

SIZE CONSTANTS **

Parameter	Symbol	Unit	VALUE
Maximum Rated Torque	Tr	lbft	17.857
		Nm	24.210
Maximum Continuous Stall Torque @Temperature Rise 110.000 °C	Tc	lbft	3.268
		Nm	4.431
Motor Constant	Km	lbft/sqrt.w	0.417
		Nm/sqrt.w	0.565
Electrical Time Constant	Te	msec	2.266
Mechanical Time Constant	Tm	msec	4.436
Angular Acceleration (theoretical)		rad/sec ²	17080.709
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	7.194E-05
		Nm/rpm	9.754E-05
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	2.654
		kg	1.204
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	17.857 24.210
Peak Current, +/-15%	Ip	amps LIMIT	121.136
Torque Sensitivity +/-10%	Kt	lbft/amp Nm/Amp	0.147 0.200
No Load Speed	Sn1	rpm rad/sec	2222.253 232.714
Voltage Constant +/-10%	Kb	v/Krpm v/rad/sec	20.929 0.200
Terminal Resistance +/-12%	Rm	ohms	0.125
Terminal Inductance +/-30%	Lm	mH	0.283

* Performance @ 20.000°C
 RMS TORQUE PERFORMANCE

Design Voltage	Vp	volt	48.000
Continuous Power Output @	Power	watt Horsepower	468.152 0.628
Temperature Rise: 100.137°C	Torque	lbft Nm	2.355 3.193
COOLING : { Still air}	Speed	rpm	1400.000
Ambient temperature 20.000°C	Iphase	amperes	18.800
	I (dc-link)	amperes	11.422
	Efficiency	%	85.388

PEAK TORQUE PERFORMANCE

Power Output @	Power	watt Horsepower	1268.709 1.701
Temperature Rise: 100.583°C	Torque	lbft Nm	7.446 10.096
COOLING : { Still air}	Speed	rpm	1200.000
Ambient temperature 20.000°C	Iphase	amperes	62.000
	I (dc-link)	amperes	38.204
	Efficiency	%	69.185

UNHOUSED	MECHANICAL	
Stator Stack OD	6.693 inch	170.002 mm
Stator Stack Length (Machined)	0.390 inch	9.906 mm
Stator ID	4.366	
No. Of Phases	3	
Phase Connection	WYE	
Length Over Coil (Maximum)	1.340 inch	34.036 mm
End Turns OD (Maximum)	5.750 inch	146.050 mm
End Turns ID (Maximum)	4.440 inch	112.776 mm
Lead Wire Gage	16 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	