

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : NEMA Premium Efficiency Three-Phase  
Product code : 12712157  
Catalog # : 03018ET3H286JM-W22

Frame	: 284/6JM	Locked rotor time	: 36s (cold) 20s (hot)
Output	: 30 HP (22 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	: 28.1 A	Protection degree	: IP55
L. R. Amperes	: 171 A	Cooling method	: IC411 - TEFC
LRC	: 6.1x(Code G)	Mounting	: F-1
No load current	: 10.4 A	Rotation <sup>1</sup>	: Both (CW and CCW)
Rated speed	: 1765 rpm	Noise level <sup>2</sup>	: 63.0 dB(A)
Slip	: 1.94 %	Starting method	: Direct On Line
Rated torque	: 89.3 ft.lb	Approx. weight <sup>3</sup>	: 479 lb
Locked rotor torque	: 240 %		
Breakdown torque	: 240 %		
Insulation class	: F		
Service factor	: 1.25		
Moment of inertia (J)	: 5.85 sq.ft.lb		
Design	: B		

Output	50%	75%	100%	Foundation loads	
Efficiency (%)	93.0	93.0	93.6	Max. traction	: 695 lb
Power Factor	0.70	0.80	0.84	Max. compression	: 1173 lb

	<u>Drive end</u>	<u>Non drive end</u>
Bearing type	: 6311 C3	6211 C3
Sealing	: V'Ring	V'Ring
Lubrication interval	: 20000 h	20000 h
Lubricant amount	: 18 g	11 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

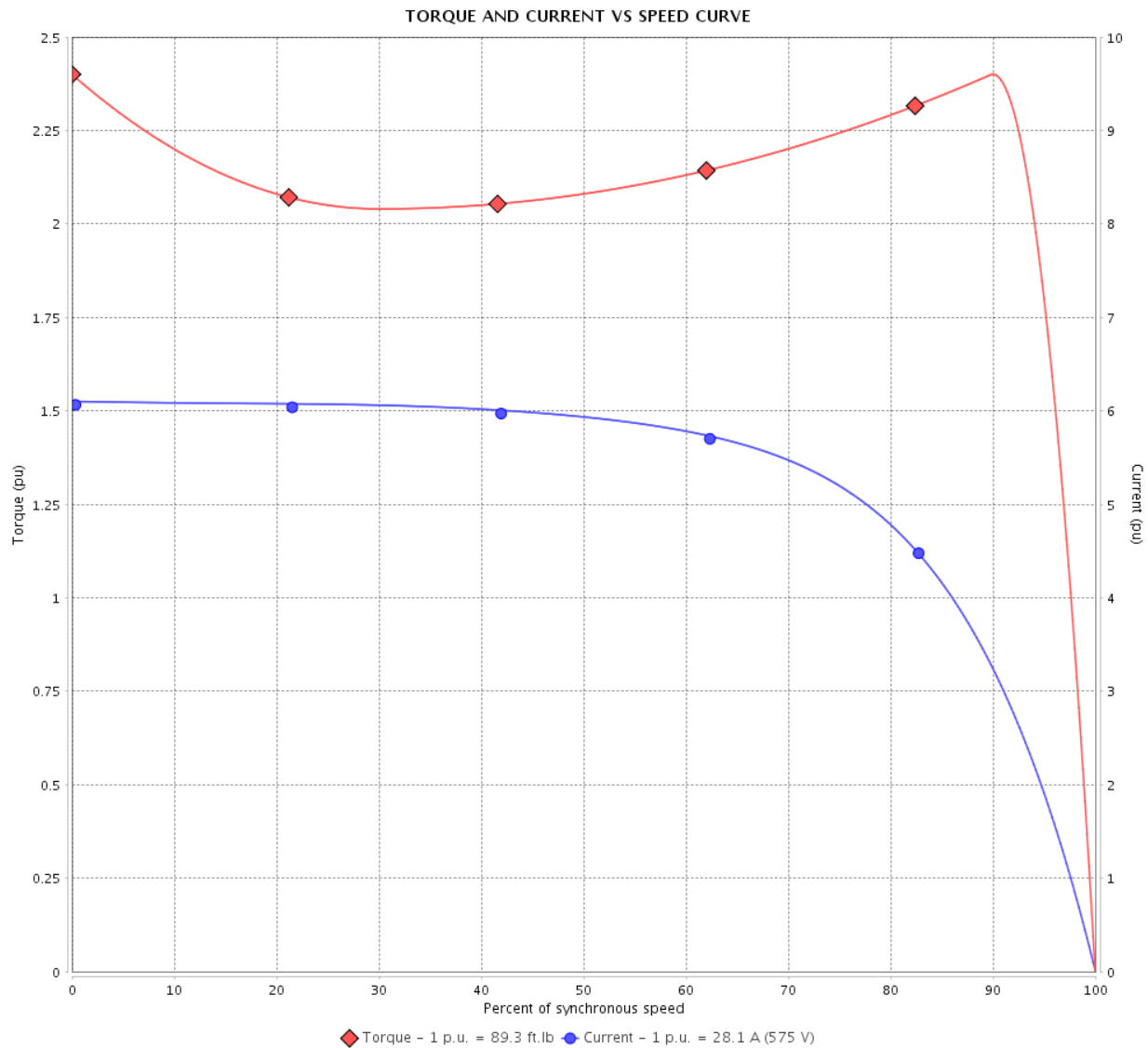


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12712157

Catalog # : 03018ET3H286JM-W22



Performance : 575 V 60 Hz 4P

Rated current	: 28.1 A	Moment of inertia (J)	: 5.85 sq.ft.lb
LRC	: 6.1	Duty cycle	: Cont.(S1)
Rated torque	: 89.3 ft.lb	Insulation class	: F
Locked rotor torque	: 240 %	Service factor	: 1.25
Breakdown torque	: 240 %	Temperature rise	: 80 K
Rated speed	: 1765 rpm	Design	: B

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

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# LOAD PERFORMANCE CURVE

## Three Phase Induction Motor - Squirrel Cage

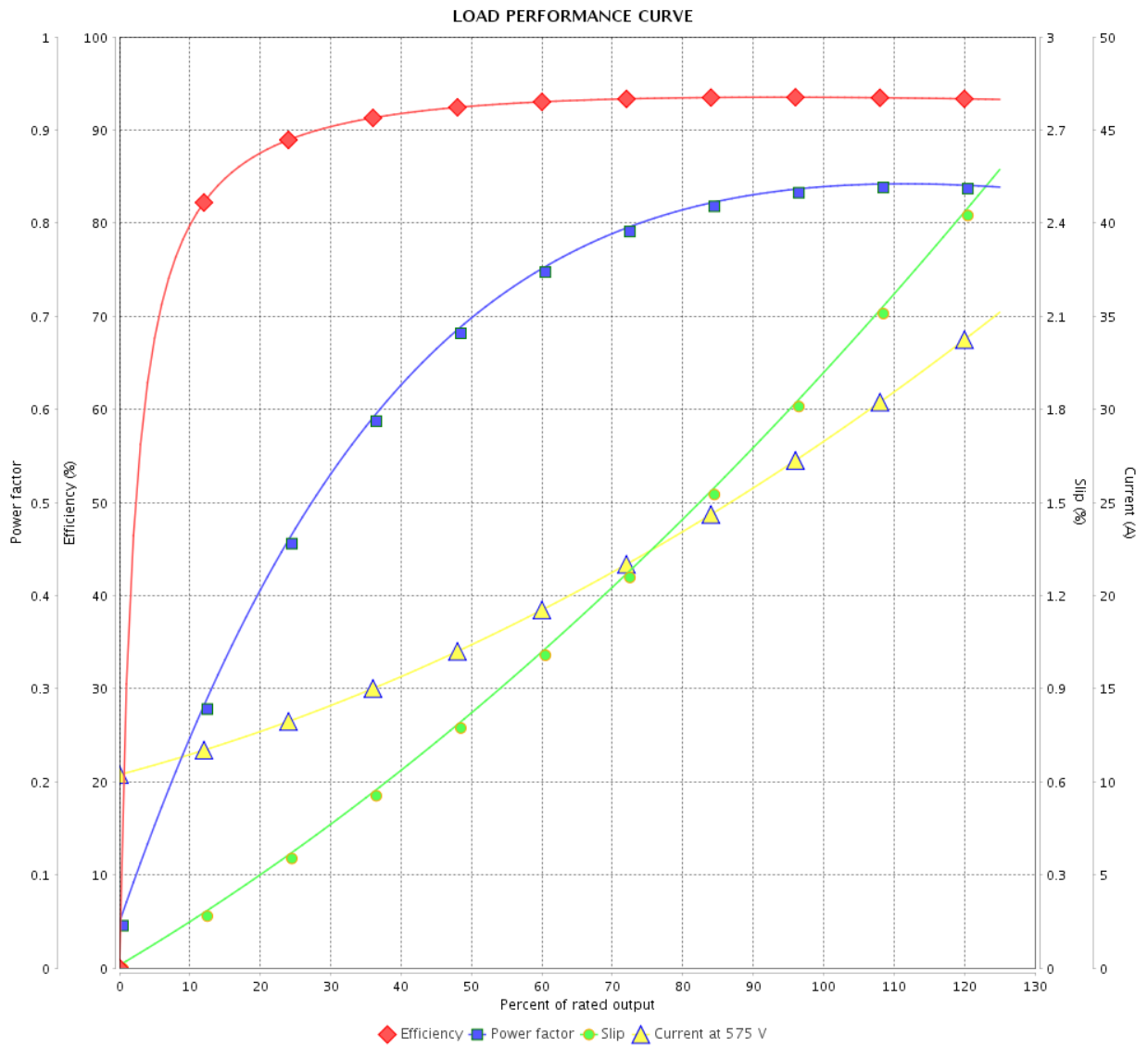


Customer : \_\_\_\_\_

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12712157

Catalog # : 03018ET3H286JM-W22



Performance : 575 V 60 Hz 4P

Rated current : 28.1 A  
 LRC : 6.1  
 Rated torque : 89.3 ft.lb  
 Locked rotor torque : 240 %  
 Breakdown torque : 240 %  
 Rated speed : 1765 rpm

Moment of inertia (J) : 5.85 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.25  
 Temperature rise : 80 K  
 Design : B

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# THERMAL LIMIT CURVE



## Three Phase Induction Motor - Squirrel Cage

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Performance : 575 V 60 Hz 4P

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LRC	: 6.1	Duty cycle	: Cont.(S1)
Rated torque	: 89.3 ft.lb	Insulation class	: F
Locked rotor torque	: 240 %	Service factor	: 1.25
Breakdown torque	: 240 %	Temperature rise	: 80 K
Rated speed	: 1765 rpm	Design	: B

Heating constant

Cooling constant

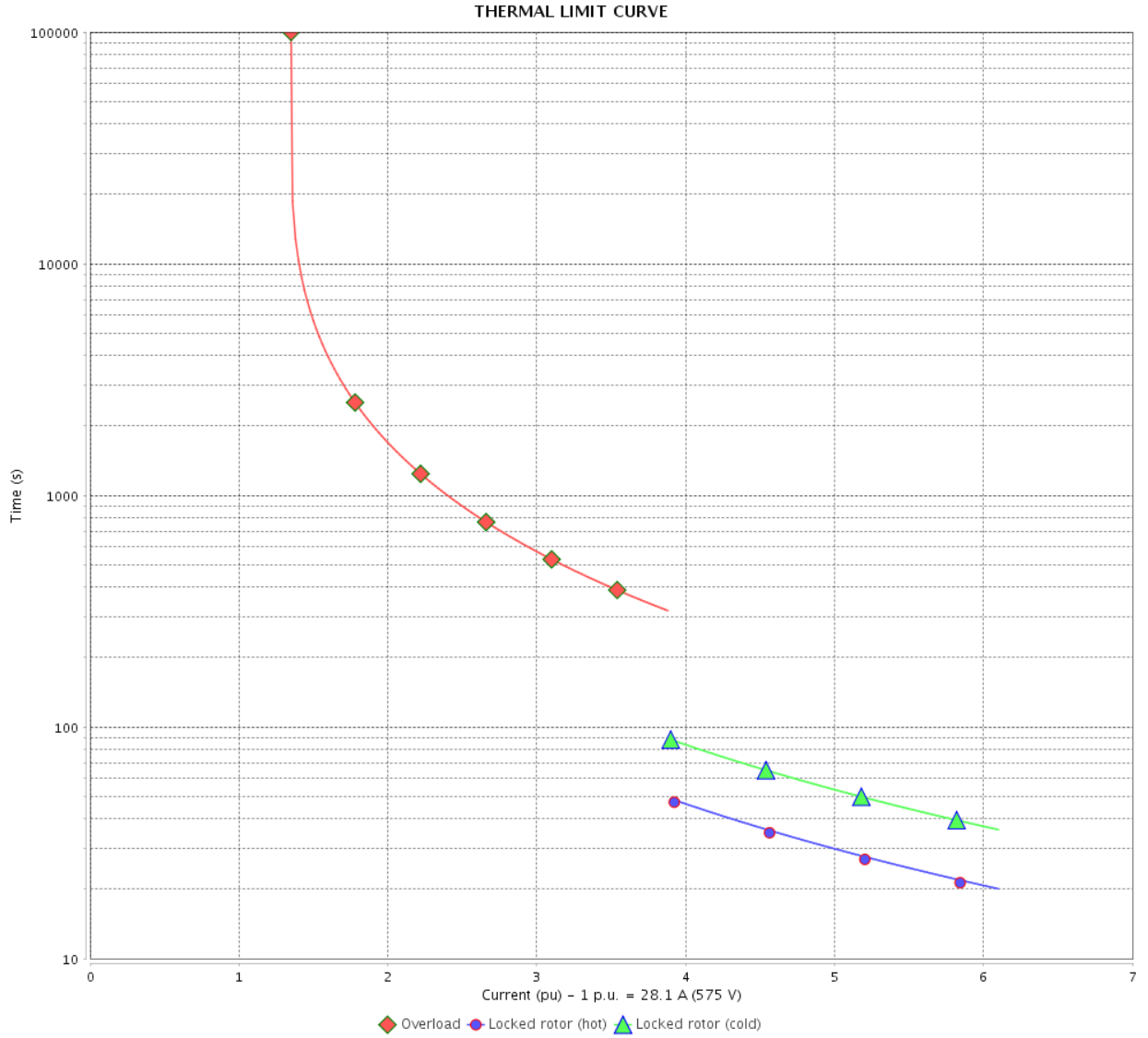
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# THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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



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# VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



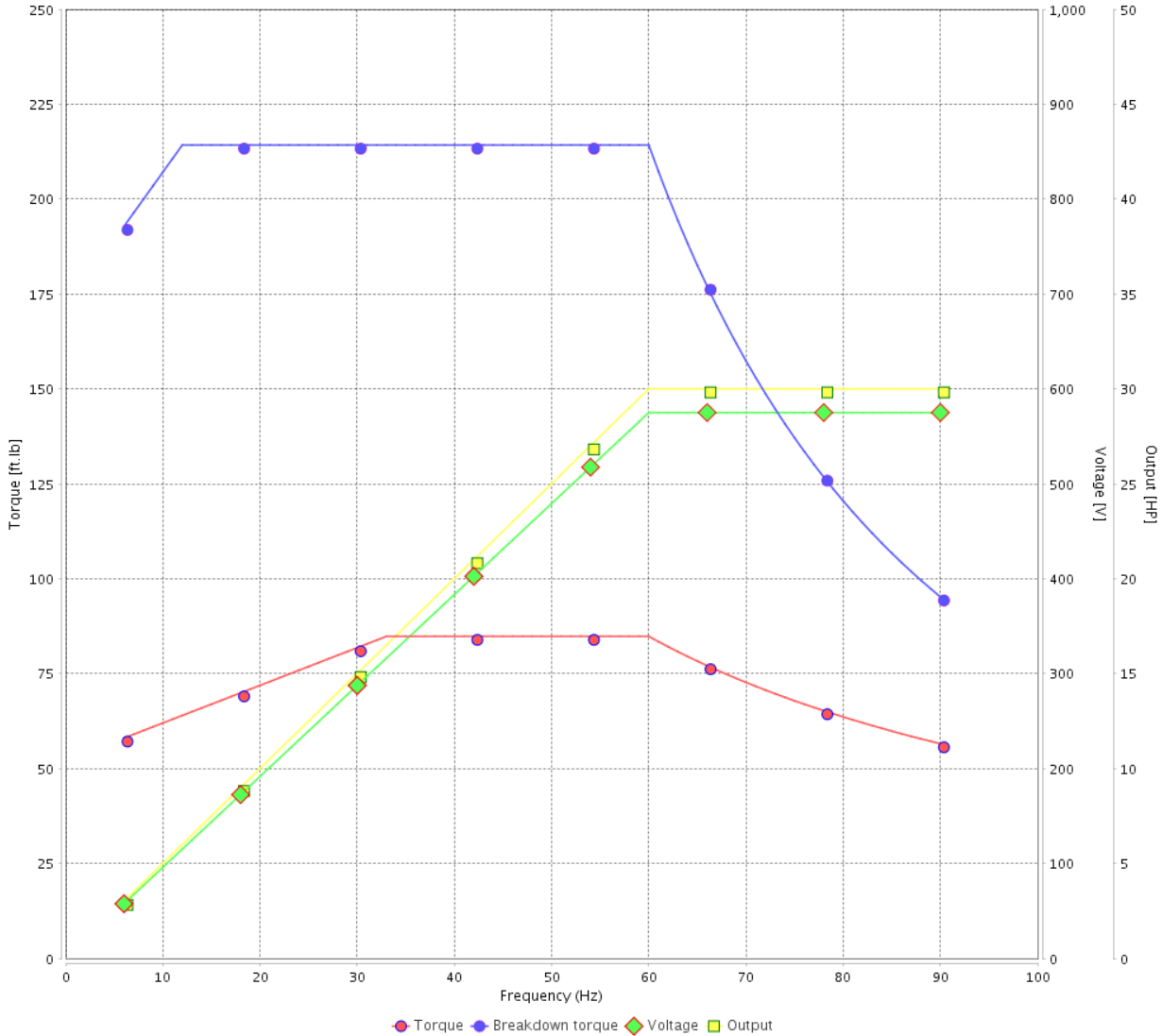
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12712157

Catalog # : 03018ET3H286JM-W22

VFD OPERATION CURVE



Performance : 575 V 60 Hz 4P

Rated current : 28.1 A  
 LRC : 6.1  
 Rated torque : 89.3 ft.lb  
 Locked rotor torque : 240 %  
 Breakdown torque : 240 %  
 Rated speed : 1765 rpm

Moment of inertia (J) : 5.85 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.25  
 Temperature rise : 80 K  
 Design : B

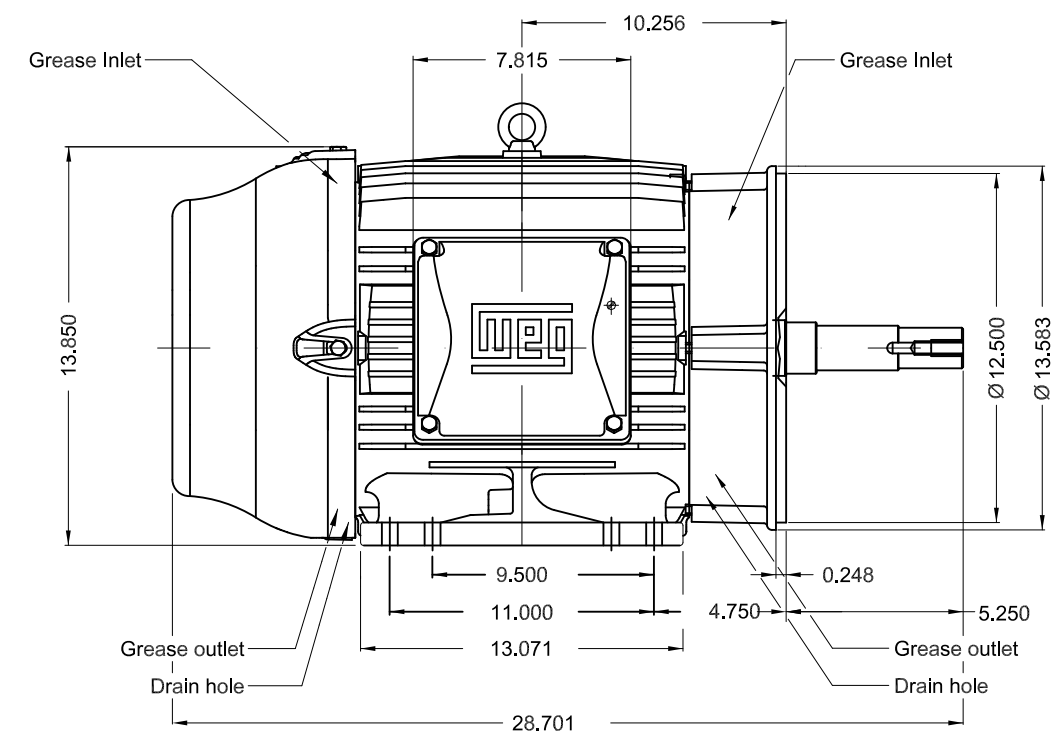
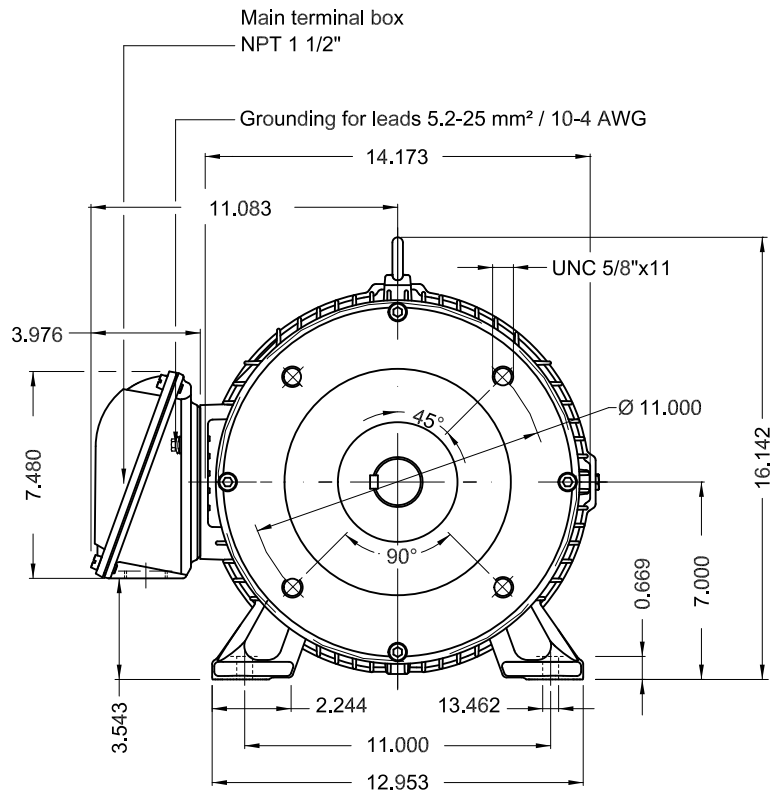
Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 6 / 6	Revision
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Date	14/04/2022			

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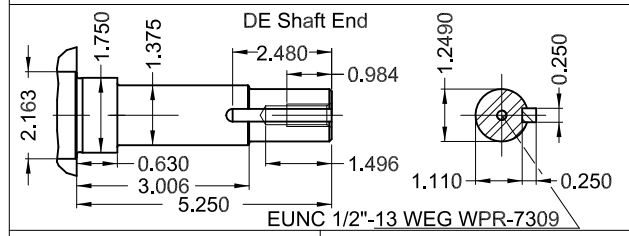
A

B

C



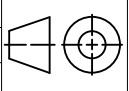
D



E

Color RAL 5009  
 Painting plan 203A  
 Mounting NEMA F-1  
 Mounting B34R(D)

30 HP 04 Poles 60 Hz A

ECM	LOC	SUMMARY OF MODIFICATIONS	EXECUTED	CHECKED	RELEASED	DATE	VER
EXECUTED	PIRWBUSER	 THREE PH. MOTOR JM/JP/JET PUMP W22 PREM. EFF. FRAME 284/6JM IP55 TEFC					
CHECKED							
RELEASED							
REL DT.	WMO		Jaragua do Sul	Product Engineering	SHEET	1 / 1	

PREVIEW  
 WDD





**W22 NEMA**  
**CC029A Premium**

*Inverter Duty Motor  
 Severe Duty*



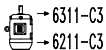
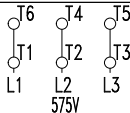
FOR SAFE AREA  
 MOD.TE1BFOXON



Class I, Div 2, Gr. A, B, C and D - T3  
 Class I, Zone 2, IIC - T3  
 Class II, Div 2, Gr. F and G - T4  
 For use on PWM, Gr. A, B, C, D and F,  
 VT 1000:1, CT 20:1, 1.0SF, T3A

JM030504NPW22  
 MADE IN BRAZIL  
 12712157

PH 3	FR 284/6JM	HP(kW) 30(22)		Hz 60
V 575		A 28.1		IP55
NEMA NOM EFF		93.6	%	RPM 1765
ENCL TEFC	DUTY CONT.		INS. CL. F $\Delta$ T 80 K	
PF 0.84		DES B	CODE G	AMB. 40°C
SF 1.25	SFA 35.1		ALT 1000 m.a.s.l.	



→ 6311-C3  
 → 6211-C3

MOBIL POLYREX EM  
 18 g 20000 h

478 Lbs