



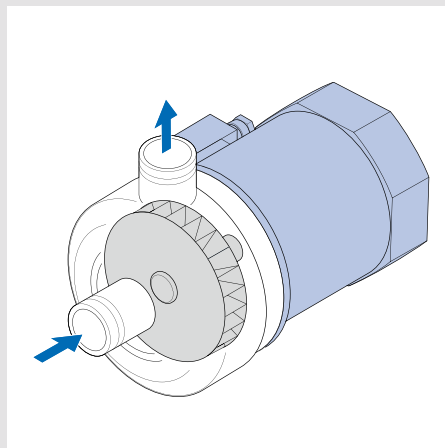
Compact Pumps

with Motors and Drivers from Oriental Motor

Pumps

in Action

Pumps are used in industrial applications all over the world. They work under the toughest conditions and must always ensure reliable and consistently smooth operation.



Application: Pump

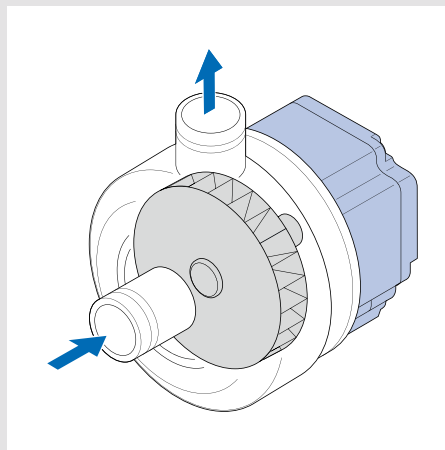
Compact, energy efficient motors with stable speed
are needed when transporting liquids.

Brushless DC Motors

in Action

Solution

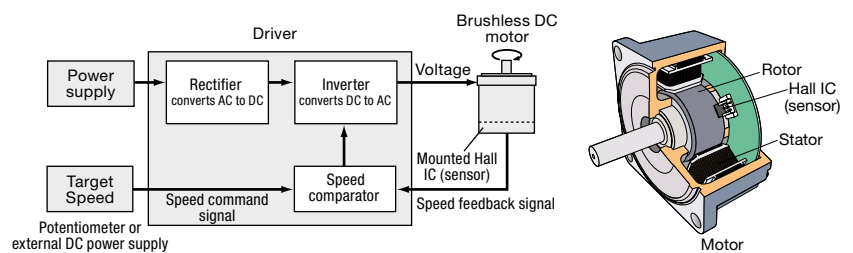
BMU Series brushless DC motors



Application: Pump

Construction and Design Principles

Brushless DC motors utilise a closed loop system for accurate speed control. Based on signals detected by the Hall IC (sensor) mounted in the motor, the transistors in the driver circuit switch on and off, and the motor rotates at the set speed. The term “brushless DC motor” reflects the development history of this technology. In traditional brushed DC motors, the mechanical contact between the brush and the commutator was a weak point that suffered from wear and tear. This has been replaced by an electrical circuit with no physical contact, making maintenance unnecessary.



Solution:

Our **BMU** Series Motors and Driver

A brushless DC motor with compact housing, high power and high efficiency combined with a driver with digital display and intuitive operation. The easy handling of the **BMU** Series sets standards in drive technology.

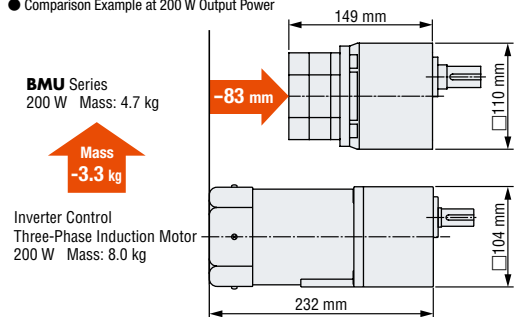


- **Compact**
- **Energy Efficient**
- **Stable Speed Control**

Slim, Light, High Power

Brushless DC motors are slim, lightweight, and high power because permanent magnets are used in the rotor portion. This contributes to the downsizing of equipment.

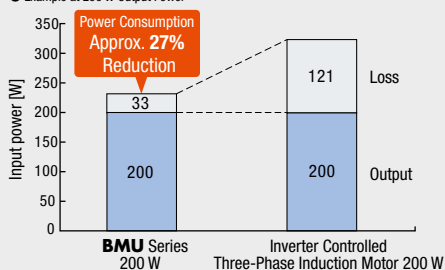
● Comparison Example at 200 W Output Power



Energy Saving

Brushless DC motors significantly reduce power consumption as the use of permanent magnets in the rotor portion prevents secondary losses from the rotor. This helps the equipment to save energy.

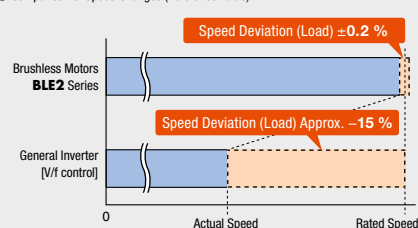
● Example at 200 W Output Power



Stable Speed Control

Brushless DC motor drivers constantly monitor feedback signals from the motor and compare the actual speed against the set speed, adjusting the applied voltage where needed to maintain the set speed. This allows the motor to rotate at a stable speed from low to high speeds even when the load fluctuates.

● Comparison of Speed Changes (Reference value)



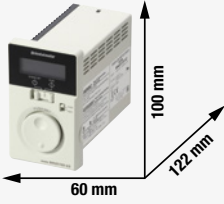
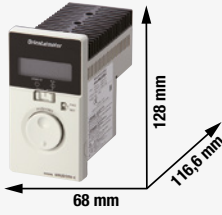

Distinguished Characteristics

with Brushless DC Motors

Wide Speed Control Range

Brushless DC motors have a wider speed control range than AC induction motors. They also have excellent torque characteristics, making them ideal for applications that require a consistent level of torque from low to high speed.

Product Group	Speed Control Range	Speed Ratio
Brushless Motors BMU Series	80~4000 r/min	1:50
Inverter-Controlled Three-Phase Induction Motors	200~2400 r/min	1:12
AC Speed Control Motors	50 Hz : 90~1400 r/min	1:15
	60 Hz : 90~1600 r/min	1:17

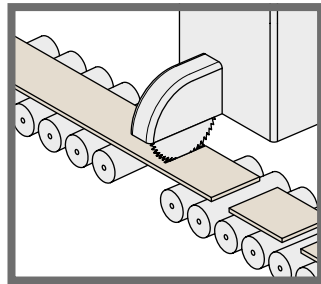
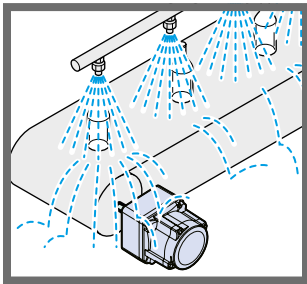
		Drivers of BMU Series	
			
Output Power		30 W, 60 W, 120 W	200 W, 300 W
Speed Setting Method	Settings Dial	●	
	Digital Setting	●	
	External DC Voltage	—	
Functions	Digital Speed Indicator	●	
	Instantaneous Stop	●	
	Acceleration/Deceleration Operation	●	
	Multi-Speed Operation	4 Speeds	
	Multi-Motor Control	—	
	Protective Function	●	
	Source/Sink Select Input	●	
	Maximum Extension Length	10 m	
Safety Standards			

Water-Resistant

According to Protection Class IP66 or IP67

Water-Resistant, Dust-Resistant

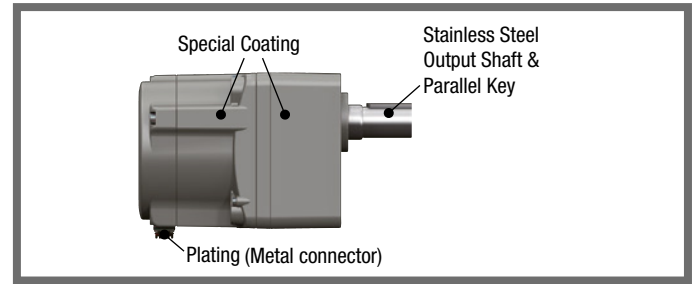
Can be washed down with water. Designed to be mounted on equipment with no protective cover. Can be used in dusty and wet environments.



Improved Anti-Corrosion Properties

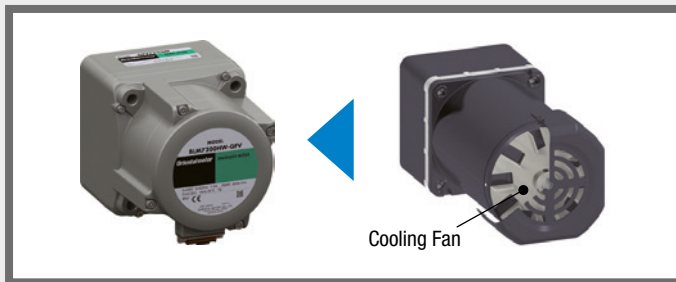
(for Motors with Protection Class IP67 only)

The motor is covered with a special rust-resistant coating, with an output shaft, parallel key and screws made of stainless steel. The installation surface is also painted, so it will be rust-resistant even when installed on stainless steel equipment.



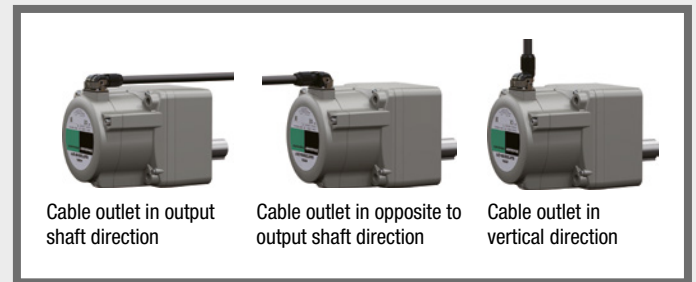
Increased Environmental Resistance

The high efficiency motor does not require a cooling fan.



Easy Equipment Design

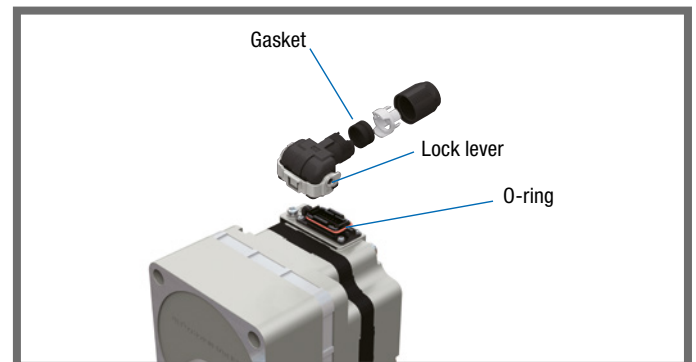
Three cable outlet directions can be selected, reducing positional restrictions in equipment design. Facilitating direct connection between motor and driver without relays.



Connector Structure

The connector has an integrated gasket and an O-ring. This allows for the motor to achieve an IP66 or IP67* degree of protection in both the motor and cable connection point, enabling it to be used in an environment where high pressured water may be an issue. The connector lock lever does not require a screw fitting, allowing for easy connection.

*The driver unit is IP20.



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AC Motors	Show
Brushless DC Motors	Hide
BMU Series	<div style="margin-bottom: 10px;"> BMU/BLE2 Series with high torque gearheads: PDF (3.9 MB) </div> <div style="margin-bottom: 10px;"> BMU/BLE2 Series with IP67: PDF (4.1 MB) </div> <div> BMU Series: PDF (5.6 MB) </div>

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IMPRESSUM

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The information in this brochure is presented as general information. For accurate technical specifications please contact the Oriental Motor (Europa) GmbH office.

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