

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W40 NEMA Premium Efficiency Three-Phase Product code : 14272886  
Catalog # : 12518OT3H405TC-W40

Frame	: 404/5TC	Locked rotor time	: 18s (cold) 10s (hot)
Output	: 125 HP	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	: 110 A	Protection degree	: IP23
L. R. Amperes	: 762 A	Cooling method	: IC01 - ODP
LRC	: 6.9x(Code G)	Mounting	: F-1
No load current	: 37.6 A	Rotation <sup>1</sup>	: Both (CW and CCW)
Rated speed	: 1780 rpm	Noise level <sup>2</sup>	: 69.0 dB(A)
Slip	: 1.11 %	Starting method	: Direct On Line
Rated torque	: 369 ft.lb	Approx. weight <sup>3</sup>	: 1048 lb
Locked rotor torque	: 270 %		
Breakdown torque	: 260 %		
Insulation class	: F		
Service factor	: 1.25		
Moment of inertia (J)	: 25.5 sq.ft.lb		
Design	: B		

Output	25%	50%	75%	100%	Foundation loads	
Efficiency (%)	94.9	95.0	95.4	95.4	Max. traction	: 2351 lb
Power Factor	0.50	0.75	0.83	0.86	Max. compression	: 3399 lb

		<u>Drive end</u>	<u>Non drive end</u>
Bearing type	:	6316 C3	6212 Z C3
Sealing	:	Without Bearing Seal	Without Bearing Seal
Lubrication interval	:	20000 h	20000 h
Lubricant amount	:	34 g	13 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		Page 1 / 6 Revision		
Checked by				
Date	10/04/2020			

# TORQUE AND CURRENT VS SPEED CURVE

## Three Phase Induction Motor - Squirrel Cage

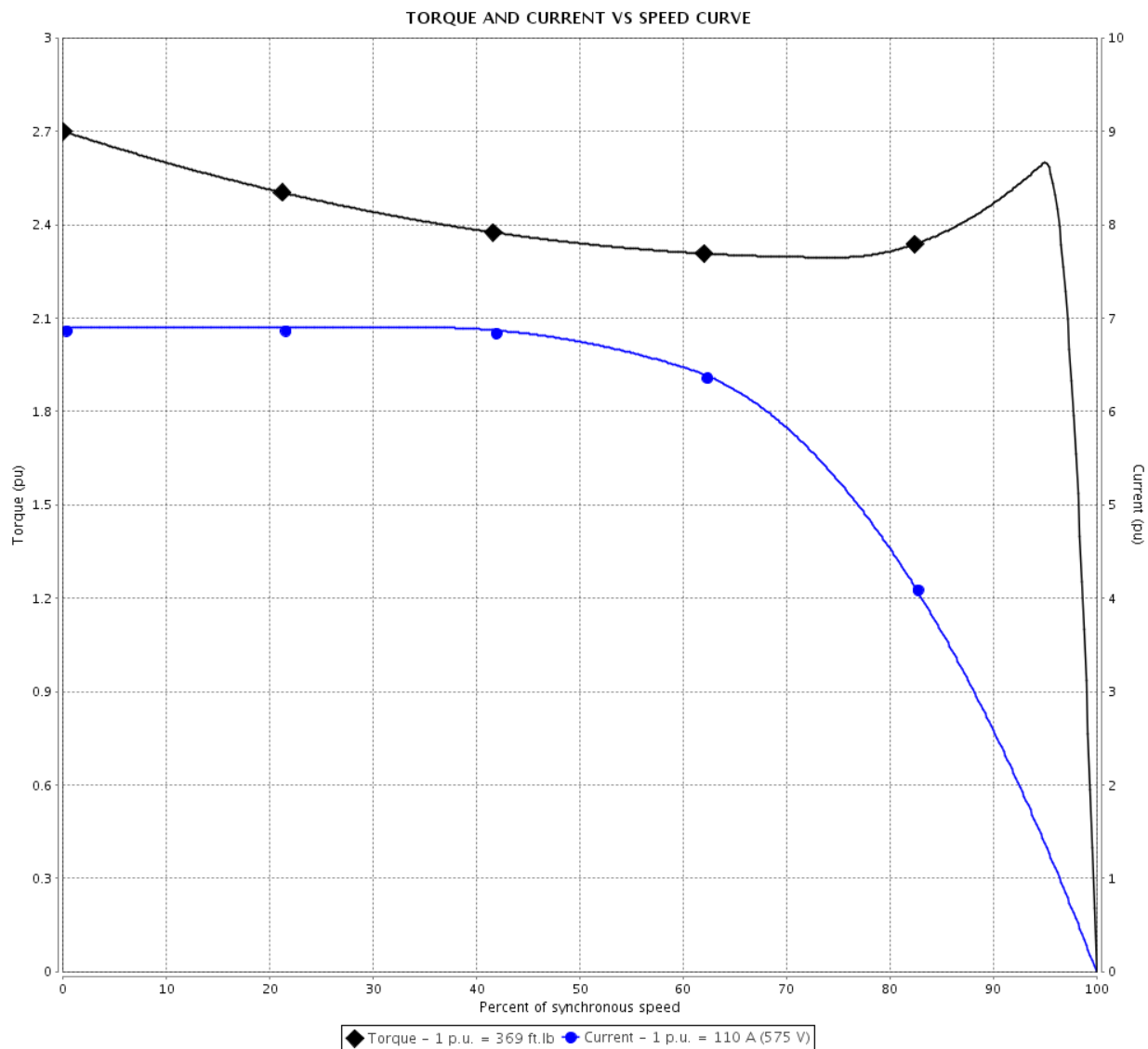


Customer :

Product line : W40 NEMA Premium Efficiency  
Three-Phase

Product code : 14272886

Catalog # : 12518OT3H405TC-W40



Performance : 575 V 60 Hz 4P

Rated current	: 110 A	Moment of inertia (J)	: 25.5 sq.ft.lb
LRC	: 6.9	Duty cycle	: Cont.(S1)
Rated torque	: 369 ft.lb	Insulation class	: F
Locked rotor torque	: 270 %	Service factor	: 1.25
Breakdown torque	: 260 %	Temperature rise	: 80 K
Rated speed	: 1780 rpm	Design	: B

Locked rotor time : 18s (cold) 10s (hot)

Rev.	Changes Summary	Performed	Checked	Date
Performed by		<div style="display: flex; justify-content: space-between;"> <div>Page 2 / 6</div> <div>Revision</div> </div>		
Checked by				
Date	10/04/2020			

# LOAD PERFORMANCE CURVE

## Three Phase Induction Motor - Squirrel Cage

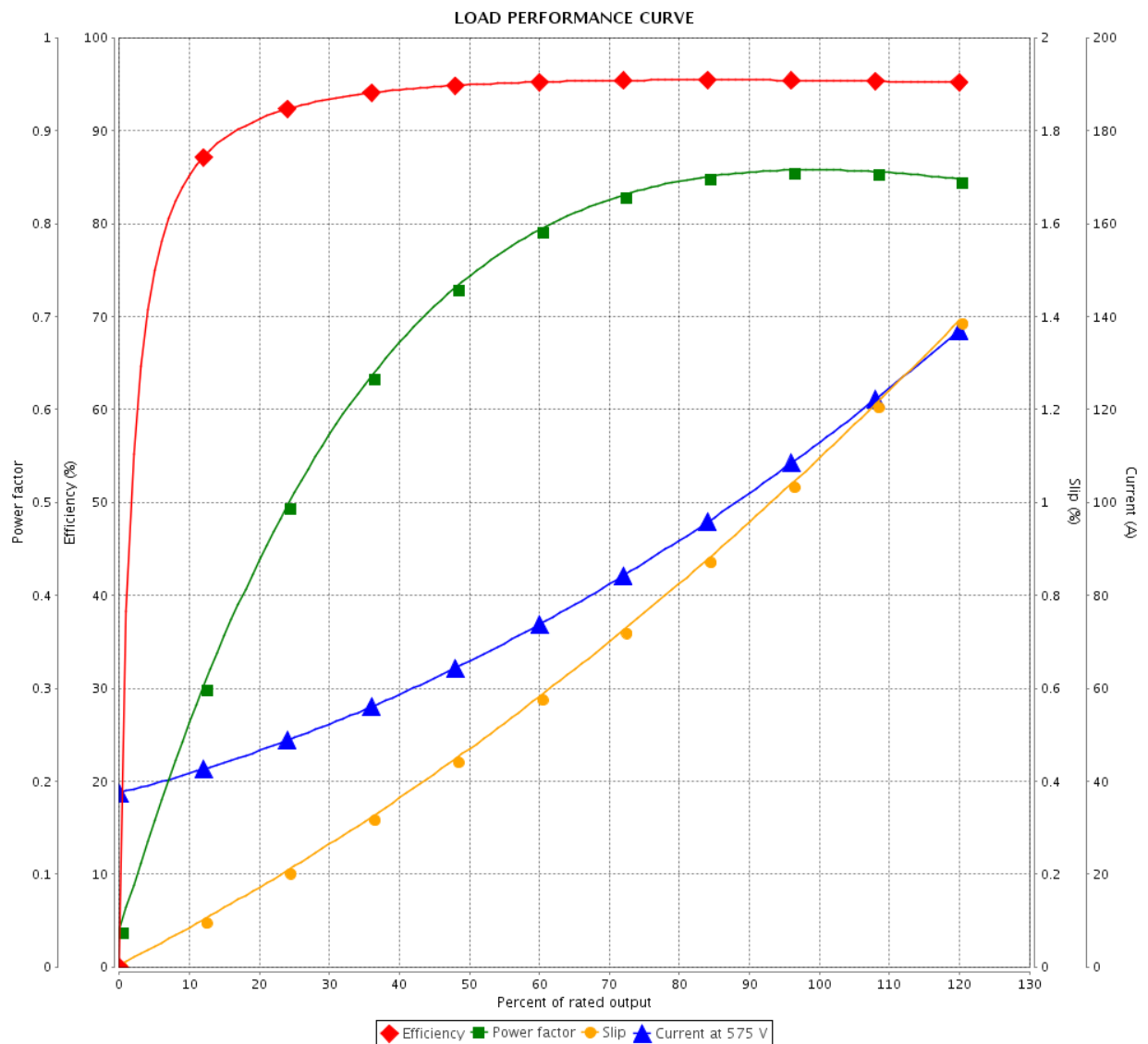


Customer :

Product line : W40 NEMA Premium Efficiency  
Three-Phase

Product code : 14272886

Catalog # : 12518OT3H405TC-W40



Performance : 575 V 60 Hz 4P

Rated current : 110 A  
LRC : 6.9  
Rated torque : 369 ft.lb  
Locked rotor torque : 270 %  
Breakdown torque : 260 %  
Rated speed : 1780 rpm

Moment of inertia (J) : 25.5 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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Three-Phase

Product code : 14272886

Catalog # : 12518OT3H405TC-W40

Performance : 575 V 60 Hz 4P

Rated current	: 110 A	Moment of inertia (J)	: 25.5 sq.ft.lb
LRC	: 6.9	Duty cycle	: Cont.(S1)
Rated torque	: 369 ft.lb	Insulation class	: F
Locked rotor torque	: 270 %	Service factor	: 1.25
Breakdown torque	: 260 %	Temperature rise	: 80 K
Rated speed	: 1780 rpm	Design	: B

Heating constant

Cooling constant

Rev.

Changes Summary

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Checked

Date

Performed by

Checked by

Date

10/04/2020

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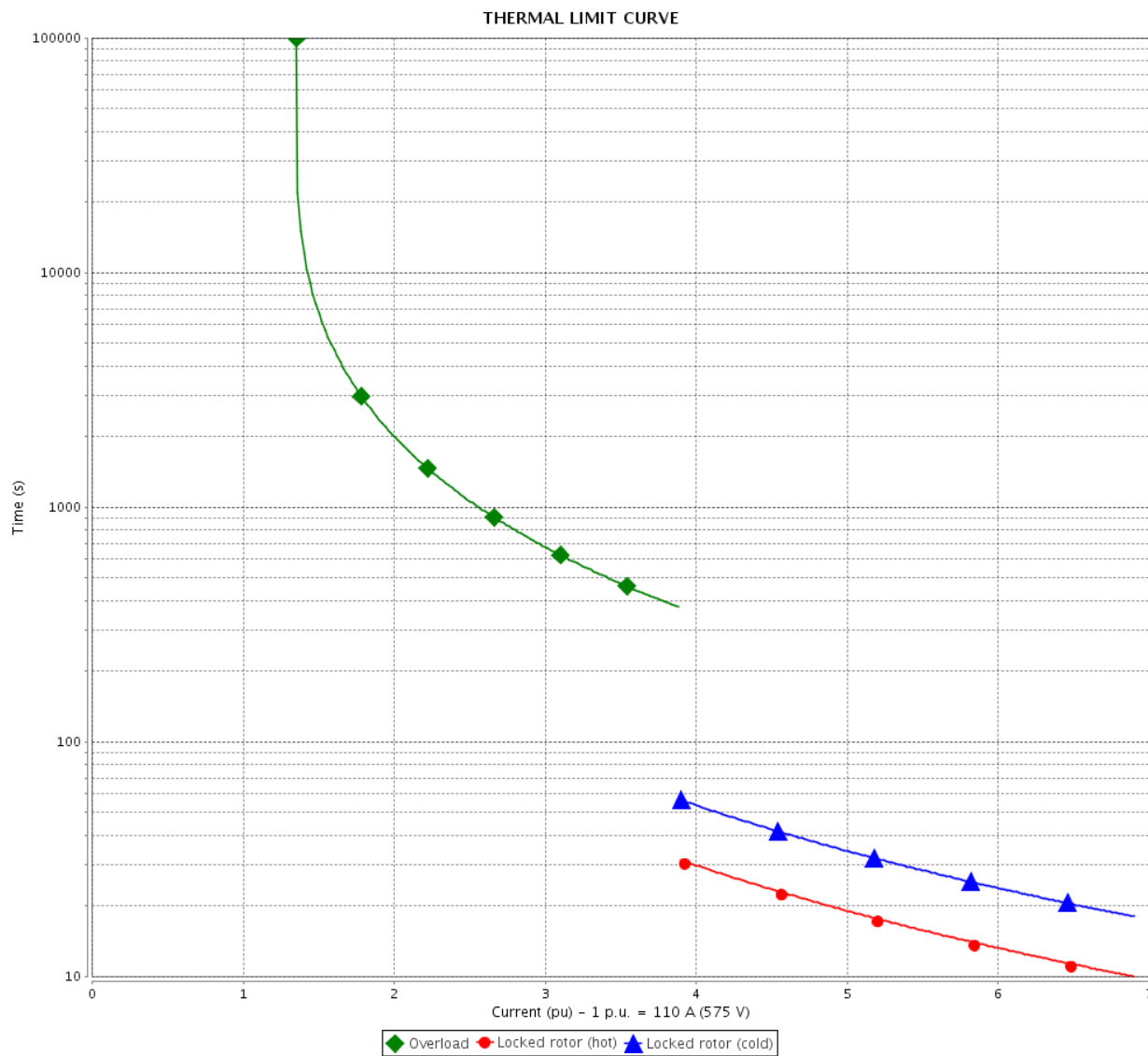
Revision

# THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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



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Performed by					
Checked by					
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# VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

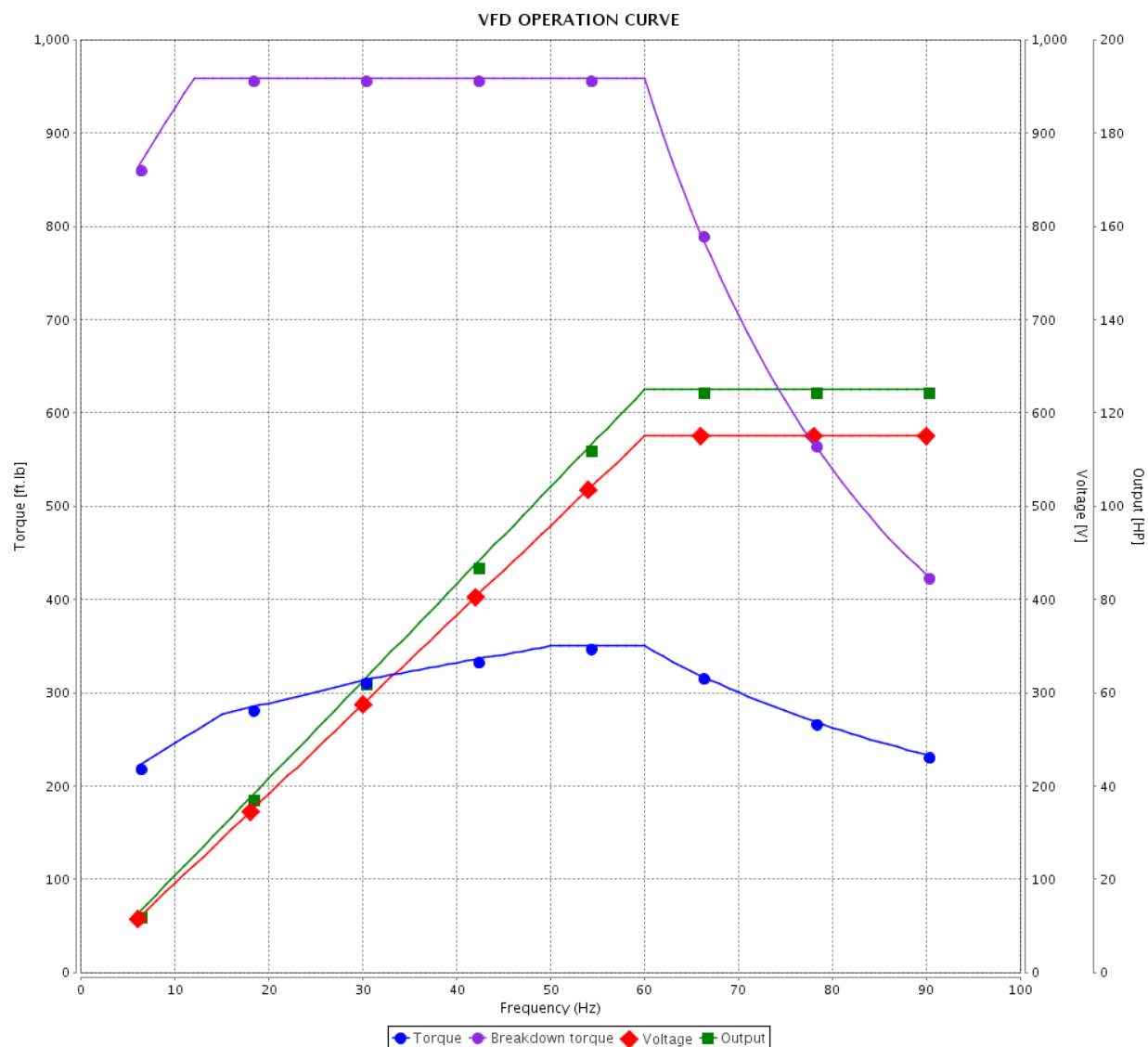


Customer :

Product line : W40 NEMA Premium Efficiency  
Three-Phase

Product code : 14272886

Catalog # : 12518OT3H405TC-W40

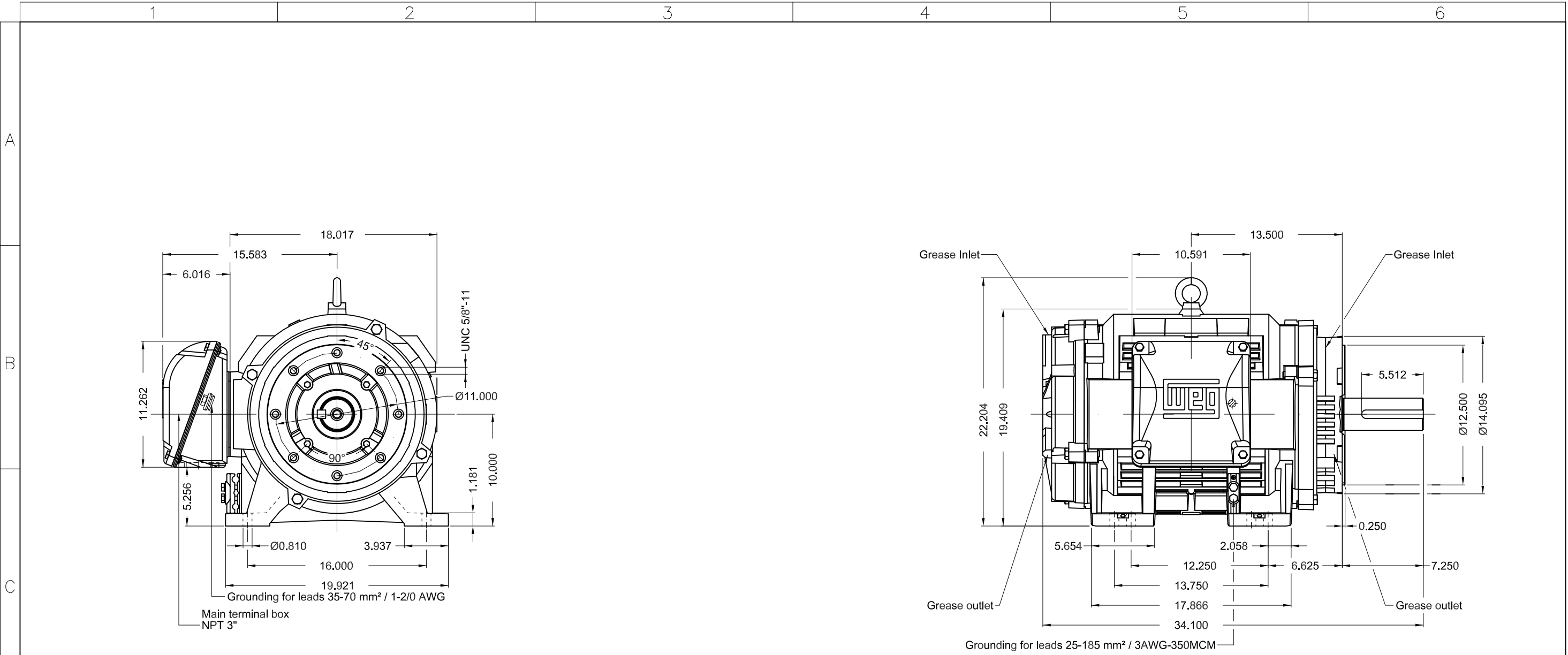


Performance : 575 V 60 Hz 4P

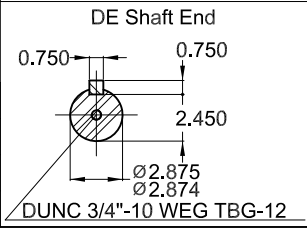
Rated current : 110 A  
LRC : 6.9  
Rated torque : 369 ft.lb  
Locked rotor torque : 270 %  
Breakdown torque : 260 %  
Rated speed : 1780 rpm

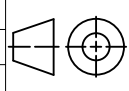

Moment of inertia (J) : 25.5 sq.ft.lb  
Duty cycle : Cont.(S1)  
Insulation class : F  
Service factor : 1.25  
Temperature rise : 80 K  
Design : B

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



125 HP 04 Poles 60Hz										A			
										1:9			
ECM		LOC		SUMMARY OF MODIFICATIONS				EXECUTED	CHECKED	RELEASED	DATE	VER	
EXECUTED		PIRWBUSER			THREE PHASE W40 MOTOR NEMA PREMIUM EFF FRAME 404/5TC IP23 ODP				PREVIEW  WDD				
CHECKED													
RELEASED													
REL DT.				WMO	Jaragua do Sul		Product Engineering		SHEET	1 / 1			

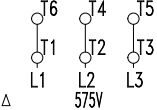

MODEL 125180T3H405TC-W40  
MADE IN BRAZIL  
14272886



MOD.T01#FOXON



For use on PWM, VT 1000:1, CT 2:1, 1.0SF

PH 3	FR 404/5TC	HP(kW) 125(90)	Hz 60		
V 575	A 110	IP23			
NEMA NOM EFF	95.4 %	RPM 1780		 → 6316-C3(34g) MOBIL POLYREX EM → 6212-Z-C3(13g) 20000 h	
ENCL ODP	DUTY CONT.	INS. CL. F ΔT 80 K			
PF 0.86	DES B	CODE G	AMB. 40°C		
SF 1.25	SFA 138	ALT 1000 m.a.s.l.		1049 Lbs	