

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



Customer					
Product line		: W40 NEMA Premium Efficiency Three-Phase		Product code : 14272925 Catalog # : 12518OT3E405T-W40G	
Frame		: 404/5T		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> : 1030 lb	
Protection degree		: IP23		Moment of inertia (J) : 25.5 sq.ft.lb	
Design		: B			
Output [HP]	125	100	100	100	100
Poles	4	4	4	4	4
Frequency [Hz]	60	50	50	50	50
Rated voltage [V]	230/460	380	400	415	415
Rated current [A]	276/138	138	133	129	129
L. R. Amperes [A]	1904/952	994	1024	1032	1032
LRC [A]	6.9x(Code G)	7.2x(Code H)	7.7x(Code H)	8.0x(Code J)	8.0x(Code J)
No load current [A]	94.0/47.0	46.3	50.2	53.7	53.7
Rated speed [RPM]	1780	1480	1480	1480	1480
Slip [%]	1.11	1.33	1.33	1.33	1.33
Rated torque [ft.lb]	369	355	355	355	355
Locked rotor torque [%]	270	240	270	290	290
Breakdown torque [%]	260	260	300	320	320
Service factor	1.25	1.00	1.00	1.00	1.00
Temperature rise	80 K	80 K	80 K	80 K	80 K
Locked rotor time	18s (cold) 10s (hot)	16s (cold) 9s (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	94.8
	50%	95.0	94.6	94.6	94.9
	75%	95.4	95.0	95.0	95.0
	100%	95.4	95.0	95.0	95.0
Power Factor	25%	0.50	0.50	0.46	0.43
	50%	0.75	0.76	0.72	0.69
	75%	0.83	0.84	0.82	0.80
	100%	0.86	0.87	0.86	0.85
Bearing type		Drive end : 6316 C3	Non drive end : 6212 Z C3	Foundation loads	
Sealing		: Without	: Without	Max. traction : 2890 lb	
Lubrication interval		: 20000 h	: 20000 h	Max. compression : 3920 lb	
Lubricant amount		: 34 g	: 13 g		
Lubricant type		: Mobil Polyrex EM			
Notes USABLE @208V 305A SF 1.15 SFA 351A					
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



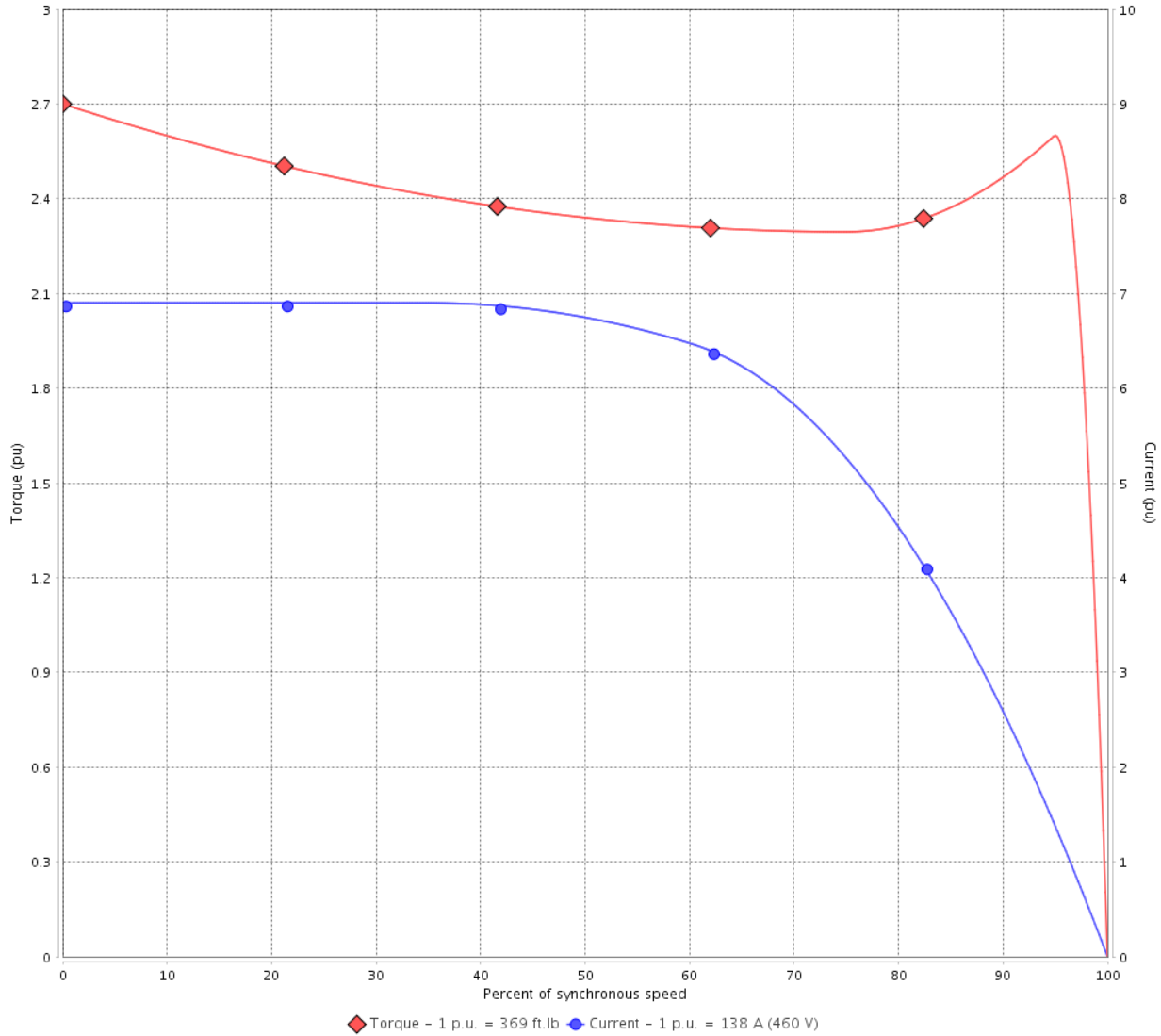
Customer :

Product line : W40 NEMA Premium Efficiency  
Three-Phase

Product code : 14272925

Catalog # : 12518OT3E405T-W40G

TORQUE AND CURRENT VS SPEED CURVE



Performance : 230/460 V 60 Hz 4P

Rated current	: 276/138 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



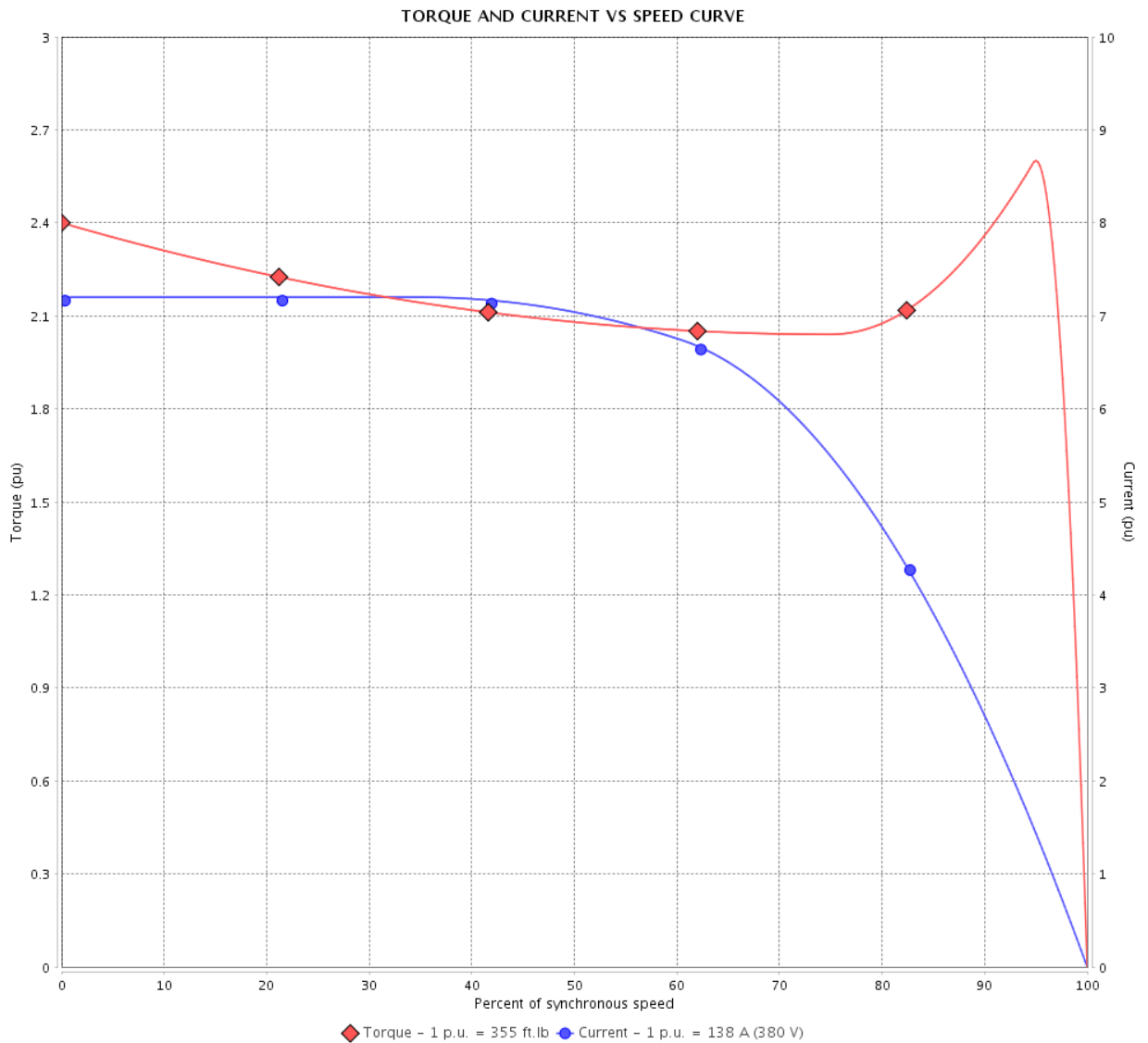
## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : W40 NEMA Premium Efficiency  
Three-Phase

Product code : 14272925

Catalog # : 12518OT3E405T-W40G



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



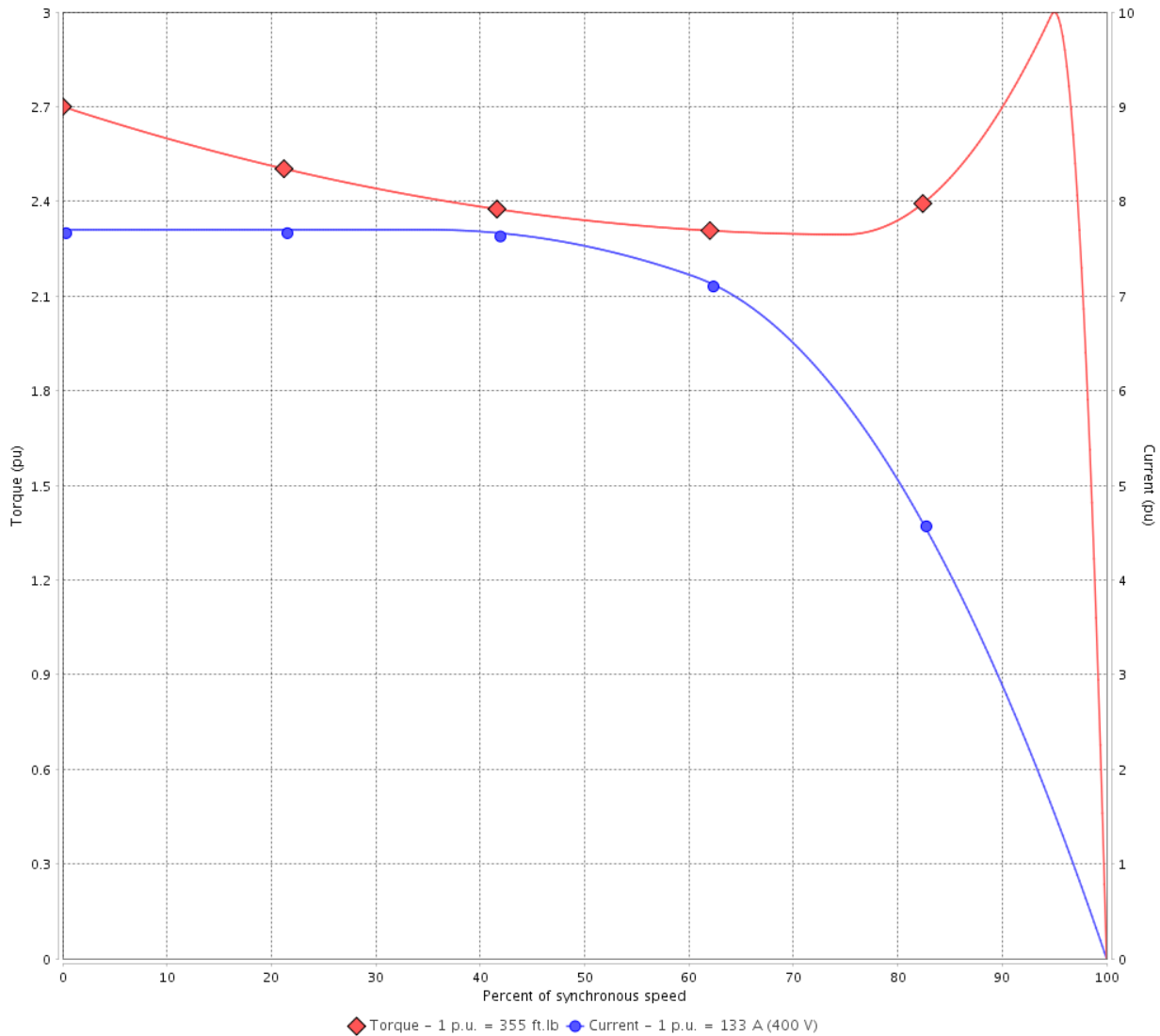
Customer :

Product line : W40 NEMA Premium Efficiency  
Three-Phase

Product code : 14272925

Catalog # : 12518OT3E405T-W40G

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



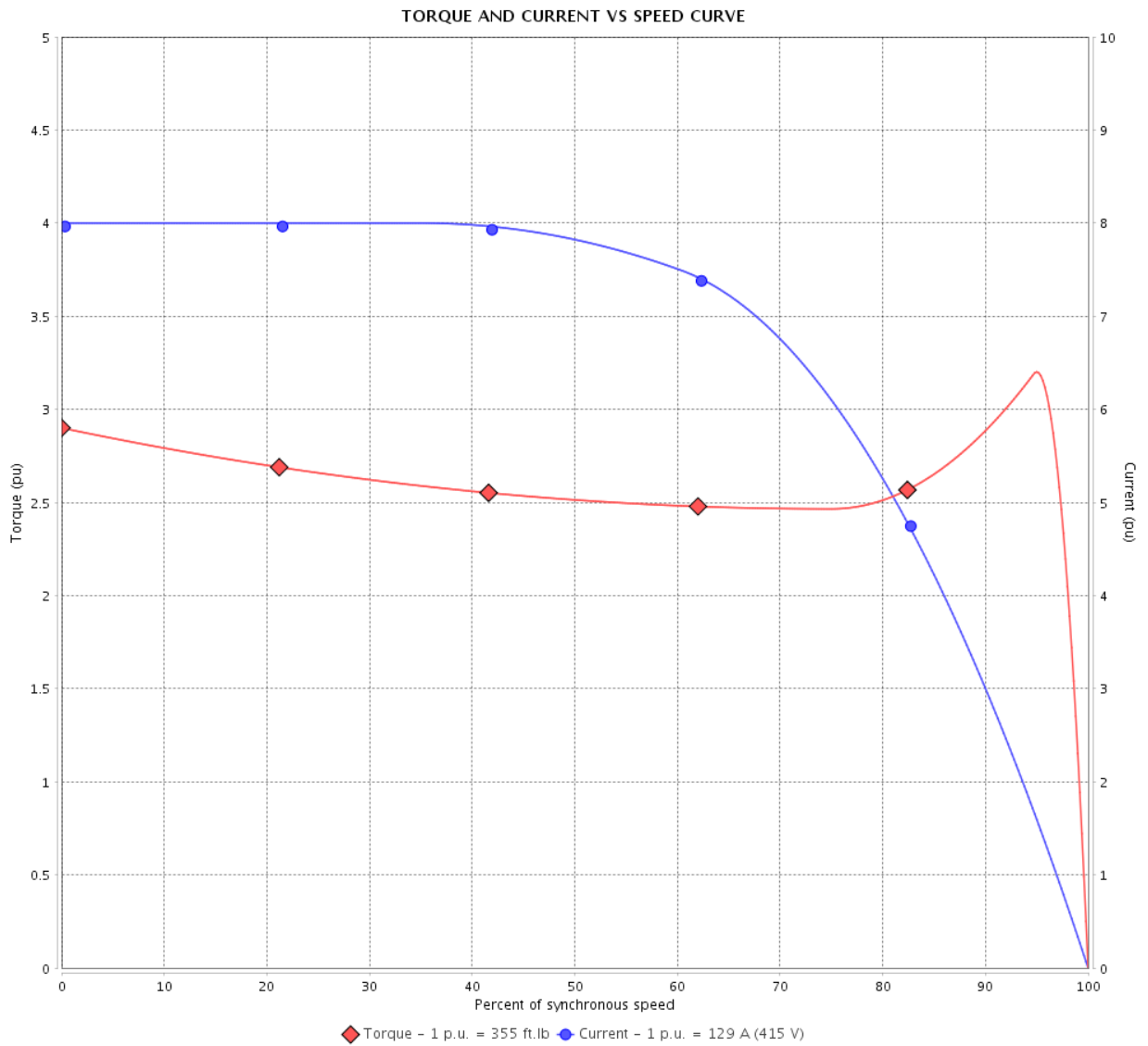
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Customer :

Product line : W40 NEMA Premium Efficiency  
Three-Phase

Product code : 14272925

Catalog # : 12518OT3E405T-W40G



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



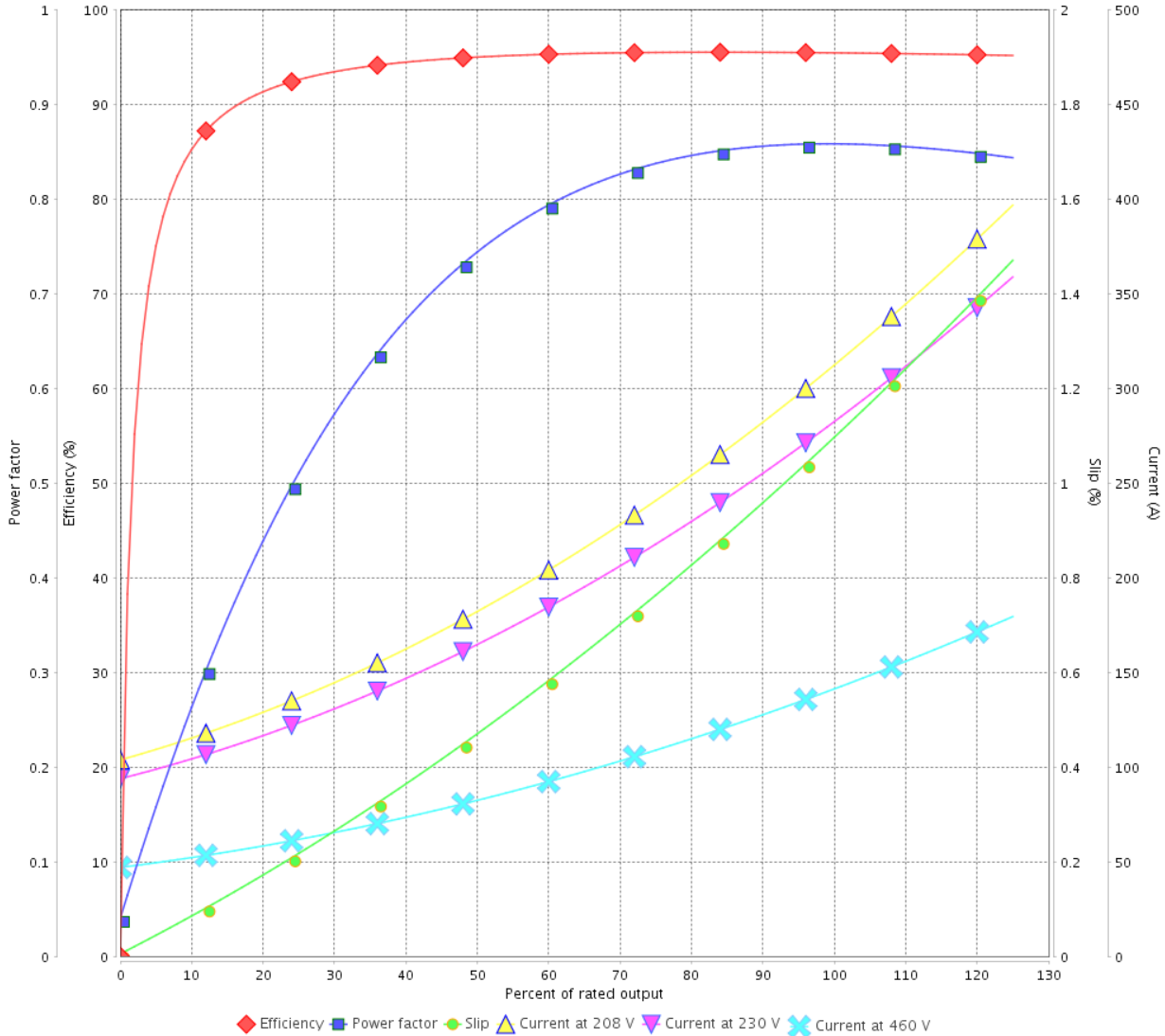
Customer :

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Product code : 14272925

Catalog # : 12518OT3E405T-W40G

LOAD PERFORMANCE CURVE



Performance : 230/460 V 60 Hz 4P

Rated current : 276/138 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

## Three Phase Induction Motor - Squirrel Cage

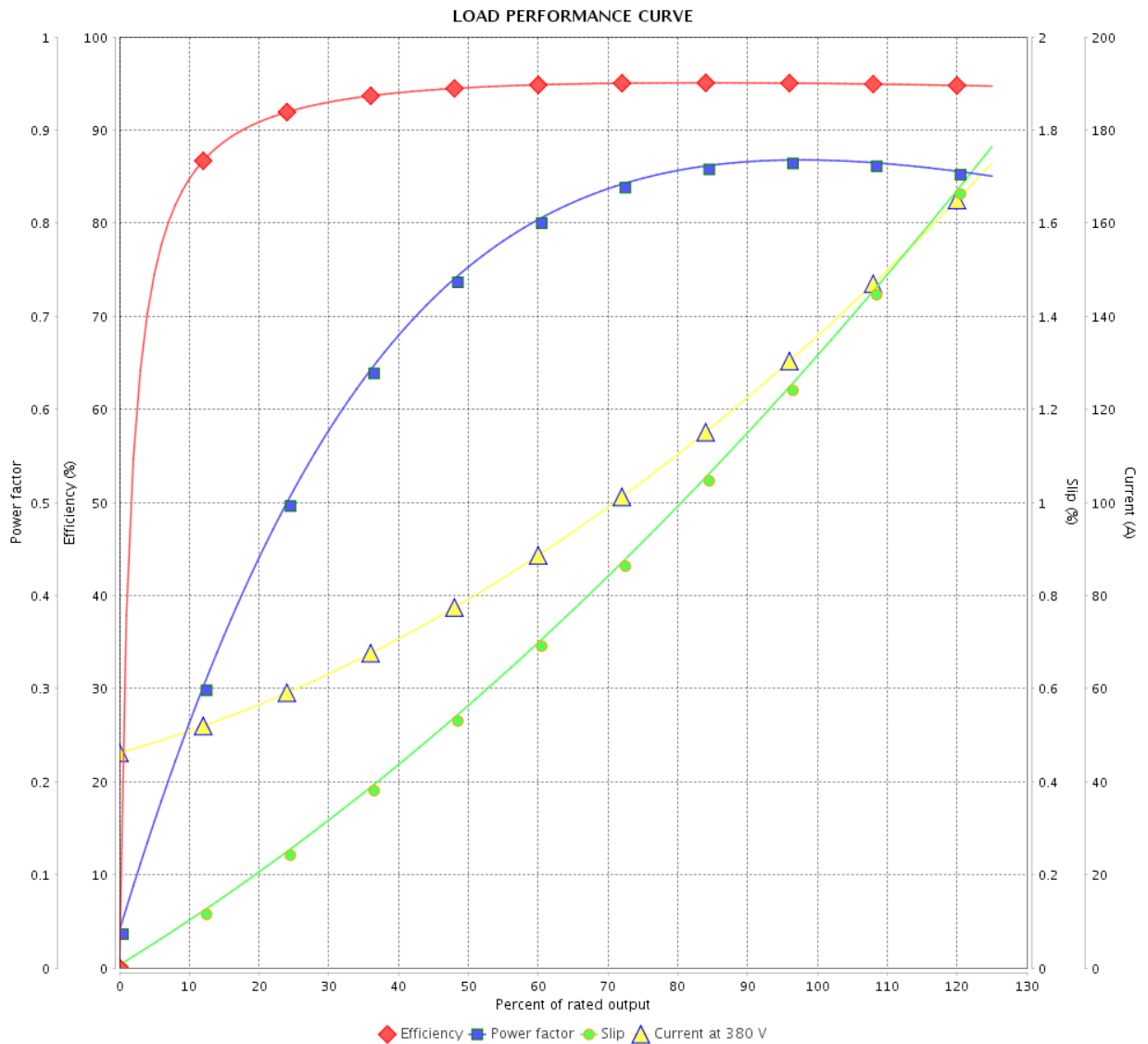


Customer :

Product line : W40 NEMA Premium Efficiency Three-Phase

Product code : 14272925

Catalog # : 12518OT3E405T-W40G



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

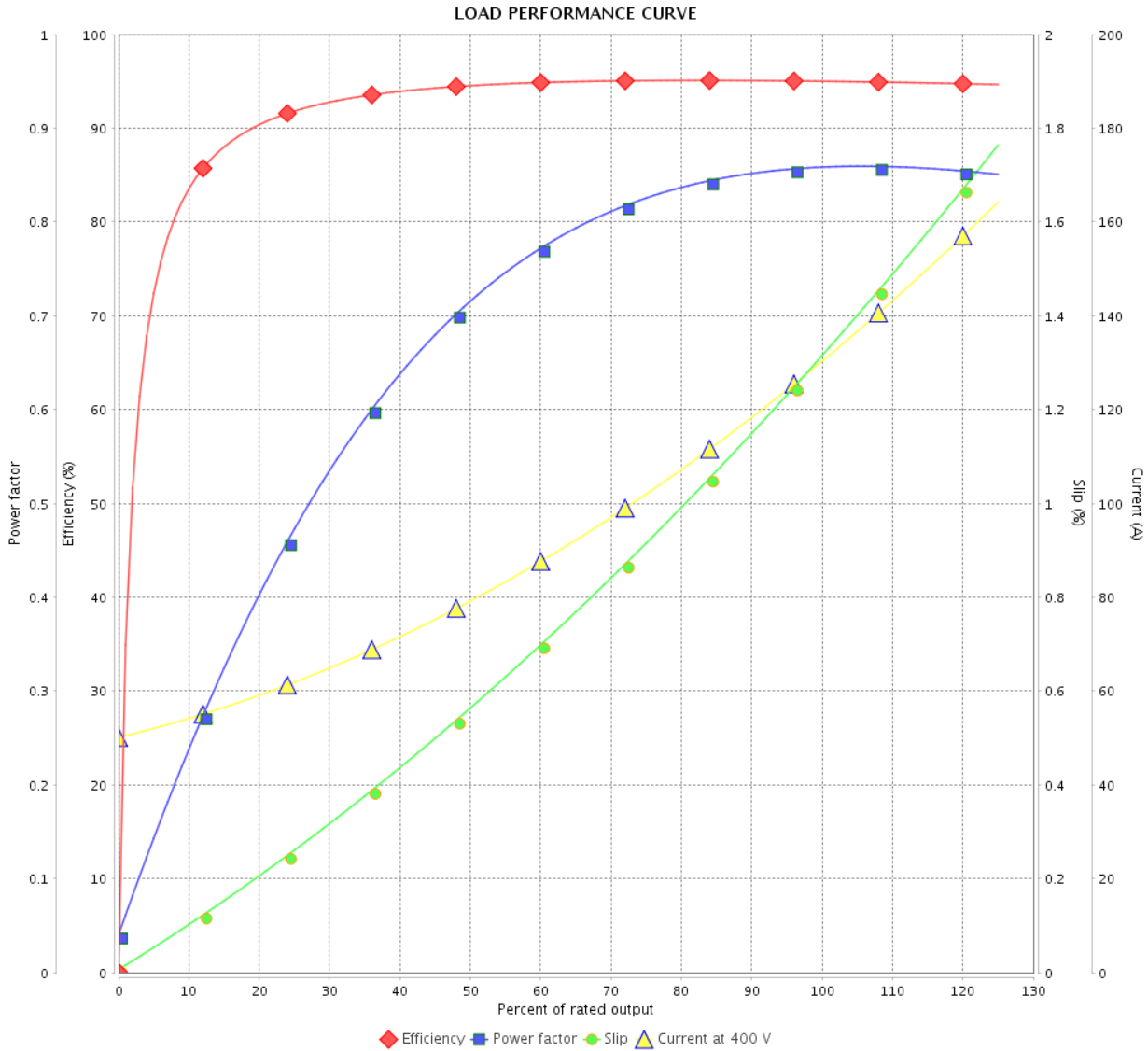


Customer :

Product line : W40 NEMA Premium Efficiency Three-Phase

Product code : 14272925

Catalog # : 12518OT3E405T-W40G



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

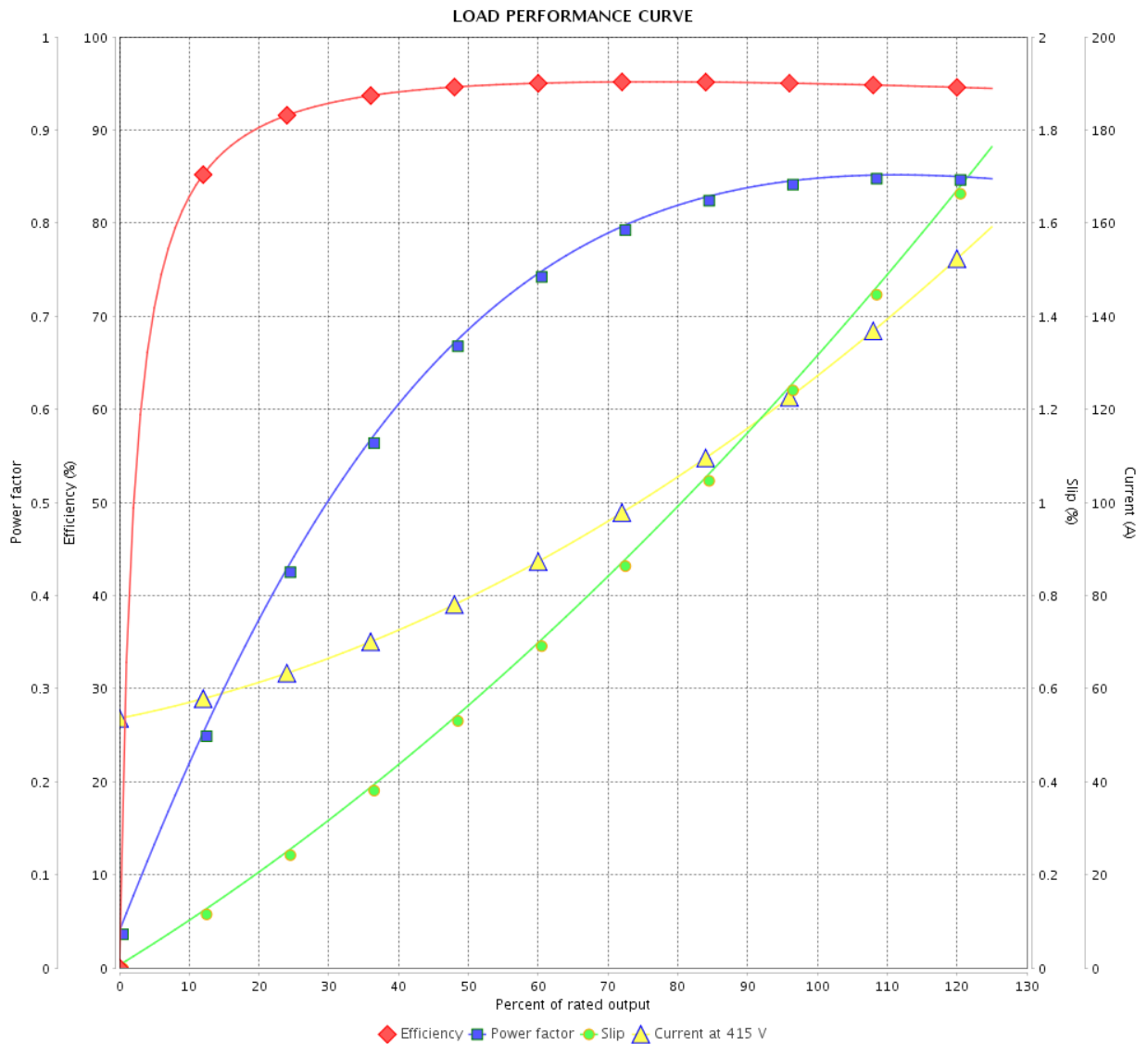


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 Breakdown torque : 320 %  
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 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 80 K  
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# THERMAL LIMIT CURVE



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Insulation class : F  
Service factor : 1.25  
Temperature rise : 80 K  
Design : B

Heating constant

Cooling constant

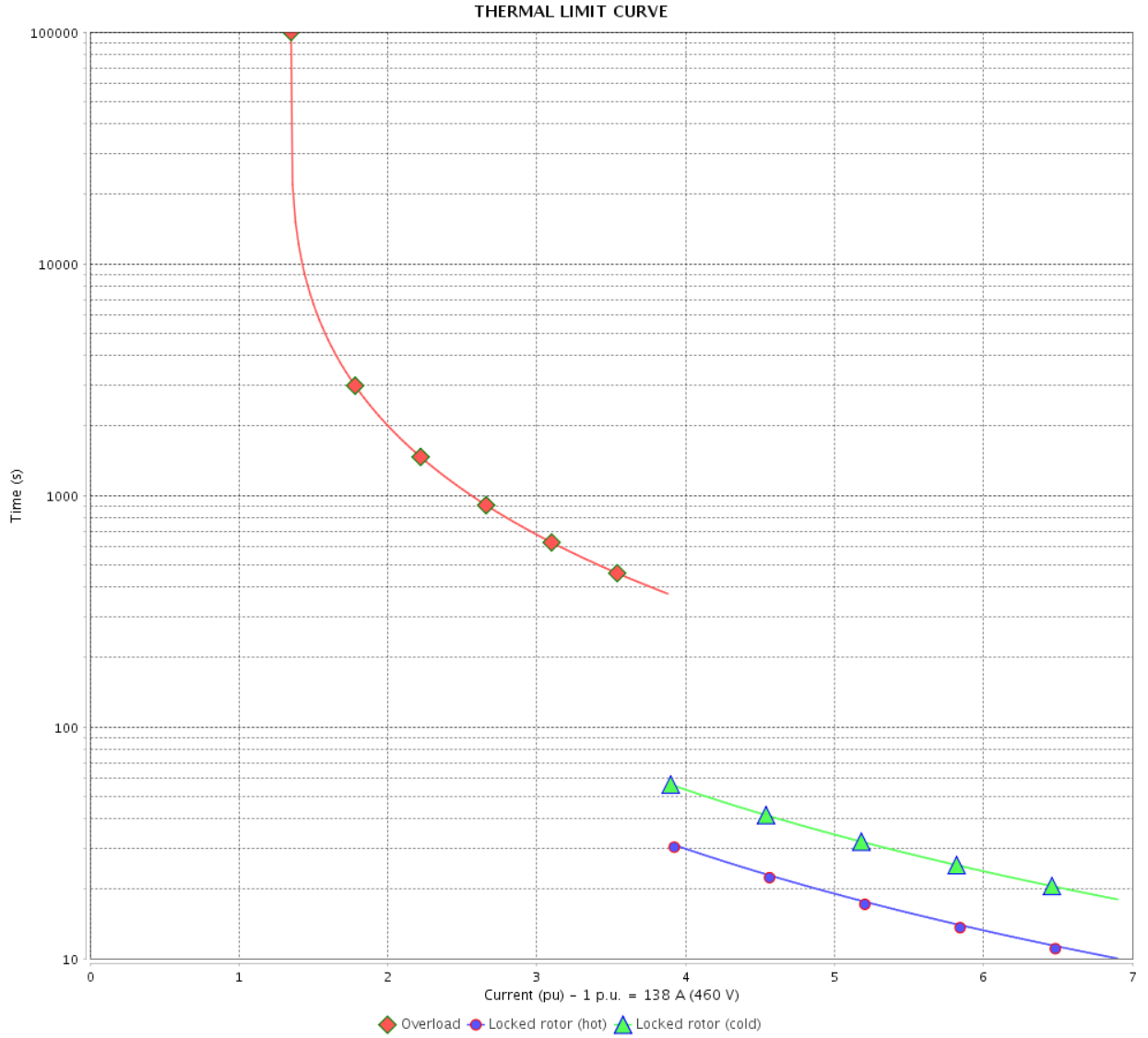
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# THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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Catalog # : 12518OT3E405T-W40G

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

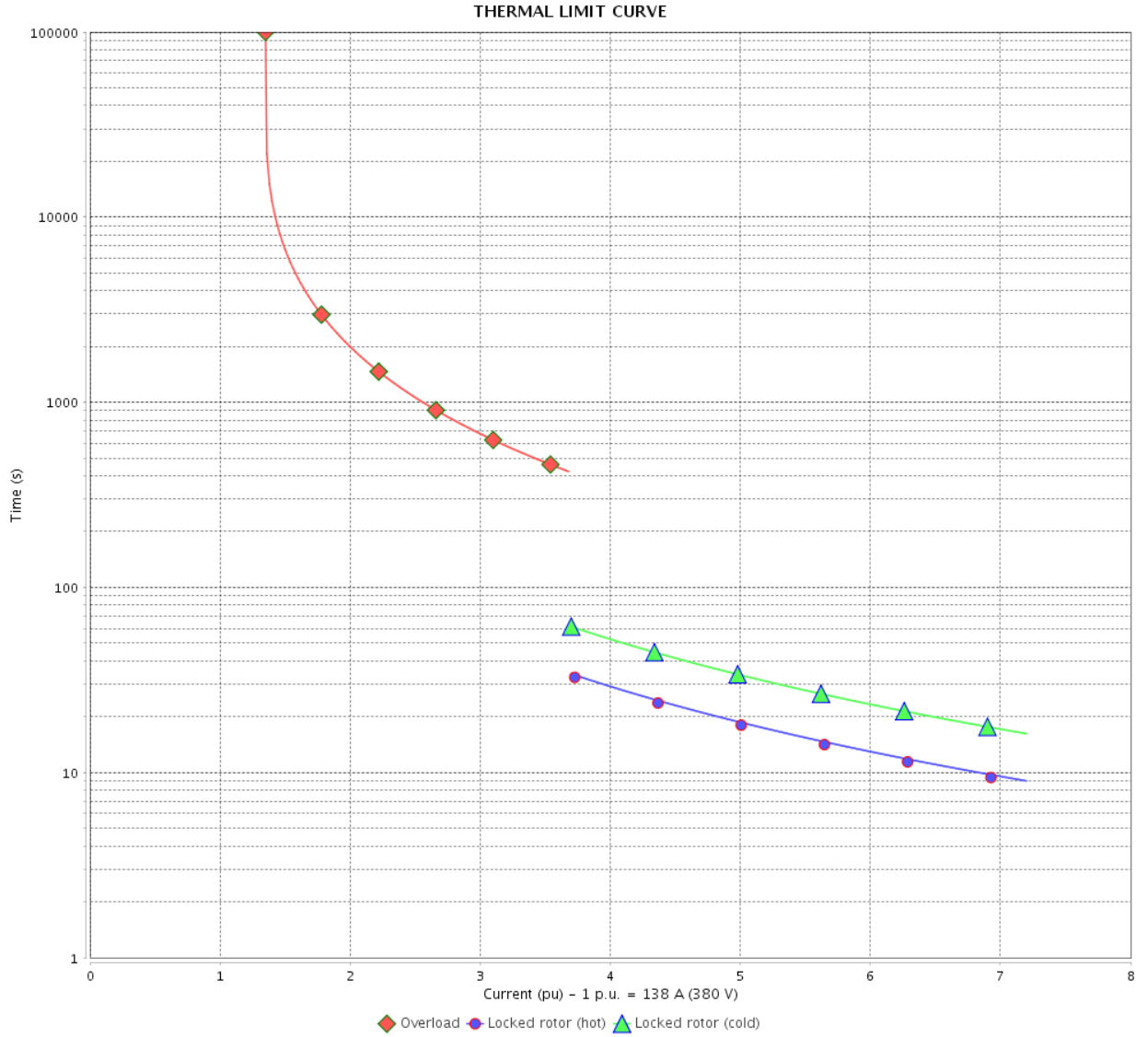
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Performance : 400 V 50 Hz 4P IE3

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

Heating constant

Cooling constant

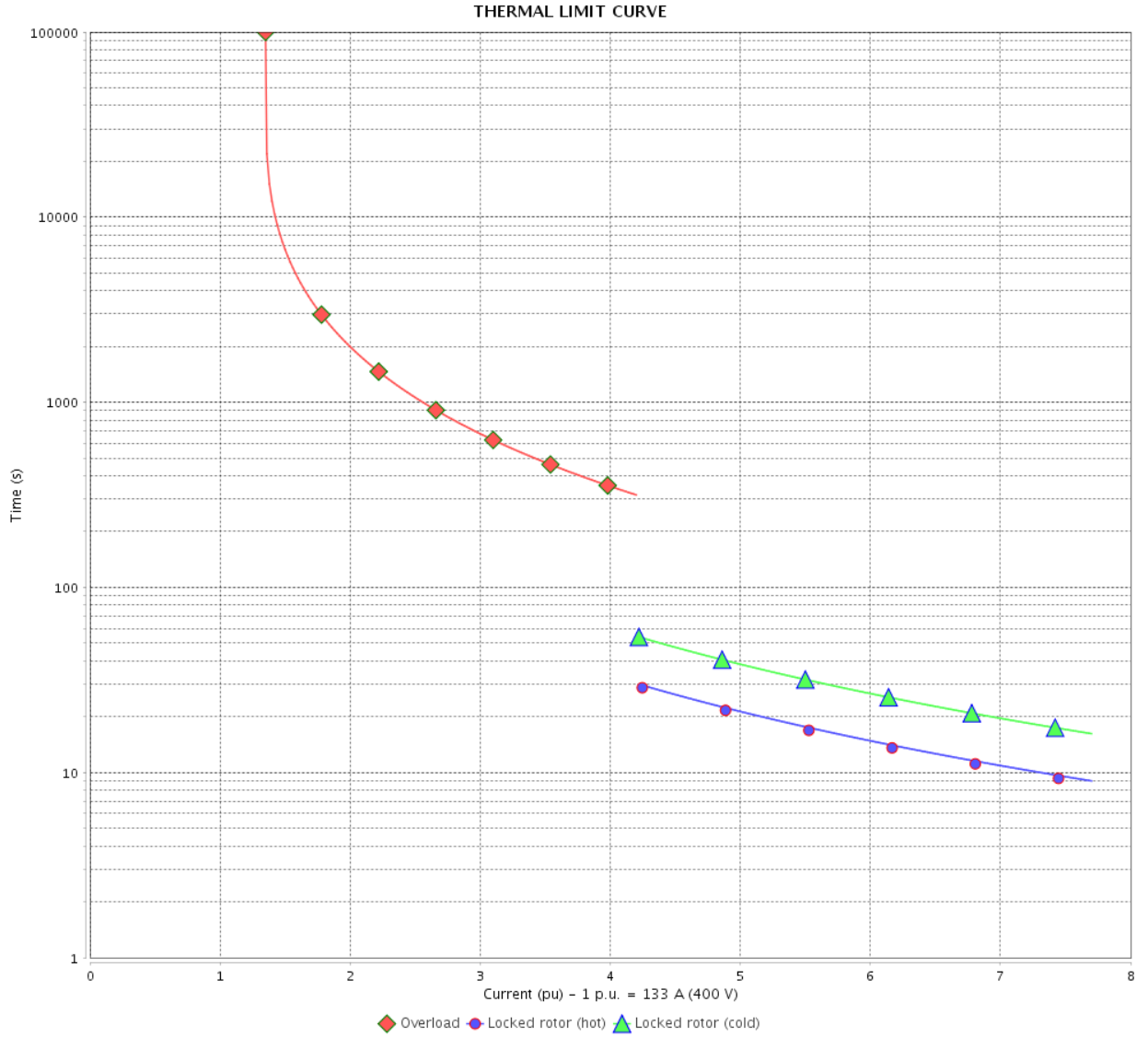
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Catalog # : 12518OT3E405T-W40G

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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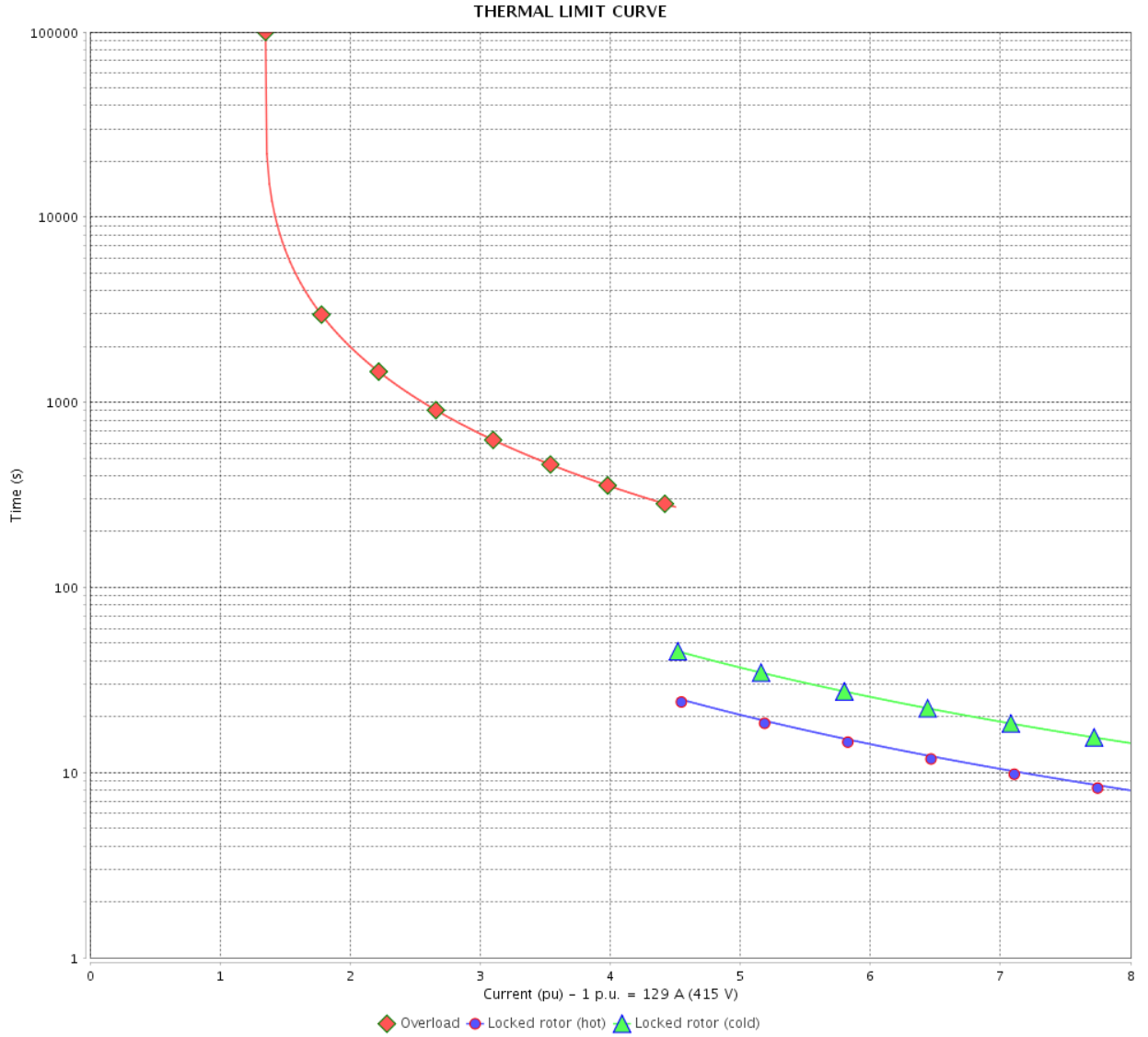


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# VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

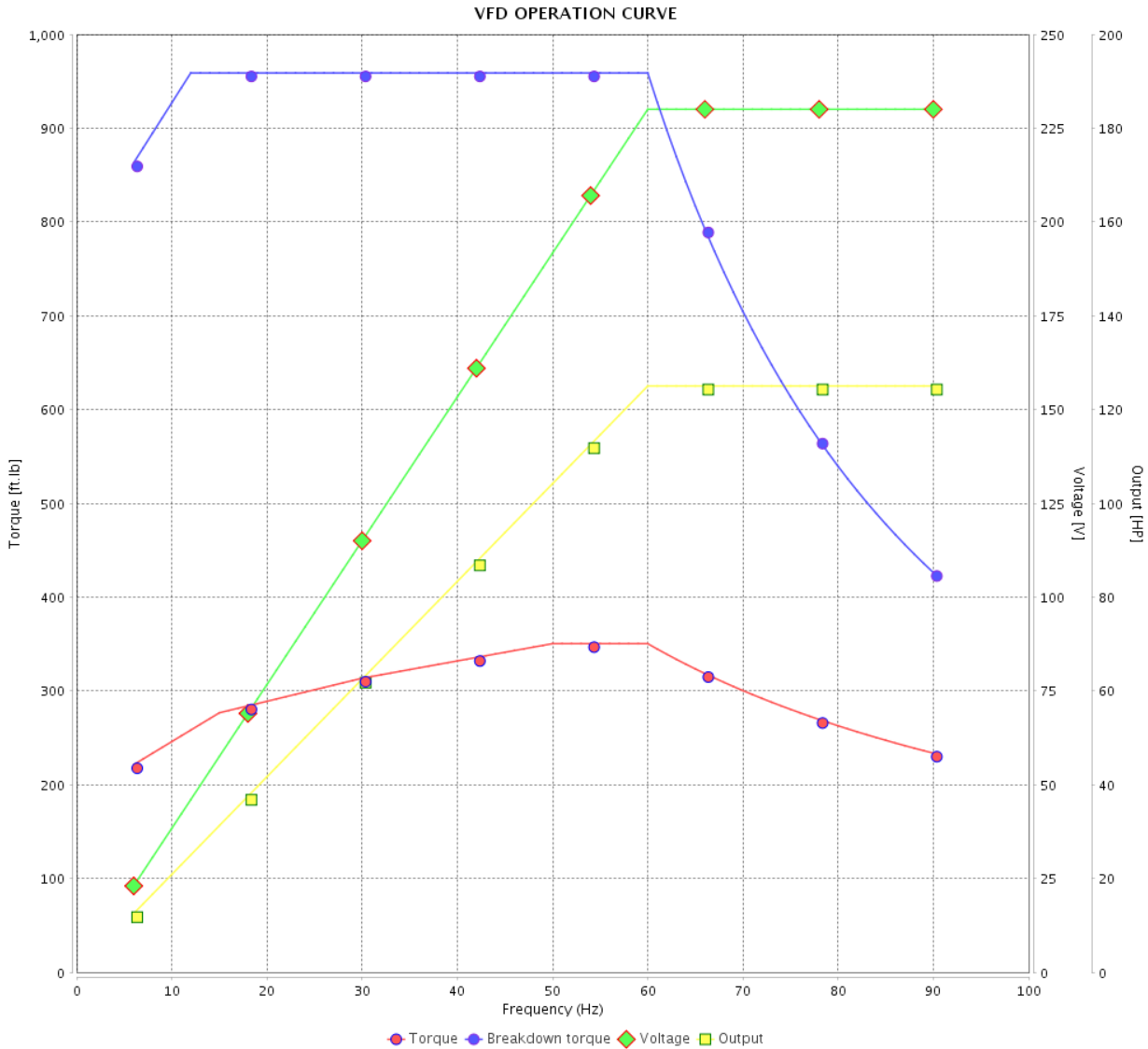


Customer :

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Product code : 14272925

Catalog # : 12518OT3E405T-W40G



Performance : 230/460 V 60 Hz 4P

Rated current : 276/138 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

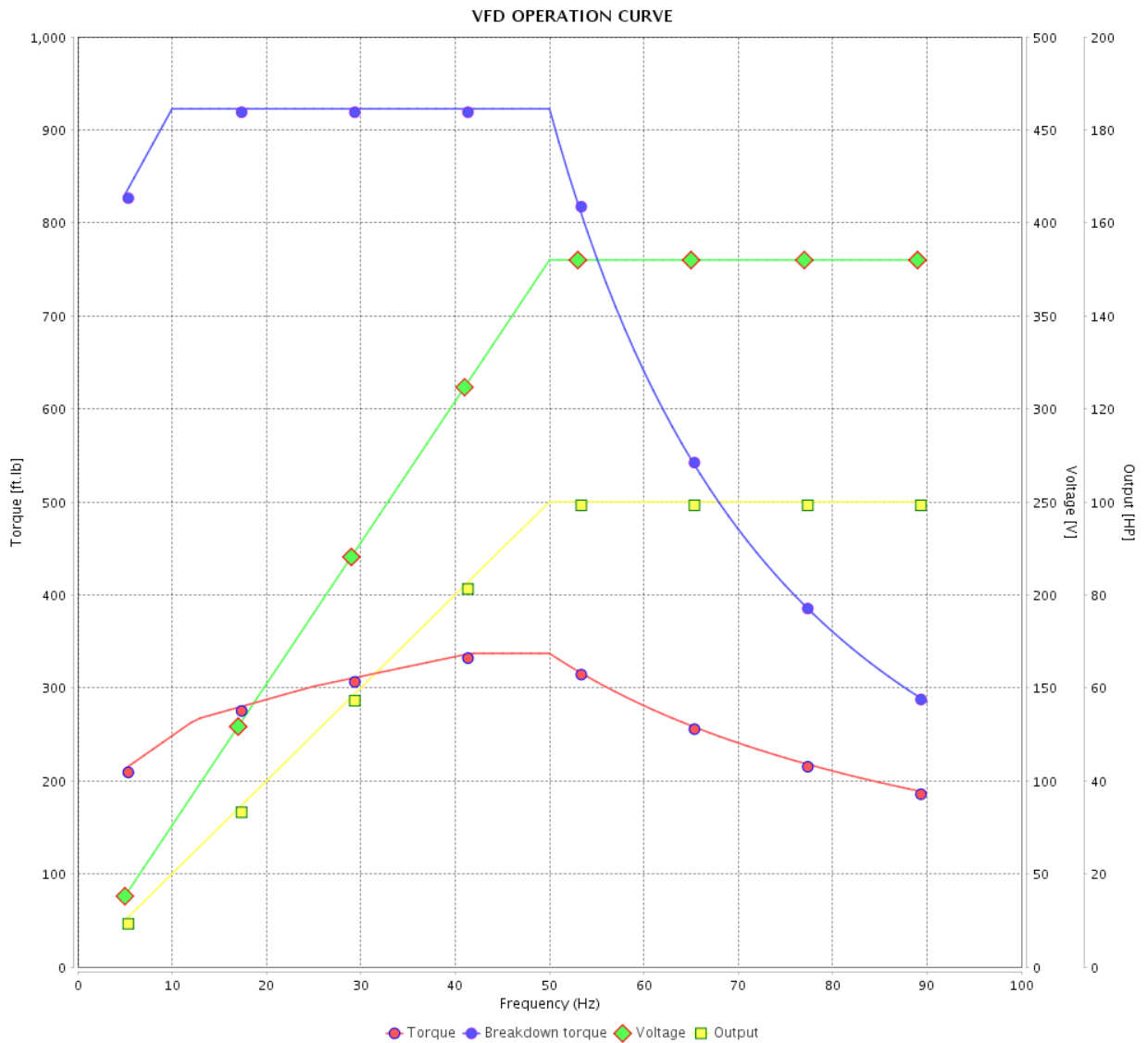


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Product code : 14272925

Catalog # : 12518OT3E405T-W40G



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  
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Three Phase Induction Motor - Squirrel Cage



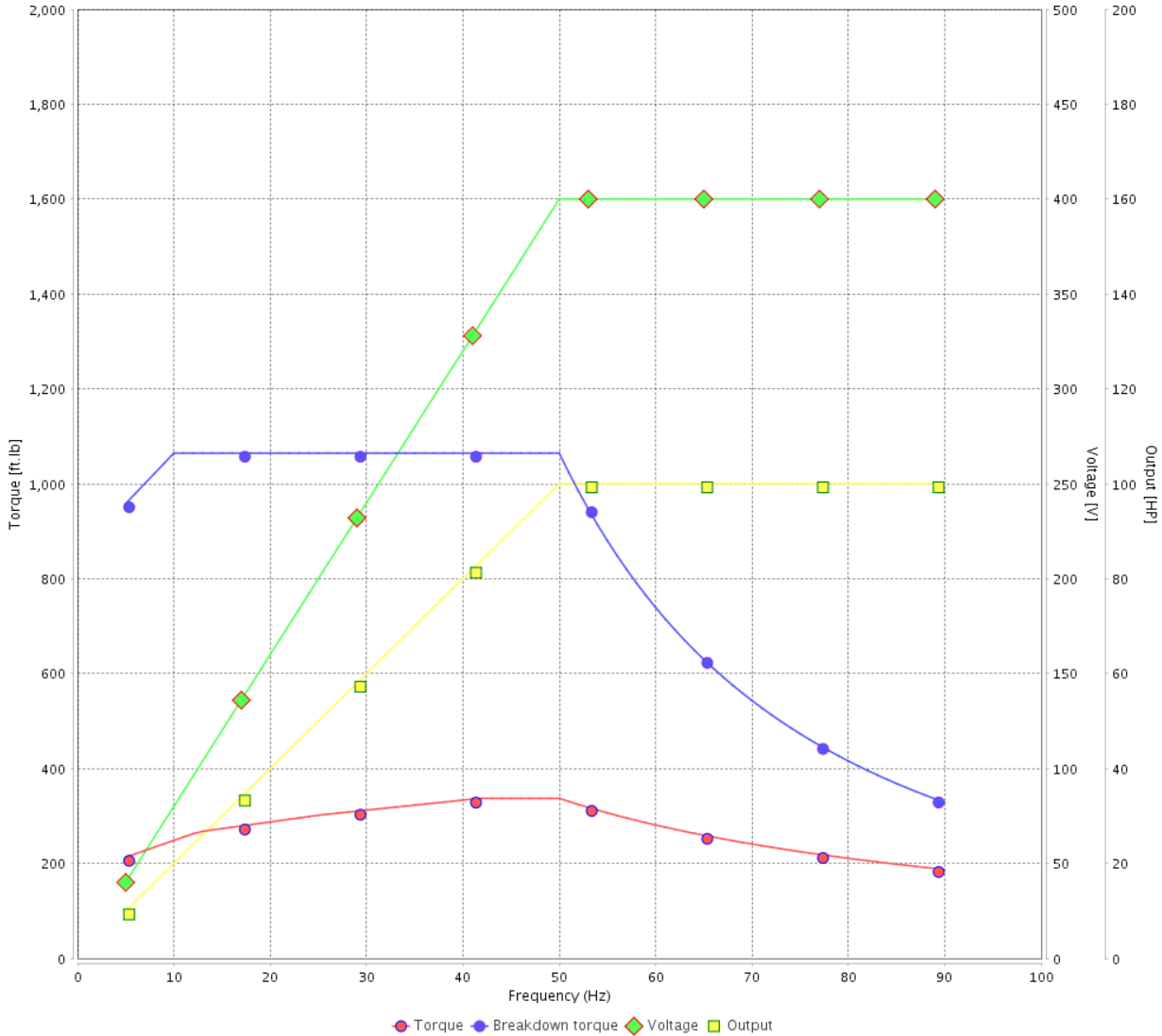
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VFD OPERATION CURVE



Performance : 400 V 50 Hz 4P IE3

Rated current : 133 A  
 LRC : 7.7  
 Rated torque : 355 ft.lb  
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 Rated speed : 1480 rpm

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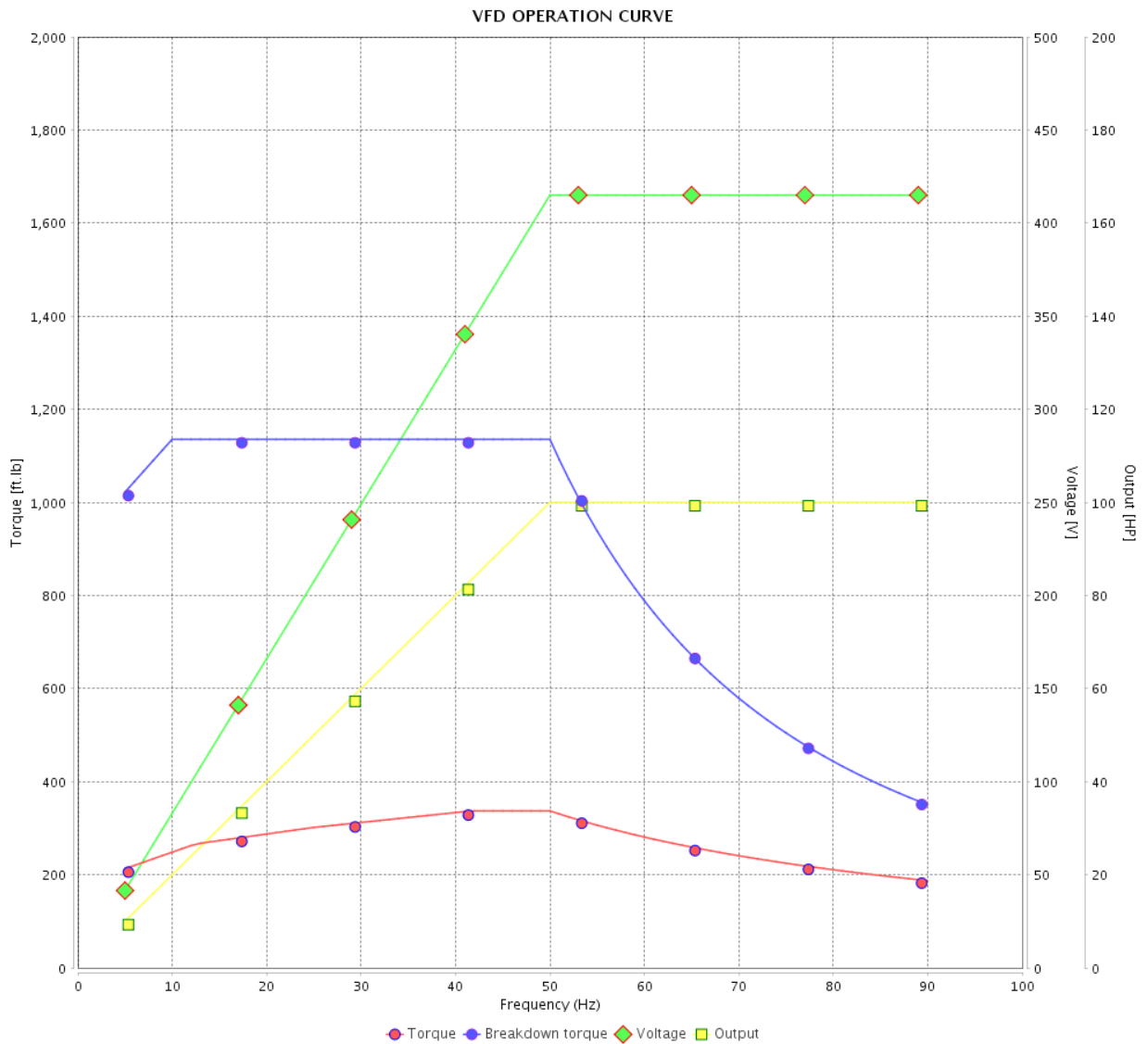


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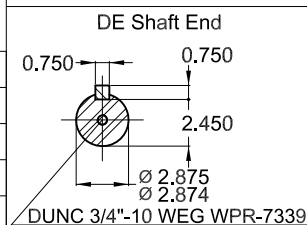
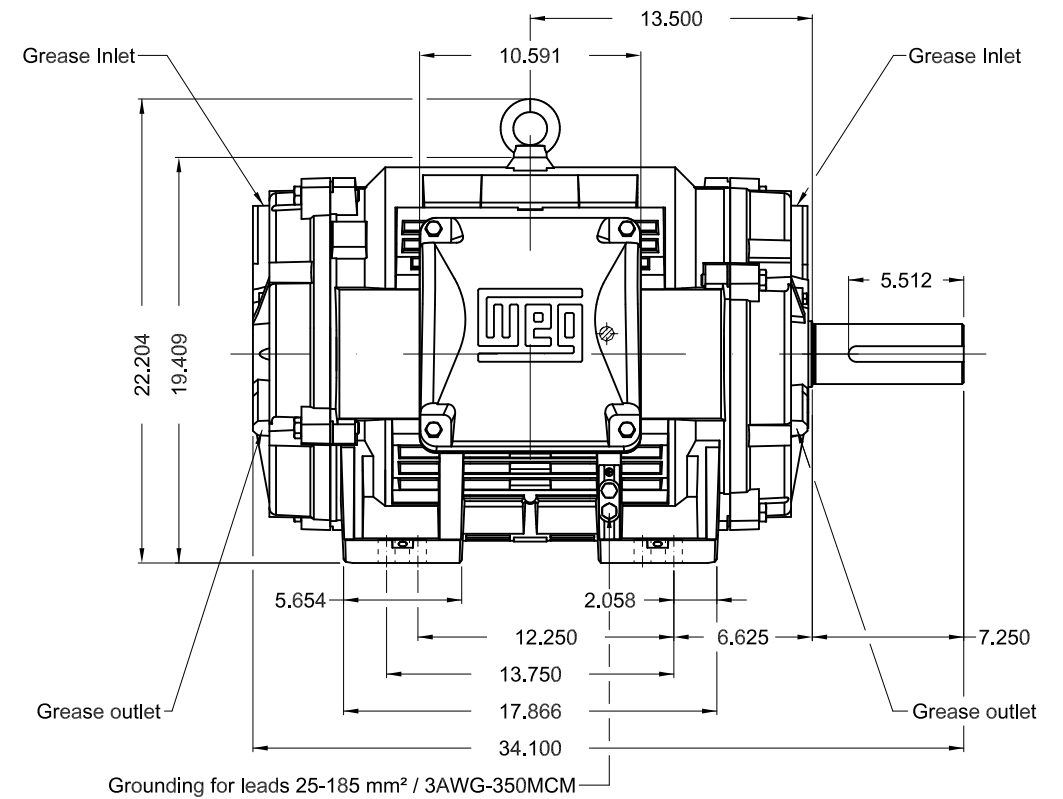
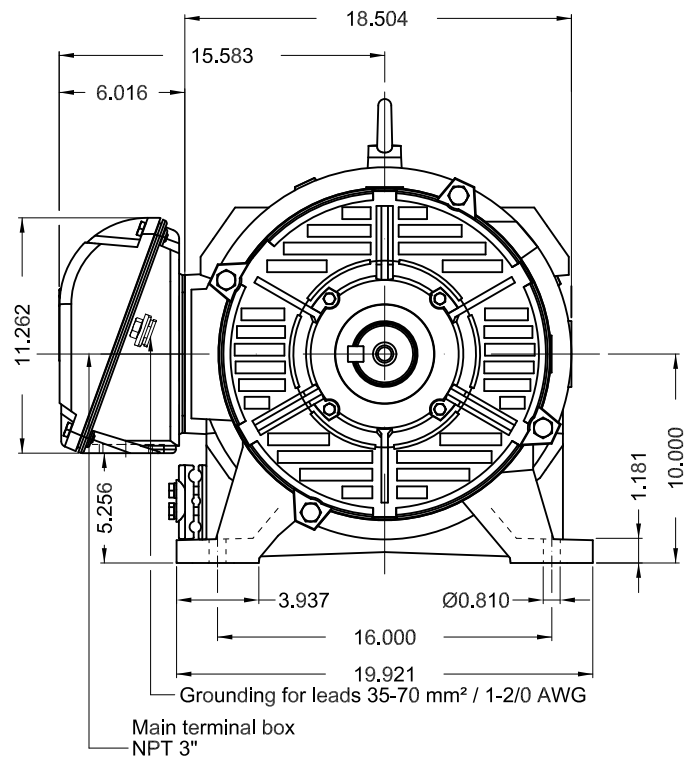


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- Internal AEGIS ground ring on the DE
- Color RAL 5009
- Painting plan 203A
- Mounting NEMA F-1
- Mounting B3R(D)

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 404/5T IP23 ODP					
RELEASED							
REL DT.		WMO Jaragua do Sul	Product Engineering	SHEET	1 / 1		

PREVIEW  
WDD



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



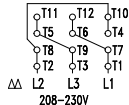
IEC 60034-1  
 MOD.T01#FOXON



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

MODEL 125180T3E405T-W40G  
 MADE IN BRAZIL  
 14272925

PH 3	FR 404/5T	HP(kW) 125.0(90.0)	Hz 60
V 230/460	A 276/138	RPM 1780	DES B
NEMA NOM EFF 95.4 %	INS. CL. F $\Delta$ T 80 K	IP23	
ENCL ODP	DUTY CONT.	AMB. 40°C	
CODE G	PF 0.86	SF 1.25	SFA 345/173
USABLE @208V 305 A	SF 1.15	SFA 351	
100HP 75kW 50Hz 380V 138A 1480RPM SF1.00 EFF 95.0% (IE3)	ALT 1000 m.a.s.l.	1030 Lbs	



→ 6316-C3(34g)  
 → 6212-Z-C3(13g)

MOBIL POLYREX EM  
 20000 h