

# DATA SHEET



## Three Phase Induction Motor - Squirrel Cage

Customer :																			
Product line	: NEMA Premium Efficiency Three-Phase																		
Product code :	14315330																		
Catalog # :	20036XT3G447TS																		
Frame : 447TS Output : 200 HP (150 kW) Poles : 2 Frequency : 60 Hz Rated voltage : 460 V Rated current : 221 A L. R. Amperes : 1613 A LRC : 7.3x(Code H) No load current : 53.0 A Rated speed : 3575 rpm Slip : 0.69 % Rated torque : 294 ft.lb Locked rotor torque : 260 % Breakdown torque : 270 % Insulation class : F Service factor : 1.15 Design : B	Locked rotor time : 66s (cold) 37s (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> : 87.0 dB(A) Starting method : Direct On Line Approx. weight <sup>3</sup> : 2492 lb																		
Output	25% 50% 75% 100%																		
Efficiency (%)	0.000 94.1 95.4 95.8																		
Power Factor	0.00 0.84 0.88 0.89																		
Foundation loads																			
Max. traction	: 868 lb																		
Max. compression	: 3360 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>6314 C3</td> <td>6314 C3</td> </tr> <tr> <td>Sealing :</td> <td>Viton Oil Seal</td> <td>Lip Seal</td> </tr> <tr> <td>Lubrication interval :</td> <td>3604 h</td> <td>3604 h</td> </tr> <tr> <td>Lubricant amount :</td> <td>27 g</td> <td>27 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 :	6314 C3	6314 C3	Sealing :	Viton Oil Seal	Lip Seal	Lubrication interval :	3604 h	3604 h	Lubricant amount :	27 g	27 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															
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# DATA SHEET

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

### Thermal protection

ID	Application	Type	Quantity	Sensing Temperature
1	Winding	Thermostat - 2 wires	1 x Phase	155 °C

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Checked by				
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# TORQUE AND CURRENT VS SPEED CURVE



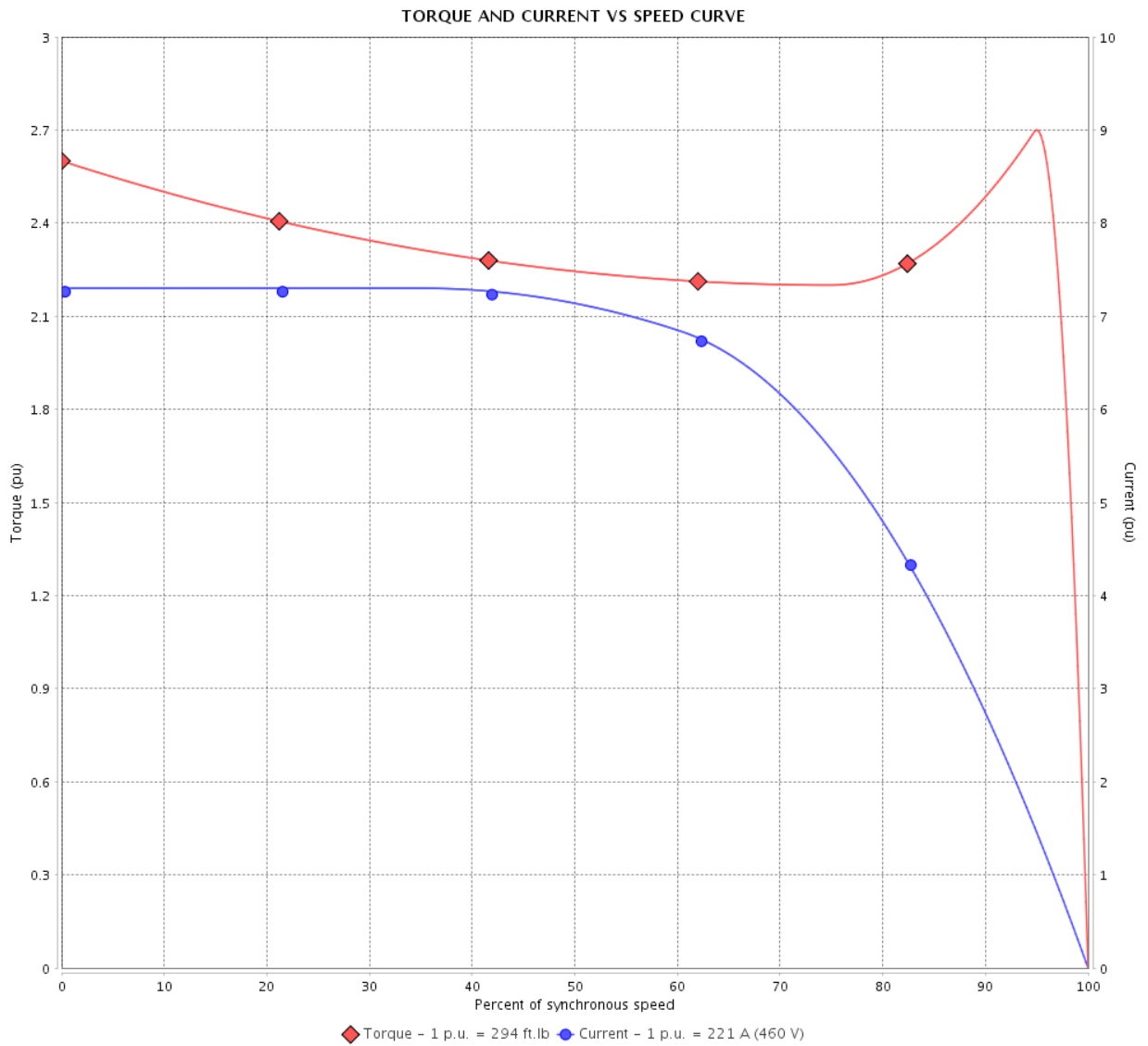
## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14315330

Catalog # : 20036XT3G447TS



Performance : 460 V 60 Hz 2P

Rated current	: 221 A	Moment of inertia (J)	
LRC	: 7.3	Duty cycle	: Cont.(S1)
Rated torque	: 294 ft.lb	Insulation class	: F
Locked rotor torque	: 260 %	Service factor	: 1.15
Breakdown torque	: 270 %	Temperature rise	: 80 K
Rated speed	: 3575 rpm	Design	: B

Locked rotor time : 66s (cold) 37s (hot)

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# LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage

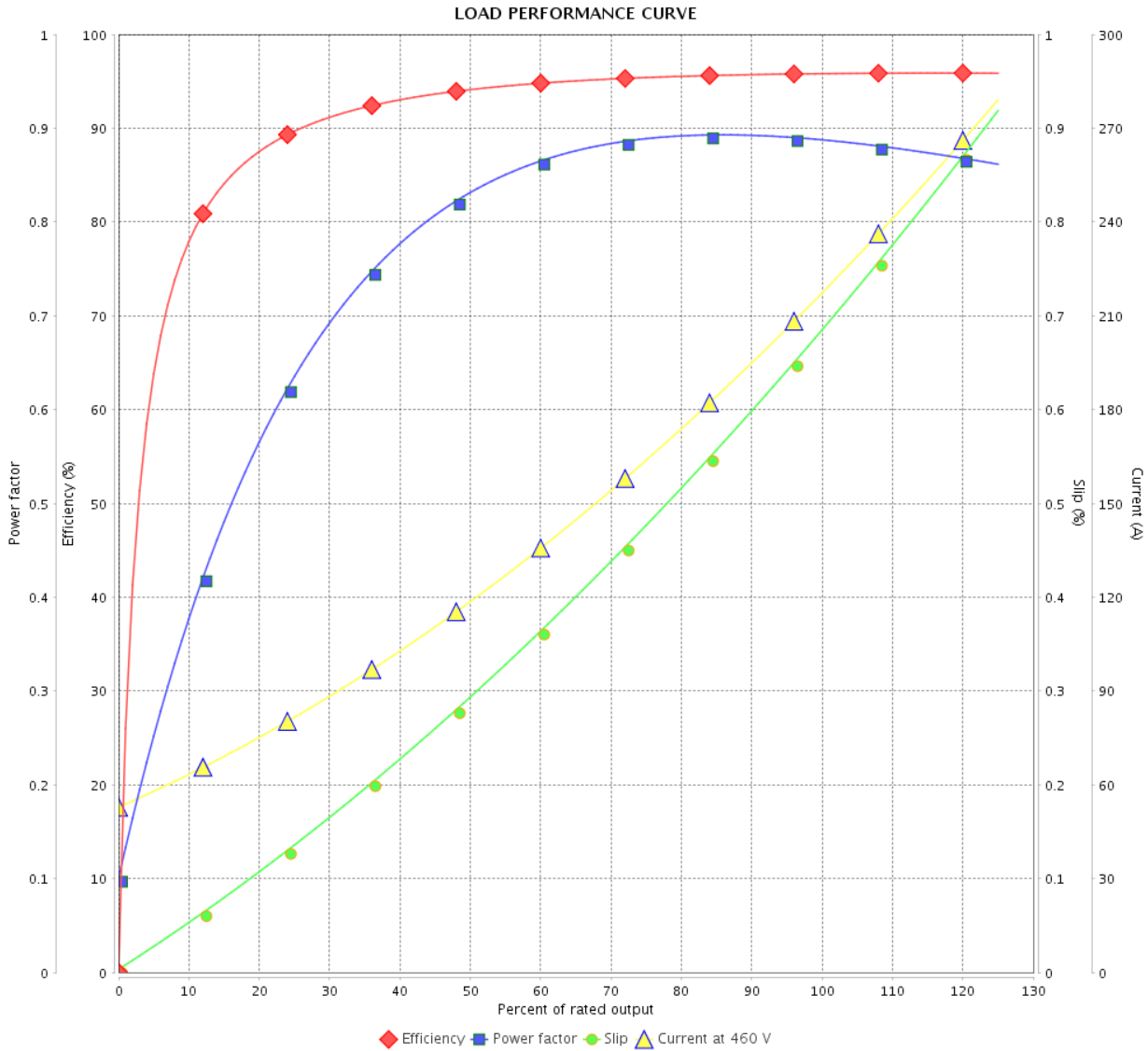


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Rated current : 221 A	Moment of inertia (J)
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Locked rotor torque : 260 %	Service factor : 1.15
Breakdown torque : 270 %	Temperature rise : 80 K
Rated speed : 3575 rpm	Design : B

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# THERMAL LIMIT CURVE



## Three Phase Induction Motor - Squirrel Cage

Customer :

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Catalog # : 20036XT3G447TS

Performance : 460 V 60 Hz 2P

Rated current : 221 A  
 LRC : 7.3  
 Rated torque : 294 ft.lb  
 Locked rotor torque : 260 %  
 Breakdown torque : 270 %  
 Rated speed : 3575 rpm

Moment of inertia (J)  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.15  
 Temperature rise : 80 K  
 Design : B

Heating constant

Cooling constant

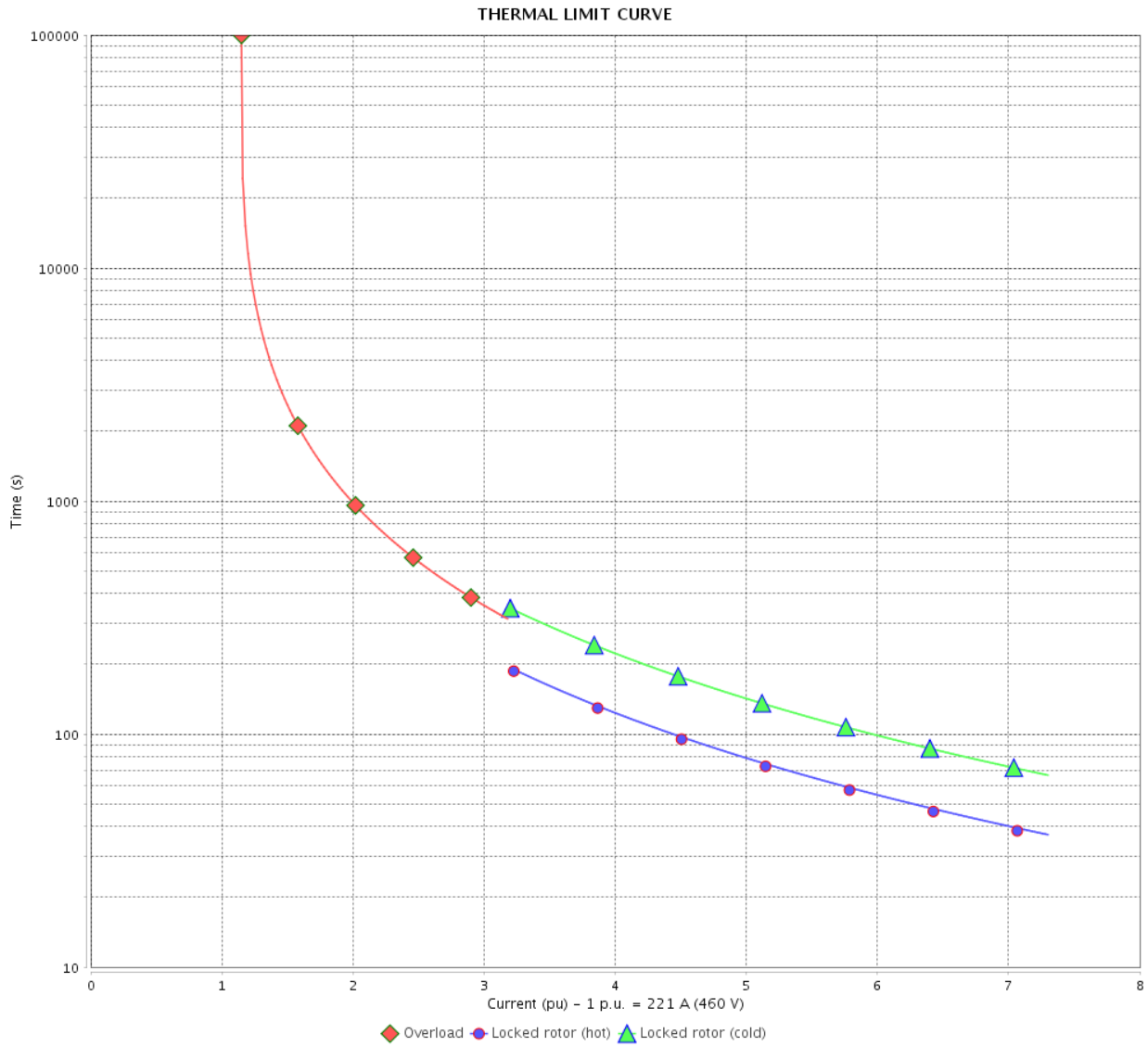
Rev.	Changes Summary	Performed	Checked	Date
Performed by				
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# THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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



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Checked by				
Date				

# VFD OPERATION CURVE

## Three Phase Induction Motor - Squirrel Cage

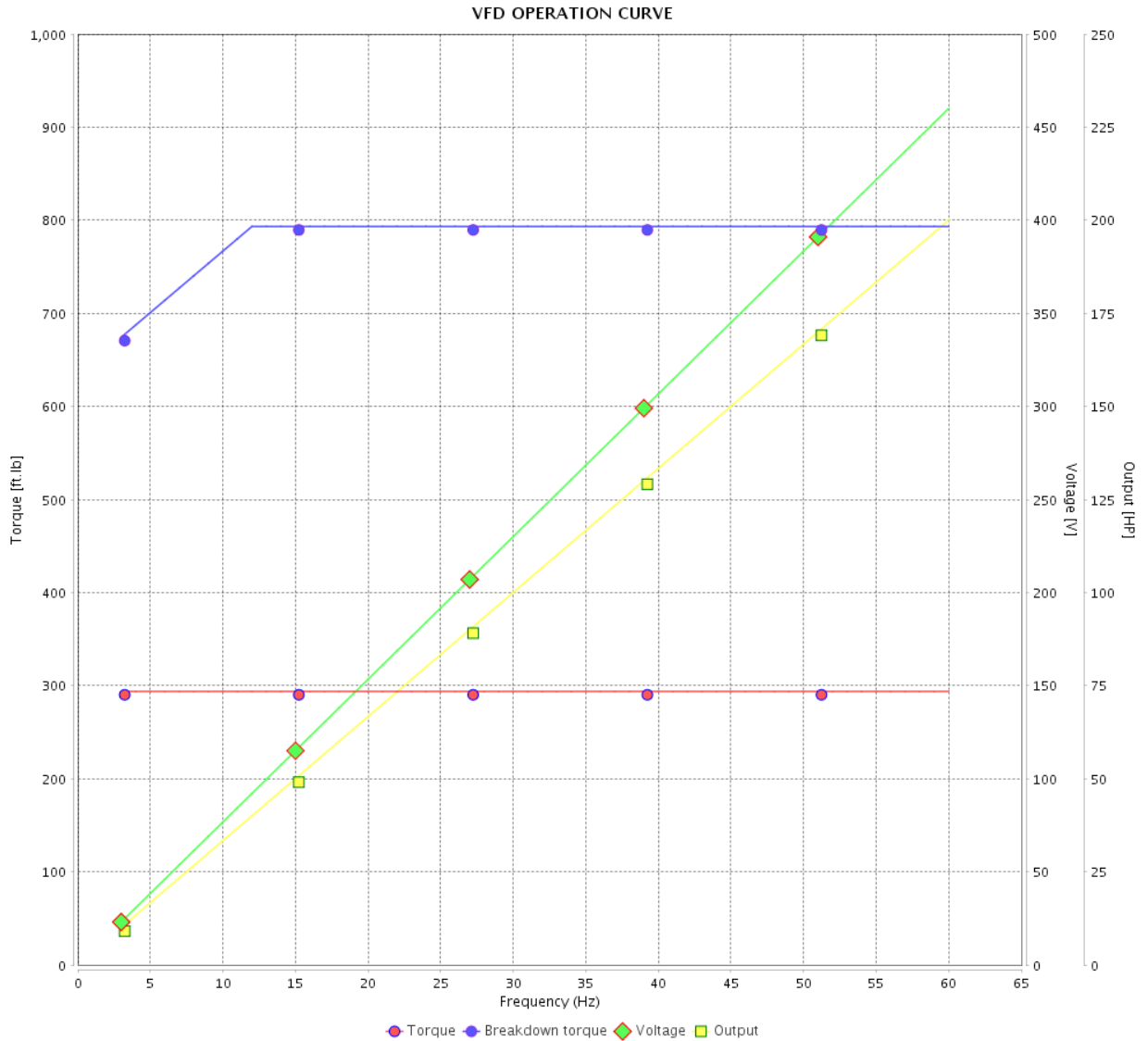


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14315330

Catalog # : 20036XT3G447TS

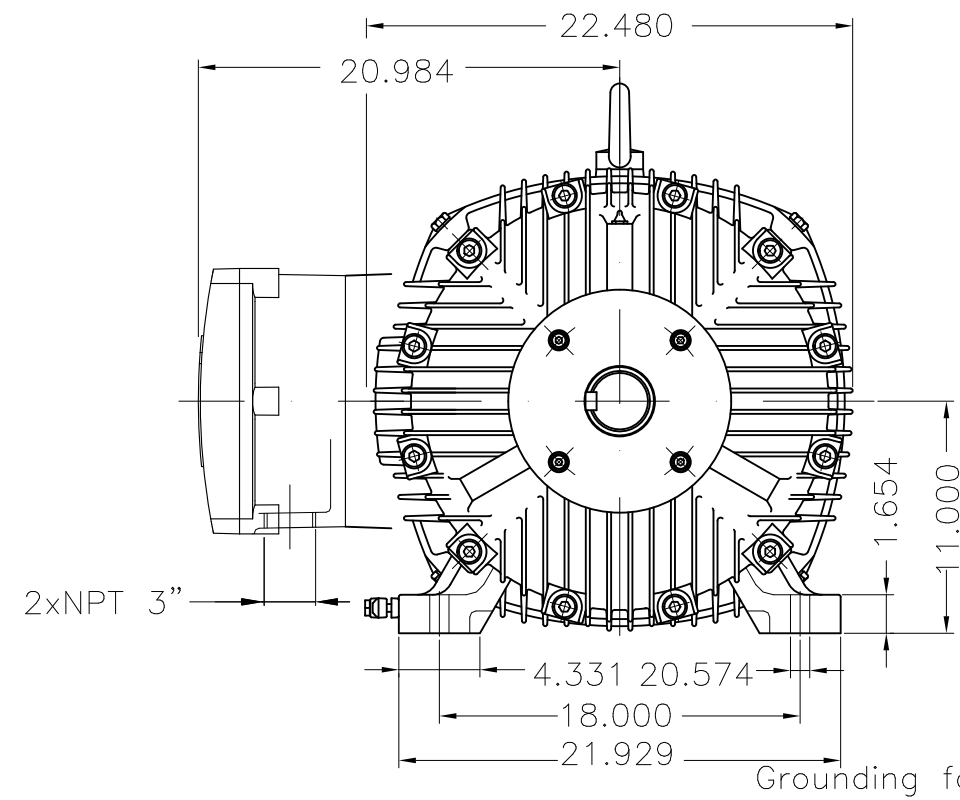


Performance : 460 V 60 Hz 2P

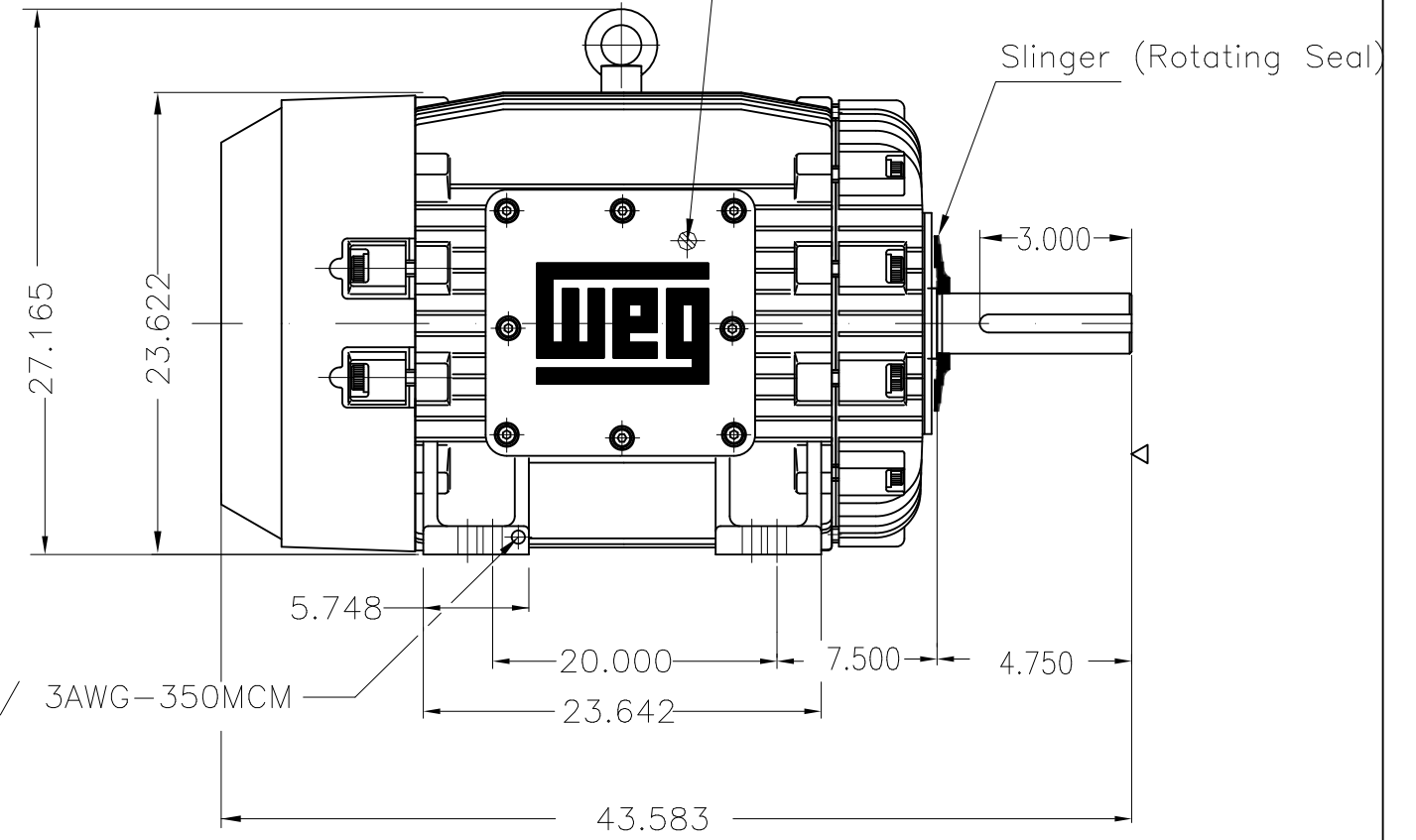
Rated current : 221 A  
 LRC : 7.3  
 Rated torque : 294 ft.lb  
 Locked rotor torque : 260 %  
 Breakdown torque : 270 %  
 Rated speed : 3575 rpm

Moment of inertia (J)  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.15  
 Temperature rise : 80 K  
 Design : B

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Grounding for leads 35–70 mm<sup>2</sup> / 1–2/0 AWG

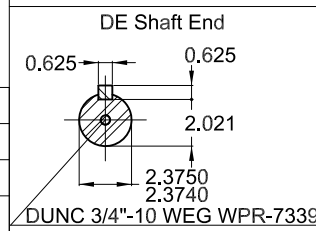


Grounding for leads 25–185 mm<sup>2</sup> / 3AWG–350MCM

200 HP 02 Poles 60 Hz

A

Color RAL 5009  
 Painting plan 202P  
 Mounting NEMA F-1  
 Mounting B3R(D)



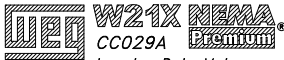
ECM	LOC	SUMMARY OF MODIFICATIONS	EXECUTED	CHECKED	RELEASED	DATE	VER
EXECUTED	PIRWBUSER	THREE PH. MOTOR EXPLOSION PROOF PREM. EFF.					
CHECKED		FRAME 447TS IP55 TEFC					
RELEASED							
REL DT.	WMO	Jaragua do Sul	Product Engineering				

**PREVIEW**  
 WDD



SHEET 1 / 1





Inverter Duty Motor  
Severe Duty



TEMP CODE T3C  
 CSA/UL: Class I - Div. 1 - Groups C and D  
 CSA: Class II - Div. 1 - Groups F and G  
 CSA: Class I - Zone 1 - IIB  
**EXPLOSION PROOF MOTOR**

FOR USE ON VPWM VFD 1000:1VT, 2:1CT, 1.0SF, T3C, AMB 40°C.

MODEL 20036XT3G447TS  
 MADE IN BRAZIL  
 14315330

PH 3	FR 447TS	HP(kW) 200(150)	Hz 60
V 460	A 221	RPM 3575	
NEMA NOM. EFF. 95.8%		INS CL F $\Delta$ T 80 K	IP55
PF 0.89	DUTY CONT.		CODE H
ENCL. TEFC	SF 1.15	SFA 254	
AMB 40°C	DES B		

PART-WINDING						WYE-DELTA					
START			RUN			START			RUN		
○T12	○T10	○T11	○T12	○T10	○T11	○T12	○T10	○T11	○T12	○T10	○T11
○T7	○T8	○T9	○T7	○T8	○T9	○T6	○T4	○T5	○T6	○T4	○T5
○T6	○T4	○T5	○T6	○T4	○T5	○T7	○T8	○T9	○T7	○T8	○T9
○T1	○T2	○T3	○T1	○T2	○T3	○T1	○T2	○T3	○T1	○T2	○T3
L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
→ 6314-C3(27g)						MOBIL POLYREX EM					
→ 6314-C3(27g)						3604 h					
ALT 1000 m.a.s.l						2405 Lbs					