

# DATA SHEET



## Three Phase Induction Motor - Squirrel Cage

Customer :																			
Product line	: NEMA Premium Efficiency Three-Phase																		
Product code :	12970107																		
Catalog # :	20009ST3HIE449T-W22																		
Frame : L447/9T Output : 200 HP (150 kW) Poles : 8 Frequency : 60 Hz Rated voltage : 575 V Rated current : 194 A L. R. Amperes : 1181 A LRC : 6.1x(Code G) No load current : 72.0 A Rated speed : 891 rpm Slip : 1.00 % Rated torque : 1180 ft.lb Locked rotor torque : 190 % Breakdown torque : 210 % Insulation class : F Service factor : 1.15 Moment of inertia (J) : 255 sq.ft.lb Design : B	Locked rotor time : 45s (cold) 25s (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> : 64.0 dB(A) Starting method : Direct On Line Approx. weight <sup>3</sup> : 3492 lb																		
Output	25%    50%    75%    100%																		
Efficiency (%)	94.5    94.6    95.0    95.0																		
Power Factor	0.45    0.70    0.79    0.82																		
Foundation loads																			
Max. traction : 4853 lb																			
Max. compression : 8345 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;">6322 C3</td> <td style="text-align: center;">6319 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;">14000 h</td> <td style="text-align: center;">17000 h</td> </tr> <tr> <td>Lubricant amount :</td> <td style="text-align: center;">60 g</td> <td style="text-align: center;">45 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 :	6322 C3	6319 C3	Sealing :	Inpro/Seal	Inpro/Seal	Lubrication interval :	14000 h	17000 h	Lubricant amount :	60 g	45 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															
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# TORQUE AND CURRENT VS SPEED CURVE

## Three Phase Induction Motor - Squirrel Cage



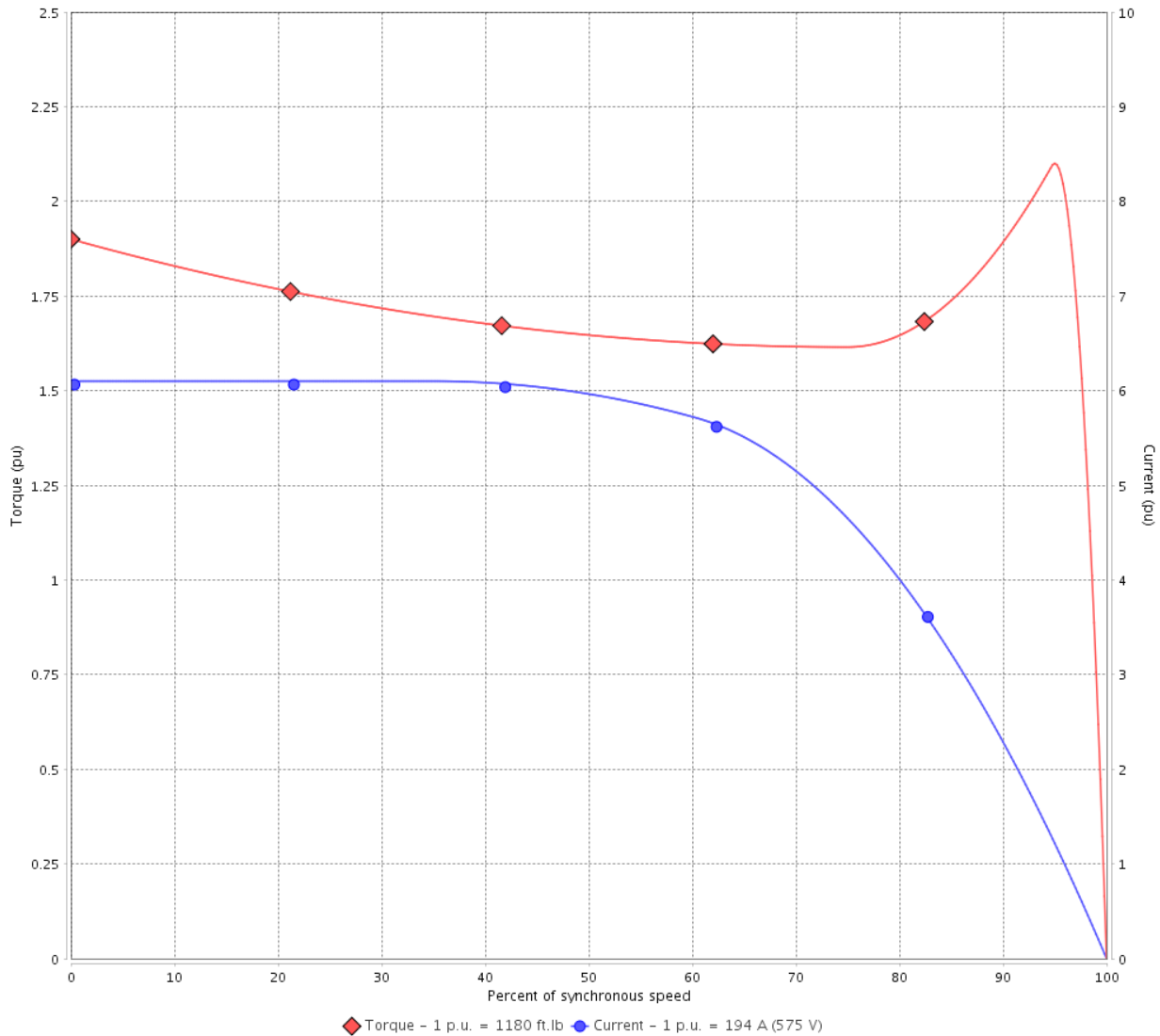
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12970107

Catalog # : 20009ST3HIE449T-W22

TORQUE AND CURRENT VS SPEED CURVE



Performance : 575 V 60 Hz 8P

Rated current	: 194 A	Moment of inertia (J)	: 255 sq.ft.lb
LRC	: 6.1	Duty cycle	: Cont.(S1)
Rated torque	: 1180 ft.lb	Insulation class	: F
Locked rotor torque	: 190 %	Service factor	: 1.15
Breakdown torque	: 210 %	Temperature rise	: 80 K
Rated speed	: 891 rpm	Design	: B

Locked rotor time : 45s (cold) 25s (hot)

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Date	14/04/2022			

# LOAD PERFORMANCE CURVE

## Three Phase Induction Motor - Squirrel Cage

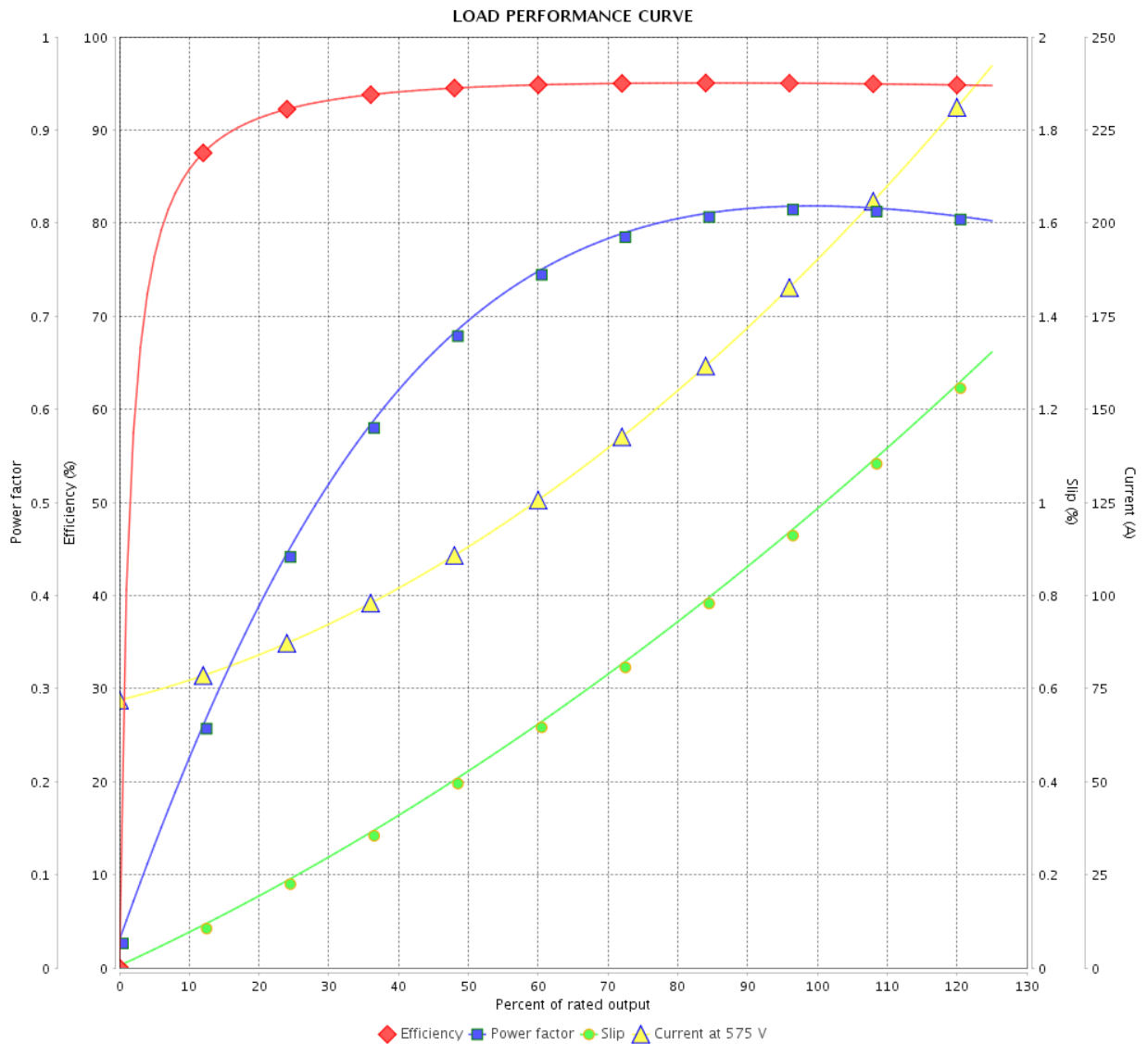


Customer : \_\_\_\_\_

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12970107

Catalog # : 20009ST3HIE449T-W22



Performance : 575 V 60 Hz 8P

Rated current : 194 A  
 LRC : 6.1  
 Rated torque : 1180 ft.lb  
 Locked rotor torque : 190 %  
 Breakdown torque : 210 %  
 Rated speed : 891 rpm

Moment of inertia (J) : 255 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.15  
 Temperature rise : 80 K  
 Design : B

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# THERMAL LIMIT CURVE

## Three Phase Induction Motor - Squirrel Cage



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Heating constant

Cooling constant

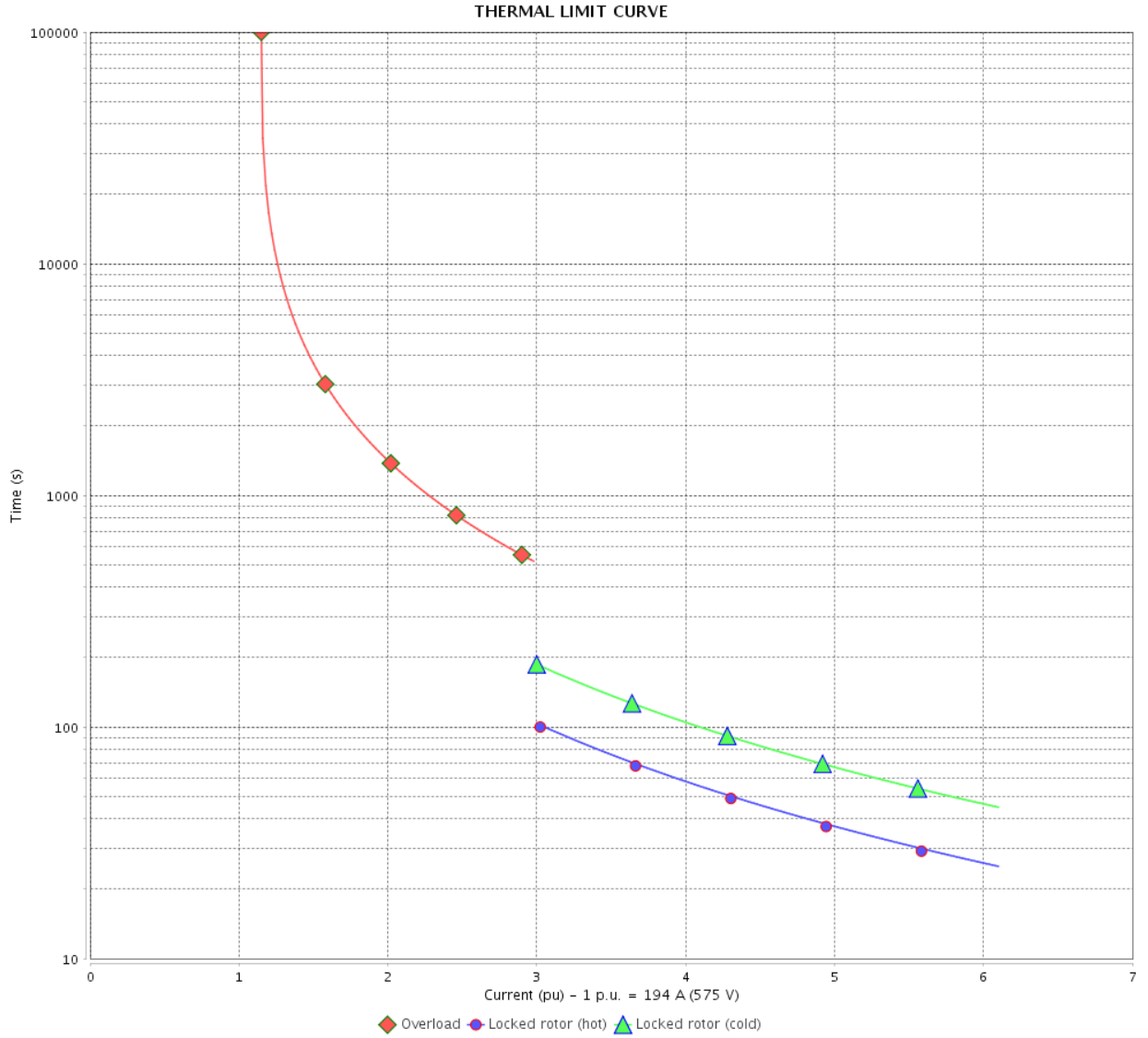
Rev.	Changes Summary	Performed	Checked	Date
Performed by				
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# THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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



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Date				

# VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

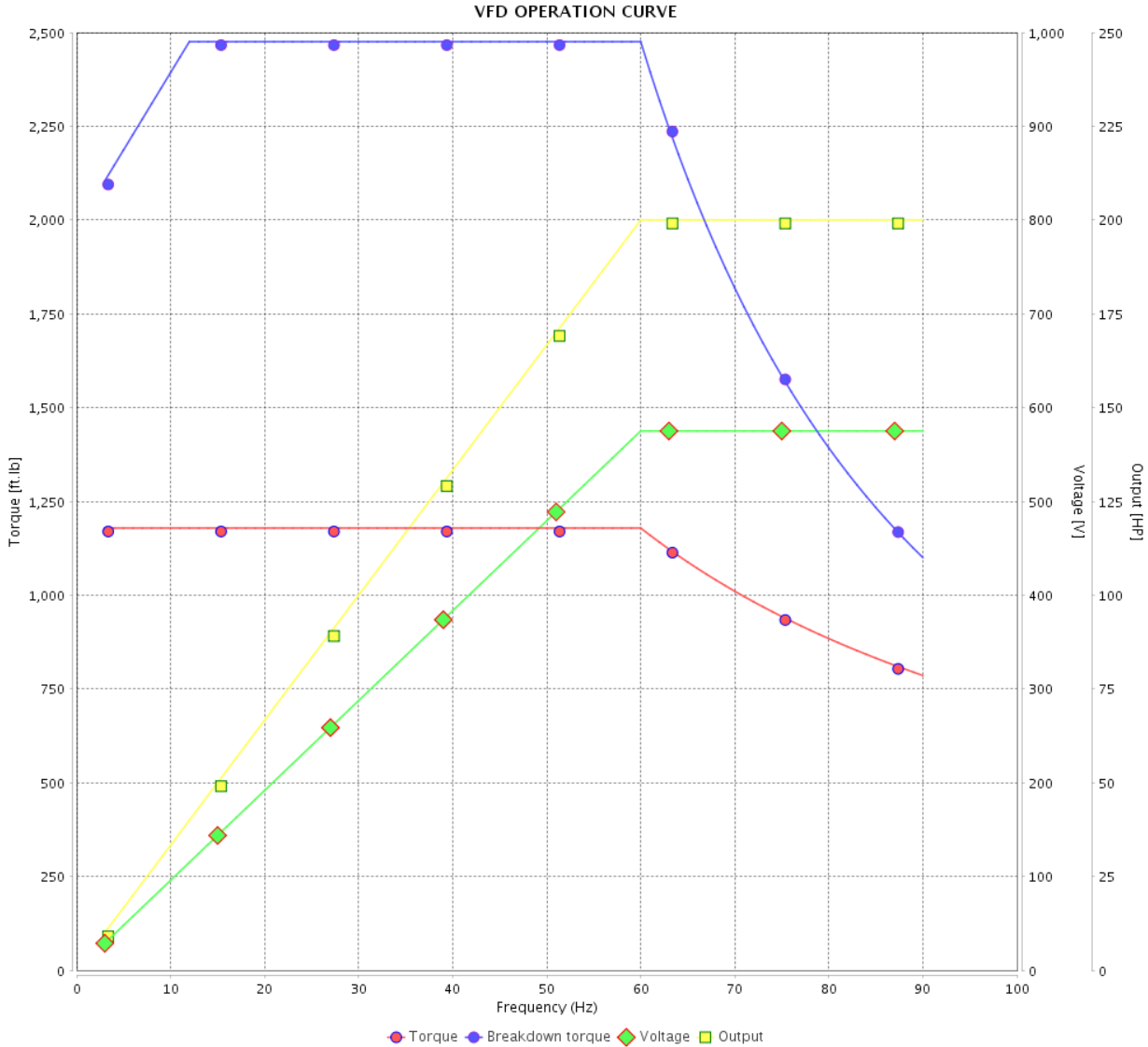


Customer :

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Product code : 12970107

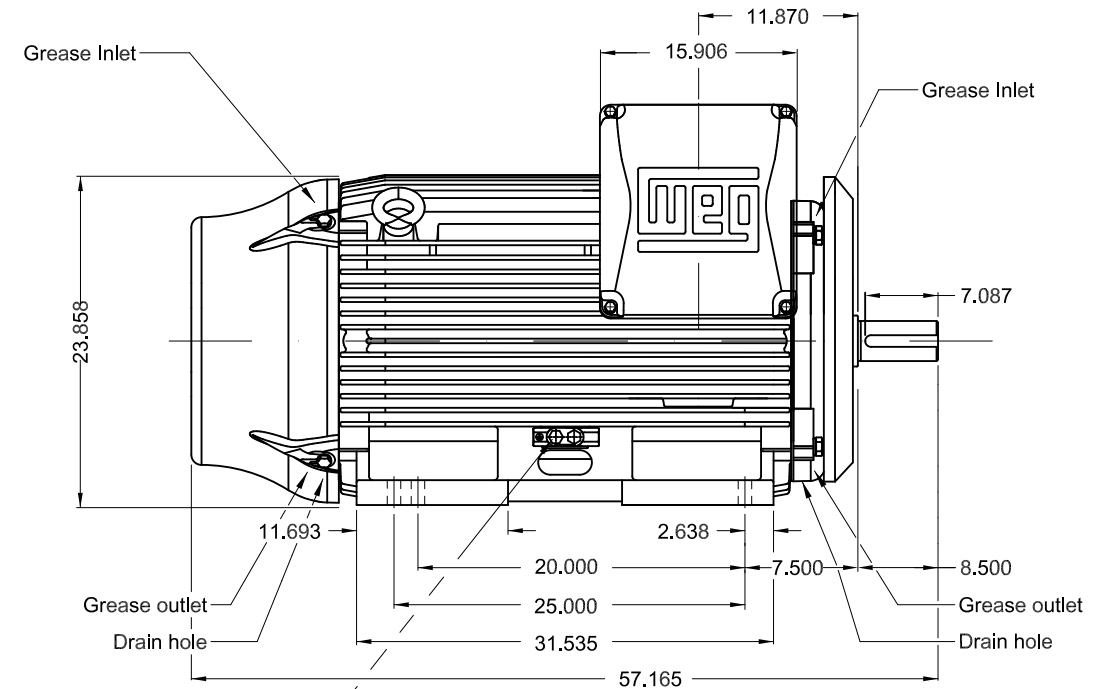
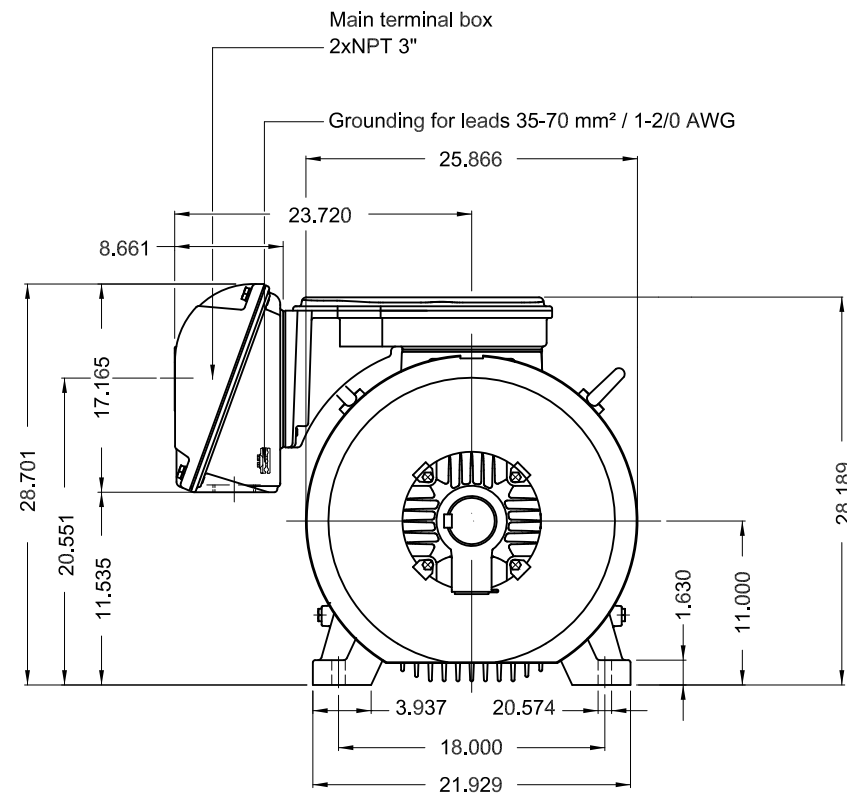
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Performance : 575 V 60 Hz 8P

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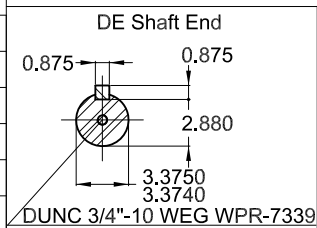


Grounding for leads 25-185 mm<sup>2</sup> / 3AWG-350MCM

200 HP 08 Poles 60 Hz

A

- NDE endshield with electrically insulated bearing hub
- Drive-End Air Deflector
- Color RAL 5009
- Painting plan 202E
- Mounting NEMA F-1
- Mounting B3R(D)



ECM	LOC	SUMMARY OF MODIFICATIONS	EXECUTED	CHECKED	RELEASED	DATE	VER
EXECUTED	PIRWBUSER	THREE PH. MOTOR IEEE 841 W22 PREM. EFF.					
CHECKED		FRAME L447/9T IP55 TEFC					
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 - T3C  
For use on PWM: Gr. A, B, C, D and F,  
VT 1000:1, CT 20:1, 1.00SF - T3

MODEL 20009ST3HIE449T-W22



Inverter Duty Motor  
Severe Duty

MADE IN BRAZIL  
12970107

PH3 60Hz Fr. L447/9T 1000m.a.s.l. IP55 TEFC 3491lb

V 575

A 194

HP 200

kW 150

SF 1.15

SFA 223

RPM 891

PF 0.82

AMB 40°C

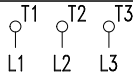
INS cl. F DT80K

NEMA NOM EFF 95.0%

DUTY CONT.

DES B Code G

GUARANT. EFF 94.1%



575V



→ 6322-C3 (60g) 110BC03X30

→ 6319-C3 (45g) 95BC03X30



MOBIL POLYREX EM (14000h)

