

BRUSHLESS MOTORS
BMU Series

EASY SPEED CONTROL

WITH SPIN AND PUSH



Lineup Added

Hypoid Right-Angle
Hollow Shaft Gear and
Various Gears

Gearheads Supporting
Food Machinery Grease H1

Features of Connector Type

The connector is new and specially developed for compact motors. It connects the motor and the driver directly. In addition to the motor mechanism, improved dust-resistant and watertight performance has allowed the motor to obtain a Degree of Protection IP66*.

New connector

The built-in gasket and the O-ring contribute to improved watertight performance. The locking lever makes connection easy, eliminating the trouble to fix screws.

● Connector Structure



● How to Install



Plug the connector.



Turn the locking lever.



Connection is completed.

Stainless steel shaft equipped as a standard*

Highly rustproof, anti-corrosive stainless steel is used for the shaft. Stainless steel is also used for the parallel key and the installation screws.

*The protection rating and the output shaft material depend on the gearhead used. For details, refer to the Lineup chart. → Page 04-10



Cable with Selectable Drawing Direction for Direct Connection

2 types of connection cables are available to choose from depending on the direction to draw out. For direct connections between the motor and the driver, one connection cable can extend up to 10 m, eliminating the need for a relay.

Selectable cable drawing direction

2 types are available to choose from depending on the direction to draw out the motor cable.

(The round shaft type draws only from the counter-output shaft side.)



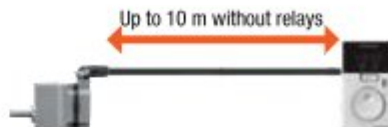
Drawing on the output shaft side



Drawing on the counter-output shaft side

Connects the motor and the driver directly

One cable can extend up to 10 m without a relay, eliminating the need for relays. Only this one cable is required for the power, signals and grounding, reducing wiring efforts.



Designed for Compactness, High Power and High Efficiency

An optimal magnetic design and high-performance material enable a stator plate thickness of just 11.2 mm. This slimness realizes a highly efficient power unit that outputs 120 W. Compared with the conventional brushless motor of the same output power, the stator plate thickness is only half of the conventional one (For motors with a frame size of 90 mm).

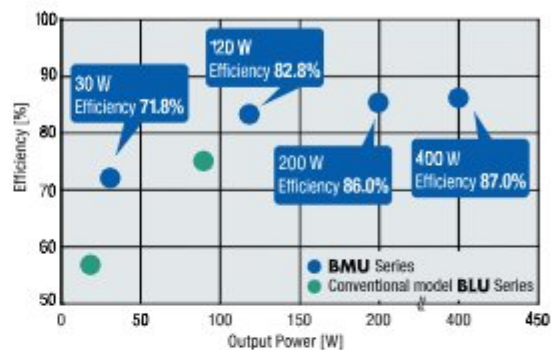
Moreover, the use of high-performance material reduces the amount of material used, therefore reducing costs.



Substantial Improvement in the Efficiency of the Motor and Driver Package

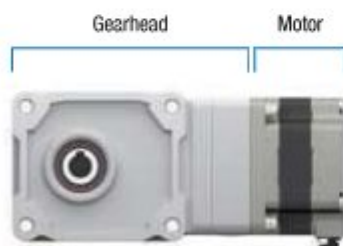
The **BMU** Series sees a maximum of 15% unit efficiency improvement compared with conventional models*.

***BMU** Series 30 W and **BLU** Series 20 W comparison.

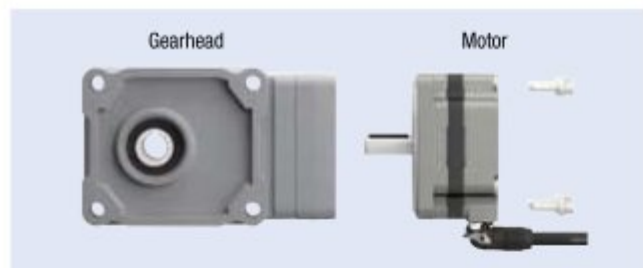


Assembled Motor and Gearhead

The motor and gearhead come pre-assembled. This reduces assembly time and allows immediate installation of the unit to equipment.



You can remove the gearhead and change the mounting angle by 90-degree intervals. You can change the connector position depending on the equipment.



Lineup

Motor

Cable Type		Connector Type			
Type/material of the output shaft		Output Power [W]	Gear Ratio	Degree of Protection	
Parallel Shaft Gearhead	Cable Type	30	5, 10, 15, 20, 30, 50, 100, 200	Cable IP40	
	Connector Type	60			
	GFV Gear	120			
	Cable	200			
	Iron Shaft	400	5, 10, 15, 20, 30, 50	Connector IP66	
	Connector				
	Stainless Steel Shaft		5, 10, 15, 20, 30, 50, 100, 200	IP66	
	NEW	30			
	GFV Gear	60			
	Supports Food Machinery Grease H1	120			
	Stainless Steel Shaft		300, 450	IP66	
	JV Gear	200			
Legged Gearhead JB Gear	Connector Type	400	100, 200, 300, 450	IP66	
	Iron Shaft				
Hypoid Right-Angle Hollow Shaft JH Gear	Connector Type	200	5, 10, 20, 30, 50, 100, 200, 300, 450, 600, 1200	IP44	
		400	5, 10, 20, 30, 50, 100, 200, 300, 450, 600		
		NEW 60	10, 13, 20, 30, 50, 100, 200		
		120	5, 10, 15, 20, 30, 50, 100, 200		
Round Shaft Type*1	Connector Type	200	—	Cable IP40	
		400			
Iron Shaft	Cable Type	30	—	Cable IP40	
	Connector Type	60			
		120			
		200			
		400			
Stainless Steel Shaft	Cable Type	30	—	Cable IP40	
	Connector Type	60			
		120			
		200			
		400			

Driver

Output Power [W]	Power Supply Voltage [VAC]
30	Single-Phase 100-120 Single-Phase 200-240 Three-Phase 200-240
60	
120	
200	
400	Three-Phase 200-240
30	Single-Phase 100-120 Single-Phase 200-240 Three-Phase 200-240
60	
120	
200	Single-Phase 100-120 Single-Phase 200-240 Three-Phase 200-240
400	Three-Phase 200-240
200	Single-Phase 100-120 Single-Phase 200-240 Three-Phase 200-240
400	Three-Phase 200-240
60	Single-Phase 100-120 Single-Phase 200-240 Three-Phase 200-240
120	Single-Phase 100-120 Single-Phase 200-240 Three-Phase 200-240
200	Single-Phase 100-120 Single-Phase 200-240 Three-Phase 200-240
400	Three-Phase 200-240
30	Single-Phase 100-120 Single-Phase 200-240 Three-Phase 200-240
60	
120	
200	
400	

Connection Cable

Cable Type
1~10 m
0.5~10 m
Drawing on the output shaft side
Drawing on the counter-output shaft side*2

*1 Some round shaft types have a milling cut shaft.

*2 The round shaft type can connect only the connection cable drawing from the counter-output shaft.

Product Number Code

Motor

◇ Parallel Shaft Gearhead **GFV** Gear/Round Shaft Type

BLM 4 60 S H P - 50 S F

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨

①	Motor Type	BLM : Brushless Motor
②	Frame Size	2 : 60 mm 4 : 80 mm 5 : 90 mm 6 : 104 mm (Gearhead is 110 mm)
③	Output Power	30 : 30 W 60 : 60 W 120 : 120 W 200 : 200 W 400 : 400 W
④	Identification Part Number	S
⑤	Motor Connection Method	Blank: Cable Type H : Connector Type
⑥	Motor Degree of Protection	Blank: IP40 Specifications P : IP66 Specifications
⑦	Gear Ratio/Shaft Shape	Numbers: Gear Ratio of the Gearhead A, A2 : Round Shaft Type AC, AC2 : Round Shaft Type (With milling cut)
⑧	Material of the Output Shaft	B : Blank: Iron S : Stainless Steel
⑨		F : Supports Food Machinery Grease H1

◇ Hypoid Right-Angle Hollow Shaft **JH** Gear, Legged Gearhead **JB** Gear, Parallel Shaft Gearhead **JV** Gear

BLM 5 200 H P K - 5 C B 50 B - L

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩ ⑪ ⑫ ⑬

Motor Product Name

Gearhead Product Name

Motor Product Name	①	Motor Type	BLM : Brushless Motor
	②	Frame Size	4 : 80 mm 5 : 90 mm
	③	Output Power	60 : 60 W 120 : 120 W 200 : 200 W 400 : 400 W
	④	Identification Part Number	S
	⑤	Motor Connection Method	H : Connector Type
	⑥	Motor Degree of Protection	P : IP66
	⑦	Combination Type Motor	K : Round Shaft Type (With key)
Gearhead Product Name	⑧	Combination Type Motor Frame Size	4 : 80 mm 5 : 90 mm
	⑨	Gearhead Size	Code (Example) C or the codes of the gearhead size, see Specifications (→ Pages 04-18, 04-19 and 04-22).
	⑩	Gearhead Type	H : JH Gear B : JB Gear V : JV Gear
	⑪	Gear Ratio	Numbers: Gear Ratio of the Gearhead
	⑫	Material of the Output Shaft	S : Stainless Steel B : Iron
	⑬	Connector Position	Blank: Bottom -L : Left

Driver

BMUD 60 - C 2

① ② ③ ④

①	Driver Type	BMUD : BMU Series Driver
②	Output Power	30 : 30 W 60 : 60 W 120 : 120 W 200 : 200 W 400 : 400 W
③	Power Supply Voltage	A : Single-Phase 100-120 VAC C : Single-Phase, Three-Phase 200-240 VAC S : Three-Phase 200-240 VAC
④	Reference Number	

Connection Cable/Flexible Connection Cable (For cable type)

CC 01 BL 2 R

① ② ③ ④ ⑤

①	Cable Type	CC : Connection Cable
②	Length	01 : 1 m 02 : 2 m 03 : 3 m 05 : 5 m 07 : 7 m 10 : 10 m
③	Applied Model	BL : Brushless Motor
④	Reference Number	
⑤	Blank: Connection Cable	R : Flexible Connection Cable

Connection Cable (For connector type)

CC 010 H BL F

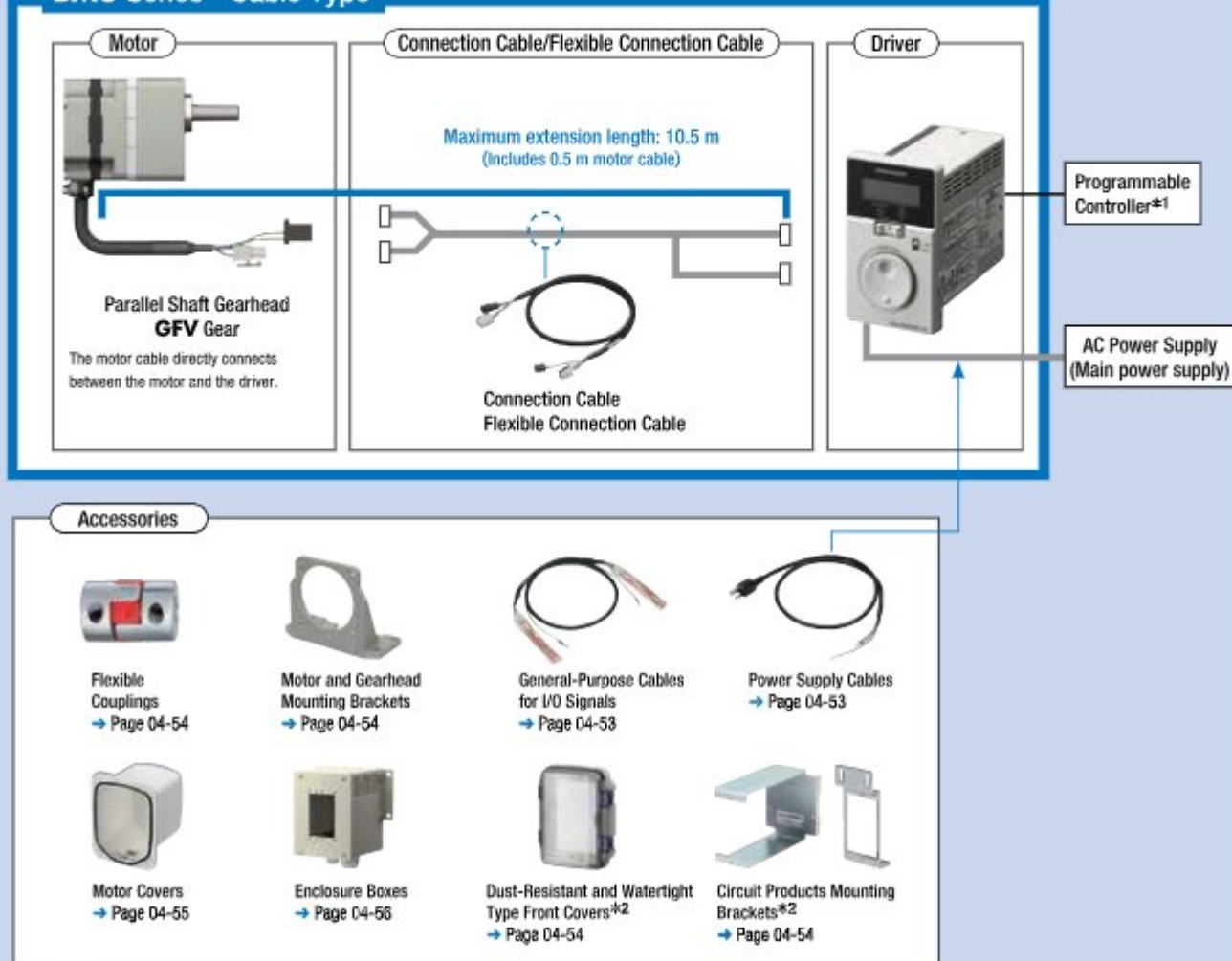
① ② ③ ④ ⑤

①	Cable Type	CC : Connection Cable
②	Length	005 : 0.5 m 010 : 1 m 015 : 1.5 m 020 : 2 m 025 : 2.5 m 030 : 3 m 040 : 4 m 050 : 5 m 070 : 7 m 100 : 10 m
③	Motor Connection Method	H : Connector Type
④	Applied Model	BL : Brushless Motor
⑤	Cable Drawing Direction	F : Drawing on the Output Shaft Side B : Drawing on the Counter-output Shaft Side

System Configuration Cable Type

The motor, driver and connection cable needs to be purchased separately.

BMU Series Cable Type



*1 Not supplied.

*2 Circuit products mounting brackets cannot be used together with the dust-resistant and watertight type front cover.

System Configuration Example

BMU Series Cable Type			Sold Separately		
Motor Parallel Shaft Gearhead GFV Gear	Driver	Connection Cable (1 m)	Mounting Bracket	Flexible Coupling	Circuit Product Mounting Bracket
BLM230-10B	BMUD30-A2	CC01BL2	SOL2M4F	MCL301010	MAFP05V
SGD215	SGD175	SGD38	SGD24	SGD61	SGD12

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

Product Line Cable Type

A motor, driver and connection cable needs to be purchased separately.

Motors

Parallel Shaft Gearhead GFV Gear

Output Power	Product Name	Gear Ratio	List Price
30 W	BLM230-□B	5, 10, 15, 20	SGD215
		30, 50, 100	SGD224
		200	SGD236
60 W	BLM460S-□B	5, 10, 15, 20	SGD245
		30, 50, 100	SGD254
		200	SGD266
120 W	BLM5120-□B	5, 10, 15, 20	SGD320
		30, 50, 100	SGD331
		200	SGD343
200 W	BLM6200S-□B	5, 10, 15, 20	SGD398
		30, 50	SGD413
		100, 200	SGD431
400 W	BLM6400S-□B	5, 10, 15, 20	SGD448
		30, 50	SGD463

Round Shaft Type

Output Power	Product Name	List Price
30 W	BLM230-A2	SGD128
60 W	BLM260-A2	SGD143
120 W	BLM5120-A2	SGD175
200 W	BLM5200-A	SGD213
400 W	BLM5400-A	SGD263

Lineup of Other Products

Round Shaft Type
Milling Cut Output Shaft

For details, contact your nearest Oriental Motor sales office.

Drivers

Output Power	Power Supply Voltage	Product Name	List Price
30 W	Single-Phase 100-120 VAC	BMUD30-A2	SGD175
	Single-Phase, Three-Phase 200-240 VAC	BMUD30-C2	SGD175
60 W	Single-Phase 100-120 VAC	BMUD60-A2	SGD181
	Single-Phase, Three-Phase 200-240 VAC	BMUD60-C2	SGD181
120 W	Single-Phase 100-120 VAC	BMUD120-A2	SGD203
	Single-Phase, Three-Phase 200-240 VAC	BMUD120-C2	SGD203
200 W	Single-Phase 100-120 VAC	BMUD200-A	SGD225
	Single-Phase, Three-Phase 200-240 VAC	BMUD200-C	SGD225
400 W	Three-Phase 200-240 VAC	BMUD400-S	SGD238

Connection Cables (For cable type)

Length	Product Name	List Price
1 m	CC01BL2	SGD38
2 m	CC02BL2	SGD53
3 m	CC03BL2	SGD68
5 m	CC05BL2	SGD98
7 m	CC07BL2	SGD128
10 m	CC10BL2	SGD173

Flexible Connection Cables (For cable type)

Length	Product Name	List Price
1 m	CC01BL2R	SGD75
2 m	CC02BL2R	SGD105
3 m	CC03BL2R	SGD135
5 m	CC05BL2R	SGD195
7 m	CC07BL2R	SGD255
10 m	CC10BL2R	SGD345

Accessories (Common among cable and connector types)

Motor

Type	Parallel Key	Safety Cover	Installation Screws	Operating Manual
GFV Gear	1 piece	—	1 set	1 copy
JV Gear	—	—	—	
JB Gear	—	—	—	
JH Gear	1 piece	1 piece	1 set	
Round Shaft	—	—	—	

Driver

Connector	Startup Guide	Operating Manual
• CN1 connector (1 piece) • CN4 connector (1 piece)	1 copy	1 copy

A number in the box □ in the product name indicates the gear ratio.

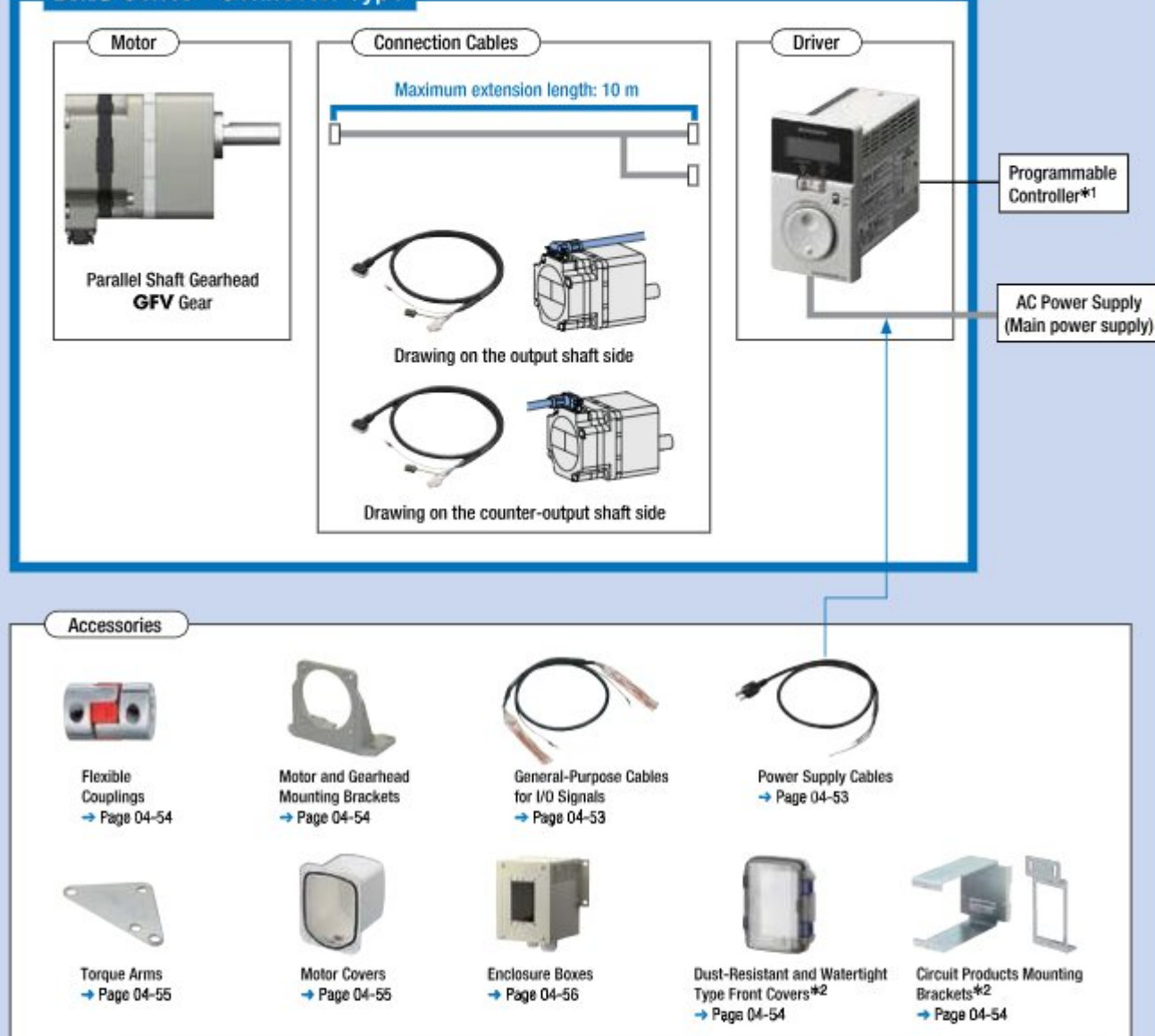
Click Here

For more information, please visit ORIENTAL MOTOR Website:
<https://www.orientalmotor.com.sg/om/tp/index.html>

System Configuration Connector Type

The motor, driver and connection cable needs to be purchased separately.

BMU Series Connector Type



*1 Not supplied.

*2 Circuit products mounting brackets cannot be used together with the dust-resistant and watertight type front cover.

System Configuration Example

BMU Series Connector Type			Sold Separately		
Motor	Driver	Connection Cable (3 m)	Mounting Bracket	Flexible Coupling	Circuit Product Mounting Bracket
Parallel Shaft Gearhead GFV Gear					
BLM230HP-10S	BMUD30-A2	CC030HBLF	SOL2M4F	MCL301010	MAFP05V
SGD265	SGD175	SGD66	SGD24	SGD61	SGD12

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

Product Line Connector Type

A motor, driver and connection cable needs to be purchased separately.

Motors

Parallel Shaft Gearhead GFV Gear

Output Power	Product Name	Gear Ratio	List Price
30 W	BLM230HP-□S	5, 10, 15, 20	SGD265
		30, 50, 100	SGD274
		200	SGD286
60 W	BLM460SHP-□S	5, 10, 15, 20	SGD295
		30, 50, 100	SGD304
		200	SGD316
120 W	BLM5120HP-□S	5, 10, 15, 20	SGD370
		30, 50, 100	SGD381
		200	SGD393
200 W	BLM6200SHP-□S	5, 10, 15, 20	SGD448
		30, 50	SGD463
		100, 200	SGD481
400 W	BLM6400SHP-□S	5, 10, 15, 20	SGD498
		30, 50	SGD513

Parallel Shaft Gearhead GFV Gear Supports Food Machinery Grease H1

Output Power	Product Name	Gear Ratio	List Price
30 W	NEW BLM230HP-□SF	5, 10, 15, 20	SGD328
		30, 50, 100	SGD336
		200	SGD349
60 W	NEW BLM460SHP-□SF	5, 10, 15, 20	SGD358
		30, 50, 100	SGD366
		200	SGD379
120 W	NEW BLM5120HP-□SF	5, 10, 15, 20	SGD433
		30, 50, 100	SGD444
		200	SGD455

Parallel Shaft Gearhead JV Gear

Output Power	Product Name	Gear Ratio	List Price
200 W	BLM5200HPK-5KV□S	300, 450	SGD956
400 W	BLM5400HPK-5DV□S	100, 200	SGD744
	BLM5400HPK-5KV□S	300, 450	SGD1,006

Lineup of Other Products

Round Shaft Type
Milling Cut Output Shaft
Connector Position 4-direction selection

For details, contact your nearest Oriental Motor sales office.

Legged Gearhead JB Gear

Output Power	Product Name	Gear Ratio	List Price
200 W	BLM5200HPK-5AB□B-L	5, 10, 20	SGD538
	BLM5200HPK-5CB□B-L	30, 50	SGD588
	BLM5200HPK-5EB□B-L	100, 200	SGD788
	BLM5200HPK-5KB□B-L	300, 450	SGD988
	BLM5200HPK-5SB□B-L	600, 1200	SGD1,068
400 W	BLM5400HPK-5AB□B-L	5, 10, 20	SGD588
	BLM5400HPK-5CB□B-L	30, 50	SGD638
	BLM5400HPK-5EB□B-L	100, 200	SGD838
	BLM5400HPK-5KB□B-L	300, 450	SGD1,038
	BLM5400HPK-5SB□B-L	600	SGD1,118

Hypoid Right-Angle Hollow Shaft JH Gear

Output Power	Product Name	Gear Ratio	List Price
60 W	NEW BLM460SHPK-4H□S	10, 15, 20	SGD498
		30, 50, 100	SGD509
		200	SGD520
120 W	BLM5120HPK-5H□S	10, 15, 20	SGD516
		30, 50, 100	SGD528
		200	SGD539
200 W	BLM5200HPK-5XH□S	5, 10, 15, 20	SGD763
		30	SGD775
		50	SGD813
	BLM5200HPK-5YH□S	100	SGD1,000
		200	SGD1,188
400 W	BLM5400HPK-5XH□S	5, 10, 15, 20	SGD813
		30	SGD825
		50	SGD863
	BLM5400HPK-5YH□S	100	SGD1,050
		200	SGD1,238

Round Shaft Type

Output Power	Product Name	List Price
30 W	BLM230HP-A5	SGD153
60 W	BLM260HP-A5	SGD168
120 W	BLM5120HP-A5	SGD200
200 W	BLM5200HP-A5	SGD238
400 W	BLM5400HP-A5	SGD288

Drivers

Output Power	Power Supply Voltage	Product Name	List Price
30 W	Single-Phase 100-120 VAC	BMUD30-A2	SGD175
	Single-Phase, Three-Phase 200-240 VAC	BMUD30-C2	SGD175
60 W	Single-Phase 100-120 VAC	BMUD60-A2	SGD181
	Single-Phase, Three-Phase 200-240 VAC	BMUD60-C2	SGD181
120 W	Single-Phase 100-120 VAC	BMUD120-A2	SGD203
	Single-Phase, Three-Phase 200-240 VAC	BMUD120-C2	SGD203
200 W	Single-Phase 100-120 VAC	BMUD200-A	SGD225
	Single-Phase, Three-Phase 200-240 VAC	BMUD200-C	SGD225
400 W	Three-Phase 200-240 VAC	BMUD400-S	SGD238

● A number in the box □ in the product name indicates the gear ratio.
● Accessories → Page 04-13

Connection Cables (For connector type)

Length	Product Name	List Price	Length	Product Name	List Price
0.5 m	CC005HBL	SGD38	3 m	CC030HBL	SGD66
1 m	CC010HBL	SGD38	4 m	CC040HBL	SGD78
1.5 m	CC015HBL	SGD43	5 m	CC050HBL	SGD89
2 m	CC020HBL	SGD48	7 m	CC070HBL	SGD110
2.5 m	CC025HBL	SGD56	10 m	CC100HBL	SGD139

● The □ symbol in the product is replaced with **F** or **B** that represents the cable drawing direction.

Two types of connection cables for different cable drawing directions are provided.

Note

● The cable for the round shaft type draws only from the counter-output shaft side.

F: Drawing on the output shaft side

B: Drawing on the counter-output shaft side

