

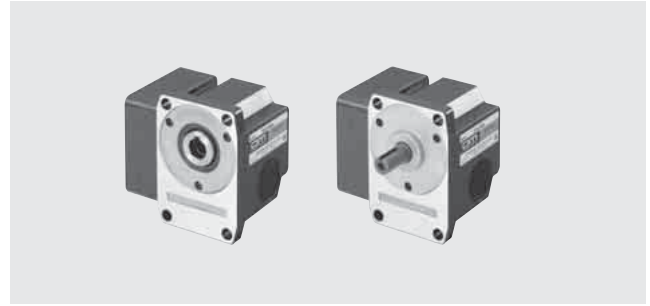
Standard AC Motors

Right-Angle Gearheads

Right-Angle Gearheads

Right-Angle Gearheads

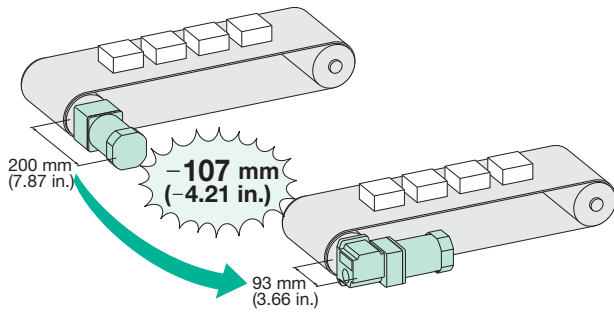
Right-angle gearheads are flange-mounted gearheads that use worm gears and special helical gears. They allow motors to be installed at right angles to the axis of equipment such as belt conveyors. They are available in hollow shaft **RH** and solid shaft **RAA** types and are ideal for keeping equipment compact.



Features

● Ideal for Space-Saving Solution

The output shaft is perpendicular to the motor shaft, so the motor can be installed perpendicularly to the axis being driven, enabling space-saving.



5IK90GE-AW2U motor and gearhead with a gear ratio of 18:1

Hollow shaft gearheads allow additional space savings and simpler mechanism designs due to the removal of some mechanical parts as they do not require couplings for mounting.

● Mounting Using Torque Arm

Usually, hollow shaft gearheads are locked with a torque arm when mounted so the gearhead does not rotate from the reactive force of the load. The torque arm is available as an accessory for the **5GE□RH** and **5GU□RH**. Torque arm → Page A-291

● Wide Variation

A wide variety of gear ratios (20 types, from **3** to **180**) are available. The proper gear ratio can be selected as the same with ordinary gearheads. The maximum permissible torques are also the same as for ordinary gearheads.

● Solid shaft of **GE** pinion gearheads come with a tapped hole at the tip of the shaft.

● RoHS RoHS-Compliant

Right-Angle Gearheads conform to the RoHS Directive that prohibits the use of six chemical substances including lead and cadmium.

● Details of RoHS Directive → Page G-38

Applicable Products

The right-angle gearheads can be used with pinion shaft type motors listed below.

Applicable Products	Series	Output Power	Pages
Induction Motors	World K Series	25 W (1/30 HP), 40 W (1/19 HP), 60 W (1/12 HP), 90 W (1/8 HP)	A-36, A-42, A-48, A-54
Reversible Motors	World K Series	25 W (1/30 HP), 40 W (1/19 HP), 60 W (1/12 HP), 90 W (1/8 HP)	A-92, A-96, A-100, A-104
Electromagnetic Brake Motors	World K Series	25 W (1/30 HP), 40 W (1/19 HP), 60 W (1/12 HP), 90 W (1/8 HP)	A-124, A-128, A-133, A-138
Speed Control Systems	FE100 + World K Series Induction Motors	25 W (1/30 HP), 40 W (1/19 HP), 60 W (1/12 HP), 90 W (1/8 HP)	B-156
	ES01/ES02 + World K Series Speed Control Motors	25 W (1/30 HP), 40 W (1/19 HP), 60 W (1/12 HP)	B-172
	US Series	25 W (1/30 HP), 40 W (1/19 HP), 60 W (1/12 HP), 90 W (1/8 HP)	B-202

● The right-angle gearheads cannot be used with synchronous motors and torque motors.

Product Number Code

5 GE 25 RH

① ② ③ ④

①	Gearhead Frame Size	4 : 80 mm (3.15 in.) 5 : 90 mm (3.54 in.)
②	Type of Pinion	GN : GN Type Pinion GE : GE Type Pinion GU : GU Type Pinion
③	Gear Ratio	(Example) 25 : Gear Ratio of 25:1
④		RH : Right-Angle, Hollow Shaft Gearhead, RoHS-Compliant RAA : Right-Angle, Solid Shaft Gearhead, RoHS-Compliant

Product Line

● Hollow Shaft Type (RoHS)

Gearhead Model	Gear Ratio
4GN□RH	3, 3.6, 5, 6, 7.5, 9, 12.5, 15, 18, 25, 30, 36, 50, 60, 75, 90, 100, 120, 150, 180
5GN□RH	
5GE□RH	
5GU□RH	

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

The following items are included in each product.
Gearhead, Mounting Screws, Parallel Key, Safety Cover (with screws), Gasket, Operating Manual

● Solid Shaft Type (RoHS)

Gearhead Model	Gear Ratio
4GN□RAA	3, 3.6, 5, 6, 7.5, 9, 12.5, 15, 18, 25, 30, 36, 50, 60, 75, 90, 100, 120, 150, 180
5GN□RAA	
5GE□RAA	
5GU□RAA	

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

The following items are included in each product.
Gearhead, Mounting Screws, Parallel Key*, Gasket, Operating Manual
* Only for **5GE□RAA** and **5GU□RAA**

Specifications

Gearhead Model	Gear Ratio	Maximum Permissible Torque		Permissible Overhung Load				Permissible Thrust Load	
				10 mm (0.39 in.) from Shaft End		20 mm (0.79 in.) from Shaft End			
		N-m	lb-in	N	lb.	N	lb.	N	lb.
4GN□RH	3~180	8	70	250*	56*	220*	49*	100	22
5GN□RH	3~180	10	88	350*	78*	310*	69*	200	45
5GE□RH	3~180	20	177	560*	126*	500*	112*	250	56
5GU□RH	3~180	20	177	560*	126*	500*	112*	250	56
4GN□RAA	3~18	8	70	100	22	150	33	100	22
	25~180			200	45	300	67		
5GN□RAA	3~18	10	88	250	56	350	78	200	45
	25~180			300	67	450	101		
5GE□RAA	3~9	20	177	400	90	500	112	250	56
	12.5~25			450	101	600	135		
	30~180			500	112	700	157		
5GU□RAA	3~9	20	177	400	90	500	112	250	56
	12.5~25			450	101	600	135		
	30~180			500	112	700	157		

* With the hollow shaft type, the permissible overhung load is measured from the flange-mounting surface.

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

Note:

● The right-angle gearhead does not have self-locking capabilities.

■ Gearmotor – Torque Table

The permissible torque shown on pages A-248 to A-258 cover most motor combinations. For motor combinations not covered, use the efficiency value in the table below for your calculations. When making a selection, remember that the efficiency at starting is lower than at the rated speed.

$$\text{Permissible torque } T_G = T_M \times i \times \eta$$

T_G : Permissible torque of gearhead
 T_M : Motor torque
 i : Gearhead gear ratio
 η : Gearhead efficiency

● Gearhead Efficiency

Gear Ratio		3	3.6	5	6	7.5	9	12.5	15	18	25	30	36	50	60	75	90	100	120	150	180
Gearhead Model	Rated	40%			50%			60%													
	Starting	40%			50%			54%													
4GN□RH	Rated	50%			68%			60%													
	Starting	50%			60%			54%													
5GN□RH	Rated	50%			68%			60%													
	Starting	50%			60%			54%													
5GE□RH	Rated	50%			68%			60%													
	Starting	50%			60%			54%													
5GU□RH	Rated	50%			68%			60%													
	Starting	50%			60%			54%													
4GN□RAA	Rated	50%			68%			60%													
	Starting	50%			60%			54%													
5GN□RAA	Rated	68%			60%			60%													
	Starting	60%			60%			54%													
5GE□RAA	Rated	68%			60%			60%													
	Starting	60%			60%			54%													
5GU□RAA	Rated	68%			60%			60%													
	Starting	60%			60%			54%													

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

Note:

● If used with **FE100/FE200**, not all gear ratios are available. Check the list of permissible torque on pages A-251.

■ Calculating Permissible Overhung Load of Hollow Shaft Types

When the end of the shaft being driven is not supported by a bearing in the figure shown below, calculate the permissible overhung load using the following formula.

(This mechanism is the most demanding in terms of overhung load.)

● 4GN□RH

$$\text{Permissible overhung load } W [\text{N (lb.)}] = \frac{59.5 \text{ mm (2.34 in.)}}{59.5 \text{ mm (2.34 in.)} + L_p} \times 295 \text{ N (66 lb.)}^*$$

* 295 N (66 lb.): Permissible overhung load at the flange mounting surface

● 5GN□RH

$$\text{Permissible overhung load } W [\text{N (lb.)}] = \frac{70 \text{ mm (2.76 in.)}}{70 \text{ mm (2.76 in.)} + L_p} \times 400 \text{ N (90 lb.)}^*$$

* 400 N (90 lb.): Permissible overhung load at the flange mounting surface

● 5GE□RH

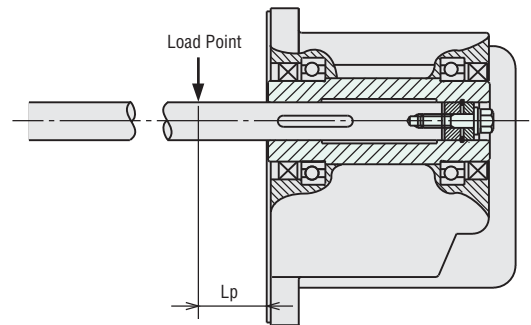
$$\text{Permissible overhung load } W [\text{N (lb.)}] = \frac{68.5 \text{ mm (2.70 in.)}}{68.5 \text{ mm (2.70 in.)} + L_p} \times 645 \text{ N (145 lb.)}^*$$

* 645 N (145 lb.): Permissible overhung load at the flange mounting surface

● 5GU□RH

$$\text{Permissible overhung load } W [\text{N (lb.)}] = \frac{68.5 \text{ mm (2.70 in.)}}{68.5 \text{ mm (2.70 in.)} + L_p} \times 645 \text{ N (145 lb.)}^*$$

* 645 N (145 lb.): Permissible overhung load at the flange mounting surface



L_p [mm (in.)]: Distance from flange mounting surface to overhung load point

■ Permissible Load Inertia J of Gearhead

→ Page A-17

Dimensions Unit = mm (in.)

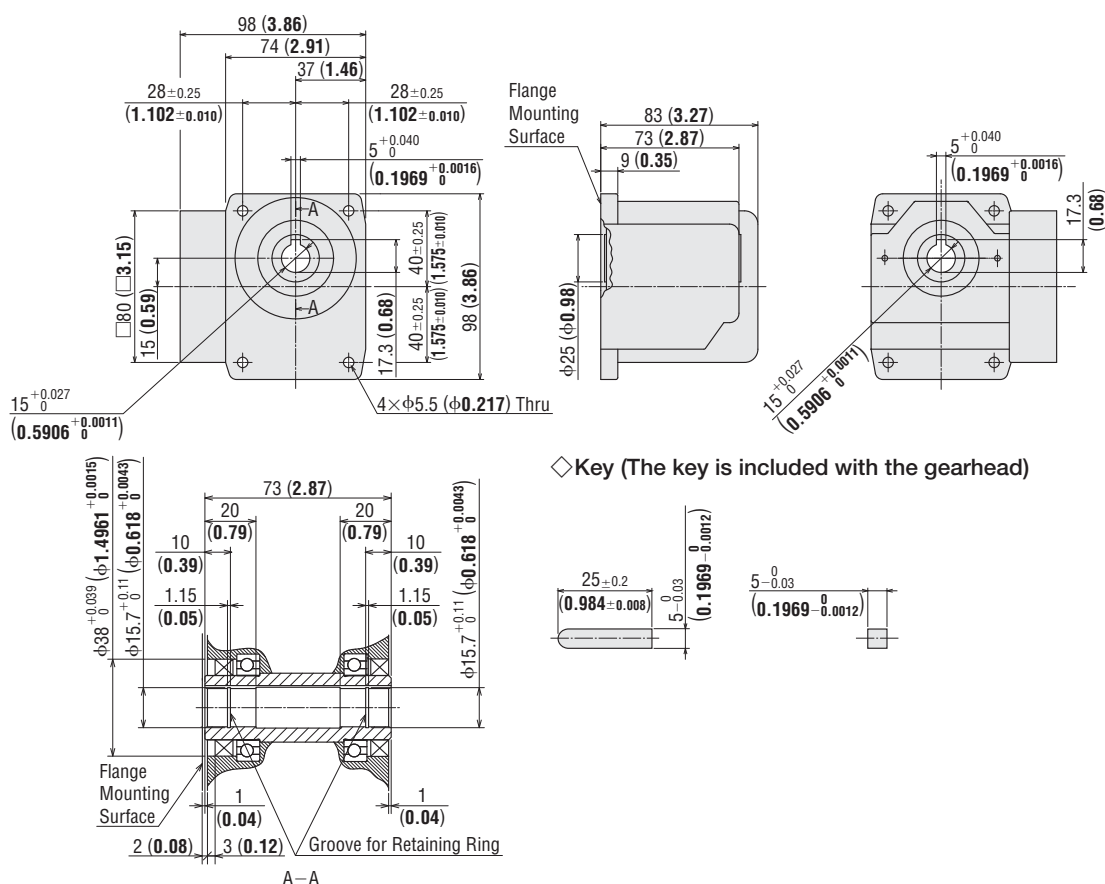
- Mounting screws are included with gearheads. Dimensions for mounting screws → Page A-310
- Enter the gear ratio in the box () within the model name.

◇ Hollow Shaft Type

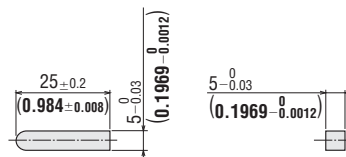
4GN RH

Mass: 1.6 kg (3.5 lb.)

DXF A254



◇ Key (The key is included with the gearhead)

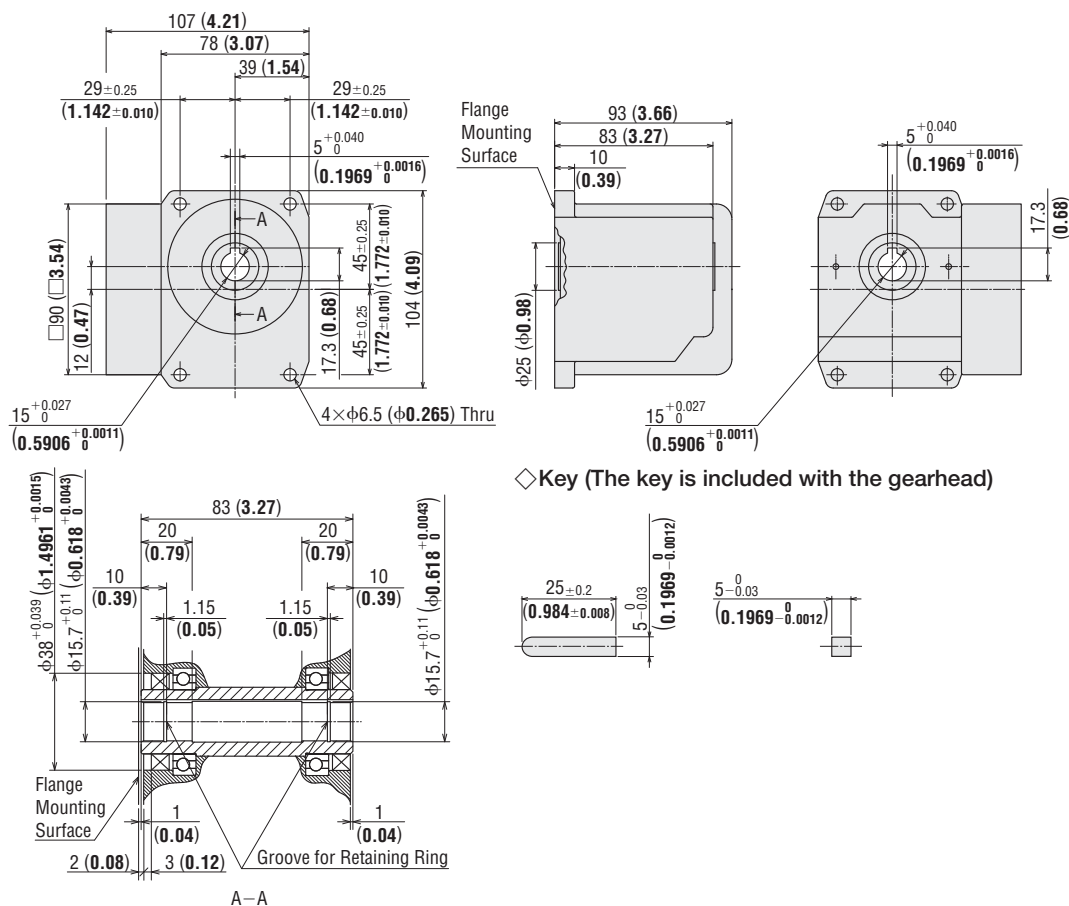


◇ Hollow Shaft Type

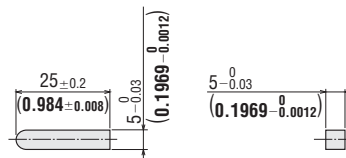
5GN RH

Mass: 2.0 kg (4.4 lb.)

DXF A229



◇ Key (The key is included with the gearhead)

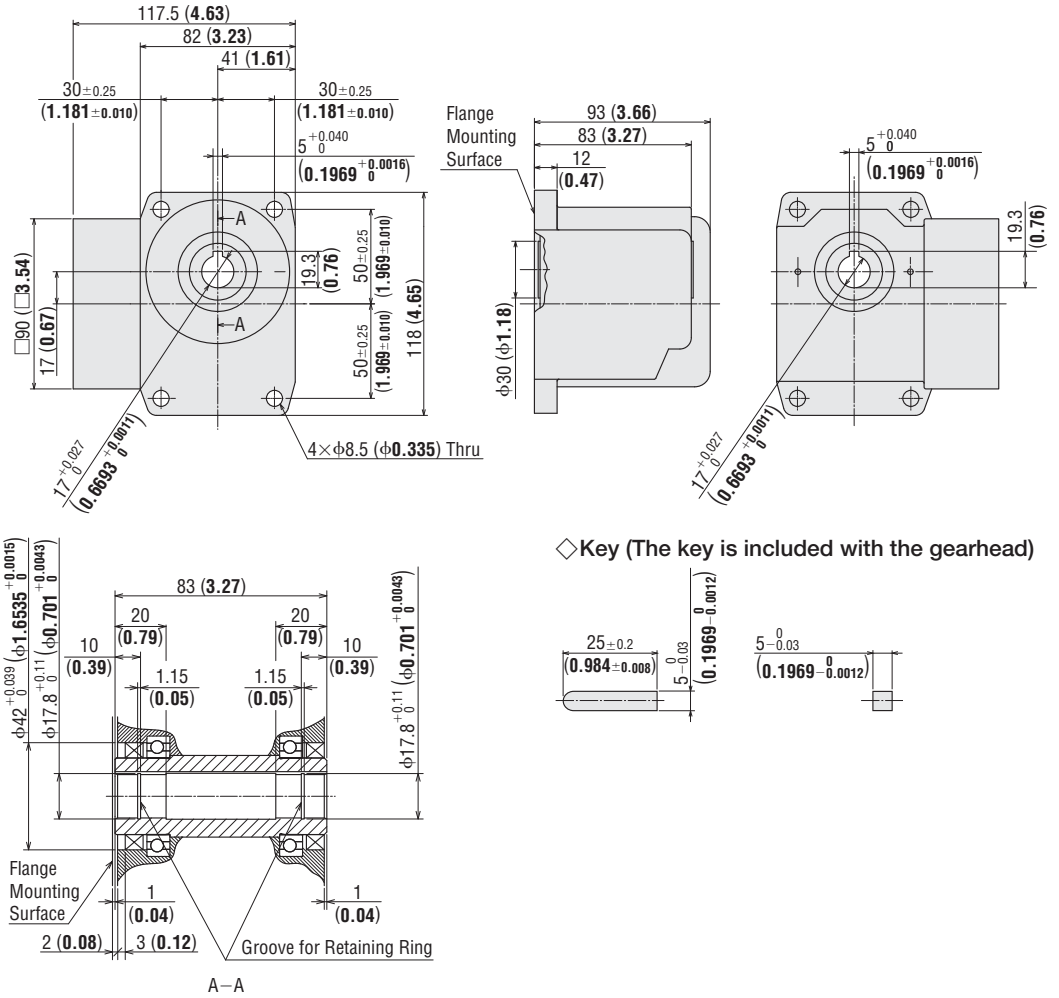


◇ Hollow Shaft Type

5GE□RH

Mass: 2.5 kg (5.5 lb.)

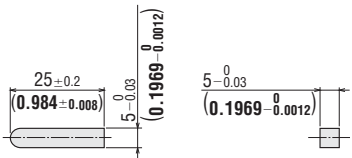
DXF A230



◇ Key (The key is included with the gearhead)

DXF A230

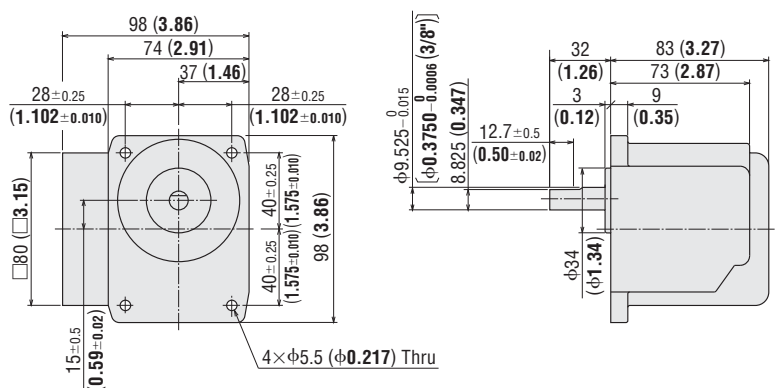
◇ **Key** (The key is included with the gearhead)



◆ Solid Shaft Type

4GN□RAA

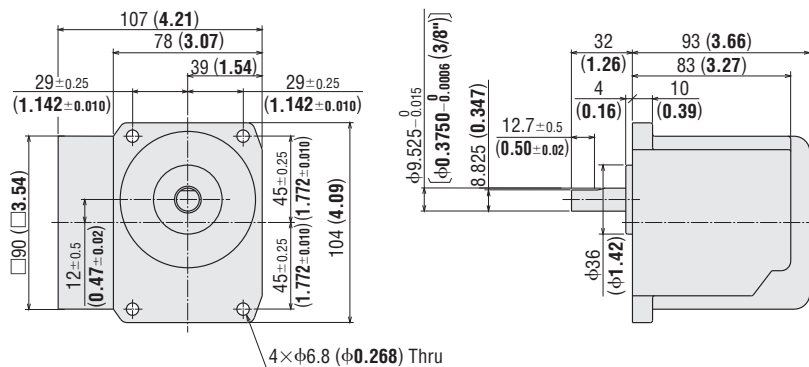
Mass: 1.6 kg (3.5 lb.)

DXF A255U


◆ Solid Shaft Type

5GN□RAA

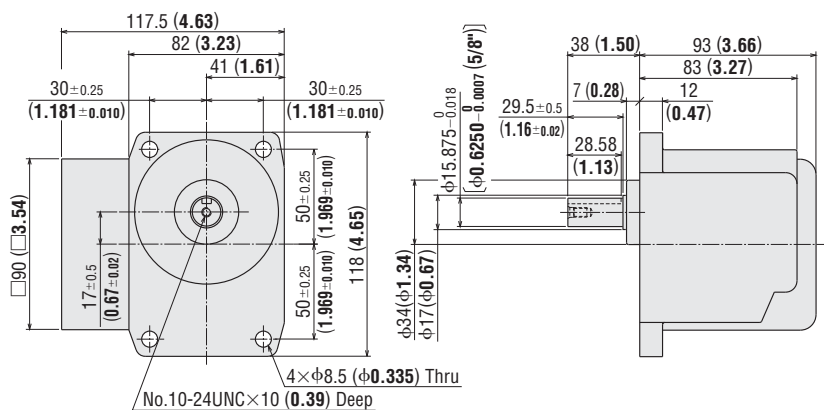
Mass: 2.0 kg (4.4 lb.)

DXF A025U


◆ Solid Shaft Type

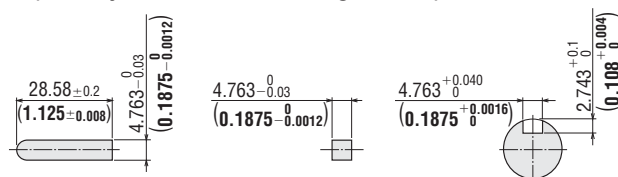
5GE□RAA

Mass: 2.5 kg (5.5 lb.)

DXF A512U


◆ Key and Key Slot

(The key is included with the gearhead)



Gearmotor – Torque Table

- 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 speed is calculated by dividing the motor's synchronous speed by the gear ratio.
The actual speed is 2~20% less than the displayed value, depending on the load.
- The transfer efficiency at starting is lower than at the rated speed, so output torque is lower.

World K Series Induction Motors

◇ Hollow Shaft Type Single-Phase 115 VAC 60 Hz / 230 VAC 60 Hz

- All output shafts rotate opposite to the direction of motor shaft rotation.

Unit = Upper values: N·m/Lower values: lb-in

Model	Speed r/min	600	500	360	300	240	200	144	120	100	72	60	50	36	30	24	20	18	15	12	10
Motor/Gearhead	Gear Ratio	3	3.6	5	6	7.5	9	12.5	15	18	25	30	36	50	60	75	90	100	120	150	180
4IK25GN-AW2□U 4IK25GN-FCH 4IK25GN-CW2□E 4IK25GN-ECH /4GN□RH	Rated	0.20	0.24	0.34	0.41	0.64	0.77	1.3	1.5	1.8	2.6	3.1	3.7	5.1	6.1	7.7	8	8	8	8	8
		1.77	2.1	3.0	3.6	5.6	6.8	11.5	13.2	15.9	23	27	32	45	53	68	70	70	70	70	70
	Starting	0.14	0.17	0.24	0.29	0.45	0.54	0.81	0.97	1.2	1.6	1.9	2.3	3.2	3.9	4.9	5.8	6.5	7.8	8	8
		1.23	1.50	2.1	2.5	3.9	4.7	7.1	8.5	10.6	14.1	16.8	20	28	34	43	51	57	69	70	70
5IK40GN-AW2□U 5IK40GN-FCH 5IK40GN-CW2□E 5IK40GN-ECH /5GN□RH	Rated	0.39	0.47	0.65	0.78	1.3	1.6	2.2	2.7	3.2	3.9	4.7	5.6	7.8	9.4	10	10	10	10	10	10
		3.4	4.1	5.7	6.9	11.5	14.1	19.4	23	28	34	41	49	69	83	88	88	88	88	88	88
	Starting	0.30	0.36	0.50	0.60	0.90	1.1	1.5	1.8	2.2	2.7	3.2	3.9	5.4	6.5	8.1	9.7	10	10	10	10
		2.6	3.1	4.4	5.3	7.9	9.7	13.2	15.9	19.4	23	28	34	47	57	71	85	88	88	88	88
5IK60GE-AW2□U 5IK60GE-FCH 5IK60GE-CW2□E 5IK60GE-ECH /5GE□RH	Rated	0.61	0.73	1.0	1.2	2.1	2.5	3.4	4.1	5.0	6.9	7.3	8.7	12.2	14.6	18.2	20	20	20	20	20
		5.3	6.4	8.8	10.6	18.5	22	30	36	44	61	64	76	107	129	161	177	177	177	177	177
	Starting	0.48	0.58	0.80	0.96	1.4	1.7	2.4	2.9	3.5	4.8	5.2	6.2	8.6	10.4	13.0	15.6	17.3	17.3	20	20
		4.2	5.1	7.0	8.4	12.3	15.0	21	25	30	42	46	54	76	92	115	138	153	153	177	177
5IK90GE-AW2□U 5IK90GE-FCH 5IK90GE-CW2□E 5IK90GE-ECH /5GE□RH	Rated 115 VAC	0.88	1.1	1.5	1.8	3.0	3.6	5.0	6.0	7.2	9.9	10.5	12.6	17.6	20	20	20	20	20	20	20
	Rated 230 VAC	7.7	9.7	13.2	15.9	26	31	44	53	63	87	92	111	155	177	177	177	177	177	177	177
	Starting	0.91	1.1	1.5	1.8	3.1	3.7	5.1	6.2	7.4	10.3	10.9	13.1	18.2	20	20	20	20	20	20	20
		8.0	9.7	13.2	15.9	27	32	45	54	65	91	96	115	161	177	177	177	177	177	177	177
	Starting	0.68	0.81	1.1	1.4	2.0	2.4	3.4	4.1	4.9	6.8	7.3	8.7	12.2	14.6	18.2	20	20	20	20	20
		6.0	7.1	9.7	12.3	17.7	21	30	36	43	60	64	76	107	129	161	177	177	177	177	177

◇ Solid Shaft Type Single-Phase 115 VAC 60 Hz / 230 VAC 60 Hz

- All output shafts rotate opposite to the direction of motor shaft rotation.

Unit = Upper values: N·m/Lower values: lb-in

Model	Speed r/min	600	500	360	300	240	200	144	120	100	72	60	50	36	30	24	20	18	15	12	10
Motor/Gearhead	Gear Ratio	3	3.6	5	6	7.5	9	12.5	15	18	25	30	36	50	60	75	90	100	120	150	180
4IK25GN-AW2□U 4IK25GN-FCH 4IK25GN-CW2□E 4IK25GN-ECH /4GN□RAA	Rated	0.26	0.31	0.43	0.51	0.64	0.77	1.3	1.5	1.8	2.6	3.1	3.7	5.1	6.1	7.7	8	8	8	8	8
		2.3	2.7	3.8	4.5	5.6	6.8	11.5	13.2	15.9	23	27	32	45	53	68	70	70	70	70	70
	Starting	0.18	0.22	0.30	0.36	0.45	0.54	0.81	0.97	1.2	1.6	1.9	2.3	3.2	3.9	4.9	5.8	6.5	7.8	8	8
		1.59	1.94	2.6	3.1	3.9	4.7	7.1	8.5	10.6	14.1	16.8	20	28	34	43	51	57	69	70	70
5IK40GN-AW2□U 5IK40GN-FCH 5IK40GN-CW2□E 5IK40GN-ECH /5GN□RAA	Rated	0.53	0.64	0.88	1.1	1.3	1.6	2.2	2.7	3.2	3.9	4.7	5.6	7.8	9.4	10	10	10	10	10	10
		4.6	5.6	7.7	9.7	11.5	14.1	19.4	23	28	34	41	49	69	83	88	88	88	88	88	88
	Starting	0.36	0.43	0.60	0.72	0.90	1.1	1.5	1.8	2.2	2.7	3.2	3.9	5.4	6.5	8.1	9.7	10	10	10	10
		3.1	3.8	5.3	6.3	7.9	9.7	13.2	15.9	19.4	23	28	34	47	57	71	85	88	88	88	88
5IK60GE-AW2□U 5IK60GE-FCH 5IK60GE-CW2□E 5IK60GE-ECH /5GE□RAA	Rated	0.83	0.99	1.4	1.7	2.1	2.5	3.4	4.1	5.0	6.9	7.3	8.7	12.2	14.6	18.2	20	20	20	20	20
		7.3	8.7	12.3	15.0	18.5	22	30	36	44	61	64	76	107	129	161	177	177	177	177	177
	Starting	0.58	0.69	0.96	1.2	1.4	1.7	2.4	2.9	3.5	4.8	5.2	6.2	8.6	10.4	13.0	15.6	17.3	17.3	20	20
		5.1	6.1	8.4	10.6	12.3	15.0	21	25	30	42	46	54	76	92	115	138	153	153	177	177
5IK90GE-AW2□U 5IK90GE-FCH 5IK90GE-CW2□E 5IK90GE-ECH /5GE□RAA	Rated 115 VAC	1.2	1.4	2.0	2.4	3.0	3.6	5.0	6.0	7.2	9.9	10.5	12.6	17.6	20	20	20	20	20	20	20
	Rated 230 VAC	10.6	12.3	17.7	21	26	31	44	53	63	87	92	111	155	177	177	177	177	177	177	177
	Starting	1.2	1.5	2.1	2.5	3.1	3.7	5.1	6.2	7.4	10.3	10.9	13.1	18.2	20	20	20	20	20	20	20
		10.6	13.2	18.5	22	27	32	45	54	65	91	96	115	161	177	177	177	177	177	177	177
	Starting	0.81	0.97	1.4	1.6	2.0	2.4	3.4	4.1	4.9	6.8	7.3	8.7	12.2	14.6	18.2	20	20	20	20	20
		7.1	8.5	12.3	14.1	17.7	21	30	36	43	60	64	76	107	129	161	177	177	177	177	177

● World K Series Reversible Motors

◇ Hollow Shaft Type Single-Phase 115 VAC 60 Hz / 230 VAC 60 Hz

● All output shafts rotate opposite to the direction of motor shaft rotation.

Unit = Upper values: N-m/Lower values: lb-in

Model Motor/Gearhead	Speed r/min Gear Ratio	600	500	360	300	240	200	144	120	100	72	60	50	36	30	24	20	18	15	12	10
		3	3.6	5	6	7.5	9	12.5	15	18	25	30	36	50	60	75	90	100	120	150	180
4RK25GN-AW2 □U 4RK25GN-CW2 □E /4GN □RH	Rated	0.20 1.77	0.24 2.1	0.34 3.0	0.41 3.6	0.64 5.6	0.77 6.8	1.3 11.5	1.5 13.2	1.8 15.9	2.6 23	3.1 27	3.7 32	5.1 45	6.1 53	7.7 68	8 70	8 70	8 70	8 70	8 70
	Starting	0.17 1.50	0.20 1.77	0.28 2.4	0.34 3.0	0.53 4.6	0.63 5.5	0.95 8.4	1.1 9.7	1.4 12.3	1.9 16.8	2.3 20	2.7 23	3.8 33	4.5 39	5.7 50	6.8 60	7.6 67	8 70	8 70	8 70
5RK40GN-AW2 □U 5RK40GN-CW2 □E /5GN □RH	Rated 115 VAC	0.41 3.6	0.49 4.3	0.68 6.0	0.81 7.1	1.4 12.3	1.7 15.0	2.3 20	2.8 24	3.3 29	4.1 36	4.9 43	5.8 51	8.1 71	9.7 85	10 88	10 88	10 88	10 88	10 88	10 88
	Rated 230 VAC	0.39 3.4	0.47 4.1	0.65 5.7	0.78 6.9	1.3 11.5	1.6 14.1	2.2 19.4	2.7 23	3.2 28	3.9 34	4.7 41	5.6 49	7.8 69	9.4 83	10 88	10 88	10 88	10 88	10 88	10 88
	Starting	0.39 3.4	0.47 4.1	0.65 5.7	0.78 6.9	1.2 10.6	1.4 12.3	2.0 17.7	2.3 20	2.8 24	3.5 30	4.2 37	5.1 45	7.0 61	8.4 74	10 88	10 88	10 88	10 88	10 88	10 88
5RK60GE-AW2 □U 5RK60GE-CW2 □E /5GE □RH	Rated	0.61 5.3	0.73 6.4	1.0 8.8	1.2 10.6	2.1 18.5	2.5 22	3.4 30	4.1 36	5.0 44	6.9 61	7.3 64	8.7 76	12.2 107	14.6 129	18.2 161	20 177	20 177	20 177	20 177	20 177
	Starting	0.57 5.0	0.68 6.0	0.95 8.4	1.1 9.7	1.7 15.0	2.1 18.5	2.9 25	3.4 30	4.1 36	5.7 50	6.2 54	7.4 65	10.3 91	12.3 108	15.4 136	18.5 163	20 177	20 177	20 177	20 177
5RK90GE-AW2 □U 5RK90GE-CW3 □E /5GE □RH	Rated 115 VAC	0.88 7.7	1.1 9.7	1.5 13.2	1.8 15.9	3.0 26	3.6 31	5.0 44	6.0 53	7.2 63	9.9 87	10.5 92	12.6 111	17.6 155	20 177	20 177	20 177	20 177	20 177	20 177	20 177
	Rated 230 VAC	0.91 8.0	1.1 9.7	1.5 13.2	1.8 15.9	3.1 27	3.7 32	5.1 45	6.2 54	7.4 65	10.3 91	10.9 96	13.1 115	18.2 161	20 177	20 177	20 177	20 177	20 177	20 177	20 177
	Starting	0.89 7.8	1.1 9.7	1.5 13.2	1.8 15.9	2.7 23	3.2 28	4.4 38	5.3 46	6.4 56	8.9 78	9.6 84	11.5 101	15.9 140	19.1 169	20 177	20 177	20 177	20 177	20 177	20 177

◇ Solid Shaft Type Single-Phase 115 VAC 60 Hz / 230 VAC 60 Hz

● All output shafts rotate opposite to the direction of motor shaft rotation.

Unit = Upper values: N-m/Lower values: lb-in

Model Motor/Gearhead	Speed r/min Gear Ratio	600	500	360	300	240	200	144	120	100	72	60	50	36	30	24	20	18	15	12	10
		3	3.6	5	6	7.5	9	12.5	15	18	25	30	36	50	60	75	90	100	120	150	180
4RK25GN-AW2 □U 4RK25GN-CW2 □E /4GN □RAA	Rated	0.26 2.3	0.31 2.7	0.43 3.8	0.51 4.5	0.64 5.6	0.77 6.8	1.3 11.5	1.5 13.2	1.8 15.9	2.6 23	3.1 27	3.7 32	5.1 45	6.1 53	7.7 68	8 70	8 70	8 70	8 70	8 70
	Starting	0.21 1.85	0.25 2.2	0.35 3.0	0.42 3.7	0.53 4.6	0.63 5.5	0.95 8.4	1.1 9.7	1.4 12.3	1.9 16.8	2.3 20	2.7 23	3.8 33	4.5 39	5.7 50	6.8 60	7.6 67	8 70	8 70	8 70
5RK40GN-AW2 □U 5RK40GN-CW2 □E /5GN □RAA	Rated 115 VAC	0.55 4.8	0.66 5.8	0.92 8.1	1.1 9.7	1.4 12.3	1.7 15.0	2.3 20	2.8 24	3.3 29	4.1 36	4.9 43	5.8 51	8.1 71	9.7 85	10 88	10 88	10 88	10 88	10 88	10 88
	Rated 230 VAC	0.53 4.6	0.64 5.6	0.88 7.7	1.1 9.7	1.3 11.5	1.6 14.1	2.2 19.4	2.7 23	3.2 28	3.9 34	4.7 41	5.6 49	7.8 69	9.4 83	10 88	10 88	10 88	10 88	10 88	10 88
	Starting	0.47 4.1	0.56 4.9	0.78 6.9	0.94 8.3	1.2 10.6	1.4 12.3	2.0 17.7	2.3 20	2.8 24	3.5 30	4.2 37	5.1 45	7.0 61	8.4 74	10 88	10 88	10 88	10 88	10 88	10 88
5RK60GE-AW2 □U 5RK60GE-CW2 □E /5GE □RAA	Rated	0.83 7.3	0.99 8.7	1.4 12.3	1.7 15.0	2.1 18.5	2.5 22	3.4 30	4.1 36	5.0 44	6.9 61	7.3 64	8.7 76	12.2 107	14.6 129	18.2 161	20 177	20 177	20 177	20 177	20 177
	Starting	0.68 6.0	0.82 7.2	1.1 9.7	1.4 12.3	1.7 15.0	2.1 18.5	2.9 25	3.4 30	4.1 36	5.7 50	6.2 54	7.4 65	10.3 91	12.3 108	15.4 136	18.5 163	20 177	20 177	20 177	20 177
5RK90GE-AW2 □U 5RK90GE-CW3 □E /5GE □RAA	Rated 115 VAC	1.2 10.6	1.4 12.3	2.0 17.7	2.4 21	3.0 26	3.6 31	5.0 44	6.0 53	7.2 63	9.9 87	10.5 92	12.6 111	17.6 155	20 177	20 177	20 177	20 177	20 177	20 177	20 177
	Rated 230 VAC	1.2 10.6	1.5 13.2	2.1 18.5	2.5 22	3.1 27	3.7 32	5.1 45	6.2 54	7.4 65	10.3 91	10.9 96	13.1 115	18.2 161	20 177	20 177	20 177	20 177	20 177	20 177	20 177
	Starting	1.1 9.7	1.3 11.5	1.8 15.9	2.1 18.5	2.7 23	3.2 28	4.4 38	5.3 46	6.4 56	8.9 78	9.6 84	11.5 101	15.9 140	19.1 169	20 177	20 177	20 177	20 177	20 177	20 177

● World K Series Electromagnetic Brake Motors

◇ Hollow Shaft Type Single-Phase 115 VAC 60 Hz / 230 VAC 60 Hz

● All output shafts rotate opposite to the direction of motor shaft rotation.

Unit = Upper values: N·m/Lower values: lb-in

Model Motor/Gearhead	Speed r/min Gear Ratio	600 3	500 3.6	360 5	300 6	240 7.5	200 9	144 12.5	120 15	100 18	72 25	60 30	50 36	36 50	30 60	24 75	20 90	18 100	15 120	12 150	10 180
4RK25GN-AW2MU 4RK25GN-CW2ME /4GN□RH	Rated	0.20 1.77	0.24 2.1	0.34 3.0	0.41 3.6	0.64 5.6	0.77 6.8	1.3 11.5	1.5 13.2	1.8 15.9	2.6 23	3.1 27	3.7 32	5.1 45	6.1 53	7.7 68	8 70	8 70	8 70	8 70	8 70
	Starting	0.17 1.50	0.20 1.77	0.28 2.4	0.34 3.0	0.53 4.6	0.63 5.5	0.95 8.4	1.1 9.7	1.4 12.3	1.9 16.8	2.3 20	2.7 23	3.8 33	4.5 39	5.7 50	6.8 60	7.6 67	8 70	8 70	8 70
5RK40GN-AW2MU 5RK40GN-CW2ME /5GN□RH	Rated 115 VAC	0.41 3.6	0.49 4.3	0.68 6.0	0.81 7.1	1.4 12.3	1.7 15.0	2.3 20	2.8 24	3.3 29	4.1 36	4.9 43	5.8 51	8.1 71	9.7 85	10 88	10 88	10 88	10 88	10 88	10 88
	Rated 230 VAC	0.39 3.4	0.47 4.1	0.65 5.7	0.78 6.9	1.3 11.5	1.6 14.1	2.2 19.4	2.7 23	3.2 28	3.9 34	4.7 41	5.6 49	7.8 69	9.4 83	10 88	10 88	10 88	10 88	10 88	10 88
	Starting	0.39 3.4	0.47 4.1	0.65 5.7	0.78 6.9	1.2 10.6	1.4 12.3	2.0 17.7	2.3 20	2.8 24	3.5 30	4.2 37	5.1 45	7.0 61	8.4 74	10 88	10 88	10 88	10 88	10 88	10 88
5RK60GE-AW2MU 5RK60GE-CW2ME /5GE□RH	Rated	0.61 5.3	0.73 6.4	1.0 8.8	1.2 10.6	2.1 18.5	2.5 22	3.4 30	4.1 36	5.0 44	6.9 61	7.3 64	8.7 76	12.2 107	12.2 129	14.6 161	18.2 177	20 20	20 20	20 20	20 20
	Starting	0.57 5.0	0.68 6.0	0.95 8.4	1.1 9.7	1.7 15.0	2.1 18.5	2.9 25	3.4 30	4.1 36	5.7 50	6.2 54	7.4 65	10.3 91	12.3 108	15.4 136	18.5 163	20 177	20 177	20 177	20 177
5RK90GE-AW2MU 5RK90GE-CW2ME /5GE□RH	Rated 115 VAC	0.88 7.7	1.1 9.7	1.5 13.2	1.8 15.9	3.0 26	3.6 31	5.0 44	6.0 53	7.2 63	9.9 87	10.5 92	12.6 111	17.6 155	20 177	20 177	20 177	20 177	20 177	20 177	20 177
	Rated 230 VAC	0.91 8.0	1.1 9.7	1.5 13.2	1.8 15.9	3.1 27	3.7 32	5.1 45	6.2 54	7.4 65	10.3 91	10.9 96	13.1 115	18.2 161	20 177	20 177	20 177	20 177	20 177	20 177	20 177
	Starting	0.89 7.8	1.1 9.7	1.5 13.2	1.8 15.9	2.7 23	3.2 28	4.4 38	5.3 46	6.4 56	8.9 78	9.6 84	11.5 101	15.9 140	19.1 169	20 177	20 177	20 177	20 177	20 177	20 177

◇ Solid Shaft Type Single-Phase 115 VAC 60 Hz / 230 VAC 60 Hz

● All output shafts rotate opposite to the direction of motor shaft rotation.

Unit = Upper values: N·m/Lower values: lb-in

Model Motor/Gearhead	Speed r/min Gear Ratio	600 3	500 3.6	360 5	300 6	240 7.5	200 9	144 12.5	120 15	100 18	72 25	60 30	50 36	36 50	30 60	24 75	20 90	18 100	15 120	12 150	10 180
4RK25GN-AW2MU 4RK25GN-CW2ME /4GN□RAA	Rated	0.26 2.3	0.31 2.7	0.43 3.8	0.51 4.5	0.64 5.6	0.77 6.8	1.3 11.5	1.5 13.2	1.8 15.9	2.6 23	3.1 27	3.7 32	5.1 45	6.1 53	7.7 68	8 70	8 70	8 70	8 70	8 70
	Starting	0.21 1.85	0.25 2.2	0.35 3.0	0.42 3.7	0.53 4.6	0.63 5.5	0.95 8.4	1.1 9.7	1.4 12.3	1.9 16.8	2.3 20	2.7 23	3.8 33	4.5 39	5.7 50	6.8 60	7.6 67	8 70	8 70	8 70
5RK40GN-AW2MU 5RK40GN-CW2ME /5GN□RAA	Rated 115 VAC	0.55 4.8	0.66 5.8	0.92 8.1	1.1 9.7	1.4 12.3	1.7 15.0	2.3 20	2.8 24	3.3 29	4.1 36	4.9 43	5.8 51	8.1 71	9.7 85	10 88	10 88	10 88	10 88	10 88	10 88
	Rated 230 VAC	0.53 4.6	0.64 5.6	0.88 7.7	1.1 9.7	1.3 11.5	1.6 14.1	2.2 19.4	2.7 23	3.2 28	3.9 34	4.7 41	5.6 49	7.8 69	9.4 83	10 88	10 88	10 88	10 88	10 88	10 88
	Starting	0.47 4.1	0.56 4.9	0.78 6.9	0.94 8.3	1.2 10.6	1.4 12.3	2.0 17.7	2.3 20	2.8 24	3.5 30	4.2 37	5.1 45	7.0 61	8.4 74	10 88	10 88	10 88	10 88	10 88	10 88
5RK60GE-AW2MU 5RK60GE-CW2ME /5GE□RAA	Rated	0.83 7.3	0.99 8.7	1.4 12.3	1.7 15.0	2.1 18.5	2.5 22	3.4 30	4.1 36	5.0 44	6.9 61	7.3 64	8.7 76	12.2 107	12.2 129	14.6 161	18.2 177	20 20	20 20	20 20	20 20
	Starting	0.68 6.0	0.82 7.2	1.1 9.7	1.4 12.3	1.7 15.0	2.1 18.5	2.9 25	3.4 30	4.1 36	5.7 50	6.2 54	7.4 65	10.3 91	12.3 108	15.4 136	18.5 163	20 177	20 177	20 177	20 177
5RK90GE-AW2MU 5RK90GE-CW2ME /5GE□RAA	Rated 115 VAC	1.2 10.6	1.4 12.3	2.0 17.7	2.4 21	3.0 26	3.6 31	5.0 44	6.0 53	7.2 63	9.9 87	10.5 92	12.6 111	17.6 155	20 177	20 177	20 177	20 177	20 177	20 177	20 177
	Rated 230 VAC	1.2 10.6	1.5 13.2	2.1 18.5	2.5 22	3.1 27	3.7 32	5.1 45	6.2 54	7.4 65	10.3 91	10.9 96	13.1 115	18.2 161	20 177	20 177	20 177	20 177	20 177	20 177	20 177
	Starting	1.1 9.7	1.3 11.5	1.8 15.9	2.1 18.5	2.7 23	3.2 28	4.4 38	5.3 46	6.4 56	8.9 78	9.6 84	11.5 101	15.9 140	19.1 169	20 177	20 177	20 177	20 177	20 177	20 177

● Speed Controller **FE100** + World **K** Series Induction Motors

◇ Hollow Shaft Type

● All output shafts rotate opposite to the direction of motor shaft rotation.

Unit = Upper values: N·m/Lower values: lb·in

Model		Gear Ratio																					
Motor/Gearhead	Applicable Speed Controllers	Set Frequency Hz (Set Speed r/min)		3	3.6	5	6	7.5	9	12.5	15	18	25	30	36	50	60	75	90	100	120	150	180
4IK25GN-SW2  4IK25GN-SH /4GN  RH	FE100A FE100C FE100S	6.6 (200)	Rated	—	—	—	—	—	0.75 6.6	1.1 9.7	1.3 11.5	1.6 14.1	2.5 22	3.0 26	3.7 32	4.4 38	5.3 46	6.6 58	8 70	8 70	8 70	8 70	8
			Starting	—	—	—	—	—	0.75 6.6	0.99 8.7	1.2 10.6	1.5 13.2	2.3 20	2.7 23	3.3 29	3.9 34	4.8 42	6.0 53	7.2 63	8 70	8 70	8 70	8
		10~50 (300~1500)	Rated	—	—	—	—	—	0.95 8.4	1.4 12.3	1.7 15	2.3 20	3.2 28	3.9 34	4.7 41	5.6 49	6.7 59	8 70	8 70	8 70	8 70	8 70	8
			Starting	—	—	—	—	—	0.95 8.4	1.3 11.5	1.5 13.2	2.0 17.7	2.9 25	3.5 30	4.2 37	5.0 44	6.0 53	7.6 67	8 70	8 70	8 70	8 70	8
		80 (2400)	Rated	—	—	—	—	—	0.22 1.94	0.64 5.6	0.82 7.2	1.0 8.8	1.5 13.2	2.0 17.7	2.4 21	2.9 25	3.5 30	4.4 38	5.3 46	5.9 52	7.1 62	8 70	8
			Starting	—	—	—	—	—	0.22 1.94	0.58 5.1	0.73 6.4	0.92 8.1	1.3 11.5	1.8 15.9	2.1 18.5	2.6 23	3.1 27	3.9 34	4.7 41	5.3 46	6.4 56	8 70	8
		6.6~50 (200~1500)	Rated	—	—	—	—	1.3 11.5	1.6 14.1	2.5 22	3.0 26	3.6 31	5.1 45	6.2 54	7.4 65	8.9 78	10 88	10 88	10 88	10 88	10 88	10 88	10
			Starting	—	—	—	—	1.1 9.7	1.4 12.3	2.2 19.4	2.7 23	3.2 28	4.6 40	5.6 49	6.7 59	8.0 70	9.6 84	10 88	10 88	10 88	10 88	10 88	10
5IK40GN-SW2  5IK40GN-SH /5GN  RH	FE100A FE100C FE100S	80 (2400)	Rated	—	—	—	—	0.58 5.1	0.75 6.6	1.1 9.7	1.4 12.3	1.7 15	2.3 20	3.2 28	3.9 34	4.7 41	5.6 49	7.1 62	8.5 75	9.5 84	10 88	10 88	10
			Starting	—	—	—	—	0.51 4.5	0.66 5.8	1.0 8.8	1.2 10.6	1.5 13.2	2.3 21	2.9 25	3.5 30	4.2 37	5.1 45	6.4 56	7.7 68	8.5 75	10 88	10 88	10
		6.6 (200)	Rated	—	—	0.84 7.4	1.0 8.8	1.4 12.3	1.7 15	2.6 23	3.1 27	3.8 33	5.3 46	6.5 57	8.1 70	9.1 80	11.0 97	13.8 122	16.6 146	18.4 162	20 177	20 177	20
			Starting	—	—	0.84 7.4	1.0 8.8	1.2 10.6	1.5 13.2	2.3 20	2.7 23	3.3 29	4.7 41	5.9 52	7.1 62	8.2 72	9.9 87	12.4 109	14.9 131	16.6 146	20 177	20 177	20
		10~50 (300~1500)	Rated	—	—	1.2 10.6	1.5 13.2	2.1 18.5	2.6 23	3.7 32	4.5 39	5.5 48	7.7 68	9.6 84	11.3 98	13.3 117	16.0 141	20 177	20 177	20 177	20 177	20 177	20
			Starting	—	—	1.2 10.6	1.5 13.2	1.9 16.8	2.3 20	3.3 29	4.0 35	4.8 42	6.8 60	8.6 76	10.6 92	12.0 106	14.4 127	18.1 160	20 177	20 177	20 177	20 177	20
		80 (2400)	Rated	—	—	0.50 4.4	0.70 6.1	0.99 8.7	1.3 11.5	2.0 17.7	2.5 22	3.1 27	4.4 38	5.4 47	6.6 57	7.6 67	9.2 81	11.5 101	13.9 123	15.4 136	17.4 153	19.3 170	20
			Starting	—	—	0.50 4.4	0.70 6.1	0.87 7.6	1.1 9.7	1.8 15.9	2.2 19.4	2.7 23	3.8 33	4.9 43	6.0 53	7.3 64	8.3 73	10.4 92	12.5 110	13.9 123	15.4 136	17.4 153	20
5IK90GE-SW2  5IK90GE-SH /5GE  RH	FE100A FE100C FE100S	6.6 (200)	Rated	—	—	1.3 11.5	1.6 14.1	2.2 19.4	2.7 23	3.8 33	4.6 40	5.5 48	7.7 68	9.6 84	11.3 98	13.3 117	16.0 141	20 177	20 177	20 177	20 177	20 177	20
			Starting	—	—	1.3 11.5	1.6 14.1	1.9 16.8	2.4 21	3.3 29	4.0 35	4.9 43	6.8 60	8.6 76	10.6 92	12.0 106	14.4 127	18.1 160	20 177	20 177	20 177	20 177	20
		10~60 (300~1800)	Rated	—	—	1.3 11.5	1.8 15.9	2.4 21	2.9 25	4.2 37	5.1 45	6.1 53	8.6 76	10.6 92	12.0 106	14.8 130	17.8 157	20 177	20 177	20 177	20 177	20 177	20
			Starting	—	—	1.3 11.5	1.8 15.9	2.1 18.5	2.6 23	3.7 32	4.5 39	5.4 47	7.6 67	9.6 84	11.3 98	13.4 118	16.1 142	20 177	20 177	20 177	20 177	20 177	20
		80 (2400)	Rated	—	—	0.83 7.3	1.1 9.7	1.5 13.2	2.0 17.7	2.9 25	3.6 31	4.3 38	6.1 53	7.6 67	9.6 84	10.6 93	12.8 113	16.0 141	19.3 170	20 177	20 177	20 177	20
			Starting	—	—	0.83 7.3	1.1 9.7	1.3 11.5	1.8 15.9	2.6 23	3.1 27	3.8 33	5.4 47	7.6 67	9.6 84	11.3 98	14.4 127	17.4 153	19.3 170	20 177	20 177	20 177	20
		6.6 (200)	Rated	—	—	1.3 11.5	1.6 14.1	2.2 19.4	2.7 23	3.8 33	4.6 40	5.5 48	7.7 68	9.6 84	11.3 98	13.3 117	16.0 141	20 177	20 177	20 177	20 177	20 177	20
			Starting	—	—	1.3 11.5	1.6 14.1	1.9 16.8	2.4 21	3.3 29	4.0 35	4.9 43	6.8 60	8.6 76	10.6 92	12.0 106	14.4 127	18.1 160	20 177	20 177	20 177	20 177	20

Note:

● Gear ratios not shown in the list of permissible torque are not available.

Introduction

Induction Motors

Reversible Motors

Electro-magnetic Brake Motors

V Series

Clutch & Brake Motors

Synchronous Motors

Low-Speed Synchronous Motors

Watertight, Dust-Resistant Motors

Torque Motors

Right-Angle Gearheads

Linear Heads

Brake Pack

Accessories

Installation

◇ Solid Shaft Type

● All output shafts rotate opposite to the direction of motor shaft rotation.

Unit = Upper values: N·m/Lower values: lb-in

Model		Gear Ratio		3	3.6	5	6	7.5	9	12.5	15	18	25	30	36	50	60	75	90	100	120	150	180
Motor/Gearhead	Applicable Speed Controllers	Set Frequency Hz (Set Speed r/min)																					
4IK25GN-SW2  4IK25GN-SH /4GN  RAA	FE100A FE100C FE100S	6.6 (200)	Rated	—	—	0.45 3.9	0.54 4.7	0.73 6.4	0.88 7.7	1.2 10.6	1.5 13.2	1.8 15.9	2.6 23	3.2 28	3.8 33	4.5 39	5.4 47	6.8 60	8 70	8 70	8 70	8 70	8 70
			Starting	—	—	0.45 3.9	0.54 4.7	0.73 6.4	0.88 7.7	1.1 9.7	1.3 11.5	1.6 14.1	2.4 21	2.8 24	3.4 30	4.1 36	4.9 43	6.1 53	7.3 64	8 70	8 70	8 70	8 70
		10~50 (300~1500)	Rated	—	—	0.38 3.3	0.74 6.5	0.93 8.2	1.1 9.7	1.5 13.2	1.9 16.8	2.4 21	3.3 29	4.0 35	4.8 42	5.7 50	6.8 60	8 70	8 70	8 70	8 70	8 70	8 70
			Starting	—	—	0.38 3.3	0.74 6.5	0.93 8.2	1.1 9.7	1.4 12.3	1.7 15.0	2.2 19.4	3.0 26	3.6 31	4.3 38	5.1 45	6.2 54	7.7 68	8 70	8 70	8 70	8 70	8 70
		80 (2400)	Rated	—	—	0.20 1.77	0.24 2.1	0.30 2.6	0.41 3.6	0.81 7.1	0.98 8.6	1.2 10.6	1.6 14.1	2.1 18.5	2.5 22	3.0 26	3.6 31	4.5 39	5.4 47	6.0 53	7.2 63	8 70	8 70
			Starting	—	—	0.20 1.77	0.24 2.1	0.30 2.6	0.41 3.6	0.73 6.4	0.88 7.7	1.1 9.7	1.5 13.2	1.9 16.8	2.3 20	2.7 23	3.2 28	4.1 36	4.9 43	5.4 47	6.5 57	8 70	8 70
5IK40GN-SW2  5IK40GN-SH /5GN  RAA	FE100A FE100C FE100S	6.6~50 (200~1500)	Rated	—	—	0.98 8.6	1.2 10.6	1.5 13.2	1.8 15.9	2.6 23	3.2 28	3.8 33	5.3 46	6.3 55	7.6 67	9.0 79	10 88	10 88	10 88	10 88	10 88	10 88	10 88
			Starting	—	—	0.86 7.6	1.0 8.8	1.3 11.5	1.5 13.2	2.3 20	2.8 24	3.3 29	4.7 41	5.7 50	6.8 60	8.1 71	9.7 85	10 88	10 88	10 88	10 88	10 88	10 88
		80 (2400)	Rated	—	—	0.32 2.8	0.38 3.3	0.78 6.9	0.94 8.3	1.3 11.5	1.6 14.1	1.9 16.8	2.8 24	3.4 30	4.0 35	4.8 42	5.8 51	7.2 63	8.6 76	9.6 84	10 88	10 88	10 88
			Starting	—	—	0.28 2.4	0.34 3.0	0.69 6.1	0.83 7.3	1.1 9.7	1.4 12.3	1.7 15.0	2.5 22	3.0 26	3.6 31	4.3 38	5.2 46	6.5 57	7.8 69	8.6 76	10 88	10 88	10 88
		6.6 (200)	Rated	—	—	1.0 8.8	1.2 10.6	1.5 13.2	1.8 15.9	2.7 23	3.3 29	3.9 34	5.4 47	6.7 59	8.1 71	9.9 88	11.2 99	14.0 123	16.7 147	18.6 164	20 177	20 177	20 177
			Starting	—	—	0.89 7.8	1.1 9.7	1.3 11.5	1.6 14.1	2.4 21	2.9 25	3.4 30	4.8 42	5.0 44	6.0 53	7.4 66	8.4 74	10.0 88	12.6 111	15.1 133	16.7 147	20 177	20 177
5IK60GE-SW2  5IK60GE-SH /5GE  RAA	FE100A FE100C FE100S	10~50 (300~1500)	Rated	—	—	1.5 13.2	1.8 15.9	2.4 21	2.8 24	3.9 34	4.7 41	5.7 50	7.9 69	8.1 71	9.7 85	13.5 119	16.2 143	20 177	20 177	20 177	20 177	20 177	20 177
			Starting	—	—	1.3 11.5	1.5 13.2	2.1 18.5	2.5 22	3.5 30	4.2 37	5.0 44	6.9 61	7.3 64	8.7 76	12.2 107	14.6 129	18.2 161	20 177	20 177	20 177	20 177	20 177
		80 (2400)	Rated	—	—	0.85 7.5	1.0 8.8	1.3 11.5	1.5 13.2	2.3 20	2.7 23	3.3 29	4.6 40	4.7 41	5.6 49	7.8 69	9.4 83	11.7 103	14.0 123	15.6 138	17.6 155	19.5 172	20 177
			Starting	—	—	0.75 6.6	0.89 7.8	1.1 9.7	1.3 11.5	2.0 17.7	2.4 21	2.9 25	4.0 35	4.2 37	5.1 45	7.0 61	8.4 74	10.5 92	12.6 111	14.0 123	17.6 155	20 177	20 177
		6.6 (200)	Rated	0.88 7.7	1.1 9.7	1.5 13.2	1.8 15.9	2.4 21	2.8 24	3.9 34	4.7 41	5.7 50	7.9 69	8.1 71	9.7 85	13.5 119	16.2 143	20 177	20 177	20 177	20 177	20 177	20 177
			Starting	0.77 6.8	0.93 8.2	1.3 11.5	1.5 13.2	2.1 18.5	2.5 22	3.5 30	4.2 37	5.0 44	6.9 61	7.3 64	8.7 76	12.2 107	14.6 129	18.2 161	20 177	20 177	20 177	20 177	20 177
5IK90GE-SW2  5IK90GE-SH /5GE  RAA	FE100A FE100C FE100S	10~60 (300~1800)	Rated	0.98 8.6	1.2 10.6	1.6 14.1	2.1 18.5	2.6 23	3.2 28	4.4 38	5.3 46	6.3 55	8.8 77	9.0 79	10.8 95	15.0 132	18.0 159	20 177	20 177	20 177	20 177	20 177	20 177
			Starting	0.86 7.6	1.0 8.8	1.4 12.3	1.9 16.8	2.3 20	2.8 24	3.9 34	4.6 40	5.6 49	7.7 68	8.1 71	9.7 85	13.5 119	16.2 143	20 177	20 177	20 177	20 177	20 177	20 177
		80 (2400)	Rated	0.70 6.1	0.84 7.4	1.2 10.6	1.4 12.3	1.8 15.9	2.3 20	3.2 28	3.8 33	4.5 39	6.3 55	6.5 57	7.8 69	10.8 95	13.0 115	16.2 143	19.4 171	20 177	20 177	20 177	20 177
			Starting	0.62 5.4	0.74 6.5	1.0 8.8	1.2 10.6	1.5 13.2	2.0 17.7	2.8 24	3.3 29	4.0 35	5.6 49	5.8 51	7.0 61	9.7 85	11.7 103	14.6 129	17.5 154	19.4 171	20 177	20 177	20 177
		6.6 (200)	Rated	0.88 7.7	1.1 9.7	1.5 13.2	1.8 15.9	2.4 21	2.8 24	3.9 34	4.7 41	5.7 50	7.9 69	8.1 71	9.7 85	13.5 119	16.2 143	20 177	20 177	20 177	20 177	20 177	20 177
			Starting	0.77 6.8	0.93 8.2	1.3 11.5	1.5 13.2	2.1 18.5	2.5 22	3.5 30	4.2 37	5.0 44	6.9 61	7.3 64	8.7 76	12.2 107	14.6 129	18.2 161	20 177	20 177	20 177	20 177	20 177

Note:

● Gear ratios not shown in the list of permissible torque are not available.

● Speed Controller **ES01/ES02** + World **K** Series Speed Control Motors

◇ Induction Motors Hollow Shaft Type Single-Phase 115 VAC 60 Hz

● All output shafts rotate opposite to the direction of motor shaft rotation.

Unit = Upper values: N·m/Lower values: lb-in

Model		Gear Ratio																				
Motor/ Gearhead	Applicable Speed Controllers	Motor Speed r/min	3	3.6	5	6	7.5	9	12.5	15	18	25	30	36	50	60	75	90	100	120	150	180
4IK25RGN-AW2U /4GN□RH	ES01	1200	0.22 1.94	0.27 2.3	0.37 3.2	0.44 3.8	0.69 6.1	0.83 7.3	1.4 12.3	1.7 15.0	2.0 17.7	2.8 24	3.3 29	4.0 35	5.6 49	6.7 59	8 70	8 70	8 70	8 70	8 70	8 70
		90	0.060 0.53	0.072 0.63	0.10 0.88	0.12 1.06	0.19 1.68	0.23 2.0	0.38 3.3	0.45 3.9	0.54 4.7	0.75 6.6	0.90 7.9	1.1 9.7	1.5 13.2	1.8 15.9	2.3 20	2.7 23	3.0 26	3.6 31	4.5 39	5.4 47
		Starting	0.14 1.23	0.17 1.50	0.24 2.1	0.29 2.5	0.45 3.9	0.54 4.7	0.81 7.1	0.97 8.5	1.2 10.6	1.6 14.1	1.9 16.8	2.3 20	3.2 28	3.9 34	4.9 43	5.8 51	6.5 57	7.8 69	8 70	8 70
5IK40RGN-AW2U /5GN□RH	ES01	1200	0.34 3.0	0.41 3.6	0.56 4.9	0.68 6.0	1.1 9.7	1.4 12.3	1.9 16.8	2.3 20	2.8 24	3.4 30	4.1 36	4.9 43	6.8 60	8.1 71	10 88	10 88	10 88	10 88	10 88	10 88
		90	0.10 0.88	0.12 1.06	0.17 1.50	0.20 1.77	0.34 3.0	0.41 3.6	0.57 5.0	0.68 6.0	0.82 7.2	1.0 8.8	1.2 10.6	1.4 12.3	2.0 17.7	2.4 21	3.0 26	3.6 31	4.0 35	4.8 42	6.0 53	7.2 63
		Starting	0.30 2.6	0.36 3.1	0.50 4.4	0.60 5.3	0.90 7.9	1.1 9.7	1.5 13.2	1.8 15.9	2.2 19.4	2.7 23	3.2 28	3.9 34	5.4 47	6.5 57	8.1 71	9.7 85	10 88	10 88	10 88	10 88
5IK60RGU-AWU /5GU□RH	ES01	1200	0.74 6.5	0.88 7.7	1.2 10.6	1.5 13.2	2.5 22	3.0 26	4.2 37	5.0 44	6.0 53	8.3 73	8.8 77	10.6 93	14.7 130	17.6 155	20 177	20 177	20 177	20 177	20 177	20 177
		90	0.32 2.8	0.38 3.3	0.53 4.6	0.63 5.5	1.1 9.7	1.3 11.5	1.8 15.9	2.1 18.5	2.6 23	3.6 31	4.5 39	5.6 49	6.3 55	7.6 67	9.5 84	11.3 100	12.6 111	15.8 139	18.9 167	20 20
		Starting	0.48 4.2	0.58 5.1	0.80 7.0	0.96 8.4	1.4 12.3	1.7 15.0	2.4 21	2.9 25	3.5 30	4.8 42	5.2 46	6.2 54	8.6 76	10.4 92	13.0 115	15.6 138	17.3 153	20 177	20 177	20 177

◇ Induction Motors Solid Shaft Type Single-Phase 115 VAC 60 Hz

● All output shafts rotate opposite to the direction of motor shaft rotation.

Unit = Upper values: N·m/Lower values: lb-in

Model		Gear Ratio																				
Motor/ Gearhead	Applicable Speed Controllers	Motor Speed r/min	3	3.6	5	6	7.5	9	12.5	15	18	25	30	36	50	60	75	90	100	120	150	180
4IK25RGN-AW2U /4GN□RAA	ES01	1200	0.28 2.4	0.33 2.9	0.46 4.0	0.56 4.9	0.69 6.1	0.83 7.3	1.4 12.3	1.7 15.0	2.0 17.7	2.8 24	3.3 29	4.0 35	5.6 49	6.7 59	8 70	8 70	8 70	8 70	8 70	8 70
		90	0.075 0.66	0.090 0.79	0.13 1.15	0.15 1.32	0.19 1.68	0.23 2.0	0.38 3.3	0.45 3.9	0.54 4.7	0.75 6.6	0.90 7.9	1.1 9.7	1.5 13.2	1.8 15.9	2.3 20	2.7 23	3.0 26	3.6 31	4.5 39	5.4 47
		Starting	0.18 1.59	0.22 1.94	0.30 2.6	0.36 3.1	0.45 3.9	0.54 4.7	0.81 7.1	0.97 8.5	1.2 10.6	1.6 14.1	1.9 16.8	2.3 20	3.2 28	3.9 34	4.9 43	5.8 51	6.5 57	7.8 69	8 70	8 70
5IK40RGN-AW2U /5GN□RAA	ES01	1200	0.46 4.0	0.55 4.8	0.77 6.8	0.92 8.1	1.1 9.7	1.4 12.3	1.9 16.8	2.3 20	2.8 24	3.4 30	4.1 36	4.9 43	6.8 60	8.1 71	10 88	10 88	10 88	10 88	10 88	10 88
		90	0.14 1.23	0.16 1.41	0.23 2.0	0.27 2.3	0.34 3.0	0.41 3.6	0.57 5.0	0.68 6.0	0.82 7.2	1.0 8.8	1.2 10.6	1.4 12.3	2.0 17.7	2.4 21	3.0 26	3.6 31	4.0 35	4.8 42	6.0 53	7.2 63
		Starting	0.36 3.1	0.43 3.8	0.60 5.3	0.72 6.3	0.90 7.9	1.1 9.7	1.5 13.2	1.8 15.9	2.2 19.4	2.7 23	3.2 28	3.9 34	5.4 47	6.5 57	8.1 71	9.7 85	10 88	10 88	10 88	10 88
5IK60RGU-AWU /5GU□RAA	ES01	1200	1.0 8.8	1.2 10.6	1.7 15.0	2.0 17.7	2.5 22	3.0 26	4.2 37	5.0 44	6.0 53	8.3 73	8.8 77	10.6 93	14.7 130	17.6 155	20 177	20 177	20 177	20 177	20 177	20 177
		90	0.43 3.8	0.51 4.5	0.71 6.2	0.86 7.6	1.1 9.7	1.3 11.5	1.8 15.9	2.1 18.5	2.6 23	3.6 31	4.5 39	5.6 49	6.3 55	7.6 67	9.5 84	11.3 100	12.6 111	15.8 139	18.9 167	20 177
		Starting	0.58 5.1	0.69 6.1	0.96 8.4	1.2 10.6	1.4 12.3	1.7 15.0	2.4 21	2.9 25	3.5 30	4.8 42	5.2 46	6.2 54	8.6 76	10.4 92	13.0 115	15.6 138	17.3 153	20 177	20 177	20 177

◇ Induction Motors Hollow Shaft Type Single-Phase 230 VAC 60 Hz

● All output shafts rotate opposite to the direction of motor shaft rotation.

Unit = Upper values: N·m/Lower values: lb-in

Model		Gear Ratio																				
Motor/ Gearhead	Applicable Speed Controllers	Motor Speed r/min	3	3.6	5	6	7.5	9	12.5	15	18	25	30	36	50	60	75	90	100	120	150	180
4IK25RGN-CW2E /4GN□RH	E502	1200	0.18 1.59	0.22 1.94	0.30 2.6	0.36 3.1	0.56 4.9	0.68 6.0	1.1 9.7	1.4 12.3	1.6 14.1	2.3 20	2.7 23	3.2 28	4.5 39	5.4 47	6.8 60	8 70	8 70	8 70	8 70	8 70
		90	0.048 0.42	0.058 0.51	0.080 0.70	0.096 0.84	0.15 1.32	0.18 1.59	0.30 2.6	0.36 3.1	0.43 3.8	0.60 5.3	0.72 6.3	0.86 7.6	1.2 10.6	1.4 12.3	1.8 15.9	2.2 19.4	2.4 21	2.9 25	3.6 31	4.3 38
		Starting	0.14 1.23	0.17 1.50	0.24 2.1	0.29 2.5	0.45 3.9	0.54 4.7	0.81 7.1	0.97 8.5	1.2 10.6	1.6 14.1	1.9 16.8	2.3 20	3.2 28	3.9 34	4.9 43	5.8 51	6.5 57	7.8 69	8 70	8 70
5IK40RGN-CW2E /5GN□RH	E502	1200	0.39 3.4	0.47 4.1	0.65 5.7	0.78 6.9	1.3 11.5	1.6 14.1	2.2 19.4	2.7 23	3.2 28	3.9 34	4.7 41	5.6 49	7.8 69	9.4 83	10 88	10 88	10 88	10 88	10 88	10 88
		90	0.11 0.97	0.13 1.15	0.18 1.59	0.21 1.85	0.36 3.1	0.43 3.8	0.60 5.3	0.71 6.2	0.86 7.6	1.1 9.7	1.3 11.5	1.5 13.2	2.1 18.5	2.5 22	3.2 28	3.8 33	4.2 37	5.0 44	6.3 55	7.6 67
		Starting	0.30 2.6	0.36 3.1	0.50 4.4	0.60 5.3	0.90 7.9	1.1 9.7	1.5 13.2	1.8 15.9	2.2 19.4	2.7 23	3.2 28	3.9 34	5.4 47	6.5 57	8.1 71	9.7 85	10 88	10 88	10 88	10 88
5IK60RGU-CWE /5GU□RH	E502	1200	0.74 6.5	0.88 7.7	1.2 10.6	1.5 13.2	2.5 22	3.0 26	4.2 37	5.0 44	6.0 53	8.3 73	8.8 77	10.6 93	14.7 130	17.6 155	20 177	20 177	20 177	20 177	20 177	20 177
		90	0.27 2.3	0.32 2.8	0.45 3.9	0.54 4.7	0.92 8.1	1.1 9.7	1.5 13.2	1.8 15.9	2.2 19.4	3.1 27	3.2 28	3.9 34	5.4 47	6.5 57	8.1 71	9.7 85	10.8 95	10.8 95	13.5 119	16.2 143
		Starting	0.48 4.2	0.58 5.1	0.80 7.0	0.96 8.4	1.4 12.3	1.7 15.0	2.4 21	2.9 25	3.5 30	4.8 42	5.2 46	6.2 54	8.6 76	10.4 92	13.0 115	15.6 138	17.3 153	17.3 153	20 177	20 177

◇ Induction Motors Solid Shaft Type Single-Phase 230 VAC 60 Hz

● All output shafts rotate opposite to the direction of motor shaft rotation.

Unit = Upper values: N·m/Lower values: lb-in

Model		Gear Ratio																				
Motor/ Gearhead	Applicable Speed Controllers	Motor Speed r/min	3	3.6	5	6	7.5	9	12.5	15	18	25	30	36	50	60	75	90	100	120	150	180
4IK25RGN-CW2E /4GN□RAA	E502	1200	0.23 2.0	0.27 2.3	0.38 3.3	0.45 3.9	0.56 4.9	0.68 6.0	1.1 9.7	1.4 12.3	1.6 14.1	2.3 20	2.7 23	3.2 28	4.5 39	5.4 47	6.8 60	8 70	8 70	8 70	8 70	8 70
		90	0.060 0.53	0.072 0.63	0.10 0.88	0.12 1.06	0.15 1.32	0.18 1.59	0.30 2.6	0.36 3.1	0.43 3.8	0.60 5.3	0.72 6.3	0.86 7.6	1.2 10.6	1.4 12.3	1.8 15.9	2.2 19.4	2.4 21	2.9 25	3.6 31	4.3 38
		Starting	0.18 1.59	0.22 1.94	0.30 2.6	0.36 3.1	0.45 3.9	0.54 4.7	0.81 7.1	0.97 8.5	1.2 10.6	1.6 14.1	1.9 16.8	2.3 20	3.2 28	3.9 34	4.9 43	5.8 51	6.5 57	7.8 69	8 70	8 70
5IK40RGN-CW2E /5GN□RAA	E502	1200	0.53 4.6	0.64 5.6	0.88 7.7	1.1 9.7	1.3 11.5	1.6 14.1	2.2 19.4	2.7 23	3.2 28	3.9 34	4.7 41	5.6 49	7.8 69	9.4 83	10 88	10 88	10 88	10 88	10 88	10 88
		90	0.14 1.23	0.17 1.50	0.24 2.1	0.29 2.5	0.36 3.1	0.43 3.8	0.60 5.3	0.71 6.2	0.86 7.6	1.1 9.7	1.3 11.5	1.5 13.2	2.1 18.5	2.5 22	3.2 28	3.8 33	4.2 37	5.0 44	6.3 55	7.6 67
		Starting	0.36 3.1	0.43 3.8	0.60 5.3	0.72 6.3	0.90 7.9	1.1 9.7	1.5 13.2	1.8 15.9	2.2 19.4	2.7 23	3.2 28	3.9 34	5.4 47	6.5 57	8.1 71	9.7 85	10 88	10 88	10 88	10 88
5IK60RGU-CWE /5GU□RAA	E502	1200	1.0 8.8	1.2 10.6	1.7 15.0	2.0 17.7	2.5 22	3.0 26	4.2 37	5.0 44	6.0 53	8.3 73	8.8 77	10.6 93	14.7 130	17.6 155	20 177	20 177	20 177	20 177	20 177	20 177
		90	0.37 3.2	0.44 3.8	0.61 5.3	0.73 6.4	0.92 8.1	1.1 9.7	1.5 13.2	1.8 15.9	2.2 19.4	3.1 27	3.2 28	3.9 34	5.4 47	6.5 57	8.1 71	9.7 85	10.8 95	10.8 95	13.5 119	16.2 143
		Starting	0.58 5.1	0.69 6.1	0.96 8.4	1.2 10.6	1.4 12.3	1.7 15.0	2.4 21	2.9 25	3.5 30	4.8 42	5.2 46	6.2 54	8.6 76	10.4 92	13.0 115	15.6 138	17.3 153	17.3 153	20 177	20 177

◇ Reversible Motors Hollow Shaft Type Single-Phase 115 VAC 60 Hz

● All output shafts rotate opposite to the direction of motor shaft rotation.

Unit = Upper values: N-m/Lower values: lb-in

Model		Gear Ratio																					
Motor/ Gearhead	Applicable Speed Controllers	Motor Speed r/min	3	3.6	5	6	7.5	9	12.5	15	18	25	30	36	50	60	75	90	100	120	150	180	
4RK25RGN-AW2U /4GN□RH	ES01	1200	0.25 2.2	0.30 2.6	0.41 3.6	0.49 4.3	0.77 6.8	0.92 8.1	1.5 13.2	1.8 15.9	2.2 19.4	3.1 27	3.7 32	4.4 38	6.2 54	7.4 65	8 70	8 70	8 70	8 70	8 70	8 70	
		90	0.13 1.15	0.16 1.41	0.22 1.94	0.26 2.3	0.41 3.6	0.50 4.4	0.83 7.3	0.99 8.7	1.2 10.6	1.7 15.0	2.0 17.7	2.4 21	3.3 29	4.0 35	5.0 44	5.9 52	6.6 58	7.9 69	8 70	8 70	
		Starting	0.17 1.50	0.20 1.77	0.28 2.4	0.34 3.0	0.53 4.6	0.63 5.5	0.95 8.4	1.1 9.7	1.4 12.3	1.9 16.8	2.3 20	2.7 23	3.8 33	4.5 39	5.7 50	6.8 60	7.6 67	8 70	8 70	8 70	
5RK40RGN-AW2U /5GN□RH	ES01	1200	0.48 4.2	0.58 5.1	0.80 7.0	0.96 8.4	1.6 14.1	2.0 17.7	2.7 23	3.3 29	3.9 34	4.8 42	5.8 51	6.9 61	9.6 84	10 88	10 88	10 88	10 88	10 88	10 88	10 88	
		90	0.23 2.0	0.28 2.4	0.39 3.4	0.47 4.1	0.79 6.9	0.95 8.4	1.3 11.5	1.6 14.1	1.9 16.8	2.3 20	2.8 24	3.3 30	4.7 41	5.6 49	7.0 61	8.4 74	9.3 82	10 88	10 88	10 88	
		Starting	0.39 3.4	0.47 4.1	0.65 5.7	0.78 6.9	1.2 10.6	1.4 12.3	2.0 17.7	2.3 20	2.8 24	3.5 30	4.2 37	5.1 45	7.0 61	8.4 74	10 88	10 88	10 88	10 88	10 88	10 88	
5RK60RGU-AWU /5GU□RH	ES01	1200	0.74 6.5	0.88 7.7	1.2 10.6	1.5 13.2	2.5 22	3.0 26	4.2 37	5.0 44	6.0 53	8.3 73	8.8 77	10.6 93	14.7 130	17.6 155	20 177	20 177	20 177	20 177	20 177	20 177	
		90	0.41 3.6	0.49 4.3	0.68 6.0	0.81 7.1	1.4 12.3	1.7 15.0	2.3 20	2.8 24	3.3 29	4.6 40	4.9 43	5.8 51	8.1 71	9.7 85	12.2 107	14.6 129	16.2 143	16.2 143	20 177	20 177	
		Starting	0.57 5.0	0.68 6.0	0.95 8.4	1.1 9.7	1.7 15.0	2.1 18.5	2.9 25	3.4 30	4.1 36	5.7 50	6.2 54	7.4 65	10.3 91	12.3 108	15.4 136	18.5 163	20 177	20 177	20 177	20 177	

◇ Reversible Motors Solid Shaft Type Single-Phase 115 VAC 60 Hz

● All output shafts rotate opposite to the direction of motor shaft rotation.

Unit = Upper values: N-m/Lower values: lb-in

Model		Gear Ratio																				
Motor/ Gearhead	Applicable Speed Controllers	Motor Speed r/min	3	3.6	5	6	7.5	9	12.5	15	18	25	30	36	50	60	75	90	100	120	150	180
4RK25RGN-AW2U /4GN□RAA	ES01	1200	0.31 2.7	0.37 3.2	0.51 4.5	0.62 5.4	0.77 6.8	0.92 8.1	1.5 13.2	1.8 15.9	2.2 19.4	3.1 27	3.7 32	4.4 38	6.2 54	7.4 65	8 70	8 70	8 70	8 70	8 70	8 70
		90	0.17 1.50	0.20 1.77	0.28 2.4	0.33 2.9	0.41 3.6	0.50 4.4	0.83 7.3	0.99 8.7	1.2 10.6	1.7 15.0	2.0 17.7	2.4 21	3.3 29	4.0 35	5.0 44	5.9 52	6.6 58	7.9 69	8 70	8 70
		Starting	0.21 1.85	0.25 2.2	0.35 3.0	0.42 3.7	0.53 4.6	0.63 5.5	0.95 8.4	1.1 9.7	1.4 12.3	1.9 16.8	2.3 20	2.7 23	3.8 33	4.5 39	5.7 50	6.8 60	7.6 67	8 70	8 70	8 70
5RK40RGN-AW2U /5GN□RAA	ES01	1200	0.65 5.7	0.78 6.9	1.1 9.7	1.3 11.5	1.6 14.1	2.0 17.7	2.7 23	3.3 29	3.9 34	4.8 42	5.8 51	6.9 61	9.6 84	10 88	10 88	10 88	10 88	10 88	10 88	10 88
		90	0.32 2.8	0.38 3.3	0.53 4.6	0.63 5.5	0.79 6.9	0.95 8.4	1.3 11.5	1.6 14.1	1.9 16.8	2.3 20	2.8 24	3.3 29	4.7 41	5.6 49	7.0 61	8.4 74	9.3 82	10 88	10 88	10 88
		Starting	0.47 4.1	0.56 4.9	0.78 6.9	0.94 8.3	1.2 10.6	1.4 12.3	2.0 17.7	2.3 20	2.8 24	3.5 30	4.2 37	5.1 45	7.0 61	8.4 74	10 88	10 88	10 88	10 88	10 88	10 88
5RK60RGU-AWU /5GU□RAA	ES01	1200	1.0 8.8	1.2 10.6	1.7 15.0	2.0 17.7	2.5 22	3.0 26	4.2 37	5.0 44	6.0 53	8.3 73	8.8 77	10.6 93	14.7 130	17.6 155	20 177	20 177	20 177	20 177	20 177	20 177
		90	0.55 4.8	0.66 5.8	0.92 8.1	1.1 9.7	1.4 12.3	1.7 15.0	2.3 20	2.8 24	3.3 29	4.6 40	4.9 43	5.8 51	8.1 71	9.7 85	12.2 107	14.6 129	16.2 143	16.2 143	20 177	20 177
		Starting	0.68 6.0	0.82 7.2	1.1 9.7	1.4 12.3	1.7 15.0	2.1 18.5	2.9 25	3.4 30	4.1 36	5.7 50	6.2 54	7.4 65	10.3 91	12.3 108	15.4 136	18.5 163	20 177	20 177	20 177	20 177

◇ Reversible Motors Hollow Shaft Type Single-Phase 230 VAC 60 Hz

● All output shafts rotate opposite to the direction of motor shaft rotation.

Unit = Upper values: N·m/Lower values: lb-in

Model		Gear Ratio																				
Motor/ Gearhead	Applicable Speed Controllers	Motor Speed r/min	3	3.6	5	6	7.5	9	12.5	15	18	25	30	36	50	60	75	90	100	120	150	180
4RK25RGN-CW2E /4GN□RH	E502	1200	0.25 2.2	0.30 2.6	0.41 3.6	0.49 4.3	0.77 6.8	0.92 8.1	1.5 13.2	1.8 15.9	2.2 19.4	3.1 27	3.7 32	4.4 38	6.2 54	7.4 65	8 70	8 70	8 70	8 70	8 70	8 70
		90	0.13 1.15	0.16 1.41	0.22 1.94	0.26 2.3	0.41 3.6	0.50 4.4	0.83 7.3	0.99 8.7	1.2 10.6	1.7 15.0	2.0 17.7	2.4 21	3.3 29	4.0 35	5.0 44	5.9 52	6.6 58	7.9 69	8 70	8 70
		Starting	0.17 1.50	0.20 1.77	0.28 2.4	0.34 3.0	0.53 4.6	0.63 5.5	0.95 8.4	1.1 9.7	1.4 12.3	1.9 16.8	2.3 20	2.7 23	3.8 33	4.5 39	5.7 50	6.8 60	7.6 67	8 70	8 70	8 70
5RK40RGN-CW2E /5GN□RH	E502	1200	0.48 4.2	0.58 5.1	0.80 7.0	0.96 8.4	1.6 14.1	2.0 17.7	2.7 23	3.3 29	3.9 34	4.8 42	5.8 51	6.9 61	9.6 84	10 88	10 88	10 88	10 88	10 88	10 88	10 88
		90	0.26 2.3	0.31 2.7	0.43 3.8	0.51 4.5	0.87 7.6	1.0 8.8	1.4 12.3	1.7 15.0	2.1 18.5	2.6 23	3.1 27	3.7 32	5.1 45	6.1 53	7.7 68	9.2 81	10 88	10 88	10 88	10 88
		Starting	0.39 3.4	0.47 4.1	0.65 5.7	0.78 6.9	1.2 10.6	1.4 12.3	2.0 17.7	2.3 20	2.8 24	3.5 30	4.2 37	5.1 45	7.0 61	8.4 74	10 88	10 88	10 88	10 88	10 88	10 88
5RK60RGU-CWE /5GU□RH	E502	1200	0.74 6.5	0.88 7.7	1.2 10.6	1.5 13.2	2.5 22	3.0 26	4.2 37	5.0 44	6.0 53	8.3 73	8.8 77	10.6 93	14.7 130	17.6 155	20 177	20 177	20 177	20 177	20 177	20 177
		90	0.42 3.7	0.50 4.4	0.70 6.1	0.84 7.4	1.4 12.3	1.7 15.0	2.4 21	2.9 25	3.4 30	4.8 42	5.0 44	6.0 53	8.4 74	10.1 89	12.6 111	15.1 133	16.8 148	16.8 148	20 177	20 177
		Starting	0.57 5.0	0.68 6.0	0.95 8.4	1.1 9.7	1.7 15.0	2.1 18.5	2.9 25	3.4 30	4.1 36	5.7 50	6.2 54	7.4 65	10.3 91	12.3 108	15.4 136	18.5 163	20 177	20 177	20 177	20 177

◇ Reversible Motors Solid Shaft Type Single-Phase 230 VAC 60 Hz

● All output shafts rotate opposite to the direction of motor shaft rotation.

Unit = Upper values: N·m/Lower values: lb-in

Model		Gear Ratio																				
Motor/ Gearhead	Applicable Speed Controllers	Motor Speed r/min	3	3.6	5	6	7.5	9	12.5	15	18	25	30	36	50	60	75	90	100	120	150	180
4RK25RGN-CW2E /4GN□RAA	E502	1200	0.31 2.7	0.37 3.2	0.51 4.5	0.62 5.4	0.77 6.8	0.92 8.1	1.5 13.2	1.8 15.9	2.2 19.4	3.1 27	3.7 32	4.4 38	6.2 54	7.4 65	8 70	8 70	8 70	8 70	8 70	8 70
		90	0.17 1.50	0.20 1.77	0.28 2.4	0.33 2.9	0.41 3.6	0.50 4.4	0.83 7.3	0.99 8.7	1.2 10.6	1.7 15.0	2.0 17.7	2.4 21	3.3 29	4.0 35	5.0 44	5.9 52	6.6 58	7.9 69	8 70	8 70
		Starting	0.21 1.85	0.25 2.2	0.35 3.0	0.42 3.7	0.53 4.6	0.63 5.5	0.95 8.4	1.1 9.7	1.4 12.3	1.9 16.8	2.3 20	2.7 23	3.8 33	4.5 39	5.7 50	6.8 60	7.6 67	8 70	8 70	8 70
5RK40RGN-CW2E /5GN□RAA	E502	1200	0.65 5.7	0.78 6.9	1.1 9.7	1.3 11.5	1.6 14.1	2.0 17.7	2.7 23	3.3 29	3.9 34	4.8 42	5.8 51	6.9 61	9.6 84	10 88	10 88	10 88	10 88	10 88	10 88	10 88
		90	0.35 3.0	0.42 3.7	0.58 5.1	0.69 6.1	0.87 7.6	1.0 8.8	1.4 12.3	1.7 15.0	2.1 18.5	2.6 23	3.1 27	3.7 32	5.1 45	6.1 53	7.7 68	9.2 81	10 88	10 88	10 88	10 88
		Starting	0.47 4.1	0.56 4.9	0.78 6.9	0.94 8.3	1.2 10.6	1.4 12.3	2.0 17.7	2.3 20	2.8 24	3.5 30	4.2 37	5.1 45	7.0 61	8.4 74	10 88	10 88	10 88	10 88	10 88	10 88
5RK60RGU-CWE /5GU□RAA	E502	1200	1.0 8.8	1.2 10.6	1.7 15.0	2.0 17.7	2.5 22	3.0 26	4.2 37	5.0 44	6.0 53	8.3 73	8.8 77	10.6 93	14.7 130	17.6 155	20 177	20 177	20 177	20 177	20 177	20 177
		90	0.57 5.0	0.69 6.1	0.95 8.4	1.1 9.7	1.4 12.3	1.7 15.0	2.4 21	2.9 25	3.4 30	4.8 42	5.0 44	6.0 53	8.4 74	10.1 89	12.6 111	15.1 133	16.8 148	16.8 148	20 177	20 177
		Starting	0.68 6.0	0.82 7.2	1.1 9.7	1.4 12.3	1.7 15.0	2.1 18.5	2.9 25	3.4 30	4.1 36	5.7 50	6.2 54	7.4 65	10.3 91	12.3 108	15.4 136	18.5 163	20 177	20 177	20 177	20 177

US Series Speed Control System

◇ Hollow Shaft Type Single-Phase 115 VAC 60 Hz

● All output shafts rotate opposite to the direction of motor shaft rotation.

Unit = Upper values: N-m/Lower values: lb-in

Model	Gear Ratio																					
Motor/Gearhead	Motor Speed r/min	3	3.6	5	6	7.5	9	12.5	15	18	25	30	36	50	60	75	90	100	120	150	180	
US425-401U2 /4GN□RH	1200	0.24 2.1	0.29 2.5	0.40 3.5	0.48 4.2	0.75 6.6	0.90 7.9	1.5 13.2	1.8 15.9	2.2 19.4	3.0 26	3.6 31	4.3 38	6.0 53	7.2 63	8 70	8 70	8 70	8 70	8 70	8 70	
	90	0.060 0.53	0.072 0.63	0.10 0.88	0.12 1.06	0.19 1.68	0.23 2.0	0.38 3.3	0.45 3.9	0.54 4.7	0.75 6.6	0.90 7.9	1.1 9.7	1.5 13.2	1.8 15.9	2.3 20	2.7 23	3.0 26	3.6 31	4.5 39	5.4 47	
	Starting	0.13 1.15	0.15 1.32	0.21 1.85	0.25 2.2	0.39 3.4	0.47 4.1	0.71 6.2	0.85 7.5	1.0 8.8	1.4 12.3	1.7 15.0	2.0 17.7	2.8 24	3.4 30	4.3 38	5.1 45	5.7 50	6.8 60	8 70	8 70	
US540-401U2 /5GN□RH	1200	0.39 3.4	0.47 4.1	0.65 5.7	0.78 6.9	1.3 11.5	1.6 14.1	2.2 19.4	2.7 23	3.2 28	3.9 34	4.7 41	5.6 49	7.8 69	9.4 83	10 88	10 88	10 88	10 88	10 88	10 88	
	90	0.11 0.97	0.13 1.15	0.18 1.59	0.21 1.85	0.36 3.1	0.43 3.8	0.60 5.3	0.71 6.2	0.86 7.6	1.1 9.7	1.3 11.5	1.5 13.2	2.1 18.5	2.5 22	3.2 28	3.8 33	4.2 37	5.0 44	6.3 55	7.6 67	
	Starting	0.27 2.3	0.32 2.8	0.45 3.9	0.54 4.7	0.81 7.1	0.97 8.5	1.4 12.3	1.6 14.1	1.9 16.8	2.4 21	2.9 25	3.5 30	4.9 43	5.8 51	7.3 64	8.7 76	9.7 85	10 88	10 88	10 88	
US560-501U2 /5GU□RH	1200	0.74 6.5	0.88 7.7	1.2 10.6	1.5 13.2	2.5 22	3.0 26	4.2 37	5.0 44	6.0 53	8.3 73	8.8 77	10.6 93	14.7 130	17.6 155	20 177	20 177	20 177	20 177	20 177	20 177	
	90	0.30 2.6	0.36 3.1	0.50 4.4	0.60 5.3	1.0 8.8	1.2 10.6	1.7 15.0	2.0 17.7	2.4 21	3.4 30	3.6 31	4.3 38	6.0 53	7.2 63	9.0 79	10.8 95	12.0 106	12.0 106	15.0 132	18.0 159	
	Starting	0.43 3.8	0.51 4.5	0.71 6.2	0.86 7.6	1.3 11.5	1.5 13.2	2.1 18.5	2.6 23	3.1 27	4.3 38	4.6 40	5.5 48	7.7 68	9.2 81	11.5 101	13.9 123	15.4 136	15.4 136	19.2 169	20 177	
US590-501U2 /5GU□RH	1200	1.1 9.7	1.3 11.5	1.8 15.9	2.2 19.4	3.7 32	4.5 39	6.2 54	7.4 65	8.9 78	12.4 109	13.1 115	15.8 139	20 177	20 177	20 177	20 177	20 177	20 177	20 177	20 177	
	90	0.30 2.6	0.36 3.1	0.50 4.4	0.60 5.3	1.0 8.8	1.2 10.6	1.7 15.0	2.0 17.7	2.4 21	3.4 30	3.6 31	4.3 38	6.0 53	7.2 63	9.0 79	10.8 95	12.0 106	12.0 106	15.0 132	18.0 159	
	Starting	0.61 5.3	0.73 6.4	1.0 8.8	1.2 10.6	1.8 15.9	2.2 19.4	3.0 26	3.6 31	4.4 38	6.1 53	6.6 58	7.9 69	10.9 96	13.1 115	16.4 145	19.7 174	20 177	20 177	20 177	20 177	

◇ Solid Shaft Type Single-Phase 115 VAC 60 Hz

● All output shafts rotate opposite to the direction of motor shaft rotation.

Unit = Upper values: N-m/Lower values: lb-in

Model																	Gear Ratio											
Motor/Gearhead		Motor Speed r/min	3	3.6	5	6	7.5	9	12.5	15	18	25	30	36	50	60	75	90	100	120	150	180						
US425-401U2 /4GN□RAA		1200	0.30 2.6	0.36 3.1	0.50 4.4	0.60 5.3	0.75 6.6	0.90 7.9	1.5 13.2	1.8 15.9	2.2 19.4	3.0 26	3.6 31	4.3 38	6.0 53	7.2 63	8 70	8 70	8 70	8 70	8 70	8 70						
		90	0.075 0.66	0.090 0.79	0.13 1.15	0.15 1.32	0.19 1.68	0.23 2.0	0.38 3.3	0.45 3.9	0.54 4.7	0.75 6.6	0.90 7.9	1.1 9.7	1.5 13.2	1.8 15.9	2.3 20	2.7 23	3.0 26	3.6 31	4.5 39	5.4 47						
		Starting	0.16 1.41	0.19 1.68	0.26 2.3	0.32 2.8	0.39 3.4	0.47 4.1	0.71 6.2	0.85 7.5	1.0 8.8	1.4 12.3	1.7 15.0	2.0 17.7	2.8 24	3.4 30	4.3 38	5.1 45	5.7 50	6.8 60	8 70	8 70						
US540-401U2 /5GN□RAA		1200	0.53 4.6	0.64 5.6	0.88 7.7	1.1 9.7	1.3 11.5	1.6 14.1	2.2 19.4	2.7 23	3.2 28	3.9 34	4.7 41	5.6 49	7.8 69	9.4 83	10 88	10 88	10 88	10 88	10 88	10 88						
		90	0.14 1.23	0.17 1.50	0.24 2.1	0.29 2.5	0.36 3.1	0.43 3.8	0.60 5.3	0.71 6.2	0.86 7.6	1.1 9.7	1.3 11.5	1.5 13.2	2.1 18.5	2.5 22	3.2 28	3.8 33	4.2 37	5.0 44	6.3 55	7.6 67						
		Starting	0.32 2.8	0.39 3.4	0.54 4.7	0.65 5.7	0.81 7.1	0.97 8.5	1.4 12.3	1.6 14.1	1.9 16.8	2.4 21	2.9 25	3.5 30	4.9 43	5.8 51	7.3 64	8.7 76	9.7 85	10 88	10 88	10 88						
US560-501U2 /5GU□RAA		1200	1.0 8.8	1.2 10.6	1.7 15.0	2.0 17.7	2.5 22	3.0 26	4.2 37	5.0 44	6.0 53	8.3 73	8.8 77	10.6 93	14.7 130	17.6 155	20 177	20 177	20 177	20 177	20 177	20 177						
		90	0.41 3.6	0.49 4.3	0.68 6.0	0.82 7.2	1.0 8.8	1.2 10.6	1.7 15.0	2.0 17.7	2.4 21	3.4 30	3.6 31	4.3 38	6.0 53	7.2 63	9.0 79	10.8 95	12.0 106	12.0 106	15.0 132	18.0 159						
		Starting	0.51 4.5	0.62 5.4	0.86 7.6	1.0 8.8	1.3 11.5	1.5 13.2	2.1 18.5	2.6 23	3.1 27	4.3 38	4.6 40	5.5 48	7.7 68	9.2 81	11.5 101	13.9 123	15.4 136	15.4 136	19.2 169	20 177						
US590-501U2 /5GU□RAA		1200	1.5 13.2	1.8 15.9	2.5 22	3.0 26	3.7 32	4.5 39	6.2 54	7.4 65	8.9 78	12.4 109	13.1 115	15.8 139	20 177	20 177	20 177	20 177	20 177	20 177	20 177	20 177						
		90	0.41 3.6	0.49 4.3	0.68 6.0	0.82 7.2	1.0 8.8	1.2 10.6	1.7 15.0	2.0 17.7	2.4 21	3.4 30	3.6 31	4.3 38	6.0 53	7.2 63	9.0 79	10.8 95	12.0 106	12.0 106	15.0 132	18.0 159						
		Starting	0.73 6.4	0.87 7.6	1.2 10.6	1.5 13.2	1.8 15.9	2.2 19.4	3.0 26	3.6 31	4.4 38	6.1 53	6.6 58	7.9 69	10.9 96	13.1 115	16.4 145	19.7 174	20 177	20 177	20 177	20 177						

US Series Speed Control System

◇ Hollow Shaft Type Single-Phase 230 VAC 60 Hz

● All output shafts rotate opposite to the direction of motor shaft rotation.

Unit = Upper values: N·m/Lower values: lb-in

Model	Gear Ratio																				
Motor/Gearhead	Motor Speed r/min	3	3.6	5	6	7.5	9	12.5	15	18	25	30	36	50	60	75	90	100	120	150	180
US425-402E2 /4GN□RH	1200	0.17 1.50	0.20 1.77	0.28 2.4	0.34 3.0	0.53 4.6	0.63 5.5	1.1 9.7	1.3 11.5	1.5 13.2	2.1 18.5	2.5 22	3.0 26	4.2 37	5.0 44	6.3 55	7.6 67	8 70	8 70	8 70	8 70
	90	0.042 0.37	0.050 0.44	0.070 0.61	0.084 0.74	0.13 1.15	0.16 1.41	0.26 2.3	0.32 2.8	0.38 3.3	0.53 4.6	0.63 5.5	0.76 6.7	1.1 9.7	1.3 11.5	1.6 14.1	1.9 16.8	2.1 18.5	2.5 22	3.2 28	3.8 33
	Starting	0.13 1.15	0.16 1.41	0.22 1.94	0.26 2.3	0.41 3.6	0.50 4.4	0.74 6.5	0.89 7.8	1.1 9.7	1.5 13.2	1.8 15.9	2.1 18.5	3.0 26	3.6 31	4.5 39	5.3 46	5.9 52	7.1 62	8 70	8 70
US540-402E2 /5GN□RH	1200	0.35 3.0	0.41 3.6	0.58 5.1	0.69 6.1	1.2 10.6	1.4 12.3	2.0 17.7	2.3 20	2.8 24	3.5 30	4.1 36	5.0 44	6.9 61	8.3 73	10 88	10 88	10 88	10 88	10 88	10 88
	90	0.095 0.84	0.11 0.97	0.16 1.41	0.19 1.68	0.32 2.8	0.39 3.4	0.54 4.7	0.64 5.6	0.77 6.8	0.95 8.4	1.1 9.7	1.4 12.3	1.9 16.8	2.3 20	2.8 24	3.4 30	3.8 33	4.5 39	5.7 50	6.8 60
	Starting	0.21 1.85	0.25 2.2	0.35 3.0	0.42 3.7	0.63 5.5	0.76 6.7	1.1 9.7	1.3 11.5	1.5 13.2	1.9 16.8	2.3 20	2.7 23	3.8 33	4.5 39	5.7 50	6.8 60	7.6 67	9.1 80	10 88	10 88
US560-502E2 /5GU□RH	1200	0.68 6.0	0.81 7.1	1.1 9.7	1.4 12.3	2.3 20	2.8 24	3.8 33	4.6 40	5.5 48	7.7 68	8.1 71	9.7 85	13.5 119	16.2 143	20 177	20 177	20 177	20 177	20 177	20 177
	90	0.24 2.1	0.29 2.5	0.40 3.5	0.48 4.2	0.82 7.2	0.98 8.6	1.4 12.3	1.6 14.1	2.0 17.7	2.7 23	2.9 25	3.5 30	4.8 42	5.8 51	7.2 63	8.6 76	9.6 84	9.6 84	12.0 106	14.4 127
	Starting	0.36 3.1	0.43 3.8	0.60 5.3	0.72 6.3	1.1 9.7	1.3 11.5	1.8 15.9	2.2 19.4	2.6 23	3.6 31	3.9 34	4.7 41	6.5 57	7.8 69	9.7 85	11.7 103	13.0 115	13.0 115	16.2 143	19.4 171
US590-502E2 /5GU□RH	1200	1.1 9.7	1.3 11.5	1.8 15.9	2.2 19.4	3.7 32	4.5 39	6.2 54	7.4 65	8.9 78	12.4 109	13.1 115	15.8 139	20 177	20 177	20 177	20 177	20 177	20 177	20 177	20 177
	90	0.39 3.4	0.47 4.1	0.65 5.7	0.78 6.9	1.3 11.5	1.6 14.1	2.2 19.4	2.7 23	3.2 28	4.4 38	4.7 41	5.6 49	7.8 69	9.4 83	11.7 103	14.0 123	15.6 138	15.6 138	19.5 172	20 177
	Starting	0.60 5.3	0.72 6.3	1.0 8.8	1.2 10.6	1.8 15.9	2.2 19.4	3.0 26	3.6 31	4.3 38	6.0 53	6.5 57	7.8 69	10.8 95	13.0 115	16.2 143	19.4 171	20 177	20 177	20 177	20 177

◇ Solid Shaft Type Single-Phase 230 VAC 60 Hz

● All output shafts rotate opposite to the direction of motor shaft rotation.

Unit = Upper values: N·m/Lower values: lb-in

Model	Gear Ratio																				
Motor/Gearhead	Motor Speed r/min	3	3.6	5	6	7.5	9	12.5	15	18	25	30	36	50	60	75	90	100	120	150	180
US425-402E2 /4GN□RAA	1200	0.21 1.85	0.25 2.2	0.35 3.0	0.42 3.7	0.53 4.6	0.63 5.5	1.1 9.7	1.3 11.5	1.5 13.2	2.1 18.5	2.5 22	3.0 26	4.2 37	5.0 44	6.3 55	7.6 67	8 70	8 70	8 70	8 70
	90	0.053 0.46	0.063 0.55	0.088 0.77	0.11 0.97	0.13 1.15	0.16 1.41	0.26 2.3	0.32 2.8	0.38 3.3	0.53 4.6	0.63 5.5	0.76 6.7	1.1 9.7	1.3 11.5	1.6 14.1	1.9 16.8	2.1 18.5	2.5 22	3.2 28	3.8 33
	Starting	0.17 1.50	0.20 1.77	0.28 2.4	0.33 2.9	0.41 3.6	0.50 4.4	0.74 6.5	0.89 7.8	1.1 9.7	1.5 13.2	1.8 15.9	2.1 18.5	3.0 26	3.6 31	4.5 39	5.3 46	5.9 52	7.1 62	8 70	8 70
US540-402E2 /5GN□RAA	1200	0.47 4.1	0.56 4.9	0.78 6.9	0.94 8.3	1.2 10.6	1.4 12.3	2.0 17.7	2.3 20	2.8 24	3.5 30	4.1 36	5.0 44	6.9 61	8.3 73	10 88	10 88	10 88	10 88	10 88	10 88
	90	0.13 1.15	0.15 1.32	0.21 1.85	0.26 2.3	0.32 2.8	0.39 3.4	0.54 4.7	0.64 5.6	0.77 6.8	0.95 8.4	1.1 9.7	1.4 12.3	1.9 16.8	2.3 20	2.8 24	3.4 30	3.8 33	4.5 39	5.7 50	6.8 60
	Starting	0.25 2.2	0.30 2.6	0.42 3.7	0.50 4.4	0.63 5.5	0.76 6.7	1.1 9.7	1.3 11.5	1.5 13.2	1.9 16.8	2.3 20	2.7 23	3.8 33	4.5 39	5.7 50	6.8 60	7.6 67	9.1 80	10 88	10 88
US560-502E2 /5GU□RAA	1200	0.92 8.1	1.1 9.7	1.5 13.2	1.8 15.9	2.3 20	2.8 24	3.8 33	4.6 40	5.5 48	7.7 68	8.1 71	9.7 85	13.5 119	16.2 143	20 177	20 177	20 177	20 177	20 177	20 177
	90	0.33 2.9	0.39 3.4	0.54 4.7	0.65 5.7	0.82 7.2	0.98 8.6	1.4 12.3	1.6 14.1	2.0 17.7	2.7 23	2.9 25	3.5 30	4.8 42	5.8 51	7.2 63	8.6 76	9.6 84	9.6 84	12.0 106	14.4 127
	Starting	0.43 3.8	0.52 4.6	0.72 6.3	0.86 7.6	1.1 9.7	1.3 11.5	1.8 15.9	2.2 19.4	2.6 23	3.6 31	3.9 34	4.7 41	6.5 57	7.8 69	9.7 85	11.7 103	13.0 115	13.0 115	16.2 143	19.4 171
US590-502E2 /5GU□RAA	1200	1.5 13.2	1.8 15.9	2.5 22	3.0 26	3.7 32	4.5 39	6.2 54	7.4 65	8.9 78	12.4 109	13.1 115	15.8 139	20 177	20 177	20 177	20 177	20 177	20 177	20 177	20 177
	90	0.53 4.6	0.64 5.6	0.88 7.7	1.1 9.7	1.3 11.5	1.6 14.1	2.2 19.4	2.7 23	3.2 28	4.4 38	4.7 41	5.6 49	7.8 69	9.4 83	11.7 103	14.0 123	15.6 138	15.6 138	19.5 172	20 177
	Starting	0.72 6.3	0.86 7.6	1.2 10.6	1.4 12.3	1.8 15.9	2.2 19.4	3.0 26	3.6 31	4.3 38	6.0 53	6.5 57	7.8 69	10.8 95	13.0 115	16.2 143	19.4 171	20 177	20 177	20 177	20 177