

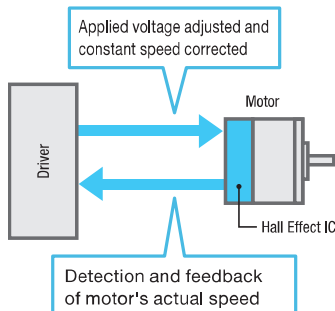
Brushless Motors



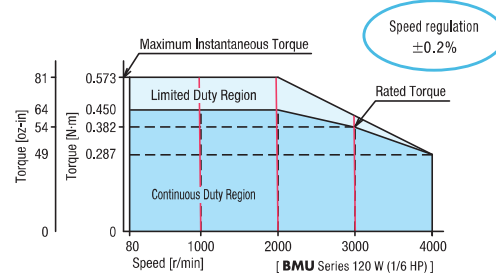
Brushless motors offer excellent energy efficiency and savings equivalent to IE4, excellent speed stability, as well as a wide speed control range. Brushless motors use permanent magnets in the rotor of three-phase motors. With Brushless motors there is no brush and commutator resulting in a maintenance free motor.

On the inside of the stator, there is a built-in hall effect IC (magnetic sensor) that detects magnetic field changes with the permanent magnets. The feedback signals from the hall effect IC of the motor are compared with the setting speed by the driver and the motor speed is adjusted continuously.

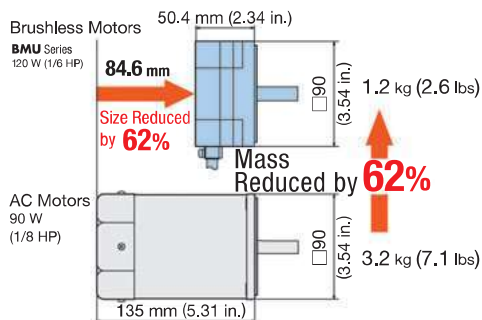
●Control Method



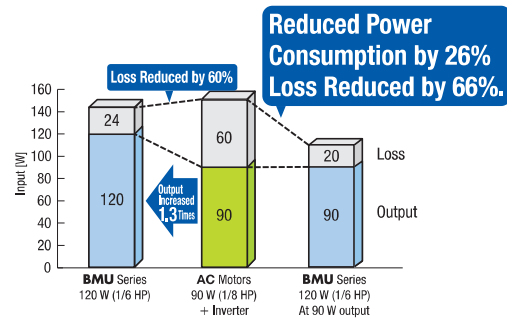
●Wide Speed Range: 80~4000 r/min



●Compact and Lightweight

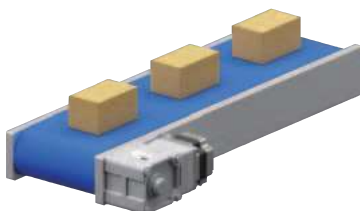


●Energy Savings



Application Examples

Conveyor / Transportation



Agitators/Pumps/Dispensers







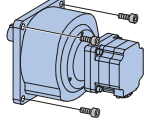


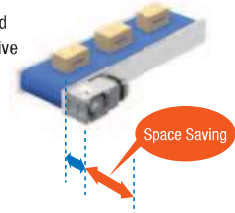


Torque Limiting



Brushless DC Motor Gear Options

These gearheads can be combined with brushless DC motors and offer a wide variety of gear ratio variations and high strength types, expanding the available options.

Gearhead Type		Parallel Shaft Gearhead				Right-Angle Gearhead	Hollow Shaft Flat Gear
		GFV Gears GFS Gears	JV Gears	JB Gears	CS Geared Motor	JH Gears	FR Gears
External View							
Features		<ul style="list-style-type: none"> Long Life, High Strength Output Shaft: Iron, Stainless Steel 	<ul style="list-style-type: none"> High Gear Ratio up to 1/450 Flange Installation Output Shaft: Stainless Steel 	<ul style="list-style-type: none"> High Gear Ratio up to 1/1200 Does not Saturate Permissible Torque Leg Installation 	<ul style="list-style-type: none"> Increased Load-bearing Capacity (Compared to a parallel shaft gearhead) Center Shaft 	<ul style="list-style-type: none"> Space Saving, Low Cost High Strength Output Shaft: Stainless Steel 	<ul style="list-style-type: none"> Space Saving, Low Cost Does not Saturate Permissible Torque
Advantages of Installation		<ul style="list-style-type: none"> Install on Flange Face 		<ul style="list-style-type: none"> No Mounting Brackets Required 	<ul style="list-style-type: none"> The Output Shaft Protrudes from the Center, so Design is Easy 	<ul style="list-style-type: none"> Space Saving Can be Connected Directly to the Drive Shaft 	
Output Power of Combinable Motors	AC Input	30 W, 60 W, 120 W, 200 W, 300 W, 400 W	200 W, 300 W, 400 W	200 W, 300 W, 400 W	—	60 W, 120 W, 200 W, 300 W, 400 W	30 W, 60 W, 120 W, 200 W, 300 W, 400 W
	DC Input	15 W, 30 W, 50 W, 60 W, 100 W, 200 W, 400 W	—	—	30 W, 50 W, 60 W	—	30 W, 50 W, 60 W, 100 W, 200 W, 400 W
Gear Ratio		5 to 200	100 to 450	5 to 1200	5 to 20	5 to 200	5 to 200
Rated Life		10000 hours*	5000 hours	5000 hours	10000 hours	5000 hours	10000 hours
Permissible Radial Load/Permissible Axial Load		1400 N/400 N	3123 N/480 N	3672 N/577 N	200 N/70 N	2405 N/550 N	2040 N/800 N
Permissible Torque		70 N·m	198 N·m	518 N·m	2.9 N·m	82.8 N·m	54 N·m

*The rated life for 15 W is 5,000 hours.


The values for permissible radial load, permissible axial load, and permissible torque are for the following operating conditions. They will vary based on the combined motor output power and gearhead gear ratio.

• Output Power: 200 W (For **CS** geared motors, values are for 50 W models.)

• Motor Shaft Speed: 3000 r/min

• Gear Ratio : Maximum gear ratio for each gearhead (Example: For **GFV** gear, the gear ratio is 200)

[Internal Gearhead Structure]

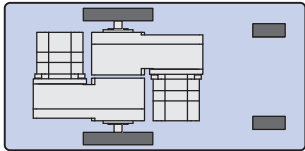


Improved gear case rigidity and larger diameters for gears and bearings lead to high permissible torque and long life.

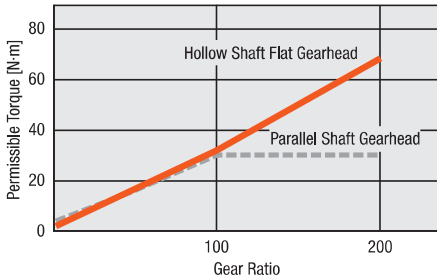
[Characteristic Configuration]

Wheel drive units, etc. can be arranged in a compact configuration with alternating directions.

*Now available in smaller sizes.



[Frame Size 90 mm]



The graph shows Permissible Torque [N·m] on the y-axis (0 to 80) and Gear Ratio on the x-axis (0 to 200). Two lines are plotted: a solid orange line for 'Hollow Shaft Flat Gearhead' and a dashed grey line for 'Parallel Shaft Gearhead'. The Hollow Shaft Flat Gearhead line starts at (0,0) and rises to approximately (200, 70). The Parallel Shaft Gearhead line starts at (0,0) and rises to approximately (100, 30), then levels off.

AC Input Motor / Driver

BMU Series



Max. of 10 m (32.8 ft.)
without an Extension Cable



- Simple Driver Controls
- Easy Wiring & Set Up
- 4 Speeds - Data Setting
- Digital Display Built into the Driver
- IP66/67 Motors



Turn the dial and set to the
desired speed.



BMU Series

Output Power - Watts (HP)	30 W (1/25 HP)~400 W (1/2 HP)	
Frame Size - mm (in.)	60 mm (2.36 in.)~110 mm (4.33 in.)	
Speed Range (r/min)	80~4000	
Option	IP67 Type	
Gear Types	Parallel, Foot, Right Angle, H1 Food Grade Grease (Parallel Shaft type), FR Hollow Shaft	
Power Supply	Single-Phase (VAC)	100-120 / 200-240
	Three-Phase (VAC)	200-240

BLE2 Series



Max. of 20 m (65.6 ft.)
without an Extension Cable



- Easy Set up via Front Control Panel
- Side By Side Mounting
- Up to 16 Preset Speeds
- External DC Voltage Control
- **MEXE02** Support Software
- IP66/67 Motors



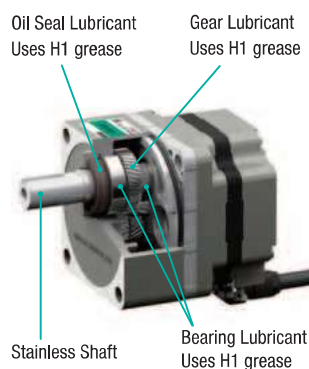
● The control panel cannot be
removed from the driver.



BLE2 Series

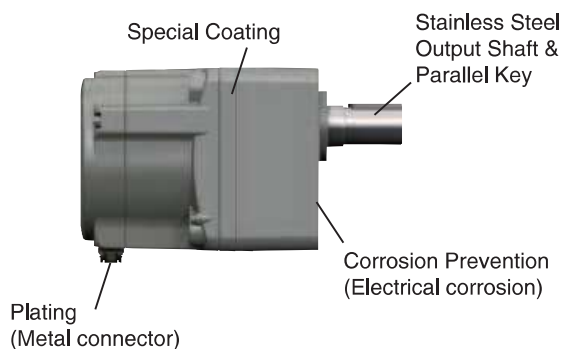
Output Power - Watts (HP)	30 W (1/25 HP)~400 W (1/2 HP)	
Frame Size - mm (in.)	60 mm (2.36 in.)~110 mm (4.33 in.)	
Speed Range (r/min)	80~4000	
Option	Electromagnetic Brake / IP67 Type	
Gear Types	Parallel, Foot, Right Angle, H1 Food Grade Grease (Parallel Shaft type), FR Hollow Shaft	
Power Supply	Single-Phase (VAC)	100-120 / 200-240
	Three-Phase (VAC)	200-240

● H1 Food-Grade Grease (IP66)



H1 Food-Grade Grease is a grease registered by the NSF as part of a category where the "lubricants used in food-processing environments where there is the possibility of incidental food contact."

● Watertight, Dust-Resistant (IP67)



DC Input Motor and Driver

BLS Series



- Constant speed operation
- AC gearheads can be used
- 100 to 4000 r/min
- **MEXE02** Support Software

BLS Series



Output Power	25 W (1/30 HP)~120 W (1/6 HP)	
Frame Size - mm (in.)	60 mm (2.36 in.)~90 mm (3.54 in.)	
Speed Range (r/min)	100~2000 (standard) or 100~4000 (high strength)	
Option	IP65 or IP40	
Gear Types	Parallel, FR Hollow Shaft	
Power Supply	VDC	24

BLH Series



- 2 Motor types (Connector or Cable)
- 3 Driver types (Analog, Digital or RS-485 Communications)
- 80 to 3000 r/min
- Torque Limiting & Deceleration Stop
- **MEXE02** Support Software

BLH Series



Output Power - Watts (HP)	15 W (1/50 HP)~100 W (1/8 HP)	
Frame Size - mm (in.)	42 mm (1.65 in.)~90 mm (3.54 in.)	
Speed Range (r/min)	80~3000	
Option	Electromagnetic Brake	
Gear Types	Parallel, FR Hollow Shaft, Center Shaft	
Power Supply	VDC	24

BLV Series R Type



- Communications Control Through Modbus (RTU) and CANopen
- 1 to 4000 r/min
- Battery-Operated
- **MEXE02** Support Software

BLV Series R Type

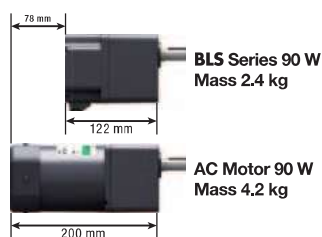


Output Power - Watts (HP)	60 W (1/12 HP)~400 W (1/2 HP)	
Frame Size - mm (in.)	60 mm (2.36 in.)~110 mm (4.33 in.)	
Speed Range (r/min)	1~4000	
Option	Electromagnetic Brake	
Gear Types	Parallel, FR Hollow Shaft, Center Shaft	
Power Supply	VDC	24 / 48

*24 VDC 400 W driver, **BLVD-KBRD**, is CE marking only.

- **BLS Series** is a Smaller, More Efficient AC Motor Alternative

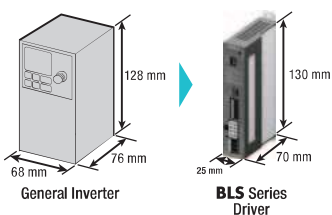
Smaller and Lighter Motor



Motor Length
78 mm
Reduction

Mass
1.8 kg
Reduction

Slimmer Driver

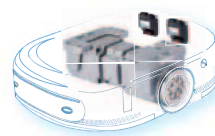


Volume
65%
Reduction

- **BLV Series R Type** and **BLH Series** are Transport Robot Solutions



Low-platform and thinly design motors are paired with compact, lightweight drivers.



Significantly Increased Permissible Load with Flange Drive Adapter

