

Standard AC Motors

# Electromagnetic Brake Motors

## Electromagnetic Brake 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

# Electromagnetic Brake Motors



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



Terminal Box Type

Lead Wire Type

- Power Off Activated Type Electromagnetic Brake Equipped
- Ideal for Applications Required Load Holding
- Hypoid Gear Right Angle Type is Available
- Compatible with Gearheads



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

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

## Features of Electromagnetic Brake Motors



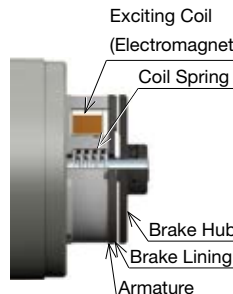

### ● Power Off Activated Type Electromagnetic Brake Equipped

An AC power off activated type electromagnetic brake is equipped to allow the motor to stop instantaneously when the power is cut off, while still holding the load in position.

### ● Ideal for Applications Required Load Holding

This configuration is ideal for vertical applications in which the load must be held.

## Types of Electromagnetic Brake Motors

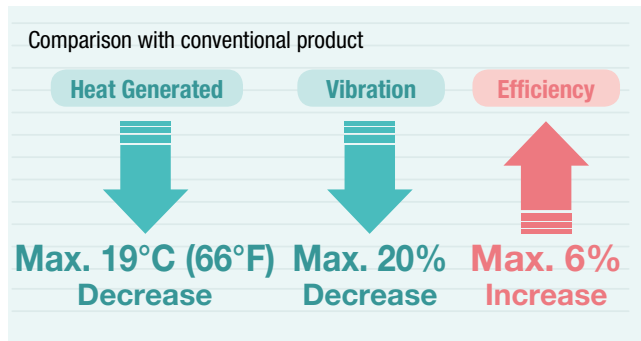
Series	Features, Product Line									
<b>KII Series</b>  	<ul style="list-style-type: none"> <li>● <b>New Global Standard</b> With a high performance gearhead built in, it is the new global standard for standard AC motors.</li> <li>● <b>Equipped with a High-Performance Gearhead</b></li> </ul>	<ul style="list-style-type: none"> <li>● <b>Power Off Activated Type Electromagnetic Brake Equipped</b> An AC power off activated type electromagnetic brake is equipped. When the power source is turned OFF, the motor stops instantaneously and holds the load.</li> </ul>  <p>[Structural Drawing]</p> <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>6 W (1/125 HP)~90 W (1/8 HP)</td> </tr> <tr> <td>Type</td> <td>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	6 W (1/125 HP)~90 W (1/8 HP)	Type	Parallel Shaft, Round Shaft Type	Voltage	Single-Phase 110/115 VAC Single-Phase 220/230 VAC
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Output Power	6 W (1/125 HP)~90 W (1/8 HP)									
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></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 Output Shaft End</b></li> <li>● <b>Lineup</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>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	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									

## Features of the KII Series

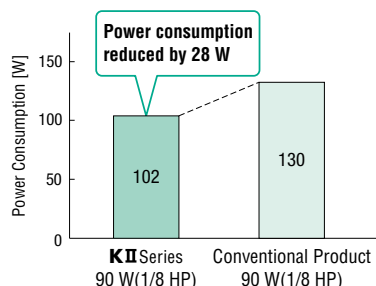
### Excellent Motor Performance

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.



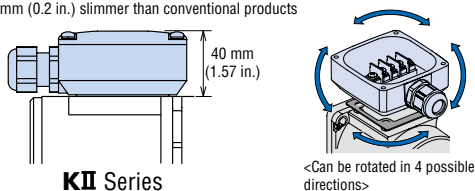
### Energy Savings



### 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.

5 mm (0.2 in.) slimmer than conventional products



### 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.

#### Main Specifications

##### Material

Case and terminal box: Aluminum

Output shaft: S45C

Screws: Stainless steel (externally facing screws only)

##### Surface Treatment

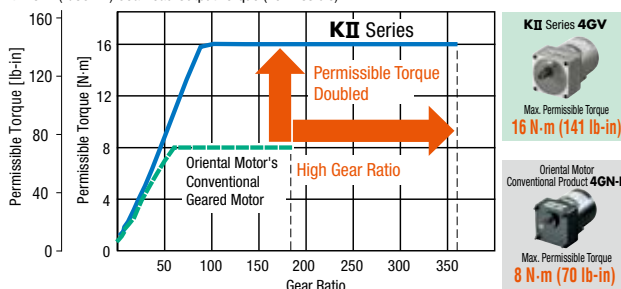
Case and terminal box: Painted (excluding installation surface)

### Equipped with a High-Performance Gearhead

#### High Permissible Torque

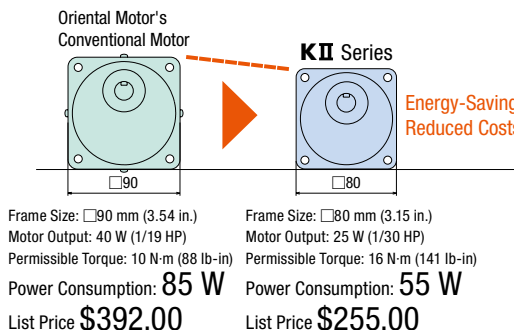
The permissible torque is up to twice that of conventional products.

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



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

Downsizing is possible by changing our company's conventional products with the KII Series. If a smaller size motor can be selected, not only the power consumption but also the purchase cost can be reduced.



### High Strength

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

Oriental Motor Conventional Product 4GN-K

KII Series 4GV



### Long-Life

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

### Noise Reduction

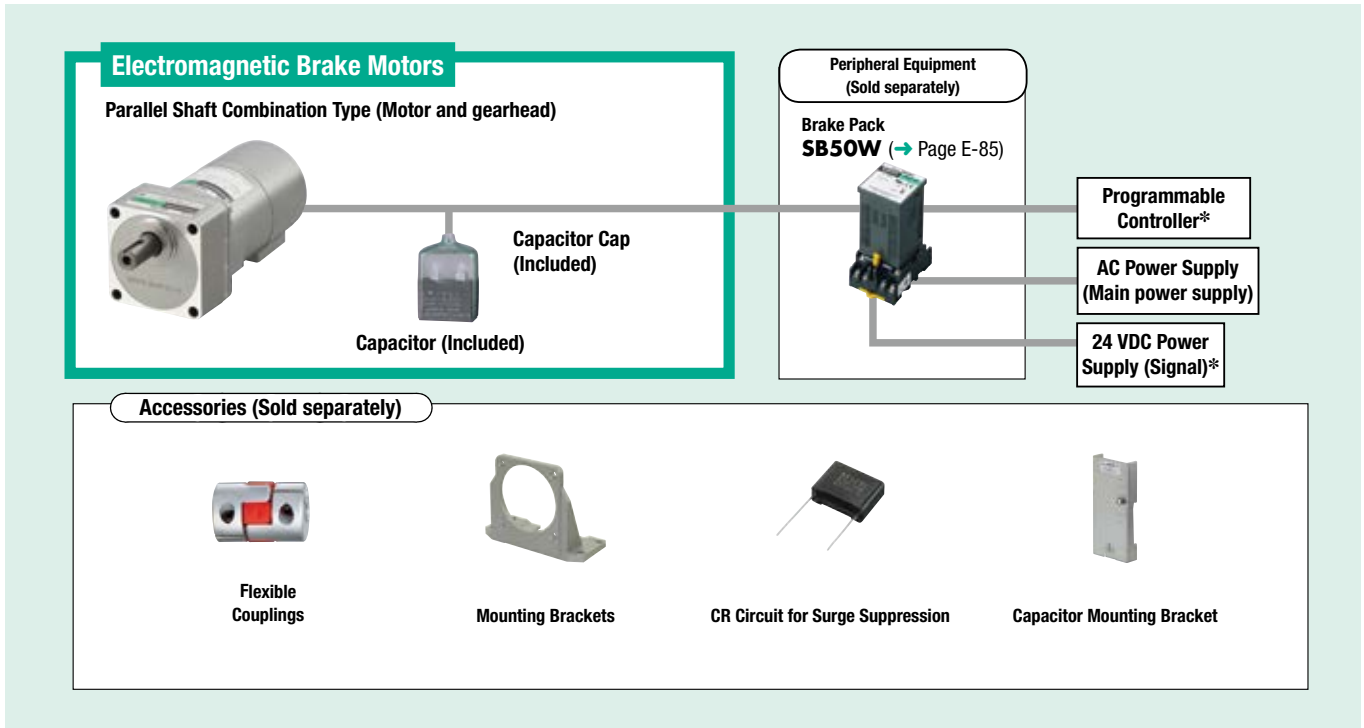
The contact noise of the motor and gearhead is approximately 6 dB less compared to a conventional product.

Product Line of Electromagnetic Brake 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)
<b>KII</b> Series	Single-Phase 110/115 Single-Phase 220/230	Terminal Box Type				●	●	●	
		Lead Wire / Cable	●	●	●	●	●	●	
<b>BH</b> Series	Single-Phase 110/115 Single-Phase 220/230 Three-Phase 220/230	Terminal Box Type							●

System Configuration

\*Not supplied.



## Product Number

### ● KII Series

◇ Parallel Shaft Combination Type

**5 R K 40 UA M T2 - 100 A**

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨

◇ Round Shaft Type

**5 R K 40 A - UA M T2**

① ② ③ ④ ⑧ ⑤ ⑥ ⑦

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	Product Name	<b>R:</b> Reversible Motor
③	Series Name	<b>K:</b> KII Series
④	Output Power	(Example) <b>40:</b> 40 W (1/19 HP)
⑤	Power Supply Voltage/ Number of Poles	<b>UA:</b> Single-Phase 110/115 VAC 4-Pole <b>UC:</b> Single-Phase 220/230 VAC 4-Pole
⑥	<b>M:</b> Type with a Power Off Activated Electromagnetic Brake	
⑦	<b>T2:</b> Terminal Box Type	Blank: Lead Wire Type or Cable Type
⑧	Gear Ratio and Shaft Type	Number: Gear Ratio for Combination Types <b>A:</b> Round Shaft Type
⑨	<b>A:</b> Imperial	

### ● BH Series

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

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨

①	Series	<b>BH:</b> BH 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>M:</b> Power Off Activated Type Electromagnetic Brake	
⑦	<b>T:</b> Terminal Box Type	
⑧	Gear Ratio, Motor Shaft Type	<b>A:</b> Round Shaft Type Number: Gear Ratio of Combination Type
⑨	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

Overview

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IP67 Watertight, Dust-Resistant Motors

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AC Speed Control Motors

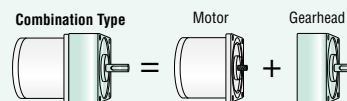
AC input DSC

**Product Line**

● **KII Series Combination Type**

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.



◇ **Lead Wire Type/Cable Type**

Output Power	Power Supply Voltage	Product Name	Gear Ratio	List Price
6 W (1/125 HP)	Single-Phase 110/115 VAC	<b>2RK6UAM-□A</b>	<b>5, 6, 7.5, 9, 12.5, 15, 18</b>	\$199.00
			<b>25, 30, 36</b>	\$205.00
			<b>50, 60, 75, 90, 100, 120, 150, 180</b>	\$212.00
	Single-Phase 220/230 VAC	<b>2RK6UCM-□A</b>	<b>250, 300, 360</b>	\$258.00
			<b>5, 6, 7.5, 9, 12.5, 15, 18</b>	\$201.00
			<b>25, 30, 36</b>	\$207.00
Single-Phase 110/115 VAC	<b>3RK15UAM-□A</b>	<b>50, 60, 75, 90, 100, 120, 150, 180</b>	\$214.00	
		<b>250, 300, 360</b>	\$260.00	
		<b>5, 6, 7.5, 9, 12.5, 15, 18</b>	\$210.00	
15 W (1/50 HP)	Single-Phase 110/115 VAC	<b>3RK15UAM-□A</b>	<b>25, 30, 36</b>	\$216.00
			<b>50, 60, 75, 90, 100, 120, 150, 180</b>	\$223.00
			<b>250, 300, 360</b>	\$267.00
	Single-Phase 220/230 VAC	<b>3RK15UCM-□A</b>	<b>5, 6, 7.5, 9, 12.5, 15, 18</b>	\$212.00
			<b>25, 30, 36</b>	\$218.00
			<b>50, 60, 75, 90, 100, 120, 150, 180</b>	\$225.00
25 W (1/30 HP)	Single-Phase 110/115 VAC	<b>4RK25UAM-□A</b>	<b>250, 300, 360</b>	\$269.00
			<b>5, 6, 7.5, 9, 12.5, 15, 18</b>	\$242.00
			<b>25, 30, 36</b>	\$248.00
	Single-Phase 220/230 VAC	<b>4RK25UCM-□A</b>	<b>50, 60, 75, 90, 100, 120, 150, 180</b>	\$255.00
			<b>250, 300, 360</b>	\$302.00
			<b>5, 6, 7.5, 9, 12.5, 15, 18</b>	\$245.00
40 W (1/19 HP)	Single-Phase 110/115 VAC	<b>5RK40UAM-□A</b>	<b>25, 30, 36</b>	\$251.00
			<b>50, 60, 75, 90, 100, 120, 150, 180</b>	\$258.00
			<b>250, 300, 360</b>	\$305.00
	Single-Phase 220/230 VAC	<b>5RK40UCM-□A</b>	<b>5, 6, 7.5, 9, 12.5, 15, 18</b>	\$242.00
			<b>25, 30, 36</b>	\$293.00
			<b>50, 60, 75, 90, 100, 120, 150, 180</b>	\$300.00
60 W (1/12 HP)	Single-Phase 110/115 VAC	<b>5RK60UAM-□A</b>	<b>250, 300</b>	\$378.00
			<b>5, 6, 7.5, 9, 12.5, 15, 18</b>	\$354.00
			<b>25, 30, 36, 50, 60, 75, 90, 100</b>	\$365.00
	Single-Phase 220/230 VAC	<b>5RK60UCM-□A</b>	<b>120, 150, 180</b>	\$375.00
			<b>250, 300</b>	\$409.00
			<b>5, 6, 7.5, 9, 12.5, 15, 18</b>	\$359.00
90 W (1/8 HP)	Single-Phase 110/115 VAC	<b>5RK90UAM-□A</b>	<b>25, 30, 36, 50, 60, 75, 90, 100, 120, 150, 180</b>	\$370.00
			<b>120, 150, 180</b>	\$380.00
			<b>250, 300</b>	\$414.00
	Single-Phase 220/230 VAC	<b>5RK90UCM-□A</b>	<b>5, 6, 7.5, 9, 12.5, 15, 18</b>	\$373.00
			<b>25, 30, 36, 50, 60</b>	\$393.00
			<b>75, 90, 100, 120, 150, 180</b>	\$403.00
Single-Phase 110/115 VAC	<b>5RK90UAM-□A</b>	<b>5, 6, 7.5, 9, 12.5, 15, 18</b>	\$378.00	
		<b>25, 30, 36, 50, 60</b>	\$398.00	
		<b>75, 90, 100, 120, 150, 180</b>	\$408.00	

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

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

## ◇ Terminal Box Type

Output Power	Power Supply Voltage	Product Name	Gear Ratio	List Price
40 W (1/19 HP)	Single-Phase 110/115 VAC	<b>5RK40UAMT2-□A</b>	<b>5, 6, 7.5, 9, 12.5, 15, 18</b>	\$304.00
			<b>25, 30, 36</b>	\$311.00
			<b>50, 60, 75, 90, 100, 120, 150, 180</b>	\$318.00
	Single-Phase 220/230 VAC	<b>5RK40UCMT2-□A</b>	<b>250, 300</b>	\$396.00
			<b>5, 6, 7.5, 9, 12.5, 15, 18</b>	\$307.00
			<b>25, 30, 36</b>	\$314.00
			<b>50, 60, 75, 90, 100, 120, 150, 180</b>	\$321.00
			<b>250, 300</b>	\$399.00
60 W (1/12 HP)	Single-Phase 110/115 VAC	<b>5RK60UAMT2-□A</b>	<b>5, 6, 7.5, 9, 12.5, 15, 18</b>	\$375.00
			<b>25, 30, 36, 50, 60, 75, 90, 100</b>	\$386.00
			<b>120, 150, 180</b>	\$396.00
	Single-Phase 220/230 VAC	<b>5RK60UCMT2-□A</b>	<b>250, 300</b>	\$430.00
			<b>5, 6, 7.5, 9, 12.5, 15, 18</b>	\$380.00
			<b>25, 30, 36, 50, 60, 75, 90, 100</b>	\$391.00
			<b>120, 150, 180</b>	\$401.00
			<b>250, 300</b>	\$435.00
90 W (1/8 HP)	Single-Phase 110/115 VAC	<b>5RK90UAMT2-□A</b>	<b>5, 6, 7.5, 9, 12.5, 15, 18</b>	\$394.00
			<b>25, 30, 36, 50, 60</b>	\$414.00
			<b>75, 90, 100, 120, 150, 180</b>	\$424.00
	Single-Phase 220/230 VAC	<b>5RK90UCMT2-□A</b>	<b>5, 6, 7.5, 9, 12.5, 15, 18</b>	\$399.00
			<b>25, 30, 36, 50, 60</b>	\$419.00
			<b>75, 90, 100, 120, 150, 180</b>	\$429.00

The following items are included with each product.

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

## ● KII Series Round Shaft Type

### ◇ Lead Wire Type/Cable Type

Output Power	Power Supply Voltage	Product Name	List Price
6 W (1/125 HP)	Single-Phase 110/115 VAC	<b>2RK6A-UAM</b>	\$142.00
	Single-Phase 220/230 VAC	<b>2RK6A-UCM</b>	\$144.00
15 W (1/50 HP)	Single-Phase 110/115 VAC	<b>3RK15A-UAM</b>	\$148.00
	Single-Phase 220/230 VAC	<b>3RK15A-UCM</b>	\$150.00
25 W (1/30 HP)	Single-Phase 110/115 VAC	<b>4RK25A-UAM</b>	\$179.00
	Single-Phase 220/230 VAC	<b>4RK25A-UCM</b>	\$182.00
40 W (1/19 HP)	Single-Phase 110/115 VAC	<b>5RK40A-UAM</b>	\$208.00
	Single-Phase 220/230 VAC	<b>5RK40A-UCM</b>	\$211.00
60 W (1/12 HP)	Single-Phase 110/115 VAC	<b>5RK60A-UAM</b>	\$242.00
	Single-Phase 220/230 VAC	<b>5RK60A-UCM</b>	\$247.00
90 W (1/8 HP)	Single-Phase 110/115 VAC	<b>5RK90A-UAM</b>	\$260.00
	Single-Phase 220/230 VAC	<b>5RK90A-UCM</b>	\$265.00

The following items are included with each product.

Motor, Capacitor, Capacitor Cap, Operating Manual

### ◇ Terminal Box Type

Output Power	Power Supply Voltage	Product Name	List Price
40 W (1/19 HP)	Single-Phase 110/115 VAC	<b>5RK40A-UAMT2</b>	\$229.00
	Single-Phase 220/230 VAC	<b>5RK40A-UCMT2</b>	\$232.00
60 W (1/12 HP)	Single-Phase 110/115 VAC	<b>5RK60A-UAMT2</b>	\$263.00
	Single-Phase 220/230 VAC	<b>5RK60A-UCMT2</b>	\$268.00
90 W (1/8 HP)	Single-Phase 110/115 VAC	<b>5RK90A-UAMT2</b>	\$281.00
	Single-Phase 220/230 VAC	<b>5RK90A-UCMT2</b>	\$286.00

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

● **BH Series**

**Combination Type** The combination type comes with a motor and gearhead 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**

Output Power	Type	Power Supply Voltage	Product Name	Gear Ratio	List Price
200 W (1/4 HP)	Hollow Shaft	Three-Phase 220/230 VAC	<b>BHI62SMT-□RH</b>	<b>5, 6, 7.5, 9, 12.5, 15, 18, 25, 30, 36</b>	\$693.00
				<b>50, 60, 75, 90, 100, 120, 150, 180</b>	\$713.00
		Single-Phase 110/115 VAC	<b>BHI62FMT-□RH</b>	<b>5, 6, 7.5, 9, 12.5, 15, 18, 25, 30, 36</b>	\$686.00
		<b>50, 60, 75, 90, 100, 120, 150, 180</b>		\$706.00	
		Single-Phase 220/230 VAC	<b>BHI62EMT-□RH</b>	<b>5, 6, 7.5, 9, 12.5, 15, 18, 25, 30, 36</b>	\$693.00
		<b>50, 60, 75, 90, 100, 120, 150, 180</b>		\$713.00	
	Solid Shaft	Three-Phase 220/230 VAC	<b>BHI62SMT-□RA</b>	<b>5, 6, 7.5, 9, 12.5, 15, 18, 25, 30, 36</b>	\$687.00
				<b>50, 60, 75, 90, 100, 120, 150, 180</b>	\$707.00
		Single-Phase 110/115 VAC	<b>BHI62FMT-□RA</b>	<b>5, 6, 7.5, 9, 12.5, 15, 18, 25, 30, 36</b>	\$680.00
	<b>50, 60, 75, 90, 100, 120, 150, 180</b>	\$700.00			
	Single-Phase 220/230 VAC	<b>BHI62EMT-□RA</b>	<b>5, 6, 7.5, 9, 12.5, 15, 18, 25, 30, 36</b>	\$687.00	
	<b>50, 60, 75, 90, 100, 120, 150, 180</b>		\$707.00		

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

◇ **Combination Type, Parallel Shaft**

Output Power	Power Supply Voltage	Product Name	Gear Ratio	List Price
200 W (1/4 HP)	Three-Phase 220/230 VAC	<b>BHI62SMT-□</b>	<b>3, 3.6, 5, 6, 7.5, 9</b>	\$632.00
			<b>12.5, 15, 18, 25, 30, 36</b>	\$641.00
			<b>50, 60, 75, 90, 100, 120, 150, 180</b>	\$651.00
	Single-Phase 110/115 VAC	<b>BHI62FMT-□</b>	<b>3, 3.6, 5, 6, 7.5, 9</b>	\$625.00
			<b>12.5, 15, 18, 25, 30, 36</b>	\$634.00
			<b>50, 60, 75, 90, 100, 120, 150, 180</b>	\$644.00
	Single-Phase 220/230 VAC	<b>BHI62EMT-□</b>	<b>3, 3.6, 5, 6, 7.5, 9</b>	\$632.00
			<b>12.5, 15, 18, 25, 30, 36</b>	\$641.00
			<b>50, 60, 75, 90, 100, 120, 150, 180</b>	\$651.00

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**

Output Power	Power Supply Voltage	Product Name	List Price
200 W (1/4 HP)	Three-Phase 220/230 VAC	<b>BHI62SMT-A</b>	\$481.00
	Single-Phase 110/115 VAC	<b>BHI62FMT-A</b>	\$474.00
	Single-Phase 220/230 VAC	<b>BHI62EMT-A</b>	\$481.00

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

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)

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