MF0150010-X0X OREGON STATE UNIVERSITY

SIZE CONSTANTS **

Parameter	Symbol	Unit	VALUE
Maximum Rated Torque	Tr	lbft	21.218
		Nm	28.768
Maximum Continuous Stall Torque @Temperature Rise 110.000 °C	Tc	lbft	3.204
		Nm	4.344
Motor Constant	Km	lbft/sqrt.w	0.409
		Nm/sqrt.w	0.554
Electrical Time Constant	Te	msec	2.179
Mechanical Time Constant	Tm	msec	4.614
Angular Acceleration (theoretical)		rad/sec²	19278.855
Thermal Resistance *	TPR	°C/watts	1.250
Maximum Cogging Torque	Tf	lbft	0.245
		Nm	0.332
Viscous Damping (Infinite Source Impedance)	Fi	lbft/rpm	7.688E-05
		Nm/rpm	1.042E-04
Hysteresis Drag Torque	Th	lbft	0.030
		Nm	0.040
Rotor Inertia Frameless	Jm	lbfts2	1.045E-03
		kg.m2	1.417E-03
Motor Weight Frameless	Wt	lb	2.632
		kg	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	20.155
		Nm	27.326
Peak Current,+/-15%	Ip	ampere	50.639
Torque Sensitivity +/-10%	Kt	lbft/amp	0.398
		Nm/Amp	0.540
No Load Speed	Snl	rpm	823.057
		rad/sec	86.190
Voltage Constant +/-10%	Kb	v/Krpm	56.510
		v/rad/sec	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	218.765
			Horsepower	0.293
Temperature Rise:	110.893°C	Torque	lbft	2.801
COOLING :			Nm	3.798
{ 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	