

杭州兴达机械有限公司
Hangzhou Xingda Machinery Co.,Ltd.

工厂地址: 中国浙江省杭州市萧山区新湾工业园区
Factory Address: Xinwan Industry, Xiaoshan, Hangzhou, Zhejiang, China
公司地址: 中国浙江省杭州市萧山区绿都泰富广场1-1809室
Office Add: 1-1809, Taifu Plaza, Xiaoshan, Hangzhou, Zhejiang, China

T: +86 571 2280 7860 F: +86 571 2280 7855
P: 311200 QQ: 5616 23288



www.xdmade.com

www.xdmade.com

SPEED REDUCER

意德 减速机

驾驭传动



杭州兴达机械有限公司

杭州兴达机械有限公司成立于1984年，总部设立于杭州，是一家集研发，生产，销售为一体，专业提供减速机，齿轮马达等动力传动解决方案的综合性企业。公司自行生产的E-WP, E-RV, E-VF, E-UDL型蜗轮蜗杆减速机，E-R, E-S, E-K, E-F型齿轮减速机，E-GM齿轮马达及为客户需求定制的专用非标减速机等在同行中处于领导地位。

兴达机械把握生产过程中的每个细节，全部通过ISO9001:2008质量管理体系认证，SGS认证，拥有3项发明专利，11项实用新型专利，是浙江省科技型企业，国家高新技术企业。公司拥有高级工程师20余人，高级技工300人，大专及以上学历占30%以上。

公司占地面积50亩，拥有现代化车间面积40,000平方米，拥有世界领先的CNC加工中心，磨齿机等生产设备和多项检测设备合计300多台。年产量20万台减速机。

公司的销售网络遍布122个国家及地区，228个城市，广泛的服务于钢铁行业，冶金行业，石油机械，食品机械，包装机械，陶瓷机械，纺织机械，印刷机械，木工机械，玻璃机械，化工机械，起重设备，船舶工业，清洁行业，高压开关及健身器材等各种领域。

兴达机械秉承“诚信经营，质量第一，开拓创新，与时俱进”的宗旨，以精湛的技术，优质的产品，完善的服务，朝管理规模化，市场国际化，产品优质化的方向发展。我们的目标是制造最高性价比的减速机，把兴达自主品牌意德EED打造成高端动力传动解决方案的全球供应商。

Hangzhou Xingda Machinery co.,ltd established on 1984, headquartered in HANGZHOU, CHINA, is a comprehensive enterprise that specializes in the research, production and sales of speed reducers. Our products E-WP, E-RV, E-VF, E-UDL series of worm gear speed reducers, E-R, E-S, E-K, E-F series of helical gear speed reducers, E-GM series of geared motors and the special customized of reducers are leading in the power gearbox manufacturing industries.

Xingda focus on the detail in the manufacturing process, passed the ISO9001:2008 certificate, SGS certificate, assures the high quality of our products. Our company has 3 Inventive patents, 11 new practical patents, and awarded the Science and technology enterprises in Zhejiang Province, the national high-tech enterprises. We have more than 20 Senior Engineers, more than 200 Technical workers. The Tertiary and higher education accounted for more than 30%.

Xingda covers an area of 50 acres, with modern workshop area of 40,000 square meters. It has a total of more than 300 sets of the world's leading CNC machining centers, grinding machine centers and other production equipment and testing equipment. The annual output is 200,000 units.

We have the distribution of regional service centers, sales and service department across the 122 countries and zone, 228 cities, services to the steel industries, metallurgical industries, petroleum machinery, food machinery, packaging machinery, ceramic machinery, textile machinery, printing machinery, woodworking machinery, glass machinery, chemical machinery, lifting equipment, shipbuilding industry, cleaning industry, high-voltage switch and fitness equipment ect..

Xingda adheres to the "Honesty, Quality, Innovation, Advancing". By superb technology, quality products, perfect service, we are developing standardized management, the international market, and the super quality products. Our goal is to create the most high Efficient & Economic speed reducers, making EED a global supplier of advancing power transmission solutions Expert.

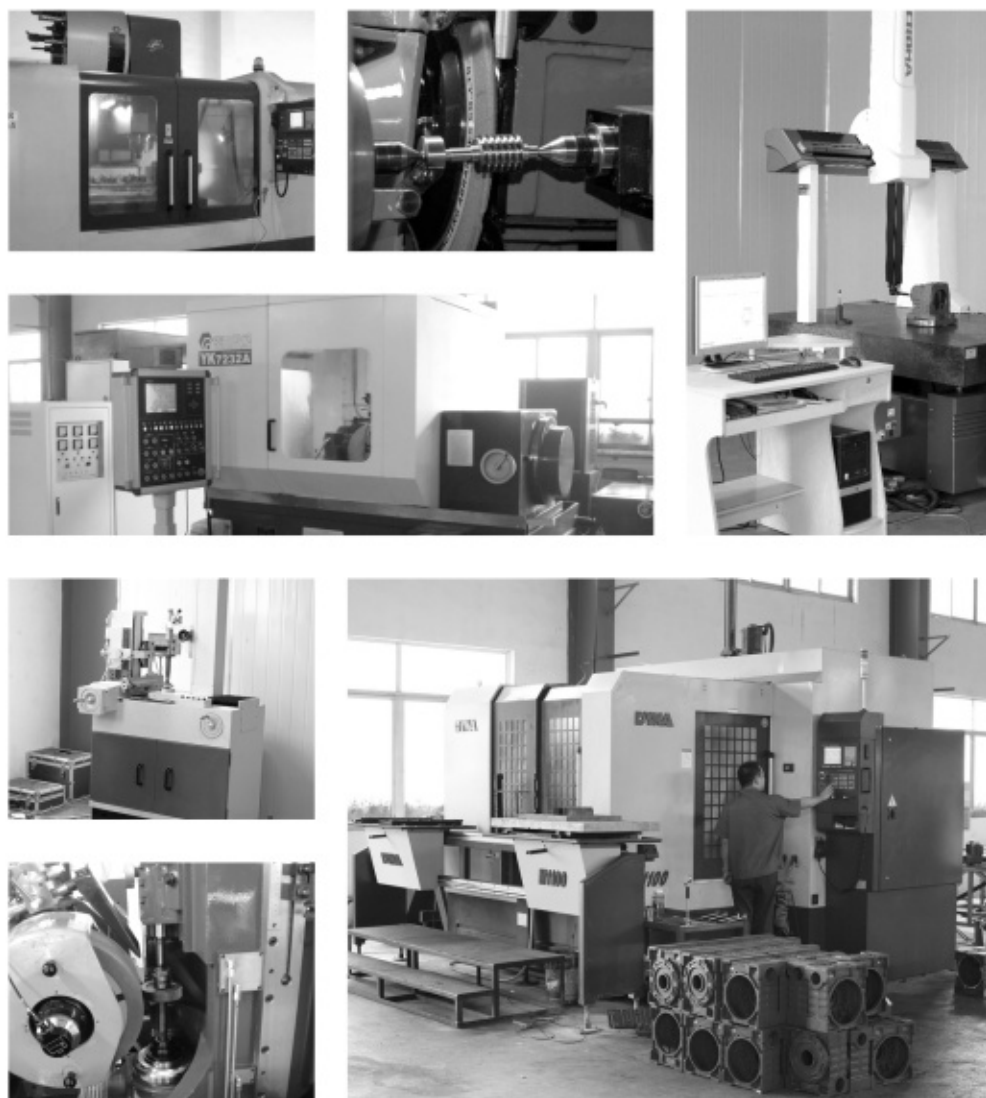
Xingda Machinery

EED
TRANSMISSION



工欲善其事，必先利其器

A workman must first sharpen his tools if he is to do his work well.



Machining equipment

加工设备

国内一流自动化加工设备为零件加工精度的稳定性提供最稳固的基础。

The first-rate automatic equipments have provided solid foundation for machining accuracy.

CONTENTS 目录

E-V系列 P01-20

一、E-RV 系列减速机 E-RV Series Worm Gear Units

产品概述 Summary	02
结构图 Structural View	03
型号说明 Model Mark	04

二、选型指南 Type Selection Manual

性能参数 Performance Parameter	08
外形尺寸图表 Outline Dimension Sheet	10
附件 Accessories	13

三、E-RV/E-V—E-RV 双级减速机 Combination Worm Gear Units

产品概述 Summary	14
外形尺寸图表 Outline Dimension Sheet	15
安装方位图 Installation Positions Diagram	19
组合传动速比分配表 Assignment Table Of Combination Ratio	20

E-UDL系列 P21-26

四、E-UDL 无级变速器 E-UDL Stepless Speed Variator

产品概述 Summary	21
结构图 Structural View	22
型号说明 Model Mark	22
性能参数 Performance Parameter	23
使用与保养 Operation & Maintenance	26

参 数 P27-54

E-RV, E-RV—E-RV 性能参数 Performance Parameter	27
E-V 性能参数 Performance Parameter	42
E-V—E-RV 性能参数 Performance Parameter	50
E-UDL—E-RV 性能参数 Performance Parameter	53

E-VF系列 P55-115

五、E-VF 蜗轮减速机 E-VF Worm Gear Units

型号说明 Model Mark	55
性能参数 Performance Parameter	57
外形尺寸图表 Outline Dimension Sheet	86

附 录 P116-119

减速器的安装 Installation	116
润滑 Lubricants	117
故障原因与排除 The Cause For Breakdown And Settlement	119

E-SWL系列 P120-140

六、E-SWL 系列蜗轮螺杆升降机 E-SWL Series Worm Gear Screw Jack

产品概述 Summary	120
外形及安装尺寸 Outline And Installing Size	122

EDSS系列 P141-154

七、EDSS 蜗轮丝杆升降机 EDSS Worm Gear Linear Actuator

EDTM系列 P155-162

八、EDTM 螺旋伞齿轮转向器 EDTM Spiral Bevel Gear Steering Device



一、E-RV 系列减速机 E-RV SERIES WORM GEAR UNITS

产品图片 Product picture



E-RV025~150



E-V030~150



E-RV-E-RV...



E-V-E-RV...



E-UDL.B3



E-UDL-E-RV...



E-RV025~150



E-V030~150

产品概述 Summary

结构特点 STRUCTURE FEATURES

- 1、优质铝合金铸造，重量轻，不生锈；
- 2、输出扭矩大；
- 3、传动平稳，噪音小，适合在恶劣环境中长期连续工作；
- 4、散热效率高；
- 5、美观耐用，体积小；
- 6、可适应全方位安装。

- 1、Made of high-quality aluminum alloy, light in weight and non-rusting.
- 2、Large in output torque.
- 3、Smooth in running and low in noise, can work long time in dreadful conditions.
- 4、High in radiating efficiency.
- 5、Good-looking in appearance, durable in service life and small in volume.
- 6、Suitable for omnibearing installation.

主要材料 MAIN MATERIALS

- 1、外壳：铝合金（机座：025-090），铸铁（机座：110-150）；
- 2、蜗杆：20CrMnTi，渗碳淬火，齿面硬度56-62HRC，精磨后保持渗碳层厚度0.3-0.5mm；
- 3、蜗轮：耐磨锡青铜。

- 1、Housing: die-cast aluminum alloy (frame size: 025 to 090); cast iron (frame size: 110 to 150).
- 2、Worm: 20CrMnTi, carbonize heat treatment make the hardness of gear's surface up to 56-62 HRC, retain carburization layer's thickness between 0.3 and 0.5mm after precise grinding.
- 3、Worm wheel: wearable stannum bronze alloy.

表面涂装 SURFACE PAINTING

铝合金外壳：

- 1、先抛丸处理，再经特种防腐处理，保持银白金属感，并耐汽油，二甲苯等有机溶剂的腐蚀；
- 2、磷化处理后，再喷RAL5010蓝色或银白色涂料。

铸铁外壳：

先涂红色防锈漆，后喷涂RAL5010A蓝色或银白色涂料。

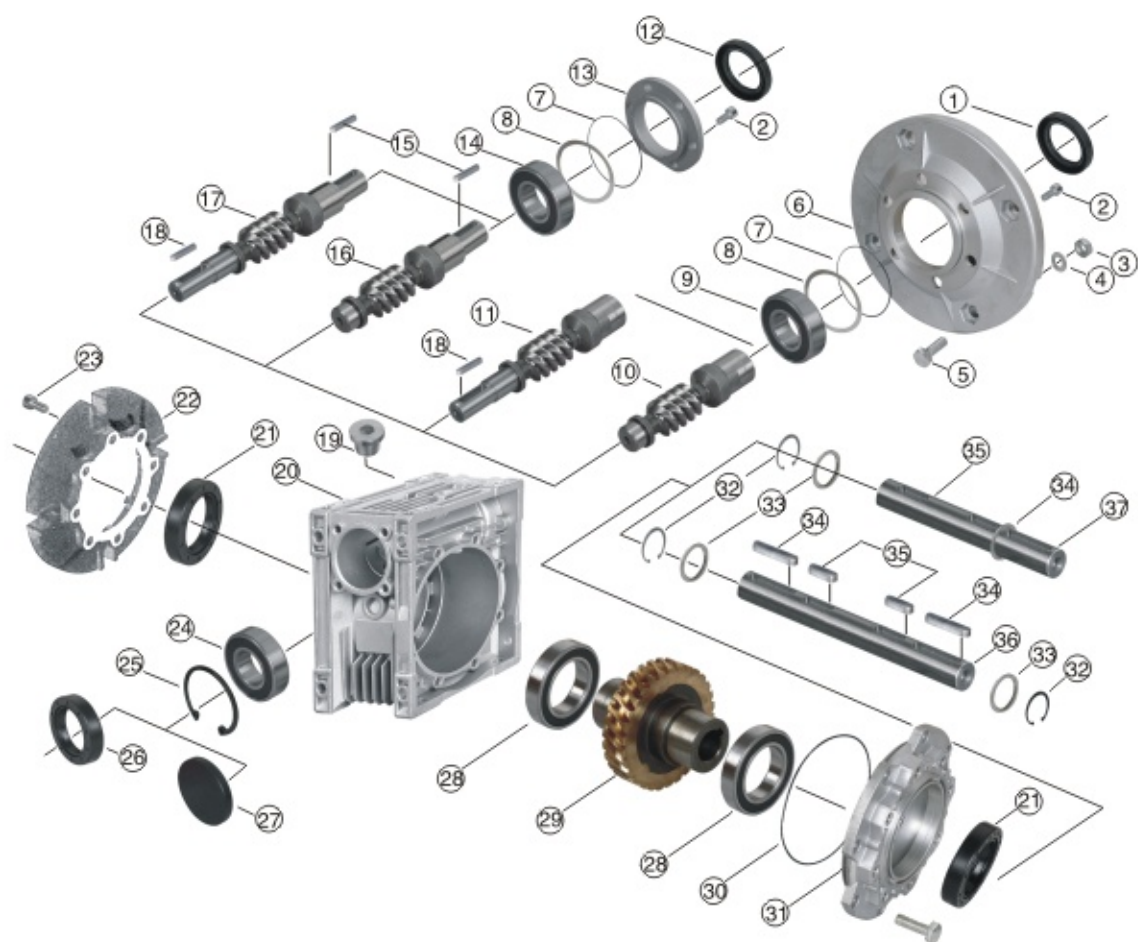
Aluminum alloy housing:

- 1、Shot blasting and special antiseptic treatment on the aluminum alloy surface.
- 2、After phosphating, paint with RAL5010 blue or silvery white paint.

Cast iron housing:

First paint with red antirust paint, then paint with RAL5010 blue or silvery white paint.

零件爆炸视图及名称 Exploded view & name of parts



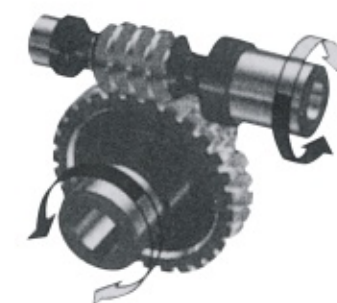
- | | | | |
|-------------|-----------------------------------|----------|---------------------|
| 1、油封 | Oil seal | 19、油塞 | Oil plug |
| 2、内六角螺钉 | Inner hex screw | 20、箱体 | Casing |
| 3、螺母 | Nut | 21、油封 | Oil seal |
| 4、弹性垫圈 | Spring washer | 22、输出法兰 | Output flange |
| 5、六角头螺栓 | Hex screw | 23、内六角螺钉 | Inner hex screw |
| 6、输入法兰 | Input flange | 24、轴承 | Bearing |
| 7、O形圈 | O-Ring | 25、孔用挡圈 | Hole-circlip |
| 8、调整垫片 | Adjust spacer | 26、油封 | Oil seal |
| 9、轴承 | Bearing | 27、盖子 | Cover |
| 10、孔输入蜗杆 | Hole input worm | 28、轴承 | Bearing |
| 11、孔输入轴输出蜗杆 | Hole input and shaft output worm | 29、蜗轮 | Worm wheel |
| 12、油封 | Oil seal | 30、O形圈 | O-Ring |
| 13、输入端盖 | Input cover | 31、输出端盖 | Output cover |
| 14、轴承 | Bearing | 32、轴用挡圈 | Shaft-circlip |
| 15、平键 | Key | 33、垫片 | Spacer |
| 16、轴输入蜗杆 | Shaft input worm | 34、平键 | Key |
| 17、轴输入轴输出蜗杆 | Shaft input and shaft output worm | 35、平键 | Key |
| 18、平键 | Key | 36、双向输出轴 | Double output shaft |
| | | 37、单向输出轴 | Single output shaft |

型号说明 Model Mark

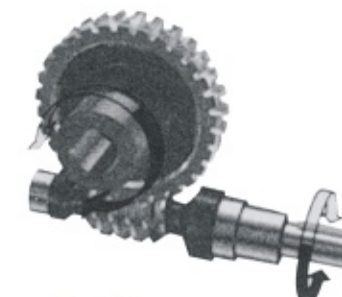
E-RV 063-40-E-FA1-AS1 71B5 B3-7124或/or0.37-4/1

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩

NO	说 明	Comments
1	型号代码 1).E-RV:孔输入带输入法兰 2).E-V:轴输入不带输入法兰	Model code 1).E-RV:Hole input with flange 2).E-V:Shaft input without flange
2	蜗轮蜗杆减速器中心距 (规格)	Central distance of worm gear units(spec)
3	减速器速比 (I=7.5;10;15;20;25;30;40;50;60;80;100)	Speed ratio of reducer (I=7.5;10;15;20;25;30;40;50;60;80;100)
4	1).无代号表示不带蜗杆同向输出轴 2).E: 带蜗杆同向输出轴	1).No mark means single extension worm shaft 2).E: Double extension worm shaft
5	1).无代号表示不带输出法兰 2).FA,FB,FC,FD,FE(1/2):输出法兰代号和位置	1).No mark means without output flange 2).FA,FB,FC,FD,FE(1/2):output flange and position
6	1).无代号表示孔输出 2).AS (1/2): 单向输出轴和位置 3).AB: 双向输出轴	1).No mark means hole output 2).AS (1/2): Single output shaft and position 3).AB: Double output shaft
7	输入法兰规格型式 (不带电机时)	Normalized form of input flange(without motor)
8	安装方位代号	Installation position code
9	1).无代号表示不带电机 2).电机型号或功率、极数	1).No mark means without motor 2).Model motors (poles of power)
10	电机接线盒位置, 默认位置1可以不写	Position diagram for motor terminal box default position1 can be no mention

蜗杆 蜗轮旋转方向
Direction of Rotation

E-RV



E-V



二、选型指南

TYPE SELECTION MANUAL

2, 1 选型方法 Model selections

2.1.1 符号及计量单位 Symbols and units of measure

● P: 功率 Power (KW)

P₁: 输入功率 Input power

P₂: 输出功率 Output power

P_{1n}: 选用电机功率 Select motor power

η_d: 动态效率 Dynamic efficiency

η_d是蜗轮箱经过足够长的时间跑和后, 表面温度下降并最终稳定后计算得到P2和P1之间的关系

The dynamic efficiency is the relationship of power delivered at output shaft P2 to power applied at input shaft P1. Value of η_d are calculated for gearboxes after a sufficiently long running-in period.

After the running-in period the surface temperature in operation reduces and finally stabilises.

$$\eta_d = \frac{P_2}{P_1} \cdot 100\%$$

$$P_{1n} \geq P_1 \cdot f_s$$

η_s: 静态效率 Static efficient

η_s是蜗轮箱启动阶段的效率, 在间歇工作制的选型中, 是非常重要的考虑因素。

Efficiency applicable at star-up of the gearbox. It is critical when selecting worm gearbox operating under intermittent duty.

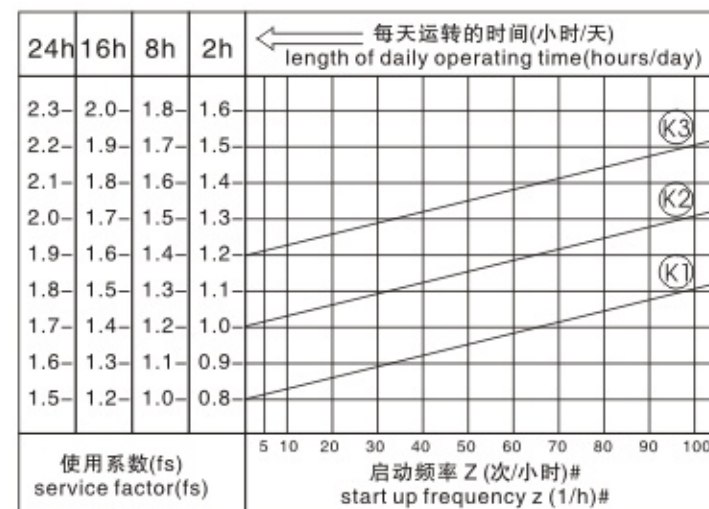
f_s: 使用系数 Service factor

使用系数用来表示减速机的负载特性, 它考虑到与减速机应用场合有关的每天的运转条件, 负载的变化, 过载等因素。在下面的图标中, 在选型合适的“每天运行时间”列后, 即可由每小时的启动次数与曲线K1,K2或K3相交点获得使用系数。K曲线是通过惯性加速K与负载特性(大致可分为: 均匀负载, 中等负载和重负载)相联系的, 且与被驱动装置的转动惯量和电机的转动惯量壁纸有关。

This factor is the numeric value describing reducer service duty. It takes into consideration, with unavoidable approximation, daily operating condition, load variations and overloads connected with reducer application. In the graph below, after selecting proper “daily working hours” column, the service factor is given by intersecting the number of starts per hour and one of the K1,K2 or K3 curves. K_{curves} are linked with the service nature(approximately: uniform, medium and heavy) through the acceleration factor of masses K, connected to the ratio between driven masses and motor inertia values.



Fs取决于负荷 K-CURVES



受环境温度影响, 使用系数做以下调整:

A. 环境温度30-40℃: f_s × (1.1-1.2)

B. 环境温度40-50℃: f_s × (1.3-1.4)

C. 环境温度50-60℃: f_s × (1.5-1.6)

Service factor should be adjusted as followings:

A, ambient temperature is30-40℃, f_s × (1.1-1.2)

B, ambient temperature is40-50℃, f_s × (1.3-1.4)

C, ambient temperature is50-60℃, f_s × (1.5-1.6)

● n₁: 减速机输入转速(r/min) Gear unit input speed(r/min)

n₂: 减速机输出转速(r/min) Gear unit output speed(r/min)

I: 速比 Ratio

$$I = \frac{n_1}{n_2}$$

● Fr1: 输入轴径向载荷

Input shaft radial loads

● Fr2: 输出轴径向载荷

Output shaft radial loads

● M₂: 输出扭矩(Nm) Output Torque (Nm)

M_{2n}: 选用输出扭矩 Selected output torque

$$M_2 = \frac{9550 \cdot P_1 \cdot \eta_d}{n_2}$$

$$M_{2n} \geq M_2 \cdot f_s$$



2.1.2选型考虑因素: Understanding the following when select the gearbox

- 负荷条件 Load condition
- 使用转速范围或速比 (与双极组合, E-UDL 组合等) Speed scope or ratio in application
- 工作运转情况及环境 (温度, 湿度, 腐蚀) Working condition and environment
- 安装空间 Installation space

2.1.3 选型举例 Examples for model chosen

● 被驱动的设备扭矩是150 N.m, 输入转速是1400 r/min, 输出转速是 70 r/min, 中等负荷, 每天运行8小时, 每小时启动20次, 环境温度30℃。电机要求B3安装方位

- (1) 确定速比 $i=n_1/n_2=1400/70=20$
- (2) 确定工作系数, 中等负荷, 选用K2曲线, 取20次频率的交点, 查得8小时/天的 $f_s=1.25$
- (3) 温度36℃, 温度系数是1.1, 则 $f_s=1.25 \times 1.1=1.38$
- (4) 确定选用扭矩 $M_{2n} \geq M_2 \cdot f_s = 150 \times 1.43=214.5 \text{ Nm}$
- (5) 查性能参数表, 符合3个条件, 速比是20, M_{2n} 等于或者大于214.5Nm, f_s 要等于或大于1.38, 查得最接近的是 E-RV 90-20-B3-2.2-4

Required torque 150 Nm on driven machine, $n_1=1400\text{r/min}$, $n_2=70 \text{ r/min}$, medium load, running for 8 hours per day, start 20 times per hours, the ambient temperature is 30℃, B3 mounted.

- (1) $i=n_1/n_2=1400/70=20$
- (2) Get the $f_s=1.25$ from turning time and start frequency on Curve K2,
- (3) Get the $f_s=1.25 \times 1.1=1.38$ from the working condition
- (4) Choose the $M_{2n} \geq M_2 \cdot f_s = 150 \times 1.43=214.5 \text{ Nm}$
- (5) To get the $i=20$, $M_{2n} \geq 214.5 \text{ Nm}$, $f_s \geq 1.38$ from the performance parameter, choose

E-RV 90-20-B3-2.2-4

● 被驱动的设备输入功率是1.5 KW 输入转速是900 r/min, 输出转速是 60 r/min, 重冲击负荷, 每天运行16小时, 每小时启动100次, 环境温度20℃。

- (1) 确定速比 $i=n_1/n_2=900/60=15$
- (2) 确定工作系数, 重负荷, 选用K3 曲线, 找到16小时和100次的交叉点, 查得 $f_s=1.9$
- (3) 温度20℃, 温度系数是1.0, 则修正 $f_s=1.9 \times 1=1.9$
- (4) 确定选用电机 $P_{1n} \geq P_1 \cdot f_s = 1.5 \times 1.9=2.85 \text{ kw}$
- (5) 查性能参数表, 符合3个条件, $i=15$, f_s 要等于或大于1.9, P_{1n} 要等于或者大于2.85kw, 查得最接近的是

E-RV 110-15-132S6

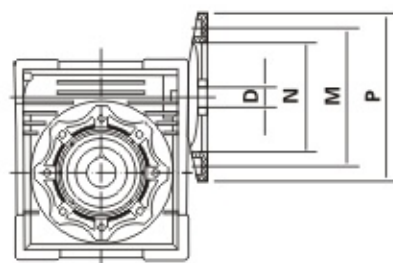
The input power of the driver machine is 1.5kw, $n_1=900 \text{ r/min}$, $n_2=60\text{r/min}$, heavy load, running 16 hours per day, starts 100 times for hour, ambient temperature is 20℃

- (1) $i=n_1/n_2=900/60=15$
- (2) Get the $f_s=1.9$ from turning time and start frequency on Curve K3,
- (3) Get the $f_s=1.9 \times 1.0=1.9$ from the working condition
- (4) Choose the $P_{2n} \geq P_2 \cdot f_s = 1.5 \times 1.9=2.85 \text{ KW}$
- (5) To get the $i=15$, $P_{2n} \geq 2.85 \text{ KW}$, $f_s \geq 1.9$ from the performance parameter, choose E-RV 110-15-132S6.



啮合参数 Mesh parameter

	i	7.5	10	15	20	25	30	40	50	60	80	100
E-RV025	Z ₁	4	3	2	2	2	1	1	1	1		
	M _n	1.3	1.3	1.3	0.995	0.8	1.3	0.995	0.8	0.67		
	Y	25°18'	19°31'	13°18'	11°02'	9°05'	6°44'	5°34'	4°34'	3°55'		
	η _s (1400)	0.85	0.83	0.79	0.75	0.71	0.67	0.62	0.58	0.55		
	η _s	0.71	0.68	0.61	0.56	0.5	0.46	0.41	0.36	0.34		
E-RV030	Z ₁	4	3	2	2	1	1	1	1	1	1	
	M _n	18°55'	14°25'	9°44'	7°50'	5°33'	4°54'	3°55'	3°17'	2°43'	2°07'	
	Y	1.44	1.44	1.44	1.1	1.7	1.44	1.1	0.89	0.74	0.56	
	η _s (1400)	0.85	0.82	0.77	0.73	0.68	0.65	0.59	0.55	0.51	0.44	
	η _s	0.67	0.63	0.55	0.5	0.43	0.39	0.35	0.31	0.27	0.23	
E-RV040	Z ₁	4	3	2	2	2	1	1	1	1	1	1
	M _n	2.05	2.05	2.05	1.56	1.27	2.05	1.56	1.27	1.06	0.8	0.65
	Y	23°54'	18°23'	12°30'	10°03'	8°45'	6°19'	5°04'	4°24'	3°42'	2°52'	2°29'
	η _s (1400)	0.87	0.85	0.82	0.78	0.75	0.7	0.65	0.62	0.58	0.52	0.47
	η _s	0.71	0.67	0.6	0.55	0.51	0.45	0.4	0.36	0.32	0.28	0.24
E-RV050	Z ₁	4	3	2	2	2	1	1	1	1	1	1
	M _n	2.56	2.56	2.56	1.95	1.58	2.56	1.95	1.58	1.32	1	0.8
	Y	23°49'	18°19'	12°27'	10°03'	8°33'	6°18'	5°04'	4°18'	3°38'	2°52'	2°17'
	η _s (1400)	0.88	0.86	0.82	0.79	0.76	0.72	0.67	0.63	0.59	0.53	0.49
	η _s	0.7	0.66	0.59	0.55	0.51	0.44	0.39	0.35	0.32	0.27	0.23
E-RV063	Z ₁	4	3	2	2	2	1	1	1	1	1	1
	M _n	3.25	3.25	3.25	2.48	2	3.25	2.48	2	1.68	1.27	1.02
	Y	24°31'	18°53'	12°51'	10°29'	8°45'	6°30'	5°17'	4°24'	3°49'	2°59'	2°26'
	η _s (1400)	0.88	0.87	0.83	0.81	0.78	0.74	0.7	0.66	0.62	0.57	0.51
	η _s	0.71	0.67	0.6	0.55	0.51	0.45	0.4	0.36	0.33	0.28	0.24
E-RV075	Z ₁	4	3	2	2	2	1	1	1	1	1	1
	M _n	3.95	3.95	3.95	3	2.42	3.95	3	2.42	2.03	1.54	1.24
	Y	26°38'	20°37'	14°05'	11°19'	9°29'	7°09'	5°43'	4°46'	4°01'	3°17'	2°44'
	η _s (1400)	0.89	0.88	0.85	0.82	0.8	0.76	0.72	0.69	0.65	0.6	0.55
	η _s	0.71	0.68	0.61	0.57	0.53	0.46	0.42	0.38	0.35	0.29	0.26
E-RV090	Z ₁	4	3	2	2	2	1	1	1	1	1	1
	M _n	4.84	4.84	4.84	3.69	2.98	4.84	3.69	2.98	2.5	1.89	1.52
	Y	29°05'	22°39'	15°33'	12°50'	10°53'	7°55'	6°30'	5°29'	4°46'	3°45'	3°06'
	η _s (1400)	0.9	0.89	0.86	0.84	0.82	0.78	0.75	0.72	0.68	0.63	0.59
	η _s	0.73	0.7	0.64	0.6	0.56	0.49	0.45	0.41	0.38	0.32	0.28
E-RV110	Z ₁	4	3	2	2	2	1	1	1	1	1	1
	M _n	5.875	5.875	5.875	4.62	3.73	5.875	4.62	3.73	3.13	2.37	1.91
	Y	28°15'	21°57'	15°02'	14°42'	12°33'	7°39'	7°29'	6°21'	5°33'	4°27'	3°46'
	η _s (1400)	0.9	0.89	0.86	0.85	0.84	0.79	0.78	0.75	0.72	0.67	0.63
	η _s	0.72	0.69	0.63	0.62	0.59	0.48	0.48	0.44	0.41	0.36	0.32
E-RV130	Z ₁	4	3	2	2	2	1	1	1	1	1	1
	M _n	6.97	6.97	6.97	5.4	4.37	6.97	5.4	4.37	3.67	2.77	2.23
	Y	28°43'	22°20'	15°19'	13°47'	11°54'	7°48'	7°00'	6°01'	5°16'	4°07'	3°27'
	η _s (1400)	0.91	0.89	0.87	0.86	0.84	0.8	0.78	0.75	0.72	0.68	0.64
	η _s	0.72	0.69	0.63	0.61	0.58	0.49	0.46	0.43	0.39	0.34	0.3

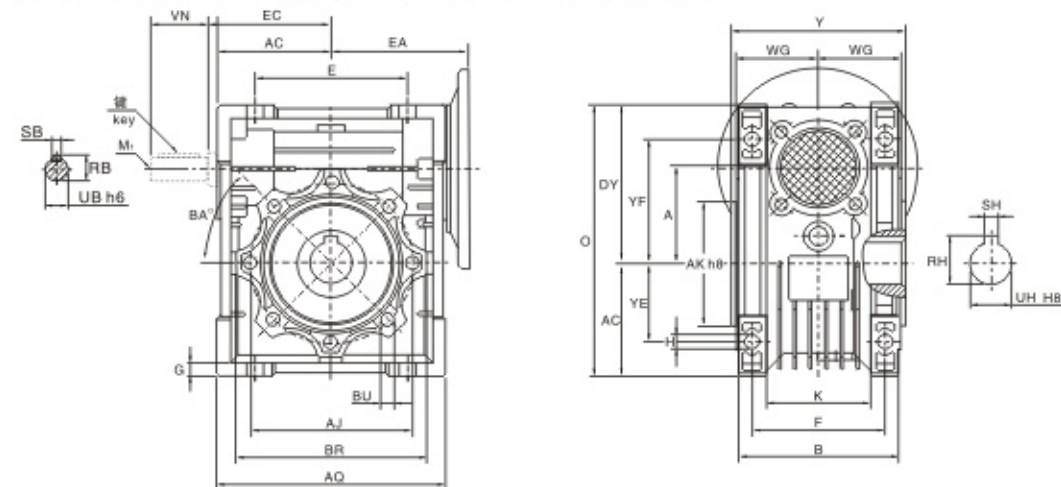


*如果要特殊平键, 请与技术部联系。

*If you want special key, please call our Technical Service

	电机法兰Motor flange				输入轴直径 D The hole diameter of input shaft											
	PAM IEC	P	M	N	传动比 Transmission ratio											
					7.5	10	15	20	25	30	40	50	60	80	100	
E-RV025	56B14	80	65	50	9	9	9	9	9	9	9	9	9			
E-RV030	63B5	140	115	95	11	11	11	11	11	11	11	11				
	63B14	90	75	60												
	56B5	120	100	80	9	9	9	9	9	9	9	9	9	9		
	56B14	80	65	50												
E-RV040	71B5	160	130	110	14	14	14	14	14	14	14					
	71B14	105	85	70												
	63B5	140	115	95	11	11	11	11	11	11	11	11	11	11	11	
	63B14	90	75	60												
E-RV050	56B5	120	100	80									9	9	9	9
	80B5	200	165	130	19	19	19	19	19	19						
	80B14	120	100	80												
	71B5	160	130	110	14	14	14	14	14	14	14	14	14	14		
71B14	105	85	70													
E-RV063	63B5	140	115	95									11	11	11	11
	90B5	200	165	130	24	24	24	24	24	24						
	90B14	140	115	95												
	80B5	200	165	130	19	19	19	19	19	19	19	19	19			
	80B14	120	100	80												
	71B5	160	130	110							14	14	14	14	14	
E-RV075	71B14	105	85	70												
	100/112B5	250	215	180	28	28	28									
	110/112B14	160	130	110												
	90B5	200	165	130	24	24	24	24	24	24						
	90B14	140	115	95												
	80B5	200	165	130				19	19	19	19	19	19	19	19	
80B14	120	100	80								14	14	14	14		
E-RV090	71B5	160	130	110												
	100/112B5	250	215	180	28	28	28	28	28	28						
	110/112B14	160	130	110												
	90B5	200	165	130	24	24	24	24	24	24	24	24				
	90B14	140	115	95												
	80B5	200	165	130												
80B14	120	100	80							19	19	19	19	19		
E-RV110	132B5	300	265	230	38*	38*	38*	38*								
	110/112B5	250	215	180	28	28	28	28	28	28	28	28	28			
	90B5	200	165	130					24	24	24	24	24	24	24	24
	80B5	200	165	130											19	19
E-RV130	132B5	300	265	230	38*	38*	38*	38*	38*	38*	38*					
	100/112B5	250	215	180					28	28	28	28	28	28	28	28
	90B5	200	165	130											24	24
E-RV150	160B5	350	320	250	42	42	42	42	42							
	132B5	300	265	230				38	38	38	38	38	38			
	100/112B5	250	215	180									28	28	28	28

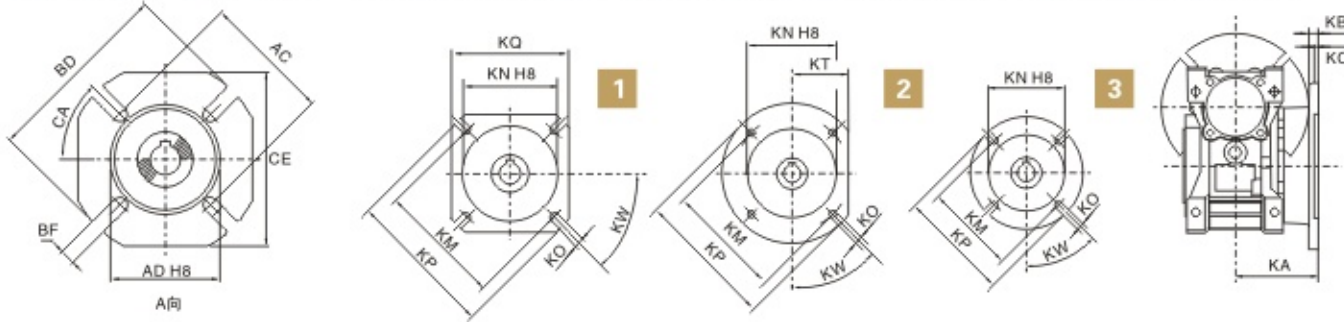
E-RV安装尺寸(E-RV MOUNTING DIMENSIONS)



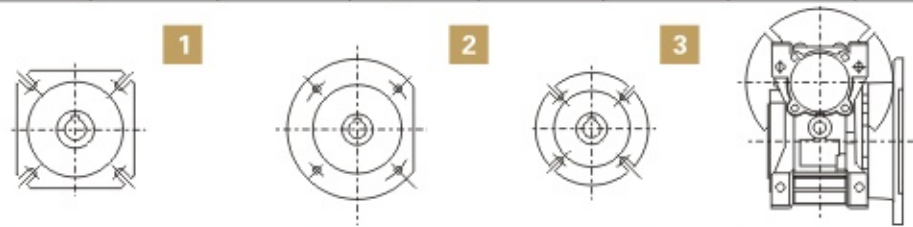
	25	30	40	50	63	75	90	110	130	150
A	25	30	40	50	63	75	90	110	130	150
AC	35	40	50	60	72	86	103	127.5	147.5	170
AJ	55	65	75	85	95	115	130	165	215	215
AK	45	55	60	70	80	95	110	130	180	180
AQ	70	80	100	120	144	172	206	252	292	340
B	42	56	71	85	103	112	130	144	155	185
BA	见上图	0°	45°	45°	45°	45°	45°	45°	45°	45°
BR	65	75	87	100	110	140	160	200	250	250
BU	见上图	M6x11(n.4)	M6x10(n.4)	M8x10(n.4)	M8x14(n.8)	M8x14(n.8)	M10x18(n.8)	M10x18(n.8)	M12x21(n.8)	M12x21(n.8)
DY	48	57	71.5	84	102	119	135	167.5	187.5	230
E	45	54	70	80	100	120	140	170	200	240
EA	45	55	71	80	95	112.5	130	160	180	210
EC	-	45	53	64	75	90	108	135	155	175
F	34	44	60	70	85	90	100	115	120	145
G	5	5.5	6.5	7	8	10	11	15	15	18
H	6	6.5	7	8.5	8.5	11	13	14	16	18
K	22	32	43	49	67	72	74	-	-	-
M1	-	-	-	M6	M6	M8	M8	M10	M10	M12
O	83	97	121.5	144	174	205	238	295	335	400
RB	-	10.2	12.5	16	21.5	27	27	31	33	38
RH	12.8	16.3	20.8	28.3	28.3	31.3	38.3	45.3	48.8	53.8
SB	-	3	4	5	6	8	8	8	8	10
SH	4	5	6	8	8	8	10	12	14	14
UB	-	9	11	14	19	24	24	28	30	35
UH	11	14	18	25	25	28	35	42	45	50
VN	-	20	23	30	40	50	50	60	80	80
WG	22.5	29	36.5	43.5	53	57	67	74	81	96
Y	50	63	78	92	112	120	140	155	170	200
YE	22	27	35	40	50	60	70	85	100	120
YF	35.5	44	55	64	80	93	102	125	140	180
重量(kg)	0.7	1.3	2.3	3.5	6.2	9	13	35	48	84



E-RV/E-RV-P030-150F – Dimensioni / Dimensions / Encombresments / Abmessungen / Dimensiones / 尺寸

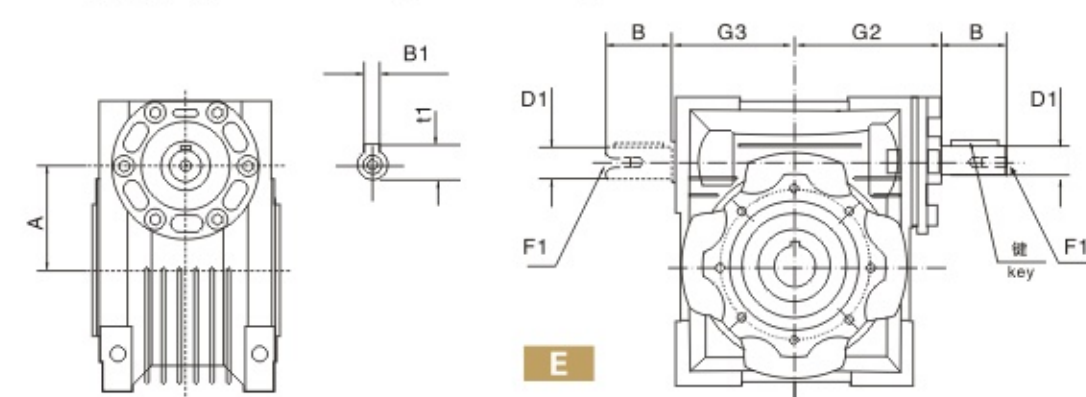


		030	040	050	063	075	090	110	130	150
FA	KA	54.5	67	90	82	111	111	131	140	155
	KB	6	7	9	10	13	13	15	15	15
	KC	4	4	5	6	6	6	6	6	6
	KN	50	60	70	115	130	152	170	180	180
	KM	68	80min	90min	150	165	175	230	255	255
	KO	6.5(n° 4)	9(n° 4)	11(n° 4)	11(n° 4)	14(n° 4)	14(n° 4)	14(n° 8)	16(n° 8)	16(n° 8)
	KP	80	110	125	180	200	210	280	320	320
FB	KQ	70	95	110	142	170	200	260	290	290
	KW	45°	45°	45°	45°	45°	45°	45°	22.5°	22.5°
	KA	-	97	120	112	90	122	180	-	-
	KB	-	7	9	10	13	18	15	-	-
	KC	-	4	5	6	6	6	6	-	-
	KN	-	60	70	115	110	180	170	-	-
	KM	-	80min	90min	150	130	215	230	-	-
FC	KO	-	9(n° 4)	11(n° 4)	11(n° 4)	14(n° 4)	14(n° 4)	14(n° 8)	-	-
	KP	-	110	125	180	160	250	280	-	-
	KQ	-	95	110	142	-	-	260	-	-
	KT	-	-	-	-	-	105	-	-	-
	KW	-	45°	45°	45°	45°	45°	45°	-	-
	KA	-	80	89	98	-	110	-	-	-
	KB	-	9	10	10	-	17	-	-	-
FD	KC	-	5	5	5	-	6	-	-	-
	KN	-	95	110	130	-	130	-	-	-
	KM	-	115	130	165	-	165	-	-	-
	KO	-	9.5(n° 4)	9.5(n° 4)	11(n° 4)	-	11(n° 4)	-	-	-
	KP	-	140	160	200	-	200	-	-	-
	KT	-	56	66	80	-	-	-	-	-
	KW	-	45°	45°	45°	-	45°	-	-	-
FE	KA	-	58	72	107	-	151	-	-	-
	KB	-	12	14.5	10	-	13	-	-	-
	KC	-	5	5	5	-	6	-	-	-
	KN	-	80	95	130	-	152	-	-	-
	KM	-	100	115	165	-	175	-	-	-
	KO	-	9(n° 4)	11(n° 4)	11(n° 4)	-	14(n° 4)	-	-	-
	KP	-	120	140	200	-	210	-	-	-
FE	KQ	-	-	-	-	-	200	-	-	-
	KT	-	50	60	-	-	-	-	-	-
	KW	-	45°	45°	45°	-	45°	-	-	-
	KA	-	-	-	80.5	-	-	-	-	-
	KB	-	-	-	16.5	-	-	-	-	-
	KC	-	-	-	5	-	-	-	-	-
	KN	-	-	-	110	-	-	-	-	-
FE	KM	-	-	-	130	-	-	-	-	-
	KO	-	-	-	11(n° 4)	-	-	-	-	-
	KP	-	-	-	160	-	-	-	-	-
	KW	-	-	-	45°	-	-	-	-	-



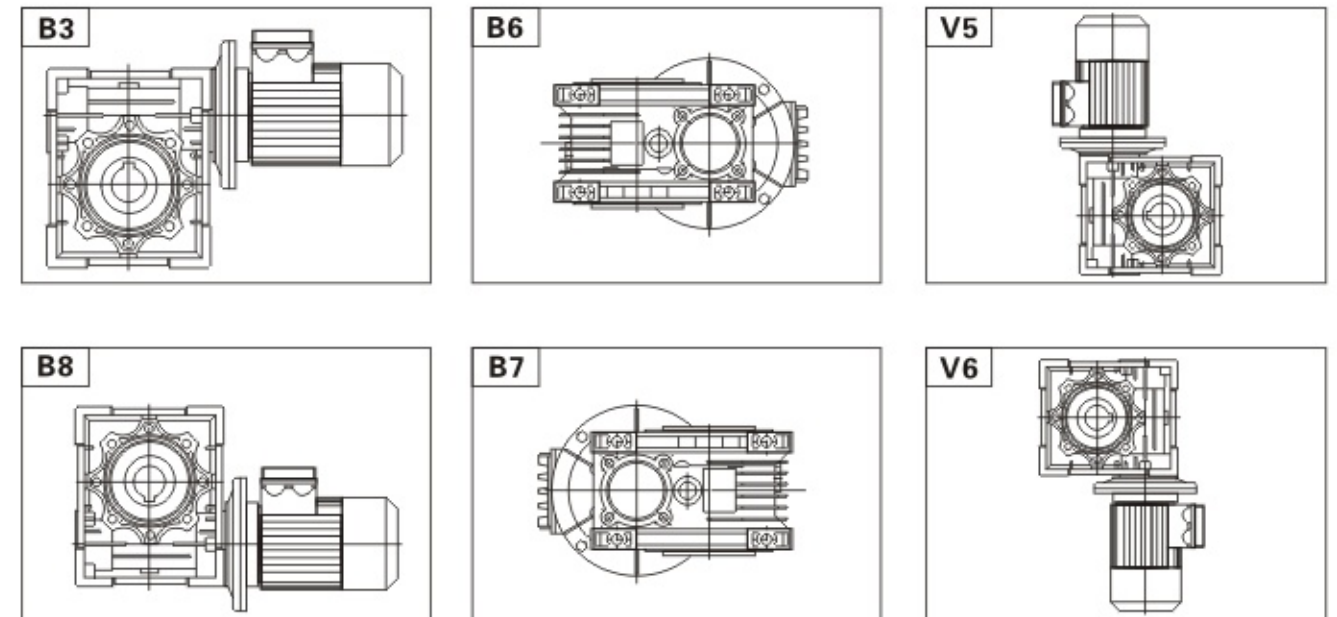
	030	040	050	063	075	090	110	130	150
FA	1	1	1	1	1	1	1	1	1
FB	-	1	1	1	3	2	1	-	-
FC	-	2	2	2	-	3	-	-	-
FD	-	2	2	2	-	1	-	-	-
FE	-	-	-	3	-	-	-	-	-

E-V安装尺寸(E-V Mounting dimensions)



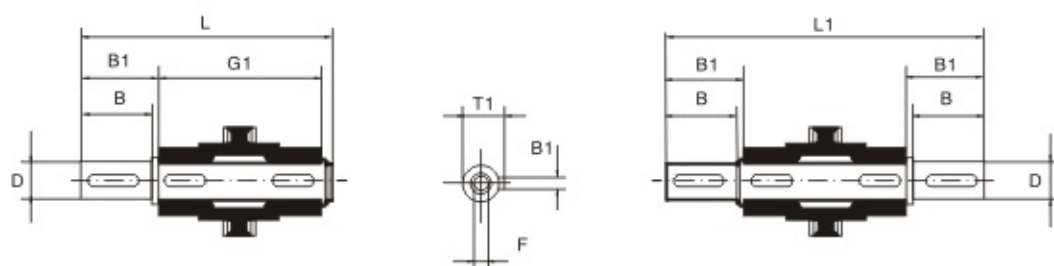
E-V	030	040	050	063	075	090	110	130	150
B	20	23	30	40	50	50	60	80	80
D1j6	9	11	14	19	24	24	28	30	35
G2	50	61	74	90	105	125	142	162	195
G3	45	53	64	75	90	108	135	155	175
A	30	40	50	63	75	90	110	130	150
B1	3	4	5	6	8	8	8	8	10
F1	-	-	M6	M6	M8	M8	M10	M10	M12
TI	10.2	12.5	16	21.5	27	27	31	33	38
输入轴平键									
规格	3x3	4x4	5x5	6x6	8x7	8x7	8x7	8x7	10x8
长度	15	20	25	35	45	45	55	70	70

单级安装型式 single Step Mounting Positions



附件 ACCESSORIES

输出轴 OUTPUT SHAFT

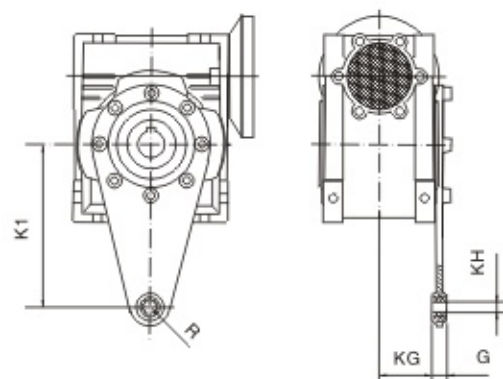


单向输出轴 Single Output Shaft

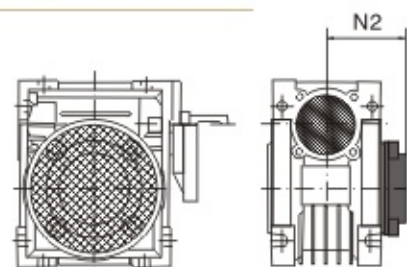
双向输出轴 Double Output Shaft

	Dh6	B	B1	G1	L	L1	F	B1	T1
E-RV025	11g6	23	25.5	50	81	101	-	4	12.5
	9*	25*	30	50	85.5*	101	-	3*	10.2*
E-RV030	14	30	32.5	63	102	128	M6	5	16
E-RV040	18	40	43	78	128	164	M6	6	20.5
E-RV050	25	50	53.5	92	153	199	M10	8	28
E-RV063	25	50	53.5	112	173	219	M10	8	28
E-RV075	28	60	63.5	120	192	247	M10	8	31
E-RV090	35	80	84.5	140	234	309	M12	10	38
E-RV110	42	80	84.5	155	249	324	M16	12	45
E-RV130	45	80	85	170	265	340	M16	14	48.5
E-RV150	50	82	87	200	297	374	M16	14	53.5

扭力臂 TORQUE ARM



防尘盖 COVER



	K1	G	KG	KH	R
E-RV025	70	14	17.5	8	15
E-RV030	85	14	24	8	15
E-RV040	100	14	31.5	10	18
E-RV050	100	14	38.5	10	18
E-RV063	150	14	49	10	18
E-RV075	200	25	47.5	20	30
E-RV090	200	25	57.5	20	30
E-RV110	250	30	62	25	35
E-RV130	250	30	69	25	35
E-RV150	250	30	84	25	35

	N2		N2
E-RV030	42	E-RV090	86
E-RV040	50	E-RV110	94
E-RV050	58	E-RV130	102
E-RV063	69	E-RV150	117
E-RV075	74		

三、E-RV/E-V—E-RV 双级减速机
COMBINATION WORM GEAR UNITS

产品概述 Summary

介绍:

由单机涡轮减速机组合而成, 具有单机E-RV的一切优点, 和获得大的传动比。

It is combined by two single step reducers and has all the virtues of them, with larger ratio.

型号标记
Model & mark

E-RV 050/110-900 E F1 SZ 71B5 B3.56

安装方位代号 Installation position code

输入法兰规格型号 Normalized form of input flange(without motor)

"SZ"带双向输出轴,标注"DZ"为单向输出轴,不标注时为孔输出

SZ: Double output shaft; DZ: Single output shaft; No mark means hole output

带输出法兰,不标注时为不带输出法兰

Flange output, no mark means without output flange

带子蜗杆同向输出轴,不标注时为不带蜗杆同向输出轴

Double extension worm shaft, no mark means single extension worm shaft

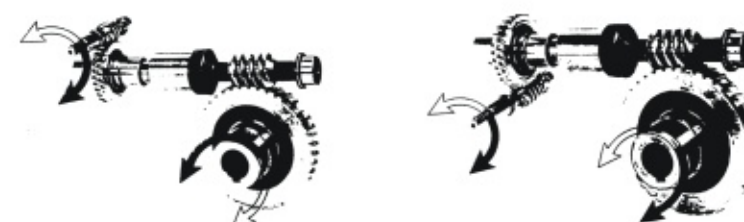
蜗轮减速机速比 Speed ratio of worm-gear speed reducer

蜗轮减速机中心距 Center distance of two worm gear units

蜗轮减速机代号 Code of worm-gear speed reducer

E-RV 为带输入法兰孔输入, E-V 为不带输入法兰轴输入

E-RV: Hole input with flange, E-V: Shaft input without flange

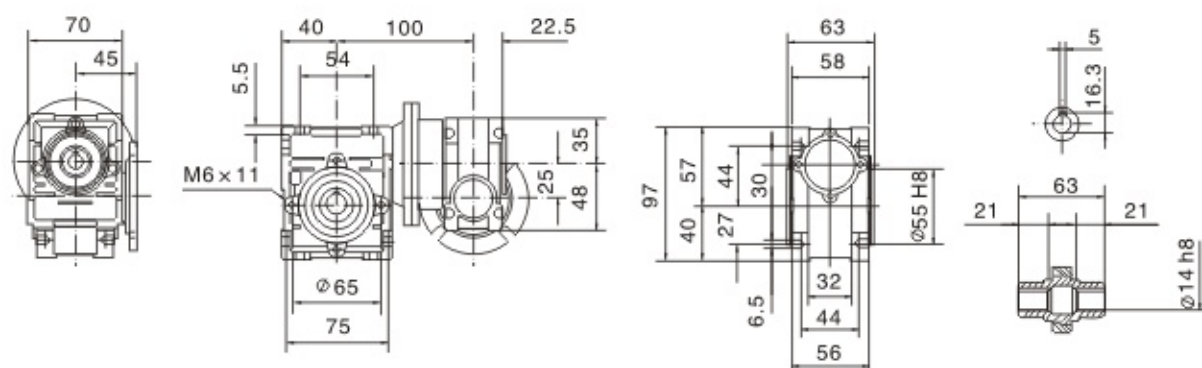
蜗杆 蜗轮旋转方向
Direction of Rotation



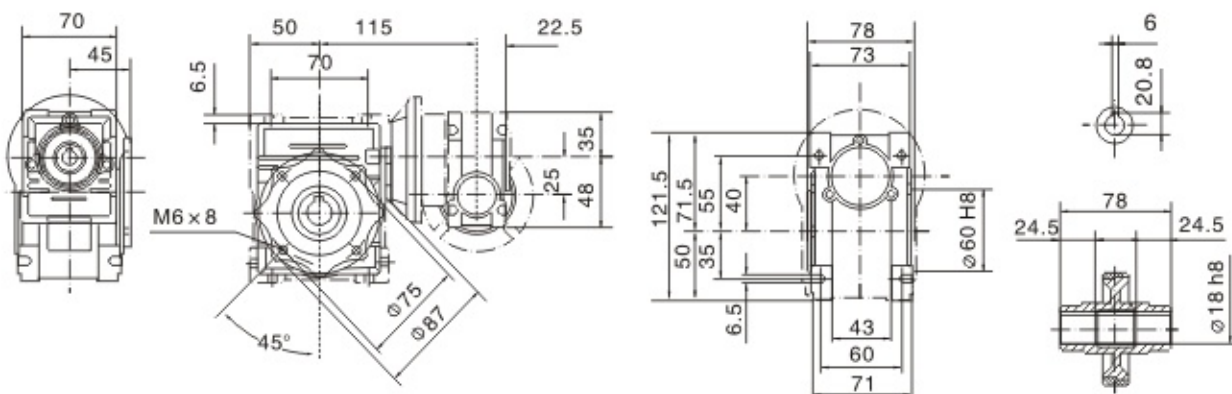
外形尺寸图表 Outline Dimension Sheet

- ◆有关输出法兰尺寸,请查阅11页
- ◆有关输出空心轴尺寸,请查阅10页
- ◆有关单、双向输出轴尺寸,请查阅13页
- ◇For the dimensions of the output flanges, please refer to page 11
- ◇For the dimensions of the hollow shafts, please refer to page 10
- ◇For the dimensions of the double extension worm shafts please refer to page 13

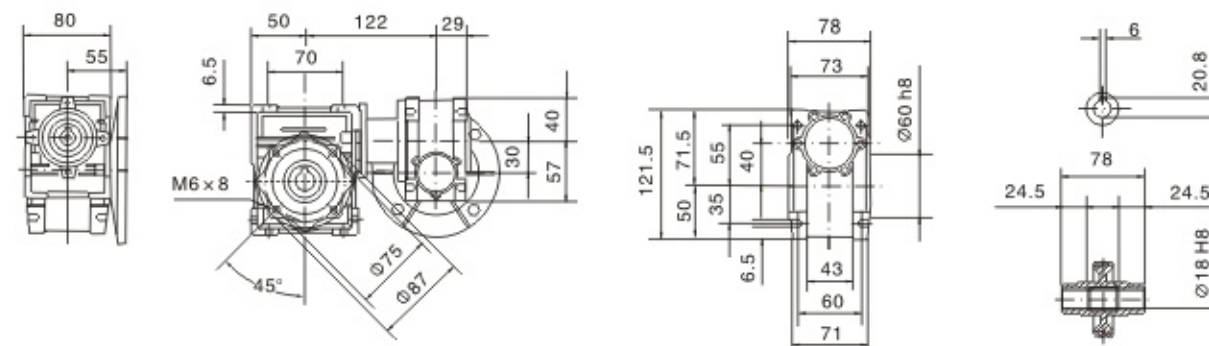
E-RV025/030



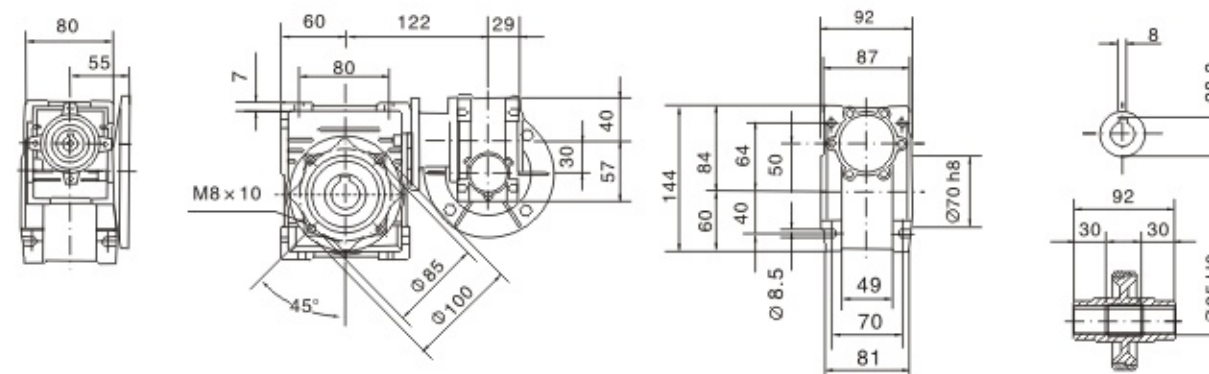
E-RV025/040



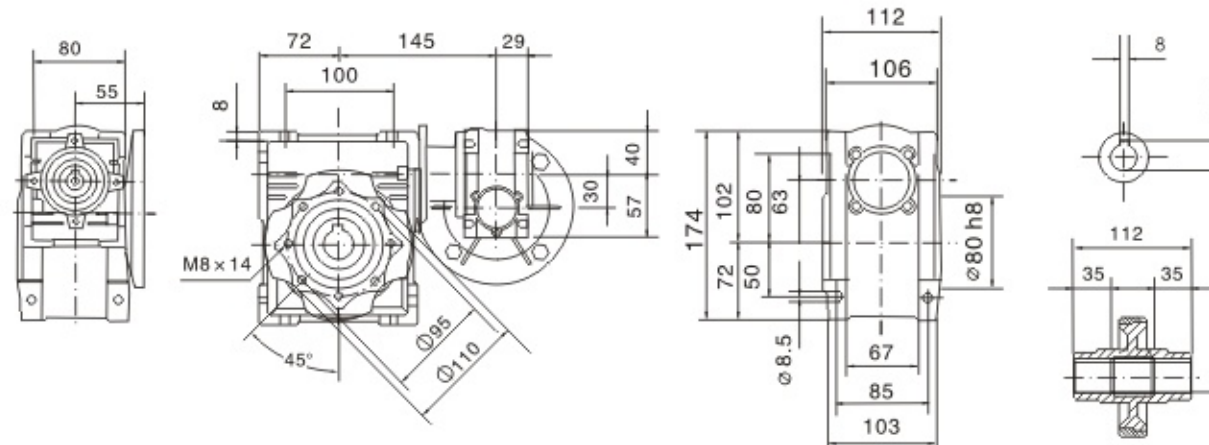
E-RV030/040



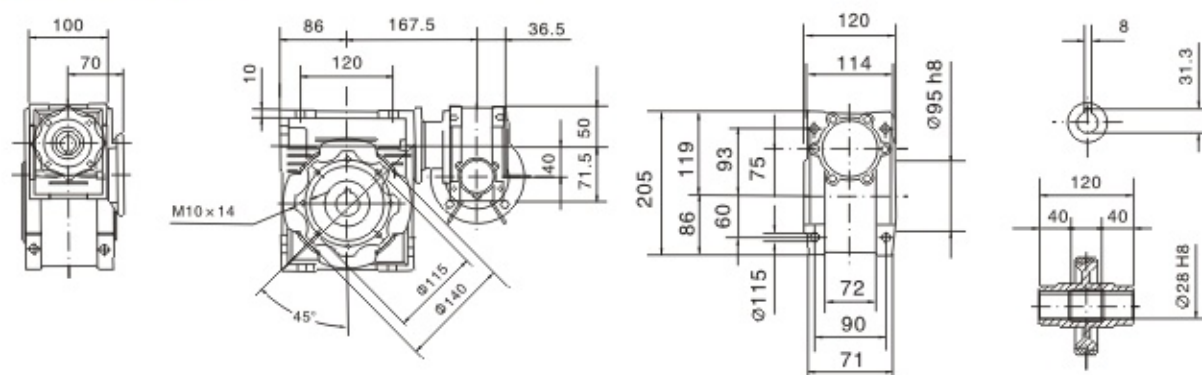
E-RV030/050



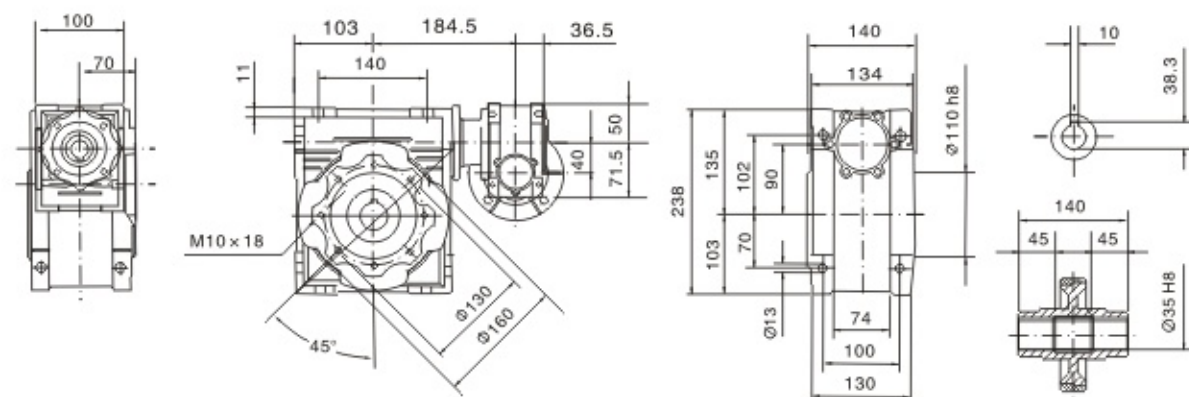
E-RV030/063



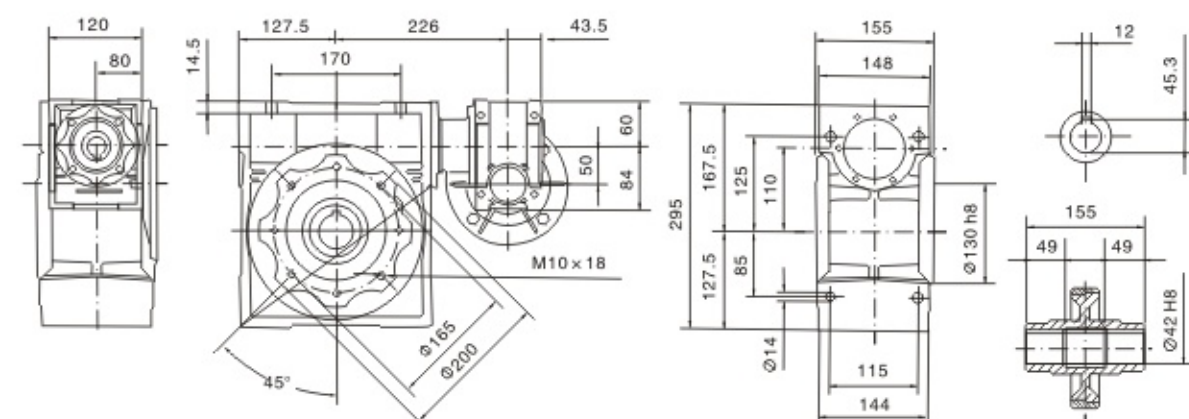
E-RV040/075



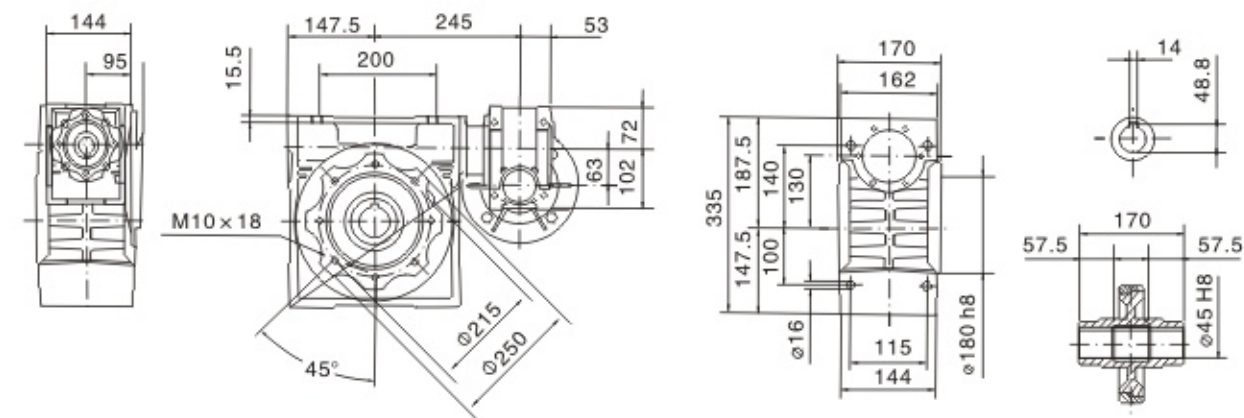
E-RV040/090



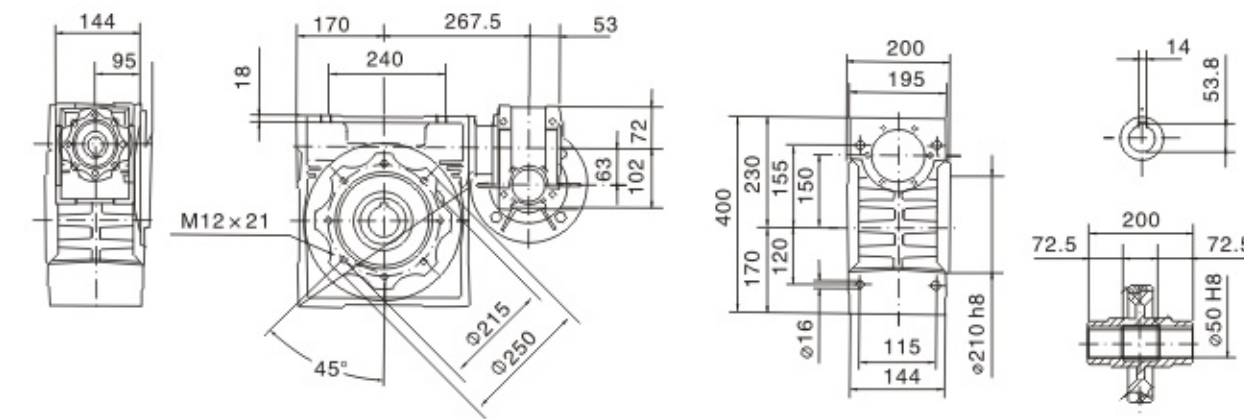
E-RV050/110



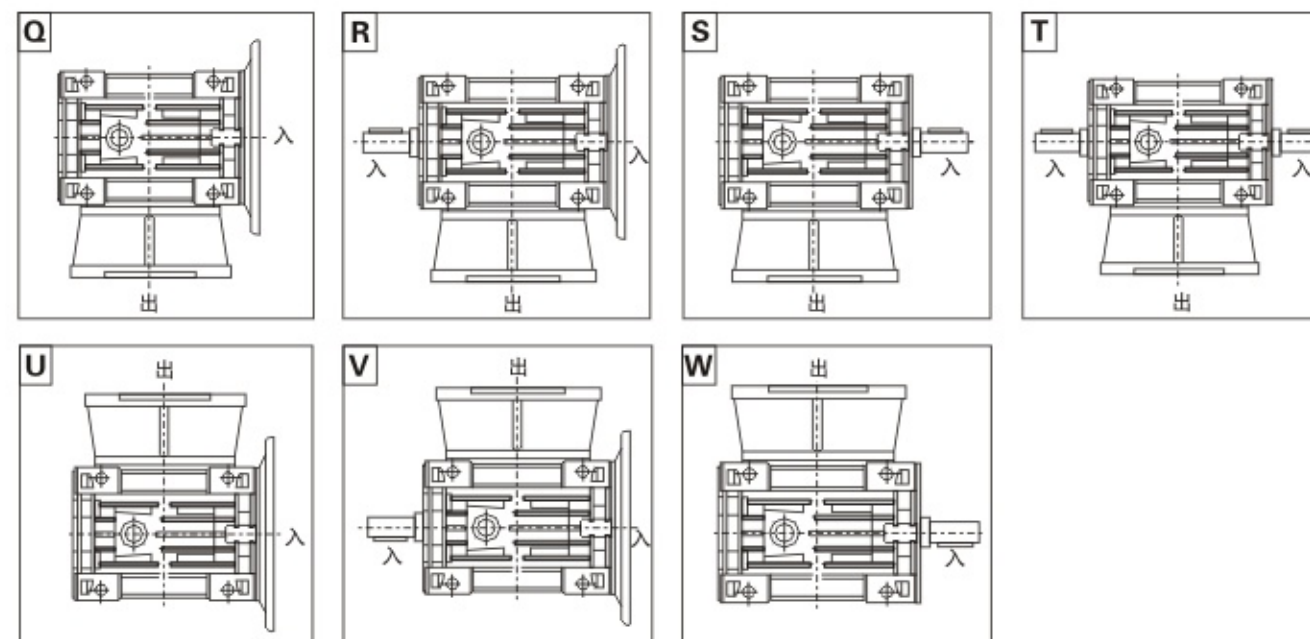
E-RV063/130



E-RV063/150



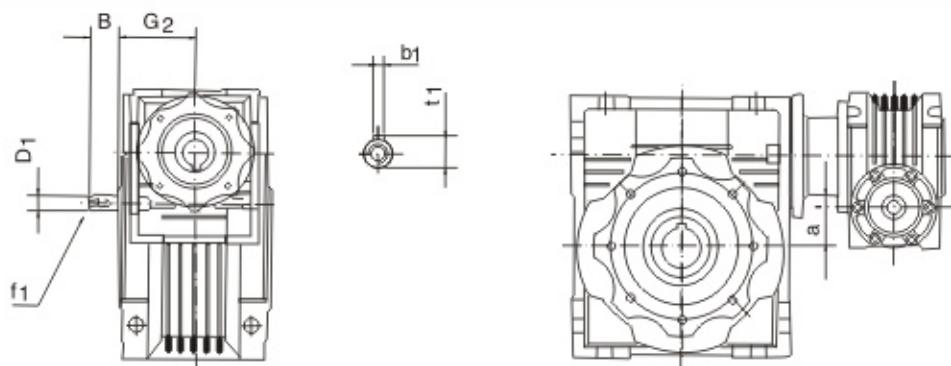
输入轴和输出法兰指向图 Directions of input shaft & output flange





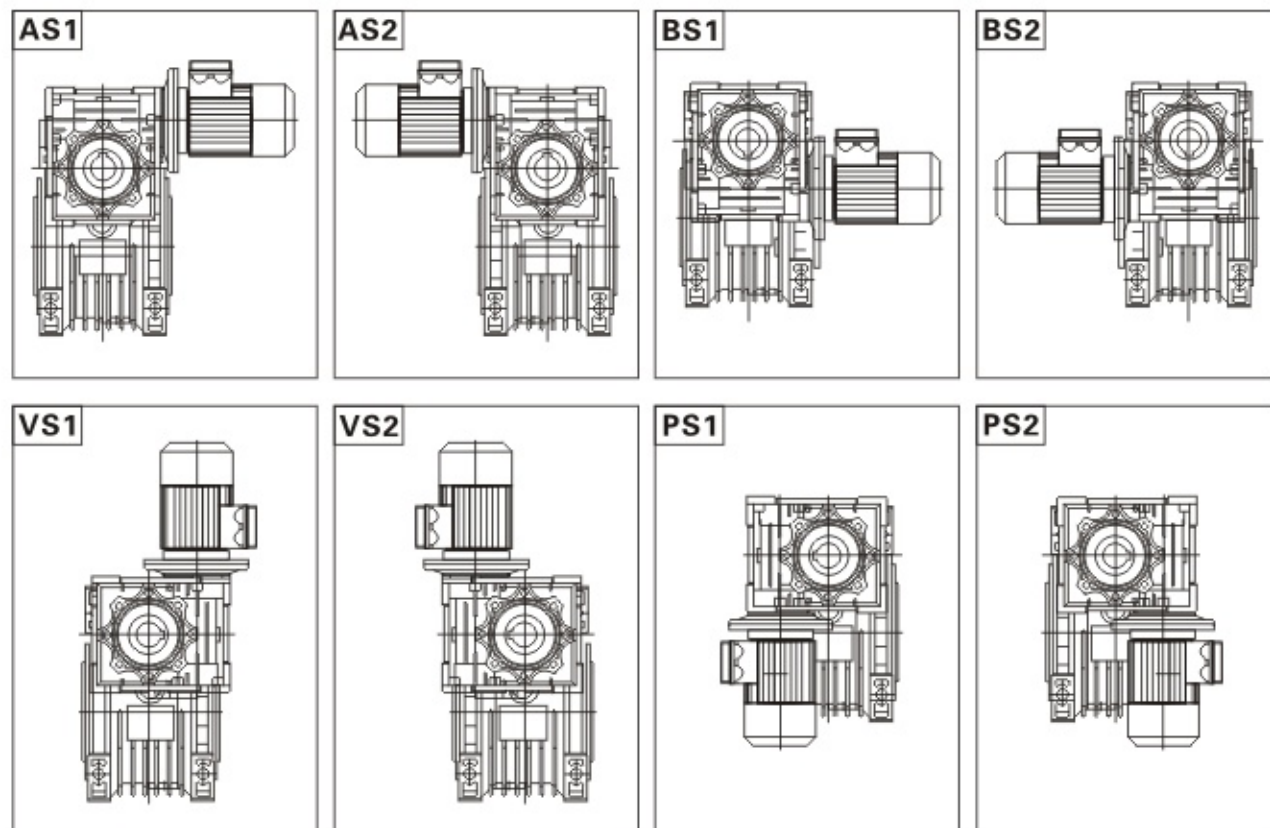
安装方位图 Installation Positions Diagram

E-V—E-RV 双蜗轮减速器 COMBINATION WORM GEAR UNITS OF E-V—E-RV



E-V—E-RV	030/040	030/050	030/063	040/073	040/093	050/110	063/130
B	20	20	20	23	23	30	40
D1j6	9	9	9	11	11	14	19
G2	51	51	51	60	60	74	90
A	10	20	33	35	50	60	67
B1	3	3	3	4	4	5	6
F1	—	—	—	—	—	M6	M6
TI	10.2	10.2	10.2	12.5	12.5	16	21.5

双级安装型式 Double Step Mounting Positions



n1=1400r/min		E-RV025/030			E-RV025/040			E-RV030/040			E-RV030/050			E-RV030/063		
i	n2	P1 (kw)	i025	i030	P1 (kw)	i025	i040	P1 (kw)	i030	i040	P1 (kw)	i030	i050	P1 (kw)	i030	i060
100	14	0.09	10	10	—	—	—	—	—	—	—	—	—	—	—	—
150	9.3	0.06	10	15	—	—	—	—	—	—	—	—	—	—	—	—
200	7	0.06	10	20	—	—	—	—	—	—	—	—	—	—	—	—
250	5.6	0.06	10	25	—	—	—	—	—	—	—	—	—	—	—	—
300	4.7	0.06	10	30	0.06	10	30	0.09	10	30	0.18	10	30	0.22	10	30
400	3.5	0.06	20	20	0.06	10	40	0.06	10	40	0.12	10	40	0.18	10	40
500	2.8	0.06	20	25	0.06	20	25	0.06	20	25	0.09	10	50	0.18	10	50
600	2.3	0.06	20	30	0.06	20	30	0.06	20	30	0.09	20	30	0.12	20	30
750	1.9	0.06	30	25	0.06	25	30	0.06	25	30	0.09	25	30	0.12	25	30
900	1.6	0.06	30	30	0.06	30	30	0.06	30	30	0.06	30	30	0.09	30	30
1200	1.2	0.06	40	30	0.06	40	30	0.06	40	30	0.06	40	30	0.09	40	30
1500	0.93	0.06	50	30	0.06	50	30	0.06	50	30	0.06	50	30	0.06	50	30
1800	0.78	0.06	60	30	0.06	60	30	0.06	60	30	0.06	60	30	0.06	60	30
2400	0.58	0.06	60	40	0.06	60	40	0.06	60	40	0.06	60	40	0.06	60	40
3000	0.47	0.06	60	50	0.06	60	50	0.06	—	—	0.06	60	50	0.06	60	50
3200	0.44	—	—	—	—	—	—	—	80	40	—	—	—	—	—	—
4000	0.35	—	—	—	0.06	50	80	0.06	80	50	0.06	80	50	0.06	80	50
4800	0.29	—	—	—	—	—	—	—	—	—	0.06	80	60	—	—	—
5000	0.28	—	—	—	0.06	50	100	0.06	50	100	—	—	—	0.06	100	50

N1=1400r/min		E-RV040/075			E-RV040/090			E-RV050/110			E-RV063/130		
i	n2	P1 (kw)	i040	i075	P1 (kw)	i040	i090	P1 (kw)	i050	i0110	P1 (kw)	i063	i030
300	4.7	0.37	10	30	0.37	10	30	0.75	10	30	1.5	10	30
400	3.5	0.25	10	40	0.37	10	40	0.75	10	40	1	10	40
500	2.8	0.25	10	50	0.37	10	50	0.55	20	25	1	10	50
600	2.3	0.18	20	30	0.37	20	30	0.55	20	30	0.75	15	40
750	1.9	0.18	25	30	0.25	25	30	0.55	25	30	0.75	25	30
900	1.6	0.12	30	30	0.25	30	30	0.37	30	30	0.75	30	30
1200	1.2	0.12	40	30	0.18	40	30	0.25	40	30	0.55	40	30
1500	0.93	0.09	50	30	0.18	50	30	0.25	50	30	0.37	50	30
1800	0.78	0.09	60	30	0.12	60	30	0.25	60	30	0.37	60	30
2400	0.58	0.06	60	40	0.12	60	40	0.18	60	40	0.25	60	40
3000	0.47	0.06	60	50	0.09	60	50	0.12	60	50	0.25	60	50
4000	0.35	0.06	80	50	0.06	80	50	0.12	80	50	0.25	80	50
5000	0.28	0.06	100	50	0.06	100	50	0.12	100	50	0.25	100	50

用户有特殊要求时,可根据实际需要选择025、030、040、050、063、075、090、110、130、150作为组合单位另行组合
You can choose 025、030、040、050、063、075、090、110、130、150 as combination unit to combine according to the fact your special needs.

四、E-UDL 无级变速器 E-UDL STEPLESS SPEED VARIATOR

产品概述 Summary



E-UDL...B3



E-UDL...B5

无线变速器简介 BRIEF INTRODUCTION TO STEPLESS SPEED VARIATOR

E-UDL系列无级变速器的设计，融合了国内外的先进技术，产品有以下主要特点：

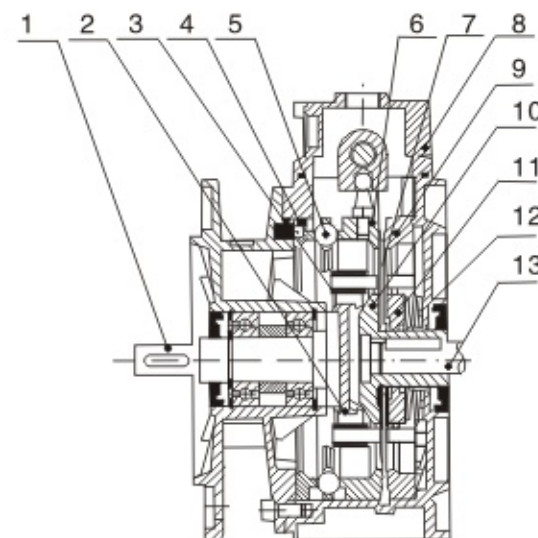
- 1、调速精度高：达0.5-1转。
 - 2、变速范围大，输出速比可在1: 1.4至1:7之间变化；
 - 3、强度高，寿命长。
 - 4、调速方便。
 - 5、可连续工作运转，且可正反方向运转，运转平稳，性能稳定，噪音低。
 - 6、全密封，对环境要求低。
 - 7、机构紧凑，体积小。
 - 8、采用优质铝合金压铸成型，外形美观，重量轻，永不生锈。
 - 9、适应性好。E-UDL系列无级变速器可与各种减速机组合，实现低速无级变速。
- E-UDL系列无级变速器可广泛用于食品、包装、化工、制药、塑料、造纸、机床、交通以及各种需调速的自动生产线，输送装配流水线，是您机器上理想的伙伴。

The design of E-UDL series stepless speed variator compromises the advanced technology both at home and abroad. The products include the following main characteristics:

- 1、High speed-regulating precision : up to 0.5-1 rotation.
- 2、Large speed-changing range: The speed ratio ranges from 1:1.4 to 1:7 freely.
- 3、High in strength and long in service life.
- 4、Convenient to regulate the speed.
- 5、Continuous in running , front-to-back in running direction , smooth in driving , stable in performance and low in noise.
- 6、Full in sealing and suitable for any environment.
- 7、Compact in structure and small in volume.
- 8、Made in high-quality aluminium alloy diecast into forming , good-looking in appearance , light in weight and it never gets rusty.
- 9、Good in adaptation: E-UDL series stepless speed variators can be combined with all kinds of speed reducers, as to achieve low stepless speed-changing.

E-UDL series stepless speed variators are widely used for foodstuffs, ceramics, packing, chemicals, pharmacy, plastics , paper-making, machine-tools, communications, and all kinds of automatic lines, pipelines and assembly lines which need speed-regulation, it is a good companion for your production.

结构 STRUCTURE



- | | |
|---------|--------------------------------|
| 1、输出轴 | 1、Output shaft |
| 2、行星架 | 2、Planet carrier |
| 3、滑块 | 3、Friction bearing-planet disk |
| 4、调整轨 | 4、Cam ring |
| 5、钢珠环 | 5、Ball ring |
| 6、滑动轨 | 6、Adjustable annulus ring |
| 7、行星轮 | 7、Planet disk |
| 8、操作盒 | 8、Control cover |
| 9、固定轨 | 9、Fixed annulus ring |
| 10、太阳轮 | 10、Fixed sun race |
| 11、太阳轮片 | 11、Adjustable sun race |
| 12、蝶形弹簧 | 12、Belleville spring |
| 13、电机轴 | 13、Motor shaft |

E-UDL 型号标记 E-UDL MODEL MARK

E-UD-L-0.75 B5 B5

① ② ③ ④ ⑤

NO	说 明	Comments
1	无线变速器代号	Code of step less speed variator
2	1) L铝合金机壳 2) 不标注时为铸铁机壳	1)L:Aluminium alloy casing 2)No mark means iron casting
3	电机功率	Motor power
4	1) B3脚底安装机型 2) B5法兰安装机型	1)B3:Foot-mounted model 2)B5:Flange-mounted model
5	安装方位代号	Code of installation position

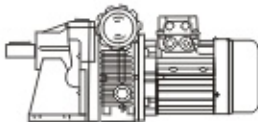
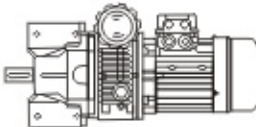
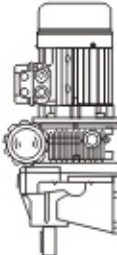
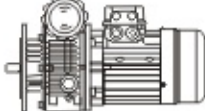
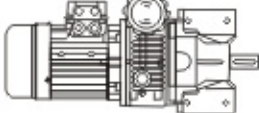
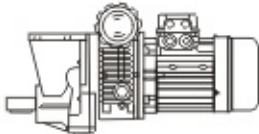
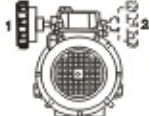
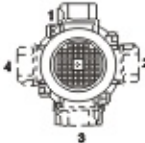


E-UDL 系列无级变速器性能参数 PERFORMANCE TABLE FOR E-UDL SERIES SPEED VARIATOR

N1=1400 r/min

B	型号Model	I	N ₂ [r/min]	M ₂ [Nm]
0.18KW	E-UDL0.18	1.6~8.2	880~170	1.5~3
0.37KW	E-UDL0.37	1.4~7	1000~200	3~6
0.55KW	E-UDL0.55	1.4~7	1000~200	4~8
0.75KW	E-UDL0.75	1.4~7	1000~200	6~12
1.1KW	E-UD1.1	1.4~7	1000~200	9~18
1.5KW	E-UD1.5	1.4~7	1000~200	12~24
2.2KW	E-UD2.2	1.4~7	1000~200	18~36
3.0KW	E-UD3.0	1.4~7	1000~200	24~48
4.0KW	E-UD4.0	1.4~7	1000~200	32~64
5.5KW	E-UD5.5	1.4~7	1000~200	45~90
7.5KW	E-UD7.5	1.4~7	1000~200	59~118

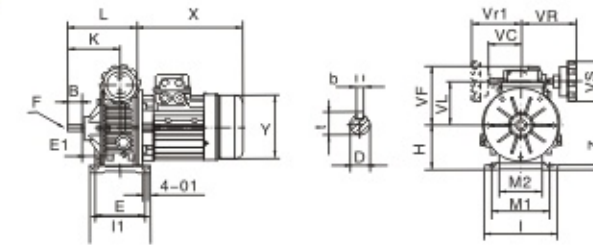
安装方位图 INSTALLATION POSITION DIAGRAM

B3	B6S	V5	V1
			
B5	B6D		
			
B8	Position of hand wheel	Position of terminal box	
			

- 如果对接线盒位置有特殊要求,请在下单时如上图所示来指定接线盒安装方位,否则接线盒的位置按标准1形式提供.
- 如没有特殊要求,一般按出厂的标准位置B3或B5形式提供.
- 如需要特殊的位置,请与我们技术服务人员联系.
- For special requirements, orders must specify the position of the terminal box with reference to the diagram. Unless otherwise specified the terminal box, the position of that will be mounted as shown in the diagram for the mounting position.
- Unless specified otherwise, the standard positions are B3 or B5.
- For positions not envisaged, it is necessary to call our Technical Service.

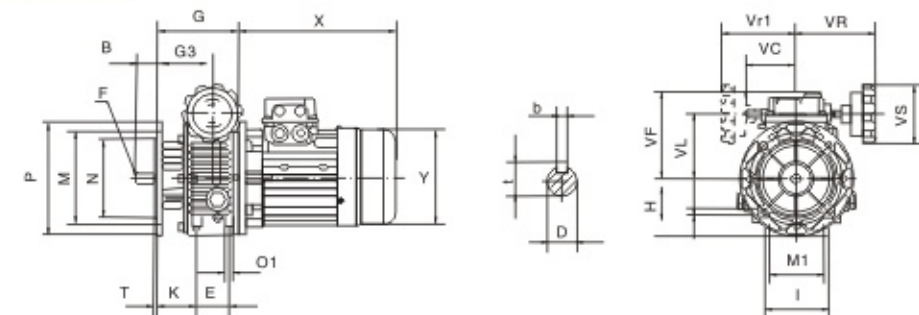


B3型 (MODEL)

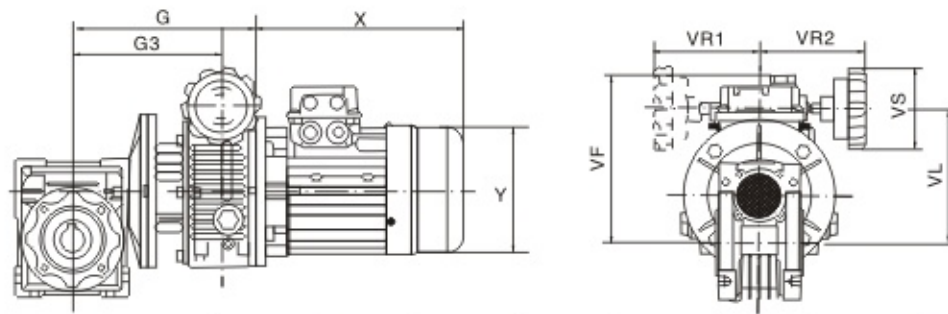


	B	Dp	E	E1	H	I	I1	K	L	M1	M2	O1	VC	VF	VL	VR	Vr1	VS	B	F	T	X	Y	Z
E-UDL0.18B3	23	11	105	18	80	145	120	88	136	110	71	9	71	111	78	110	110	85	4	-	12.5	200	120	10
E-UDL0.37B3	30	14	104	20	93	149	125	104	140	120	96	9	71	123	90	110	110	85	5	M6	16	227	141	10
E-UDL0.75B3	40	19	125	26	113	190	150	126	179	160	135	11	79	140	107	120	120	110	6	M6	21.5	268	160	15
E-UD1.1B3	40	24	105	35	100	207	130	136	187	160	115	13	-	124	102	150	-	110	8	M8	27	265	195	15
E-UD1.5B3	50	30	115	54	123	241	150	165	238	190	143	13	-	144	122	150	-	110	8	M8	27	290	195	18
E-UD2.2B3	60	30	230	25	150	300	270	191	268	245	190	14	-	188	150	150	-	110	8	M8	33	320	215	25
E-UD3.0B3	60	30	230	25	150	300	270	191	268	245	190	14	-	188	150	150	-	110	8	M8	33	320	215	25
E-UD4.0B3	60	30	230	25	150	300	270	191	268	245	190	14	-	188	150	150	-	110	8	M8	33	340	240	25
E-UD5.5B3	70	35	250	33	200	365	290	201	319	315	245	18	-	-	192	192	-	110	10	M10	38	395	275	30
E-UD7.5B3	70	35	250	33	200	365	290	201	319	315	245	18	-	-	192	192	-	110	10	M10	38	435	275	30

B5型 (MODEL)

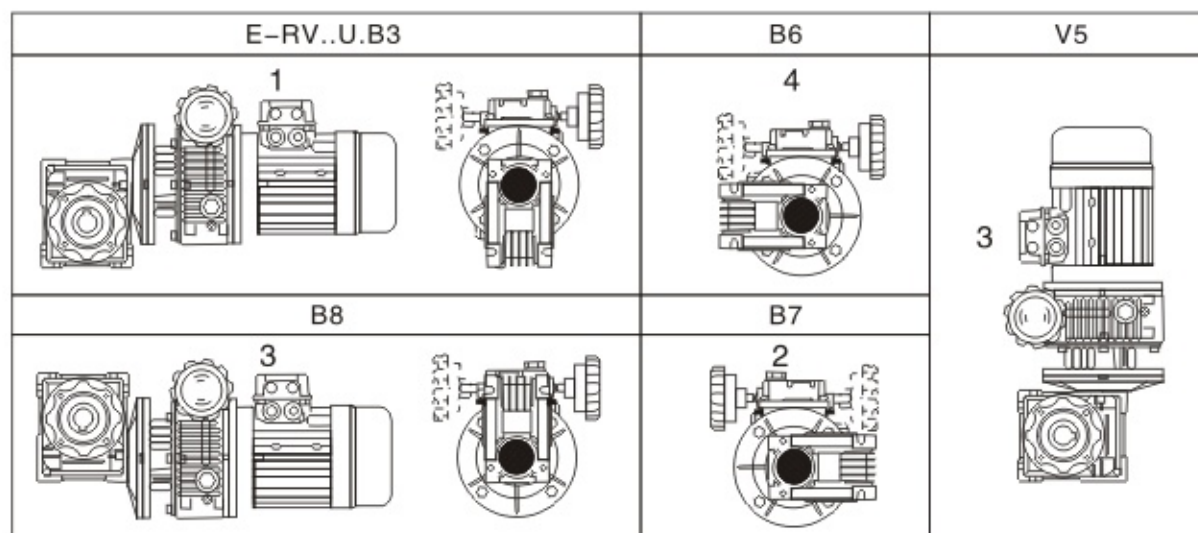


	B	Dp	E	G	G3	H	I	M	M1	N	D	D1	P	T	K	VC	VF	VL	VR	Vr1	VS	B	F	T	X	Y
E-UDL0.18B3	23	11	50	113	64.5	70	72	115	60	95	9	M6	140	3.5	46	71	111	78	110	110	85	4	–	13	200	120
E-UDL0.37B3	30	14	40	110	74	80	90	130	77	110	9	M8	160	3.5	53	71	123	90	100	110	85	5	M6	16	227	141
E-UDL0.75B3	40	19	58	139	85.5	100	98	165	84	130	11	M8	200	3.5	60	79	140	107	120	120	110	6	M6	22	268	160
E-UD1.1B3	40	24	–	147	95	98	207	165	–	130	11	–	200	3.5	–	–	124	102	150	–	110	8	M8	27	265	195
E-UD1.5B3	50	24	–	188	115	126	241	165	–	130	11	–	200	3.5	–	–	144	122	150	–	110	8	M8	27	290	195
E-UD2.2B3	60	30	–	208	131	150	270	165	–	230	15	–	300	4	–	–	188	150	160	–	100	8	M8	33	320	215
E-UD3.0B3	60	30	–	208	131	150	270	265	–	230	15	–	300	4	–	–	188	150	160	–	100	8	M8	33	320	215
E-UD4.0B3	60	30	–	208	131	150	270	265	–	230	15	–	300	4	–	–	188	150	160	–	110	8	M8	33	320	240
E-UD5.5B3	70	35	–	244	131	200	–	300	–	250	19	–	350	5	–	–		192	194	–	110	10	M10	38	395	275
E-UD7.5B3	70	35	–	244	131	200	–	300	–	250	19	–	350	5	–	–		192	194	–	110	10	M10	38	435	275



Model	G	G3	VF	VL	VS	VR	VR1	机座号4P Base No. 4P n1=1400r/min	X	Y
E-UDL0.18-E-RV040	183	135	151	118	85	110	110	63	200	120
E-UDL0.18-E-RV050	193	145	161	128	85	110	110			
E-UDL0.37-E-RV050	190	154	173	140	85	110	110	71	227	141
E-UDL0.37-E-RV063	205	169	186	153	85	110	110			
E-UDL0.55-E-RV063	234	181	203	170	110	120	120	80	268	160
E-UDL0.75-E-RV063	234	181	203	170	110	120	120			
E-UDL0.37-E-RV0.75	223	187	198	165	85	110	110	71	227	141
E-UDL0.55-E-RV075	252	198	215	182	110	120	120			
E-UDL0.75-E-RV075	252	198	215	182	110	120	120	80	268	160
E-UD1.1-E-RV075	259.5	207.5	199	177	110	150	-			
E-UD1.5-E-RV075	300.5	227.5	219	197	110	150	-	90S	265	195
E-UDL0.55-E-RV090	269	215	230	197	110	120	120			
E-UDL0.75-E-RV090	269	215	230	197	110	120	120	80	268	160
E-UD1.1-E-RV090	276.5	224.5	214	192	110	150	-			
E-UD1.5-E-RV090	317.5	244.5	234	212	110	150	-	90L	290	195
E-UD1.1-E-RV110	307	255	234	212	110	120	-			
E-UD1.5-E-RV110	348	275	254	232	110	150	-	90S	265	195
E-UD2.2-E-RV110	368	291	298	260	110	160	-			
E-UD3.0-E-RV110	368	291	298	260	110	160	-	100L	320	215
E-UD4.0-E-RV110	368	291	298	260	110	160	-			
E-UD1.5-E-RV130	368	295	274	252	110	150	-	90L	290	195
E-UD2.2-E-RV130	388	311	318	280	110	160	-			
E-UD3.0-E-RV130	388	311	318	280	110	160	-	100L	320	215
E-UD4.0-E-RV130	388	311	318	280	110	160	-			

E-UDL...-E-RV...安装方位图 E-UDL - E-RV MOUNTED POSITION



使用与保养 Operation & Maintenance

- 1、轴伸形式全部圆柱形、按《圆柱形轴伸》GB1569-1990选定，键联接按《普通平键》GB1095-2003选定。
- 2、联轴器与电动机联接时应使轴线保持同心、安装误差不应大于所用联轴器的允许误差值。
- 3、输出轴装联轴器或带轮时，用轴端螺孔压入，或加热装配，严禁锤击！
- 4、机械无级变速器不宜用于可能超负荷或堵转使用场合。
- 5、调速应在运转中进行，严禁停车转动调速手轮。
- 6、操作盒下的两端调速限位螺钉已调整好，请勿再动！
- 7、本机不宜工作在高于40℃的环境中，温升不得高于45℃。关于本机的温升，请看下面介绍：
变速器采用四级电机时，此时部件在跑合（空车运转）开始时，温度高于正常工作的环境温度约40℃-50℃。跑合60-80小时后，温升逐渐下降，此后温度高于环境20℃，并保持稳定的温升。跑合时高的温升影响正常允许的工作条件，但对部件的使用寿命并无有害影响。
- 8、变速器采用润湿油浴润滑。润滑油牌号为UBb-3x，使用前请检查油位。
- 9、出厂前润滑油已加入，首次使用2000小时后应更换润滑油，以后每隔5000小时换一次油。
- 10、变速器内润滑油应保持在油标的三分之二高度，用户应经常检查油位高度，严禁润滑不良的情况下使用，操作盒上透气螺母出厂时为防止搬运中漏油已旋紧，运转时须松开，严禁未松开使用。

- 1、The shapes of shaft extension are all cylindrical. It is subject to GB 1569-1990 Cylindrical shaft extension. The key joint refers to GE1095-2003 Ordinary flat key.
- 2、The shaft lines should be kept concentric when the coupling is connected with a motor. The installation error should be no more than the tolerance value of the coupling.
- 3、When the output shaft is installed with the coupling or belt wheel, they should be pressed into the screw hole on shaft end or assembled by heating. No hammering on it.
- 4、The mechinal stepless speed variator is not used in such an occasion where overload or running-blockage happens to occur.
- 5、Speed-regulation should be effected in running. Do not turn the hand wheel of speed-regulation when the machine stops!
- 6、The limit screws of speed-regulation on two ends under the operating box are well adjusted, Please don't touch them!
- 7、This set is not suited to work in the environment over 40 temperature, especially no more than 45 temperature when the temperature rises. In regard to its temperature rise, please read the explanation as follows.
If a 4-pole motor is used for the speed variator, the temperature under running-in(empty running) is 40-50 temperature higher than that of normal working environment. After running-in up to 60-80 hours, the temperature rise will go down gradually. From that time on, it is 20 temperature higher than of environment; and the temperatuer will keep on rising stably. The high temperature rise in running will affect normal permissive working condition, but it won't bring any bad effects to the service life of parts.
- 8、The liquid lubricating oil is used for the speed variator. Its trade mark is Ub-3x, Please check up the oil level before use.
- 9、The machine is filled with lubricating oil before leaving factory. When it starts to work up to 2000 hours for the first time, its lubricating oil should be replaced, changing the lubricating oil every 5000 hours later.
- 10、The lubricating oil level inside the speed variator should be kept at the height of tow-third in the oil scale Users should usually check the height of oil level. It is strictly prohibited to operate it when short of lubricating oil. The air screw nut on the operating box is screwed up for preventing from oil leakage in moving before leaving factory. It should be loosed when it starts to run. It is strictly forbidden to use it before loosing!



E-RV,E-RV-E-RV 性能参数 PERFORMANCE PARAMETER

P1n [Kw]	n2 [1/min]	M2n [Nm]	i	Fr2 [N]	fs		
0.06 (5614)	186.7	2.6	7.5	503	4.2	E-RV025	5614
	140	3.4	10	553	3.5		
	93.3	4.9	15	633	2.5		
	70	6.2	20	697	2		
	56	7.5	25	751	1.8		
	46.7	8.3	30	798	1.6		
	35	10	40	878	1.3		
	28	12	50	946	0.9		
	23.3	14	60	1006	0.7		
	186.7	2.6	7.5	683	6.9	E-RV030	5614
	140	3.4	10	752	5.4		
	93.3	4.7	15	861	3.8		
	70	6	20	948	3		
	56	7	25	1021	3		
	46.7	8	30	1085	2.5		
	35	9.7	40	1194	1.9		
	28	11.3	50	1286	1.5		
	23.3	12.5	60	1367	1.3		
	17.5	12.5	80	1504	0.9		
	14	25	100	1620	1.3	E-RV025/030	5614
	9.3	33	150	1830	0.9		
	7	41	200	1830	0.7		
	5.6	45	250	1830	0.8		
	4.7	56	300	3490	1.2	E-RV025/040	5614
	3.5	69	400	3490	0.9		
	2.8	94	500	3490	0.7		
	2.3	100	600	3490	0.6		
	1.9	115	750	3490	0.5		
	1.6	125	900	3490	0.5		
	1.2	153	1200	3490	0.4		
	0.93	185	1500	3490	0.3		
	0.78	198	1800	3490	0.3		
	0.58	247	2400	3490	0.2		
	0.47	280	3000	3490	0.2		
	0.35	295	4000	3490	0.1		
	0.28	348	5000	3490	0.1		
	4.7	55	300	3490	1.3	E-RV030/040	5614
	3.5	67	400	3490	0.9		
	2.8	88	500	3490	0.6		
	2.3	95	600	3490	0.7		
	1.9	103	750	3490	0.6		
	1.6	118	900	3490	0.5		
	1.2	143	1200	3490	0.4		
	0.93	166	1500	3490	0.4		
	0.78	184	1800	3490	0.3		
	0.58	217	2400	3490	0.2		
	0.44	247	3200	3490	0.2		
	0.35	278	4000	3490	0.1		
	0.28	327	5000	3490	0.1		
	1.6	118	900	4840	1	E-RV030/050	5614
	1.2	143	1200	4840	0.7		
	0.93	166	1500	4840	0.7		
	0.78	184	1800	4840	0.7		
	0.58	227	2400	4840	0.5		
	0.47	256	3000	4840	0.4		
	0.35	278	4000	4840	0.3		
	0.29	316	4800	4840	0.3		

	N1=1400
	N1=2800
	N1=900



P1n [Kw]	n2 [1/min]	M2n [Nm]	i	Fr2 [N]	fs		
0.06 (5614)	0.93	173	1500	6270	1.1	E-RV030/063	5614
	0.78	191	1800	6270	0.9		
	0.58	227	2400	6270	0.8		
	0.47	256	3000	6270	0.7		
	0.35	295	4000	6270	0.6		
	0.28	327	5000	6270	0.4		
	0.58	267	2400	7380	1.1	E-RV040/075	5614
	0.47	305	3000	7380	0.8		
	0.35	360	4000	7380	0.7		
	0.28	409	5000	7380	0.5		
	0.47	329	3000	8180	1.4	E-RV040/090	5614
	0.35	393	4000	8180	1.3		
	0.28	430	5000	8180	1		
0.09 (5612) (5624)	373.3	2.0	7.5	399	3.9	E-RV025	5612
	280	2.6	10	439	3.4		
	186.7	3.8	15	503	2.4		
	140	4.9	20	553	1.9		
	112	5.9	25	590	1.5		
	93.3	6.7	30	633	1.3		
	70	8.5	40	697	1.1		
	56	10.0	50	751	0.9		
	186.7	3.9	7.5	503	2.8	E-RV025	5624
	140	5.1	10	553	2.4		
	93.3	7.3	15	633	1.6		
	70	9.3	20	697	1.3		
	56	11	25	751	1.2		
	46.7	13	30	798	1.1		
	35	16	40	878	0.9		
	373.3	2.0	7.5	542	6.5	E-RV030	5612
	280	2.6	10	597	5		
	186.7	3.7	15	683	3.5		
	140	4.7	20	752	2.5		
	112	5.5	25	810	2.8		
	93.3	6.4	30	861	2.3		
	70	8.0	40	948	1.7		
	56	9.4	50	1021	1.4		
	46.7	10	60	1085	1.1		
	35	13	80	1194	0.9		
	186.7	3.9	7.5	683	4.6	E-RV030	5624
	140	5.0	10	752	3.6		
	93.3	7.0	15	861	2.5		
	70	8.8	20	948	2		
	56	10	25	1021	1.9		
	46.7	12	30	1085	1.7		
	35	14	40	1194	1.2		
	28	17	50	1286	1		
	23.3	18	60	1367	0.9		
	28	18	100	1286	1.6	E-RV025/030	5612
	18.7	25	150	1472	1.1		
	14	31	200	1620	0.9		
	14	37	100	1620	0.8	E-RV025/030	5624
	9.3	50	150	1830	0.6		
	7	61	200	1830	0.5		
	5.6	68	250	1830	0.5		
	4.7	77	300	1830	0.4		
	3.5	106	400	1830	0.3		
	2.8	117	500	1830	0.3		

	N1=1400
	N1=2800
	N1=900



P1n [Kw]	n2 [1/min]	M2n [Nm]	i	Fr2 [N]	fs		
0.09 (5612) (5624)	2.3	135	600	1830	0.2	E-RV025/030	5624
	1.9	149	750	1830	0.2		
	1.6	167	900	1830	0.2		
	1.2	201	1200	1830	0.1		
	0.93	231	1500	1830	0.1		
	0.78	264	1800	1830	0.1		
	0.58	311	2400	1830	0.1		
	0.47	347	3000	1830	0.1		
	28	19	50	2475	2	E-RV040	5624
	23.3	21	60	2630	1.7		
	17.5	25	80	2895	1.3		
	14	29	100	3118	1		
	9.3	43	300	3490	1.6	E-RV025/040	5612
	7	52	400	3490	1.2		
	5.6	71	500	3490	0.8		
	4.7	82	300	3490	0.8	E-RV030/040	5624
	3.5	103	400	4840	1.2	E-RV030/050	5624
	2.8	120	500	4840	1		
	2.3	146	600	4840	0.9		
	1.9	158	750	4840	0.8		
	1.6	177	900	4840	0.7	E-RV030/063	5624
	1.6	188	900	6270	1		
	1.2	222	1200	6270	0.9		
	0.93	259	1500	6270	0.7		
	0.93	305	1500	7380	1.1	E-RV040/075	5624
	0.78	331	1800	7380	1		
	0.58	400	2400	7380	0.7		
	0.47	494	3000	8180	0.9	E-RV040/090	5624
	0.35	589	4000	8180	0.8		
0.12 (5622) (6314)	373.3	2.7	7.5	399	3	E-RV025	5622
	280	3.5	10	439	2.6		
	186.7	5.1	15	503	1.8		
	140	6.5	20	553	1.4		
	112	7.9	25	590	1.1		
	93.3	9.0	30	633	1		
	70	11	40	697	0.8		
	186.7	5.2	7.5	683	3.4	E-RV030	6314
	140	6.6	10	752	2.7		
	93.3	9.3	15	861	1.9		
	70	12	20	948	1.5		
	56	14	25	1021	1.5		
	46.7	16	30	1085	1.3		
	35	19	40	1194	0.9		
	28	22	50	1286	0.8		
	46.7	17	30	2087	2.6	E-RV040	6314
	35	21	40	2298	1.9		
	28	25	50	2475	1.5		
	23.3	28	60	2630	1.3		
	17.5	33	80	2895	1	E-RV050	6314
	14	38	100	3118	0.8		
	23.3	29	60	3610	2.3		
	17.5	35	80	3973	1.9		
	14	39	100	4280	1.4	E-RV030/050	6314
	4.7	112	300	4840	1.2		
	3.5	138	400	4840	0.9		
	2.8	160	500	4840	0.7		
	2.8	168	500	6270	1.3	E-RV030/063	6314

	N1=1400
	N1=2800
	N1=900

P1n [Kw]	n2 [1/min]	M2n [Nm]	i	Fr2 [N]	fs		
0.12 (5622) (5614)	2.3	199	600	6270	1.1	E-RV030/063	6314
	1.9	217	750	6270	0.9		
	1.6	279	900	7380	1.2	E-RV040/075	6314
	1.2	344	1200	7380	0.9		
	0.78	470	1800	8180	0.9	E-RV040/090	6314
	0.58	593	2400	8180	0.9		
	0.47	731	3000	10320	1.2	E-RV050/110	6314
	0.35	884	4000	10320	1		
0.18 (6312) (6324) (7116)	0.28	1023	5000	10320	0.8	E-RV030	6312
	373.3	4	7.5	542	3.2		
	280	5.2	10	597	2.5		
	186.7	7.4	15	683	1.7		
	140	9.5	20	752	1.3		
	112	11	25	810	1.4		
	93.3	13	30	861	1.1		
	70	16	40	948	0.9		
	186.7	7.7	7.5	683	2.3	E-RV030	6324
	140	10	10	752	1.8		
	93.3	14	15	861	1.3		
	70	18	20	948	1		
	56	20	25	1021	0.9	E-RV040	6312
	46.7	24	30	1085	0.8		
	93.3	14	30	1657	2.4		
	70	17	40	1824	1.8		
	56	21	50	1964	1.4	E-RV040	6324
	70	19	20	1824	2		
	56	23	25	1964	1.7		
	46.7	25	30	2087	1.7		
	35	32	40	2298	1.3	E-RV050	6312
	28	37	50	2475	1		
	23.3	42	60	2630	0.8		
	45	28	20	2113	1.5	E-RV040	7116
	36	34	25	2276	1.3		
	30	38	30	2419	1.3		
	22.5	47	40	2662	1		
	46.7	24	60	2865	2.1	E-RV050	6312
	35	30	80	3153	1.5		
	28	34	100	3397	1.2		
	35	33	40	3153	2.3	E-RV050	6324
	28	39	50	3397	1.9		
	23.3	44	60	3610	1.6		
	17.5	52	80	3973	1.2		
	14	59	100	4280	0.9	E-RV050	7116
	18	56	50	3936	1.4		
	15	63	60	4183	1.1		
	11.3	75	80	4604	0.9		
	15	66	60	5467	2.1	E-RV063	7116
	11.3	79	80	6018	1.6		
	9	90	100	6270	1.4		
	3.5	216	400	6270	1	E-RV030/063	6324
	2.8	252	500	6270	0.8		
	2.3	336	600	7380	1.1	E-RV040/075	6324
	1.9	371	750	7380	0.9		
	1.6	419	900	7380	0.8	E-RV040/090	6324
	1.2	544	1200	8180	1		
	0.93	647	1500	8180	0.8	E-RV050/110	6324
	0.78	727	1800	10320	1.5		
	0.58	948	2400	10320	1.1		

	N1=1400
	N1=2800
	N1=900



P1n [Kw]	n2 [1/min]	M2n [Nm]	i	Fr2 [N]	fs		
0.25 (6322) (7114) (7126)	373.3	5.6	7.5	542	2.3	E-RV030	6322
	280	7.2	10	597	1.8		
	186.7	10	15	683	1.3		
	140	13	20	752	0.9		
	112	15	25	810	1		
	93.3	18	30	861	0.8		
	186.7	11	7.5	1315	3.6	E-RV040	7114
	140	14	10	1447	2.8		
	93.3	20	15	1657	1.9		
	70	26	20	1824	1.5		
	56	32	25	1964	1.2		
	46.7	35	30	2087	1.3		
	35	44	40	2298	0.9		
	120	17	7.5	1524	2.6	E-RV040	7126
	90	22	10	1677	2		
	60	31	15	1920	1.4		
	45	39	20	2113	1.1		
	36	48	25	2276	0.9		
	30	53	30	2419	0.9		
	35	42	80	3153	1.1	E-RV050	6322
	28	48	100	3397	0.8		
	70	27	20	2503	2.7		
	56	32	25	2696	2.2		
	46.7	36	30	2865	2.3		
	35	46	40	3153	1.7		
	28	54	50	3397	1.4	E-RV050	7114
	23.3	60	60	3610	1.1		
	17.5	72	80	3973	0.9		
	45	40	20	2900	1.9		
	36	48	25	3124	1.5		
	30	54	30	3320	1.7		
	22.5	67	40	3654	1.2	E-RV050	7126
	18	78	50	3936	1		
	15	88	60	4183	0.8		
	28	55	50	4440	2.4		
	23.3	64	60	4719	2		
	17.5	76	80	5193	1.6		
	14	87	100	5595	1.4	E-RV063	7114
	18	81	50	5145	1.8		
	15	92	60	5467	1.5		
	11.3	110	80	6018	1.2		
	9	125	100	6270	1		
	7	150	400	6270	1.4	E-RV030/063	6322
	5.6	175	500	6270	1.2		
	17.5	80	80	6130	2.3		
	14	94	100	6603	1.9		
	11.3	116	80	7103	1.7		
	9	133	100	7380	1.4	E-RV075	7126
	3.5	321	400	7380	1.1		
	2.8	375	500	7380	0.8		
	2.3	488	600	8180	1.2		
	1.9	553	750	8180	0.9		
	1.6	612	900	8180	0.8	E-RV040/090	7114
	1.2	776	1200	10320	1.3		
	0.93	924	1500	10320	1.2		
	0.78	1010	1800	10320	1.1		
	0.58	1358	2400	13500	1		
	0.47	1626	3000	13500	0.8		

	N1=1400
	N1=2800
	N1=900

P1n [Kw]	n2 [1/min]	M2n [Nm]	i	Fr2 [N]	fs		
0.37 (7112) (7124) (8026)	0.35	1910	4000	13500	0.6	E-RV063/130	7114
	0.28	2132	5000	13500	0.5		
	0.8	1199	1800	18000	1.8	E-RV063/150	7114
	0.6	1446	2400	18000	1.8		
	0.5	1713	3000	18000	1.4		
	0.4	2026	4000	18000	0.9		
	0.3	2251	5000	18000	0.7		
	373.3	8.3	7.5	1044	3.3	E-RV040	7112
	280	11	10	1149	2.6		
	186.7	16	15	1315	1.9		
	140	20	20	1447	1.4		
	112	25	25	1559	1.1		
	186.7	16	7.5	1315	24	E-RV040	7124
	140	21	10	1447	1.9		
	93.3	30	15	1657	1.3		
	70	39	20	1824	1		
	56	47	25	1964	0.8		
	46.7	52	30	2087	0.8		
	112	25	25	2140	2	E-RV050	7112
	93.3	29	30	2274	2.2		
	70	37	40	2503	1.6		
	56	44	50	2696	1.2		
	46.7	50	60	2865	1		
	35	62	80	3153	0.7		
	140	21	10	1987	3.3	E-RV050	7124
	93.3	31	15	2274	2.4		
	70	39	20	2503	1.8		
	56	47	25	2696	1.5		
	46.7	54	30	2865	1.5		
	35	68	40	3153	1.1		
	28	80	50	3397	0.9	E-RV050	8016
	23.3	89	60	3610	0.8		
	120	25	7.5	2091	3.3		
	90	33	10	2302	2.5		
	60	47	15	2635	1.8		
	45	59	20	2900	1.3		
	36	72	25	3124	1	E-RV063	7124
	30	80	30	3320	1.1		
	35	70	40	4122	2.1		
	28	82	50	4440	1.6		
	23.3	94	60	4719	1.4		
	17.5	113	80	5193	1.1		
	14	129	100	5595	0.9	E-RV063	8016
	45	60	20	3791	2.4		
	36	73	25	4084	1.9		
	30	82	30	4339	2.1		
	22.5	102	40	4776	1.6		
	18	120	50	5145	1.2		
	15	137	60	5467	1	E-RV030/063	7112
	9.3	182	300	6270	1.3		
	7	222	400	6270	1		
	23.3	97	60	5569	2	E-RV075	7124
	17.5	119	80	6130	1.6		
	14	139	100	6603	1.3		
	18	124	50	6073	1.8	E-RV075	8016
	15	141	60	6453	1.5		
	11.3	172	80	7103	1.2		
	9	196	100	7380	1		

	N1=1400
	N1=2800
	N1=900



P1n [Kw]	n2 [1/min]	M2n [Nm]	i	Fr2 [N]	fs		
0.37 (7112) (7124) (8016)	4.7	383	300	7380	1	E-RV040/075	7124
	3.5	474	400	7380	0.7		
	11.3	184	80	7859	1.7		
	9	212	100	8180	1.3	E-RV090	8016
	4.7	406	300	8180	1.5		
	3.5	505	400	8180	1.2		
	2.8	593	500	8180	0.9	E-RV040/090	7124
	2.3	722	600	8180	0.8		
	1.9	837	750	10320	1.3		
	1.6	928	900	10320	1.2	E-RV050/110	7124
	1.2	1148	1200	10320	0.8		
	0.93	1444	1500	13500	1.1		
	0.78	1586	1800	13500	0.9	E-RV063/130	7124
	0.8	1774	1800	18000	1.2		
	0.6	2141	2400	18000	1.2		
0.55 (7122) (8014) (8026)	0.5	2535	3000	18000	0.9	E-RV063/150	7124
	373.3	12	7.5	1044	2.2		
	280	16	10	1149	1.8	E-RV040	7122
	186.7	24	15	1315	1.3		
	140	30	20	1447	0.9		
	112	37	25	1559	0.8	E-RV050	7122
	140	31	20	1987	1.7		
	112	38	25	2140	1.4		
	93.3	43	30	2274	1.5	E-RV050	8014
	70	55	40	2503	1.1		
	56	65	50	2696	0.8		
	46.7	74	60	2865	0.7	E-RV050	8014
	186.7	24	7.5	1805	2.9		
	140	32	10	1987	2.2	E-RV050	8026
	93.3	46	15	2274	1.6		
	70	59	20	2503	1.2		
	56	70	25	2696	1	E-RV050	7122
	46.7	80	30	2865	1		
	120	37	7.5	2091	2.2		
	90	48	10	2302	1.7	E-RV063	7122
	60	69	15	2635	1.2		
	45	88	20	2900	0.9		
	70	56	40	3272	1.9	E-RV063	8014
	56	68	50	3524	1.5		
	46.7	78	60	3745	1.2		
	35	96	80	4122	0.9	E-RV063	8026
	28	111	100	4440	0.7		
	70	60	20	3272	2.2		
	56	72	25	3524	1.8	E-RV063	8012
	46.7	82	30	3745	1.9		
	35	104	40	4122	1.4		
	28	122	50	4440	1.1	E-RV063	8024
	23.3	140	60	4719	0.9		
	60	70	15	3444	2.2		
	45	90	20	3791	1.6	E-RV075	7122
	36	108	25	4084	1.3		
	30	123	30	4339	1.4		
	22.5	152	40	4776	1.1	E-RV075	8014
	35	99	80	4865	1.3		
	28	116	100	5241	1		
	35	108	40	4865	2	E-RV075	8014
	28	128	50	5241	1.6		

	N1=1400
	N1=2800
	N1=900



P1n [Kw]	n2 [1/min]	M2n [Nm]	i	Fr2 [N]	fs		
0.55 (7112) (8014) (8026)	23.3	144	60	5569	1.4	E-RV075	8014
	17.5	177	80	6130	1.1		
	14	206	100	6603	0.9		
	30	124	30	5122	2	E-RV075	8026
	22.5	156	40	5637	1.5		
	18	184	50	6073	1.2		
	15	210	60	6453	1	E-RV090	8014
	17.5	189	80	6783	1.5		
	14	221	100	7306	1.2		
	18	196	50	6719	2	E-RV090	8026
	15	224	60	7140	1.6		
	11.3	274	80	7859	1.1		
	9	315	100	8180	0.9	E-RV040/090	7122
	9.3	305	300	8180	2		
	7	375	400	8180	1.5		
0.75 (8012) (8024) (90S6)	5.6	441	500	8180	1.2	E-RV110	8014
	17.5	201	80	8571	2.6		
	14	236	100	9232	2	E-RV110	8026
	11.3	293	80	9931	1.9		
	9	344	100	10320	1.5	E-RV050/110	8014
	4.7	615	300	10320	2		
	3.5	810	400	10320	1.4		
	2.8	938	500	10320	1.1	E-RV063/130	8014
	2.3	1096	600	10320	1		
	1.9	1244	750	10320	0.9		
	2.8	957	500	13500	1.6	E-RV063/150	8014
	1.9	1382	750	13500	1.2		
	1.2	2057	1200	13500	0.8		
	0.8	2637	1800	1800	0.8	E-RV050	8012
	0.6	3182	2400	2400	0.8		
	373.3	17	7.5	1433	3		
	280	22	10	1577	2.4	E-RV050	8024
	186.7	31	15	1805	1.7		
	140	41	20	1987	1.3		
	112	49	25	2140	1	E-RV050	8012
	93.3	56	30	2274	1.1		
	186.7	33	7.5	1805	2.1		
	140	43	10	1987	1.6	E-RV063	8012
	93.3	62	15	2274	1.2		
	70	80	20	2503	0.9		
	140	43	20	2597	2.3	E-RV063	8024
	112	52	25	2797	1.8		
	93.3	60	30	2973	2		
	70	77	40	3272	1.4	E-RV063	90S6
	56	92	50	3524	1.1		
	46.7	106	60	3745	0.9		
	93.3	63	15	2973	2.2	E-RV063	8024
	70	82	20	3272	1.6		
	56	98	25	3524	1.3		
	46.7	112	30	3745	1.4	E-RV063	8024
	35	141	40	4122	1		
	120	51	7.5	2734	2.9		
	90	67	10	3009	2.3	E-RV063	90S6
	60	96	15	3444	1.6		
	45	123	20	3791	1.2		
	36	147	25	4084	0.9	E-RV063	90S6
	30	167	30	4339	1		

	N1=1400
	N1=2800
	N1=900



P1n [Kw]	n2 [1/min]	M2n [Nm]	i	Fr2 [N]	fs		
0.75 (8012) (8024) (90S6)	46.7	107	60	4421	1.3	E-RV075	8012
	28	159	100	5241	0.8		
	56	101	25	4160	2	E-RV075	8024
	46.7	117	30	4421	2		
	35	147	40	4865	1.5		
	28	174	50	5241	1.2		
	23.3	197	60	5569	1		
	60	97	15	4065	2.4	E-RV075	90S6
	45	124	20	4474	1.9		
	36	149	25	4820	1.4		
	30	170	30	5122	1.5		
	22.5	213	40	5637	1.1		
	35	143	80	5383	1.6	E-RV090	8012
	28	169	100	5799	1.2		
	28	182	50	5799	1.8	E-RV090	8024
	23.3	209	60	6163	1.5		
	17.5	258	80	6783	1.1		
	14	302	100	7306	0.9	E-RV090	90S6
	30	179	30	5667	2.6		
	22.5	226	40	6238	1.8		
	18	267	50	6719	1.4		
	15	306	50	7140	1.4		
	7	512	400	8180	1.1	E-RV040/090	8012
	5.6	601	500	8180	0.9		
	17.5	274	80	8571	1.9	E-RV110	8024
	14	322	100	9232	1.5		
	15	325	60	9023	2.1	E-RV110	90S6
	11.3	399	80	9931	1.4		
	9	470	100	10320	1.1		
	9.3	424	300	10320	2.8	E-RV050/110	8012
	7	553	400	10320	2.1		
	5.6	640	500	10320	1.6		
	4.7	838	300	10320	1.5	E-RV050/110	8024
	3.5	1105	400	10320	1.1		
	11.3	399	80	12989	2.1	E-RV130	90S6
	9	470	100	13500	1.7		
	2.8	1305	500	13500	1.1	E-RV063/130	8024
	2.3	1557	600	13500	1		
	1.9	1772	750	13500	0.9		
	1.6	2014	900	13500	0.8		
	2.8	1290	500	18000	1.8	E-RV063/150	90L6
	2.3	1529	600	18000	1.7		
	1.9	1783	750	18000	1.3		
	1.6	2215	900	18000	0.9		
	1.2	2680	1200	18000	1		
1.1 (8022) (90L6) (90S4)	373.3	25	7.5	1433	2.1	E-RV050	8022
	280	33	10	1577	1.6		
	186.7	48	15	1805	1.2		
	140	62	20	1987	0.9		
	186.7	46	15	2359	2.1	E-RV063	8022
	140	60	20	2597	1.6		
	112	72	25	2797	1.2		
	93.3	82	30	2973	1.1		
	70	104	40	3272	1		
	120	75	7.5	2734	2	E-RV063	90L6
	90	98	10	3009	1.5		
	60	140	15	3444	1.1		
	45	180	20	3791	0.8		

	N1=1400
	N1=2800
	N1=900



P1n [Kw]	n2 [1/min]	M2n [Nm]	i	Fr2 [N]	fs		
1.1 (8022) (90L6) (90S4)	186.7	50	7.5	2359	2.6	E-RV063	90S4
	140	65	10	2597	2		
	93.3	92	15	2973	1.5		
	70	120	20	3272	1.1		
	56	144	25	3524	0.9		
	46.7	164	30	3745	1	E-RV075	8022
	112	77	25	3302	1.9		
	93.3	89	30	3509	1.9		
	70	114	40	3862	1.4		
	56	137	50	4160	1.1		
	46.7	157	60	4421	0.9	E-RV075	90L6
	90	98	10	3551	2.3		
	60	142	15	4065	1.6		
	45	182	20	4474	1.3		
	36	219	25	4820	1		
	30	249	30	5122	1	E-RV075	90S4
	93.3	95	15	3509	2.1		
	70	122	20	3862	1.7		
	56	148	25	4160	1.3		
	46.7	171	30	4421	1.3		
	35	216	40	4865	1	E-RV090	8022
	35	210	80	5383	1.1		
	28	248	100	5799	0.8		
	36	228	25	5333	1.6	E-RV090	90L6
	30	263	30	5667	1.8		
	22.5	331	40	6238	1.2		
	18	391	50	6719	1		
	15	448	60	7140	0.8		
	35	222	40	5383	1.6	E-RV090	90S4
	28	266	50	5799	1.3		
	23.3	307	60	6163	1		
	22.5	345	40	7882	2.3	E-RV110	90L6
	18	414	50	8491	1.8		
	15	476	60	9023	1.4		
	11.3	586	80	9931	1		
	28	278	50	7328	2.3	E-RV110	90S4
	23.3	325	60	7787	1.9		
	17.5	402	80	8571	1.3		
	14	473	100	9232	1		
	9.3	621	300	10320	1.9	E-RV050/110	8022
	7	810	400	10320	1.4		
	5.6	938	500	10320	1.1		
	11.3	586	80	12989	1.4	E-RV130	90L6
	9	689	100	13500	1.1		
	17.5	408	80	11210	2.1	E-RV130	90S4
	14	480	100	12076	1.5		
	4.7	1274	300	13500	1.3	E-RV063/130	90S4
	3.5	1621	400	13500	1		
	2.8	1913	500	13500	0.8		
	9.3	752	150	18000	3.1	E-RV063/150	90S4
	7	966	200	18000	2.4		
	5.6	1175	250	18000	1.7		
	4.7	1364	300	18000	1.7		
	3.5	1619	400	18000	1.6		
	2.8	1893	500	18000	1.2		
	2.3	2242	600	18000	1.2		
	1.9	2616	750	18000	0.9		

	N1=1400
	N1=2800
	N1=900



P1n [Kw]	n2 [1/min]	M2n [Nm]	i	Fr2 [N]	fs		
1.5 (90S2) (90L4) (100L6)	373.3	34	7.5	1433	1.5	E-RV050	90S2
	280	45	10	1577	1.2		
	186.7	65	15	1805	0.9		
	186.7	68	7.5	2359	1.9	E-RV063	90L4
	140	88	10	2597	1.5		
	93.3	126	15	2973	1.1		
	70	164	20	3272	0.8	E-RV063	90S2
	373.3	35	7.5	1873	2.7		
	280	45	10	2061	2.1		
	186.7	66	15	2359	1.6	E-RV063	90S2
	140	86	20	2597	1.2		
	112	105	25	2797	0.9		
	93.3	120	30	2973	1	E-RV075	100L6
	120	103	7.5	3227	2		
	90	134	10	3551	1.7		
	60	193	15	4065	1.2	E-RV075	90L4
	140	89	10	3065	2.2		
	93.3	129	15	3509	1.5		
	70	166	20	3862	1.3	E-RV075	90S2
	56	202	25	4160	1		
	46.7	233	30	4421	1		
	280	45	10	2433	3.1	E-RV075	90S2
	186.7	66	15	2785	2.2		
	140	86	20	3065	1.8		
	112	105	25	3302	1.4	E-RV075	90S2
	93.3	121	30	3509	1.4		
	70	156	40	3862	1		
	56	187	50	4160	0.8	E-RV075	90S2
	46.7	215	60	4421	0.7		
	90	137	10	3929	2.7		
	60	198	15	4498	2.1	E-RV090	100L6
	45	258	20	4951	1.5		
	36	310	25	5333	1.2		
	30	358	30	5667	1.3	E-RV090	90L4
	70	170	20	4273	2.1		
	56	207	25	4603	1.6		
	46.7	239	30	4891	1.7	E-RV090	90S4
	35	303	40	5383	1.2		
	28	363	50	5799	0.9		
	23.3	418	60	6163	0.8	E-RV090	90S4
	56	197	50	4603	1.4		
	46.7	227	60	4891	1.1		
	45	264	20	6256	2.7	E-RV110	100L6
	36	322	25	6739	2.4		
	30	363	30	7161	2.3		
	22.5	471	40	7882	1.7	E-RV110	90L4
	18	565	50	8491	1.3		
	15	649	60	9023	1.1		
	35	315	40	6803	2.2	E-RV110	90L4
	28	379	50	7328	1.7		
	23.3	443	60	7787	1.4		
	17.5	548	80	8571	0.9	E-RV110	90S2
	46.7	236	60	6181	2		
	35	299	80	6803	1.3		
	28	358	100	7328	1	E-RV050/110	90S2
	9.3	847	300	10320	1.4		
	7	1105	400	10320	1		
	5.6	1279	500	10320	0.8		

N1=1400
N1=2800
N1=900



P1n [Kw]	n2 [1/min]	M2n [Nm]	i	Fr2 [N]	fs		
1.5 (90S2) (90L4) (100L6)	22.5	471	40	10309	2.3	E-RV130	100L6
	18	565	50	11105	1.8		
	15	659	60	11801	1.4		
	11.3	799	80	12989	1.1	E-RV130	90L4
	17.5	557	80	11210	1.5		
	14	655	100	12076	1.1		
	9.3	878	300	13500	1.9	E-RV063/130	90S2
	7	1105	400	13500	1.4		
	5.6	1305	500	13500	1.1		
	4.7	1737	300	13500	1	E-RV063/130	90L4
	3.5	2210	400	13500	0.7		
	9.3	1026	150	18000	2.3	E-RV063/150	90L4
	7	1317	200	18000	1.8		
	5.6	1602	250	18000	1.3		
	4.7	1860	300	18000	1.3	E-RV063/150	90L4
	3.5	2208	400	18000	1.2		
	2.8	2582	500	18000	0.9		
	2.3	3057	600	18000	0.9	E-RV063	90L2
	373.3	51	7.5	1873	1.8		
	280	66	10	2061	1.5		
	186.7	97	15	2359	1.1	E-RV075	100LA4
	186.7	99	7.5	2785	1.8		
	140	131	10	3065	1.5		
2.2 (90L2) (100LA4) (112M6)	93.3	189	15	3509	1	E-RV075	90L2
	373.3	50	7.5	2210	2.5		
	280	66	10	2433	2.1		
	186.7	97	15	2785	1.5	E-RV075	90L2
	140	126	20	3065	1.3		
	112	154	25	3302	1		
	93.3	178	30	3509	0.9	E-RV090	100LA4
	186.7	100	7.5	3081	2.9		
	140	132	10	3391	2.3		
	93.3	191	15	3882	1.9	E-RV090	100LA4
	70	249	20	4273	1.4		
	56	304	25	4603	1.1		
	46.7	351	30	4891	1.2	E-RV090	112M6
	120	154	7.5	3570	2.2		
	90	201	10	3929	1.8		
	60	291	15	4498	1.4	E-RV090	90L2
	45	378	20	4951	1		
	140	129	20	3391	2		
	112	159	25	3653	1.6	E-RV090	90L2
	93.3	185	30	3882	1.7		
	70	237	40	4273	1.2		
	56	289	50	4603	0.9	E-RV110	100LA4
	70	255	20	5399	2.5		
	56	311	25	5816	2.2		
	46.7	355	30	6181	2	E-RV110	100LA4
	35	462	40	6803	1.5		
	28	555	50	7328	1.2		
	23.3	649	60	7787	1	E-RV110	112M6
	90	203	10	4965	3.5		
	60	294	15	5684	2.6		
	45	388	20	6256	1.9	E-RV110	90L2
	36	473	25	6739	1.6		
	30	532	30	7161	1.6		
	112	161	25	4616	3.1	E-RV110	90L2
	93.3	187	30	4905	3		

N1=1400
N1=2800
N1=900



P1n [Kw]	n2 [1/min]	M2n [Nm]	i	Fr2 [N]	fs		
2.2 (90L2) (100LA4) (112M6)	70	243	40	5399	2.1	E-RV110	90L2
	56	296	50	5816	1.7		
	46.7	346	60	6181	1.4		
	35	468	40	8897	2.2	E-RV130	100LA4
	28	563	50	9584	1.7		
	23.3	658	60	10185	1.4		
	17.5	816	80	11210	1	E-RV130	112M6
	36	473	25	8814	2.2		
	30	539	30	9366	2.1		
	22.5	691	40	10309	1.6		
	18	829	50	11105	1.2		
	15	966	60	11801	1		
	35	444	80	8897	1.3	E-RV130	90L2
	28	525	100	9584	1		
	28	570	50	13100	2.5	E-RV150	100LA4
	23.3	657	60	13920	1.9		
	17.5	816	80	15320	1.4		
	14	960	100	16500	1		
3.0 (100L2) (100LB4) (132S6)	373.3	68	7.5	2210	1.9	E-RV075	100L2
	280	90	10	2433	1.6		
	186.7	135	7.5	2785	1.4	E-RV075	100LB4
	140	178	10	3065	1.1		
	93.3	258	15	3509	0.8	E-RV090	100L2
	373.3	70	7.5	2446	3		
	280	92	10	2692	2.6		
	186.7	137	7.5	3081	2.1	E-RV090	100LB4
	140	180	10	3391	1.7		
	93.3	261	15	3882	1.4		
	70	340	20	4273	1		
	56	414	25	4603	0.8		
	46.7	479	30	4891	0.9	E-RV110	100LB4
	93.3	264	15	4905	2.5		
	70	348	20	5399	1.9		
	56	425	25	5816	1.6		
	46.7	485	30	6181	1.5		
	35	630	40	6803	1.1	E-RV110	132S6
	28	757	50	7328	0.9		
	120	210	7.5	4511	3.1		
	90	277	10	4965	2.5		
	60	401	15	5684	1.9		
	45	528	20	6256	1.4	E-RV130	100LB4
	56	430	25	7607	2.2		
	46.7	491	30	8084	2.1		
	35	638	40	8897	1.6		
	28	767	50	9584	1.3		
	23.3	898	60	10185	1		
	17.5	1113	80	11210	0.8		
	90	277	10	6494	3.4	E-RV130	132S6
	60	406	15	7434	2.6		
	45	528	20	8182	1.9		
	36	645	25	8814	1.6		
	30	735	30	9366	1.6		
	22.5	942	40	10309	1.2		

N1=1400
N1=2800
N1=900

P1n [Kw]	n2 [1/min]	M2n [Nm]	i	Fr2 [N]	fs		
3.0 (100L2) (100LB4) (132S6)	28	777	50	13100	1.8	E-RV150	100LB4
	23.3	896	60	13920	1.4		
	17.5	1113	80	15320	1		
	14	1310	100	16500	0.8		
	373.3	91	7.5	2210	1.4	E-RV075	112M2
4.0 (112M2) (112M4) (132MA6)	280	120	10	2433	1.2		
	186.7	180	7.5	2785	1	E-RV075	112M4
	140	237	10	3065	0.8		
	373.3	93	7.5	2446	2.2	E-RV090	112M2
	280	123	10	2692	1.9		
	186.7	182	7.5	3081	1.6	E-RV090	112M4
	140	240	10	3391	1.3		
	93.3	348	15	3882	1		
	70	453	20	4273	0.8		
	140	240	10	4285	2.5	E-RV110	112M4
	93.3	352	15	4905	1.9		
	70	464	20	5399	1.4		
	56	566	25	5816	1.2		
	46.7	646	30	6181	1.1	E-RV110	132MA6
	120	280	7.5	4511	2.3		
	90	369	10	4965	1.9		
	60	535	15	5684	1.4		
	56	573	25	7607	1.6	E-RV130	112M4
	46.7	654	30	8084	1.6		
	35	851	40	8897	1.2		
	28	1023	50	9584	1		
	23.3	1197	60	10185	0.8		
	120	283	7.5	5901	3.1	E-RV130	132MA6
	90	369	10	6494	2.6		
	60	541	15	7434	2		
	45	705	20	8182	1.5		
	36	860	25	8814	1.2	E-RV150	112M4
	28	1036	50	13100	1.4		
	23.3	1195	60	13920	1.1		
	17.5	1484	80	15320	0.8		
5.5 (132S4)	186.7	250	7.5	3893	2.2	E-RV110	132S4
	140	330	10	4285	1.8		
	93.3	484	15	4905	1.4		
	70	638	20	5399	1	E-RV130	132S4
	140	334	10	5605	2.5		
	93.3	490	15	6416	1.9		
	70	638	20	7062	1.4		
	56	788	25	7607	1.2		
	46.7	900	30	8084	1.2	E-RV150	132S4
	35	1171	40	8897	0.9		
	70	645	20	9650	2		
	56	788	25	10400	1.5		
	46.7	934	30	11050	1.3		
	35	1171	40	12160	1.3		
	28	1426	50	13100	1		
	23.3	1643	60	13920	0.8		

N1=1400
N1=2800
N1=900



P1n [Kw]	n2 [1/min]	M2n [Nm]	i	Fr2 [N]	fs		
7.5 (132M4)	186.7	341	7.5	3893	1.6	E-RV110	132M4
	140	450	10	4285	1.3		
	93.3	660	15	4905	1		
	186.7	345	7.5	5092	2.1	E-RV130	132M4
	140	455	10	5605	1.8		
	93.3	668	15	6416	1.4		
	70	870	20	7062	1		
	56	1074	25	7607	0.9		
	46.7	1227	30	8084	0.8		
	35	1596	40	8897	0.7	E-RV150	132S4
	70	880	20	9650	1.5		
	56	1074	25	10400	1.1		
	46.7	1274	30	11050	0.9		
	35	4596	40	12160	1	E-RV150	132M4
	186.7	512	7.5	6960	2.3		
	140	675	10	7660	1.8		
	93.3	990	15	8770	1.3		
	70	1291	20	9650	1		
	56	1576	25	10400	0.8		
	186.7	698	7.5	6960	1.7	E-RV150	132M4
	140	921	10	7660	1.3		
	93.3	1351	15	8770	0.9		
	70	1760	20	9650	0.7		

 N1=1400
 N1=2800
 N1=900

E-V 性能参数 PERFORMANCE PARAMETER

M2n [Kw]	i	P1n [Kw]	n2 [1/min]	Fr2 [N]	Fr1 [N]	
13	7.5	0.58	373.3	542	125	E-V030
13	10	0.45	280	597	140	
13	15	0.31	186.7	683	140	
12	20	0.23	140	752	146	
15	25	0.25	112	810	210	
15	30	0.21	93.3	861	210	
14	40	0.16	70	948	127	
12	50	0.12	56	1021	128	
12	60	0.1	46.7	1085	126	
11	80	0.08	35	1194	130	
27	7.5	1.2	373.3	1044	233	E-V040
30	10	1.0	280	1149	272	
31	15	0.72	186.7	1315	291	
29	20	0.52	140	1447	204	
28	25	0.42	112	1559	236	
34	30	0.44	93.3	1657	350	
31	40	0.32	70	1824	350	
30	50	0.26	56	1964	350	
27	60	0.21	46.7	2087	350	
25	80	0.16	35	2298	350	
22	100	0.12	28	2475	350	
52	7.5	2.3	373.3	1433	324	E-V050
53	10	1.8	280	1577	378	
57	15	1.3	186.7	1805	399	
53	20	0.95	140	1987	417	
51	25	0.75	112	2140	482	
65	30	0.82	93.3	2274	490	
59	40	0.59	70	2503	490	
53	50	0.45	56	2696	490	
50	60	0.37	46.7	2865	490	
45	80	0.27	35	3153	490	
40	100	0.21	28	3397	490	
92	7.5	4.0	373.3	1873	395	E-V063
96	10	3.2	280	2061	463	
101	15	2.3	186.7	2359	492	
97	20	1.7	140	2597	538	
91	25	1.3	112	2797	593	
120	30	1.5	93.3	2973	700	
113	40	1.1	70	3272	700	
102	50	0.83	56	3524	700	
96	60	0.68	46.7	3745	700	
86	80	0.49	35	4122	700	
74	100	0.37	28	4440	700	

 N1=1400
 N1=2800
 N1=900



M2n [Kw]	I	P1n [Kw]	n2 [1/min]	Fr2 [N]	Fr1 [N]	
128	7.5	5.6	373.3	2210	560	E-V075
141	10	4.7	280	2433	703	
150	15	3.4	186.7	2785	727	
160	20	2.8	140	3065	872	
147	25	2.1	112	3302	980	
170	30	2.1	93.3	3509	980	
166	40	1.6	70	3862	980	
149	50	1.2	56	4160	980	
143	60	1.0	46.7	4421	980	
130	80	0.72	35	4865	980	
123	100	0.58	28	5241	980	
207	7.5	8.9	373.3	2446	715	E-V090
236	10	7.7	280	2692	900	
270	15	6.0	186.7	3081	1034	
258	20	4.4	140	3391	1120	
246	25	3.4	112	3653	1270	
311	30	3.7	93.3	3882	1270	
280	40	2.6	70	4273	1270	
263	50	2.0	56	4603	1270	
242	60	1.6	46.7	4891	1270	
229	80	1.2	35	5383	1270	
203	100	0.9	28	5799	1270	
386	7.5	16.6	373.3	3090	950	E-V110
433	10	14.1	280	3401	1194	
482	15	10.7	186.7	3893	1337	
475	20	8.0	140	4285	1485	
499	25	6.8	112	4616	1700	
552	30	6.4	93.3	4905	1700	
519	40	4.7	70	5399	1700	
498	50	3.7	56	5816	1700	
472	60	3.0	46.7	6181	1700	
398	80	2.0	35	6803	1700	
382	100	1.6	28	7328	1700	
514	7.5	22.1	373.3	4042	1190	E-V130
574	10	18.7	280	4449	1493	
669	15	14.7	186.7	5092	1725	
660	20	11	140	5605	1912	
660	25	9.0	112	6038	2100	
774	30	9.0	93.3	6416	2100	
727	40	6.5	70	7062	2100	
696	50	5.1	56	7607	2100	
638	60	4.0	46.7	8084	2100	
606	80	3.0	35	8897	2100	
525	100	2.2	28	9584	2100	

	N1=1400
	N1=2800
	N1=900

M2n [Kw]	i	P1n [Kw]	n2 [1/min]	Fr2 [N]	Fr1 [N]	
18	7.5	0.41	186.7	683	150	E-V030
18	10	0.32	140	752	169	
18	15	0.23	93.3	861	169	
18	20	0.18	70	948	190	
20	25	0.18	56	1021	210	
20	30	0.15	46.7	1085	210	
18	40	0.11	35	1194	210	
17	50	0.09	28	1286	210	
16	60	0.08	23.3	1367	210	
12	80	0.05	17.5	1504	210	
40	7.5	0.9	186.7	1315	294	E-V040
40	10	0.69	140	1447	331	
39	15	0.48	93.3	1657	331	
39	20	0.37	70	1824	350	
38	25	0.3	56	1964	350	
44	30	0.31	46.7	2087	350	
41	40	0.23	35	2298	350	
37	50	0.18	28	2475	350	
35	60	0.15	23.3	2630	350	
33	80	0.12	17.5	2895	350	
29	100	0.09	14	3118	350	
71	7.5	1.6	186.7	1805	401	E-V050
70	10	1.2	140	1987	490	
73	15	0.88	93.3	2274	490	
72	20	0.68	70	2503	490	
69	25	0.54	56	2696	490	
83	30	0.57	46.7	2865	490	
77	40	0.42	35	3153	490	
73	50	0.34	28	3397	490	
68	60	0.28	23.3	3610	490	
64	80	0.22	17.5	3973	490	
52	100	0.16	14	4280	490	
126	7.5	2.8	186.7	2359	500	E-V063
129	10	2.2	140	2597	571	
134	15	1.6	93.3	2973	615	
131	20	1.2	70	3272	667	
131	25	1.0	56	3524	700	
164	30	1.1	46.7	3745	700	
143	40	0.76	35	4122	700	
133	50	0.6	28	4440	700	
130	60	0.51	23.3	4719	700	
119	80	0.39	17.5	5193	700	
118	100	0.34	14	5592	700	

	N1=1400
	N1=2800
	N1=900



M2n [Kw]	i	P1n [Kw]	n2 [1/min]	Fr2 [N]	Fr1 [N]	
185 190 198 210 202 233 216 206 197 187 180	7.5 10 15 20 25 30 40 50 60 80 100	4.1 3.2 23 1.9 1.5 1.5 1.1 0.89 0.75 0.58 0.48	186.7 140 93.3 70 56 46.7 35 28 23.3 17.5 14	2785 3065 3509 3862 4160 4421 4865 5241 5569 6130 6603	700 830 851 980 980 980 980 980 980 980 980	 E-V075
287 306 357 351 332 415 363 339 307 285 270	7.5 10 15 20 25 30 40 50 60 80 100	6.3 5.1 4.1 3.1 2.4 2.6 1.8 1.4 1.1 0.83 0.67	186.7 140 93.3 70 56 46.7 35 28 23.3 17.5 14	3081 3391 3882 4273 4603 4891 5383 5799 6163 6783 7306	900 1082 1257 1270 1270 1270 1270 1270 1270 1270 1270	
546 588 660 649 665 727 693 656 620 512 473	7.5 10 15 20 25 30 40 50 60 80 100	12 9.8 7.5 5.6 4.7 4.5 3.3 2.6 2.1 1.4 1.1	186.7 140 93.3 70 56 46.7 35 28 23.3 17.5 14	3893 4285 4905 5399 5816 6181 6803 7328 7787 8571 9232	1200 1463 1604 1700 1700 1700 1700 1700 1700 1700 1700	
741 820 917 905 931 1047 1043 972 928 853 742	7.5 10 15 20 25 30 40 50 60 80 100	16.1 13.5 10.3 7.8 6.5 6.4 4.9 3.8 3.1 23 1.7	186.7 140 93.3 70 56 46.7 35 28 23.3 17.5 14	5092 5605 6416 7062 7607 8084 8897 9584 10185 11210 12076	1500 1845 2070 2100 2100 2100 2100 2100 2100 2100 2100	

N1=1400
N1=2800
N1=900

M2n [Kw]	i	P1n [Kw]	n2 [1/min]	Fr2 [N]	Fr1 [N]	
20 20 20 19 23 21 21 19 18 14	7.5 10 15 20 25 30 40 50 60 80	0.3 0.24 0.17 0.13 0.14 0.11 0.09 0.07 0.06 0.04	120 90 60 45 36 30 22.5 18 15 11.3	792 871 997 1098 1183 1257 1383 1490 1583 1743	175 197 197 210 210 210 210 210 210 210	 E-V030
43 44 45 44 44 48 44 43 38 37 33	7.5 10 15 20 25 30 40 50 60 80 100	0.65 0.5 0.36 0.28 0.23 0.23 0.17 0.14 0.11 0.09 0.07	120 90 60 45 36 30 22.5 18 15 11.3 9	1524 1677 1920 2113 2276 2419 2662 2868 3047 3354 3490	319 350 350 350 350 350 350 350 350 350 350	
81 83 84 76 76 91 83 78 74 66 56	7.5 10 15 20 25 30 40 50 60 80 100	1.2 0.94 0.67 0.48 0.39 0.42 0.31 0.25 0.21 0.16 0.12	120 90 60 45 36 30 22.5 18 15 11.3 9	2091 2302 2635 2900 3124 3320 3654 3936 4183 4604 4840	448 490 490 490 490 490 490 490 490 490 490	
151 152 153 149 135 176 160 146 137 127 125	7.5 10 15 20 25 30 40 50 60 80 100	2.2 1.7 1.2 0.91 0.69 0.79 0.058 0.45 0.37 0.29 0.25	120 90 60 45 36 30 22.5 18 15 11.3 9	2734 3009 3444 3791 4084 4339 4776 5145 5467 6018 6270	580 661 670 700 700 700 700 700 700 700 700	

N1=1400
N1=2800
N1=900



M2n [Kw]	i	P1n [Kw]	n2 [1/min]	Fr2 [N]	Fr1 [N]	
212	7.5	3.1	120	3227	810	E-V075
223	10	2.5	90	3551	975	
232	15	1.8	60	4065	980	
232	20	1.4	45	4474	980	
219	25	1.1	36	4820	980	
249	30	1.1	30	5122	980	
236	40	0.83	22.5	5637	980	
217	50	0.64	18	6073	980	
206	60	0.54	15	6453	980	
200	80	0.43	11.3	7103	980	
191	100	0.36	9	7380	980	
336	7.5	4.8	120	3570	1040	E-V090
365	10	4.0	90	3929	1270	
410	15	3.0	60	4498	1270	
395	20	2.3	45	4951	1270	
372	25	1.8	36	5333	1270	
454	30	1.9	30	5667	1270	
422	40	1.4	22.5	6238	1270	
391	50	1.1	18	6719	1270	
350	60	0.86	15	7140	1270	
314	80	0.63	11.3	7859	1270	
281	100	0.49	9	8180	1270	
644	7.5	9.2	120	4511	1390	E-V110
702	10	7.6	90	4965	1700	
749	15	5.6	60	5684	1700	
722	20	4.1	45	6256	1700	
752	25	3.5	36	6739	1700	
847	30	3.5	30	7161	1700	
785	40	2.5	22.5	7882	1700	
753	50	2.0	18	8491	1700	
693	60	1.6	15	9023	1700	
586	80	1.1	11.3	9931	1700	
526	100	0.84	9	10320	1700	
871	7.5	12.3	120	5901	1740	E-V130
951	10	10.3	90	6494	2100	
1055	15	7.8	60	7434	2100	
1022	20	5.8	45	8182	2100	
1031	25	4.8	36	8814	2100	
1152	30	4.7	30	9366	2100	
1099	40	3.5	22.5	10309	2100	
1017	50	2.7	18	11105	2100	
923	60	2.1	15	11801	2100	
852	80	1.6	11.3	12989	2100	
751	100	1.2	9	13500	2100	

N1=1400
N1=2800
N1=900

M2n [Kw]	i	P1n [Kw]	n2 [1/min]	Fr2 [N]	Fr1 [N]	
24	7.5	0.21	66.7	963	210	E-V030
24	10	0.16	50	1060	210	
24	15	0.12	33.3	1213	210	
23	20	0.09	25	1336	210	
29	25	0.1	20	1439	210	
26	30	0.08	16.7	1529	210	
24	40	0.06	12.5	1683	210	
22	50	0.05	10	1813	210	
20	60	0.04	8.3	1830	210	
17	80	0.03	6.3	1830	210	
53	7.5	0.45	66.7	1853	350	E-V040
53	10	0.35	50	2040	350	
56	15	0.26	33.3	2335	350	
52	20	0.19	25	2570	350	
49	25	0.15	20	2769	350	
58	30	0.16	16.7	2942	350	
53	40	0.12	12.5	3238	350	
52	50	0.1	10	3488	350	
46	60	0.08	8.3	3490	350	
40	80	0.06	6.3	3490	350	
38	100	0.05	5	3490	350	
102	7.5	0.86	66.7	2544	490	E-V050
104	10	0.67	50	2800	490	
102	15	0.47	33.3	3205	490	
92	20	0.33	25	3528	490	
94	25	0.28	20	3800	490	
106	30	0.29	16.7	4038	490	
99	40	0.22	12.5	4445	490	
89	50	0.17	10	4788	490	
82	60	0.14	8.3	4840	490	
75	80	0.11	6.3	4840	490	
69	100	0.09	5	4840	490	
180	7.5	1.5	66.7	3325	700	E-V063
188	10	1.2	50	3660	700	
188	15	0.85	33.3	4190	700	
178	20	0.63	25	4611	700	
163	25	0.48	20	4967	700	
204	30	0.54	16.7	4967	700	
186	40	0.4	12.5	5279	700	
174	50	0.32	10	5810	700	
162	60	0.26	8.3	6259	700	
138	80	0.19	6.3	6270	700	
131	100	0.16	5	6270	700	

N1=500
N1=1400
N1=2800
N1=900



E-V-E-RV 性能参数 PERFORMANCE PARAMETER

M2n [Kw]	I	P1n [Kw]	n2 [1/min]	Fr2 [N]	Fr1 [N]	
253	7.5	2.1	66.7	3925	980	E-V075
266	10	1.7	50	4320	980	
268	15	1.2	33.3	4945	980	
281	20	0.98	25	5443	980	
251	25	0.73	20	5863	980	
299	30	0.77	16.7	6231	980	
279	40	0.58	12.5	6858	980	
248	50	0.44	1	7380	980	
234	60	0.37	8.3	7380	980	
220	80	0.29	6.3	7380	980	
206	100	0.24	5	7380	980	
406	7.5	3.3	66.7	4343	1270	E-V090
433	10	2.7	50	4780	1270	
488	15	2.1	33.3	5472	1270	
477	20	1.6	25	6022	1270	
430	25	1.2	20	6487	1270	
568	30	1.4	16.7	6894	1270	
486	40	0.95	12.5	7588	1270	
451	50	0.75	10	8174	1270	
407	60	0.59	8.3	8180	1270	
368	80	0.45	6.3	8180	1270	
328	100	0.35	5	8180	1270	
788	7.5	6.4	66.7	5488	1700	E-V110
844	10	5.2	50	6040	1700	
906	15	3.9	33.3	6914	1700	
856	20	2.8	25	7610	1700	
894	25	2.4	20	8198	1700	
988	30	2.4	16.7	8711	1700	
909	40	1.7	12.5	9588	1700	
882	50	1.4	10	10320	1700	
810	60	1.1	8.3	10320	1700	
668	80	0.76	6.3	10320	1700	
609	100	0.59	5	10320	1700	
1071	7.5	8.6	66.7	7178	2100	E-V130
1153	10	7.1	50	7900	2100	
1293	15	5.5	33.3	9043	2100	
1222	20	4.0	25	9953	2100	
1192	25	3.2	20	10722	2100	
1378	30	3.3	16.7	11394	2100	
1284	40	2.4	12.5	12540	2100	
1216	50	1.9	10	13500	2100	
1105	60	1.5	8.3	13500	2100	
967	80	1.1	6.3	13500	2100	
877	100	0.85	5	13500	2100	

N1=500
N1=1400
N1=2800
N1=900

M2n [Kw]	i	P1n [Kw]	n2 [1/min]	Fr2 [N]	Fr1 [N]	
73	300	0.08	4.7	3490	210	E-V030/040
67	400	0.06	3.5	3490	210	
59	500	0.04	2.8	3490	210	
63	600	0.04	2.3	3490	210	
68	750	0.04	1.9	3490	210	
59	900	0.03	1.6	3490	210	
48	1200	0.02	1.2	3490	210	
57	1500	0.02	0.9	3490	210	
60	1800	0.02	0.8	3490	210	
36	2400	0.01	0.58	3490	210	
45	3200	0.01	0.4	3490	210	E-V030/050
33	4000	0.01	0.4	3490	210	
29	5000	0.01	0.28	3490	210	
140	300	0.15	4.4	4840	210	
115	400	0.1	3.5	4840	210	
120	500	0.09	2.8	4840	210	
130	600	0.08	2.3	4840	210	
123	750	0.07	1.9	4840	210	
118	900	0.06	1.6	4840	210	
96	1200	0.04	1.2	4840	210	
111	1500	0.04	0.93	4840	210	E-V030/063
122	1800	0.04	0.78	4840	210	
110	2400	0.06	0.6	4840	210	
80	3000	0.02	0.5	4840	210	
82	4000	0.02	0.35	4840	210	
82	4800	0.02	0.29	4840	210	
234	300	0.24	4.7	6270	210	
228	400	0.19	3.5	6270	210	
210	500	0.15	2.8	6270	210	
216	600	0.13	2.3	6270	210	
199	750	0.11	1.9	6270	210	E-V040/075
188	900	0.09	1.6	6270	210	
197	1200	0.08	1.2	6270	210	
173	1500	0.06	0.93	6270	210	
159	1800	0.05	0.78	6270	210	
189	2400	0.05	0.58	6270	210	
171	3000	0.04	0.47	6270	210	
147	4000	0.03	0.35	6270	210	
109	5000	0.02	0.28	6270	210	
373	300	0.36	4.7	7380	350	
346	400	0.27	3.5	7380	350	
315	500	0.21	2.8	7380	350	
355	600	0.19	2.3	7380	350	
330	750	0.16	1.9	7380	350	
326	900	0.14	1.6	7380	350	

N1=1400
N1=2800
N1=900



M2n [Kw]	i	P1n [Kw]	n2 [1/min]	Fr2 [N]	Fr1 [N]	
315	1200	0.11	1.2	7380	350	E-V040/075
339	1500	0.1	0.93	7380	350	
331	1800	0.09	0.78	7380	350	
311	2400	0.07	0.58	7380	350	
254	3000	0.05	0.47	7380	350	
240	4000	0.04	0.35	7380	350	
205	5000	0.03	0.28	7380	350	
614	300	0.56	4.7	8180	350	E-V040/090
587	400	0.43	3.5	8180	350	
545	500	0.34	2.8	8180	350	
585	600	0.3	2.3	8180	350	
509	750	0.23	1.9	8180	350	
465	900	0.19	1.6	8180	350	
514	1200	0.17	1.2	8180	350	
503	1500	0.14	0.93	8180	350	
431	1800	0.11	0.78	8180	350	
543	2400	0.11	0.58	8180	350	
439	3000	0.08	0.47	8180	350	
460	4000	0.08	0.35	8180	350	
410	5000	0.06	0.28	8180	350	
1229	300	1.1	4.7	10320	490	E-V050/110
1164	400	0.79	3.5	10320	490	
1248	500	0.61	2.8	10320	490	
1096	600	0.55	2.3	10320	490	
1108	750	0.49	1.9	10320	490	
1078	900	0.43	1.6	10320	490	
962	1200	0.31	1.2	10320	490	
1109	1500	0.3	0.93	10320	490	
1051	1800	0.26	0.78	10320	490	
1001	2400	0.19	0.58	10320	490	
914	3000	0.15	0.47	10320	490	
819	4000	0.13	0.35	10320	490	
746	5000	0.1	0.28	10320	490	
1737	300	1.5	4.7	13500	700	E-V063/130
1621	400	1.1	3.5	13500	700	
1496	500	0.86	2.8	13500	700	
1578	600	0.76	2.3	13500	700	
1559	750	0.66	1.9	13500	700	
1558	900	0.58	1.6	13500	700	
1403	1200	0.43	1.2	13500	700	
1522	1500	0.39	0.93	13500	700	
1500	1800	0.35	0.78	13500	700	
1358	2400	0.25	0.58	13500	700	
1300	3000	0.2	0.47	13500	700	
1146	4000	0.15	0.35	13500	700	
938	5000	0.11	0.28	13500	700	

N1=1400
N1=2800
N1=900



P1n [Kw]	n2 [1/min]	M2n [Nm]	i		
0.18	117-22.5	9-18	12-61.5	E-UDL0.18-E-RV040	6324
	88-17	12-23	16-82		
	58.7-11.3	17-32	24-123		
	44-8.5	22-40	32-164		
	35.2-6.8	27-47	40-205		
	29.3-5.7	30-51	48-246		
	22-4.3	37-62	64-328		
	17.6-3.4	43-60	80-410	E-UDL0.18-E-RV050	6324
	22-4.3	38-63	64-328		
	17.6-3.4	44-73	80-410		
	14.7-2.8	50-80	96-492		
	11-2.1	59-82	128-656		
	8.8-1.7	66-79	160-820		
	133-26.7	19-36	10.5-52.5	E-UDL0.37-E-RV050	7124
0.37	100-20	25-47	14-70		
	66.7-13.3	36-65	21-105		
	50-10	46-82	28-140		
	40-8	55-97	35-175		
	33.3-6.7	61-107	42-210		
	25-5	76-124	56-280		
	20-4	89-120	70-350	E-UDL0.37-E-RV063	7124
	25-5	79-134	56-280		
	20-4	92-155	70-350		
	16.7-3.3	104-173	84-420		
	12.5-2.5	125-173	112-560		
	10-2	139-150	140-700		
	133-26.7	26-49	10.5-52.5	E-UDL0.55-E-RV063	8014
0.55	100-20	34-63	14-70		
	66.7-13.3	48-88	21-105		
	50-10	62-112	28-140		
	40-8	75-133	35-175		
	33.3-6.7	81-146	42-210		
	25-5	105-179	56-280		
	20-4	123-207	70-350	E-UDL0.55-E-RV075	8014
	20-4	129-216	70-350		
	16.7-3.3	146-242	84-420		
	12.5-2.5	176-250	112-560		
	12.5-2.5	189-309	112-560	E-UDL0.55-E-RV090	8014
	10-2	218-350	140-700		
	133-26.7	39-73	10.5-52.5	E-UDL0.75-E-RV063	8024
0.75	100-20	51-94	14-70		
	66.7-13.3	72-132	21-105		
	50-10	92-168	28-140		
	40-8	112-199	35-175		
	33.3-6.7	126-219	42-210		
	25-5	156-232	56-280		
	20-4	185-310	70-350	E-UDL0.75-E-RV075	8024
	20-4	192-320	70-350		
	16.7-3.3	219-300	84-420		
	16.7-3.3	230-389	84-420	E-UDL0.75-E-RV090	8024
	125-2.5	265-428	112-560		
	10-2	303-410	140-700		
	125-2.5	302-503	112-560	E-UDL0.75-E-RV110	8024
	10-2	348-575	140-700		

N1=1400
N1=2800
N1=900

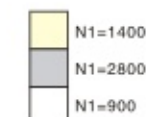


UDL-NMRV 性能参数 PERFORMANCE PARAMETER

P1n [Kw]	n2 [1/min]	M2n [Nm]	i		
1.1	133-26.7	59-111	10.5-52.5	E-UD1.1-E-RV075	90S4
	100-20	77-144	14-70		
	66.7-13.3	110-203	21-105		
	50-10	142-258	28-140		
	40-8	172-308	35-175		
	33.3-6.7	195-340	42-210		
	25-5	245-360	56-280		
	100-20	78-146	14-70	E-UD1.1-E-RV090	90S4
	66.7-13.3	113-208	21-105		
	50-10	146-266	28-140		
	40-8	177-320	35-175		
	33.3-6.7	202-356	42-210		
	25-5	256-442	56-280		
	20-4	304-517	70-350		
	20-4	320-550	70-350	E-UD1.1-E-RV110	90S4
	16.7-3.3	368-625	84-420		
	12.5-2.5	455-754	112-560		
	10-2	522-710	140-700		
	16.7-3.3	373-623	84-420	E-UD1.1-E-RV130	90S4
	12.5-2.5	460-749	112-560		
	10-2	531-868	140-700		
1.5	133-26.7	78-148	10.5-52.5	E-UD1.5-E-RV075	90L4
	100-20	102-192	14-70		
	66.7-13.3	147-270	21-105		
	50-10	190-344	28-140		
	40-8	229-330	35-175		
	33.3-6.7	260-390	42-210		
	25-5	327-360	56-280		
	133-26.7	77-150	10.5-52.5	E-UD1.5-E-RV090	90L4
	100-20	104-195	14-70		
	66.7-13.3	150-277	21-105		
	50-10	194-355	28-140		
	40-8	236-427	35-175		
	33.3-6.7	270-474	42-210		
	25-5	341-589	56-280		
	20-4	406-560	70-350		
	20-4	426-733	70-350	E-UD1.5-E-RV110	90L4
	16.7-3.3	490-833	84-420		
	16.7-3.3	498-831	84-420	E-UD1.5-E-RV130	90L4
	12.5-2.5	614-999	112-560		
	10-2	696-1100	140-700		



P1n [Kw]	n2 [1/min]	M2n [Nm]	i		
2.2	133-26.7	120-226	10.5-52.5	E-UD2.2-E-RV110	100LA4
	100-20	157-294	14-70		
	66.7-13.3	228-418	21-105		
	50-10	298-549	28-140		
	40-8	364-664	35-175		
	33.3-6.7	413-717	42-210		
	25-5	533-931	56-280		
	25-5	542-932	56-280	E-UD2.2-E-RV130	100LA4
	20-4	648-1097	70-350		
	16.7-3.3	746-1246	84-420		
	12.5-2.5	921-1499	112-560		
3.0	10-2	1040-1690	140-700		
	133-26.7	160-302	10.5-52.5	E-UD3.0-E-RV110	100LB4
	100-20	210-392	14-70		
	66.7-13.3	304-558	21-105		
	50-10	398-732	28-140		
	40-8	485-885	35-175		
	33.3-6.7	547-956	42-210		
	25-5	711-1030	56-280		
	133-26.7	160-301	10.5-52.5	E-UD3.0-E-RV130	100LB4
	100-20	211-395	14-70		
	66.7-13.3	307-563	21-105		
	50-10	402-733	28-140		
	40-8	490-885	35-175		
	33.3-6.7	562-973	42-210		
4.0	25-5	720-1242	56-280		
	20-4	864-1463	70-350		
	133-26.7	213-402	10.5-52.5	E-UD4.0-E-RV110	124M4
	100-20	279-523	14-70		
	66.7-13.3	405-744	21-105		
	50-10	530-975	28-140		
	40-8	647-1020	35-175		
	133-26.7	214-401	10.5-52.5	E-UD4.0-E-RV130	124M4
	100-20	281-527	14-70		
	66.7-13.3	410-751	21-105		
	50-10	536-978	28-140		
	40-8	653-1180	35-175		
	33.3-6.7	749-1298	42-210		
	25-5	960-1650	56-280		



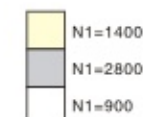


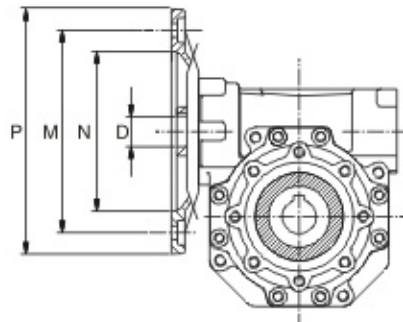
UDL-NMRV 性能参数 PERFORMANCE PARAMETER

P1n [Kw]	n2 [1/min]	M2n [Nm]	i		
1.1	133-26.7	59-111	10.5-52.5	E-UD1.1-E-RV075	90S4
	100-20	77-144	14-70		
	66.7-13.3	110-203	21-105		
	50-10	142-258	28-140		
	40-8	172-308	35-175		
	33.3-6.7	195-340	42-210		
	25-5	245-360	56-280		
	100-20	78-146	14-70	E-UD1.1-E-RV090	90S4
	66.7-13.3	113-208	21-105		
	50-10	146-266	28-140		
	40-8	177-320	35-175		
	33.3-6.7	202-356	42-210		
	25-5	256-442	56-280		
	20-4	304-517	70-350		
	20-4	320-550	70-350	E-UD1.1-E-RV110	90S4
	16.7-3.3	368-625	84-420		
	12.5-2.5	455-754	112-560		
	10-2	522-710	140-700		
	16.7-3.3	373-623	84-420	E-UD1.1-E-RV130	90S4
	12.5-2.5	460-749	112-560		
	10-2	531-868	140-700		
1.5	133-26.7	78-148	10.5-52.5	E-UD1.5-E-RV075	90L4
	100-20	102-192	14-70		
	66.7-13.3	147-270	21-105		
	50-10	190-344	28-140		
	40-8	229-330	35-175		
	33.3-6.7	260-390	42-210		
	25-5	327-360	56-280		
	133-26.7	77-150	10.5-52.5	E-UD1.5-E-RV090	90L4
	100-20	104-195	14-70		
	66.7-13.3	150-277	21-105		
	50-10	194-355	28-140		
	40-8	236-427	35-175		
	33.3-6.7	270-474	42-210		
	25-5	341-589	56-280		
	20-4	406-560	70-350		
	20-4	426-733	70-350	E-UD1.5-E-RV110	90L4
	16.7-3.3	490-833	84-420		
	16.7-3.3	498-831	84-420	E-UD1.5-E-RV130	90L4
	12.5-2.5	614-999	112-560		
	10-2	696-1100	140-700		



P1n [Kw]	n2 [1/min]	M2n [Nm]	i		
2.2	133-26.7	120-226	10.5-52.5	E-UD2.2-E-RV110	100LA4
	100-20	157-294	14-70		
	66.7-13.3	228-418	21-105		
	50-10	298-549	28-140		
	40-8	364-664	35-175		
	33.3-6.7	413-717	42-210		
	25-5	533-931	56-280		
	25-5	542-932	56-280	E-UD2.2-E-RV130	100LA4
	20-4	648-1097	70-350		
	16.7-3.3	746-1246	84-420		
	12.5-2.5	921-1499	112-560		
3.0	10-2	1040-1690	140-700		
	133-26.7	160-302	10.5-52.5	E-UD3.0-E-RV110	100LB4
	100-20	210-392	14-70		
	66.7-13.3	304-558	21-105		
	50-10	398-732	28-140		
	40-8	485-885	35-175		
	33.3-6.7	547-956	42-210		
	25-5	711-1030	56-280		
	133-26.7	160-301	10.5-52.5	E-UD3.0-E-RV130	100LB4
	100-20	211-395	14-70		
	66.7-13.3	307-563	21-105		
	50-10	402-733	28-140		
	40-8	490-885	35-175		
	33.3-6.7	562-973	42-210		
4.0	25-5	720-1242	56-280		
	20-4	864-1463	70-350		
	133-26.7	213-402	10.5-52.5	E-UD4.0-E-RV110	124M4
	100-20	279-523	14-70		
	66.7-13.3	405-744	21-105		
	50-10	530-975	28-140		
	40-8	647-1020	35-175		
	133-26.7	214-401	10.5-52.5	E-UD4.0-E-RV130	124M4
	100-20	281-527	14-70		
	66.7-13.3	410-751	21-105		
	50-10	536-978	28-140		
	40-8	653-1180	35-175		
	33.3-6.7	749-1298	42-210		
	25-5	960-1650	56-280		





*如果要特殊平键, 请与技术部联系。
*If you want special key, please call our Technical Service

E-VF	PAM IEC	N	M	P	D											
					5	7.5	10	15	20	25	30	40	50	60	80	100
030	63B5	95	115	140	11	11	11	11	11	11	11	11	-	-	-	-
	63B14	60	75	90	-	-	-	-	-	-	-	-	-	-	-	-
	56B5	80	100	120	9	9	9	9	9	9	9	9	9	9	9	-
	56B14	50	65	80	-	-	-	-	-	-	-	-	-	-	-	-
040	71B5	110	130	160	14	14	14	14	14	14	14	14	-	-	-	-
	71B14	70	85	105	-	-	-	-	-	-	-	-	-	-	-	-
	63B5	95	115	140	11	11	11	11	11	11	11	11	11	11	11	11
	63B14	60	75	90	-	-	-	-	-	-	-	-	9	9	9	9
050	80B5	130	165	200	19	19	19	19	19	19	19	-	-	-	-	-
	80B14	80	100	120	-	-	-	-	-	-	-	-	-	-	-	-
	71B5	110	130	160	14	14	14	14	14	14	14	14	14	14	14	-
	71B14	70	85	105	-	-	-	-	-	-	-	-	-	-	-	-
063	63B5	95	115	140	-	-	-	-	-	-	-	11	11	11	11	11
	90B5	130	165	200	-	24	24	24	24	24	24	-	-	-	-	-
	90B14	95	115	140	-	-	-	-	-	-	-	-	-	-	-	-
	80B5	130	165	200	-	19	19	19	19	19	19	19	19	19	-	-
075	80B14	80	100	120	-	-	-	-	-	-	-	-	-	-	-	-
	71B5	110	130	160	-	-	-	-	-	-	-	14	14	14	14	14
	71B14	70	85	105	-	-	-	-	-	-	-	-	-	-	-	-
	100/112B5	180	215	250	-	28	28	28	28	28	28	-	-	-	-	-
090	100/112B14	110	130	160	-	-	-	-	-	-	-	-	-	-	-	-
	90B5	130	165	200	-	24	24	24	24	24	24	24	24	24	-	-
	90B14	95	115	140	-	-	-	-	-	-	-	-	-	-	-	-
	80B5	130	165	200	-	-	-	-	-	-	-	19	19	19	19	19
105	80B14	80	100	120	-	-	-	-	-	-	-	-	-	-	-	-
	132B5	230	265	300	-	38*	38*	38*	38*	-	-	-	-	-	-	-
	100/112B5	180	215	250	-	28	28	28	28	28	28	28	28	28	-	-
	90B5	130	165	200	-	-	-	-	-	24	24	24	24	24	24	24
110	80B5	130	165	200	-	-	-	-	-	-	-	-	-	-	19	19
	132B5	230	265	300	-	38*	38*	38*	38*	-	-	-	-	-	-	-
	100/112B5	180	215	250	-	28	28	28	28	28	28	28	28	28	-	-
	90B5	130	165	200	-	-	-	-	-	24	24	24	24	24	24	24
130	80B5	130	165	200	-	-	-	-	-	-	-	-	-	-	19	19
	132B5	230	265	300	-	38*	38*	38*	38*	38*	38*	-	-	-	-	-
	100/112B5	180	215	250	-	-	-	-	-	28	28	28	28	28	28	28
	90B5	130	165	200	-	-	-	-	-	-	-	-	-	-	24	24
150	160B5	250	300	350	-	42	42	42	42	42	-	-	-	-	-	-
	132B5	230	265	300	-	-	-	-	38	38	38	38	38	38	-	-
	100/112B5	180	215	250	-	-	-	-	-	-	-	28	28	28	28	28
	90B5	130	165	200	-	-	-	-	-	-	-	-	-	-	-	-



E-VF	i	5	7.5	10	15	20	25	30	40	50	60	80	100
030	Z1	6	4	3	2	2	1	1	1	1	1	1	1
	γ	27°04'	18°49'	14°20'	9°40'	7°42'	5°35'	4°52'	3°52'	3°12'	2°45'	2°07'	1°56'
	Mx	1.44	1.44	1.44	1.44	1.09	1.7	1.44	1.09	0.89	0.74	0.56	0.44
	ηd(1400)	0.87	0.85	0.82	0.77	0.73	0.68	0.65	0.59	0.55	0.51	0.44	0.33
040	Z1	6	4	3	2	2	2	1	1	1	1	1	1
	γ	34°19'	24°28'	18°51'	12°49'	10°23'	8°43'	6°29'	5°14'	4°23'	3°47'	2°57'	2°25'
	Mx	2.06	2.06	2.06	2.06	1.57	1.27	2.06	1.57	1.27	1.06	0.81	0.65
	ηd(1400)	0.89	0.87	0.85	0.82	0.78	0.75	0.7	0.65	0.62	0.58	0.52	0.47
050	Z1	6	4	3	2	2	2	1	1	1	1	1	1
	γ	33°37'	23°54'	18°23'	12°30'	10°06'	8°29'	6°19'	5°06'	4°16'	3°40'	2°52'	2°21'
	Mx	2.56	2.56	2.56	2.56	1.95	1.58	2.56	1.95	1.58	1.32	1	0.8
	ηd(1400)	0.89	0.88	0.86	0.82	0.79	0.76	0.72	0.67	0.63	0.59	0.53	0.49
063	Z1	6	4	3	2	2	2	1	1	1	1	1	1
	γ	33°37'	23°54'	18°23'	12°30'	10°06'	8°29'	6°19'	5°06'	4°16'	3°40'	2°52'	2°21'
	Mx	2.56	2.56	2.56	2.56	1.95	1.58	2.56	1.95	1.58	1.32	1	0.8
	ηd(1400)	0.89	0.88	0.86	0.82	0.79	0.76	0.72	0.67	0.63	0.59	0.53	0.49
075	Z1	6	4	3	2	2	2	1	1	1	1	1	1
	γ	33°37'	23°54'	18°23'	12°30'	10°06'	8°29'	6°19'	5°06'	4°16'	3°40'	2°52'	2°21'
	Mx	2.56	2.56	2.56	2.56	1.95	1.58	2.56	1.95	1.58	1.32	1	0.8
	ηd(1400)	0.89	0.88	0.86	0.82	0.79	0.76	0.72	0.67	0.63	0.59	0.53	0.49
090	Z1	6	4	3	2	2	2	1	1	1	1	1	1
	γ	33°37'	23°54'	18°23'	12°30'	10°06'	8°29'	6°19'	5°06'	4°16'	3°40'	2°52'	2°21'
	Mx	2.56	2.56	2.56	2.56	1.95	1.58	2.56	1.95	1.58	1.32	1	0.8
	ηd(1400)	0.89	0.88	0.86	0.82	0.79	0.76	0.72	0.67	0.63	0.59	0.53	0.49
105	Z1	6	4	3	2	2	2	1	1	1	1	1	1
	γ	33°37'	23°54'	18°23'	12°30'	10°06'	8°29'	6°19'	5°06'	4°16'	3°40'	2°52'	2°21'
	Mx	2.56	2.56	2.56	2.56	1.95	1.58	2.56	1.95	1.58	1.32	1	0.8
	ηd(1400)	0.89	0.88	0.86	0.82	0.79	0.76	0.72	0.67	0.63	0.59	0.53	0.49
110	Z1	6	4	3	2	2	2	1	1	1	1	1	1
	γ	33°37'	23°54'	18°23'	12°30'	10°06'	8°29'	6°19'	5°06'	4°16'	3°40'	2°52'	2°21'
	Mx	2.56	2.56	2.56	2.56	1.95	1.58	2.56	1.95	1.58	1.32	1	0.8
	ηd(1400)	0.89	0.88	0.86	0.82	0.79	0.76	0.72	0.67	0.63	0.59	0.53	0.49
130	Z1	6	4	3	2	2	2	1	1	1	1	1	1
	γ	33°37'	23°54'	18°23'	12°30'	10°06'	8°29'	6°19'	5°06'	4°16'	3°40'	2°52'	2°21'
	Mx	2.56	2.56	2.56	2.56	1.95	1.58	2.56	1.95	1.58	1.32	1	0.8
	ηd(1400)	0.89	0.88	0.86	0.82	0.79	0.76	0.72	0.67	0.63	0.59	0.53	0.49
150	Z1	6	4	3	2	2	2	1	1	1	1	1	1
	γ	33°37'	23°54'	18°23'	12°30'	10°06'	8°29'	6°19'	5°06'	4°16'	3°40'	2°52'	2°21'
	Mx	2.56	2.56	2.56	2.56	1.95	1.58	2.56	1.95	1.58	1.32	1	0.8
	ηd(1400)	0.89	0.88	0.86	0.82	0.79	0.76	0.72	0.67	0.63	0.59	0.53	0.49



性能参数 Performance Parameter

P1 (KW)	n2 (1/min)	M2 (Nm)	f.s.	i	型号 Size		Fr2 (N)	
0.06	280.0	1.8	10.1	5	E-VF030		597	86-87
	186.7	2.6	6.9	7.5			683	
	140.0	3.4	5.4	10			752	
	93.3	4.7	3.8	15			861	
	70.0	6.0	3.0	20			948	
	56.0	7.0	3.0	25			1021	
	46.7	8.0	2.5	30			1085	
	35.0	9.7	1.9	40			1194	
	28.0	11	1.5	50			1286	
	23.3	13	1.3	60			1367	
	17.5	14	0.9	80			1504	
	15.0	18.0	0.9	60	E-VF030	56B6	1583	86-87
	18.0	18.1	2.3	50	E-VF040		2868	88-89
	15.0	21	1.9	60			3047	
	11.3	24	1.4	80			3354	
	9.0	27	1.2	100			3490	
	4.7	57.4	1.3	300	E-VF030/040		3490	108
	3.5	70	0.9	400			3490	
	2.8	96	0.6	500			3490	
	2.3	104	0.7	600			3490	
	1.9	121	0.6	750			3490	
	1.6	139	0.5	900			3490	
	1.2	166	0.4	1200			3490	
	0.9	196	0.4	1500			3490	
	0.8	218	0.3	1800			3490	
	0.58	261	0.2	2400			3490	
	0.4	300	0.2	3200	E-VF030/050		3490	108
	0.4	279	0.1	4000			3490	
	0.28	338	0.1	5000			3490	
	1.6	141.3	1.0	900			4840	
	1.2	169	0.7	1200			4840	
	0.93	199	0.7	1500			4840	
	0.78	222	0.7	1800			4840	
	0.6	266	0.5	2400			4840	
	0.5	307	0.4	3000			4840	
	0.35	288	0.3	4000			4840	
	0.29	311	0.3	4800	E-VF030/063		4840	109
	0.9	203.5	1.1	1500			6270	
	0.78	225	0.9	1800			6270	
	0.58	276	0.8	2400			6270	
	0.47	319	0.7	3000			6270	
	0.35	306	0.6	4000			6270	
	0.28	360	0.4	5000	E-VF040/075		6270	109
	0.6	330.4	1.1	2400			7380	
	0.47	377	0.8	3000			7380	
	0.35	355	0.7	4000			7380	
	0.28	419	0.5	5000			7380	
	0.5	405.9	1.4	3000	E-VF040/090		8180	109
	0.35	365	1.3	4000			8180	
	0.28	431	1.0	5000			8180	

	N1=1400
	N1=2800
	N1=900



P1 (KW)	n2 (1/min)	M2 (Nm)	f.s.	i	型号 Size		Fr2 (N)	
0.09	560.0	1.4	8.8	5	E-VF030		474	86-87
	373.3	2.0	6.5	7.5			542	
	280.0	2.6	5.0	10			597	
	186.7	3.7	3.5	15			683	
	140.0	4.8	2.5	20			752	
	112.0	5.7	2.8	25			810	
	93.3	6.5	2.3	30			861	
	70.0	8.1	1.7	40			948	
	56.0	10	1.4	50			1021	
	46.7	11	1.1	60			1085	
	35.0	13	0.9	80			1194	
	280.0	2.7	6.7	5	E-VF030		597	86-87
	186.7	3.9	4.6	7.5			683	
	140.0	5.0	3.6	10			752	
	93.3	7.1	2.5	15			861	
	70.0	9.0	2.0	20			948	
	56.0	10	2.0	25			1021	
	46.7	12	1.7	30			1085	
	35.0	14	1.2	40			1194	
	28.0	17	1.0	50			1286	
	23.3	19	0.9	60			1367	
	180.0	4.1	4.9	5	E-VF030		692	86-87
	120.0	5.9	3.4	7.5			792	
	90.0	7.6	2.6	10			871	
	60.0	11	1.9	15			997	
	45.0	13	1.5	20			1098	
	36.0	15	1.5	25			1183	
	30.0	17	1.2	30			1257	
	22.5	21	1.0	40			1383	
	18.0	24	0.7	50			1490	
	28.0	19.0	2.0	50	E-VF040		2475	88-89
	23.3	21	1.7	60			2630	
	17.5	26	1.3	80			2895	
	14.0	29	1.0	100			3118	
	30.0	18.9	2.6	30	E-VF040		2419	88-89
	22.5	24	1.9	40			2662	
	18.0	27	1.5	50			2868	
	15.0	31	1.3	60			3047	
	11.3	37	1.0	80			3354	
	9.0	41	0.8	100			3490	
	12.0	46.6	1.3	75	PC063+E-VF040		3283	103
	10.0	51	1.4	90			3488	
	7.5	62	1.1	120			3490	
	6.0	72	0.8	150			3490	
	5.0	79	0.7	180			3490	
	4.7	87.6	0.8	300	E-VF030/040	56B4	3490	108
	15.0	31.5	2.3	60	E-VF050		4183	90-91
	11.3	37	1.8	80			4604	
	9.0	42	1.3	100			4840	
	6.0	73.1	1.6	150	PC063+E-VF050		4840	103
	5.0	81	1.3	180			4840	
	3.8	94	0.9	240			4840	
	3.0	106	0.7	300			4840	

	N1=1400
	N1=2800
	N1=900



P1 (KW)	n2 (1/min)	M2 (Nm)	f.s.	i	型号 Size		Fr2 (N)	
0.09	3.5	106.7	1	400	E-VF030/050	56B4	4840	108
	2.8	123	1.0	500			4840	
	2.3	159	0.9	600			4840	
	1.9	185	0.8	750			4840	
	1.6	212	0.7	900			4840	
	3.8	99	1.7	240	PC063+E-VF063	63A6	6270	104
	3.0	109	1.4	300			6270	
	1.6	200	1.0	900	E-VF030/063	56B4	6270	109
	1.2	263	0.9	1200			6270	
	0.93	305	0.7	1500			6270	
	0.93	360	1.1	1500	E-VF040/075	56B4	7380	109
	0.78	404	1.0	1800			7380	
	0.58	496	0.7	2400			7380	
	0.47	609	0.9	3000	E-VF040/090	56B4	8180	109
	0.35	548	0.8	4000			8180	
0.12	280.0	3.6	5.1	5	E-VF030	63A4	597	86-87
	186.7	5.2	3.4	7.5			683	
	140.0	6.7	2.7	10			752	
	93.3	9.5	1.9	15			861	
	70.0	12	1.5	20			948	
	56.0	14	1.5	25			1021	
	46.7	16	1.3	30			1085	
	35.0	19	0.9	40			1194	
	28.0	23	0.8	50			1286	
	180.0	5.4	3.7	5	E-VF030	63B6	692	86-87
	120.0	7.9	2.5	7.5			792	
	90.0	10	2.0	10			871	
	60.0	14	1.4	15			997	
	45.0	18	1.1	20			1098	
	36.0	20	1.1	25			1183	
	30.0	23	0.9	30			1257	
	46.7	17	2.6	30	E-VF040	63A4	2087	88-89
	35.0	21	1.9	40			2298	
	28.0	25	1.5	50			2475	
	23.3	28	1.3	60			2630	
	17.5	34	1.0	80			2895	
	14.0	38	0.8	100			3118	
	30.0	25	1.9	30	E-VF040	63B6	2419	88-89
	22.5	32	1.4	40			2662	
	18.0	36	1.2	50			2868	
	15.0	41	0.9	60			3047	
	18.7	42	1.2	75	PC063+E-VF040	63A4	2833	103
	15.6	46	1.2	90			3011	
	11.7	57	0.9	120			3314	
	9.3	66	0.7	150			3490	
	7.8	74	0.6	180			3490	
	12.0	62	1.0	75	PC063+E-VF040	63B6	3283	103
	10.0	68	1.1	90			3488	
	7.5	83	0.8	120			3490	

N1=1400
N1=2800
N1=900



P1 (KW)	n2 (1/min)	M2 (Nm)	f.s.	i	型号 Size		Fr2 (N)	
0.12	23.3	29	2.3	60	E-VF050	63A4	3610	90-91
	17.5	35	1.9	80			3973	
	14.0	40	1.4	100			4280	
	22.5	32	2.6	40	E-VF050	63B6	3654	90-91
	18.0	38	2.0	50			3936	
	15.0	42	1.7	60			4183	
	11.3	50	1.4	80			4604	
	9.0	56	1.0	100			4840	
	9.3	68	1.3	150	PC063+E-VF050	63A4	4840	103
	7.8	75	1.1	180			4840	
	5.8	88	0.8	240			4840	
	4.7	98	0.7	300			4840	
	12.0	63	1.7	75	PC063+E-VF050	63B6	4506	103
	10.0	70	2.1	90			4788	
	7.5	84	1.5	120			4840	
	6.0	97	1.2	150			4840	
	5.0	108	1.0	180			4840	
	3.8	125	0.7	240			4840	
	4.7	119	1.2	300	E-VF030/050	63A4	4840	108
	3.5	142	0.9	400			4840	
	2.8	164	0.7	500			4840	
	5.8	92	1.5	240	PC063+E-VF063	63A4	6270	104
	4.7	103	1.2	300			6270	
	6.0	101	2.1	150	PC063+E-VF063	63B6	6270	104
	5.0	112	1.8	180			6270	
	3.8	131	1.3	240			6270	
	3.0	145	1.0	300			6270	
	2.8	171	1.3	500	E-VF030/063	63A4	6270	109
	2.3	208	1.1	600			6270	
	1.9	241	0.9	750			6270	
	1.6	325	1.2	900	E-VF040/075	63A4	7380	109
	1.2	399	0.9	1200			7380	
0.15	0.78	547	0.9	1800	E-VF040/090	63A4	8180	109
	0.58	695	0.9	2400			8180	
	0.47	884	1.1	3000	E-VF050/105	63A4	10320	110
	0.35	784	1.0	4000			10320	
	0.28	928	0.76	5000			10320	
	0.47	884	1.2	3000	E-VF050/110	63A4	10320	110
	0.35	784	1.0	4000			10320	
	0.28	928	0.80	5000			10320	
	180.0	6.8	3.0	5	E-VF030	63C6	692	86-87
	120.0	10	2.0	7.5			792	
	90.0	13	1.6	10			871	
	60.0	18	1.1	15			997	
	45.0	22	0.9	20			1098	

N1=1400
N1=2800
N1=900



E-VF

P1 (KW)	n2 (1/min)	M2 (Nm)	f.s.	i	型号 Size		Fr2 (N)	
0.15	60.0	19	2.4	15	E-VF040	63C6	1920	88-89
	45.0	24	1.8	20			2113	
	36.0	29	1.5	25			2276	
	30.0	32	1.6	30			2419	
	22.5	39	1.1	40			2662	
	18.0	45	0.9	50			2868	
	18.0	47	1.6	50	VF050	63C6	3936	90-91
	15.0	53	1.4	60			4183	
	11.3	62	1.1	80			4604	
	10.0	87	1.7	90	PC063+E-VF050	63C6	4788	103
0.18	7.5	105	1.2	120			4840	
	6.0	127	1.7	150	PC063+E-VF063	63C6	6270	104
	5.0	140	1.4	180			6270	
	560.0	2.7	4.4	5	E-VF030	63A2	474	86-87
	373.3	4.0	3.2	7.5			542	
	280.0	5.2	2.5	10			597	
	186.7	7.5	1.7	15			683	
	140.0	10	1.3	20			752	
	112.0	11	1.4	25			810	
	93.3	13	1.1	30			861	
	70.0	16	0.9	40			948	
	280.0	5.3	3.4	5	E-VF030	63B4	597	86-87
	186.7	7.8	2.3	7.5			683	
	140.0	10	1.8	10			752	
	93.3	14	1.3	15			861	
	70.0	18	1.0	20			948	
	56.0	21	1.0	25			1021	
	46.7	24	0.8	30			1085	
	93.3	14	2.4	30	E-VF040	63A2	1657	88-89
	70.0	18	1.8	40			1824	
	56.0	21	1.4	50			1964	
	70.0	19	2.0	20	E-VF040	63B4	1824	88-89
	56.0	23	1.7	25			1964	
	46.7	26	1.7	30			2087	
	35.0	32	1.3	40			2298	
	28.0	38	1.0	50			2475	
	23.3	43	0.8	60			2630	
	45.0	29	1.5	20	E-VF040	71A6	2113	88-89
	36.0	34	1.3	25			2276	
	30.0	38	1.3	30			2419	
	22.5	47	1.0	40			2662	
	18.7	64	0.8	75	PC063+E-VF040	63B4	2833	103
	15.6	70	0.8	90			3011	
	11.7	85	0.6	120			3314	
	46.7	24	2.1	60	E-VF050	63A2	2865	90-91
	35.0	30	1.5	80			3153	
	28.0	34	1.2	100			3397	
	35.0	33	2.3	40	E-VF050	63B4	3153	90-91
	28.0	39	1.9	50			3397	
	23.3	43	1.6	60			3610	
	17.5	52	1.2	80			3973	
	14.0	60	0.9	100			4280	

	N1=1400
	N1=2800
	N1=900



E-VF

P1 (KW)	n2 (1/min)	M2 (Nm)	f.s.	i	型号 Size		Fr2 (N)	
0.18	18.0	56	1.4	50	E-VF050	71A6	3936	90-91
	15.0	63	1.1	60			4183	
	11.3	75	0.9	80			4604	
	18.7	64	1.4	75	PC063+E-VF050	63B4	3889	103
	15.6	71	1.5	90			4132	
	11.7	87	1.1	120			4548	
	9.3	101	0.9	150			4840	
	7.8	113	0.7	180			4840	
	5.8	133	0.6	240			4840	
	12.0	95	1.2	75	PC071+E-VF050	71A6	4506	104
	10.0	105	1.4	90			4788	
	7.5	126	1.0	120			4840	
	15.0	66	2.1	60	E-VF063	71A6	5467	92-93
	11.3	79	1.6	80			6018	
	9.0	90	1.4	100			6270	
	9.3	103	1.7	150	PC063+E-VF063	63B4	6270	104
	7.8	117	1.4	180			6270	
	5.8	139	1.0	240			6270	
	4.7	155	0.8	300			6270	
	12.0	97	2.2	75	PC071+E-VF063	71A6	5889	104
	10.0	107	2.4	90			6259	
	7.5	131	1.8	120			6270	
	6.0	152	1.4	150			6270	
	5.0	168	1.2	180			6270	
0.22	3.8	197	0.9	240			6270	109
	3.0	218	0.7	300			6270	
	3.5	222	1.0	400	E-VF030/063	63B4	6270	
	2.8	257	0.8	500			6270	
	5.0	179	1.7	180	PC071+E-VF075	71A6	7380	105
	3.8	211	1.2	240			7380	
	3.0	235	1.0	300			7380	
	2.3	362	1.1	600	E-VF040/075	63B4	7380	109
	1.9	435	0.9	750			7380	
	1.6	487	0.8	900			7380	
	1.2	629	1.0	1200	E-VF040/090	63B4	8180	109
	0.93	735	0.8	1500			8180	
	0.78	861	1.3	1800	E-VF050/105	63B4	10320	110
	0.58	1113	0.9	2400			10320	
	0.78	861	1.5	1800	E-VF050/110	63B4	10320	110
	0.58	1113	1.1	2400			10320	
	280.0	6.5	2.8	5	E-VF030	63C4	597	86-87
	186.7	10	1.9	7.5			683	
	140.0	12	1.5	10			752	
	93.3	17	1.0	15			861	
	70.0	22	0.8	20			948	

	N1=1400
	N1=2800
	N1=900



P1 (KW)	n2 (1/min)	M2 (Nm)	f.s.	i	型号 Size		Fr2 (N)	
0.22	93.3	18	2.2	15	E-VF040	63C4	1657	88-89
	70.0	23	1.7	20			1824	
	56.0	28	1.4	25			1964	
	46.7	32	1.4	30			2087	
	35.0	39	1.1	40			2298	
	28.0	47	0.8	50			2475	
	28.0	47	1.5	50	E-VF050	63C4	3397	90-91
	23.3	53	1.3	60			3610	
	17.5	64	1.0	80			3973	
	18.7	78	1.2	75	PC063+E-VF050	63C4	3889	103
	15.6	86	1.2	90			4132	
	11.7	106	0.9	120			4548	
	9.3	126	1.4	150	PC063+E-VF063	63C4	6270	104
	7.8	143	1.1	180			6270	
0.25	4.7	210	1.1	300	E-VF030/063	63C4	6270	109
	3.5	271	0.8	400			6270	
	560.0	3.8	3.2	5	E-VF030	63B2	474	86-87
	373.3	5.6	2.3	7.5			542	
	280.0	7.2	1.8	10			597	
	186.7	10	1.3	15			683	
	140.0	13	0.9	20			752	
	112.0	16	1.0	25			810	
	93.3	18	0.8	30			861	88-89
	280.0	7.6	4.5	5	E-VF040	71A4	1149	
	186.7	11	3.6	7.5			1315	
	140.0	14	2.8	10			1447	
	93.3	21	1.9	15			1657	
	70.0	27	1.5	20			1824	
	56.0	32	1.2	25			1964	
	46.7	36	1.3	30			2087	
	35.0	44	0.9	40			2298	88-89
	180.0	12	3.5	5	E-VF040	71B6	1331	
	120.0	17	2.6	7.5			1524	
	90.0	22	2.0	10			1677	
	60.0	31	1.4	15			1920	
	45.0	40	1.1	20			2113	
	36.0	48	0.9	25			2276	
	30.0	53	0.9	30			2419	90-91
	35.0	42	1.1	80	E-VF050	63B2	3153	
	28.0	48	0.8	100			3397	90-91
	70.0	27	2.7	20	E-VF050	71A4	2503	
	56.0	32	2.2	25			2696	
	46.7	37	2.3	30			2865	
	35.0	46	1.7	40			3153	
	28.0	54	1.4	50			3397	
	23.3	60	1.1	60			3610	
	17.5	72	0.9	80			3973	
	45.0	40	1.9	20	E-VF050	71B6	2900	90-91
	36.0	48	1.5	25			3124	
	30.0	54	1.7	30			3320	
	22.5	67	1.2	40			3654	
	18.0	78	1.0	50			3936	
	15.0	88	0.8	60			4183	

	N1=1400
	N1=2800
	N1=900



P1 (KW)	n2 (1/min)	M2 (Nm)	f.s.	i	型号 Size		Fr2 (N)	
0.25	18.7	88	1.0	75	PC071+E-VF050	71A4	3889	104
	15.6	98	1.1	90			4132	
	11.7	121	0.8	120			4548	
	28.0	56	2.4	50	E-VF063	71A4	4440	92-93
	23.3	63	2.0	60			4719	
	17.5	78	1.6	80			5193	
	14.0	87	1.4	100			5595	
	18.0	81	1.8	50	E-VF063	71B6	5145	92-93
	15.0	92	1.5	60			5467	
	11.3	110	1.2	80			6018	
	9.0	125	1.0	100			6270	
	18.7	91	1.8	75	PC071+E-VF063	71A4	5083	104
	15.6	100	2.0	90			5401	
	11.7	125	1.5	120			5945	
	9.3	143	1.2	150			6270	
	7.8	163	1.0	180			6270	
	5.8	192	0.7	240			6270	
	4.7	215	0.6	300			6270	104
	12.0	135	1.6	75	PC071+E-VF063	71B6	5889	
	10.0	148	1.8	90			6259	
	7.5	181	1.3	120			6270	
	6.0	211	1.0	150			6270	
	7.0	159	1.4	400	E-VF030/063	63B2	6270	109
	5.6	185	1.2	500			6270	
	17.5	82	2.3	80	E-VF075	71A4	6130	94-95
	14.0	94	1.9	100			6603	
	11.3	117	1.7	80	E-VF075	71B6	7103	94-95
	9.0	133	1.4	100			7380	
	9.3	151	1.7	150	PC071+E-VF075	71A4	7380	105
	7.8	172	1.4	180			7380	
	5.8	201	1.1	240			7380	
	4.7	230	0.9	300			7380	
	12.0	139	2.4	75	PC071+E-VF075	71B6	6952	105
	10.0	155	2.5	90			7380	
	7.5	191	1.9	120			7380	
	6.0	219	1.5	150			7380	
	5.0	248	1.2	180			7380	
	3.5	336	1.1	400	E-VF040/075	71A4	7380	109
	2.8	384	0.8	500			7380	
	5.0	263	1.9	180	PC071+E-VF090	71B6	8180	105
	3.8	318	1.4	240			8180	
	3.0	358	1.1	300			8180	
	2.3	512	1.2	600	E-VF040/090	71A4	8180	109
	1.9	598	0.9	750			8180	
	1.6	667	0.8	900			8180	
	1.2	943	1.1	1200	E-VF050/105	71A4	10320	110
	0.93	1064	1.0	1500			10320	
	0.78	1195	0.9	1800			10320	

	N1=1400
	N1=2800
	N1=900



P1 (KW)	n2 (1/min)	M2 (Nm)	f.s.	i	型号 Size		Fr2 (N)	
0.25	1.2	943	1.3	1200	E-VF050/110	71A4	10320	110
	0.93	1064	1.2	1500			10320	
	0.78	1195	1.1	1800			10320	
	0.58	1624	1.0	2400	E-VF063/130	71A4	13500	110
	0.47	1935	0.8	3000			13500	
	0.35	2046	0.6	4000			13500	
	0.28	2430	0.5	5000			13500	
	0.8	1199	1.8	1800	E-VF063/150	71A4	18000	111
	0.6	1446	1.8	2400			18000	
	0.5	1713	1.4	3000			18000	
	0.4	2026	0.9	4000			18000	
	0.3	2251	0.7	5000			18000	
0.37	560.0	5.6	2.1	5	E-VF030	71A2	474	86-87
	373.3	8.2	1.6	7.5			542	
	280.0	11	1.2	10			597	
	186.7	15	0.8	15			683	
	560.0	5.7	4.2	5	E-VF040	71A2	912	88-89
	373.3	8.4	3.3	7.5			1044	
	280.0	11	2.6	10			1149	
	186.7	16	1.9	15			1315	
	140.0	21	1.4	20			1447	
	112.0	25	1.1	25			1559	
	280.0	11	3.0	5	E-VF040	71B4	1149	88-89
	186.7	16	2.4	7.5			1315	
	140.0	21	1.9	10			1447	
	93.3	31	1.3	15			1657	
	70.0	39	1.0	20			1824	
	56.0	47	0.8	25			1964	
	46.7	53	0.8	30			2087	
	112.0	25	2.0	25	E-VF050	71A2	2140	90-91
	93.3	29	2.2	30			2274	
	70.0	37	1.6	40			2503	
	56.0	44	1.2	50			2696	
	46.7	50	1.0	60			2865	
	35.0	62	0.7	80			3153	
	140.0	22	3.3	10	E-VF050	71B4	1987	90-91
	93.3	31	2.4	15			2274	
	70.0	40	1.8	20			2503	
	56.0	48	1.5	25			2696	
	46.7	55	1.5	30			2865	
	35.0	68	1.1	40			3153	
	28.0	80	0.9	50			3397	
	23.3	89	0.8	60			3610	
	180.0	17	4.3	5	E-VF050	80A6	1827	90-91
	120.0	25	3.3	7.5			2091	
	90.0	33	2.5	10			2302	
	60.0	47	1.8	15			2635	
	45.0	60	1.3	20			2900	
	36.0	72	1.0	25			3124	
	30.0	80	1.1	30			3320	

	N1=1400
	N1=2800
	N1=900



P1 (KW)	n2 (1/min)	M2 (Nm)	f.s.	i	型号 Size		Fr2 (N)	
0.37	35.0	71	2.1	40	E-VF063	71B4	4122	92-93
	28.0	83	1.6	50			4440	
	23.3	94	1.4	60			4719	
	17.5	115	1.1	80			5193	
	14.0	129	0.9	100			5595	
	45.0	60	2.4	20	E-VF063	80A6	3791	92-93
	36.0	74	1.9	25			4084	
	30.0	82	2.1	30			4339	
	22.5	102	1.6	40			4776	
	18.0	120	1.2	50			5145	
	15.0	137	1.0	60			5467	
	18.7	134	1.2	75	PC071+E-VF063	71B4	5083	104
	15.6	148	1.4	90			5401	
	11.7	185	1.0	120			5945	
	9.3	212	0.8	150			6270	
	9.3	181	1.3	300	E-VF030/063	71A2	6270	109
	7.0	236	1.0	400			6270	
	23.3	98	2.0	60	E-VF075	71B4	5569	94-95
	17.5	121	1.6	80			6130	
	14.0	139	1.3	100			6603	
	18.0	126	1.8	50	E-VF075	80A6	6073	94-95
	15.0	144	1.5	60			6453	
	11.3	173	1.2	80			7103	
	9.0	196	1.0	100			7380	
	18.7	138	1.8	75	PC071+E-VF075	71B4	6000	105
	15.6	154	1.9	90			6375	
	11.7	191	1.5	120			7017	
	9.3	223	1.1	150			7380	
	7.8	254	0.9	180			7380	
	12.0	206	1.6	75	PC080+E-VF075	80A6	6952	105
	10.0	230	1.7	90			7380	
	7.5	283	1.3	120			7380	
	6.0	324	1.0	150			7380	
	4.7	405	1.0	300	E-VF040/075	71B4	7380	109
	3.5	498	0.7	400			7380	
	11.3	185	1.7	80	E-VF090	80A6	7859	96-97
	9.0	212	1.3	100			8180	
	7.8	268	1.5	180	PC071+E-VF090	71B4	8180	105
	5.8	321	1.1	240			8180	
	4.7	371	0.9	300			8180	
	6.0	347	1.6	150	PC080+E-VF090	80A6	8180	106
	5.0	389	1.3	180			8180	
	3.8	471	1.0	240			8180	
	4.7	402	1.5	300	E-VF040/090	71B4	8180	109
	3.5	523	1.2	400			8180	
	2.8	611	0.9	500			8180	
	2.3	757	0.8	600			8180	

	N1=1400
	N1=2800
	N1=900



P1 (KW)	n2 (1/min)	M2 (Nm)	f.s.	i	型号 Size		Fr2 (N)	
0.37	3.8	509	1.5	240	PC080+E-VF105	80A6	10320	106
	3.0	577	1.2	300			10320	
	1.9	950	1.2	750	E-VF050/105	71B4	10320	110
	1.6	1079	1.0	900			10320	
	1.2	1396	0.7	1200			10320	
	3.8	509	1.6	240	PC080+E-VF110	80A6	10320	106
	3.0	577	1.3	300			10320	
	1.9	950	1.3	750	E-VF050/110	71B4	10320	110
	1.6	1079	1.2	900			10320	
	1.2	1396	0.8	1200			10320	
	0.93	1674	1.1	1500	E-VF063/130	71B4	13500	110
	0.78	1887	0.9	1800			13500	
0.55	0.8	1775	1.2	1800	E-VF063/150	71B4	18000	111
	0.6	2141	1.2	2400			18000	
	0.5	2535	0.9	3000			18000	
	560.0	8.4	2.8	5	E-VF040	71B2	912	88-89
	373.3	13	2.2	7.5			1044	
	280.0	17	1.8	10			1149	
	186.7	24	1.3	15			1315	
	140.0	31	0.9	20			1447	
	112.0	37	0.8	25			1559	
	280.0	17	2.0	5	E-VF040	71C4	1149	88-89
	186.7	24	1.6	7.5			1315	
	140.0	32	1.3	10			1447	
	93.3	46	0.9	15			1657	
	140.0	31	1.7	20	E-VF050	71B2	1987	90-91
	112.0	38	1.4	25			2140	
	93.3	43	1.5	30			2274	
	70.0	55	1.1	40			2503	
	56.0	65	0.8	50			2696	
	46.7	74	0.7	60			2865	
	280.0	17	3.7	5	E-VF050	80A4	1577	90-91
	186.7	25	2.9	7.5			1805	
	140.0	32	2.2	10			1987	
	93.3	46	1.6	15			2274	
	70.0	59	1.2	20			2503	
	56.0	71	1.0	25			2696	
	46.7	81	1.0	30			2865	
	120.0	38	2.2	7.5	E-VF050	80B6	2091	90-91
	90.0	49	1.7	10			2302	
	60.0	69	1.2	15			2635	
	45.0	89	0.9	20			2900	
	70.0	56	1.9	40	E-VF063	71B2	3272	92-93
	56.0	67	1.5	50			3524	
	46.7	77	1.2	60			3745	
	35.0	95	0.9	80			4122	
	28.0	109	0.7	100			4440	

	N1=1400
	N1=2800
	N1=900



P1 (KW)	n2 (1/min)	M2 (Nm)	f.s.	i	型号 Size		Fr2 (N)	
0.55	70.0	61	2.2	20	E-VF063	80A4	3272	92-93
	56.0	73	1.8	25			3524	
	46.7	83	1.9	30			3745	
	35.0	105	1.4	40			4122	
	28.0	124	1.1	50			4440	
	23.3	140	0.9	60			4719	
	60.0	71	2.2	15	E-VF063	80B6	3444	92-93
	45.0	90	1.6	20			3791	
	36.0	109	1.3	25			4084	
	30.0	123	1.4	30			4339	
	22.5	152	1.1	40			4776	
	18.7	200	0.8	75	PC071+E-VF063	71C4	5083	104
	15.6	219	0.9	90			5401	
	35.0	99	1.3	80	E-VF075	71B2	4865	94-95
	28.0	114	1.0	100			5241	
	35.0	108	2.0	40	E-VF075	80A4	4865	94-95
	28.0	129	1.6	50			5241	
	23.3	146	1.4	60			5569	
	17.5	180	1.1	80			6130	
	14.0	206	0.9	100			6603	
	30.0	128	2.0	30	E-VF075	80B6	5122	94-95
	22.5	159	1.5	40			5637	
	18.0	187	1.2	50			6073	
	15.0	214	1.0	60			6453	
	18.7	205	1.2	75	PC071+E-VF075	71C4	6000	105
	15.6	230	1.3	90			6375	
	11.7	284	1.0	120			7017	
	18.7	205	1.2	75	PC080+E-VF075	80A4	6000	105
	15.6	230	1.3	90			6375	
	11.7	284	1.0	120			7017	
	9.3	332	0.8	150			7380	
	12.0	306	1.1	75	PC080+E-VF075	80B6	6952	105
	10.0	341	1.1	90			7380	
	17.5	189	1.5	80	E-VF090	80A4	6783	96-97
	14.0	221	1.2	100			7306	
	18.0	198	2.0	50	E-VF090	80B6	6719	96-97
	15.0	224	1.6	60			7140	
	11.3	275	1.1	80			7859	
	9.0	315	0.9	100			8180	
	15.6	240	2.3	90	PC080+E-VF090	80A4	7054	106
	11.7	297	1.6	120			7764	
	9.3	355	1.3	150			8180	
	7.8	398	1.0	180			8180	
	5.8	477	0.8	240			8180	
	10.0	357	2.0	90	PC080+E-VF090	80B6	8174	106
	7.5	441	1.4	120			8180	
	6.0	516	1.1	150			8180	
	5.0	578	0.9	180			8180	

	N1=1400
	N1=2800
	N1=900



P1 (KW)	n2 (1/min)	M2 (Nm)	f.s.	i	型号 Size		Fr2 (N)	
0.55	9.3	306	2.0	300	E-VF040/090	71B2	8180	109
	7.0	403	1.5	400			8180	
	5.6	470	1.2	500			8180	
	17.5	201	2.4	80	E-VF105	80A4	8571	98-99
	14.0	236	1.9	100			9232	
	11.3	294	1.8	80	E-VF105	80B6	9931	98-99
	9.0	338	1.4	100			10320	
	7.8	425	1.7	180	PC080+E-VF105	80A4	10320	106
	5.8	513	1.2	240			10320	
	4.7	597	1.0	300			10320	
	7.5	462	2.2	120	PC080+E-VF105	80B6	10320	106
	6.0	552	1.8	150			10320	
	5.0	620	1.5	180			10320	
	3.8	756	1.0	240			10320	
	4.7	639	1.7	300	E-VF050/105	80A4	10320	110
	3.5	826	1.2	400			10320	
	2.8	984	1.0	500			10320	
	2.3	1181	0.9	600			10320	
	1.9	1411	0.8	750			10320	
	17.5	201	2.6	80	E-VF110	80A4	8571	100
	14.0	236	2.0	100			9232	
	11.3	294	1.9	80	E-VF110	80B6	9931	100
	9.0	338	1.5	100			10320	
	7.8	425	1.8	180	PC080+E-VF110	80A4	10320	106
	5.8	513	1.3	240			10320	
	4.7	597	1.0	300			10320	
0.75	7.5	462	2.6	120	PC080+E-VF110	80B6	10320	106
	6.0	552	2.0	150			10320	
	5.0	620	1.6	180			10320	
	3.8	756	1.1	240			10320	
	4.7	639	2.0	300	E-VF050/110	80A4	10320	110
	3.5	826	1.4	400			10320	
	2.8	984	1.1	500			10320	
	2.3	1181	1.0	600			10320	
	1.9	1411	0.9	750			10320	
	3.8	756	1.6	240	PC080+E-VF130	80B6	13500	107
	3.0	858	1.3	300			13500	
	2.8	996	1.6	500	E-VF063/130	80A4	13500	110
	1.9	1471	1.2	750			13500	
	1.2	2132	0.8	1200			13500	
	0.8	2638	0.8	1800	E-VF063/150	80A4	18000	111
	0.6	3182	0.8	2400			18000	
0.75	560.0	12	2.1	5	E-VF040	80A2	912	88-89
	373.3	17	1.6	7.5			1044	
	280.0	23	1.3	10			1149	
	186.7	32	1.0	15			1315	

	N1=1400
	N1=2800
	N1=900



P1 (KW)	n2 (1/min)	M2 (Nm)	f.s.	i	型号 Size		Fr2 (N)	
0.75	560.0	12	3.9	5	E-VF050	80A2	1251	90-91
	373.3	17	3.0	7.5			1433	
	280.0	23	2.4	10			1577	
	186.7	33	1.7	15			1805	
	140.0	42	1.3	20			1987	
	112.0	51	1.0	25			2140	
	93.3	58	1.1	30			2274	
	280.0	23	2.7	5	E-VF050	80B4	1577	90-91
	186.7	34	2.1	7.5			1805	
	140.0	44	1.6	10			1987	
	93.3	63	1.2	15			2274	
	70.0	81	0.9	20			2503	
	140.0	43	2.3	20	E-VF063	80A2	2597	92-93
	112.0	52	1.8	25			2797	
	93.3	60	2.0	30			2973	
	70.0	77	1.4	40			3272	
	56.0	91	1.1	50			3524	
	46.7	104	0.9	60			3745	
	93.3	64	2.2	15	E-VF063	80B4	2973	92-93
	70.0	83	1.6	20			3272	
	56.0	100	1.3	25			3524	
	46.7	114	1.4	30			3745	
	35.0	143	1.0	40			4122	
	120.0	52	2.9	7.5	E-VF063	90S6	2734	92-93
	90.0	68	2.3	10			3009	
	60.0	97	1.6	15			3444	
	45.0	123	1.2	20			3791	
	36.0	149	0.9	25			4084	
	30.0	167	1.0	30			4339	
0.75	46.7	109	1.3	60	E-VF075	80A2	4421	94-95
	28.0	156	0.8	100			5241	
	56.0	102	2.0	25	E-VF075	80B4	4160	94-95
	46.7	117	2.0	30			4421	
	35.0	147	1.5	40			4865	
	28.0	177	1.2	50			5241	
	23.3	200	1.0	60			5569	
	60.0	98	2.4	15	E-VF075	90S6	4065	94-95
	45.0	126	1.9	20			4474	
	36.0	153	1.4	25			4820	
	30.0	174	1.5	30			5122	
	22.5	216	1.1	40			5637	
	18.7	280	0.9	75	PC080+E-VF075	80B4	6000	105
	15.6	313	1.0	90			6375	
	35.0	141	1.6	80	E-VF090	80A2	5383	96-97
	28.0	166	1.2	100			5799	
0.75	28.0	184	1.8	50	E-VF090	80B4	5799	96-97
	23.3	212	1.5	60			6163	
	17.5	258	1.1	80			6783	
	14.0	302	0.9	100			7306	

	N1=1400
	N1=2800
	N1=900



P1 (KW)	n2 (1/min)	M2 (Nm)	f.s.	i	型号 Size		Fr2 (N)	
0.75	30.0	179	2.6	30	E-VF090	90S6	5667	96-97
	22.5	226	1.8	40			6238	
	18.0	271	1.4	50			6719	
	15.0	306	1.1	60			7140	
	15.6	327	1.7	90	PC080+ E-VF090	80B4	7054	106
	11.7	405	1.2	120			7764	
	9.3	483	0.9	150			8180	
	7.8	543	0.7	180			8180	
	7.0	549	1.1	400	E-VF040/090	80A2	8180	109
	5.6	642	0.9	500			8180	
	17.5	274	1.8	80	E-VF105	80B4	8571	98-99
	14.0	322	1.4	100			9232	
	15.0	325	1.9	60	E-VF105	90S6	9023	98-99
	11.3	401	1.3	80			9931	
	9.0	462	1.1	100			10320	
	11.7	430	1.9	120	PC080+ E-VF105	80B4	9811	106
	9.3	506	1.6	150			10320	
	7.8	580	1.2	180			10320	
	5.8	700	0.9	240			10320	
	12.4	393	2.8	72.6	PC090+ E-VF105	90S6	9614	106
	9.3	508	2.0	96.8			10320	
	7.4	607	1.6	121			10320	
	6.2	682	1.3	145.2			10320	
	4.6	832	0.9	193.6			10320	
	9.3	446	2.5	300	E-VF050/105	80A2	10320	110
	7.0	563	1.8	400			10320	
	5.6	687	1.5	500			10320	
	4.7	871	1.3	300	E-VF050/105	80B4	10320	110
	3.5	1126	0.9	400			10320	
	17.5	274	1.9	80	E-VF110	80B4	8571	100
	14.0	322	1.5	100			9232	
	15.0	325	2.1	60	E-VF110	90S6	9023	100
	11.3	401	1.4	80			9931	
	9.0	462	1.1	100			10320	
	11.7	430	2.2	120	PC080+ E-VF110	80B4	9811	106
	9.3	506	1.7	150			10320	
	7.8	580	1.3	180			10320	
	5.8	700	0.9	240			10320	
	12.4	393	3.2	72.6	PC090+ E-VF110	90S6	9614	106
	9.3	508	2.3	96.8			10320	
	7.4	607	1.8	121			10320	
	6.2	682	1.5	145.2			10320	
	4.6	832	1.0	193.6			10320	
	9.3	446	2.8	300	E-VF050/110	80A2	10320	110
	7.0	563	2.1	400			10320	
	5.6	687	1.6	500			10320	
	4.7	871	1.5	300	E-VF050/110	80B4	10320	110
	3.5	1126	1.1	400			10320	

	N1=1400
	N1=2800
	N1=900



P1 (KW)	n2 (1/min)	M2 (Nm)	f.s.	i	型号 Size		Fr2 (N)	
0.75	11.3	407	2.1	80	E-VF130	90S6	12989	101
	9.0	470	1.7	100			13500	
	5.8	712	1.4	240	PC080+ E-VF130	80B4	13500	107
	4.7	813	1.1	300			13500	
	12.4	399	4.4	72.6	PC090+ E-VF130	90S6	12575	107
	9.3	508	3.2	96.8			13500	
	7.4	607	2.6	121			13500	
	6.2	682	2.1	145.2			13500	
	4.6	832	1.5	193.6			13500	
	3.7	944	1.2	242			13500	
	2.8	1358	1.1	500	E-VF063/130	80B4	13500	110
	2.3	1631	1.0	600			13500	
	1.9	2005	0.9	750			13500	
	1.6	2283	0.8	900			13500	
	2.8	1291	1.8	500			18000	
	2.3	1529	1.7	600			18000	
	1.9	1783	1.3	750			18000	
	1.6	2215	0.9	900			18000	
	1.2	2680	1.0	1200			18000	
	280.0	28	2.2	5	E-VF050	80C4	1577	90-91
	186.7	41	1.7	7.5			1805	
	140.0	54	1.3	10			1987	
	93.3	77	1.0	15			2274	
0.92	140.0	55	2.4	10	E-VF063	80C4	2597	92-93
	93.3	78	1.8	15			2973	
	70.0	102	1.3	20			3272	
	56.0	122	1.1	25			3524	
	46.7	139	1.1	30			3745	
	35.0	176	0.8	40			4122	
	70.0	103	2.0	20	E-VF075	80C4	3862	94-95
	56.0	126	1.6	25			4160	
	46.7	143	1.6	30			4421	
	35.0	181	1.2	40			4865	
	28.0	217	1.0	50			5241	
	23.3	245	0.8	60			5569	
	18.7	344	0.7	75	PC080+ E-VF075	80C4	6000	105
	15.6	384	0.8	90			6375	
	28.0	226	1.5	50	E-VF090	80C4	5799	96-97
	23.3	260	1.2	60			6163	
	17.5	316	0.9	80			6783	
	15.6	401	1.4	90	PC080+ E-VF090	80C4	7054	106
	11.7	497	1.0	120			7764	
	9.3	593	0.8	150			8180	
	17.5	336	1.5	80	E-VF105	80C4	8571	98-99
	14.0	395	1.2	100			9232	
	18.7	367	2.2	75	PC080+ E-VF105	80C4	8388	106
	11.7	527	1.5	120			9811	
	9.3	621	1.3	150			10320	
	7.8	712	1.0	180			10320	

	N1=1400
	N1=2800
	N1=900



E-VF

P1 (KW)	n2 (1/min)	M2 (Nm)	f.s.	i	型号 Size		Fr2 (N)	
0.92	4.7	1069	1.0	300	E-VF050/105	80C4	10320	110
	3.5	1382	0.7	400			10320	
	17.5	336	1.5	80	E-VF110	80C4	8571	100
	14.0	395	1.2	100			9232	
	18.7	367	2.5	75	PC080+ E-VF110	80C4	8388	106
	11.7	527	1.8	120			9811	
	9.3	621	1.4	150			10320	
	7.8	712	1.1	180			10320	
	4.7	1069	1.2	300	E-VF050/110	80C4	10320	110
	3.5	1382	0.9	400			10320	
	3.5	1398	1.2	400	E-VF063/130	80C4	13500	110
	2.8	1665	0.9	500			13500	
	7.8	712	1.5	180	PC080+ E-VF130	80C4	13500	107
	5.8	874	1.1	240			13500	
	4.7	998	0.9	300			13500	
	2.8	1583	1.5	500	E-VF063/150	80C4	18000	111
1.1	2.3	1875	1.4	600			18000	
	1.9	2188	1.1	750			18000	
	1.6	2717	0.8	900			18000	
	1.2	3288	0.8	1200			18000	
	560.0	17	2.6	5	E-VF050	80B2	1251	90-91
	373.3	25	2.1	7.5			1433	
	280.0	33	1.6	10			1577	
	186.7	48	1.2	15			1805	
	140.0	62	0.9	20			1987	
	186.7	48	2.1	15	E-VF063	80B2	2359	92-93
	140.0	63	1.6	20			2597	
	112.0	77	1.2	25			2797	
	93.3	88	1.4	30			2973	
	70.0	113	1.0	40			3272	
	120.0	76	2.0	7.5	E-VF063	90L6	2734	92-93
	90.0	99	1.5	10			3009	
	60.0	142	1.1	15			3444	
	45.0	180	0.8	20			3791	
	186.7	50	2.6	7.5	E-VF063	90S4	2359	92-93
	140.0	65	2.0	10			2597	
	93.3	93	1.5	15			2973	
	70.0	122	1.1	20			3272	
	56.0	146	0.9	25			3524	
	46.7	167	1.0	30			3745	
	112.0	78	1.9	25	E-VF075	80B2	3302	94-95
	93.3	90	1.9	30			3509	
	70.0	116	1.4	40			3862	
	56.0	139	1.1	50			4160	
	46.7	160	0.9	60			4421	
	90.0	100	2.3	10	E-VF075	90L6	3551	94-95
	60.0	144	1.6	15			4065	
	45.0	184	1.3	20			4474	
	36.0	225	1.0	25			4820	
	30.0	256	1.0	30			5122	

	N1=1400
	N1=2800
	N1=900



E-VF

P1 (KW)	n2 (1/min)	M2 (Nm)	f.s.	i	型号 Size		Fr2 (N)	
1.1	93.3	96	2.1	15	E-VF075	90S4	3509	94-95
	70.0	123	1.7	20			3862	
	56.0	150	1.3	25			4160	
	46.7	171	1.3	30			4421	
	35.0	216	1.0	40			4865	
	35.0	207	1.1	80	E-VF090	80B2	5383	96-97
	28.0	244	0.8	100			5799	
	36.0	231	1.6	25	E-VF090	90L6	5333	96-97
	30.0	263	1.8	30			5667	
	22.5	331	1.2	40			6238	
	18.0	397	1.0	50			6719	
	15.0	448	0.8	60			7140	
	35.0	225	1.6	40	E-VF090	90S4	5383	96-97
	28.0	270	1.3	50			5799	
	23.3	311	1.0	60			6163	
	22.5	345	2.0	40	E-VF105	90L6	7882	98-99
	18.0	414	1.6	50			8491	
	15.0	476	1.3	60			9023	
	11.3	588	0.9	80			9931	
	28.0	281	2.1	50	E-VF105	90S4	7328	98-99
	23.3	324	1.7	60			7787	
	17.5	402	1.2	80			8571	
	14.0	473	1.0	100			9232	
	12.4	576	1.9	72.6	PC090+ E-VF105	90L6	9614	106
	9.3	746	1.4	96.8			10320	
	7.4	890	1.1	121			10320	
	6.2	1000	0.9	145.2			10320	
	19.3	392	2.2	72.6	PC090+ E-VF105	90S4	8298	106
	14.5	508	1.6	96.8			9133	
	11.6	599	1.3	121			9838	
	9.6	686	1.0	145.2			10320	
	7.2	828	0.8	193.6			10320	
	9.3	654	1.7	300	E-VF050/105	80B2	10320	110
	7.0	845	1.2	400			10320	
	5.6	1007	1.0	500			10320	
	22.5	345	2.3	40	E-VF110	90L6	7882	100
	18.0	414	1.8	50			8491	
	15.0	476	1.4	60			9023	
	11.3	588	1.0	80			9931	
	28.0	281	2.3	50	E-VF110	90S4	7328	100
	23.3	324	1.9	60			7787	
	17.5	402	1.3	80			8571	
	14.0	473	1.0	100			9232	
	12.4	576	2.2	72.6	PC090+ E-VF110	90L6	9614	106
	9.3	746	1.6	96.8			10320	
	7.4	890	1.2	121			10320	
	6.2	1000	1.0	145.2			10320	

	N1=1400
	N1=2800
	N1=900



P1 (KW)	n2 (1/min)	M2 (Nm)	f.s.	i	型号 Size		Fr2 (N)	
1.1	19.3	392	2.5	72.6	PC090+ E-VF110	90S4	8298	106
	14.5	508	1.8	96.8			9133	
	11.6	599	1.5	121			9838	
	9.6	686	1.1	145.2			10320	
	7.2	828	0.8	193.6			10320	
	9.3	654	1.9	300	E-VF050/110	80B2	10320	110
	7.0	845	1.4	400			10320	
	5.6	1007	1.1	500			10320	
	11.3	598	1.4	80	E-VF130	90L6	12989	101
	9.0	689	1.1	100			13500	
	17.5	408	2.1	80	E-VF130	90S4	11210	101
	14.0	480	1.5	100			12076	
	12.4	585	3.0	72.6	PC090+E-VF130	90L6	12575	107
	9.3	746	2.2	96.8			13500	
	7.4	890	1.7	121			13500	
	6.2	1000	1.4	145.2			13500	
	4.6	1220	1.0	193.6			13500	
	19.3	398	3.5	72.6	PC090+E-VF130	90S4	10853	107
	14.5	508	2.6	96.8			11945	
	11.6	608	2.0	121			12868	
	9.6	686	1.6	145.2			13500	
	7.2	843	1.2	193.6			13500	
	5.8	962	0.9	242			13500	
	4.7	1312	1.3	300	E-VF063/130	90S4	13500	110
	3.5	1671	1.0	400			13500	
	2.8	1991	0.8	500			13500	
	9.3	753	3.1	150	E-VF063/150	90S4	18000	111
	7.0	966	2.4	200			18000	
	5.6	1175	1.7	250			18000	
	4.7	1364	1.7	300			18000	
	3.5	1619	1.6	400			18000	
	2.8	1893	1.2	500			18000	
	2.3	2242	1.2	600			18000	
	1.9	2616	0.9	750			18000	
	560.0	23	1.9	5	E-VF050	90S2	1251	90-91
	373.3	35	1.5	7.5			1433	
	280.0	45	1.2	10			1577	
	186.7	65	0.9	15			1805	
1.5	186.7	68	1.9	7.5	E-VF063	90L4	2359	92-93
	140.0	89	1.5	10			2597	
	93.3	127	1.1	15			2973	
	70.0	166	0.8	20			3272	
	373.3	35	2.7	7.5	E-VF063	90S2	1873	92-93
	280.0	46	2.1	10			2061	
	186.7	66	1.6	15			2359	
	140.0	86	1.2	20			2597	
	112.0	105	0.9	25			2797	
	93.3	120	1.0	30			2973	
	120.0	105	2.0	7.5	E-VF075	100LA6	3227	94-95
	90.0	137	1.7	10			3551	
	60.0	196	1.2	15			4065	

	N1=1400
	N1=2800
	N1=900



P1 (KW)	n2 (1/min)	M2 (Nm)	f.s.	i	型号 Size		Fr2 (N)	
1.5	56.0	189	0.8	50	E-VF075	90S2	4160	94-95
	46.7	218	0.7	60			4421	
	140.0	90	2.2	10	E-VF075	90L4	3065	94-95
	93.3	130	1.5	15			3509	
	70.0	168	1.3	20			3862	
	56.0	205	1.0	25			4160	
	46.7	233	1.0	30			4421	94-95
	280.0	46	3.1	10	E-VF075	90S2	2433	
	186.7	67	2.2	15			2785	
	140.0	87	1.8	20			3065	
	112.0	106	1.4	25			3302	
	93.3	123	1.4	30			3509	
	70.0	158	1.0	40			3862	96-97
	90.0	138	2.7	10	E-VF090	100LA6	3929	
	60.0	201	2.1	15			4498	
	45.0	258	1.5	20			4951	
	36.0	314	1.2	25			5333	
	30.0	358	1.3	30			5667	
	70.0	172	2.1	20	E-VF090	90L4	4273	96-97
	56.0	210	1.6	25			4603	
	46.7	239	1.7	30			4891	
	35.0	307	1.2	40			5383	
	28.0	368	0.9	50			5799	
	23.3	424	0.8	60			6163	96-97
	56.0	194	1.4	50	E-VF090	90S2	4603	
	46.7	227	1.1	60			4891	
	45.0	264	2.4	20	E-VF105	100LA6	6256	98-99
	36.0	322	2.0	25			6739	
	30.0	363	2.0	30			7161	
	22.5	471	1.5	40			7882	
	18.0	565	1.2	50			8491	
	15.0	649	1.0	60			9023	98-99
	35.0	319	1.9	40	E-VF105	90L4	6803	
	28.0	384	1.6	50			7328	
	23.3	442	1.3	60			7787	
	17.5	548	0.9	80			8571	
	46.7	236	1.8	60	E-VF105	90S2	6181	98-99
	35.0	299	1.3	80			6803	
	28.0	353	1.0	100			7328	
	19.3	535	1.6	72.6	PC090+ E-VF105	90L4	8298	106
	14.5	693	1.2	96.8			9133	
	11.6	817	1.0	121			9838	
	9.6	936	0.8	145.2			10320	
	9.3	891	1.2	300	E-VF050/105	90S2	10320	110
	7.0	1153	0.9	400			10320	
	5.6	1373	0.7	500			10320	
	45.0	264	2.7	20	E-VF110	100LA6	6256	100
	36.0	322	2.4	25			6739	
	30.0	363	2.3	30			7161	
	22.5	471	1.7	40			7882	
	18.0	565	1.3	50			8491	
	15.0	649	1.1	60			9023	

	N1=1400
	N1=2800
	N1=900



E-VF

P1 (KW)	n2 (1/min)	M2 (Nm)	f.s.	i	型号 Size		Fr2 (N)	
1.5	35.0	319	2.2	40	E-VF110	90L4	6803	100
	28.0	384	1.7	50			7328	
	23.3	442	1.4	60			7787	
	17.5	548	0.9	80			8571	
	46.7	236	2.0	60	E-VF110	90S2	6181	100
	35.0	299	1.3	80			6803	
	28.0	353	1.0	100			7328	
	19.3	535	1.9	72.6	PC090+E-VF110	90L4	8298	106
	14.5	693	1.3	96.8			9133	
	11.6	817	1.1	121			9838	
	9.6	936	0.8	145.2			10320	
	9.3	891	1.4	300	E-VF050/110	90S2	10320	110
	7.0	1153	1.0	400			10320	
	5.6	1373	0.8	500			10320	
	22.5	478	2.3	40	E-VF130	100LA6	10309	101
	18.0	573	1.8	50			11105	
	15.0	659	1.4	60			11801	
	11.3	815	1.1	80			12989	
	17.5	557	1.5	80	E-VF130	90L4	11210	101
	14.0	655	1.1	100			12076	
	19.3	542	2.6	72.6	PC090+E-VF130	90L4	10853	107
	14.5	693	1.9	96.8			11945	
	11.6	830	1.5	121			12868	
	9.6	936	1.1	145.2			13500	
	7.2	1149	0.8	193.6			13500	
1.8	9.3	915	1.9	300	E-VF063/130	90S2	13500	110
	7.0	1166	1.4	400			13500	
	5.6	1389	1.1	500			13500	
	4.7	1789	1.0	300	E-VF063/130	90L4	13500	110
	3.5	2279	0.7	400			13500	
	9.3	1026	2.3	150	E-VF063/150	90L4	18000	111
	7.0	1317	1.8	200			18000	
	5.6	1602	1.3	250			18000	
	4.7	1860	1.3	300			18000	
	3.5	2208	1.2	400			18000	
	2.8	2582	0.9	500			18000	
	2.3	3057	0.9	600			18000	
	186.7	83	1.5	7.5	E-VF063	90LL4	2359	92-93
	140.0	109	1.2	10			2597	
	93.3	156	0.9	15			2973	
	186.7	84	2.2	7.5	E-VF075	90LL4	2785	94-95
	140.0	110	1.8	10			3065	
	93.3	160	1.2	15			3509	
	70.0	206	1.0	20			3862	
	56.0	251	0.8	25			4160	
	46.7	286	0.8	30			4421	
	70.0	211	1.7	20	E-VF090	90LL4	4273	96-97
	56.0	257	1.3	25			4603	
	46.7	294	1.4	30			4891	
	35.0	377	1.0	40			5383	
	28.0	452	0.8	50			5799	

	N1=1400
	N1=2800
	N1=900



E-VF

P1 (KW)	n2 (1/min)	M2 (Nm)	f.s.	i	型号 Size		Fr2 (N)	
1.8	56.0	264	2.2	25	E-VF105	90LL4	5816	98-99
	35.0	392	1.6	40			6803	
	28.0	471	1.3	50			7328	
	23.3	542	1.0	60			7787	
	19.3	656	1.3	72.6	PC090+E-VF105	90LL4	8298	106
	14.5	850	1.0	96.8			9133	
	11.6	1002	0.8	121			9838	
	56.0	264	2.6	25	E-VF110	90LL4	5816	100
	35.0	392	1.8	40			6803	
	28.0	471	1.4	50			7328	
	23.3	542	1.1	60			7787	
	19.3	656	1.5	72.6	PC090+E-VF110	90LL4	8298	106
	14.5	850	1.1	96.8			9133	
	11.6	1002	0.9	121			9838	
	17.5	683	1.2	80	E-VF130	90LL4	11210	101
	14.0	803	0.9	100			12076	
	19.3	665	2.1	72.6	PC090+E-VF130	90LL4	10853	107
	14.5	850	1.5	96.8			11945	
	11.6	1018	1.2	121			12868	
	9.6	1148	0.9	145.2			13500	
	9.3	1259	1.9	150	E-VF063/150	90LL4	18000	111
	7.0	1616	1.4	200			18000	
	5.6	1966	1.0	250			18000	
	4.7	2281	1.0	300			18000	
	3.5	2708	1.0	400			18000	
	2.8	3167	0.7	500			18000	
2.2	373.3	51	1.8	7.5	E-VF063	90L2	1873	
	280.0	67	1.5	10			2061	
	186.7	97	1.1	15			2359	
	186.7	100	1.8	7.5	E-VF075	100LA4	2785	94-95
	140.0	132	1.5	10			3065	
	93.3	191	1.0	15			3509	
	373.3	51	2.5	7.5	E-VF075	90L2	2210	94-95
	280.0	68	2.1	10			2433	
	186.7	98	1.5	15			2785	
	140.0	128	1.3	20			3065	
	112.0	156	1.0	25			3302	
	93.3	180	0.9	30			3509	
	186.7	101	2.9	7.5	E-VF090	100LA4	3081	96-97
	140.0	134	2.3	10			3391	
	93.3	194	1.9	15			3882	
	70.0	252	1.4	20			4273	
	56.0	308	1.1	25			4603	
	46.7	351	1.2	30			4891	
	120.0	156	2.2	7.5	E-VF090	112M6	3570	96-97
	90.0	203	1.8	10			3929	
	60.0	294	1.4	15			4498	
	45.0	378	1.0	20			4951	

	N1=1400
	N1=2800
	N1=900



P1 (KW)	n2 (1/min)	M2 (Nm)	f.s.	i	型号 Size		Fr2 (N)	
2.2	140.0	131	2.0	20	E-VF090	90L2	3391	96-97
	112.0	159	1.6	25			3653	
	93.3	185	1.7	30			3882	
	70.0	237	1.2	40			4273	
	56.0	285	0.9	50			4603	
	70.0	255	2.2	20	E-VF105	100LA4	5399	98-99
	56.0	315	1.9	25			5816	
	46.7	356	1.8	30			6181	
	35.0	468	1.3	40			6803	
	28.0	563	1.1	50			7328	
	23.3	648	0.9	60			7787	
	90.0	205	3.0	10	E-VF105	112M6	4965	98-99
	60.0	298	2.2	15			5684	
	45.0	388	1.6	20			6256	
	36.0	473	1.4	25			6739	
	30.0	532	1.4	30			7161	
	112.0	163	2.7	25	E-VF105	90L2	4616	98-99
	93.3	187	2.6	30			4905	
	70.0	246	1.9	40			5399	
	56.0	296	1.5	50			5816	
	46.7	347	1.2	60			6181	
	38.6	398	1.8	72.6	PC090+E-VF105	90L2	6586	106
	28.9	516	1.3	96.8			7249	
	23.1	617	1.1	121			7809	
	70.0	255	2.5	20	E-VF110	100LA4	5399	100
	56.0	315	2.2	25			5816	
	46.7	356	2.0	30			6181	
	35.0	468	1.5	40			6803	
	28.0	563	1.2	50			7328	
	23.3	648	1.0	60			7787	
	90.0	205	3.5	10	E-VF110	112M6	4965	100
	60.0	298	2.6	15			5684	
	45.0	388	1.9	20			6256	
	36.0	473	1.6	25			6739	
	30.0	532	1.6	30			7161	
	112.0	163	3.1	25	E-VF110	90L2	4616	100
	93.3	187	3.0	30			4905	
	70.0	246	2.1	40			5399	
	56.0	296	1.7	50			5816	
	46.7	347	1.4	60			6181	
	38.6	398	2.1	72.6	PC090+E-VF110	90L2	6586	106
	28.9	516	1.5	96.8			7249	
	23.1	617	1.2	121			7809	
	35.0	468	2.2	40	E-VF130	100LA4	8897	101
	28.0	563	1.7	50			9584	
	23.3	648	1.4	60			10185	
	17.5	816	1.0	80			11210	
	36.0	479	2.2	25	E-VF130	112M6	8814	
	30.0	546	2.1	30			9366	101
	22.5	700	1.6	40			10309	
	18.0	840	1.2	50			11105	
	15.0	966	1.0	60			11801	

	N1=1400
	N1=2800
	N1=900



P1 (KW)	n2 (1/min)	M2 (Nm)	f.s.	i	型号 Size		Fr2 (N)	
2.2	35.0	438	1.3	80	E-VF130	90L2	8897	101
	28.0	525	1.0	100			9584	
	38.6	409	2.9	72.6	PC090+E-VF130	90L2	8614	107
	28.9	545	2.0	96.8			9481	
	23.1	654	1.6	121			10213	
	19.3	752	1.3	145.2			10853	
	28.0	570	2.5	50	E-VF150	100LA4	13103	102
	23.3	657	1.9	60			13924	
	17.5	816	1.4	80			15325	
	14.0	960	1.0	100			16508	
3	373.3	70	1.9	7.5	E-VF075	100LA2	2210	94-95
	280.0	92	1.6	10			2433	
	186.7	137	1.4	7.5	E-VF075	100LB4	2785	94-95
	140.0	180	1.1	10			3065	
	93.3	261	0.8	15			3509	
	373.3	71	3.0	7.5	E-VF090	100LA2	2446	96-97
	280.0	92	2.6	10			2692	
	186.7	138	2.1	7.5	E-VF090	100LB4	3081	96-97
	140.0	182	1.7	10			3391	
	93.3	264	1.4	15			3882	
	70.0	344	1.0	20			4273	
	56.0	420	0.8	25			4603	
	46.7	479	0.9	30			4891	
	93.3	264	2.2	15	E-VF105	100LB4	4905	98-99
	70.0	348	1.6	20			5399	
	56.0	430	1.4	25			5816	
	46.7	485	1.3	30			6181	
	35.0	638	1.0	40			6803	
	28.0	767	0.8	50			7328	
	120.0	212	2.7	7.5	E-VF105	132S6	4511	98-99
	90.0	280	2.2	10			4965	
	60.0	406	1.6	15			5684	
	45.0	528	1.2	20			6256	
	93.3	264	2.5	15	E-VF110	100LB4	4905	100
	70.0	348	1.9	20			5399	
	56.0	430	1.6	25			5816	
	46.7	485	1.5	30			6181	
	35.0	638	1.1	40			6803	
	28.0	767	0.9	50			7328	
	120.0	212	3.1	7.5	E-VF110	132S6	4511	100
	90.0	280	2.5	10			4965	
	60.0	406	1.9	15			5684	
	45.0	528	1.4	20			6256	
	56.0	430	2.2	25	E-VF130	100LB4	7607	101
	46.7	491	2.1	30			8084	
	35.0	638	1.6	40			8897	
	28.0	767	1.3	50			9584	
	23.3	884	1.0	60			10185	
	17.5	1113	0.8	80			11210	

	N1=1400
	N1=2800
	N1=900



P1 (KW)	n2 (1/min)	M2 (Nm)	f.s.	i	型号 Size		Fr2 (N)	
3	90.0	280	3.4	10	E-VF130	132S6	6494	101
	60.0	406	2.6	15			7434	
	45.0	535	1.9	20			8182	
	36.0	653	1.6	25			8814	
	30.0	745	1.6	30			9366	
	22.5	955	1.2	40			10309	
	28.0	778	1.8	50	E-VF150	100LB4	13103	102
	23.3	896	1.4	60			13924	
	17.5	1113	1.0	80			15325	
	14.0	1310	0.8	100			16508	
4	373.3	93	1.4	7.5	E-VF075	112M2	2210	94-95
	280.0	123	1.2	10			2433	
	186.7	182	1.0	7.5	E-VF075	112M4	2785	94-95
	140.0	240	0.8	10			3065	
	373.3	94	2.2	7.5	E-VF090	112M2	2446	96-97
	280.0	123	1.9	10			2692	
	186.7	184	1.6	7.5	E-VF090	112M4	3081	96-97
	140.0	243	1.3	10			3391	
	93.3	352	1.0	15			3882	
	70.0	458	0.8	20			4273	
	140.0	243	2.1	10	E-VF105	112M4	4285	98-99
	93.3	352	1.6	15			4905	
	70.0	464	1.2	20			5399	
	56.0	573	1.0	25			5816	
	46.7	647	1.0	30			6181	
	120.0	283	2.0	7.5	E-VF105	132M6	4511	98-99
	90.0	374	1.7	10			4965	
	60.0	541	1.2	15			5684	
	140.0	243	2.5	10	E-VF110	112M4	4285	100
	93.3	352	1.9	15			4905	
	70.0	464	1.4	20			5399	
	56.0	573	1.2	25			5816	
	46.7	647	1.1	30			6181	
	120.0	283	2.3	7.5	E-VF110	132M6	4511	100
	90.0	374	1.9	10			4965	
	60.0	541	1.4	15			5684	
	56.0	573	1.6	25	E-VF130	112M4	7607	101
	46.7	655	1.6	30			8084	
	35.0	851	1.2	40			8897	
	28.0	1023	1.0	50			9584	
	23.3	1179	0.8	60			10185	
	120.0	287	3.1	7.5	E-VF130	132M6	5901	101
	90.0	374	2.6	10			6494	
	60.0	541	2.0	15			7434	
	45.0	713	1.5	20			8182	
	36.0	870	1.2	25			8814	
	28.0	1037	1.4	50	E-VF150	112M4	13103	102
	23.3	1195	1.1	60			13924	
	17.5	1484	0.8	80			15325	

	N1=1400
	N1=2800
	N1=900



P1 (KW)	n2 (1/min)	M2 (Nm)	f.s.	i	型号 Size		Fr2 (N)	
4.8	186.7	221	1.3	7.5	E-VF090	112MS4	3081	96-97
	140.0	291	1.1	10			3391	
	93.3	422	0.9	15			3882	
	186.7	221	2.2	7.5	E-VF105	112MS4	3893	98-99
	140.0	291	1.8	10			4285	
	93.3	422	1.3	15			4905	
	70.0	557	1.0	20			5399	
	56.0	688	0.9	25			5816	
	186.7	221	2.5	7.5	E-VF110	112MS4	3893	100
	140.0	291	2.1	10			4285	
	93.3	422	1.6	15			4905	
	70.0	557	1.2	20			5399	
	56.0	688	1.0	25			5816	
	56.0	688	1.4	25	E-VF130	112MS4	7607	101
	46.7	786	1.3	30			8084	
	35.0	1022	1.0	40			8897	
	28.0	1228	0.8	50			9584	
5.5	28.0	1244	1.1	50	E-VF150	112MS4	13103	102
	23.3	1434	0.9	60			13924	
	186.7	253	1.9	7.5	E-VF105	132S4	3893	98-99
	140.0	334	1.6	10			4285	
	93.3	484	1.2	15			4905	
	70.0	638	0.9	20			5399	
	186.7	253	2.2	7.5	E-VF110	132S4	3893	100
	140.0	334	1.8	10			4285	
	93.3	484	1.4	15			4905	
	70.0	638	1.0	20			5399	
	140.0	334	2.5	10	E-VF130	132S4	5605	101
	93.3	490	1.9	15			6416	
	70.0	645	1.4	20			7062	
	56.0	788	1.2	25			7607	
	46.7	900	1.2	30	E-VF150	132S4	8084	102
	35.0	1171	0.9	40			8897	
	70.0	645	2.0	20			9654	
	56.0	788	1.5	25			10400	
	46.7	934	1.3	30			11051	
	35.0	1171	1.3	40	E-VF110	132M6	12163	100
	28.0	1426	1.0	50			13103	
	23.3	1643	0.8	60			13924	
7.5	186.7	345	1.4	7.5	E-VF105	132L4	3893	98-99
	140.0	455	1.1	10			4285	
	93.3	660	0.9	15			4905	
	186.7	345	1.6	7.5	E-VF110	132L4	3893	100
	140.0	455	1.3	10			4285	
	93.3	660	1.0	15			4905	
	186.7	349	2.1	7.5	E-VF130	132L4	5092	101
	140.0	455	1.8	10			5605	
	93.3	668	1.4	15			6416	
	70.0	880	1.0	20			7062	
	56.0	1074	0.9	25			7607	
	46.7	1228	0.8	30			8084	
	35.0	1596	0.7	40			8897	

	N1=1400
	N1=2800
	N1=900

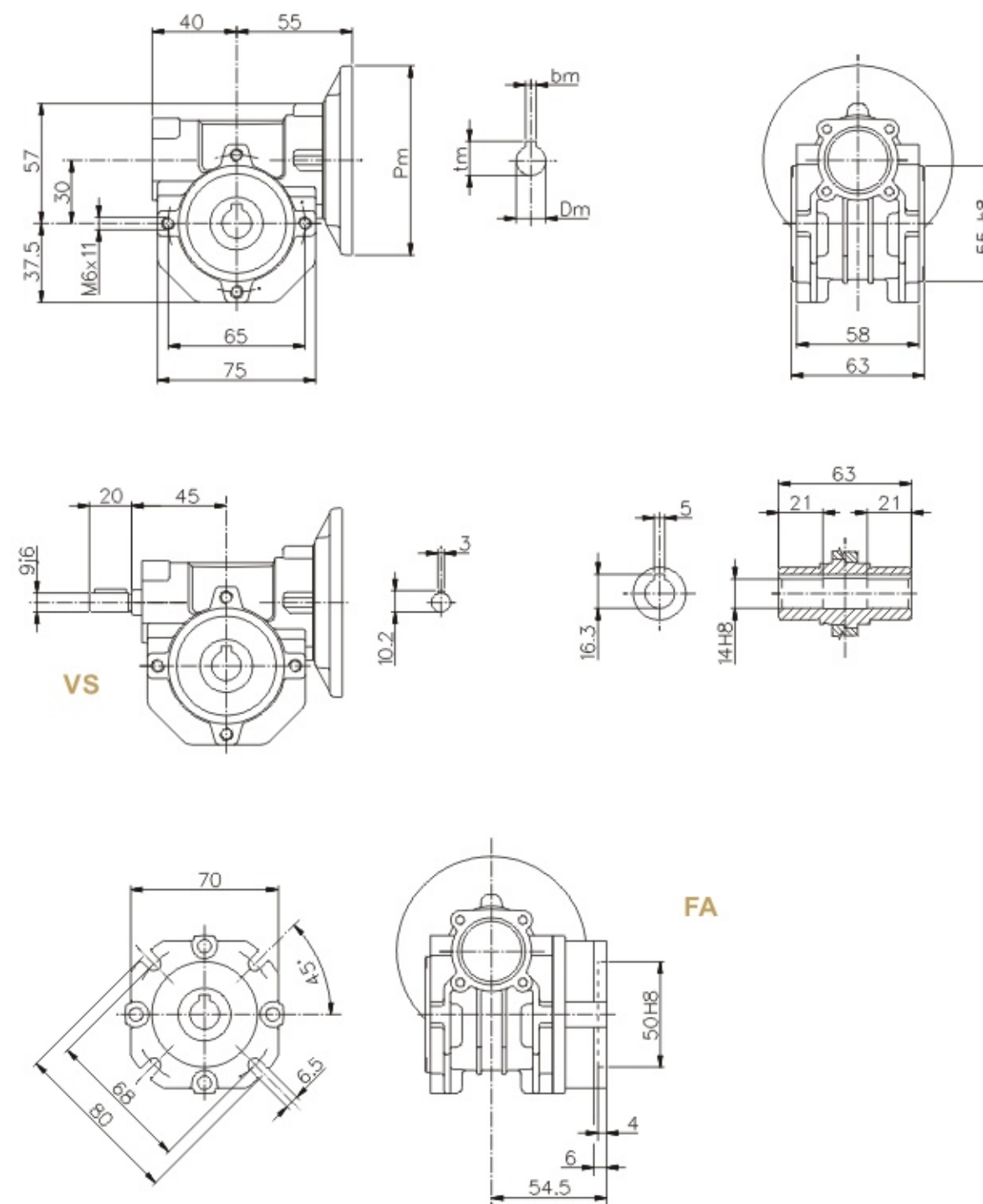


P1 (KW)	n2 (1/min)	M2 (Nm)	f.s.	i	型号 Size	Fr2 (N)	
7.5	70.0	880	1.5	20	E-VF150 132L4	9654	102
	56.0	1074	1.1	25		10400	
	46.7	1274	0.9	30		11051	
	35.0	1596	1.0	40		12163	
9.2	186.7	424	1.3	7.5	E-VF110 132M4	3893	100
	186.7	428	1.8	7.5	E-VF130 132M4	5092	101
	140.0	559	1.5	10		5605	
	93.3	819	1.1	15		6416	
	70.0	1079	0.8	20		7062	
	56.0	1318	0.7	25		7607	
	70.0	1079	1.2	20	E-VF150 132M4	9654	102
	56.0	1318	0.9	25		10400	
11	46.7	1563	0.8	30		11051	
	35.0	1958	0.8	40		12163	
	186.7	512	2.3	7.5	E-VF150 160M4	6962	102
	140.0	675	1.8	10		7663	
	93.3	990	1.3	15		8771	
15	70.0	1291	1.0	20		9654	
	56.0	1576	0.8	25	E-VF150 160L4	6962	102
	140.0	921	1.3	10		7663	
	93.3	1351	0.9	15		8771	
	70.0	1760	0.7	20		9654	

	N1=1400
	N1=2800
	N1=900

E-VF 外形尺寸图表 OUTLINE DIMENSION SHEET FOR E-VF

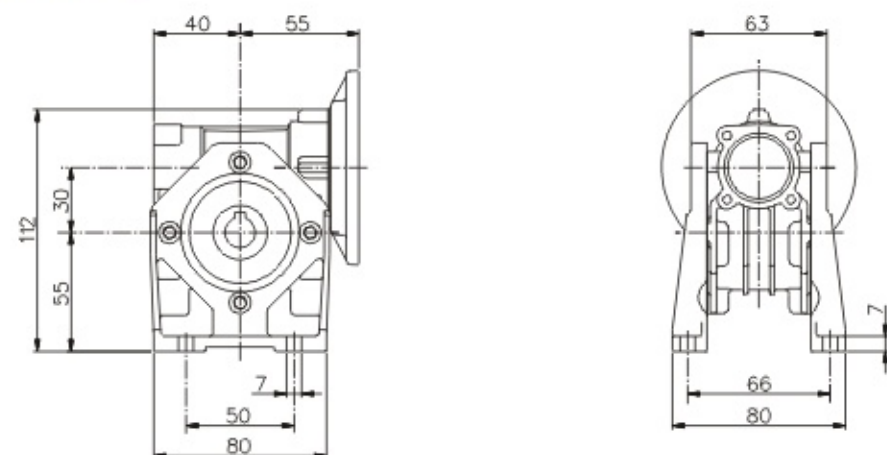
E-VF 030 T



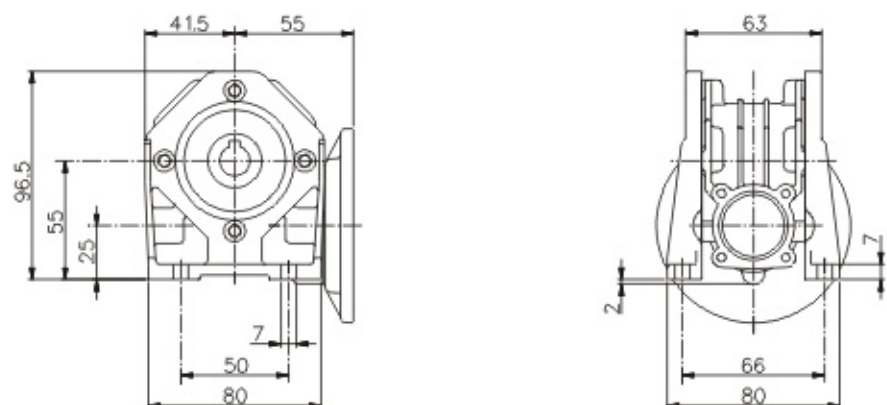
•不带电机的重量-1.2kg
Weight without motor-1.2kg



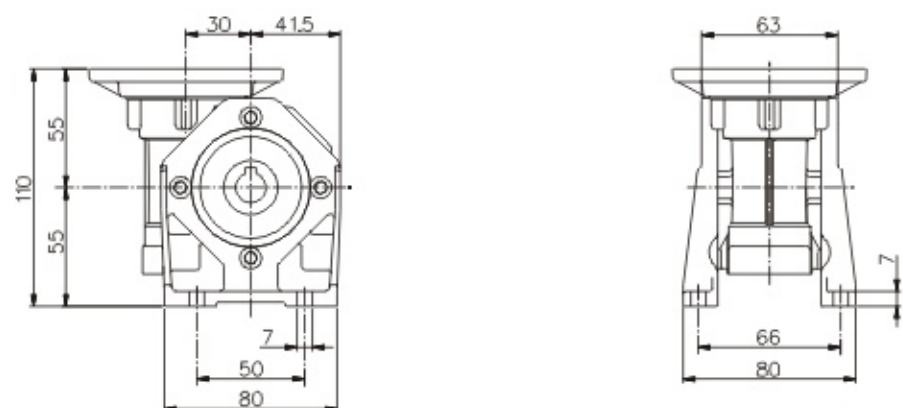
E-VF 030 PA



E-VF 030 PB



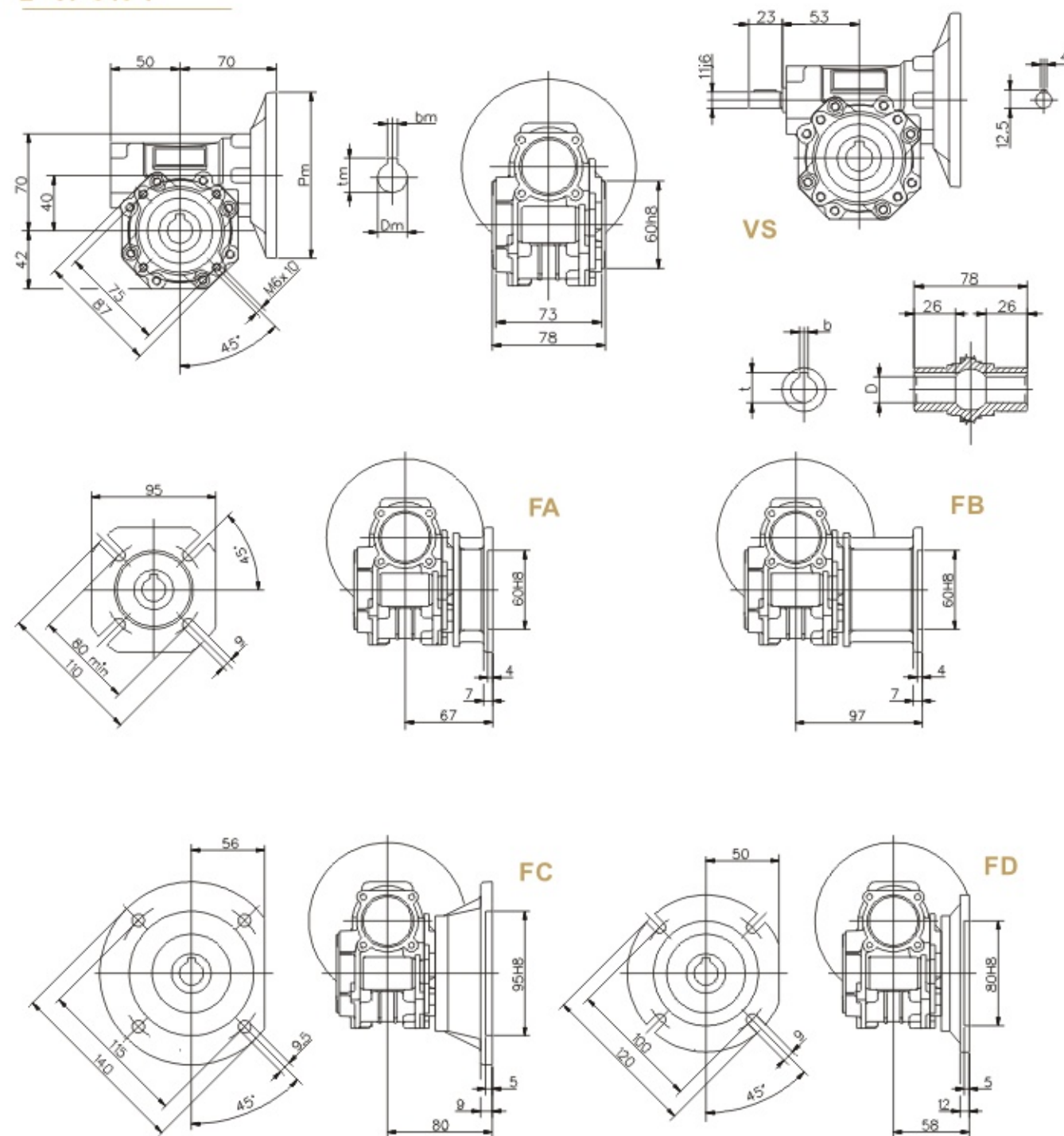
E-VF 030 PV



• 有关电机连接位置的尺寸，请参阅57页的表格。
For the dimensions concerning the motor connection area (Pm, Dm, bm, tm) please refer to the table shown at page 57.



E-VF 040 T

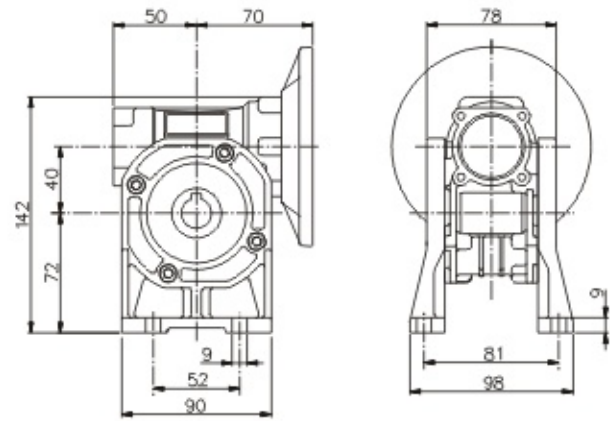


输出/Output		
D H8	b	t
18	6	20,8
(19)	(6)	(21,8)

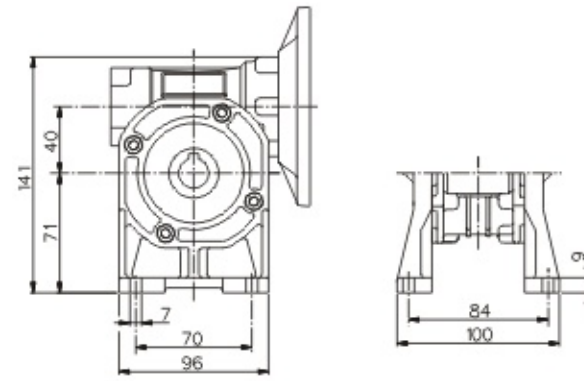
• 按要求，不带电机重量2.3kg
Only on request weight without motor-2.3kg



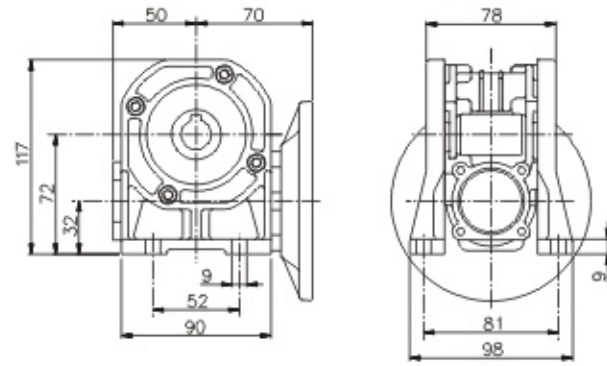
E-VF 040 PA



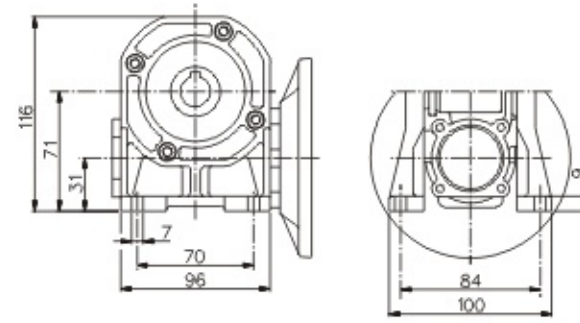
E-VF 040 PAS



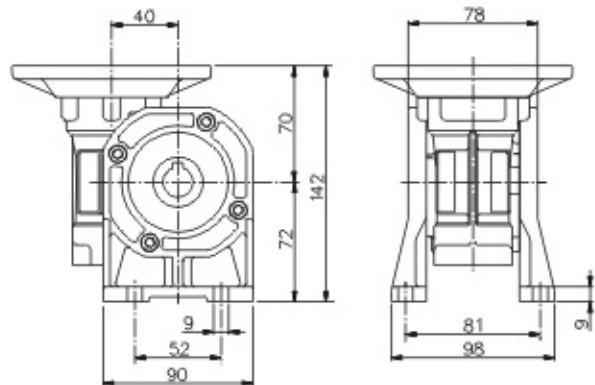
E-VF 040 PB



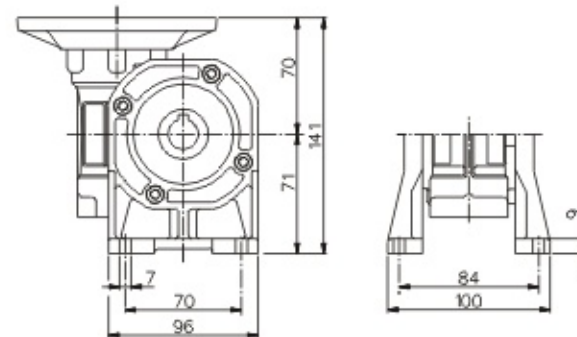
E-VF 040 PBS



E-VF 040 PV

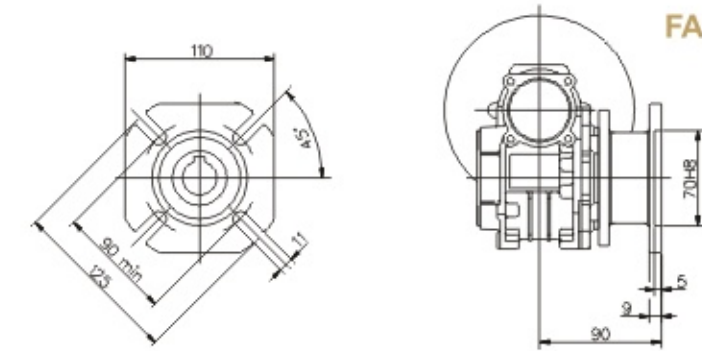
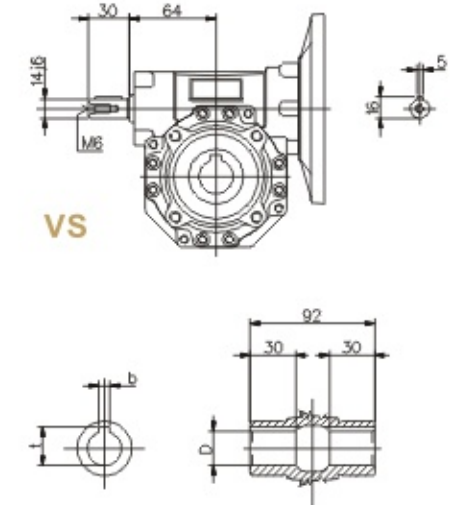
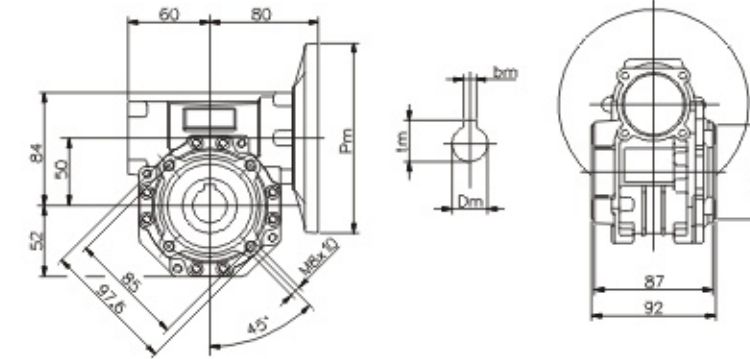


E-VF 040 PVS

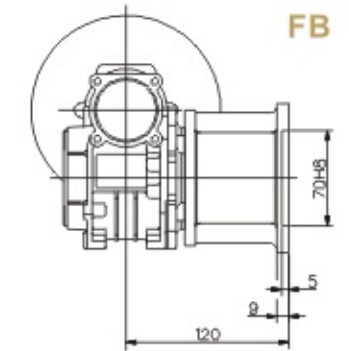


• 有关电机连接位置的尺寸，请参阅57页的表格。
For the dimensions concerning the motor connection area (Pm, Dm, bm, tm) please refer to the table shown at page 57.

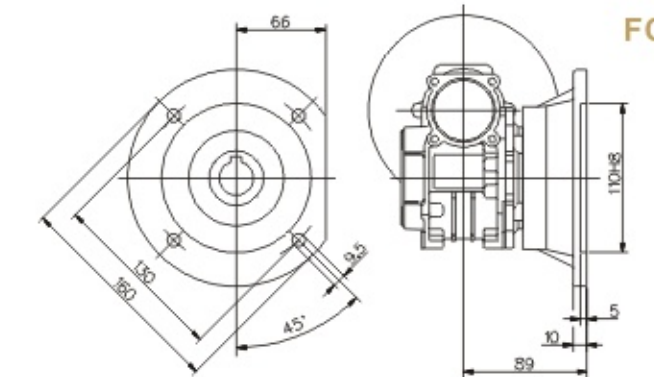
E-VF 050 T



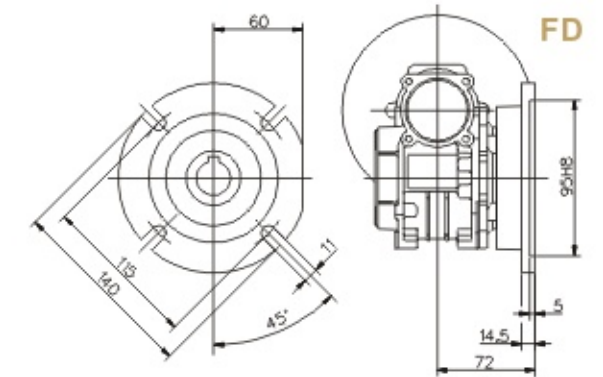
FA



FB



FC



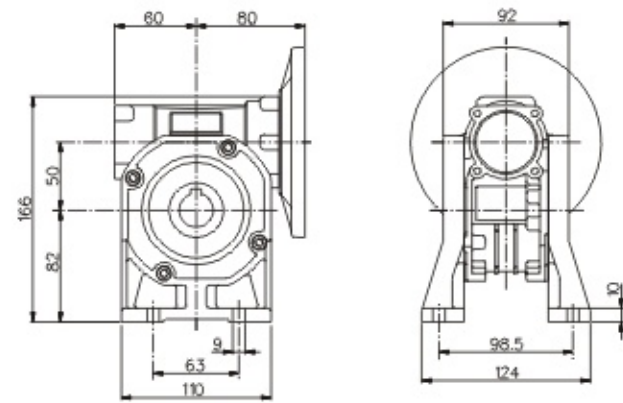
FD

输出/Output		
D H8	b	t
25 (24)	8 (8)	28,3 (27,3)

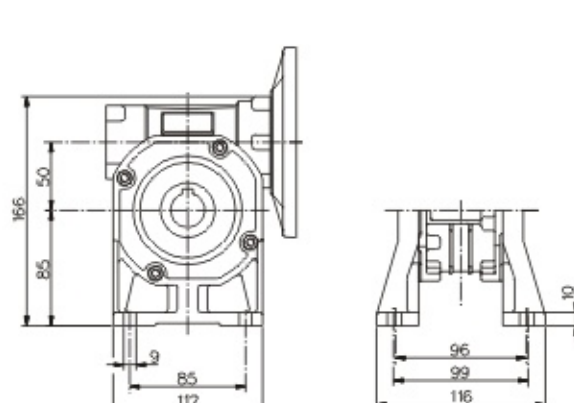
• 按要求，不带电机重量3.5kg
Only on request weight without motor-3.5kg



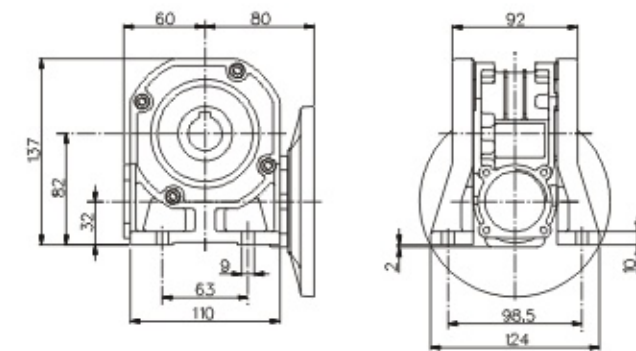
E-VF 050 PA



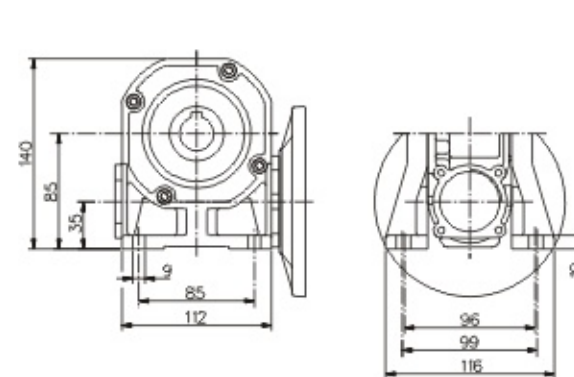
E-VF 050 PAS



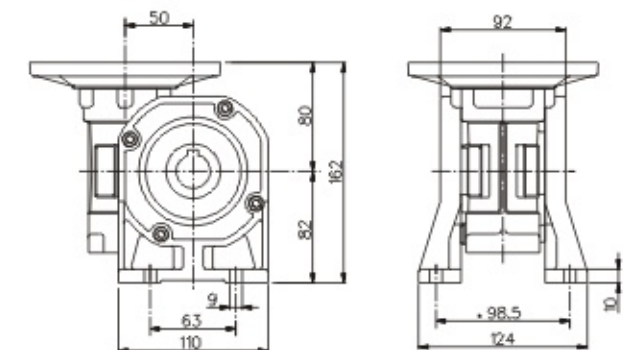
E-VF 050 PB



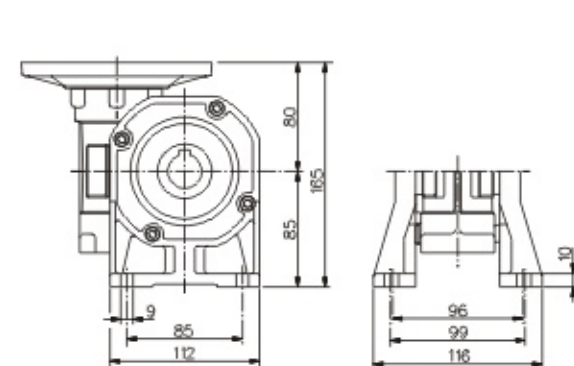
E-VF 050 PBS



E-VF 050 PV

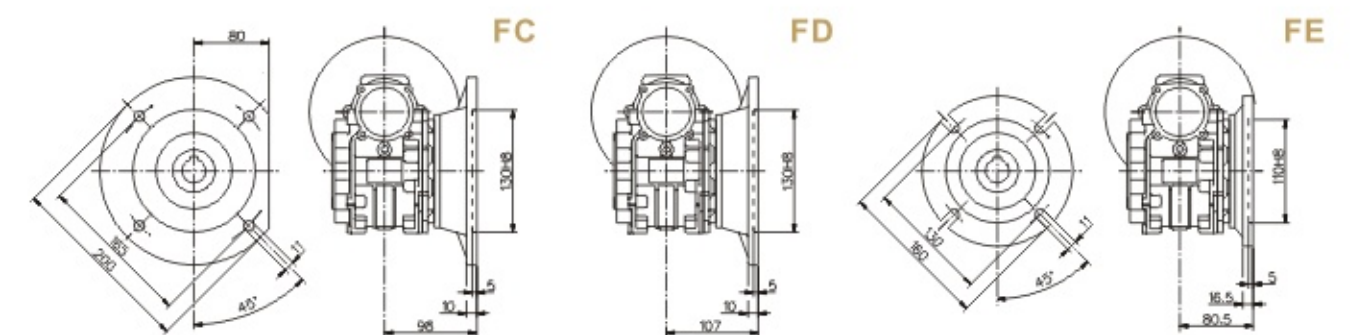
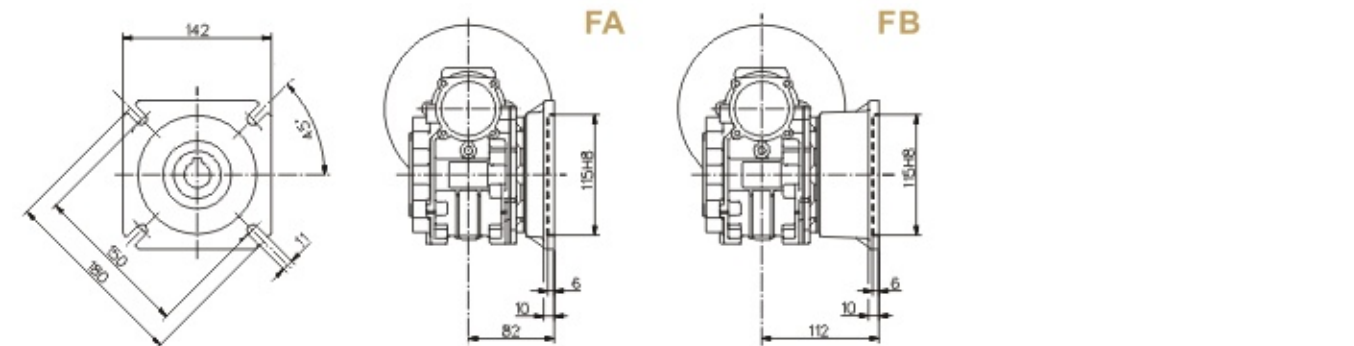
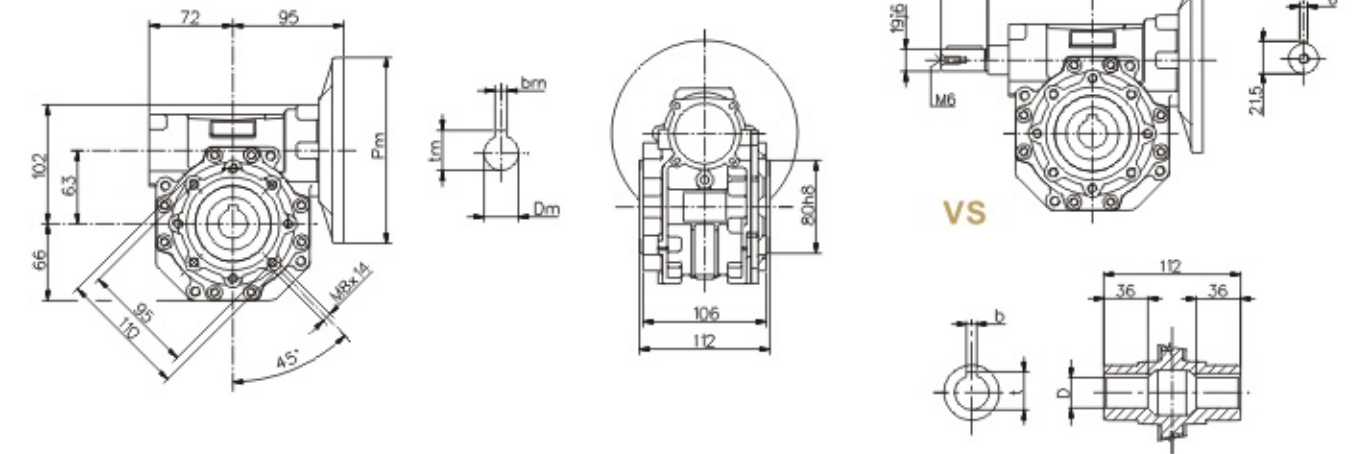


E-VF 050 PVS



• 有关电机连接位置的尺寸，请参阅57页的表格。
For the dimensions concerning the motor connection area (Pm, Dm, bm, tm) please refer to the table shown at page 57.

E-VF 063 T

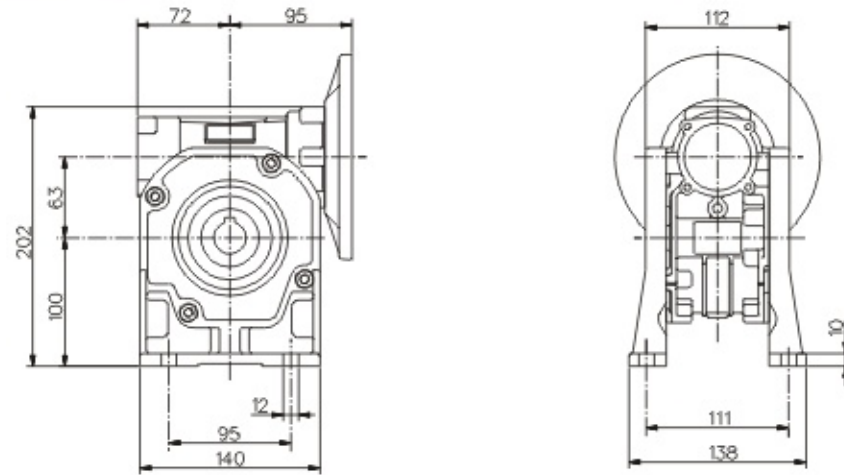


输出/Output		
D H8	b	t
25 (28)	8 (8)	28,3 (31,3)

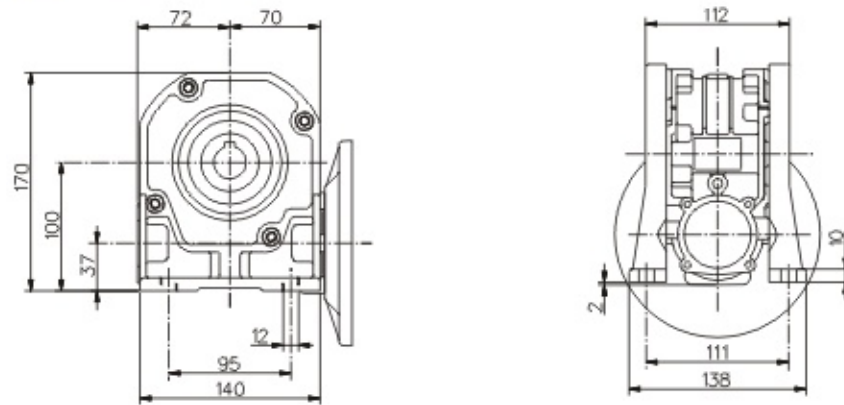
• 按要求，不带电机重量6.2kg
Only on request weight without motor-6.2kg



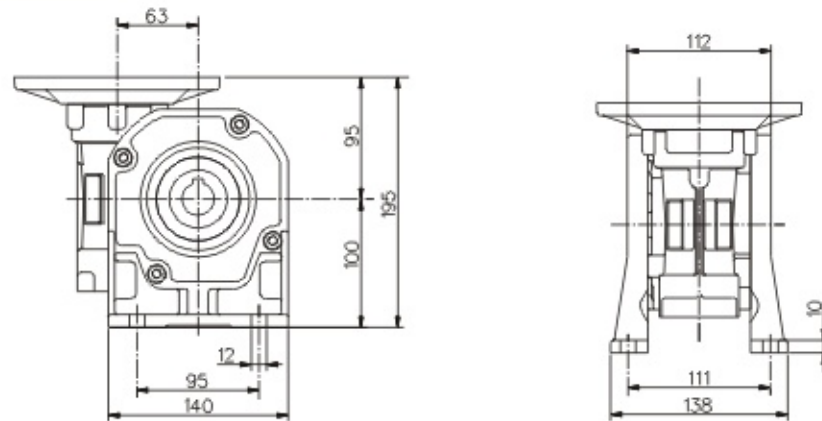
E-VF 063 PA



E-VF 063 PB



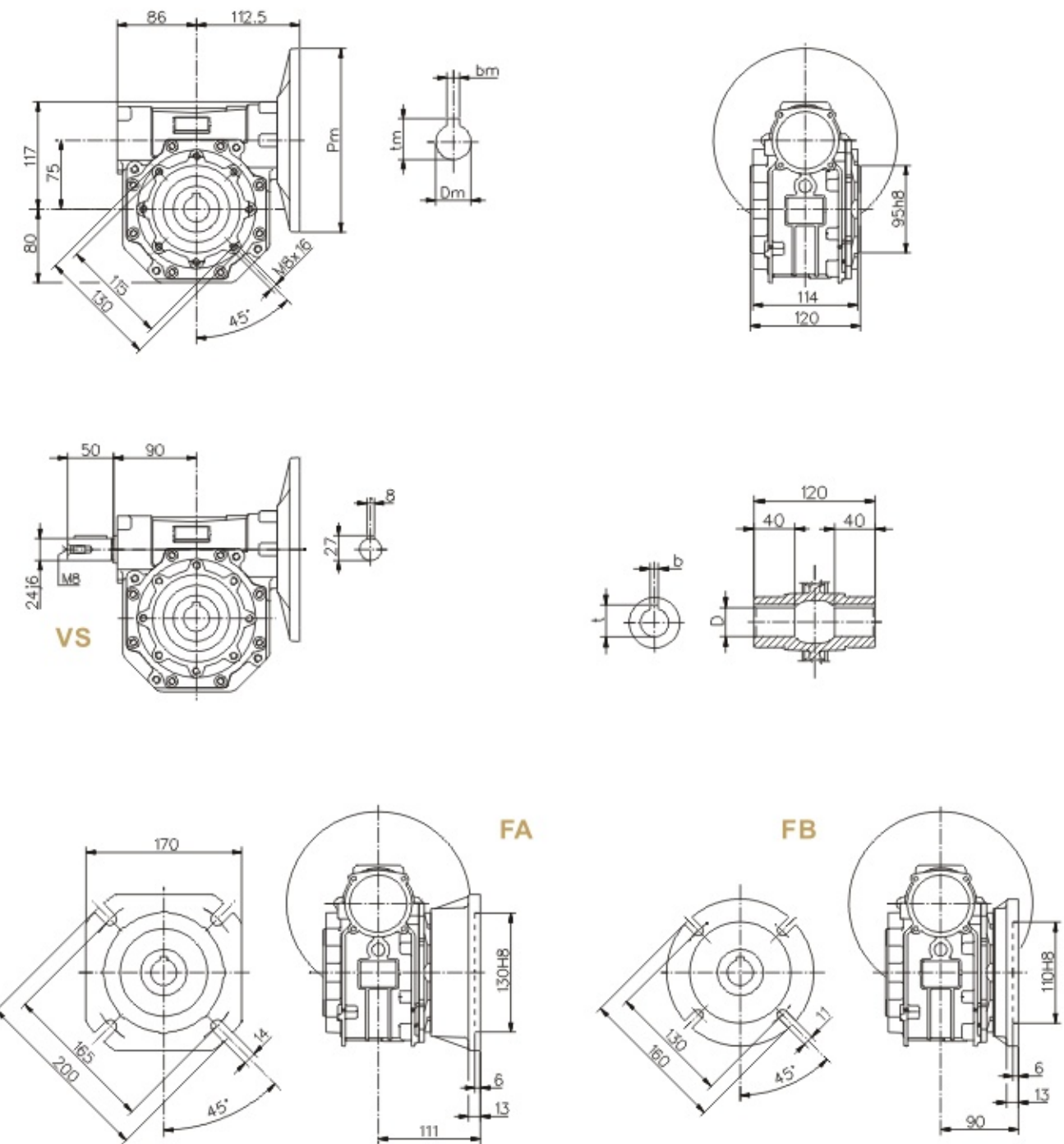
E-VF 063 PV



• 有关电机连接位置的尺寸, 请参阅57页的表格。
For the dimensions concerning the motor connection area (Pm, Dm, bm, tm) please refer to the table shown at page 57.



E-VF 075 T

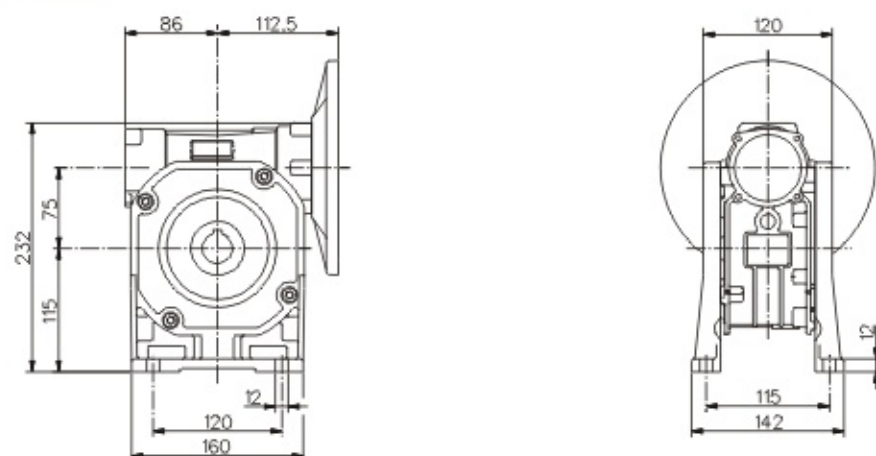


输出/Output		
D H8	b	t
28	8	31,3
(35)	(10)	(38,3)

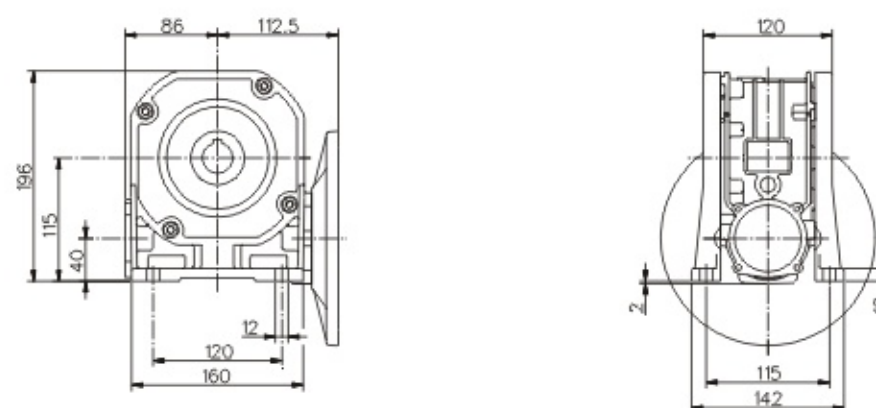
• 按要求, 不带电机重量9kg
Only on request weight without motor-9kg



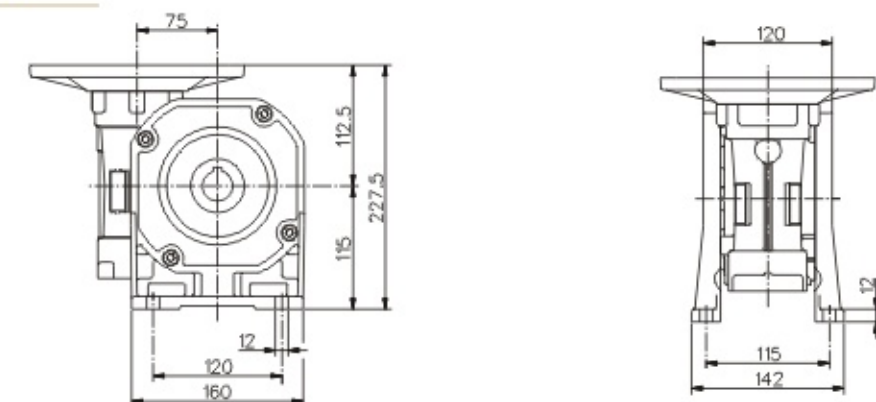
E-VF 075 PA



E-VF 075 PB

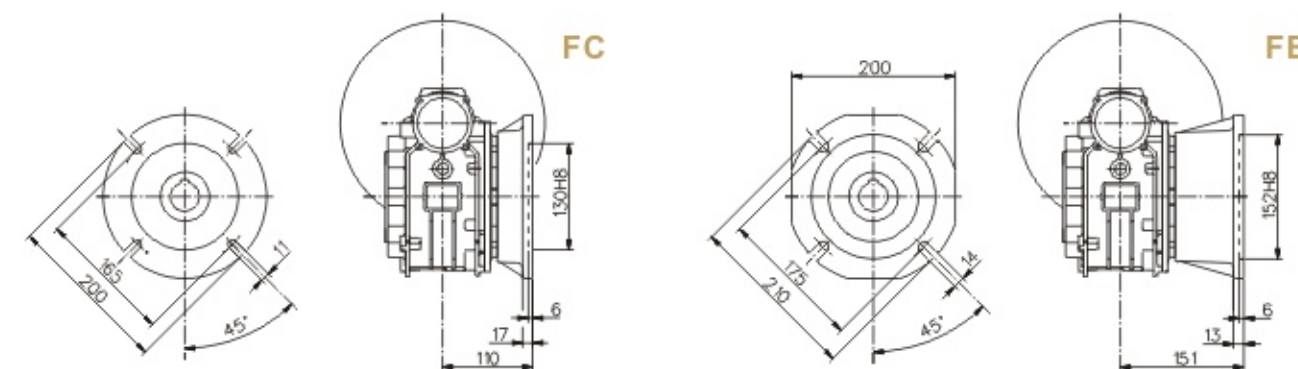
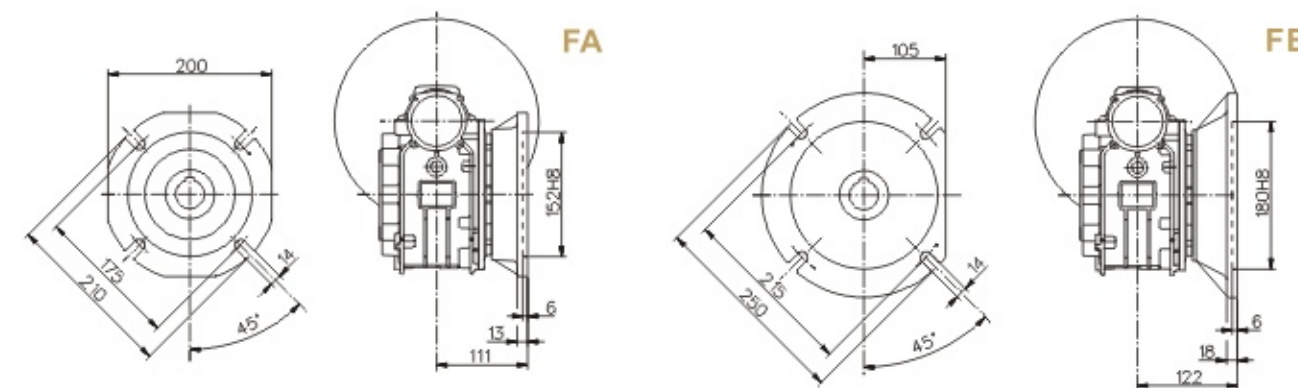
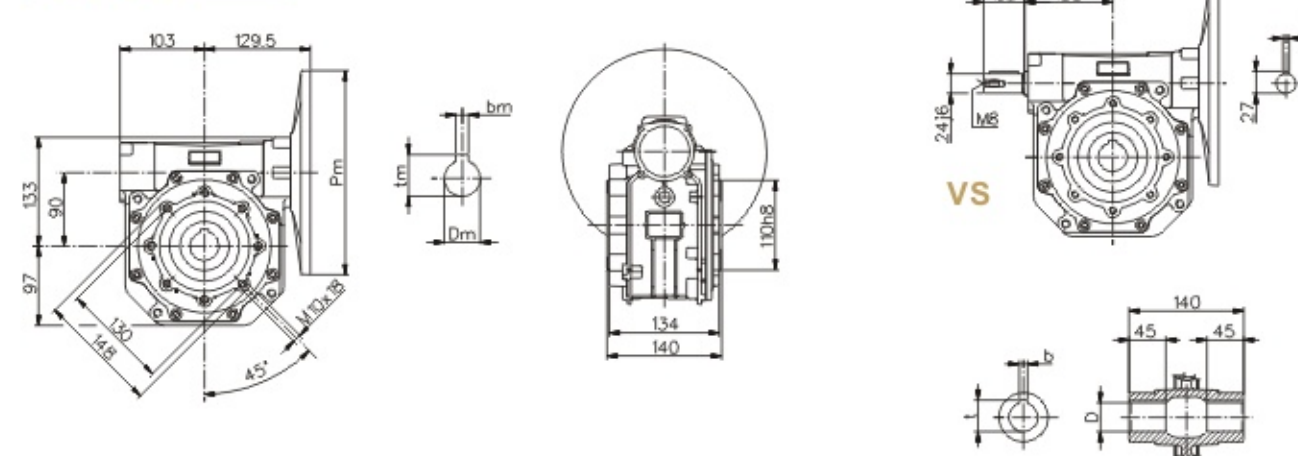


E-VF 075 PV



• 有关电机连接位置的尺寸, 请参阅57页的表格。
For the dimensions concerning the motor connection area (Pm, Dm, bm, tm) please refer to the table shown at page 57.

E-VF090 T

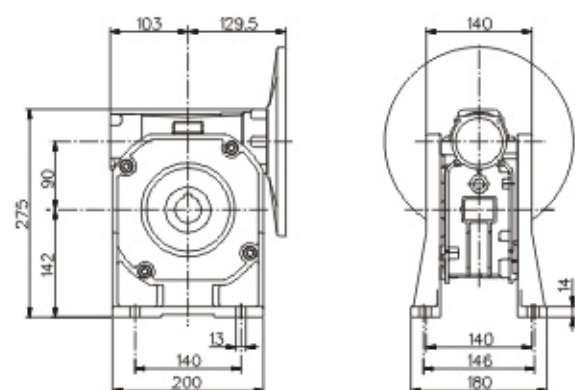


输出/Output		
D H8	b	t
35	10	38,3
(38)	(10)	(41,3)

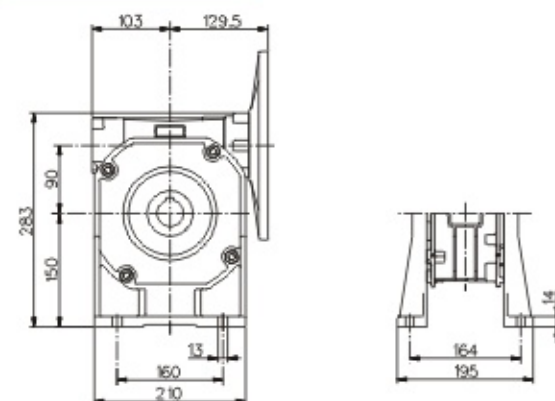
• 按要求, 不带电机重量13kg
Only on request weight without motor-13kg



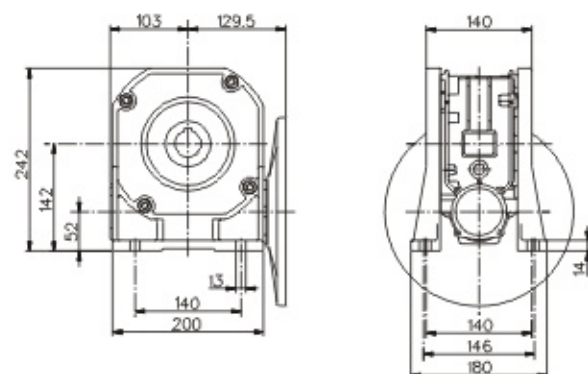
E-VF 090 PA



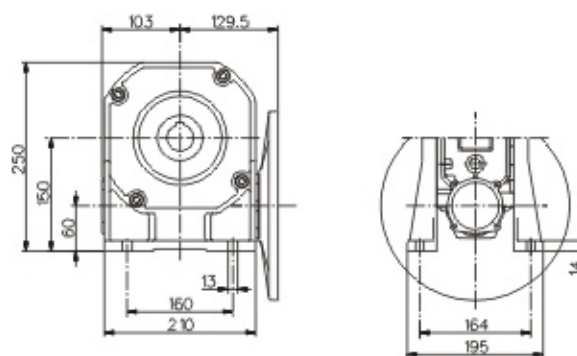
E-VF 090 PAS



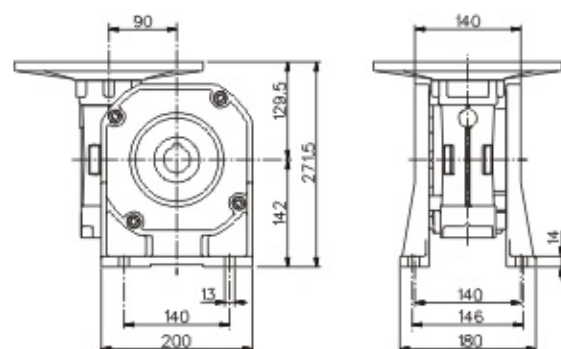
E-VF 090 PB



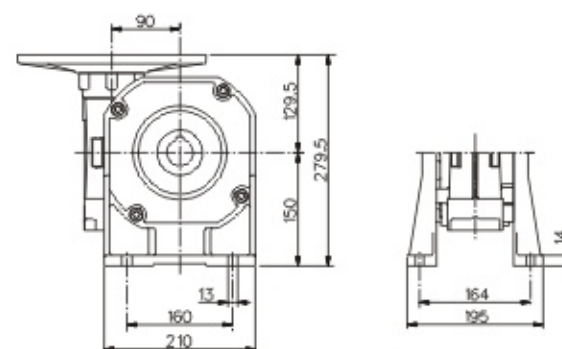
E-VF 090 PBS



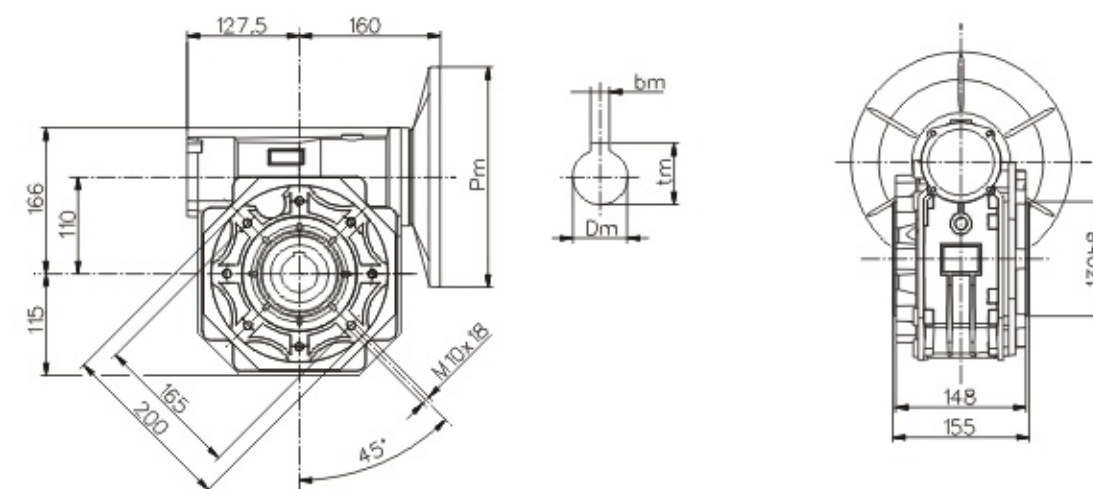
E-VF 090 PV



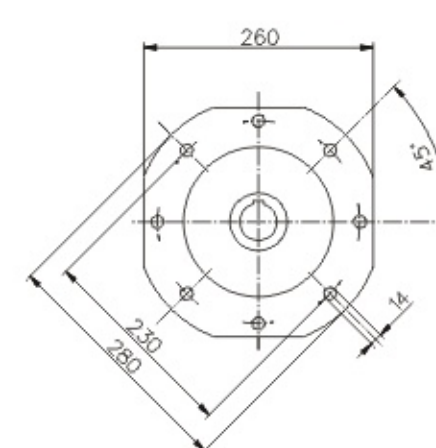
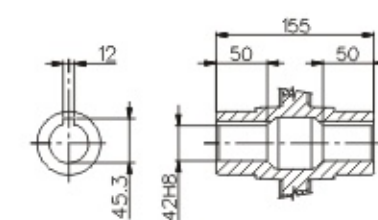
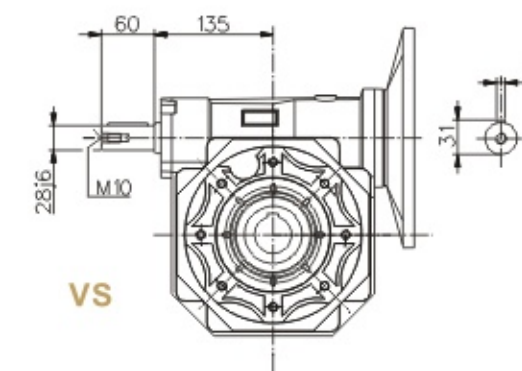
E-VF 090 PVS



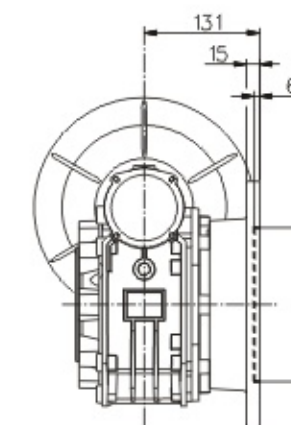
E-VF105 T



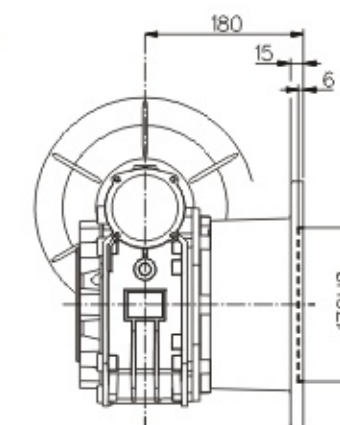
VS



FA



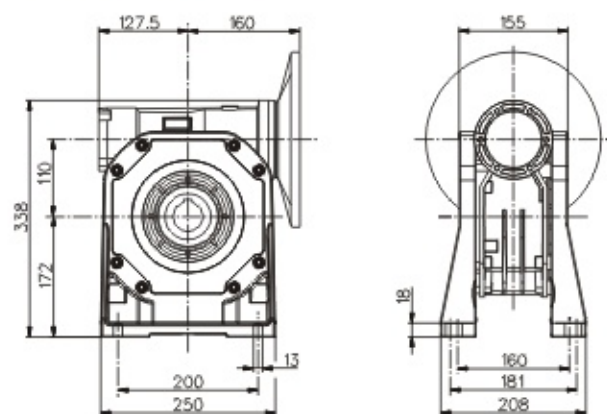
FB



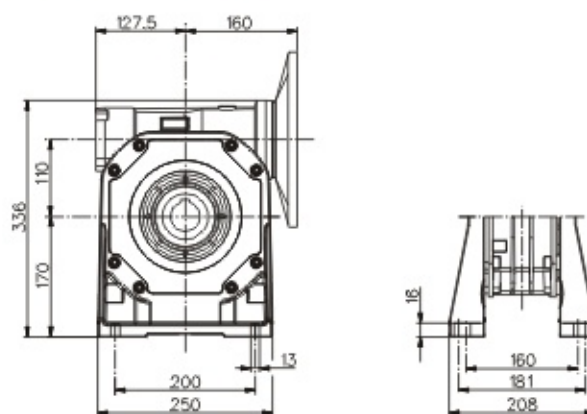
• 有关电机连接位置的尺寸，请参阅57页的表格。
For the dimensions concerning the motor connection area (Pm, Dm, bm, tm) please refer to the table shown at page 57.



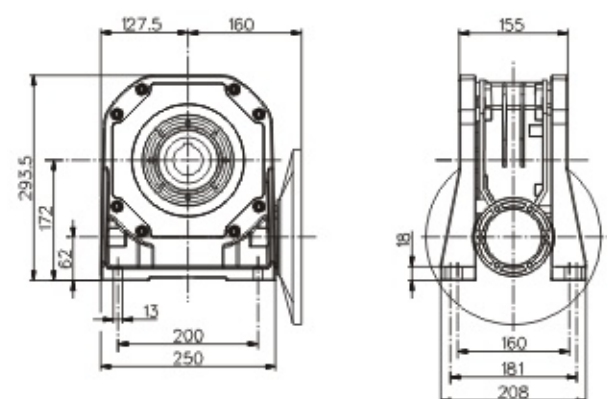
E-VF 105 PA



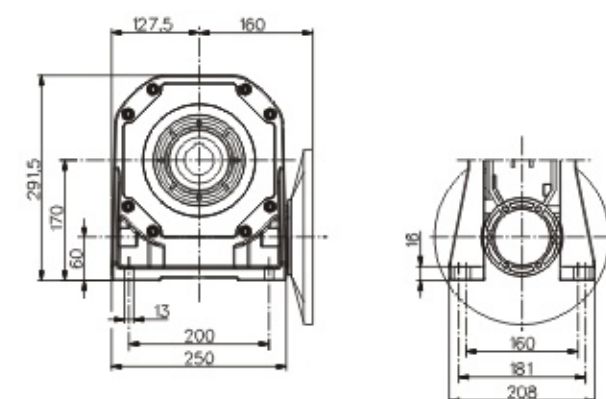
E-VF 105 PAS



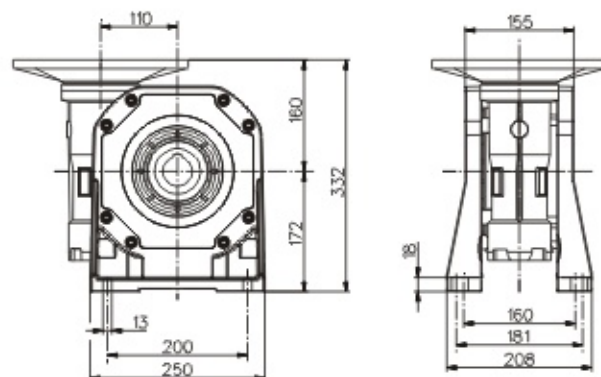
E-VF 105 PB



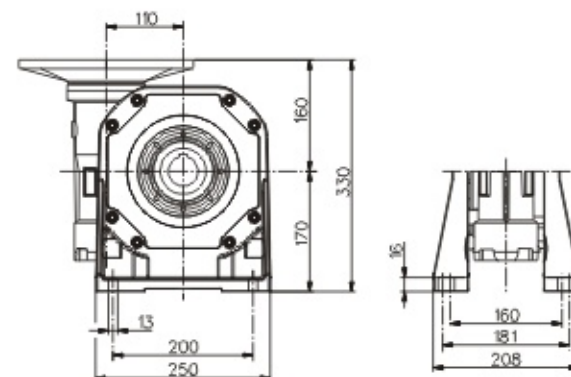
E-VF 105 PBS



E-VF 105 PV

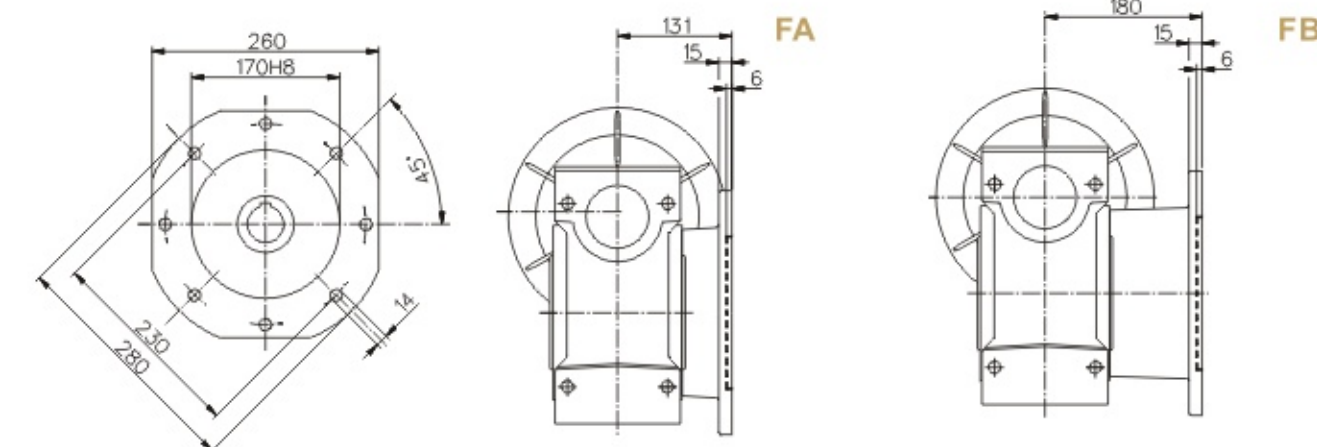
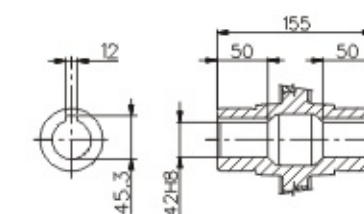
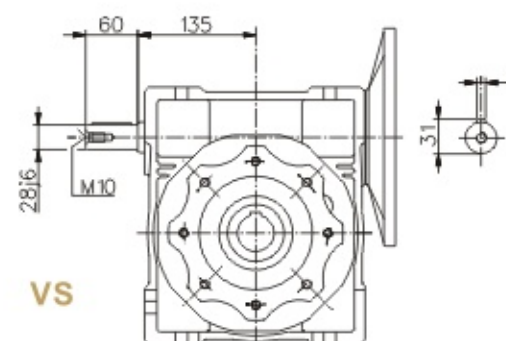
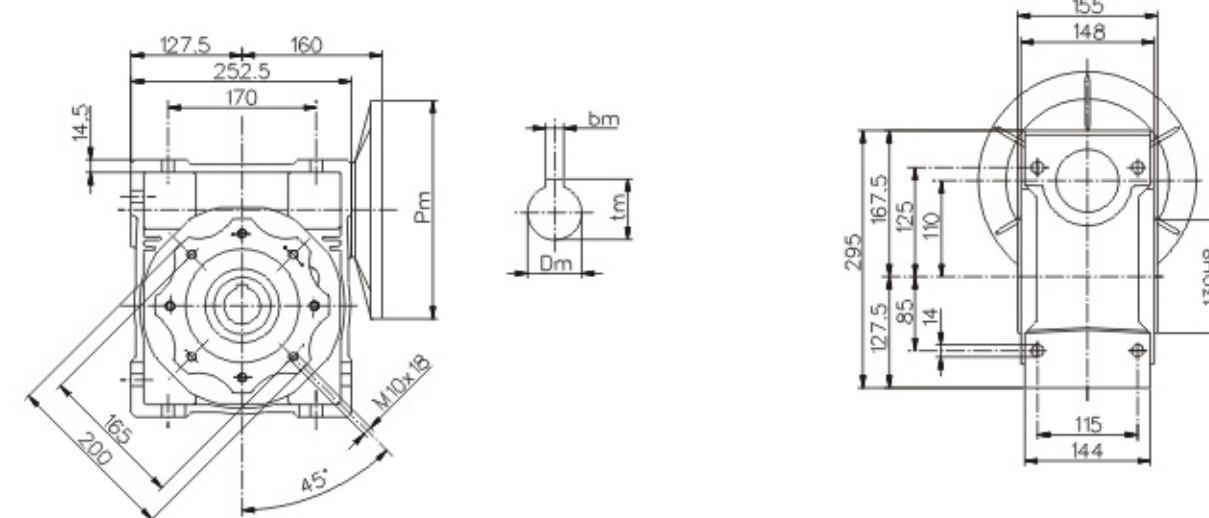


E-VF 105 PVS



• 有关电机连接位置的尺寸, 请参阅57页的表格。
For the dimensions concerning the motor connection area (Pm, Dm, bm, tm) please refer to the table shown at page 57.

E-VF 110

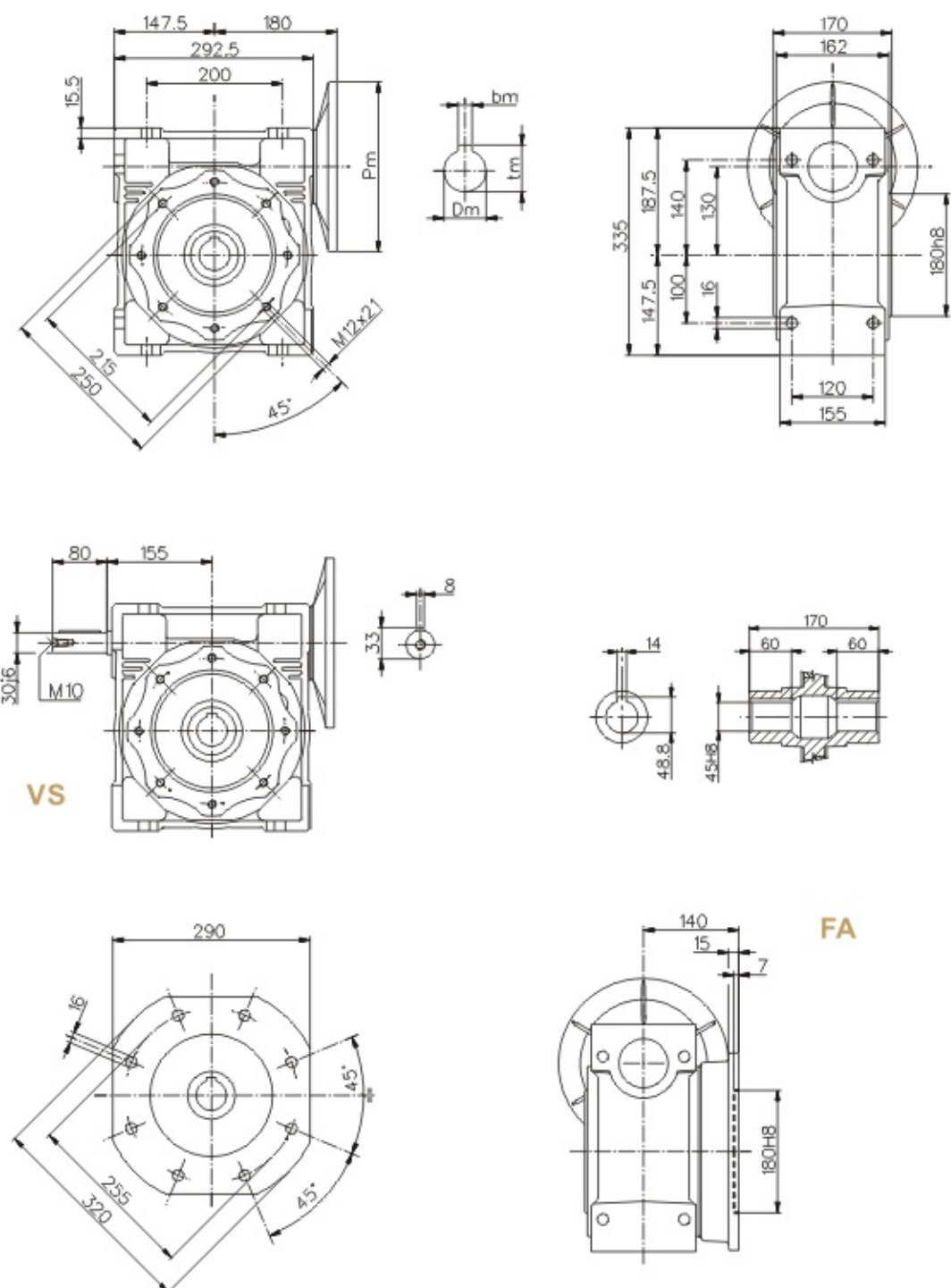


• 不带电机重量35kg
weight without motor-35kg

• 有关电机连接位置的尺寸, 请参阅57页的表格。
For the dimensions concerning the motor connection area (Pm, Dm, bm, tm) please refer to the table shown at page 57.



E-VF 130

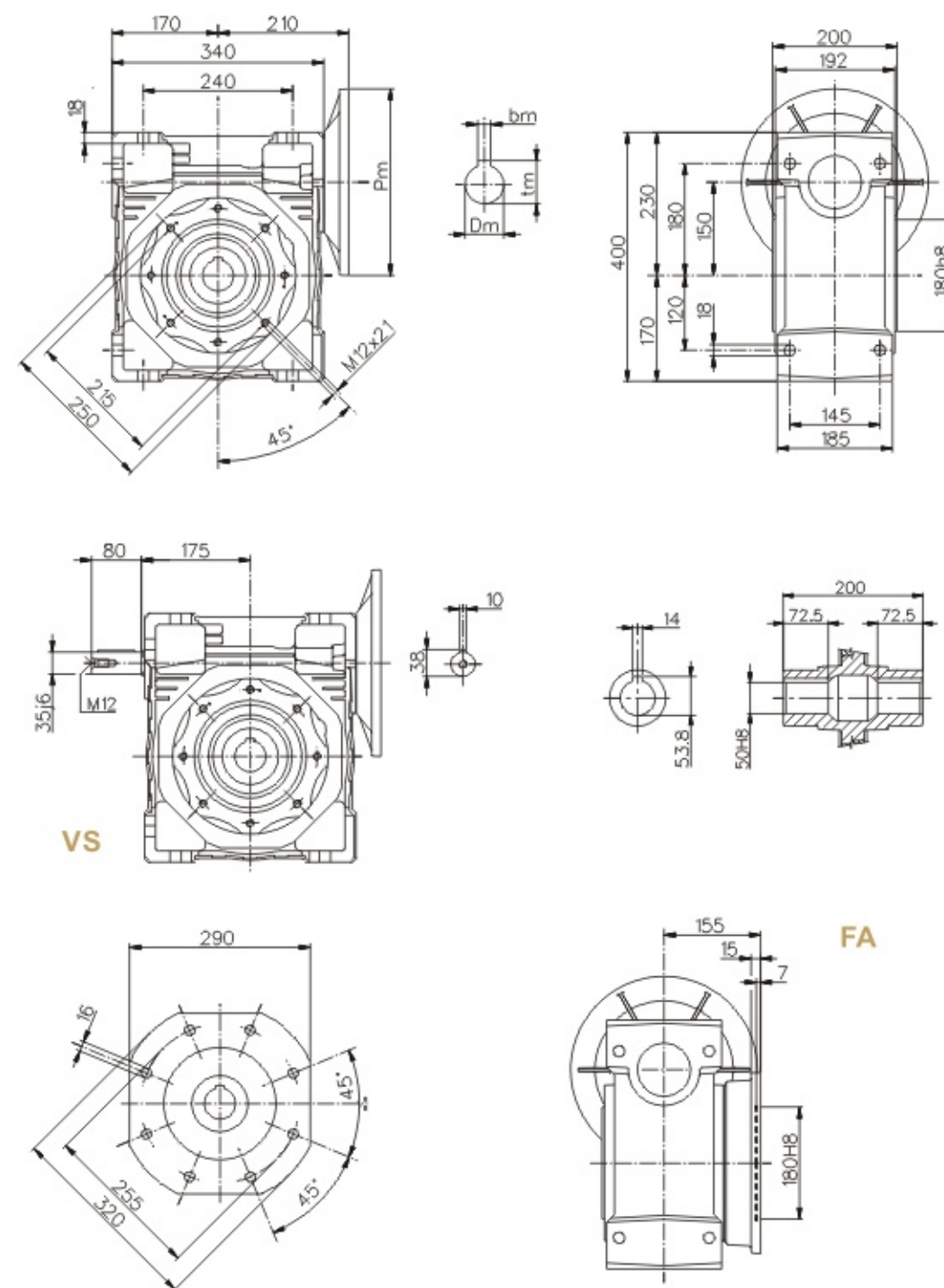


• 不带电机重量48kg
weight without motor-48kg

• 有关电机连接位置的尺寸, 请参阅57页的表格。
For the dimensions concerning the motor connection area (Pm, Dm, bm, tm) please refer to the table shown at page 57.



E-VF 150



• 不带电机重量84kg
weight without motor-84kg

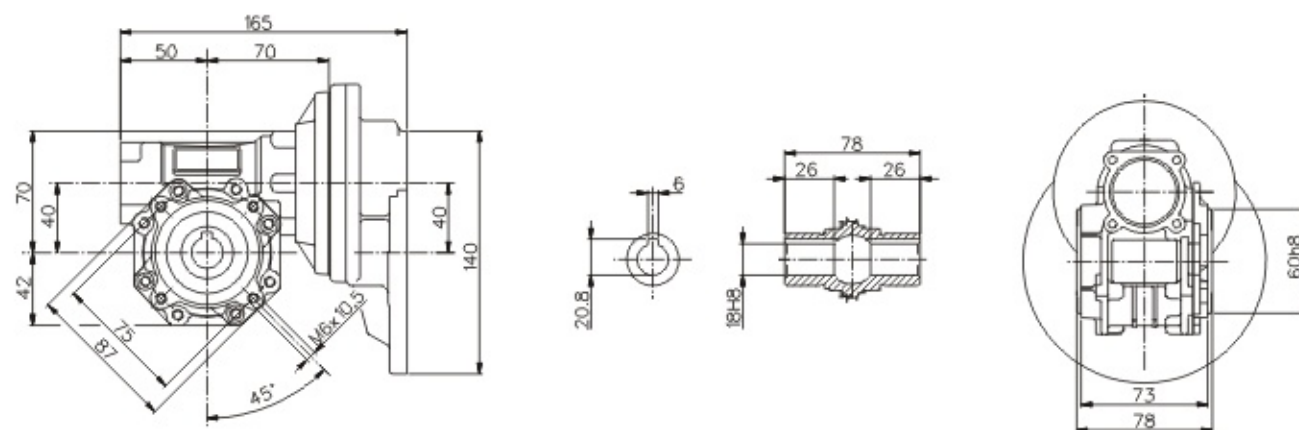
• 有关电机连接位置的尺寸, 请参阅57页的表格。
For the dimensions concerning the motor connection area (Pm, Dm, bm, tm) please refer to the table shown at page 57.



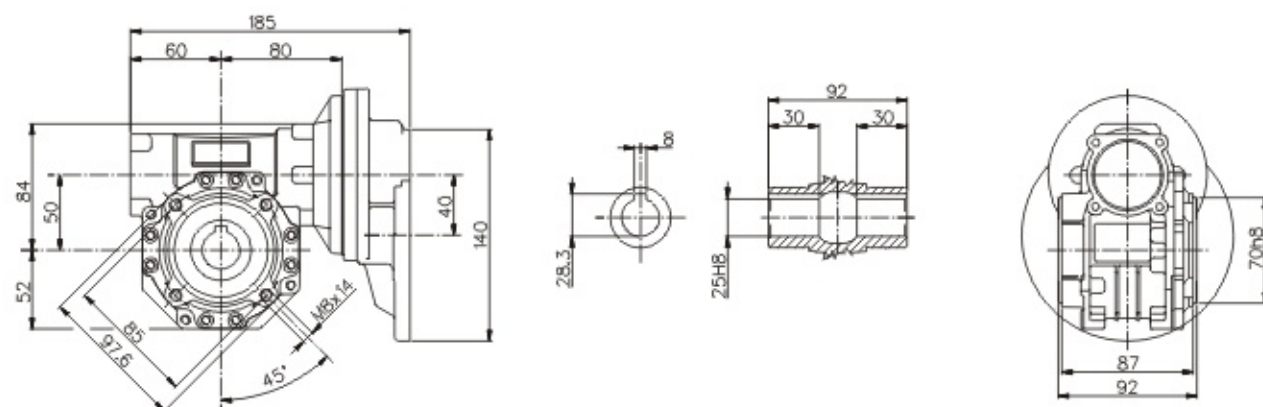
PC+E-VF 外形尺寸图表 OUTLINE DIMENSION SHEET FOR PC+ E-VF

- 有关输出法兰F的尺寸，请参阅有关E-V型号的图纸
For the dimensions of the output flange F, please consider the drawing of the relevant E-V size
- 有关中空轴的尺寸，请参阅有关E-V型号的图纸
For the dimensions of the hollow shafts in option, please consider the drawing of the relevant E-V size
- 有关双延伸轴的尺寸，请参阅有关E-V型号的图纸
For the dimensions of the double extension worm shafts, please consider the drawing of the relevant E-V size

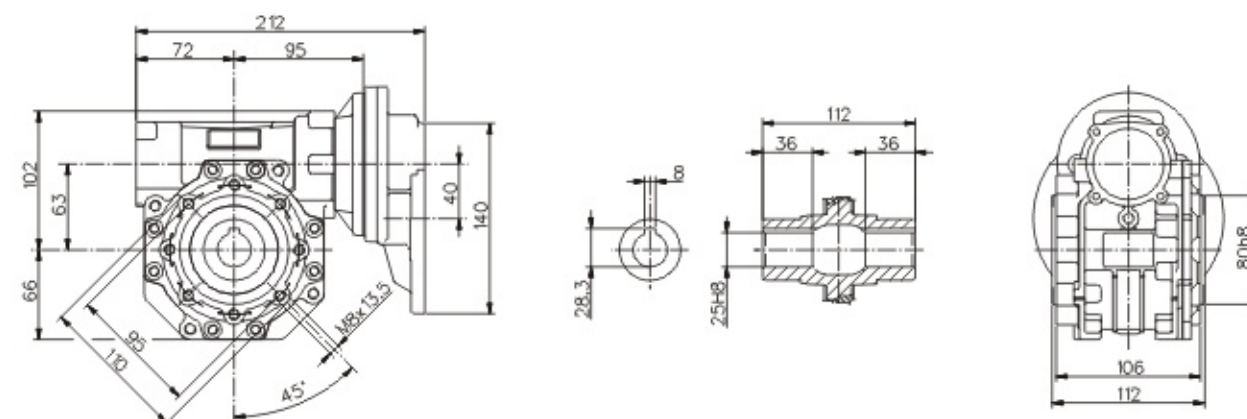
PC 063 - E-VF 040



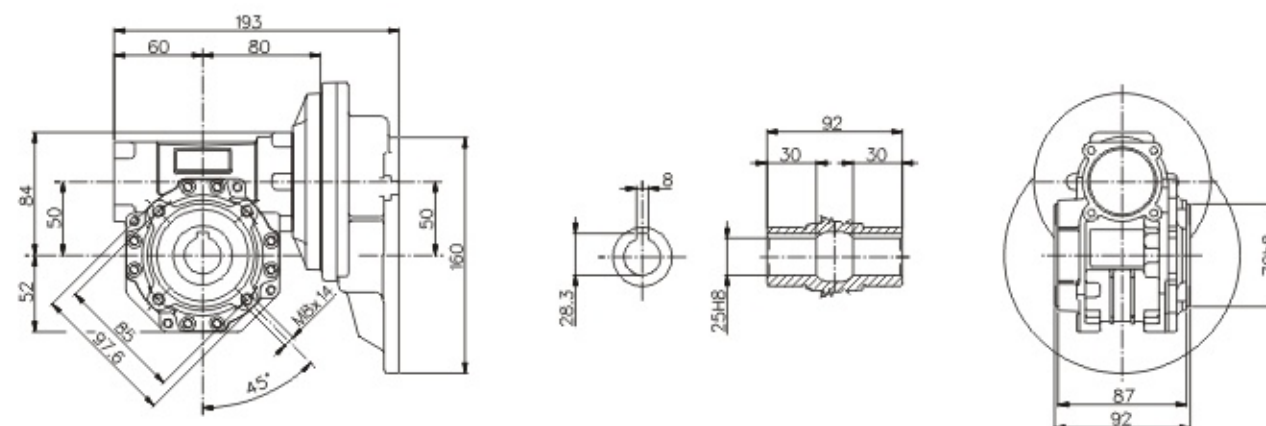
PC 063 - E-VF 050



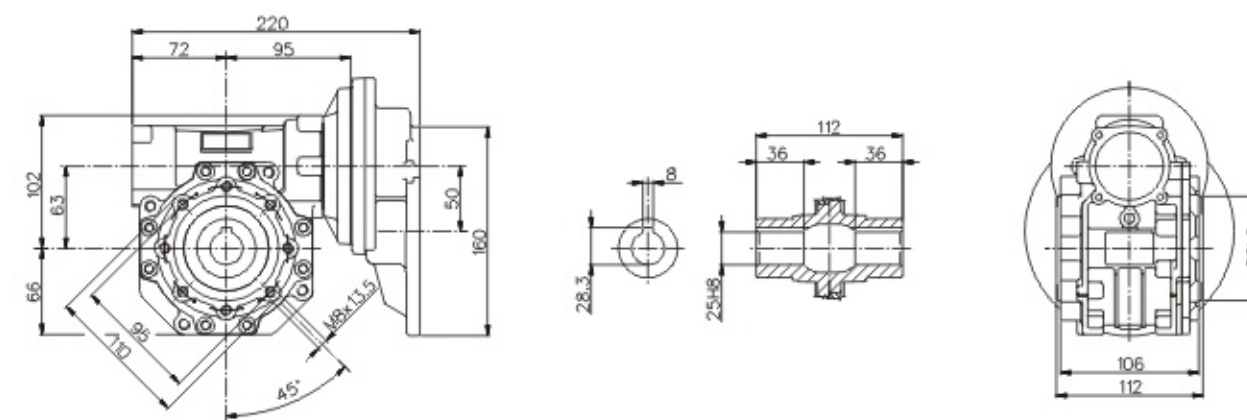
PC 063 - E-VF 063



PC 071 - E-VF 050

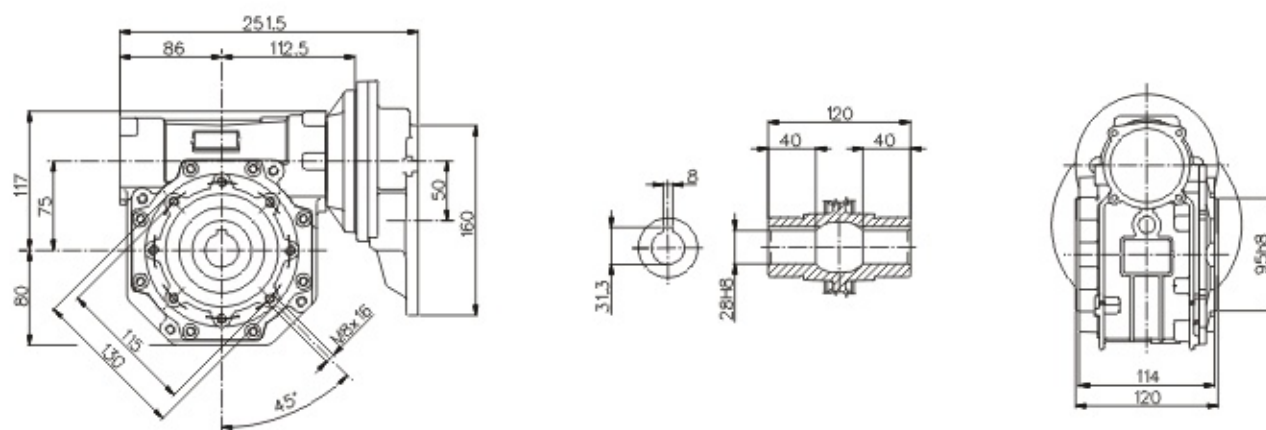


PC 071 - E-VF 063

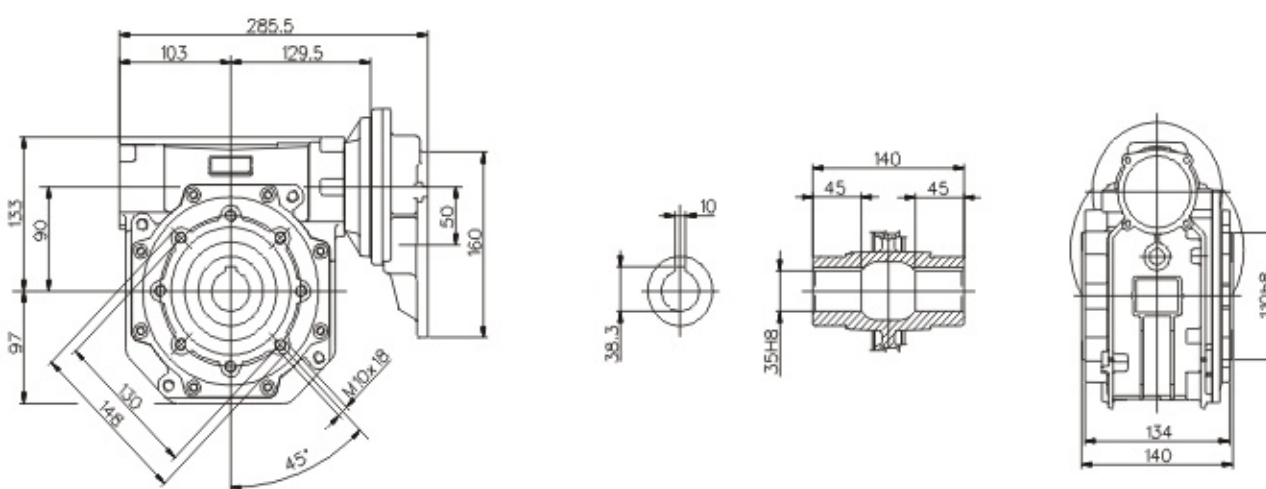




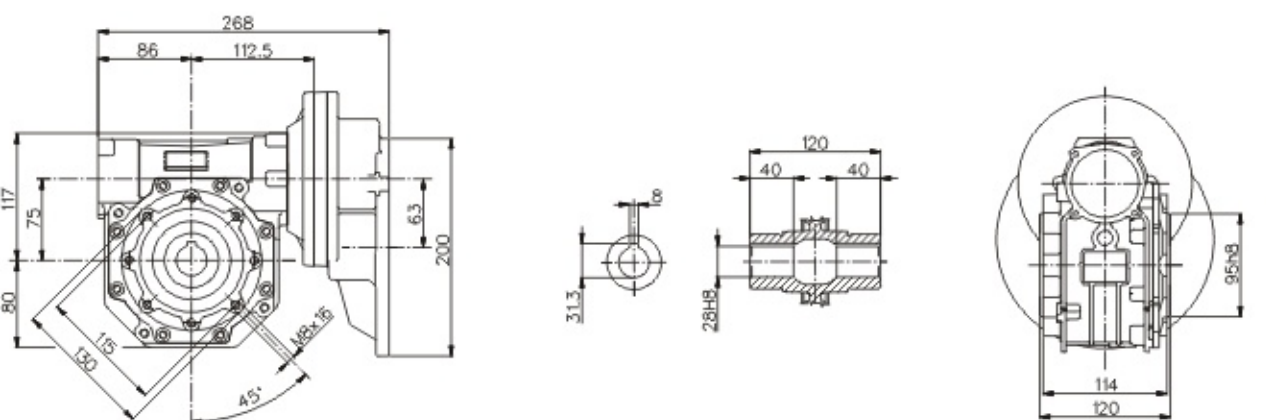
PC 071 - E-VF 075



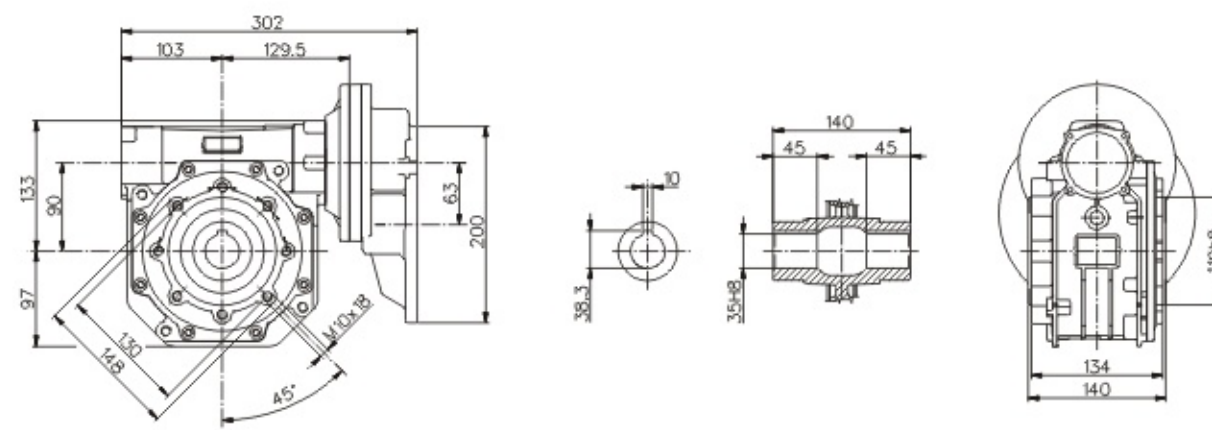
PC 071 - E-VF 090



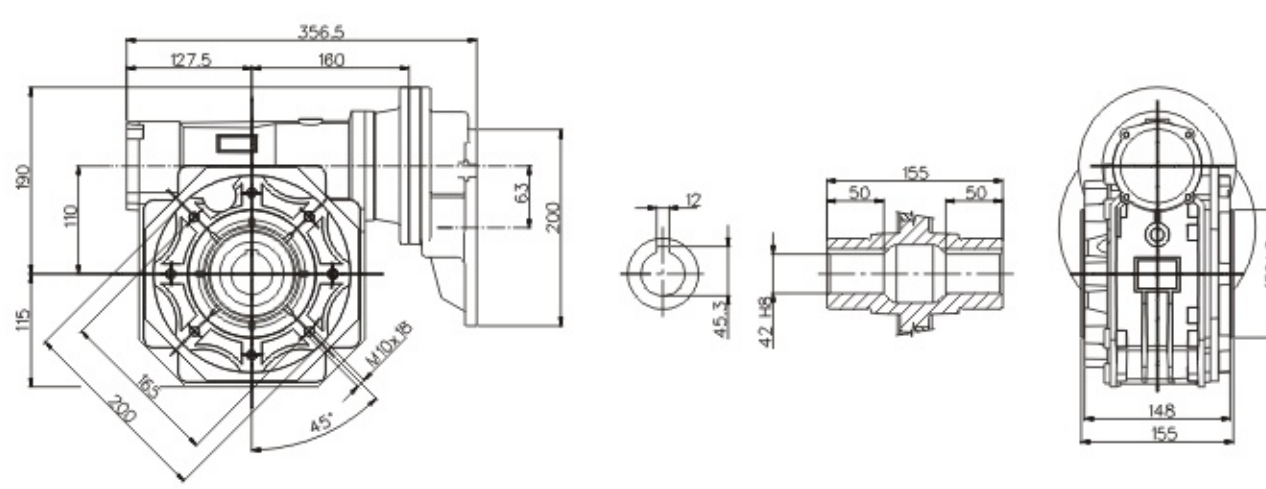
PC 080 - E-VF 075



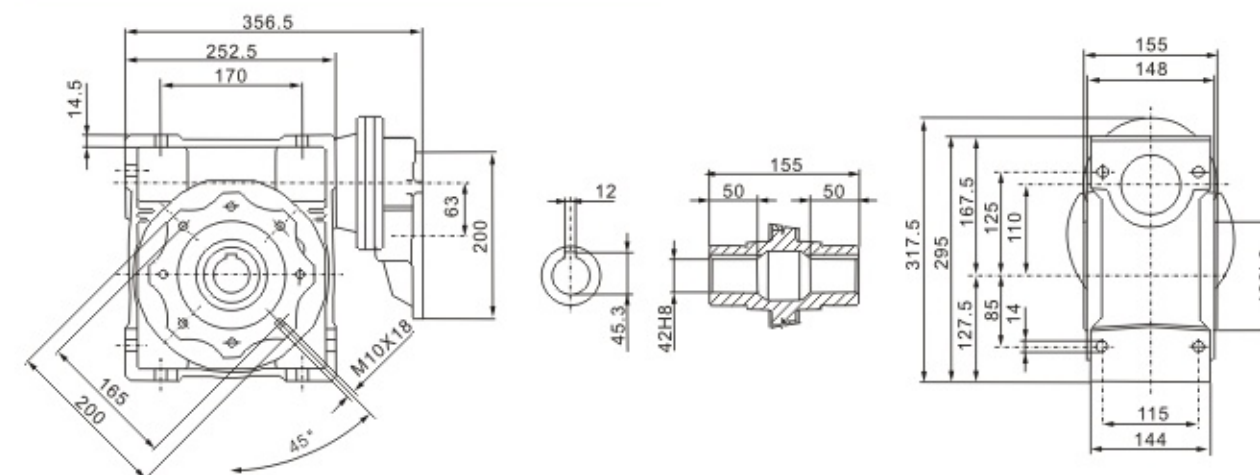
PC 080 - E-VF 090



PC 080 - E-VF 105 PC 090 - E-VF 105

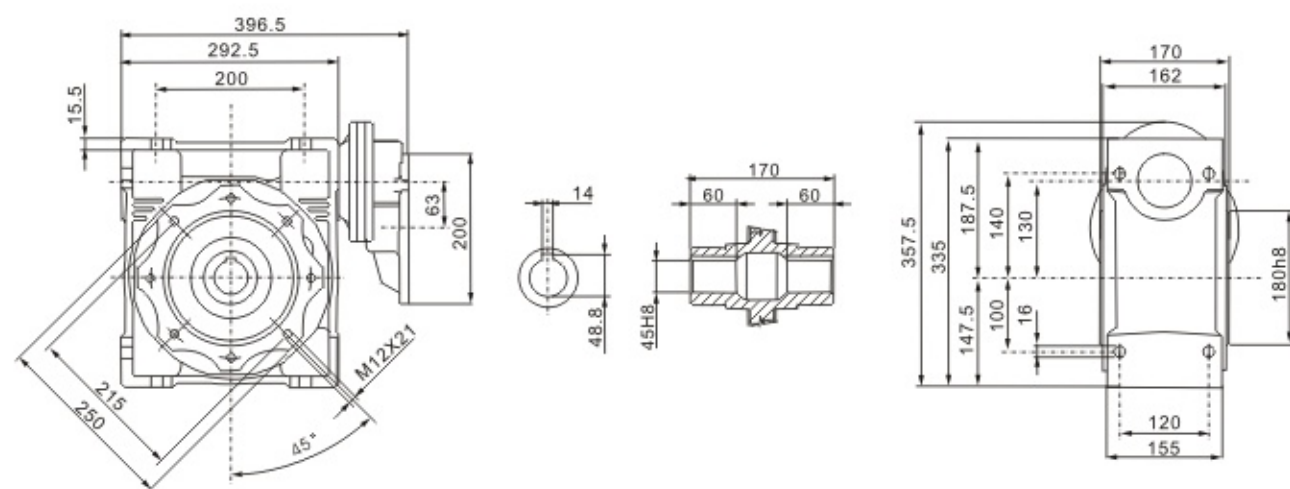


PC 080 - E-VF 110 PC 090 - E-VF 110





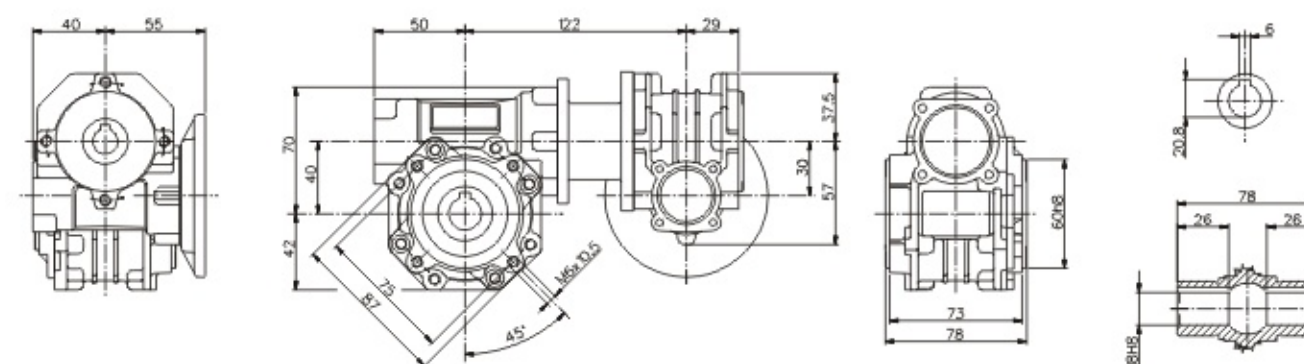
PC 080 - E-VF 130 PC 090 - E-VF 130



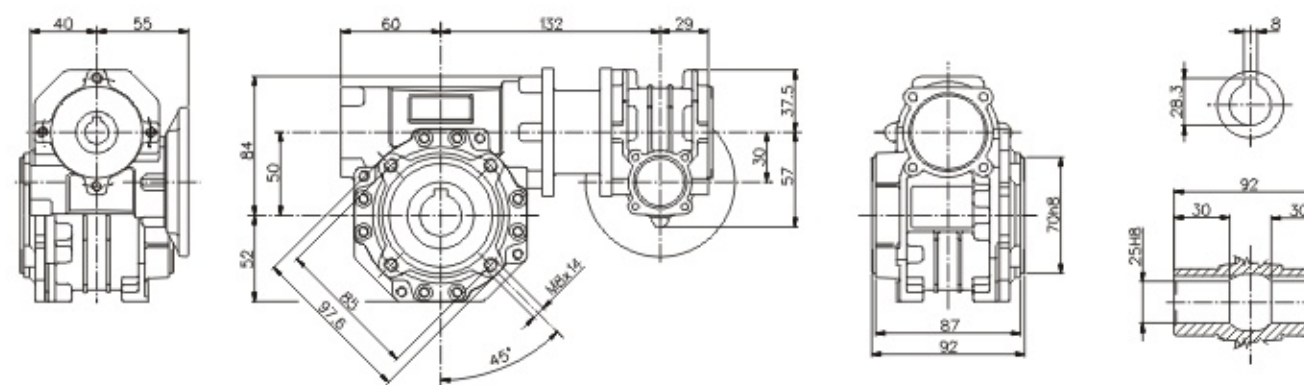
E-VF+E-VF 外形尺寸图表 LINE DIMENSION SHEET FOR E-VF+E-VF

- 有关输出法兰F的尺寸, 请参阅有关E-V型号的图纸
For the dimensions of the output flange F, please consider the drawing of the relevant E-V size
- 有关中空轴的尺寸, 请参阅有关E-V型号的图纸
For the dimensions of the hollow shafts in option, please consider the drawing of the relevant E-V size
- 有关双延伸轴的尺寸, 请参阅有关E-V型号的图纸
For the dimensions of the double extension worm shafts, please consider the drawing of the relevant E-V size

E-VF 030.040

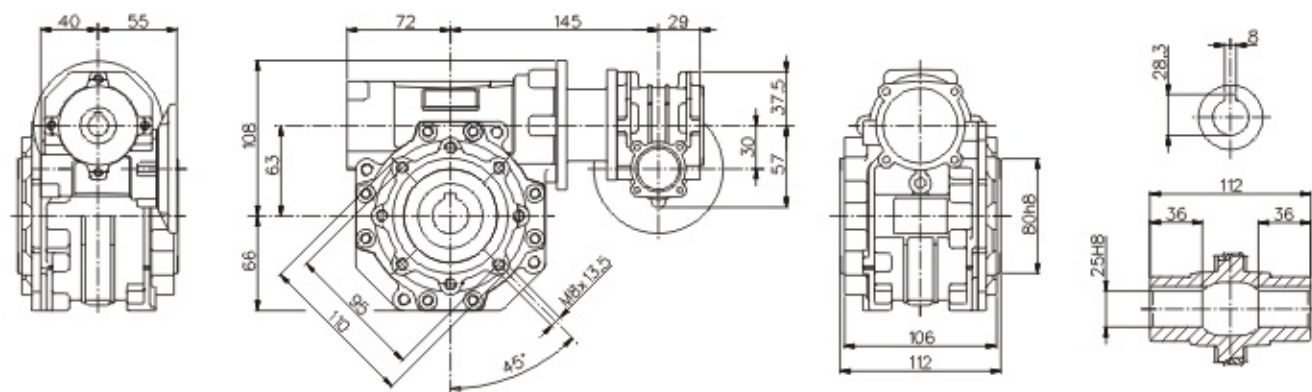


E-VF 030-050

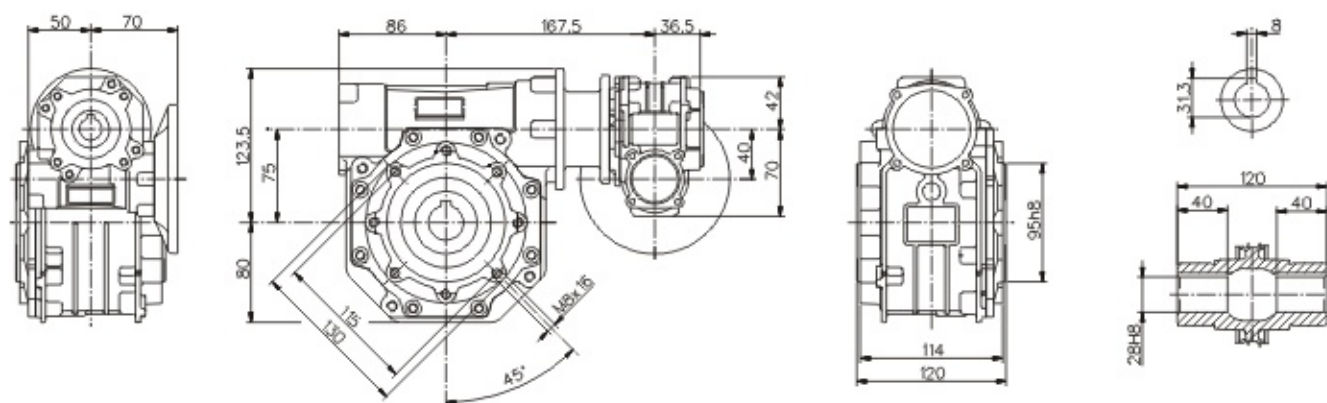




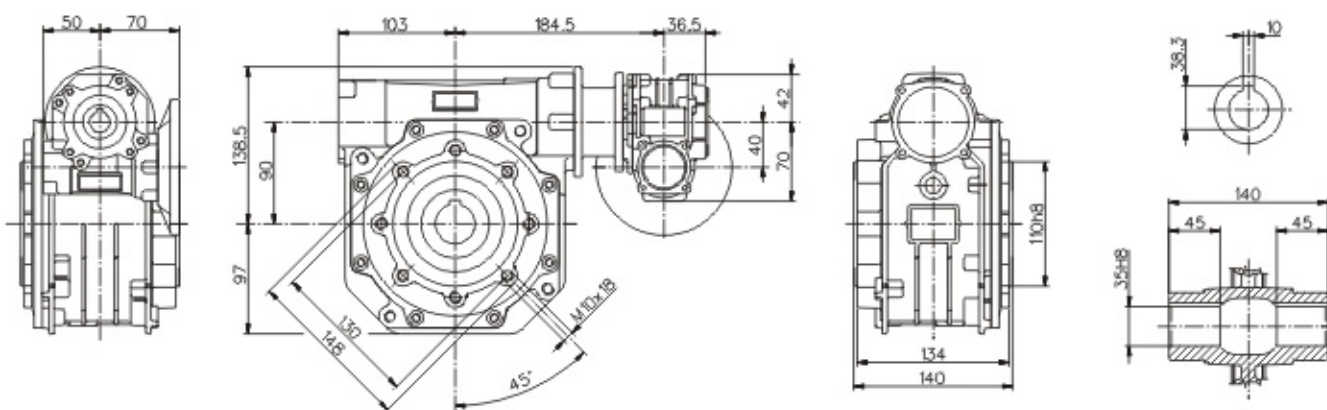
E-VF 030-063



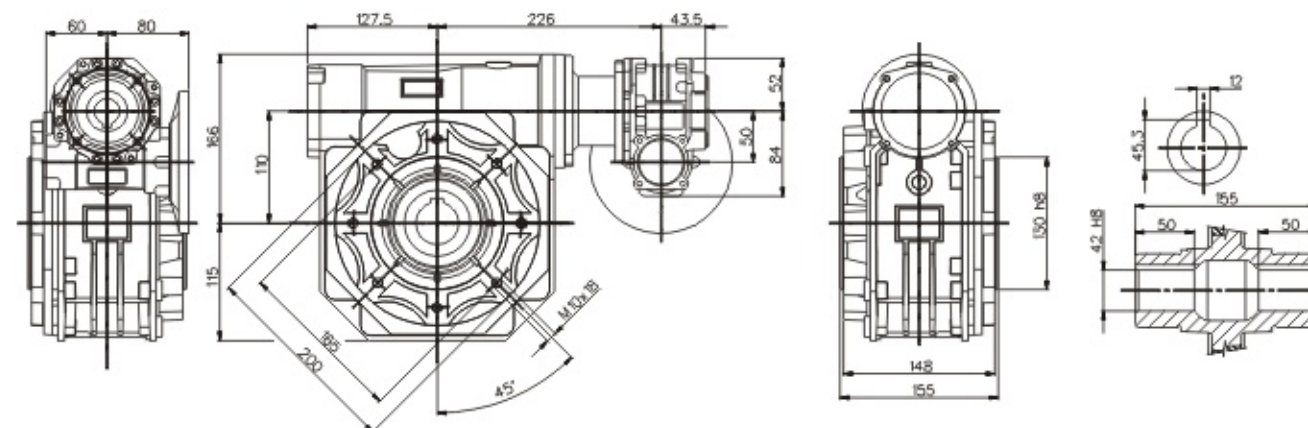
E-VF 040-075



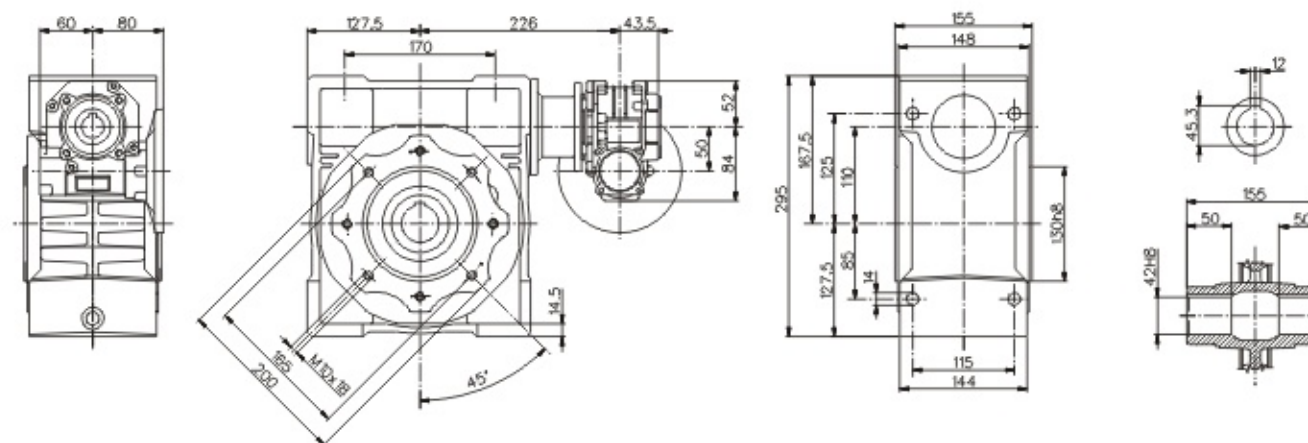
E-VF 040-090



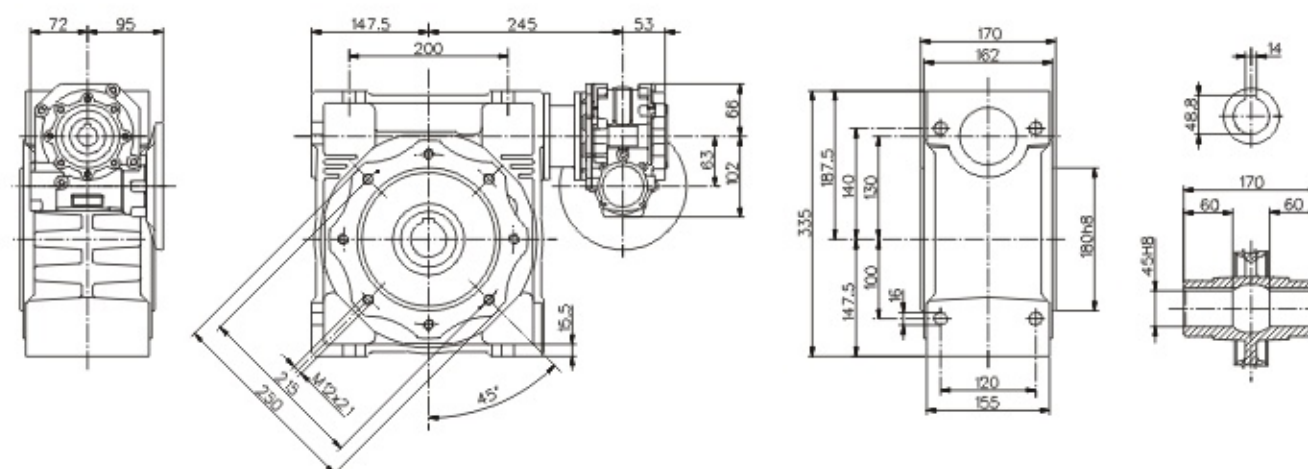
E-VF 050-105



E-VF 050- 110

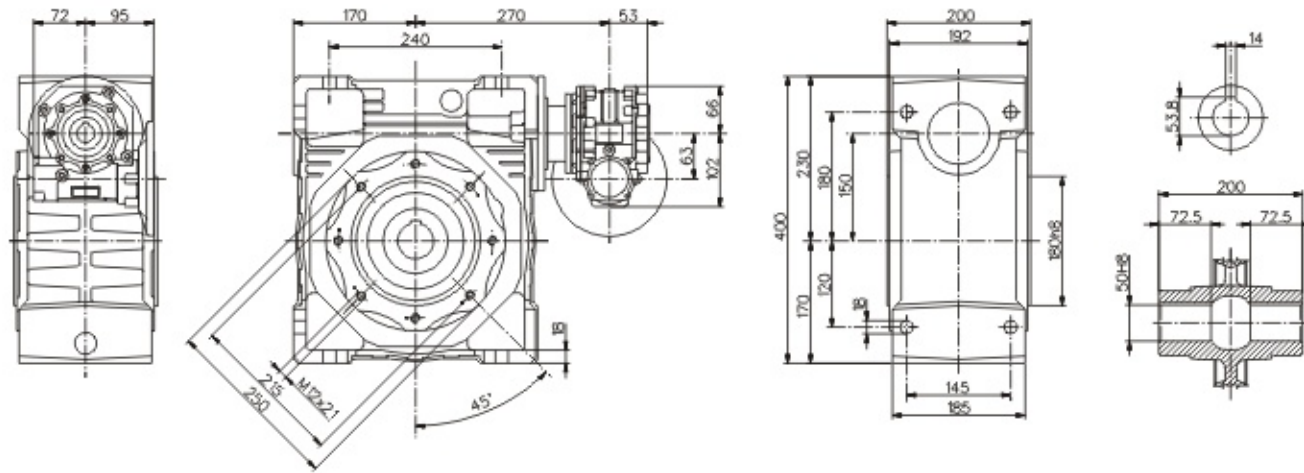


E-VF 063-130

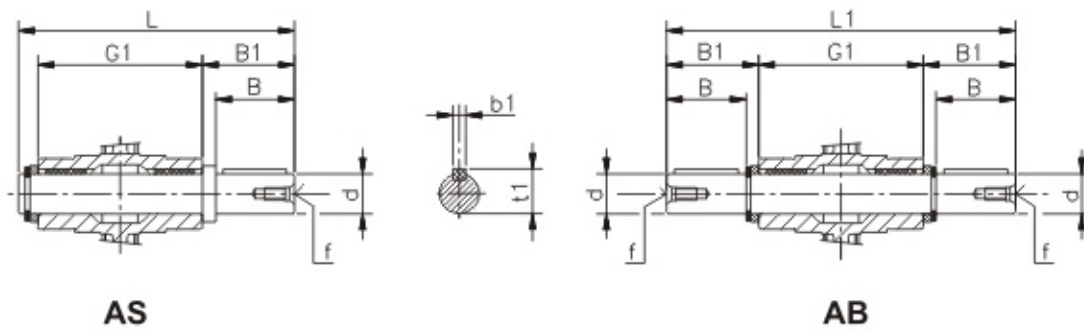




E-VF 063-150

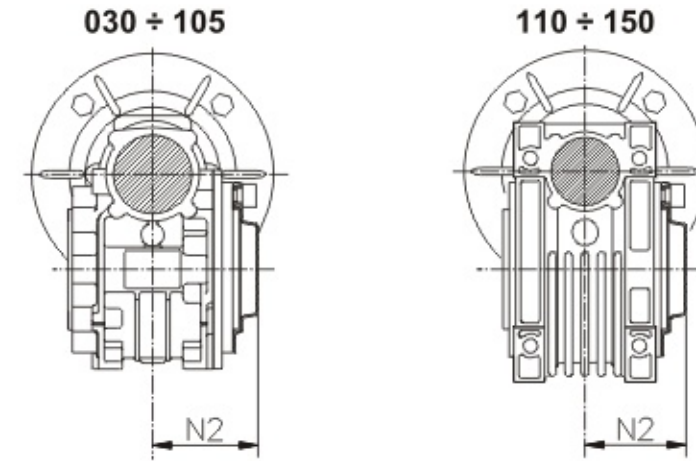


低速轴 Low speed shafts



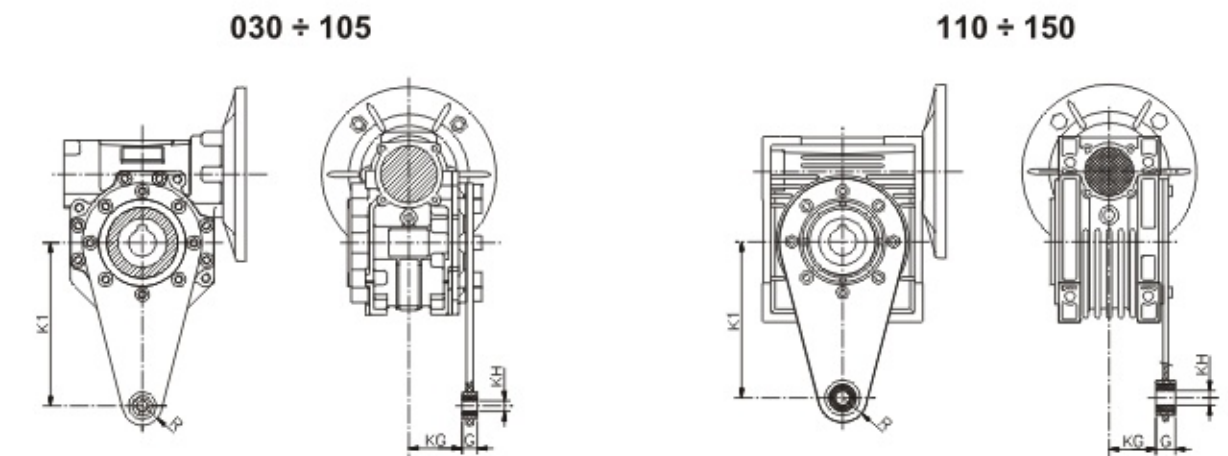
	d	B	B1	G1	L	L1	f	b1	t1
030	14 g6	30	32,5	63	102	128	M6	5	16
040	18 h6	40	43	78	128	164	M6	6	20,5
050	25 h6	50	53,5	92	153	199	M10	8	28
063	25 h6	50	53,5	112	173	219	M10	8	28
075	28 h6	60	63,5	120	192	247	M10	8	31
090	35 h6	80	84,5	140	234	309	M12	10	38
105	42 h6	80	84,5	155	249	324	M16	12	45
110	42 h6	80	84,5	155	249	324	M16	12	45
130	45 h6	80	85	170	265	340	M16	14	48,5
150	50 h6	82	87	200	297	374	M16	14	53,5

端盖 Cover



	N2
030	42
040	50
050	58
063	69
075	74
090	86
105	94
110	94
130	102
150	113

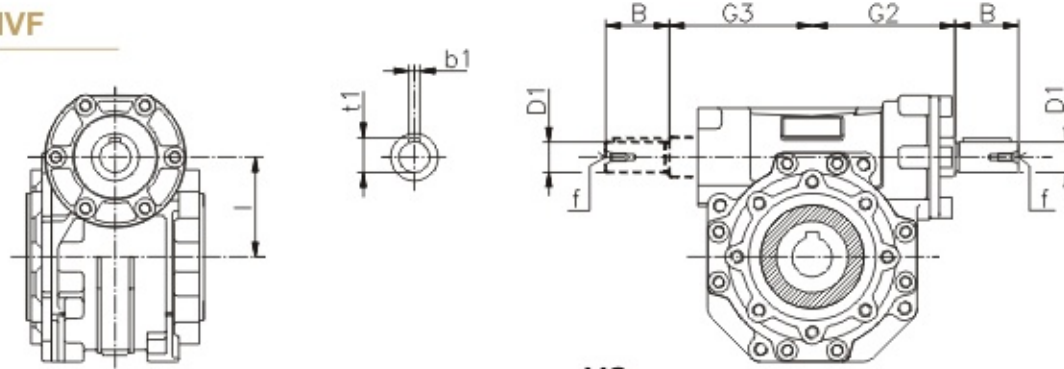
扭力臂 Torque arm



	K1	G	KG	KH	R
030	85	14	24	8	15
040	100	14	31,5	10	18
050	100	14	38,5	10	18
063	150	14	49	10	18
075	200	25	47,5	20	30
090	200	25	57,5	20	30
105	250	30	62	25	35
110	250	30	62	25	35
130	250	30	69	25	35
150	250	30	84	25	35



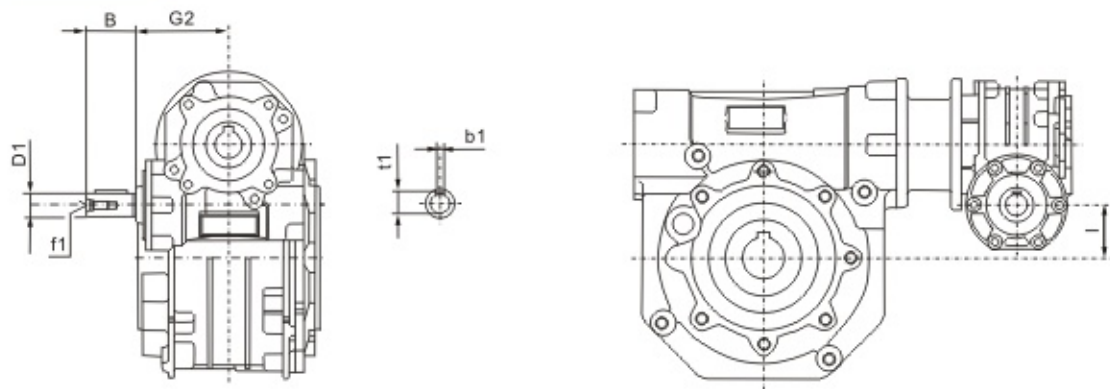
IVF



VS

IVF	030	040	050	063	075	090	105
B	20	23	30	40	50	50	60
D1	9 j6	11 j6	14 j6	19 j6	24 j6	24 j6	28 j6
G2	51	60	74	90	105	125	142
G3	45	53	64	75	90	108	135
l	30	40	50	63	75	90	110
b1	3	4	5	6	8	8	8
f1	-	-	M6	M6	M8	M8	M10
t1	10,2	12,5	16	21,5	27	27	31

IVF - E-VF

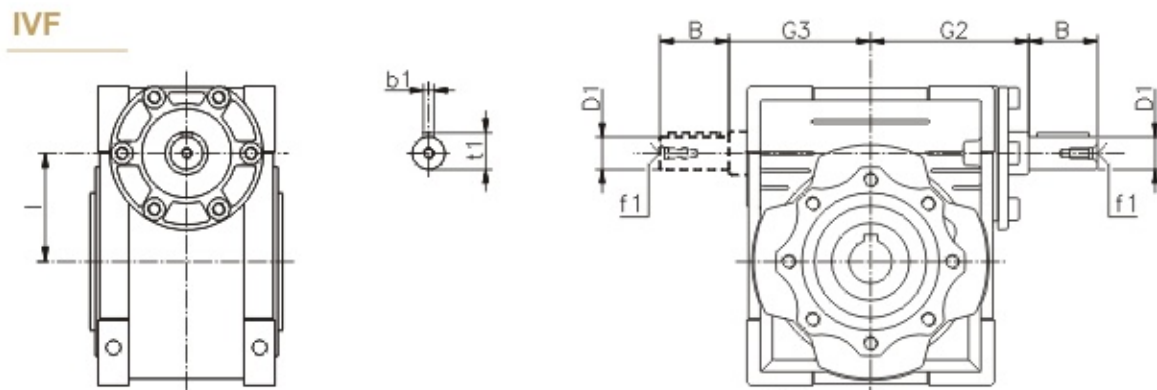


IVF-VF	030-040	030-050	030-063	040-075	040-090	050-105
B	20	20	20	23	23	30
D1	9 j6	9 j6	9 j6	11 j6	11 j6	14 j6
G2	51	51	51	60	60	74
l	10	20	33	35	50	60
b1	3	3	3	4	4	5
f1	-	-	-	-	-	M6
t1	10,2	10,2	10,2	12,5	12,5	16

• 对于没有的尺寸, 请参阅有关RV型号的图纸
For the missing dimensions, please consider the drawing of the relevant RV size



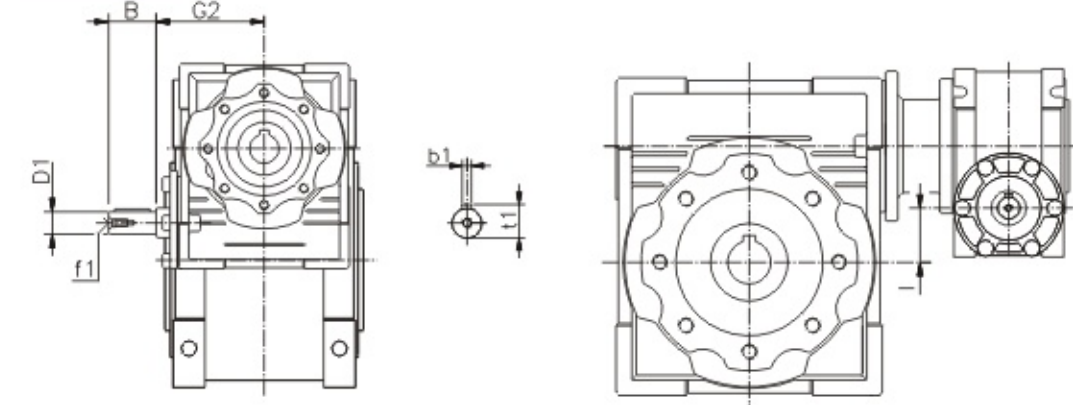
IVF



VS

IVF	110	130	150
B	60	80	80
D1	28 j6	30 j6	35 j6
G2	142	162	195
G3	135	155	175
l	110	130	150
b1	8	8	10
f1	M10	M10	M12
t1	31	33	38

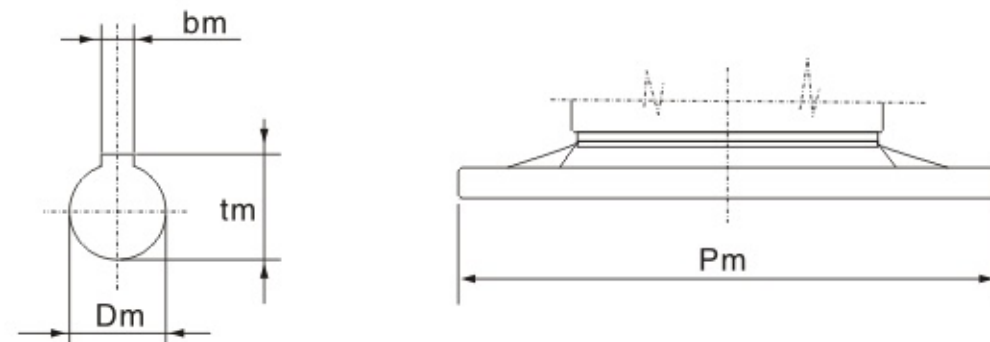
IVF - E-VF



IVF-VF	050-110	063-130	063-150
B	30	40	40
D1	14 j6	19 j6	19 j6
G2	74	90	90
l	60	67	87
b1	5	6	6
f1	M6	M6	M6
t1	16	21,5	21,5

• 对于没有的尺寸, 请参阅有关RV型号的图纸
For the missing dimensions, please consider the drawing of the relevant RV size

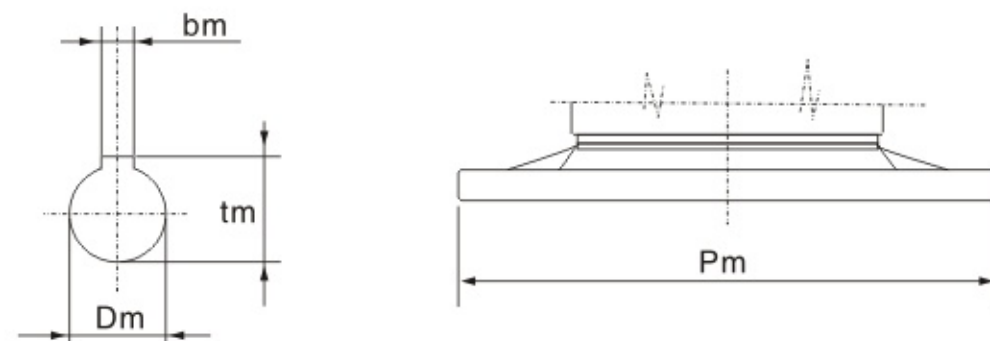
PAM B5



B5	IEC										
	056	063	071	080	090	100	112	132	160	180	200
Pm	120	140	160	200	200	250	250	300	350	350	400
Dm	9	11	14	19	24	28	28	38	42	48	55
bm	3	4	5	6	8	8	8	10	12	14	16
tm	10,4	12,8	16,3	21,8	27,3	31,3	31,3	41,3	45,3	51,8	59,3

VF (105 ÷ 130) tm= 40,3 (IEC 132)

PAM B14



B14	IEC								
	056	063	071	080	090	100	112	132	
Pm	80	90	105	120	140	160	160	200	
Dm	9	11	14	19	24	28	28	38	
bm	3	4	5	6	8	8	8	10	
tm	10,4	12,8	16,3	21,8	27,3	31,3	31,3	41,3	

安装 NOTES OF INSTALLATION

安装减速器时要注意以下一些事项:

- 1、减速器与机械设备装配之前，要检查减速器输出轴的旋转方向是否正确；
- 2、减速器与原动机、设备装配之前，应检查各轴径、孔径、键和键槽的偏差尺寸，避免装配过紧损坏轴承，过松影响动力传递；
- 3、减速器必须牢固地安装在机械设备上，避免有松动或振动；
- 4、链轮、齿轮等传动件装上轴伸时，应尽量靠近轴承，以减少轴伸弯曲应力
- 5、减速机装配电机时，应在蜗杆头部内孔孔壁及键槽处涂抹黄油，避免装配过紧，防止轴孔日久生锈。
- 6、使用各类电机直联型减速机时，若电机重量偏大，应设支撑装置。

To install the reduction unit it is necessary to note the following recommendations;

- 1、Check the correct direction of rotation of the reduction unit output shaft before fitting the unit to the machine.
- 2、Before mount with the prime mover and device , please check the reducer's every axial diameter, aperture , key and key slot, to be sure their dimensions are not deviation, and avoid assembling too tight or too loose, unless it will influence the reducer's performance.
- 3、The mounting on the machine must be stable to avoid any vibration.
- 4、Drives such as sprocket wheel and gear must be fitted close to bearing in order to reduce bending stress of hanging shaft
- 5、While assembling motor to the reducer, it is necessary to add butters to the worm shaft input hole and keyway, so as to avoid tightly assembling and rusting when it is used for a long time.
- 6、Supporting unit is required when reducers directly match with motors whose weight is bigger than normal types.

使用注意事项 NOTES OF OPERATING

- 1、使用前应注意检查减速机型式结构、中心距规格、传动比、输入轴联结方式、输出轴结构、输入轴输出轴指向和回转方向等是否符合使用要求，蜗杆输入转速不宜超过1500r/min
- 2、开机时应逐步施加载荷，不能满载启动
- 3、所有的减速机配有排气塞，在使用时，把密封塞换成随机附带的排气塞
- 4、使用时必须检查油位（如油位镜孔或打开油塞）
- 5、尽可能地避免减速器暴露在烈日阳光上和恶劣环境中；确保电机风扇附近有有良好的通风环境，以免影响散热效果；
- 6、如果减速器存放时间长达4-6个月，应检查油封是否浸润滑油中，可能油封唇口会粘在轴上，甚至失去了弹性，由于适当的弹性是油封必须的工作条件，所以推荐更换油封；所有橡胶和透气孔不能沾有油漆；
- 7、减速器的标准工作环境温度是-5℃至40℃，如果不在这范围时，请与我们技术服务人员联系。

- 1、Before using, please check carfully whether the reducer model, distance size , ratio , input connecting method, output shaft structure, input and output shaft direction and revolving direction are tight according to requirement. It is better for the input speed of worm shaft not more than 1500r/min.
- 2、The load should be added step by step when using the machine. Never running it with full load.
- 3、All the reduction units are fitted with breather. Please replace the closed plug used for transportation with the breather plug supplied with the unit after installation.
- 4、Please check the correct level of the lubricant through the indicator or open the plug.
- 5、Whenever possible, protect the reduction unit against solar radiation and dad weather. Ensure the motor cools correctly by assuring good passage of air from the fan side.
- 6、In the case of particularly lengthy periods of storage(4-6 months),if the oil seal is not immersed in the lubricant inside the unit, it is recommended to change it since the rubber could could stick to the shaft or may even have lost the elasticity.
- 7、In the case of ambient temperatures < -5℃ or > +40℃ call the Technical Service.



润滑油选用表 LUBRICANTS OIL CHOSEN TABLE

	TEMPERATURE	ISO	SHELL	AGIP	ESSO	MOBIL	CASTROL	BP	GEMER	
E-RV 025-090	-25 +50	VG320	Tivela Oil 460	Tellum VSF320	S220	Glygoyle 30	Alphasyn Pg320	Emrthpl SGXP320		合成油 Synthetic oil
E-RV 025-090	-5 +40	VG460	Omala Oil 460	Blasia 460	Spartaun Ep450	Mobilgear 634	Alpha MAX 450	Energol GAXP460	CKE460	矿物油 Mineral oil
	-15 +25	VG220	Omala Oil 220	Blasia 220	Spartaun Ep220	Mobilgear 630	Alpha MAX 220	Energol GAXP220		
E-UDL	-25 +40	VG32	A.T.F.DXRONA	A.T.F.DXRONA	A.T.F.DXRONA	A.T.F.220	TQ.DXRONII	Autran DX	Ub-3x	矿物油 Mineral oil

润滑油加注表(单位:升) LUBRICANT FILL QUANTITY(L)

	B3	B6	B7	B8	V5	V6
E-RV025	0.023					
E-RV030	0.05					
E-RV040	0.1					
E-RV050	0.15					
E-RV063	0.3					
E-RV075	0.5					
E-RV090	1					
E-RV110	3	2.5	2.5	2.2	3	2.2
E-RV130	4.5	3.5	3.5	3.3	4.5	3.3
E-RV150	7	5.1	5.1	5.4	7	5.1
E-UDL0.18	0.13				0.2	
E-UDL0.37	0.15				0.25	
E-UDL0.55	0.33				0.45	
E-UDL0.75	0.33				0.45	
E-UD1.1	0.8				1	
E-UD1.5	0.8				1	
E-UD2.2	1.2				1.2	
E-UD3.0	1.2				1.2	
E-UD4.0	1.2				1.2	

润滑油 LUBRICATION

工作环境温度不在表中范围内时, 请与我们技术人员联系。

◆当工作环境温度低于-30℃或高于60℃时, 要使用特殊材质的油封

◆工作环境温度低于0℃时, 必须考虑下列情况:

→选用的电机必须在低温下能正常工作;

→电机的功率必须满足在低温下有较大启动扭矩要求;

→如果减速器箱体的材质是铸铁, 在温度-15℃以下时, 箱体变得很脆, 要注意尽量避免撞击;

→在开始使用阶段时, 由于润滑油的粘度很高, 可能会产生一些问题, 所以刚开始启动时最好让它空载运转几分钟;

◆减速器运行大约5000小时后, 应更换润滑油, 换油频率按减速器实际运行情况和环境条件而定; 更换油应注意, 不同的油品不能混用;

◆NMRV025、0.30、040、050、063、075、090规格的减速器在出厂时已加注了耐用的合成润滑油 (SHELL TEVELA OIL 320),

可以按照样本中安装方位所提到的方位安装。V5或V6安装时, 请与我们技术服务人员联系;

◆减速器NMRV110、130、150规格在出厂时已加注了矿物润滑油 (SHELL Omala Oil 460);

◆无级变速器在出厂时也加了矿物润滑油 (广研Ub-3X);

◆减速器NMRV110、130、150规格的安装方位在下单时要说明, 否则润滑油按B3方位提供;

◆In case of ambient temperatures not envisaged in the table, call our technical service.

In the case of temperature under -30℃ or over 60℃ it is necessary to use oil seals with special material.

◆For operating ranges with temperatures under 0℃ it is necessary to consider the following:

→The motors need to be suitable for operation at the envisaged ambient temperature.

→The power of the electric motor needs to be adequate for exceeding the higher starting torques required.

→In the case of reduction units with a cast-iron case, pay attention to impact loads since cast iron may have problems of fragility at temperatures under -15℃.

→During the early stages of service, problems of lubrication may arise due to the high level of viscosity taken on by the oil and so it is wise to have a few minutes of rotation under no load.

◆The oil needs to be changed after approximately 5000 hours. This period depends on the type of service and the environment where the reduction unit works. The synthetic oil and the mineral oil can not be combined used in the reduction units.

◆The reduction units size 025-030-040-050-063-075-090 are supplied complete with lubricant for life, synthetic oil (SHELL TEVELA OIL 320), and can therefore be mounted in any position envisaged in the catalogue. V5/V6 for which you should call our technical service to assess the condition of use.

◆The reduction units size 110, 130 and 150 are supplied complete with lubricant, mineral oil, (SHELL TEVELA OIL 320)

◆The variator speed are supplied complete with lubricant, mineral oil (GUANGYAN Ub-3x).

◆For size 110, 130 and 150 it is necessary to specify the position, otherwise the reduction units are supplied with the quantity of oil relating to pos.B3.

减速器的故障原因与排除 THE CAUSE FOR BREAKDOWN AND SETTLEMENT OF REDUCER

故障内容 Breakdown	可能的原因 Possible cause	排除的方法 The way of settlement
无负载状态下, 电机不转 The motor does not run in case of no load	停电 Power off	检查电源, 询问电力公司 Check power, consult with power company
	连接线断裂 Connecting wire break	检查接线 Check wire
	开关接触不良 The switch does not contact well	修理或更换 Repair or replace
	电机线圈断裂 The motor coil break	送专业工厂修理 Repair it in special factor
	三相电机接单相电压 3 phase motor connect single phase voltage	确认电压及接线方式 Confirm voltage and connecting ways
	单相电机未接电容器 Single phase motor does not connect condenser	连接电容器 Connect condenser
	单相电机起动器动作不良 Single motor's starter does work well	送专业工厂修理 Repair it at special factory
负载时, 电机不转 The motor does not run in case of loading	齿轮、轴心及轴承损坏 Gear, axis and bearing are damaged	送专业工厂修理 Repair it at special factory
	电压过低 Voltage is too low	检查电源线是否过长或过细 Check to see if the wire is too long or too thin
	齿轮损坏 Gear is damaged	送专业工厂修理 Repair it in special factory
异常发热 Very hot	超负载运转 Work with overload	减少负荷 Discharge load
	超负载运转 Work with overload	减少负荷 Discharge load
	起动、停止过多 Start and stop too many	减少使用频率 Reduce using frequency
	轴承磨损 Bearing is damaged	修理或更换 Repair or replace
噪声太大 Loud noise	电压过高或过低 Voltage is too high or too low	确认电压是否正常 Confirm to see if the voltage is normal
	声音大且持续: 轴承损坏, 齿轮磨损 If the noise is loud and continuous, the bearing is damaged or the gear damaged	送专业工厂修理 Repair it in special factory
振动太大 Severe vibration	偶尔声音大: 齿轮损伤, 有异物卡住 If the noise is loud and continuous, the gear must be damaged or something else block	与用户服务机构联系 Contact with the service institution
	齿轮、轴承磨损 Gear or bearing is worn out	送专业工厂修理 Repair it in special factory
异常的不稳定的运转噪声 Abnormal, unsteady, running noise	固定不良, 螺丝松动 Screw is loose	重新锁紧 Re-lock
漏油 -在电机法兰处 -在电机油封处 -在减速机法兰处 -在输出部分的油封处 Leakage at flange and gasket	油已污染或油量不足 The oil is contaminated or short of	检查油颜色、浓度、油位 Check the color, density and level of oil
	螺丝松动 The screw is loose	重新锁紧 Re-lock
通气塞处漏油 Leakage at ventilating plug	密封圈损坏 The gasket is damaged	替换之与用户服务机构联系 Replace it and contact service institution
	油量太多 The oil is too much	校正油量 Correct the oil amount
	通气塞安装不正确 The plug is not well installed	正确安装通气塞 Install it properly
电机转动时输出轴不转 The output shaft does not move when the motor work	频繁冷起动 (油产生泡沫) 或油位太高 Cold start too often (the oil produce foam) oil level is too high	将通气塞换成排气阀 Change the plug with ventilating valve
	减速机轴键连接破坏 The connection between shaft and key is damaged	送专业工厂修理 Repair it in special factory

六、E-SWL 系列蜗轮螺杆升降机 E-SWL SERIES WORM GEAR SCREW JACK

概述 Brief introduction



E-SWL系列蜗轮螺杆升降机是通过蜗轮传动螺杆完成提升、下降、推进、翻转等功能, 是一种基础起重部件, 已列为JB/T8809-1998标准。广泛地用于机械、冶金、水利、化工、医疗、文化、卫生等各个行业, 具有结构紧凑、体积小、重量轻、安装方便、使用灵活、可靠性好、稳定性高、使用寿命长等优点, 可以用电动机或其它动力直接带动, 也可以手动。本系列蜗轮螺杆升降机可以自锁, 承载能力2.5t~120t, 最高输入转速1500r/min, 最大提升速度2.7m/min, 有不同的结构型式和装配方式, 工作环境温度在-20~100℃之间, 提升高度按用户要求制造。

E-SWL series worm gear screw jack is a basis jack-up part, accomplish the functions such as lifting, drop, push and inverting through worm gear drives screw. has been in the standard JB/T8809-1998. It is applied to the fields such as machinery, metallurgy, water conservancy, chemical industry, medical treatment, culture and hygienism etc, it has many advantages, such as compact configuration, small size, lightweight, convenient installation, flexible operation, high reliability and stability, also has a long service life and more connection form etc, can be driven directly by motor or other power or manual. has self-locking ability, load capacity ranging from 2.5t~120t, input speed up to 1500rpm and lifting speed up to 2.7m/min, ambient temperature: -20~100℃, has different configuration form and assembly type, and the lifting height can highly customized according to user's demand.

型式 Type

2.1 结构型式 Configuration form

- 1型 - 蜗轮与螺杆为螺纹联接, 螺杆作轴向运动。
- 2型 - 蜗轮与螺杆为键联接, 螺杆上配螺母, 螺母作轴向运动。
- 1 type - worm gear and screw is threaded and coupled and screw does axial motion
- 2 type - worm gear joins screw by key, the screw assembled with nut, and this nut does axial motion.

2.2 装配型式 Assembly type

升降机每种结构型式又分为两种装配型式
Every configuration form has two assembly type

1型结构型式有两种装配型式
1 type configuration has two assembly type

A型: 螺杆工作端在上
B型: 螺杆工作端在下
A type: the screw work end at top
B type: the screw work end at lower side

2型结构型式有两种装配型式
2 type configuration has two assembly type

A型: 螺杆工作端在上, 螺母上顶式下拉
B型: 螺杆工作端在下, 螺母下压式上拉
A type: screw work end at top and nut upply or pull it down
B type: screw work end at lower side and nut press it down or pull it up



2.3 螺杆头部型式 Screw head form

1型结构型式螺杆头部分为 I 型 (圆柱型)、II 型 (法兰型)、III 型 (螺纹型) 和 IV 型 (扁头型) 四种型式 (见图1)

2型结构型式螺杆头部分为 I 型 (圆柱型) 和 III 型 (螺纹型) 两种型式 (见图2)。

1 type configuration form, screw head form is: 1 type (cylinder), 2 type (flange), 3 type (thread), 4 type (flat head), see chart

2 type configuration form, screw head form is: 1 type (cylinder), 2 type (thread), see chart 2.

2.4 传动比 Drive ratio

升降机蜗轮杆传动分为两种传动比, 即普通 (P) 和慢速 (M)。

The jack worm gear drive ratio divided into two types: normal (P) and slow (M).

2.5 提升承载力 t: Lifting load capacity t

2.5 5 10 15 20 25 35 50 100 120

2.5 5 10 15 20 25 35 50 100 120

2.6 螺杆的防护 Protection of screw

1型升降机螺杆的防护分为: 基本型, 防旋转型 (F) 和带防护罩型 (Z);

2型升降机螺杆的防护分为: 基本型和带防护罩型 (Z)。

protection of 1 type jack screw divided as normal, protective rotation (F) and protective cover attached (Z)

protection of 2 type jack screw divided as normal and protective cover attached (Z).

2.7 标记示例 Mark sample

升降机

E-SWL2.5 M- 1 A II- 500 FZ

螺杆防护型式代号 (见2.6)
Screw protection type code

行程, mm
stroke

螺杆头部型式代号
screw head form code

装配型式代号
assembly type code

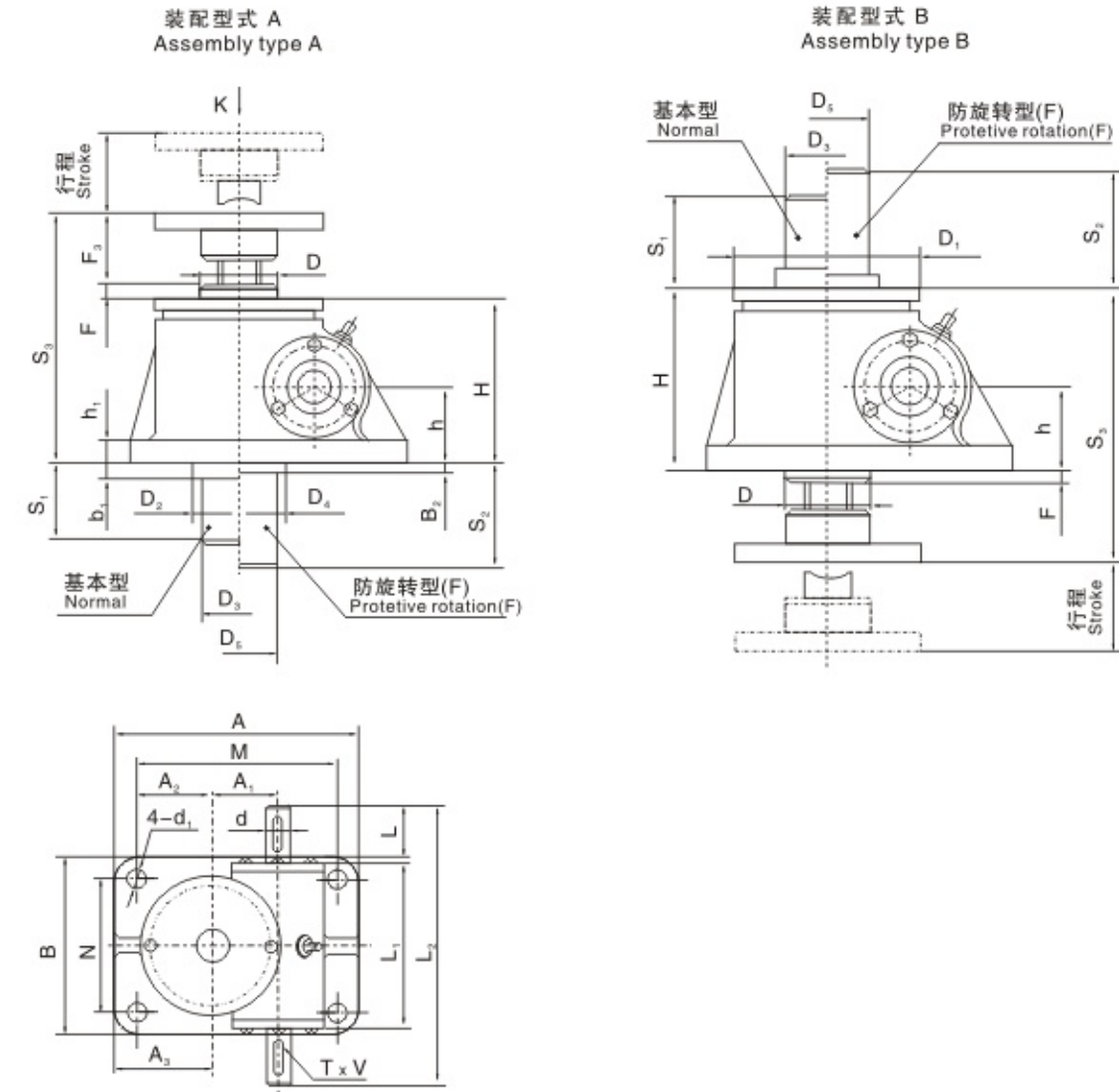
结构型式代号
configuration form code

传动比代号 (慢速, 普通P不注)
drive ratio code (slow, normal not marked)

型号 (见表1和表2)
type (see table 1 and table 2)

外形及安装尺寸 Outline and installing size

3.1 1型升降机的外形结构尺寸见图1和表1 1 type jack outline size, refer to chart 1 and table 1



螺杆头部型式 Screw head form

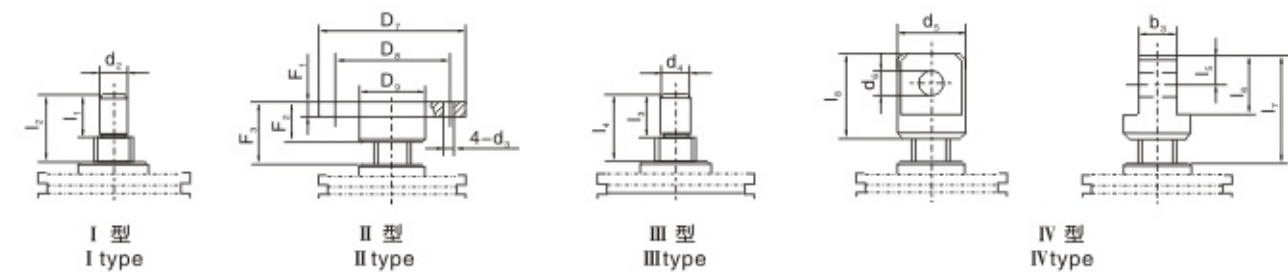


图1 1型结构形式
1 type configuration type



表1 table1

mm

型号 type		E-SWL2.5	E-SWL5	E-SWL10/15	E-SWL20	E-SWL25	E-SWL35	E-SWL50	E-SWL100	E-SWL120	
S ₁		行程+20 stroke+20	行程+20 stroke+20	行程+20 stroke+20	行程+20 stroke+20	行程+20 stroke+20	行程+20 stroke+20	行程+20 stroke+20	行程+20 stroke+20	行程+20 stroke+20	
S ₂		行程+110 stroke+110	行程+110 stroke+110	行程+150 stroke+150	行程+190 stroke+190	行程+205 stroke+205	行程+250 stroke+250	行程+285 stroke+285	行程+350 stroke+350	行程+400 stroke+400	
S ₃		150.5	193	230	262	317	350	416	550	570	
A		165	212	235	295	350	430	475	527.1	526	
B		120	155	200	215	260	280	500	526	622	
M		135	168	190	240	280	360	385	622	412	
N		90	114	155	160	190	210	406	412	508	
H		97	130	150	176	217	240	280	360	360	
h		45	61.5	70	87	102	115	121	155	155	
h ₁		12	14	16	20	25	30	32	38	42	
d(k6)		16	20	25	28	32/34★	38	38	45	48	
d ₁		14	17	21	28	35	35	45	48	48	
键GB1096 keyGB1096		5×5×32	6×6×45	8×7×45	8×7×45	10×8×50	10×8×70	10×8×90	14×9×90	14×9×90	
L		32	45	52	52	58	80	100	100	100	
L ₁		110.5	132	172	213.5	221	265	310	380	380	
L ₂		190	228	280	322	355	430	558	610	610	
D		48	65	80	100	130	150	170	240	240	
D ₁		98	122	150	185	205	260	300	420	420	
D ₂		70	90	100	120	150	180	220	310	310	
D ₃		45	60	76	83	114	121	145	180	220	
D ₄		98	110	130	170	200	210	260	370	370	
AM×AM		50×50	60×60	80×80	80×80	120×120	150×150	150×150	200×200	200×200	
A ₁		45	56	67	72	97	120	135	190	190	
A ₂		50	58	63.5	95	95	135	160	166	166	
A ₃		65	80	86	122.5	130	170	205	223	223	
A ₄		—	—	—	—	—	—	—	206	206	
b ₁		20	25	30	35	35	35	45	60	60	
b ₂		12	12	12	15	19	20	25	30	30	
F		8.5	12	6.5	6	8	10	20	36.5	40	
螺 杆 头 部 型 式 screw head form	I	d ₂ (k6)	20	25	40	50	70	80	95	130	150
		I ₁	30	40	50	58	63	80	90	120	140
		I ₂	45	51	73.5	80	92	100	120	150	170
	II	D ₇	98	122	150	185	205	260	300	370	400
		D ₈	75	85	105	140	155	200	225	280	310
		D ₉	40	50	65	90	100	130	150	200	230
		d ₃	14	17	21	26	27	33	39	48	48
		F ₁	12	18	20	20	25	30	35	75	80
		F ₂	30	40	50	60	63	80	90	120	140
		F ₃	45	51	73.5	80	92	100	120	150	170
	III	d ₄	M22×1.5-6g	M30×2-6g	M42×2-6g	M48×2-6g	M70×3-6g	M80×3-6g	M95×3-6g	M130×4-6g	M150×4-6g
		I ₃	30	39	50	60	63	80	90	120	140
		I ₄	45	51	73.5	80	92	100	120	150	170
	IV	d ₅	50	65	90	110	130	150	180	220	260
		d ₆ (H8)	25	35	50	60	70	80	80	90	95
		b ₃	30	42	60	75	90	105	120	160	180
		I ₅	25	37.5	50	60	70	80	80	90	100
		I ₆	50	75	100	120	140	160	160	180	200
		I ₇	85	117	153.5	175	204	240	270	330	360
		I ₈	70	105	130	150	175	220	240	300	335

★ φ32为 E-SWL25所要求的轴头尺寸, φ34为QWL25所要求的轴头尺寸。

★ φ32 is the shaft head size demanded by E-SWL25, φ34 is the shaft head size demanded by QWL25.

3.2 2型升降机的外形结构尺寸见图2和表2 2 type jack outline size refer to chart 1 and table 2

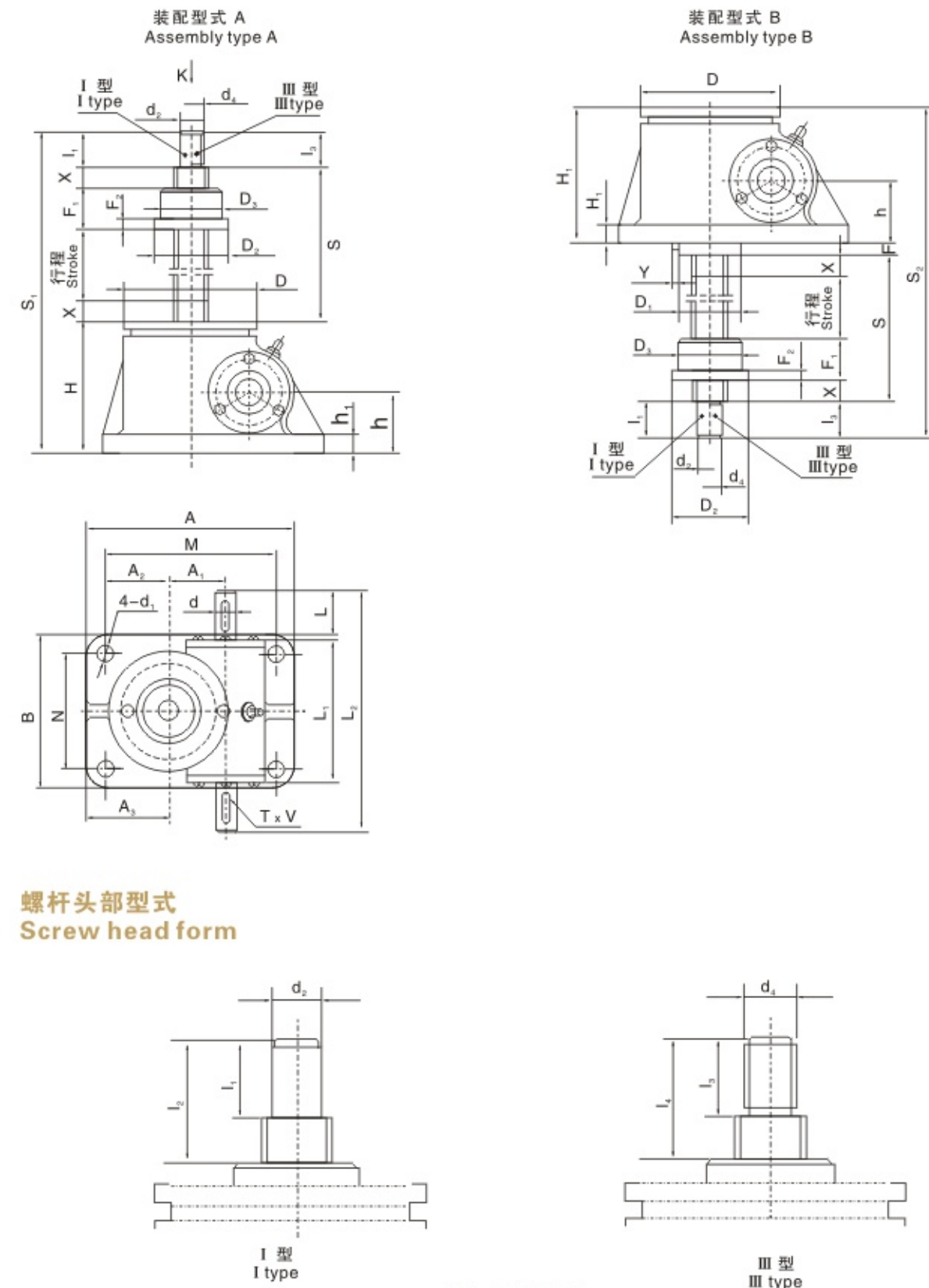
螺杆头部型式
Screw head form图21 2型结构形式
2 type configuration type



表2 table2

mm

型号 type	E-SWL2.5	E-SWL5	E-SWL10/15	E-SWL20	E-SWL25	E-SWL35	E-SWL50	E-SWL100	E-SWL120
S	行程+85 stroke+85	行程+100 stroke+100	行程+125 stroke+125	行程+150 stroke+150	行程+170 stroke+170	行程+205 stroke+205	行程+250 stroke+250	行程+320 stroke+320	行程+330 stroke+330
S ₁	行程+215 stroke+215	行程+270 stroke+270	行程+335 stroke+335	行程+404 stroke+404	行程+476 stroke+476	行程+535 stroke+535	行程+603 stroke+603	行程+815 stroke+815	行程+845 stroke+845
S ₂	行程+238 stroke+238	行程+300 stroke+300	行程+359 stroke+359	行程+430 stroke+430	行程+519 stroke+519	行程+580 stroke+580	行程+685 stroke+685	行程+880 stroke+880	行程+910 stroke+910
A	165	212	235	295	350	430	475	526	526
B	120	155	200	215	260	280	500	622	622
M	135	168	190	240	280	360	385	412	412
N	90	114	155	160	190	210	406	508	508
H	100	131	160	190	226	250	290	375	375
H ₁	97	131	150	181	211	250	280	360	360
h	45	61.5	70	87	102	115	121	155	155
h ₁	12	14	16	20	25	30	32	38	42
d(k6)	16	20	25	28	34/32★	38	38	45n6	48m6
d ₁	14	17	21	28	35	35	45	48	48
键GB1096 keyGB1096	5×5×32	6×6×45	8×7×45	8×7×45	10×8×50	10×8×70	10×8×90	14×9×90	14×9×90
L	32	45	52	52	56	80	100	100	100
L ₁	110.5	132	172	213.5	221	265	314	380	380
L ₂	190	228	280	322	355	430	558	610	610
D	98	122	150	185	205	260	300	420	420
D ₁	68	83	110	140	160	180	200	260	260
A ₁	45	56	67	72	97	120	135	190	190
A ₂	50	58	63.5	95	95	135	160	166	166
A ₃	65	80	86	122.5	130	170	205	223	223
A ₄	—	—	—	—	—	—	—	206	206
F	26	30	34	39	52	45	65	80	80
安全裕度X safety tolerance	20	20	25	25	25	30	40	50	50
Y	3	3	1	3	3	4	5	6	6
活动螺母 movable	D ₂	80	87	110	120	155	190	220	300
	D ₃ (h9)	50	70	90	90	130	150	180	240
	F ₁	45	60	75	100	120	145	170	220
	F ₂	15	18	25	30	35	50	70	80
螺杆头部形式 screw head form	I	D ₂ (k6)	20	25	40	50	70	80	95
		L ₁	30	40	50	60	80	108	127
	III	d ₄	M22×1.5-6g	M30×2-6g	M42×2-6g	M48×2-6g	M70×3-6g	M80×3-6g	M95×3-6g
		I ₁	30	39	50	60	63	80	90
		d ₄	M22×1.5-6g	M30×2-6g	M42×2-6g	M48×2-6g	M70×3-6g	M80×3-6g	M95×3-6g
		I ₁	30	39	50	60	63	80	90

★ φ32为 E-SWL25所要求的轴头尺寸, φ34为QWL25所要求的轴头尺寸。

★ φ32 is the shaft head size demanded by E-SWL25, φ34 is the shaft head size demanded by QWL25.

性能参数 Performance parameter

4.1 升降机的主要性能参数见表3 parameter of jack, refer to table 3

表3 table 3

型号 type	E-SWL2.5	E-SWL5	E-SWL10/15	E-SWL20	E-SWL25	E-SWL35	E-SWL50	E-SWL100	E-SWL120
最大起升为kN max lifting strength kN	25	50	100/150	200	250	350	500	1000	1200
最大拉力kN max pull force kN	25	50	99	166	250	350	500	1000	1200
螺杆螺纹尺寸 acrew thread size	Tr30×6	Tr40×7	Tr58×12	Tr65×12	Tr90×16	Tr100×18	Tr120×20	Tr160×23	Tr180×25
蜗轮蜗杆传动比 (p) drive ratio of worm and gear(p)	6:1	6:1	7 $\frac{2}{3}$:1	8:1	10 $\frac{2}{3}$:1	10 $\frac{2}{3}$:1	10 $\frac{2}{3}$:1	12:1	12:1
蜗杆每转行程mm (p) worm stroke per revolution mm(p)	1.0	1.167	1.565	1.5	1.5	1.69	1.87	1.92	2.083
蜗轮蜗杆转动比 (M) rotational speed ratio of worm and gear(M)	24:1	24:1	23:1	24:1	32:1	32:1	32:1	36:1	36:1
蜗杆每转行程mm(M) worm stroke per revolution mm(M)	0.250	0.292	0.5	0.5	0.5	0.56	0.625	0.638	0.694
蜗杆扭矩N.m worm torqueN.m	见图5-13								
拉力负荷时螺杆 的最大伸长mm max elongation of screw under pull load	1500	2000	2500	3000	3500	4000	5500	6500	7000
侧向力负荷时螺 杆的最大伸长mm max elongation of screw under side force load	见图4-10								
压力负荷时螺 杆的最大伸长mm max elongation of screw under pressure load	见图11-17								
最大许用功率kW max safety power kW	1.45	2.59	3.47	4.02	5.38	13.06	13.9	28.5	62
普通速比 (p) 总效率% general efficiency under normal speed ratio	23	21	23	21	19	18	15	13	12
慢速比 (M) 总效率% general efficiency under slow speed ratio	14	12	15	13	11	11	11	10	8
润滑油量kg lubrication volume	0.1	0.25	0.5	0.75	1.1	1.9	2.2	2.5	2.5
不加行程的质量kg weight without stroke	7.3	16.2	25	36	70.5	87	420	1010	1350
螺杆每100mm的重量kg screw weight per 100mm	0.45	0.82	1.67	2.15	4.15	5.20	7.45	13.6	17.3

注: 1.最大许用功率是在环境温度为20°C,工作持续率为20%h, 蜗杆转速为1500r/min的条件下的参数。

2.总效率为油脂润滑条件下的参数。

3.工作环境温度-20°C~+80°C。

4.在静止状态一般可以自锁。

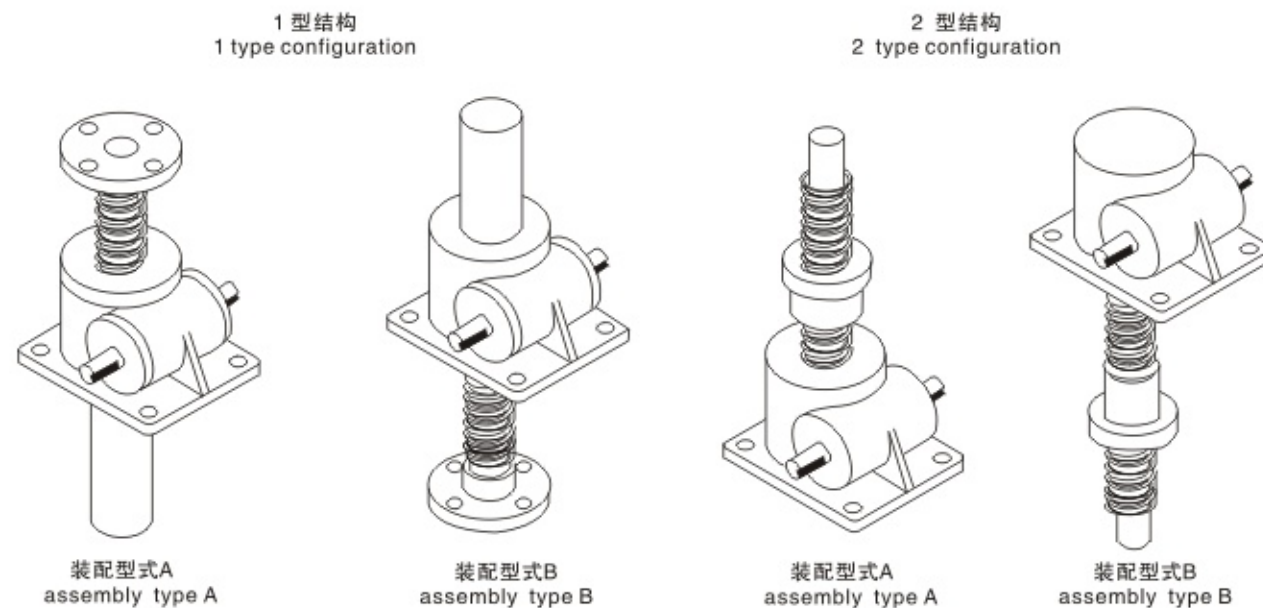
Note: 1.the max safety power means this parameter got in this condition; ambient temperature is 20°C, continuous running rate is 20%h, worm rotational speed is 1500r/min

2.general efficiency is a parameter in the grease-lubricated case

3.ambient temperature is -20~+80°C

4.Can be self-locked in stillness state

装配型式与结构型式 Assembly type and configuration form



升降机的选择 Jack selection

升降机的主要选择参数为：起升负荷（KN）、螺杆行程（mm）、起升速度（m/min）。

下面给出两种选择方法：

The main parameter to select jacks as so: lifting load (KN), screw stroke (mm), lifting speed (m/min)

Two methods as follows

6.1 选择方法一（仅作参考）Method 1 (for refers only)

图11~图17给出了允许弯曲力矩下，。螺杆长度与极限负荷的关系。根据螺杆行程和起升负荷，查图12~图17，查出所需升降机的型号。再根据查出的升降机型号和起升负荷查表4（表4是各种型号在不同的起升负荷下所允许的起升速度），若查出的起升速度满足不了要求，则须选用型号大一规格的升降机，直至满足要求。

Chart 11~chart 17 show the relation between the screw length and limit load under the safety flexural torque, according to screw stroke and lifting load, see chart 12~chart 17, find out the jack type needed. Then according to the jack type and lifting load table 4 check out if the type meets the need, if the type can't meet the need, then should select higher grade one, till meets the need. (table 4 shows the safety lifting speed of every type under the different lifting load)

示例 已知：起升负荷为F=20KN，螺杆行程为200mm，起升速度V=0.45m/min，试求所需的升降机。

选择升降机：根据F=20KN，行程200mm，查图12，选择SWL2.5升降机，查表4起升速度V=0.3m/min，满足不了要求。若选择SWL5升降机，查表4起升速度V=0.7m/min，满足要求，应选择SWL5型升降机。

Example Known conditions: lifting load F=20KN, screw stroke is 200mm, lifting speed

V=0.45m/min, select the proper jack

Selection process: according to F=20KN, stroke is 200mm, refer to chart 12, select SWL2.5 type, then refer to table 4, lifting speed V=0.3m/min which can't meet the need, so select SWL5 type, refer to table 4 again, the lifting speed V=0.7m/min, meet the need, so should select SWL5 type.

6.2 选择方法二 Method 2

表5~表13是各种型号螺杆传动的许用起升速度、扭矩和功率，其参数适用于环境温度为20℃，工作持续率为20%/h或30%/10min的条件下；对粗线范围内的参数，使用时升降机会产生过热，应尽量避免选用，否则必须采取有效措施。根据螺杆起升负荷及起升速度，按照下列公式计算升降机的驱动功率，再查表5~表13，查出所需升降机的型号。

Table 5~table 13 is all the sorts of safety lifting speed, torque and power of screw drive, these parameters suitable for this condition; ambient temperature is 20℃, continuous running rate is 20%/h or 30%/10min. those within the thick lines, according to them to select the jack, the jack will overheat, so should avoid selecting speed, calculate the jack's drive power as follow formula, then refer to table 5~table 13, find out the jack type.

示例 以6.1示例的已知条件进行选择

Example refer to example 6.1

第一步：升降机驱动功率的计算：

First step: calculate drive power

$$\text{驱动功率: } P = \frac{F_a \times v}{60 \eta}$$

$$\text{Drive power: } P = \frac{F_a \times v}{60 \eta}$$

式中：
In formula:

P——驱动功率，kW
drive power, kW
F_a——起升力（或拉力），KN
lifting strength
V——起升速度，m/min
lifting speed, m/min
η——传递总效率（见表3）
general efficiency of transmission (see table 3)

$$\text{驱动扭矩: } M_t = 9550 \times \frac{P}{n}$$

$$\text{Drive torque: } M_t = 9550 \times \frac{P}{n}$$

式中：
In formula:

M_t——驱动扭矩，N.m
drive torque
P——驱动功率，kW
drive power
n——转速，r/min
rotational speed

$$\text{根据公式: 驱动功率 } P = \frac{20 \times 0.45}{60 \times 0.21} = 0.714$$

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



第二步: 查表5, 蜗杆在500r/min, 起升速度为0.5m/min, 起升负荷为20KN时, 许用功率为0.72kW,在粗线范围内, 不选用。

Second step: refer to table 5, worm rotational speed is 500r/min, lifting speed is 0.5m/min, lifting load is 20kn, this moment, the safety power is 0.72kw, within thick lines, so can't select it.

第三步: 查表6, 蜗杆在500r/min,起升速度为0.583m/min, 起升负荷为20KN时, 许用功率为0.9kW,满足要求, 应选择E-SWL5型升降机。

Third step: refer to table 6, worm rotational speed is 500r/min, lifting speed is 0.5m/min, lifting load is 20kn, this moment, the safety power is 0.9kw, meet the need, so should select E-SWL type.

表 4 table 4

型号 type	起升力F KN lifting strength	普通速比 normal speed ratio		慢速比 slow speed ratio	
		起升速度V m/min lifting speed	蜗杆转速n r/min worm rotational speed	起升速度V _m m/min lifting speed	蜗杆转速n _m r/min worm rotational speed
E-SWL2.5	25	< 0.05	< 50	< 0.0125	< 50
	20	0.3	300	0.15	600
	15	0.5	500	0.1875	750
	10	0.75	750	0.25	1000
	5	1.5	1500	0.45	1800
	2.5	1.8	1800	0.45	1800
E-SWL5	50	< 0.0583	< 50	< 0.0146	< 50
	40	0.35	300	0.0175	600
	30	0.35	300	0.219	750
	20	0.7	600	0.292	1000
	10	1.166	1000	0.525	1800
	5	2.1	1800	0.525	1800
E-SWL10/15	100	0.288	200	0.15	300
	75	0.432	300	0.25	500
	50	0.432	300	0.375	750
	35	0.864	600	0.5	1000
	20	1.44	1000	0.9	1800
	10	2.592	1800	0.9	1800
	5	2.592	1800	0.9	1800
E-SWL20	200	0.15	100	0.1	200
	160	0.15	100	0.15	200
	120	0.3	200	0.15	300

续表4 continuous 4

E-SWL20	100	0.3	200	0.25	500
	75	0.45	300	0.375	750
	50	0.75	500	0.5	1000
	25	1.5	1000	0.9	1800
E-SWL25	250	0.075	50	0.025	50
	200	0.15	100	0.1	200
	160	0.15	100	0.15	300
	130	0.3	200	0.15	300
	100	0.45	300	0.25	500
	75	0.45	300	0.3	600
	50	0.9	600	0.5	1000
E-SWL35	350	< 0.075	< 50	< 0.025	< 50
	300	0.075	50	0.05	100
	250	0.15	100	0.15	300
	200	0.3	200	0.15	300
	150	0.3	200	0.25	500
	100	0.6	400	0.375	750
E-SWL50	50	1.125	750	0.5	1000
	500	< 0.08	< 50	< 0.03	< 50
	450	0.08	50	0.03	50
	400	0.16	100	0.06	100
	300	0.24	150	0.188	300
	200	0.48	300	0.25	400
E-SWL100	100	0.8	500	0.625	1000
	1000	< 0.08	< 50	< 0.032	< 50
	900	0.08	50	0.032	50
	800	0.159	100	0.064	100
	600	0.238	150	0.096	150
	400	0.317	200	0.192	300
E-SWL120	200	0.635	400	0.639	1000
	1200	0.104	50	0.035	50
	1000	0.208	100	0.069	100
	900	0.417	200	0.139	200
	800	0.625	300	0.277	400
	600	1.042	500	0.347	500
	400	1.563	750	0.521	750
	200	2.083	1000	0.694	1000



表5 table5 (E-SWL2.5)

蜗杆转速 worm rotat -lonal speed n r/min	起升速度 lifting speed v m/min	起升力 lifting strength KN											
		25			15			10			5		
		P	M		P	M		P	M		P	M	
		N.m	kW	N.m	N.m	kW	N.m	N.m	kW	N.m	N.m	kW	N.m
1500	1.500	18	2.7	7.1	1.2	14	2.2	5.7	0.89	11	1.7	4.3	0.67
		18	2.7	7.1	1.2	14	2.2	5.7	0.89	11	1.7	4.3	0.67
1000	1.000	18	1.8	7.1	0.74	14	1.5	5.7	0.60	11	1.1	4.3	0.45
		18	1.8	7.1	0.74	14	1.5	5.7	0.60	11	1.1	4.3	0.45
750	0.750	18	1.4	7.1	0.56	14	1.1	5.7	0.45	11	0.82	4.3	0.33
		18	1.4	7.1	0.56	14	1.1	5.7	0.45	11	0.82	4.3	0.33
500	0.500	18	0.91	7.1	0.37	14	0.72	5.7	0.30	11	0.54	4.3	0.22
		18	0.91	7.1	0.37	14	0.72	5.7	0.30	11	0.54	4.3	0.22
300	0.300	18	0.54	7.1	0.22	14	0.43	5.7	0.18	11	0.33	4.3	0.13
		18	0.54	7.1	0.22	14	0.43	5.7	0.18	11	0.33	4.3	0.13
200	0.200	18	0.36	7.1	0.15	14	0.29	5.7	0.12	11	0.22	4.3	0.09
		18	0.36	7.1	0.15	14	0.29	5.7	0.12	11	0.22	4.3	0.09
100	0.100	18	0.18	7.1	0.07	14	0.14	5.7	0.06	11	0.11	4.3	0.05
		18	0.18	7.1	0.07	14	0.14	5.7	0.06	11	0.11	4.3	0.05
50	0.050	18	0.09	7.1	0.05	14	0.07	5.7	0.05	11	0.05	4.3	0.05
		18	0.09	7.1	0.05	14	0.07	5.7	0.05	11	0.05	4.3	0.05

表6 table6 (E-SWL5)

蜗杆转速 worm rotat -lonal speed n r/min	起升速度 lifting speed v m/min	起升力 lifting strength KN											
		25			15			10			5		
		P	M		P	M		P	M		P	M	
		N.m	kW	N.m	N.m	kW	N.m	N.m	kW	N.m	N.m	kW	N.m
1500	1.750	44.2	6.9	19.3	3.0	35.4	5.6	15.5	2.4	26.5	4.2	11.6	1.8
		44.2	6.9	19.3	3.0	35.4	5.6	15.5	2.4	26.5	4.2	11.6	1.8
1000	1.167	44.2	4.6	19.3	2.0	35.4	3.7	15.5	1.6	26.5	2.8	11.6	1.2
		44.2	4.6	19.3	2.0	35.4	3.7	15.5	1.6	26.5	2.8	11.6	1.2
750	0.875	44.2	3.5	19.3	1.5	35.4	2.8	15.5	1.2	26.5	2.1	11.6	0.9
		44.2	3.5	19.3	1.5	35.4	2.8	15.5	1.2	26.5	2.1	11.6	0.9
500	0.583	44.2	2.3	19.3	1.0	35.4	1.9	15.5	0.8	26.5	1.4	11.6	0.6
		44.2	2.3	19.3	1.0	35.4	1.9	15.5	0.8	26.5	1.4	11.6	0.6
300	0.350	44.2	1.4	19.3	0.6	35.4	1.1	15.5	0.5	26.5	0.8	11.6	0.4
		44.2	1.4	19.3	0.6	35.4	1.1	15.5	0.5	26.5	0.8	11.6	0.4
200	0.233	44.2	0.9	19.3	0.4	35.4	0.7	15.5	0.3	26.5	0.6	11.6	0.2
		44.2	0.9	19.3	0.4	35.4	0.7	15.5	0.3	26.5	0.6	11.6	0.2
100	0.117	44.2	0.5	19.3	0.2	35.4	0.4	15.5	0.2	26.5	0.3	11.6	0.1
		44.2	0.5	19.3	0.2	35.4	0.4	15.5	0.2	26.5	0.3	11.6	0.1
50	0.058	44.2	0.2	19.3	0.1	35.4	0.2	15.5	0.1	26.5	0.1	11.6	0.1
		44.2	0.2	19.3	0.1	35.4	0.2	15.5	0.1	26.5	0.1	11.6	0.1

表7 table7 (E-SWL10/15)

蜗杆转速 worm rotat -lonal speed n r/min	起升速度 lifting speed v m/min	起升力 lifting strength KN											
		100			80			60			40		
		P	M		P	M		P	M		P	M	
		N.m	kW	N.m	N.m	kW	N.m	N.m	kW	N.m	N.m	kW	N.m
1500	2.348	108	17	53	8.3	87	14	43	6.7	65	11	32	5.0
		108	17	53	8.3	87	14	43	6.7	65	11	32	5.0
1000	1.565	108	12	53	5.6	87	9.1	43	4.4	65	6.8	32	3.3
		108	12	53	5.6	87	9.1	43	4.4	65	6.8	32	3.3
750	1.174	108	8.5	53	4.2	87	6.8	43	3.3	65	5.1	32	2.5
		108	8.5	53	4.2	87	6.8	43	3.3	65	5.1	32	2.5
500	0.783	108	5.7	53	2.8	87	4.5	43	2.2	65	3.4	32	1.7
		108	5.7	53	2.8	87	4.5	43	2.2	65	3.4	32	1.7
300	0.470	108	3.4	53	1.7	87	2.7	43	1.3	65	2.0	32	1.0
		108	3.4	53	1.7	87	2.7	43	1.3	65	2.0	32	1.0
200	0.313	108	2.3	53	1.1	87	1.8	43	0.9	65	1.4	32	0.7
		108	2.3	53	1.1	87	1.8	43	0.9	65	1.4	32	0.7
100	0.157	108	1.1	53	0.6	87	0.9	43	0.4	65	0.7	32	0.3
		108	1.1	53	0.6	87	0.9	43	0.4	65	0.7	32	0.3
50	0.078	108	0.6	53	0.3	87	0.5	43	0.2	65	0.3	32	0.2
		108	0.6	53	0.3	87	0.5	43	0.2	65	0.3	32	0.2

表8 table8 (E-SWL20)

蜗杆转速 worm rotat -lonal speed n r/min	起升速度 lifting speed v m/min	起升力 lifting strength KN											
		200			160			120			100		
		P	M		P	M		P	M		P	M	
		N.m	kW	N.m	N.m	kW	N.m	N.m	kW	N.m	N.m	kW	N.m
1500	2.250	228	36	123	20	182	29	98	16	137	22	74	12
		228	36	123	20	182	29	98	16	137	22	74	12
1000	1.500	228	24	123	13	182	19	98	11	137	15	74	7.7
		228	24	123	13	182	19	98	11	137	15	74	7.7
750	1.125	228	18	123	9.6	182	15	98	7.7	137	11	74	5.8
		228	18	123	9.6	182	15	98	7.7	137	11	74	5.8
500	0.750	228	12	123	6.4	182	9.5	98	5.1	137	7.1	74	3.8
		228	12	123	6.4	182	9.5	98	5.1	137	7.1	74	3.8
300	0.450	228	7.1	123	3.8	182	5.7	98	3.1	137	4.3	74	2.3
		228	7.1	123	3.8	182	5.7	98	3.1	137	4.3	74	2.3
200	0.300	228	4.8	123	2.6	182	3.8	98	2.1	137	2.9	74	1.5
		228	4.8	123	2.6	182	3.8	98	2.1	137	2.9	74	1.5
100	0.150	228	2.4	123	1.3	182	1.9	98	1.0	137	1.4	74	0.8
		228	2.4	123	1.3	182	1.9	98	1.0	137	1.4	74	0.8
50	0.075	228	1.2	123	0.6	182	1.0	98	0.5	137	0.7	74	0.4
		228	1.2	123	0.6	182	1.0	98	0.5	137	0.7	74	0.4





表9 table9 (E-SWL25)

蜗杆转速 worm rotat -ional speed n r/min	起升力 lifting strength KN											
	250		200		160		120		100		75	
	P	M	P	M	P	M	P	M	P	M	P	M
起升速度 lifting speed v m/min	N.m	kW	N.m	kW	N.m	kW	N.m	kW	N.m	kW	N.m	kW
1500	314	33	181	19	252	27	145	16	201	22	116	13
1000	314	25	181	15	252	20	145	12	201	16	116	9.1
750	314	17	181	9.5	252	14	145	7.6	201	11	116	6.1
500	314	14	181	7.6	252	11	145	6.1	201	8.4	116	4.8
300	314	9.9	181	5.7	252	7.9	145	4.5	201	6.3	116	3.6
200	314	6.6	181	3.8	252	5.3	145	3.0	201	4.2	116	2.4
100	314	3.3	181	1.9	252	2.6	145	1.5	201	2.1	116	1.2
50	314	1.6	181	0.9	252	1.3	145	0.8	201	1.1	116	0.6

表10 table10 (E-SWL35)

蜗杆转速 worm rotat -ional speed n r/min	起升力 lifting strength KN											
	350		300		250		200		150		100	
	P	M	P	M	P	M	P	M	P	M	P	M
起升速度 lifting speed v m/min	N.m	kW	N.m	kW	N.m	kW	N.m	kW	N.m	kW	N.m	kW
1500	464	49	253	27	332	35	181	19	266	28	145	16
1000	464	37	253	20	332	26	181	15	266	21	145	12
750	464	25	253	14	332	18	181	9.5	266	14	145	7.6
500	464	20	253	11	332	14	181	7.6	266	12	145	6.1
300	464	15	253	8.0	332	11	181	5.7	266	8.3	145	4.5
200	464	9.8	253	5.3	332	7.0	181	3.8	266	5.6	145	3.0
100	464	4.9	253	2.7	332	3.5	181	1.9	266	2.8	145	1.5
50	464	2.5	253	1.3	332	1.8	181	0.9	266	1.4	145	0.8

表11 table11(E-SWL50)

蜗杆转速 worm rotat -ional speed n r/min	起升力 lifting strength KN											
	500		450		400		350		300		200	
	P	M	P	M	P	M	P	M	P	M	P	M
起升速度 Lifting speed v m/min	N.m	kW	N.m	kW	N.m	kW	N.m	kW	N.m	kW	N.m	kW
1500	848	88	448	47	679	71.1	353	37	594	62.2	316	33.1
1000	848	67	448	35.5	679	53.3	353	28.4	594	46.5	316	24.8
750	848	44	448	23.7	679	35.5	353	18.9	594	31	316	16.6
500	848	35	448	18.9	679	28.4	353	15.2	594	24.8	316	13.3
300	848	26	448	14.2	679	21.3	353	11.4	594	18.6	316	9.9
200	848	18	448	9.5	679	14.2	353	7.5	594	12.4	316	6.6
100	848	8.9	448	4.5	679	7.1	353	3.6	594	6.2	316	3.2
50	848	4.4	448	2.2	679	3.5	353	1.8	594	3.1	316	1.6

表12 table12(E-SWL100)

蜗杆转速 worm rotat -ional speed n r/min	起升力 lifting strength KN											
	1000		900		800		700		600		400	
	P	M	P	M	P	M	P	M	P	M	P	M
起升速度 lifting speed v m/min	N.m	kW	N.m	kW	N.m	kW	N.m	kW	N.m	kW	N.m	kW
1500	1938	203	1012	106	1747	183	915	96	1554	162	813	85
1000	1938	152	1012	80	1747	137	915	72	1554	122	813	64
750	1938	102	1012	53	1747	91	915	48	1554	81	813	42
500	1938	81.4	1012	42.5	1747	73	915	38	1554	65	813	34
300	1938	61	1012	32	1747	55	915	28.8	1554	49	813	25
200	1938	40.6	1012	21	1747	36	915	19.2	1554	32.5	813	17
100	1938	20.3	1012	10.6	1747	18.3	915	9.6	1554	16	813	8.5
50	1938	10.2	1012	5.3	1747	9.1	915	4.8	1554	8	813	4.2



表13 table13(E-SWL120)

蜗杆转速 worm rotat- ional speed n r/min	起升速度 lifting speed v m/min	起升力 lifting strength KN											
		1200			1000			900			800		
		P		M	P		M	P		M	P		M
1500	2.083	N.m	3315	347	N.m	3315	347	N.m	3315	347	N.m	3315	347
1000	1.563	N.m	3315	260	N.m	3315	260	N.m	3315	260	N.m	3315	260
750	1.042	N.m	3315	173	N.m	3315	173	N.m	3315	173	N.m	3315	173
500	0.833	N.m	3315	138	N.m	3315	138	N.m	3315	138	N.m	3315	138
300	0.625	N.m	3315	104	N.m	3315	104	N.m	3315	104	N.m	3315	104
200	0.417	N.m	3315	69	N.m	3315	69	N.m	3315	69	N.m	3315	69
100	0.208	N.m	3315	34	N.m	3315	34	N.m	3315	34	N.m	3315	34
50	0.104	N.m	3315	17	N.m	3315	17	N.m	3315	17	N.m	3315	17

7 蜗杆副采用稀油润滑时的总效率 η (仅用于2型) 见表14

The general efficiency under the worm pair lubricated with thin oil (for 2nd type only) refer to table 14

表14 talbe 14

蜗杆转速 worm rotat- ional speed r/min	型号E-SWL type E-SWL											
	2.5	2.5m	5	5M	10/15	10M/15M	20	20M	25	25M	35	35M
1500	0.283	0.214	0.257	0.188	0.29	0.236	0.273	0.275	0.262	0.21	0.248	0.204
1000	0.279	0.206	0.252	0.18	0.285	0.227	0.268	0.217	0.257	0.2	0.243	0.195
750	0.276	0.201	0.249	0.175	0.282	0.222	0.266	0.212	0.253	0.194	0.24	0.189
500	0.272	0.194	0.245	0.168	0.277	0.215	0.262	0.205	0.249	0.187	0.236	0.183
300	0.267	0.187	0.241	0.161	0.272	0.207	0.257	0.198	0.243	0.179	0.231	0.175
100	0.257	0.172	0.231	0.146	0.261	0.191	0.247	0.183	0.233	0.164	0.222	0.16
50	0.251	0.164	0.225	0.138	0.255	0.183	0.242	0.175	0.226	0.155	0.216	0.152

8 蜗杆轴伸的许用径向力 The safety radial strength of worm axial elongation

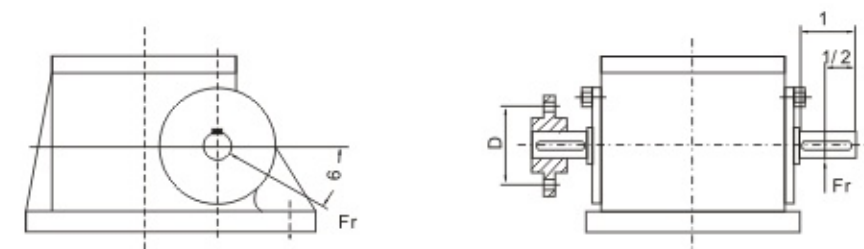
8.1 蜗杆轴伸上, 由于安装齿轮、链轮或带轮所产生的径向力 F_r , 其最大许用力与起升力和型号有关。在1/2处所许用的最大径向力和扭矩见图3和表15。At the worm axial elongation, the radial strength F_r caused by installing gear, chain wheel or belt wheel, the Max safety strength has relation to lifting strength and jack type. The Max safety radial strength and torque at the half point, please see chart 3 and table 15.图3
chart 3

表15 talbe 15

型号 type	F_{rmax} N	M_{tmax} N.m
E-SWL2.5/2.5M	350	18
E-SWL5/5M	750	44.2
E-SWL10/10M/15/15M	1000	108
E-SWL20/20M	1300	182
E-SWL25/25M	2000	314
E-SWL35/35M	2300	398

注: 表中参数是按 $\phi \approx 30^\circ$ 或 330° 的计算。Note: parameters in the table counted as $\phi \approx 30^\circ$ or 330° .

8.2 齿轮或带轮的最小直径:

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

The Min diameter of gear or belt wheel

式中: D_{min} ——齿轮或带轮的最小直径, m

In Formula: the Min diameter of gear or belt wheel, m

P——驱动功率, kW
Drive power, kW F_{rmax} ——最大径向力, N
Max radial strength, N

n——蜗杆转速, r/min

Worm rotational speed, r/min

Mt——驱动扭矩, N.m

Drive torques, N.m

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



螺杆许用侧向力Fs和轴向力Fa与行程的关系见图4-10

Relation between the safety lateral strength, axial strength and stroke, refer to chart 4-10

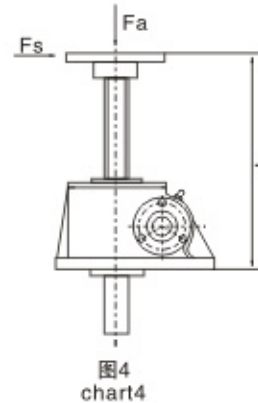


图4
chart4

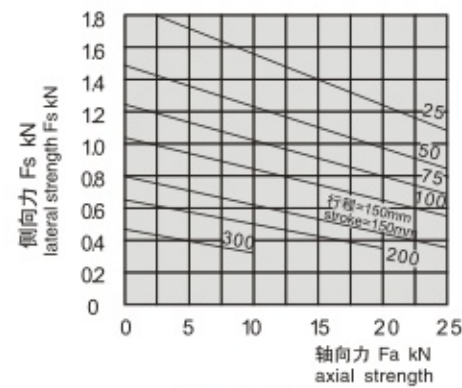


图5 chart5 SWL2.5

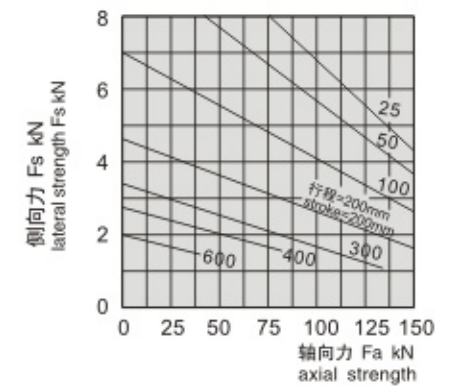


图7 chart7 SWL10/15

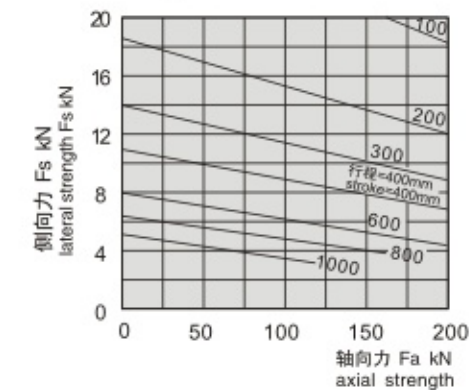


图9 chart9 SWL25

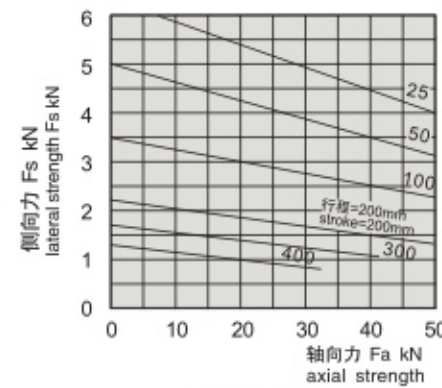


图6 chart6 SWL5

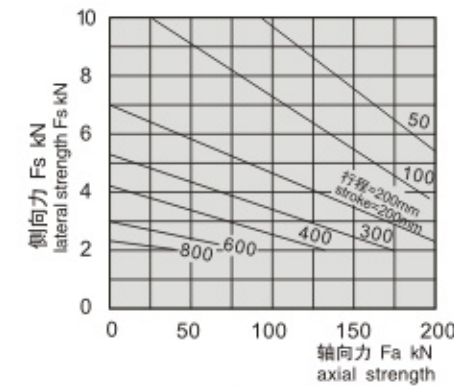


图8 chart8 SWL20

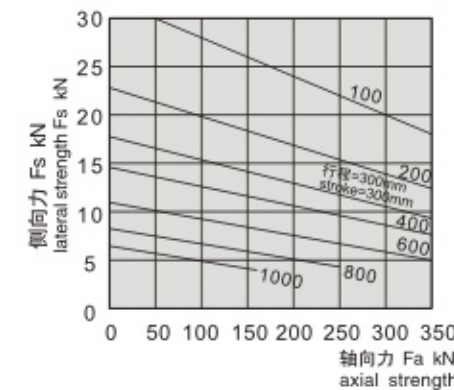
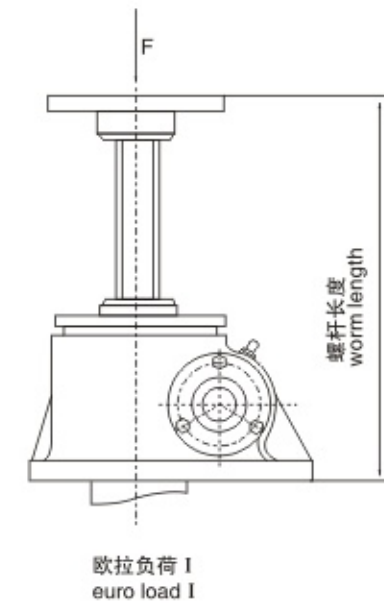


图10 chart10 SWL35

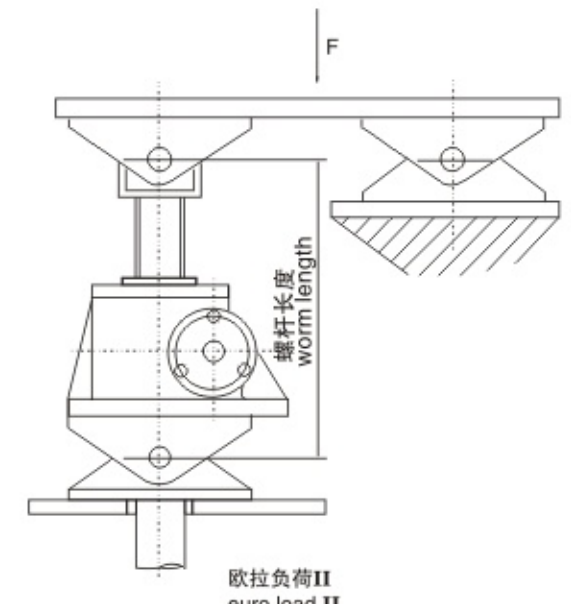
螺杆长度与极限负荷的关系 The relation between screw length and limit load

在欧拉负荷I和II情况下, 螺杆长度与极限负荷的关系见图11~图17.

Under euro load 1 and 2, the relation between screw length and limit load, see chart 11-17

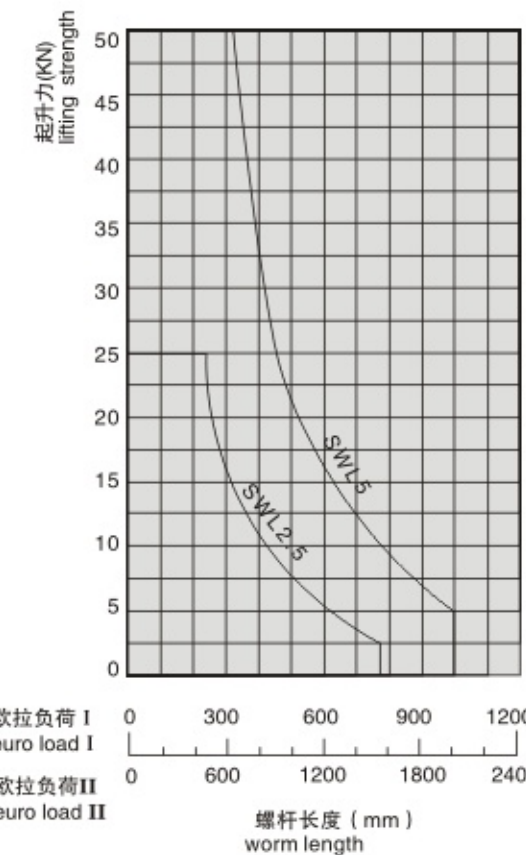


欧拉负荷 I
euro load I



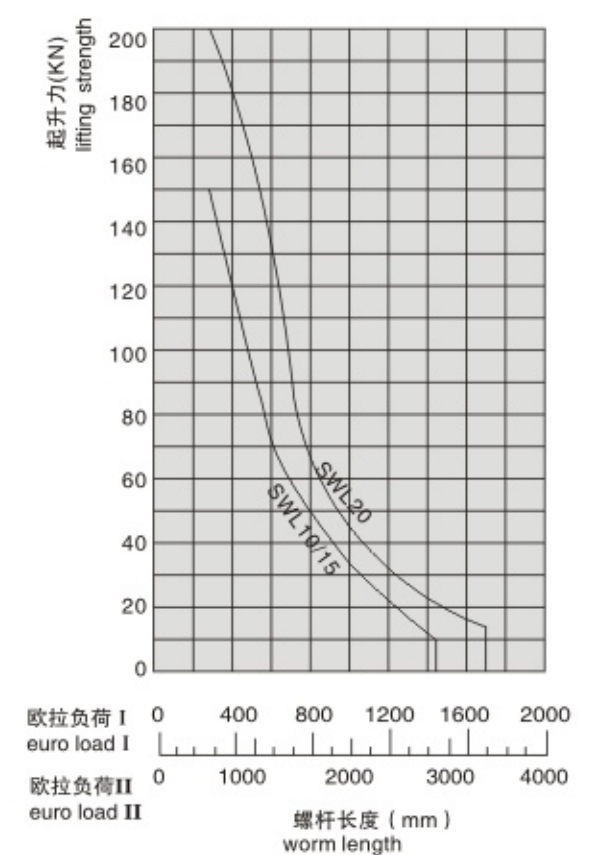
欧拉负荷 II
euro load II

图11
Chart11



欧拉负荷 I
euro load I
欧拉负荷 II
euro load II

图12
chart12



欧拉负荷 I
euro load I
欧拉负荷 II
euro load II

图13
Chart13



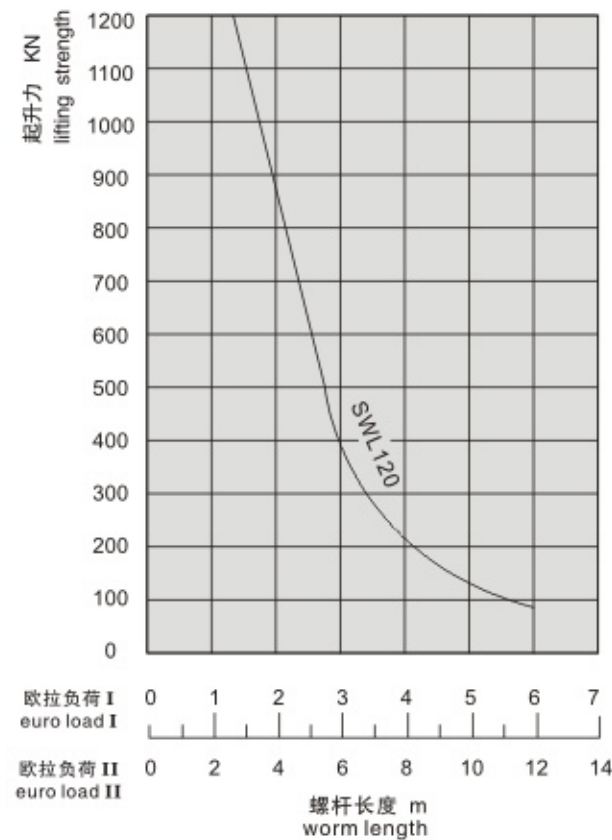
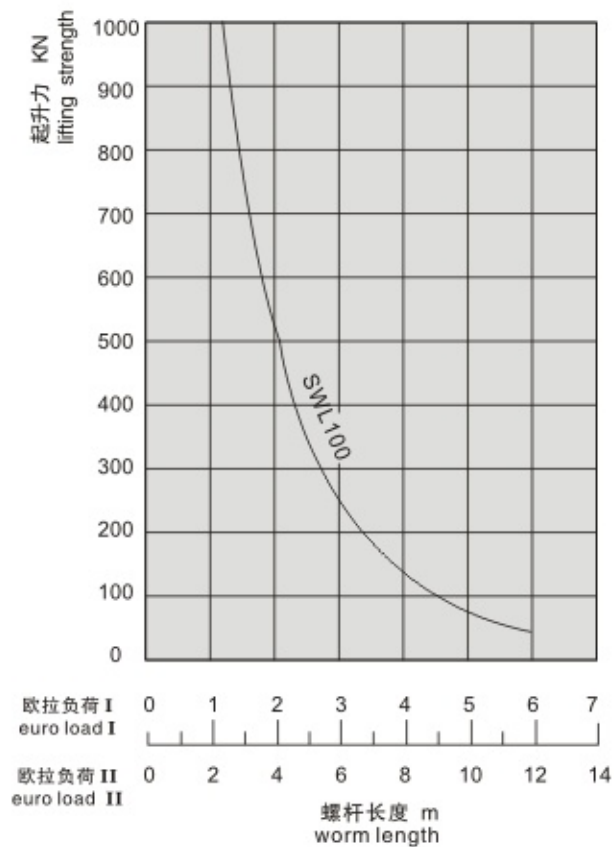
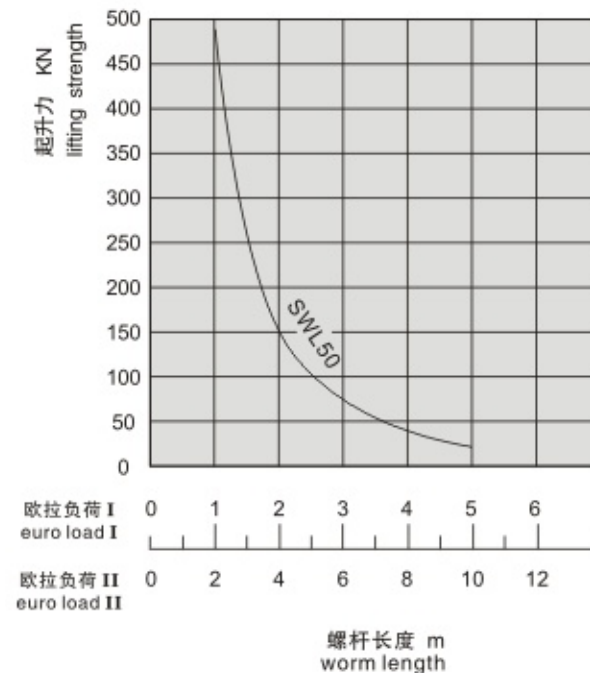
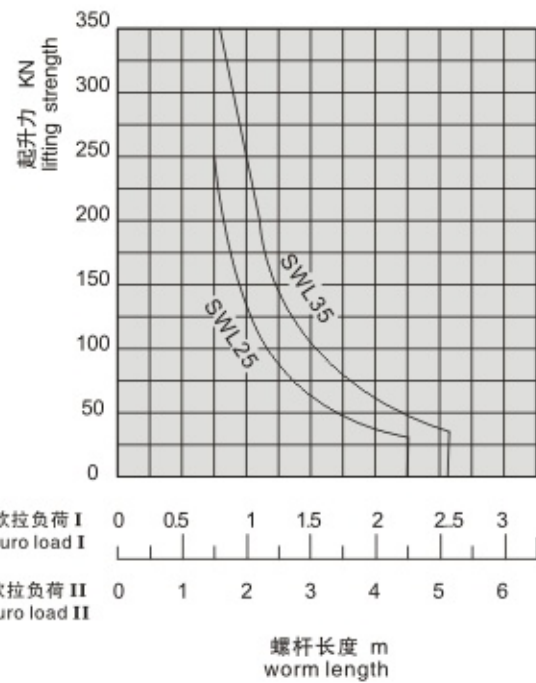
升降机的额定输入功率*见表16 The rated input power of jacks* see table 16

表16 table 16

型号 type	输入转速r/min input rotational speed	普通速比 normal speed ratio	慢速比 slow speed ratio
E-SWL2.5	1500	1.45	1.45
	1000	1.01	0.32
	750	0.98	0.24
	500	0.82	0.19
E-SWL5	1500	2.59	0.84
	1000	1.92	0.7
	750	1.77	0.58
	500	1.45	0.43
E-SWL10/15	1500	3.47	1.31
	1000	2.68	1.06
	750	2.15	0.93
	500	1.89	0.64
E-SWL20	1500	4.02	1.65
	1000	2.94	1.39
	750	2.46	1.15
	500	2.31	0.77
E-SWL25	1500	6.38	2.26
	1000	4.42	1.87
	750	3.4	1.51
	500	2.67	1.22
E-SWL35	1500	13.06	6.36
	1000	11.89	5.28
	750	9.9	4.2
	500	6.56	3.13
E-SWL50	1000	11.74	6.29
	750	10.62	4.78
	500	8.25	3.63
	300	5.92	2.65
E-SWL100	1000	23.5	11.78
	750	21.1	9.44
	500	15.7	6.88
	300	10.9	4.94
E-SWL120	1000	56.41	28.2
	750	53.9	22.2
	500	39.8	16.44
	300	26.7	11.4

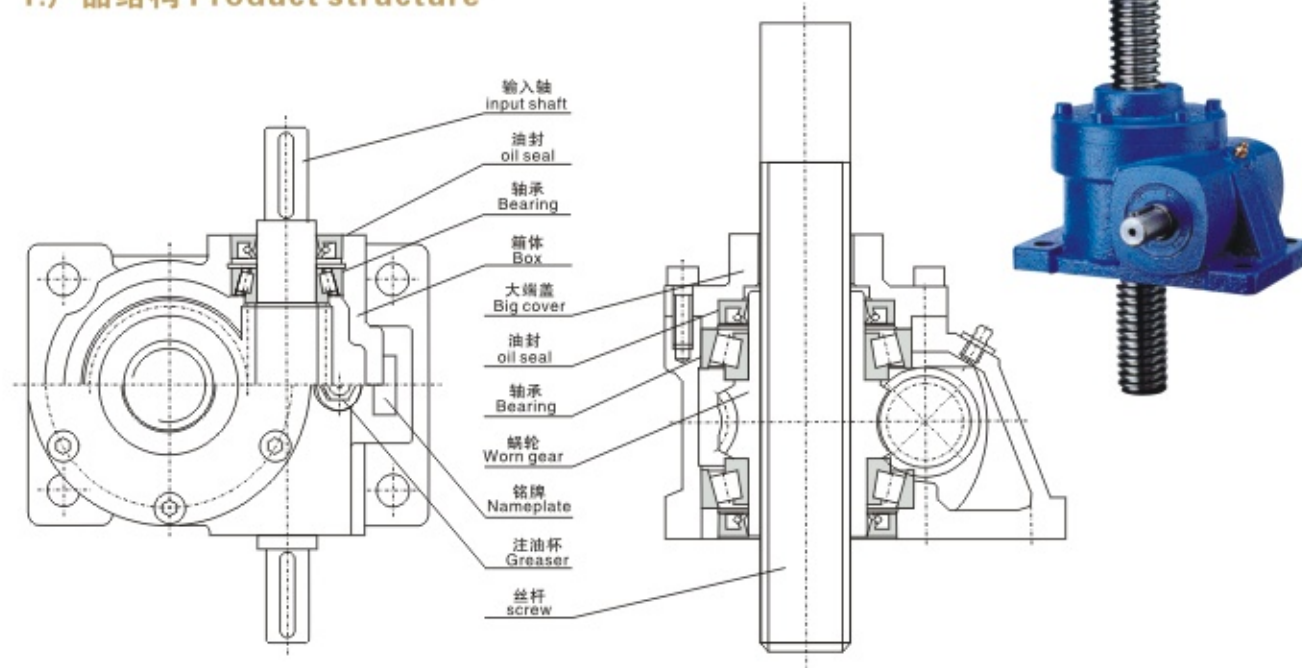
★表中功率值为载荷平稳无冲击、环境温度20℃、浸油润滑状态下的功率值。

★The parameter power got in this condition: ambient temperature is 20℃, in the grease-lubricated case, the load beared without any impact



七、EDSS蜗轮丝杆升降机 EDSS WORM GEAR LINEAR ACTUATOR

1.产品结构 Product structure



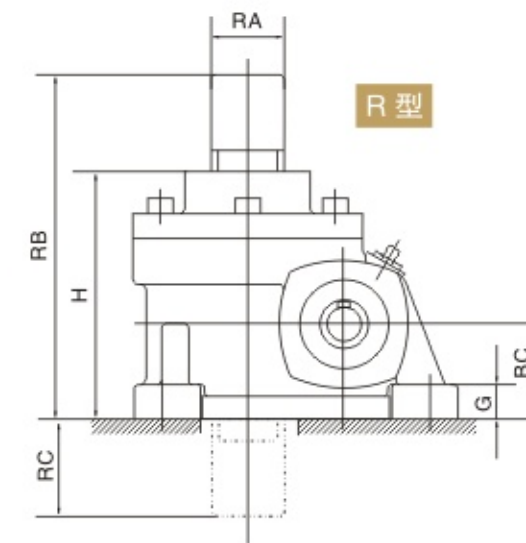
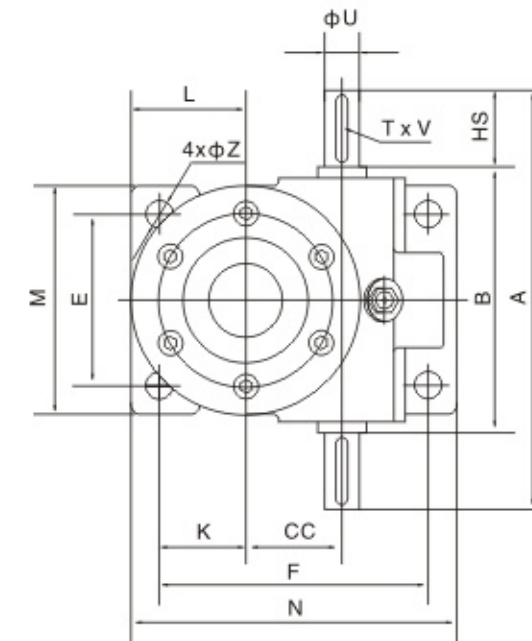
2.型号说明 Model Introduction

ED	SS	D	100	12	A	R	300	B	P
1	2	3	4	5	6	7	8	9	10

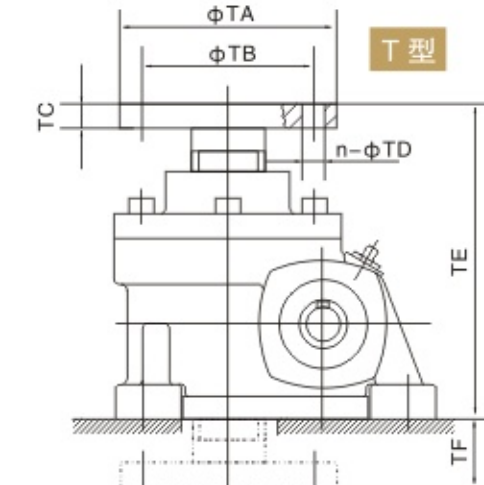
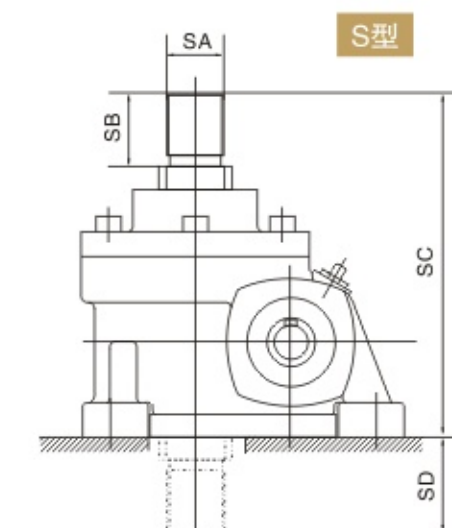
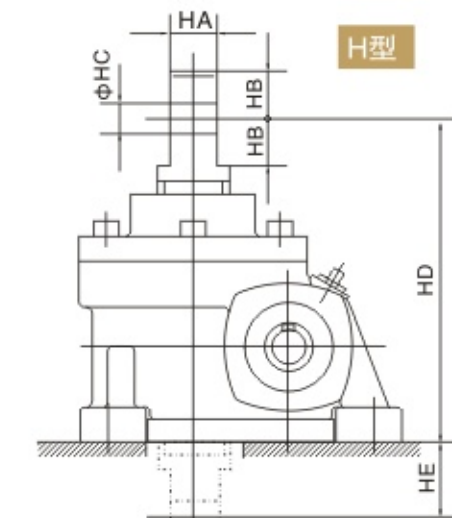
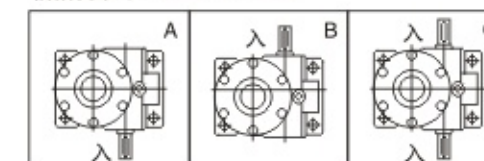
1 企业代码 ED-- 意德减速 Enterprise code ED--xingda machinery	2 产品代码 SS-- 蜗轮丝杆 升降机 Products code SS-- worm gear linear actuator	3 输入轴联接方式 D-- 带电机法兰 无代码 -- 基本型 Connector of Input shaft D With motor flange Non-code-basic	4 规格用蜗轮副 中心距表示100 Specification Expressed by the center distance of a pair of Worm gear 100	5 传动比 12 Ratio 12	6 安装方式代码 Mounting Option code A、B-基本型 C、D-止旋构造型 E、F-活动螺母构造型 详见“4.3安装方式” A,B--Basic Model C,D--Screw flange without rotation E,F--Screw flange without rotation more information from 4.3 Mounting option	7 丝杆头部型式代码 Code of screw head R型(圆柱式) R-Column type H型(栓孔式) H-Bolt hole type S型(螺线式) S-Screw type T型(顶板式) T-Coping type 详见“产品图片” 注: 安装方式E、F时无此代码 Notes: Non-code-E,F mounting option	8 丝杆行程 300mm Stroke of screw 300mm 共有100、200、300、400、 500、600、800、1000mm 8种规格, 根据使用情况选 择, 如需要其它长度行程, 也可定做 Total 8 species model: 100, 200, 300, 400, 500, 600, 800, 1000mm choose according to using situation, if other model needed, can be made to order	9 轴指向 shaft direction EDSS系列共有A、B、C三种 EDSSD系列共有A、B、C、D四种 详见“轴指向表示” EDSS series have a,b and C three species EDSSD series have A,B,C and D four species	10 护管 Safeguard pipe P-带护管 P-With safeguard pipe 无代码-不带护管 Non-code-without safeguard pipe 注: 安装方式E、F时无此代码 Notes: Non-code-E,F mounting option
---	---	---	---	-----------------------------------	--	--	---	---	---

3.安装尺寸 Installation Dimensions

3.1 EDSS安装尺寸 Installation Dimensions of EDSS



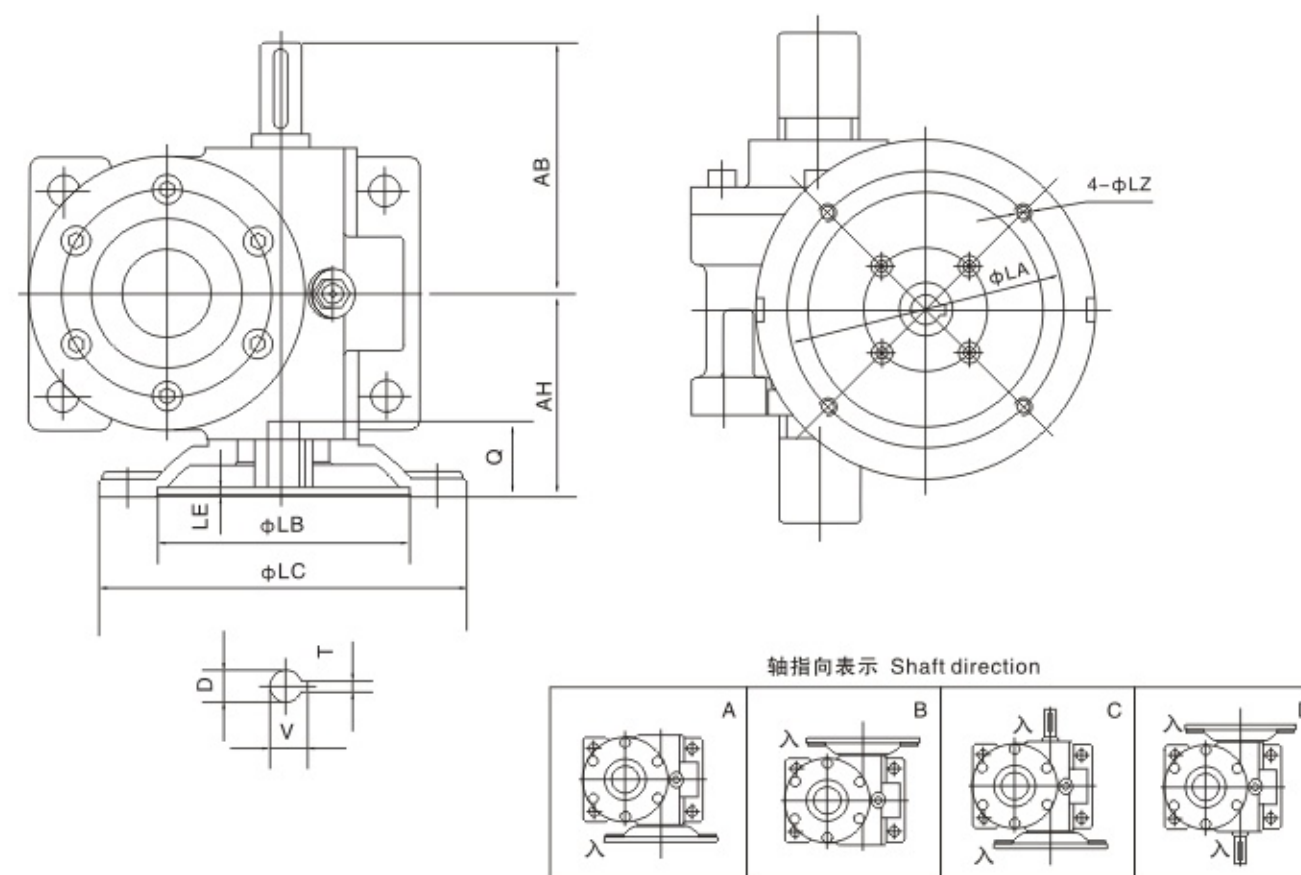
轴指向表示 Shaft direction





型号规格 Model size	A B HS	E F Z	BC G H	CC K	Tr	L M N	U T x V	丝杆头部型式 Type of screw head							
								R 型		H 型		S 型		T 型	
								RA RB RC	HA HB HC	HD HE		SA SC SD	SB SE SF	TA TB TC	n-TD TE TF
EDSS35	170	66	40	35	Tr26 x 5	50	15	26	16	165		M16 x 1.5	28	88	4-φ10
	110	111	15	38		90	5 x 3	165	20	55			150	70	135
	30	12	110			135		55	12				40	10	25
EDSS40	220	80	50	40	Tr32 x 6	57	18	32	20	195		M22 x 1.5	32	98	4-φ10
	140	125	18	42		110	6 x 3.5	195	25	65			180	80	160
	40	12	130			155		65	14				50	13	30
EDSS50	220	90	50	50	Tr38 x 6	60	18	38	25	195		M30 x 1.5	35	114	4-φ12
	140	140	18	45		120	6 x 3.5	195	25	65			180	90	160
	40	14	130			170		65	16				50	13	30
EDSS60	256	100	60	60	Tr46 x 8	90	25	46	32	255		M33 x 1.5	40	138	4-φ14
	176	190	20	70		140	8 x 4	255	32	95			220	100	200
	40	18	160			230		65	20				60	16	40
EDSS60B	264	110	60	60	Tr52 x 8	90	25	52	36	255		M39 x 1.5	45	148	4-φ18
	184	190	20	70		150	8 x 4	225	32	95			220	110	210
	40	18	160			230		65	24				60	20	50
EDSS70	316	140	70	70	Tr65 x 10	95	28	65	44	295		M45 x 1.5	55	178	4-φ21
	216	210	25	75		180	8 x 4	250	35	115			260	125	235
	50	18	180			250		70	26				80	25	55
EDSS100	390	190	85	100	Tr75 x 12	110	32	75	56	355		M60 x 2	65	188	4-φ21
	260	260	30	85		230	10 x 5	295	44	135			300	140	285
	65	22	220			310		75	35				80	28	65
EDSS120	420	210	100	120	Tr80 x 12	130	35	80	60	410		M64 x 2	70	218	4-φ25
	290	305	30	105		260	10 x 5	355	54	150			360	170	330
	65	22	260			355		95	38				100	30	70
EDSS130	480	240	120	130	Tr90 x 14	160	45	90	70	480		M76 x 2	75	248	4-φ27
	340	355	30	130		300	14 x 5.5	430	64	165			435	200	390
	70	22	315			415		115	45				120	32	75
EDSS150	550	250	125	150	Tr100 x 16	170	50	100	80	545		M90 x 2	100	358	6-φ27
	360	385	35	135		320	14 x 5.5	485	70	200			495	280	445
	95	27	345			455		140	55				150	35	100

3.2 EDSSD 安装尺寸 Installation Dimensions of EDSSD



型号规格 Model size	法兰规格 Flange size	AB	AH	LA	LB	LC	LE	LZ	D	Q	T x V
EDSSD40	71B5	110	72	130	110	160	4	M8	φ14	34	5 x 16.3
EDSSD50	71B5	110	80	130	110	160	4	M8	φ14	34	5 x 16.3
EDSSD60	80B5	128	100	165	130	200	4.5	M10	φ19	43	6 x 21.8
EDSSD60B	80B5	132	100	165	130	200	4.5	M10	φ19	43	6 x 21.8
EDSSD70	90B5	158	120	165	130	200	4.5	M10	φ24	52	8 x 27.3
EDSSD100	100/112B5	195	150	215	180	250	5	M12	φ28	63	8 x 31.3
EDSSD120	100/112B5	210	165	215	180	250	5	M12	φ28	63	8 x 31.3
EDSSD130	132B5	240	194	265	230	300	5	M12	φ38	83	10 x 41.3
EDSSD150	132B5	275	218	265	230	300	5	M12	φ38	83	10 x 41.3

4. 选型方法

4.1 选型要素

4.1.1 总当量载荷计算

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

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

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

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

4.1.2 单台升降机当量载荷的计算

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

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

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

联动台数 Linkage quantity	1	2	3	4	5~8
使用系数 Using coefficient	1	0.95	0.9	0.85	0.8

4.1.3 暂定升降机型号

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

4.1.4 丝杆行程选定

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

丝杆计算(详见表3, 丝杆行程用L表示, 单位(unit): mm)

表3 丝杆计算 Table 3 screw calculate

型号 Model	丝杆直径 Screw dia	护管长 Length of protect pipe	丝杆头部S型 “S” type screw end		丝杆头部H型 “H” type screw end		丝杆头部R型 “R” type screw end		丝杆头部T型 “T” type screw end	
			总长=L+SC	牙长=总长-SD	总长=L+HB+HD	牙长=总长+HB+HE	总长=L+RB	牙长=总长-RC	总长=L+TE	牙长=总长-TF
EDSS35	Tr26 x 5	L+55	L+150	总长-40	L+20+165	总长-20-55	L+165	总长-55	L+135	总长-25
EDSS40	Tr32 x 6	L+60	L+180	总长-50	L+25+195	总长-25-65	L+195	总长-65	L+160	总长-30
EDSS50	Tr38 x 6	L+60	L+180	总长-50	L+25+195	总长-25-65	L+195	总长-65	L+160	总长-30
EDSS60	Tr46 x 8	L+65	L+220	总长-60	L+32+255	总长-32-95	L+225	总长-65	L+200	总长-40
EDSS60B	Tr52 x 8	L+65	L+220	总长-60	L+32+255	总长-32-95	L+225	总长-65	L+210	总长-50
EDSS70	Tr65 x 10	L+75	L+260	总长-80	L+35+295	总长-35-115	L+250	总长-70	L+235	总长-55
EDSS100	Tr75 x 12		L+300	总长-80	L+44+355	总长-44-135	L+295	总长-75	L+285	总长-65
EDSS120	Tr80 x 12		L+360	总长-100	L+54+410	总长-54-150	L+355	总长-95	L+330	总长-70
EDSS130	Tr90 x 14		L+435	总长-120	L+64+480	总长-64-165	L+430	总长-115	L+390	总长-75
EDSS150	Tr100 x 16		L+495	总长-150	L+70+545	总长-70-200	L+485	总长-140	L+445	总长-100

4.1.5 丝杆稳定性校核

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

应确保 $P_{cr} > W \times S_i$ (一般 $S_i=4$)

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

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

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

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

4.1.6 丝杆转速校核

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

应确保 $n_c > n_1 / i$

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

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

4.1.7 输入功率校核

$$P = n_1 \times p_1 \times w / 9549 \times 2 \pi \times i \times \eta$$

应确保 $P < P_{\text{额}}$

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

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

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

型号 Model	EDSS35	EDSS40	EDSS50	EDSS60	EDSS60B	EDSS70	EDSS100	EDSS120	EDSS130	EDSS150
丝杆底径 Diameter of screwing bottom	20.5	25	31	37	43	54	62	67	74	82

表6 支撑系数 f_n table 6 Sustain coefficient(f_n)

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



4 Methods for model chosen

4.1 Selection points

4.1.1 Calculate total current load

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

W_s —current load $W_{\max}$ —max load f_s —using coefficient (more information from table 1)

4.1.2 Calculate current load of unit screw lifter

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

W —unit current load W_s —current load S —linkage quantity

f_d —linkage coefficient (more information from table 2)

4.1.3 Choose screw model

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

4.1.4 Option stroke of screw

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

Calculate screw (more information from table 3)

4.1.5 Check screw stability

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

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

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

W —Current load of unit screw lifter (N) S —security coefficient (usual $S=4$)

4.1.6 check screw speed

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

should insure $n_c > n_i / i$

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

d —diameter of screw bottom (mm) (more information from table 5);

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

4.1.7 check input power

$$p = n_i \times p_i \times w / 9549 \times 2\pi \times i \times \eta$$

should insure $p < p_{rated}$

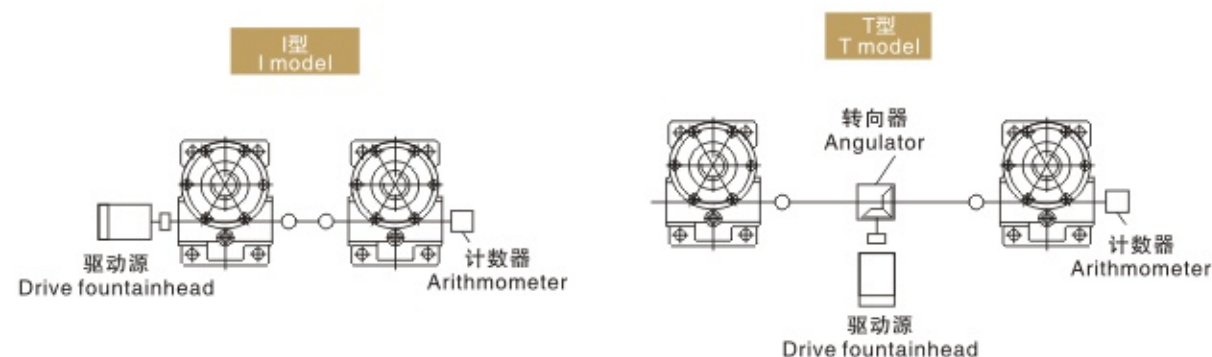
P —needed input power (KW); n_i —input shaft screwing speed (r/min); p_i —axial pitch distance (mm)

W —current load (KN); π —pi i —ratio η —general efficiency

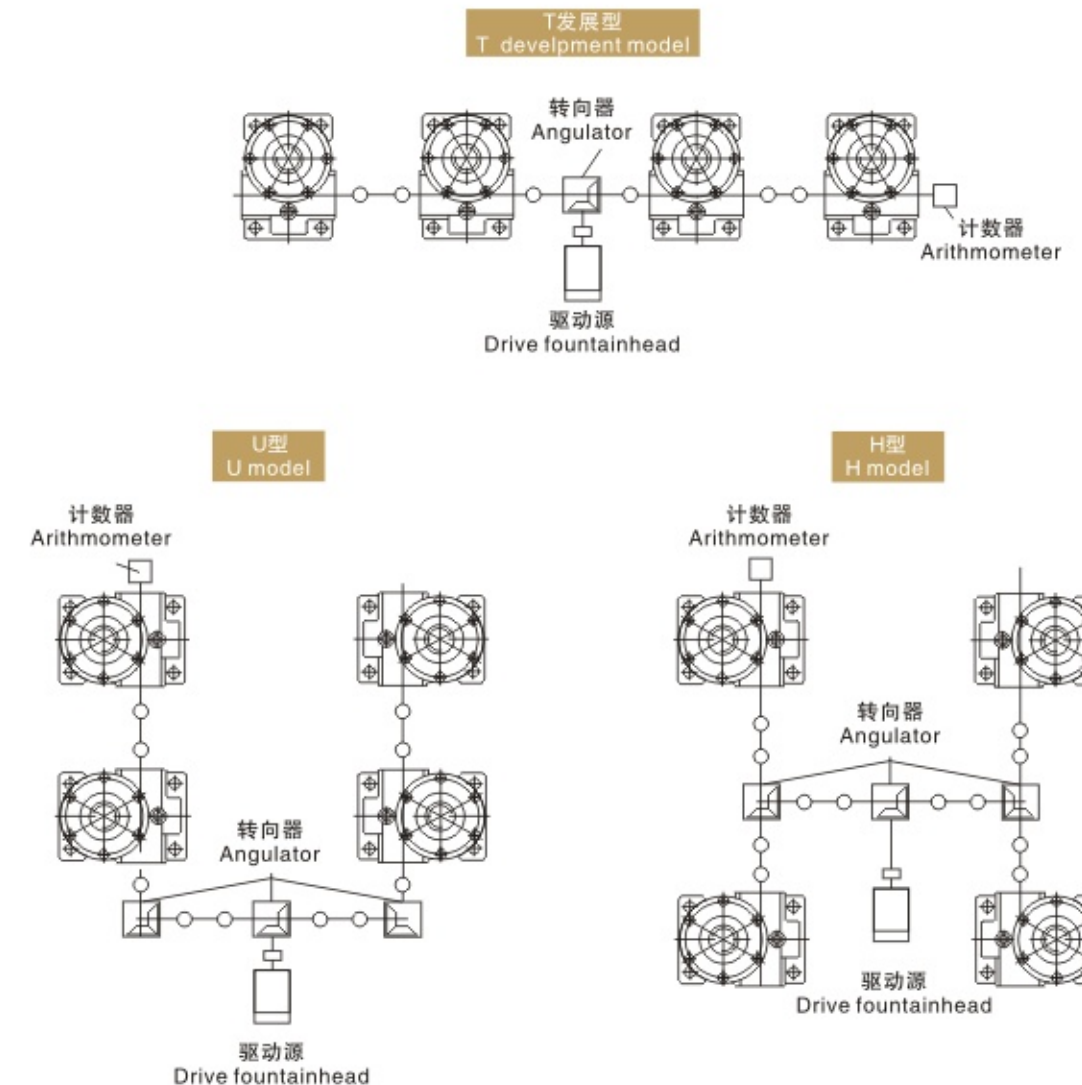
4.2 选型示例

4.2 Selection example

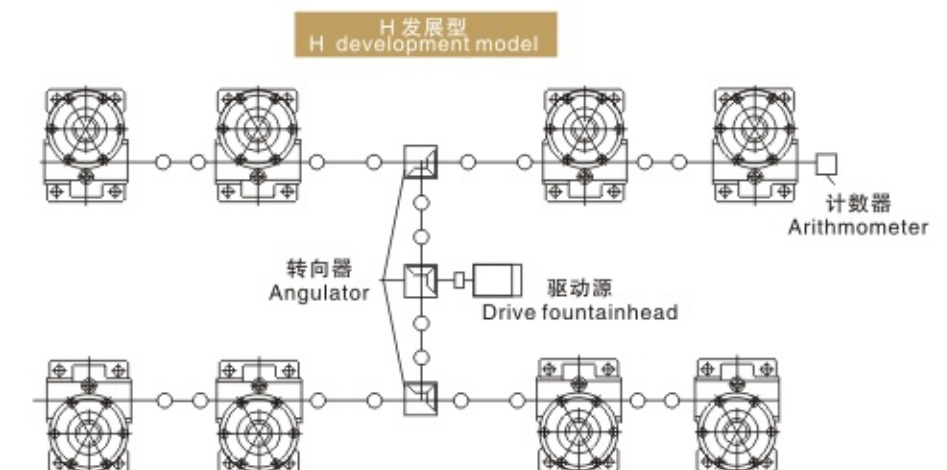
4.2.1 两台联动 Two sets linkage

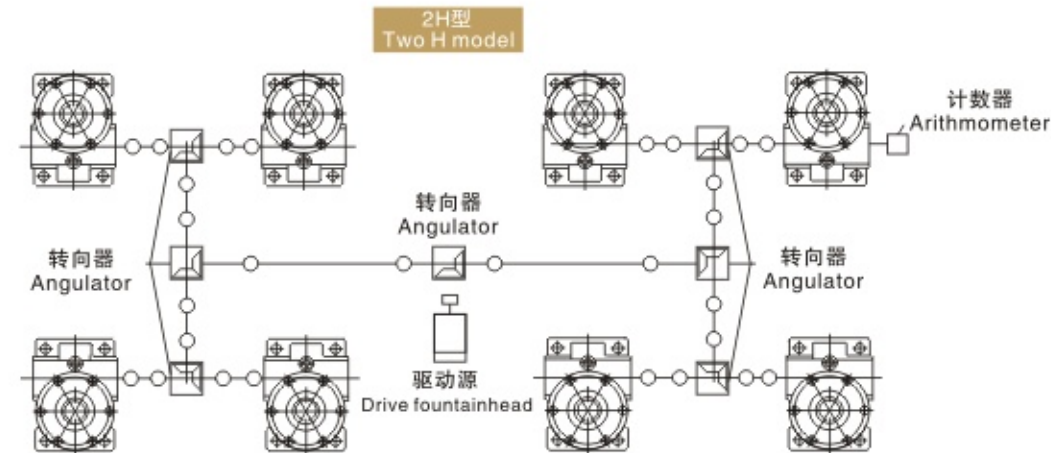


4.2.2 四台联动 four sets linkage



4.2.3 八台联动 Eight sets linkage





4.3 安装方式 4.3. Mounting Option

基本型 Basic Model		止旋构造型 Screw fluctuate without rotation		活动螺母构造型 Screw rotate without fluctuation	

说明:

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

Explanation:

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

5. 选型参数 Capacity and Model Selection

型号 规格 Model size	传动比 Ratio	输入轴转速 1800r/min Input shaft revolution speed 1800r/min			输入轴转速 1500r/min Input shaft revolution speed 1500r/min			输入轴转速 1200r/min Input shaft revolution speed 1200r/min			输入轴转速 900r/min Input shaft revolution speed 900r/min			输入轴转速 600r/min Input shaft revolution speed 600r/min			输入轴转速 300r/min Input shaft revolution speed 300r/min		
		输入功率 (kw) Input power (kw)	起升力 (kg) Lifter force (kg)	起升速度 (m/min) Hoist speed (m/min)	输入功率 (kw) Input power (kw)	起升力 (kg) Lifter force (kg)	起升速度 (m/min) Hoist speed (m/min)	输入功率 (kw) Input power (kw)	起升力 (kg) Lifter force (kg)	起升速度 (m/min) Hoist speed (m/min)	输入功率 (kw) Input power (kw)	起升力 (kg) Lifter force (kg)	起升速度 (m/min) Hoist speed (m/min)	输入功率 (kw) Input power (kw)	起升力 (kg) Lifter force (kg)	起升速度 (m/min) Hoist speed (m/min)	输入功率 (kw) Input power (kw)	起升力 (kg) Lifter force (kg)	起升速度 (m/min) Hoist speed (m/min)
		(kw)	(kg)	(m/min)	(kw)	(kg)	(m/min)	(kw)	(kg)	(m/min)	(kw)	(kg)	(m/min)	(kw)	(kg)	(m/min)	(kw)	(kg)	(m/min)
EDSS35	1/5	0.69	500	1.80	0.64	550	1.50	0.65	700	1.20	0.63	900	0.90	0.46	1000	0.60	0.37	1000	0.30
	1/10	0.37	500	0.90	0.37	550	0.75	0.37	700	0.60	0.37	950	0.45	0.37	1000	0.30	0.19	1350	0.15
	1/20	0.37	600	0.45	0.37	700	0.38	0.37	900	0.30	0.37	1200	0.23	0.19	1350	0.15	0.19	1350	0.08
EDSS40	1/6	0.98	700	1.80	0.93	800	1.50	0.88	950	1.20	0.91	1300	0.90	0.84	1800	0.60	0.42	1800	0.30
	1/12	0.66	950	0.90	0.64	1100	0.75	0.61	1300	0.60	0.57	1650	0.45	0.46	2000	0.30	0.37	2000	0.15
	1/24	0.37	950	0.45	0.37	1100	0.38	0.37	1300	0.30	0.37	1650	0.23	0.37	2000	0.15	0.19	2000	0.08
EDSS50	1/6	1.39	900	1.80	1.28	1000	1.50	1.24	1200	1.20	1.16	1500	0.90	0.87	1700	0.60	0.54	2100	0.30
	1/12	1.10	1350	0.90	1.01	1500	0.75	0.98	1800	0.60	0.87	2150	0.45	0.58	2150	0.30	0.37	2500	0.15
	1/24	0.78	1800	0.45	0.72	2000	0.38	0.69	2400	0.30	0.55	2550	0.23	0.42	2900	0.15	0.37	2850	0.08
EDSS60	1/8	2.12	1300	1.80	1.97	1450	1.50	1.85	1700	1.20	1.72	2100	0.90	1.66	3050	0.60	1.31	4800	0.30
	1/16	1.12	1300	0.90	1.04	1450	0.75	0.98	1700	0.60	0.95	2200	0.45	0.87	3050	0.30	0.69	4800	0.15
	1/32	0.80	1750	0.45	0.75	1950	0.38	0.69	2250	0.30	0.64	2800	0.23	0.63	4100	0.15	0.48	6400	0.08
EDSS60B	1/8	2.00	1300	1.80	1.86	1450	1.50	1.75	1700	1.20	1.62	2100	0.90	1.57	3050	0.60	1.24	4800	0.30
	1/16	1.06	1300	0.90	0.98	1450	0.75	0.93	1700	0.60	0.89	2200	0.45	0.83	3050	0.30	0.65	4800	0.15
	1/32	0.75	1750	0.45	0.70	1950	0.38	0.65	2250	0.30	0.61	2800	0.23	0.59	4100	0.15	0.46	6400	0.08
EDSS70	1/10	2.66	1400	1.80	2.42	1850	1.50	2.25	1950	1.20	2.12	2450	0.90	1.93	3350	0.60	1.41	4900	0.30
	1/20	1.42	1600	0.90	1.47	1850	0.75	1.37	2250	0.60	1.28	2800	0.45	1.18	3850	0.30	0.86	5600	0.15
	1/40	1.14	2400	0.45	1.17	2800	0.38	1.09	3350	0.30	1.07	4400	0.23	0.93	5750	0.15	0.69	8400	0.08
EDSS100	1/12	3.62	1850	1.80	3.51	2150	1.50	3.39	2600	1.20	3.18	3250	0.90	2.94	4500	0.60	2.09	6400	0.30
	1/18	2.65	1900	1.20	2.68	2300	1.00	2.57	2750	0.80	2.45	3500	0.60	2.19	4700	0.40	1.56	6700	0.20
	1/36	1.66	2200	0.60	1.63	2600	0.50	1.60	3200	0.40	1.47	3900	0.30	1.36	5400	0.20	1.20	9600	0.10
EDSS120	1/12	4.15	1975	1.80	4.02	2300	1.50	3.81	2725	1.20	3.80	3625	0.90	3.48	4975	0.60	2.48	7050	0.30
	1/18	3.20	2125	1.20	3.20	2550	1.00	3.04	3025	0.80	3.03	4025	0.60	2.74	5450	0.40	1.94	7725	0.20
	1/36	2.14	2625	0.60	2.07	3050	0.50	1.98	3650	0.40	1.99	4875	0.30	1.80	6600	0.20	1.40	10300	0.10
EDSS130	1/7	9.47	2100	3.60	9.17	2450	3.00	9.02	2850	2.40	8.58	4000	1.80	8.20	5450	1.20	5.84	7750	0.60
	1/14	5.76	2350	1.80	5.71	2800	1.50	5.57	3300	1.20	5.39	4550	0.90	5.06	6200	0.60	3.57	8750	0.30
	1/28	4.07	3050	0.90	3.89	3500	0.75	3.91	4100	0.60	3.65	5850	0.45	3.48	7800	0.30	2.45	11000	0.15
EDSS150	1/8	16.3	3500	3.60	16.1	4000	3.00	15.8	5400	2.40	15.1	7100	1.80	14.8	9850	1.20	9.70	12950	0.60
	1/16	11.7	4300	1.80	11.6	5400	1.50	10.5	7200	1.20	11.00	9450	0.90	9.62	11800	0.60	7.08	17350	0.30
	1/32	8.65	5500	0.90	9.55	6800	0.75	7.35	10000	0.60	7.53	14300	0.45	7.02	15750	0.30	5.80	26050	0.15



6. 使用说明

6.1 产品说明

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

6.2 使用注意事项

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

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

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

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

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

6. Operating instructions

6.1 Product Introduction

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



6.2 Notices of usage

- 6.2.1 Select the model with proper ratio and load.
- 6.2.2 The surface temperature of speed reducer and nut should be controlled in -15°C~80°C when the screw lifter is working.
- 6.2.3 The screw lifter cannot work all the time. the unit is thirty mins for duty ratio of unit one and can not exceed 20%.

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

- 6.2.4 Insure adequate drive fountainhead.
- 6.2.5 Theoretically screw has self-lock function, but the self-lock function may not work in heavy shock condition;
- 6.2.6 Using situation for screw lifter.
- 6.2.7 Transverse load is not allowed when screw lifter is working. If transverse load occurred, please add direction setting.

7. 油品润滑 Lubricant

7.1 润滑油（脂）选用表

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

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

注：合成钙钠基润滑脂温度范围-20°C~100°C

Note: The temperature range of synthetic lime-sode basic lubricant grease ZNG-1 or ZNG-2 is -20°C~100°C

7.2 润滑油（脂）注油量 (L)

Lubricants capacity (L)

型号 Type	EDSS35	EDSS40	EDSS50	EDSS60	EDSS60B	EDSS70	EDSS100	EDSS120	EDSS130	EDSS150
规格 Size										
注油量 Lubricant capacity	0.06	0.1	0.2	0.35	0.4	0.5	1.5	2.2	3.5	4.0



8. 故障分析

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

注：如果发生其他故障无法解决时，请随时与我们联系，以便提供咨询服务。



8. Malfunctions Analysis

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

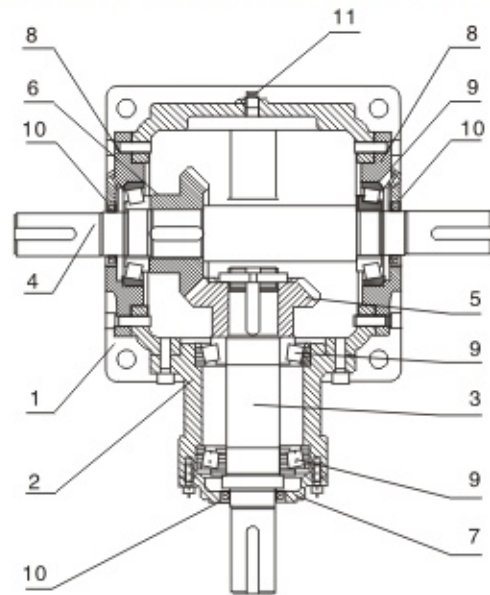
Note: If other faults not listed above occur, please contact to us at any moment. We will supply thorough consultation and service.

八、EDTM 系列螺旋伞齿轮转向器 EDTM SERIES SPIRAL BEVEL GEAR STEERING DEVICE

1、概述 Summarization

- EDTM系列螺旋伞齿轮转向器；产品规格2-25；传动比1-5；输入功率0.014-335KW；输出转矩11-5713N·m。
- 共10大规格15000余种不同的形式、传动比、联接和安装方式可供选用。
- 其它产品：公司可根据用户需要，研究开发设计制造专用产品。以满足用户的各种需求。
- EDTM series spiral bevel gear steering device: specification 2-25; ratio 1-5; input power 0.014-335KW; output 11-5713 N·m.
- Totally ten series with more than 15000 combinations in different ratios, connections and mounion positions are optional.
- Other products: our company can research, develop, design and produce customer tailored products to meet the different demand of customers.

2、EDTM 系列结构图 EDTM series structure drawing



- 1、机座 Housing
- 2、横轴座 Housing of input shaft
- 3、横轴 Input shaft
- 4、纵轴 Output shaft
- 5、横轴锥齿轮 Driven spiral bevel gear
- 6、纵轴锥齿轮 Driven spiral bevel gear
- 7、端盖 Bearing seat of input shaft
- 8、端盖 Bearing seat of output shaft
- 9、轴承 Bearing
- 10、油封 Oil Seal
- 11、油镜 Oil gauge

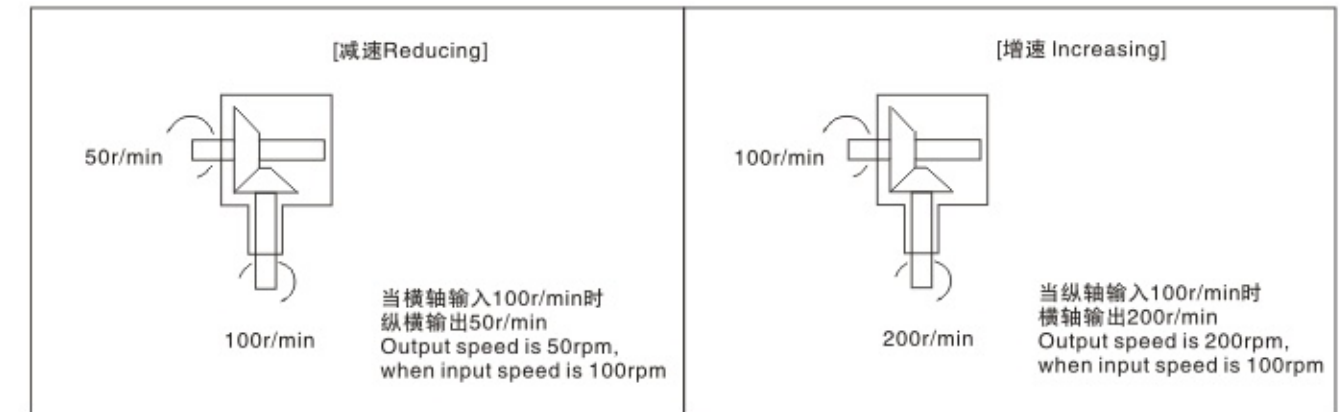


3、转向功能 Function of rotation

1 横轴 Input shaft		2 横轴 Input shaft	
2轴2-extended shaft	3轴3-extended shaft	3轴3-extended shaft	4轴4-extended shaft

说明：当输入轴旋转方向改变，输出轴相应改变。
Specification: Direction of rotation of output shaft varies with that of input shaft.

4、选定输入轴时就注意转速关系:(1:1传动比时无关系) Pay attention to the ration when fixing the input side (there is nothing in case of ratio of 1:1)



5、型号表示方法 EDTM series model notes

ED	TM	06	1:1	I-LRO	B₃
1	2	3	4	5	6
1 企业代码 Entorise Code ED -- 意德减速 ED-- Xingda machinery	2 产品代码 Product Code TM--螺旋伞齿轮转向器 TM--spiral bevel gear reducer overview	3 机座号 Size of gear units	4 速比 ratio	5 轴配置 Shaft arrangement	6 安装方法 Mounting position

6、EDTM 系列重量表 EDTM series weight table

Type	EDTM02	EDTM04	EDTM06	EDTM07	EDTM08	EDTM10	EDTM12	EDTM16	EDTM20	EDTM25
m(kg)	2	10	21	32	49	78	124	188	297	488



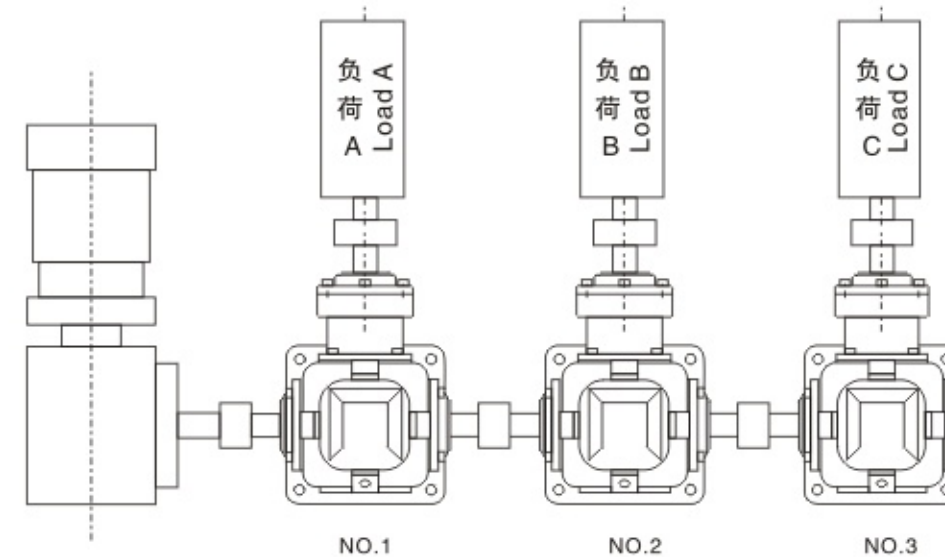
7、EDTM 系列Fr(N)表 EDM series Fr(N) table

i _N	n1 (r/min)	EDTM02		EDTM04		EDTM06		EDTM07		EDTM08		EDTM10		EDTM12		EDTM16		EDTM20		EDTM25	
		横轴	纵轴	横轴	纵轴	横轴	纵轴	横轴	纵轴	横轴	纵轴	横轴	纵轴	横轴	纵轴	横轴	纵轴	横轴	纵轴	横轴	纵轴
1:1	1450	265	216	833	951	1911	2450	2450	3136	3234	3381	4165	4508	5096	5586	10633	10976				
	1150	323	235	882	1029	2058	2597	2744	3234	3479	3626	4459	4851	5488	6076	11368	11760	15386	15608		
	870	402	255	960	1127	2205	2842	2989	3381	3773	3969	4851	5292	5880	6566	12446	12740	16660	17150	24794	25480
	580	549	314	1078	1323	2499	3185	3381	3822	4263	4459	5488	5880	6713	7301	14014	14504	18816	19404	28028	28910
	400	637	353	1372	1715	3185	3528	4018	4900	4851	5978	6272	7056	7742	8134	15680	16170	21070	21756	31360	32340
	300	696	392	1519	1960	3430	3528	4410	5537	5243	6958	6713	7987	8232	9065	17150	17640	23422	24108	34300	35280
	200	784	441	1911	1960	3430	3528	5096	6272	7889	8820	8575	9604	9261	10290	19600	19894	25970	26754	38612	39788
	100	980	588	1911	1960	3430	3528	5096	6272	8428	8820	9996	11760	11368	12593	22540	22540	28420	32928	39200	49000
	10	980	588	1911	1960	3430	3528	5096	6272	8428	8820	9996	11760	11858	14504	22540	22540	28420	33320	39200	49000
1.5:1	1450			1078	1960	2548	2842	3430	5390	4361	7987	5194	9212	5978	10486	5978	12152	7693	14602		
	1150			1078	1960	3038	3087	4067	5978	5096	8820	6174	10486	7252	12152	6419	13083	8771	17934	12985	24647
	870			1078	1960	3430	3332	4753	6076	6076	8820	7448	11760	8869	14504	6958	14210	9506	19453	13573	29400
	580			1078	1960	3430	3528	5096	6174	7644	8820	9555	11760	11466	14504	7840	16072	10780	22001	15680	33222
	400			1078	1960	3430	3528	5096	6272	8428	8820	9996	11760	11858	14504	8820	17934	12005	24598	17542	37142
	300			1078	1960	3430	3528	5096	6272	8428	8820	9996	11760	11858	14504	9604	19600	13132	27342	19159	40474
	200			1078	1960	3430	3528	5096	6272	8428	8820	9996	11760	11858	14504	10829	22148	14798	30282	21658	45766
	100			1078	1960	3430	3528	5096	6272	8428	8820	9996	11760	11858	14504	13328	22540	18228	33320	26656	49000
	10			1078	1960	3430	3528	5096	6272	8428	8820	9996	11760	11858	14504	22540	22540	28420	33320	39200	49000
2.5:1	1450																				
	1150																				
	870																				
	580																				
	400																				
	300																				
	200																				
	100																				
	10																				

备注：各规格更低的输出转速按以上最大的Fr值。

Notes: If there is lower output speed, please choose the maximum Fr in the above table.

8、EDTM 系列举例 EDM series selection example



3台负载全总为196N·m，一般冲击，每天连续工作8小时，即使用系数fs=1.25，斜齿轮输入轴转速300r/min，速比全部为1:1。

根据公式：

每台转向器本身所需的负载 $MN_2 \geq M_2 \times fs = 196 \times 1.25 = 245N \cdot m$

※1号转向器 因1号转向器本身的负载为245N·m，而2号、3号转向器需通过1号转向器传递扭矩。

所以1号转向器应承担的负载为：245N·m+245N·m+245N·m=735N·m，依据传动能力表，应选EDTM12。

※2号转向器 除本向的负载245N·m，还需传递3号转向器的扭矩。所以总负载应为245N·m+245N·m=490N·m，依据传动能力表，应选EDTM10。

※3号转向器 由于仅一个负载C进行运转，即所需负载在245N·m以上即可，依据传动能力表可选EDTM08。

Torque values of three gear reducer are 196Nm, uniform impulsive force, operate continuous for 8 hour per day, th at is, useful factor fs=1.25, input speed of 300rpm, ratio of 1:1.

Calculate according to formula:

Required torque of any of gearbox Mn2 is equal to 245Nm or larger.

No.1 gear reducer No.1 gear reducer carry torque 245Nm, but No.2 and No.3 gear reducer need transfer torques through No.1. Consequently No.1 gear reducer should carry torque 735Nm(245Nm+245Nm+245Nm), select EDM12 according to transmission capacity table.

No.2 gear reducer No.3 gear reducer still transfers torque of No.3 gear reducer besides torque of 245Nm, so, the total torque is 490Nm(245Nm+245Nm), select EDM10 according to transmission capacity table.

No.3 gear reducer Required torque is more than 245Nm because of only load C according to transmission capacity Table select EDM08.



EDTM 系列传动能力表 EDTM series transmission capacity table

i_N	n_1 (r/min)	EDTM02		EDTM04		EDTM06		EDTM07		EDTM08	
		MN2 (N·m)	PN1 (Kw)	MN2 (N·m)	PN1 (Kw)	MN2 (N·m)	PN1 (Kw)	MN2 (N·m)	PN1 (Kw)	MN2 (N·m)	PN1 (Kw)
1:1	1450	11.6	1.79	31.9	4.94	96.0	14.9	142	22.0	294	45.6
	1150	11.7	1.43	34.1	4.19	103	12.7	150	18.4	305	37.5
	870	12.1	1.12	37.2	3.46	113	10.5	164	15.2	312	29.0
	580	12.1	0.747	39.5	2.45	119	7.35	184	11.4	319	19.8
	400	12.3	0.524	40.2	1.72	122	5.20	195	8.34	326	14.0
	300	12.3	0.396	40.5	1.30	123	3.93	198	6.35	331	10.6
	200	12.4	0.226	41.2	0.880	124	2.66	201	4.30	338	7.23
	100	12.7	0.136	41.9	0.448	127	1.36	206	2.20	346	3.70
	10	13.0	0.014	43.0	0.046	132	0.141	214	0.228	361	0.386
	10					117	12.1	145	15.0	185	19.1
1.5:1	1450					122	9.96	147	12.0	188	15.4
	1150					123	7.66	150	9.30	191	11.8
	870					126	5.23	153	6.32	197	8.14
	580					128	3.66	155	4.41	200	5.70
	400					129	2.77	157	3.35	203	4.34
	300					131	1.87	160	2.28	204	2.91
	200					134	0.957	163	1.16	210	1.49
	100					139	0.099	169	0.12	218	0.155
	10					102	7.90	137	10.6	180	14.0
	10					104	6.39	139	8.55	183	11.3
2:1	1450	12.1	0.94	42.8	3.32	105	4.88	141	6.56	187	8.70
	1150	12	0.74	43.4	2.67	108	3.34	144	4.47	191	5.92
	870	12	0.56	43.8	2.04	109	2.33	146	3.12	194	4.15
	580	11.9	0.37	44.4	1.38	110	1.76	148	2.37	196	3.14
	400	12.2	0.26	45.1	0.96	111	1.18	149	1.59	198	2.12
	300	11.9	0.19	45.5	0.73	114	0.608	152	0.812	202	1.08
	200	12.2	0.13	46.1	0.49	116	0.062	157	0.084	209	0.112
	100	11.2	0.06	46.6	0.25	96.2	5.97	113	6.99	184	11.4
	10	28.1	0.015	48.5	0.026	97.2	4.78	115	5.64	185	9.11
	10					99.0	3.68	116	4.30	188	7.00
2.5:1	1450					100.0	2.48	118	2.92	192	4.76
	1150					100.9	1.73	120	2.05	195	3.34
	870					102.9	1.32	121	1.55	197	2.53
	580					103.9	0.888	123	1.05	200	1.71
	400					104.9	0.448	123	0.528	203	0.867
	300					107.8	0.046	126	0.054	208	0.089
	200					93.6	4.84	105	5.42	159	8.20
	100					94.8	3.88	106	4.34	160	6.55
	10					95.9	2.97	108	3.34	163	5.04
	10					97.6	2.02	109	2.25	166	3.42
3:1	1450					99.0	1.41	111	1.58	168	2.39
	1150					100	1.07	111	1.18	169	1.80
	870					100	0.712	113	0.803	171	1.22
	580					102	0.363	115	0.409	173	0.618
	400					104	0.037	118	0.042	179	0.064
	300					80.6	3.12	93.4	3.62	124	4.80
	200					81.5	2.50	94.3	2.90	125	3.83
	100					82.4	1.92	95.9	2.23	127	2.95
	10					84.1	1.30	96.9	1.50	129	2.00
	10					85.1	0.91	98.7	1.05	131	1.40
4:1	1450					86.1	0.69	98.3	0.79	131	1.05
	1150					86.0	0.46	101	0.54	134	0.71
	870					87.7	0.23	101	0.27	135	0.36
	580					89.3	0.02	101	0.03	140	0.04
	400					52.0	1.61	57.4	1.78	68.7	2.13
	300					52.5	1.29	58.0	1.43	69.2	1.70
	200					53.2	0.99	59.0	1.10	70.4	1.31
	100					54.2	0.67	59.6	0.74	71.7	0.89
	10					54.9	0.47	60.7	0.52	72.6	0.62
	10					55.5	0.36	60.4	0.39	72.9	0.47
5:1	1450					55.4	0.24	61.7	0.26	74.1	0.32
	1150					56.5	0.12	62.9	0.13	75.1	0.16
	870					57.6	0.01	64.5	0.01	77.8	0.02
	580										
	400										
	300										
	200										
	100										
	10										
	10										

1、横轴转速未达到10r/min时,请使用10r/min的数据。

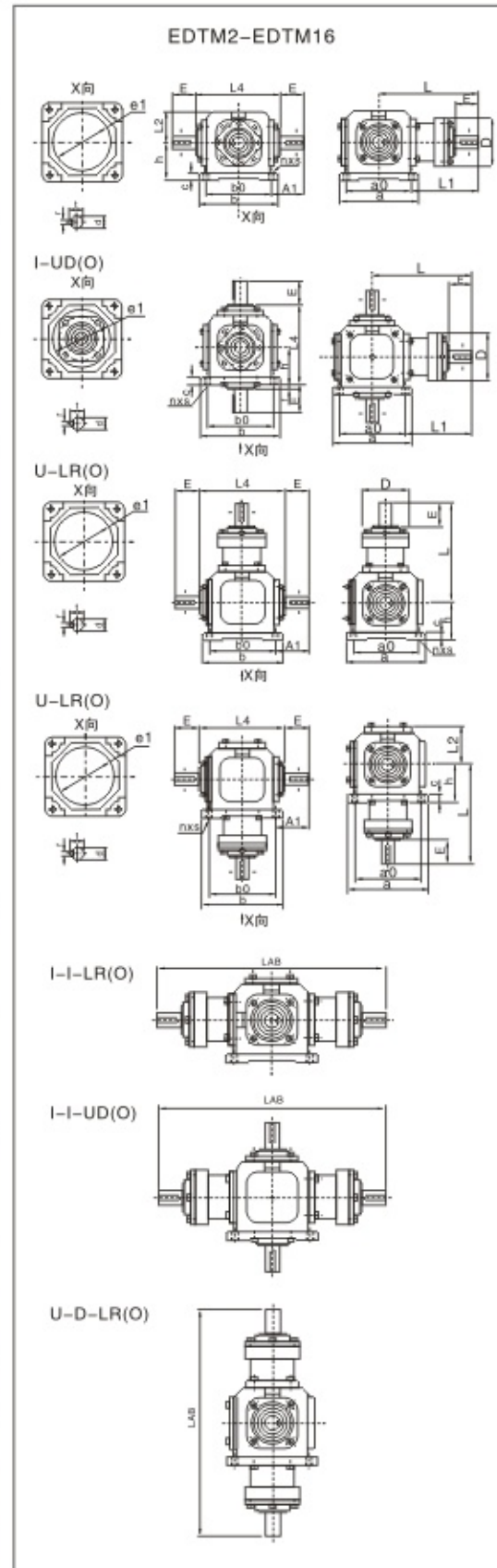
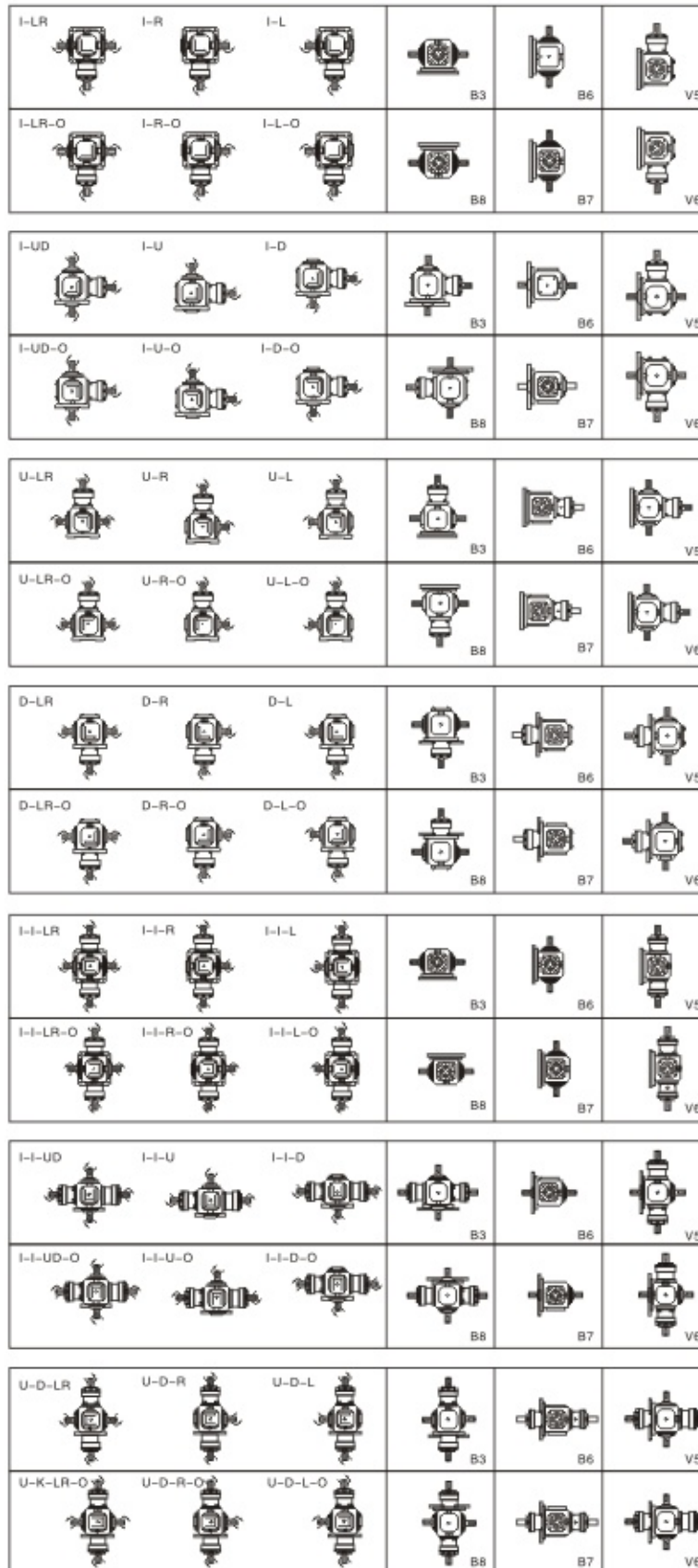
2、以上有灰色标识的规格定货时须咨询,横轴输入转速超过1450r/min时,向本公司咨询。

i _N	n1 (r/min)	EDTM10		EDTM12		EDTM16		EDTM20		EDTM25	
		Mn2 (N · m)	Pn1 (Kw)	Mn2 (N · m)	Pn1 (Kw)	Mn2 (N · m)	Pn1 (Kw)	Mn2 (N · m)	Pn1 (Kw)	Mn2 (N · m)	Pn1 (Kw)
1:1	1450	421	65.3	619	96.0	1019	163				
	1150	453	55.7	665	81.1	1098	139	1842	234		
	870	479	44.6	726	67.5	1186	114	2009	193	3489	335
	580	493	30.6	802	49.7	1343	85.9	2274	145	3940	252
	400	504	21.5	821	35.1	1499	66.1	2538	112	4410	195
	300	513	16.4	835	26.8	1637	54.1	2744	90.8	4792	159
	200	521	11.1	852	18.2	1784	39.3	3126	69.0	5390	119
	100	535	5.72	875	9.36	1842	20.3	3205	35.3	5439	60.0
10	561	0.599	919	0.983	1940	2.14	3205	3.53	5713	6.30	
1.5:1	1450	374	38.7	564	58.3						
	1150	380	31.2	601	49.2						
	870	389	24.1	656	40.7						
	580	396	16.4	699	28.9						
	400	406	11.6	711	20.3						
	300	411	8.78	724	15.5						
	200	417	5.95	736	10.5						
	100	426	3.04	754	5.37						
10	443	0.316	785	0.56							
2:1	1450	305	23.6	516	40.0	921	73.7	1578	126		
	1150	309	19.0	516	31.7	938	59.5	1607	102	3146	199
	870	315	14.6	516	24.0	958	46.0	1646	79.0	3224	155
	580	322	10.0	524	16.3	980	31.3	1695	54.2	3332	107
	400	328	7.02	538	11.5	1000	22.0	1725	38.0	3420	75.4
	300	332	5.33	543	8.71	1009	16.7	1754	29.0	3479	57.5
	200	338	3.61	551	5.89	1029	11.3	1784	19.7	3557	39.2
	100	344	1.84	563	3.01	1058	5.84	1833	10.1	3646	20.1
10	357	0.191	586	0.313	1098	0.605	1921	1.06	3822	2.11	
2.5:1	1450	293	18.2	507	31.4						
	1150	298	14.7	514	25.3						
	870	302	11.2	523	19.5						
	580	310	7.68	535	13.3						
	400	315	5.38	545	9.32						
	300	317	4.06	552	7.08						
	200	321	2.75	560	4.79						
	100	326	1.40	568	2.43						
10	336	0.144	588	0.251							
3:1	1450	270	14.0	458	23.6	904	48.2	1529	82.3	2935	158
	1150	275	11.3	464	19.0	920	38.9	1561	66.6	3045	130
	870	279	8.66	469	14.3	940	30.1	1598	51.6	3135	101
	580	285	5.89	480	9.92	960	20.4	1644	35.4	3246	69.9
	400	288	4.11	490	6.98	978	14.4	1672	24.8	3317	49.3
	300	291	3.11	495	5.29	990	10.9	1701	18.9	3372	37.6
	200	294	2.10	501	3.57	1005	7.38	1733	12.9	3449	25.6
	100	300	1.07	510	1.82	1038	3.82	1777	6.60	3537	13.1
10	308	0.110	527	0.188	1076	0.40	1865	0.69	3713	1.4	
4:1	1450	241	9.35	434	16.8	850	34.3	1452	58.7	2798	113
	1150	246	7.54	441	13.5	865	27.7	1483	47.5	2892	92.6
	870	249	5.78	448	10.4	884	21.4	1518	36.8	2978	72.2
	580	254	3.93	456	7.07	902	14.6	1562	25.2	3084	49.8
	400	257	2.74	465	4.97	919	10.2	1588	17.7	3151	35.1
	300	259	2.08	470	3.77	930	7.8	1616	13.5	3204	26.8
	200	262	1.40	476	2.54	944	5.3	1646	9.17	3276	18.2
	100	267	0.71	485	1.30	976	2.7	1688	4.70	3360	9.36
10	275	0.07	501	0.13	1011	0.3	1772	0.49	3527	0.98	
5:1	1450	136	4.21	296	9.18	814	26.3	1391	44.9	2631	85.0
	1150	138	3.39	301	7.39	828	21.2	1420	36.4	2771	71.0
	870	140	2.60	305	5.68	847	16.4	1454	28.2	2853	55.3
	580	143	1.77	311	3.86	864	11.2	1496	19.3	2954	38.2
	400	144	1.23	318	2.72	881	7.85	1521	13.6	3018	26.9
	300	146	0.93	321	2.06	891	5.96	1548	10.3	3069	20.5
	200	148	0.63	325	1.39	905	4.03	1577	7.03	3138	14.0
	100	150	0.32	331	0.71	935	2.08	1617	3.60	3218	7.17
10	155	0.03	342	0.07	969	0.22	1697	0.38	3378	0.75	

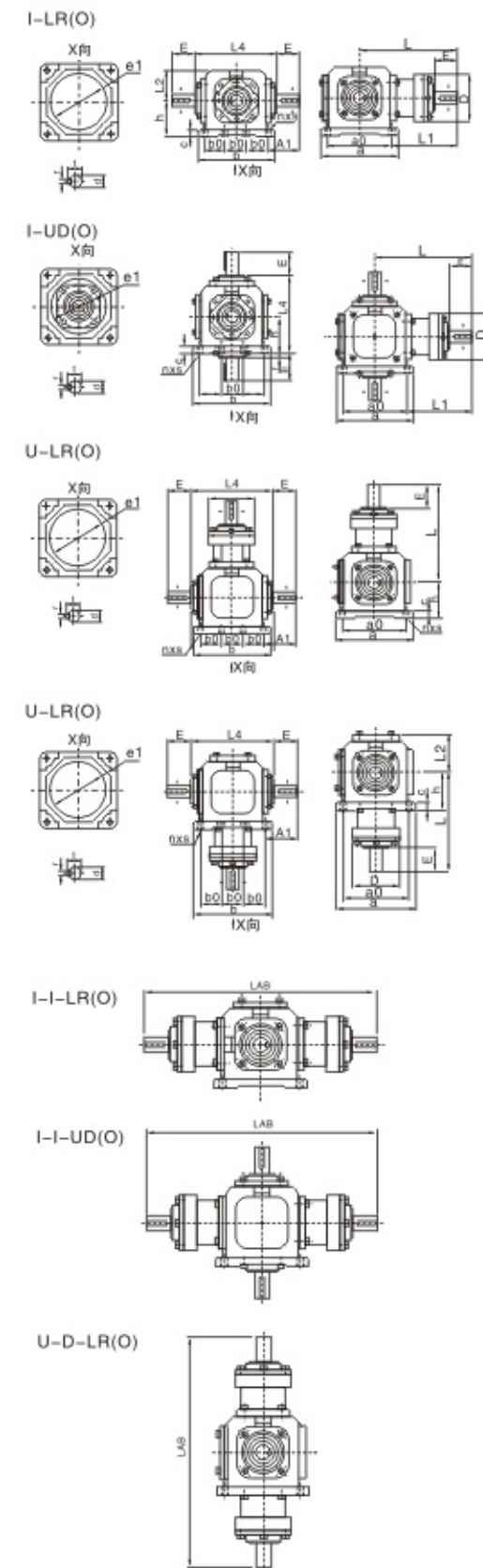


轴配置及轴旋转方向的关系、安装方位及尺寸图表

The relationship between shaft arrangements and direction of shaft rotation, Mounting position and dimension sheets



EDTM20-EDTM25



	EDTM2	EDTM4	EDTM6	EDTM7	EDTM8	EDTM10	EDTM12	EDTM16	EDTM20	EDTM25
A1	48	53.5	81	88	110.5	120	130	150	195	235
a	100	155	190	210	235	285	340	390	490	580
a0	84	125	152	174	195	240	290	330	430	520
b	100	155	190	210	235	285	340	390	410	480
b0	84	125	152	174	195	240	390	330	110	130
C	10	20	22	22	26	28	32	40	40	40
D	58	76	115	125	159	155	168	193	220	270
d(h7)	15	19	25	32	40	45	50	60	72	85
E	33	38	50	62	75	90	100	105	105	130
e1(H8)/x3	94x3	155x5	190x4	220x4	240x5	305x5	370x5	420x7	360x10	430x10
f	5	2	17	13	18	10	0	10	10	10
h	52	76	90	100	115	140	175	200	245	290
L	124	180	222	265	308	360	415	455	545	660
L1	82	117.5	146	178	210.5	240	270	290	330	400
L2	52	76	87	99	119.5	133	160	186	217	255
L4	114	156	214	226	266	300	350	420	510	600
LAB	/	360	444	530	616	720	830	/	/	/
n	4	4	4	4	4	4	4	4	8	8
r	5	6	8	10	12	14	14	18	20	22
s	9	10.5	14	14	14	16	21	25	21	24
t	17	21.5	28	35	43	48.5	53.5	64	76.5	90