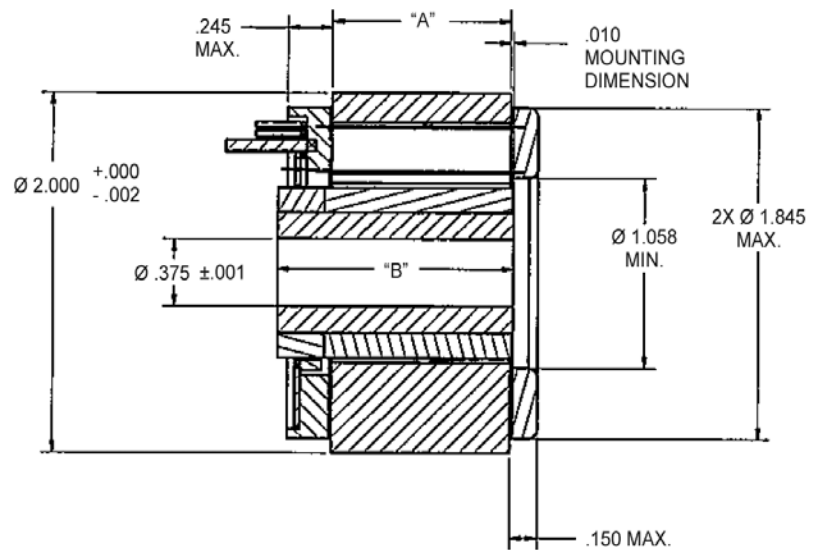
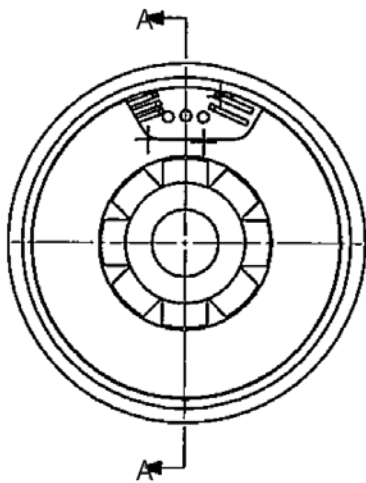


Brushless Torque Motors

DBE-2000-1ES SERIES SPECIFICATIONS @ 25°C

Part Number		DBE-2000-A-1ES	DBE-2000-B-1ES	DBE-2000-C-1ES	DBE-2000-D-1ES	DBE-2000-E-1ES	DBE-2000-F-1ES	DBE-2000-G-1ES	DBE-2000-H-1ES
Size Constants		Units							
Peak Torque, T_p	oz-in	43	75	100	126	192	256	315	377
Motor Constant, K_M	oz-in/vV	5.93	9.16	11.1	12.8	17.1	20.6	23.2	25.8
Number of Poles		8	8	8	8	8	8	8	8
Number of Phases		3	3	3	3	3	3	3	3
Weight	oz (nom)	4.6	7.6	10.1	13	18	23	28	34
Motor Inertia, J_M	oz-in-s ²	4.41E-04	6.59E-04	8.81E-04	1.10E-03	1.54E-03	1.98E-03	2.41E-03	2.85E-03
Friction Torque, T_f	oz-in	1.0	2.0	3.0	4.00	6.0	8.0	10	12
Electrical Time Constant, τ_E	ms	0.48	0.74	0.92	1.0	1.2	1.3	1.4	1.4
Mechanical Time Constant, τ_M	ms	1.77	1.11	1.02	0.949	0.741	0.660	0.638	0.606
Temperature Rise, Housed TPR ¹	°C/W	11.0	8.4	6.8	5.8	4.4	3.6	3.0	2.6
Sensors		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Winding Constants		Units							
Torque Sensitivity, K_T	oz-in/amp	8.60	15.0	20	25.2	38.5	51.3	62.9	75.5
Back EMF, K_E	V per rad/s	0.0607	0.106	0.141	0.178	0.272	0.362	0.444	0.533
Terminal Resistance, R_M	ohms (nom)	2.10	2.68	3.27	3.87	5.04	6.21	7.38	8.55
Terminal Inductance, L_M	mH (nom)	1.0	2.0	3.0	4.0	6.0	8.0	10	12
Voltage, Stalled at Peak Torque, V_p	volts	10.5	13.4	16.4	19.3	25.2	31.0	36.9	42.8
Amps at Peak Torque, I_p	amps	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00

DBE-2000-1ES Series Typical Outline Drawing



Modular	"A"	"B"
	inches	inches
DBE-2000-A-1ES	.250	.540
DBE-2000-B-1ES	.500	.805
DBE-2000-C-1ES	.750	1.065
DBE-2000-D-1ES	1.000	1.330
DBE-2000-E-1ES	1.500	1.860
DBE-2000-F-1ES	2.000	2.385
DBE-2000-G-1ES	2.500	2.915
DBE-2000-H-1ES	3.000	3.440

Tolerances are:
 Angles ± 0.5
 .XXX $\pm .005$
 .XX $\pm .01$
 .X $\pm .03$

Dimensions are in inches

Dimensions and tolerances are in accordance with ASME Y14.5 - 1994

Unless otherwise Specified
 Finish: E.S. 411
 For machined surfaces