

# DATA SHEET



## Three Phase Induction Motor - Squirrel Cage

Customer :																			
Product line	: NEMA Premium Efficiency Three-Phase																		
Product code :	13585401																		
Catalog # :	04036ST3HIE324TS-W22																		
Frame : 324/6TS Output : 40 HP (30 kW) Poles : 2 Frequency : 60 Hz Rated voltage : 575 V Rated current : 37.0 A L. R. Amperes : 233 A LRC : 6.3x(Code G) No load current : 8.80 A Rated speed : 3555 rpm Slip : 1.25 % Rated torque : 59.1 ft.lb Locked rotor torque : 250 % Breakdown torque : 240 % Insulation class : F Service factor : 1.25 Moment of inertia (J) : 4.90 sq.ft.lb Design : B	Locked rotor time : 81s (cold) 45s (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 <sup>1</sup> : Both (CW and CCW) Noise level <sup>2</sup> : 76.0 dB(A) Starting method : Direct On Line Approx. weight <sup>3</sup> : 534 lb																		
Output	25%    50%    75%    100%																		
Efficiency (%)	91.5    91.7    92.4    92.4																		
Power Factor	0.58    0.80    0.86    0.88																		
Foundation loads																			
Max. traction : 277 lb																			
Max. compression : 811 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;">Inpro/Seal</td> <td style="text-align: center;">Inpro/Seal</td> </tr> <tr> <td>Lubrication interval :</td> <td style="text-align: center;">12000 h</td> <td style="text-align: center;">15000 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 :	Inpro/Seal	Inpro/Seal	Lubrication interval :	12000 h	15000 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																			
Checked by			Page	Revision															
Date	12/04/2022		1 / 6																

# TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



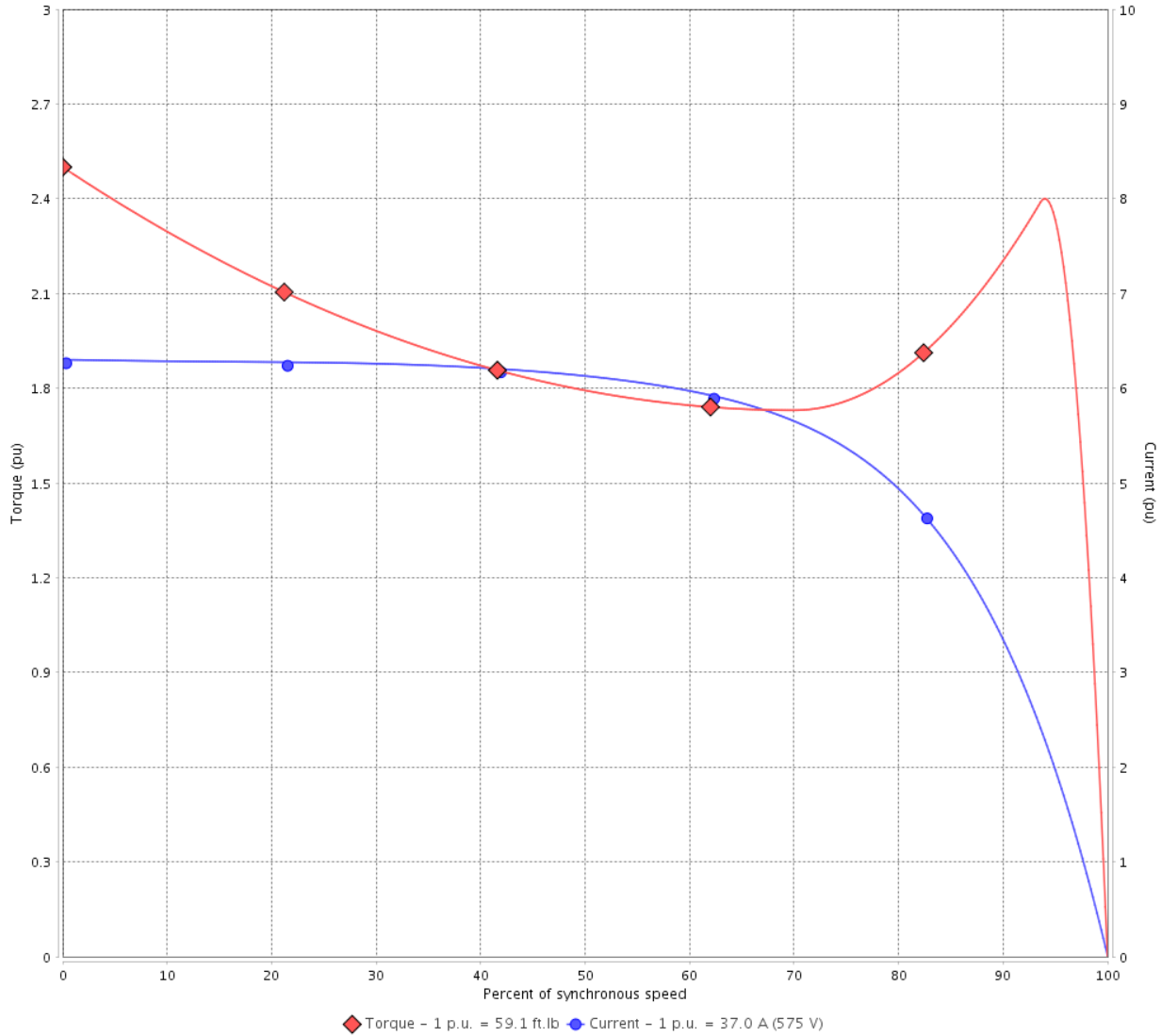
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 13585401

Catalog # : 04036ST3HIE324TS-W22

TORQUE AND CURRENT VS SPEED CURVE



Performance : 575 V 60 Hz 2P

Rated current	: 37.0 A	Moment of inertia (J)	: 4.90 sq.ft.lb
LRC	: 6.3	Duty cycle	: Cont.(S1)
Rated torque	: 59.1 ft.lb	Insulation class	: F
Locked rotor torque	: 250 %	Service factor	: 1.25
Breakdown torque	: 240 %	Temperature rise	: 80 K
Rated speed	: 3555 rpm	Design	: B

Locked rotor time : 81s (cold) 45s (hot)

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Date	12/04/2022			

# LOAD PERFORMANCE CURVE

## Three Phase Induction Motor - Squirrel Cage

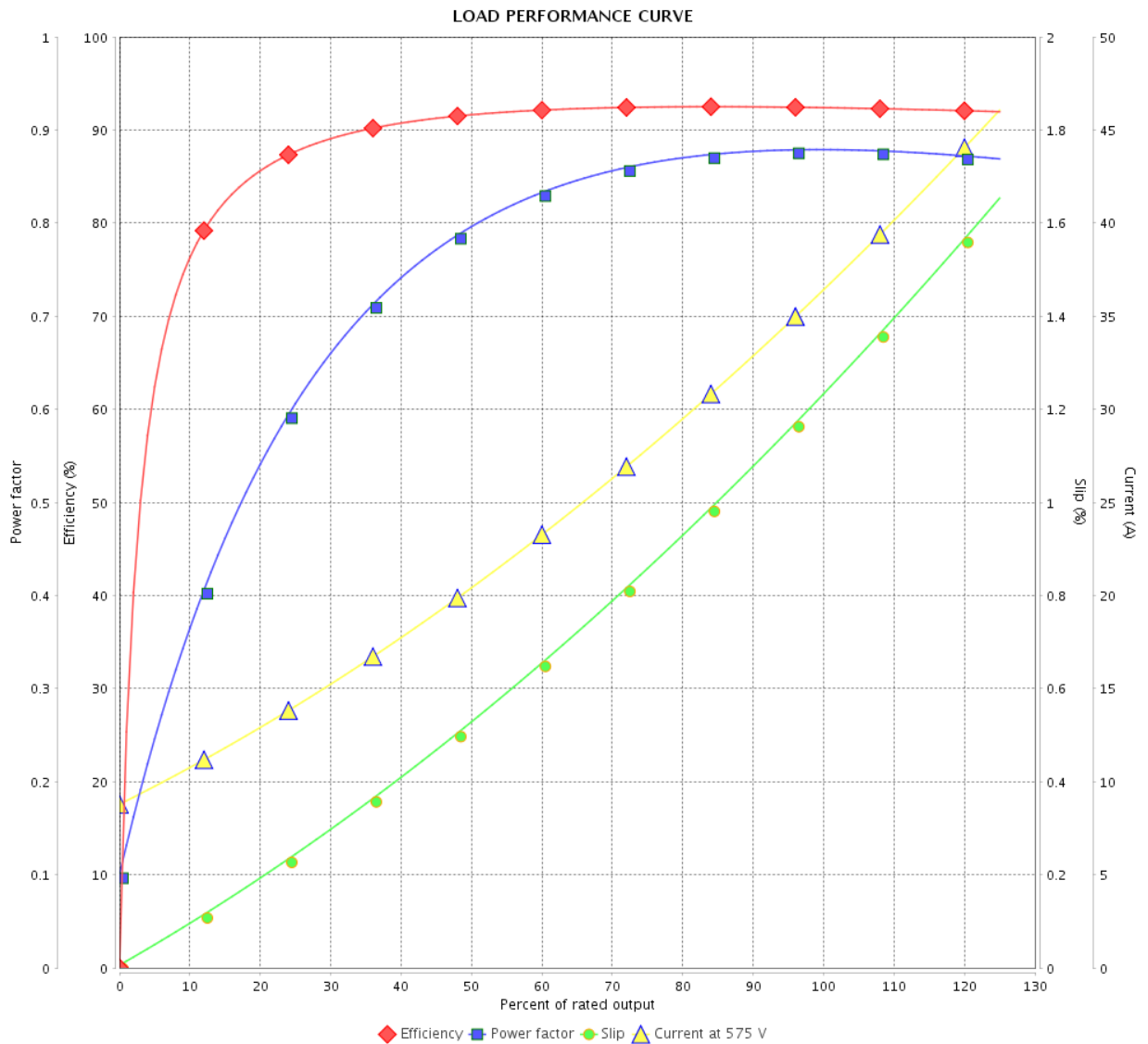


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 13585401

Catalog # : 04036ST3HIE324TS-W22



Performance : 575 V 60 Hz 2P

Rated current : 37.0 A  
 LRC : 6.3  
 Rated torque : 59.1 ft.lb  
 Locked rotor torque : 250 %  
 Breakdown torque : 240 %  
 Rated speed : 3555 rpm

Moment of inertia (J) : 4.90 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.25  
 Temperature rise : 80 K  
 Design : B

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Date		12/04/2022		

# THERMAL LIMIT CURVE



## Three Phase Induction Motor - Squirrel Cage

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 Product code : 13585401  
 Catalog # : 04036ST3HIE324TS-W22

Performance : 575 V 60 Hz 2P

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LRC : 6.3	Duty cycle : Cont.(S1)
Rated torque : 59.1 ft.lb	Insulation class : F
Locked rotor torque : 250 %	Service factor : 1.25
Breakdown torque : 240 %	Temperature rise : 80 K
Rated speed : 3555 rpm	Design : B

Heating constant

Cooling constant

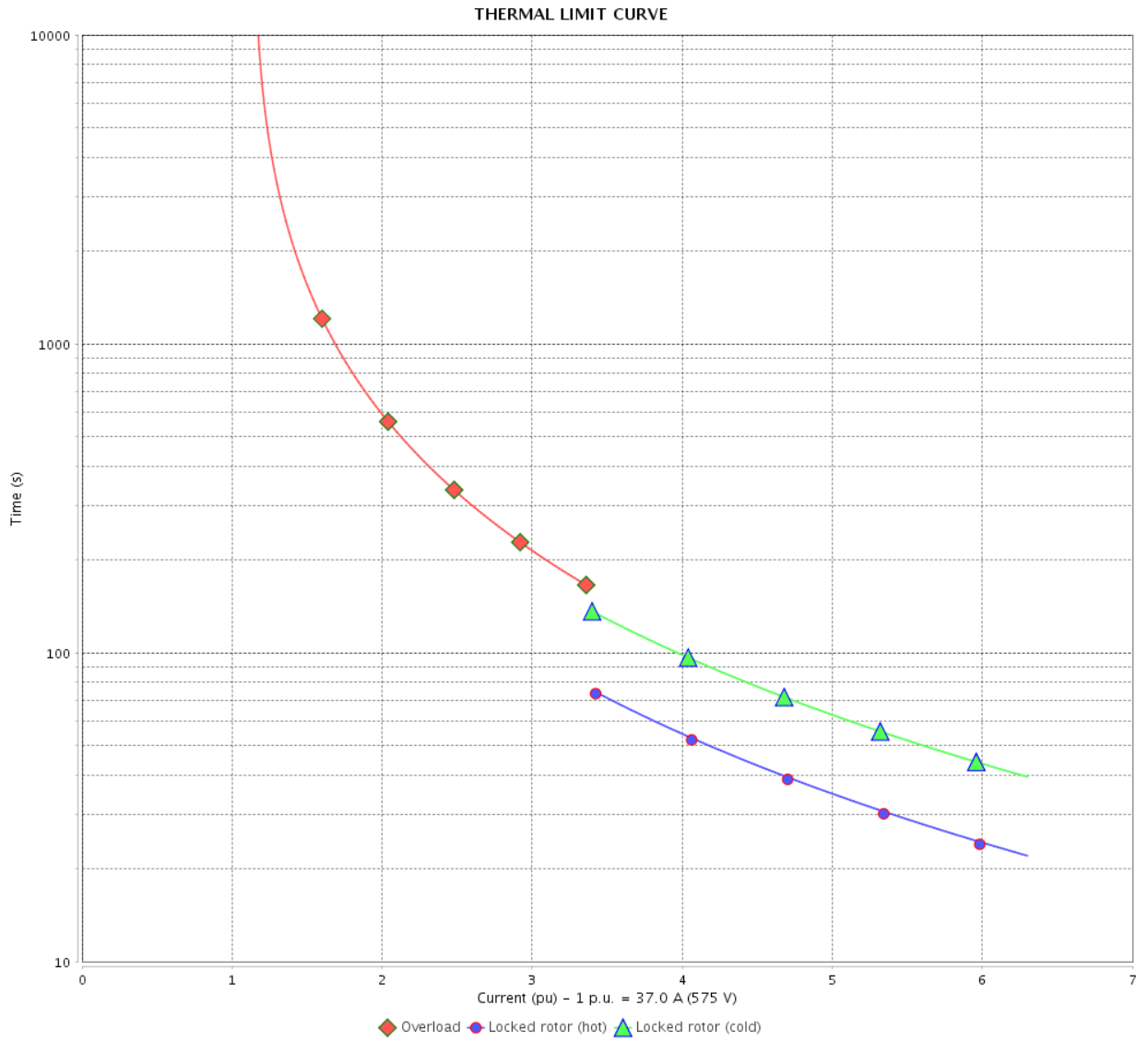
Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page	Revision
Checked by				
Date	12/04/2022			

# THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer : \_\_\_\_\_



Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page 5 / 6		Revision
Checked by				
Date				

# VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



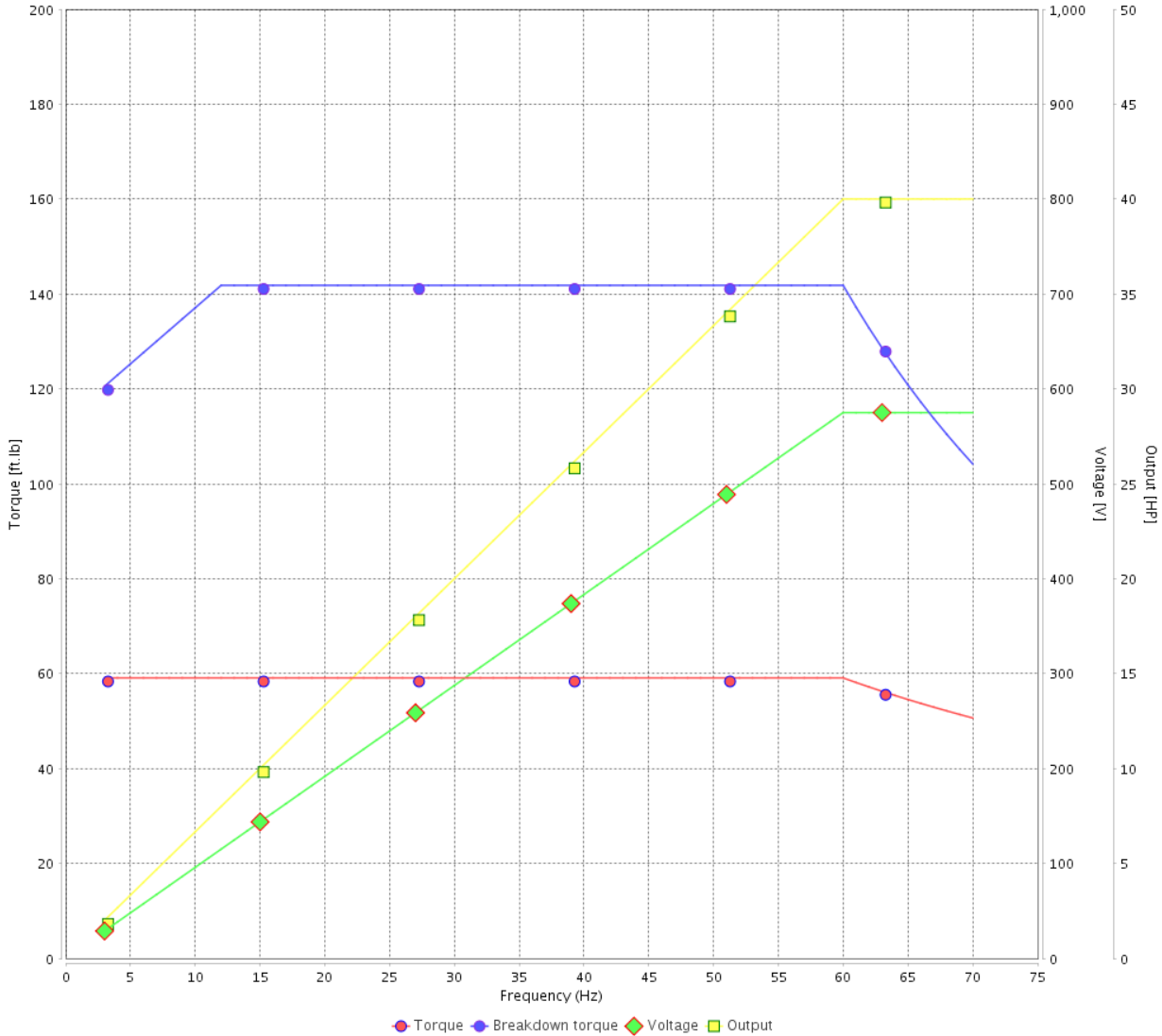
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 13585401

Catalog # : 04036ST3HIE324TS-W22

VFD OPERATION CURVE



Performance : 575 V 60 Hz 2P

Rated current : 37.0 A  
 LRC : 6.3  
 Rated torque : 59.1 ft.lb  
 Locked rotor torque : 250 %  
 Breakdown torque : 240 %  
 Rated speed : 3555 rpm

Moment of inertia (J) : 4.90 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.25  
 Temperature rise : 80 K  
 Design : B

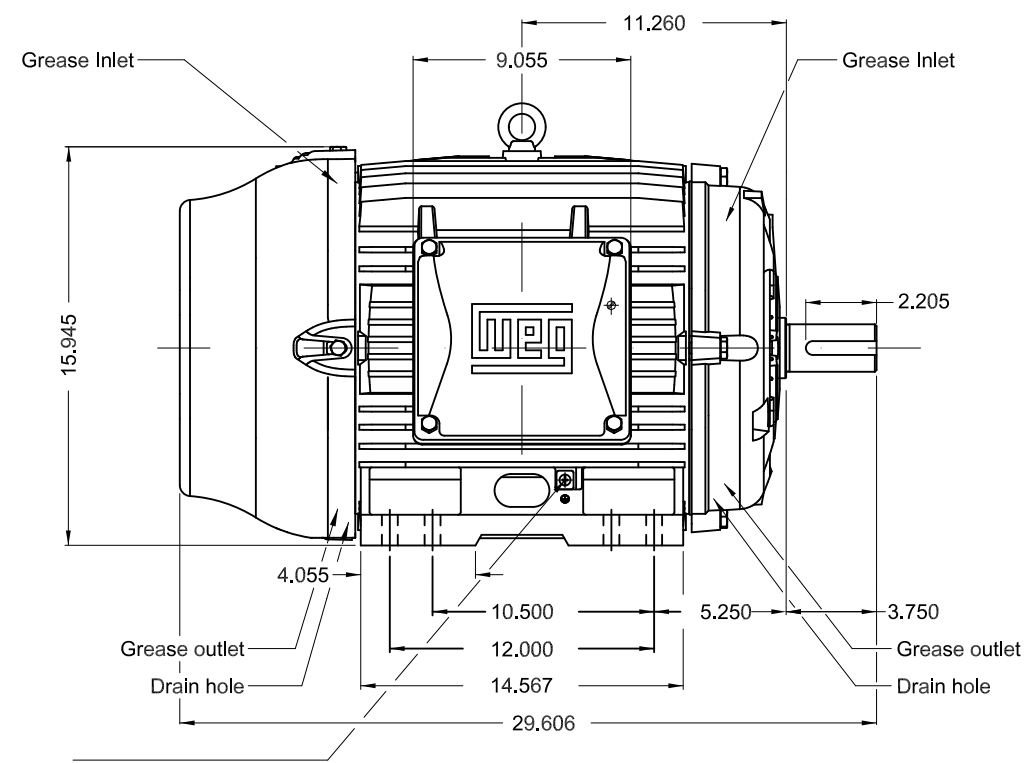
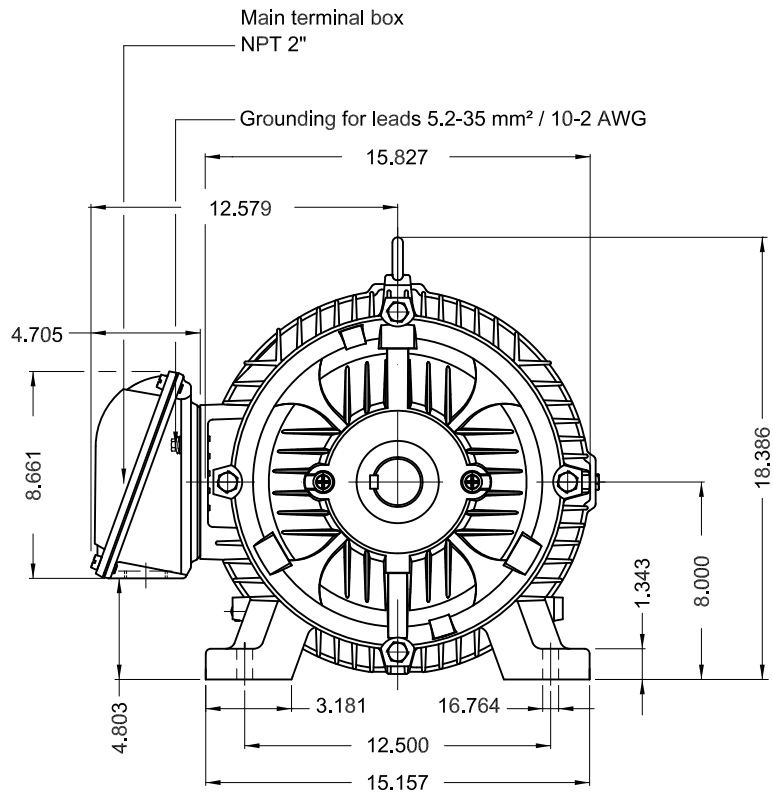
Rev.	Changes Summary	Performed	Checked	Date
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Date	12/04/2022			

1 2 3 4 5 6

A

B

C

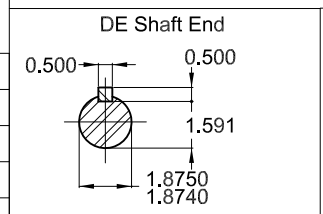


Grounding for leads 5.2-35 mm² / 10-2 AWG

D

E

Without vertical jackscrews
Color RAL 5009
Painting plan 202E
Mounting NEMA F-1
Mounting B3R(D)



40 HP 02 Poles 60 Hz A

ECM	LOC	SUMMARY OF MODIFICATIONS	EXECUTED	CHECKED	RELEASED	DATE	VER
EXECUTED	PIRWBUSER	THREE PH. MOTOR IEEE 841 W22 PREM. EFF.					
CHECKED		FRAME 324/6TS 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 04036ST3HIE324TS-W22



Inverter Duty Motor  
Severe Duty

MADE IN BRAZIL  
13585401

PH3 60Hz Fr. 324/6TS 1000m.a.s.l. IP55 TEFC 534lb

V 575

A 37.0

HP 40

kW 30

SF 1.25

SFA 46.3

RPM 3555

PF 0.88

AMB 40°C

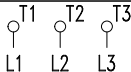
INS cl. F DT80K

NEMA NOM EFF 92.4%

DUTY CONT.

DES B Code G

GUARANT. EFF 91.0%



575V



→ 6312-C3 (21g) 60BC03X30

→ 6212-C3 (13g) 60BC02X30



MOBIL POLYREX EM (12000h)

