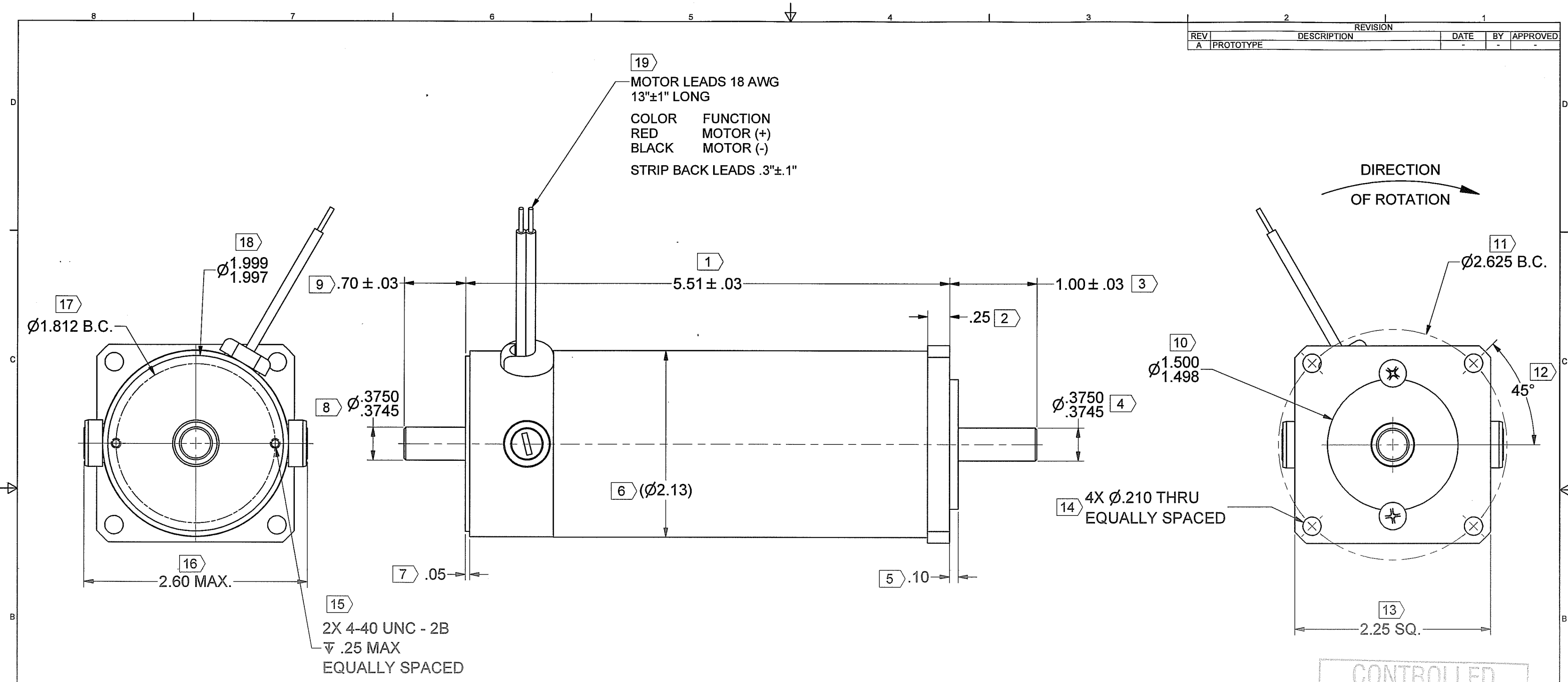


REVISION		DATE	BY	APPROVED
REV	DESCRIPTION			
A	PROTOTYPE			



**MOTOR SPECIFICATIONS:**

TORQUE CONSTANT (Kt) = 35.0 ± 10% OZ-IN/AMP  
VOLTAGE CONSTANT (Ke) = 25.9 ± 10% VOLTS/KRPM

**NOTES:**

- 1.) MOTOR ROTATION IS CLOCKWISE WHEN VIEWED FROM OUTPUT SHAFT WITH POSITIVE VOLTAGE APPLIED TO RED LEAD.
- 2.) SCREW PENETRATION NOT TO EXCEED SPECIFIED THREAD DEPTH.
- 3.) **X** IDENTIFIES INSPECTION DIMENSIONS.

CONTROLLED  
JUL 5 2022  
DOCUMENT

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES & [mm]	THIRD ANGLE PROJECTION DO NOT SCALE DRAWING	THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF MAGMOTOR TECHNOLOGIES. ANY REPRODUCTION OR DISCLOSURE OF THE INFORMATION CONTAINED THEREIN IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION FROM MAGMOTOR TECHNOLOGIES IS PROHIBITED.		MAGMOTOR™
		SIGNATURES	DATE	
TOLERANCES ON: ANGLES = ± 1/2° X.XX [X.X] = ± .01 [0.25] X.XXX [X.XX] = ± .005 [0.12]	125 ✓	DRAWN CGW	6/22/2022	MOTOR ASSEMBLY, C21-I-300FX
MATERIAL	CHECKED	ENG APPR. MCM	7/5/22	
SPEC		MFG APPR. BT	7/5/22	
FINISH NONE	Q.A.	UNLESS OTHERWISE SPECIFIED REMOVE ALL BURRS & SHARP EDGES, COUNTERSINK TAPPED HOLES TO BODY SIZE FILLET: .03 MAX. / EXTERNAL CORNERS: .015 MAX.		SIZE NUMBER <b>D 500210362</b>
SPEC				REV <b>A</b>
		SCALE: -	WEIGHT: - LB.	SHEET 1 OF 3



10 Coppage Drive  
Worcester, MA 01603  
8/17/2022

**MOTOR PERFORMANCE / SPECIFICATIONS**

**Attn.:**

Final Product No.: **C21-I-300FX**

Customer:

RFQ 500210362

Phone/Fax:

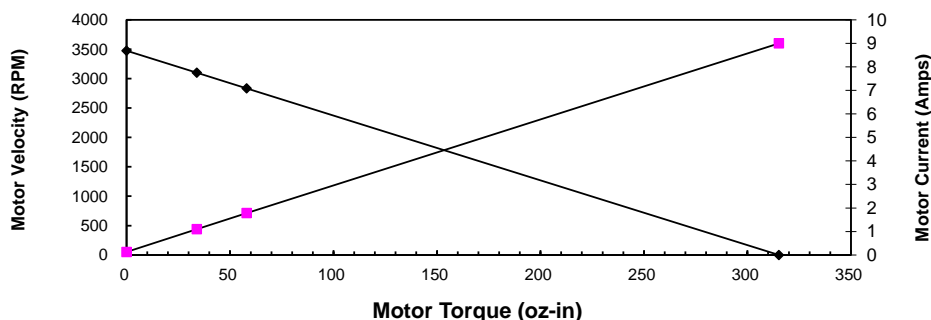
By: MM

Date: 8/17/2022

This is a calculation data sheet

SPECS	C/S	Frame	PM	-	Winding	-	Stack	Options	Gear Ratio
MODEL #	<b>C</b>	<b>21</b>	-	-	<b>I</b>	-	<b>300</b>	<b>FX</b>	
V in =*	<b>90</b>	Vdc							Eff = 0.9
Ke =*	<b>25.90</b>	V/krpm							
Kt =	35.0	oz-in/A							
Rt =*	<b>10.00</b>	Ohms(@20° C)							
Io =*	<b>0.13</b>	Amps							
I as =	9.0	Amps							
T gs =	315	oz-in							
I 1 =	1.1	Amps							
I 2 =	1.8	Amps							
T 1 =*	<b>34</b>	oz-in							
T 2 =*	<b>58</b>	oz-in							
RPM nl =	3475	RPM							#DIV/0! rpm
RPM r =	3100	RPM							#DIV/0! rpm
RPM p =	2836	RPM							#DIV/0! rpm
R ah =	13.08	Ohms(@105° C)							
T gsh =	241	oz-in							
I ash =	6.9	Amps							
R th =*	<b>3.8</b>	°C/W							
Tr =	<b>80</b>	°C	Without cooling air						Temperature Rise @ T1 (above ambient)
Tr =	<b>149</b>	°C	Without cooling air						Temperature Rise @ T2 (above ambient)
Nm/A =	0.25								Torque Constant
Lb in/A =	2.19								Torque Constant
Km =	11.1	Kt/r							Motor Constant

**Torque Curve**



**Calculation data**

Voltage	Torque	RPM	Amp	Efficiency	Watts out
90	0	3475	0.1		0
90	34	3100	1.1	0.787009074	77.961732
90	58	2836	1.8	0.756838466	121.64454
90	315	0	9.0		0