

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



Customer :					
Product line		: W40 NEMA Premium Efficiency Three-Phase		Product code : 14284972	
			Catalog # :	12518OT3G405TS-W40	
Frame : 404/5TS		Cooling method : IC01 - ODP			
Insulation class : F		Mounting : F-1			
Duty cycle : Cont.(S1)		Rotation <sup>1</sup> : Both (CW and CCW)			
Ambient temperature : -20°C to +40°C		Starting method : Direct On Line			
Altitude : 1000 m.a.s.l.		Approx. weight <sup>2</sup> : 1010 lb			
Protection degree : IP23		Moment of inertia (J) : 25.5 sq.ft.lb			
Design : B					
Output [HP]	125	100	100	100	
Poles	4	4	4	4	
Frequency [Hz]	60	50	50	50	
Rated voltage [V]	460	380	400	415	
Rated current [A]	138	138	133	129	
L. R. Amperes [A]	952	994	1024	1032	
LRC [A]	6.9x(Code G)	7.2x(Code H)	7.7x(Code H)	8.0x(Code J)	
No load current [A]	47.0	46.3	50.2	53.7	
Rated speed [RPM]	1780	1480	1480	1480	
Slip [%]	1.11	1.33	1.33	1.33	
Rated torque [ft.lb]	369	355	355	355	
Locked rotor torque [%]	270	240	270	290	
Breakdown torque [%]	260	260	300	320	
Service factor	1.25	1.00	1.00	1.00	
Temperature rise	80 K	80 K	80 K	80 K	
Locked rotor time	18s (cold) 10s (hot)	16s (cold) 9s (hot)	16s (cold) 9s (hot)	14s (cold) 8s (hot)	
Noise level <sup>2</sup>	69.0 dB(A)				
Efficiency (%)	25%	94.9	94.5	94.5	
	50%	95.0	94.6	94.6	
	75%	95.4	95.0	95.0	
	100%	95.4	95.0	95.0	
Power Factor	25%	0.50	0.50	0.46	
	50%	0.75	0.76	0.72	
	75%	0.83	0.84	0.82	
	100%	0.86	0.87	0.86	
Bearing type		<u>Drive end</u> 6314 C3	<u>Non drive end</u> 6212 Z C3	Foundation loads	
Sealing		Without	Without	Max. traction : 2900 lb	
Lubrication interval		Bearing Seal 20000 h	Bearing Seal 20000 h	Max. compression : 3910 lb	
Lubricant amount		27 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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# TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



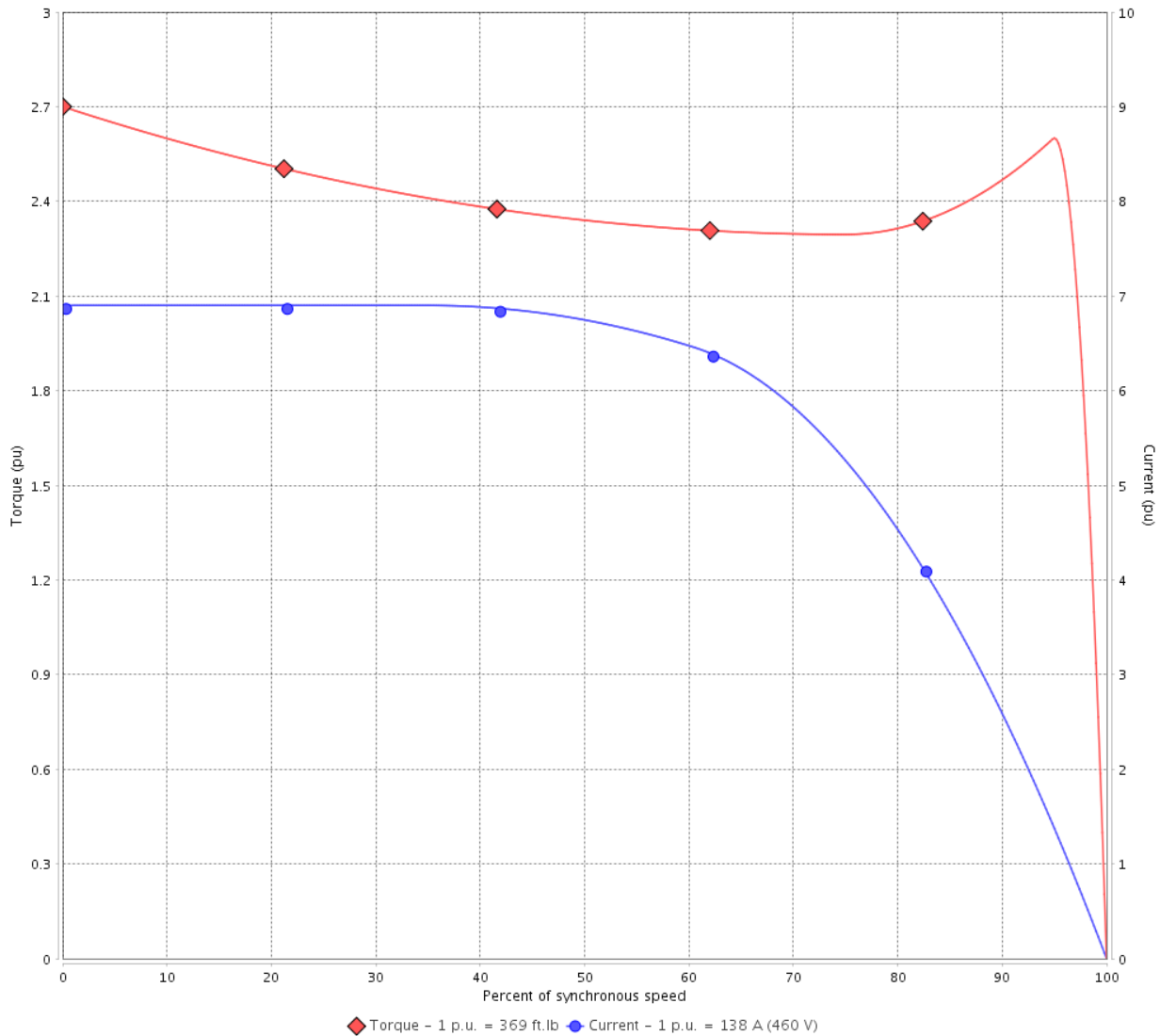
Customer :

Product line : W40 NEMA Premium Efficiency  
Three-Phase

Product code : 14284972

Catalog # : 12518OT3G405TS-W40

TORQUE AND CURRENT VS SPEED CURVE



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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# TORQUE AND CURRENT VS SPEED CURVE



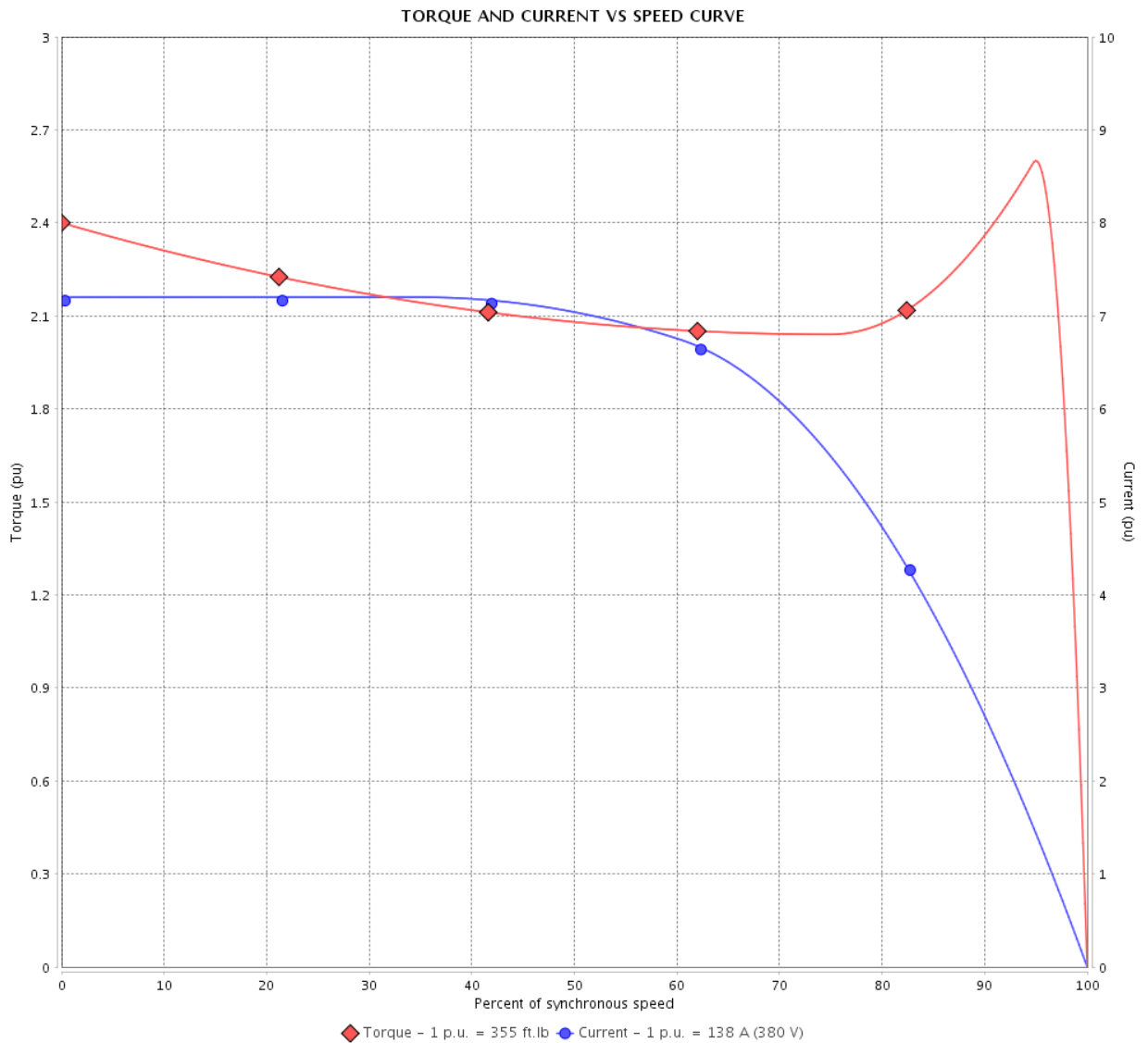
## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : W40 NEMA Premium Efficiency  
Three-Phase

Product code : 14284972

Catalog # : 12518OT3G405TS-W40



Performance : 380 V 50 Hz 4P IE3

Rated current	: 138 A	Moment of inertia (J)	: 25.5 sq.ft.lb
LRC	: 7.2	Duty cycle	: Cont.(S1)
Rated torque	: 355 ft.lb	Insulation class	: F
Locked rotor torque	: 240 %	Service factor	: 1.00
Breakdown torque	: 260 %	Temperature rise	: 80 K
Rated speed	: 1480 rpm	Design	: B

Locked rotor time : 16s (cold) 9s (hot)

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# TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



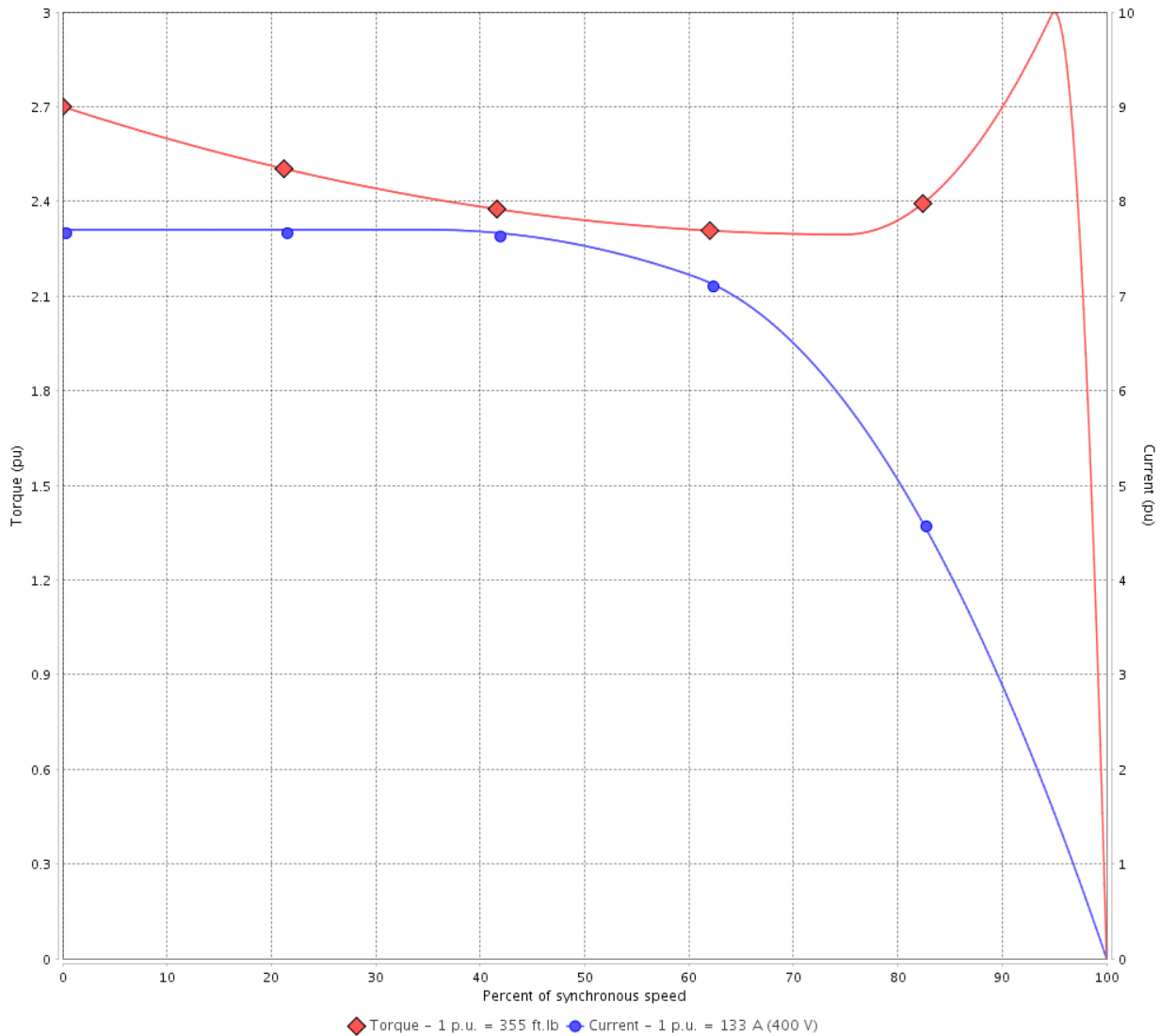
Customer :

Product line : W40 NEMA Premium Efficiency  
Three-Phase

Product code : 14284972

Catalog # : 12518OT3G405TS-W40

TORQUE AND CURRENT VS SPEED CURVE



Performance : 400 V 50 Hz 4P IE3

Rated current	: 133 A	Moment of inertia (J)	: 25.5 sq.ft.lb
LRC	: 7.7	Duty cycle	: Cont.(S1)
Rated torque	: 355 ft.lb	Insulation class	: F
Locked rotor torque	: 270 %	Service factor	: 1.00
Breakdown torque	: 300 %	Temperature rise	: 80 K
Rated speed	: 1480 rpm	Design	: B

Locked rotor time : 16s (cold) 9s (hot)

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# TORQUE AND CURRENT VS SPEED CURVE



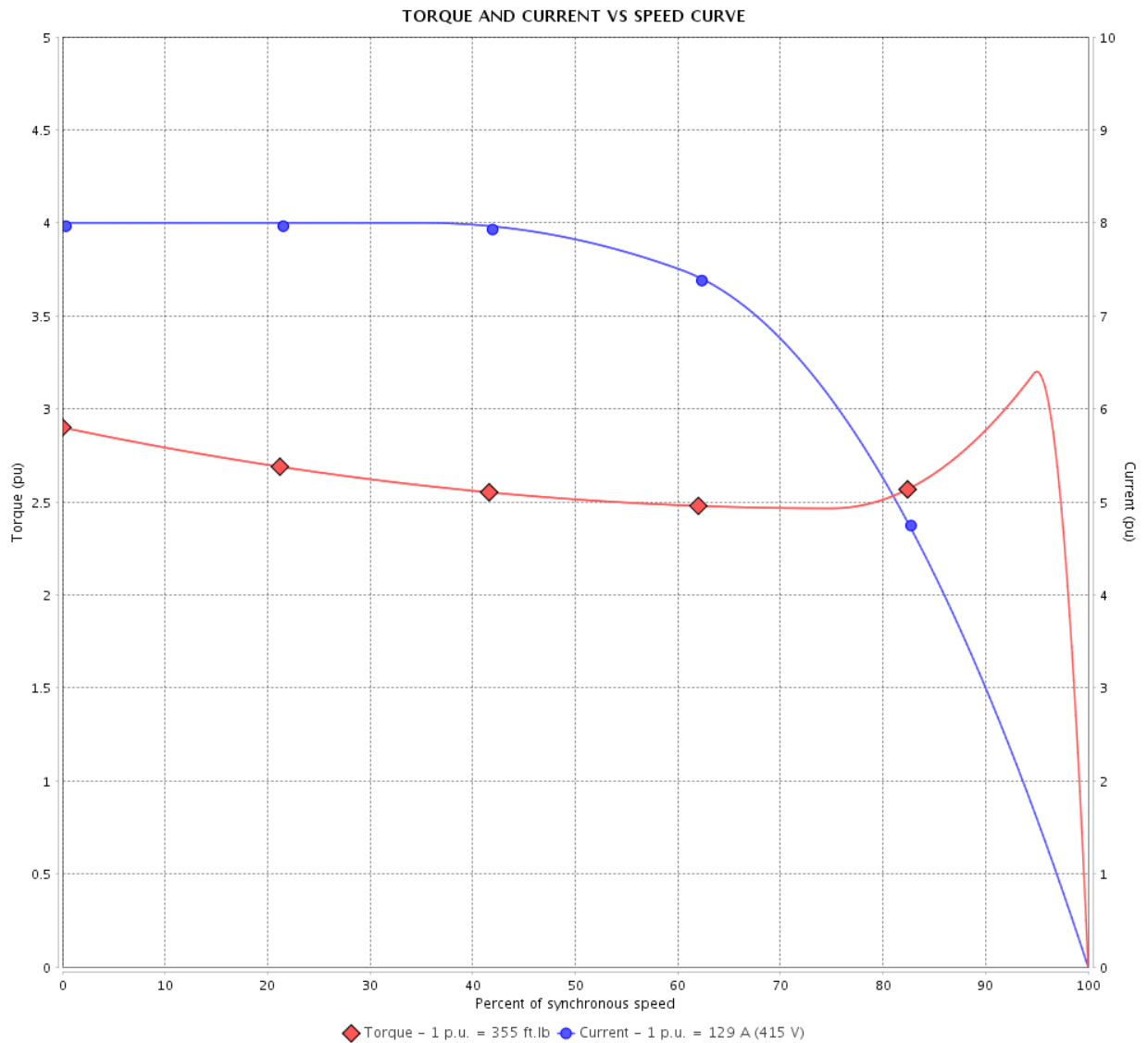
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Product code : 14284972

Catalog # : 12518OT3G405TS-W40



Performance : 415 V 50 Hz 4P IE3

Rated current	: 129 A	Moment of inertia (J)	: 25.5 sq.ft.lb
LRC	: 8.0	Duty cycle	: Cont.(S1)
Rated torque	: 355 ft.lb	Insulation class	: F
Locked rotor torque	: 290 %	Service factor	: 1.00
Breakdown torque	: 320 %	Temperature rise	: 80 K
Rated speed	: 1480 rpm	Design	: B

Locked rotor time : 14s (cold) 8s (hot)

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# LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage



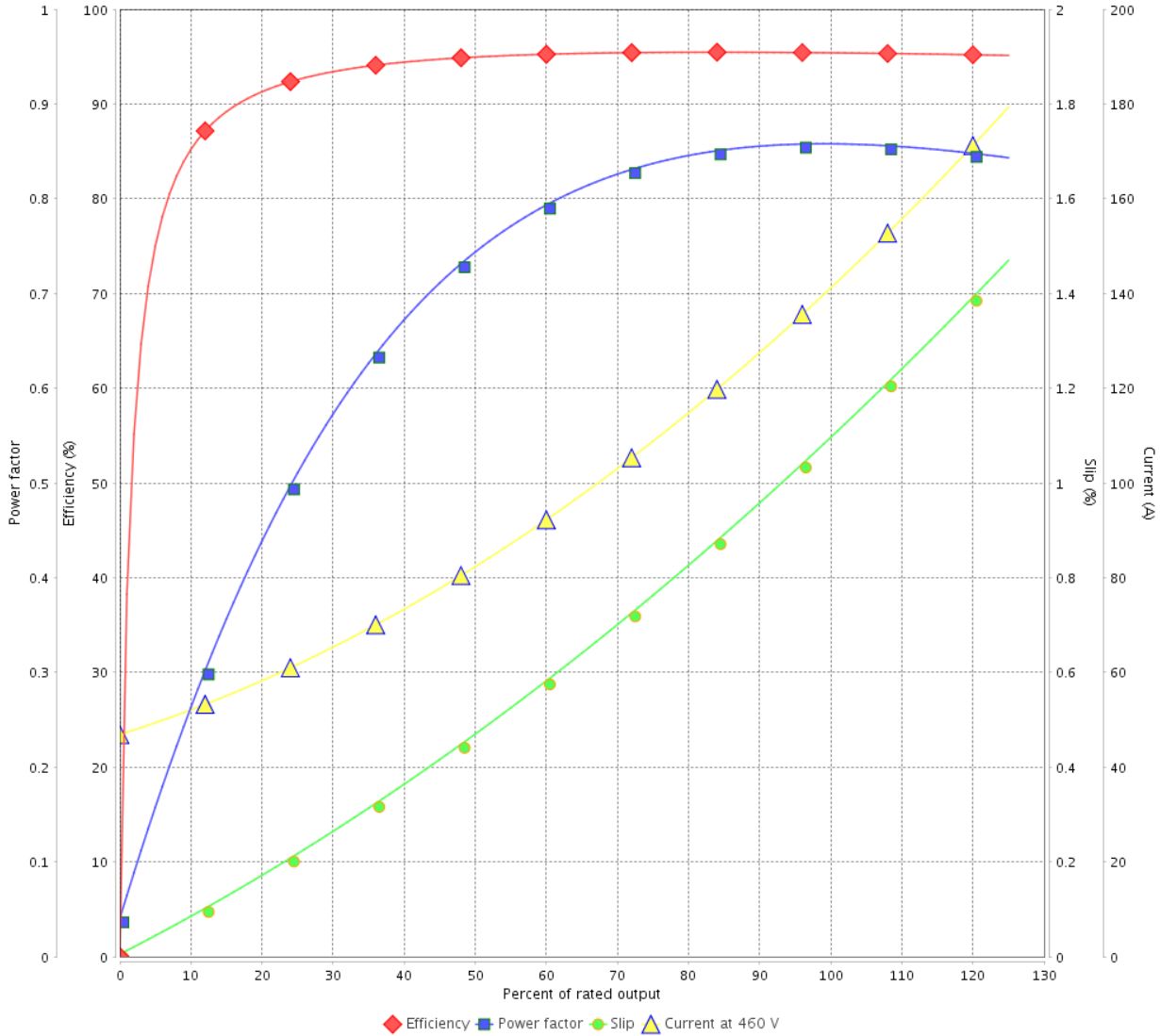
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Product code : 14284972

Catalog # : 12518OT3G405TS-W40

LOAD PERFORMANCE CURVE



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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# LOAD PERFORMANCE CURVE

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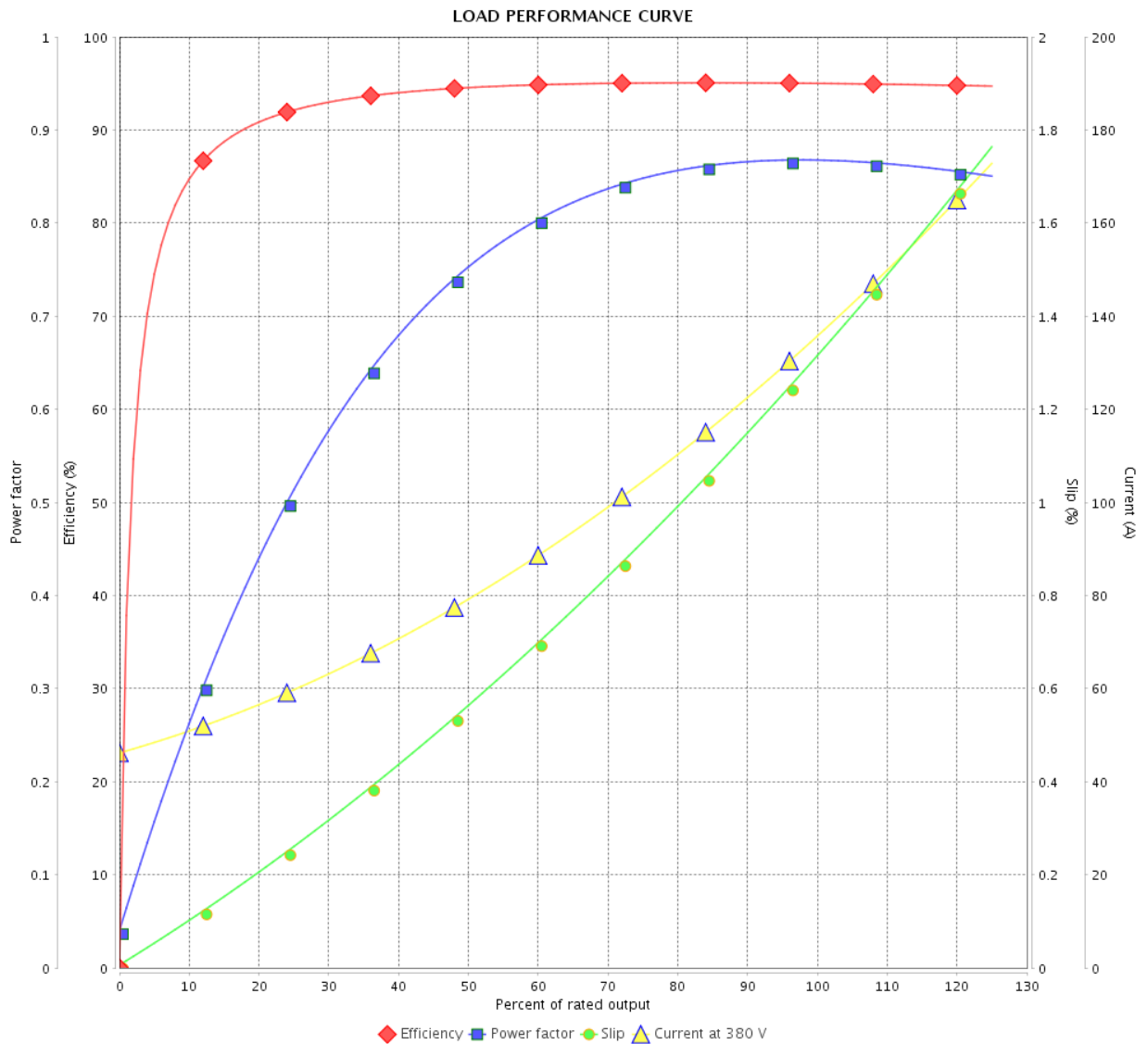


Customer :

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Product code : 14284972

Catalog # : 12518OT3G405TS-W40



Performance : 380 V 50 Hz 4P IE3

Rated current : 138 A  
 LRC : 7.2  
 Rated torque : 355 ft.lb  
 Locked rotor torque : 240 %  
 Breakdown torque : 260 %  
 Rated speed : 1480 rpm

Moment of inertia (J) : 25.5 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 80 K  
 Design : B

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# LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage

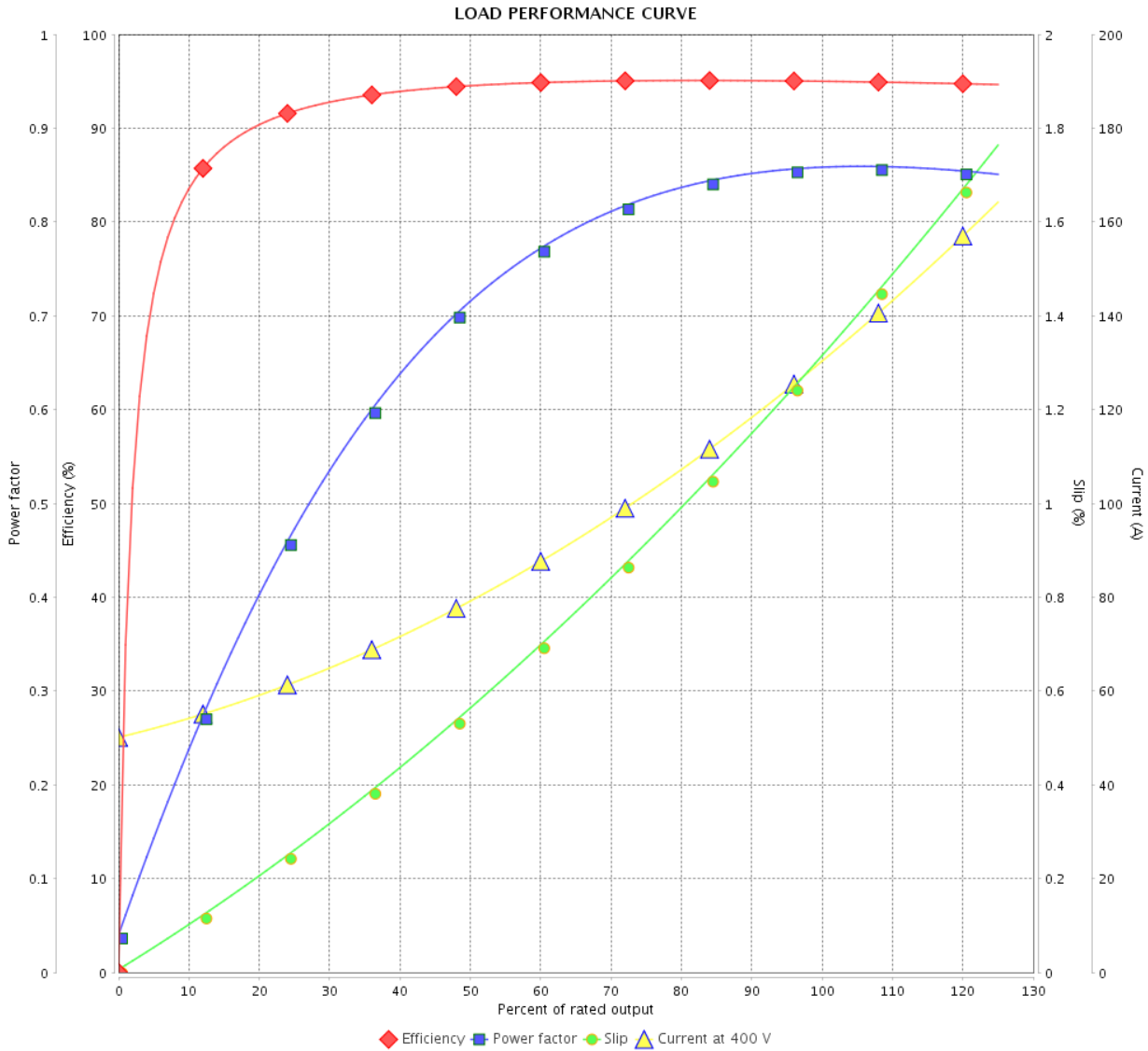


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Product code : 14284972

Catalog # : 12518OT3G405TS-W40



Performance : 400 V 50 Hz 4P IE3

Rated current : 133 A  
 LRC : 7.7  
 Rated torque : 355 ft.lb  
 Locked rotor torque : 270 %  
 Breakdown torque : 300 %  
 Rated speed : 1480 rpm

Moment of inertia (J) : 25.5 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 80 K  
 Design : B

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# LOAD PERFORMANCE CURVE

## Three Phase Induction Motor - Squirrel Cage

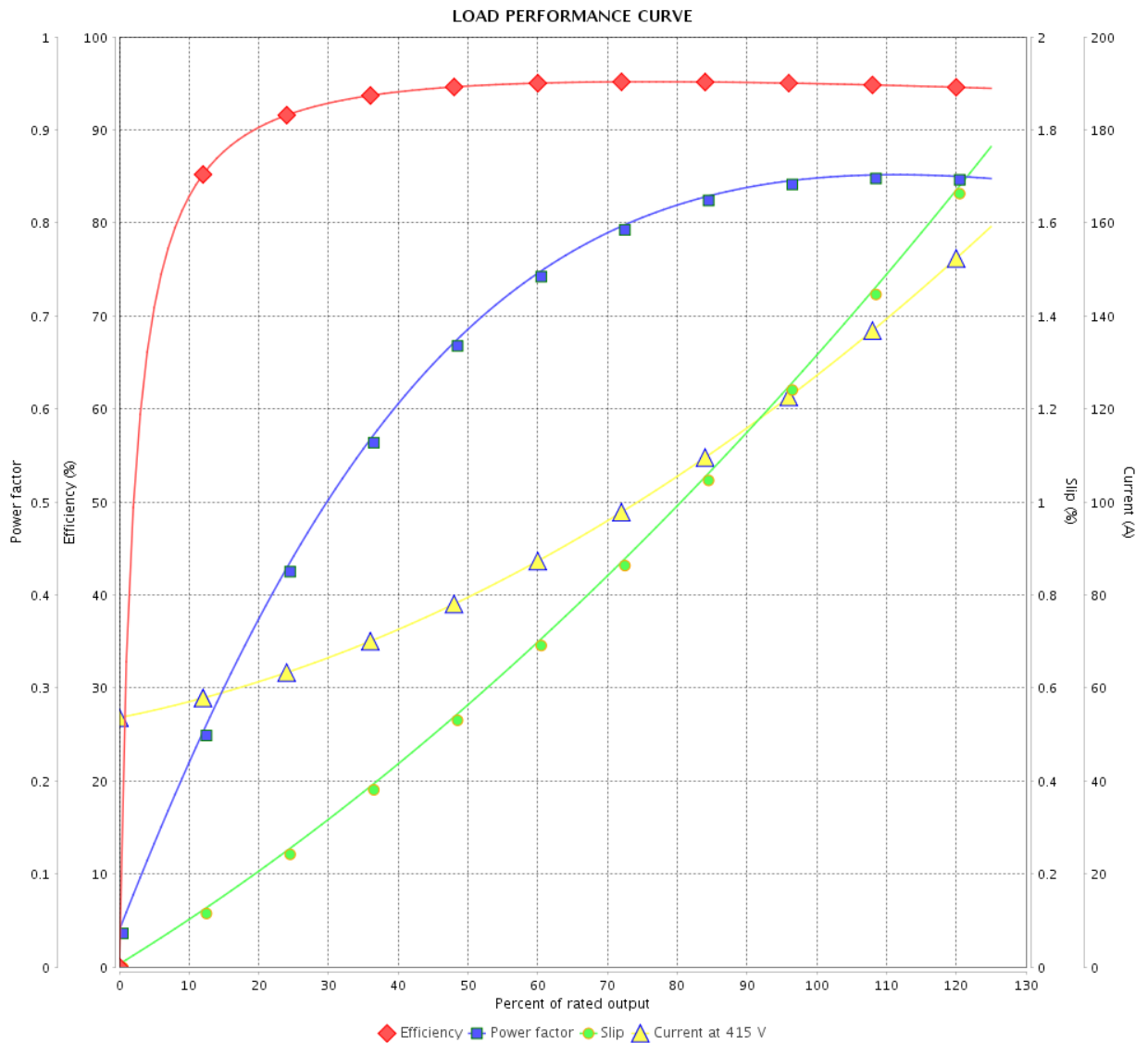


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 Breakdown torque : 320 %  
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 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 80 K  
 Design : B

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# THERMAL LIMIT CURVE



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Heating constant

Cooling constant

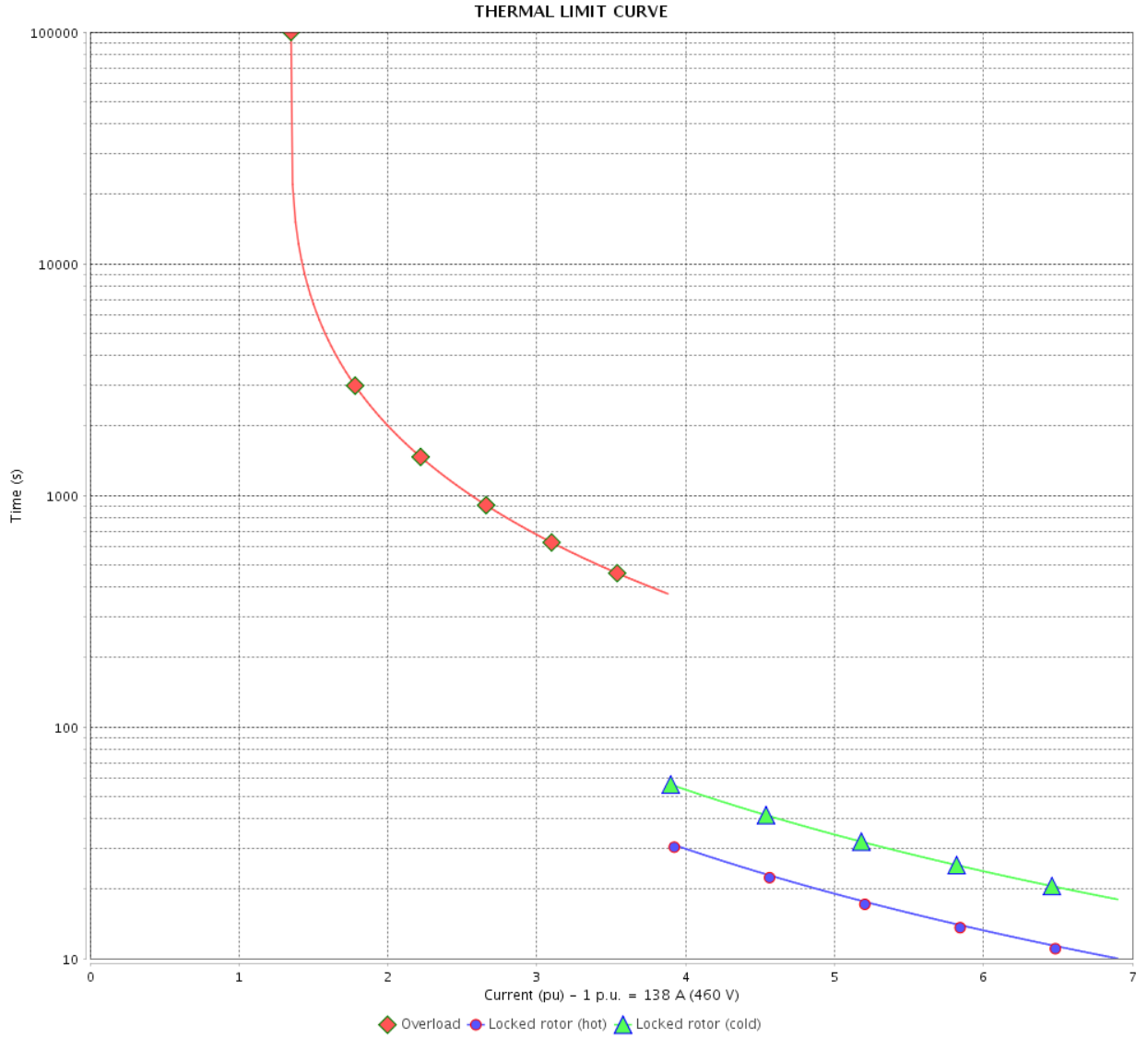
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Performance : 380 V 50 Hz 4P IE3

Rated current	: 138 A	Moment of inertia (J)	: 25.5 sq.ft.lb
LRC	: 7.2	Duty cycle	: Cont.(S1)
Rated torque	: 355 ft.lb	Insulation class	: F
Locked rotor torque	: 240 %	Service factor	: 1.00
Breakdown torque	: 260 %	Temperature rise	: 80 K
Rated speed	: 1480 rpm	Design	: B

Heating constant

Cooling constant

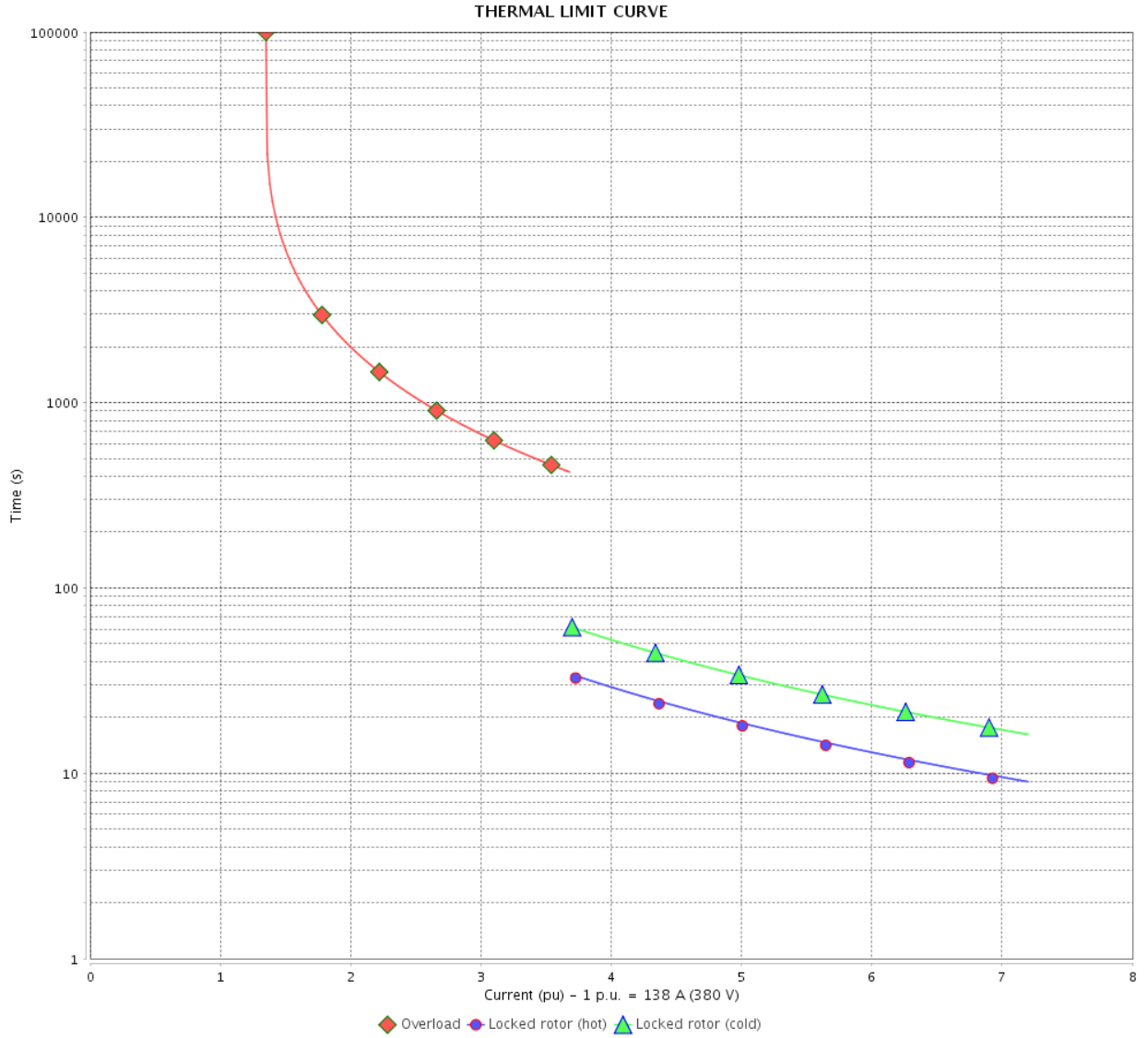
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Cooling constant

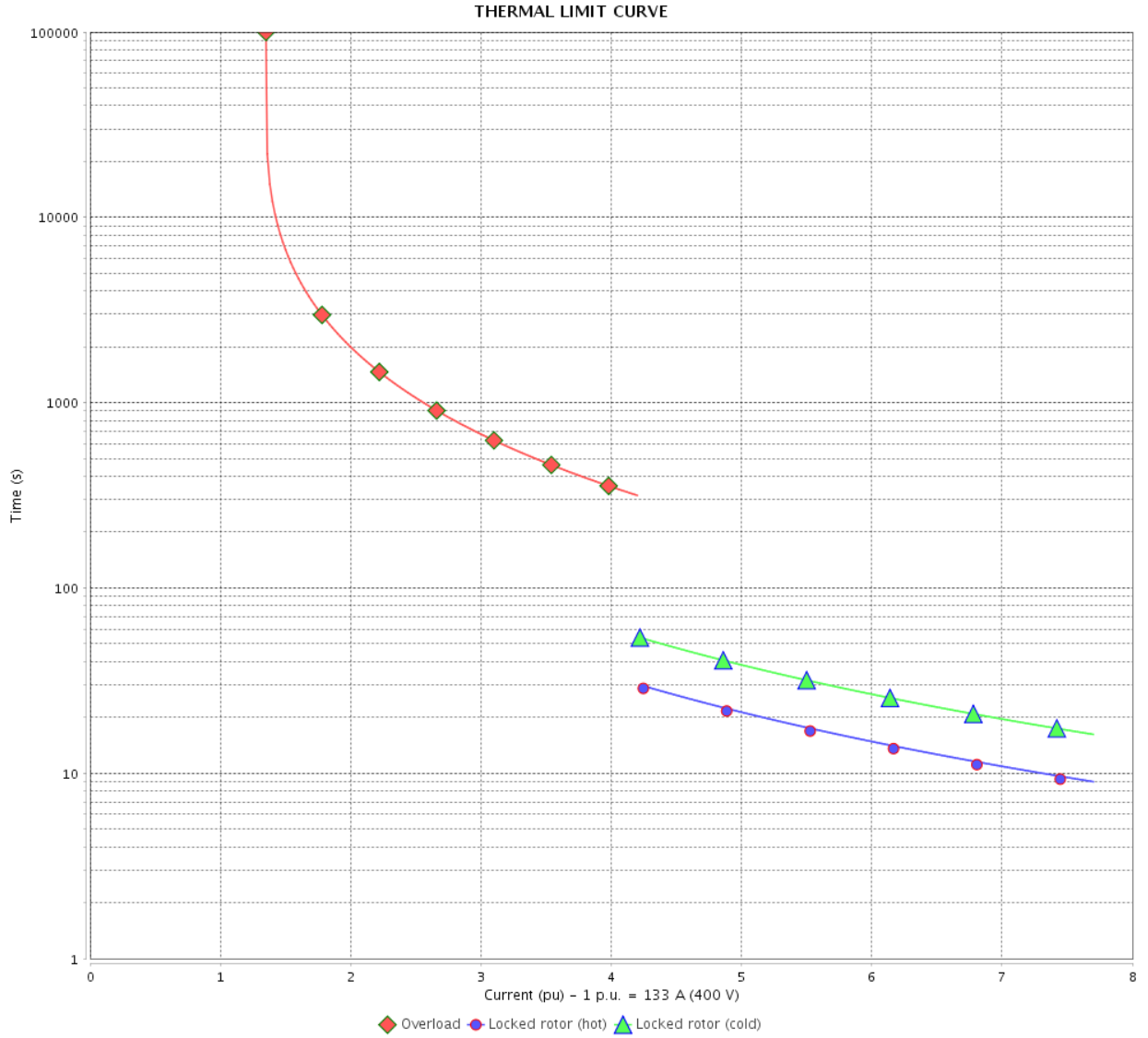
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Catalog # : 12518OT3G405TS-W40

Performance : 415 V 50 Hz 4P IE3

Rated current	: 129 A	Moment of inertia (J)	: 25.5 sq.ft.lb
LRC	: 8.0	Duty cycle	: Cont.(S1)
Rated torque	: 355 ft.lb	Insulation class	: F
Locked rotor torque	: 290 %	Service factor	: 1.00
Breakdown torque	: 320 %	Temperature rise	: 80 K
Rated speed	: 1480 rpm	Design	: B

Heating constant

Cooling constant

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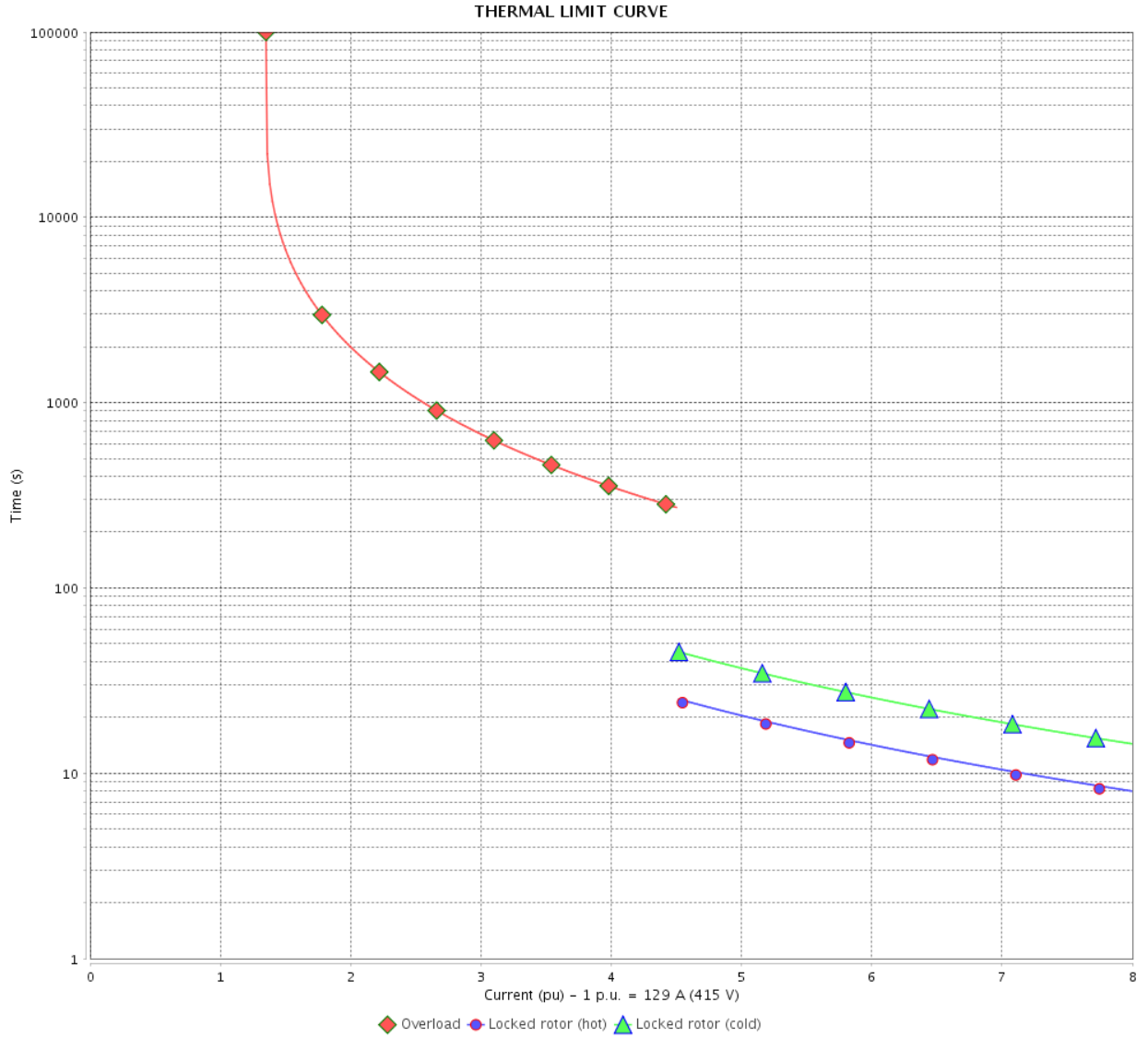


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# VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

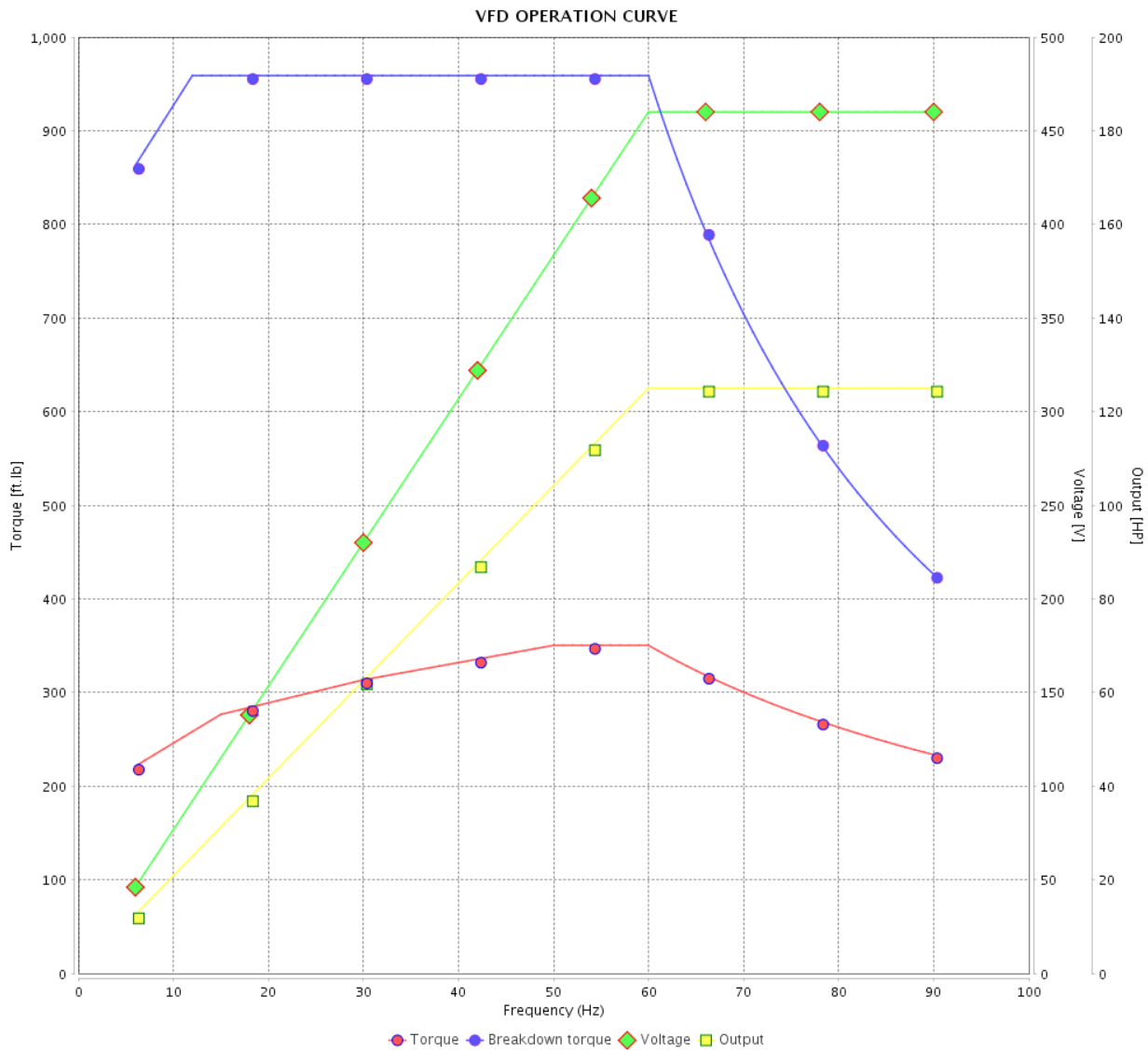


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Performance : 460 V 60 Hz 4P

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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# VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

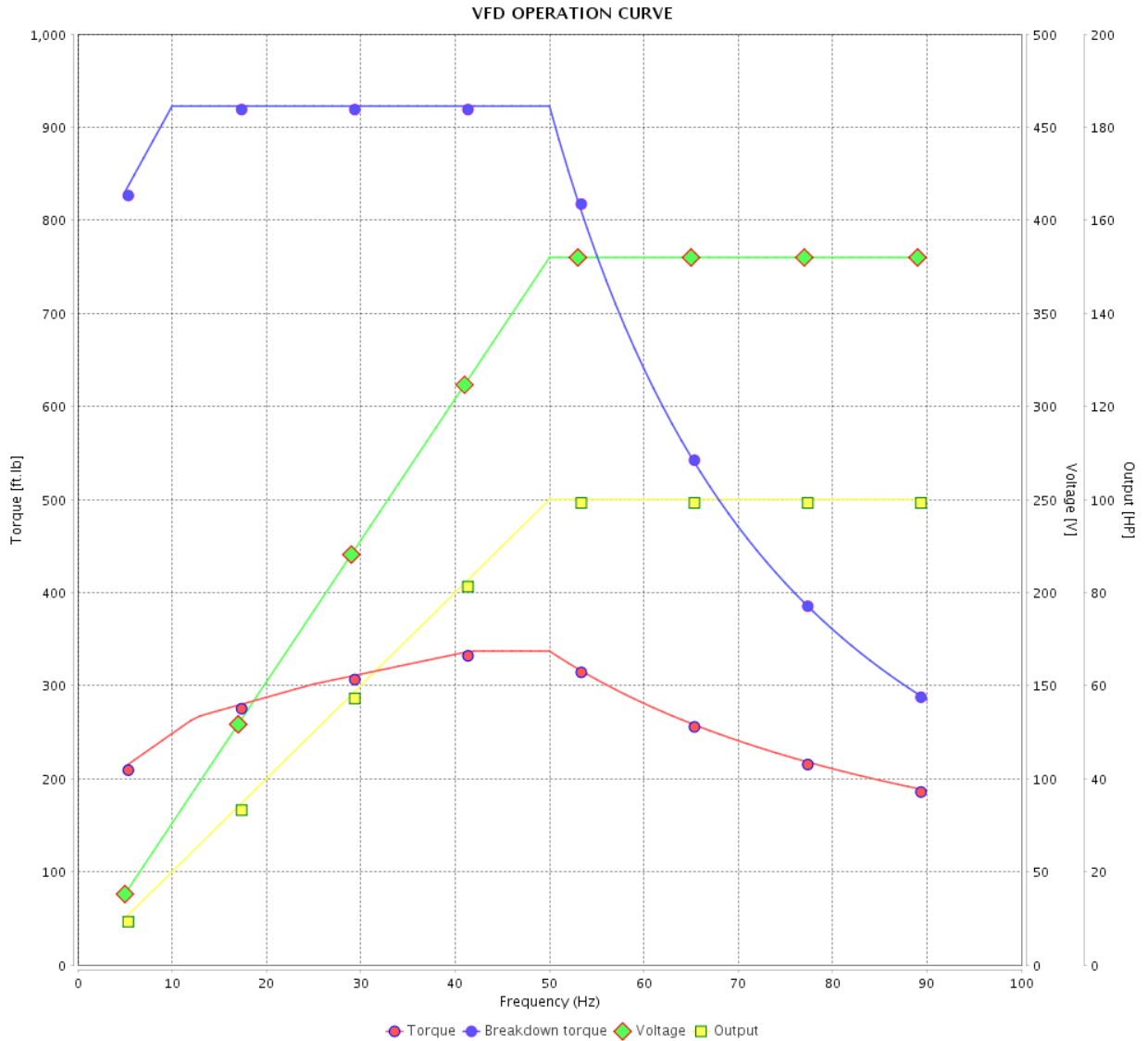


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Product code : 14284972

Catalog # : 12518OT3G405TS-W40



Performance : 380 V 50 Hz 4P IE3

Rated current : 138 A  
LRC : 7.2  
Rated torque : 355 ft.lb  
Locked rotor torque : 240 %  
Breakdown torque : 260 %  
Rated speed : 1480 rpm

Moment of inertia (J) : 25.5 sq.ft.lb  
Duty cycle : Cont.(S1)  
Insulation class : F  
Service factor : 1.00  
Temperature rise : 80 K  
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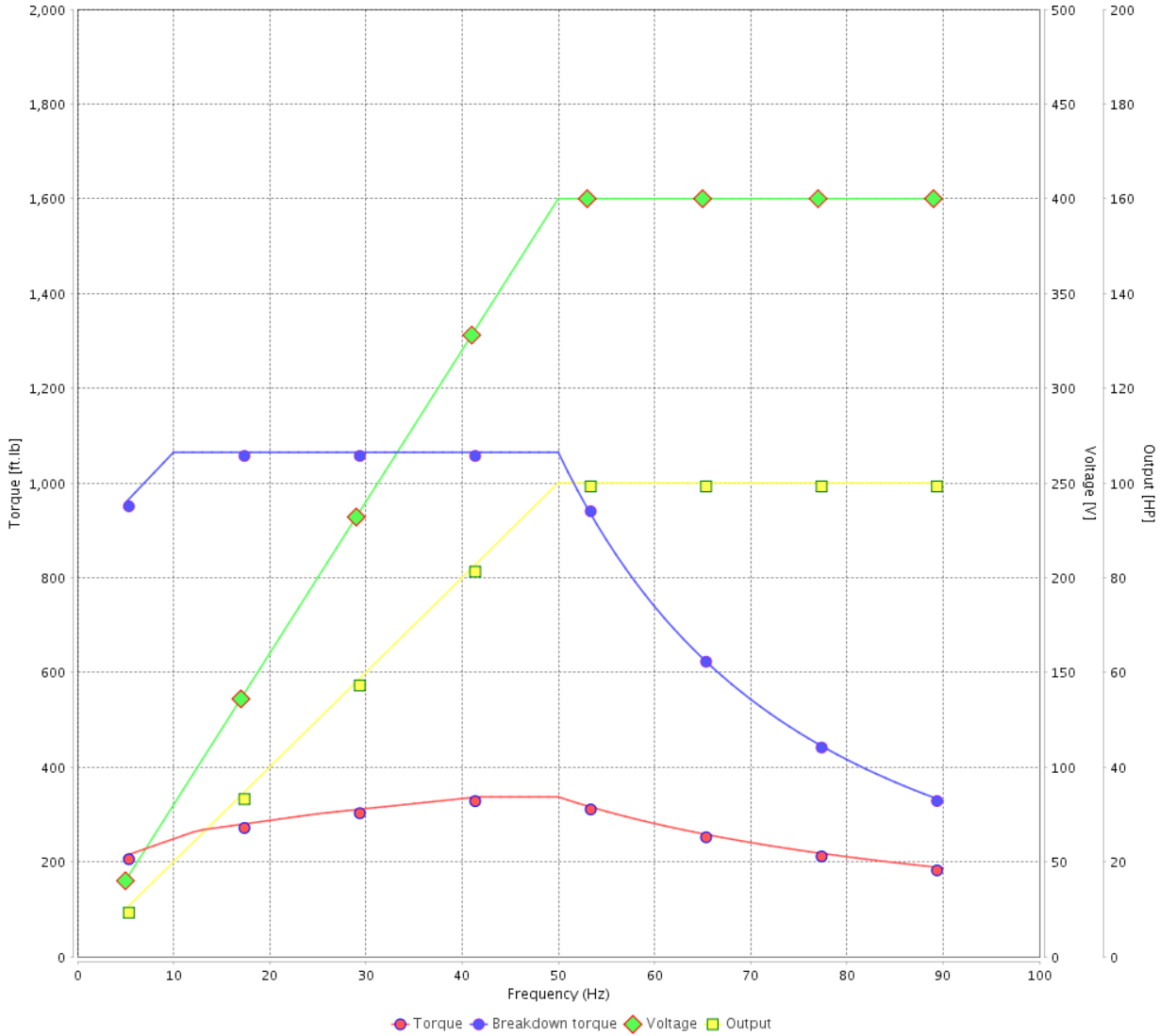
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VFD OPERATION CURVE



Performance : 400 V 50 Hz 4P IE3

Rated current : 133 A  
LRC : 7.7  
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Locked rotor torque : 270 %  
Breakdown torque : 300 %  
Rated speed : 1480 rpm

Moment of inertia (J) : 25.5 sq.ft.lb  
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Service factor : 1.00  
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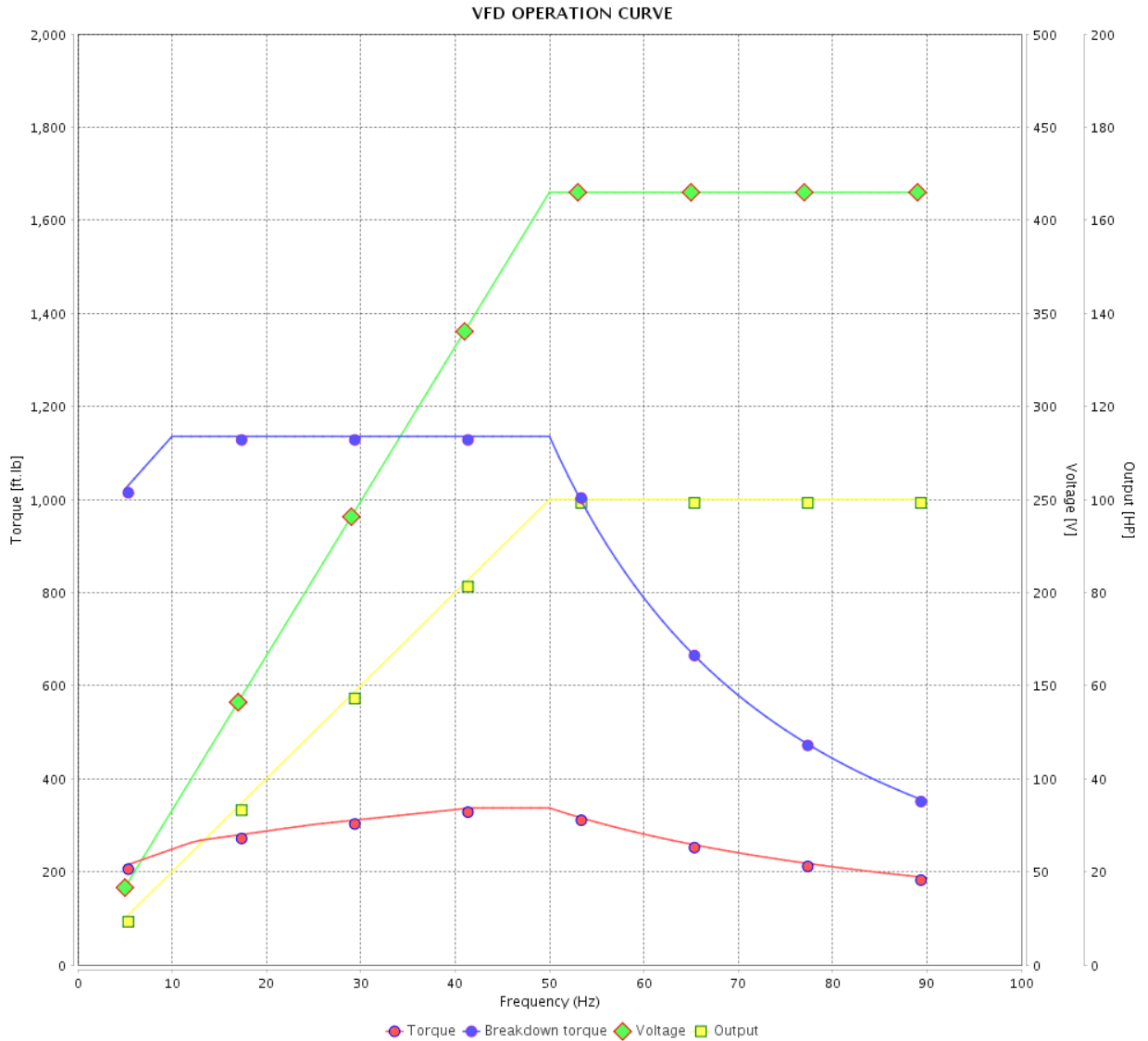


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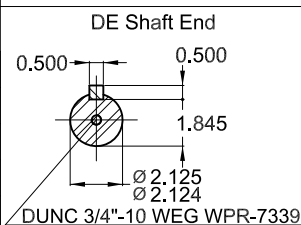
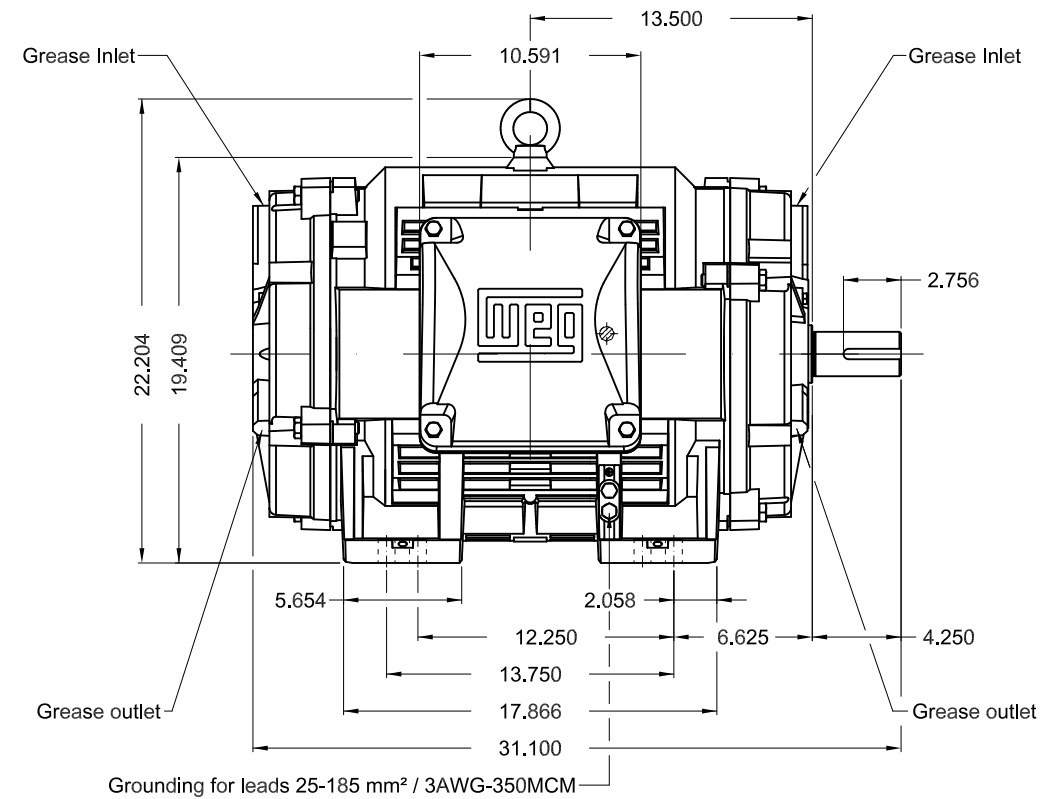
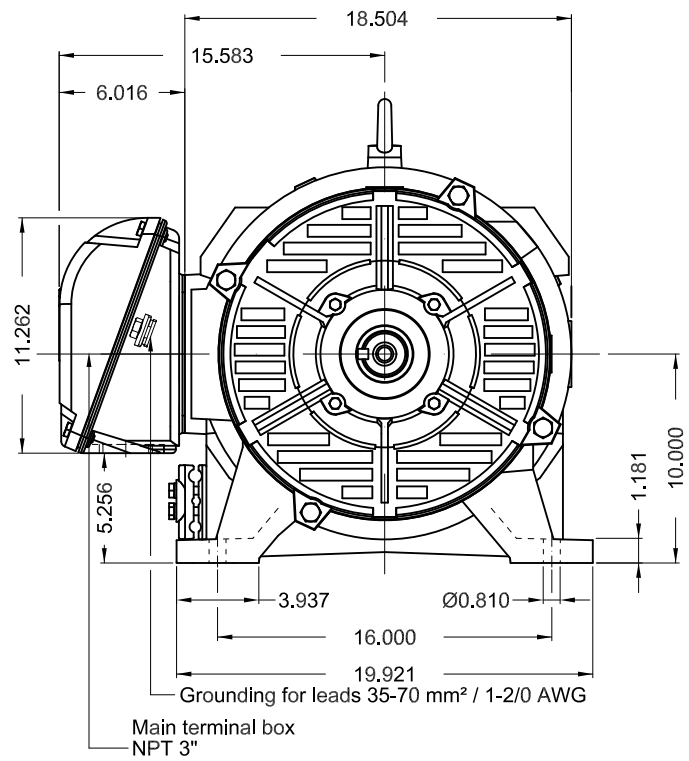


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TS shaft end  
Color RAL 5009  
Painting plan 203A  
Mounting NEMA F-1  
Mounting B3R(D)

125 HP 04 Poles 60 Hz

A

1:9

ECM	LOC	SUMMARY OF MODIFICATIONS	EXECUTED	CHECKED	RELEASED	DATE	VER
EXECUTED	PIRWBUSER	THREE PH. MOTOR W40 PREM. EFF.					
CHECKED		FRAME 404/5TS IP23 ODP					
RELEASED							
REL DT.	WMO	Jaragua do Sul	Product Engineering	SHEET	1 / 1		

PREVIEW  
WDD



MODEL 125180T3G405TS-W40  
MADE IN BRAZIL  
14284972

**WEG** **W40 NEMA**  
**CC029A Premium**  
Inverter Duty Motor

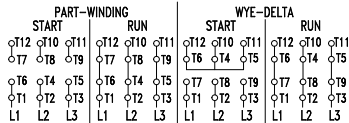



IEC 60034-1  
MOD.T01#FOXON



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

PH 3	FR 404/5TS	HP(kW) 125(90)	Hz 60
V 460	A 138	IP23	
NEMA NOM EFF	95.4 %	RPM 1780	
ENCL ODP	DUTY CONT.	INS. CL. F $\Delta T$ 80 K	
PF 0.86	DES B	CODE G	AMB. 40°C
SF 1.25	SFA 173	ALT 1000 m.a.s.l.	
100HP 75kW 50Hz 380V 138A 1480RPM SF1.00 EFF 95.0% (IE3)			



 → 6314-C3(27g) MOBIL POLYREX EM  
→ 6212-Z-C3(13g) 20000 h

1012 Lbs