

NEMA

Model GRC2504E-TD
MFG PN: T449T 250U4B

Model GRC2504E-TD

Product Data Package



MODEL	HP	RPM	VOLTAGE	PHASE	Hz	FRAME	MOUNT	ENCLOSURE
GRC2504E-TD	250	1785	460	3	60	449TD	Rigid/D-Flange	TEFC

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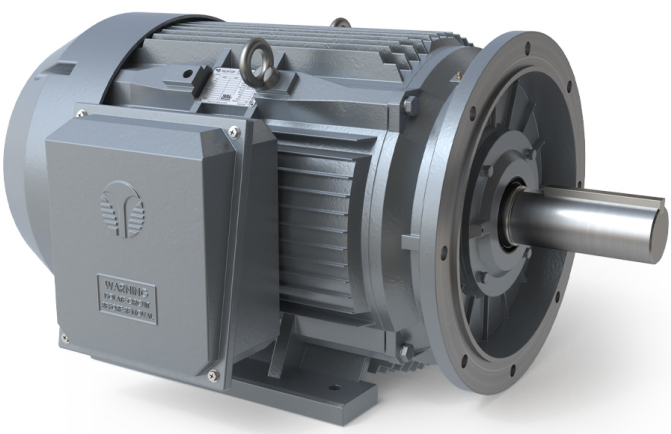
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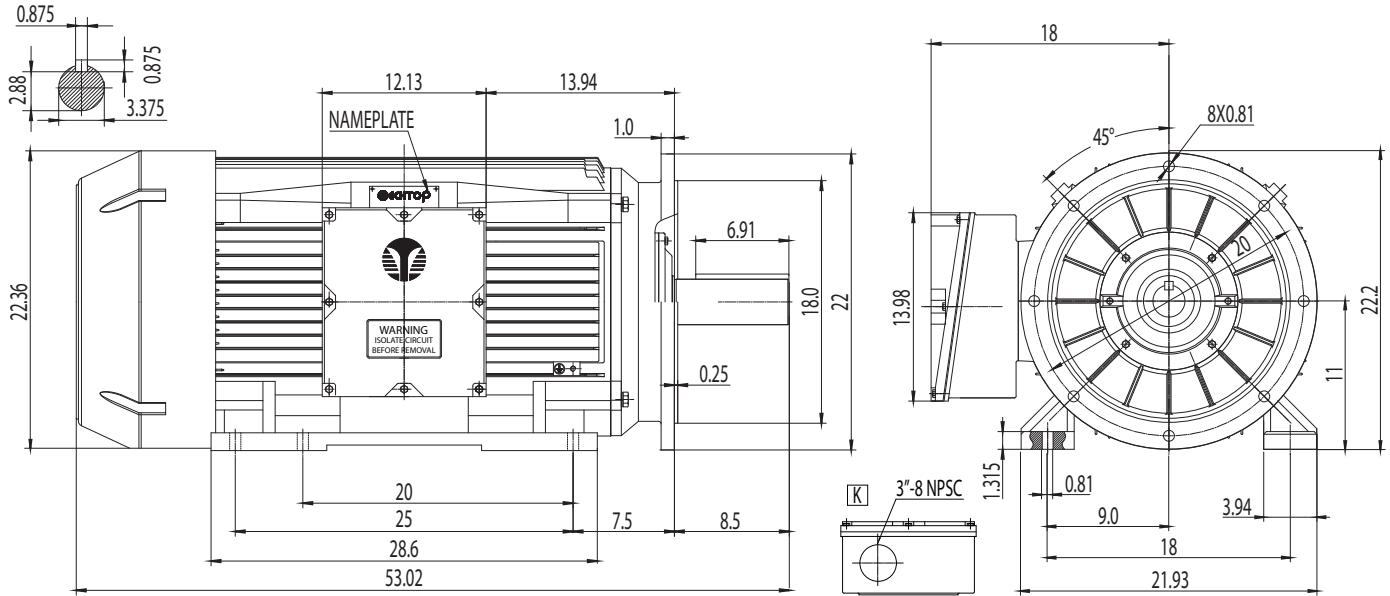
ELECTRICAL DATA		
Rated Motor Output Power	250	HP
	-	kW
Rated Motor Speed	1785	r/min 60Hz
	1480	r/min 50Hz
Rated Motor Voltage (+/-10%)	460	V/60Hz
	380	V/50Hz
Rated Motor Current	270.00	A (I _n) @ 60Hz
	328.00	A (I _n) @ 50Hz
Phase	3	Ø
Locked Rotor Current @ High Voltage	2170	A (I _n) @ 60Hz
FI Current @ 208V	-	A (I _n) @ 60Hz
Service Factor	1.15	@ 60Hz
	1	@ 50Hz
KVA Code	H	60Hz
	G	50Hz
Nominal Efficiency	96.2	% @ 60Hz
Nominal Power Factor	0.9	cosΦ @ 60Hz
Leads (Qty, Size)	6	0
Connection	D	-
Coil Resistance	7.4	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	88.4	°C @ 60Hz
	-	°C @ 50Hz

GENERAL DATA		
Frame Size	449TD	
Enclosure	TEFC	
Mounting	Rigid/D-Flange	
Approximate Weight (lbs.)	2342 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	6319 C3	
Bearing ODE Side	6319 C3	
Grease Type	Mobil Polyrex EM	
Compensation Ring (wavy washer)	NDE	
Moment of Inertia (lb-ft²)	88.9	
Sound Pressure @ 3 FT dBA	94.1	
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	1785	1480
Voltage	460	380
Full Load Amps	270.00	328.00
Service Factor	1.15	1
KVA Code	H	G
Full Load Amps (208V)	-	-
Nominal Efficiency	96.2	95
Nominal Power Factor	0.9	-
Design	A	
Frame	449TD	
Enclosure Type	TEFC	
IP Rating	55	
Duty	Cont. / S1	
Insulation Class	F	
Ambient Rating	40	
Drive End Bearing	6319 C3	
Opposite Drive End Bearing	6319 C3	
Weight (lbs)	2342	

NAMEPLATE LAYOUT

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

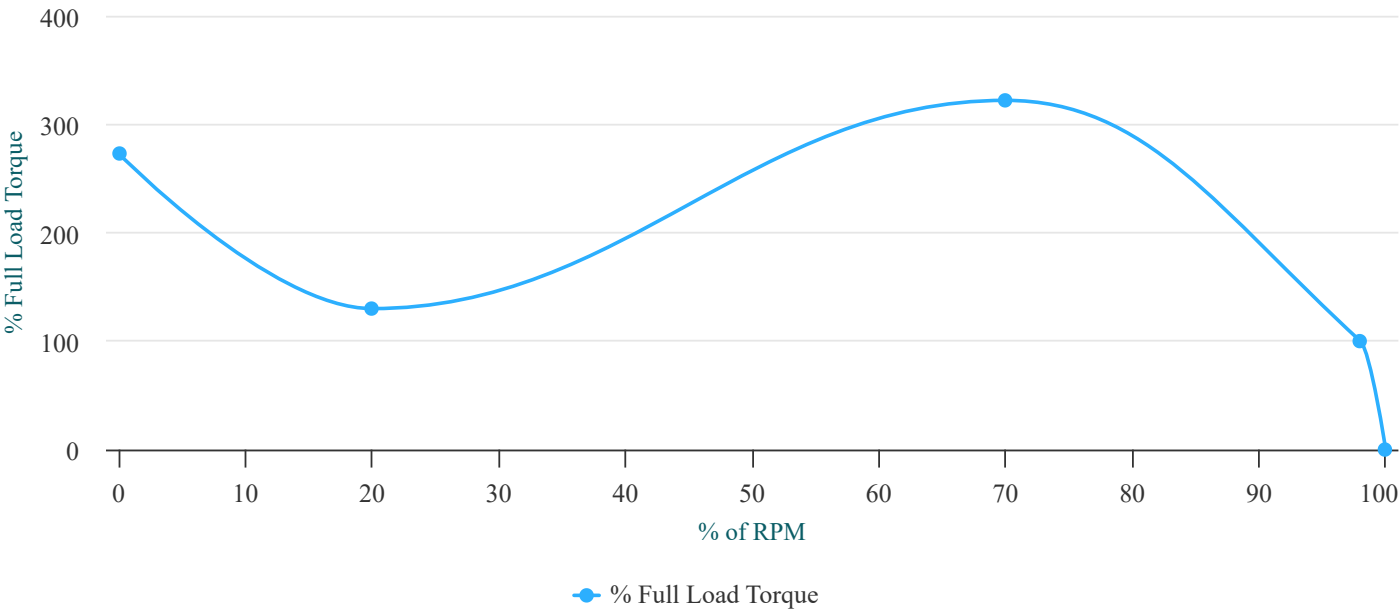
HAZARDOUS LOCATIONS	CSA CERTIFIED
Class / Division	Class I, Div. 2
Groups	A, B, C & D

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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	2008.1	273	Start Configuration	DOL
Pull-Up Torque	956.6	130	Starting Current (A)	2170
Breakdown Torque	2368.5	322	No-Load Current (A)	58.8
Full Load Torque	735.6	100	No-Load Power Factor	0.06

TYPICAL PERFORMANCE - NOT GUARANTEED VALUES

% OF RATED LOAD	25	50	75	100	125	S.F. 1.15
Line Amperes (A)	87.1	141.7	202.1	267.7	338.3	-
Efficiency (%)	93.5	95.6	95.8	95.4	94.9	-
Speed (r/min)	1796	1792	1788	1784	1779	-
Power Factor (cosΦ)	0.72	0.86	0.91	0.92	0.91	-
Input Power (kW)	49.86	97.58	146.05	195.4	245.73	-

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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-3-6-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	

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