

## 一、概述 Profile

SWL 系列蜗轮丝杆升降机广泛应用于机械、冶金、建筑、水利设备等行业，具有起升、下降及借助辅件推进、翻转及各种高度位置调整等诸多功能。

SWL 蜗轮丝杆升降机是一种基础起重部件，具有结构紧凑、体积小、重量轻、动力源广泛、无噪音、安装方便、使用灵活、功能多、配套形式多、可靠性高、使用寿命长等许多优点。可以单台或组合使用，能按一定程序准确地控制调整提升或推进的高度，可以用电动机或其他动力直接带动，也可以手动。它有不同的结构型式和装配型式，且提升高度可按用户的要求定制。

SWL series worm wheel screw elevator is widely applied in industries such as machinery, metallurgy, construction, and hydraulic equipment, and has many functions such as lifting and pushing and turning with the help of accessories or adjusting height and position. This series worm screw elevator is one model of basic hoisting parts and has numerous features of compact structure, small volume, light weight, wide drive sources, low noise, high reliability, and long lifespan. In addition, they are easy to be mounted, flexible in use and enjoy multiple functions. This series, driven by motor or other power or manually, can be used both single and combined with others to accurately control the adjustment of height of lifting or pushing by certain programs. For there are many structures and mounting positions, the lifting height can be adjusted to the customers' requirements.

## 二、型式、规格及表示方法

### 1. 结构形式

- 1 型——丝杆作轴向移动
- 2 型——丝杆作旋转运动、螺母作轴向移动

### 2. 装配型式

- A 型——丝杆（或螺母）向上移动
- B 型——丝杆（或螺母）向下移动

### 3. 丝杆头部型式

1 型结构型式的丝杆头部分为 I 型（圆柱型）、II 型（法兰型）、III 型（螺纹型）、IV 型（扁头型）四种型式；

2 型结构型式的丝杆头部分为 I 型（圆柱型）、III 型（螺纹型）二种型式。

### 4. 传动比

普通速比（P）、慢速比（M）

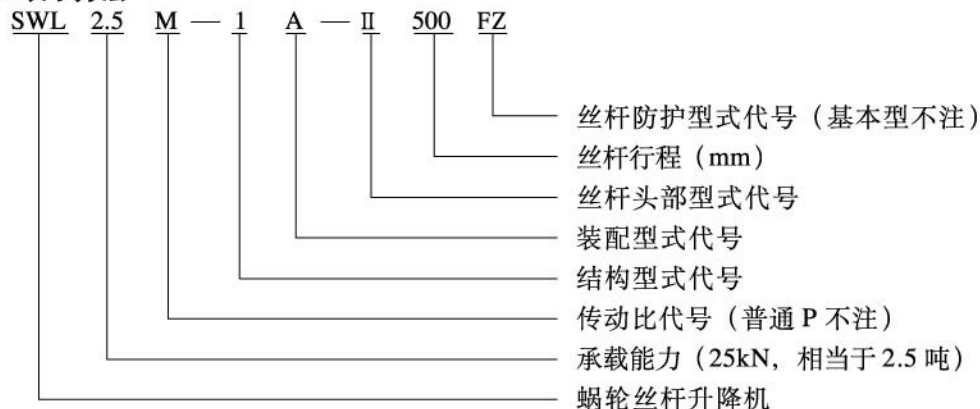
### 5. 提升承载能力

2.5, 5, 10, 15, 20, 25, 35 (× 10kN) 七种

### 6. 丝杆的防护

- 1 型结构有基本型、防旋转型（F）和带防护罩型（Z）；
- 2 型结构有基本型和带防护罩型（Z）。

### 7. 表示方法



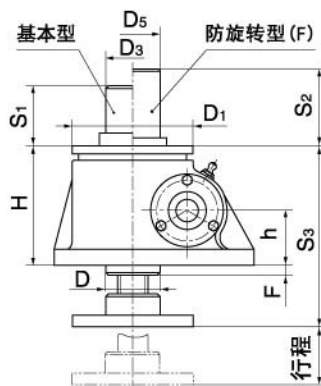
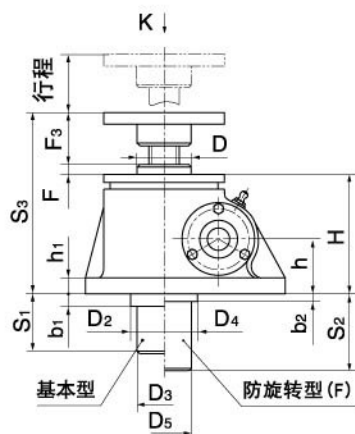
SWL

## 三、外形尺寸

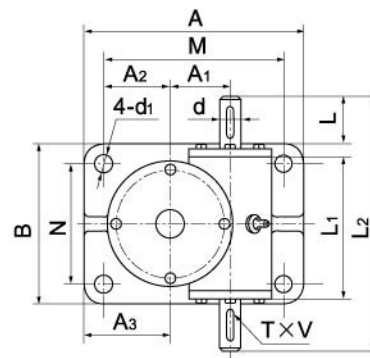
## 1 型结构型式

装配型式 A

装配型式 B



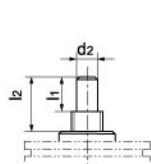
K向



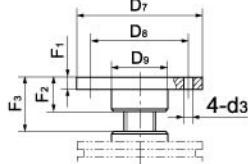
型 号	S <sub>1</sub>	S <sub>2</sub>	S <sub>3</sub>	A	B	M	N	H	h	h <sub>1</sub>	d(k6)	d <sub>1</sub>	键 GB1096	L	L <sub>1</sub>	L <sub>2</sub>	D	D <sub>1</sub>	D <sub>2</sub>	D <sub>3</sub>	D <sub>4</sub>	D <sub>5</sub>	A <sub>1</sub>	A <sub>2</sub>	A <sub>3</sub>	b <sub>1</sub>	b <sub>2</sub>	F
SWL2.5	行程+20	行程+110	150.5	165	120	135	90	97	45	12	16	14	5 × 5 × 32	-	110.5	190	48	98	70	45	98	60	45.2	50	65	20	20	8.5
SWL5		行程+110	193	212	155	168	114	130	61.5	18	20	17	6 × 6 × 45	-	132	228	65	122	90	60	110	70	56.2	58	80	25	18	12
SWL10 SWL15		行程+150	230	235	200	190	155	150	70	16	25	21	8 × 7 × 45	42	172	280	80	150	100	76	130	95	66.8	63.5	86	17	18	6.5
SWL20		行程+190	262	295	215	240	160	176	87	20	28	28	8 × 7 × 45	42	213.5	322	100	185	120	83	170	108	72.5	95	122.5	35	31	6
SWL25		行程+205	317	350	260	280	190	217	102	25	32	35	10 × 8 × 50	58	221	355	130	205	150	114	200	133	97	95	130	30	40	8
SWL35		行程+250	350	430	280	360	210	240	115	30	38	35	10 × 8 × 70	80	265	430	150	260	180	121	210	139	120	135	170	35	40	10

## 丝杆头部型式

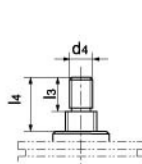
I 型



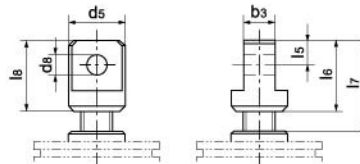
II 型



III 型

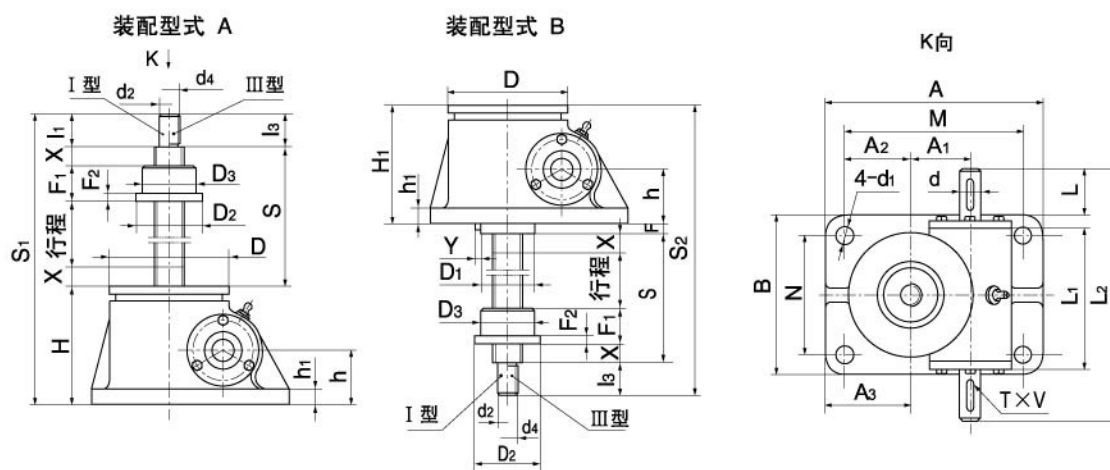


IV 型



型 号	丝杆头部型式																	
	I			II							III			IV				
	d <sub>2</sub> (k6)	l <sub>1</sub>	l <sub>2</sub>	D <sub>7</sub>	D <sub>8</sub>	D <sub>9</sub>	d <sub>3</sub>	F <sub>1</sub>	F <sub>2</sub>	F <sub>3</sub>	d <sub>4</sub>	l <sub>3</sub>	l <sub>4</sub>	d <sub>5</sub>	d <sub>6</sub> (H8)	b <sub>3</sub>	l <sub>5</sub>	l <sub>6</sub>
SWL2.5	20	30	45	98	75	40	14	12	30	45	M22 × 1.5-6g	30	45	50	25	30	25	50
SWL5	25	40	51	122	85	50	17	18	40	51	M30 × 2-6g	39	51	65	35	42	37.5	75
SWL10 SWL15	40	50	73.5	150	105	65	21	20	50	73.5	M42 × 2-6g	50	73.5	90	50	60	50	100
SWL20	50	60	80	185	140	90	26	20	60	80	M48 × 2-6g	60	80	110	60	75	60	120
SWL25	70	63	92	205	155	100	27	25	63	92	M70 × 3-6g	63	92	130	70	90	70	140
SWL35	80	80	100	260	200	130	33	30	80	100	M80 × 3-6g	80	100	150	80	105	80	160

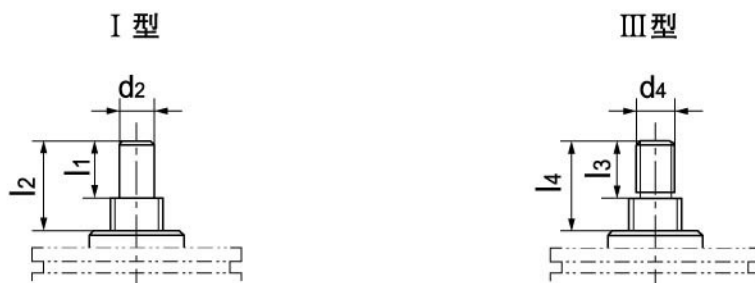
## 2 型结构型式



型 号	S	S <sub>1</sub>	S <sub>2</sub>	A	B	M	N	H	H <sub>1</sub>	h	h <sub>1</sub>	d(k6)	d <sub>1</sub>	键 GB1096	L	L <sub>1</sub>	L <sub>2</sub>	D	D <sub>1</sub>	A <sub>1</sub>	A <sub>2</sub>	A <sub>3</sub>	F	安全裕度 X	Y
SWL2.5	行程+85	行程+215	行程+238.5	165	120	135	90	100	97	45	12	16	14	5 × 5 × 32	-	110.5	190	98	68	45.2	50	65	26.5	20	3
SWL5	行程+100	行程+270	行程+300	212	155	168	114	131	131	61.5	14	20	17	6 × 6 × 32	-	132	228	122	83	56.2	58	80	30	20	3
SWL10	行程+125	行程+335	行程+359	235	200	190	155	160	150	70	16	25	21	8 × 7 × 45	42	172	280	150	110	66.8	63.5	86	34	25	1
SWL15																									
SWL20	行程+150	行程+404	行程+430	295	215	240	160	194	181	87	20	28	28	8 × 7 × 45	42	213.5	322	185	140	72.5	95	122.5	39	25	3
SWL25	行程+170	行程+476	行程+513	350	260	280	190	226	211	102	25	32	35	10 × 8 × 50	58	221	355	205	160	97	95	130	52	25	3
SWL35	行程+205	行程+535	行程+580	430	280	360	210	250	250	115	30	38	35	10 × 8 × 70	80	265	430	260	180	120	135	170	45	30	4

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## 丝杆头部型式及螺母尺寸



型 号	活动螺母尺寸				丝杆头部型式			
					I		III	
	D <sub>2</sub>	D <sub>3</sub> (h9)	F <sub>1</sub>	F <sub>2</sub>	d <sub>2</sub> (k6)	l <sub>1</sub>	d <sub>4</sub>	l <sub>3</sub>
SWL2.5	80	50	45	15	20	30	M22 × 1.5-6g	30
SWL5	87	70	60	18	25	40	M30 × 2-6g	39
SWL10	110	90	75	25	40	50	M42 × 2-6g	50
SWL15								
SWL20	120	90	100	30	50	60	M48 × 2-6g	60
SWL25	155	130	120	35	70	63	M70 × 3-6g	63
SWL35	190	150	145	35	80	80	M80 × 3-6g	80



## 四、升降机的主要性能参数表

型 号		SWL2.5	SWL5	SWL10	SWL15	SWL20	SWL25	SWL35
最大起升力（kN）		25	50	100	150	200	250	350
丝杆螺纹尺寸		Tr30 × 6	Tr40 × 7	Tr58 × 12		Tr65 × 12	Tr90 × 16	Tr100 × 20
最大拉力（kN）		25	50	99		166	250	350
蜗轮蜗杆传动比	P	1/6	1/8	3/23		1/8	3/32	3/32
	M	1/24	1/24	1/24		1/24	1/32	1/32
蜗杆每转行程（mm）	P	1.0	0.875	1.565		1.56	1.5	1.875
	M	0.250	0.292	0.5		0.5	0.5	0.625
拉力负荷时丝杆的最大伸长（mm）		1500	2000	2500		3000	3500	4000
最大压力负荷时的	丝杆头部无导向	250	385	500	400	490	850	820
最大提升高度（mm）	丝杆头部导向	400	770	1000	800	980	1700	1640
满载时蜗杆扭矩（N·m）	P	18	39.5	119	179	240	366	464
	M	8.86	19.8	60	90	122	217	253
效率（%）	P	22	23	20.5		19.5	16	18
	M	11	11.5	13		12.8	9	11
功率（kw）		P=T × n/9550    { T:扭矩（N·m）； n:转速（r/min） }						
不加行程的重量（kg）		7.3	16.2	25		36	70.5	87
丝杆每 100mm 的重量（kg）		0.45	0.82	1.67		2.15	4.15	5.20
润滑剂		合成钙钠基润滑脂 ZGN-1 或 ZGN-2（-20℃ ~ +100℃）						
润滑脂量（kg）		0.1	0.3	0.5		0.75	1.1	1.9

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## 五、提升力和提升速度表

型 号	提升力 (kN)	提升速度 m/min (普通)	蜗杆转速 r/min	提升速度 m/min (慢速)	蜗杆转速 r/min	型 号	提升力 (kN)	提升速度 r/min (普通)	蜗杆转速 r/min	提升速度 r/min (慢速)	蜗杆转速 r/min
SWL2.5	25			0.0125	50	SWL20	200	0.15	100	0.10	200
	20			0.15	600		160	0.15	100	0.15	300
	15			0.188	750		120	0.30	200	0.15	300
	10			0.25	1000		100	0.30	200	0.25	500
	5			0.45	1800		75	0.45	300	0.375	750
SWL5	50	0.044	50	0.0146	50	SWL25	50	0.75	500	0.50	1000
	40	0.264	300	0.175	600		25	1.50	1000	0.90	1800
	30	0.264	300	0.219	750		250	0.075	50	0.025	50
	20	0.526	600	0.292	1000		200	0.15	100	0.10	200
	10	0.876	1000	0.525	1800		160	0.15	100	0.15	300
SWL10	5	1.575	1800	0.525	1800	SWL35	130	0.30	200	0.15	300
	100	0.288	200	0.15	300		100	0.45	300	0.25	500
	75	0.432	300	0.25	500		75	0.45	300	0.30	600
	50	0.432	300	0.375	750		50	0.90	600	0.50	1000
	35	0.864	600	0.90	1800		350	0.094	50	0.0313	50
SWL15	20	1.44	1000	0.90	1800		300	0.104	100	0.125	200
	10	2.592	1800	0.90	1800		250	0.208	100	0.188	300
	150	0.072	50	0.025	50		200	0.416	200	0.188	300
	100	0.288	200	0.15	300		150	0.624	300	0.313	500
	80	0.288	200	0.25	500		100	0.624	300	0.47	750
SWL15	60	0.432	300	0.30	600		50	1.248	600	0.626	1000
	40	0.720	500	0.50	1000						
	20	1.44	1000	0.90	1800						
	10	2.592	1800	0.90	1800						

注：表中参数是在环境温度 20℃，工作持续率每小时 20% 或每分钟 40% 情况下得出的；  
当转速超过表中数值时，提升元件会因过热而出现早期磨损，使用时应严加注意。



## 六、丝杆长度与极限负荷的关系

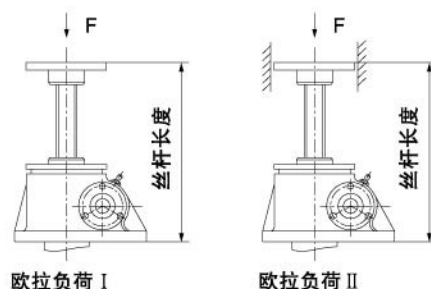


图 1

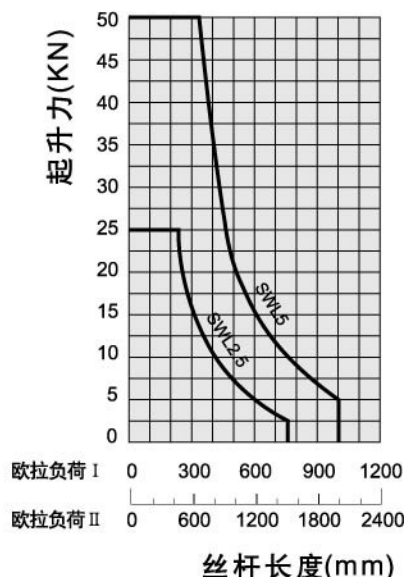


图 2

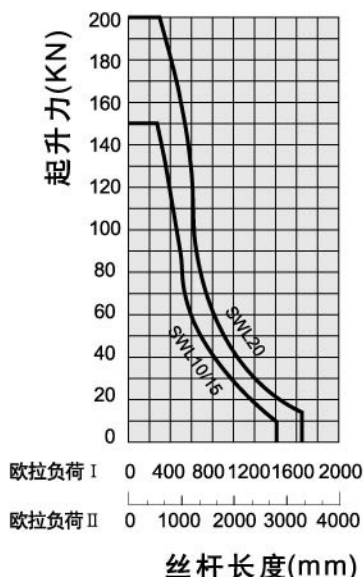


图 3

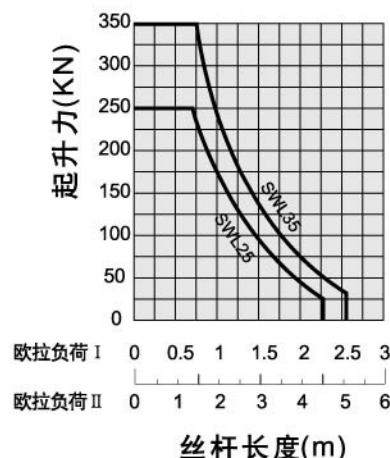


图 4

## 七、升降机的选型说明：

根据丝杆行程和提升负荷查图 1 ~ 图 4，找出所需升降机的型号，再查提升力和提升速度表，校核提升速度是否满足要求。

例：已知提升负荷为  $F=20\text{kN}$ ，丝杆行程  $=400\text{mm}$ ，提升速度  $V=0.65\text{m/min}$ ，试求所需的升降机。

根据  $F=20\text{kN}$ ，丝杆行程  $=400\text{mm}$  查图 2，选择 SWL5 升降机。再查提升力和提升速度表核对 SWL5 升降机在  $20\text{kN}$  负荷下只允许  $0.526\text{m/min}$  的速度，只有重选大型号的升降机。再查提升力和提升速度表得知 SWL10 在  $20\text{kN}$  负荷下允许提升速度为  $1.44\text{m/min}$  而满足要求。

## 八、说明：

- 1) 当压力负荷减小时，提升高度可随之增大（两者具体关系详见图 2 ~ 图 4）；
- 2) 在提升不同的负荷时，所允许的扭矩、功率、转速也不同，且不同工作持续率的最大功率也不同；
- 3) 1 型结构采用油脂润滑，随着温度的升高应及时补充润滑剂；
- 4) 表中的效率为用油脂润滑条件下的参数；
- 5) 工作期间应及时更换润滑剂；
- 6) 工作环境温度： $-20^{\circ}\text{C} \sim +80^{\circ}\text{C}$ ；
- 7) 在静止状态一般可以自锁。

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## JW丝杆升降机概述

## JWM型（梯形丝杆型）

## 低速、低频率

JWM型（梯形丝杆型）适用于低速、低频率的场合，主要构成部件为：精密梯形丝杆副与高精度蜗轮蜗杆副。

- 1) 价格经济、结构紧凑、操作简单、保养方便。
- 2) 低速、低频率：  
主要用于大负荷、低速与无需频繁工作的场所。
- 3) 保持载重：梯形丝杆具有自动锁定功能，即使没有制动装置也可保持载重。

\*在受到较大振动，冲击载荷时，可能会使自锁功能失效，此时请外加制动装置。



## JW series screw jack overview:

## JWM (Trapezoid screw)

## LOW SPEED LOW FREQUENCY

JWM (trapezoidal screw) is suitable for low speed and low frequency.

Main components: Precision trapezoid screw pair and high precision worm-gears pair.

- 1) Economical:  
Compact design, easy operation, convenient maintenance.
- 2) Low speed, low frequency:  
Be suitable for heavy load, low speed, low service frequency.
- 3) Self-lock  
Trapezoid screw has self-lock function, it can hold up load without braking device when screw stops traveling.

Braking device equipped for self-lock will be of malfunction accidentally when large jolt & impact load occur.



JW

## JWB型（普通滚珠丝杆型）

## 高速 高频率

JWB型（普通滚珠丝杆型），适用于高速，高频率和高性能的装置中，主要构成部件为精密滚珠丝杆副与高精度蜗轮蜗杆副。

- 1) 高效率：只需很小的驱动源，就可以产生很大的推动力。
- 2) 高速化：与梯形丝杆相比，速度有很大的提高，能轻松而高速地运转。
- 3) 使用寿命长：采用高质量的滚珠丝杆，使其工作寿命提高3倍以上。

注：本身无自锁功能，需外加制动装置或选择带有制动的驱动源。



## JWB (General ball screw)

## HIGH SPEED HIGH FREQUENCY

JWB (General ball screw) is suitable for high speed, high frequency and excellent performance.

Main components: Precision ball screw pair and high precision worm-gears pair.

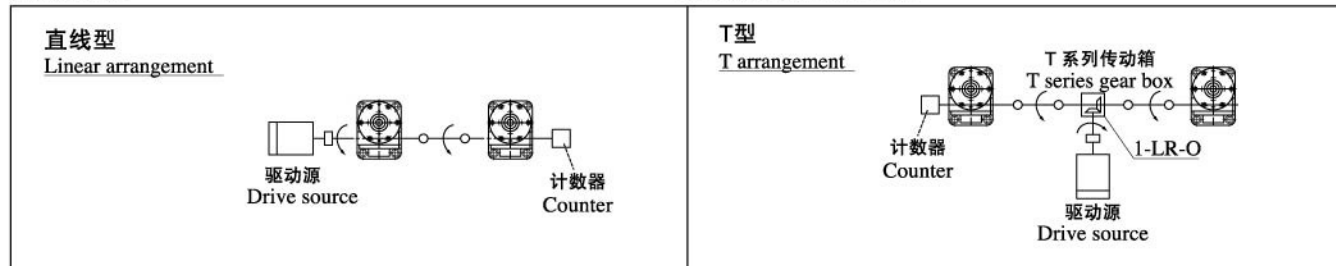
- 1) High efficiency  
Rolling friction improve efficiency greatly, only a little drive power can generate great thrust force.
- 2) High speed  
Rolling friction speed up travel of screw easily.
- 3) Lifetime longer  
High precision ball screw can make JWB's lifetime longer by 3 times comparing with JWB.

Note: Braking devices or motor with braking devices are necessary when choosing JWB.



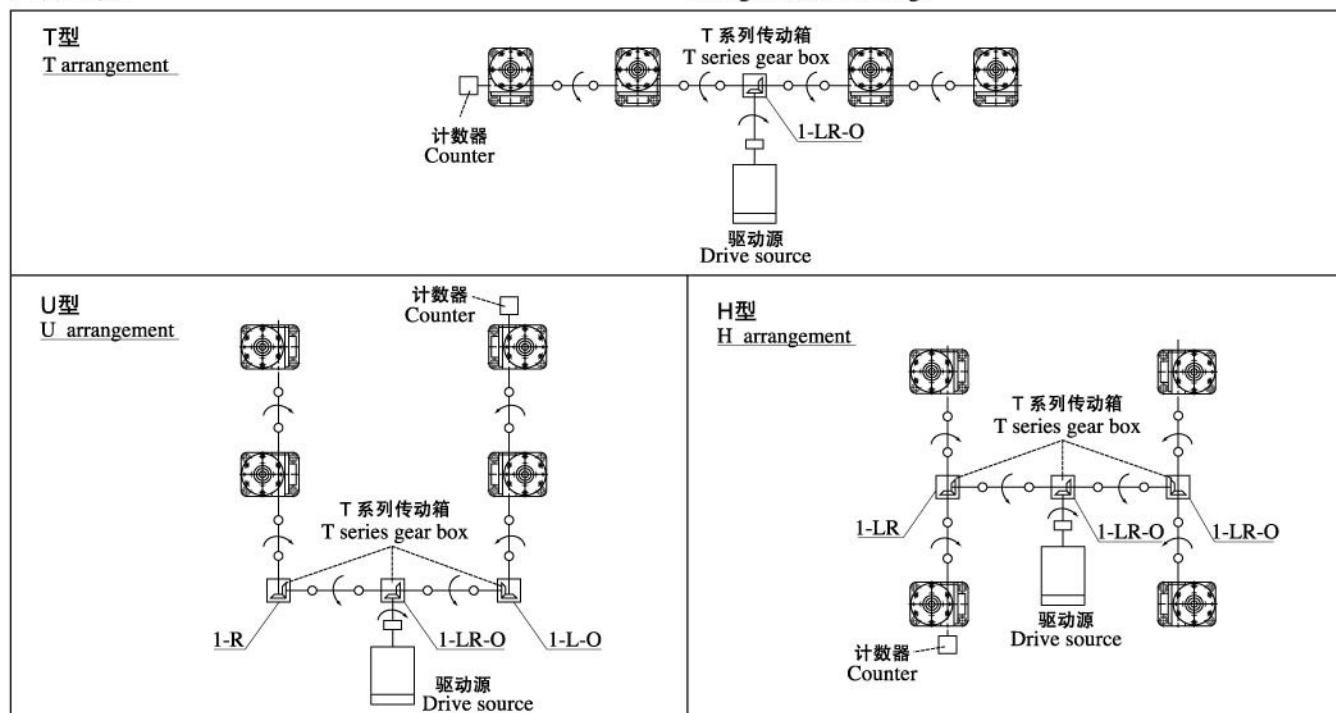
应用示例：  
两台连动：

Application example:  
Two gear boxes linking:



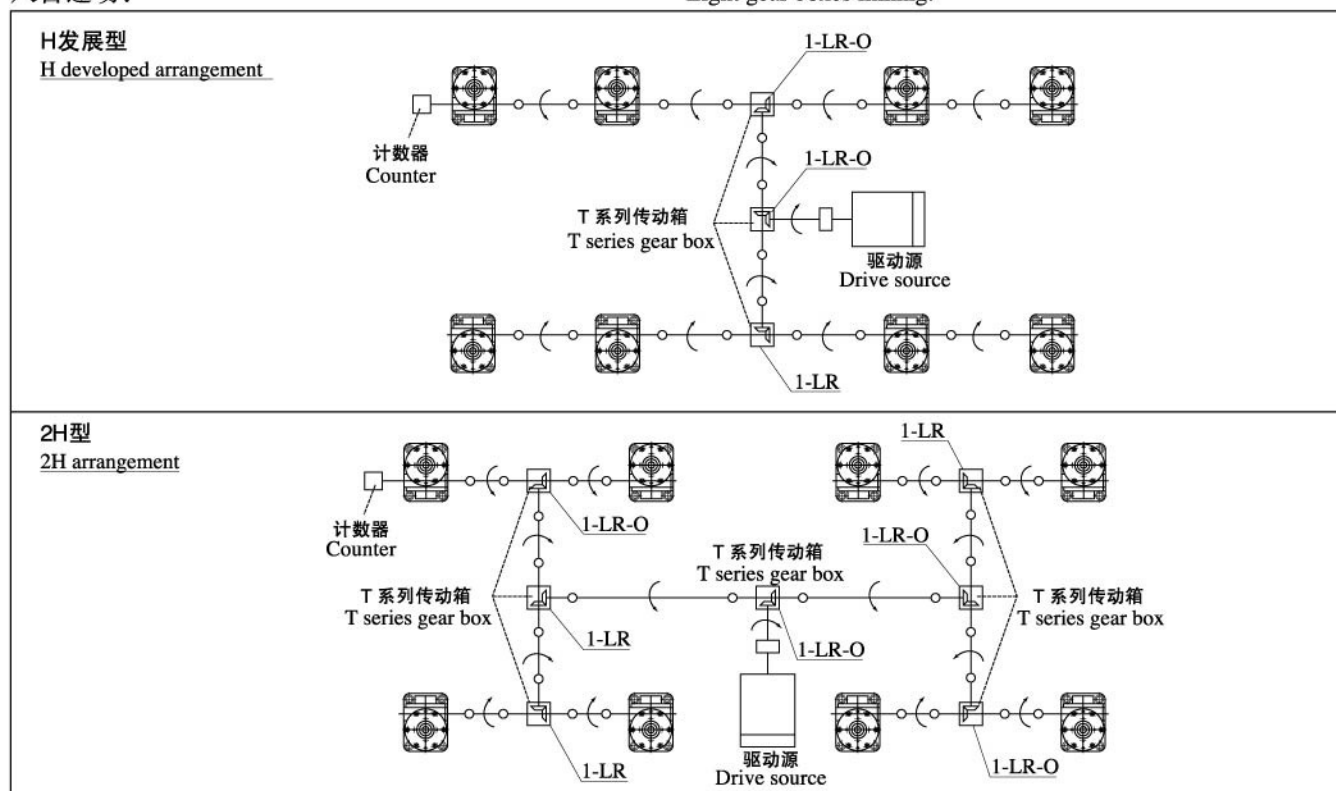
四台连动：

Four gear boxes linking:



八台连动：

Eight gear boxes linking:



JW


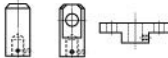


型号表示方法举例：

基本形式和止旋构造升降机的型号表示方法：

Illustration of types:

Plain mode and Mode with anti-rotation device:

JW	M	050	US	-	A	H	100	J	M	C	-	I
M梯形丝杆 B滚珠丝杆 M (Trapezoid screw) B (General ball screw)		US DS UM DM		蜗轮速比 Ratio		 J 防尘罩 Dust hood		支架安装 Support-mounted 普通底座式安装不标 Normal foot-mounted isn't marked				
升降机系列 JW series	机座号 Size of JW	输入轴方向A或B 双向输入时不标 (详细标注外形尺寸图)		行程(mm) Journey		 B I M 顶端连接方式 Top end fittings		安装方位 Mounting position I、II、III				

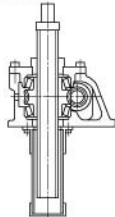
**基本形式 (US, DS)**

螺母转动, 丝杆上下移动并伴随附加的旋转运动, (如下图)

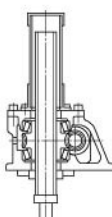
US: 押上 DS: 吊下

\* 请根据载荷方向、安装方向来选择合适的升降机 (US或DS).

\* 丝杆轴在升降时, 会产生旋转力, 所以必须做好防止旋转措施.



US



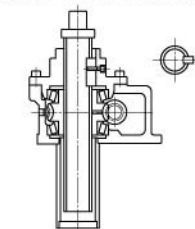
DS

**止旋构造 (UM, DM)**

UM: 押上 DM: 吊下

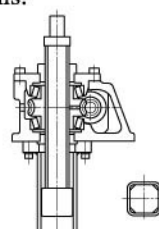
\* 丝杆只能上下移动

\* 请根据载荷方向、安装方向来选择合适的升降机 (UM或DM)



(JWM100-JWM200)

UM



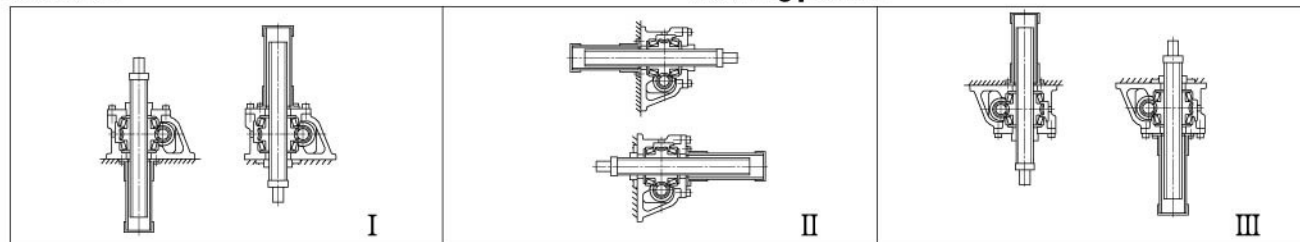
(JWM010-JWM050) (JWB010-JWB200)

DM

**With Anti-rotation device.****UM: UPRISE DM: DROP**

\* No rotation of screw, which only travel up and down.

\* Select UM or DM according to the load and mounting positions.

**安装方位****Mounting position**

注: 采用III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: Selecting mounting position III, the quality of bolt on housing feet reaches 10.9.

活动螺母构造升降机的型号表示方法:

Illustration of type with traveling nut



## 活动螺母构造 (UR, DR)

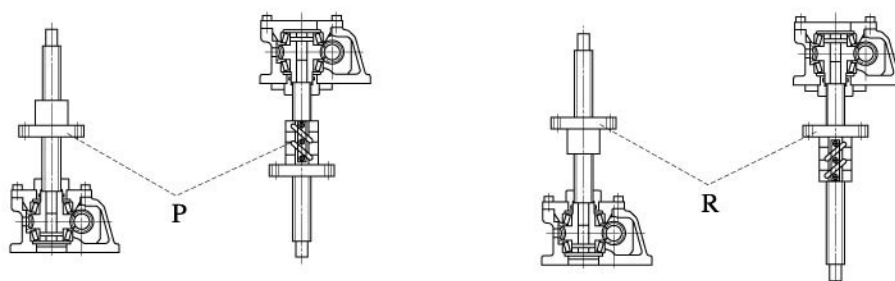
一般情况下, 升降机必须具有因丝杆轴的升降而产生的行程和丝杆罩所需的空间, 若想有限的空间内增长行程时, 使用此活动螺母构造非常适应(丝杆轴旋转, 活动螺母移动)。丝杆轴顶端为圆柱形, 所以在长行程时, 在轴端采用支撑方式, 可以得到很好的传动效果。

UR: 押上 DR: 吊下

请根据载荷方向, 安装方向来选择合适的升降机(押上或吊下)

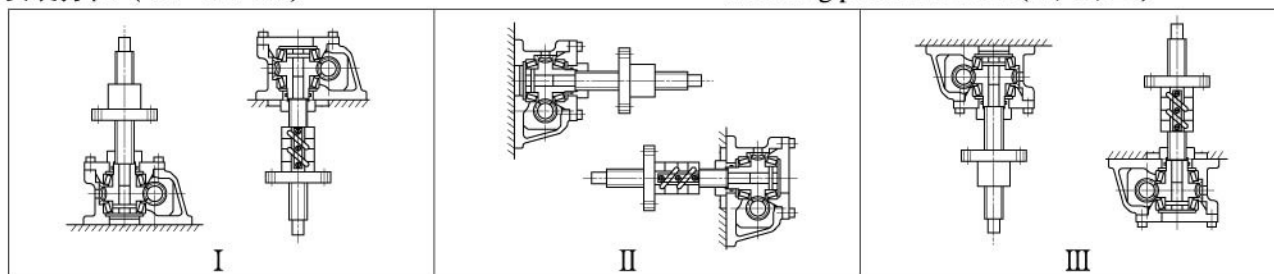
## 活动螺母的安装方向 (P, R)

选型和型号表示方法中, 还需注明螺母的放置方向(如下图)



## 安装方位 (I、II、III)

## Mounting position of Jack (I, II, III)



注: 采用III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: Selecting mounting position III, the quality of bolt on housing feet reaches 10.9.

JW

JWM (梯形丝杆类型) 基本参数一览表

JWM (Trapezoid screw) basic parameter table:

型 号	Type	JWM010	JWM025	JWM050	JWM100	JWM150	JWM200	JWM300	JWM500	JWM750	JWM1000
最大载荷	Maximal load (kN)	9.80	24.5	49.0	98.0	147	196	294	490	735	980
丝杆外径	Outer diameter of screw (mm)	20	26	40	50	55	65	85	120	130	150
丝杆底径	Small diameter of screw d (mm)	14.8	19.7	30.5	38.4	43.4	49.3	67	102	112	127
丝杆螺距	Pitch of screw L1 (mm)	4	5	8	10	10	12	16	16	16	20
减速比 Ratio i	H 速度 Speed	5	6	6	8	8	8	10 <sup>2/3</sup>	10 <sup>2/3</sup>	10 <sup>2/3</sup>	12
	L 速度 Speed	20	24	24	24	24	24	32	32	32	36
综合效率 % Integrated efficiency η	H 速度 Speed	21	21	22	22	20	20	19	15	13	13
	L 速度 Speed	12	12	14	15	14	13	11	10	8	8
容许输入最大功率 (kW) Permissible output maximal power	H 速度 Speed	0.49	1.0	2.0	2.8	3.1	5.0	8.4	13.4	14.4	21.4
	L 速度 Speed	0.36	0.46	0.63	1.4	2.2	3.2	4.6	5.7	7.2	9.4
空载扭矩	No-load torque T <sub>0</sub> (N·m)	0.29	0.62	1.4	2.0	2.6	3.9	9.8	19.6	29.4	39.2
容许输入轴扭矩*	Permissible torque of input shaft (N·m)	19.6	49.0	153.9	292.0	292.0	292.0	735.0	1372.0	1764.0	2450.0
最大载荷时所需输入轴扭矩** Required torque of input shaft at maximal load (N·m)	H 速度 Speed	6.2	16.1	48.7	90.7	149.0	238.1	400.1	856.0	1380.5	2040.9
	L 速度 Speed	2.9	7.4	20.0	45.3	72.3	124.0	244.0	453.3	761.3	1278.3
输入轴每回转一圈丝杆 (活动螺母)轴向位移量 Axial journey of screw, when input shaft rotate a circle. (mm)	H 速度 Speed	0.80	0.83	1.33	1.25	1.25	1.50	1.50	1.50	1.50	1.67
	L 速度 Speed	0.20	0.21	0.33	0.42	0.42	0.50	0.50	0.50	0.50	0.56
最大载荷时容许输入轴回转速度 Permissible rotational speed of screw shaft at maximal load (rpm)	H 速度 Speed	750	600	400	300	200	200	200	150	100	100
	L 速度 Speed	1200	600	300	300	290	250	180	120	90	70
最大载荷时丝杆回转扭矩 (N·m) Rotational torque of screw at maximal load		20.1	65.1	201.5	503.6	813.2	1287.7	2531.9	5551.3	8921.8	13878.3

\* 减速机输入轴的容许扭矩。(连动运转时请确认)

\*\* 包括无负荷空转扭矩的数值。

\* Permission torque of shaft of reducer.

\*\* Include torque under the condition of no-load operating.

JW

JWB (普通滚珠丝杆) 基本参数一览表

JWB (General ball screw) basic parameter table:

型 号	Type	JWB010	JWB025	JWB050	JWB100	JWB150	JWB200	JWB300	JWB500
最大载荷	Maximal load (kN)	9.80	24.5	49.0	98.0	147	196	294	490
丝杆外径	Outer diameter of screw (mm)	20	25	40	50	55	65	80	100
丝杆底径	Small diameter of screw d (mm)	17.5	21.4	31.3	39.1	43.1	55.7	74.8	87
丝杆螺距	Pitch of screw L1 (mm)	5	8	10	12	12	12	16	20
减速比 Ratio i	H 速度 Speed	5	6	6	8	8	8	10 <sup>2/3</sup>	10 <sup>2/3</sup>
	L 速度 Speed	20	24	24	24	24	24	32	32
综合效率 % Integrated efficiency η	H 速度 Speed	61	62	64	63	63	62	56	60
	L 速度 Speed	34	35	39	43	43	41	34	38
容许输入最大功率 Permissible output maximal power (kW)	H 速度 Speed	0.54	1.3	2.2	3.6	4.0	5.5	8.9	13.3
	L 速度 Speed	0.27	0.63	1.0	1.9	2.1	2.8	4.1	6.5
空载扭矩	No-load torque T <sub>0</sub> (N·m)	0.29	0.62	1.37	1.96	2.65	3.92	9.81	19.6
保持扭矩 Keeping torque (N·m)	H 速度 Speed	1.27	4.31	10.78	19.6	39.2	51.0	68.6	140.1
	L 速度 Speed	0.26	0.91	2.4	5.8	11.8	15.0	19.5	41.2
容许输入轴扭矩*	Permissible torque of input shaft (N·m)	19.6	49.0	153.9	292.0	292.0	292.0	735.0	1372.0
最大载荷时所需输入轴扭矩** Required torque of input shaft at maximal load (N·m)	H 速度 Speed	2.8	9.0	21.5	39.1	77.0	104.5	169.6	317.5
	L 速度 Speed	1.4	4.3	9.6	20.4	39.6	54.2	98.5	177.9
输入轴每回转一圈对应丝杆 (活动螺母)轴向位移量 Axial displacement of screw, when input shaft rotate a circle. (mm)	H 速度 Speed	1	1.33	1.67	1.5	1.5	1.5	1.5	1.88
	L 速度 Speed	0.25	0.33	0.42	0.5	0.5	0.5	0.5	0.63
最大载荷时容许输入轴回转速度 Permissible rotational speed of screw shaft at maximal loading (rpm)	H 速度 Speed	1500	1400	1000	890	500	500	500	400
	L 速度 Speed	1500	1400	1000	890	500	500	400	350
最大载荷时丝杆回转扭矩 (N·m) Rotational torque of screw at maximal load		8.7	34.7	86.7	208.2	416.3	555.1	1040.9	2081.7

\* 减速机输入轴的容许扭矩。(连动运转时请确认)

\*\* 包括无负荷空转扭矩的数值。

\* Permissible torque of shaft of reducer.

\*\* Include torque under the condition of no-load operating.



## 注意事项:

- 1) 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;
- 2) 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;
- 3) 升降机在工作时其减速部表面温度应控制在  $-15^{\circ}\text{C} \sim 80^{\circ}\text{C}$  的范围以内, 确保活动螺母的表面温度也在上述范围以内;
- 4) 输入轴容许转速为  $1500\text{r/min}$ , 输入轴不得超过此转速;
- 5) JWM和JWB都不可连续运转:  
单台升降机的负荷时间率(%ED)以30分为单位计算, JWM(梯形丝杆类型)的负荷时间内不得超过20%ED, JWB(普通滚珠丝杆)的负荷时间率不得超过30%ED,

负荷时间率%ED=

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

- 6) 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;
- 7) 驱动源的起动扭矩应确保在使用扭矩的200%以上;
- 8) 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;
- 9) JWM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。  
JWB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的自重而产生逆转, 必须外加制动装置或选择带有制动的驱动源, 请确保制动扭矩大于保持扭矩;

## 10) 升降机使用的环境如下

使用场所	Working Location	室内无雨水侵入的场所	Indoor location without rainwater
周围空气	Ambient Air	灰尘为一般工厂状态	Normal
环境温度	Ambient Temperature	$-15^{\circ}\text{C} \sim 40^{\circ}\text{C}$	
相对湿度	Relative Humidity	85%以下	Less than 85%

- 11) 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;
- 12) 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;
- 13) 在有负载的情况下, 请不要将JWB型的输入轴驱动方式变为手动操作, 负载有可能会造成输入轴旋转非常危险。

## Note:

- 1) Select a Jack with sufficient capacity according to safety factor, service journey and stability. And stationary load, dynamic load and shock load must be lower than permissible maximum load.
- 2) Please note that rotation speed of screw must match load, permissible maximum load, permissible maximum outer load, and permissible rotation speed of screw must be verified. If these figures exceed that of products, jacks will be damaged greatly.
- 3) The surface temperature will be limited in  $-15^{\circ} \sim 80^{\circ}$  when jack working to ensure the temperature of traveling nuts in  $-15^{\circ} \sim 80^{\circ}$ .
- 4) Maximum input speed is  $1500\text{r/min}$ .
- 5) JWM and JWB aren't suitable for continuous operation, Jack Duty(%ED)  
JWM duty(%ED) cannot exceed 20%ED,  
JWB duty(%ED) cannot exceed 30%ED,

Duty %ED=

$$\frac{\text{jack operating time(lift \& lower cycle)}}{\text{Elapsed cycle time}} \times 100\%$$

- 6) When several Jacks are connected on the same axial line, the loaded torque with each Jack must be verified and limited within permissible input torque.
- 7) Starting torque must be 200% of service torque.
- 8) At below  $0^{\circ}$  ambient temperature, changed adhesion of lubrication will lower Jack's efficiency so that sufficient drive is necessary.
- 9) JWM has self-lock function, but an Extra braking device or drive source with braking device is necessary to be equipped because self-lock will be of mal-function when Jack is loaded a heavy shock.  
JWB has no self-lock function, to avoid backspin of screw under axial load and its weight, a braking device or drive source with braking device is necessary to be equipped and braking torque must be larger than operating torque of Jack.

## 10) Jack's operating conditions

室内无雨水侵入的场所	Indoor location without rainwater
灰尘为一般工厂状态	Normal
$-15^{\circ}\text{C} \sim 40^{\circ}\text{C}$	
85%以下	Less than 85%

- 11) When working in dusty space, Jack must be equipped with elastic dust-hood on screw; in open air, shield must be equipped to prevent exposure to wind and rain.
- 12) When working, Jack cannot be forced to stop, or it will be damaged seriously.
- 13) Under load, don't change motor drive mode into manual drive, or which will cause backspin of screw and cause great danger.

JW

选型方法:

升降机型号的确定:

计算总机的当量载荷 $W_s$  (N)

$$W_s = \text{最大载荷 } W_{\max} \times \text{使用系数 } f_1 (N)$$

被驱动设备系数 ( $f_1$ ) 表:

载荷性质 Load character	使用举例 Example	被驱动设备系数 Factor for driven machine ( $f_1$ )
无冲击载荷, 负荷惯性小 shockless load & small inertia load	开关、阀门传送带切换装置 Switch, valve transmission belt swithing device	1.0 ~ 1.3
轻微冲击载荷, 负荷惯性中等 moderate shock & moderate inertia	各种移动装置; 升降用各种升降机 All kinds of moving devices, all kinds of elevators	1.3 ~ 1.5
大冲击振动载荷, 负荷惯性大 heavy shock & large inertia	用台车搬运东西; 保持压延滚轮的位置 Carrying something by trolley; to keep the position of idling gear	1.5 ~ 3.0

计算单台升降机的当量载荷 $W$ ,

$$W = \frac{W_s}{\text{连动台数} \times \text{连动系数 } f_d}$$

连动系数 Linkage factor( $f_d$ ):

连动台数 Number of linkage jack	1	2	3	4	5~8
连动系数 Linkage factor	1	0.95	0.9	0.85	0.8

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

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。

How to select type:

Determine Jack's type:

Calculate total equivalent load  $W_s$  (N):

$$W_s = W_{\max} \times f_1$$

Service factor for driven machine ( $f_1$ ):

Calculate equivalent load of single Jack,

$$W = \frac{W_s}{\text{Number} \times \text{Linkage factor } (f_d)}$$

Temporarily determine Jack type:

Temporarily determine Jack type after taking full consideration of load, speed, journey, efficiency and drive source.

Determine JW type according to service journey, ambient conditions, connection mode of end-fittings.

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。

Verify input power

If required input power under load exceeds permissible maximum input power, please select larger type or lower the speed of screw rotation.

负载所需输入功率计算 Calculation of required input power under load :

所需输入轴转速 Required rotation speed of input shaft	$n_1$ (r/min)	$n_1 = \frac{V}{L_1} \times i$
所需输入轴扭矩 Required torque of input shaft	$T_1$ (N · m)	$T_1 = \frac{W \times L_1}{2\pi \times i \times \eta} + T_0$
所需输入功率 Required input power	$P_1$ (kW)	$P_1 = \frac{T_1 \times n_1}{9550}$

V: 升降机丝杆轴(活动螺母)升降速度 mm/min  $L_1$ : 丝杆螺距 (mm)  
 $i$ : 减速比  $W$ : 单台升降机当量载荷 (N)  $\pi$ : 圆周率  
 $\eta$ : 升降机的综合效率  $T_0$ : 空载扭矩 (N·m)  
 ( $L_1$ 、 $i$ 、 $\eta$ 、 $T_0$  参照基本参数表)

V: linear speed of screw mm/min  $L$ : Pitch of screw (m)  
 $i$ : ratio  $W$ : equivalent load of single jack  $\pi$ : pi  
 $\eta$ : Integrated efficiency  $T_0$ : No-load torque (Nm)  
 ( $L_1$ 、 $i$ 、 $\eta$ 、 $T_0$  refer to basic parameter table)

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。

Verify the stability of screw:

Please verify the stability of screw under axial load, larger type should be used when load exceed the critical load.

升降机丝杆临界稳定载荷通过以下公式计算:

The formula to calculate the critical load as follows,

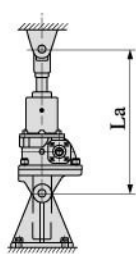
$P_{CR} = f_m \times \left(\frac{d^2}{L_a}\right)^2$	确保 ensure	$P_{CR} > W \times SF$ ( $SF = 4$ )
------------------------------------------------------	--------------	-------------------------------------

$P_{CR}$ : 临界载荷 (N)  
 $d$ : 丝杆底径mm(参照基本参数表)  
 $f_m$ : 支撑系数  
 $L_a$ : 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 $SF=4$ )

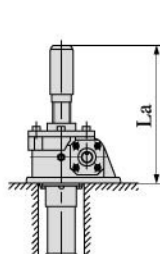
$P_{CR}$ : Critical load (N)  
 $d$ : small diameter of screw end (mm) (refer to basic parameter table)  
 $f_m$ : support factor  
 $L_a$ : distance between load-supporting point and mounting point as drawing.  
 $W$ : equivalent load of single Jack (N)  
 $SF$ : safety factor ( $SF=4$  as usual)



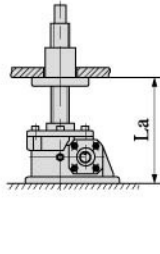
丝杆轴稳定性校验时,  $L_a$  ( $L_a$ 值计算根据各型号尺寸)  
与  $f_m$  (支撑系数) 选取如下:



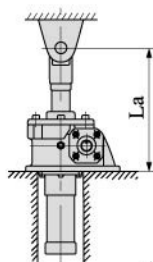
两端支撑  $f_m = 10 \times 10^4$   
support at both ends  $f_m = 10 \times 10^4$



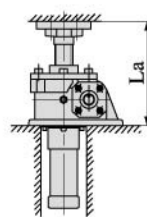
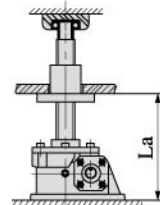
底座固定轴端自由  $f_m = 2.5 \times 10^4$   
Foot-mounted & movable shaft end  $f_m = 2.5 \times 10^4$



Verifying the stability of screw, the values of  $L_a$  and  $f_m$  as follows,



底座固定轴端支撑或固定  $f_m = 20 \times 10^4$   
Foot-mounted & shaft end supporting or fixed  $f_m = 20 \times 10^4$



### 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  
转数以下, 若超出临界转速, 请提高型号再计算。

Verifying critical rotation speed:

Using traveling nut, the rotation speed of screw must be  
lower than critical speed, if no, please select larger type  
and calculate again.

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

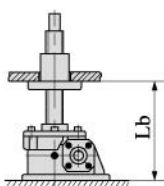
$$n_s = \frac{n_1}{i}$$

$n_c$ : 临界转速 r/min  
 $d$ : 丝杆底径 mm (参照基本参数表)  
 $f_n$ : 长度系数  
 $L_b$ : 支撑间距离 mm

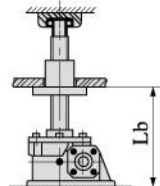
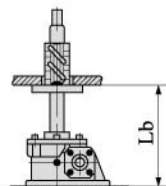
$n_s$ : 丝杆转速 r/min  
 $n_1$ : 输入速度 r/min  
 $i$ : 减速比

$n_c$ : Permissible rotation speed of screw  
 $n_s$ : Rotational speed of screw  
 $d$ : Small diameter of screw (refer to basic parameter table)  
 $n_1$ : Rotational speed of input shaft  
 $f_n$ : Length factor  
 $i$ : ratio  
 $L_b$ : Distance between both supporting face

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



轴端自由  $f_n = 0.36$   
Movable shaft end  $f_n = 0.36$



轴端支撑  $f_n = 1.56$   
Shaft end supporting  $f_n = 1.56$

请确保:  $n_c > n_s$

Ensure:  $n_c > n_s$

计算举例: JWM200UR-H1200PI 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:  
 $d = 49.3$   $L_b = 1437$

Example for calculation:  
Take JWM200UR-H1200PI as example,  $n_1 = 1200$  r/min, con-  
necting mode of top-end : I, we can know  $d = 49.3$ ,  $L_b = 1437$   
referring to dimension and transmission capacity table.

$$n_s = \frac{n_1}{i} = \frac{1200}{8} = 150 \text{ r/min}$$

$$n_c = \frac{96 \times f_n \times d \times 10^6}{L_b^2} = \frac{96 \times 1.56 \times 49.3 \times 10^6}{(1437)^2} = 3575 \text{ r/min}$$

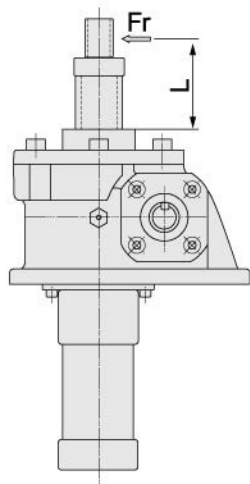
$$n_c = 3575 \text{ r/min} > n_s = 150 \text{ r/min} \dots \dots \dots \text{ok.}$$



当有横向载荷时，请外加导向器。

When there is radial load, please add guiding device.

JWM 许用横向载荷 Permitted radial load  $F_r(N)$ :

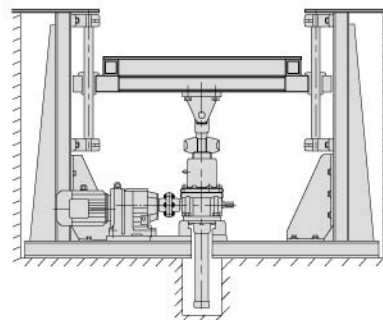
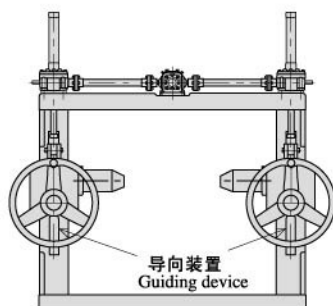


$F_r(N)$ Type L (mm)	010	025	050	100	150	200	300	500	750	1000
100	318	570	2500	4010	4610	8210	38200	85300	73500	186200
200	159	290	1250	2010	2300	4110	23000	50400	56800	145000
300	106	190	830	1340	1540	2740	15300	33600	46100	104700
400	79	140	620	1000	1150	2050	11400	25200	39300	78500
500	64	110	500	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

JWB或JWM超过许用横向载荷时，请外加导向装置，举例如下：

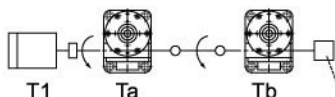
When operating radial load exceeds critical radial load, please add guiding device, for example,

JW



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)如图须对各升降机输入轴端进行强度校核：

Please verify input torque of each Jack when several Jack are connected on the same input axial line as the following,



$T_a$ : 为升降机a的所需输入扭矩

$T_b$ : 为升降机b的所需输入扭矩

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

$T_a$ : Required torque of input shaft of jack a.

$T_b$ : Required torque of input shaft of jack b.

Required torque of motor  $T_1 = T_a + T_b < \text{Promitted input torque of jack a.}$

## 升降机选择举例:

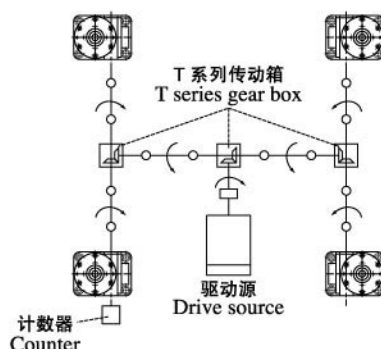
例题: 4台连动押上用, 结构如下图所示的4台连动模式, 工厂内保持常温, 有少许灰尘, 有横向负荷在升降机侧面设置了导向器, 安装状态采用底座固定, 轴端采用一固定一支撑, 电源为三相380V/50Hz, 使用频率为2次/小时×8小时

1. 最大轴向载荷: 88.2 KN/4台
2. 升降速度: 10mm/s (600mm/min)
3. 使用行程: 260mm

## Jack selection example:

Example: Four Jacks, linked as the following drawing, normal temperature, thin dust, radial load, with guiding devices on one side, foot-mounted, fixed the screw top-end, 380v/50Hz, service frequency: 2 times/hour, service time : 8 hours.

1. Maximum axial load ; 88.2KN/4 Jacks
2. Linear speed : 10mm/s (600mm/min)
3. Service journey : 260mm



## 升降机型号确定

- 1). 计算总机当量载荷 $W_s$  (取被驱动设备系数为1.3)  
 $W_s = W_{\max} \cdot f_1 = 88200 \times 1.3 = 114660 \text{ N}$
- 2). 计算单台当量载荷 $W$

## Determine Jack type,

- 1) Calculate total equivalent load  $W_s$   
(Factor for driven machine is 1.3)  
 $W_s = W_{\max} \cdot f_1 = 88200 \times 1.3 = 114660 \text{ N}$
- 2) Calculate equivalent load of single jack:

$$W = \frac{114660}{4 \times 0.85} = 33724 \text{ N}$$

- 3). 暂定型号:  
考虑速度、效率、驱动源、载重后暂定选择 JWB050USH (参照基本参数表)
- 4). 行程校核:  
使用行程为260mm, 充分考虑余量后选定行程为 300mm (参照JWB050US尺寸表)
- 5). 输入功率校核:  
(1) 所需输入功率计算:

- 3) Temporarily determine type,  
Temporarily determine JWB050USH according to speed, efficiency, drive and Load (refer to basic parameter table)
- 4) Verify journey:  
Service journey is 260mm, determine journey should be 300 after considering surplus.  
(Please refer to dimension sheet of JWB050US ).
- 5) Check input power:  
(1) Calculate required input power:

$$\textcircled{1} n_1 = \frac{V}{L_1} \times i = \frac{0.60}{0.010} \times 6 = 360 \text{ r/min}$$

$$\textcircled{2} T_1 = \frac{W \times L_1}{2 \pi \times i \times \eta} + T_0$$

$$\textcircled{3} P_1 = \frac{T_1 \times n_1}{9550}$$

$$= \frac{33724 \times 0.010}{2 \times 3.14 \times 6 \times 0.64} + 1.37 = 15.4 \text{ Nm}$$

$$= \frac{15.4 \times 360}{9550} = 0.58 \text{ kW}$$

(2) 参照基本参数表,  $P_{\max} = 2.2 \text{ kW} > P_1 \dots \dots \text{OK}$

(2) Refer to basic parameter table,  $P_{\max} = 2.2 \text{ kW} > P_1 \dots \dots \text{OK}$

- 6). 丝杆稳定性校核:  
因为施加压缩载荷, 根据传动能力表及外形尺寸图得出:

- 6) Verify the stability of screw  
For under axial load, refer to transmission table and dimension for the following figures,

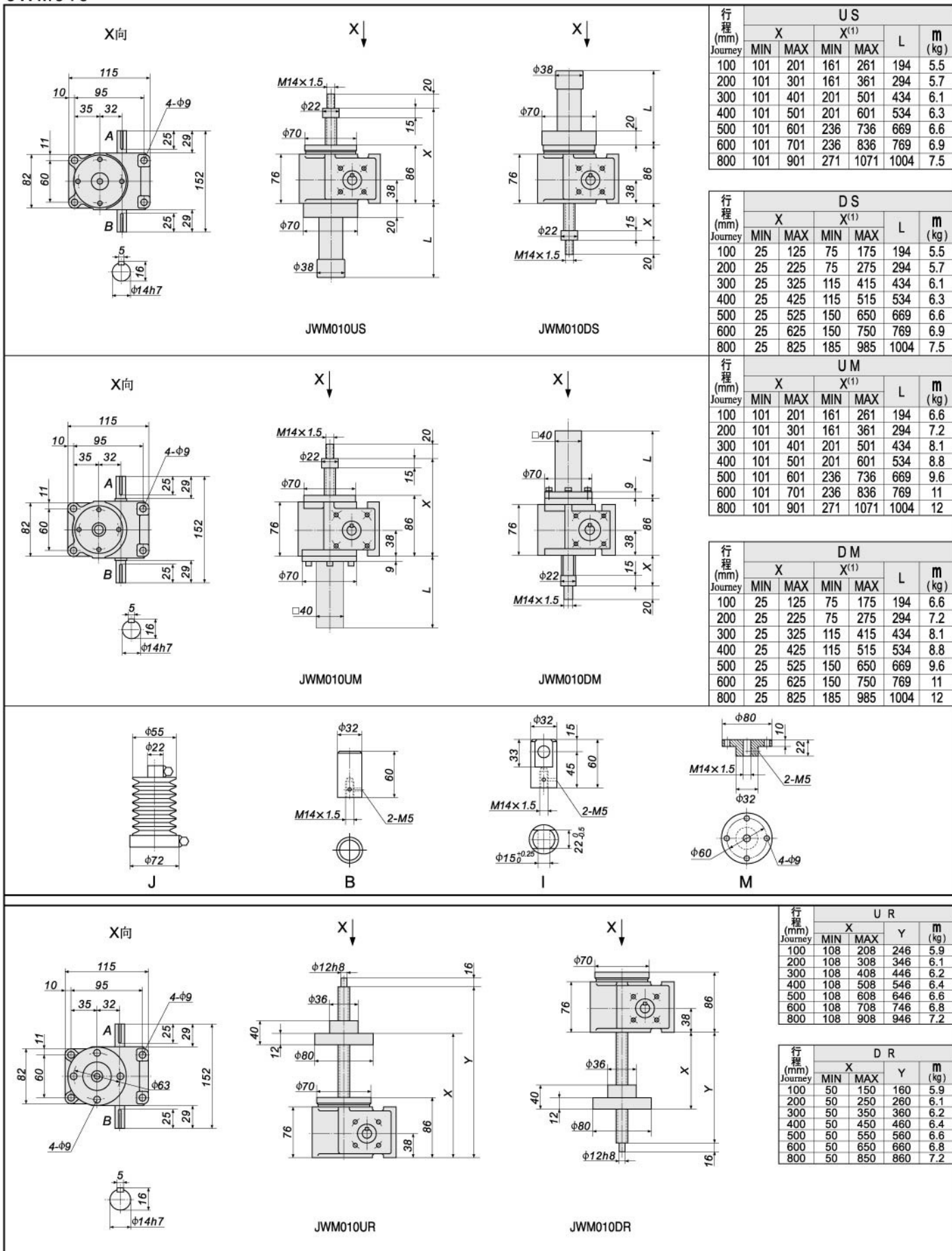
$$d = 31.3 \quad L_a = 604 + 33 = 637 \quad f_m = 20 \times 10^4 \quad SF = 4$$

$$P_{CR} = f_m \times \left( \frac{d^2}{L_a} \right)^2 = 20 \times 10^4 \times \left( \frac{31.3^2}{637} \right)^2 = 473073 \text{ N}$$

$$P_F = \frac{P_{CR}}{SF} = \frac{473073}{4} = 118268 > W = 33724$$

$\dots \dots \text{OK}$

JWM010

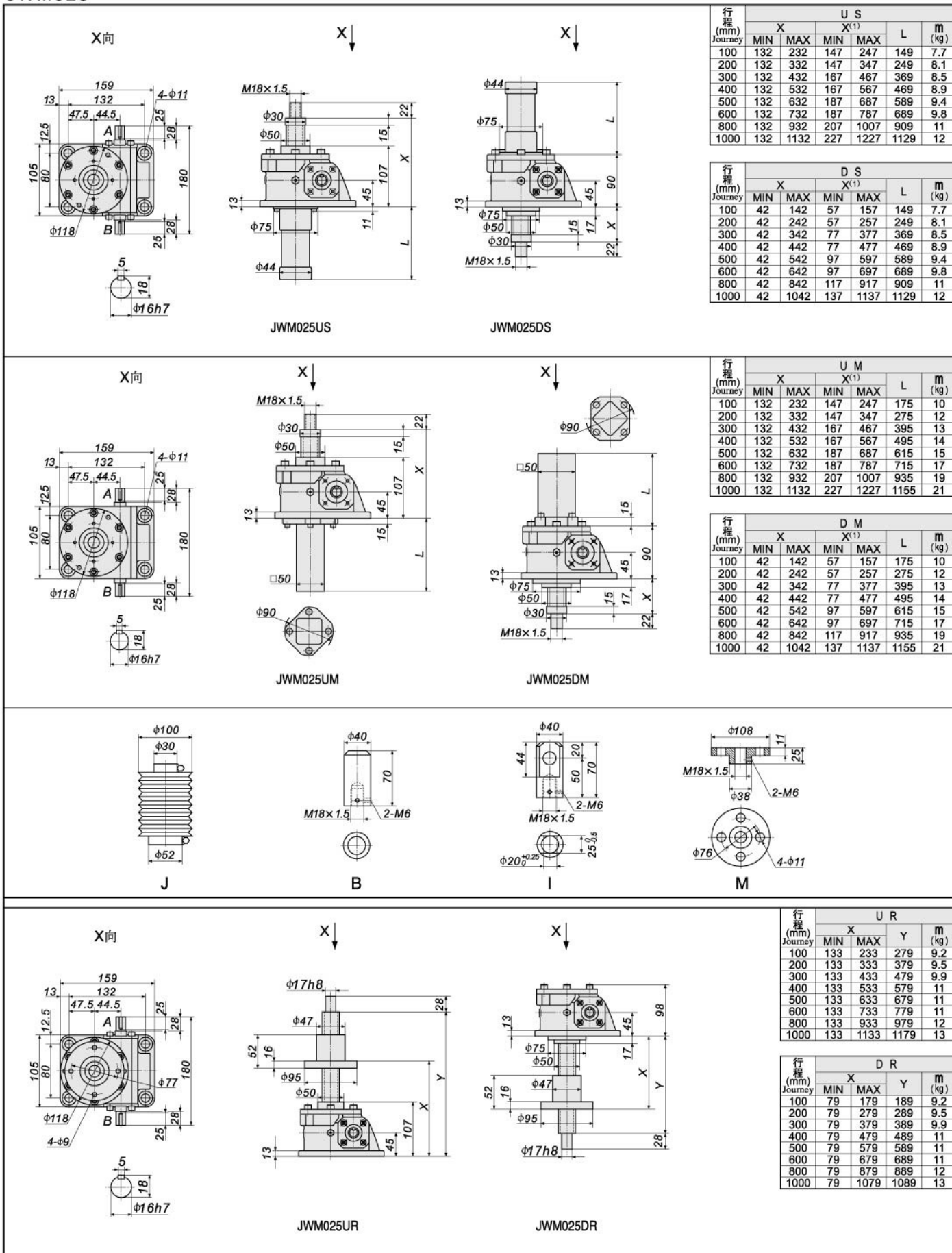


注: X<sup>(1)</sup> 为加防尘罩时尺寸。

Note: "X<sup>(1)</sup>" is the dimension of jack with dust hood.



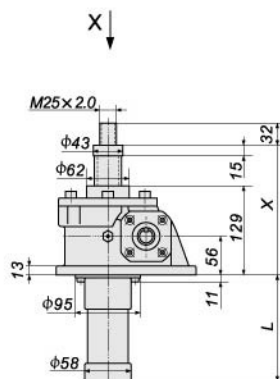
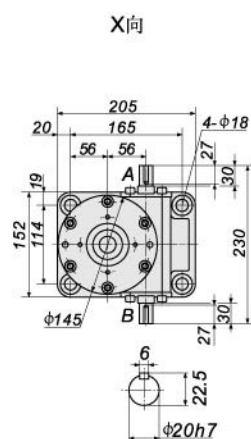
JWM025



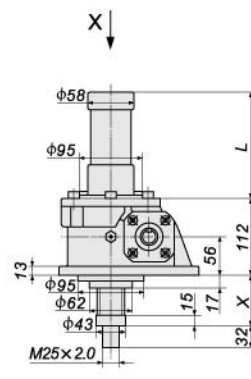
注: X<sup>(1)</sup> 为加防尘罩时尺寸。

Note: "X<sup>(1)</sup>" is the dimension of jack with dust hood.

JWM050



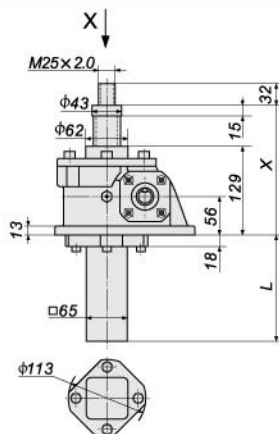
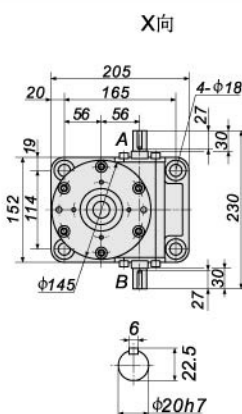
JWM050US



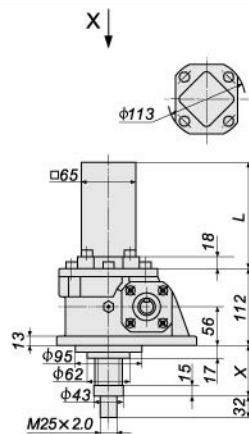
JWM050DS

行程 (mm) Journey	U S				
	X		X <sup>(1)</sup>		L
	MIN	MAX	MIN	MAX	
100	154	254	169	269	147
200	154	354	169	369	247
300	154	454	189	489	367
400	154	554	189	589	467
500	154	654	209	709	587
600	154	754	209	809	687
800	154	954	229	1029	907
1000	154	1154	249	1249	1127

行程 (mm) Journey	D S				
	X		X <sup>(1)</sup>		L
	MIN	MAX	MIN	MAX	
100	42	142	57	157	147
200	42	242	57	257	247
300	42	342	77	377	367
400	42	442	77	477	467
500	42	542	97	597	587
600	42	642	97	697	687
800	42	842	117	917	907
1000	42	1042	137	1137	1127



JWM050UM



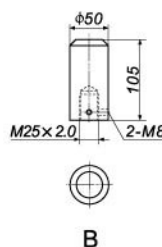
JWM050DM

行程 (mm) Journey	U M				
	X		X <sup>(1)</sup>		L
	MIN	MAX	MIN	MAX	
100	154	254	169	269	175
200	154	354	169	369	275
300	154	454	189	489	395
400	154	554	189	589	495
500	154	654	209	709	615
600	154	754	209	809	715
800	154	954	229	1029	935
1000	154	1154	249	1249	1155

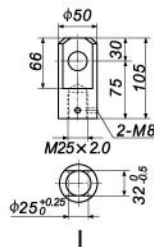
行程 (mm) Journey	D M				
	X		X <sup>(1)</sup>		L
	MIN	MAX	MIN	MAX	
100	42	142	57	157	22
200	42	242	57	257	24
300	42	342	77	377	26
400	42	442	77	477	28
500	42	542	97	597	30
600	42	642	97	697	32
800	42	842	117	917	36
1000	42	1042	137	1137	40



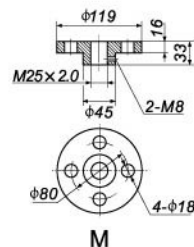
J



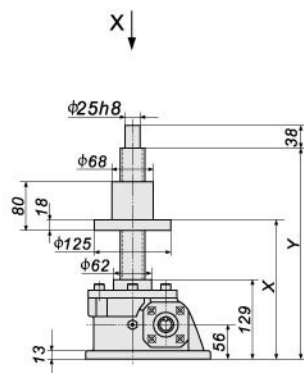
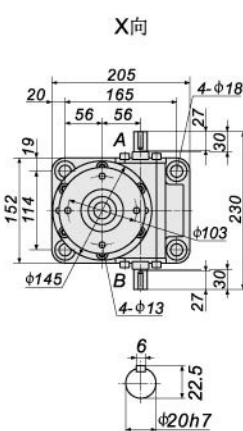
B



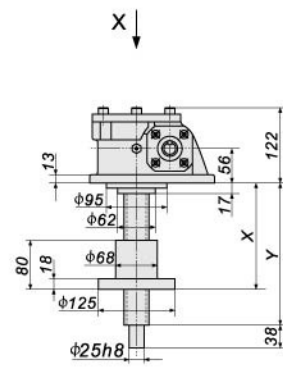
I



M



JWM050UR



JWM050DR

行程 (mm) Journey	U R				
	X		Y		m (kg)
	MIN	MAX	MIN	MAX	
100	157	257	330	330	22
200	157	357	430	430	22
300	157	457	530	530	23
400	157	557	630	630	24
500	157	657	730	730	25
600	157	757	830	830	26
800	157	957	1030	1030	27
1000	157	1157	1230	1230	29

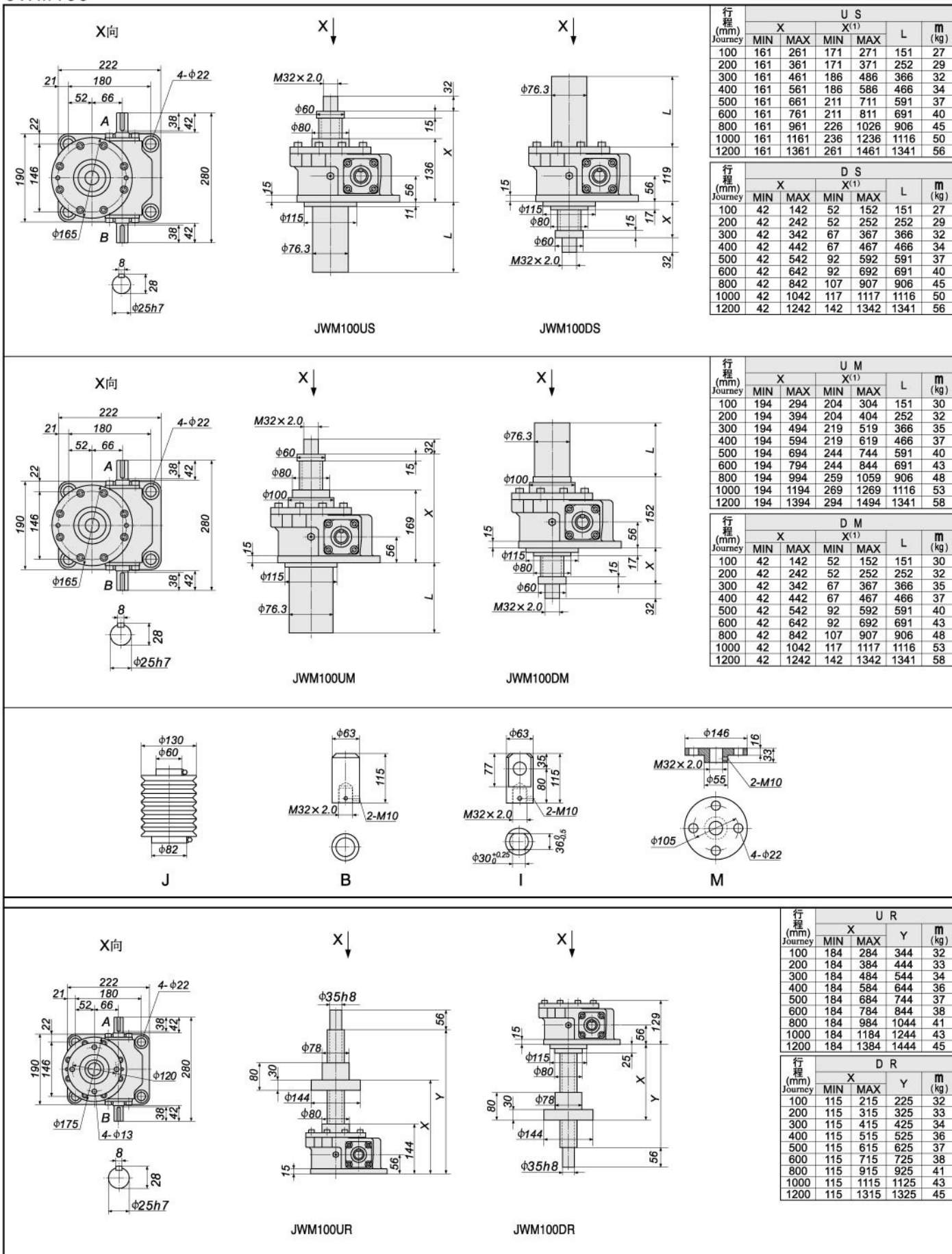
行程 (mm) Journey	D R				
	X		Y		m (kg)
	MIN	MAX	MIN	MAX	
100	107	207	218	218	22
200	107	307	318	318	22
300	107	407	418	418	23
400	107	507	518	518	24
500	107	607	618	618	25
600	107	707	718	718	26
800	107	907	918	918	27
1000	107	1107	1118	1118	29

注: X<sup>(1)</sup> 为加防尘罩时尺寸。

Note: "X<sup>(1)</sup>" is the dimension of jack with dust hood.



JWM100

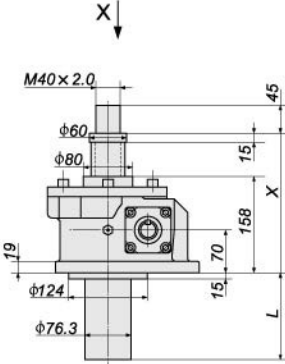
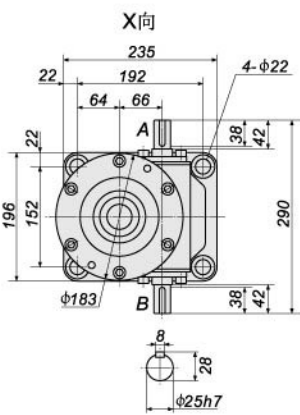


注: X<sup>(1)</sup> 为加防尘罩时尺寸。

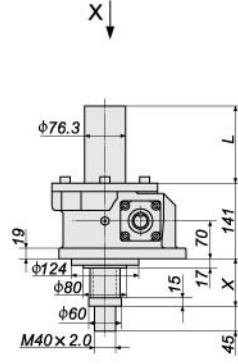
Note: "X<sup>(1)</sup>" is the dimension of jack with dust hood.



JWM150



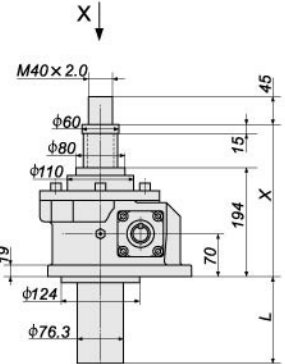
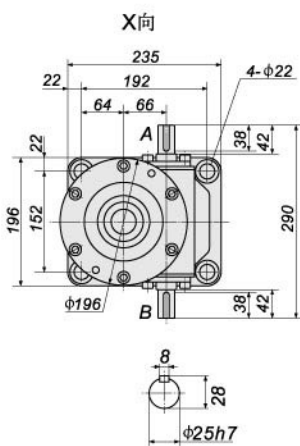
JWM150US



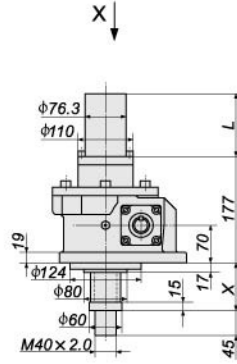
JWM150DS

行程 (mm) Journey	U S					
	X		X <sup>(1)</sup>		L	m (kg)
	MIN	MAX	MIN	MAX		
100	183	283	193	293	151	33
200	183	383	193	393	252	35
300	183	483	208	508	366	38
400	183	583	208	608	466	41
500	183	683	233	733	591	45
600	183	783	233	833	691	47
800	183	983	248	1048	906	53
1000	183	1183	258	1258	1116	59
1200	183	1383	283	1483	1341	65

行程 (mm) Journey	D S					
	X		X <sup>(1)</sup>		L	m (kg)
	MIN	MAX	MIN	MAX		
100	42	142	52	152	151	33
200	42	242	52	252	252	35
300	42	342	67	367	366	38
400	42	442	67	467	466	41
500	42	542	92	592	591	45
600	42	642	92	692	691	47
800	42	842	107	907	906	53
1000	42	1042	117	1117	1116	59
1200	42	1242	142	1342	1341	65



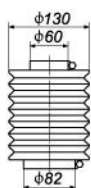
JWM150UM



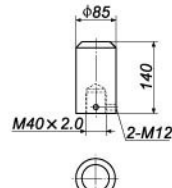
JWM150DM

行程 (mm) Journey	U M					
	X		X <sup>(1)</sup>		L	m (kg)
	MIN	MAX	MIN	MAX		
100	219	319	229	329	151	37
200	219	419	229	429	252	40
300	219	519	244	544	366	43
400	219	619	244	644	466	46
500	219	719	269	769	591	49
600	219	819	269	869	691	52
800	219	1019	284	1084	906	58
1000	219	1219	294	1294	1116	64
1200	219	1419	319	1519	1341	69

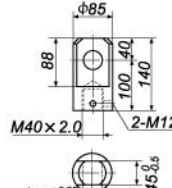
行程 (mm) Journey	D M					
	X		X <sup>(1)</sup>		L	m (kg)
	MIN	MAX	MIN	MAX		
100	42	142	52	152	151	37
200	42	242	52	252	252	40
300	42	342	67	367	366	43
400	42	442	67	467	466	46
500	42	542	92	592	591	49
600	42	642	92	692	691	52
800	42	842	107	907	906	58
1000	42	1042	117	1117	1116	64
1200	42	1242	142	1342	1341	69



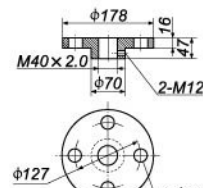
J



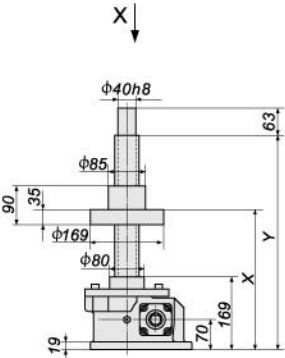
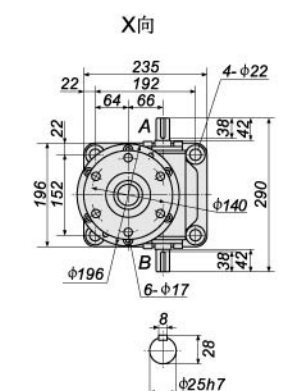
B



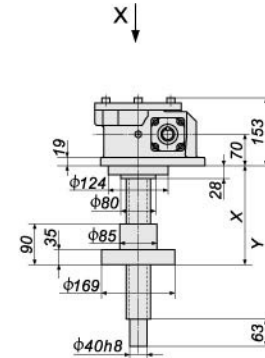
I



M



JWM150UR



JWM150DR

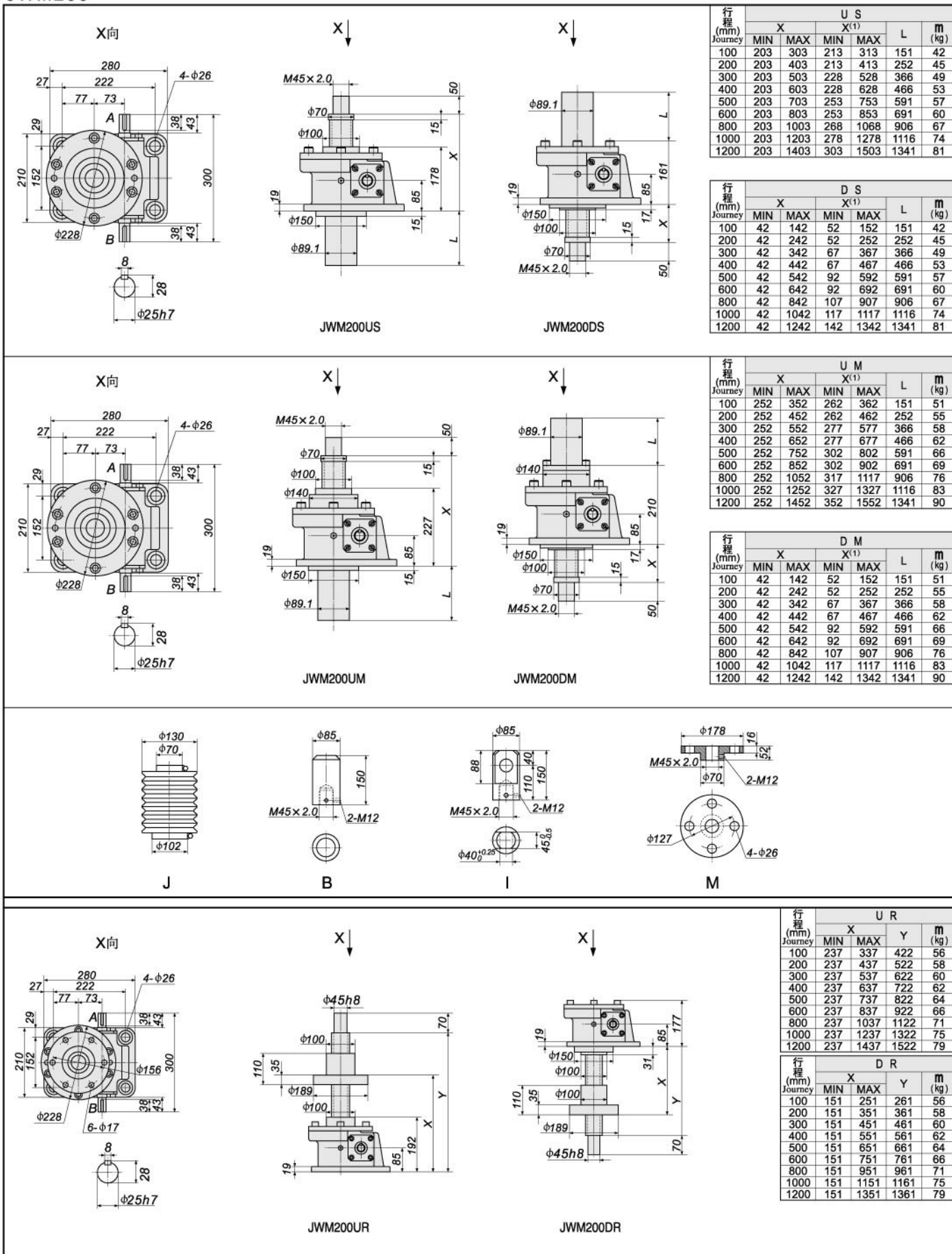
行程 (mm) Journey	U R				
	X		Y	m (kg)	
	MIN	MAX			
100	214	314	379	40	
200	214	414	479	42	
300	214	514	579	43	
400	214	614	679	45	
500	214	714	779	46	
600	214	814	879	48	
800	214	1014	1079	51	
1000	214	1214	1279	54	
1200	214	1414	1479	57	

行程 (mm) Journey	D R			
	X		Y	m (kg)
	MIN	MAX		
100	128	228	239	40
200	128	328	339	42
300	128	428	439	43
400	128	528	539	45
500	128	628	639	46
600	128	728	739	48
800	128	928	939	51
1000	128	1128	1139	54
1200	128	1328	1339	57

注: X<sup>(1)</sup> 为加防尘罩时尺寸。

Note: "X<sup>(1)</sup>" is the dimension of jack with dust hood.

JWM200



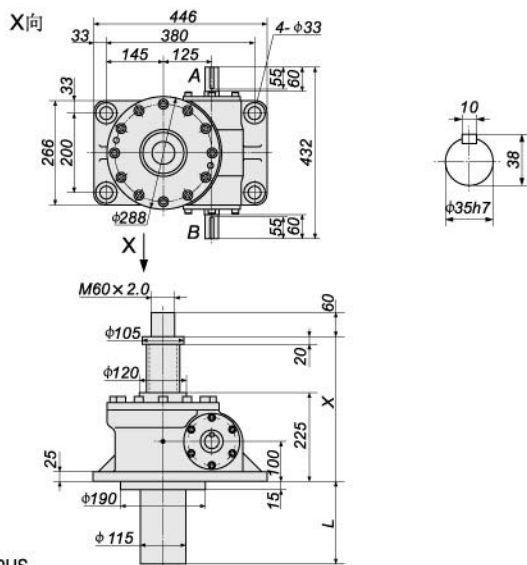
注: X<sup>(1)</sup> 为加防尘罩时尺寸。

Note: "X<sup>(1)</sup>" is the dimension of jack with dust hood.



### JWM300

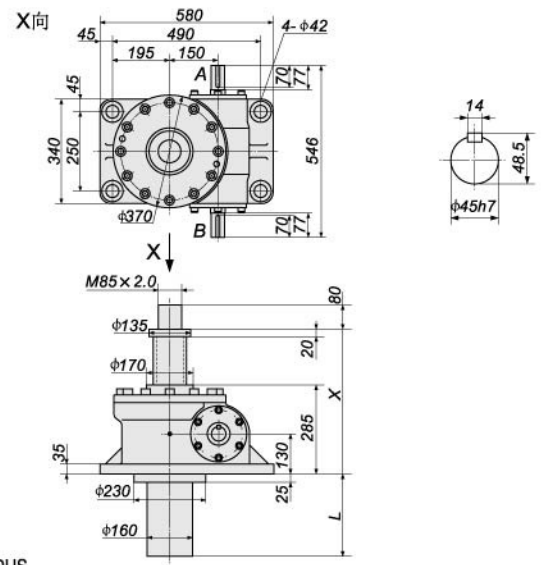
行程 (mm) Journey	U S					D S					m (kg)
	X		X <sup>(1)</sup>		L	X		X <sup>(1)</sup>		L	
	MIN	MAX	MIN	MAX		MIN	MAX	MIN	MAX		
100	255	355	265	365	160	55	155	65	165	160	118
200	255	455	265	465	260	55	255	65	265	260	123
300	255	555	280	580	375	55	355	80	380	375	128
400	255	655	280	680	475	55	455	80	480	475	134
500	255	755	295	795	590	55	555	95	595	590	139
600	255	855	295	895	690	55	655	95	695	690	145
800	255	1055	310	1110	905	55	855	110	910	905	155
1000	255	1255	330	1330	1125	55	1055	130	1130	1125	167
1200	255	1455	340	1540	1335	55	1255	140	1340	1335	177
1500	255	1755	365	1865	1660	55	1555	165	1665	1660	194



JWM300US

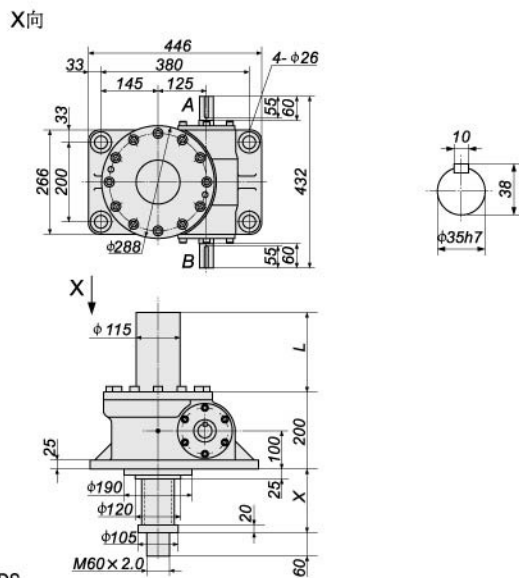
### JWM500

行程 (mm) Journey	U S					D S					m (kg)
	X		X <sup>(1)</sup>		L	X		X <sup>(1)</sup>		L	
	MIN	MAX	MIN	MAX		MIN	MAX	MIN	MAX		
100	315	415	320	420	165	55	155	60	160	165	248
200	315	515	320	520	265	55	255	60	260	265	260
300	315	615	340	640	385	55	355	80	380	385	273
400	315	715	340	740	485	55	455	80	480	485	284
500	315	815	350	850	395	55	555	90	590	395	297
600	315	915	350	950	695	55	655	90	690	695	308
800	315	1115	365	1165	910	55	855	105	905	910	332
1000	315	1315	380	1380	1125	55	1055	120	1120	1125	357
1200	315	1515	390	1590	1335	55	1255	130	1330	1335	380
1500	315	1815	410	1910	1665	55	1555	150	1650	1665	417
2000	315	2315	445	2445	2190	55	2055	185	2185	2190	477

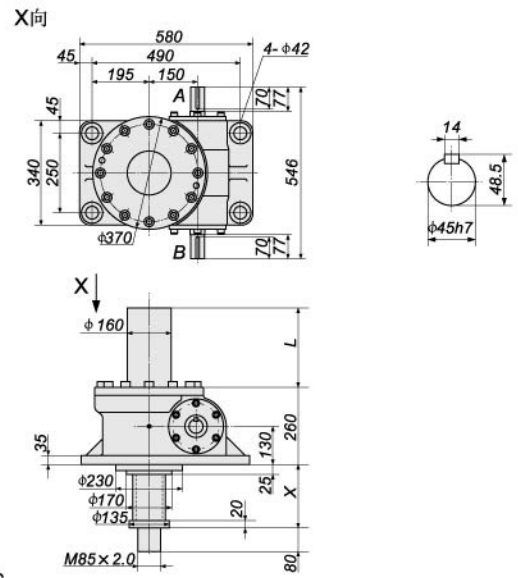


JWM500US

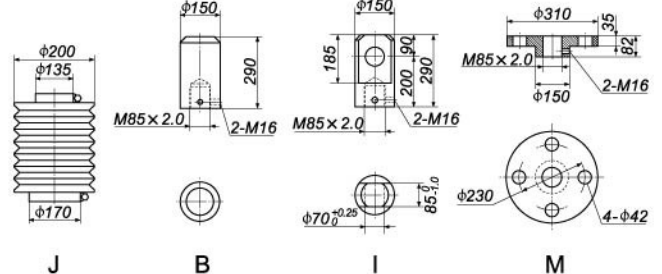
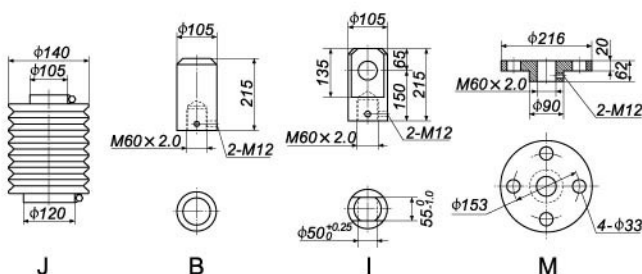
JW



JWM300DS



JWM500DS



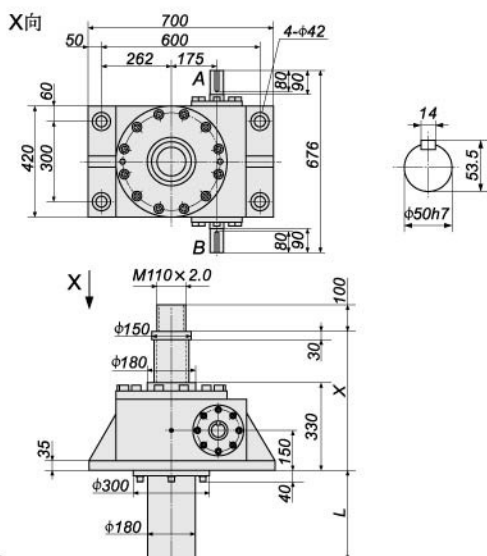
注: X<sup>(1)</sup> 为加防尘罩时尺寸。

Note: "X<sup>(1)</sup>" is the dimension of jack with dust hood.

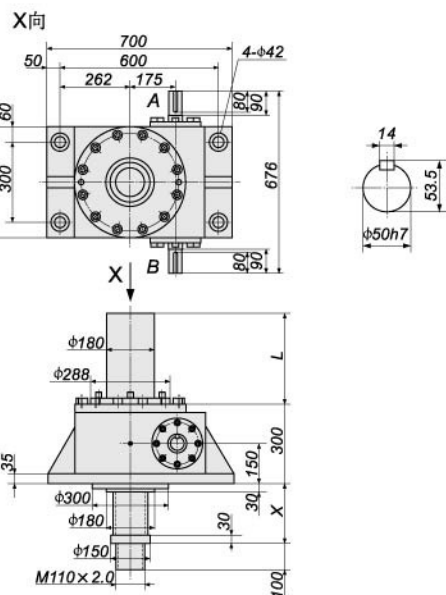


### JWM750

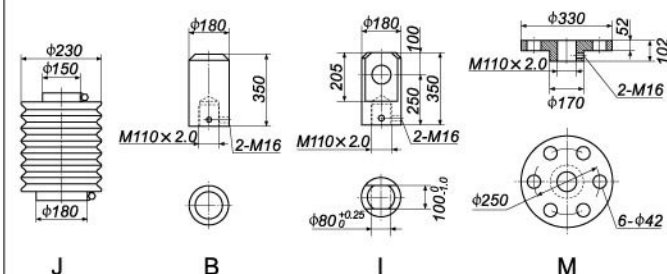
行程 (mm) Journey	U S					D S					m (kg)
	X		X <sup>(1)</sup>		L	X		X <sup>(1)</sup>		L	
	MIN	MAX	MIN	MAX		MIN	MAX	MIN	MAX		
100	370	470	380	480	165	70	170	80	180	165	370
200	370	570	380	580	265	70	270	80	280	265	384
300	370	670	395	695	385	70	370	95	395	385	401
400	370	770	395	795	485	70	470	95	495	485	415
500	370	870	410	910	595	70	570	110	610	595	431
600	370	970	410	1010	695	70	670	110	710	695	445
800	370	1170	425	1225	910	70	870	125	925	910	476
1000	370	1370	435	1435	1125	70	1070	135	1135	1125	506
1200	370	1570	450	1650	1335	70	1270	150	1350	1335	536
1500	370	1870	465	1965	1665	70	1570	165	1665	1665	581
2000	370	2370	500	2500	2190	70	2070	200	2200	2190	657



JWM750US



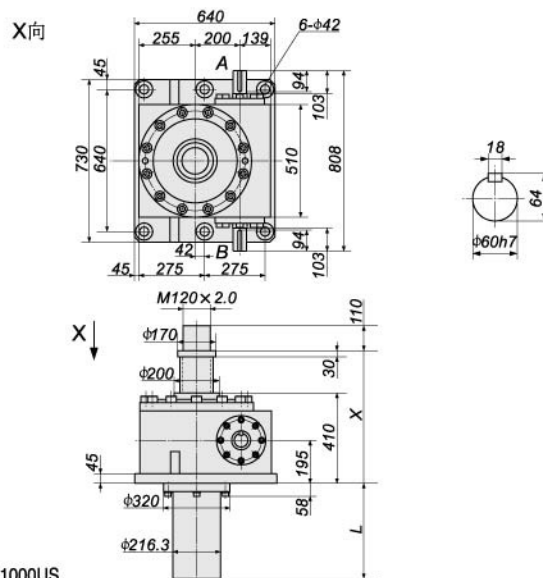
JWM750DS



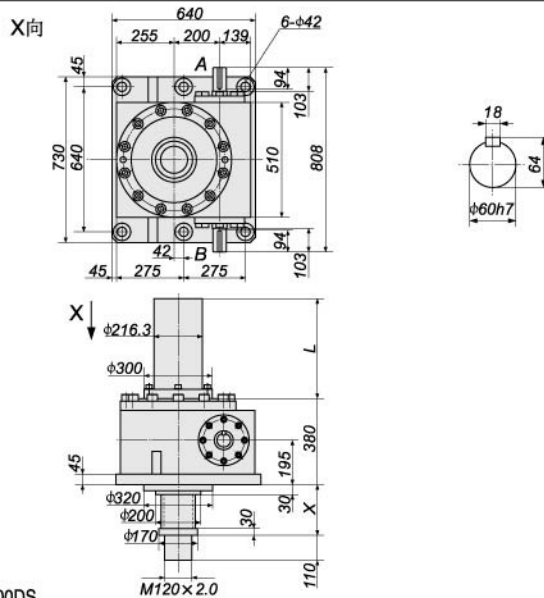
注: X<sup>(1)</sup> 为加防尘罩时尺寸。

### JWM1000

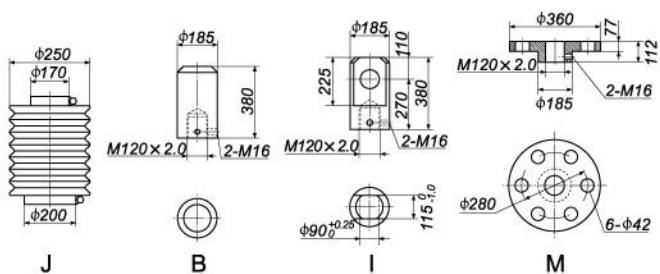
行程 (mm) Journey	U S					D S					m (kg)
	X		X <sup>(1)</sup>		L	X		X <sup>(1)</sup>		L	
	MIN	MAX	MIN	MAX		MIN	MAX	MIN	MAX		
100	450	550	460	560	165	70	170	80	180	165	748
200	450	650	460	660	265	70	270	80	280	265	766
300	450	750	475	775	385	70	370	95	395	385	787
400	450	850	475	875	485	70	470	95	495	485	805
500	450	950	485	985	595	70	570	105	605	595	824
600	450	1050	485	1085	695	70	670	105	705	695	842
800	450	1250	500	1300	910	70	870	120	920	910	881
1000	450	1450	510	1510	1125	70	1070	130	1130	1125	918
1200	450	1650	525	1725	1335	70	1270	145	1345	1335	957
1500	450	1950	545	2045	1665	70	1570	165	1665	1665	1014
2000	450	2450	575	2575	2190	70	2070	195	2195	2190	1109



JWM1000US

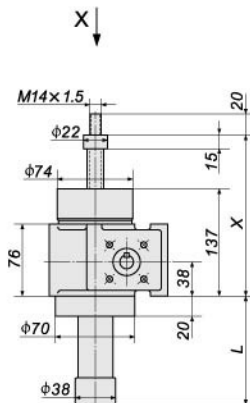
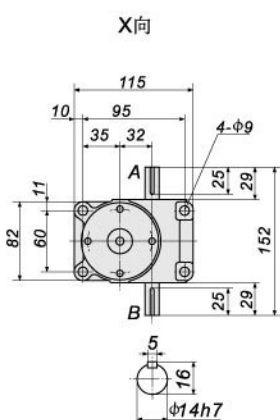


JWM1000DS

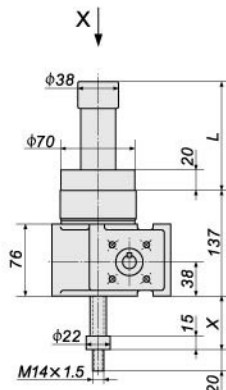


Note: "X<sup>(1)</sup>" is the dimension of jack with dust hood.

JWB010



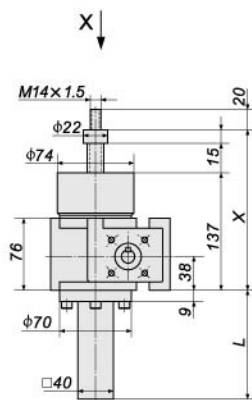
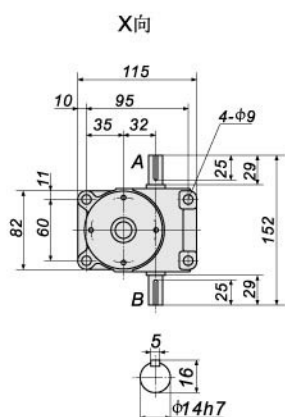
JWB010US



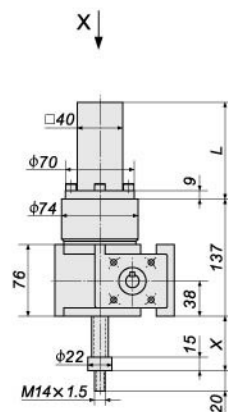
JWB010DS

行程 (mm) Journey	U S				
	X		X <sup>(1)</sup>		L
	MIN	MAX	MIN	MAX	
100	162	262	212	312	194
200	162	362	212	412	294
300	162	462	252	552	434
400	162	562	252	652	534
500	162	662	287	787	669
600	162	762	287	887	769

行程 (mm) Journey	D S				
	X		X <sup>(1)</sup>		L
	MIN	MAX	MIN	MAX	
100	25	125	75	175	194
200	25	225	75	275	294
300	25	325	115	415	434
400	25	425	115	515	534
500	25	525	150	650	669
600	25	625	150	750	769



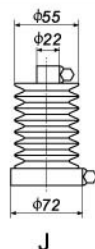
JWB010UM



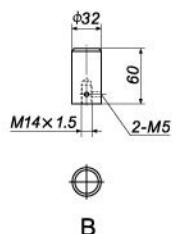
JWB010DM

行程 (mm) Journey	U M				
	X		X <sup>(1)</sup>		L
	MIN	MAX	MIN	MAX	
100	162	262	212	312	194
200	162	362	212	412	294
300	162	462	252	552	434
400	162	562	252	652	534
500	162	662	287	787	669
600	162	762	287	887	769

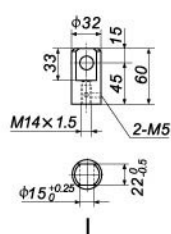
行程 (mm) Journey	D M				
	X		X <sup>(1)</sup>		L
	MIN	MAX	MIN	MAX	
100	25	125	75	175	194
200	25	225	75	275	294
300	25	325	115	415	434
400	25	425	115	515	534
500	25	525	150	650	669
600	25	625	150	750	769



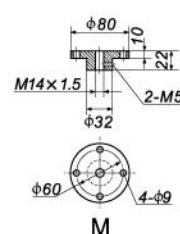
J



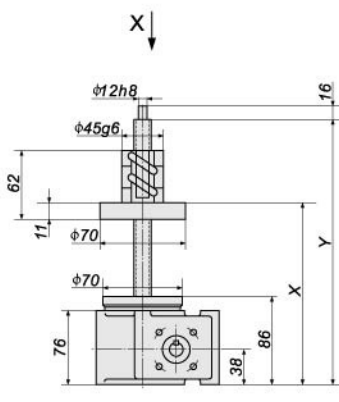
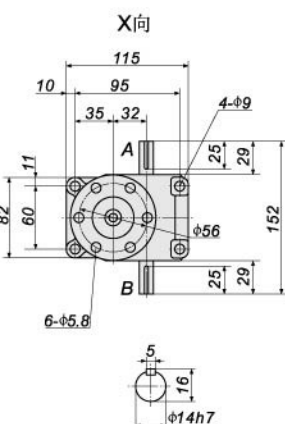
B



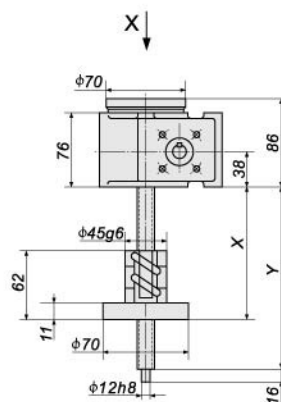
I



M



JWB010UR



JWB010DR

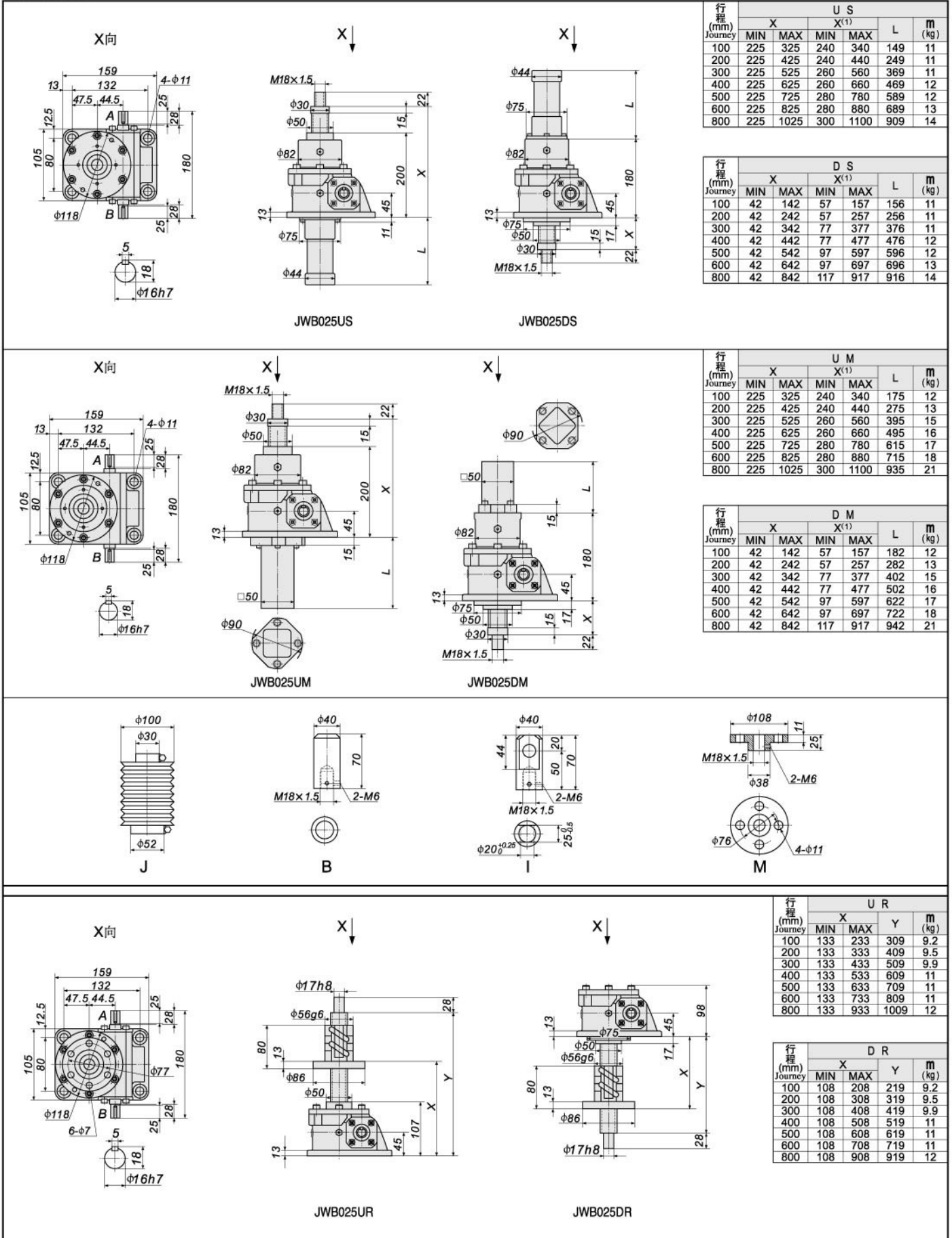
行程 (mm) Journey	U R			
	X		Y	m (kg)
	MIN	MAX		
100	108	208	265	5.9
200	108	308	365	6.1
300	108	408	465	6.4
400	108	508	565	6.6
500	108	608	665	6.8
600	108	708	765	7.0

行程 (mm) Journey	D R			
	X		Y	m (kg)
	MIN	MAX		
100	69	169	179	5.9
200	69	269	279	6.1
300	69	369	379	6.4
400	69	469	479	6.6
500	69	569	579	6.8
600	69	669	679	7.0

注: X<sup>(1)</sup> 为加防尘罩时尺寸。

Note: "X<sup>(1)</sup>" is the dimension of jack with dust hood.

JWB025

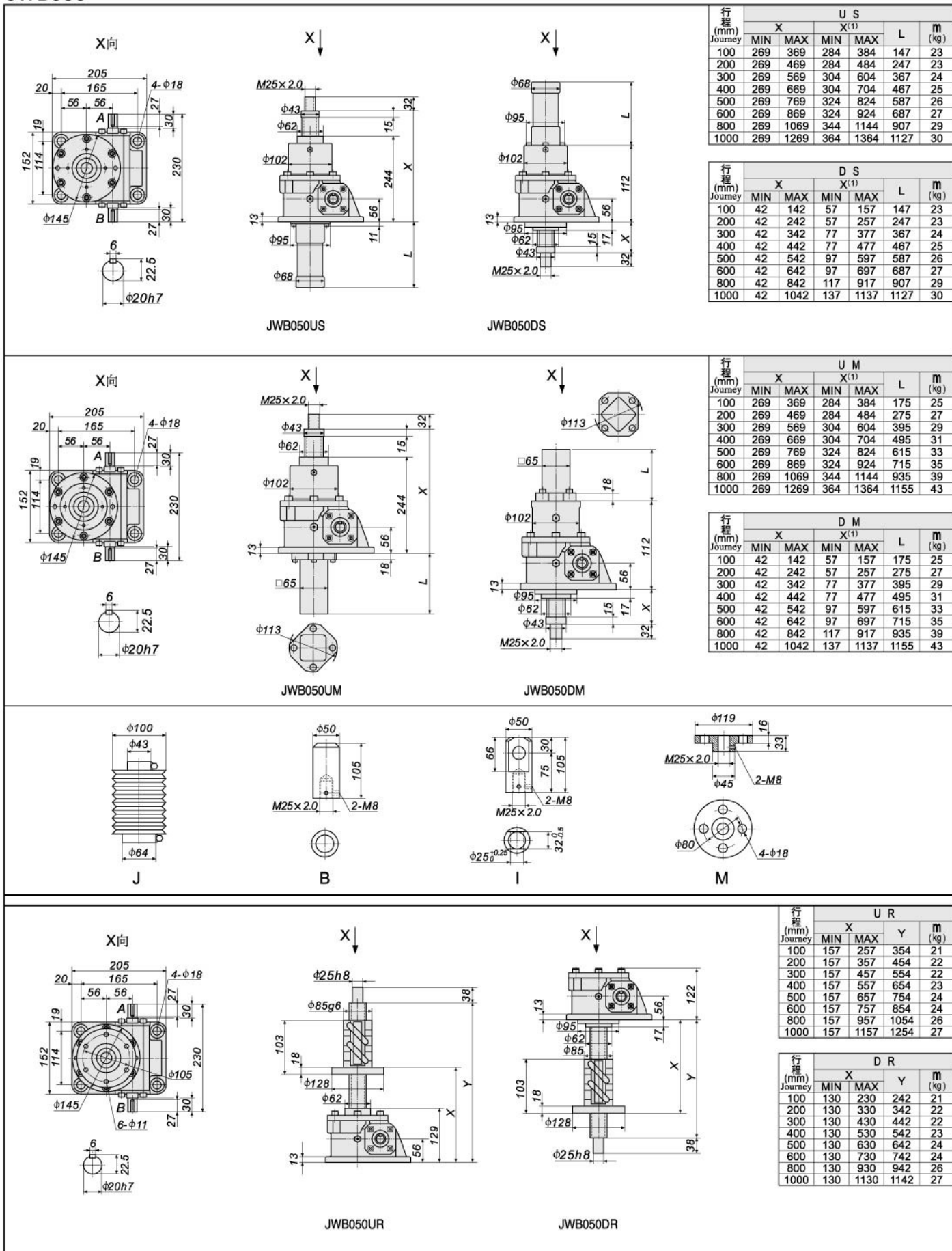


注: X<sup>(1)</sup> 为加防尘罩时尺寸。

Note: "X<sup>(1)</sup>" is the dimension of jack with dust hood.



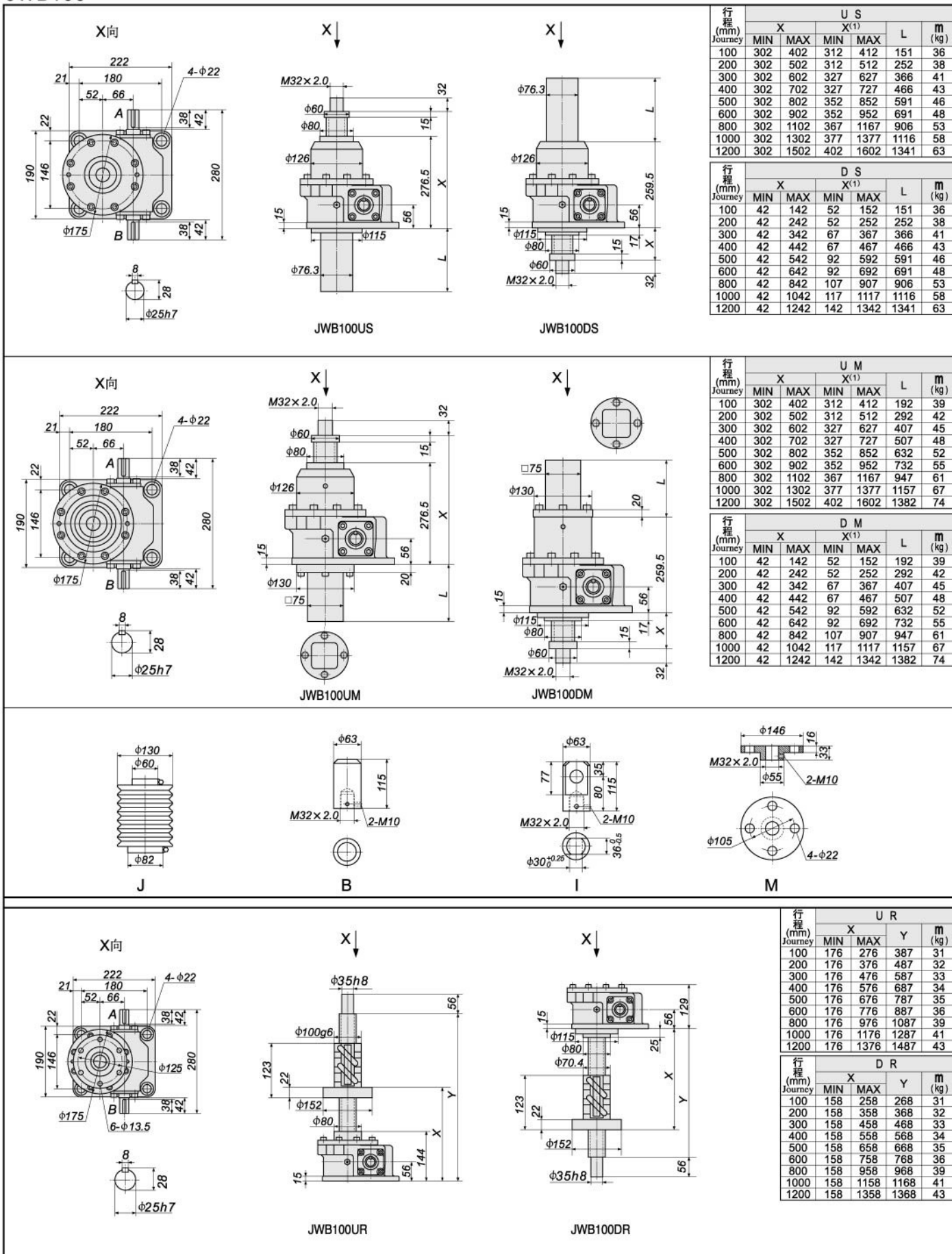
JWB050



注: X<sup>(1)</sup> 为加防尘罩时尺寸。

Note: "X<sup>(1)</sup>" is the dimension of jack with dust hood.

JWB100

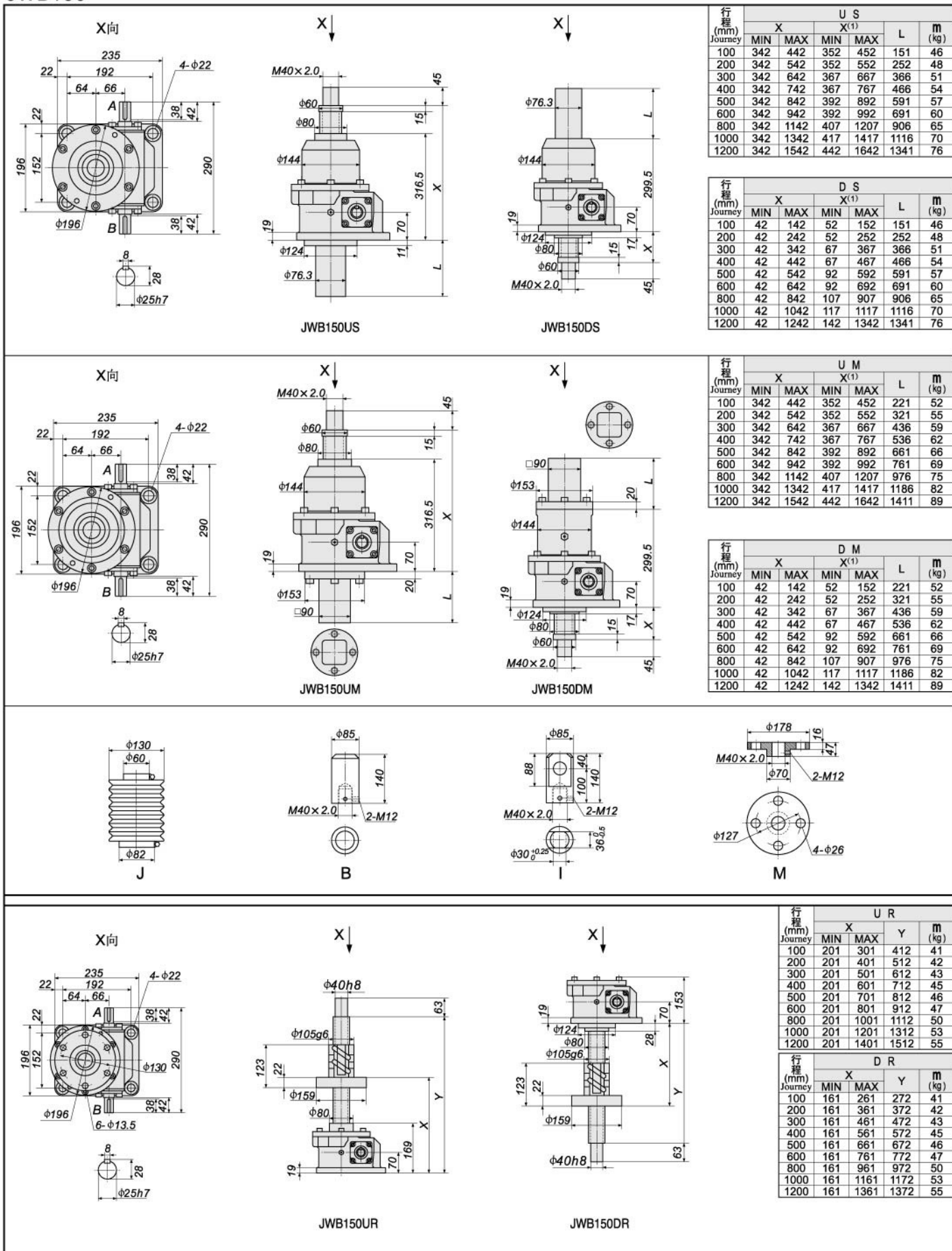


注: X<sup>(1)</sup> 为加防尘罩时尺寸。

Note: "X<sup>(1)</sup>" is the dimension of jack with dust hood.



JWB150

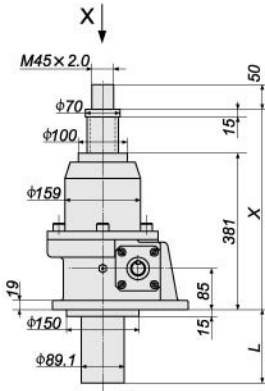
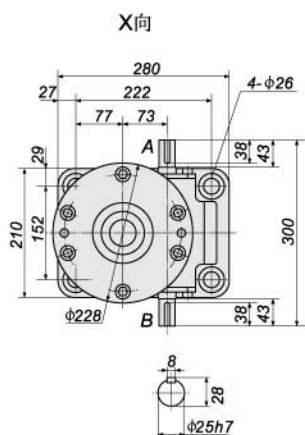


注: X<sup>(1)</sup> 为加防尘罩时尺寸。

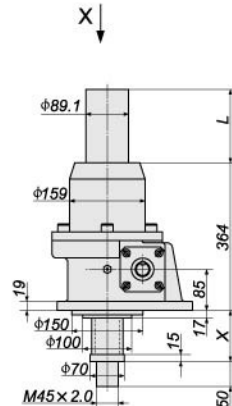
Note: "X<sup>(1)</sup>" is the dimension of jack with dust hood.



JWB200



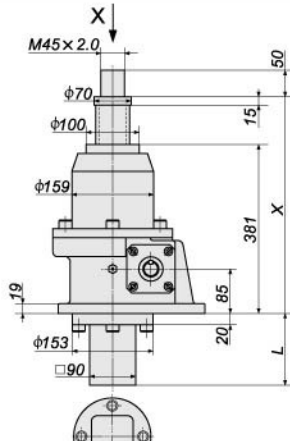
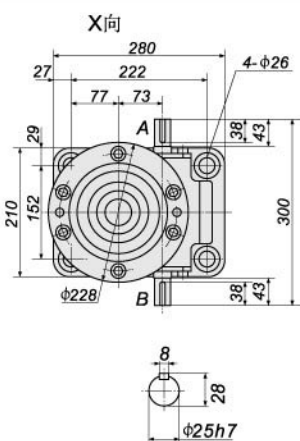
JWB200US



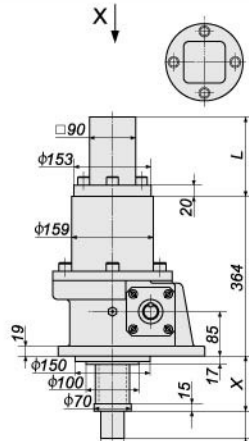
JWB200DS

行程 (mm) Journey	U S				
	X		X <sup>(1)</sup>		L
	MIN	MAX	MIN	MAX	
100	406	506	416	516	151
200	406	606	416	616	252
300	406	706	431	731	366
400	406	806	431	831	466
500	406	906	456	956	591
600	406	1006	456	1056	691
800	406	1206	471	1271	906
1000	406	1406	481	1481	1116
1200	406	1606	506	1706	1357

行程 (mm) Journey	D S				
	X		X <sup>(1)</sup>		L
	MIN	MAX	MIN	MAX	
100	42	142	52	152	151
200	42	242	52	252	252
300	42	342	67	367	366
400	42	442	67	467	466
500	42	542	92	592	591
600	42	642	92	692	691
800	42	842	107	907	906
1000	42	1042	117	1117	1116
1200	42	1242	142	1342	1357



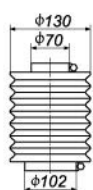
JWB200UM



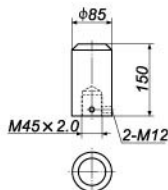
JWB200DM

行程 (mm) Journey	U M				
	X		X <sup>(1)</sup>		L
	MIN	MAX	MIN	MAX	
100	406	506	416	516	230
200	406	606	416	616	330
300	406	706	431	731	445
400	406	806	431	831	545
500	406	906	456	956	670
600	406	1006	456	1056	770
800	406	1206	471	1271	985
1000	406	1406	481	1481	1195
1200	406	1606	506	1706	1420

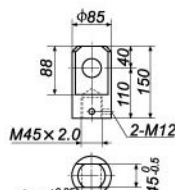
行程 (mm) Journey	D M				
	X		X <sup>(1)</sup>		L
	MIN	MAX	MIN	MAX	
100	42	142	52	152	230
200	42	242	52	252	330
300	42	342	67	367	445
400	42	442	67	467	545
500	42	542	92	592	670
600	42	642	92	692	770
800	42	842	107	907	985
1000	42	1042	117	1117	1195
1200	42	1242	142	1342	1420



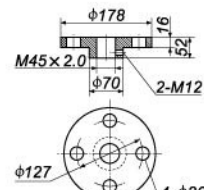
J



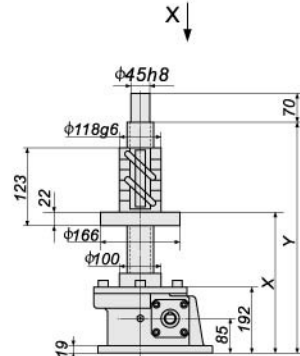
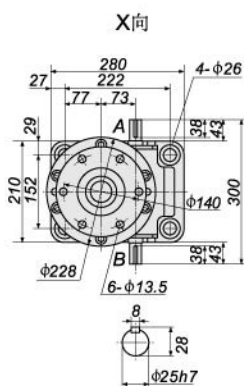
B



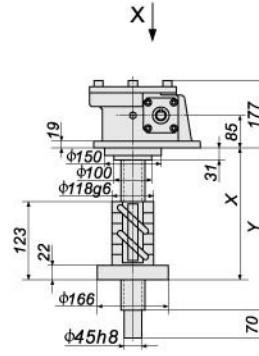
I



M



JWB200UR



JWB200DR

行程 (mm) Journey	U R			
	X		Y	
	MIN	MAX	MIN	MAX
100	224	324	435	56
200	224	424	535	58
300	224	524	635	60
400	224	624	735	62
500	224	724	835	65
600	224	824	935	67
800	224	1024	1135	71
1000	224	1224	1335	76
1200	224	1424	1535	80

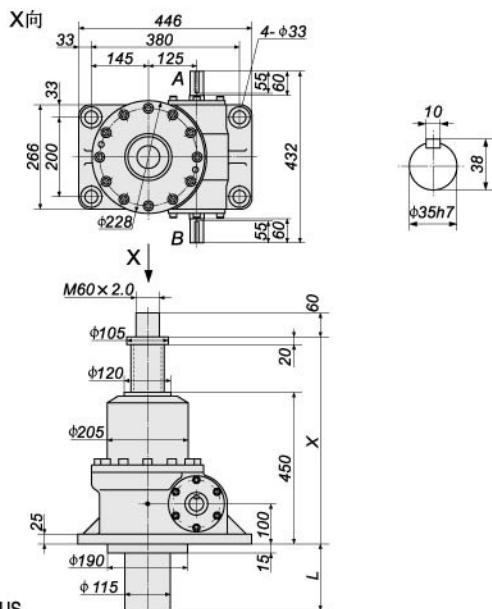
行程 (mm) Journey	D R			
	X		Y	
	MIN	MAX	MIN	MAX
100	164	264	274	56
200	164	364	374	58
300	164	464	474	60
400	164	564	574	62
500	164	664	674	65
600	164	764	774	67
800	164	964	974	71
1000	164	1164	1174	76
1200	164	1364	1374	80

注: X<sup>(1)</sup> 为加防尘罩时尺寸。

Note: "X<sup>(1)</sup>" is the dimension of jack with dust hood.

### JWB300

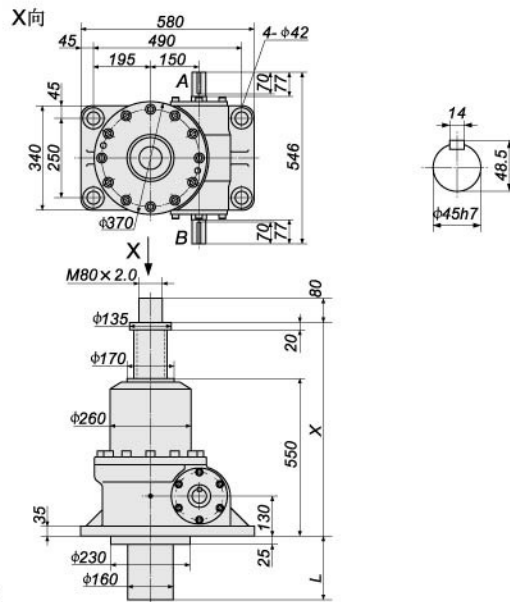
行程 (mm) Journey	U S					D S					m (kg)
	X		X <sup>(1)</sup>		L	X		X <sup>(1)</sup>		L	
	MIN	MAX	MIN	MAX		MIN	MAX	MIN	MAX		
100	480	580	490	590	160	55	155	65	165	160	153
200	480	680	490	690	260	55	255	65	265	260	159
300	480	780	505	805	375	55	355	80	380	375	166
400	480	880	505	905	475	55	455	80	480	475	172
500	480	980	520	1020	590	55	555	95	595	590	178
600	480	1080	520	1120	690	55	655	95	695	690	184
800	480	1280	535	1335	905	55	855	110	910	905	197
1000	480	1480	555	1555	1125	55	1050	130	1130	1125	210
1200	480	1680	565	1765	1335	55	1255	140	1340	1335	223
1500	480	1980	590	2090	1660	55	1555	165	1665	1660	242



JWB300US

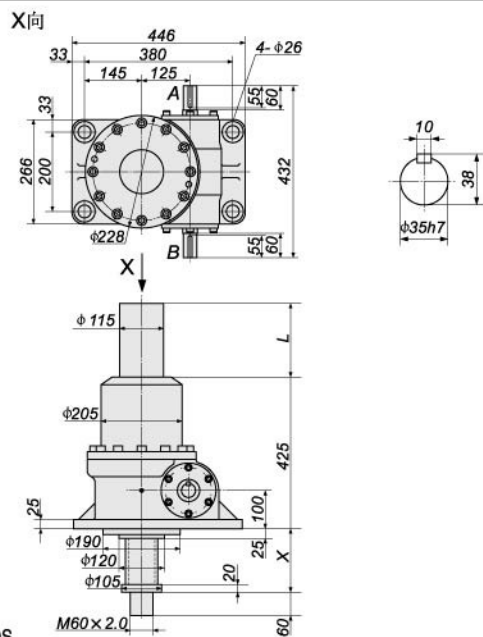
### JWB500

行程 (mm) Journey	U S					D S					m (kg)
	X		X <sup>(1)</sup>		L	X		X <sup>(1)</sup>		L	
	MIN	MAX	MIN	MAX		MIN	MAX	MIN	MAX		
100	580	680	585	685	165	55	155	60	160	165	310
200	580	780	585	785	265	55	255	60	260	265	320
300	580	880	605	905	385	55	355	80	380	385	330
400	580	980	605	1005	485	55	455	80	480	485	340
500	580	1080	615	1115	595	55	555	90	590	595	350
600	580	1180	615	1215	695	55	655	90	690	695	359
800	580	1380	630	1430	910	55	855	105	905	910	378
1000	580	1580	645	1645	1125	55	1050	120	1120	1125	398
1200	580	1780	655	1855	1335	55	1255	130	1330	1335	417
1500	580	2080	675	2175	1665	55	1555	150	1650	1665	446

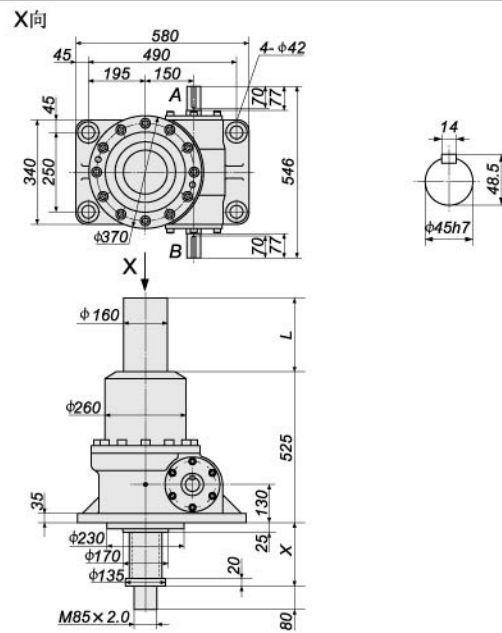


JWB500US

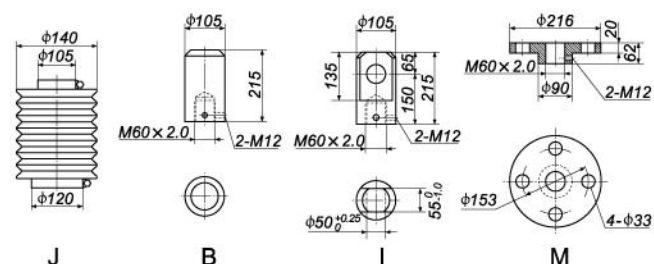
JW



JWB300DS



JWB500DS

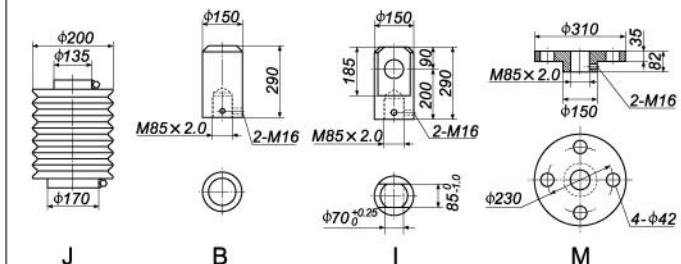


J

B

I

M



J

B

I

M

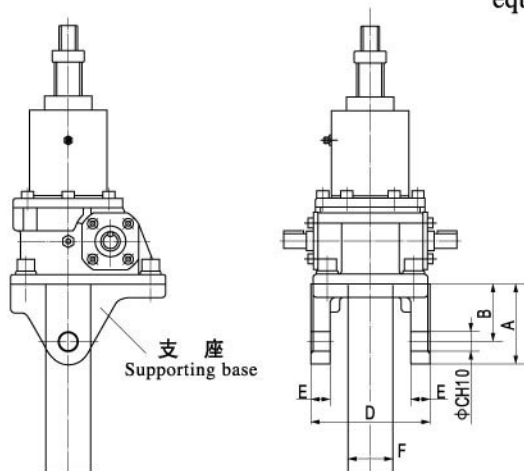
注: X<sup>(1)</sup> 为加防尘罩时尺寸。

Note: "X<sup>(1)</sup>" is the dimension of jack with dust hood.

## 附件的确认:

### C型安装:

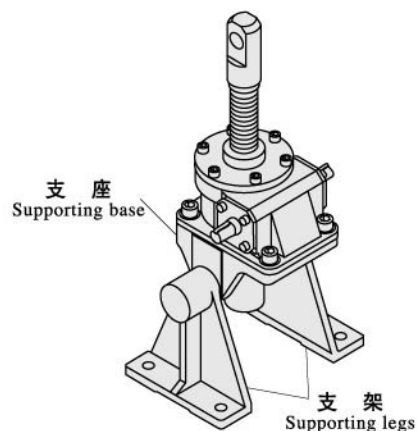
支座安装广泛应用于开关装置、倾斜装置。如图:



## Accessory confirmation:

### Support (Mode C mounting):

Support-mounted mode widely apply to tilting equipment.



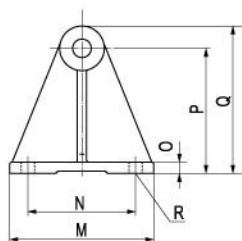
型 号	A	B	C	D	E	F
010	75	60	15	86	15	35
025	100	75	20	115	20	45
050	105	75	25	158	25	58
100	145	100	40	201	30	76.3
150	155	105	50	224	44	76.3
200	173	110	63	244	50	89.1

## 支架

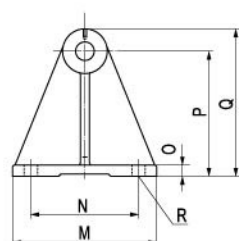
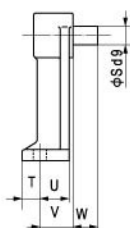
支座与支架配合, 实现多方位升降。

## Supporting legs:

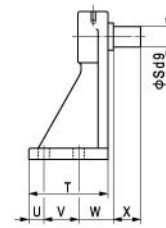
Matching supporting base and legs realizes multi-angles lifting and lowering.



JW010-JW050



JW100-JW200



型 号	M	N	O	P	Q	R	S	T	U	V	W	X
010	180	130	15	150	178	2-Φ18	15	25	40	45	17	-
025	180	130	15	150	178	2-Φ18	20	25	40	45	30	-
050	200	150	15	170	200	2-Φ18	25	25	40	45	35	-
100	280	220	22	240	290	4-Φ22	40	159	30	70	70	55
150	360	280	27	300	360	4-Φ33	50	195	40	85	85	70
200	400	320	30	380	450	4-Φ33	63	210	40	90	90	75



手轮盘:

此件只适应于JWM型工作在冲击、振动不大的场合，  
请不要应用在JWB结构中。  
手动操作扭矩=所需输入扭矩/手轮操作盘半径

Hand wheel:

Hand wheel only apply to JWM under light  
shock or vibration condition but not for JWB.  
 $M_{handwheel}=M_{required}/r_{handwheel}$

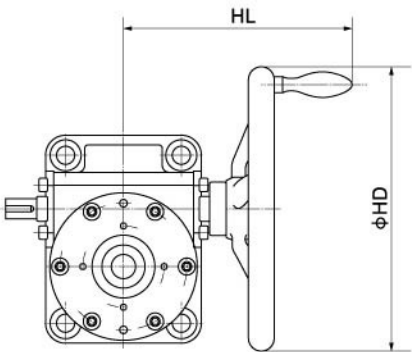
型号表示:

JWM025US-H200MI

升降机型号 (见180页)  
Refer to 180页

- NV100

手轮盘型号  
Hand wheel mode



尺寸表:

Dimension sheet: (mm)

型 号 Type	NV80		NV100		NV200		NV250		NV450	
	HD	HL	HD	HL	HD	HL	HD	HL	HD	HL
JWM010	80	122	100	125	—	—	—	—	—	—
JWM025	—	—	100	140	200	198	—	—	—	—
JWM050	—	—	—	—	200	221	250	229	—	—
JWM100	—	—	—	—	—	—	250	242	450	295
JWM150	—	—	—	—	—	—	250	247	450	300
JWM200	—	—	—	—	—	—	—	—	450	304

注：手轮为外购件，以定货时实物尺寸为准。

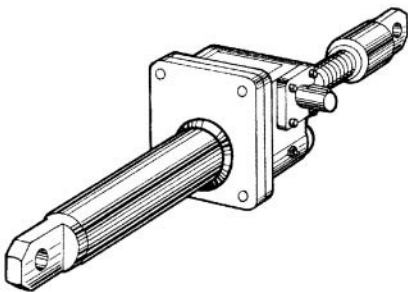
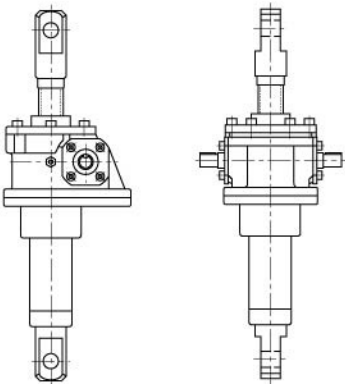
Note: The dimension of hand wheel is subject to product  
purchased from other factories.

双头输出:

适用于开闭装置、反转装置。

Double end output:

Apply to open and close devices, reversing devices.



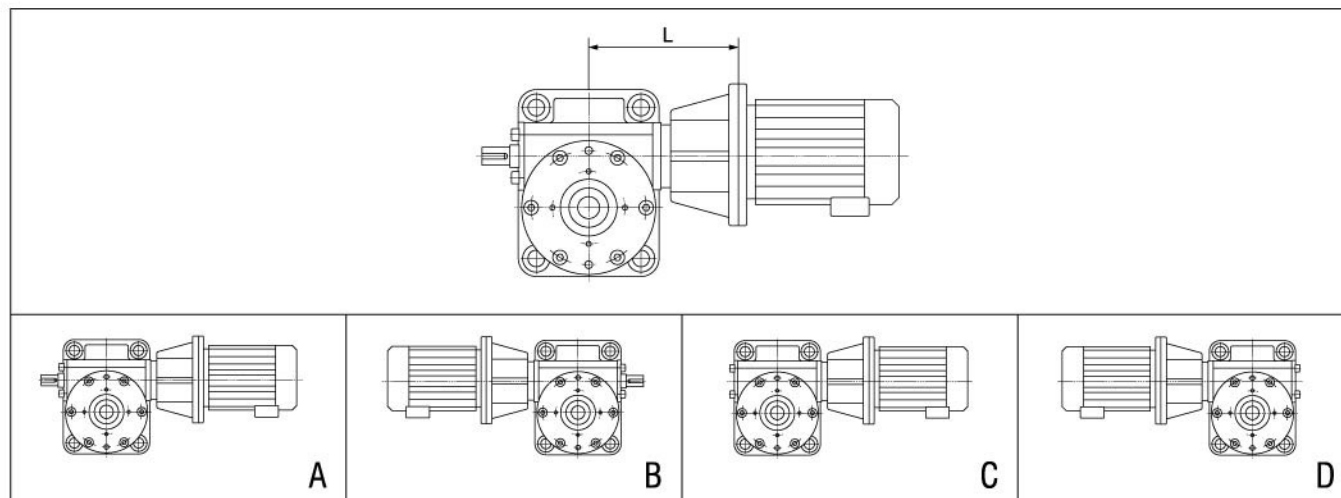
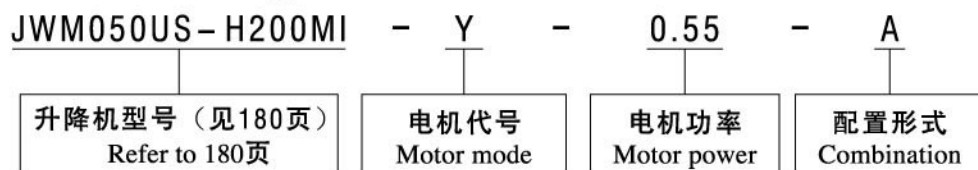
组合型式:

Combination of JW series:

电机直联:

Direct-connected-motor:

型号表示 Illustration of types:



型号	JWM010				JWM025						JWM050					
电机功率 (kW) Motor Power	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 *
L (mm)	136				142						170					

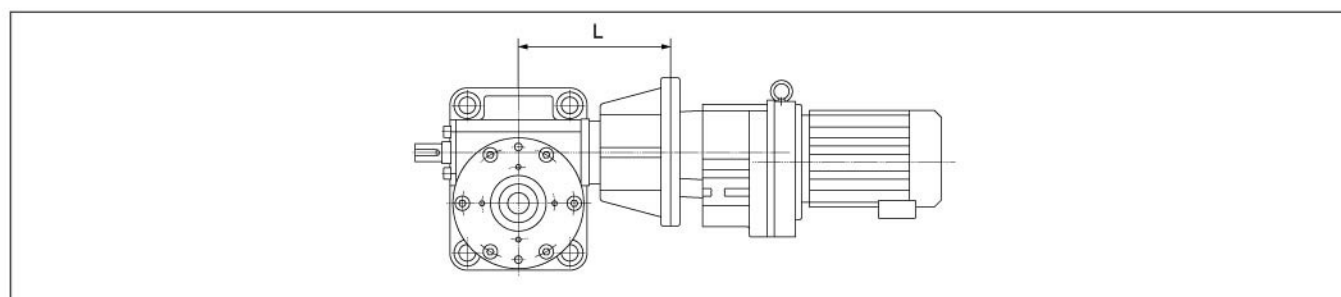
型号	JWM100						JWM150						JWM200					
电机功率 (kW) Motor Power	0.37	0.55	0.75	1.1	1.5	2.2 *	0.55	0.75	1.1	1.5	2.2 *	3 *	0.75	1.1	1.15	2.2	3	4 *
L (mm)	225						232						260					

注: 1.电机功率的选择应符合传动能力表;  
2.表中所列功率为4极电机功率;  
3.当与所联电机为6极或标有“\*”的电机为变频、制动时, 因电机过重, 应选择带有底脚安装的电机。

Note: 1. Motor power must accord with JM basic parameter table.  
2. 4-pole motor power are available in the table.  
3. 6-pole motors or “\*” frequency conversion and braking motors should be foot-mounted for their heavy weight.

与减速电机组合式 Combination with gear motor:

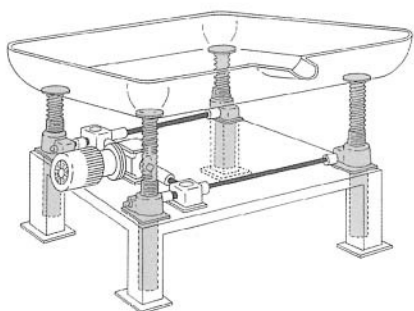
型号表示 Illustration of types:



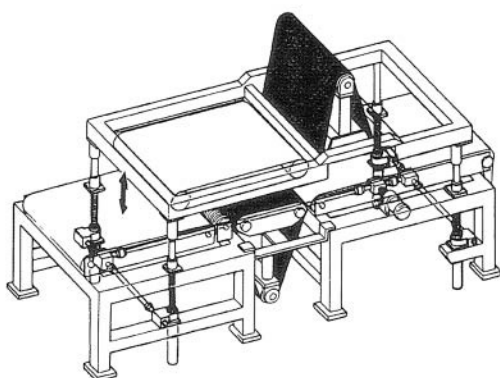
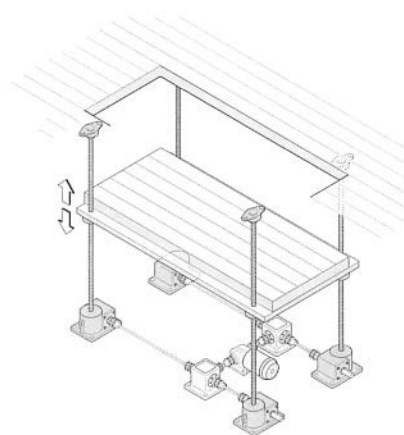
注: 当直联的减速电机重量过重时, 请咨询我司。 Note: If gear motor is over weight, consult us please.

应用举例

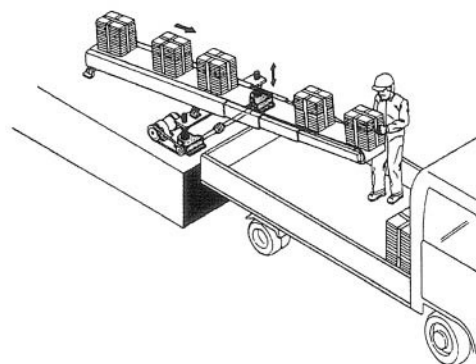
Application example:



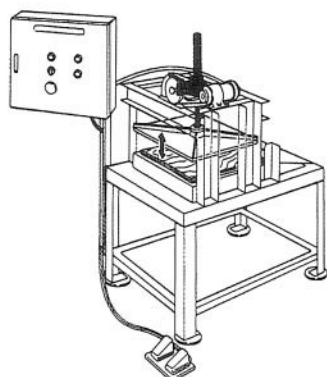
平台升降  
Ascending and descending of flat slab



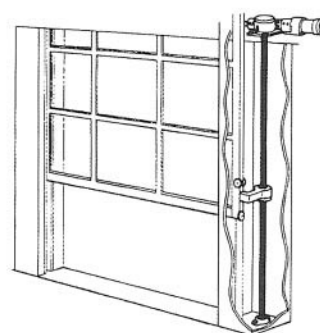
调整表面加工机的工作高度  
Adjust operation height of surface machining tool



调整滑动传送带的倾斜程度  
Adjust inclination pitch of conveyer apron



更改校正器的作业高度  
Operation height of straightening machine



大型窗户（门）自动开关  
Automatic switch on large windows (doors)

JW