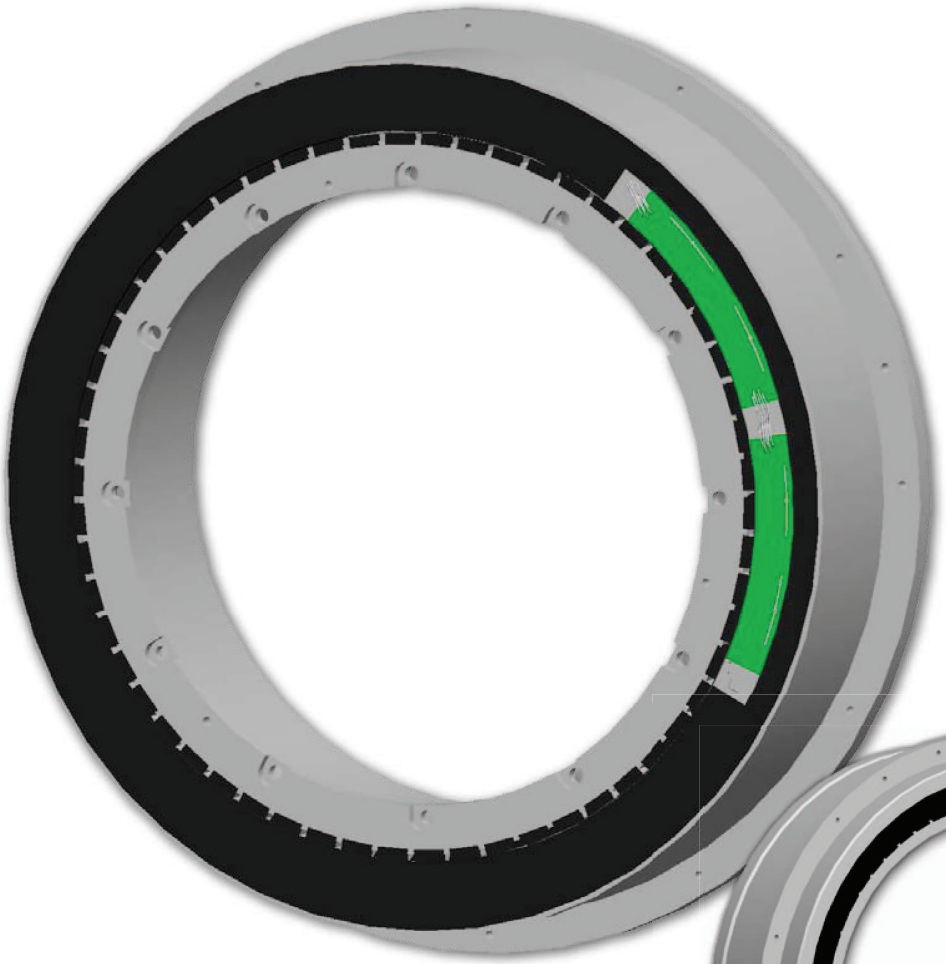
KBM 260 Frameless Motors

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

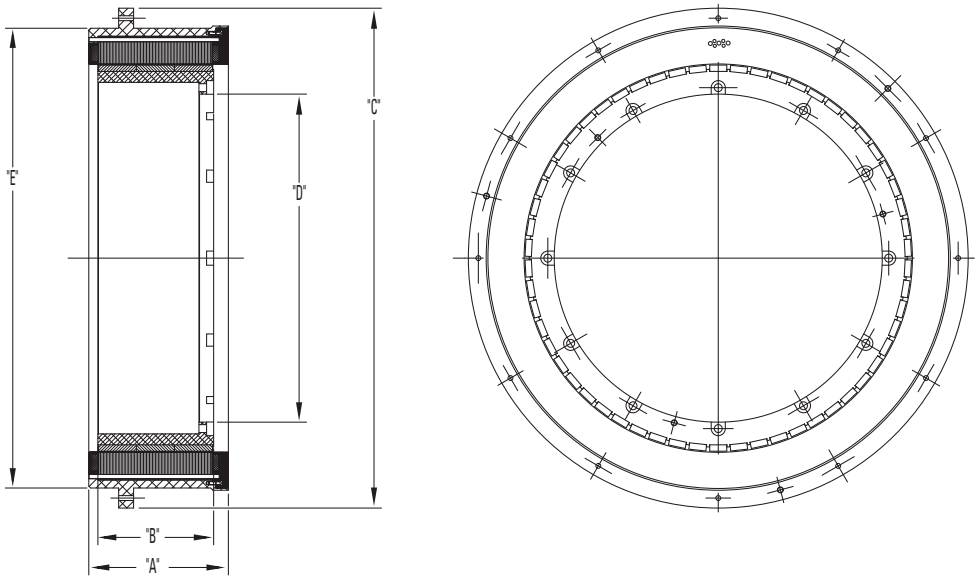
Rear View

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

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

KBM 260 Outline Drawings

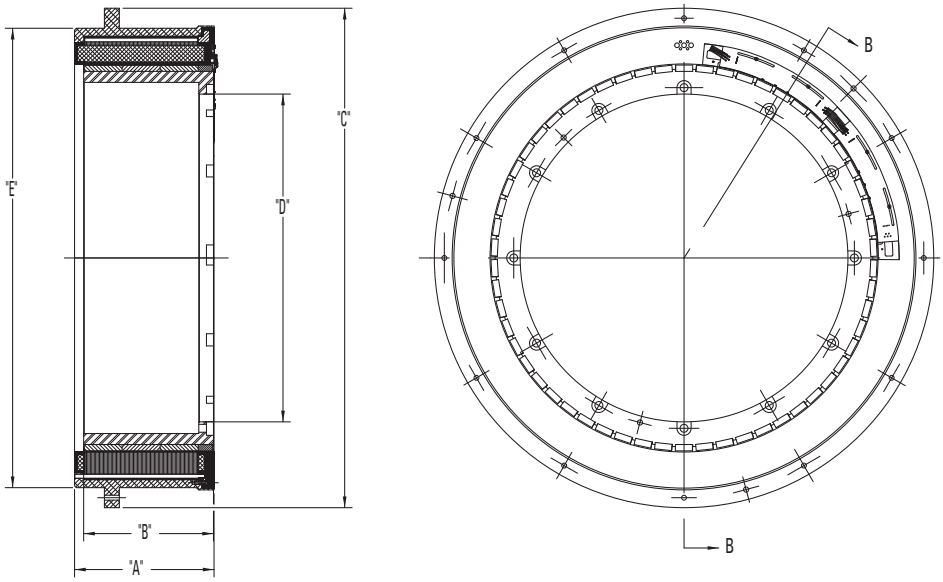
KBM 260



Model Number	"A" mm[inch]	"B" mm[inch]	∅ "C" mm[inch]	∅ "D" mm[inch]	∅ "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]	850.0 [33.46]	557.85 [21.962]	781.81 [30.780]
KBM-260X03	302.16 [11.896]	261.62 [10.300]	850.0 [33.46]	557.85 [21.962]	781.81 [30.780]

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

KBMS 260

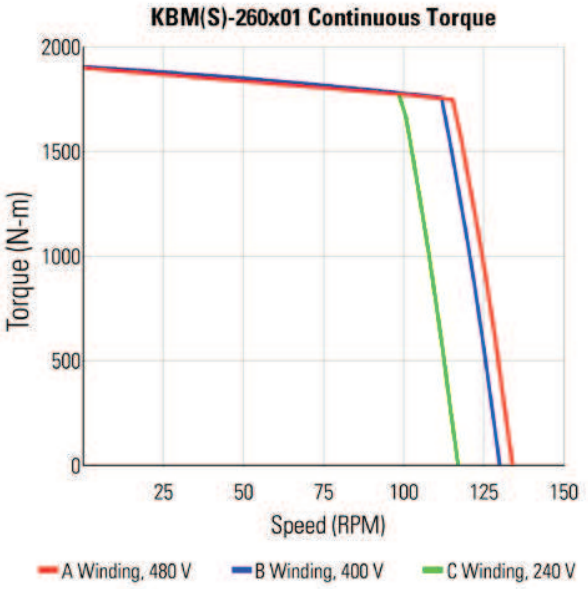


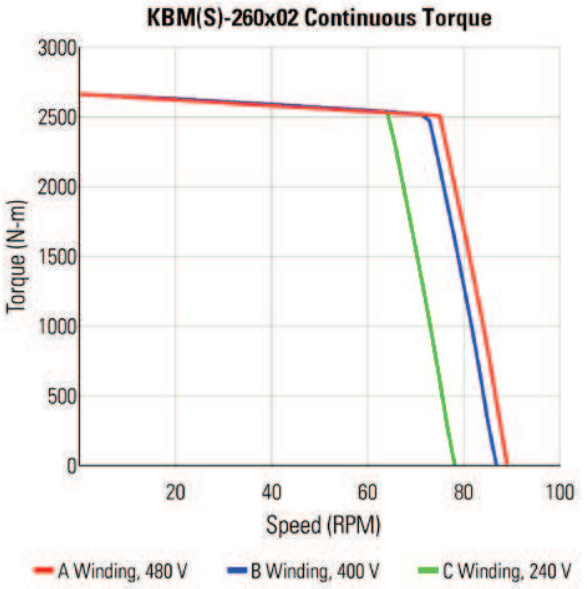
Model Number	"A" mm[inch]	"B" mm[inch]	∅ "C" mm[inch]	∅ "D" mm[inch]	∅ "E" mm[inch]
KBMS-260X01	172.62 [6.796]	156.21 [6.150]	850.0 [33.46]	557.85 [21.962]	781.81 [30.780]
KBMS-260X02	237.39 [9.346]	220.98 [8.700]	850.0 [33.46]	557.85 [21.962]	781.81 [30.780]
KBMS-260X03	302.16 [11.896]	285.75 [11.250]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

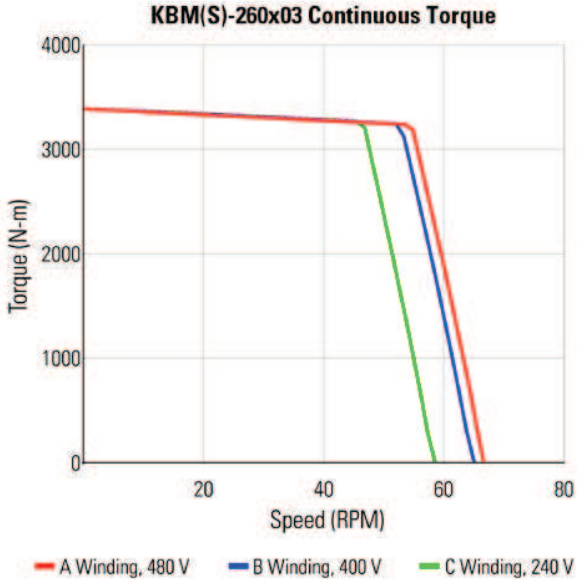
All dimensions are nominal. For additional dimensional data, 2D and 3D drawings, visit www.kollmorgen.com/kbm

KBM 260 Perfomance Curves

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







KBM 260 Perfomance Data

KBM(S) Frameless Motor Series

KBM(S)-260XXX PERFORMANCE DATA & MOTOR PARAMETERS												
Motor Parameter	Symbol	Units	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	N-m	1932	1932	1932	2706	2706	2706	3445	3445	3445	
		lb-ft	1425	1425	1425	1996	1996	1996	2540	2540	2540	
Continuous Current	Ic	Arms	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	N-m	6494	6494	6494	9742	9742	9742	12812	12812	12812	
		lb-ft	4790	4790	4790	7185	7185	7185	9450	9450	9450	
Peak Current	Ip	Arms	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	N-m / Arms	59.3	50.3	33.9	89.0	76.3	50.9	119	102	67.8	
		lb-ft / Arms	43.7	37.5	25.0	65.6	56.3	37.5	87.6	75.0	50.0	
Back EMF Constant (3)	Kb	Vpk / kRPM	5069	4345	2896	7610	6523	4349	10152	8695	5801	
Motor Constant	Km	N-m/√watt	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	1.06	0.771	0.347	1.48	1.09	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-m²	4.88			7.19			9.56			
		lb-ft-s²	3.60			5.30			7.05			
Weight (KBM)	Wt	Kg	170			249			329			
		lb	375			550			725			
Inertia (KBMS)	Jm	Kg-m²	5.45			7.86			10.2			
		lb-ft-s²	4.02			5.80			7.55			
Weight (KBMS)	Wt	Kg	177			257			336			
		lb	390			567			740			
Max Static Friction	Tf	N-m	28.5			43.0			57.5			
		lb-ft	21.0			31.7			42.4			
Cogging Friction (peak-to-peak)	Tcog	N-m	17.6			27.1			35.9			
		lb-ft	13.0			20.0			26.5			
Viscous Damping	Fi	N-m/ kRPM	620			1010			1380			
		lb-ft / kRPM	457			748			1020			
Thermal Resistance (4)	TPR	°C / watt	0.050			0.041			0.035			
Number of Poles	P	-	58			58			58			
Recommended Drive	AKD-■_ _ _ _ _		04807	04807	09607	04807	04807	09607	04807	04807	09607	
Voltage Req'd at Rated Output	Vac Input	VAC	480	400	240	480	400	240	480	400	240	
Peak Stall Torque (5) (Motor with AKD servo drive)	Tp Drive	N-m	5000	4500	5790	7500	6700	8680	10000	8960	11562	
		lb-ft	3688	3317	4267	5532	4942	6402	7376	6609	8520	

* 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) TPR assumes motor is housed and mounted to a heat sink.
5) Peak torque may be limited by AKD servo drive current, see page 11 for drive ratings or visit www.kollmorgen.com.