

DB-5000 Matirx Series Specifications

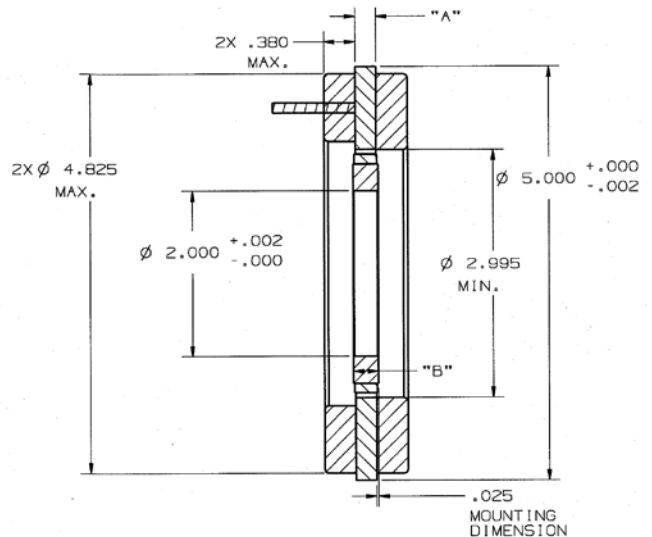
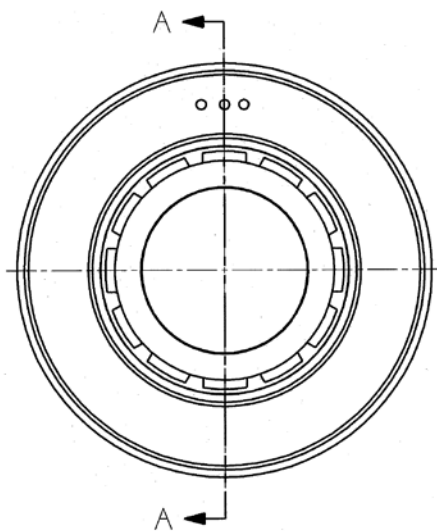
DB-5000 SERIES SPECIFICATIONS @ 25°C

Part Number		DB-5000-A-1ES	DB-5000-B-1ES	DB-5000-C-1ES	DB-5000-D-1ES	DB-5000-E-1ES	DB-5000-F-1ES	DB-5000-G-1ES	DB-5000-H-1ES
Size Constants	Units								
Peak Torque, T_p	oz-in	578	1207	2298	3444	4536	5644	6768	9024
Motor Constant, K_M	oz-in/ \sqrt{W}	22.2	42.5	71.6	97.3	118.0	137.0	155.0	186.0
Number of Poles		12	12	12	12	12	12	12	12
Number of Phases		3"Y"	3"Y"	3"Y"	3"Y"	3"Y"	3"Y"	3"Y"	3"Y"
Weight	oz (nom)	31	48	74	104	135	165	200	255
Motor Inertia, J_M	oz-in-s ²	1.89E-02	3.84E-02	7.10E-02	1.04E-01	1.36E-01	1.69E-01	2.03E-01	2.68E-01
Friction Torque, T_F	oz-in	4.5	10	19	28	38	47	56	76
Electrical Time Constant, τ_E	ms	1.4	2.5	3.7	4.5	5.1	5.5	5.9	6.3
Mechanical Time Constant, τ_M	ms	5.45	3.02	1.96	1.55	1.38	1.27	1.20	1.10
*Temperature Rise, TPR	°C/W	2.7	2.3	1.7	1.4	1.2	1.0	0.9	0.8
Sensors		No	No	No	No	No	No	No	No
Winding Constants	Units								
**Torque Sensitivity, K_T	oz-in/amp ± 10%	72	151	287	430	567	705	846	1128
Back EMF, K_E	V per rad/s ± 10%	0.509	1.07	2.03	3.04	4.00	4.98	5.97	7.97
Terminal Resistance, R_M	ohms ± 10%	10.6	12.6	16.1	19.6	23.0	26.5	29.9	36.8
Terminal Inductance, L_M	mH ± 30%	14	32	60	89	118	147	175	233
Voltage, Stalled at Peak Torque, V_p	volts	84.6	101	129	156	184	212	239	295
Amps at Peak Torque, I_p	amps	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0

*TPR as listed on the data sheets, is for an un-mounted condition unless otherwise noted. Mounted TPR values are often 50% or less than the un-mounted TPR. For air flow, the TPR may be less than 25% the un-mounted amount and for fluid cooling it may be 10% or less. Many factors affect the TPR value and its change relative to the mounting or external cooling applied. Consult the factory for an more accurate estimate of the motor's TPR.

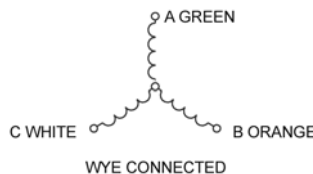
**Stack lengths from 0.25 to 10.00 inches (6.35 to 254 mm) with K_T to 125 N.m/amp

DB-5000 Series Typical Outline Drawing



Dimensions are in inches

Modular	"A"	"B"
	inches	inches
DB-5000-A-1ES	.250	.300
DB-5000-B-1ES	.550	.600
DB-5000-C-1ES	1.050	1.100
DB-5000-D-1ES	1.550	1.600
DB-5000-E-1ES	2.050	2.100
DB-5000-F-1ES	2.550	2.610
DB-5000-G-1ES	3.050	3.125
DB-5000-H-1ES	4.050	4.125



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