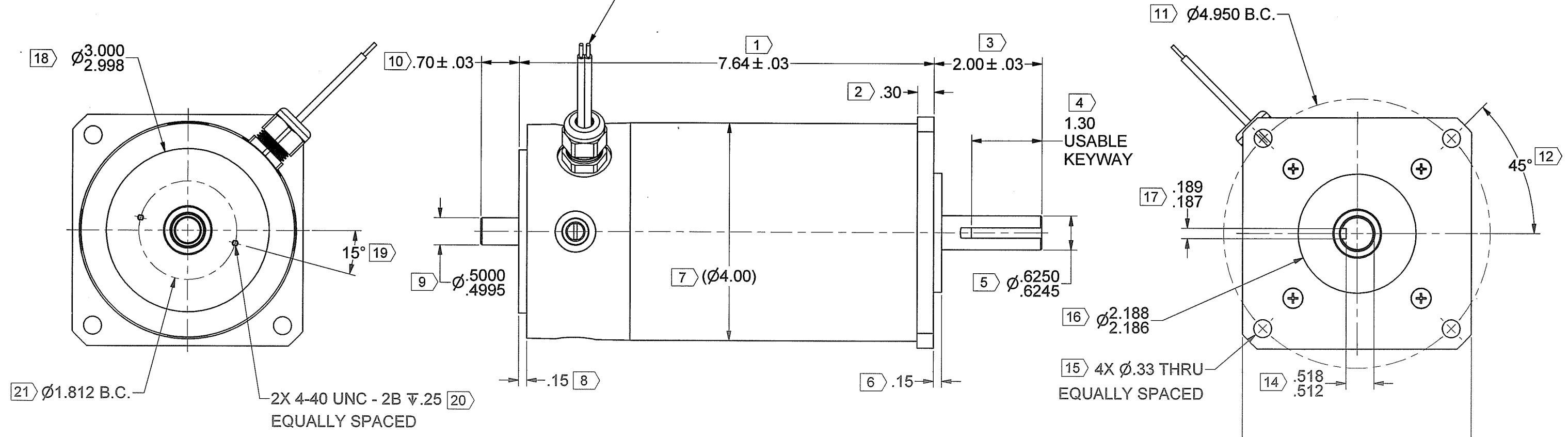


REV	DESCRIPTION	REVISION	DATE	BY	APPROVED
A	PROTOTYPE				

22 MOTOR LEADS 14 AWG
13"±1" LONG

COLOR	FUNCTION
RED	MOTOR (+)
BLACK	MOTOR (-)
STRIP BACK LEADS .3"±.1"	

DIRECTION
OF ROTATION



CONTROLLED
JUN 15 2022
DOCUMENT

MOTOR SPECIFICATIONS:

TORQUE CONSTANT (Kt) = 25.4 ± 10% OZ-IN/AMP
VOLTAGE CONSTANT (Ke) = 18.8 ± 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.

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	6/7/2022	MOTOR ASSEMBLY, C40-Z-400FX
MATERIAL		CHECKED <i>MC</i>	6/15/22	
SPEC		ENG APPR. <i>MC</i>	6/15/22	
FINISH NONE		MFG APPR. <i>BT</i>	6/15/22	
SPEC		Q.A.		
UNLESS OTHERWISE SPECIFIED REMOVE ALL BURRS & SHARP EDGES. COUNTERSINK TAPPED HOLES TO BODY SIZE FILLETS: .03 MAX. / EXTERNAL CORNERS: .015 MAX.		SIZE D	NUMBER 500400260	REV A
		SCALE: -	WEIGHT: - LB.	SHEET 1 OF 3



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

MOTOR PERFORMANCE / SPECIFICATIONS

Attn.:

Final Product No.: **C40-Z-400FX**

Customer:

RFQ 500400260

Phone/Fax:

By: MM

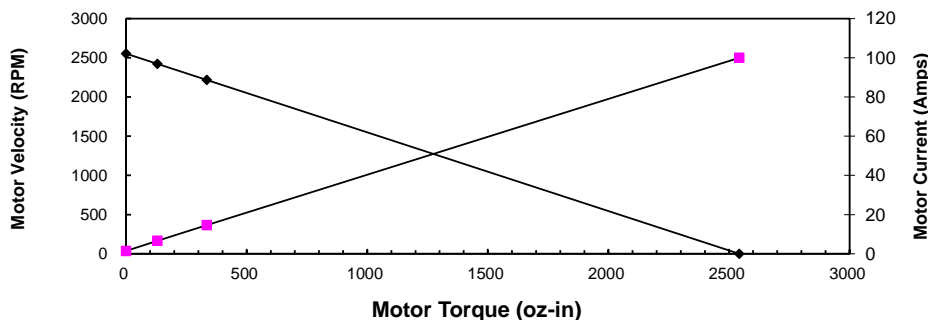
Date: 8/10/2022

This is a calculation data sheet

SPECS	C/S	Frame	PM	Winding	-	Stack	Options	Gear Ratio
MODEL #	C	40	-	Z	-	400	FX	

V in =*	48 Vdc		Input Voltage	Eff = 0.9
Ke =*	18.8 V/krpm		Voltage Constant	
Kt =	25.4 oz-in/A		Torque Constant	
Rt =*	0.48 Ohms(@20° C)		Terminal Resistance+Amplifier	
Io =*	1.455 Amps		No load current	
I as =	100.0 Amps		Stall Current (reference only)	
T gs =	2543 oz-in		Stall Torque (reference only @ V in)	
I 1 =	6.6 Amps		Current @ Torque-1	
I 2 =	14.6 Amps		Current @ Torque-2	
T 1 =*	130 oz-in		Torque-1	
T 2 =*	335 oz-in		Torque-2	
RPM nl =	2553 RPM		No Load Velocity	
RPM r =	2423 RPM		RPM @ T1	
RPM p =	2217 RPM		RPM @ T2	
R ah =	0.63 Ohms(@105° C)		Term. Resistance Hot	
T gsh =	1943 oz-in		Stall Torque Hot	
I ash =	76.4 Amps		Stall Current Hot	
R th =*	0.98 °C/W		Thermal Resistance	
Tr =	81 °C	Without cooling air	Temperature Rise @ T1 (above ambient)	
Tr =	150 °C	Without cooling air	Temperature Rise @ T2 (above ambient)	
Nm/A =	0.18		Torque Constant	
Lb in/A =	1.59		Torque Constant	
Km =	36.7	Kt/r	Motor Constant	

Torque Curve



Calculation data

Voltage	Torque	RPM	Amp	Efficiency	Watts out
48	0	2553	1.5	0	0
48	130	2423	6.6	0.738887973	232.94668
48	335	2217	14.6	0.782128173	549.27719
48	2543	0	100.0	0	0