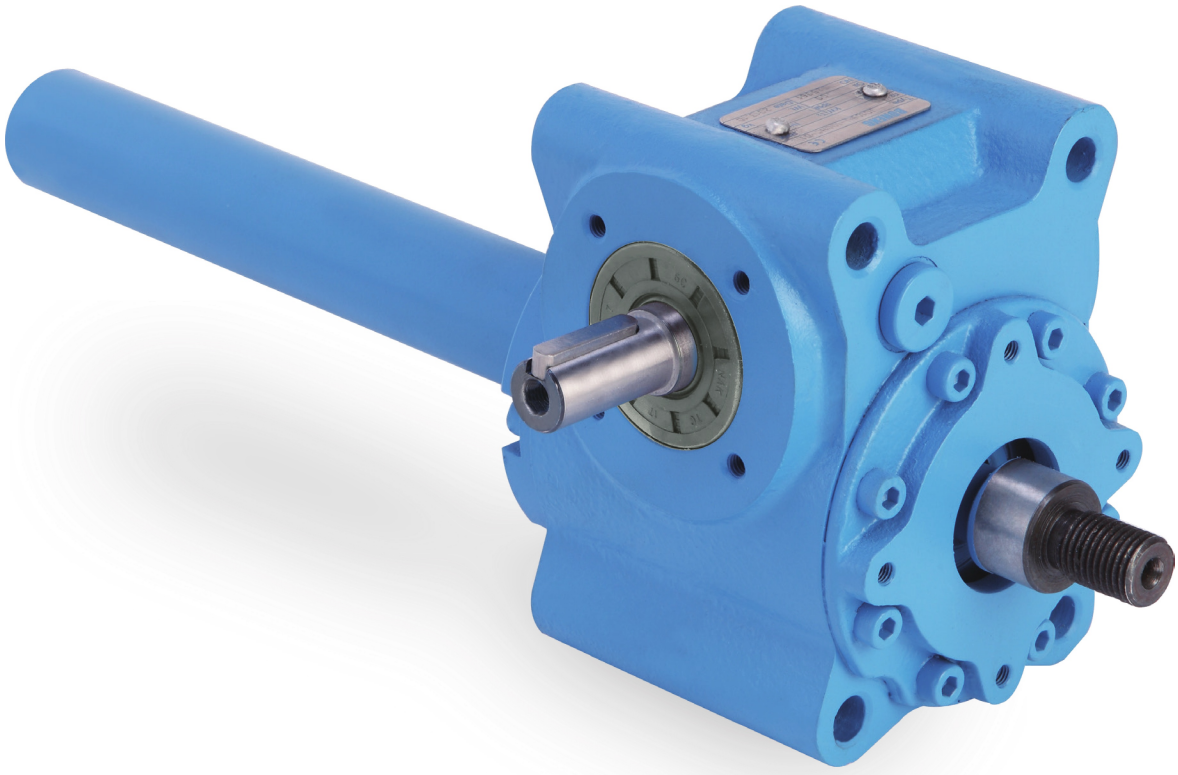
BONENG



博能 J Jack
J升降机

1/2019

BONENG

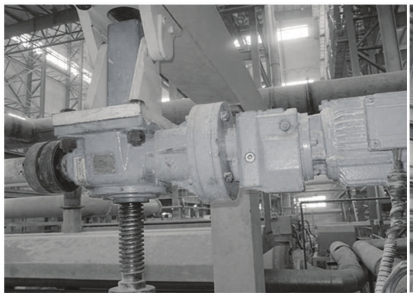
Screw Jack / 螺旋升降机

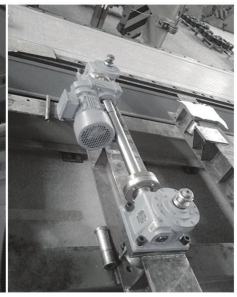
On the basis of summarizing gear units design and manufacturing experiences in the past twenty years,analyzing and absorbing advanced technology of international gear units motor production,Boneng Transmission makes innovative development,pushing forward new type J series gear motor to better satisfy customer requirements.

Compared with internationally advanced gear motor and the original J series gear motor of Boneng,the new type J series screw jack has the following characteristics:

博能公司在总结二十余年螺旋升降机设计制造经验，分析和吸收国际上螺旋升降机设计制造先进技术的基础上，创新发展，推出新型J系列螺旋升降机，以更好满足客户要求。

同国际上先进的螺旋升降机和博能公司原有J系列螺旋升降机相比，博能公司新型J系列螺旋升降机具有以下特点：





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

- 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, targe output torque;
- Output mode: motor direct-linking output, gear unit direct-liking input and manual input (equipped with hand wheel);
- Various kinds of output type screw rod top thread, top flange, type pin jonit, column jonit and flexible nut, etc, it can be equipped with frame and foundation to satisfy lifting requrements on different directions;
- Various kinds of products, each type has various kinds of strokes and various kinds of lifting load range.

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

- 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，刚度好，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；
- 输入方式可采用电机直联输入、减速机直联输入和人工手动操作输入（配备手轮）；
- 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；

CE DNV ISO9001 MA

Note: You must conform to the following instructions
注意事项！必须严格遵守以下各项！

- 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 guality lubrication oil.

- 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。

Product Function Mark / 产品功能标识


Oil glass / 油　镜

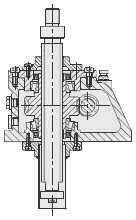
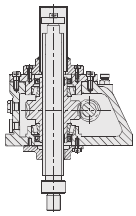
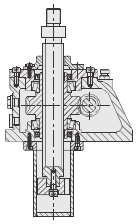
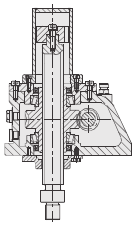
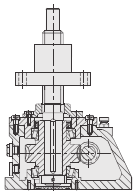
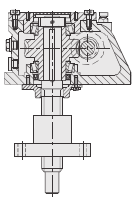

Breather / 通气帽


Oil filler / 进油孔


Oil drain / 放油孔

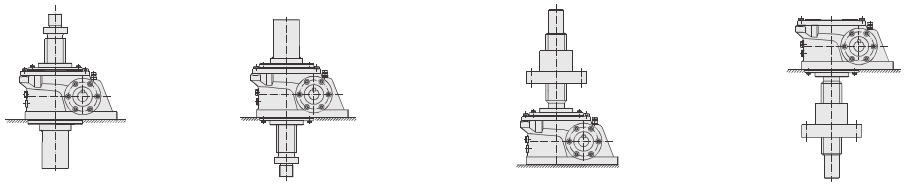
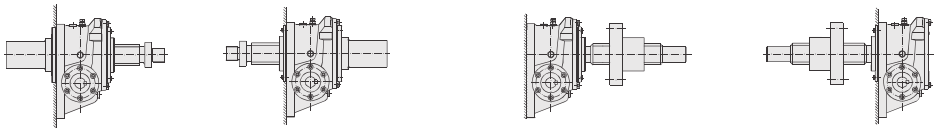
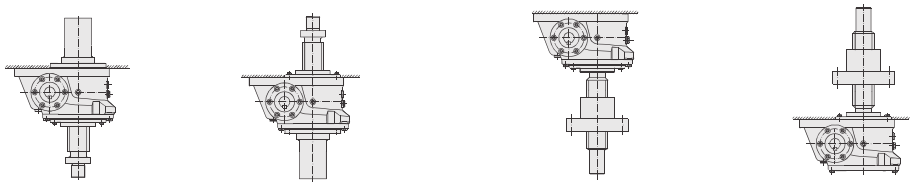
Contents / 目录

1 Structure Scheme:　　1 结构示意图：

Structure Mode 结 构 形 式	Output Mode 输 出 形 式	Structure Drawing 结 构 图	Explanation 说 明
Plain mode 基本结构	J ..BU		The screw may produce rotary force when lifting,so anti–rotation measures should be adopted. 丝杆在升降时，会产生旋转力，所以必须做好防止旋转措施。
	J ..BD		
With Anti–rotation device 止旋结构	J ..RU		With anti–rotation device,the screw travels up and down only and produces no rotary force. 止旋结构，丝杆只上下移动并不产生旋转力。
	J ..RD		
Structure Traveling nut 活动螺母结构	J ..NU		For travelling nut type,the screw rotates to drive the nut move.Due to its cylindric structure,supporting mode is often used at the screw end to ensure good transmission of long stroke. 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。 Note:Bellows are not supplied with the travelling nut type screw jack.Consult us if required. 注：活动螺母构造形式供货时不配防尘罩，如需请另咨询。
	J ..ND		

2 Mounting Positions：

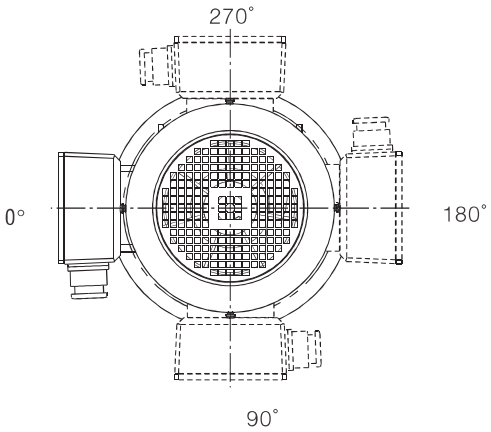
2 安装方位：

D1	
D2	
D3	

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

⚠ 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。

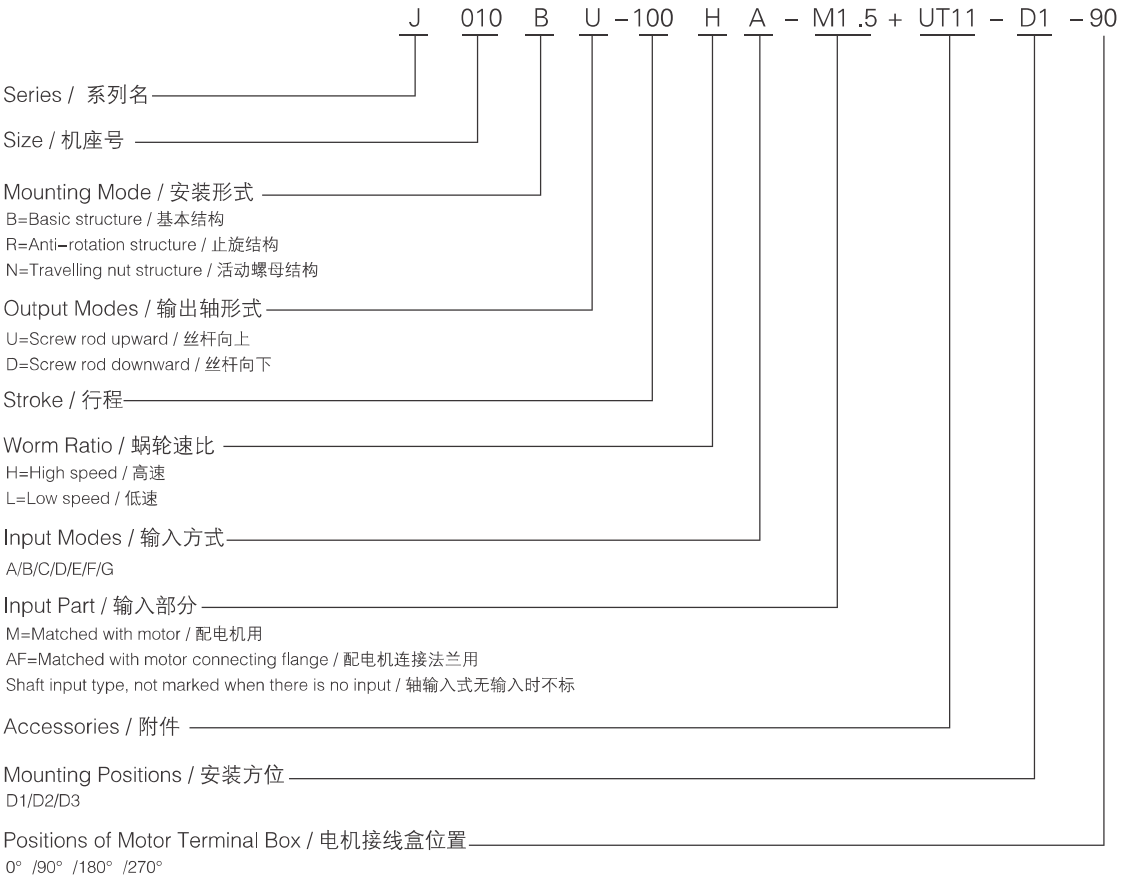
Positions of Motor Terminal Box / 电机接线盒位置：



Visual angle:motor end
视角：电机尾部

3 Type Designation：

3 型号表示方法：



Combined–type Designation/组合形式举例:J100BU–200HE–CRL37–18.9–M1.1+UT11–D1–ZR01

Combined–type Designation/组合形式举例:J100BU–200HE–R063FA–15–M1.1+UT11–D1–ZR01

4 Basic Parameters：

4 基本参数表：

Type / 型 号		J010	J025	J050	J100	J150	J200	J300	J500	J750	J1000
Maximum loading / 最大载荷 (KN)		9.8	24.5	49	98	147	196	294	490	735	980
Screw road external diameter / 丝杆外径 (mm)		20	26	40	50	55	65	85	120	130	150
Screw rod bottom diameter / 丝杆底径(mm)		15.5	20.5	31	39	44	52	67	102	112	128
Screw rod bolt distance / 丝杆螺距 L1(mm)		4	5	8	10	10	12	16	16	16	20
Ratio i/ 减速比	H Speed/速度	5	5.6	5.2	10.667	10.667	9.667	10.667	10.333	12.333	11.333
	L Speed/速度	20	26	26	24	24	29	32	31	31	34
Comprehenswe efficiency / 综合效率% η	H Speed/速度	21	21	22	22	20	20	19	15	13	13
	L Speed/速度	12	12	14	15	14	13	11	10	8	8
Allowable input maximum Power (KW) 容许输入最大功率 (KW)	H Speed/速度	0.47	1.06	2.05	2.32	2.36	4.70	8.18	13.93	13.37	22.63
	L Speed/速度	0.35	0.38	0.56	1.41	2.38	3.58	3.90	6.14	9.00	9.92
Empty-loading torque T0 空载扭矩 T0	(N · m)	0.29	0.62	1.4	2	2.6	3.9	9.8	19.6	29.4	39.2
Allowable input shaft torque* 容许输入轴扭矩*	(N · m)	20	49	126	247	247	247	620	973	1745	2219
Input shaft torque for** Maximum loading (N · m) 最大载荷时所需** 输入轴扭矩(N · m)	H Speed/速度	6	16.9	56	69.3	112.8	224.3	390.5	886.9	1277.2	2161
	L Speed/速度	2.8	6.0	16.8	44.8	78.3	136.8	206.8	488.9	954.8	1353.5
输入轴每回转一圈丝杆（活动螺母）轴向位移量(mm)	H Speed/速度	0.80	0.89	1.54	0.94	0.94	1.24	1.50	1.55	1.30	1.76
	L Speed/速度	0.20	0.19	0.31	0.42	0.42	0.41	0.50	0.52	0.52	0.59
Allowable input shaft rotation speed (rpm) for maximum loading 最大载荷时容许输入轴回转速度(rpm)	H Speed/速度	750	600	350	320	200	200	200	150	100	100
	L Speed/速度	1200	600	320	300	290	250	180	120	90	70
Screw rod rotation torque during maximum loading 最大载荷时丝杆回转扭矩 (N · m)		20.1	65.1	201.5	503.6	813.2	1287.7	2531.9	5551.3	8921.8	13878.3
Pipe material / 套管材质		Stainless steel (rotation stop pipe applies common steel pipe) 不锈钢材质（止旋套管为普通钢管材质）									
Lubrication mode / 润滑方式		Apply splash lubrication in common 一般采用飞溅润滑									
Cooling method / 冷却方式		Natural cooling 自然冷却									
Common ambient condition / 一般环境条件		Ambient temperature: −10℃ ~ 40℃, open site has good ventilation, altitude is under 1000 meters, common plant dust. 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。									
Specied ambient condition / 特殊环境条件		High temperature, low temperature, much dust, chemical effect (acid,alkali,etc), oper-air (direct sunshine,ice,water spray,etc), please consult. 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。									

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

"*" 升降机输入轴的容许扭矩。
"**" 包括无负荷空载扭矩的数值。

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 ：

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

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

$$W=\frac{Ws}{\text{Arrangment factor}\cdot\text{Number of jacks in arrangement}}\quad Ws\ fd$$

Arrangement factor(fd)

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

(3) Initial selection of jack type

Make an initial selection of jack type by fully considering load, speed, travel, efficiency and drive source.

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

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:

Input speed required / 所需输入轴转速	n(r / min)	$n=\frac{V}{L_1}\times i$
Input torque required / 所需输入轴扭矩	T(N・m)	$T=\frac{W\times L_1}{2\pi\times i\times\eta}+T_0$
Input power required / 所需输入功率	P(kW)	$P=\frac{T\times n}{9550}$

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

5 选型方法：

5.1 升降机型号的确定：

(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：

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

(2) 计算单台升降机的当量载荷W：

$$W=\frac{Ws}{\text{连动台数}\times\text{连动系数}}\quad Ws\ fd$$

连动系数(fd):

连动台数 Number of jacks in arrangement	1	2	3	4	5～8
连动系数 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。

5.2 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:

所需输入轴转速 Input speed required	n(r / min)	$n=\frac{V}{L_1}\times i$
所需输入轴扭矩 Input torque required	T(N・m)	$T=\frac{W\times L_1}{2\pi\times i\times\eta}+T_0$
所需输入功率 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）　　π：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）

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.

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。

The critical load is calculated with the following formula:

升降机丝杆临界稳定载荷通过以下公式计算：

$$P_{CR}=fm\times\left(\frac{d^2}{La}\right)^2$$

ensure 确保

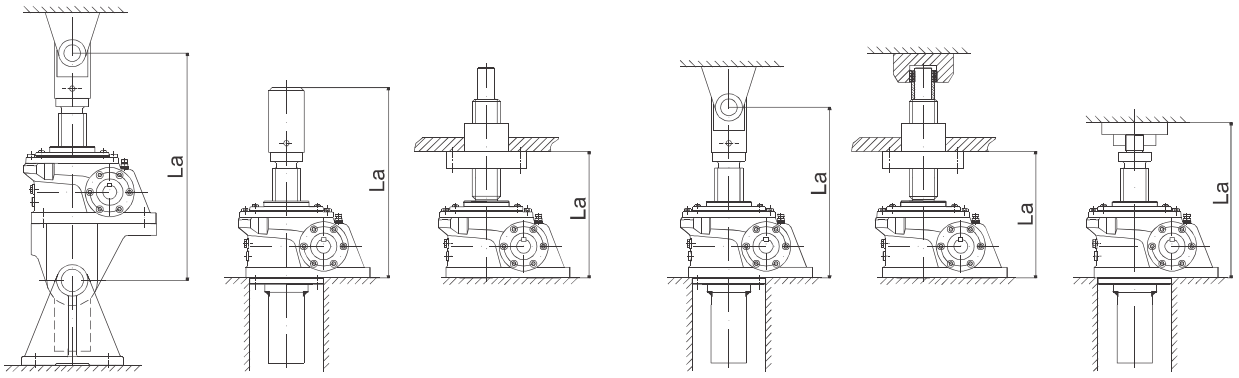
$$P_{CR}>W\times S_F(S_F=4)$$

P_{CR}: 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)
S_F: safety factor(generally S_F=4)

P_{CR}：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）
S_F：安全系数（一般S_F=4）

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

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：



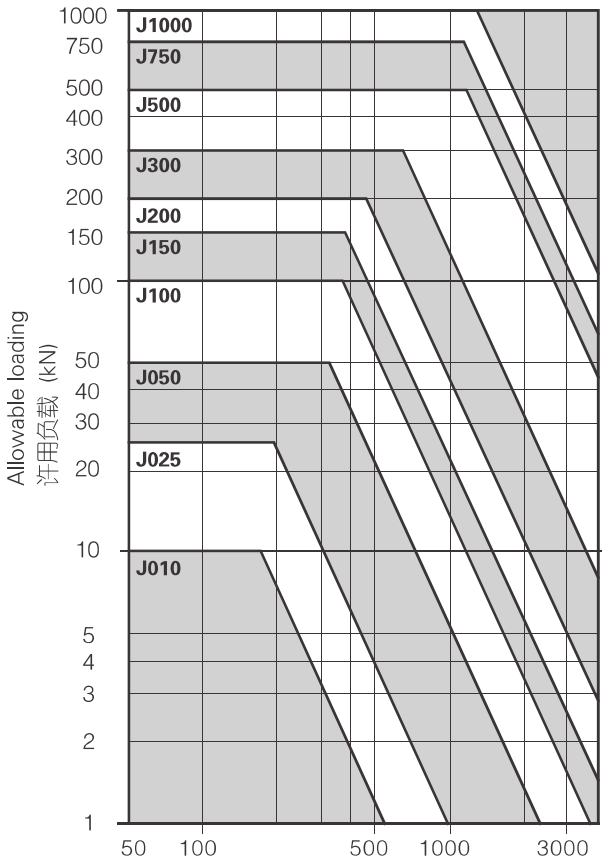
Two end supporting fm=10×10^4
两端支撑fm=10×10^4

Foundation solid shaft end freedom fm=10×10^4
底座固定轴端自由 fm=2.5×10^4

Foundation fixed shaft end support or fixing fm=10×10^4
底座固定轴端支撑或固定 fm=20×10^4

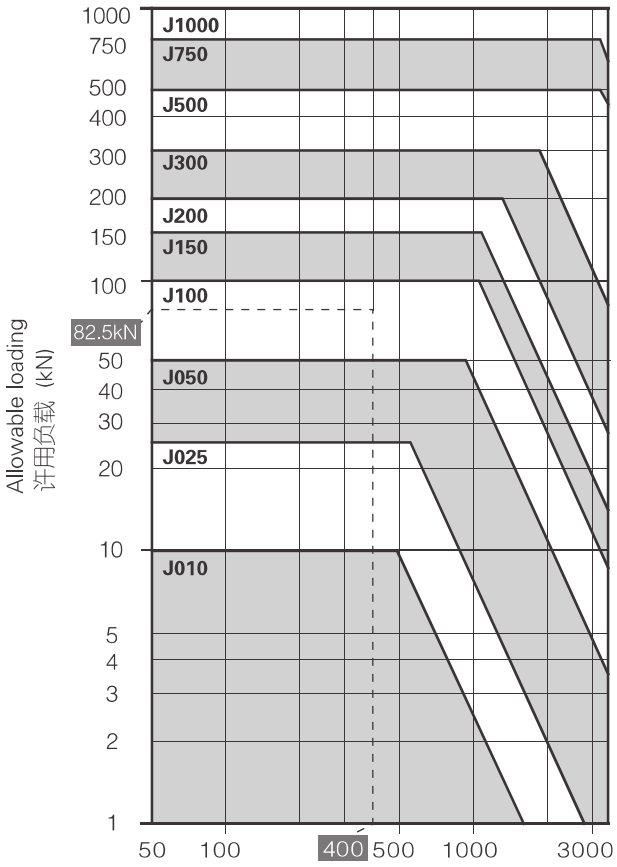
Associated diagram of allowed loading of point distance :

作用点距离许用负载关联图表：



Distance between action points La mm (fm=2.5×10^4)

作用点间距离 La mm (fm=2.5×10^4)



Distance between action points La mm (fm=20×10^4)

作用点间距离 La mm (fm=20×10^4)

"---" means loading W=82.5kN, (safety coefficient SF=4) point distance La=400mm (foundation fixed shaft end supporting fixing fm=20×10^4) as an example; at this time, you can select ladder screw elevator J100 witch can satisfy crossing point of vertical and horizontal axis.

"---"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=20×10^4）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J100

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.

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（$n_c > n_s$），若超出临界转速，请提高型号再计算。

$$n_c = \frac{96 \times fn \times d \times 10^6}{Lb^2} \qquad n_s = \frac{n_1}{i}$$

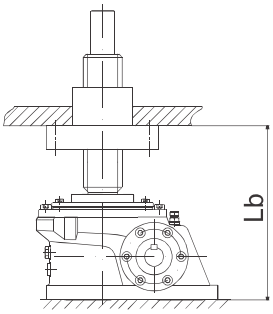
n_c: critical speed r/min
d: screw root diameter mm(see the table of basic parameters)
fn: length factor
L_b: distance between supports, mm
n_s: screw speed
n_1: input speed r/min
i: ratio(see the table of basic parameters)

n_c: 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
n_s: 丝杆转速 r/min
n_1: 输入速度 r/min
i: 减速比(参照基本参数表)

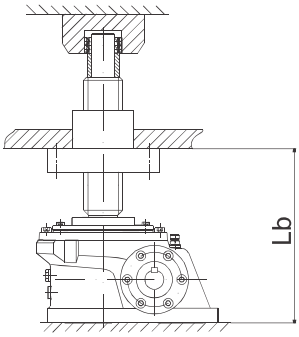
Lb (as per the sizes) and fn (length factor) are as follows in verifying the rotary speed of screw.

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

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



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



Calculation example: J200NU–1200HA–D1 Input speed is 1200r/min，run under shaft end support, check according to outline dimension and transmisson capacity：
i=9.667 d=52 Lb=1432

计算举例: J200NU–1200HA–D1 在输入转速为1200r/min，轴端支撑下运转,根据外形尺寸与传动能力表查得：
i=9.667 d=52 Lb=1432

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

$$n_c = \frac{96 \times fn \times d \times 10^6}{Lb^2} = \frac{96 \times 1.56 \times 52 \times 10^6}{(1432)^2} = 3798 \text{ r/min}$$

n_c=3798 r/min>124 r/min .....ok

Association diagram of screw rod lifting speed and allowable loading:

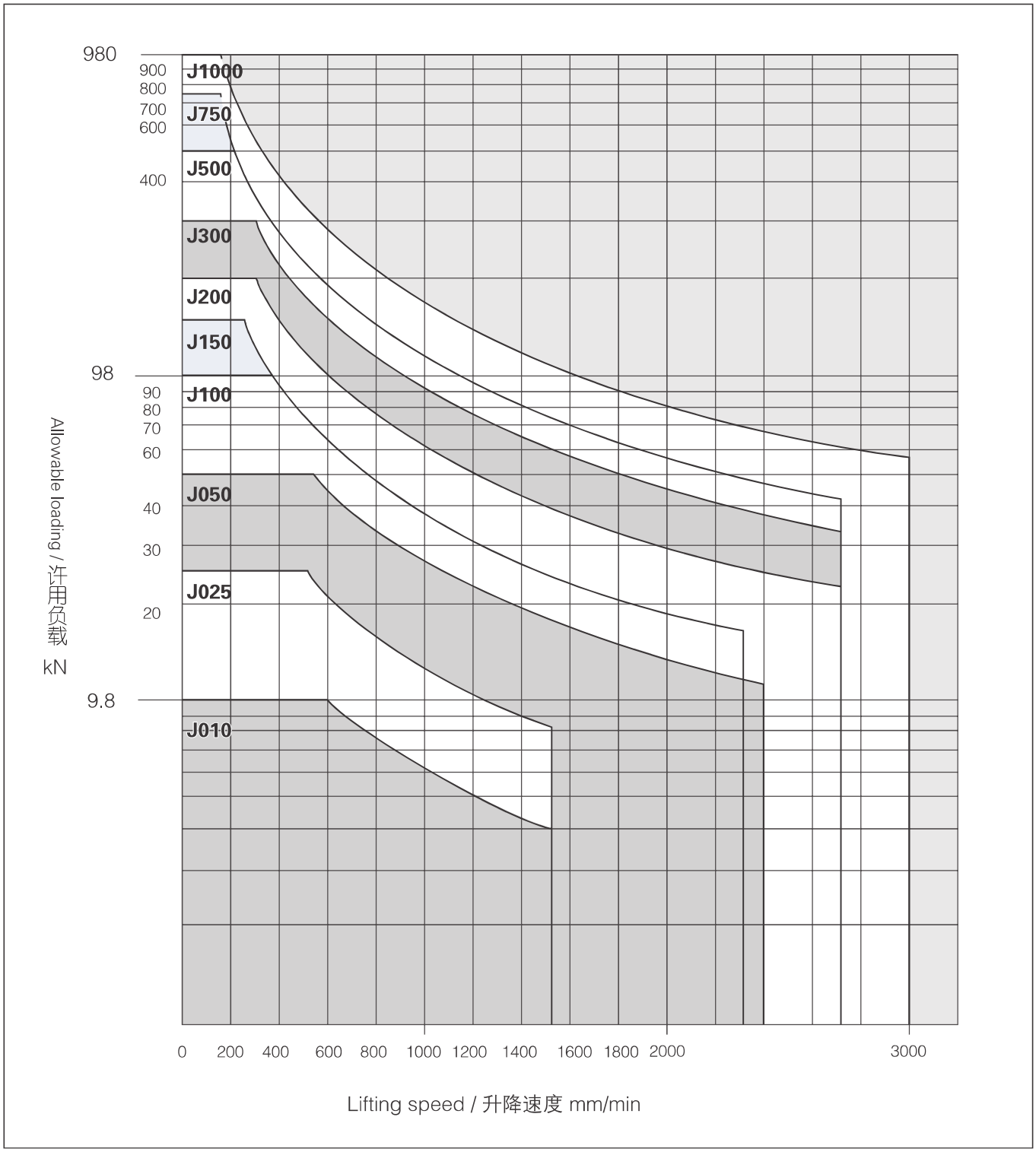
The picture is established according to maximum allowable input capacity of screw rod, please check allowable loading according to this picture, determine elevator type. When detailed type is needed, confirm by calculation.

丝杆升降速度与许用负载关联图表：

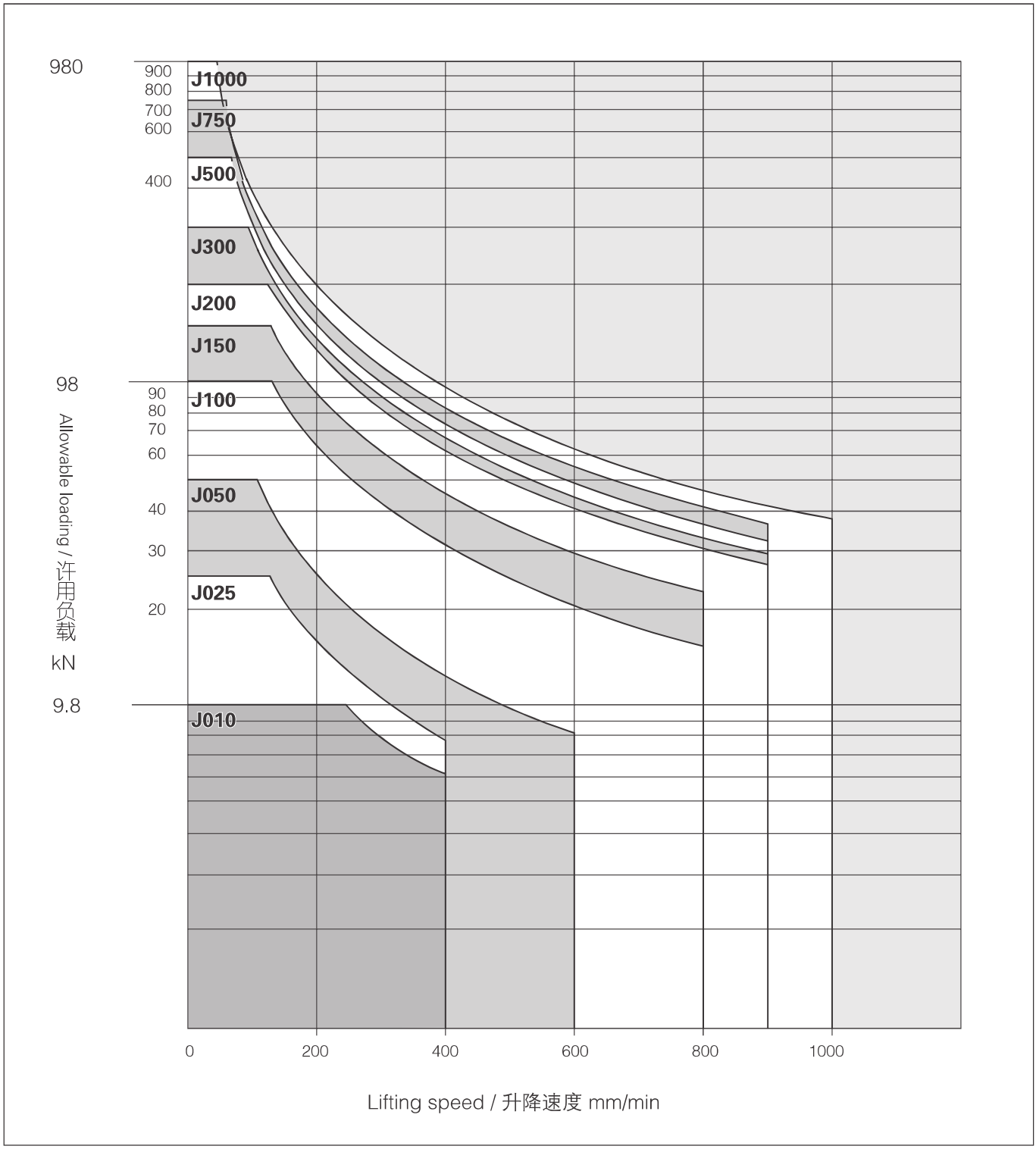
此图表是考虑丝杆的最大允许输入容量而创建的图表，请通过此图表检查允许负荷决定升降机型号。需要详细造型时，请通过计算确认。

H Speed

H速度



H Speed L速度


980
900
800
700
600
400
J1000
J750
J500
J300
J200
J150
98
90
80
70
60
J100
40
30
20
J050
J025
9.8
J010
Allowable loading / 许用负载
kN
0
200
400
600
800
1000
Lifting speed / 升降速度 mm/min

5.5 Drive source options

Determine the required drive unit capacity for synchronous drive Pt

1. Add the torque required for each jack $T_{1\sim4}$ on the drive unit side to determine the overall torque Tt

(1) Required torque per jack:

$$T_{1\sim4} = \frac{T}{\text{Gearbox efficiency}^{\text{No.of gearbox}}}$$

(2) Required torque for the drive unit:

$T_t = T_1 + T_2 + T_3 + T_4$

$T_{1\sim4}$ ： Required torque for each jack on the drive unit side N.m

T ： Required input torque per jack N.m

T_t ： Required torque for the drive unit N.m

Gearbox efficiency：Assume 0.9

For a four unit system (fig.1), $T_{1\sim4} = \frac{T}{0.9^2}$

5.5 驱动源的选型

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$T_{1\sim4}$，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：

$$T_{1\sim4} = \frac{T}{\text{转向箱效率}^{\text{转向箱台数}}}$$

（2）驱动源所需总扭矩：

$T_t = T_1 + T_2 + T_3 + T_4$

$T_{1\sim4}$：各升降机驱动源侧所需扭矩 N.m

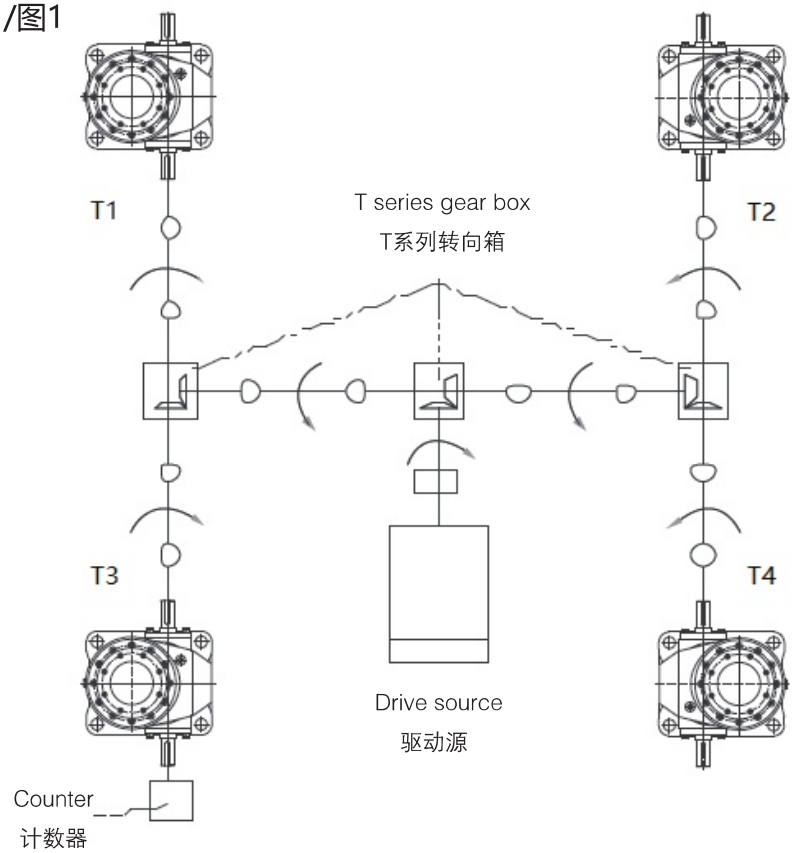
T ：升降机所需输入扭矩 N.m

T_t ：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 $T_{1\sim4} = \frac{T}{0.9^2}$

fig.1/图1



2.Determine the required drive unit capacity Pt with input n and overall Tt determined in 1. $Pt = \frac{T_t \times n}{9550}$

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。 $Pt = \frac{T_t \times n}{9550}$

5.6 Allowable radial force of input shaft Fr1

When installing chain wheel, gear, belt on input shaft, please confirm radial force excerted on input shaft is under allow–able radial force.

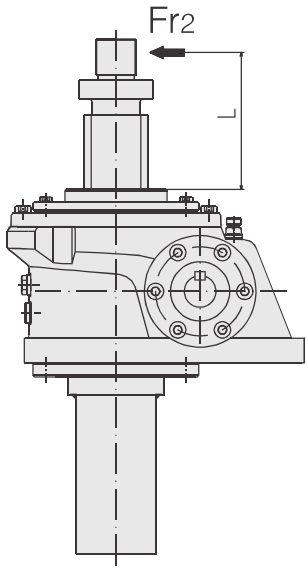
5.6 输入轴允许径向力Fr1

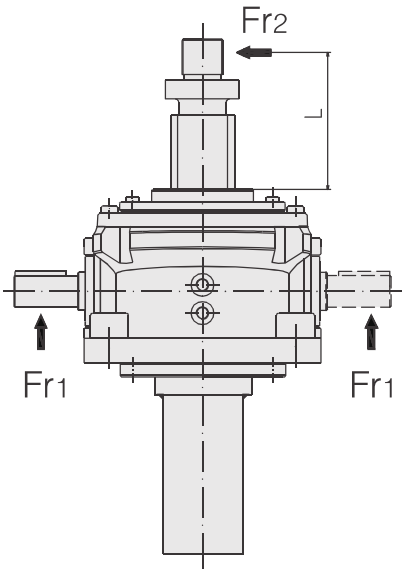
在输入轴安装链轮、齿轮、皮带时，请确认作用在输入轴上的径向力在允许径向力以下。

Ratio 速比内型	Allowable radial force Fr1 / 允许径向力 Unit / 单位（N）									
	J010	J025	J050	J100	J150	J200	J300	J500	J750	J1000
H Speed H速度	380	710	1500	2270	3160	4320	6110	10100	13900	18000
L Speed L速度	220	420	820	1430	1950	2800	4400	6650	9390	13200

5.7 Allowable radial force of screw rod output end Fr2

5.7 丝杆输出端允许径向力Fr2





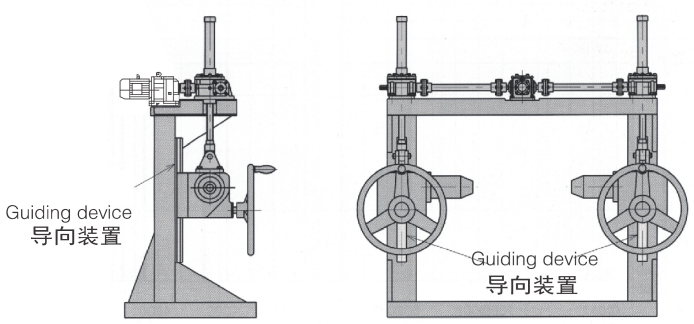
When exerting force on screw rod output end, please confirm radial force exerted on screw rod output end, under allowable radial force

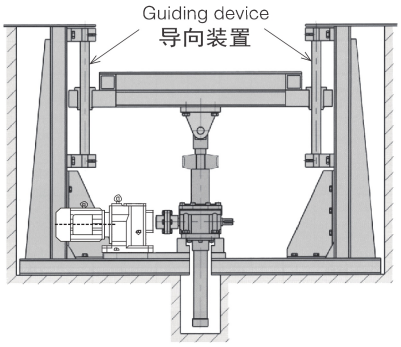
在丝杆输出端施加外力时，请确认作用在丝杆输出端的径向力，在允许径向力以下

Type / 型号 Highlighted quantity of screw rod 丝杆突出量L(mm)	Allowable radial force Fr2 / 允许径向力 Unit / 单位（N）									
	J010	J025	J050	J100	J150	J200	J300	J500	J750	J1000
100	318	570	2500	4010	4610	8210	38200	85300	73500	186200
200	159	290	1250	2010	2300	4110	23000	50400	56800	145000
300	106	190	830	1340	1540	2740	15300	33600	46100	104700
400	79	140	620	1000	1150	2050	11400	25200	39300	78500
500	64	110	500	800	920	1640	9100	20200	33900	62800
600	53	100	420	670	770	1370	7600	16800	29900	52300
700	51	90	360	570	660	1170	6500	14400	26700	44800
800	48	90	310	500	580	1030	5700	12600	24100	39200
900	45	90	280	450	510	910	5000	11200	22000	34800
1000	42	90	250	400	460	820	4500	10100	20200	31300

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

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：



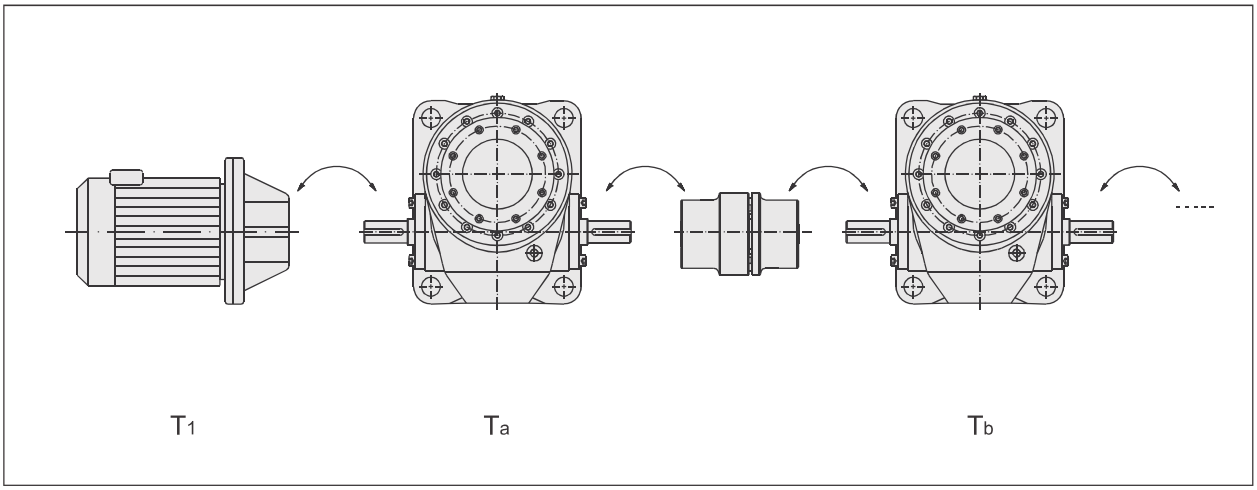


5.7 When elevator transmission is in series (that means the same axial line is equipped with two or more elevators)

5.7 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)

Make strenght examination to input shaft end of each elevator:

如图须对各升降机输入轴端进行强度校核;



Ta: Input torque needed by elevator a

Tb: Input torque needed by elevator b

Torque needed by motor $T_1=T_a+T_b <$ Allowable input shaft torque of elevator a

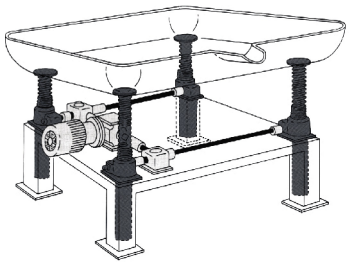
Ta:为升降机 a 的所需输入扭矩

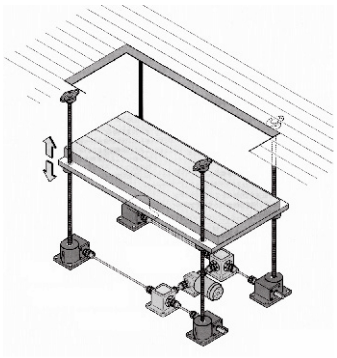
Tb:为升降机 b 的所需输入扭矩

电机必需的扭矩 $T_1=T_a+T_b <$ 升降机 a 的容许输入轴扭矩

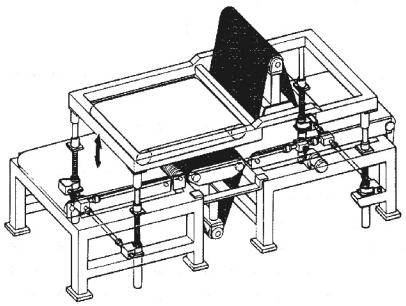
6 Examples:

6 应用举例：

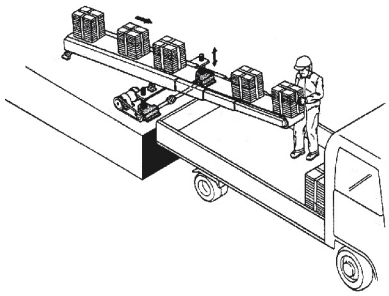




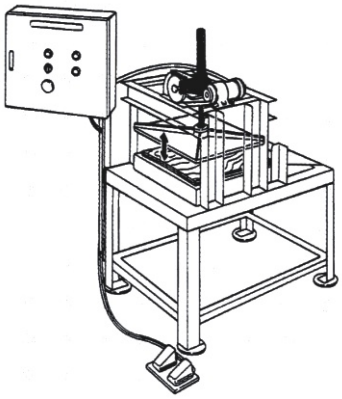
Lifting platform / 平台升降



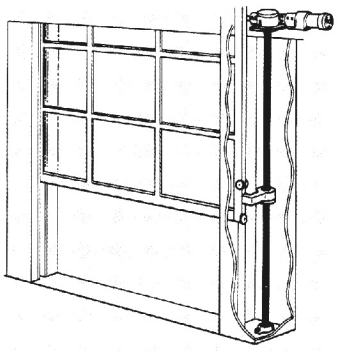
Height adjustment of surface machining tool
调整表面加工机的工作高度



Inclination adjustment of the sliding belt
调整滑动传送带的倾斜程度



Height adjustment of straightening machine
更改校正器的作业高

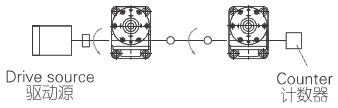


Auto opening of large windows or doors
大型窗户（门）自动开关

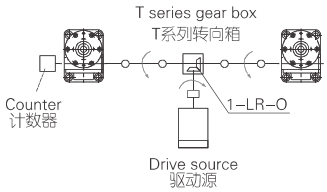
7 Arrangement Type Examples:　　7 布置型式举例：

7.1 Two sets interlock　　7.1 两台连动

Linear/直线型

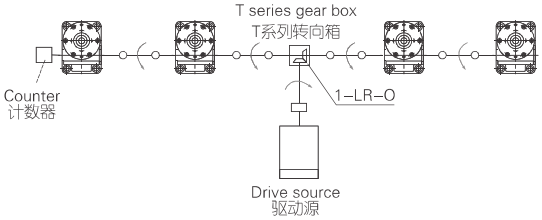


Layout T/T型

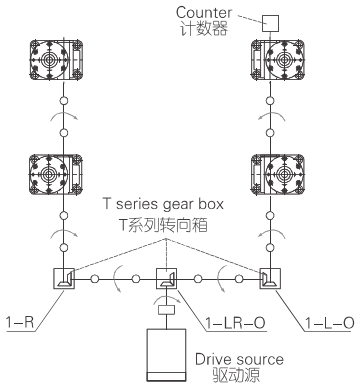


7.2 Four sets interlock　　7.2 四台连动

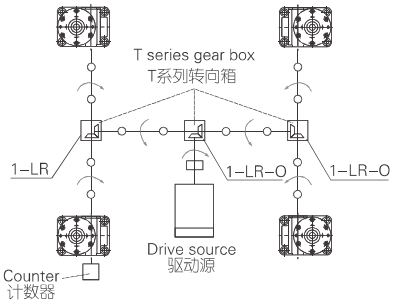
Layout T/T型



Layout U/U型

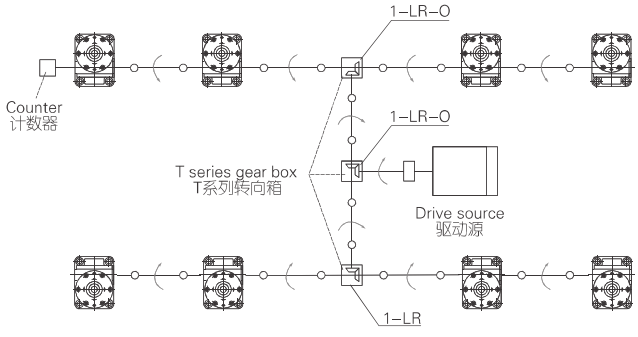


Layout H/H型

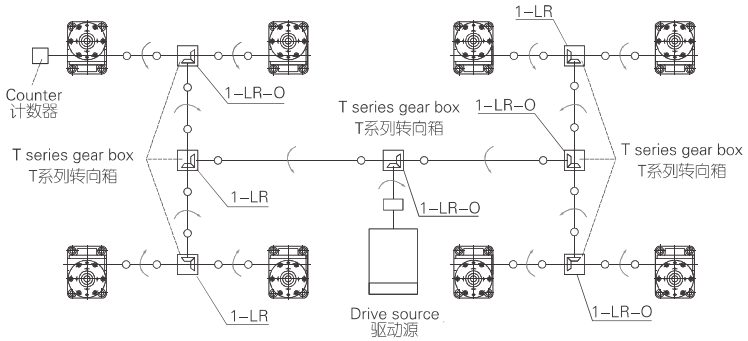


7.3 Eight sets interlock　　7.3 八台连动

Layout H/H发展型



Layout 2H/2H型



8 Examples Of Type Selection:

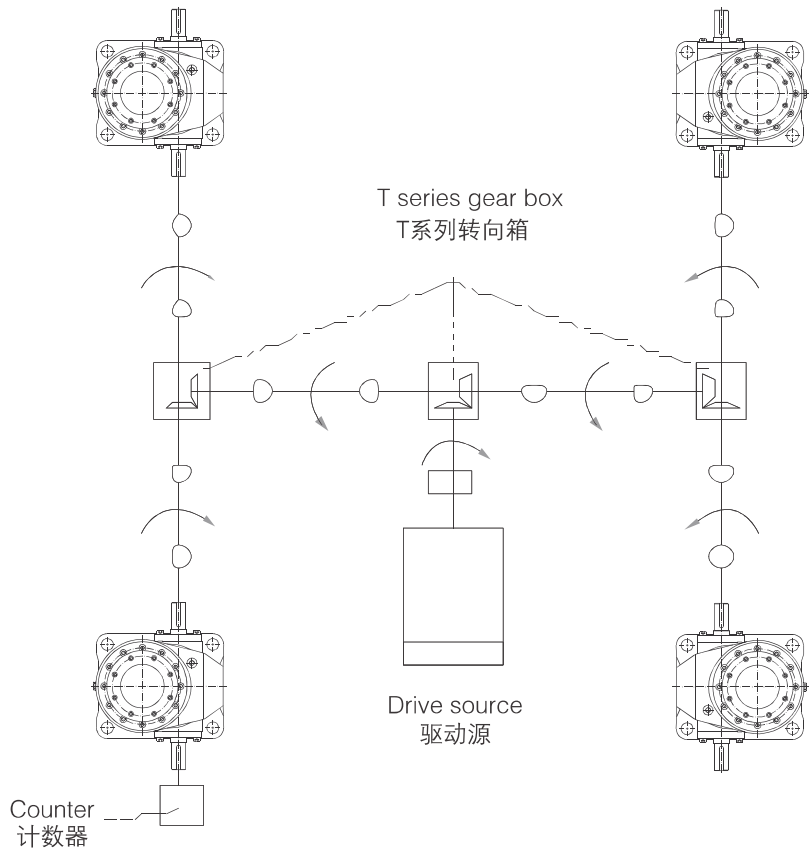
8 选型举例：

Known Criteria:

已知条件：

1. The axial load of the lifting platform: 88KN, lifting speed: 200mm/min, stroke: 260mm
2. Normal motor: 4 pole, speed n_1=1450r/min
3. Load characteristic: moderate, operating 16h/d, starts per hour:10
4. Mounting mode: 4 jacks, Layout H(See 14), foot–mounted with fixed shaft end, accessories UJ11 and UF11
5. Lateral load, guiding device on one side of the jack.

1、升降平台轴向载荷：88KN，平台升降速度：200 mm/min，升降行程：260mm;
2、普通电机：4极，转速n_1=1450r/min;
3、负荷性质：一般冲击，工作16小时/天，启动频率10次/小时;
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UJ11、UF11附件;
5、有横向负载，在升降机侧面设置了导向器。



Selection steps:

1.Calculation of total equivalent load Ws (driven machine factor f1=1.3)

Ws=Wmax · f1=88000 × 1.3=114400N

2.Calculation of equivalent load of single jack W(arrangement factor fd=0.85)

W= 114400/(4X0.85) =33647N

3. Initial selection of jack type:

J050B–U300HA–AF–UJ11–UF11selected 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)

4. Verification of input power of single jack:

(1) Input power required by single jack:

① $n=\frac{v1}{L1}\times i=\frac{0.2}{0.008}\times 5.2=130$ r/min

② $T=\frac{W\times L1}{2\pi\times i\times\eta}+T0=\frac{33647\times 0.008}{2\times 3.14\times 5.2\times 0.22}+1.4=38.9N\cdot m$

③ $P=\frac{T\times n}{9550}=\frac{38.9\times 130}{9550}=0.53kW$

(2) According to the table of technical data,

Pmax=2.05kW>P is OK.

5. Verification of screw stability:

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).

d=31，La=（489+33）=522，$fm=20\times 10^4$，SF=4

$PCR=fm\times(\frac{d^2}{La})^2=20\times 10^4\times(\frac{31^2}{522})=677856N$

$PCR=677856N>W\times SF=33647\times 4=134456N$ is OK.

6. Verification of critical speed:

Because of none travelling nut type and low rotary speed, the verification of critical speed can be ignored.

Note: If the above verifications fail, select the larger size jack.
For selection of T series gear units, refer to T series brochures.

7. Drive source options

（1）Required torque per jack：

$T_{1\sim4}=\frac{T}{\text{Gearbox efficiency}^{\text{No.of gearbox}}}=\frac{38.9}{0.9^2}=48N.m$

（2）Required torque for the drive unit：

$T_t=T_1+T_2+T_3+T_4=192N.m$

（3）required drive unit capacity：

$Pt=\frac{T_t\ X\ n}{9550}=\frac{192\ X\ 130}{9550}=2.61Kw$

（4）Drive source = required drive unit capacity × drive unit factor

=2.61 × 1.3=3.39KW

Based on above data,we select 4KW motor.

选型步骤：

1. 计算总机当量载荷Ws（取被驱动设备系数f1=1.3）

Ws=Wmax · f1=88000 × 1.3=114400N

2. 计算单台当量载荷W(取连动系数fd=0.85)

$W=\frac{114400}{4\times 0.85}=33647N$

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J050BU–300HA–UJ11–UF11【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】

4. 单台输入功率校核:

（1）单台所需输入功率计算：

① $n=\frac{v1}{L1}\times i=\frac{0.2}{0.008}\times 5.2=130$ r/min

② $T=\frac{W\times L1}{2\pi\times i\times\eta}+T0=\frac{33647\times 0.008}{2\times 3.14\times 5.2\times 0.22}+1.4=38.9N\cdot m$

③ $P=\frac{T\times n}{9550}=\frac{38.9\times 130}{9550}=0.53kW$

（2）参照基本参数表，Pmax=2.05kW>P,……OK.

5. 丝杆稳定性校核:

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：

d=31，La=（489+33）=522，$fm=20\times 10^4$，SF=4

$PCR=fm\times(\frac{d^2}{La})^2=20\times 10^4\times(\frac{31^2}{522})=677856N$

$PCR=677856N>W\times SF=33647\times 4=134456N$,……OK.

6. 临界转速校核:

此型号为非活动螺母式，且转速较低，可不必校核临界转速。

⚠ 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。

7. 驱动源的选型:

（1）单台升降机驱动源侧所需扭矩计算：

$T_{1\sim4}=\frac{T}{\text{转向箱效率}^{\text{转向箱台数}}}=\frac{38.9}{0.9^2}=48N.m$

（2）驱动源所需总扭矩：$T_t=T_1+T_2+T_3+T_4=192N.m$

（3）驱动源所需功率：

$Pt=\frac{T_t\ X\ n}{9550}=\frac{192\ X\ 130}{9550}=2.61Kw$

（4）驱动源功率=驱动源所需功率 × 驱动源系数=2.61 × 1.3=3.39KW

由上可得：应选4KW电机

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℃.

◆Permissible speed of the input shaft is 1500r/min. Higher speed are not allowed.

◆J screw jacks are not designed for continuous duty circle.
The unit of %ED for single screw jack is 30min J (Trapezoid screw) duty circle must be less than 20%ED

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

◆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℃, the screw jack must be guaranteed by sufficient drive source, for its efficiency decreases as a result of the viscosity change in the grease.

◆J has self−locking function theoretically, but may break down when working under heavy shock circumstance. So an additional break or a drive source with brake is recommended.

◆The normal ambient environment: ambient temperature −10 to 40℃, 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.

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℃～80℃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。

◆J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，J列升降机（梯形丝杆类型）的负荷时间内不得超过20%ED。
负荷时间率%ED=

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

◆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。

◆驱动源的起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。

◆J列升降机型理论上具有自锁功能，但工作在振动冲击较大的场合时会导致自锁功能失灵，因此须外加一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℃，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。

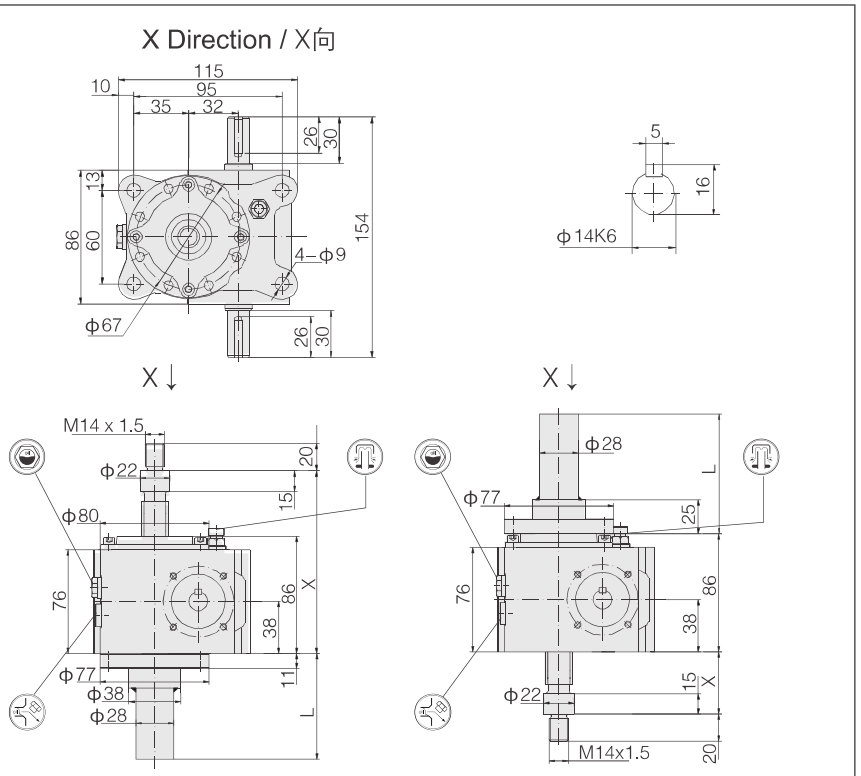
10 Outline Dimension:

10 外形尺寸：

J010

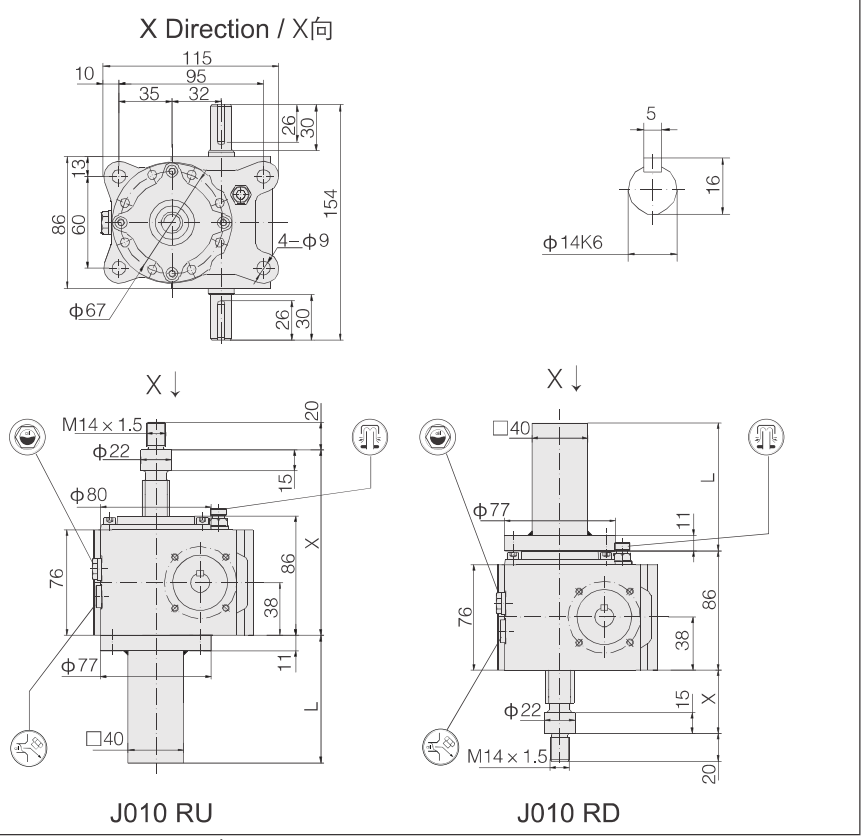
Stroke 行程(mm)	BU					
	X		X(1)		L	m(kg)
	MIN	MAX	MIN	MAX		
25	111	136	161	186	119	5.4
50	111	161	161	211	144	5.4
100	111	211	161	261	194	5.5
150	111	261	161	311	244	5.6
200	111	311	161	361	294	5.7
250	111	361	201	451	384	6
300	111	411	201	501	434	6.1
350	111	461	201	551	484	6.2
400	111	511	201	601	534	6.3
500	111	611	236	736	669	6.6
600	111	711	236	836	769	6.9
800	111	911	271	1071	1004	7.5
1000	111	1111	301	1301	1234	8

Stroke 行程(mm)	BD					
	X		X(1)		L	m(kg)
	MIN	MAX	MIN	MAX		
25	25	50	75	100	119	5.4
50	25	75	75	125	144	5.4
100	25	125	75	175	194	5.5
150	25	175	75	225	244	5.6
200	25	225	75	275	294	5.7
250	25	275	115	365	384	6
300	25	325	115	415	434	6.1
350	25	375	115	465	484	6.2
400	25	425	115	515	534	6.3
500	25	525	150	650	669	6.6
600	25	625	150	750	769	6.9
800	25	825	185	985	1004	7.5
1000	25	1025	215	1215	1234	8



Stroke 行程(mm)	RU					
	X		X(1)		L	m(kg)
	MIN	MAX	MIN	MAX		
25	111	136	161	186	119	6.2
50	111	161	161	211	144	6.3
100	111	211	161	261	194	6.6
150	111	261	161	311	244	6.9
200	111	311	161	361	294	7.2
250	111	361	201	451	384	7.8
300	111	411	201	501	434	8.1
350	111	461	201	551	484	8.5
400	111	511	201	601	534	8.8
500	111	611	236	736	669	9.6
600	111	711	236	836	769	11
800	111	911	271	1071	1004	12
1000	111	1111	301	1301	1234	14

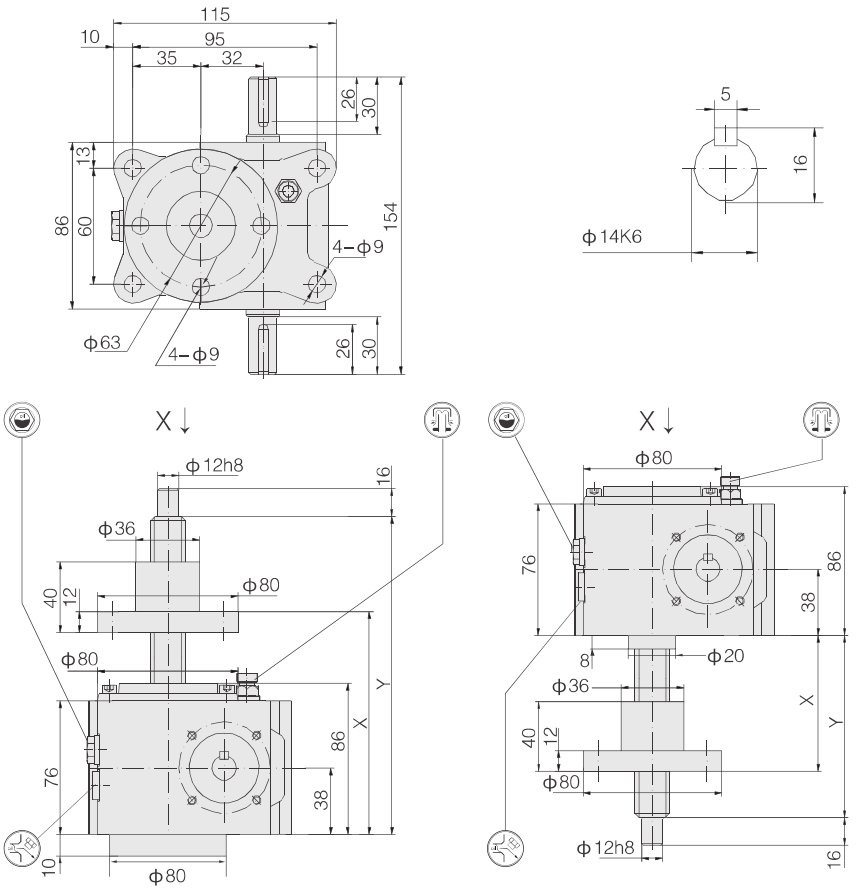
Stroke 行程(mm)	RD					
	X		X(1)		L	m(kg)
	MIN	MAX	MIN	MAX		
25	25	50	75	100	119	6.2
50	25	75	75	125	144	6.3
100	25	125	75	175	194	6.6
150	25	175	75	225	244	6.9
200	25	225	75	275	294	7.2
250	25	275	115	365	384	7.8
300	25	325	115	415	434	8.1
350	25	375	115	465	484	8.5
400	25	425	115	515	534	8.8
500	25	525	150	650	669	9.6
600	25	625	150	750	769	11
800	25	825	185	985	1004	12
1000	25	1025	215	1215	1234	14



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

⚠注：X(1)加防尘罩尺寸。

X Direction / X向

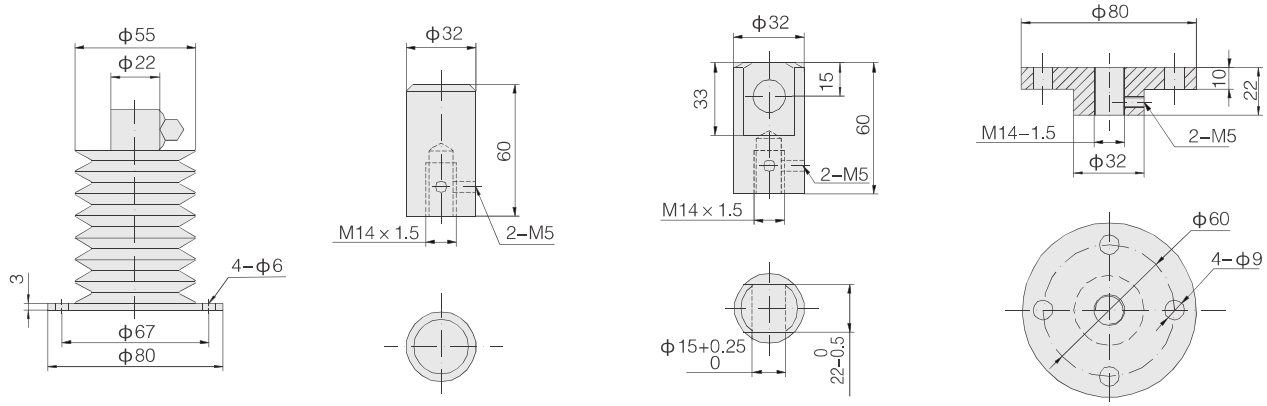


J010 NU　　J010 ND

Stroke 行程(mm)	NU			
	X		Y	m(kg)
	MIN	MAX		
25	108	133	171	5.8
50	108	158	196	5.8
100	108	208	246	5.9
150	108	258	296	6
200	108	308	346	6.1
250	108	358	396	6.2
300	108	408	446	6.2
350	108	558	496	6.3
400	108	508	546	6.4
500	108	608	646	6.6
600	108	708	746	6.8
800	108	908	946	7.2
1000	108	1108	1146	7.6

Stroke 行程(mm)	ND			
	X		Y	m(kg)
	MIN	MAX		
25	60	85	95	5.8
50	60	110	120	5.8
100	60	160	170	5.9
150	60	210	220	6
200	60	260	270	6.1
250	60	310	320	6.2
300	60	360	370	6.2
350	60	410	420	6.3
400	60	460	470	6.4
500	60	560	570	6.6
600	60	660	670	6.8
800	60	860	970	7.2
1000	60	1060	1070	7.6

Accessories / 附件



UJ11　　UT12　　UT11　　UF11

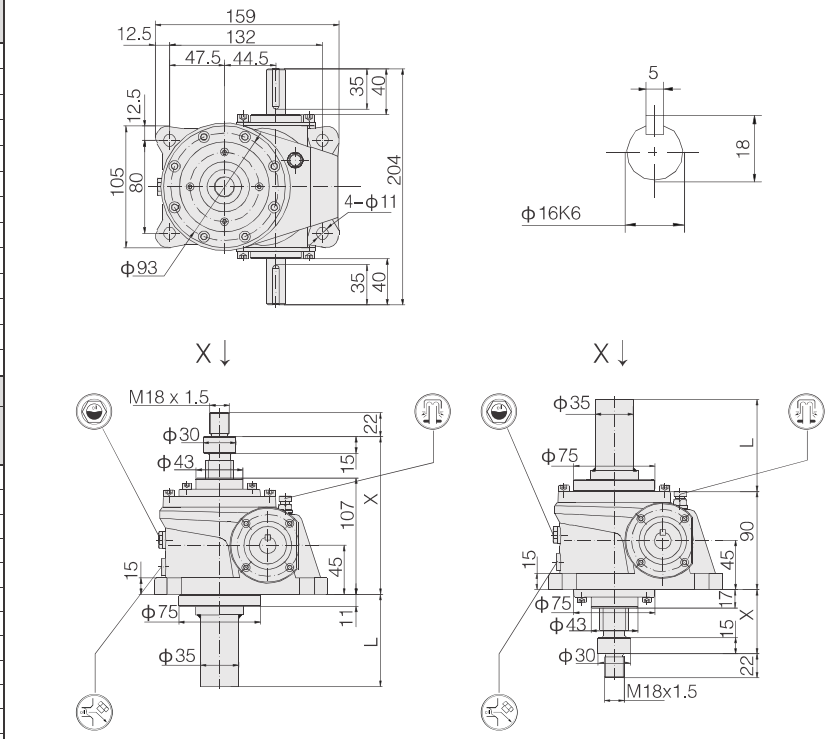
10 Outline Dimension:

10 外形尺寸：

J025

Stroke 行程(mm)	BU					
	X		X(1)		L	m(kg)
	MIN	MAX	MIN	MAX		
50	132	182	147	197	99	7.5
100	132	232	147	247	149	7.7
150	132	282	147	297	199	7.9
200	132	332	147	347	249	8.1
250	132	382	167	417	319	8.3
300	132	432	167	467	369	8.5
350	132	482	167	517	419	8.7
400	132	532	167	567	469	8.9
500	132	632	187	687	589	9.4
600	132	732	187	787	689	9.8
800	132	932	207	1007	909	11
1000	132	1132	227	1227	1129	12
1200	132	1332	242	1442	1334	13

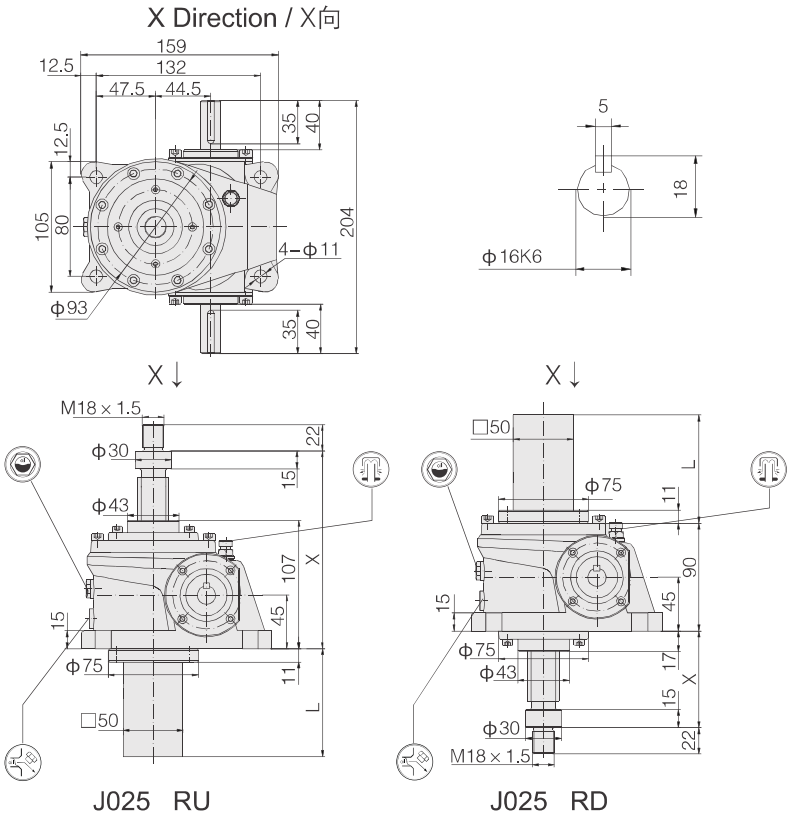
Stroke 行程(mm)	BD					
	X		X(1)		L	m(kg)
	MIN	MAX	MIN	MAX		
50	42	92	57	107	99	7.5
100	42	142	57	157	149	7.7
150	42	192	57	207	199	7.9
200	42	242	57	257	249	8.1
250	42	292	77	327	319	8.3
300	42	342	77	377	369	8.5
350	42	392	77	427	419	8.7
400	42	442	77	477	469	8.9
500	42	542	97	597	589	9.4
600	42	642	97	697	689	9.8
800	42	842	117	917	909	11
1000	42	1042	137	1137	1129	12
1200	42	1242	152	1352	1334	13



J025 BU　　J025 BD

Stroke 行程(mm)	RU					
	X		X(1)		L	m(kg)
	MIN	MAX	MIN	MAX		
50	132	182	147	197	125	9
100	132	232	147	247	175	10
150	132	282	147	297	225	11
200	132	332	147	347	275	12
250	132	382	167	417	345	12.5
300	132	432	167	467	395	13
350	132	482	167	517	445	13.5
400	132	532	167	567	495	14
500	132	632	187	687	615	15
600	132	732	187	787	715	17
800	132	932	207	1007	935	19
1000	132	1132	227	1227	1155	21
1200	132	1332	242	1442	1370	24

Stroke 行程(mm)	RD					
	X		X(1)		L	m(kg)
	MIN	MAX	MIN	MAX		
50	42	92	57	107	125	9
100	42	142	57	157	175	10
150	42	192	57	207	225	11
200	42	242	57	257	275	12
250	42	292	77	327	345	12.5
300	42	342	77	377	395	13
350	42	392	77	427	445	13.5
400	42	442	77	477	495	14
500	42	542	97	597	615	15
600	42	642	97	697	715	17
800	42	842	117	917	935	19
1000	42	1042	137	1137	1155	21
1200	42	1242	152	1352	1370	24

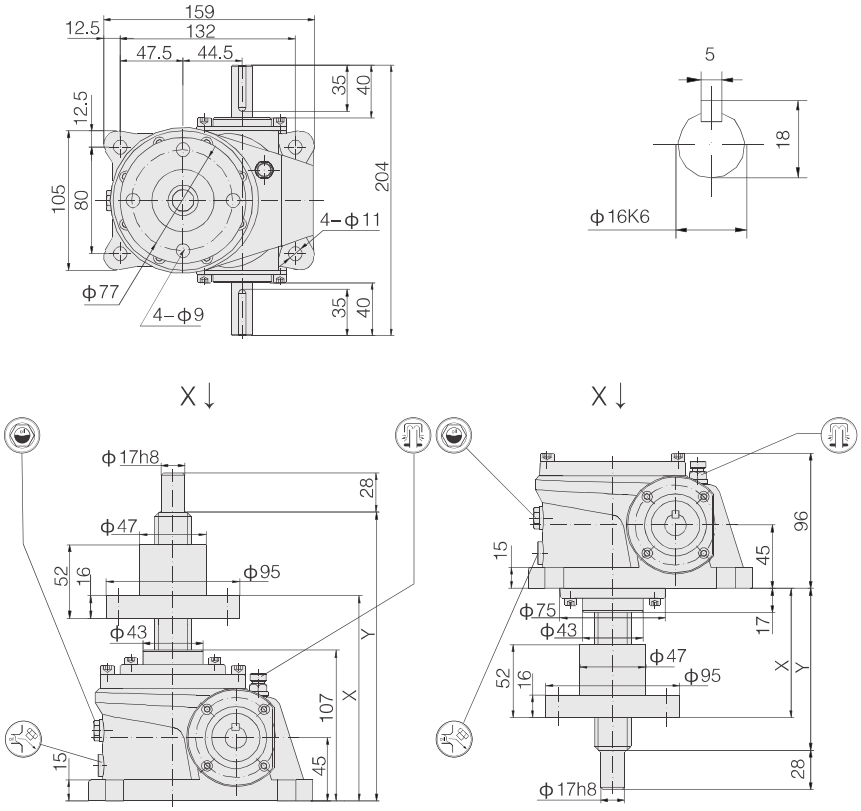


J025 RU　　J025 RD

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

⚠ 注：X(1) 加防尘罩尺寸。

X Direction / X向

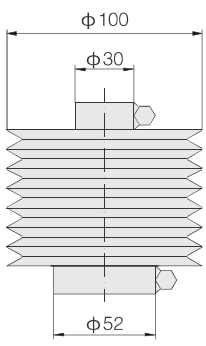


J025 NU　　J025 ND

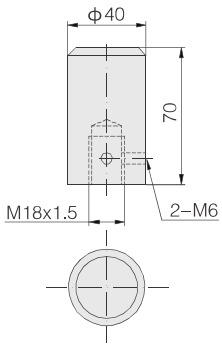
Stroke 行程(mm)	NU			
	X		Y	m(kg)
	MIN	MAX		
50	133	183	229	9.1
100	133	233	279	9.2
150	133	283	329	9.4
200	133	333	379	9.5
250	133	383	429	9.7
300	133	433	479	9.9
350	133	483	529	10.5
400	133	533	579	11
500	133	633	679	11
600	133	733	779	11
800	133	933	979	12
1000	133	1133	1179	13
1200	133	1333	1379	13

Stroke 行程(mm)	ND			
	X		Y	m(kg)
	MIN	MAX		
50	79	129	139	9.1
100	79	179	189	9.2
150	79	229	239	9.4
200	79	279	289	9.5
250	79	329	339	9.7
300	79	379	389	9.9
350	79	429	439	10.5
400	79	479	489	11
500	79	579	589	11
600	79	679	689	11
800	79	879	889	12
1000	79	1079	1089	13
1200	79	1279	1289	13

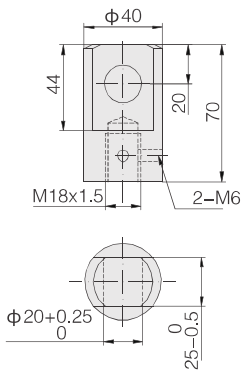
Accessories / 附件



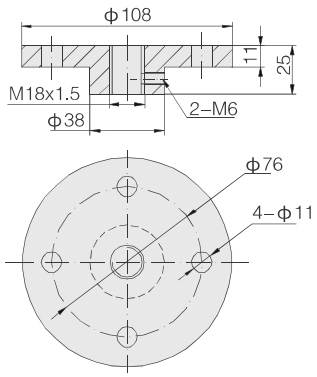
UJ11



UT12



UT11



UF11

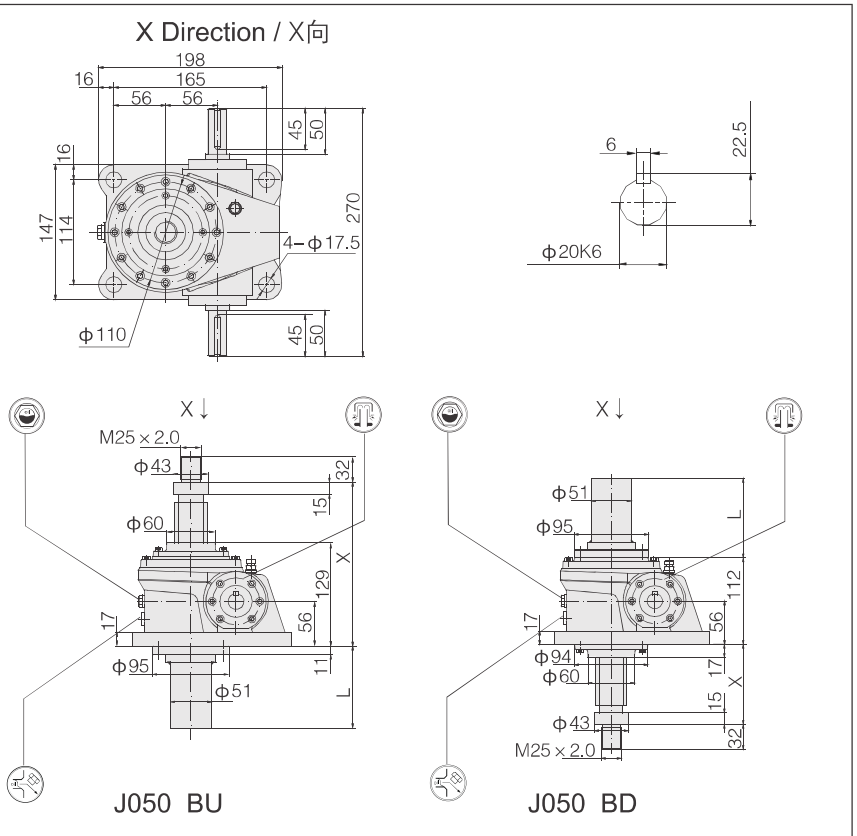
10 Outline Dimension:

10 外形尺寸：

J050

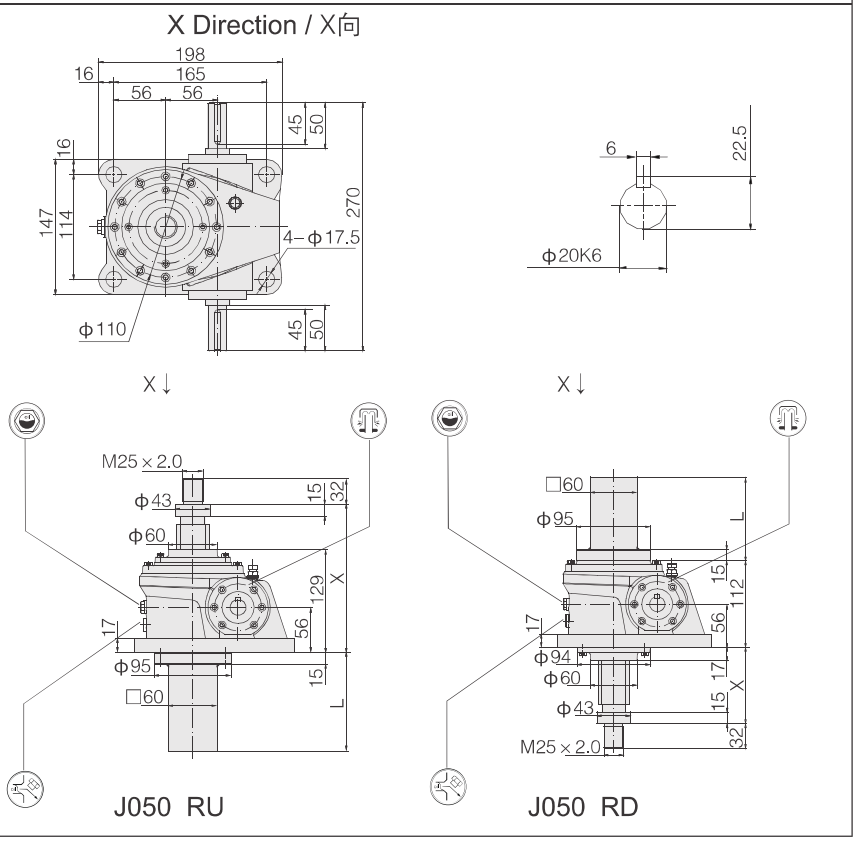
Stroke 行程(mm)	BU					
	X		X(1)		L	m(kg)
	MIN	MAX	MIN	MAX		
50	154	204	169	219	105	18
100	154	254	169	269	155	18
150	154	304	169	319	205	19
200	154	354	169	369	255	19
250	154	404	189	439	325	20
300	154	454	189	489	375	20
350	154	504	189	539	425	21
400	154	554	189	589	475	21
450	154	604	209	659	545	22
500	154	654	209	709	595	22
550	154	704	209	759	645	23
600	154	754	209	809	695	23
650	154	804	229	879	765	24
700	154	854	229	929	815	24
800	154	954	229	1029	915	25
1000	154	1154	249	1249	1135	27
1200	154	1354	264	1464	1350	29
1500	154	1654	289	1789	1675	32

Stroke 行程(mm)	BD					
	X		X(1)		L	m(kg)
	MIN	MAX	MIN	MAX		
50	42	92	57	107	105	18
100	42	142	57	157	155	18
150	42	192	57	207	205	19
200	42	242	57	257	255	19
250	42	292	77	327	325	20
300	42	342	77	377	375	20
350	42	392	77	427	425	21
400	42	442	77	477	475	21
450	42	492	97	547	545	22
500	42	542	97	597	595	22
550	42	592	97	647	645	23
600	42	642	97	697	695	23
650	42	692	117	767	765	24
700	42	742	117	817	815	24
800	42	842	117	917	915	25
1000	42	1042	137	1137	1135	27
1200	42	1242	152	1352	1350	29
1500	42	1542	177	1677	1675	32



Stroke 行程(mm)	RU					
	X		X(1)		L	m(kg)
	MIN	MAX	MIN	MAX		
50	154	204	169	219	133	21
100	154	254	169	269	183	22
150	154	304	169	319	233	23
200	154	354	169	369	283	24
250	154	404	189	439	353	25
300	154	454	189	489	403	26
350	154	504	189	539	453	27
400	154	554	189	589	503	28
450	154	604	209	659	573	29
500	154	654	209	709	623	30
550	154	704	209	759	673	31
600	154	754	209	809	723	32
650	154	804	229	879	793	33
700	154	854	229	929	843	34
800	154	954	229	1029	943	36
1000	154	1154	249	1249	1163	40
1200	154	1354	264	1464	1399	44
1500	154	1654	289	1789	1724	50

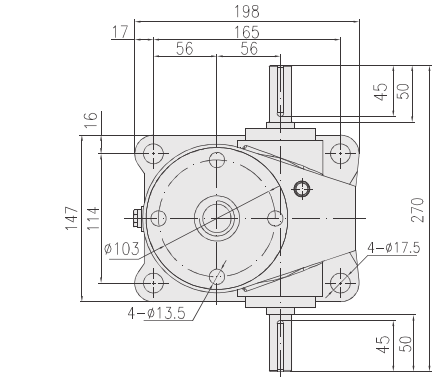
Stroke 行程(mm)	RD					
	X		X(1)		L	m(kg)
	MIN	MAX	MIN	MAX		
50	42	92	57	107	133	21
100	42	142	57	157	183	22
150	42	192	57	207	233	23
200	42	242	57	257	283	24
250	42	292	77	327	353	25
300	42	342	77	377	403	26
350	42	392	77	427	453	27
400	42	442	77	477	503	28
450	42	492	97	547	573	29
500	42	542	97	597	623	30
550	42	592	97	647	673	31
600	42	642	97	697	723	32
650	42	692	117	767	793	33
700	42	742	117	817	843	34
800	42	842	117	917	943	36
1000	42	1042	137	1137	1163	40
1200	42	1242	152	1352	1399	44
1500	42	1542	177	1677	1724	50

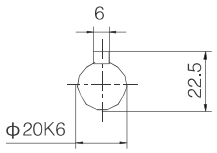


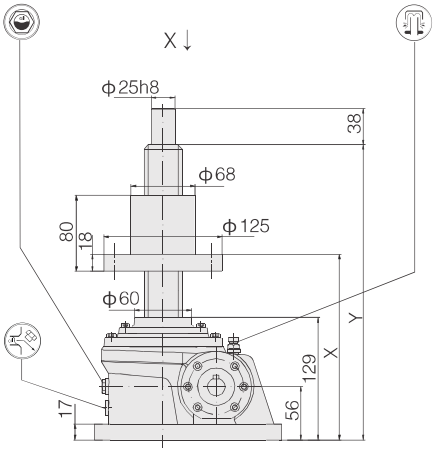
Note: X(1) dimension with dust-proof cover.

⚠ 注：X(1) 加防尘罩尺寸。

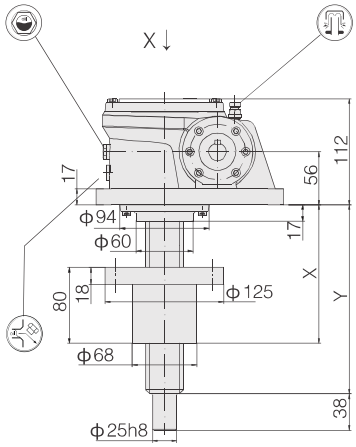
X Direction / X向







J050 NU

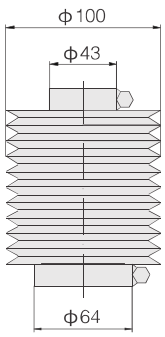


J050 ND

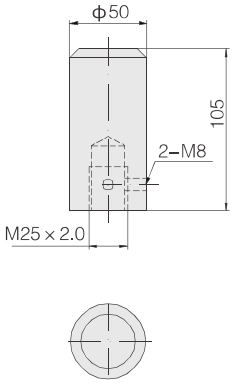
Stroke 行程(mm)	NU			
	X		Y	m(kg)
	MIN	MAX		
50	157	207	280	22
100	157	157	330	22
150	157	307	380	22
200	157	375	430	22
250	157	407	480	23
300	157	457	530	23
350	157	507	580	24
400	157	557	630	24
450	157	607	680	25
500	157	657	730	25
550	157	707	780	26
600	157	757	830	26
650	157	807	880	27
700	157	857	930	27
800	157	957	1030	27
1000	157	1157	1230	29
1200	157	1357	1430	30
1500	157	1657	1657	33

Stroke 行程(mm)	ND			
	X		Y	m(kg)
	MIN	MAX		
50	107	157	168	22
100	107	207	218	22
150	107	257	268	22
200	107	307	318	22
250	107	357	368	23
300	107	407	418	23
350	107	457	468	24
400	107	507	518	24
450	107	557	568	25
500	107	607	618	25
550	107	657	668	26
600	107	707	718	26
650	107	757	768	27
700	107	807	818	27
800	107	907	918	27
1000	107	1107	1118	29
1200	107	1307	1318	30
1500	107	1507	1518	33

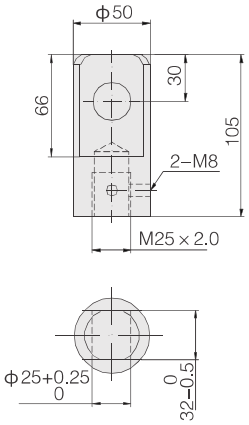
Accessories / 附件



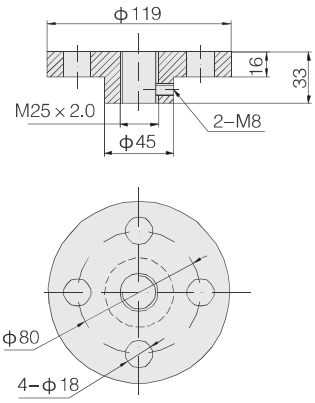
UJ11



UT12



UT11



UF11

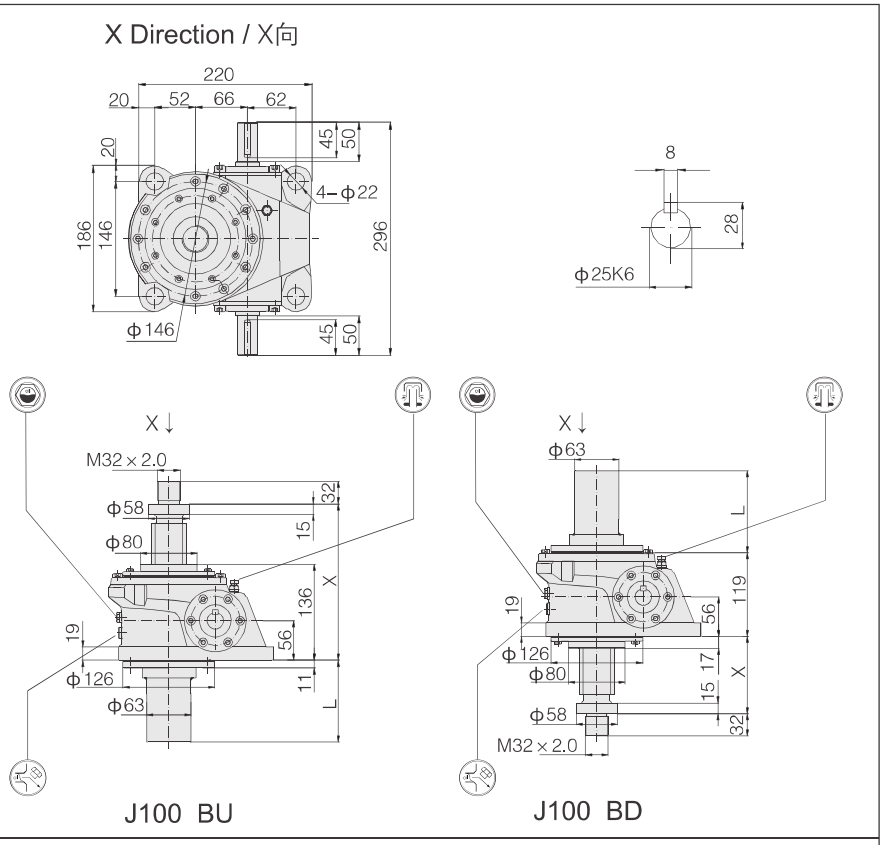
10 Outline Dimension:

10 外形尺寸：

J100

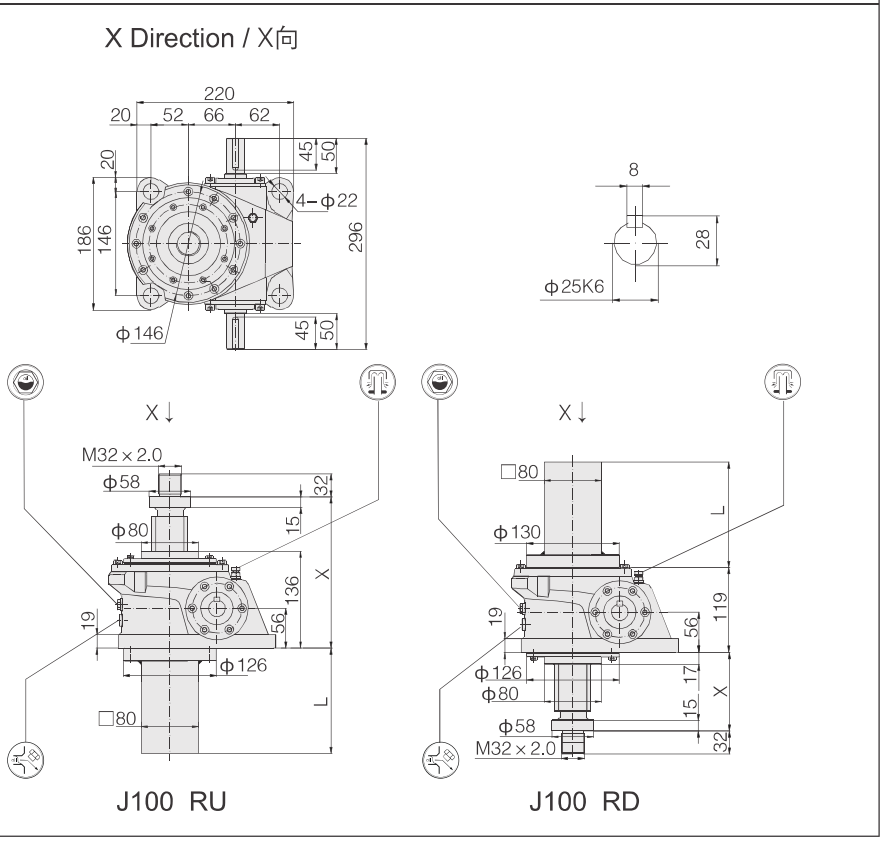
Stroke 行程(mm)	BU					
	X		X(1)		L	m(kg)
	MIN	MAX	MIN	MAX		
50	161	211	171	221	101	26
100	161	261	171	271	151	27
150	161	311	171	321	202	28
200	161	361	171	371	252	29
250	161	411	186	436	316	31
300	161	461	186	486	366	32
350	161	511	186	536	416	33
400	161	561	186	586	466	34
450	161	611	211	661	541	36
500	161	661	211	711	591	37
550	161	711	211	761	641	39
600	161	761	211	811	691	40
650	161	811	226	875	756	42
700	161	861	226	926	806	43
800	161	961	226	1026	906	45
1000	161	1161	236	1236	1116	50
1200	161	1361	261	1461	1341	56
1500	161	1661	286	1786	1666	63

Stroke 行程(mm)	BD					
	X		X(1)		L	m(kg)
	MIN	MAX	MIN	MAX		
50	42	92	52	102	101	26
100	42	142	52	152	151	27
150	42	192	52	202	202	28
200	42	242	52	252	252	29
250	42	292	67	317	316	31
300	42	342	67	367	366	32
350	42	392	67	417	416	33
400	42	442	67	467	466	34
450	42	492	92	542	541	36
500	42	542	92	592	591	37
550	42	592	92	642	641	39
600	42	642	92	692	691	40
650	42	692	107	757	756	42
700	42	742	107	807	806	43
800	42	842	107	907	906	45
1000	42	1042	117	1117	1116	50
1200	42	1242	142	1342	1341	56
1500	42	1542	167	1667	1666	63



Stroke 行程(mm)	RU					
	X		X(1)		L	m(kg)
	MIN	MAX	MIN	MAX		
50	161	211	171	221	130	29
100	161	261	171	271	180	30
150	161	311	171	321	232	31
200	161	361	171	371	282	32
250	161	411	186	436	346	34
300	161	461	186	486	396	35
350	161	511	186	536	446	36
400	161	561	186	586	496	37
450	161	611	211	661	571	39
500	161	661	211	711	621	40
550	161	711	211	761	671	42
600	161	761	211	811	721	43
650	161	811	226	875	786	45
700	161	861	226	926	836	46
800	161	961	226	1026	936	48
1000	161	1161	236	1236	1146	53
1200	161	1361	261	1461	1371	58
1500	161	1661	286	1786	1707	66

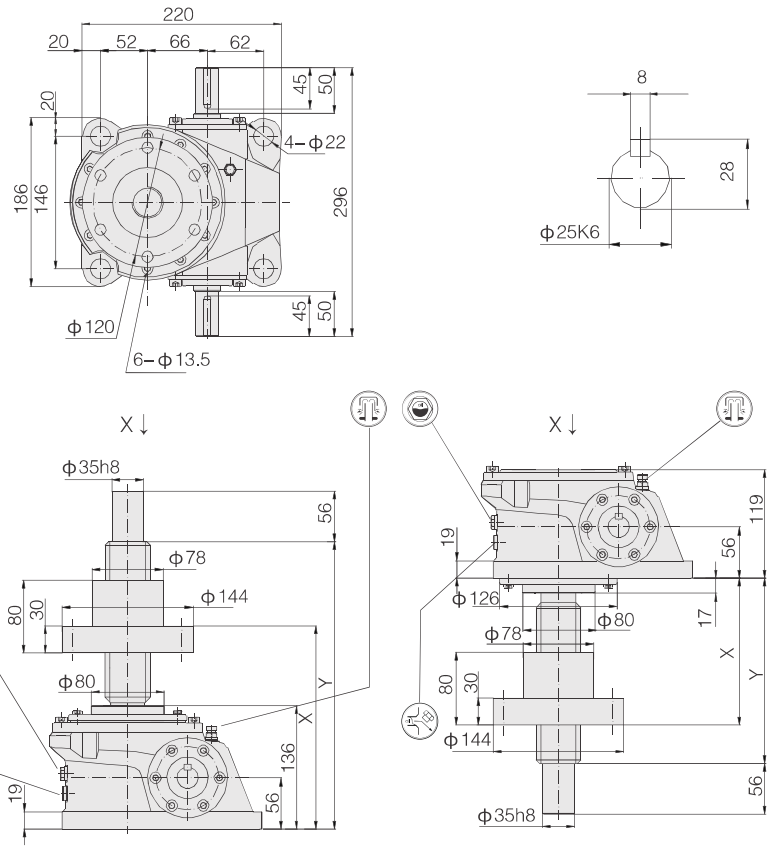
Stroke 行程(mm)	RD					
	X		X(1)		L	m(kg)
	MIN	MAX	MIN	MAX		
50	42	92	52	102	130	29
100	42	142	52	152	180	30
150	42	192	52	202	232	31
200	42	242	52	252	282	32
250	42	292	67	317	346	34
300	42	342	67	367	396	35
350	42	392	67	417	446	36
400	42	442	67	467	496	37
450	42	492	92	542	571	39
500	42	542	92	592	621	40
550	42	592	92	642	671	42
600	42	642	92	692	721	43
650	42	692	107	757	786	45
700	42	742	107	807	836	46
800	42	842	107	907	936	48
1000	42	1042	117	1117	1146	53
1200	42	1242	142	1342	1371	58
1500	42	1542	167	1667	1707	66



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

⚠ 注：X(1) 加防尘罩尺寸。

X Direction / X向

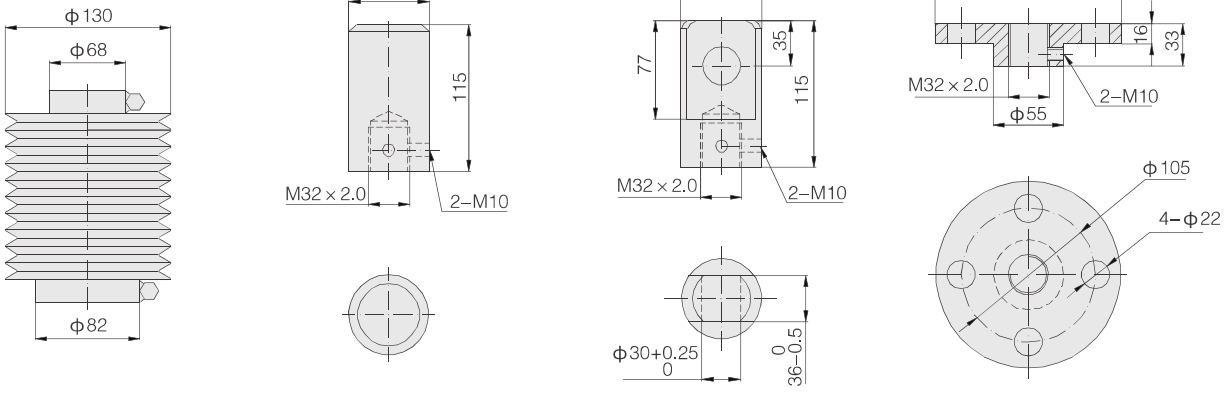


J100 NU　　J100 ND

Stroke 行程(mm)	NU			
	X		Y	m(kg)
	MIN	MAX		
50	177	227	287	32
100	177	277	337	32
150	177	327	387	33
200	177	377	437	33
250	177	427	487	34
300	177	477	537	34
350	177	527	587	35
400	177	577	637	36
450	177	627	687	37
500	177	677	737	37
550	177	727	787	38
600	177	777	837	38
650	177	827	887	39
700	177	877	937	40
800	177	977	1037	41
1000	177	1177	1237	43
1200	177	1377	1437	45
1500	177	1677	1737	49

Stroke 行程(mm)	ND			
	X		Y	m(kg)
	MIN	MAX		
50	115	165	175	32
100	115	215	225	32
150	115	265	275	33
200	115	315	325	33
250	115	365	375	34
300	115	415	425	34
350	115	465	475	35
400	115	515	525	36
450	115	565	575	37
500	115	615	625	37
550	115	665	675	38
600	115	715	725	38
650	115	765	775	39
700	115	815	825	40
800	115	915	925	41
1000	115	1115	1125	43
1200	115	1315	1325	45
1500	115	1615	1625	49

Accessories / 附件



UJ11　　UT12　　UT11　　UF11

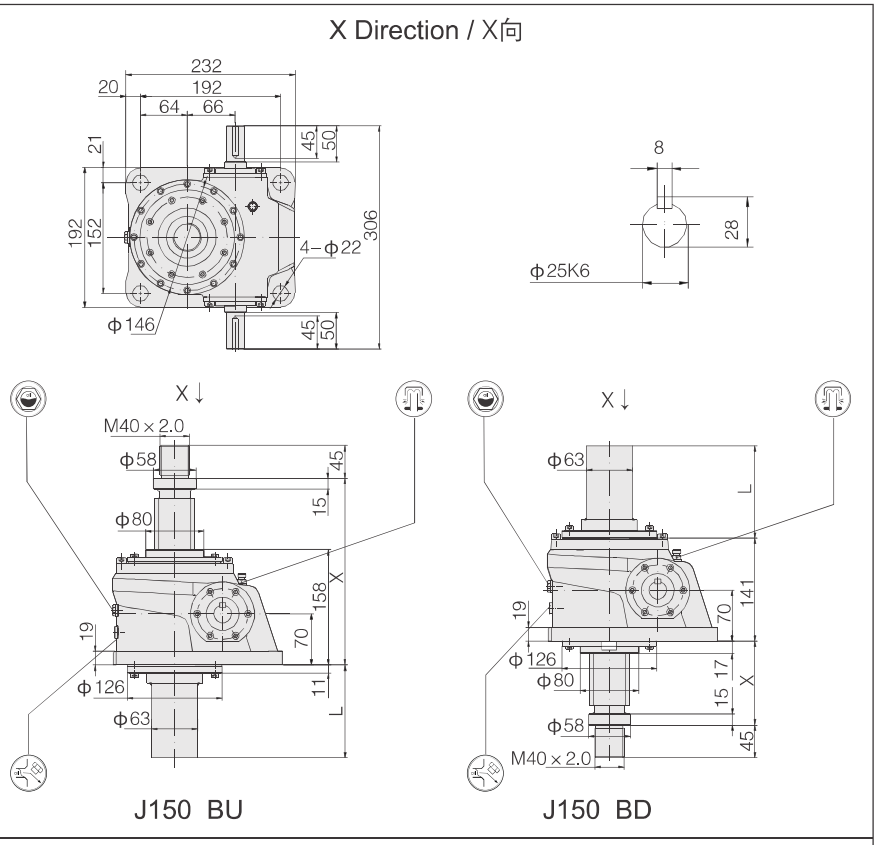
10 外形尺寸：

10 Outline Dimension:

J150

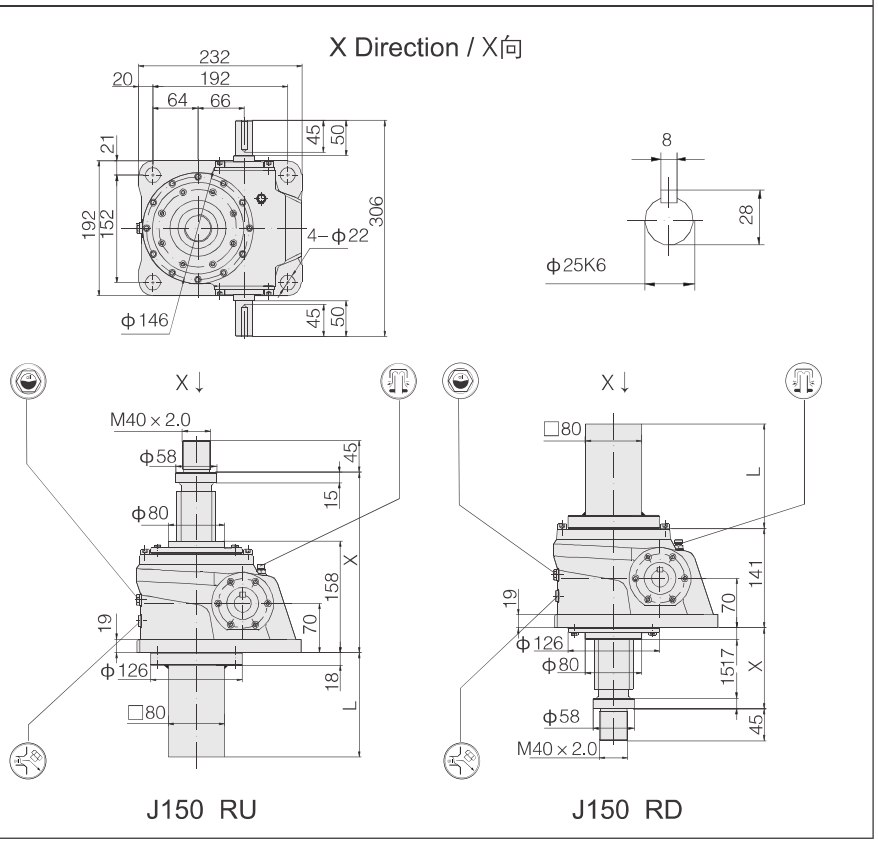
Stroke 行 程(mm)	BU					
	X		X(1)		L	m(kg)
	MIN	MAX	MIN	MAX		
50	183	233	193	243	101	32
100	183	283	193	293	151	33
150	183	333	193	343	202	34
200	183	383	193	393	252	35
250	183	433	208	458	316	37
300	183	483	208	508	366	38
350	183	533	208	558	416	39
400	183	583	208	608	466	41
450	183	633	233	683	541	44
500	183	683	233	733	591	45
550	183	733	233	783	641	46
600	183	783	233	833	691	47
650	183	833	248	898	756	49
700	183	883	248	948	806	50
800	183	983	248	1048	906	53
1000	183	1183	258	1258	1116	59
1200	183	1383	283	1483	1341	65
1500	183	1683	308	1808	1666	74

Stroke 行程(mm)	BD					
	X		X(1)		L	m(kg)
	MIN	MAX	MIN	MAX		
50	42	92	52	102	101	32
100	42	142	52	152	151	33
150	42	192	52	202	202	34
200	42	242	52	252	252	35
250	42	292	67	317	316	37
300	42	342	67	367	366	38
350	42	392	67	417	416	39
400	42	442	67	467	466	41
450	42	492	92	542	541	44
500	42	542	92	592	591	45
550	42	592	92	642	641	46
600	42	642	92	692	691	47
650	42	692	107	757	756	49
700	42	742	107	807	806	50
800	42	842	107	907	906	53
1000	42	1042	117	1117	1116	59
1200	42	1242	142	1342	1341	65
1500	42	1542	167	1667	1666	74



Stroke 行程(mm)	RU					
	X		X(1)		L	m(kg)
	MIN	MAX	MIN	MAX		
50	183	233	193	243	130	36
100	183	283	193	293	180	37
150	183	333	193	343	232	38
200	183	383	193	393	282	40
250	183	433	208	458	346	42
300	183	483	208	508	396	43
350	183	533	208	558	446	44
400	183	583	208	608	496	46
450	183	633	233	683	571	48
500	183	683	233	733	621	49
550	183	733	233	783	671	50
600	183	783	233	833	721	52
650	183	833	248	898	786	54
700	183	883	248	948	836	56
800	183	983	248	1048	936	58
1000	183	1183	258	1258	1146	64
1200	183	1383	283	1483	1371	69
1500	183	1683	308	1808	1707	78

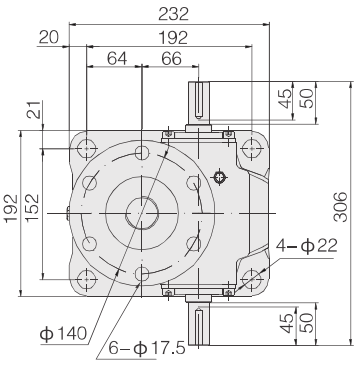
Stroke 行程(mm)	RD					
	X		X(1)		L	m(kg)
	MIN	MAX	MIN	MAX		
50	42	92	52	102	130	36
100	42	142	52	152	180	37
150	42	192	52	202	232	38
200	42	242	52	252	282	40
250	42	292	67	317	346	42
300	42	342	67	367	396	43
350	42	392	67	417	446	44
400	42	442	67	467	496	46
450	42	492	92	542	571	48
500	42	542	92	592	621	49
550	42	592	92	642	671	50
600	42	642	92	692	721	52
650	42	692	107	757	786	54
700	42	742	107	807	836	56
800	42	842	107	907	936	58
1000	42	1042	117	1117	1146	64
1200	42	1242	142	1342	1371	69
1500	42	1542	167	1667	1707	78

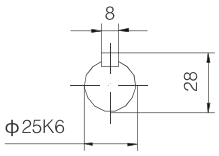


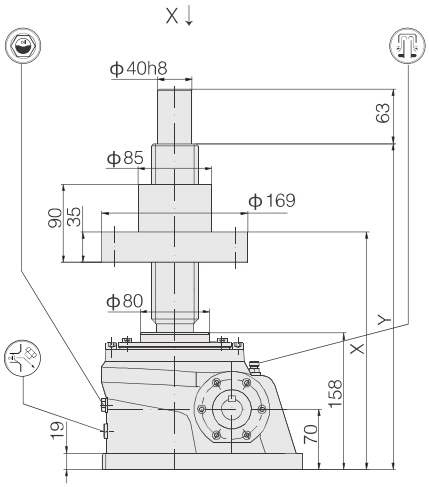
Note: X(1) dimension with dust-proof cover.

⚠ 注：X(1) 加防尘罩尺寸。

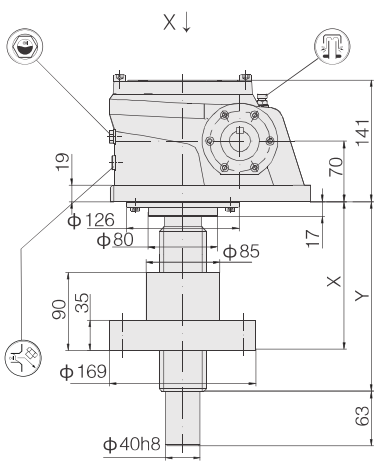
X Direction / X向







J150 NU

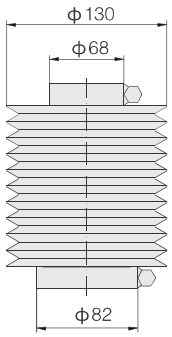


J150 ND

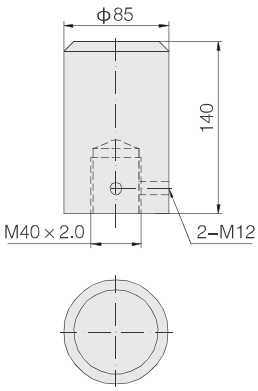
Stroke 行程(mm)	NU			
	X		Y	m(kg)
	MIN	MAX		
50	204	254	319	39
100	204	304	369	40
150	204	354	419	41
200	204	404	469	42
250	204	454	519	42.5
300	204	504	569	43
350	204	554	619	44
400	204	604	669	45
450	204	654	719	45.5
500	204	704	769	46
550	204	754	819	47
600	204	804	869	48
650	204	854	919	49
700	204	904	969	50
800	204	1004	1069	51
1000	204	1204	1269	54
1200	204	1404	1469	57
1500	204	1704	1769	61

Stroke 行程(mm)	ND			
	X		Y	m(kg)
	MIN	MAX		
50	119	169	179	39
100	119	219	229	40
150	119	269	279	41
200	119	319	329	42
250	119	369	379	42.5
300	119	419	429	43
350	119	469	479	44
400	119	519	529	45
450	119	569	579	45.5
500	119	619	629	46
550	119	669	679	47
600	119	719	729	48
650	119	769	779	49
700	119	819	829	50
800	119	919	929	51
1000	119	1119	1129	54
1200	119	1319	1329	57
1500	119	1619	1629	61

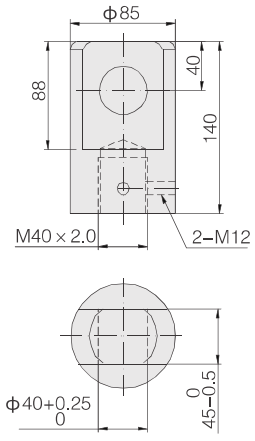
Accessories / 附件



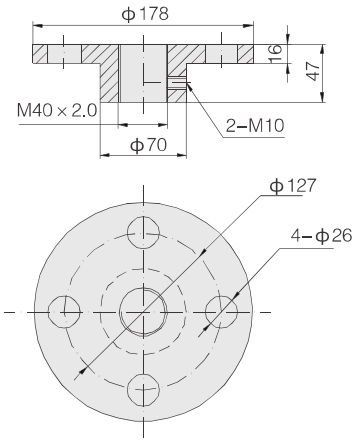
UJ11



UT12



UT11



UF11

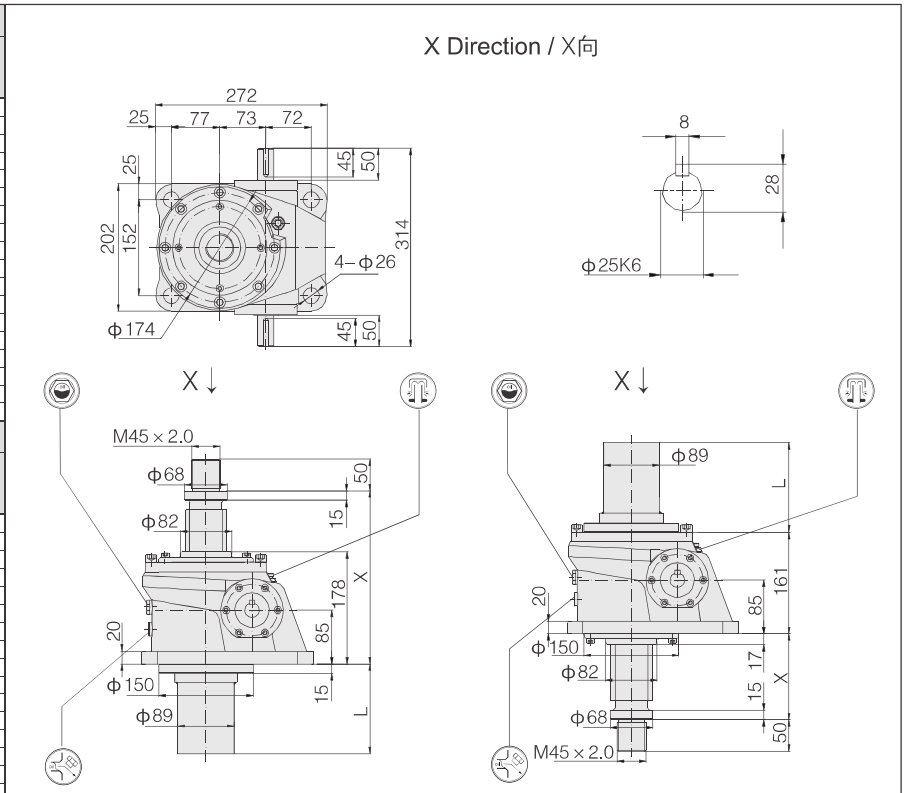
10 Outline Dimension:

10 外形尺寸：

J200

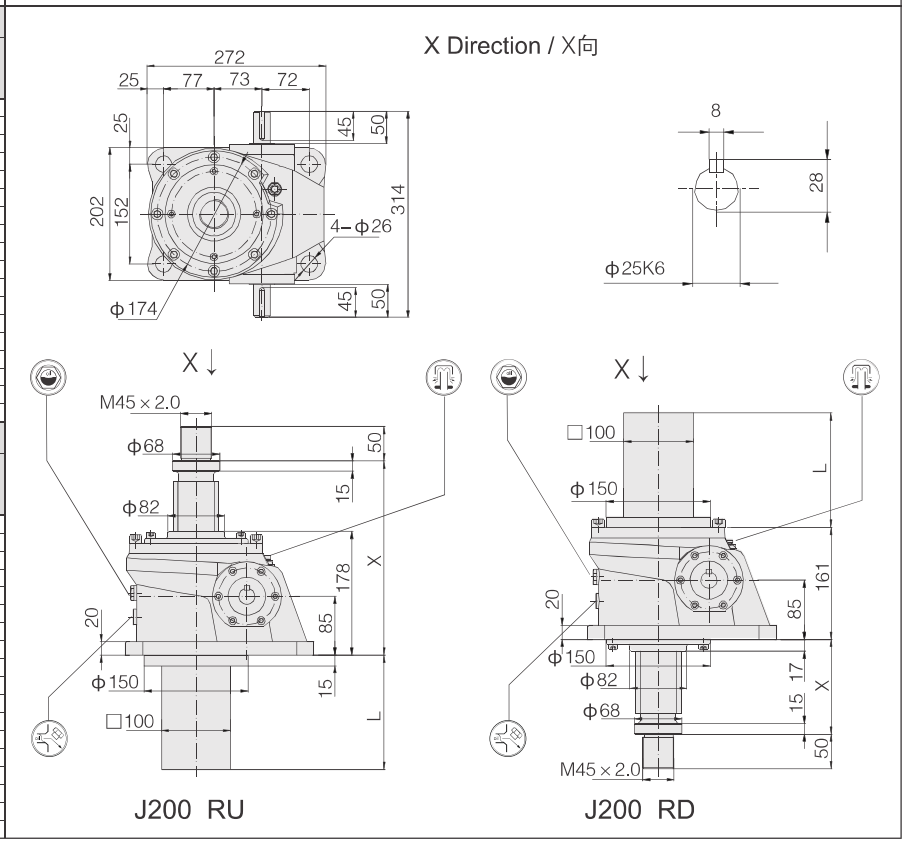
Stroke 行程(mm)	BU					
	X		X(1)		L	m(kg)
	MIN	MAX	MIN	MAX		
100	203	303	213	313	151	42
150	203	353	213	363	202	43
200	203	403	213	413	252	45
250	203	453	228	478	316	47
300	203	503	228	528	366	49
350	203	553	228	578	416	51
400	203	603	228	628	466	53
450	203	653	253	703	541	55
500	203	703	253	753	591	57
550	203	753	253	803	641	59
600	203	803	253	853	691	60
650	203	853	268	918	756	62
700	203	903	268	968	806	64
800	203	1003	268	1068	906	67
1000	203	1203	278	1278	1116	74
1200	203	1403	303	1503	1341	81
1500	203	1703	328	1828	1666	92
2000	203	2203	373	2373	2211	109

Stroke 行程(mm)	BD					
	X		X(1)		L	m(kg)
	MIN	MAX	MIN	MAX		
100	42	142	52	152	151	42
150	42	192	52	202	202	43
200	42	242	52	252	252	45
250	42	292	67	317	316	47
300	42	342	67	367	366	49
350	42	392	67	417	416	51
400	42	442	67	467	466	53
450	42	492	92	542	541	55
500	42	542	92	592	591	57
550	42	592	92	642	641	59
600	42	642	92	692	691	60
650	42	692	107	757	756	62
700	42	742	107	807	806	64
800	42	842	107	907	906	67
1000	42	1042	117	1117	1116	74
1200	42	1242	142	1342	1341	81
1500	42	1542	167	1667	1666	92
2000	42	2042	212	2212	2211	109



Stroke 行程(mm)	RU					
	X		X(1)		L	m(kg)
	MIN	MAX	MIN	MAX		
100	203	303	213	313	170	51
150	203	353	213	363	220	53
200	203	403	213	413	270	55
250	203	453	228	478	335	57
300	203	503	228	528	385	58
350	203	553	228	578	435	60
400	203	603	228	628	485	62
450	203	653	253	703	560	64
500	203	703	253	753	610	66
550	203	753	253	803	660	68
600	203	803	253	853	710	70
650	203	853	268	918	775	72
700	203	903	268	968	825	74
800	203	1003	268	1068	925	76
1000	203	1203	278	1278	1135	83
1200	203	1403	303	1503	1360	90
1500	203	1703	328	1828	1686	100
2000	203	2203	373	2373	2231	118

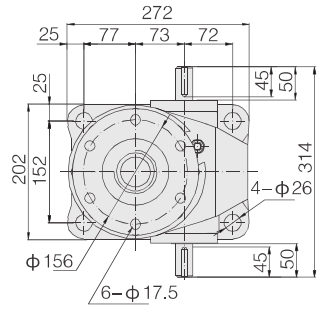
Stroke 行程(mm)	RD					
	X		X(1)		L	m(kg)
	MIN	MAX	MIN	MAX		
100	42	142	52	152	170	51
150	42	192	52	202	220	53
200	42	242	52	252	270	55
250	42	292	67	317	335	57
300	42	342	67	367	385	58
350	42	392	67	417	435	60
400	42	442	67	467	485	62
450	42	492	92	542	560	64
500	42	542	92	592	610	66
550	42	592	92	642	660	68
600	42	642	92	692	710	70
650	42	692	107	757	775	72
700	42	742	107	807	825	74
800	42	842	107	907	925	76
1000	42	1042	117	1117	1135	83
1200	42	1242	142	1342	1360	90
1500	42	1542	167	1667	1686	100
2000	42	2042	212	2212	2231	118

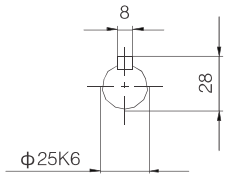


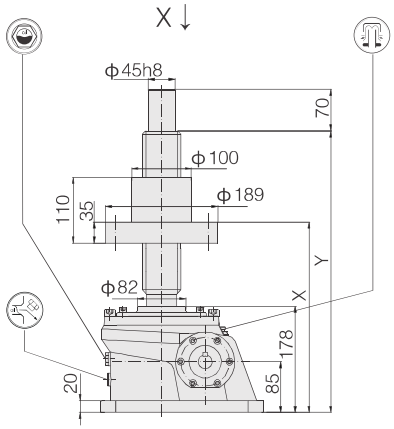
Note: X(1) dimension with dust-proof cover.

⚠ 注：X(1) 加防尘罩尺寸。

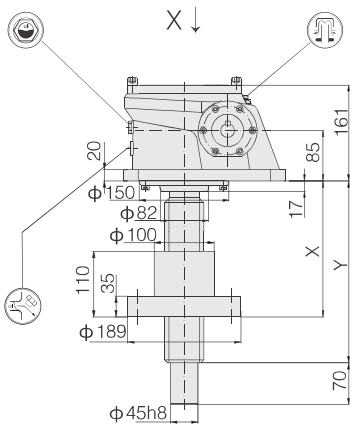
X Direction / X向







J200 NU

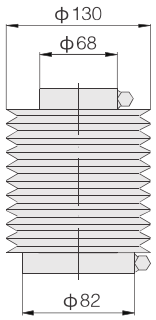


J200 ND

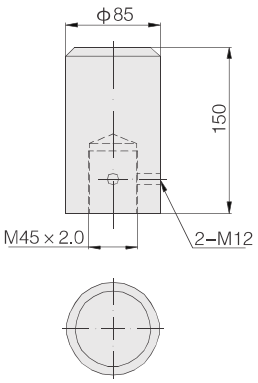
Stroke 行程(mm)	NU			
	X		Y	m(kg)
	MIN	MAX		
100	232	332	417	56
150	232	382	467	57
200	232	432	517	58
250	232	482	567	59
300	232	532	617	60
350	232	582	667	61
400	232	632	717	62
450	232	682	767	63
500	232	732	817	64
550	232	782	867	65
600	232	832	917	66
650	232	882	967	67
700	232	932	1017	68
800	232	1032	1117	71
1000	232	1232	1317	75
1200	232	1432	1517	79
1500	232	1732	1817	85
2000	232	2232	2317	96

Stroke 行程(mm)	ND			
	X		Y	m(kg)
	MIN	MAX		
100	137	237	247	56
150	137	287	297	57
200	137	337	347	58
250	137	387	397	59
300	137	437	447	60
350	137	487	497	61
400	137	537	547	62
450	137	587	597	63
500	137	637	647	64
550	137	687	697	65
600	137	737	747	66
650	137	787	797	67
700	137	837	847	68
800	137	937	947	71
1000	137	1137	1147	75
1200	137	1337	1347	79
1500	137	1637	1647	85
2000	137	2137	2147	96

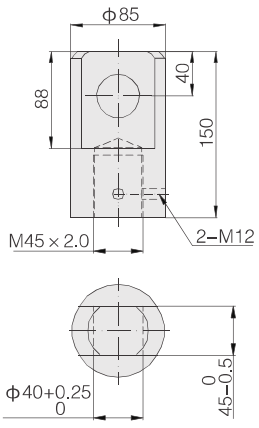
Accessories / 附件



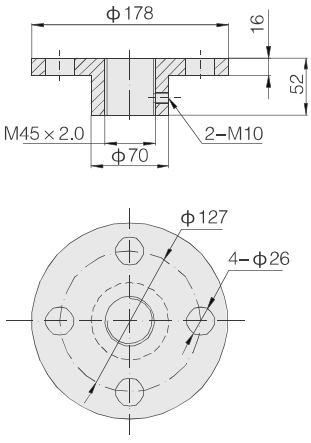
UJ11



UT12



UT11



UF11

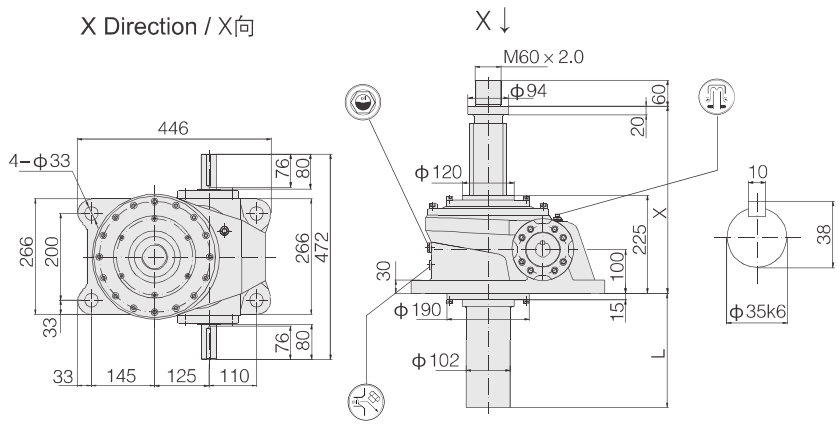
10 Outline Dimension:

10 外形尺寸：

J300

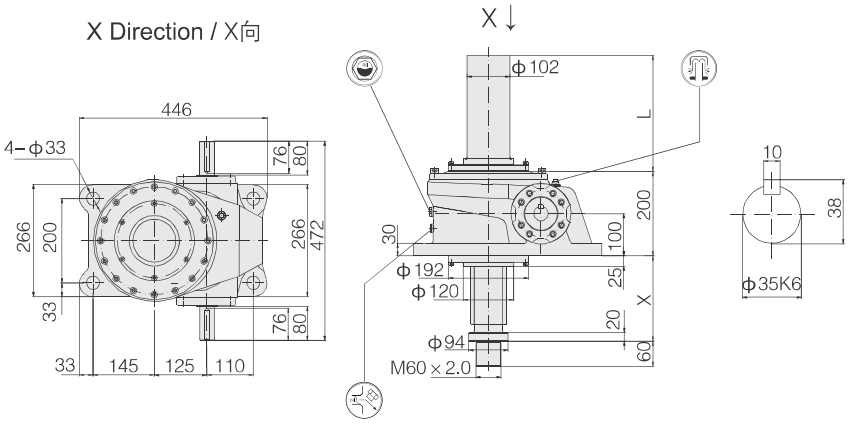
Stroke 行程(mm)	BU					
	X		X(1)		L	m(kg)
	MIN	MAX	MIN	MAX		
100	1255	355	265	365	160	118
150	255	405	265	415	210	120
200	255	455	265	465	260	123
250	255	505	280	530	325	126
300	255	555	280	580	375	128
350	255	605	280	630	425	131
400	255	655	280	680	475	134
450	255	705	295	745	540	137
500	255	755	295	795	590	139
550	255	805	295	845	640	142
600	255	855	295	895	690	145
650	255	905	310	960	755	148
700	255	955	310	1010	805	151
800	255	1055	310	1110	905	155
1000	255	1255	330	1330	1125	167
1200	255	1455	340	1540	1335	177
1500	255	1755	365	1865	1660	194
2000	255	2255	400	2400	2195	221

J300 BU

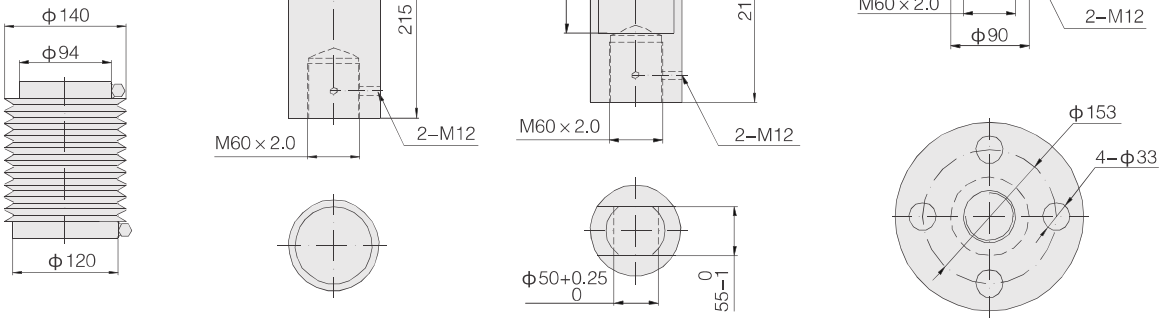


Stroke 行程(mm)	BD					
	X		X(1)		L	m(kg)
	MIN	MAX	MIN	MAX		
100	55	155	65	165	160	118
150	55	205	65	215	210	120
200	55	255	65	265	260	123
250	55	305	80	330	325	126
300	55	355	80	380	375	128
350	55	405	80	430	425	131
400	55	455	80	480	475	134
450	55	505	95	545	540	137
500	55	555	95	595	590	139
550	55	605	95	645	640	142
600	55	655	95	695	690	145
650	55	705	110	760	755	148
700	55	755	110	810	805	151
800	55	855	110	910	905	155
1000	55	1055	130	1130	1125	167
1200	55	1255	140	1340	1335	177
1500	55	1555	165	1665	1660	194
2000	55	2055	200	2200	2195	221

J300 BD



Accessories / 附件



UJ11 UT12 UT11 UF11

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

⚠ 注：X(1) 加防尘罩尺寸。

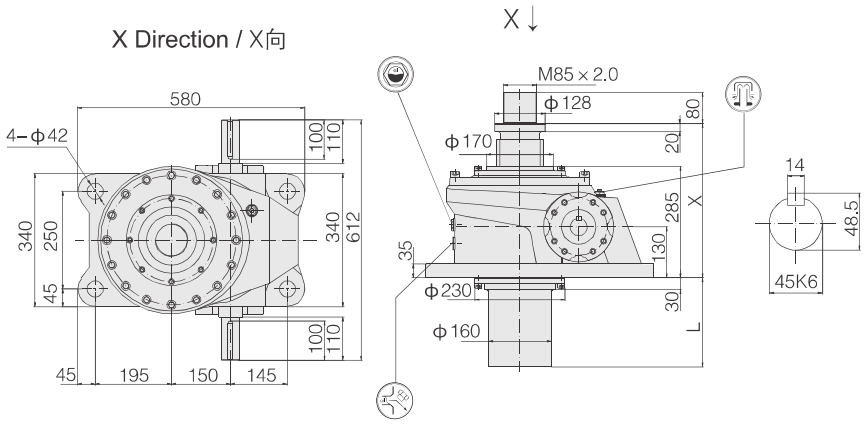
10 Outline Dimension:

10 外形尺寸：

J500

J500 BU

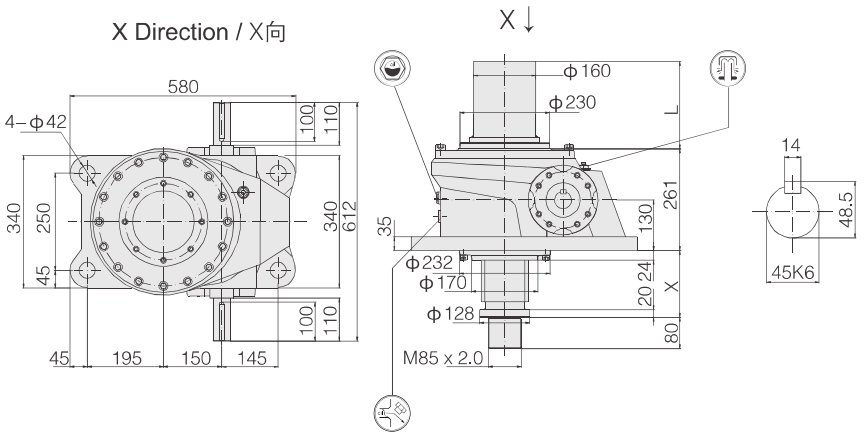
X Direction / X向



Stroke 行程(mm)	BU					
	X		X(1)		L	m(kg)
	MIN	MAX	MIN	MAX		
100	315	415	320	420	165	248
200	315	515	320	520	265	260
300	315	615	340	640	385	273
400	315	715	340	740	485	284
500	315	815	350	850	595	279
600	315	915	350	950	695	308
800	315	1115	365	1165	910	332
1000	315	1315	380	1380	1125	357
1200	315	1515	390	1590	1335	380
1500	315	1815	410	1910	1665	417
2000	315	2315	445	2445	2190	477

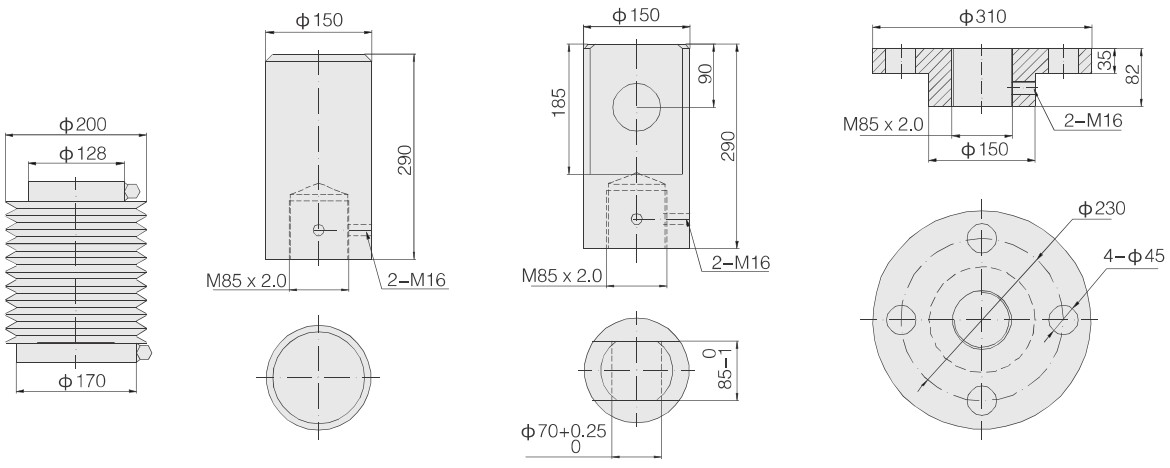
J500 BD

X Direction / X向



Stroke 行程(mm)	BD					
	X		X(1)		L	m(kg)
	MIN	MAX	MIN	MAX		
100	54	154	59	159	165	248
200	54	254	59	259	265	260
300	54	354	79	379	385	273
400	54	454	79	479	485	284
500	54	554	89	589	595	279
600	54	654	89	689	695	308
800	54	854	104	904	910	332
1000	54	1054	119	1119	1125	357
1200	54	1254	129	1329	1335	380
1500	54	1554	149	1649	1665	417
2000	54	2054	184	2184	2190	417

Accessories / 附件



UJ11 UT12 UT11 UF11

10 Outline Dimension:

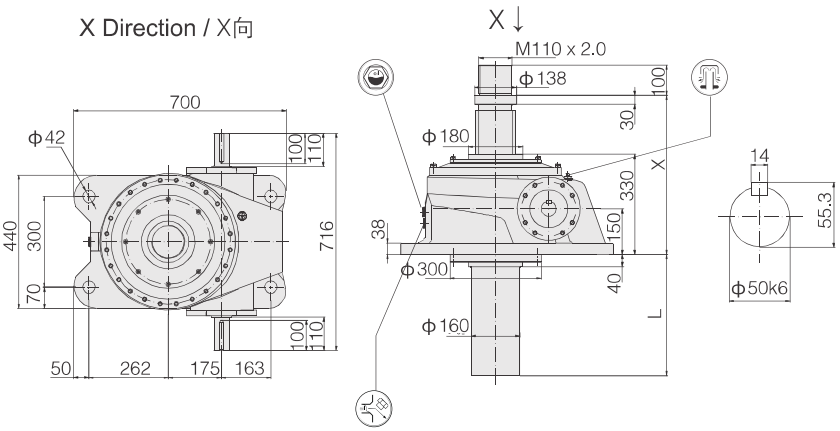
10 外形尺寸：

J750

Stroke 行程(mm)	BU					
	X		X(1)		L	m(kg)
	MIN	MAX	MIN	MAX		
100	370	470	380	480	165	370
200	370	570	380	580	265	384
300	370	670	395	695	385	401
400	370	770	395	795	485	415
500	370	870	410	910	595	431
600	370	970	410	1010	695	445
800	370	1170	425	1225	910	476
1000	370	1370	435	1435	1125	506
1200	370	1570	450	1650	1335	536
1500	370	1870	465	1965	1665	581
2000	370	2370	500	2500	2190	657

J750 BU

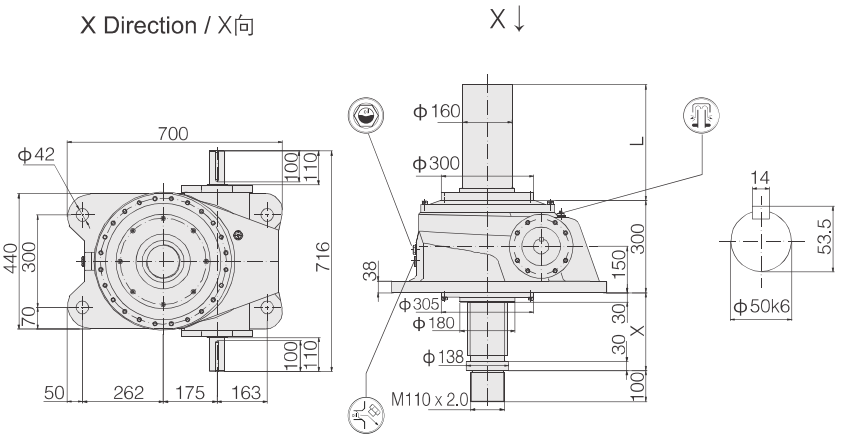
X Direction / X向



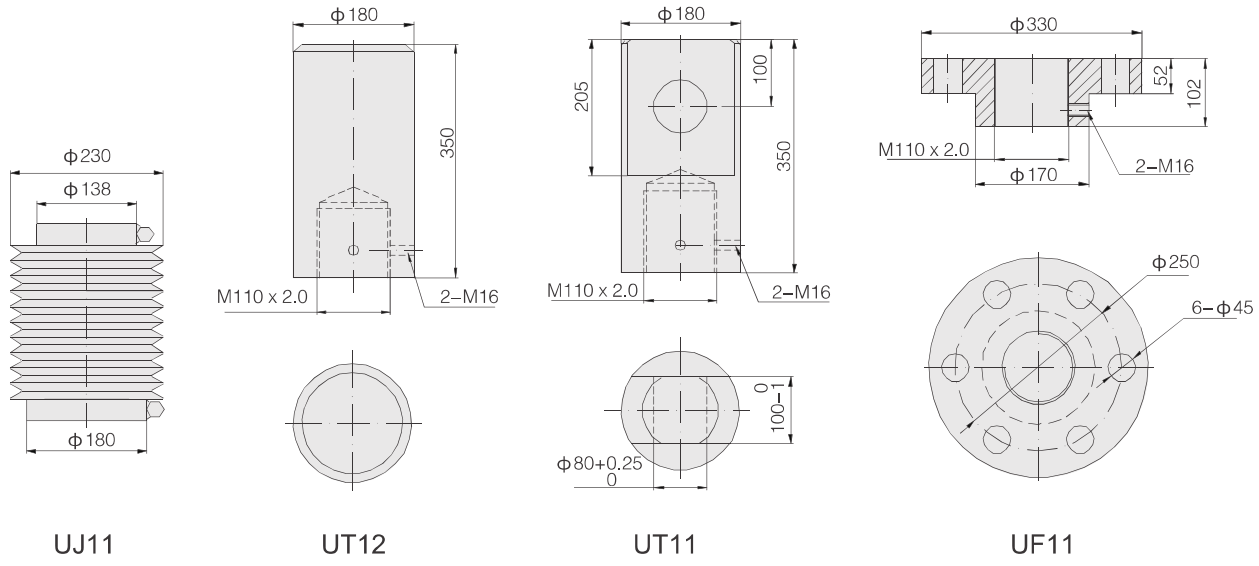
Stroke 行程(mm)	BD					
	X		X(1)		L	m(kg)
	MIN	MAX	MIN	MAX		
100	70	170	80	180	165	370
200	70	270	80	280	265	384
300	70	370	95	395	385	401
400	70	470	95	495	485	415
500	70	570	110	610	595	431
600	70	670	110	710	695	445
800	70	870	125	925	910	476
1000	70	1070	135	1135	1125	506
1200	70	1270	150	1350	1335	536
1500	70	1570	165	1665	1665	581
2000	70	2070	200	2200	2190	657

J750 BD

X Direction / X向



Accessories / 附件



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

⚠ 注：X(1) 加防尘罩尺寸。

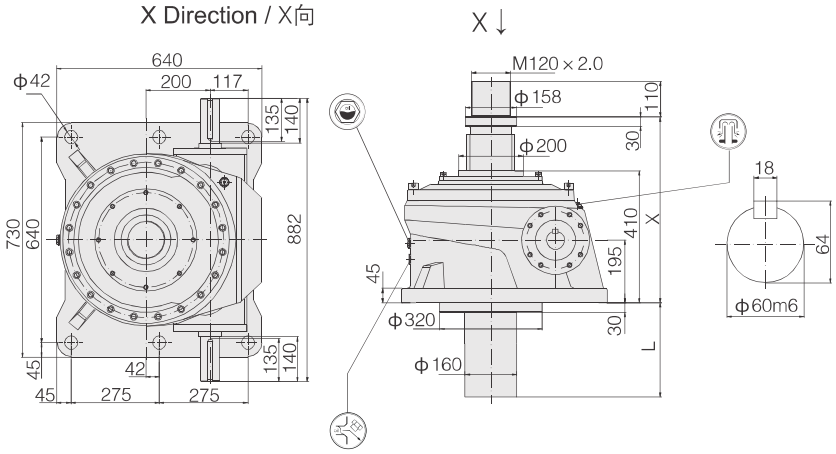
10 Outline Dimension:

10 外形尺寸：

J1000

J1000 BU

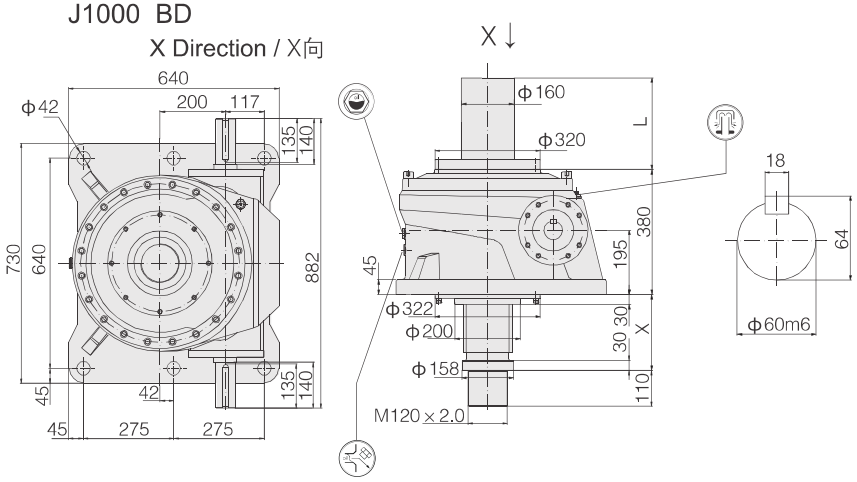
X Direction / X向



Stroke 行程(mm)	BU					
	X		X(1)		L	m(kg)
	MIN	MAX	MIN	MAX		
100	450	550	460	560	165	748
200	450	650	460	660	265	766
300	450	750	475	775	385	787
400	450	850	475	875	485	805
500	450	950	485	985	595	824
600	450	1050	485	1085	695	842
800	450	1250	500	1300	910	881
1000	450	1450	510	1510	1125	918
1200	450	1650	525	1725	1335	957
1500	450	1950	545	2045	1665	1014
2000	450	2450	575	2575	2190	1109

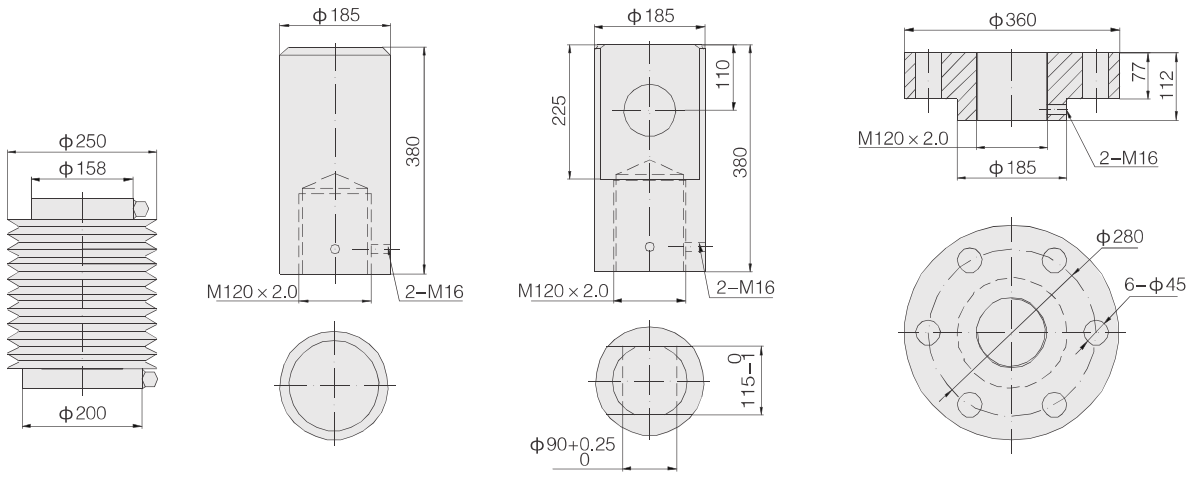
J1000 BD

X Direction / X向



Stroke 行程(mm)	BD					
	X		X(1)		L	m(kg)
	MIN	MAX	MIN	MAX		
100	70	170	80	180	165	748
200	70	270	80	280	265	766
300	70	370	95	395	385	787
400	70	470	95	495	485	805
500	70	570	105	605	595	824
600	70	670	105	705	695	842
800	70	870	120	920	910	881
1000	70	1070	130	1130	1125	918
1200	70	1270	145	1345	1335	957
1500	70	1570	165	1665	1665	1014
2000	70	2070	195	2195	2190	1109

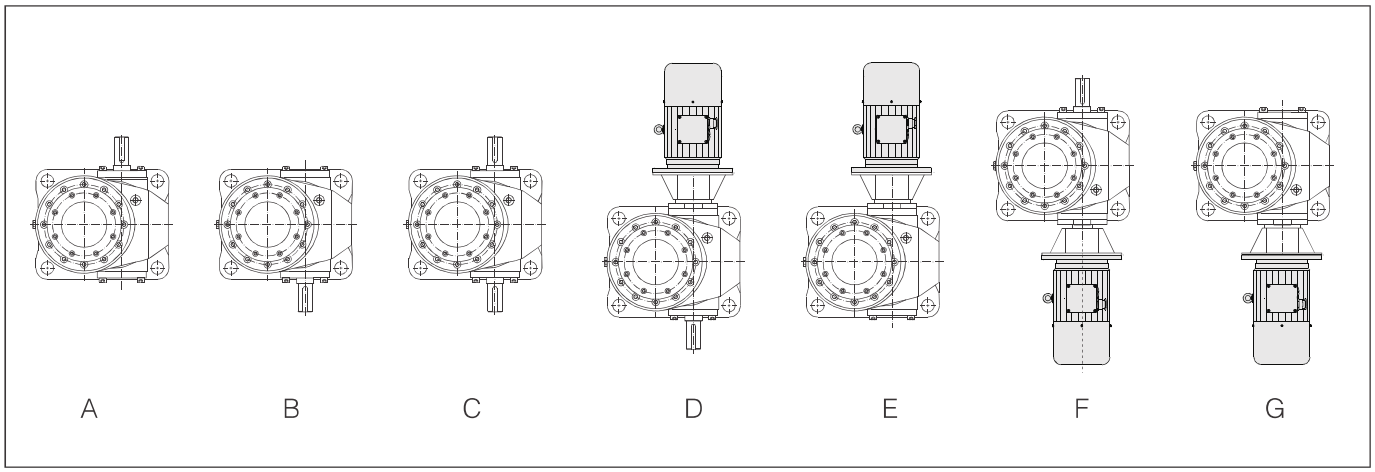
Accessories / 附件



UJ11　　UT12　　UT11　　UF11

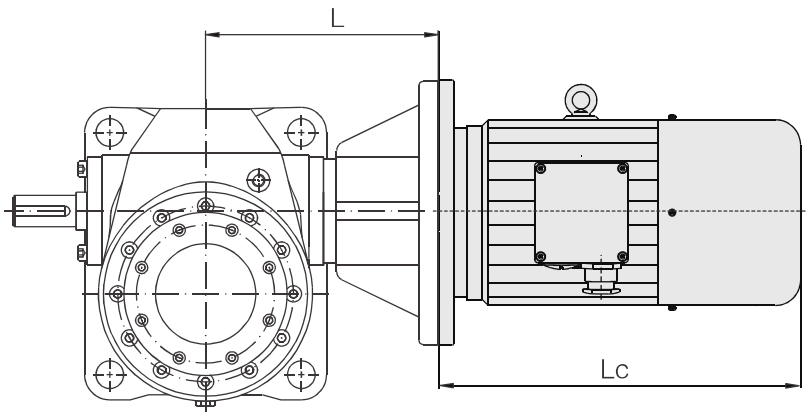
11 Input Modes:

11 输入方式：



12 Direct-linking Input:

12 直联输入：



Type / 型号	J010				J025						J050					
Power of motor 电机功率（kW）	0.12	0.18	0.25	0.37	0.12	0.18	0.25	0.37	0.55	0.75	0.25	0.37	0.55	0.75	1.1	1.5
Input flange type 电机法兰型号	AF63		AF71		AF63		AF71		AF80		AF71		AF80		AF90	
L（mm）	118		120		145						187					

Type / 型号	J100						J150						J200					
Power of motor 电机功率（kW）	0.37	0.55	0.75	1.1	1.5	2.2	0.55	0.75	1.1	1.5	2.2	3	0.75	1.1	1.5	2.2	3	4
Input flange type 电机法兰型号	AF71	AF80		AF90		AF112	AF80		AF90		AF112		AF80	AF90		AF112		
L（mm）	223						225						241					

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

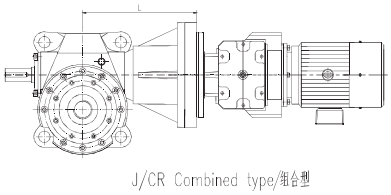
⚠ 注：1.电机功率的选用应符合传动能力表；
2.表中所列功率为4极普通电机功率。

13 Combined-type

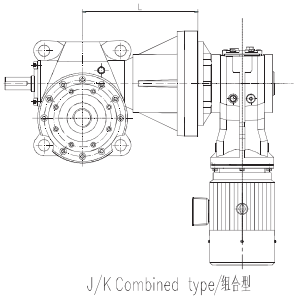
13.1 Dimensions of combined–type

13 组合型

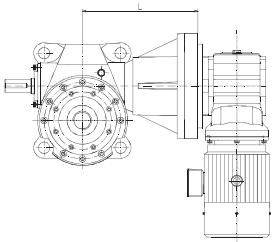
13.1组合型尺寸



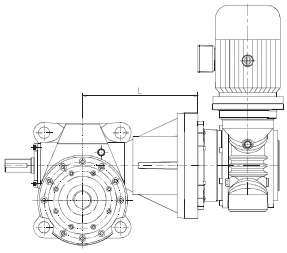
J/CR Combined type/组合型



J/K Combined type/组合型



J/S Combined type/组合型

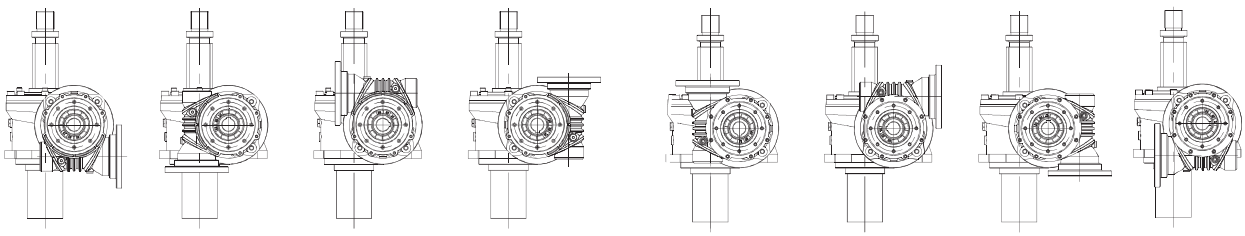


J/R Combined type/组合型

Type/型号	L
J025../C.01..	145
J025../R050..	145
J050../CRL37..	187
J050../KF37..	187
J050../S203..	187
J050../R063..	187
J100../CRL37..	223
J100../KF37..	223
J100../S203..	223
J100../CR47..	223
J100../KF47..	223
J100../S204..	223
J100../R063..	223
J100../R080..	223
J150../CRL37..	225
J150../KF37..	225
J150../S203..	225
J150../CRL47	225
J150../KF47..	225
J150../S204..	225
J150../R063..	225
J150../R080..	225
J200../CRL37..	241
J200../KF37..	241
J200../S203..	241
J200../CRL47..	244
J200../KF47..	241
J200../S204..	241
J200../CRL67..	248
J200../KF67..	248
J200../S206..	248
J200../R080..	241
J200../R100..	248

13.2 Arrangement of combined–type

13.2 组合布置形式



ZR01 ZR02 ZR03 ZR04 ZR05 ZR06 ZR07 ZR08

14 Attachment:

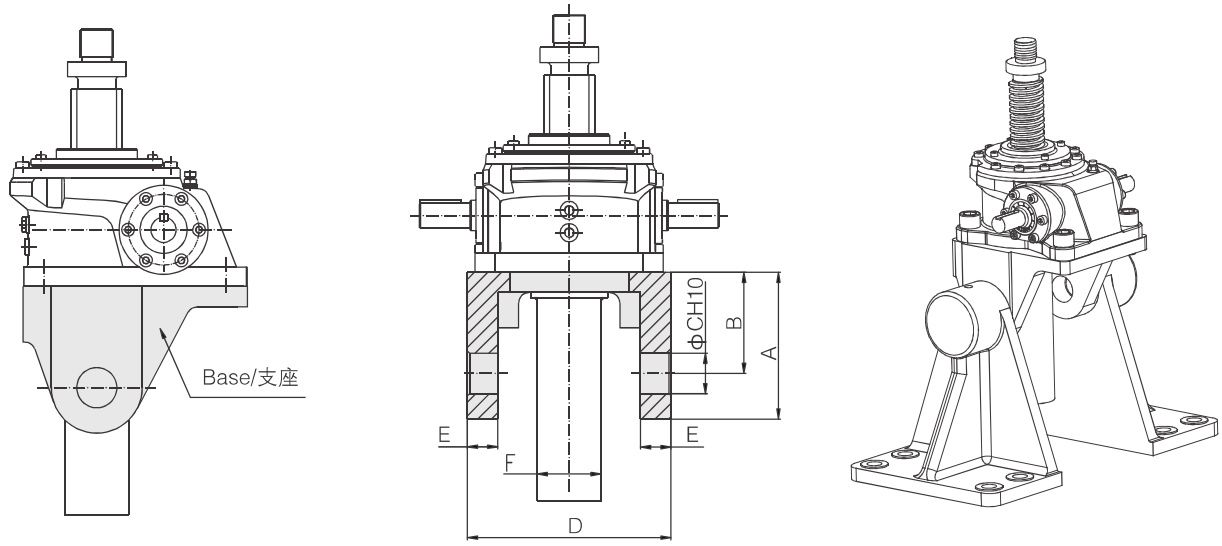
14.1 Base(code UB21)

Bases are widely used in switching and inclining devices.

14 附件：

14.1 支座（附件代号 UB21）

支座安装广泛应用于开关装置、倾斜装置。如图：



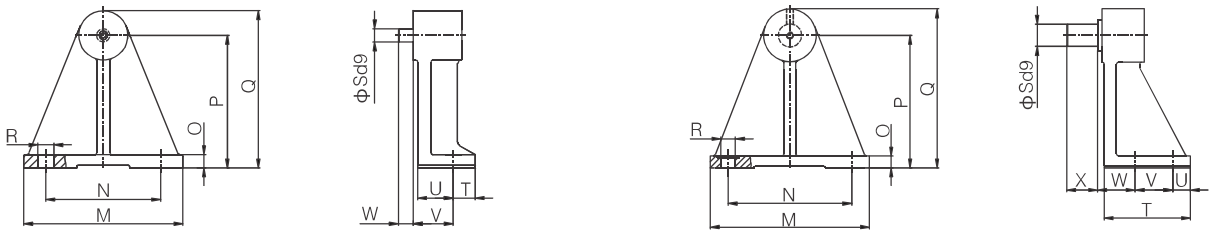
Type / 型号	A	B	C	D	E	F
J010	75	60	15	86	15	40
J025	100	75	20	115	20	50
J050	105	75	25	158	25	60
J100	145	100	40	201	30	80
J150	145	105	50	224	44	80
J200	173	110	63	244	50	100

14.2 Support legs(code UB22)

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

14.2 支架（附件代号 UB22）

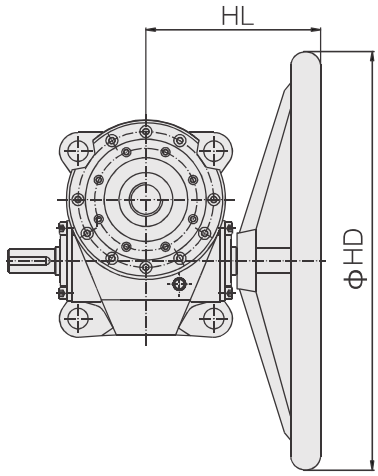
支座与支架配合，实现多方位升降。



Type / 型号	M	N	O	P	Q	R	S	T	U	V	W	X
J010	180	130	15	150	178	2–Φ17.5	15	25	40	45	17	–
J025	180	130	15	150	178	2–Φ17.5	20	25	40	45	30	–
J050	200	150	15	170	200	2–Φ17.5	25	25	40	45	35	–
J100	280	220	22	240	290	4–Φ22	40	159	30	70	70	55
J150	360	280	27	300	360	4–Φ33	50	195	40	85	85	70
J200	400	320	30	380	450	4–Φ33	63	210	40	90	90	65

14.3 Handwheel(code UN08 ~ UN45)

(1) The manual torque=Required input torque(T)/Radius of handwheel (ΦHD/2)



14.3 手轮盘（附件代号 UN08 ~ UN45）

（1）手动操作扭矩=所需输入扭矩(T）/手轮操作盘半径（ΦHD/2）

(2) Dimensions: (mm)

(2) 尺寸表：

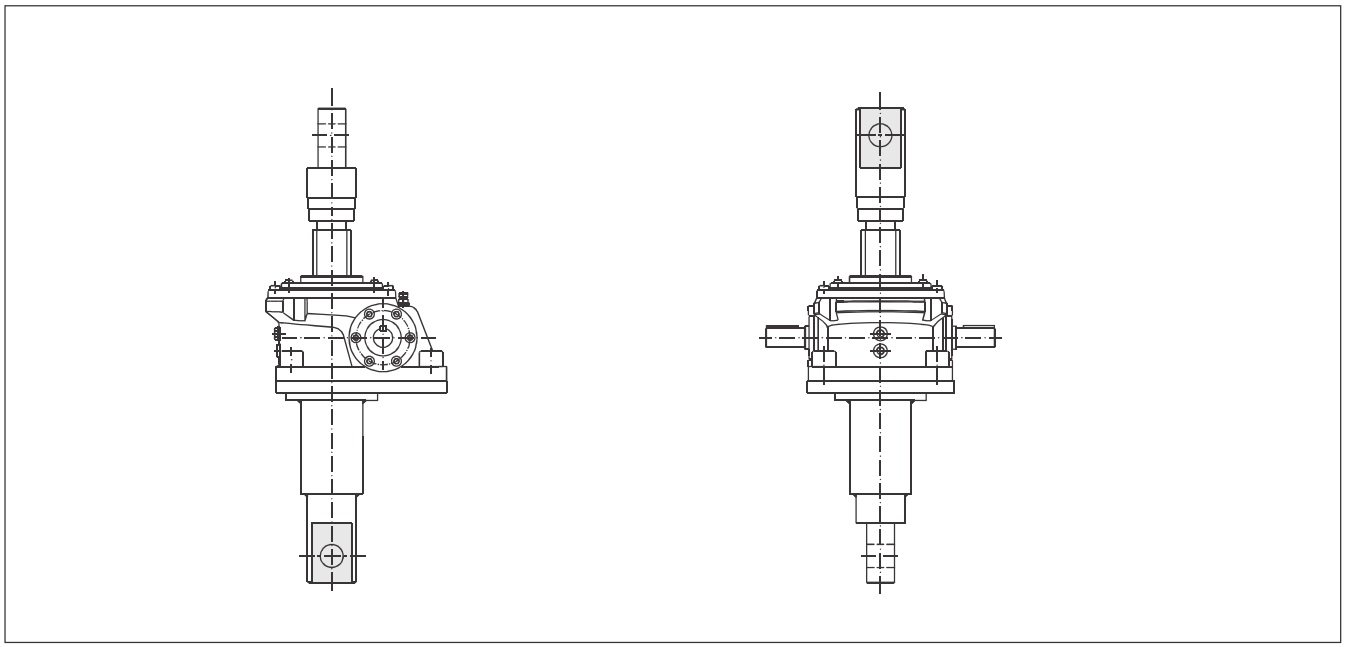
Code/附件代号 / Type/型号	UN08		UN10		UN20		UN28		UN45	
	HD	HL	HD	HL	HD	HL	HD	HL	HD	HL
J010	80	72	100	85	–	–	–	–	–	–
J025	–	–	100	90	200	100	280	114	–	–
J050	–	–	–	–	200	111	280	129	–	–
J100	–	–	–	–	–	–	280	129	450	145
J150	–	–	–	–	–	–	–	–	450	145
J200	–	–	–	–	–	–	–	–	450	162

14.4 Torque–arm mounted(Please consult)

Applicable to opening and reversing devices.

14.4 扭力臂安装（敬请垂询）

适用于开闭装置、反转装置。



14.5 Oil

Oil amount reference table:

Oil Amount Reference Table / 油量参照表 Unit/单位:(L)										
Assembly Position 安装方位 \ Type/型号	000#Extreme Pressure Grease/000#极压润滑脂					VG220（Worm Gear Oil / 蜗轮蜗杆油）				
	J010	J025	J050	J100	J150	J200	J300	J500	J750	J1000
D1、D3	0.1	0.12	0.15	0.22	0.25	0.6	2.5	5.5	9.5	14
D2	0.1	0.12	0.15	0.22	0.25	0.5	2	4.5	7.5	8

Note: When ambient temperature is –20℃ ~ +40℃,

1.J010–J150 000# Extreme lubricant has been added when delivery,accessory code is V00;

2.J200–J1000 lubricant brand is VG220(ISO viscosity class),accessory code is V22;

3.Elevator operation process screw (nut) need to grease;

(1) When ambient temperature is lower than –10℃, synthetic oil should be used;

(2) To ensure lifespan of the product,we recommend synthetic oil ;

(3) When ambient temperature exceeds the above range,please consult BONENG.

14.5 润滑油

油量参照表：

⚠ 注：在环境温度–20℃ ~ +40℃时，

1.J010–J150出厂已添加000#极压润滑脂；附件代号V00；

2.J200–J1000 润滑油牌号为VG220（ISO粘度等级），附件代号为V22；

3.升降机运行过程中丝杆（螺母）处需涂抹润滑脂；

(1)当使用环境温度低于–10℃时必须使用合成油；

(2)为确保产品的使用寿命，推荐使用合成油；

(3)使用环境温度超出上述范围时，请向 BONENG 咨询。

14.6 For details about motor accessories, see motor slection.

14.6 电机附件详见电机部分。

14.7 Colour of standard allocation J010–J1000: (RAL5015) Colour of Non–standard allocation can be customized according to customer requirements.

14.7 整机标配颜色J010–J1000: (RAL5015)

非标配颜色可按客户要求定制。

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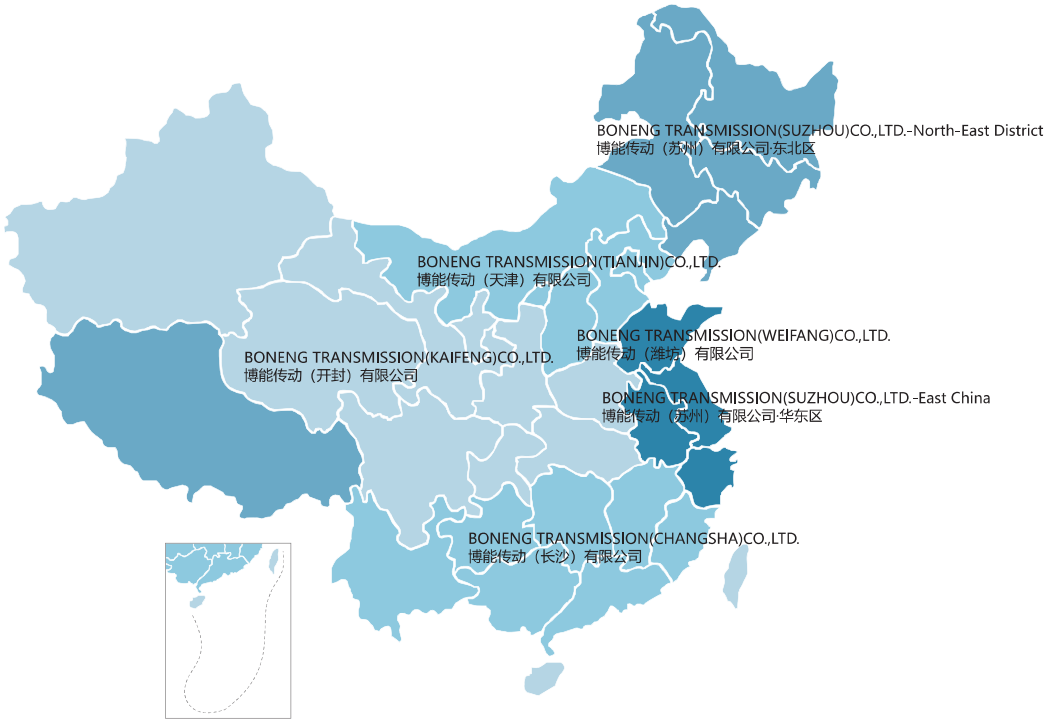

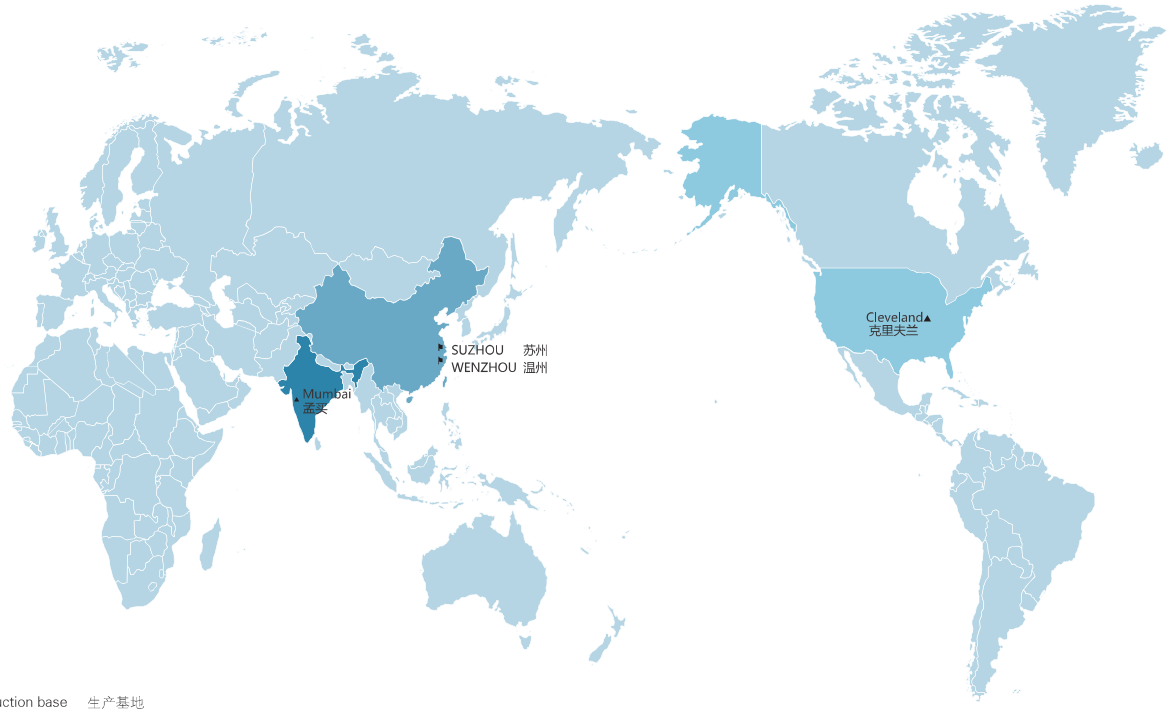

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Along with the technology advanced et.,the product of the manual of Boneng will be changed,please forgive.

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!

C05.0007

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