

NEMA

Model GRC1002D-TD
MFG PN: T405TS100U2B

Model GRC1002D-TD

Product Data Package



MODEL	HP	RPM	VOLTAGE	PHASE	Hz	FRAME	MOUNT	ENCLOSURE
GRC1002D-TD	100	3565	230/460	3	60	405TSD	Rigid/D-Flange	TEFC

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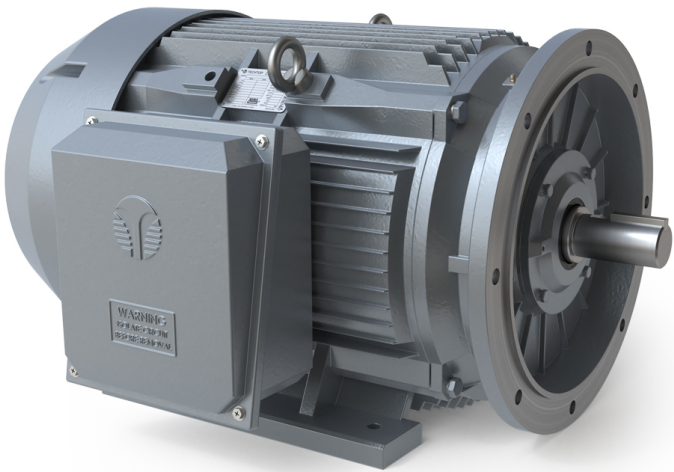
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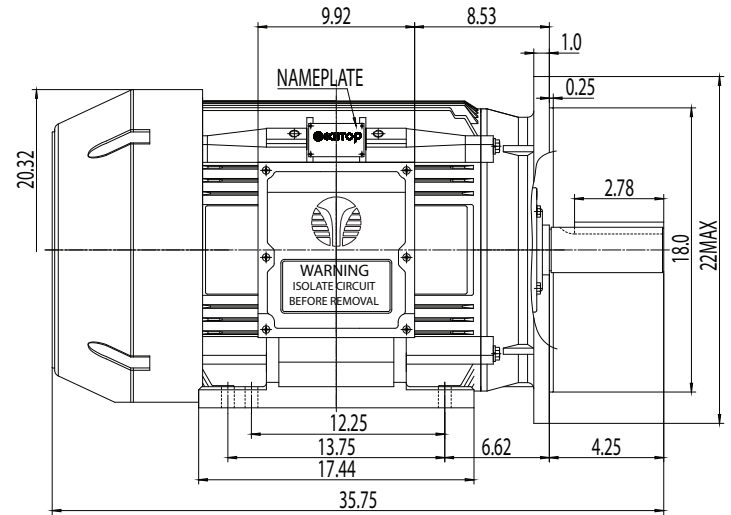
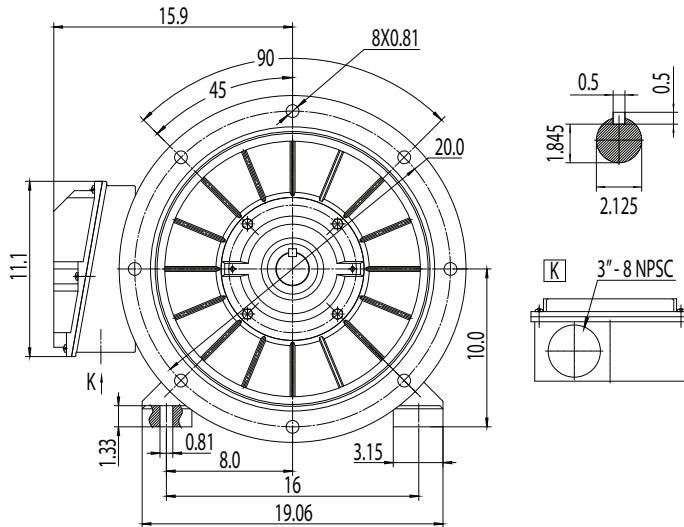
ELECTRICAL DATA		
Rated Motor Output Power	100	HP
	-	kW
Rated Motor Speed	3565	r/min 60Hz
	2950	r/min 50Hz
Rated Motor Voltage (+/-10%)	230/460	V/60Hz
	190/380	V/50Hz
Rated Motor Current	222/111	A (I _n) @ 60Hz
	266/133	A (I _n) @ 50Hz
Phase	3	Ø
Locked Rotor Current @ High Voltage	1011	A (I _n) @ 60Hz
FI Current @ 208V	-	A (I _n) @ 60Hz
Service Factor	1.15	@ 60Hz
	1	@ 50Hz
KVA Code	K	60Hz
	H	50Hz
Nominal Efficiency	94.1	% @ 60Hz
Nominal Power Factor	0.9	cosΦ @ 60Hz
Leads (Qty, Size)	12	6
Connection	DD/D	-
Coil Resistance	0.037	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	67	°C @ 60Hz
	87.9	°C @ 50Hz

GENERAL DATA		
Frame Size	405TSD	
Enclosure	TEFC	
Mounting	Rigid/D-Flange	
Approximate Weight (lbs.)	1059.4 lbs.	
Casing Material / Fan Cover	Cast Iron	Cast Iron
Shaft Material	-	
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	6314 C3	
Bearing ODE Side	6314 C3	
Grease Type	Mobil Polyrex EM	
Compensation Ring (wavy washer)	NDE	
Moment of Inertia (lb-ft²)	11.84	
Sound Pressure @ 3 FT dBA	92.5	
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	100	100
RPM	3565	2950
Voltage	230/460	190/380
Full Load Amps	222/111	266/133
Service Factor	1.15	1
KVA Code	K	H
Full Load Amps (208V)	-	-
Nominal Efficiency	94.1	93.5
Nominal Power Factor	0.9	-
Design	A	
Frame	405TSD	
Enclosure Type	TEFC	
IP Rating	55	
Duty	Cont. / S1	
Insulation Class	F	
Ambient Rating	40	
Drive End Bearing	6314 C3	
Opposite Drive End Bearing	6314 C3	
Weight (lbs)	1059.4	

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			
RPM			
VOLT			
FLA			
SF			
KVA CODE			
NOM.EFF			
USABLE AT 208V 60Hz	BEARING SIZE		
FLA	DE	ODE	
	GREASE: MOBIL POLYREX EM		
MADE IN CHINA		CLASS 1, DIV 2, GROUPS A, B, C AND D	
MFG PN		MFG DATE	
SER #		DESIGN	
FRAME		ENCL	
IP		DUTY	
INS CL		AMB	
WEIGHT		lbs	
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

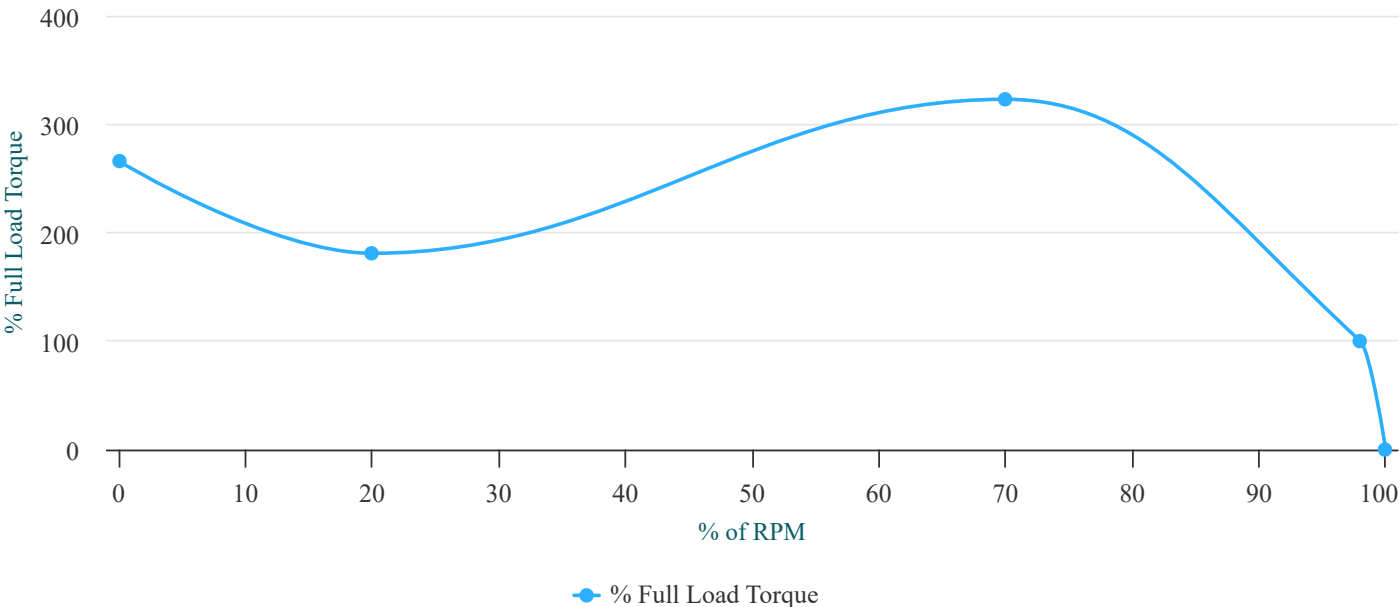
HAZARDOUS LOCATIONS	CSA CERTIFIED
Class / Division	Class I, Div. 2
Groups	A, B, C & D

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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	391.9	266	Start Configuration	DOL
Pull-Up Torque	266.7	181	Starting Current (A)	1011
Breakdown Torque	475.8	323	No-Load Current (A)	26.5
Full Load Torque	147.3	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)	38.2	59.4	83.2	109.1	136.4	136.4
Efficiency (%)	90.4	93.8	94.5	94.4	93.9	93.9
Speed (r/min)	3593	3586	3578	3570	3562	3562
Power Factor (cosΦ)	0.68	0.84	0.9	0.91	0.92	0.92
Input Power (kW)	20.75	39.98	59.55	79.48	99.81	99.81

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HIGH VOLTAGE
(Δ)



LOW VOLTAGE
(ΔΔ)

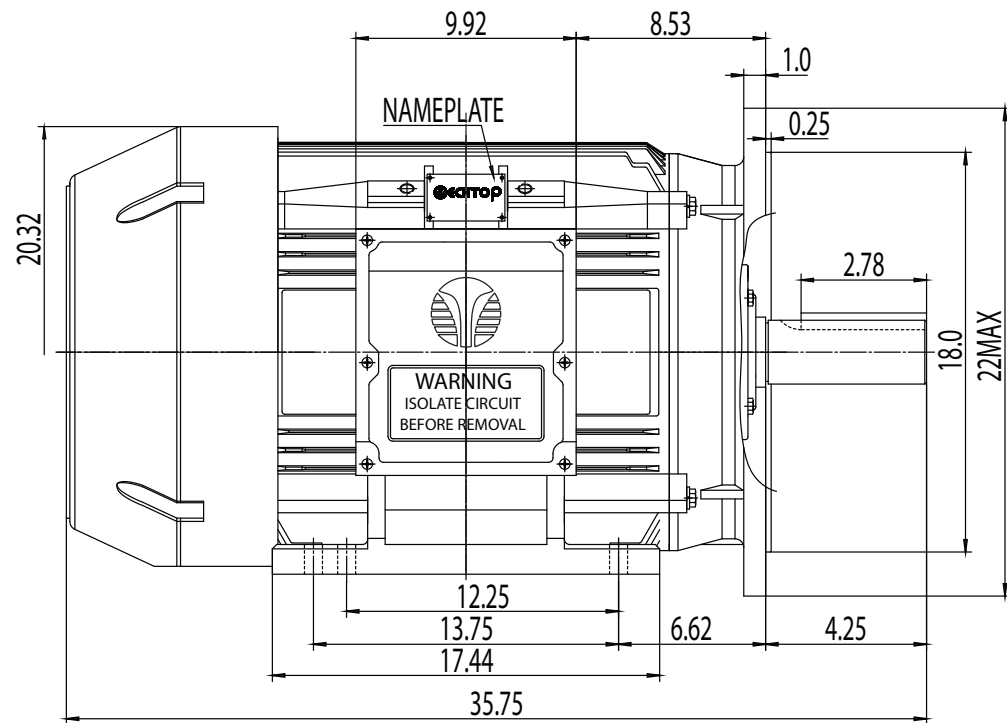
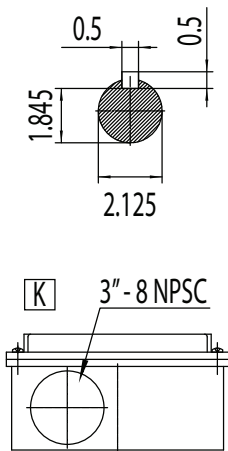
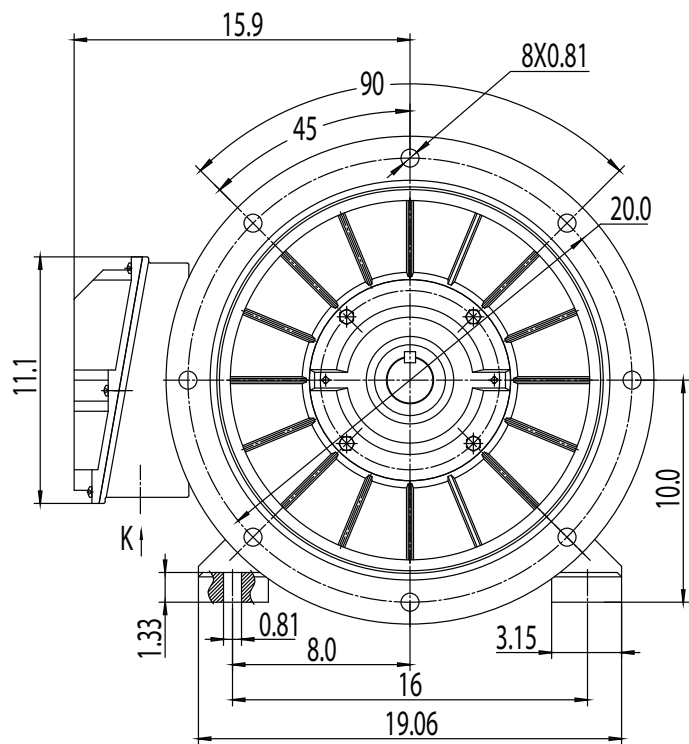
- NOTES:
- 1. CCW ROTATION FACING ODE FOR CONNECTIONS SHOWN
 - 2. TO REVERSE ROTATION, SWAP ANY TWO INPUT LINES
 - 3. WHEN MOTOR IS IN F1 POSITION, LEADS INDICATED WITH “*” EXIT THE CASING ABOVE THE CENTER LINE OF THE MOTOR, THE REMAINING LEADS EXIT BELOW THE CENTER LINE
 - 4. LEADS MUST BE NUMBERED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



DRAWING NUMBER:	NEMA-3-12-DD-D
CONNECTION:	DD/D
NUMBER OF LEADS:	12
THERMAL PROTECTION:	-

NEMA 3Ø DD/D 12-Lead Dual Voltage

ISSUED DATE	30/05/25
PREMIUM T-FRAME CAST IRON MOTORS	



NEMA Premium TEFC 405TSD

DRAWING NUMBER:	GR3-CI-TF-404(5)TSD-CFC	ISSUED DATE	30/05/25
DIMENSIONS:	Inches	PREMIUM T-FRAME CAST IRON MOTORS	
MOUNTING:	Rigid/D-Flange		
CASING MATERIAL:	Cast Iron		