

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer :				
Product line		: W40 NEMA Premium Efficiency Three-Phase	Product code :	14285006
			Catalog # :	12518OT3E405TC-W40G
Frame	: 404/5TC	Cooling method	: IC01 - ODP	
Insulation class	: F	Mounting	: F-1	
Duty cycle	: Cont.(S1)	Rotation ¹	: Both (CW and CCW)	
Ambient temperature	: -20°C to +40°C	Starting method	: Direct On Line	
Altitude	: 1000 m.a.s.l.	Approx. weight ²	: 1055 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]	230/460	380	400	415
Rated current [A]	276/138	138	133	129
L. R. Amperes [A]	1904/952	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]	94.0/47.0	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 ²	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> 6316 C3 <u>Non drive end</u> 6212 Z C3	Foundation loads		
Sealing	: Without Without	Max. traction	: 2878 lb	
	: Bearing Seal Bearing Seal	Max. compression	: 3932 lb	
Lubrication interval	: 20000 h 20000 h			
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



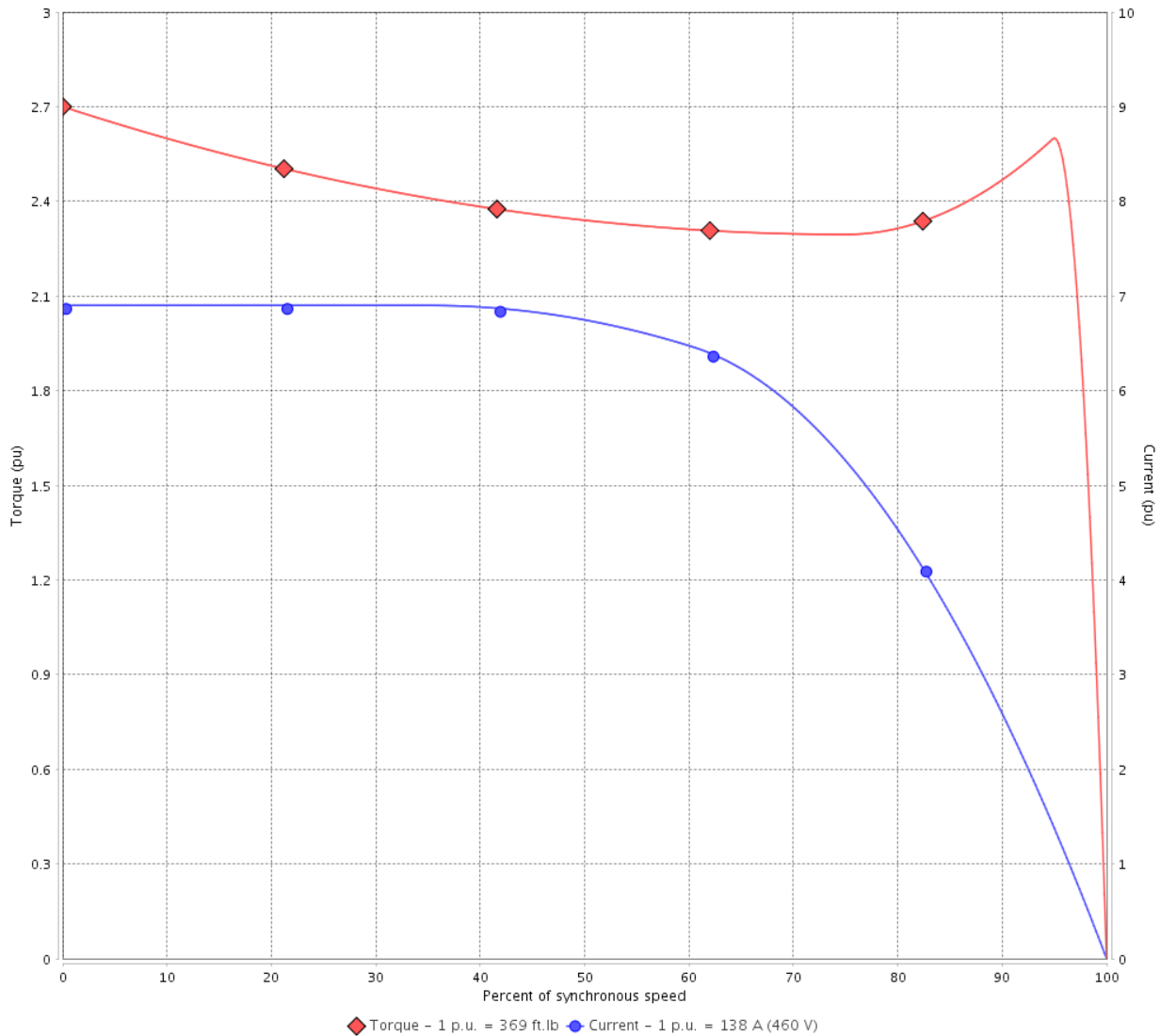
Customer :

Product line : W40 NEMA Premium Efficiency
Three-Phase

Product code : 14285006

Catalog # : 12518OT3E405TC-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



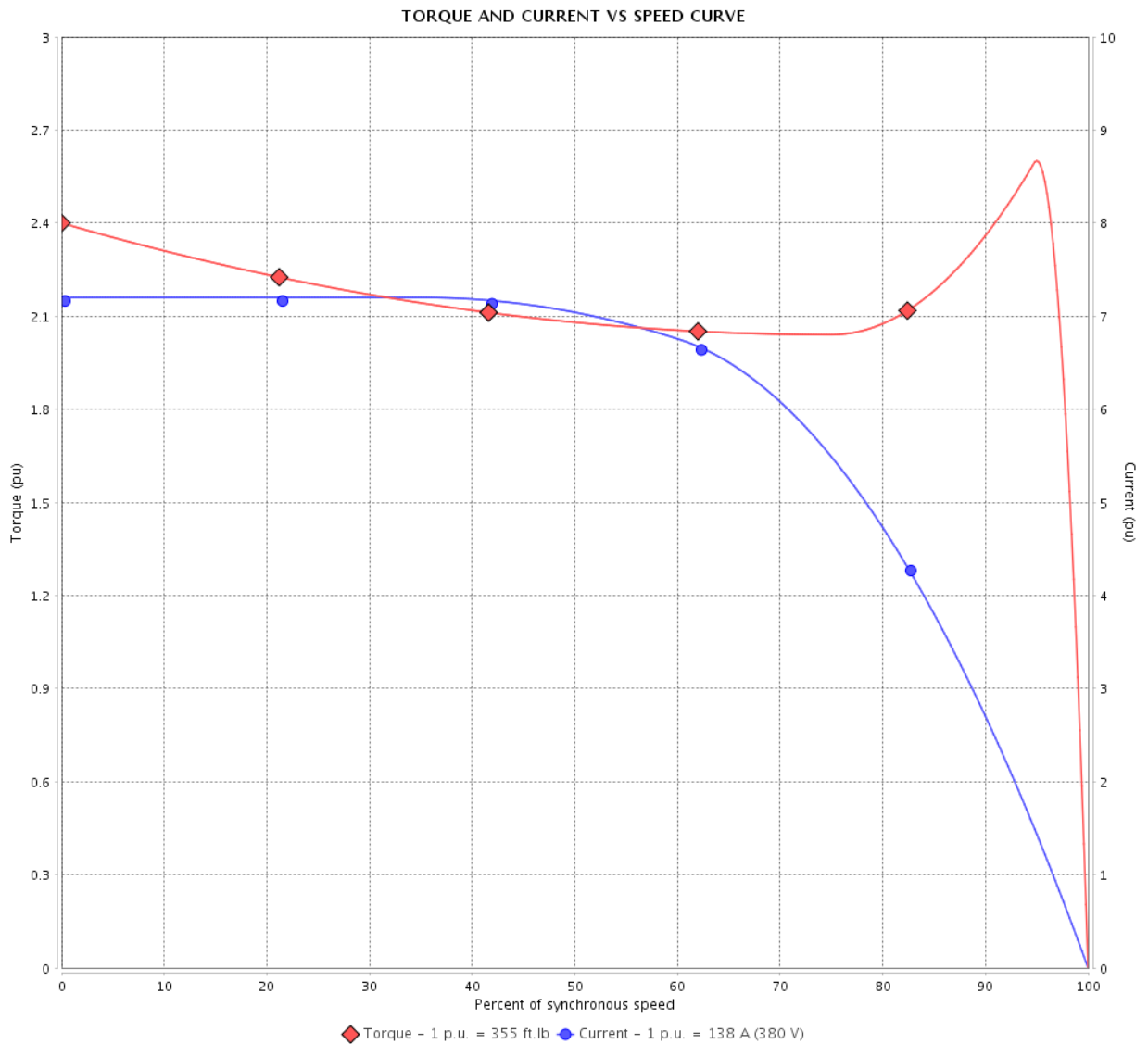
Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : W40 NEMA Premium Efficiency
Three-Phase

Product code : 14285006

Catalog # : 12518OT3E405TC-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



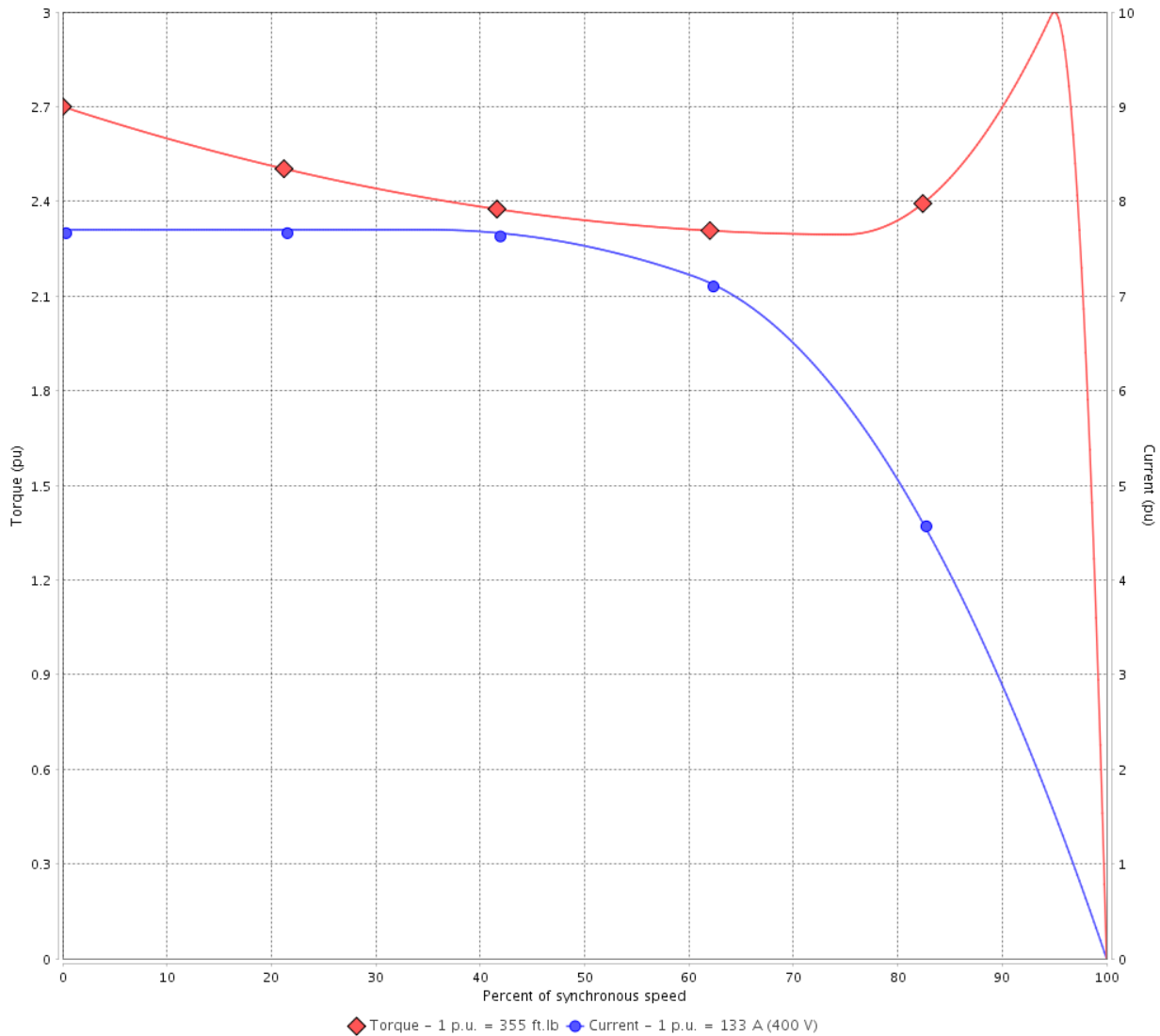
Customer :

Product line : W40 NEMA Premium Efficiency
Three-Phase

Product code : 14285006

Catalog # : 12518OT3E405TC-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



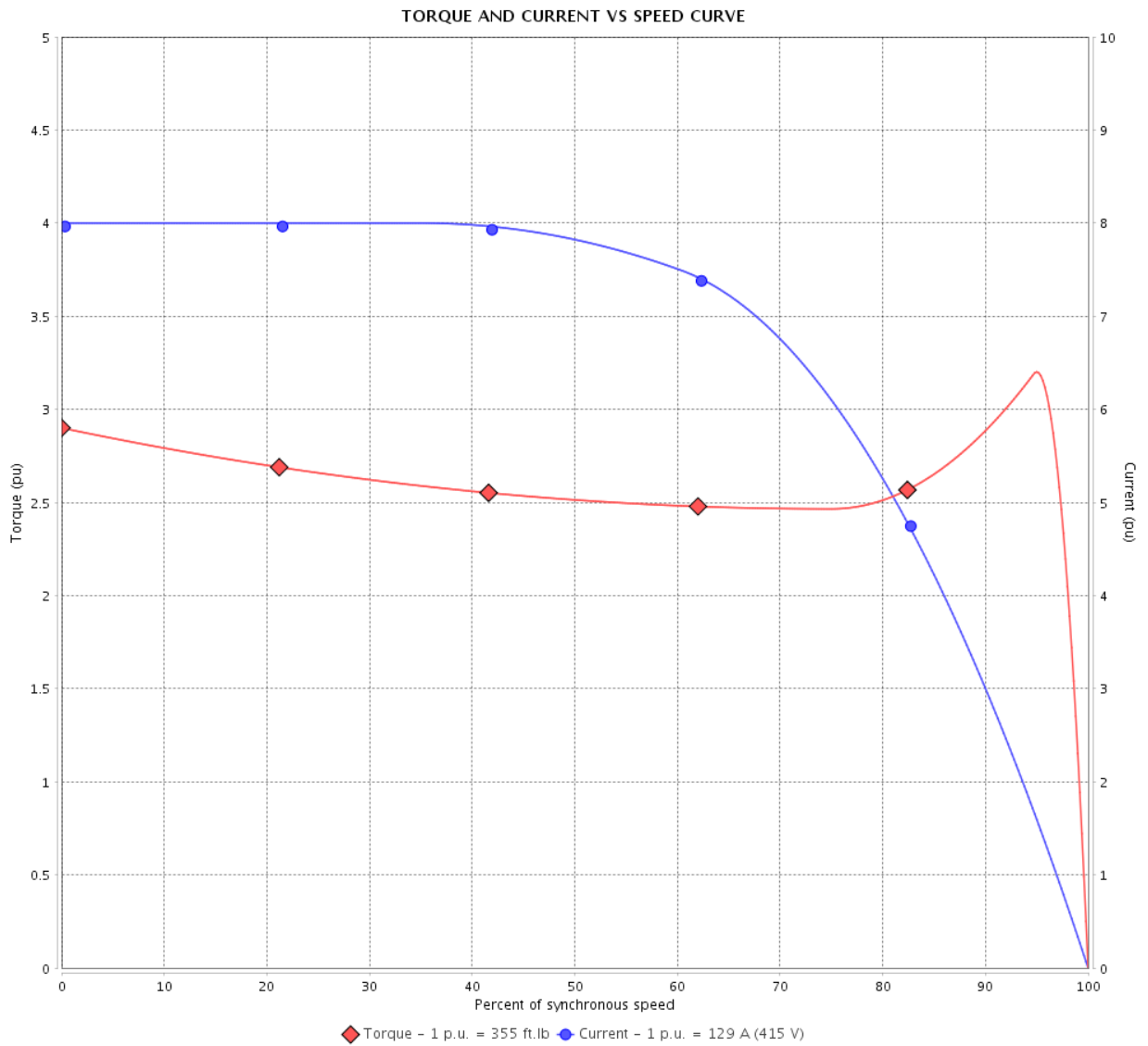
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Product code : 14285006

Catalog # : 12518OT3E405TC-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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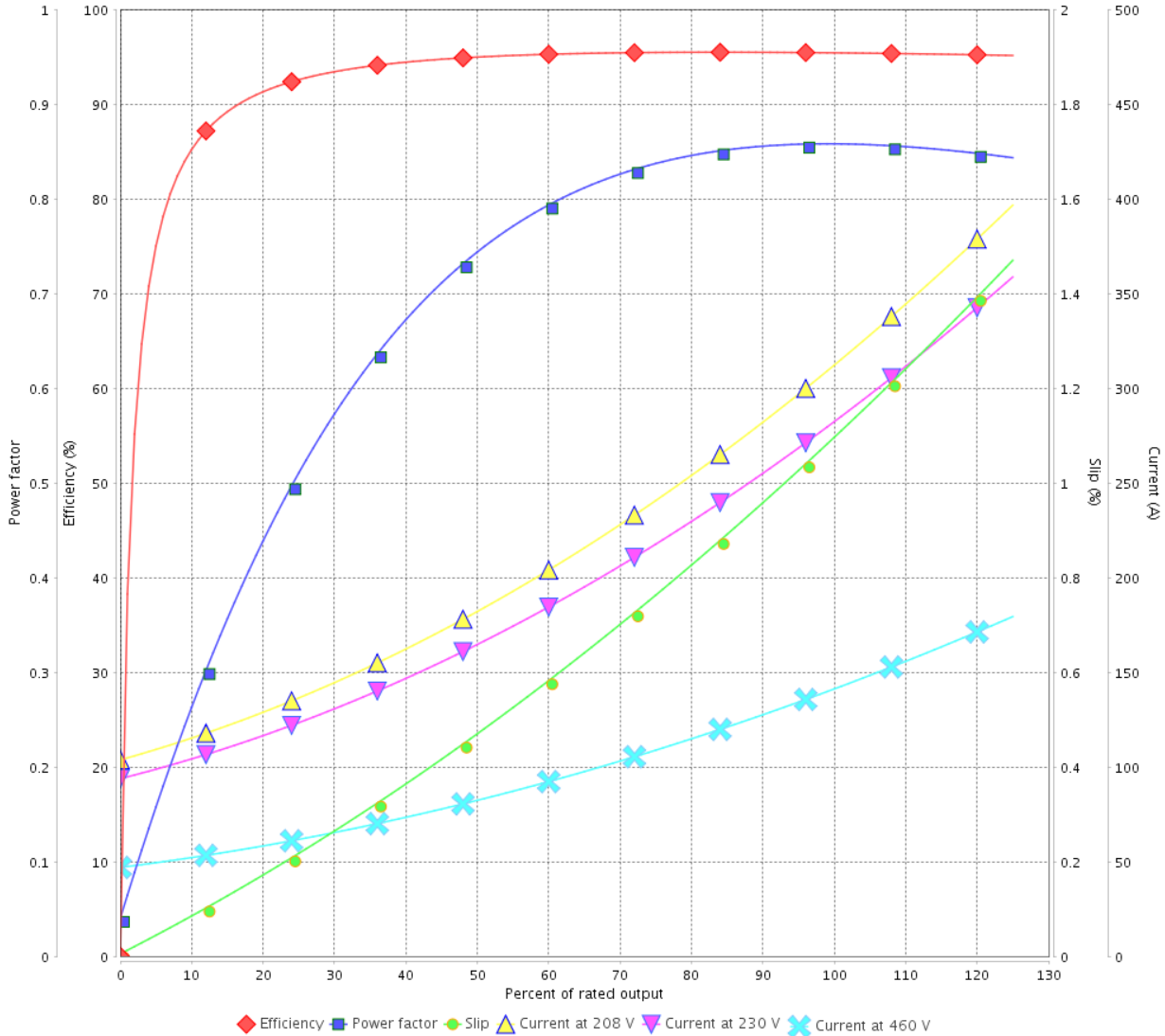
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Product code : 14285006

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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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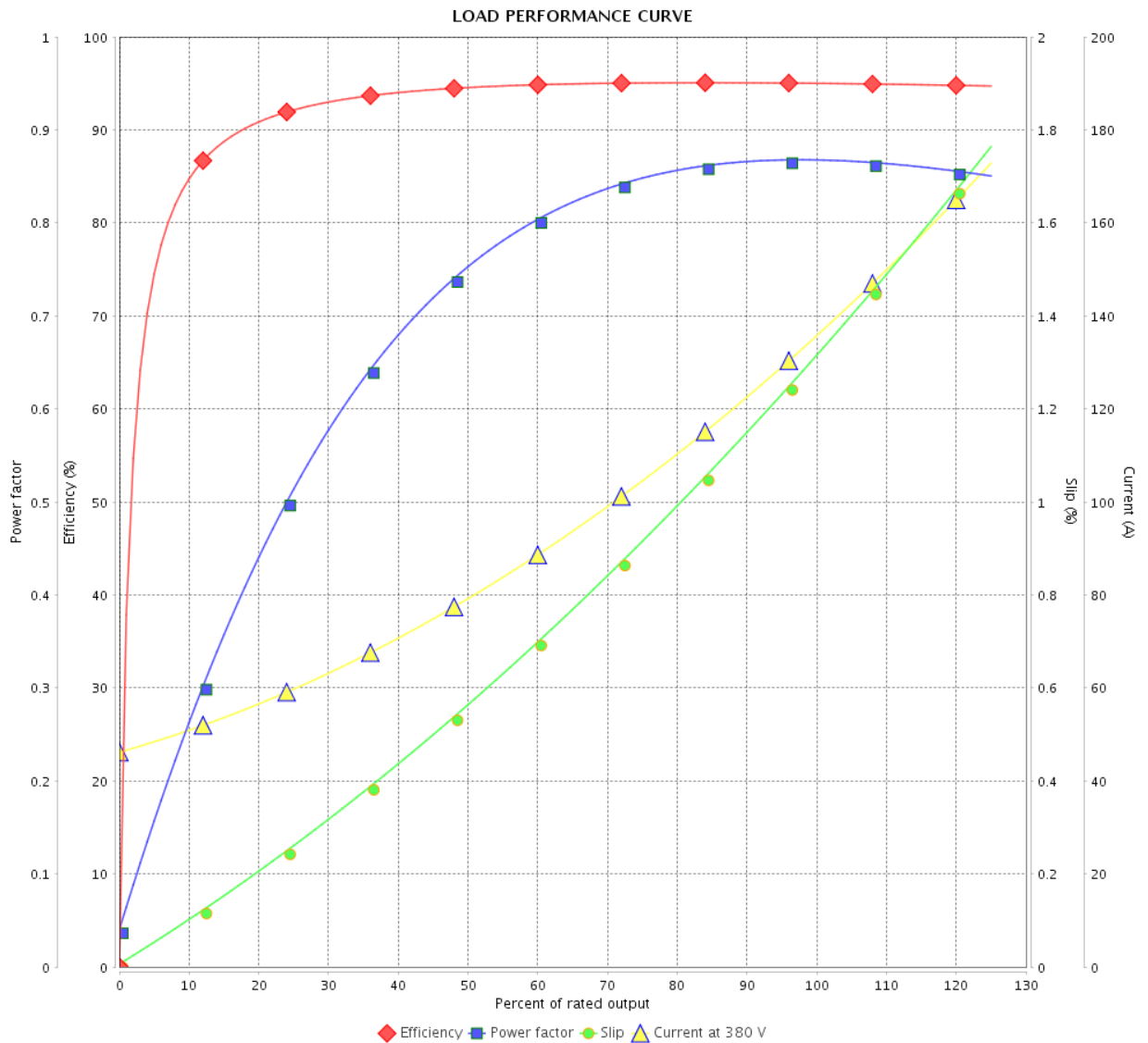


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Performance : 380 V 50 Hz 4P IE3

Rated current : 138 A
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 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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Three Phase Induction Motor - Squirrel Cage

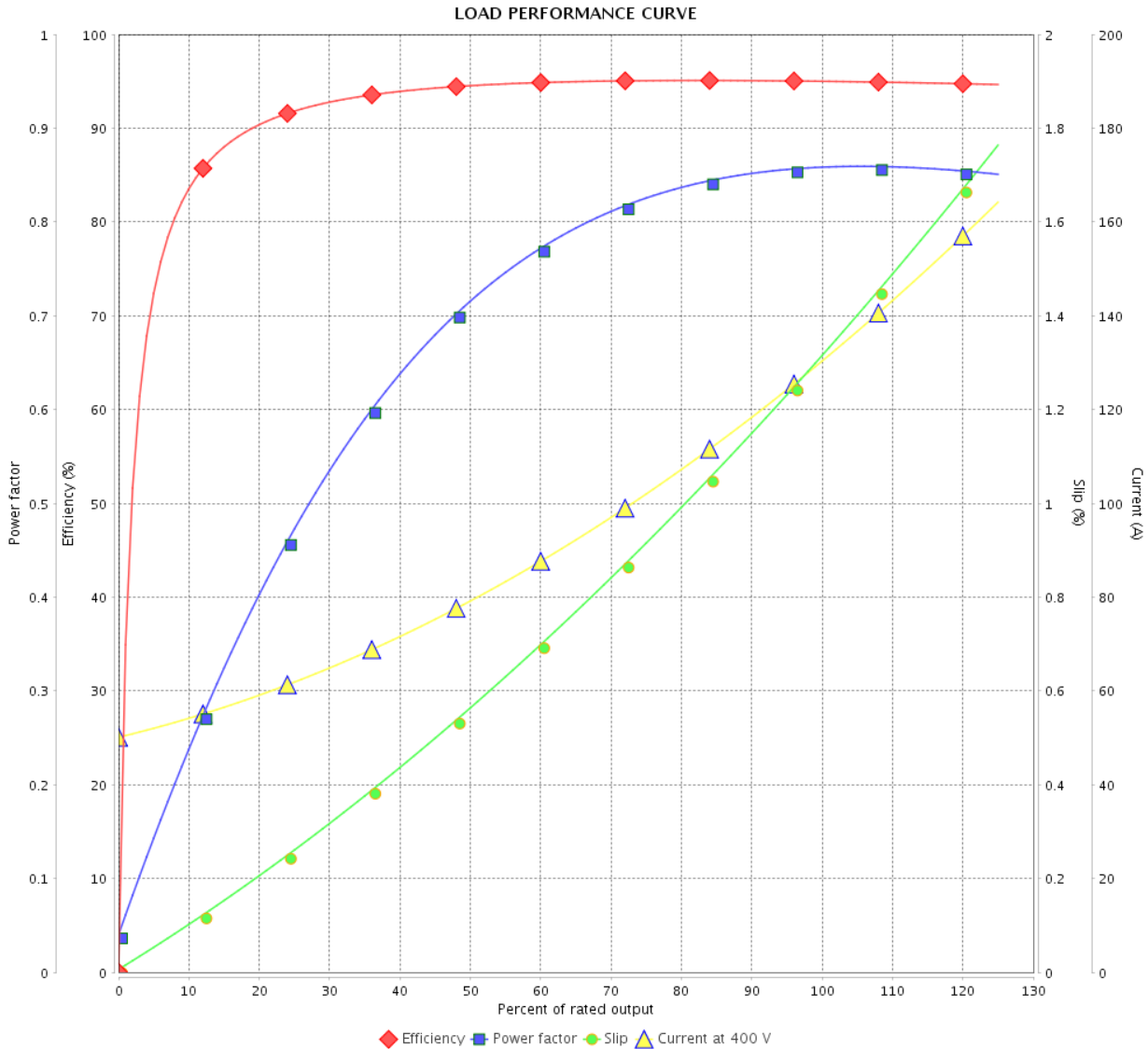


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Performance : 400 V 50 Hz 4P IE3

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

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LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage

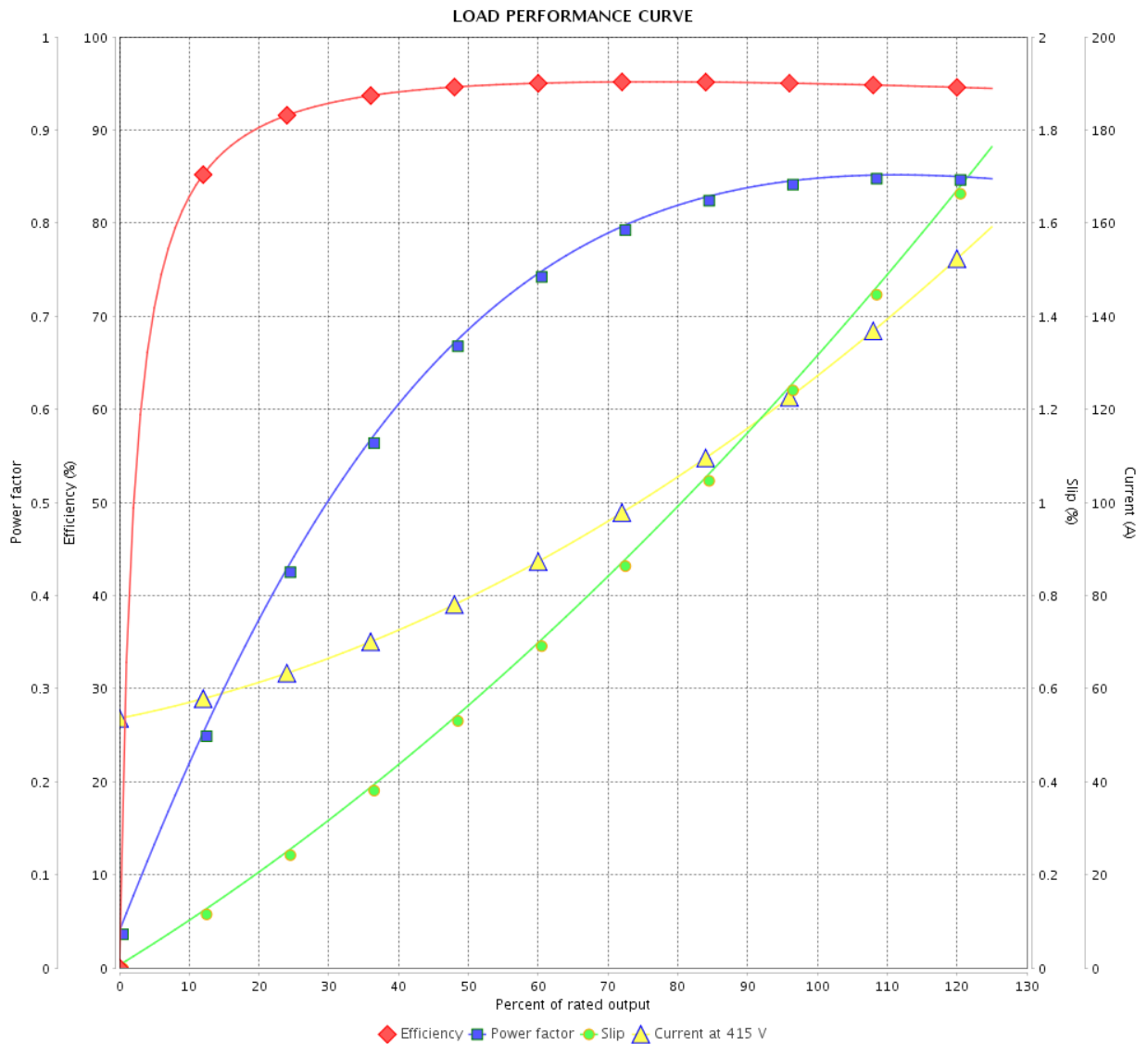


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 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : B

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THERMAL LIMIT CURVE



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

Heating constant

Cooling constant

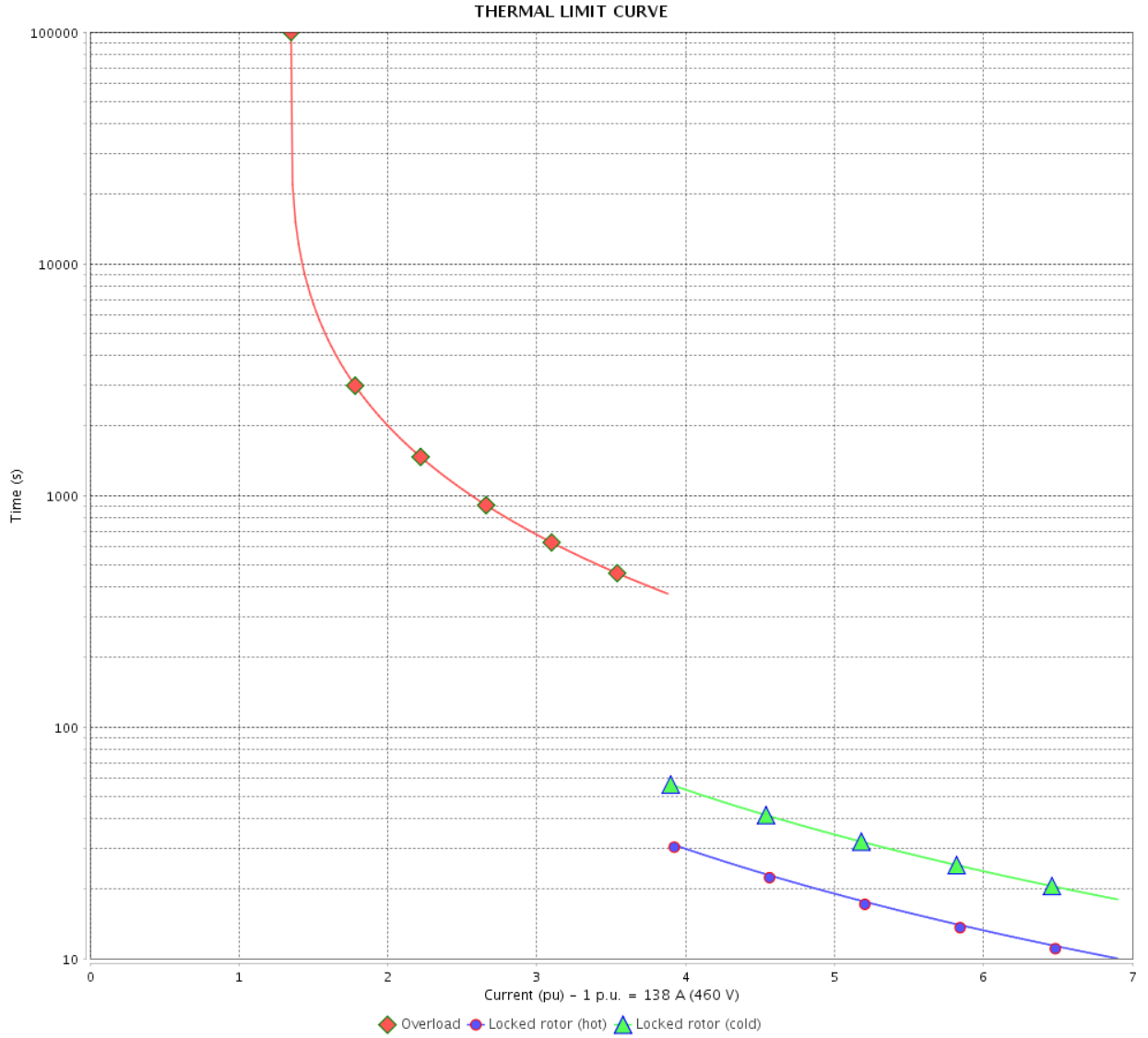
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THERMAL LIMIT CURVE

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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

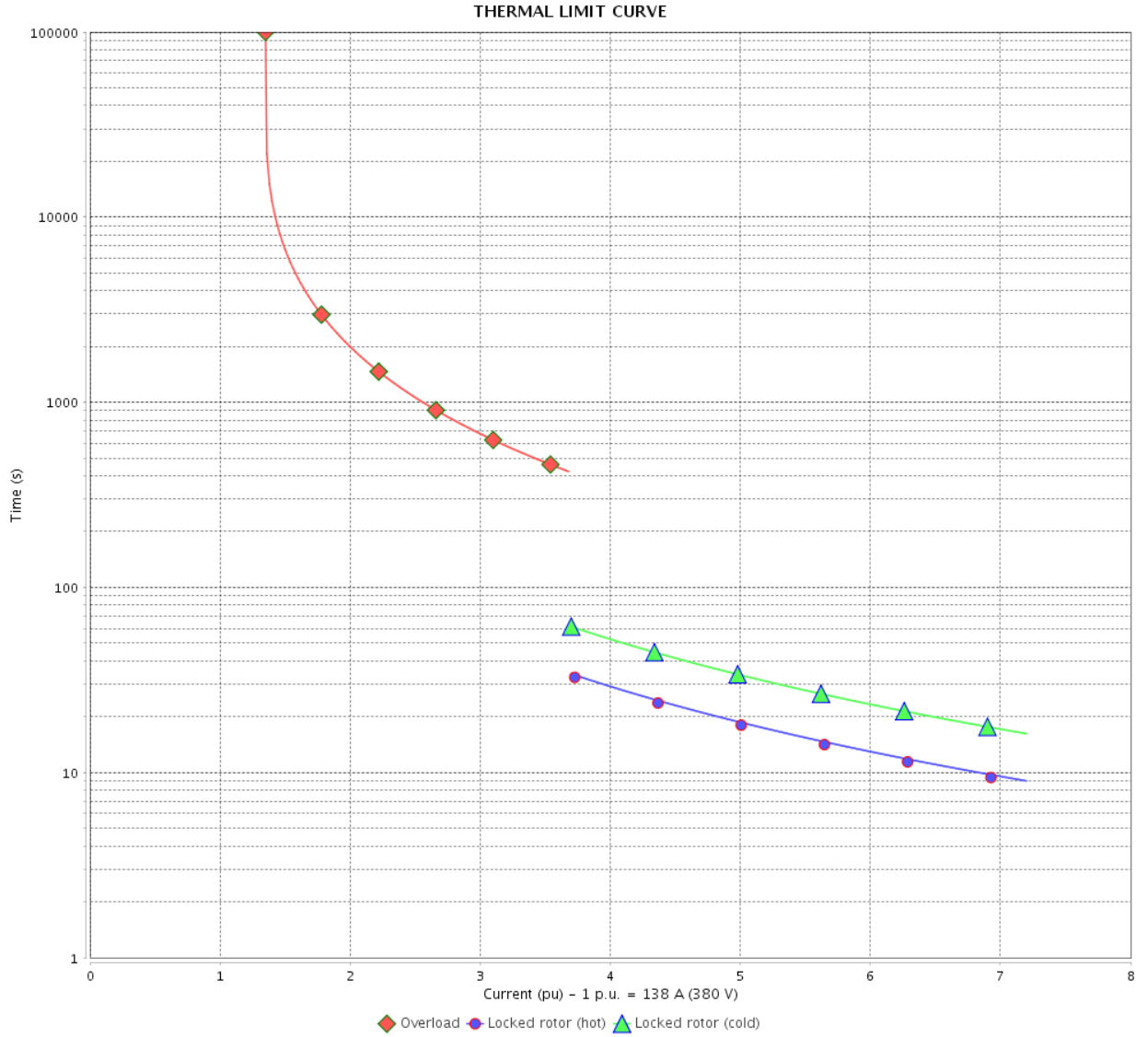
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Locked rotor torque	: 270 %	Service factor	: 1.00
Breakdown torque	: 300 %	Temperature rise	: 80 K
Rated speed	: 1480 rpm	Design	: B

Heating constant

Cooling constant

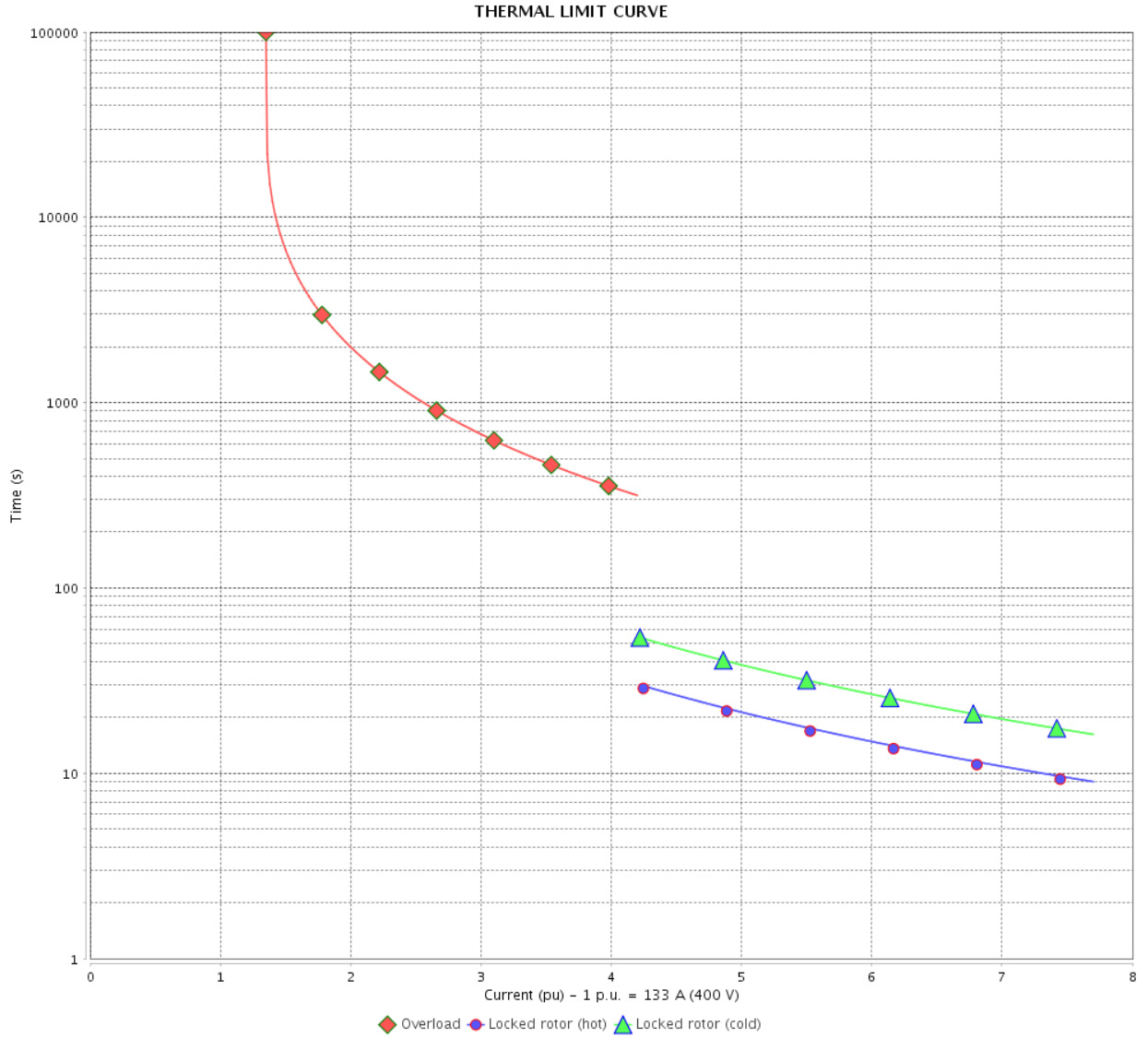
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THERMAL LIMIT CURVE



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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

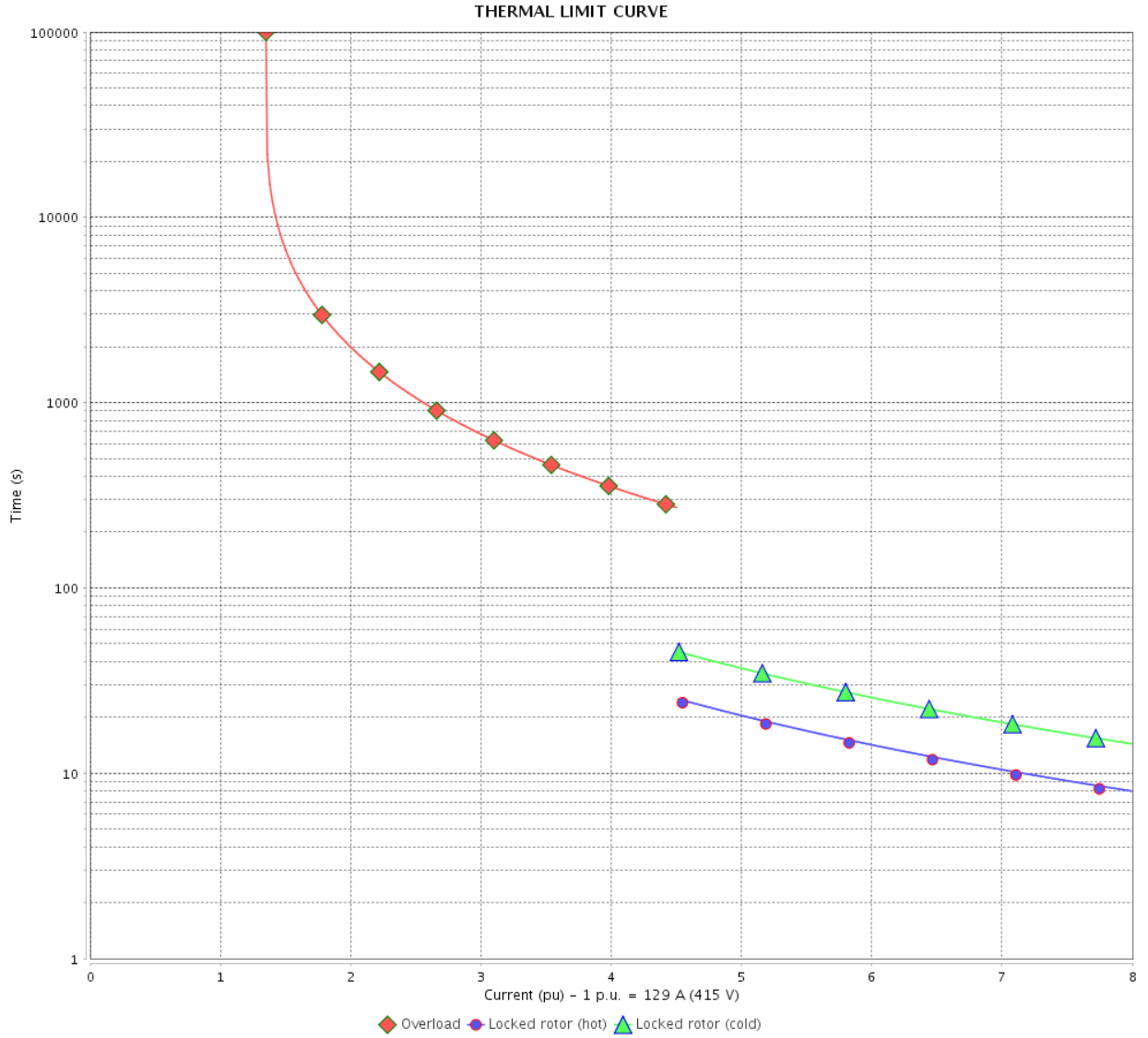
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Checked by			Page	Revision
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Three Phase Induction Motor - Squirrel Cage



Customer : _____



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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

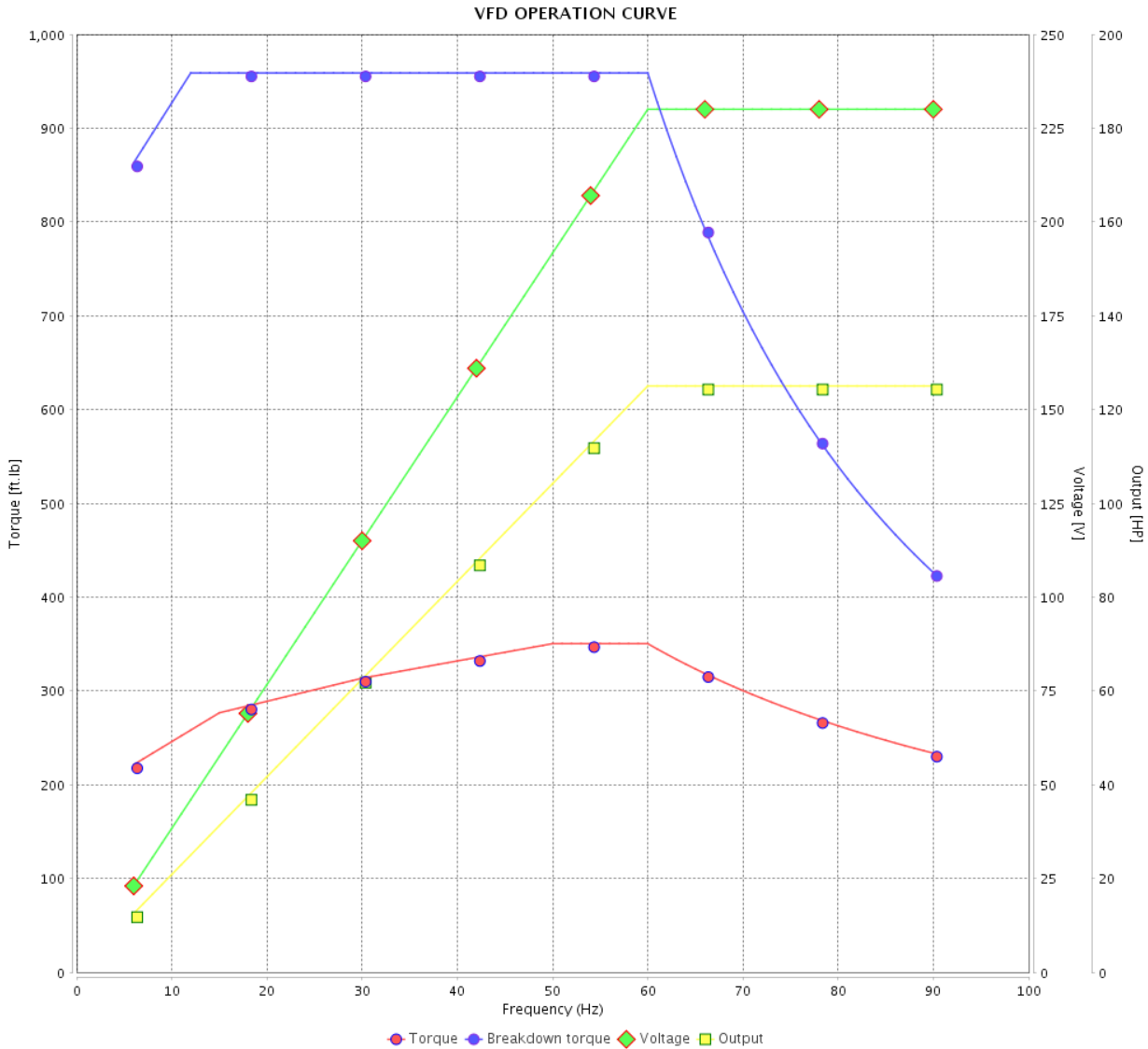


Customer :

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Product code : 14285006

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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

Rev.	Changes Summary	Performed	Checked	Date
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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

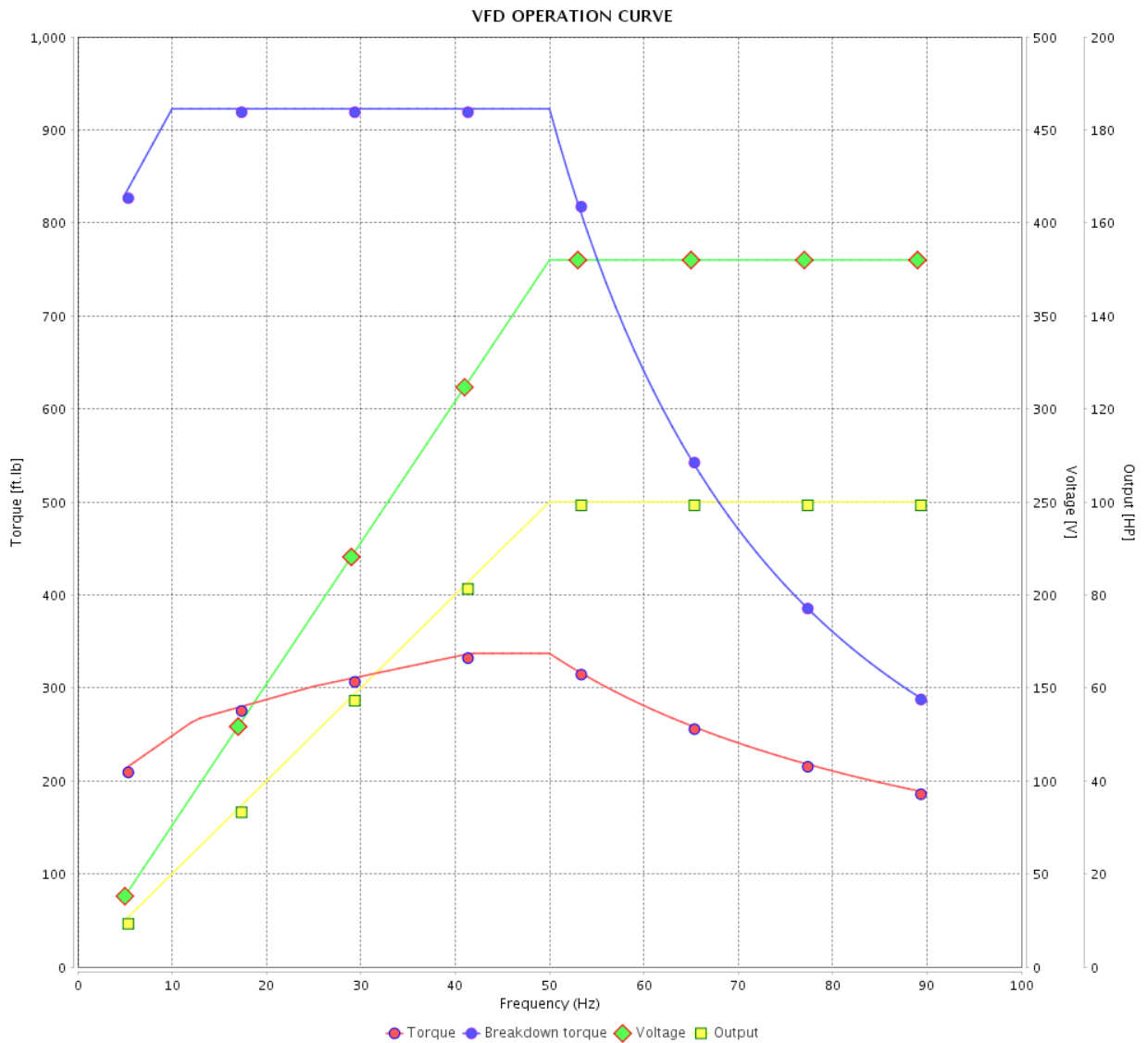


Customer :

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Three-Phase

Product code : 14285006

Catalog # : 12518OT3E405TC-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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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



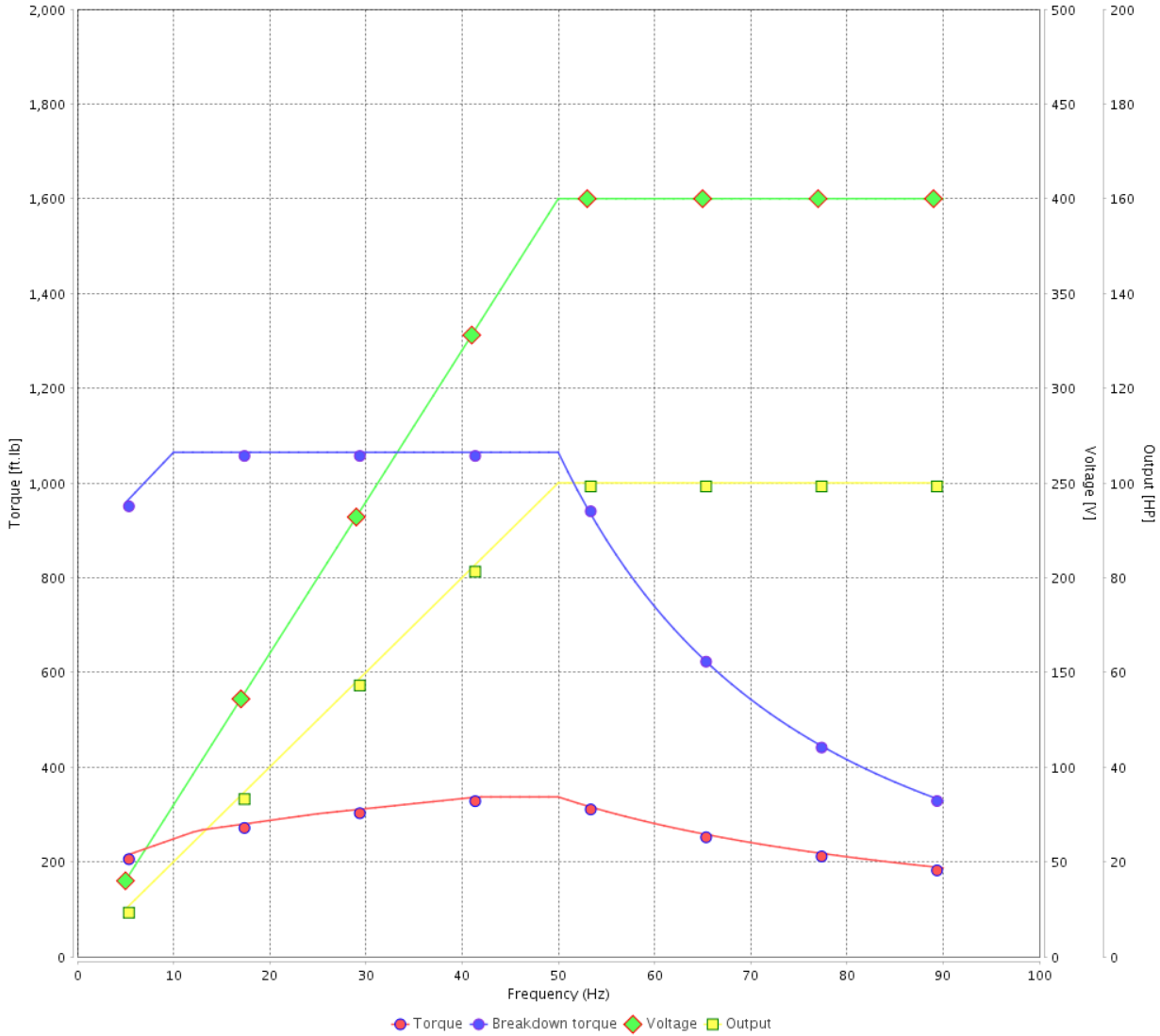
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VFD OPERATION CURVE



Performance : 400 V 50 Hz 4P IE3

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

Rev.	Changes Summary	Performed	Checked	Date
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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

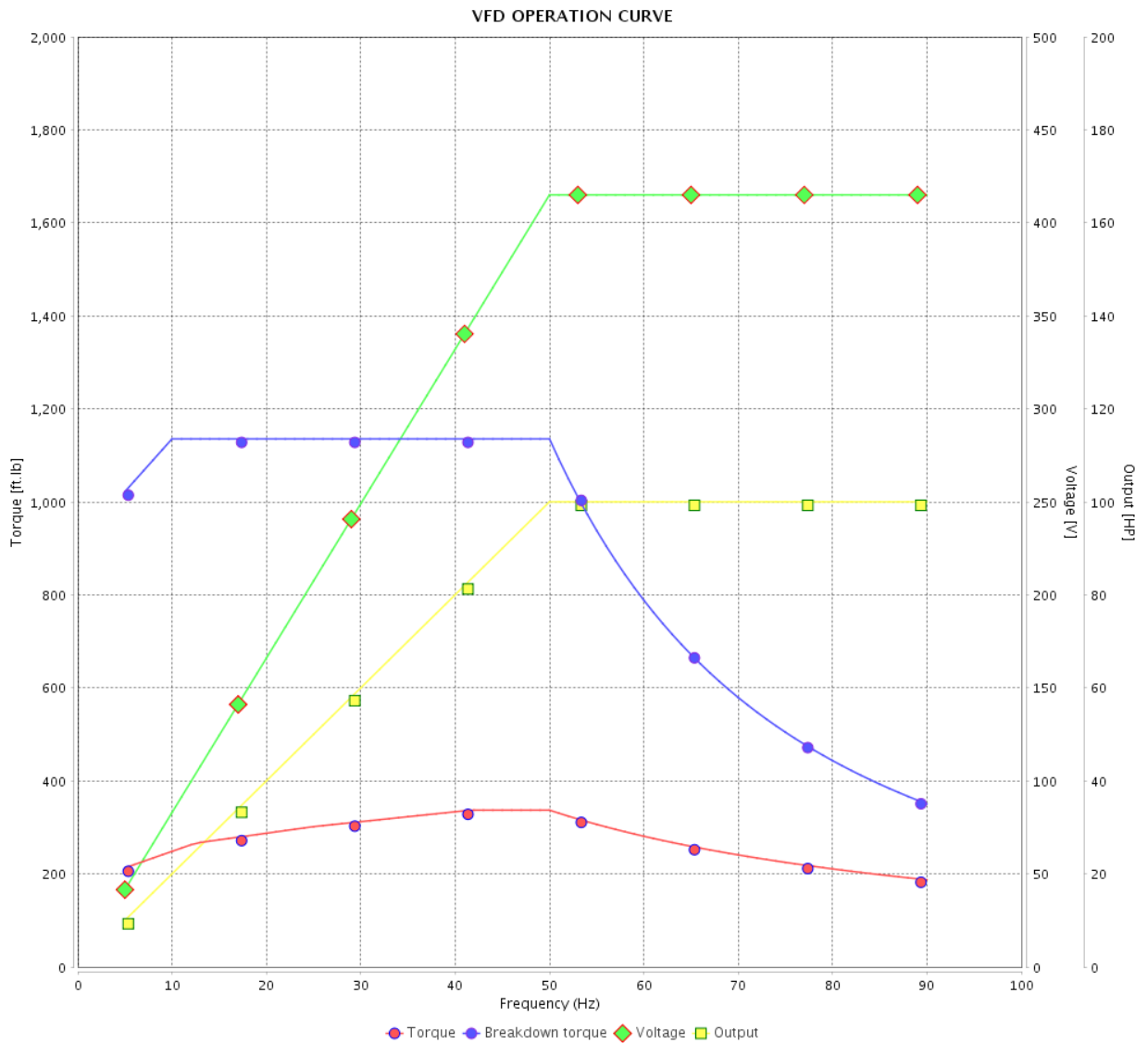


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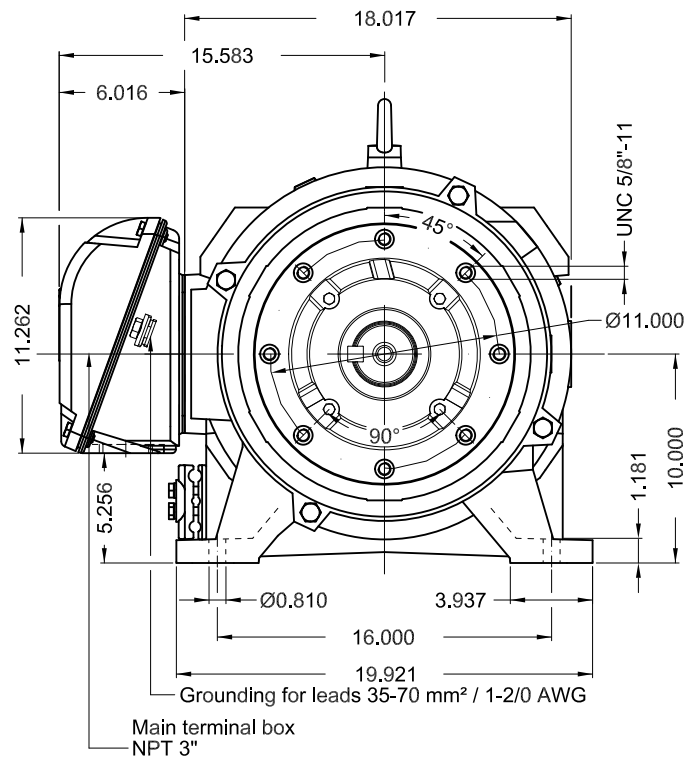


Performance : 415 V 50 Hz 4P IE3

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Rated torque : 355 ft.lb
Locked rotor torque : 290 %
Breakdown torque : 320 %
Rated speed : 1480 rpm

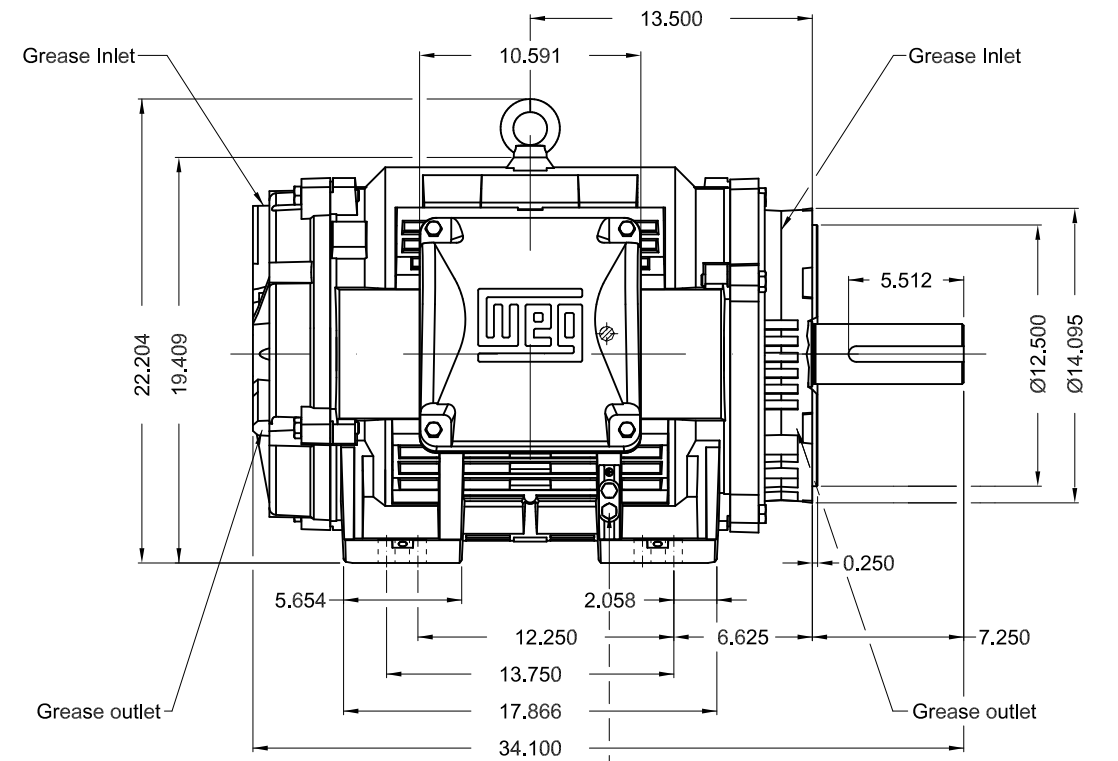
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Main terminal box
NPT 3"

Grounding for leads 35-70 mm² / 1-2/0 AWG



Grounding for leads 25-185 mm² / 3AWG-350MCM

125 HP 04 Poles 60 Hz

A

1:9

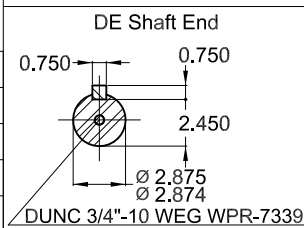
Internal AEGIS ground ring on the DE

Color RAL 5009

Painting plan 203A

Mounting NEMA F-1

Mounting B34R(D)



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

PREVIEW

WDD



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



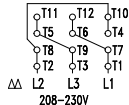
IEC 60034-1
 MOD.T01#FOXON



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

MODEL 125180T3E405TC-W40G
 MADE IN BRAZIL
 14285006

PH 3	FR 404/5TC	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 Δ 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.	1054 Lbs	



→ 6316-C3(34g)
 → 6212-Z-C3(13g)

MOBIL POLYREX EM
 20000 h