

AC & DC RIGHT ANGLE GEAR MOTOR

003-095

SIEGMA

AC GEAR MOTOR



SAFETY CAUTIONS

<p>P04</p> <p>General</p>	<p>Please don't use motor out of the range which is clarified in of nameplate of gear box and motor and the specification of product catalogue, avoiding getting an electric shock, hurting or damaging the device.</p> <p>Please do not put your fingers into the opening part of gear of motor, in order to prevent getting an electric shock, hurting catching a fire or damaging device etc.</p> <p>Please do not use the injured gear head or motor, in order to prevent hurting, catching a fire etc.</p> <p>Please do not put off the nameplate.</p> <p>If the products are reformed by the customers personally, it no belongs to the guarantee scope, and our company doesn't undertake any responsibility.</p>
<p>Moving</p>	<p>When you move it, if it shed off or tit to one side, it is very dangerous, please pay more attention.</p>
<p>Assembly</p>	<p>Please never put the flammable thing near and motor, for fear of a fire.</p> <p>Please do not put the things around motor, otherwise it can effect ventilation and cooling, even burning or catching a fire because of too hot.</p> <p>Please do not touch the gear, the motor shaft and the key slot of the gear with naked hand, or you may be hurt.</p> <p>The device may creating the smoke, such as food machine, please add an oil cup assembly part, to prevent leaking oil which may have a bad effect.</p>
<p>Assemble to the main machine</p>	<p>Please set a safe cover above the revolving part, to prevent being hurt.</p> <p>Before linking to the other machine, please confirm the revolving direction is not right, it may hurt the gear motor or destroy the device.</p>
<p>Wiring</p>	<p>Please don't get in touch with terminal, when you measure insure insulated resistance, preventing danger of getting an electric shock.</p>
<p>Operation</p>	<p>Please link with the electric source according to wire diagram and usage manual, in order to prevent getting an electric shock or catching a fire. (no terminal box, please strengthen the insulation of the connection part surely)</p> <p>Referring to the electrical source cable and the motor wire, please do not bend, stretch, and clip tightly excessively, in order to prevent getting an electric shock.</p> <p>The terminal box connecting to the ground must be firm, in order to prevent getting an electric shock. Please adopt the electrical source according to the nameplate, to avoid burning the motor and catching a fire.</p>
<p>The daily check and maintain</p>	<p>When operating, do not get close to or touch the revolving parts (shaft). If something or somebody engulfs or hurts, Please turn off the electrical power switch right and handle at once.</p> <p>Please turn off the electrical source switch when electricity stops, in order to prevent hurting the person and damaging the device.</p> <p>Please note, motor with the thermal protector, when temperature of the motor is unusual, it will turn off the electrical source automatically, when the temperature of the motor fall down to a fixed data, the motor can work automatically. (Note: when the motor is not burned-not, the motor can work automatically)</p> <hr/> <p>In daily, you should keep the motor operating in the normal work environment. (Except the special model)</p> <p>While checking, please do not get close to or touch the revolving parts (shaft). Something or somebody may engulf of hurt.</p>
<p>Receiving confirm</p>	<p>Please confirm if it is the right one with the order when receiving. Choosing wrong probably leads to damage of motor of damage the device and etc.</p>

PRODUCT NUMBER CODE

Motor

5 I K 40 R GU - C T
 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧

①	Motor frame size	4: 80mm 5: 90mm 6: 104mm
②	Motor type I : Induction motor R : Reversible motor	
③	Series	K : K series
④	Output power (W)	(Example) 40 : 40W
⑤	R : The suffix "-R" after the output power means speed adjustable motor	
⑥	Motor shaft type GN : GN type : Pinion shaft : GU : GU Type : Pinion shat	
⑦	Voltage-Poles A : Single-phase 110V50/60Hz 4P H : Single-phase 220/230V60Hz 4P B : Single-phase 110V50Hz 2P S : Three-phase 200/220/230V50/60Hz 4P C : Single-phase 220/230V50Hz 4P S3 : Three-phase 380/400/415V50/60Hz 4P D : Single-phase 220V50Hz 2P T : Three-phase 200/220/230V50/60Hz 2P E : Single-phase 110V/120V60Hz 4P T3 : Three-phase 380/400/415V50/60Hz 2P	
⑧	T : Terminal box type F : W/Fan FF : W/Forced fan M : Power off activated type electromagnetic brake motor	

Description Of Reducer Model

5 GU 50 RH
 ① ② ③ ④

①	Gearhead frame size	4: 80mm 5: 90mm 6: 104mm
②	Type of pinion	GN : GN type gear GU : GU type gear
③	Gear ratio	(e.g) 50 : Gear ratio of 1 : 50 10x denotes the decimal gearhead of ratio 1 : 10
④	Type of output shaft	RH : Hollow worm shaft RA : Worm output shaft RC : Spiral bevel hollow shaft RT : Spiral bevel output shaft

GENERAL SPECIFICATIONS OF MOTORS

25W~200W

Item	Specifications
Insulation Resistance	In the circumstance of normal temperature and humidity, the resistance can be up to 100MΩ, measured DC 500V insulation resistance measurer between the motor wiring and motor shell while the motor is working
Insulation Voltage	In the circumstance of normal temperature and humidity, there will be no problem supplying the power of 1.5kV (three phase 400v: 2kV) at 50/60Hz between the metal wiring and motor shell for 1 minute while the motor is working
Temperature Rise	The temperature rise of winding are 80°C or less measured by the resistance change method after rated motor operation under normal ambient temperature and humidity, with connecting a gearhead or equivalent heat radiation plate ※
Insulation Class	UL/CSA Standards: Class A (105°C) EN Standards: Class B (130°C)
Overheat Protection	Thermal protector inside (Automatic return) Class B (Opening: 120°C±5°C、75°C±15°C) Class F (Opening: 145°C±5°C、100°C±15°C)
Ambient Temperature	Single-phase 100V、Three-phase 200V: -10~+50°C (Non freezing)、Others: -10~+40°C (Non freezing)
Ambient Humidity	≤85% (Non condensing)
Protection Class	Lead wire type: IP20 Terminal box type: Single-phase 100V50/60Hz、110/120V60Hz、220/230V50Hz、220/230V60Hz 25W-180W Type: IP54 (Excluding the installation surface of the round shaft type) Three-phase 200/220/230V50/60Hz、380/400/415V50/60Hz 25W-180W Type: IP54 (Excluding the installation surface of the round shaft type)

Heat Radiation Plate (Material: Aluminum)

Motor Type	Size	Thickness (mm)
25W	135X135	5
40W、60W type	165X165	
60W、90W、120W type	200X200	
120W、140W、200W type	230X230	

MOTOR FEATURES

Induction Motor Features

1. Generally, Micro induction motor refers to the motor rotated by the induction. Induction motor relies on capacitor and electromagnetism when starting and rotating. Though its starting torque is not very high, it has a simple structure, high efficiency and can rotate continue.
2. The single-phase motor have a reverse direction with the rotating's when operated. Pls change the direction of single-phase motor rotation only after bring the motor to a stop.
3. Three-phase motor relies on three-phase supply, it has a high efficiency and can get a high starting torque.

Reversible Motor Features

1. Reversible motor has a friction brake at the back of the motor body, which is designed for applications where reversal of direction is frequently required. For the friction brake, pls check draw 1. The damp with spring impacts the rotating brake disk and supplies with continuous press. The functions of the friction brake are as following:

- ① With friction load, increasing the instant reversal.
- ② Shorten over-run.
- ③ Keep the torque in some way. (About 10% of the rated torque)

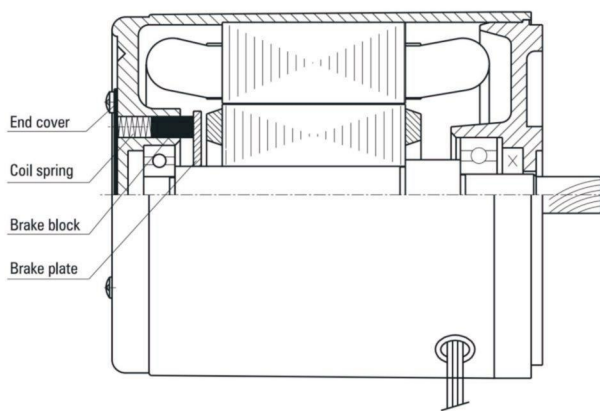


Fig.1

2. The keeping torque or more of the friction brake and over-run are listed in the table 1. It is only for reference. As it will change according to the rotating period as well as the temperature. Pls also note that the torque may be a little lower than the one listed in the table when being operated initially.
3. The reversible motor, like induction motor, is started by the capacitor and has a same torque characteristic with the induction motor. But the reversible Motor is designed with a higher starting torque to increase the instant reversal features. Pls check drawing 2.

Table 1. Keep Torque And Over-run

Phase	Size mm	Output W	Motor Model	Keep Torque		Over-run Cycles
				N.cm	Kgf.cm	
Sing-Phase	80	25	4RK25	1.5	0.14	5
	90	40	5RK40	4.0	0.40	6
		60	5RK60			
		90	5RK90			
		120	5RK120			

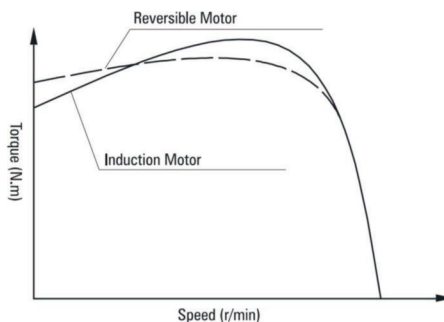


Fig.2

INDUCTION MOTORS

■ 25W □ 80mm



P09

Specs Continuous Rating

Model · Type Upper:Pinion Shaft Below:Round Shaft		Output power W	Voltage V	Frequency Hz	Current A	Starting Torque mN.m	Rated Torque mN.m	Rated Speed r/min	Capacitor μF
Lead Wire Type Dimensions①	Terminal Box Type Dimensions②								
4IK25GN-A	4IK25GN-AT	25	1ph 100	50	0.500	120	200	1250	8.0
				60	0.550		165	1550	
4IK25GN-E	4IK25GN-ET	25	1ph 110	60	0.450	120	165	1550	7.0
			1ph 120		0.500				
4IK25GN-C	4IK25GN-CT	25	1ph 220	50	0.250	120	200	1250	1.8
			1ph 230		0.230				
4IK25GN-H	4IK25GN-HT	25	1ph 220	60	0.230	120	165	1550	1.8
			1ph 230						
4IK25GN-S	4IK25GN-ST	25	3ph 220	50	0.185	350	200	1250	-
				60	0.170	250	165	1550	
4IK25GN-S3	4IK25GN-S3T	25	3ph 380	50	0.107	350	200	1250	-
				60	0.098	250	165	1550	

• When the motor is approved under various safety standards, the model name on the nameplate is the approved model name.

• Note: "-A" it means the voltage 110V, the assembly capacitor value it is according to the label.

Gear Motor-Torque Table

• Gearhead and mid-gearbox can be sold separately. Enter the code that represents the terminal box type (T) in the box (□) within the model name.

• Enter the gear ratio in the box (□) within the model name.

The colored background indicates the same rotating direction of the motor while the rotating direction of others are opposite.

• The speed is calculated by dividing the motor's synchronous speed (50Hz:1500r/min, 60Hz:1800r/min) by the gear ratio. The actual speed is 2%~20% less than the displayed value, depending on the size of the load.

• To reduce the speed beyond the gear ratio in the table, attach a mid-gearbox (gear ratio:10) between the gearhead and motor. In that case, the permissible torque is 8N·m.

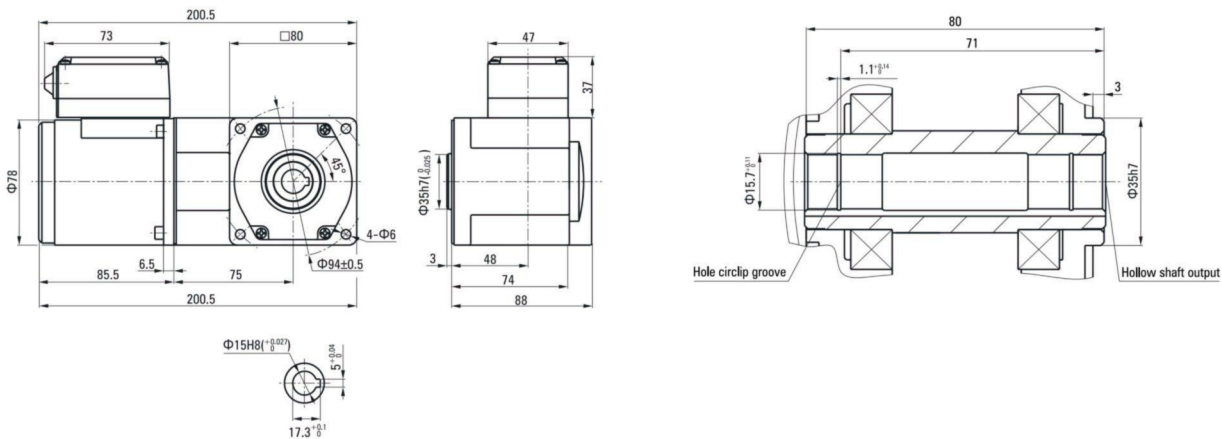
SPIRAL BEVEL RIGHT ANGLE

■ Allowance Torque Unit: Upside (N.m) / Belowside (kgf.cm)

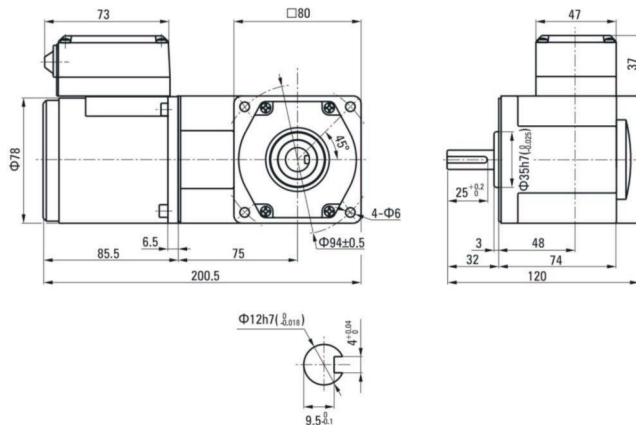
Type	Gear Ratio	Speedr/min	7.5	9	12.5	15	18	25	30	36	50	60	75	90	100	120	150	180		
			Motor/Gearhead	50Hz	200	166	120	100	83	60	50	42	30	25	20	16	15	12	10	8
		60Hz	240	200	144	120	100	72	60	50	36	30	24	20	18	15	12	10		
4K25GN-A□ 4K25GN-E□ 4K25GN-C□ 4K25GN-H□ 4K25GN-S□ 4K25GN-S3□	4GN□RC 4GN□RT	Allowance Torque	50Hz	0.99	1.18	1.64	1.97	2.37	3.29	3.95	4.73	6.58	7.10	8.00	8.00	8.00	8.00	8.00	8.00	
			60Hz	0.80	0.95	1.33	1.59	1.91	2.65	3.18	3.82	5.30	5.73	7.16	8.00	8.00	8.00	8.00	8.00	
			50Hz	10.1	12.1	16.8	20.1	24.2	33.5	40.3	48.3	67.1	72.5	80.0	80.0	80.0	80.0	80.0	80.0	80.0
			60Hz	8.12	9.74	13.5	16.2	19.5	27.1	32.5	39.0	54.1	58.4	73.0	80.0	80.0	80.0	80.0	80.0	80.0

■ Motor Size Chart

4K25GN-A□/4GN□RC 4K25GN-E□/4GN□RC	4K25GN-C□/4GN□RC 4K25GN-H□/4GN□RC	4K25GN-S□/4GN□RC	4K25GN-S3□/4GN□RC
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4K25GN-A□/4GN□RT 4K25GN-E□/4GN□RT	4K25GN-C□/4GN□RT 4K25GN-H□/4GN□RT	4K25GN-S□/4GN□RT	4K25GN-S3□/4GN□RT
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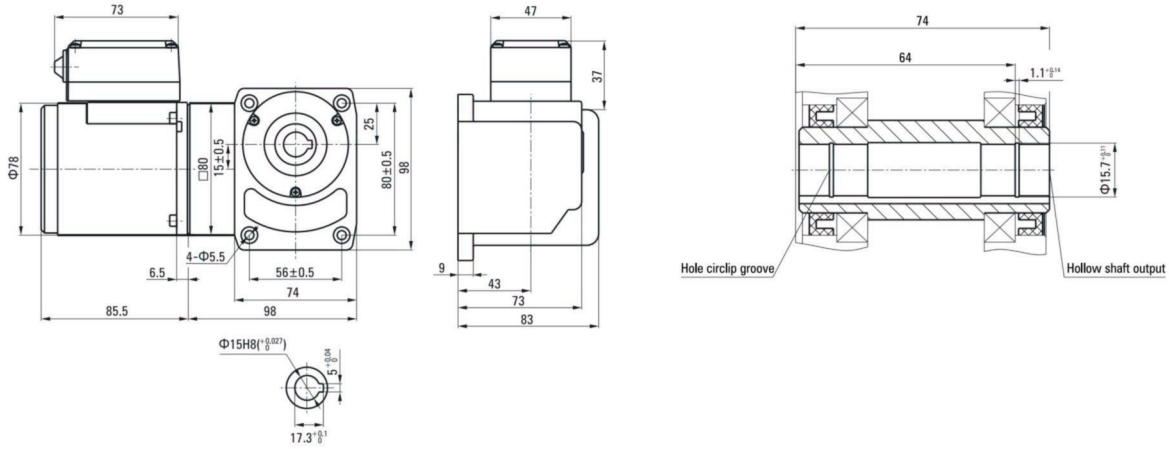
WORM GEAR RIGHT ANGLE

Allowance Torque Unit: Upside (N.m) / Belowside (kgf.cm)

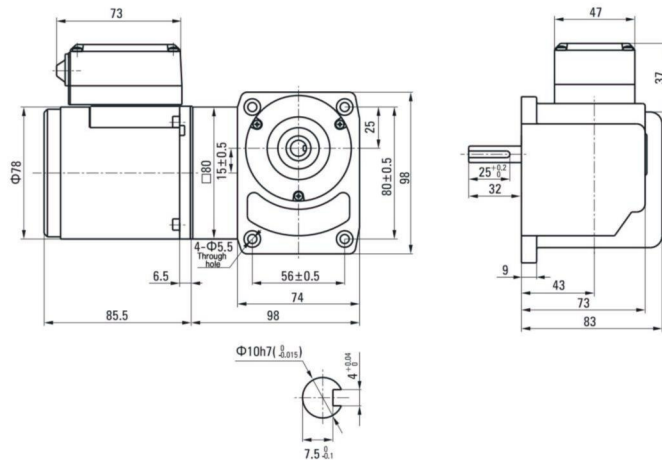
Type Motor/Gearhead	Gear Ratio	Speed/r/min	7.5	9	12.5	15	18	25	30	36	50	60	75	90	100	120	150	180
			50Hz	60Hz	50Hz	60Hz	50Hz	60Hz	50Hz	60Hz	50Hz	60Hz	50Hz	60Hz	50Hz	60Hz	50Hz	60Hz
4IK25GN-A□ 4IK25GN-E□ 4IK25GN-C□ 4IK25GN-H□ 4IK25GN-S□ 4IK25GN-S3□	4GN□RH 4GN□RA	Allowance Torque	0.58 5.92	0.70 7.10	0.97 9.87	1.16 11.8	1.39 14.2	1.93 19.7	2.32 23.7	2.78 28.4	3.87 39.5	4.64 47.4	5.80 59.2	6.96 71.0	7.74 78.9	8.00 80.0	8.00 80.0	8.00 80.0

Motor Size Chart

4IK25GN-A□/4GN□RH 4IK25GN-E□/4GN□RH	4IK25GN-C□/4GN□RH 4IK25GN-H□/4GN□RH	4IK25GN-S□/4GN□RH	4IK25GN-S3□/4GN□RH
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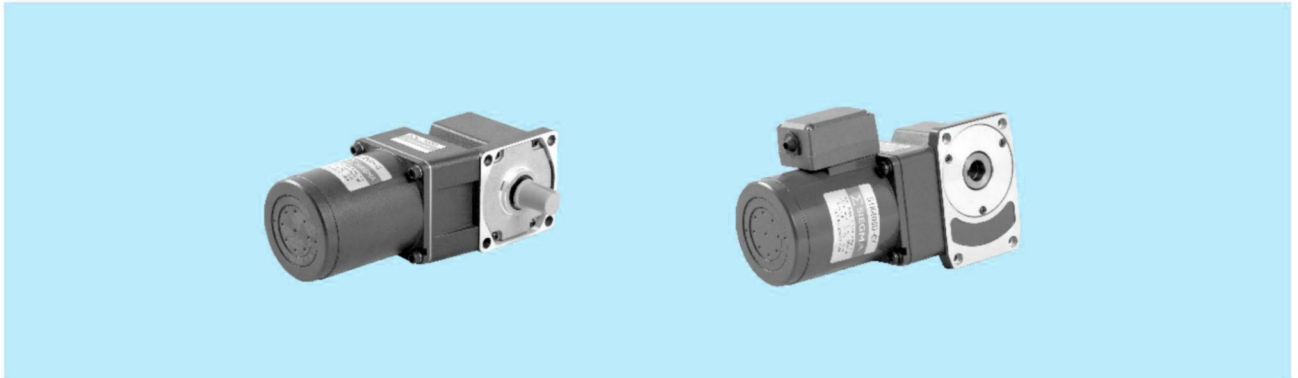
4IK25GN-A□/4GN□RA 4IK25GN-E□/4GN□RA	4IK25GN-C□/4GN□RA 4IK25GN-H□/4GN□RA	4IK25GN-S□/4GN□RA	4IK25GN-S3□/4GN□RA
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INDUCTION MOTORS

■ 40W □ 90mm

P12



■ Specs Continuous Rating

Model · Type Upper:Pinion Shaft Below:Round Shaft		Output power W	Voltage V	Frequency Hz	Current A	Starting Torque mN.m	Rated Torque mN.m	Rated Speed r/min	Capacitor μF 2.5
Lead Wire Type Dimensions①	Terminal Box Type Dimensions②								
5IK40GU-A	5IK40GU-AT	40	1ph 100	50	0.65	220	315	1250	12
				60	0.70		260	1550	
5IK40GU-E	5IK40GU-ET	40	1ph 110	60	0.55	200	260	1550	8.0
			1ph 120		0.60				
5IK40GU-C	5IK40GU-CT	40	1ph 220	50	0.35	220	315	1250	2.5
			1ph 230		0.40				
5IK40GU-H	5IK40GU-HT	40	1ph 220	60	0.35	200	260	1550	2.5
			1ph 230		0.40				
5IK40GU-S	5IK40GU-ST	40	3ph 220	50	0.30	800	315	1250	-
				60	0.25	660	250	1550	
5IK40GU-S3	5IK40GU-S3T	40	3ph 380	50	0.17	800	315	1250	-
				60	0.14	660	250	1550	

- When the motor is approved under various safety standards, the model name on the nameplate is the approved model name.
- Note: "-A" it means the voltage 110V, the assembly capacitor value it is according to the label.

■ Gear Motor-Torque Table

- Gearhead and mid-gearbox can be sold separately. Enter the code that represents the terminal box type (T) in the box (□) within the model name.
- Enter the gear ratio in the box (□) within the model name.
The colored background indicates the same rotating direction of the motor while the rotating direction of others are opposite.
- The speed is calculated by dividing the motor's synchronous speed (50Hz:1500r/min, 60Hz:1800r/min) by the gear ratio. The actual speed is 2%~20% less than the displayed value, depending on the size of the load.
- To reduce the speed beyond the gear ratio in the table, attach a mid-gearbox (gear ratio:10) between the gearhead and motor. In that case, the permissible torque is 20N·m.

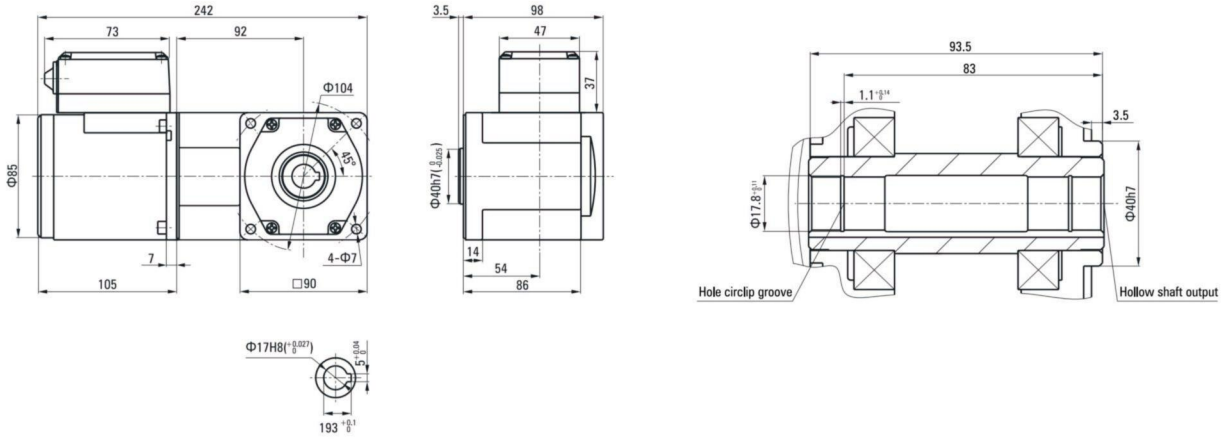
SPIRAL BEVEL RIGHT ANGLE

Allowance Torque Unit: Upside (N.m) / Belowside (kgf.cm)

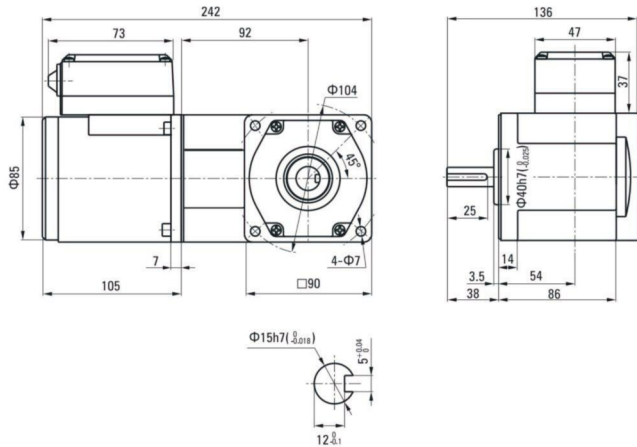
Type Motor/Gearhead	Gear Ratio	Speedr/min	7.5	9	12.5	15	18	25	30	36	50	60	75	90	100	120	150	180	
			50Hz	60Hz	50Hz	60Hz	50Hz	60Hz	50Hz	60Hz	50Hz	60Hz	50Hz	60Hz	50Hz	60Hz	50Hz	60Hz	50Hz
5IK40GU-A□ 5IK40GU-E□	5GU□RC 5GU□RT	Allowance Torque	1.58	1.89	2.63	3.16	3.79	5.26	6.31	6.80	9.50	11.4	14.2	17.0	18.9	20.0	20.0	20.0	20.0
5IK40GU-C□ 5IK40GU-H□			16.1	19.3	26.8	32.2	38.6	53.7	64.4	70.0	97.0	116	145	174	193	200	200	200	200
5IK40GU-S□ 5IK40GU-S3□			1.27	1.53	2.12	2.55	3.05	4.24	5.09	5.50	7.64	9.16	11.5	13.7	15.3	18.3	20.0	20.0	20.0
			13.0	15.6	21.6	26.0	31.2	43.3	51.9	56.1	77.9	93.5	117	140	156	187	200	200	200

Motor Size Chart

5IK40GU-A□/5GU□RC 5IK40GU-E□/5GU□RC	5IK40GU-C□/5GU□RC 5IK40GU-H□/5GU□RC	5IK40GU-S□/5GU□RC	5IK40GU-S3□/5GU□RC
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5IK40GU-A□/5GU□RT 5IK40GU-E□/5GU□RT	5IK40GU-C□/5GU□RT 5IK40GU-H□/5GU□RT	5IK40GU-S□/5GU□RT	5IK40GU-S3□/5GU□RT
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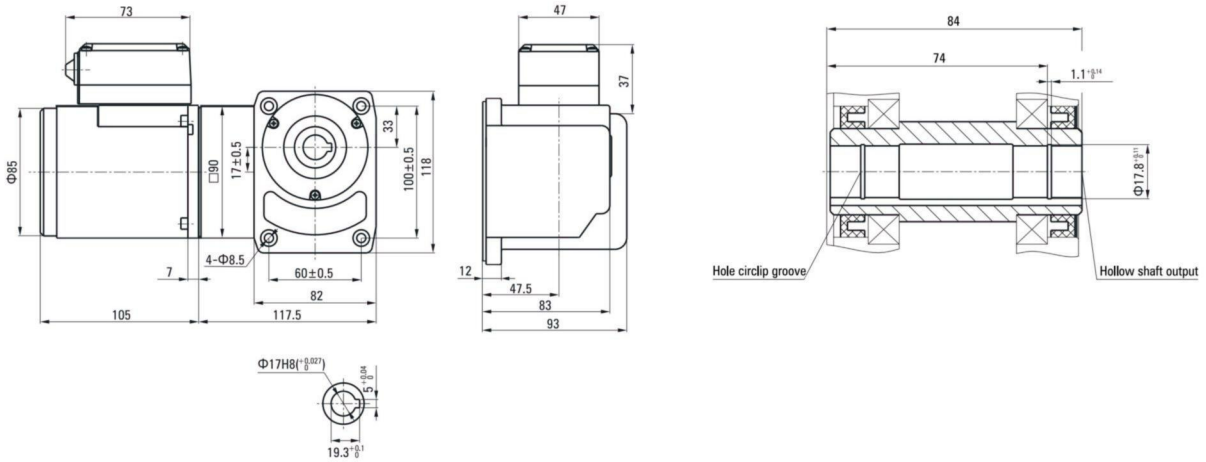
WORM GEAR RIGHT ANGLE

Allowance Torque Unit: Upside (N.m) / Belowside (kgf.cm)

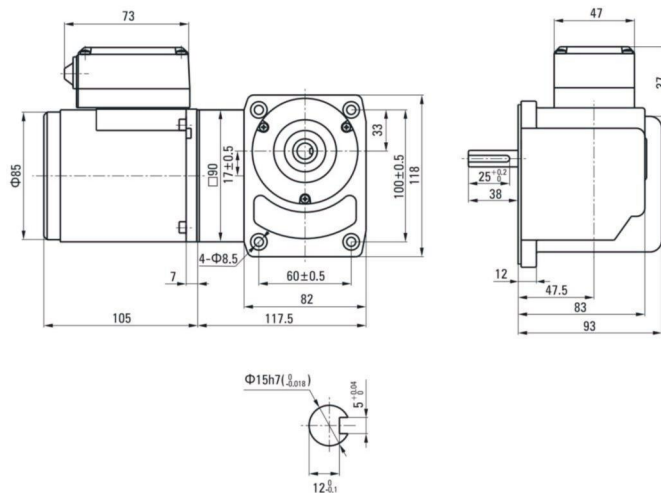
Type	Gear Ratio	Speedr/min	7.5	9	12.5	15	18	25	30	36	50	60	75	90	100	120	150	180		
			Motor/Gearhead	50Hz	200	166	120	100	83	60	50	42	30	25	20	16	15	12	10	8
		60Hz	240	200	144	120	100	72	60	50	36	30	24	20	18	15	12	10		
5IK40GU-A□	5GU□RH 5GU□RA	Allowance Torque	50Hz	0.93	1.11	1.55	1.86	2.23	3.09	3.71	4.46	6.19	7.43	9.28	11.1	12.4	14.9	18.6	20.0	
5IK40GU-E□			60Hz	9.47	11.4	15.8	18.9	22.7	31.6	37.9	45.5	63.1	75.8	94.7	114	126	152	189	200	
5IK40GU-C□			50Hz	0.75	0.90	1.25	1.50	1.80	2.50	2.99	3.59	4.99	5.99	7.49	8.98	9.98	12.0	15.0	18.0	
5IK40GU-H□			60Hz	7.64	9.17	12.7	15.3	18.3	25.5	30.6	36.7	50.9	61.1	76.4	91.7	102	122	153	183	
5IK40GU-S□																				
5IK40GU-S3□																				

Motor Size Chart

5IK40GU-A□/5GU□RH 5IK40GU-E□/5GU□RH	5IK40GU-C□/5GU□RH 5IK40GU-H□/5GU□RH	5IK40GU-S□/5GU□RH	5IK40GU-S3□/5GU□RH
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5IK40GU-A□/5GU□RA 5IK40GU-E□/5GU□RA	5IK40GU-C□/5GU□RA 5IK40GU-H□/5GU□RA	5IK40GU-S□/5GU□RA	5IK40GU-S3□/5GU□RA
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INDUCTION MOTORS

■ 60W □ 90mm



P15

■ Specs Continuous Rating

Model • Type Upper:Pinion Shaft Below:Round Shaft		Output power W	Voltage V	Frequency Hz	Current A	Starting Torque mN.m	Rated Torque mN.m	Rated Speed r/min	Capacitor μF
Lead Wire Type Dimensions①	Terminal Box Type Dimensions②								
5IK60GU-AF	5IK60GU-AFT	60	1ph 100	50	1.00	320	470	1250	20
				60	1.10		380	1550	
5IK60GU-EF	5IK60GU-EFT	60	1ph 110	60	0.80	300	380	1550	12
			1ph 120		0.85				
5IK60GU-CF	5IK60GU-CFT	60	1ph 220	50	0.50	340	470	1250	4.0
			1ph 230		0.55				
5IK60GU-HF	5IK60GU-HFT	60	1ph 220	60	0.50	340	380	1550	4.0
			1ph 230		0.55				
5IK60GU-SF	5IK60GU-SFT	60	3ph 220	50	0.45	1000	470	1250	-
				60	0.40	800	380	1550	
5IK60GU-S3F	5IK60GU-S3FT	60	3ph 380	50	0.26	1000	470	1250	-
				60	0.23	800	380	1550	

● When the motor is approved under various safety standards, the model name on the nameplate is the approved model name.

● Note: "-A" it means the voltage 110V, the assembly capacitor value it is according to the label.

■ Gear Motor-Torque Table

● Gearhead and mid-gearbox can be sold separately. Enter the code that represents the terminal box type (T) in the box (□) within the model name.

● Enter the gear ratio in the box (□) within the model name.

The colored background indicates the same rotating direction of the motor while the rotating direction of others are opposite.

● The speed is calculated by dividing the motor's synchronous speed (50Hz:1500r/min、60Hz:1800r/min) by the gear ratio. The actual speed is 2%~20% less than the displayed value, depending on the size of the load.

● To reduce the speed beyond the gear ratio in the table, attach a mid-gearbox (gear ratio:10) between the gearhead and motor. In that case, the permissible torque is 20N·m.

SPIRAL BEVEL RIGHT ANGLE

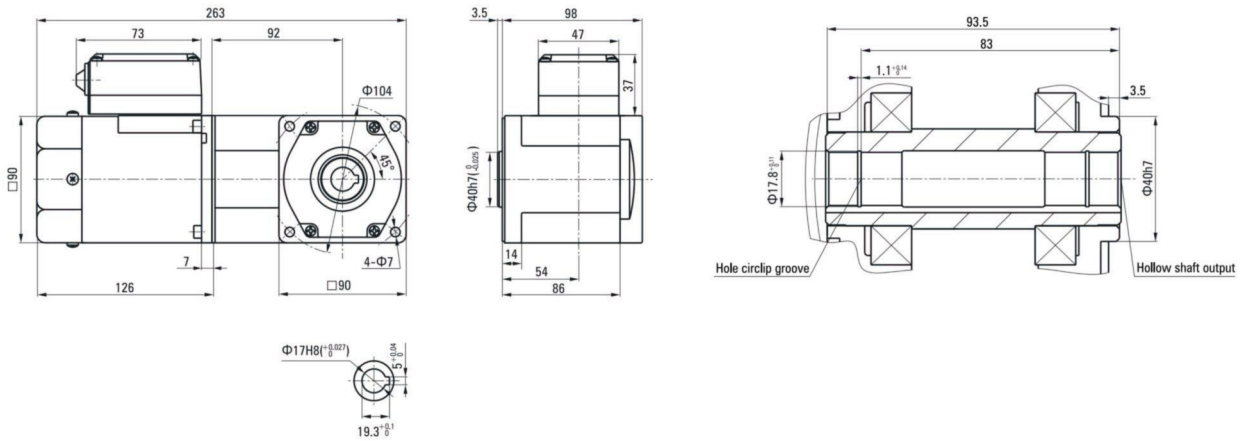
P16

Allowance Torque Unit: Upside (N.m) / Belowside (kgf.cm)

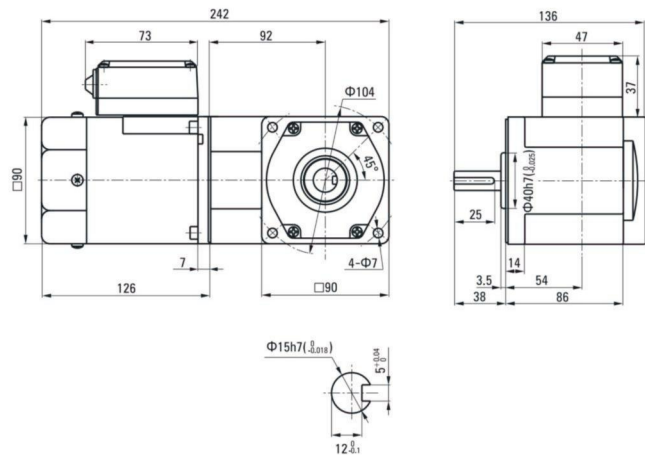
Type	Gear Ratio	Speedr/min	7.5	9	12.5	15	18	25	30	36	50	60	75	90	100	120	150	180	
			Motor/Gearhead	50Hz	200	166	120	100	83	60	50	42	30	25	20	16	15	12	10
		60Hz	240	200	144	120	100	72	60	50	36	30	24	20	18	15	12	10	
5IK60GU-AF□ 5IK60GU-EF□ 5IK60GU-CF□ 5IK60GU-HF□ 5IK60GU-SF□ 5IK60GU-S3F□	5GU□RC 5GU□RT	Allowance Torque	50Hz	2.37	2.84	3.95	4.73	5.68	7.89	9.47	10.2	14.2	17.0	20.0	20.0	20.0	20.0	20.0	20.0
			60Hz	24.2	29.0	40.3	48.3	58.0	80.5	96.6	104	145	174	200	200	200	200	200	200
			50Hz	1.91	2.29	3.18	3.82	4.58	6.36	7.64	8.25	11.5	13.7	17.2	20.0	20.0	20.0	20.0	20.0
			60Hz	19.48	23.37	32.46	38.96	46.75	64.93	77.92	84.1	117	140	175	200	200	200	200	200

Motor Size Chart

5IK60GU-AF□/5GU□RC 5IK60GU-EF□/5GU□RC	5IK60GU-CF□/5GU□RC 5IK60GU-HF□/5GU□RC	5IK60GU-SF□/5GU□RC	5IK60GU-S3F□/5GU□RC
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5IK60GU-AF□/5GU□RT 5IK60GU-EF□/5GU□RT	5IK60GU-CF□/5GU□RT 5IK60GU-HF□/5GU□RT	5IK60GU-SF□/5GU□RT	5IK60GU-S3F□/5GU□RT
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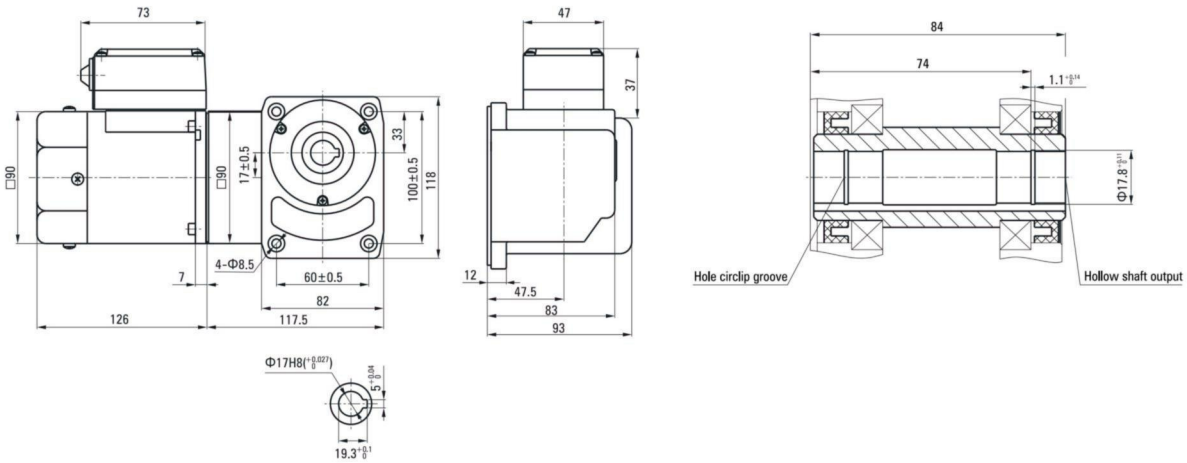
WORM GEAR RIGHT ANGLE

Allowance Torque Unit: Upside (N.m) / Belowside (kgf.cm)

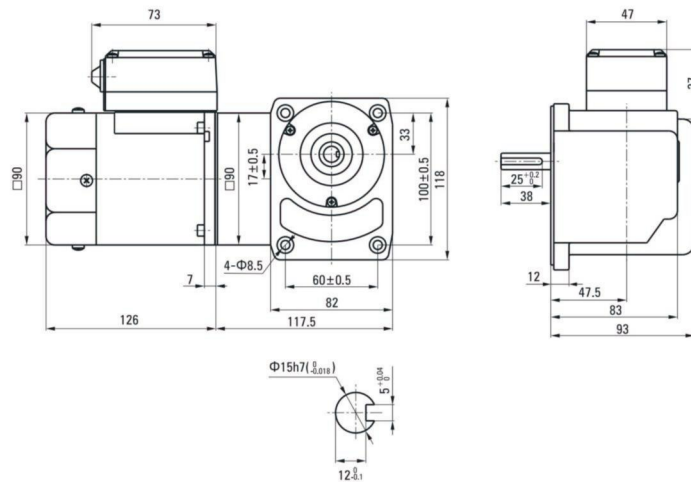
Type	Gear Ratio	7.5	9	12.5	15	18	25	30	36	50	60	75	90	100	120	150	180		
																		Speedr/min	
Motor/Gearhead	50Hz	200	166	120	100	83	60	50	42	30	25	20	16	15	12	10	8		
	60Hz	240	200	144	120	100	72	60	50	36	30	24	20	18	15	12	10		
5IK60GU-AF□ 5IK60GU-EF□ 5IK60GU-CF□ 5IK60GU-HF□ 5IK60GU-SF□ 5IK60GU-S3F□	5GU□RH 5GU□RA	Allowance Torque	50Hz	1.39	1.67	2.32	2.78	3.34	4.64	5.57	6.68	9.28	11.1	13.9	16.7	18.6	20.0	20.0	20.0
			60Hz	14.2	17.0	23.7	28.4	34.1	47.4	56.8	68.2	94.7	114	142	170	189	200	200	200
			50Hz	1.12	1.35	1.87	2.25	2.69	3.74	4.49	5.39	7.49	8.98	11.2	13.5	15.0	18.0	20.0	20.0
			60Hz	11.5	13.7	19.1	22.9	27.5	38.2	45.8	55.0	76.4	91.7	115	137	153	183	200	200

Motor Size Chart

5IK60GU-AF□/5GU□RH 5IK60GU-CF□/5GU□RH 5IK60GU-SF□/5GU□RH 5IK60GU-S3F□/5GU□RH
 5IK60GU-EF□/5GU□RH 5IK60GU-HF□/5GU□RH

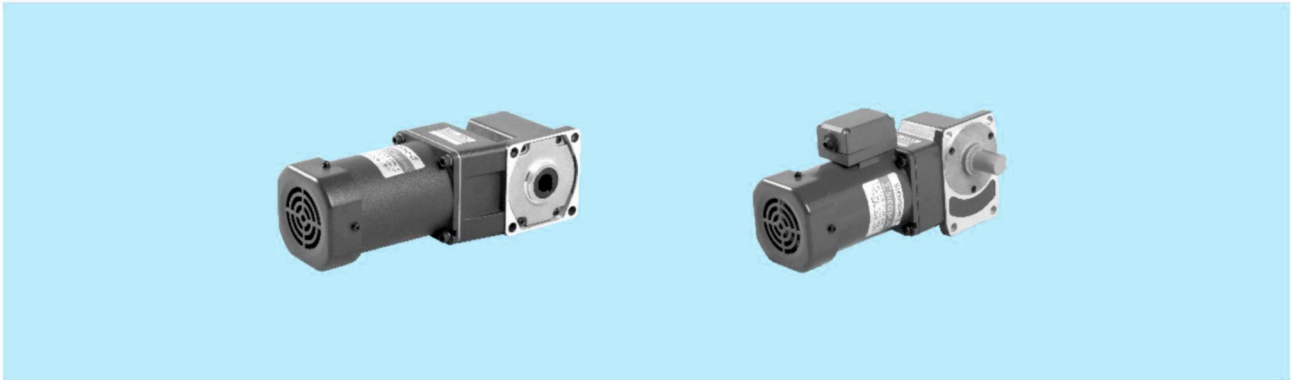


5IK60GU-AF□/5GU□RA 5IK60GU-CF□/5GU□RA 5IK60GU-SF□/5GU□RA 5IK60GU-S3F□/5GU□RA
 5IK60GU-EF□/5GU□RA 5IK60GU-HF□/5GU□RA



INDUCTION MOTORS

■ 90W □ 90mm



Specs Continuous Rating

Model - Type Upper:Pinion Shaft Below:Round Shaft		Output power W	Voltage V	Frequency Hz	Current A	Starting Torque mN.m	Rated Torque mN.m	Rated Speed r/min	Capacitor μF
Lead Wire Type Dimensions①	Terminal Box Type Dimensions②								
5IK90GU-AF	5IK90GU-AFT	90	1ph 100	50	1.55	450	700	1250	25
				60	1.85		570	1550	
5IK90GU-EF	5IK90GU-EFT	90	1ph 110	60	1.40	500	570	1550	20
			1ph 120		1.45				
5IK90GU-CF	5IK90GU-CFT	90	1ph 220	50	0.72	450	700	1250	5.0
			1ph 230		0.70				
5IK90GU-HF	5IK90GU-HFT	90	1ph 220	60	0.71	450	570	1550	5.0
			1ph 230		0.75				
5IK90GU-SF	5IK90GU-SFT	90	3ph 220	50	0.60	1350	700	1250	-
				60	0.55	1100	570	1550	
5IK90GU-S3F	5IK90GU-S3FT	90	3ph 380	50	0.35	1350	700	1250	-
				60	0.32	1100	570	1550	

● When the motor is approved under various safety standards, the model name on the nameplate is the approved model name.

● Note: "-A" it means the voltage 110V, the assembly capacitor value it is according to the label.

Gear Motor-Torque Table

● Gearhead and mid-gearbox can be sold separately. Enter the code that represents the terminal box type (T) in the box (□) within the model name.

● Enter the gear ratio in the box (□) within the model name.

The colored background indicates the same rotating direction of the motor while the rotating direction of others are opposite.

● The speed is calculated by dividing the motor's synchronous speed (50Hz:1500r/min, 60Hz:1800r/min) by the gear ratio. The actual speed is 2%~20% less than the displayed value, depending on the size of the load.

● To reduce the speed beyond the gear ratio in the table, attach a mid-gearbox (gear ratio:10) between the gearhead and motor. In that case, the permissible torque is 20N·m.

WORM GEAR RIGHT ANGLE

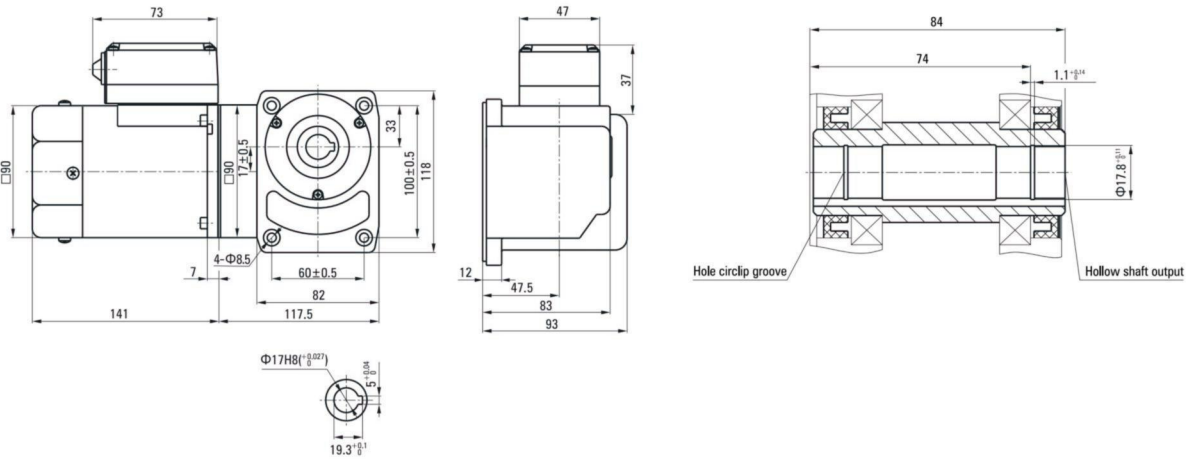
P20

■ Allowance Torque Unit: Upside (N.m) / Belowside (kgf.cm)

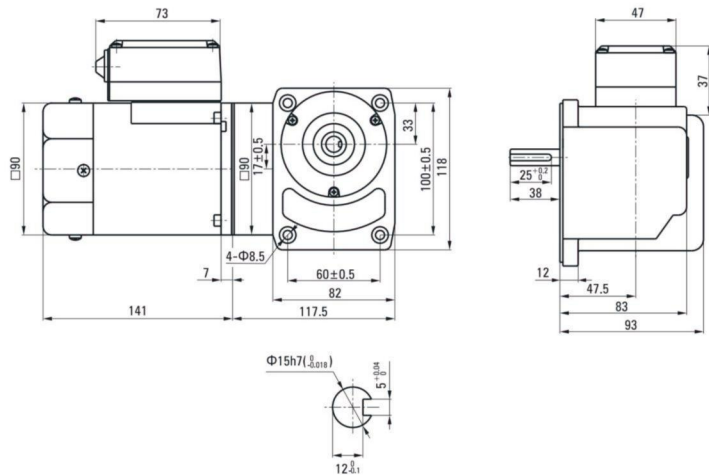
Type	Gear Ratio	Speed/r/min	7.5	9	12.5	15	18	25	30	36	50	60	75	90	100	120	150	180		
			Motor/Gearhead	50Hz	200	166	120	100	83	60	50	42	30	25	20	16	15	12	10	8
		60Hz	240	200	144	120	100	72	60	50	36	30	24	20	18	15	12	10		
5IK90GU-AF□	5GU□RH 5GU□RA	Allowance Torque	50Hz	2.09	2.51	3.48	4.18	5.01	6.96	8.35	10.0	13.9	16.7	20.0	20.0	20.0	20.0	20.0	20.0	
5IK90GU-EF□			60Hz	2.13	2.56	3.55	4.26	5.11	71.0	85.2	102	142	170	204	200	200	200	200	200	
5IK90GU-CF□			50Hz	1.68	2.02	2.81	3.37	4.04	5.61	6.74	8.08	11.2	13.5	16.8	20.0	20.0	20.0	20.0	20.0	
5IK90GU-HF□			60Hz	1.72	2.06	2.86	3.44	4.12	57.3	68.7	82.5	115	137	172	200	200	200	200	200	
5IK90GU-SF□																				
5IK90GU-S3F□																				

■ Motor Size Chart

5IK90GU-AF□/5GU□RH 5IK90GU-EF□/5GU□RH	5IK90GU-CF□/5GU□RH 5IK90GU-HF□/5GU□RH	5IK90GU-SF□/5GU□RH	5IK90GU-S3F□/5GU□RH
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5IK90GU-AF□/5GU□RA 5IK90GU-EF□/5GU□RA	5IK90GU-CF□/5GU□RA 5IK90GU-HF□/5GU□RA	5IK90GU-SF□/5GU□RA	5IK90GU-S3F□/5GU□RA
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INDUCTION MOTORS

■ 120W □ 90mm



Specs Continuous Rating

Model · Type Upper:Pinion Shaft Below:Round Shaft		Output power W	Voltage V	Frequency Hz	Current A	Starting Torque mN.m	Rated Torque mN.m	Rated Speed r/min	Capacitor μF
Lead Wire Type Dimensions①	Terminal Box Type Dimensions②								
5IK120GU-AF	5IK120GU-AFT	120	1ph 100	50	2.10	600	930	1250	30
				60	2.50		750	1550	
5IK120GU-EF	5IK120GU-EFT	120	1ph 110	60	1.65	600	750	1550	25
			1ph 120		1.80				
5IK120GU-CF	5IK120GU-CFT	120	1ph 220	50	1.00	650	930	1250	7.0
			1ph 230		0.95				
5IK120GU-HF	5IK120GU-HFT	120	1ph 220	60	1.00	600	750	1550	7.0
			1ph 230		0.95				
5IK120GU-SF	5IK120GU-SFT	120	3ph 220	50	0.70	1850	930	1250	-
				60	0.60	1600	750	1550	
5IK120GU-S3F	5IK120GU-S3FT	120	3ph 380	50	0.40	1850	930	1250	-
				60	0.35	1600	750	1550	

● When the motor is approved under various safety standards, the model name on the nameplate is the approved model name.

● Note: "-A" it means the voltage 110V, the assembly capacitor value it is according the label.

Gear Motor-Torque Table

● Gearhead and mid-gearbox can be sold separately. Enter the code that represents the terminal box type (T) in the box (□) within the model name.

● Enter the gear ratio in the box (□) within the model name.

The colored background indicates the same rotating direction of the motor while the rotating direction of others are opposite.

● The speed is calculated by dividing the motor's synchronous speed (50Hz:1500r/min、60Hz:1800r/min) by the gear ratio. The actual speed is 2%~20% less than the displayed value, depending on the size of the load.

● To reduce the speed beyond the gear ratio in the table, attach a mid-gearbox (gear ratio:10) between the gearhead and motor. In that case, the permissible torque is 20N·m.

SPIRAL BEVEL RIGHT ANGLE

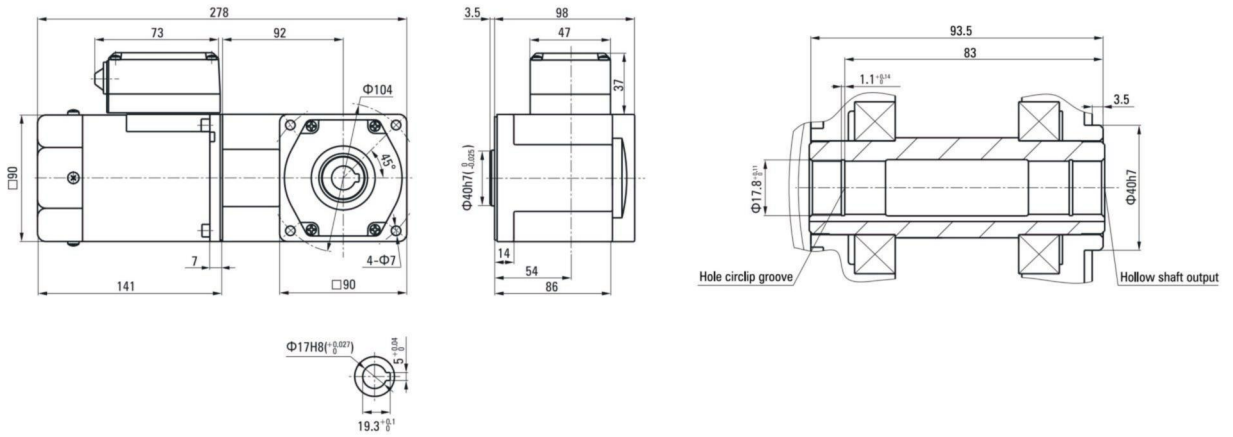
P22

■ Allowance Torque Unit: Upside (N.m) / Belowside (kgf.cm)

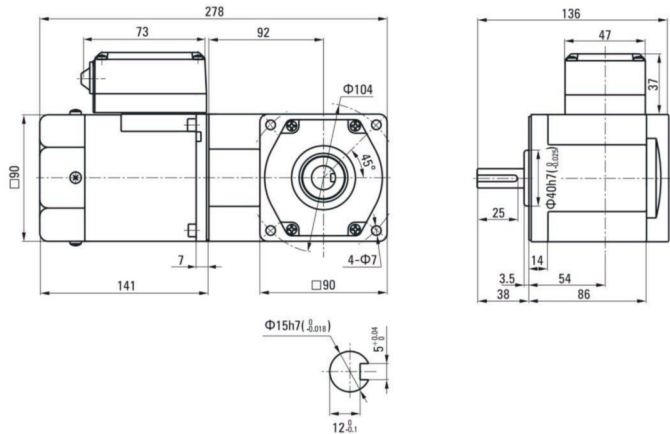
Type	Gear Ratio	Speedr/min	7.5	9	12.5	15	18	25	30	36	50	60	75	90	100	120	150	180			
			Motor/Gearhead	50Hz	200	166	120	100	83	60	50	42	30	25	20	16	15	12	10	8	
		60Hz	240	200	144	120	100	72	60	50	36	30	24	20	18	15	12	10			
5IK120GU-AF□	5GU□RC	Allowance Torque	50Hz	4.73	5.68	7.89	9.47	11.4	15.8	18.9	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0		
5IK120GU-EF□			60Hz	48.3	58.0	80.5	96.6	116	161	193	200	200	200	200	200	200	200	200	200	200	
5IK120GU-CF□			50Hz	3.82	4.58	6.36	7.64	9.16	12.7	15.3	16.5	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	
5IK120GU-HF□			60Hz	39.0	46.7	64.9	77.9	93.5	130	156	168	200	200	200	200	200	200	200	200	200	
5IK120GU-SF□																					
5IK120GU-S3F□																					

■ Motor Size Chart

5IK120GU-AF□/5GU□RC 5IK120GU-CF□/5GU□RC 5IK120GU-SF□/5GU□RC 5IK120GU-S3F□/5GU□RC
 5IK120GU-EF□/5GU□RC 5IK120GU-HF□/5GU□RC



5IK120GU-AF□/5GU□RT 5IK120GU-CF□/5GU□RT 5IK120GU-SF□/5GU□RT 5IK120GU-S3F□/5GU□RT
 5IK120GU-EF□/5GU□RT 5IK120GU-HF□/5GU□RT



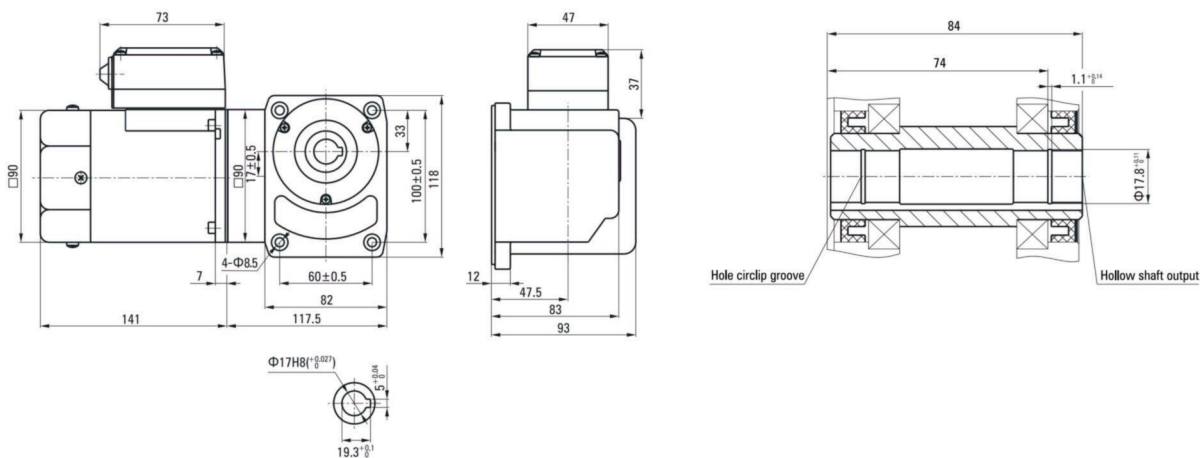
WORM GEAR RIGHT ANGLE

Allowance Torque Unit: Upside (N.m) / Belowside (kgf.cm)

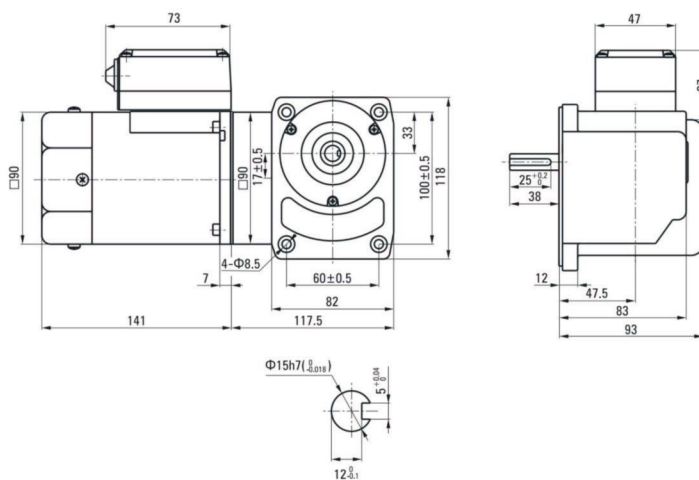
Type	Gear Ratio	7.5	9	12.5	15	18	25	30	36	50	60	75	90	100	120	150	180	
		Speed/r/min	50Hz	60Hz	50Hz	60Hz	50Hz	60Hz	50Hz	60Hz	50Hz	60Hz	50Hz	60Hz	50Hz	60Hz	50Hz	60Hz
5K120GU-AF□ 5K120GU-EF□ 5K120GU-CF□ 5K120GU-HF□ 5K120GU-SF□ 5K120GU-S3F□	5GU□RH 5GU□RA	Allowance Torque	2.78	3.34	4.64	5.57	6.68	9.28	11.1	13.4	18.6	20.0	20.0	20.0	20.0	20.0	20.0	20.0
			28.4	34.1	47.4	56.8	68.2	94.7	114	136	189	200	200	200	200	200	200	200
			2.25	2.69	3.74	4.49	5.39	7.49	8.98	10.8	15.0	18.0	20.0	20.0	20.0	20.0	20.0	20.0
			22.9	27.5	38.2	45.8	55.0	76.4	91.7	110	153	183	200	200	200	200	200	200

Motor Size Chart

5K120GU-AF□/5GU□RH 5K120GU-CF□/5GU□RH 5K120GU-SF□/5GU□RH 5K120GU-S3F□/5GU□RH
 5K120GU-EF□/5GU□RH 5K120GU-HF□/5GU□RH

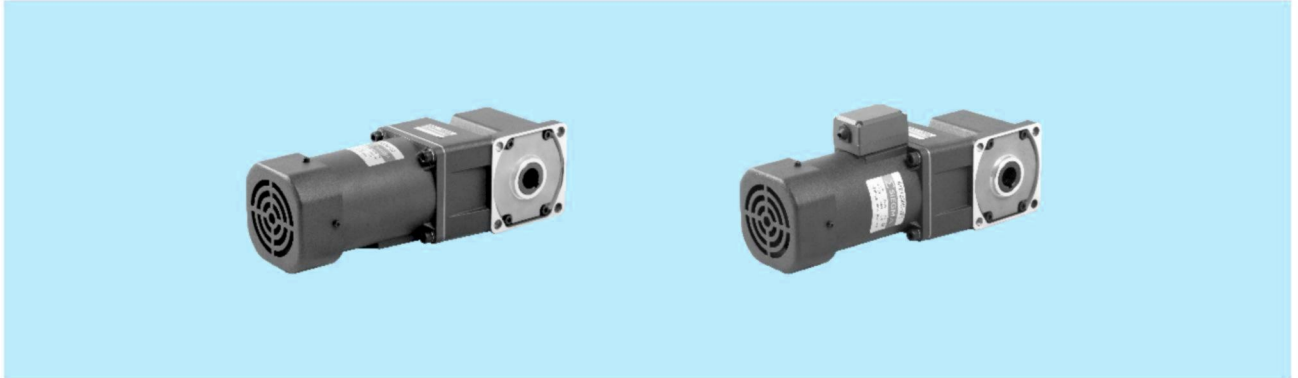


5K120GU-AF□/5GU□RA 5K120GU-CF□/5GU□RA 5K120GU-SF□/5GU□RA 5K120GU-S3F□/5GU□RA
 5K120GU-EF□/5GU□RA 5K120GU-HF□/5GU□RA



INDUCTION MOTORS

■ 120W □ 104mm



■ Specs Continuous Rating

Model · Type Upper:Pinion Shaft Below:Round Shaft		Output power W	Voltage V	Frequency Hz	Current A	Starting Torque mN.m	Rated Torque mN.m	Rated Speed r/min	Capacitor μF
Lead Wire Type Dimensions①	Terminal Box Type Dimensions②								
6IK120GU-AF	6IK120GU-AFT	120	1ph 100	50	2.10	600	930	1250	30
				60	2.50		750	1550	
6IK120GU-EF	6IK120GU-EFT	120	1ph 110	60	1.70	600	750	1550	20
			1ph 120		1.80				
6IK120GU-CF	6IK120GU-CFT	120	1ph 220	50	0.95	750	930	1250	8.0
			1ph 230						
6IK120GU-HF	6IK120GU-HFT	120	1ph 220	60	0.95	700	750	1550	8.0
			1ph 230		1.00				
6IK120GU-SF	6IK120GU-SFT	120	3ph 220	50	0.75	2200	890	1300	-
				60	0.70	2000	730	1600	
6IK120GU-S3F	6IK120GU-S3FT	120	3ph 380	50	0.43	2200	890	1300	-
				60	0.40	2000	730	1600	

● When the motor is approved under various safety standards, the model name on the nameplate is the approved model name.

● Note: "-A" it means the voltage 110V, the assembly capacitor value it is according to the label.

■ Gear Motor-Torque Table

● Gearhead and mid-gearbox can be sold separately. Enter the code that represents the terminal box type (T) in the box (□) within the model name.

● Enter the gear ratio in the box (□) within the model name.

The colored background indicates the same rotating direction of the motor while the rotating direction of others are opposite.

● The speed is calculated by dividing the motor's synchronous speed (50Hz:1500r/min, 60Hz:1800r/min) by the gear ratio. The actual speed is 2%~20% less than the displayed value, depending on the size of the load.

● To reduce the speed beyond the gear ratio in the table, attach a mid-gearbox (gear ratio:10) between the gearhead and motor. In that case, the permissible torque is 60N·m.

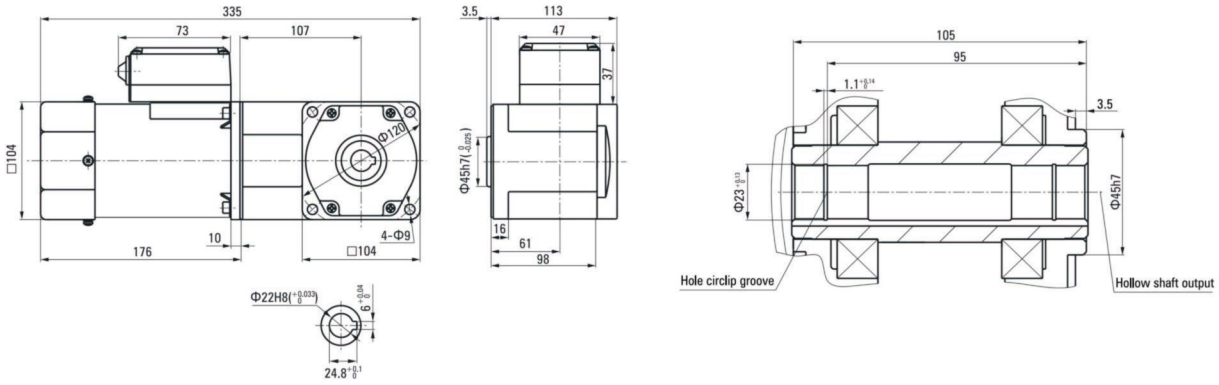
SPIRAL BEVEL RIGHT ANGLE

Allowance Torque Unit: Upside (N.m) / Belowside (kgf.cm)

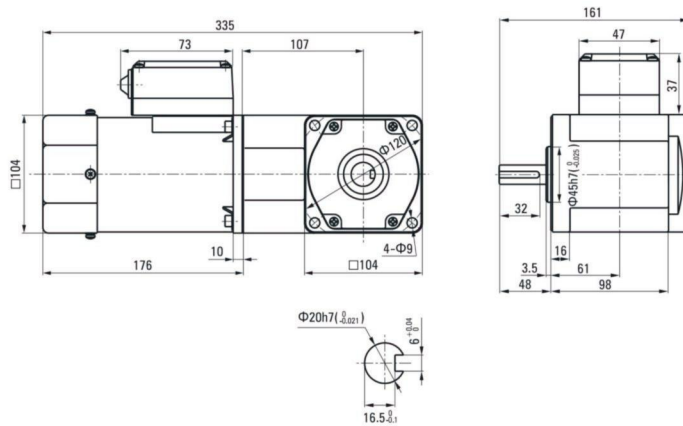
Type	Gear Ratio	Allowance Torque																
		7.5	9	12.5	15	18	25	30	36	50	60	75	90	100	120	150	180	
Motor/Gearhead	Speedr/min																	
	50Hz	200	166	120	100	83	60	50	42	30	25	20	16	15	12	10	8	
	60Hz	240	200	144	120	100	72	60	50	36	30	24	20	18	15	12	10	
6IK120GU-AF□	6GU□RC 6GU□RT	Allowance Torque	50Hz	4.26	5.68	7.89	9.47	11.4	15.8	18.9	22.7	28.4	34.1	42.6	51.1	56.8	60.0	60.0
6IK120GU-EF□			60Hz	43.5	58.0	80.5	96.6	116	161	193	232	290	348	435	522	580	600	600
6IK120GU-CF□			50Hz	3.44	4.58	6.36	7.64	9.16	12.7	15.3	18.3	22.9	27.5	34.4	41.2	45.8	55.0	60.0
6IK120GU-HF□			60Hz	35.1	46.7	64.9	77.9	93.5	130	156	187	234	280	351	421	467	561	600
6IK120GU-SF□																		

Motor Size Chart

6IK120GU-AF□/6GU□RC 6IK120GU-CF□/6GU□RC 6IK120GU-SF□/6GU□RC 6IK120GU-S3F□/6GU□RC
 6IK120GU-EF□/6GU□RC 6IK120GU-HF□/6GU□RC

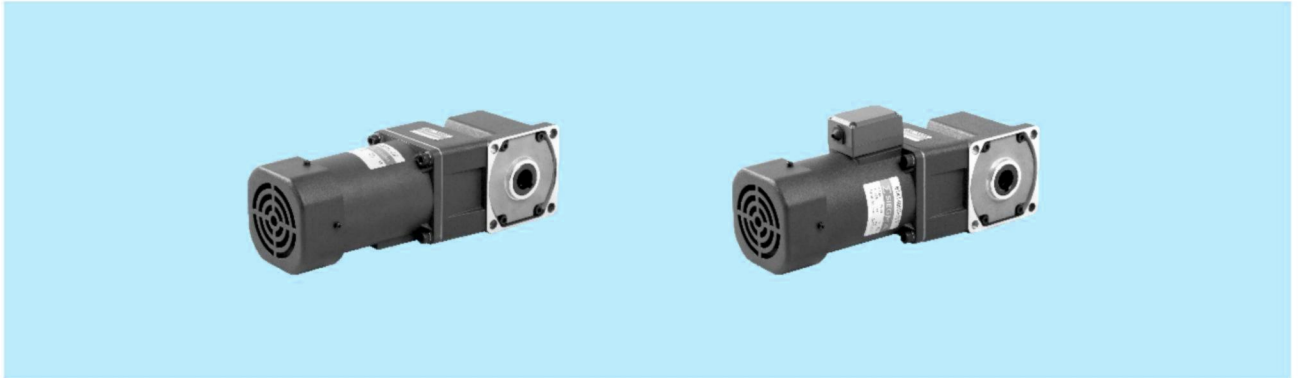


6IK120GU-AF□/6GU□RT 6IK120GU-CF□/6GU□RT 5IK120GU-SF□/6GU□RT 5IK120GU-S3F□/6GU□RT
 6IK120GU-EF□/6GU□RT 6IK120GU-HF□/6GU□RT



INDUCTION MOTORS

■ 140W □ 104mm



Specs Continuous Rating

Model · Type Upper:Pinion Shaft Below:Round Shaft		Output power W	Voltage V	Frequency Hz	Current A	Starting Torque mN.m	Rated Torque mN.m	Rated Speed r/min	Capacitor μF
Lead Wire Type Dimensions①	Terminal Box Type Dimensions②								
6IK140GU-AF	6IK140GU-AFT	140	1ph 100	50	2.70	700	1080	1250	35
				60	3.00		870	1550	
6IK140GU-EF	6IK140GU-EFT	140	1ph 110	60	1.80	700	850	1600	25
			1ph 120		1.95				
6IK140GU-CF	6IK140GU-CFT	140	1ph 220	50	1.05	850	1040	1350	10
			1ph 230		1.15				
6IK140GU-HF	6IK140GU-HFT	140	1ph 220	60	1.05	750	850	1600	10
			1ph 230		1.15				
6IK140GU-SF	6IK140GU-SFT	140	3ph 220	50	0.85	2700	1080	1250	-
				60	0.75	2200	870	1550	
6IK140GU-S3F	6IK140GU-S3FT	140	3ph 380	50	0.49	2700	1080	1250	-
				60	0.43	2200	870	1550	

● When the motor is approved under various safety standards, the model name on the nameplate is the approved model name.

● Note: "-A" it means the voltage 110V, the assembly capacitor value it is according the label.

Gear Motor-Torque Table

● Gearhead and mid-gearbox can be sold separately. Enter the code that represents the terminal box type (T) in the box (□) within the model name.

● Enter the gear ratio in the box (□) within the model name.

The colored background indicates the same rotating direction of the motor while the rotating direction of others are opposite.

● The speed is calculated by dividing the motor's synchronous speed (50Hz:1500r/min、60Hz:1800r/min) by the gear ratio. The actual speed is 2%~20% less than the displayed value, depending on the size of the load.

● To reduce the speed beyond the gear ratio in the table, attach a mid-gearbox (gear ratio:10) between the gearhead and motor. In that case, the permissible torque is 60N·m.

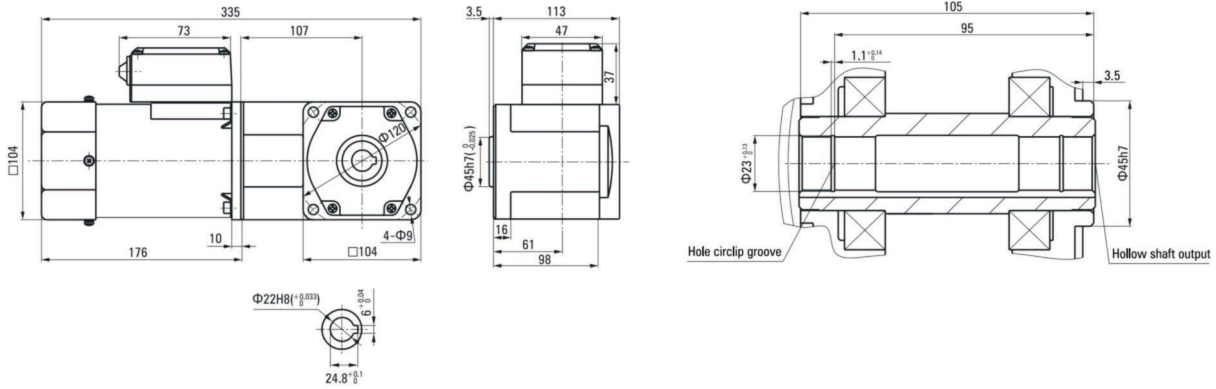
SPIRAL BEVEL RIGHT ANGLE

Allowance Torque Unit: Upside (N.m) / Belowside (kgf.cm)

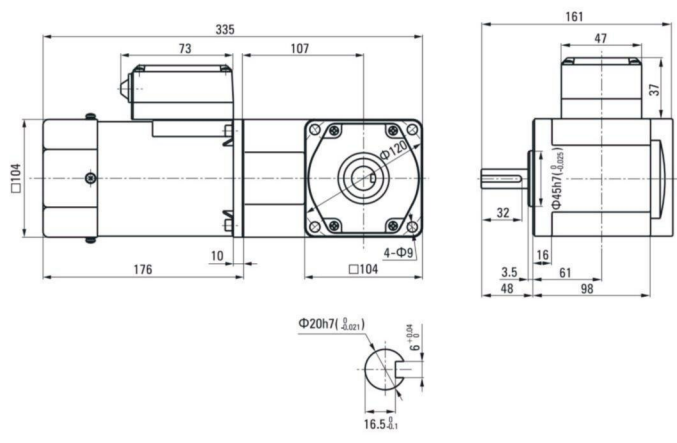
Type	Gear Ratio	Speed/r/min	7.5	9	12.5	15	18	25	30	36	50	60	75	90	100	120	150	180			
			50Hz	200	166	120	100	83	60	50	42	30	25	20	16	15	12	10	8		
Motor/Gearhead		60Hz	240	200	144	120	100	72	60	50	36	30	24	20	18	15	12	10			
6IK140GU-AF□	6GU□RC 6GU□RT	Allowance Torque	50Hz	4.97	6.63	9.21	11.0	13.3	18.4	22.1	26.5	33.1	39.8	49.7	59.6	60.0	60.0	60.0	60.0		
6IK140GU-EF□			60Hz	50.7	67.6	93.9	113	135	188	225	271	338	406	507	600	600	600	600	600	600	
6IK140GU-CF□			50Hz	4.01	5.34	7.42	8.91	10.7	14.8	17.8	21.4	26.7	32.1	40.1	48.1	53.4	60.0	60.0	60.0	60.0	
6IK140GU-HF□			60Hz	40.9	54.5	75.8	90.9	109	152	182	218	273	327	409	491	545	600	600	600	600	
6IK140GU-SF□																					
6IK140GU-S3F□																					

Motor Size Chart

6IK140GU-AF□/6GU□RC	6IK140GU-CF□/6GU□RC	5IK140GU-SF□/6GU□RC	5IK140GU-S3F□/6GU□RC
6IK140GU-EF□/6GU□RC	6IK140GU-HF□/6GU□RC		

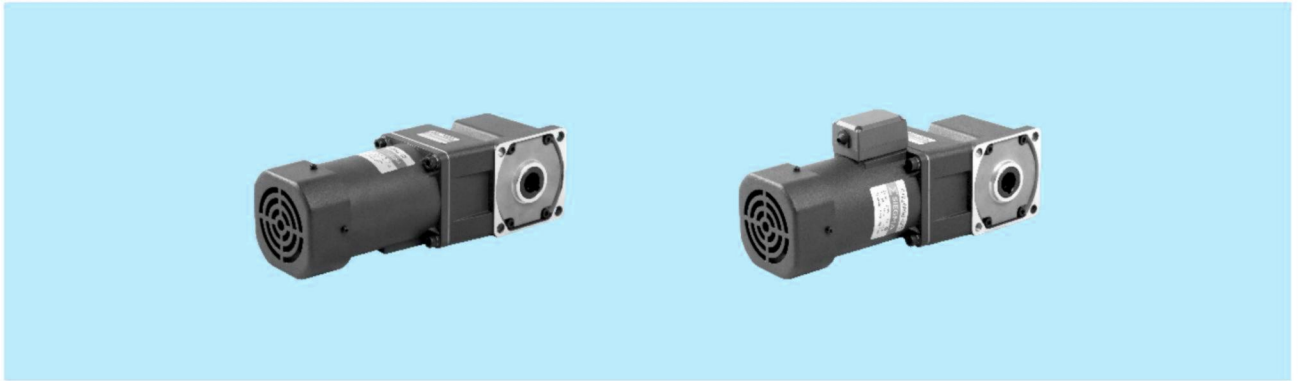


6IK140GU-AF□/6GU□RT	6IK140GU-CF□/6GU□RT	5IK140GU-SF□/6GU□RT	5IK140GU-S3F□/6GU□RT
6IK140GU-EF□/6GU□RT	6IK140GU-HF□/6GU□RT		



INDUCTION MOTORS

■ 200W □ 104mm



Specs Continuous Rating

Model · Type Upper:Pinion Shaft Below:Round Shaft		Output power W	Voltage V	Frequency Hz	Current A	Starting Torque mN.m	Rated Torque mN.m	Rated Speed r/min	Capacitor μF
Lead Wire Type Dimensions①	Terminal Box Type Dimensions②								
6IK200GU-AF	6IK200GU-AFT	200	1ph 100	50	3.20	900	1520	1250	45
				60	3.50		1230	1550	
6IK200GU-EF	6IK200GU-EFT	200	1ph 110	60	2.75	850	1230	1550	35
			1ph 120		2.65				
6IK200GU-CF	6IK200GU-CFT	200	1ph 220	50	1.40	1000	1520	1250	10
			1ph 230						
6IK200GU-HF	6IK200GU-HFT	200	1ph 220	60	1.40	900	1230	1550	10
			1ph 230						
6IK200GU-SF	6IK200GU-SFT	200	3ph 220	50	1.20	3400	1520	1250	-
				60	1.00	2700	1230	1550	
6IK200GU-S3F	6IK200GU-S3FT	200	3ph 380	50	0.69	3400	1520	1250	-
				60	0.58	2700	1230	1550	

● When the motor is approved under various safety standards, the model name on the nameplate is the approved model name.

● Note: "-A" it means the voltage 110V, the assembly capacitor value it is according the label.

Gear Motor-Torque Table

● Gearhead and mid-gearbox can be sold separately. Enter the code that represents the terminal box type (T) in the box (□) within the model name.

● Enter the gear ratio in the box (□) within the model name.

The colored background indicates the same rotating direction of the motor while the rotating direction of others are opposite.

● The speed is calculated by dividing the motor's synchronous speed (50Hz:1500r/min, 60Hz:1800r/min) by the gear ratio. The actual speed is 2%~20% less than the displayed value, depending on the size of the load.

● To reduce the speed beyond the gear ratio in the table, attach a mid-gearbox (gear ratio:10) between the gearhead and motor. In that case, the permissible torque is 60N·m.

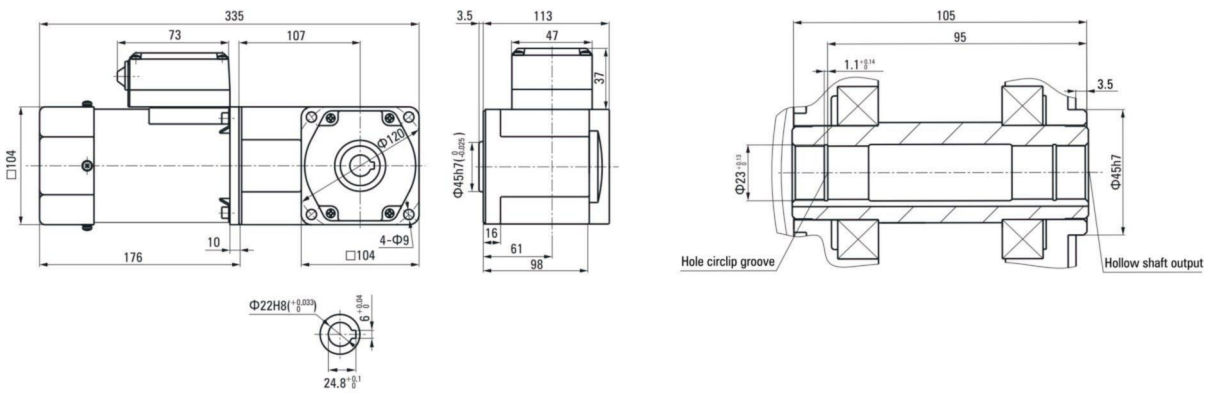
SPIRAL BEVEL RIGHT ANGLE

Allowance Torque Unit: Upside (N.m) / Belowside (kgf.cm)

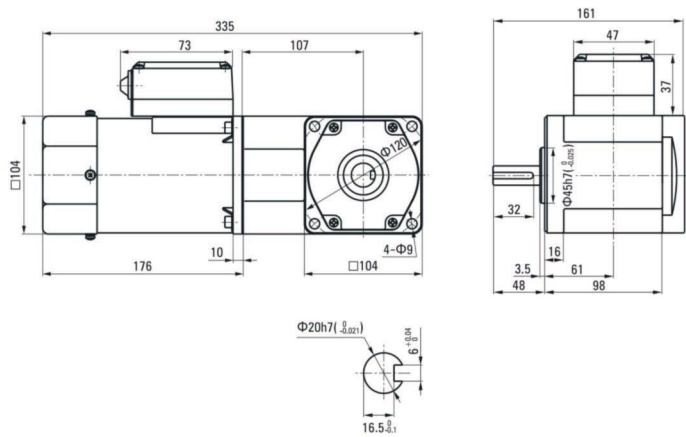
Type Motor/Gearhead	Gear Ratio	Speedr/min	7.5	9	12.5	15	18	25	30	36	50	60	75	90	100	120	150	180	
			50Hz	200	166	120	100	83	60	50	42	30	25	20	16	15	12	10	8
		60Hz	240	200	144	120	100	72	60	50	36	30	24	20	18	15	12	10	8
6IK200GU-AF□ 6IK200GU-EF□ 6IK200GU-CF□ 6IK200GU-HF□ 6IK200GU-SF□ 6IK200GU-S3F□	6GU□RC 6GU□RT	Allowance Torque	50Hz	9.28	11.1	13.9	16.7	20.1	25.2	30.3	36.3	50.4	60.0	60.0	60.0	60.0	60.0	60.0	60.0
			60Hz	94.7	114	142	171	205	257	30.9	370	515	600	600	600	600	600	600	600
			50Hz	7.49	8.98	11.2	13.5	16.2	20.3	24.4	29.3	40.7	48.8	60.0	60.0	60.0	60.0	60.0	60.0
			60Hz	76.4	91.7	115	138	165	207	249	299	415	498	600	600	600	600	600	600

Motor Size Chart

6IK200GU-AF□/6GU□RC 6IK200GU-CF/6GU□RC 6IK200GU-SF□/6GU□RC 6IK200GU-S3F□/6GU□RC
 6IK200GU-EF□/6GU□RC 6IK200GU-HF/6GU□RC



6IK200GU-AF□/6GU□RT 6IK200GU-CF/6GU□RT 6IK200GU-SF□/6GU□RT 6IK200GU-S3F□/6GU□RT
 6IK200GU-EF□/6GU□RT 6IK200GU-HF/6GU□RT



Wiring Diagram

- The direction of motor rotation is as viewed from the shaft end of motor. CW represents the clockwise direction, while CCW represents the counterclockwise direction.
- Name indicated in the list is pinion shaft type, also valid for the equivalent round shaft type.

Lead Wire Type		
6IK200GU-AF, 6IK200GU-EF, 6IK200GU-HF, 6IK200GU-CF		6IK200GU-SF(S3F)
<p>CW</p> <p>Capacitance</p>	<p>CCW</p> <p>Capacitance</p>	<p>CW</p> <p>CCW To change the rotation direction change any two connections among R, S and T</p>
Terminal Box Type		
6IK200GU-AFT, 6IK200GU-EFT, 6IK200GU-HFT, 6IK200GU-CFT		6IK200GU-SFT(3FT)
<p>CW</p> <p>Capacitance</p>	<p>CCW</p> <p>Capacitance</p>	<p>CW</p> <p>CCW To change the rotation direction change any two connections among U, V and W</p>

Note:

Change the direction of single-phase motor rotation only after bring the motor to a stop.
 If an attempt is made to change the direction of rotation while the motor is rotating, motor may ignore reversing command or change its direction of rotation after some delay.