Magmotor

**10 Coppage Drive
Worcester, MA 01603
12/1/2023**

MOTOR PERFORMANCE / SPECIFICATIONS

Attn.:

Final Product No.: **500280164**

Customer: Nomadic Technologies

RFQ

Phone/Fax:

By: BT

Date: 12/1/2023

This is a calculation data sheet X

SPECS	C/S	Frame	PM	-	Winding	-	Stack	Options	Gear Ratio
MODEL #	**C**	**33**	**-**		**I**	**-**	**300**	**X**	**1.00**

V in =*	**90**	Vdc		Input Voltage		**Eff =** 0.9
Ke =*	**33.80**	V/krpm		Voltage Constant		
Kt =	45.7	oz-in/A		Torque Constant		
Rt =*	**4.40**	Ohms(@20°C)		Terminal Resistance+Amplifier		
Io=*	**0.25**	Amps		No load current		
I as =	20.5	Amps		Stall Current (reference only)		
T gs =	935	oz-in		Stall Torque (reference only @ V in)		
I 1 =	2.0	Amps		Current @ Torque-1		
I 2 =	2.3	Amps		Current @ Torque-2		
T 1 =*	**80**	oz-in		Torque-1	72.0 oz-in	4.5 in-lb
T 2 =*	**95**	oz-in		Torque-2	85.5 oz-in	5.3 in-lb
RPM nl =	2663	RPM		No Load Velocity		2662.7 rpm
RPM r =	2435	RPM		RPM @ T1		**2434.9 rpm**
RPM p=	2392	RPM		RPM @ T2		2392.2 rpm
R ah =	5.76	Ohms(@105°C)		Term. Resistance Hot		
T gsh =	715	oz-in		Stall Torque Hot		
I ash =	15.6	Amps		Stall Current Hot		
R th =*	**2.3**	°C/W		Thermal Resistance		
Tr =	**83**	°C	Without cooling air	Temperature Rise @ T1 (above ambient)		
Tr =	**95**	°C	Without cooling air	Temperature Rise @ T2 (above ambient)		
Nm/A=	0.32			Torque Constant		
Lb in/A=	2.86			Torque Constant		
Km=	21.8	Kt//r		Motor Constant		

Torque Curve
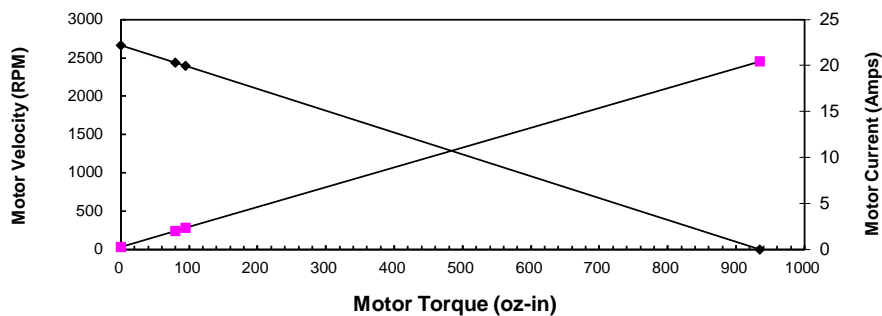
Calculation data

Voltage	Torque	RPM	Amp	Efficiency	Watts out
90	0	2663	0.3	0	0
90	80	2435	2.0	0.800377359	144.07665
90	95	2392	2.3	0.802166936	168.08943
90	935	0	20.5	0	0