

Overview

B Series Features

• 17, 23, 34 and 42 frame brushless servo motors

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





	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 B23 B23H B32 B33 B40 B41	B12 motor w/ 12-ft quick-disconnect cable B23 motor w/ 12-ft quick-disconnect cable B23H motor w/ 12-ft quick-disconnect cable B32 motor w/ 12-ft quick-disconnect cable B33 motor w/ 12-ft quick-disconnect cable B40 motor w/ 12-ft quick-disconnect cable B41 motor w/ 12-ft quick-disconnect cable	-B -C25 -C50 -C100	24 VDC motor brake 25-foot cable 50-foot cable 100-foot cable
BN21 BN23 BN31 BN32	B42 motor w/ 12-ft quick-disconnect cable Description BN21 motor with 12-foot jacketed cable BN23 motor with 12-foot jacketed cable BN31 motor with 12-foot jacketed cable BN32 motor with 12-foot jacketed cable		Note: Currently, no options are available for the BN motors.

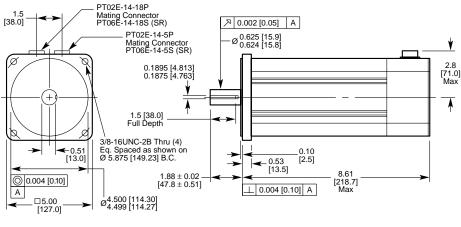


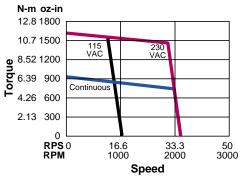
To confirm your selection, review the checklist on page H-6.





- 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 2.0 in [51 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

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.

System Ratings with B8000 Controls

Torque	
Continuous Stall Torque oz-in [N-m]	930 [6.57]
Peak oz-in [N-m]	1616 [11.41]
Peak Shaft Power	
@ 230 VAC HP [W]	2.8 [2079]
Torque Sensitivity	
$K_{T(p-p)}$ oz-in/A [N-m/A]*	186.5 [1.32]
Back EMF, KV V _{p-p} /kRPM*	137.9
* + 100/ +-l	

^{* ±10%} tolerance

Motor Data

Rotor Inertia oz-in-sec² [kg-m]²	$0.0425 [3.0 \times 10^{-4}]$	
Weight lb [kg]	20.0 [9.1]	
Axial Shaft Loading lb [kg]	50 [55.7]	
Radial shaft loading lb [kg]		
@ 1 in [25 mm]	100 [45.4]	
Incremental encoder	2000 line, 8000 counts/rev	

Performance Planetary Gearmotors

In-line		Right-angle
Gear Ratio in [mm]	L	A x B
3 to 10	13.77 [349.8]	5.95 x 20.00 [151.1 x 508.0]
16 to 100	15.4 [391.2]	5.95 x 21.63 [151.1 x 549.4]
160 to 700	16.55 [420.4]	Above 100:1, not available

Value Planetary Gearmotors

In-line		Right-angle
Gear Ratio in [mm]	L	AxB
3 to 10	13.81 [350.8]	5.95 x 20.46 [151.1 x 519.7]
16 to 100	15.41 [391.4]	5.95 x 22.06 [151.1 x 560.3]

