

### B Series Features

- 17, 23, 34 and 42 frame brushless servo motors
- Optimized for use with IDC's B8000 servo controls
- High Torque-to-inertia ratio for quick acceleration
- Rugged MS-style connectors, 12-ft quick-disconnect cables included

### BN Series Features

- 23 and 34 frame brushless servo motors
- True NEMA dimensions (including motor shafts)
- Smooth operation/low cogging
- 12-ft jacketed cables included



### Brushless Motor Comparison

	Continuous Stall Torque oz-in [N-m]	Peak Torque oz-in [N-m]	Max Speed @ 115 VAC rps [rpm]	Max Speed @ 230 VAC rps [rpm]	For Complete Motor Specs, see:
B12	24 [0.17]	63 [0.44]	100 [6000]	NA	H-53
B23	160 [1.13]	580 [4.09]	63 [3780]	100 [6000]	H-54
B23H	160 [1.13]	480 [3.39]	76 [4560]	100 [6000]	H-55
B32	493 [3.48]	853 [6.02]	37 [2220]	74 [4440]	H-56
B33	624 [4.41]	1792 [12.65]	20 [1200]	41 [2460]	H-57
B40	488 [3.45]	1328 [9.38]	27 [1620]	55 [3300]	H-58
B41	930 [6.57]	1616 [11.41]	20 [1200]	39 [2340]	H-59
B42	1328 [9.38]	4032 [28.47]	9 [540]	18 [1080]	H-60
BN21	22 [0.15]	70 [0.49]	100 [6000]	N/A	H-49
BN23	51 [0.36]	170 [1.2]	100 [6000]	N/A	H-50
BN31	108 [0.76]	320 [2.26]	79 [4750]	N/A	H-51
BN32	191 [1.35]	560 [3.96]	61 [3700]	N/A	H-52



## How To Order

### Motor Models

### Description

### Options

### Description

B12	B12 motor w/ 12-ft quick-disconnect cable
B23	B23 motor w/ 12-ft quick-disconnect cable
B23H	B23H motor w/ 12-ft quick-disconnect cable
B32	B32 motor w/ 12-ft quick-disconnect cable
B33	B33 motor w/ 12-ft quick-disconnect cable
B40	B40 motor w/ 12-ft quick-disconnect cable
B41	B41 motor w/ 12-ft quick-disconnect cable
B42	B42 motor w/ 12-ft quick-disconnect cable

-B	24 VDC motor brake
-C25	25-foot cable
-C50	50-foot cable
-C100	100-foot cable

### Motor Models

### Description

BN21	BN21 motor with 12-foot jacketed cable
BN23	BN23 motor with 12-foot jacketed cable
BN31	BN31 motor with 12-foot jacketed cable
BN32	BN32 motor with 12-foot jacketed cable

**Note:** Currently, no options are available for the BN motors.

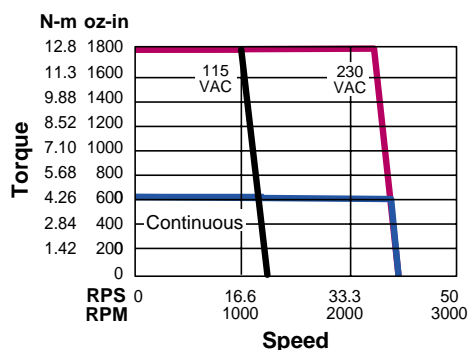
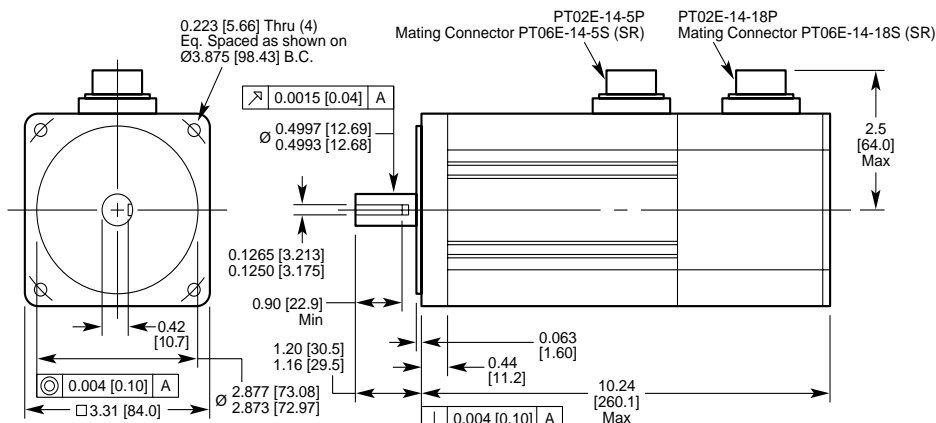


To confirm your selection,  
review the checklist on page H-6.





- Performance using B8000 Series controls
- IDC recommends at least a 10% torque safety margin and taking winding tolerances into account when applying servo motors.
- See How to Order on page H-48.
- Brake option adds 1.5 in [38 mm] to motor length



- Continuous duty region (230/115 VAC) [max RMS torque over any 10-minute interval]
- Intermittent duty region
- 115 VAC speed limit

## System Ratings with B8000 Controls

## Torque

Continuous Stall Torque oz-in [N-m] 624 [4.40]

Peak oz-in [N-m] 1792 [12.65]

Peak Shaft Power  
@ 230 VAC HP [W] 3.0 [2220]

## Torque Sensitivity

 $K_{T(p-p)}$  oz-in/A [N-m/A]\* 179.2 [1.265]Back EMF, KV  $V_{p-p}/krpm^*$  132.5\*  $\pm 10\%$  tolerance

## Motor Data

Rotor Inertia oz-in-sec<sup>2</sup> [kg-m]<sup>2</sup> 0.023 [1.60 x 10<sup>-4</sup>]

Weight lb [kg] 14.6 [6.6]

Axial Shaft Loading lb [kg] 25 [11.3]

Radial shaft loading lb [kg]  
@ 1 in [25 mm] 40 [18.1]

Incremental encoder 2000 line, 8000 counts/rev

## Applying Gearmotors\*

- See page I-1 for IDC gearmotor information
- See page I-1 for how to determine gearmotor performance
- The servo drive should be current limited if the continuous or intermittent torque of the motor exceeds the gearhead torque ratings.

## Performance Planetary Gearmotors

	In-line	Right-angle
<b>Gear Ratio</b> in [mm]	L	A x B
3 to 10	14.43 [366.5]	5.20 x 19.40 [132.1 x 492.8]
16 to 100	15.55 [395.0]	5.20 x 20.53 [132.1 x 521.5]
160 to 700	16.78 [426.2]	Above 100:1, not available

## Value Planetary Gearmotors

	In-line	Right-angle
<b>Gear Ratio</b> in [mm]	L	A x B
3 to 10	14.8 [375.9]	5.20 x 19.77 [132.1 x 502.2]
16 to 100	16.06 [407.9]	5.20 x 21.0 [132.1 x 534.4]