

# KBM 260 Frameless Motors

The KBM(S)-260 series provides a classic torque motor footprint - large diameter with short axial length, high pole count, and large rotor thru-bore. Aluminum armature sleeve and steel rotor hub provide pilot diameter engagement surfaces and bolted mounting joints for simple installation. With very low cogging, low total harmonic distortion, and high torque capacity, the largest member of the KBM(S) family is a great performer in the most demanding applications.



Front View

Rear View

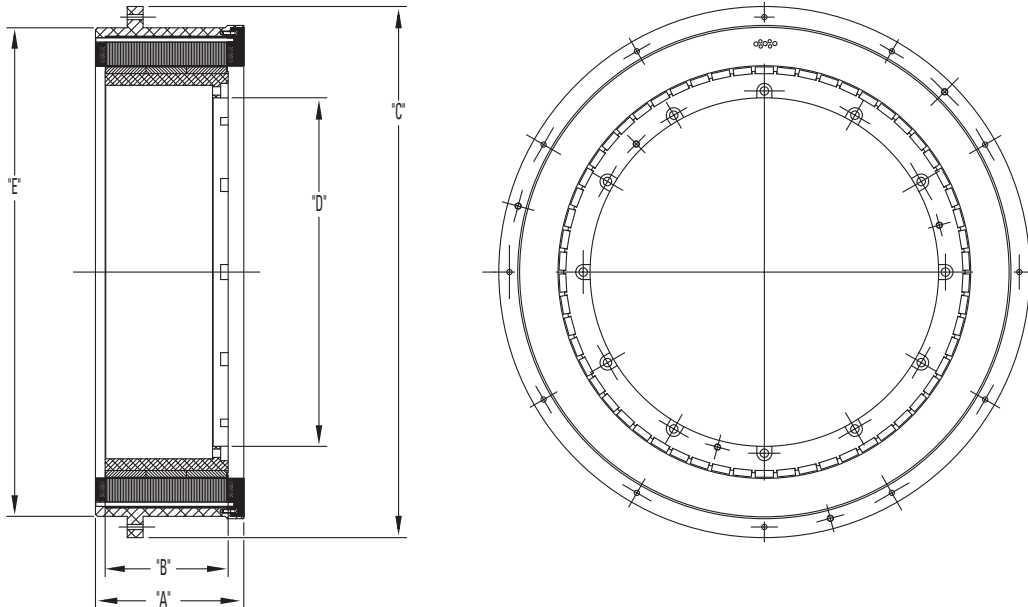
MOTOR LEADS: #10 AWG Teflon<sup>®</sup> insulated per UL 1199, 900 mm [35 in] min. length, 1-Blue, 1-Brown, 1-Violet

SENSOR LEADS: #26 AWG Teflon<sup>®</sup> coated per MIL-W-22759/11, 900 mm [35 in] min. length, 1-Blue, 1-Green, 1-Brown, 1-Orange, 1-Yellow

THERMISTOR LEADS: #26 AWG, Teflon<sup>®</sup> Insulated, 900 mm [35"] min. length, 2-Blue, 2-Red

# KBM 260 Outline Drawings

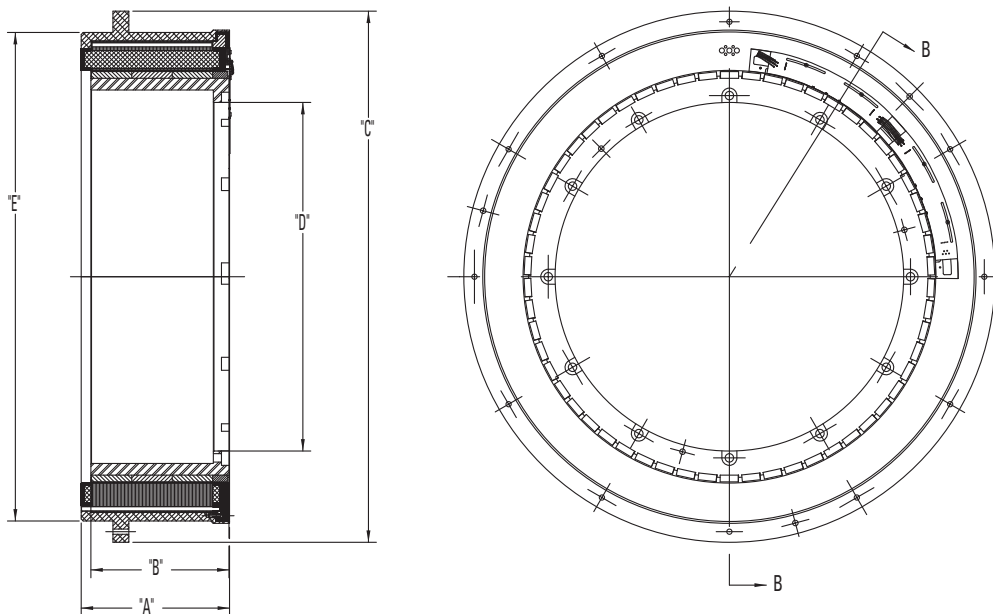
**KBM 260**



Model Number	"A" mm[inch]	"B" mm[inch]	Ø "C" mm[inch]	Ø "D" mm[inch]	Ø "E" mm[inch]
KBM-260X01	172.62 [6.796]	132.08 [5.200]	850.0 [33.46]	557.85 [21.962]	781.81 [30.780]
KBM-260X02	237.39 [9.346]	196.85 [7.750]			
KBM-260X03	302.16 [11.896]	261.62 [10.300]			

All dimensions are nominal. For more detailed and interactive 3D models with 2D product views, visit [www.kollmorgen.com/kbm](http://www.kollmorgen.com/kbm)

**KBMS 260**



Model Number	"A" mm[inch]	"B" mm[inch]	Ø "C" mm[inch]	Ø "D" mm[inch]	Ø "E" mm[inch]
KBMS-260X01	172.62 [6.796]	156.21 [6.150]	850.0 [33.46]	557.85 [21.962]	781.81 [30.780]
KBMS-260X02	237.39 [9.346]	220.98 [8.700]			
KBMS-260X03	302.16 [11.896]	285.75 [11.250]			

All dimensions are nominal. For additional dimensional data, 2D and 3D drawings, visit [www.kollmorgen.com/kbm](http://www.kollmorgen.com/kbm)

# KBM 260 Performance Data

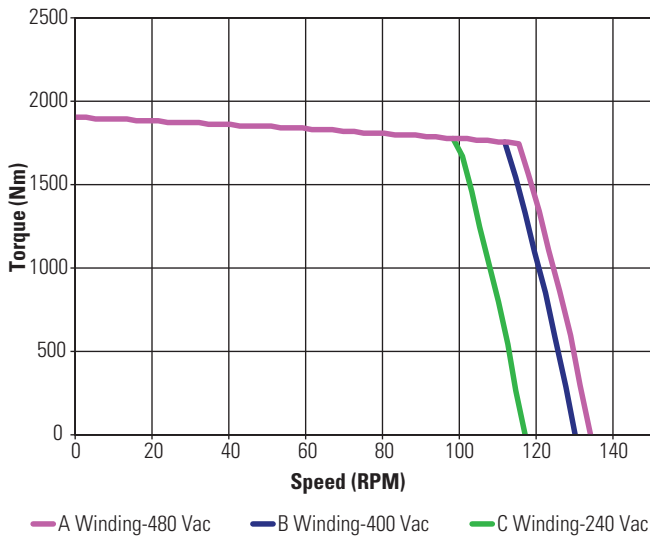
KBM(S)-260XXX PERFORMANCE DATA & MOTOR PARAMETERS												
Motor Parameter	Symbol	Units	TOL	KBM(S)-260X01-X			KBM(S)-260X02-X			KBM(S)-260X03-X		
				A	B	C	A	B	C	A	B	C
Continuous Stall Torque at 25°C Amb. (1)	Tc	Nm	NOM	1932	1932	1932	2706	2706	2706	3445	3445	3445
		lb-ft		1425	1425	1425	1996	1996	1996	2540	2540	2540
Continuous Current	Ic	Arms	NOM	33.1	39.0	58.0	31.0	36.5	54.5	29.5	34.5	52.0
Peak Stall Torque (25°C winding temp)	Tp	Nm	NOM	6494	6494	6494	9742	9742	9742	12812	12812	12812
		lb-ft		4790	4790	4790	7185	7185	7185	9450	9450	9450
Peak Current	Ip	Arms	NOM	147	171	257	147	171	257	147	171	262
Rated Continuous Output Power at 25°C Amb. (1)	P Rated	Watts		18500	17675	16100	17150	16400	14715	16200	15570	13710
	HP Rated	HP		24.8	23.7	21.6	23.0	22.0	19.7	21.7	20.9	18.4
Speed at Rated Power	N Rated	RPM		105	100	90	68	65	58	50	48	42
Torque Sensitivity (2)	Kt	Nm / Arms	+/-10%	59.3	50.3	33.9	89.0	76.3	50.9	119	102	67.80
		lb-ft / Arms		43.7	37.5	25.0	65.6	56.3	37.5	87.6	75.0	50.00
Back EMF Constant	Kb	Vrms/kRPM	+/- 10%	3584	3072	2048	5381	4612	3075	7179	6148	4102
Motor Constant	Km	Nm/√watt	+/-10%	47.1	47.1	47.1	59.8	59.8	59.8	70.4	70.4	70.4
		lb-ft /√watt		34.7	34.7	34.7	44.1	44.1	44.1	51.9	51.9	51.9
Resistance (line to line)	Rm	Ohms	+/- 10%	1.06	0.771	0.347	1.48	1.090	0.484	1.90	1.38	0.622
Inductance	Lm	mH		16	12	5.2	24	18	7.8	32	24	10
Inertia (KBM)	Jm	Kg-m <sup>2</sup>		4.88			7.19			9.56		
		lb-ft-s <sup>2</sup>		3.60			5.30			7.05		
Weight (KBM)	Wt	Kg		170			249			329		
		lb		375			550			725		
Inertia (KBMS)	Jm	Kg-m <sup>2</sup>		5.45			7.86			10.2		
		lb-ft-s <sup>2</sup>		4.02			5.80			7.55		
Weight (KBMS)	Wt	Kg		177			257			336		
		lb		390			567			740		
Max Static Friction	Tf	Nm		28.5			43.0			57.5		
		lb-ft		21.0			31.7			42.4		
Cogging Friction (peak-to-peak)	Tcog	Nm		17.6			27.1			35.9		
		lb-ft		13.0			20.0			26.5		
Viscous Damping	Fi	Nm/ kRPM		620			1010			1380		
		lb-ft / kRPM		457			748			1020		
Thermal Resistance (3)	TPR	°C / watt		0.050			0.041			0.035		
Number of Poles	P	-		58			58			58		
Recommended Kollmorgen S700 Drive				S748	S748	S772	S748	S748	S772	S748	S748	S772
Voltage Req'd at Rated Output	Vac Input	Vac		480	400	240	480	400	240	480	400	240
Peak Stall Torque (4) (Motor with Drive)	Tp Drive	Nm	+/-10%	4578	4020	4020	6870	6030	6030	9164	8040	7861
		lb-ft		3377	3317	4267	5067	4448	4448	6759	5930	8520
Cont. Stall Torque (4) (Motor with Drive)	Tc Drive	Nm	+/-10%	1932	1932	1932	2706	2706	2706	3445	3445	3445
		lb-ft		1425	3317	4267	1996	1996	1996	2541	2541	2541

- Notes
- 1) Winding temperature = 155°C at continuous stall, at rated output, and for performance curves.
  - 2) To calculate no-load Kt and Kb at 25°C, multiply by 1.064.
  - 3) Back EMF is peak (not RMS).
  - 4) Peak & Continuous Torques may be limited by drive current, see [www.kollmorgen.com](http://www.kollmorgen.com) for complete drive ratings.

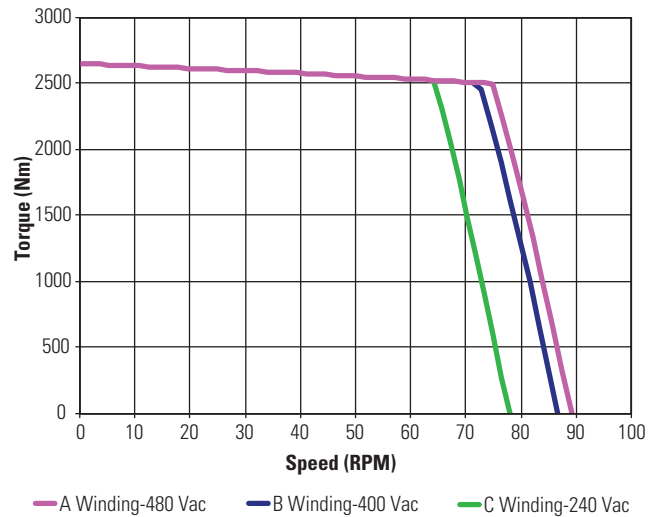
# KBM 260 Performance Curves

Continuous duty capability for 130°C rise in a 25°C ambient using recommended S700 servo drive and sinusoidal commutation.

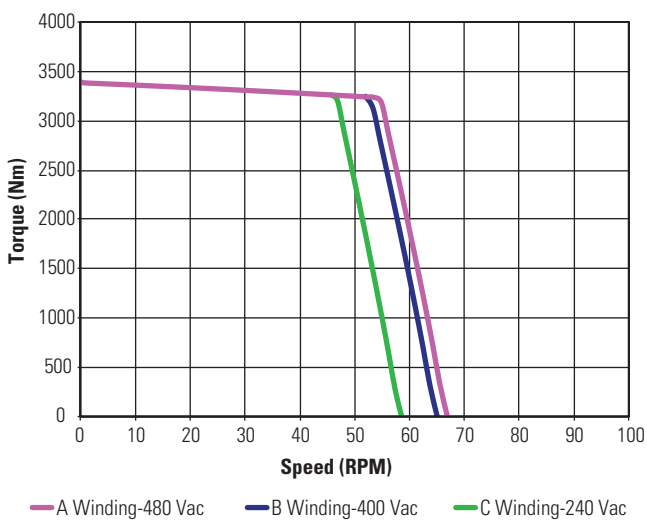
**KBM(S)-260X01  
ContinuousTorque**



**KBM(S)-260X02  
ContinuousTorque**



**KBM(S)-260X03  
ContinuousTorque**



Low Voltage optimized windings available.