

DBE-6000 Matrix Series Specifications

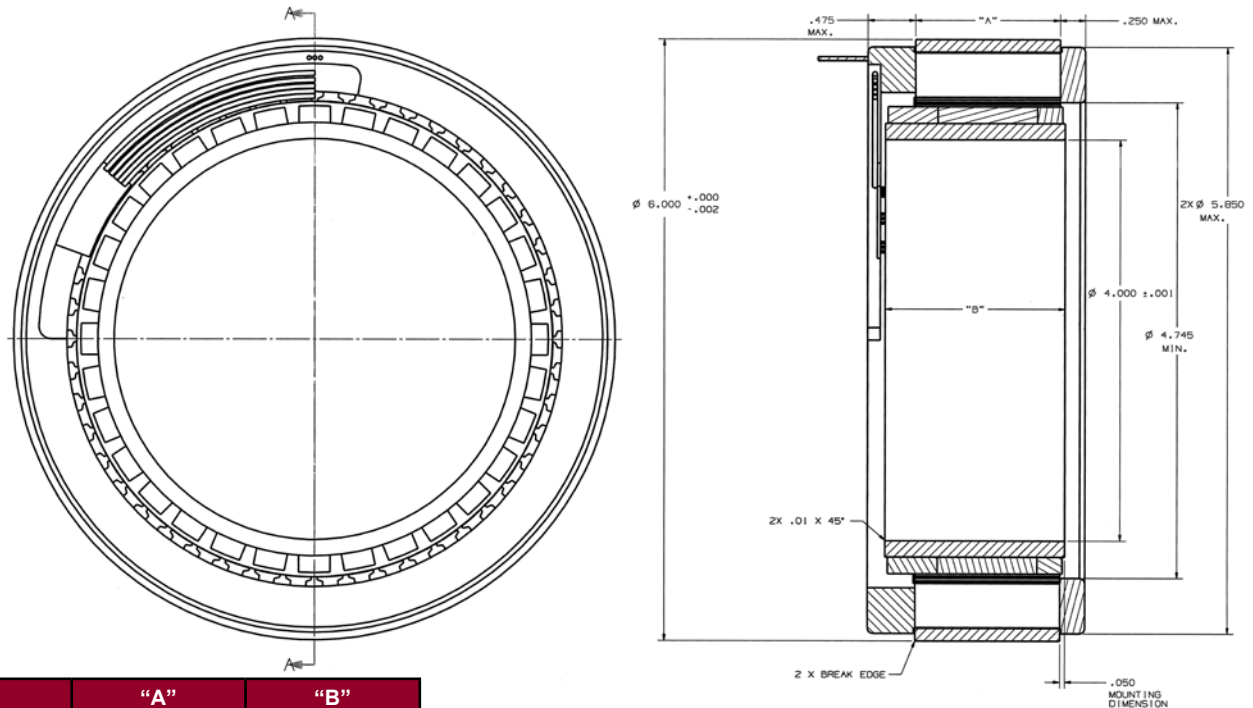
DBE-6000 SERIES SPECIFICATIONS @ 25°C

Part Number		DB-6000-B-2ES	DB-6000-C-2ES	DB-6000-D-2ES	DB-6000-E-2ES	DB-6000-F-2ES	DB-6000-G-2ES
Size Constants							
Peak Torque, T_P	lb-ft	52.5	44	35	26.3	17.5	8.8
Motor Constant, K_M	lb-ft/√W	1.41	1.27	1.11	0.93	0.72	0.419
Number of Poles		32	32	32	32	32	32
Number of Phases		3"Y"	3"Y"	3"Y"	3"Y"	3"Y"	3"Y"
Weight	lbs	10.5	9.2	7.6	6.0	4.4	2.8
Motor Inertia, J_M	lb-ft-s ²	3.54×10^{-3}	3.04×10^{-3}	2.50×10^{-3}	1.95×10^{-3}	1.40×10^{-3}	8.51×10^{-4}
Friction Torque, T_F	lb-ft	0.65	0.54	0.43	0.32	0.22	0.10
Electrical Time Constant, τ_E	ms	1.9	1.9	1.8	1.7	1.4	1.0
Mechanical Time Constant, τ_M	ms	1.32	1.40	1.50	1.67	2.02	3.28
*Temperature Rise, Housed TPR ¹	°C/W	0.72	0.90	1.1	1.3	1.7	2.4
Sensors		Yes	Yes	Yes	Yes	Yes	Yes
Winding Constants							
**Torque Sensitivity, K_T	lb-ft/amp	2.63	2.19	1.75	1.31	0.875	0.439
Back EMF, K_E	V per rad/s	3.56	2.97	2.38	1.78	1.19	0.595
Terminal Resistance, R_M	ohms (nom)	3.48	2.99	2.5	2.00	1.50	1.10
Terminal Inductance, L_M	mH (nom)	6.7	5.6	4.4	3.3	2.2	1.0
Voltage, Stalled at Peak Torque, V_P	volts	69.8	59.9	50.0	40.0	30.0	22.0
Amps at Peak Torque, I_P	amps	20.0	20.0	20.0	20.0	20.0	20.0

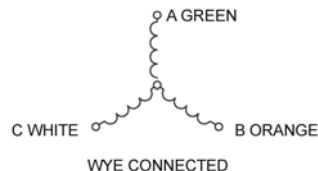
¹TPR as listed on the data sheets, is for an un-mounted condition unless otherwise noted. Mounted TPR values are often 50% or less than the un-mounted TPR. For air flow, the TPR may be less than 25% the un-mounted amount and for fluid cooling it may be 10% or less. Many factors affect the TPR value and its change relative to the mounting or external cooling applied. Consult the factory for an more accurate estimate of the motor's TPR.

²Stack lengths from 0.25 to 12.00 inches (6.35 to 304.8 mm) with K_T to 232 N.m/amp

DBE-6000 Series Typical Outline Drawing



Modular	"A"	"B"
	inches	inches
DBE-6000-B-2ES	2.950	3.300
DBE-6000-C-2ES	2.450	2.800
DBE-6000-D-2ES	1.950	2.300
DBE-6000-E-2ES	1.450	1.800
DBE-6000-F-2ES	.950	1.300
DBE-6000-G-2ES	.450	.800



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

Dimensions are in inches

REVISED 04/2015