

NEMA

Model **GRA0012F-TC-01**
MFG PN: T143T1.5U2B

Model **GRA0012F-TC-01**

Product Data Package



MODEL	HP	RPM	VOLTAGE	PHASE	Hz	FRAME	MOUNT	ENCLOSURE
GRA0012F-TC-01	1.5	3500	575	3	60	143TC	Rigid/C-Flange	TEFC

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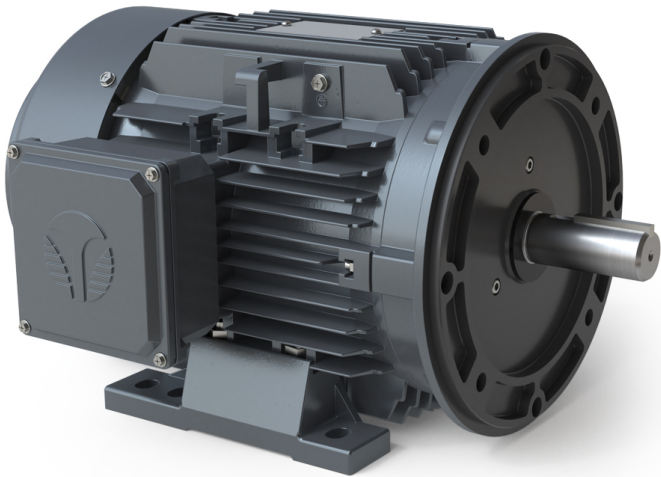
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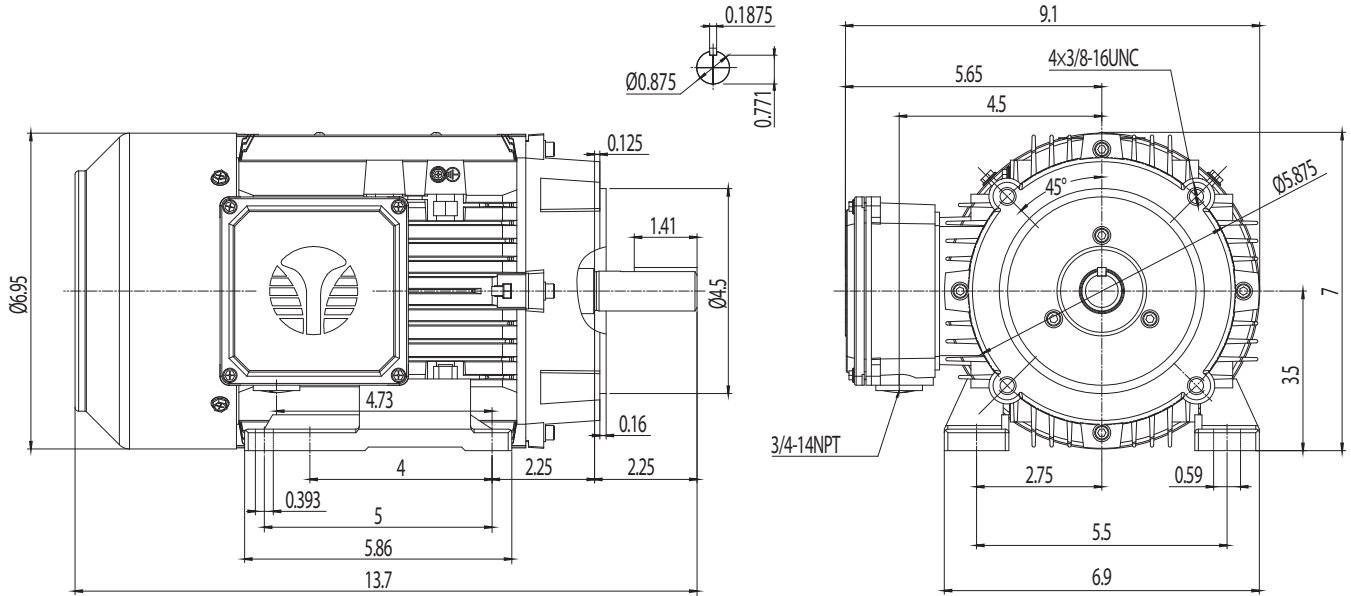
ELECTRICAL DATA		
Rated Motor Output Power	1.5	HP
	-	kW
Rated Motor Speed	3500	r/min 60Hz
	-	r/min 50Hz
Rated Motor Voltage (+/-10%)	575	V/60Hz
	-	V/50Hz
Rated Motor Current	1.64	A (I _n) @ 60Hz
	-	A (I _n) @ 50Hz
Phase	3	Ø
Locked Rotor Current @ High Voltage	12.56	A (I _n) @ 60Hz
FI Current @ 208V	-	A (I _n) @ 60Hz
Service Factor	1.25	@ 60Hz
	-	@ 50Hz
KVA Code	L	60Hz
	-	50Hz
Nominal Efficiency	84	% @ 60Hz
Nominal Power Factor	0.8	cosΦ @ 60Hz
Leads (Qty, Size)	3	18
Connection	Y	-
Coil Resistance	-	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	46	°C @ 60Hz
	-	°C @ 50Hz

GENERAL DATA		
Frame Size	143TC	
Enclosure	TEFC	
Mounting	Rigid/C-Flange	
Approximate Weight (lbs.)	25 lbs.	
Casing Material / Fan Cover	Cast Aluminum	Steel
Shaft Material	1045	
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	YES
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)	-	
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	1.5	1.5
RPM	3500	-
Voltage	575	-
Full Load Amps	1.64	-
Service Factor	1.25	-
KVA Code	L	-
Full Load Amps (208V)	-	-
Nominal Efficiency	84	-
Nominal Power Factor	0.8	-
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)	25	

NAMEPLATE LAYOUT

TECHTOP		INDUSTRIAL THREE PHASE MOTOR INVERTER DUTY 15:1 CT 30:1 VT - 1.0 SF	
MODEL		MFG PN	
60Hz		50Hz	
HP		MFG DATE	
RPM		SER #	
VOLT		DESIGN	
FLA		FRAME	
SF		ENCL / IP	TEFC 55
KVA CODE		DUTY	
NOM.EFF		INS CL	
EFF 75%		AMB	
PF		DE	
USABLE AT 208V		ODE	
NEMA Premium® TECHTOPCANADA.COM		WEIGHT lbs	
CLASS 1, DIV 2, GROUPS A, B, C AND D		MADE IN CHINA	

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

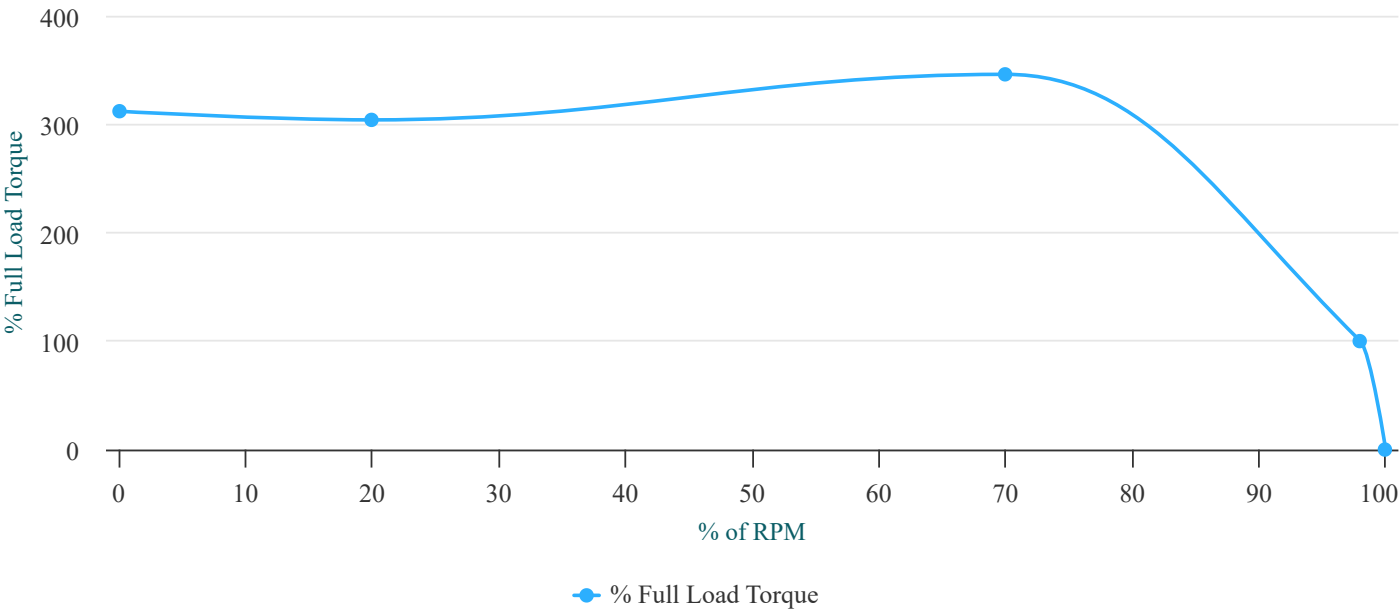
HAZARDOUS LOCATIONS	CSA CERTIFIED
Class / Division	Class I, Div. 2
Groups	A, B, C & D

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Torque Speed (T-n) Curve



PERFORMANCE LOAD VALUES, HIGH VOLTAGE, 60Hz

TORQUE VALUES	TORQUE (lb-ft)	TORQUE (% FULL LOAD)	PERFORMANCE VALUES	
Locked Rotor Torque	7	312	Start Configuration	DOL
Pull-Up Torque	6.8	304	Starting Current (A)	12.56
Breakdown Torque	7.8	346	No-Load Current (A)	0.8
Full Load Torque	2.3	100	No-Load Power Factor	0.13

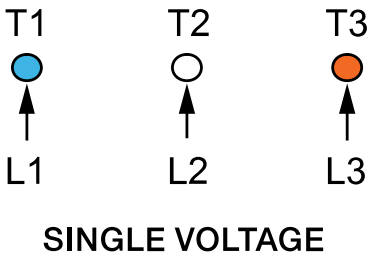
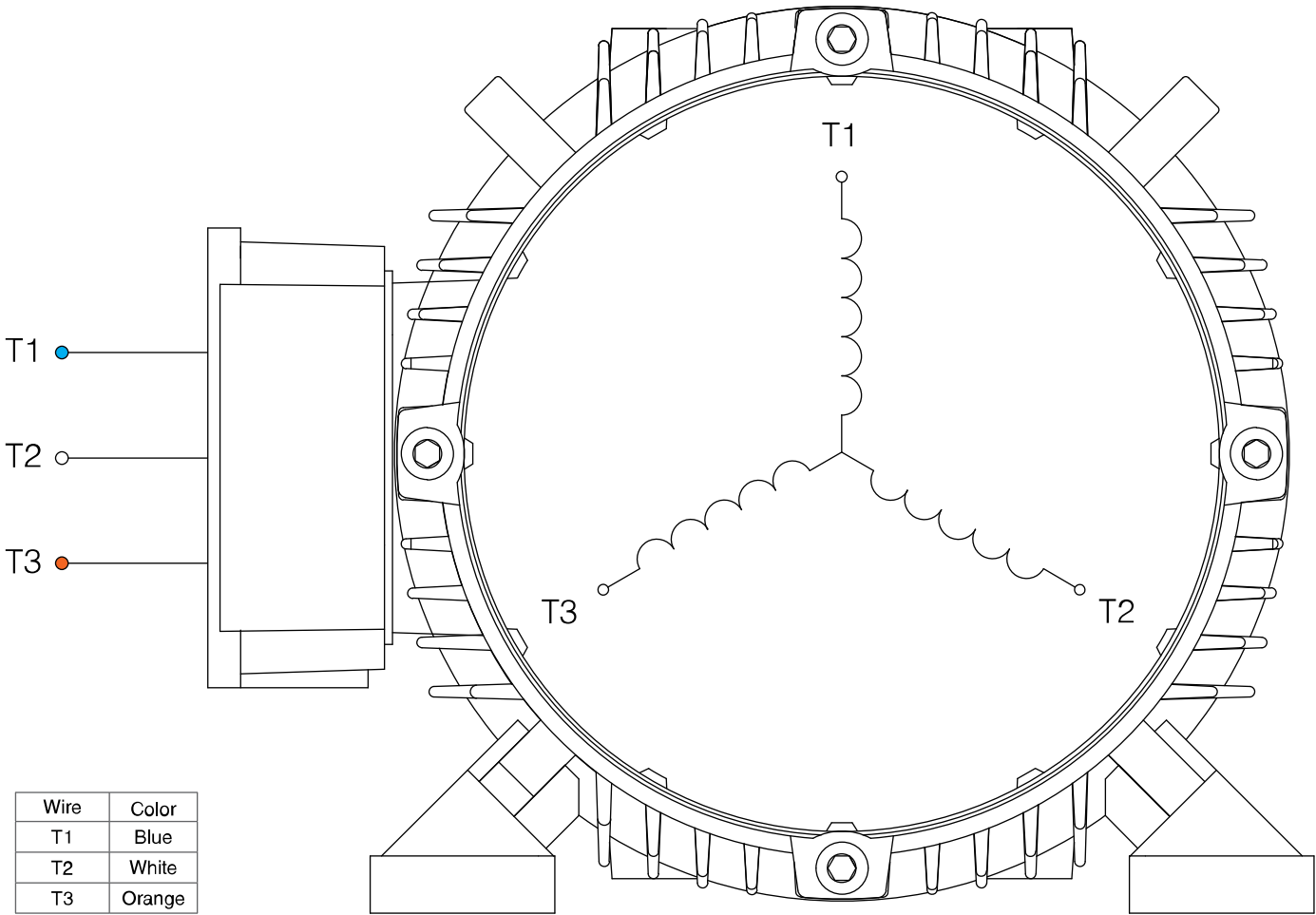
TYPICAL PERFORMANCE - NOT GUARANTEED VALUES

% OF RATED LOAD	25	50	75	100	125	S.F. 1.25
Line Amperes (A)	0.9	1.1	1.3	1.6	1.9	1.9
Efficiency (%)	70.9	80.3	82.8	83	82.1	82.1
Speed (r/min)	3569	3540	3508	3472	3433	3433
Power Factor (cosΦ)	0.45	0.65	0.77	0.84	0.88	0.88
Input Power (kW)	0.39	0.69	1	1.33	1.68	1.68

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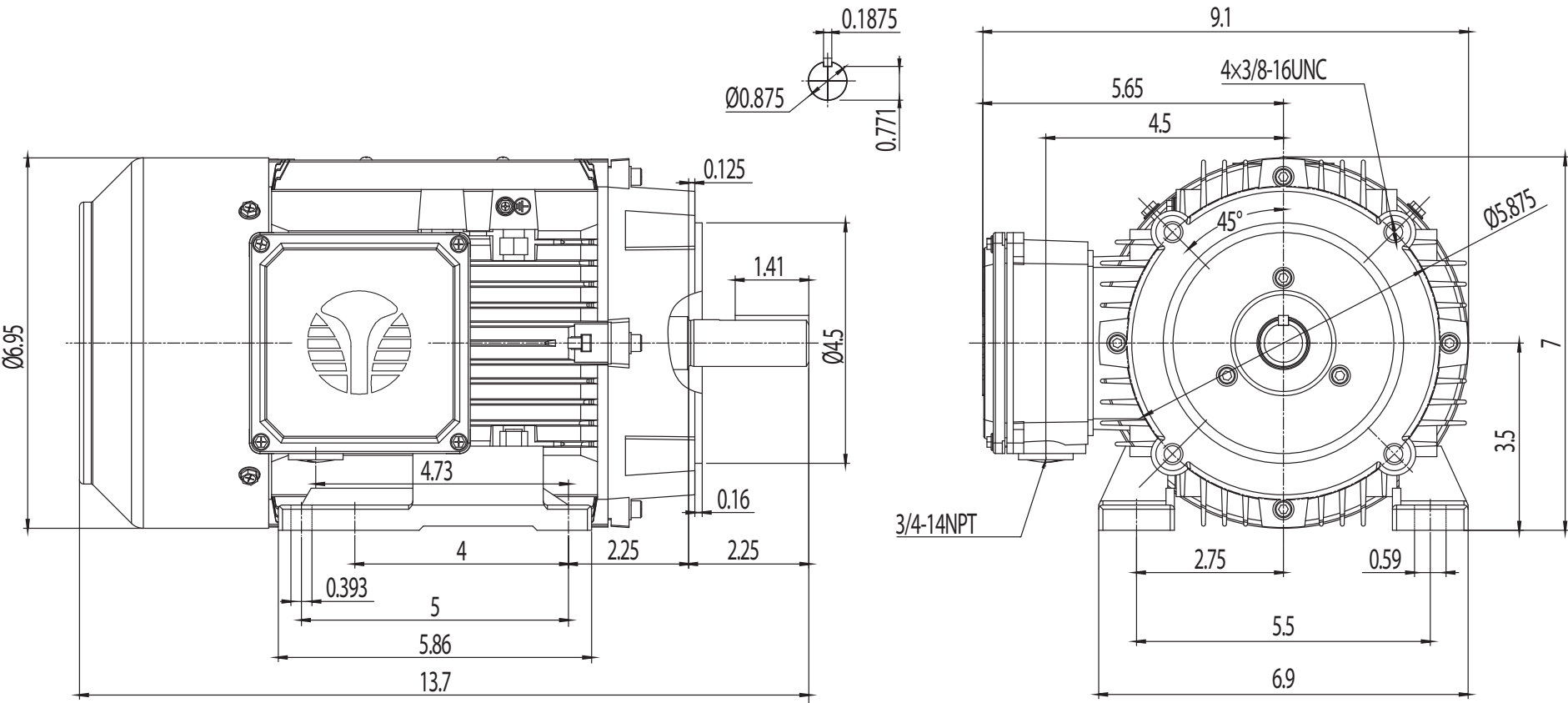
- NOTES:
- 1. CCW ROTATION FACING ODE FOR CONNECTIONS SHOWN
 - 2. TO REVERSE ROTATION, SWAP ANY TWO INPUT LINES
 - 3. WHEN MOTOR IS IN F1 POSITION, LEADS INDICATED WITH “*” EXIT THE CASING ABOVE THE CENTER LINE OF THE MOTOR, THE REMAINING LEADS EXIT BELOW THE CENTER LINE
 - 4. LEADS MUST BE NUMBERED 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	15/01/25
PREMIUM T-FRAME ALUMINUM MOTORS	



NEMA Premium TEFC 143TC

DRAWING NUMBER:	GR3-AL-TF-140TC-01	ISSUED DATE	15/01/25
DIMENSIONS:	Inches		
MOUNTING:	Rigid/C-Flange		
CASING MATERIAL:	Cast Aluminum		

PREMIUM T-FRAME ALUMINUM MOTORS