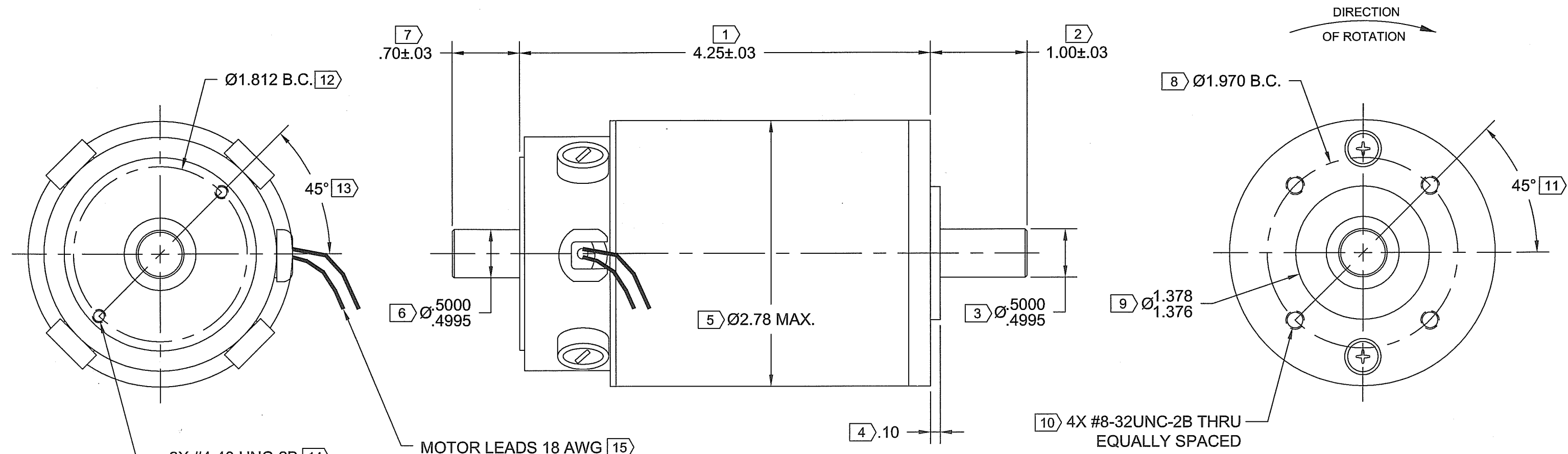


REV	DESCRIPTION	DATE	BY	APPROVED
0	RELEASE TO PRODUCTION ECO01-0077	5/25/01	-	-
1	DIA. .5000/.4995 WAS .4999/.4995, .30 WAS .20, SZ ECO03-5030	7/3/03	CHEN	-



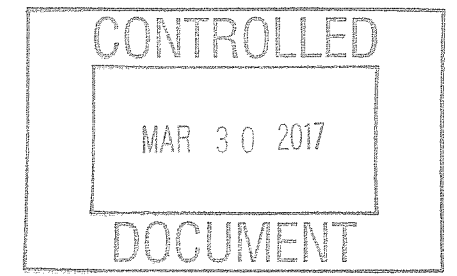
COLOR FUNCTION  
 RED MOTOR (+)  
 BLACK MOTOR (-)  
 STRIP BACK LEADS .3" ± .1"

**MOTOR SPECIFICATIONS:**

TORQUE CONSTANT (Kt) = 17.5 ± 10% OZ-IN/AMP  
 VOLTAGE CONSTANT (Ke) = 13.0 ± 10% VOLTS/KRPM

**NOTES:**

- 1.) ROTATION IS CLOCKWISE WHEN LOOKING FROM DRIVE END WITH POSITIVE VOLTAGE APPLIED TO THE MOTOR RED LEAD.
- 2.) SCREW PENETRATION NOT TO EXCEED SPECIFIED THREAD DEPTH.
- 3.) [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™	
TOLERANCES ON: ANGLES = ± 1/2° X.XX [X.X] = ± .01 [0.25] X.XXX [X.XX] = ± .005 [0.12]		SIGNATURES		DATE		TITLE	
MATERIAL		DRAWN MTC		5/24/2001		MOTOR ASSEMBLY, S28-E-200X	
SPEC -		CHECKED [Signature]		3/30/17		SIZE NUMBER	
FINISH		ENG APPR.		3/30/17		D 500280221	
SPEC -		MFG APPR. [Signature]		3/30/17		REV 1	
UNLESS OTHERWISE SPECIFIED REMOVE ALL BURRS & SHARP EDGES. COUNTERSINK TAPPED HOLES TO BODY SIZE FILLETS: .03 MAX. / EXTERNAL CORNERS: .015 MAX.		Q.A.		SCALE: NONE		WEIGHT: - SHEET 1 OF 3	



10 Coppage Drive  
Worcester, MA 01603  
3/29/2017

**MOTOR PERFORMANCE / SPECIFICATIONS**

**Attn.:**

Final Product No.: **S28-E-200 X**

Customer:

RFQ **500280221**

Phone/Fax:

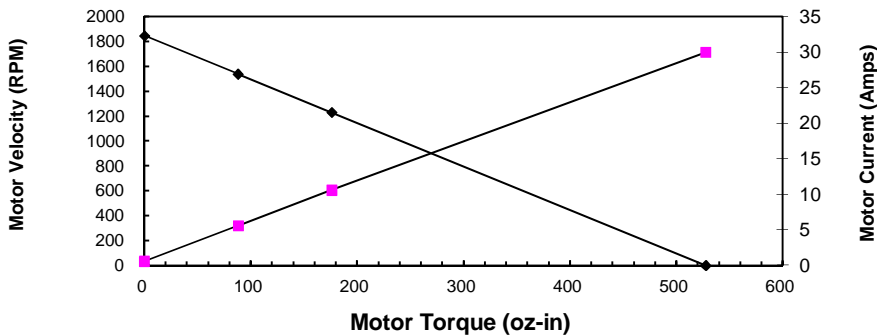
By: **JC**

Date: **3/21/2017**

This is a calculation data sheet

SPECS	C/S	Frame	PM	- Winding	- Stack	Options	Gear Ratio
MODEL #	<b>S</b>	<b>28</b>		<b>E</b>	<b>200</b>	<b>X</b>	<b>1.0</b>
$V_{in} = *$	<b>24</b>	Vdc		Input Voltage		<b>eff = 0.9</b>	
$K_e = *$	<b>13.0</b>	V/krpm		Voltage Constant			
$K_t =$	17.6	oz-in/A		Torque Constant			
$R_t = *$	<b>0.8</b>	Ohms(@20°C)		Terminal Resistance+Amplifier			
$I_o = *$	<b>0.6</b>	Amps		No load current			
$I_{as} =$	30.0	Amps		Stall Current (reference only)			
$T_{gs} =$	527	oz-in		Stall Torque (reference only @ $V_{in}$ )			
$I_1 =$	<b>5.6</b>	Amps		<b>Current @ Torque-1</b>			
$T_1 = *$	<b>88</b>	oz-in		<b>Torque-1</b>	79.2 oz-in	5.0 in-lb	
$T_2 = *$	<b>176</b>	oz-in		<b>Torque-2</b>	158.4 oz-in	9.9 in-lb	
$I_2 =$	<b>10.6</b>	Amps		<b>Current @ Torque-2</b>			
RPM nl =	1846	RPM		No Load Velocity		1846.2 rpm	
<b>RPM r =</b>	<b>1538</b>	<b>RPM</b>		<b>RPM @ T1</b>		<b>1538.1 rpm</b>	
RPM p =	1230	RPM		RPM @ T2		1230.1 rpm	
$R_{ah} =$	1.05	Ohms(@105°C)		Term. Resistance Hot			
$T_{gsh} =$	403	oz-in		Stall Torque Hot			
$I_{ash} =$	22.9	Amps		Stall Current Hot			
$R_{th} = *$	<b>2.9</b>	°C/W		<b>Thermal Resistance</b>			
$T_r =$	<b>100</b>	°C		<b>Without cooling air Temperature Rise (above ambient)</b>			
Nm/A =	0.12			Torque Constant			
Lb in/A =	1.10			Torque Constant			
Km =	19.7	Kt/r		Motor Constant			

**Torque Curve**



**Calculation data**

Voltage	Torque	RPM	Amp	Efficiency	Watts out
24	0	1846	0.6	0	0
<b>24</b>	<b>88</b>	<b>1538</b>	<b>5.6</b>	<b>0.74419</b>	<b>100.11513</b>
24	176	1230	10.6	0.62882	160.13282
24	527	0	30.0	0	0