

# DATA SHEET



## Three Phase Induction Motor - Squirrel Cage

Customer :																			
Product line	: NEMA Premium Efficiency Three-Phase																		
Product code :	11432054																		
Catalog # :	02012ST3HIE286T-W22																		
Frame : 284/6T Output : 20 HP (15 kW) Poles : 6 Frequency : 60 Hz Rated voltage : 575 V Rated current : 19.4 A L. R. Amperes : 114 A LRC : 5.9x(Code G) No load current : 6.64 A Rated speed : 1175 rpm Slip : 2.08 % Rated torque : 89.4 ft.lb Locked rotor torque : 220 % Breakdown torque : 250 % Insulation class : F Service factor : 1.25 Moment of inertia (J) : 9.16 sq.ft.lb Design : B	Locked rotor time : 28s (cold) 16s (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> : 59.0 dB(A) Starting method : Direct On Line Approx. weight <sup>3</sup> : 439 lb																		
Output	25% 50% 75% 100%																		
Efficiency (%)	90.8 91.0 91.7 91.7																		
Power Factor	0.46 0.70 0.80 0.85																		
Foundation loads																			
Max. traction	: 755 lb																		
Max. compression	: 1194 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>: 6311 C3</td> <td>6211 C3</td> </tr> <tr> <td>Sealing</td> <td>: Inpro/Seal</td> <td>Inpro/Seal</td> </tr> <tr> <td>Lubrication interval</td> <td>: 20000 h</td> <td>20000 h</td> </tr> <tr> <td>Lubricant amount</td> <td>: 18 g</td> <td>11 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	: 6311 C3	6211 C3	Sealing	: Inpro/Seal	Inpro/Seal	Lubrication interval	: 20000 h	20000 h	Lubricant amount	: 18 g	11 g	Lubricant type	Mobil Polyrex EM	
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Lubricant type	Mobil Polyrex EM																		
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															
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Checked by			Page	Revision															
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# TORQUE AND CURRENT VS SPEED CURVE

## Three Phase Induction Motor - Squirrel Cage



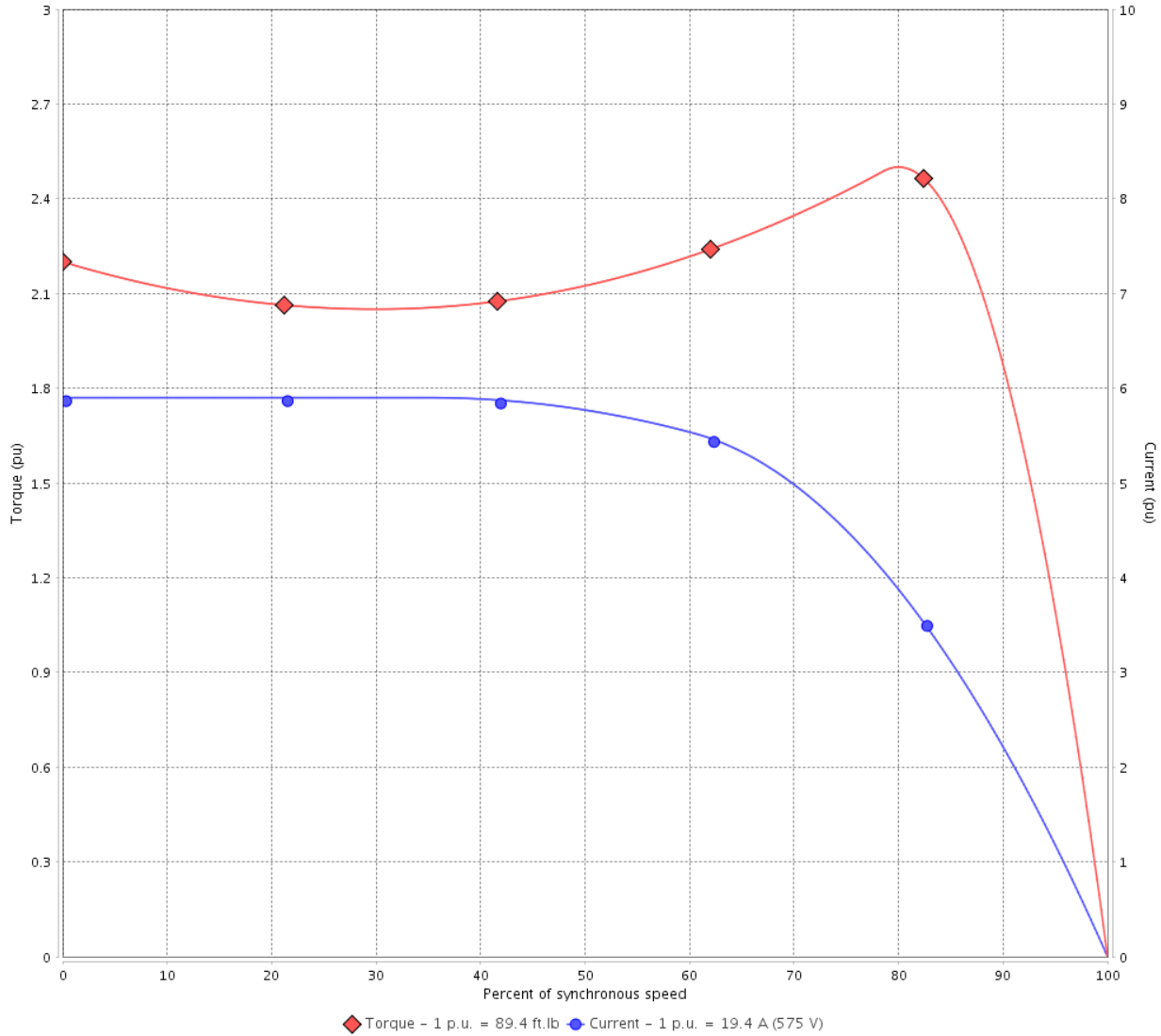
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11432054

Catalog # : 02012ST3HIE286T-W22

TORQUE AND CURRENT VS SPEED CURVE



Performance : 575 V 60 Hz 6P

Rated current	: 19.4 A	Moment of inertia (J)	: 9.16 sq.ft.lb
LRC	: 5.9	Duty cycle	: Cont.(S1)
Rated torque	: 89.4 ft.lb	Insulation class	: F
Locked rotor torque	: 220 %	Service factor	: 1.25
Breakdown torque	: 250 %	Temperature rise	: 80 K
Rated speed	: 1175 rpm	Design	: B

Locked rotor time : 28s (cold) 16s (hot)

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Date	14/04/2022			

# LOAD PERFORMANCE CURVE

## Three Phase Induction Motor - Squirrel Cage

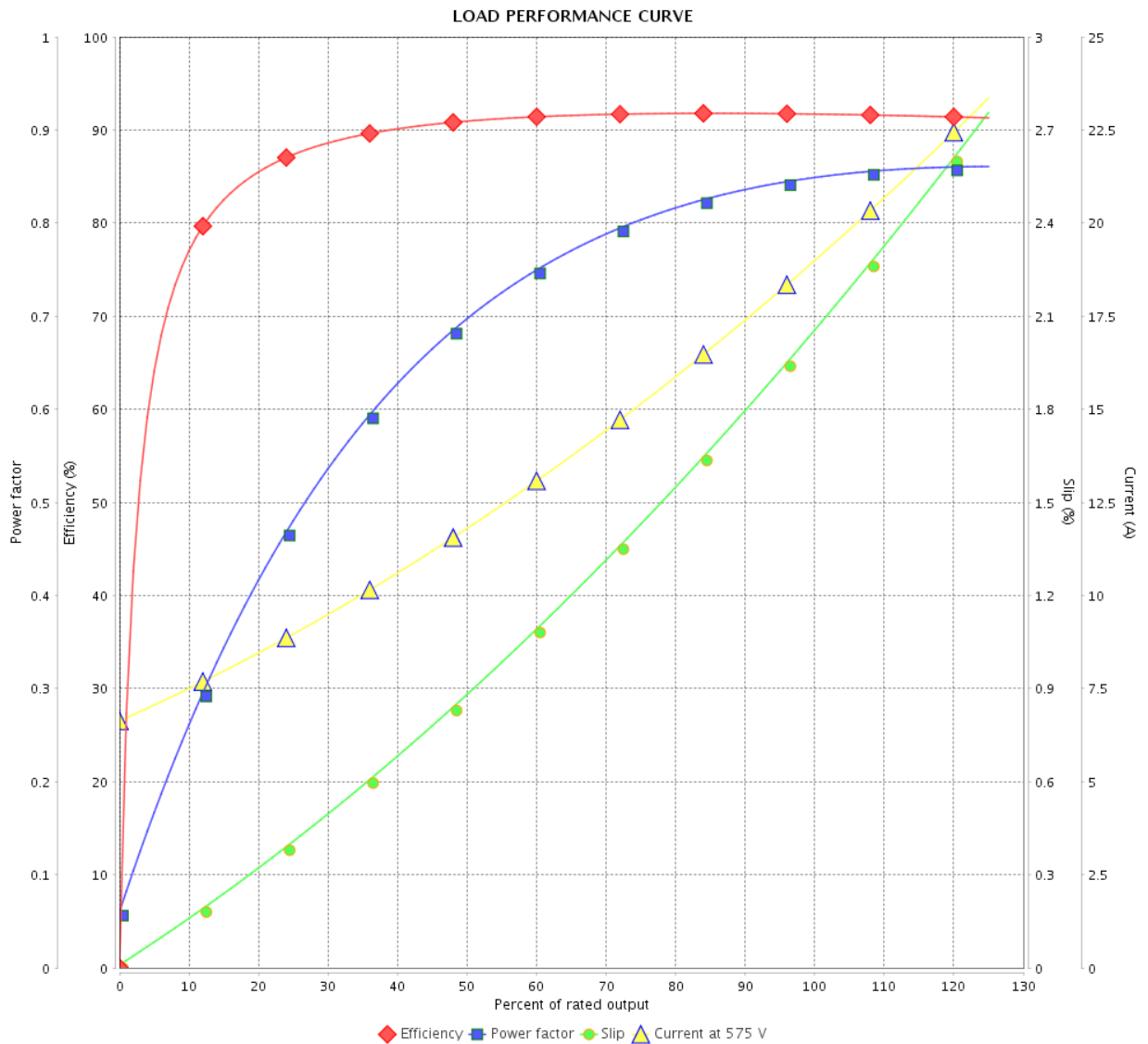


Customer : \_\_\_\_\_

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11432054

Catalog # : 02012ST3HIE286T-W22



Performance : 575 V 60 Hz 6P

Rated current : 19.4 A  
 LRC : 5.9  
 Rated torque : 89.4 ft.lb  
 Locked rotor torque : 220 %  
 Breakdown torque : 250 %  
 Rated speed : 1175 rpm

Moment of inertia (J) : 9.16 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.25  
 Temperature rise : 80 K  
 Design : B

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# THERMAL LIMIT CURVE



## Three Phase Induction Motor - Squirrel Cage

Customer :

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Product code : 11432054  
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Performance : 575 V 60 Hz 6P

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Rated speed	: 1175 rpm	Design	: B

Heating constant

Cooling constant

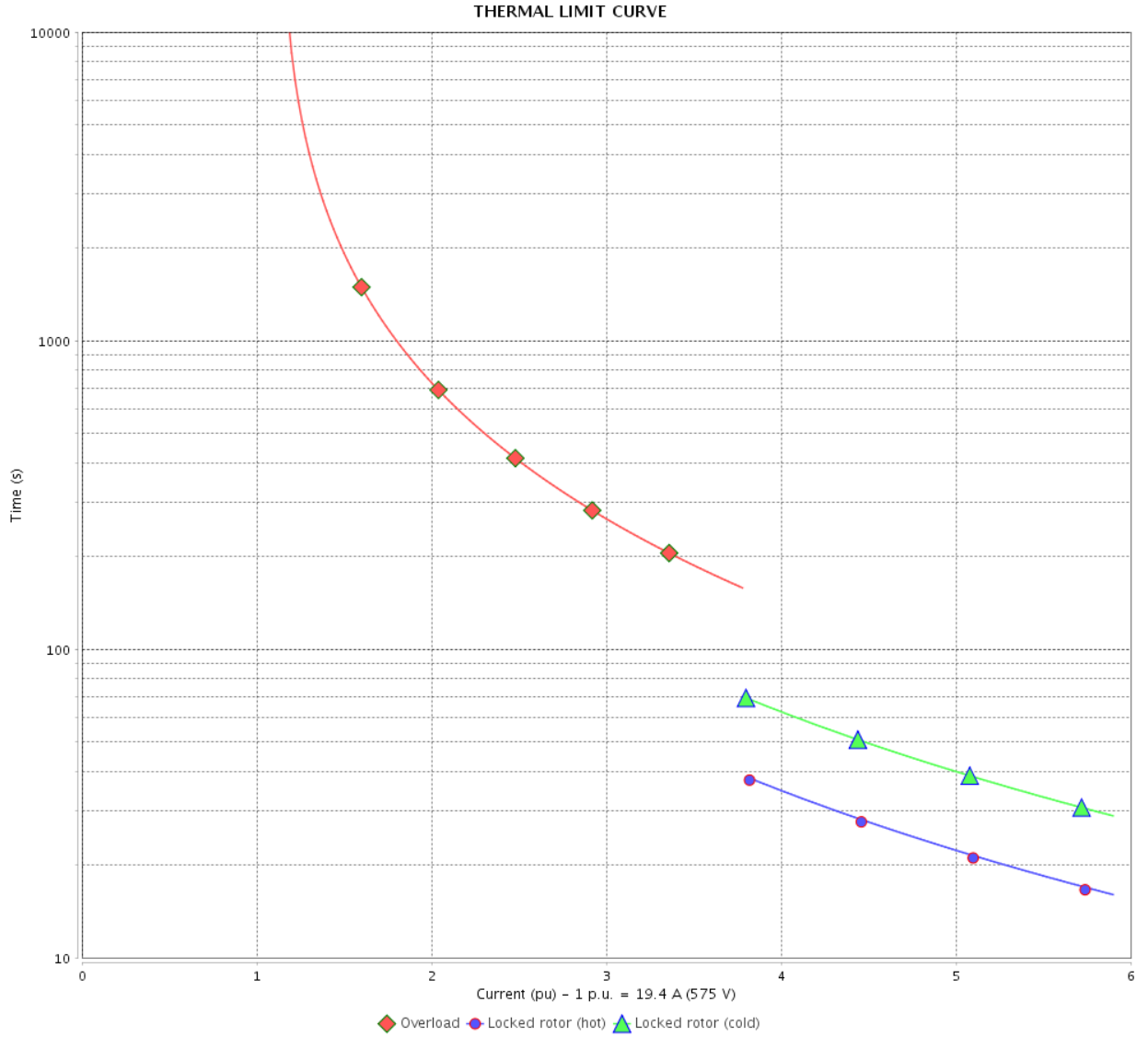
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# THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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



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Date				

# VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

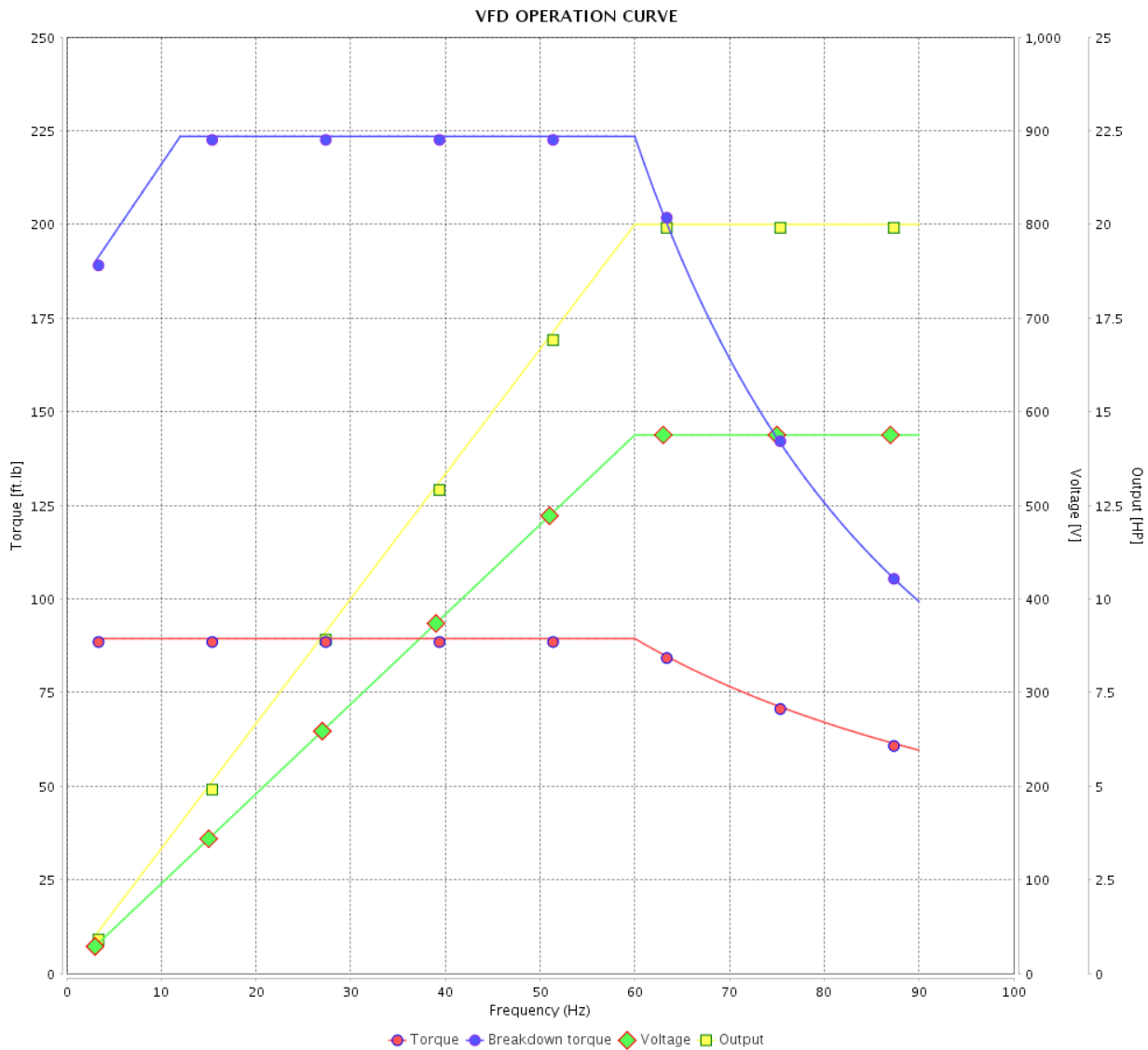


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11432054

Catalog # : 02012ST3HIE286T-W22



Performance : 575 V 60 Hz 6P

Rated current : 19.4 A  
 LRC : 5.9  
 Rated torque : 89.4 ft.lb  
 Locked rotor torque : 220 %  
 Breakdown torque : 250 %  
 Rated speed : 1175 rpm

Moment of inertia (J) : 9.16 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.25  
 Temperature rise : 80 K  
 Design : B

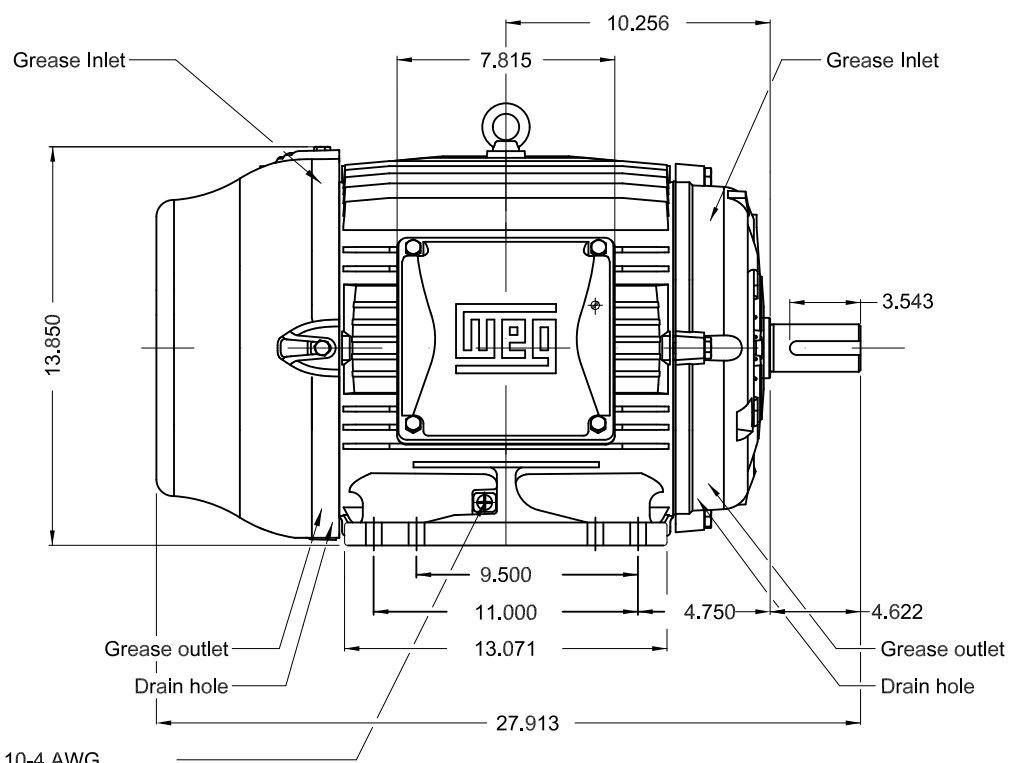
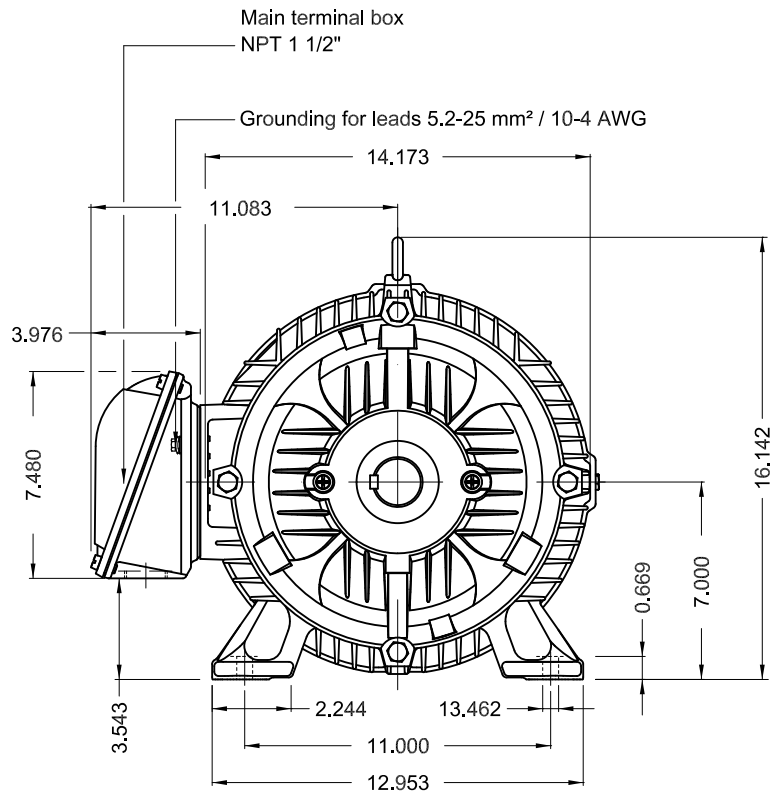
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Date	14/04/2022			

1 2 3 4 5 6

A

B

C

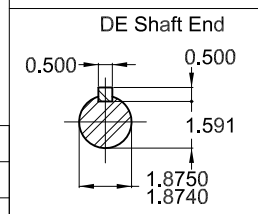


Grounding for leads 5.2-25 mm² / 10-4 AWG

D

E

Color RAL 5009  
 Painting plan 202E  
 Mounting B3R(D)



20 HP 06 Poles 60 Hz A

ECM	LOC	SUMMARY OF MODIFICATIONS	EXECUTED	CHECKED	RELEASED	DATE	VER
EXECUTED	PIRWBUSER	THREE PH. MOTOR IEEE 841 W22 PREM. EFF. FRAME 284/6T IP55 TEFC					
CHECKED							
RELEASED							
REL DT.	WMO	Jaragua do Sul	Product Engineering	SHEET	1 / 1		

**PREVIEW**  
**WDD**





**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

IE020506W22IS



Inverter Duty Motor  
Severe Duty

MADE IN BRAZIL  
11432054

PH3 60Hz Fr. 284/6T 1000m.a.s.l. IP55 TEFC 439lb

V 575

A 19.4

HP 20

kW 15

SF 1.25

SFA 24.3

RPM 1175

PF 0.85

AMB 40°C

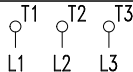
INS cl. F DT80K

NEMA NOM EFF 91.7%

DUTY CONT.

DES B Code G

GUARANT. EFF 90.2%



575V



→ 6311-C3 (18g) 55BC03X30

→ 6211-C3 (11g) 55BC02X30



MOBIL POLYREX EM (20000h)

