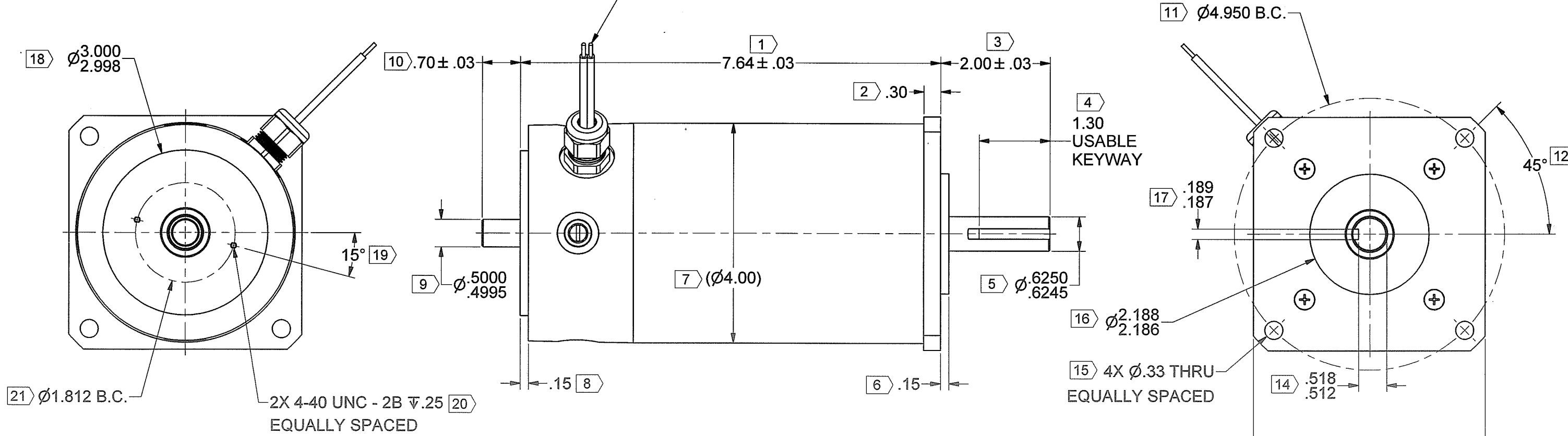


REVISION		DATE	BY	APPROVED
REV	DESCRIPTION			
A	PROTOTYPE			

22 MOTOR LEADS 14 AWG
13"±1" LONG

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

DIRECTION
OF ROTATION



CONTROLLED
JUN 9 2022
DOCUMENT

MOTOR SPECIFICATIONS:

TORQUE CONSTANT (Kt) = 60.2 ± 10% OZ-IN/AMP
VOLTAGE CONSTANT (Ke) = 44.5 ± 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.

<small>UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES & [mm]</small> <small>TOLERANCES ON:</small> <small>ANGLES = ± 1/2°</small> <small>X.XX [X.X] = ± .01 [0.25]</small> <small>X.XXX [X.XX] = ± .005 [0.12]</small>		<small>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.</small>		
	<small>THIRD ANGLE PROJECTION</small> <small>DO NOT SCALE DRAWING</small>	<small>SIGNATURES</small> <small>DATE</small> <small>TITLE</small>		
	<small>MATERIAL</small> <small>SPEC</small> <small>FINISH</small> <small>NONE</small> <small>SPEC</small>	<small>DRAWN</small> CGW <small>CHECKED</small> ALM <small>ENG APPR.</small> ALM <small>MFG APPR.</small> BT <small>Q.A.</small>	<small>DATE</small> 6/7/2022 <small>DATE</small> 6/9/22 <small>DATE</small> 6/9/22 <small>DATE</small> 6/9/22	<small>MOTOR ASSEMBLY, C40-D-400FX</small>
	<small>UNLESS OTHERWISE SPECIFIED REMOVE ALL BURRS & SHARP EDGES, COUNTERSINK TAPPED HOLES TO BODY SIZE FILLETS: .03 MAX. / EXTERNAL CORNERS: .015 MAX.</small>	<small>SIZE</small> D <small>NUMBER</small> 500400262 <small>SCALE:</small> - <small>WEIGHT:</small> - LB.	<small>REV</small> A <small>SHEET 1 OF 3</small>	



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

MOTOR PERFORMANCE / SPECIFICATIONS

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

RFQ 500400262

By: MM

Attn.:

Customer:

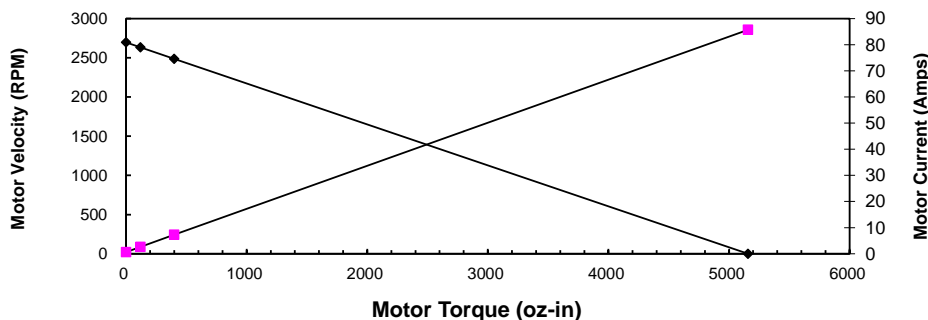
Phone/Fax:

Date: 8/10/2022

This is a calculation data sheet

SPECS	C/S	Frame	PM	Winding	-	Stack	Options	Gear Ratio
MODEL #	C	40			-	D	- 400 FX	
V in =*	120	Vdc					Input Voltage	Eff = 0.9
Ke =*	44.5	V/krpm					Voltage Constant	
Kt =	60.2	oz-in/A					Torque Constant	
Rt =*	1.4	Ohms(@20° C)					Terminal Resistance+Amplifier	
Io=*	0.63	Amps					No load current	
I as =	85.7	Amps					Stall Current (reference only)	
T gs =	5158	oz-in					Stall Torque (reference only @ V in)	
I 1 =	2.6	Amps					Current @ Torque-1	
I 2 =	7.3	Amps					Current @ Torque-2	
T 1 =*	120	oz-in					Torque-1	0.0 oz-in 0.0 in-lb
T 2 =*	400	oz-in					Torque-2	0.0 oz-in 0.0 in-lb
RPM nl =	2697	RPM					No Load Velocity	#DIV/0! rpm
RPM r =	2634	RPM					RPM @ T1	#DIV/0! rpm
RPM p=	2488	RPM					RPM @ T2	#DIV/0! rpm
R ah =	1.83	Ohms(@105° C)					Term. Resistance Hot	
T gsh =	3943	oz-in					Stall Torque Hot	
I ash =	65.5	Amps					Stall Current Hot	
R th =*	0.98	°C/W					Thermal Resistance	
Tr =	79	°C	Without cooling air				Temperature Rise @ T1 (above ambient)	
Tr =	134	°C	Without cooling air				Temperature Rise @ T2 (above ambient)	
Nm/A=	0.42						Torque Constant	
Lb in/A=	3.76						Torque Constant	
Km=	50.9	Kt/r					Motor Constant	

Torque Curve



Calculation data

Voltage	Torque	RPM	Amp	Efficiency	Watts out
120	0	2697	0.6	0	0
120	120	2634	2.6	0.742446768	233.77792
120	400	2488	7.3	0.842840346	735.95413
120	5158	0	85.7	0	0