

DATA SHEET



Three Phase Induction Motor - Squirrel Cage

Customer :																			
Product line	: NEMA Premium Efficiency Three-Phase																		
Product code :	14409582																		
Catalog # :	02012XT3H286T																		
Frame : 286T Output : 20 HP (15 kW) Poles : 6 Frequency : 60 Hz Rated voltage : 575 V Rated current : 19.4 A L. R. Amperes : 139 A LRC : 7.2x(Code H) No load current : 7.20 A Rated speed : 1175 rpm Slip : 2.08 % Rated torque : 89.4 ft.lb Locked rotor torque : 250 % Breakdown torque : 260 % Insulation class : F Service factor : 1.15 Moment of inertia (J) : 8.02 sq.ft.lb Design : B	Locked rotor time : 39s (cold) 22s (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 : 59.0 dB(A) Starting method : Direct On Line Approx. weight ³ : 494 lb																		
Output	25% 50% 75% 100%																		
Efficiency (%)	91.5 91.7 91.7 91.7																		
Power Factor	0.45 0.70 0.80 0.85																		
Foundation loads																			
Max. traction	: 766 lb																		
Max. compression	: 1261 lb																		
	<table style="width:100%; border: none;"> <tr> <td style="width: 50%;"></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;">6311 C3</td> <td style="text-align: center;">6211 C3</td> </tr> <tr> <td>Sealing :</td> <td style="text-align: center;">Oil Seal</td> <td style="text-align: center;">Lip Seal</td> </tr> <tr> <td>Lubrication interval :</td> <td style="text-align: center;">20000 h</td> <td style="text-align: center;">20000 h</td> </tr> <tr> <td>Lubricant amount :</td> <td style="text-align: center;">18 g</td> <td style="text-align: center;">11 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 :	6311 C3	6211 C3	Sealing :	Oil Seal	Lip Seal	Lubrication interval :	20000 h	20000 h	Lubricant amount :	18 g	11 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															
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Thermal protection

ID	Application	Type	Quantity	Sensing Temperature
1	Winding	Thermostat - 2 wires	1 x Phase	155 °C

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TORQUE AND CURRENT VS SPEED CURVE



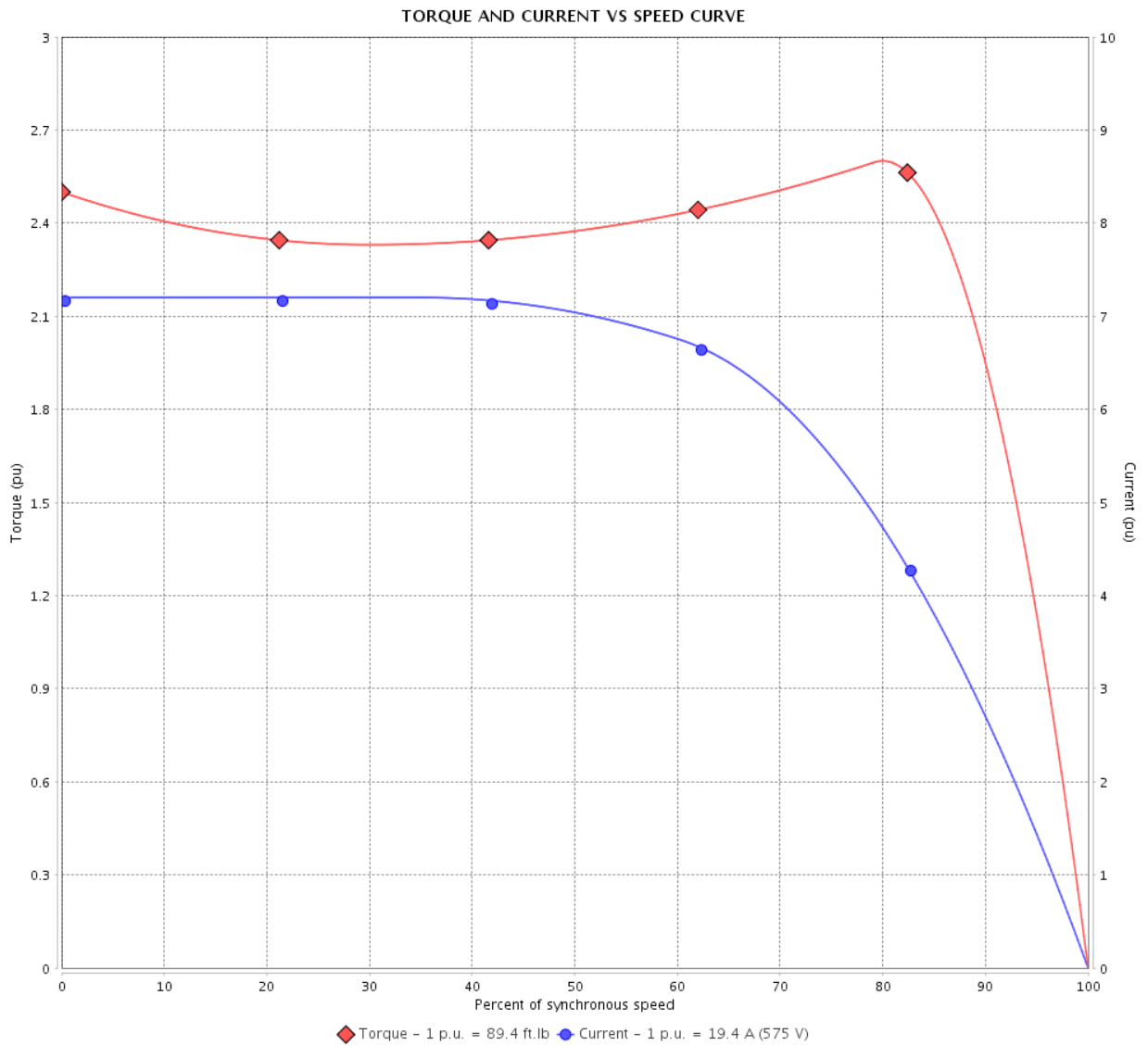
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Performance : 575 V 60 Hz 6P

Rated current	: 19.4 A	Moment of inertia (J)	: 8.02 sq.ft.lb
LRC	: 7.2	Duty cycle	: Cont.(S1)
Rated torque	: 89.4 ft.lb	Insulation class	: F
Locked rotor torque	: 250 %	Service factor	: 1.15
Breakdown torque	: 260 %	Temperature rise	: 80 K
Rated speed	: 1175 rpm	Design	: B

Locked rotor time : 39s (cold) 22s (hot)

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LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage



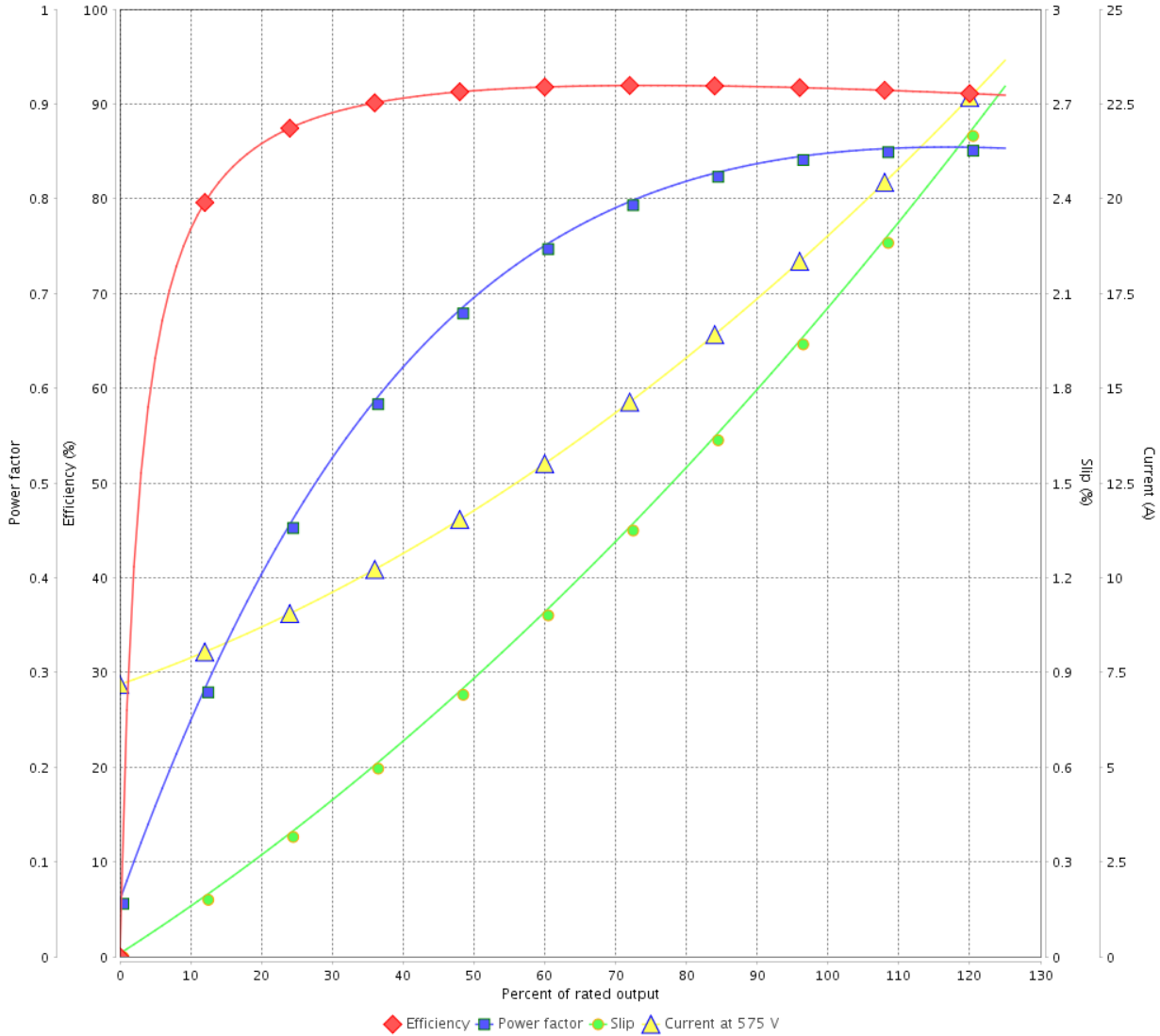
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THERMAL LIMIT CURVE



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Heating constant

Cooling constant

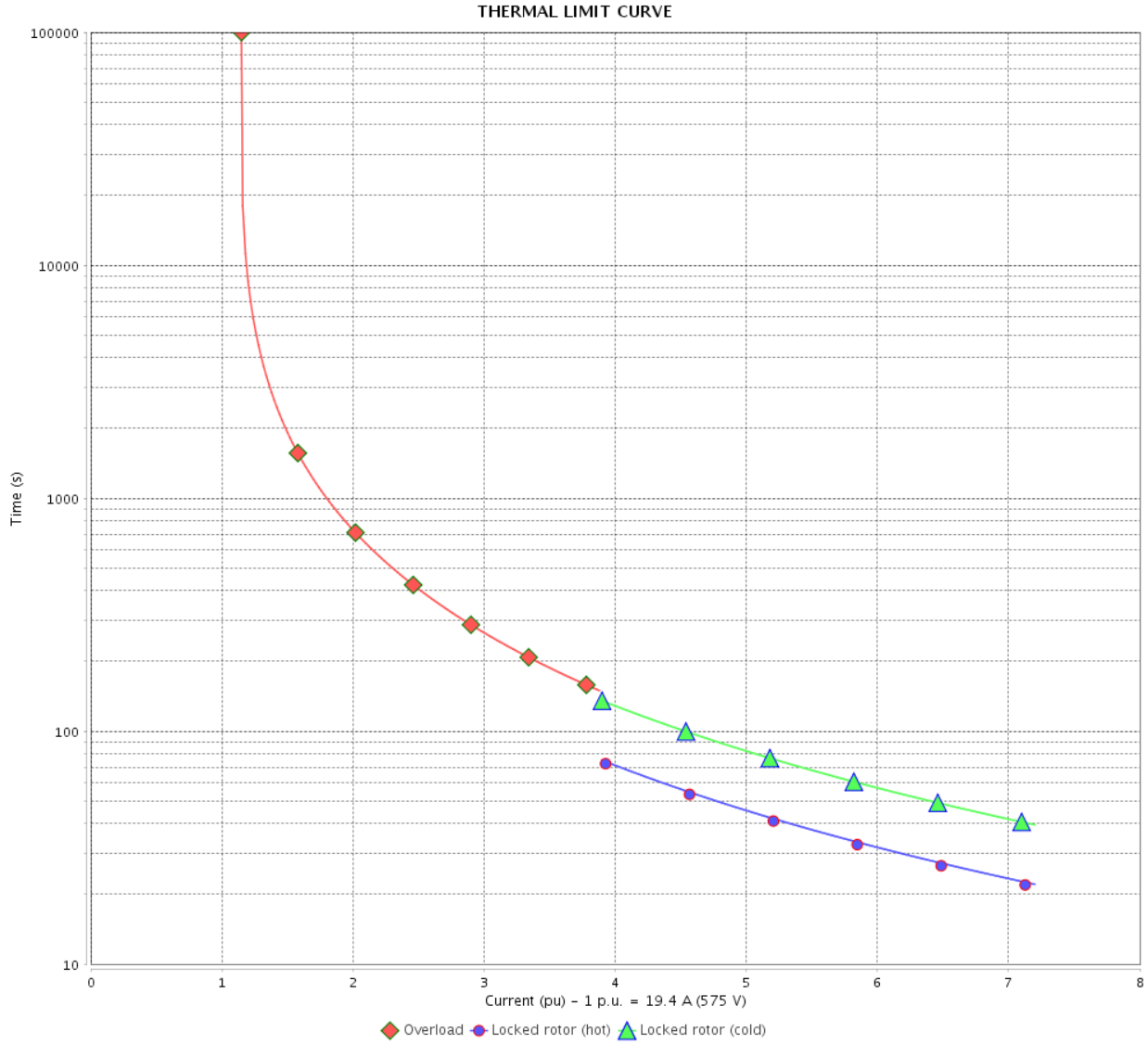
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THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

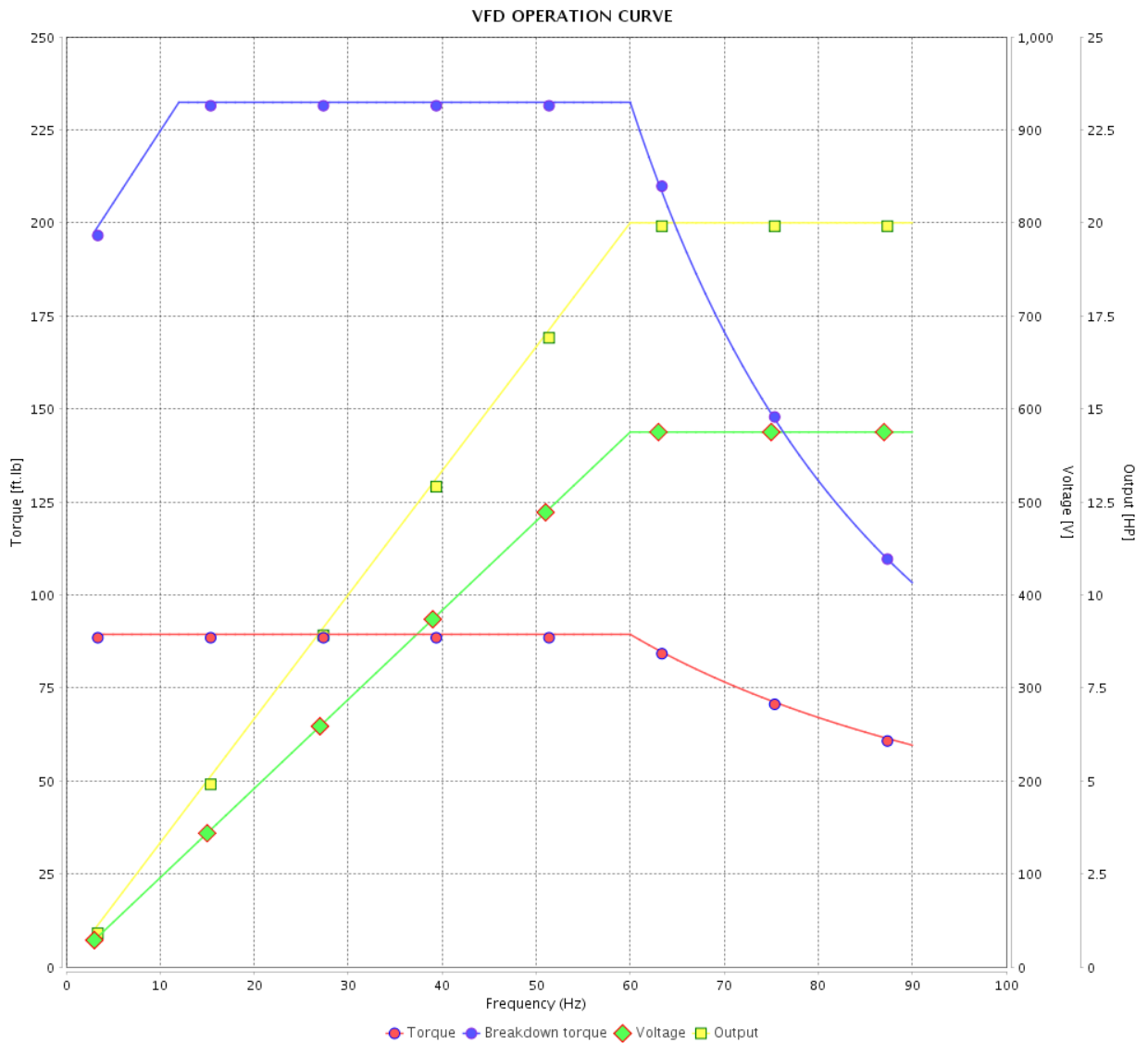


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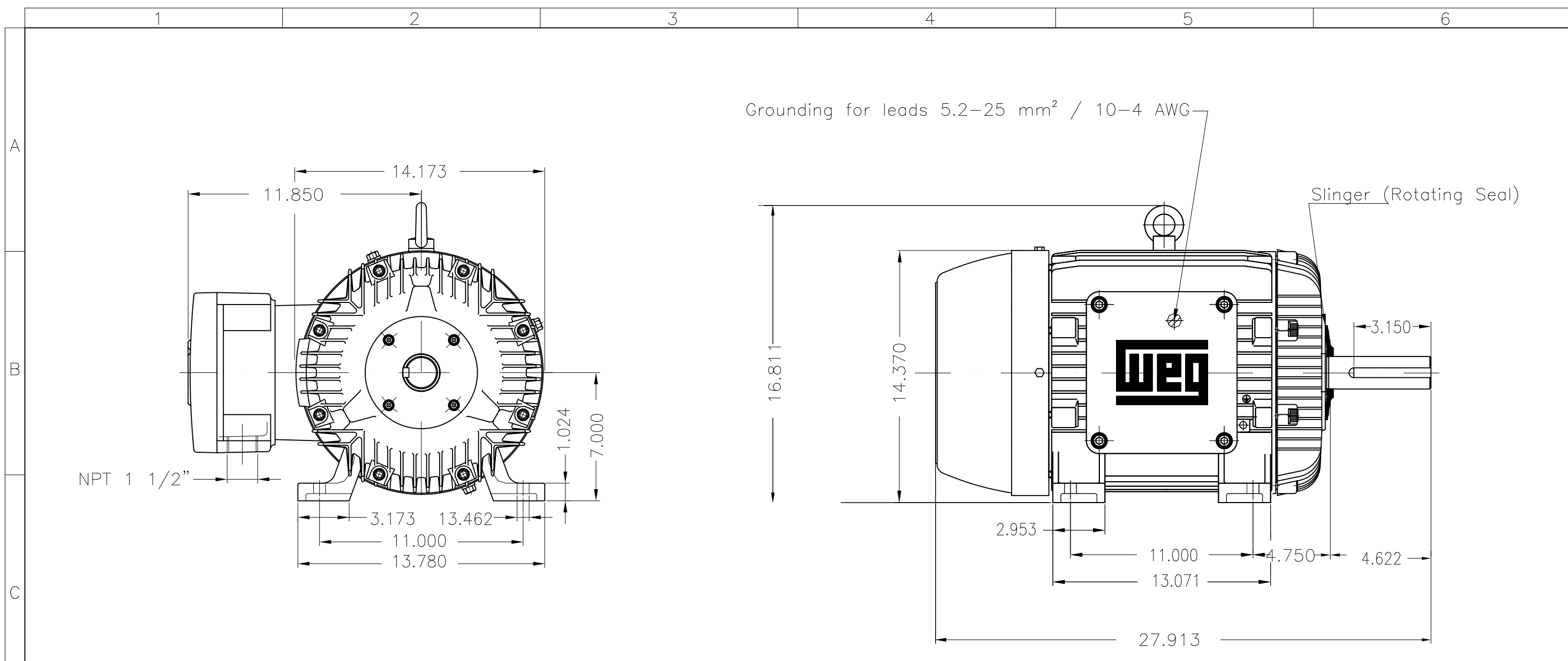


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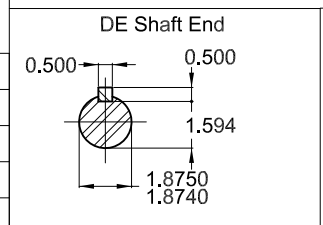
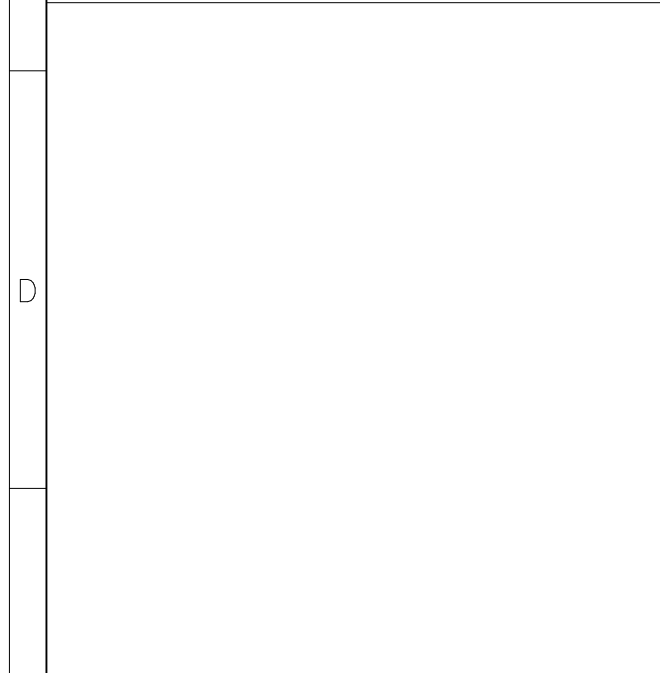
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Grounding for leads 5.2–25 mm² / 10–4 AWG

Slinger (Rotating Seal)



20 HP 06 Poles 60 Hz A

ECM	LOC	SUMMARY OF MODIFICATIONS	EXECUTED	CHECKED	RELEASED	DATE	VER
EXECUTED	PIRWBUSER	THREE PH. MOTOR EXPLOSION PROOF PREM. EFF.					
CHECKED		FRAME 286T IP55 TEFC					
RELEASED							
REL DT.	WMO	Jaragua do Sul	Product Engineering	SHEET	1 / 1		

- With grease fitting
- Color RAL 5009
- Painting plan 202P
- Mounting NEMA F-1
- Mounting B3R(D)

PREVIEW
WDD



MADE IN BRAZIL

**W21X NEMA**
Premium

14409582



LISTED

CC029A

Inverter Duty Motor
Severe Duty

HX020506NPW21X

PH 3 | FR 286T

HP(kW) 20(15)

HZ 60

IP55

V 575

A 19.4

RPM 1175

NEMA NOM EFF 91.7%

PF 0.85

SFA 22.3

DES B

INS CL F Δ T 80 K | SF 1.15

ENCL TEFC

DUTY CONT.

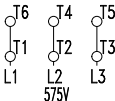
CODE H

ALT 1000

m.a.s.l.

AMB 40°C

AMB 55°C SF1.0



→ 6311-C3 MOBIL POLYREX EM

→ 6211-C3 18 g 20000 h

494 Lbs



TEMP CODE T3C

CSA/UL: Class I - Div. 1 - Groups C and D

CSA: Class II - Div. 1 - Groups F and G

CSA: Class I - Zone 1 - IIB

EXPLOSION PROOF MOTOR

FOR USE ON VPWM VFD 1000:1VT, 6:1CT, 1.0SF, T3C, AMB 40°C.