

DATA SHEET



Three Phase Induction Motor - Squirrel Cage

Customer :																			
Product line	: NEMA Premium Efficiency Three-Phase																		
Product code :	12447064																		
Catalog # :	02009ET3H324T-W22																		
Frame : 324/6T Output : 20 HP (15 kW) Poles : 8 Frequency : 60 Hz Rated voltage : 575 V Rated current : 22.6 A L. R. Amperes : 113 A LRC : 5.0x(Code G) No load current : 12.8 A Rated speed : 880 rpm Slip : 2.22 % Rated torque : 119 ft.lb Locked rotor torque : 190 % Breakdown torque : 220 % Insulation class : F Service factor : 1.25 Moment of inertia (J) : 9.37 sq.ft.lb Design : B	Locked rotor time : 48s (cold) 27s (hot) Temperature rise : 80 K Duty cycle : Cont.(S1) Ambient temperature : -20°C to +40°C Altitude : 1000 m.a.s.l. Protection degree : IP55 Cooling method : IC411 - TEFC Mounting : F-1 Rotation ¹ : Both (CW and CCW) Noise level ² : 56.0 dB(A) Starting method : Direct On Line Approx. weight ³ : 508 lb																		
Output	25% 50% 75% 100%																		
Efficiency (%)	89.2 89.5 91.0 91.0																		
Power Factor	0.31 0.54 0.66 0.73																		
Foundation loads																			
Max. traction : 753 lb																			
Max. compression : 1262 lb																			
	<table border="0"> <tr> <td></td> <td style="text-align: center;"><u>Drive end</u></td> <td style="text-align: center;"><u>Non drive end</u></td> </tr> <tr> <td>Bearing type :</td> <td style="text-align: center;">6312 C3</td> <td style="text-align: center;">6212 C3</td> </tr> <tr> <td>Sealing :</td> <td style="text-align: center;">V'Ring</td> <td style="text-align: center;">V'Ring</td> </tr> <tr> <td>Lubrication interval :</td> <td style="text-align: center;">20000 h</td> <td style="text-align: center;">20000 h</td> </tr> <tr> <td>Lubricant amount :</td> <td style="text-align: center;">21 g</td> <td style="text-align: center;">13 g</td> </tr> <tr> <td>Lubricant type :</td> <td colspan="2" style="text-align: center;">Mobil Polyrex EM</td> </tr> </table>		<u>Drive end</u>	<u>Non drive end</u>	Bearing type :	6312 C3	6212 C3	Sealing :	V'Ring	V'Ring	Lubrication interval :	20000 h	20000 h	Lubricant amount :	21 g	13 g	Lubricant type :	Mobil Polyrex EM	
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Notes																			
This revision replaces and cancel the previous one, which must be eliminated. (1) Looking the motor from the shaft end. (2) Measured at 1m and with tolerance of +3dB(A). (3) Approximate weight subject to changes after manufacturing process. (4) At 100% of full load.																			
These are average values based on tests with sinusoidal power supply, subject to the tolerances stipulated in NEMA MG-1.																			
Rev.	Changes Summary	Performed	Checked	Date															
Performed by																			
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TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



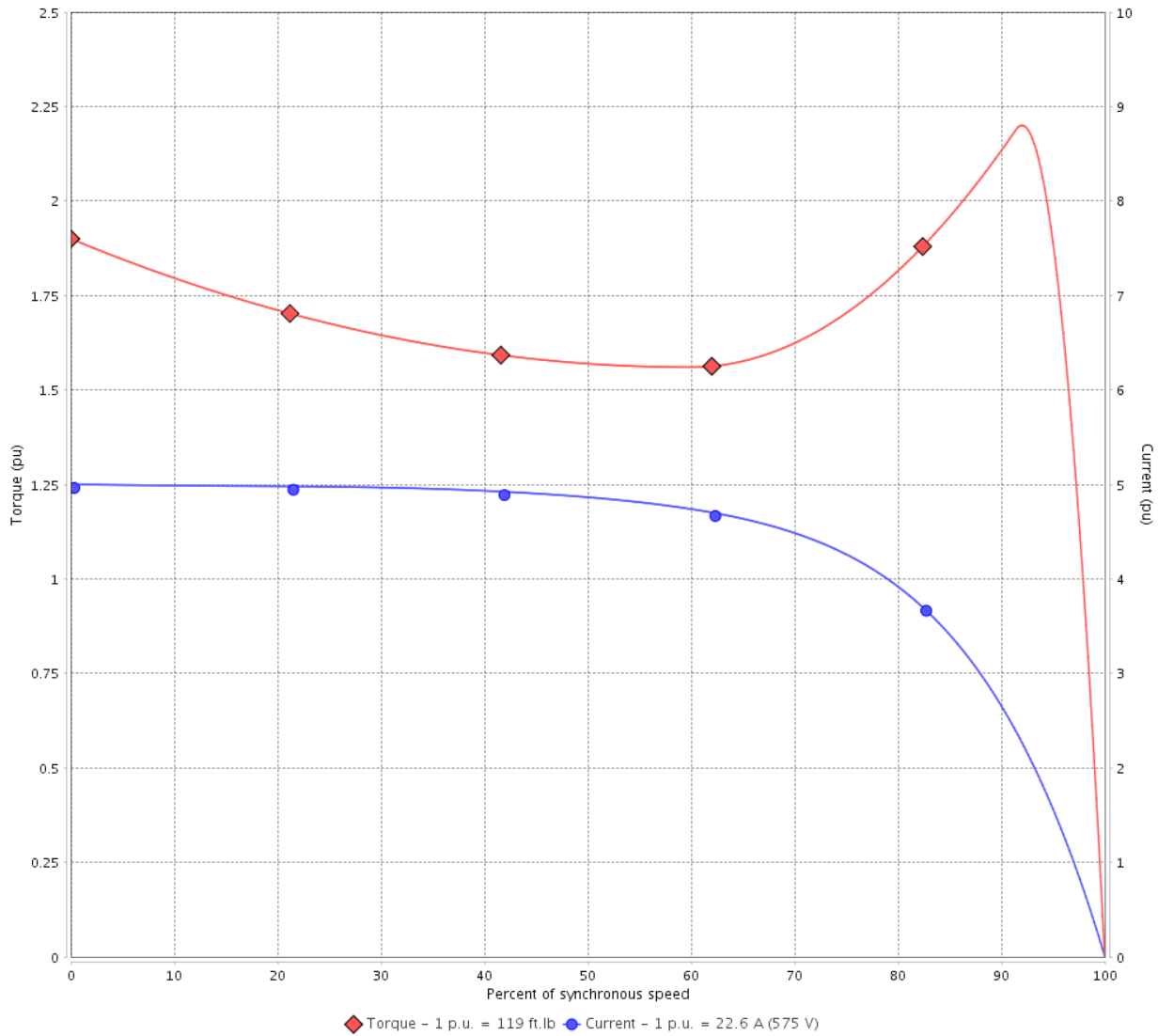
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TORQUE AND CURRENT VS SPEED CURVE



Performance : 575 V 60 Hz 8P

Rated current	: 22.6 A	Moment of inertia (J)	: 9.37 sq.ft.lb
LRC	: 5.0	Duty cycle	: Cont.(S1)
Rated torque	: 119 ft.lb	Insulation class	: F
Locked rotor torque	: 190 %	Service factor	: 1.25
Breakdown torque	: 220 %	Temperature rise	: 80 K
Rated speed	: 880 rpm	Design	: B

Locked rotor time : 48s (cold) 27s (hot)

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Performed by			Page 2 / 6	Revision
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LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage

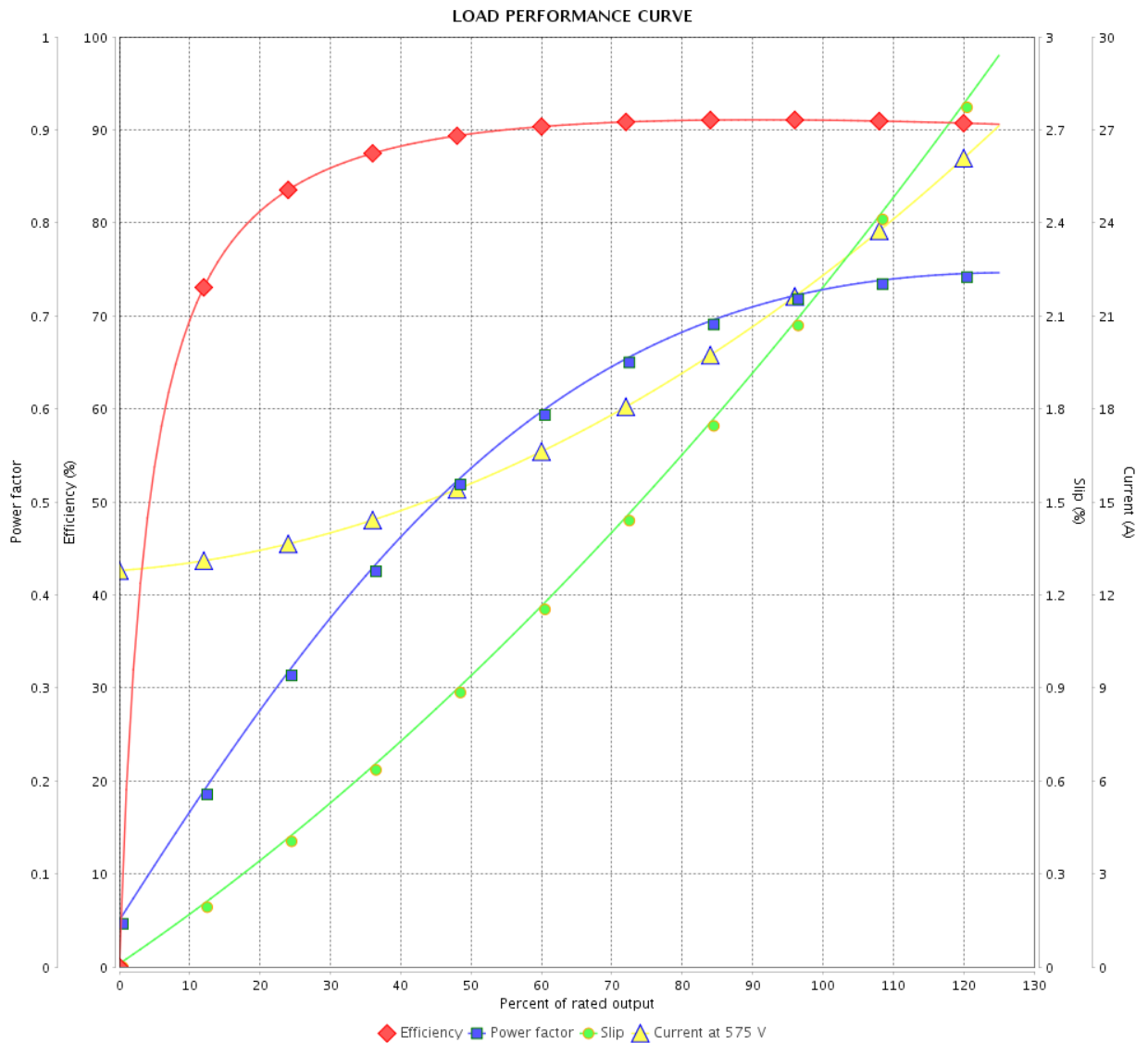


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 Service factor : 1.25
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 Design : B

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THERMAL LIMIT CURVE

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Heating constant

Cooling constant

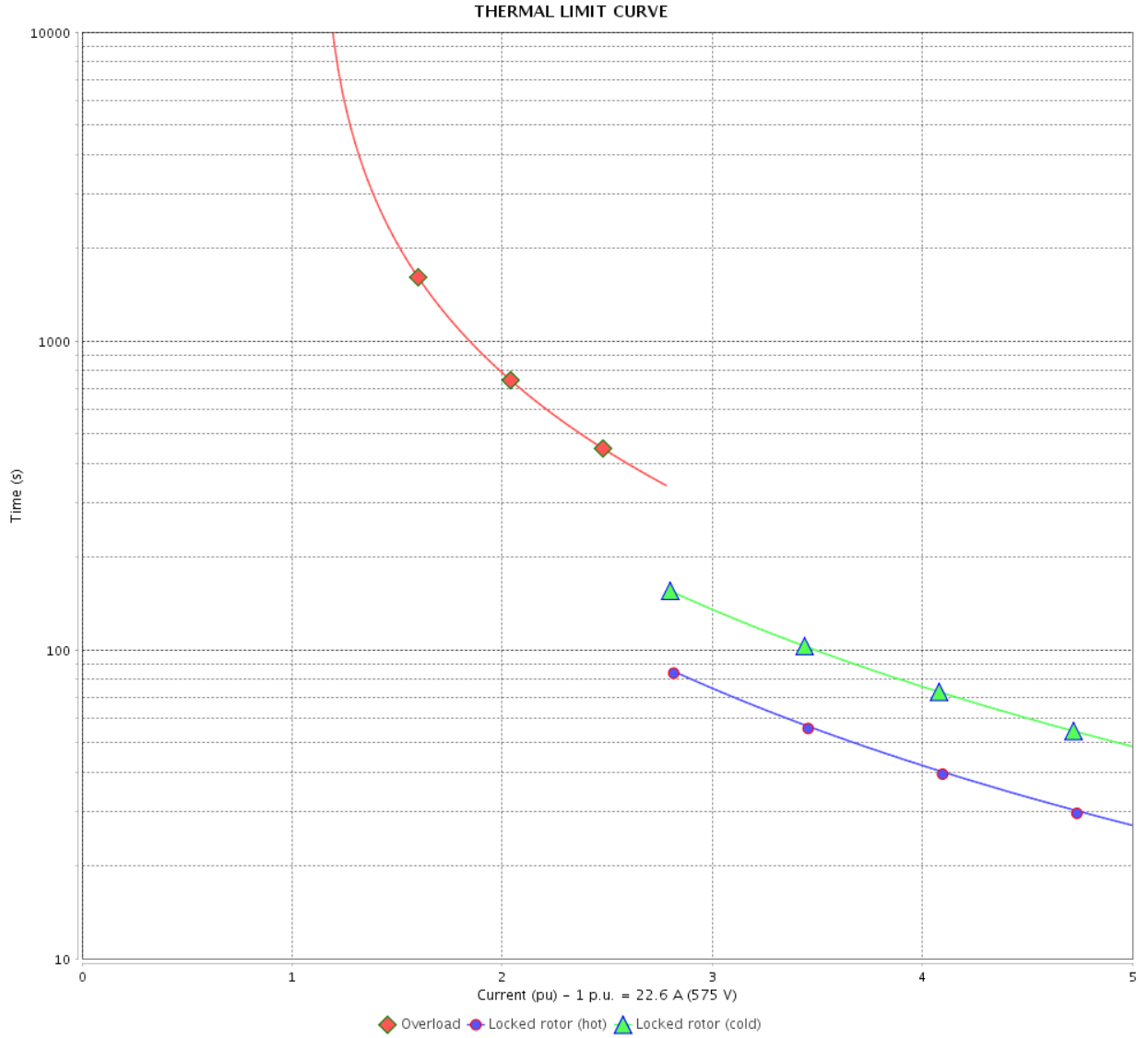
Rev.	Changes Summary	Performed	Checked	Date
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THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

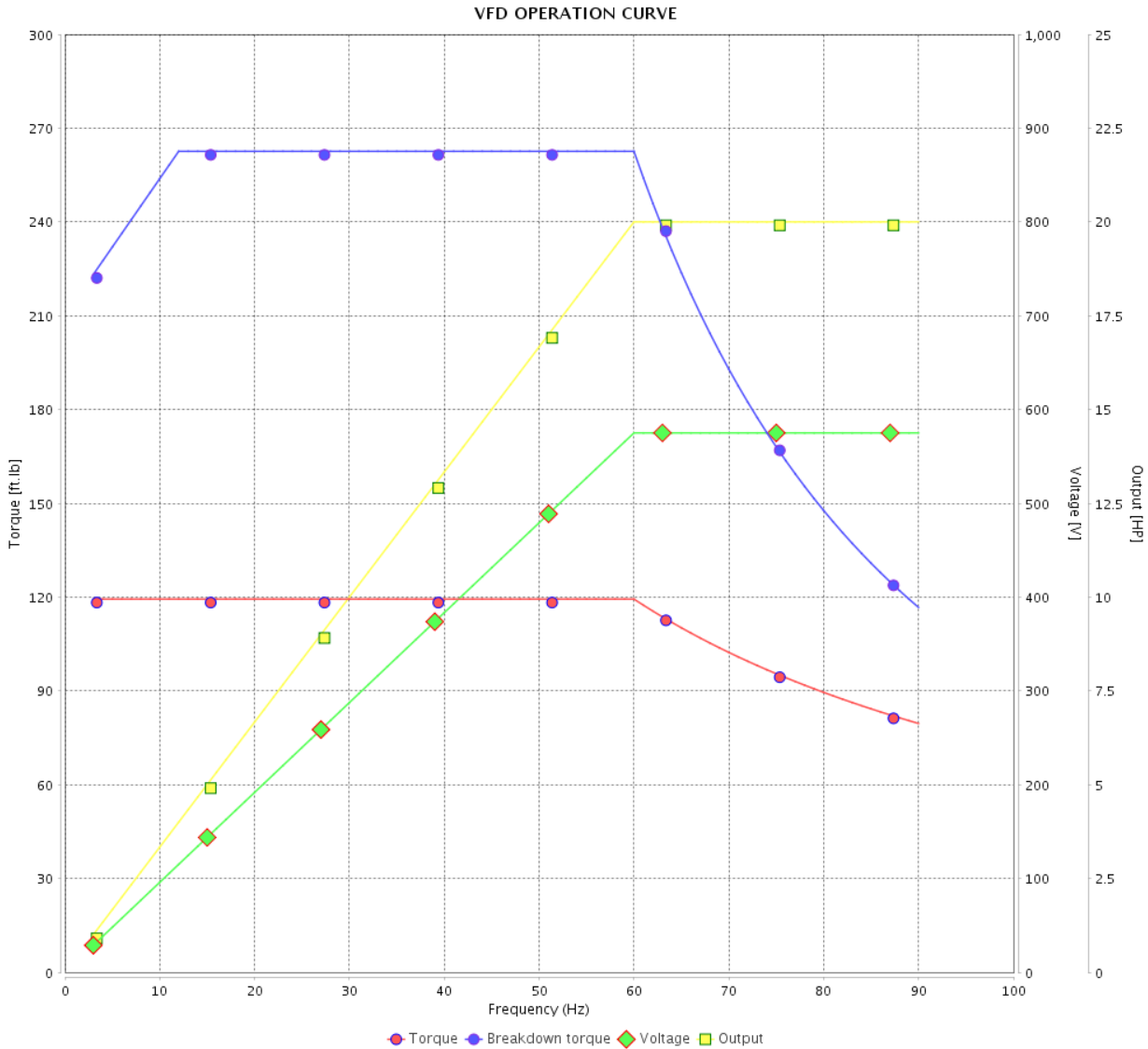


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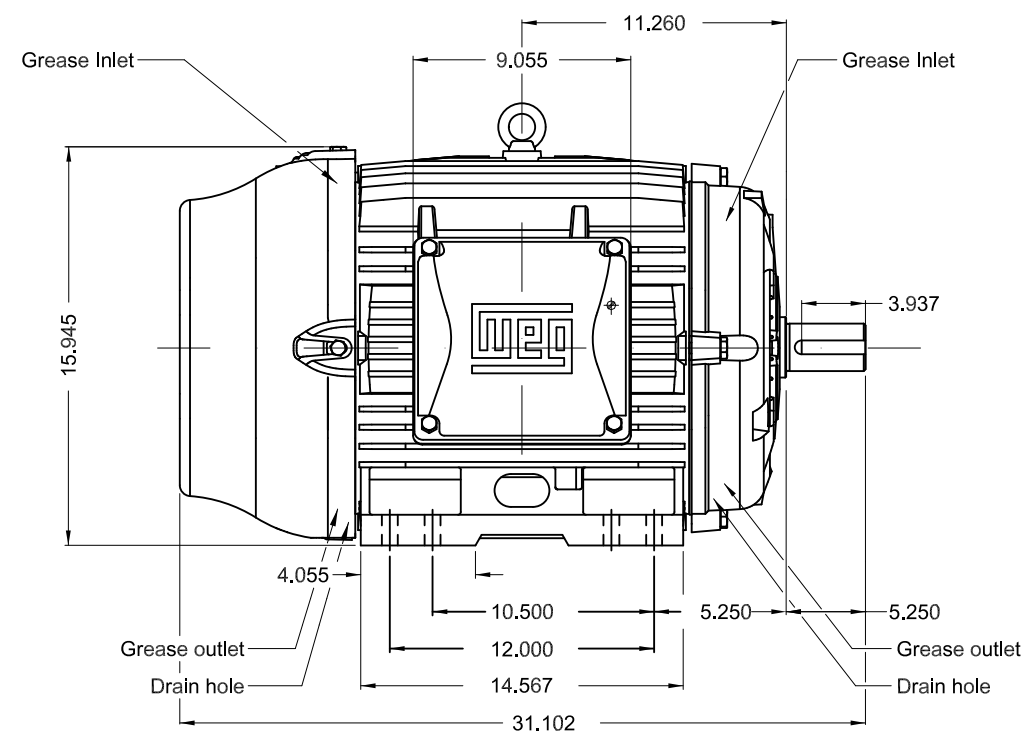
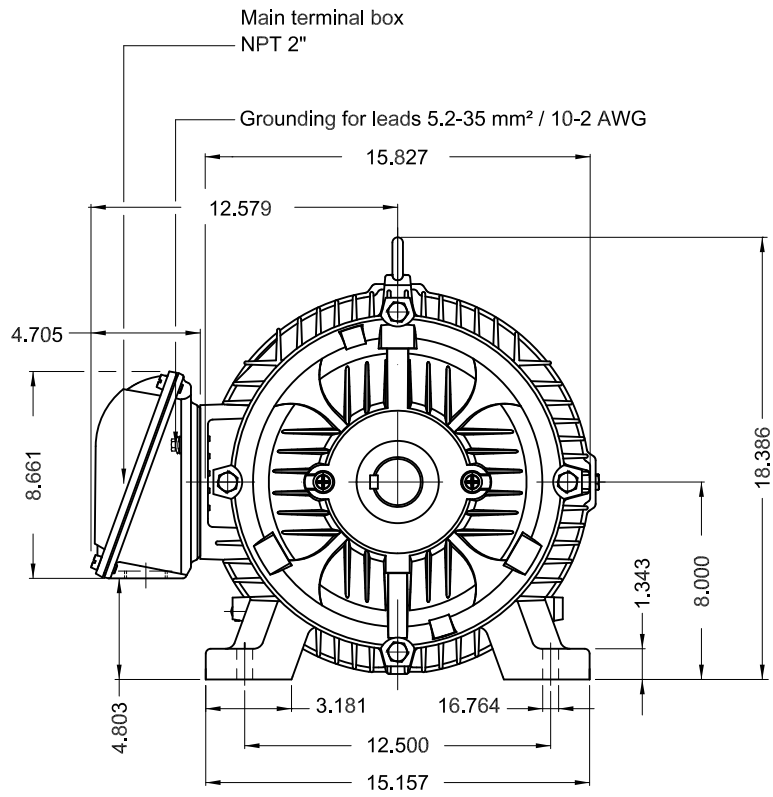
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1 2 3 4 5 6

A

B

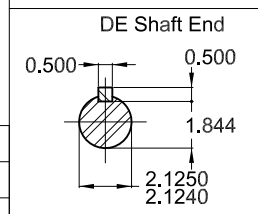
C



D

E

Color RAL 5009
 Painting plan 203A
 Mounting B3R(D)



20 HP 08 Poles 60 Hz A

ECM	LOC	SUMMARY OF MODIFICATIONS	EXECUTED	CHECKED	RELEASED	DATE	VER
EXECUTED	PIRWBUSER	THREE PH. MOTOR W22 PREM. EFF.					
CHECKED		FRAME 324/6T IP55 TEFC					
RELEASED							
REL DT.	WMO	Jaragua do Sul	Product Engineering				

PREVIEW
 WDD



SHEET 1 / 1

Dimensions in inches XME A3



NEMA
Premium
W22



FOR SAFE AREA
Mod.TE1BFOXON
CC029A



Class I, Div 2, Gr A, B, C and D - T3
Class I, Zone 2, IIC - T3
Class II, Div 2, Gr F and G - T4
For use on PWM: Gr. A, B, C, D and F,
VT 1000:1, CT 20:1, 1.00SF - T3A

MODEL 02009ET3H324T-W22

Inverter Duty Motor
Severe Duty

PH3 60Hz Fr. 324/6T 1000m.a.s.l. IP55 TEFC 508lb

V 575

A 22.6

HP 20

kW 15

SF 1.25

SFA 28.3

RPM 880

PF 0.73

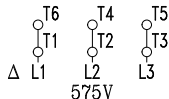
AMB 40°C

INS cl. F DT80K

NEMA NOM EFF 91.0%

DUTY CONT.

DES B Code G

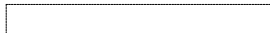


→ 6312-C3 (21g)

→ 6212-C3 (13g)



MOBIL POLYREX EM (20000h)



MADE IN BRAZIL
12447064