ARTISAN®
TECHNOLOGY GROUP

Your **definitive** source for quality pre-owned equipment.

Artisan Technology Group
(217) 352-9330 | sales@artisantg.com | artisantg.com

Full-service, independent repair center
with experienced engineers and technicians on staff.

We buy your excess, underutilized, and idle equipment
along with credit for buybacks and trade-ins.

Custom engineering
so your equipment works exactly as you specify.

- Critical and expedited services
- In stock / Ready-to-ship
- Leasing / Rentals / Demos
- ITAR-certified secure asset solutions

Expert team | Trust guarantee | 100% satisfaction

All trademarks, brand names, and brands appearing herein are the property of their respective owners.

Find the *ABB / Baldor / Reliance BSM90N-375AA* at our website: *Click HERE*

AC servo motors

BSM N-Series brushless servo motors
Low inertia - high dynamics

The BSM N series provides the lowest inertia and a high torque designed for excellent performance response. This series has a rugged, durable industrial design and is constructed with Neodymium Iron Boron magnetics. It is capable of peak torques equal to four times continuous, which can be used to provide high acceleration torques in applications. ABB BSM motors are available with a wide variety of feedback devices to suit application needs. IEC and NEMA configurations are available.

Variety of feedback options:
— Resolver
— Incremental/Absolute Encoders
— Hall sensors

Precision wrapped rotor
High acceleration capability - to move faster, to get the job done faster. High torque to inertia ratio - enables your machine to produce more parts per hour.

Moisture/Dust resistant o-rings
Environmentally rugged - for reliability and long life.

High temperature operation
Over temperature protection thermal switch. Heavy duty continuous operation - for dependable performance.

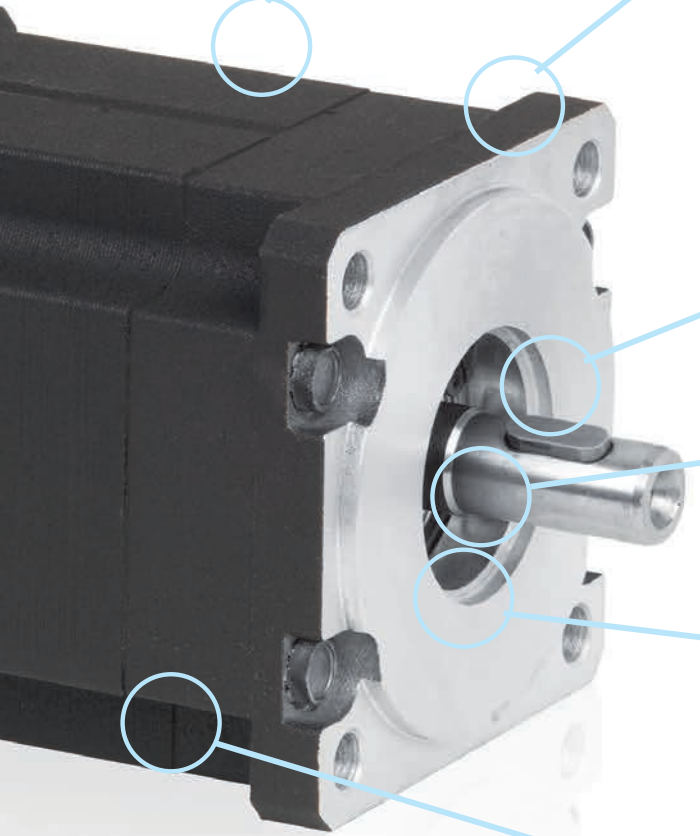


Cooling kits available on some models - to obtain more performance and extend torque range.
Optional holding brakes available.
Typical BSM63/80 series shown

Motor family	Size		Torque range	
	mm	in	lb-in	Nm
BSM50	55	2.1	3.9-12	0.45-1.36
BSM63	67	2.6	6.8-18.5	0.7-2.09
BSM80	89	3.5	14.6-40	1.6-4.5
BSM90	120	4.7	53-117	6-13.3
BSM100	146	5.7	123-354	14-40

Rugged construction
— Sealed to IP54
— With shaft oil seal sealed to IP55
— 95% RH Non-Condensing
— 1000 m (3300 Feet) without derate

Popular shaft/mounting dimensions
— Stock and custom
— IEC and NEMA



Proven reliable bearings
4 times longer bearing life.

Optional shaft seal

Captured front bearing eliminates axial movement

High voltage insulation
Windings potted for additional voltage protection - for improved reliability and improved heat transfer.

AC servo motors
BSM N-series



The BSM N-series provides applications with low inertia to attain the highest acceleration capability - to position faster - to obtain the highest machine throughput. Our motors are hard at work, increasing productivity, improving part quality, providing precision and reducing cost in many applications. This series provides continuous stall torques ranging from 3.9 lb-in (0.4 Nm) to 354 lb-in (40 Nm). Peak torques are four times continuous. This series has the lowest inertia to provide the maximum torque per package size.

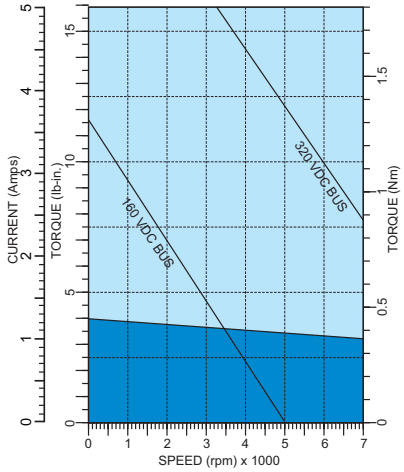
AC servo motors - N-series

Continuous stall torque		Continuous stall amps	Speed RPM @ 320V[1]	Motor number[2]	Motor inertia	
lb-in	Nm				lb-in-s^2	Kg - cm^2
3.9	0.45	1.49	7500	BSM50N-133AX	0.00006	0.0677
		0.79	4000	BSM50N-175AX		
6.8	0.77	2.0	9000	BSM63N-133AX	0.00018	0.2031
		1.8	6000	BSM63N-150AX		
		1.0	4000	BSM63N-175AX		
7.9	0.9	2.8	7500	BSM50N-233AX	0.00011	0.125
		1.4	3750	BSM50N-275AX		
12	1.36	4.5	7500	BSM50N-333AX	0.00016	0.180
		2.3	4000	BSM50N-375AX		
13	1.47	3.9	9000	BSM63N-233AX	0.00034	0.384
		2.8	6000	BSM63N-250AX		
		1.9	4000	BSM63N-275AX		
14.6	1.65	4.7	9000	BSM80N-133AX	0.00091	1.02
		3.0	6000	BSM80N-150AX		
		2.1	4000	BSM80N-175AX		
18.5	2.0	6.0	9000	BSM63N-333AX	0.0005	0.564
		4.0	6000	BSM63N-350AX		
		2.8	4000	BSM63N-375AX		
28.3	3.2	8.7	9000	BSM80N-233AX	0.00162	1.82
		5.6	6000	BSM80N-250AX		
		3.9	4000	BSM80N-275AX		
40	4.52	12.9	9000	BSM80N-333AX	0.00223	2.519
		8.6	6000	BSM80N-350AX		
		5.5	4000	BSM80N-375AX		
53	6	7.8	4000	BSM90N-175AX	0.0030	3.389
		4.0	2000	BSM90N-1150AX		
		2.6	1200	BSM90N-1250AX		
88	10	11.6	4000	BSM90N-275AX	0.0056	6.327
		6.1	2000	BSM90N-2150AX		
		4.1	1200	BSM90N-2250AX		
117	13.3	19	4000	BSM90N-375AX	0.0082	9.264
		8.6	2000	BSM90N-3150AX		
		5.5	1200	BSM90N-3250AX		
123	14	9.4	2000	BSM100N-1150AX	0.0120	13.558
		5.9	1200	BSM100N-1250AX		
203	23	15.5	2000	BSM100N-2150AX	0.0196	22.145
		9.9	1200	BSM100N-2250AX		
300	34	21.0	2000	BSM100N-3150AX	0.0273	30.844
		14.7	1200	BSM100N-3250AX		
354	40	26.9	2000	BSM100N-4150AX	0.0349	39.431
		16.8	1200	BSM100N-4250AX		

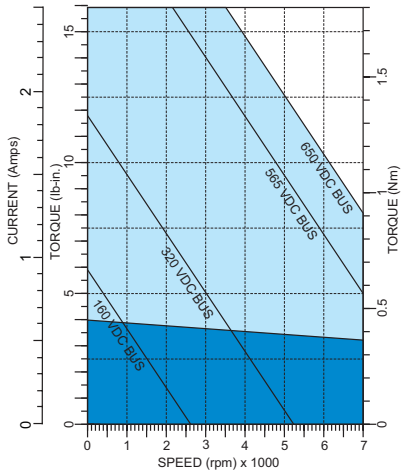
Note: [1] Nominal rpm shown at 320 Vdc bus for convenience. For 640 Vdc double the speed. Reference motor table to verify that max speed is not exceeded.
[2] For X callout, see motor ID matrix under engineering information.

AC servo motors
BSM N-series performance curves

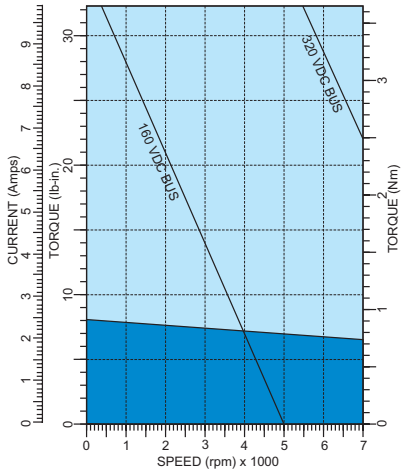
BSM50N-133



BSM50N-175



BSM50N-233



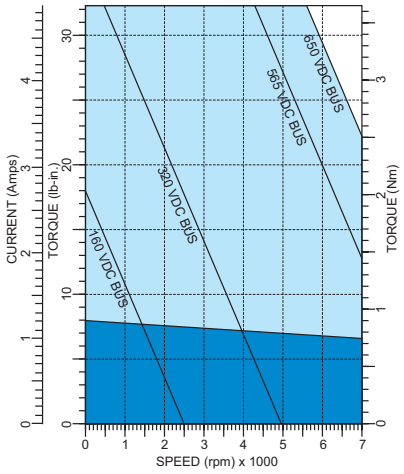
Model number		BSM50N-133	BSM50N-175	BSM50N-233
General				
Continuous stall torque	lb-in	3.9	3.9	7.9
	Nm	0.45	0.45	0.9
Continuous current	amps	1.49	0.79	2.87
Peak torque	lb-in	15.9	15.9	32.3
	Nm	1.8	1.8	3.65
Peak current	amps	5	2.52	9.91
Thermal resistance	°C/watt	3	3	2.6
Thermal time constant	Min	7	7	11
Mechanical time constant	msec	0.6	0.6	0.38
Electrical time constant	msec	1.3	1.3	2.1
Rated speed @ 300 volts	rpm	7500	4000	7500
Rated speed @ 160 volts	rpm	4000	1000	4000
Electrical				
Torque constant	lb-in/amp	3.14	6.31	3.25
	Nm/amp	0.35	0.71	0.36
Voltage constant	Vpk/krpm	30.37	60.94	32
	Vrms/krpm	21.48	43.1	22.7
Resistance	ohms	11.95	47.5	4
Inductance	mH	16.5	63.5	8.3
Mechanical				
Inertia	lb-in-s^2	0.00006	0.00006	0.00011
	Kg-cm^2	0.0677	0.0677	0.124
Maximum speed (1)	rpm	10,000	10,000	10,000
Number of motor poles	—	4	4	4
Weight	lbs/Kg	2.4/1.1	2.4/1.1	3.4/1.6

(1) Maximum speed can be limited by bus volts and feedback types.

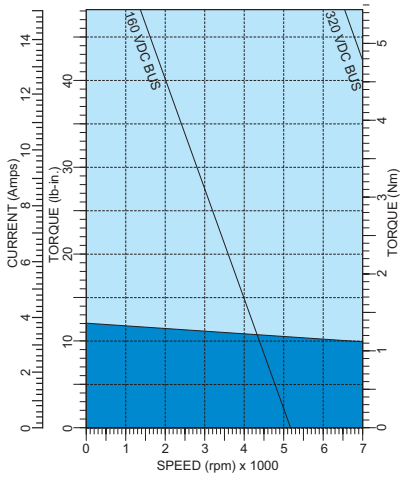
AC servo motors
BSM N-series performance curves

1

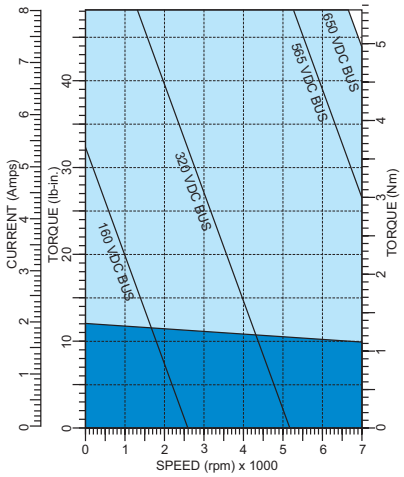
BSM50N-275



BSM50N-333



BSM50N-375

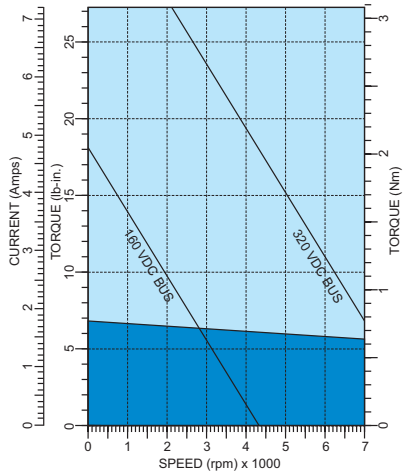


Model number		BSM50N-275	BSM50N-333	BSM50N-375
General				
Continuous stall torque	lb-in	7.9	12	12
	Nm	0.9	1.36	1.36
Continuous current	amps	1.42	4.56	2.38
Peak torque	lb-in	32	48.15	48.15
	Nm	3.65	5.44	5.44
Peak current	amps	4.87	15	8
Thermal resistance	°C/watt	2.6	1.8	1.8
Thermal time constant	Min	11	15	15
Mechanical time constant	msec	0.35	0.29	0.3
Electrical time constant	msec	2.1	1.9	1.8
Rated speed @ 300 volts	rpm	4000	7500	4000
Rated speed @ 160 volts	rpm	2000	4000	1500
Electrical				
Torque constant	lb-in/amp	6.66	3.2	6.4
	Nm/amp	0.75	0.36	0.72
Voltage constant	Vpk/krpm	64.3	30.9	61.9
	Vrms/krpm	45.5	21.89	43.8
Resistance	ohms	16	2.1	8.5
Inductance	mH	33.2	4.1	16
Mechanical				
Inertia	lb-in-s^2	0.00011	0.00016	0.00016
	Kg-cm^2	0.124	0.18	0.18
Maximum speed (1)	rpm	10,000	10,000	10,000
Number of motor poles	—	4	4	4
Weight	lbs/Kg	3.4/1.6	4.4/2	4.4/2

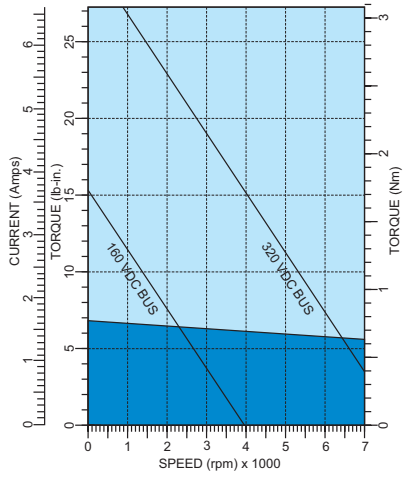
(1) Maximum speed can be limited by bus volts and feedback types.

AC servo motors
BSM N-series performance curves

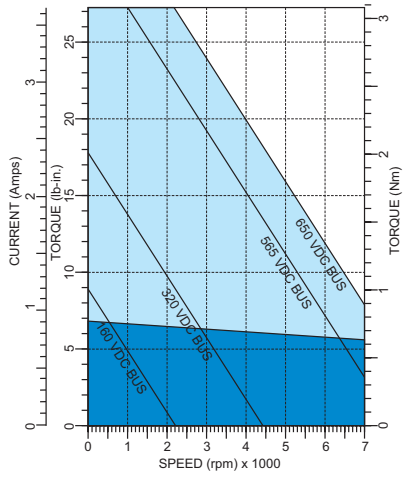
BSM63N-133



BSM63N-150



BSM63N-175



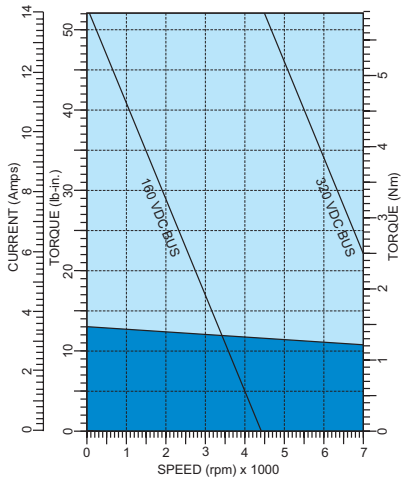
Model number		BSM63N-133	BSM63N-150	BSM63N-175
General				
Continuous stall torque	lb-in	6.8	6.8	6.8
	Nm	0.77	0.77	0.77
Continuous current	amps	2.01	1.83	1.01
Peak torque	lb-in	27.25	27.25	27.25
	Nm	3.08	3.08	3.08
Peak current	amps	7.24	6.59	3.64
Thermal resistance	°C/watt	2.2	2.2	2.2
Thermal time constant	Min	13	1.3	13
Mechanical time constant	msec	1	1.1	1
Electrical time constant	msec	1.5	2	2.1
Rated speed @ 300 volts	rpm	9000	6000	4000
Rated speed @ 160 volts	rpm	4000	3200	2130
Electrical				
Torque constant	lb-in/amp	3.75	4.12	7.46
	Nm/amp	0.425	0.467	0.844
Voltage constant	Vpk/krpm	36.3	39.9	72.1
	Vrms/krpm	25.7	28.2	51
Resistance	ohms	9.4	12.1	37.4
Inductance	mH	12.77	17.2	53.63
Mechanical				
Inertia	lb-in-s^2	0.00018	0.00018	0.00018
	Kg-cm^2	0.2031	0.2031	0.2031
Maximum speed (1)	rpm	10,000	10,000	10,000
Number of motor poles	—	4	4	4
Weight	lbs/Kg	3.7/1.68	3.7/1.68	3.7/1.68

(1) Maximum speed can be limited by bus volts and feedback types.

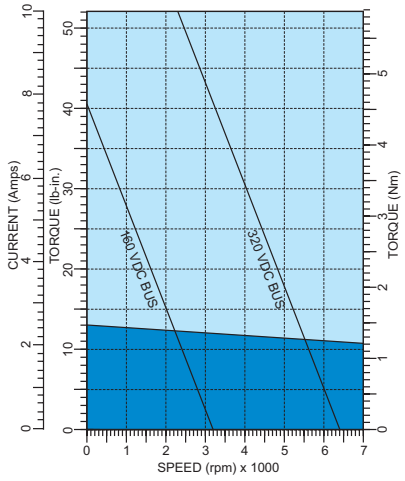
AC servo motors
BSM N-series performance curves

1

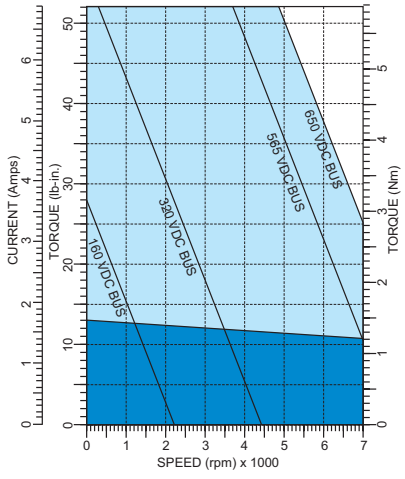
BSM63N-233



BSM63N-250



BSM63N-275

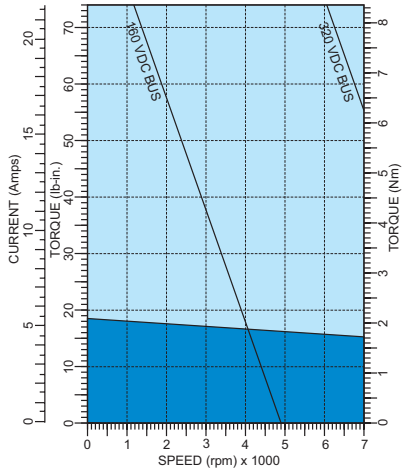


Model number		BSM63N-233	BSM63N-250	BSM63N-275
General				
Continuous stall torque	lb-in	13	13	13
	Nm	1.47	1.47	1.47
Continuous current	amps	3.93	2.82	1.94
Peak torque	lb-in	52.04	52.04	52.04
	Nm	5.88	5.88	5.88
Peak current	amps	14.1	10.1	6.96
Thermal resistance	°C/watt	1.9	1.9	1.9
Thermal time constant	Min	19	19	19
Mechanical time constant	msec	0.69	0.64	0.62
Electrical time constant	msec	1.5	2	2.1
Rated speed @ 300 volts	rpm	9000	6000	4000
Rated speed @ 160 volts	rpm	4800	3200	2130
Electrical				
Torque constant	lb-in/amp	3.67	5.12	7.47
	Nm/amp	0.415	0.579	0.844
Voltage constant	Vpk/krpm	35.4	49.4	72.1
	Vrms/krpm	25	34.9	51
Resistance	ohms	3.1	5.6	11.6
Inductance	mH	4.75	11.57	24.77
Mechanical				
Inertia	lb-in-s^2	0.00034	0.00034	0.00034
	Kg-cm^2	0.384	0.384	0.384
Maximum speed (1)	rpm	10,000	10,000	10,000
Number of motor poles	—	4	4	4
Weight	lbs/Kg	5/2.3	5/2.3	5/2.3

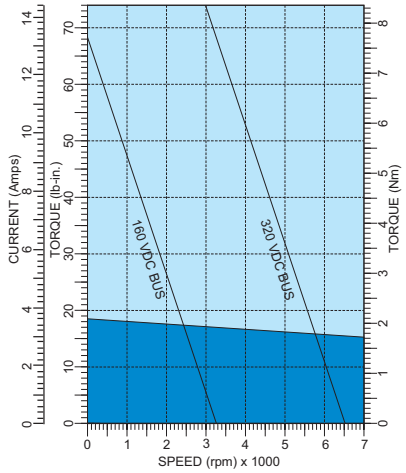
(1) Maximum speed can be limited by bus volts and feedback types.

AC servo motors
BSM N-series performance curves

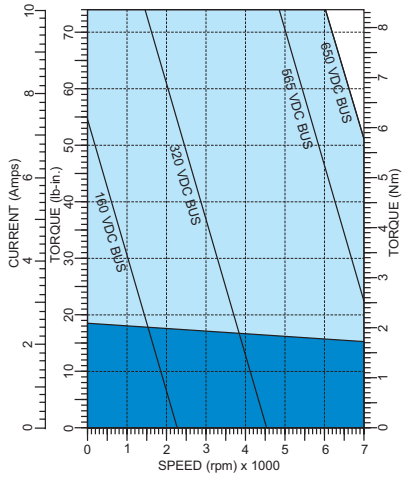
BSM63N-333



BSM63N-350



BSM63N-375



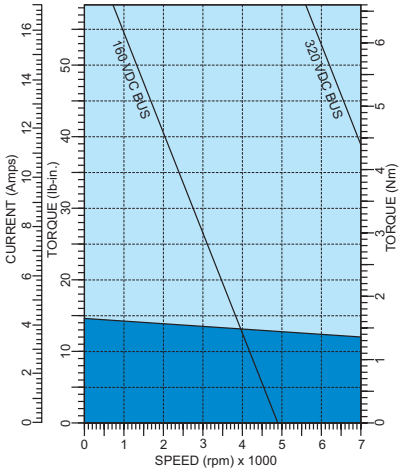
Model number		BSM63N-333	BSM63N-350	BSM63N-375
General				
Continuous stall torque	lb-in	18.5	18.5	18.5
	Nm	2.09	2.09	2.09
Continuous current	amps	6.03	4.05	2.82
Peak torque	lb-in	73.99	73.99	73.99
	Nm	8.36	8.36	8.36
Peak current	amps	21.7	14.5	10.1
Thermal resistance	°C/watt	1.6	1.6	1.6
Thermal time constant	Min	25	25	25
Mechanical time constant	msec	0.57	0.57	0.5
Electrical time constant	msec	1.9	1.79	2.3
Rated speed @ 300 volts	rpm	9000	6000	4000
Rated speed @ 160 volts	rpm	4800	3200	2130
Electrical				
Torque constant	lb-in/amp	3.41	5.07	7.28
	Nm/amp	0.385	0.573	0.823
Voltage constant	Vpk/krpm	32.8	49	70.2
	Vrms/krpm	23.25	34.6	49.7
Resistance	ohms	1.5	3.28	5.92
Inductance	mH	2.85	5.87	13.67
Mechanical				
Inertia	lb-in-s^2	0.0005	0.0005	0.0005
	Kg-cm^2	0.564	0.564	0.564
Maximum speed (1)	rpm	10,000	10,000	10,000
Number of motor poles	—	4	4	4
Weight	lbs/Kg	6.3/2.9	6.3/2.9	6.3/2.9

(1) Maximum speed can be limited by bus volts and feedback types.

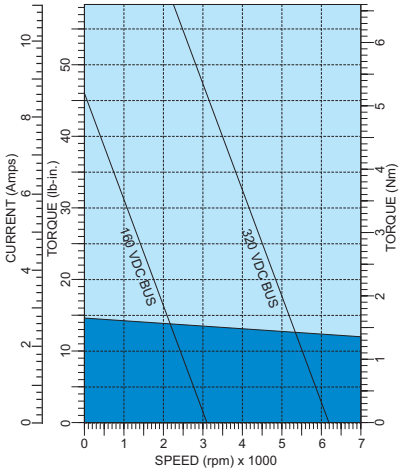
AC servo motors
BSM N-series performance curves

1

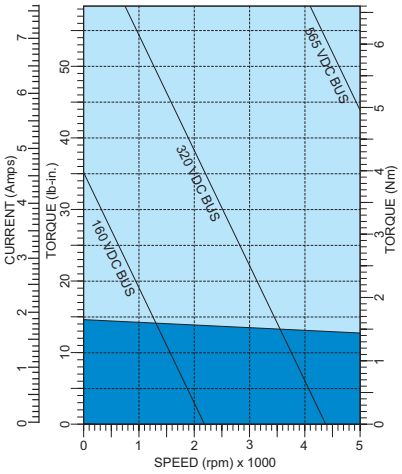
BSM80N-133



BSM80N-150



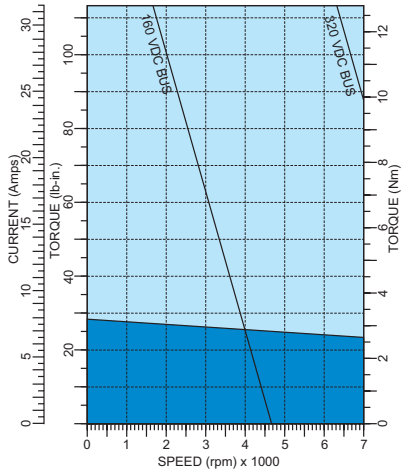
BSM80N-175



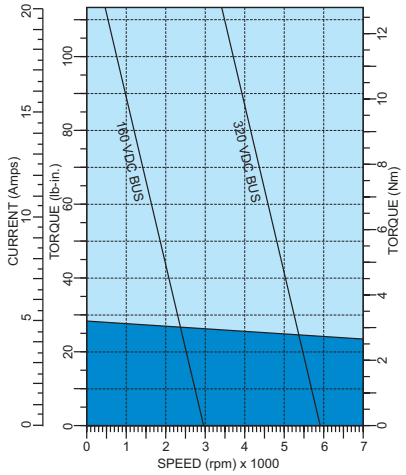
Model number		BSM80N-133	BSM80N-150	BSM80N-175
General				
Continuous stall torque	lb-in	14.6	14.6	14.6
	Nm	1.65	1.65	1.65
Continuous current	amps	4.74	3.05	2.14
Peak torque	lb-in	58.41	58.41	58.41
	Nm	6.6	6.6	6.6
Peak current	amps	17.1	11	7.69
Thermal resistance	°C/watt	1.84	1.84	1.84
Thermal time constant	Min	23	23	23
Mechanical time constant	msec	1.5	1.4	1.3
Electrical time constant	msec	2.4	2.7	2.9
Rated speed @ 300 volts	rpm		6000	4000
Rated speed @ 160 volts	rpm	4800	3200	2130
Electrical				
Torque constant	lb-in/amp	3.4	5.3	7.5
	Nm/amp	0.386	0.6	0.85
Voltage constant	Vpk/krpm	33.9	51.3	73.3
	Vrms/krpm	24.2	36.3	51.8
Resistance	ohms	2.1	5.1	9.53
Inductance	mH	5.2	13.97	28
Mechanical				
Inertia	lb-in-s^2	0.00091	0.00091	0.00091
	Kg-cm^2	1.02	1.02	1.02
Maximum speed	rpm	7,000	7,000	7,000
Number of motor poles	—	4	4	4
Weight	lbs/Kg	7/3.2	7/3.2	7/3.2

AC servo motors
BSM N-series performance curves

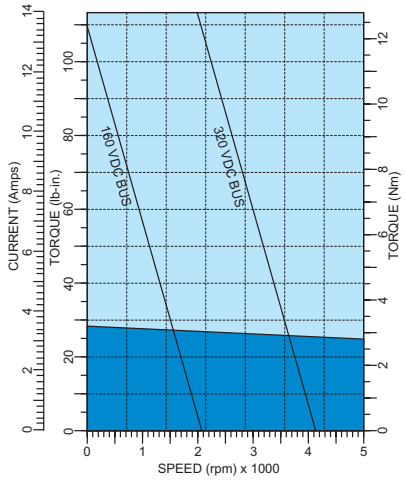
BSM80N-233



BSM80N-250



BSM80N-275

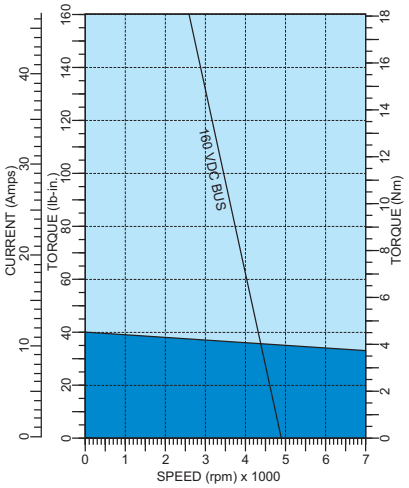


Model number		BSM80N-233	BSM80N-250	BSM80N-275
General				
Continuous stall torque	lb-in	28.3	28.3	28.3
	Nm	3.2	3.2	3.2
Continuous current	amps	8.76	5.61	4
Peak torque	lb-in	113.28	113.28	113.28
	Nm	12.8	12.8	12.8
Peak current	amps	31.5	20.2	14
Thermal resistance	°C/watt	1.5	1.5	1.5
Thermal time constant	Min	28	28	28
Mechanical time constant	msec	0.95	0.84	0.72
Electrical time constant	msec	3.2	2.9	3.9
Rated speed @ 300 volts	rpm		6000	4000
Rated speed @ 160 volts	rpm	4800	3200	2130
Electrical				
Torque constant	lb-in/amp	3.59	5.6	8
	Nm/amp	0.406	0.633	0.904
Voltage constant	Vpk/krpm	34.7	54.1	77.3
	Vrms/krpm	24.6	38.29	54.7
Resistance	ohms	0.832	1.81	3.2
Inductance	mH	2.73	5.3	12.73
Mechanical				
Inertia	lb-in-s^2	0.00162	0.00162	0.00162
	Kg-cm^2	1.82	1.82	1.82
Maximum speed	rpm	7,000	7,000	7,000
Number of motor poles	—	4	4	4
Weight	lbs/Kg	10/4.6	10/4.6	10/4.6

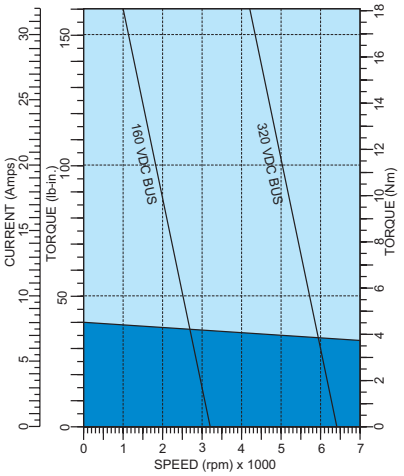
AC servo motors
BSM N-series performance curves

1

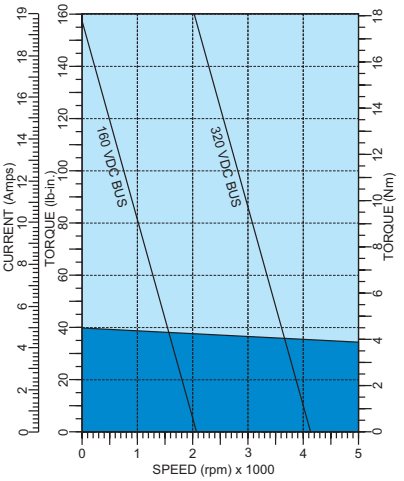
BSM80N-333



BSM80N-350



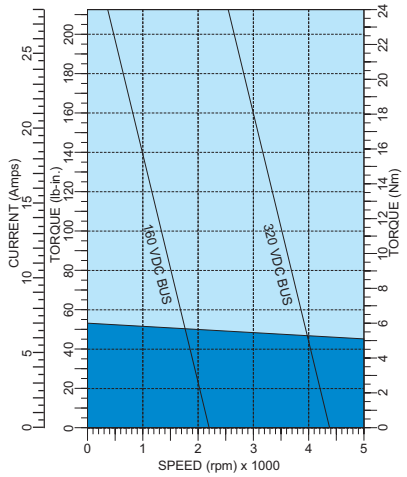
BSM80N-375



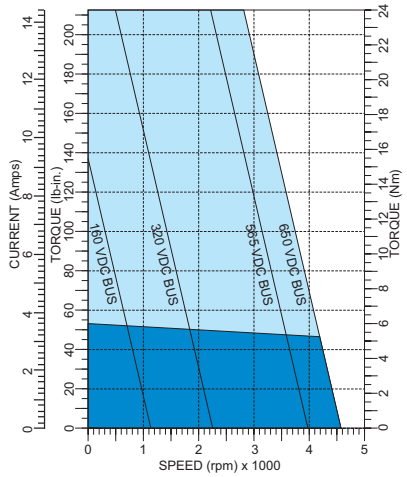
Model number		BSM80N-333	BSM80N-350	BSM80N-375
General				
Continuous stall torque	lb-in	40	40	40
	Nm	4.52	4.52	4.52
Continuous current	amps	12.98	8.61	5.54
Peak torque	lb-in	160	160	160
	Nm	18.08	18.08	18.08
Peak current	amps	46.71	31.01	19.96
Thermal resistance	°C/watt	1.22	1.22	1.22
Thermal time constant	Min	34	34	34
Mechanical time constant	msec	0.75	0.7	0.69
Electrical time constant	msec	3.9	4.3	4.2
Rated speed @ 300 volts	rpm		6000	4000
Rated speed @ 160 volts	rpm	4800	3200	2130
Electrical				
Torque constant	lb-in/amp	3.42	5.15	8.01
	Nm/amp	0.387	0.583	0.906
Voltage constant	Vpk/krpm	33.2	49.7	77.4
	Vrms/krpm	23.41	35.2	54.7
Resistance	ohms	0.433	0.935	2.22
Inductance	mH	1.7	4	9.3
Mechanical				
Inertia	lb-in-s^2	0.00223	0.00223	0.00223
	Kg-cm^2	2.519	2.519	2.519
Maximum speed	rpm	7,000	7,000	7,000
Number of motor poles	—	4	4	4
Weight	lbs/Kg	13/6	13/6	13/6

AC servo motors
BSM N-series performance curves

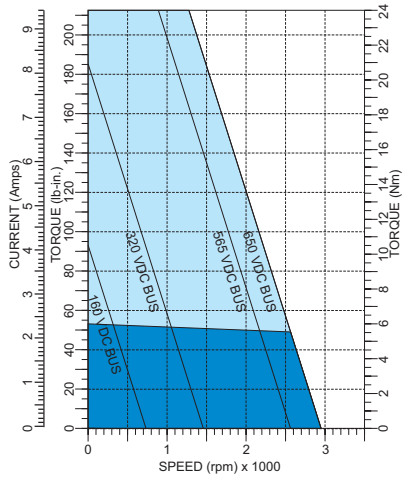
BSM90N-175



BSM90N-1150



BSM90N-1250

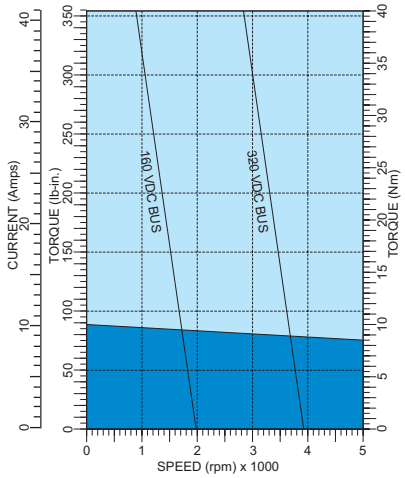


Model number		BSM90N-175	BSM90N-1150	BSM90N-1250
General				
Continuous stall torque	lb-in	53	53	53
	Nm	6	6	6
Continuous current	amps	7.8	4.03	2.6
Peak torque	lb-in	212.41	212.41	212.41
	Nm	24	24	24
Peak current	amps	28.1	14.5	9.37
Thermal resistance	°C/watt	1.16	1.16	1.16
Thermal time constant	Min	38	38	38
Mechanical time constant	msec	0.58	0.54	0.55
Electrical time constant	msec	3.3	4	4.1
Rated speed @ 300 volts	rpm	4000	2000	1200
Rated speed @ 600 volts	rpm		4000	2400
Electrical				
Torque constant	lb-in/amp	7.31	14.16	21.93
	Nm/amp	0.853	1.65	2.56
Voltage constant	Vpk/krpm	72.8	141.3	218.9
	Vrms/krpm	51.5	99.9	154.8
Resistance	ohms	1.24	4.33	10.66
Inductance	mH	4.15	17.6	43.5
Mechanical				
Inertia	lb-in-s^2	0.003	0.003	0.003
	Kg-cm^2	3.389	3.389	3.389
Maximum speed	rpm	7,000	7,000	7,000
Number of motor poles	—	8	8	8
Weight	lbs/Kg	18/8.2	18/8.2	18/8.2

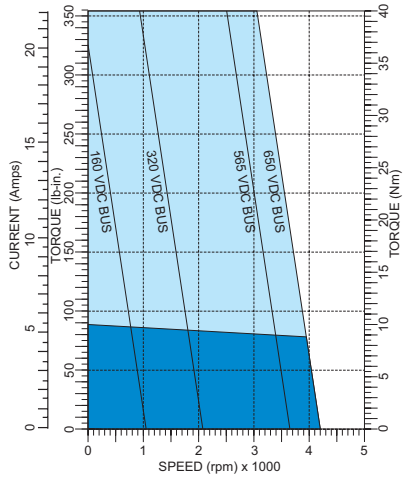
AC servo motors
BSM N-series performance curves

1

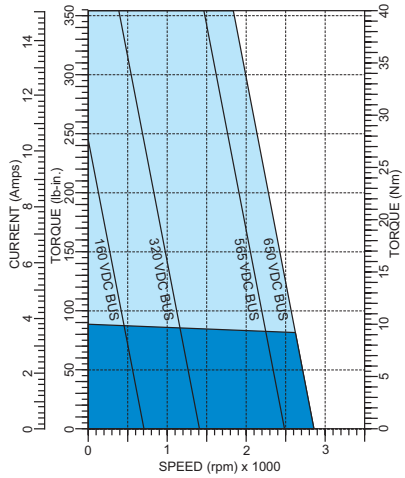
BSM90N-275



BSM90N-2150



BSM90N-2250

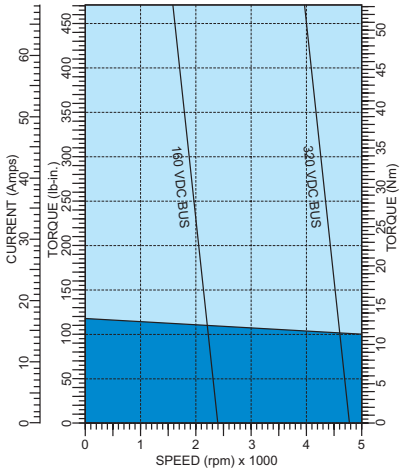


Model number		BSM90N-275[1]	BSM90N-2150[1]	BSM90N-2250[1]
General				
Continuous stall torque	lb-in	88	88	88
	Nm	10	10	10
Continuous current	amps	11.6	6.15	4.19
Peak torque	lb-in	354	354	354
	Nm	40	40	40
Peak current	amps	41.8	22.1	15
Thermal resistance	°C/watt	1.15	1.15	1.15
Thermal time constant	Min	49	49	49
Mechanical time constant	msec	0.36	0.38	0.36
Electrical time constant	msec	5.1	5.4	5.7
Rated speed @ 300 volts	rpm	4000	2000	1200
Rated speed @ 600 volts	rpm		4000	2400
Electrical				
Torque constant	lb-in/amp	8.43	15.9	23.4
	Nm/amp	0.954	1.8	2.65
Voltage constant	Vpk/krpm	81.5	154.5	226.7
	Vrms/krpm	57.6	109.3	160.3
Resistance	ohms	0.523	1.97	3.94
Inductance	mH	2.66	10.5	22.5
Mechanical				
Inertia	lb-in-s^2	0.0056	0.0056	0.0056
	Kg-cm^2	6.327	6.327	6.327
Maximum speed	rpm	7,000	7,000	7,000
Number of motor poles	—	8	8	8
Weight	lbs/Kg	28/12.7	28/12.7	28/12.7

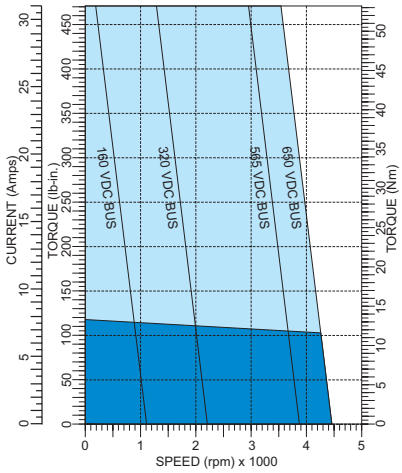
[1] A blower option is available which will increase the motor's continuous stall torque by another 80%.

AC servo motors
BSM N-series performance curves

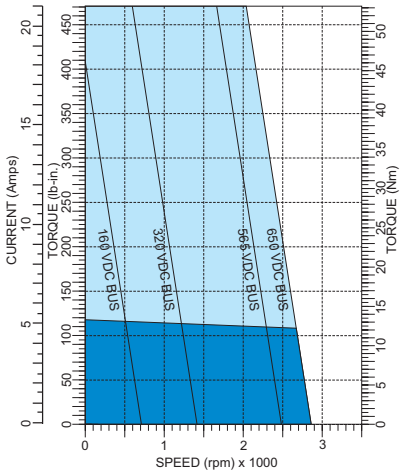
BSM90N-375



BSM90N-3150



BSM90N-3250



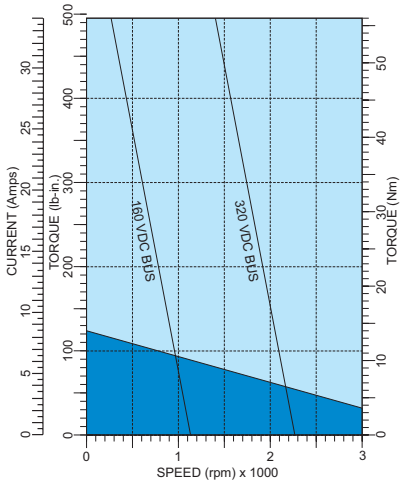
Model number		BSM90N-375[1]	BSM90N-3150[1]	BSM90N-3250[1]
General				
Continuous stall torque	lb-in	117	117	117
	Nm	13.3	13.3	13.3
Continuous current	amps	19.01	8.64	5.59
Peak torque	lb-in	471	471	471
	Nm	53.2	53.2	53.2
Peak current	amps	68.47	31.1	20.1
Thermal resistance	°C/watt	1.14	1.14	1.14
Thermal time constant	Min	59	59	59
Mechanical time constant	msec	0.32	0.33	0.32
Electrical time constant	msec	2.8	5.4	5.5
Rated speed @ 300 volts	rpm	4000	2000	1200
Rated speed @ 600 volts	rpm		4000	2400
Electrical				
Torque constant	lb-in/amp	6.8	15.07	23.4
	Nm/amp	0.77	1.7	2.64
Voltage constant	Vpk/krpm	65.7	145.6	226.3
	Vrms/krpm	46.5	103	160.1
Resistance	ohms	0.2075	1.02	2.39
Inductance	mH	1.257	5.53	13.18
Mechanical				
Inertia	lb-in-s^2	0.0082	0.0082	0.0082
	Kg-cm^2	9.264	9.264	9.264
Maximum speed	rpm	7,000	7,000	7,000
Number of motor poles	—	8	8	8
Weight	lbs/Kg	38/17.3	38/17.3	38/17.3

[1] A blower option is available which will increase the motor's continuous stall torque by another 80%.

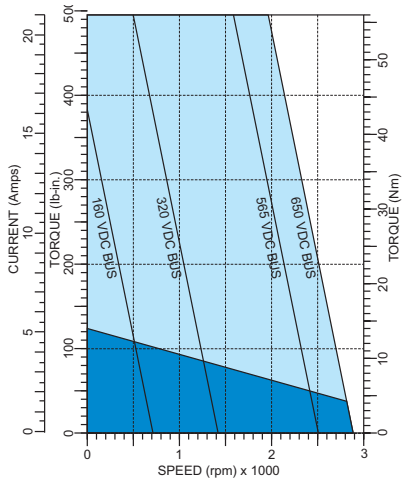
AC servo motors
BSM N-series performance curves

1

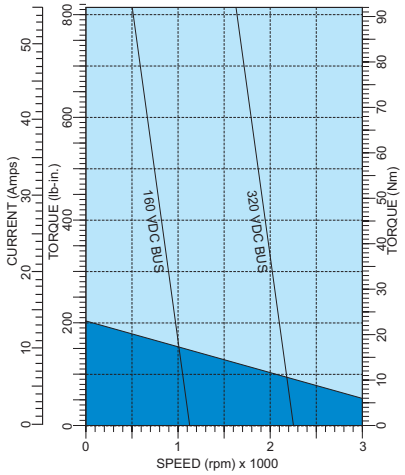
BSM100N-1150



BSM100N-1250



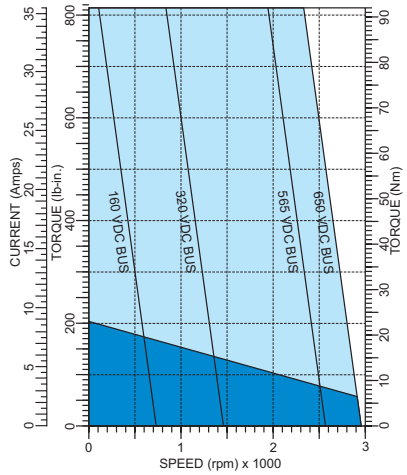
BSM100N-2150



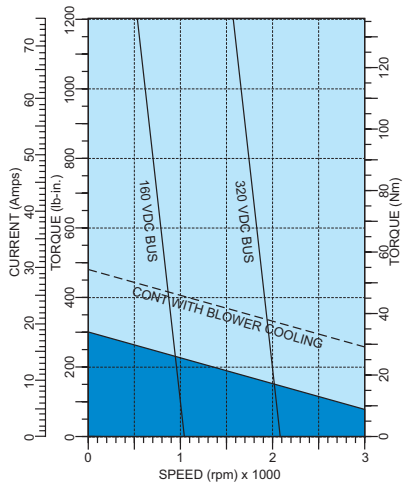
Model number		BSM100N-1150	BSM100N-1250	BSM100N-2150
General				
Continuous stall torque	lb-in	123.9	123.9	203.5
	Nm	14	14	23
Continuous current	amps	9.4	5.9	15.5
Peak torque	lb-in	495.6	495.6	814.2
	Nm	56	56	92
Peak current	amps	34	21.2	55.8
Thermal resistance	°C/watt	1.05	1.05	1
Thermal time constant	Min	58	58	67
Mechanical time constant	msec	0.47	0.46	0.33
Electrical time constant	msec	7.2	7.4	8.3
Rated speed @ 300 volts	rpm	2000	1200	2000
Rated speed @ 160 volts	rpm	1000	640	1000
Electrical				
Torque constant	lb-in/amp	14.5	23.3	14.5
	Nm/amp	1.64	2.6	1.64
Voltage constant	Vpk/krpm	140.4	225.3	140.8
	Vrms/krpm	99.3	159.4	99.6
Resistance	ohms	0.91	2.25	0.4
Inductance	mH	6.6	17.5	3.3
Mechanical				
Inertia	lb-in-s^2	0.012	0.012	0.0196
	Kg-cm^2	13.558	13.558	22.145
Maximum speed	rpm	4,000	4,000	4,000
Number of motor poles	—	8	8	8
Weight	lbs/Kg	35/16	35/16	49/22.3

AC servo motors
BSM N-series performance curves

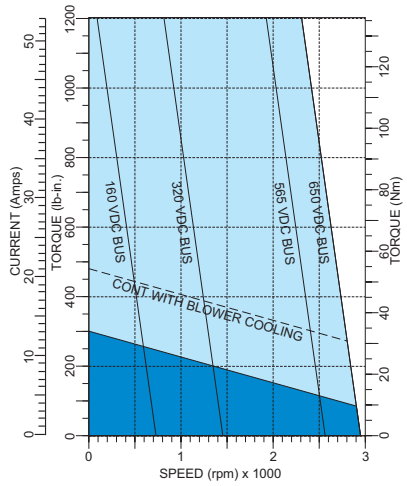
BSM100N-2250



BSM100N-3150



BSM100N-3250



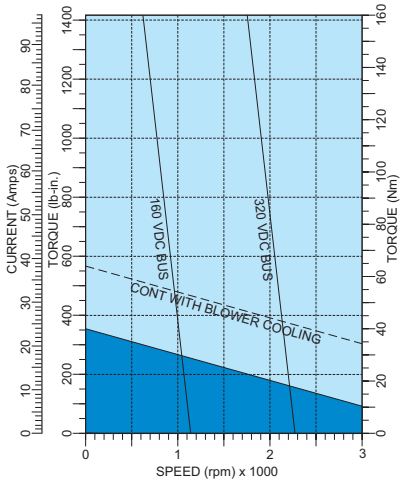
Model number		BSM100N-2250	BSM100N-3150[1]	BSM100N-3250[1]
General				
Continuous stall torque	lb-in	203.5	300	300
	Nm	23	34	34
Continuous current	amps	9.9	21	14.7
Peak torque	lb-in	814.2	1203.6	1203.6
	Nm	92	136	136
Peak current	amps	35.8	75.8	53.1
Thermal resistance	°C/watt	1	0.7	0.7
Thermal time constant	Min	67	76	76
Mechanical time constant	msec	0.3	0.24	0.29
Electrical time constant	msec	9.4	10.9	9.7
Rated speed @ 300 volts	rpm	1200	2000	1200
Rated speed @ 600 volts	rpm	2400		2400
Electrical				
Torque constant	lb-in/amp	22.6	15.8	22.6
	Nm/amp	2.56	1.79	2.56
Voltage constant	Vpk/krpm	219	153.1	218.8
	Vrms/krpm	154.9	108.3	154.7
Resistance	ohms	0.87	0.25	0.61
Inductance	mH	8.25	2.7	5.8
Mechanical				
Inertia	lb-in-s^2	0.0196	0.0273	0.0273
	Kg-cm^2	22.145	30.844	30.844
Maximum speed	rpm	4,000	4,000	4,000
Number of motor poles	—	8	8	8
Weight	lbs/Kg	49/22.3	63/28.6	63/28.6

[1] A blower option is available which will increase the motor's continuous stall torque by another 60%.

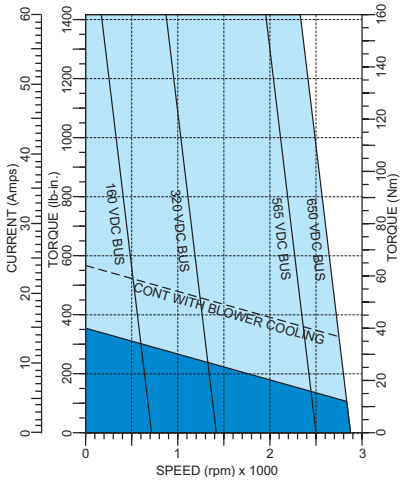
AC servo motors
BSM N-series performance curves

1

BSM100N-4150



BSM100N-4250



Model number		BSM100N-4150[1]	BSM100N-4250[1]
General			
Continuous stall torque	lb-in	354	354
	Nm	40	40
Continuous current	amps	26.9	16.8
Peak torque	lb-in	1416	1416
	Nm	160	160
Peak current	amps	97.1	60.7
Thermal resistance	°C/watt	0.66	0.66
Thermal time constant	Min	85	85
Mechanical time constant	msec	0.26	0.26
Electrical time constant	msec	10.3	10.5
Rated speed @ 300 volts	rpm	2000	1200
Rated speed @ 600 volts	rpm		2400
Electrical			
Torque constant	lb-in/amp	14.5	23.2
	Nm/amp	1.64	2.63
Voltage constant	Vpk/krpm	140.7	225.1
	Vrms/krpm	99.5	159.2
Resistance	ohms	0.18	0.46
Inductance	mH	1.867	4.86
Mechanical			
Inertia	lb-in-s^2	0.0349	0.0349
	Kg-cm^2	39.431	39.431
Maximum speed	rpm	4,000	4,000
Number of motor poles	—	8	8
Weight	lbs/Kg	77/35	77/35

[1] A blower option is available which will increase the motor's continuous stall torque by another 60%.

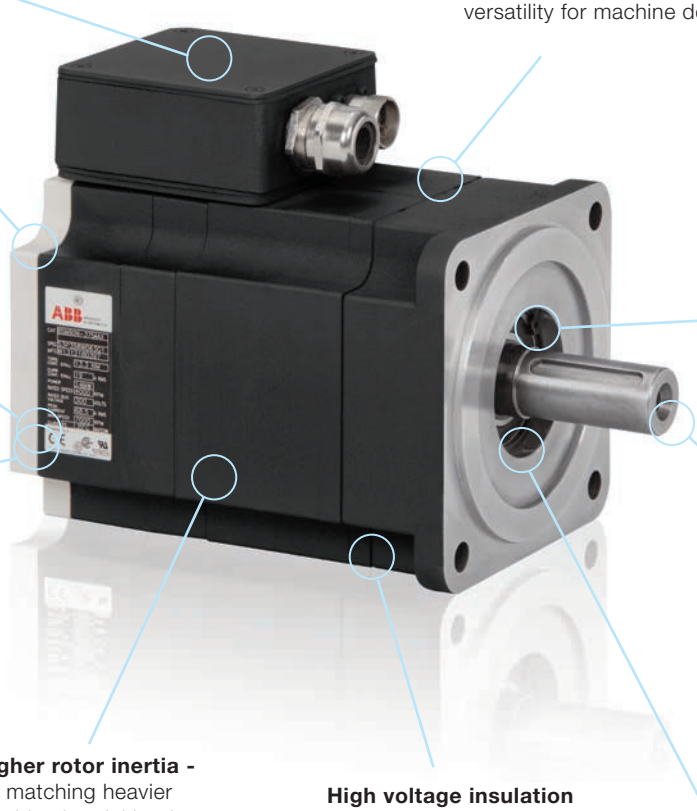
AC servo motors
Brushless servo C-series

The BSM C series of servo motors provide higher inertia in an economical package. These motors have a reliable magnetic design, and are used in applications needing higher inertial matching. These rugged motors provide peak torques equal to three times continuous, thus enabling rapid acceleration for the higher inertial demanding applications. Besides a wide variety of feedback devices, other options such as brakes, cooling to extend performance, mounting, shaft, and electrical windings are available for your application needs. We also have stocked motors for immediate delivery for your application needs.

Motor family	Size		Torque range	
	mm	in	lb-in	Nm
BSM80	89	3.5	10-38	1.2-4.3
BSM90	120	4.7	23-69	2.6-7.8
BSM100	146	5.7	44-265	5-30
BSM132	244	9.6	469-1185	53-134

Variety of feedback options:
– Resolver
– Incremental/Absolute Encoders
– Hall sensors

Stock and custom shafts and mountings. Rugged industrial construction - quality in the design
– IEC and NEMA
– Design interchangeable with N-Series - versatility for machine designs



High continuous rated operating temperature
Over temperature protective thermal switch

Optional holding brakes

O-rings for moisture and dust resistance
Rugged design for rugged environments - quality in the design.

Proven reliable bearings
4 times longer bearing life

Rugged construction
– Sealed to IP54
– With shaft oil seal sealed to IP55
– 95% RH Non-Condensing
– 1000 m (3300 Feet) without derate

Higher rotor inertia -
for matching heavier machine inertial loads.

High voltage insulation
Windings potted for additional voltage protection - for improved reliability and improved heat transfer

Optional shaft seal

Optional forced air cooling on some models - to extend torque capability for additional motor performance.
Typical BSM 90/100 series shown

Artisan Technology Group is an independent supplier of quality pre-owned equipment

Gold-standard solutions

Extend the life of your critical industrial, commercial, and military systems with our superior service and support.

We buy equipment

Planning to upgrade your current equipment? Have surplus equipment taking up shelf space? We'll give it a new home.

Learn more!

Visit us at **artisantg.com** for more info on price quotes, drivers, technical specifications, manuals, and documentation.

Artisan Scientific Corporation dba Artisan Technology Group is not an affiliate, representative, or authorized distributor for any manufacturer listed herein.

We're here to make your life easier. How can we help you today?

(217) 352-9330 | sales@artisantg.com | artisantg.com

ARTISAN® TECHNOLOGY GROUP