

DATA SHEET



Three Phase Induction Motor - Squirrel Cage

Customer :						
Product line		: NEMA Premium Efficiency Three-Phase		Product code :	14406979	
				Catalog # :	02018XT3H256T	
Frame	: 256T		Locked rotor time	: 36s (cold) 20s (hot)		
Output	: 20 HP (15 kW)		Temperature rise	: 80 K		
Poles	: 4		Duty cycle	: Cont.(S1)		
Frequency	: 60 Hz		Ambient temperature	: -20°C to +40°C		
Rated voltage	: 575 V		Altitude	: 1000 m.a.s.l.		
Rated current	: 20.0 A		Protection degree	: IP55		
L. R. Amperes	: 150 A		Cooling method	: IC411 - TEFC		
LRC	: 7.5x(Code J)		Mounting	: F-1		
No load current	: 9.44 A		Rotation ¹	: Both (CW and CCW)		
Rated speed	: 1770 rpm		Noise level ²	: 69.0 dB(A)		
Slip	: 1.67 %		Starting method	: Direct On Line		
Rated torque	: 59.3 ft.lb		Approx. weight ³	: 370 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					
Output	25%	50%	75%	100%	Foundation loads	
Efficiency (%)	91.0	91.7	92.4	93.0	Max. traction : 669 lb	
Power Factor	0.38	0.63	0.75	0.81	Max. compression : 1039 lb	
		<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					
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	14/04/2022				1 / 7	

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Thermal protection

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

Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by			Page	Revision
Date	14/04/2022		2 / 7	

TORQUE AND CURRENT VS SPEED CURVE



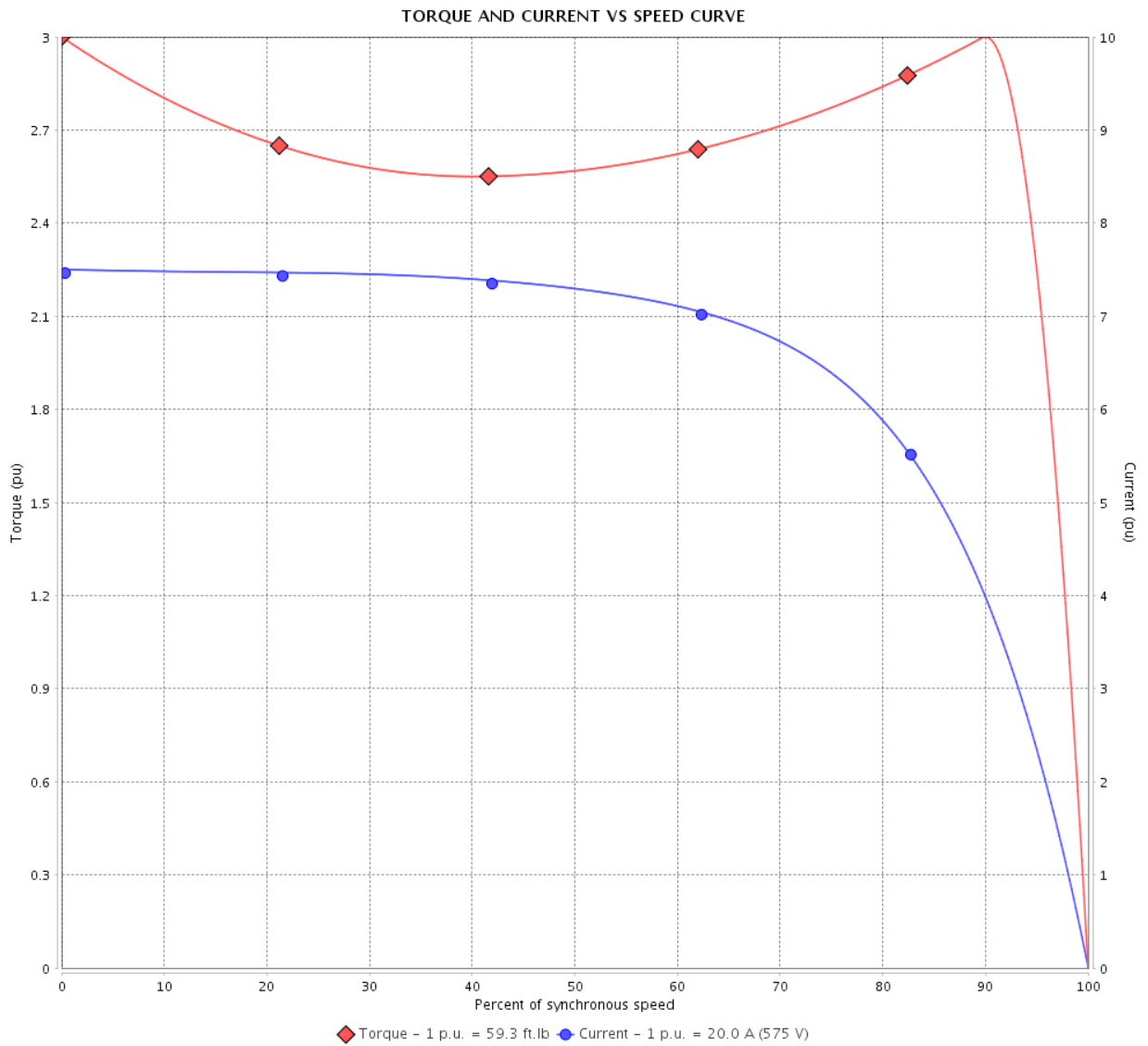
Three Phase Induction Motor - Squirrel Cage

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Product code : 14406979

Catalog # : 02018XT3H256T



Performance : 575 V 60 Hz 4P

Rated current : 20.0 A
 LRC : 7.5
 Rated torque : 59.3 ft.lb
 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

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

Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page		Revision
Checked by		3 / 7		
Date		14/04/2022		

LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage

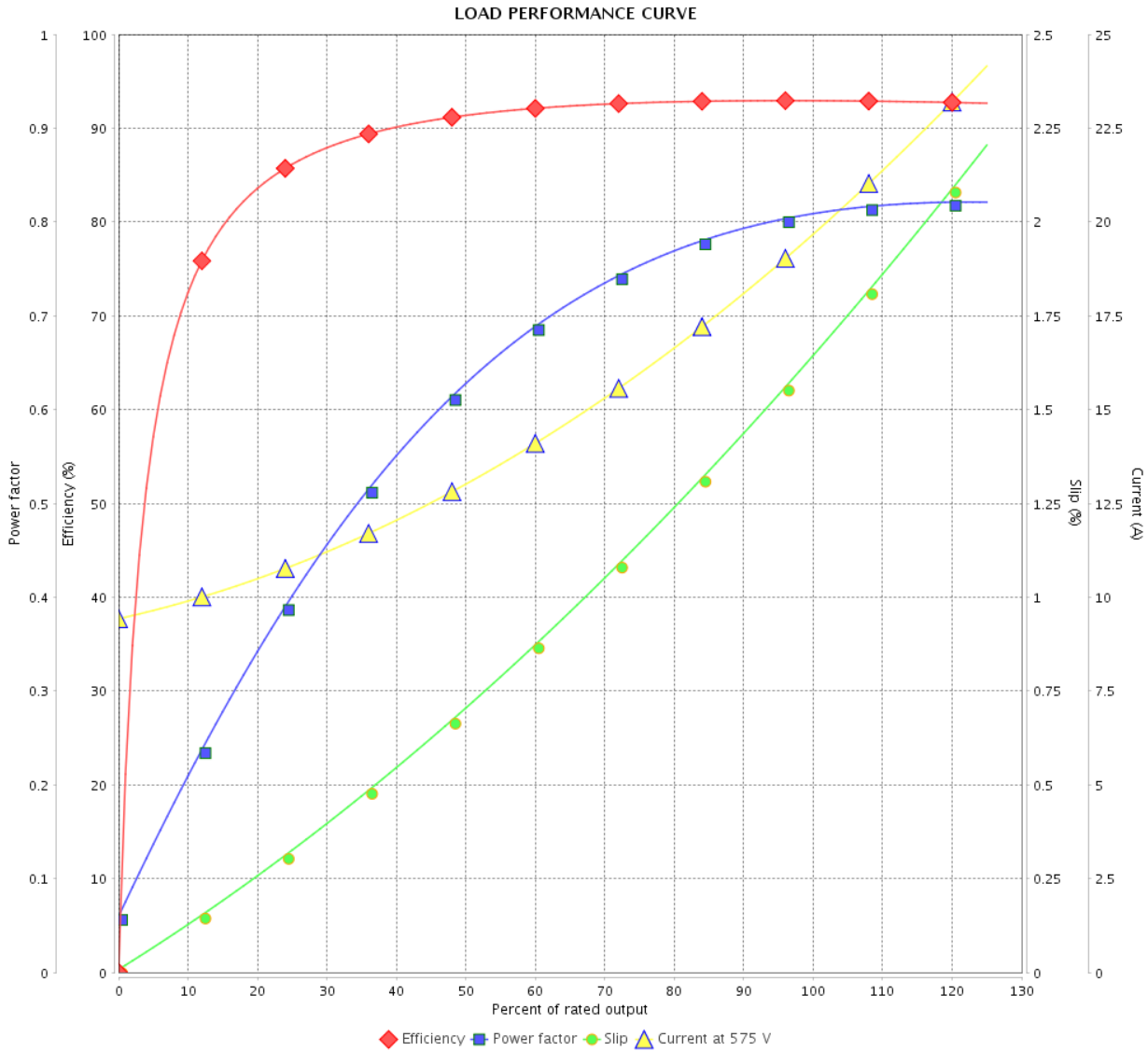


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Rated current	: 20.0 A	Moment of inertia (J)	: 2.89 sq.ft.lb
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Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 4 / 7	Revision
Checked by				
Date	14/04/2022			

THERMAL LIMIT CURVE



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Locked rotor torque : 300 %	Service factor : 1.15
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Rated speed : 1770 rpm	Design : B

Heating constant

Cooling constant

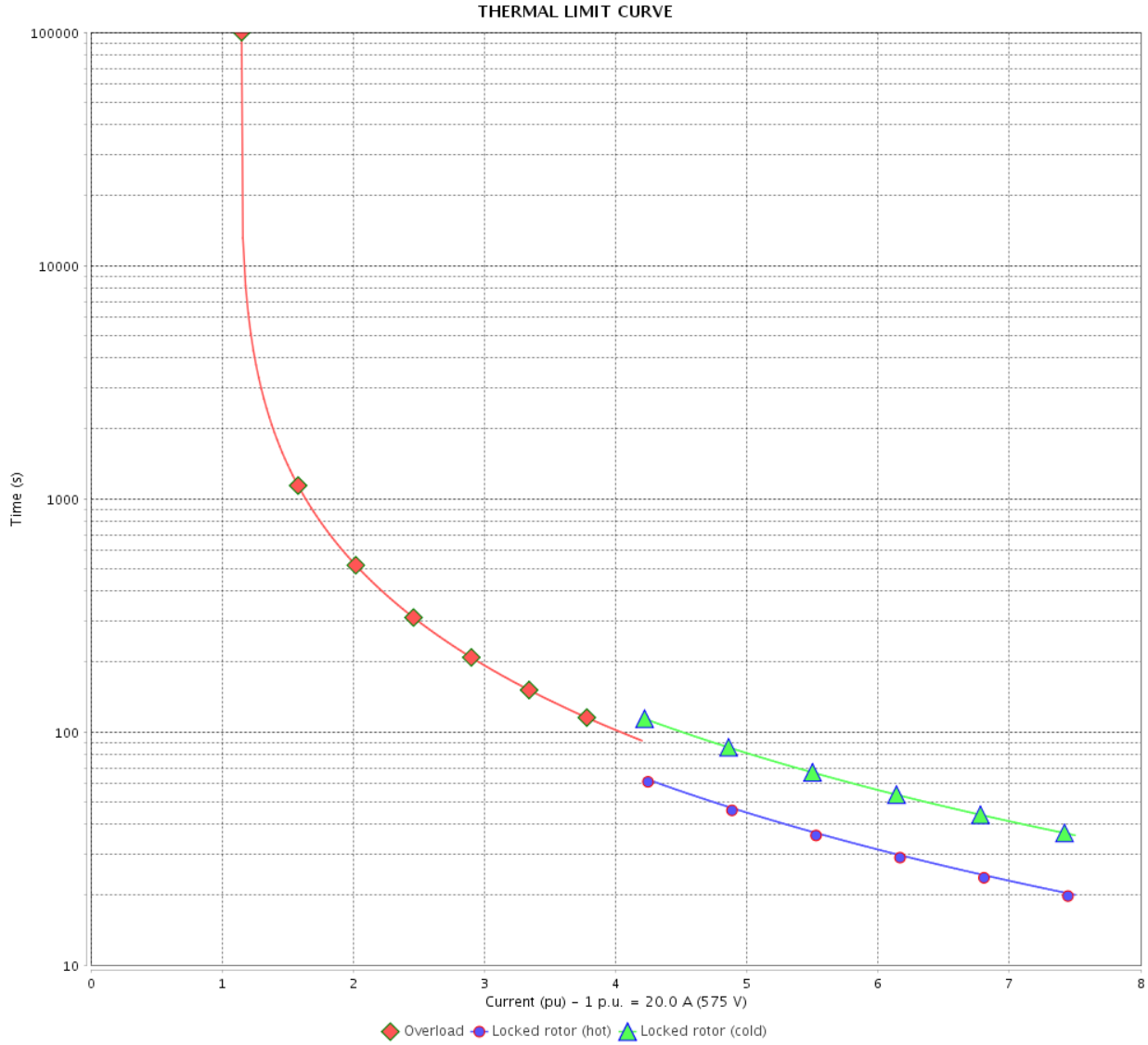
Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 5 / 7	Revision
Checked by				
Date	14/04/2022			

THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page 6 / 7		Revision
Checked by				
Date				

VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

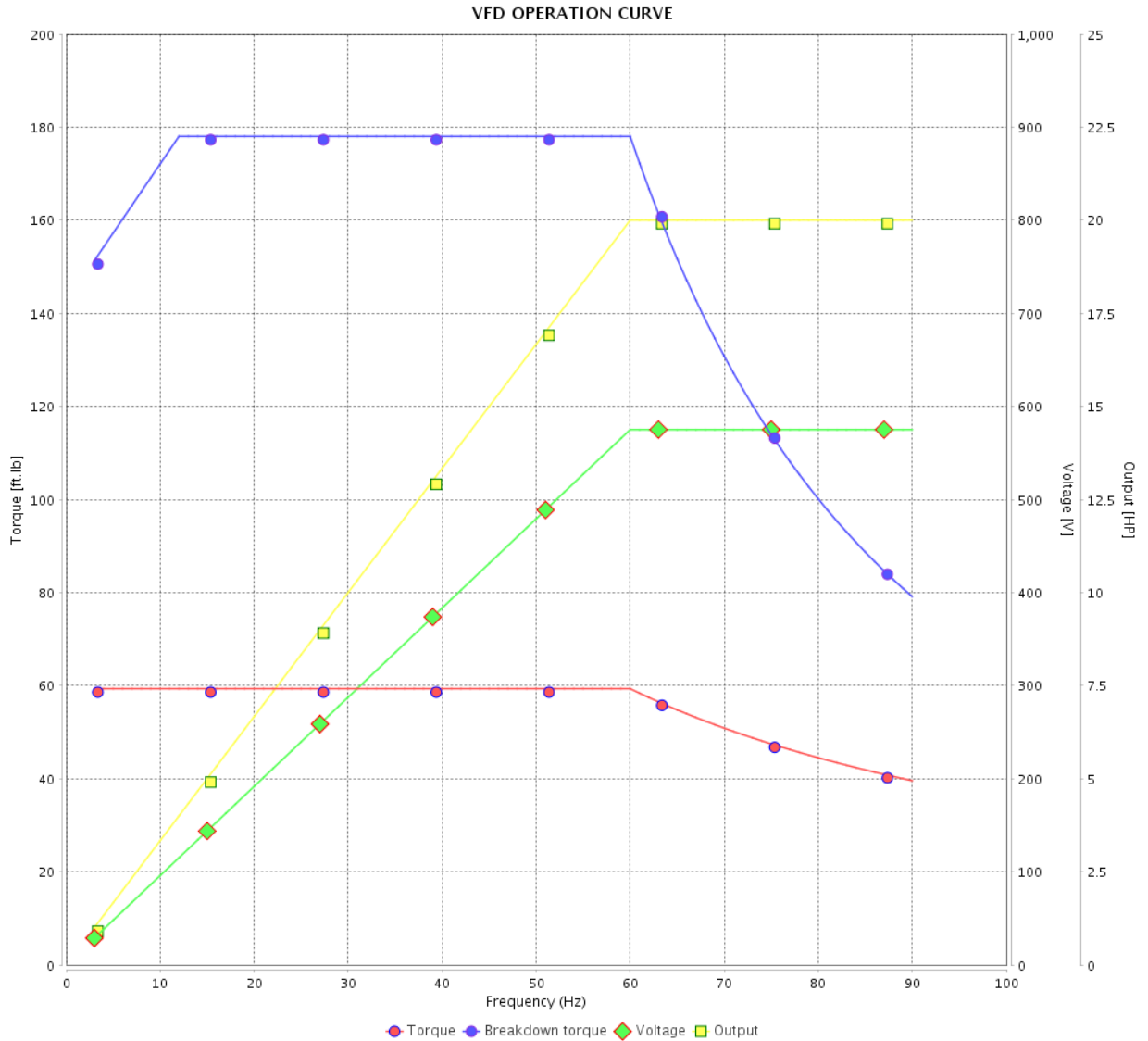


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Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page	Revision
Checked by				
Date				
			7 / 7	

1 2 3 4 5 6

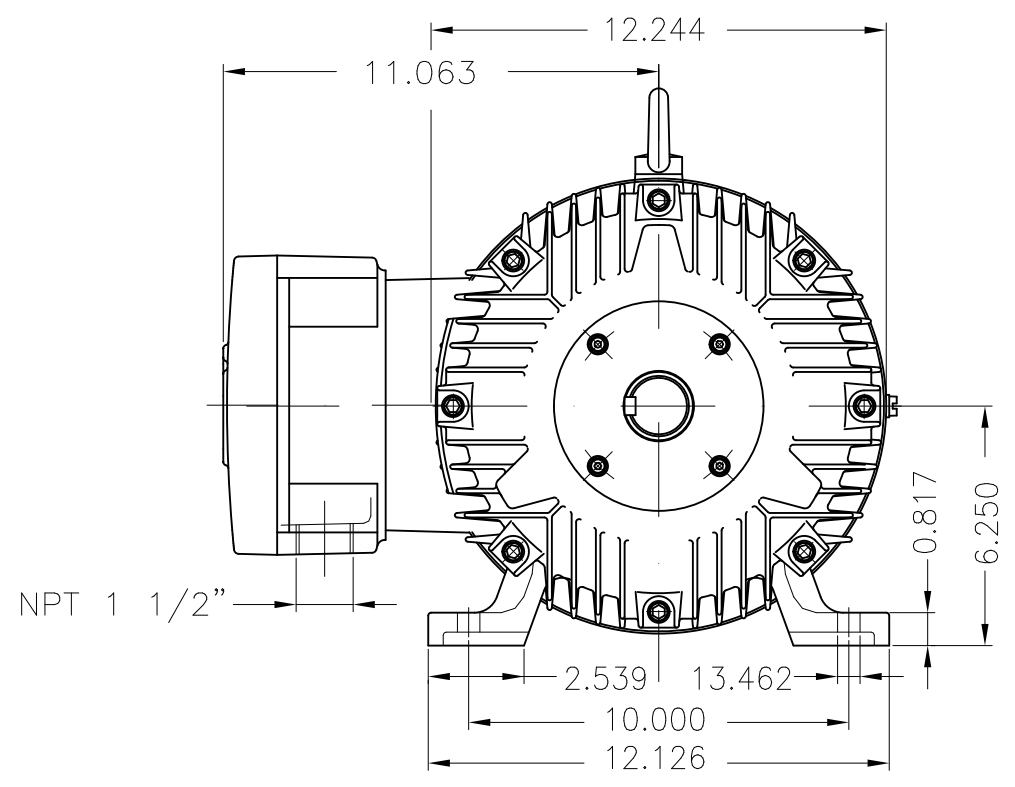
A

B

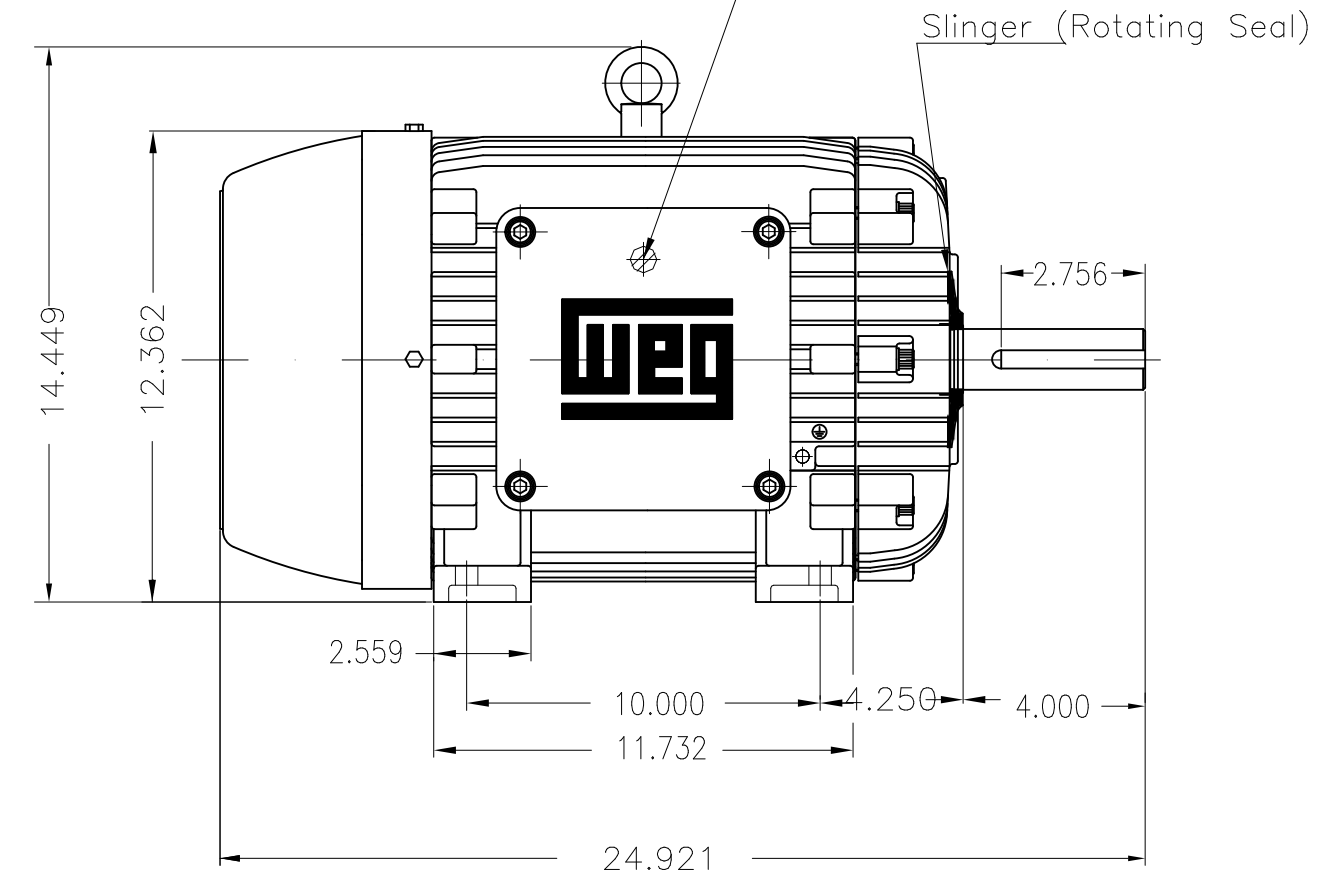
C

D

E

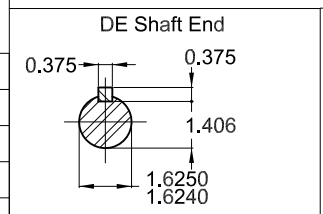


Grounding for leads 5.2–25 mm² / 10–4 AWG



20 HP 04 Poles 60 Hz A

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



ECM	LOC	SUMMARY OF MODIFICATIONS	EXECUTED	CHECKED	RELEASED	DATE	VER
EXECUTED	PIRWBUSER	THREE PH. MOTOR EXPLOSION PROOF PREM. EFF.					
CHECKED		FRAME 256T IP55 TEFC					
RELEASED							
REL DT.	WMO	Jaragua do Sul	Product Engineering	SHEET 1 / 1			

PREVIEW
WDD

MADE IN BRAZIL

**W21X NEMA**
Premium

14406979



LISTED

CC029A

Inverter Duty Motor
Severe Duty

HX020504NPW21X

PH 3 | FR 256T

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.

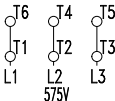
CODE J

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

373 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.