

NEMA

Model **GRA0012D-TD-01**
MFG PN: T143T1.5U2B

Model **GRA0012D-TD-01**

Product Data Package



MODEL	HP	RPM	VOLTAGE	PHASE	Hz	FRAME	MOUNT	ENCLOSURE
GRA0012D-TD-01	1.5	3500	230/460	3	60	143TD	Rigid/D-Flange	TEFC

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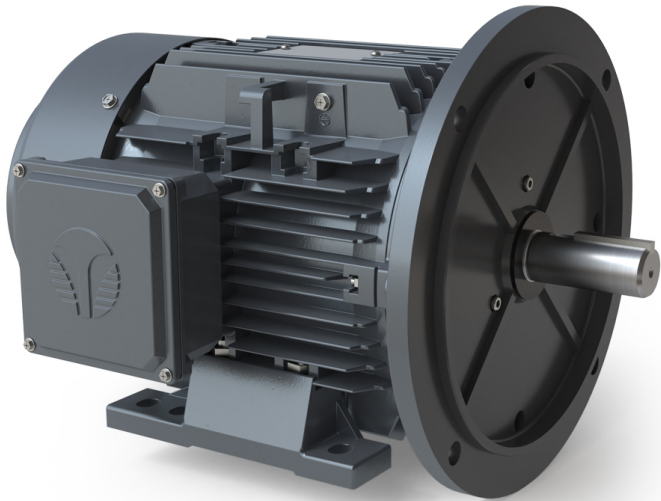
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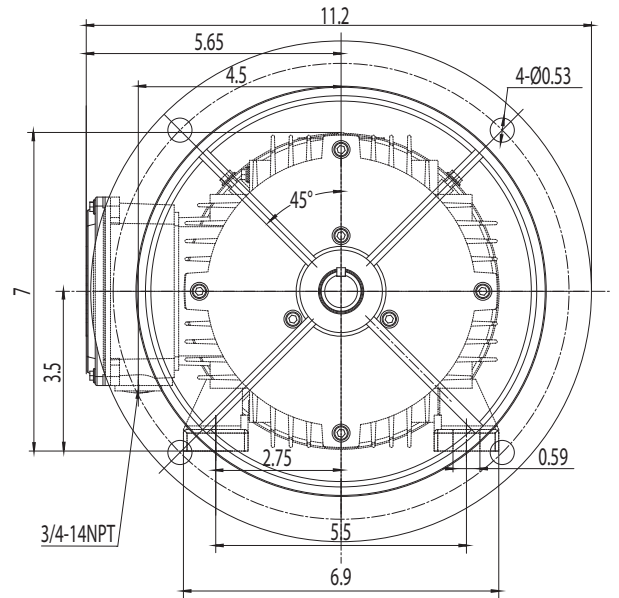
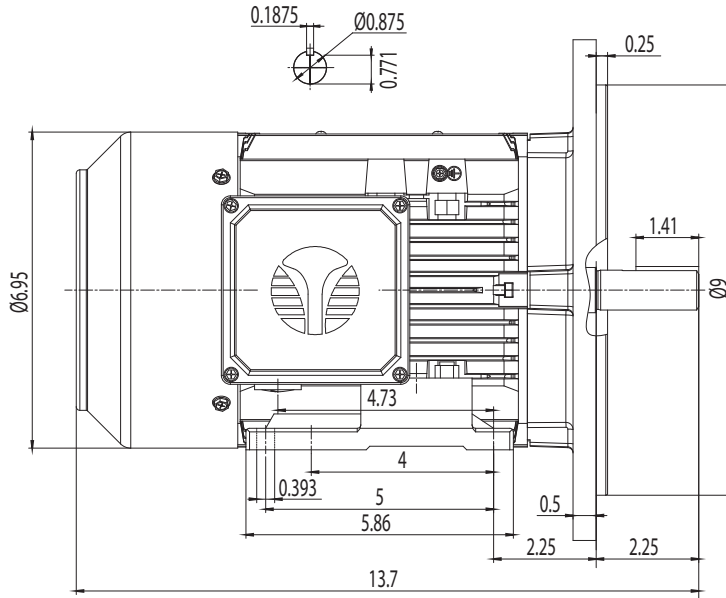
ELECTRICAL DATA		
Rated Motor Output Power	1.5	HP
	-	kW
Rated Motor Speed	3500	r/min 60Hz
	2890	r/min 50Hz
Rated Motor Voltage (+/-10%)	230/460	V/60Hz
	190/380	V/50Hz
Rated Motor Current	4.12/2.06	A (I _n) @ 60Hz
	4.74/2.37	A (I _n) @ 50Hz
Phase	3	Ø
Locked Rotor Current @ High Voltage	15.7	A (I _n) @ 60Hz
FI Current @ 208V	4.2	A (I _n) @ 60Hz
Service Factor	1.25	@ 60Hz
	1	@ 50Hz
KVA Code	L	60Hz
	H	50Hz
Nominal Efficiency	84	% @ 60Hz
Nominal Power Factor	0.8	cosΦ @ 60Hz
Leads (Qty, Size)	9	18
Connection	YY/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
	58	°C @ 50Hz

GENERAL DATA		
Frame Size	143TD	
Enclosure	TEFC	
Mounting	Rigid/D-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	2890
Voltage	230/460	190/380
Full Load Amps	4.12/2.06	4.74/2.37
Service Factor	1.25	1
KVA Code	L	H
Full Load Amps (208V)	4.2	-
Nominal Efficiency	84	83.5
Nominal Power Factor	0.8	-
Design	B	
Frame	143TD	
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	MFG DATE	
HP		SER #	
RPM		DESIGN	
VOLT		FRAME	
FLA		ENCL / IP	TEFC 55
SF		DUTY	
KVA CODE		INS CL	
NOM.EFF		AMB	
EFF 75%		DE	
PF		ODE	
USABLE AT 208V		WEIGHT	lbs
NEMA Premium TECHTOPCANADA.COM		CC088A E323353 SP 224653 Energy Verified Only	
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

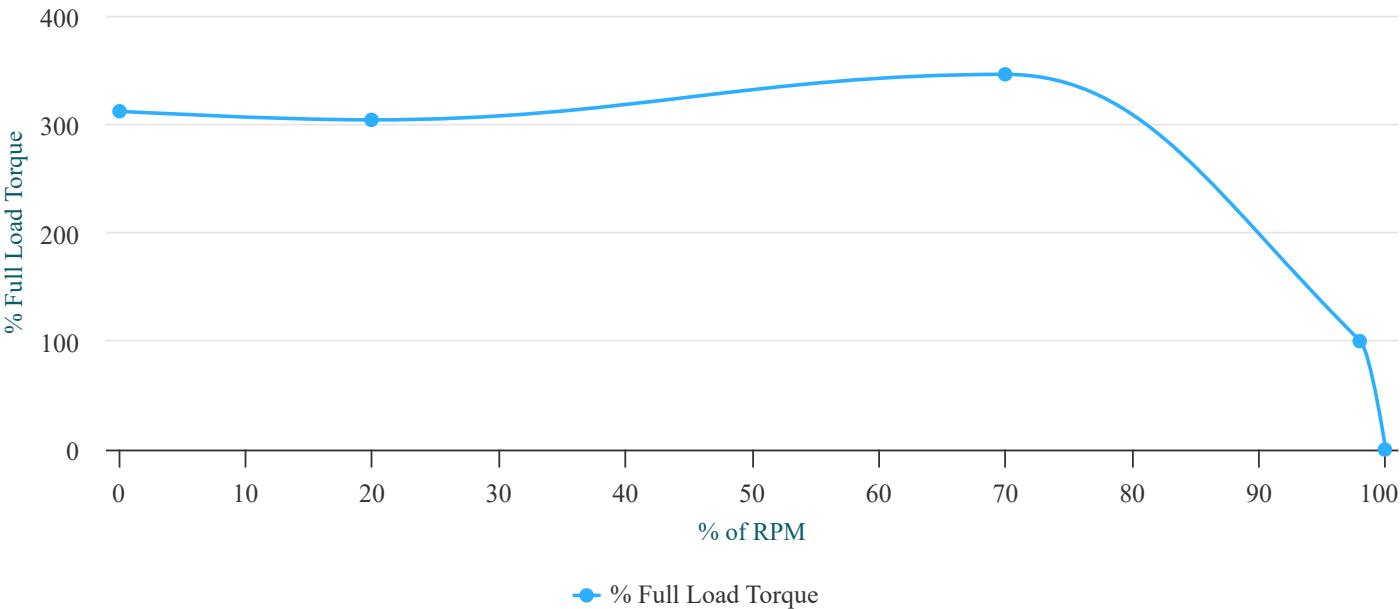
HAZARDOUS LOCATIONS	CSA CERTIFIED
Class / Division	Class I, Div. 2
Groups	A, B, C & D

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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)	15.7
Breakdown Torque	7.8	346	No-Load Current (A)	1
Full Load Torque	2.3	100	No-Load Power Factor	0.13

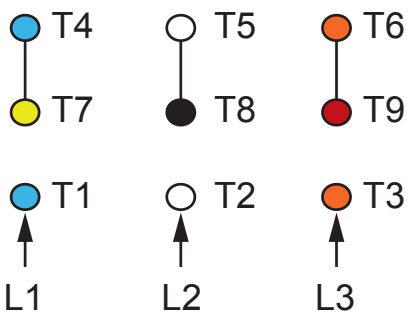
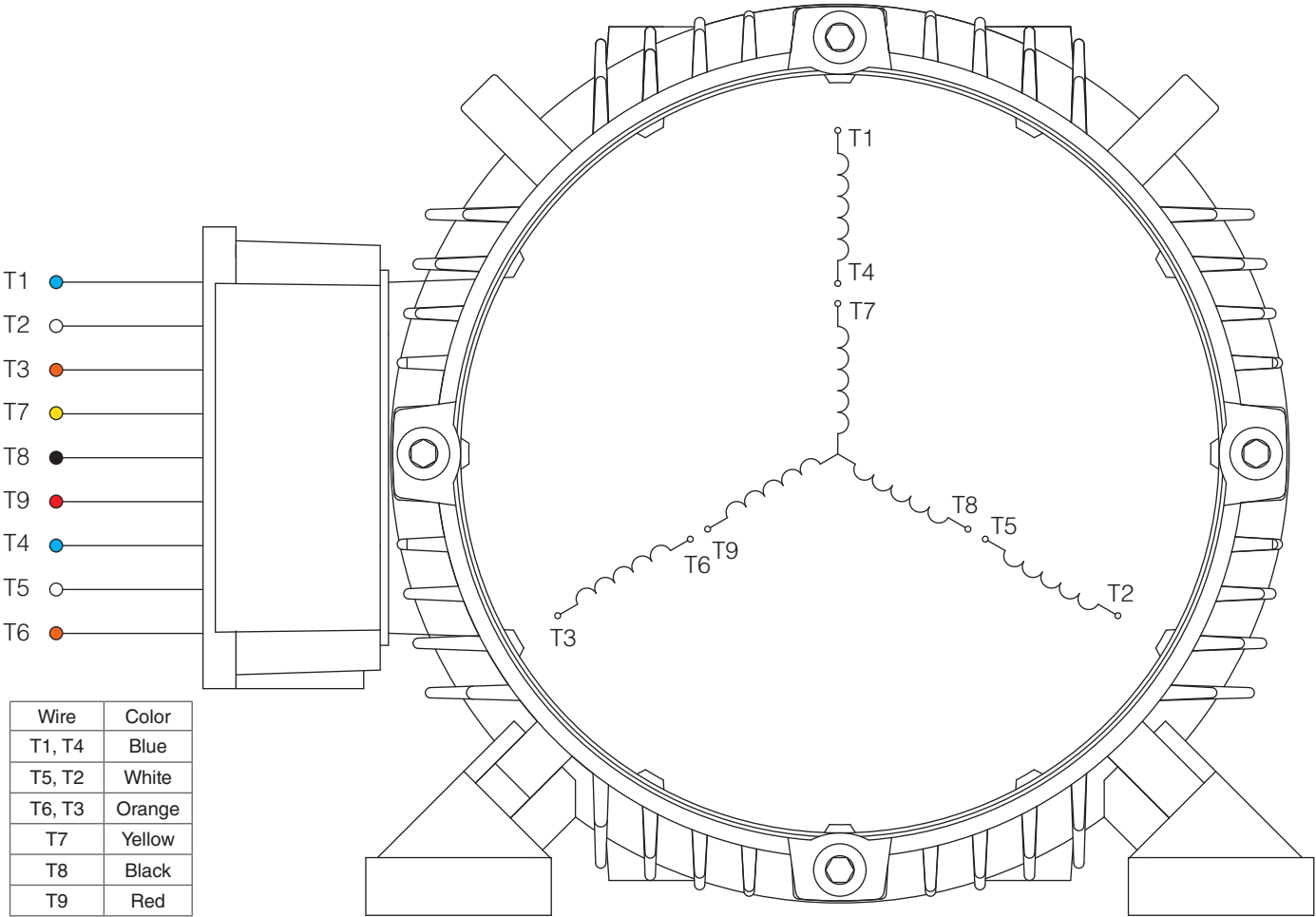
TYPICAL PERFORMANCE - NOT GUARANTEED VALUES

% OF RATED LOAD	25	50	75	100	125	S.F. 1.25
Line Amperes (A)	1.1	1.3	1.6	2	2.4	2.4
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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HIGH VOLTAGE
(Y)



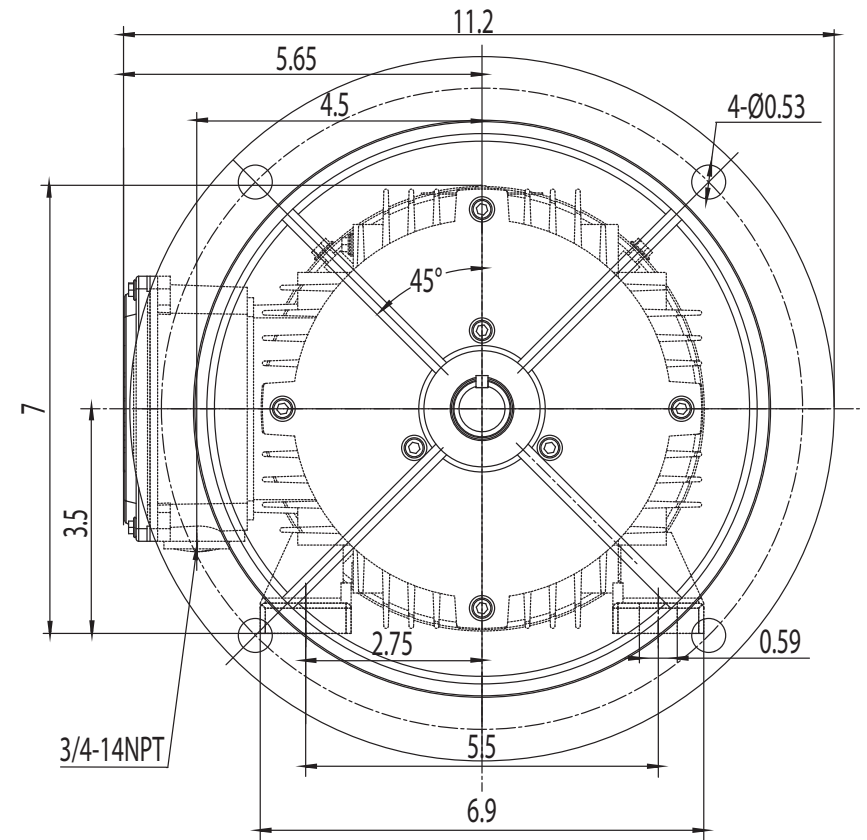
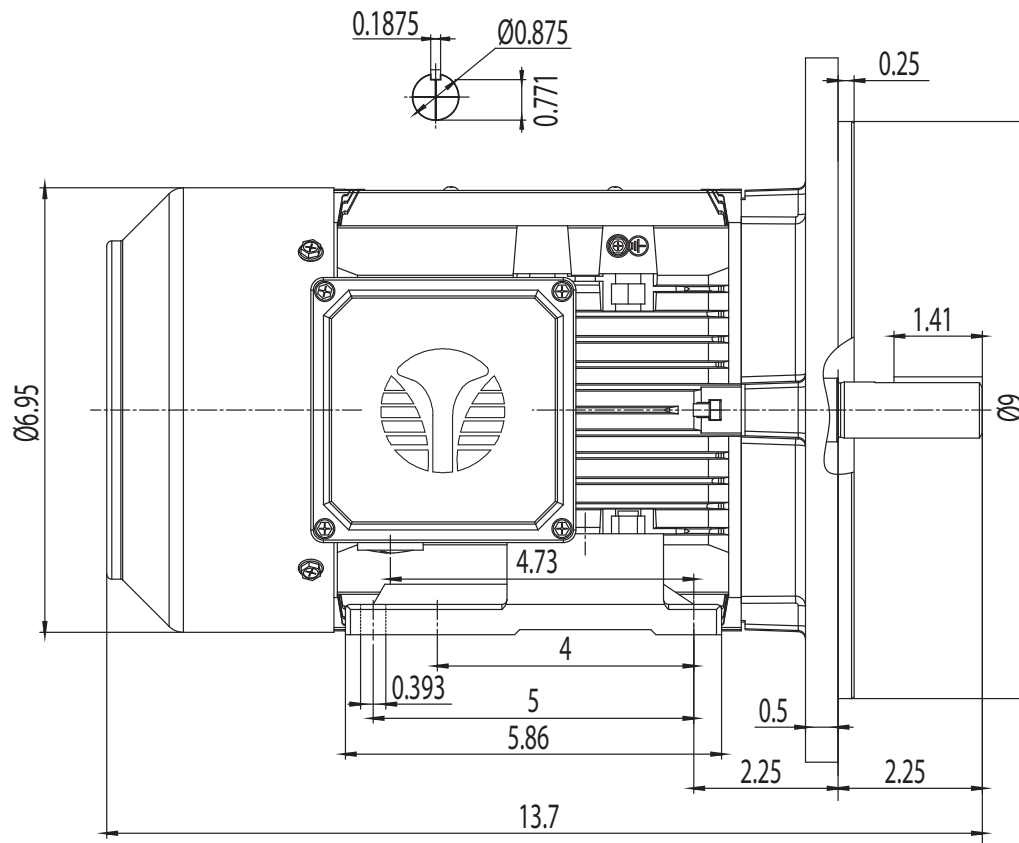
LOW VOLTAGE
(YY)

- 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



NEMA 3Ø YY/Y 9-Lead Dual Voltage

DRAWING NUMBER:	NEMA-3-9-YY-Y	ISSUED DATE	15/01/25
CONNECTION:	YY/Y	PREMIUM T-FRAME ALUMINUM MOTORS	
NUMBER OF LEADS:	9		
THERMAL PROTECTION:	-		



NEMA Premium TEFC 143TD

DRAWING NUMBER:

GR3-AL-TF-140TD-01

DIMENSIONS:

Inches

MOUNTING:

Rigid/D-Flange

CASING MATERIAL:

Cast Aluminum

ISSUED DATE

15/01/25

PREMIUM T-FRAME ALUMINUM MOTORS