

DATA SHEET



Three Phase Induction Motor - Squirrel Cage

Customer :																			
Product line	: NEMA Premium Efficiency Three-Phase																		
Product code :	14407502																		
Catalog # :	02018XT3H256TC																		
Frame : 256TC Output : 20 HP (15 kW) Poles : 4 Frequency : 60 Hz Rated voltage : 575 V Rated current : 20.0 A L. R. Amperes : 150 A LRC : 7.5x(Code J) No load current : 9.44 A Rated speed : 1770 rpm Slip : 1.67 % Rated torque : 59.3 ft.lb Locked rotor torque : 300 % Breakdown torque : 300 % Insulation class : F Service factor : 1.15 Moment of inertia (J) : 2.89 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 ¹ : Both (CW and CCW) Noise level ² : 69.0 dB(A) Starting method : Direct On Line Approx. weight ³ : 373 lb																		
Output	25% 50% 75% 100%																		
Efficiency (%)	91.0 91.7 92.4 93.0																		
Power Factor	0.38 0.63 0.75 0.81																		
Foundation loads																			
Max. traction : 667 lb																			
Max. compression : 1040 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>6309 C3</td> <td>6209 C3</td> </tr> <tr> <td>Sealing :</td> <td>Oil Seal</td> <td>Lip Seal</td> </tr> <tr> <td>Lubrication interval :</td> <td>20000 h</td> <td>20000 h</td> </tr> <tr> <td>Lubricant amount :</td> <td>13 g</td> <td>9 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 :	6309 C3	6209 C3	Sealing :	Oil Seal	Lip Seal	Lubrication interval :	20000 h	20000 h	Lubricant amount :	13 g	9 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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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



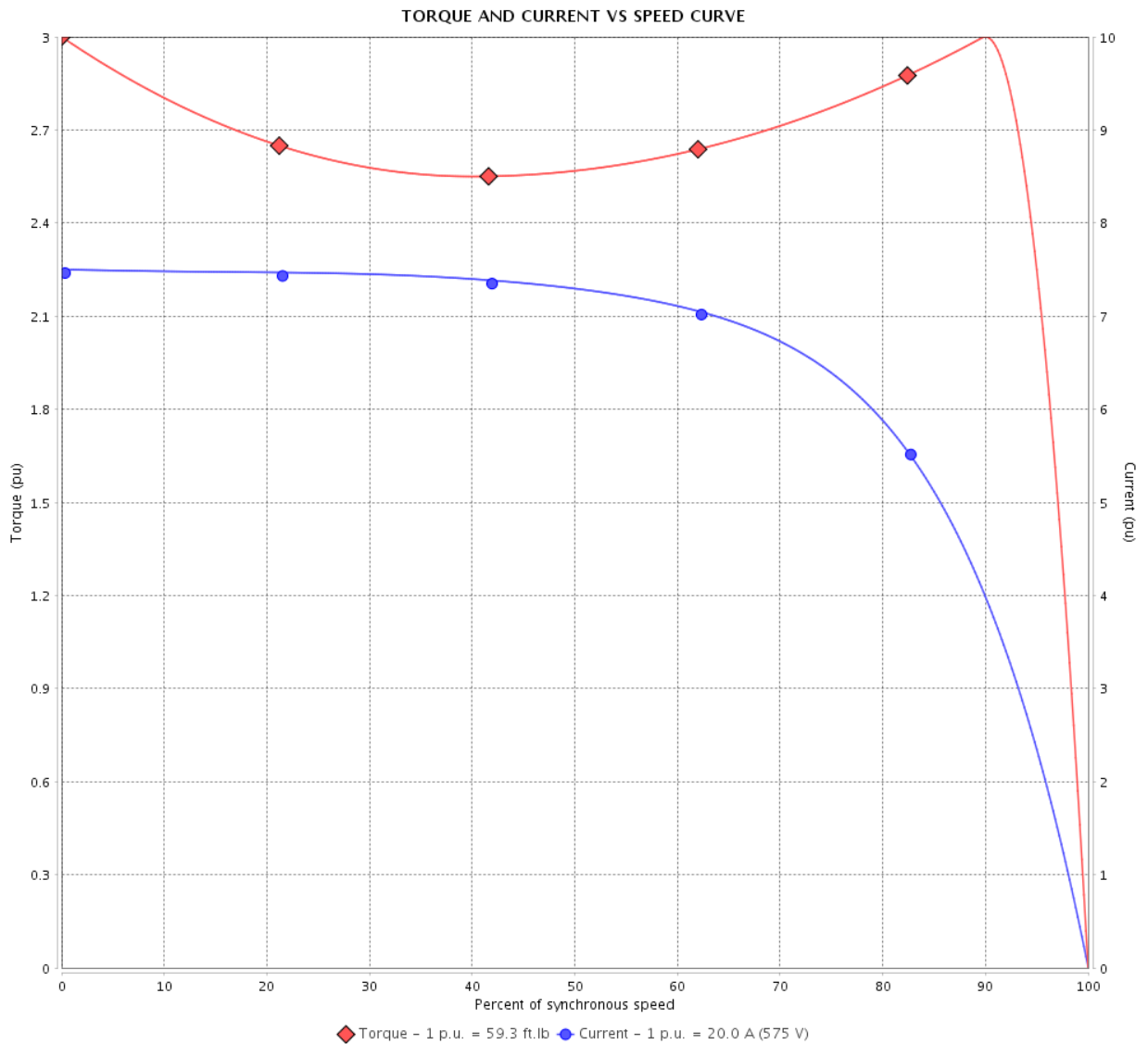
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Performance : 575 V 60 Hz 4P

Rated current	: 20.0 A	Moment of inertia (J)	: 2.89 sq.ft.lb
LRC	: 7.5	Duty cycle	: Cont.(S1)
Rated torque	: 59.3 ft.lb	Insulation class	: F
Locked rotor torque	: 300 %	Service factor	: 1.15
Breakdown torque	: 300 %	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

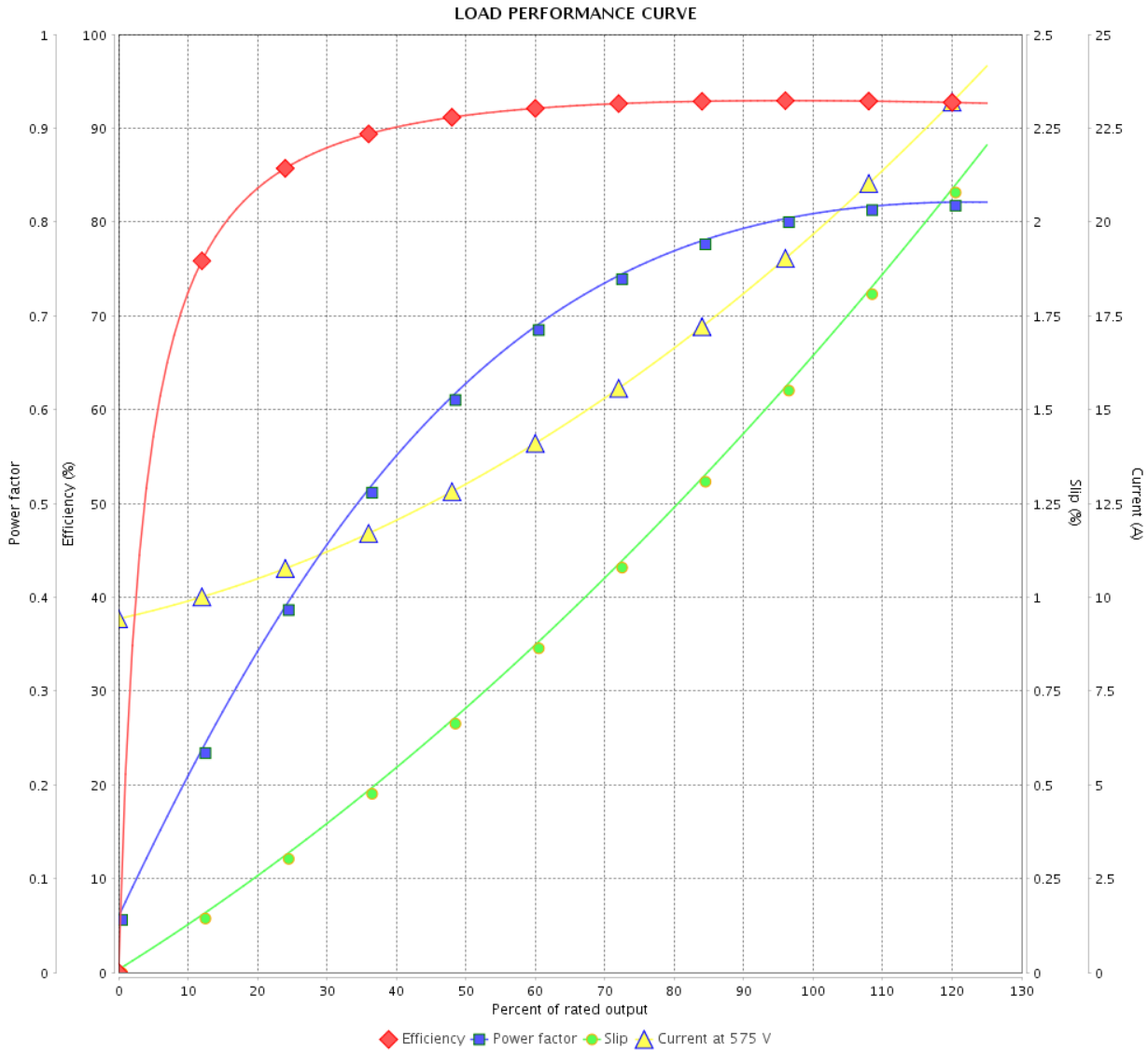


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Performance : 575 V 60 Hz 4P

Rated current : 20.0 A
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 Locked rotor torque : 300 %
 Breakdown torque : 300 %
 Rated speed : 1770 rpm

Moment of inertia (J) : 2.89 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.15
 Temperature rise : 80 K
 Design : B

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THERMAL LIMIT CURVE



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Heating constant

Cooling constant

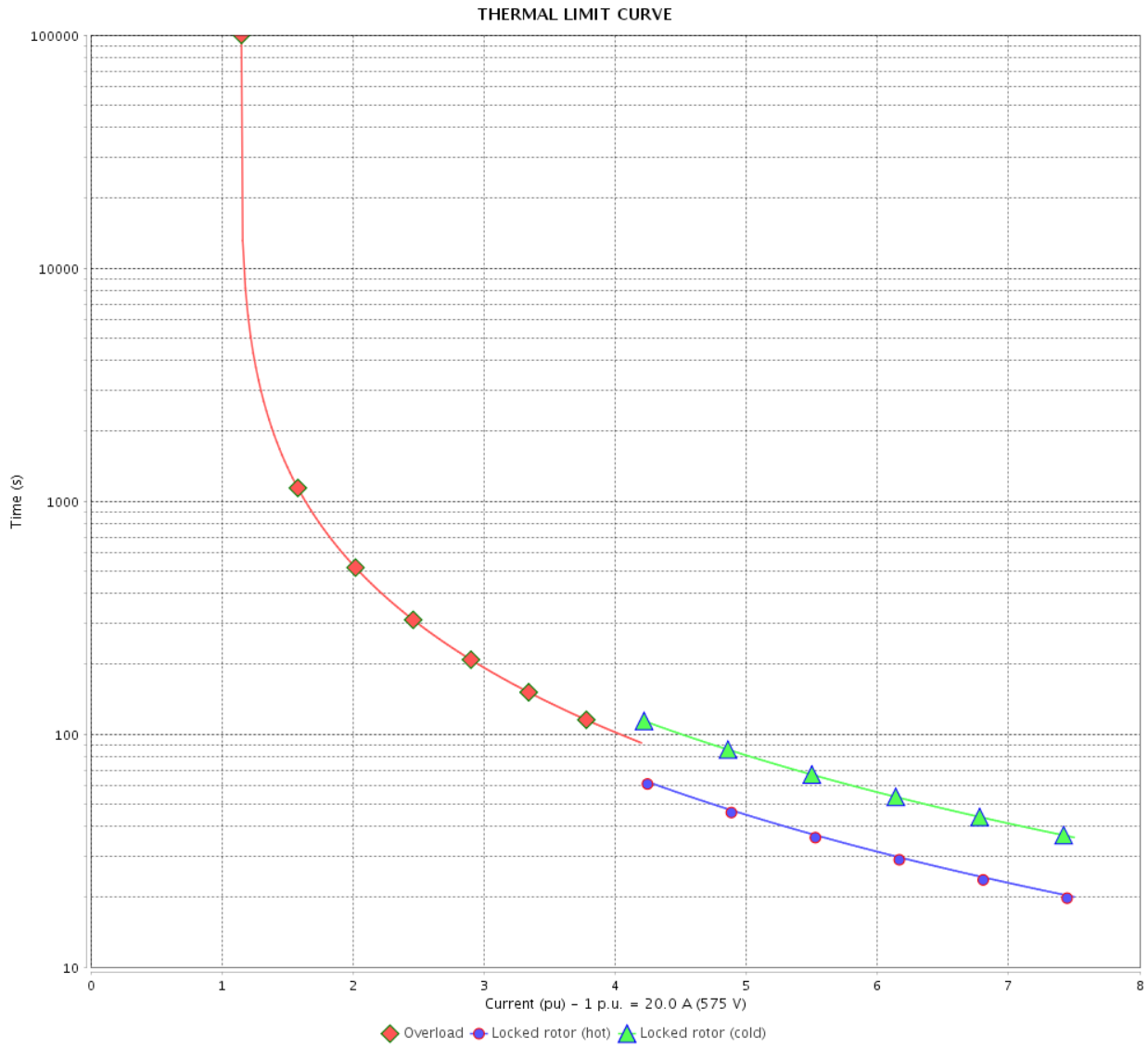
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THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer : _____



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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

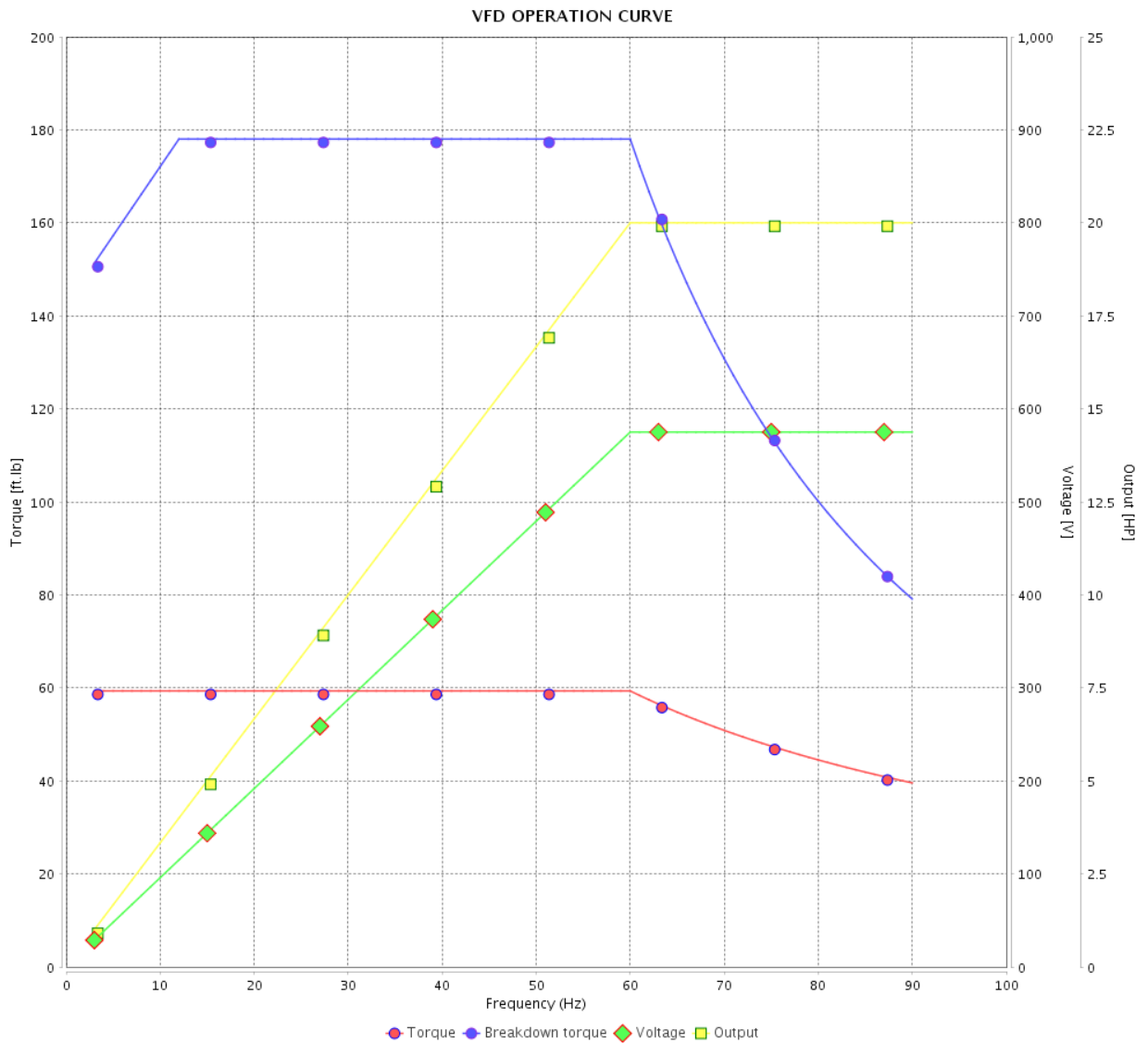


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1 2 3 4 5 6

A

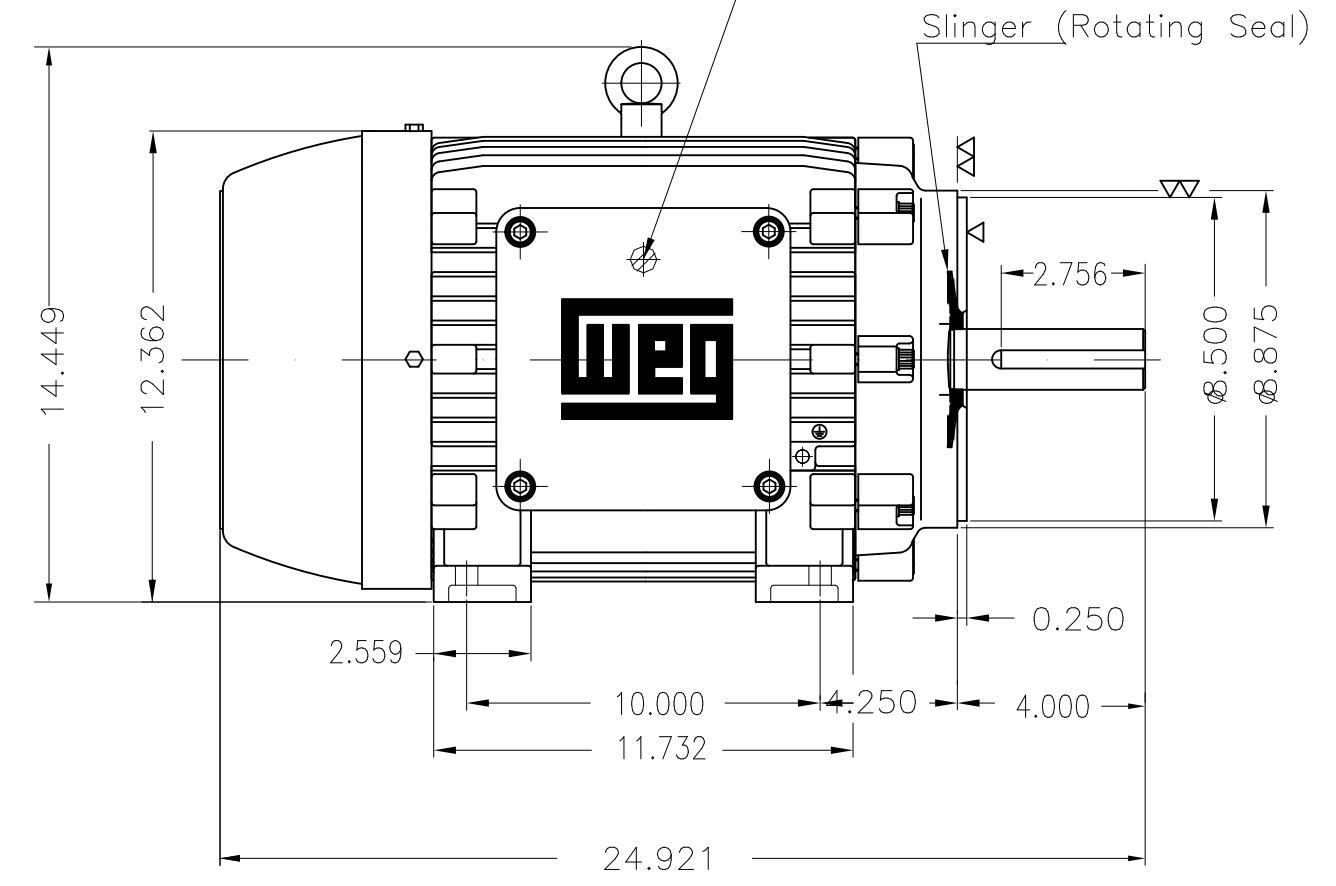
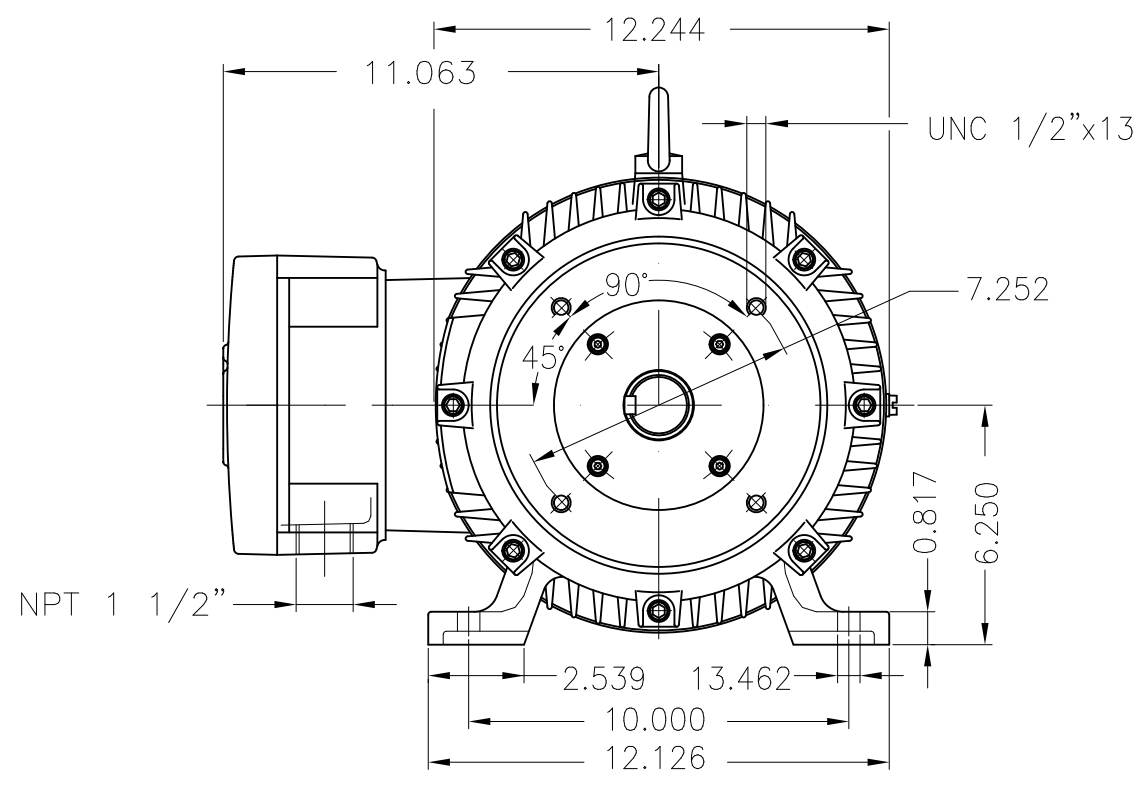
B

C

D

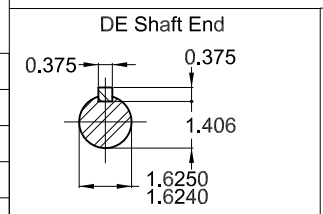
E

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



20 HP 04 Poles 60 Hz A

- With grease fitting
- Color RAL 5009
- Painting plan 202P
- Mounting NEMA F-1
- Mounting B34R(D)



ECM	LOC	SUMMARY OF MODIFICATIONS	EXECUTED	CHECKED	RELEASED	DATE	VER
EXECUTED	PIRWBUSER	THREE PH. MOTOR EXPLOSION PROOF PREM. EFF.					
CHECKED		FRAME 256TC IP55 TEFC					
RELEASED							
REL DT.	WMO	Jaragua do Sul	Product Engineering	PREVIEW	WDD		

PREVIEW
WDD

SHEET 1 / 1

MADE IN BRAZIL

**W21X NEMA**
Premium

14407502

CC029A

Inverter Duty Motor
Severe Duty

LISTED

MODEL 02018XT3H256TC

PH 3 | FR 256TC

HP(kW) 20(15)

HZ 60

IP55

V 575

A 20.0

RPM 1770

NEMA NOM EFF 93.0%

PF 0.81

SFA 23.0

DES B

INS CL F Δ T 80 K | SF 1.15

ENCL TEFC

DUTY CONT.

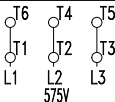
CODE J

ALT 1000

m.a.s.l.

AMB 40°C

AMB 55°C SF1.0



→ 6309-C3 MOBIL POLYREX EM

→ 6209-C3 13 g 20000 h

375 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.