Induction Motors
6 W (1/125 HP)
Frame Size: □ 2.36 in. (□ 60 mm)

World **K** Series
(Gearhead Sold Separately)

V Series/Combination Type
(Pre-assembled Gearmotor)

Specifications — Continuous Rating

World K Series (General Purpose)

Model Upper Model Name: Pinion Shaft Type Lower Model Name( ): Round Shaft Type		Output Power		Voltage	Frequency	Current	Starting Torque		Rated Torque		Rated Speed	Capacitor
Lead Wire Type Dimension ①	Terminal Box Type Dimension ②	HP	W	VAC	Hz	A	oz-in	mN·m	oz-in	mN·m	r/min	μF
ZP **2IK6GN-AWU** **(2IK6A-AWU)**	**2IK6GN-AWTU** **(2IK6A-AWTU)**	1/125	6	Single-Phase 110 Single-Phase 115	60 60	0.2	5.6	40	5.8	41	1450	2.5
ZP **2IK6GN-CWE** **(2IK6A-CWE)**	**2IK6GN-CWTE** **(2IK6A-CWTE)**			Single-Phase 220 Single-Phase 220 Single-Phase 230 Single-Phase 230	50 60 50 60	0.11 0.09 0.11 0.1	5.3 5.6 6.3 5.6	38 40 45 40	6.9 5.8 6.9 5.8	49 41 49 41	1200 1450 1200 1450	0.6
ZP **2IK6GN-SW** **(2IK6A-SW)**	**2IK6GN-SWT** **(2IK6A-SWT)**			Three-Phase 200 Three-Phase 200 Three-Phase 220 Three-Phase 230	50 60 60 60	0.09 0.08 0.09 0.09	6.9 6.9 5.8 5.8	49 49 41 41	6.9 6.9 5.8 5.8	49 49 41 41	1200 1450 1500 1500	—

ZP Impedance protected.
- The "**U**" and "**E**" at the end of the model name indicate that the unit includes a capacitor. These two letters are not listed on the motor nameplate. When the motor is approved under various safety standards, the model name on the nameplate is the approved model name.→Page G-10
- **Details of Safety Standard**→Page G-2

V Series (Quiet Operation, High Strength, Long Life)

Model Combination Type		Output Power		Voltage	Frequency	Current	Starting Torque		Rated Torque		Rated Speed	Capacitor
Lead Wire Type Dimension ③	Terminal Box Type	HP	W	VAC	Hz	A	oz-in	mN·m	oz-in	mN·m	r/min	μF
ZP **VHI206A-□U**	—	1/125	6	Single-Phase 110 Single-Phase 115	60	0.2	5.6	40	5.8	41	1450	2.5
ZP **VHI206C-□E**	—			Single-Phase 220 Single-Phase 220 Single-Phase 230 Single-Phase 230	50 60 50 60	0.11 0.09 0.11 0.1	5.3 5.6 6.3 5.6	38 40 45 40	6.9 5.8 6.9 5.8	49 41 49 41	1200 1450 1200 1450	0.6

ZP Impedance protected.
- The "**U**" and "**E**" at the end of the model name indicate that the unit includes a capacitor. These two letters are not listed on the motor nameplate. When the motor is approved under various safety standards, the model name on the nameplate is the approved model name.→Page G-11
- **Details of Safety Standard**→Page G-2
- Models above are provided as combination type with motor and gearhead pre-assembled.
- Enter gear ratio in the box (□) within the model name.
- The values in the table are for the motor only.

Gearhead for World K Series (Sold Separately)

Parallel Shaft

Gearhead Model	Gear Ratio
2GN□KA	**3~180**
2GN10XK (Decimal Gearhead)	

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

Gearmotor — Torque Table

World K Series (General Purpose)

The maximum permissible torque with a decimal gearhead with a gear ratio of 10:1 is 26 lb-in (3 N·m).

Single-Phase 115/230 VAC 60 Hz, Three-Phase 230 VAC 60 Hz

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

Model	Speed r/min	600	500	360	300	240	200	144	120	100	72	60	50	36	30	24	20	18	15	12	10
	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**
2IK6GN-AWU **2IK6GN-AWTU** **2IK6GN-CWE** **2IK6GN-CWTE** **2IK6GN-SW** **2IK6GN-SWT**	**2GN□KA**	0.88 0.10	1.06 0.12	1.5 0.17	1.77 0.20	2.2 0.25	2.6 0.30	3.7 0.42	4.4 0.50	5.3 0.60	6.6 0.75	7.9 0.90	9.7 1.1	12.3 1.4	14.1 1.6	17.7 2.0	21 2.4	23 2.7	26 3	26 3	26 3

Single-Phase 230 VAC 50 Hz

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

Model	Speed r/min	500	416	300	250	200	166	120	100	83	60	50	41	30	25	20	16	15	12.5	10	8.3
	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**
2IK6GN-CWE **2IK6GN-CWTE**	**2GN□KA**	1.06 0.12	1.23 0.14	1.77 0.20	2.1 0.24	2.6 0.30	3.1 0.36	4.4 0.50	5.3 0.60	6.2 0.71	7.8 0.89	9.7 1.1	11.5 1.3	14.1 1.6	16.8 1.9	21 2.4	25 2.9	26 3	26 3	26 3	26 3

V Series (Quiet Operation, High Strength, Long Life)

Single-Phase 115/230 VAC 60 Hz

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

Model	Speed r/min	360	300	200	120	100	60	50	30	20	15	10	6	5
	Gear Ratio	**5**	**6**	**9**	**15**	**18**	**30**	**36**	**60**	**90**	**120**	**180**	**300**	**360**
VHI206A-□U **VHI206C-□E**		1.59 0.18	1.94 0.22	2.9 0.33	4.8 0.55	5.8 0.66	9.7 1.1	11.5 1.3	18.5 2.1	28 3.2	37 4.2	53 6	53 6	53 6

Single-Phase 230 VAC 50 Hz

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

Model	Speed r/min	300	250	166	100	83	50	41	25	16	12.5	8.3	5	4.2
	Gear Ratio	**5**	**6**	**9**	**15**	**18**	**30**	**36**	**60**	**90**	**120**	**180**	**300**	**360**
VHI206C-□E		1.94 0.22	2.3 0.26	3.5 0.4	5.8 0.66	6.9 0.79	11.5 1.3	13.2 1.5	22 2.5	33 3.8	45 5.1	53 6	53 6	53 6

- Gearheads and decimal gearheads are sold separately. Decimal gearheads are not available for **V** Series.
- Enter the gear ratio in the box (□) within the model name. A colored background indicates gear shaft rotation in the same direction as the motor shaft; a white background indicates rotation in the opposite direction.
- The speed is calculated by dividing the motor's synchronous speed (50 Hz: 1500 r/min, 60 Hz: 1800 r/min) by the gear ratio. The actual speed is 2～20% less than the displayed value, depending on the size of the load.

Permissible Overhung Load and Permissible Thrust Load

Motor (Round shaft type)→Page A-11
Gearhead→Page A-11

Permissible Load Inertia J for Gearhead

→Page A-12

Dimensions Scale 1/4, Unit = **inch** (mm)

Mounting screws are included with gearheads. Dimensions for screws →A-223

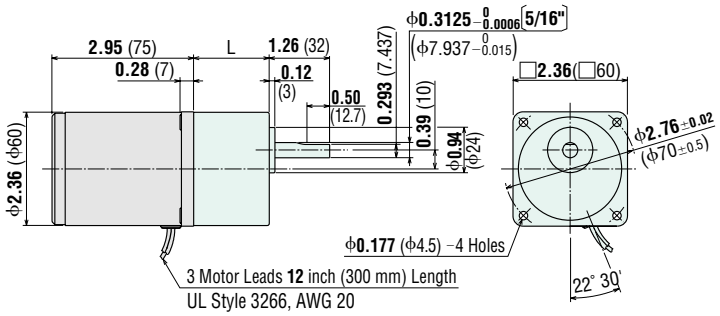
World K Series

Lead Wire Type ①

Motor
2IK6GN-AWU
2IK6GN-CWE
2IK6GN-SW
Weight: 1.5 lb. (0.7 kg)

Gearhead
2GN□KA
Weight: 0.88 lb. (0.4 kg)

DXF A004AU (**2GN3KA**~**18KA**)
A004BU (**2GN25KA**~**180KA**)

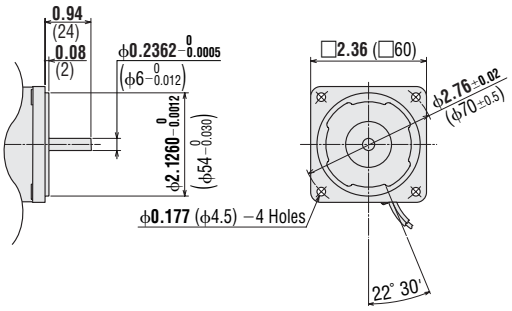


2GN3KA~**18KA**: L = **1.18** (30)
2GN25KA~**180KA**: L = **1.57** (40)

Round Shaft Type
2IK6A-AWU
2IK6A-CWE
2IK6A-SW
Weight: 1.5 lb. (0.7 kg)

DXF A324

1/4 inch shaft motors are also available. Contact your Oriental Motor Representative for more information.

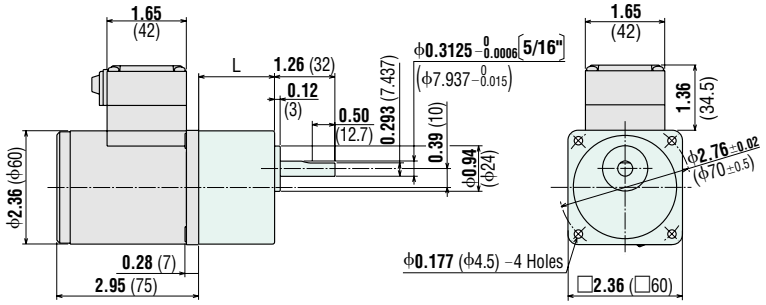


Terminal Box Type ②

Motor
2IK6GN-AWTU
2IK6GN-CWTE
2IK6GN-SWT
Weight: 1.7 lb. (0.75 kg)

Gearhead
2GN□KA
Weight: 0.88 lb. (0.4 kg)

DXF A005AU (**2GN3KA**~**18KA**)
A005BU (**2GN25KA**~**180KA**)

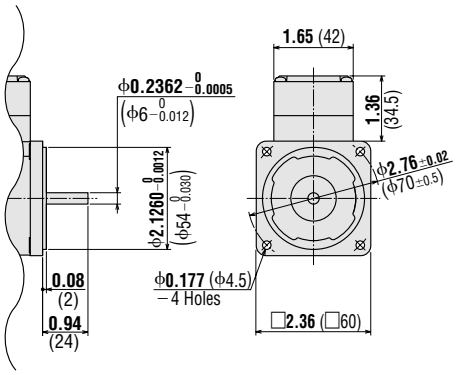


2GN3KA~**18KA**: L = **1.18** (30)
2GN25KA~**180KA**: L = **1.57** (40)

- Use cable (VCTF) with a diameter of ϕ**0.27** inch (ϕ6.8 mm)~ϕ**0.34** inch (ϕ8.6 mm).
- Cable entry is possible at any of the four sides of the terminal box.
- **Details of Terminal Box** → Page A-224

Round Shaft Type
2IK6A-AWTU
2IK6A-CWTE
2IK6A-SWT
Weight: 1.7 lb. (0.75 kg)

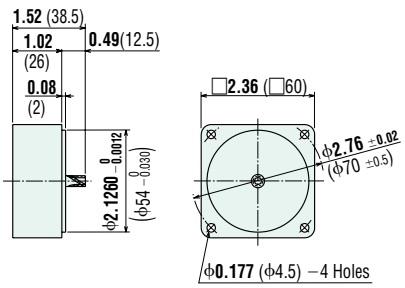
DXF A325



Decimal Gearhead (for World K Series)

2GN10XK Weight: 0.44 lb. (0.2 kg)

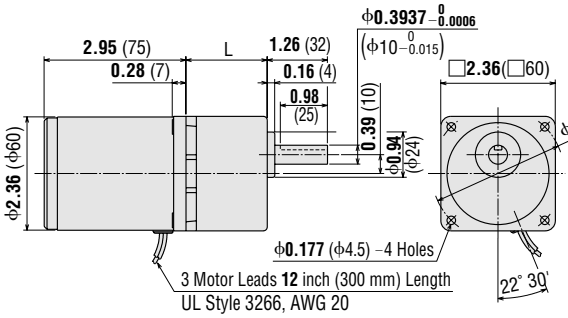
DXF A003



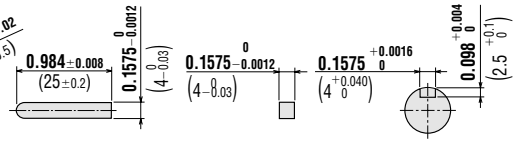
● V Series

◆ Lead Wire Type ③

VHI206A-□U, VHI206C-□E
(Combination Type)
Weight: 2.6 lb. (1.2 kg)
including gearhead
Motor Model:
VHI206A-GV,VHI206C-GV
Gearhead Model: GV2G□
DXF A201A (GV2G5~18)
A201B (GV2G30~120)
A201C (GV2G180~360)

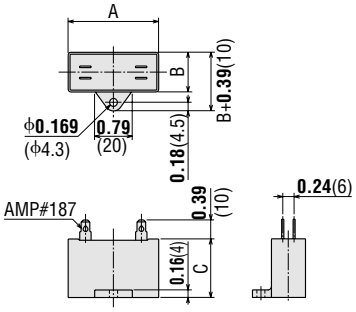


●Key and Key Slot (Scale 1/2)
(The key is provided with the gearhead)



GV2G5~GV2G18: L = **1.34** (34)
GV2G30~GV2G120: L = **1.5** (38)
GV2G180~GV2G360: L = **1.69** (43)

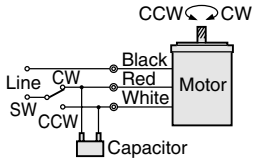
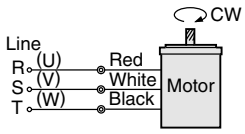
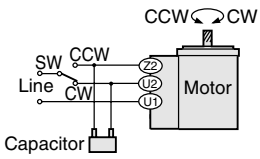
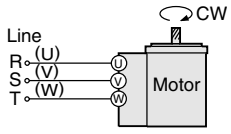
● Capacitor (included with single-phase motors)



Motor Model	Capacitor Model	Dimensions inch (mm) A	B	C	Weight oz. (g)
2IK6GN-AW(T)U **2IK6A-AW(T)U** **VHI206A-□U**	CH25FAUL	1.22 (31)	0.67 (17)	1.06 (27)	0.71 (20)
2IK6GN-CW(T)E **2IK6A-CW(T)E** **VHI206C-□E**	CH06BFAUL	1.22 (31)	0.57 (14.5)	0.93 (23.5)	0.53 (15)

- If you need to order a capacitor without a motor, add "-C" to the capacitor model name shown. A capacitor cap is included with a capacitor.

■ Connection Diagrams

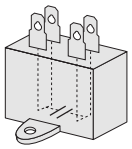
Lead Wire Type		Terminal Box Type	
2IK6GN-AWU **2IK6GN-CWE** **VHI206A-□U** **VHI206C-□E**	**2IK6GN-SW**	**2IK6GN-AWTU** **2IK6GN-CWTE**	**2IK6GN-SWT**
			
To rotate the motor in a clockwise (CW) direction, flip switch SW to CW. To rotate it in a counterclockwise (CCW) direction, flip switch SW to CCW.	To change the rotation direction, change any two connections between U, V and W.	To rotate the motor in a clockwise (CW) direction, flip switch SW to CW. To rotate it in a counterclockwise (CCW) direction, flip switch SW to CCW.	To change the rotation direction, change any two connections between U, V and W.

- The direction of motor rotation is as viewed from the shaft end of the motor.
- CW represents the clockwise direction, while CCW represents the counterclockwise direction.
- Connection diagrams are also valid for the equivalent round shaft type.
- **How to connect a capacitor**→Page A-225

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

● Inner Connection Diagram for 4-Terminal Capacitor

Terminals of the capacitor are connected as shown in the figure. For lead wire connection, use one lead wire per terminal.



■ List of Motor and Gearhead Combinations for V Series

Model numbers for motor and gearhead combinations are shown below.

Model	Motor Model	Gearhead Model
VHI206A-□U	VHI206A-GV	GV2G□
VHI206C-□E	VHI206C-GV	

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