

SIZE CONSTANTS **

Parameter	Symbol	Unit	VALUE
Maximum Rated Torque	Tr	lbft Nm	21.218 28.768
Maximum Continuous Stall Torque @Temperature Rise 110.000 °C	Tc	lbft Nm	3.204 4.344
Motor Constant	Km	lbft/sqrt.w Nm/sqrt.w	0.409 0.554
Electrical Time Constant	Te	msec	2.179
Mechanical Time Constant	Tm	msec	4.614
Angular Acceleration (theoretical)		rad/sec ²	19278.855
Thermal Resistance *	TPR	°C/watts	1.250
Maximum Cogging Torque	Tf	lbft Nm	0.245 0.332
Viscous Damping (Infinite Source Impedance)	Fi	lbft/rpm Nm/rpm	7.688E-05 1.042E-04
Hysteresis Drag Torque	Th	lbft Nm	0.030 0.040
Rotor Inertia Frameless	Jm	lbfts2 kg.m2	1.045E-03 1.417E-03
Motor Weight Frameless	Wt	lb kg	2.632 1.194
No. of Poles		P	24

* TPR Assumes motor mounted to aluminium heat sink
10.000 10.000 0.250 inches (Still air)
** @ Ambient Temperature , 20.000°C

Winding Constants *

Parameter	Symbol	Unit	VALUE
Design Voltage	Vp	volt	48.000
Peak Torque, +/-25%	Tp	lbft Nm	20.155 27.326
Peak Current, +/-15%	Ip	ampere	50.639
Torque Sensitivity +/-10%	Kt	lbft/amp Nm/Amp	0.398 0.540
No Load Speed	Snl	rpm rad/sec	823.057 86.190
Voltage Constant +/-10%	Kb	v/Krpm v/rad/sec	56.510 0.540
Terminal Resistance +/-12%	Rm	ohms	0.948
Terminal Inductance +/-30%	Lm	mH	2.065

* Performance @ 20.000°C
RMS TORQUE PERFORMANCE

Design Voltage	Vp	volt	48.000
Continuous Power Output @	Power	watt Horsepower	218.765 0.293
Temperature Rise: 110.893°C	Torque	lbft Nm	2.801 3.798
COOLING : { Still air}	Speed	rpm	550.000
Ambient temperature 20.000°C	Iphase	amperes	8.610
	I(dc-link)	amperes	6.406
	Efficiency	%	71.148

UNHOUSED	MECHANICAL	
Stator Stack OD	6.693 inch	170.002 mm
Stator Stack Length (UNmachined)	0.390 inch	9.906 mm
Stator ID	4.366	
No. Of Phases	3	
Phase Connection	WYE	
Length Over Coil (Maximum)	1.240 inch	31.496 mm
End Turns OD (Maximum)	5.750 inch	146.050 mm
End Turns ID (Maximum)	4.440 inch	112.776 mm
Lead Wire Gage	20 AWG	
Lead Wire Length	12.000 inch	304.800 mm
ROTOR OD	4.326 inch	109.880 mm
Rotor ID	3.701 inch	94.000 mm
Rotor Axial Length "B"	0.515 inch	13.081 mm
No. Of Poles	24	

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