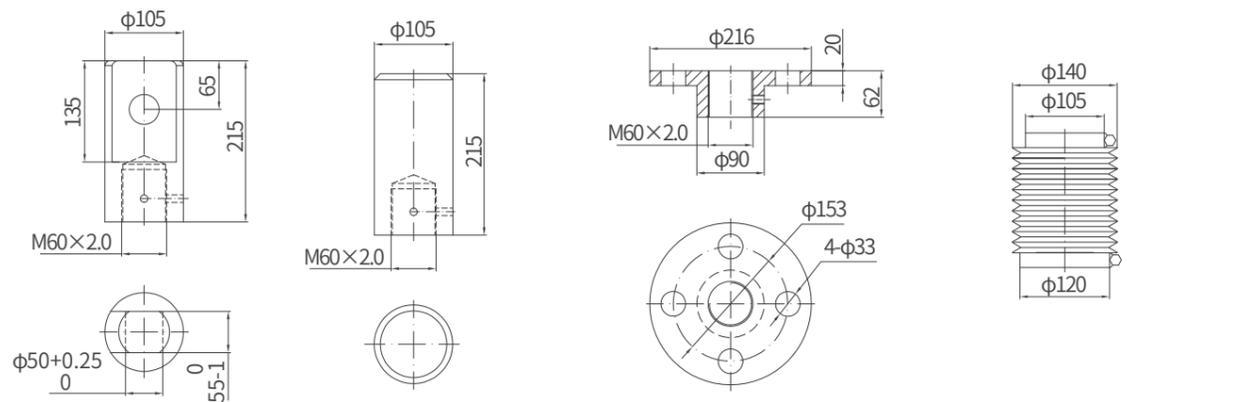
JB500



行程 Stroke (mm) (mm)	BU					
	X		X ⁽¹⁾		L	m (kg)
	MIN	MAX	MIN	MAX		
100	540	640	545	645	165	310
200	540	740	545	745	265	320
300	540	840	565	865	385	330
400	540	940	565	965	485	340
500	540	1040	575	1075	595	350
600	540	1140	575	1175	695	359
800	540	1340	590	1390	910	378
1000	540	1540	605	1605	1125	398
1200	540	1740	615	1815	1335	417
1500	540	2040	635	2135	1665	446
2000	540	2540	670	2670	2190	497

行程 Stroke (mm) (mm)	BD					
	X		X ⁽¹⁾		L	m (kg)
	MIN	MAX	MIN	MAX		
100	54	154	59	159	165	310
200	54	254	59	259	265	320
300	54	354	79	379	385	330
400	54	454	79	479	485	340
500	54	554	89	589	595	350
600	54	654	89	689	695	359
800	54	854	104	904	910	378
1000	54	1054	119	1119	1125	398
1200	54	1254	129	1329	1335	417
1500	54	1554	149	1649	1665	446
2000	54	2054	184	2184	2190	497

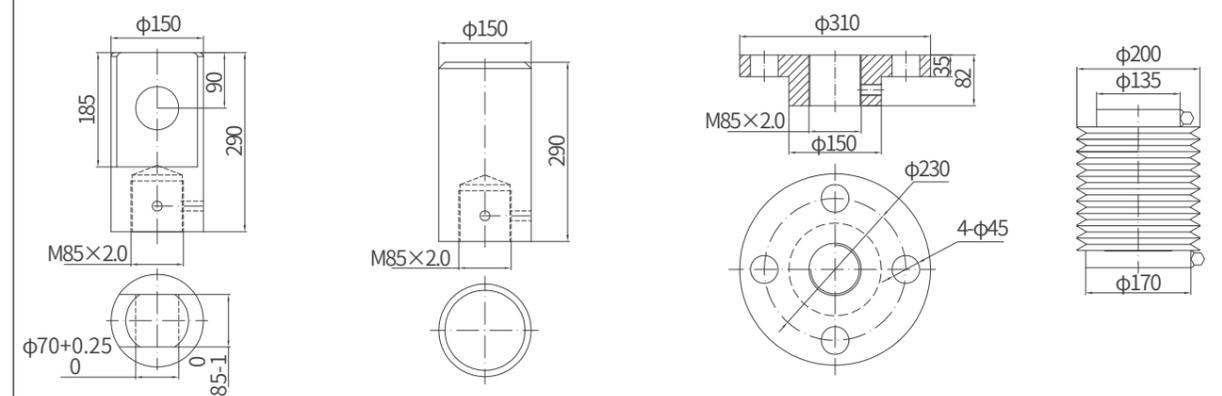
附件 Accessories



I型接头 I type connection B型接头 B type connection 输出法兰盘 Output flange 防尘罩 Dust-proof cover

注: X⁽¹⁾ 加防尘罩尺寸。 Note: X⁽¹⁾ dimension with dust-proof cover.

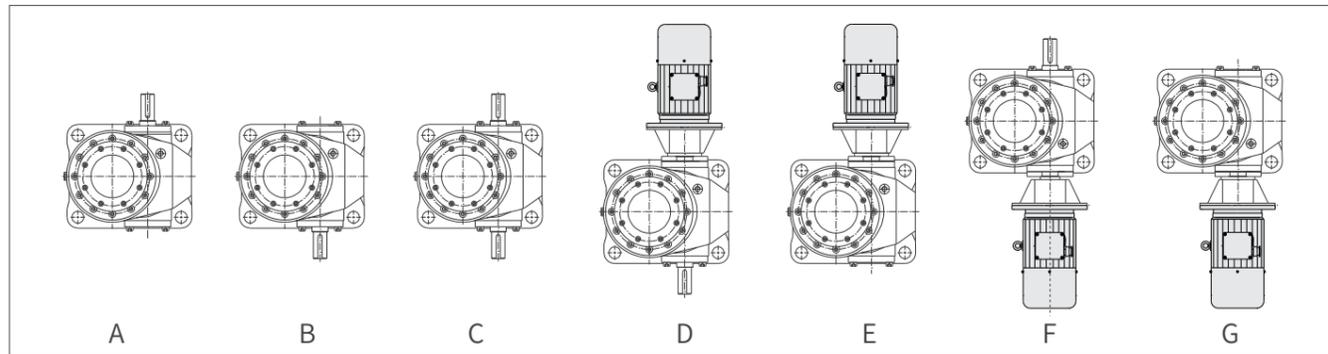
附件 Accessories



I型接头 I type connection B型接头 B type connection 输出法兰盘 Output flange 防尘罩 Dust-proof cover

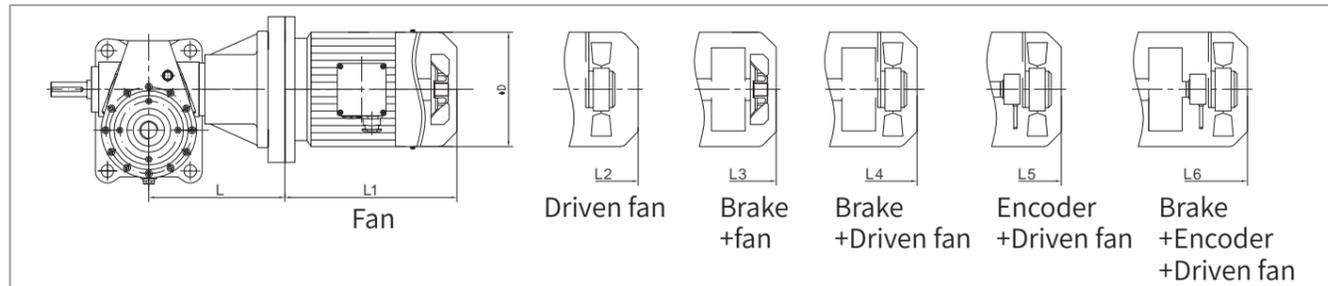
11 输入方式:

11 Input Modes:



12 直联输入:

12 Direct-linking Input:



型号 Type	功率 Power (kW) (kW)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	L5 (mm)	L6 (mm)	D (mm)	L (mm)
JB010	0.12	192	247	227	282	/	/	124	118
	0.18	192	247	227	282	/	/	124	118
	0.25	214	259	254	304	304	344	139	120
	0.37	214	259	254	304	304	344	139	120
JB025	0.12	192	247	227	282	/	/	124	145
	0.18	192	247	227	282	/	/	124	145
	0.25	214	259	254	304	304	344	139	145
	0.37	214	259	254	304	304	344	139	145
	0.55	261	306	321	366	366	416	159	145
JB050	0.75	261	306	321	366	366	416	159	145
	0.25	214	259	254	304	304	344	139	187
	0.37	214	259	254	304	304	344	139	187
	0.55	261	306	321	366	366	416	159	187
	0.75	261	306	321	366	366	416	159	187
	1.1	284	329	339	384	384	439	176	187
JB100	1.5	284	329	339	384	384	439	176	187
	0.37	214	259	254	304	304	344	139	220
	0.55	261	306	321	366	366	416	159	223
	0.75	261	306	321	366	366	416	159	223
	1.1	284	329	339	384	384	439	176	223
JB200	1.5	284	329	339	384	384	439	176	223
	2.2	349	389	424	464	464	519	199	230
	0.75	261	306	321	366	366	416	159	241
	1.1	284	329	339	384	384	439	176	241
	1.5	284	329	339	384	384	439	176	241
JB200	2.2	349	389	424	464	464	519	199	248
	3	349	389	424	464	464	519	199	248
	4	412	462	487	537	537	592	220	248

注: 1: 电机功率的选用应符合传动能力表
2: 表中所列功率为4级电机功率

Note: 1: Power of motor should be conformed with the transmission capacity.
2: The power is for 4-pole motor

13 组合型

13 Combined-type

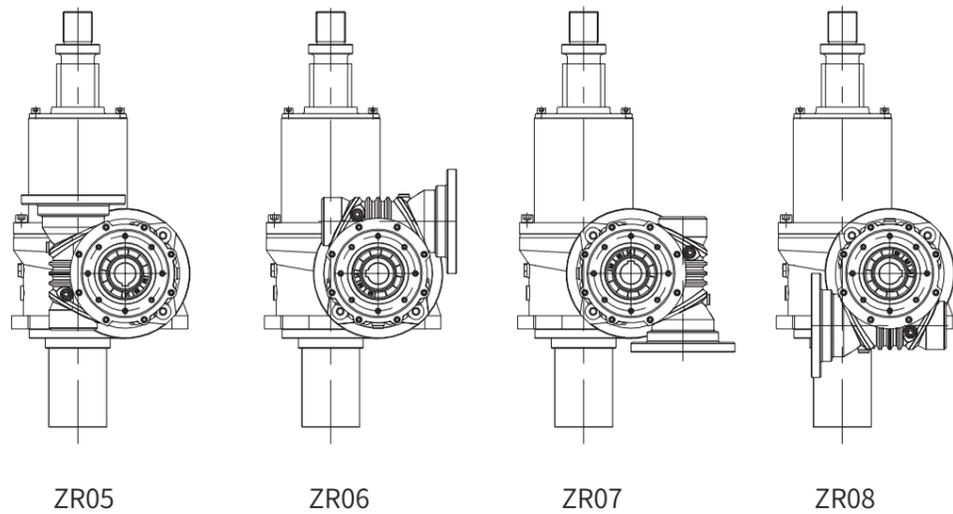
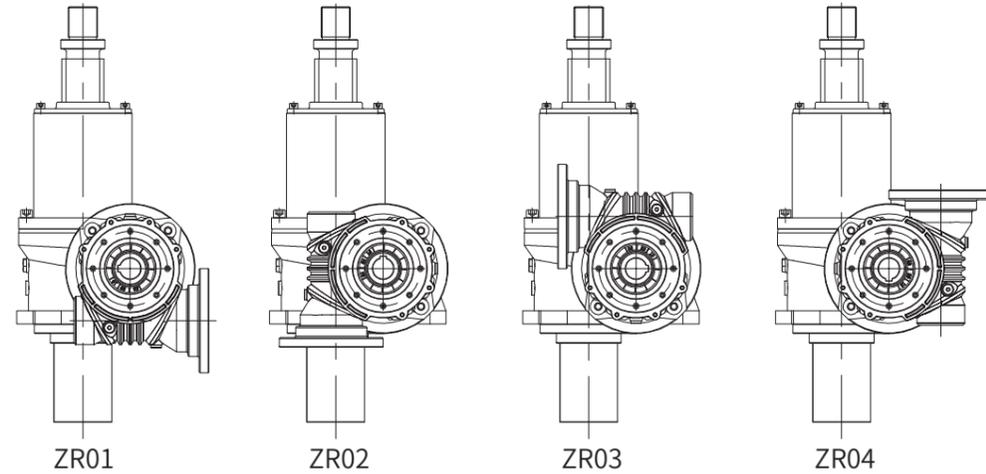
13.1 组合型尺寸

13.1 Dimensions of combined-type

型号 Type	L
JB025.. /C. 01FA	145
JB025.. /R050FG (FH)	145
JB050.. /C. 03FA	187
JB050.. /K303FA (FE)	187
JB050.. /S203FA (FE)	187
JB050.. /R063FG (FH)	187
JB100.. /C. 03FA	223
JB100.. /K303FA (FE)	223
JB100.. /S203FA (FE)	223
JB100.. /C. 04FA	223
JB100.. /K304FM (FR)	223
JB100.. /S204FA (FE)	223
JB100.. /R063FG (FH)	223
JB100.. /R080FG (FH)	223
JB200.. /C. 03FA	241
JB200.. /K303FA (FE)	241
JB200.. /S203FA (FE)	241
JB200.. /C. 04FA	244
JB200.. /K304FM (FR)	241
JB200.. /S204FA (FE)	241
JB200.. /C. 06FA	248
JB200.. /K306FA (FE)	248
JB200.. /S206FA (FE)	248
JB200.. /R080FG (FH)	241
JB200.. /R100FG (FH)	248

13.2 组合布置形式

13.2 Arrangement of combined type



14 附件:

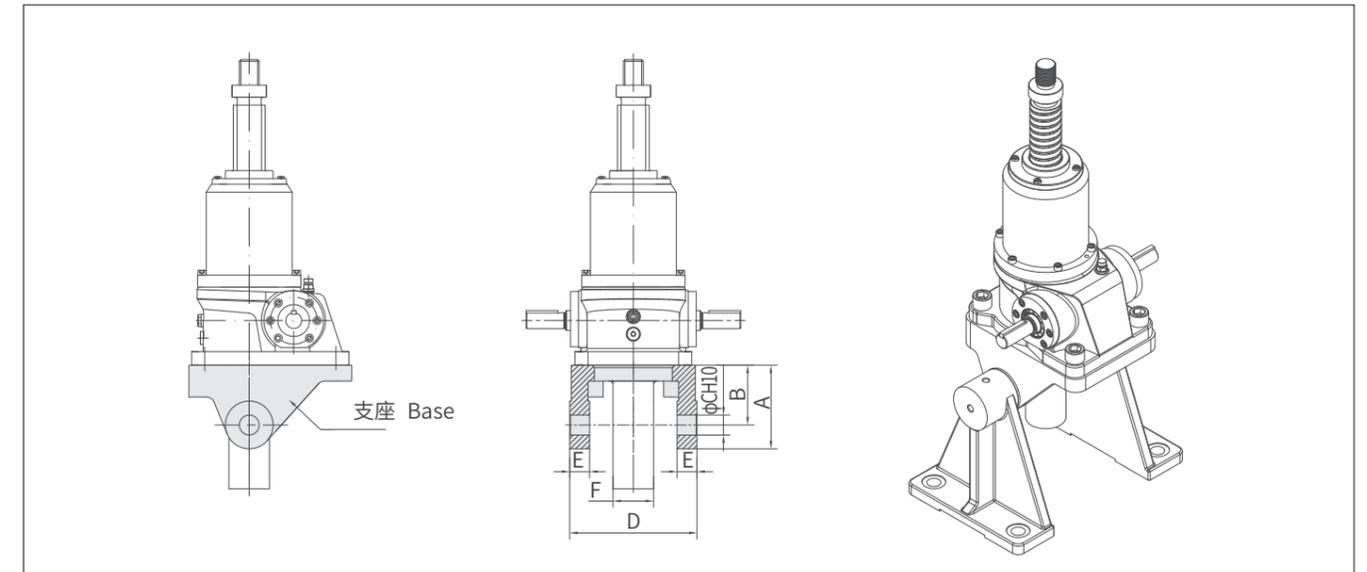
14 Attachment:

14.1 支座

14.1 Base

支座安装广泛应用于开关装置、倾斜装置。如图:

Bases are widely used in switching and inclining devices.



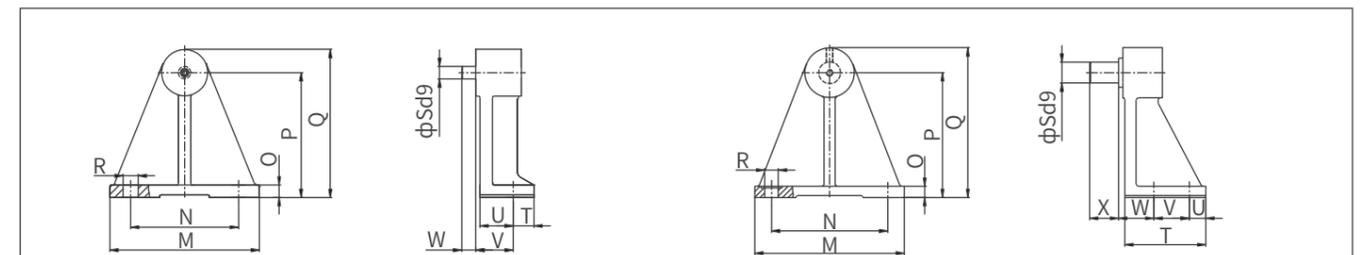
型号 Type	A	B	C	D	E	F
JB010	75	60	15	86	15	40
JB025	100	75	20	115	20	50
JB050	105	75	25	158	25	60
JB100	145	100	40	201	30	80
JB200	173	110	63	244	50	100

14.2 支架

14.2 Support legs

支座与支架配合, 实现多方位升降。

Bases and support legs are often used together to make lifting function in multiple directions.



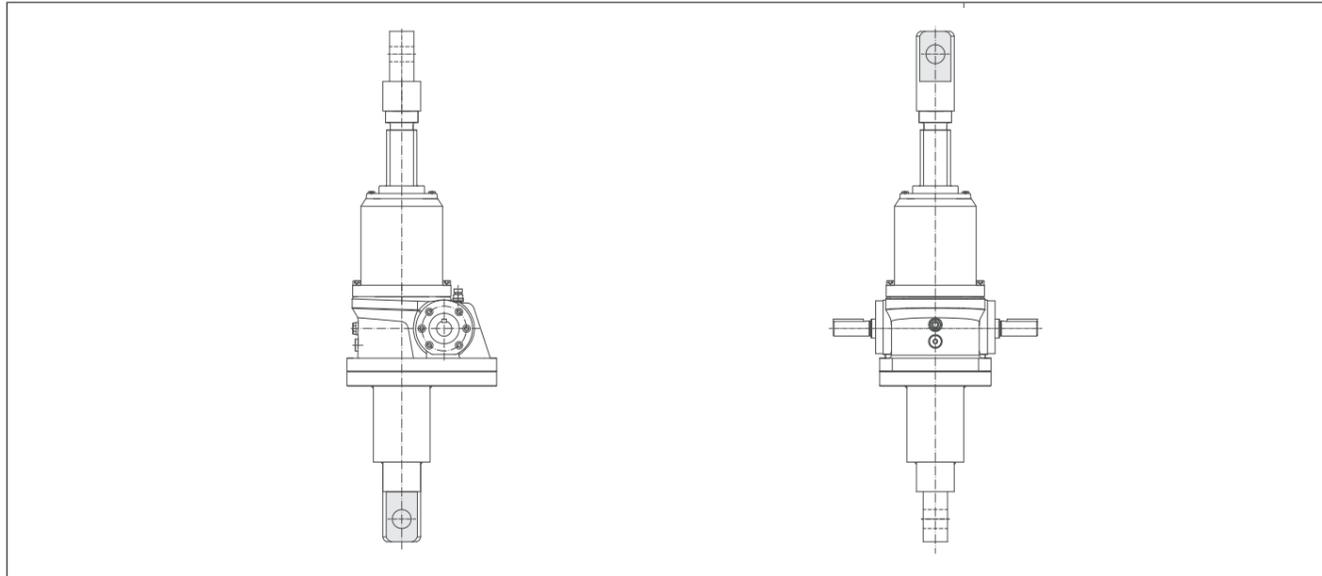
型号 Type	M	N	O	P	Q	R	S	T	U	V	W	X
JB010	180	130	15	150	178	2-φ17.5	15	25	40	45	17	-
JB025	180	130	15	150	178	2-φ17.5	20	25	40	45	30	-
JB050	200	150	15	170	200	2-φ17.5	25	25	40	45	35	-
JB100	280	220	22	240	290	4-φ22	40	159	30	70	70	55
JB200	400	320	30	380	450	4-φ33	63	210	40	90	90	65

14.3 扭力臂安装 (敬请垂询)

适用于开闭装置、反转装置。

14.3 Torque-arm mounted (Please consult)

Applicable to opening and reversing devices.



14.4 润滑油

油量参照表:

14.4 Oil

Oil amount reference table:

BU/BD/RU/RD		油量参照表 Oil Amount Reference Table 单位:(L) Unit:(L)					
安装方位 Assembly Position	型号 Type	000#极压 润滑脂		000#Extreme Pressure Grease		VG220 (蜗轮 蜗杆油)	VG220 (Worm Gear Oil)
		JB010	JB025	JB050	JB100	JB200	JB300 JB500
D1、D3		0.13	0.16	0.2	0.27	0.75	3.1 7.3
D2		0.12	0.13	0.18	0.23	0.65	2.6 5.3

NU/ND		油量参照表 Oil Amount Reference Table 单位:(L) Unit:(L)					
安装方位 Assembly Position	型号 Type	000#极压 润滑脂		000#Extreme Pressure Grease		VG220 (蜗轮 蜗杆油)	VG220 (Worm Gear Oil)
		JB010	JB025	JB050	JB100	JB200	
D1、D3		0.1	0.12	0.15	0.22	0.6	
D2		0.1	0.12	0.15	0.22	0.5	

⚠ 注:升降机运行过程中丝杆(螺母)处需涂抹润滑脂 ⚠ Note: Elevator operation process screw(nut) need to grease

随着技术迭代进步,博能产品样本将会同步更新,请见谅。
Along with the technology advancedet.,the product of the manual of Boneng will be changed,please forgive.

控制层 CONTROL

驱动层 DRIVE

马达层 MOTOR

齿轮层 GEAR



X3010 PLC
EtherCAT&Modbus
24VDC



X3050 运动控制器
Motion Controller
EtherCAT&Modbus
24VDC

C/F/K/S-M
* . . . D
马达分布式
变频驱动器
Integrated
Gearmotor
Drive



EtherCAT&
Modbus
380~480VAC
0.25~3kW
i=4~355

AM 变频驱动器
Variable Frequency Drive



Modbus
380~480VAC
0.75~5.5kW

A1 变频驱动器
Variable Frequency Drive



Modbus/CANopen
/PROFINET
380~480VAC
0.75~250kW

C/F/K/S/R
齿轮马达
Gearmotor



380~480VAC
0.09~200kW
i=1.25~500

MP/MU/MA
三相交流异步马达
Asynchronous Motor



380~480VAC
0.09~90kW
960/1450r/min
1160/1750r/min

HB/BE/HK
齿轮箱
Gearbox



4.2~15775kW
i=5.6~450

P/PK
行星齿轮箱
Planetary
Gearbox



0.4~14000kW
i=25~4000

PW
卷扬齿轮箱
Planetary
Winch
Gearbox



1~1810kW
i=13~940

PS
回转齿轮箱
Planetary
Slewing
Gearbox



1~1626kW
i=14~947

J/JB
升降机
Jack



0.35~22.63kW
i=5~34

T
转向箱
Spiral Bevel
Gearbox



0.08~303kW
i=1:1~3:1

MX&AX
伺服马达&伺
服驱动器
Permanent
Magnet
Servo Motor
& Servo Drive



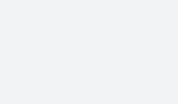
EtherCAT/
PROFINET
380~480VAC
0.28~14kW
1500/2000r/min
3000/4500r/min

C/F/K/S-MX
&AX齿轮伺
服马达&伺
服驱动器
Servo
Gearmotor
& Servo Drive



EtherCAT/
PROFINET
380~480VAC
0.28~14kW
i=1.25~315

PX-MX&AX
行星伺服马达
&伺服驱动器
Planetary
Precision Gear
Servo Motor
& Servo Drive



EtherCAT/
PROFINET
380~480VAC
0.38~14kW
i=3~100

PN-MN&AN
行星伺服马达
&伺服驱动器
Planetary
Precision Gear
Servo Motor
& Servo Drive



EtherCAT
PROFINET
380~480VAC
0.28~5.03kW
i=3~100

ME&AN
永磁同步伺服马
达&伺服驱动器
Permanent
Magnet
Servo Motor
& Servo Drive



EtherCAT/
PROFINET
200~240VAC
0.1kW~1.2kW

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辽宁省沈阳市沈北新区 太平洋工业城A区A73-6号 电话: 024-31271571	No. A73-6, Area A, Pacific Industrial City, Shenbei New District, Shenyang, Liaoning Province, China TEL: 024-31271571
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天津市北辰区双海道6号 宏鹏工业园7号车间 电话: 022-26929556	7th Workshop, Hongpeng Industrial Park, No. 6 Shuanghai Road, Beichen District, Tianjin City,China TEL: 022-26929556
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