

NEMA

Model GRC0002F-TC
MFG PN: T143T1U2B

Model GRC0002F-TC

Product Data Package



MODEL	HP	RPM	VOLTAGE	PHASE	Hz	FRAME	MOUNT	ENCLOSURE
GRC0002F-TC	1	3500	575	3	60	143TC	Rigid/C-Flange	TEFC

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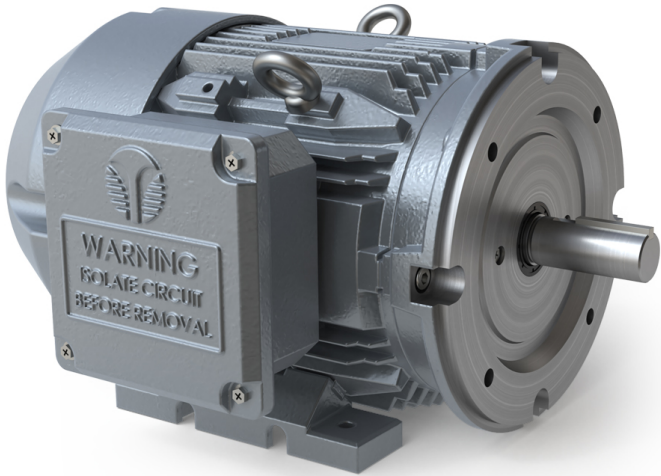
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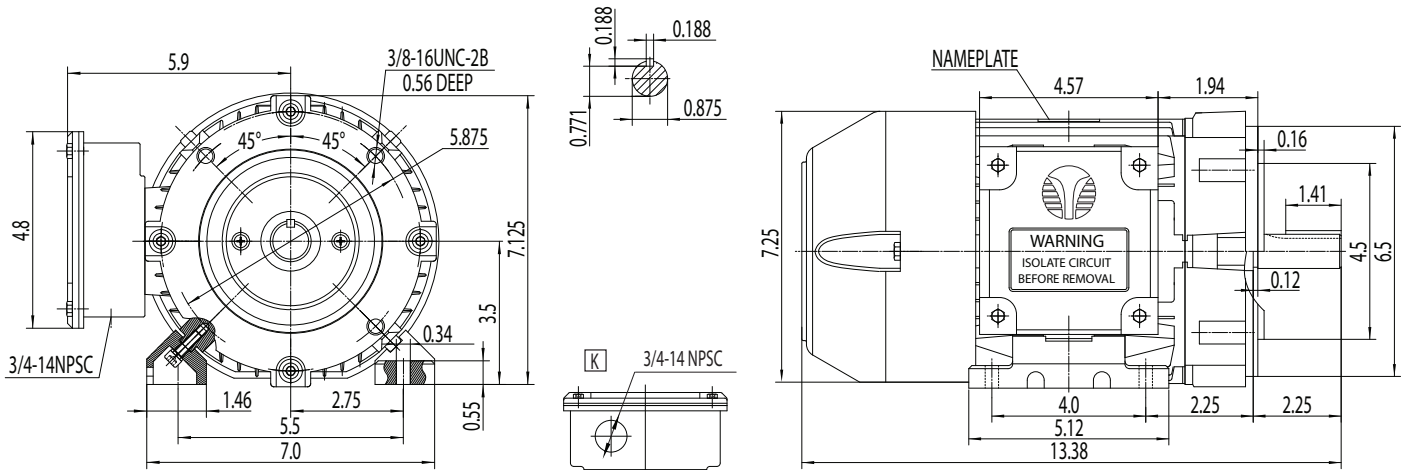
ELECTRICAL DATA		
Rated Motor Output Power	1	HP
	-	kW
Rated Motor Speed	3500	r/min 60Hz
	-	r/min 50Hz
Rated Motor Voltage (+/-10%)	575	V/60Hz
	-	V/50Hz
Rated Motor Current	1.18	A (I _n) @ 60Hz
	-	A (I _n) @ 50Hz
Phase	3	Ø
Locked Rotor Current @ High Voltage	8.75	A (I _n) @ 60Hz
FI Current @ 208V	-	A (I _n) @ 60Hz
Service Factor	1.25	@ 60Hz
	1	@ 50Hz
KVA Code	K	60Hz
	-	50Hz
Nominal Efficiency	77	% @ 60Hz
Nominal Power Factor	0.83	cosΦ @ 60Hz
Leads (Qty, Size)	3	1
Connection	Y	-
Coil Resistance	21.083	Ω
Start Capacitor	-	µF/V
Run Capacitor	-	µF/V
VFD DUTY (S.F. 1.0)	RATIO	Hz
Variable Torque	30:1	2 - 60
Constant Torque	15:1	4 - 60
FULL LOAD TEMPERATURE RISE		
Full Load Temperature Rise	41.1	°C @ 60Hz
	58	°C @ 50Hz

GENERAL DATA		
Frame Size	143TC	
Enclosure	TEFC	
Mounting	Rigid/C-Flange	
Approximate Weight (lbs.)	41.2 lbs.	
Casing Material / Fan Cover	Cast Iron	Cast Iron
Shaft Material	-	
NEMA Design	B	
Degree of Protection (IP)	55	
Insulation Class / Temp Rise (60Hz)	F	B
Tropicalization	YES	
Duty	Cont. / S1	
Conduit Box Location	F1	
Feet Removable / Double Drilled	YES	NO
Paintwork	7024	
	Graphite Gray	
MECHANICAL DATA		
Bearing DE Side	6205 ZZ	
Bearing ODE Side	6205 ZZ	
Grease Type	Mobil Polyrex EM	
Compensation Ring (wavy washer)	NDE	
Moment of Inertia (lb-ft²)	0.03	
Sound Pressure @ 3 FT dBA	77.2	
SITE CONDITIONS		
Ambient Temperature (°C)	40	
Meters Above Sea Level (MASL)	1000	
HAZARDOUS LOCATIONS		
CSA Certified	A, B, C & D	
Temperature Code	T2D	-

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NAMEPLATE DATA	60Hz	50Hz
Horse Power	1	1
RPM	3500	-
Voltage	575	-
Full Load Amps	1.18	-
Service Factor	1.25	1
KVA Code	K	-
Full Load Amps (208V)	-	-
Nominal Efficiency	77	-
Nominal Power Factor	0.83	-
Design	B	
Frame	143TC	
Enclosure Type	TEFC	
IP Rating	55	
Duty	Cont. / S1	
Insulation Class	F	
Ambient Rating	40	
Drive End Bearing	6205 ZZ	
Opposite Drive End Bearing	6205 ZZ	
Weight (lbs)	41.2	

NAMEPLATE LAYOUT

TECHTOP		INDUSTRIAL THREE PHASE MOTOR INVERTER DUTY 15:1 CT 30:1 VT - 1.0 SF	
MODEL		TECHTOPCANADA.COM	
NEMA Premium		MFG PN	
60Hz		50Hz	
HP		MFG DATE	
RPM		SER #	
VOLT		DESIGN	
FLA		FRAME	
SF		ENCL	
KVA CODE		IP	
NOM.EFF		DUTY	
BEARING SIZE		INS CL	
DE	ODE	AMB	
GREASE: MOBIL POLYREX EM		WEIGHT	
MADE IN CHINA CLASS 1, DIV 2, GROUPS A, B, C AND D		IEEE 45 MARINE DUTY	

VFD DUTY (S.F. 1.0)	RATIO	Hz*
Variable Torque	30:1	2 - 60
Constant Torque	15:1	4 - 60

*For max speed please contact Techtop Canada

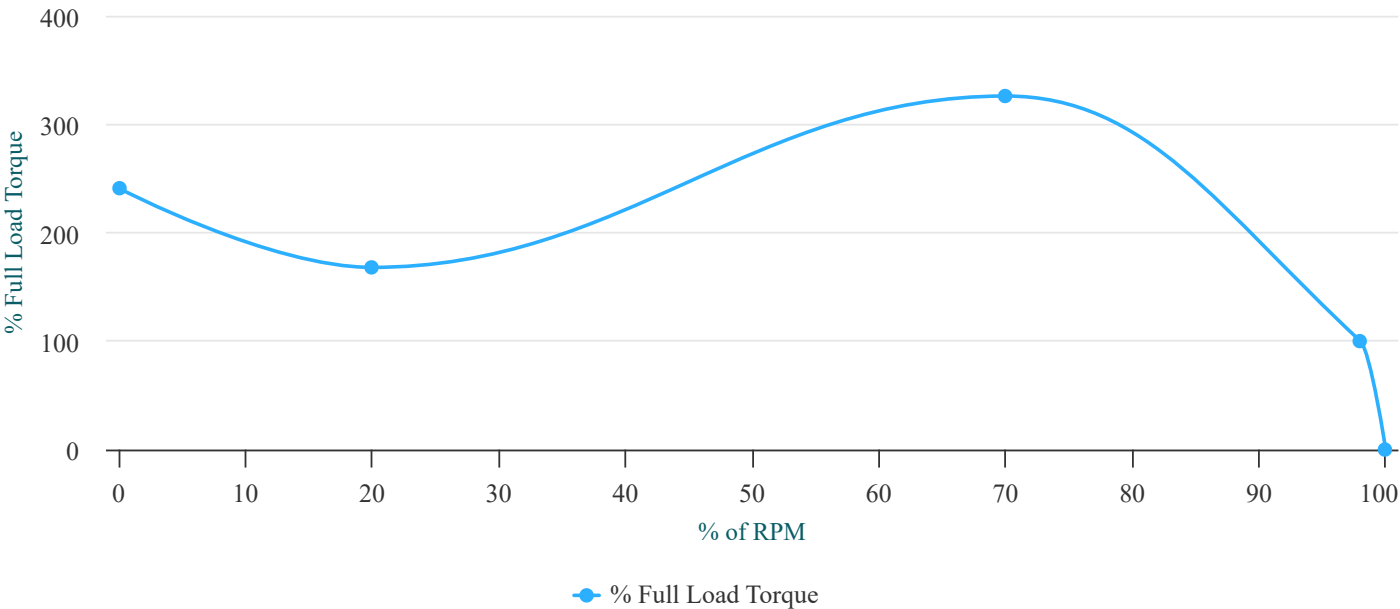
HAZARDOUS LOCATIONS	CSA CERTIFIED
Class / Division	Class I, Div. 2
Groups	A, B, C & D

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Torque Speed (T-n) Curve



PERFORMANCE LOAD VALUES, HIGH VOLTAGE, 60Hz

TORQUE VALUES	TORQUE (lb-ft)	TORQUE (% FULL LOAD)
Locked Rotor Torque	3.6	241
Pull-Up Torque	2.5	168
Breakdown Torque	4.9	326
Full Load Torque	1.5	100

TYPICAL PERFORMANCE - NOT GUARANTEED VALUES

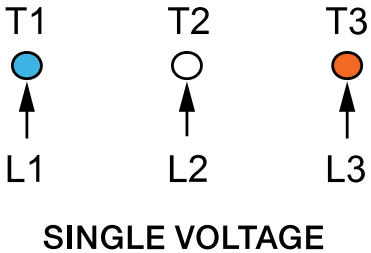
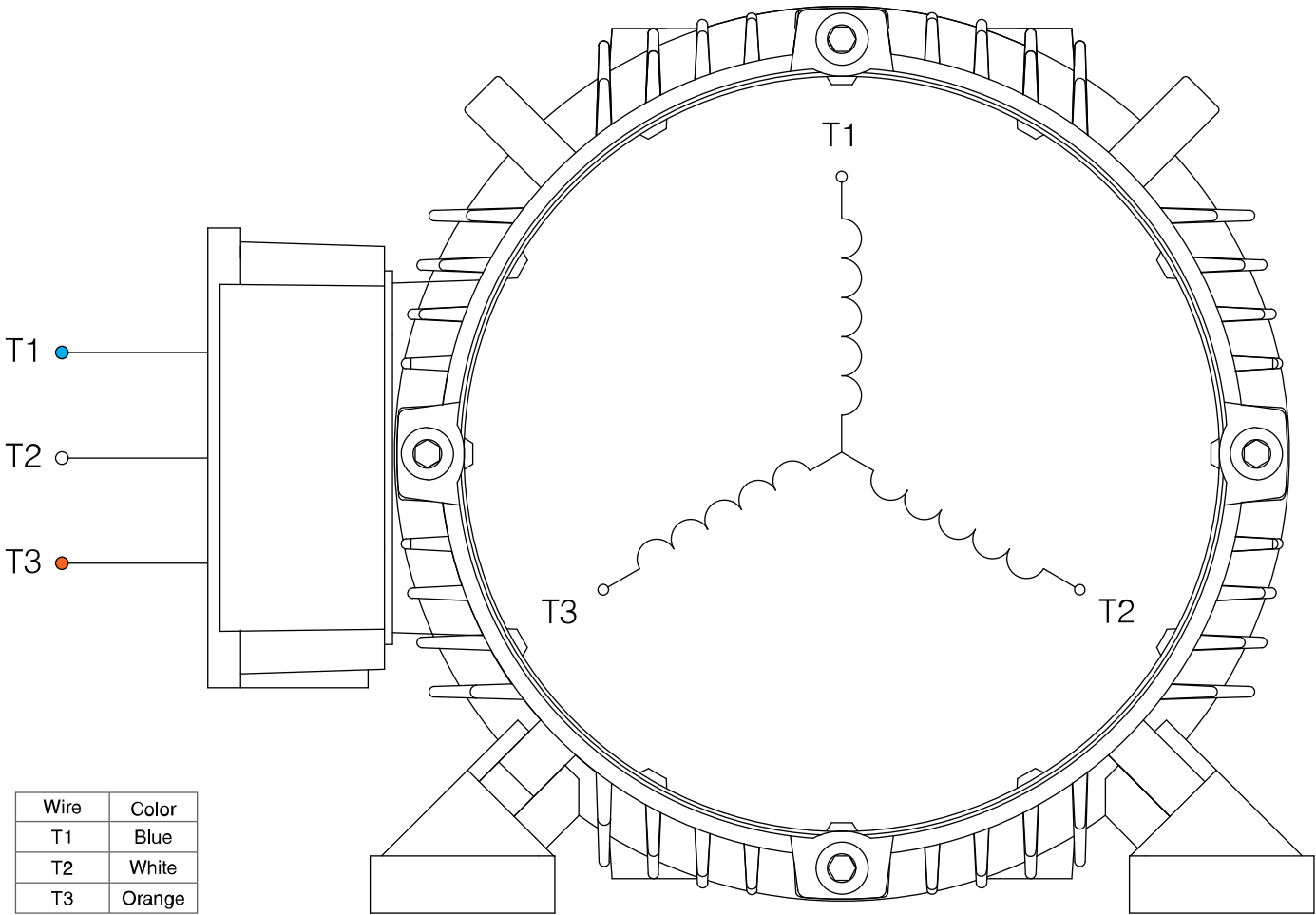
PERFORMANCE VALUES	
Start Configuration	DOL
Starting Current (A)	8.75
No-Load Current (A)	0.7
No-Load Power Factor	0.16

% OF RATED LOAD	25	50	75	100	125	S.F. 1.25
Line Amperes (A)	0.7	0.8	1	1.2	1.4	1.4
Efficiency (%)	63.4	75.5	79.5	80.7	80.5	80.5
Speed (r/min)	3575	3554	3530	3504	3475	3475
Power Factor (cosΦ)	0.4	0.6	0.72	0.8	0.85	0.85
Input Power (kW)	0.3	0.5	0.71	0.93	1.17	1.17

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- NOTES:
- 1. CCW ROTATION FACING ODE FOR CONNECTIONS SHOWN
 - 2. TO REVERSE ROTATION, SWAP ANY TWO INPUT LINES
 - 3. WHEN MOTOR IS IN F1 POSITION, LEADS INDICATED WITH “*” EXIT THE CASING ABOVE THE CENTER LINE OF THE MOTOR, THE REMAINING LEADS EXIT BELOW THE CENTER LINE
 - 4. LEADS MUST BE NUMBERED AND COLORED AS SHOWN
 - 5. DIAGRAMS FOR REFERENCE ONLY



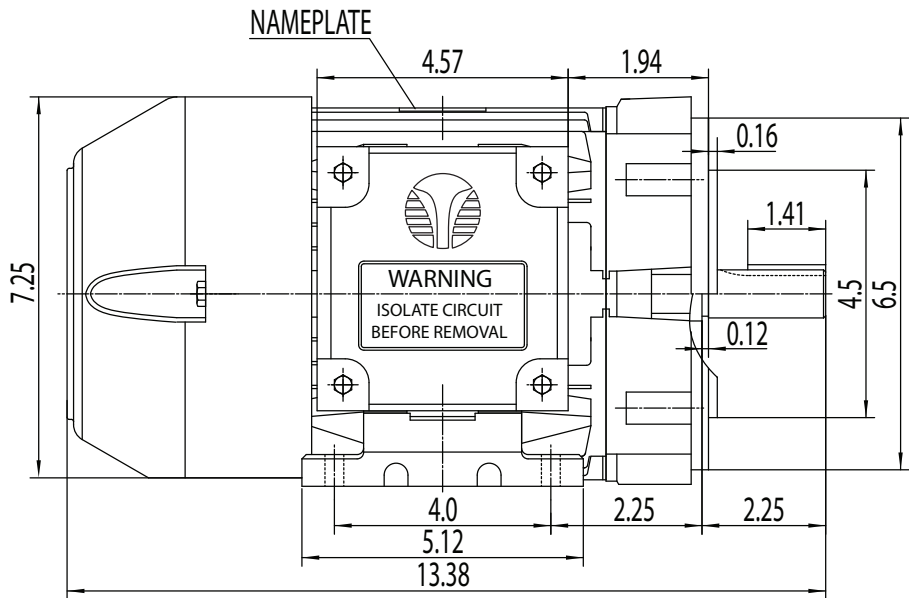
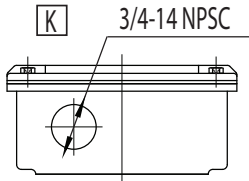
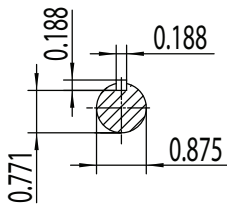
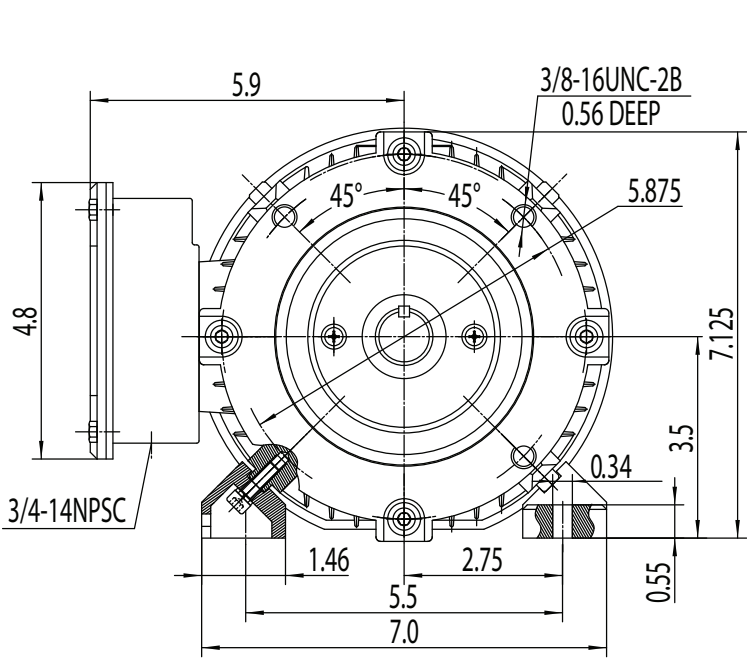
DRAWING NUMBER:	NEMA-3-3-Y
CONNECTION:	Y
NUMBER OF LEADS:	3
THERMAL PROTECTION:	-

NEMA 3Ø Y 3-Lead Single Voltage

ISSUED DATE	11/03/25
PREMIUM T-FRAME CAST IRON MOTORS	



Model **GRC0002F-TC**
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NEMA Premium TEFC 143TC

DRAWING NUMBER:	GR3-CI-TF-143TC-CFC	ISSUED DATE	11/03/25
DIMENSIONS:	Inches	PREMIUM T-FRAME CAST IRON MOTORS	
MOUNTING:	Rigid/C-Flange		
CASING MATERIAL:	Cast Iron		