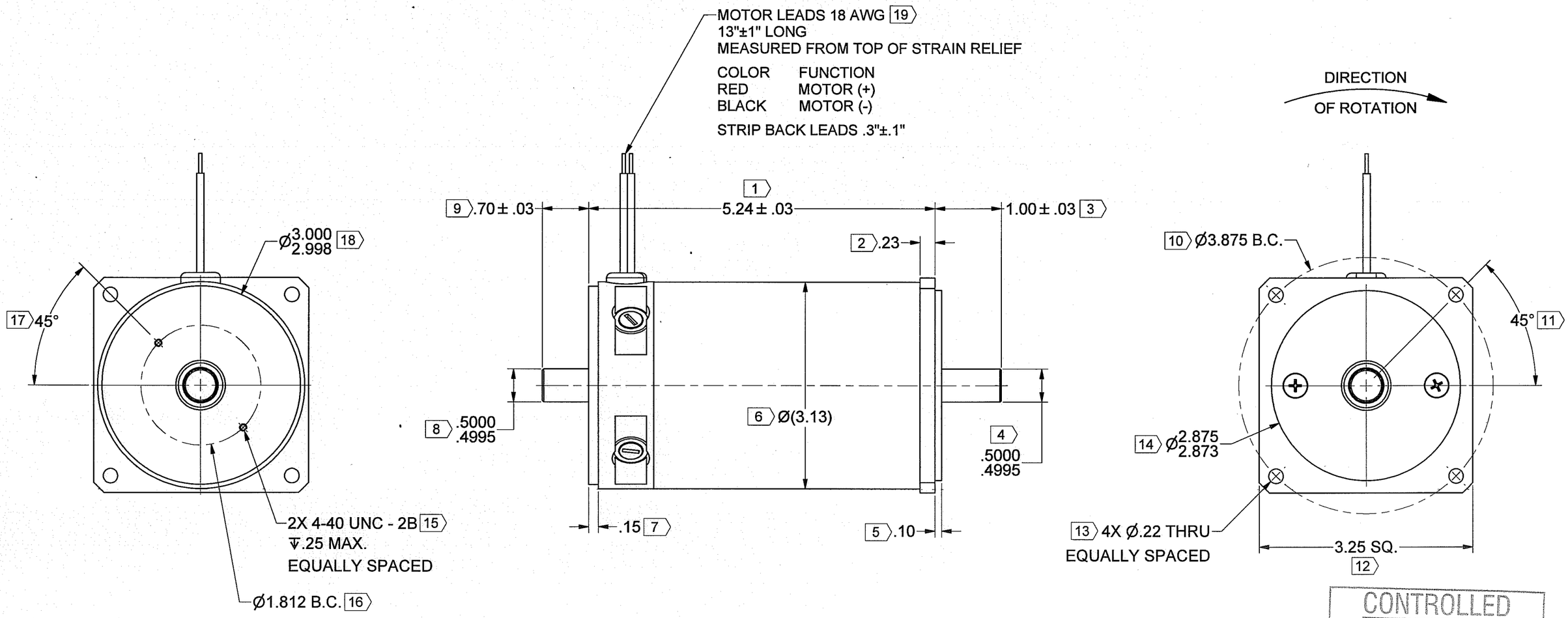
REVISION				
REV	DESCRIPTION	DATE	BY	APPROVED
A	PROTOTYPE	-	-	-



MOTOR SPECIFICATIONS:

TORQUE CONSTANT (Kt) = 57.7 ± 10% OZ-IN/AMP
VOLTAGE CONSTANT (Ke) = 42.7 ± 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.

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES & [mm]
TOLERANCES ON:
ANGLES = ± 1/2°
X.XX [X.X] = ± .01 [0.25]
X.XXX [X.XX] = ± .005 [0.12]
125

THIRD ANGLE PROJECTION
DO NOT SCALE DRAWING

Magmotor™

SIGNATURES		DATE
DRAWN	CGW	7/27/2022
CHECKED	[signature]	9/21/22
ENG APPR.	[signature]	9/21/22
MFG APPR.	BT	9/22/22
Q.A.		

MATERIAL: -
SPEC:
FINISH: NONE
SPEC:

UNLESS OTHERWISE SPECIFIED REMOVE ALL BURRS & SHARP EDGES, COUNTERSINK TAPPED HOLES TO BODY SIZE FILLETS: .03 MAX. / EXTERNAL CORNERS: .015 MAX.

TITLE: MOTOR ASSEMBLY, C33-J-300FX

SIZE	NUMBER	REV
D	500280474	A

SCALE: - | WEIGHT: - LB. | SHEET 1 OF 3

10 Coppage Drive
Worcester, MA 01603
11/23/2022

MOTOR PERFORMANCE / SPECIFICATIONS

Attn.:

Final Product No.: **C33-J-300FX**
RFQ 500280474
By: MM

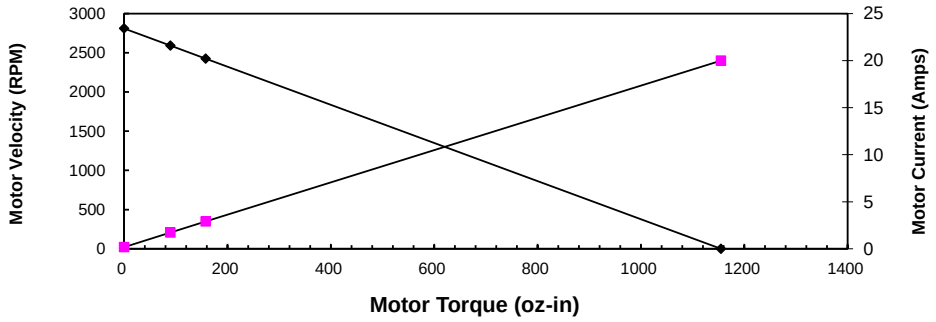
Customer:
Phone/Fax:
Date: 11/23/2022

This is a calculation data sheet X

SPECS	C/S	Frame	PM	-	Winding	-	Stack	Options	Gear Ratio
MODEL #	C	33		-	J	-	300	FX	

V in =*	120	Vdc		Input Voltage
Ke =*	42.70	V/krpm		Voltage Constant
Kt =	57.7	oz-in/A		Torque Constant
Rt =*	6.00	Ohms(@20° C)		Terminal Resistance+Amplifier
Io=*	0.17	Amps		No load current
I as =	20.0	Amps		Stall Current (reference only)
T gs =	1155	oz-in		Stall Torque (reference only @ V in)
I 1 =	1.7	Amps		Current @ Torque-1
I 2 =	2.9	Amps		Current @ Torque-2
T 1 =*	90	oz-in		Torque-1
T 2 =*	158	oz-in		Torque-2
RPM nl =	2810	RPM		No Load Velocity
RPM r =	2591	RPM		RPM @ T1
RPM p=	2426	RPM		RPM @ T2
R ah =	7.85	Ohms(@105° C)		Term. Resistance Hot
T gsh =	883	oz-in		Stall Torque Hot
I ash =	15.3	Amps		Stall Current Hot
R th =*	2.3	°C/W		Thermal Resistance
Tr =	80	°C	Without cooling air	Temperature Rise @ T1 (above ambient)
Tr =	150	°C	Without cooling air	Temperature Rise @ T2 (above ambient)
Nm/A=	0.41			Torque Constant
Lb in/A=	3.61			Torque Constant
Km=	23.6	Kt//r		Motor Constant

Torque Curve



Calculation data

Voltage	Torque	RPM	Amp	Efficiency	Watts out
120	0	2810	0.2	0	0
120	90	2591	1.7	0.831633887	172.49846
120	158	2426	2.9	0.812942053	283.49404
120	1155	0	20.0	0	0