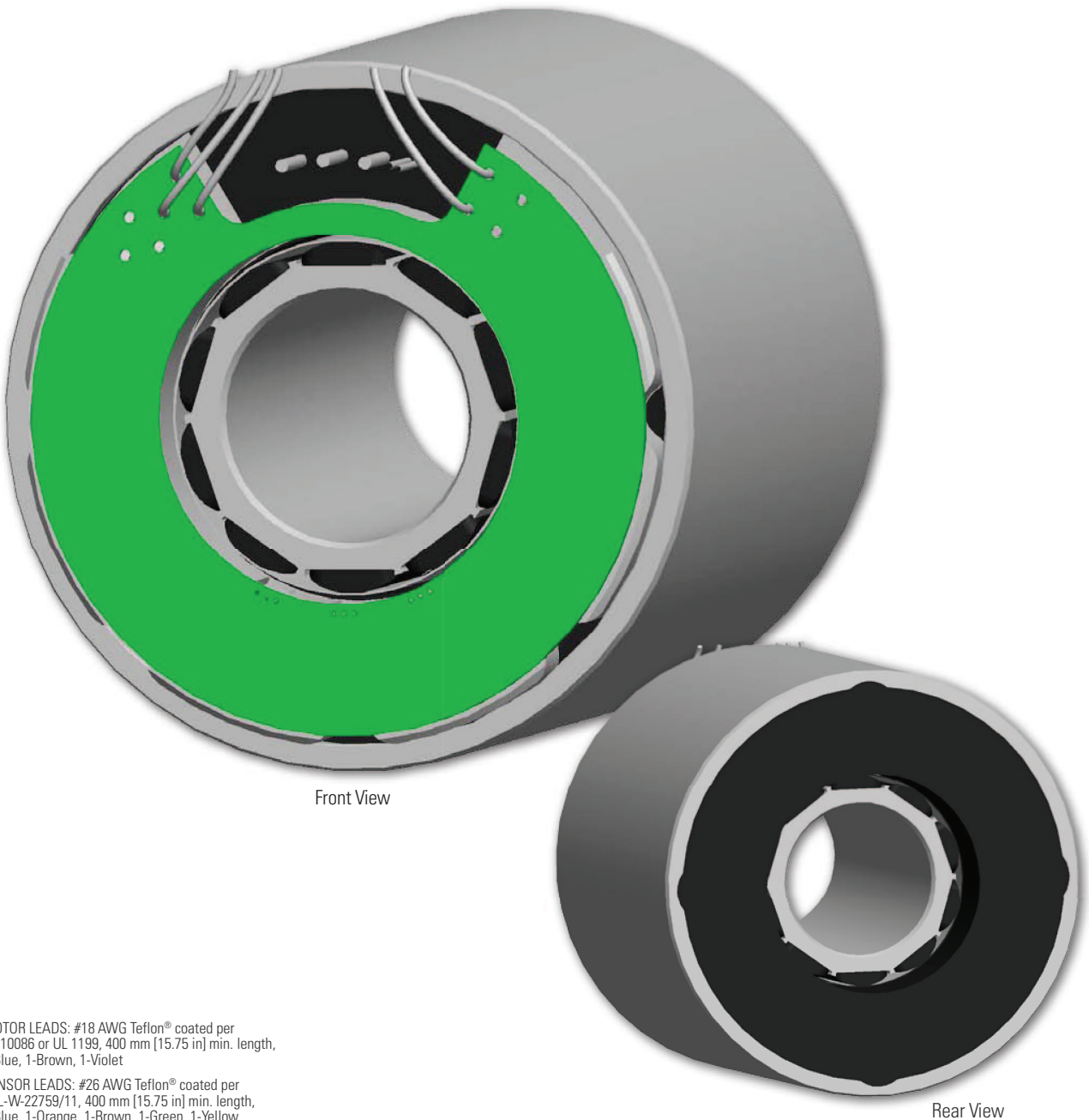


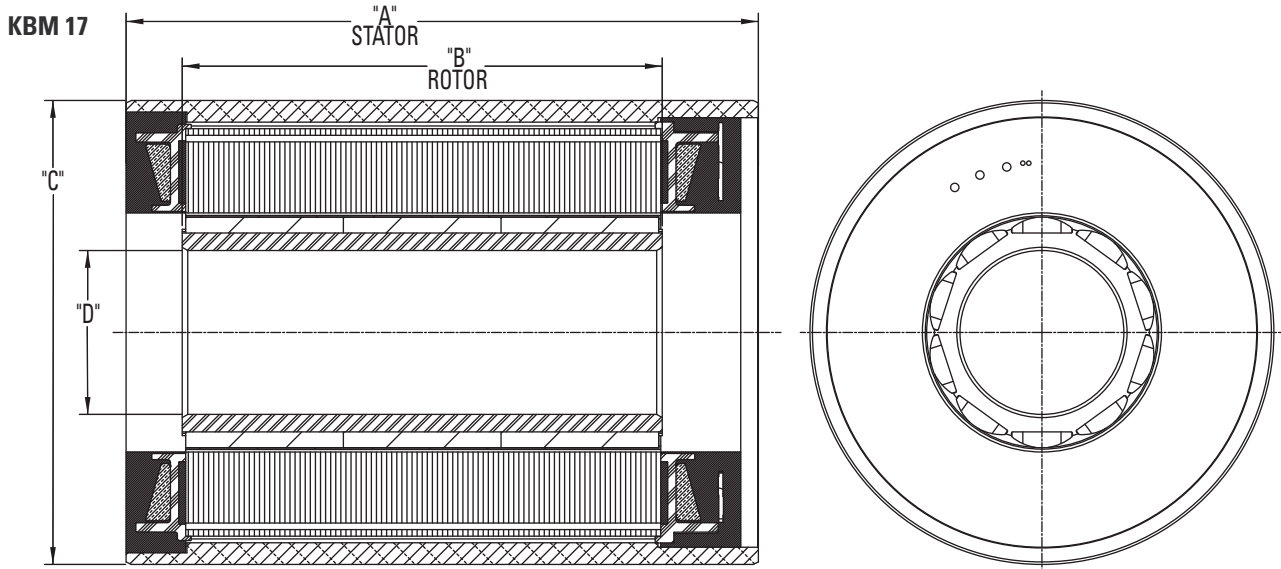
KBM 17 Frameless Motors

K B M 1 7

The KBM(S)-17 series is designed to operate over a broad speed range with high acceleration. Designed for maximum torque density with minimal cogging by using a variable air gap, the KBM(S)-17 is an ideal choice to meet or exceed your compact frameless motor application needs.

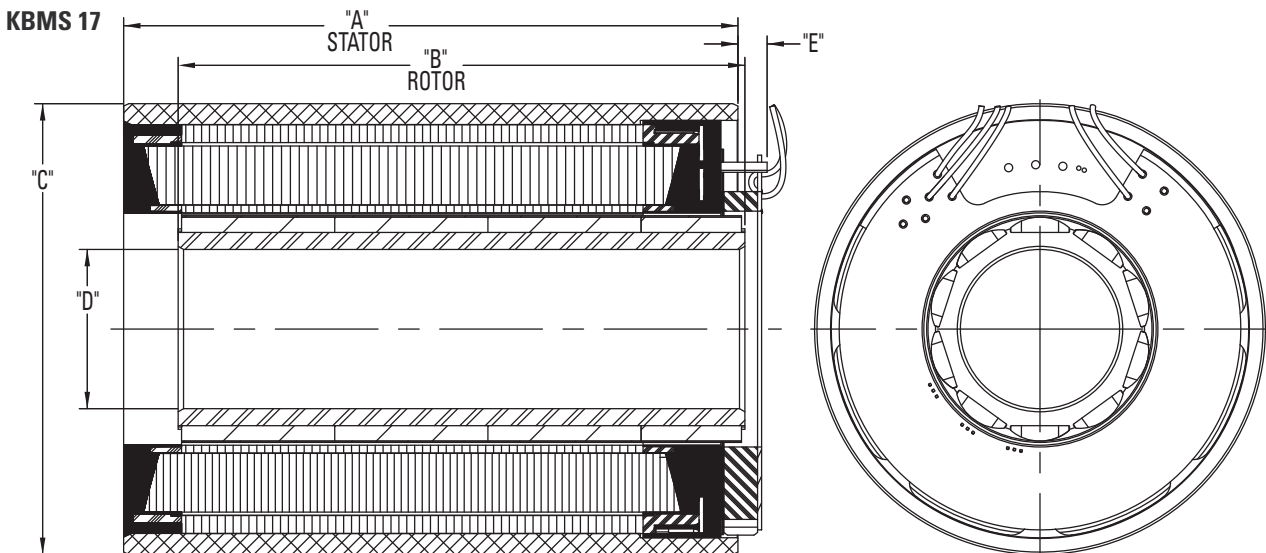


KBM 17 Outline Drawings



Model Number	"A" mm[inch]	"B" mm[inch]	Ø "C" mm[inch]	Ø "D" mm[inch]
KBM-17X01	57.80 [2.276]	30.15 [1.187]	84.963 [3.345]	30.010 [1.1815]
KBM-17X02	86.80 [3.417]	59.03 [2.324]	84.963 [3.345]	30.010 [1.1815]
KBM-17X03	115.80 [4.559]	87.91 [3.461]	84.963 [3.345]	30.010 [1.1815]
KBM-17X04	144.80 [5.701]	116.79 [4.598]	84.963 [3.345]	30.010 [1.1815]

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

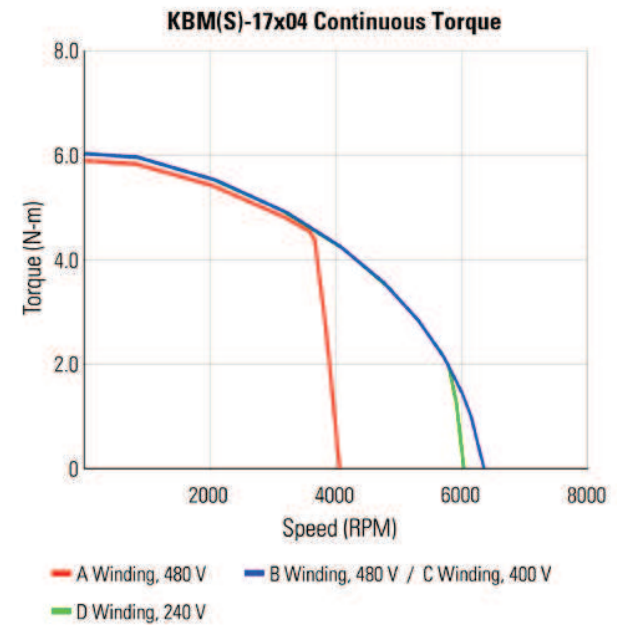
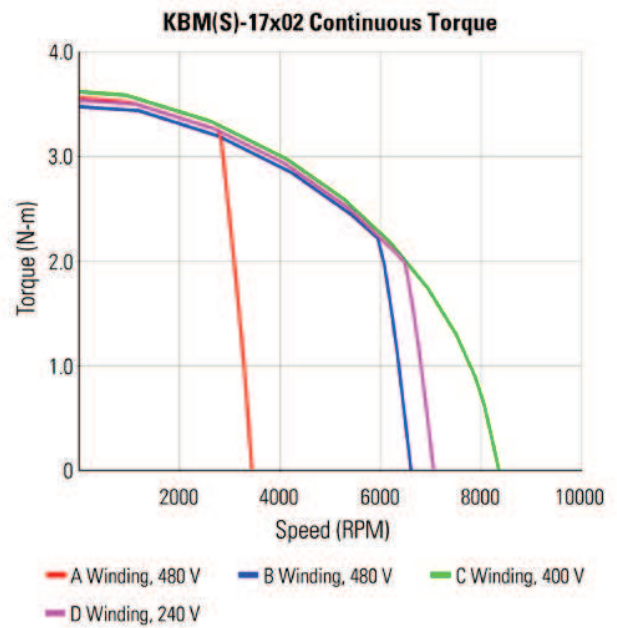
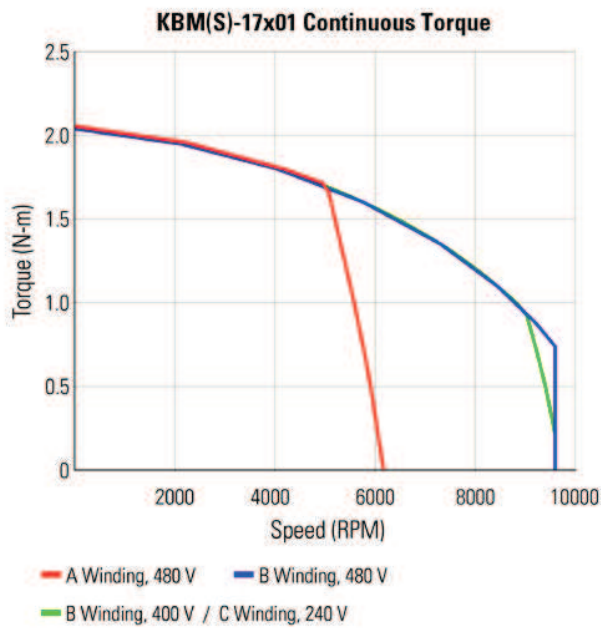


Model Number	"A" mm[inch]	"B" mm[inch]	Ø "C" mm[inch]	Ø "D" mm[inch]	"E" MAX mm[inch]
KBMS-17X01	57.80 [2.276]	49.07 [1.932]	84.963 [3.345]	30.010 [1.1815]	5.75 [.226]
KBMS-17X02	86.80 [3.417]	77.95 [3.069]	84.963 [3.345]	30.010 [1.1815]	5.75 [.226]
KBMS-17X03	115.80 [4.559]	106.83 [4.206]	84.963 [3.345]	30.010 [1.1815]	5.75 [.226]
KBMS-17X04	144.80 [5.701]	135.71 [5.353]	84.963 [3.345]	30.010 [1.1815]	5.75 [.226]

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

KBM 17 Performance Curves

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



KBM 17 Performance Data

KBM(S) Frameless Motor Series

KBM(S)-17XXX PERFORMANCE DATA & MOTOR PARAMETERS																		
Motor Parameter	Symbol	Units	KBM(S)-17X01-X			KBM(S)-17X02-X				KBM(S)-17X03-X				KBM(S)-17X04-X				
			A	B	C	A	B	C	D	A	B	C	D	A	B	C	D	
Continuous Stall Torque at 25°C Amb. (1)	Tc	N-m	2.08	2.06	2.07	3.58	3.52	3.57	3.58	4.89	4.90	5.00	5.00	6.20	6.12	5.90	5.90	
		lb-ft	1.53	1.52	1.53	2.64	2.60	2.64	2.64	3.61	3.62	3.69	3.69	4.57	4.52	4.35	4.35	
Continuous Current	Ic	Arms	1.65	3.11	6.10	1.59	3.00	5.27	6.25	3.02	5.32	6.14	10.4	3.26	5.53	6.20	9.56	
Peak Stall Torque (25°C winding temp)	Tp	N-m	5.95	6.14	6.35	12.2	12.3	12.7	12.8	18.5	18.8	18.8	19.0	23.7	23.7	23.7	24.0	
		lb-ft	4.39	4.53	4.68	9.00	9.05	9.38	9.45	13.6	13.9	13.9	14.0	17.5	17.5	17.5	17.7	
Peak Current	Ip	Arms	5.45	10.9	21.8	6.08	12.2	21.9	24.5	13.8	24.4	27.2	48.0	14.5	25.0	28.1	44.0	
Rated Continuous Output Power at 25°C Amb. (1)	P Rated	Watts	810	715	955	855	835	1270	790	1290	1440	890	965	1275	1520	1075	975	1550
	HP Rated	HP	1.09	0.958	1.280	1.15	1.12	1.70	1.06	1.73	1.93	1.19	1.29	1.71	2.04	1.44	1.31	2.08
Speed at Rated Power	N Rated	RPM	4650	9600	8125	9050	2600	5450	7560	5600	3950	6500	6480	6100	3350	5700	5775	5000
Torque Sensitivity (2)	Kt	N-m / Arms	1.29	0.681	0.355	2.31	1.21	0.709	0.565	1.66	0.948	0.849	0.496	1.96	1.14	1.01	0.661	
		lb-ft / Arms	0.948	0.502	0.262	1.70	0.890	0.523	0.416	1.22	0.699	0.626	0.366	1.45	0.841	0.748	0.487	
Back EMF Constant (3)	Kb	Vpk / kRPM	110	58.2	30.4	197	103	60.6	48.3	142	81.1	72.6	42.5	168	97.5	86.8	56.5	
Motor Constant	Km	N-m/√watt	0.227	0.227	0.232	0.359	0.353	0.365	0.359	0.461	0.462	0.478	0.471	0.544	0.557	0.555	0.557	
		lb-ft/√watt	0.168	0.167	0.171	0.265	0.261	0.270	0.265	0.340	0.341	0.353	0.348	0.401	0.411	0.409	0.411	
Resistance (line to line)	Rm	Ohms	21.3	6.02	1.56	27.5	7.78	2.51	1.65	8.61	2.81	2.10	0.740	8.64	2.80	2.23	0.940	
Inductance	Lm	mH	66	18	5.0	97	27	9.2	6.0	33	11	8.8	2.9	34	12	9.1	3.8	
Inertia (KBM)	Jm	Kg-m ²	5.12E-5			9.54E-5				1.42E-4				2.03E-4				
		lb-ft-s ²	3.78E-5			7.04E-5				1.05E-4				1.50E-4				
Weight (KBM)	Wt	Kg	1.05			1.87				2.65				3.62				
		lb	2.31			4.12				5.85				7.98				
Inertia (KBMS)	Jm	Kg-m ²	8.62E-5			1.28E-4				1.75E-4				2.40E-4				
		lb-ft-s ²	6.36E-5			9.45E-5				1.29E-4				1.77E-4				
Weight (KBMS)	Wt	Kg	1.16			1.97				2.76				3.72				
		lb	2.55			4.35				6.08				8.20				
Max Static Friction	Tf	N-m	4.23E-2			7.59E-2				.130				.165				
		lb-ft	3.12E-2			5.60E-2				9.60E-2				.122				
Cogging Friction (peak-to-peak)	Tcog	N-m	3.19E-2			5.61E-2				.102				.127				
		lb-ft	2.35E-2			4.14E-2				7.50E-2				9.40E-2				
Viscous Damping	Fi	N-m/ kRPM	8.45E-3			1.22E-2				1.60E-2				1.98E-2				
		lb-ft / kRPM	6.23E-3			9.00E-3				1.18E-2				1.46E-2				
Thermal Resistance (4)	TPR	°C / watt	0.970			0.800				0.700				0.650				
Number of Poles	P	-	10			10				10				10				
Recommended Drive	AKD-█	00307	00607	01206	00307	00307	00607	01206	00607	00607	01207	01206	00607	00607	01207	01206		
Voltage Req'd at Rated Output	Vac Input	VAC	480	480	400	240	480	480	400	240	480	480	400	240	480	480	400	240
Peak Stall Torque (5) (Motor with AKD servo drive)	Tp Drive	N-m	5.95	6.14	6.14	6.35	12.2	9.90	11.1	12.8	18.5	14.6	18.8	14.0	23.7	19.5	23.7	18.4
		lb-ft	4.39	4.53	4.53	4.68	9.00	7.30	8.18	9.45	13.6	10.8	13.9	10.3	17.5	14.4	17.5	13.6

* 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 10" x 10" x 1/4" heat sink or equivalent.
 5) Peak torque may be limited by AKD servo drive current, see page 11 for drive ratings or visit www.kollmorgen.com.