

# DATA SHEET



## Three Phase Induction Motor - Squirrel Cage

Customer :				
Product line	: NEMA Premium Efficiency Three-Phase			
Product code :	13416636			
Catalog # :	10018ST3HIERB405T-W2			
Frame : 404/5T Output : 100 HP (75 kW) Poles : 4 Frequency : 60 Hz Rated voltage : 575 V Rated current : 92.8 A L. R. Amperes : 575 A LRC : 6.2x(Code G) No load current : 25.6 A Rated speed : 1775 rpm Slip : 1.39 % Rated torque : 296 ft.lb Locked rotor torque : 240 % Breakdown torque : 220 % Insulation class : F Service factor : 1.25 Moment of inertia (J) : 29.9 sq.ft.lb Design : B	Locked rotor time : 23s (cold) 13s (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> : 68.0 dB(A) Starting method : Direct On Line Approx. weight <sup>3</sup> : 1246 lb			
Output	50%      75%      100%			
Efficiency (%)	95.0      95.0      95.4			
Power Factor	0.77      0.84      0.85			
Foundation loads				
Max. traction : 1331 lb				
Max. compression : 2577 lb				
Bearing type	: <u>Drive end</u> NU-316 C3 <u>Non drive end</u> 6314 C3			
Sealing	: Inpro/Seal      Inpro/Seal			
Lubrication interval	: 7000 h      12000 h			
Lubricant amount	: 34 g      27 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.				
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# TORQUE AND CURRENT VS SPEED CURVE

## Three Phase Induction Motor - Squirrel Cage



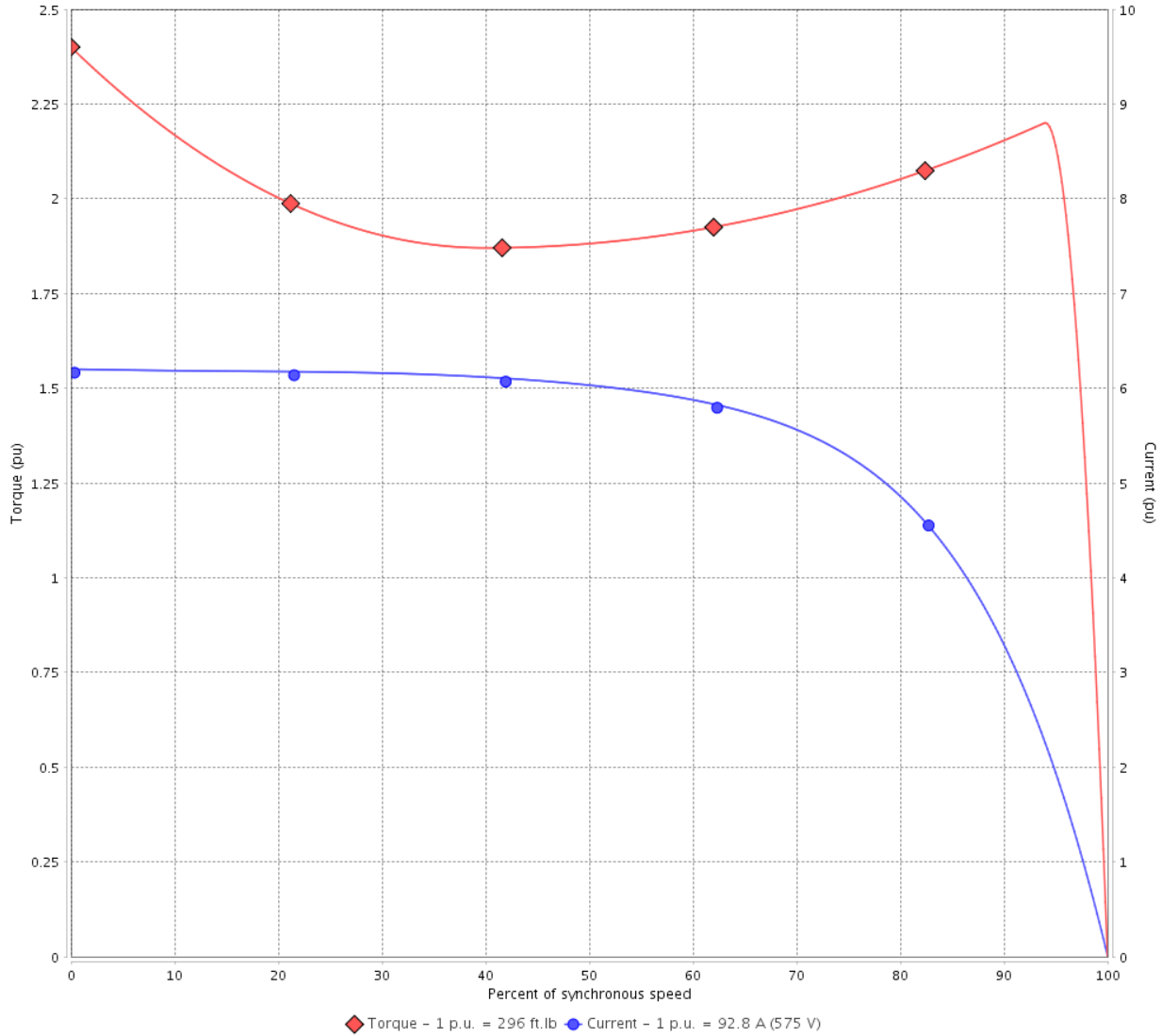
Customer :

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Catalog # : 10018ST3HIERB405T-W2

TORQUE AND CURRENT VS SPEED CURVE



Performance : 575 V 60 Hz 4P

Rated current	: 92.8 A	Moment of inertia (J)	: 29.9 sq.ft.lb
LRC	: 6.2	Duty cycle	: Cont.(S1)
Rated torque	: 296 ft.lb	Insulation class	: F
Locked rotor torque	: 240 %	Service factor	: 1.25
Breakdown torque	: 220 %	Temperature rise	: 80 K
Rated speed	: 1775 rpm	Design	: B

Locked rotor time : 23s (cold) 13s (hot)

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# LOAD PERFORMANCE CURVE

## Three Phase Induction Motor - Squirrel Cage

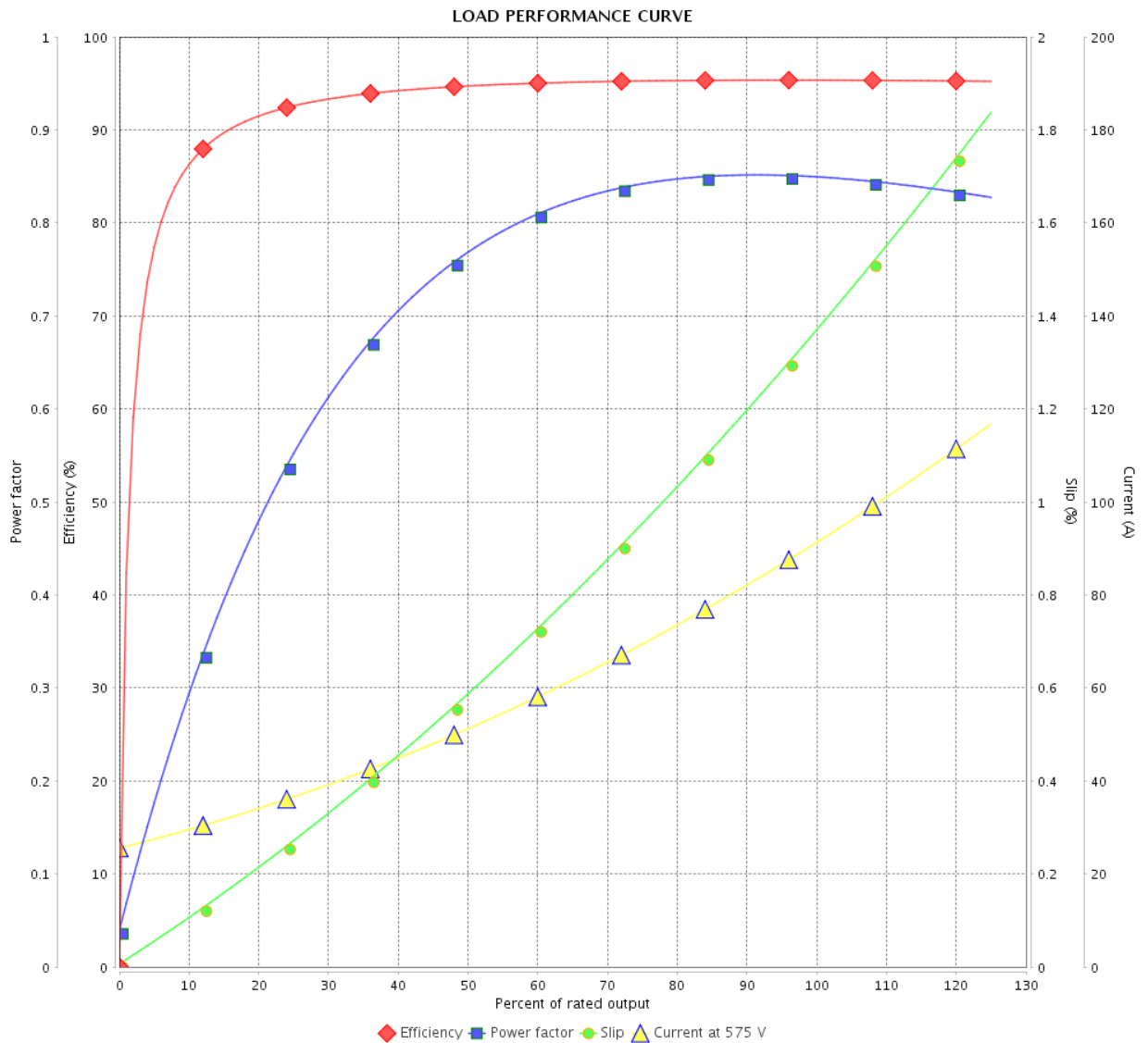


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 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.25  
 Temperature rise : 80 K  
 Design : B

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# THERMAL LIMIT CURVE

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Heating constant

Cooling constant

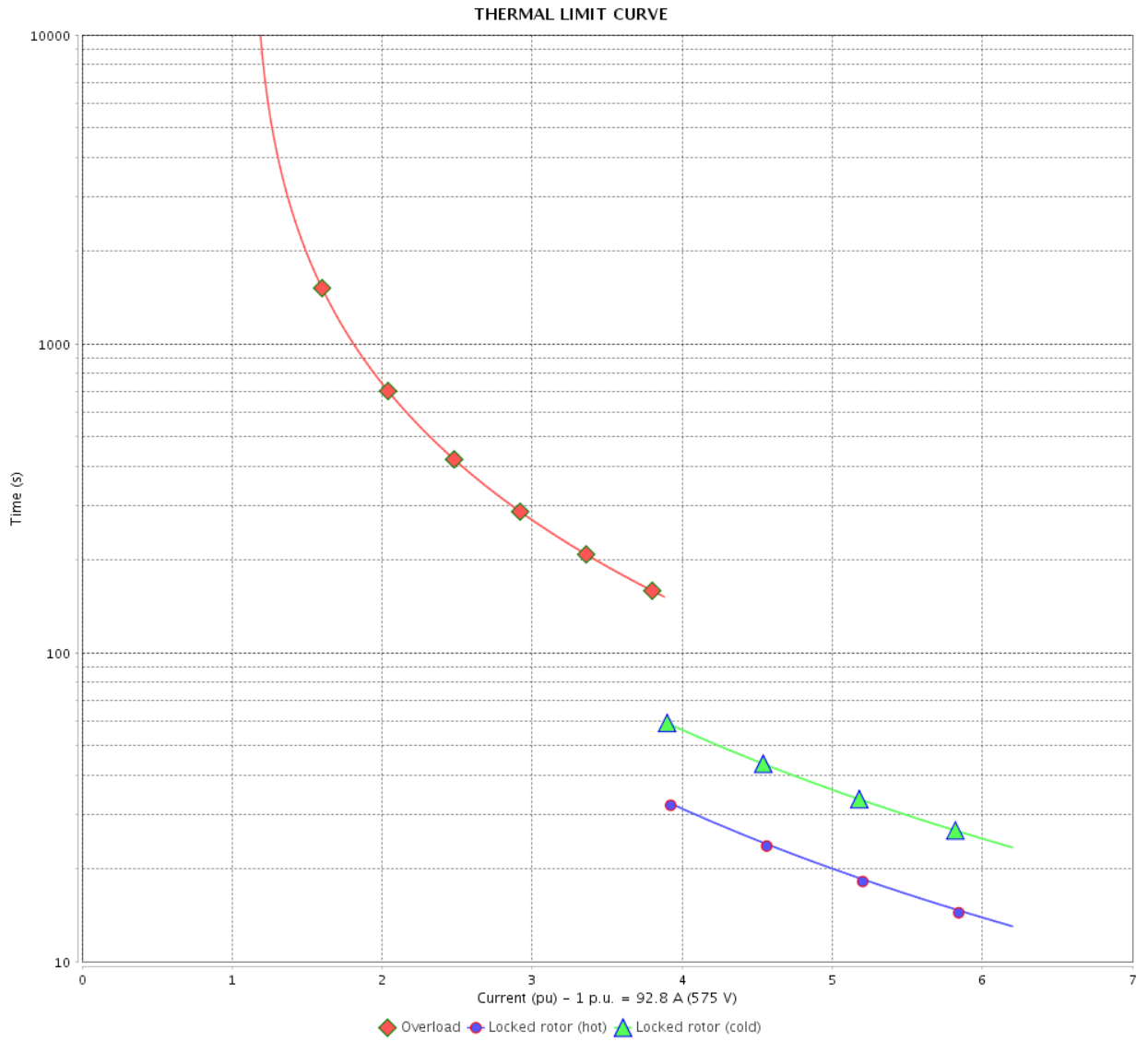
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# THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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



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# VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



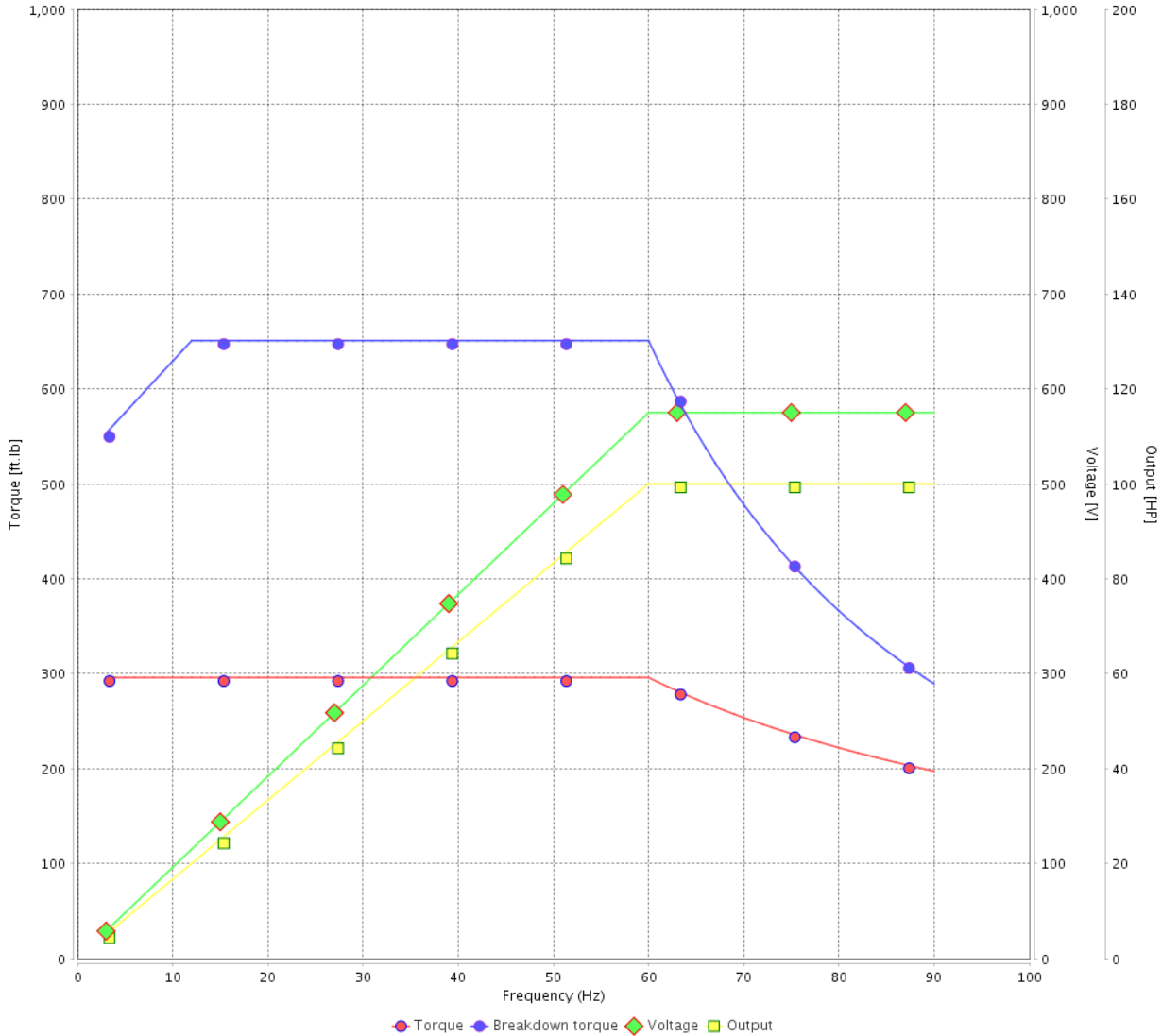
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VFD OPERATION CURVE



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 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.25  
 Temperature rise : 80 K  
 Design : B

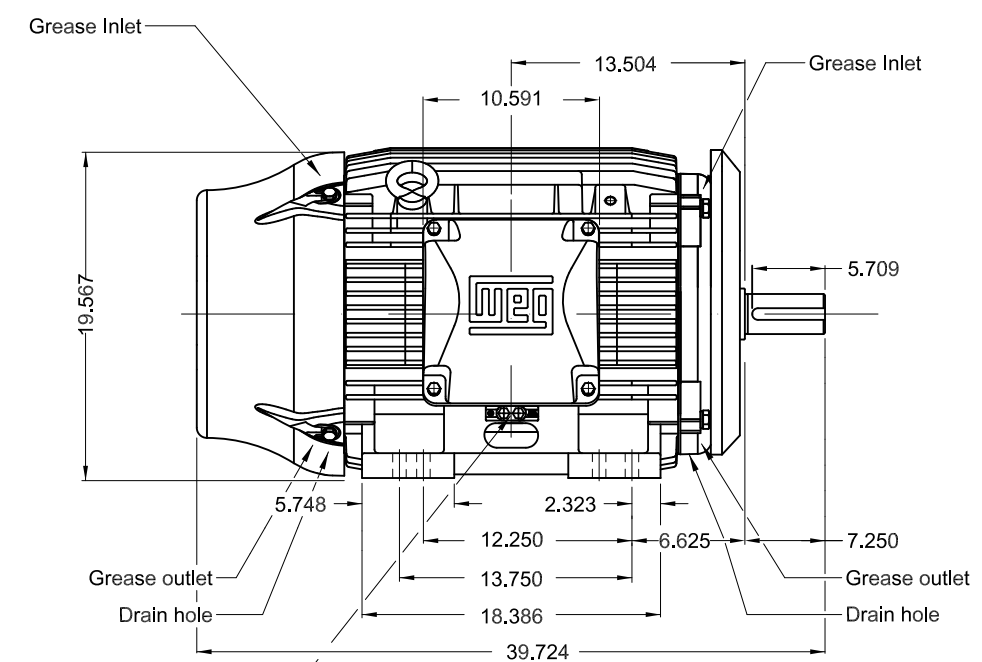
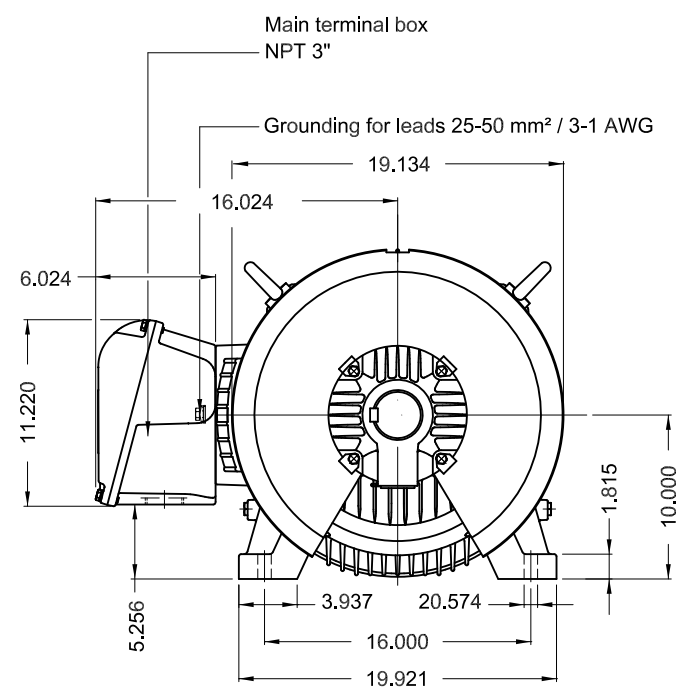
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1 2 3 4 5 6

A

B

C

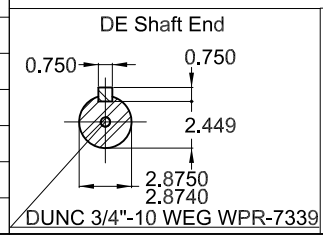


Grounding for leads 25-185 mm² / 3AWG-350MCM

D

E

- DE roller bearing
- Shaft locking device
- Drive-End Air Deflector
- Color RAL 5009
- Painting plan 202E
- Mounting NEMA F-1
- Mounting B3R(D)



100 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.				<p style="text-align: center; font-weight: bold;">PREVIEW</p> <p style="text-align: center; font-weight: bold;">WDD</p>		SHEET	1 / 1
CHECKED			FRAME 404/5T IP55 TEFC							
RELEASED										
REL DT.		WMO	Jaragua do Sul	Product Engineering						

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 - T4  
For use on PWM: Gr. A, B, C, D and F,  
VT 1000:1, CT 20:1, 1.00SF - T3A

IE100504RBW22IS



Inverter Duty Motor  
Severe Duty

MADE IN BRAZIL  
13416636

PH3 60Hz Fr. 404/5T 1000m.a.s.l. IP55 TEFC 1246lb

V 575

A 92.8

HP 100

kW 75

SF 1.25

SFA 116

RPM 1775

PF 0.85

AMB 40°C

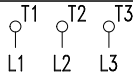
INS cl. F DT80K

NEMA NOM EFF 95.4%

DUTY CONT.

DES B Code G

GUARANT. EFF 94.5%



575V



→ NU-316-C3 (34g) 80RU03X30

→ 6314-C3 (27g) 70BC03X30



MOBIL POLYREX EM (7000h)

