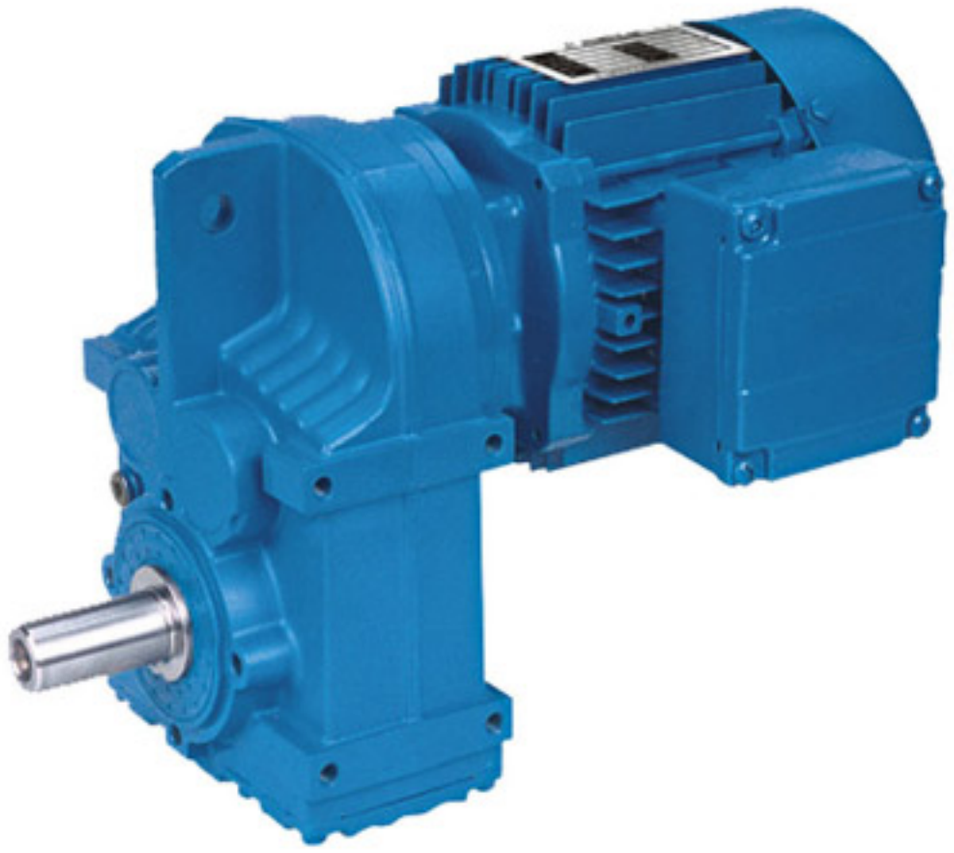
CHUELY 丘里



产品选型手册

F系列平行轴斜齿轮减速机

上海丘里机械设备有限公司

性能特性:

☆ 产品采用了系列化、模块化的设计思想，有广泛的适应性，本系列产品有极其多的电机组合、安装位置和结构方案，传动比分级精细，转速型谱宽，满足不同的使用工况，实现机电一体化。

☆ R、K、F、S四大系列减速机采用单元结构模块化设计原理，大量减少了零部件种类和库存量，也大大的缩短了交货周期。部件通用性强，维护成本低，特别是生产线，只需备用内部几个传动件即可保证整线正常生产的维修保养。

☆ 减速器效率高达96%，振动小、噪音低、性能优越、密封性能好、可在有腐蚀、潮湿等恶劣环境中连续工作。

☆ 带筋的高刚性铸铁箱体，齿轮采用高耐磨优质合金材料并经特种热处理及精密磨齿加工，确保轴平行度和定位的精度，这一切构成了齿轮传动的完美结合。

Characteristics:

☆ R series rigid tooth flank helical gear units, K series helical-bevel gear units, F series parallel shaft helical gear units, S series helical-worm gear units, T series spiral bevel gear units, have the advantages of small volume and big transmission torque.

☆ Designed and manufactured on the basis of modular combined system, the gear units have abundant combinations of motor, mounting positions and structure projects, the classifying class of transmission ratio is detailed, which meets the requirements of different working situation and realize mechatronics.

☆ R, K, F, S four main series gear units utilize the design principle of unit structure module, which reduces the categories and stocks of parts, and shortens the delivery period.
High efficiency of drive, low consumption of power, and excellent performance.

☆ High rigidity cast iron housing with rib; the rigid tooth flank gear utilizes good-quality alloy steel, the surface is treated with carburizing quenching hardening treatment, refined processing of grounding, stable drive, low noise, big capacity of load, long using life.

选型指南:

☆ 减速机是按载荷平稳，每天工作时间一定和少量起停次数的情况设计的，而在实际使用中往往不是处于此种理想状况，因此必须按照实际情况的载荷类型、运行时间、起动频率来确定工作机系数f_1、原动机系数f_2、起动系数f_3。使其小于或等于选型表中的服务系数f_B,即$f_1 \times f_2 \times f_3 \leqslant f_B$。或将工作机所需的转矩乘以服务系数（$f_1 \times f_2 \times f_3$）应小于或等于减速机的许用转矩。

即 $T_N > T_2 \times f_1 \times f_2 \times f_3$

f_1 — 工作机系数（见表1）

f_2 — 原动机系数（见表2）

f_3 — 起动系数（见表3）

T_2 — 工作机所需转矩

T_N — 减速机许用转矩(见第9页)

☆ K系列如果只承受单向载荷则最好注明旋转方向(从输出端方向看)，这样有利于改善螺旋锥齿轮的受力状况。

☆ 我公司可承接特殊规格产品的订货，并可为客户提供专用设计服务。

☆ 随着技术进步，本公司产品设计和规格可能会有所更改，恕不另行通知。

Instructions for Selection:

☆ Gear units are designed under the circumstance of steady load, stated operating time per day and a few sarting times.but the practical condition will be not as perfect as the designed circumstance.so we must confirm driven machine factor f_1,prime mover factor f_2,starting factor f_3 according to actual load type, operating time,starting frequency.let it less than or equale to the service factor fb of selection table,viz $f_1 \times f_2 \times f_3 \leqslant f_B$.the needed torque of service machine multiply the service factor ($f_1 \times f_2 \times f_3$) should less than or equale to gear units' permissible torque.

Viz $T_N > T_2 \times f_1 \times f_2 \times f_3$

f_1 — driven machine factor(see table 1)

f_2 — prime mover factor(see table 2)

f_3 — starting factor(see table 3)

T_2 — the needed torque of driven machine

T_N — gear units' permissible torque(see page 9)

☆ If the K series only bear single direction load, please indicate the rotating direction (see from output side), which is good for improving the pressing state of the spiral bevel gear.

☆ We accept the orders of products of special specification, and provide our customer with exclusive design service.

☆ Design and specifications are subject to change without notice, Please forgive

载 荷 类 型 表

表1　工 作 机 系 数　f1

工作机		日工作小时数			工作机		日工作小时数		
		≤0.5h	0.5-10h	>10h			≤0.5h	0.5-10h	>10h
污水处理	浓缩器(中心传动)	-	-	1.2	金属加工设备	可逆式板坯轧机	-	2.5	2.5
	压滤器	1.0	1.3	1.5		可逆式线材轧机	-	1.8	1.8
	絮凝器	0.8	1.0	1.3		可逆式薄板轧机	-	2.0	2.0
	曝气机	-	1.8	2.0		可逆式中厚板轧机	-	1.8	1.8
	接集设备	1.0	1.2	1.3		辊缝调节驱动装置	0.9	1.0	-
	纵向、回转组合接集装置	1.0	1.3	1.5	输送机械	斗式输送机	-	1.2	1.5
	预浓缩器	-	1.1	1.3		绞车	1.4	1.6	1.6
	螺杆泵	-	1.3	1.5		卷扬机		1.5	1.8
	水轮机	-	-	2.0		皮带输送机<150kw	1.0	1.2	1.3
	离心泵	1.0	1.2	1.3		皮带输送机≥150kw	1.1	1.3	1.5
	1个活塞容积式泵	1.3	1.4	1.8		货用电梯*	-	1.2	1.5
	>1个活塞容积式泵	1.2	1.4	1.5		客用电梯*		1.5	1.8
挖泥机	斗式运输机	-	1.6	1.6		刮板式输送机	-	1.2	1.5
	倾卸装置	-	1.3	1.5		自动扶梯		1.2	1.4
	Carteypillar行走机构	1.2	1.6	1.8		轨道行走机构	-	1.5	-
	斗轮式挖掘机(用于捡拾)	-	1.7	1.7	变频装置		-	1.8	2.0
	斗轮式挖掘机(用于粗料)	-	2.2	2.2	往复式压缩机		-	1.8	1.9
	切碎机	-	2.2	2.2	起重机械	回转机构	2.5	2.5	3.0
	行走机构*		1.4	1.8		俯仰机构	2.5	2.5	3.0
弯板机*		-	1.0	1.0		行走机构	2.5	3.0	3.0
化学工业	挤压机	-	-	1.6		提升机构	2.5	2.5	3.0
	调浆机	-	1.8	1.8		转臂式起重机	2.5	2.5	3.0
	橡胶研光机	-	1.5	1.5	冷却塔	冷却塔风扇	-	-	2.0
	冷却圆筒	-	1.3	1.4		风机(轴流和离心式)	-	1.4	1.5
	混料机,用于均匀介质	1.0	1.3	1.4	蔗糖生产	甘蔗切碎机*	-	-	1.7
	混料机,用于非均匀介质	1.4	1.6	1.7		甘蔗碾磨机	-	-	1.7
	搅拌机,用于密度均匀介质	1.0	1.3	1.5	甜菜糖生产	甜菜绞碎机	-	-	1.2
	搅拌机,用于非均匀介质	1.2	1.4	1.6		榨取机,机械致冷机,蒸煮机	-	-	1.4
	搅拌机,用于不均匀气体吸收	1.4	1.6	1.8		甜菜清洗机	-	-	1.5
	烘炉	1.0	1.3	1.5		甜菜切碎机	-	-	1.5
	离心机	1.0	1.2	1.3	造纸机械	各种类型**	-	1.8	2.0
金属加工设备	翻板机	1.0	1.0	1.2		碎浆机驱动装置	2.0	2.0	2.0
	推钢机	1.0	1.2	1.2	离心式压缩机		-	1.4	1.5
	绕线机	-	1.6	1.6	索道缆车	运货索道	-	1.3	1.4
	冷床横移架	-	1.5	1.5		往返系统空中索道	-	1.6	1.8
	辊式矫直机	-	1.6	1.6		T型杆升降机	-	1.3	1.4
	辊道(连续式)	-	1.5	1.5		连续索道	-	1.4	1.6
	辊道(间歇式)	-	2.0	2.0	水泥工业	混凝土搅拌器	-	1.5	1.5
	可逆式轧管机	-	1.8	1.8		破碎机*	-	1.2	1.4
	剪切机(连续式)*	-	1.5	1.5		回转窑	-	-	2.0
	剪切机(曲柄式)*	1.0	1.0	1.0		管式磨机	-	-	2.0
	连铸机驱动装置	-	1.4	1.4		选粉机	-	1.6	1.6
	可逆式开坯机	-	2.5	2.5		辊压机	-	-	2.0

工作机额定功率P_2的确定　*)按最大扭矩确定额定功率.　**)检验热功率是绝对必要的.

表 2　原动机系数　f2

电机,液压马达,汽轮机	1.0
4-6缸活塞发动机	1.25
1-3缸活塞发动机	1.5

表 3　起动系数　f3

f_3 每小时起动次数 \ $f_1 \times f_2$	1	1.25-1.75	2-2.75	≥3
≤5	1	1	1	1
6-25	1.2	1.12	1.06	1
26-60	1.3	1.2	1.12	1.06
61-180	1.5	1.3	1.2	1.12
>180	1.7	1.5	1.3	1.2

Gear Units Service Factor

Table 1 Factor for driven machine f_1

Driven machines		Effective daily operating period under load in hours			Driven machines		Effective daily operating period under load in hours		
		<0.5h	0.5-10h	>10h			<0.5h	0.5-10h	>10h
Waste water treatment	Thickeners(central drive)	-	-	1.2	Metal working mills	Reversing slabbing mills	-	2.5	2.5
	Filter presses	1.0	1.3	1.5		Reversing wire mills	-	1.8	1.8
	Flocculation apparata	0.8	1.0	1.3		Reversing sheet mills	-	2.0	2.0
	Aerators	-	1.8	2.0		Reversing plate mills	-	1.8	1.8
	Raking equipment	1.0	1.2	1.3		Roll adjustment drives	0.9	1.0	-
	Combined longitudinal and rotary rakes	1.0	1.3	1.5	Conveyors	Bucket conveyors	-	1.2	1.5
	Pre-thickeners	-	1.1	1.3		Hauling winches	1.4	1.6	1.6
	Screw pumps	-	1.3	1.5		Hoists		1.5	1.8
	Water turbines	-	-	2.0		Belt conveyors <150 kw	1.0	1.2	1.3
	Centrifugal pumps	1.0	1.2	1.3		Belt conveyors >150 kw	1.1	1.3	1.5
	1piston positive-displacement pumps	1.3	1.4	1.8		Goods lifts *	-	1.2	1.5
	>1piston positive-displacement pumps	1.2	1.4	1.5		Passenger lifts *		1.5	1.8
Dredgers	Bucket conveyors	-	1.6	1.6		Apron conveyors	-	1.2	1.5
	Dumping devices	-	1.3	1.5		Escalators		1.2	1.4
	Carterpillar travelling gears	1.2	1.6	1.8		Rail travelling gears	-	1.5	-
	Bucket wheel excavators as pick-up	-	1.7	1.7	Frequency converters		-	1.8	2.0
	Bucket wheel excavators for primitive material	-	2.2	2.2	Reciprocating compressors		-	1.8	1.9
	Cutter heads	-	2.2	2.2	Cranes	Slewing gears	2.5	2.5	3.0
	Traversing gears *		1.4	1.8		Luffing gears	2.5	2.5	3.0
Plate bending machines *		-	1.0	1.0		Travelling gears	2.5	3.0	3.0
Chemical industry	Extruders	-	-	1.6		Hoisting gears	2.5	2.5	3.0
	Dough mills	-	1.8	1.8		Derricking jib cranes	2.5	2.5	3.0
	Rubber calenders	-	1.5	1.5	Cooling towers	Cooling tower fans	-	-	2.0
	Cooling drums	-	1.3	1.4		Blowers(axial and radial)	-	1.4	1.5
	Mixers for uniform media	1.0	1.3	1.4	Cane sugar production	Cane knives *	-	-	1.7
	Mixers for non-uniform media	1.4	1.6	1.7		Cane mills	-	-	1.7
	Agitators for media with uniform density	1.0	1.3	1.5	Beet sugar production	Beet cossettes macerators	-	-	1.2
	Agitators for media with non-uniform density	1.2	1.4	1.6		Extraction plants,Mechanical refrigerators,Juice boilers,	-	-	1.4
	Agitators for media with non-uniform gas absorption	1.4	1.6	1.8		Sugar beet washing machines	-	-	1.5
	Toasters	1.0	1.3	1.5		Sugar beet cutters	-	-	1.5
	Centrifuges	1.0	1.2	1.3	Paper machines	Of all-kind **	-	1.8	2.0
Metal working mills	Plate tilters	1.0	1.0	1.2		Pulper drives	2.0	2.0	2.0
	Ingot pushers	1.0	1.2	1.2	Centrifugal compressors		-	1.4	1.5
	Winding machines	-	1.6	1.6	Cableways	Material ropeways	-	1.3	1.4
	Cooling bed transfer frames	-	1.5	1.5		To-and fro system aerial ropeways	-	1.6	1.8
	Roller straighteners	-	1.6	1.6		T-bar lifts	-	1.3	1.4
	Roller tables continuous	-	1.5	1.5		Continuous ropeways	-	1.4	1.6
	Roller tables intermittent	-	2.0	2.0	Cement industry	Concrete mixers	-	1.5	1.5
	Roller tables Reversing tube mills	-	1.8	1.8		Breakers *	-	1.2	1.4
	Shears continuous *	-	1.5	1.5		Rotary kilns	-	-	2.0
	Shears crank type *	1.0	1.0	1.0		Tube mills	-	-	2.0
	Continuous casting drivers	-	1.4	1.4		Separators	-	1.6	1.6
	Reversing blooming mills	-	2.5	2.5		Roll crushers	-	-	2.0

Design for power rating of driven machine P_2 *)Designed power corresponding to max.torque.

**)A check for thermal capacity is absolutely essential.

Table 2 Factor for prime mover f_2

Electric motors,hydraulic motors,turbines	1.0
Piston engines 4-6 cylinders	1.25
Piston engines 1-3 cylinders	1.5

Table 3 Start factor f_3

f_3 / $f_1 \times f_2$ / Starts per hour	1	1.25 -1.75	2-2.75	>3
<5	1	1	1	1
6-25	1.2	1.12	1.06	1
26-60	1.3	1.2	1.12	1.06
61-180	1.5	1.3	1.2	1.12
>180	1.7	1.5	1.3	1.2

注意事项：

☆ 样本中的结构图和外形附图只属范例，并不要求严格一致；若需严格的外形及尺寸可向我们索取您所选定型号规格的CAD文件。

☆ 样本中外形尺寸单位全部是毫米 (mm)。

☆ 所注重量和油量仅为平均值，并不要求严格一致。

☆ 传动能力表中只有4、6、8极电机的平均或同步转速值，准确的输出转速应以电机额定转速或输入转速除以精确或实际减速比。尺寸图表中的电机尺寸以所配电机规格确定。电机接线盒位置若有要求，订货时需标注确认。电机代号见附录部分。

☆ 为防止发生事故，所有旋转部件均应根据国家和当地安全规定加防护罩。

☆ 传动箱供货时带径向油封，其它要求另行说明。

☆ 传动箱供货时，铸件外表喷涂兰色或灰色油漆，铝合金外表喷涂银白色平面漆，要求其它色彩或特种油漆需注明。

☆ 通气帽、放油孔、油镜或油尺位置出厂时按公司图纸标准，指定位置订货时必需另行说明。

☆ 本说明书中的所有减速机都可以正反运转（除配单向逆止器外），书中只表示一个输入旋转方向；另一个旋转方向输入时，输出方向也将改变。输出轴的旋转方向与内部结构和输入旋转方向有关，斜齿轮与减速级有关，螺旋锥齿轮与相对装配位置有关，蜗轮箱与蜗杆螺旋旋转方向有关。

☆ 试车之前，必需认真阅读使用说明书。

☆ 传动箱供货时已作好运行准备，只是未加入润滑油。

☆ 减速机空心轴带收缩盘、花键轴、电机座和伺服电机联接法兰及逆止器，带强制风扇、润滑冷却及控制部分等装置另行咨询。

☆ 本选型手册仅提供标准产品内容，行业专用或特殊规格另行咨询。

☆ 传动能力表中有关最大允许直联电机功率是相对于4极电机的功率。

Notes:

☆ Structure drawings and outline pictures attached in this catalog are regarded as examples with no strict accordance with products. The exact CAD drawing and dimension of certain types can be offered.

☆ The unit of dimension is millimeter (mm).

☆ Labeled weight and oil capacity are not exact but average.

☆ There are only average speed of 4, 6, 8 pole motor in transmission capacity table, exact speed is motor speed divided by exact ration. Motor size in dimension table is determined by motor type. Special requirements on terminal box of motor should be specified when placing an order. Motor types can be referred to Appendix.

☆ To avoid accident, all rotative components must be installed dust hood complying with national and regional safety regulations.

☆ Charge-free radial seals will be added on delivery, please state if other requirements.

☆ Iron-cast surface is sprayed blue or gray paint, Aluminum-die-cast surface silver, Other colors or special lacquer will be specified.

☆ Location of breather valve, oil drain plug, oil level plug and oil dipstick is subject to our drawings of different types. Special requirement will be stated when ordering.

☆ All reducers can rotate on both opposite directions (except installation of backstop) in this catalog, and only one input direction is marked, the input direction changed into the opposite will cause the change of output direction. The output direction relates to inner structure and input direction, to number of stages of helical gears, to relative position of spiral gears, to the rotation direction of worm in worm gear units.

☆ Please read the catalog before running the reducer.

☆ Gear units have been debugged, but lubrication will be added before running.

☆ Shrink disk, involute spline, motor base, flange and backstop connected with servo motor, cooling fan, lubrication cooling and controller will be specified when needed. We will offer reference.

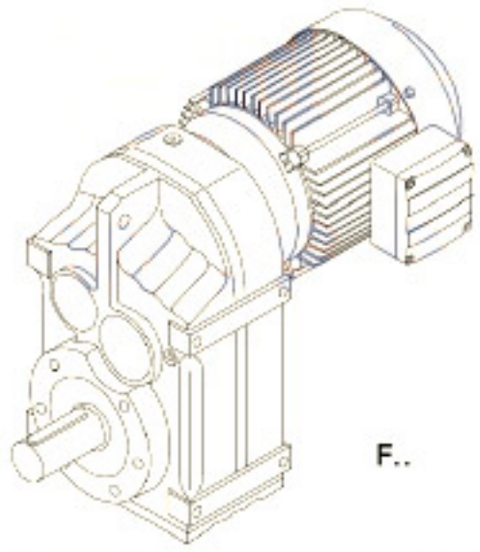
☆ Please consult us for special products because all information in this catalog is subject to general standards.

☆ Maximum motor power in transmission capacity table is of 4-pole electric motor.

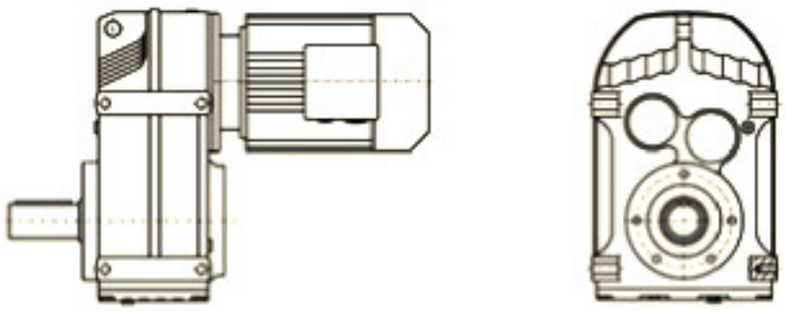
代号说明 Symbol specification

代号 Symbol	说明	Specification	单位 Unit
i	实际减速比	Actual ratio	/
iN	公称减速比	Nominal ratio	
iex	精确减速比	Exact ratio	
T_2	输出扭矩	Output torque	N · m
T_{2N}	额定输出扭矩	Rated output torque	
T_A	峰值扭矩	Max. Torque occurring on input shaft, e.g. Peak operating,starting or braking torque	
$T_{n2atmax}$	在最高转速时的额定输出扭矩	Nominal output torque at highest speed	
$T_{n2atmin}$	在最低转速时的额定输出扭矩	Nominal output torque at lowest speed	
P_{1N}	减速机额定输入功率	Rated input power	kW
P_G	热容量功率	Thermal capacity pwoer	
P_1	输入功率	Input power	
P_2	输出功率	Output power	
t	环境温度	Ambient temperature	℃
f_1	被驱动设备系数	Driven machine factor	/
f_2	原动机系数	Drives factor	
f_t	环境温度系数	Temperature factor	
n_1	输入转速	Input speed	r/min
n_m	电机转速	Motor speed	
n_{2N}	公称输出转速	Nominal output speed	
n_2	输出转速	Output speed	
F_{r1}	输入轴额定径向力	Nominal radial force on input shaft	N
F_{r2}	输出轴额定径向力	Nominal radial force on output shaft	
F_a	输出轴额定轴向力	Nominal axial force on output shaft	
η	效率	Efficiency	/
f	电机频率	Motor ferquency	Hz
V_{mot}	电机电压	Motor voltage	V
V_{brake}	制动器电压	Braker voltage	

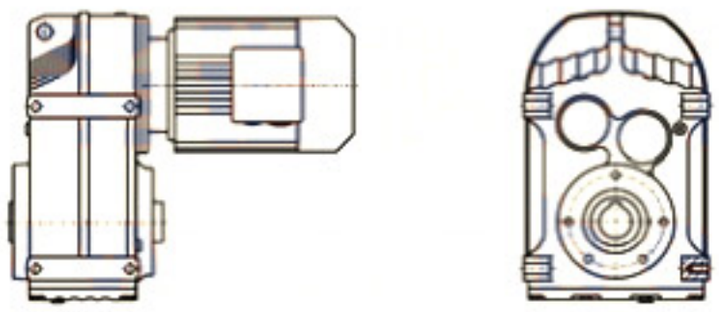
F系列减速机有以下设计方案：
F series gear units are available in the following designs:



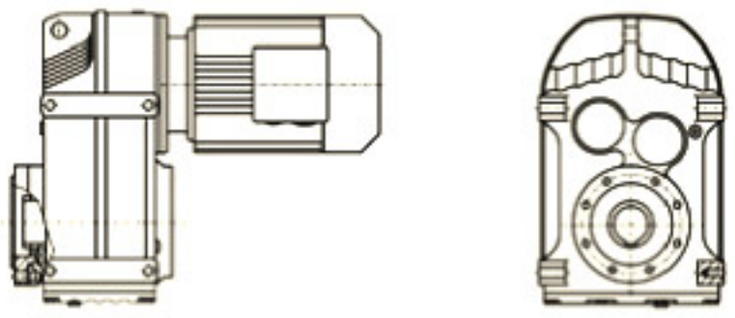
F..



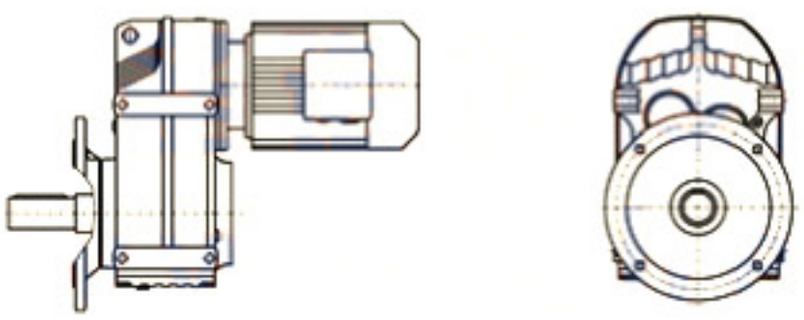
F..Y..
底脚轴伸式安装平行轴斜齿轮减速机
Foot-mounted parallel shaft helical gear units with solid shaft



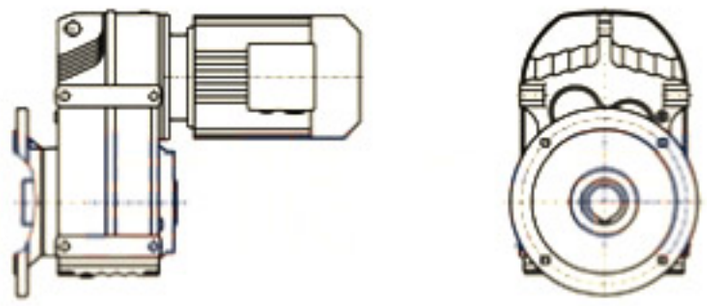
FA..Y..
空心轴安装平行轴斜齿轮减速机
Parallel shaft helical gear units with hollow shaft



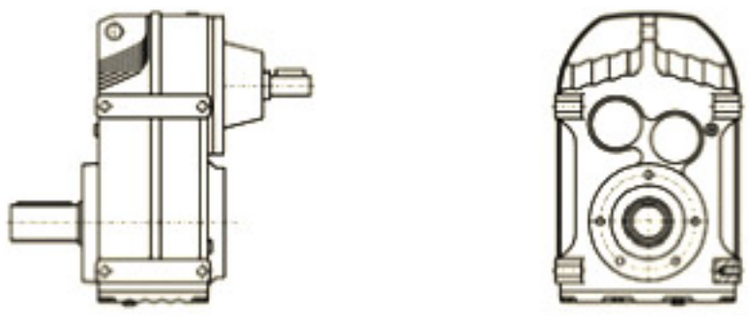
FAZ..Y..
小法兰空心轴安装平行轴斜齿轮减速机
Short-flange-mounted parallel shaft helical gear units with hollow shaft



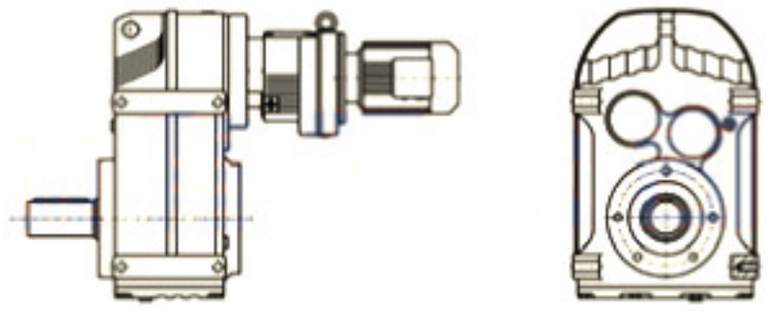
FF..Y..
法兰轴伸式安装平行轴斜齿轮减速机
Flange-mounted parallel shaft helical gear units with solid shaft



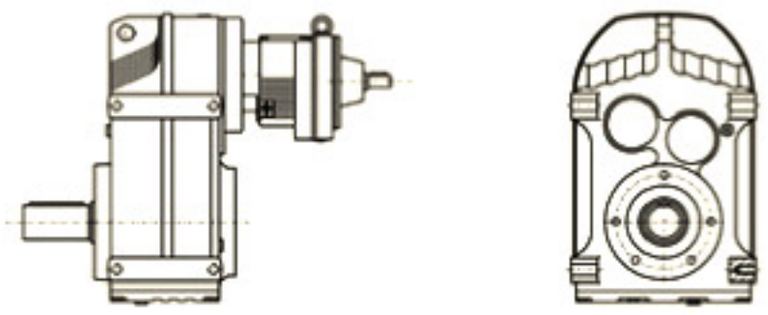
FAF..Y..
法兰空心轴安装平行轴斜齿轮减速机
Flange-mounted parallel shaft helical gear units with hollow shaft



F (FF、FA、FAF、FAZ) S...
轴输入的平行轴斜齿轮减速机
Shaft input parallel shaft helical gear units



F (FF、FA、FAF、FAZ) ...R...Y...
组合式平行轴斜齿轮减速机
Combinatorial parallel shaft helical gear units



F (FF、FA、FAF、FAZ) S...R...
轴输入的组合式平行轴斜齿轮减速机
Shaft input combinatorial parallel shaft helical gear units

F (FF、FA、FAF、FAZ) ...Y...
电机用户自配或配特殊电机时需加联接法兰
When equipping the user's motor or the special one,the flange is required to be connected

型号与标记：
Type Designations:

F F 37-Y 0.55-4P-23.88-M1- 270°

- 减速机类型
- 结构形式
- 规格
- 电机代号
- 电机功率、极数
- 传动比
- 安装形式
- 电机接线盒位置

F F 37-Y 0.55-4P-23.88-M1- 270°

- Gear units type
- Structure
- Size
- Motor code
- Motor power、pole
- Ratio
- Mounting position
- Position of the motor thermal box

减速机类型：
平行轴斜齿轮减速机

Gear units type:
Parallel shaft helical gear units

结构形式：

普通轴伸式（省略）	
轴装式	A
轴伸法兰式	F
轴装法兰式	AF
轴装小法兰式	AZ
普通轴伸式，轴输入	S
普通轴装式，轴输入	AS
轴伸法兰式，轴输入	FS
轴装法兰式，轴输入	AFS

Structure:

Foot-mounted solid shaft output	(-)
Hollow shaft output	A
Flange-mounted solid shaft output	F
Flange-mounted hollow shaft output	AF
Short-flange-mounted hollow shaft output	AZ
Foot-mounted solid shaft output, shaft input	S
Hollow shaft output,shaft input	AS
Flange-mounted solid shaft output,shaft input	FS
Flange-mounted hollow shaft output,shaft input	AFS

规格：
(见选型参数表)

Size:
(see selection table)

电机代号：

普通(更新)	Y(Y2)
防　爆	B
直　流	Z
制　动	YEJ
多　速	D
变　频	YVP
电磁调速	YCT
冶金起重	R
变频制动	YVPJ
辊　道	G

Motor code:

Ordinary(renew)	Y(Y2)
Flame-proof	B
Direct current	Z
Brake	YEJ
Multi-speed	D
Variable frequency	YVP
Electromagnetism speed modulation	YCT
Hoisting in metallurgy	R
Variable frequency and brake	YVPJ
Roller tables	G

电机功率、极数：
(见选型参数表)

Motor power、pole：
(see selection table)

传动比：
(见选型参数表)

Ratio:
(see selection table)

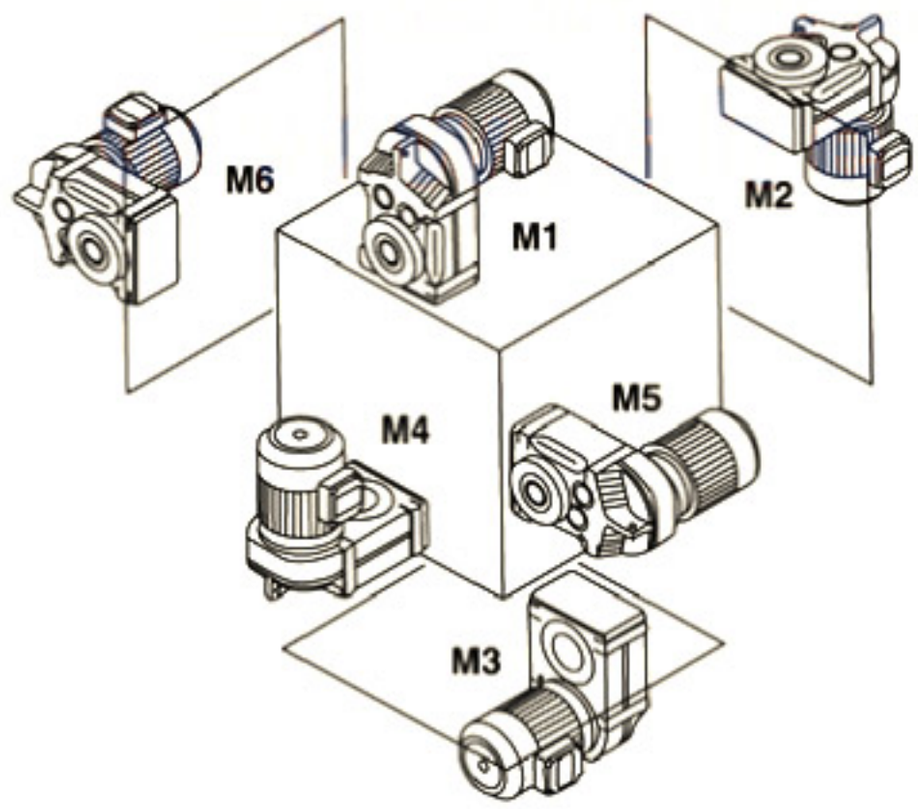
安装形式：
M1、M2、M3、M4、M5、M6

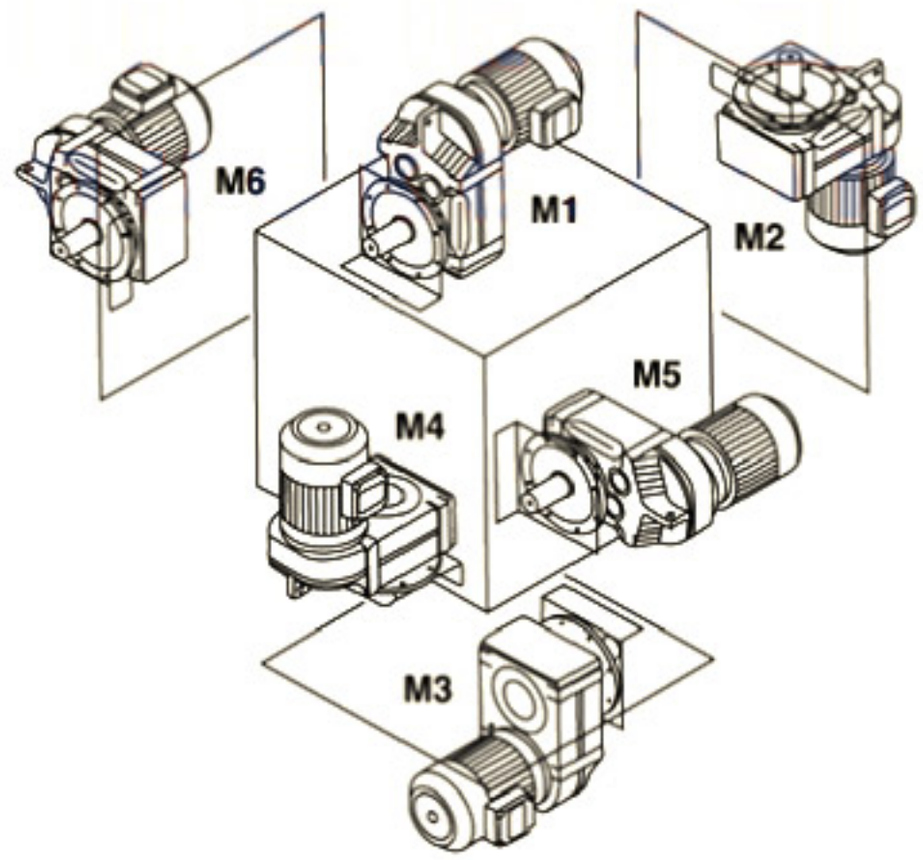
Mounting position:
M1、M2、M3、M4、M5、M6

电机接线盒位置：
0°、90°、180°、270°

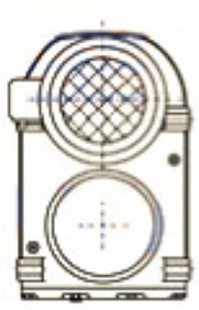
Position of the motor thermal box:
0°、90°、180°、270°

安装形式:
Mounting position:

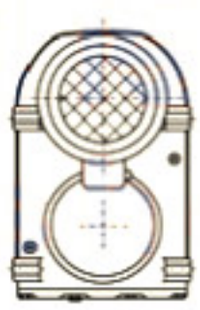




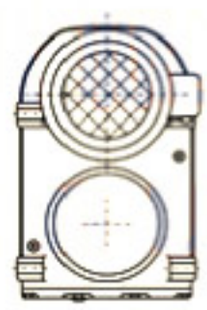
电机接线盒位置:
Position of the motor thermal box



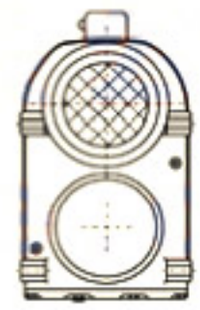
0°



90°



180°



270°

输入功率及许用转矩
Input power rating and permissible torque

规 格 Size	37	47	57	67	77	87	97	107	127	157
结构形式 Structure	F FA FF FAF FAZ									
输入功率 Input power rating(kW)	0.18~3	0.18~3	0.18~5.5	0.18~5.5	0.37~11	0.75~22	1.1~30	2.2~45	7.5~90	11~200
传动比 Ratio	3.81~128.51	5.06~189.39	5.18~199.70	4.21~228.99	4.30~281.71	4.12~270.68	4.68~280.76	6.20~254.40	4.63~172.17	11.92~267.43
许用转矩(N.m) Permissible torque	200	400	600	820	1500	3000	4300	7840	12000	18000

减速机重量
Gear unit weight

规 格 Size	37	47	57	67	77	87	97	107	127	157
重量(kg) Weight	13	18	34	55	90	150	260	402	700	950

所注重量为平均值，仅供参考
The weights are mean values,only for reference.

润滑油量表
Lubrication table

F...:

规格 Size	润滑油量（升） Fill quantity in liters					
	M1	M2	M3	M4	M5	M6
F37	1	1.2	0.7	1.2	1	1.1
F47	1.5	1.8	1.1	1.9	1.5	1.7
F57	2.6	3.7	2.1	3.5	2.8	2.9
F67	2.7	3.8	1.9	3.8	2.9	3.2
F77	5	7.3	4.3	8	6	6.3
F87	10	13.0	7.7	13.8	10.8	11
F97	18.5	22.5	12.6	25.2	18.5	20
F107	24.5	32	19.5	37.5	27	27
F127	40.5	55	34	61	46.5	47
F157	69	104	63	105	86	78

FF...:

规格 Size	润滑油量（升） Fill quantity in liters					
	M1	M2	M3	M4	M5	M6
FF37	1	1.2	0.7	1.3	1	1.1
FF47	1.6	1.9	1.1	1.9	1.5	1.7
FF57	2.8	3.8	2.1	3.7	2.9	3
FF67	2.7	3.8	1.9	3.8	2.9	3.2
FF77	5.1	7.3	4.3	8.1	6	6.3
FF87	10.3	13.2	7.8	14.1	11	11.2
FF97	19	22.5	12.6	25.5	18.9	20.5
FF107	25.5	32	19.5	38.5	27.5	28
FF127	41.5	56	34	63	46.5	49
FF157	72	105	64	106	87	79

FA..、FAF..、FAZ...:

规格 Size	润滑油量（升） Fill quantity in liters					
	M1	M2	M3	M4	M5	M6
F..37	1	1.2	0.7	1.2	1	1.1
F..47	1.5	1.8	1.1	1.9	1.5	1.7
F..57	2.7	3.8	2.1	3.6	2.9	3
F..67	2.7	3.8	1.9	3.8	2.9	3.2
F..77	5	7.3	4.3	8	6	6.3
F..87	10	13.0	7.7	13.8	10.8	11
F..97	18.5	22.5	12.6	25.0	18.5	20
F..107	24.5	32	19.5	37.5	27	27
F..127	39	55	34	61	45	46.5
F..157	68	103	62	104	85	77

输出转速 Output speed r/min	输出扭矩 Output torque Nm	传动比 Ratio i	使用系数 Service factor f_B	机型号 Type Type	极数 Pole p
0.18kW					
0.11	14324	13014	0.79		
0.12	12930	11748	0.87	FA 127R77	4
0.14	11305	10271	1.00	FAF127R77	4
0.16	9797	8901	1.15	F 127R77	4
0.18	8478	7703	1.33	FF 127R77	4
0.21	7449	6768	1.51		
0.16	9408	8548	0.78		
0.18	8448	7675	0.87		
0.21	7281	6615	1.01		
0.24	6406	5820	1.15	FA 107R77	4
0.27	5749	5223	1.28	FAF107R77	4
0.30	5027	4567	1.47	F 107R77	4
0.39	3875	3521	1.90	FF 107R77	4
0.46	3343	3037	2.2		
0.50	3033	2756	2.4		
0.59	2607	2369	2.8		
0.67	2276	2068	3.2		
0.32	4815	4375	0.84		
0.35	4343	3946	0.9		
0.41	3743	3401	1.1		
0.47	3246	2949	1.2	FA 97R57	4
0.54	2851	2590	1.4	FAF97R57	4
0.61	2495	2267	1.6	F 97R57	4
0.70	2189	1989	1.8	FF 97R57	4
0.80	1914	1739	2.1		
0.90	1697	1542	2.4		
1.0	1475	1340	2.7		
1.2	1301	1182	3.1		
0.48	3171	2881	0.9		
0.54	2834	2575	1.0		
0.63	2420	2199	1.2		
0.72	2124	1930	1.3	FA 87R57	4
0.81	1881	1709	1.5	FAF87R57	4
0.93	1643	1493	1.7	F 87R57	4
1.1	1431	1300	2.0	FF 87R57	4
1.2	1264	1148	2.2		
1.4	1112	1010	2.5		
1.6	976	887	2.9		
1.8	859	780	3.3		
0.8	1902	1728	0.7		
0.9	1698	1543	0.8		
1.0	1490	1354	0.9		
1.2	1316	1196	1.1	FA 77R37	4
1.3	1156	1050	1.2	FAF77R37	4
1.5	998	907	1.4	F 77R37	4
1.7	892	810	1.6	FF 77R37	4
2.0	781	710	1.8		
2.3	660	600	2.1		
1.6	944	858	0.82		
1.9	812	738	0.95		
2.2	689	626	1.12		
2.4	630	572	1.22		
2.8	550	500	1.40		
2.8	547	497	1.41		
3.1	500	454	1.54	FA 67R37	4
3.3	470	427	1.64	FAF67R37	4
3.5	431	392	1.79	F 67R37	4
3.8	403	366	1.91	FF 67R37	4
4.2	367	333	2.1		
4.7	327	297	2.4		
5.3	287	261	2.7		
5.8	262	238	2.9		
7.0	220	200	3.5		

输出转速 Output speed r/min	输出扭矩 Output torque Nm	传动比 Ratio i	使用系数 Service factor f_B	机型号 Type Type	极数 Pole p
0.18kW					
2.5	616	560	0.92		
2.7	558	507	1.01		
3.1	499	453	1.13		
3.3	469	426	1.20	FA 57R37	4
3.6	426	387	1.32	FAF57R37	4
4.2	363	330	1.55	F 57R37	4
4.7	328	298	1.72	FF 57R37	4
5.3	288	262	1.96		
6.2	249	226	2.3		
7.0	220	200	2.6		
4.1	371	337	1.01		
4.6	331	301	1.13		
4.7	322	293	1.17		
4.9	314	285	1.20	FA 47R17	4
6.0	253	230	1.49	FAF47R17	4
6.1	250	227	1.50	F 47R17	4
6.4	238	216	1.58	FF 47R17	4
7.4	207	188	1.82		
7.9	194	176	1.94		
8.2	187	170	1.00	FA 37R17	4
8.3	185	168	1.02	FAF37R17	4
10	146	133	1.28	F 37R17	4
11	142	129	1.32	FF 37R17	4
3.0	536	281.71	2.6	FA 77	6
3.2	500	262.93	2.8	FAF77	6
3.8	429	225.79	3.3	F 77	6
				FF 77	6
3.7	435	228.99	1.77	FA 67	6
4.4	371	195.39	2.1	FAF67	6
5.0	325	170.85	2.4	F 67	6
				FF 67	6
6.1	266	228.99	2.9	FA 67	4
7.1	227	195.39	3.4	FAF67	4
8.1	199	170.85	3.9	F 67	4
				FF 67	4
4.3	380	199.70	1.49		
4.6	349	183.60	1.62	FA 57	6
5.4	299	157.09	1.89	FAF57	6
6.2	259	136.16	2.2	F 57	6
6.7	242	127.27	2.3	FF 57	6
7.7	209	110.01	2.7		
7.0	232	199.70	2.4		
7.6	213	183.60	2.6	FA 57	4
8.8	183	157.09	3.1	FAF57	4
10	158	136.16	3.6	F 57	4
11	148	127.27	3.8	FF 57	4
4.5	360	189.39	1.0		
4.9	331	174.13	1.1	FA 47	6
5.7	283	148.98	1.3	FAF47	6
6.6	245	129.14	1.5	F 47	6
7.0	229	120.70	2.5	FF 47	6
7.3	220	189.39	1.71		
8.0	202	174.13	1.86	FA 47	4
9.3	173	148.98	2.2	FAF47	4
11	150	129.14	2.5	F 47	4
12	140	120.70	2.7	FF 47	4

0.18kW

输出转速 Output speed r/min	输出扭矩 Output torque Nm	传动比 Ratio i	使用系数 Service factor f_B	机型号 Type Type	极数 Pole p
7.2	224	117.88	0.84	FA 37	6
8.5	191	100.36	0.99	FAF37	6
9.8	164	86.53	1.14	F 37	6
11	153	80.65	1.23	FF 37	6
12	134	70.50	1.40		
11	149	128.51	1.26		
12	137	117.88	1.37		
14	117	100.36	1.61		
16	101	86.53	1.87		
17	94	80.65	2.0		
20	82	70.50	2.3		
21	77	66.09	2.4		
24	68	58.32	2.8		
25	63	54.54	3.0		
27	60	51.70	3.1		
30	55	47.02	3.4		
32	51	43.83	3.7		
36	45	38.31	4.2		
39	42	35.91	4.5	FA 37	4
44	37	31.69	5.1	FAF37	4
49	33	28.09	5.8	F 37	4
58	28	23.88	6.8	FF 37	4
59	27	23.63	6.8		
68	24	20.57	7.9		
72	22	19.27	8.4		
82	20	17.03	9.5		
88	18	15.81	10.2		
97	17	14.33	11		
108	15	12.87	13		
125	13	11.08	14		
133	12	10.42	14		
155	10	8.97	16		
185	8.7	7.51	16		
204	7.9	6.81	17		
227	7.1	6.11	18		
264	6.1	5.27	19		
281	5.8	4.95	20		
326	5.0	4.26	21		

0.25kW

输出转速 Output speed r/min	输出扭矩 Output torque Nm	传动比 Ratio i	使用系数 Service factor f_B	机型号 Type Type	极数 Pole p
0.16	13607	8901	0.83		
0.18	11775	7703	0.96	FA 127R77	4
0.21	10346	6768	1.09	FAF127R77	4
0.23	9131	5973	1.24	F 127R77	4
0.27	7760	5076	1.45	FF 127R77	4
0.31	6827	4466	1.7		
0.24	8897	5820	0.83		
0.27	7984	5223	0.92		
0.30	6982	4567	1.06		
0.40	5262	3442	1.40	FA 107R77	4
0.46	4643	3037	1.59	FAF107R77	4
0.50	4213	2756	1.75	F 107R77	4
0.59	3621	2369	2.0	FF 107R77	4
0.67	3161	2068	2.3		
0.87	2441	1597	3.0		
0.99	2142	1401	3.4		
0.47	4508	2949	0.90		
0.54	3959	2590	1.02		
0.61	3466	2267	1.17	FA 97R57	4
0.63	3362	2199	1.20	FAF97R57	4
0.80	2658	1739	1.52	F 97R57	4
0.90	2357	1542	1.71	FF 97R57	4
1.0	2032	1329	2.0		
1.2	1807	1182	2.2		
1.3	1578	1032	2.6		

0.25kW

输出转速 Output speed r/min	输出扭矩 Output torque Nm	传动比 Ratio i	使用系数 Service factor f_B	机型号 Type Type	极数 Pole p
0.72	2950	1930	1.0		
0.81	2613	1709	1.1		
0.93	2282	1493	1.2		
1.1	1987	1300	1.4	FA 87R57	4
1.2	1755	1148	1.6	FAF87R57	4
1.4	1544	1010	1.8	F 87R57	4
1.6	1356	887	2.1	FF 87R57	4
1.8	1192	780	2.4		
2.1	1030	674	2.7		
1.3	1605	1050	0.88		
1.5	1387	907	1.02		
1.7	1238	810	1.14	FA 77R37	4
2.0	1085	710	1.30	FAF77R37	4
2.3	917	600	1.54	F 77R37	4
2.6	803	525	1.76	FF 77R37	4
3.0	717	469	1.97		
3.4	630	412	2.2		
2.2	980	641	0.79		
2.4	874	572	0.88		
2.7	778	509	0.99		
2.8	764	500	1.01	FA 67R37	4
3.1	694	454	1.11	FAF67R37	4
3.2	668	437	1.15	F 67R37	4
3.5	599	392	1.29	FF 67R37	4
4.2	509	333	1.51		
4.7	454	297	1.70		
5.3	399	261	1.93		
5.8	364	238	2.1		
3.6	592	387	0.95		
4.2	504	330	0.97		
5.6	381	249	1.11		
3.6	584	382	1.12	FA 57R37	4
4.2	505	330	1.21	FAF57R37	4
4.7	456	298	1.24	F 57R37	4
5.3	401	262	1.48	FF 57R37	4
6.2	345	226	1.63		
7.0	306	200	1.84		
8.4	254	166	2.2		
6.0	352	230	1.07		
6.1	347	227	1.08		
6.4	330	216	1.14		
7.2	294	192	1.28	FA 47R17	4
7.4	287	188	1.31	FAF47R17	4
7.9	269	176	1.40	F 47R17	4
8.0	264	173	1.42	FF 47R17	4
9.4	226	148	1.66		
11	199	130	1.89		
10	203	133	0.92	FA 37R17	4
11	197	129	0.95	FAF37R17	4
12	180	118	1.04	F 37R17	4
14	150	98	1.25	FF 37R17	4
16	133	87	1.41		
3.0	744	281.71	1.9	FA 77	6
3.2	694	262.93	2.0	FAF77	6
3.8	596	225.79	2.4	F 77	6
4.3	524	198.31	2.7	FF 77	6
4.5	497	188.40	2.8		

输出转速 Output speed r/min	输出扭矩 Output torque Nm	传动比 Ratio i	使用系数 Service factor f_B	机型号 Type Type	极数 Pole p
0.25kW					
3.7	605	228.99	1.3	FA 67	6
4.4	516	195.39	1.5	FAF67	6
5.0	451	170.85	1.7	F 67	6
5.2	429	162.31	1.8	FF 67	6
6.0	376	142.40	2.1		
6.1	370	228.99	2.1	FA 67	4
7.1	315	195.39	2.4	FAF67	4
8.1	276	170.85	2.8	F 67	4
8.6	262	162.31	2.9	FF 67	4
9.8	230	142.40	3.4		
4.3	527	199.70	1.07		
4.6	485	183.60	1.16	FA 57	6
5.4	415	157.09	1.4	FAF57	6
6.2	360	136.16	1.6	F 57	6
6.7	336	127.27	1.7	FF 57	6
7.7	290	110.01	1.9		
7.0	322	199.70	1.7		
7.6	296	183.60	1.9	FA 57	4
8.8	254	157.09	2.2	FAF57	4
10	220	136.16	2.6	F 57	4
11	205	127.27	2.7	FF 57	4
13	178	110.01	3.2		
5.7	393	148.98	1.0	FA 47	6
6.6	341	129.14	1.1	FAF47	6
7.0	319	120.70	1.2	F 47	6
8.1	275	104.33	1.4	FF 47	6
7.3	306	189.39	1.2		
8.0	281	174.13	1.3	FA 47	4
9.3	241	148.98	1.6	FAF47	4
11	209	129.14	1.8	F 47	4
12	195	120.70	1.9	FF 47	4
13	168	104.33	2.2		
16	143	88.65	2.6		
11	207	128.51	0.9		
12	190	117.88	1.0		
14	162	100.36	1.2		
16	140	86.53	1.3		
17	130	80.65	1.4		
20	114	70.50	1.7		
21	107	66.09	1.8		
24	94	58.32	2.0		
25	88	54.54	2.1		
27	83	51.70	2.3		
30	76	47.02	2.5		
32	71	43.83	2.7		
36	62	38.31	3.0	FA 37	4
39	58	35.91	3.2	FAF37	4
44	51	31.69	3.7	F 37	4
49	45	28.09	4.1	FF 37	4
58	39	23.88	4.9		
59	38	23.63	4.9		
68	33	20.57	5.7		
72	31	19.27	6.0		
82	27	17.03	6.8		
88	26	15.81	7.4		
97	23	14.33	8.1		
108	21	12.87	9.0		
125	18	11.08	10		
133	17	10.42	10		
155	14	8.97	11		
185	12	7.51	11		

输出转速 Output speed r/min	输出扭矩 Output torque Nm	传动比 Ratio i	使用系数 Service factor f_B	机型号 Type Type	极数 Pole p
0.25kW					
204	11	6.81	12		
227	10	6.11	13	FA 37	4
264	8.5	5.27	14	FAF37	4
281	8.0	4.95	14	F 37	4
326	6.9	4.26	15	FF 37	4
0.37kW					
0.21	15312	6768	0.74		
0.23	13514	5973	0.83	FA 127R77	4
0.27	11484	5076	0.98	FAF127R77	4
0.31	10104	4466	1.12	F 127R77	4
0.36	8751	3868	1.29	FF 127R77	4
0.41	7699	3403	1.47		
0.47	6758	2987	1.67		
0.46	6871	3037	1.07		
0.50	6235	2756	1.16	FA 107R77	4
0.59	5360	2369	1.35	FAF107R77	4
0.67	4679	2068	1.54	F 107R77	4
0.87	3613	1597	2.0	FF 107R77	4
0.61	5129	2267	0.79		
0.70	4505	1991	0.90		
0.80	3934	1739	1.03	FA 97R57	4
0.90	3489	1542	1.16	FAF97R57	4
1.0	3032	1340	1.3	F 97R57	4
1.2	2674	1182	1.5	FF 97R57	4
1.3	2335	1032	1.7		
1.5	2052	907	2.0		
1.1	2941	1300	1.0		
1.2	2597	1148	1.1		
1.4	2285	1010	1.2	FA 87R57	4
1.6	2007	887	1.4	FAF87R57	4
1.8	1765	780	1.6	F 87R57	4
2.1	1525	674	1.8	FF 87R57	4
2.3	1378	609	2.0		
2.7	1165	515	2.4		
3.1	1023	452	2.8		
1.7	1833	810	0.77		
2.0	1606	710	0.88		
2.3	1357	600	1.04	FA 77R37	4
2.6	1188	525	1.19	FAF77R37	4
3.0	1061	469	1.33	F 77R37	4
3.4	932	412	1.51	FF 77R37	4
3.9	808	357	1.75		
4.4	710	314	1.98		
3.3	966	427	0.80		
3.8	828	366	0.93	FA 67R37	4
4.3	731	323	1.05	FAF67R37	4
4.8	656	290	1.17	F 67R37	4
5.4	581	257	1.33	FF 67R37	4
6.3	498	220	1.55		
5.3	593	262	0.95		
5.6	563	249	1.00		
6.2	511	226	1.10	FA 57R37	4
7.0	452	200	1.25	FAF57R37	4
7.1	446	197	1.27	F 57R37	4
7.7	410	181	1.38	FF 57R37	4
8.4	376	166	1.50		
9.1	344	152	1.64		
10	303	134	1.86		

0.37kW

输出转速 Output speed r/min	输出扭矩 Output torque Nm	传动比 Ratio i	使用系数 Service factor f_B	机型号 Type Type	极数 Pole p
8.0	391	173	0.96	FA 47R17	4
9.5	330	146	1.14	FAF47R17	4
11	292	129	1.29	F 47R17	4
				FF 47R17	4
2.4	1400	271.92	2.0	FA 87	8
2.5	1313	254.93	2.1	FAF87	8
2.8	1177	228.57	2.4	F 87	8
3.3	1014	196.85	2.8	FF 87	8
3.1	1063	271.92	2.7	FA 87	6
3.3	996	254.93	2.8	FAF87	6
3.7	893	228.57	3.2	F 87	6
				FF 87	6
3.8	882	225.79	1.6	FA 77	6
4.3	775	198.31	1.8	FAF77	6
4.5	736	188.40	1.9	F 77	6
5.1	651	166.47	2.2	FF 77	6
6.0	556	142.27	2.5		
4.9	673	281.71	2.1	FA 77	4
5.3	628	262.93	2.2	FAF77	4
6.2	540	225.79	2.6	F 77	4
7.0	474	198.31	3.0	FF 77	4
4.4	764	195.39	1.01	FA 67	6
5.0	668	170.85	1.15	FAF67	6
5.2	634	162.31	1.22	F 67	6
6.0	556	142.40	1.4	FF 67	6
7.0	472	120.79	1.6		
6.1	547	228.99	1.41		
7.1	467	195.39	1.65	FA 67	4
8.1	408	170.85	1.89	FAF67	4
8.6	388	162.31	1.99	F 67	4
9.8	340	142.40	2.3	FF 67	4
12	289	120.79	2.7		
5.4	614	157.09	0.92	FA 57	6
6.2	532	136.16	1.06	FAF57	6
6.7	497	127.27	1.13	F 57	6
7.7	430	110.01	1.31	FF 57	6
7.0	477	199.70	1.18		
7.6	439	183.60	1.29		
8.8	375	157.09	1.50	FA 57	4
10	325	136.16	1.73	FAF57	4
11	304	127.27	1.85	F 57	4
13	263	110.01	2.1	FF 57	4
15	223	93.47	2.5		
17	199	83.46	2.8		
9	356	148.98	1.06		
11	309	129.14	1.22	FA 47	4
13	249	104.33	1.51	FAF47	4
16	212	88.65	1.77	F 47	4
18	189	79.15	2.0	FF 47	4
21	162	67.61	2.3		
21	155	64.89	2.4		
16	207	86.53	0.91		
17	193	80.65	0.98		
20	168	70.50	1.12	FA 37	4
21	158	66.09	1.19	FAF37	4
24	139	58.32	1.35	F 37	4
25	130	54.54	1.44	FF 37	4
27	124	51.70	1.52		
30	112	47.02	1.67		

0.37kW

输出转速 Output speed r/min	输出扭矩 Output torque Nm	传动比 Ratio i	使用系数 Service factor f_B	机型号 Type Type	极数 Pole p
32	105	43.83	1.80		
36	92	38.31	2.1		
39	86	35.91	2.2		
44	76	31.69	2.5		
49	67	28.09	2.8		
58	57	23.88	3.3		
59	56	23.63	3.3		
68	49	20.57	3.8		
72	46	19.27	4.1		
82	41	17.03	4.6	FA 37	4
88	38	15.81	5.0	FAF37	4
97	34	14.33	5.5	F 37	4
108	31	12.87	6.1	FF 37	4
125	26	11.08	6.7		
133	25	10.42	7.0		
155	21	8.97	7.6		
185	18	7.51	7.7		
204	16	6.81	8.1		
227	15	6.11	8.7		
264	13	5.27	9.3		
281	12	4.95	9.5		
326	10	4.26	10		

0.55kW

输出转速 Output speed r/min	输出扭矩 Output torque Nm	传动比 Ratio i	使用系数 Service factor f_B	机型号 Type Type	极数 Pole p
0.22	21141	6286	0.80		
0.26	18174	5404	0.93		
0.50	9336	2776	1.81	FA 157R97	4
0.57	8162	2427	2.1	FAF157R97	4
0.83	5630	1674	3.0	F 157R97	4
1.1	4399	1308	3.8	FF 157R97	4
1.2	3931	1169	4.3		
0.36	13009	3868	0.87	FA 127R77	4
0.41	11445	3403	0.99	FAF127R77	4
0.47	10046	2987	1.12	F 127R77	4
				FF 127R77	4
0.59	7967	2369	0.92		
0.67	6955	2068	1.06		
0.76	6141	1826	1.20		
0.87	5371	1597	1.37	FA 107R77	4
0.99	4712	1401	1.56	FAF107R77	4
1.19	3921	1166	1.88	F 107R77	4
1.28	3656	1087	2.0	FF 107R77	4
1.46	3195	950	2.3		
1.67	2805	834	2.6		
2.17	2152	640	3.4		
1.04	4507	1340	0.90		
1.18	3975	1182	1.02		
1.35	3471	1032	1.16		
1.5	3050	907	1.33	FA 97R57	4
1.7	2677	796	1.5	FAF97R57	4
2.0	2354	700	1.7	F 97R57	4
2.3	2055	611	2.0	FF 97R57	4
2.6	1796	534	2.3		
2.9	1587	472	2.5		
3.4	1379	410	2.9		
3.8	1234	367	3.3		
1.6	2983	887	0.95		
1.8	2623	780	1.08		
2.1	2267	674	1.24	FA 87R57	4
2.3	2048	609	1.38	FAF87R57	4
2.7	1732	515	1.63	F 87R57	4
3.1	1520	452	1.86	FF 87R57	4
4.0	1160	345	2.4		

0.55kW

输出转速 Output speed r/min	输出扭矩 Output torque Nm	传动比 Ratio i	使用系数 Service factor f_B	机型号 Type Type	极数 Pole p
2.6	1766	525	0.80	FA 77R37	4
3.0	1577	469	0.89	FAF77R37	4
3.4	1386	412	1.02	F 77R37	4
3.9	1201	357	1.17	FF 77R37	4
4.4	1056	314	1.34		
5.4	864	257	0.89	FA 67R37	4
6.3	740	220	1.04	FAF67R37	4
7.1	659	196	1.17	F 67R37	4
8.3	562	167	1.37	FF 67R37	4
2.4	2039	276.64	1.98	FA 97	8
2.6	1878	254.79	2.2	FAF97	8
3.0	1668	226.34	2.4	F 97	8
				FF 97	8
2.5	2004	271.92	1.41	FA 87	8
2.6	1875	254.93	1.50	FAF87	8
2.9	1684	228.57	1.67	F 87	8
3.4	1450	196.85	1.94	FF 87	8
3.3	1517	271.92	1.86	FA 87	6
3.5	1422	254.93	1.98	FAF87	6
3.9	1275	228.57	2.2	F 87	6
4.5	1098	196.85	2.6	FF 87	6
4.9	998	178.95	2.8		
3.9	1260	225.79	1.12		
4.5	1106	198.31	1.27	FA 77	6
4.7	1051	188.40	1.34	FAF77	6
5.3	929	166.47	1.52	F 77	6
6.2	794	142.27	1.78	FF 77	6
6.8	728	130.42	1.94		
6.2	802	225.79	1.76		
7.0	704	198.31	2.0		
7.4	669	188.40	2.1	FA 77	4
8.3	591	166.47	2.4	FAF77	4
9.8	505	142.27	2.8	F 77	4
11	463	130.42	3.0	FF 77	4
12	407	114.45	3.5		
13	385	108.46	3.7		
15	337	94.93	4.2		
7.1	694	195.39	1.11		
8.1	607	170.85	1.27		
8.6	577	162.31	1.34	FA 67	4
9.8	506	142.40	1.52	FAF67	4
12	429	120.79	1.80	F 67	4
13	387	109.04	2.0	FF 67	4
14	341	95.94	2.3		
15	322	90.59	2.4		
18	277	77.97	2.8		
8.8	558	157.09	1.01		
10	484	136.16	1.17		
11	452	127.27	1.25	FA 57	4
13	391	110.01	1.44	FAF57	4
15	332	93.47	1.70	F 57	4
17	296	83.46	1.90	FF 57	4
19	260	73.16	2.2		
20	243	68.38	2.3		
24	210	59.10	2.7		
13	371	104.33	1.01	FA 47	4
16	315	88.65	1.19	FAF47	4
18	281	79.15	1.34	F 47	4
21	240	67.61	1.57	FF 47	4

0.55kW

输出转速 Output speed r/min	输出扭矩 Output torque Nm	传动比 Ratio i	使用系数 Service factor f_B	机型号 Type Type	极数 Pole p
21	230	64.89	1.63	FA 47	4
25	199	56.09	1.89	FAF47	4
29	169	47.66	2.2	F 47	4
33	151	42.55	2.5	FF 47	4
24	207	58.32	0.91		
25	194	54.54	0.97		
27	184	51.70	1.02		
30	167	47.02	1.13		
32	156	43.83	1.21		
36	136	38.31	1.38		
39	128	35.91	1.47		
44	113	31.69	1.67		
49	100	28.09	1.88		
58	85	23.88	2.2		
59	84	23.63	2.2		
68	73	20.57	2.6		
72	68	19.27	2.7	FA 37	4
82	60	17.03	3.1	FAF37	4
97	51	14.33	3.7	F 37	4
108	46	12.87	4.1	FF 37	4
125	39	11.08	4.5		
133	37	10.42	4.7		
155	32	8.97	5.1		
174	28	8.01	5.2		
185	27	7.51	5.4		
204	24	6.81	5.6		
227	22	6.11	5.8		
264	19	5.27	6.3		
281	18	4.95	6.4		
326	15	4.26	6.8		
365	14	3.81	7.3		

0.75kW

输出转速 Output speed r/min	输出扭矩 Output torque Nm	传动比 Ratio i	使用系数 Service factor f_B	机型号 Type Type	极数 Pole p
0.50	12731	2776	1.33	FA 157R97	4
0.57	11130	2427	1.52	FAF157R97	4
0.83	7677	1674	2.2	F 157R97	4
1.1	5999	1308	2.8	FF 157R97	4
1.2	5361	1169	3.2		
0.47	13699	2987	0.82		
0.52	12350	2693	0.91	FA 127R77	4
0.59	10896	2376	1.04	FAF127R77	4
0.68	9420	2054	1.20	F 127R77	4
0.77	8246	1798	1.37	FF 127R77	4
0.86	7425	1619	1.52		
0.76	8374	1826	0.88		
0.88	7241	1597	1.02		
0.99	6425	1401	1.15	FA 107R77	4
1.1	5700	1243	1.29	FAF107R77	4
1.3	4985	1087	1.48	F 107R77	4
1.5	4357	950	1.69	FF 107R77	4
1.7	3825	834	1.93		
2.2	2875	627	2.6		
3.3	1958	427	3.8		
1.3	4733	1032	0.85		
1.5	4160	907	0.97		
1.7	3651	796	1.1	FA 97R57	4
2.0	3210	700	1.3	FAF97R57	4
2.3	2802	611	1.4	F 97R57	4
2.6	2449	534	1.7	FF 97R57	4
2.9	2165	472	1.9		
3.4	1880	410	2.1		
3.8	1683	367	2.4		

输出转速 Output speed r/min	输出扭矩 Output torque Nm	传动比 Ratio i	使用系数 Service factor f_B	机型号 Type Type	极数 Pole p
0.75kW					
2.1	3091	674	0.91	FA 87R57	4
2.3	2793	609	1.01	FAF87R57	4
2.7	2362	515	1.19	F 87R57	4
3.1	2073	452	1.36	FF 87R57	4
4.0	1582	345	1.78		
3.9	1637	357	0.86	FA 77R37	4
4.4	1440	314	0.98	FAF77R37	4
5.1	1247	272	1.13	F 77R37	4
				FF 77R37	4
2.7	2519	255.25	2.9	FA 107	8
				FAF107	8
				F 107	8
				FF 107	8
2.5	2739	276.64	1.5	FA 97	8
2.7	2523	254.79	1.6	FAF97	8
3.0	2241	226.34	1.8	F 97	8
				FF 97	8
3.3	2047	276.64	2.0	FA 97	6
3.6	1885	254.79	2.1	FAF97	6
4.0	1675	226.34	2.4	F 97	6
				FF 97	6
3.3	2012	271.92	1.40		
3.6	1886	254.93	1.50	FA 87	6
4.0	1691	228.57	1.67	FAF87	6
4.6	1456	196.85	1.94	F 87	6
5.1	1324	178.95	2.1	FF 87	6
5.7	1181	159.61	2.4		
5.1	1317	271.92	2.1	FA 87	4
5.4	1235	254.93	2.3	FAF87	4
6.1	1107	228.57	2.5	F 87	4
				FF 87	4
4.6	1467	198.31	0.96	FA 77	6
4.8	1394	188.40	1.01	FAF77	6
5.5	1232	166.47	1.14	F 77	6
6.4	1053	142.27	1.34	FF 77	6
7.0	965	130.42	1.46		
6.2	1094	225.79	1.29		
7.0	961	198.31	1.47		
7.4	913	188.40	1.55	FA 77	4
8.3	806	166.47	1.75	FAF77	4
9.8	689	142.27	2.0	F 77	4
11	632	130.42	2.2	FF 77	4
12	554	114.45	2.5		
13	525	108.46	2.7		
8.1	828	170.85	0.93		
8.6	786	162.31	0.98		
9.8	690	142.40	1.12		
12	585	120.79	1.32	FA 67	4
13	528	109.04	1.46	FAF67	4
14	465	95.94	1.66	F 67	4
15	439	90.59	1.76	FF 67	4
18	378	77.97	2.0		
21	320	66.13	2.4		
23	289	59.70	2.7		
11	616	127.27	0.91	FA 57	4
13	533	110.01	1.06	FAF57	4
15	453	93.47	1.25	F 57	4
17	404	83.46	1.40	FF 57	4

输出转速 Output speed r/min	输出扭矩 Output torque Nm	传动比 Ratio i	使用系数 Service factor f_B	机型号 Type Type	极数 Pole p
0.75kW					
19	354	73.16	1.59	FA 57	4
20	331	68.38	1.70	FAF57	4
24	286	59.10	1.97	F 57	4
28	243	50.22	2.3	FF 57	4
31	217	44.84	2.6		
17	386	79.72	0.97		
20	330	68.09	1.14		
21	317	65.36	1.19		
25	272	56.09	1.38	FA 47	4
29	231	47.66	1.63	FAF47	4
33	206	42.55	1.82	F 47	4
38	176	36.34	2.1	FF 47	4
41	165	34.04	2.3		
48	139	28.67	2.7		
30	228	47.02	0.83		
32	212	43.83	0.89		
36	186	38.31	1.01		
39	174	35.91	1.08		
44	153	31.69	1.22		
49	136	28.09	1.38		
58	116	23.88	1.63		
59	114	23.63	1.6		
68	100	20.57	1.9		
72	93	19.27	2.0	FA 37	4
82	82	17.03	2.3	FAF37	4
97	69	14.33	2.7	F 37	4
108	62	12.87	3.0	FF 37	4
125	54	11.08	3.3		
133	50	10.42	3.4		
155	43	8.97	3.8		
204	33	6.81	4.0		
227	30	6.11	4.3		
264	26	5.27	4.6		
281	24	4.95	4.7		
326	21	4.26	5.0		
365	18	3.81	5.3		
1.1kW					
0.50	18539	2776	0.91		
0.58	16208	2427	1.04		
0.64	14592	2185	1.16		
0.72	12982	1944	1.30	FA 157R97	4
0.84	11179	1674	1.51	FAF157R97	4
1.1	8735	1308	1.94	F 157R97	4
1.2	7807	1169	2.2	FF 157R97	4
1.5	6364	953	2.7		
1.7	5643	845	3.0		
3.1	2978	446	5.7		
4.7	2010	301	8.4		
0.68	13717	2054	0.82		
0.78	12007	1798	0.94	FA 127R77	4
0.86	10812	1619	1.04	FAF127R77	4
1.0	9356	1401	1.21	F 127R77	4
1.1	8214	1230	1.37	FF 127R77	4
1.3	7246	1085	1.56		
1.1	8301	1243	0.89		
1.3	7259	1087	1.02	FA 107R77	4
1.5	6344	950	1.16	FAF107R77	4
1.7	5570	834	1.32	F 107R77	4
1.9	4915	736	1.50	FF 107R77	4
2.2	4274	640	1.72		

1.1kW

输出转速 Output speed r/min	输出扭矩 Output torque Nm	传动比 Ratio i	使用系数 Service factor f_B	机型号 Type Type	极数 Pole p
2.0	4675	700	0.86		
2.3	4080	611	0.99	FA 97R57	4
2.6	3566	534	1.13	FAF97R57	4
3.0	3152	472	1.28	F 97R57	4
3.4	2738	410	1.48	FF 97R57	4
3.8	2451	367	1.65		
3.1	3019	452	0.93	FA 87R57	4
4.1	2304	345	1.22	FAF87R57	4
4.7	2003	300	1.41	F 87R57	4
5.6	1663	249	1.70	FF 87R57	4
2.7	3707	255.25	1.95	FA 107	8
3.2	3123	215.04	2.3	FAF107	8
3.4	2894	199.31	2.5	F 107	8
3.8	2594	178.64	2.8	FF 107	8
3.3	3002	276.64	1.35	FA 97	6
3.6	2765	254.79	1.46	FAF97	6
4.0	2456	226.34	1.65	F 97	6
4.8	2045	188.50	2.0	FF 97	6
5.2	1908	175.83	2.1		
5.1	1951	276.64	2.1	FA 97	4
5.5	1797	254.79	2.2	FAF97	4
6.2	1596	226.34	2.5	F 97	4
				FF 97	4
3.3	2951	271.92	0.96		
3.6	2766	254.93	1.02	FA 87	6
4.0	2480	228.57	1.14	FAF87	6
4.6	2136	196.85	1.32	F 87	6
5.1	1942	178.95	1.45	FF 87	6
5.7	1732	159.61	1.63		
5.2	1911	271.92	1.48		
5.5	1798	254.93	1.57		
6.1	1612	228.57	1.75	FA 87	4
7.1	1388	196.85	2.0	FAF87	4
7.8	1262	178.95	2.2	F 87	4
8.8	1126	159.61	2.5	FF 87	4
10	946	134.16	3.0		
11	870	123.29	3.2		
7.1	1399	198.31	1.01		
7.4	1329	188.40	1.06		
8.4	1174	166.47	1.20		
9.8	1003	142.27	1.41	FA 77	4
11	920	130.42	1.53	FAF77	4
12	807	114.45	1.75	F 77	4
13	765	108.46	1.84	FF 77	4
15	670	94.93	2.1		
16	603	85.52	2.3		
19	529	75.02	2.7		
12	853	120.79	0.9		
13	769	109.04	1.0		
15	677	95.94	1.1		
15	639	90.59	1.2		
18	550	77.97	1.4	FA 67	4
21	466	66.13	1.7	FAF67	4
23	421	59.70	1.8	F 67	4
27	371	52.53	2.1	FF 67	4
28	350	49.60	2.2		
33	298	42.23	2.6		
36	271	38.38	2.7		
42	234	33.24	3.0		

1.1kW

输出转速 Output speed r/min	输出扭矩 Output torque Nm	传动比 Ratio i	使用系数 Service factor f_B	机型号 Type Type	极数 Pole p
17	589	83.46	0.96		
19	516	73.16	1.09		
20	482	68.38	1.17	FA 57	4
24	417	59.10	1.35	FAF57	4
28	354	50.22	1.59	F 57	4
31	316	44.84	1.78	FF 57	4
37	270	38.30	2.1		
39	253	35.87	2.2		
46	213	30.22	2.6		
25	396	56.09	0.95		
29	336	47.66	1.12		
33	300	42.55	1.25		
39	256	36.34	1.47		
41	240	34.04	1.57	FA 47	4
46	216	30.64	1.74	FAF47	4
48	205	29.11	1.83	F 47	4
49	202	28.67	1.86	FF 47	4
55	180	25.54	2.1		
65	153	21.66	2.5		
72	138	19.56	2.7		
44	224	31.69	0.84		
50	198	28.09	0.95		
59	168	23.88	1.12		
68	145	20.57	1.30		
73	136	19.27	1.38		
82	120	17.03	1.57		
98	101	14.33	1.86		
109	91	12.87	2.1	FA 37	4
126	78	11.08	2.3	FAF37	4
134	73	10.42	2.4	F 37	4
156	63	8.97	2.6	FF 37	4
175	56	8.01	2.7		
206	48	6.81	2.8		
229	43	6.11	2.9		
266	37	5.27	3.2		
283	35	4.95	3.2		
329	30	4.26	3.4		
367	27	3.81	3.7		

1.5kW

输出转速 Output speed r/min	输出扭矩 Output torque Nm	传动比 Ratio i	使用系数 Service factor f_B	机型号 Type Type	极数 Pole p
0.58	22102	2427	0.77		
0.64	19898	2185	0.85		
0.72	17703	1944	0.96		
0.84	15244	1674	1.11	FA 157R97	4
1.1	11911	1308	1.42	FAF157R97	4
1.2	10646	1169	1.59	F 157R97	4
1.5	8679	953	1.95	FF 157R97	4
1.7	7695	845	2.2		
3.1	4062	446	4.2		
4.7	2741	301	6.2		
0.86	14744	1619	0.77		
1.0	12758	1401	0.88	FA 127R77	4
1.1	11201	1230	1.01	FAF127R77	4
1.3	9881	1085	1.14	F 127R77	4
1.5	8533	937	1.32	FF 127R77	4
1.7	7531	827	1.50		
1.9	6675	733	1.69		
2.2	5828	640	1.94		
1.5	8651	950	0.83	FA 107R77	4
1.7	7595	834	0.95	FAF107R77	4
1.9	6702	736	1.08	F 107R77	4
2.2	5710	627	1.26	FF 107R77	4

1.5kW

输出转速 Output speed r/min	输出扭矩 Output torque Nm	传动比 Ratio i	使用系数 Service factor f_B	机型号 Type Type	极数 Pole p
2.5	5100	560	1.42	FA 107R77	4
2.9	4453	489	1.62	FAF107R77	4
3.3	3889	427	1.86	F 107R77	4
3.8	3369	370	2.1	FF 107R77	4
2.6	4863	534	0.83	FA 97R57	4
3.0	4298	472	0.94	FAF97R57	4
3.4	3734	410	1.08	F 97R57	4
3.8	3342	367	1.21	FF 97R57	4
4.1	3142	345	0.90	FA 87R57	4
4.7	2732	300	1.03	FAF87R57	4
5.6	2268	249	1.24	F 87R57	4
				FF 87R57	4
2.7	4981	255.25	1.48	FA 107	8
3.2	4197	215.04	1.76	FAF107	8
3.5	3890	199.31	1.89	F 107	8
3.9	3486	178.64	2.1	FF 107	8
3.6	3736	255.25	2.0	FA 107	6
4.3	3147	215.04	2.3	FAF107	6
4.6	2917	199.31	2.5	F 107	6
5.2	2615	178.64	2.8	FF 107	6
3.3	4049	276.64	1.00	FA 97	6
3.6	3729	254.79	1.08	FAF97	6
4.1	3313	226.34	1.22	F 97	6
4.9	2759	188.50	1.47	FF 97	6
5.2	2574	178.83	1.57		
5.1	2661	276.64	1.52	FA 97	4
5.5	2451	254.79	1.65	FAF97	4
6.2	2177	226.34	1.86	F 97	4
7.4	1813	188.50	2.2	FF 97	4
8.0	1691	178.83	2.4		
5.2	2615	271.92	1.08		
5.5	2452	254.93	1.15		
6.1	2198	228.57	1.28	FA 87	4
7.1	1893	196.85	1.49	FAF87	4
7.8	1721	178.95	1.63	F 87	4
8.8	1535	159.61	1.84	FF 87	4
10	1290	134.16	2.2		
13	1053	109.49	2.7		
14	942	97.89	3.0		
8.4	1601	166.47	0.88		
9.8	1368	142.27	1.03		
11	1254	130.42	1.12		
12	1101	114.45	1.28		
13	1043	108.46	1.35		
15	913	94.93	1.54		
16	823	85.52	1.71	FA 77	4
19	722	75.02	1.95	FAF77	4
19	695	72.29	2.0	F 77	4
21	637	66.28	2.2	FF 77	4
24	559	58.16	2.5		
25	530	55.12	2.7		
29	464	48.24	3.0		
32	418	43.46	3.0		
37	367	38.12	3.4		
38	352	36.52	3.8		
44	303	31.45	4.3		

1.5kW

输出转速 Output speed r/min	输出扭矩 Output torque Nm	传动比 Ratio i	使用系数 Service factor f_B	机型号 Type Type	极数 Pole p
15	871	90.59	0.88		
18	750	77.97	1.03		
21	636	66.13	1.21		
23	574	59.70	1.34		
27	505	52.53	1.53	FA 67	4
28	477	49.60	1.62	FAF67	4
33	406	42.23	1.90	F 67	4
36	369	38.38	1.99	FF 67	4
39	349	36.30	2.2		
44	309	32.08	2.5		
51	264	27.41	2.9		
56	242	25.13	3.2		
24	568	59.10	0.99		
28	483	50.22	1.17	FA 57	4
31	431	44.84	1.31	FAF57	4
37	368	38.30	1.53	F 57	4
39	345	35.87	1.63	FF 57	4
46	291	30.22	1.94		
33	409	42.55	0.92		
39	350	36.34	1.08		
41	327	34.04	1.15		
46	295	30.64	1.28		
48	280	29.11	1.34	FA 47	4
49	276	28.67	1.36	FAF47	4
55	246	25.54	1.53	F 47	4
65	208	21.66	1.80	FF 47	4
72	188	19.56	2.0		
81	166	17.21	2.3		
86	156	16.25	2.4		
101	133	13.83	2.8		
68	198	20.57	0.95		
73	185	19.27	1.01		
82	164	17.03	1.15		
98	138	14.33	1.36		
109	124	12.87	1.52		
126	107	11.08	1.68	FA 37	4
134	100	10.42	1.74	FAF37	4
156	86	8.97	1.91	F 37	4
175	77	8.01	2.1	FF 37	4
206	66	6.81	2.0		
229	59	6.11	2.2		
266	51	5.27	2.3		
283	48	4.95	2.4		
329	41	4.26	2.5		
367	37	3.81	2.7		

2.2kW

输出转速 Output speed r/min	输出扭矩 Output torque Nm	传动比 Ratio i	使用系数 Service factor f_B	机型号 Type Type	极数 Pole p
1.00	18699	1420	0.90		
1.09	17224	1308	0.98		
1.21	15394	1169	1.10		
1.49	12549	953	1.35		
1.68	11127	845	1.52	FA 157R97	4
1.86	10061	764	1.68	FAF157R97	4
2.1	8954	680	1.89	F 157R97	4
2.5	7585	576	2.2	FF 157R97	4
3.2	5873	446	2.9		
4.7	3964	301	4.3		
5.2	3582	272	4.7		
6.1	3042	231	5.6		
7.2	2581	196	6.6		
1.31	14288	1085	0.79	FA 127R77	4
1.52	12339	937	0.91	FAF127R77	4
1.72	10890	827	1.04	F 127R77	4
1.94	9652	733	1.17	FF 127R77	4

2.2kW

输出转速 Output speed r/min	输出扭矩 Output torque Nm	传动比 Ratio i	使用系数 Service factor f_B	机型号 Type Type	极数 Pole p
2.22	8428	640	1.34	FA 127R77	4
2.62	7137	542	1.58	FAF127R77	4
2.90	6439	489	1.75	F 127R77	4
3.36	5570	428	2.0	FF 127R77	4
2.3	8256	627	0.89		
2.5	7374	560	1.00	FA 107R77	4
2.9	6439	489	1.14	FAF107R77	4
3.3	5623	427	1.31	F 107R77	4
3.9	4767	362	1.55	FF 107R77	4
4.3	4306	327	1.71		
3.9	4833	367	0.84	FA 97R57	4
4.9	3792	288	1.07	FAF97R57	4
5.7	3253	247	1.24	F 97R57	4
				FF 97R57	4
2.8	7100	255.25	1.02	FA 107	8
3.3	5982	215.04	1.21	FAF107	8
3.6	5544	199.31	1.30	F 107	8
4.0	4969	178.64	1.45	FF 107	8
3.7	5363	255.25	1.35	FA 107	6
4.4	4518	215.04	1.60	FAF107	6
4.7	4188	199.31	1.72	F 107	6
5.3	3753	178.64	1.92	FF 107	6
5.6	3550	255.25	2.0	FA 107	4
6.6	2991	215.04	2.4	FAF107	4
7.1	2772	199.31	2.6	F 107	4
7.9	2485	178.64	2.9	FF 107	4
4.2	4755	226.34	0.85	FA 97	6
5.0	3960	188.50	1.02	FAF97	6
5.3	3694	175.83	1.09	F 97	6
6.0	3302	157.16	1.22	FF 97	6
5.1	3848	276.64	1.05		
5.6	3544	254.79	1.14		
6.3	3148	226.34	1.28	FA 97	4
7.5	2622	188.50	1.54	FAF97	4
8.1	2445	175.83	1.65	F 97	4
9.0	2186	157.16	1.85	FF 97	4
10	1968	141.47	2.1		
11	1782	128.12	2.3		
7.2	2738	196.85	1.03		
7.9	2489	178.95	1.13		
8.9	2220	159.61	1.27		
11	1866	134.16	1.51		
12	1715	123.29	1.64		
13	1523	109.49	1.85	FA 87	4
15	1361	97.89	2.1	FAF87	4
16	1224	88.01	2.3	F 87	4
19	1062	76.39	2.7	FF 87	4
21	951	68.40	3.0		
25	789	56.75	3.6		
28	699	50.29	4.0		
31	629	45.22	4.2		
12	1592	114.45	0.89		
13	1508	108.46	0.93		
15	1320	94.93	1.07	FA 77	4
17	1189	85.52	1.19	FAF77	4
19	1043	75.02	1.35	F 77	4
21	922	66.28	1.53	FF 77	4
24	809	58.16	1.74		

2.2kW

输出转速 Output speed r/min	输出扭矩 Output torque Nm	传动比 Ratio i	使用系数 Service factor f_B	机型号 Type Type	极数 Pole p
26	767	55.12	1.84		
29	671	48.24	2.1		
33	604	43.46	2.1	FA 77	4
39	509	36.52	2.3	FAF77	4
45	438	31.45	3.0	F 77	4
49	400	28.59	3.4	FF 77	4
56	355	25.50	4.0		
24	830	59.70	0.93		
27	731	52.53	1.06		
29	690	49.60	1.12		
34	587	42.23	1.31		
37	534	38.38	1.37	FA 67	4
43	462	33.24	1.50	FAF67	4
44	446	32.08	1.73	F 67	4
52	381	27.41	2.0	FF 67	4
57	350	25.13	2.2		
64	307	22.05	2.5		
68	291	20.90	2.7		
78	254	18.29	3.0		
32	624	44.84	0.90		
37	533	38.30	1.06		
40	499	35.87	1.13		
47	420	30.22	1.32	FA 57	4
57	347	24.96	1.56	FAF57	4
67	294	21.17	1.92	F 57	4
74	266	19.11	2.1	FF 57	4
84	234	16.81	2.4		
89	221	15.88	2.6		
56	355	25.54	1.06		
66	301	21.66	1.25		
73	272	19.56	1.38		
83	239	17.21	1.57	FA 47	4
87	226	16.25	1.66	FAF47	4
103	192	13.83	1.95	F 47	4
113	175	12.57	2.2	FF 47	4
130	151	10.89	2.5		
156	126	9.08	2.5		
99	199	14.33	0.94		
110	179	12.87	1.05		
128	154	11.08	1.16		
136	145	10.42	1.20		
158	125	8.97	1.32	FA 37	4
177	111	8.01	1.39	FAF37	4
209	95	6.81	1.43	F 37	4
232	85	6.11	1.49	FF 37	4
269	73	5.27	1.60		
287	69	4.95	1.64		
333	59	4.26	1.75		
373	53	3.81	1.86		

3kW

输出转速 Output speed r/min	输出扭矩 Output torque Nm	传动比 Ratio i	使用系数 Service factor f_B	机型号 Type Type	极数 Pole p
1.2	20991	1169	0.81		
1.5	17113	953	0.99		
1.7	15173	845	1.12	FA 157R97	4
1.9	13719	764	1.23	FAF157R97	4
2.1	12211	680	1.39	F 157R97	4
2.5	10343	576	1.64	FF 157R97	4
3.2	8009	446	2.1		
4.7	5405	304	3.1		
5.2	4884	272	3.5		
6.1	4148	231	4.1		
7.2	3520	196	4.8		

输出转速 Output speed r/min	输出扭矩 Output torque Nm	传动比 Ratio i	使用系数 Service factor f_B	机型号 Type Type	极数 Pole p
3kW					
1.9	13162	733	0.86	FA 127R77	4
2.2	11492	640	0.98	FAF127R77	4
2.6	9733	542	1.16	F 127R77	4
2.9	8781	489	1.28	FF 127R77	4
3.3	7668	427	0.96	FA 107R77	4
3.9	6500	362	1.13	FAF107R77	4
4.3	5872	327	1.26	F 107R77	4
5.0	5118	285	1.44	FF 107R77	4
3.8	7161	255.25	1.03	FA 107	6
4.5	6033	215.04	1.22	FAF107	6
4.8	5591	199.31	1.32	F 107	6
5.4	5011	178.64	1.47	FF 107	6
5.6	4841	255.25	1.52	FA 107	4
6.6	4078	215.04	1.81	FAF107	4
7.1	3780	199.31	1.95	F 107	4
7.9	3388	178.64	2.2	FF 107	4
8.8	3059	161.28	2.4		
6.3	4293	226.34	0.94		
7.5	3575	188.50	1.13		
8.1	3335	175.83	1.21	FA 97	4
9.0	2981	157.16	1.36	FAF97	4
10	2683	141.47	1.51	F 97	4
11	2430	128.12	1.66	FF 97	4
12	2155	113.61	1.88		
14	1948	102.72	2.1		
16	1721	90.77	2.3		
11	2544	134.16	1.11		
12	2338	123.29	1.21		
13	2077	109.49	1.36		
15	1857	97.89	1.52	FA 87	4
16	1669	88.01	1.69	FAF87	4
19	1449	76.39	1.9	F 87	4
21	1297	68.40	2.2	FF 87	4
25	1076	56.75	2.6		
28	954	50.29	2.9		
17	1622	85.52	0.87		
19	1423	75.02	0.99		
21	1257	66.28	1.12		
24	1103	58.16	1.28		
26	1045	55.12	1.35	FA 77	4
29	915	48.24	1.5	FAF77	4
33	824	43.46	1.54	F 77	4
37	723	38.12	1.71	FF 77	4
39	694	36.52	1.95		
45	598	31.45	2.2		
49	545	28.59	2.5		
56	484	25.50	2.9		
66	406	21.43	3.5		
33	819	43.20	0.94		
36	745	39.26	0.98		
42	645	34.01	1.08		
44	608	32.08	1.27	FA 67	4
52	520	27.41	1.48	FAF67	4
57	477	25.13	1.62	F 67	4
64	418	22.05	1.84	FF 67	4
68	396	20.90	1.94		
78	347	18.29	2.2		
86	313	16.48	2.5		
98	274	14.46	2.8		

输出转速 Output speed r/min	输出扭矩 Output torque Nm	传动比 Ratio i	使用系数 Service factor f_B	机型号 Type Type	极数 Pole p
3kW					
57	473	24.96	1.19		
67	401	21.17	1.40		
74	362	19.11	1.56	FA 57	4
84	319	16.81	1.77	FAF57	4
89	301	15.88	1.87	F 57	4
105	256	13.52	2.2	FF 57	4
116	233	12.29	2.4		
133	202	10.64	2.8		
73	371	19.56	1.01		
83	326	17.21	1.15	FA 47	4
87	308	16.25	1.22	FAF47	4
103	262	13.83	1.43	F 47	4
113	238	12.57	1.58	FF 47	4
130	207	10.89	1.80		
156	172	9.08	1.82		
128	210	11.08	0.85		
136	198	10.42	0.88		
158	170	8.97	0.97		
177	152	8.01	1.02	FA 37	4
209	129	6.81	1.05	FAF37	4
232	116	6.11	1.10	F 37	4
269	100	5.27	1.18	FF 37	4
287	94	4.95	1.20		
333	81	4.26	1.28		
373	72	3.81	1.37		
4kW					
1.7	19950	845	0.85		
1.9	18038	764	0.94		
2.1	16055	680	1.05	FA 157R97	4
2.5	13599	576	1.24	FAF157R97	4
3.2	10530	446	1.61	F 157R97	4
4.8	7107	304	2.4	FF 157R97	4
5.3	6422	272	2.6		
6.2	5454	231	3.1		
7.3	4628	196	3.7		
2.7	12796	542	0.88	FA 127R77	4
2.9	11545	489	0.98	FAF127R77	4
3.4	9987	423	1.13	F 127R77	4
3.9	8759	371	1.29	FF 127R77	4
4.4	7720	327	0.94	FA 107R77	4
5.1	6729	285	1.07	FAF107R77	4
6.5	5218	221	1.38	F 107R77	4
				FF 107R77	4
4.2	8594	172.33	1.31	FA 127	8
4.6	7721	154.81	1.46	FAF127	8
5.7	6269	125.71	1.80	F 127	8
				FF 127	8
5.6	6365	255.25	1.16		
6.7	5363	215.04	1.37	FA 107	4
7.2	4970	199.31	1.48	FAF107	4
8.1	4455	178.64	1.65	F 107	4
8.9	4022	161.28	1.83	FF 107	4
9.8	3653	146.49	2.02		
11	3241	129.97	2.3		
12	2941	117.94	2.5		
14	2528	101.38	2.9		

4kW

输出转速 Output speed r/min	输出扭矩 Output torque Nm	传动比 Ratio i	使用系数 Service factor f_B	机型号 Type Type	极数 Pole p
8.2	4385	175.83	0.92		
9.2	3919	157.16	1.03		
10	3528	141.47	1.15		
11	3195	128.12	1.27		
13	2833	113.61	1.43	FA 97 FAF97 F 97 FF 97	4 4 4 4
14	2561	102.72	1.58		
15	2427	97.31	1.67		
16	2263	90.77	1.79		
18	2023	81.13	2.0		
20	1821	73.03	2.2		
22	1649	66.14	2.5		
13	2730	109.49	1.03		
15	2441	97.89	1.16		
16	2195	88.01	1.28	FA 87	4
19	1905	76.39	1.48	FAF87	4
21	1706	68.40	1.65	F 87	4
25	1415	56.75	1.99	FF 87	4
29	1254	50.29	2.2		
32	1128	45.22	2.5		
22	1653	66.28	0.85		
25	1450	58.16	0.97		
26	1374	55.12	1.03		
30	1203	48.24	1.17		
33	1084	43.46	1.30		
38	951	38.12	1.48	FA 77	4
43	839	33.64	1.68	FAF77	4
48	744	29.82	1.90	F 77	4
50	717	28.59	1.97	FF 77	4
56	636	25.50	2.2		
57	635	25.47	2.2		
67	534	21.43	2.6		
73	491	19.70	2.9		
53	683	27.41	1.13		
57	627	25.13	1.23		
65	550	22.05	1.40		
69	521	20.90	1.48		
79	456	18.29	1.69		
87	411	16.48	1.88		
100	361	14.46	2.1	FA 67	4
113	318	12.76	2.4	FAF67	4
127	282	11.31	2.7	F 67	4
149	241	9.66	3.2	FF 67	4
150	240	9.61	2.1		
158	227	9.11	2.4		
181	199	7.97	2.9		
201	179	7.18	3.3		
229	157	6.30	3.6		
259	139	5.56	4.0		
292	123	4.93	4.3		
342	105	4.21	4.5		
68	528	21.17	1.07		
75	477	19.11	1.18		
86	419	16.81	1.35		
91	396	15.88	1.42		
107	337	13.52	1.67		
117	306	12.29	1.84	FA 57 FAF57 F 57 FF 57	4 4 4 4
135	265	10.64	2.1		
155	232	9.31	1.70		
176	204	8.19	1.93		
186	193	7.73	2.0		
219	164	6.58	2.4		
241	149	5.98	2.6		
278	129	5.18	3.0		

5.5kW

输出转速 Output speed r/min	输出扭矩 Output torque Nm	传动比 Ratio i	使用系数 Service factor f_B	机型号 Type Type	极数 Pole p
2.5	18699	576	0.90		
2.9	16329	503	1.04		
3.2	14479	446	1.17		
4.1	11460	353	1.48	FA 157R97 FAF157R97 F 157R97 FF 157R97	4 4 4 4
4.8	9771	301	1.73		
5.3	8830	272	1.92		
6.2	7499	231	2.3		
7.1	6558	202	2.6		
7.3	6363	196	2.7		
3.5	13537	417	0.83		
3.9	12109	373	0.93	FA 127R87	4
4.6	10129	312	1.11	FAF127R87	4
4.9	9512	293	1.19	F 127R87	4
5.5	8505	262	1.33	FF 127R87	4
6.4	7337	226	1.54		
				FA 127R77	4
3.4	13732	423	0.82	FAF127R77	4
3.9	12044	371	0.94	F 127R77	4
				FF 127R77	4
2.7	18293	266.76	0.92		
3.3	14977	218.40	1.1		
4.0	12149	177.17	1.4		
4.4	11269	164.33	1.5		
5.1	9724	141.80	1.7	FA 157 FAF157 F 157 FF 157	8 8 8 8
5.8	8581	125.14	2.0		
6.6	7440	108.49	2.3		
7.5	6619	96.53	2.6		
8.3	5959	86.90	2.8		
9.1	5450	79.47	3.1		
10	4742	69.15	3.6		
4.2	11817	172.33	0.95	FA 127	8
4.7	10616	154.81	1.06	FAF127	8
5.7	8620	125.71	1.31	F 127	8
6.2	7555	116.00	1.42	FF 127	8
6.7	7373	215.04	0.98		
7.2	6834	199.31	1.06	FA 107	4
8.1	6125	178.64	1.18	FAF107	4
8.9	5530	161.28	1.31	F 107	4
9.8	5023	146.49	1.44	FF 107	4
11	4456	129.97	1.62		
12	4044	117.94	1.79		
14	3476	101.38	2.1	FA 107 FAF107 F 107 FF 107	4 4 4 4
16	3171	92.47	2.3		
16	3034	88.49	2.4		
17	2880	83.99	2.5		
11	4393	128.12	0.92		
13	3895	113.61	1.04		
14	3522	102.72	1.15		
15	3336	97.31	1.21		
16	3112	90.77	1.30	FA 97	4
17	2985	87.06	1.35	FAF97	4
18	2782	81.13	1.45	F 97	4
19	2620	76.40	1.54	FF 97	4
21	2504	73.03	1.68		
22	2268	66.14	1.78		
25	2011	58.65	2.0		
27	1818	53.03	2.2		
16	3018	88.01	0.93	FA 87	4
19	2619	76.39	1.08	FAF87	4
21	2345	68.40	1.20	F 87	4
25	1946	56.75	1.45	FF 87	4

5.5kW

输出转速 Output speed r/min	输出扭矩 Output torque Nm	传动比 Ratio i	使用系数 Service factor f_B	机型号 Type Type	极数 Pole p
29	1724	50.29	1.64		
32	1550	45.22	1.82		
37	1346	39.25	2.1	FA 87	4
41	1205	35.14	2.3	FAF87	4
49	1000	29.16	2.8	F 87	4
42	1170	34.11	2.1	FF 87	4
51	974	28.41	2.4		
54	909	26.50	3.1		
61	812	23.68	3.5		
30	1654	48.24	0.85		
33	1490	43.46	0.95		
38	1307	38.12	1.08		
43	1153	33.64	1.22		
48	1022	29.82	1.38	FA 77	4
56	874	25.50	1.61	FAF77	4
57	873	25.47	1.61	F 77	4
67	735	21.43	1.92	FF 77	4
73	675	19.70	2.1		
82	600	17.49	2.4		
92	536	15.64	2.6		
102	482	14.06	2.9		
118	418	12.20	3.4		
65	756	22.05	1.02		
69	717	20.9	1.08		
79	627	18.29	1.23		
87	565	16.48	1.36		
100	496	14.46	1.50		
113	438	12.76	1.55	FA 67	4
127	388	11.31	1.70	FAF67	4
149	331	9.66	1.76	F 67	4
150	329	9.61	2.0	FF 67	4
158	312	9.11	2.1		
181	273	7.97	2.3		
201	246	7.18	2.4		
229	216	6.30	2.7		
259	191	5.56	2.9		
292	169	4.93	3.1		
342	144	4.21	3.3		
86	576	16.81	0.98		
91	544	15.88	1.04		
107	464	13.52	1.22		
117	421	12.29	1.34	FA 57	4
135	365	10.64	1.55	FAF57	4
176	281	8.19	1.41	F 57	4
186	265	7.73	1.49	FF 57	4
219	226	6.58	1.75		
241	205	5.98	1.93		
278	178	5.18	2.2		

7.5kW

输出转速 Output speed r/min	输出扭矩 Output torque Nm	传动比 Ratio i	使用系数 Service factor f_B	机型号 Type Type	极数 Pole p
4.6	13812	312	0.82	FA 127R87	4
4.9	12971	293	0.87	FAF127R87	4
5.5	11598	262	0.97	F 127R87	4
6.4	10005	226	1.13	FF 127R87	4
7.2	8854	200	1.27		
3.3	20350	217.62	0.83		
4.0	16664	178.20	1.02	FA 157	8
4.4	15238	162.96	1.11	FAF157	8
5.1	13260	141.80	1.28	F 157	8
5.8	11702	125.14	1.45	FF 157	8
6.6	10145	108.49	1.67		
7.5	9027	96.53	1.87		

7.5kW

输出转速 Output speed r/min	输出扭矩 Output torque Nm	传动比 Ratio i	使用系数 Service factor f_B	机型号 Type Type	极数 Pole p
8.4	8023	85.80	2.1		
9.2	7337	78.46	2.3	FA 157	8
10.5	6385	68.28	2.7	FAF157	8
12	5634	60.25	3.0	F 157	8
13.8	4885	52.24	3.5	FF 157	8
15.5	4346	46.48	3.9		
18	3746	40.06	4.5		
3.6	18709	266.76	0.90		
4.4	15317	218.40	1.11		
5.4	12425	177.17	1.36		
5.8	11525	164.33	1.47		
6.8	9945	141.80	1.70	FA 157	6
7.7	8776	125.14	1.93	FAF157	6
8.8	7609	108.49	2.2	F 157	6
9.9	6770	96.53	2.5	FF 157	6
11	6095	86.90	2.8		
12	5573	79.47	3.0		
14	4850	69.15	3.5		
16	4280	61.02	4.0		
18	3711	52.91	4.6		
5.7	11816	126.36	0.95	FA 127	8
6.2	10776	115.24	1.05	FAF127	8
7.2	9326	99.73	1.21	F 127	8
8.2	8229	88.00	1.37	FF 127	8
5.6	12086	172.33	0.93	FA 127	6
6.2	10857	154.81	1.04	FAF127	6
7.6	8816	125.71	1.28	F 127	6
8.3	8135	116.00	1.39	FF 127	6
8.5	7947	172.33	1.42	FA 127	4
9.4	7139	154.81	1.58	FAF127	4
12	5797	125.71	1.95	F 127	4
				FF 127	4
8.2	8238	178.64	0.88		
9.1	7437	161.28	0.97		
10	6755	146.49	1.07		
11	5994	129.97	1.20	FA 107	4
12	5439	117.94	1.33	FAF107	4
14	4675	101.38	1.54	F 107	4
16	4264	92.47	1.69	FF 107	4
16	4081	88.49	1.77		
17	3873	83.99	1.86		
20	3436	74.52	2.1		
22	3118	67.62	2.3		
15	4487	97.31	0.90		
16	4186	90.77	0.97		
17	4015	87.06	1.01		
18	3741	81.13	1.08		
19	3523	76.40	1.15		
21	3229	70.03	1.25	FA 97	4
22	3050	66.14	1.33	FAF97	4
25	2705	58.65	1.49	F 97	4
28	2445	53.03	1.65	FF 97	4
32	2072	44.94	1.95		
33	2023	43.87	2.0		
37	1810	39.26	2.2		
40	1704	36.96	2.4		
43	1580	34.26	2.6		
44	1514	32.83	2.7		
48	1416	30.70	2.9		

输出转速 Output speed r/min	输出扭矩 Output torque Nm	传动比 Ratio i	使用系数 Service factor f_B	机型号 Type Type	极数 Pole p
7.5kW					
26	2617	56.75	1.08		
29	2319	50.29	1.19		
32	2085	45.22	1.27		
37	1810	39.25	1.41		
42	1620	35.14	1.51		
50	1345	29.16	1.75	FA 87	4
51	1327	28.41	1.74	FAF87	4
55	1222	26.50	2.3	F 87	4
62	1092	23.68	2.6	FF 87	4
68	983	21.32	2.9		
76	890	19.31	3.2		
85	789	17.12	3.6		
94	714	15.48	4.0		
43	1551	33.64	0.91		
49	1375	29.82	1.03		
57	1176	25.50	1.16		
57	1175	25.47	1.20		
68	988	21.43	1.43		
74	908	19.70	1.55		
83	807	17.49	1.75		
93	721	15.64	1.95	FA 77	4
104	648	14.06	2.2	FAF77	4
120	563	12.20	2.5	F 77	4
134	504	10.93	2.8	FF 77	4
156	431	9.35	2.4		
176	383	8.30	2.7		
197	342	7.42	3.0		
219	308	6.67	3.3		
252	267	5.79	3.8		
281	239	5.19	4.2		
340	198	4.30	4.8		
11kW					
4.9	19275	301	0.88	FA 157R97	4
5.4	17418	272	0.97	FAF157R97	4
6.3	14793	231	1.14	F 157R97	4
7.2	12936	202	1.31	FF 157R97	4
7.4	12551	196	1.35		
6.5	14472	226	0.78	FA 127R87	4
7.3	12807	200	0.88	FAF127R87	4
8.7	10758	168	1.05	F 127R87	4
				FF 127R87	4
5.1	19181	141.80	0.88	FA 157	8
5.8	16928	125.14	1.00	FAF157	8
6.7	14675	108.49	1.15	F 157	8
7.6	13058	96.53	1.30	FF 157	8
5.5	18036	177.17	0.94		
5.9	16729	164.33	1.01		
6.8	14435	141.80	1.17	FA 157	6
7.8	12739	125.14	1.33	FAF157	6
8.9	11044	108.49	1.53	F 157	6
10	9827	96.53	1.72	FF 157	6
11	8847	86.90	1.91		
12	8090	79.47	2.1		
5.5	18042	266.76	0.94		
6.7	14776	218.46	1.15		
8.2	12053	177.17	1.40	FA 157	4
8.9	11114	164.33	1.52	FAF157	4
10	9591	141.80	1.76	F 157	4
12	8464	125.14	2.0	FF 157	4
13	7338	108.49	2.3		

输出转速 Output speed r/min	输出扭矩 Output torque Nm	传动比 Ratio i	使用系数 Service factor f_B	机型号 Type Type	极数 Pole p
11kW					
15	6529	96.53	2.6	FA 157	4
17	5877	86.90	2.9	FAF157	4
18	5375	79.47	3.1	F 157	4
21	4677	69.15	3.6	FF 157	4
7.7	12864	125.71	0.88		
8.4	11732	116.00	0.96	FA 127	6
10	10153	99.73	1.11	FAF127	6
11	8958	88.00	1.26	F 127	6
13	7737	76.00	1.46	FF 127	6
8.5	11656	172.33	0.97		
9.4	10471	154.81	1.08		
12	8502	125.71	1.33	FA 127	4
13	7846	116.00	1.44	FAF127	4
15	6745	99.73	1.67	F 127	4
17	5952	88.00	1.90	FF 127	4
19	5140	76.00	2.2		
12	7977	117.94	0.91		
14	6857	101.38	1.05		
16	6254	92.47	1.15		
17	5681	83.99	1.27		
20	5040	74.52	1.43	FA 107	4
22	4573	67.62	1.58	FAF107	4
25	3931	58.12	1.84	F 107	4
29	3431	50.73	2.1	FF 107	4
34	2910	43.03	2.5		
43	2285	33.78	3.2		
53	1855	27.43	3.9		
58	1712	25.31	4.2		
22	4473	66.14	0.90		
25	3967	58.65	1.02		
28	3587	53.03	1.13		
32	3040	44.94	1.33	FA 97	4
37	2655	39.26	1.52	FAF97	4
43	2317	34.26	1.74	F 97	4
44	2220	32.83	1.82	FF 97	4
48	2076	30.70	1.95		
53	1875	27.72	2.2		
58	1703	25.18	2.4		
65	1511	22.34	2.7		
37	2655	39.25	0.96		
42	2377	35.14	1.03		
50	1972	29.16	1.20		
55	1792	26.50	1.57	FA 87	4
62	1602	23.68	1.76	FAF87	4
68	1442	21.32	1.96	F 87	4
76	1306	19.31	2.16	FF 87	4
85	1158	17.12	2.4		
94	1047	15.48	2.7		
111	887	13.12	3.2		
74	1332	19.70	1.06		
83	1183	17.49	1.19		
93	1058	15.64	1.33		
104	951	14.06	1.48		
120	825	12.20	1.61		
134	739	10.93	1.71	FA 77	4
156	632	9.35	1.81	FAF77	4
176	561	8.30	1.91	F 77	4
197	502	7.42	2.0	FF 77	4
219	451	6.67	2.3		
252	392	5.79	2.6		
281	351	5.19	2.9		
340	291	4.30	3.3		

15kW

输出转速 Output speed r/min	输出扭矩 Output torque Nm	传动比 Ratio i	使用系数 Service factor f_B	机型号 Type Type	极数 Pole p
6.3	20172	231	0.84	FA 157R97	4
7.2	17639	202	0.96	FAF157R97	4
7.4	17115	196	0.99	F 157R97	4
				FF 157R97	4
6.8	19685	141.80	0.86	FA 157	6
7.8	17372	125.14	0.97	FAF157	6
8.9	15061	108.49	1.12	F 157	6
10	13400	96.53	1.26	FF 157	6
11	12063	86.90	1.40		
6.7	20143	218.40	0.84		
8.2	16340	177.17	1.04		
8.9	15156	164.33	1.12		
10	13078	141.80	1.29		
12	11542	125.14	1.47	FA 157	4
13	10006	108.49	1.69	FAF157	4
15	8903	96.53	1.90	F 157	4
17	8015	86.90	2.1	FF 157	4
18	7329	79.47	2.3		
21	6378	69.15	2.7		
24	5628	61.02	3.0		
9.7	13844	99.73	0.81		
11	12216	88.00	0.92	FA 127	6
13	10550	76.00	1.07	FAF127	6
14	9803	70.62	1.15	F 127	6
15	8941	64.41	1.26	FF 127	6
12	11594	125.71	0.97		
13	10699	116.00	1.05	FA 127	4
15	9198	99.73	1.23	FAF127	4
17	8116	88.00	1.39	F 127	4
19	7009	76.00	1.61	FF 127	4
21	6513	70.62	1.73		
16	8528	92.47	0.85		
16	8161	88.49	0.88		
17	7746	83.99	0.93		
20	6873	74.52	1.05		
22	6237	67.62	1.16	FA 107	4
25	5360	58.12	1.35	FAF107	4
29	4679	50.73	1.54	F 107	4
34	3969	43.03	1.82	FF 107	4
39	3469	37.61	2.1		
43	3116	33.78	2.3		
46	2933	31.80	2.5		
53	2530	27.43	2.8		
58	2334	25.31	3.1		
67	2007	21.76	3.6		
32	4145	44.94	0.98		
37	3621	39.26	1.12		
43	3160	34.26	1.28		
44	3028	32.83	1.33		
48	2831	30.70	1.43	FA 97	4
53	2557	27.72	1.58	FAF97	4
58	2322	25.18	1.74	F 97	4
65	2060	22.34	1.96	FF 97	4
72	1869	20.27	2.2		
84	1607	17.42	2.5		
96	1403	15.21	2.9		
113	1190	12.90	3.4		
129	1040	11.28	3.9		

15kW

输出转速 Output speed r/min	输出扭矩 Output torque Nm	传动比 Ratio i	使用系数 Service factor f_B	机型号 Type Type	极数 Pole p
55	2444	26.50	1.15		
62	2184	23.68	1.29		
68	1966	21.32	1.43		
76	1781	19.31	1.58		
85	1579	17.12	1.79		
94	1428	15.48	1.84		
111	1210	13.12	1.98	FA 87	4
127	1057	11.46	2.1	FAF87	4
152	884	9.58	2.3	F 87	4
173	780	8.46	2.5	FF 87	4
195	692	7.50	2.7		
215	625	6.78	2.8		
254	530	5.75	2.8		
291	463	5.02	3.1		
348	387	4.20	3.5		

18.5kW

输出转速 Output speed r/min	输出扭矩 Output torque Nm	传动比 Ratio i	使用系数 Service factor f_B	机型号 Type Type	极数 Pole p
				FA 157R97	4
7.3	21607	202	0.78	FAF157R97	4
7.5	20965	196	0.81	F 157R97	4
				FF 157R97	4
8.3	20016	177.17	0.85		
8.9	18565	164.33	0.91		
10	16020	141.80	1.06		
12	14138	125.14	1.20		
14	12257	108.49	1.38	FA 157	4
15	10906	96.53	1.55	FAF157	4
17	9818	86.90	1.72	F 157	4
18	8978	79.47	1.88	FF 157	4
21	7812	69.15	2.2		
24	6894	61.02	2.5		
28	5978	52.91	2.8		
13	13105	116.00	0.86		
15	11267	99.73	1.00		
17	9942	88.00	1.13	FA 127	4
19	8586	76.00	1.31	FAF127	4
21	7978	70.62	1.41	F 127	4
23	7277	64.41	1.55	FF 127	4
26	6297	55.74	1.79		
30	5557	49.19	2.0		
20	8419	74.52	0.86		
22	7639	67.62	0.94		
25	6566	58.12	1.10		
29	5731	50.73	1.26	FA 107	4
34	4861	43.03	1.49	FAF107	4
39	4249	37.61	1.70	F 107	4
44	3817	33.78	1.89	FF 107	4
46	3593	31.80	2.0		
53	3099	27.43	2.3		
58	2859	25.31	2.5		
68	2458	21.76	2.9		
37	4435	39.26	0.91		
45	3709	32.83	1.09		
53	3132	27.72	1.29		
58	2845	25.18	1.42	FA 97	4
66	2524	22.34	1.60	FAF97	4
73	2290	20.27	1.77	F 97	4
84	1274	17.42	2.35	FF 97	4
97	1718	15.21	2.77		
114	1457	12.90	3.17		
130	1274	11.28	3.17		

18.5kW

输出转速 Output speed r/min	输出扭矩 Output torque Nm	传动比 Ratio i	使用系数 Service factor f_B	机型号 Type Type	极数 Pole p
69	2409	21.32	1.17		
76	2182	19.31	1.29		
86	1934	17.12	1.46		
95	1749	15.48	1.50		
112	1482	13.12	1.61		
128	1295	11.46	1.70	FA 87	4
153	1082	9.58	1.80	FAF87	4
174	956	8.46	1.88	F 87	4
196	847	7.50	1.90	FF 87	4
217	766	6.78	2.0		
256	650	5.75	2.2		
296	567	5.02	2.5		
350	474	4.20	2.9		

22kW

输出转速 Output speed r/min	输出扭矩 Output torque Nm	传动比 Ratio i	使用系数 Service factor f_B	机型号 Type Type	极数 Pole p
10	19654	96.53	0.86	FA 157	6
11	17693	86.90	0.96	FAF157	6
12	16180	79.47	1.05	F 157	6
14	14079	69.15	1.20	FF 157	6
10	19051	141.80	0.89		
12	16813	125.14	1.01		
14	14576	108.49	1.16		
15	12969	96.53	1.30		
17	11675	86.90	1.45	FA 157	4
18	10677	79.47	1.58	FAF157	4
21	9290	69.15	1.82	F 157	4
24	8198	61.02	2.1	FF 157	4
28	7108	52.91	2.4		
31	6324	47.07	2.7		
36	5451	40.57	3.1		
45	4430	32.97	3.8		
15	13399	99.73	0.84		
17	11823	88.00	0.95		
19	10211	76.00	1.10	FA 127	4
21	9488	70.62	1.19	FAF127	4
23	8653	64.41	1.30	F 127	4
26	7489	55.74	1.51	FF 127	4
30	6609	49.19	1.71		
35	5707	42.48	1.98		
25	7808	58.12	0.92		
29	6816	50.73	1.06		
34	5781	43.03	1.25		
39	5053	37.61	1.43	FA 107	4
44	4540	33.78	1.59	FAF107	4
46	4272	31.08	1.69	F 107	4
54	3685	27.43	1.96	FF 107	4
58	3400	25.31	2.1		
68	2923	21.76	2.5		
77	2580	19.20	2.8		
53	3724	27.72	1.09		
58	3383	25.18	1.19		
66	3001	22.34	1.35	FA 97	4
73	2723	20.27	1.48	FAF97	4
84	2340	17.42	1.73	F 97	4
97	2043	15.21	2.0	FF 97	4
114	1733	12.90	2.3		
130	1515	11.28	2.7		
69	2864	21.32	0.98	FA 87	4
76	2594	19.31	1.09	FAF87	4
86	2300	17.12	1.23	F 87	4
95	2080	15.48	1.36	FF 87	4

22kW

输出转速 Output speed r/min	输出扭矩 Output torque Nm	传动比 Ratio i	使用系数 Service factor f_B	机型号 Type Type	极数 Pole p
112	1763	13.12	1.27		
128	1540	11.46	1.43		
153	1287	9.58	1.58		
174	1137	8.46	1.60	FA 87	4
196	1008	7.50	1.70	FAF87	4
217	911	6.78	1.83	F 87	4
256	773	5.75	1.86	FF 87	4
293	674	5.02	2.1		
350	564	4.20	2.4		

30kW

输出转速 Output speed r/min	输出扭矩 Output torque Nm	传动比 Ratio i	使用系数 Service factor f_B	机型号 Type Type	极数 Pole p
14	19876	108.49	0.85		
15	17685	96.53	0.96		
17	15920	86.90	1.06		
18	14559	79.47	1.16	FA 157	4
21	12669	69.15	1.34	FAF157	4
24	11179	61.02	1.51	F 157	4
28	9693	52.91	1.75	FF 157	4
31	8623	47.07	2.0		
36	7433	40.57	2.3		
19	13924	76.00	0.81		
21	12938	70.62	0.87		
23	11800	64.41	0.96		
26	10212	55.74	1.10		
30	9012	49.19	1.25	FA 127	4
35	7783	42.48	1.45	FAF127	4
39	6883	37.57	1.58	F 127	4
47	5786	31.58	1.6	FF 127	4
54	4961	26.92	1.95		
58	4672	25.50	2.4		
59	4536	24.97	2.8		
68	3948	21.55	2.9		
77	3483	19.01	3.2		
34	7883	43.03	0.92		
39	6890	37.61	1.05		
46	5826	31.80	1.24		
54	5025	27.43	1.44	FA 107	4
58	4637	25.31	1.56	FAF107	4
68	3987	21.76	1.81	F 107	4
77	3518	19.20	2.1	FF 107	4
89	3038	16.58	2.4		
100	2688	14.67	2.7		
119	2259	12.33	2.9		
148	1825	9.96	3.3		
66	4093	22.34	0.99		
73	3714	20.27	1.09		
84	3191	17.42	1.27		
97	2787	15.21	1.31		
114	2363	12.90	1.44	FA 97	4
130	2067	11.28	1.45	FAF97	4
159	1698	9.27	1.67	F 97	4
175	1541	8.41	1.83	FF 97	4
203	1325	7.23	1.85		
233	1156	6.31	1.86		
275	980	5.35	2.1		
314	857	4.68	2.2		

37kW

输出转速 Output speed r/min	输出扭矩 Output torque Nm	传动比 Ratio i	使用系数 Service factor f_B	机型号 Type Type	极数 Pole p
17	19503	86.90	0.87		
19	17835	79.47	0.95		
21	15519	69.15	1.09	FA 157	4
24	13694	61.02	1.24	FAF157	4
28	11874	52.91	1.42	F 157	4
31	10564	47.07	1.60	FF 157	4
36	9105	40.57	1.86		
45	7399	32.97	2.3		
53	6275	27.96	2.7		
15	22261	99.19	0.51		
27	12509	55.74	0.90		
35	9534	42.48	1.18		
39	8432	37.57	1.31		
47	7087	31.58	1.34		
58	5723	25.50	1.44		
55	6077	26.92	1.59	FA 127	4
60	5557	24.97	1.97	FAF127	4
69	4836	21.55	2.3	F 127	4
78	4266	19.01	2.4	FF 127	4
90	3699	16.48	2.8		
101	3292	14.67	3.1		
117	2837	12.64	3.2		
144	2305	10.27	3.3		
169	1966	8.76	3.3		
190	1748	7.79	3.9		
54	6156	27.43	1.20		
58	5680	25.31	1.30		
68	4883	21.76	1.51		
77	4309	19.20	1.7		
89	3721	16.58	2.0	FA 107	4
101	3292	14.67	2.1	FAF107	4
120	2767	12.33	2.2	F 107	4
149	2235	9.96	2.3	FF 107	4
153	2166	9.65	2.4		
177	1872	8.34	2.6		
201	1654	7.37	2.7		
239	1391	6.20	3.1		

45kW

输出转速 Output speed r/min	输出扭矩 Output torque Nm	传动比 Ratio i	使用系数 Service factor f_B	机型号 Type Type	极数 Pole p
21	18874	69.15	0.90		
24	16655	61.02	1.02	FA 157	4
28	14442	52.91	1.17	FAF157	4
31	12848	47.07	1.32	F 157	4
36	11074	40.57	1.53	FF 157	4
45	8999	32.97	1.88		
53	7632	27.96	2.2		
30	13426	49.19	0.84		
35	11595	42.48	0.97		
39	10255	37.57	1.08		
47	8620	31.58	1.10		
55	7391	26.92	1.18		
58	6960	25.50	1.31		
60	6758	24.97	1.62	FA 127	4
69	5882	21.55	1.92	FAF127	4
78	5189	19.01	2.0	F 127	4
90	4498	16.48	2.3	FF 127	4
101	4004	14.67	2.6		
117	3450	12.64	2.7		
144	2803	10.27	2.8		
169	2391	8.76	2.9		
190	2126	7.79	3.2		
220	1834	6.72	3.6		
271	1490	5.46	3.8		

45kW

输出转速 Output speed r/min	输出扭矩 Output torque Nm	传动比 Ratio i	使用系数 Service factor f_B	机型号 Type Type	极数 Pole p
54	7525	27.57	0.98		
59	6862	25.14	1.07		
68	5939	21.76	1.24		
77	5241	19.2	1.41		
89	4525	16.58	1.63	FA 107	4
101	4004	14.67	1.80	FAF107	4
120	3365	12.33	1.90	F 107	4
149	2719	9.96	2.0	FF 107	4
153	2634	9.65	2.1		
177	2276	8.34	2.2		
201	2012	7.37	2.3		
239	1692	6.20	2.6		

55kW

输出转速 Output speed r/min	输出扭矩 Output torque Nm	传动比 Ratio i	使用系数 Service factor f_B	机型号 Type Type	极数 Pole p
24	20357	61.02	0.83		
28	17651	52.91	0.96		
31	15703	47.07	1.08	FA 157	4
36	13534	40.57	1.25	FAF157	4
45	10999	32.97	1.54	F 157	4
53	9328	27.96	1.66	FF 157	4
58	8484	25.43	1.81		
67	7393	22.16	2.3		
75	6595	19.77	2.4		
88	5621	16.85	3.0		
39	12534	37.57	0.90		
47	10535	31.58	1.07		
58	8507	25.5	1.33		
69	7189	21.55	1.57		
78	6342	19.01	1.63		
90	5498	16.48	1.88	FA 127	4
101	4894	14.67	2.1	FAF127	4
117	4217	12.64	2.2	F 127	4
144	3426	10.27	2.3	FF 127	4
169	2922	8.76	2.4		
190	2599	7.79	2.6		
220	2242	6.72	2.9		
271	1821	5.46	3.1		
320	1545	4.63	3.7		

75kW

输出转速 Output speed r/min	输出扭矩 Output torque Nm	传动比 Ratio i	使用系数 Service factor f_B	机型号 Type Type	极数 Pole p
31	21413	47.07	0.79		
36	18456	40.57	0.92		
45	14999	32.97	1.13		
53	12719	27.96	1.22	FA 157	4
58	11569	25.43	1.33	FAF157	4
67	10081	22.16	1.68	F 157	4
75	8994	19.77	1.78	FF 157	4
88	7665	16.85	2.2		
106	6351	13.96	2.5		
124	5423	11.92	2.8		
58	11600	25.50	0.97		
69	9803	21.55	1.2		
78	8648	19.01	1.2		
90	7497	16.48	1.4		
101	6674	14.67	1.5	FA 127	4
117	5750	12.64	1.6	FAF127	4
144	4672	10.27	1.6	F 127	4
169	3985	8.76	1.7	FF 127	4
190	3544	7.79	1.9		
220	3057	6.72	2.2		
271	2484	5.46	2.3		
320	2106	4.63	2.7		

输出转速 Output speed r/min	输出扭矩 Output torque Nm	传动比 Ratio i	使用系数 Service factor f_B	机型号 Type Type	极数 Pole p
90kW					
45	17998	32.97	0.94		
53	15263	27.96	1.02		
58	13882	25.43	1.11	FA 157	4
67	12097	22.16	1.40	FAF157	4
75	10792	19.77	1.48	F 157	4
88	9198	16.85	1.84	FF 157	4
106	7621	13.96	2.1		
124	6507	11.92	2.3		
58	13920	25.50	0.81		
69	11764	21.55	0.96		
78	10378	19.01	1.00		
90	8953	16.48	1.15		
101	8008	14.67	1.29	FA 127	4
117	6900	12.64	1.33	FAF127	4
144	5606	10.27	1.36	F 127	4
169	4782	8.76	1.59	FF 127	4
190	4253	7.79	1.60		
220	3668	6.72	1.79		
271	2981	5.46	1.89		
320	2528	4.63	2.2		
110kW					
53	18530	27.96	0.91		
67	14686	22.16	1.15	FA 157	4
75	13102	19.77	1.22	FAF157	4
88	11167	16.85	1.52	F 157	4
107	9252	13.96	1.73	FF 157	4
125	7900	11.92	1.90		
132kW					
67	17623	22.16	0.96	FA 157	4
75	15723	19.77	1.02	FAF157	4
88	13400	16.85	1.26	F 157	4
107	11102	13.96	1.44	FF 157	4
125	9480	11.92	1.59		
160kW					
				FA 157	4
88	16243	16.85	1.04	FAF157	4
107	13457	13.96	1.19	F 157	4
125	11491	11.92	1.31	FF 157	4
200kW					
				FA 157	4
88	20304	16.85	0.83	FAF157	4
107	16821	13.96	0.95	F 157	4
125	14363	11.92	1.05	FF 157	4

输出转速 Output speed r/min	输出扭矩 Output torque Nm	传动比 Ratio i	使用系数 Service factor f_B	机型号 Type Type	极数 Pole p

Mamax Permissible torque Nm	输出转速 Output speed r/min	传动比 Ratio i	机 型 号 Type Type	功率 Power kW/4p
200	5.3	262	FA 37R17 FAF37R17 F 37R17 FF 37R17	0.18
	6.1	229		
	7.0	200		
	8.2	170		
	9.1	153		0.25
	10	133		
	11	129		
400	2.5	563	FA 47R17 FAF47R17 F 47R17 FF 47R17	0.18
	2.9	477		
	3.1	445		
	3.6	389		
	4.0	346		
	4.6	304		0.25
	4.7	293		
	6.0	230		
	6.4	216		0.37
	7.4	188		
	7.9	176		
	9.4	148		0.55
	11	130		
600	1.6	856	FA 57R37 FAF57R37 F 57R37 FF 57R37	0.18
	1.9	749		
	2.1	658		
	2.5	549		0.25
	2.9	483		
	3.3	426		
	3.6	382		
	4.2	330		0.37
	4.7	298		
	5.3	262		
	6.2	226		0.55
	7.0	200		
	8.4	166		0.75
	9.1	152		
	10	134		
820	1.2	1126	FA 67R37 FAF67R37 F 67R37 FF 67R37	0.18
	1.4	984		
	1.6	864		
	1.9	722		0.25
	2.2	633		
	2.6	527		
	2.8	500		0.37
	3.1	454		
	3.5	392		
	4.2	333		0.55
	4.7	297		
	5.3	261		
	5.8	238		
	7.0	200		0.75
1500	0.7	2024	FA 77R37 FAF77R37 F 77R37 FF 77R37	0.18
	0.81	1728		
	0.91	1543		
	1.03	1354		
	1.2	1196		0.25
	1.3	1050		
	1.5	907		0.37
	1.7	810		
	2.0	710		

Mamax Permissible torque Nm	输出转速 Output speed r/min	传动比 Ratio i	机 型 号 Type Type	功率 Power kW/4p
1500	2.3	600	FA 77R37 FAF77R37 F 77R37 FF 77R37	0.55
	2.6	525		
	3.0	469		
	3.4	412		0.75
	3.9	357		
	4.4	314		
3000	0.33	4245	FA 87R57 FAF87R57 F 87R57 FF 87R57	0.18
	0.37	3721		
	0.43	3244		
	0.48	2881		
	0.54	2575		0.25
	0.63	2199		
	0.72	1930		
	0.81	1709		0.37
	0.93	1493		
	1.1	1300		0.55
	1.2	1148		
	1.4	1010		
	1.6	887		
	1.8	780		0.75
	2.1	674		
	2.3	609		1.1
	2.7	515		
	3.1	452		
	4.0	345		1.5
4300	0.21	6532	FA 97R57 FAF97R57 F 97R57 FF 97R57	0.18
	0.24	5696		
	0.28	5032		
	0.32	4375		
	0.35	3946		0.25
	0.41	3404		
	0.47	2949		
	0.54	2590		0.37
	0.61	2267		
	0.70	1989		
	0.80	1739		0.55
	0.90	1542		
	1.0	1340		
	1.2	1182		0.75
	1.3	1032		
	1.5	907		1.1
	1.8	796		
	2.0	700		
	2.3	611		1.5
	2.6	534		
	3.0	472		
	3.5	410		2.2
	3.9	367		
	4.9	288		3
	5.7	247		
7840	0.12	11347	FA 107R77 FAF107R77 F 107R77 FF 107R77	0.18
	0.14	10039		
	0.16	8548		
	0.18	7675		
	0.21	6615		0.25
	0.24	5820		
	0.27	5223		

表上所配功率均有超载,按实际条件确定的转扭不得大于减速机额定转扭。

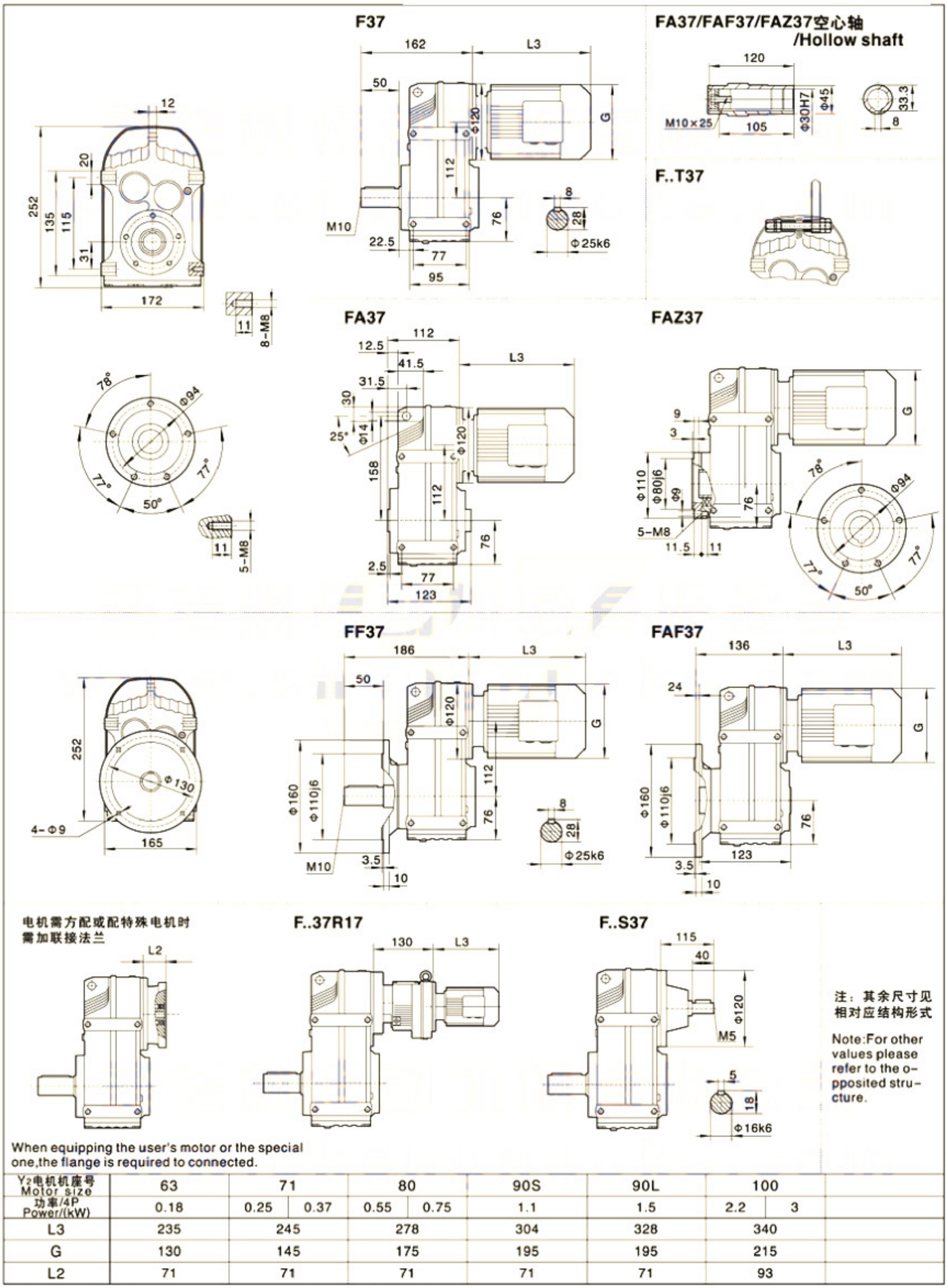
The power are all overload in the table.The decided torque according to operating condition should not more than gear units' nominal torque.

Mamax Permissible torque Nm	输出转速 Output speed r/min	传动比 Ratio i	机 型 号 Type Type	功率 Power kW/4p
7840	0.30	4567	FA 107R77 FAF107R77 F 107R77 FF 107R77	0.37
	0.40	3442		
	0.46	3037		0.55
	0.50	2756		
	0.59	2369		
	0.67	2068		0.75
	0.76	1826		
	0.88	1597		1.1
	1.0	1401		
	1.1	1243		
	1.3	1087		1.5
	1.5	950		
	1.7	834		2.2
	1.9	736		
	2.3	627		
	2.5	560		3
	2.9	489		
	3.3	427		
	4.0	362		4
	4.3	333		
12000	0.08	16787	FA 127R77 FAF127R77 F 127R77 FF 127R77	0.18
	0.09	14838		
	0.11	13014		
	0.12	11748		
	0.14	10271		0.25
	0.16	8901		
	0.18	7703		0.37
	0.21	6768		
	0.23	5975		
	0.27	5076		0.55
	0.31	4466		
	0.36	3868		
	0.41	3403		0.75
	0.47	2987		
	0.52	2693		
	0.59	2376		1.1
	0.68	2054		
	0.78	1798		
	0.86	1619		1.5
	1.0	1401		
	1.2	1230		2.2
	1.3	1085		
	1.5	937		
	1.7	827		3
	1.9	733		
	2.2	640		
	2.7	542		4
	2.9	489		
	3.4	423		5.5
	3.9	371		
	3.0	483	FA 127R87 FAF127R87 F 127R87 FF 127R87	5.5
	3.5	417		
	3.9	373		
	4.7	312		7.5
	5.0	293		
	7.3	200		11

Mamax Permissible torque Nm	输出转速 Output speed r/min	传动比 Ratio i	机 型 号 Type Type	功率 Power kW/4p
18000	0.04	31434	FA 157R97 FAF157R97 F 157R97 FF 157R97	0.55
	0.05	26173		
	0.06	23464		
	0.07	20212		
	0.08	17984		
	0.09	16358		
	0.10	13751		
	0.11	12235		
	0.20	7065		
	0.22	6286		
	0.26	5404		0.75
	0.14	10033		1.1
	0.16	9021		
	0.17	8026		
	0.29	4831		
	0.34	4124		
	0.50	2776		
	0.57	2427		1.5
	0.64	2185		
	0.39	3602		2.2
	0.44	3205		
	0.73	1944		
	0.85	1674		
	1.00	1420		
	1.1	1308		3
	1.2	1169		
	1.5	953		4
	1.7	845		
	1.9	764		
	2.1	680		5.5
	2.5	576		
	2.9	503		7.5
	3.3	446		
	4.9	301		11
	5.4	272		
	6.3	231		15
	7.2	202		
	4.9	196		18.5

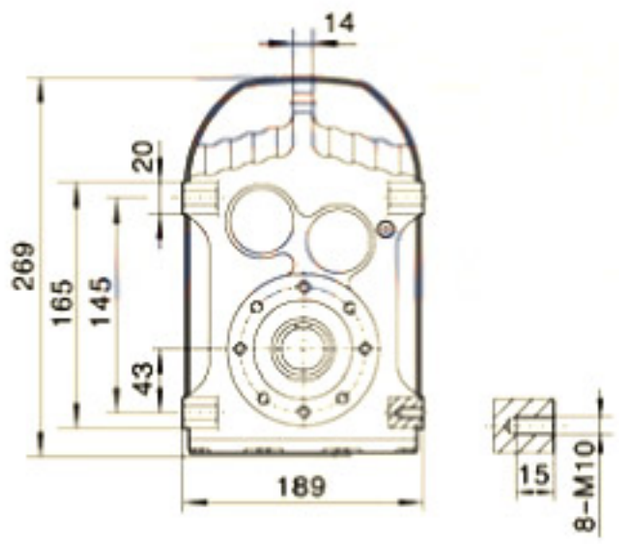
表上所配功率均有超载,按实际条件确定的转扭不得大于减速机额定转扭。

The power are all overload in the table.The decided torque according to operating condition should not more than gear units' nominal torque.

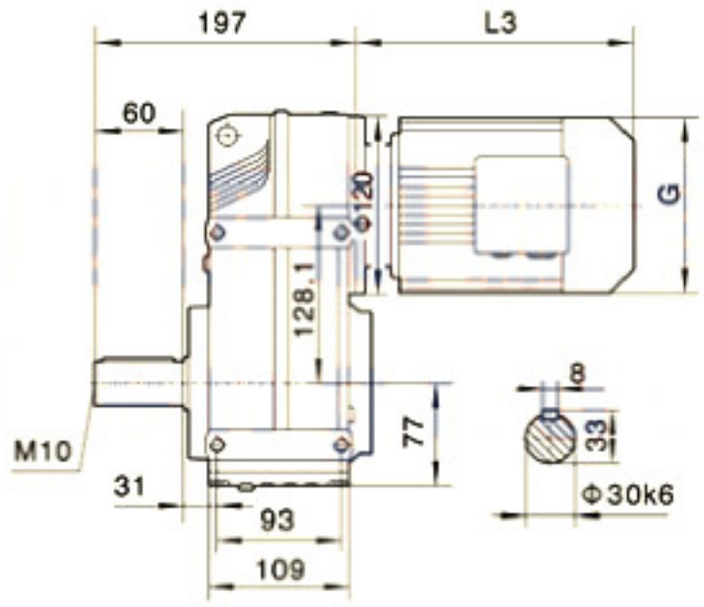


Y2电机机座号 Motor size	63	71		80		90S	90L	100	
功率/4P Power/(kW)	0.18	0.25	0.37	0.55	0.75	1.1	1.5	2.2	3
L3	235	245		278		304	328	340	
G	130	145		175		195	195	215	
L2	71	71		71		71	71	93	

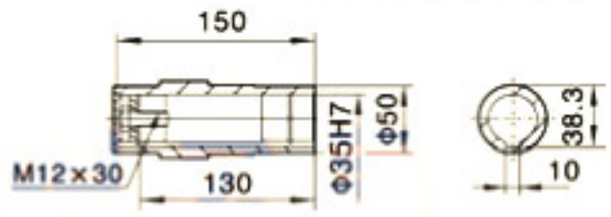
注:1.以上壳体为通用件,安装尺寸均可相互参照　2."F.."表示F、FA、FF、FAF、FAZ
Note:1.The above housings are common parts.The mounting dimensions may consult each other.　2."F.."mean F、FA、FF、FAF、FAZ



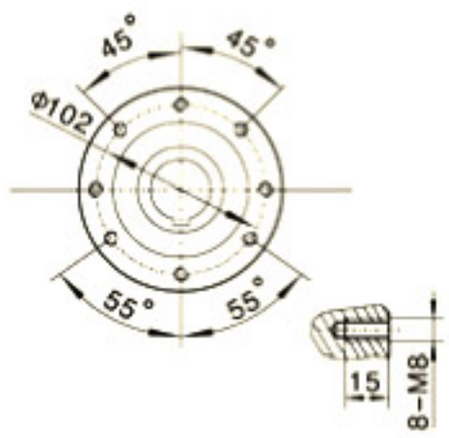
F47



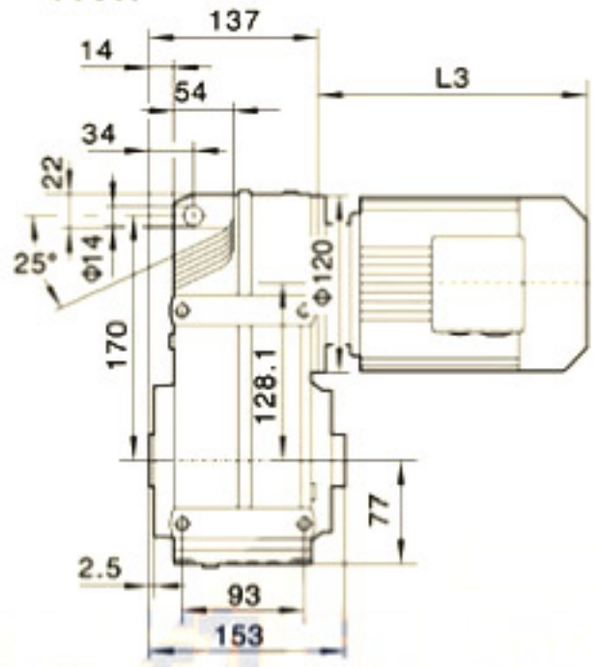
FA47/FAF47/FAZ47空心轴 /Hollow shaft



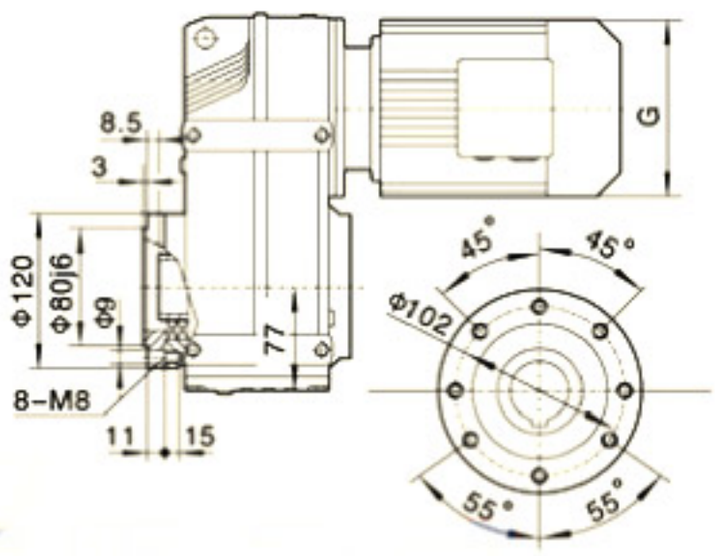
F..T47



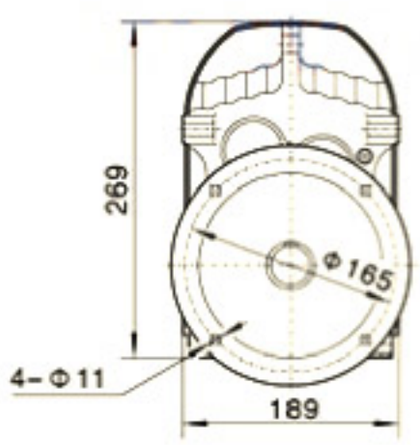
FA47

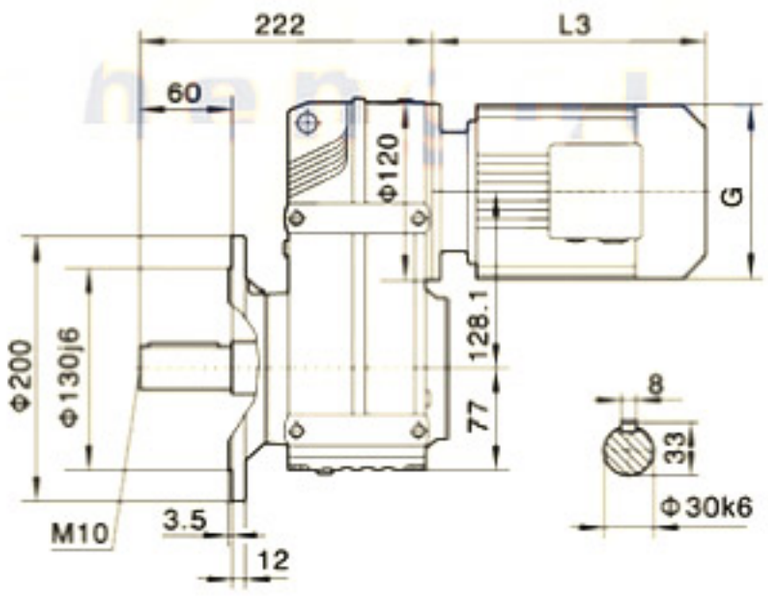


FAZ47

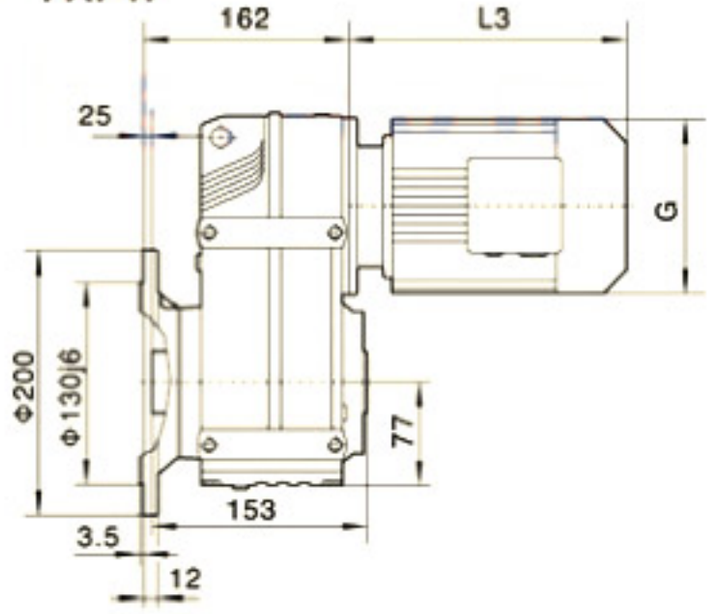


FF47

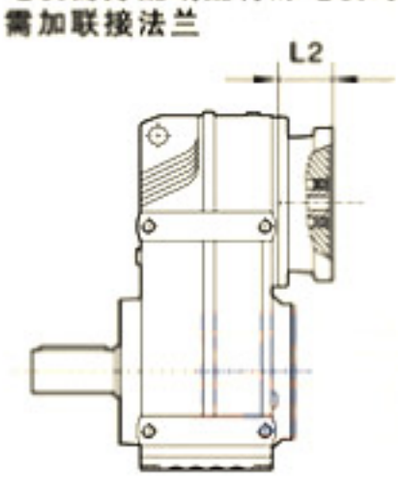




FAF47

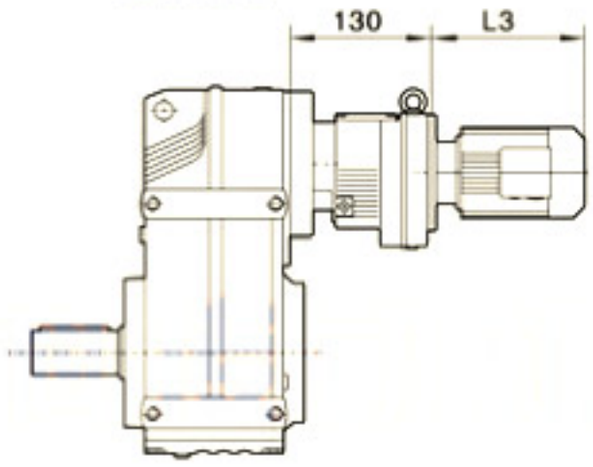


电机需方配或配特殊电机时
需加联接法兰

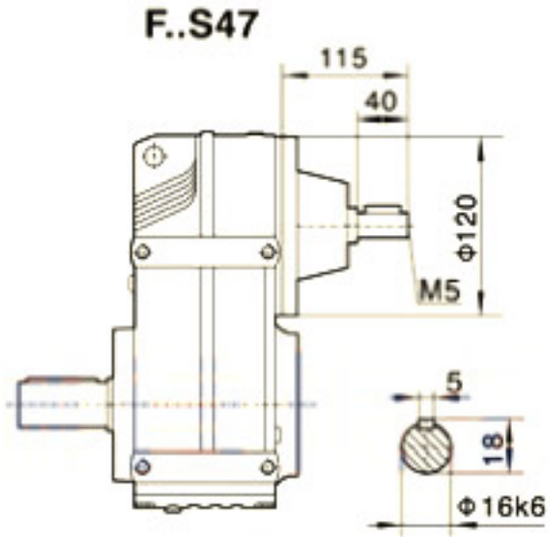


When equipping the user's motor or the special one,the flange is required to connected.

F..47R17



F..S47



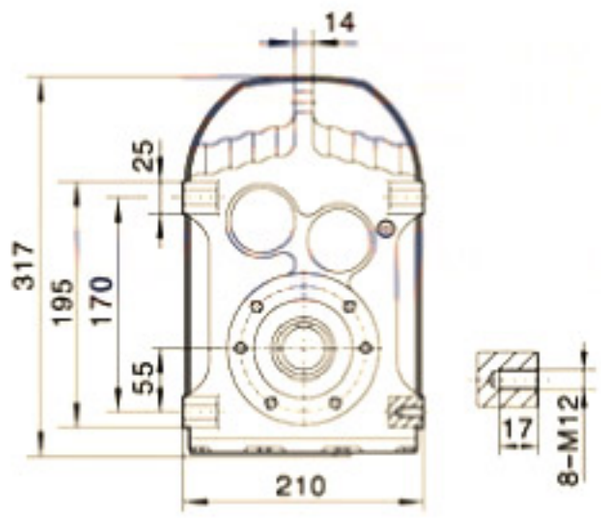
注：其余尺寸见相对应结构形式

Note:For other values please refer to the opposited structure.

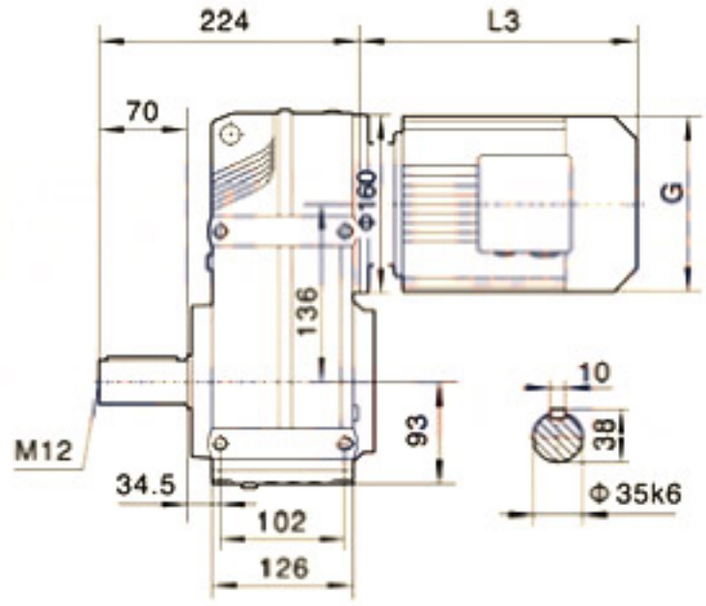
Y2电机机座号 Motor size	63	71		80		90S	90L	100	
功率/4P Power/(kW)	0.18	0.25	0.37	0.55	0.75	1.1	1.5	2.2	3
L3	235	245		278		304	328	340	
G	130	145		175		195	195	215	
L2	71	71		71		71	71	93	

注:1.以上壳体为通用件.安装尺寸均可相互参照　2."F.."表示F、FA、FF、FAF、FAZ

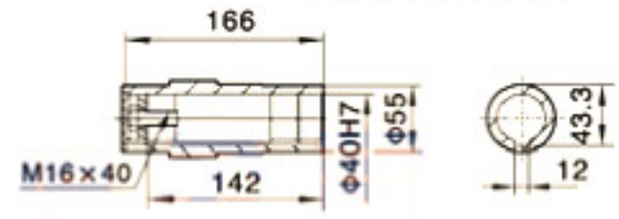
Note:1.The above housings are common parts.The mounting dimensions may consult each other.　2."F.."mean F、FA、FF、FAF、FAZ



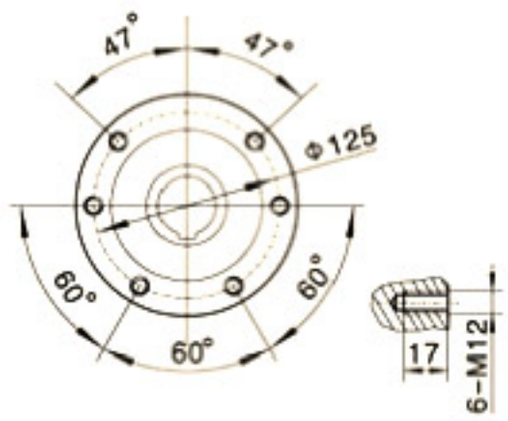
F57



FA57/FAF57/FAZ57空心轴
/Hollow shaft



F..T57



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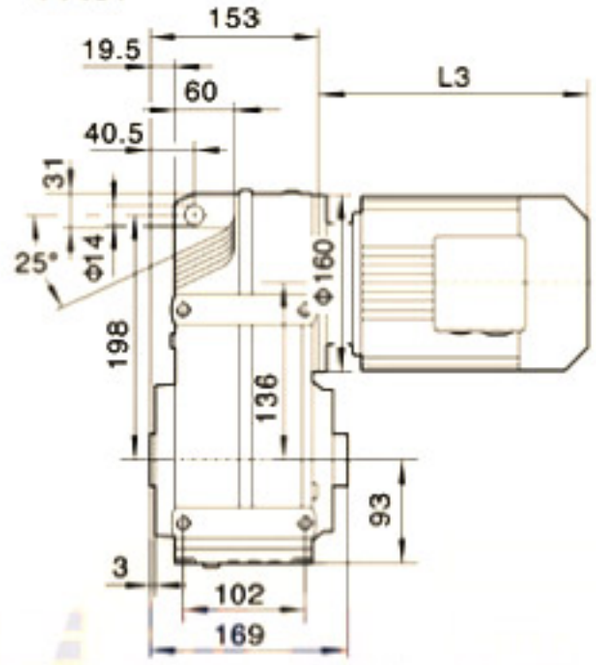
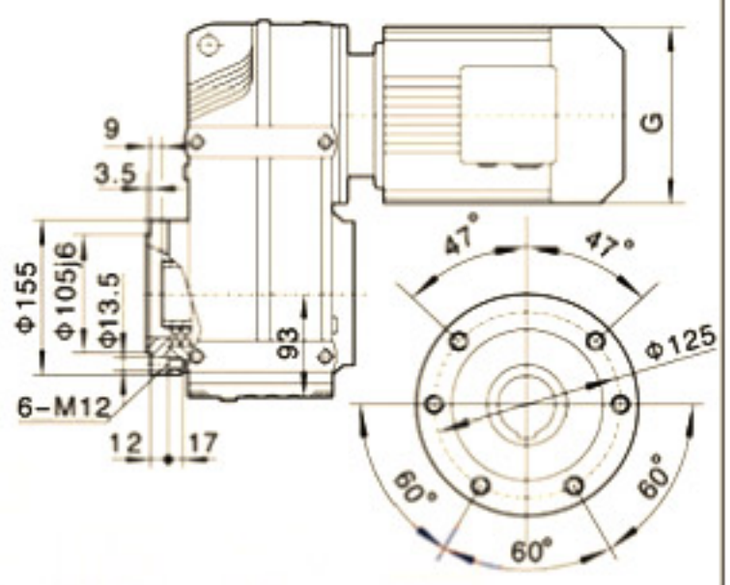
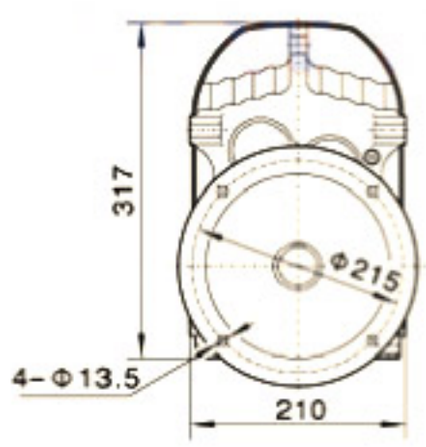


FAZ57





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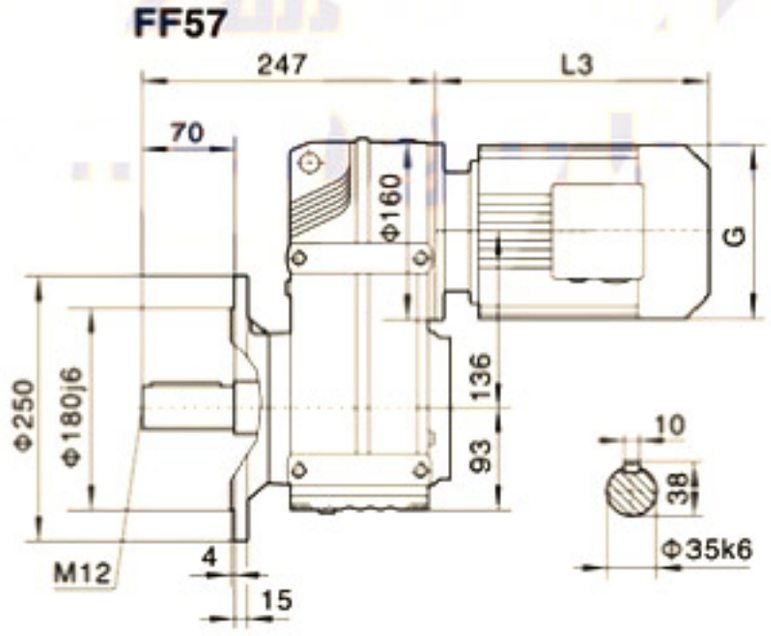
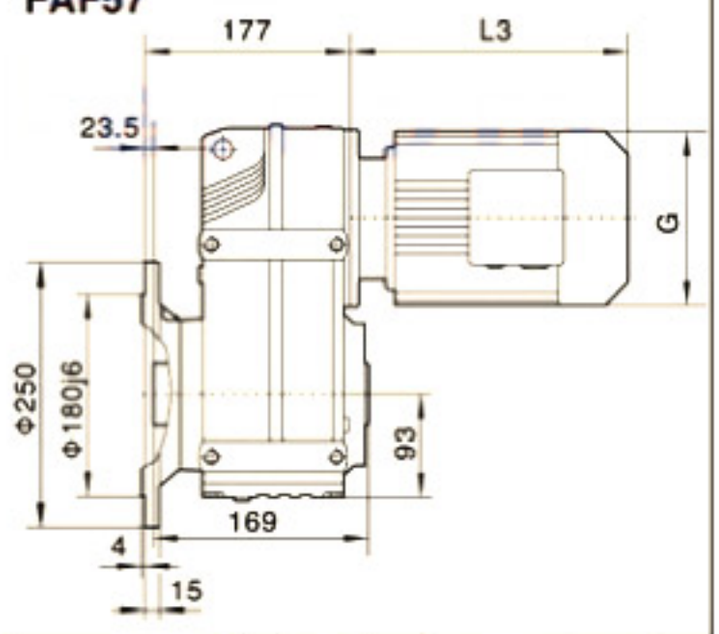
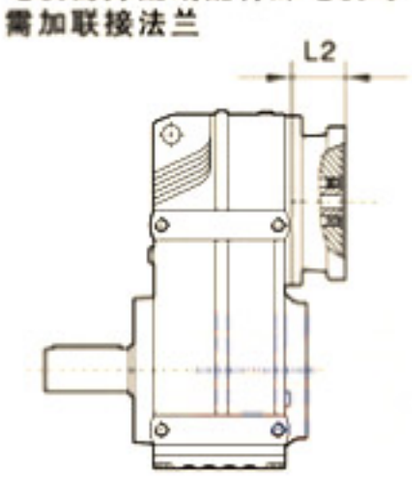


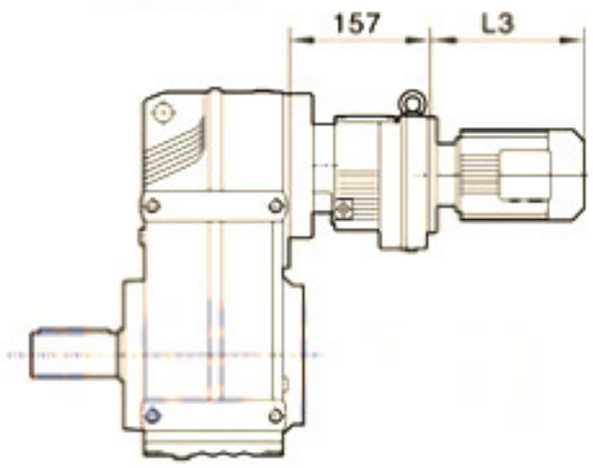
FAF57



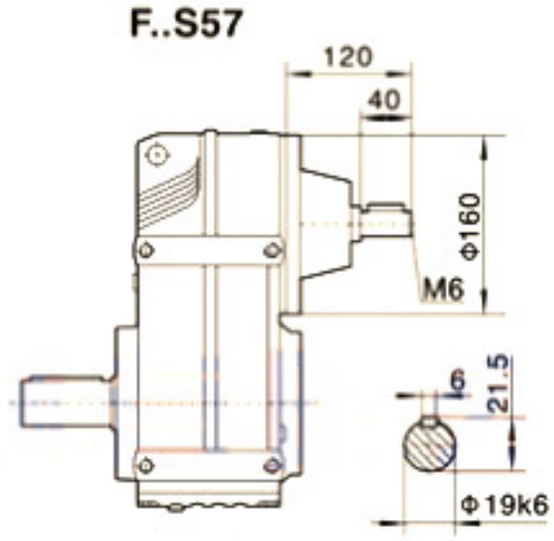
电机需方配或配特殊电机时
需加联接法兰



F..57R37



F..S57



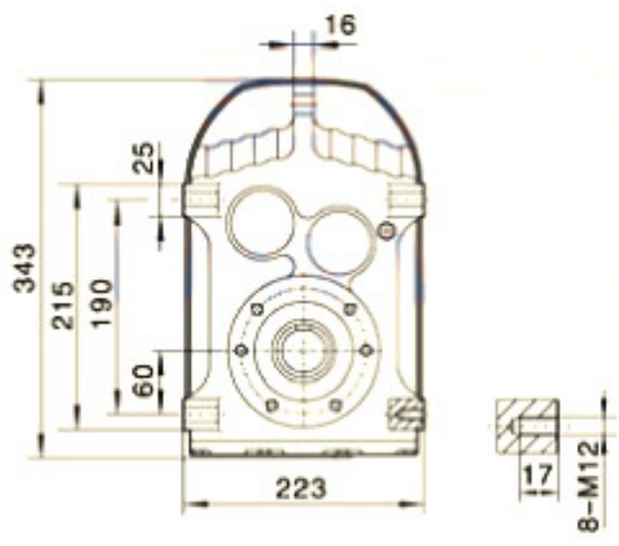
注：其余尺寸见
相对应结构形式

Note:For other values please refer to the opposited structure.

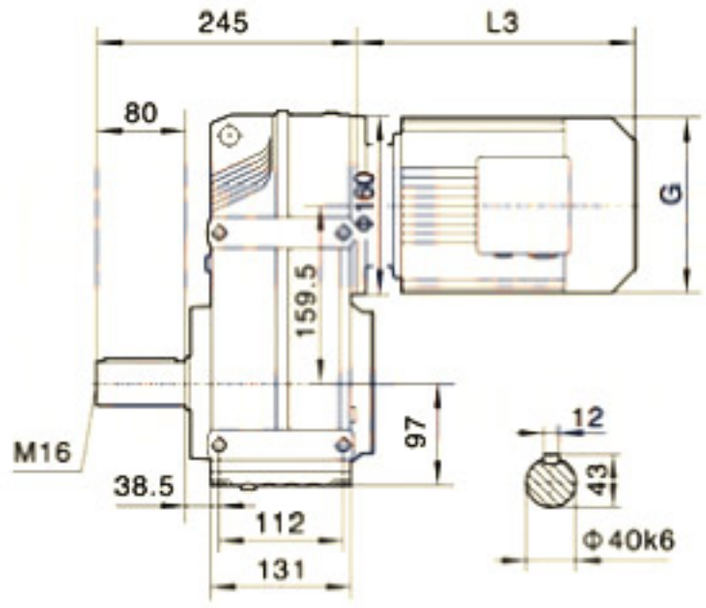
When equipping the user's motor or the special one,the flange is required to connected.

Y2电机机座号 Motor size	63	71		80		90S	90L	100		112M	132S
功率/4P Power/(kW)	0.18	0.25	0.37	0.55	0.75	1.1	1.5	2.2	3	4	5.5
L3	223	245		278		304	328	350		380	425
G	130	145		175		195	195	215		240	275
L2	81	81		81		81	81	93		93	101

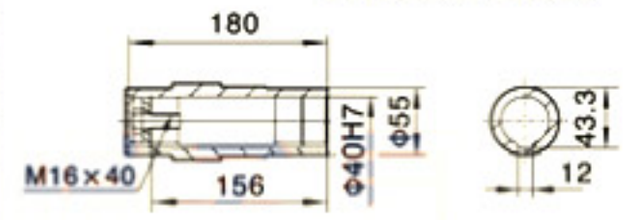
注:1.以上壳体为通用件,安装尺寸均可相互参照　2."F.."表示F、FA、FF、FAF、FAZ
Note:1.The above housings are common parts.The mounting dimensions may consult each other.　2."F.."mean F、FA、FF、FAF、FAZ



F67

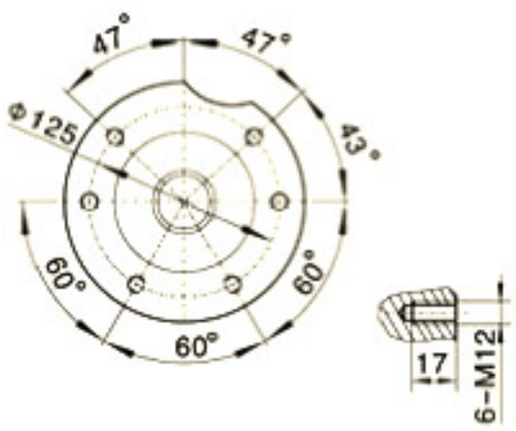


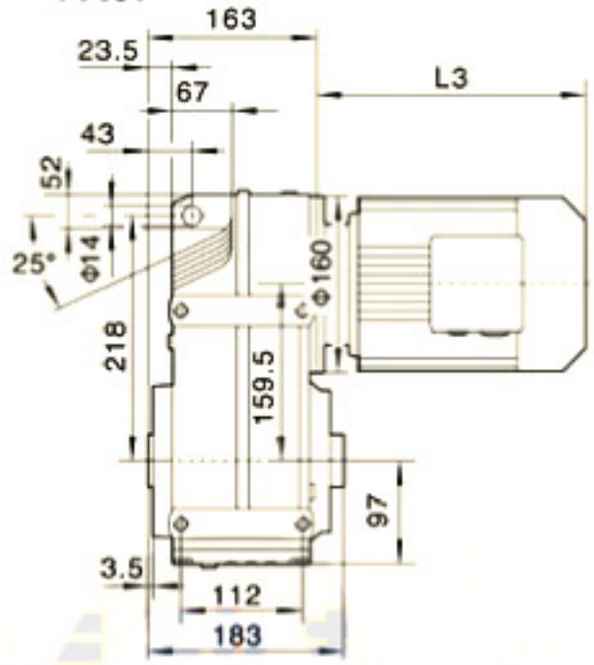
FA67/FAF67/FAZ67空心轴 /Hollow shaft



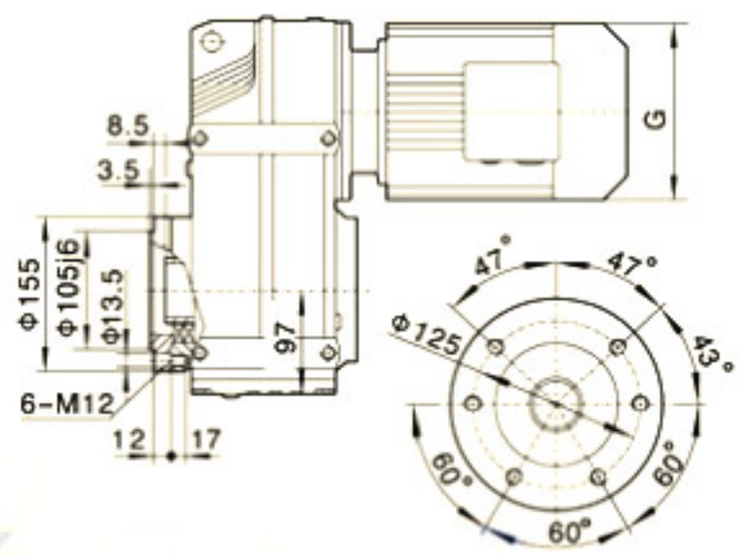
F..T67

FA67

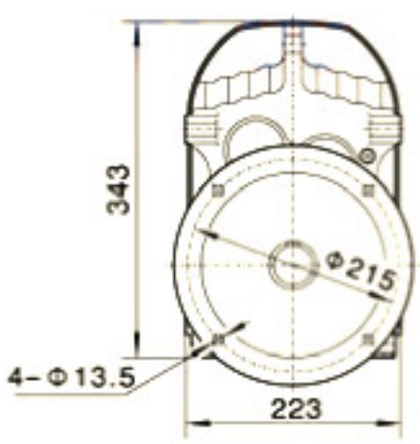


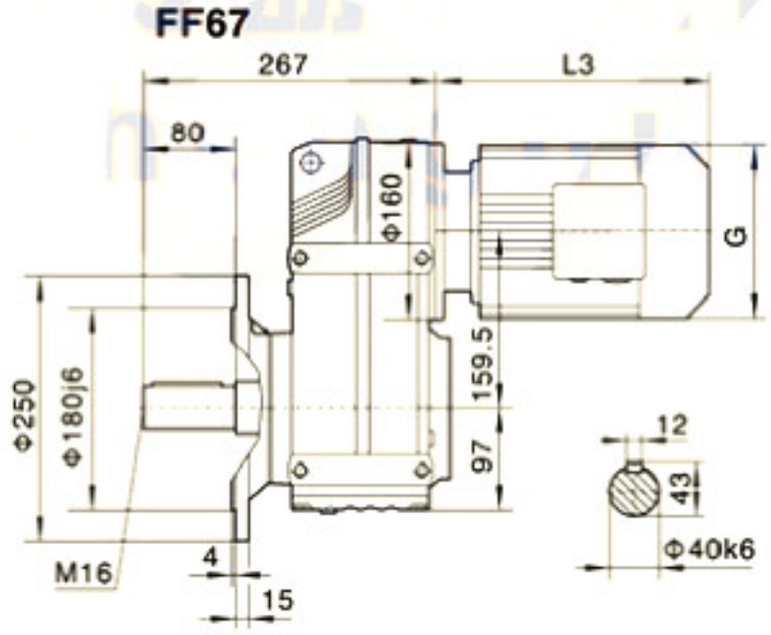


FAZ67

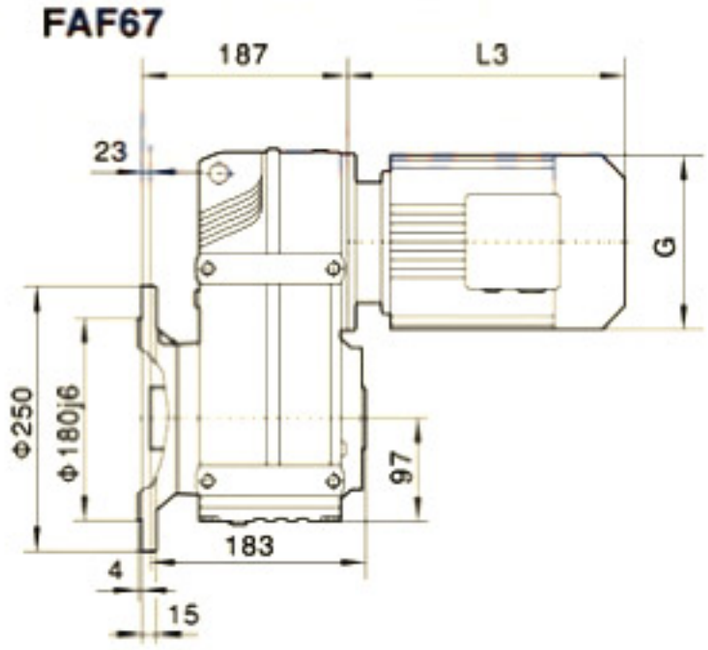


FF67

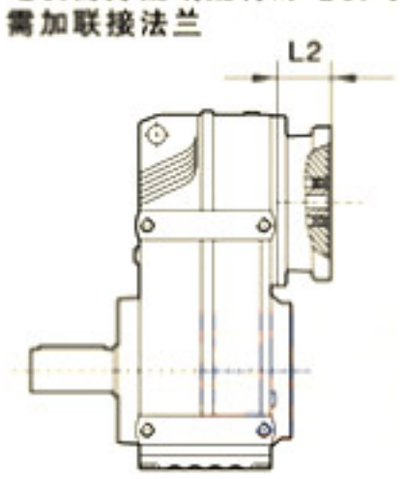




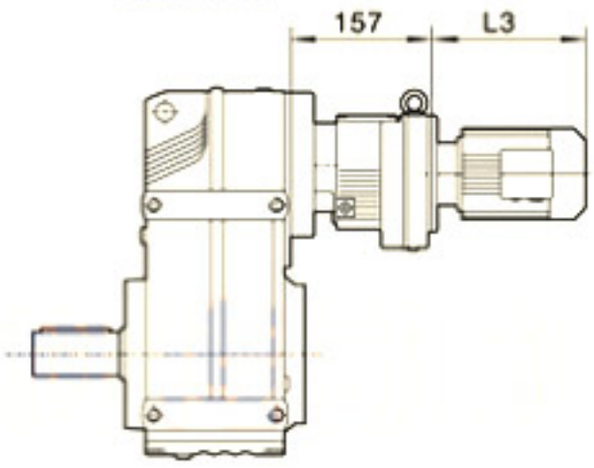
FAF67



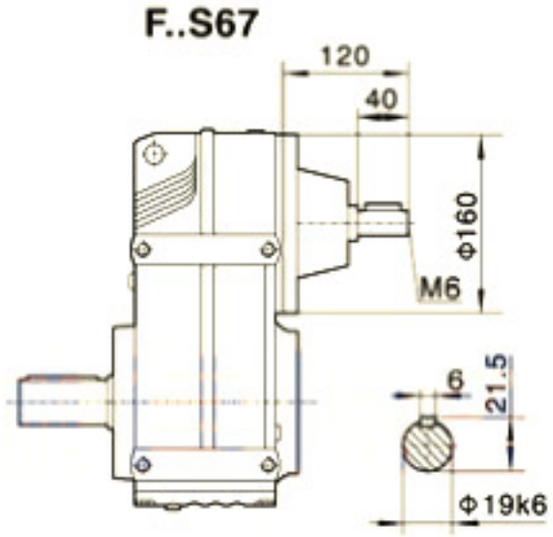
电机需方配或配特殊电机时需加联接法兰



F..67R37



F..S67



注：其余尺寸见相对应结构形式

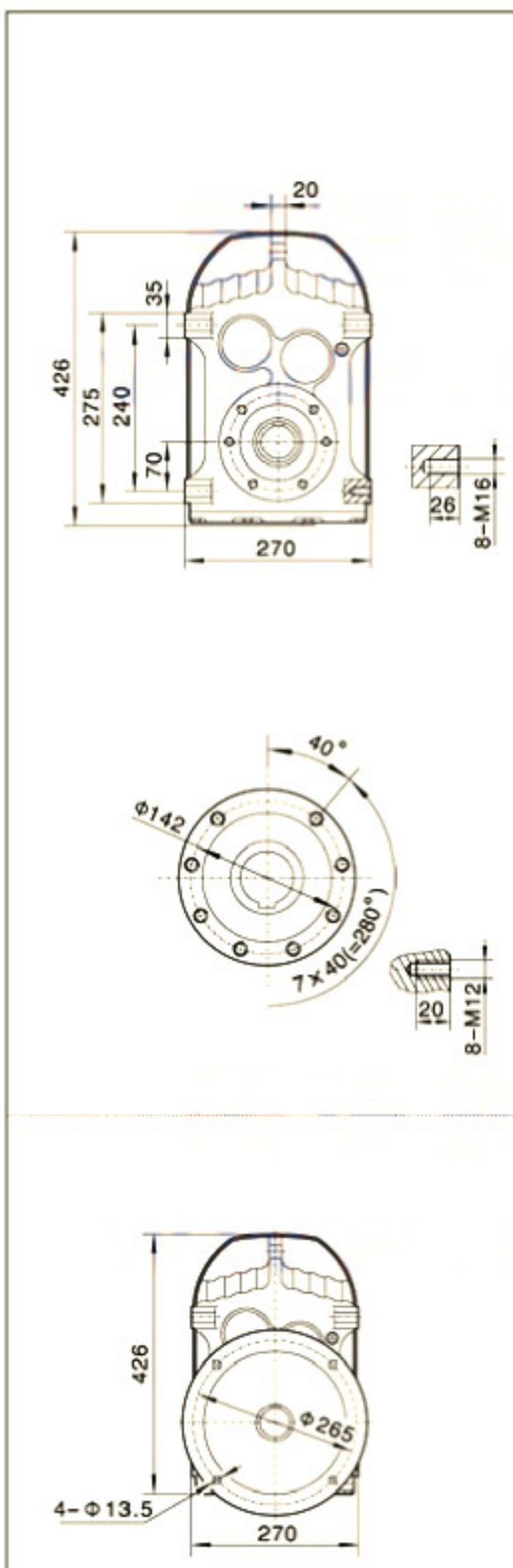
Note:For other values please refer to the o-pposited stru-cture.

When equipping the user's motor or the special one,the flange is required to connected.

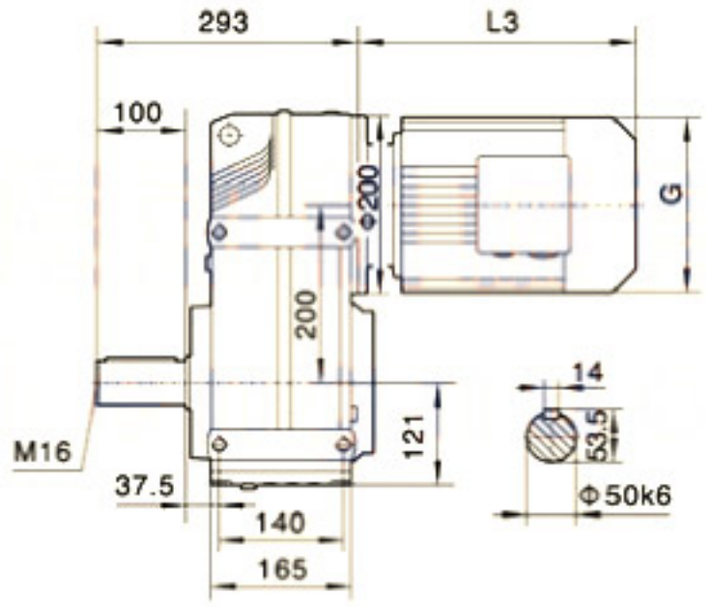
Y2电机机座号 Motor size	63	71		80		90S	90L	100		112M	132S
功率/4P Power/(kW)	0.18	0.25	0.37	0.55	0.75	1.1	1.5	2.2	3	4	5.5
L3	223	245		278		304	328	350		380	425
G	130	145		175		195	195	215		240	275
L2	81	81		81		81	81	93		93	101

注:1.以上壳体为通用件,安装尺寸均可相互参照　2."F.."表示F、FA、FF、FAF、FAZ

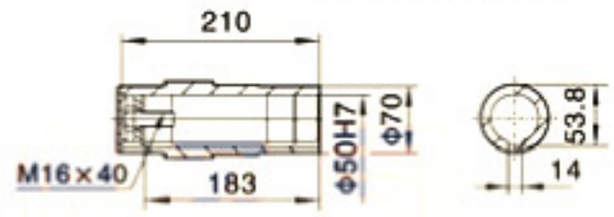
Note:1.The above housings are common parts.The mounting dimensions may consult each other.　2."F.."mean F、FA、FF、FAF、FAZ



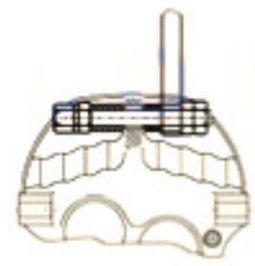
F77



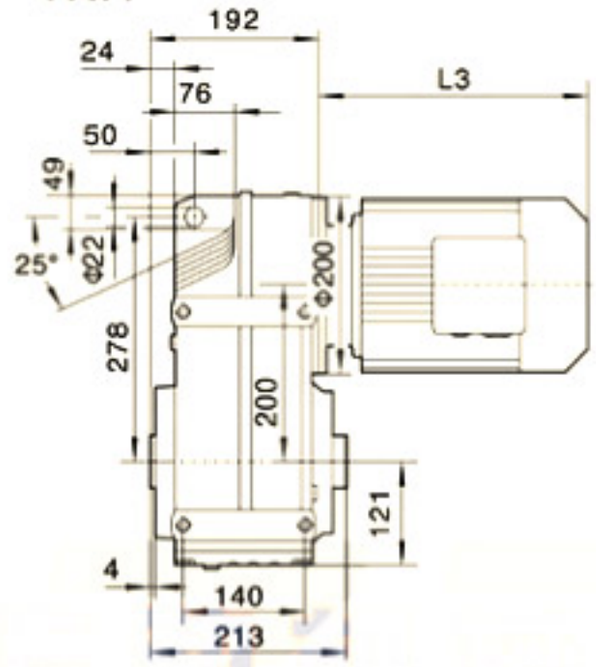
FA77/FAF77/FAZ77空心轴 /Hollow shaft



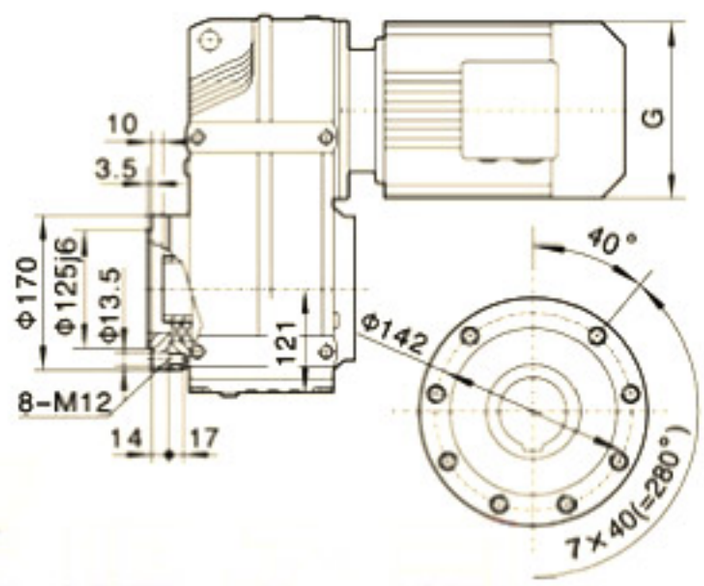
F..T77



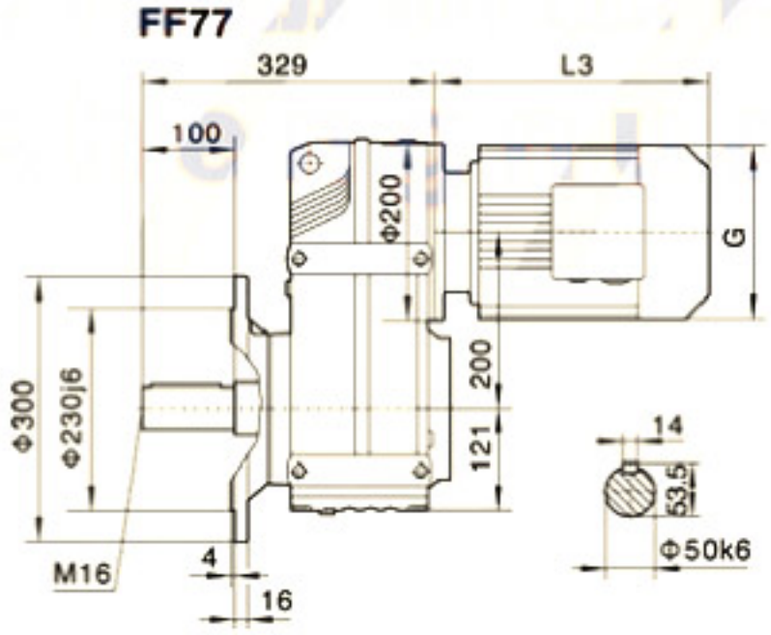
FA77



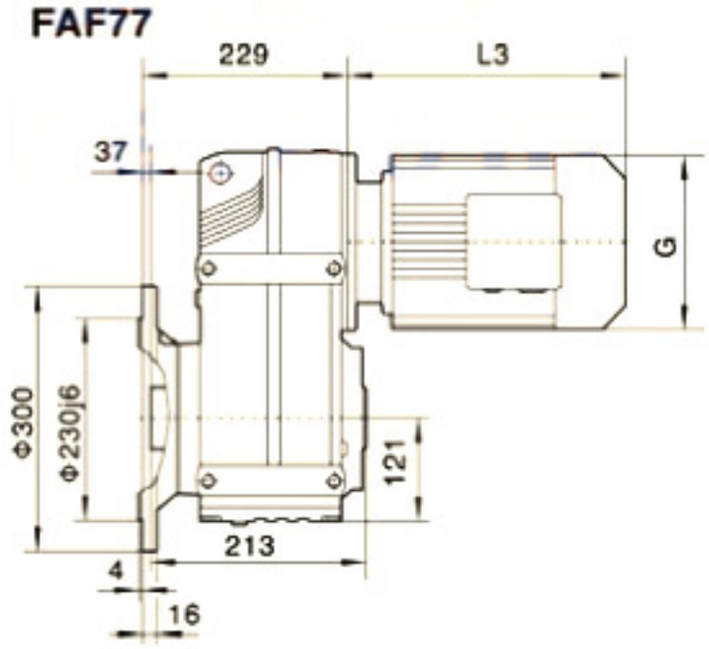
FAZ77



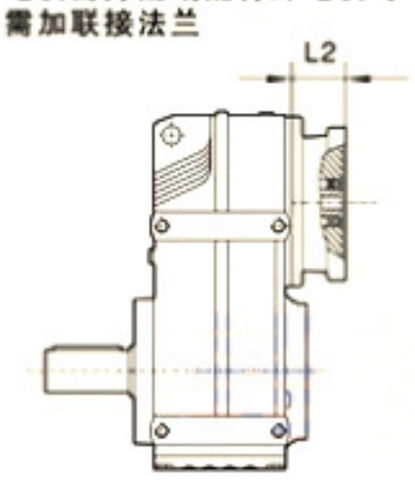
FF77



FAF77

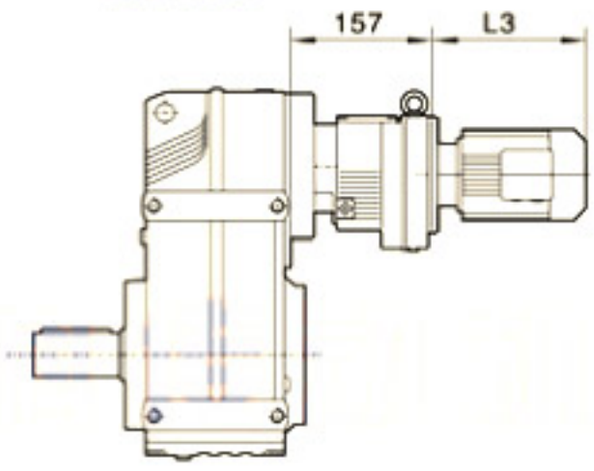


电机需方配或配特殊电机时需加联接法兰

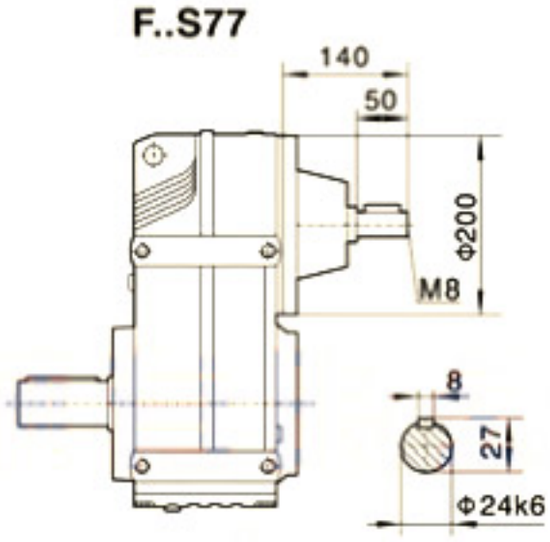


When equipping the user's motor or the special one,the flange is required to connected.

F..77R37



F..S77



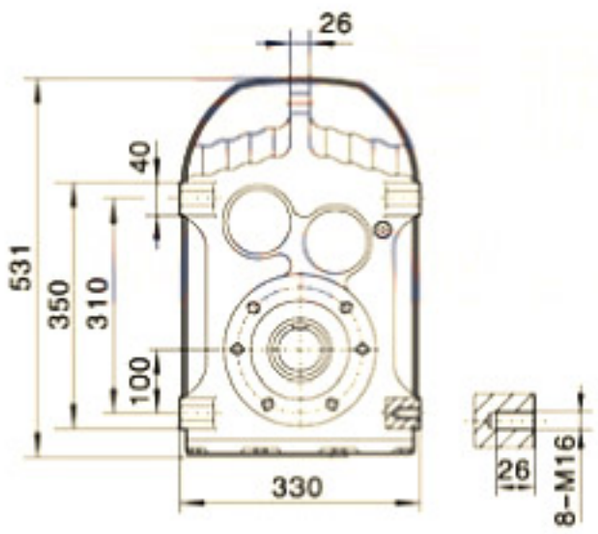
注：其余尺寸见相对应结构形式

Note:For other values please refer to the opposited structure.

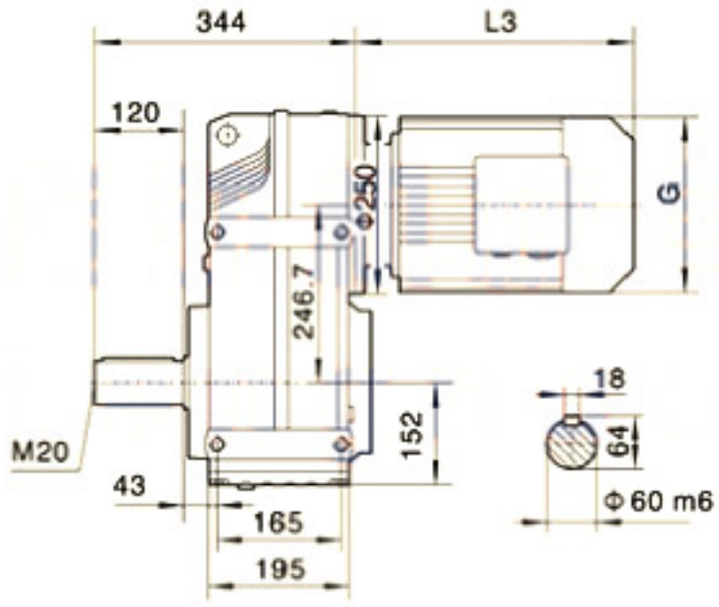
Y2电机机座号 Motor size	71	80		90S	90L	100		112M	132S	132M	160M
功率/4P Power/(kW)	0.37	0.55	0.75	1.1	1.5	2.2	3	4	5.5	7.5	11
L3	233	278		304	328	350		380	425	461	524
G	145	175		195	195	215		240	275	275	330
L2	81	81		81	81	93		93	101	101	126

注:1.以上壳体为通用件,安装尺寸均可相互参照　2."F.."表示F、FA、FF、FAF、FAZ

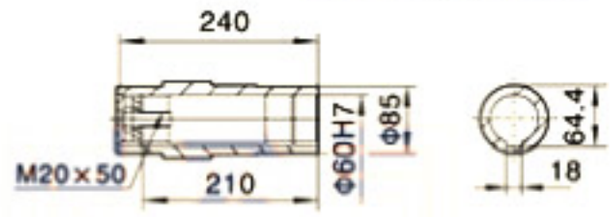
Note:1.The above housings are common parts.The mounting dimensions may consult each other.　2."F.."mean F、FA、FF、FAF、FAZ



F87

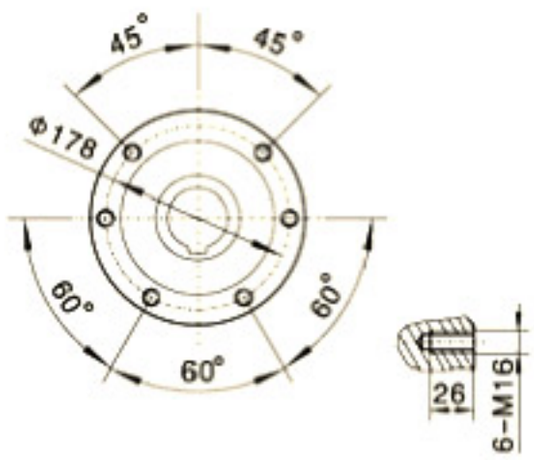


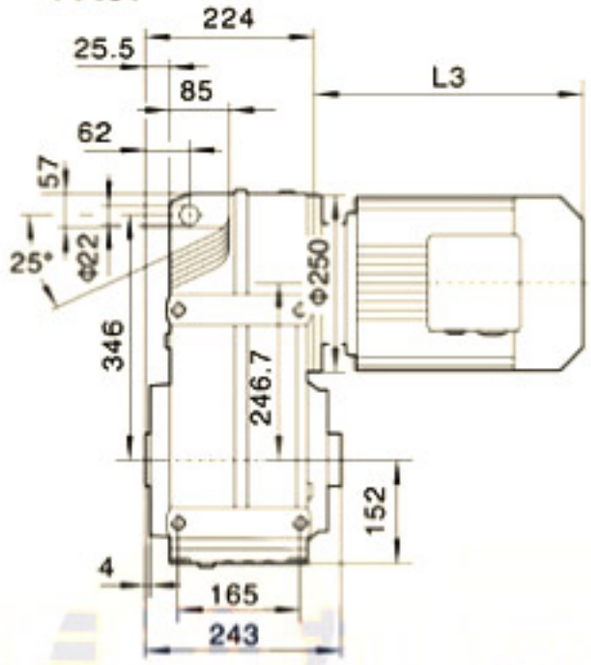
FA87/FAF87/FAZ87空心轴 /Hollow shaft



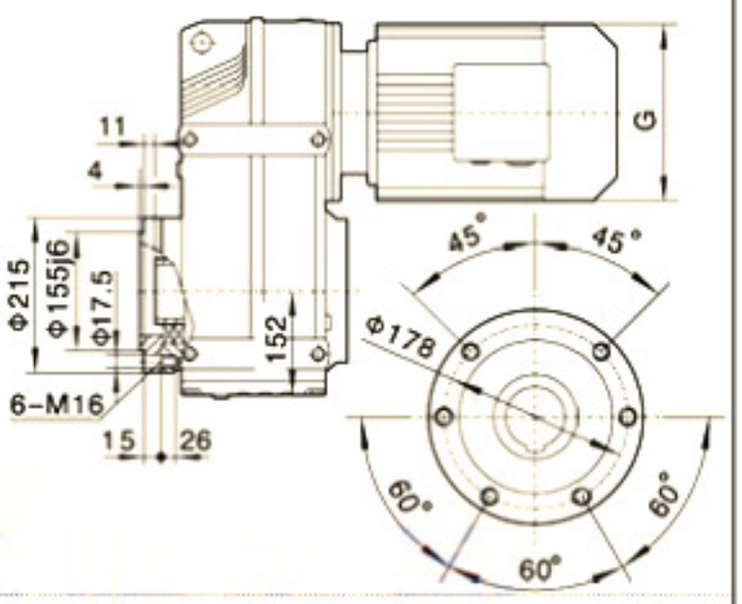
F..T87

FA87

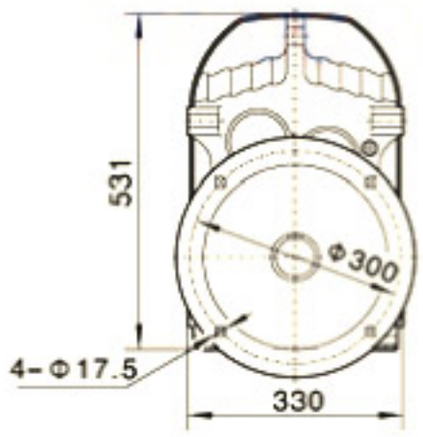


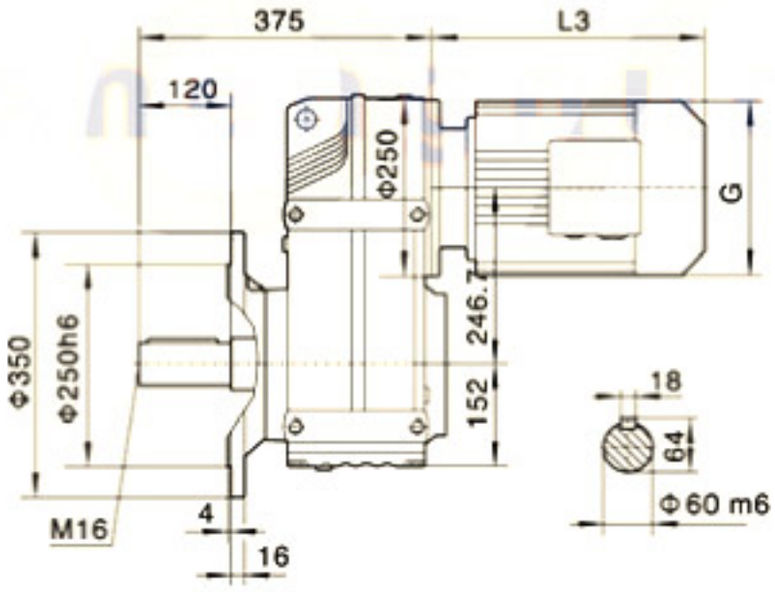


FAZ87

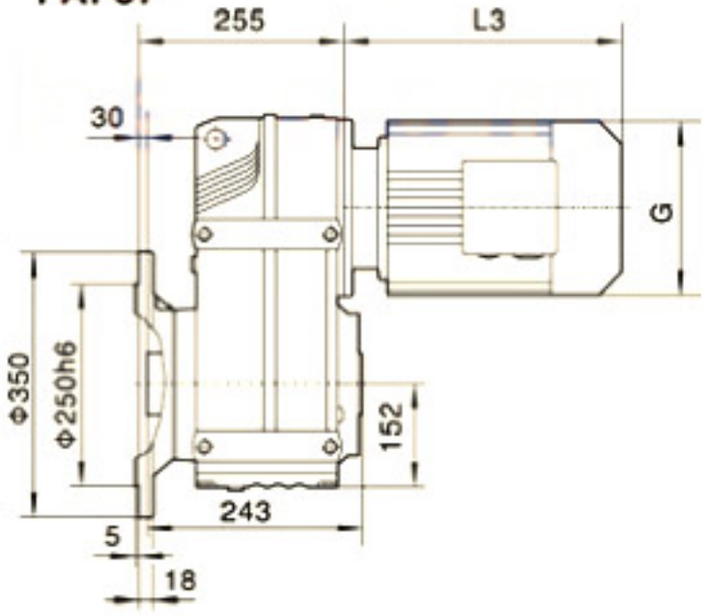


FF87

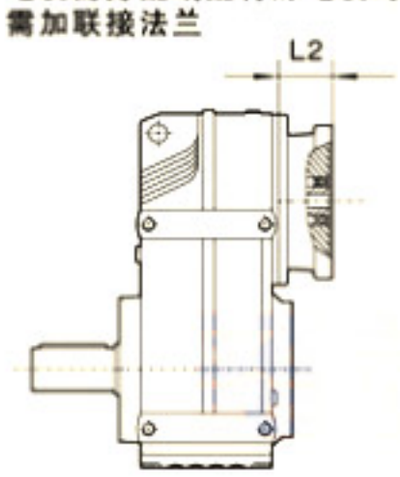




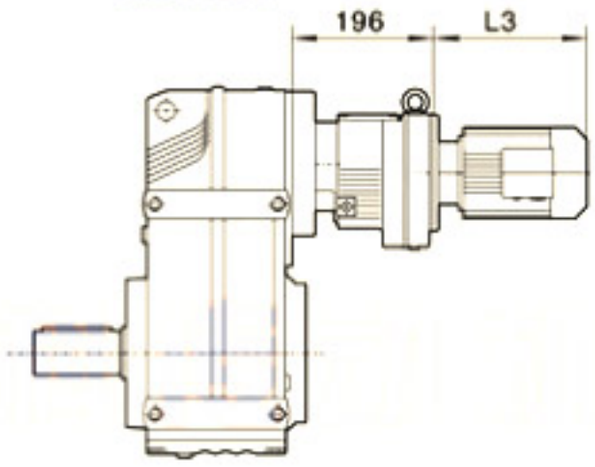
FAF87



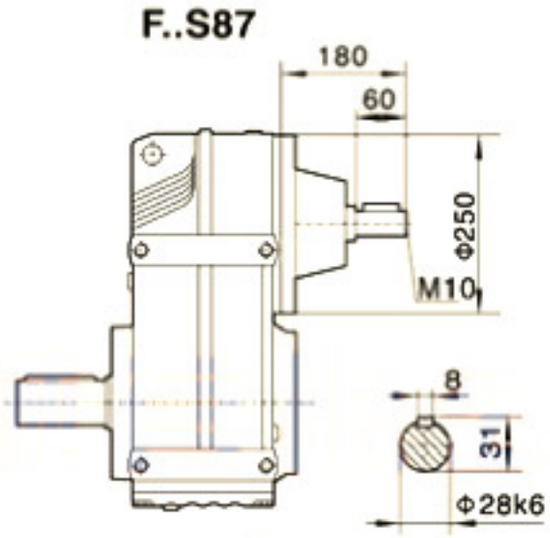
电机需方配或配特殊电机时
需加联接法兰



F..87R57



F..S87



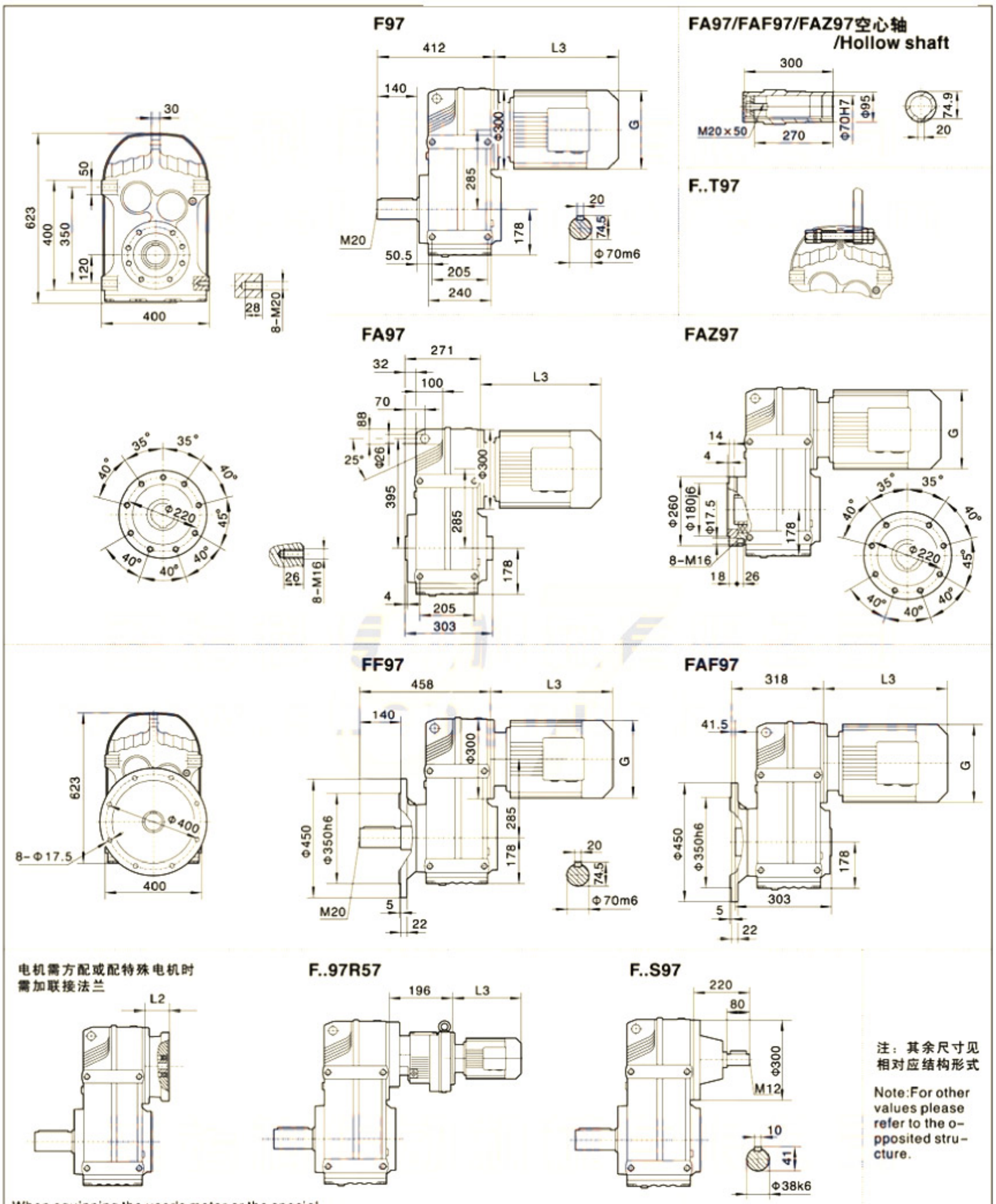
注：其余尺寸见
相对应结构形式

Note:For other values please refer to the opposited structure.

When equipping the user's motor or the special one,the flange is required to connected.

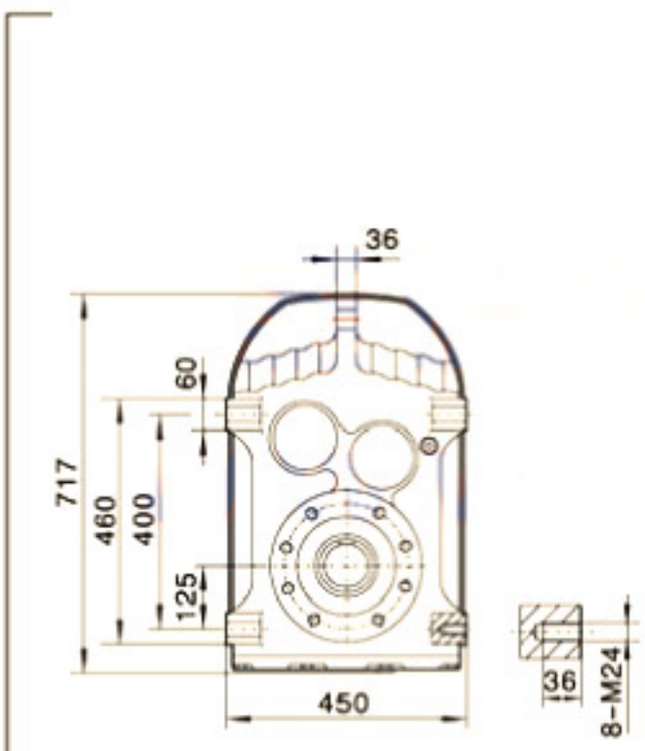
Y2电机机座号 Motor size	80	90S	90L	100		112M	132S	132M	160M	160L	180M	180L
功率/4P Power/(kW)	0.75	1.1	1.5	2.2	3	4	5.5	7.5	11	15	18.5	22
L3	246	280	304	350		380	425	461	524	547	583	616
G	175	195	195	215		240	275	275	330	330	380	380
L2	86	86	86	71		71	101	101	126	126	126	126

注:1.以上壳体为通用件,安装尺寸均可相互参照　2."F.."表示F、FA、FF、FAF、FAZ
Note:1.The above housings are common parts.The mounting dimensions may consult each other.　2."F.."mean F、FA、FF、FAF、FAZ

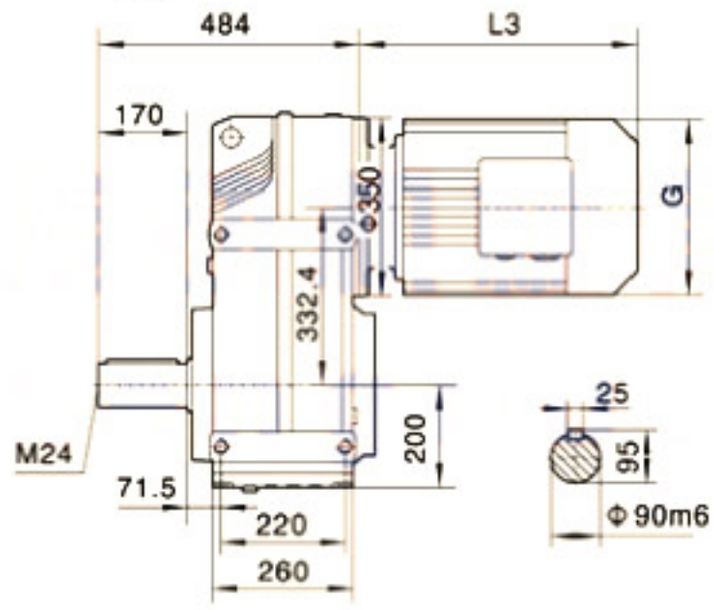


Y2电机机座号 Motor size	90S	90L	100		112M	132S	132M	160M	160L	180M	180L	200
功率/4P Power/(kW)	1.1	1.5	2.2	3	4	5.5	7.5	11	15	18.5	22	30
L3	280	304	315		334	425	461	524	547	555	588	654
G	195	195	215		240	275	275	330	330	380	380	420
L2	86	86	101		101	101	101	126	126	126	126	132

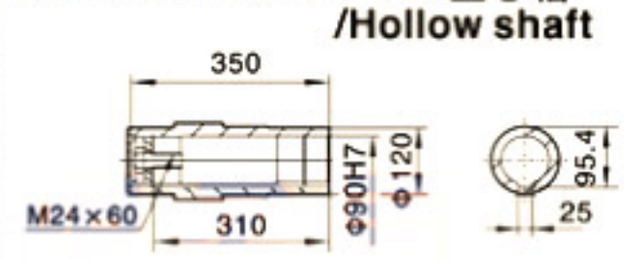
注:1.以上壳体为通用件,安装尺寸均可相互参照　2."F.."表示F、FA、FF、FAF、FAZ
Note:1.The above housings are common parts.The mounting dimensions may consult each other.　2."F.."mean F、FA、FF、FAF、FAZ



F107

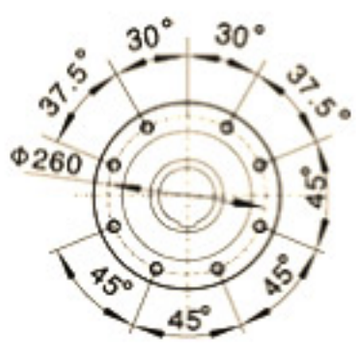


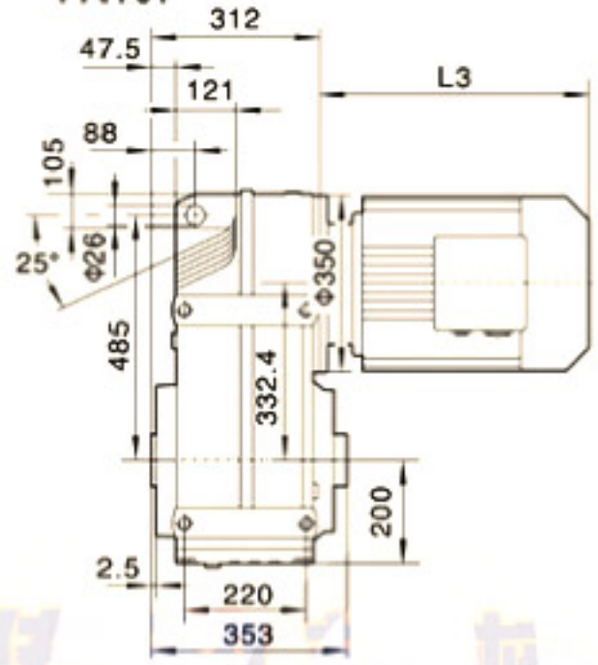
FA107/FAF107/FAZ107空心轴 /Hollow shaft



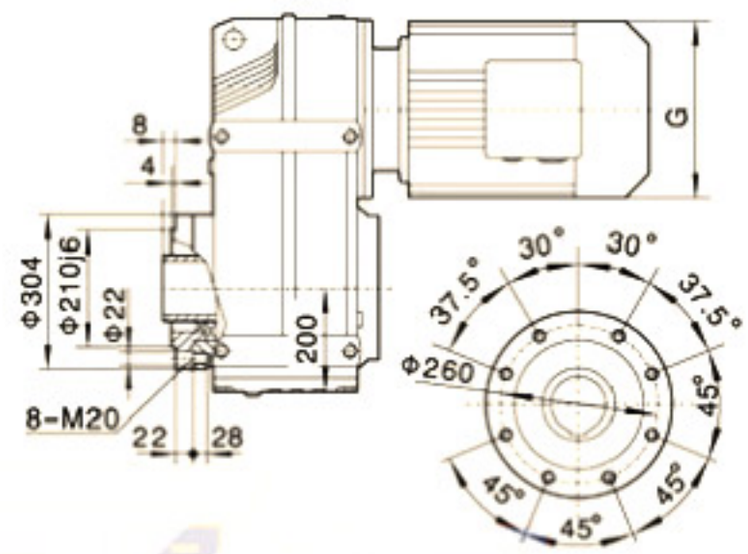
F..T107

FA107

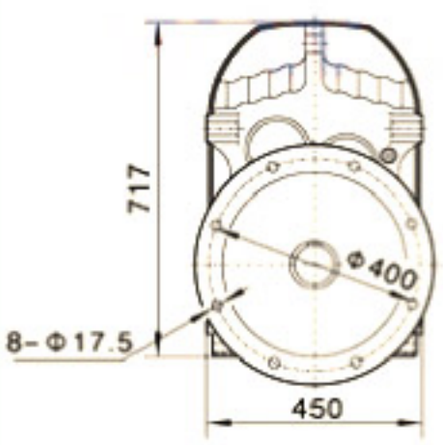


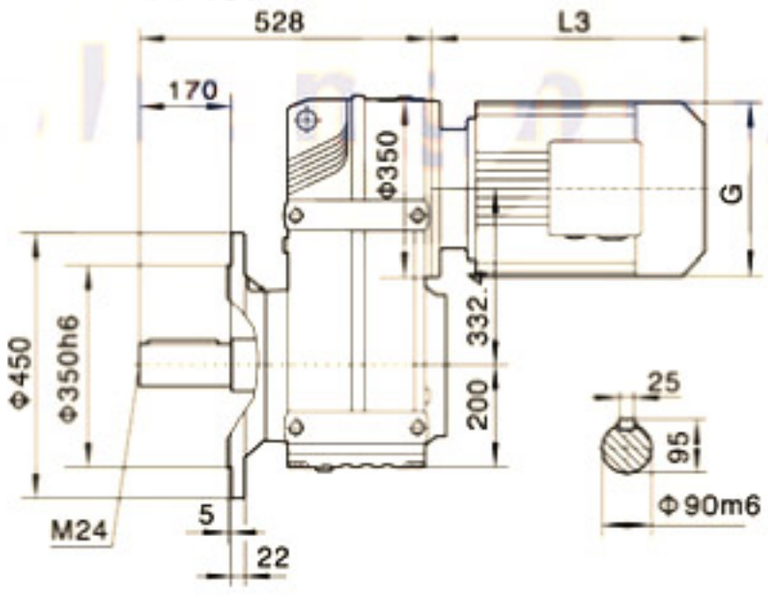


FAZ107

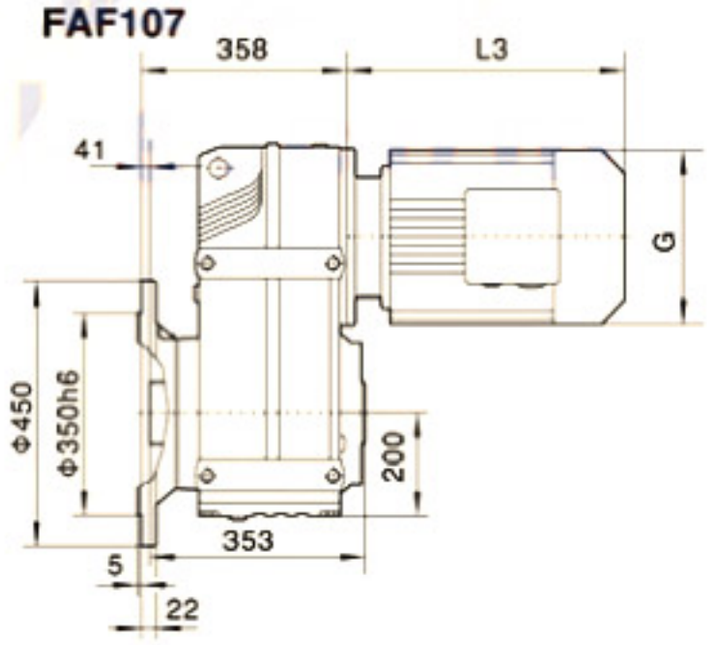


FF107

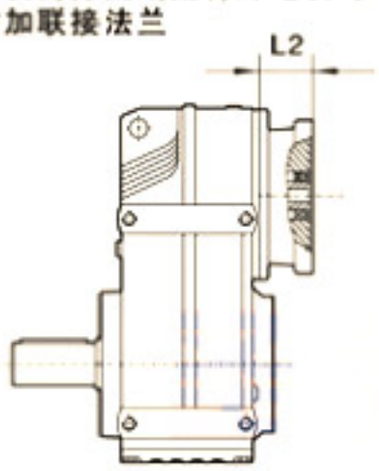




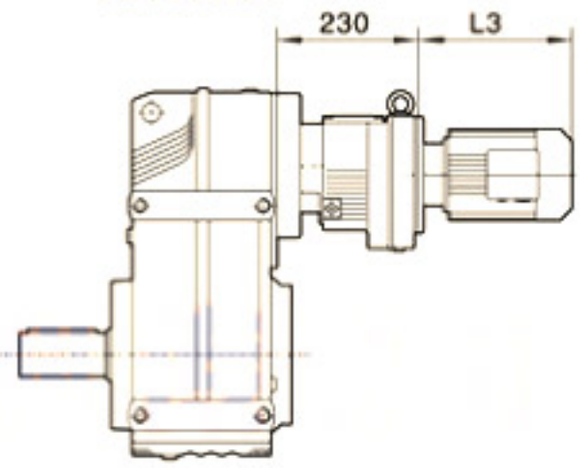
FAF107



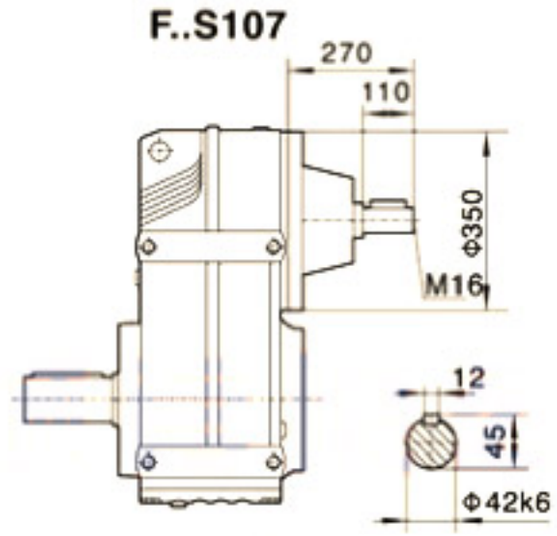
电机需方配或配特殊电机时
需加联接法兰



F..107R77



F..S107



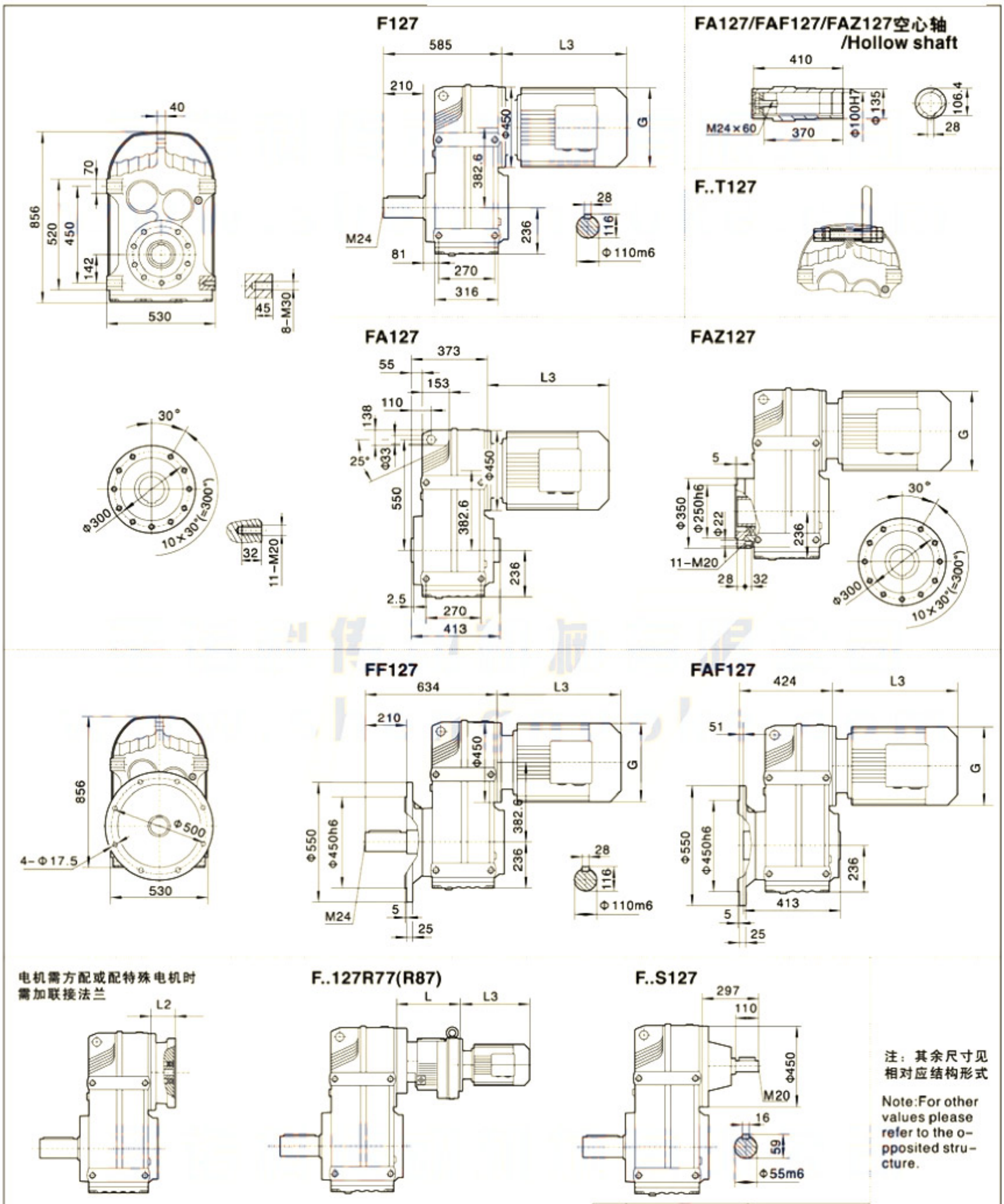
注：其余尺寸见
相对应结构形式

Note:For other values please refer to the o-pposited stru-cture.

When equipping the user's motor or the special one,the flange is required to connected.

Y2电机机座号 Motor size	100		112M	132S	132M	160M	160L	180M	180L	200	225S	225M
功率/4P Power/(kW)	2.2	3	4	5.5	7.5	11	15	18.5	22	30	37	45
L3	318		334	386	422	504	519	555	588	654	680	702
G	215		240	275	275	330	330	380	380	420	470	470
L2	101		101	101	101	126	126	126	126	132	132	132

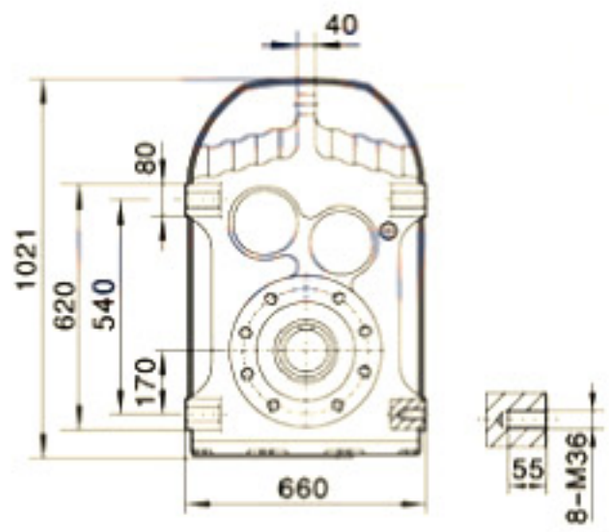
注:1.以上壳体为通用件,安装尺寸均可相互参照　2."F.."表示F、FA、FF、FAF、FAZ
Note:1.The above housings are common parts.The mounting dimensions may consult each other.　2."F.."mean F、FA、FF、FAF、FAZ



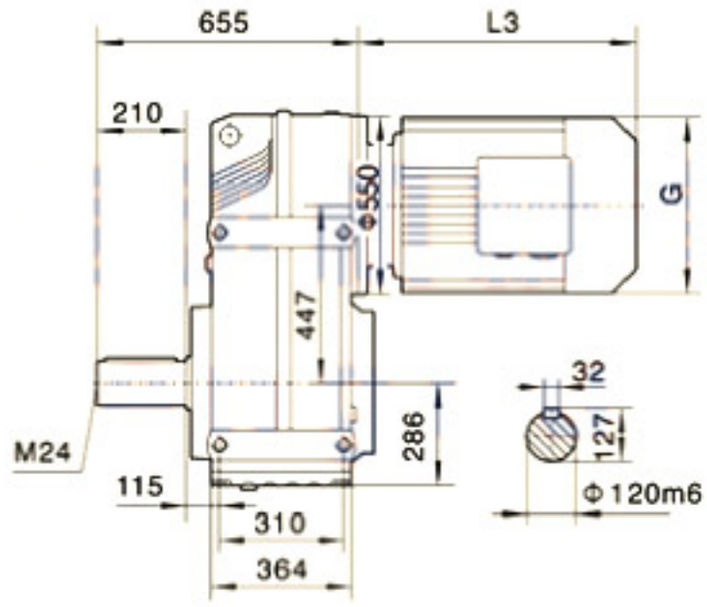
	F..127R77	F..127R87
L	230	275

Y2电机机座号 Motor size	132M	160M	160L	180M	180L	200	225S	225M	250	280S	280M
功率/4P Power/(kW)	7.5	11	15	18.5	22	30	37	45	55	75	90
L3	424	567	602	583	616	654	674	696	775	847	847
G	275	330	330	380	380	420	470	470	510	580	580
L2	132	132	132	132	132	132	143	143	174	174	174

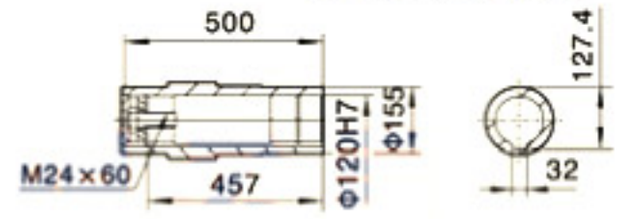
注:1.以上壳体为通用件,安装尺寸均可相互参照　2."F.."表示F、FA、FF、FAF、FAZ
Note:1.The above housings are common parts.The mounting dimensions may consult each other.　2."F.."mean F、FA、FF、FAF、FAZ



F157

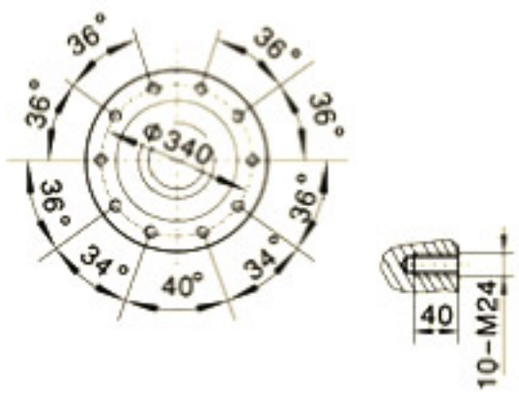


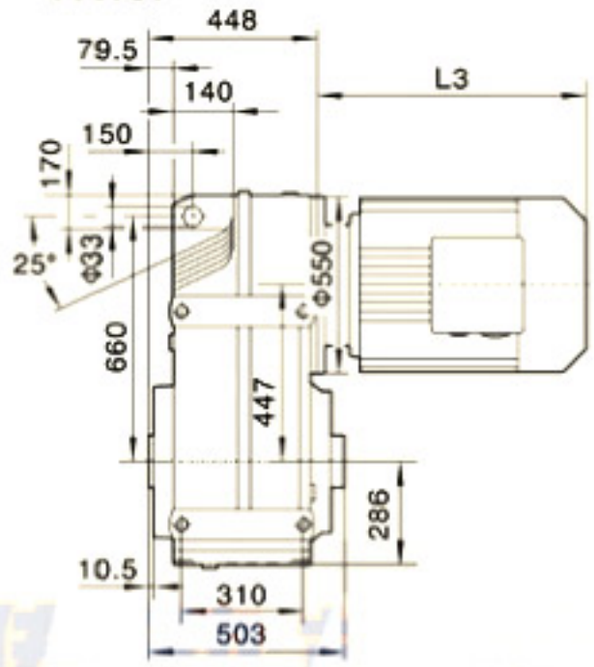
FA157/FAF157/FAZ157空心轴 /Hollow shaft



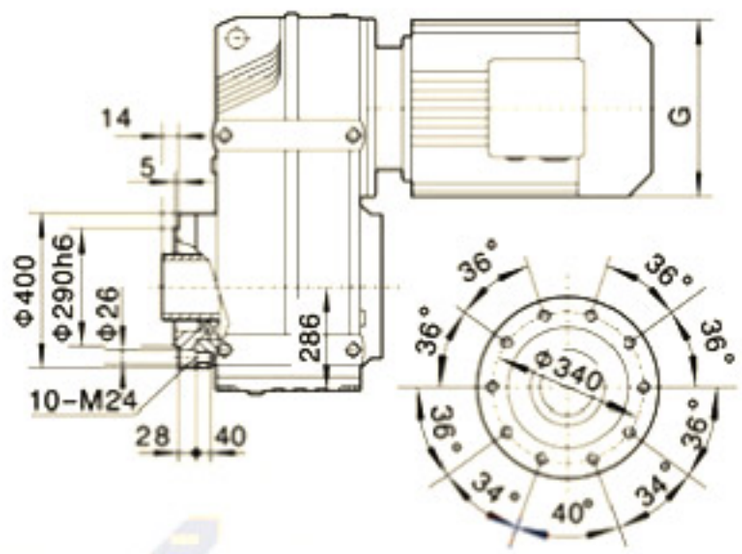
F..T157

FA157

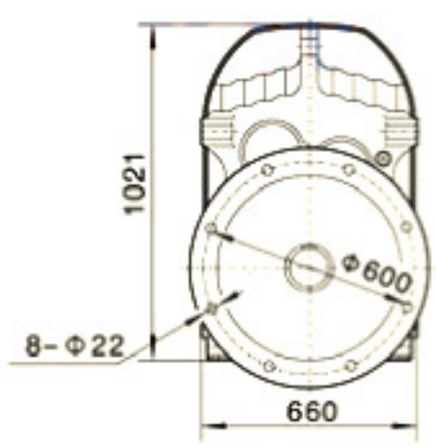


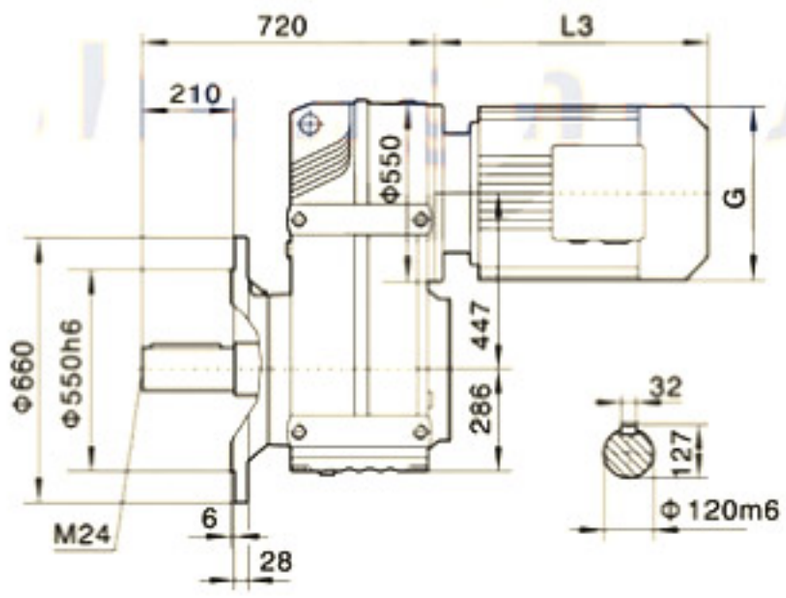


FAZ157

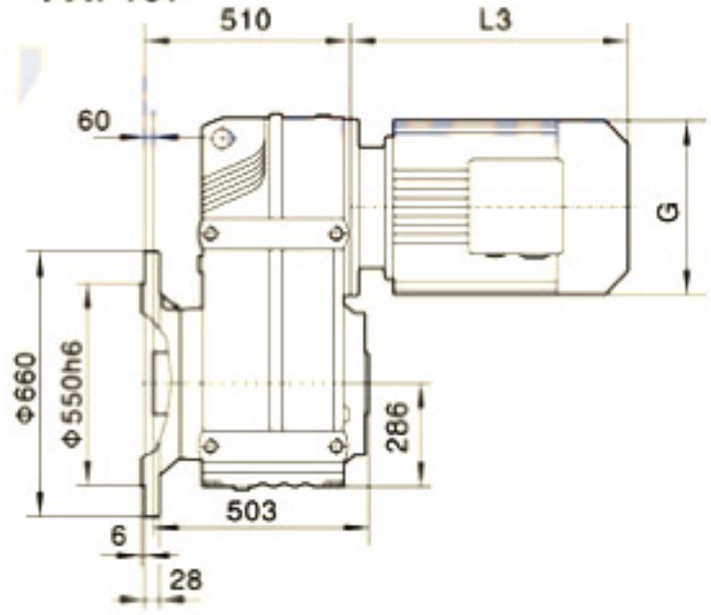


FF157

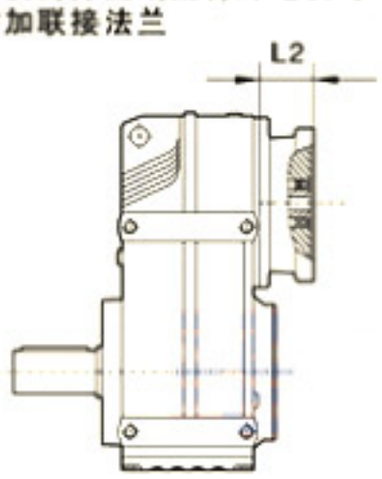




FAF157

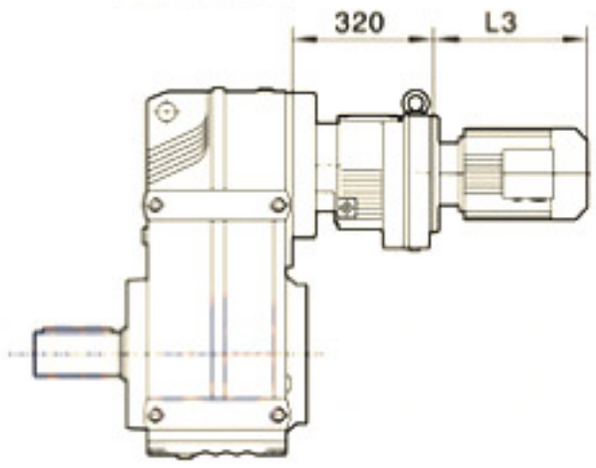


电机需方配或配特殊电机时
需加联接法兰

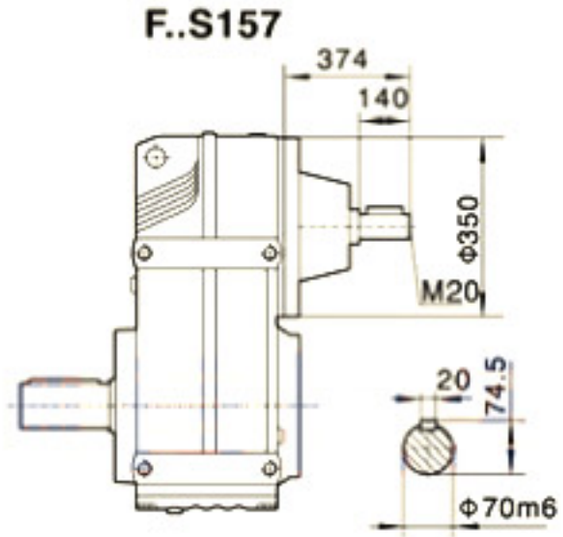


When equipping the user's motor or the special one,the flange is required to connected.

F..157R97



F..S157



注：其余尺寸见相对应结构形式

Note:For other values please refer to the opposited structure.

Y2电机机座号 Motor size	160M	160L	180M	180L	200	225S	225M	250	280S	280M	315S	315M	315L
功率/4P Power/(kW)	11	15	18.5	22	30	37	45	55	75	90	110	132	160
L3	567	602	635	666	642	669	691	770	828	879	1100	1180	1270
G	330	330	380	380	420	470	470	510	580	580	645	645	645
L2	143	143	143	143	143	143	143	143	143	143	145	145	145

注:1.以上壳体为通用件.安装尺寸均可相互参照　2."F.."表示F、FA、FF、FAF、FAZ

Note:1.The above housings are common parts.The mounting dimensions may consult each other.　2."F.."mean F、FA、FF、FAF、FAZ

安装、使用、润滑说明

一般说明

减速机的安装、操作、维护保养和修理人员均需阅读和理解本说明并遵守其中的规定。若因违反本说明的规定而造成的任何损伤和停机，本公司概不负责。

注意事项

■一定不能用高压清理设备清洁减速机。

■对减速机所进行检修、保养、维护、安装都必须在减速机不工作的情况下进行。

■在减速机上不得进行焊接工作，也不得用作焊接工作的接地点。焊接会造成精密轮齿和轴承的不可修复的损坏。

■如果在减速机的运行过程中发现了任何异常现象（例如过热或者不正常的噪声等），应该立即停机检查。

■凡是旋转的零部件必须配备合适的防护罩以防止人员的意外接触，例如联轴器，液力偶合器，齿轮，驱动皮带轮等。

■一定要遵守减速机上所附加的说明，例如铭牌、指示方向的箭头等。这些铭牌和标记上面不得有灰尘和油漆。

■在组装或者解体工作中损坏了的螺栓一定要用同等强度和类型的新螺栓更换。

■安装升降机时，台架面上的孔，在满足丝杆能方便通过的前提下，应尽可能小。

■根据减速机的操作条件，减速机的表面、润滑油和零部件可能会达到相当高的温度，小心烫伤！

■当更换润滑油的时候，要谨慎小心不要被热油烫伤。

■减速机应该放置在无振动的干燥木制基座上并遮盖好。当储存减速机和任何单独的零部件的时候一定要做好防锈措施，以免生锈，储存时不得将减速机叠放在一起。

■除订货合同中另外有所规定，否则减速机不得储存在或工作在强酸、强碱、低温、高温和重度的空气污染、潮湿，具有化学物品的场所。

■在搬运减速机时，一定要特别小心，应防止撞击轴端，因为这样将有可能造成减速机的损坏，在吊运减速机时，不得将吊环螺钉挂在轴端处的螺纹上。

■除订货合同中另外有所规定，减速机和无级变速机工作环境温度不超过40摄氏度，温升低于40摄氏度。

Installation、usage、lubrication

General

It must be read and understood by operators、maintenance and repair persons. And they must comply with all regulations in this manual. Any damages and stop of machine caused by wrong operation will be buyer's responsibility.

Notes

■ Gear units can not be cleaned by high-pressure cleaning machine.

■ Repair、 maintenance、installation must be made with gear unit powered off.

■ No welding can be made on gear units, and it cannot be a welding ground point. Welding will cause irreparability of precision gears and shafts.

■ During running, gear units must be stopped immediately for check once any problem (such as over heated and high noise) occurs.

■ Any rotating parts will be equipped with appropriate shields in order to keep it from accidental touch. Such as couplings、hydraulic couplings、gears、driving belt wheels.

■ Please note the instructions attached on gear units, such as label、arrow indicating direction. And they will be kept clean without dust and oil.

■ The bolts damaged in installation or dismantlement should be replaced with new one of the same tension and type.

■ When installing screw jacks, the screw holes in mounting plate should be as small as possible up to bolts' diameter.

■ When gear units running, its temperature may get up to a high point, please take care, there is a danger of scald.

■ When changing lubrication, please be careful not to be scalded by hot oil.

■ Gear units should be put on dry wooden non-vibration base and be covered. When storing gear units and their components, we should take rust-proof measures, and we cannot pile up gear units.

■ Unless there are special requirements in contracts, gear units cannot be stored or work in places with acid、alkali、low temperature、high temperature、heavy air pollution、damp、chemical products.

■ When removing gear units, please be careful to avoid knocking shaft end and damaging; when swinging them, bolts of swinging rings cannot put in screw holes in the shaft ends.

■ Unless there are special requirements in contracts, ambient temperature of gear units and variable speed drives is below 40℃, and temperature rise should lower 40℃.

■ 减速机应在许用转矩范围内使用，超扭矩使用应在输出轴上装安全装置，以免减速机损坏。

■ 各种减速机适用于连续运转，并允许正反两向运转。(配逆止器时除外)

■ 若出现安装方位变动，一般情况下调换油镜、油塞、通气帽即可。

■ 备件一定要从本公司购买。

■ Gear units should run under permissible torque, safety devices should be equipped to avoid damage if load is larger permissible torque.

■ Gear units can run continuously and are permitted to rotate in both directions.

■ If mounting position changes, the positions of breather screw、oil level、oil drain plug will be change with each other as usual.

■ Spare parts must be purchased from buyer's.

安装与拆卸

关于安装的综合信息：在户外安装时应该避免阳光的直射，一定要避免热力集中影响减速机的正常性能。

整机安装

1）准备刚性好的基础或牢固的台架来安装传动设备，同时也需充分考虑即使加上最大载荷也不至于改变装配好后各部件的位置。

2）底座式安装应校准中心高，联轴器联接时应校准两轴的同轴度；柔性联轴器时浮动量不超过联轴器的允许范围，刚性连接时保证各安装联接的形位公差；长轴联接还要考虑轴的足够刚度。

3）法兰式安装，凸肩（或凹肩）应配合良好，以免错位。法兰式安装并配空心轴联接时，特别应保证联接处的形位公差。

4）扭力臂安装，空心轴与工作轴应配合良好，工作轴的浮动或设备振动应小于弹性块允许的范围，力臂应固定并锁紧。

5）在减速机上安装驱动零件时（如联轴器、齿轮、链轮等），如果需要预加热，则必须保护好轴上的油封，要用防热屏减少热辐射。

6）输出轴加装联轴器、皮带轮、齿轮、链轮等时，请勿重击，应用输出轴外端螺孔，压入连接件。皮带轮、链轮、搅拌式还需考虑径向力。

Installation and dismantlement

Installing gear units should avoid direct sunshine and heat concentration to guarantee smooth running.

Installation of whole units

1) Please choose foundation with good rigidity or stable plat form to install transmission devices. In the meantime, also should take full consideration that the positions of all parts will not change even if maximum torque is loaded on units.

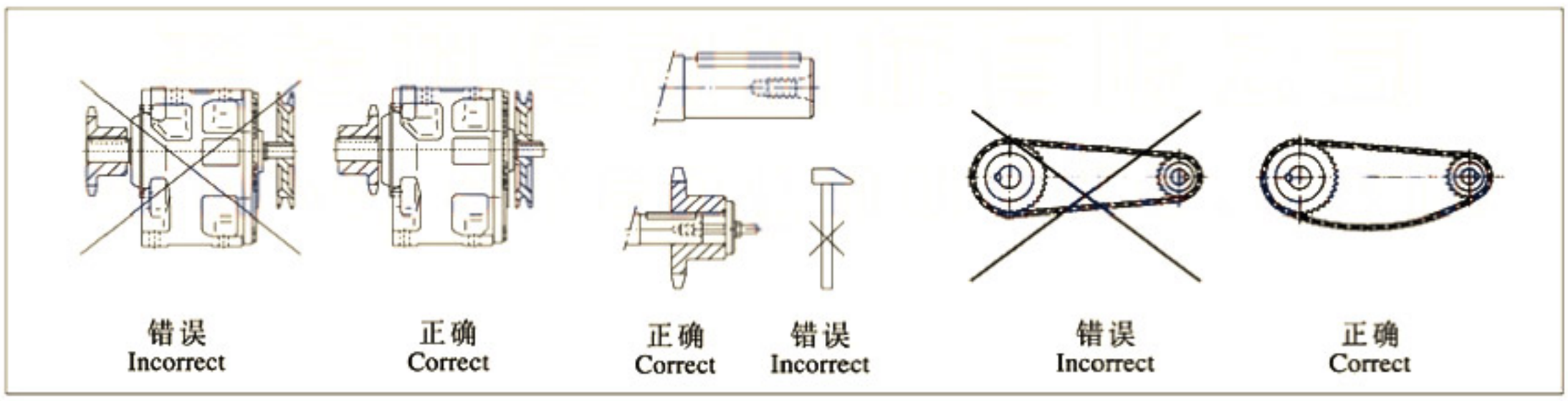
2) Choosing foot-mount, the height of centre line should be calibrated; Choosing coupling-connect, coaxiality should be calibrated; Choosing flexible coupling, run-out should keep within permissible values; Choosing rigid coupling, contour and position tolerance should be guaranteed; Choosing long coupling, rigidity of shaft should be enough.

3) Flange-mount, protruding or concave steps should inosculate with housings; using hollow shaft, contour and position tolerance at connection parts should be guaranteed.

4) Torque-arm-mount, hollow shafts should be fit with working shafts; run-out of working shafts and vibration of units should be within range of vibration values, torque arm should be fixed and locked.

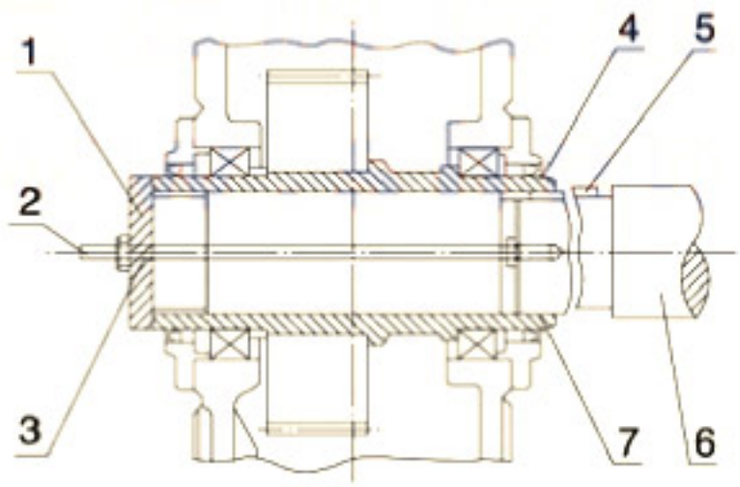
5) Mounting driving parts such as couplings、gears、gear chains, if pre-heat is necessary, seal should be protected by using heat-proof shelter to diminish heat radiation.

6) Installing couplings、belt wheels、gears、chain gears on output shafts, please use screw hole in shaft end to press them in the correct position (see following pictures). And radial force should be considered in case of Belt wheel、chain gears and agitation mode.



7）空心轴与实心轴连接时，应清理干净并涂防锈油(空心轴一定要精密对中)。除了在图中所示的螺母和螺杆以外，还可以使用其它类型的装置例(如液压提升装置)。

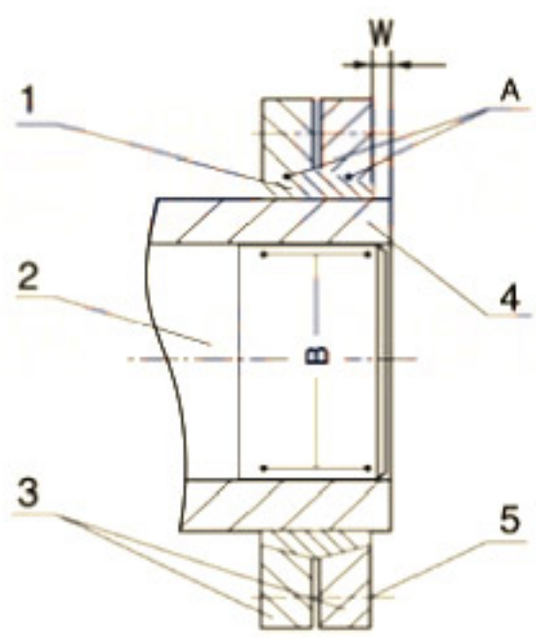
7) When connecting hollow shaft and solid shaft, please clean the surface and put anti-corrosive oil on it. When connecting, besides nuts and threads illustrated in the drawing below, other installing tools such as oil hydraulic devices can be used.



1 端板 Pressure plate
2 螺母 Nut
3 螺杆 Thread
4 空心轴 Hollow shaft
5 平键 Key
6 机器轴 Shaft
7 螺母 Nut

8）当空心轴配置收缩盘时，为了安全起见在收缩盘上应加防护罩；空心轴的孔和工作轴在收缩盘的区域里面一定不能有润滑脂。在安装机器的轴之前不要拧紧紧固螺栓。

8) When hollow shaft equipped with shrink disk, protect shield should be installed on shrink disk for safety. Connecting area (equipped shrink disk) of hollow shaft and solid shaft must not be put lubrication cream. Before installing solid shaft, not tighten binding bolts.



1 内 环 Inner ring
2 机器轴 Solid shaft
3 外环 Outer ring
4 空心轴 Hollow shaft
5 紧固螺栓 Binding bolt
A 有润滑脂的部位 Lubrication area
B 绝对不能有润滑脂的部位 Non lubrication area
W 安装高度 Installation height

9）安装螺栓一般情况下采用8.8级，如果有高温或者振动冲击等情况，请在螺纹连接处作好防松措施。各个紧固螺栓的拧紧扭矩见下表：

9) Generally fixing bolts adopt GBT8.8. In case of high temperature and vibration, please take anti-loose measures. The tightening torques of binding bolts as follows

螺栓大小（mm） Diameter of bolt	预紧力矩（N·m） Pre-binding-torque	螺栓大小（mm） Length of bolt	预紧力矩（N·m） Pre-binding torque
M6	15	M30	2000
M8	36	M36	3560
M10	72	M42	5720
M12	123	M48	8640
M16	295	M56	13850
M20	580	M64	14300
M24	1000	M72	20800

拆卸

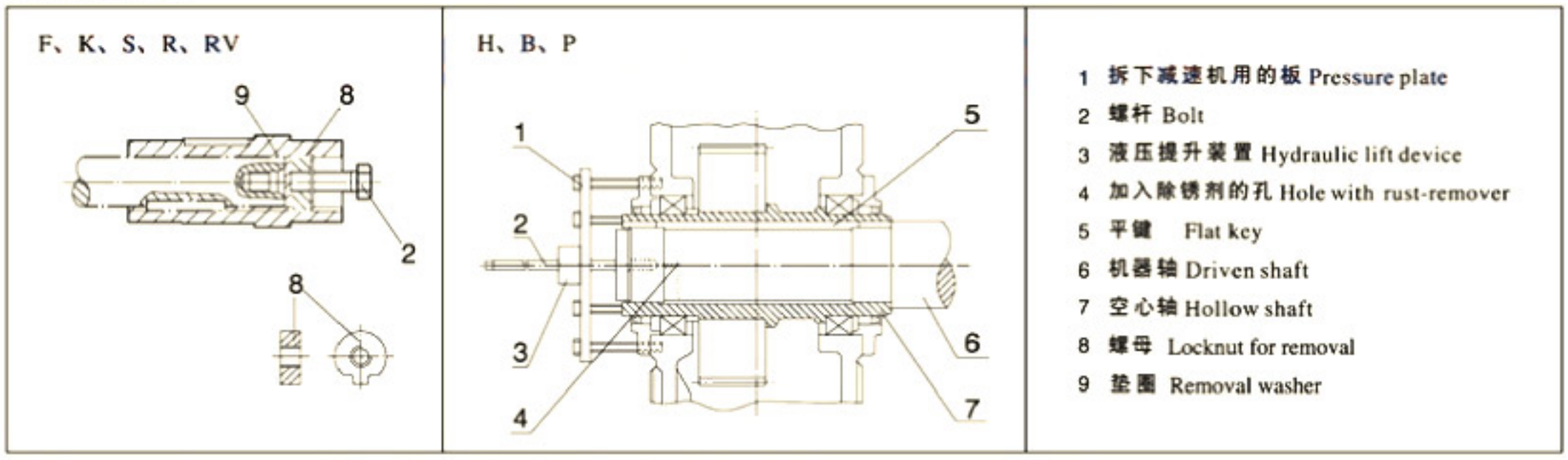
1）空心轴的拆卸

根据现场实际可使用的设备，可以用端板上的螺杆（参见下图）、中心螺杆或者液压提升装置将减速机从机器轴上脱下来。空心轴的每个端面都配备了 2 个螺丝孔可以拧入固定端板的螺栓。

Dismantlement

1)Dismantle hollow shaft

According to tools available on the spot, Bolts on pressure plate、center bolt、oil hydraulic device are available to dismantle gear units from driven solid shaft. There are two screw holes in the end surface of hollow shaft for tightening bolts fixing pressure plate.



注：端板和辅助板不在供货范围内。（空心轴端螺纹孔的分布和大小请参照本公司技术图纸）。

Note: Pressure plate and attached plate are not included in shipment. (Serew holes on hollow shaft end refer to drawings)

2）当空心轴配置收缩盘时，在首次受力之前一定不能拆下来。拆卸时严禁按照相邻的顺序松开螺栓。

2) When hollow shaft equipped with shrink disk, it is prohibited to loosen bolts one by one in a round way.

润滑与冷却

润滑

1）润滑油的选择：

1) Choosing lubrication oil, as following table:

系列 Series of ruducer	环境温度 Ambient temperature -50 0℃ +50 +100	ISO粘度与NLGI相应 Adhesiveness of ISO and NLGI unitive	Esso	Mobil	Shell	GB牌号 L-CK
R. F. K.	-25 +80	VG220		Mobil Glygoyle 30	Shell Tivela OIWB	N220
	0 +40	VG220	SPARTAN EP 220	Mobilgear 630	Shell Omala OI220	N220
	-15 +25	VG150 VG100	SPARTAN EP 150	Mobilgear 629	Shell Omala OI 100	N150
	-30 +10	VG68-46 VG32	ESSOATF D-21611	Mobil D.T.E. 15M	Shell Tellus OI T 32	N68
	-20	VG22 VG15	UNIVIS J 13	Mobil D.T.E. 11M	Shell Tellus OI T 15	N22
	-45 0 +60	VG680		Mobil Glygoyle HE 680		N680
S	0 +40	VG680	SPARTAN EP 680	Mobilgear 636	Shell Omala OI 680	N680
	-15 +25	VG220	SPARTAN EP 220	Mobilgear 630	Shell Omala OI 220	N220
	-20 +10	VG150 VG100	SPARTAN EP 150	Mobil D.T.E. 18M	Shell Omala OI 100	N150
	-25 +10	VG220		Mobil Glygoyle 30		N220
	-45-20	VG22 VG15	UNIVIS J 13	Mobil D.T.E. 11M	Shell Tellus OI T 15	N22、N15

2）润滑油的更换

要用和原来的润滑油同一牌号、同一厂家的润滑油。更换润滑油品种时，要用润滑油将减速机箱体里面的沉积物、金属颗粒和残留的润滑油都冲洗干净。

对于升降机在其正常工作前，都必须对丝杆表面涂抹润滑油脂，将丝杆升到最大行程，然后在丝杆表面涂抹润滑油脂。

3）润滑方式：

A. 油池润滑：一般情况下减速机都采用油池飞溅润滑；

B. 浸油润滑：所有的齿轮和轴承都浸没在润滑油里面；

C. 强制润滑：是靠辅助设备将润滑油强制压入齿轮箱内对轴承和齿轮进行润滑的。

D. 稀油站集中润滑：客户可以根据实际情况自配润滑系统。

Lubrication and cooling

Lubrication

2) Change of lubrication oil

Changing lubrication oil, it must be the same type and produced by the same factory. If type is different, must completely remove deposits、metal grains、residues of the old oil in housing with new lubrication oil.

Before screw jacks running, must lubricate screw threads with lubrication cream. Let threads get up to highest point and lubricate threads.

3) Lubrication methods

A. Splash lubrication: generally gear units adopt or splash lubrication.

B. Oil-bath lubrication: all gears and bearings must immerse in oil.

C. Forced lubrication: attached devices press oil into housing to lubricate gears and bearings.

D. Oil tank lubrication: Customers can equip lubrication system accordingly.

冷却

根据要求，有些减速机可配备风扇、冷却螺旋管、水冷或者空冷的润滑油冷却系统或者单独的供油系统。在单独的供油系统的情况下，一定要遵守有关这些装置的规定。

1）风扇：

带有风扇的减速机，在安装联轴器或其它零部件的安全防护罩的时一定要留出足够的空间让空气进入。所留出空间的正确尺寸请参照我公司技术图纸。一定要将风扇罩固定好并防止外界的损坏而且不能和风扇叶接触。

2）冷却螺旋管：

冷却水要由用户自行提供。自来水、海水还是半咸水都可以进行冷却，在连接冷却水的螺旋管之前要先将堵头从冷却水盘管的连接衬套上取下来并彻底冲洗螺旋管将赃物清理干净。（冷却水的流量请参照我公司技术图纸。）

注：冷却水可以任意方向流过减速机。冷却水的压力不得超过8巴。为了避免过高的压力，冷却水的入口必须要配备一个流量控制装置，例如减压阀或者截止阀。

Cooling

For different requirements, gear units can be equipped with cooling fans、cooling coils、water or air cooling systems、separate oil supply systems. Under condition of separate oil supply system, please comply with its operation regulations.

1)Cooling fan:

When gear units with cooling fans are installed safety shield of couplings or other spare parts, enough space should be left to let air get into. The dimension of the space refers to our technical drawings. The fan shield should be fastened and protected against damage, and cannot touch the leaves of fan.

2)Cooling coil:

Cooling water is supplied by customers. Tap water、seawater、half salt water can applied to cooling. Before installing cooling coils, please get the plug off the coil clean it. (water flux refer to our technical drawings)

Note: Cooling water can flow through gear units in all directions. The pressure of cooling water cannot exceed 8 bar. To avoid higher pressure, a flux controller should be installed at the entrance of cooling coil such as decompression valve or cut-off.

起动

要遵守“安全说明”中的规定。

添加润滑油：

本公司产品一般都未带润滑油出厂，在设备运行前请先加入润滑油。

核查设备：

1）检查油面高度，润滑油冷却或者供油系统管路的密封性。
2）检查冷却装置，截止阀的开启状态
3）配备了止回装置的减速机，检查电机接线是否正确。
4）检查轴封是否有效。
5）检查旋转的零部件是否与其它零件接触。

配置了电动油泵的减速机应当保证在启动设备前首先开启油泵电机。

Start up

Please comply with the regulations in safety instructions

Add lubrication oil:

Generally there is no lubrication oil in our products. Please add oil before machines begin running.

Verify machines:

1)Check oil level、air-proof of cooling system or oil supply system.
2)Check the open-and-close state of cooling devices and cut-off.
3)Check the position of input wires when gear units are equipped with anti-counter-rotation devices.
4)Check validity of seals.
5)Check ifthe rotating components touch other ones.

Make sure that electric oil pump should stat up before the start-up of gear units.

故障、原因和措施

维修工作一定要由经过培训的素质合格的人员谨慎地进行。

Malfunction、cause and measure

Maintenance should be made by qualified workers .

故障 Malfunction	原因 Causes	措施 Measures
在减速机的紧固件处有大的噪声 High noise at tightening parts	紧固件松动了 Loose of tightening parts	将螺栓/螺母拧紧到规定的扭矩。 更换损坏了的螺栓/螺母。 Tighten nut bolt to correct state Replace damaged nut/bolt
减速机的噪声变化 Changing noise	齿轮的轮齿发生了损坏 Teeth of gears get damaged	和客户服务部联系。 检查所有零件上的齿，更换损坏了的零件。 Consult after-sales department Check teeth of gears and replace damaged one.
	轴承间隙过大 Clearance of bearings too big	和售后服务部联系。 调整轴承的间隙。 Consult after-sales department Adjust the clearance of bearings
	轴承损坏 Bearings get damaged	和客户服务部联系。 更换损坏的轴承。 Consult after-sales department Replace damaged bearings

故障 Malfunction	原因 Causes	措施 Measures
轴承温度升高 Bearing temperature rise	箱体里面的油面过高或过低 Oil level is too high or low	在室温下检查油面的高度并按需加油。 Check oil level at room temperature and add on reduce oil
	油过于陈旧 Oil is used too long	和售后服务部联系。 —检查上次换油的时间。 Consult after-sales department. Check the date that oil be replaced last time.
	油泵的机械故障 Malfunction of oil pump	和售后服务部联系。 检查油泵的工作是否正常，修理或换新的油泵。 Consult after-sales department. Check if pump works normally, repair or replace it.
	轴承损坏 Bearing damage	和售后服务部联系。 —查阅操作人员在振动测量中所获得的数据。 —检查并按需更换轴承。 Consult after-sales department. —Look up the date about vibration. —Check and replace it on request.
工作温度过高 working temperature too high	箱体里面的油面过高 Oil level is too high	检查油面的高度，如果有必要的话，调整。 Check oil level, and adjust if necessary.
	油过于陈旧 Oil is used too long	和售后服务部联系。 检查上一次换油的时间，如果有必要的话就更换。 Consult after-sales department. Check the date that oil was replaced last time, replace it if necessary.
	油受到严重污染 Oil is polluted seriously	和售后服务部联系。 —换油。 Consult after-sales department. —Replace oil.
	在配备了润滑油冷却系统的减速机上：冷却剂的流量过低或者过高 Flux of cooling material is too high or low	全面调节进口和出口管道的阀门。 检查水冷装置的自由流量。 Adjust entrance and exit valves. Check the flux of water cooling devices.
	通过水冷装置的油流过低，其原因是：滤油器严重堵塞 Oil flux through water cooling devices is too low	清理滤油器。 Clean oil filter.
	油泵的机械故障 油泵损坏 Malfunction of oil pump oil pump damage	和售后服务部联系。 —检查油泵的功能是否正常。 —修理或者换新。 Consult after-sales department. —Check of oil pump works normally. —Repair or replace it.
	在配备了风扇的减速机上：风扇罩的空气入口和/或箱体严重污染 Entrance of fan shield and housing polluted seriously	清理风扇罩和箱体。 Cleanse fan shield and housing.
	配备了冷却螺旋管的减速机：冷却螺旋管里面结垢 Residues in cooling coil	和售后服务部联系。 —清理或者更换螺旋管。 Consult after-sales department. —Clean or replace cooling coil.

故障 Malfunction	原因 Causes	措施 Measures
轴承处的振幅升高 Swing at bearing higher	轴承损坏 Bearing is damaged	和售后服务部联系。 —检查并按需更换轴承。 Consult after-sales department. —Check and replace bearing.
	齿轮损坏 Gear is damaged	和售后服务部联系。 —检查并按需更换齿轮。 Consult after-sales department. —Check and replaces gears.
止回装置的温度过高止回功能的失效 Temperature of anti-backstop too high and it becomes malfunction	止回装置损坏 Anti-backstop becomes malfunction	和售后服务部联系。 —检查并按需更换止回装置。 Consult after-sales department. —Replace anti-backstop
减速机漏油 Oil-leak of gear unit	箱体盖或者联接处的密封不良 Sealing at cover and connection notin good state	检查密封和连接处，如果必要的话，更换新的。将连接处密封好。 Check air-proof and connection part, replace them if necessary, and seal up connection part.
	径向轴封环失效 Shaft seal is malfunction	和售后服务部联系。 —换新的径向密封环。 Consult after-sales department. —Replace it.
油中有水 Water in oil	油中有杂物 Mixer in oil	用试管检查油的状态是否有水分存在。 实验室分析油。 Classify if there is water in oil by using tube. Analyse oil in laboratory.
	润滑油冷却器或者冷却螺旋管失效 Cooling coil is of mal-fanction	和售后服务部联系。 —找出并修理泄漏之处。 —更换冷却器或者螺旋管。 Consult after-sales department. —Find out and repair leakage place. —replace cooling coil
	减速机受到机器间通风过来的凉空气而产生凝露 Cool air will cause water drop in gear unit.	用合适的保温材料将减速机保护起来。 关闭空气的出口或者在结构上改变其方向。 Shelter gear units with proper

注：对于客户自己无法排除的故障请和我公司售后服务部联系。

Note: Please consult after-sales department, if malfunction can not be removed by consumer s tehmselves.