

DATA SHEET



Three Phase Induction Motor - Squirrel Cage

Customer :																			
Product line	: NEMA Premium Efficiency Three-Phase																		
Product code :	13516682																		
Catalog # :	05018ST3HIE326T-W22																		
Frame : 324/6T Output : 50 HP (37 kW) Poles : 4 Frequency : 60 Hz Rated voltage : 575 V Rated current : 47.4 A L. R. Amperes : 294 A LRC : 6.2x(Code G) No load current : 18.8 A Rated speed : 1775 rpm Slip : 1.39 % Rated torque : 148 ft.lb Locked rotor torque : 229 % Breakdown torque : 270 % Insulation class : F Service factor : 1.25 Moment of inertia (J) : 9.16 sq.ft.lb Design : B	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 : 66.0 dB(A) Starting method : Direct On Line Approx. weight ³ : 601 lb																		
Output	25% 50% 75% 100%																		
Efficiency (%)	92.5 93.0 94.1 94.5																		
Power Factor	0.42 0.66 0.77 0.83																		
Foundation loads																			
Max. traction	: 1232 lb																		
Max. compression	: 1833 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>: 6312 C3</td> <td>6212 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>: 21 g</td> <td>13 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	: 6312 C3	6212 C3	Sealing	: Inpro/Seal	Inpro/Seal	Lubrication interval	: 20000 h	20000 h	Lubricant amount	: 21 g	13 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



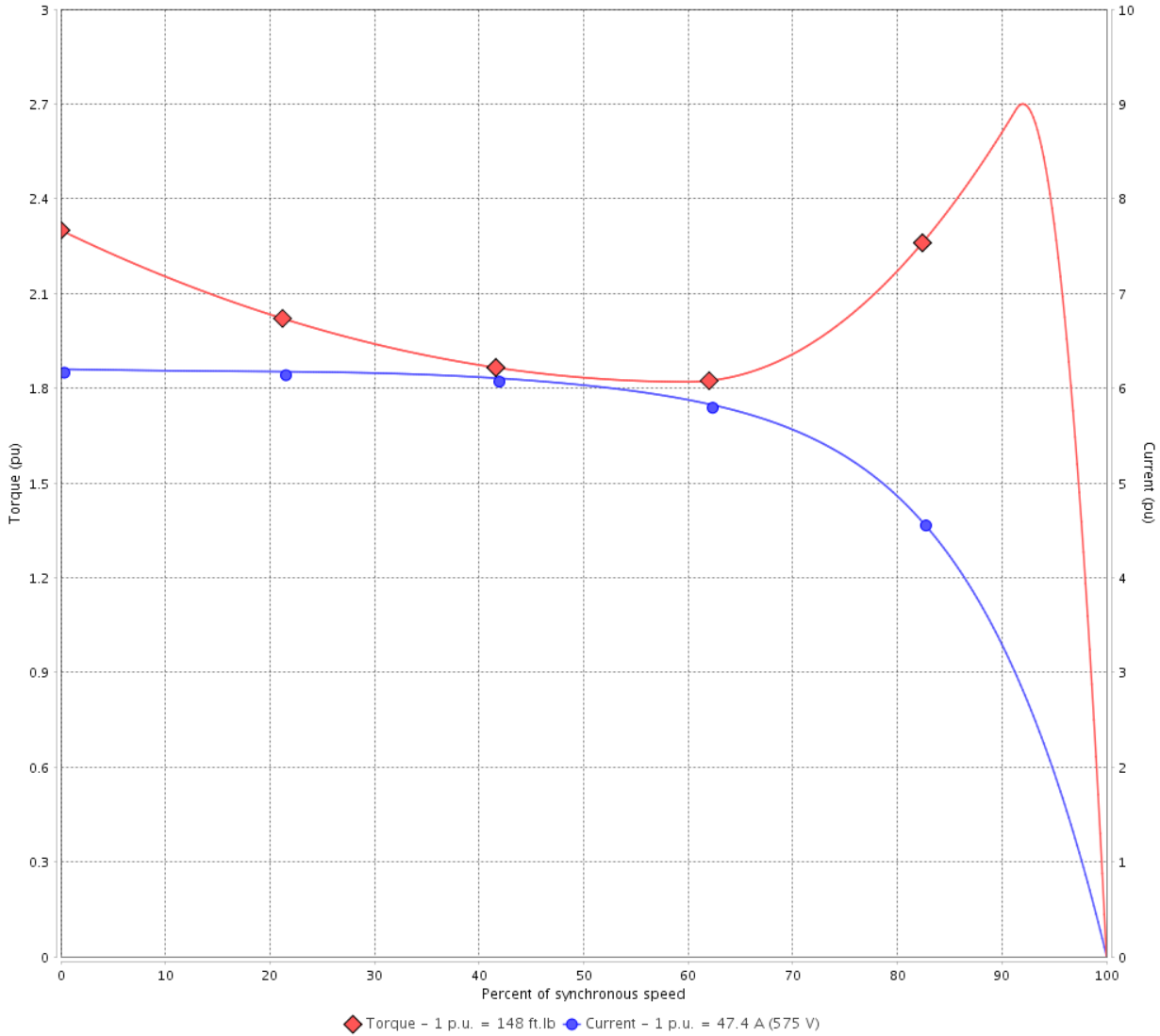
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Rated current	: 47.4 A	Moment of inertia (J)	: 9.16 sq.ft.lb
LRC	: 6.2	Duty cycle	: Cont.(S1)
Rated torque	: 148 ft.lb	Insulation class	: F
Locked rotor torque	: 229 %	Service factor	: 1.25
Breakdown torque	: 270 %	Temperature rise	: 80 K
Rated speed	: 1775 rpm	Design	: B

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

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Date	12/04/2022			

LOAD PERFORMANCE CURVE

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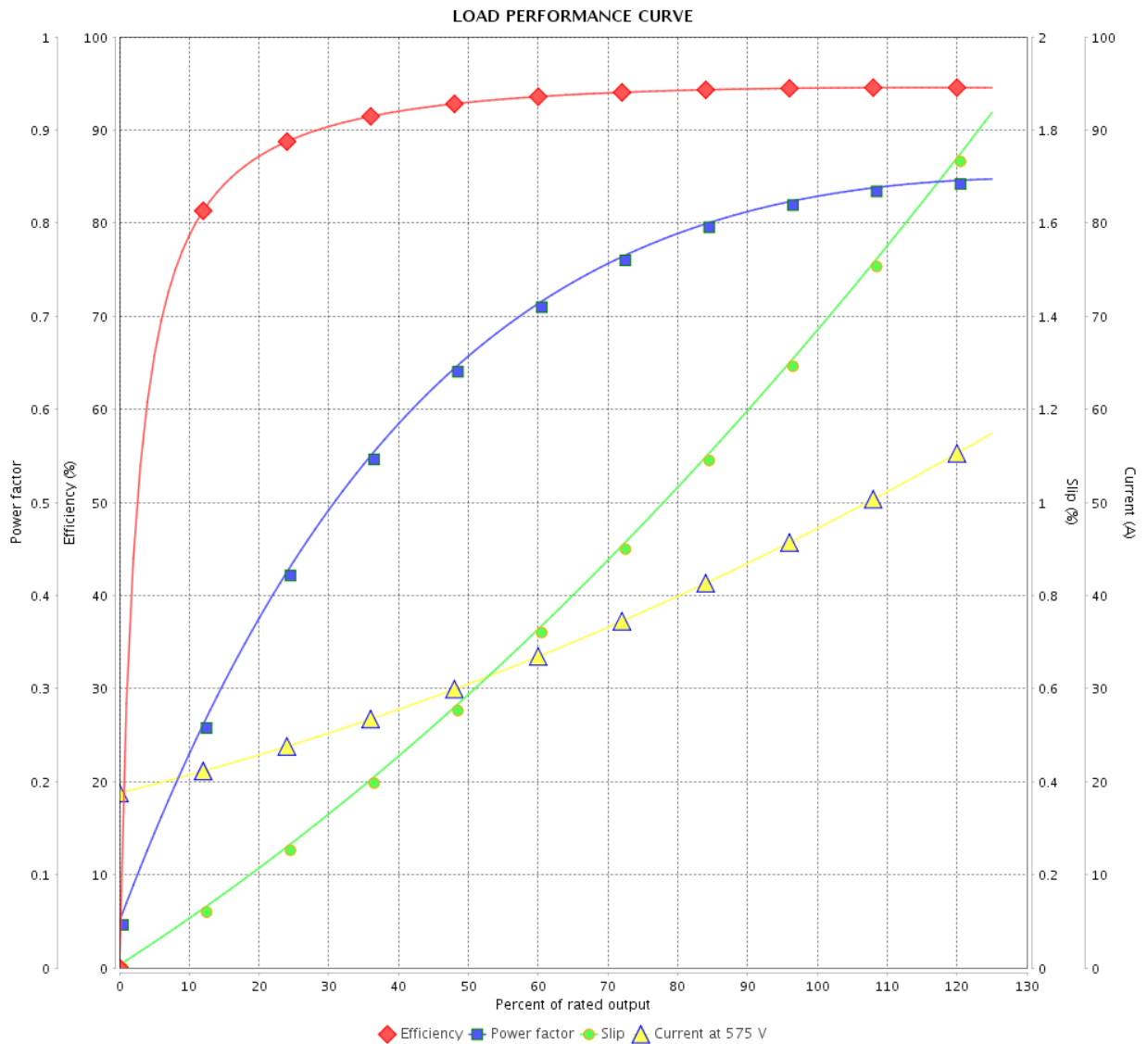


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THERMAL LIMIT CURVE



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Heating constant

Cooling constant

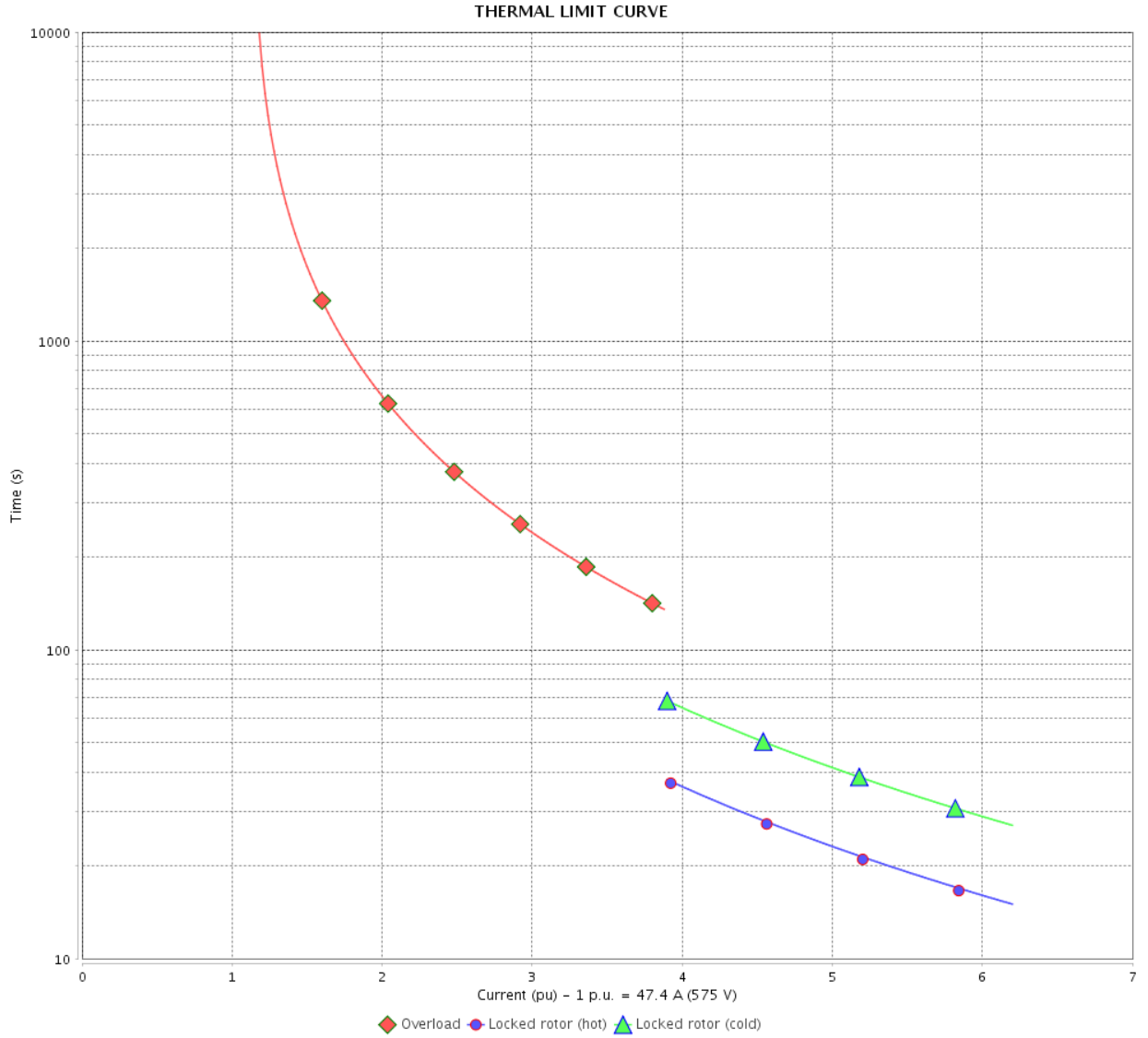
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THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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VFD OPERATION CURVE

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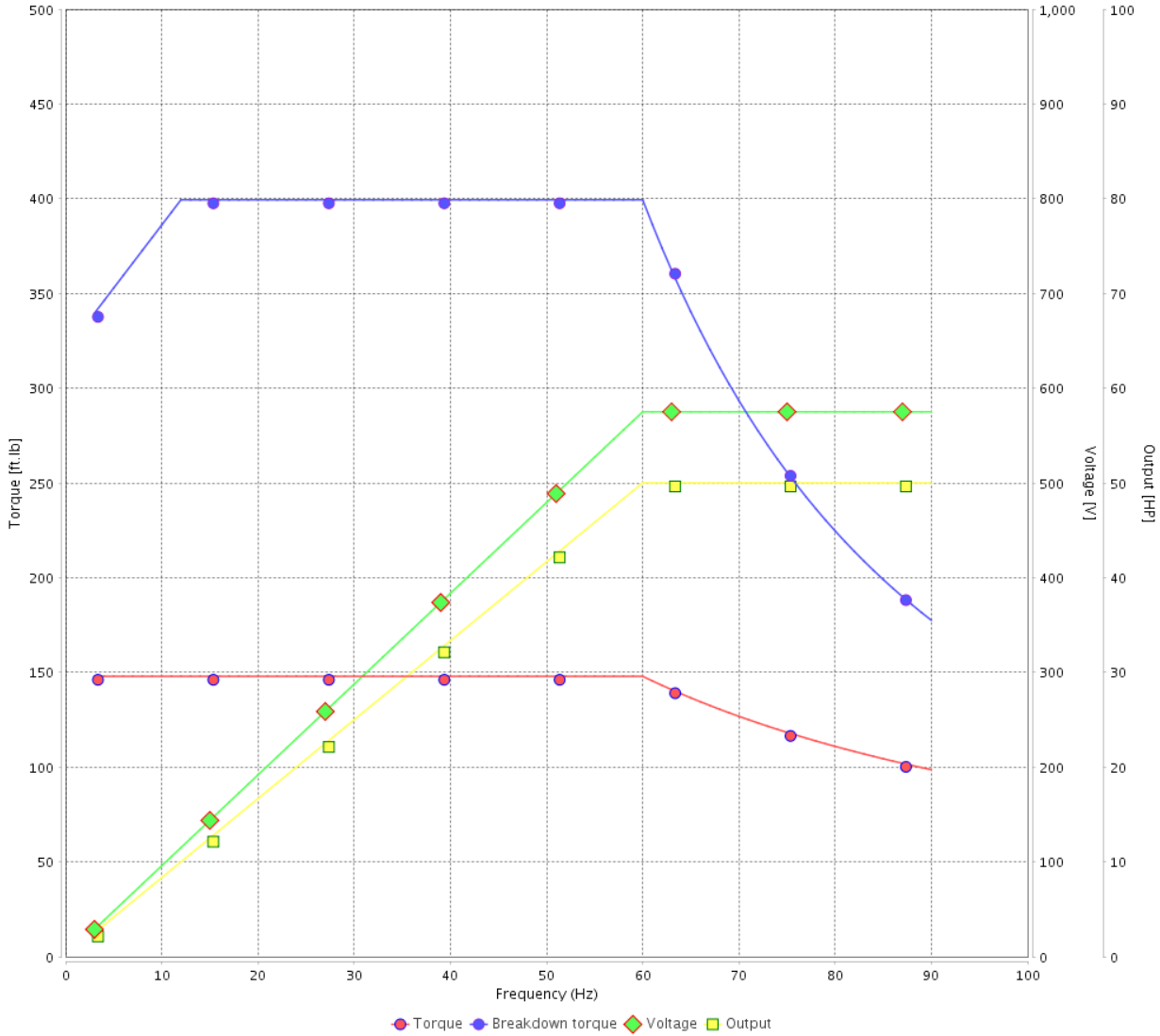
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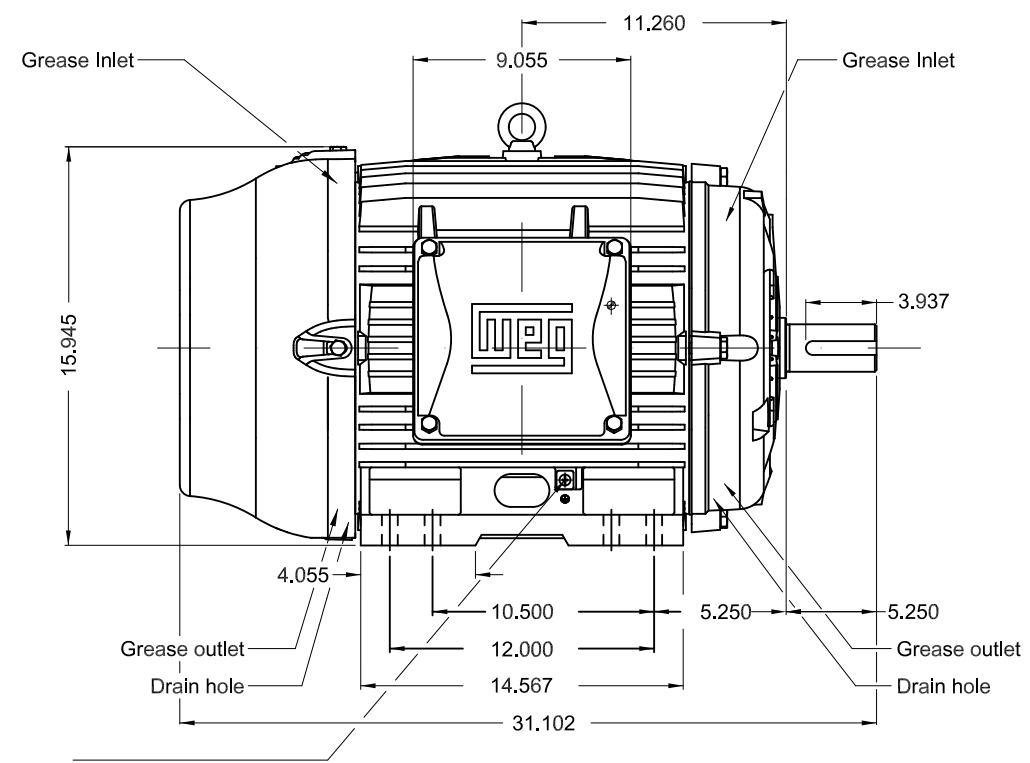
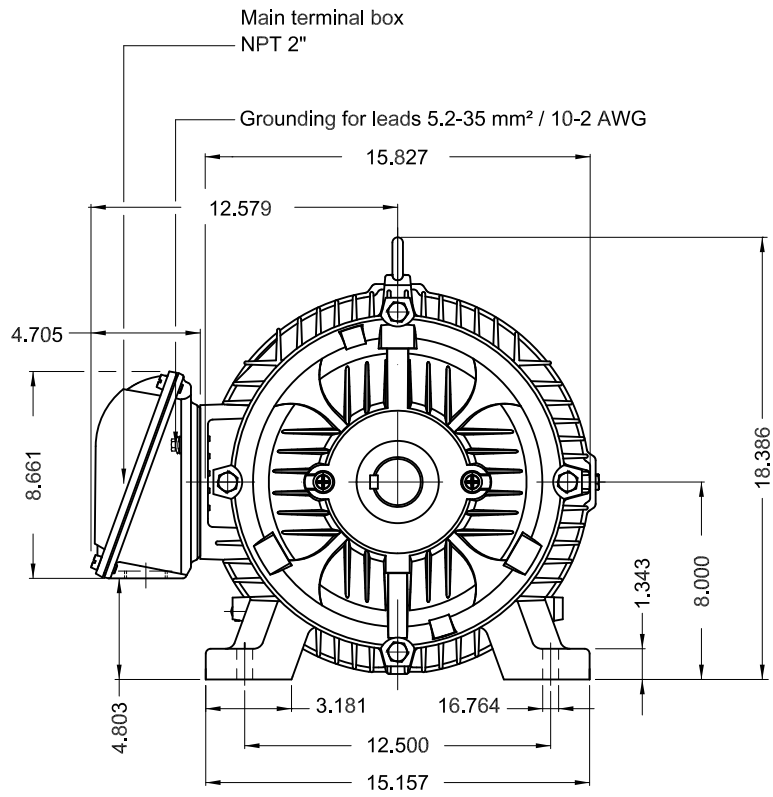
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1 2 3 4 5 6

A

B

C

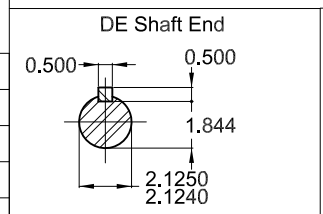


Grounding for leads 5.2-35 mm² / 10-2 AWG

D

E

Without vertical jackscrews
Color RAL 5009
Painting plan 202E
Mounting NEMA F-1
Mounting B3R(D)



50 HP 04 Poles 60 Hz A

ECM	LOC	SUMMARY OF MODIFICATIONS	EXECUTED	CHECKED	RELEASED	DATE	VER
EXECUTED	PIRWBUSER	THREE PH. MOTOR IEEE 841 W22 PREM. EFF.					
CHECKED		FRAME 324/6T 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 - T4
For use on PWM: Gr. A, B, C, D and F,
VT 1000:1, CT 20:1, 1.00SF - T3A

IE050504W22IS



Inverter Duty Motor
Severe Duty

MADE IN BRAZIL
13516682

PH3 60Hz Fr. 324/6T 1000m.a.s.l. IP55 TEFC 604lb

V 575

A 47.4

HP 50

kW 37

SF 1.25

SFA 59.3

RPM 1775

PF 0.83

AMB 40°C

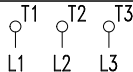
INS cl. F DT80K

NEMA NOM EFF 94.5%

DUTY CONT.

DES B Code G

GUARANT. EFF 93.6%



575V



→ 6312-C3 (21g) 60BC03X30

→ 6212-C3 (13g) 60BC02X30



MOBIL POLYREX EM (20000h)

