Standard AC Motors

Constant Speed Motors

Clutch & Brake Motors
Clutch & Brake Motors
C·B Motors

Features

● Suitable for High-frequency Operation
The combination of a constantly rotating induction motor and a clutch and brake unit enables high frequency starting and stopping.

● Compact and Easy to Handle
The compact design simplifies handling and enables the drive unit of the machine to be mounted into a small area.

● Highly Reliable Gearhead Employed

GC type and GCH type gearheads are specifically designed for C·B motors and boast excellent impact resistance, greater strength and high reliability. Other gearheads including GN-S gearhead cannot be combined.

Characteristics of C·B Motors

C·B motor’s output shaft runs and stops by being controlled through the clutch and brake while the motor is running continuously.

Output shaft rotation is controlled through the use of the clutch and brake mechanism. The load is stopped by disengaging the clutch and applying the brake. The motor is always affected by the rotor inertia. However, with a clutch and brake unit, the load is not affected by the rotor inertia.

For these reasons, C·B motors boast superior response over other AC standard motors, starting and stopping in considerably less time.

To meet high-frequency, starting and stopping applications, Oriental Motor uses an induction motor for its continuous duty rating. An induction motor is best suited for uni-directional movements. The C·B motor is not suitable for frequent bi-directional starting and stopping motion.

Other Motor Braking Options

In addition to the C·B motors, various other brake options are available to suit a variety of applications.

How to Select a Brake Motor

Selecting Based on Stopping Accuracy

For low-speed synchronous motors, the motor can be stopped instantly within ±10° of stopping accuracy by turning off the power supply. Refer to page C-167 for details.

Note

The values for overrun applies to the motor only.

Selecting Based on Frequency of Use

For low-speed synchronous motors, if operated within the permissible load inertia, the motor can start, stop and reverse within 1.5 cycles of power supply frequency. Refer to page C-167 for details.
System Configuration

C-B Motors

- C-B Motor
- Gearhead (Sold separately)
- Capacitor (Included)
- Capacitor Cap (Included)

AC Power Supply (Main power supply)

Accessories (Sold separately)

- Flexible Couplings

- Capacitor Cap (Included)

- Capacitor (Included)
Product Number

Motor

**CB I 5 40 - 7 0 1W U**

- **CB:** Clutch & Brake Motor
- **I:** Induction Motor
- **Motor Frame Size:** 5: 90 mm (3.54 in.)
- **Output Power (W):** (Example) 40: 40 W (1/19 HP)
- **Type of Pinion:** 7: GC Type Pinion Shaft
- **8: GCH Type Pinion Shaft
- **Clutch Brake Type:** 0: Power On Activated Type
- **Power Supply Voltage:** 1W: Single-Phase 110/115 VAC
- **Included Capacitor:** U: For Single-Phase 110/115 VAC

Gearhead

**5 GC 30 KA**

- **Gearhead Frame Size:** 5: 90 mm (3.54 in.)
- **Type of Pinion:** GC: GC Type Pinion Shaft
- **GCH: GCH Type Pinion Shaft
- **Gear Ratio:** (Example) 30: Gear Ratio of 30:1
- **Type of Gearhead:** KA: Ball Bearing Type (inch size)

Product Line

Motor

<table>
<thead>
<tr>
<th>Output Power</th>
<th>Power Supply Voltage</th>
<th>Product Name</th>
<th>Motor Product Name</th>
<th>List Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>40 W (1/19 HP)</td>
<td>Single-Phase 110/115 VAC</td>
<td>CB1540-701WU</td>
<td>5IK40GN-AW-CB1</td>
<td>$469.00</td>
</tr>
<tr>
<td>60 W (1/12 HP)</td>
<td>Single-Phase 110/115 VAC</td>
<td>CB1560-801WU</td>
<td>5IK60GU-AW-CB1</td>
<td>$487.00</td>
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<td>90 W (1/8 HP)</td>
<td>Single-Phase 110/115 VAC</td>
<td>CB1590-801WU</td>
<td>5IK90GU-AW-CB1</td>
<td>$511.00</td>
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</tbody>
</table>

- When the motor is approved under various standards, the product name on the nameplate is the approved product name.
  - (Example) Model: **CB1540-701WU** → Motor nameplate and product approved under various standards: 5IK40GN-AW-CB1

**Note**

- The **GC** and **GCH** type gearheads are designed specifically for use with the **CB** motor. Other types of gearheads should not be used.
- The clutch and brake sections cannot be disassembled.

- The following items are included with each product:
  - Motor, Capacitor, Capacitor Cap, Surge Suppressor, Operating Manual

Gearhead (Sold separately)

<table>
<thead>
<tr>
<th>Applicable Motor Output Power</th>
<th>Product Name</th>
<th>Gear Ratio</th>
<th>List Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>40 W (1/19 HP)</td>
<td>5GC □ KA</td>
<td>3.6 6 9 15 18</td>
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<td></td>
<td>30 36</td>
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<td></td>
<td></td>
<td>60 90 120 180</td>
<td>$91.00</td>
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<tr>
<td>60 W (1/12 HP)</td>
<td>5GCH □ KA</td>
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<td>15 18</td>
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<td></td>
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<td>30 36 60</td>
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<td></td>
<td>90 120 180</td>
<td>$149.00</td>
</tr>
</tbody>
</table>

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

- The following items are included with each product:
  - Gearhead, Installation Screws, Parallel Key®, Operating Manual
  - Only for 5GCH □ KA

For details (specifications, characteristics, dimensions and others) on these products please refer to either to our website, contact technical support or your nearest Oriental Motor sales office.

www.orientalmotor.com/catalog