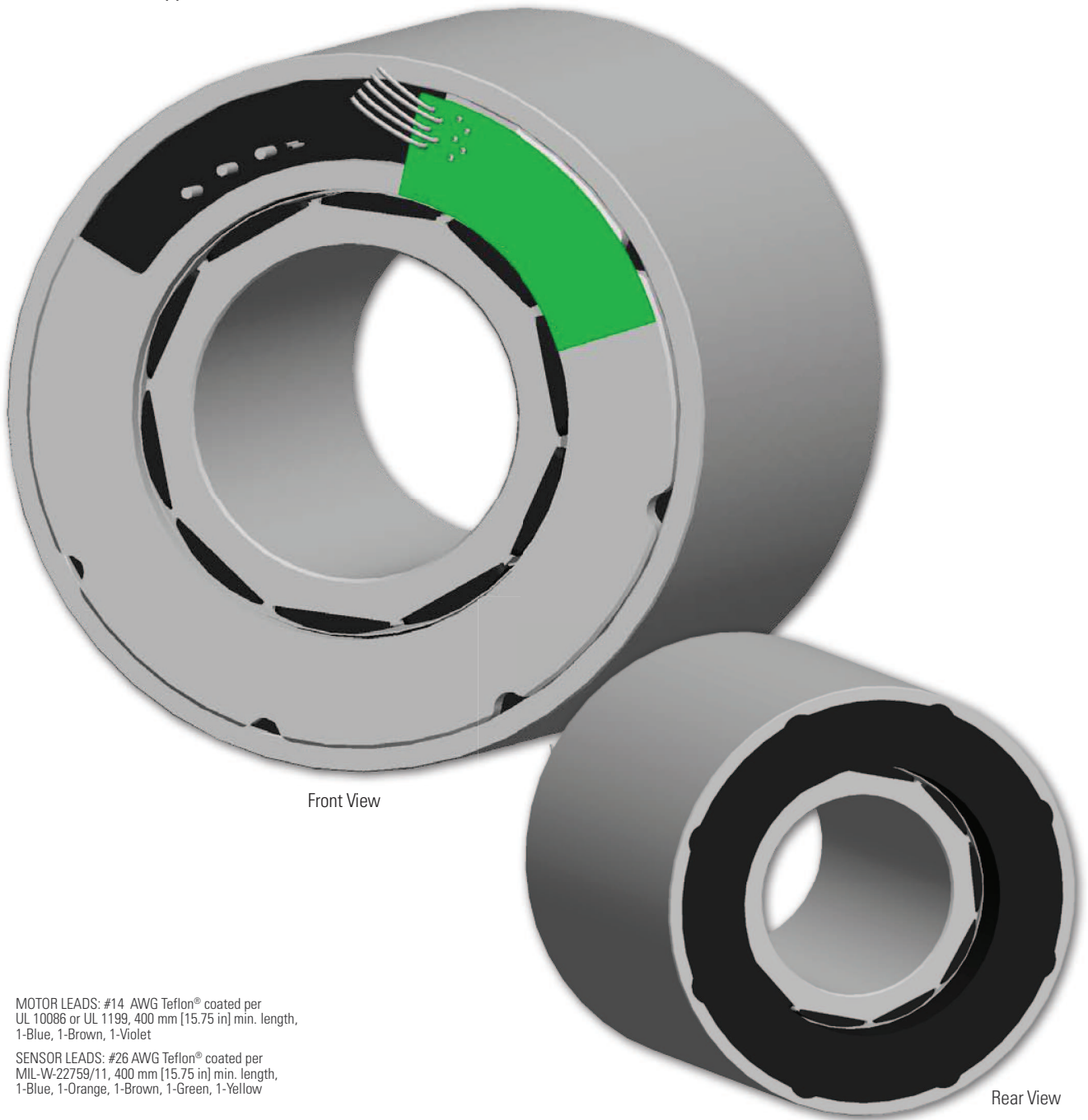


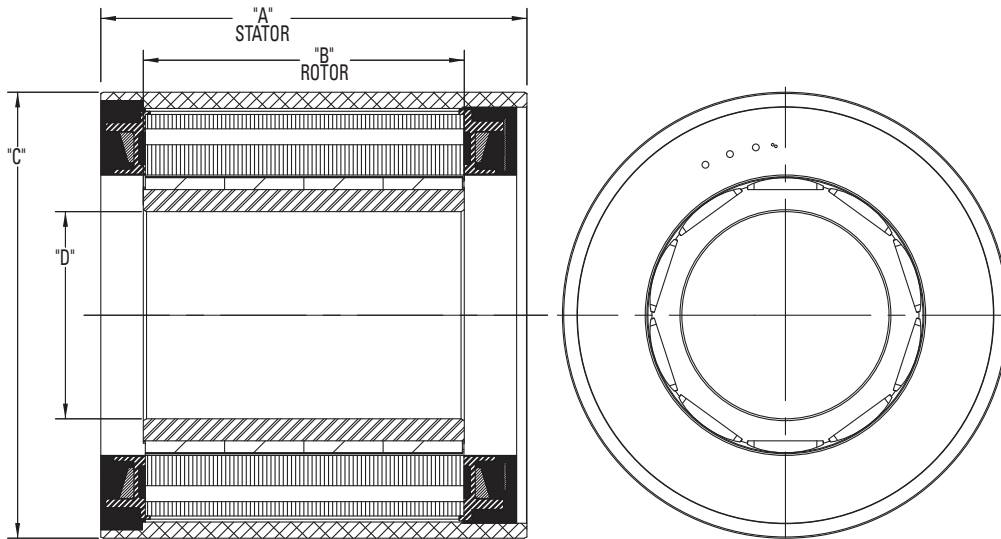
KBM 35 Frameless Motors

The KBM(S)-35 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)-35 is an ideal choice to meet or exceed your compact frameless motor application needs.



KBM 35 Outline Drawings

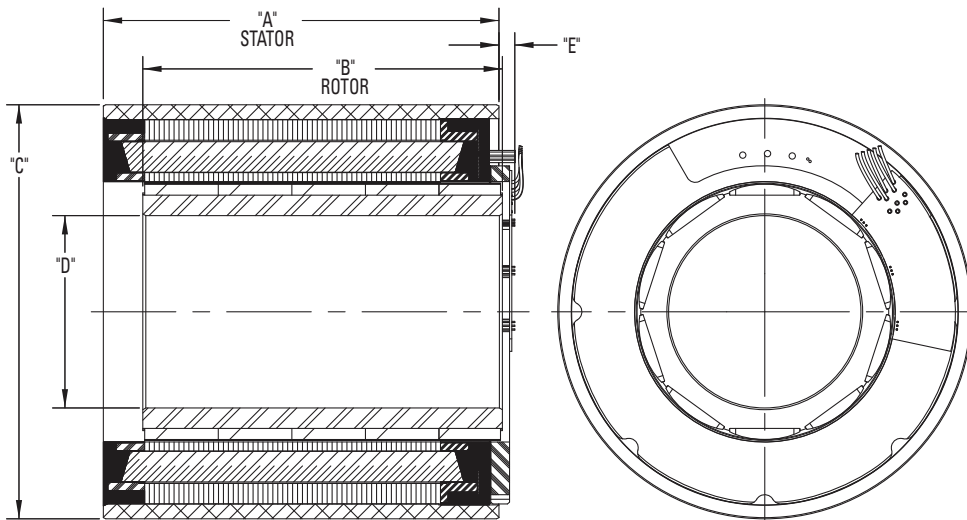
KBM 35



Model Number	"A" mm[inch]	"B" mm[inch]	Ø "C" mm[inch]	Ø "D" mm[inch]
KBM-35X01	83.74 [3.297]	51.00 [2.008]	139.956 [5.5101]	65.012 [2.5595]
KBM-35X02	108.74 [4.281]	75.87 [2.987]	139.956 [5.5101]	65.012 [2.5595]
KBM-35X03	133.74 [5.265]	100.74 [3.966]	139.956 [5.5101]	65.012 [2.5595]
KBM-35X04	158.74 [6.250]	125.60 [4.945]	139.956 [5.5101]	65.012 [2.5595]

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

KBMS 35

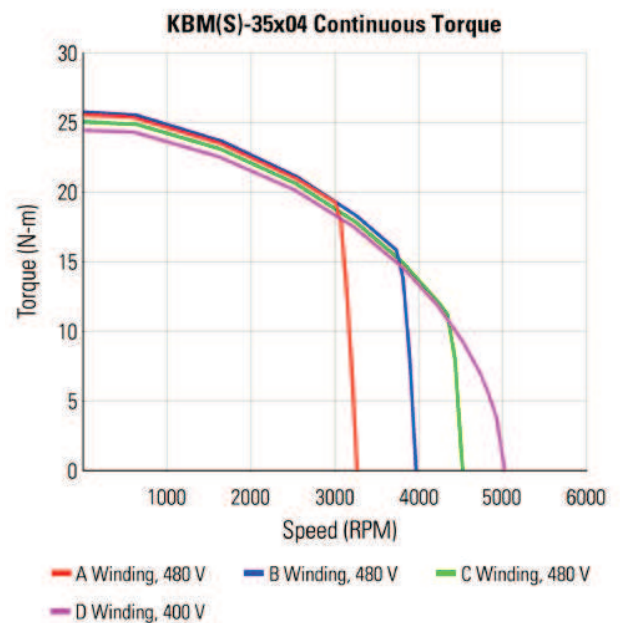
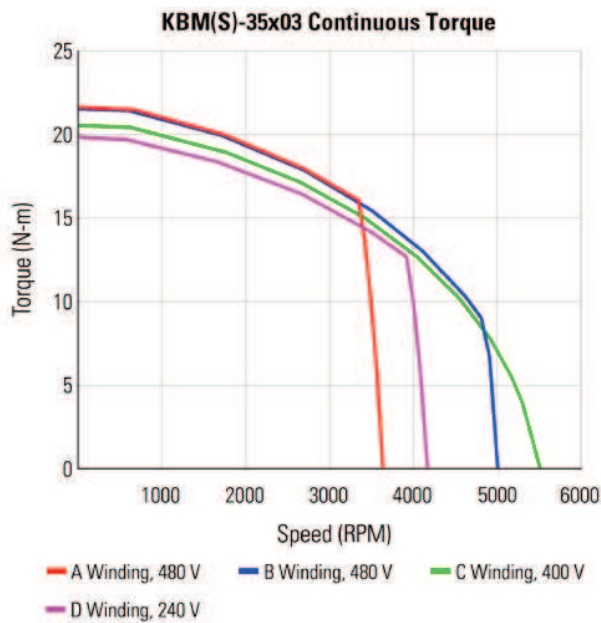
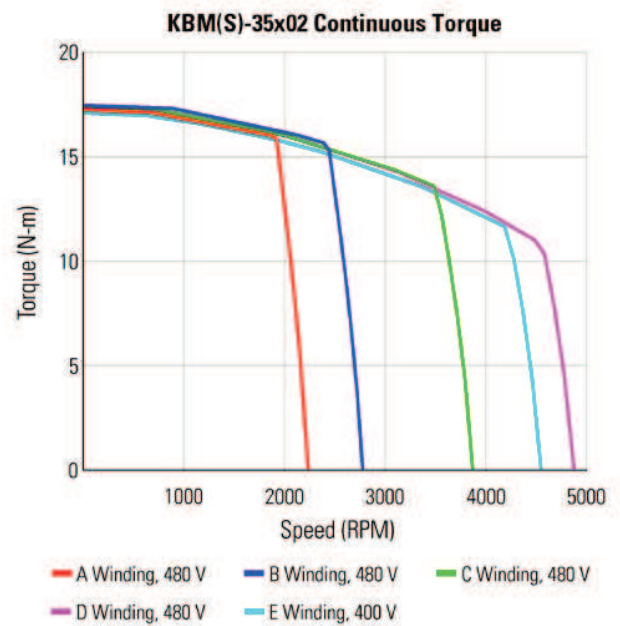
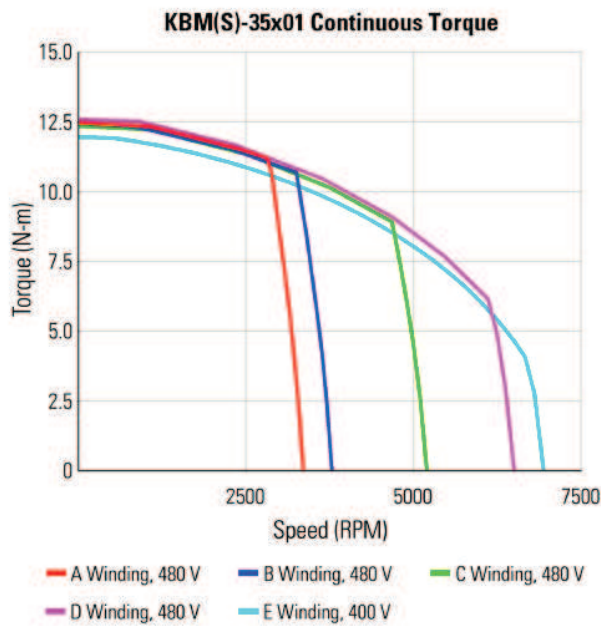


Model Number	"A" mm[inch]	"B" mm[inch]	Ø "C" mm[inch]	Ø "D" mm[inch]	"E" MAX mm[inch]
KBMS-35X01	83.74 [3.297]	71.83 [2.828]	139.956 [5.5101]	65.012 [2.5595]	5.75 [.226]
KBMS-35X02	108.74 [4.281]	96.70 [3.807]	139.956 [5.5101]	65.012 [2.5595]	5.75 [.226]
KBMS-35X03	133.74 [5.265]	121.56 [4.786]	139.956 [5.5101]	65.012 [2.5595]	5.75 [.226]
KBMS-35X04	158.74 [6.250]	146.43 [5.765]	139.956 [5.5101]	65.012 [2.5595]	5.75 [.226]

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

KBM 35 Performance Curves

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



KBM 35 Performance Data

KBM(S) Frameless Motor Series

KBM(S)-35XXX PERFORMANCE DATA & MOTOR PARAMETERS																				
Motor Parameter	Symbol	Units	KBM(S)-35X01-X					KBM(S)-35X02-X					KBM(S)-35X03-X				KBM(S)-35X04-X			
			A	B	C	D	E	A	B	C	D	E	A	B	C	D	A	B	C	D
Continuous Stall Torque at 25°C Amb. (1)	Tc	N-m	12.6	12.7	12.4	12.7	12.2	17.3	17.6	17.5	17.5	17.1	21.8	21.7	20.7	20.0	25.6	25.9	25.3	24.7
		lb-ft	9.26	9.34	9.15	9.34	9.00	12.8	13.0	12.9	12.9	12.6	16.1	16.0	15.3	14.8	18.9	19.1	18.7	18.2
Continuous Current	Ic	Arms	5.41	6.10	8.32	10.6	12.9	4.97	6.30	8.70	10.9	12.1	10.2	14.0	20.2	21.5	10.9	13.3	14.7	19.2
Peak Stall Torque (25°C winding temp)	Tp	N-m	40.9	40.8	41.1	41.2	41.1	58.8	58.8	59.2	59.4	59.4	76.1	76.6	75.2	75.7	92.3	93.0	93.0	91.5
		lb-ft	30.1	30.1	30.3	30.4	30.3	43.4	43.4	43.7	43.8	43.8	56.1	56.5	55.5	55.8	68.1	68.6	68.6	67.5
Peak Current	Ip	Arms	21.9	24.5	34.7	43.5	55.4	22.5	28.0	39.2	49.5	55.4	46.1	64.0	93.1	104	49.0	61.0	68.0	89.0
Rated Continuous Output Power at 25°C Amb. (1)	P Rated	Watts	2970	3100	3885	3750	3200	2750	3415	4395	4750	4610	5025	5160	2985	4735	5400	5750	4870	4500
	HP Rated	HP	3.98	4.16	5.21	5.03	4.29	3.69	4.58	5.89	6.37	6.18	6.74	6.92	4.00	6.35	7.24	7.71	6.53	6.03
Speed at Rated Power	N Rated	RPM	2700	2900	4200	5800	6125	1750	2200	3200	4300	3765	3100	4800	5000	3400	2800	3400	4150	4250
Torque Sensitivity (2)	Kt	N-m / Arms	2.37	2.11	1.53	1.23	0.956	3.55	2.87	2.05	1.64	1.46	2.19	1.59	1.05	.956	2.44	2.01	1.76	1.32
		lb-ft / Arms	1.75	1.55	1.13	0.904	0.705	2.62	2.12	1.51	1.21	1.08	1.62	1.17	0.776	0.705	1.80	1.48	1.30	0.975
Back EMF Constant (3)	Kb	Vpk / kRPM	203	180	131	105	81.8	304	246	175	140	125	187	136	90.0	81.8	208	172	151	113
Motor Constant	Km	N-m/√watt	0.954	0.947	0.946	0.963	0.908	1.24	1.27	1.25	1.25	1.23	1.51	1.50	1.43	1.38	1.71	1.73	1.68	1.65
		lb-ft/√watt	0.704	0.699	0.698	0.710	0.670	0.912	0.934	0.921	0.923	0.908	1.11	1.11	1.06	1.02	1.26	1.28	1.24	1.21
Resistance (line to line)	Rm	Ohms	4.13	3.30	1.75	1.08	0.740	5.50	3.43	1.80	1.14	0.940	1.41	0.750	0.360	0.320	1.35	0.900	0.730	0.430
Inductance	Lm	mH	32	25	13	8.5	5.4	44	28	15	9.3	7.4	12	6.2	2.8	2.3	11	7.6	6.1	3.4
Inertia (KBM)	Jm	Kg-m ²	1.52E-3					2.28E-3					3.04E-3				3.81E-3			
		lb-ft-s ²	1.12E-3					1.68E-3					2.24E-3				2.81E-3			
Weight (KBM)	Wt	Kg	4.68					6.76					8.80				10.9			
		lb	10.3					14.9					19.4				24.0			
Inertia (KBMS)	Jm	Kg-m ²	2.17E-3					2.94E-3					3.70E-3				4.46E-3			
		lb-ft-s ²	1.60E-3					2.17E-3					2.73E-3				3.29E-3			
Weight (KBMS)	Wt	Kg	5.17					7.21					9.34				11.3			
		lb	11.4					15.9					20.6				25.0			
Max Static Friction	Tf	N-m	0.247					0.346					0.450				0.598			
		lb-ft	0.182					0.255					0.332				0.441			
Cogging Friction (peak-to-peak)	Tcog	N-m	0.197					0.271					0.338				0.399			
		lb-ft	0.145					0.200					0.249				0.294			
Viscous Damping	Fi	N-m / kRPM	3.76E-2					5.99E-2					7.51E-2				9.40E-2			
		lb-ft / kRPM	2.77E-2					4.42E-2					5.54E-2				6.93E-2			
Thermal Resistance (4)	TPR	°C / watt	0.460					0.410					0.380				0.350			
Number of Poles	P	-	10					10					10				10			
Recommended Drive	AKD-█	█	00607	01207	01207	01207	02407	00607	01207	01207	01207	02407	01207	02407	02407	02406	01207	02407	02407	02407
Voltage Req'd at Rated Output	Vac Input	VAC	480	480	480	480	400	480	480	480	480	400	480	480	400	240	480	480	480	400
Peak Stall Torque (5) (Motor with AKD servo drive)	Tp Drive	N-m	37.5	40.8	40.9	34.1	36.3	57.4	58.8	56.0	46.0	55.0	61.6	70.0	49.0	45.0	71.0	87.5	79.0	61.0
		lb-ft	27.7	30.1	30.2	25.1	26.8	42.3	43.4	41.3	33.9	40.6	45.4	51.6	36.1	33.2	52.4	64.5	58.3	45.0

* 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 18" x 18" x 1/2" 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.