

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W40 NEMA Premium Efficiency Three-Phase Product code : 14272881  
Catalog # : 12518OT3G405TC-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	: 460 V	Altitude	: 1000 m.a.s.l.
Rated current	: 138 A	Protection degree	: IP23
L. R. Amperes	: 952 A	Cooling method	: IC01 - ODP
LRC	: 6.9x(Code G)	Mounting	: F-1
No load current	: 47.0 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>	: 1050 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	: 2880 lb
Power Factor	0.50	0.75	0.83	0.86	Max. compression	: 3930 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.

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Date	10/04/2020			

# TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage

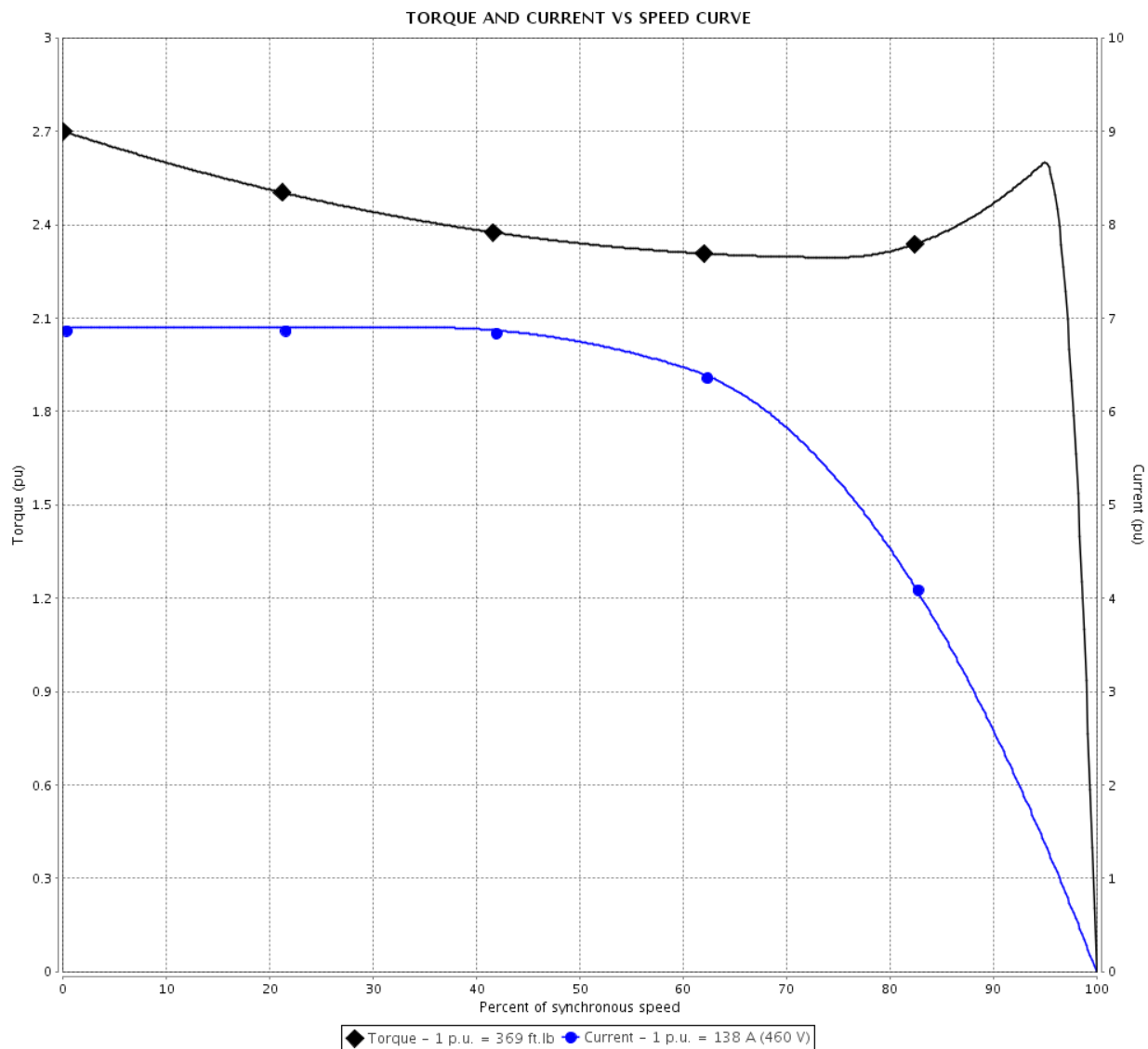


Customer :

Product line : W40 NEMA Premium Efficiency  
Three-Phase

Product code : 14272881

Catalog # : 12518OT3G405TC-W40



Performance : 460 V 60 Hz 4P

Rated current	: 138 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)

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Checked by				
Date	10/04/2020			

# LOAD PERFORMANCE CURVE

## Three Phase Induction Motor - Squirrel Cage

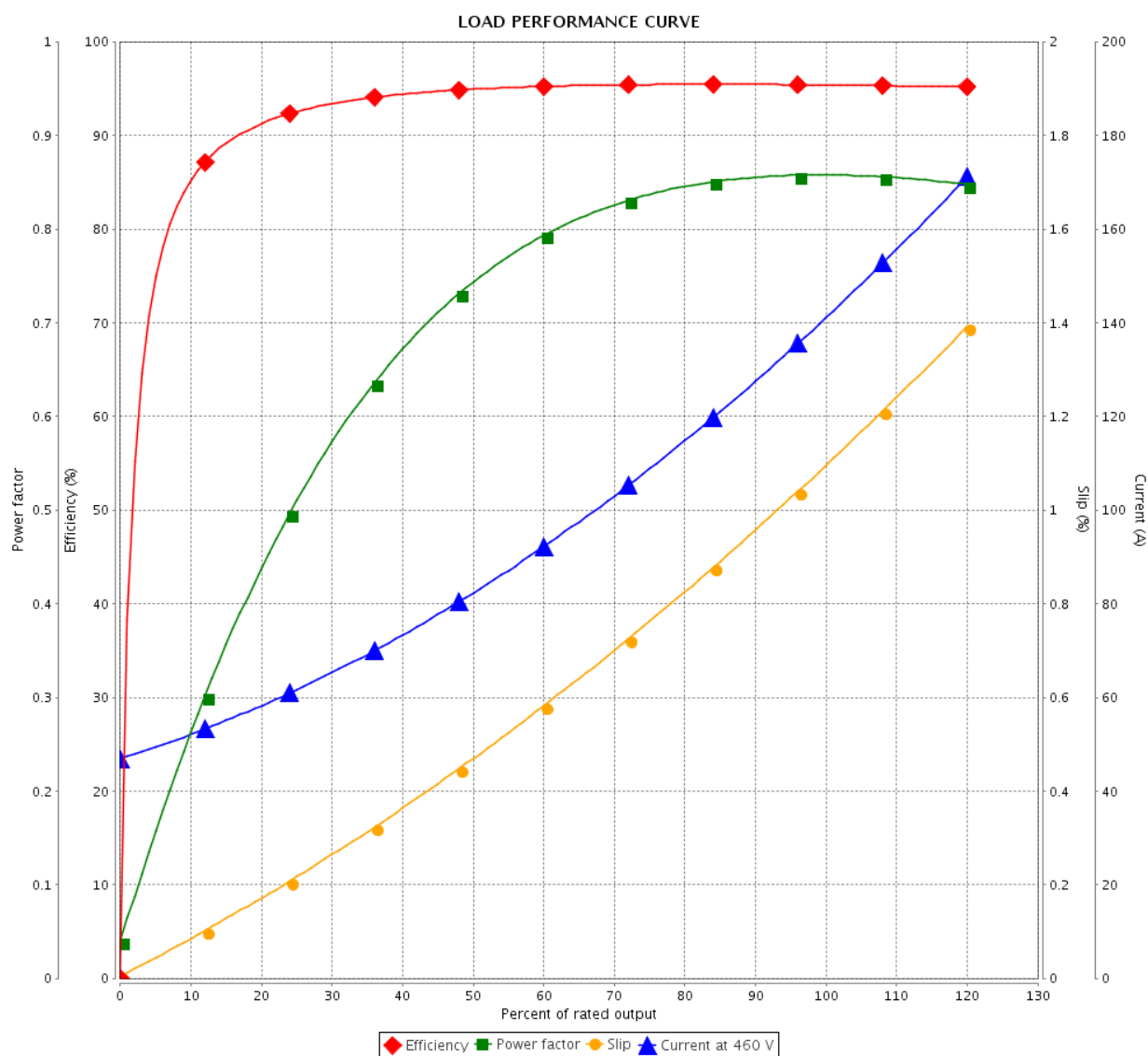


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# THERMAL LIMIT CURVE

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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

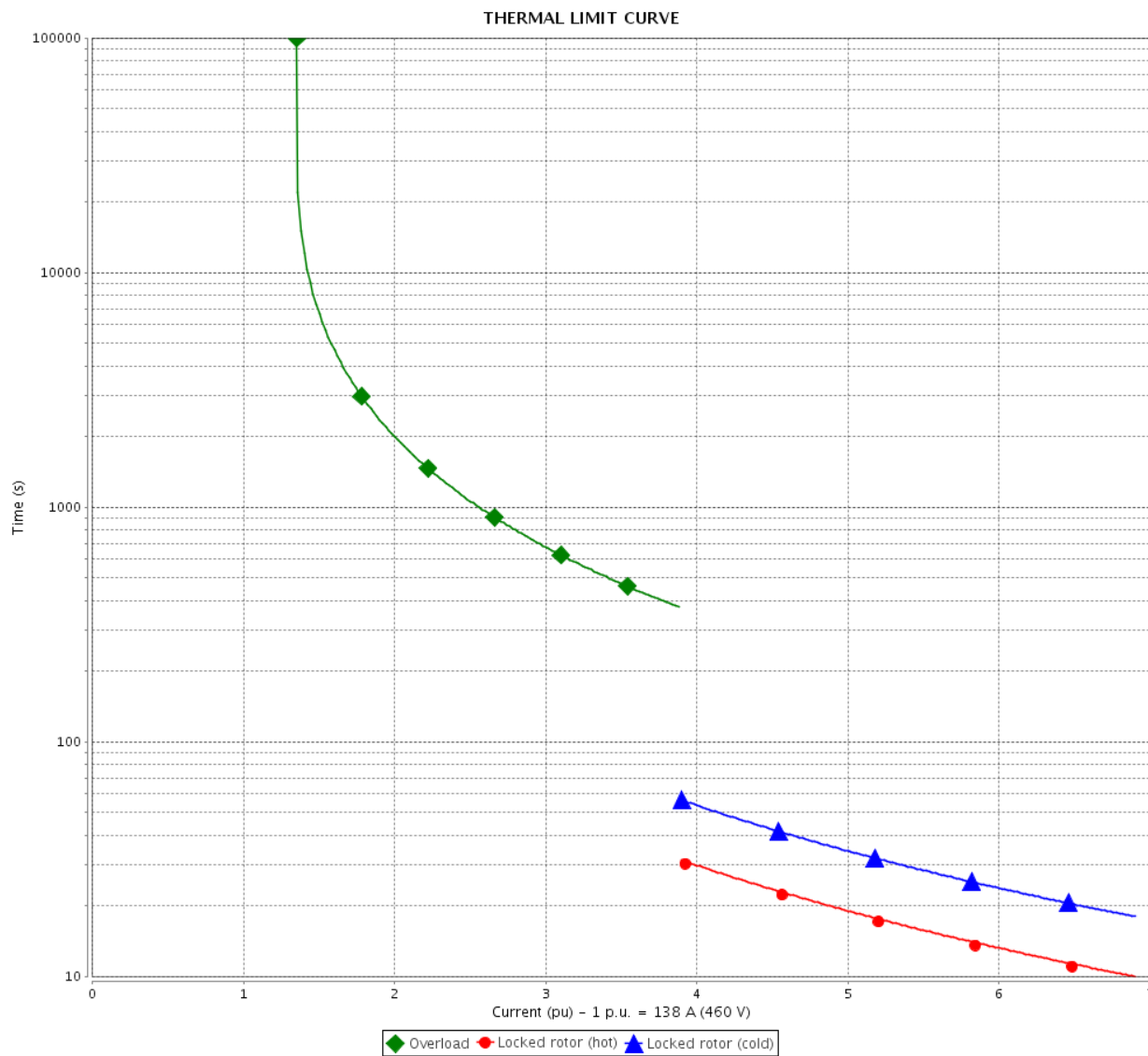
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# THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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



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# VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

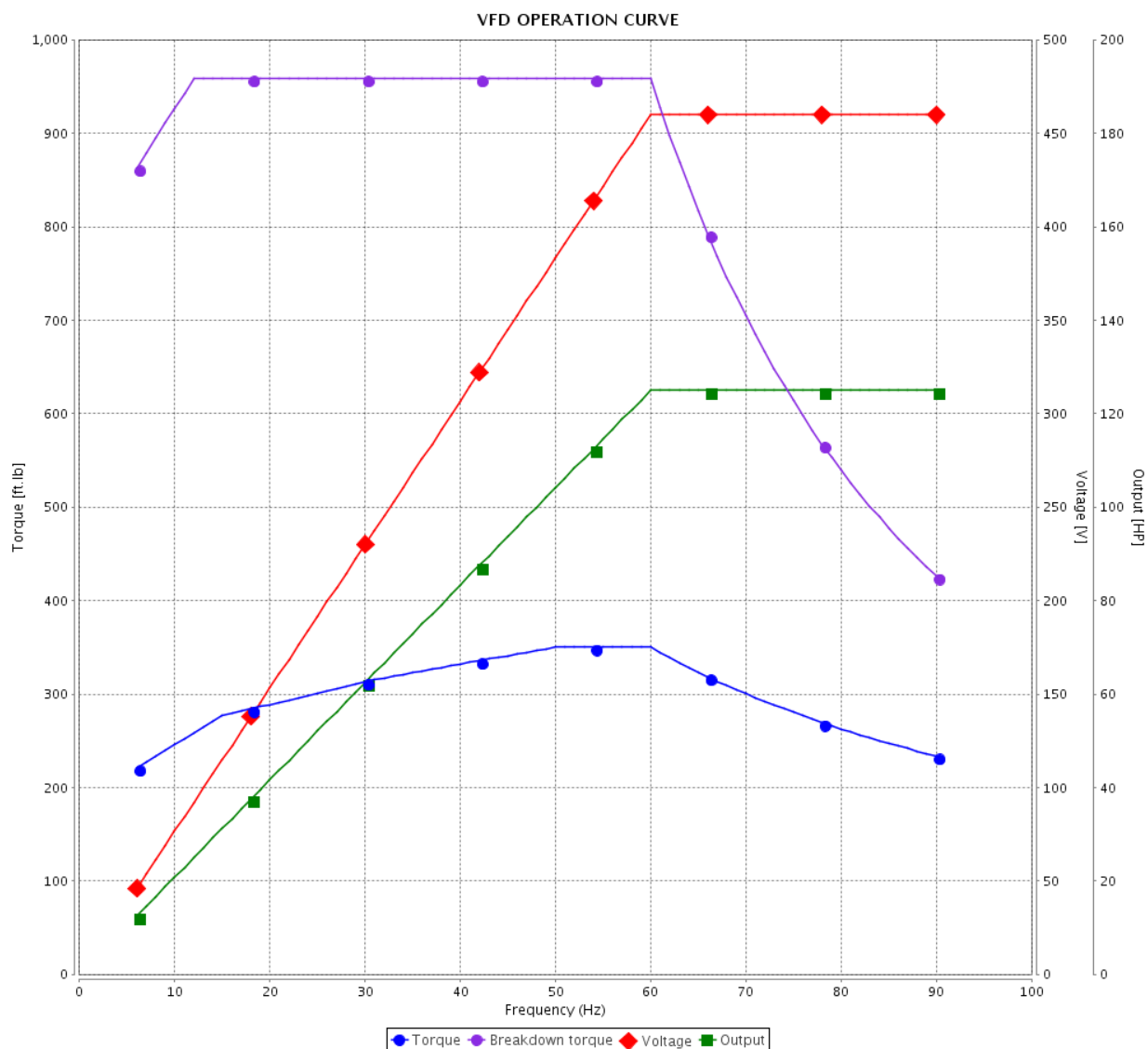


Customer :

Product line : W40 NEMA Premium Efficiency  
Three-Phase

Product code : 14272881

Catalog # : 12518OT3G405TC-W40



Performance : 460 V 60 Hz 4P

Rated current : 138 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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MODEL 125180T3G405TC-W40  
MADE IN BRAZIL  
14272881



IEC 60034-1  
MOD.T01#FOXON



For 60Hz use on PWM, VT 1000:1, CT 2:1, 1.0SF

PH 3	FR 404/5TC	HP(kW) 125(90)		Hz 60		PART-WINDING						WYE-DELTA					
V 460		A 138		IP23		START			RUN			START			RUN		
						 T12	 T10	 T11	 T12	 T10	 T11	 T12	 T10	 T11	 T12	 T10	 T11
						 T7	 T8	 T9	 T7	 T8	 T9	 T6	 T4	 T5	 T6	 T4	 T5
						 T6	 T4	 T5	 T6	 T4	 T5	 T7	 T8	 T9	 T7	 T8	 T9
						 T1	 T2	 T3	 T1	 T2	 T3	 T1	 T2	 T3	 T1	 T2	 T3
						 L1	 L2	 L3	 L1	 L2	 L3	 L1	 L2	 L3	 L1	 L2	 L3
ENCL ODP	DUTY	CONT.		INS. CL. F $\Delta$ T 80 K		 → 6316-C3(34g) → 6212-Z-C3(13g) MOBIL POLYREX EM 20000 h											
PF 0.86		DES B	CODE G	AMB. 40°C													
SF 1.25	SFA 173		ALT 1000 m.a.s.l.		1049 Lbs												
100HP 75kW 50Hz 380V 138A 1480RPM SF1.00 EFF 95.0% (IE3)																	