

Standard AC Motors

# Induction Motors

## Induction Motors

Overview

Three-Phase Induction Motors

Induction Motors

Reversible Motors

Electromagnetic Brake Motors

Clutch & Brake Motors

Low-Speed Synchronous Motors

Torque Motors

IP67 Watertight, Dust-Resistant Motors

Brake Pack

AC Speed Control Motors

AC input DSC

Page

Features and Types of Induction Motors .....	E-34
General Specifications .....	E-38
<b>KII</b> Series [6 W~90 W (1/125 HP~1/8 HP)] .....	E-40
<b>BH</b> Series [200 W (1/4 HP)] .....	E-50

# Induction Motors



● For detailed information about regulations and standards, please see to the Oriental Motor website.



- Induction motors can be operated easily from an AC power supply
- These products are suitable for unidirectional continuous operation

KII Series

6 W  
(1/125 HP)

15 W  
(1/50 HP)

25 W  
(1/30 HP)

40 W  
(1/19 HP)

60 W  
(1/12 HP)

90 W  
(1/8 HP)

BH Series  
200 W  
(1/4 HP)



See Full Product Details Online  
[www.orientalmotor.com](http://www.orientalmotor.com)

- Manual
- Specifications
- Dimensions
- CAD
- Characteristics
- Connection and Operation

## Features of Induction Motors

### ● Optimal for Uni-Directional and Continuous Operation

Induction motors are optimal for uni-directional and continuous operation, such as a conveyor system.

### ● Easy Operation

A three-phase motor does not require a capacitor. All you need is to keep the motor connected to a three-phase power supply.

A single-phase motor can be operated simply by connecting it to a single-phase power supply via the included capacitor.

### ● Extensive Product Line





The **KII** Series and **BH** Series are available.

We have products with an output power range of 6 W (1/125 HP) to 200 W (1/4 HP), so you can find a motor that meets your specific application.

### ● Compatible with Various Gearheads

Motor, combined with a gearhead allows the motor speed to be reduced to the required speed or generate higher torque.

## Types of Induction Motors

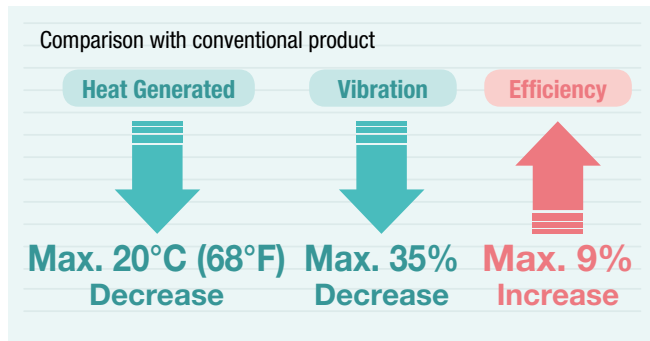
Series	Features, Product Line									
<b>KII Series</b>  	<ul style="list-style-type: none"> <li>● <b>New Global Standard</b> With a high performance gearhead built-in, it is the new global standard for standard AC motors. Features of the <b>KII</b> Series → Page E-35</li> <li>● <b>High Performance Gearhead</b></li> </ul>	<ul style="list-style-type: none"> <li>● <b>Product Line</b></li> </ul> <table border="1"> <tr> <td>Frame Size</td> <td>□60 mm (□2.36 in.)~□90 mm (□3.54 in.)</td> </tr> <tr> <td>Output Power</td> <td>Terminal Box Type: 25 W~90 W (1/30 HP~1/8 HP) Lead Wire Type: 6 W~90 W (1/125 HP~1/8 HP)</td> </tr> <tr> <td>Type</td> <td>Terminal Box Type: Parallel shaft, Round Shaft Type Lead Wire Type: Parallel shaft, Round Shaft Type</td> </tr> <tr> <td>Voltage</td> <td>Single-Phase 110/115 VAC, Single-Phase 220/230 VAC</td> </tr> </table>	Frame Size	□60 mm (□2.36 in.)~□90 mm (□3.54 in.)	Output Power	Terminal Box Type: 25 W~90 W (1/30 HP~1/8 HP) Lead Wire Type: 6 W~90 W (1/125 HP~1/8 HP)	Type	Terminal Box Type: Parallel shaft, Round Shaft Type Lead Wire Type: Parallel shaft, Round Shaft Type	Voltage	Single-Phase 110/115 VAC, Single-Phase 220/230 VAC
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Type	Terminal Box Type: Parallel shaft, Round Shaft Type Lead Wire Type: Parallel shaft, Round Shaft Type									
Voltage	Single-Phase 110/115 VAC, Single-Phase 220/230 VAC									
<b>BH Series</b>  	<ul style="list-style-type: none"> <li>● <b>Smallest Frame Size among 200 W (1/4 HP) Motors</b> These motors achieve a high output of 200 W (1/4 HP) with a frame size of 104 mm (4.09 in.).</li> <li>● <b>Hypoid Gear Right-Angle Type is Available.</b></li> <li>● <b>"Combination Type" for Easy Installation</b> With each combination type, the motor and gearhead come pre-assembled for easy installation into your equipment.</li> <li>● <b>Conforms to Standards and Global Voltage Specifications</b></li> </ul>	<ul style="list-style-type: none"> <li>● <b>Tapped Hole at the Shaft End</b> The gearhead shaft features a tapped hole for convenient connection with loads.</li> <li>● <b>Product Line</b></li> </ul> <table border="1"> <tr> <td>Frame Size</td> <td>□104 mm (□4.09 in.)</td> </tr> <tr> <td>Output Power</td> <td>200 W (1/4 HP)</td> </tr> <tr> <td>Type</td> <td>Terminal Box Type: Right-Angle, Hollow Shaft Type, Right-Angle, Solid Shaft Type, Parallel Shaft Type, Round Shaft Type Cable Type: Right-Angle, Hollow Shaft Type, Right-Angle, Solid Shaft Type, Parallel Shaft Type, Round Shaft Type</td> </tr> <tr> <td>Voltage</td> <td>Three-Phase 220/230 VAC Single-Phase 110/115 VAC Single-Phase 220/230 VAC</td> </tr> </table>	Frame Size	□104 mm (□4.09 in.)	Output Power	200 W (1/4 HP)	Type	Terminal Box Type: Right-Angle, Hollow Shaft Type, Right-Angle, Solid Shaft Type, Parallel Shaft Type, Round Shaft Type Cable Type: Right-Angle, Hollow Shaft Type, Right-Angle, Solid Shaft Type, Parallel Shaft Type, Round Shaft Type	Voltage	Three-Phase 220/230 VAC Single-Phase 110/115 VAC Single-Phase 220/230 VAC
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Voltage	Three-Phase 220/230 VAC Single-Phase 110/115 VAC Single-Phase 220/230 VAC									

## KII Series Features

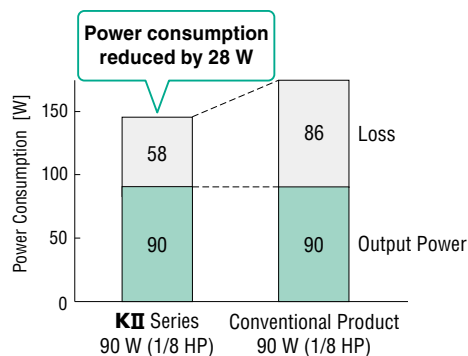
### Excellent Motor Performance

The magnetic balance for each input voltage has been re-examined and the motors have been specially designed to optimize their characteristics.

Designing specifically for each voltage not only improves efficiency, but also contributes to equipment reliability by reducing heat and vibration generated by the motor.

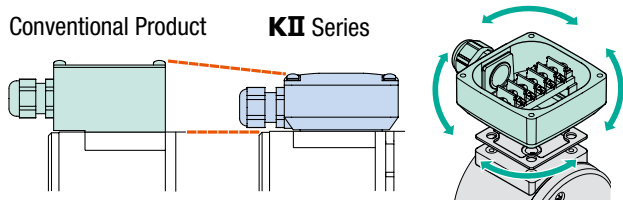


### Energy Savings



### Built-In Slim Body Terminal Box (Terminal Box Type)

A new shape of terminal box was designed to make wiring the terminal block easier. It is slimmer than conventional products, and the cable outlet can be rotated in 90° increments for 4 possible directions.



### IP66 Compliant Drip-proof Specification

The seal structure for the motor, gearhead and terminal box components has been strengthened. The terminal box type is compliant with the IP66 degree of protection.

IP66:

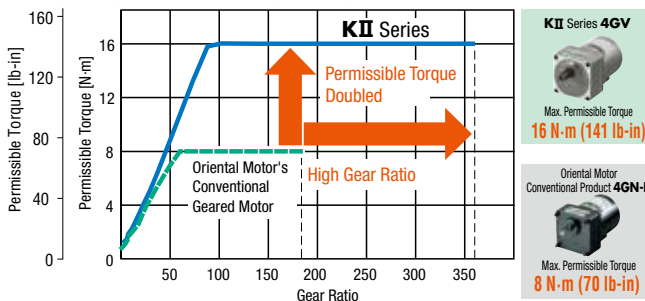
The IP indication that shows the watertight and dust-resistant performance are specified under IEC 60529 and IEC 60034-5.

### Equipped with a High-Performance Gearhead

#### High Permissible Torque

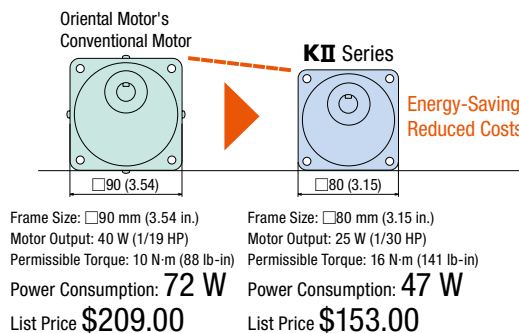
The permissible torque is up to twice that of conventional products.

● 25 W (1/30 HP) Gearhead Output Torque (Permissible)



#### Downsizing is Possible with the Same Output Torque

Downsizing is possible by replacing conventional products with the KII Series. If a smaller size motor can be selected, the power consumption and purchase cost can be reduced.



### High Strength

The permissible radial load and the permissible axial load are up to twice that of conventional products.



### Long-Life

At 10,000 hours, the rated life is twice that of a conventional product.

### Noise Reduction

The contact noise of the motor and gearhead is approximately 6 dB less compared to a conventional product.

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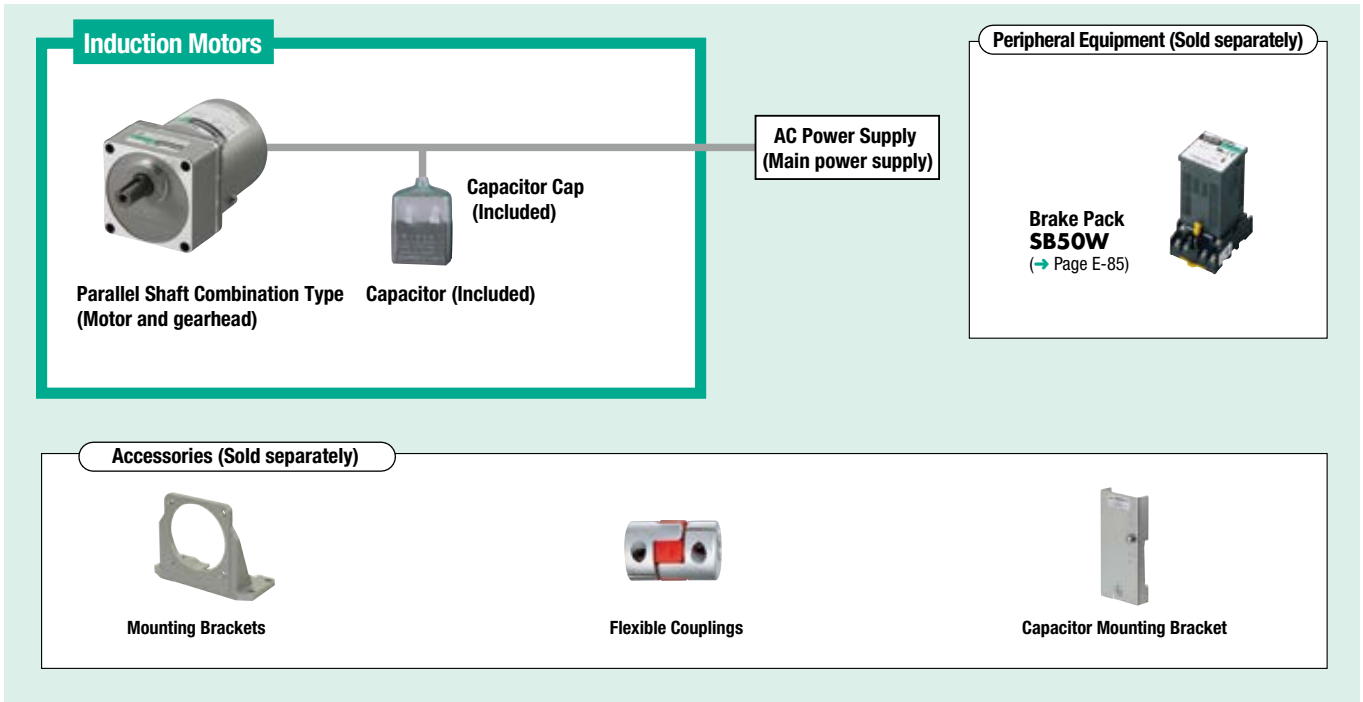
AC input DSC

Product Line of Induction Motors

Series	Voltage (VAC)	Type	Motor Frame Size, Output Power						
			□60 mm (□2.36 in.)	□70 mm (□2.76 in.)	□80 mm (□3.15 in.)	□90 mm (□3.54 in.)		□104 mm (□4.09 in.)	
			6 W (1/125 HP)	15 W (1/50 HP)	25 W (1/30 HP)	40 W (1/19 HP)	60 W (1/12 HP)	90 W (1/8 HP)	200 W (1/4 HP)
KII Series	Single-Phase 110/115	Terminal Box			●	●	●	●	
		Lead Wire	●	●	●	●	●	●	
	Single-Phase 220/230	Terminal Box			●	●	●	●	
		Lead Wire	●	●	●	●	●	●	
BH Series	Three-Phase 220/230	Terminal Box							●
		Cable							●
	Single-Phase 110/115	Terminal Box							●
		Cable							●
	Single-Phase 220/230	Terminal Box							●
		Cable							●

- KII Series
- 6 W (1/125 HP)
- 15 W (1/50 HP)
- 25 W (1/30 HP)
- 40 W (1/19 HP)
- 60 W (1/12 HP)
- 90 W (1/8 HP)
- BH Series
- 200 W (1/4 HP)

System Configuration



Example of System Configuration Pricing

Induction Motors Parallel Shaft Combination Type <b>4IK25UA-25A</b> \$146.00	+	Sold Separately	
		Mounting Bracket <b>SOL4UAF</b> \$27.00	Flexible Couplings <b>MCL40F10F10</b> \$76.00

The system configuration shown above is an example. Other combinations are also available.

## Product Number

### ● KII Series Parallel Shaft Combination Type

**4 I K 25 UA T2 - 12.5 A**

①    ②    ③    ④    ⑤    ⑥    ⑦    ⑧

### ● KII Series Round Shaft Type

**4 I K 25 A - UA T2**

①    ②    ③    ④    ⑦    ⑤    ⑥

①	Motor Frame Size	<b>2</b> : 60 mm (2.36 in.) <b>3</b> : 70 mm (2.76 in.) <b>4</b> : 80 mm (3.15 in.) <b>5</b> : 90 mm (3.54 in.)
②	Motor Type	<b>I</b> : Induction Motor
③	Series	<b>K</b> : <b>KII</b> Series
④	Output Power (W)	(Example) <b>25</b> : 25 W (1/30 HP)
⑤	Power Supply Voltage	<b>UA</b> : Single-Phase 110/115 VAC <b>UC</b> : Single-Phase 220/230 VAC
⑥	<b>T2</b> : Terminal Box Type    Blank: Lead Wire Type	
⑦	Gear Ratio, Motor Shaft Type	Number: Gear Ratio of Combination Type <b>A</b> : Round Shaft Type
⑧	<b>A</b> : Imperial	

### ● BH Series

**BH I 6 2 F T - 100 RH**

①    ②    ③    ④    ⑤    ⑥    ⑦    ⑧

①	Series	<b>BH</b> : <b>BH</b> Series
②	Motor Type	<b>I</b> : Induction Motor
③	Motor Frame Size	<b>6</b> : 104 mm (4.09 in.)
④	Output Power (W)	(Example) <b>2</b> : 200 W (1/4 HP)
⑤	Power Supply Voltage	<b>S</b> : Three-Phase 220/230 VAC <b>F</b> : Single-Phase 110/115 VAC <b>E</b> : Single-Phase 220/230 VAC
⑥	<b>T</b> : Terminal Box Type    Blank: Cable Type	
⑦	Gear Ratio, Motor Shaft Type	Number: Gear Ratio of Combination Type <b>A</b> : Round Shaft Type
⑧	Type of Gearhead (Combination type only)	<b>RH</b> : Right-Angle, Hollow Shaft Type <b>RA</b> : Right-Angle, Solid Shaft Type    Blank: Parallel Shaft Type

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## General Specifications

### ● KII Series

Item	Specifications
Insulation Resistance	100 MΩ or more when 500 VDC megger is applied between the windings and the case after rated operation under normal ambient temperature and humidity.
Dielectric Strength	Sufficient to withstand 1.5 kVAC at 60 Hz applied between the windings and the case for 1 minute after rated operation under normal ambient temperature and humidity.
Temperature Rise	Temperature rise of windings are 80°C (144°F) or less measured by the resistance change method after rated operation under normal ambient temperature and humidity with connecting a gearhead or equivalent heat radiation plate*1.
Thermal Class	130 (B)
Overheat Protection	6 W (1/125 HP) type has impedance protection. Other Types Built-In thermal protector (automatic return type) Open: 130±5°C (266±9°F), Close: 85±20°C (185±36°F)
Ambient Temperature	-10~+40°C (+14~+104°F) (non-freezing)
Ambient Humidity	85% or less (non-condensing)
Degree of Protection	Terminal Box Type: 25 W (1/30 HP), 40 W (1/19 HP) IP66*2 (excluding the installation surface of the round shaft type) : 60 W (1/12 HP), 90 W (1/8 HP) IP54 (excluding the installation surface of the round shaft type) Lead Wire Type: IP20

\*1 Heat sink size (Material: Aluminum)

Motor Type	Size: mm (in.)	Thickness: mm (in.)
6 W (1/125 HP)	115×115 (4.53×4.53)	5 (0.20)
15 W (1/50 HP)	125×125 (4.92×4.92)	
25 W (1/30 HP)	135×135 (5.31×5.31)	
40 W (1/19 HP)	165×165 (6.50×6.50)	
60 W (1/12 HP), 90 W (1/8 HP)	200×200 (7.87×7.87)	

\*2 For materials and surface treatments

Terminal Box Type: IP66

Type	Output	Material	Surface Treatment
Combination Type Round Shaft Type	25 W (1/30 HP), 40 W (1/19 HP)	Case and terminal box: Aluminum Output shaft: S45C Screws: Stainless steel (externally facing screws only)	Case and terminal box: Painted (excluding installation surface)

### ● BH Series

Item	Specifications
Insulation Resistance	100 MΩ or more when 500 VDC megger is applied between the windings and the case after rated operation under normal ambient temperature and humidity.
Dielectric Strength	Sufficient to withstand 1.5 kVAC at 50 Hz or 60 Hz applied between the windings and the case for 1 minute after rated operation under normal ambient temperature and humidity.
Temperature Rise	Temperature rise of windings are 70°C (126°F) or less measured by the resistance change method after rated operation under normal ambient temperature and humidity with connecting a gearhead or equivalent heat radiation plate*.
Thermal Class	130 (B)
Overheat Protection	Built-in thermal protector (automatic return type) Open: 150±5°C, (302±9°F), Close: 96±15°C (204.8±27°F)
Ambient Temperature	-10~+40°C (+14~+104°F) (non-freezing)
Ambient Humidity	85% or less (non-condensing)
Degree of Protection	Terminal Box Type: IP54 (excluding the installation surface of the round shaft type) Cable Type: IP40

\*Heat radiation plate: 230×230 mm (9.06×9.06 in.), Thickness: 5 mm (0.20 in.) (Material: Aluminum)

KII Series

6 W  
(1/125 HP)

15 W  
(1/50 HP)

25 W  
(1/30 HP)

40 W  
(1/19 HP)

60 W  
(1/12 HP)

90 W  
(1/8 HP)

BH Series  
200 W  
(1/4 HP)

## List of Motor and Gearhead Combinations

### ● KII Series

#### ◇ Terminal Box Type

Type	Product Name	Motor Product Name	Gearhead Product Name
Terminal Box Type	<b>4IK25UAT2-□A</b>	4IK25GV-UAT2	4GV□A
	<b>4IK25UCT2-□A</b>	4IK25GV-UCT2	
	<b>5IK40UAT2-□A</b>	5IK40GV-UAT2	5GV□A
	<b>5IK40UCT2-□A</b>	5IK40GV-UCT2	
	<b>5IK60UAT2-□A</b>	5IK60GVH-UAT2	5GVH□A
	<b>5IK60UCT2-□A</b>	5IK60GVH-UCT2	
	<b>5IK90UAT2-□A</b>	5IK90GVR-UAT2	5GVR□A
	<b>5IK90UCT2-□A</b>	5IK90GVR-UCT2	

### ● BH Series

#### ◇ Combination Type Right-Angle Shaft

Product Name	Motor Product Name	Gearhead Product Name
<b>BHI62ST-□RH</b>	BHI62ST-G2	BH6G2-□RH
<b>BHI62ST-□RA</b>		BH6G2-□RA
<b>BHI62S-□RH</b>	BHI62S-G2	BH6G2-□RH
<b>BHI62S-□RA</b>		BH6G2-□RA
<b>BHI62FT-□RH</b>	BHI62FT-G2	BH6G2-□RH
<b>BHI62FT-□RA</b>		BH6G2-□RA
<b>BHI62F-□RH</b>	BHI62F-G2	BH6G2-□RH
<b>BHI62F-□RA</b>		BH6G2-□RA
<b>BHI62ET-□RH</b>	BHI62ET-G2	BH6G2-□RH
<b>BHI62ET-□RA</b>		BH6G2-□RA
<b>BHI62E-□RH</b>	BHI62E-G2	BH6G2-□RH
<b>BHI62E-□RA</b>		BH6G2-□RA

#### ◇ Lead Wire Type

Type	Product Name	Motor Product Name	Gearhead Product Name
Lead Wire Type	<b>2IK6UA-□A</b>	2IK6GV-UA	2GV□A
	<b>2IK6UC-□A</b>	2IK6GV-UC	
	<b>3IK15UA-□A</b>	3IK15GV-UA	3GV□A
	<b>3IK15UC-□A</b>	3IK15GV-UC	
	<b>4IK25UA-□A</b>	4IK25GV-UA	4GV□A
	<b>4IK25UC-□A</b>	4IK25GV-UC	
	<b>5IK40UA-□A</b>	5IK40GV-UA	5GV□A
	<b>5IK40UC-□A</b>	5IK40GV-UC	
	<b>5IK60UA-□A</b>	5IK60GVH-UA	5GVH□A
	<b>5IK60UC-□A</b>	5IK60GVH-UC	
	<b>5IK90UA-□A</b>	5IK90GVR-UA	5GVR□A
	<b>5IK90UC-□A</b>	5IK90GVR-UC	

#### ◇ Combination Type Parallel Shaft

Product Name	Motor Product Name	Gearhead Product Name
<b>BHI62ST-□</b>	BHI62ST-G2	BH6G2-□
<b>BHI62S-□</b>	BHI62S-G2	
<b>BHI62FT-□</b>	BHI62FT-G2	
<b>BHI62F-□</b>	BHI62F-G2	
<b>BHI62ET-□</b>	BHI62ET-G2	
<b>BHI62E-□</b>	BHI62E-G2	

● A number indicating the gear ratio is specified where the box □ is located in the product name.

# 6 W (1/125 HP)

□60 mm (□2.36 in.)

## KII Series Parallel Shaft Combination Type/Round Shaft Type



KII Series

6 W (1/125 HP)

15 W (1/50 HP)

25 W (1/30 HP)

40 W (1/19 HP)

60 W (1/12 HP)

90 W (1/8 HP)

BH Series 200 W (1/4 HP)

### Specifications – Continuous Rating



Product Name Upper Level: Combination Type Lower Level: Round Shaft Type	Output		Voltage VAC	Frequency Hz	Current* A	Starting Torque		Rated Torque		Rated Speed r/min	Capacitor μF	Overheat Protection Device
	W	HP				mN·m	oz-in	mN·m	oz-in			
<b>2IK6UA-□A</b> <b>2IK6A-UA</b>	6	1/125	Single-Phase 110	60	0.185 (0.179)	40	5.6	41	5.8	1450	2.5	ZP
			Single-Phase 115		0.189 (0.184)							
<b>2IK6UC-□A</b> <b>2IK6A-UC</b>	6	1/125	Single-Phase 220	60	0.093 (0.090)	40	5.6	41	5.8	1450	0.6	
			Single-Phase 230		0.096 (0.093)							

\*The value inside the parentheses is the specification for the round shaft type.

● The values in the table are characteristics for the motor only.

ZP: These products are impedance protected.

### Product Line

**Combination Type**

Motor and gearhead are delivered pre-assembled. The combination of motors and gearheads can be changed and they are also available separately. In addition, the gearhead can be removed and the assembly position can be changed in 90° increments.

#### ● Parallel Shaft Combination Type Price includes motor and gearhead.

Product Name	Gear Ratio	List Price
<b>2IK6UA-□A</b>	<b>5, 6, 7.5, 9, 12.5, 15, 18</b>	\$121.00
	<b>25, 30, 36</b>	\$127.00
	<b>50, 60, 75, 90, 100, 120, 150, 180</b>	\$134.00
	<b>250, 300, 360</b>	\$180.00
<b>2IK6UC-□A</b>	<b>5, 6, 7.5, 9, 12.5, 15, 18</b>	\$124.00
	<b>25, 30, 36</b>	\$130.00
	<b>50, 60, 75, 90, 100, 120, 150, 180</b>	\$137.00
	<b>250, 300, 360</b>	\$183.00

The following items are included with each product.  
Motor, Gearhead, Capacitor, Capacitor Cap, Installation Screws, Parallel Key, Operating Manual

#### ● Round Shaft Type

Product Name	List Price
<b>2IK6A-UA</b>	\$64.00
<b>2IK6A-UC</b>	\$67.00

The following items are included with each product.  
Motor, Capacitor, Capacitor Cap, Operating Manual

### Permissible Torque

● The speed is calculated by dividing the motor's synchronous speed (60 Hz: 1800 r/min) by the gear ratio. The actual speed is a max. of 30% less, depending on the load.

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

Product Name	Speed r/min	360	300	240	200	144	120	100	72	60	50	36	30	24	20	18	15	12	10	7.2	6	5
	Gear Ratio	<b>5</b>	<b>6</b>	<b>7.5</b>	<b>9</b>	<b>12.5</b>	<b>15</b>	<b>18</b>	<b>25</b>	<b>30</b>	<b>36</b>	<b>50</b>	<b>60</b>	<b>75</b>	<b>90</b>	<b>100</b>	<b>120</b>	<b>150</b>	<b>180</b>	<b>250</b>	<b>300</b>	<b>360</b>
<b>2IK6U□-□A</b>		0.18	0.22	0.28	0.33	0.46	0.55	0.66	0.92	1.1	1.3	1.8	2.1	2.6	3.2	3.5	4.2	5.0	6	6	6	6
		1.59	1.94	2.4	2.9	4.0	4.8	5.8	8.1	9.7	11.5	15.9	18.5	23	28	30	37	44	53	53	53	53

### Permissible Radial Load and Permissible Axial Load

→ Page E-17

### Permissible Inertia J of Combination Types

→ Page E-18

● Either **A** or **C** indicating the power supply voltage is specified where the box □ is located in the product name. A number indicating the gear ratio is specified where the box □ is located in the product name.



## 15 W (1/50 HP)

□70 mm (□2.76 in.)

### KII Series Parallel Shaft Combination Type/Round Shaft Type



### Specifications – Continuous Rating



Product Name Upper Level: Combination Type Lower Level: Round Shaft Type Lead Wire Type	Output		Voltage	Frequency	Current	Starting Torque		Rated Torque		Rated Speed	Capacitor	Overheat Protection Device
	W	HP	VAC	Hz	A	mN-m	oz-in	mN-m	oz-in	r/min	μF	
<b>3IK15UA-□A</b> <b>3IK15A-UA</b>	15	1/50	Single-Phase 110	60	0.31	65	9.2	105	14.9	1450	4.0	TP
			Single-Phase 115		0.31							
<b>3IK15UC-□A</b> <b>3IK15A-UC</b>	15	1/50	Single-Phase 220	60	0.154	65	9.2	105	14.9	1450	1.0	
			Single-Phase 230		0.155							

● The values in the table are characteristics for the motor only.

TP: This indicates that there is a built-in thermal protector (automatic return type). If a motor overheats for any reason, the thermal protector is activated and the motor is stopped.

When the motor temperature drops, the thermal protector closes and the motor restarts automatically. Be sure to turn the power supply off before inspecting.

### Product Line

**Combination Type**

Motor and gearhead are delivered pre-assembled. The combination of motors and gearheads can be changed and they are also available separately.

In addition, the gearhead can be removed and the assembly position can be changed in 90° increments.

#### ● Parallel Shaft Combination Type Price includes motor and gearhead.

Product Name	Gear Ratio	List Price
<b>3IK15UA-□A</b>	<b>5, 6, 7.5, 9, 12.5, 15, 18</b>	\$132.00
	<b>25, 30, 36</b>	\$138.00
	<b>50, 60, 75, 90, 100, 120, 150, 180</b>	\$145.00
<b>3IK15UC-□A</b>	<b>250, 300, 360</b>	\$189.00
	<b>5, 6, 7.5, 9, 12.5, 15, 18</b>	\$134.00
	<b>25, 30, 36</b>	\$140.00
	<b>50, 60, 75, 90, 100, 120, 150, 180</b>	\$147.00
	<b>250, 300, 360</b>	\$191.00

The following items are included with each product.  
Motor, Gearhead, Capacitor, Capacitor Cap, Installation Screws, Parallel Key, Operating Manual

#### ● Round Shaft Type

Product Name	List Price
<b>3IK15A-UA</b>	\$70.00
<b>3IK15A-UC</b>	\$72.00

The following items are included with each product.  
Motor, Capacitor, Capacitor Cap, Operating Manual

### Permissible Torque

- The speed is calculated by dividing the motor's synchronous speed (60 Hz: 1800 r/min) by the gear ratio. The actual speed is a max. of 30% less, depending on the load.

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

Product Name	Speed r/min	360	300	240	200	144	120	100	72	60	50	36	30	24	20	18	15	12	10	7.2	6	5
	Gear Ratio	<b>5</b>	<b>6</b>	<b>7.5</b>	<b>9</b>	<b>12.5</b>	<b>15</b>	<b>18</b>	<b>25</b>	<b>30</b>	<b>36</b>	<b>50</b>	<b>60</b>	<b>75</b>	<b>90</b>	<b>100</b>	<b>120</b>	<b>150</b>	<b>180</b>	<b>250</b>	<b>300</b>	<b>360</b>
<b>3IK15U□-□A</b>		0.47	0.57	0.71	0.85	1.2	1.4	1.7	2.4	2.7	3.3	4.5	5.4	6.8	8.1	9.0	10	10	10	10	10	10
		4.1	5.0	6.2	7.5	10.6	12.3	15.0	21	23	29	39	47	60	71	79	88	88	88	88	88	88

### Permissible Radial Load and Permissible Axial Load

→ Page E-17

### Permissible Inertia J of Combination Types

→ Page E-18

● Either **A** or **C** indicating the power supply voltage is specified where the box □ is located in the product name. A number indicating the gear ratio is specified where the box □ is located in the product name.

# 25 W (1/30 HP)

□80 mm (□3.15 in.)

## KII Series Parallel Shaft Combination Type/ Round Shaft Type



Terminal Box Type



Lead Wire Type

KII Series

6 W  
(1/125 HP)

15 W  
(1/50 HP)

25 W  
(1/30 HP)

40 W  
(1/19 HP)

60 W  
(1/12 HP)

90 W  
(1/8 HP)

BH Series  
200 W  
(1/4 HP)

### Specifications – Continuous Rating



Product Name Upper Level: Combination Type Lower Level: Round Shaft Type		Output		Voltage	Frequency	Current	Starting Torque		Rated Torque		Rated Speed	Capacitor	Overheat Protection Device
Terminal Box Type	Lead Wire Type	W	HP	VAC	Hz	A	mN·m	oz-in	mN·m	oz-in	r/min	μF	TP
4IK25UAT2-□A 4IK25A-UAT2	4IK25UA-□A 4IK25A-UA	25	1/30	Single-Phase 110	60	0.44	120	17.0	170	24	1450	6.0	
				Single-Phase 115		0.43							
4IK25UCT2-□A 4IK25A-UCT2	4IK25UC-□A 4IK25A-UC	25	1/30	Single-Phase 220	60	0.22	110	15.6	170	24	1450	1.5	
				Single-Phase 230		0.22							

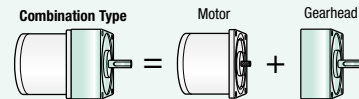
● The values in the table are characteristics for the motor only.

TP: This indicates that there is a built-in thermal protector (automatic return type). If a motor overheats for any reason, the thermal protector is activated and the motor is stopped. When the motor temperature drops, the thermal protector closes and the motor restarts automatically. Be sure to turn the power supply off before inspecting.

### Product Line

#### Combination Type

Motor and gearhead are delivered pre-assembled. The combination of motors and gearheads can be changed and they are also available separately. In addition, the gearhead can be removed and the assembly position can be changed in 90° increments.



#### ● Parallel Shaft Combination Type Price includes motor and gearhead.

##### ◇ Terminal Box Type

Product Name	Gear Ratio	List Price
4IK25UAT2-□A	5, 6, 7.5, 9, 12.5, 15, 18	\$162.00
	25, 30, 36	\$168.00
	50, 60, 75, 90, 100, 120, 150, 180	\$175.00
	250, 300, 360	\$222.00
4IK25UCT2-□A	5, 6, 7.5, 9, 12.5, 15, 18	\$165.00
	25, 30, 36	\$171.00
	50, 60, 75, 90, 100, 120, 150, 180	\$178.00
	250, 300, 360	\$225.00

The following items are included with each product.  
Motor, Gearhead, Capacitor, Capacitor Cap, Installation Screws, Parallel Key, Operating Manual

##### ◇ Lead Wire Type

Product Name	Gear Ratio	List Price
4IK25UA-□A	5, 6, 7.5, 9, 12.5, 15, 18	\$140.00
	25, 30, 36	\$146.00
	50, 60, 75, 90, 100, 120, 150, 180	\$153.00
	250, 300, 360	\$200.00
4IK25UC-□A	5, 6, 7.5, 9, 12.5, 15, 18	\$144.00
	25, 30, 36	\$150.00
	50, 60, 75, 90, 100, 120, 150, 180	\$157.00
	250, 300, 360	\$204.00

#### ● Round Shaft Type

##### ◇ Terminal Box Type

Product Name	List Price
4IK25A-UAT2	\$99.00
4IK25A-UCT2	\$102.00

##### ◇ Lead Wire Type

Product Name	List Price
4IK25A-UA	\$77.00
4IK25A-UC	\$80.00

The following items are included with each product.  
Motor, Capacitor, Capacitor Cap, Operating Manual

● A number indicating the gear ratio is specified where the box □ is located in the product name.

## Permissible Torque

- The speed is calculated by dividing the motor's synchronous speed (60 Hz: 1800 r/min) by the gear ratio.  
The actual speed is a max. of 30% less, depending on the load.

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

Product Name	Speed r/min	360	300	240	200	144	120	100	72	60	50	36	30	24	20	18	15	12	10	7.2	6	5	
	Gear Ratio	<b>5</b>	<b>6</b>	<b>7.5</b>	<b>9</b>	<b>12.5</b>	<b>15</b>	<b>18</b>	<b>25</b>	<b>30</b>	<b>36</b>	<b>50</b>	<b>60</b>	<b>75</b>	<b>90</b>	<b>100</b>	<b>120</b>	<b>150</b>	<b>180</b>	<b>250</b>	<b>300</b>	<b>360</b>	
<b>4IK25U</b> □□-□ <b>A</b>	0.77	0.92	1.1	1.4	1.9	2.3	2.8	3.8	4.4	5.3	7.3	8.8	11.0	13.2	14.6	16	16	16	16	16	16	16	16
	6.8	8.1	9.7	12.3	16.8	20	24	33	38	46	64	77	97	116	129	141	141	141	141	141	141	141	141

- Either **A** or **C** indicating the power supply voltage is specified where the box □ is located in the product name.  
A code (**T2**) indicating the terminal box type is specified where the box □ is located in the product name.  
A number indicating the gear ratio is specified where the box □ is located in the product name.

## Permissible Radial Load and Permissible Axial Load

→ Page E-17

## Permissible Inertia J of Combination Types

→ Page E-18

Overview

Three-Phase Induction Motors

Induction Motors

Reversible Motors

Electromagnetic Brake Motors

Clutch & Brake Motors

Low-Speed Synchronous Motors

Torque Motors

IP67 Watertight, Dust-Resistant Motors

Brake Pack

AC Speed Control Motors

AC input DSC

# 40 W (1/19 HP)

□90 mm (□3.54 in.)

## KII Series Parallel Shaft Combination Type/ Round Shaft Type



Terminal Box Type



Lead Wire Type

KII Series

6 W  
(1/125 HP)

15 W  
(1/50 HP)

25 W  
(1/30 HP)

40 W  
(1/19 HP)

60 W  
(1/12 HP)

90 W  
(1/8 HP)

BH Series  
200 W  
(1/4 HP)

### Specifications – Continuous Rating



Product Name Upper Level: Combination Type Lower Level: Round Shaft Type		Output		Voltage	Frequency	Current	Starting Torque		Rated Torque		Rated Speed	Capacitor	Overheat Protection Device
Terminal Box Type	Lead Wire Type	W	HP	VAC	Hz	A	mN·m	oz-in	mN·m	oz-in	r/min	μF	
<b>5IK40UAT2-□A</b> <b>5IK40A-UAT2</b>	<b>5IK40UA-□A</b> <b>5IK40A-UA</b>	40	1/19	Single-Phase 110	60	0.66	200	28	260	36	1500	9.0	TP
				Single-Phase 115		0.65							
<b>5IK40UCT2-□A</b> <b>5IK40A-UCT2</b>	<b>5IK40UC-□A</b> <b>5IK40A-UC</b>	40	1/19	Single-Phase 220	60	0.33	200	28	260	36	1500	2.0	
				Single-Phase 230		0.32							

● The values in the table are characteristics for the motor only.

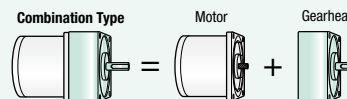
TP: This indicates that there is a built-in thermal protector (automatic return type). If a motor overheats for any reason, the thermal protector is activated and the motor is stopped.

When the motor temperature drops, the thermal protector closes and the motor restarts automatically. Be sure to turn the power supply off before inspecting.

### Product Line

#### Combination Type

Motor and gearhead are delivered pre-assembled. The combination of motors and gearheads can be changed and they are also available separately. In addition, the gearhead can be removed and the assembly position can be changed in 90° increments.



● Parallel Shaft Combination Type Price includes motor and gearhead.

#### ◇ Terminal Box Type

Product Name	Gear Ratio	List Price
<b>5IK40UAT2-□A</b>	<b>5, 6, 7.5, 9, 12.5, 15, 18</b>	\$191.00
	<b>25, 30, 36</b>	\$198.00
	<b>50, 60, 75, 90, 100, 120, 150, 180</b>	\$205.00
	<b>250, 300</b>	\$283.00
<b>5IK40UCT2-□A</b>	<b>5, 6, 7.5, 9, 12.5, 15, 18</b>	\$194.00
	<b>25, 30, 36</b>	\$201.00
	<b>50, 60, 75, 90, 100, 120, 150, 180</b>	\$208.00
	<b>250, 300</b>	\$286.00

The following items are included with each product.

Motor, Gearhead, Capacitor, Capacitor Cap, Installation Screws, Parallel Key, Operating Manual

#### ◇ Lead Wire Type

Product Name	Gear Ratio	List Price
<b>5IK40UA-□A</b>	<b>5, 6, 7.5, 9, 12.5, 15, 18</b>	\$169.00
	<b>25, 30, 36</b>	\$176.00
	<b>50, 60, 75, 90, 100, 120, 150, 180</b>	\$183.00
	<b>250, 300</b>	\$261.00
<b>5IK40UC-□A</b>	<b>5, 6, 7.5, 9, 12.5, 15, 18</b>	\$173.00
	<b>25, 30, 36</b>	\$180.00
	<b>50, 60, 75, 90, 100, 120, 150, 180</b>	\$187.00
	<b>250, 300</b>	\$265.00

### ● Round Shaft Type

#### ◇ Terminal Box Type

Product Name	List Price
<b>5IK40A-UAT2</b>	\$116.00
<b>5IK40A-UCT2</b>	\$119.00

#### ◇ Lead Wire Type

Product Name	List Price
<b>5IK40A-UA</b>	\$94.00
<b>5IK40A-UC</b>	\$97.00

The following items are included with each product.

Motor, Capacitor, Capacitor Cap, Operating Manual

● A number indicating the gear ratio is specified where the box □ is located in the product name.

## Permissible Torque

- The speed is calculated by dividing the motor's synchronous speed (60 Hz: 1800 r/min) by the gear ratio. The actual speed is a max. of 30% less, depending on the load.

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

Product Name	Speed r/min	360	300	240	200	144	120	100	72	60	50	36	30	24	20	18	15	12	10	7.2	6
	Gear Ratio	<b>5</b>	<b>6</b>	<b>7.5</b>	<b>9</b>	<b>12.5</b>	<b>15</b>	<b>18</b>	<b>25</b>	<b>30</b>	<b>36</b>	<b>50</b>	<b>60</b>	<b>75</b>	<b>90</b>	<b>100</b>	<b>120</b>	<b>150</b>	<b>180</b>	<b>250</b>	<b>300</b>
<b>5IK40U</b> □□□□□ <b>A</b>		1.2	1.4	1.8	2.1	2.9	3.5	4.2	5.6	6.7	8.0	11.2	13.4	16.8	20.1	22.4	25.3	30	30	30	30
		10.6	12.3	15.9	18.5	25	30	37	49	59	70	99	118	148	177	198	220	260	260	260	260

- Either **A** or **C** indicating the power supply voltage is specified where the box □ is located in the product name.
- A code (**T2**) indicating the terminal box type is specified where the box □ is located in the product name.
- A number indicating the gear ratio is specified where the box □ is located in the product name.

## Permissible Radial Load and Permissible Axial Load

→ Page E-17

## Permissible Inertia J of Combination Types

→ Page E-18

Overview

Three-Phase Induction Motors

Induction Motors

Reversible Motors

Electromagnetic Brake Motors

Clutch & Brake Motors

Low-Speed Synchronous Motors

Torque Motors

IP67 Watertight, Dust-Resistant Motors

Brake Pack

AC Speed Control Motors

AC input DSC

# 60 W (1/12 HP)

□90 mm (□3.54 in.)

## KII Series Parallel Shaft Combination Type/ Round Shaft Type



Terminal Box Type



Lead Wire Type

KII Series

6 W  
(1/125 HP)

15 W  
(1/50 HP)

25 W  
(1/30 HP)

40 W  
(1/19 HP)

60 W  
(1/12 HP)

90 W  
(1/8 HP)

BH Series  
200 W  
(1/4 HP)

### Specifications – Continuous Rating



Product Name Upper Level: Combination Type Lower Level: Round Shaft Type		Output		Voltage	Frequency	Current	Starting Torque		Rated Torque		Rated Speed	Capacitor	Overheat Protection Device
Terminal Box Type	Lead Wire Type	W	HP	VAC	Hz	A	mN·m	oz-in	mN·m	oz-in	r/min	μF	
<b>5IK60UAT2-□A</b> <b>5IK60A-UAT2</b>	<b>5IK60UA-□A</b> <b>5IK60A-UA</b>	60	1/12	Single-Phase 110	60	1.09	320	45	405	57	1450	16	TP
				Single-Phase 115		1.09							
<b>5IK60UCT2-□A</b> <b>5IK60A-UCT2</b>	<b>5IK60UC-□A</b> <b>5IK60A-UC</b>	60	1/12	Single-Phase 220	60	0.53	320	45	405	57	1450	4.0	
				Single-Phase 230		0.52							

● The values in the table are characteristics for the motor only.

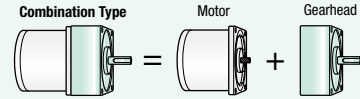
TP: This indicates that there is a built-in thermal protector (automatic return type). If a motor overheats for any reason, the thermal protector is activated and the motor is stopped.

When the motor temperature drops, the thermal protector closes and the motor restarts automatically. Be sure to turn the power supply off before inspecting.

### Product Line

#### Combination Type

Motor and gearhead are delivered pre-assembled. The combination of motors and gearheads can be changed and they are also available separately. In addition, the gearhead can be removed and the assembly position can be changed in 90° increments.



#### ● Parallel Shaft Combination Type Price includes motor and gearhead.

##### ◇ Terminal Box Type

Product Name	Gear Ratio	List Price
<b>5IK60UAT2-□A</b>	<b>5, 6, 7.5, 9, 12.5, 15, 18</b>	\$245.00
	<b>25, 30, 36, 50, 60, 75, 90, 100</b>	\$256.00
	<b>120, 150, 180</b>	\$266.00
	<b>250, 300</b>	\$300.00
<b>5IK60UCT2-□A</b>	<b>5, 6, 7.5, 9, 12.5, 15, 18</b>	\$250.00
	<b>25, 30, 36, 50, 60, 75, 90, 100</b>	\$261.00
	<b>120, 150, 180</b>	\$271.00
	<b>250, 300</b>	\$305.00

The following items are included with each product.

Motor, Gearhead, Capacitor, Capacitor Cap, Installation Screws, Parallel Key, Operating Manual

##### ◇ Lead Wire Type

Product Name	Gear Ratio	List Price
<b>5IK60UA-□A</b>	<b>5, 6, 7.5, 9, 12.5, 15, 18</b>	\$224.00
	<b>25, 30, 36, 50, 60, 75, 90, 100</b>	\$235.00
	<b>120, 150, 180</b>	\$245.00
	<b>250, 300</b>	\$279.00
<b>5IK60UC-□A</b>	<b>5, 6, 7.5, 9, 12.5, 15, 18</b>	\$228.00
	<b>25, 30, 36, 50, 60, 75, 90, 100</b>	\$239.00
	<b>120, 150, 180</b>	\$249.00
	<b>250, 300</b>	\$283.00

#### ● Round Shaft Type

##### ◇ Terminal Box Type

Product Name	List Price
<b>5IK60A-UAT2</b>	\$133.00
<b>5IK60A-UCT2</b>	\$138.00

##### ◇ Lead Wire Type

Product Name	List Price
<b>5IK60A-UA</b>	\$112.00
<b>5IK60A-UC</b>	\$117.00

The following items are included with each product.

Motor, Capacitor, Capacitor Cap, Operating Manual

● A number indicating the gear ratio is specified where the box □ is located in the product name.

## Permissible Torque

- The speed is calculated by dividing the motor's synchronous speed (60 Hz: 1800 r/min) by the gear ratio. The actual speed is a max. of 30% less, depending on the load.

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

Product Name	Speed r/min	360	300	240	200	144	120	100	72	60	50	36	30	24	20	18	15	12	10	7.2	6	
	Gear Ratio	<b>5</b>	<b>6</b>	<b>7.5</b>	<b>9</b>	<b>12.5</b>	<b>15</b>	<b>18</b>	<b>25</b>	<b>30</b>	<b>36</b>	<b>50</b>	<b>60</b>	<b>75</b>	<b>90</b>	<b>100</b>	<b>120</b>	<b>150</b>	<b>180</b>	<b>250</b>	<b>300</b>	
<b>5IK60U</b> <input type="checkbox"/> - <input type="checkbox"/> <b>A</b>	1.8	2.2	2.7	3.3	4.6	5.5	6.6	8.7	10.4	12.5	17.4	20.9	26.1	30	30	30	30	30	30	30	30	30
	15.9	19.4	23	29	40	48	58	76	92	110	153	184	230	260	260	260	260	260	260	260	260	260

- Either **A** or **C** indicating the power supply voltage is specified where the box  is located in the product name.  
A code (**T2**) indicating the terminal box type is specified where the box  is located in the product name.  
A number indicating the gear ratio is specified where the box  is located in the product name.

## Permissible Radial Load and Permissible Axial Load

→ Page E-17

## Permissible Inertia J of Combination Types

→ Page E-18

Overview

Three-Phase Induction Motors

Induction Motors

Reversible Motors

Electromagnetic Brake Motors

Clutch & Brake Motors

Low-Speed Synchronous Motors

Torque Motors

IP67 Watertight, Dust-Resistant Motors

Brake Pack

AC Speed Control Motors

AC input DSC

# 90 W (1/8 HP)

□ 90 mm (□ 3.54 in.)

## KII Series Parallel Shaft Combination Type/ Round Shaft Type



Terminal Box Type



Lead Wire Type

KII Series

6 W  
(1/125 HP)

15 W  
(1/50 HP)

25 W  
(1/30 HP)

40 W  
(1/19 HP)

60 W  
(1/12 HP)

90 W  
(1/8 HP)

BH Series  
200 W  
(1/4 HP)

### Specifications – Continuous Rating



Product Name Upper Level: Combination Type Lower Level: Round Shaft Type		Output		Voltage	Frequency	Current	Starting Torque		Rated Torque		Rated Speed	Capacitor	Overheat Protection Device
Terminal Box Type	Lead Wire Type	W	HP	VAC	Hz	A	mN·m	oz·in	mN·m	oz·in	r/min	μF	
<b>5IK90UAT2-□A</b> <b>5IK90A-UAT2</b>	<b>5IK90UA-□A</b> <b>5IK90A-UA</b>	90	1/8	Single-Phase 110	60	1.44	450	63	585	83	1500	20	TP
				Single-Phase 115		1.44							
<b>5IK90UCT2-□A</b> <b>5IK90A-UCT2</b>	<b>5IK90UC-□A</b> <b>5IK90A-UC</b>	90	1/8	Single-Phase 220	60	0.71	450	63	605	85	1450	5.0	
				Single-Phase 230		0.71							

● The values in the table are characteristics for the motor only.

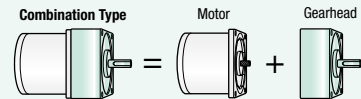
TP: This indicates that there is a built-in thermal protector (automatic return type). If a motor overheats for any reason, the thermal protector is activated and the motor is stopped.

When the motor temperature drops, the thermal protector closes and the motor restarts automatically. Be sure to turn the power supply off before inspecting.

### Product Line

#### Combination Type

Motor and gearhead are delivered pre-assembled. The combination of motors and gearheads can be changed and they are also available separately. In addition, the gearhead can be removed and the assembly position can be changed in 90° increments.



● **Parallel Shaft Combination Type** Price includes motor and gearhead.

#### ◇ Terminal Box Type

Product Name	Gear Ratio	List Price
<b>5IK90UAT2-□A</b>	<b>5, 6, 7.5, 9, 12.5, 15, 18</b>	\$265.00
	<b>25, 30, 36, 50, 60</b>	\$285.00
	<b>75, 90, 100, 120, 150, 180</b>	\$295.00
<b>5IK90UCT2-□A</b>	<b>5, 6, 7.5, 9, 12.5, 15, 18</b>	\$269.00
	<b>25, 30, 36, 50, 60</b>	\$289.00
	<b>75, 90, 100, 120, 150, 180</b>	\$299.00

The following items are included with each product.

Motor, Gearhead, Capacitor, Capacitor Cap, Installation Screws, Parallel Key, Operating Manual

#### ◇ Lead Wire Type

Product Name	Gear Ratio	List Price
<b>5IK90UA-□A</b>	<b>5, 6, 7.5, 9, 12.5, 15, 18</b>	\$243.00
	<b>25, 30, 36, 50, 60</b>	\$263.00
	<b>75, 90, 100, 120, 150, 180</b>	\$273.00
<b>5IK90UC-□A</b>	<b>5, 6, 7.5, 9, 12.5, 15, 18</b>	\$248.00
	<b>25, 30, 36, 50, 60</b>	\$268.00
	<b>75, 90, 100, 120, 150, 180</b>	\$278.00

### ● Round Shaft Type

#### ◇ Terminal Box Type

Product Name	List Price
<b>5IK90A-UAT2</b>	\$152.00
<b>5IK90A-UCT2</b>	\$156.00

#### ◇ Lead Wire Type

Product Name	List Price
<b>5IK90A-UA</b>	\$130.00
<b>5IK90A-UC</b>	\$134.00

The following items are included with each product.

Motor, Capacitor, Capacitor Cap, Operating Manual

● A number indicating the gear ratio is specified where the box □ is located in the product name.



## Permissible Torque

- The speed is calculated by dividing the motor's synchronous speed (60 Hz: 1800 r/min) by the gear ratio. The actual speed is a max. of 30% less, depending on the load.

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

Product Name	Speed r/min	360	300	240	200	144	120	100	72	60	50	36	30	24	20	18	15	12	10
	Gear Ratio	<b>5</b>	<b>6</b>	<b>7.5</b>	<b>9</b>	<b>12.5</b>	<b>15</b>	<b>18</b>	<b>25</b>	<b>30</b>	<b>36</b>	<b>50</b>	<b>60</b>	<b>75</b>	<b>90</b>	<b>100</b>	<b>120</b>	<b>150</b>	<b>180</b>
<b>5IK90UA</b> □-□ <b>A</b>	2.6	3.2	3.9	4.7	6.6	7.9	9.1	12.6	15.1	18.1	25.2	30.2	35.5	40	40	40	40	40	40
	23	28	34	41	58	69	80	111	133	160	220	260	310	350	350	350	350	350	350
<b>5IK90UC</b> □-□ <b>A</b>	2.7	3.3	4.1	4.9	6.8	8.2	9.4	13.0	15.6	18.7	26.0	31.2	36.8	40	40	40	40	40	40
	23	29	36	43	60	72	83	115	138	165	230	270	320	350	350	350	350	350	350

- A code (**T2**) indicating the terminal box type is specified where the box □ is located in the product name. A number indicating the gear ratio is specified where the box □ is located in the product name.

## Permissible Radial Load and Permissible Axial Load

→ Page E-17

## Permissible Inertia J of Combination Types

→ Page E-18

Overview

Three-Phase Induction Motors

Induction Motors

Reversible Motors

Electromagnetic Brake Motors

Clutch & Brake Motors

Low-Speed Synchronous Motors

Torque Motors

IP67 Watertight, Dust-Resistant Motors

Brake Pack

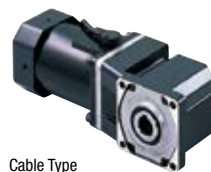
AC Speed Control Motors

AC input DSC

# 200 W (1/4 HP)

□104 mm (□4.09 in.)

## High Power Induction Motors BH Series



Cable Type  
Right-Angle Hollow Shaft



Terminal Box Type  
Parallel Shaft

KII Series

6 W  
(1/125 HP)

15 W  
(1/50 HP)

25 W  
(1/30 HP)

40 W  
(1/19 HP)

60 W  
(1/12 HP)

90 W  
(1/8 HP)

**BH Series**  
200 W  
(1/4 HP)

### Features

● **High Power 200 W (1/4 HP)**

Smallest frame size among 200 W (1/4 HP) motors

● **Hypoid Gear Right-Angle Gearheads**

Right-angle gearheads employ hypoid gears. Hollow shafts and solid shafts are available to enable space-saving.

● **Tapped Hole at the Shaft End**

The gearhead shafts feature a tapped hole for convenient connection with loads.

● **"Combination Type" for Easy Installation**

The combination type comes with the motor and gearhead pre-assembled. This enables easy installation in equipment.

### Specifications – Continuous Rating



Product Name Combination Type ( ) : Round Shaft Type		Output Power W HP	Voltage VAC	Frequency Hz	Current A	Starting Torque N-m oz-in	Rated Torque N-m oz-in	Rated Speed r/min	Capacitor μF	Overheat Protection Device
Terminal Box Type	Cable Type									
<b>BHI62ST-□RH</b> <b>BHI62ST-□RA</b> <b>BHI62ST-□</b> <b>(BHI62ST-A)</b>	<b>BHI62S-□RH</b> <b>BHI62S-□RA</b> <b>BHI62S-□</b> <b>(BHI62S-A)</b>	200 1/4	Three-Phase 220	60	0.95	1.23 174	1.23 174	1550	-	TP
<b>BHI62FT-□RH</b> <b>BHI62FT-□RA</b> <b>BHI62FT-□</b> <b>(BHI62FT-A)</b>	<b>BHI62F-□RH</b> <b>BHI62F-□RA</b> <b>BHI62F-□</b> <b>(BHI62F-A)</b>	200 1/4	Single-Phase 110	60	3	0.88 124	1.27 180	1500	40	TP
			Single-Phase 115			0.98 139				
<b>BHI62ET-□RH</b> <b>BHI62ET-□RA</b> <b>BHI62ET-□</b> <b>(BHI62ET-A)</b>	<b>BHI62E-□RH</b> <b>BHI62E-□RA</b> <b>BHI62E-□</b> <b>(BHI62E-A)</b>	200 1/4	Single-Phase 220	50	1.5	0.98 139	1.52 210	1250	10	TP
				60			1.27 180			
			Single-Phase 230	50			1.52 210	1250		
				60			1.27 180	1500		

● A number indicating the gear ratio is entered where the box □ is located within the product name.

The values for each specification applies to the motor only.

TP: Contains a built-in thermal protector (automatic return type). If a motor overheats for any reason, the thermal protector is activated and the motor is stopped.

When the motor temperature drops, the thermal protector closes and the motor restarts. Be sure to turn the motor power off before inspecting.

## Product Line

### Combination Type

Motor and gearhead are delivered pre-assembled.  
The combination of motors and gearheads can be changed and they are also available separately.  
In addition, the gearhead can be removed and the assembly position can be changed in 90° increments.

### Combination Type

#### ◇ Right-Angle Shaft

Type	Voltage	Product Name	Gear Ratio	List Price
Hollow Shaft Terminal Box	Three-Phase 220/230 VAC	<b>BHI62ST-□RH</b>	<b>5, 6, 7.5, 9, 12.5, 15, 18, 25, 30, 36</b>	\$433.00
			<b>50, 60, 75, 90, 100, 120, 150, 180</b>	\$453.00
	Single-Phase 110/115 VAC	<b>BHI62FT-□RH</b>	<b>5, 6, 7.5, 9, 12.5, 15, 18, 25, 30, 36</b>	\$426.00
			<b>50, 60, 75, 90, 100, 120, 150, 180</b>	\$446.00
	Single-Phase 220/230 VAC	<b>BHI62ET-□RH</b>	<b>5, 6, 7.5, 9, 12.5, 15, 18, 25, 30, 36</b>	\$433.00
		<b>50, 60, 75, 90, 100, 120, 150, 180</b>	\$453.00	
Hollow Shaft Cable	Three-Phase 220/230 VAC	<b>BHI62S-□RH</b>	<b>5, 6, 7.5, 9, 12.5, 15, 18, 25, 30, 36</b>	\$403.00
			<b>50, 60, 75, 90, 100, 120, 150, 180</b>	\$423.00
	Single-Phase 110/115 VAC	<b>BHI62F-□RH</b>	<b>5, 6, 7.5, 9, 12.5, 15, 18, 25, 30, 36</b>	\$396.00
			<b>50, 60, 75, 90, 100, 120, 150, 180</b>	\$416.00
	Single-Phase 220/230 VAC	<b>BHI62E-□RH</b>	<b>5, 6, 7.5, 9, 12.5, 15, 18, 25, 30, 36</b>	\$403.00
		<b>50, 60, 75, 90, 100, 120, 150, 180</b>	\$423.00	
Solid Shaft Terminal Box	Three-Phase 220/230 VAC	<b>BHI62ST-□RA</b>	<b>5, 6, 7.5, 9, 12.5, 15, 18, 25, 30, 36</b>	\$427.00
			<b>50, 60, 75, 90, 100, 120, 150, 180</b>	\$447.00
	Single-Phase 110/115 VAC	<b>BHI62FT-□RA</b>	<b>5, 6, 7.5, 9, 12.5, 15, 18, 25, 30, 36</b>	\$420.00
			<b>50, 60, 75, 90, 100, 120, 150, 180</b>	\$440.00
	Single-Phase 220/230 VAC	<b>BHI62ET-□RA</b>	<b>5, 6, 7.5, 9, 12.5, 15, 18, 25, 30, 36</b>	\$427.00
		<b>50, 60, 75, 90, 100, 120, 150, 180</b>	\$447.00	
Solid Shaft Cable	Three-Phase 220/230 VAC	<b>BHI62S-□RA</b>	<b>5, 6, 7.5, 9, 12.5, 15, 18, 25, 30, 36</b>	\$397.00
			<b>50, 60, 75, 90, 100, 120, 150, 180</b>	\$417.00
	Single-Phase 110/115 VAC	<b>BHI62F-□RA</b>	<b>5, 6, 7.5, 9, 12.5, 15, 18, 25, 30, 36</b>	\$390.00
			<b>50, 60, 75, 90, 100, 120, 150, 180</b>	\$410.00
	Single-Phase 220/230 VAC	<b>BHI62E-□RA</b>	<b>5, 6, 7.5, 9, 12.5, 15, 18, 25, 30, 36</b>	\$397.00
		<b>50, 60, 75, 90, 100, 120, 150, 180</b>	\$417.00	

The following items are included with each product.  
Motor, Gearhead, Capacitor\*, Capacitor Cap\*,  
Parallel Key, Operating Manual  
\*Only for single-phase motors

#### ◇ Parallel Shaft

Type	Voltage	Product Name	Gear Ratio	List Price
Terminal Box	Three-Phase 220/230 VAC	<b>BHI62ST-□</b>	<b>3, 3.6, 5, 6, 7.5, 9</b>	\$371.00
			<b>12.5, 15, 18, 25, 30, 36</b>	\$381.00
			<b>50, 60, 75, 90, 100, 120, 150, 180</b>	\$391.00
	Single-Phase 110/115 VAC	<b>BHI62FT-□</b>	<b>3, 3.6, 5, 6, 7.5, 9</b>	\$364.00
			<b>12.5, 15, 18, 25, 30, 36</b>	\$374.00
			<b>50, 60, 75, 90, 100, 120, 150, 180</b>	\$383.00
Single-Phase 220/230 VAC	<b>BHI62ET-□</b>	<b>3, 3.6, 5, 6, 7.5, 9</b>	\$371.00	
		<b>12.5, 15, 18, 25, 30, 36</b>	\$381.00	
		<b>50, 60, 75, 90, 100, 120, 150, 180</b>	\$391.00	
Cable	Three-Phase 220/230 VAC	<b>BHI62S-□</b>	<b>3, 3.6, 5, 6, 7.5, 9</b>	\$342.00
			<b>12.5, 15, 18, 25, 30, 36</b>	\$351.00
			<b>50, 60, 75, 90, 100, 120, 150, 180</b>	\$361.00
	Single-Phase 110/115 VAC	<b>BHI62F-□</b>	<b>3, 3.6, 5, 6, 7.5, 9</b>	\$334.00
			<b>12.5, 15, 18, 25, 30, 36</b>	\$344.00
			<b>50, 60, 75, 90, 100, 120, 150, 180</b>	\$354.00
Single-Phase 220/230 VAC	<b>BHI62E-□</b>	<b>3, 3.6, 5, 6, 7.5, 9</b>	\$342.00	
		<b>12.5, 15, 18, 25, 30, 36</b>	\$351.00	
		<b>50, 60, 75, 90, 100, 120, 150, 180</b>	\$361.00	

The following items are included with each product.  
Motor, Gearhead, Capacitor\*, Capacitor Cap\*,  
Installation Screws, Parallel Key, Operating Manual  
\*Only for single-phase motors

### ● Round Shaft Type

Type	Voltage	Product Name	List Price
Terminal Box	Three-Phase 220/230 VAC	<b>BHI62ST-A</b>	\$221.00
	Single-Phase 110/115 VAC	<b>BHI62FT-A</b>	\$214.00
	Single-Phase 220/230 VAC	<b>BHI62ET-A</b>	\$221.00
Cable	Three-Phase 220/230 VAC	<b>BHI62S-A</b>	\$191.00
	Single-Phase 110/115 VAC	<b>BHI62F-A</b>	\$184.00
	Single-Phase 220/230 VAC	<b>BHI62E-A</b>	\$191.00

The following items are included with each product.  
Motor, Capacitor\*, Capacitor Cap\*, Operating Manual  
\*Only for single-phase motors

● A number indicating the gear ratio is entered where the box □ is located within the product name.

### Permissible Torque

- The speed is calculated by dividing the motor's synchronous speed (60 Hz: 1800 r/min) by the gear ratio.  
The actual speed is 2~20% less than the displayed value, depending on the load.
- Decimal gearheads are not available for the **BH** series.

KII Series

#### Right-Angle Shaft 50 Hz

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

Product Name	Speed r/min	300	250	200	167	120	100	83	60	50	42	30	25	20	17	15	12.5	10	8.3
	Gear Ratio	<b>5</b>	<b>6</b>	<b>7.5</b>	<b>9</b>	<b>12.5</b>	<b>15</b>	<b>18</b>	<b>25</b>	<b>30</b>	<b>36</b>	<b>50</b>	<b>60</b>	<b>75</b>	<b>90</b>	<b>100</b>	<b>120</b>	<b>150</b>	<b>180</b>
<b>BHI62E</b> □-□RH, <b>BHI62E</b> □-□RA		5.5 48	6.7 59	8.3 73	10.0 88	13.9 123	16.6 146	20.0 177	27.7 240	33.3 290	36.0 310	40.0 350	43.0 380	47.0 410	51.5 450	54.5 480	60 530	60 530	60 530

6 W  
(1/125 HP)

15 W  
(1/50 HP)

#### Right-Angle Shaft 60 Hz

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

Product Name	Speed r/min	360	300	240	200	144	120	100	72	60	50	36	30	24	20	18	15	12	10
	Gear Ratio	<b>5</b>	<b>6</b>	<b>7.5</b>	<b>9</b>	<b>12.5</b>	<b>15</b>	<b>18</b>	<b>25</b>	<b>30</b>	<b>36</b>	<b>50</b>	<b>60</b>	<b>75</b>	<b>90</b>	<b>100</b>	<b>120</b>	<b>150</b>	<b>180</b>
<b>BHI62S</b> □-□RH, <b>BHI62S</b> □-□RA (220 VAC)		4.5 39	5.4 47	6.7 59	8.1 71	11.2 99	13.5 119	16.2 143	22.4 198	26.9 230	32.3 280	40.0 350	43.0 380	47.0 410	51.5 450	54.5 480	60 530	60 530	60 530
<b>BHI62S</b> □-□RH, <b>BHI62S</b> □-□RA (230 VAC)		4.3 38	5.2 46	6.5 57	7.8 69	10.8 95	12.9 114	15.5 137	21.5 190	25.8 220	31.0 270	40.0 350	43.0 380	47.0 410	51.5 450	54.5 480	60 530	60 530	60 530
<b>BHI62F</b> □-□RH, <b>BHI62F</b> □-□RA <b>BHI62E</b> □-□RH, <b>BHI62E</b> □-□RA		4.6 40	5.6 49	7.0 61	8.3 73	11.6 102	13.9 123	16.7 147	23.2 200	27.8 240	33.4 290	40.0 350	43.0 380	47.0 410	51.5 450	54.5 480	60 530	60 530	60 530

25 W  
(1/30 HP)

40 W  
(1/19 HP)

60 W  
(1/12 HP)

90 W  
(1/8 HP)

#### Parallel Shaft 50 Hz

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

Product Name	Speed r/min	500	417	300	250	200	167	120	100	83	60	50	42	30	25	20	17	15	12.5	10	8.3
	Gear Ratio	<b>3</b>	<b>3.6</b>	<b>5</b>	<b>6</b>	<b>7.5</b>	<b>9</b>	<b>12.5</b>	<b>15</b>	<b>18</b>	<b>25</b>	<b>30</b>	<b>36</b>	<b>50</b>	<b>60</b>	<b>75</b>	<b>90</b>	<b>100</b>	<b>120</b>	<b>150</b>	<b>180</b>
<b>BHI62E</b> □-□		4.1 36	4.9 43	6.8 60	8.2 72	10.3 91	12.3 108	16.3 144	19.6 173	23.5 200	32.7 280	39.2 340	40 350	40 350	40 350	40 350	40 350	40 350	40 350	40 350	40 350

BH Series  
200 W  
(1/4 HP)

#### Parallel Shaft 60 Hz

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

Product Name	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	<b>3</b>	<b>3.6</b>	<b>5</b>	<b>6</b>	<b>7.5</b>	<b>9</b>	<b>12.5</b>	<b>15</b>	<b>18</b>	<b>25</b>	<b>30</b>	<b>36</b>	<b>50</b>	<b>60</b>	<b>75</b>	<b>90</b>	<b>100</b>	<b>120</b>	<b>150</b>	<b>180</b>
<b>BHI62S</b> □-□ (220 VAC)		3.3 29	4.0 35	5.5 48	6.6 58	8.3 73	10.0 88	13.2 116	15.9 140	19.0 168	26.4 230	31.7 280	38.1 330	40 350	40 350	40 350	40 350	40 350	40 350	40 350	40 350
<b>BHI62S</b> □-□ (230 VAC)		3.2 28	3.8 33	5.3 46	6.4 56	8.0 70	9.6 84	12.7 112	15.2 134	18.3 161	25.4 220	30.4 260	36.5 320	40 350	40 350	40 350	40 350	40 350	40 350	40 350	40 350
<b>BHI62F</b> □-□, <b>BHI62E</b> □-□		3.4 30	4.1 36	5.7 50	6.9 61	8.6 76	10.3 91	13.7 121	16.4 145	19.7 174	27.3 240	32.8 290	39.3 340	40 350	40 350	40 350	40 350	40 350	40 350	40 350	40 350

### Permissible Radial Load and Permissible Axial Load

Combination Type → Page E-17  
Round Shaft Type → Page E-17

### Permissible Inertia J of Gearhead

→ Page E-18

- Enter the code that represents the terminal box type "T" in the box □ within the product name.
- A number indicating the gear ratio is entered where the box □ is located within the product name.

For details (specifications, characteristics, dimensions and more) on these products, please either refer to our website or contact technical support or your nearest Oriental Motor sales office.  
[www.orientalmotor.com](http://www.orientalmotor.com)