

GHP HELICAL GEARED MOTOR
Ratio Up to 58/1
Max. Output Torque : 3500Nm

About Us:

Gaeyah Transmission an Indian company, manufacturing efficient power transmission products to meet the growing aspirations of Indian customers. Gaeyah is mentored by qualified, experienced engineers having expertise in various applications, solutions and wide industry segments. We promise to deliver right combination of efficient, affordable and quality products for the light duty industry segment.

Our Vision:

“Gaeyah’s vision to offer affordable power transmission solutions, thereby empowering Indian customers to improve their product performance”

Our Values:

Inclusiveness: Respect all living being

Honesty: Upright and fair

Commitment: Promise to persevere

Innovate: Contemporary Solutions

Passion: Empathize and Listen



GHP



GHPS



GHF



GHFS

FEATURES OF GHP GEARED MOTORS

Two types of housings: Aluminum alloy and cast iron; Two kinds of frames: foot mounting and flange mounting. They are good-looking in appearance, suitable for universal mount.

Helical gear with the high-tensile alloy material makes the construction more compact, housing smaller, efficiency higher, output torque larger.

Hardened facing transmission gear that fine finished has the advantages below: seldom distortion, high precision, stable running, low noise, It also can work continually under the dreadful conditions.

With 6 specification for the diameter of output shaft: 020, 025, 030, 035, 040, 050, 060

Two stage transmission, large in ratio range, each single frame size with 17 ratios from 3.7:1 to 58:1.

Using high quality bearing prolongs the use life. All the units filled with synthetic oil for longer life and high load carrying capacity.

High-performance oil seal prevents the lubricant from leaking back to the inner of motor.

Three-phase motor combined the standard and full-enclosed aluminum motor, which is fairly good in dust proof, easy in heat dissipation, high in running efficiency.

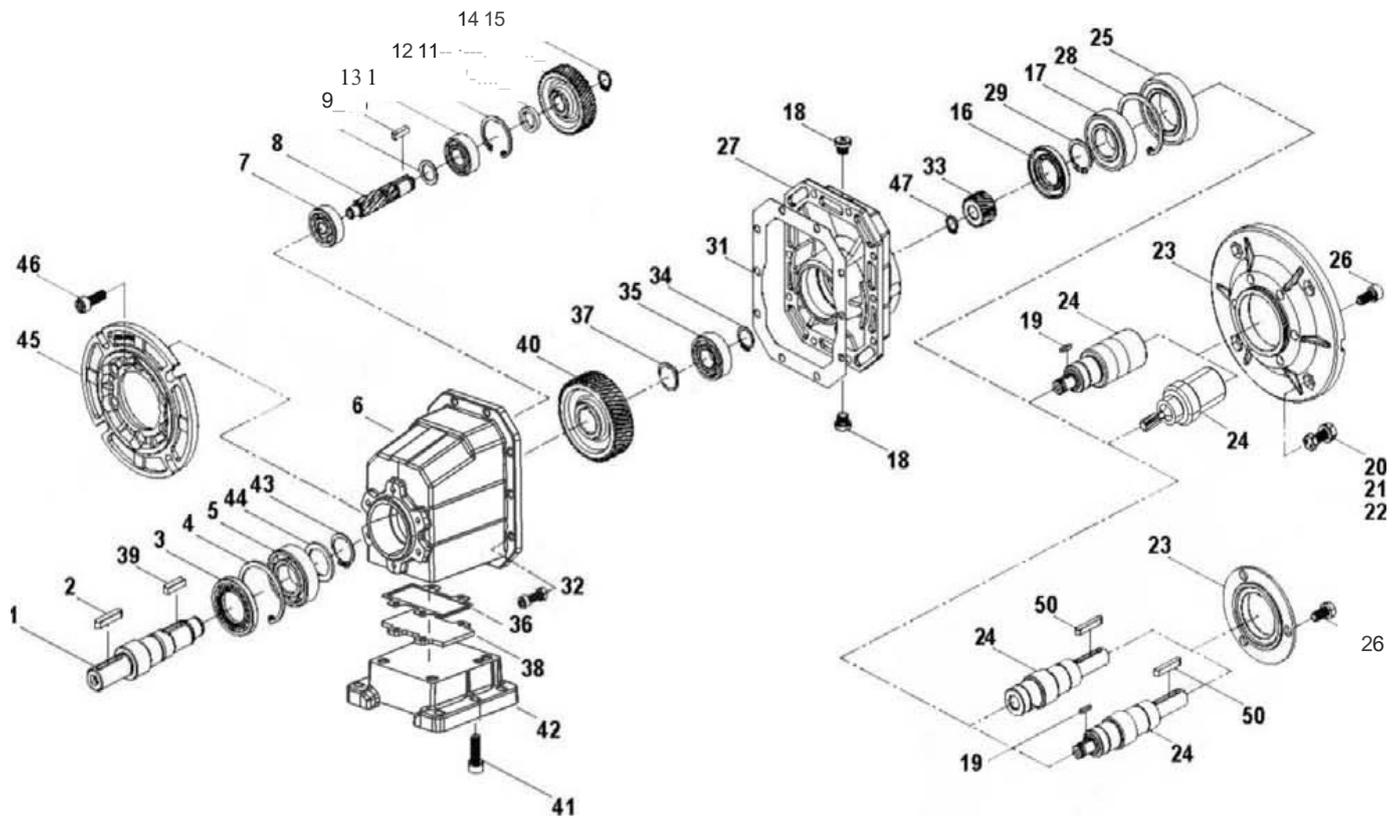
Modular combination extends the transmission ratio from $i=3.7:1$ to 58:1.

SURFACE PAINTING

Shot blasting firstly and then special antiseptic treatment on aluminum alloy surface remain the metalite silver; also, is corrosion resistance to organic solvent, such as gasoline, xylene and so on.

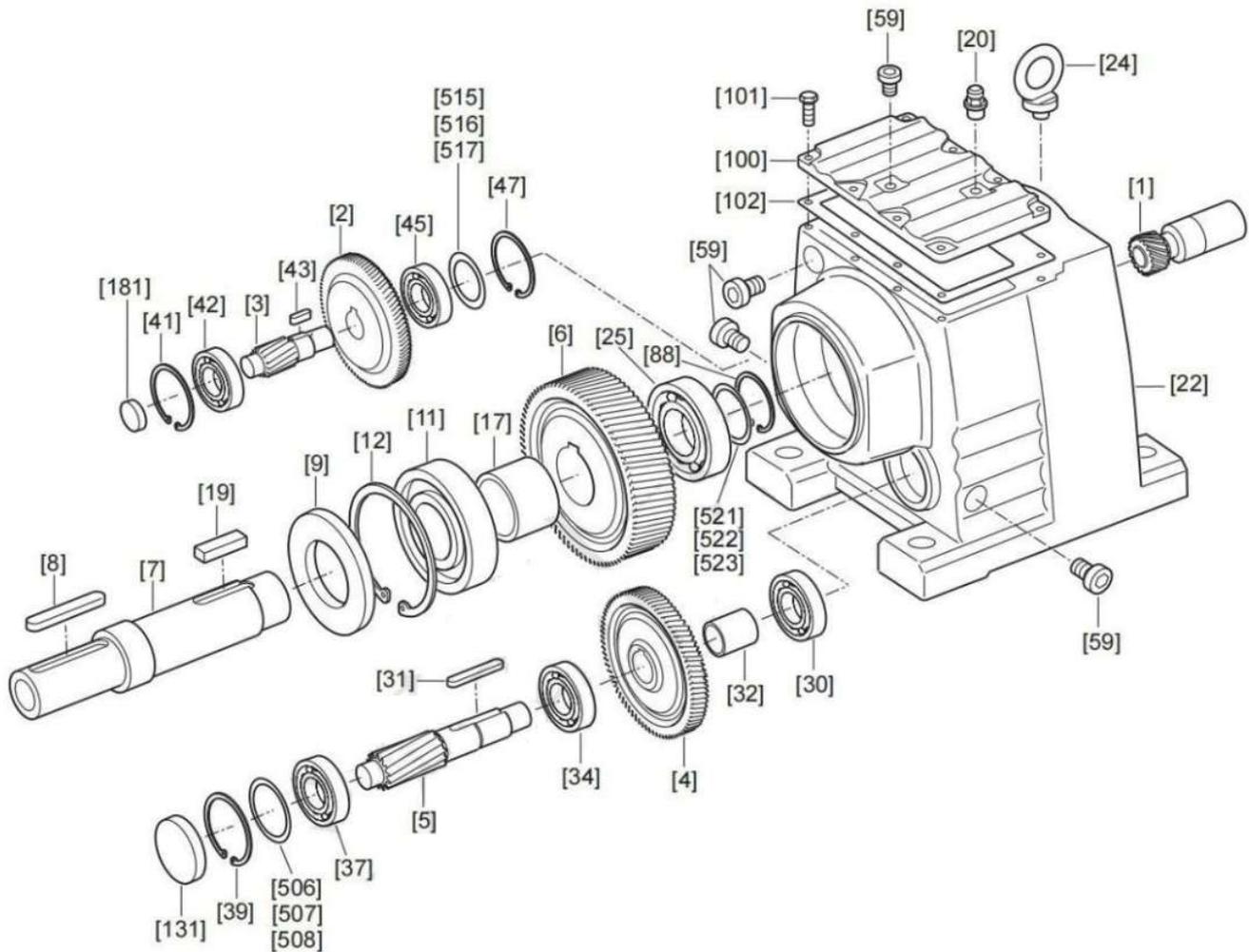
After phosphating, painted with metallic grey coating.

STRUCTURE & PARTS - GHP01 to 04



Part No.	Description	Part No.	Description	Part No.	Description
1	Output shaft	17	Bearing	33	Driving pinion
2	Key	18	Oilpiug	34	Shaft circlip
3	Oil seal	19	Key	35	Bearing
4	Hole circlip	20	Hex head bolt	36	Support seat
5	Bearing	21	Washer	37	Shaft circlip
6	Housing	22	Hex nut	38	Cylindrical pin
7	Bearing	23	Input flange	39	Key
8	Drving gear shaft	24	Input shaft	40	Driven gear
9	Circlips retaining rings	25	Bearing	41	Socket headcap screw
10	Bearing	26	Socket headcap screw	42	Foot
11	Spacer ring	27	Input cover	43	Shaft circlip
12	Hole circlip	28	Hole circlip	44	Washer
13	Key	29	Shaft circlip	45	Output flange
14	Driven gear	30	Hex nut	46	Hex socket screws
15	Shaft circlip	31	Housing gasket	47	Shaft circlip
16	Oil seal	32	Socket headcap screw	50	Key

STRUCTURE & PARTS – >GHP05



Part No.	Description	Part No.	Description
1	Input Pinion	17,32	Spacer
2	InputGear	20	Breather
3	2nd Stage Pinion	22	Casing
4	2nd Stage Gear	24	Lifting Bolt
5	3rd Stage Pinion	59	Oil Level Indicator
6	3rd Stage Gear	100	Top Cover
7	Output Shaft	101	Hex. Bolt
8,19,31,43	Flat Key	102	Gasket
9	Oil Seal	131,181	End Cover
11,25,30,34,37,42,45	Roller Bearing	506,507,508,515,516,517,	Shims
12,39,41,47,88	Snap Ring	521, 522, 523	Shims

SUMMARISE

GHP series helical gearbox is a modular construction product, it has 8 types, power from 0.12kw to 15.0kw, ratio from 3.66 to 58.09, Max torque from 120Nm to 4300Nm. This product widely used in industries like textile, food, beverage, tobacco, logistics and other industrial fields..

Products characteristics:

Modular construction | High efficiency | Low noise | Fine structure | Durable

MODEL/ INSTRUCTION

GHP	01	28.9	FA	Y0.37	3pH	4P	71	B5	M1
↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
1	2	3	4	5	6	7	8	9	10

SI No	Instruction
1	GHP : GH Gearbox Foot mounting GHF : GH Gearbox flange mounting S : Solid input shaft
2	Specification code of gearbox 01,02,03,04,05,06,.....
3	Ratio of the gearbox
4	FA, FB : Output flange specification B01, B02, B03, B05, M04 : Foot Specification
5	Y0.18,0.37,0.75,1.1...3.7 Motor kW
6	3, 1 Motor Phase
7	2,4,6,8 Motor Pole
8	Motor frame : 63, 71.80, 90, 100, 112, 132 etc
9	Input Motor Flange : B5, B14
10	Mounting Position: M1. M2. M3, M4, M5, M5

Example:

GHP01 28.5 FA M1

RELEVANT PARAMETERS

Power P

$$P1 = P2/\eta \text{ [kW]}$$

$$P1n \geq P1*fs \text{ [kW]}$$

P1 = Input power

P2 = Output power

P1n = Rated input motor power

fs = Service factor

η = Efficiency

GHP Series helical gearbox has 2 stage, and the efficiency is about 96%.

Rotation speed n

n1 = Gearbox input speed

n2 = Gearbox output speed

For optimizing working condition and improving the life when the gearbox driven by the external device, please use the speed at 1400rpm or lower. High input speed is allowed but the rated torque M2 will be decreased under such case.

Transmission ratio i

Generally, ratio is decimal fraction with 1 radix points tagged in selecting table.

Torque M

$$M2 = [9550 * P1 * \eta] / n2 \text{ [Nm]}$$

$$M2n \geq M2 * fs \text{ [Nm]}$$

M2 = Output torque

M2n = Rated output torque

P1 = Input power

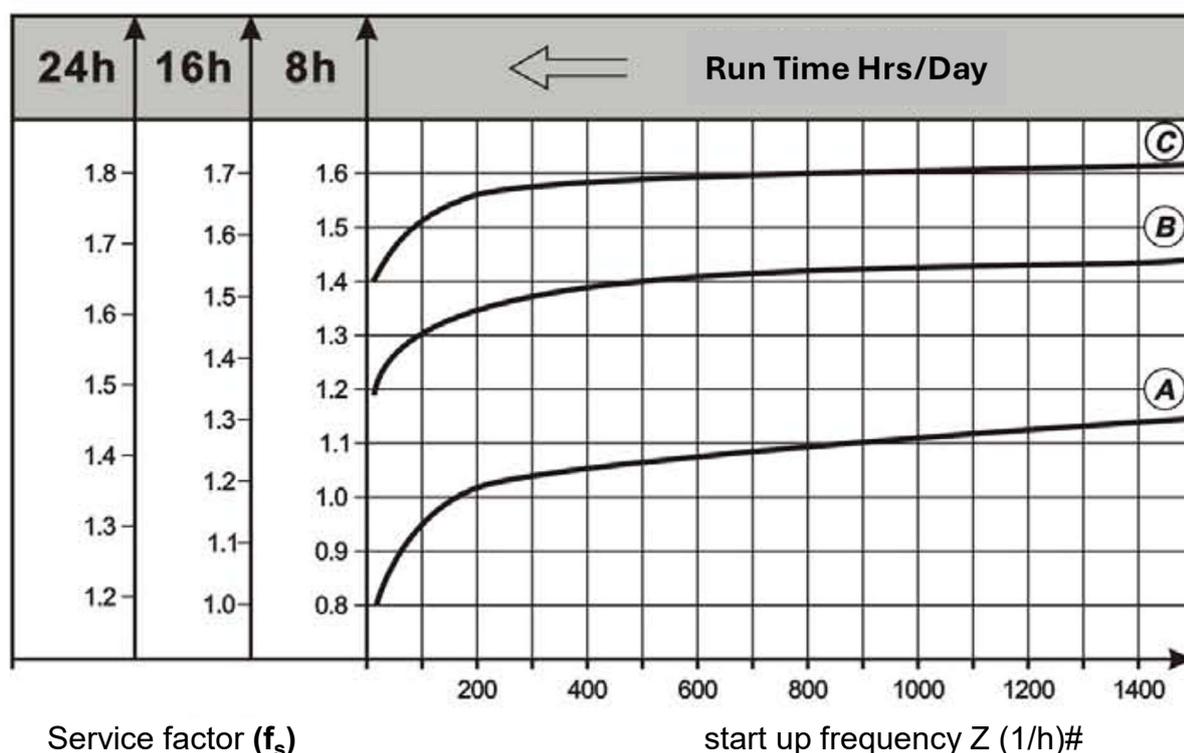
η = Efficiency

fs = Service factor

SERVICE FACOR F_s s

Please consider the service factor f_s . when used the gearbox, the service factor is decided by running time and frequency of on-off Z per day.

Confirming the 3 kind of load types according to the inertial accelerating factor, the practical application service factors (f_s) can be read in the below table, the selected f_s from the below table must be less than or equal to the f_s provided in the performance parameter table.



Load classifications

- Ⓐ Uniform shock load, permitted mass acceleration factor ≤ 0.2
- Ⓑ Moderate shock load, permitted mass acceleration factor ≤ 3
- Ⓒ Heavy shock load, permitted mass acceleration factor ≤ 10

Inertial accelerating factor

The Inertial accelerating factor is calculated as follows:

$$fa = Jc/Jm$$

fa = Inertial accelerating factor

Jc = All external massmoments of inertia [kgm^2]

Jm = Mass moment of inertia on the motor end [kgm^2]

If mass acceleration factors **fa** > 10, please call our Technical Service.

To keep the service-life of gearbox, the use factor f_s selected from the catalogue must be equal or slightly higher than the calculated use factor f_s .

RELEVANT PARAMETER

RADIAL LOAD Fr

When determining the resulting radial loads, the type of transmission elements, mounted on the shaft end must be considered. Various transmission elements are corresponding with following transmission element factors **fz**:

Transmission element	Transmissi on element factor Fz	Comments
Gears	1	≥17 teeth
	1.15	<17 teeth
Chain sprockets	1	≥20 teeth
	1.25	<20 teeth
	1.4	<13 teeth
Narrow V-belt pulleys	1.75	Influence of the tensile force
Flat belt pulleys	2.5	Influence of the tensile force
Toothed belt pulleys	2.5	Influence of the tensile force

The overhung loads exerted on the motor or gear shaft is then calculated as follows:

$$Fr = (M * 2000 * fz) / d0 \text{ [N]}$$

Fr = Resulting radial load [N]

M = Torque on the shaft [Nm]

d0 = Average diameter of the mounted transmission element in [mm]

fz = Transmission element factor

The allowed radial load force on the shaft is calculated with the following formula:

$$FxL \leq (Fr2 * a) / (b+x) \text{ [N]}$$

Fr2 = Permitted overhung load(x = U2) for foot-mounted gear units according to the selection tables in [N]

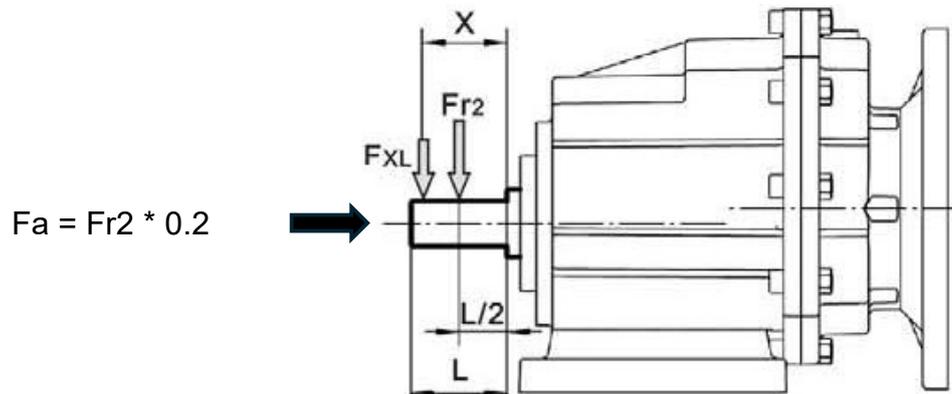
a, b = Gearbox constant for overhung load conversion[mm]

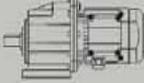
X = Distance from the shaft shoulder to the force application point in (mm)

The values of a, b, Fr2 are given in the following tables:

Distance	GHP01	GHP02	GHP03	GHP04
a	103	116.5	130	147
b	83	91.5	100	112

SELECTION TABLE INSTRUCTIONS

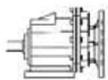


P_{1n} [kW]	n_2 [r/min]	M_{2n} [Nm]	i	F_{r2} [N]	f_s		Page		Page
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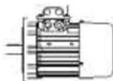
Combination with the IEC in the header row is possible

Combination with the IEC in the header row is not possible

- P_{1n} Rated input motor power [kW]
- n_2 Output speed [r/min];
- M_{2n} Rated output torque [Nm]
- M_{2max} Permissible output torque [Nm]
- i Gearbox ratio
- f_s Service factor



Gearbox type;



Motor type;

page

Dimension sheet page no;

*

Ratio is divisible.

SELECTION EXAMPLE

Gearbox

Example: The required torque on driven machine is 400Nm, works for 6 hours per day, Uniform shock load, start-up frequency is 400 times per hour, $D=200\text{mm}$ output flange-mounted, $n_2=30\text{ r/min}$.

see tables, $f_s=1.05$

$$M_{2n} \geq M_2 \cdot f_s = 400 \times 1.05 = 420(\text{Nm})$$

$$i = n_1/n_2 = 1400/30 = 46.67$$

Choose type:

GHP04 - 44.2 - 90B5

Geared motor

Example: The required power on driven machine 1kW, works for 8 hours per day, moderate shock load, start-up cootinnously, M6 foot-mounted, $n_2=95\text{ r/min}$.5rpm/min.

see tables, $f_s=1.35$

$$i = n_1/n_2 = 1400/95 = 14.74$$

$$P_{1n} \geq P_1 \cdot f_s = P_2/\eta \cdot f_s = 1/0.96 \cdot 1.35 = 1.41[\text{kW}]$$

Choose type:

GHP02- 14.8 - 90B5 - Y1.0 - 4P - 3pH - M6

Gear unit weight in kg

Model	GHP01	GHP02	GHP03	GHP04	GHP05	GHP06	GHP07	GHP08
Weight (kg)	6.5	7.5	12	15.5	36	63	101	153

Rated Power & Torque (>GHP05)

Size	GHP05	GHP06	GHP07	GHP08	GHP09	GHP10
Input power (kW)	0.18-11	0.55-22	0.55-30	2.2-45	5.5-55	11-90
Ratio Range	5.21-195.24	5.36-246.54	4.49-289.74	5.06-249.16	5.15-222.6	5.00-163.31
Rated Torque (Nm)	820	1550	3000	4300	8000	13000 8

POSSIBLE GEOMETRIC COMBINATION

GHP01 $n_1=1400r/min$

120NM

n2[r/min]	M2Max [Nm]	Fr2[N]	i	63B5	7185/B14	80B5/B14	90B5/814
26	120	2600	53.3				
31	120	2600	45.9				
35	120	2600	40.1				
39	120	2560	35.5				
49	120	2380	28.5				
59	120	2230	23.6				
71	120	2100	19.8				
78	90	2030	17.9				
96	120	1900	14.6				
101	90	1860	13.80*				
118	120	1770	11.9				
143	120	1660	9.8				
153	80	1630	9.2				
181	80	1540	7.7				
246	70	1390	5.7				
302	70	1290	4.6				
366	70	1210	3.8				

GHP02 $n_1=1400r/min$

200NM

n2[r/min]	M2Max [Nm]	Fr2[N]	i	63B5	7185/B14	80B5/B14	90B5/B14
26	200	4500	54.00*				
30	200	4500	46.46*				
34	200	4500	40.60*				
39	200	4270	35.91*				
48	200	3970	28.88*				
59	200	3730	23.85*				
70	200	3520	20.08*				
82	140	3330	17.1				
95	200	3180	14.81*				
106	140	3060	13.2				
116	200	2970	12.1				
141	200	2780	9.9				
159	120	2670	8.8				
189	120	2520	7.4				
257	100	2280	5.5				
316	100	2120	4.4				
383	80	1990	3.7				

POSSIBLE GEOMETRIC COMBINATION...

GHP03 $n_2=1400r/min$

300NM

n2[r/min]	M2Max [Nm]	Fr2[N]	i	7185/B14	80B5/B14	90B5/B14	100B5/B14	112B5/B14
24	300	6000	58.0					
28	300	6000	51.3					
32	300	6000	44.2					
36	300	6000	38.6					
40	300	5860	34.2					
46	300	5630	30.6					
56	300	5290	25.0					
64	280	5020	21.8					
81	280	4660	17.3					
93	260	4440	15.3					
113	260	4160	12.6					
136	180	3910	10.9					
177	180	3590	7.9					
222	150	3320	6.3					
255	150	3170	5.5					
311	150	2970	4.5					
374	150	2790	3.7					

GHP04 $n_2=1400r/min$

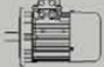
500NM

n2[r/min]	M2Max [Nm]	Fr2[N]	i	80B5/B14	90B5/B14	100B5/B14	112B5/B14
24	500	8000	58.1				
28	500	8000	51.3				
32	500	8000	44.2				
36	500	8000	38.6				
40	500	7950	34.2				
46	500	7790	30.6				
56	500	7200	25.0				
64	480	6810	21.8				
81	480	6310	17.3				
93	460	6020	15.3				
113	460	5640	12.6				
136	440	5300	10.9				
177	260	4860	7.9				
222	260	4510	6.3				
255	230	4300	5.5				
311	230	4030	4.5				
374	200	3780	3.7				

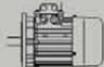
SELECTION CHART...

P_{1n} [kW]	n_2 [r/min]	M_{2n} [Nm]	i	F_{T2} [N]	f_s			Page																																																	
0.12	26	42	53.33	2600	2.9	GHP01 63B5	6314	25																																																	
	31	36	45.89	2600	3.3				GHF01 63B5	6314	25																																														
	35	32	40.10	2600	3.8							GHP01 63B5	6314	25																																											
	39	28	35.47	2560	4.3										GHF01 63B5	6314	25																																								
	49	22	28.50	2380	5.4													GHP01 63B5	6314	25																																					
	59	18.5	23.56	2230	6.5																GHF01 63B5	6314	25																																		
	71	15.6	19.83	2100	7.7																			GHP01 63B5	6314	25																															
	78	14.0	17.86	2030	6.4																						GHF01 63B5	6314	25																												
	96	11.5	14.62	1900	10.4																									GHP01 63B5	6314	25																									
	101	10.8	13.80*	1860	8.3																												GHF01 63B5	6314	25																						
	118	9.4	11.90	1770	12.8																															GHP01 63B5	6314	25																			
	143	7.7	9.81	1660	15.6																																		GHF01 63B5	6314	25																
	153	7.2	9.17	1630	11.1																																					GHP01 63B5	6314	25													
	181	6.1	7.72	1540	13.2																																								GHF01 63B5	6314	25										
	246	4.5	5.69	1390	15.7																																											GHP01 63B5	6314	25							
	302	3.6	4.63	1290	19.2																																														GHF01 63B5	6314	25				
	366	3.0	3.82	1210	23.3																																																	GHP01 63B5	6314	25	
	16.9	65	53.33	2600	1.8																																																				GHP01 63B5
	19.6	56	45.89	2600	2.1	GHF01 63B5	6326	25																																																	
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	25	43	35.47	2560	2.8							GHF01 63B5	6326	25																																											
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	76	14.5	11.90	1770	8.2																												GHP01 63B5	6326	25																						
	92	12.0	9.81	1660	10.0																															GHF01 63B5	6326	25																			
	98	11.2	9.17	1630	7.1																																		GHP01 63B5	6326	25																
	117	9.4	7.72	1540	8.5																																					GHF01 63B5	6326	25													
	158	7.0	5.69	1390	10.1																																								GHP01 63B5	6326	25										
	194	5.7	4.63	1290	12.4																																											GHF01 63B5	6326	25							
	236	4.7	3.82	1210	15.0																																														GHP01 63B5	6326	25				
	0.18	26	63	53.33	2600																																																	1.9	GHP01 63B5	6324	
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35		47	40.10	2600	2.5	GHP01 63B5	6324	25																																																	
39		42	35.47	2560	2.9				GHF01 63B5	6324	25																																														
49		34	28.50	2380	3.6							GHP01 63B5	6324	25																																											
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78		21	17.86	2030	4.3																GHF01 63B5	6324	25																																		
96		17.2	14.62	1900	7.0																			GHP01 63B5	6324	25																															
101		16.3	13.80*	1860	5.5																						GHF01 63B5	6324	25																												
118		14.0	11.90	1770	8.6																									GHP01 63B5	6324	25																									
143		11.6	9.81	1660	10.4																												GHF01 63B5	6324	25																						
153		10.8	9.17	1630	7.4																															GHP01 63B5	6324	25																			
181		9.1	7.72	1540	8.8																																		GHF01 63B5	6324	25																
246		6.7	5.69	1390	10.4																																					GHP01 63B5	6324	25													
302		5.5	4.63	1290	12.8																																								GHF01 63B5	6324	25										
366		4.5	3.82	1210	15.5																																											GHP01 63B5	6324	25							
16.9		98	53.33	2600	1.2																																														GHP01 71B5/B14	7116	25				
19.6		84	45.89	2600	1.4																																																	GHF01 71B5/B14	7116	25	
22		74	40.10	2600	1.6																																																				GHP01 71B5/B14
25		65	35.47	2600	1.8	GHF01 71B5/B14	7116	25																																																	
32		52	28.50	2600	2.3				GHP01 71B5/B14	7116	25																																														
38		43	23.56	2580	2.8							GHF01 71B5/B14	7116	25																																											
45		36	19.83	2440	3.3										GHP01 71B5/B14	7116	25																																								
50		33	17.86	2360	2.7													GHF01 71B5/B14	7116	25																																					

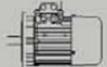
SELECTION CHART...

P_{1n} [kW]	n_2 [r/min]	M_{2n} [Nm]	i	F_{r2} [N]	f_s			Page					
0.18	26	64	54.00*	4500	3.1	GHP02 63B5	6324	27					
	30	55	46.46*	4500	3.7			GHF02 63B5	6324	27			
	34	48	40.60*	4500	4.2					GHPS02 63B5	6324	27	
	39	42	35.91*	4270	4.7								
	16.7	99	54.00*	4500	2.0	GHP02 71B5/B14	7116	27					
	19.4	85	46.46*	4500	2.3			GHF02 71B5/B14	7116	27			
	22	74	40.60*	4500	2.7					GHPS02 71B5/B14	7116	27	
	25	66	35.91*	4500	3.0								
	31	53	28.88*	4500	3.8								
	0.25	26	87	53.33	2600	1.4	GHP01 71B5/B14	7114	25				
31		75	45.89	2600	1.6	GHF01 71B5/B14			7114	25			
35		66	40.10	2600	1.8					GHPS01 71B5/B14	7114	25	
39		58	35.47	2560	2.1								
49		47	28.50	2380	2.6								
59		39	23.56	2230	3.1								
71		32	19.83	2100	3.7								
78		29	17.86	2030	3.1								
96		24	14.62	1900	5.0								
101		23	13.80*	1860	4.0								
118		19.5	11.90	1770	6.2								
143		16.1	9.81	1660	7.5								
153		15.0	9.17	1630	5.3								
181		12.6	7.72	1540	6.3								
246		9.3	5.69	1390	7.5								
302		7.6	4.63	1290	9.2								
366		6.3	3.82	1210	11.2								
16.9		136	53.33	2600	0.88	GHP01 71B5/B14	7126	25					
19.6		117	45.89	2600	1.0			GHF01 71B5/B14	7126	25			
22		102	40.10	2600	1.2					GHPS01 71B5/B14	7126	25	
25		90	35.47	2600	1.3								
32		73	28.50	2600	1.7								
38		60	23.56	2580	2.0								
45		51	19.83	2440	2.4								
50		45	17.86	2360	2.0								
62		37	14.62	2200	3.2								
65		35	13.80*	2160	2.6								
76		30	11.90	2060	4.0								
92		25	9.81	1930	4.8								
98		23	9.17	1890	3.4								
117		19.7	7.72	1780	4.1								
158		14.5	5.69	1610	4.8								
194		11.8	4.63	1500	5.9								
236		9.7	3.82	1410	7.2								
26		88	54.00*	4500	2.3	GHP02 71B5/B14	7114	27					
30		76	46.46*	4500	2.6			GHF02 71B5/B14	7114	27			
34		66	40.60*	4500	3.0					GHPS02 71B5/B14	7114	27	
39		59	35.91*	4270	3.4								
16.7		138	54.00*	4500	1.5	GHP02 71B5/B14	7126	27					
19.4		118	46.46*	4500	1.7			GHF02 71B5/B14	7126	27			
22		103	40.60*	4500	1.9					GHPS02 71B5/B14	7126	27	
25		91	35.91*	4500	2.2								
31		74	28.88*	4500	2.7								

SELECTION CHART...

P_{1n} [kW]	n_2 [r/min]	M_{2n} [Nm]	i	F_{r2} [N]	f_s			Page																										
0.37	26	129	53.33	2600	0.93	GHP01 71B5/B14	7124	25																										
	31	111	45.89	2600	1.1			GHF01 71B5/B14	7124	25																								
	35	97	40.10	2600	1.2					GHPS01 71B5/B14	7124	25																						
	39	86	35.47	2560	1.4																													
	49	69	28.50	2380	1.7																													
	59	57	23.56	2230	2.1																													
	71	48	19.83	2100	2.5																													
	78	43	17.86	2030	2.1																													
	96	35	14.62	1900	3.4																													
	101	33	13.80*	1860	2.7																													
	118	29	11.90	1770	4.2																													
	143	24	9.81	1660	5.0																													
	153	22	9.17	1630	3.6																													
	181	18.7	7.72	1540	4.3																													
	246	13.8	5.69	1390	5.1																													
	302	11.2	4.63	1290	6.2																													
	366	9.3	3.82	1210	7.6																													
	25	134	35.47	2600	0.90					GHP01 80B5/B14	8016																							
	32	107	28.50	2600	1.1							GHF01 80B5/B14	8016																					
	38	89	23.56	2580	1.4									GHPS01 80B5/B14	8016																			
	45	75	19.83	2440	1.6																													
	50	67	17.86	2360	1.3																													
	62	55	14.62	2200	2.2																													
	65	52	13.80*	2160	1.7																													
	76	45	11.90	2060	2.7																													
	92	37	9.81	1930	3.2																													
	98	35	9.17	1890	2.3																													
	117	29	7.72	1780	2.7																													
	26	131	54.00*	4500	1.5							GHP02 71B5/B14	7124																	27				
	30	113	46.46*	4500	1.8									GHF02 71B5/B14	7124															27				
	34	98	40.60*	4500	2.0	GHPS02 71B5/B14	7124									27																		
	39	87	35.91*	4270	2.3																													
	48	70	28.88*	3970	2.9																													
	59	58	23.85*	3730	3.5																													
	70	49	20.08*	3520	4.1																													
	82	41	17.10*	3330	3.4																													
95	36	14.81*	3180	5.6																														
16.7	204	54.00*	4500	1.0						GHP02 80B5/B14	8016	27																						
19.4	175	46.46*	4500	1.1								GHF02 80B5/B14	8016	27																				
22	153	40.60*	4500	1.3		GHPS02 80B5/B14	8016							27																				
25	135	35.91*	4500	1.5																														
31	109	28.88*	4500	1.8																														
38	90	23.85*	4320	2.2																														
45	76	20.08*	4080	2.6																														
53	64	17.10*	3860	2.2																														
68	50	13.21*	3550	2.8																														
24	141	58.09	6000	2.1						GHP03 71B5/B14	7124												29											
28	121	50.02	6000	2.5								GHF03 71B5/B14	7124										29											
32	106	43.75	6000	2.8		GHPS03 71B5/B14	7124																29											
36	94	38.73	6000	3.2																														
40	84	34.62	5860	3.6																														
15.5	219	58.09	6000	1.4						GHP03 80B5/B14	8016					29																		
18.0	189	50.02	6000	1.6								GHF03 80B5/B14	8016			29																		
21	165	43.75	6000	1.8		GHPS03 80B5/B14	8016									29																		
23	146	38.73	6000	2.1																														
26	130	34.62	6000	2.3																														
32	107	28.30	6000	2.8																														
41	82	21.78	5820	3.4																														

SELECTION CHART...

P_{1n} [kW]	n_2 [r/min]	M_{2n} [Nm]	i	F_{r2} [N]	f_s			Page																	
0.55	53	96	53.33	2320	1.2	GHP01 71B5/B14	7122	25																	
	61	83	45.89	2210	1.5			GHF01 71B5/B14	7122	25															
	70	72	40.10	2110	1.7					GHPS01 71B5/B14	7122	25													
	79	64	35.47	2030	1.9																				
	98	51	28.50	1880	2.3																				
	119	42	23.56	1770	2.8																				
	141	36	19.83	1670	3.4																				
	157	32	17.86	1610	2.8																				
	203	25	13.80*	1480	3.6																				
		39	128	35.47	2560	0.94	GHP01 80B5/B14	8014	25																
		49	103	28.50	2380	1.2			GHF01 80B5/B14	8014	25														
		59	85	23.56	2230	1.4					GHPS01 80B5/B14	8014	25												
		71	71	19.83	2100	1.7																			
		78	64	17.86	2030	1.4																			
		96	53	14.62	1900	2.3																			
		101	50	13.80*	1860	1.8																			
		118	43	11.90	1770	2.8																			
		143	35	9.81	1660	3.4																			
		153	33	9.17	1630	2.4																			
		181	28	7.72	1540	2.9																			
		246	20	5.69	1390	3.4																			
		302	16.7	4.63	1290	4.2																			
		366	13.8	3.82	1210	5.1																			
		38	132	23.56	2580	0.91	GHP01 80B5/B14	8026	25																
		45	111	19.83	2440	1.1			GHF01 80B5/B14	8026	25														
		62	82	14.62	2200	1.5					GHPS01 80B5/B14	8026	25												
		65	77	13.80*	2160	1.2																			
		76	67	11.90	2060	1.8																			
		92	55	9.81	1930	2.2																			
		98	51	9.17	1890	1.6																			
		117	43	7.72	1780	1.8																			
		158	32	5.69	1610	2.2																			
		194	26	4.63	1500	2.7																			
		236	21	3.82	1410	3.3																			
		52	97	54.00*	3880	2.1	GHP02 71B5/B14	7122	27																
		60	84	46.46*	3690	2.4			GHF02 71B5/B14	7122	27														
		69	73	40.60*	3530	2.7					GHPS02 71B5/B14	7122	27												
		78	65	35.91*	3390	3.1																			
		97	52	28.88*	3150	3.8																			
		26	194	54.00*	4500	1.0	GHP02 80B5/B14	8014	27																
		30	167	46.46*	4500	1.2			GHF02 80B5/B14	8014	27														
		34	146	40.60*	4500	1.4					GHPS02 80B5/B14	8014	27												
		39	129	35.91*	4270	1.5																			
		48	104	28.88*	3970	1.9																			
		59	86	23.85*	3730	2.3																			
		70	72	20.08*	3520	2.8																			
		82	62	17.10	3330	2.3																			
		95	53	14.81*	3180	3.7																			
		106	48	13.21	3060	2.9																			
		22	227	40.60*	4500	0.88	GHP02 80B5/B14	8026	29																
		25	201	35.91*	4500	1.0			GHF02 80B5/B14	8026	29														
		31	162	28.88*	4500	1.2					GHPS02 80B5/B14	8026	29												
		38	134	23.85*	4320	1.5																			
		45	113	20.08*	4080	1.8																			
		53	96	17.10	3860	1.5																			
		61	83	14.81*	3680	2.4																			
		68	74	13.21	3550	1.9																			
		103	49	8.78	3090	2.4																			

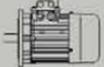
SELECTION CHART...

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	28	180	50.02	6000	1.7				GHF03	80B5/B14	8014	29				
	32	158	43.75	6000	1.9							GHPS03	80B5/B14	8014	29	
	36	139	38.73	6000	2.2											
	40	125	34.62	5860	2.4											
	49	102	28.30	5480	2.9											
	64	78	21.78	5020	3.6											
	81	62	17.33	4660	4.5											
	15.5	325	58.09	6000	0.92	GHP03	80B5/B14	8026							29	
	18.0	280	50.02	6000	1.1				GHF03	80B5/B14	8026				29	
	21	245	43.75	6000	1.2							GHPS03	80B5/B14	8026	29	
	23	217	38.73	6000	1.4											
	26	194	34.62	6000	1.5											
	32	159	28.30	6000	1.9											
	41	122	21.78	5820	2.3											
	52	97	17.33	5400	2.9											
	60	84	15.06	5150	3.1											
	73	69	12.37	4820	3.8											
	24	209	58.09	8000	2.4	GHP04	80B5/B14	8014	31							
	28	180	50.02	8000	2.8				GHF04	80B5/B14	8014	31				
	32	158	43.75	8000	3.2							GHPS04	80B5/B14	8014	31	
	36	139	38.73	8000	3.6											
	40	125	34.62	7950	4.0											
	15.5	325	58.09	8000	1.5	GHP04	80B5/B14	8026							31	
	18.0	280	50.02	8000	1.8				GHF04	80B5/B14	8026				31	
	21	245	43.75	8000	2.0							GHPS04	80B5/B14	8026	31	
	23	217	38.73	8000	2.3											
	26	194	34.62	8000	2.6											
	32	159	28.30	8000	3.2											
	41	122	21.78	7890	3.9											
	0.75	61	113	45.89	2210										1.1	GHP01
		70	98	40.10	2100	1.2	GHF01	80B5/B14							8012	
79		87	35.47	2030	1.4	GHPS01			80B5/B14	8012	25					
98		70	28.50	1880	1.7											
119		58	23.56	1770	2.1											
141		49	19.83	1670	2.5											
157		44	17.86	1610	2.1											
192		36	14.62	1510	3.3											
203		34	13.80*	1480	2.7											
59		116	23.56	2230	1.0		GHP01	80B5/B14			8024	25				
71		97	19.83	2100	1.2	GHF01			80B5/B14	8024		25				
78		88	17.86	2030	1.0							GHPS01	80B5/B14	8024	25	
96		72	14.62	1900	1.7											
101		68	13.80*	1860	1.3											
118		58	11.90	1770	2.1											
143		48	9.81	1660	2.5											
153		45	9.17	1630	1.8											
181		38	7.72	1540	2.1											
246		28	5.69	1390	2.5											
302		23	4.63	1290	3.1											
366		18.8	3.82	1210	3.7											
62		112	14.62	2200	1.1										GHP01	90B5/B14
76		91	11.90	2060	1.3		GHF01	90B5/B14			90S6					
92		75	9.81	1930	1.6	GHPS01			90B5/B14	90S6						
98		70	9.17	1890	1.1											

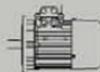
SELECTION CHART...

P_{1n} [kW]	n_2 [r/min]	M_{2n} [Nm]	i	F_{r2} [N]	f_s			Page	
0.75	117	59	7.72	1780	1.4	GHP01	90B5/B14	90S6	25
	158	43	5.69	1610	1.6	GHF01	90B5/B14	90S6	25
	194	35	4.63	1500	2.0	GHP01	90B5/B14	90S6	25
	236	29	3.82	1410	2.4	GHP01	90B5/B14	90S6	25
	52	133	54.00*	3880	1.5	GHP02	80B5/B14	8012	27
	60	114	46.46*	3690	1.8	GHF02	80B5/B14	8012	27
	69	100	40.60*	3530	2.0	GHP02	80B5/B14	8012	27
	78	88	35.91*	3390	2.3				
	97	71	28.88*	3150	2.8				
	117	59	23.85*	2960	3.4				
	139	49	20.08*	2790	4.1				
	164	42	17.10*	2650	3.3				
	30	228	46.46*	4500	0.88	GHP02	80B5/B14	8024	27
	34	199	40.60*	4500	1.0	GHF02	80B5/B14	8024	27
	39	176	35.91*	4270	1.1	GHP02	80B5/B14	8024	27
	48	142	28.88*	3970	1.4				
	59	117	23.85*	3730	1.7				
	70	99	20.08*	3520	2.0				
	82	84	17.10	3330	1.7				
	95	73	14.81*	3180	2.7				
	106	65	13.21	3060	2.2				
	116	59	12.05	2970	3.4				
	141	49	9.93	2780	4.1				
	159	43	8.78	2670	2.8				
	189	36	7.39	2520	3.3				
	257	27	5.45	2280	3.7				
	38	182	23.85*	4320	1.1	GHP02	90B5/B14	90S6	27
	45	153	20.08*	4080	1.3	GHF02	90B5/B14	90S6	27
	61	113	14.81*	3680	1.8	GHP02	90B5/B14	90S6	27
	68	101	13.21	3550	1.4				
	75	92	12.05	3440	2.2				
	91	76	9.93	3220	2.6				
	103	67	8.78	3090	1.8				
	122	56	7.39	2920	2.1				
	165	42	5.45	2640	2.4				
	48	143	58.09	5530	2.1	GHP03	80B5/B14	8012	29
	56	123	50.02	5260	2.4	GHF03	80B5/B14	8012	29
	64	107	43.75	5030	2.8	GHP03	80B5/B14	8012	29
	72	95	38.73	4830	3.2				
	81	85	34.62	4650	3.5				
	24	285	58.09	6000	1.1	GHP03	80B5/B14	8024	29
	28	246	50.02	6000	1.2	GHF03	80B5/B14	8024	29
	32	215	43.75	6000	1.4	GHP03	80B5/B14	8024	29
	36	190	38.73	6000	1.6				
	40	170	34.62	5860	1.8				
	49	139	28.30	5480	2.2				
	64	107	21.78	5020	2.6				
	81	85	17.33	4660	3.3				
	93	74	15.06	4440	3.5				
	23	296	38.73	6000	1.0	GHP03	90B5/B14	90S6	29
	26	264	34.62	6000	1.1	GHF03	90B5/B14	90S6	29
	32	216	28.30	6000	1.4	GHP03	90B5/B14	90S6	29
	41	166	21.78	5820	1.7				
	52	132	17.33	5400	2.1				
	60	115	15.06	5150	2.3				

SELECTION CHART...

P_{1n} [kW]	n_2 [r/min]	M_{2n} [Nm]	i	F_{r2} [N]	f_s			Page			
0.75	73	95	12.37	4820	2.8	GHP03	90B5/B14	90S6	29		
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	113	61	7.93*	4160	3.0				GHPS03	90S6	29
	143	48	6.31	3850	3.7	GHP04	80B5/B14	8024	31		
	164	42	5.48	3670	3.6						
	24	285	58.09	8000	1.8						
	28	246	50.02	8000	2.0						
	32	215	43.75	8000	2.3						
	36	190	38.73	8000	2.6						
	40	170	34.62	7950	2.9						
	49	139	28.30	7430	3.6						
	64	107	21.78	6810	4.5						
	15.5	444	58.09	8000	1.1					GHP04	90B5/B14
	18.0	382	50.02	8000	1.3						
	21	334	43.75	8000	1.5						
	23	296	38.73	8000	1.7						
	26	264	34.62	8000	1.9						
	32	216	28.30	8000	2.3						
	41	166	21.78	7890	2.9						
	52	132	17.33	7310	3.6						
1.1	98	103	28.50	1880	1.2	GHP01	80B5/B14	8022	25		
	119	85	23.56	1770	1.4				GHF01	8022	25
	141	71	19.83	1670	1.7				GHPS01	8022	25
	157	64	17.86	1610	1.4	GHP01	90B5/B14	90S4	25		
	192	53	14.62	1510	2.3						
	203	50	13.80*	1480	1.8						
	235	43	11.90	1410	2.8						
	285	35	9.81	1320	3.4						
	305	33	9.17	1290	2.4						
	363	28	7.72	1220	2.9						
	492	20	5.69	1100	3.4						
	605	16.7	4.63	1030	4.2						
	733	13.8	3.82	960	5.1						
	96	105	14.62	1900	1.1	GHP01	90B5/B14	90S4	25		
	118	86	11.90	1770	1.4						
	143	71	9.81	1660	1.7						
	153	66	9.17	1630	1.2						
	181	56	7.72	1540	1.4						
	246	41	5.69	1390	1.7						
	302	33	4.63	1290	2.1						
	366	28	3.82	1210	2.5						
	92	110	9.81	1930	1.1					GHP01	90B5/B14
	117	87	7.72	1780	0.92						
	158	64	5.69	1610	1.1						
	194	52	4.63	1500	1.3						
	236	43	3.82	1410	1.6						
	52	194	54.00*	3880	1.0	GHP02	80B5/B14	8022	27		
	60	167	46.46*	3690	1.2						
	69	146	40.60*	3530	1.4						
	78	129	35.91*	3390	1.5						
	97	104	28.88*	3150	1.9						
	117	86	23.85*	2960	2.3						
	139	72	20.08*	2790	2.8						
	164	62	17.10	2650	2.3						
	189	53	14.81*	2520	3.7						
	212	48	13.21	2430	2.9						

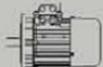
SELECTION CHART...

P_{1n} [kW]	n_2 [r/min]	M_{2n} [Nm]	i	F_{r2} [N]	f_s			Page										
1.1	48	208	28.88*	3970	0.96	GHP02 90B5/B14	90S4	27										
	59	172	23.85*	3730	1.2			GHF02 90B5/B14	90S4	27								
	70	145	20.08*	3520	1.4					GHPS02 90B5/B14	90S4	27						
	95	107	14.81*	3180	1.9													
	106	95	13.21	3060	1.5													
	116	87	12.05	2970	2.3													
	141	72	9.93	2780	2.8													
	159	63	8.78	2670	1.9													
	189	53	7.39	2520	2.3													
	257	39	5.45	2280	2.5													
	316	32	4.43	2120	3.1													
	383	26	3.66	1990	3.0													
	61	166	14.81*	3680	1.2							GHP02 90B5/B14	90L6	27				
	75	135	12.05	3440	1.5									GHF02 90B5/B14	90L6	27		
	91	111	9.93	3220	1.8											GHPS02 90B5/B14	90L6	27
	103	98	8.78	3090	1.2													
	122	83	7.39	2920	1.4													
	165	61	5.45	2640	1.6													
	203	50	4.43	2460	2.0													
	246	41	3.66	2310	2.0													
	48	209	58.09	5530	1.4							GHP03 80B5/B14	8022					29
	56	180	50.02	5260	1.7									GHF03 80B5/B14	8022			29
	64	158	43.75	5030	1.9											GHPS03 80B5/B14	8022	29
	72	139	38.73	4830	2.2													
	81	125	34.62	4650	2.4													
	99	102	28.30	4350	2.9													
	129	78	21.78	3990	3.6													
	32	315	43.75	6000	0.95							GHP03 90B5/B14	90S4	29				
	36	279	38.73	6000	1.1									GHF03 90B5/B14	90S4	29		
	40	249	34.62	5860	1.2											GHPS03 90B5/B14	90S4	29
	49	204	28.30	5480	1.5													
	64	157	21.78	5020	1.8													
	81	125	17.33	4660	2.2													
	93	108	15.06	4440	2.4													
	113	89	12.37	4160	2.9													
	136	74	10.28	3910	3.2													
	177	57	7.93*	3590	3.2													
	222	45	6.31	3320	4.0													
	255	39	5.48	3170	3.8													
	311	32	4.50	2970	4.6													
	374	27	3.74	2790	5.6													
	32	317	28.30	6000	0.95	GHP03 90B5/B14	90L6	29										
	41	244	21.78	5820	1.1			GHF03 90B5/B14	90L6	29								
	52	194	17.33	5400	1.4					GHPS03 90B5/B14	90L6	29						
	60	169	15.06	5150	1.5													
	73	139	12.37	4820	1.9													
	88	115	10.28	4530	2.1													
	113	89	7.93*	4160	2.0													
	143	71	6.31	3850	2.5													
	164	61	5.48	3670	2.4													
	200	50	4.50	3440	3.0													
	241	42	3.74	3230	3.6													
	48	209	58.09	7500	2.4							GHP04 80B5/B14	8022	31				
	56	180	50.02	7130	2.8	GHF04 80B5/B14	8022							31				
	64	158	43.75	6820	3.2			GHPS04 80B5/B14	8022					31				
	72	139	38.73	6550	3.6													
	81	125	34.62	6310	4.0													

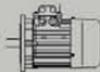
SELECTION CHART...

P_{1n} [kW]	n_2 [r/min]	M_{2n} [Nm]	i	F_{r2} [N]	f_s			Page			
1.1	24	418	58.09	8000	1.2			31			
	28	360	50.02	8000	1.4						
	32	315	43.75	8000	1.6				GHP04 90B5/B14	90S4	31
	36	279	38.73	8000	1.8				GHF04 90B5/B14	90S4	31
	40	249	34.62	7950	2.0				GHP04 90B5/B14	90S4	31
	49	204	28.30	7430	2.5				GHF04 90B5/B14	90S4	31
	64	157	21.78	6810	3.1				GHP04 90B5/B14	90S4	31
	81	125	17.33	6310	3.8				GHF04 90B5/B14	90S4	31
	93	108	15.06	6020	4.2				GHP04 90B5/B14	90S4	31
	21	490	43.75	8000	1.0				GHP04 90B5/B14	90L6	31
	23	434	38.73	8000	1.2				GHF04 90B5/B14	90L6	31
	26	388	34.62	8000	1.3				GHP04 90B5/B14	90L6	31
	32	317	28.30	8000	1.6				GHF04 90B5/B14	90L6	31
	41	244	21.78	7890	2.0				GHP04 90B5/B14	90L6	31
	52	194	17.33	7310	2.5				GHF04 90B5/B14	90L6	31
	60	169	15.06	6980	2.7				GHP04 90B5/B14	90L6	31
	73	139	12.37	6540	3.3				GHF04 90B5/B14	90L6	31
	88	115	10.28	6150	3.8				GHP04 90B5/B14	90L6	31
	113	89	7.93*	5640	2.9				GHF04 90B5/B14	90L6	31
	143	71	6.31	5220	3.7				GHP04 90B5/B14	90L6	31
164	61	5.48	4980	3.7	GHF04 90B5/B14	90L6	31				
1.5	119	116	23.56	1770	1.0			25			
	141	97	19.83	1670	1.2						
	192	72	14.62	1510	1.7				GHP01 90B5/B14	90S2	25
	203	68	13.80*	1480	1.3				GHF01 90B5/B14	90S2	25
	235	58	11.90	1410	2.1				GHP01 90B5/B14	90S2	25
	285	48	9.81	1320	2.5				GHF01 90B5/B14	90S2	25
	305	45	9.17	1290	1.8				GHP01 90B5/B14	90S2	25
	363	38	7.72	1220	2.1				GHF01 90B5/B14	90S2	25
	492	28	5.69	1100	2.5				GHP01 90B5/B14	90S2	25
	605	23	4.63	1030	3.1				GHF01 90B5/B14	90S2	25
	733	18.8	3.82	960	3.7				GHP01 90B5/B14	90S2	25
	118	117	11.90	1770	1.0				GHP01 90B5/B14	90L4	25
	143	96	9.81	1660	1.2						
	153	90	9.17	1630	0.89						
	181	76	7.72	1540	1.1						
	246	56	5.69	1390	1.3						
	302	45	4.63	1290	1.5						
	366	38	3.82	1210	1.9						
	69	199	40.60*	3530	1.0						
	79	176	35.91*	3390	1.1						
	97	142	28.88*	3150	1.4						
	117	117	23.85*	2960	1.7						
	139	99	20.08*	2790	2.0						
	189	73	14.81*	2520	2.7						
	212	65	13.21	2430	2.2						
	232	59	12.05	2350	3.4						
	282	49	9.93	2210	4.1						
	319	43	8.78	2120	2.8						
	379	36	7.39	2000	3.3						
	514	27	5.45	1810	3.7						
	95	145	14.81*	3180	1.4				GHP02 90B5/B14	90L4	27
	116	118	12.05	2970	1.7						
	141	98	9.93	2780	2.1						
	159	86	8.78	2670	1.4						
	189	73	7.39	2520	1.7						
	257	54	5.45	2280	1.9						
	316	44	4.43	2120	2.3						
	383	36	3.66	1990	2.2						

SELECTION CHART...

P_{1n} [kW]	n_2 [r/min]	M_{2n} [Nm]	i	F_{r2} [N]	f_s			Page
1.5	48	285	58.09	5530	1.1	GHP03 90B5/B14	90S2	29
	56	246	50.02	5260	1.2			
	64	215	43.75	5030	1.4			
	72	190	38.73	4830	1.6			
	81	170	34.62	4650	1.8			
	99	139	28.30	4350	2.2			
	129	107	21.78	3990	2.6			
	162	85	17.33	3690	3.3			
	186	74	15.06	3530	3.5			
	40	340	34.62	5860	0.88	GHP03 90B5/B14	90L4	29
	49	278	28.30	5480	1.1			
	64	214	21.78	5020	1.3			
	81	170	17.33	4660	1.6			
	93	148	15.06	4440	1.8			
	113	122	12.37	4160	2.1			
	136	101	10.28	3910	2.4			
	177	78	7.93*	3590	2.3			
	222	62	6.31	3320	2.9			
	255	54	5.48	3170	2.8			
	311	44	4.50	2970	3.4			
	374	37	3.74	2790	4.1			
	52	265	17.33	5400	1.1			
	60	230	15.06	5150	1.1			
	73	189	12.37	4820	1.4			
	88	157	10.28	4530	1.5			
	113	121	7.93*	4160	1.5			
	143	96	6.31	3850	1.9			
	164	84	5.48	3670	1.8			
	200	69	4.50	3440	2.2			
	241	57	3.74	3230	2.6			
	48	285	58.09	7500	1.8	GHP04 90B5/B14	90S2	31
	56	246	50.02	7130	2.0			
	64	215	43.75	6820	2.3			
	72	190	38.73	6550	2.6			
	81	170	34.62	6310	2.9			
	99	139	28.30	5900	3.6			
	24	571	58.09	8000	0.88	GHP04 90B5/B14	90L4	31
	28	491	50.02	8000	1.0			
	32	430	43.75	8000	1.2			
	36	380	38.73	8000	1.3			
	40	340	34.62	7950	1.5			
	49	278	28.30	7430	1.8			
	64	214	21.78	6810	2.2			
	81	170	17.33	6310	2.8			
	93	148	15.06	6020	3.1			
	113	122	12.37	5640	3.8			
	136	101	10.28	5300	4.4			
	177	78	7.93*	4860	3.3			
222	62	6.31	4510	4.2				
255	54	5.48	4300	4.3				
26	529	34.62	8000	0.95	GHP04 100B5/B14			
32	432	28.30	8000	1.2				
41	333	21.78	7890	1.4				
52	265	17.33	7310	1.8				
60	230	15.06	6980	2.0				
73	189	12.37	6540	2.4				
88	157	10.28	6150	2.8				
113	121	7.93*	5640	2.1				

SELECTION CHART...

P_{1n} [kW]	n_2 [r/min]	M_{2n} [Nm]	i	F_{r2} [N]	f_s			Page										
1.5	143	96	6.31	5220	2.7	GHP04	100B5/B14	100L6	31									
	164	84	5.48	4980	2.7		GHF04	100B5/B14	100L6	31								
	200	69	4.50	4660	3.3		GHPS04	100B5/B14	100L6	31								
	241	57	3.74	4390	3.5													
2.2	97	208	28.88*	3150	0.96	GHP02	90B5/B14	90L2	27									
	117	172	23.85*	2960	1.2					GHF02	90B5/B14	90L2	27					
	139	145	20.08*	2790	1.4									GHPS02	90B5/B14	90L2	27	
	189	107	14.81*	2520	1.9													
	212	95	13.21	2430	1.5													
	232	87	12.05	2350	2.3													
	282	72	9.93	2210	2.8													
	319	63	8.78	2120	1.9													
	379	53	7.39	2000	2.3													
	514	39	5.45	1810	2.5													
632	32	4.43	1680	3.1														
765	26	3.66	1580	3.0														
	64	315	43.75	5030	0.95	GHP03	90B5/B14	90L2	29									
	72	279	38.73	4830	1.1					GHF03	90B5/B14	90L2	29					
	81	249	34.62	4650	1.2									GHPS03	90B5/B14	90L2	29	
	99	204	28.30	4350	1.5													
	129	157	21.78	3990	1.8													
	162	125	17.33	3690	2.2													
	186	108	15.06	3530	2.4													
	226	89	12.37	3300	2.9													
	272	74	10.28	3100	3.2													
	353	57	7.93*	2850	3.2													
	444	45	6.31	2640	4.0													
	511	39	5.48	2520	3.8													
		64	314	21.78	5020									0.89	GHP03	100B5/B14	100LA4	29
		81	250	17.33	4660									1.1				
93		217	15.06	4440	1.2	GHPS03	100B5/B14	100LA4	29									
113		178	12.37	4160	1.5													
136		148	10.28	3910	1.6													
177		114	7.93*	3590	1.6													
222		91	6.31	3320	2.0													
255		79	5.48	3170	1.9													
311		65	4.50	2970	2.3													
374		54	3.74	2790	2.8													
	73	277	12.37	4820	0.94	GHP03	112B5/B14	112M6	29									
	88	230	10.28	4530	1.0					GHF03	112B5/B14	112M6	29					
	113	178	7.93*	4160	1.0									GHPS03	112B5/B14	112M6	29	
	143	141	6.31	3850	1.3													
	164	123	5.48	3670	1.2													
	200	101	4.50	3440	1.5													
	241	84	3.74	3230	1.8													
		48	418	58.09	7500									1.2	GHP04	90B5/B14	90L2	31
56		360	50.02	7130	1.4	GHF04	90B5/B14	90L2	31									
64		315	43.75	6820	1.6					GHPS04	90B5/B14	90L2	31					
72		279	38.73	6550	1.8													
81		249	34.62	6310	2.0													
99		204	28.30	5900	2.5													
129		157	21.78	5410	3.1													
162		125	17.33	5010	3.8													
		40	499	34.62	7950					1.0	GHP04	100B5/B14	100LA4	31				
		49	408	28.30	7430					1.2								
	64	314	21.78	6810	1.5					GHPS04					100B5/B14	100LA4	31	
	81	250	17.33	6310	1.9													
	93	217	15.06	6020	2.1													

SELECTION CHART...

P_{1n} [kW]	n_2 [r/min]	M_{2n} [Nm]	i	F_{r2} [N]	f_s			Page										
2.2	113	178	12.37	5640	2.6	GHP04 100B5/B14	100LA4	31										
	136	148	10.28	5300	3.0			GHF04 100B5/B14	100LA4	31								
	177	114	7.93*	4860	2.3					GHPS04 100B5/B14	100LA4	31						
	222	91	6.31	4510	2.9							GHP04 112B5/B14	112M6	31				
	255	79	5.48	4300	2.9									GHF04 112B5/B14	112M6	31		
	311	65	4.50	4030	3.5											GHPS04 112B5/B14	112M6	31
	374	54	3.74	3780	3.7													GHP04 112B5/B14
	41	488	21.78	7890	1.0	GHF04 112B5/B14	112M6	31										
	52	388	17.33	7310	1.2	GHPS04 112B5/B14	112M6	31										
	60	338	15.06	6980	1.4													
	73	277	12.37	6540	1.7													
	88	230	10.28	6150	1.9													
	113	178	7.93*	5640	1.5													
	143	141	6.31	5220	1.8													
	164	123	5.48	4980	1.9													
	200	101	4.50	4660	2.3													
	241	84	3.74	4390	2.4													

P_1 [kW]	n_2 [r/min]	M_{2n} [Nm]	Ratio [i]	F_{r2} [N]	f_s	Model	Poles				
2.2	23	900	60.95	20000	1.70	GHP06	4				
	27	185	52.82	20000	1.95			GHF06	4		
	30	710	47.58	20000	2.20					GHPS06	4
	34	620	41.74	19900	2,5						
	31	685	45 81	11000	1.20	GHP05	4				
	33	645	43.28	11300	1.25	GHF05					
	38	550	36.83	11800	1 50	GHPS05					
	42	500	33.48	12100	1.65						
	49	430	29.00	12100	1.90						
	56	375	26.23	11700	2.10						
	60	350	23,37	11400	2.30						

SELECTION CHART...

P_{1n} [kW]	n_2 [r/min]	M_{2n} [Nm]	i	F_{r2} [N]	f_s			Page																																	
3.0	99	278	28.30	4350	1.1	GHP03	100B5/B14	100L2	29																																
	129	214	21.78	3990	1.3					GHF03	100B5/B14	100L2	29																												
	162	170	17.33	3690	1.6									GHPS03	100B5/B14	100L2	29																								
	186	148	15.06	3530	1.8													100LB4	100LB4	29																					
	226	122	12.37	3300	2.1																100LB4	100LB4	29																		
	272	101	10.28	3100	2.4																			100LB4	100LB4	29															
	353	78	7.93*	2850	2.3																						100LB4	100LB4	29												
	444	62	6.31	2640	2.9																									100LB4	100LB4	29									
	511	54	5.48	2520	2.8																												100LB4	100LB4	29						
	622	44	4.50	2350	3.4																															100LB4	100LB4	29			
	749	37	3.74	2210	4.1																																		100LB4	100LB4	29
	93	296	15.06	4440	0.88																																				
	113	243	12.37	4160	1.1	100LB4	100LB4	29																																	
	136	202	10.28	3910	1.2				100LB4	100LB4	29																														
	177	156	7.93*	3590	1.2							100LB4	100LB4	29																											
	222	124	6.31	3320	1.5										100LB4	100LB4	29																								
	255	108	5.48	3170	1.4													100LB4	100LB4	29																					
	311	88	4.50	2970	1.7																100LB4	100LB4	29																		
	374	73	3.74	2790	2.0																			100LB4	100LB4	29															
	81	340	34.62	6310	1.5																						100L2	100L2	31												
	99	278	28.30	5900	1.8																									100L2	100L2	31									
	129	214	21.78	5410	2.2																												100L2	100L2	31						
	162	170	17.33	5010	2.8	100L2	100L2	31																																	
	186	148	15.06	4780	3.1				100L2	100L2	31																														
	226	122	12.37	4480	3.8							100L2	100L2	31																											
	272	101	10.28	4210	4.4										100L2	100L2	31																								
	353	78	7.93*	3860	3.3													100L2	100L2	31																					
	444	62	6.31	3580	4.2																100L2	100L2	31																		
	49	556	28.30	7430	0.90																			100LB4	100LB4	31															
	64	428	21.78	6810	1.1																															100LB4	100LB4	31			
	81	340	17.33	6310	1.4																																		100LB4	100LB4	31
	93	296	15.06	6020	1.6	100LB4	100LB4	31																																	
	113	243	12.37	5640	1.9				100LB4	100LB4	31																														
	136	202	10.28	5300	2.2							100LB4	100LB4	31																											
	177	156	7.93*	4860	1.7										100LB4	100LB4	31																								
	222	124	6.31	4510	2.1													100LB4	100LB4	31																					
255	108	5.48	4300	2.1	100LB4																100LB4	31																			
311	88	4.50	4030	2.6																			100LB4				100LB4	31													
374	73	3.74	3780	2.7																									100LB4	100LB4	31										
P_1 [kW]	n_2 [r/min]	M_{2n} [Nm]	Ratio [i]	F_{r2} [N]	f_s	Model	Poles																																		
3.0	29	1230	60.35	18800	1.25	GHP06	4																																		
	27	1080	52.82	19500	1.45	GHF06																																			
	29	970	47.58	19900	1.60	GHPS06																																			
	34	850	41.74	19400	1.80																																				
	38	755	36.84	18700	2.10																																				
	43	670	32.66	18100	2.30																																				
	50	570	27.88	17400	2.60																																				
	38	755	36.83	10500	1.10	GHP05	4																																		
	42	685	33.47	11000	1.20	GHF05																																			
	48	595	29.00	11600	1.40	GHPS05																																			
	55	516	25.23	11300	1.50																																				
	60	480	23.37	11100	1.70																																				
	65	440	21.43	10800	1.85																																				
	74	385	18.80	10500	2.00																																				

SELECTION CHART...

P_{1n} [kW]	n_2 [r/min]	M_{2n} [Nm]	i	F_{r2} [N]	f_s			Page				
4.0	162	227	17.33	3690	1.2	GHP03 112B5/B14	112M2	29				
	186	197	15.06	3530	1.3			GHF03 112B5/B14	112M2	29		
	226	162	12.37	3300	1.6			GHPS03 112B5/B14	112M2	29		
	272	135	10.28	3100	1.8							
	353	104	7.93*	2850	1.7							
	444	83	6.31	2640	2.2							
	511	72	5.48	2520	2.1							
	622	59	4.50	2350	2.5							
	749	49	3.74	2210	3.1							
	136	269	10.28	3910	0.89			GHP03 112B5/B14	112M4	29		
	177	208	7.93*	3590	0.87					GHF03 112B5/B14	112M4	29
	222	165	6.31	3320	1.1					GHPS03 112B5/B14	112M4	29
	255	144	5.48	3170	1.0							
	311	118	4.50	2970	1.3							
	374	98	3.74	2790	1.5							
	81	453	34.62	6310	1.1	GHP04 112B5/B14	112M2	31				
	99	371	28.30	5900	1.3			GHF04 112B5/B14	112M2	31		
	129	285	21.78	5410	1.7			GHPS04 112B5/B14	112M2	31		
	162	227	17.33	5010	2.1							
	186	197	15.06	4780	2.3							
	226	162	12.37	4480	2.8							
	272	135	10.28	4210	3.3							
	353	104	7.93*	3860	2.5							
	444	83	6.31	3580	3.1							
	511	72	5.48	3410	3.2							
	622	59	4.50	3190	3.9							
	749	49	3.74	3000	4.1							
	81	454	17.33	6310	1.1	GHP04 112B5/B14	112M4	31				
	93	394	15.06	6020	1.2			GHF04 112B5/B14	112M4	31		
	113	324	12.37	5640	1.4			GHPS04 112B5/B14	112M4	31		
	136	269	10.28	5300	1.6							
	177	208	7.93*	4860	1.3							
	222	165	6.31	4510	1.6							
	255	144	5.48	4300	1.6							
	311	118	4.50	4030	2.0							
	374	98	3.74	3780	2.0							

P_1 [kW]	n_2 [r/min]	M_{2n} [Nm]	Ratio [i]	F_{r2} [N]	f_s	Model	Poles
4.0	24	1610	59.92	25500	1.85	GHP07	4
	27	1430	53.21	24700	2.10	GHF07	
	30	1280	47.58	24000	2.30	GHPS07	
	27	1420	52.82	15200	1.10	GHP06	4
	30	1280	47.58	16000	1.20	GHF06	
	34	1120	41.74	16800	1.40	GHPS06	
	39	990	36.84	17400	1.55		
	41	930	34.40	17600	1.60		
	45	840	31.40	17400	1.85		
	51	750	27.84	16800	2.10		
	61	630	23.40	16100	2.50		
	56	680	25.23	10000	1.15	GHP05	4
	61	630	23.37	10600	1.30	GHF05	
	66	575	21.43	10400	1.40	GHPS05	
	76	505	18.80	10100	1.5S		
	80	480	17.82	9950	1.85		
	91	420	15.60	9630	1.75		
	101	380	14.05	9380	1.90		
	115	330	12.33	9070	2.10		
	131	295	10.88	8780	2.30		
	147	260	9.64	8500	2.40		

SELECTION CHART...

P ₁ [kW]	n ₂ [r/min]	M _{2n} [Nm]	Ratio [i]	F _{r2} [N]	fs	Model	Poles
5.5	24	2180	59.41	31300	1.95	GHP08	4
	27	1930	52.68	30300	2.20	GHF08	
	24	2200	59.92	24200	1,35	GHP07	4
	27	1950	53,21	23600	1.55	GHF07	
	30	1750	47.68	23000	1.70	GHPS07	
	33	1570	42.78	22500	1.90		
	39	1360	37.13	21700	2.20		
	45	1180	32.05	20900	2.20		
	39	1350	36.84	17200	1.15	GHP06	
	44	1020	32.66	16700	1.30	GHF06	
	51	1020	27.86	16100	1.45	GHPS06	
	61	860	23.40	15500	1,80		
	66	790	21.51	15200	1.90		
	75	700	19.10	14700	2,00		
	84	625	17.08	14300	2.20		
	93	565	15.35	13900	2.40		
	107	490	13.33	13400	2.60		
	76	690	18.80	9240	1.15	GHP05	4
	80	655	17.82	9400	1.20	GHF05	
	92	575	15.60	9150	1.30	GHPS05	
	102	515	14.05	8950	1.40		
	116	455	12.33	8690	1.50		
	131	400	10.88	8440	1.55		
	148	355	9.64	8190	1.80		
	166	315	8.59	8080	2.00		
	185	285	7,74	7860	2.20		
	211	250	6.79	7580	2.30		
	239	220	5.99	7320	2.50		
	143	365	10.00	6500	1.30	GHP041	
	164	320	8.70	5310	1.40	GHF041	
	183	285	7.79	6180	1.35	GHPS041	
	194	270	7.36	6100	1.35		
	228	230	6.27	5860	1.45		
251	210	5.70	5720	1,50			
290	181	4.93	5510	1.60			
333	158	4.29	5310	1.70			

SELECTION CHART...

P ₁ [kW]	n ₂ [r/min]	M _{2n} [Nm]	Ratio [i]	F _{r2} [N]	fs	Model	Poles
7.5	24	2980	59.41	30000	1.45	GHP08	4
	27	2640	52.68	29200	1.65	GHF08	
	30	2390	47.63	28500	1.80	GHPS08	
	35	2020	40.37	27300	2.10		
	41	1770	35.26	26400	2.40		
	27	2670	53.21	22200	1.15	GHP07	4
	30	2380	47,58	21800	1.25	GHF07	
	33	2140	42.78	21300	1.40	GHPS07	
	39	1860	37 13	20700	1.60		
	43	1670	33.25	20200	1 75		
	52	1380	27.58	19400	1.95		
	45	1610	32.05	20000	1.60		
	53	1360	27.19	19300	1.90		
	57	1250	25.03	18900	2.30		
	64	1120	22.37	18400	2.50		
	51	1390	27.84	15200	1.10	GHP06	
	61	1170	23.40	14700	1.30	GHF06	
	66	1080	21.51	14500	1.40	GHPS06	
	75	960	19.10	14100	1.50		
	84	860	17,08	13700	1.65		
	93	770	15.35	12500	1.75		
	107	870	13.33	12900	1.90		
	120	600	11,93	12600	2.10		
	144	495	9.90	12060	2.40		
	116	615	12.33	7750	1.10	GHP05	4
	131	545	10.88	8010	1.20	GHF05	
148	485	9.64	7810	1.30	GHPS05		
166	430	8.59	7620	1.45			
185	390	7.74	7590	1.55			
211	340	6.79	7340	1.70			
239	300	5.99	7110	1.80			
269	265	5.31	6890	1.90			

SELECTION CHART...

P ₁ [kW]	n ₂ [r/min]	M _{2n} [Nm]	Ratio [i]	F _{r2} [N]	fs	Model	Poles
9.2	24	3610	59.17	59900	2.20	GHP09	4
	24	3620	59.41	28800	1.20	GHP08	4
	27	3210	52.68	28100	1.35	GHF08	
	30	2910	47.63	27500	1.50	GHPS08	
	36	2460	40.37	26500	1.75		
	41	2150	35.26	25700	2.00		
	49	1800	29.49	24600	2.40		
	47	1880	30,77	24900	2..3		
	34	2610	42.78	20300	1.15	GHP07	4
	39	2270	37.13	19800	1.30	GHF07	
	43	2030	33.25	19400	1.40	GHPS07	
	52	1680	27.58	18700	1.60		
	58	1530	25,03	18300	1.85		
	64	1370	22.37	17900	2.00		
	71	1230	20.14	17400	2.10		
	79	1110	18.24	17000	2.20		
	89	990	16 ..17	16500	2.40		
	67	1310	21.51	13900	1.15	GHP06	4
	75	1170	19.10	13600	1.25	GHF06	
	84	1040	17.08	13200	1.35	GHPS06	
	94	940	15.35	13000	1.45		
	108	810	13.33	12600	1.55		
	121	730	11.93	12200	1.70		
	145	605	9.90	11700	1.95		
	158	560	9.14	11700	2.20		
	175	500	8.22	11400	2.30		
	202	435	7.13	10900	2.50		
	186	470	7.74	6300	1..30	GHP05	4
212	415	6.79	6720	1.40	GHF05		
240	365	5.99	6920	1.50	GHPS05		
271	325	5.31	6720	1.55			

SELECTION CHART...

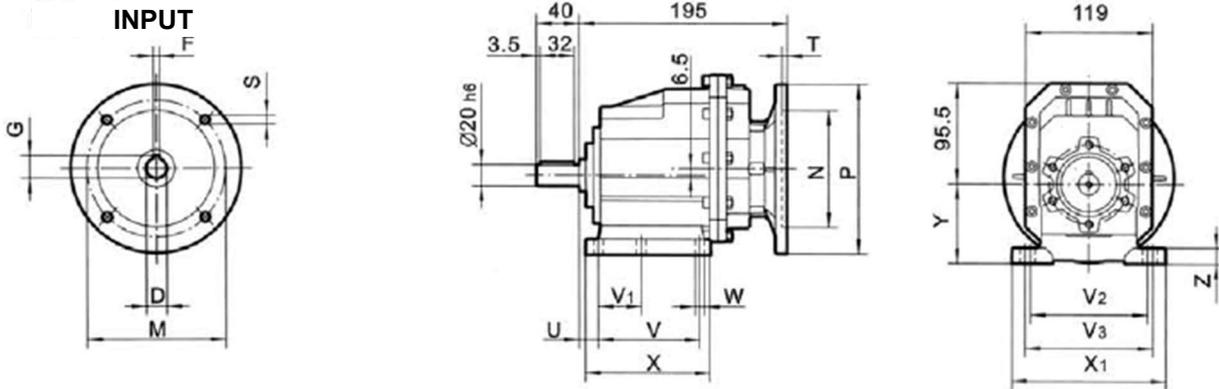
P ₁ [kW]	n ₂ [r/min]	M _{2n} [Nm]	Ratio [i]	F _{r2} [N]	fs	Model	Poles
11	27	3210	52,68	28100	1.35	GHP08	4
	30	2910	47,63	27500	1.50	GHF08	
	36	2460	40,37	26500	1.75	GHPS08	
	41	2150	35,26	25700	2.00		
	49	1800	29,49	24600	2.40		
	47	1880	30,77	24900	2.30		
	34	2610	42,78	20300	1.15	GHP07	4
	39	2270	37,13	19800	1.30	GHF07	
	43	2030	33,25	19400	1.40	GHPS07	
	52	1680	27,58	18700	1.60		
	58	1530	25,03	18300	1.85		
	64	1370	22,37	17900	2.00		
	71	1230	20,14	17400	2.10		
	79	1110	18,24	17000	2.20		
	89	990	16,17	16500	2.40		
	67	1310	21,51	13900	1.15	GHP06	4
	75	1170	19,10	13600	1.25	GHF06	
	84	1040	17,08	13200	1.35	GHPS06	
	94	940	15,35	13000	1.45		
	108	810	13,33	12600	1.55		
	121	730	11,93	12200	1.70		
	145	605	9,90	11700	1.95		
	158	560	9,14	11700	2.20		
	175	500	8,22	11400	2.30		
	149	590	9,64	6800	1.05	GHP05	4
	186	470	7,74	6300	1.30	GHF05	
	212	415	6,79	6720	1.40	GHPS05	
240	365	5,99	6920	1.50			
271	325	5,31	7620	1.55			

SELECTION CHART...

P ₁ [kW]	n ₂ [r/min]	M _{2n} [Nm]	Ratio [i]	F _{r2} [N]	fs	Model	Poles
15	31	4670	47.63	24500	0.90	GHP08	4
	36	3960	40.37	23900	1.10	GHF08	
	41	3460	35.26	23400	1.25	GHPS08	
	50	2890	29.49	22600	1.50		
	47	3020	30.77	22800	1.40		
	53	2710	27.58	22400	1.60		
	59	2440	24.90	21900	1.75		
	65	2220	22.62	21400	1.95		
	73	1970	20.07	20900	2.20		
	80	1790	18.21	20400	2.40		
	53	2710	27.58	16500	1.00	GHP07	4
	58	2460	25.03	16300	1.15	GHF07	
	65	2200	22.37	16100	1.25	GHPS07	
	72	1980	20.14	15800	1.30		
	80	1790	18.24	15600	1.40		
	90	1590	16.17	15200	1.50		
	100	1430	14.62	14900	1.60		
	118	1220	12.39	14400	1.80		
	135	1060	10.83	14000	1.95		
	157	910	9.29	13800	2.2		
	174	820	8.39	13400	2.50		
	110	1310	13.33	11300,	1.00	GHP06	4
	122	1170	11.93	11100	1.05	GHF06	
	147	970	9.90	10700	1.20	GHPS06	
	160	900	9.14	11000	1.35		
	178	810	8.22	10700	1.45		
	205	700	7,13	10300	1.55		
	229	625	6.39	10100	1.65		
	275	520	5.30	96000	1.75		

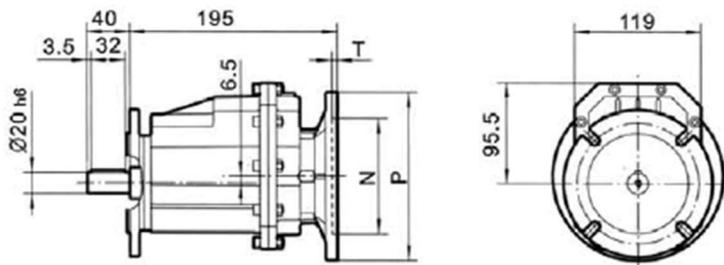
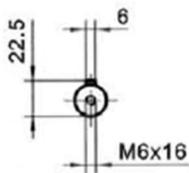
GENERAL ARRANGEMENT AND DIMENSIONS

GHP01 (IEC)



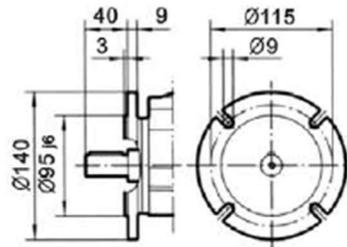
GHF01 (IEC)

OUTPUT



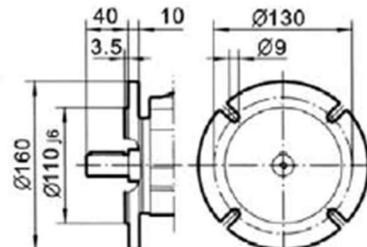
FB

Ø140

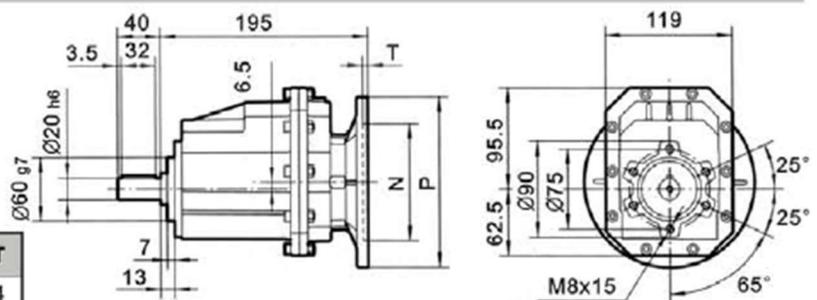


FA

Ø160



GH01 (IEC)

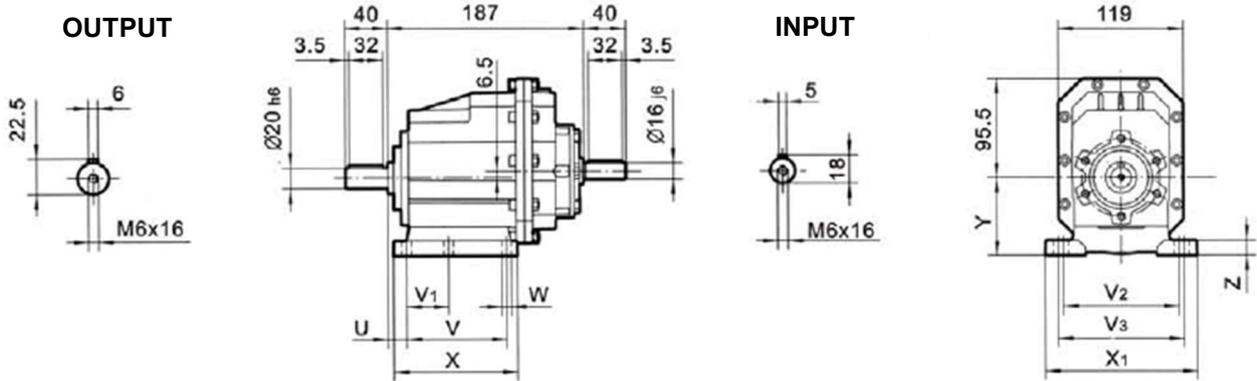


IEC	D _{E8}	F	G	P	M	N	S	T
P63B5	11	4	12.8	140	115	95	9	4
P71B5	14	5	16.3	160	130	110	9	4
P71B14	14	5	16.3	105	85	70	7	4
P80B5	19	6	21.8	200	165	130	11	4
P80B14	19	6	21.8	120	100	80	7	4
P90B5	24	8	27.3	200	165	130	11	4
P90B14	24	8	27.3	140	115	95	9	4

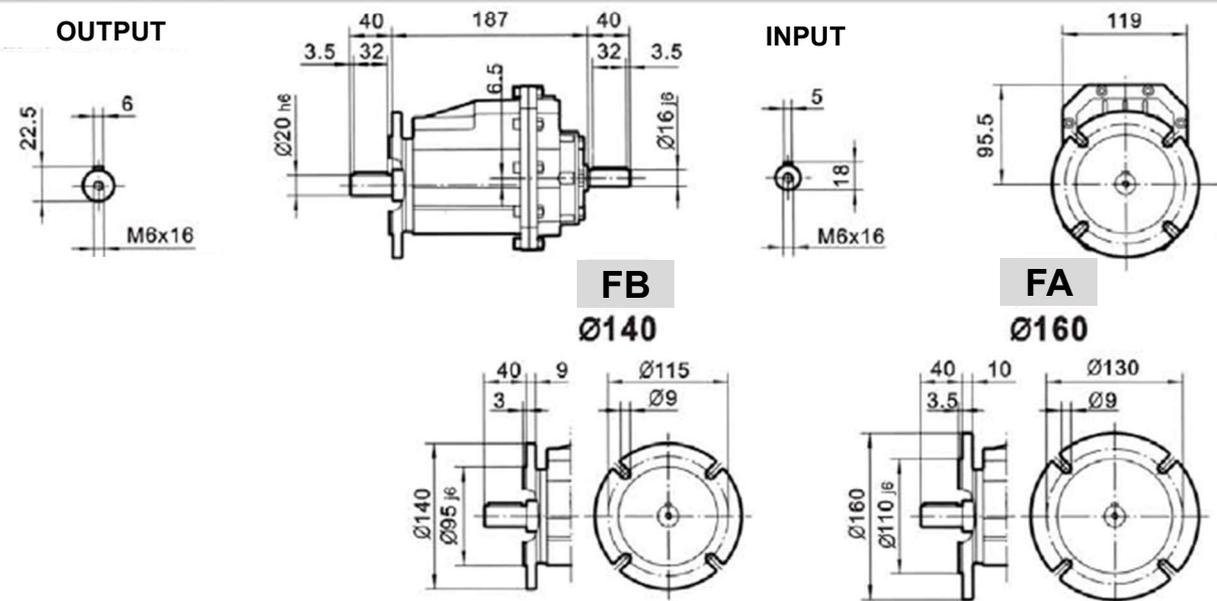
GHP01 Foot Code	u	V	V1	V2	V3	w	X	X1	y	z
B01	18	87	50	110	-	9	118	130	85	15
B02	18	107.5	60	130	-	11	136	155	95	17

GENERAL ARRANGEMENT AND DIMENSIONS...

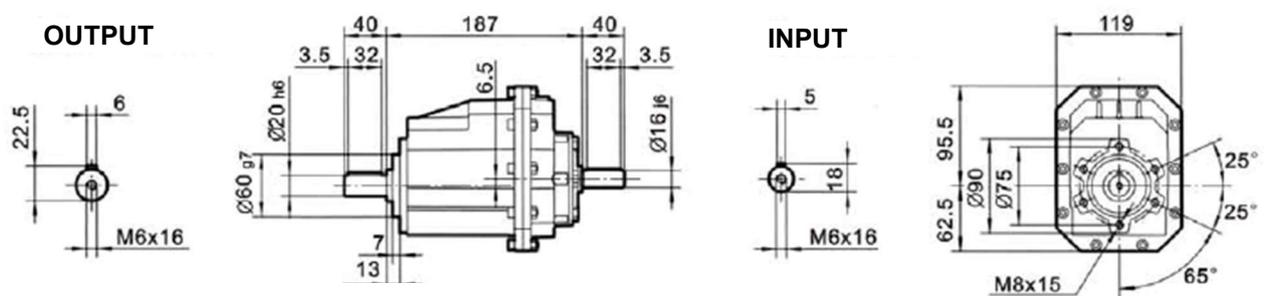
GHPS01



GHFS01



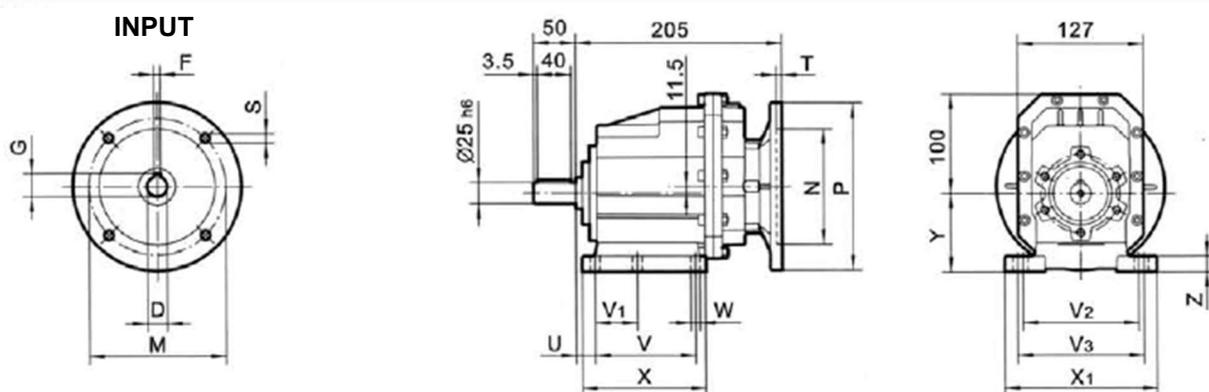
GHS01



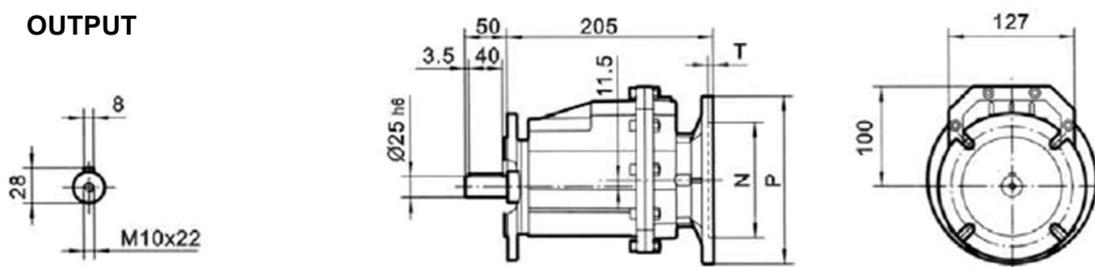
GHP01 Foot Code	u	V	V1	V2	V3	w	X	X1	y	z
B01	18	87	50	110	-	9	118	130	85	15
B02	18	107.5	60	130	-	11	136	155	95	17

GENERAL ARRANGEMENT AND DIMENSIONS...

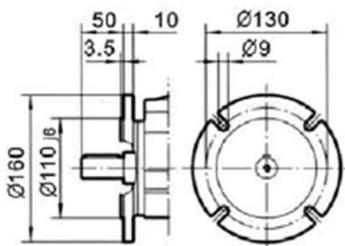
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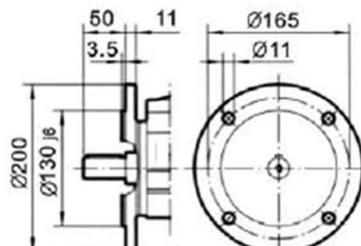
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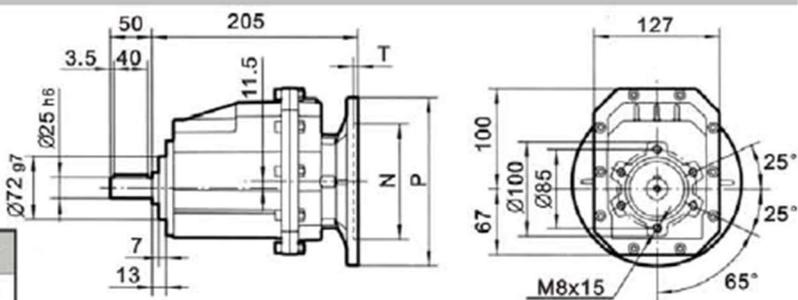
FB Ø160



FA Ø200



GH02 (IEC)



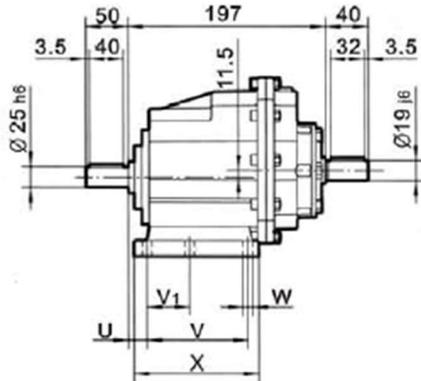
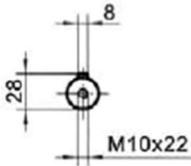
IEC	D _{E8}	F	G	P	M	N	S	T
P63B5	11	4	12.8	140	115	95	9	4
P71B5	14	5	16.3	160	130	110	9	4
P71B14	14	5	16.3	105	85	70	7	4
P80B5	19	6	21.8	200	165	130	11	4
P80B14	19	6	21.8	120	100	80	7	4
P90B5	24	8	27.3	200	165	130	11	4
P90B14	24	8	27.3	140	115	95	9	4

GHP02 Foot Code	u	v	V1	V2	V3	w	X	X1	y	z
B02	18	107.5	60	130	-	11	136	155	100	17
B01	18	87	50	110	-	9	118	130	90	15

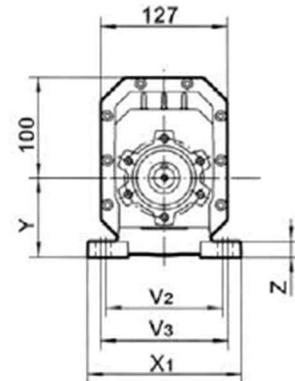
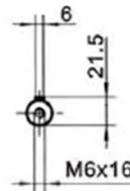
GENERAL ARRANGEMENT AND DIMENSIONS...

GHPS02

OUTPUT

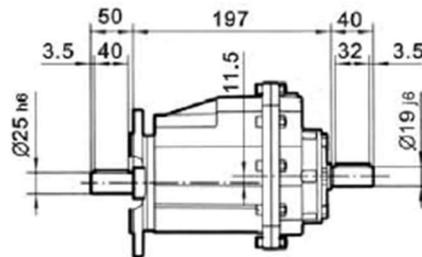
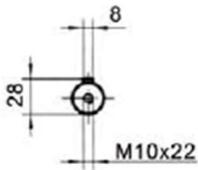


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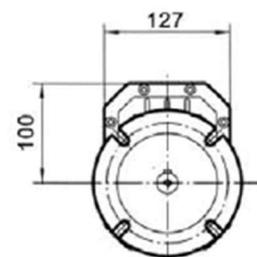
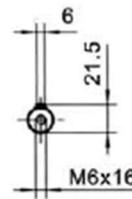


GHFS02

OUTPUT

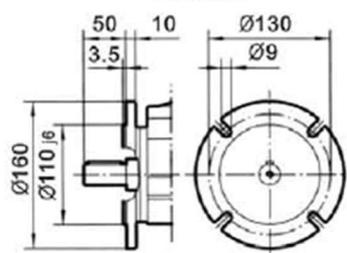


INPUT



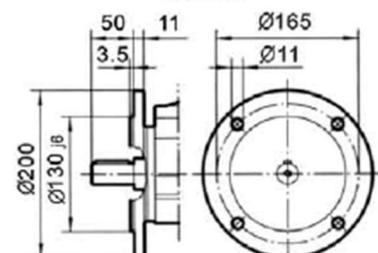
FB

Ø160



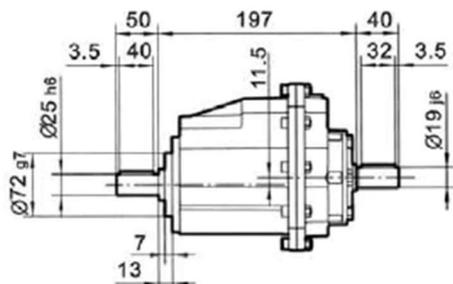
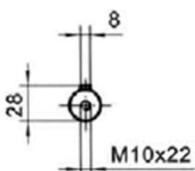
FA

Ø200

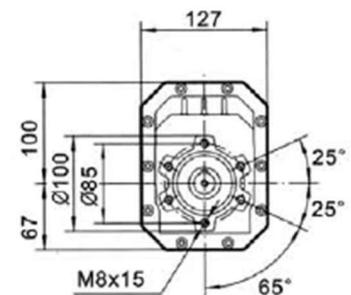
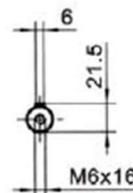


GHS02

OUTPUT



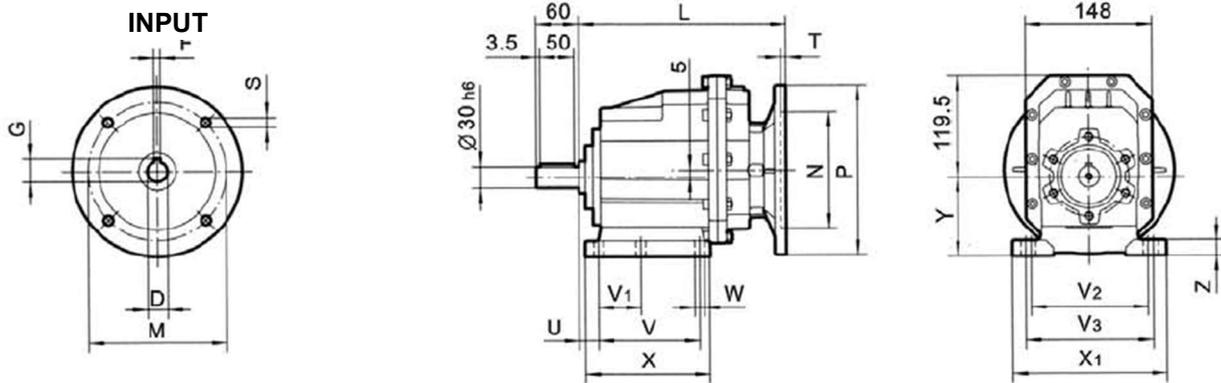
INPUT



GHP02 Foot Code	u	V	V1	V2	V3	w	X	X1	y	z
B02	18	107.5	60	130	-	11	136	155	100	17
B01	18	87	50	110	-	9	118	130	90	15

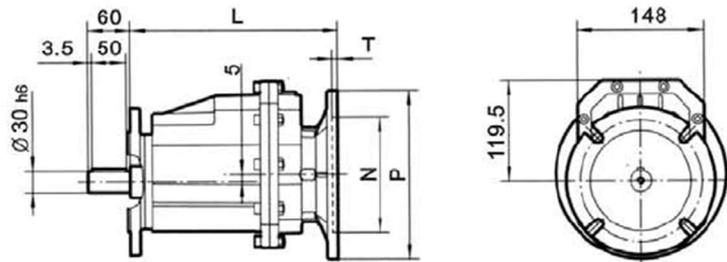
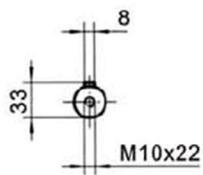
GENERAL ARRANGEMENT AND DIMENSIONS...

GHP03 (IEC)



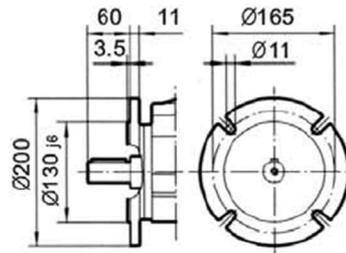
GHF03 (IEC)

OUTPUT



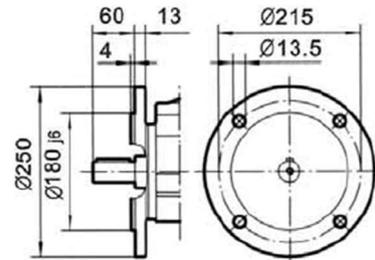
FB

Ø200

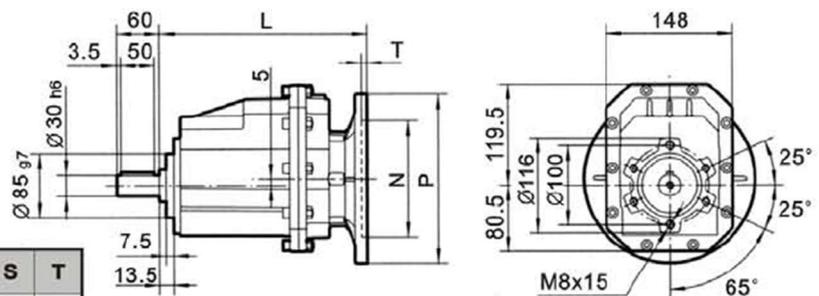


FA

Ø250



GH03 (IEC)



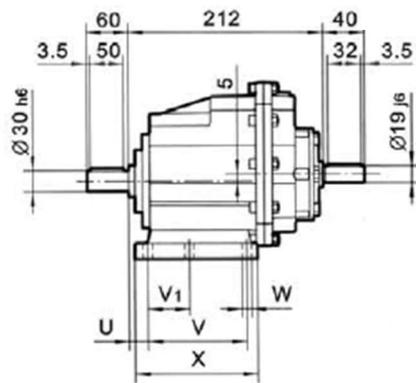
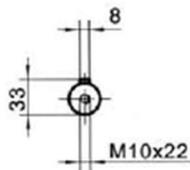
IEC	D _{E8}	F	G	P	L	M	N	S	T
P71B5	14	5	16.3	160	220	130	110	9	4
P80B5	19	6	21.8	200	220	165	130	11	4
P80B14	19	6	21.8	120	220	100	80	7	4
P90B5	24	8	27.3	200	220	165	130	11	4
P90B14	24	8	27.3	140	220	115	95	9	4
P100/112B5	28	8	31.3	250	237	215	180	13.5	4.5
P100/112B14	28	8	31.3	160	237	130	110	9	4.5

GHP03 Foot Code	u	V	V1	V2	V3	w	X	X1	y	z
B03	18	130	70	160	-	11	156	190	110	20
M04	32	110	-	170	185	14	150	230	110	20

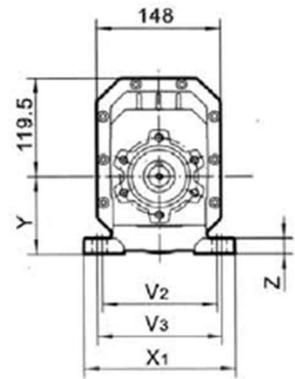
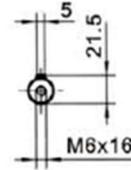
GENERAL ARRANGEMENT AND DIMENSIONS...

GHPS03

OUTPUT

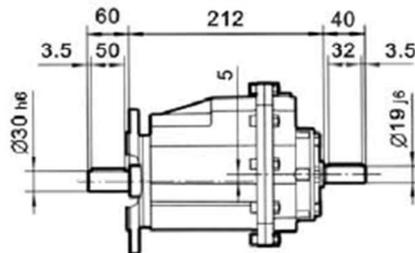
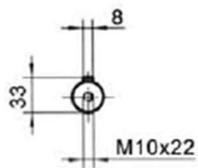


INPUT

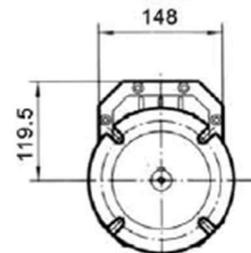
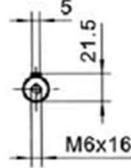


GHFS03

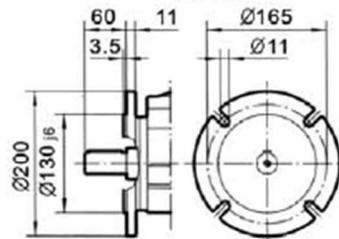
OUTPUT



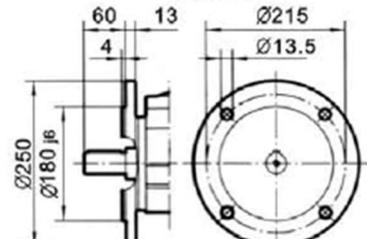
INPUT



FB Ø200

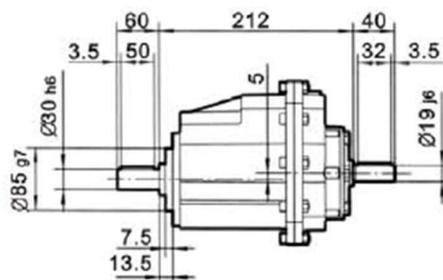
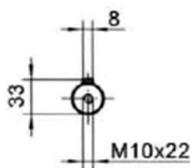


FA Ø250

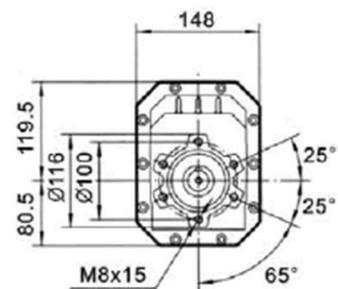
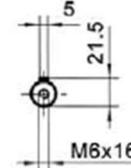


GHF03

OUTPUT



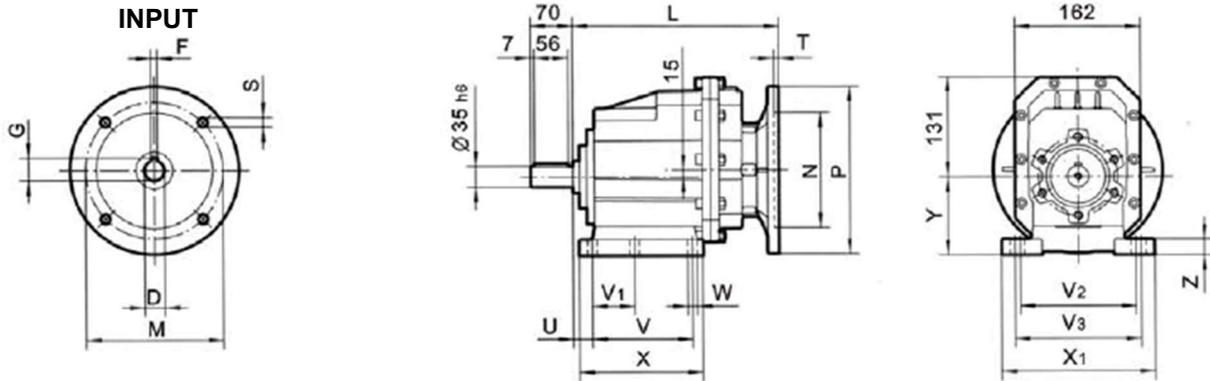
INPUT



GHP03 Foot Code	u	v	V1	V2	V3	w	X	X1	y	z
B03	18	130	70	160	-	11	156	190	110	20
M04	32	110	-	170	185	14	150	230	110	20

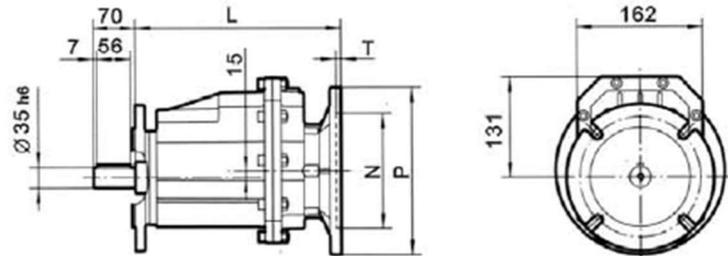
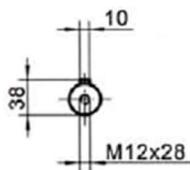
GENERAL ARRANGEMENT AND DIMENSIONS...

GHP04 (IEC)



GHF04 (IEC)

OUTPUT

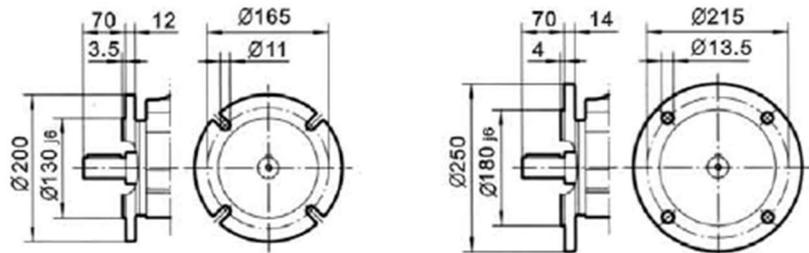


FB

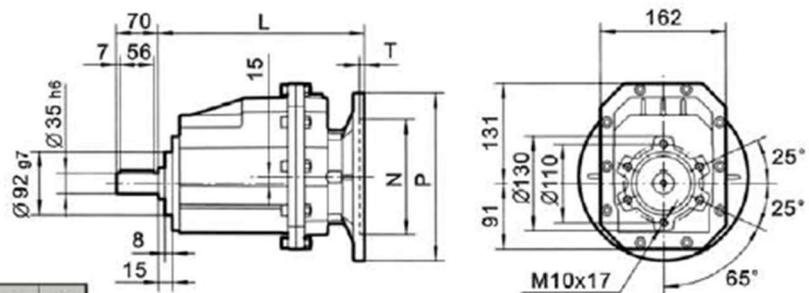
Ø200

FA

Ø250



GH04 (IEC)

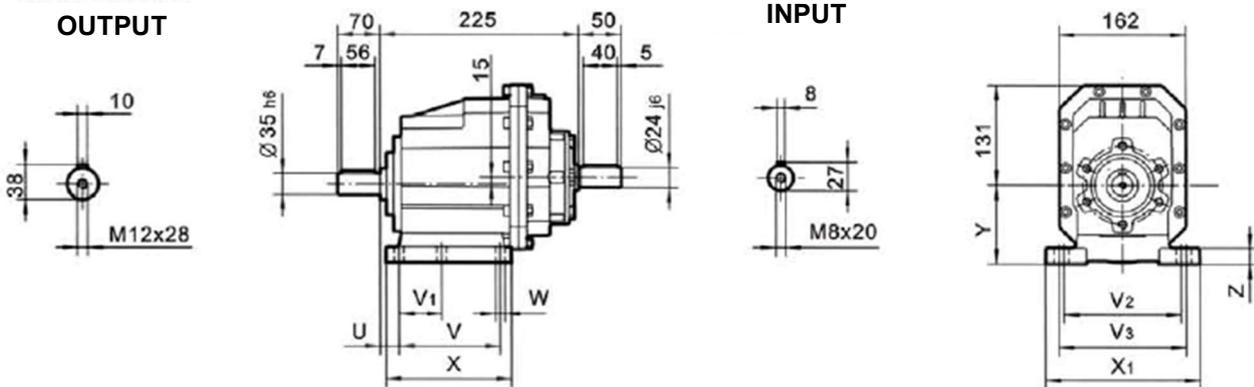


IEC	D _{E8}	F	G	P	L	M	N	S	T
P80B5	19	6	21.8	200	233	165	130	11	4
P80B14	19	6	21.8	120	233	100	80	7	4
P90B5	24	8	27.3	200	233	165	130	11	4
P90B14	24	8	27.3	140	233	115	95	9	4
P100/H12B5	28	8	31.3	250	250	215	180	13.5	4.5
P100/H12B14	28	8	31.3	160	250	130	110	9	4.5

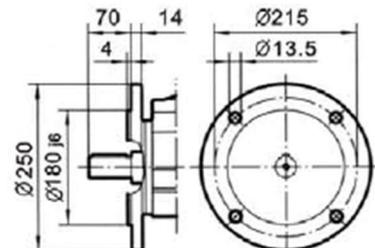
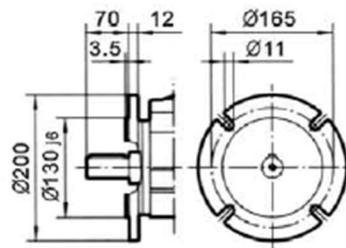
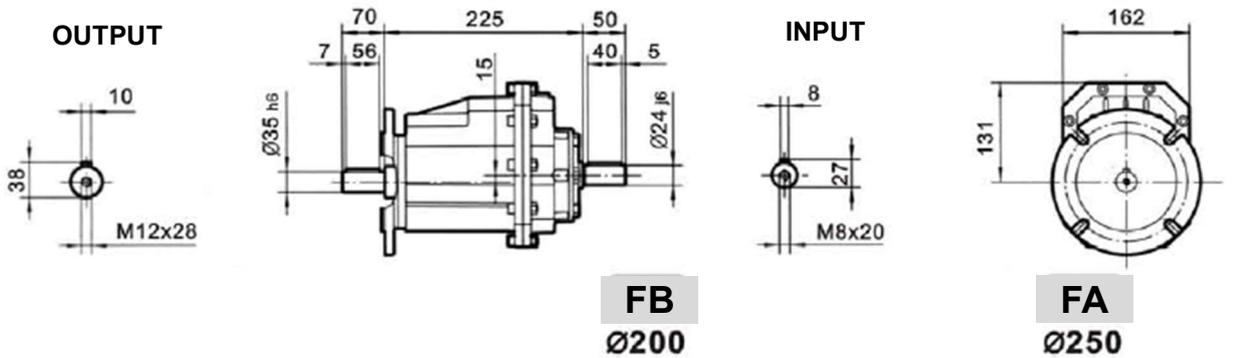
GHP04 Foot Code	u	V	V1	V2	Y3	w	X	X1	y	z
B03	21	130	70	160	-	11	156	190	120	20
B05	19.5	149.5	-	180	-	14	185	215	130	20

GENERAL ARRANGEMENT AND DIMENSIONS...

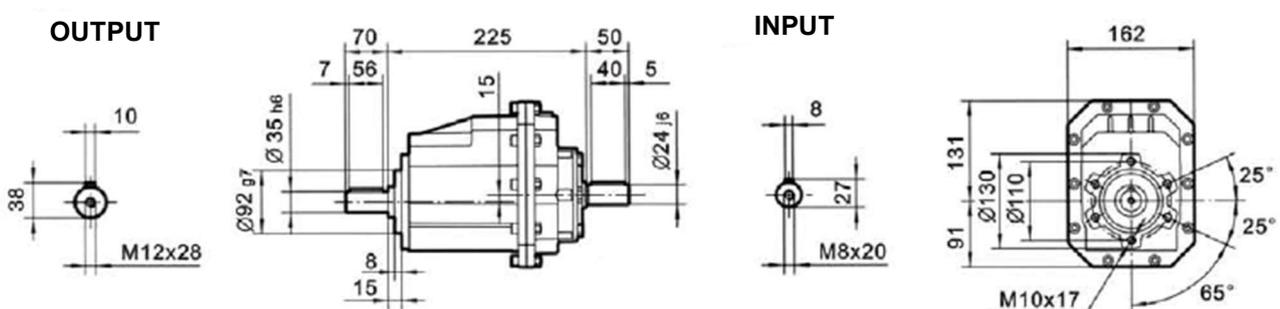
GHPS04



GHFS04



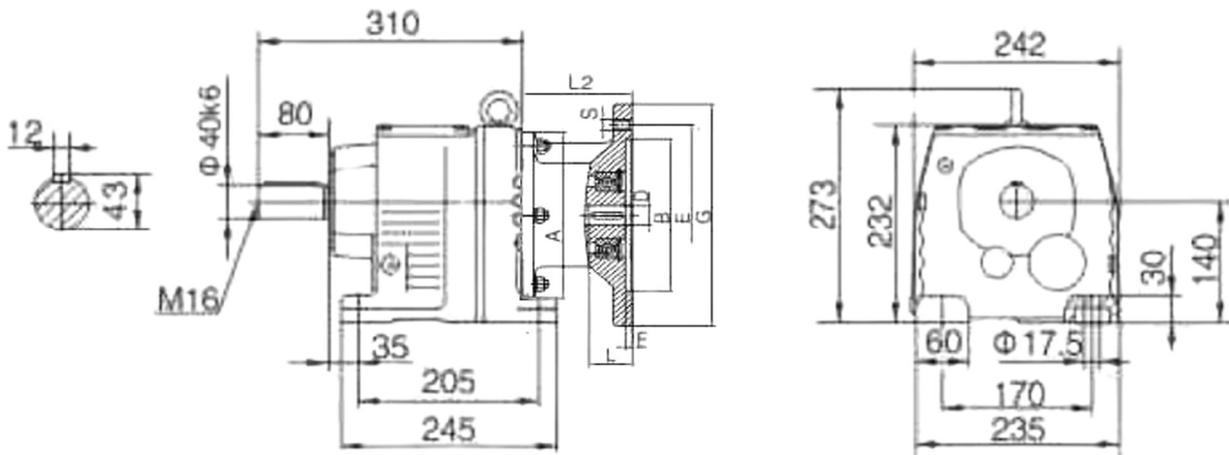
GHF04



GHP04 Foot Code	u	V	V1	V2	Y3	w	X	X1	y	z
B03	21	130	70	160	-	11	156	190	120	20
B05	19.5	149.5	-	180	-	14	185	215	130	20

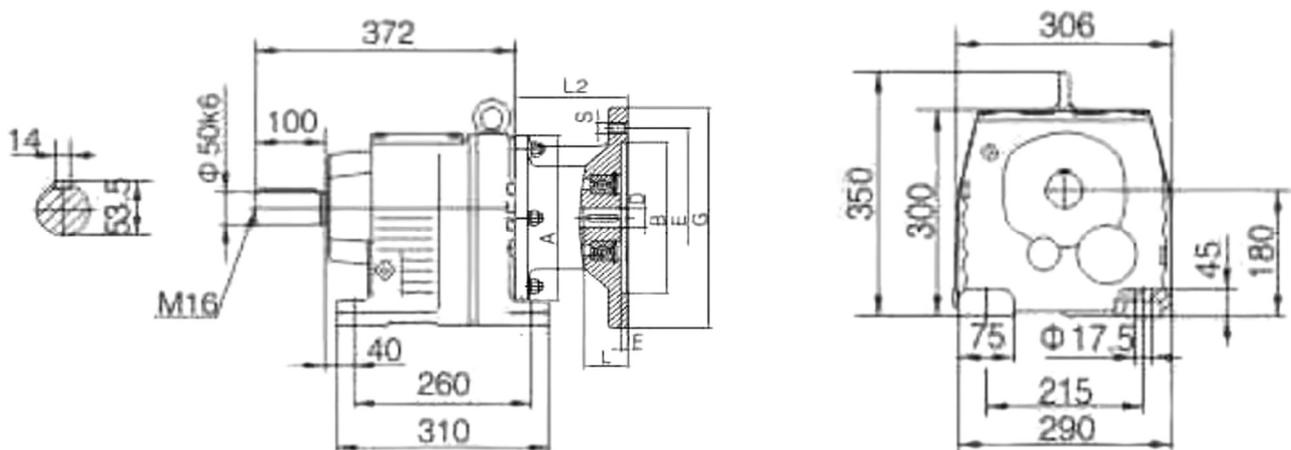
GENERAL ARRANGEMENT AND DIMENSIONS...

GHP05



Size	Motor Frame	Fig	B	E	F	A	G	s	I2	D	L	T1	U1
GHP05	AM63	1	95	115	3.5	200	140	MB	52	11	23	12.8	4
	AM71		110	130			52		14	30	18.3	5	
	Alv80		130	165	4.5		200	M10	67	19	40	21.8	6
	AM90								24	50	27.3	8	
	AM100*		180	0.215	5		250	M12	77	28	60	31.3	8
	AM112*								230	265	5	300	M12
	AM132S*		101	38	80		41.3	10					
	AM132M*												
	AM132ML*												

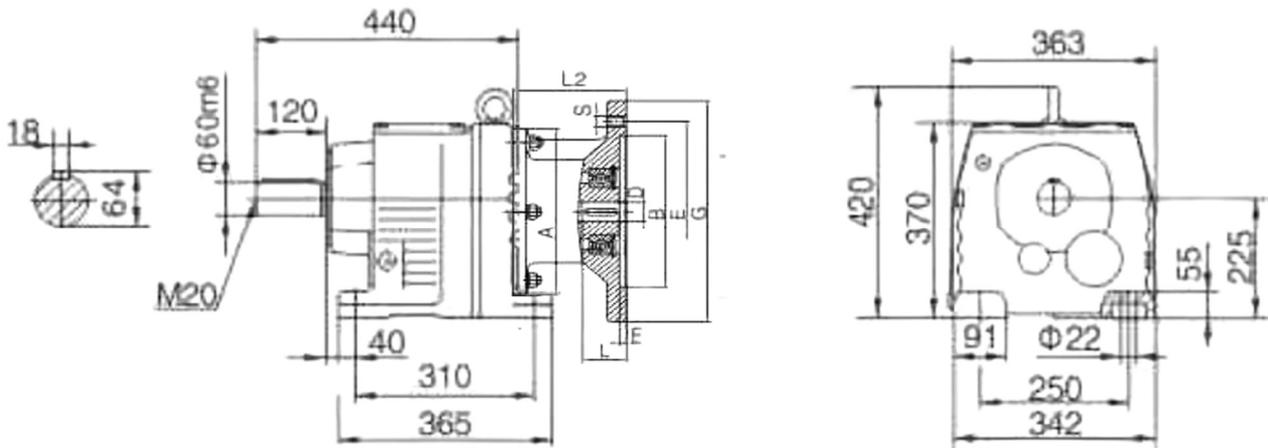
GHP06



Size	Motor Frame	Fig	B	E	F	A	G	s	I2	D	L	T1	U1					
GHP06	AM80	1	130	185	4.S	250	200	M10	62	19	40	21.8	6					
	AM90									24	50	27.3	8					
	AM100		180	215	5		250	M12	72	28	60	31.3	8					
	AM112								230	265	5	300	M12	98	3S	80	41.3	10
	AM132S		260	300	6		350	M16						133	42	110	45.3	12
	AM132MI													48	51.8		14	
	AN160*																	
	AM180*																	

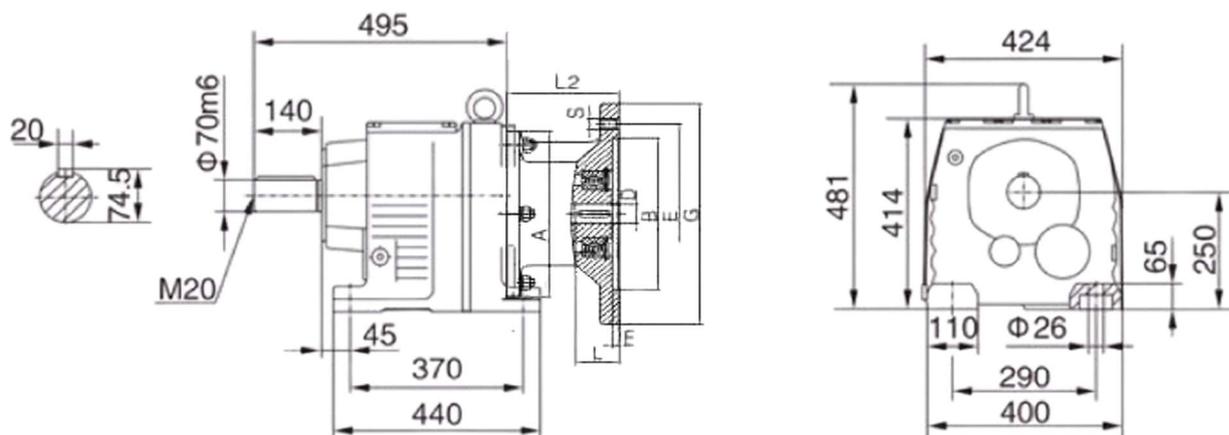
GENERAL ARRANGEMENT AND DIMENSIONS...

GHP07



Size	Motor Frame	Fig	B	E	F	A	G	s	I2	D	L	T1	U1
GHP07	AM100	1	180	215	5	300	250	M12	66	28	60	31.3	8
	AM112												
	AM132S		230	265									
	AM132M												
	AM132ML												
	AM180	250	300	6	350		M16	135	42	110	45.3	12	
	AM180												48
	AM200	300	350	7	400			133	55	59.3	16		
AM225*	2					350						400	7

GHP08



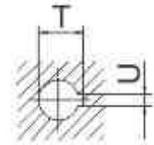
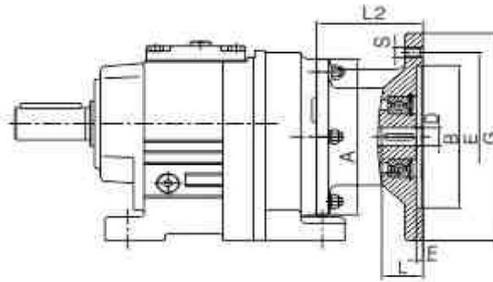
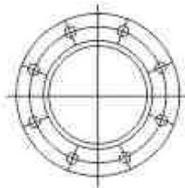
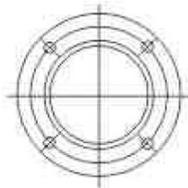
Size	Motor Frame	Fig	B	E	F	A	G	s	I2	D	L	T1	U1
GHP08	AM100	1	180	215	5	350	250	M12	61	28	60	31.3	8
	AM112												
	AM132S		230	265									
	AM132M												
	AM132ML												
	AM160	250	300	6	350		M16	130	42	110	45.3	12	
	AM180												48
	AM200	300	350	7	400			133	55	59.3	16		
AM225	2					35						400	7

GENERAL ARRANGEMENT AND DIMENSIONS...

GHP05/06/07/08/09

Fig.1

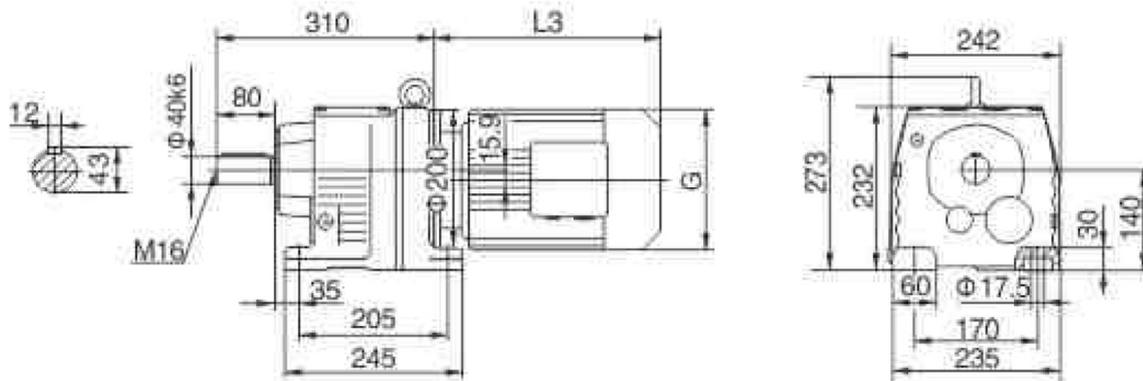
Fig.2



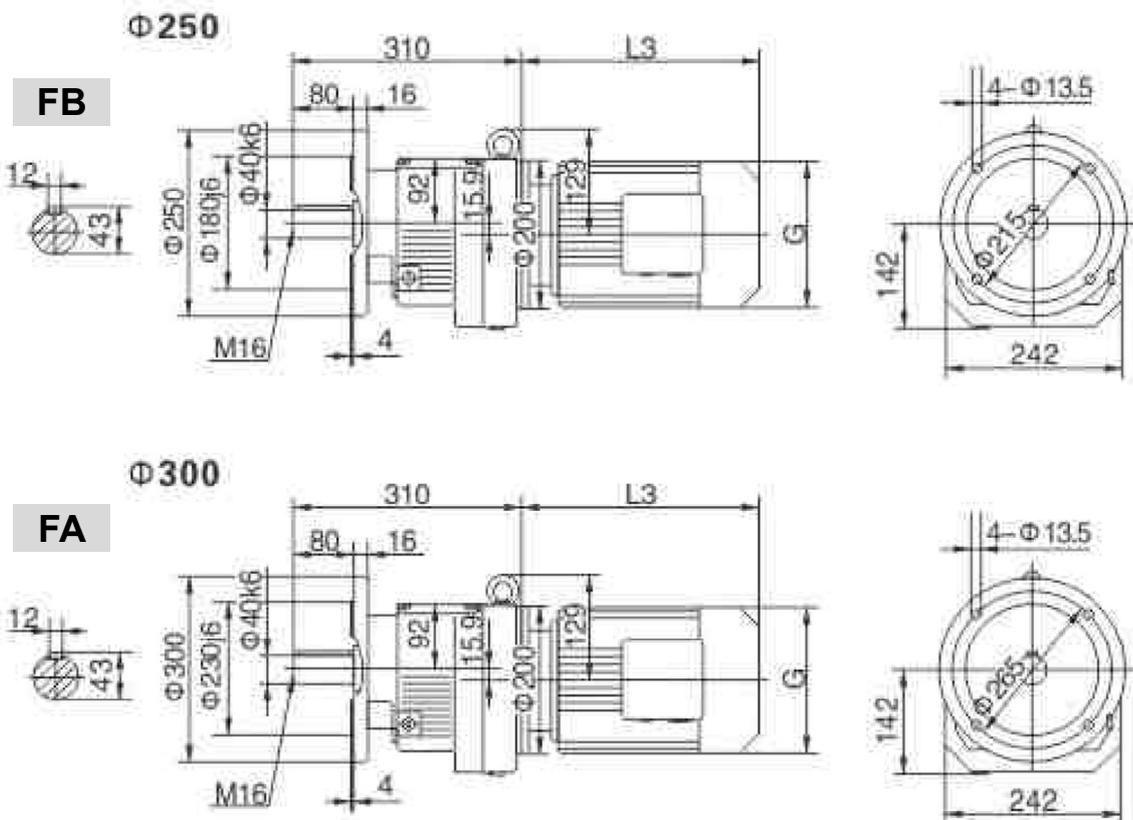
Size	Motor Frame	Fig	B	E	F	A	G	s	I2	D	L	T1	U1								
GHP05	AM63	1	95	115	3.5	200	140	MB	52	11	23	12.8	4								
	AM71		110	130			160		52	14	30	18.3	5								
	Alv\80		130	165	4.5		200	M10	67	19	40	21.8	6								
	AM90									24	50	27.3	8								
	AM100*		230	265	5		250	M12	101	77	28	60	31.3	8							
	AM112*														5						
	AM132S*															300	101	38	80	41.3	10
	AM132M*																				
AM132ML*																					
GHP06	AM80	1				130									185	4.S	250	200	M10	62	19
	AM90		24	50	27.3		8														
	AM100		180	215	5	250	M12	72	28	60	31.3	8									
	AM112																				
	AM132S		230	265	5	300	M12	98	3S	80	41.3	10									
	AM132M																				
	AM132MI		260	300	6	350	M16	133	42	110	45.3	12									
	AN160*								48		51.8	14									
AM180*																					
GHP07	AM100	1	180	215	5	300	250	M12	66	28	60	31.3	8								
	AM112																				
	AM132S		230	265	5		300	M12	93	38	80	41.3	10								
	AM132M																				
	AM132ML		250	300	6		350	M16	135	42	110	45.3	12								
	AM180									48		51.8	14								
	AM180		300	350	7		400	M16	133	55	110	59.3	16								
	AM200									170		60	140	64.4	18						
AM225*	2	350	400	7	450	170	60	140	64.4	18											
GHP08	AM100	1	180	215	5	350	250	M12	61	28	60	31.3	8								
	AM112																				
	AM132S		230	265	5		300	M12	87	38	80	41.3	10								
	AMI32M																				
	AM132ML		250	300	6		350	M16	130	42	110	45.3	12								
	AM160									48		51.8	14								
	AM180		300	350	7		400	M16	133	55	110	59.3	16								
	AM200									170		60	140	64.4	18						
AM225	2	35	400	7	450	170	60	140	64.4	18											

GENERAL ARRANGEMENT AND DIMENSIONS...

GHP05



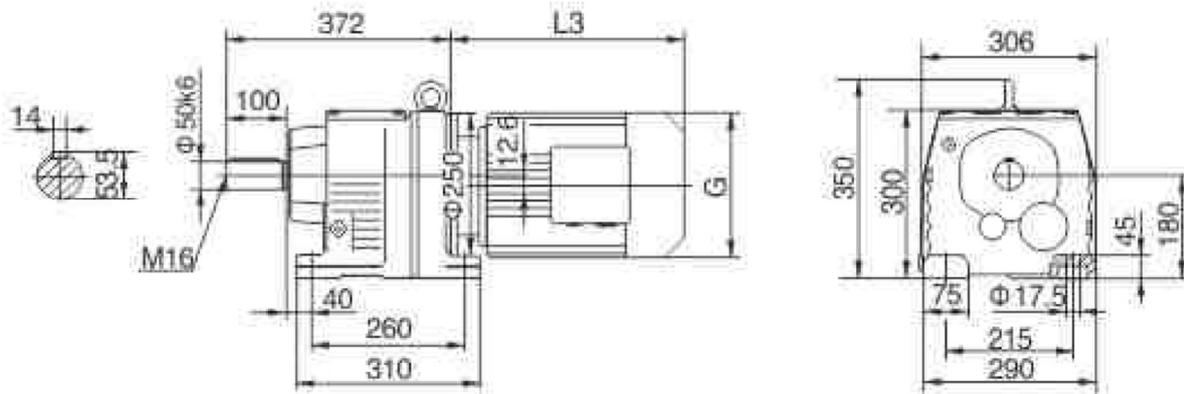
GHF05



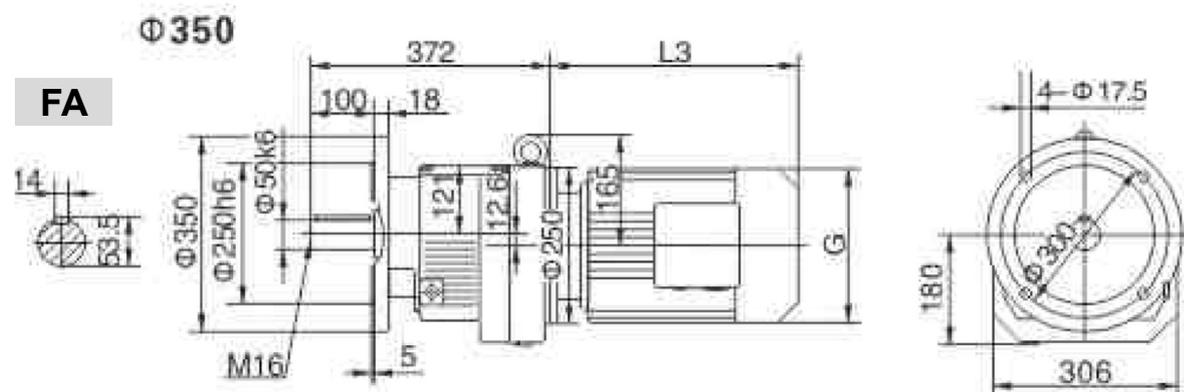
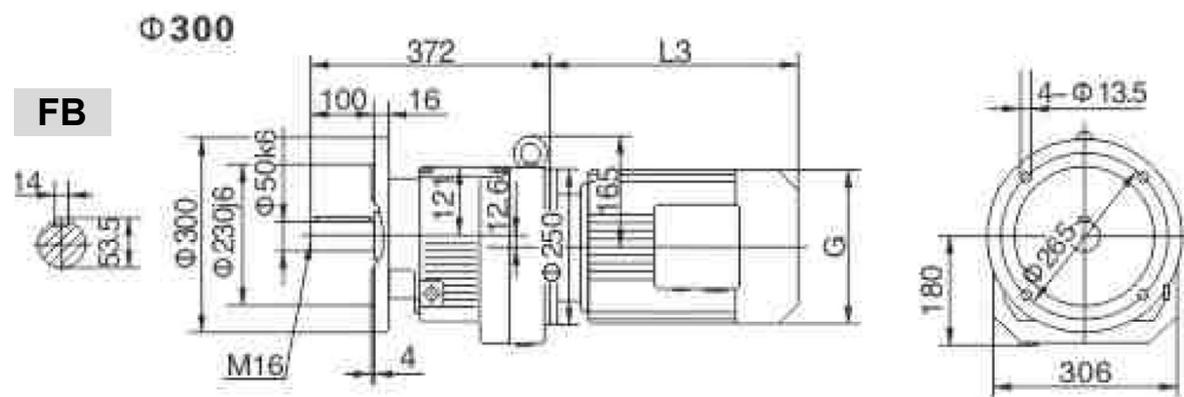
Motor size	63	71	80	90S	90L	100L	112M	132S	132M	160M
Power/(KW/4P)	0.18	0.25 / 0.37	0.55 / 0.75	1.1	1.5	2.2 / 3.0	4	5.5	7.5	11
L3	223	233	278	304	328	350	380	425	461	524
G	130	145	175	195	195	215	240	275	275	330
L2	45	55	80	80	80	100	100	110	110	133

GENERAL ARRANGEMENT AND DIMENSIONS...

GHP06



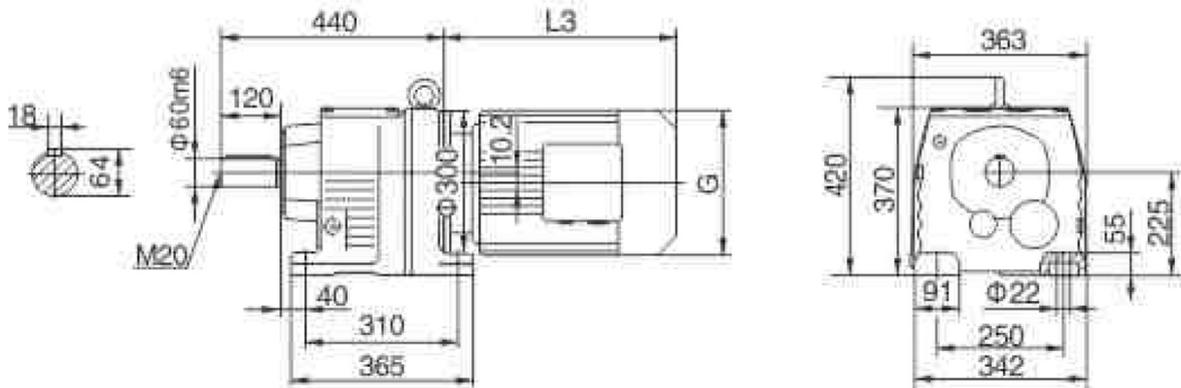
GHF06



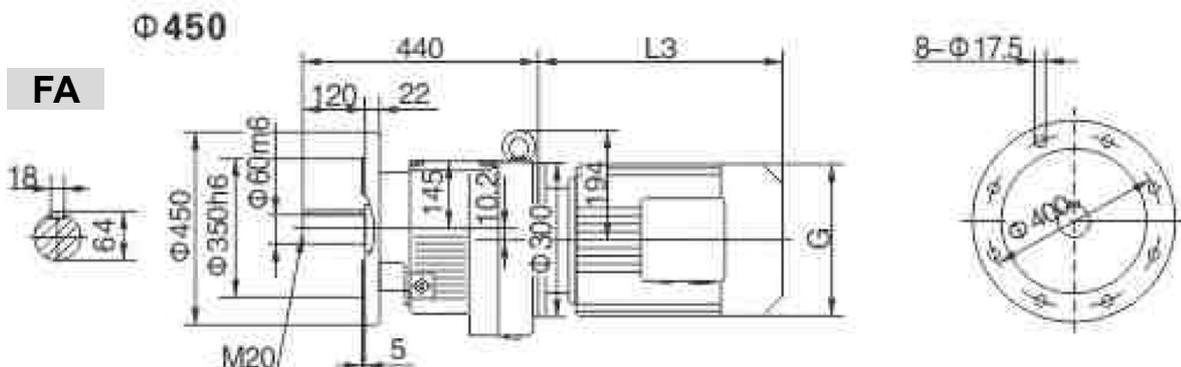
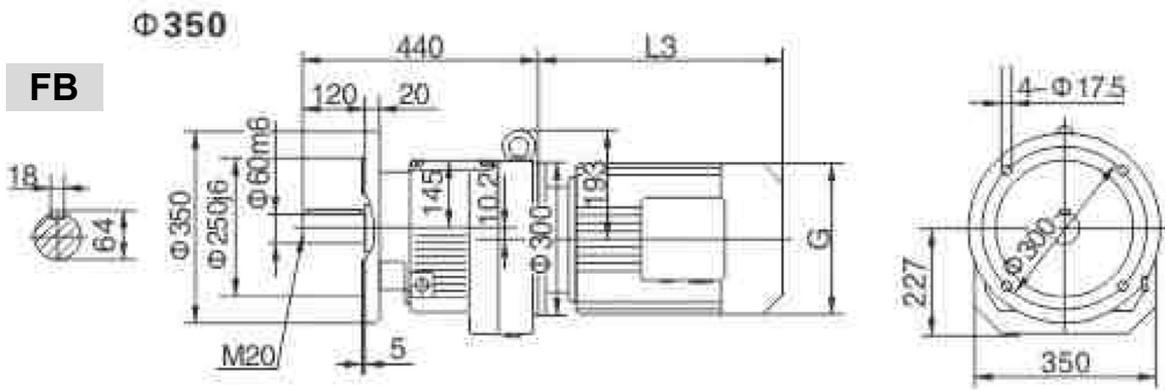
Motor size	80	90S	90L	100L	112M	132S	132M	160M	160L	180M	180L
Power/(KW/4P)	0.55 / 0.75	1.1	1.5	2.2 / 3.0	4	5.5	7.5	11	15	18.5	22
L3	246	280	304	350	380	425	461	524	547	583	616
G	175	195	195	215	240	275	275	330	330	380	380
L2	80	80	80	100	100	110	110	133	133	133	133

GENERAL ARRANGEMENT AND DIMENSIONS...

GHP07



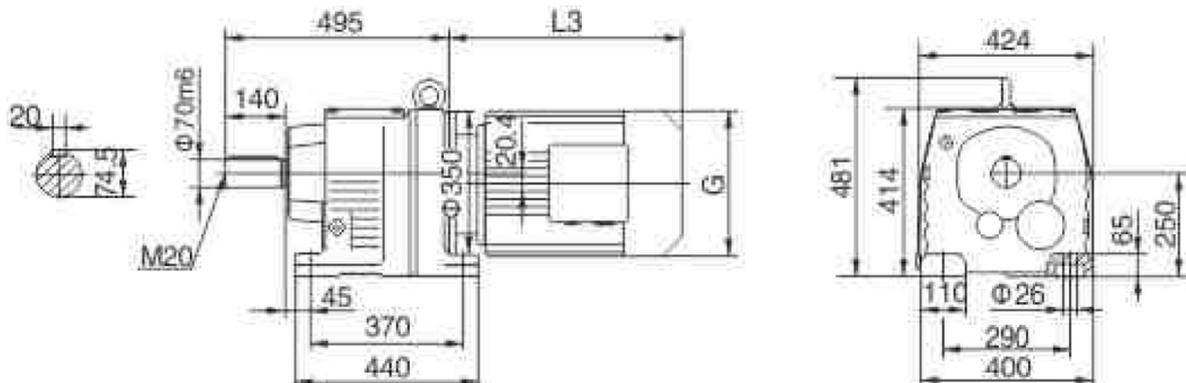
GHF07



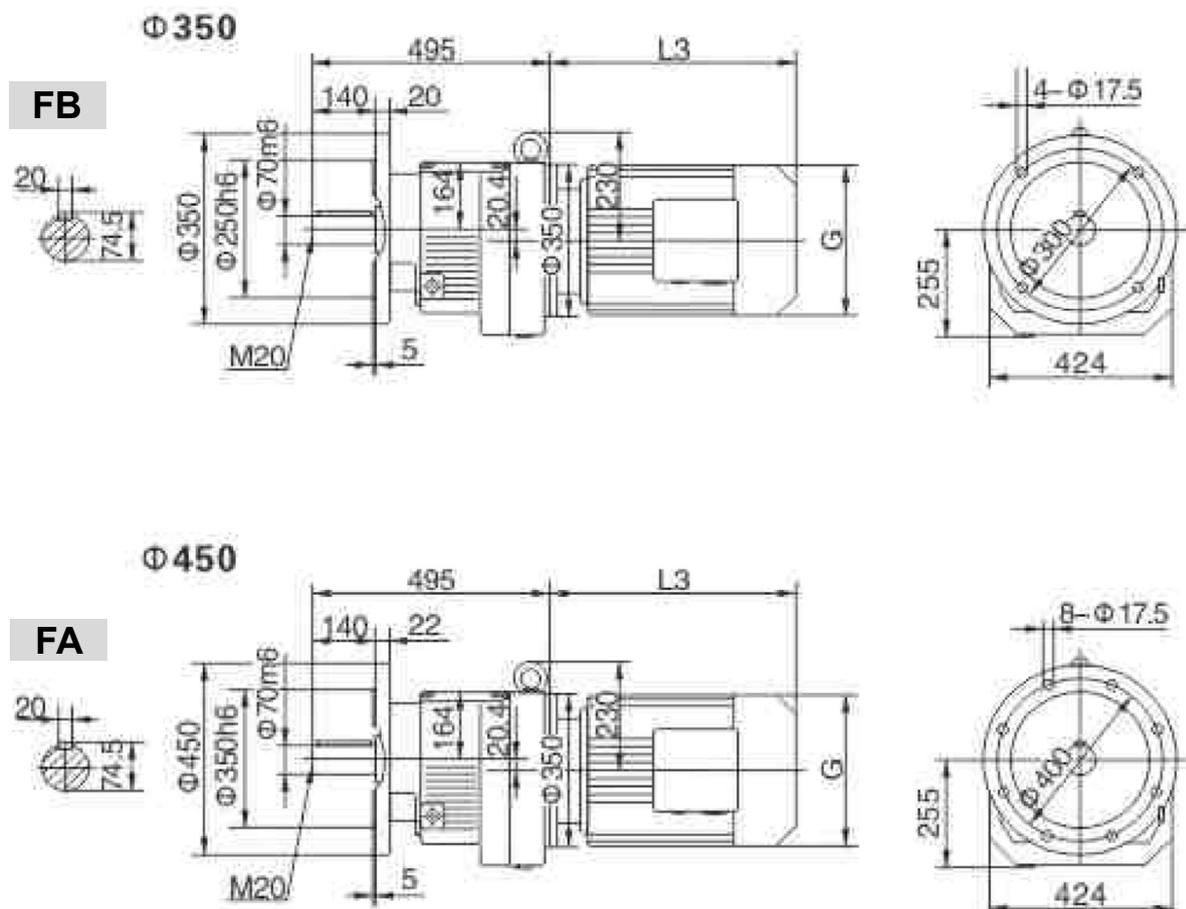
Motor size	80	90S	90L	100L	112M	132S	132M	160M	160L	180M	180L	200
Power/(KW/4P)	0.55 / 0.75	1.1	1.5	2.2 3.0	4	5.5	7.5	11	15	18.5	22	30
L3	246	280	304	315	334	425	461	524	547	555	588	654
G	175	195	195	215	240	275	275	330	330	380	380	420
L2	107	107	107	100	100	110	110	133	133	133	133	135

GENERAL ARRANGEMENT AND DIMENSIONS...

GHP08

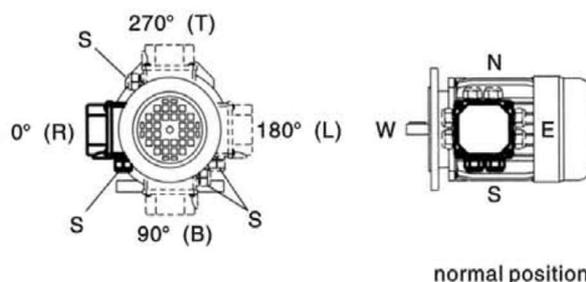
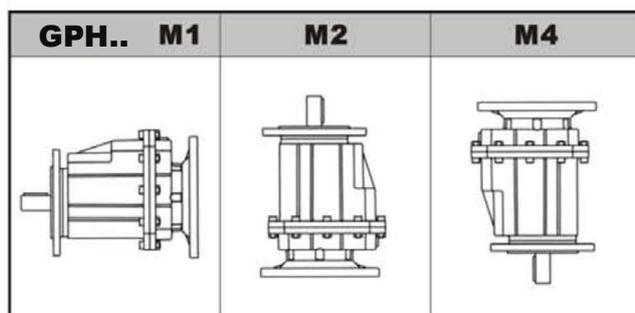
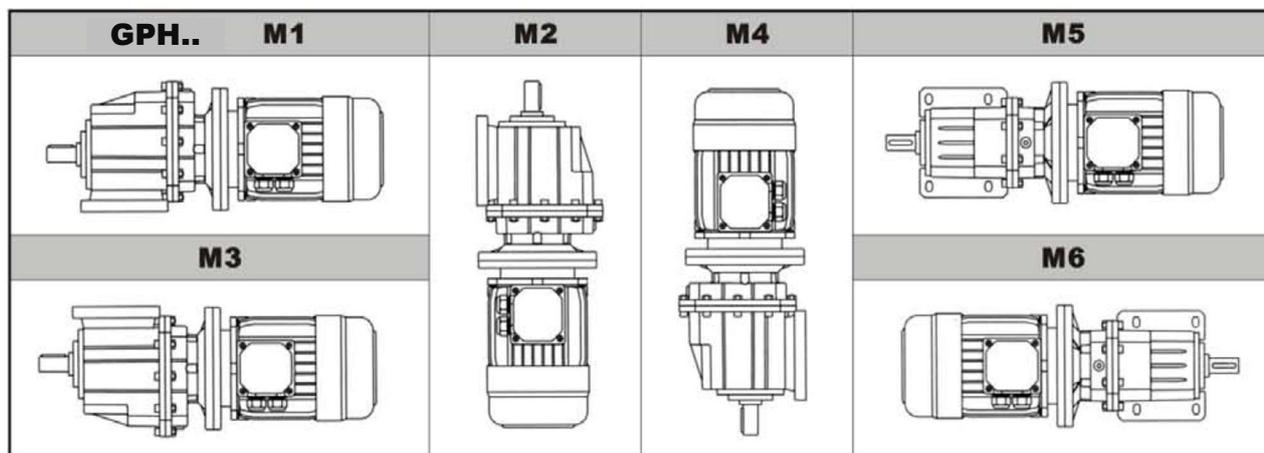


GHF08



Motor size	100L	112M	132S	132M	160M	160L	180M	180L	200	225S	225M
Power/(KW/4P)	2.2 / 3.0	4	5.5	7.5	11	15	18.5	22	30	37	45
L3	318	334	386	422	504	519	555	588	654	680	702
G	215	240	275	275	330	330	380	380	420	470	470
L2	100	100	110	110	133	133	133	133	135	143	143

MOUNTING POSITION



General information

The lubricant was filled according to the specified mounting position (M1) if there is no special requirement. So please mark the mounting position when ordering. You must adapt the oil quantity after the mounting position was changed (see Oil quantity).

INDICATIVE WEIGHT Kg

Size	GHP/F01	GHP/F02	GHP/F03	GHP/F04	GHP/F05	GHP/F06	GHP/F07	GHP/F08
Weight (kg)	6.3	8.05	11.8	15.5	36	63	101	153

The weight values given are mean value and are only for reference

LUBRICATION

TYPES OF LUBRICATING OIL

						Lubricant Type
	标准 Standard -10 +40	ISO	SHELL	MOBIL	BP	
GHP	-10 +40	VG 220	Shell Omala 220	Mobilgear 630	BP Energol GR-XP 220	Mineral oil
	-20 +25	VG 150 VG 100	shell Omala 100	Mobilgear 627	BP Energol GR-XP 100	
	-30 +10	VG 68-46 VG 32	Shell Tellus T 32	Mobil D.T.E 13M		
	-40 -20	VG 22 VG 15	Shell Tellus T 15	Mobil D.T.E 11M	BP Energol HLP-HM 15	Synthetic oil
	-40 +80	VG 220	Shell Omala HD 220	Mobil SHC 630		
	-40 +40	VG 150	Shell Omala HD 150	Mobil SHC 629		
	-40 +10	VG 32		Mobil SHC 624		

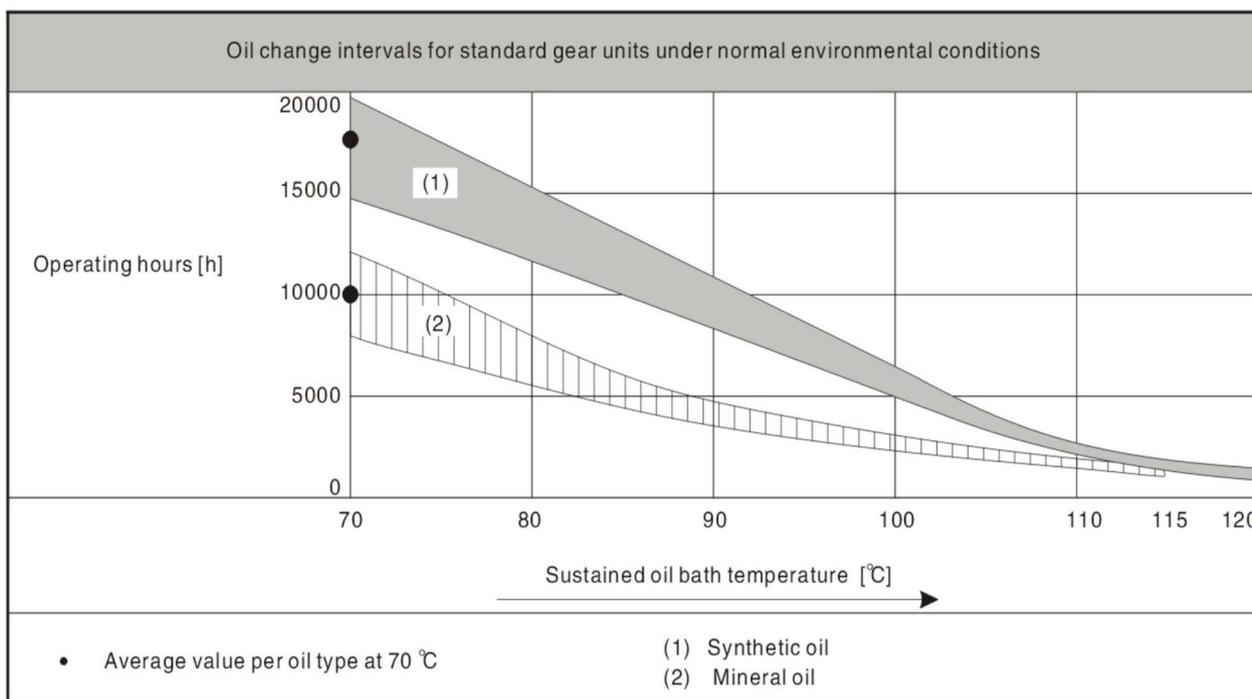
Gear units	Fill quantity in liters					
	M1*	M2*	M3	M4	M5	M6
GHP01	0.4	0.6	0.4	0.3	0.3	0.3
GHP02	0.5	0.7	0.5	0.4	0.4	0.4
GHP03	0.8	1.1	0.8	0.6	0.6	0.6
GHP04	1.2	1.6	1	1	0.9	0.9
GHP05	1.2/3	3.8/14.3	3.6	4.3	2.5	3.4
GHP06	2.3/6	6.7/8.4	7.2	7.7	6.3	6.5
GHP07	4.6/9.8	11.7/14	11.7	13.4	11.3	11.7
GHP08	6/13.7	16.3	16.9	19.2	13.2	15.9

**In case of Multi stage gear units, the large gear unit must be filled with the higher oil volume*

The fill quantity in the table is referenced, the exact value relating to the ratio. All GPH Series helical gearbox are filled with life lubrication before delivery, do not need to change it in general.

OIL FILLING & WORKING AMBIENCE

'GHP' series Gaeyah Helical geared motors are supplied filled with lubricant, synthetic oil, before delivery. No need to replace lubricant for the first 20,000 hours running. However, under special working conditions like high temperature, long-time running heavy impact load, Oil should be changed every 10,000-15,000 working hours.



Caution: Don not mix synthetic oil with mineral oil. If need to change rinse the gear unit thoroughly before changing

- Ambient temperature between -10°C to 45°C
- Ambient humidity below 85%RH
- The altitude below 1,000m
- No corrosive and explosive gas or liquid or dust
- Mounted in indoor.

INSTALLATION INSTRUCTIONS

Preparation before installation

- 1) Check if the data on the nameplates of the gearmotor matches the voltage supply system.
- 2) For standard gearbox, the ambient temperature must be in accordance with the corresponding lubricant table.
- 3) The drive must not be assembled in conditions such as oil, gas, vapors, acids, radiation and so on.
- 4) Output shaft and flange surfaces must thoroughly clean to ensure they are free of anti corrosion agents, contamination or similar, Use a commercially available solvent. Do not let the solvent come into contact with the sealing lip of the oil seals, or will damage the material!
- 5) The supporting structure must have the following characteristics: level, vibration damping and torsionally rigid.

The installation of the gearbox

- 1) Do not tighten the feet and mounting flanges against one another and ensure that you comply with the permitted radial load and axial load.
- 2) Never used hammer to knock belt pulley, coupling and pinion into the output shaft when the assembly is needed, otherwise the bearing, shaft and housing will be damaged.
- 3) Prior to startup, check that if the oil level is as specified for the mounting position, if the oil checking and drain screw and the breather valves are free accessible.

MALFUNCTION ANALYSIS & CORRECTION

Defect	Reason	Analysis	Solution method
Noise	knocking	gear surface damaged	contact manufacturer.replace gear set
	continual cacophony	bearing damaged	replace the damaged bearing
	periodical cacophony	particle on the gear surface	check gear surface
	neigh	lackof lubricant	fill with lubricant
	intermittent cacophony	dirty lubricant	replace the new lubricant
Shake or play	fixed foundation shake	deflective mount on the surface	re-adjust fixed pedestal
	output shaft shake	bearing damaged	replace the damaged bearing
	inner gear parts shake	gear damaged	replace the damaged gear
	housing shake	defective gear assembly	re-adjustthe gear set
Leakage	oil seal leakage	oil seal vulcanize	replacethe damaged oil seal
	housing leakage	housing with the sand hole	replace housing with the sand hole
	combined surface leakage	O-ring damaged	replace the damaged o-ring
	oil seal damaged	over-tighten oil seal	replace over-tighten oil seal
	over-heat housing	over-load	re-calculate load
Over-heating	lack of lubricant	low lubricant	fill with lubricant
	over-heat motor	1.Ambient temperature is too high	1.take measure to reduce the temperature
		2.Air circulation is bad.	2.clean out the wind pass- age, and check the motor if cooling fan has been damaged
	3.pressure is too high or too low.	3.adjust electrical source pressure	
Motor doesn't rotate	Power connection	Power is not switched on	check if the switch is contacted well, if the fuse wise is broken or the motor down-lead is broken.
		wrong control connection outside	correct it on the right connection
		over loading	reduce the load
Outout speed	Too less	wrong ratio	check the rotation ratio of the cooling fan and output shaft by hand
		electrical source pressure too low	adjust electrical source pressure
		over-load	reduce load
Geared motor not rotating	Output shaft idle	Inner gear set damaged	please contact the manufacture to replace the gear set

