

# DATA SHEET



## Three Phase Induction Motor - Squirrel Cage

Customer :																			
Product line	: NEMA Premium Efficiency Three-Phase																		
Product code :	12199325																		
Catalog # :	15012ET3H447T-W22																		
Frame : 445/7T Output : 150 HP (110 kW) Poles : 6 Frequency : 60 Hz Rated voltage : 575 V Rated current : 141 A L. R. Amperes : 873 A LRC : 6.2x(Code G) No load current : 56.0 A Rated speed : 1187 rpm Slip : 1.08 % Rated torque : 664 ft.lb Locked rotor torque : 240 % Breakdown torque : 250 % Insulation class : F Service factor : 1.15 Moment of inertia (J) : 134 sq.ft.lb Design : B	Locked rotor time : 36s (cold) 20s (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> : 69.0 dB(A) Starting method : Direct On Line Approx. weight <sup>3</sup> : 2269 lb																		
Output	25% 50% 75% 100%																		
Efficiency (%)	94.5 95.0 95.4 95.8																		
Power Factor	0.43 0.67 0.78 0.82																		
Foundation loads																			
Max. traction	: 3288 lb																		
Max. compression	: 5557 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>: 6319 C3</td> <td>6316 C3</td> </tr> <tr> <td>Sealing</td> <td>: WSeal</td> <td>WSeal</td> </tr> <tr> <td>Lubrication interval</td> <td>: 13000 h</td> <td>16000 h</td> </tr> <tr> <td>Lubricant amount</td> <td>: 45 g</td> <td>34 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	: 6319 C3	6316 C3	Sealing	: WSeal	WSeal	Lubrication interval	: 13000 h	16000 h	Lubricant amount	: 45 g	34 g	Lubricant type	Mobil Polyrex EM	
	<u>Drive end</u>	<u>Non drive end</u>																	
Bearing type	: 6319 C3	6316 C3																	
Sealing	: WSeal	WSeal																	
Lubrication interval	: 13000 h	16000 h																	
Lubricant amount	: 45 g	34 g																	
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															
Performed by																			
Checked by			Page	Revision															
Date	13/04/2022		1 / 6																

# TORQUE AND CURRENT VS SPEED CURVE

## Three Phase Induction Motor - Squirrel Cage



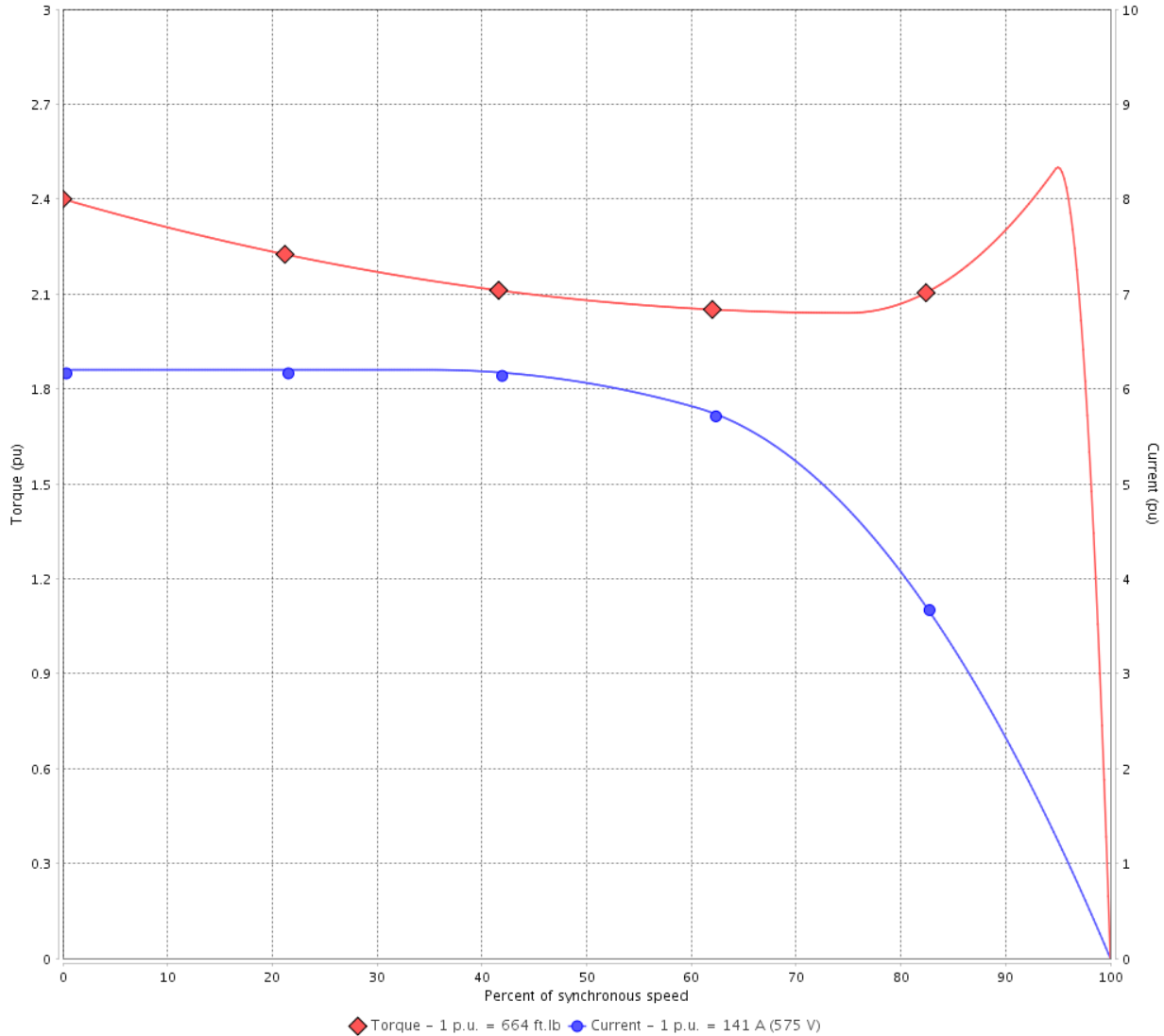
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12199325

Catalog # : 15012ET3H447T-W22

TORQUE AND CURRENT VS SPEED CURVE



Performance : 575 V 60 Hz 6P

Rated current	: 141 A	Moment of inertia (J)	: 134 sq.ft.lb
LRC	: 6.2	Duty cycle	: Cont.(S1)
Rated torque	: 664 ft.lb	Insulation class	: F
Locked rotor torque	: 240 %	Service factor	: 1.15
Breakdown torque	: 250 %	Temperature rise	: 80 K
Rated speed	: 1187 rpm	Design	: B

Locked rotor time : 36s (cold) 20s (hot)

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 2 / 6	Revision
Checked by				
Date	13/04/2022			

# LOAD PERFORMANCE CURVE

## Three Phase Induction Motor - Squirrel Cage

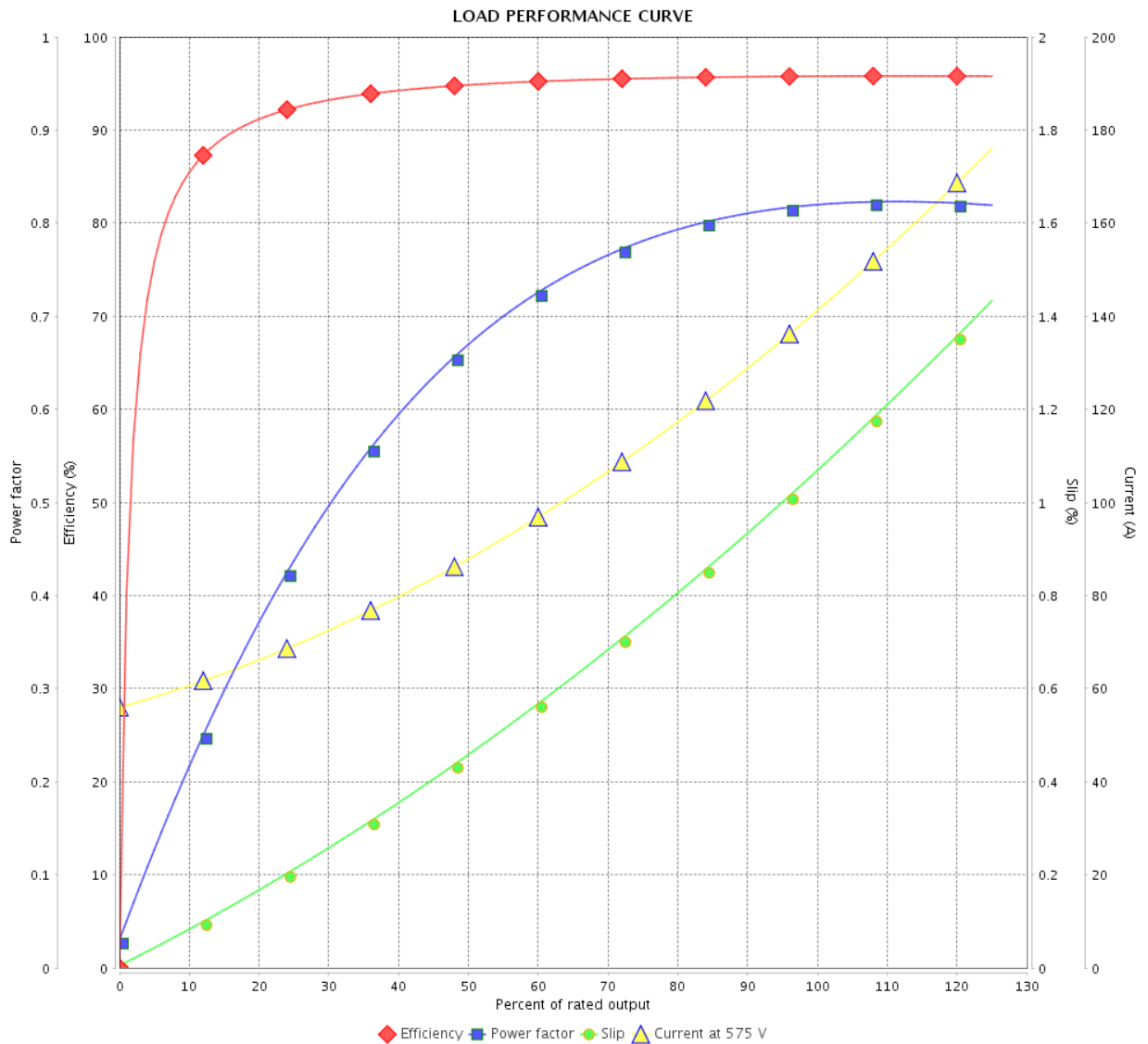


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12199325

Catalog # : 15012ET3H447T-W22



Performance : 575 V 60 Hz 6P

Rated current : 141 A  
 LRC : 6.2  
 Rated torque : 664 ft.lb  
 Locked rotor torque : 240 %  
 Breakdown torque : 250 %  
 Rated speed : 1187 rpm

Moment of inertia (J) : 134 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.15  
 Temperature rise : 80 K  
 Design : B

Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page		Revision
Checked by		3 / 6		
Date		13/04/2022		

# THERMAL LIMIT CURVE

## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : NEMA Premium Efficiency Three-Phase  
Product code : 12199325  
Catalog # : 15012ET3H447T-W22

Performance : 575 V 60 Hz 6P

Rated current	: 141 A	Moment of inertia (J)	: 134 sq.ft.lb
LRC	: 6.2	Duty cycle	: Cont.(S1)
Rated torque	: 664 ft.lb	Insulation class	: F
Locked rotor torque	: 240 %	Service factor	: 1.15
Breakdown torque	: 250 %	Temperature rise	: 80 K
Rated speed	: 1187 rpm	Design	: B

Heating constant

Cooling constant

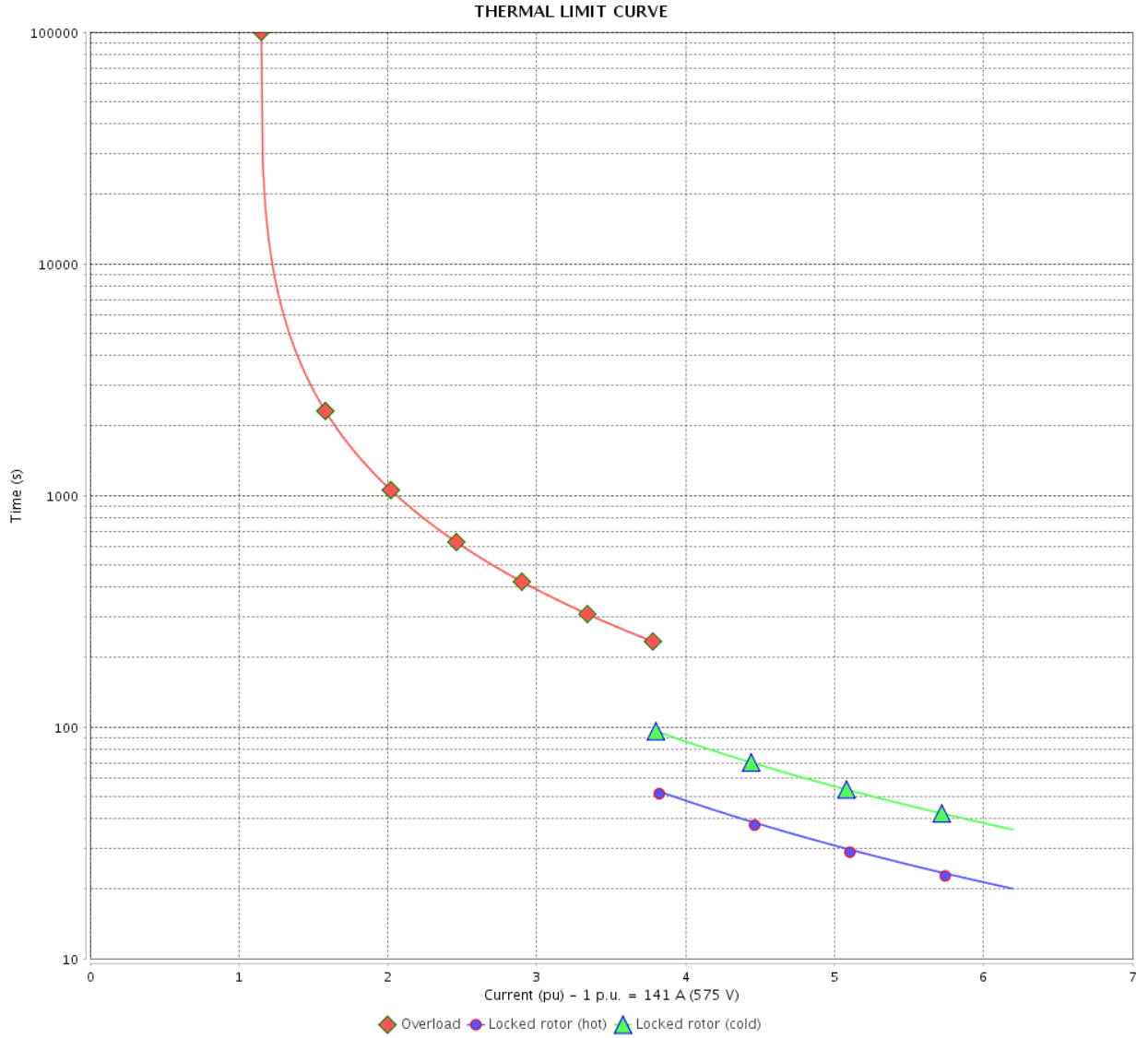
Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by			Page	Revision
Date	13/04/2022		4 / 6	

# THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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



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

# VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



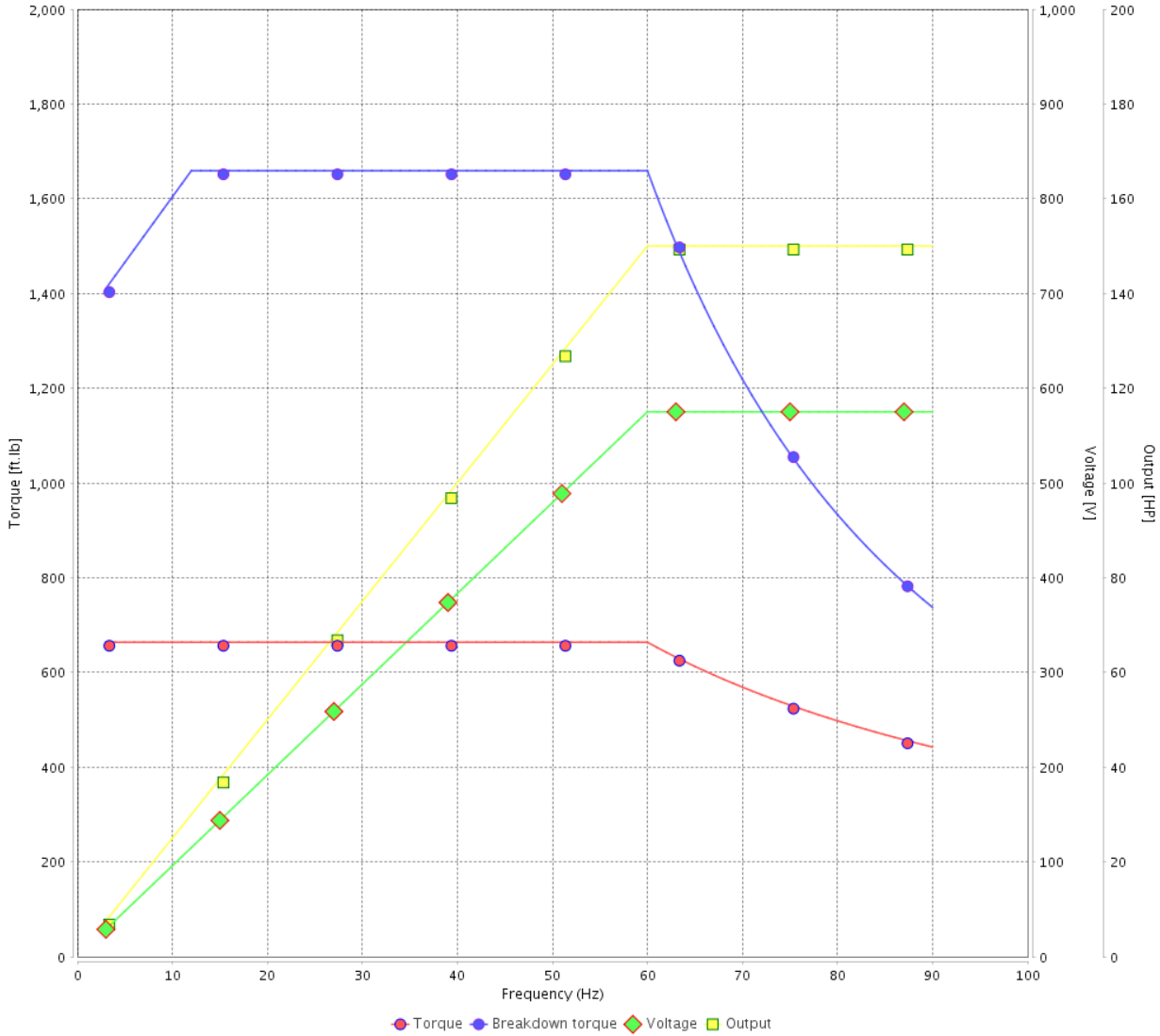
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12199325

Catalog # : 15012ET3H447T-W22

VFD OPERATION CURVE

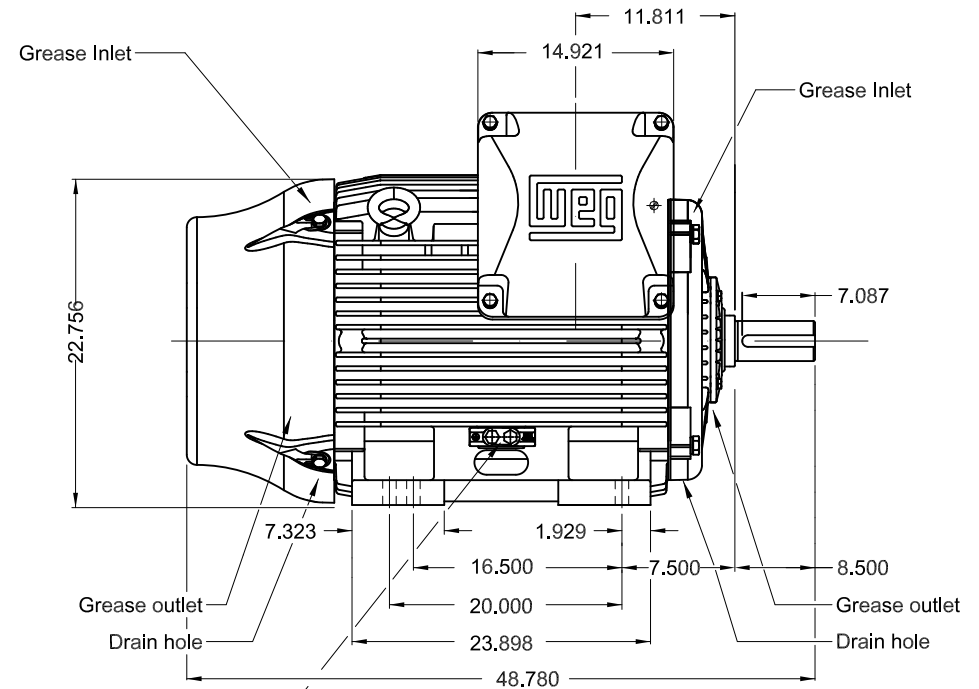
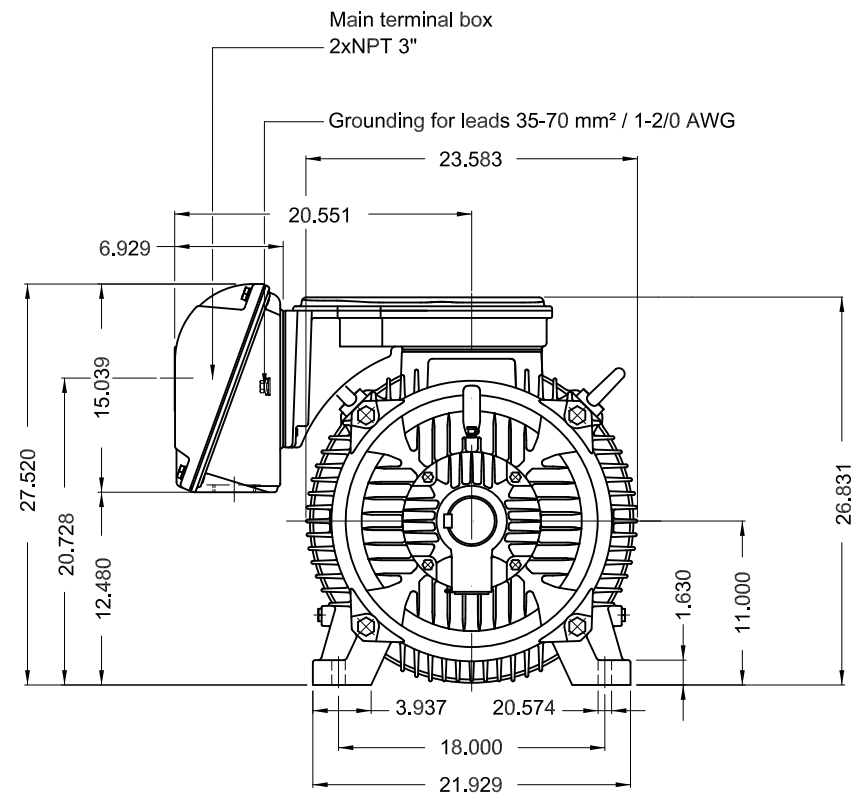


Performance : 575 V 60 Hz 6P

Rated current : 141 A  
 LRC : 6.2  
 Rated torque : 664 ft.lb  
 Locked rotor torque : 240 %  
 Breakdown torque : 250 %  
 Rated speed : 1187 rpm

Moment of inertia (J) : 134 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.15  
 Temperature rise : 80 K  
 Design : B

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 6 / 6	Revision
Checked by				
Date	13/04/2022			

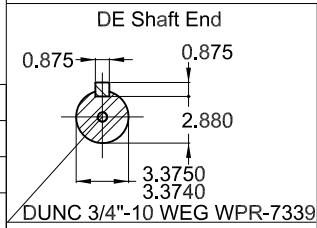


Grounding for leads 25-185 mm² / 3AWG-350MCM

150 HP 06 Poles 60 Hz

A

Without vertical jackscrews  
 Color RAL 5009  
 Painting plan 203A  
 Mounting B3R(D)



ECM	LOC	SUMMARY OF MODIFICATIONS	EXECUTED	CHECKED	RELEASED	DATE	VER
EXECUTED	PIRWUSER	THREE PH. MOTOR W22 PREM. EFF.					
CHECKED		FRAME 445/7T 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 - T3C  
For use on PWM: Gr. A, B, C, D and F,  
VT 1000:1, CT 20:1, 1.00SF - T3

MODEL 15012ET3H447T-W22

Inverter Duty Motor  
Severe Duty

PH3 60Hz Fr. 445/7T 1000m.a.s.l. IP55 TEFC 2270lb

V 575

A 141

HP 150

kW 110

SF 1.15

SFA 162

RPM 1187

PF 0.82

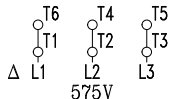
AMB 40°C

INS cl. F DT80K

NEMA NOM EFF 95.8%

DUTY CONT.

DES B Code G

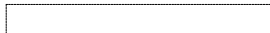


→ 6319-C3 (45g)

→ 6316-C3 (34g)



MOBIL POLYREX EM (13000h)



MADE IN BRAZIL  
12199325