

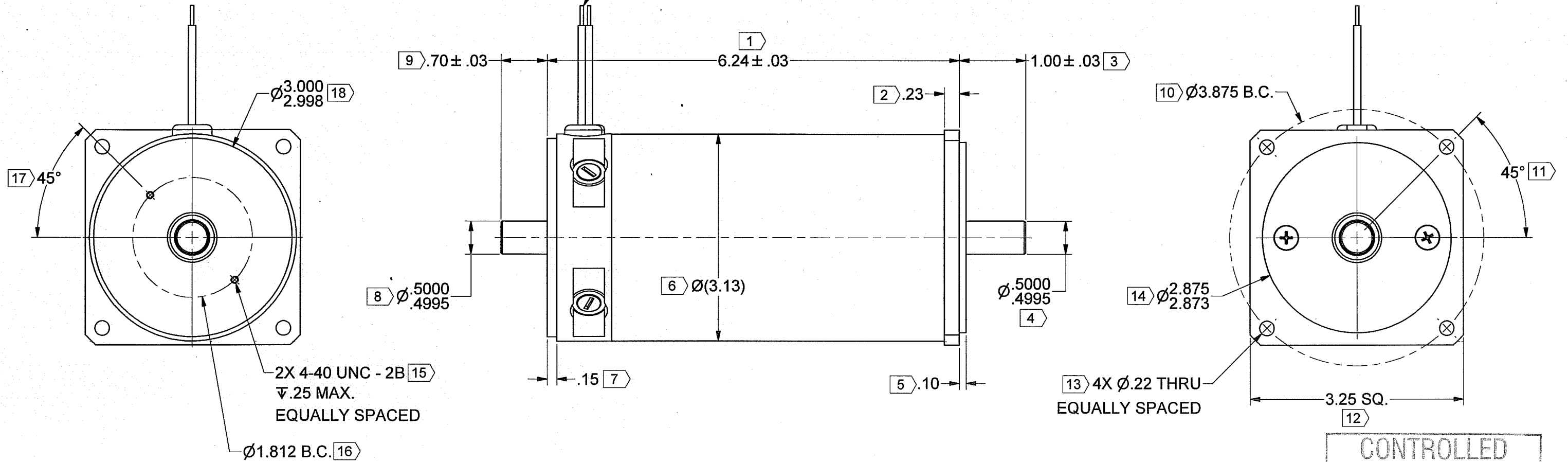
REV	DESCRIPTION	REVISION	DATE	BY	APPROVED
A	PROTOTYPE				

MOTOR LEADS 18 AWG 19
 13"±1" LONG
 MEASURED FROM TOP OF STRAIN RELIEF

COLOR	FUNCTION
RED	MOTOR (+)
BLACK	MOTOR (-)

STRIP BACK LEADS .3"±.1"

DIRECTION
OF ROTATION



MOTOR SPECIFICATIONS:

TORQUE CONSTANT (Kt) = 60.3 ± 10% OZ-IN/AMP
 VOLTAGE CONSTANT (Ke) = 44.6 ± 10% VOLTS/KRPM

NOTES:

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

CONTROLLED
 SEP 22 2022
DOCUMENT

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES & [mm]		THIRD ANGLE PROJECTION		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 TM	
TOLERANCES ON: ANGLES = ± 1/2° X.XX [X.X] = ± .01 [0.25] X.XXX [X.XX] = ± .005 [0.12]		DO NOT SCALE DRAWING					
		SIGNATURES		DATE		TITLE	
MATERIAL		DRAWN CGW		7/26/2022		MOTOR ASSEMBLY, C33-I-400FX	
SPEC		CHECKED <i>Al</i>		9/22/22			
FINISH		ENG APPR. <i>MCM</i>		9/22/22		SIZE	
NONE		MFG APPR. <i>BT</i>		9/22/22		NUMBER	
SPEC		Q.A.		UNLESS OTHERWISE SPECIFIED REMOVE ALL BURRS & SHARP EDGES. COUNTERSINK TAPPED HOLES TO BODY SIZE. FILLETS: .03 MAX. / EXTERNAL CORNERS: .015 MAX.		REV	
						D 500280472 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-I-400FX**

Customer:

RFQ 500280472

Phone/Fax:

By: MM

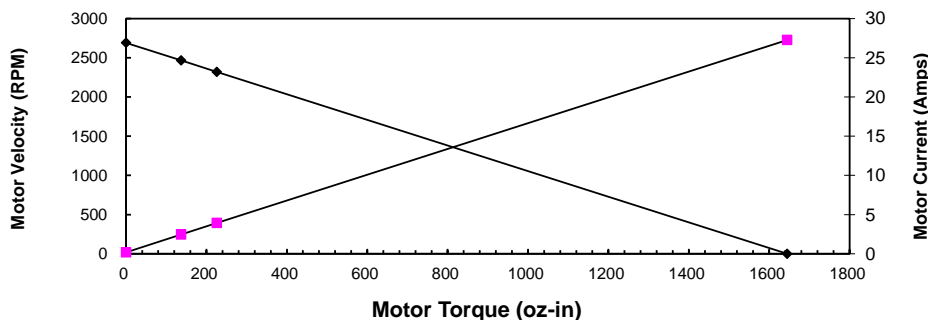
Date: 11/23/2022

This is a calculation data sheet

SPECS	C/S	Frame	PM	Winding	-	Stack	Options	Gear Ratio
MODEL #	C	33	-	I	-	400	FX	

V in =*	120 Vdc							Input Voltage
Ke =*	44.60 V/krpm							Voltage Constant
Kt =	60.3 oz-in/A							Torque Constant
Rt =*	4.40 Ohms(@20° C)							Terminal Resistance+Amplifier
Io =*	0.18 Amps							No load current
I as =	27.3 Amps							Stall Current (reference only)
T gs =	1645 oz-in							Stall Torque (reference only @ V in)
I 1 =	2.5 Amps							Current @ Torque-1
I 2 =	3.9 Amps							Current @ Torque-2
T 1 =*	137 oz-in							Torque-1
T 2 =*	226 oz-in							Torque-2
RPM nl =	2691 RPM							No Load Velocity
RPM r =	2467 RPM							RPM @ T1
RPM p =	2321 RPM							RPM @ T2
R ah =	5.76 Ohms(@105° C)							Term. Resistance Hot
T gsh =	1257 oz-in							Stall Torque Hot
I ash =	20.8 Amps							Stall Current Hot
R th =*	1.8 °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 =	0.43							Torque Constant
Lb in/A =	3.77							Torque Constant
Km =	28.8	Kt/r						Motor Constant

Torque Curve



Calculation data

Voltage	Torque	RPM	Amp	Efficiency	Watts out
120	0	2691	0.2	0	0
120	137	2467	2.5	0.849655031	249.93435
120	226	2321	3.9	0.823317759	387.96724
120	1645	0	27.3	0	0