

# GEDAEFFECT

ЦИЛИНДРО-ЧЕРВЯЧНЫЕ  
МОТОР-РЕДУКТОРЫ



серия S



Gedaeffect  
The Engineering Company



## ОПИСАНИЕ ПРОДУКЦИИ

**Цилиндро-червячные мотор-редукторы серии S** представлены в цилиндрических/цилиндро-червячных комбинациях, поэтому они являются более производительными, чем обычные червячные редукторы.

Момент 73 – 10200 Н·м.

Коэффициент 23,8-389.

Мощность: 0,12-45 кВт.

Благодаря своей высокой эффективности эти редукторы могут использоваться во всех отраслях промышленности и могут иметь различные исполнения в зависимости от требований к величине момента и скорости. Передаточное число дает возможность регулировать ступени передачи и сокращать уровень шума во время работы, что позволяет оптимизировать стоимость этих редукторов для простых областей применения.

Главным образом, они используются в металлургии, очистке промышленных вод, химической промышленности, фармацевтике, сельскохозяйственном оборудовании, нефтедобывающей промышленности, ленточных конвейерах, пищевом оборудовании, смесительном оборудовании, автоматических производственных линиях, упаковке, транспортировке материалов, изготовлении бумаги, сахара, инженерном оборудовании, строительстве, электромеханической промышленности и прочее.



## ОСНОВНЫЕ МОДЕЛИ

- S37, S47, S57, S67, S77, S87, S97. S: на лапах, сплошной вал
- SF37, SF47, SF57, SF67, SF77, SF87, SF97. SF: на фланце, сплошной вал
- SA37, SA47, SA57, SA67, SA77, SA87, SA97. SA: полый вал
- SAF37, SAF47, SAF57, SAF67, SAF77, SAF87, SAF97. SAF: на фланце, полый вал
- SAT37, SAT47, SAT57, SAT67, SAT77, SAT87, SAT97. SAT: на моментном рычаге, полый вал
- SAZ37, SAZ47, SAZ57, SAZ67, SAZ77, SAZ87, SAZ97. SAZ: на коротком фланце, полый вал

## ТЕХНИЧЕСКИЕ ХАРАКТЕРИСТИКИ

- Высокомодульная конструкция
- Встроенный литой корпус
- Высокая степень защиты от утечек, широкий спектр применения
- Передовая технология шлифования, модифицированный профиль, высокая устойчивость к нагрузкам, безопасная работа
- Экономия затрат, низкая стоимость обслуживания

## СФЕРЫ ПРИМЕНЕНИЯ

- Серия Y Стандарт IEC и IE2 Односкоростные и двухскоростные высокоэффективные двигатели
- Серия YVP, YVPEJ, YEJ, YDEJ Трехфазные асинхронные тормозные двигатели переменной частоты
- Серия YZP, YZPEJ, YZRE Трехфазные асинхронные двигатели для кранов и металлургической промышленности
- Серия YB, YBEJ, YBPT, YFB Трехфазные асинхронные взрывозащитные двигатели
- Серия YGa, YGb Двигатели для рольгангов

## РУКОВОДСТВО ПО ВЫБОРУ ОБОРУДОВАНИЯ

Конструкция двигателей предусматривает постоянные нагрузки, заявленное время работы, также время пуска. Коэффициент привода  $f_1$ , коэффициент первичного пуска  $f_2$ , пусковой коэффициент  $f_3$  – согласно фактической нагрузке, времени работы, пусковой частоте.

Принимаются значения, меньше либо равные расчетному коэффициенту  $f_b$  Таблицы, то есть  $f_1 * f_2 * f_3 \leq f_b$ .

Требуемый момент при умножении на расчетный коэффициент ( $f_1 * f_2 * f_3$ ) должен быть меньше либо равен допустимому моменту редуктора.

**Таким образом,**

$$T_N \geq T_2 * f_1 * f_2 * f_3$$

$f_1$  – коэффициент привода (см. Таблицу 1)

$f_2$  – коэффициент первичного пуска (см. Таблицу 2)

$f_3$  – коэффициент пуска (см. Таблицу 3)

$T_2$  – требуемый момент

$T_N$  – допустимый момент

Sample Part Number

Service factor:

Table 1				Driven machine factor			f <sub>1</sub>		
Driven equipment	Daily operating time with load(hour)			Driven equipment	Daily operating time with load(hour)				
	≤ 2	> 2-10	> 10		≤ 2	> 2-10	> 10		
<b>Sewage treatment</b>				<b>Conveying machine</b>					
Concentrator(Central Transmission)	-	-	1.2	Bucket conveyor	-	1.4	1.5		
Compressed filter	1.0	1.3	1.5	Winch	1.4	1.6	1.6		
Flocculator	0.8	1.0	1.3	Hoist	-	1.5	1.8		
Aerator	-	1.8	2.0	Belt conveyor≤150kW	1.0	1.2	1.3		
Collector	1.0	1.2	1.3	Belt conveyor≥150kW	1.1	1.3	1.4		
Vertical,rotary group				Elevators for goods*	-	1.2	1.5		
Blended collector	1.0	1.3	1.5	Elevators for customers*	-	1.5	1.8		
Concentrator	-	1.1	1.3	Scraper conveyor	-	1.2	1.5		
Screw pump	-	1.3	1.5	Automatic ladder	1.0	1.2	1.4		
Water wheel machine	-	-	2.0	Rail traveling mechanism	-	1.5	-		
Pump				<b>Various frequency device</b>	-	1.8	2.0		
Centrifugal pump	1.0	1.2	1.3	<b>Reciprocating compressor</b>	-	1.8	1.9		
Volume-down pump				<b>Hoisting mechanism**</b>					
1Piston	1.3	1.4	1.8	Rotary mechanism*		1.4	1.8		
>1Piston	1.2	1.4	1.5	Pitching mechanism		1.1	1.4		
<b>Dredge</b>				Traveling mechanism		1.6	2.0		
Bucket conveyor	-	1.6	1.6	Lifting mechanism		1.1	1.4		
Unloading device	-	1.3	1.5	Jibcrane		1.2	1.6		
Caterpillar traveling mechanism	1.2	1.6	1.8	<b>Cooling tower</b>					
Bucket digger				Cooling tower fan	-	-	2.0		
Be used for picking up	-	1.7	1.7	Fan (Shaft flow and centrifugal type)	-	1.4	1.5		
Be used for rough materials	-	2.2	2.2	<b>Food industry</b>					
Chopper	-	2.2	2.2	Sugar production					
Traveling mechanism*	-	1.4	1.8	Sugar-cane cutter*	-	-	1.7		
<b>Plate blender</b>				Sugar crane mill	-	-	1.7		
	-	1.0	1.0	Beet sugar production	-	-	1.7		
<b>Chemical industry</b>				Beet masher	-	-	1.2		
Extruder	-	-	1.6	Squeeze machine,	-	-	1.4		
Paste mixer	-	1.8	1.8	mechanical refrigerator,	-	-	1.4		
Rubber calendar	-	1.5	1.5	cooking machine	-	-	1.5		
Cooling cylinder	-	1.3	1.4	Beet cleaner	-	-	1.5		
Material mixer,be used for				Beet chopper					
Uniform medium	1.0	1.3	1.4	<b>Paper-making machinery</b>					
Non-uniform medium	1.4	1.6	1.7	Various kinds***	-	1.8	2.0		
Blender,be used for				Pulper driving device				Supply goods according to customer requirements	
Uniform density medium	1.0	1.3	1.5	<b>Centrifugal compressor</b>	-	1.4	1.5		
Un-uniformed medium	1.2	1.4	1.6	<b>Rope way cable car</b>					
Un-uniformed gas absorption	1.4	1.6	1.8	Delivery ropeway	-	1.3	1.4		
Oven	1.0	1.3	1.5	Cableway of shuttle system	-	1.6	1.8		
Centrifugal machine	1.0	1.2	1.3	T rod elevator	-	1.3	1.4		
<b>Metal processing equipment</b>				Continuous cableway	-	1.4	1.6		
Plate turnover	1.0	1.0	1.2	<b>Cement industry</b>					
Steel pushing device	1.0	1.2	1.2	Concrete blender	-	1.5	1.5		
Winding machine	-	1.6	1.6	Crusher*	-	1.2	1.4		
Cooling bed transverse frame	-	1.5	1.5	Rotary kiln	-	-	2.0		
Roller leveler	-	1.6	1.6	Tube mill	-	-	2.0		
Roller path				Powder concentrator	-	1.6	1.6		
Continuous	-	1.5	1.5	Roller press	-	-	2.0		
Interval	-	2.0	2.0						
Reversing mill	-	1.8	1.8						
Cutter									
Continuous*	-	1.5	1.5						
Crank type*	1.0	1.0	1.0						
Continuous casting driving device	-	1.4	1.4						
Rolling mill									
Reversing cogging mill	-	2.5	2.5						
Reversing plate slab mill	-	2.5	2.5						
Reversing wire mill	-	1.8	1.8						
Reversing thin plate mill	-	2.0	2.0						
Reversing middle thickness plate mill	-	1.8	1.8						
Roll gap adjusting and driving device	0.9	1.0	-						

Sample Part Number

Table 1				Driven machine factor			f <sub>1</sub>		
Driven equipment	Daily running time with load(hour)			Driven equipment	Daily running time with load(hour)				
	≤ 2	> 2-10	> 10		≤ 2	> 2-10	> 10		
<b>Wood industry</b>				<b>Plastics industry</b>					
Barking machine				Miller, compound grinding					
Feed drive	1.25	1.25	1.50	Coating, film	1.25	1.25	1.25		
Main drive	1.75	1.75	1.75	Conveying pipe, Pulling rod, thin type					
Conveyor				Pipe type, Pile drawer	1.25	1.25	1.50		
Burner, repeating saw	1.25	1.25	1.50	Continuous mixer, Calender	1.50	1.50	1.50		
Rotary tower,transit transport	1.50	1.50	1.50	Blow film, to plasticizing					
Main loading,heavy loading	1.75	1.75	2.00	Batch mixer	1.75	1.75	1.75		
Main original wood,land base				<b>Rubber industry</b>					
Conveying chain				Continuous strong inner mixer,Mix roller,					
Floor	1.50	1.50	1.50	Batch feeding mixer (except for double sticks)	1.50	1.50	1.50		
Green-wood	1.50	1.50	1.75	Refiner, calender					
Cutting Chain				Double roller clamp feeding and mixed miller	1.25	1.25	1.50		
Saw transmission,traction	1.50	1.50	1.75	Batch strong inner mixer,					
Peeling barrel	1.75	1.75	2.00	Double stick single groove grain stick	1.75	1.75	1.75		
Feed drive				Miller heater, double sticks					
Edging,wood trimmer	1.25	1.25	1.50	Batch feeding mixer					
Planer feed,assorting table,				Wave stick miller	2.00	2.00	2.00		
Automatic incline lifting	1.75	1.75	1.75	<b>Generator and exciter</b>	1.00	1.00	1.25		
Multi-shaft feed,raw wood				<b>Hammer crusher</b>	1.75	1.75	2.00		
Transportation and rotation				<b>Sand miller</b>	1.25	1.25	1.50		
Transportation									
Charging tray	1.50	1.50	1.75						
Plywood lathe drive									
Conveying chain,Lifting									

Note: Determine required power P<sub>2</sub> of the driven equipment:  
 \*)Determine rated power according to maximum torque.  
 \*\*)It's necessary to check thermal capacity.

Prime mover factor

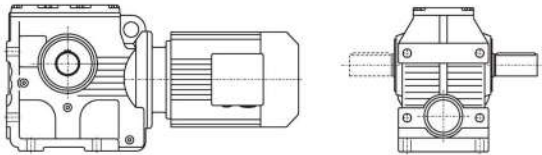
Table 2	Factor for prime mover	f <sub>2</sub>
Electric motors,hydraulic motors,turbines		1.0
Piston engines 4-6 cylinders		1.25
Piston engines 1-3 cylinders		1.5

Table 3	Start factor	f <sub>3</sub>			
f <sub>3</sub>	f <sub>1</sub> x f <sub>2</sub>	1	1.25	2-	>3
Starts per hour		1	-1.75	2.75	
≤ 5		1	1	1	1
6-25		1.2	1.12	1.06	1
26-60		1.3	1.2	1.12	1.06
61-180		1.5	1.3	1.2	1.12
> 180		1.7	1.5	1.3	1.2

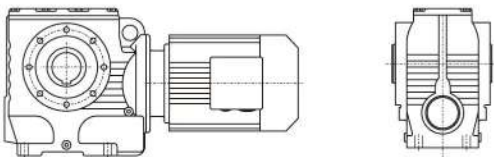
Sample Part Number



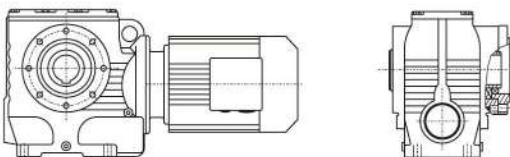
S series gear units are available in the following designs:



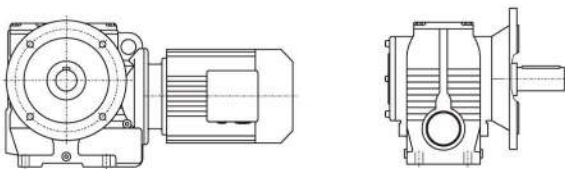
S..Y..  
Foot-mounted solid shaft helical-worm gear units



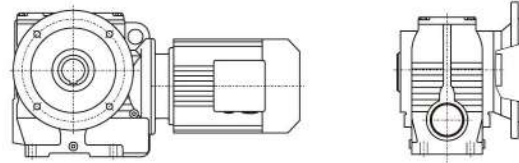
SA...Y...  
Hollow shaft helical-worm gear units



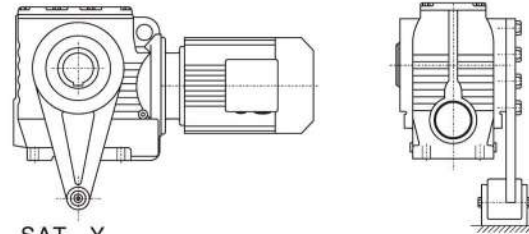
SAZ...Y...  
Short-flange-mounted hollow shaft helical-worm gear units



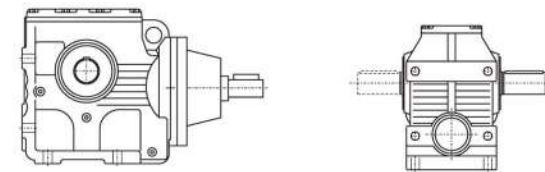
SF...Y..  
Flange-mounted solid shaft helical-worm gear units



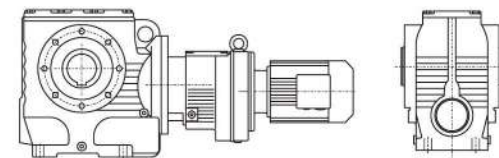
SAF...Y..  
Flange-mounted hollow shaft helical-worm gear units



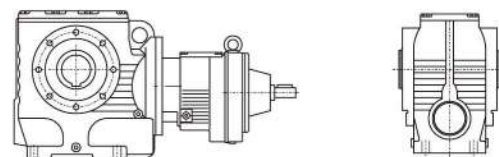
SAT...Y..  
Torque-arm-mounted hollow shaft helical-worm gear units



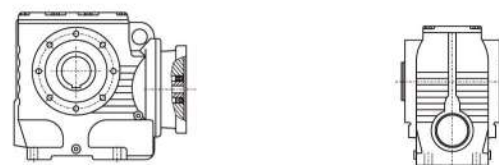
S(SF, SA, SAF, SAZ) S...  
Helical-worm gear units with solid shaft input



SA (S, SF, SAF, SAZ) ...R...Y...  
Combi-type helical-worm gear units



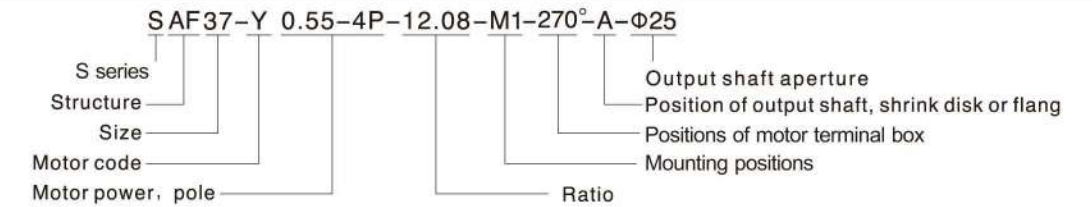
SA (S, SF, SAF, SAZ) S...R...  
Combi-type helical-worm gear units with solid shaft input



SA(S, SF, SAF, SAZ) ...Y...  
Customers provide the motor by themselves need connected flange.

Sample Part Number

Type Designations:



S series: Helical-worm Gearmotors

Structure:	
Foot-mounted solid shaft	(-)
Hollow shaft	A
Flange-mounted solid shaft	F
Flange-mounted hollow shaft	AF
Short-flange-mounted hollow shaft	AZ
Torque-arm-mounted hollow shaft	AT
Foot-mounted solid shaft with solid shaft input	S
Hollow shaft with solid shaft input	AS
Flange-mounted solid shaft with solid shaft input	FS
Flange-mounted hollow shaft with solid shaft input	AFS
*Hollow shaft with shrink disk	H..(H, HF, HZ, HT)

Size:  
(see selection table)

Motor code:	
Common motor	Y(Y2)
Flameproof motor	B
Direct current motor	Z
Brake motor	YEJ
Multi-speed motor	D
Variable frequency motor	YVP
Electromagnetic variable speed motor	YCT
Metallurgy hoisting motor	R
Transduction braking motor	YVPJ
Roller way	G

Motor power, pole :  
See selection table

Ratio:  
See selection table

Mounting positions:  
M1, M2, M3, M4, M5, M6

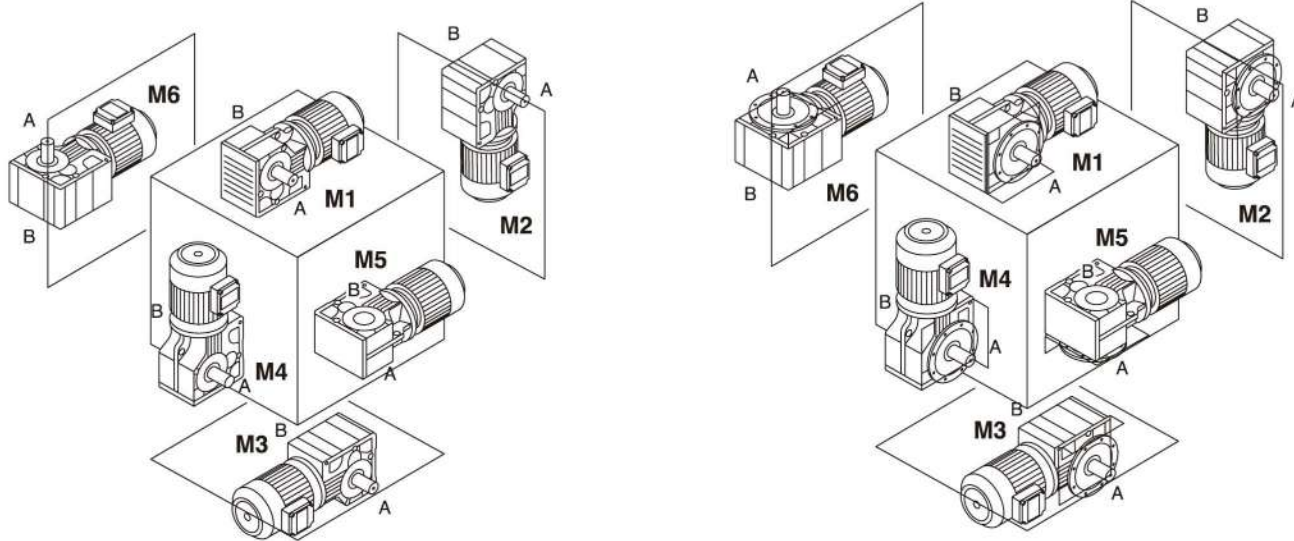
Positions of motor terminal box:  
0°, 90°, 180°, 270°

Output shaft \ flange \ shrink disc directions:  
Viewing from motor end: left side = A,  
right side = B, both side = AB(See mounting positions)

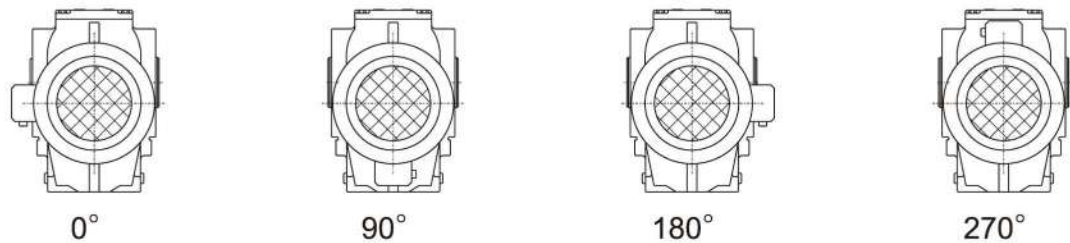
Output shaft aperture:  
See the chart of mounting dimension (It will be omitted when applying with solid output shaft)

Sample Part Number

Mounting positions



Positions of motor terminal box



Input power rating and permissible torque

Size	37	47	57	67	77	87	97
Structure	S SA SF SAF SAT SAZ						
Input power rating (kW)	0.18~0.75	0.18~1.5	0.18~3	0.25~5.5	0.55~7.5	0.75~15	1.5~22
Ratio	10.27~165.71	11.46~244.74	10.78~196.21	11.55~227.20	9.96~241.09	11.83~223.26	12.75~230.48
Permissible torque (n.m)	90	170	300	520	1270	2280	4000

Sample Part Number

Product Weight

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

The marked weight is average value, it has no constraint force.

Oil Quantity

S...:

Size	Oil level (L)					
	M1	M2	M3 <sup>1)</sup>	M4	M5	M6
S37	0.25	0.4	0.5	0.6	0.4	0.4
S47	0.35	0.8	0.7	1.1	0.8	0.8
S57	0.5	1.2	1	1.5	1.3	1.3
S67	1	2.0	2.2/3.1	3.2	2.6	2.6
S77	1.9	4.2	3.7/5.4	6	4.4	4.4
S87	3.3	8.1	6.9/10.4	12	8.4	8.4
S97	6.8	15	13.4/18	22.5	17	17

SF...:

Size	Oil level (L)					
	M1	M2	M3 <sup>1)</sup>	M4	M5	M6
SF37	0.25	0.4	0.5	0.6	0.4	0.4
SF47	0.4	0.9	0.9	1.2	1.0	1.0
SF57	0.5	1.2	1	1.6	1.4	1.4
SF67	1	2.2	2.3/3	3.2	2.7	2.7
SF77	1.9	4.1	3.9/5.8	6.5	4.9	4.9
SF87	3.8	8	7.1/10.1	12	9.1	9.1
SF97	7.4	15	13.8/18.8	23.6	18	18

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

Size	Oil level (L)					
	M1	M2	M3 <sup>1)</sup>	M4	M5	M6
S..37	0.25	0.4	0.5	0.6	0.4	0.4
S..47	0.4	0.8	0.7	1.1	0.8	0.8
S..57	0.5	1.1	1	1.6	1.2	1.2
S..67	1	2.0	1.8/2.6	2.9	2.5	2.5
S..77	1.8	3.9	3.6/5	5.9	4.5	4.5
S..87	3.8	7.4	6/8.7	11.2	8	8
S..97	7	14	11.4/16	21	15.7	15.7

Note: Combi-type gear units must be filled with the larger oil volume.

## Technical Parameter Table

Output speed r/min	Output torque Nm	Ratio i	Service factor f <sub>B</sub>	Type Type	Pole p	Output speed r/min	Output torque Nm	Ratio i	Service factor f <sub>B</sub>	Type Type	Pole p
<b>0.18kW</b>						<b>0.18kW</b>					
0.30	2579	4606	0.83			9.5	109	146.84	1.47		
0.36	2563	3872	0.84			10	102	137.25	1.57		
0.40	2515	3475	0.85	S 87R57	4	12	88	118.64	1.82	S 47	4
0.48	2394	2905	0.90	SF 87R57	4	14	75	100.80	2.14	SF 47	4
0.54	2239	2586	0.96	SA 87R57	4	15	67	90.00	2.40	SA 47	4
0.60	2021	2335	1.06	SAF87R57	4	18	57	76.88	2.80	SAF47	4
0.68	1778	2054	1.21			19	53	72.00	2.99		
0.76	1579	1824	1.36			23	45	60.65	3.56		
0.85	1412	1631	1.52								
0.99	1215	1404	0.98			9.1	113	152.00	0.80		
1.1	1078	1245	1.11			11	96	129.41	0.89		
1.3	952	1100	1.25	S 77R37	4	12	83	111.58	1.03		
1.5	826	954	1.45	SF 77R37	4	13	77	104.00	1.10		
1.7	725	837	1.65	SA 77R37	4	15	67	90.91	1.26		
1.9	618	714	1.93	SAF77R37	4	16	63	85.22	1.34		
2.2	551	637	2.2			18	56	75.20	1.52		
2.4	497	574	2.4			21	49	66.67	1.72		
						25	45	56.67	1.89		
						27	42	52.00	2.02	S 37	4
1.7	600	809	0.81			31	39	45.45	2.16	SF 37	4
2.0	532	712	0.92	S 67R37	4	33	37	42.61	2.30	SA 37	4
2.3	528	615	0.93	SF 67R37	4	37	33	37.60	2.61	SAF37	4
2.6	470	543	1.04	SA 67R37	4	42	29	33.33	2.95		
3.0	406	469	1.20	SAF67R37	4	49	25	28.33	3.47		
3.3	367	424	1.33			59	23	23.46	3.66		
3.8	316	365	1.55			74	19	18.85	4.56		
						84	16	16.48	5.21		
						90	15	15.45	5.56		
3.2	336	438	0.87			102	13	13.63	6.30		
3.6	325	388	0.84			115	12	12.08	7.11		
4.1	291	336	0.97	S 57R17	4	135	10	10.27	8.37		
4.7	255	294	1.11	SF 57R17	4						
5.2	233	269	1.21	SA 57R17	4						
6.1	198	229	1.42	SAF57R17	4						
6.8	177	204	1.60								
7.4	162	187	1.74								
4.7	198	294	0.81	S 47R17	4						
5.4	191	257	0.84	SF 47R17	4						
6.1	182	229	0.88	SA 47R17	4						
7.0	173	200	0.92	SAF47R17	4						
3.7	276	227.20	1.77	S 67	6						
4.1	249	205.11	1.96	SF 67	6						
4.7	219	180.46	2.23	SA 67	6						
5.0	207	170.40	2.36	SAF67	6						
4.3	238	196.21	1.18	S 57	6						
4.7	219	180.40	1.29	SF 57	6						
5.5	187	154.35	1.51	SA 57	6						
6.4	162	133.79	1.74	SAF57	6						
7.1	146	196.21	1.94	S 57	4						
7.7	134	180.40	2.11	SF 57	4						
9.0	115	154.35	2.46	SA 57	4						
10.4	99	133.79	2.84	SAF57	4						
5.1	204	168.00	0.81	S 47	6						
5.7	182	150.00	0.88	SF 47	6						
5.8	178	146.84	0.90	SA 47	6						
6.2	167	137.25	0.96	SAF47	6						
7.2	144	118.64	1.11								
5.7	182	244.74	0.88	S 47	4						
6.1	170	228.75	0.94	SF 47	4						
7.0	147	197.73	1.09	SA 47	4						
8.3	125	168.00	1.28	SAF47	4						
9.3	111	150.00	1.44								

## Technical Parameter Table

Output speed r/min	Output torque Nm	Ratio i	Service factor f <sub>B</sub>	Type Type	Pole p	Output speed r/min	Output torque Nm	Ratio i	Service factor f <sub>B</sub>	Type Type	Pole p
<b>0.25kW</b>						<b>0.37kW</b>					
3.7	383	227.20	1.28	S 67	6	0.68	2611	2054	0.82	S 87R57	4
4.1	346	205.11	1.41	SF 67	6	0.76	2488	1824	0.86	SF 87R57	4
4.7	304	180.46	1.61	SA 67	6	0.85	2318	1631	0.92	SA 87R57	4
5.0	287	170.40	1.70	SAF67	6	1.5	1655	930	1.29	SAF87R57	4
5.9	243	144.00	2.01			1.7	1479	831	1.45		
6.1	234	227.20	2.09			1.9	1271	714	0.94		
6.8	211	205.11	2.31			2.2	1134	637	1.05	S 77R37	4
7.7	186	180.46	2.63	S 67	4	2.4	1021	574	1.17	SF 77R37	4
8.2	176	170.40	2.78	SF 67	4	2.8	888	499	1.34	SA 77R37	4
9.7	148	144.00	3.30	SA 67	4	3.2	779	438	1.53	SAF77R37	4
11	134	130.00	3.65	SAF67	4	3.6	692	389	1.72		
12	118	114.38	4.15								
13	111	108.00	4.39			3.8	557	365	0.88	S 67R37	4
						4.4	568	319	0.92	SF 67R37	4
4.3	331	196.21	0.85	S 57	6	4.9	500	281	0.98	SA 67R37	4
4.7	304	180.40	0.93	SF 57	6	5.7	438	246	1.12	SAF67R37	4
5.5	260	154.35	1.08	SA 57	6						
6.4	225	133.79	1.25	SAF57	6	3.0	702	222.00	3.03	S 87	8
6.8	211	125.05	1.34			3.4	627	198.00	3.42	SF 87	8
						4.0	527	166.43	4.07	SA 87	8
7.1	202	196.21	1.39								
7.7	186	180.40	1.52								
9.0	159	154.35	1.77	S 57	4	2.8	763	241.09	1.57	S 77	8
10	138	133.79	2.05	SF 57	4	3.3	652	206.04	1.83	SF 77	8
11	129	125.05	2.19	SA 57	4	3.5	598	188.89	2.00	SA 77	8
13	111	108.09	2.53	SAF57	4	4.0	524	165.75	2.28	SAF77	8
15	95	91.84	2.98			4.3	497	157.08	2.40		
17	85	82.00	3.34								
7.0	204	197.73	0.81			3.9	544	227.20	0.90		
8.3	173	168.00	0.92			4.3	491	205.11	1.00	S 67	6
9.3	155	150.00	1.04			4.9	432	180.46	1.13	SF 67	6
9.5	151	146.84	1.06			5.2	408	170.40	1.20	SA 67	6
10	141	137.25	1.13			6.1	345	144.00	1.42	SAF67	6
12	122	118.64	1.31	S 47	4						
14	104	100.80	1.54	SF 47	4	6.1	347	227.20	1.41		
15	93	90.00	1.73	SA 47	4	6.8	313	205.11	1.56		
18	79	76.88	2.02	SAF47	4	7.7	275	180.46	1.78	S 67	4
19	74	72.00	2.16			8.2	260	170.40	1.88	SF 67	4
23	71	60.65	2.24			9.7	220	144.00	2.23	SA 67	4
24	63	59.32	2.56			11	198	130.00	2.47	SAF67	4
28	61	50.40	2.64			12	174	114.38	2.80		
31	54	45.00	2.96								
13	107	104.00	0.81			5.7	370	154.35	0.81		
15	94	90.91	0.91			6.6	321	133.79	0.88	S 57	6
16	88	85.22	0.97			7.1	300	125.05	0.94	SF 57	6
18	77	75.20	1.10			8.2	259	108.09	1.09	SA 57	6
21	69	66.67	1.24			10.8	196	82.00	1.44	SAF57	6
25	63	56.67	1.36								
27	58	52.00	1.46			7.1	299	196.21	0.94		
31	55	45.45	1.56			7.7	275	180.40	1.02		
33	51	42.61	1.66			9.0	235	154.35	1.20		
37	45	37.60	1.88	S 37	4	10	204	133.79	1.38		
42	40	33.33	2.12	SF 37	4	11	191	125.05	1.48	S 57	4
49	34	28.33	2.50	SA 37	4	13	165	108.09	1.71	SF 57	4
59	32	23.46	2.64	SAF37	4	15	140	91.84	2.01	SA 57	4
74	26	18.85	3.28			17	125	82.00</			

Technical Parameter Table

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

Technical Parameter Table

Output speed	Output torque	Ratio	Service factor	Type	Pole	Output speed	Output torque	Ratio	Service factor	Type	Pole
r/min	Nm	i	f <sub>B</sub>	Type	p	r/min	Nm	i	f <sub>B</sub>	Type	p
<b>0.55kW</b>						<b>0.75kW</b>					
42	88	33.33	0.96			6.8	634	205.11	0.80		
49	75	28.33	1.13			7.7	558	180.46	0.88		
59	71	23.46	1.20			8.2	527	170.40	0.93		
74	57	18.85	1.49	S 37	4	9.7	445	144.00	1.10		
84	50	16.48	1.71	SF 37	4	11	402	130.00	1.22		
90	47	15.45	1.82	SA 37	4	12	354	114.38	1.38	S 67	4
102	41	13.63	2.06	SAF37	4	13	334	108.00	1.46	SF 67	4
115	37	12.08	2.33			15	284	91.96	1.72	SA 67	4
135	31	10.27	2.74			17	258	83.57	1.89	SAF67	4
						19	224	72.39	2.09		
						21	234	65.00	2.18		
						22	206	63.00	2.37		
						24	195	57.19	2.51		
						26	185	54.00	2.51		
						30	166	45.98	2.95		
						13	331	70.04	0.80		
						14	369	66.89	0.82	S 57	6
						15	345	62.53	0.85	SF 57	6
						17	298	54.05	0.95	SA 57	6
						20	253	45.92	1.11	SAF57	6
						22	226	41.00	1.25		
						13	334	108.09	0.84		
						15	284	91.84	0.99		
						17	254	82.00	1.11		
						20	217	70.04	1.17		
						21	241	66.89	1.25		
						22	226	62.53	1.30		
						26	195	54.05	1.45		
						30	166	45.92	1.70	S 57	4
						34	148	41.00	1.91	SF 57	4
						40	126	35.02	2.23	SA 57	4
						42	118	32.80	2.27	SAF57	4
						46	124	30.12	2.38		
						53	108	26.11	2.62		
						57	101	24.40	2.80		
						66	87	21.09	3.24		
						78	74	17.92	3.82		
						87	66	16.00	4.28		
						102	56	13.67	5.00		
						31	162	45.00	0.99		
						36	139	38.44	1.15		
						39	130	36.00	1.23		
						46	109	30.33	1.40	S 47	4
						50	114	27.74	1.46	SF 47	4
						54	107	25.93	1.50	SA 47	4
						62	92	22.41	1.73	SAF47	4
						73	78	19.04	2.04		
						82	70	17.00	2.28		
						96	60	14.52	2.67		
						102	56	13.60	2.85		
						121	47	11.46	3.39		
						74	78	18.85	1.09		
						84	68	16.48	1.25	S 37	4
						90	64	15.45	1.33	SF 37	4
						102	56	13.63	1.51	SA 37	4
						115	50	12.08	1.71	SAF37	4
						135	42	10.27	2.01		



## Technical Parameter Table

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

## Technical Parameter Table

Output speed r/min	Output torque Nm	Ratio i	Service factor f <sub>B</sub>	Type Type	Pole p	Output speed r/min	Output torque Nm	Ratio i	Service factor f <sub>B</sub>	Type Type	Pole p
<b>1.5kW</b>						<b>2.2kW</b>					
6.3	1363	222.00	1.56			3.4	4350	420	0.86	S 97R57	4
7.1	1216	198.00	1.76			3.8	3894	376	0.97	SF 97R57	4
8.4	1022	166.43	2.10	S 87	4	4.3	3387	327	1.11	SA 97R57	4
9.2	939	152.95	2.28	SF 87	4	4.9	2972	287	1.26	SAF97R57	4
10	834	135.83	2.57	SA 87	4	5.6	2610	252	1.44		
12	746	121.44	2.87	SAF87	4	4.1	3091	230.48	1.22	S 97	6
13	970	109.19	3.20			4.5	2782	207.48	1.35	SF 97	6
15	582	94.77	3.68			5.0	2520	187.89	1.49	SA 97	6
										SAF97	6
7.4	1160	188.89	1.03			6.2	2046	230.48	1.84		
8.4	1018	165.75	1.17			6.8	1842	207.48	2.04		
8.9	964	157.08	1.24			7.6	1668	187.89	2.25	S 97	4
10	844	137.48	1.41			8.5	1479	166.62	2.54	SF 97	4
11	760	123.86	1.57	S 77	4	9.4	1337	150.64	2.81	SA 97	4
13	667	108.65	1.79	SF 77	4	11	1133	127.68	3.32	SAF97	4
15	589	95.88	2.03	SA 77	4	13	990	111.52	3.80		
16	564	85.00	2.12	SAF77	4	15	863	93.27	4.54		
18	522	78.78	2.29			17	828	83.31	4.36		
19	517	72.22	2.31			6.4	1971	222.00	1.08		
22	454	63.38	2.63			7.2	1758	198.00	1.22		
23	430	60.06	2.78			8.5	1477	166.43	1.45		
27	377	52.57	3.17			9.3	1358	152.95	1.58		
30	339	47.36	3.52			10	1206	135.83	1.78	S 87	4
34	298	41.54	4.01			12	1078	121.44	1.99	SF 87	4
						13	969	109.19	2.21	SA 87	4
17	513	83.57	0.95			15	841	94.77	2.55	SAF87	4
19	466	72.39	1.05			17	753	84.86	2.74		
22	444	65.00	1.10			19	733	75.63	2.84		
23	410	63.00	1.19			20	700	70.40	3.06		
24	387	57.19	1.26			21	630	67.62	3.40		
26	367	54.00	1.26			23	625	60.80	3.43		
30	329	45.98	1.48	S 67	4	27	547	52.77	3.92		
34	299	41.79	1.63	SF 67	4	10	1220	137.48	0.98		
39	259	36.20	1.89	SA 67	4	11	1100	123.86	1.09		
44	226	31.50	2.17	SAF67	4	13	965	108.65	1.24		
53	216	26.40	2.26			15	851	95.88	1.40		
59	195	23.83	2.51			17	755	85.00	1.46		
67	171	20.92	2.86			18	816	78.78	1.58		
71	162	19.80	3.02			20	748	72.22	1.60		
83	138	16.86	3.54			22	656	63.38	1.82	S 77	4
91	125	15.32	3.90			24	622	60.06	1.92	SF 77	4
106	109	13.27	4.50			27	544	52.57	2.19	SA 77	4
121	95	11.55	5.17			30	491	47.36	2.43	SAF77	4
						34	430	41.54	2.78		
43	247	32.80	1.20			39	380	36.66	3.14		
46	235	30.12	1.14			44	337	32.50	3.55		
54	214	26.11	1.32			51	307	27.75	3.89		
57	200	24.40	1.41	S 57	4	55	287	25.93	4.15		
66	173	21.09	1.63	SF 57	4	62	269	22.75	4.43		
78	147	17.92	1.92	SA 57	4	66	255	21.56	4.68		
88	131	16.00	2.15	SAF57	4	31	476	45.98	1.03		
102	112	13.67	2.52			34	433	41.79	1.13		
109	105	12.80	2.69			39	375	36.20	1.30		
130	88	10.78	3.20			45	326	31.50	1.50		
						54	312	26.40	1.56	S 67	4
96	119	14.52	1.35	S 47	4	60	282	23.83	1.73	SF 67	4
103	111	13.60	1.44	SF 47	4	68	248	20.97	1.97	SA 67	4
122	94	11.46	1.71	SA 47	4	72	234	19.80	2.09	SAF67	4
				SAF47	4	84	200	16.86	2.45		
						93	1				

Technical Parameter Table

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

Technical Parameter Table

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

## Technical Parameter Table

Output speed r/min	Output torque Nm	Ratio i	Service factor f <sub>B</sub>	Type Type	Pole p	Output speed r/min	Output torque Nm	Ratio i	Service factor f <sub>B</sub>	Type Type	Pole p
<b>15kW</b>											
31	3203	46.64	1.17								
36	2856	40.38	1.32								
40	2773	36.39	1.36								
45	2571	32.76	1.46	S 97	4						
49	2329	29.67	1.61	SF 97	4						
55	2065	26.31	1.82	SA 97	4						
61	1867	23.79	2.01	SAF97	4						
72	1582	20.16	2.38								
83	1382	17.61	2.72								
99	1156	14.73	3.25								
115	1001	12.75	3.76								
89	1287	16.39	1.67	S 87	4						
107	1068	13.60	2.01	SF 87	4						
123	929	11.83	2.31	SA 87	4						
				SAF87	4						
<b>18.5kW</b>											
40	3499	36.39	1.07								
45	3150	32.76	1.19								
50	2853	29.67	1.32	S 97	4						
56	2530	26.31	1.49	SF 97	4						
62	2287	23.79	1.64	SA 97	4						
73	1938	20.16	1.94	SAF97	4						
83	1693	17.61	2.22								
100	1416	14.73	2.65								
115	1226	12.75	3.07								
<b>22kW</b>											
56	3008	26.31	1.25								
62	2720	23.79	1.38	S 97	4						
73	2305	20.16	1.63	SF 97	4						
83	2014	17.61	1.87	SA 97	4						
100	1684	14.73	2.23	SAF97	4						
115	1458	12.75	2.58								

## Technical Parameter Table

Permissible torque Nm	Output speed r/min	Ratio i	Type Type	Power kW/4p	Permissible torque Nm	Output speed r/min	Ratio i	Type Type	Power kW/4p
<b>90</b>	7.8	179			<b>2280</b>	0.24	5875		
	8.8	158	S 37R17	0.18		0.27	5187		0.18
	9.7	144	SF 37R17			0.30	4606		
	12	118	SA 37R17			0.36	3872		
	13	110	SAF37R17	0.25		0.40	3475		0.25
<b>170</b>	3.6	388		0.18		0.48	2905		
	4.1	336				0.54	2586		
	4.7	294	S 47R17			0.60	2335		0.37
	5.4	257	SF 47R17			0.68	2054		
	6.1	229	SA 47R17	0.25		0.76	1824		
<b>300</b>	7.0	200	SAF47R17		0.85	1631		0.55	
	7.4	187			1.0	1332	S 87R57		
	8.4	165			1.2	1191	SF 87R57		
	2.4	574		0.18	1.3	1032	SA 87R57		
	2.7	506			1.5	930	SAF87R57	0.75	
<b>520</b>	3.2	438			1.7	831			
	3.6	388			1.9	719		1.1	
	4.1	336	S 57R17	0.25	2.2	624			
	4.7	294	SF 57R17		2.5	558			
	5.2	269	SA 57R17	0.37	2.9	485		1.5	
<b>1270</b>	6.1	229	SAF57R17		3.2	435			
	6.8	204			3.7	378			
	7.4	187		0.55	4.4	323		2.2	
	8.4	165			5.1	281			
	11	131			0.16	8608		0.18	
<b>520</b>	1.3	1045		0.18	0.18	7554			
	1.5	914			0.21	6640			
	1.7	809			0.24	5780		0.25	
	2.0	712			0.28	4937			
	2.3	615	S 67R37	0.25	0.31	4444			
<b>1270</b>	2.6	543	SF 67R37		0.35	4017		0.37	
	3.0	469	SA 67R37	0.37	0.40	3453			
	3.3	424	SAF67R37		0.45	3108			
	3.8	365			0.52	2654		0.37	
	4.4	319		0.55	0.60	2329			
<b>1270</b>	4.9	281			0.67	2081			
	5.7	246			0.75	1860		0.55	
	6.3	221			0.88	1574	S 97R57		
	7.0	198		0.75	1.0	1394	SF 97R57		
	0.45	3098			1.1	1223	SA 97R57	0.75	
<b>1270</b>	0.67	2083		0.18	1.3	1070	SAF97R57		
	0.77	1813			1.5	928		1.1	
	0.80	1745			1.7	824			
	0.87	1600			2.0	714		1.5	
	1.0	1404		0.25	2.2	626			
<b>1270</b>	1.1	1245			2.6	538			
	1.3	1100			2.9	484		2.2	
	1.5	954	S 77R37	0.37	3.4	420			
	1.7	837	SF 77R37		3.8	376			
	1.9	714	SA 77R37	0.55	4.3	327		3	
<b>1270</b>	2.2	637	SAF77R37		4.9	287			
	2.4	574			5.7	252		4	
	2.8	499		0.75	6.6	219			
	3.2	438							
	3.6	389							
<b>1270</b>	4.3	327							
	4.8	289		1.1					
	5.6	250							
	6.4	219							

All gear units are overloaded in above table. Determination of operating torque should not higher than the gear unit's nominal torque.

Dimensional Drawings

**SF37/Φ120**      **SAF37/Φ120**

**SF37/Φ160**      **SAF37/Φ160**

**SA37**      **SAF37/SA37/SAZ37**  
Hollow shaft

**S37**      **S..37R17**

**SAT37**      **S..S37**

Customers provide the motor by themselves need connected flange.

Note: For other values please refer to relevant structure.

Motor size	63	71	80		
Power/(kW)	0.18	0.25 0.37	0.55 0.75		
L3	235	245	278		
G	130	145	175		
L2	71	71	71		

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

Dimensional Drawings

**S47**      **SA47**      **SAZ47**

**SF47**      **SAF47**

**SAT47**

**S..S47**      **S..47R17**

Customers provide the motor by themselves need connected flange.

Note: For other values please refer to relevant structure.

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

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

Dimensional Drawings

**S57**

**SA57/SAZ57/SAF57**  
 $\Phi 30H7$  /Hollow shaft  
 $\Phi 35H7$

**SA57**

**SAZ57**

**SF57**

**SAF57**

**SAT57**

**S..S57**

**S..57R17**

Note: For other values please refer to relevant structure.

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

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

Dimensional Drawings

**S67**

**SA67/SAZ67/SAF67**  
 $\Phi 40H7$  /Hollow shaft  
 $\Phi 45H7$

**SA67**

**SAZ67**

**SF67**

**SAF67**

**SAT67**

**S..S67**

**S..67R37**

Note: For other values please refer to relevant structure.

Motor size	71	80	90S	90L	100	112M	132S
Power/(kW)	0.25	0.37	0.55 0.75	1.1	1.5	2.2 3.0	4.0 5.5
L3	245	278	304	328	350	380	425
G	145	175	195	195	215	240	275
L2	81	81	81	81	93	93	101

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

Dimensional Drawings

**S77**

**SA77/SAZ77/SAF77**  
 $\Phi 50H7$  /Hollow shaft  
 $\Phi 60H7$

**SA77** **SAZ77**

**SF77** **SAF77**

**SAT77**

**S..S77** **S..77R37**

Note: For other values please refer to relevant structure.

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

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

Dimensional Drawings

**S87**

**SA87/SAZ87/SAF87**  
 $\Phi 60H7$  /Hollow shaft  
 $\Phi 70H7$

**SA87** **SAZ87**

**SF87** **SAF87**

**SAT87**

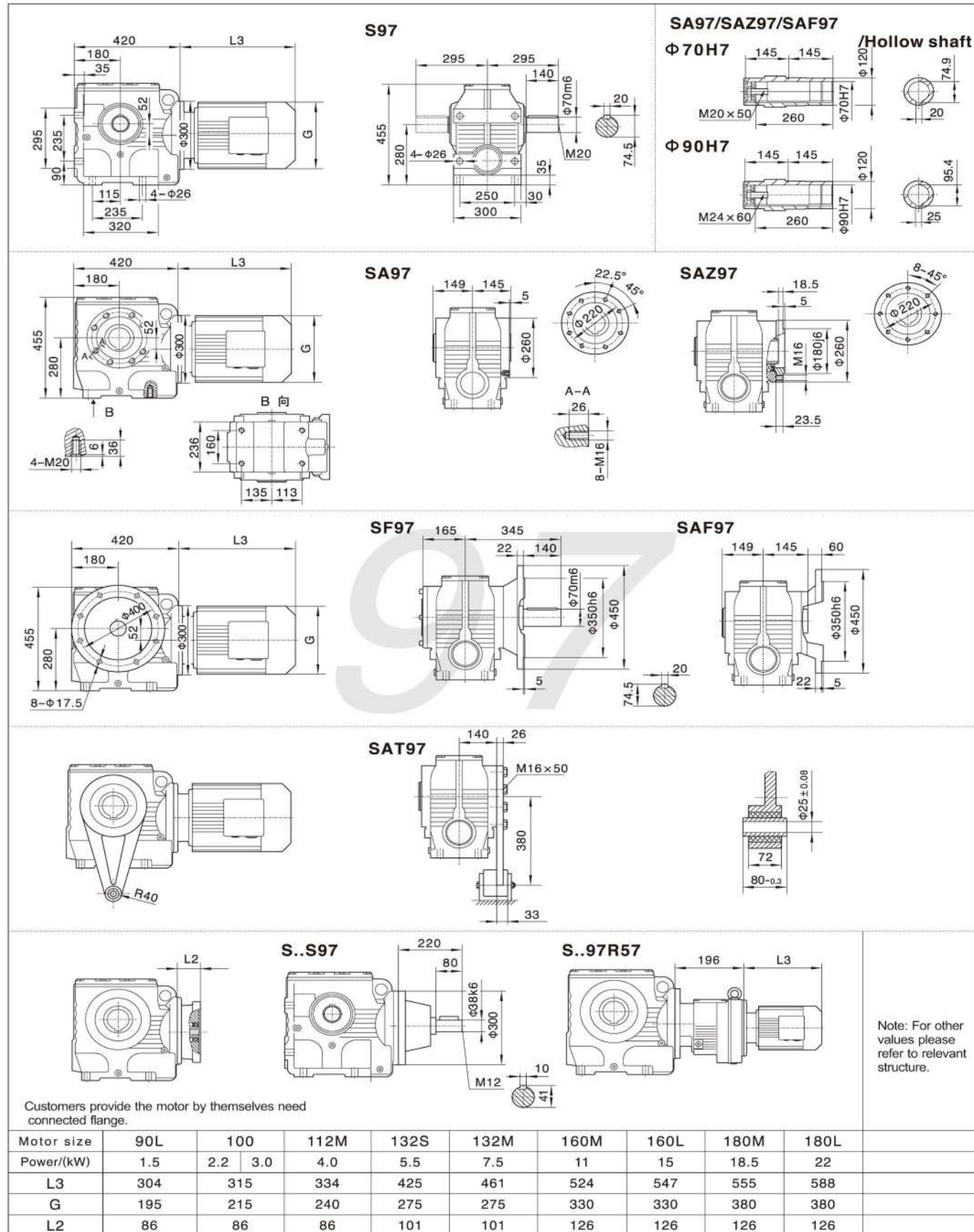
**S..S87** **S..87R57**

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

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

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

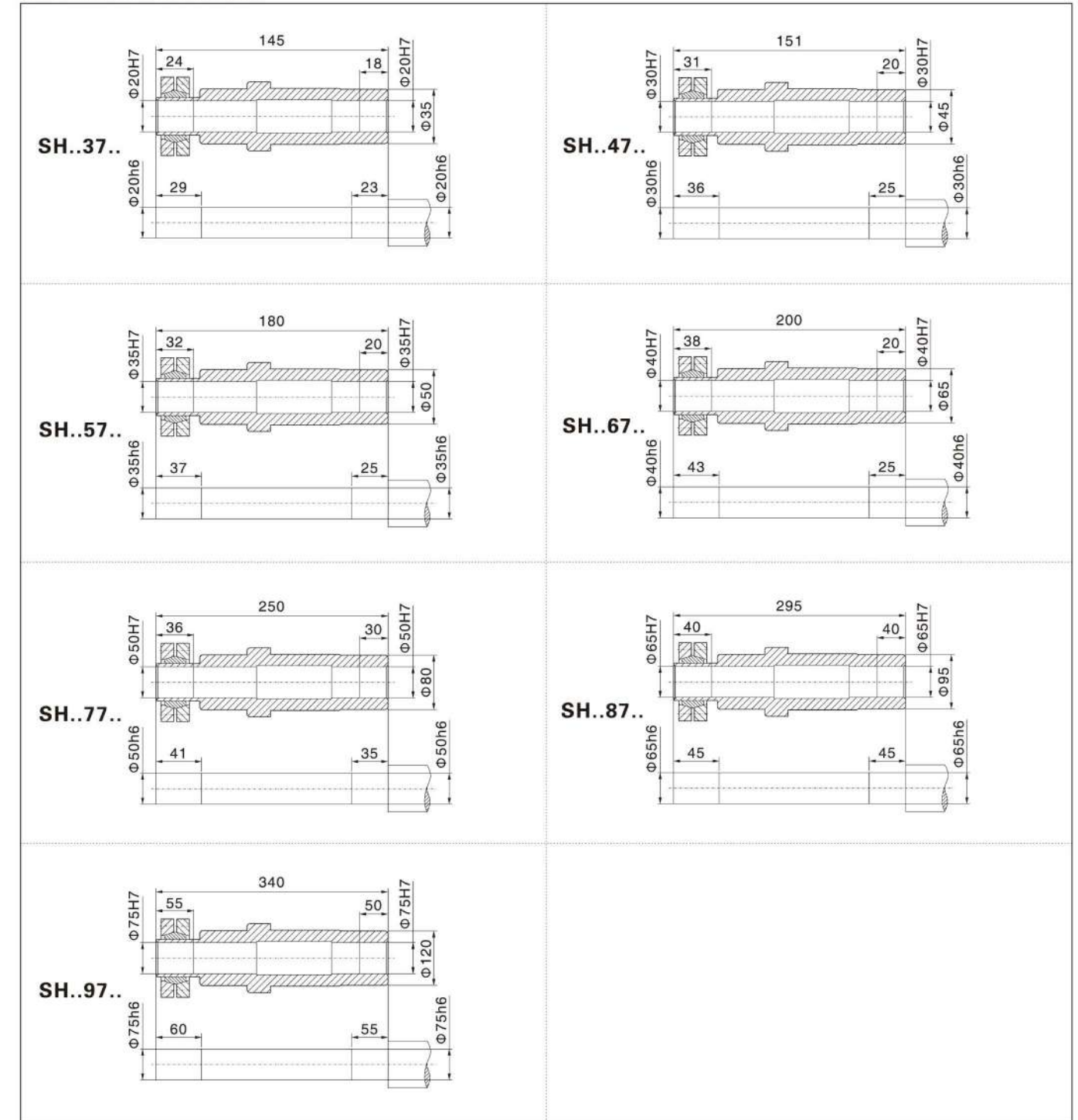
Dimensional Drawings

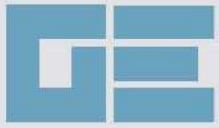


Note:1.The housings of SA, SF, SAF, SAZ are common parts.The mounting dimensions may consult each other. 2. "S.." means S, SA, SF, SAF, SAZ.

Dimensional Drawings

Dimensions of shrink disc





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