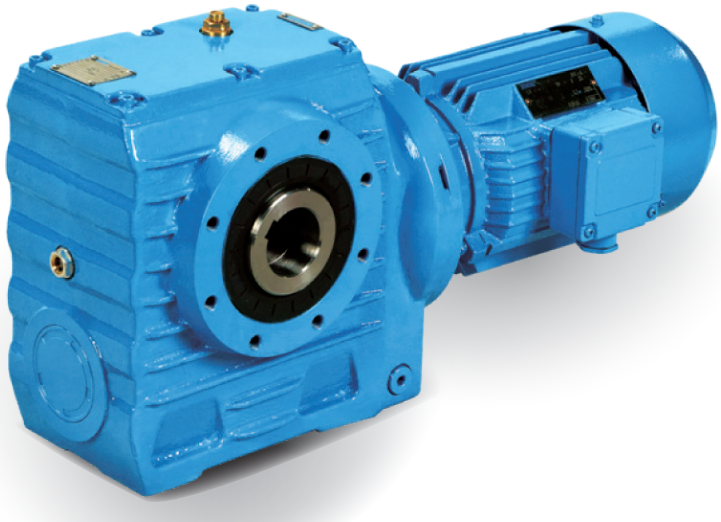
TGE
TRANSMISSION



S series

HELICAL-WORM GEAR UNITS

S Series Helical-worm gear units

P: 0.12 ~ 45kW

i: 23.8 ~ 389 (imax: 26688)

T2N: 73–10200 N.m

Features

» A combination of helical and worm gear units, compact structure, large ratio;

» Fluorine rubber oil seal prevent leakage;

» Gear with advanced grinding and casting which showed good performance in working;

» Good value for money and less maintains.

Part characteristics

» Housing materials are high strength grey cast iron and nodular cast iron;

» Gears, pinions and bevel gears are made of high grade alloy with carburize-harden technology. Hardness of teeth surface reaches 58-62 HRC, grinding precision reaching class5-6 and even 3 if required;

» Shafts are made of alloy via heat treatment;

» Standard accessories such a bearings and oil seals are provided by international a national famous brands;

» Good assembly environment, standardized assembly technology, 100% strict quality assurance inspection and regular type test;

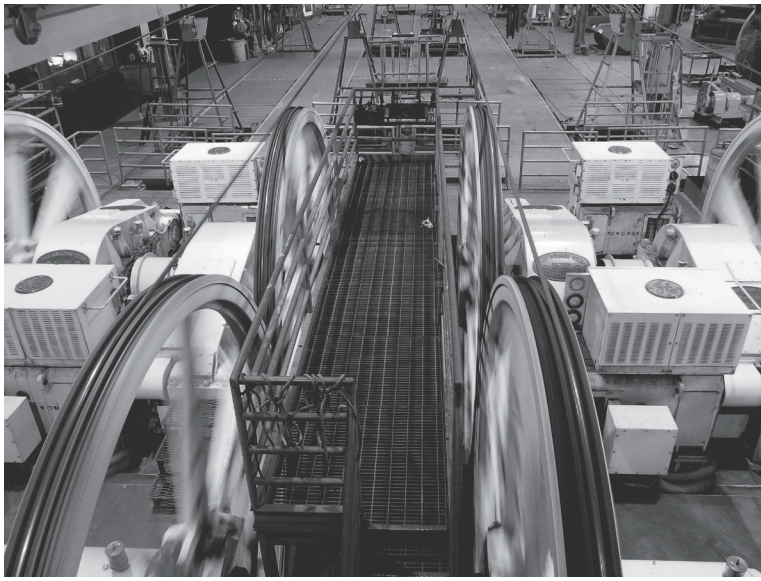
» The material of worm wheel is tin bronze, the worm rod is alloy steel, which is grinded after carburizing and quenching. The material has good anti-gluing and anti-abrasion performances. The lifespan is long.

Application industries

» Modular, high standardization, components of few specifications and models.

» Wide power, torque, speed ratio covering range.

» The products are widely applied in electricity, coal, cement, metallurgy, harbor, agriculture, shipping, lifting, environment protection, stage, logistic, weaving, paper making, light industry, plastics and other regions.



Note:
you must conform to the following instructions!

- The structure scheme, appearance diagram and other attached diagrams in sample are examples, there is no strict proportion requirement (The unmarked dimension units are mm)
- The marked weight is average value, it has no constraint force
- To prevent accidents, all the rotation parts are added with protective covers according to the safety regulations of the nation and region
- Before debugging, you shoutd carefully read instruction book
- Gear unit is on running-permission status when delivered, you should add lubrication oil before putting it into running
- The marked oil quantity in sample is only reference value, actual oil filling quantity should be the same with the mark on oil dipstick
- Lubrication oil viscosity should be selected according to working situation and application environment temperature of gear units
- You can only apply lubrication oil of internationally famous brand

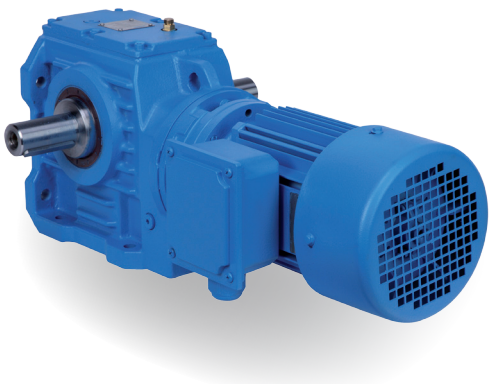
Product function mark

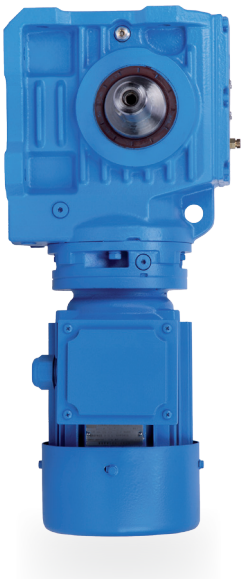

Oil dipstick


Breather


Oil filler

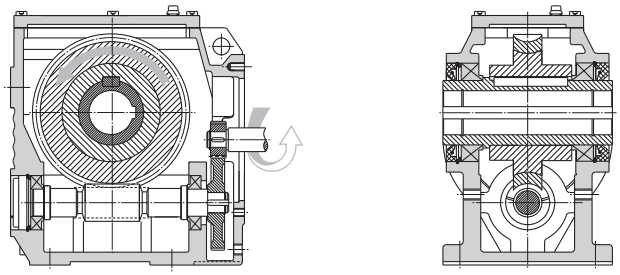

Oil drain





Contents

1 Sectional Drawings:



S..37-S..97

Note: S107 and S127 are on request.

2 Type Designation

SF 97 A - 32.6 - Y-11+V68- B51 - 90

S Series
- *S = Foot-mounted solid shaft with parallel key*
- *SH = Foot-mounted hollow shaft with shrink disk*
- *SW = Foot-mounted hollow shaft with parallel key*
- *SN = Foot-mounted hollow shaft with involute spline*
- *SF = Flange-mounted solid shaft with parallel key*
- *SL = Flange-mounted hollow shaft with parallel key*
- *SHL = Flange-mounted hollow shaft with shrink disk*
- *SNF = Flange-mounted hollow shaft with involute spline*
- *SA = Torque-arm-mounted hollow shaft with parallel key*
- *SHA = Torque-arm-mounted hollow shaft with shrink disk*
- *SNA = Torque-arm-mounted hollow shaft with involute spline*
- *SZ = Short-flange-mounted hollow shaft with parallel key*
- *SHZ = Short-flange-mounted hollow shaft with shrink disk*
- *SNZ = Short-flange-mounted hollow shaft with involute spline*

Size

Output Shaft Direction
- *A\B= Unidirectional output shaft*
- *S= Bidirectional output shaft*

Nominal Ratio

Input Part
- *Y= Motor*
- *AE= Input Shaft*
- *AG= Connection Flange*

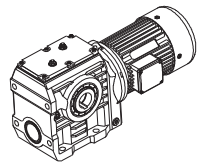
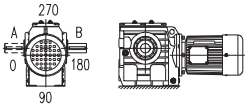
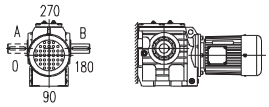
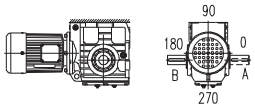
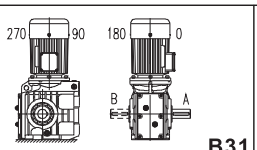
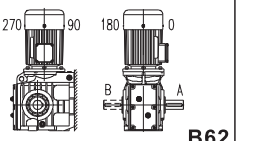
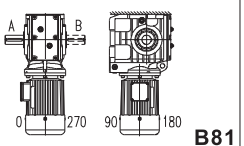
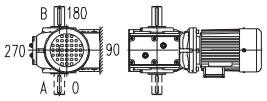
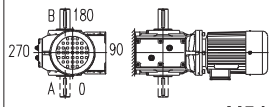
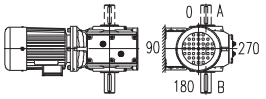
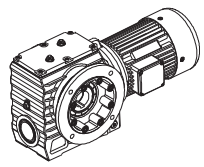
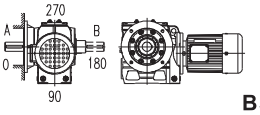
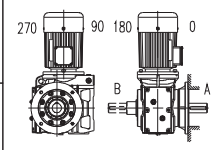
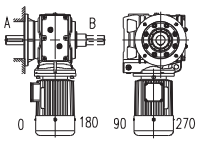
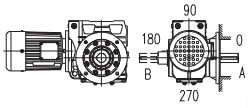
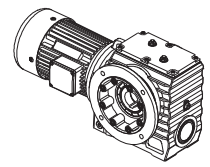
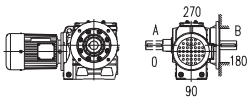
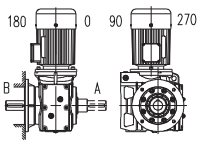
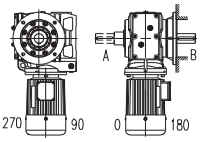
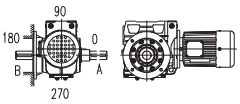
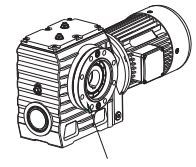
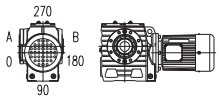
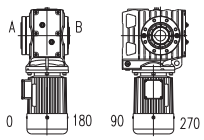
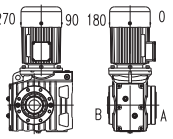
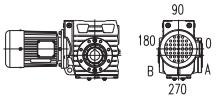
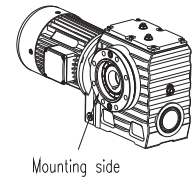
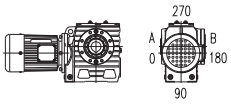
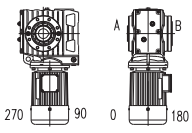
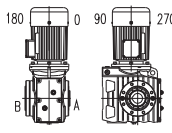
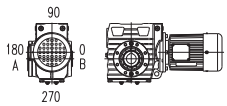
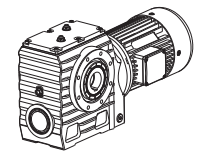
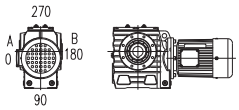
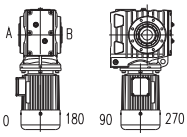
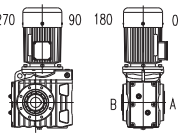
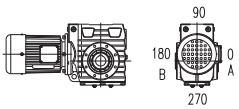
Accessories and Special Requests

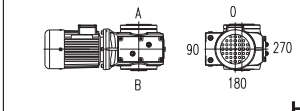
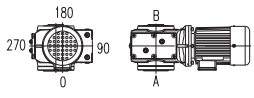
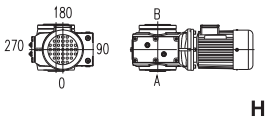
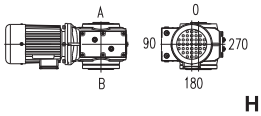
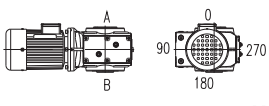
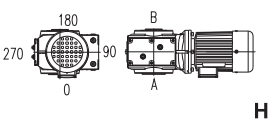
Mounting Positions

Positions of Motor Terminal Box

Combi-type Designation：S87A/CRL47-284-Y-1.1+V68-B3-90

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		
 SF..\SL..\SHL..\SNF..	 B55	 B56	 B57
	 B58		
 Mounting side SZ..\SHZ..\SNZ..	 H1	 H3	 H4
	 H2		
 Mounting side SZ..\SHZ..\SNZ..	 H11	 H31	 H41
	 H21		
 SA..\SHA..\SNA..	 H1	 H3	 H4
	 H2		

 H5
 H6
 H51
 H61
 H5
 H6

S

4 Type Selection and Example:

<table>
<tr><th>Steps</th><th>Description</th><th>Symbols</th><th colspan="8">Parameters Calculation and Guidelines</th></tr>
<tr><td rowspan="5">1</td><td rowspan="5">Driven Machine Factor</td><td rowspan="5">f_1</td><td colspan="8"><table>
<tr><td rowspan="2">Load Characteristic</td><td colspan="3">Operating hours per day (h)</td></tr>
<tr><td>≤2</td><td>2～10</td><td>10～24</td></tr>
<tr><td>Uniform</td><td>1.00(1.00)</td><td>1.00(1.25)</td><td>1.25(1.50)</td></tr>
<tr><td>Moderate</td><td>1.00(1.25)</td><td>1.25(1.50)</td><td>1.50(1.75)</td></tr>
<tr><td>Heavy</td><td>1.25(1.50)</td><td>1.50(1.75)</td><td>1.75(2.00)</td></tr>
</table></td></tr>
<tr><td colspan="8">Note: Apply values in the brackets when starts per hour are 10 times or more.</td></tr>
<tr><td rowspan="5">2</td><td rowspan="5">Ambient Temperature Factor</td><td rowspan="5">f_t</td><td colspan="8"><table>
<tr><td rowspan="2">Load Characteristic</td><td colspan="7">Ambient Temperature</td></tr>
<tr><td>20</td><td>25</td><td>30</td><td>35</td><td>40</td><td>45</td><td>50</td></tr>
<tr><td>Uniform</td><td>1.00</td><td>1.00</td><td>1.00</td><td>1.03</td><td>1.06</td><td>1.12</td><td>1.20</td></tr>
<tr><td>Moderate</td><td>1.00</td><td>1.01</td><td>1.02</td><td>1.06</td><td>1.12</td><td>1.16</td><td>1.30</td></tr>
<tr><td>Heavy</td><td>1.00</td><td>1.02</td><td>1.04</td><td>1.10</td><td>1.17</td><td>1.20</td><td>1.40</td></tr>
</table></td></tr>
<tr><td colspan="8">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.</td></tr>
<tr><td>3</td><td>Input Speed</td><td>n_1</td><td colspan="8">≤1800 r/min Consult us if higher speed required.</td></tr>
<tr><td>4</td><td>Calculation of the Ratio</td><td>i</td><td colspan="8">i=n1/n2</td></tr>
<tr><td rowspan="2">5</td><td rowspan="2">Transmission Efficiency</td><td rowspan="2">η</td><td></td><td colspan="2">i=23.8-67.8</td><td colspan="2">i=73.7-389</td><td colspan="2">S/CR Combi-type</td></tr>
<tr><td>η</td><td colspan="2">77%</td><td colspan="2">62%</td><td colspan="2">57%</td></tr>
<tr><td>6</td><td>Calculation of the input power of the gear unit on basis of the torque and power required by the driven machine.</td><td>P_1</td><td colspan="8">$P_1=T_2 \cdot n_1/(9550 \cdot i \cdot \eta)$ or $P_1=P_2/\eta$</td></tr>
<tr><td>7</td><td>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.</td><td>T_{2N}、P_{1N}</td><td colspan="8">$T_{2N} \geqslant T_2 \cdot f_1 \cdot f_t$ or $P_{1N} \geqslant P_1 \cdot f_1 \cdot f_t$</td></tr>
<tr><td>8</td><td>Check the radial and axial forces on the shafts.</td><td>F_{r1}/F_{r2}
F_{a1}/F_{a2}</td><td colspan="8">See P 16/S</td></tr>
<tr><td>9</td><td>Determination of Lubrication System</td><td></td><td colspan="8">Generally Splash Lubrication</td></tr>
<tr><td>10</td><td>Determination of Cooling System</td><td></td><td colspan="8">Generally Air Cooling or Fan cooling</td></tr>
<tr><td>11</td><td>Determination of every item included in the Type Designation</td><td></td><td colspan="8">For details about Type Designation, see P 2/S.</td></tr>
<tr><td>12</td><td>Normal ambient conditions</td><td></td><td colspan="8">Ambient temperature -10 to 40℃, ample space, good ventilation, altitude not exceeding 1000m and common plant dust.</td></tr>
<tr><td>13</td><td>Special ambient conditions</td><td></td><td colspan="8">For higher or lower temperature, dusty sites, chemical reaction (acids, alkaline, etc), or open field (sunlight, ice, rain, etc), please consult us!</td></tr>
</table>

Example

1) Gear motor

Known Criteria:

1. The power required by the driven machine P_2=1kW, speed n_2=10.4r/min
2. Common motor: 4-pole, speed n_1=1450r/min
3. Load characteristics: moderate, working 8 hours/d, ambient temperature 40℃ and starting 10 times/h
4. Mounting and output mode: Unidirectional shaft, output mode A , 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 f1=1.5 and ambient temperature factor ft=1.12
2. Calculation of the Ratio iN:
   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 η=62%) :
   $P_1=P_2/\eta=1/0.62=1.6$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}:
   $P_{1N} \geqslant P2 \cdot f1 \cdot ft/\eta = 1 \times 1.5 \times 1.12/0.62 = 2.7$kW
5. The type selected:
   SF87A-139-Y-2.2-B51-90

2) Gear Unit

Known Criteria:

1. The torque required by the driven machine T2=800N • m and speed n2=5r/min
2. The input speed n1=200r/min
3. Load characteristic: uniform, operating 12h/d continuously, ambient temperature 40℃
4. Mounting and output mode: hollow output shaft with keyway, 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,ft=1.06.
2. Calculation of the ratio i_N:
   As i= n1/ n2=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 η=77%) :
   $T_{2N} \geqslant T_2 \cdot f_1 \cdot f_t = 800 \times 1.25 \times 1.06 = 1060$ N • m;
   $P_{1N} \geqslant P_1 \cdot f_1 \cdot f_t = T_2 \cdot f_1 \cdot f_t \cdot n_1/(9550 \cdot i_N \cdot \eta)$
   $= 800 \times 1.25 \times 1.06 \times 1450/(9550 \times 41.1 \times 0.77)$
   =5.1kW
   In the table of Transmission Capacity, K08 meets the requirements (T_{2N}=1600N • m, P_{1N}=6.67 kW)
4. Determination of the input mode:
   As $P_{1N} \geqslant P_1 = T_2 \cdot n_1/(9550 \cdot i_N \cdot \eta) = 800 \cdot 1450/(9550 \cdot 41.1 \cdot 0.77) = 3.84$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:
   SW87-41.1-AE3-B8

5 Transmission Capacity:

S.. (n1=1450r/min)

			S..37			S..47			S..57			S..67			
n_1 (r/min)	n_{2N} (r/min)	i_N	T_{2N} (N·m)	iex	P_{1N} (kW)	T_{2N} (N·m)	iex	P_{1N} (kW)	T_{2N} (N·m)	iex	P_{1N} (kW)	T_{2N} (N·m)	iex	P_{1N} (kW)	
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)	iex	P_{1N} (kW)	T_{2N} (N·m)	iex	P_{1N} (kW)	T_{2N} (N·m)	iex	P_{1N} (kW)	T_{2N} (N·m)	iex	P_{1N} (kW)	T_{2N} (N·m)	iex	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.. (n1=1740r/min)

			S..37			S..47			S..57			S..67			
n_1 (r/min)	n_{2N} (r/min)	i_N	T_{2N} (N•m)	iex	P_{1N} (kW)	T_{2N} (N•m)	iex	P_{1N} (kW)	T_{2N} (N•m)	iex	P_{1N} (kW)	T_{2N} (N•m)	iex	P_{1N} (kW)	
	73.11	23.8	73	23.9	0.71	152	23.9	1.45	245	23.9	2.40	340	24.11	2.92	
	59.79	29.1	76	29.46	0.61	155	29.4	1.21	245	29.46	1.97	480	28.8	3.66	
	53.37	32.6	76	32.88	0.55	155	32.88	1.09	245	32.88	1.79	480	32.68	3.26	
	47.15	36.9	79	36.88	0.52	155	36.88	0.98	245	36.88	1.60	480	36.35	2.94	
	42.34	41.1	81	41.59	0.47	155	41.59	0.88	245	41.59	1.42	480	40.63	2.65	
	37.42	46.5	81	47.25	0.42	155	47.25	0.78	245	47.25	1.26	480	45.68	2.36	
	33.92	51.3	81	50.53	0.40	155	50.53	0.73	245	50.53	1.19	480	51.75	2.11	
	30.26	57.5	81	58.24	0.35	155	58.24	0.65	265	58.24	1.14	480	56.74	1.93	
	25.66	67.8	84	68	0.37	167	68	0.59	285	68	1.27	480	67.5	1.64	
	23.61	73.7	84	71.22	0.36	155	71.22	0.64	290	71.22	1.26	480	72.32	1.54	
1740	19.93	87.3	86	88.39	0.30	167	88.39	0.56	295	88.39	1.04	520	86.4	1.63	
	17.66	98.5	87	98.65	0.28	168	98.65	0.53	295	98.65	0.96	520	98.04	1.46	
	15.82	110	88	110.6	0.26	168	110.6	0.47	295	110.6	0.86	520	109	1.32	
	14.15	123	91	124.8	0.24	168	124.8	0.42	295	124.8	0.78	520	121.9	1.20	
	12.52	139	92	141.8	0.22	168	141.8	0.37	295	141.8	0.70	520	137.1	1.08	
	11.30	154	92	151.6	0.20	170	151.6	0.36	295	151.6	0.67	520	155.3	0.97	
	9.94	175	92	174.7	0.18	170	174.7	0.31	295	174.7	0.58	520	170.2	0.90	
	8.57	203	92	204	0.16	170	204	0.28	295	204	0.49	520	202.5	0.77	
	7.60	229										520	230	0.67	
	6.90	252										520	246.2	0.64	
	6.15	283										520	285	0.54	
	5.37	324													
	5.03	346													
	4.47	389													

	S..77			S..87			S..97			S..107			S..127		
	T_{2N} (N·m)	iex	P_{1N} (kW)	T_{2N} (N·m)	iex	P_{1N} (kW)	T_{2N} (N·m)	iex	P_{1N} (kW)	T_{2N} (N·m)	iex	P_{1N} (kW)	T_{2N} (N·m)	iex	P_{1N} (kW)
	1020	24.11	8.86	1600	23.44	13.68	2870	24.23	23.40	4085	22.36	41.28	7350	23.61	58.20
	1050	28.8	7.63	1600	28.93	11.33	3010	28.93	21.12	4280	27.66	35.04	7700	28.16	63.24
	1090	32.68	6.98	1600	32.3	10.26	3200	32.31	20.04	4550	30.82	33.36	8200	31.83	59.52
	1100	36.35	6.41	1600	37.22	8.90	3300	37.22	18.12	4700	35.55	29.88	8600	36.67	54.24
	1100	40.63	5.74	1600	41.4	8.00	3300	41.4	16.32	4700	39.56	26.88	8600	40.63	48.96
	1100	45.68	5.10	1600	46.3	7.24	3300	46.3	14.64	4700	44.29	24.00	8100	45.17	42.48
	1100	51.75	4.56	1600	52.14	6.43	3300	52.14	12.96	4700	49.88	21.36	8600	50.60	44.04
	1100	56.74	3.91	1600	56.74	5.90	3300	56.74	12.00	4700	54.18	19.56	8600	55.44	39.24
	1040	67.5	3.32	1700	67.5	5.28	2900	67.5	8.89	4700	64.50	16.44	8600	66.00	35.88
	1100	72.32	3.34	1600	70.31	4.82	3300	72.69	9.40	4520	68.64	17.16	8600	72.45	30.12
	1100	86.4	3.22	1880	86.79	5.27	3240	86.79	8.83	4700	84.92	15.96	8420	86.40	28.44
	1140	98.04	2.94	1960	96.92	4.91	3240	96.92	8.02	4900	94.60	14.52	8770	97.65	25.80
	1170	109	2.76	2000	111.7	4.40	3510	111.7	7.54	5000	109.12	13.32	9000	112.50	23.88
	1200	121.9	2.57	2060	124.2	4.08	3510	124.2	6.78	5150	121.44	12.24	9200	124.65	21.96
	1210	137.1	2.29	2100	138.9	3.77	3650	138.9	6.30	5255	135.96	11.11	9500	138.60	20.16
	1240	155.3	2.11	2150	156.4	3.43	3840	156.4	5.96	5360	153.12	10.42	9600	155.25	18.60
	1260	170.2	1.96	2210	170.2	3.29	3840	170.2	5.48	5520	166.32	9.01	9900	170.10	16.20
	1270	202.5	1.73	2260	202.5	2.87	4000	202.5	4.86	5645	198.00	8.17	10120	202.50	14.64
	1270	235.7	1.49	2280	228.3	2.57	4000	228.3	4.37	5700	223.08	7.54	10200	228.15	13.44
	1270	249.8	1.40	2280	250.2	2.41	4000	250.2	4.04	5700	244.64	6.49	10200	250.20	11.60
	1270	282.5	1.24	2280	275.9	2.18	4000	290.5	3.48						
	1270	323.4	1.08	2280	324	1.86	4000	324	3.12						
	1270	348	1.01	2280	343.4	1.75	4000	343.4	2.95						
				2280	389.1	1.55	4000	389.3	2.60						

S../CRL.. (n1=1450r/min)

			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)	iex	P_{1N} (kW)	T_{2N} (N·m)	iex	P_{1N} (kW)	T_{2N} (N·m)	iex	P_{1N} (kW)	T_{2N} (N·m)	iex	P_{1N} (kW)	
	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		
1450	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)	iex	P_{1N} (kW)	T_{2N} (N·m)	iex	P_{1N} (kW)	T_{2N} (N·m)	iex	P_{1N} (kW)	T_{2N} (N·m)	iex	P_{1N} (kW)	T_{2N} (N·m)	iex	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../CRL.. (n1=1740r/min)

			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)	iex	P_{1N} (kW)	T_{2N} (N·m)	iex	P_{1N} (kW)	T_{2N} (N·m)	iex	P_{1N} (kW)	T_{2N} (N·m)	iex	P_{1N} (kW)	
	7.84	222	92	226.2	0.13	185	226.2	0.18	300	226.2	0.42	570	224.8	0.73	
	6.93	251	92	253.5	0.12	185	253.5	0.17	300	253.5	0.37	570	252	0.66	
	6.13	284	92	288.4		185	288.4	0.14	300	288.4	0.32	570	286.6	0.58	
	4.99	349	92	355.1		185	355.1		300	355.1	0.26	570	352.9	0.47	
	4.42	394	92	396.5		185	396.5		300	396.5	0.24	570	394.1	0.42	
	3.93	443	92	444.5		185	444.5		300	444.5	0.22	570	441.8	0.37	
	3.54	492	92	501.4		185	501.4		300	501.4	0.19	570	498.4	0.34	
	2.90	601	92	607.7		185	607.7		300	607.7	0.16	570	603.9	0.28	
	2.60	670	92	678.7		185	678.7		300	678.7	0.14	570	674.5	0.24	
	2.30	758	92	760.6		185	760.6		300	760.6		570	755.9	0.22	
	2.03	857	92	865.2		185	865.2		300	865.2		570	859.8	0.19	
	1.65	1054	92	1065		185	1065		300	1065		570	1059	0.16	
	1.46	1192	92	1190		185	1190		300	1190		570	1182	0.14	
	1.30	1340	92	1334		185	1334		300	1334		570	1326		
	1.17	1487	92	1504		185	1504		300	1504		570	1495		
	1.04	1675	92	1710		185	1710		300	1710		570	1699		
	0.93	1862	92	1828		185	1828		300	1828		570	1817		
	0.85	2049	92	2106		185	2106		300	2106		570	2093		
1740	0.71	2443	92	2459		185	2459		300	2459		570	2444		
	0.65	2679	92	2680		185	2680		300	2680		570	2664		
	0.53	3260	92	3304		185	3304		300	3304		570	3283		
	0.47	3664	92	3688		185	3688		300	3688		570	3665		
	0.42	4157	92	4134		185	4134		300	4134		570	4109		
	0.37	4689	92	4702		185	4702		300	4702		570	4673		
	0.30	5880	92	5795		185	5795		300	5795		570	5759		
	0.27	6560	92	6467		185	6467		300	6467		570	6428		
	0.24	7358	92	7253		185	7253		300	7253		570	7208		
	0.21	8323	92	8180		185	8180		300	8180		570	8129		
	0.19	9298	92	9293		185	9293		300	9293		570	9235		
	0.17	10244	92	9938		185	9938		300	9938		570	9877		
	0.15	11746	92	11758		185	11758		300	11758		570	11368		
	0.13	13122	92	13358		185	13358		300	13358		570	12915		
	0.12	14456	92	14285		185	14285		300	14285		570	13811		
	0.11	15985	92	16464		185	16464		300	16464		570	15919		
	0.091	19043	92	19228		185	19228		300	19228		570	18591		
	0.080	21823													
	0.074	23630													
	0.065	26688													

	S..77/CRL37			S..87/CRL47			S..97/CRL67			S..107/CRL77			S..127/CRL87		
	T_{2N} (N·m)	iex	P_{1N} (kW)	T_{2N} (N·m)	iex	P_{1N} (kW)	T_{2N} (N·m)	iex	P_{1N} (kW)	T_{2N} (N·m)	iex	P_{1N} (kW)	T_{2N} (N·m)	iex	P_{1N} (kW)
	1270	224.8	1.51	2500	221.9	3.95	4200	223.6	4.56	6000	208.7	8.33	10200	215.2	12.60
	1270	252	1.36	2500	244.2	3.59	4200	248.5	4.10	6000	231.8	7.50	10200	247.6	10.93
	1270	286.6	1.19	2500	282.6	3.10	4200	284	3.59	6000	259.2	6.71	10200	275.6	9.83
	1270	352	0.97	2500	336.9	2.60	4200	339.3	3.01	6000	325.5	5.34	10200	338.0	8.00
	1270	394.1	0.86	2500	386.6	2.27	4200	384.8	2.65	6000	369.5	4.70	10200	379.7	7.19
	1270	441.8	0.77	2500	425.7	2.05	4200	428.1	2.39	6000	410.2	4.24	10200	434.2	6.24
	1270	498.4	0.68	2500	495.5	1.76	4200	478.5	2.14	6000	459.5	3.78	10200	483.2	5.60
														S..127/CRL77	
	1270	603.9	0.56	2500	579.6	1.51	4200	591.2	1.73	6000	563.8	3.36	10200	582.0	5.66
	1270	674.5	0.50	2500	665.8	1.32	4200	670.7	1.52	6000	640.4	2.95	10200	661.1	4.99
	1270	755.9	0.46	2500	732.7	1.20	4200	745.3	1.37	6000	711.4	2.66	10200	734.3	4.49
	1270	859.8	0.40	2500	848.1	1.03	4200	851.9	1.20	6000	795.6	2.38	10200	821.2	4.02
	1270	1059	0.32	2500	1011	0.86	4200	1018	1.01	6000	999.0	1.90	10200	1031	3.20
	1270	1182	0.29	2500	1160	0.76	4200	1154	0.89	6000	1134	1.67	10200	1171	2.82
	1270	1326	0.25	2500	1277	0.68	4200	1284	0.79	6000	1259	1.50	10200	1300	2.54
	1270	1495	0.23	2500	1487	0.59	4200	1435	0.71	6000	1411	1.34	10200	1456	2.27
	1270	1699	0.20	2500	1655	0.53	4200	1614	0.64	6000	1587	1.19	10200	1639	2.02
	1270	1817	0.19	2500	1854	0.47	4200	1828	0.56	6000	1796	1.06	10200	1853	1.78
	1270	2093	0.17	2500	1968	0.44	4200	2004	0.50	6000	1967	0.96	10200	2030	1.62
	1270	2444	0.14	2500	2386	0.37	4200	2384	0.43	6000	2341	0.80	10200	2417	1.37
	1270	2664		2500	2684	0.32	4200	2649	0.38	6000	2611	0.72	10200	2695	1.22
	1270	3283		2500	3199	0.28	4200	3159	0.32	6000	3133	0.60	10200	3234	1.02
	1270	3665		2500	3674	0.24	4200	3626	0.28	6000	3558	0.53	10200	3673	0.90
	1270	4109		2500	4044	0.22	4200	3992	0.25	6000	3950	0.48	10200	4077	0.80
	1270	4673		2500	4707	0.19	4200	4646	0.22	6000	4423	0.43	10200	4565	0.72
	1270	5759		2500	5881	0.14	4200	5796	0.18	6000	5630	0.34	10200	5811	0.56
	1270	6428		2500	6552	0.13	4200	6467	0.16	6000	6272	0.30	10200	6474	0.50
	1270	7208		2500	7213		4200	7119	0.14	6000	6963	0.28	10200	7187	0.46
	1270	8129		2500	8394		4200	8286		6000	7825	0.24	10200	8078	0.41
	1270	9235		2500	9346		4200	9225		6000	8746	0.22	10200	9028	0.36
	1270	9877		2500	10467		4200	10332		6000	9924	0.19	10200	10244	0.32
	1270	11368		2500	12030		4200	11875		6000	11247	0.17	10200	11465	0.30
	1270	12915		2500	13394		4200	13221		6000	12570	0.16	10200	12814	0.26
	1270	13811		2500	15001		4200	14807		6000	14262	0.13	10200	14539	0.23
	1270	15919		2500	15932		4200	15722		6000	15635		10200	15939	0.22
	1270	18591		2500	19307		4200	19057		6000	18613		10200	18974	0.18
				2500	22266		4200	21960		6000	21616		10200	21476	0.16
				2500	24044		4200	23724		6000	22624		10200	23063	0.14
										6000	26172		10200	26681	

6 Directly connected motor power table:

iN \ Pm (kW)	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																				

S37 S47 S57

iN \ Pm (kW)	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																					

S67 S77

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,P1＞P1N),
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.

iN \ Pm (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																					

S87

S97

iN \ Pm (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																					
87.3																					
98.5																					
110																					
123																					
139																					
154																					
175																					
203																					
229																					
252																					
283																					
324																					
346																					
389																					

S107

S127

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,P1＞P1N),
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 Permissible Radial Force and Axial Force on Shafts:

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

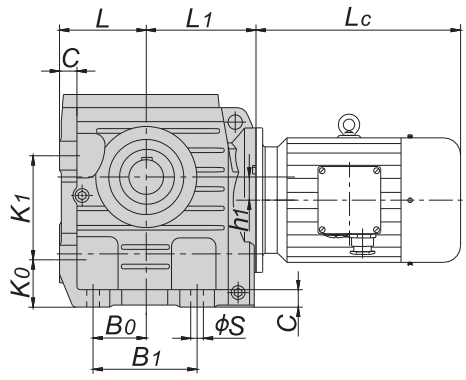
7.2 Radial Force on Output Shaft (Fr2)(N):

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

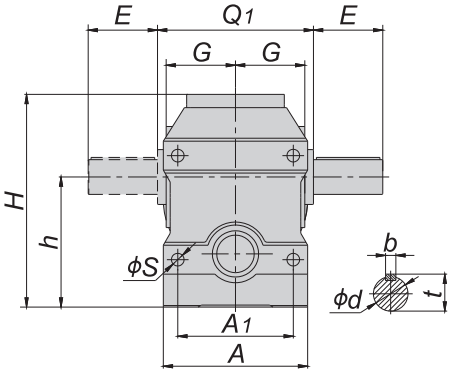
Note: For lower output speed, apply the largest Fr2 value in each type.

8 Mounting, Output Modes and Dimensions:

S..37-S..97

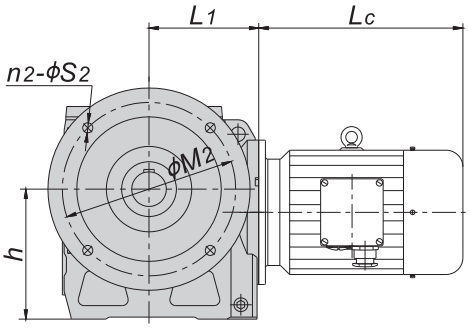


Foot-mounted

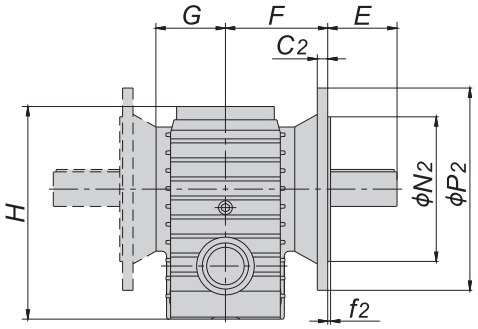


Solid shaft with parallel key

S37～S97

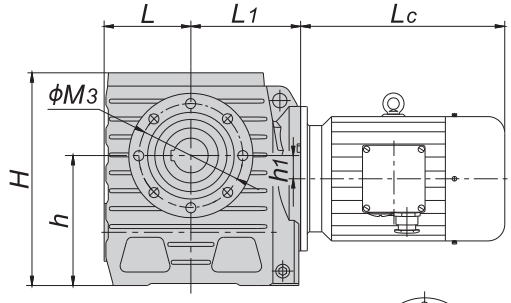


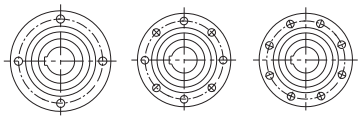
Flange-mounted



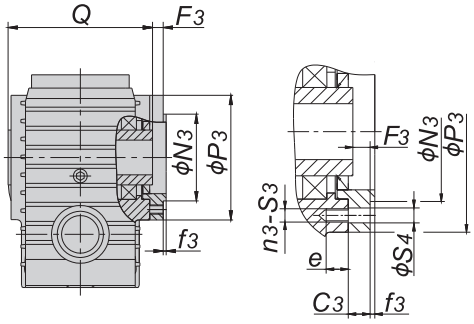
Solid shaft with parallel key

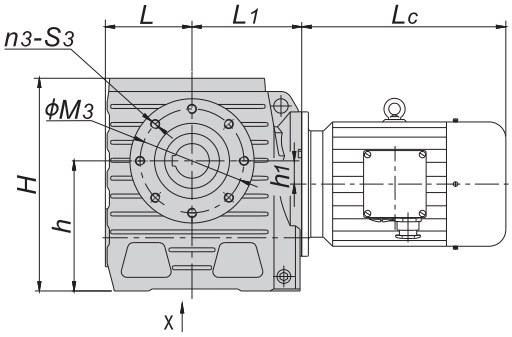
SF37～SF97

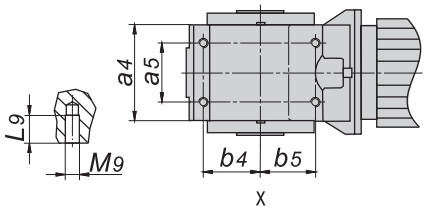


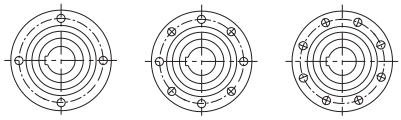


Short Flange-mounted S..47、S..67 S.57 S..77～S..97

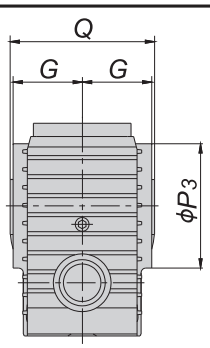






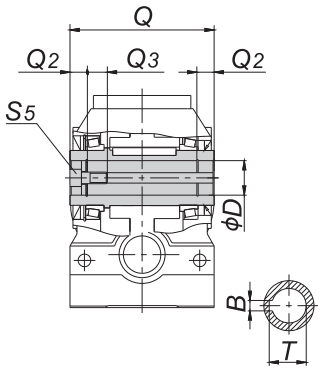


S..37～S..67 S..57 S..77～S..97



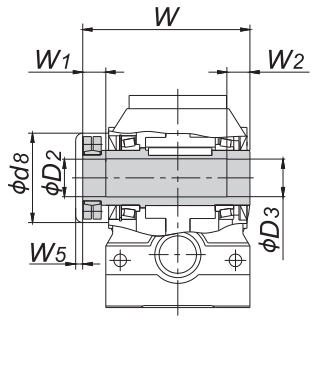
Shaft-mounted(Applicable for torque arm mounted)

S



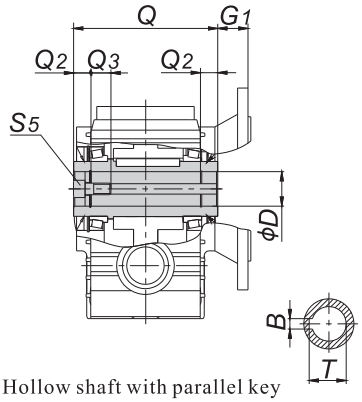
Hollow shaft with parallel key

SW37～SW97



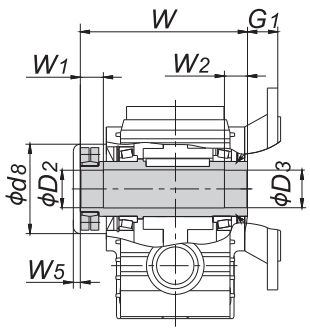
Hollow shaft with shrink disk

SH37～SH97



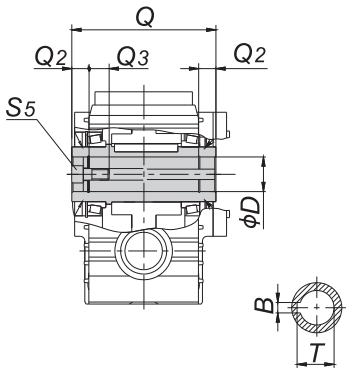
Hollow shaft with parallel key

SL37～SL97



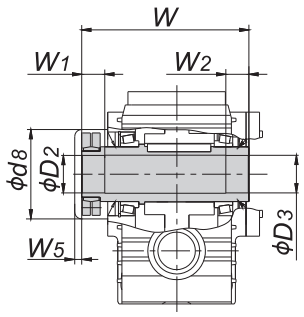
Hollow shaft with shrink disk*

SHL37～SHL97



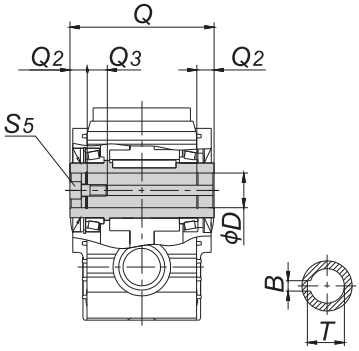
Hollow shaft with parallel key

SZ47～SZ97



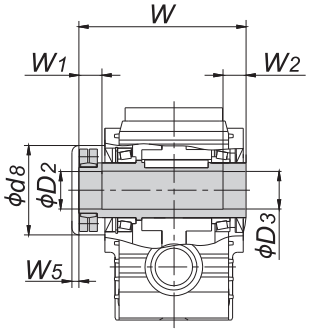
Hollow shaft with shrink disk *

SHZ47～SHZ97



Hollow shaft with parallel key

SA37～SA97



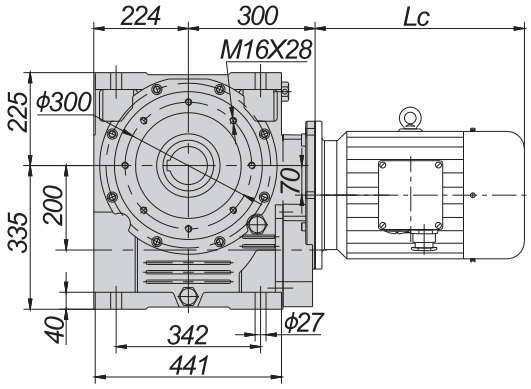
Hollow shaft with shrink disk *

SHA37～SHA97

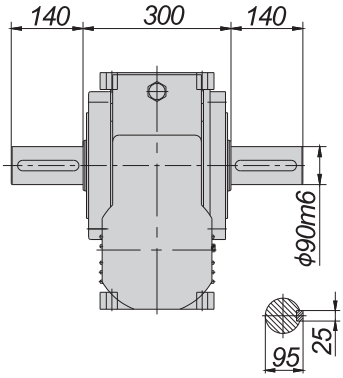
	Size	37	47	57	67	77	87	97
Outline Dimensions	A	110	120	136	160	185	250	300
	a4	86	90	105	128	154	194	236
	a5	／	60	60	88	102	118	160
	A1	90	100	110	130	150	200	250
	b4	／	35	58.5	71.5	85	115	135
	b5	／	52	58.5	80.5	85	110	113
	B0	35	35	45	60	75	92	115
	B1	63	80	100	130	135	180	235
	C	10	15	16	20	25	30	35
	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
Dimensions of output shaft	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
Wt. (kg)**		7.2	10	13.5	25	43	85	149

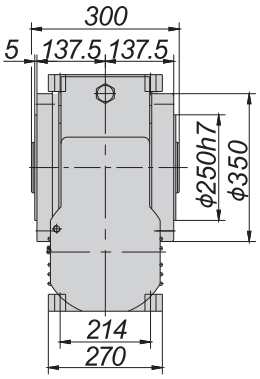
Note: For hollow shaft with involute spline, please consult us. 2) * Shrink disk should be installed on the opposite side of flange, short-flange and torque-arm. 3) **The weight of motor is not included.

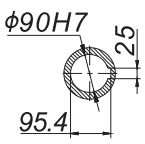
S107

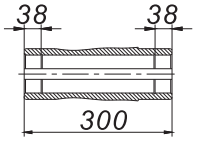


Foot-mounted

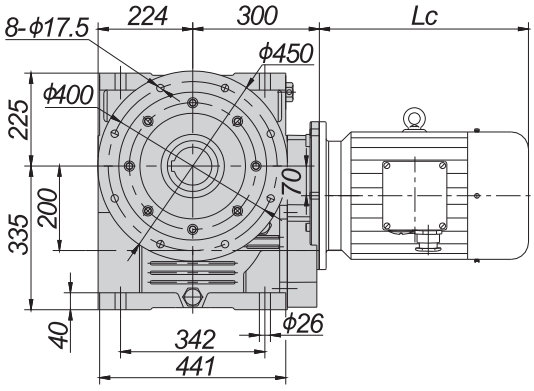




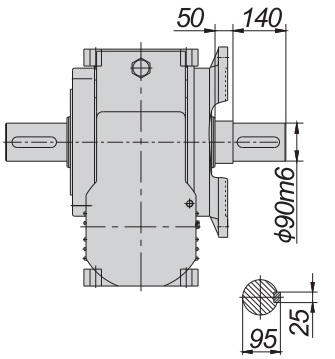


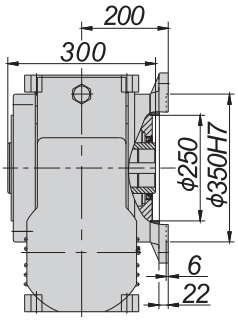


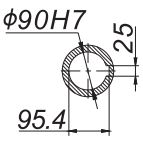
S107 **SW107**

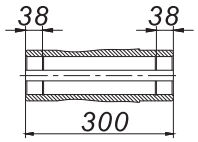


Flange-mounted





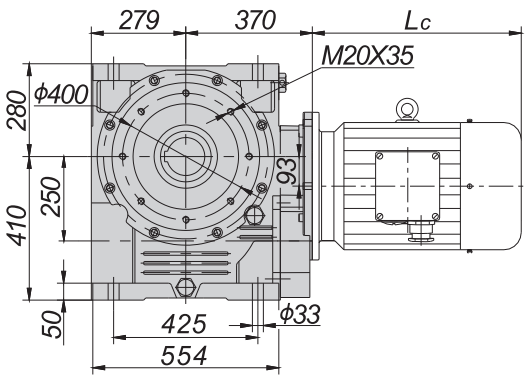




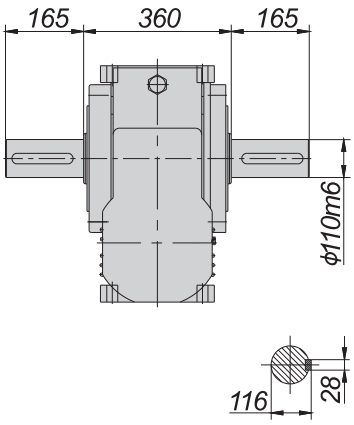
SF107 **SL107**

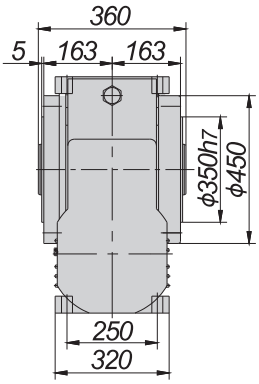
Note:1) For hollow shaft with involute spline or shrink disk, please consult us.
2) The weight of S.107 is 237kg, which do not include the weight of motor and lubricant..

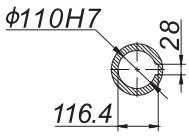
S127

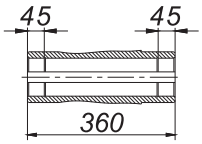


Foot-mounted

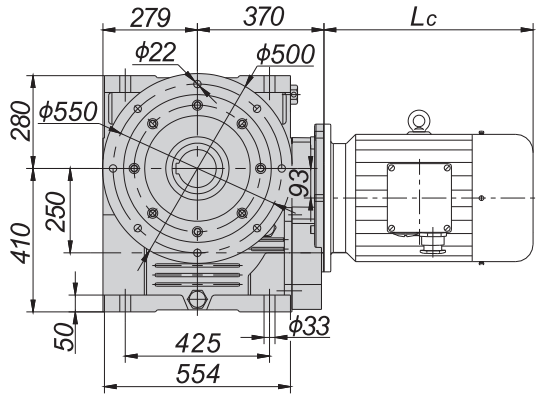




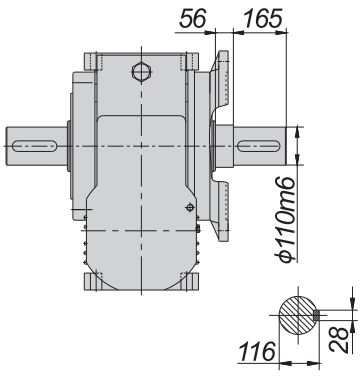


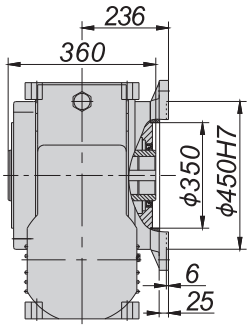


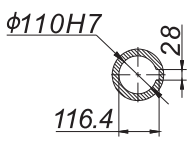
S127 **SW127**

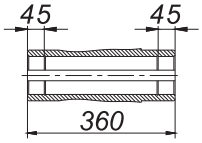


Flange-mounted









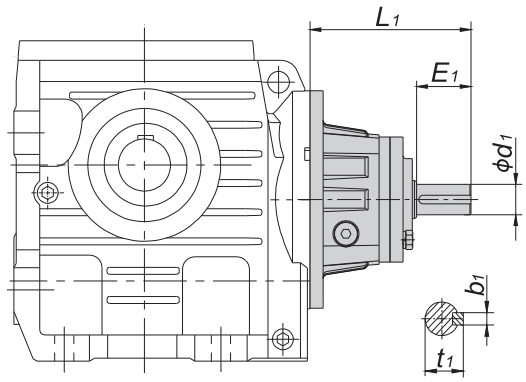
SF127 **SL127**

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..

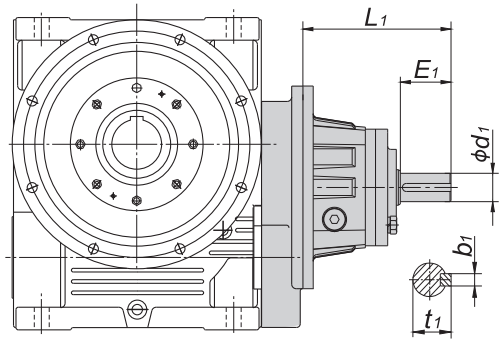
S

9 Input Part:

9.1 Dimensions of AE Input Shaft:



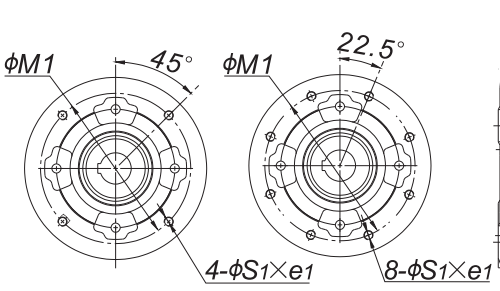
S..37～S..97

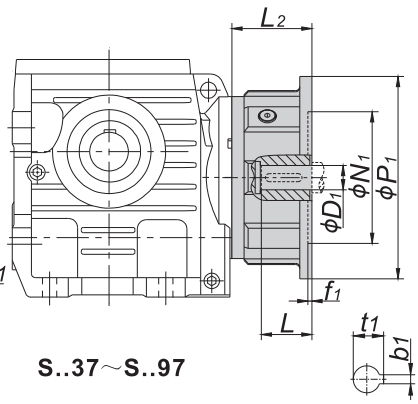


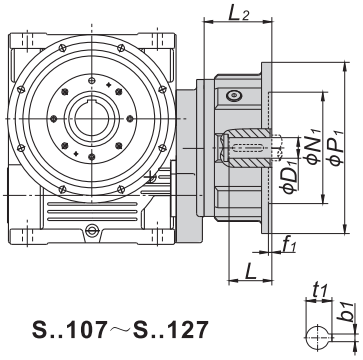
S..107～S..127

Size	Input Shaft	Range of Power	d1	E1	L1	b1	t1	Weight (Kg)
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 Dimensions of AG Connection Flange:



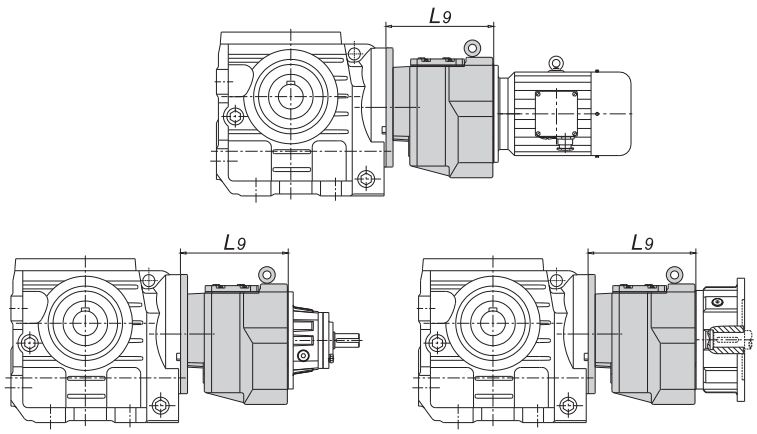




Size	Flange Type	e1	D1	N1	M1	P1	f1	b1	t1	L	S1	L2	Weight(Kg)
37 47	AG63	14	11H7	95H7	115	140	4	4	12.8	23	M8	59	4.5
	AG71	14	14H7	110H7	130	160	4	5	16.3	30	M8	59	4.5
	AG80	18	19H7	130H7	165	200	4	6	21.8	40	M10	74	7.3
57	AG63	14	11H7	95H7	115	140	4	4	12.8	23	M8	61	4.6
	AG71	14	14H7	110H7	130	160	4	5	16.3	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	M20	138	60.3
	AG225	28	60H7	350H7	400	450	6	18	64.4	140	M16	166	98.6

S

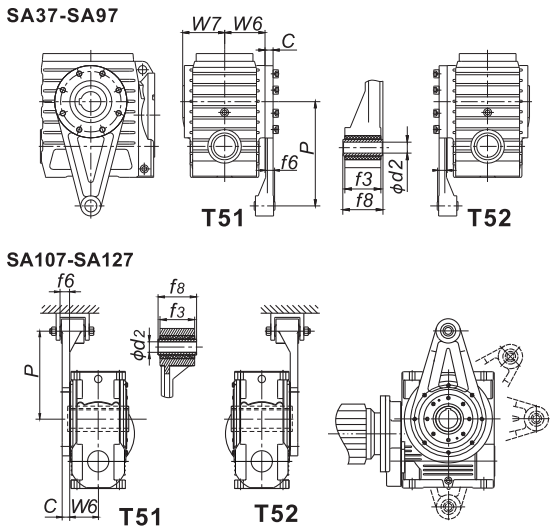
10 Combi-type Dimensions:



Type	L9
S..37/CRL37 S..47/CRL37	181
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 Accessories:

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



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 Oil:

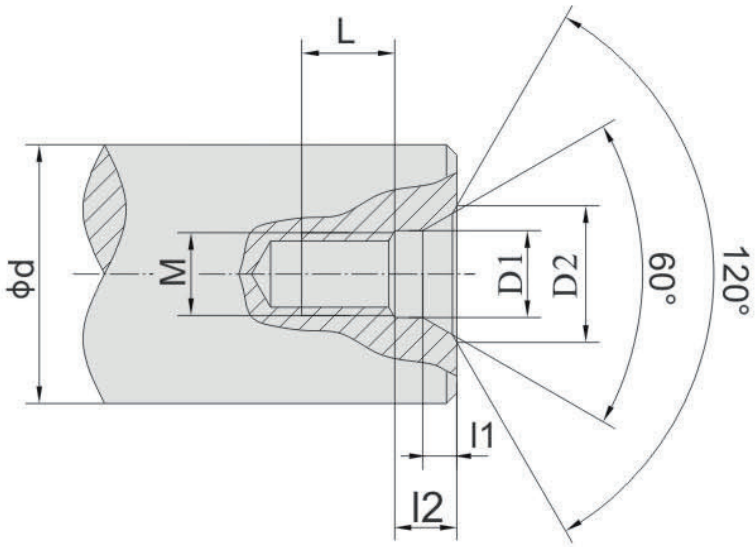
Oil level (L)					
Mounting Position / Size	B3、B61、B51、B55、H1、H11	B81、B63、B53 B57、H3、H31	B8、B54、B58 H2、H21	B31、B62、B52 B56、H4、H41	V5、V51、V6、V61、V3、V1 V31、V11、H5、H6、H51、H61
37	0.25	0.4	0.5	0.6	0.4
47	0.4	0.9	0.9	1.2	1.0
57	0.5	1.2	1	1.6	1.4
67	1	2.2	3.1	3.2	2.7
77	1.9	4.2	5.8	6.5	4.9
87	3.8	8.1	10.4	12	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

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

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

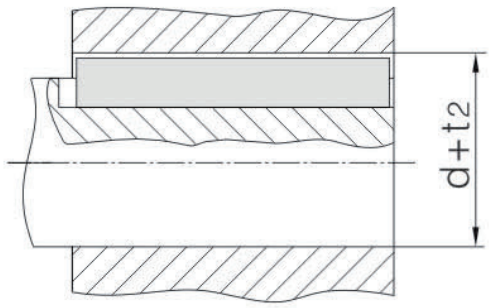
12 Shaft end central hole

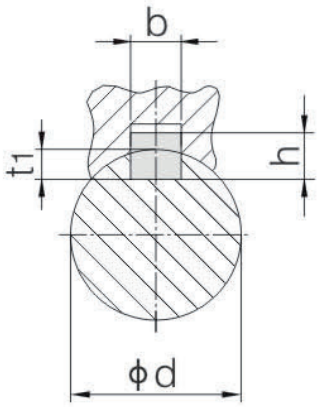
Shaft end C Type screw central hole



d	M	L	l2	l1	D1	D2
7 < d ≤ 10	M3	10	2.6	1.8	3.2	5.8
10 < d ≤ 13	M4	10	3.2	2.1	4.3	7.4
13 < d ≤ 16	M5	10	4	2.4	5.3	8.8
16 < d ≤ 21	M6	12	5	2.8	6.4	10.5
21 < d ≤ 24	M8	12	6	3.3	8.4	13.2
24 < d ≤ 30	M10	15	7.5	3.8	10.5	16.3
30 < d ≤ 38	M12	20	9.5	4.4	13	19.8
38 < d ≤ 50	M16	25	12	5.2	17	25.3
50 < d ≤ 85	M20	30	15	6.4	21	31.3
85 < d ≤ 130	M24	35	18	8	25	38
130 < d ≤ 225	M30	45	18	11	31	48

13 Dimension of parallel key and keyway





d	b	h	t_1	$d + t_2$
8 < d ≤ 10	3	3	1.8	d + 1.4
10 < d ≤ 12	4	4	2.5	d + 1.8
12 < d ≤ 17	5	5	3	d + 2.3
17 < d ≤ 22	6	6	3.5	d + 2.8
22 < d ≤ 30	8	7	4	d + 3.3
30 < d ≤ 38	10	8	5	d + 3.3
38 < d ≤ 44	12	8	5	d + 3.3
44 < d ≤ 50	14	9	5.5	d + 3.8
50 < d ≤ 58	16	10	6	d + 4.3
58 < d ≤ 65	18	11	7	d + 4.4
65 < d ≤ 75	20	12	7.5	d + 4.9
75 < d ≤ 85	22	14	9	d + 5.4
85 < d ≤ 95	25	14	9	d + 5.4
95 < d ≤ 110	28	16	10	d + 6.4
110 < d ≤ 130	32	18	11	d + 7.4
130 < d ≤ 150	36	20	12	d + 8.4
150 < d ≤ 170	40	22	13	d + 9.4
170 < d ≤ 200	45	25	15	d + 10.4
200 < d ≤ 230	50	28	17	d + 11.4
230 < d ≤ 260	56	32	20	d + 12.4

S

S

TGE Transmission s.r.o.
9. května 209,
268 01 Hořovice

Technical office Plzeň
Teslova 7b,
301 00 Plzeň
info@tge-transmission.com | www.tge-transmission.com

Local dealer