

# DATA SHEET



## Three Phase Induction Motor - Squirrel Cage

Customer :					
Product line	: JM Pump NEMA Premium Efficiency Three-Phase	Product code :	13328509		
		Catalog # :	02036ET3H256JM-S		
Frame	: 254/6JM	Locked rotor time	: 21s (cold) 12s (hot)		
Output	: 20 HP (15 kW)	Temperature rise	: 80 K		
Poles	: 2	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	: 18.2 A	Protection degree	: IP55		
L. R. Amperes	: 120 A	Cooling method	: IC411 - TEFC		
LRC	: 6.6x(Code G)	Mounting	: F-1		
No load current	: 5.50 A	Rotation <sup>1</sup>	: Both (CW and CCW)		
Rated speed	: 3515 rpm	Noise level <sup>2</sup>	: 75.0 dB(A)		
Slip	: 2.36 %	Starting method	: Direct On Line		
Rated torque	: 29.9 ft.lb	Approx. weight <sup>3</sup>	: 234 lb		
Locked rotor torque	: 200 %				
Breakdown torque	: 290 %				
Insulation class	: F				
Service factor	: 1.15				
Moment of inertia (J)	: 1.22 sq.ft.lb				
Design	: B				
Output	25%	50%	75%	100%	
Efficiency (%)	89.7	90.0	91.0	91.0	
Power Factor	0.55	0.81	0.88	0.91	
Foundation loads					
Max. traction : 298 lb					
Max. compression : 533 lb					
		<u>Drive end</u>	<u>Non drive end</u>		
Bearing type	:	6309 Z C3	6208 Z C3		
Sealing	:	V'Ring	V'Ring		
Lubrication interval	:	15797 h	20000 h		
Lubricant amount	:	13 g	8 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



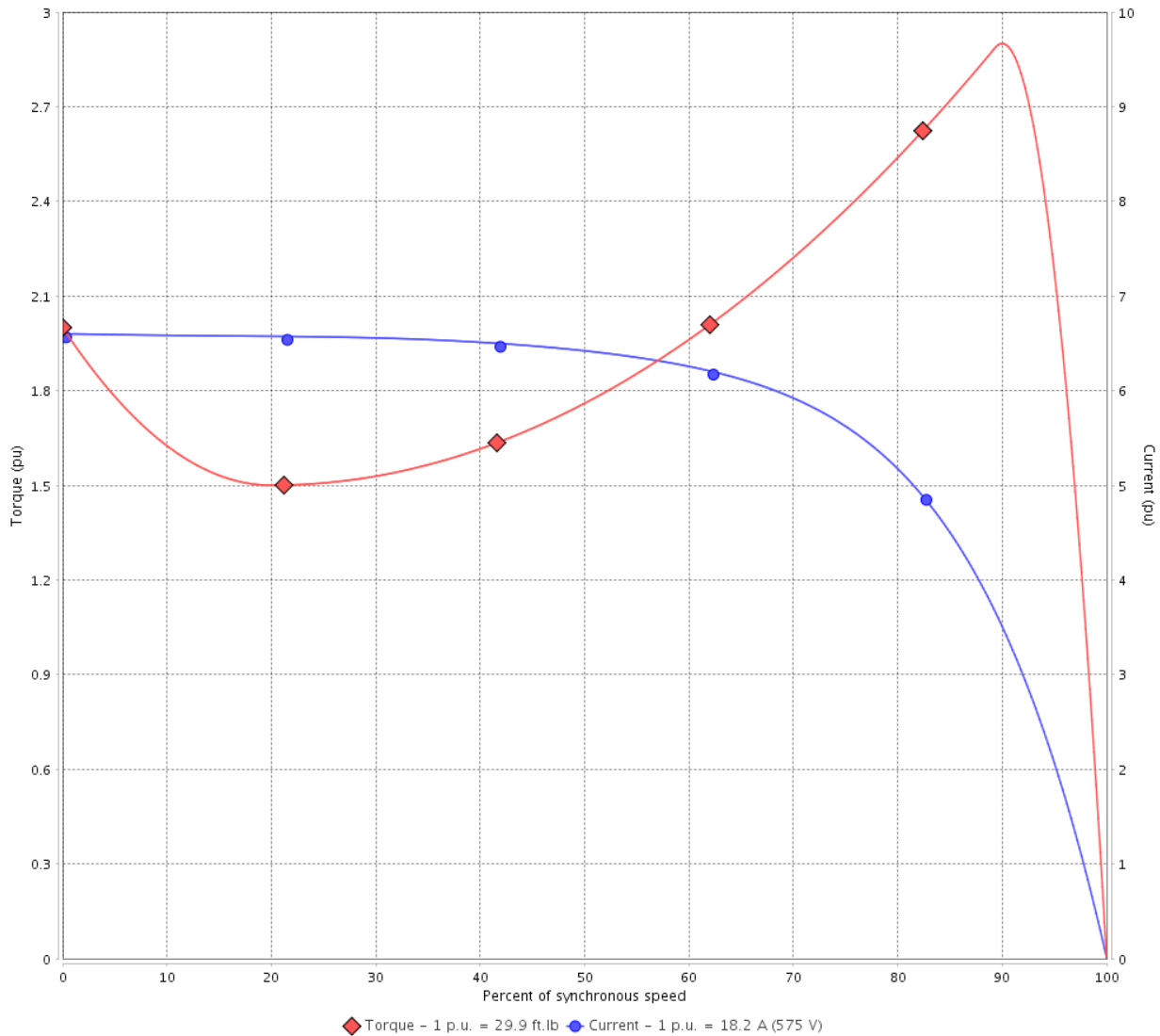
Customer :

Product line : JM Pump NEMA Premium Efficiency Three-Phase

Product code : 13328509

Catalog # : 02036ET3H256JM-S

TORQUE AND CURRENT VS SPEED CURVE



Performance : 575 V 60 Hz 2P

Rated current	: 18.2 A	Moment of inertia (J)	: 1.22 sq.ft.lb
LRC	: 6.6	Duty cycle	: Cont.(S1)
Rated torque	: 29.9 ft.lb	Insulation class	: F
Locked rotor torque	: 200 %	Service factor	: 1.15
Breakdown torque	: 290 %	Temperature rise	: 80 K
Rated speed	: 3515 rpm	Design	: B

Locked rotor time : 21s (cold) 12s (hot)

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Date	14/04/2022			

# LOAD PERFORMANCE CURVE

## Three Phase Induction Motor - Squirrel Cage

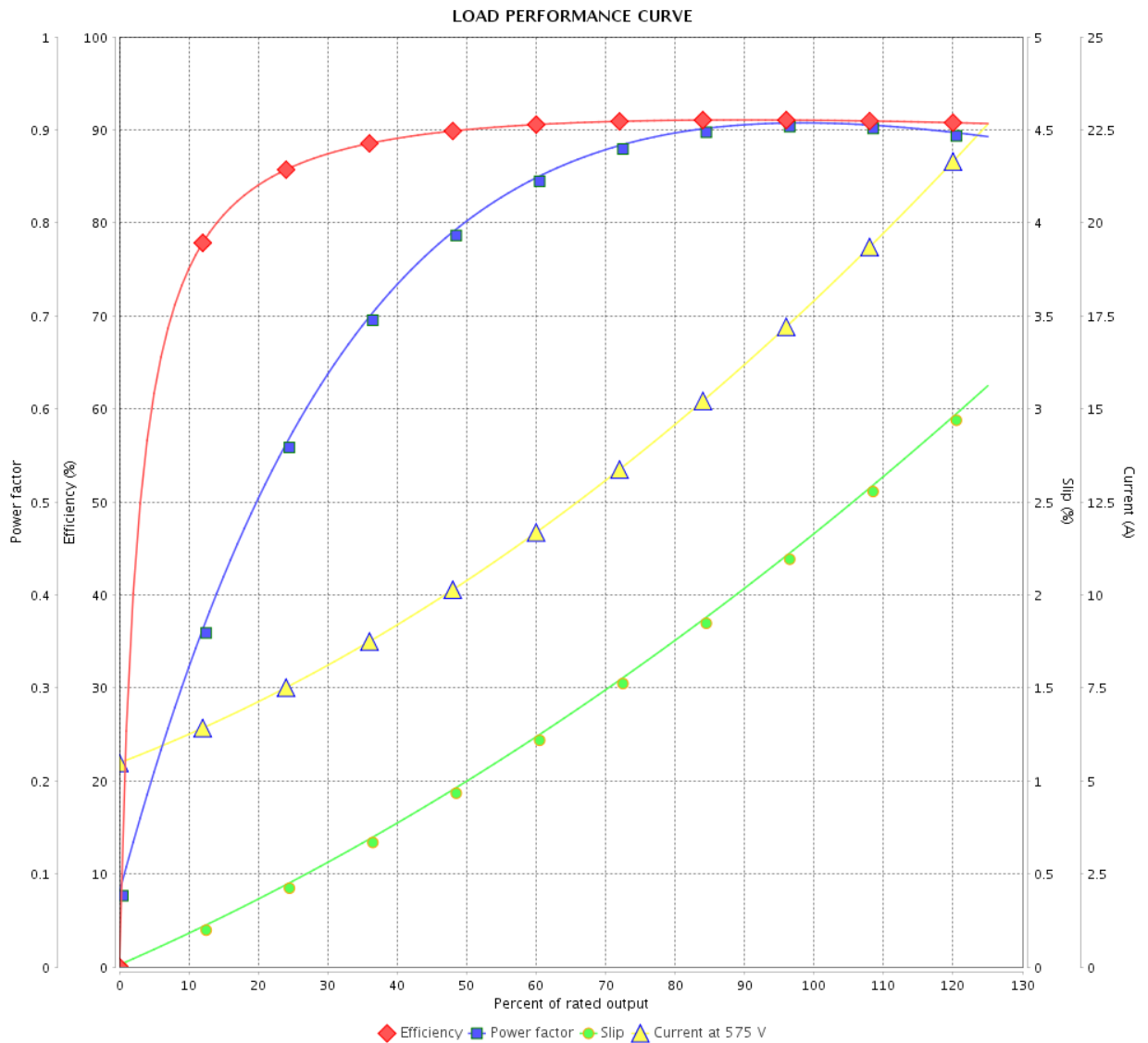


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Product line : JM Pump NEMA Premium  
Efficiency Three-Phase

Product code : 13328509

Catalog # : 02036ET3H256JM-S



Performance : 575 V 60 Hz 2P

Rated current : 18.2 A  
 LRC : 6.6  
 Rated torque : 29.9 ft.lb  
 Locked rotor torque : 200 %  
 Breakdown torque : 290 %  
 Rated speed : 3515 rpm

Moment of inertia (J) : 1.22 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

## Three Phase Induction Motor - Squirrel Cage



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Efficiency Three-Phase

Product code : 13328509

Catalog # : 02036ET3H256JM-S

Performance : 575 V 60 Hz 2P

Rated current	: 18.2 A	Moment of inertia (J)	: 1.22 sq.ft.lb
LRC	: 6.6	Duty cycle	: Cont.(S1)
Rated torque	: 29.9 ft.lb	Insulation class	: F
Locked rotor torque	: 200 %	Service factor	: 1.15
Breakdown torque	: 290 %	Temperature rise	: 80 K
Rated speed	: 3515 rpm	Design	: B

Heating constant

Cooling constant

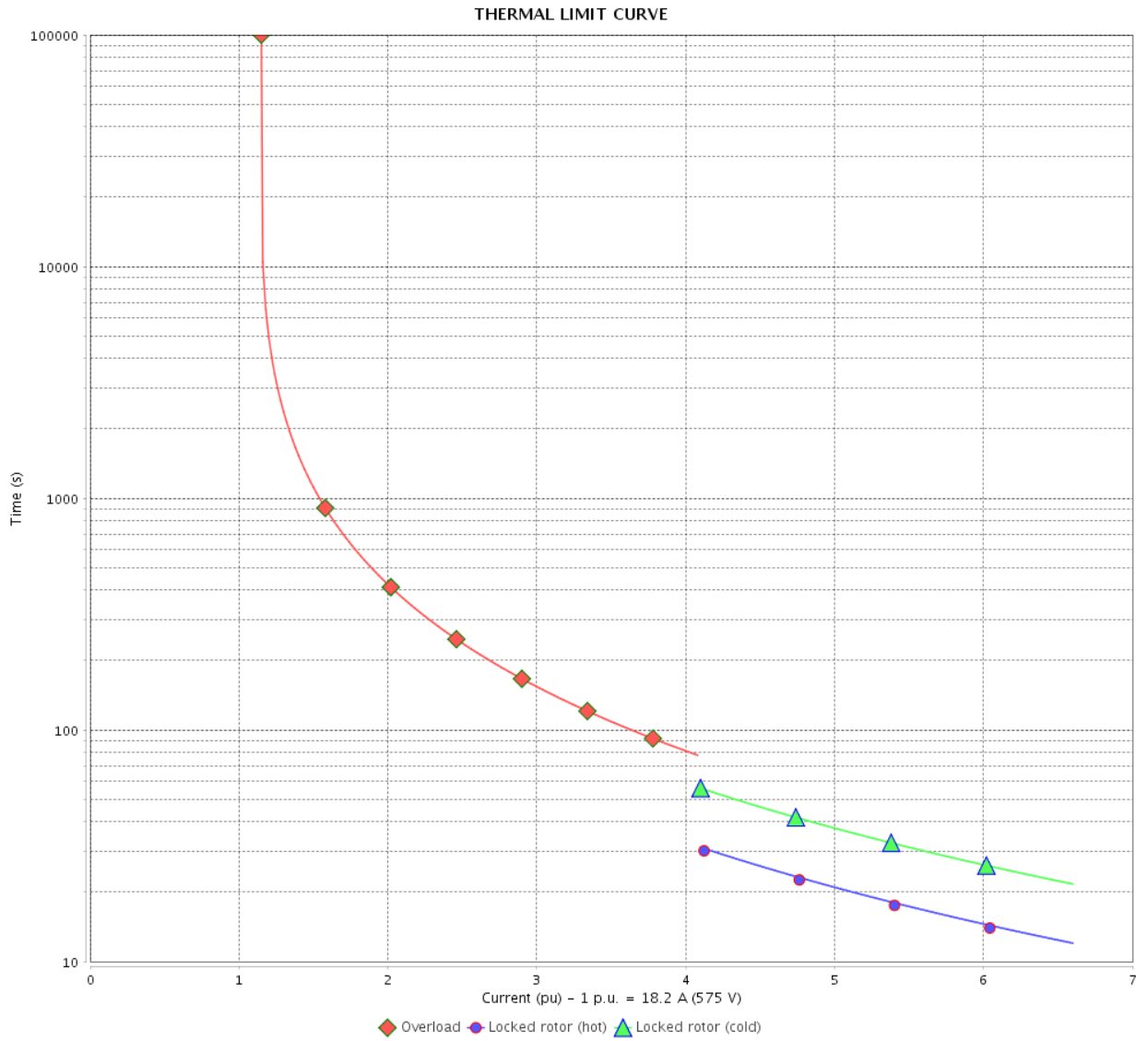
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# THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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



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# VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



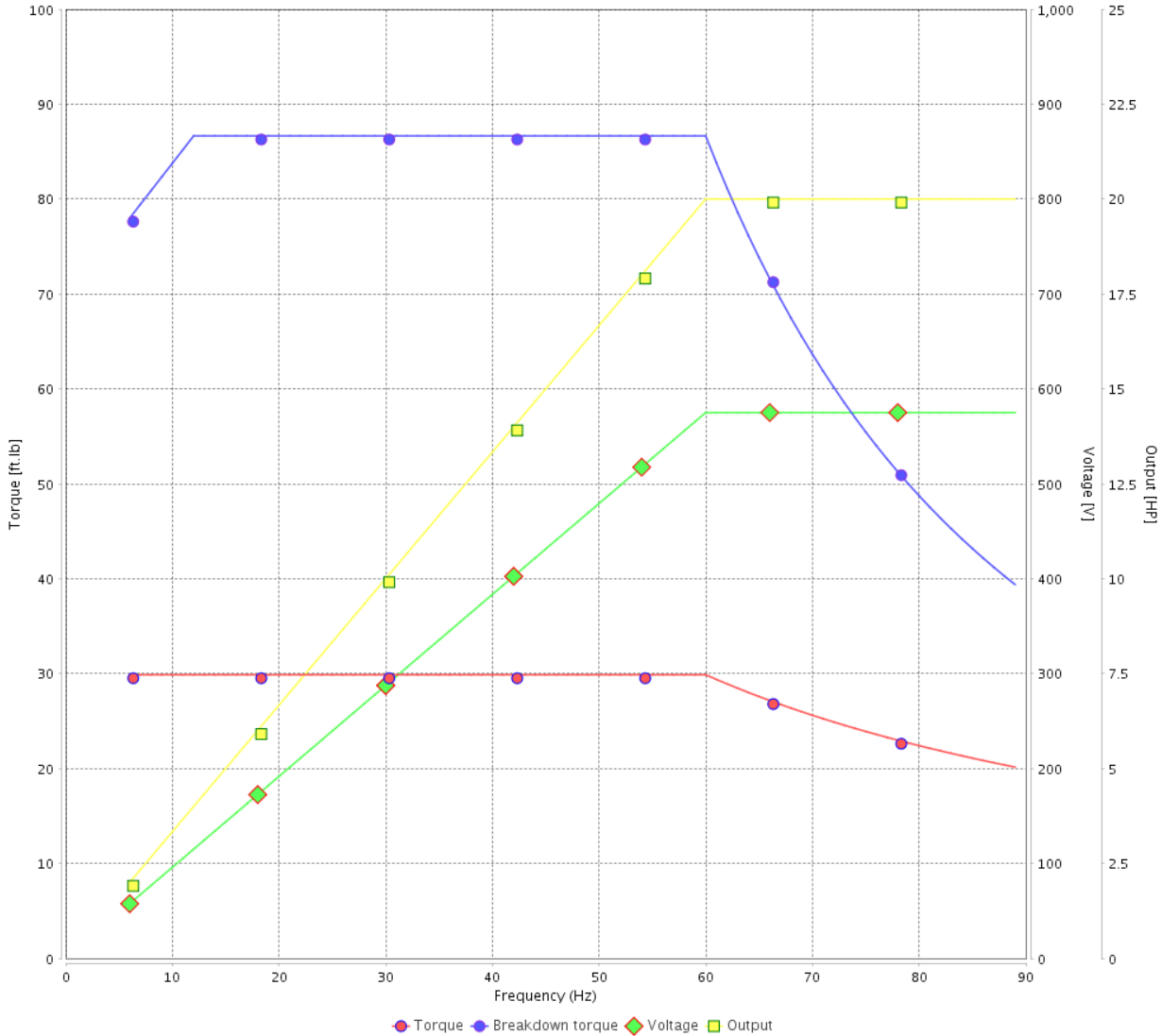
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VFD OPERATION CURVE



Performance : 575 V 60 Hz 2P

Rated current : 18.2 A  
 LRC : 6.6  
 Rated torque : 29.9 ft.lb  
 Locked rotor torque : 200 %  
 Breakdown torque : 290 %  
 Rated speed : 3515 rpm

Moment of inertia (J) : 1.22 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.15  
 Temperature rise : 80 K  
 Design : B

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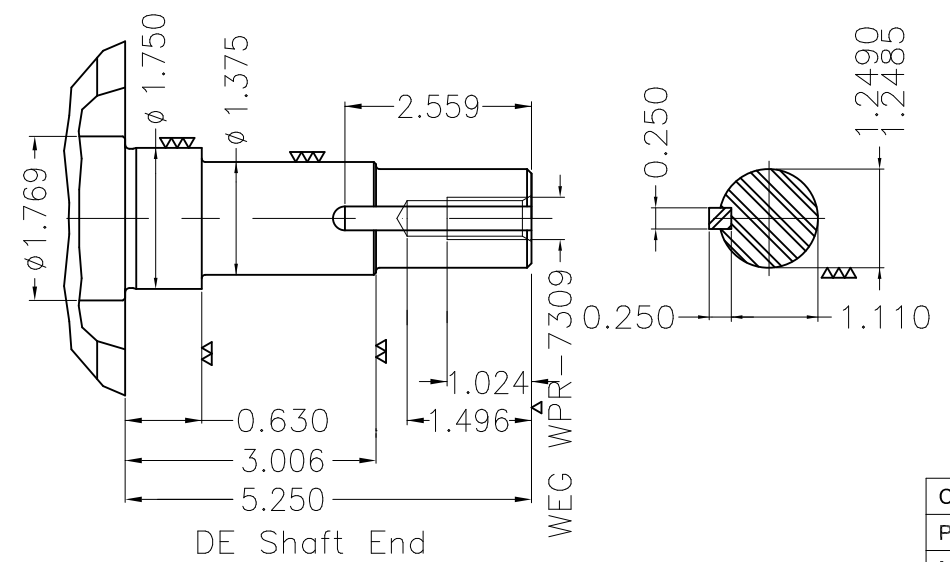
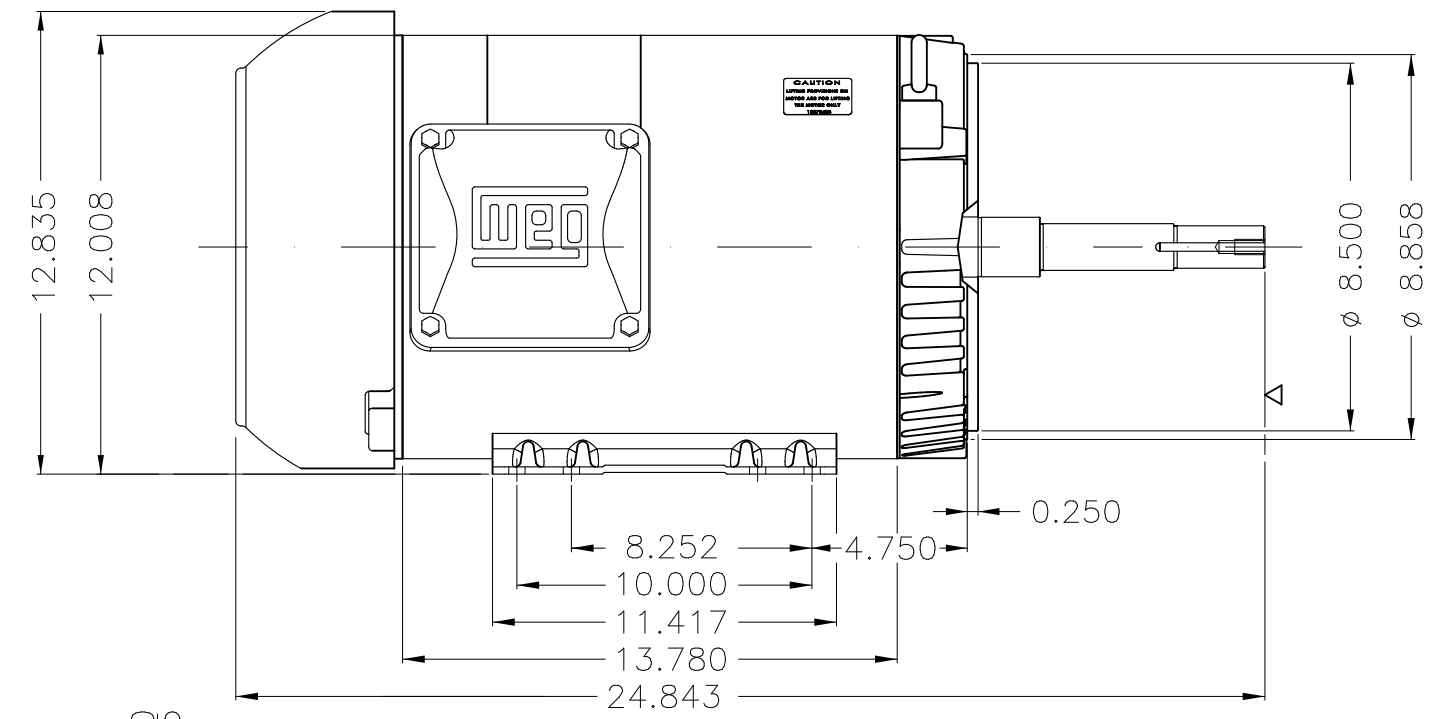
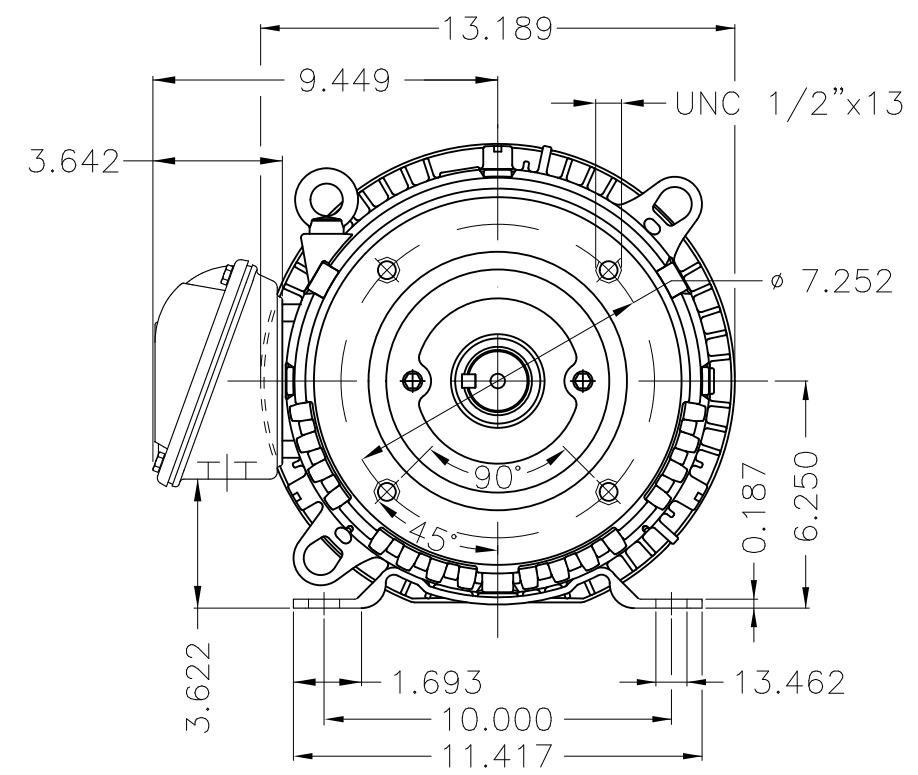
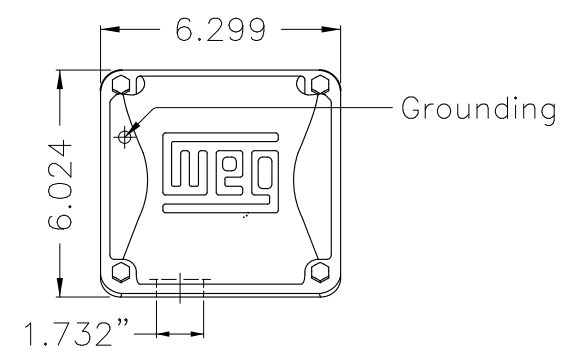
A

B

C

D

E



EUNC 1/2"-13 WEG WPR-7309

DE Shaft End

Color Munsell N 1 matte black  
 Painting plan 207N  
 Mounting F-1/B34R(D)

ECM	LOC	SUMMARY OF MODIFICATIONS	EXECUTED	CHECKED	RELEASED	DATE	VER
EXECUTED	PIRWBUSER	THREE PH. MOTOR ROLLED STEEL CLOSE COUPLED PUMP JM TYPE PSE 500					
CHECKED		FRAME 254/6JM IP55 TEFC					
RELEASED							
REL DT.	WMO	Jaragua do Sul	Product Engineering	WDD	SHEET	1 / 1	

20 HP 02 Poles 60 Hz





**NEMA**  
**Premium**



MADE IN MEXICO

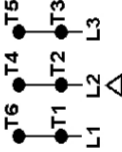
**MAT: 13328509 CC029A**  
**W01.TE0IC0X0N**  
**JM020502NPW01**  
**22FEB2022 S/N:**

**For 60Hz: Class I, Zone 2, IIC**  
**Class I, Div.2, Gr. A,B,C,D - T3**  
**Div 2 Inverter Duty (SF1.00)**  
**CT 2:1/VT 1000:1**

PH 3	Hz 60	HP 20
FR 254/6JM		KW 15
DUTY CONT.		V 575
ALT 1000 m.a.s.l.		A 18.2
INS CL F AT 80K	IP55	SFA 20.9
AMB 40°C	DES B	SF 1.15
ENCL TEFC	CODE G	PF 0.91
		RPM 3515
		NEMA NOM. EFF 91.0%

For safe area-inverter duty motor For use on VPWM 1000:1 VT, 10:1 CT

DE 6309-Z-C3	ODE 6208-Z-C3	MOBIL POLYREX EM	15797h
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T1-BLU  
T2-WHT  
T3-ORG  
T4-YEL  
T5-BLK  
T6-GRY

INTERCHANGE ANY TWO LINE WIRES TO REVERSE THE ROTATION



**WARNING:** Motor must be grounded in accordance with local and national electrical codes to prevent serious electrical shocks. Disconnect power source before servicing unit.



**AVERTISSEMENT:** Le moteur doit être mis à la terre conformément aux codes électriques locaux et nationaux afin d'éviter tout choc électrique grave. Déconnectez l'alimentation avant l'entretien de la machine.

