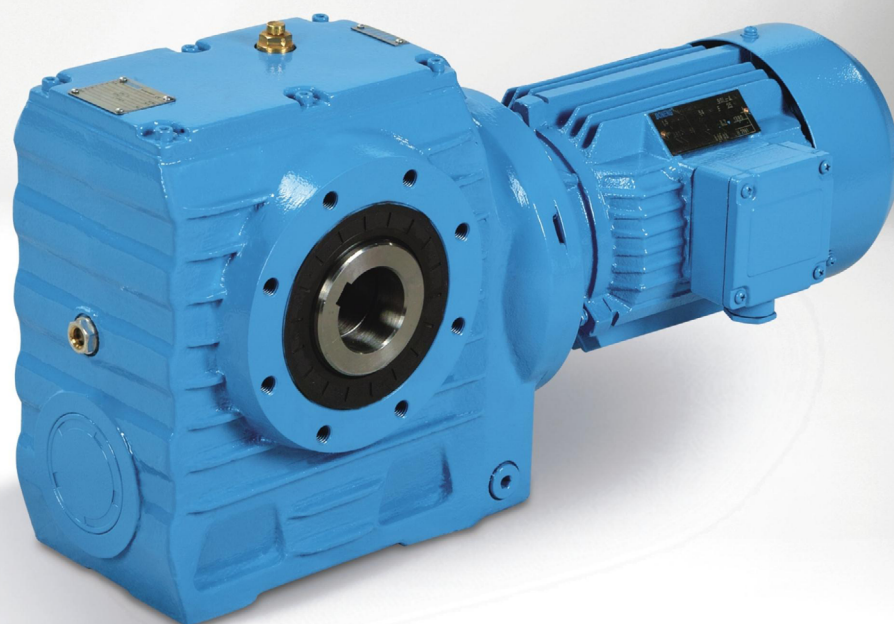


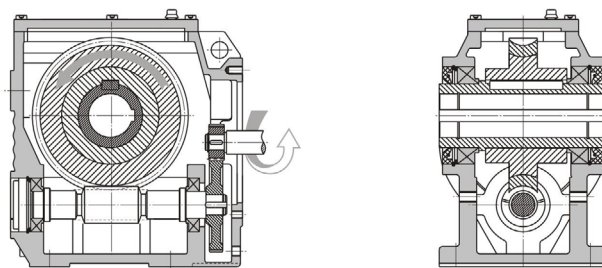
S 系列斜齿轮-蜗轮减速机 Series Helical-worm Gear Units





1 结构示意图:

1 Sectional Drawings:



S..37-S..97

注:S..107、S..127敬请垂询。
Note: S107 and S127 are on request.

2 型号表示方法:

2 Type Designation

S	SF	97	A	- 32.6 -	M11+V68-	B51	- 90
S系列安装形式 S Series							
S = 底座式平键实心轴 Foot-mounted solid shaft with parallel key							
SH = 底座式带锁紧盘空心轴 Foot-mounted hollow shaft with shrink disk							
SW = 底座式平键空心轴 Foot-mounted hollow shaft with parallel key							
SN = 底座式渐开线花键空心轴 Foot-mounted hollow shaft with involute spline							
SF = 法兰式平键实心轴 Flange-mounted solid shaft with parallel key							
SL = 法兰式平键空心轴 Flange-mounted hollow shaft with parallel key							
SHL = 法兰式带锁紧盘空心轴 Flange-mounted hollow shaft with shrink disk							
SNF = 法兰式渐开线花键空心轴 Flange-mounted hollow shaft with involute spline							
SA = 扭力臂式平键空心轴 Torque-arm-mounted hollow shaft with parallel key							
SHA = 扭力臂式带锁紧盘空心轴 Torque-arm-mounted hollow shaft with shrink disk							
SNA = 扭力臂式渐开线花键空心轴 Torque-arm-mounted hollow shaft with involute spline							
SZ = 小法兰式平键空心轴 Short-flange-mounted hollow shaft with parallel key							
SHZ = 小法兰式带锁紧盘空心轴 Short-flange-mounted hollow shaft with shrink disk							
SNZ = 小法兰式渐开线花键空心轴 Short-flange-mounted hollow shaft with involute spline							
机座号 Size							
输出轴方向 Output Shaft Direction							
A\B=单向 Unidirectional output shaft							
S=双向 Bidirectional output shaft							
公称减速比 Nominal Ratio							
输入部分 Input Part							
M=电机 Motor							
AE=轴输入 Input Shaft							
AG=法兰连接 Connection Flange							
附件和特殊要求 Accessories and Special Requests							
安装方位 Mounting Positions							
电机接线盒位置 Positions of Motor Terminal Box							

组合型举例 Combi-type Designation: S87A/CRL47-284-M1.1+V68-B3-90



3 安装方位、电机接线盒位置和输出轴方向：

3 Mounting Positions, Positions of Motor Terminal Box and Output Shaft Direction:

 S.. \SW.. \SH.. \SN..	 B3	 B61	 B8
	 B31	 B62	 B81
	 V5	 V51	 V6
 SF.. \SL.. \SHL.. \SNF..	 B51	 B52	 B53
	 B54	 B55	 B56
	 B57	 V1	 V3
 SF.. \SL.. \SHL.. \SNF..	 B58	 B59	 B60
	 V11	 V12	 V13
	 V14	 V15	 V16
 SZ.. \SHZ.. \SNZ..	 H1	 H2	 H3
	 H4	 H5	 H6
	 H7	 H8	 H9
 SZ.. \SHZ.. \SNZ..	 H11	 H12	 H13
	 H14	 H15	 H16
	 H17	 H18	 H19
 SA.. \SHA.. \SNA..	 H21	 H22	 H23
	 H24	 H25	 H26
	 H27	 H28	 H29

S



4 选型及举例：

4 Type Selection and Example:

序号 Steps	说 明 Description	代号 Symbols	参 数 计 算 Parameters Calculation and Guidelines							
1	被驱动设备系数 Driven Machine Factor	f ₁	负荷性质 Load Characteristic	每天使用时间（小时）Operating hours per day (h)						
			≤2	2~10		10~24				
			均匀负载 Uniform	1.00(1.00)	1.00(1.25)		1.25(1.50)			
			一般冲击 Moderate	1.00(1.25)	1.25(1.50)		1.50(1.75)			
			强烈冲击 Heavy	1.25(1.50)	1.50(1.75)		1.75(2.00)			
			注：当每小时启动、停止次数≥10次，请使用括号内数值。 Note: Apply values in the brackets when starts per hour are 10 times or more.							
2	环境温度系数 Ambient Temperature Factor	f _t	负荷性质 Load Characteristic	环境温度 Ambient Temperature						
			20	25	30	35	40	45	50	
			均匀负载 Uniform	1.00	1.00	1.00	1.03	1.06	1.12	1.20
			一般冲击 Moderate	1.00	1.01	1.02	1.06	1.12	1.16	1.30
			强烈冲击 Heavy	1.00	1.02	1.04	1.10	1.17	1.20	1.40
			注：环境温度-10~+40℃，均匀和一般冲击，整机使用率≤90%，每天工作≤8小时，输入转速1800以下，若超过此范围，S57以上蜗轮箱应在蜗杆轴端加风扇。 Note:The usual working condition is: ambient temperature -10~+40℃, uniform or moderate shock, utilization ratio ≤90%, working hours/d ≤8, and input speed ≤1800rpm. If not within this range, add fans to the worm shaft end of gear units type S57 and above.							
3	输入转速 Input Speed	n ₁	≤1800 r/min 更高转速请咨询 Consult us if higher speed required.							
4	确定减速比 Calculation of the Ratio	i	i=n ₁ /n ₂							
5	传动效率 Transmission Efficiency	η		i=23.8-67.8		i=73.7-389		S/CR组合Combi-type		
			η	77%		62%		57%		
6	以被动设备所需的扭矩或功率,确定蜗轮箱的输入功率 Calculation of the input power of the gear unit on basis of the torque and power required by the driven machine.	P ₁	P ₁ =T ₂ · n ₁ /(9550 · i · η) 或 P ₁ =P ₂ / η							
7	根据计算，查传动能力表,确定齿轮箱规格,直联电机时需查直联电机功率表 Determination of gear unit type referring to the table of transmission capacity after calculation, For directly-connected motor, require to refer to directly-connected motor power table.	T _{2N} 、P _{1N}	T _{2N} ≥T ₂ · f ₁ · f _t 或 P _{1N} ≥P ₁ · f ₁ · f _t							
8	径向力、轴向力校核 Check the radial and axial forces on the shafts.	F _{r1} /F _{r2} F _{a1} /F _{a2}	查第12/S页，S系列Fr2表 See P 12/S							
9	确认润滑方式 Determination of Lubrication System		一般采用飞溅润滑 Generally Splash Lubrication							
10	确认冷却方式 Determination of Cooling System		自然冷却和风扇冷却 Generally Air Cooling or Fan cooling							
11	按型号表示方法确定各项 Determination of every item included in the Type Designation		型号表示方法见2/S For details about Type Designation, see P 2/S.							
12	一般环境条件 Normal ambient conditions		环境温度：-10至40℃，空旷场地通风良好，海拔高度1000米以下，一般工厂灰尘。 Ambient temperature -10 to 40℃, ample space, good ventilation, altitude not exceeding 1000m and common plant dust.							
13	特殊环境条件 Special ambient conditions		高温、低温、灰尘多，化学作用（例：酸碱等），露天（直接日照、冰、水淋等），请咨询。 For higher or lower temperature, dusty sites, chemical reaction (acids, alkaline, etc), or open field (sunlight, ice, rain, etc), please consult us!							

选型举例
Example

1) 减速电机

已知条件:

- 1、被驱动设备所需功率 $P_2=1\text{kW}$, 所需转速 $n_2=10.4\text{ r/min}$;
- 2、普通电机: 4极, 转速 $n_1=1450\text{r/min}$;
- 3、负荷性质: 一般冲击, 工作8小时/天, 环境温度 40°C , 启动频率10次/小时;
- 4、安装输出形式: 单向实心输出轴A向, 法兰安装, 安装方位B51, 接线盒位置为90.

选型步骤:

- 1、根据负荷性质查表可得出被驱动设备系数 $f_1=1.5$, 环境温度系数 $f_t=1.12$;
- 2、确定速比 i_N :
 $i = n_1/n_2 = 1450/10.4 = 139.4$, 取公称减速比 $i_N=139$;
- 3、计算输入功率并确定电机功率(查表得出齿轮传动效率 $\eta=62\%$):
 $P_1 = P_2/\eta = 1/0.62 = 1.6\text{kW}$, 取电机功率为 2.2kW ;
查直联电机功率表, 可直联;
- 4、确定减速电机额定功率 P_{1N} :
 $P_{1N} \geq P_2 \cdot f_1 \cdot f_t/\eta = 1 \times 1.5 \times 1.12/0.62 = 2.7\text{kW}$;
- 5、根据已知条件和以上数据, 查传动能力表可选出减速电机型号为:
SF87A-139-M2.2-B51-90

2) 齿轮箱

已知条件:

- 1、被驱动设备所需扭矩 $T_2=800\text{N} \cdot \text{m}$, 所需转速 $n_2=5\text{r/min}$;
- 2、输入转速 $n_1=200\text{r/min}$;
- 3、负荷性质: 均匀负载, 连续工作12小时/天, 环境温度 40°C ;
- 4、安装输出形式: 平键空心轴输出A向, 底脚安装, 安装方位B8.

选型步骤:

- 1、根据负荷性质查表可得出被驱动设备系数 $f_1=1.25$, $f_t=1.06$;
- 2、确定速比 i_N :
 $i = n_1/n_2 = 200/5 = 40$, 取公称减速比 $i_N=41.1$;
- 3、确定减速箱额定扭矩 T_{2N} 及额定功率 P_{1N} (传动效率 $\eta=77\%$):
 $T_{2N} \geq T_2 \cdot f_1 \cdot f_t = 800 \times 1.25 \times 1.06 = 1060\text{N} \cdot \text{m}$;
 $P_{1N} \geq P_1 \cdot f_1 \cdot f_t = T_2 \cdot f_1 \cdot f_t \cdot n_1/(9550 \cdot i_N \cdot \eta)$
 $= 800 \times 1.25 \times 1.06 \times 1450/(9550 \times 41.1 \times 0.77)$
 $= 5.1\text{kW}$;
查传动能力表可得S87满足要求($T_{2N}=1600\text{N} \cdot \text{m}$, $P_{1N}=6.67\text{kW}$);
- 4、确定输入部分:
根据 $P_{1N} \geq P_1 = T_2 \cdot n_1/(9550 \cdot i_N \cdot \eta)$
 $= 800 \times 1450/(9550 \times 41.1 \times 0.77) = 3.84\text{kW}$
用户自配的电机电功率取 4kW , 查轴输入尺寸图表选AE3即可;
根据已知条件和以上数据, 可初选出减速箱型号为:
SW87A-41.1-AE3-B8

1) Gear motor

Known Criteria:

1. The power required by the driven machine $P_2=1\text{kW}$, speed $n_2=10.4\text{r/min}$
2. Common motor: 4-pole, speed $n_1=1450\text{r/min}$
3. Load characteristics: moderate, working 8 hours/d, ambient temperature 40°C and starting 10 times/h
4. Mounting and output mode: One-way solid output shaft A direction, flange-mounted, mounting position B51, terminal box position 90.

Selection Steps:

1. By referring to the tables of Load Characteristic and Ambient Temperature, we get the driven machine factor $f_1=1.5$ and ambient temperature factor $f_t=1.12$
2. Calculation of the Ratio i_N :
As $i = n_1/n_2 = 1450/10.4 = 139.4$, nominal ratio $i_N=139$ is appropriate.
3. Calculation of the input power and determination of the motor power (transmission efficiency $\eta=62\%$):
 $P_1 = P_2/\eta = 1/0.62 = 1.6\text{kW}$, so 2.2kW motor is selected.
Refer to the directly-connected motor power table, it can be directly-connected.
4. Determination of the nominal power of the geared motor P_{1N} :
 $P_{1N} \geq P_2 \cdot f_1 \cdot f_t/\eta = 1 \times 1.5 \times 1.12/0.62 = 2.7\text{kW}$
5. The type selected:
SF87A-139-M2.2-B51-90

2) Gear Unit

Known Criteria:

1. The torque required by the driven machine $T_2=800\text{N} \cdot \text{m}$ and speed $n_2=5\text{r/min}$
2. The input speed $n_1=200\text{r/min}$
3. Load characteristic: uniform, operating 12h/d continuously, ambient temperature 40°C
4. Mounting and output mode: Parallel key solid shaft output A direction, foot-mounted, mounting position B8.

Selection steps:

1. By referring to the table of Load Characteristic, we get the driven machine factor $f_1=1.25$, $f_t=1.06$.
2. Calculation of the ratio i_N :
As $i = n_1/n_2 = 200/5 = 40$, nominal ratio $i_N=41.1$ is appropriate
3. Determination of the nominal torque T_{2N} and nominal power P_{1N} of the gear unit (transmission efficiency $\eta=77\%$):
 $T_{2N} \geq T_2 \cdot f_1 \cdot f_t = 800 \times 1.25 \times 1.06 = 1060\text{N} \cdot \text{m}$;
 $P_{1N} \geq P_1 \cdot f_1 \cdot f_t = T_2 \cdot f_1 \cdot f_t \cdot n_1/(9550 \cdot i_N \cdot \eta)$
 $= 800 \times 1.25 \times 1.06 \times 1450/(9550 \times 41.1 \times 0.77)$
 $= 5.1\text{kW}$
In the table of Transmission Capacity, K08 meets the requirements ($T_{2N}=1600\text{N} \cdot \text{m}$, $P_{1N}=6.67\text{kW}$)
4. Determination of the input mode:
As $P_{1N} \geq P_1 = T_2 \cdot n_1/(9550 \cdot i_N \cdot \eta) = 800 \cdot 1450/(9550 \cdot 41.1 \cdot 0.77) = 3.84\text{kW}$
and power of the user-supplied motor is specified as 4kW , in the table of Dimensions the AE Input Shaft, AE3 is selected.
5. The type selected:
SW87A-41.1-AE3-B8



5 传动能力表:

5 Transmission Capacity:

5.1 S系列传动能力表:

5 S Series Transmission Capacity:

			S..37			S..47			S..57			S..67			
n ₁ (r/min)	n _{2N} (r/min)	i _N	T _{2N} (N·m)	i _{ex}	P _{1N} (kW)	T _{2N} (N·m)	i _{ex}	P _{1N} (kW)	T _{2N} (N·m)	i _{ex}	P _{1N} (kW)	T _{2N} (N·m)	i _{ex}	P _{1N} (kW)	
S 1450	61	23.8	73	23.9	0.59	152	23.9	1.21	245	23.9	2	340	24.11	2.43	
	50	29.1	76	29.46	0.51	155	29.4	1.01	245	29.46	1.64	480	28.8	3.05	
	44	32.6	76	32.88	0.46	155	32.88	0.91	245	32.88	1.49	480	32.68	2.72	
	39	36.9	79	36.88	0.43	155	36.88	0.82	245	36.88	1.33	480	36.35	2.45	
	35	41.1	81	41.59	0.39	155	41.59	0.73	245	41.59	1.18	480	40.63	2.21	
	31	46.5	81	47.25	0.35	155	47.25	0.65	245	47.25	1.05	480	45.68	1.97	
	28.3	51.3	81	50.53	0.33	155	50.53	0.61	245	50.53	0.99	480	51.75	1.76	
	25.2	57.5	81	58.24	0.29	155	58.24	0.54	265	58.24	0.95	480	56.74	1.61	
	21.4	67.8	84	68	0.31	167	68	0.49	285	68	1.06	480	67.5	1.37	
	19.7	73.7	84	71.22	0.3	155	71.22	0.53	290	71.22	1.05	480	72.32	1.28	
	16.6	87.3	86	88.39	0.25	167	88.39	0.47	295	88.39	0.87	520	86.4	1.36	
	14.7	98.5	87	98.65	0.23	168	98.65	0.44	295	98.65	0.8	520	98.04	1.22	
	13.2	110	88	110.6	0.22	168	110.6	0.39	295	110.6	0.72	520	109	1.1	
	11.8	123	91	124.8	0.2	168	124.8	0.35	295	124.8	0.65	520	121.9	1	
	10.4	139	92	141.8	0.18	168	141.8	0.31	295	141.8	0.58	520	137.1	0.9	
	9.4	154	92	151.6	0.17	170	151.6	0.3	295	151.6	0.56	520	155.3	0.81	
	8.3	175	92	174.7	0.15	170	174.7	0.26	295	174.7	0.48	520	170.2	0.75	
	7.1	203	92	204	0.13	170	204	0.23	295	204	0.41	520	202.5	0.64	
	6.3	229										520	230	0.56	
	5.8	252										520	246.2	0.53	
	5.1	283										520	285	0.45	
	4.6	324													
	4.2	346													
	3.7	389													



	S..77			S..87			S..97			S..107			S..127		
	T _{2N} (N • m)	i _{ex}	P _{1N} (kW)	T _{2N} (N • m)	i _{ex}	P _{1N} (kW)	T _{2N} (N • m)	i _{ex}	P _{1N} (kW)	T _{2N} (N • m)	i _{ex}	P _{1N} (kW)	T _{2N} (N • m)	i _{ex}	P _{1N} (kW)
	1020	24.11	7.38	1600	23.44	11.4	2870	24.23	19.5	4085	22.36	34.4	7350	23.61	48.5
	1050	28.8	6.36	1600	28.93	9.44	3010	28.93	17.6	4280	27.66	29.2	7700	28.16	52.7
	1090	32.68	5.82	1600	32.3	8.55	3200	32.31	16.7	4550	30.82	27.8	8200	31.83	49.6
	1100	36.35	5.34	1600	37.22	7.42	3300	37.22	15.1	4700	35.55	24.9	8600	36.67	45.2
	1100	40.63	4.78	1600	41.4	6.67	3300	41.4	13.6	4700	39.56	22.4	8600	40.63	40.8
	1100	45.68	4.25	1600	46.3	6.03	3300	46.3	12.2	4700	44.29	20	8100	45.17	35.4
	1100	51.75	3.8	1600	52.14	5.36	3300	52.14	10.8	4700	49.88	17.8	8600	50.60	36.7
	1100	56.74	3.26	1600	56.74	4.92	3300	56.74	10	4700	54.18	16.3	8600	55.44	32.7
	1040	67.5	2.77	1700	67.5	4.4	2900	67.5	7.41	4700	64.50	13.7	8600	66.00	29.9
	1100	72.32	2.78	1600	70.31	4.02	3300	72.69	7.83	4520	68.64	14.3	8600	72.45	25.1
	1100	86.4	2.68	1880	86.79	4.39	3240	86.79	7.36	4700	84.92	13.3	8420	86.40	23.7
	1140	98.04	2.45	1960	96.92	4.09	3240	96.92	6.68	4900	94.60	12.1	8770	97.65	21.5
	1170	109	2.3	2000	111.7	3.67	3510	111.7	6.28	5000	109.12	11.1	9000	112.50	19.9
	1200	121.9	2.14	2060	124.2	3.4	3510	124.2	5.65	5150	121.44	10.2	9200	124.65	18.3
	1210	137.1	1.91	2100	138.9	3.14	3650	138.9	5.25	5255	135.96	9.26	9500	138.60	16.8
	1240	155.3	1.76	2150	156.4	2.86	3840	156.4	4.97	5360	153.12	8.68	9600	155.25	15.5
	1260	170.2	1.63	2210	170.2	2.74	3840	170.2	4.57	5520	166.32	7.51	9900	170.10	13.5
	1270	202.5	1.44	2260	202.5	2.39	4000	202.5	4.05	5645	198.00	6.81	10120	202.50	12.2
	1270	235.7	1.24	2280	228.3	2.14	4000	228.3	3.64	5700	223.08	6.28	10200	228.15	11.2
	1270	249.8	1.17	2280	250.2	2.01	4000	250.2	3.37	5700	244.64	5.41	10200	250.20	9.67
	1270	282.5	1.03	2280	275.9	1.82	4000	290.5	2.9						
	1270	323.4	0.9	2280	324	1.55	4000	324	2.6						
	1270	348	0.84	2280	343.4	1.46	4000	343.4	2.46						
				2280	389.1	1.29	4000	389.3	2.17						

S



5.2 S../CR..组合型传动能力表:

5.2 S../CR.. Combi-type Transmission Capacity:

			S..37/CRL37			S..47/CRL37			S..57/CRL37			S..67/CRL37			
n ₁ (r/min)	n _{2N} (r/min)	i _N	T _{2N} (N·m)	i _{ex}	P _{1N} (kW)	T _{2N} (N·m)	i _{ex}	P _{1N} (kW)	T _{2N} (N·m)	i _{ex}	P _{1N} (kW)	T _{2N} (N·m)	i _{ex}	P _{1N} (kW)	
1450	6.53	222	92	226.2	0.11	185	226.2	0.15	300	226.2	0.35	570	224.8	0.61	
	5.78	251	92	253.5	0.1	185	253.5	0.14	300	253.5	0.31	570	252	0.55	
	5.11	284	92	288.4		185	288.4	0.12	300	288.4	0.27	570	286.6	0.48	
	4.15	349	92	355.1		185	355.1		300	355.1	0.22	570	352.9	0.39	
	3.68	394	92	396.5		185	396.5		300	396.5	0.2	570	394.1	0.35	
	3.27	443	92	444.5		185	444.5		300	444.5	0.18	570	441.8	0.31	
	2.95	492	92	501.4		185	501.4		300	501.4	0.16	570	498.4	0.28	
	2.41	601	92	607.7		185	607.7		300	607.7	0.13	570	603.9	0.23	
	2.16	670	92	678.7		185	678.7		300	678.7	0.12	570	674.5	0.2	
	1.91	758	92	760.6		185	760.6		300	760.6		570	755.9	0.18	
	1.69	857	92	865.2		185	865.2		300	865.2		570	859.8	0.16	
	1.38	1054	92	1065		185	1065		300	1065		570	1059	0.13	
	1.22	1192	92	1190		185	1190		300	1190		570	1182	0.12	
	1.08	1340	92	1334		185	1334		300	1334		570	1326		
	0.98	1487	92	1504		185	1504		300	1504		570	1495		
	0.87	1675	92	1710		185	1710		300	1710		570	1699		
	0.78	1862	92	1828		185	1828		300	1828		570	1817		
	0.71	2049	92	2106		185	2106		300	2106		570	2093		
	0.59	2443	92	2459		185	2459		300	2459		570	2444		
	0.54	2679	92	2680		185	2680		300	2680		570	2664		
	0.44	3260	92	3304		185	3304		300	3304		570	3283		
	0.40	3664	92	3688		185	3688		300	3688		570	3665		
	0.35	4157	92	4134		185	4134		300	4134		570	4109		
	0.31	4689	92	4702		185	4702		300	4702		570	4673		
	0.25	5880	92	5795		185	5795		300	5795		570	5759		
	0.22	6560	92	6467		185	6467		300	6467		570	6428		
	0.20	7358	92	7253		185	7253		300	7253		570	7208		
	0.17	8323	92	8180		185	8180		300	8180		570	8129		
	0.16	9298	92	9293		185	9293		300	9293		570	9235		
	0.14	10244	92	9938		185	9938		300	9938		570	9877		
	0.12	11746	92	11758		185	11758		300	11758		570	11368		
	0.11	13122	92	13358		185	13358		300	13358		570	12915		
	0.10	14456	92	14285		185	14285		300	14285		570	13811		
	0.09	15985	92	16464		185	16464		300	16464		570	15919		
	0.08	19043	92	19228		185	19228		300	19228		570	18591		
	0.07	21823													
	0.06	23630													
	0.05	26688													



	S..77/CRL37			S..87/CRL47			S..97/CRL67			S..107/CRL77			S..127/CRL87		
	T _{2N} (N·m)	i _{ex}	P _{1N} (kW)	T _{2N} (N·m)	i _{ex}	P _{1N} (kW)	T _{2N} (N·m)	i _{ex}	P _{1N} (kW)	T _{2N} (N·m)	i _{ex}	P _{1N} (kW)	T _{2N} (N·m)	i _{ex}	P _{1N} (kW)
	1270	224.8	1.26	2500	221.9	3.29	4200	223.6	3.8	6000	208.7	6.94	10200	215.2	10.5
	1270	252	1.13	2500	244.2	2.99	4200	248.5	3.42	6000	231.8	6.25	10200	247.6	9.11
	1270	286.6	0.99	2500	282.6	2.58	4200	284	2.99	6000	259.2	5.59	10200	275.6	8.19
	1270	352	0.81	2500	336.9	2.17	4200	339.3	2.51	6000	325.5	4.45	10200	338.0	6.67
	1270	394.1	0.72	2500	386.6	1.89	4200	384.8	2.21	6000	369.5	3.92	10200	379.7	5.99
	1270	441.8	0.64	2500	425.7	1.71	4200	428.1	1.99	6000	410.2	3.53	10200	434.2	5.2
	1270	498.4	0.57	2500	495.5	1.47	4200	478.5	1.78	6000	459.5	3.15	10200	483.2	4.67
													S..127/CRL77		
	1270	603.9	0.47	2500	579.6	1.26	4200	591.2	1.44	6000	563.8	2.8	10200	582.0	4.72
	1270	674.5	0.42	2500	665.8	1.1	4200	670.7	1.27	6000	640.4	2.46	10200	661.1	4.16
	1270	755.9	0.38	2500	732.7	1	4200	745.3	1.14	6000	711.4	2.22	10200	734.3	3.74
	1270	859.8	0.33	2500	848.1	0.86	4200	851.9	1	6000	795.6	1.98	10200	821.2	3.35
	1270	1059	0.27	2500	1011	0.72	4200	1018	0.84	6000	999.0	1.58	10200	1031	2.67
	1270	1182	0.24	2500	1160	0.63	4200	1154	0.74	6000	1134	1.39	10200	1171	2.35
	1270	1326	0.21	2500	1277	0.57	4200	1284	0.66	6000	1259	1.25	10200	1300	2.12
	1270	1495	0.19	2500	1487	0.49	4200	1435	0.59	6000	1411	1.12	10200	1456	1.89
	1270	1699	0.17	2500	1655	0.44	4200	1614	0.53	6000	1587	0.99	10200	1639	1.68
	1270	1817	0.16	2500	1854	0.39	4200	1828	0.47	6000	1796	0.88	10200	1853	1.48
	1270	2093	0.14	2500	1968	0.37	4200	2004	0.42	6000	1967	0.8	10200	2030	1.35
	1270	2444	0.12	2500	2386	0.31	4200	2384	0.36	6000	2341	0.67	10200	2417	1.14
	1270	2664		2500	2684	0.27	4200	2649	0.32	6000	2611	0.6	10200	2695	1.02
	1270	3283		2500	3199	0.23	4200	3159	0.27	6000	3133	0.5	10200	3234	0.85
	1270	3665		2500	3674	0.2	4200	3626	0.23	6000	3558	0.44	10200	3673	0.75
	1270	4109		2500	4044	0.18	4200	3992	0.21	6000	3950	0.4	10200	4077	0.67
	1270	4673		2500	4707	0.16	4200	4646	0.18	6000	4423	0.36	10200	4565	0.6
	1270	5759		2500	5881	0.12	4200	5796	0.15	6000	5630	0.28	10200	5811	0.47
	1270	6428		2500	6552	0.11	4200	6467	0.13	6000	6272	0.25	10200	6474	0.42
	1270	7208		2500	7213		4200	7119	0.12	6000	6963	0.23	10200	7187	0.38
	1270	8129		2500	8394		4200	8286		6000	7825	0.2	10200	8078	0.34
	1270	9235		2500	9346		4200	9225		6000	8746	0.18	10200	9028	0.3
	1270	9877		2500	10467		4200	10332		6000	9924	0.16	10200	10244	0.27
	1270	11368		2500	12030		4200	11875		6000	11247	0.14	10200	11465	0.25
	1270	12915		2500	13394		4200	13221		6000	12570	0.13	10200	12814	0.22
	1270	13811		2500	15001		4200	14807		6000	14262	0.11	10200	14539	0.19
	1270	15919		2500	15932		4200	15722		6000	15635		10200	15939	0.18
	1270	18591		2500	19307		4200	19057		6000	18613		10200	18974	0.15
				2500	22266		4200	21960		6000	21616		10200	21476	0.13
				2500	24044		4200	23724		6000	22624		10200	23063	0.12
										6000	26172		10200	26681	

S



6 直联电机功率表:

6 Directly connected motor power table:

P_m (kW) i_N	0.12	0.18	0.25	0.37	0.55	0.12	0.18	0.25	0.37	0.55	0.75	1.1	0.12	0.18	0.25	0.37	0.55	0.75	1.1	1.5
23.8																				
29.1																				
32.6																				
36.9																				
41.1																				
46.5																				
51.3																				
57.5																				
67.8																				
73.7																				
87.3																				
98.5																				
110																				
123																				
139																				
154																				
175																				
203																				
229																				
252																				
283																				
324																				
346																				
389																				

P_m (kW) i_N	0.12	0.18	0.25	0.37	0.55	0.75	1.1	1.5	2.2	0.12	0.18	0.25	0.37	0.55	0.75	1.1	1.5	2.2	3	4	5.5
23.8																					
29.1																					
32.6																					
36.9																					
41.1																					
46.5																					
51.3																					
57.5																					
67.8																					
73.7																					
87.3																					
98.5																					
110																					
123																					
139																					
154																					
175																					
203																					
229																					
252																					
283																					
324																					
346																					
389																					

注: 1. 符号表示可直联电机;
2. 符号表示可直联电机(电机功率大于减速机的额定输入功率, 即 $P_1 > P_{1N}$);
3. 符号表示不可直联电机;
4. 电机功率的选择应符合相应的被驱动设备系数及选型规定;
5. 电机为4极电机。

Note: 1. 符号表示可直联电机;
2. 符号表示可直联电机(The motor's power is more than nominal input power of gear unit, $P_1 > P_{1N}$);
3. 符号表示不可直联电机;
4. The selection of motor shall be suitable for driver machine factor and regulations of type selection.
5. The motor is 4-pole motor.



i_N \ P_m (kW)	0.55	0.75	1.1	1.5	2.2	3	4	5.5	7.5	11	0.75	1.1	1.5	2.2	3	4	5.5	7.5	11	15	18.5
23.8																					
29.1																					
32.6																					
36.9																					
41.1																					
46.5																					
51.3																					
57.5																					
67.8																					
73.7																					
87.3																					
98.5																					
110																					
123																					
139																					
154																					
175																					
203																					
229																					
252																					
283																					
324																					
346																					
389																					

i_N \ P_m (kW)	1.5	2.2	3	4	5.5	7.5	11	15	18.5	22	2.2	3	4	5.5	7.5	11	15	18.5	22	30	37
23.8																					
29.1																					
32.6																					
36.9																					
41.1																					
46.5																					
51.3																					
57.5																					
67.8																					
73.7																					
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98.5																					
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注: 1. 符号表示可直联电机;
2. 符号表示可直联电机(电机功率大于减速机的额定输入功率, 即 $P_1 > P_{1N}$);
3. 符号表示不可直联电机;
4. 电机功率的选择应符合相应的被驱动设备系数及选型规定;
5. 电机为4极电机。

Note: 1. means permissible directly-connected motor,
2. means permissible directly-connected motor(The motor's power is more than nominal input power of gear unit, $P_1 > P_{1N}$),
3. means unallowed directly-connected motor.
4. The selection of motor shall be suitable for driver machine factor and regulations of type selection.
5. The motor is 4-pole motor.



7 允许径向力和轴向力:

7 Permissible Radial Force and Axial Force on Shafts:

7.1 输入轴径向力Fr1表(N):

7.1 Radial Force on Input Shaft (Fr1)(N):

	Fr1(N)								
	S..37	S..47	S..57	S..67	S..77	S..87	S..97	S..107	S..127
AE2	803	803	803	803	803	803	/	/	/
AE3	/	/	1504	1504	1504	1504	1504	1504	/
AE4	/	/	/	/	/	2188	2188	2188	2188
AE5	/	/	/	/	/	/	4207	4207	4207
AE6	/	/	/	/	/	/	/	/	5664



7.2 输出轴径向力 Fr2表(N):

7.2 Radial Force on Output Shaft (Fr2)(N):

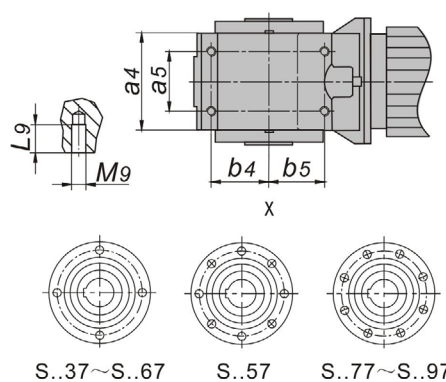
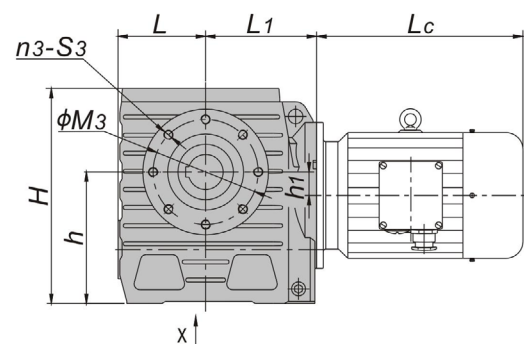
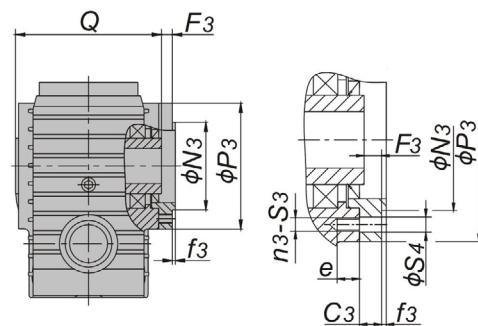
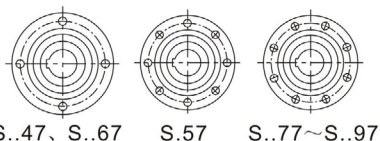
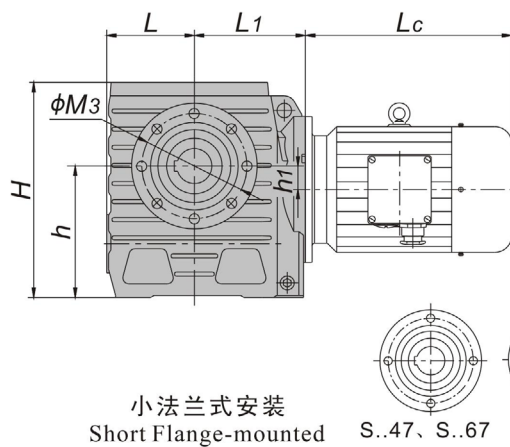
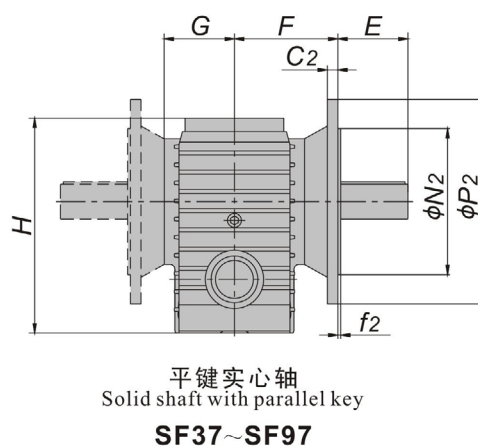
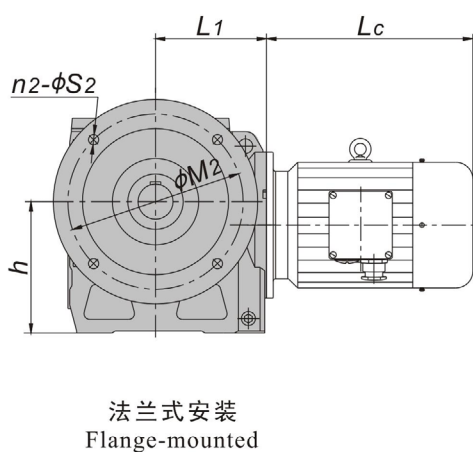
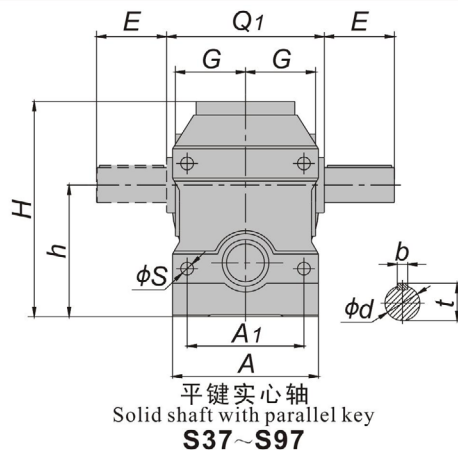
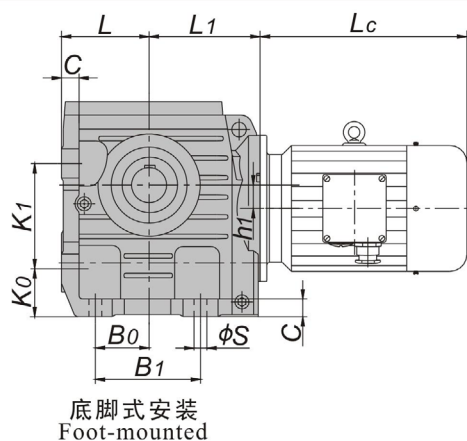
n_{2N} (r/min)	Fr2(N)								
	S..37	S..47	S..57	S..67	S..77	S..87	S..97	S..107	S..127
56 ~ 80	2151	3035	5041	5007	5075	18530	21165	30345	42500
45 ~ 56	2380	3332	5542	5304	6265	20995	24650	35275	47600
40 ~ 45	2380	3502	5814	5559	6571	22100	25840	36975	49725
35.5 ~ 40	2550	3502	5950	6163	6919	23035	26605	38063	51255
31.5 ~ 35.5	2550	3766	6222	6163	7438	23970	27880	39950	53720
28 ~ 31.5	2550	4004	6392	6851	7659	24650	28985	41565	56100
26.5 ~ 28	2550	4123	6392	6851	8203	24650	29325	43095	60350
22.4 ~ 26.5	2550	4522	6392	7370	9860	24650	29325	43095	60350
≤22.4	2550	4556	6392	7378	10455	24650	29325	43095	60350

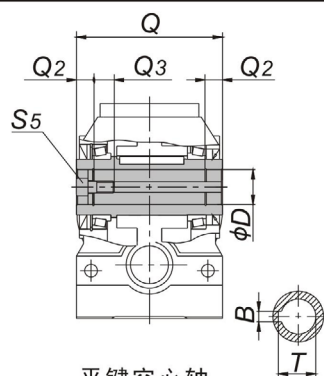
备注：各规格更低的输出转速按以上最大的Fr2值。 Note: For lower output speed, apply the largest Fr2 value in each type.



8 安装、输出形式及尺寸图表: S..37-S..97

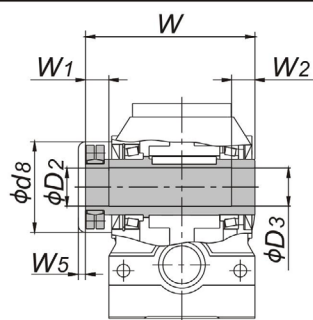
8 Mounting, Output Modes and Dimensions:





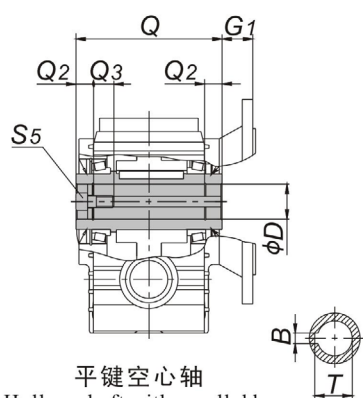
平键空心轴
Hollow shaft with parallel key

SW37~SW97



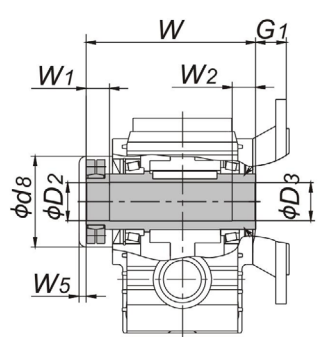
锁紧盘空心轴
Hollow shaft with shrink disk

SH37~SH97



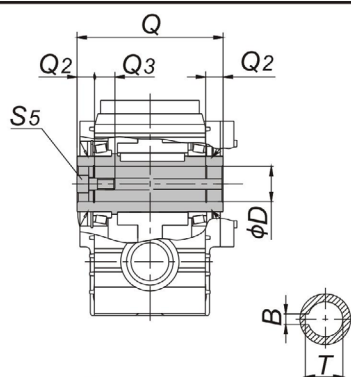
平键空心轴
Hollow shaft with parallel key

SL37~SL97



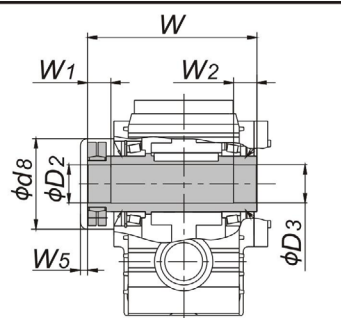
锁紧盘空心轴*
Hollow shaft with shrink disk

SHL37~SHL97



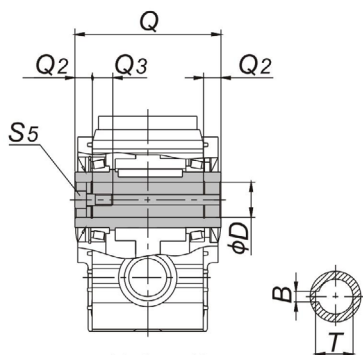
平键空心轴
Hollow shaft with parallel key

SZ47~SZ97



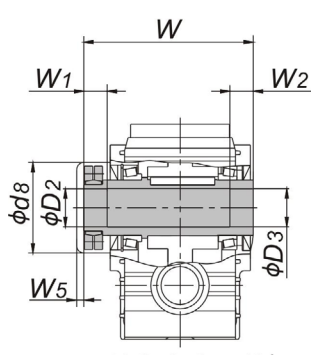
锁紧盘空心轴*
Hollow shaft with shrink disk

SHZ47~SHZ97



平键空心轴
Hollow shaft with parallel key

SA37~SA97



锁紧盘空心轴*
Hollow shaft with shrink disk

SHA37~SHA97

规格 Size	37	47	57	67	77	87	97
A	110	120	136	160	185	250	300
a4	86	90	105	128	154	194	236
a5	/	60	60	88	102	118	160
A1	90	100	110	130	150	200	250
b4	/	35	58.5	71.5	85	115	135
b5	/	52	58.5	80.5	85	110	113
B0	35	35	45	60	75	92	115
B1	63	80	100	130	135	180	235
C	10	15	16	20	25	30	35
C2	9	10	12	12	15	18	22
C3	/	11	11	13	18.5	23.5	23.5
e	/	12	12	20	20	28	28
F	74	84	100	126.5	150.5	177.5	205
F3	/	11	6	8	13.5	18.5	18.5
f2	3.5	3.5	3.5	3.5	4	5	5
f3	/	3	3	3.5	4	5	5
G	55	55	70	79	100	120	140
G1	14	24	25	42.5	45.5	52.5	60
H	151	165	188	239	300	368	456
h	88	100	112	140	180	225	280
h1	0	11	24	24	33	40	53
K0	40	35	35	40	70	82	90
K1	80	80	100	130	135	180	235
L	63	75	80	107	125	150	180
L1	96	113	117	142	173	198	245
L9	/	20	20	25	32	32	36
M2	130	130	165	165	215	300	400
M3	95	115	102	130	155	180	220
M9	/	M10	M10	M12	M16	M16	M20
N2	110h7	110h7	130h7	130h7	180h7	250h7	350h7
N3	/	95h7	80h7	105h7	125h7	150h7	180h7
n2	4	4	4	4	4	4	8
n3	4	4	8	4	8	8	8
P2	160	160	200	200	250	350	450
P3	/	130	120	155	180	215	260
b	6	8	8	10	14	18	20
B	6	8	8	12	14	18	20
d	20k6	25k6	30k6	35k6	45k6	60m6	70m6
d8	58	87	87	96	122	150	160
D	20H7	25H7	30H7	40H7	50H7	60H7	70H7
D2	20H7	30H7	35H7	40H7	50H7	65H7	75H7
D3	20H7	30H7	35H7	40H7	50H7	65H7	75H7
E	40	50	60	70	90	120	140
Q	120	120	150	168	210	250	290
Q1	120	130	148	180	210	270	310
Q2	16	15	18	24	27	30	30
Q3	8	17	22	29	32	34	36
S	9	11	11	13.5	17.5	22	26
S2	9	9	11	11	13.5	17.5	17.5
S3	M6	M8	M8	M12	M12	M16	M16
S4	/	9	9	13.5	13.5	17.5	17.5
S5	M6	M10	M10	M16	M16	M20	M20
t	22.5	28	33	38	48.5	64	74.5
T	22.8	28.3	33.3	43.3	53.5	64.4	74.9
W	139	146	177	196	241	290	335
W1	25	31	32	38	36	41	55
W2	20	20	20	20	30	40	50
W5	8	11	10	12	9	10	12
重量Wt.(kg)**	7.2	10	13.5	25	43	85	149

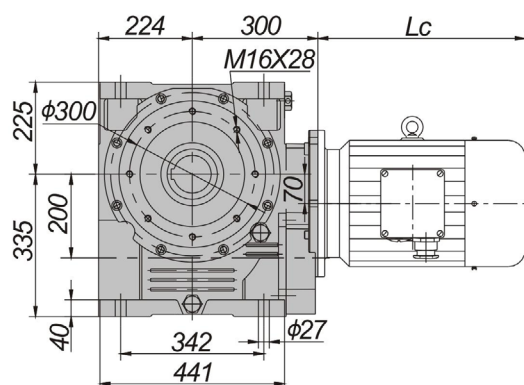
外形尺寸
Outline Dimensions

输出轴尺寸
Dimensions of output shaft

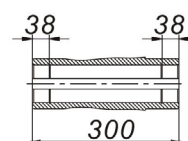
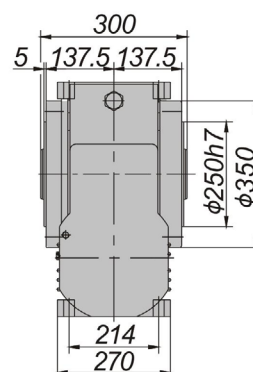
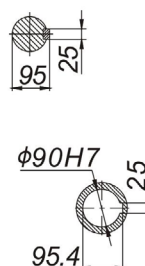
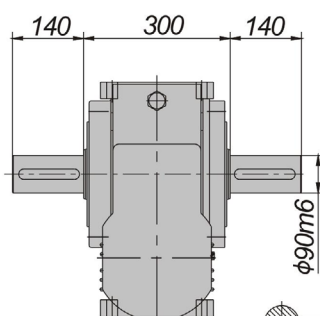
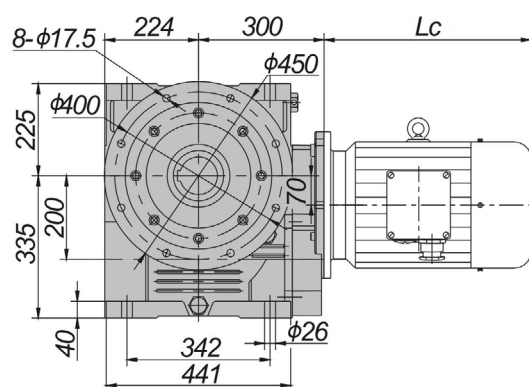
Note: For hollow shaft with involute spline, please consult us. 2) * Shrink disk should be installed on the opposite side of flange, short-flange and torque-arm. 3) **The weight of motor is not included.



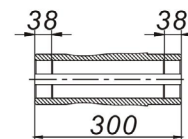
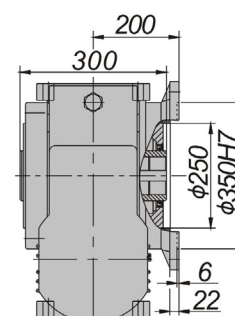
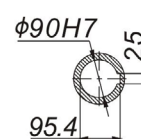
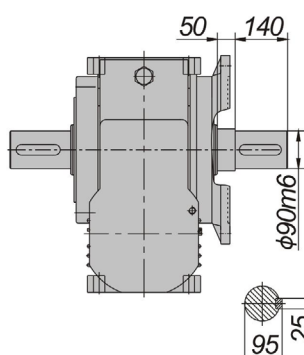
S107



底脚式安装
Foot-mounted

**S107****SW107**

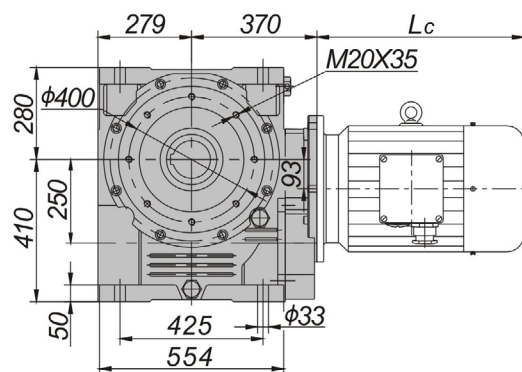
法兰式安装
Flange-mounted

**SF107****SL107**

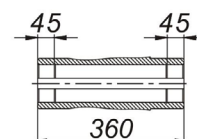
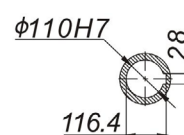
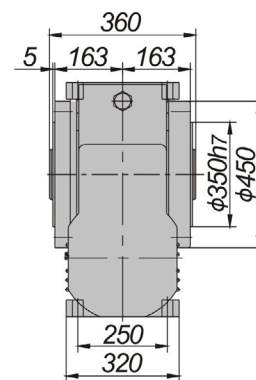
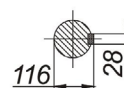
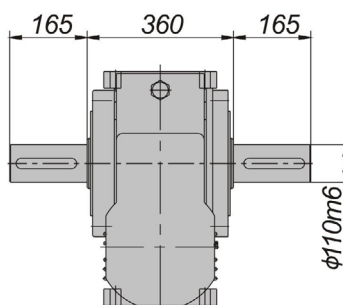
注: 1) 要求带花键空心轴和锁紧盘空心轴输出时请来电咨询。 Note: 1) For hollow shaft with involute spline or shrink disk, please consult us.
2) S.107重量为237kg,重量不含电机和润滑油。 2) The weight of S.107 is 237kg, which do not include the weight of motor and lubricant..



S127

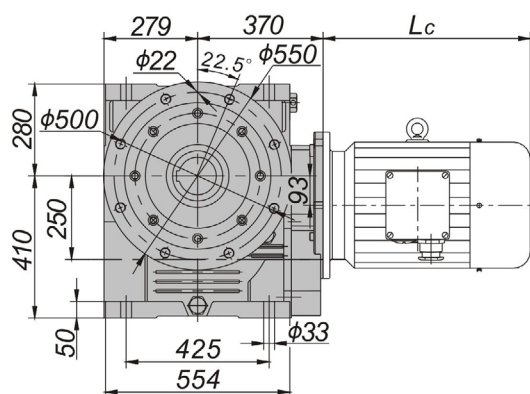


底脚式安装
Foot-mounted

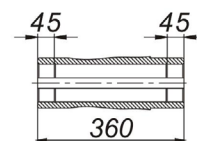
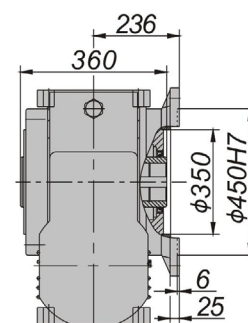
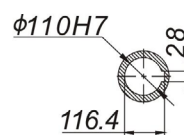
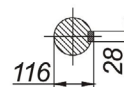
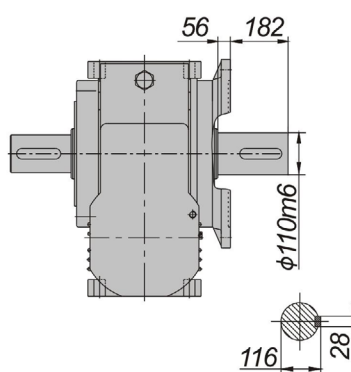


S127

SW127



法兰式安装
Flange-mounted



SF127

SL127

注:1) 要求带花键空心轴和锁紧盘空心轴输出时请来电咨询。

2) S.127重量为390kg,重量不含电机和润滑油。

Note: 1) For hollow shaft with involute spline or shrink disk, please consult us.

2) The weight of S.127 is 390kg, which do not include the weight of motor and lubricant..

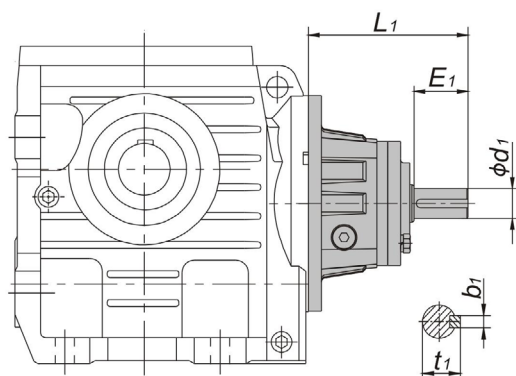


9 输入部分:

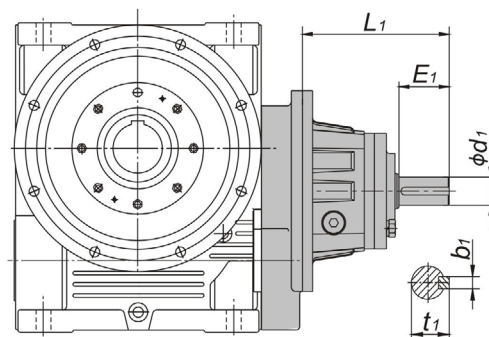
9.1 AE轴输入尺寸图表:

9 Input Part:

9.1 Dimensions of AE Input Shaft:



S..37~S..97



S..107~S..127

规格 Size	输入轴型号 Input Shaft	功率 Range of Power	d1	E1	L1	b1	t1	重量 (kg) Weight
37	AE2	0.12-0.55kW	19k6	40	117	6	21.5	3.2
47	AE2	0.12-1.1kW	19k6	40	117	6	21.5	3.2
57	AE2	0.12-1.1kW	19k6	40	119	6	21.5	3.9
	AE3	1.5-2.2kW	28k6	60	175	8	31	7.5
67	AE2	0.12-1.1kW	19k6	40	119	6	21.5	3.9
	AE3	1.5-2.2kW	28k6	60	175	8	31	7.5
77	AE2	0.12-1.1kW	19k6	40	111	6	21.5	4.7
	AE3	1.5-5.5kW	28k6	60	165	8	31	8.5
87	AE2	0.12-1.1kW	19k6	40	108	6	21.5	5.9
	AE3	1.5-5.5kW	28k6	60	158	8	31	9.9
	AE4	7.5-11kW	38k6	80	209	10	41	14.5
97	AE3	1.5-5.5kW	28k6	60	156	8	31	11.9
	AE4	7.5-11kW	38k6	80	203	10	41	17
	AE5	15-18.5kW	42k6	110	265	12	45	26.6
107	AE3	1.5-5.5kW	28k6	60	146	8	31	13.9
	AE4	7.5-11kW	38k6	80	190	10	41	19.3
	AE5	15-22kW	42k6	110	252	12	45	29.1
127	AE4	7.5-11kW	38k6	80	176	10	41	23.7
	AE5	15-22kW	42k6	110	238	12	45	37.3
	AE6	30-45kW	48k6	110	298	14	51.5	57.2



9.2 AG 连接法兰尺寸图表:

9.2 Dimensions of AG Connection Flange:

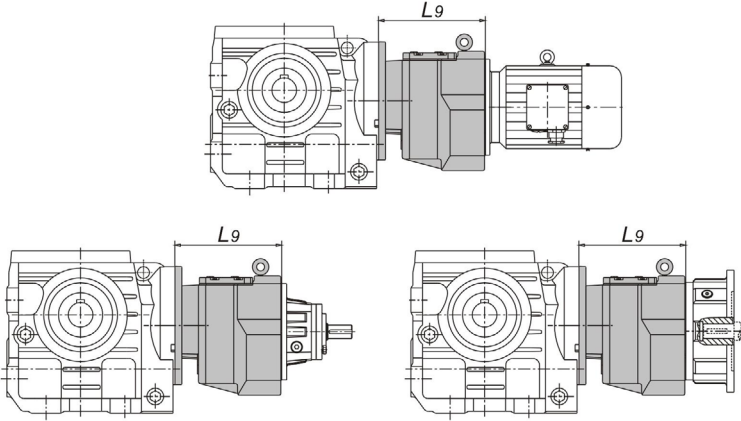
<div><div><div><div>AG63-AG200 AG225-AG315</div><div>S..37~S..97 S..107~S..127</div></div></div></div>													
规格 Size	法兰型号 Flange Type	e1	D1	N1	M1	P1	f1	b1	t1	L	S1	L2	重量 (kg) Weight
37 47	AG63	14	11H7	95H7	115	140	4	4	12.8	23	M8	59	4.5
	AG71	14	14H7	110H7	130	160	4	5	16.3	30	M8	59	4.5
	AG80	18	19H7	130H7	165	200	4	6	21.8	40	M10	74	7.3
57	AG63	14	11H7	95H7	115	140	4	4	12.8	23	M8	61	4.6
	AG71	14	14H7	110H7	130	160	4	5	16.3	30	M8	61	4.6
	AG80	18	19H7	130H7	165	200	4	6	21.8	40	M10	76	8
	AG90	18	24H7	130H7	165	200	4	8	27.3	50	M10	81	9.1
67	AG63	14	11H7	95H7	115	140	4	4	12.8	23	M8	61	4.6
	AG71	14	14H7	110H7	130	160	4	5	16.3	30	M8	61	4.6
	AG80	18	19H7	130H7	165	200	4	6	21.8	40	M10	76	8
	AG90	18	24H7	130H7	165	200	4	8	27.3	50	M10	81	9.1
	AG100	21	28H7	180H7	215	250	5	8	31.3	60	M12	96	13.1
77	AG71	14	14H7	110H7	130	160	4	5	12.8	30	M8	53	5.5
	AG80	18	19H7	130H7	165	200	4	6	21.8	40	M10	68	9.7
	AG90	18	24H7	130H7	165	200	4	8	27.3	50	M10	73	10.6
	AG100\112	21	28H7	180H7	215	250	5	8	31.3	60	M12	86	13.9
	AG132	21	38H7	230H7	265	300	5	10	41.3	80	M12	103	19.7
87	AG80	18	19H7	130H7	165	200	4	6	21.8	40	M10	65	10.2
	AG90	18	24H7	130H7	165	200	4	8	27.3	50	M10	70	11.1
	AG100\112	21	28H7	180H7	215	250	5	8	31.3	60	M12	83	15.8
	AG132	21	38H7	230H7	265	300	5	10	41.3	80	M12	96	22.6
	AG160	28	42H7	250H7	300	350	6	12	45.3	110	M16	143	37.2
97	AG90	18	24H7	130H7	165	200	4	8	27.3	50	M10	64	14.1
	AG100\112	21	28H7	180H7	215	250	5	8	31.3	60	M12	78	17
	AG132	21	38H7	230H7	265	300	5	10	41.3	80	M12	94	24.5
	AG160	28	42H7	250H7	300	350	6	12	45.3	110	M16	137	40.4
	AG180	28	48H7	250H7	300	350	6	14	51.8	110	M16	137	40.4
107	AG100\112	21	28H7	180H7	215	250	5	8	31.3	60	M12	69	19.6
	AG132	21	38H7	230H7	265	300	5	10	41.3	80	M12	83	25.4
	AG160	28	42H7	250H7	300	350	6	12	45.3	110	M16	124	43.4
	AG180	28	48H7	250H7	300	350	6	14	51.8	110	M16	124	43.4
127	AG132	21	38H7	230H7	265	300	5	10	41.3	80	M12	71	33.1
	AG160	28	42H7	250H7	300	350	6	12	45.3	110	M16	110	50
	AG180	28	48H7	250H7	300	350	6	14	51.8	110	M16	110	50
	AG200	28	55H7	300H7	350	400	6	16	59.3	110	M16	138	60.3
	AG225	28	60H7	350H7	400	450	6	18	64.4	140	M16	166	98.6

S



10 组合型尺寸图表:

10 Combi-type Dimensions:

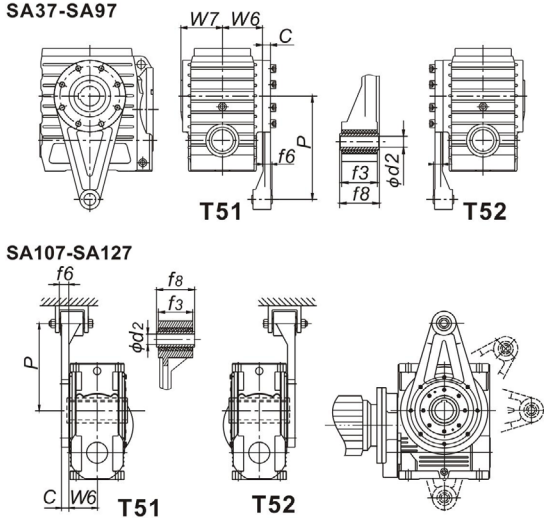
	型号Type	L9
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	S..57/CRL37 S..67/CRL37	183
	S..77/CRL37	173
	S..87/CRL47	180
	S..97/CRL67	225
	S..107/CRL77	238.5
	S..127/CRL77	227
	S..127/CRL87	281

11 附件:

11 Accessories:

11.1 扭力臂附件(附件代号T51\T52):

11.1 Torque-arm(Accessory code T51\T52):

	规格Size	37	47	57	67	77	87	97	107	127
	C	10	15	15	18	18	24	26	30	32
	d2	10.4	10.4	10.4	10.4	16.4	16.4	25	25	40
	f3	31	31	31	31	54	54	72	92	110
	f6	15	20.5	18.5	22	32.5	28.5	33	50	66
	f8	36	36	36	36	60	60	80	100	126
	p	110	130	160	200	250	310	380	410	520
	W6	55	55	70	79	100	120	140	139	163
	W7	60	60	75	84	110	125	145	150	180

11.2 润滑油:

11.2 Oil:

油量表Oil level (L)					
安装方位 Mounting Position 规格 Size	B3、B61、B51、 B55、H1、H11	B81、B63、B53 B57、H3、H31	B8、B54、B58 H2、H21	B31、B62、B52 B56、H4、H41	V5、V51、V6、V61、V3、V1 V31、V11、H5、H6、H51、H61
37	0.25	0.4	0.5	0.6	0.4
47	0.4	0.9	0.9	1.2	1.0
57	0.5	1.2	1	1.6	1.4
67	1	2.2	3.1	3.2	2.7
77	1.9	4.2	5.8	6.5	4.9
87	3.8	8.1	10.4	12	9.1
97	7.4	15	18.8	23.6	18
107	10.4	38	31.5	38	21.2
127	18.3	67	53	67	35.7

注:在环境温度-10℃~+40℃时,S系列润滑油牌号为VG680 (ISO粘度等级),附件代号V68。

Note:When ambient temperature is -10℃~+40℃,for S series products, lubricant brand is VG680(ISO viscosity class), accessory code is V68 .

11.3 电机附件详见电机部分5/M页。

11.3 Please refer to page 5/M of motor section for motor accessories.