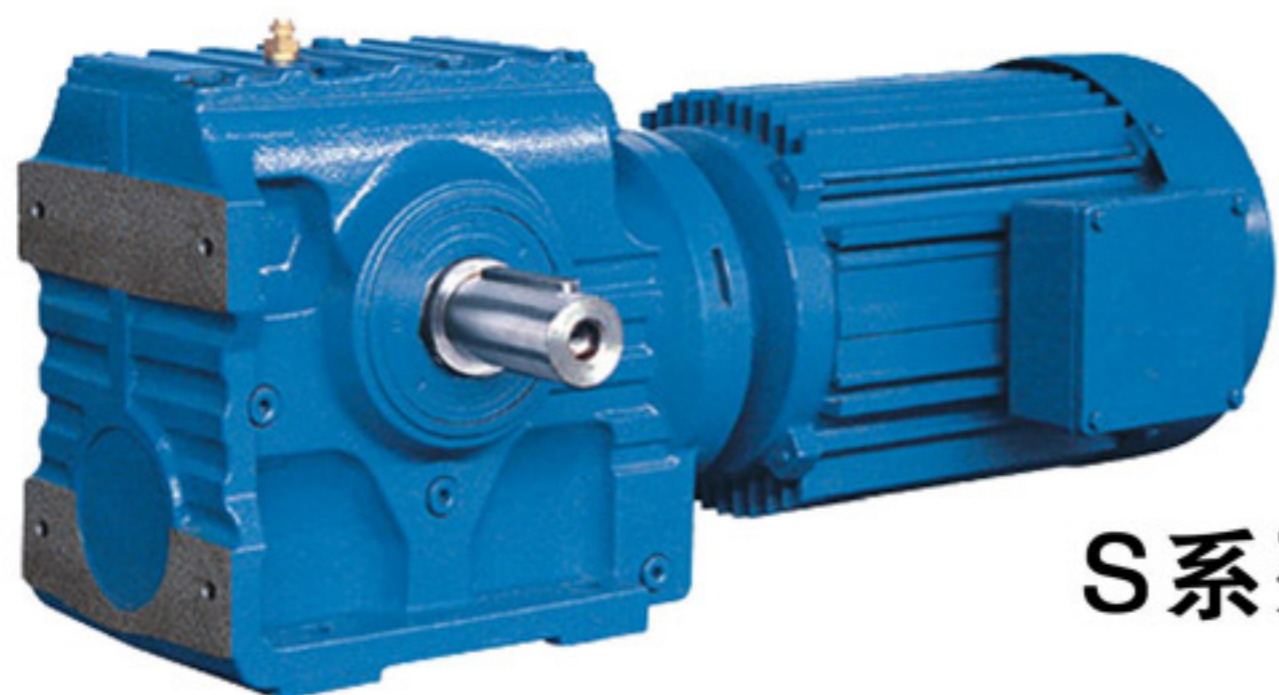


CHUELY 丘里



产品选型手册

S系列斜齿轮蜗轮蜗杆减速机

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。

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 $f_1 \times f_2 \times f_3 \leq f_B$ 。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。

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 grinding, stable drive, low noise, big capacity of load, long using life.

Instructions for Selection:

- ☆ Gear units are designed under the circumstance of steady load, stated operating time per day and a few starting 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 equal to the service factor f_B of selection table, viz $f_1 \times f_2 \times f_3 \leq f_B$. the needed torque of service machine multiply the service factor ($f_1 \times f_2 \times f_3$) should less than or equal 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

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		
挤压机	-	-	1.6	提升机构		2.5	2.5	3.0		
化 学 工 业	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	
	金 属 加 工 设 备	离心机	1.0	1.2	1.3	造 纸 机 械	各种类型**	-	1.8	2.0
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	混凝土搅拌机	-	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.

原 动 机	f_2
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

f_3	$f_1 \times f_2$	f_3			
		1	1.25-1.75	2-2.75	>3
每小时启动次数					
<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		
Bucket conveyors	-	1.6	1.6	Apron conveyors		-	1.2	1.5		
Dumping devices	-	1.3	1.5	Escalators		-	1.2	1.4		
Caterpillar travelling gears	1.2	1.6	1.8	Rail travelling gears		-	1.5	-		
Dredgers	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		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	Cement industry	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 P₂ *)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 x f ₂	1	1.25 -1.75	2- 2.75	>3	
Starts per hour						
≤ 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、电机座和伺服电机连接法兰及逆止器，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:

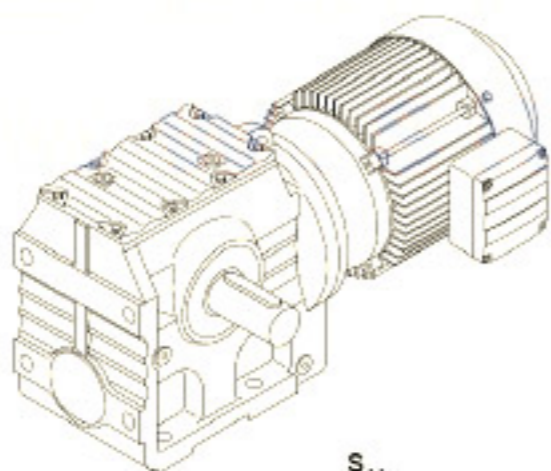
- ☆ Structure drawings and outline pictures attached in this catalog are regarded as examples with no strict accordance with products. The exact CAD drawing and dimension of certain types can be offered.
- ☆ The unit of dimension is millimeter (mm).
- ☆ Labeled weight and oil capacity are not exact but 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

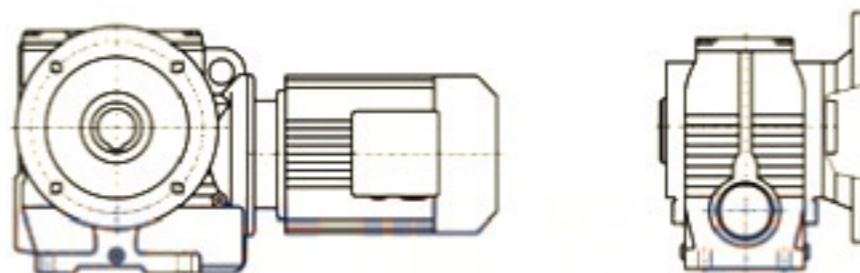
Symbol specification

代号 Symbol	说 明	Specification	单 位 Unit	
i	实际减速比	Actual ratio	/	
i _N	公称减速比	Nominal ratio		
i _{ex}	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 power		
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 frequency	Hz	
V _{mot}	电机电压	Motor voltage	V	
V _{brake}	制动器电压	Braker voltage		

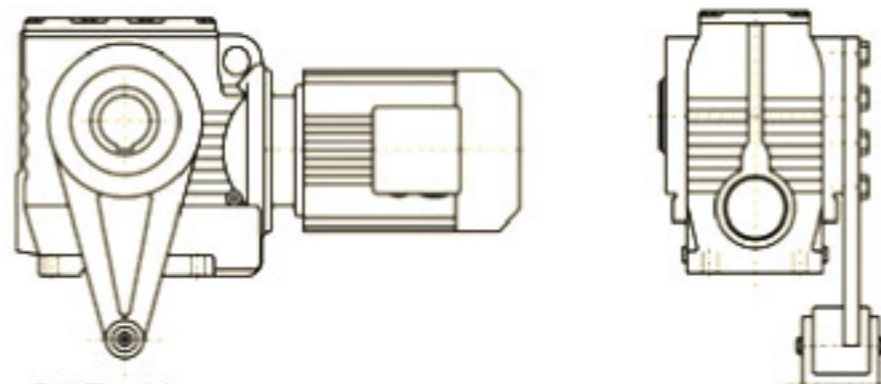
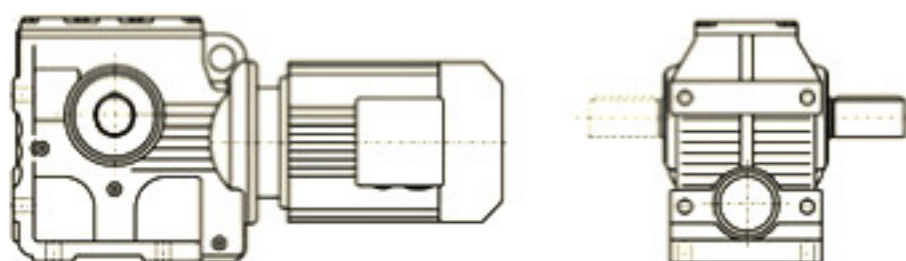
S系列减速机有以下设计方案：
S series gear units are available in the following designs:



S..

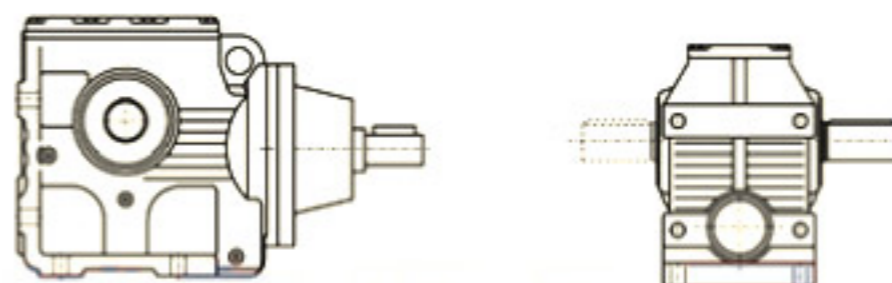
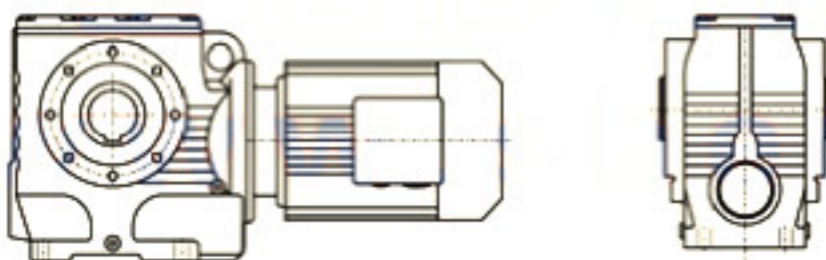


SAF...Y..
法兰空心轴安装斜齿-蜗轮蜗杆减速机
Flange-mounted helical-worm gear units with hollow shaft



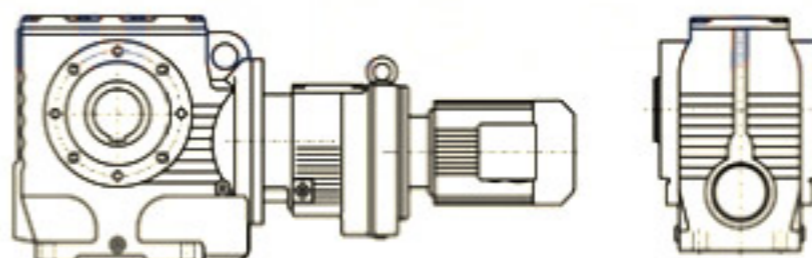
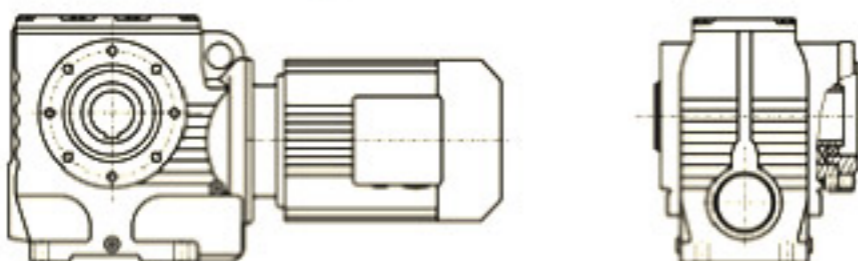
SAT...Y..
带防转臂空心轴安装斜齿-蜗轮蜗杆减速机
Torque-arm-mounted helical-worm gear units with hollow shaft

S..Y..
底脚轴伸式安装斜齿-蜗轮蜗杆减速机
Foot-mounted helical-worm gear units with solid shaft



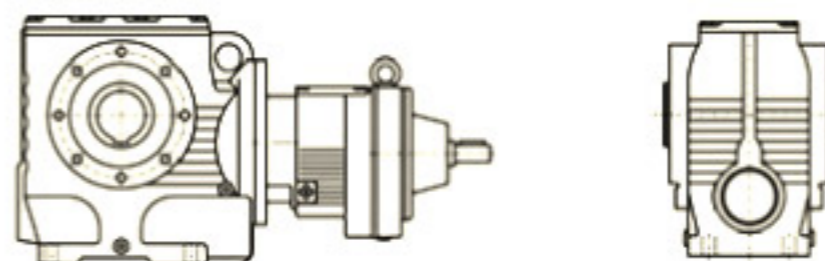
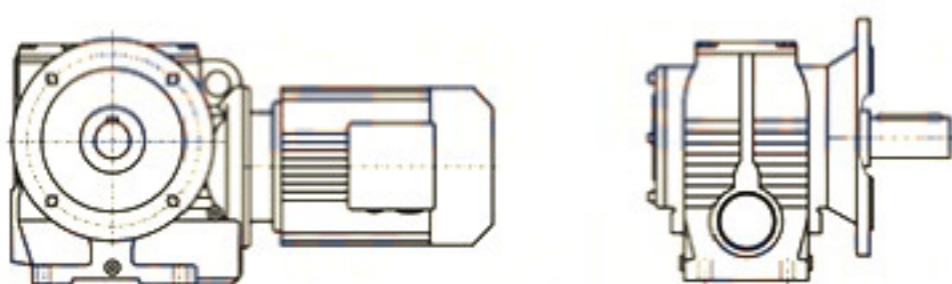
S(SF, SA, SAF, SAZ) S...
轴输入的斜齿-蜗轮蜗杆减速机
Shaft input helical-worm gear units

SA...Y...
空心轴安装斜齿-蜗轮蜗杆减速机
Helical-worm gear units with hollow shaft



SA(S, SF, SAF, SAZ) ...R...Y...
组合式斜齿-蜗轮蜗杆减速机
Combinatorial helical-worm gear units

SAZ...Y...
小法兰空心轴安装斜齿-蜗轮蜗杆减速机
Short-flange mounted helical-worm gear units with hollow shaft



SA(S, SF, SAF, SAZ) S...R...
轴输入的组合式斜齿-蜗轮蜗杆减速机
Shaft input combinatorial helical-worm gear units

SF...Y..
法兰轴伸式安装斜齿-蜗轮蜗杆减速机
Flange-mounted helical-worm gear units with solid shaft



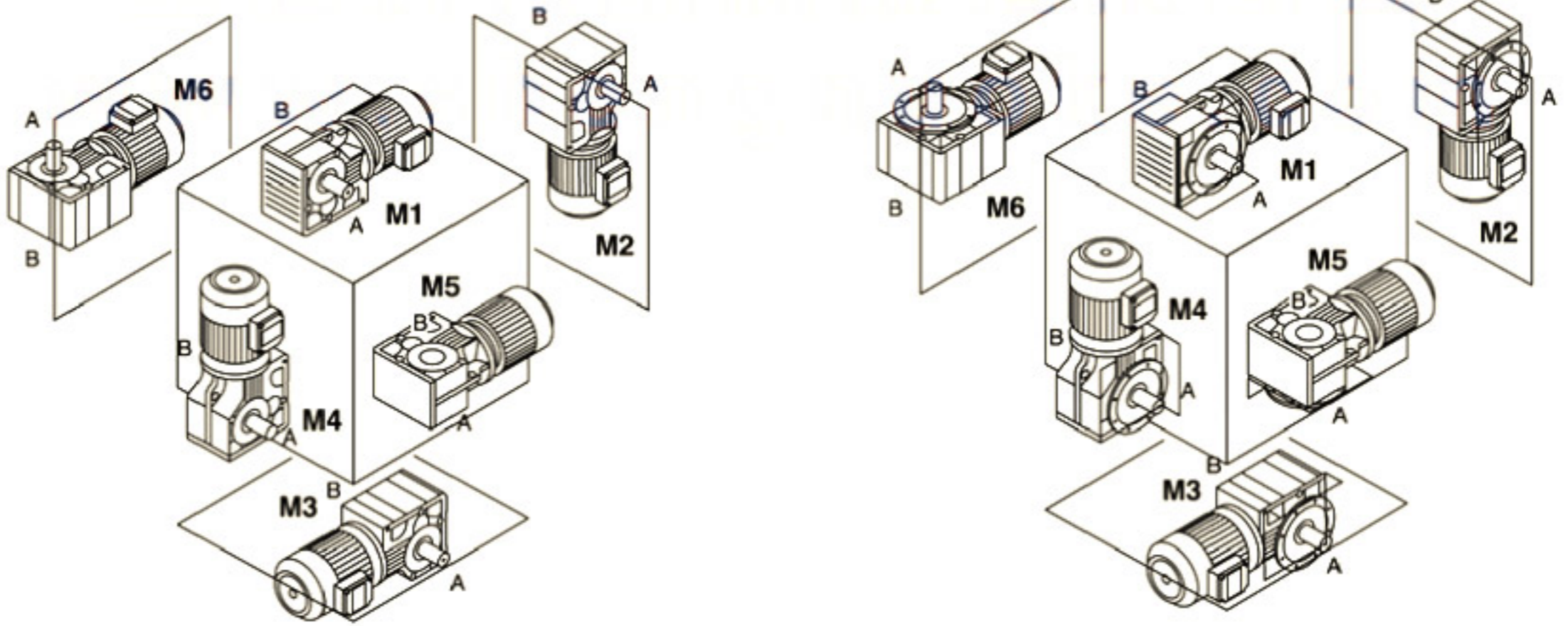
SA(S, SF, SAF, SAZ) ...Y...
电机用户自配或配特殊电机时需加联接法兰
When equipping the user's motor or the special one, the flange is required to be connected

型号与标记:

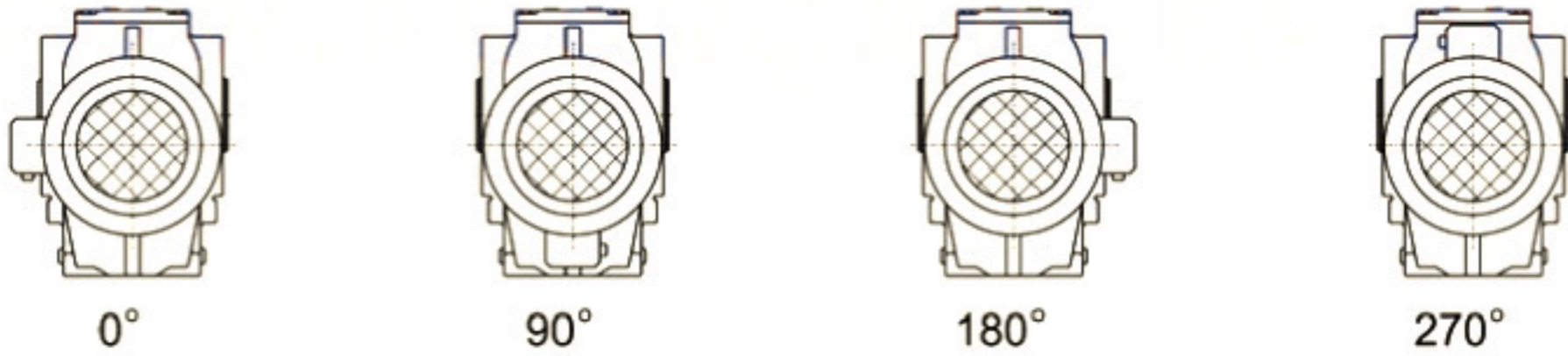
Type Designations:

<p style="text-align: center;">SAF37-Y 0.55-4P-12.08-M1-270°-A-Φ25</p> <p>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 输出轴或法兰方向 输出轴孔径</p>	<p style="text-align: center;">SAF37-Y 0.55-4P-12.08-M1-270°-A-Φ25</p> <p>Gear units type Structure Size Motor code Motor power, pole Ratio Mounting position Position of the motor thermal box Position of output shaft or flange Output shaft aperture</p>																																								
<p>减速机类型: 斜齿-蜗轮蜗杆减速机</p>	<p>Gear units type: Helical-worm gear units</p>																																								
<p>结构形式:</p> <table border="0"> <tr><td>普通轴伸式 (省略)</td><td></td></tr> <tr><td>轴装式</td><td>A</td></tr> <tr><td>轴伸法兰式</td><td>F</td></tr> <tr><td>轴装法兰式</td><td>AF</td></tr> <tr><td>轴装小法兰式</td><td>AZ</td></tr> <tr><td>轴装带防转臂</td><td>AT</td></tr> <tr><td>普通轴伸式, 轴输入</td><td>S</td></tr> <tr><td>普通轴装式, 轴输入</td><td>AS</td></tr> <tr><td>轴伸法兰式, 轴输入</td><td>FS</td></tr> <tr><td>轴装法兰式, 轴输入</td><td>AFS</td></tr> </table>	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	轴装带防转臂	AT	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	<p>Structure:</p> <table border="0"> <tr><td>Foot-mounted solid shaft output</td><td>(-)</td></tr> <tr><td>Hollow shaft output</td><td>A</td></tr> <tr><td>Flange-mounted solid shaft output</td><td>F</td></tr> <tr><td>Flange-mounted hollow shaft output</td><td>AF</td></tr> <tr><td>Short-flange-mounted hollow shaft output</td><td>AZ</td></tr> <tr><td>Torque-arm-mounted hollow shaft output</td><td>AT</td></tr> <tr><td>Foot-mounted solid shaft output, shaft input</td><td>S</td></tr> <tr><td>Hollow shaft output, shaft input</td><td>AS</td></tr> <tr><td>Flange-mounted solid shaft output, shaft input</td><td>FS</td></tr> <tr><td>Flange-mounted hollow shaft output, shaft input</td><td>AFS</td></tr> </table>	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	Torque-arm-mounted hollow shaft output	AT	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
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<p>电机接线盒位置: 0°、90°、180°、270°</p>	<p>Position of the motor thermal box: 0°、90°、180°、270°</p>																																								
<p>输出轴或法兰方向:</p> <p>从电机尾部看左边为 A 从电机尾部看右边为 B (见安装形式) 从电机尾部看左右边为 A+B</p>	<p>Position of output shaft or flange: viewing on motor end:left side -A, right side-B,both sides-A+B(see mounting position)</p>																																								
<p>输出轴孔径: (见安装尺寸图)带实心轴输出时省略</p>	<p>Output shaft aperture: (see the chart of mouting dimension) It will be omitted when solid output shaft</p>																																								

安装形式
Mounting position



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



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
结构形式 Structure	S SA SF SAF SAT SAZ						
输入功率(kW) Input power rating	0.18~0.75	0.18~1.5	0.18~3	0.25~5.5	0.55~7.5	0.75~15	1.5~22
传动比 Ratio	10.27~165.71	11.46~244.74	10.78~196.21	11.55~227.20	9.96~241.09	11.83~223.26	12.75~230.48
许用转矩(N.m) Permissible torque	90	170	300	520	1270	2280	4000

减速机重量

Gear unit weight

规格 Size	37	47	57	67	77	87	97
重量(kg) Weight	7	10	14	26	50	100	170

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

S...:

规格 Size	润滑油量 (升)			Fill quantity in liters		
	M1	M2	M3 ¹⁾	M4	M5	M6
S37	0.25	0.4	0.5	0.6	0.4	0.4
S47	0.35	0.8	0.7	1.1	0.8	0.8
S57	0.5	1.2	1	1.5	1.3	1.3
S67	1	2.0	2.2/3.1	3.2	2.6	2.6
S77	1.9	4.2	3.7/5.4	6	4.4	4.4
S87	3.3	8.1	6.9/10.4	12	8.4	8.4
S97	6.8	15	13.4/18	22.5	17	17

SF...:

规格 Size	润滑油量 (升)			Fill quantity in liters		
	M1	M2	M3 ¹⁾	M4	M5	M6
SF37	0.25	0.4	0.5	0.6	0.4	0.4
SF47	0.4	0.9	0.9	1.2	1.0	1.0
SF57	0.5	1.2	1	1.6	1.4	1.4
SF67	1	2.2	2.3/3	3.2	2.7	2.7
SF77	1.9	4.1	3.9/5.8	6.5	4.9	4.9
SF87	3.8	8	7.1/10.1	12	9.1	9.1
SF97	7.4	15	13.8/18.8	23.6	18	18

SA..., SAF..., SAZ...:

规格 Size	润滑油量 (升)			Fill quantity in liters		
	M1	M2	M3 ¹⁾	M4	M5	M6
S..37	0.25	0.4	0.5	0.6	0.4	0.4
S..47	0.4	0.8	0.7	1.1	0.8	0.8
S..57	0.5	1.1	1	1.6	1.2	1.2
S..67	1	2.0	1.8/2.6	2.9	2.5	2.5
S..77	1.8	3.9	3.6/5	5.9	4.5	4.5
S..87	3.8	7.4	6/8.7	11.2	8	8
S..97	7	14	11.4/16	21	15.7	15.7

注: 1) 表示减速机为组合型时低速级所加油量为大值。

Notes: 1) The large gear unit of multi-stage gear units must be filled with the larger oil volume.

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 _s	机型号 Type Type	极数 Pole p	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 _s	机型号 Type Type	极数 Pole p
0.18kW						0.18kW					
0.30	2579	4606	0.83			9.5	109	146.84	1.47		
0.36	2563	3872	0.84			10	102	137.25	1.57		
0.40	2515	3475	0.85	S 87R57	4	12	88	118.64	1.82	S 47	4
0.48	2394	2905	0.90	SF 87R57	4	14	75	100.80	2.14	SF 47	4
0.54	2239	2586	0.96	SA 87R57	4	15	67	90.00	2.40	SA 47	4
0.60	2021	2335	1.06	SAF87R57	4	18	57	76.88	2.80	SAF47	4
0.68	1778	2054	1.21			19	53	72.00	2.99		
0.76	1579	1824	1.36			23	45	60.65	3.56		
0.85	1412	1631	1.52								
0.99	1215	1404	0.98			9.1	113	152.00	0.80		
1.1	1078	1245	1.11			11	96	129.41	0.89		
1.3	952	1100	1.25	S 77R37	4	12	83	111.58	1.03		
1.5	826	954	1.45	SF 77R37	4	13	77	104.00	1.10		
1.7	725	837	1.65	SA 77R37	4	15	67	90.91	1.26		
1.9	618	714	1.93	SAF77R37	4	16	63	85.22	1.34		
2.2	551	637	2.2			18	56	75.20	1.52		
2.4	497	574	2.4			21	49	66.67	1.72		
						25	45	56.67	1.89		
						27	42	52.00	2.02	S 37	4
						31	39	45.45	2.16	SF 37	4
						33	37	42.61	2.30	SA 37	4
						37	33	37.60	2.61	SAF37	4
						42	29	33.33	2.95		
						49	25	28.33	3.47		
						59	23	23.46	3.66		
						74	19	18.85	4.56		
						84	16	16.48	5.21		
						90	15	15.45	5.56		
						102	13	13.63	6.30		
						115	12	12.08	7.11		
						135	10	10.27	8.37		
						0.25kW					
						0.48	2495	2905	0.86		
						0.54	2470	2586	0.87		
						0.60	2406	2335	0.89	S 87R57	4
						0.68	2221	2054	0.96	SF 87R57	4
						0.76	2193	1824	0.98	SA 87R57	4
						0.85	1961	1631	1.09	SAF87R57	4
						1.5	1118	930	1.92		
						1.5	1147	954	1.04		
						1.7	1006	837	1.19	S 77R37	4
						1.9	858	714	1.39	SF 77R37	4
						2.2	766	637	1.56	SA 77R37	4
						2.4	690	574	1.73	SAF77R37	4
						2.8	600	499	1.99		
						2.6	564	543	0.87		
						3.0	560	469	0.87	S 67R37	4
						3.3	510	424	0.96	SF 67R37	4
						3.8	439	365	1.11	SA 67R37	4
						4.4	384	319	1.27	SAF67R37	4
						4.9	338	281	1.45		
						4.7	353	294	0.80		
						5.2	323	269	0.87		
						6.1	275	229	1.02	S 57R17	4
						6.8	245	204	1.15	SF 57R17	4
						7.4	225	187	1.25	SA 57R17	4
						8.4	198	165	1.42	SAF57R17	4
						11	158	131	1.79		
						2.8	505	227.20	0.97	S 67	8
						3.1	456	205.11	1.07	SF 67	8
						3.6	401	180.46	1.22	SA 67	8
						3.8	378	170.40	1.29	SAF67	8
						4.5	320	144.00	1.53		
5.1	204	168.00	0.81								
5.7	182	150.00	0.88	S 47	6						
5.8	178	146.84	0.90	SF 47	6						
6.2	167	137.25	0.96	SA 47	6						
7.2	144	118.64	1.11	SAF47	6						
5.7	182	244.74	0.88								
6.1	170	228.75	0.94	S 47	4						
7.0	147	197.73	1.09	SF 47	4						
8.3	125	168.00	1.28	SA 47	4						
9.3	111	150.00	1.44	SAF47	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 _s	机型号 Type Type	极数 Pole p	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 _s	机型号 Type Type	极数 Pole p
0.25kW						0.37kW					
3.7	383	227.20	1.28			0.68	2611	2054	0.82	S 87R57	4
4.1	346	205.11	1.41	S 67	6	0.76	2488	1824	0.86	SF 87R57	4
4.7	304	180.46	1.61	SF 67	6	0.85	2318	1631	0.92	SA 87R57	4
5.0	287	170.40	1.70	SA 67	6	1.5	1655	930	1.29	SAF87R57	4
5.9	243	144.00	2.01	SAF67	6	1.7	1479	831	1.45		
6.1	234	227.20	2.09			1.9	1271	714	0.94		
6.8	211	205.11	2.31			2.2	1134	637	1.05	S 77R37	4
7.7	186	180.46	2.63	S 67	4	2.4	1021	574	1.17	SF 77R37	4
8.2	176	170.40	2.78	SF 67	4	2.8	888	499	1.34	SA 77R37	4
9.7	148	144.00	3.30	SA 67	4	3.2	779	438	1.53	SAF77R37	4
11	134	130.00	3.65	SAF67	4	3.6	692	389	1.72		
12	118	114.38	4.15			3.8	557	365	0.88	S 67R37	4
13	111	108.00	4.39			4.4	568	319	0.92	SF 67R37	4
4.3	331	196.21	0.85	S 57	6	4.9	500	281	0.98	SA 67R37	4
4.7	304	180.40	0.93	SF 57	6	5.7	438	246	1.12	SAF67R37	4
5.5	260	154.35	1.08	SA 57	6						
6.4	225	133.79	1.25	SAF57	6	3.0	702	222.00	3.03	S 87	8
6.8	211	125.05	1.34			3.4	627	198.00	3.42	SF 87	8
7.1	202	196.21	1.39			4.0	527	166.43	4.07	SA 87	8
7.7	186	180.40	1.52							SAF87	8
9.0	159	154.35	1.77	S 57	4	2.8	763	241.09	1.57	S 77	8
10	138	133.79	2.05	SF 57	4	3.3	652	206.04	1.83	SF 77	8
11	129	125.05	2.19	SA 57	4	3.5	598	188.89	2.00	SA 77	8
13	111	108.09	2.53	SAF57	4	4.0	524	165.75	2.28	SAF77	8
15	95	91.84	2.98			4.3	497	157.08	2.40		
17	85	82.00	3.34								
7.0	204	197.73	0.81			3.9	544	227.20	0.90	S 67	6
8.3	173	168.00	0.92			4.3	491	205.11	1.00	SF 67	6
9.3	155	150.00	1.04			4.9	432	180.46	1.13	SA 67	6
9.5	151	146.84	1.06			5.2	408	170.40	1.20	SAF67	6
10	141	137.25	1.13			6.1	345	144.00	1.42		
12	122	118.64	1.31	S 47	4	6.1	347	227.20	1.41		
14	104	100.80	1.54	SF 47	4	6.8	313	205.11	1.56		
15	93	90.00	1.73	SA 47	4	7.7	275	180.46	1.78	S 67	4
18	79	76.88	2.02	SAF47	4	8.2	260	170.40	1.88	SF 67	4
19	74	72.00	2.16			9.7	220	144.00	2.23	SA 67	4
23	71	60.65	2.24			11	198	130.00	2.47	SAF67	4
24	63	59.32	2.56			12	174	114.38	2.80		
28	61	50.40	2.64								
31	54	45.00	2.96			5.7	370	154.35	0.81		
13	107	104.00	0.81			6.6	321	133.79	0.88	S 57	6
15	94	90.91	0.91			7.1	300	125.05	0.94	SF 57	6
16	88	85.22	0.97			8.2	259	108.09	1.09	SA 57	6
18	77	75.20	1.10			9.6	220	91.84	1.28	SAF57	6
21	69	66.67	1.24			10.8	196	82.00	1.44		
25	63	56.67	1.36								
27	58	52.00	1.46			7.1	299	196.21	0.94		
31	55	45.45	1.56			7.7	275	180.40	1.02		
33	51	42.61	1.66			9.0	235	154.35	1.20		
37	45	37.60	1.88	S 37	4	10	204	133.79	1.38	S 57	4
42	40	33.33	2.12	SF 37	4	11	191	125.05	1.48	SF 57	4
49	34	28.33	2.50	SA 37	4	13	165	108.09	1.71	SA 57	4
59	32	23.46	2.64	SAF37	4	15	140	91.84	2.01	SAF57	4
74	26	18.85	3.28			17	125	82.00	2.25		
84	23	16.48	3.75			20	119	70.04	2.64		
90	21	15.45	4.00			21	111	66.89	2.37		
102	19	13.63	4.54			22	107	62.53	2.53		
115	17	12.08	5.12								
135	14	10.27	6.02			10	209	137.25	0.80	S 47	4
						12	181	118.64	0.88	SF 47	4
						14	154	100.80	1.04	SA 47	4
						15	137	90.00	1.17	SAF47	4
						18	117	76.88	1.36		

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 _s	机型号 Type Type	极数 Pole p	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 _s	机型号 Type Type	极数 Pole p
0.37kW						0.55kW					
19	110	72.00	1.46			3.7	859	241.09	1.39		
23	106	60.65	1.52			4.3	734	206.04	1.63	S 77	6
24	93	59.32	1.73			4.7	673	188.89	1.78	SF 77	6
28	90	50.40	1.78			5.3	590	165.75	2.02	SA 77	6
31	80	45.00	2.00	S 47	4	5.6	559	157.08	2.13	SAF77	6
36	68	38.44	2.34	SF 47	4						
39	64	36.00	2.50	SA 47	4	5.8	547	241.09	2.18	S 77	4
46	54	30.33	2.96	SAF47	4	6.7	467	206.04	2.56	SF 77	4
50	56	27.74	2.84			7.4	428	188.89	2.79	SA 77	4
54	53	25.93	3.03							SAF77	4
62	46	22.41	3.51			6.1	515	227.20	0.95		
73	39	19.04	4.13			6.8	465	205.11	1.05		
82	35	17.00	4.63			7.7	409	180.46	1.20		
						8.2	386	170.40	1.27		
21	102	66.67	0.84			9.7	326	144.00	1.50		
25	93	56.67	0.92			11	295	130.00	1.66	S 67	4
27	86	52.00	0.98			12	259	114.38	1.89	SF 67	4
31	81	45.45	1.05			13	245	108.00	2.00	SA 67	4
33	76	42.61	1.12			15	208	91.96	2.35	SAF67	4
37	67	37.60	1.27	S 37	4	17	189	83.57	2.58		
42	59	33.33	1.43	SF 37	4	19	172	72.39	2.98		
49	50	28.33	1.69	SA 37	4	21	164	65.00	2.84		
59	48	23.46	1.78	SAF37	4						
74	38	18.85	2.22			9.6	327	91.84	0.86		
84	34	16.48	2.54			11	292	82.00	0.97		
90	31	15.45	2.71			12	251	70.40	1.01	S 57	6
102	28	13.63	3.07			13	278	66.89	1.12	SF 57	6
115	25	12.08	3.46			14	260	62.53	1.09	SA 57	6
135	21	10.27	4.07			16	225	54.05	1.26	SAF57	6
						19	191	45.92	1.48		
						22	170	41.00	1.66		
						25	146	35.20	1.93		
0.55kW						0.55kW					
1.0	2517	1332	0.85			9.0	350	154.35	0.81		
1.2	2475	1191	0.87			10	303	133.79	0.93		
1.3	2460	1032	0.87	S 87R57	4	11	284	125.05	0.99		
1.5	2340	930	0.92	SF 87R57	4	13	245	108.09	1.15		
1.7	2198	831	0.97	SA 87R57	4	15	208	91.84	1.35		
1.9	1902	719	1.13	SAF87R57	4	17	186	82.00	1.52		
2.2	1651	624	1.30			20	177	70.40	1.59		
2.5	1476	558	1.45			21	165	66.89	1.70	S 57	4
3.2	1151	435	1.86			22	160	62.53	1.77	SF 57	4
						26	143	54.05	1.97	SA 57	4
2.8	1320	499	0.90			30	121	45.92	2.32	SAF57	4
3.2	1159	438	1.03	S 77R37	4	34	108	41.00	2.60		
3.6	1029	389	1.16	SF 77R37	4	40	93	35.02	3.04		
4.3	865	327	1.38	SA 77R37	4	42	91	32.80	3.10		
4.8	764	289	1.56	SAF77R37	4	46	87	30.12	3.25		
5.6	661	250	1.81			53	79	26.11	3.57		
						57	74	24.40	3.82		
5.7	558	246	0.84	S 67R37	4	66	64	21.09	4.42		
6.3	585	221	0.88	SF 67R37	4						
7.0	524	198	0.93	SA 67R37	4	18	174	76.88	0.92		
8.3	444	168	1.10	SAF67R37	4	19	163	72.00	0.98		
						23	157	60.65	1.02		
3.0	1044	222.00	2.05	S 87	8	25	138	59.32	1.16		
3.4	931	198.00	2.30	SF 87	8	28	133	50.40	1.20		
4.0	783	166.43	2.74	SA 87	8	31	119	45.00	1.34		
				SAF87	8	36	102	38.44	1.57	S 47	4
						39	95	36.00	1.68	SF 47	4
4.0	791	222.00	2.71	S 87	6	46	80	30.33	1.91	SA 47	4
4.5	705	198.00	3.04	SF 87	6	50	84	27.74	1.99	SAF47	4
5.3	593	166.43	3.62	SA 87	6	54	78	25.93	2.04		
				SAF87	6	62	68	22.41	2.36		
						73	58	19.04	2.78		
3.3	969	206.04	1.23	S 77	8	82	51	17.00	3.11		
3.5	888	188.89	1.34	SF 77	8	96	44	14.52	3.65		
4.0	780	165.75	1.53	SA 77	8	102	41	13.60	3.89		
4.3	739	157.08	1.62	SAF77	8	121	35	11.46	4.62		

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 _s	机型号 Type Type	极数 Pole p	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 _s	机型号 Type Type	极数 Pole p
0.55kW						0.75kW					
42	88	33.33	0.96			6.8	634	205.11	0.80		
49	75	28.33	1.13			7.7	558	180.46	0.88		
59	71	23.46	1.20			8.2	527	170.40	0.93		
74	57	18.85	1.49	S 37	4	9.7	445	144.00	1.10		
84	50	16.48	1.71	SF 37	4	11	402	130.00	1.22		
90	47	15.45	1.82	SA 37	4	12	354	114.38	1.38	S 67	4
102	41	13.63	2.06	SAF37	4	13	334	108.00	1.46	SF 67	4
115	37	12.08	2.33			15	284	91.96	1.72	SA 67	4
135	31	10.27	2.74			17	258	83.57	1.89	SAF67	4
0.75kW						0.75kW					
1.1	4411	1223	0.85			19	224	72.39	2.09		
1.3	3860	1070	0.97			21	234	65.00	2.18		
1.5	3347	928	1.12	S 97R57	4	22	206	63.00	2.37		
1.7	2972	824	1.27	SF 97R57	4	24	195	57.19	2.51		
1.9	2575	714	1.46	SA 97R57	4	26	185	54.00	2.51		
2.2	2258	626	1.67	SAF97R57	4	30	166	45.98	2.95		
2.6	1941	538	1.94			13	331	70.04	0.80		
2.9	1746	484	2.2			14	369	66.89	0.82	S 57	6
1.3	2659	1032	0.81			15	345	62.53	0.85	SF 57	6
1.5	2593	930	0.83			17	298	54.05	0.95	SA 57	6
1.7	2569	831	0.83	S 87R57	4	20	253	45.92	1.11	SAF57	6
1.9	2396	719	0.89	SF 87R57	4	22	226	41.00	1.25		
2.2	2251	624	0.95	SA 87R57	4	13	334	108.09	0.84		
2.5	2013	558	1.06	SAF87R57	4	15	284	91.84	0.99		
3.2	1569	435	1.37			17	254	82.00	1.11		
4.3	1165	323	1.84			20	217	70.04	1.17		
4.3	1179	327	1.01	S 77R37	4	21	241	66.89	1.25		
4.8	1042	289	1.15	SF 77R37	4	22	226	62.53	1.30		
5.6	902	250	1.32	SA 77R37	4	26	195	54.05	1.45	S 57	4
6.3	790	219	1.51	SAF77R37	4	30	166	45.92	1.70	SF 57	4
3.0	1457	230.48	2.58	S 97	8	34	148	41.00	1.91	SA 57	4
3.3	1311	207.48	2.87	SF 97	8	40	126	35.02	2.23	SAF57	4
3.6	1187	187.89	3.17	SA 97	8	42	118	32.80	2.27		
4.1	1048	222.00	2.04	SAF97	8	46	124	30.12	2.38		
4.1	1048	222.00	2.04	S 87	6	53	108	26.11	2.62		
4.6	935	198.00	2.29	SF 87	6	57	101	24.40	2.80		
5.5	786	166.43	2.73	SA 87	6	66	87	21.09	3.24		
6.2	690	223.26	3.10	SAF87	6	78	74	17.92	3.82		
7.0	612	198.00	3.50	S 87	4	87	66	16.00	4.28		
8.4	515	166.43	4.16	SF 87	4	102	56	13.67	5.00		
3.8	1139	241.09	1.05	SA 87	6	31	162	45.00	0.99		
4.4	973	206.04	1.23	SF 87	4	36	139	38.44	1.15		
4.8	892	188.89	1.34	SA 87	4	39	130	36.00	1.23		
5.5	783	165.75	1.53	SAF87	4	46	109	30.33	1.40	S 47	4
5.8	745	241.09	1.60			50	114	27.74	1.46	SF 47	4
6.7	637	206.04	1.87	S 77	6	54	107	25.93	1.50	SA 47	4
7.4	584	188.89	2.04	SF 77	6	62	92	22.41	1.73	SAF47	4
8.4	512	165.75	2.33	SA 77	6	73	78	19.04	2.04		
8.8	486	157.08	2.46	SAF77	6	82	70	17.00	2.28		
10	425	137.48	2.81			96	60	14.52	2.67		
11	383	123.86	3.12			102	56	13.60	2.85		
13	336	108.65	3.55			121	47	11.46	3.39		
						74	78	18.85	1.09		
						84	68	16.48	1.25	S 37	4
						90	64	15.45	1.33	SF 37	4
						102	56	13.63	1.51	SA 37	4
						115	50	12.08	1.71	SAF37	4
						135	42	10.27	2.01		

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 _s	机型号 Type Type	极数 Pole p	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 _s	机型号 Type Type	极数 Pole p
1.1kW						1.1kW					
1.7	4328	824	0.87			20	351	70.04	0.80		
2.0	3750	714	1.00	S 97R57	4	21	328	66.89	0.86		
2.2	3288	626	1.14	SF 97R57	4	22	315	62.53	0.89		
2.6	2826	538	1.33	SA 97R57	4	26	284	54.05	0.99		
2.9	2542	484	1.48	SAF97R57	4	30	241	45.92	1.17		
3.3	2206	420	1.70			34	215	41.00	1.31		
						40	184	35.02	1.53	S 57	4
2.2	2547	624	0.84			43	181	32.80	1.56	SF 57	4
2.5	2512	558	0.85			46	172	30.12	1.64	SA 57	4
2.9	2341	485	0.92			54	157	26.11	1.80	SAF57	4
3.2	2285	435	0.94	S 87R57	4	57	146	24.40	1.93		
3.7	1985	378	1.08	SF 87R57	4	66	127	21.09	2.23		
4.3	1697	323	1.26	SA 87R57	4	78	108	17.92	2.62		
5.0	1476	281	1.45	SAF87R57	4	88	96	16.00	2.94		
5.5	1339	255	1.60			102	82	13.67	3.44		
6.3	1166	222	1.84			109	77	12.80	3.67		
6.8	1077	205	1.99			130	65	10.78	4.36		
				S 77R37	4	46	182	30.33	0.88		
6.4	1150	219	1.04	SF 77R37	4	50	167	27.74	0.96		
				SA 77R37	4	54	156	25.93	1.03	S 47	4
				SAF77R37	4	62	135	22.41	1.19	SF 47	4
						74	114	19.04	1.40	SA 47	4
3.0	2136	230.48	1.76	S 97	8	82	102	17.00	1.57	SAF47	4
3.3	1923	207.48	1.96	SF 97	8	96	87	14.52	1.84		
3.6	1742	187.89	2.16	SA 97	8	103	82	13.60	1.96		
				SAF97	8	122	69	11.46	2.33		
						1.5kW					
3.9	1596	230.48	2.36	S 97	6	2.0	4484	714	0.84		
4.4	1437	207.48	2.62	SF 97	6	2.2	4383	626	0.86		
4.8	1301	187.89	2.89	SA 97	6	2.6	3853	538	0.98	S 97R57	4
				SAF97	6	2.9	3467	484	1.08	SF 97R57	4
6.3	999	222.00	2.14			3.3	3008	420	1.25	SA 97R57	4
7.1	891	198.00	2.40	S 87	4	3.7	2693	376	1.40	SAF97R57	4
8.4	749	166.43	2.86	SF 87	4	4.3	2342	327	1.61		
9.2	689	152.95	3.11	SA 87	4						
10.3	612	135.83	3.50	SAF87	4	2.9	2707	485	0.79		
						3.2	2481	435	0.86		
5.8	1085	241.09	1.10			3.7	2313	378	0.93	S 87R57	4
6.8	928	206.04	1.29			4.3	2225	323	0.96	SF 87R57	4
7.4	850	188.89	1.40			5.0	2013	281	1.06	SA 87R57	4
8.4	746	165.75	1.60	S 77	4	5.5	1826	255	1.17	SAF87R57	4
8.9	707	157.08	1.69	SF 77	4	6.3	1590	222	1.35		
10	619	137.48	1.93	SA 77	4	6.8	1468	205	1.46		
11	558	123.86	2.14	SAF77	4						
13	489	108.65	2.44			3.0	2871	230.48	1.31	S 97	8
15	432	95.88	2.77			3.3	2584	207.48	1.45	SF 97	8
						3.7	2340	187.89	1.61	SA 97	8
11	585	130.00	0.84			4.1	2076	166.62	1.81	SAF97	8
12	515	114.38	0.95								
13	486	108.00	1.01			4.0	2153	230.48	1.75	S 97	6
15	414	91.96	1.18			4.4	1938	207.48	1.94	SF 97	6
17	376	83.57	1.30			4.9	1755	187.89	2.14	SA 97	6
19	341	72.39	1.43	S 67	4	5.5	1557	166.62	2.42	SAF97	6
22	326	65.00	1.50	SF 67	4						
23	284	63.00	1.63	SA 67	4	6.1	1415	230.48	2.66	S 97	4
24	300	57.19	1.72	SAF67	4	6.7	1274	207.48	2.95	SF 97	4
26	284	54.00	1.72			7.5	1154	187.89	3.26	SA 97	4
30	242	45.98	2.02								
34	220	41.79	2.23			4.1	2074	222.00	1.03	S 87	6
39	190	36.20	2.57			4.6	1850	198.00	1.16	SF 87	6
44	165	31.50	2.96			5.5	1555	166.43	1.38	SA 87	6
53	139	26.40	3.53			6.1	1429	152.95	1.50	SAF87	6

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 _s	机型号 Type Type	极数 Pole p	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 _s	机型号 Type Type	极数 Pole p
1.5kW						2.2kW					
6.3	1363	222.00	1.56			3.4	4350	420	0.86	S 97R57	4
7.1	1216	198.00	1.76			3.8	3894	376	0.97	SF 97R57	4
8.4	1022	166.43	2.10	S 87	4	4.3	3387	327	1.11	SA 97R57	4
9.2	939	152.95	2.28	SF 87	4	4.9	2972	287	1.26	SAF97R57	4
10	834	135.83	2.57	SA 87	4	5.6	2610	252	1.44		
12	746	121.44	2.87	SAF87	4	4.1	3091	230.48	1.22	S 97	6
13	970	109.19	3.20			4.5	2782	207.48	1.35	SF 97	6
15	582	94.77	3.68			5.0	2520	187.89	1.49	SA 97	6
										SAF97	6
7.4	1160	188.89	1.03			6.2	2046	230.48	1.84		
8.4	1018	165.75	1.17			6.8	1842	207.48	2.04		
8.9	964	157.08	1.24			7.6	1668	187.89	2.25	S 97	4
10	844	137.48	1.41			8.5	1479	166.62	2.54	SF 97	4
11	760	123.86	1.57			9.4	1337	150.64	2.81	SA 97	4
13	667	108.65	1.79	S 77	4	11	1133	127.68	3.32	SAF97	4
15	589	95.88	2.03	SF 77	4	13	990	111.52	3.80		
16	564	85.00	2.12	SA 77	4	15	863	93.27	4.54		
18	522	78.78	2.29	SAF77	4	17	828	83.31	4.36		
19	517	72.22	2.31			6.4	1971	222.00	1.08		
22	454	63.38	2.63			7.2	1758	198.00	1.22		
23	430	60.06	2.78			8.5	1477	166.43	1.45		
27	377	52.57	3.17			9.3	1358	152.95	1.58		
30	339	47.36	3.52			10	1206	135.83	1.78	S 87	4
34	298	41.54	4.01			12	1078	121.44	1.99	SF 87	4
17	513	83.57	0.95			13	969	109.19	2.21	SA 87	4
19	466	72.39	1.05			15	841	94.77	2.55	SAF87	4
22	444	65.00	1.10			17	753	84.86	2.74		
23	410	63.00	1.19			19	733	75.63	2.84		
24	387	57.19	1.26			20	700	70.40	3.06		
26	367	54.00	1.26			21	630	67.62	3.40		
30	329	45.98	1.48			23	625	60.80	3.43		
34	299	41.79	1.63	S 67	4	27	547	52.77	3.92		
39	259	36.20	1.89	SF 67	4	10	1220	137.48	0.98		
44	226	31.50	2.17	SA 67	4	11	1100	123.86	1.09		
53	216	26.40	2.26	SAF67	4	13	965	108.65	1.24		
59	195	23.83	2.51			15	851	95.88	1.40		
67	171	20.92	2.86			17	755	85.00	1.46		
71	162	19.80	3.02			18	816	78.78	1.58		
83	138	16.86	3.54			20	748	72.22	1.60		
91	125	15.32	3.90			22	656	63.38	1.82	S 77	4
106	109	13.27	4.50			24	622	60.06	1.92	SF 77	4
121	95	11.55	5.17			27	544	52.57	2.19	SA 77	4
43	247	32.80	1.20			30	491	47.36	2.43	SAF77	4
46	235	30.12	1.14			34	430	41.54	2.78		
54	214	26.11	1.32			39	380	36.66	3.14		
57	200	24.40	1.41	S 57	4	44	337	32.50	3.55		
66	173	21.09	1.63	SF 57	4	51	307	27.75	3.89		
78	147	17.92	1.92	SA 57	4	55	287	25.93	4.15		
88	131	16.00	2.15	SAF57	4	62	269	22.75	4.43		
102	112	13.67	2.52			66	255	21.56	4.68		
109	105	12.80	2.69			31	476	45.98	1.03		
130	88	10.78	3.20			34	433	41.79	1.13		
96	119	14.52	1.35	S 47	4	39	375	36.20	1.30		
103	111	13.60	1.44	SF 47	4	45	326	31.50	1.50		
122	94	11.46	1.71	SA 47	4	54	312	26.40	1.56	S 67	4
				SAF47	4	60	282	23.83	1.73	SF 67	4
						68	248	20.97	1.97	SA 67	4
						72	234	19.80	2.09	SAF67	4
						84	200	16.86	2.45		
						93	181	15.32	2.70		
						107	157	13.27	3.11		
						123	137	11.55	3.58		

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 _s	机型号 Type Type	极数 Pole p	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 _s	机型号 Type Type	极数 Pole p
2.2kW						3kW					
89	189	16.00	1.49	S 57	4	39	511	36.20	0.96		
104	162	13.67	1.74	SF 57	4	45	445	31.50	1.10		
111	152	12.80	1.86	SA 57	4	54	426	26.40	1.15		
132	128	10.78	2.21	SAF57	4	60	385	23.83	1.27	S 67	4
3kW						68	338	20.97	1.44	SF 67	4
4.9	4053	287	0.93	S 97R57	4	72	320	19.80	1.53	SA 67	4
				SF 97R57	4	84	272	16.86	1.80	SAF67	4
				SA 97R57	4	93	247	15.32	1.98		
				SAF97R57	4	107	214	13.27	2.28		
6.2	2790	230.48	1.35			123	186	11.55	2.62		
6.8	2512	207.48	1.50			104	221	13.67	1.28	S 57	4
7.6	2275	187.89	1.65			111	207	12.80	1.36	SF 57	4
8.5	2017	166.62	1.86	S 97	4	132	174	10.78	1.62	SA 57	4
9.4	1824	150.64	2.06	SF 97	4					SAF57	4
11	1546	127.68	2.43	SA 97	4	4kW					
13	1350	111.52	2.79	SAF97	4	6.2	3668	230.48	1.02		
15	1129	93.27	3.20			6.9	3302	207.48	1.14		
17	1177	83.31	3.33			7.7	2991	187.89	1.26		
18	978	80.75	3.85			8.6	2652	166.62	1.42		
8.5	2015	166.43	1.06			9.6	2398	150.64	1.57	S 97	4
9.3	1852	152.95	1.16			11	2032	127.68	1.85	SF 97	4
10	1644	135.83	1.30			13	1775	111.52	2.12	SA 97	4
12	1470	121.44	1.46			15	1547	93.27	2.43	SAF97	4
13	1322	109.19	1.62			17	1485	83.31	2.53		
15	1147	94.77	1.87			18	1399	80.75	2.93		
17	1027	84.86	2.01	S 87	4	19	1285	75.32	2.69		
19	1068	75.63	2.09	SF 87	4	23	1185	63.84	3.17		
20	955	70.40	2.24	SA 87	4	26	1035	55.76	3.63		
21	859	67.62	2.50	SAF87	4	12	1933	121.44	1.11		
23	852	60.80	2.51			13	1738	109.19	1.23		
27	745	52.77	2.88			15	1508	94.77	1.42		
30	696	47.25	3.08			17	1404	84.86	1.53		
33	667	43.13	3.21			19	1351	75.63	1.59		
36	617	39.20	3.47			20	1256	70.40	1.71		
37	554	38.25	3.87			21	1129	67.62	1.90		
42	481	34.09	4.45			24	1121	60.80	1.91	S 87	4
17	1113	85.00	1.07			27	980	52.77	2.19	SF 87	4
18	1029	78.78	1.16			30	915	47.25	2.34	SA 87	4
20	1020	72.22	1.17			33	877	43.13	2.44	SAF87	4
22	895	63.38	1.33			37	812	39.20	2.64		
24	848	60.06	1.41			38	728	38.25	2.94		
27	742	52.57	1.61			42	682	34.09	3.14		
30	669	47.36	1.79			45	633	32.15	3.39		
34	587	41.54	2.04	S 77	4	49	627	29.55	3.42		
39	518	36.66	2.31	SF 77	4	55	557	26.24	3.85		
44	459	32.50	2.60	SA 77	4	61	498	23.46	4.30		
51	419	27.75	2.85	SAF77	4	24	1115	60.06	1.07		
55	392	25.93	3.05			27	976	52.57	1.22		
62	367	22.75	3.25			30	879	47.36	1.36		
66	348	21.56	3.43			35	771	41.54	1.55		
75	305	18.87	3.92			39	681	36.66	1.75		
84	274	17.00	4.35			44	604	32.50	1.98	S 77	4
95	241	14.91	4.96			52	550	27.75	2.17	SF 77	4
108	212	13.16	5.62			56	515	25.93	2.32	SA 77	4
122	188	11.67	6.34			63	483	22.75	2.47	SAF77	4
143	161	9.96	7.43			67	458	21.56	2.61		
						76	400	18.87	2.98		
						85	361	17.00	3.31		
						97	316	14.91	3.77		
						109	279	13.16	4.28		
						123	248	11.67	4.82		
						145	211	9.96	5.65		

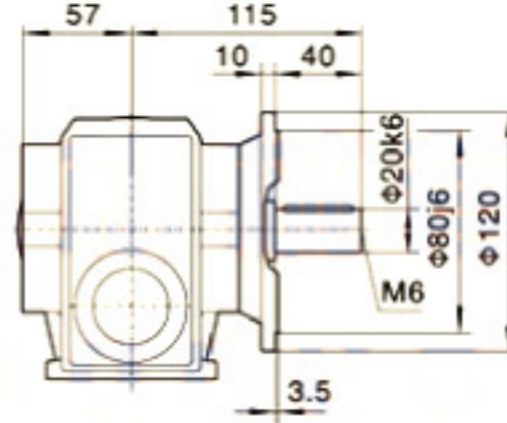
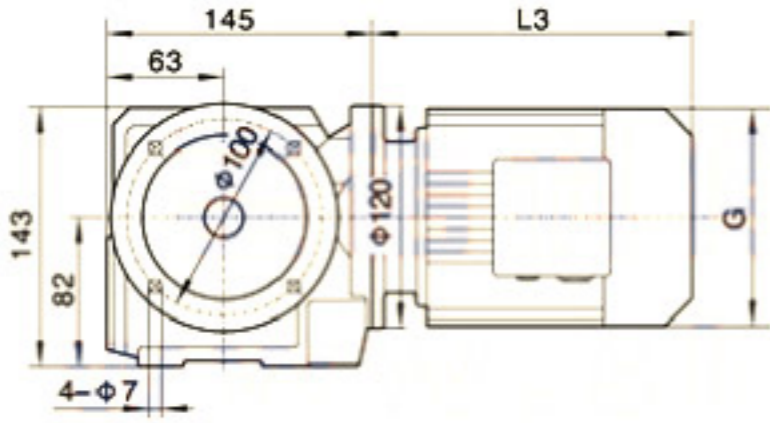
输出转速 Output speed r/min	输出扭矩 Output torque Nm	传动比 Ratio i	使用系数 Service factor f _s	机型号 Type Type	极数 Pole p	输出转速 Output speed r/min	输出扭矩 Output torque Nm	传动比 Ratio i	使用系数 Service factor f _s	机型号 Type Type	极数 Pole p	
4kW						7.5kW						
73	420	19.80	1.16	S 67 SF 67 SA 67 SAF67	4	13	3304	111.52	1.14	S 97 SF 97 SA 97 SAF97	4	
85	358	16.86	1.37		4	16	2880	93.27	1.31		4	
94	325	15.32	1.50		4	17	2764	83.31	1.36		4	
109	282	13.27	1.74		4	18	2604	80.75	1.44		4	
125	245	11.55	1.99		4	19	2393	75.32	1.57		4	
5.5kW						11kW						
8.6	3647	166.62	1.03	S 97 SF 97 SA 97 SAF97	4	23	2207	63.84	1.70		S 87 SF 87 SA 87 SAF87	4
9.6	3297	150.64	1.14		4	26	1928	55.76	1.95			4
11	2794	127.68	1.35		4	31	1612	46.64	2.33			4
13	2441	111.52	1.54		4	36	1438	40.38	2.62			4
15	2127	93.27	1.77		4	40	1396	36.39	2.69			4
17	2041	83.31	1.84		4	45	1294	32.76	2.91			4
18	1923	80.75	1.96		4	49	1172	29.67	3.21			4
19	1767	75.32	2.13		4	55	1039	26.31	3.62			4
23	1630	63.84	2.31		4	61	940	23.79	4.00			4
26	1424	55.76	2.64		4	72	796	20.16	4.72	4		
31	1191	46.64	3.16	S 87 SF 87 SA 87 SAF87	4	31	1704	47.25	1.26	S 77 SF 77 SA 77 SAF77		4
36	1031	40.38	3.65		4	34	1633	43.13	1.31			4
17	1931	84.86	1.11		4	37	1511	39.20	1.42			4
19	1857	75.63	1.15		4	38	1355	38.25	1.58			4
20	1727	70.40	1.24		4	43	1270	34.09	1.69			4
21	1552	67.62	1.38		4	45	1178	32.15	1.82		4	
24	1541	60.80	1.39		4	49	1167	29.55	1.84		4	
27	1347	52.77	1.59		4	56	1037	26.24	2.07		4	
30	1259	47.25	1.70		4	62	927	23.46	2.31		4	
33	1206	43.13	1.78		4	69	833	21.09	2.57		4	
37	1116	39.20	1.92	4	80	723	18.31	2.96	4			
38	1001	38.25	2.14	4	89	648	16.39	3.31	4			
42	938	34.09	2.28	4	107	537	13.60	3.99	4			
45	870	32.15	2.46	4	123	467	11.83	4.59	4			
49	862	29.55	2.49	4	53	1024	27.75	1.17	S 77 SF 77 SA 77 SAF77		4	
55	766	26.24	2.80	4	56	959	25.93	1.24		4		
61	685	23.46	3.13	4	64	899	22.75	1.33		4		
68	615	21.09	3.48	4	68	852	21.56	1.40		4		
79	534	18.31	4.01	4	77	746	18.87	1.60		4		
88	478	16.39	4.48	4	86	672	17.00	1.78		4		
106	397	13.60	5.40	4	98	589	14.91	2.03		4		
122	345	11.83	6.21	4	111	520	13.16	2.30		4		
35	1061	41.54	1.13	S 77 SF 77 SA 77 SAF77	4	125	461	11.67		2.59	4	
39	936	36.66	1.28		4	147	394	9.96		3.03	4	
44	830	32.50	1.44		4	11kW						
52	757	27.75	1.58		4	26	2808	55.76		1.34	S 97 SF 97 SA 97 SAF97	4
56	709	25.93	1.69		4	31	2349	46.64		1.60		4
63	664	22.75	1.80		4	36	2095	40.38		1.80		4
67	629	21.56	1.90		4	40	2034	36.39		1.85		4
76	551	18.87	2.17		4	45	1886	32.76	1.99	4		
85	496	17.00	2.41		4	49	1708	29.67	2.20	4		
97	435	14.91	2.74		4	55	1514	26.31	2.48	4		
109	384	13.16	3.11	4	61	1369	23.79	2.75	4			
123	341	11.67	3.51	4	72	1160	20.16	3.24	4			
145	291	9.96	4.11	4	83	1014	17.61	3.71	4			
94	447	15.32	1.09	S 67 SF 67 SA 67 SAF67	4	99	848	14.73	4.43	S 87 SF 87 SA 87 SAF87		4
109	387	13.27	1.26		4	115	734	12.75	5.12			4
125	337	11.55	1.45		4	56	1510	26.24	1.42			4
					4	62	1350	23.46	1.59			4
					69	1214	21.09	1.77	4			
					80	1054	18.31	2.03	4			
					89	943	16.39	2.27	4			
					107	783	13.60	2.74	4			
					123	681	11.83	3.15	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 _s	机 型 号 Type Type	极 数 Pole p	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 _s	机 型 号 Type Type	极 数 Pole p
15kW											
31	3203	46.64	1.17								
36	2856	40.38	1.32								
40	2773	36.39	1.36								
45	2571	32.76	1.46	S 97	4						
49	2329	29.67	1.61	SF 97	4						
55	2065	26.31	1.82	SA 97	4						
61	1867	23.79	2.01	SAF97	4						
72	1582	20.16	2.38								
83	1382	17.61	2.72								
99	1156	14.73	3.25								
115	1001	12.75	3.76								
89	1287	16.39	1.67	S 87	4						
107	1068	13.60	2.01	SF 87	4						
123	929	11.83	2.31	SA 87	4						
				SAF87	4						
18.5kW											
40	3499	36.39	1.07								
45	3150	32.76	1.19								
50	2853	29.67	1.32	S 97	4						
56	2530	26.31	1.49	SF 97	4						
62	2287	23.79	1.64	SA 97	4						
73	1938	20.16	1.94	SAF97	4						
83	1693	17.61	2.22								
100	1416	14.73	2.65								
115	1226	12.75	3.07								
22kW											
56	3008	26.31	1.25								
62	2720	23.79	1.38	S 97	4						
73	2305	20.16	1.63	SF 97	4						
83	2014	17.61	1.87	SA 97	4						
100	1684	14.73	2.23	SAF97	4						
115	1458	12.75	2.58								

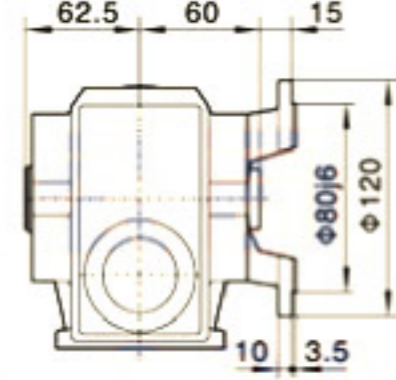
Mamax Permissible torque Nm	输出转速 Output speed r/min	传动比 Ratio i	机型号 Type Type	功率 Power kW/4p	Mamax Permissible torque Nm	输出转速 Output speed r/min	传动比 Ratio i	机型号 Type Type	功率 Power kW/4p
90	7.8	179	S 37R17 SF 37R17 SA 37R17 SAF37R17	0.18	2280	0.24	5875	S 87R57 SF 87R57 SA 87R57 SAF87R57	0.18
	8.8	158				0.27	5187		
	9.7	144				0.30	4606		
	12	118		0.36		3872	0.25		
	13	110		0.40		3475			
170	3.6	388	S 47R17 SF 47R17 SA 47R17 SAF47R17	0.18		0.48	2905		0.37
	4.1	336				0.54	2586		
	4.7	294				0.60	2335		
	5.4	257		0.68		2054	0.25		
	6.1	229		0.76		1824			
	7.0	200		0.85	1631				
	7.4	187		1.0	1332				
8.4	165	1.2	1191						
300	2.4	574	S 57R17 SF 57R17 SA 57R17 SAF57R17	0.18	1.3	1032	0.55		
	2.7	506			1.5	930			
	3.2	438			1.7	831			
	3.6	388			1.9	719			
	4.1	336		2.2	624	1.1			
	4.7	294		2.5	558				
	5.2	269		2.9	485				
	6.1	229		3.2	435	1.5			
	6.8	204		3.7	378				
	7.4	187		4.4	323				
8.4	165	5.1	281	2.2					
11	131	0.16	8608						
520	1.3	1045	S 67R37 SF 67R37 SA 67R37 SAF67R37	0.18	0.18	7554	0.18		
	1.5	914			0.21	6640			
	1.7	809			0.24	5780			
	2.0	712			0.28	4937			
	2.3	615		0.31	4444	0.25			
	2.6	543		0.35	4017				
	3.0	469		0.40	3453	0.37			
	3.3	424		0.45	3108				
	3.8	365		0.52	2654	0.55			
	4.4	319		0.60	2329				
	4.9	281		0.67	2081	0.75			
5.7	246	0.75	1860						
6.3	221	0.88	1574	0.55					
7.0	198	1.0	1394						
1270	0.45	3098	S 77R37 SF 77R37 SA 77R37 SAF77R37	0.18	1.1	1223	0.75		
	0.67	2083			1.3	1070			
	0.77	1813			1.5	928			
	0.80	1745			1.7	824			
	0.87	1600			2.0	714			
	1.0	1404		2.2	626	1.5			
	1.1	1245		2.6	538				
	1.3	1100		2.9	484	0.55			
	1.5	954		3.4	420				
	1.7	837		3.8	376	0.75			
	1.9	714		4.3	327				
	2.2	637		4.9	287	1.1			
	2.4	574		5.7	252				
	2.8	499		6.6	219	4			
	3.2	438							
3.6	389								
4.3	327								
4.8	289								
5.6	250								
6.4	219								

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

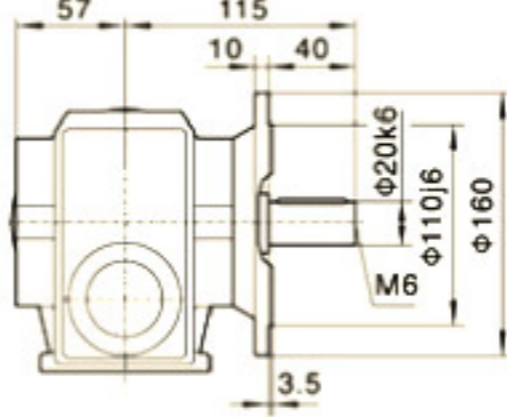
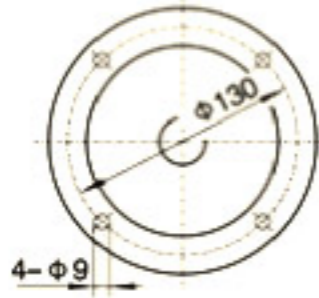
SF37/Φ120



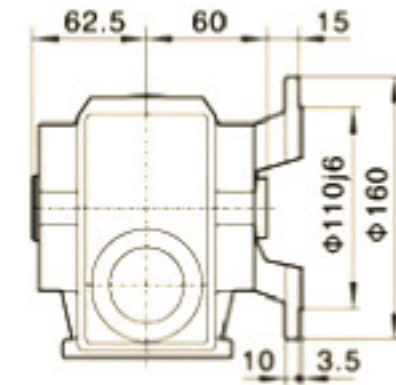
SAF37/Φ120



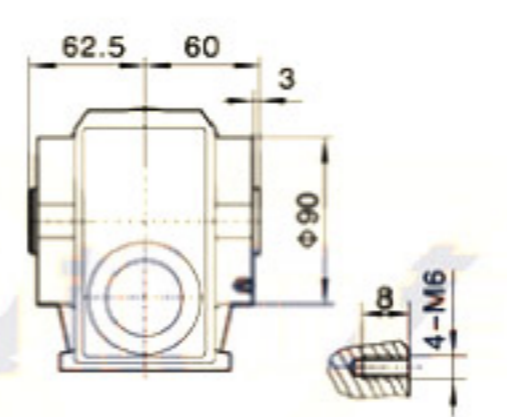
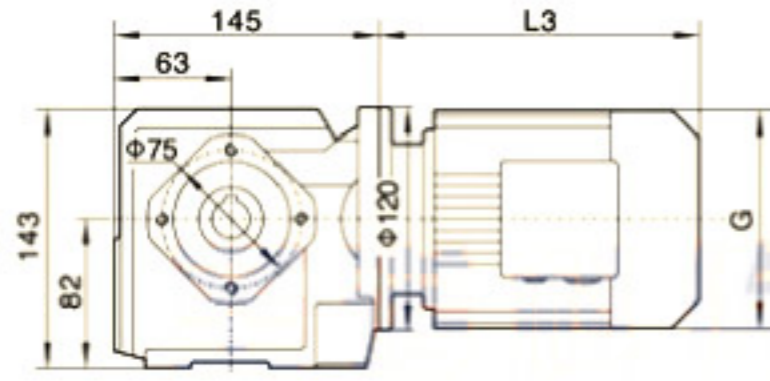
SF37/Φ160



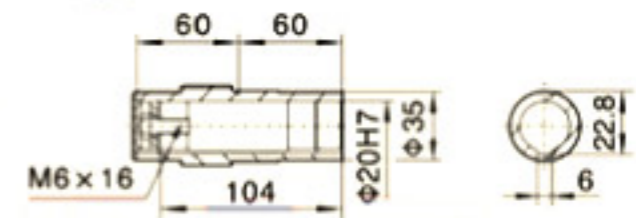
SAF37/Φ160



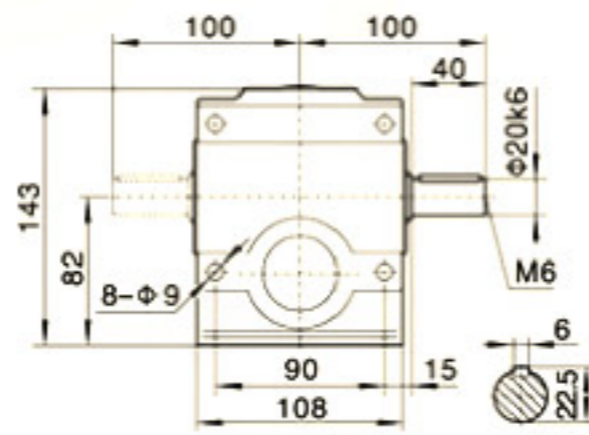
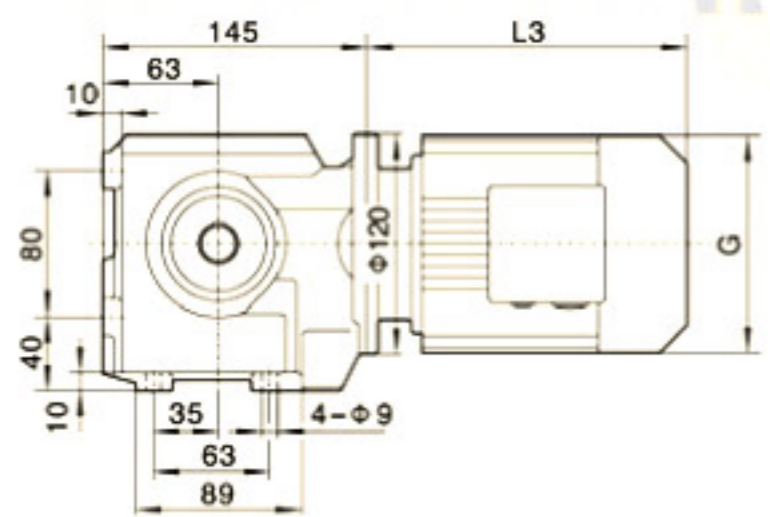
SA37



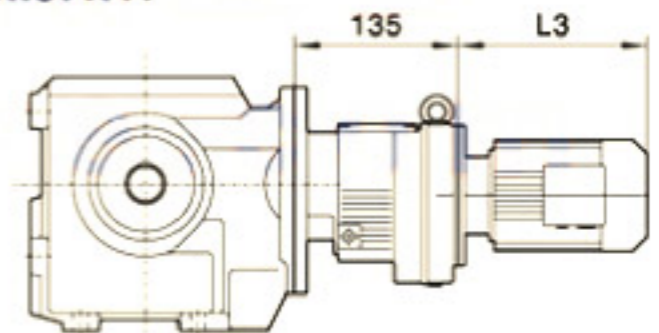
SAF37/SA37/SAZ37
空心轴/Hollow shaft



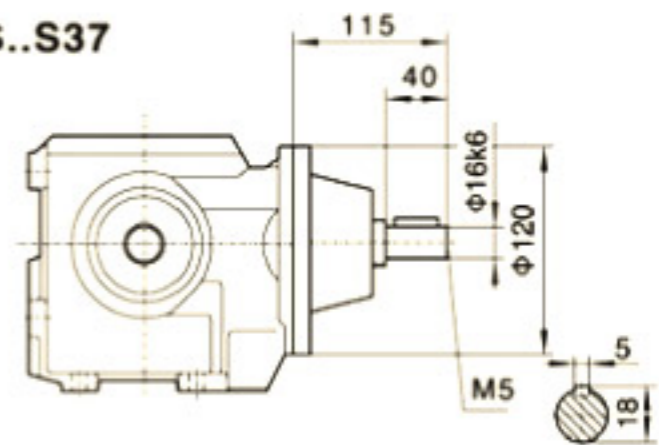
S37



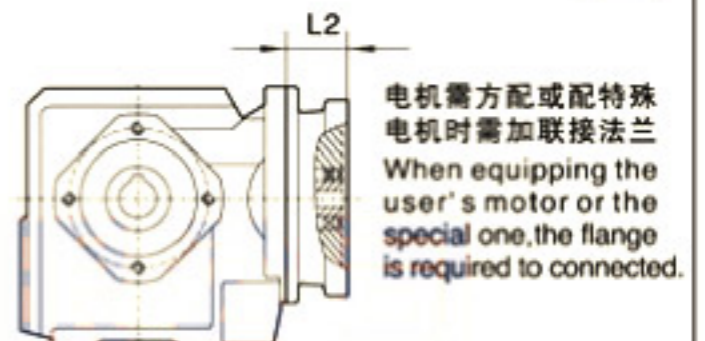
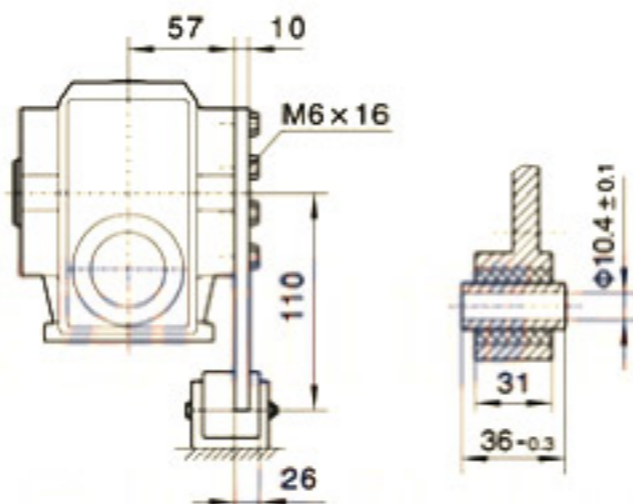
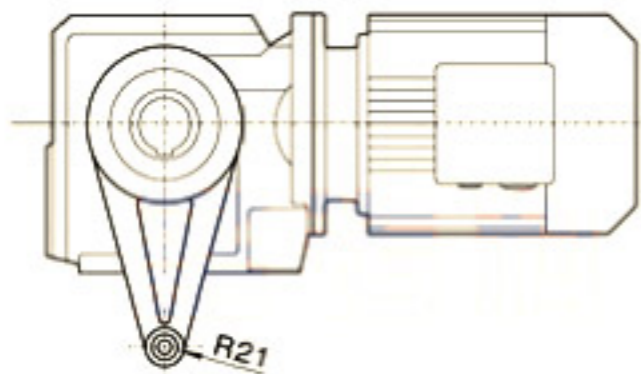
S..37R17



S..S37



SAT37



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.

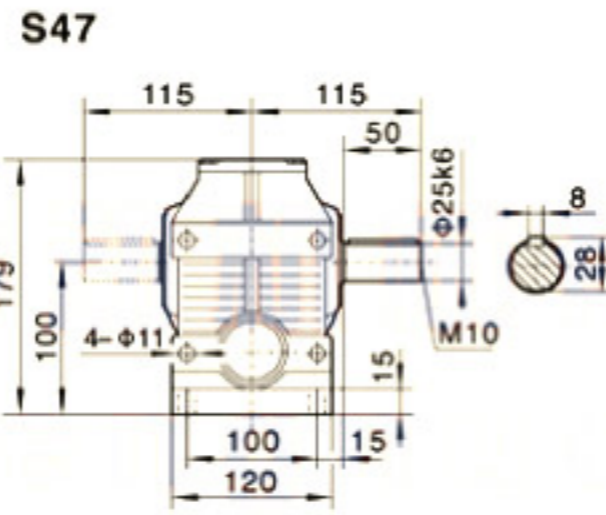
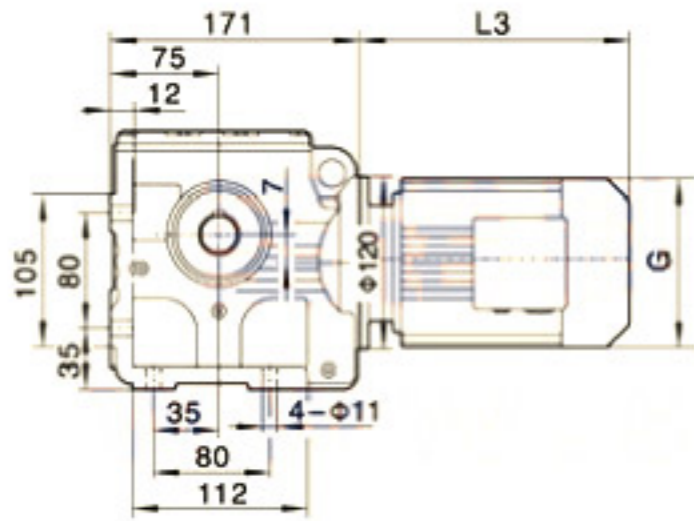
注: 其余尺寸见相对应结构形式

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

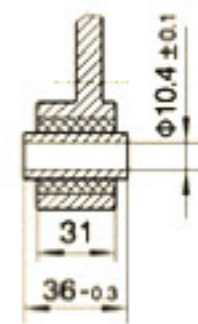
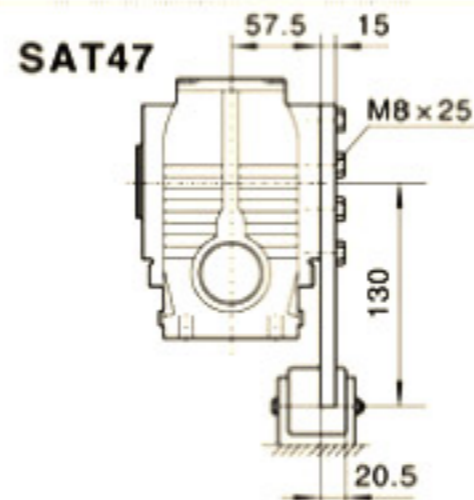
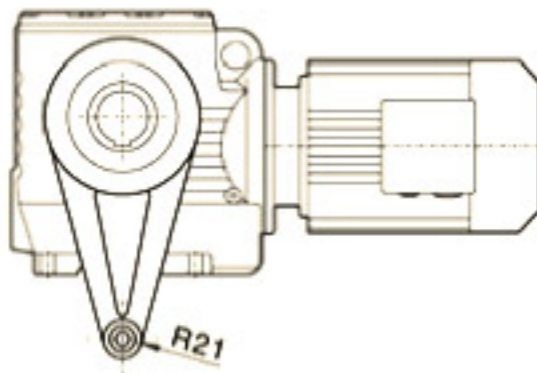
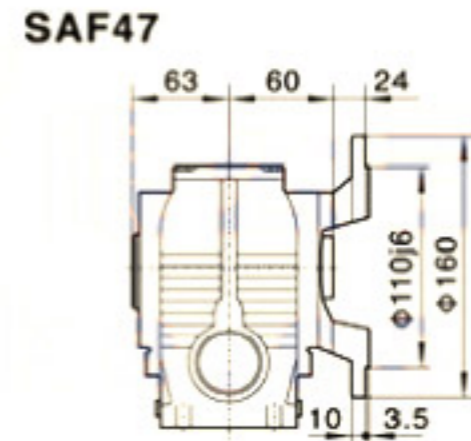
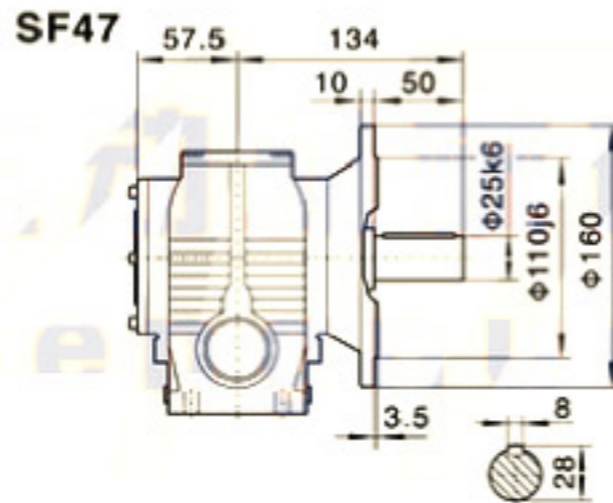
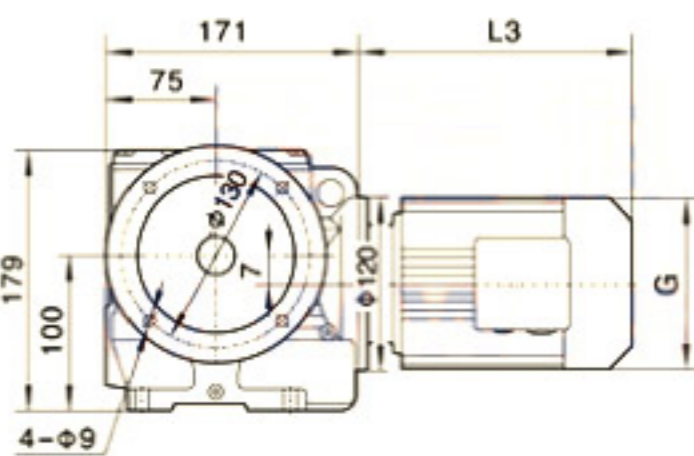
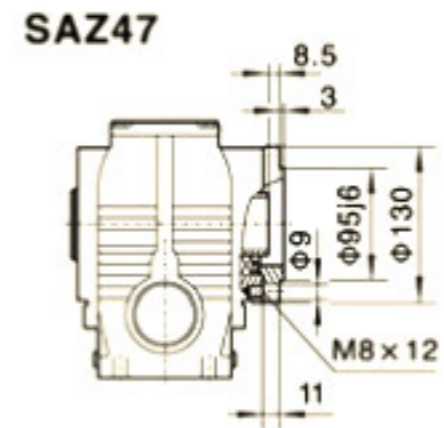
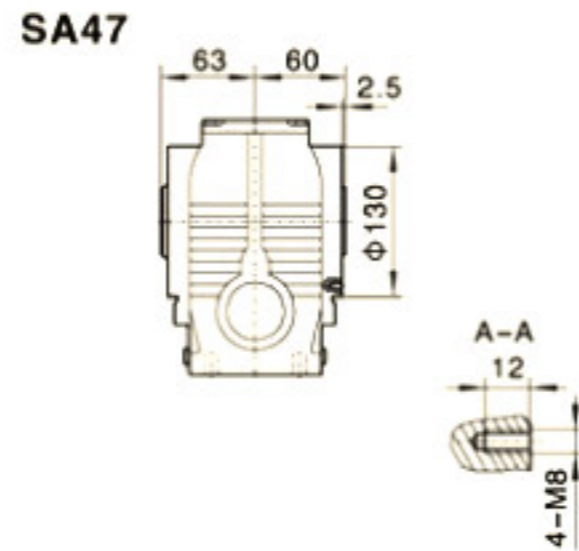
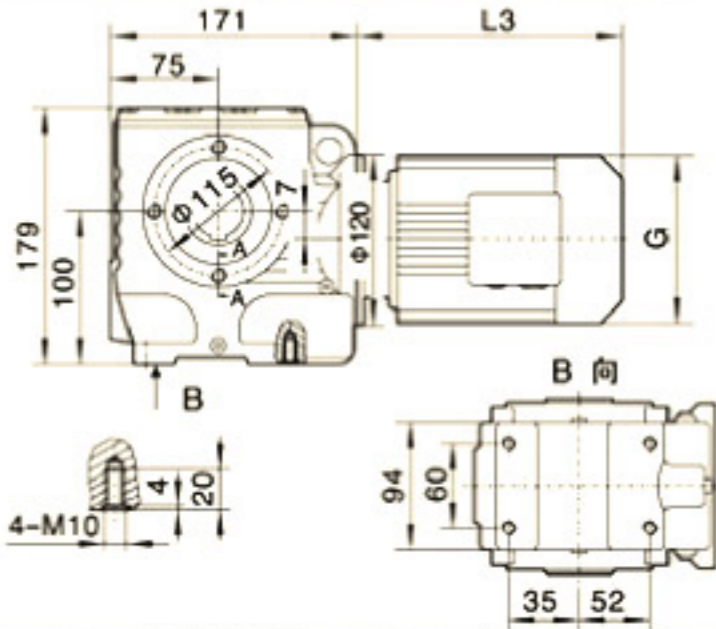
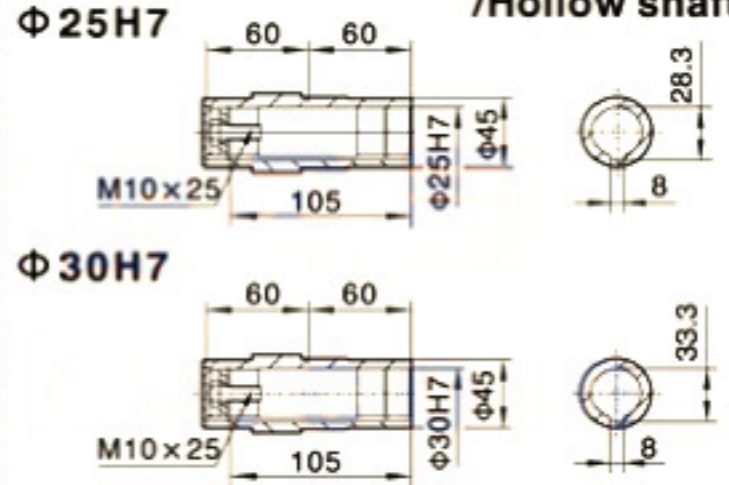
Y ₂ 电机机座号 Motor size	63	71	80		
功率/4P Power/(kW)	0.18	0.25	0.37	0.55	0.75
L3	235	245	278		
G	130	145	175		
L2	71	71	71		

注: 1. SA、SF、SAF、SAZ壳体为通用件, 安装尺寸均可相互参照。2. "S.."表示S、SA、SF、SAF、SAZ

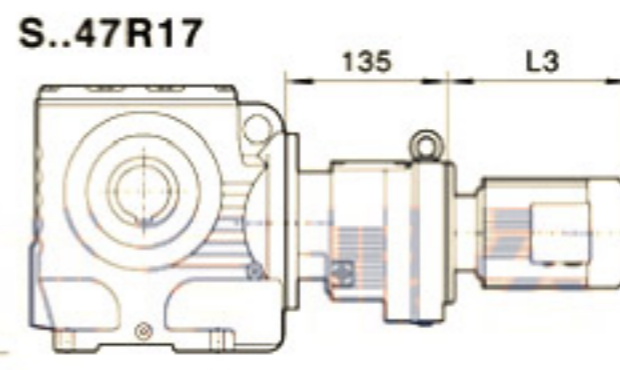
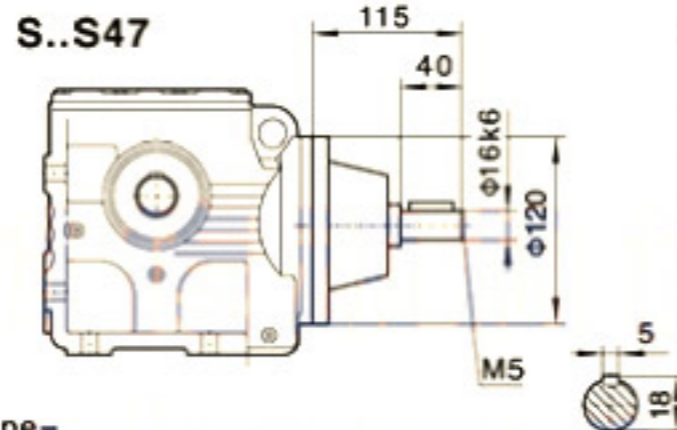
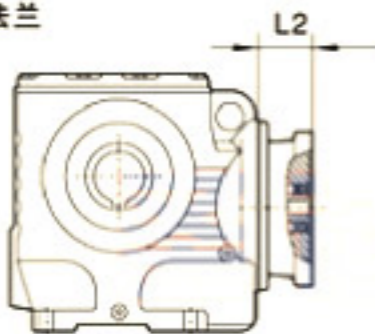
Note: 1. The housings of SA, SF, SAF, SAZ are common parts. The mounting dimensions may consult each other. 2. "S.." mean S, SA, SF, SAF, SAZ



SA47/SAZ47/SAF47空心轴 /Hollow shaft



电机需方配或配特殊电机时需加联接法兰



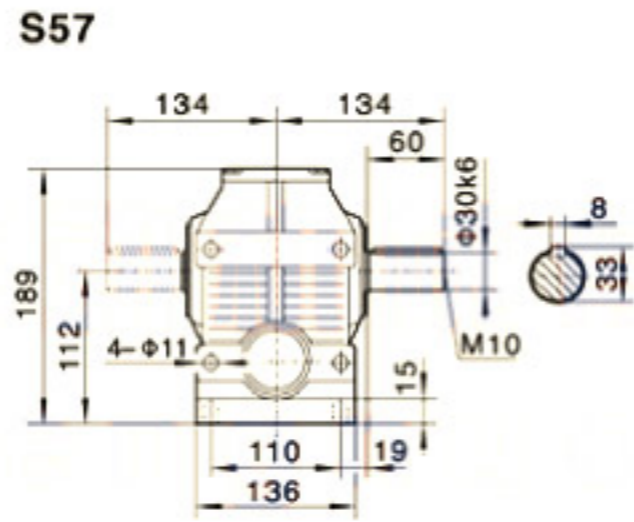
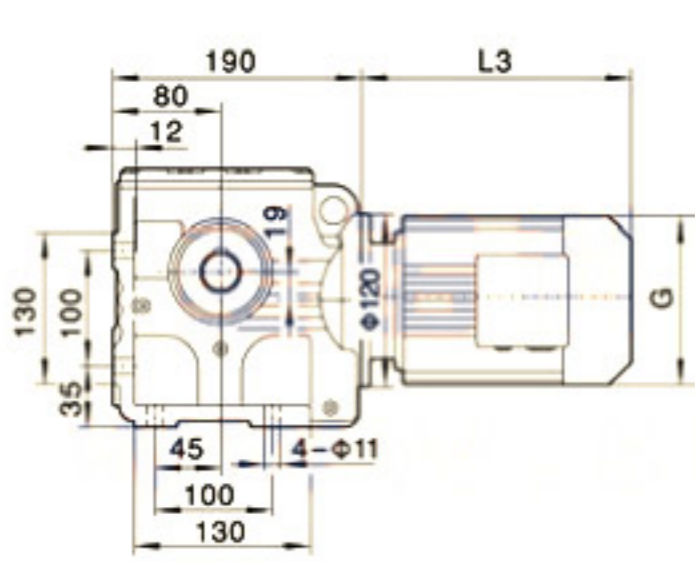
注：其余尺寸见相对应结构形式
Note: For other values please refer to the opposed structure.

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

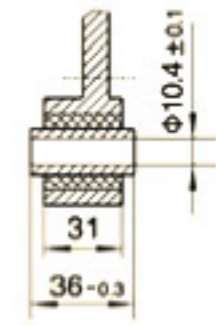
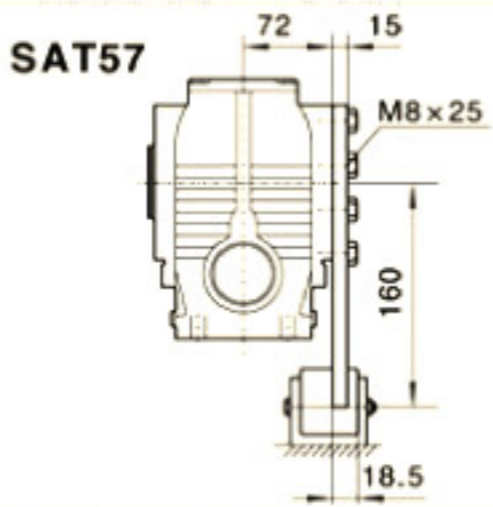
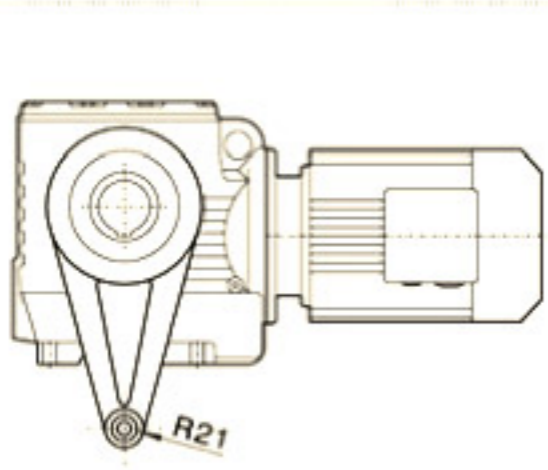
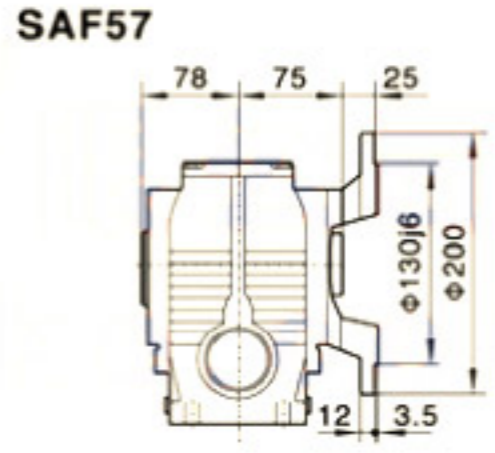
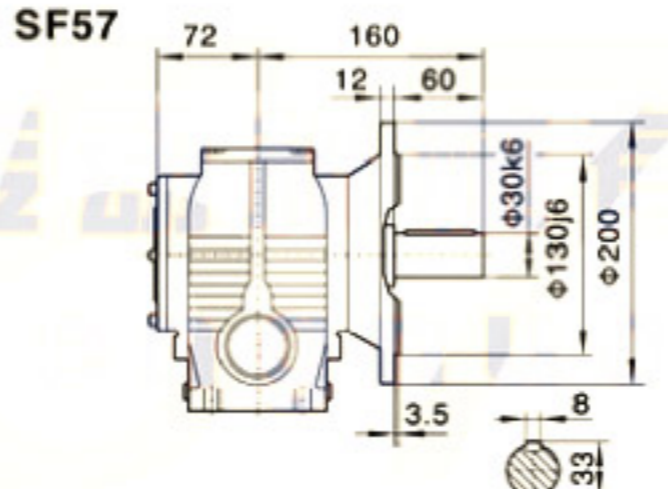
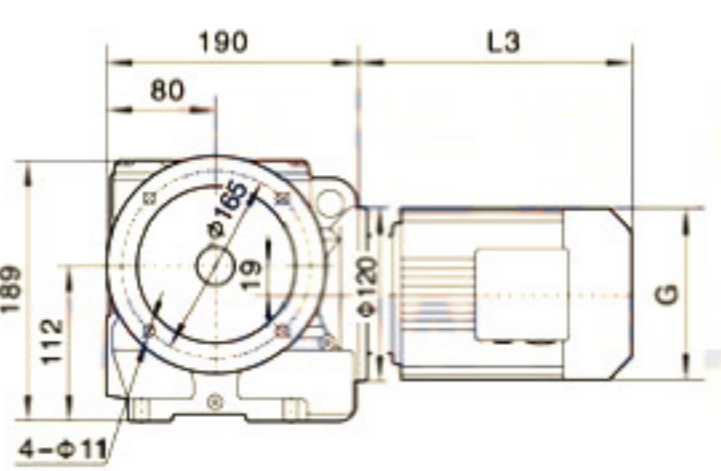
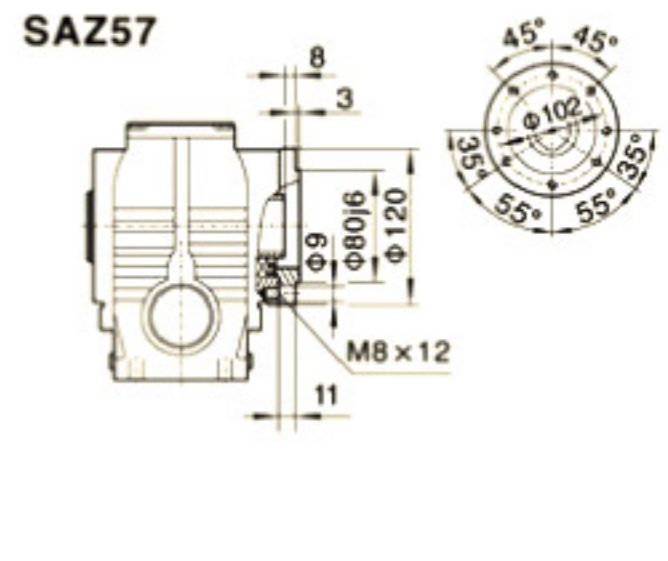
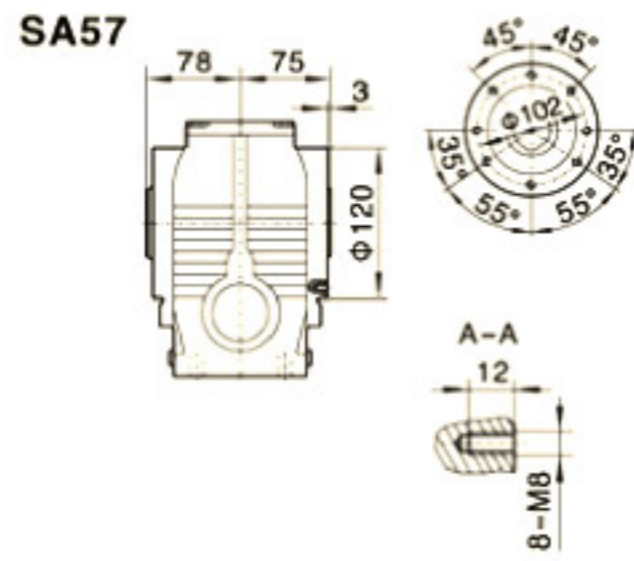
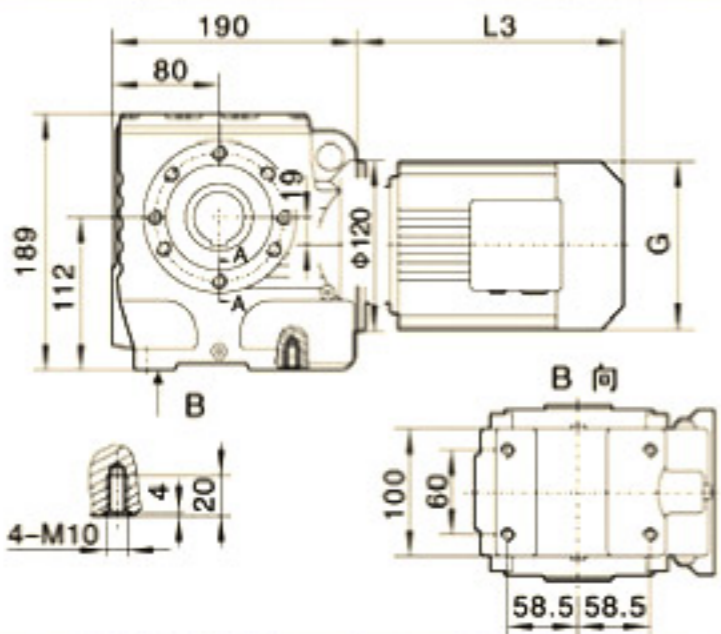
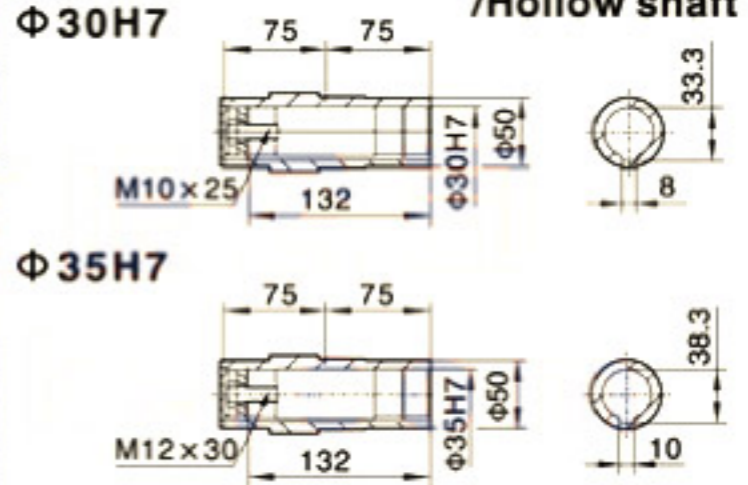
Y2电机机座号 Motor size	63	71	80	90S	90L			
功率/4P Power/(kW)	0.18	0.25 0.37	0.55 0.75	1.1	1.5			
L3	235	245	278	304	328			
G	130	145	175	195	195			
L2	71	71	71	71	71			

注:1.SA、SF、SAF、SAZ壳体为通用件,安装尺寸均可相互参照.2."S.."表示S、SA、SF、SAF、SAZ

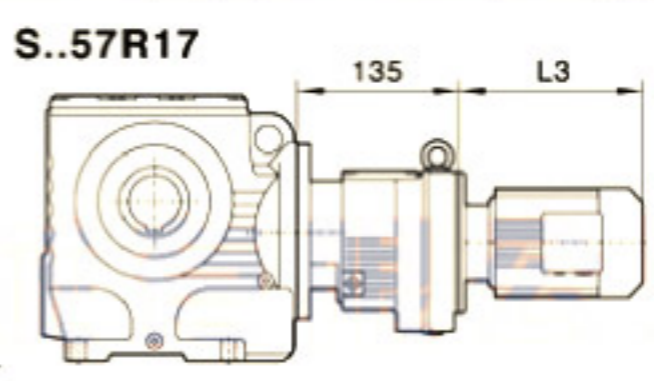
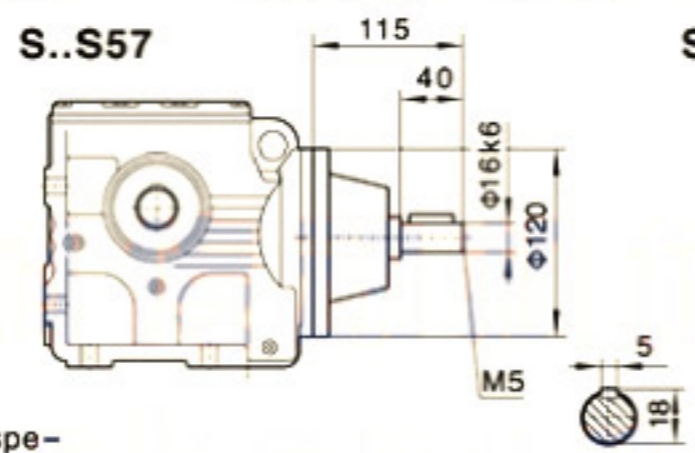
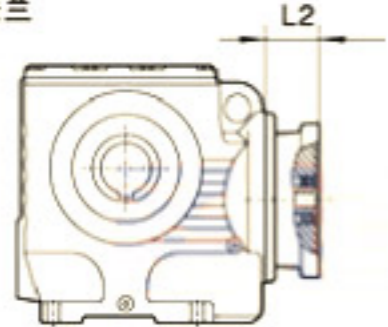
Note:1.The housings of SA、SF、SAF、SAZ are common parts.The mounting dimensions may consult each other. 2."S.."mean S、SA、SF、SAF、SAZ



SA57/SAZ57/SAF57空心轴 /Hollow shaft



电机需方配或配特殊电机时需加联接法兰

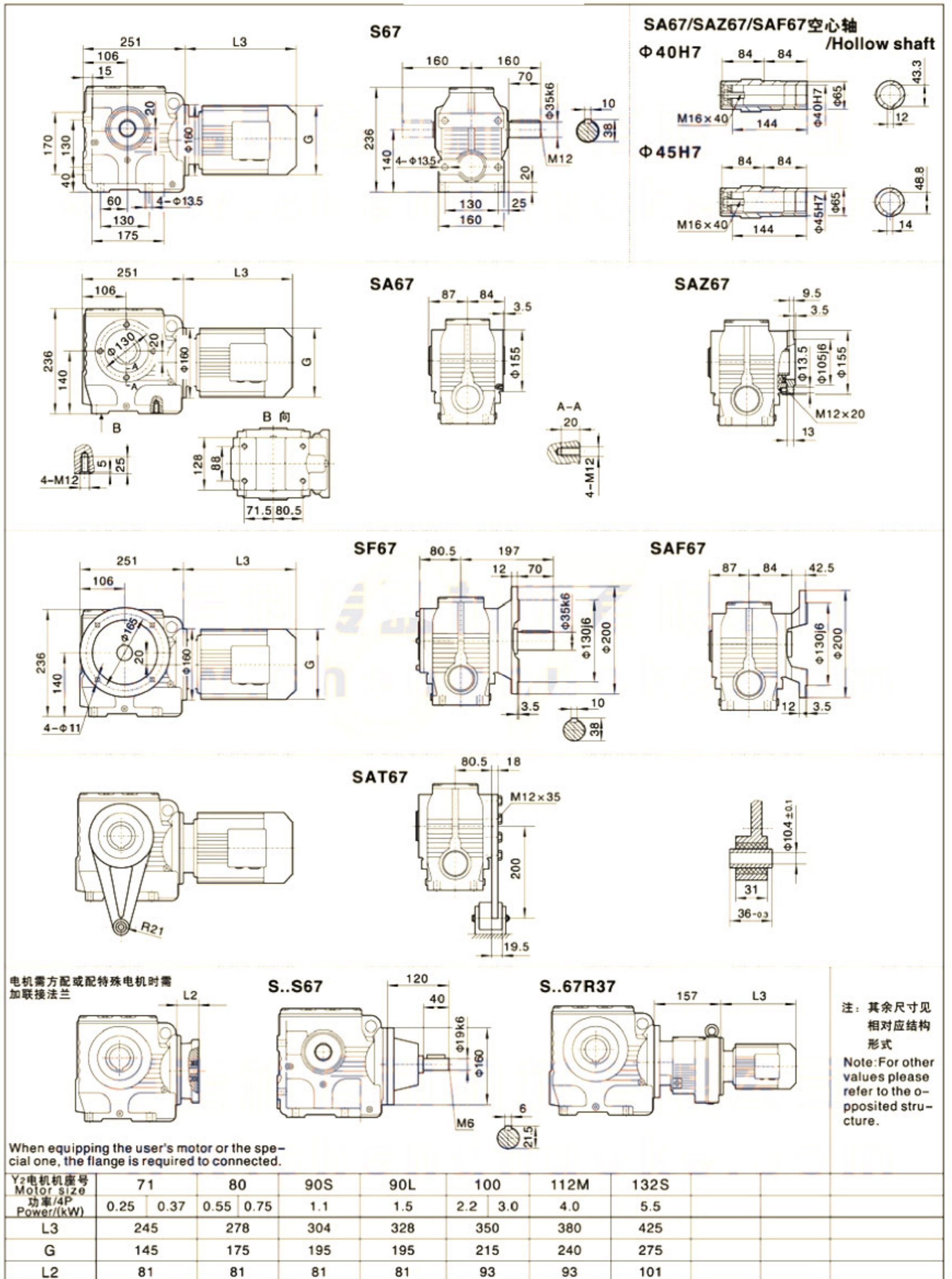


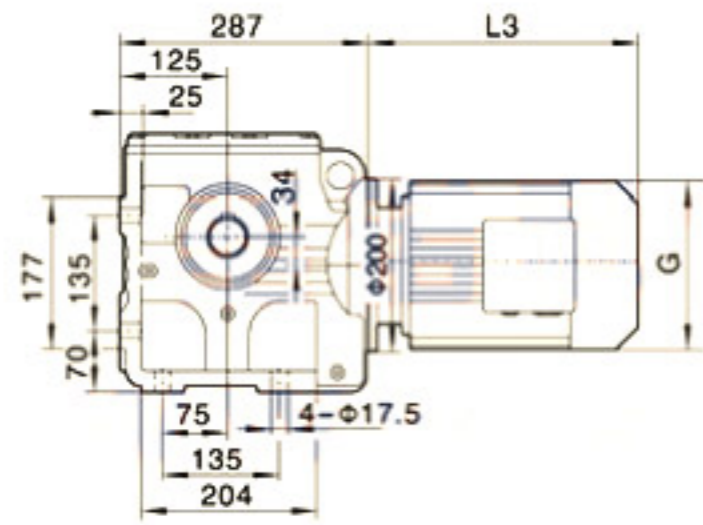
注：其余尺寸见相对应结构形式
Note: For other values please refer to the o-pposited structure.

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

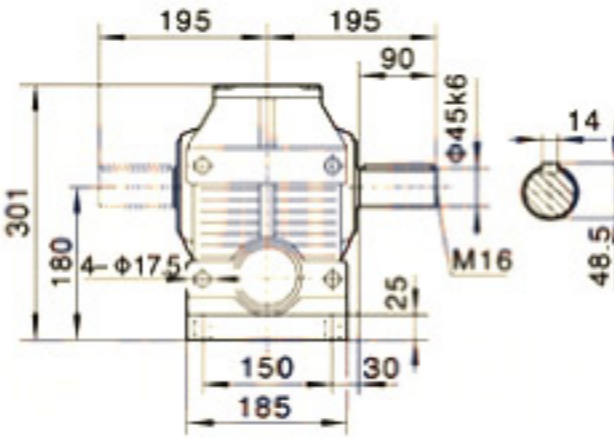
Y2电机机座号 Motor size	63	71	80	90S	90L	100			
功率/4P Power/(kW)	0.18	0.37	0.55 0.75	1.1	1.5	2.2 3.0			
L3	235	245	278	304	328	340			
G	130	145	175	195	195	215			
L2	71	71	71	71	71	93			

注:1.SA、SF、SAF、SAZ壳体为通用件,安装尺寸均可相互参照.2."S.."表示S、SA、SF、SAF、SAZ
Note:1.The housings of SA、SF、SAF、SAZ are common parts.The mounting dimensions may consult each other. 2."S.."mean S、SA、SF、SAF、SAZ





S77



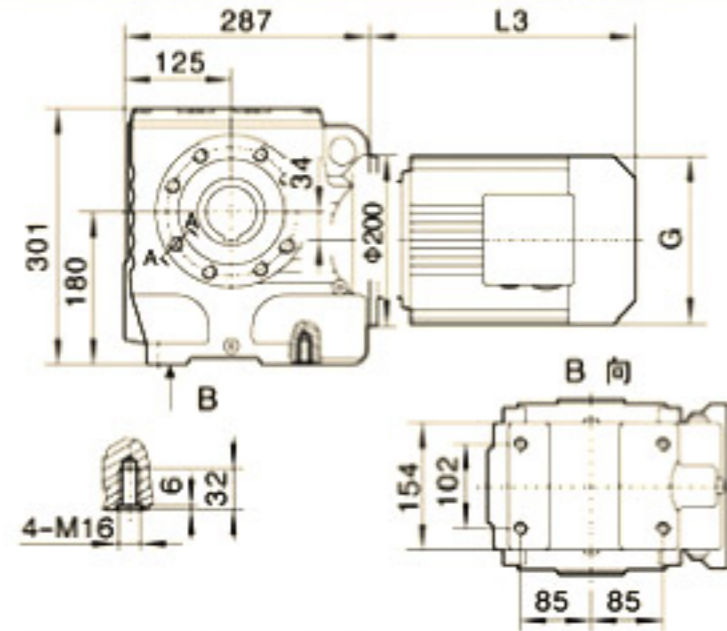
SA77/SAZ77/SAF77空心轴

Φ50H7

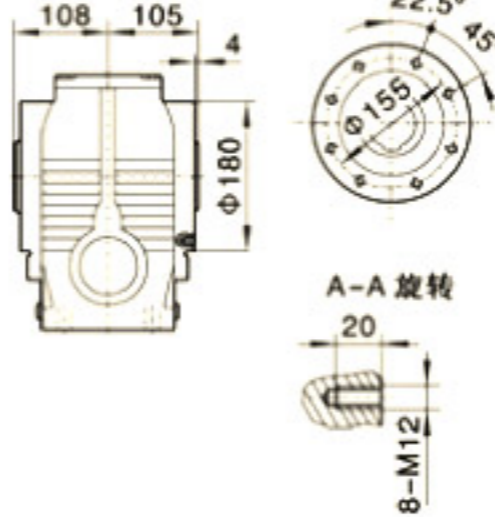


/Hollow shaft

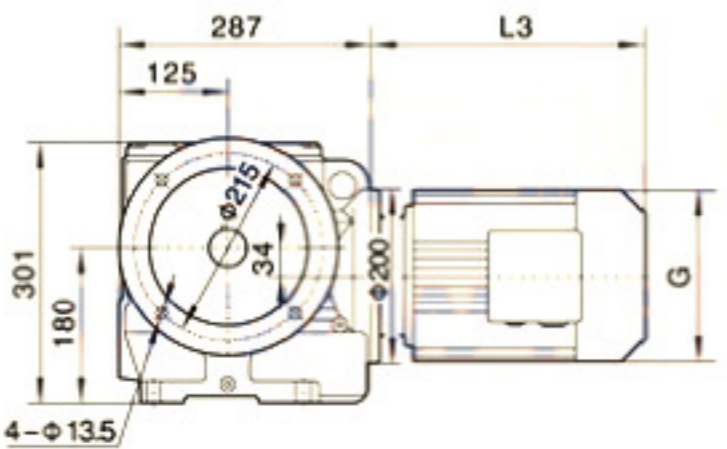
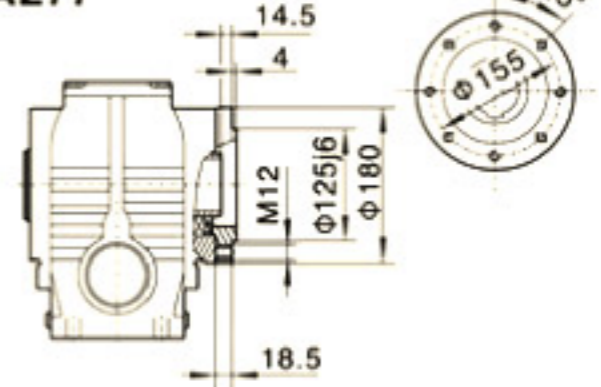
Φ60H7



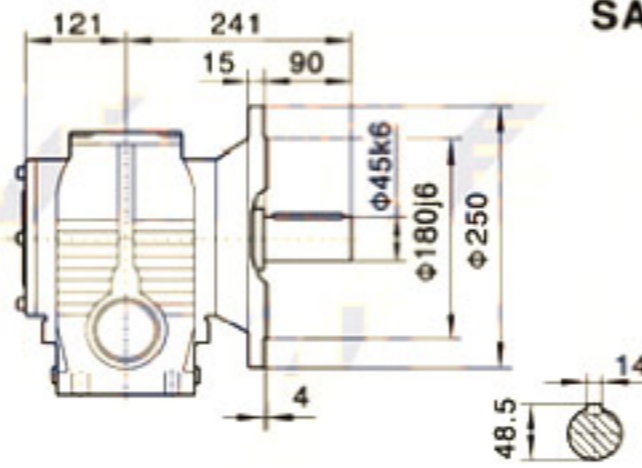
SA77



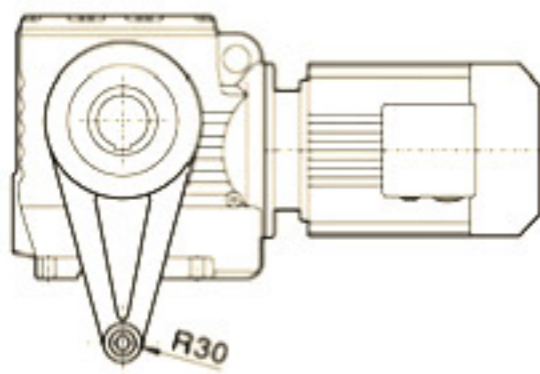
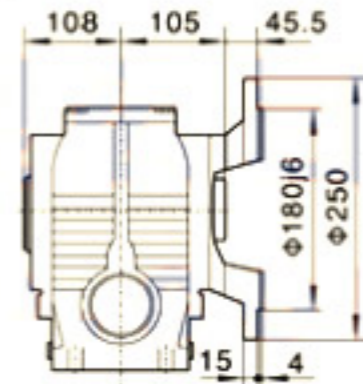
SAZ77



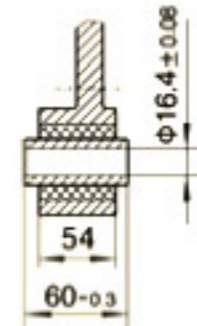
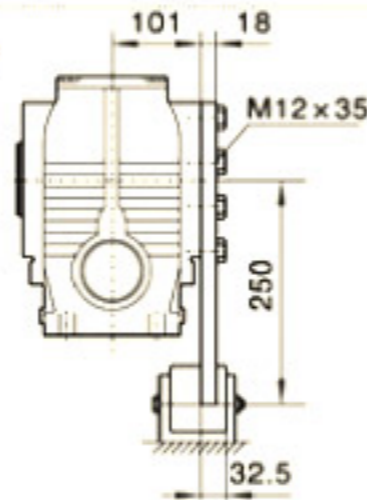
SF77



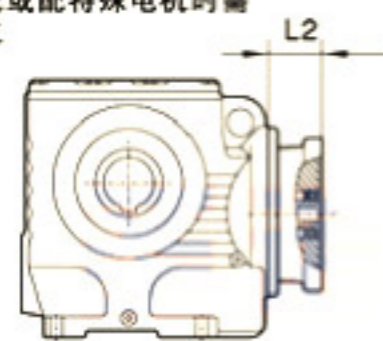
SAF77



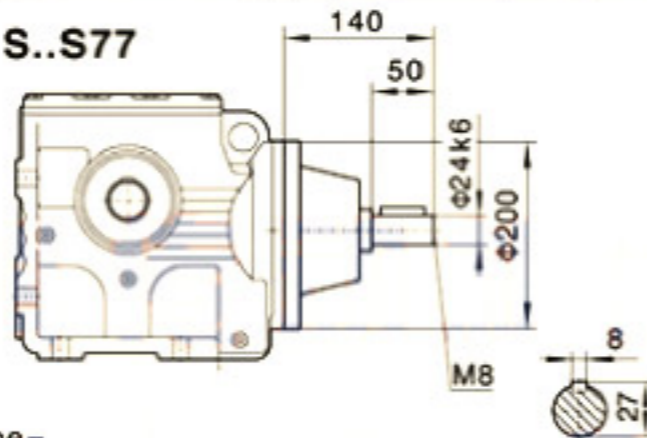
SAT77



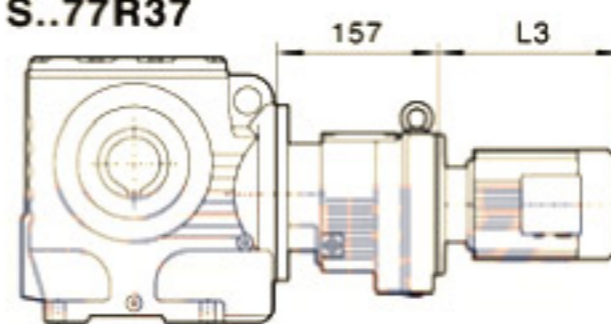
电机需方配或配特殊电机时需加联接法兰



S..S77



S..77R37



注：其余尺寸见相对应结构形式

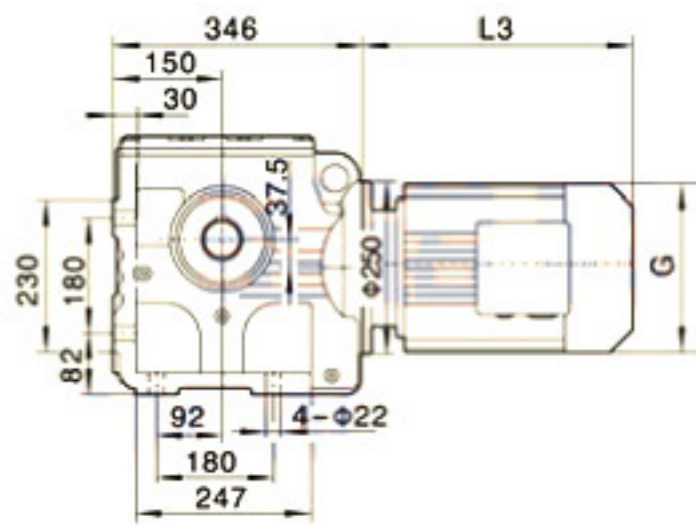
Note: For other values please refer to the opposed structure.

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

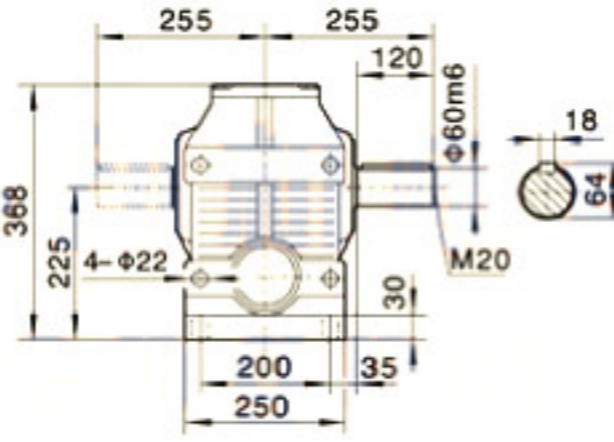
Y2电机机座号 Motor size	80	90S	90L	100	112M	132S	132M		
功率/4P Power/(kW)	0.55 0.75	1.1	1.5	2.2 3.0	4.0	5.5	7.5		
L3	278	304	328	350	380	425	461		
G	175	195	195	215	240	275	275		
L2	81	81	81	93	93	101	101		

注:1.SA、SF、SAF、SAZ壳体为通用件,安装尺寸均可相互参照.2."S.."表示S、SA、SF、SAF、SAZ

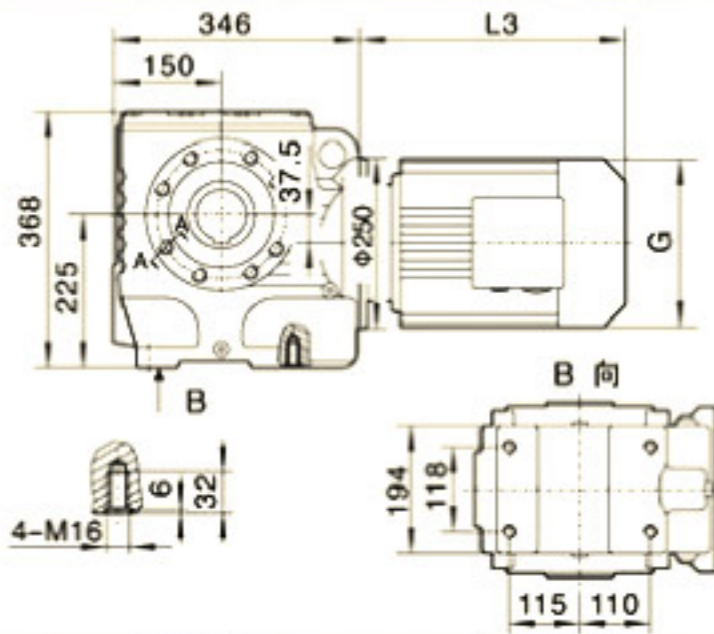
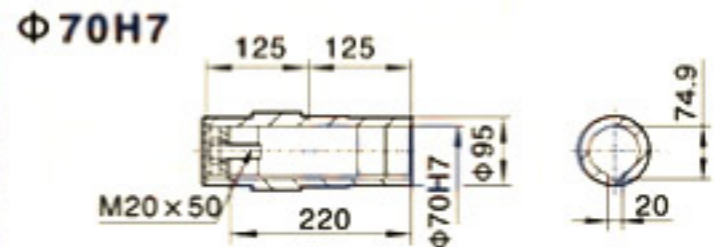
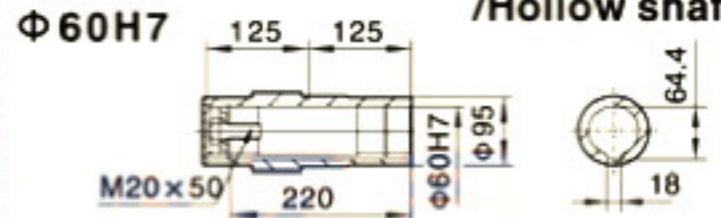
Note:1.The housings of SA、SF、SAF、SAZ are common parts.The mounting dimensions may consult each other. 2."S.."mean S、SA、SF、SAF、SAZ



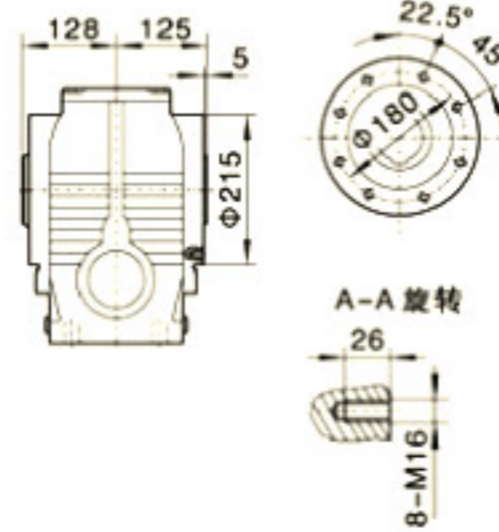
S87



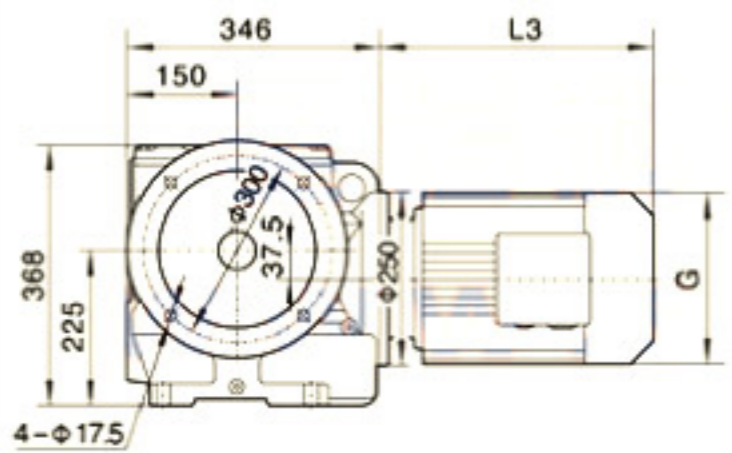
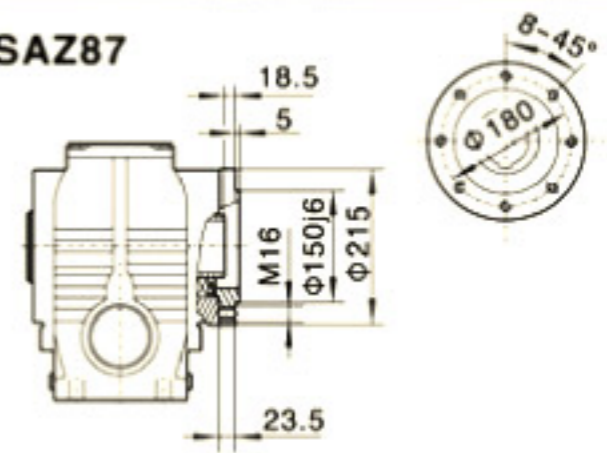
SA87/SAZ87/SAF87空心轴 /Hollow shaft



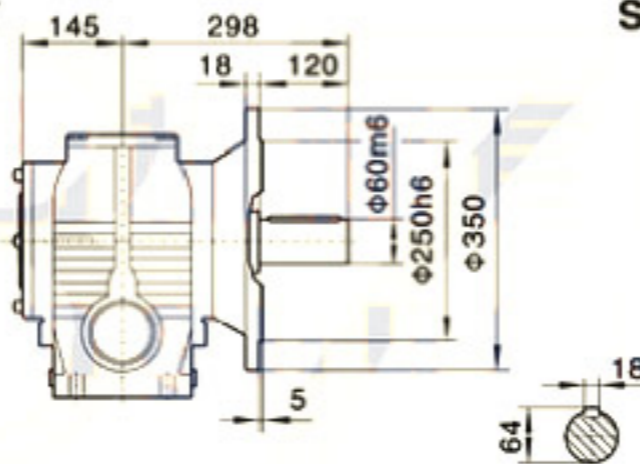
SA87



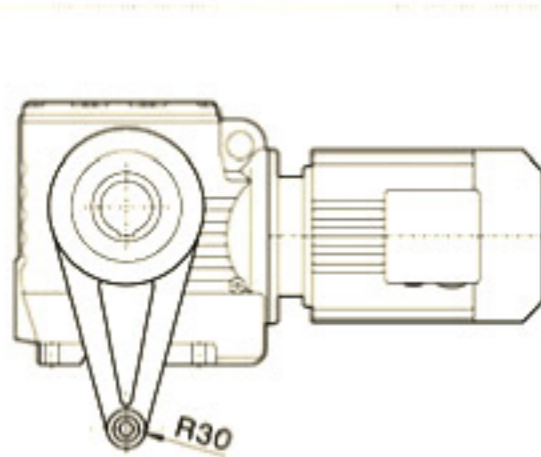
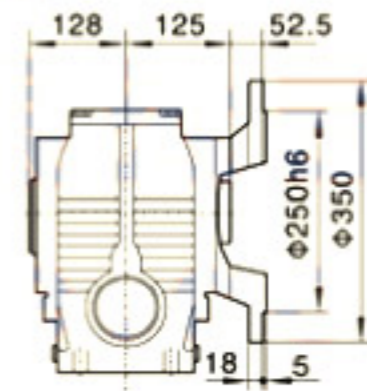
SAZ87



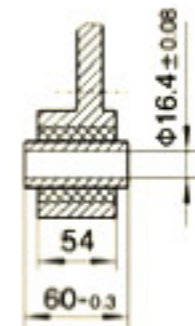
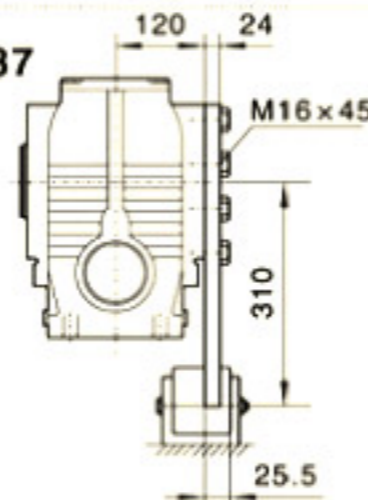
SF87



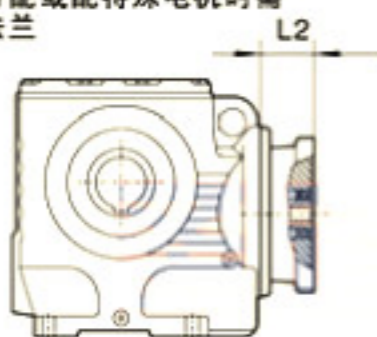
SAF87



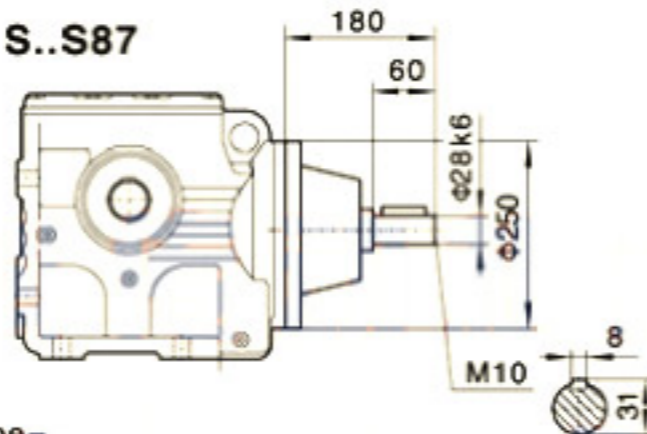
SAT87



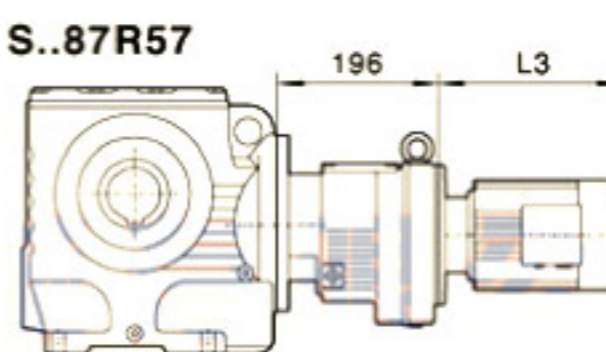
电机需方配或配特殊电机时需加联接法兰



S..S87



S..87R57



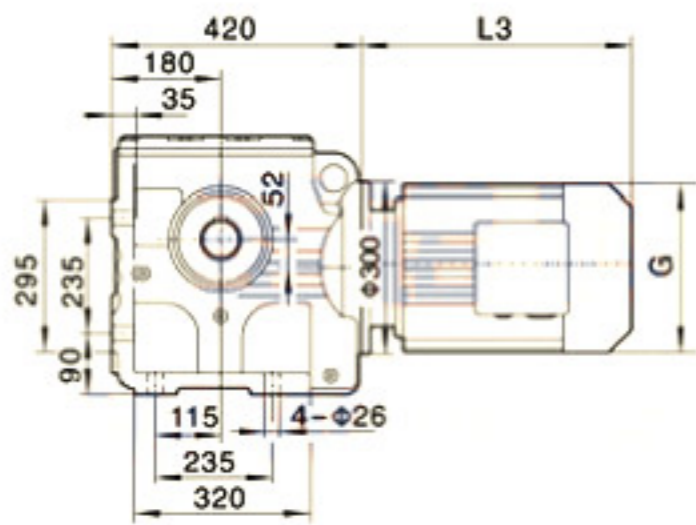
注：其余尺寸见相对应结构形式
Note: For other values please refer to the opposed structure.

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

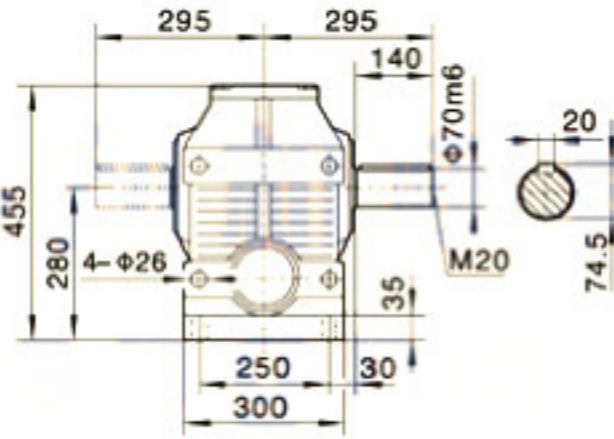
Y2电机机座号 Motor size	80	90S	90L	100	112M	132S	132M	160M	160L
功率/4P Power/(kW)	0.75	1.1	1.5	2.2 3.0	4.0	5.5	7.5	11	15
L3	246	280	304	350	380	425	461	524	547
G	175	195	195	215	240	275	275	330	330
L2	86	86	86	71	71	101	101	126	126

注:1.SA、SF、SAF、SAZ壳体为通用件,安装尺寸均可相互参照.2."S.."表示S、SA、SF、SAF、SAZ

Note:1.The housings of SA、SF、SAF、SAZ are common parts.The mounting dimensions may consult each other. 2."S.."mean S、SA、SF、SAF、SAZ

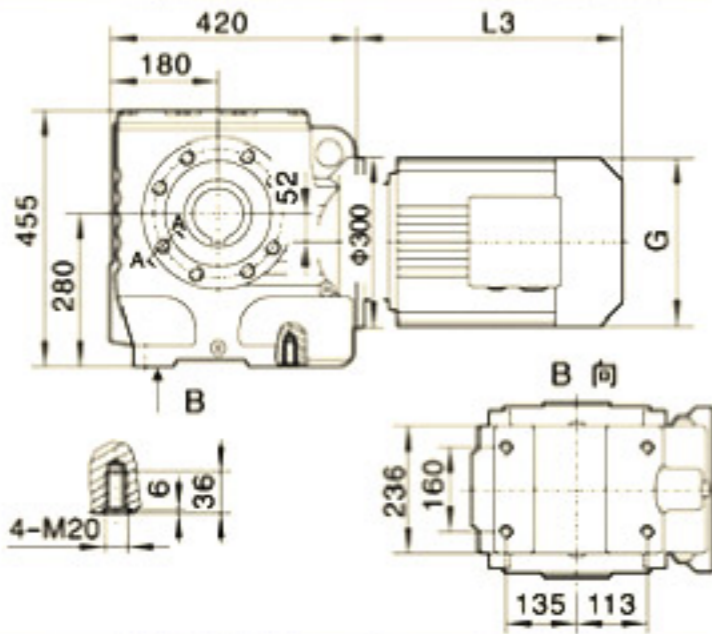
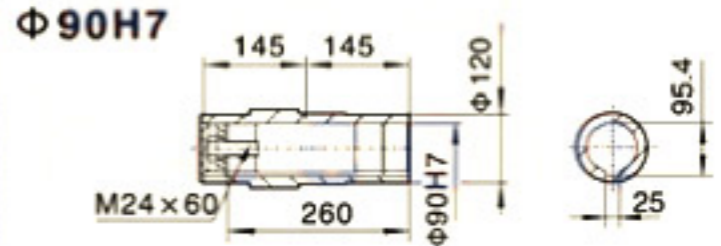
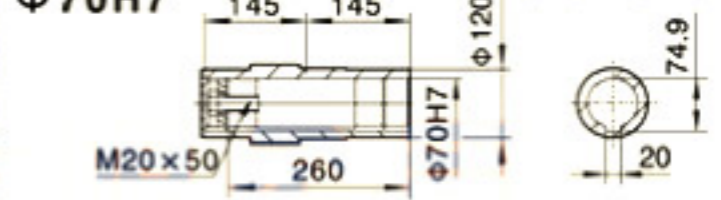


S97

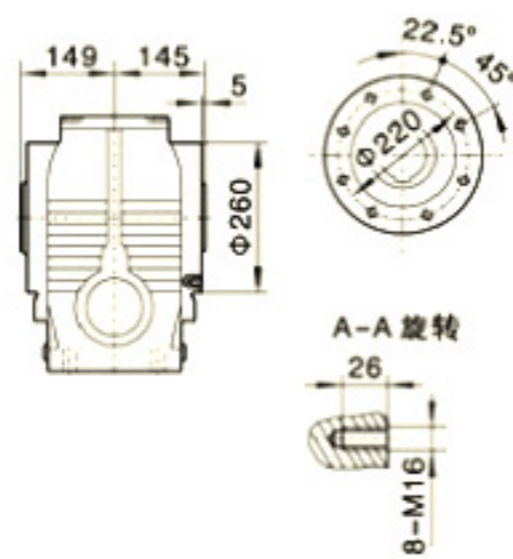


SA97/SAZ97/SAF97空心轴

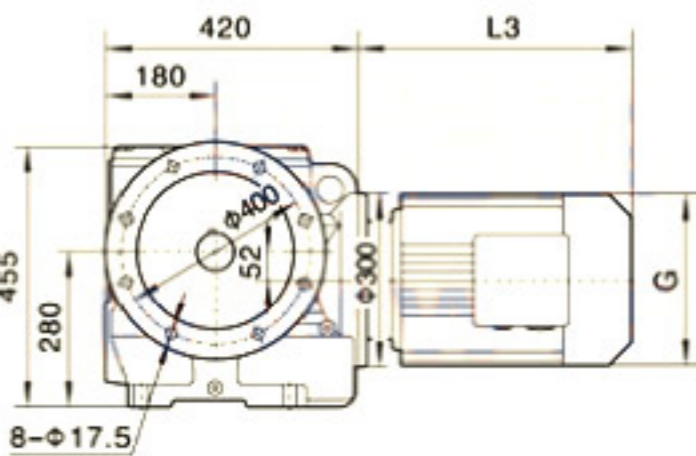
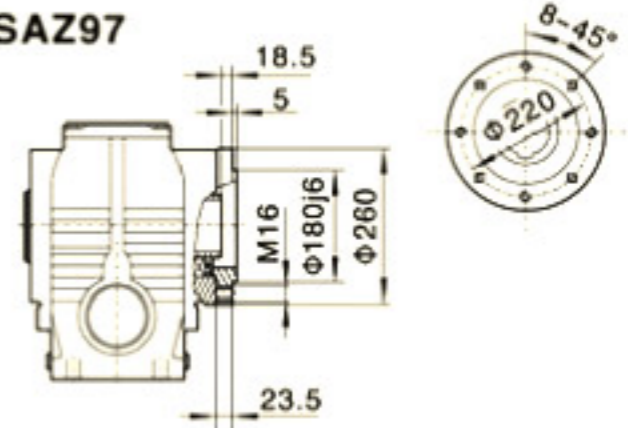
Φ70H7 /Hollow shaft



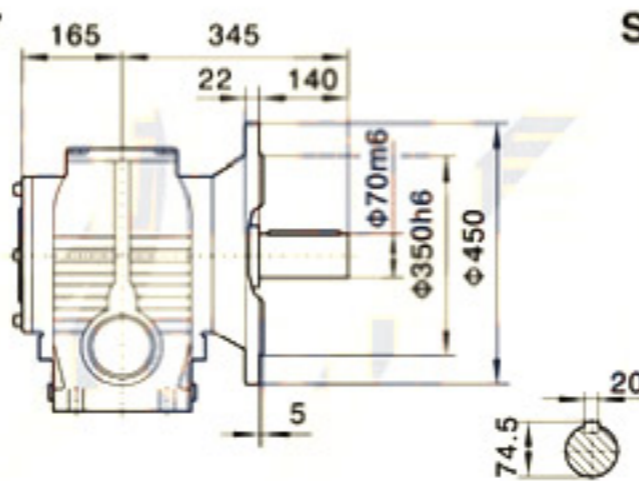
SA97



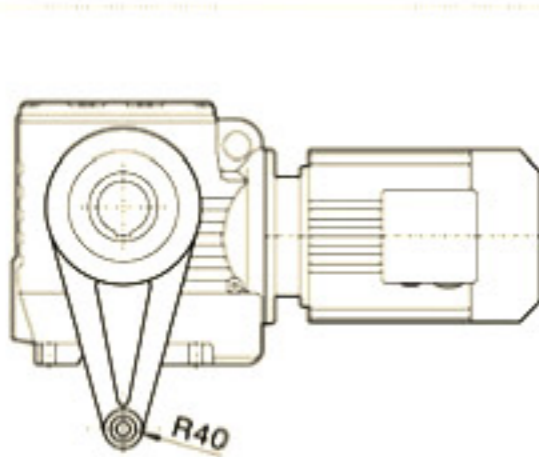
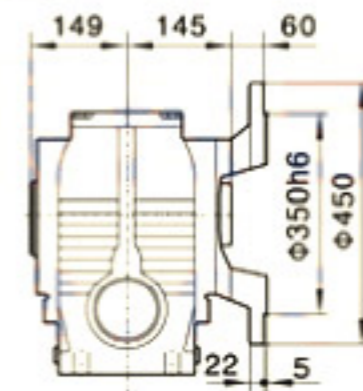
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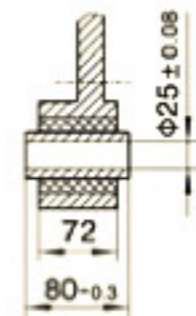
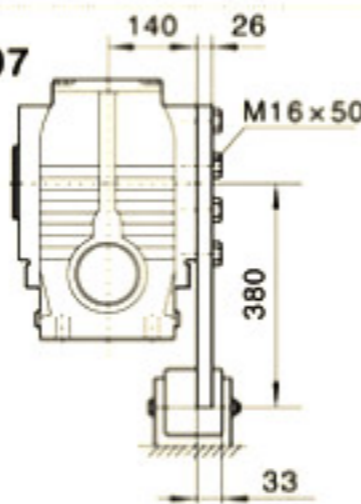
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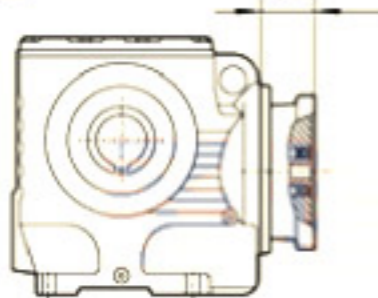
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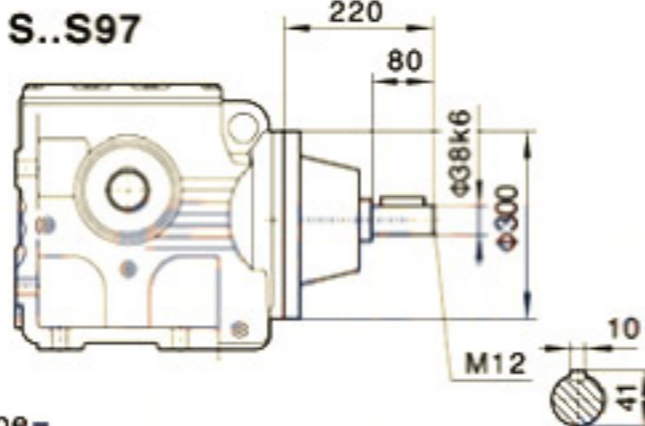
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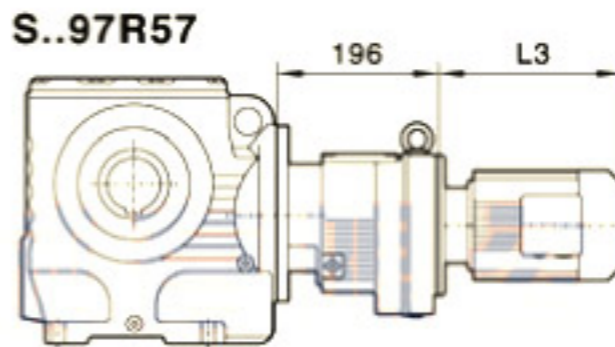
电机需方配或配特殊电机时需加联接法兰



S..S97



S..97R57



注: 其余尺寸见相对应结构形式

Note: For other values please refer to the opposed 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	90L	100	112M	132S	132M	160M	160L	180M	180L
功率/4P Power/(kW)	1.5	2.2 3.0	4.0	5.5	7.5	11	15	18.5	22
L3	304	315	334	425	461	524	547	555	588
G	195	215	240	275	275	330	330	380	380
L2	86	86	86	101	101	126	126	126	126

注: 1.SA、SF、SAF、SAZ壳体为通用件, 安装尺寸均可相互参照. 2."S.."表示S、SA、SF、SAF、SAZ

Note: 1.The housings of SA、SF、SAF、SAZ are common parts.The mounting dimensions may consult each other. 2."S.."mean S、SA、SF、SAF、SAZ

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。
- 减速机应该放置在不振动的干燥木制基座上并遮盖好。当储存减速机 and 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，减速机和无级变速器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°C, and temperature rise should lower 40°C.

- 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，一般情况调换油镜、油塞、通气帽即可。
- 备件一定要从本公司购买。

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，要用隔热屏减少热辐射。
- 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。

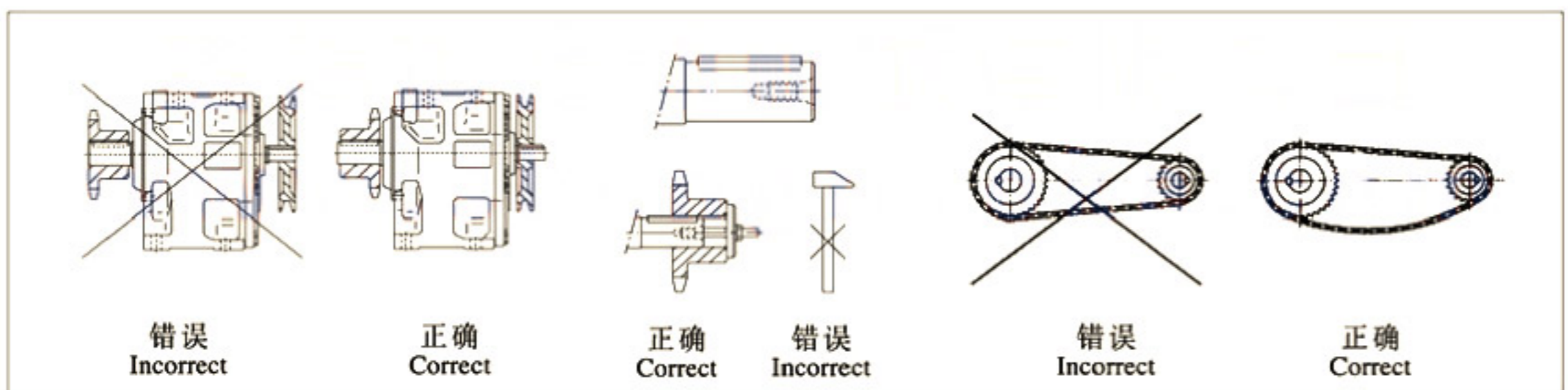
- Gear units should run under permissible torque, safety devices should be equipped to avoid damage if load is larger permissible torque.
- Gear units can run continuously and are permitted to rotate in both directions.
- If mounting position changes, the positions of breather screw, oil level, oil drain plug will be change with each other as usual.
- Spare parts must be purchased from buyer's.

Installation and dismantlement

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

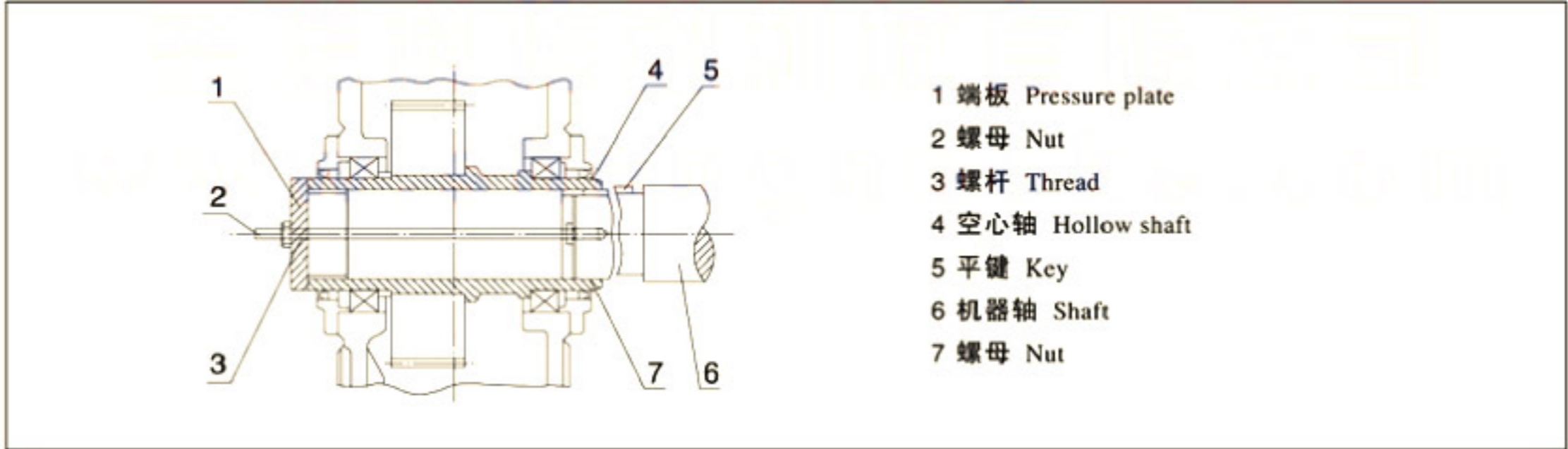
Installation of whole units

- 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)。

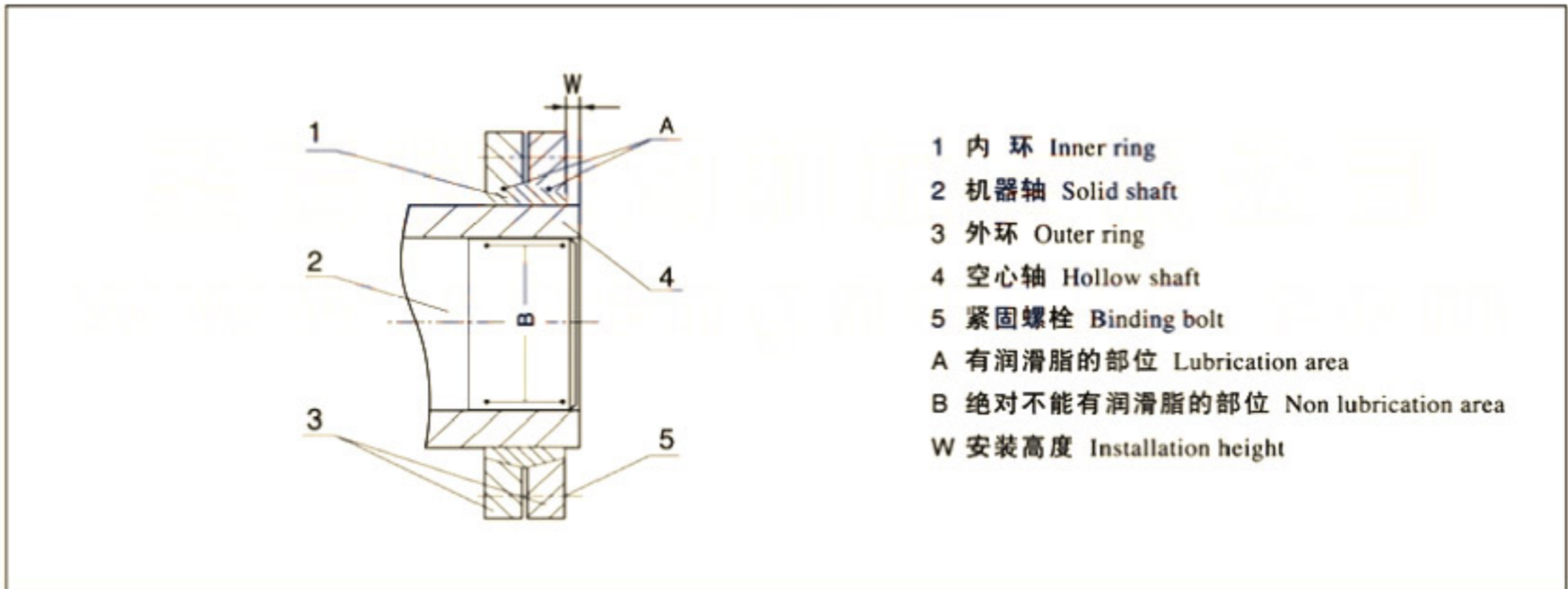
7) When connecting hollow shaft and solid shaft, please clean the surface and put anti-corrosive oil on it. When connecting, besides nuts and threads illustrated in the drawing below, other installing tools such as oil hydraulic devices can be used.



- 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

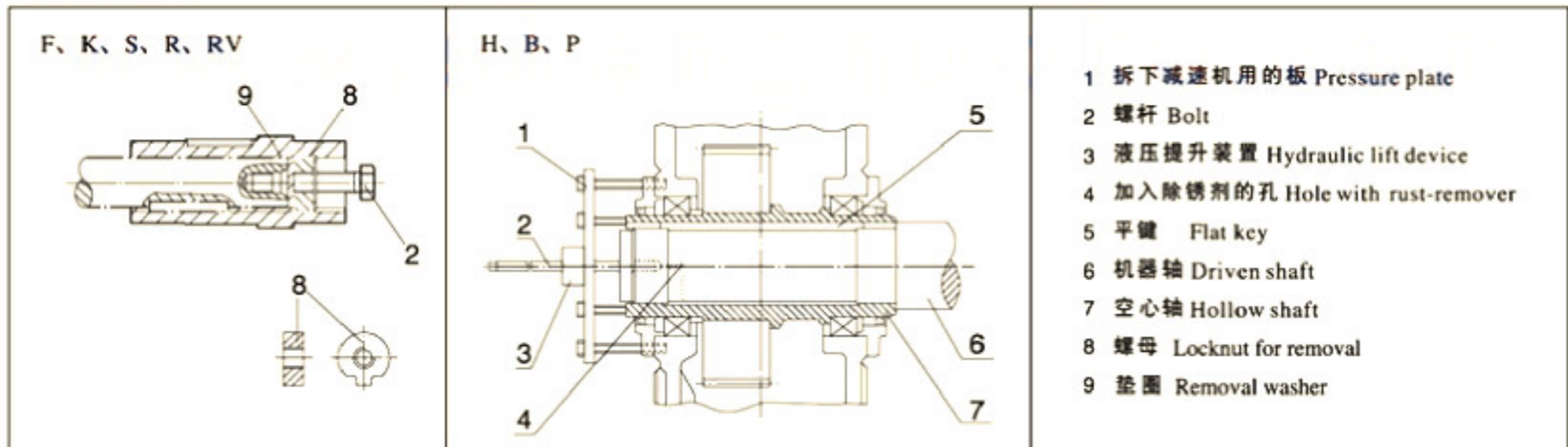
1) 空心轴的拆卸

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. (Screw 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：

Lubrication and cooling

Lubrication

1) Choosing lubrication oil, as following table:

系列 Series of rducer	环境温度 Ambient temperature				ISO粘度与NLGI相应 Adhesiveness of ISO and NLGI unitive	ESSO	Mobil	Shell	GB牌号 L-CK
	-50	0℃	+50	+100					
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
S	-45	0		+80	VG680		Mobil Glygoyle HE 680		N680
		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。

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.

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。

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

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。

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。

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。

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。

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

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.

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 if the rotating components touch other ones.

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

Malfunction, cause and measure

Maintenance should be made by qualified workers.

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.

保养

用户要定期对减速机进行维护和保养，要定期检查润滑油的使用状态，定期清理通气帽、风扇、冷凝管和减速机表面的灰尘和异物，保持减速机清洁，保证减速机的正常运行。

Maintenance

Users must maintain gear units periodically check oil state periodically clean breather screw, fan, cooling coil and surface of gear units periodically. Keep gear units clean and assure that gear units work smoothly.

措施期限备注：

Maintenance periods:

检查油温 Check oil temperature	每日 Everyday
检查减速机的不正常的噪声 Check abnormal noise of gear units	每日 Everyday
检查油面高度 Check oil level	每月 Every month
检查减速机的漏油 Check leakage	每月 Every month
检验油中的水分 Analyse water	400工作小时后, 至少每年一次 Every 400 working hours. At least 1 years.
在起动之后的首次换油 Replace oil first time after start up	在400工作小时后 Every 400 working hours.
其后的换油 Afterward oil replacement	每18个月或者5000工作小时 Every 18 months or 5000 working hours
清理滤油器 Clean oil filter	每3个月 Every 3 months
清理通气帽 Clean breathe screw	每3个月 Every 3 months
清理风扇、风扇罩和减速机箱体 Clean fan, fan shield and housing	和换油同时进行 At the same time as replacing oil
检查冷却螺旋管的沉积物 Check residues in cooling coil.	大约每2年, 和换油同时进行 Every 2 years and the same time as replacing oil
检查润滑油空气冷却器 Check air-cooling devices	和换油同时进行 At the same time as replacing oil
检查润滑油水冷却器 Check water-cooling devices	和换油同时进行 At the same time as replacing oil
检查紧固螺栓的紧固程度 Check tightening bolt	第一次换油后, 其后每隔一次换油 After first replacing oil, every 2times of replacing oil
对于减速机的全面检查 Make an over all check	大约每2年和换油同时进行 Every 2 years and coincide with replacing oil