

DATA SHEET



Three Phase Induction Motor - Squirrel Cage

Customer :																			
Product line	: NEMA Premium Efficiency Three-Phase																		
Product code :	13500517																		
Catalog # :	10009ET3GKD445T-W22																		
Frame : 444/5T Output : 100 HP (75 kW) Poles : 8 Frequency : 60 Hz Rated voltage : 460 V Rated current : 130 A L. R. Amperes : 793 A LRC : 6.1x(Code H) No load current : 60.0 A Rated speed : 890 rpm Slip : 1.11 % Rated torque : 590 ft.lb Locked rotor torque : 210 % Breakdown torque : 220 % Insulation class : F Service factor : 1.25 Moment of inertia (J) : 87.3 sq.ft.lb Design : A	Locked rotor time : 27s (cold) 15s (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 ¹ : Both (CW and CCW) Noise level ² : 63.0 dB(A) Starting method : Direct On Line Approx. weight ³ : 1784 lb																		
Output	25% 50% 75% 100%																		
Efficiency (%)	0.000 93.6 94.1 94.1																		
Power Factor	0.00 0.62 0.72 0.77																		
Foundation loads																			
Max. traction	: 2568 lb																		
Max. compression	: 4352 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>: NU-319 C3</td> <td>6316 C3</td> </tr> <tr> <td>Sealing</td> <td>: WSeal</td> <td>WSeal</td> </tr> <tr> <td>Lubrication interval</td> <td>: 15000 h</td> <td>20000 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	: NU-319 C3	6316 C3	Sealing	: WSeal	WSeal	Lubrication interval	: 15000 h	20000 h	Lubricant amount	: 45 g	34 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



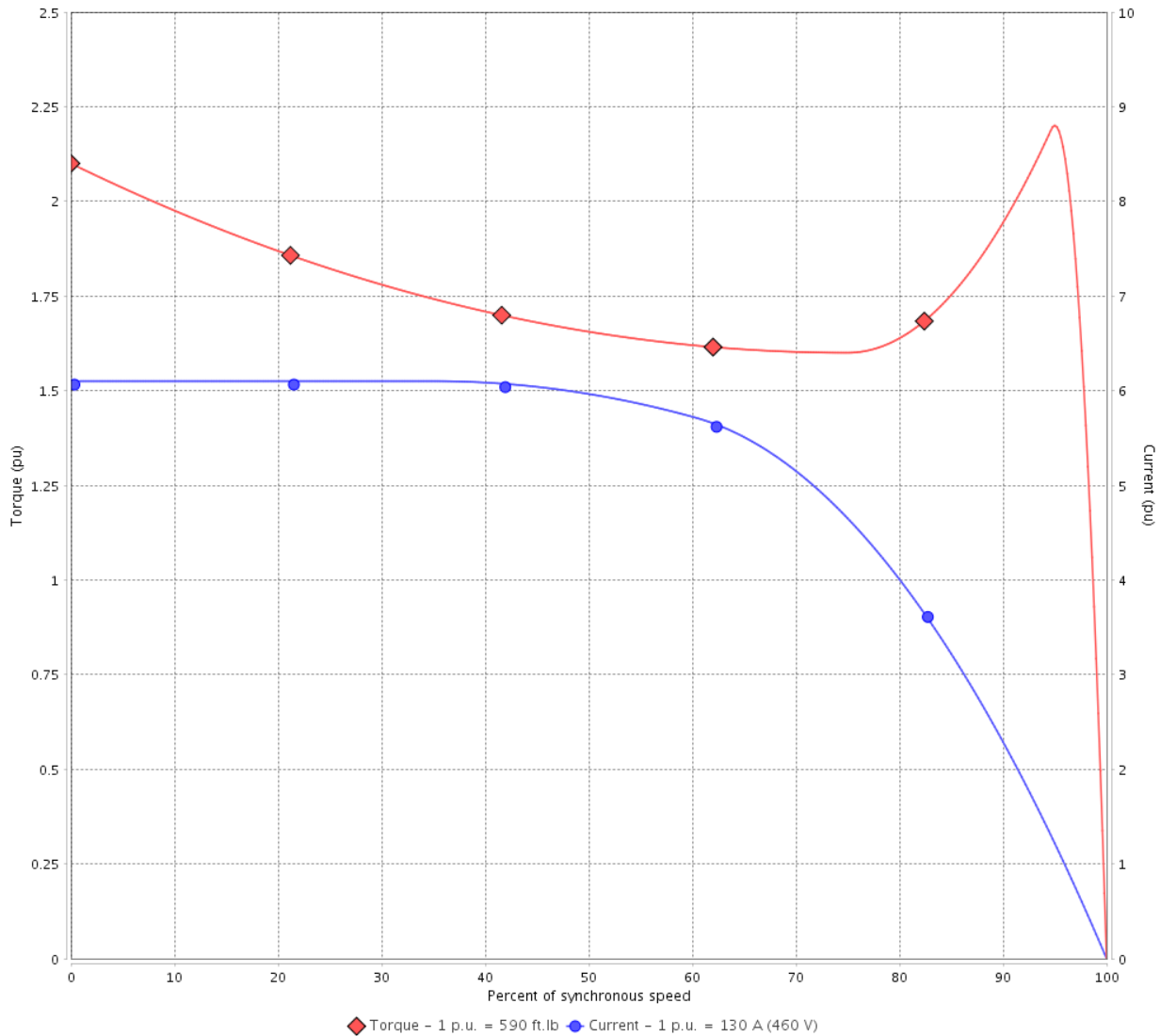
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 13500517

Catalog # : 10009ET3GKD445T-W22

TORQUE AND CURRENT VS SPEED CURVE



Performance : 460 V 60 Hz 8P

Rated current	: 130 A	Moment of inertia (J)	: 87.3 sq.ft.lb
LRC	: 6.1	Duty cycle	: Cont.(S1)
Rated torque	: 590 ft.lb	Insulation class	: F
Locked rotor torque	: 210 %	Service factor	: 1.25
Breakdown torque	: 220 %	Temperature rise	: 80 K
Rated speed	: 890 rpm	Design	: A

Locked rotor time : 27s (cold) 15s (hot)

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Checked by				
Date	12/04/2022			

LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage

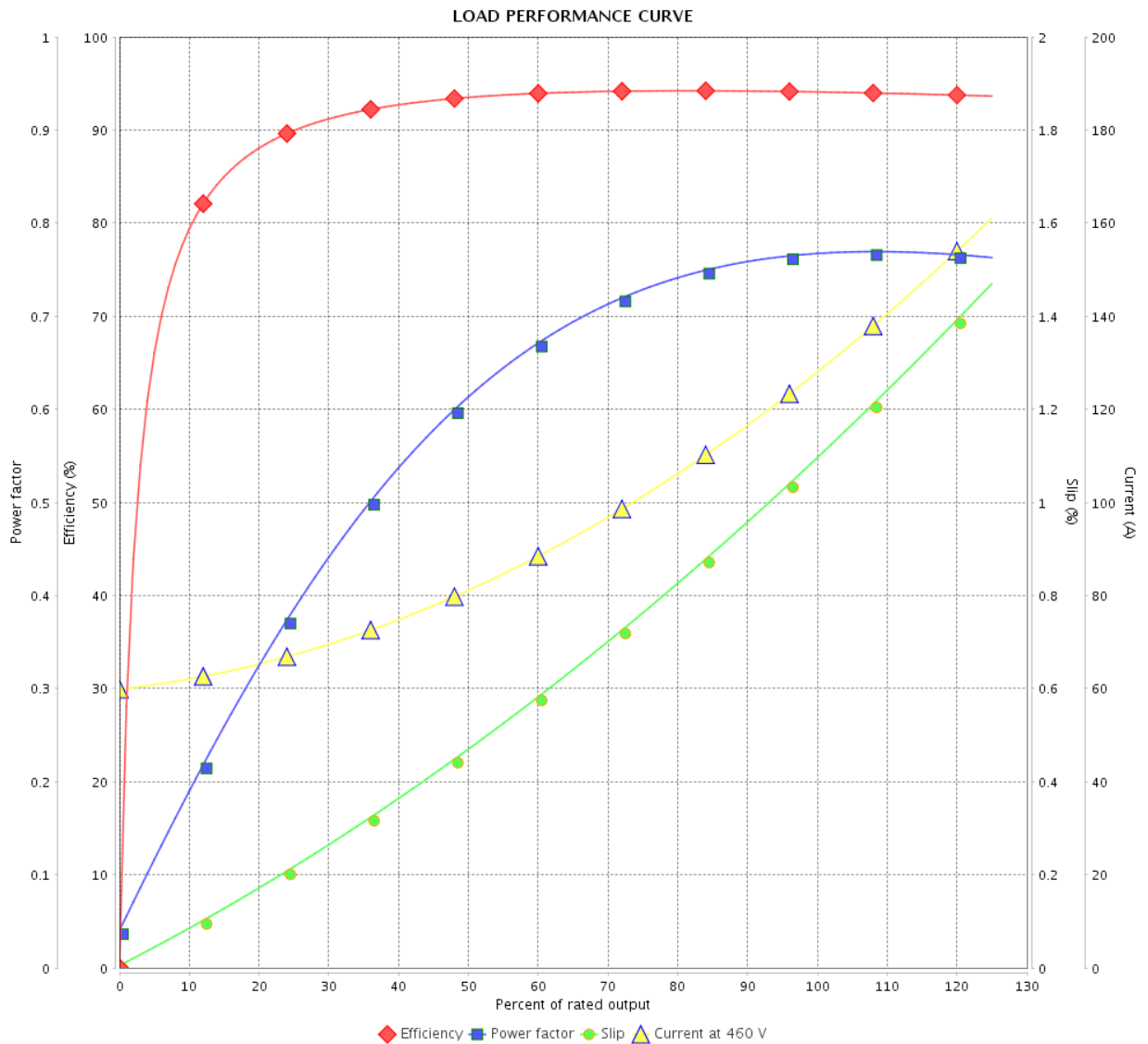


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 13500517

Catalog # : 10009ET3GKD445T-W22



Performance : 460 V 60 Hz 8P

Rated current : 130 A
 LRC : 6.1
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 Locked rotor torque : 210 %
 Breakdown torque : 220 %
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Moment of inertia (J) : 87.3 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.25
 Temperature rise : 80 K
 Design : A

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THERMAL LIMIT CURVE

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Heating constant

Cooling constant

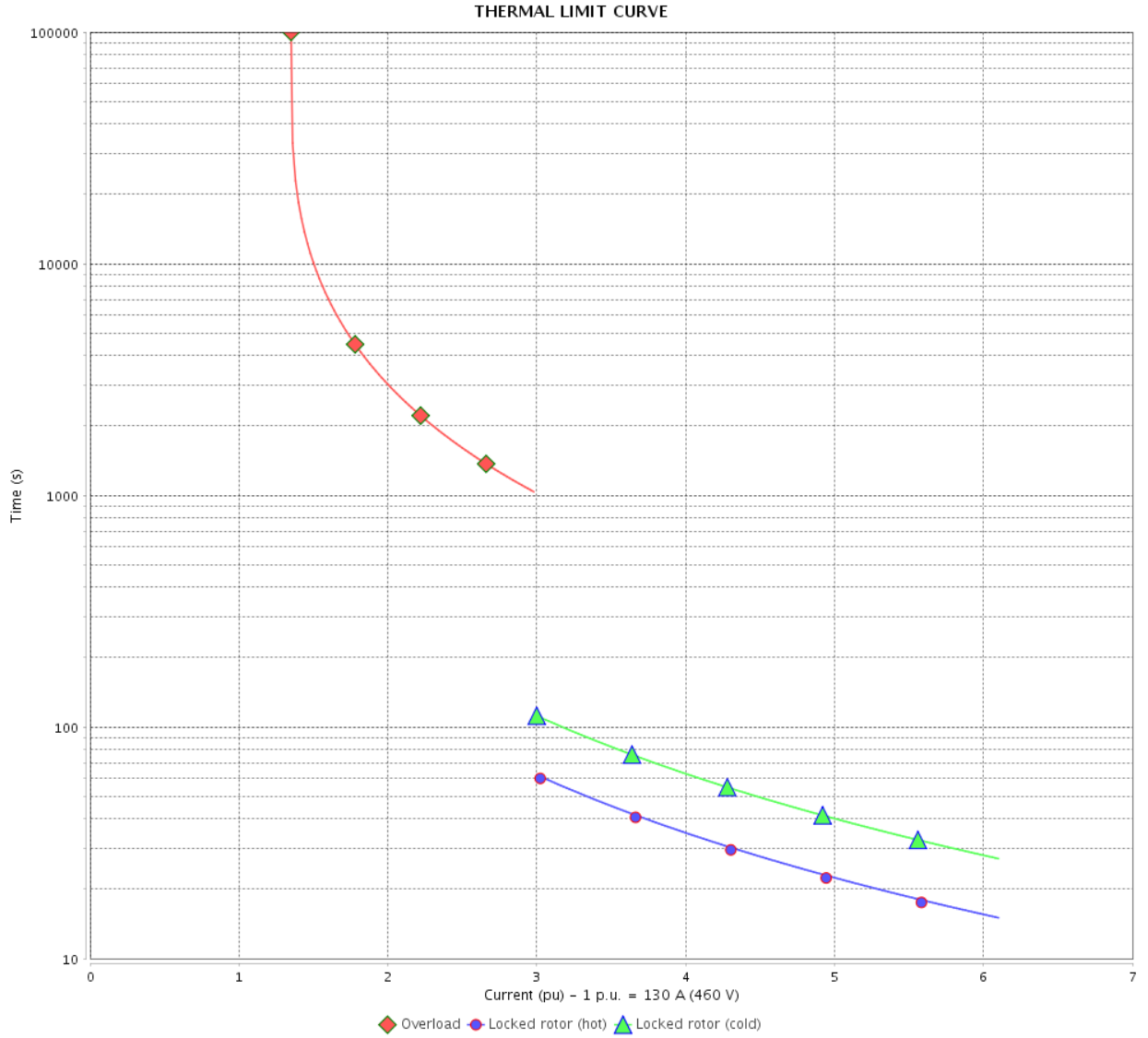
Rev.	Changes Summary	Performed	Checked	Date
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THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer : _____



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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



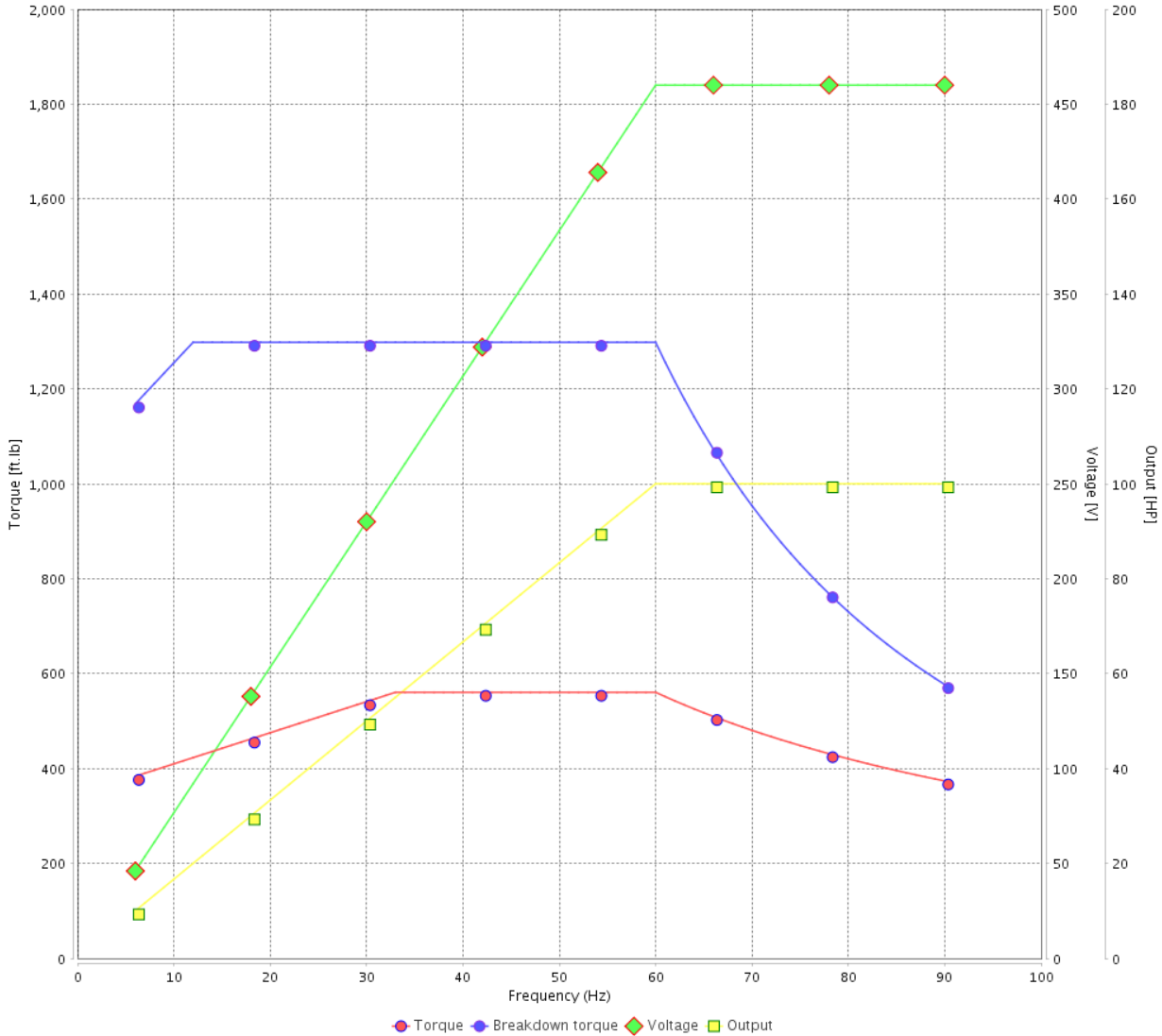
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VFD OPERATION CURVE



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 Service factor : 1.25
 Temperature rise : 80 K
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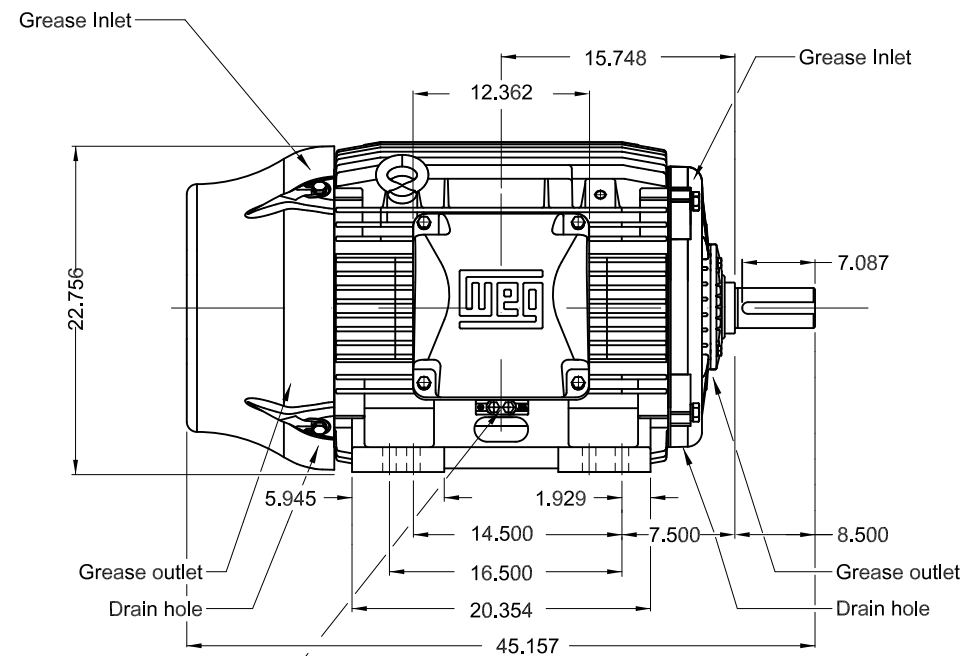
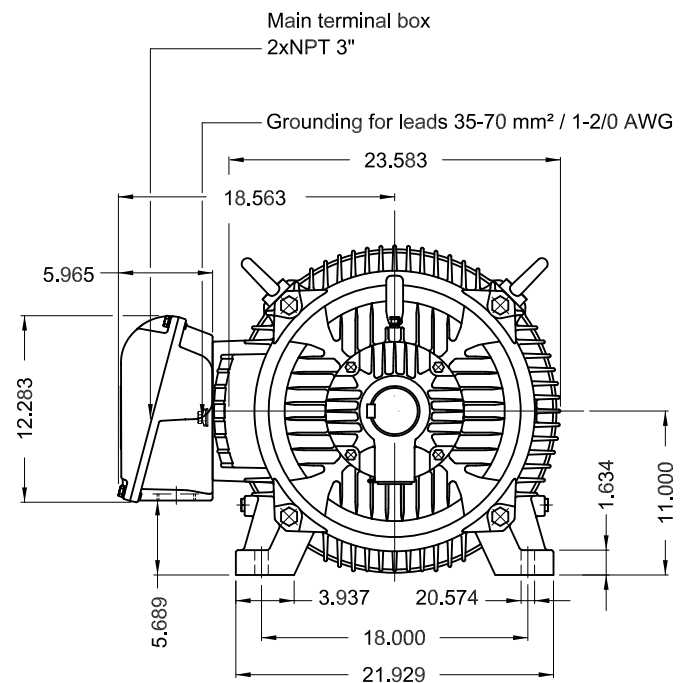
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Date	12/04/2022			

1 2 3 4 5 6

A

B

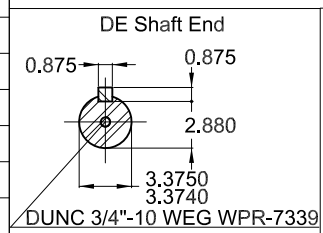
C



D

E

Design A
DE roller bearing
Shaft locking device
Color RAL 5009
Painting plan 203A
Mounting NEMA F-1
Mounting B3R(D)



100 HP 08 Poles 60 Hz A

ECM	LOC	SUMMARY OF MODIFICATIONS	EXECUTED	CHECKED	RELEASED	DATE	VER
EXECUTED	PIRWUSER	THREE PH. MOTOR W22 PREM. EFF.					
CHECKED		FRAME 444/5T IP55 TEFC					
RELEASED							
REL DT.	WMO	Jaragua do Sul	Product Engineering	SHEET	1 / 1		

PREVIEW
WDD



MADE IN BRAZIL
13500517



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 - T3A

MODEL 10009ET3GKD445T-W22

Inverter Duty Motor
Severe Duty

PH3 60Hz Fr. 444/5T 1000m.a.s.l. IP55 TEFC 1768lb

V 460

A 130

HP 100

kW 75

SF 1.25

SFA 163

RPM 890

PF 0.77

AMB 40°C

INS cl. F DT80K

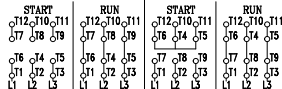
NEMA NOM EFF 94.1%

DUTY CONT.

DES A Code H

PART-WINDING

WYE-DELTA



→ NU-319-C3 (45g)

→ 6316-C3 (34g)



MOBIL POLYREX EM (15000h)

