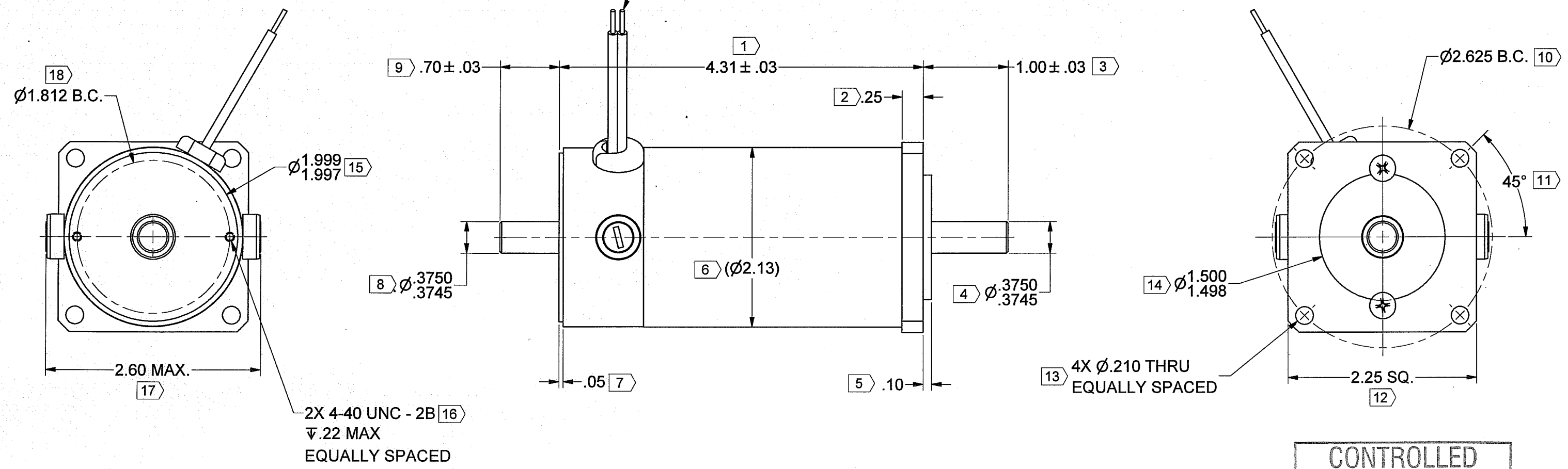


REV	DESCRIPTION	DATE	BY	APPROVED
A	PROTOTYPE			

19) MOTOR LEADS 18 AWG
13"±1" LONG
COLOR FUNCTION
RED MOTOR (+)
BLACK MOTOR (-)

STRIP BACK LEADS .3"±.1"

DIRECTION OF ROTATION



MOTOR SPECIFICATIONS:

TORQUE CONSTANT (Kt) = $18.5 \pm 10\%$ OZ-IN/AMP
VOLTAGE CONSTANT (Ke) = $13.7 \pm 10\%$ 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
SEP 6 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™
TOLERANCES ON: ANGLES = ± 12° XX [X.X] = ± .01 [0.25] XXX [X.XX] = ± .005 [0.12]		DO NOT SCALE DRAWING		SIGNATURES		
MATERIAL		DRAWN	RAL	8/15/2003	TITLE	
SPEC		CHECKED	JL	9/6/22	MOTOR ASSEMBLY, C21-H-175FX	
FINISH		ENG APPR.	MC	9/6/22	SIZE	NUMBER
SPEC		MFG APPR.	BT	9/6/22	D	500210265
UNLESS OTHERWISE SPECIFIED REMOVE ALL BURS & SHARP EDGES. COUNTERSINK TAPPED HOLES TO BODY SIZE. FILLETS: .03 MAX. / EXTERNAL CORNERS: .015 MAX.		Q.A.		SCALE: -		WEIGHT: - LB.
				SHEET 1 OF 3		REV A



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

MOTOR PERFORMANCE / SPECIFICATIONS

Attn.:

Final Product No.: **C21-H-175FX**

Customer:

RFQ 500210265

Phone/Fax:

By: MM

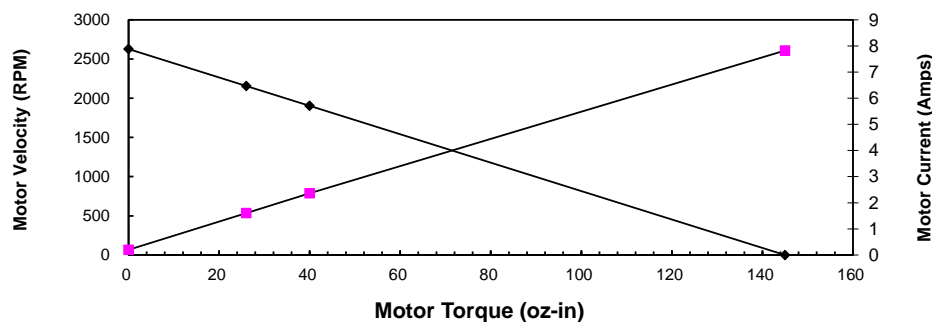
Date: 8/17/2022

This is a calculation data sheet

SPECS	C/S	Frame	PM	-	Winding	-	Stack	Options	Gear Ratio
MODEL #	C	21	-	-	H	-	175	FX	

V in =*	36 Vdc		Input Voltage	Eff = 0.9
Ke =*	13.70 V/krpm		Voltage Constant	
Kt =	18.5 oz-in/A		Torque Constant	
Rt =*	4.60 Ohms(@20° C)		Terminal Resistance+Amplifier	
Io =*	0.20 Amps		No load current	
I as =	7.8 Amps		Stall Current (reference only)	
T gs =	145 oz-in		Stall Torque (reference only @ V in)	
I 1 =	1.6 Amps		Current @ Torque-1	
I 2 =	2.4 Amps		Current @ Torque-2	
T 1 =*	26 oz-in		Torque-1	
T 2 =*	40 oz-in		Torque-2	
RPM nl =	2628 RPM		No Load Velocity	
RPM r =	2157 RPM		RPM @ T1	
RPM p =	1903 RPM		RPM @ T2	
R ah =	6.02 Ohms(@105° C)		Term. Resistance Hot	
T gsh =	111 oz-in		Stall Torque Hot	
I ash =	6.0 Amps		Stall Current Hot	
R th =*	4.9 °C/W		Thermal Resistance	
Tr =	80 °C	Without cooling air	Temperature Rise @ T1 (above ambient)	
Tr =	140 °C	Without cooling air	Temperature Rise @ T2 (above ambient)	
Nm/A =	0.13		Torque Constant	
Lb in/A =	1.16		Torque Constant	
Km =	8.6	Kt/r	Motor Constant	

Torque Curve



Calculation data

Voltage	Torque	RPM	Amp	Efficiency	Watts out
36	0	2628	0.2		0
36	26	2157	1.6	0.718527382	41.472295
36	40	1903	2.4	0.662939388	56.297284
36	145	0	7.8		0