

SIZE CONSTANTS **

Parameter	Symbol	Unit	VALUE
Maximum Rated Torque	Tr	lbft	41.438
		Nm	56.183
Maximum Continuous Stall Torque @Temperature Rise 110.000 °C	Tc	lbft	6.896
		Nm	9.349
Motor Constant	Km	lbft/sqrt.w	0.759
		Nm/sqrt.w	1.029
Electrical Time Constant	Te	msec	2.972
Mechanical Time Constant	Tm	msec	3.112
Angular Acceleration (theoretical)		rad/sec ²	17057.754
Thermal Resistance *	TPR	°C/watts	0.930
Maximum Cogging Torque	Tf	lbft	0.365
		Nm	0.494
Viscous Damping (Infinite Source Impedance)	Fi	lbft/rpm	2.187E-04
		Nm/rpm	2.965E-04
Hysteresis Drag Torque	Th	lbft	0.069
		Nm	0.094
Rotor Inertia Frameless	Jm	lbfts ²	2.429E-03
		kg.m ²	3.294E-03
Motor Weight Frameless	Wt	lb	3.850
		kg	1.746
No. of Poles		P	32

* TPR Assumes motor mounted to aluminium heat sink
 15.000 15.000 0.500 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	41.438 56.183
Peak Current, +/-15%	Ip	amps LIMIT	131.431
Torque Sensitivity +/-10%	Kt	lbft/amp Nm/Amp	0.315 0.427
No Load Speed	Sn1	rpm rad/sec	1033.936 108.273
Voltage Constant +/-10%	Kb	v/Krpm v/rad/sec	44.765 0.427
Terminal Resistance +/-12%	Rm	ohms	0.173
Terminal Inductance +/-30%	Lm	mH	0.513

* Performance @ 20.000°C
 RMS TORQUE PERFORMANCE

Design Voltage	Vp	volt	48.000
Continuous Power Output @	Power	watt Horsepower	594.149 0.797
Temperature Rise: 100.393°C	Torque	lbft Nm	5.231 7.092
COOLING : { Still air}	Speed	rpm	800.000
Ambient temperature 20.000°C	Iphase	amperes	20.700
	I(dc-link)	amperes	14.627
	Efficiency	%	84.625

UNHOUSED	MECHANICAL	
Stator Stack OD	9.055 inch	229.997 mm
Stator Stack Length (UNmachined)	0.390 inch	9.906 mm
Stator ID	6.580	
No. Of Phases	3	
Phase Connection	WYE	
Length Over Coil (Maximum)	1.140 inch	28.956 mm
End Turns OD (Maximum)	8.100 inch	205.740 mm
End Turns ID (Maximum)	6.660 inch	169.164 mm
Lead Wire Gage	12 AWG	
Lead Wire Length	12.000 inch	304.800 mm
ROTOR OD	6.520 inch	165.608 mm
Rotor ID	5.906 inch	150.000 mm
Rotor Axial Length "B"	0.520 inch	13.208 mm
No. Of Poles	32	
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