

## Servomotor Ratings and Specifications

Time Rating:	Continuous	Enclosure:	Totally-enclosed, self-cooled	Excitation:	Permanent magnet
Insulation:	Class B	Ambient Temperature:	0 to 40°C	Drive Method:	Direct drive
Vibration:	15µm or less	Ambient Humidity:	20 to 80%	Mounting:	Flange-mounted
Withstand Voltage:	1500V <sub>ac</sub>		(non-condensing)	Applicable Encoder:	13-bit incremental or 16-bit absolute encoder
Insulation Resistance:	10MΩ minimum at 500V <sub>DC</sub>	Rated Rotation Speed:	3000rpm		
		Maximum Rotation Speed:	5000rpm		

Specifications are the same for either absolute or incremental encoders.

System Voltage	MOTOR SGMAH-	Rated Output	Rated Torque*		Instantaneous Peak Torque*		Continuous Rated Current	Maximum Peak Current	Rated Angular Acceleration	Rated Power Rate*
		W (hp)	oz • in	N • m	oz • in	N • m	A <sub>rms</sub>	A <sub>rms</sub>	rad/s <sup>2</sup>	kW/s
100V <sub>ac</sub>	A3B	30 (0.04)	13.5	0.095	40.5	0.29	0.66	2.0	57500	3.49
	A5B	50 (0.07)	22.6	0.159	67.7	0.48	0.95	2.9	72300	11.5
	01B	100 (0.13)	45.1	0.318	135	0.96	2.4	7.2	87400	27.8
	02B	200 (0.27)	90.1	0.637	270	1.91	3.0	9.0	60100	38.2
	04A**	400 (0.53)	181	1.27	542	3.82	2.8	8.5	73600	93.7
200V <sub>ac</sub>	A3A	30 (0.04)	13.5	0.095	40.5	0.29	0.44	1.3	57500	5.49
	A5A	50 (0.07)	22.6	0.159	67.7	0.48	0.64	2.0	72300	11.5
	01A	100 (0.13)	45.1	0.318	135	0.96	0.91	2.8	87400	27.8
	02A	200 (0.27)	90.1	0.637	270	1.91	2.1	6.5	60100	38.2
	04A	400 (0.53)	181	1.27	542	3.82	2.8	8.5	73600	93.7
	08A	750 (1.01)	338	2.39	1010	7.1	4.4	13.4	35600	85.1

\* Values when the servomotor is combined with an SGDH servo amplifier.

\*\* When combined with an SGDH-04FE servo amplifier.

System Voltage	MOTORS SGMAH-	Moment of Inertia				Holding Brake (at 20°C)				Allowable Load Inertia*
		Motor without Brake		Motor with Brake		Capacity	Torque	Coil Resistance	Rated Current	
		oz • in • s <sup>2</sup> × 10 <sup>-3</sup>	kg • m <sup>2</sup> × 10 <sup>-4</sup>	oz • in • s <sup>2</sup> × 10 <sup>-3</sup>	kg • m <sup>2</sup> × 10 <sup>-4</sup>	W	N • m	Ω	A	
100V <sub>ac</sub>	A3B	0.235	0.0166	0.355	0.251	6	.20	96	0.25	0.63
	A5B	0.312	0.0220	0.432	0.0305	6	.20	96	0.25	0.78
	01B	0.515	0.0364	0.635	0.0449	6	.35	96	0.25	1.20
	02B	1.50	0.106	2.321	0.164	6.5	1.5	89	0.27	3.69
	04A	2.45	0.173	3.271	0.231	6.5	1.5	89	0.27	3.82
200V <sub>ac</sub>	A3A	0.235	0.0166	0.355	0.0251	6	.20	96	0.25	0.63
	A5A	0.312	0.0220	0.432	0.0305	6	.20	96	0.25	0.78
	01A	0.515	0.0364	0.635	0.0449	6	.35	96	0.25	1.20
	02A	1.50	0.106	2.321	0.164	6.5	1.5	89	0.27	3.69
	04A	2.45	0.173	3.271	0.231	6.5	1.5	89	0.27	3.82
	08A	9.52	0.671	11.5	0.811	6	2.5	96	0.25	13.4

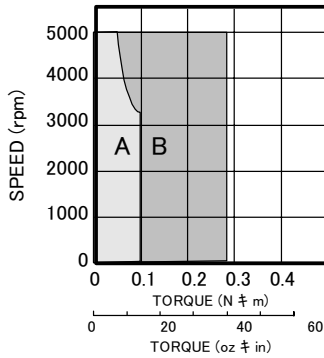
\* Values apply to motors without brake.

J<sub>L</sub> (allowable load inertia) shows the range requiring no exterior regenerative unit. When these values are exceeded, application may be restricted or a regenerative unit may be required.

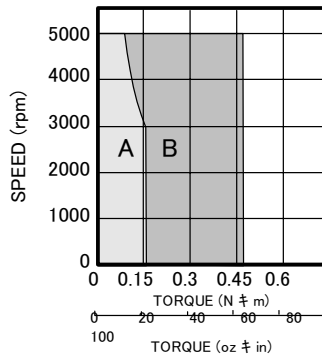
## Speed / Torque Curves

200V

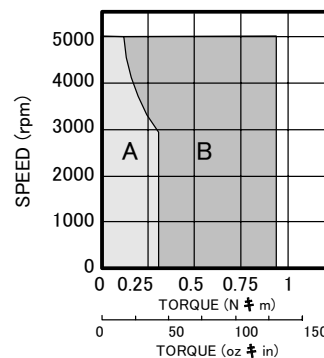
**SGMAH-A3A**



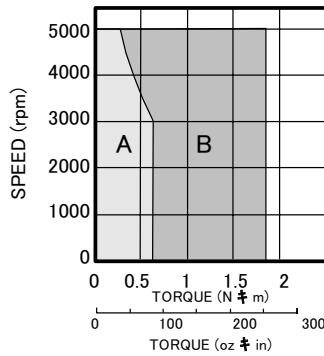
**SGMAH-A5A**



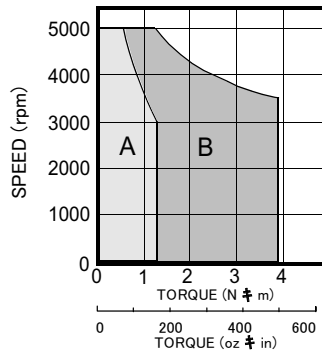
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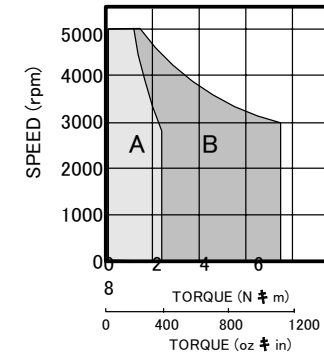
**SGMAH-02A**



**SGMAH-04A**

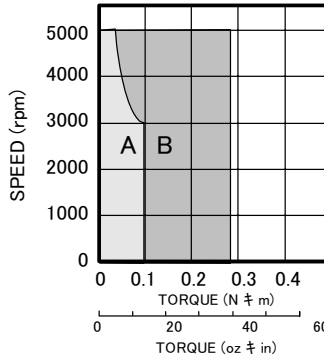


**SGMAH08A**

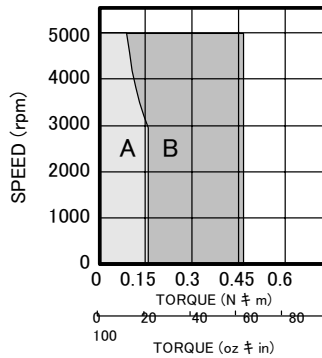


100V

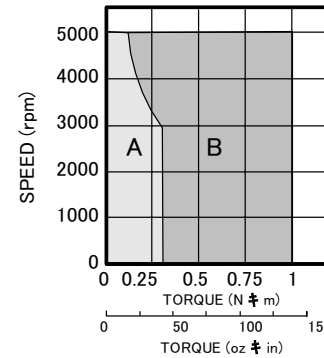
**SGMAH-A3B**



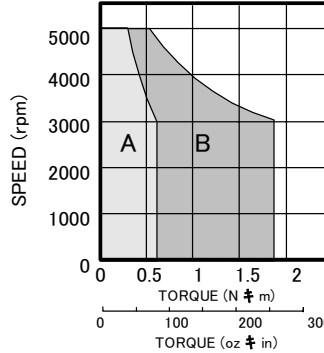
**SGMAH-A5B**



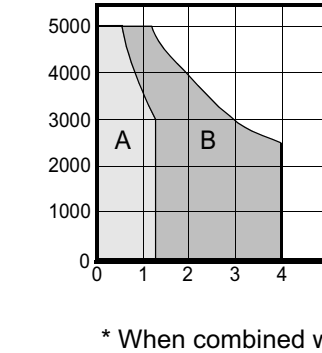
**SGMAH-01B**



**SGMAH-02B**



**SGMAH-04A\***



**A : CONTINUOUS DUTY ZONE**

**B : INTERMITTENT DUTY ZONE**

\* When combined with SGD4 FE amp.