

# DATA SHEET



## Three Phase Induction Motor - Squirrel Cage

Customer :																			
Product line	: NEMA Premium Efficiency Three-Phase																		
Product code :	14407169																		
Catalog # :	02518XT3H284T																		
Frame : 284T Output : 25 HP (18.5 kW) Poles : 4 Frequency : 60 Hz Rated voltage : 575 V Rated current : 23.9 A L. R. Amperes : 196 A LRC : 8.2x(Code G) No load current : 10.0 A Rated speed : 1770 rpm Slip : 1.67 % Rated torque : 74.2 ft.lb Locked rotor torque : 320 % Breakdown torque : 320 % Insulation class : F Service factor : 1.15 Moment of inertia (J) : 4.54 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> : 68.0 dB(A) Starting method : Direct On Line Approx. weight <sup>3</sup> : 474 lb																		
Output	25%    50%    75%    100%																		
Efficiency (%)	92.2    92.4    93.6    93.6																		
Power Factor	0.42    0.67    0.78    0.83																		
Foundation loads																			
Max. traction : 798 lb																			
Max. compression : 1272 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 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															
Performed by																			
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## Three Phase Induction Motor - Squirrel Cage



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

### 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



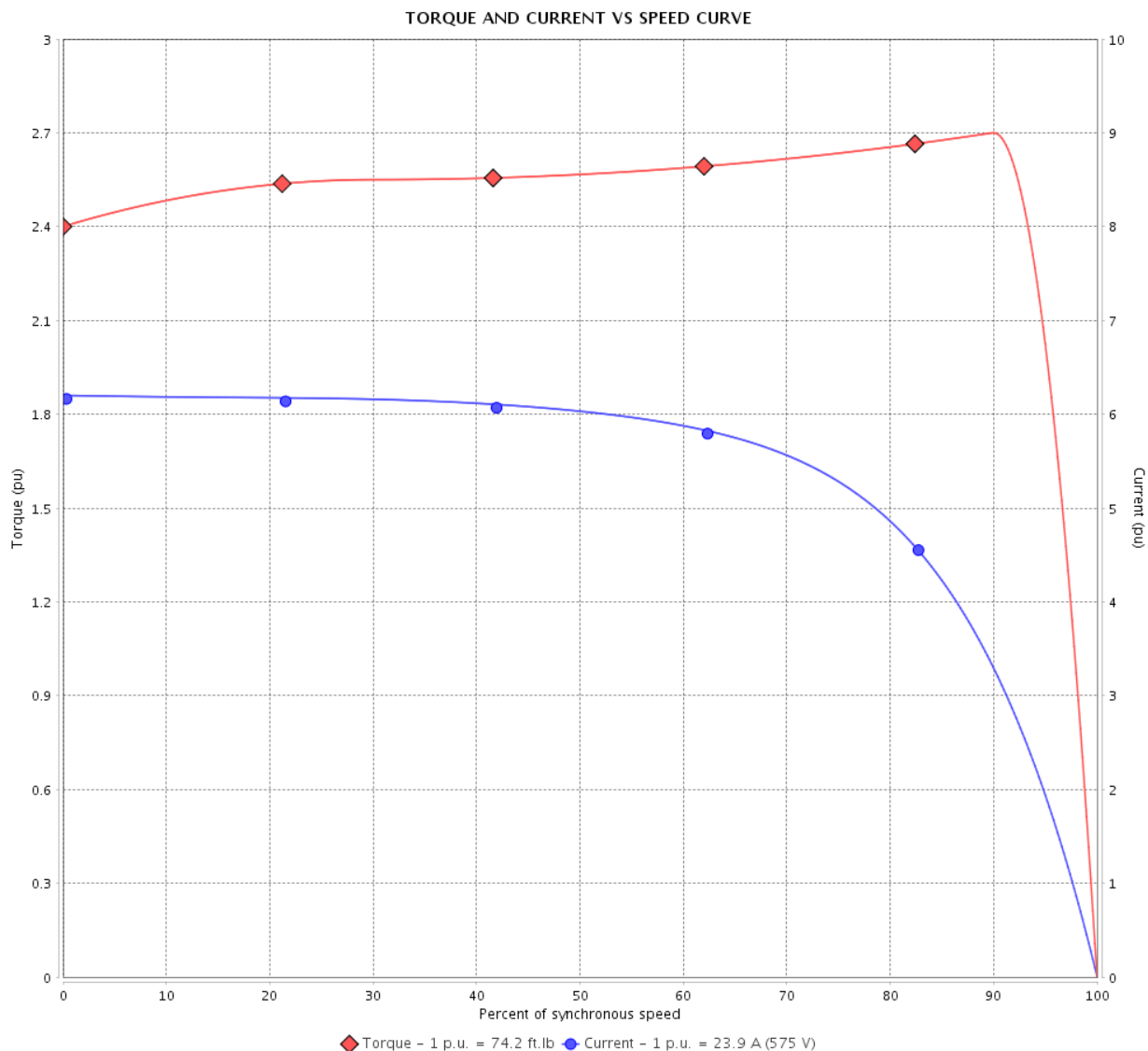
## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14407169

Catalog # : 02518XT3H284T



Performance : 575 V 60 Hz 4P

Rated current	: 23.9 A	Moment of inertia (J)	: 4.54 sq.ft.lb
LRC	: 8.2	Duty cycle	: Cont.(S1)
Rated torque	: 74.2 ft.lb	Insulation class	: F
Locked rotor torque	: 320 %	Service factor	: 1.15
Breakdown torque	: 320 %	Temperature rise	: 80 K
Rated speed	: 1770 rpm	Design	: B

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

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# LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage

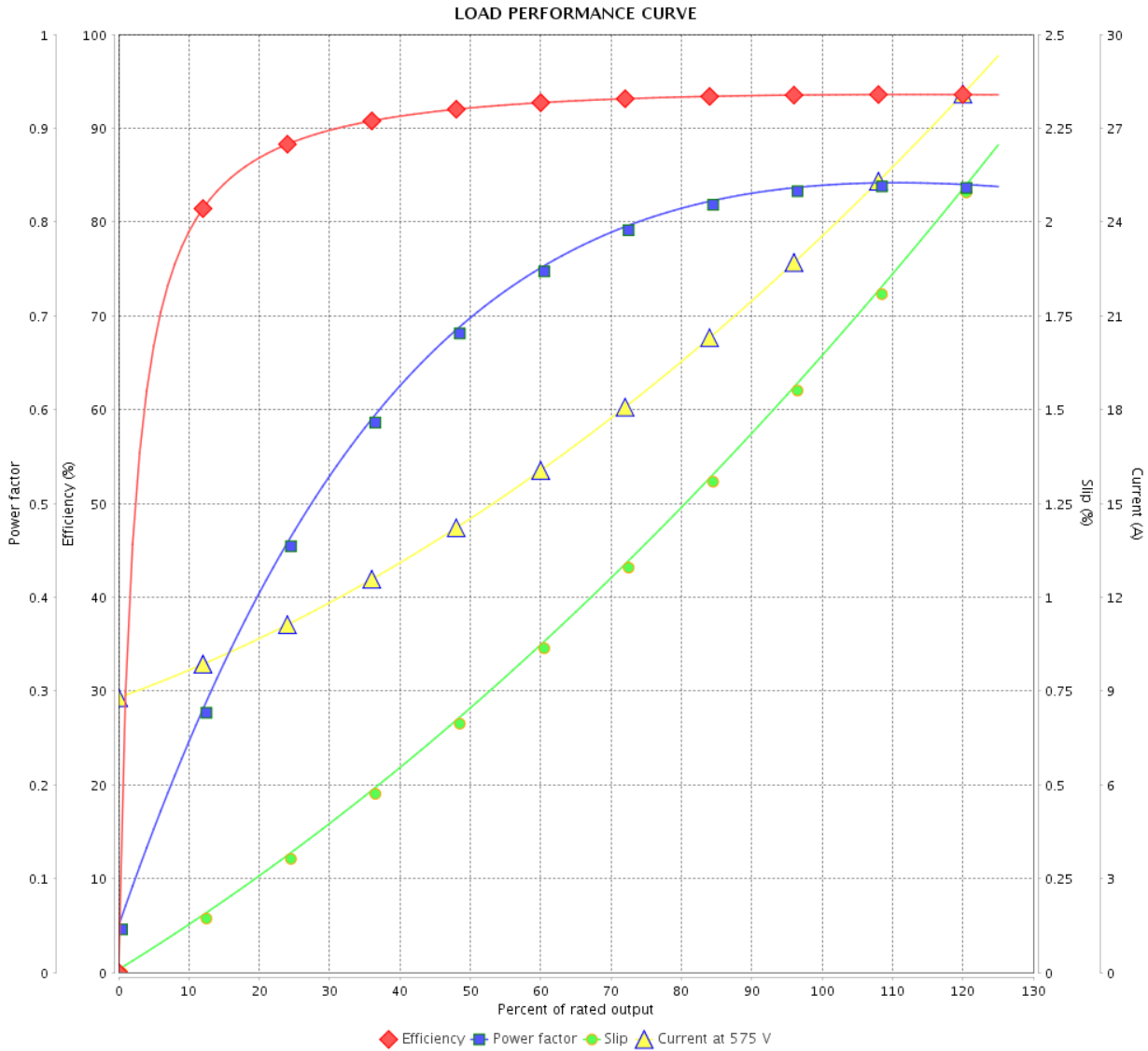


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14407169

Catalog # : 02518XT3H284T



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Rated current	: 23.9 A	Moment of inertia (J)	: 4.54 sq.ft.lb
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Locked rotor torque	: 320 %	Service factor	: 1.15
Breakdown torque	: 320 %	Temperature rise	: 80 K
Rated speed	: 1770 rpm	Design	: B

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# THERMAL LIMIT CURVE

## Three Phase Induction Motor - Squirrel Cage



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Locked rotor torque : 320 %	Service factor : 1.15
Breakdown torque : 320 %	Temperature rise : 80 K
Rated speed : 1770 rpm	Design : B

Heating constant

Cooling constant

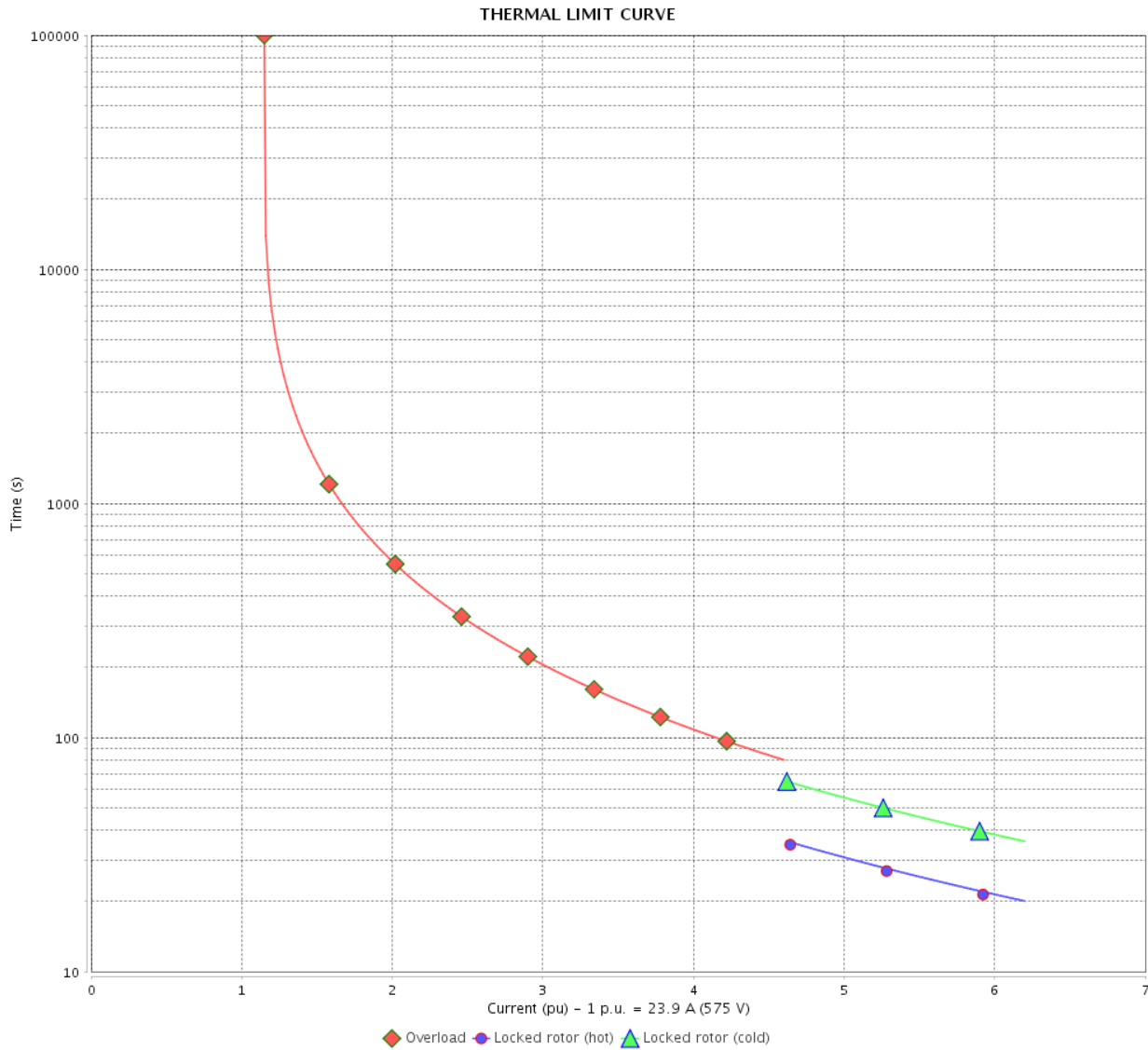
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# THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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



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Date				

# VFD OPERATION CURVE

## Three Phase Induction Motor - Squirrel Cage

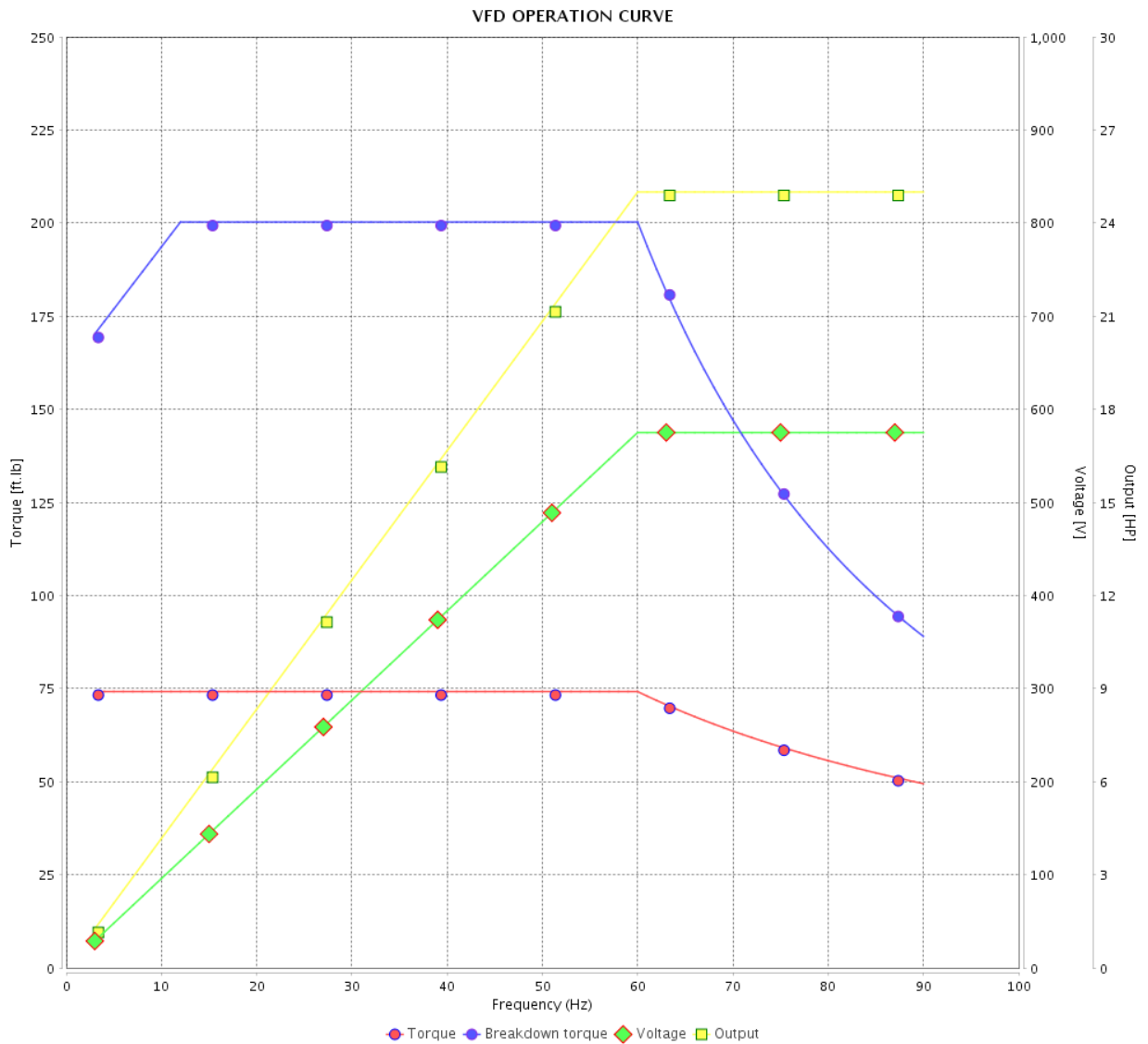


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14407169

Catalog # : 02518XT3H284T

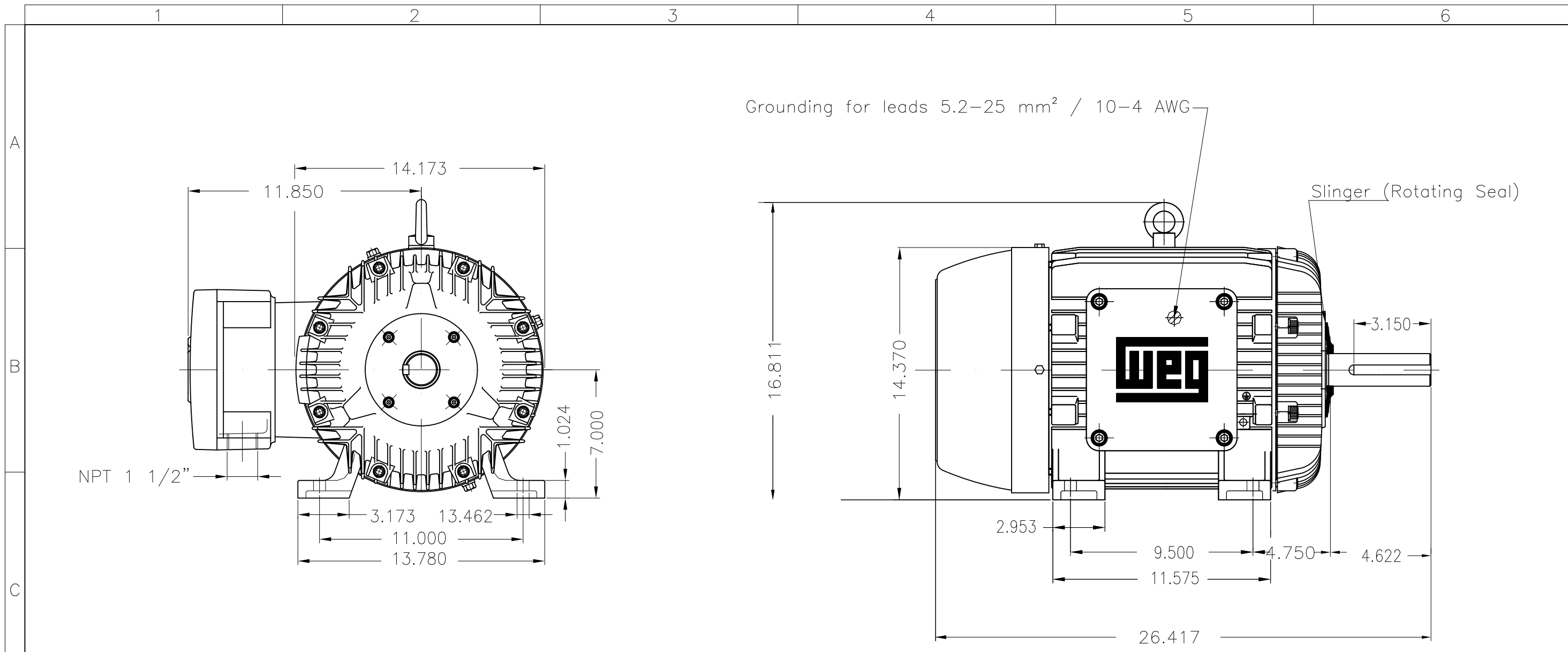


Performance : 575 V 60 Hz 4P

Rated current : 23.9 A  
 LRC : 8.2  
 Rated torque : 74.2 ft.lb  
 Locked rotor torque : 320 %  
 Breakdown torque : 320 %  
 Rated speed : 1770 rpm

Moment of inertia (J) : 4.54 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.15  
 Temperature rise : 80 K  
 Design : B

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Grounding for leads 5.2–25 mm<sup>2</sup> / 10–4 AWG

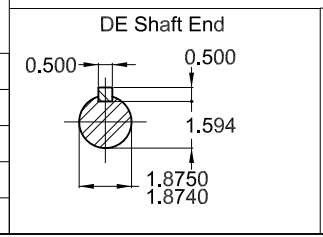
Slinger (Rotating Seal)

C

D

E

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



25 HP 04 Poles 60 Hz A

ECM	LOC	SUMMARY OF MODIFICATIONS	EXECUTED	CHECKED	RELEASED	DATE	VER
EXECUTED	PIRWBUSER	THREE PH. MOTOR EXPLOSION PROOF PREM. EFF. FRAME 284T IP55 TEFC					
CHECKED							
RELEASED							
REL DT.	WMO	Jaragua do Sul	Product Engineering	SHEET 1 / 1			

**PREVIEW**  
WDD





MADE IN BRAZIL

**W21X NEMA**  
**Premium**

14407169

CC029A

*Inverter Duty Motor*  
*Severe Duty*

LISTED

HX025504NPW21X

PH 3 | FR 284T

HP(kW) 25(18.5)

HZ 60

IP55

V 575

A 23.6

RPM 1770

NEMA NOM EFF 93.6%

PF 0.84

SFA 27.1

DES B

INS CL F  $\Delta$ T 80 K | SF 1.15

ENCL TEFC

DUTY CONT.

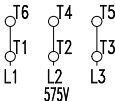
CODE G

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

443 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.