

NEMA

Model GRC2502E
MFG PN: T449T 250U2B

Model GRC2502E

Product Data Package



MODEL	HP	RPM	VOLTAGE	PHASE	Hz	FRAME	MOUNT	ENCLOSURE
GRC2502E	250	3570	460	3	60	449TS	Rigid	TEFC

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Moncton

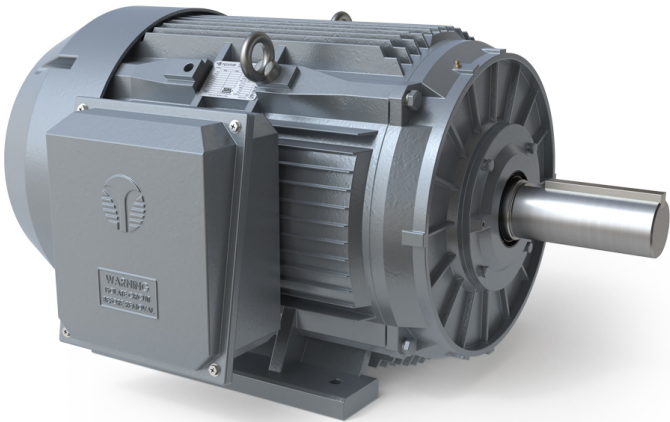
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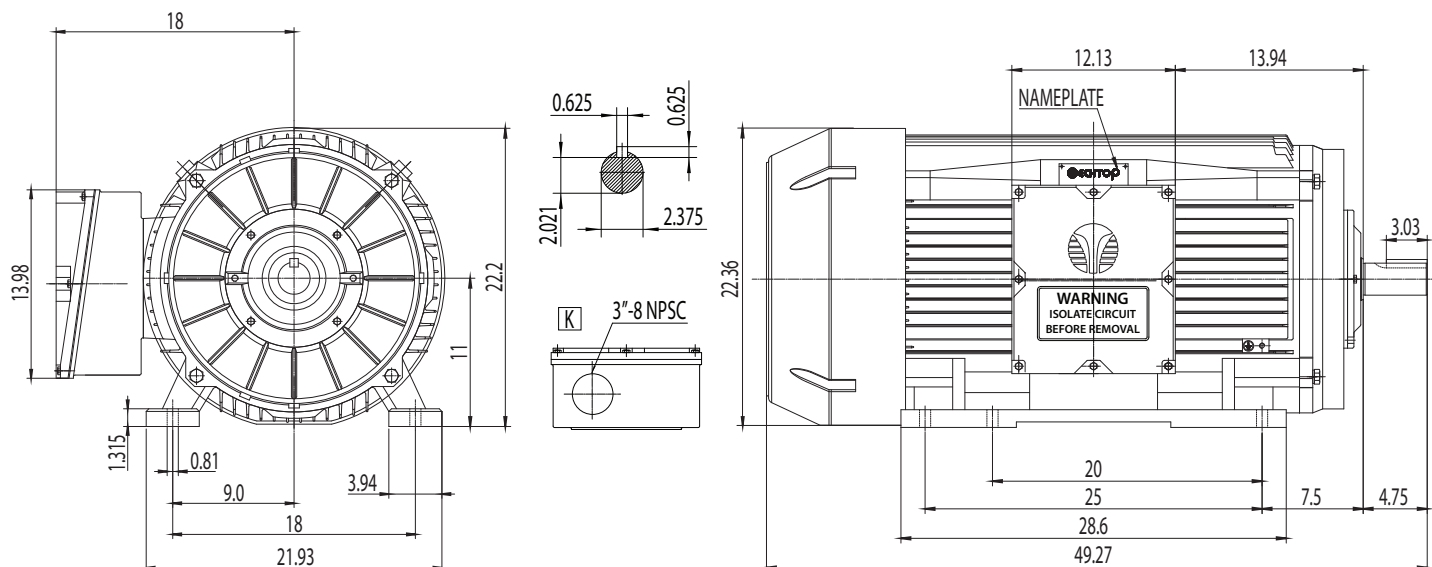
ELECTRICAL DATA		
Rated Motor Output Power	250	HP
	-	kW
Rated Motor Speed	3570	r/min 60Hz
	2955	r/min 50Hz
Rated Motor Voltage (+/-10%)	460	V/60Hz
	380	V/50Hz
Rated Motor Current	271.00	A (I _n) @ 60Hz
	326.00	A (I _n) @ 50Hz
Phase	3	Ø
Locked Rotor Current @ High Voltage	2172	A (I _n) @ 60Hz
FI Current @ 208V	-	A (I _n) @ 60Hz
Service Factor	1.15	@ 60Hz
	1	@ 50Hz
KVA Code	K	60Hz
	H	50Hz
Nominal Efficiency	95.8	% @ 60Hz
Nominal Power Factor	0.9	cosΦ @ 60Hz
Leads (Qty, Size)	6	1
Connection	D	-
Coil Resistance	14.1	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	75.3	°C @ 60Hz
	100.3	°C @ 50Hz

GENERAL DATA		
Frame Size	449TS	
Enclosure	TEFC	
Mounting	Rigid	
Approximate Weight (lbs.)	2077 lbs.	
Casing Material / Fan Cover	Cast Iron	Cast Iron
Shaft Material	4140	
NEMA Design	A	
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	NO	YES
Paintwork	7024	
	Graphite Gray	
MECHANICAL DATA		
Bearing DE Side	6316 C3	
Bearing ODE Side	6316 C3	
Grease Type	Mobil Polyrex EM	
Compensation Ring (wavy washer)	NDE	
Moment of Inertia (lb-ft²)	38.67	
Sound Pressure @ 3 FT dBA	96.1	
SITE CONDITIONS		
Ambient Temperature (°C)	40	
Meters Above Sea Level (MASL)	1000	
HAZARDOUS LOCATIONS		
CSA Certified	A, B, C & D	
Temperature Code	T3A	-

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NAMEPLATE DATA	60Hz	50Hz
Horse Power	250	250
RPM	3570	2955
Voltage	460	380
Full Load Amps	271.00	326.00
Service Factor	1.15	1
KVA Code	K	H
Full Load Amps (208V)	-	-
Nominal Efficiency	95.8	93.6
Nominal Power Factor	0.9	-
Design	A	
Frame	449TS	
Enclosure Type	TEFC	
IP Rating	55	
Duty	Cont. / S1	
Insulation Class	F	
Ambient Rating	40	
Drive End Bearing	6316 C3	
Opposite Drive End Bearing	6316 C3	
Weight (lbs)	2077	

NAMEPLATE LAYOUT

TECHTOP		INDUSTRIAL THREE PHASE MOTOR INVERTER DUTY 15:1 CT 30:1 VT - 1.0 SF	
MODEL			TECHTOPCANADA.COM
NEMA Premium HP RPM VOLT FLA SF KVA CODE NOM.EFF	60Hz	50Hz	MFG PN
			MFG DATE
			SER #
			DESIGN
			FRAME
			ENCL
			IP
USABLE AT 208V 60Hz	BEARING SIZE		DUTY
FLA	DE	ODE	INS CL
GREASE: MOBIL POLYREX EM		AMB	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

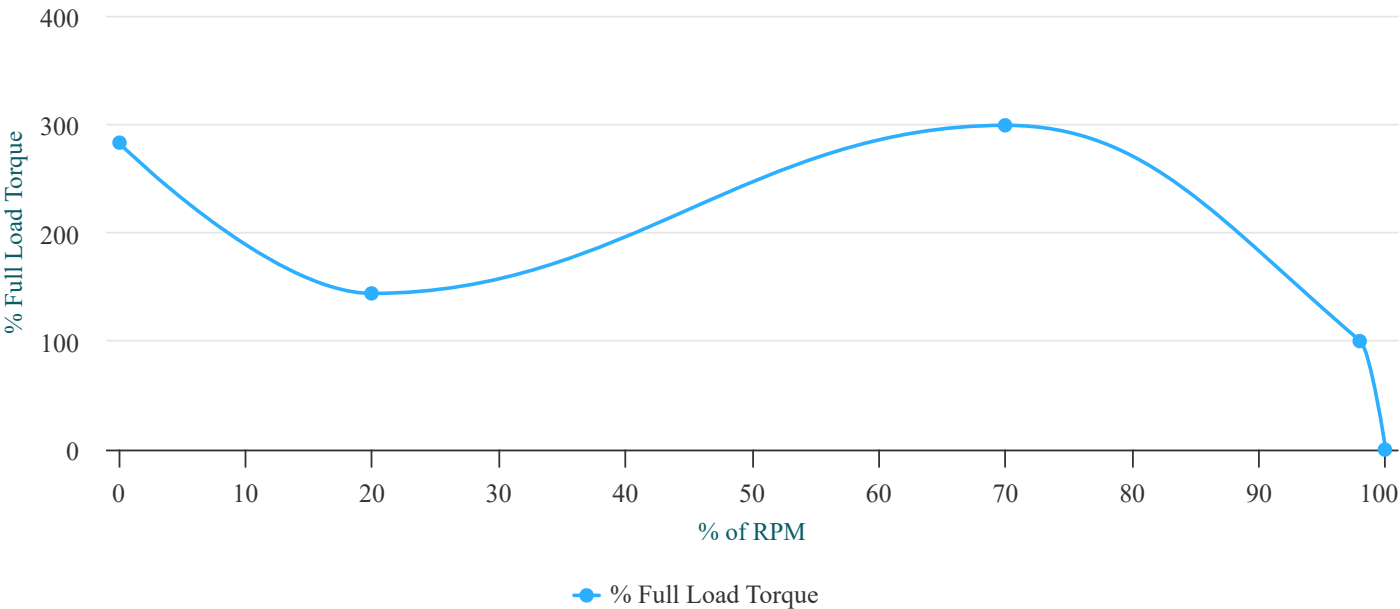
HAZARDOUS LOCATIONS	CSA CERTIFIED
Class / Division	Class I, Div. 2
Groups	A, B, C & D

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Torque Speed (T-n) Curve



PERFORMANCE LOAD VALUES, HIGH VOLTAGE, 60Hz

TORQUE VALUES	TORQUE (lb-ft)	TORQUE (% FULL LOAD)	PERFORMANCE VALUES	
Locked Rotor Torque	1040.8	283	Start Configuration	DOL
Pull-Up Torque	529.6	144	Starting Current (A)	2172
Breakdown Torque	1099.7	299	No-Load Current (A)	46
Full Load Torque	367.8	100	No-Load Power Factor	-

TYPICAL PERFORMANCE - NOT GUARANTEED VALUES

% OF RATED LOAD	25	50	75	100	125	S.F. 1.15
Line Amperes (A)	80.6	137.3	198.6	264.5	334.9	334.9
Efficiency (%)	93.3	93.3	95.8	95.6	95.1	95.1
Speed (r/min)	3593	3587	3580	3573	3564	3564
Power Factor (cosΦ)	0.78	0.89	0.92	0.93	0.92	0.92
Input Power (kW)	49.99	97.64	145.99	195.13	245.13	245.13

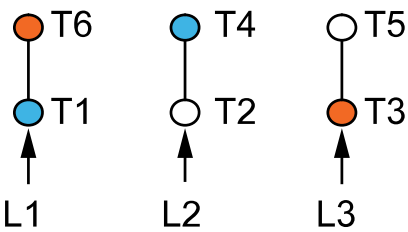
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Wire	Color
T1, T4	Blue
T5, T2	White
T3, T6	Orange



SINGLE VOLTAGE

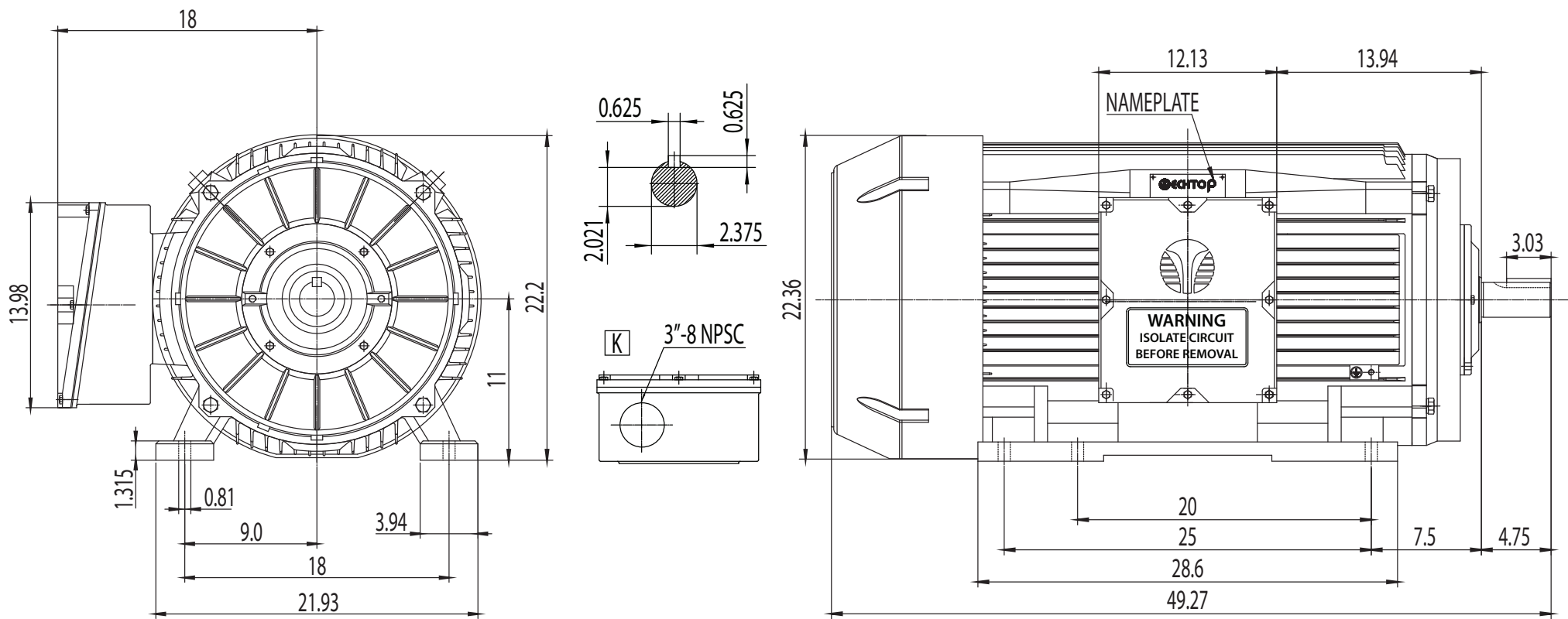
- NOTES:
- 1. CCW ROTATION FACING ODE FOR CONNECTIONS SHOWN
 - 2. TO REVERSE ROTATION, SWAP ANY TWO INPUT LINES
 - 3. WHEN MOTOR IS IN F1 POSITION, LEADS INDICATED WITH “*” EXIT THE CASING ABOVE THE CENTER LINE OF THE MOTOR, THE REMAINING LEADS EXIT BELOW THE CENTER LINE
 - 4. LEADS MUST BE NUMBERED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



DRAWING NUMBER:	NEMA-3-6-D
CONNECTION:	D
NUMBER OF LEADS:	6
THERMAL PROTECTION:	-

NEMA 3Ø D 6-Lead Single Voltage

ISSUED DATE	06/06/25
PREMIUM T-FRAME CAST IRON MOTORS	



NEMA Premium TEFC 449TS

DRAWING NUMBER:

GR3-CI-TF-447(9)TS-CFC

DIMENSIONS:

Inches

MOUNTING:

Rigid

CASING MATERIAL:

Cast Iron

ISSUED DATE

06/06/25

PREMIUM T-FRAME CAST IRON MOTORS