

GLENTEK BRUSHLESS SERVO MOTORS GMBF4300 SERIES

Revision: 1/22/2019



Glentek's GMBF4300 series of high performance, permanent magnet Brushless servo motors utilize traditional ferrite magnets which are ideal for cost sensitive applications. This helps to reduce the mechanical shaft resonance which allows higher servo gains with increased stability. In addition, all frame sizes incorporate skewed stators which provide ultra smooth operation (i.e. low cogging torque) at all speeds.

- Continuous Torque Range:
22.0 Lb-in (2.49 Nm) to 46.0 Lb-in (5.20 Nm)
- Peak Torque Range:
66.0 Lb-in (7.47 Nm) to 138.0 Lb-in (15.60 Nm)

GMBF4300 SERIES FEATURES

Traditional ferrite magnet design, which are ideal for cost sensitive applications.

Special design provides ultra smooth operation (i.e. low cogging torque) at all speeds.

Worldwide standard mounting configurations are available (English, Metric, NEMA 42, and NEMA 56C).

Optional custom mounting configurations are available to meet virtually any requirement.

Normally closed thermal switch provides over temperature protection.

Encoder with commutation tracks, brushless resolvers or Hall sensors are standard feedback devices offered

Various electrical windings are available as standard to suit both low (120 VAC) and high (230 VAC) voltage drives in order to provide optimum speed and torque characteristics. Optional custom electrical windings are available.

Shaft Keyway.

Class H insulation standard.

Standard operating temperature is dependent on the feedback device installed. Motors with resolver feedback can be specially configured to operate down to -40°C.

Optional 24VDC holding brakes are available.

Constructed to withstand the toughest industrial environment with rugged, high performance bearings and TENV construction with IP65 sealing standard

RoHS compliant

CE marked.

UL Recognized Component for US and Canada.

GMBF4300 SERIES ENVIRONMENTAL CONDITIONS

Storage Temperature: -20°C to 70°C

Operating Temperature: Standard: -20°C to 40°C, without derating, derate torque 10% per 10°C above 40°C
Special: -40°C to 40°C, without derating, derate torque 10% per 10°C above 40°C

Humidity: 5% to 95% relative humidity, non-condensing

Altitude: Up to 1000m without derating, derate torque 10% per 1000m above 1000m

GMBF4300 SERIES SELECTION TABLE

K_t = Torque Constant • K_v = BEMF = V_{RMS} Phase-to-Phase/1000 RPM • R_A = Phase-to-Phase Resistance • L_A = Phase-to-Phase Inductance

| Model Number | Power @ Rated Speed | | Speed, RPM | | Cont. Stall Rating | | | Peak Stall Rating | | | K_t | | K_v | R_A | L_A | Rotor Inertia | |
|---------------------|---------------------|------|------------|-------|--------------------|------|------|-------------------|-------|------|---------|------|-------|----------|-------|------------------------|-------------------|
| | HP | KW | Max | Rated | Lb-in | Nm | Amps | Lb-in | Nm | Amps | Lb-in/A | Nm/A | V | Ω | mH | Lb-in-sec ² | Kg-m ² |
| GMBF4320-25 | 0.89 | 0.67 | 4000 | 3200 | 22 | 2.49 | 7.5 | 66.0 | 7.47 | 22.5 | 2.94 | 0.33 | 26 | 1.1 | 8.4 | 0.0032 | 0.000362 |
| GMBF4320-50 | 0.89 | 0.67 | 4000 | 3200 | 22 | 2.49 | 3.8 | 66.0 | 7.47 | 11.4 | 5.76 | 0.65 | 51 | 4.7 | 14.7 | 0.0032 | 0.000362 |
| GMBF4320-75 | 0.56 | 0.42 | 2500 | 2000 | 22 | 2.49 | 2.6 | 66.0 | 7.47 | 7.8 | 8.47 | 0.96 | 75 | 11.0 | 39.5 | 0.0032 | 0.000362 |
| GMBF4320-100 | 0.39 | 0.29 | 1800 | 1400 | 22 | 2.49 | 1.9 | 66.0 | 7.47 | 5.7 | 11.41 | 1.29 | 101 | 18.5 | 43.8 | 0.0032 | 0.000362 |
| GMBF4340-25 | 1.46 | 1.09 | 4000 | 3200 | 36 | 4.07 | 12.3 | 108.0 | 12.21 | 36.9 | 2.94 | 0.33 | 26 | 0.4 | 5.2 | 0.0059 | 0.000667 |
| GMBF4340-50 | 1.46 | 1.09 | 4000 | 3200 | 36 | 4.07 | 6.2 | 108.0 | 12.21 | 18.6 | 5.76 | 0.65 | 51 | 2.1 | 14 | 0.0059 | 0.000667 |
| GMBF4340-75 | 0.91 | 0.68 | 2500 | 2000 | 36 | 4.07 | 4.2 | 108.0 | 12.21 | 12.6 | 8.47 | 0.96 | 75 | 4.1 | 36.3 | 0.0059 | 0.000667 |
| GMBF4340-100 | 0.64 | 0.48 | 1800 | 1400 | 36 | 4.07 | 3.2 | 108.0 | 12.21 | 9.6 | 11.41 | 1.29 | 101 | 7.0 | 41.2 | 0.0059 | 0.000667 |
| GMBF4360-25 | 1.87 | 1.39 | 4000 | 3200 | 46 | 5.20 | 16.1 | 138.0 | 15.60 | 48.3 | 2.94 | 0.33 | 25 | 0.1 | 3.6 | 0.0086 | 0.000972 |
| GMBF4360-50 | 1.87 | 1.39 | 4000 | 3200 | 46 | 5.20 | 8.0 | 138.0 | 15.60 | 24.0 | 5.76 | 0.65 | 51 | 1.0 | 11.9 | 0.0086 | 0.000972 |
| GMBF4360-75 | 1.17 | 0.87 | 2500 | 2000 | 46 | 5.20 | 5.5 | 138.0 | 15.60 | 16.5 | 8.36 | 0.94 | 74 | 2.3 | 19.8 | 0.0086 | 0.000972 |
| GMBF4360-100 | 0.82 | 0.61 | 1800 | 1400 | 46 | 5.20 | 4.1 | 138.0 | 15.60 | 12.3 | 11.30 | 1.28 | 100 | 3.9 | 28.7 | 0.0086 | 0.000972 |

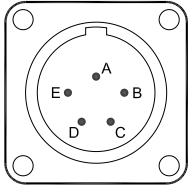
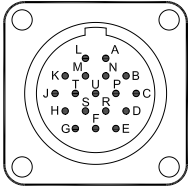
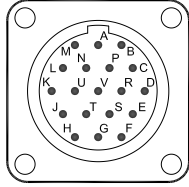
NOTE: All ratings based on a 25°C ambient temperature with the motor face mounted to a 14" x 14" x 3/4" aluminum heatsink. The values for Max and Rated Speed are for motors operated with a 230 VAC power supply

BRAKE OPTION

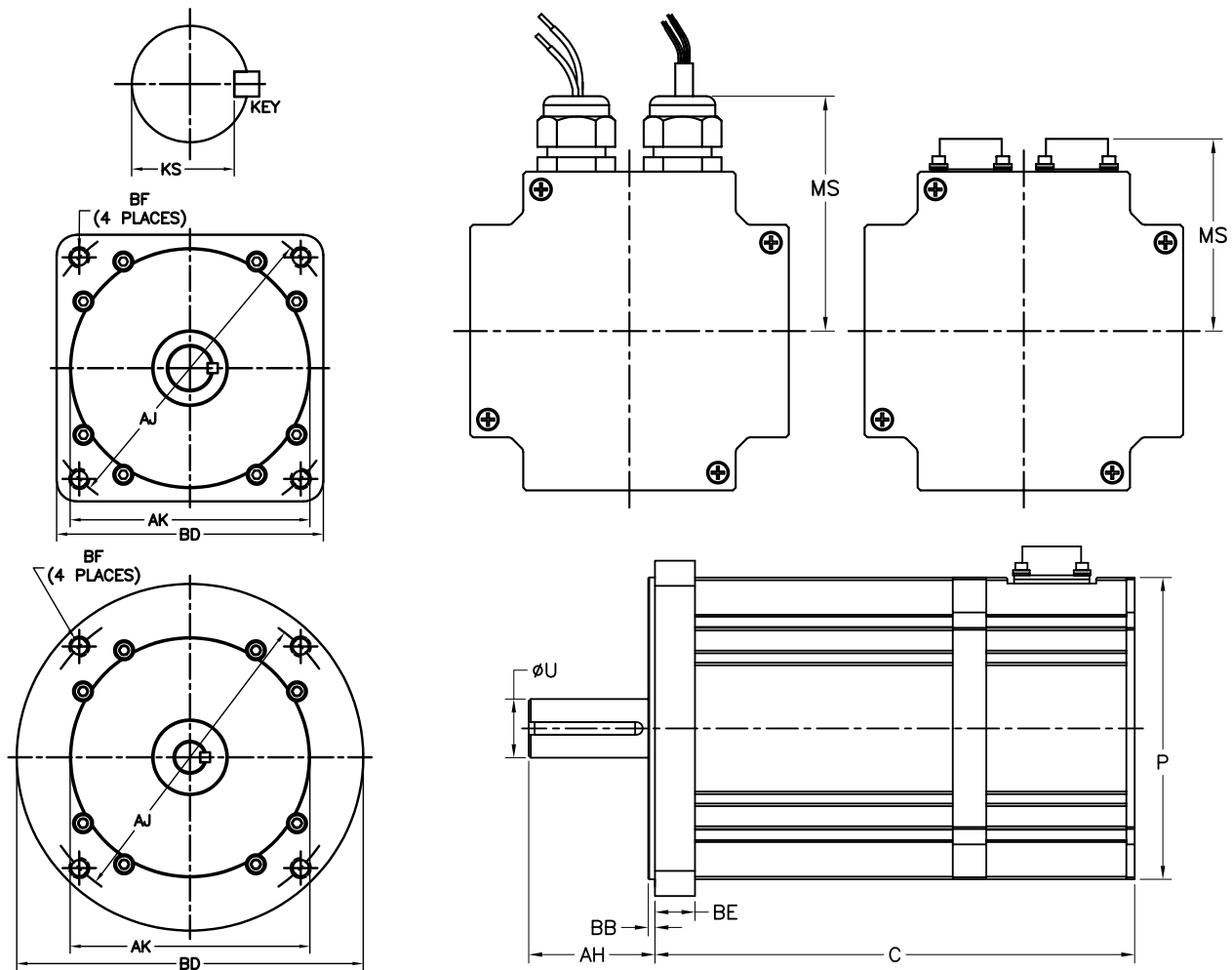
Brake requires 24V DC input voltage. The values for "Extension" represent the nominal maximum length that the brake will add to the motor. For some models, the extension will be less. Please contact one of our sales engineers for the exact values.

| Extension | Torque | | Power |
|-----------|--------|----|-------|
| in. (mm) | Lb-in | Nm | Watts |
| 1.63 (41) | 79.6 | 9 | 18 |

CONNECTORS & PIN-OUT INFORMATION

| 5-Pin MS connector MS3112E14-5P | | 18-Pin MS connector MS3112E14-18P | | 19-Pin MS connector MS3112E14-19P | | | | |
|---|--------------------|---|--------------------|---|--------------------|--------------------------------|--------------------|--------------------|
|  <p>FRONT VIEW</p> <p style="font-size: small;">Straight Mating Connector, MS3116F14-5S</p> | |  <p>FRONT VIEW</p> <p style="font-size: small;">Straight Mating Connector, MS3116F14-18S</p> | |  <p>FRONT VIEW</p> <p style="font-size: small;">Straight Mating Connector, MS3116F14-19S</p> | | | | |
| Pin# | Function | Pin# | Function | Pin# | Function | | | |
| A | Phase R | A | Resolver | A | Resolver | Encoder with Commutation Track | | |
| B | Phase S | B | Brake + | B | | | Temperature Switch | Temperature Switch |
| C | Phase T | C | Brake - | C | Temperature Switch | Temperature Switch | | |
| D | Case Ground | C | Brake Shield | C | Resolver Shield | Encoder Shield | | |
| <p>Special mounting options are available. Please contact a Glentek Sales Engineer for detailed information.</p> | | D | Resolver Shield | D | N/C | Encoder +5VDC | | |
| | | E | Reference | E | Reference | E | N/C | Encoder Common |
| | | F | Since Ground | F | Cosine Ground | F | Cosine Ground | Channel A+ |
| | | G | Cosine Ground | H | Sine | G | Cosine + | Channel A- |
| | | H | Sine | J | N/C | H | Sine Ground | Channel B+ |
| | | J | N/C | K | N/C | J | Reference Ground | Channel B- |
| | | K | N/C | L | N/C | K | Reference | Channel Z+ |
| | | L | N/C | M | N/C | L | N/C | Channel Z- |
| | | M | N/C | N | Temperature Switch | M | N/C | Comm. Track S1+ |
| | | N | Temperature Switch | P | N/C | N | N/C | Comm. Track S1- |
| | | P | N/C | R | Reference Ground | P | N/C | Comm. Track S2+ |
| | | R | Reference Ground | S | Cosine | R | N/C | Comm. Track S2- |
| | | S | Cosine | T | N/C | S | N/C | Comm. Track S3+ |
| | | T | N/C | U | Temperature Switch | T | N/C | Comm. Track S3- |
| U | Temperature Switch | U | Temperature Switch | U | Brake + | Brake + | | |
| V | Brake - | V | Brake - | V | Brake - | Brake - | | |

GMBF4300 SERIES DIMENSIONS



| Model Number | Kg (lbs.) | C (max) | P (max) | Shaft | | | | Flange/Face | | | | Mounting Hole | | |
|-----------------------|----------------------|------------------------|------------------------|------------------------|-------------------------|------------------------------|------------------------------|--------------------------|-----------------------|-------------------------|-----------------------|--------------------------|------------------------|-------------|
| | | | | AH | U | KEY | KS | AK | BB | BD | BE | AJ | BF Dia. | Tap |
| GMBF4320-XXX-M | 4.1 (9.0) | 201.7 (7.9) | 108.0 (4.25) | 50.00 (1.97) | 19.00 (0.748) | M6 SQ. X 40 | 15.4 - 15.5 | 110.00 (4.331) | 3.00 (0.12) | 114.30 (4.50) | 14.7 (0.58) | 130.00 (5.118) | 9.19 (0.362) | THRU |
| GMBF4340-XXX-M | 6.3 (13.9) | 254.0 (10.0) | 108.0 (4.25) | 50.00 (1.97) | 19.00 (0.748) | M6 SQ. X 40 | 15.4 - 15.5 | 110.00 (4.331) | 3.00 (0.12) | 114.30 (4.50) | 14.7 (0.58) | 130.00 (5.118) | 9.19 (0.362) | THRU |
| GMBF4360-XXX-M | 8.5 (18.7) | 306.3 (12.1) | 108.0 (4.25) | 50.00 (1.97) | 19.00 (0.748) | M6 SQ. X 40 | 15.4 - 15.5 | 110.00 (4.331) | 3.00 (0.12) | 114.30 (4.50) | 14.7 (0.58) | 130.00 (5.118) | 9.19 (0.362) | THRU |

Note: Dimensions are in **mm** (inches)

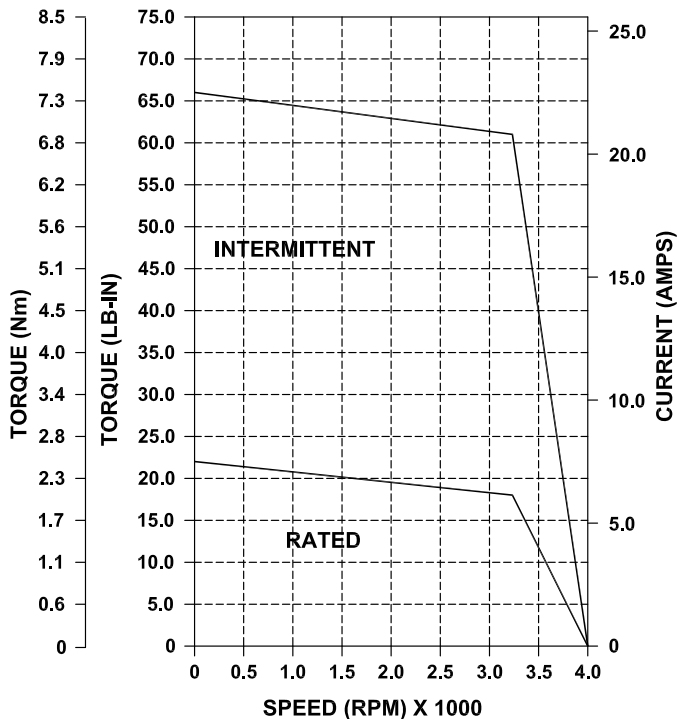
| Model Number | Lbs. (Kg) | C (max) | P (max) | Shaft | | | | Flange/Face | | | | Mounting Hole | | |
|-----------------------|----------------------|-------------------------|------------------------|-----------------------|--------------------------|----------------------------------|------------------------------|--------------------------|-----------------------|------------------------|------------------------|--------------------------|------------------------|------------------------------|
| | | | | AH | U | KEY | KS | AK | BB | BD | BE | AJ | BF Dia. | Tap |
| GMBF4320-XXX-E | 9.0 (4.1) | 7.94 (201.7) | 4.25 (108.0) | 1.88 (47.8) | 0.6250 (15.88) | .188 SQ. X 1.50 | .507 - .517 | 4.500 (114.30) | 0.10 (2.54) | 5.00 (127.0) | 0.60 (15.24) | 5.875 (149.23) | | 3/8-16 THRU |
| GMBF4340-XXX-E | 13.9 (6.3) | 10.00 (254.0) | 4.25 (108.0) | 1.88 (47.8) | 0.6250 (15.88) | .188 SQ. X 1.50 | .507 - .517 | 4.500 (114.30) | 0.10 (2.54) | 5.00 (127.0) | 0.60 (15.24) | 5.875 (149.23) | | 3/8-16 THRU |
| GMBF4360-XXX-E | 18.7 (8.5) | 12.06 (306.3) | 4.25 (108.0) | 1.88 (47.8) | 0.6250 (15.88) | .188 SQ. X 1.50 | .507 - .517 | 4.500 (114.30) | 0.10 (2.54) | 5.00 (127.0) | 0.60 (15.24) | 5.875 (149.23) | | 3/8-16 THRU |
| NEMA 42 | | | | 1.32 (33.5) | 0.6250 (15.88) | .188 SQ. X 1.00 | .507 - .517 | 2.188 (55.58) | 0.10 (2.54) | 4.50 (114.3) | 0.60 (15.24) | 4.950 (125.73) | 0.300 (7.62) | THRU |
| NEMA 56C | | | | 2.06 (52.3) | 0.6250 (15.88) | .188 SQ. X 1.50 | .507 - .517 | 4.500 (114.30) | 0.12 (3.05) | 6.50 (165.1) | 0.61 (15.49) | 5.875 (149.23) | | 3/8-16 THRU |

Note: Dimensions are in **inches** (mm)

| Connectors | 5-Pin | 18-Pin | 19-Pin | Strain Relief |
|--------------------|---------------|---------------|---------------|---------------|
| MS | 2.59 | 2.59 | 2.59 | 3.19 |
| inches (mm) | (65.7) | (65.7) | (65.7) | (81.1) |
| MS | 65.7 | 65.7 | 65.7 | 81.1 |
| mm (inches) | (2.59) | (2.59) | (2.59) | (3.19) |

GMBF4320-25 PERFORMANCE DATA

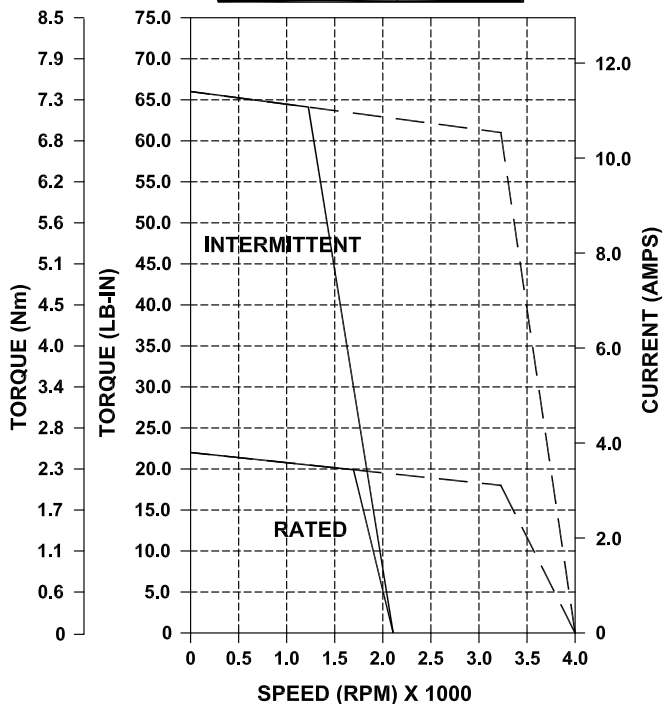
| | |
|--------------------|---------------|
| GMBF4320-25 | SYMBOL |
| 120 OR 230 VAC | — |



| | | |
|--------------------------------|------------------------------|----------|
| Power @ Rated Speed | HP | 0.89 |
| | KW | 0.67 |
| Speed, RPM | Max. | 4000 |
| | Rated | 3200 |
| Cont. Stall Rating | Lb-in | 22 |
| | Nm | 2.49 |
| | Amps | 7.5 |
| Peak Stall Rating | Lb-in | 66.0 |
| | Nm | 7.47 |
| | Amps | 22.5 |
| Torque Constant | Lb-in/A | 2.94 |
| | Nm/A | 0.33 |
| Back EMF | V/Krpm | 26 |
| Resistance | Ohms | 1.1 |
| Inductance | mH | 8.4 |
| Armature Inertia | Lb-in-sec² | 0.0032 |
| | Kg-m² | 0.000362 |

GMBF4320-50 PERFORMANCE DATA

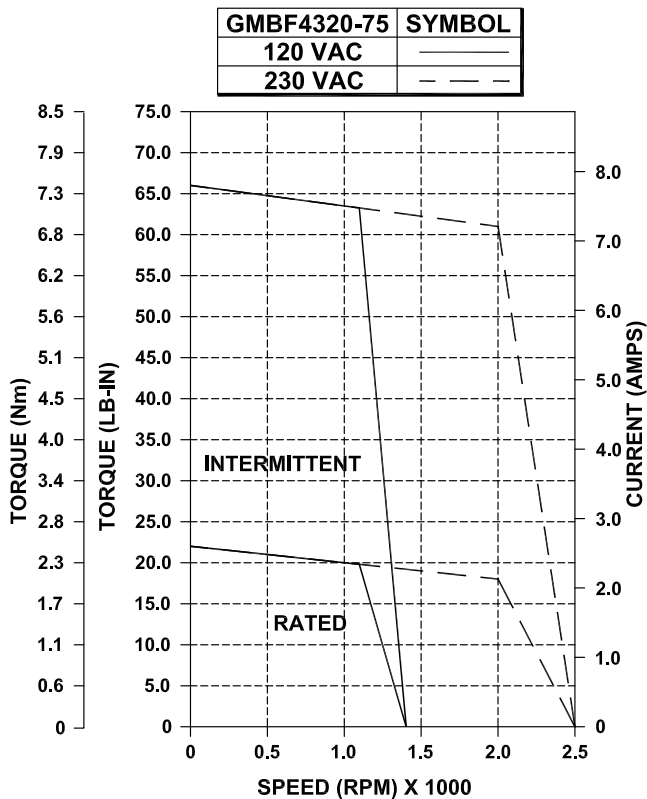
| | |
|--------------------|---------------|
| GMBF4320-50 | SYMBOL |
| 120 VAC | — |
| 230 VAC | - - - - |



| | | |
|--------------------------------|------------------------------|----------|
| Power @ Rated Speed | HP | 0.89 |
| | KW | 0.67 |
| Speed, RPM | Max. | 4000 |
| | Rated | 3200 |
| Cont. Stall Rating | Lb-in | 22 |
| | Nm | 2.49 |
| | Amps | 3.8 |
| Peak Stall Rating | Lb-in | 66.0 |
| | Nm | 7.47 |
| | Amps | 11.4 |
| Torque Constant | Lb-in/A | 5.76 |
| | Nm/A | 0.65 |
| Back EMF | V/Krpm | 51 |
| Resistance | Ohms | 4.7 |
| Inductance | mH | 14.7 |
| Armature Inertia | Lb-in-sec² | 0.0032 |
| | Kg-m² | 0.000362 |

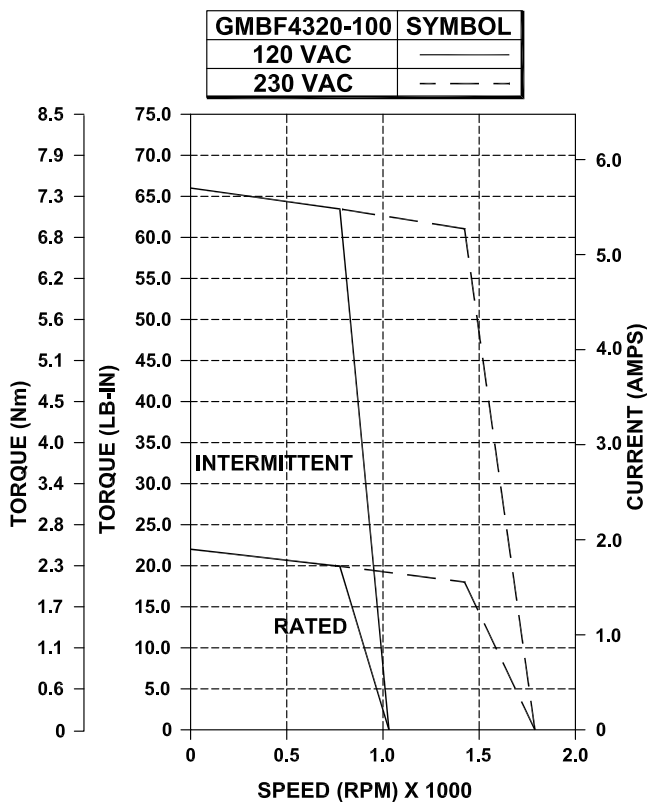
NOTE: All ratings based on a 25°C ambient temperature with the motor face mounted to a 14" x 14" x 3/4" aluminum heatsink.

GMBF4320-75 PERFORMANCE DATA



| | | |
|--------------------------------|------------------------|----------|
| Power @ Rated Speed | HP | 0.56 |
| | KW | 0.42 |
| Speed, RPM | Max. | 2500 |
| | Rated | 2000 |
| Cont. Stall Rating | Lb-in | 22 |
| | Nm | 2.49 |
| | Amps | 2.6 |
| Peak Stall Rating | Lb-in | 66.0 |
| | Nm | 7.47 |
| | Amps | 7.8 |
| Torque Constant | Lb-in/A | 8.47 |
| | Nm/A | 0.96 |
| Back EMF | V/Krpm | 75 |
| Resistance | Ohms | 11.0 |
| Inductance | mH | 39.5 |
| Armature Inertia | Lb-in-sec ² | 0.0032 |
| | Kg-m ² | 0.000362 |

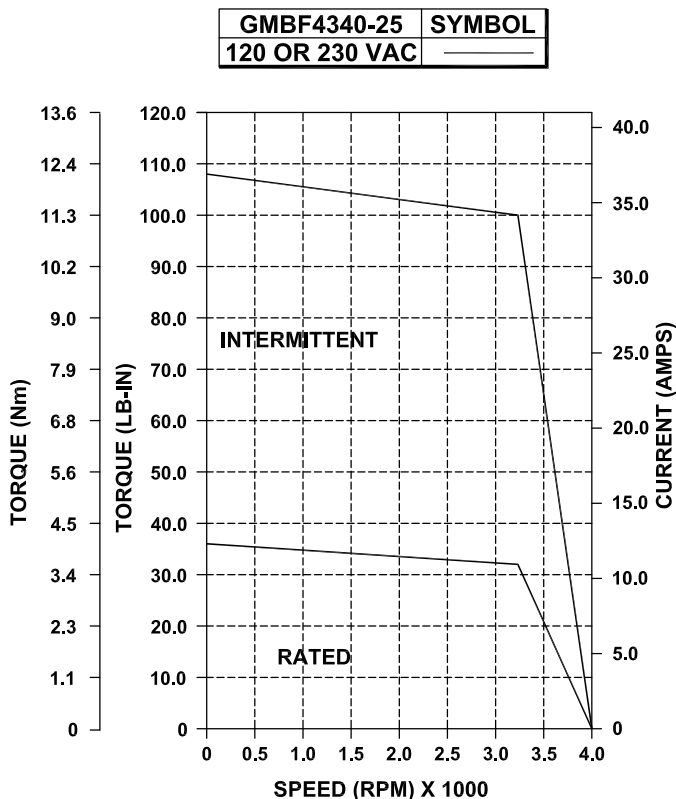
GMBF4320-100 PERFORMANCE DATA



| | | |
|--------------------------------|------------------------|----------|
| Power @ Rated Speed | HP | 0.39 |
| | KW | 0.29 |
| Speed, RPM | Max. | 1800 |
| | Rated | 1400 |
| Cont. Stall Rating | Lb-in | 22 |
| | Nm | 2.49 |
| | Amps | 1.9 |
| Peak Stall Rating | Lb-in | 66.0 |
| | Nm | 7.47 |
| | Amps | 5.7 |
| Torque Constant | Lb-in/A | 11.41 |
| | Nm/A | 1.29 |
| Back EMF | V/Krpm | 101 |
| Resistance | Ohms | 18.5 |
| Inductance | mH | 43.8 |
| Armature Inertia | Lb-in-sec ² | 0.0032 |
| | Kg-m ² | 0.000362 |

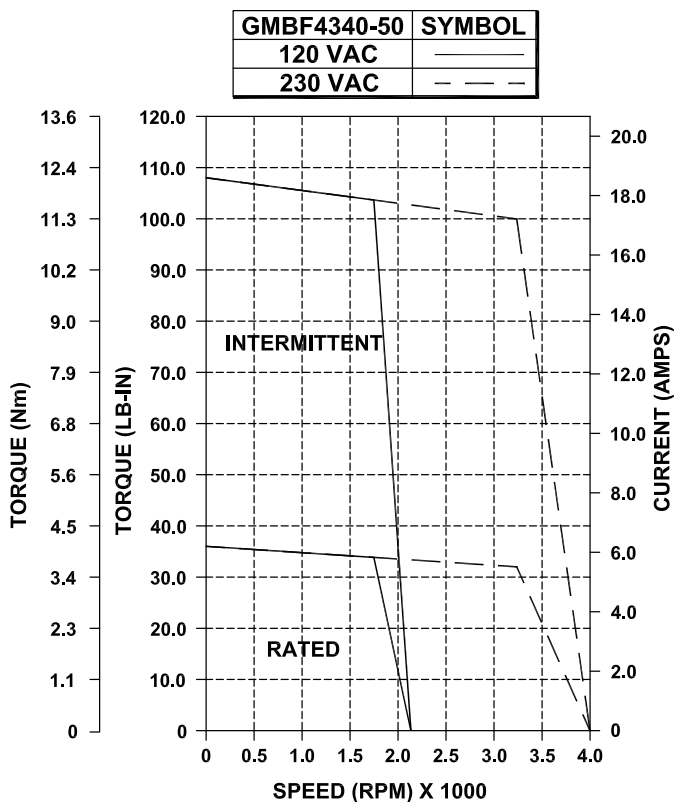
NOTE: All ratings based on a 25°C ambient temperature with the motor face mounted to a 14" x 14" x 3/4" aluminum heatsink.

GMBF4340-25 PERFORMANCE DATA



| | | |
|--------------------------------|------------------------------|----------|
| Power @ Rated Speed | HP | 1.46 |
| | KW | 1.09 |
| Speed, RPM | Max. | 4000 |
| | Rated | 3200 |
| Cont. Stall Rating | Lb-in | 36 |
| | Nm | 4.07 |
| | Amps | 12.3 |
| Peak Stall Rating | Lb-in | 108.0 |
| | Nm | 12.21 |
| | Amps | 36.9 |
| Torque Constant | Lb-in/A | 2.94 |
| | Nm/A | 0.33 |
| Back EMF | V/Krpm | 26 |
| Resistance | Ohms | 0.4 |
| Inductance | mH | 5.2 |
| Armature Inertia | Lb-in-sec² | 0.0059 |
| | Kg-m² | 0.000667 |

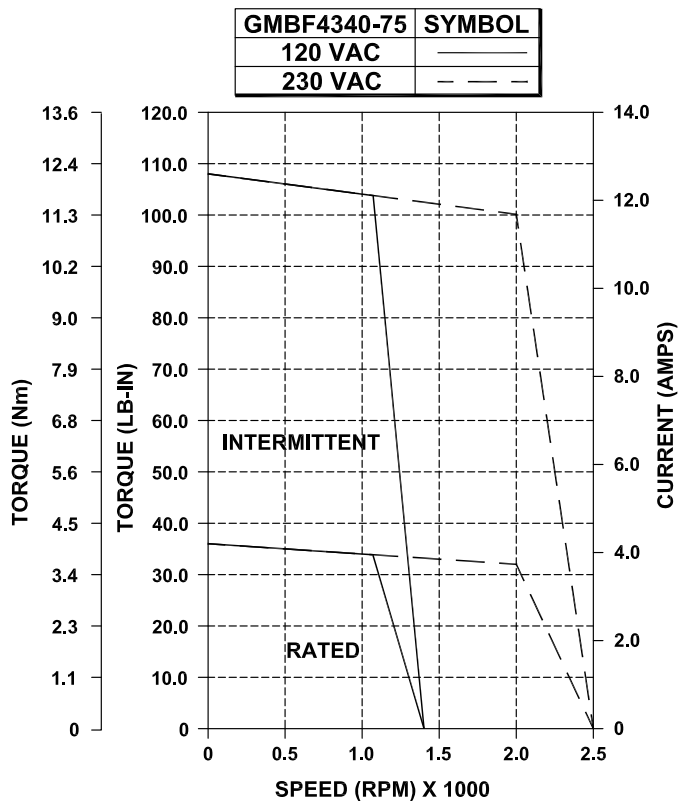
GMBF4340-50 PERFORMANCE DATA



| | | |
|--------------------------------|------------------------------|----------|
| Power @ Rated Speed | HP | 1.46 |
| | KW | 1.09 |
| Speed, RPM | Max. | 4000 |
| | Rated | 3200 |
| Cont. Stall Rating | Lb-in | 36 |
| | Nm | 4.07 |
| | Amps | 6.2 |
| Peak Stall Rating | Lb-in | 108.0 |
| | Nm | 12.21 |
| | Amps | 18.6 |
| Torque Constant | Lb-in/A | 5.76 |
| | Nm/A | 0.65 |
| Back EMF | V/Krpm | 51 |
| Resistance | Ohms | 2.1 |
| Inductance | mH | 14 |
| Armature Inertia | Lb-in-sec² | 0.0059 |
| | Kg-m² | 0.000667 |

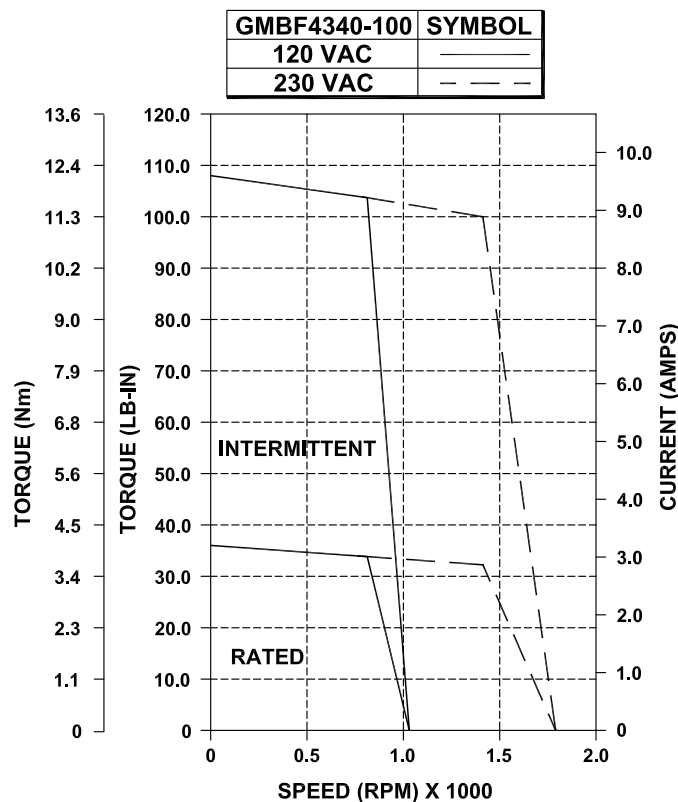
NOTE: All ratings based on a 25°C ambient temperature with the motor face mounted to a 14" x 14" x 3/4" aluminum heatsink.

GMBF4340-75 PERFORMANCE DATA



| | | |
|--------------------------------|------------------------|----------|
| Power @ Rated Speed | HP | 0.91 |
| | KW | 0.68 |
| Speed, RPM | Max. | 2500 |
| | Rated | 2000 |
| Cont. Stall Rating | Lb-in | 36 |
| | Nm | 4.07 |
| | Amps | 4.2 |
| Peak Stall Rating | Lb-in | 108.0 |
| | Nm | 12.21 |
| | Amps | 12.6 |
| Torque Constant | Lb-in/A | 8.47 |
| | Nm/A | 0.96 |
| Back EMF | V/Krpm | 75 |
| Resistance | Ohms | 4.1 |
| Inductance | mH | 36.3 |
| Armature Inertia | Lb-in-sec ² | 0.0059 |
| | Kg-m ² | 0.000667 |

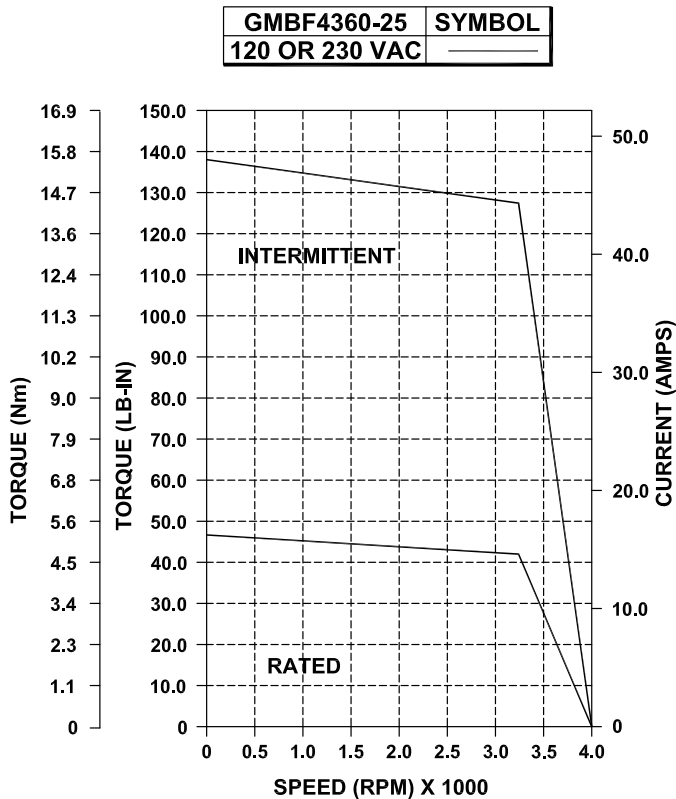
GMBF4340-100 PERFORMANCE DATA



| | | |
|--------------------------------|------------------------|----------|
| Power @ Rated Speed | HP | 0.64 |
| | KW | 0.48 |
| Speed, RPM | Max. | 1800 |
| | Rated | 1400 |
| Cont. Stall Rating | Lb-in | 36 |
| | Nm | 4.07 |
| | Amps | 3.2 |
| Peak Stall Rating | Lb-in | 108.0 |
| | Nm | 12.21 |
| | Amps | 9.6 |
| Torque Constant | Lb-in/A | 11.41 |
| | Nm/A | 1.29 |
| Back EMF | V/Krpm | 101 |
| Resistance | Ohms | 7.0 |
| Inductance | mH | 41.2 |
| Armature Inertia | Lb-in-sec ² | 0.0059 |
| | Kg-m ² | 0.000667 |

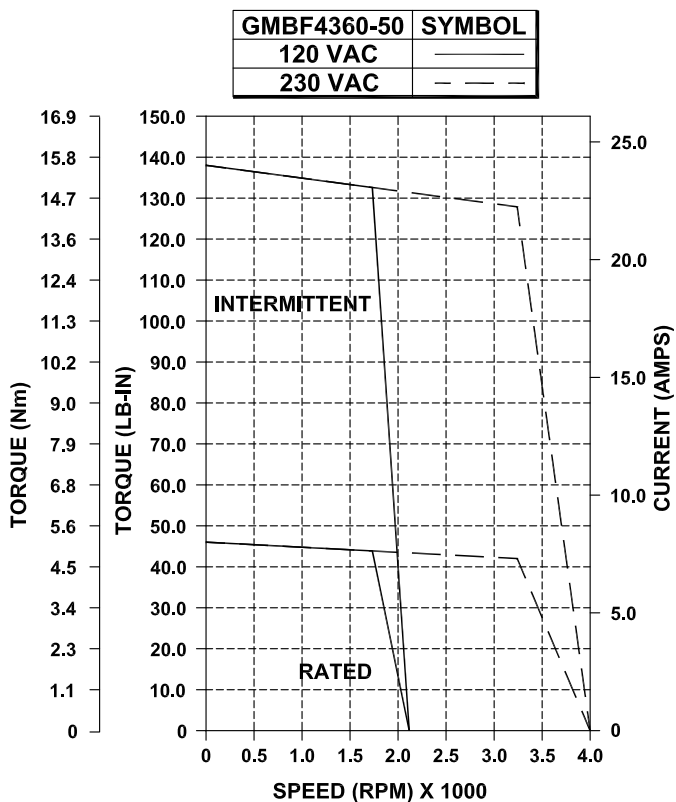
NOTE: All ratings based on a 25°C ambient temperature with the motor face mounted to a 14" x 14" x 3/4" aluminum heatsink.

GMBF4360-25 PERFORMANCE DATA



| | | |
|----------------------------|------------------------------|----------|
| Power @ Rated Speed | HP | 1.87 |
| | KW | 1.39 |
| Speed, RPM | Max. | 4000 |
| | Rated | 3200 |
| Cont. Stall Rating | Lb-in | 46 |
| | Nm | 5.20 |
| | Amps | 16.1 |
| Peak Stall Rating | Lb-in | 138.0 |
| | Nm | 15.60 |
| | Amps | 48.3 |
| Torque Constant | Lb-in/A | 2.94 |
| | Nm/A | 0.33 |
| Back EMF | V/Krpm | 25 |
| Resistance | Ohms | 0.1 |
| Inductance | mH | 3.6 |
| Armature Inertia | Lb-in-sec² | 0.0086 |
| | Kg-m² | 0.000972 |

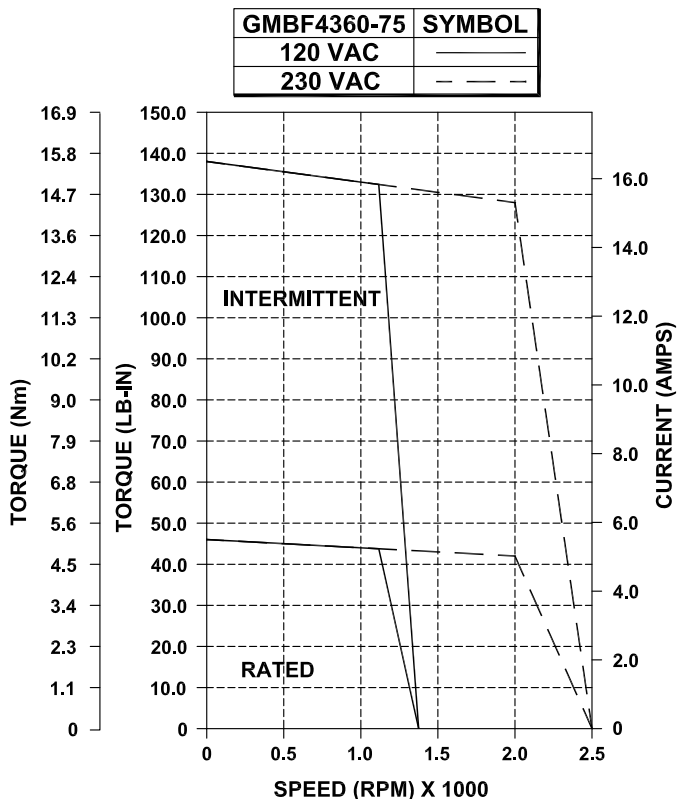
GMBF4360-50 PERFORMANCE DATA



| | | |
|----------------------------|------------------------------|----------|
| Power @ Rated Speed | HP | 1.87 |
| | KW | 1.39 |
| Speed, RPM | Max. | 4000 |
| | Rated | 3200 |
| Cont. Stall Rating | Lb-in | 46 |
| | Nm | 5.20 |
| | Amps | 8.0 |
| Peak Stall Rating | Lb-in | 138.0 |
| | Nm | 15.60 |
| | Amps | 24.0 |
| Torque Constant | Lb-in/A | 5.76 |
| | Nm/A | 0.65 |
| Back EMF | V/Krpm | 51 |
| Resistance | Ohms | 1.0 |
| Inductance | mH | 11.9 |
| Armature Inertia | Lb-in-sec² | 0.0086 |
| | Kg-m² | 0.000972 |

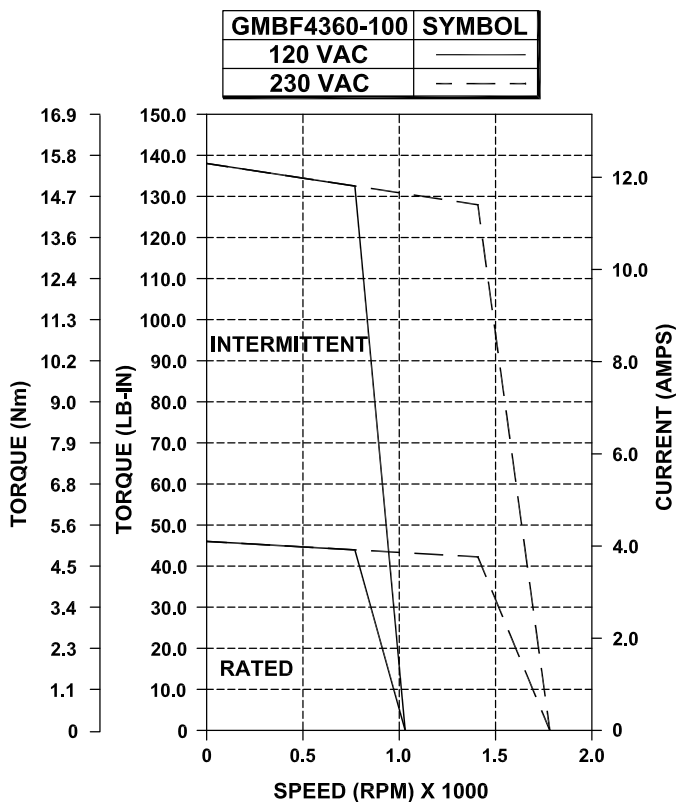
NOTE: All ratings based on a 25°C ambient temperature with the motor face mounted to a 14" x 14" x 3/4" aluminum heatsink.

GMBF4360-75 PERFORMANCE DATA



| | | |
|--------------------------------|------------------------------|----------|
| Power @ Rated Speed | HP | 1.17 |
| | KW | 0.87 |
| Speed, RPM | Max. | 2500 |
| | Rated | 2000 |
| Cont. Stall Rating | Lb-in | 46 |
| | Nm | 5.20 |
| | Amps | 5.5 |
| Peak Stall Rating | Lb-in | 138.0 |
| | Nm | 15.60 |
| | Amps | 16.5 |
| Torque Constant | Lb-in/A | 8.36 |
| | Nm/A | 0.94 |
| Back EMF | V/Krpm | 74 |
| Resistance | Ohms | 2.3 |
| Inductance | mH | 19.8 |
| Armature Inertia | Lb-in-sec² | 0.0086 |
| | Kg-m² | 0.000972 |

GMBF4360-100 PERFORMANCE DATA



| | | |
|--------------------------------|------------------------------|----------|
| Power @ Rated Speed | HP | 0.82 |
| | KW | 0.61 |
| Speed, RPM | Max. | 1800 |
| | Rated | 1400 |
| Cont. Stall Rating | Lb-in | 46 |
| | Nm | 5.20 |
| | Amps | 4.1 |
| Peak Stall Rating | Lb-in | 138.0 |
| | Nm | 15.60 |
| | Amps | 12.3 |
| Torque Constant | Lb-in/A | 11.30 |
| | Nm/A | 1.28 |
| Back EMF | V/Krpm | 100 |
| Resistance | Ohms | 3.9 |
| Inductance | mH | 28.7 |
| Armature Inertia | Lb-in-sec² | 0.0086 |
| | Kg-m² | 0.000972 |

NOTE: All ratings based on a 25°C ambient temperature with the motor face mounted to a 14" x 14" x 3/4" aluminum heatsink.

GMBF4300 SERIES MODEL NUMBERING

This section explains the model numbering system for Glentek's GMBF4300 Series Brushless Servo Motors. The model numbering system is designed so that you, our customer, will be able to quickly and accurately create the model number for the drive that best suits your requirements. Please complete the drive configuration code you require using the information on this page. After completing your model number, please contact a Glentek Sales Engineer to confirm that the model number you have created is correct.

GMBF 4320 - 25 - E - 00200100 -

- Magnet Type** F = Ferrite magnets
- Frame Size** 43 = 4.3" (6 pole) Motor
- Stack Length** 20 = 2.0 inch stack
- Back EMF Constant** 25 = 25 V/Krpm
- Dimensions** E = English
- Brake option** 0 = No brake installed
- Commutation Device** 0 = Brushless Resolver
- Number of Motor poles** 2 = 6 Pole
- Flange Type** 0 = Standard
- Shaft Type** 0 = Standard
- Lead Termination** 1 = Two MS Connectors
- Wiring Diagram (MS connector lead termination only)** 0 = Glentek Standard
- Encoder Option** 0 = No encoder installed
- Factory Assigned Option** leave blank

GMB F - - - - - - - - - - -

| Magnet Type | |
|-------------|-----------------|
| F | Ferrite magnets |

| Frame Size | |
|------------|------------|
| 43 | 4.3" Motor |

| Stack Length | | | |
|--------------|------------|-----------|------------|
| 20 | 2.0" Stack | 60 | 6.0" Stack |
| 40 | 4.0" Stack | | |

| Back EMF Constant | | | | | |
|---|-----------|------------|-----------|------------|-----------|
| 2.0" Stack | | 4.0" Stack | | 6.0" Stack | |
| 25 | 25V/Krpm | 25 | 25V/Krpm | 25 | 25V/Krpm |
| 50 | 50V/Krpm | 50 | 50V/Krpm | 50 | 50V/Krpm |
| 75 | 75V/Krpm | 75 | 75V/Krpm | 75 | 75V/Krpm |
| 100 | 100V/Krpm | 100 | 100V/Krpm | 100 | 100V/Krpm |
| For custom Back EMF, Please Contact Glentek | | | | | |

| Dimensions | | | | | |
|------------|---------|----------|--------|----------|------|
| E | English | M | Metric | N | NEMA |

| Brake Option | | | | | |
|--------------|--------------------|----------|--------------|----------|---------|
| 0 | No brake installed | 1 | 24 VDC Brake | 2 | Special |

| Commutation Device | | | | | |
|--------------------|---------------------|----------|---------------------------------|----------|------------------|
| 0 | Brushless Resolver | 2 | Encoder with commutation tracks | 4 | Absolute Encoder |
| 1 | Hall Effect Sensors | 3 | Special | 5 | Sin/Cos Encoder |

| Number of Motor Poles | |
|-----------------------|--------|
| 2 | 6 pole |

| Flange Type | | | | | |
|-------------|----------|----------|---------|----------|----------|
| 0 | Standard | 1 | Special | 4 | NEMA 42 |
| | | | | 5 | NEMA 56C |

| Shaft Type | | | | | |
|------------|----------|----------|---------|----------|----------|
| 0 | Standard | 1 | Special | 4 | NEMA 42 |
| | | | | 5 | NEMA 56C |

| Lead Termination | | | | | |
|------------------|-------------------------------|----------|--|--|--|
| 0 | One MS Connector | 3 | Special | | |
| 1 | Two MS Connectors | 4 | Liquid tight strain relief with flying leads | | |
| 2 | NPT(s) only with flying leads | 5 | Euro-style connectors | | |

| Wiring Diagram (MS connector lead termination only) | | | | | | |
|---|------------------|--|--|--|----------|---------|
| 0 | Glentek Standard | | | | 1 | Special |

| Encoder Option | | | | | |
|----------------|----------------------|----------|----------|----------|-----------|
| 0 | No encoder installed | 4 | 1250 PPR | 8 | 8192 PPR |
| 1 | 500PPR | 5 | 2000 PPR | 9 | 5000 PPR |
| 2 | 1000PPR | 6 | 2500 PPR | A | 512 PPR |
| 3 | 1024PPR | 7 | Special | B | 2048 PPR |
| | | | | C | 4096 PPR |
| | | | | D | 3600 PPR |
| | | | | E | 18000 PPR |

Factory Assigned Option

A numerical code will be assigned by Glentek to motors whose specifications vary from the standard configuration